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(Non-Proprietary Information)

Phase I Archaeological Survey for the Portsmouth Gaseous Diffusion Plant (PORTS Facility) in Scioto and Seal Townships, Pike County, Ohio

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0.1 ABSTRACT

In September 1996, and April-May 1997, ASC Group, Inc., conducted a Phase I literature review, archaeological reconnaissance survey, and predictive model on the behalf of Lockheed Martin Energy Systems, Inc., at the Portsmouth Gaseous Diffusion Plant (PORTS Facility) in Scioto and Seal townships, Pike County, Ohio. An architectural survey was conducted concurrently, the results of which will be submitted as a separate report. The total project area available for archaeological investigations encompassed approximately 836 ha (2,066 ac). The literature review concentrated on a 6.5-km (4 mi) study radius around the USDOE PORTS facility and indicated that no prehistoric sites had been documented within the USDOE PORTS facility boundary, although the potential for encountering sites was evaluated to be high. The literature review also revealed that there was a potential for historic buildings, including farmsteads, churches, schools, and cemeteries within or adjacent to the USDOE PORTS facility. The archaeological reconnaissance surveys utilized visual inspection, surface collection, and shovel test pitting to investigate Quadrants I-IV of the USDOE PORTS facility.

These investigations resulted in the identification of 36 sites (33 Pk 184-33 Pk 219). Prehistoric sites include five isolated finds (33 Pk 198, 33 Pk 204, 33 Pk 205, 33 Pk 207, and 33 Pk 208) and two lithic scatters (33 Pk 186 and 33 Pk 210). Two sites contained both a prehistoric and a historic temporal component: 33 Pk 189 [PIK-206-4], representing a prehistoric isolated find/historic cemetery, and 33 Pk 206, which is a prehistoric lithic scatter/historic farmstead. Thirteen sites were the remnants of historic farmsteads (33 Pk 184, 33 Pk 185, 33 Pk 187, 33 Pk 193, 33 Pk 194, 33 Pk 195, 33 Pk 197, 33 Pk 203, 33 Pk 211, 33 Pk 212, 33 Pk 213, 33 Pk 217, and 33 Pk 218 [PIK-205-12]), seven sites represent historic scatters or open refuse dumps (33 Pk 191, 33 Pk 192, 33 Pk 200, 33 Pk 202, 33 Pk 209, 33 Pk 215, and 33 Pk 216), two sites (33 Pk 199 and 33 Pk 201) are isolated historic finds, four sites represent plant-related structural remnants (33 Pk 188, 33 Pk 190, 33 Pk 196, and 33 Pk 219), and one site (33 Pk 214 [PIK-207-12]) consists of a historic cemetery.

For 20 sites (33 Pk 186, 33 Pk 187, 33 Pk 188, 33 Pk 190, 33 Pk 191, 33 Pk 192, 33 Pk 196, 33 Pk 198, 33 Pk 199, 33 Pk 200, 33 Pk 201, 33 Pk 202, 33 Pk 204, 33 Pk 205, 33 Pk 207, 33 Pk 208, 33 Pk 209, 33 Pk 215, 33 Pk 216, and 33 Pk 219), no further work was recommended because they do not fulfill any of the criteria for National Register of Historic Places (NRHP) status.

Preservation was recommended for the two historic cemeteries identified within the USDOE PORTS Facility boundary (33 Pk 189 [PIK-206-9] and 33 Pk 214 [PIK-207-12]), in spite of the fact that cemeteries are not eligible for the NRHP.

Further work or preservation was recommended for the remaining 14 sites which included the following categories: a prehistoric lithic scatter (33 Pk 210), and 13 historic farmsteads with pre-1947 components (33 Pk 184, 33 Pk 185, 33 Pk 193, 33 Pk 194, 33 Pk 195, 33 Pk 197, 33 Pk 203, 33 Pk 206, 33 Pk 211, 33 Pk 212, 33 Pk 213, 33 Pk 217, and 33 Pk 218 [PIK-205-12]). All of these 14 sites are considered potentially eligible for NRHP under Criterion D.

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1.0 INTRODUCTION

Under contract with Lockheed Martin Energy Systems, Inc., ASC Group, Inc., has completed a Phase I literature review, reconnaissance survey, and predictive model of prehistoric and historic archaeological site location for the Portsmouth Gaseous Diffusion Plant (PORTS) in Scioto and Seal townships, Pike County, Ohio (Figure 1). An architectural survey was conducted concurrently, the results of which will be submitted as a separate report (Coleman et al. 1997). The archaeological fieldwork was conducted from September 16 through September 27, 1996, and from April 23 through May 13, 1997. The total project area for archaeological investigations encompassed approximately 836 ha (2,066 ac). However, some portions of this project area were utilized for sanitary landfills, lagoons, and other plant-related facilities, and were inaccessible for archaeological survey (Figure 2).

The purpose of these investigations was to determine whether cultural resources existed within the project area, and if possible, to determine if those resources were eligible for inclusion on the National Register of Historic Places (NRHP). To accomplish this goal, a research strategy combining literature review, predictive modeling, and field reconnaissance was employed.

2.0 BACKGROUND RESEARCH: REVIEW

2.1 Literature Review Methods: Resources Checked

Data collection for a literature review for the U.S. Department of Energy (USDOE) PORTS Facility was conducted in September of 1996 by Dave Blanton, Kevin Coleman, and Dawn Herr of ASC Group, Inc. The following sources at the Ohio Historical Society (OHS) in Columbus, and the Pike County Public Library, Genealogy Section, in Waverly, Ohio, were utilized:

1. USGS 7.5' and 15' series topographic maps associated with the project area;
2. Ohio Historic Preservation Office Archaeological Inventory Files;
3. NRHP files;
4. OHS Archaeological and Architectural Information Files;
5. Ohio Archaeological Council Report Files;
6. Pike County maps and histories;
7. *Archeological Atlas of Ohio* (Mills 1914).

In addition to the sources listed previously, Jennifer Chandler of Lockheed Martin Energy Systems (LMES) provided 9-in-by-9-in aerial photographs which predated the construction of the USDOE PORTS facility (taken from 1939 and 1951 flights), and digitally produced topographic, hydraulic, and environmental habitat maps of the USDOE PORTS facility property.

For all sources consulted, the archaeological literature review was concentrated within the confines of the USDOE boundary at the USDOE PORTS facility. These sources were examined for the existence of previously-recorded prehistoric or historic archaeological resources located within or immediately adjacent to the present-day USDOE PORTS facility.

2.2 Environmental Setting[1]

The earliest evidence for human occupation in the eastern United States dates from 11,000 to 13,000 B.P., depending on the particular dates that are accepted (Lepper 1986). The data for the environmental period are incomplete, but preliminary studies based on the pollen record suggest that the period from 14,000 to 9,000 B.P. was a time of major vegetation and climatic change (Shane 1994). Warming trends in the late and postglacial periods resulted in the replacement of spruce forests and/or spruce woodlands with coniferous-deciduous forests. By ca. 10,000 B.P., the environment had begun to resemble the present-day environment. Data recorded by early Euro-American settlers in the region may be utilized to shed light on the environment in which the prehistoric people of Ohio lived, while other sources of environmental information may be derived from recorded archaeological and geological data.

Pike County is situated within the Unglaciated Plateau Province (Fenneman 1938). Beyond the broad Scioto River valley, the terrain is hilly and cut by narrow, steep-sided tributaries. Upland elevations range between 171 m (558 ft) and 360 m (1,181 ft) AMSL with elevations averaging 168 m (551 ft) AMSL in the Scioto River valley (Fenneman 1938). The subsurface geology of the immediate region consists of the Logan formation of the Waverly series, which contains limestones of the Mississippian system (Orton 1874). The western portion of the Scioto Valley has eroded into Middle Devonian Huron shales (Orton 1874). According to Stout and Schoenlaub (1945), no flint sources are known within the county, excluding glacial chert cobbles in the river and stream valleys.

[1]Adapted from Church 1995

Almost all of Pike County is drained by the Scioto River and its tributaries, such as Little Beaver Creek and Big Run Creek, which drain the northern and southern portions of the USDOE PORTS facility. Drainage is generally good, except for occasional flooding which can occur in the spring (Hendershot 1990). Below the 165-m (541 ft) elevation, the active floodplain has been altered postglacially by meandering of the Scioto River.

Upland areas east of the Scioto River, including portions of the USDOE PORTS facility, have been affected by the preglacial Teays River which drained much of the southeastern United States. This abandoned valley is filled with Gallia sands, old alluvium, Minford silts, varved clay lacustrine sediments, local colluvium and alluvium, and loess. Glaciers blocked the Teays channel and formed the Minford silts and Lake Tight (Hendershot 1990).

During early glacial advances the Newark River cut a channel through what was to become the Scioto River valley in Pike County. This channel was deeper than the preglacial Teays River and the channel of the Scioto River today. Furthermore, smaller tributary streams also cut deeper into side valleys which were later filled with local colluvium and alluvial sediments (Hendershot 1990).

Later glacial advances formed terraces of meltwater sediments in the Scioto River valley, and glacial till deposits are restricted to the extreme northwestern corner of the county along Massie Run in Perry Township (Hendershot 1990).

The USDOE PORTS facility encompasses preglacial valleys and moderate to steeply sloped and dissected uplands consisting of two soil areas, Olmulga soils and Shelocta-Latham soils (Hendershot 1990). Olmulga series soils consist of deep, moderately well-drained soils on slight rises at the head of drainageways, high saddles, and on side slopes in preglacial valleys. These soils were formed in loess, colluvium, and old alluvium and have a fragipan (Hendershot 1990). Shelocta-Latham series soils consist of deep and moderately deep, strongly sloping to steep, well-drained and moderately well-drained soils formed in colluvium and residuum derived from shale, siltstone, and sandstone on hillsides and ridgetops in the uplands (Hendershot 1990).

Prior to widespread Euro-American settlement in the region, uplands including the western portions of the USDOE PORTS facility were covered in Mixed Mesophytic forest, which included associations of oak-chestnut-tulip tree, oak-hickory-tulip tree, white oak-beech-maple, and hemlock-beech-chestnut-red oak. Mixed Mesophytic forests prefer moister and more shaded areas which are often on north-facing slopes or in narrow valleys or hollows (Gordon 1969).

The eastern portions of the USDOE PORTS facility were once covered in Mixed Oak Forests, which included associations of white oak-black oak-hickory, white oak-black oak-chestnut, and chestnut oak-chestnut types. Mixed Oak Forests occurred on the drier south-facing slopes or other areas prone to late summer drought in unglaciated areas (Gordon 1969).

In the adjacent Scioto River valley, extensive bottomland forests covered the valley floor. Depending upon differences in elevation, wetness, and underlying soils within the valley, bottomland hardwood associations include such trees as beech-white oak, beech-maple, beech-elm-ash-yellow buckeye, elm-sycamore-river birch-red maple, and sweet gum-river birch (Gordon 1966).

Within the USDOE PORTS facility boundary, understory growth would have been composed of numerous small shrubs and trees with natural openings in the forest filled with seed and wild berry colonizers. Sedges, cattails, and other marshy plants would have been available in wet marshy areas along Little Beaver Creek and other wetland areas.

Archaeological investigations at the nearby Madeira Brown site (33 Pk 153), located just north of the USDOE PORTS facility on a terrace of the Scioto River near the intersection of State Route 23 and State Route 32, yielded evidence of prehistoric utilization of hickory, hazelnut, walnut, acorn, and squash during the Late Archaic period (Church 1995). Features dating to the Middle Woodland period yielded economically important seed species including goosefoot, amaranth, *Mollugo*, *Galium*, pokeberry, raspberry, and maygrass, indicating that both domesticated and wild plants were utilized prehistorically in the vicinity (Church 1995).

The fauna in southern Ohio has been greatly affected by modern patterns of land use in much the same way that the flora has been altered. Many species which were adapted to forest environments faced habitat loss when these original forests were cleared, and have to varying degrees reestablished themselves in areas allowed to revert to forest growth.

By post-Pleistocene times, the faunal component of the landscape would have included most of the species noted by early Euro-American explorers and settlers. Animal species included large mammals such as elk, white-tailed deer, bear, and wolf, a variety of medium-sized animals like raccoon, woodchuck, bobcat; dog, red fox, gray fox, coyote, beaver, muskrat, opossum, and skunk, as well as a number of small mammals including gray and fox squirrels, ground squirrels, chipmunks, wood rats and field mice. Avian species included flocks of wild turkey, bobwhite, quail, passenger

pigeons, and a wide variety of migratory fowl. Reptilian species present in the region included a variety of snakes--poisonous and nonpoisonous species, turtles, as well as numerous amphibian, piscean, and molluscan species in the Scioto River, tributary streams, ponds, and marshy areas. Faunal resources utilized by the Late Archaic prehistoric inhabitants of the nearby Madeira Brown site (33 Pk 153) included white-tailed deer and turtle, as well as small avian and molluscan species (Church 1995).

To summarize, seasonal resources in the vicinity of the USDOE PORTS facility were many and varied. Probably the prime season of natural abundance, as elsewhere in the Eastern Woodlands, would have been from late summer into late fall, when wild seeds and berries were ripening, nut mast was produced, animals were at their fattest, and herds and flocks of migratory species were congregating. For prehistoric and historic inhabitants involved in food production activities, the preglacial valleys and terraces of the USDOE PORTS facility would have served as productive areas for crop or livestock production with convenient access to the Scioto River and routes for interregional communication and exchange. Therefore, it is likely that archaeological resources will be located within the project area.

2.3 Archaeological Resources: Documented

In September 1996, ASC Group, Inc., conducted a literature review for the USDOE PORTS facility property, which encompasses approximately 1,270 ha (3,140 ac)[Figure 2]. This area underwent a literature review to determine previously recorded archaeological sites that existed within and immediately adjacent to the present-day facility property boundary.

A study area of 6.5 km (4 mi) in radius, centered within the facility property boundary, was examined for previously recorded archaeological sites and to identify potentially sensitive areas. Examination of the Ohio Archaeological Inventory files revealed that no previously recorded sites are located within the property boundary of the plant facility; however, examination of the Ohio Historical Society USGS 7.5' topographic site location maps (Lucasville 1961; Piketon 1961; Wakefield 1961; and Waverly South 1992) revealed that 71 archaeological sites have been previously recorded on the Ohio Archaeological Inventory (OAI) within the study radius (Table 1). These sites include 11 sites with single or multiple mounds and/or earthworks, 33 lithic scatters, six isolated finds, 17 unknown site types, two camps, and one possible prehistoric ironstone quarry. Cultural/temporal periods represented by these 70

documented sites ranged from the Early Archaic through the Late Prehistoric/Mississippian period. Twenty-six sites were found to have at least one, and sometimes multiple, diagnostic cultural/temporal affiliations.

Six sites yielding Early Archaic, one Middle Archaic, 10 Late Archaic, two general Archaic, and one Transitional Archaic/Early Woodland components were identified (Table 1).

Twelve sites contained an Early Woodland component, while six yielded a Middle Woodland component, two possessed Late Woodland components, and four sites yielded a general Woodland component (Table 1).

One site yielded a Late Woodland-Late Prehistoric cultural/temporal affiliation, and another site yielded a Mississippian component (Table 1).

Forty-four of the 77 documented sites within the 6.5-km (4 mi) study radius could not be assigned to a specific cultural/temporal component, and were given a general unassigned prehistoric affiliation. None of the 71 documented sites were identified as having historic archaeological components.

The majority of these documented sites (n=37) were first identified as a result of a professional survey and assessment for the proposed PIK-SR 32-13.55 project conducted by Case Western Reserve University (Bush et al. 1987, 1989, 1992). Nine sites were identified during two archaeological surveys designed to assess the archaeological, impact of construction of the Piketon Hills Apartments and the Pike Turnkey Housing in Piketon, Ohio (White 1978, 1979). One site (33 Pk 116) was documented during the archaeological reconnaissance of the proposed Clearwell well field and pumping plant for the city of Piketon (DeRegnaucourt 1985). Twelve sites were recorded by the South Central Ohio Regional Area Preservation Office (SCORAPO)[Lindner 1980]. Seven of the documented sites represent prominent mounds, earthworks, and enclosures that were initially investigated during the nineteenth century by the likes of Caleb Atwater (1820), Gerard Fowke (1891, 1902, 1928), and Squier and Davis (1848). The five sites remaining were documented by R. Riggs (33 Pk 30, 33 Pk 31) of SCORAPO and Stan Baker and Laurie Gray-Phadapony (33 Pk 177, 33 Pk 179, and 33 Pk 180) of the Ohio Department of Transportation (ODOT) [Ohio Archaeological Inventory, on file at the Ohio Historic Preservation Office].

While these 71 sites vary as to which kind of landform they occupy (Table 1), nearly all of the sites within the 6.5-km (4 mi) study radius of the USDOE PORTS facility are situated within or immediately adjacent to the Scioto River valley proper. Considerably less archaeological investigation has been conducted in upland areas such as most of the

area within the USDOE PORTS facility boundary; this area may yield significantly different patterns of prehistoric and historic occupation.

The *Archeological Atlas of Ohio* (Mills 1914) identified three mounds, three enclosures, and one burial in Seal Township, and six mounds and one enclosure in Scioto Township. While none of these archaeological features are shown within the perimeter of the USDOE PORTS facility boundary, one enclosure (the Scioto Township Works I) is adjacent to the plant facility boundary on the plant's southeastern side. This significant enclosure complex once contained a conjoined circle and square embankment and associated mound. It is listed on the National Register of Historic Places (NRHP) and will be discussed further below. While some of the archaeological sites identified by Mills (1914) are clearly visible today, many of these sites have not been verified as to their accuracy of location or to their authenticity as prehistoric works, and must therefore be considered as tentative prehistoric resources.

Three sites within the 6.5-km (4 mi) study radius are listed in the NRHP files (Table 2). These are the Piketon Mounds (or Wakefield Cemetery Mound)[33 Pk 1], the Scioto Township Works I (33 Pk 22) and the Van Meter Stone House and Outbuildings.

The Piketon Mounds (33 Pk 1) are located within the Seal Township Mound Cemetery, some 3.2 km (2 mi) north of the USDOE PORTS facility boundary. Today, a single large mound (the Wakefield Mound) and two smaller mounds represent the remnants of a mound complex and series of graded ways that descended from one terrace to another and ran towards the banks of the Scioto River (Squier and Davis 1848). Construction of the Chillicothe-Portsmouth Turnpike, the Norfolk-Western Railroad, and the rebuilding of Route 23 destroyed the graded ways during the nineteenth and early twentieth centuries. At present, the large mound stands 5.5 m (18 ft) high, and is 30 m (99 ft) in diameter, with two of its original four lobes in good condition. Of the two smaller mounds, the larger measures 1.7 m (5 ft 5 in) high and is 16 m (54 ft) in diameter, while the smaller mound stands 1.2 m (3 ft 10 in) high, and is 11.6 m (38 ft) in diameter. These works are thought to belong to the Hopewell culture associated with the Middle Woodland period (Scheurer 1973).

The Scioto Township Works I (33 Pk 22) was located on the east bank of the Scioto River adjacent to the southwestern edge of the USDOE PORTS facility boundary. This earthwork complex consisted of a circle and square works with gates on the northwest and southeast sides, parallel walls running out from two gateways, and a single mound just north of the works. This complex was surveyed by Squier and Davis in 1847, and excavations were conducted by

the Bureau of American Ethnology before 1891. According to Fowke (1902), the square measured 260.3 m (854 ft) per side east to west and 259.6 m (852 ft) per side north to south. The parallel walls were 20.7 m (68 ft) apart and extended 130 m (427 ft) for the eastern wall and 122 m (400 ft) for the western wall. Even by 1902, the large circle to the north had been all but obliterated (Fowke 1902). Recent gravel quarrying and cultivation has destroyed virtually all of this earthwork complex. Like the Piketon Mounds, these earthworks are generally thought to have been built by the Hopewell during the Middle Woodland period and have been assigned dates between 300 B.C. to A.D. 700 (Drennén 1974).

The Van Meter Stone House and Outbuildings are located at the southeast corner of the intersection of State Route 23 and State Route 32, approximately 3.2 km (2 mi) north of the USDOE PORTS facility boundary. This gable-roofed, two-story, rough-cut sandstone, Classic I House is rectangular in plan and is three bays wide and one bay deep. Three outbuildings are associated with the house: a rectangular, gable-roofed cut sandstone smokehouse with an attached semi-subterranean milkhouse, a brick two-story overflow house with a gable roof, and a one-room clapboard schoolhouse (Koe-Krompecher 1973). Construction of these buildings began some time after 1801, with the overflow house being built first. The main house was begun in 1823 and was followed by the smokehouse and school. The Van Meter family, which came from Virginia, raised agricultural products and livestock, were some of the first farmers in Ohio to raise Short Horn cattle, and had one of the earliest tree farms in the state. The main house was used as an office for the farm from 1860-1940. The schoolhouse was a private school for the Van Meter children and is thought to be the first school in the county (Koe-Krompecher 1973).

An inspection of the Ohio Historic Inventory (OHI) forms revealed that comparatively few historic buildings have been documented for Pike County, with the majority being at the county seat, Waverly, and at the towns of Omega, and Piketon in the Scioto Valley proper. Three OHI forms were identified for buildings within the 6.5-km (4 mi) study area (Table 3). Of these buildings, only Bailey Chapel (no OHI number given, but the form is on file at the Ohio Historic Preservation Office) is directly adjacent to the USDOE PORTS facility boundary. This wood-frame chapel is of a vernacular style with Greek Revival influence and was built in 1847 (Frey 1984). Surrounding the church is the Bailey Chapel Cemetery which shares two sides of its boundary with the southeastern corner of the USDOE PORTS facility.

In addition to the above-mentioned sources, various cartographic sources and county histories were examined for data relevant to early historic settlement within and immediately adjacent to the USDOE PORTS facility (Kalfs 1987;

Pike County Chapter of the Ohio Genealogical Society 1986, 1992; Rickey and Co. 1983). Unlike many other counties in the state of Ohio, no nineteenth century atlases were available for Pike County. This lack of published nineteenth century atlases suggests that the county's population was not considered to be sufficiently large or wealthy enough to merit the production of atlases which were produced primarily as a money-making enterprise. In spite of this lack of atlases, a number of other cartographic resources were examined.

One source examined was the *Rand McNally & Co. Map of Pike County, Ohio* (1912). This political map indicated the location of schools, churches, and cemeteries. These buildings and cemeteries identified within the USDOE PORTS facility boundary were plotted on a USGS 7.5' topographic base map (Figure 3). Within the present-day USDOE PORTS facility boundary, one church was indicated in Section 17, Scioto Township, just north of Shyville, and one was indicated in the extreme northwest corner of Section 17. One church was identified in Section 8, Scioto Township, east of Little Beaver Creek, and another church was identified in the southeastern quarter of Section 6, Seal Township, next to what is now Fog Road (Figure 3). In addition, a single schoolhouse was depicted near the center of Section 6 just north of the present-day N & W Chesapeake Railroad (Figure 3).

Another cartographic source examined was the 15' series USGS topographic maps that encompass the USDOE PORTS facility, including the following: Otway (1917), Piketon (1915), Sciotoville (1911), and Waverly (1906). These maps indicated roads, buildings, churches, and schools within the present-day USDOE PORTS facility boundary. These roads, buildings, churches, and schools identified adjacent to, or within, the USDOE PORTS facility boundary were plotted on a USGS 7.5' topographic base map (Figure 4). Two roads which originally passed through the USDOE PORTS facility were Beaver Road and Stockdale Road (Figure 4). Beaver Road ran east from the Portsmouth Road (present-day Wakefield Mound Road) at the unincorporated hamlet of Sargents across the present-day facility, then eastward to just south of Shyville, where it joined the Stockdale Road. The Stockdale Road extended southeast from the Portsmouth Road from just south of where present-day S.R. 32 crosses S.R. 23, through what is now the USDOE PORTS facility, and continued farther southeast beyond Shyville. Portions of the original Stockdale Road in Sections 6 and 7 of Seal Township serve as Fog Road today.

Fifty-two buildings are represented on the four USGS 15' topographic quadrangles which are indicated within or immediately adjacent to the present-day USDOE PORTS facility (Figure 4). These buildings likely represent residences, outbuildings, and commercial buildings, and cannot be differentiated further. In addition, five churches were

depicted, three of which were in Section 8, Scioto Township, and included the Ferree Church, Mount Gilead Church, one unnamed church which would have been along present-day McCorkle Road, and one church along the western edge of Section 7. A single church was identified in Seal Township, and was located just north of the Moore School in Section 6 (Figure 4). A single school, labeled the Moore School, was indicated in the south-central portion of Section 6, Seal Township, where the X-735 RCRA landfill sits today (Figure 4). Taken collectively, this series of roads and buildings from the 15' USGS topographic quadrangles reveals a rural residence pattern with settlements concentrated in the northern and eastern portions of the present-day USDOE PORTS facility boundary. In particular, settlement in the vicinity of the ravine located in Section 5, Seal Township, and Section 8, Scioto Township, appears to have had the highest concentration of turn-of-the-century buildings within the present-day boundaries of the USDOE PORTS facility (Figure 4).

Recent USGS 7.5' topographic quadrangles have also been examined for potential archaeological resources within the boundaries of the USDOE PORTS facility. These include: Lucasville (1961), Piketon (1961), Wakefield (1961), and Waverly South (1992). From these topographic quadrangles, four historic cemeteries were identified within or immediately adjacent to the USDOE PORTS facility boundary. These include the Daley Cemetery which is adjacent to the eastern boundary of the USDOE PORTS facility in Section 7, just north of Sargents in Scioto Township, and the Bailey Chapel Cemetery which is adjacent to the southeastern most corner of the USDOE PORTS facility boundary in Section 19, Scioto Township. Two cemeteries were identified within the boundary of the USDOE PORTS facility: the Mount Gilead Cemetery in the southwest quarter of Section 8, Scioto Township, between the Perimeter Road and Fog Road, and the Holt Cemetery, located in the northwest quarter of Section 5, in Seal Township (Dobson-Brown and Schweikart 1997, Figure 1).

In addition to the cartographic sources discussed above, aerial photographs predating the construction of the USDOE PORTS facility were examined for evidence of buildings or structures (Figure 5). The buildings or structures identified adjacent to or within the USDOE PORTS facility boundary were plotted on a USGS 7.5' topographic base map (Figure 5). These photographs were made available by Jennifer Chandler (LMES) prior to ASC Group, Inc.'s, initial Phase I archaeological reconnaissance survey in September of 1996. Two series of 9-in-by-9-in black-and-white photographs were provided, including one set from a 1939 flight, and the other from 1951. Twenty buildings and/or structures were visible from the 1939 aerial photographs, and 21 were visible on the 1951 photographs. Nearly all of

these buildings/structures corresponded with the approximate locations of buildings identified on the USGS 15' topographic quadrangles.

2.4 Prehistoric Context[2]

The literature review indicated that 26 of the archaeological sites identified on OAI forms within the 6.5- km (4 mi) study radius were affiliated with specific prehistoric temporal periods, representing the Early Archaic through Late Prehistoric/Mississippian periods. A general prehistoric cultural context is provided below since there is a significant potential for encountering prehistoric archaeological resources in a project area the Size of the USDOE PORTS facility.

It is estimated that the occupation of the Ohio area would have been possible approximately 13,000 to 13,500 B.C. By this time the glacial front which had once covered the northwestern two-thirds of Ohio had retreated to Ontario (Seeman and Prufer 1982). The Paleoindians, the first known prehistoric population to occupy the Ohio area, were highly mobile, small band hunters moving on a seasonal basis in order to more fully exploit the available natural resources (Dragoo 1976). Although probably in pursuit of herd animals, the Paleoindians opportunistically utilized a broad spectrum of animal and plant resources.

Data pertinent to the content of Paleoindian sites in Ohio is extremely rare. Information concerning the distribution of Paleoindian sites in Ohio was documented by Prufer and Baby (1963) and subsequently updated by Seeman and Prufer (1982). Seeman and Prufer (1982) attributed the low density of fluted points in Pike County to the "ecological diversity of the Appalachian Plateau.... Travel for large herbivores, particularly during the flood season, would have been difficult" (Seeman and Prufer 1982:160). In contrast to this interpretation, more recent studies by Lepper (1983) suggest that the low frequency of Paleoindian points in the Unglaciated Plateau is attributable both to the low population of individuals in these areas who would search for and report these finds, and to the limited acreage under agricultural production. The latter characteristic is a measure of potential exposure of prehistoric artifacts. Lepper (1983) suggests that there may have been a larger Paleoindian population within the Unglaciated Plateau than is currently reflected by fluted point distributions.

The Archaic era has been subdivided into three separate temporal periods. Traditional interpretations suggest that during the Early Archaic period, 9,000 B.C. to 6,000 B.C., small mobile groups gradually became more

[2]Adapted from Church et al. 1997

geographically restricted. Seasonally oriented hunting-and-gathering activities were focused on smaller, well-exploited territories; this orientation is seen as a direct link to the expansion of the deciduous forests which produced a more favorable habitat for game species (Chapman 1975). Although hunting was a major subsistence activity, a narrow spectrum of nutritious plant foods was also utilized (Chapman 1975; Cleland 1966). This transition is marked in the material culture by a change from lanceolate spear points to a series of notched and stemmed points (Broyles 1971).

During the Middle Archaic period, 6,000 B.C. to 3,000 B.C., the economy became more diffuse as a wider selection of plant foods was exploited, but the major emphasis was still on hunting (Cleland 1966). The broadening economy is reflected in the material culture as well. Specifically, plant processing tools appear in artifact assemblages. Most of these implements were ground stone rather than chipped stone, indicating the need for durable surfaces and edges. These types of tools included grooved axes, pestles, metates, and nutting stones. Atlatl weights are also noted (Broyles 1971; Lewis and Lewis 1961).

During the Late Archaic period, 3,000 B.C. to 900 B.C., the expansion of the deciduous forest reached its northernmost limit, and the climate was warmer than the present day (Cleland 1966). Coinciding with an increase in territorial permanence was the appearance of regional adaptations (Chapman 1977; Vickery 1980). These adaptations are characterized by a variety of projectile point styles which exhibit stylistic ties with the Eastern states, such as the Brewerton and Ashtabula point types (Ritchie 1961; Whitthoft 1953), and areas to the south, such as the Buffalo Stemmed points (Broyles 1971). An increase in territorial permanence is supported by the appearance of regional adaptations which differentiated southern Ohio from other areas in the Ohio Valley (Winters 1969). Furthermore, this period in general shows a more efficient and broad-based exploitation of local animal and plant resources, evidenced by the recovery of charred botanical remains of a variety of nutshells, including acorn, hazelnut, hickory, and black walnut. Fruit was also becoming an important food resource as documented by the diversity of fruit seeds such as grape, blueberry, raspberry, and strawberry (Dye 1977; Yarnell 1974).

Archaic projectile point finds are common in southern Ohio; however, few sites have contained in-situ cultural deposits, and thus may represent only single, short-term occupations. One important exception to this is the identification of Late Archaic features and associated artifacts at the Madeira Brown site (33 Pk 153) which is located 3.2 km (2 mi) north of the USDOE PORTS facility boundary, in Seal Township, Pike County, Ohio (Church 1995).

Earlier research drew a distinction between the Archaic and Woodland periods based on the introduction of agriculture, elaborate burial ceremonialism, and the appearance of ceramics. However, more recent evidence has demonstrated a continuum from the end of the Archaic through the Middle Woodland period for the intensification of horticulture and the formalization and elaboration of mortuary practices (Dragoo 1976). The innovation and adaptation of these traits by the different human groups was not uniform, but occurred at different rates in different regions. The introduction and use of these traits had to be synchronized with the perceived biological and social needs of the different human groups. Consequently, the rate of change in subsistence and mortuary practices varies from region to region, with some local groups maintaining Late Archaic lifestyles throughout the Late Woodland, while other groups, primarily those along the main river valleys, like the Scioto River valley, underwent rapid transformations.

In central and southern Ohio, the local Early Woodland expression from around 900 B.C. to 100 B.C. is often synonymously called the Adena culture, and is noted for the manufacture of Fayette Thick, Adena Plain, and Montgomery Incised ceramics, and the use of conical burial mounds for interment (Greenman 1932; Webb and Baby 1957). In addition to the above-mentioned ceramic types and conical-shaped mounds, several point/knife forms are diagnostic of the Early Woodland period, including Adena Stemmed and Cresap points and Robbins blades (Converse 1973; Dragoo 1963). The production of these materials and associated activities could well represent a continuation and elaboration of local Late Archaic lifeways, particularly in terms of mortuary ritual. Early Woodland period mounds seem to have functioned as the focus for community identity, being constructed during a number of building episodes which occasionally culminated in very large earthworks such as the Miamisburg mound in southwestern Ohio and the Cotiga and Grave Creek mounds in West Virginia. However, in marked contrast, the few Adena habitations that have been investigated in the region appear to have been generally small, possibly seasonally occupied residences of small groups or family units dispersed within defined corporate territories which may have shared ritual facilities with adjacent corporate groups (Clay and Niquette 1989; Schweikart 1997).

There is considerable evidence for Early Woodland occupation in the lower Scioto valley as indicated by numerous conical mounds, many of which are probably Adena in origin. However, corresponding Early Woodland habitation sites have been far less conspicuous in the region (Prufer 1967).

The Middle Woodland period in central and southern Ohio lasted from around 100 B.C. to A.D. 500 and was characterized by the construction of elaborate geometric earthworks, enclosures, and mounds which were often

associated with multiple burials, and a diverse assemblage of exotic artifacts (Brose and Greber 1979). For the region, the term "Hopewell" has become synonymous for the Middle Woodland period. Ceremonially, Hopewell appears to have developed out of the local Adena culture in the Scioto Valley, albeit on a more expanded and spectacular scale (Greber 1991; Prufer 1964). Hopwellian trade networks were extensive, and raw materials for ceremonial objects were obtained from across much of North America (Seeman 1979). Like the preceding Adena culture, most of the early research on the Hopewell focused on the earthworks and their contents. It has only been in the last few decades that efforts have been made to investigate the domestic sphere and to reevaluate interpretations of economic, ceremonial, social and political aspects of the Hopewell culture (c.f. Brose 1979; Church 1984; Ford 1979; Greber 1979; Pacheco 1988; Prufer 1965; Seeman 1979; Wymer 1992; Yerkes 1990).

Prufer (1975) interpreted the Middle Woodland period in Ohio as a Dual Tradition. One level or tradition was the Hopewell culture which consisted of vacant ceremonial centers surrounded by dispersed agricultural communities, while the second tradition consisted of local Middle Woodland traditions that did not participate in the Hopewell tradition. Pacheco (1988, 1992) and Dancey and Pacheco (1992) developed the "Vacant Ceremonial Center Model" or "Hamlet Hypothesis" which suggested that Hopewell habitations represent dispersed sedentary agricultural hamlets associated with major unoccupied earthwork complexes. A growing body of data from recently excavated Middle Woodland habitation sites from across the region has shown that there is significant variability in the expression of Hopewell habitations which may require modifications to the original model (Aument 1992; Church and Ericksen 1992; Genheimer 1992).

During the Middle Woodland period, the Scioto River valley in southern Ohio represented one of the largest and most elaborate Hopewell culture centers. Numerous extensive earthworks were constructed, some of which, like the Piketon Mounds (33 Pk 1) and Scioto Township Works I (33 Pk 22), are or were in the vicinity of or adjacent to the USDOE PORTS facility boundary.

The Late Woodland period in Ohio (ca. A.D. 500 to A.D. 900) has often been viewed as a prehistoric "dark age" following the disappearance of the elaborate earthworks and evidence of mortuary ceremonialism which came to define the Hopewell period in the region. However, recent investigations of several Late Woodland sites in central and southern Ohio and elsewhere (e.g., Church 1987, 1990, 1992, 1996; Nass 1990; Shott 1990) have identified nucleated and sometimes strategically located settlements (Dancey 1992; Seeman 1980), refinements in ceramic technology (Braun

1988), and evidence for increasing effects on the local environment resultant from horticultural dependence (Wymer 1992, 1996). This research has begun to change the prevailing view of the Late Woodland as a period of cultural stagnation (Rafferty 1985; Railey 1984, 1992). During the early part of the Late Woodland period in central and southern Ohio, sites consisted of small nucleated settlements frequently located on bluff edges along major streams or rivers with encircling ditches or low embankments (Church 1987). Ceramics and point types appear to have developed out of earlier utilitarian Middle Woodland forms, with the notable exception of the blade core industry which appears to have ended with the Middle Woodland period (Odell 1994). During the latter part of the Late Woodland, the appearance of the bow and arrow and a developing reliance upon maize after A.D. 800 coincides with nucleated settlements giving way to smaller, more dispersed settlements located on terraces or floodplains, and with higher frequency, in the uplands (Church 1987; Shott 1990). Furthermore, these late Late Woodland sites begin to develop traits indicative of early Late Prehistoric assemblages (Church 1987).

While a number of sites within the 6.5-km (4 mi) study radius contain Late Woodland components, major investigations of Late Woodland sites in the study radius are lacking. Two Late Woodland sites that have been investigated in the region include the Harness 28 site (33 Ro 186) near Chillicothe (Skinner 1985) and the Bentley site (15 Gp 15) which is located south of the Ohio River in Greenup County, Kentucky, across from Portsmouth (Henderson and Pollack 1985).

The Late Prehistoric period in Ohio extends from approximately A.D. 900 to A.D. 1600. In southern Ohio the Fort Ancient culture emerged out of local Late Woodland cultures. The development of Fort Ancient was stimulated by a growing reliance on maize agriculture, increased sedentism, and an influx of southern Mississippian influences (Brose et al. 1978; Church 1987; Essenpreis 1978). Ceramic attributes were probably the earliest influences to enter the Ohio Valley with the appearance of shell-tempered pottery (Brose et al. 1978).

The Fort Ancient subsistence economy was based on the cultivation of maize, beans, and squash, with supplemental hunting (Essenpreis 1978). Settlements were occupied year-round and were concentrated along the major rivers (Essenpreis 1978). During the Middle Fort Ancient period, circular palisades were often associated with villages (Brose et al. 1978). Griffin (1943) has identified four foci or distinctive areas for the expression of Fort Ancient in southern Ohio which were centered on different parts of the major river valleys. Within the vicinity of the USDOE

PORTS facility, two of these foci, now redefined as phases, are most relevant: the Baum phase in the Chillicothe area and the Feurt phase near the mouth of the Scioto and Ohio rivers.

The Baum phase is known from excavations at the Baum site and other related village sites which are primarily located in Ross County (Prufer and Shane 1970). These sites generally date from A.D. 1000 to A.D. 1500. These Baum phase sites show a clear continuity with earlier Late Woodland occupations (Griffin 1978).

The Feurt phase is perhaps the least well known of the Fort Ancient phases, and is named after the Feurt site in Scioto County, Ohio. The mortuary regimen and pottery complex at these village sites differ from the other phases, but show an early connection with the Baum phase (Griffin 1978).

Only a few Late Prehistoric components have been identified within the 6.5-km (4 mi) study radius around the USDOE PORTS facility and little can be said conclusively about these components. However, the USDOE PORTS facility sits nearly equidistant between the center for the Baum phase to the north and the Feurt phase to the south. The Pike County area may represent a transitional zone between these two Late Prehistoric cultural expressions.

Around A.D. 1550, Late Prehistoric groups in western Pennsylvania procured materials which indicate indirect contact with European settlers (Herbstritt 1983). These materials include wire-wound beads, copper tinklers, and native manufactured artifacts such as triangular glass and metal pendants made from imported European goods. In contrast to later sites, there is no change in intrasite patterning or subsistence procurement strategy. Recognition of protohistoric sites is based solely on the occasional occurrence of European trade items (Skinner and Brose 1985). This influx of trade items is documented in the Middle Ohio Valley ca. A.D. 1650 to A.D. 1750 at two contact period sites in Greenup County, Kentucky (Pollack and Henderson 1983). The difficulty in recognizing these sites given the limited changes in the material culture undoubtedly has resulted in the lack of proper protohistoric designations. No known sites of this period have been documented in Pike County.

2.5 Historic Period Context

The literature review also indicated some 49 buildings which were either residences, outbuildings, or commercial buildings as depicted on the USGS 15' topographic quadrangles, as well as a number of churches, schools, and roads as depicted on turn-of-the-century USGS 15' quadrangles (Figure 4) and the *Rand McNally & Co. Map of Pike County, Ohio* (1912) [Figure 3]. The location of some buildings is apparently confirmed later in the twentieth century by their identification on aerial photographs dating to 1939 and 1951 which show 19 to 21 buildings or structures (Figure

5). In addition, four historic cemeteries are shown within or immediately adjacent to the USDOE PORTS facility boundary on current issue USGS 7.5' topographic quadrangles (Dobson-Brown and Schweikart 1997, Fig. 1). There is a significant potential for encountering historic archaeological resources in a project area the Size of the USDOE PORTS facility.

The following is a historic context for Pike County, focused on Seal and Scioto townships, which contain the USDOE PORTS facility. The context reflects the major historical trends and forces that created the settlement pattern and commerce of Pike County, including Settlement and Settler Origins, Land Use and Agriculture, and Transportation. The historic context ends in 1952, with the clearing of all buildings in the federal reservation in preparation for the construction of the USDOE PORTS facility.

Settlement and Settler Origins

The part of Pike County east of the Scioto River is located in an original Ohio land subdivision called the Congress Lands. This was surveyed in 1798 to 1802 under the regulations of the Land Ordinance of 1796, which specified the rectangular method of surveying. This method called for dividing the land into square townships, arranged into north-south ranges. The townships were composed of 36 one-square-mile, 640-acre sections. Each section was divided by "quarter lines" into 160-acre quarter sections, which, after the Land Act of 1800, were the smallest units of land sold by the government, at $2.00 per acre (Bond 1941). This land was held by the federal government until it was surveyed and sold.

The part of Pike County west of the Scioto is located in an original Ohio land subdivision called the Virginia Military District (VMD), a reservation of 1,701,561 ha between the Little Miami and Scioto rivers set aside for the Virginia soldiers of the Revolutionary War. The amount of land secured was based on the rank and time of service, i.e., the higher the rank, the more land deeded. The Scioto Valley had some of the largest VMD tracts secured by the higher ranking soldiers, and consequently, some of the largest farms, settled by the elite. This also led to a concentration of political power at Chillicothe in the 1790s through the 1810s, which influenced what was to become Pike County (Evans 1987; Wilhelm 1982).

The theory of *Altlandschaft* states that the first permanent occupants of the area will influence all subsequent occupants and will therefore have a lasting settlement effect. It follows that the settlement imprint of the first permanent

occupants within the project area will be identifiable, even today, evidenced in the style, type, and construction techniques of structures, in land divisions, and in farming practices.

American culture derives most of its characteristics from British culture, as they were the first people to effectively and permanently occupy large parts of the United States. Most other immigrant groups eventually assimilated to this dominant British culture, which includes Anglo-Saxon (English) influences and Celtic (Scottish, Irish and Welsh) influences (Wilhelm and Mould 1991). However, there will still be traces of immigrant cultural differences in their initial settlement areas. This cultural effect will be long-lasting especially if the population is large or enhanced by new immigrant arrivals.

Historic settlement follows much the same pattern as prehistoric settlement (Hill et al. 1987). Early settlement sites would provide optimum access to a combination of critical resources. Areas expected to be settled first would be those with arable land, wooded areas with mast for livestock, a source of fresh water, and access to established trade and communication routes, such as streams and roads. Settlers who arrived later would have to occupy less attractive land. However, as technology and population increased, and transportation and power sources shifted locations, the historic settlement pattern changed and shifted accordingly to new patterns that may have had little to do with the original settlement pattern, and may have obliterated it.

The first recorded, permanent Euro-American settlers entered Pike County in 1796 (Howe 1896). These settlers began permanent settlements, or the Initial Occupance. Initial Occupance is the first post-pioneer, permanent settlement imprint, typically established by pioneers from seaboard source areas from a time period extending to about 1850. The imprint is long-lasting, surviving subsequent changes in the settlement patterns or groups of the region (Kniffen 1965). The initial imprint within the project area will, therefore, be identifiable even today, evidenced in the style, type and construction techniques of surviving buildings, in land divisions, and in farming practices.

In 1982, Hubert Wilhelm published a detailed study of Ohio residents enumerated in the 1850 census. This mid-nineteenth century census is an excellent indicator of the regional and ethnic composition of the state population in the nineteenth century, since it recorded residents after the massive migration into the state, but before most first-generation settlers were outnumbered by their native-born descendants. In his study, Wilhelm tabulated who had been born in Ohio, who had migrated (from within the United States) or immigrated (from a foreign country) to Ohio, and

their place of origin. He determined place of origin and ethnic background by analysis of the recorded birthplace and surnames.

The cultural origin of the settlers influenced the cultural landscape they created. The 1850 census shows a sample of these migration and immigration trends in Ohio before they changed toward the end of the nineteenth century, with the immigration populace shifting from Western to Eastern Europe and the migration within the United States declining. Also, near the turn of the twentieth century, the cultural landscape was largely fixed and was less responsive to such vernacular influences as migration and immigration. The 1850 census samples the original cultural imprint within an area, which is usually retained by the buildings and built landscape created by the settlers. This imprint also influenced later settlement and development within the area (Wilhelm 1982).

The project area is in Seal and Scioto townships, Pike County. Since Scioto Township was formed from Seal in 1851, both townships are represented in the numbers for Seal in 1850 (Figures 6a and 6b). The population of Seal Township, in 1850 was 2,210. Of these people, 1,530 (64.52 percent) were Ohio-born Euro-Americans; 433 (19.59 percent) were migrant Euro-Americans; 247 (11.18 percent) were immigrant Euro-Americans, and 104 (4.71 percent) were Ohio-born, migrant or immigrant African-Americans. The number of African-Americans is relatively high for a township in Ohio. The largest number of immigrants were from Germany at 238 (10.77 percent). The largest number of Euro-American migrants were from Virginia at 220 (9.59 percent) and Pennsylvania at 76 (3.44 percent), with fewer migrants from New York. Seal Township closely resembles the percentages for Pike County in general (Figures 6a and 6b).

Since immigrants did not arrive in large numbers until after initial settlement, these numbers indicate that the first settlers of Pike County were predominantly from the Upland South cultural region. The part of Virginia where most of the settlers probably originated includes what was to become West Virginia, henceforth referred to as western Virginia. Most of the Pennsylvania migrants probably originated from the southwest part of Pennsylvania. Both are portions of a cultural region known as the Upland South (Wilhelm 1982).

One of the primary reasons emigrants from these states migrated to the Scioto Valley was because of the Virginia Military District, which included the land on the west side of the Scioto River. Although the project area is within Congress Lands, the influence of the Upland South settlers in the Virginia Military District spread throughout most of Pike County and the Scioto Valley, as it did in neighboring Ross County.

Little immigration occurred in the first 15 years of the nineteenth century. This lull in immigration was due to the disturbance of shipping caused by the Napoleonic Wars and the War of 1812. In fact, the Passenger Shipping Act of 1803 passed in Scotland actively discouraged emigration, as men were needed at home to work and to serve in the British army. After peace was achieved by 1815, transatlantic shipping was able to resume. In the seventeenth and eighteenth centuries, emigration had been used as a tool by European governments to rid their countries of "undesirables," whether political extremists, religious fanatics or criminals. With a change in European land policies of the nineteenth century, emigration was also encouraged or viewed as the only viable option by European peasants.

The Germans who settled in the Scioto Valley reflect their involvement with the canal construction and their subsequent purchase of nearby land. Many Germans left their homeland after the failed Revolution of 1848. These nineteenth century German immigrants often joined and reinforced the cultural ways of the westward-moving Pennsylvania Dutch, descendants of eighteenth century German immigrants (Wilhelm 1982).

The significant concentration of African-Americans in the VMD is an indication of the culture and origins of some of the more aristocratic settlers, who came from large slaveholding farms in the South. Many African-Americans settled along Pee Pee Creek, near Waverly. However, by 1886, Waverly had no African-Americans living within its village limits, a result of extreme racism which sparked some minor warfare (Howe 1896; Wilhelm 1982). There has been little written on nineteenth and early twentieth century African-American culture and origins in Ohio.

Land Use and Agriculture

Although Pike County includes part of the rich Scioto Valley, most of the county is much less productive and prosperous, and thus the county as an average is not outstanding in history and statistics. The Scioto Valley in Pike County shares many characteristics with Ross County, which is dominated by the valley. The hilly majority of the county is typical of most of southern and southeast Ohio.

Agriculture was the primary industry of the initial settlers in Pike County, developed immediately after settlement. Subsistence was provided by cultivating crops or raising livestock to feed the family and to sell locally for cash, or to barter for necessary items. Although new settlers were self-sufficient out of necessity, they still had to trade for basic supplies such as coffee, tea, salt, sugar, hardware, farm implements and cloth. All farm work was done by hand by a farmer and his family. Their first priority was to clear the land and plant crops. The primary income producers in

Pike County during the nineteenth century were corn, cattle, hogs, and wheat. Secondary and tertiary activities included producing hay, potatoes, tobacco, and raising horses (Jones 1983).

Settlers were at the mercy of the natural elements, so they quickly built a temporary cabin for shelter. However, they did not want to live in these small cabins any longer than necessary. When ready to build a more permanent dwelling, they received help from the neighbors. A house-raising, like a barn raising, cornhusking or quilting bee, was an important social activity due to the isolation of farmsteads (Jones 1983).

The average settler family cleared only 2 to 3 ha of their land per year. Generally they used a small portion of land (approximately 4 ha) for crops and reserved plenty for pasture for animals and forest for firewood and hogs. To produce much more than the family needed would have been pointless as early roads were not adequate to get goods to market to make a profit (Noble and Wilhelm 1995).

Corn was the most important crop of the initial settlers. It was grown primarily to be consumed on the farm by the family and by the livestock, particularly since the method of cattle feeding depended on the corn crop. It was invariably the first crop planted by the initial settlers since it could be planted no matter the topography or condition of the soil, producing immediate income for the farmer (Jones 1983).

Cattle raising was an industry brought by the settlers from western Virginia, Pennsylvania and Kentucky. The cattle received a minimum of care. They were generally free-range year-round, with their milk and meat sold locally (Jones 1983).

A specialized part of the cattle industry, cattle feeding (as opposed to grazing), was introduced to the Scioto Valley as early as 1804, when George Renick fattened an imported herd of cattle using the South Branch method on his farm in Scioto Township, Ross County, and successfully drove the cattle eastward to Baltimore (Bennett 1902; Jones 1983). The South Branch method entailed feeding corn to the cattle in three consecutive feedlots (Jones 1983). After hearing of Renick's success, the South Branch method was used as other Virginia settlers followed. As a result, the cattle feeding industry flourished in the Scioto Valley, reaching its peak in the 1840s (Jones 1983).

The Ohio & Erie Canal brought prosperity to the farms of the area, despite the decline of the cattle industry and the stagnation of hog production. The most important crop produced in the Scioto Valley after the arrival of the canal was corn. Wheat emerged during this time period as an important crop, primarily because successive crops of corn weakened the soil, allowing for the proper sowing conditions for wheat. Higher wheat production resulted in an

expansion of the milling industry within the county. Wheat, like corn, was a money crop, but unlike corn, it was rarely grown for consumption on the farm. The wheat was sold to gristmills, ground locally, and then shipped to out-of-state markets as flour. The Ohio & Erie Canal, and later the railroads, opened up more markets for the agricultural products produced in Pike County (Jones 1983).

Hog production developed simultaneously with the cattle feeding industry. The South Branch method allowed hogs to feed in the same feedlots after the herds of cattle. Hog raising emerged as a significant agricultural practice in the Scioto Valley starting in 1840, but it was not until the 1850s and 1860s when the industry achieved its number three ranking in the state. Fattened hogs were usually driven to pork-packing centers like Cincinnati, Chillicothe, and Marietta (Jones 1983).

Although the railroad made for faster transport to more markets in the East, railroad transportation increased the price of corn, which was easily exported to meet the high demand in the East. Therefore, fattening hogs became unprofitable. Because of the railroad, hog raising, while an important agricultural income producer in the Scioto Valley, probably never reached its full earning potential (Jones 1983).

While hog production reached a plateau because of railroad transport, the cattle industry declined. Again, the cost of corn was such that it was unprofitable to use it as feed. Corn then became a money crop in the county. By 1860, the cattle feeding industry in the Scioto Valley declined by half, and most of the cattle being produced were instead sold within the state of Ohio (Jones 1983).

In 1887, Pike County had about 61,000 ac of woodland, 60,000 ac of cultivated land, 50,000 ac of pasture and 6,000 ac unused. The major agricultural products were about 500,000 bushels of corn, 135,000 of wheat, and 84,000 of oats. Other products included rye, buckwheat, hay, potatoes, tobacco, butter, sorghum, maple syrup, eggs, grapes, wine, sweet potatoes, apples, peaches, pears, and wool (Howe 1896).

The agricultural economy continued to flourish after industrialization. Industrialization brought about innovations in agricultural implements, increasing the efficiency of farm production. Farm acreage continued to increase into the 1910s (Noble and Korsok 1975). This era saw most counties within Ohio shifting to manufacturing and other industries that developed, in large part, as a result of industrialization. Because of this, urban populations increased. This was not the case for Pike County, which remained rural, with only Waverly as a significant urban center where most of the manufacturing and other industrial production in the county was centered.

All but the west edge of Pike County is in the Southeastern Beef Cattle agricultural region of Ohio. Although this designation is based on modern statistics, it indicates a historical trend largely dictated by the physiography of the county, and thus is relevant here. In this part of Appalachian Ohio,

> [e]mphasis is on the production of livestock, with beef cattle normally producing from 30 to 55 percent of farm income. Because quality of soils is so low and slopes predominate in this region, field crops are not important. What little good land exists is in nearly every case devoted to corn, most of which is fed to livestock on the same farm. Other agricultural activities are dairying and the raising of hogs or poultry. Throughout the Appalachian area part-time subsistence farming is found on a greater scale than elsewhere. Some supplemental farm income is produced by sale of forest products (Noble and Korsok 1975:71-72).

Agricultural production collapsed during the Depression in the 1930s. As a result, many rural workers migrated to urban centers to find work, contributing to the suburban sprawl that commenced in the 1930s. Agricultural production experienced a slight gain in production after World War II (Noble and Korsok 1975). Farming practices changed, after World War II, from farms that traditionally fielded several crops on smaller amounts of acreage to farms that fielded only one crop on a larger amount of acreage (Kiefer 1972).

Transportation

Infrastructure played an important role in the historical economic development of Pike County, as it did elsewhere. Types of transportation included rivers, trails, roads and railroads. The use, construction and improvement of these transportation methods altered the pattern of settlement and farming. Settlers entered the area on the transportation routes that were available, and they and residents preferred to live near a means of transportation. With easier access to markets, it benefited the farmer to put more of his acreage under the plow, consequently increasing his income (Noble and Wilhelm 1995).

Throughout history, water travel has always been preferable to roads, as the latter were rarely in passable condition until recently. The Scioto River was a significant navigable natural waterway in Pike County, which was used by the early settlers to enter the area. Before the Ohio & Erie Canal was built, most Scioto Valley produce was rafted down the Scioto River to the Ohio and Mississippi rivers to Southern markets (Howe 1896). The Scioto probably fell out of use when the canal was operational and erosion from land clearing began to interfere with navigation.

The first routes used by the settlers were the Native American trails, which often dictated the first settlement locations. Ohio possessed a network of trails weaving through the forests and prairies and complementing the system

of waterways. A few were of transcontinental importance, and some were of regional importance, and many were minor trails connecting one obscure Native American village to another.

Mapping and descriptions of these trails tend to be ambiguous and conflicting, with early roads often confused with the older and somewhat different trails. The importance of some trails have been exaggerated or obscured simply because one was recorded and another was not. Various trails were in different levels of use at different times, as dictated by the location of Native American towns, availability of open land, and warfare (Conway 1965; Emmett Conway, personal communication 1991-1996).

The trails generally followed the terrain to the best advantage, due to the instincts of the animals that initiated them and the needs of the Native Americans who utilized and improved them. They were as direct as possible between two important places, ran along ridges and uplands to stay dry and defensible, and tended toward passes in hilly terrain. Where they ran through valleys, the trails were located alongside streams to be close to a source of water and water transportation. They crossed streams at shallow, natural fords or confluences. Trails were located on hillsides only to get from high to low points on the smoothest and most direct incline (Conway 1965; Hulbert 1900; Emmett Conway, personal communications 1991-1996).

Four distinct trails are indicated in Pike County. The first and most important was the "Scioto Trail" or "Warrior's Path," running through the Scioto Valley and connecting the Ohio River at the mouth of the Scioto with Lake Erie at Sandusky Bay. This was one of the most important north-south trails in the Ohio Country, connecting to trails feeding southward into Cherokee territory. The Scioto Trail in Pike County ran along the west side of the Scioto River. At what is now Waverly, it headed northward towards Chillicothe and cut across a low divide, bypassing the eastward swing of the Scioto River. This route is approximated by U.S. 23 north of Waverly, and State Route 104 south of Waverly (Conway 1965; Hulbert 1900; Lewis and Dawley 1902; Mills 1914).

Four additional trails interrelated with the Scioto Trail were also in the Scioto Valley in Pike County. One trail paralleled the east side of the river, now approximated by U.S. 23 south of Piketon, and North and Central River roads north of Piketon. This was the trail that Christopher Gist traveled in 1750. A second paralleled the west side from Waverly northward. Two additional connecting trails crossed the Scioto. One was near current U.S. 23 or Prairie Road between Piketon and Waverly, and another is approximated by State Route 220 southeast of Waverly (Conway 1965; Lewis and Dawley 1902).

The second distinct trail is an unnamed route running east-west through what is now Piketon. It is approximated by Beaver Road, Zahns Corner Road, probably Prairie Road, and farther west, State Route 220 and 124. It primarily connected Pee Pee, the early settlement near Piketon, to the salt works at what is now Jackson, Ohio (Conway 1965; Lewis and Dawley 1902; Emmett Conway, personal communication 1991-1996).

Two other distinct trails were in the western part of Pike County. One was the Pickawillany Trail, running northwestward. Another was the route followed by Colonel Robert Todd in a military expedition in 1787, and later improved by Ebenezer Zane as Zane's Trace (Conway 1965; Lewis and Dawley 1902; Schneider and Stebbins 1973).

In 1796, a year after the Greenville Treaty made most of Ohio safe for settlement, Congress contracted Ebenezer Zane to open a road between Wheeling, West Virginia, and Maysville, Kentucky. Known as Zane's Trace, this road ran through the western part of Pike County, running through what is now Morgantown and Latham. This trace represented the first attempt to open a public thoroughfare through the interior of the Northwest Territory. Although it was at first only a horse trail and not a wagon road, with its opening, settlement of the region increased rapidly and Zane's Trace became an important part of the Ohio Road system. In 1798 it was designated as a post road, and U.S. mail was carried on the road on horseback. In 1804 the trace was improved into a 6.1-m wide road (Bond 1941; Schneider and Stebbins 1973).

By the time of an 1807 state map, the Scioto Trail was apparently a road which crossed the Scioto River between Waverly and Piketon and ran on the east side of the river, essentially the same route as U.S. 23 (Smith 1977). The part of the east-west trail east of Pee Pee was improved early on as a road to the salt works at current Jackson (Emmett Conway, personal communication 1991-1996).

Getting goods to market was a significant hurdle for early Ohio farmers, and interest in canals began as early as statehood. Many early roads were merely enhanced trails and these were virtually impassable when the spring rains arrived. Merchandise could be shipped to New Orleans on the rivers, but this market was frequently glutted, the prices low, spoilage high, and the round-trip treacherous. Some goods could be taken overland to Cleveland, then by lake ships to the Erie Canal to New York. This was also impractical. Merchants could get store goods from Baltimore, Philadelphia, and New York shipped only by huge freight wagons to Pittsburgh, where the merchandise was either loaded on river steamers to Portsmouth or wagoned over Zane's Trace to Chillicothe (Grabb 1985). State legislators realized that if they were to induce more people to come to Ohio, they would have to ensure that these prospective

settlers had market access. The completion of New York's Erie Canal inspired Ohio officials to build their own canal system, which began with the 1822 act that authorized preliminary surveys for canal routes. The Canal Act of February 4, 1825, authorized construction (Canal Society of Ohio 1975; Gieck 1992).

Built from 1825 to the 1840s, the Ohio canal system consisted of two main canals and many public and private branch canals, totaling nearly 1,000 miles of waterways and almost 30 different names (Canal Society of Ohio 1975:4; Gieck 1992). The Ohio & Erie Canal, the eastern of the two main canals, ran from Lake Erie at Cleveland through Akron, Newark, and Circleville to the Ohio River at Portsmouth. It was ceremonially begun July 4, 1825 near Newark. The Ohio & Erie Canal was also known as the Ohio Canal. (Canal Society of Ohio 1975; Gieck 1992; McClelland et al. 1905).

In October 1832, the Ohio & Erie Canal was completed from Cleveland through Waverly to Portsmouth and opened for traffic. In one year, a complete revolution took place in the trade of the Scioto Valley with the completion of the canal. The canal was not exclusively used for the transportation of produce, but for people as well. Waverly began and grew in population because of its favorable location on the canal. A significant number of Irish and German immigrants came to the area for fertile farmland and to work on the construction of the Ohio & Erie Canal during the late 1820s (Evans 1987; Gieck 1992; Grabb 1985).

The Ohio canal system began to decline after the railroads were established in the 1850s and the canals became suddenly outdated to many citizens. The larger amount of material transported by the railroad, the railroad's faster speed, and its year-round operation allowed the railroad to overshadow the canal in economic importance. Income from the canals rapidly dropped after their peak in 1853, and damage from floods in 1858 and 1860 created additional expenses. After repairing the canals, the state leased the entire public system in 1861 to a consortium of six businessmen. They barely maintained it until they returned it to the state in 1878, after which the state neglected the system the same way. From that point the canals declined even faster. General lack of maintenance and design flaws of the Newark Summit led to the disuse of the entire southern part of the Ohio & Erie Canal by the late 1880s. In 1911, the state officially abandoned the canal from the Dresden Side Cut to Newark and from Columbus to Portsmouth. The flood of 1913, the worst in the state's history, severely damaged or destroyed much of what remained. Afterward, the state abandoned the entire canal system of Ohio and began selling off the land (Canal Society of Ohio 1975; Legislative Canal Commission 1914).

The state of Ohio apparently conducted a survey of most of the state-owned canals from 1892-1911, creating a 24-volume set of canal plat maps now held at the Ohio Historical Society (Ohio Department of Public Works 1891-1904, 1912). This map apparently indicates all structures on and directly associated with the canal.

The Scioto Road became the Columbus & Portsmouth Turnpike in 1840. Like other turnpike companies, they probably improved the road by rerouting some parts, grading the bed, and paving it with gravel or wood planks. This allowed improved transportation of goods and people in the area and better access for properties along the road. A bridge was built across the Scioto River in 1880 on the road between Waverly and Piketon, apparently replacing a long-lasting ford at that location (Howe 1896, Jordan 1943; Knepper 1989; Utter 1942).

The railroad arrived late in Pike County, about 25 years after the industry first made its major appearance in the state. Passenger and freight stations were built at many towns along the railroads, which permitted easier shipping out of farm produce and shipping in of merchandise and materials. Three railroads were built through Pike County.

The Scioto Valley (SV) Railroad was built north-south from Portsmouth to Columbus, and first operated in Pike County in 1877-1878. It ran on the east side of the Scioto Valley to Piketon, and crossed over to the west side near Waverly. The SV railroad made a connection with the Norfolk & Western (N&W) Railway in 1892, and soon became a part of the N&W. Apparently during construction of the USDOE PORTS plant in 1952, a spur was built from the N&W to the north side of the federal reservation to ship in materials and connect with the Chesapeake & Ohio (C&O). In 1982, the N&W became Norfolk Southern. This railroad line is still active (Drury 1985; Sheldon 1924).

The second railroad, the Scioto, Jackson & Pomeroy, ran east-northwest through the county in 1878-1879. It ran through the south side of Waverly and eastward after crossing the Scioto River. In 1905, it became the Detroit, Toledo & Ironton. The line was abandoned after becoming a part of the Grand Trunk Western Railroad in the early 1980s.

The third railroad was built into the county in 1917 by the Chesapeake & Ohio Railway, and was designed to avoid towns and road crossings. Thus, it had a limited influence on the local economy. This line, named the Chesapeake & Ohio Northern (C&ON), ran north from the Ohio River through the Teays Valley to the N&W east of Waverly, where it connected with that railroad. This allowed C&O trains to run from Kentucky and West Virginia to Columbus and northward. However, in 1926, due to restriction on the N&W line, the C&O continued the C&ON line northward to

Columbus with the Chesapeake & Hocking Valley Railway. In 1930, both became a part of the C&O. The C&O became a part of the Chessie System in 1980. This line is still active (Drury 1985; Sheldon 1924).

With the popularity of bicycling and the growing availability of the automobile, improved roads became important in the 1900s and 1910s. The road system existing in the early twentieth century was largely unpaved paths between individual farmer's parcels. The railroads dominated the shipping of goods and passengers. The push for a paved national highway system occurred in the first three decades of the twentieth century. At first the automobile was seen as a means of short-distance leisure transportation for the well-to-do. But by the eve of the First World War, both longer-distance passenger driving and the early use of motorized trucking led to the organization of movements for publicly financed hard-surfaced roads. These roads, the supporters believed, should be linked in a systematic manner that would tie distant points together much like the existing rail network.

As early as 1910 the state began thinking in terms of a road network oriented toward the automobile. That year the Highway Department published a bound set entitled *Highway Maps of Ohio* that showed, county by county, the condition of the sectional roads. In 1911, state roads were designated with numbers, and state funds were made available for their maintenance. As an important state road, the Columbus & Portsmouth Road was probably paved and improved in the 1910s or 1920s, allowing improved transportation. In 1925, it was designated U.S. Route 23, running from Portsmouth through Columbus and Toledo to Mackinac, Michigan. U.S. Route 23 was one of 16 roads in Ohio that were considered of primary importance for interstate or continental traffic (Aumann 1954; Ohio Department of Highways 1930).

The importance of the roads increased as the railroads decreased, especially after the 1950s.

3.0 METHODS

The methods of investigation utilized to identify and inventory archaeological sites during the archaeological survey are discussed below.

3.1 Predictive Model[3]

A predictive model was developed for the project with the goal of understanding the regional archaeological settlement pattern such that the location of archaeological sites within the USDOE PORTS facility boundary could be

[3]Adapted from Dobson-Brown et al. 1996

predicted with a high degree of confidence. The model was developed based on variations in plant communities, topography, soil makeup, and a knowledge of previously identified archaeological sites within the greater area.

For the present project, data were collected on the following variables for a set of previously identified archaeological sites within a 6.5-km (4 mi) radius of the project area: site type, geomorphological setting in terms of local topography, soil type, drainage, site aspect, stream rank, elevation above mean sea level, percent slope, horizontal distance to nearest water source, elevation above nearest water source, distance to the nearest confluence, site area, sine and cosine of aspect, soil pH, and soil productivity (measured by corn productivity in bushels per acre). For comparison, a set of 25 points was randomly selected from the study radius to represent nonsite area -- the same data were collected for each of these points with a value of 1 m^2 assigned as site area.

The project was then characterized into a series of habitats based on plant communities which were identified and their boundaries established in previous environmental studies for the USDOE PORTS facility (Figure 7; Table 4) [Dobson-Brown et al. 1996]. Sites within the greater study area were assigned to a habitat type and the data entered into the computer. A multivariate discriminant analysis was run using the quantifiable attributes of elevation, elevation above water, distance to confluence, sine and cosine of aspect, and soil productivity. When these variables are entered into the model, the results indicate that 100 percent of nonsite points are classified as nonsites. Lithic scatters were correctly identified 66 percent of the time, while 4 percent of lithic scatters were identified as nonsites and 30 percent as isolated finds. Isolated finds were correctly identified as such 75 percent of the time with 25 percent mis-identified as lithic scatters. This suggests that the model can predict with a high degree of confidence where prehistoric sites will be located and where they will not be found. Further refinement of the variables is possible with additional work. A map was produced indicating areas of high and low probability for the location of prehistoric archaeological sites at the USDOE PORTS facility. Additionally, based on information from aerial photographs of the facility, coupled with a knowledge of successional plant communities, predictions were made for the location of historic resources (Table 4).

3.2 Survey Methods

In order to facilitate fieldwork, the USDOE PORTS facility was investigated by quadrant (Quadrants I-IV). Each quadrant was divided into survey areas (Figure 2; Table 5). Nine survey areas were designated in Quadrant I (survey areas QI, 1-7) and Quadrant II (survey areas QII, 8-9) during the preliminary archaeological survey (Dobson-Brown et al 1996), while two survey areas were designated for Quadrant III (survey areas QIII, 1-3), and 32 survey areas

were designated for Quadrant IV (survey areas QIV, 1-32) during the archaeological survey conducted in April and May of 1997.

Testing was limited to areas not occupied by plant-related buildings or structures, sanitary landfills, or lagoons. Outside of the Perimeter Road, buildings represented a rather insignificant percentage of the overall survey area. However, the Don Marquis power station in Quadrant III and sanitary landfills and sludge lagoons in Quadrant IV did occupy a significant portion of this area of the USDOE PORTS facility property (Figure 2).

When an archaeological site was located, it was assigned a field site number. As with area numbers, field site numbers were generally assigned sequentially and ranged from Field Site 1 to Field Site 38. Site dimensions and internal features were mapped and drawn to scale, and prominent internal features or aspects of each site were photodocumented. All artifacts recovered were bagged and recorded by project and site provenience, and were released to the custody of Jennifer Chandler of LMES, until they could be scanned and cleared by technicians from Health-Physics (Plate 1) who then released these artifacts to the custody of ASC Group, Inc., for artifact cleaning and analysis. After laboratory analysis, two field sites, Field Sites 29 and 35, were eliminated because these sites represent recent, disassociated construction debris or recent, modern scattered trash. After initial analysis, each field site determined to be a bona fide archaeological site was assigned an OAI number. Sites which contained extant and relatively intact architectural structures or buildings or remnants of these were also assigned an Ohio Historic Inventory (OHI) number.

During the preliminary archaeological survey in September 1996 (Dobson-Brown et al. 1996), survey methods were determined by the conditions (i.e., ground cover and signs of disturbance) for each survey area. Investigations were limited to Quadrants I and II and involved a combination of visual inspection, surface collection, and shallow shovel soil inspections (with total depths less than five inches below ground surface).

The archaeological survey conducted from April to May 1997, utilized a modified approached derived from the predictive model (Dobson-Brown et al. 1996) in order to determine survey areas suitable for shovel testing. Shallow shovel tests were used in high probability habitat-type areas that were lacking significant disturbance and exhibited <15 percent slope. The recent archaeological survey focused on investigations of Quadrants III and IV and involved a combination of visual inspection, surface collection, shovel testing to a maximum depth of 30 cm (12 in) below surface, and deep shovel testing in designated areas below 30 cm (12 in). Shovel tests were also excavated in those portions of Quadrants I and II that were identified as suitable for shovel testing during earlier survey efforts.

3.2.1 Visual Inspection

Visual inspection was conducted over the entire USDOE PORTS facility outside of the Perimeter Road. As the term implies, visual inspection involves examining an area to determine if it has been disturbed and, if so, to evaluate the extent and possible nature of the disturbance. In addition, the visual inspection was useful for locating remnants of structures or buildings, or other aboveground cultural remains.

3.2.2 Surface Collection

Areas which were relatively level, devoid of obvious severe disturbance, and covered with little or no vegetation (i.e., >50 percent surface visibility) were surface collected. Surface collection was accomplished by setting up a series of transects, with each crew member assigned to walk an assigned transect, examining the ground surface for cultural remains. If cultural remains were located, a field site number was assigned and the immediate area was inspected more closely to determine the presence or absence of additional cultural remains and to estimate artifact distribution and site size. Singular, isolated historic artifacts of obviously recent temporal affiliation (i.e., plastic shotgun shells, aluminum beverage cans, etc.) were not collected, nor was a field site number assigned.

3.2.3 Shovel Test Pits

Portions of survey areas that were located in high probability habitat types that were relatively level, devoid of obvious severe disturbance, and had excessive vegetation cover (i.e., > 50 percent surface visibility) were subjected to shovel test pits (Figure 2; Plate 2). Shovel tests pits were excavated at a 15-m (50 ft) interval, with each unit measuring approximately 45 cm (18 in) sq and were restricted in their total depth to 30 cm (12 in) as requested by Jennifer Chandler (LMES). In cases where the subsoil was encountered above this depth, the shovel test pit was excavated at least 5 cm (2 in) below the topsoil/subsoil interface. The walls and floor of each shovel test pit were then troweled clean to determine both the depth of the plow zone (if present) and to see if in situ cultural features were present. The backdirt from each shovel test pit was screened through .25-in (.6 cm) hardware cloth to recover potentially small cultural remains. If artifacts or features were encountered, a field site number was assigned, and the artifacts were collected and bagged by survey area, transect, shovel test pit number, and field site number. Additionally, radial shovel test pits were excavated at 7.5-m (25 in) intervals in the four cardinal directions around the original shovel test pit in order to determine site area and artifact density.

Deep shovel test pits were restricted to three survey areas (survey areas QIV A-11, QIV A-12, and QIV A-30), located along alluvial terraces adjacent to Little Beaver Creek in Quadrant IV (Figure 2). After an excavation permit had been obtained from the USDOE PORTS facility, deep shovel test pits were excavated by hand at a 20-m (66 ft) interval to a depth of 50 cm (20 in), after which a 2-cm (.75 in) diameter soil core was placed at the bottom of each deep shovel test pit to permit sampling as deeply as possible (Plate 3). The average total depth for these deep shovel test pits was approximately 91 cm (36 in). The backdirt from deep shovel test pits was screened in the same manner as the standard shovel test pits, and if any artifacts or features would have been encountered, they would have been recorded and recovered in the same manner as well.

3.3 Artifact Analyses

This section briefly describes the system employed to analyze and interpret the artifacts recovered during the preliminary and recent archaeological surveys within the USDOE PORTS facility boundary, excluding areas within the Perimeter Road. All artifacts were cleaned and analyzed by staff members of ASC Group, Inc., in Columbus, Ohio.

3.3.1 Lithic Analysis

Lithic artifacts, the group of artifacts recovered most often from aboriginal sites, have been classified by morphological characteristics into descriptive classes (Skinner and Norris 1981). As noted by Greber et al. (1982:72): "The objective of the classification is to provide a system for organizing artifacts which is relatively independent of the observer, which is repeatable, and most importantly, which uses only information directly observable for the artifacts themselves.... Once these descriptive classes have been established, a number of types of analyses can be conducted. One type of analysis is a comparative study to obtain possible temporal or cultural associations for recovered artifacts."

Artifacts from the lithic categories defined below were recovered during the archaeological surveys:

Flake/Flake Fragment: unmodified flake or fragment thereof, generally then exhibiting a bulb of percussion; includes primary and secondary flakes;

Fragment: blocky or angular chunks of flint which show no indication of reworking or being used as cores. In addition, shatter that could not be assigned as unmodified flakes were also included in this category;

Biface/Biface Fragment: includes bifacially worked objects in the advanced or early stages of reduction, or fragmentary bifacially worked objects which are not projectile point/knife fragments;

Projectile Point/Projectile Point Fragment: "bifacially flaked artifact with hafting modifications and a pointed tip opposite the hafting area" (Boisvert et al. 1979:137). These artifacts are differentiated from drills

by broader, thinner blades and from hafted end scrapers by longer blades, but could have served functions other than as projectiles (i.e., knives).

Identification of material type was restricted to an inspection and classification through comparison of the visual properties of each piece. The following morphological variables were evaluated: color, fossiliferous and mineral inclusions, and luster. Source distinctions were restricted to major types which were found to dominate the assemblages.

Below, brief descriptions of the morphological characteristics and known regional distributions of the raw material types recovered during these archaeological investigations are presented:

Upper Mercer

The Upper Mercer member of the Pennsylvania system stretches across Ohio from Columbiana and Mahoning counties in northeastern Ohio to Scioto and Lawrence counties on the Ohio River (Converse 1973; Stout and Schoenlaub 1945). Characteristically, Upper Mercer is a black, glossy, fossiliferous flint, but milky, straw-colored and pinkish flint and chert also occur (Flint 1951). It can also be bluish-black, and mottled and dull gray varieties are also common (Converse 1973; Morgan 1929; Stout and Schoenlaub 1945). Used synonymously with the term Upper Mercer are the terms Coshocton, Nellie, and Nellie Blue (Tankersley 1989). The bulk of Coshocton is glassy black or gray-black chert with mottling of a gray or cream color. Nellie is dull gray chert with dark gray streaks resembling wood grain. A high-quality variety of Coshocton is a lustrous translucent gray flint that may be banded with streaks of white or yellow and is often mistaken for Flint Ridge material, i.e., Vanport chert (Converse 1973). Zaleski is a lustrous jet black flint or chert with no mottling, but smaller manufactured artifacts from it are hard to distinguish from Coshocton (Converse 1973). As there is much overlap between all of these descriptions and since only macroscopic visual attributes were used, the general term Upper Mercer was arbitrarily selected to encompass all of these varieties.

Vanport

Vanport limestone occurs within the Pennsylvanian system, which extends northward from Scioto and Lawrence counties on the Ohio River to Stark County in northern Ohio. The flint which outcrops in this formation occurs in a wide range of mottled colors, is sometimes banded, and is generally is of high lustrous quality. Outcrops of Vanport have been reported in portions of Perry, Muskingum and Licking counties. The most notable chert deposit within this member occurs in its central portion in Licking and Muskingum counties and is known as Flint Ridge flint. This high-grade chalcedony was used extensively throughout prehistory, as evidenced by numerous aboriginal quarry

pits on Flint Ridge itself, and by the fact that diagnostic artifacts were continually fashioned from it (DeWert 1980; Stout and Schoenlaub 1945).

Delaware/Columbus

Delaware chert occurs in bands and nodules of Devonian age in the Delaware limestone formation extending from the Scioto River in Pickaway County north in a narrow band through Franklin, Delaware, Marion, Crawford, Seneca, Huron, and Erie counties, and is also present in northwest Ohio in Lucas, Wood, Henry, Defiance, and Paulding counties. Extensive outcroppings occur along the Olentangy River and the eastern cliffs of the Scioto River. Eroded nodules, some of large cobble Size, occur frequently in the streambeds of the Scioto drainage system (Stout and Schoenlaub 1945). Although Delaware chert is commonly dull and grainy, examples of semiglossy, fine-grained flint have frequently been reported (Converse 1973). However, no examples are semitranslucent to translucent. Coloration consists of earth tones ranging from thin to dark grayish brown (Vickery 1983). Tiny white ostracod inclusions and thin veins of blue, white or translucent quartz have been noted in some examples (Converse 1973; Vickery 1983). It has been suggested that the darker-colored cherts occur more frequently south of Columbus and the lighter colored to the north (Converse 1973). However, eroded nodules show a gradation from a white limy cortex through lighter grays and tans to dark grays and browns.

Unknown

This category includes all cryptocrystalline lithic raw materials that could not be definitively identified based of their macroscopic morphological characteristics.

3.3.2 Historic Material

Historic artifacts were sorted using a functional scheme that Ball (1984) adapted from South (1977). Within this hierarchical scheme, artifacts are placed into groups which reflect their general function. The following functional artifact groups were identified during the archaeological investigations:

Kitchen Group: Composed of those artifacts associated with food storage, preparation, and consumption. It constituents are ceramics, bottle glass, canning jars, animal bone, kitchen utensils pots and pans, and tableware.

Architectural Group: Consists of artifacts directly related to the built, social environment. It constituents are flat glass, nails, bricks, roofing materials, and metal hardware.

Furniture Group: Consists of items related to home furnishings and decoration, such as escutcheon plates, drawer pull handles and knobs, casters, lamp parts, thick shelving glass, ceramic (typically redware) flowerpot sherds, and figurines.

Clothing Group: Composed of artifacts associated with clothing, i.e., cloth, buttons, clothing eyes and hooks, buckles, thimbles, scissors, straight pins, and glass beads.

Activity Group: Artifacts unrelated to the other functional groups comprise this category. Items in this group include toys, gaming devices, tools, fishing apparatuses, musical instruments, and stable (horse care) artifacts. This group also serves as a miscellaneous category for those items (scrap metal, bolts, wire, unidentifiable glass, etc.) which do not belong to other groups.

Research conducted by South (1977) and Ball (1984) indicated that the relative percentage of each functional group represented fell into distinctive patterns which may be used to define either the site type (South 1977) or the primary activities represented at a given site (Ball 1984). This system is called Artifact Patterning Analysis. Although Ball's (1984) study was originally concerned with nineteenth century Ohio Valley sites, the percentages may also be used for other sites with similar temporal or technological affiliations. In order to utilize Artifact Patterning Analysis, it is important to obtain an adequate sample of artifacts from each site. An adequate sample is generally at least 100 artifacts. For this reason, this analytical method was not applied to any of the archaeological sites identified within the boundary of the USDOE PORTS facility, since none of the historic archaeological components identified produced □ 100 artifacts.

Historic artifacts which exhibited temporally diagnostic manufacturing processes, markings, or decorations were compared with various references (c.f. Deiss 1981; Jones and Sullivan 1989; Magid 1984; Nelson 1968; Toulouse 1969, 1977) in order to place the historic components from different sites into specific historical temporal periods.

3.4 Artifact Curation

All notes, photographs, and artifacts associated with the archaeological surveys conducted at the USDOE PORTS facility will be returned to the proper USDOE authorities for final disposition.

4.0 RESULTS OF THE ARCHAEOLOGICAL SURVEY

The preliminary archaeological survey began on September 16, 1996, and concluded on September 27, 1996, while the recent archaeological survey began on April 23, 1997, and concluded on May 13, 1997. For both investigations, the field crew was supervised by John F. Schweikart, with Chris McLaren acting as crew chief. The following technicians worked on this project at various times: Ann Marie Bouhasin, Gary Brownstein, Tina Hartman,

Jennifer Lavris, and Jeremy Thornburg. Flora Church, Ph.D., served as the principal investigator and Shaune M. Skinner, M.A., was the project manager.

The two archaeological surveys resulted in the identification of 36 previously undocumented archaeological sites (33 Pk 184-33 Pk 219) within the USDOE PORTS facility boundary (Figure 2; Table 6). Fourteen of these sites (33 Pk 184-33 Pk 197) were first identified during the preliminary archaeological survey, and the remaining 22 sites were identified during the recent archaeological survey. Thirteen sites were the remnants of historic farmsteads (33 Pk 184, 33 Pk 185, 33 Pk 187, 33 Pk 193, 33 Pk 194, 33 Pk 195, 33 Pk 197, 33 Pk 203, 33 Pk 211, 33 Pk 212, 33 Pk 213, 33 Pk 217, and 33 Pk 218 [PIK-205-12]), seven sites represent historic scatters or open refuse dumps (33 Pk 191, 33 Pk 192, 33 Pk 200, 33 Pk 202, 33 Pk 209, 33 Pk 215, and 33 Pk 216), two sites (33 Pk 199 and 33 Pk 201) represent isolated historic finds, four sites represent USDOE PORTS plant-related structural remnants (33 Pk 188, 33 Pk 190, 33 Pk 196, and 33 Pk 219), and one site (33 Pk 214 [PIK-207-12]) represents a historic cemetery. Prehistoric sites are represented by five isolated finds (33 Pk 198, 33 Pk 204, 33 Pk 205, 33 Pk 207, and 33 Pk 208), and two lithic scatters (33 Pk 186 and 33 Pk 210). Two sites contained both a prehistoric and a historic temporal component: 33 Pk 189 [PIK-206-9] represents a prehistoric isolated find/historic cemetery, and 33 Pk 206 represents a prehistoric lithic scatter/historic farmstead (Table 6).

The literature review revealed that no prehistoric sites had been previously documented within the USDOE PORTS facility boundary; however, an abundance of prehistoric sites was identified within the 6.5-km (4 mi) study radius, suggesting that prehistoric sites were likely to be present (Table 1). Concurrently, the identification of some 52 buildings from turn-of-the-century cartographic sources also suggested that historic archaeological resources were likely to be present within the current boundaries of the USDOE PORTS facility (Figure 4). Both of these conclusions were borne out as a result of the preliminary and more recent archaeological surveys.

Of the total of 36 archaeological sites identified during these two archaeological surveys, 15 are recommend for preservation or further work (Table 6). Several criteria have been established to interpret the significance of archaeological sites in terms of potential eligibility for nomination to the NRHP. One particular category of cultural resources not subject to evaluation for their potential eligibility to the NRHP are historic cemeteries. Nevertheless, it is recommended that these important historical sites be avoided or preserved if at all possible. A discussion of the criteria for determining potential eligibility for inclusion on the NRHP is presented in the following section (Section 4.1) to

facilitate the review of sites recorded during the archaeological surveys. Following the discussion of the NRHP criteria is a brief summary of the archaeological sites that are not recommended for further work; these are discussed in terms of prehistoric isolated finds, prehistoric lithic scatters, historic isolated finds, historic dumps or scatters, historic plant-related sites, and one historic farmstead remnant (Section 4.2). Each site that is recommended for avoidance, preservation , or further work, is broken down into the following categories and is described in detail as a prehistoric lithic scatter, historic cemeteries, and historic farmsteads (Section 4.3). Following this discussion, the results of this Phase I reconnaissance survey will be considered in terms of the predictive model (Section 4.4).

4.1 NRHP Criteria for Eligibility Assessment[4]

The NRHP Criteria for Evaluation were developed to determine whether sites qualify for inclusion in the NRHP. These criteria are standards designed to evaluate the significance of sites. The quality of significance is present in sites that possess integrity and are determined to:

A. be associated with events that have made a significant contribution to the broad patterns of history;

B. be associated with the lives of significant individuals in the past;

C. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable identity whose components may lack individual distinction; or

D. have yielded, or may be likely to yield information important in prehistory or history (National Park Service 1991).

A site must meet one or more of the four criteria to be considered significant. Under Criterion A, a site must be associated with important events in history or prehistory. It must have a strong association with the event and must possess integrity (National Park Service 1991). To be considered eligible under Criterion B, a site must be associated with an individual whose activities were important within the context of a significant theme. Generally, only those sites that illustrate the individual's important achievements are considered. Items that must be addressed include why the individual was important and how the particular property is a good example of the individual's significant activities or contributions (National Park Service 1991).

[4]Adapted from Church et al. 1997

To be considered under Criterion C, sites must meet one or more of the four components. In order to embody the distinctive characteristics of a type, period, or method of construction, the way in which the property was conceived, designed, or fabricated by a people or culture must be illustrated. Representing the work of a master indicates that the technical and/or aesthetic achievements of a craftsman must be illustrated. Resources that represent a significant distinguishable entity whose components may lack individual distinction are defined as districts. Districts are typically historic environments that convey a sense of time and place by way of the survival of various features and the survival of relationships among the features (National Park Service 1991).

To be considered under Criterion D, a site must have yielded or must possess the potential to yield important information concerned with some aspect of history, or prehistory, including events, processes, institutions, design, construction, settlement, migration, ideals, beliefs, lifeways, and other facets of the development or maintenance of cultural systems. Sites that have yielded important information and that have the capacity to provide additional information, and sites which have not yielded significant information but are likely to do so can be considered under Criterion D. Consideration of a site must address whether the site has information to contribute to the understanding of history and prehistory and whether the information is important (National Park Service 1991).

To be included in the NRHP, a site must meet one of the criteria for evaluation and must possess integrity. Integrity may be defined as the authenticity of a site's historic identity, demonstrated by the survival of physical characteristics that existed during the historic or prehistoric period of the site. A site that has retained the physical characteristics that it possessed in the past has the capacity to convey associations with historic patterns or persons, architectural or engineering design and technology, or information about culture or people (National Park Service 1991).

Knoerl (1989) indicated that one way to measure integrity of a site was to ascertain how well the activity or its fragments can be interpreted. There are two aspects to integrity: visibility and focus. Visibility includes the actual amount of physical remains present at the site, regardless of whether or not they can be interpreted. The ability to interpret archaeological remains, whether a site has good or poor visibility, is referred to as focus. While visibility increases in sufficiency as more numerous and diverse artifacts are recovered, this does not hold true for focus, because some items may qualitatively convey greater amounts of information. Visibility also increases as patterns in artifact distribution are recognized and in situ remains are encountered. If these aspects of the site provide information about site activities, the focus will increase.

Integrity is related to the degree of site disturbance resulting from cultural and natural processing including, but not limited to, rebuilding, plowing, weathering, burrowing, and erosion. Integrity is concerned with determining the extent of alteration to the original patterning of the artifacts. Visibility has to do with the portion of the site which still remains, and focus addresses the informational content of those remains. If disturbance is sufficient to compromise site integrity, the site is ineligible for inclusion in the NRHP. The degree of visibility and focus exhibited by a site will determine integrity (Knoerl 198; National Park Service 1991).

A total of three different combinations of visibility and focus are discussed by Knoerl (1989). A site with good focus and good visibility possesses integrity and can provide important information. A site that exhibits good focus and poor visibility generally will not have enough integrity beyond its potential to yield important information. A site that is characterized by poor focus cannot be interpreted archaeologically and, regardless of its variability, has probably lost its integrity (Knoerl 1989).

4.2 Sites Not Recommended for Preservation or Further Work

4.2.1 Prehistoric Isolated Find Sites

A total of five sites produced one prehistoric artifact each and were assigned a minimum size of 1 sq m (Table 7). As Table 7 indicates, these isolated finds were located on a variety of landforms and were all identified during shovel test pitting. One was located on a preglacial terrace in an old field habitat (33 Pk 198), one was located on a second terrace also in an old field habitat (33 Pk 207), and three were located on hill/ridgetops in scrub thickets and an old field habitat (33 Pk 204, 33 Pk 205, and 33 Pk 208).

None of these sites produced temporally diagnostic artifacts, so all five of these isolated finds have been given an unassigned prehistoric cultural/temporal affiliation. Four of these finds yielded flakes or fragments, made from Delaware/Columbus, Vanport, and unknown raw materials (Table 7). One site (33 Pk 208) yielded a crudely-worked biface made from an unknown raw material (Plate 4).

These five sites have poor visibility and focus, and thus have low potential for producing additional important information concerning the prehistory of the region. Therefore, no further work is recommended for sites 33 Pk 198, 33 Pk 204, 33 Pk 205, 33 Pk 207, and 33 Pk 208.

4.2.2 Prehistoric Lithic Scatter

A single lithic scatter, 33 Pk 186, was identified which does not require further work (Table 6). Site 33 Pk 186 was first identified during visual inspection and surface collection conducted during the preliminary archaeological survey. This site was located on a hilltop/promontory covered in scrub thicket and upland mixed hardwoods along the southwestern portion of Quadrant 1, Survey Area 1 adjacent to the USDOE PORTS facility boundary (Figure 2). Its location provided a panoramic vista overlooking the Scioto Township Works I (33 Pk 22) in the valley below and the Scioto River farther to the west. During the preliminary investigation, a single projectile point fragment which had been broken at the base (Plate 5) was recovered from the two-track road paralleling the plant facility boundary fence (Table 8). This projectile point was made from Upper Mercer chert and may represent a side-notched form; however, not enough of the base was present to assign this point fragment to a particular diagnostic type. During the archaeological survey conducted in April and May of 1997, 14 shovel test pits were excavated across the top of this hilltop/promontory. Two shovel test pits yielded a total of two broken flakes, one made from Upper Mercer material and the other made from Delaware/Columbus material (Table 8). This site measured approximately 15 m (49 ft) north to south by 145 m (475 ft) east to west. The two broken flakes came from shovel test pits excavated on the level hilltop while the projectile point was recovered on fairly steep side slope to the west (Table 8). A number of the other shovel test pits excavated across the hilltop indicated that much of this site had been extensively disturbed. This observation was supported by the identification of weedy colonizing vegetation across the hilltop. Disturbance likely resulted from construction activities and erosion caused by the original construction of the USDOE PORTS facility and recent replacement of the USDOE boundary fence.

While 33 Pk 186 overlooks the Scioto Township Works I (33 Pk 22), this site yielded only an undiagnostic projectile point fragment and two broken flakes. Thus, the site has poor visibility, lacks focus, and site integrity has been severely compromised. Therefore, this site has little potential to produce additional important information concerning the prehistory of the region, and no further work is recommended.

4.2.3 Historic Isolated Finds

Two sites identified in Quadrant IV, Survey Area 2, represent isolated historic finds (33 Pk 199 and 33 Pk 201) that do not require further work (Table 6). Both of these sites were identified during shovel test pitting during the

archaeological survey conducted in April and May, 1997. These two sites were located on a level preglacial valley floor covered in scrub thicket identified as an old field habitat (Figure 2). Site 33 Pk 199 yielded a single whiteware cup or bowl base fragment, which could only be assigned to ca. 1820-present (Magid 1984) [Table 9]. Site 33 Pk 201 yielded a scalloped-edge molded design sherd of whiteware with polychrome transfer print (Table 9). This artifact can be used to tentatively date this site to 1890-present based on the predominant date ranges for edge decorated, scalloped rim, impressed bud, whiteware ceramics (Magid 1984; Miller and Hunter 1990).

Both of these sites probably represent field trash that may have found its way into this abandoned agricultural field through a variety of nineteenth and early twentieth century farming practices such as placing household wastes in a manure spreader for the distribution of these materials over agricultural fields. Both 33 Pk 199 and 33 Pk 201 have poor visibility, and the former also lacks focus. Both historic isolated finds have little potential to produce additional important information concerning the history of the region, and no further work is recommended.

4.2.4 Historic Scatters and Open Dumps

Three sites identified during the archaeological survey in April and May 1997, were found to represent historic artifact scatters (33 Pk 200, 33 Pk 202, and 33 Pk 209), while four other sites identified during the same survey were found to represent open dump sites (33 Pk 191, 33 Pk 192, 33 Pk 215, and 33 Pk 216). None require further work (Table 6).

The three historic scatters were located on a level preglacial valley floor in an old field habitat (33 Pk 200), an alluvial terrace along Little Beaver Creek in a riparian habitat in Quadrant IV, Area 3 (33 Pk 202), and on a hill/ridgetop in oak-hickory habitat (33 Pk 209) Quadrant I, Area 6 [Figure 2].

Site 33 Pk 200 yielded four historic artifacts recovered from a single shovel test pit, giving a site size of $1m^2$ (Table 10), which can only be assigned to a general historic cultural/temporal affiliation (1820-present). This site probably represents historic field trash associated with nineteenth through early twentieth century agricultural practices.

Site 33 Pk 202 yielded two artifacts during a surface collection of the site: an aqua-glass Coca-Cola© bottle with a 1949 date embossed near the base, and a pint-sized colorless glass milk bottle with an applied green paint label saying "Green Valley Dairy, Jackson, O." (Table 11). Applied color labels date from 1934 to the present (Jones and Sullivan 1989). In addition to these two artifacts, an old road, a cluster of nonindigenous vegetation (yucca plants), and a low pile of rocks and gravel was identified in the vicinity. On the basis of the artifacts and possible historic feature

remnants, site size was estimated at 15 m (50 ft) by 15 m (50') [Table 6]. The excavation of six shovel test pits failed to identify any subsurface cultural materials. Site 33 Pk 202 appears to represent an area of low intensity use from ca. 1934 until 1952 (Table 6). Possibly, this site was a ford or bridge crossing across Little Beaver Creek. However, no remains of any buildings or structures were identified, nor was any cartographic evidence found to support this interpretation.

Site 33 Pk 209 was represented by five amber glass whiskey bottles identified during a surface collection adjacent to an old road and fence line covering 1 m^2 (Table 6). Since these five bottles appeared to be identical, only two were collected for analysis (Table 12). On the shoulder, these bottles were embossed "Federal law prohibits sale or reuse of this bottle." This phrase was placed on alcoholic beverage containers from 1933 to 1964 (Deiss 1981; Stewart and Cosentino 1976). In addition, four shovel test pits were excavated across this site but did not reveal any subsurface cultural materials. This site most likely represents isolated field trash associated with alcohol consumption dating to just prior to or within a decade of the USDOE PORTS facilities' construction in 1952.

All three of these historic scatters represent field-associated refuse that resulted from isolated activities dating from the later half of the nineteenth century through mid-twentieth century. All three of these historic scatters have poor visibility, and 33 Pk 200 lacks focus. None of these scatters have the potential to produce additional important information concerning the history of the region; therefore, no further work is recommended.

The four historic open dump sites were located within an intermittent streambed in oak-hickory habitat (33 Pk 191 in Quadrant I, Area 4), and a hill/ridgetop in oak-hickory habitat (33 Pk 192 in Quadrant I, Area 4, 33 Pk 215 in Quadrant IV, Area 19, and 33 Pk 216 in Quadrant IV, Area 20) [Figure 2].

Site 33 Pk 191 represented an open domestic refuse dump which extended 6 m (20 ft) north-south by 30 m (98 ft) along an intermittent streambed identified during visual inspection and surface collection (Table 6). At the head of this intermittent stream bed, which was just outside the eastern boundary fence of the USDOE PORTS facility (Figure 2), a possible Hudson® automobile chrome hubcap was found in the streambed along with a number of kitchen and household glass containers such as food and medicine jars, bottles, and ceramics, which suggested a 1830s to the present temporal affiliation (Table 13).

Site 33 Pk 192 represented an open domestic refuse dump identified during visual inspection and surface collection that measured 43 m (141 ft) north-south by 53 m (174 ft) east-west (Table 6). Other possible activities may

be related to either a residence located immediately east of the site, outside the USDOE PORTS facility boundary, or with the Bailey Chapel Cemetery, located immediately to the south and outside the USDOE PORTS facility boundary. Site 33 Pk 192 consisted of a trash pile, four mounded areas of disturbed earth, a row of four cinder blocks, and an old fence line. Artifacts collected included various glass food and beverage containers, steel beverage cans, a drinking glass, and a steel roller skate, with a general date range of 1900-present (Table 14). Many of these artifacts postdate the construction of the USDOE PORTS facility and probably represent materials discarded from the adjacent residence. The four cinder blocks identified at the site may represent construction debris or remnants of a yard waste composting area previously part of the adjacent cemetery. While cinder block dates to around 1889 (Grimsely 1906), it seems more likely that these blocks date to the mid-twentieth century, given the associated cultural materials.

Site 33 Pk 215 represented an open refuse dump identified during visual inspection and surface collection. It is located on a hill/ridgetop saddle adjacent to an old road and 5 m (16 ft) north of Atomic Energy Commission Benchmark #70 (Figure 2). This site measured 12 m (39 ft) north-south by 6 m (19 ft) east-west (Table 6). Artifacts observed but not collected included two automobile tires, a number of enamelware bowls, and colorless container glass jars and bottles. Artifacts collected included pieces of amethyst glass, colorless glass, and milk glass, a square, machine-made bottle with screw closure, stoneware and whiteware sherds, a piece of green tinted flat glass, and three wire nails. Temporal dates for these artifacts range from ca. 1820 to the present, with most clustering between 1935 to 1955 (Table 15).

Site 33 Pk 216 represented another open domestic refuse dump located on a hilltop/toe ridge adjacent to an old road. It was identified during visual inspection and surface collection. This site measured 6 m (20 ft) north to south by 5 m (16 ft) east to west (Table 6). Artifacts observed but not collected included steel buckets, colorless glass, and cobalt blue container glass. Artifacts collected included a square, colorless glass bottle with screw top made by Owens-Illinois Glass Co., a colorless drinking glass with "CA & C" embossed on the base, a colorless machine-made bottle finish with screw top and metal cap, two cobalt blue, fluted drinking glass fragments, a colorless container glass fragment, a colorless machine-made lamp chimney fragment, and an end cap for a plastic sign pole (Table 16). These artifacts range from 1879 to the present, with dates clustering around the 1930s to 1950s (Table 6).

All four of these historic open refuse dump sites predominantly represent a rural pattern of household waste disposal dating from the late nineteenth century through present. All four sites have moderate to poor visibility, and lack

a specific temporal historic focus. None of these scatters have the potential to produce additional important information concerning the history of the region. Therefore, no further work is recommended.

4.2.5 Historic USDOE PORTS-Related Sites

Four sites identified during the preliminary archaeological survey in September 1996 (33 Pk 188, 33 Pk 190, 33 Pk 196, and 33 Pk 219) were found to represent architectural remnants of buildings or structures associated with the USDOE PORTS facility, none of which require further work (Table 6).

The four historic plant-related sites were located on a level hill/ridgetop in managed grassland and upland mixed hardwoods (33 Pk 188), on a hill/ridgetop in upland mixed hardwoods and scrub thicket (33 Pk 190), in a stream valley in riparian growth (33 Pk 196), and on side slope in upland mixed hardwoods (33 Pk 219)[Figure 2].

Site 33 Pk 188, identified during visual inspection, represents remains of building foundation and associated construction spoils associated with early construction episodes at the USDOE PORTS facility in Quadrant I, Area 1 (Figure 2; Table 6). Three general clusters of architectural features comprised this site, which extended approximately 140 m (459 ft) north to south by 85 m (279 ft) east to west (Table 6). In the northwest corner of the site a number of disassociated concrete blocks were scattered 42 m (138 ft) along the top of an embankment. Southeast of the concrete blocks was a rectangular concrete foundation pad measuring 30 m (100 ft) by 15 m (50 ft). On the northern edge of this concrete pad was a pile of railroad spikes and cross-tie plates with a scatter of wire nails and steel wire on the south end of the pad. Some 8 m (26 ft) to the east of the concrete pad was a single square wooden fencepost, and 25 m (82 ft) southeast of this post was a wooden pen constructed from six posts and 2 by 6 boards, measuring 5 m (16 ft) square. Another similar sized wooden pen was 62 m (203 ft) south of the first one and was constructed from four posts and 2 by 6 boards. No artifacts were collected from this site, which appears to represent highly disturbed construction spoils and a building remnant. It may represent the remnant of barracks for plant construction workers which is thought to have been in the general vicinity (personal communication, Jennifer Chandler 1996).

Site 33 Pk 190 consists of the remnants of a radio-tower platform, associated building, and abandoned access road, identified during visual inspection in Quadrant I, Area 1 (Figure 2; Table 6). This site extends approximately 30 m (100 ft) north to south by 18 m (59 ft) east to west (Table 6). Near the center of the site was a rectangular depression which measured 4.5 m (15') square. In addition, two concrete blocks were identified, which measured approximately 1 m (3.2 ft) long by 50 cm (18 in) wide and were 50 cm (18 in) high. One of the two concrete blocks had three pedestals

with anchor bolts in place. Five meters (16 ft) north of the depression was a ceramic pipe some 20 cm (8 in diameter and 50 cm (18 in) high. Immediately east of the rectangular depression was an electrical conduit and outlet box standing 1 m (3.2 ft) high. This site was labeled as a radio tower on the USGS Piketon (1961) 7.5' topographic quadrangle, and appears to represent the remnants of a radio tower and associated outbuilding previously used in conjunction with the USDOE PORTS facility.

Site 33 Pk 196 encompasses two steel drain pipes adjacent to an intermittent stream, identified during visual inspection identified in Quadrant II, Area 8 (Figure 2; Table 6). These two pipes measured approximately 50 cm (18 in) in diameter, and were some 8 m (25 ft) long. The site measures 8 m (25 ft) north-south by 1 m (3.2 ft) east-west (Table 6). These two pipes probably represent culvert sections brought in to direct or divert the course of this small intermittent stream. Since these pipes did not appear to be very deteriorated or corroded, and since no bridges or structures were identified on various cartographic sources that predate the construction of the USDOE PORTS plant, it seems likely that these pipes relate to activities associated with the USDOE PORTS facility.

Site 33 Pk219 is an artificial cut-bank previously utilized as a firing range by security personnel at the USDOE PORTS facility; it was located during visual inspection in Quadrant IV, Area 7 (Figure 2; Table 6). This site measures 70 m (230 ft) north to south by 75 m (246 ft) east to west (Table 6), and consists of an eroding embankment and pull-off area adjacent to a gravel access road, which is below a barren area/bench. Below the embankment and in the vicinity of the pull-off area, a number of black rubber target rockets were encountered. This spent ammunition was not collected. Digital cartographic data provided by Jennifer Chandler (LMES) labeled this vicinity as an old firing range (Figure 2).

These four historic sites represent disassociated or highly disturbed building or structure remnants that were once associated with operations or activities conducted at the USDOE PORTS facility. While all four of these plant-related historic sites possess moderate visibility, they are lacking in terms of clarity of focus. None of these structures or building remnants possess sufficient integrity to provide additional information by which interpretations and relationships with other components at the USDOE PORTS facility can be elucidated. Therefore, no further work is recommended for these sites.

4.2.6 Historic Farmstead Remnant

Site 33 Pk 187 is a historic farmstead remnant consisting of an outbuilding remnant and fenceposts. Based on architectural features identified during visual inspection. This site measures 10 m (33 ft) north to south by 23 m (75 ft)

east to west (Table 6). Components of this site include a cluster of four circular fence posts in Quadrant I, Area 1, on the west end of the site, and two square fence posts and one rail adjacent to the sheet metal and wood-frame section of the top of what appears to be a hog shed or chicken coop. The location of these architectural remnants corresponds with the location of buildings or structures identified during the literature review on the Piketon, O. (1915) USGS 15' topographic quadrangle and on the aerial photographs dating to 1952 provided by Jennifer Chandler (LMES) [Figures 4 and 5]. Therefore, this site may date from the early to mid-twentieth century (Table 6).

This historic outbuilding and the associated posts represent highly disturbed remains once associated with an early to mid-twentieth century farm outbuilding complex. These remains are located in an area which has been severely disturbed by cut-and-fill activity associated with the construction of the USDOE PORTS facility. This site has limited to poor visibility, lacks a specific historic focus, and does not have the potential to produce additional important information concerning the history of the region. Therefore, no further work is recommended.

4.3 Sites that are Recommended for Preservation or Further Work

4.3.1 Prehistoric Lithic Scatter

Site 33 Pk 210 was located on a hilltop with a panoramic view of the Scioto River valley to the south in Quadrant I, Area 2, and was covered in beech-maple forest adjacent to the southern boundary fence of the USDOE PORTS facility (Figure 2). This site was located during shovel test pitting (Figure 8) during the archaeological survey conducted in April and May 1997. On the basis of these positive shovel tests, the site area was determined to be 15 m (50') north to south by 15 m east to west (Table 6). Three shovel test pits yielded a total of five flakes of Delaware/Columbus chert and one flake of unknown chert (Table 17). Since no cultural or temporally diagnostic materials were recovered, an unassigned cultural/temporal affiliation was given.

In spite of the fact that no artifacts diagnostic of a specific cultural/temporal affiliation were recovered, this site has a high potential for other cultural materials or subsurface features to be present since much of the existing vegetation at this site is mature-growth beech-maple forest, representing an area with minimal historic disturbance. In addition, the location of this site on a level hilltop overlooking the Scioto River probably represented a preferred location for a number of prehistoric activities, increasing the likelihood of intact subsurface features being present at this site. The upland location of the site is also promising, as little is known in the area about upland prehistoric settlement. Therefore,

it is highly likely that 33 Pk 210 has the potential to contribute important new information concerning the prehistory of this region. Additional work or preservation is recommended for 33 Pk 210.

4.3.2 Historic Cemeteries

A total of four historic cemeteries were identified adjacent to, or within the boundary of, the USDOE PORTS facility. These cemeteries include: the abandoned Daley (Talbott-Dailey) Cemetery, located on a hilltop adjacent to the western boundary fence of the USDOE PORTS facility; the Bailey Chapel Cemetery, located adjacent to the southeastern corner of the USDOE PORTS facility boundary fence; the Mount Gilead Cemetery (33 Pk 189)[PIK-206-9] (Figure 2), located on a hilltop between Fog Road and the Perimeter Road in Quadrant IV; and the abandoned Holt Cemetery (33 Pk 214)[PIK-207-1] located on a hilltop in the northeastern corner of Quadrant IV (Figure 2). Preservation or avoidance is recommended for all four of these historic cemeteries in spite of the fact that cemeteries are not eligible for the NRHP.

The Daley (or Talbott-Dailey) Cemetery (Dobson-Brown et al. 1997, Figure 1) occupies a hilltop adjacent to the USDOE PORTS facility and measures approximately 17 m (56 ft) north to south by 10 m (33 ft) east to west, sharing its eastern boundary with the USDOE boundary fence. Since this cemetery does not extend into the USDOE PORTS facility, no site number was assigned. Nevertheless, this small cemetery is important to the history of Scioto Township, since the earliest inhabitant of the township, Reverend William Talbott, is thought to be buried there. William Talbott was a leader in the local Methodist-Episcopal church, and is thought to have arrived in Scioto Township around 1809 (Pike County Chapter, Ohio Genealogical Society 1992). Therefore, it is the recommendation of ASC Group, Inc., that care should be taken to avoid affecting this adjacent historic cemetery.

The Bailey Chapel Cemetery (Dobson-Brown et al. 1997, Figure 1) is an actively used chapel and cemetery occupying gentle side slope adjacent to the USDOE PORTS facility that extends approximately 320 m (1,150 ft) north to south by 61 m (200 ft) east to west, and shares its western and northern boundaries with the USDOE boundary fence. Since this cemetery does not extend into the USDOE PORTS facility, no site number was assigned. The cemetery may date to as early as 1838 when this Methodist-Episcopal church was organized (Pike County Chapter, Ohio Genealogical Society 1992). Therefore, it is the recommendation of ASC Group, Inc. that care should be taken to avoid affecting this functioning cemetery and associated church grounds.

The Mount Gilead Cemetery (33 Pk 189)[PIK-206-9] (Figures 2 and 9; Plate 6) is no longer in use as a cemetery, but is still maintained and occupies a hilltop in Quadrant IV between Fog Road to the east and Perimeter Road

to the west (Figure 2). This cemetery was identified during visual inspection and surface collection. This cemetery measures 55 m (180 ft) north to south by 50 m (148 ft) east to west (Table 6). Approximately 70 headstones, footstones (Figure 9), and other grave-related monuments were identified within the cemetery with death dates ranging from 1790 to present. Three headstones identified were found to be those of U.S. veterans. The oldest grave marker is that of John Violet, a veteran of the Revolutionary War, who served as a private under John Bell's Company with Colonel John Gibson's Virginia Regiment (Hammond and Days n.d.) and died in 1847. Two individuals buried at Mount Gilead were veterans of the Civil War, Joseph W. Delay, (Corporal and Private) who died in 1890, and Robert D. Taylor (Private) who died in 1901. Both men served with the First Regiment of the O.V.H.A., Company G (Hammond and Days n.d).

In addition to the graves and monuments, sandstone footers which represent the remains of the Mount Gilead Chapel were located at the crest of the hill along the eastern edge of the cemetery (Figure 9; Plate 6). Fifteen rough-cut sandstone blocks and one sandstone step preserve the outline of a building measuring some 8 m (26 ft) north to south by 10 m (33 ft) east to west. In addition, a concrete observation tower base was identified 16 m (52 ft) west of the cemetery (Figure 9; Plate 7). This structure measured some 4 m (13 ft) square and was indicated on some of the digitally-produced maps of the USDOE PORTS facility provided by Jennifer Chandler.

Surface collection of the cemetery yielded the following historic artifacts: a fragment from a solarized amethyst tumbler, three solarized amethyst container glass fragments, a violet-colored glass goblet foot/base, a three-sided, machine-made, colorless glass bottle base, a mold-decorated milk glass vase base, and a cut nail (Table 18; Plate 8). A single prehistoric artifact, a flake made from Vanport chert (Figure 9; Table 18; Plate 8), was recovered from the gravel access road. This prehistoric artifact may have come from the source of the gravels used to cover the road and may not be in its original context, while the historic artifacts have a general date range from 1790 through the present (Table 6).

The historic artifacts correspond well with the grave monument dates and the documented age of the chapel. The Mount Gilead Church of Christian Union was built in 1865 (Pike County Chapter, Ohio Genealogical Society 1992). The Mount Gilead Church or chapel was apparently still in use after the turn-of-the-century as shown on the (1906) Waverly, O., USGS 15' Quadrangle map (Figure 4). Further indirect evidence suggests that this church may have been in existence up until the time of the USDOE PORTS plant construction as indicated by the presence of the Ferree Gilead Union Church located some 914 m (3,000 ft) north of the USDOE PORTS facility boundary just off the North

Access Road (Plate 9). It seems likely that the congregation of the Ferree Church, which once stood were the X-14A Firing Range sits today, joined with the congregation of the Mount Gilead Church to form the Ferree Gilead Union Church. This church now occupies a building that appears to date to around the time of initial plant construction in the early 1950s.

In evaluating the cultural resources of the Mount Gilead Cemetery, the prehistoric and plant-related components of the site are lacking in terms of their visibility, and the prehistoric component lacks focus. Therefore, the prehistoric and plant-related components of this site do not have the potential to provide important new or additional information concerning the history or prehistory of the area. No further work is recommended for the prehistoric or plant-related components of this site. However, it is the recommendation of ASC Group that the remains of the historic Mount Gilead Chapel and cemetery continue to be preserved and maintained.

The Holt Cemetery (33 Pk 214) [PIK-207-12](Figure 10; Table 6) represents a recently abandoned cemetery located on a hilltop in the northeastern corner of the USDOE PORTS facility which measures 55 m (180 ft) north to south by 40 m (131 ft) east to west (Table 6). It is covered in low weeds and is surrounded by oak-hickory forest. This site was identified during visual inspection. In spite of the fact that some 15 grave depressions were tentatively identified within this cemetery, only three headstones were observed (Figure 10). These monuments ranged in death dates from 1877-1908 (Plates 10, 11, & 12). The last monument was that of a Civil War soldier, Pvt. Henry Pry, of the 33rd Ohio Infantry Company E (Plate 12). No dates were inscribed on this headstone. In addition to these three headstones, five possible footstones were identified near the east-central portion of the cemetery, along with a Styrofoam cross and plastic flowers on a yard-waste pile on the southwest side of the cemetery (Figure 10). It is possible that the majority of the headstones in this cemetery were removed at the request of descendants or congregation members who wanted the remains of their loved ones moved to another cemetery, or that these depressions represent graves originally marked with wood or other readily available materials as has been documented with varying frequency in Upland South cemeteries (Jeane 1978).

On the basis of the three grave monuments, and the presence of a Styrofoam cross and plastic flowers, it seems likely that the Holt Cemetery has a general date range from the late-1800s to the mid-twentieth century (Table 6). The Holt Cemetery was also depicted on the (1992) USGS Waverly South 7.5' topographic quadrangle; however, its placement on this cartographic source was inaccurate, with the actual location being some 244 m (800 ft) further to the

south on a hilltop and not on a north-sloping toe ridge as depicted on the USGS map. It is the recommendation of ASC Group, Inc., that the historic Holt Cemetery be preserved and maintained.

4.3.3 Historic Farmstead Remnants

A total of 12 sites identified (33 Pk 184, 33 Pk 185, 33 Pk 193, 33 Pk 194, 33 Pk 195, 33 Pk 197, 33 Pk 203, 33 Pk 211, 33 Pk 212, 33 Pk 213, 33 Pk 217, and 33 Pk 218) appear to represent the remains of residences, outbuildings, and associated structures, affiliated with small-scale rural farmsteads. One site, 33 Pk 206, appears to represent a prehistoric lithic scatter and the remains of a small-scale rural farmstead. All of these sites hold the potential to yield significant information concerning our understanding of mid-nineteenth to early twentieth century rural settlement and residence patterns for what appears to be a previously undocumented example of a dispersed Upland South community in Pike County, Ohio. Rickey and Co. (1983) have noted that there has been virtually no documentation of agricultural, commercial, or residential activities in Pike County, other than at Omega, Piketon, Waverly, and in Jackson Township. Upland regions, such as those occupied by the USDOE PORTS facility, potentially represent a distinctively different pattern of historic settlement and residence from those documented in the Scioto River valley. This pattern can be further elucidated by investigating the remains of rural farmsteads and communities in the uplands such as those identified during these archaeological surveys at the USDOE PORTS facility.

All 13 of the historic farmsteads recommended for further work contain the remains of at least one building or architectural feature which is visible at the ground surface, and all have a high potential for yielding relatively undisturbed subsurface features. Furthermore, these 13 historic farmsteads potentially represent a unique historic data base, given their absolute end-date of occupation by 1952, the unusual circumstances for preservation resulting from the construction of the USDOE PORTS facility, and the restricted access and activity in much of the area surrounding the plant facility over the past four decades.

Table 19 shows the total number of prominent architectural clusters identified for each historic farmstead recommended for further work. These architectural clusters represent the number of conspicuous concentrations of architectural features found at each site. Table 19 also identifies 12 distinctive architectural feature types found at each of these 13 historic farmsteads. Table 20 compares these sites by site size, offers aerial photo/map dates and total historic artifact count along with a general date range for each historic farmstead based on historic artifact analysis

results. Together, these two tables will be used in discussing each of these historic farmsteads recommended for further work.

33 Pk 184 (Davis Farmstead)

This site was located on a hill/ridgetop in an area of scrub thicket and old field near the USDOE PORTS facility boundary in the vicinity of USAC (United States Atomic Commission) Benchmark #51 (Figure 11). 33 Pk 184 was named in honor of the paternal grandfather of Jennifer Chandler (LMES), who had reportedly resided at this location prior to the construction of the USDOE PORTS facility in 1952 (Jennifer Chandler, personal communication 1996). This site was located during visual inspection, and was also subjected to surface collection and shovel test pitting (Figure 11). On the basis of identifiable architectural features, the site area was determined to be 70 m (230 ft) north to south by 65 m (213 ft) east to west. Five architectural clusters were located and consisted of a driveway remnant, fence line, and concrete garage pad (floor) [Cluster 1], a concrete cistern box and brick-lined well (Cluster 2), a concrete building foundation (Cluster 3) [Plate 13], a scatter of rough cut sandstone blocks (Cluster 4), and a circular depression (Cluster 5) [Figure 11; Table 19].

A total of 15 shovel test pits were excavated across the Davis farmstead; however, only one shovel test pit (QI-6-2-5) yielded cultural material (Table 21). Other artifacts that were identified during the surface collection included six Architecture Group artifacts, eleven Kitchen Group artifacts, and two Furniture Group artifacts (Table 21). A sample of artifacts is shown in Plate 14.

The general date range indicated by these artifacts is ca. 1820 to present which corresponds well with the date of 1939 as indicated by aerial photographic data (Table 20). In comparison with the other historic farmsteads recommended for further work, the Davis farmstead (33 Pk 184) falls just above the average of 4.6 architectural clusters of prominent architectural features per farmstead (Table 19). This site does differ somewhat, in that there is no evidence for agriculture-related activities, as shown by architectural features identified, or by the kind of artifacts recovered. It is possible that this site represents the remains of a residence that was not directly associated with agricultural activities, or that the evidence for such activities was destroyed by plant construction, or simply eluded identification. Nevertheless, one cartographic source dated this site to around 1939 (Table 20), which may make this historic farmstead the second shortest for length of occupation prior to plant construction in 1952. However, this conclusion is tentative, since the full extent of this site is unknown.

33 Pk 185 (South Shyville Farmstead)

This site was located on a ridgetop/saddle in upland mixed hardwoods approximately 20 m (66 ft) north of a power line supplying electricity to a nearby air monitoring station south of the site (Figure 12). Site 33 Pk 185 was named the South Shyville farmstead in reference to its location relative to the hamlet of Shyville. This site was located during visual inspection, and was also subjected to surface collection. On the basis of identifiable architectural features and artifacts, the site area was determined to be 70 m (230 ft) north to south by 35 m (115 ft) east to west. Eight architectural clusters were located, and consisted of a concrete foundation and brick (chimney) pile (Cluster 1), a concrete well covered in rock and broken concrete (Cluster 2)[Plate 15], a concrete cistern box [Plate 15] and linear depression (Cluster 3), a scatter of rough-cut sandstone footers (Cluster 4), a rough-cut sandstone root cellar (Cluster 5), a scatter of rough-cut sandstone blocks (Cluster 6), and ornamental wire fence, coal pile, and angled linear depression (Cluster 7), and a remnant driveway apron (Cluster 8) [Figure 12; Table 19].

Artifacts identified during the surface collection included 44 Kitchen Group artifacts, four Personal Group artifacts, and five Activities Group artifacts (Table 22). A sample of artifacts is shown in Plate 16.

The general date range indicated by these artifacts is ca. 1900 to present, which corresponds well with the dates of 1906 and 1951 as indicated by cartographic data and aerial photographs (Table 20). In comparison with the other historic farmsteads recommended for further work, the South Shyville farmstead (33 Pk 185) has the highest number of clusters of prominent architectural features at eight (Table 19). However, Clusters 2 and 3 were in close proximity and are likely related to each other since they represent a cistern and a well. This would then put the South Shyville farmstead in a tie with 33 Pk 211 (the Bamboo farmstead) for the most clusters, and may suggest that these two farmsteads were similar in terms of the scope or intensity of activities conducted at each site. Nevertheless, the South Shyville site represents one of the more visible historic farmsteads identified within the USDOE PORTS facility in terms of feature and artifact density.

33 Pk 193 (Iron Wheel Farmstead)

This site was located at the head of a ravine on a bench in upland mixed hardwoods approximately 122 m (400 ft) west of 33 Pk 185 (Figure 2). Site 33 Pk 193 was named the Iron Wheel site in reference to a cast-iron wheel identified at the site (Figure 13). This site was located during visual inspection, and was also subjected to surface

collection. On the basis of identifiable architectural features and artifacts, the site area was determined to be 55 m (180 ft) north to south by 135 m (443 ft) east to west (Table 20). Only three prominent architectural features and non-portable artifacts were identified, including a rectangular depression, suggestive of a building foundation, an east-west oriented fence line, and the iron wheel located above the south bank of the intermittent streambed [Figure 13; Table 19]. In addition, a single steel milk can was noted on the north bank of the intermittent streambed, but was not collected (Figure 13).

Nevertheless, a fairly substantial number of artifacts were scattered along the intermittent stream bank, including 23 Kitchen Group artifacts, two Personal Group artifacts, and two Furniture Group artifacts (Table 23; Plate 17).

The general date range indicated by these artifacts is ca. 1820 to the present, which corresponds well with the dates of 1906 and 1939 as indicated by cartographic data and aerial photographs (Table 20). In contrast to most of the other historic farmsteads recommended for further work, the Iron Wheel farmstead (33 Pk 193) has only a single architectural cluster (Table 19). This may suggest that 33 Pk 193 represents a more limited set of activities, which likely involved agricultural practices. Nevertheless, based on the relative density of artifacts, and integrity of the building foundation present, the potential for subsurface deposits at the Iron Wheel farmstead appears to be high.

33 Pk 194 (North Shyville Farmstead)

This site was located on a ridgetop/saddle in upland mixed hardwoods approximately 91 m (300 ft) north of the present-day hamlet of Shyville (Figure 2). This site was located during visual inspection, and was also subjected to surface collection (Table 6). On the basis of identifiable architectural features and artifacts, the site area was determined to be 110 m (361 ft) north to south by 150 m (492 ft) east to west. Six architectural clusters were located, and consisted of a bell-shaped, brick-lined cistern (Plate 18), associated with a scatter of roofing slate, an earthen well remnant, a concrete box well or cistern, and a possible grave footstone made from sandstone (Cluster 1) [Plate 19], a pile of cut sandstone blocks (Cluster 2), a buried steel oil tank, concrete drain, and old fence (Cluster 3), a cistern and inlet pipe (Cluster 4), a scatter of concrete and sandstone block (Cluster 5), and another scatter of rough cut sandstone blocks (Cluster 6)[Figure 14; Table 19].

Artifacts identified during the surface collection included eight Kitchen Group artifacts, and one Architecture Group artifact (Table 24). A sample of artifacts is shown in Plate 20.

The general date range indicated by these few artifacts is ca. 1820 to present, which substantially precedes and includes the dates of 1906, 1912, 1939, and 1951 as indicated by cartographic data and aerial photographs (Table 20). In spite of the low artifact density, the North Shyville farmstead (33 Pk 194) is the only historic farmstead site that may have a published photograph of one of its buildings prior to demolition in advance of the construction of the USDOE PORTS facility [Pike County Sesquicentennial Commission 1968). A wood-frame Classic I House (Gordon 1992), or Chesapeake Bay Hearth House (Noble 1984) is depicted in a pre-1952 photograph with a caption which reads: "Shy family homestead, Shyville, razed during A-Plant construction" (Pike County Sesquicentennial Commission 1968). However, this affiliation can only be tentative at this level of investigation, and it is unknown which, if any of the clusters identified at 33 Pk 194, may represent this building. Another important element that sets the North Shyville farmstead apart is the identification of what may be a sandstone grave footstone in Cluster 1 (Figure 14; Plate 19). Further investigations of this site should take this possibility into consideration prior to any subsurface testing. Also, despite the paucity of artifacts identified during these archaeological surveys, the North Shyville farmstead holds high potential for subsurface deposits as indicated by the Size of and relatively well-preserved condition of the architectural features still present at the site.

33 Pk 195 (Beaver Road Farmstead)

This site was located on a ridgetop/saddle in upland mixed hardwoods approximately 305 m (1,000 ft) west of Shyville (Figure 2). Site 33 Pk 195 was named the Beaver Road farmstead in reference to its location adjacent to what was identified as the Beaver Road (Figure 4) on the Waverly, O. (1906) USGS 15' topographic quadrangle. The Beaver Road farmstead site, however, was indicated on the 1939 and 1951 aerial photos (Figure 5). This site was located during visual inspection, and was also subjected to surface collection (Table 6). On the basis of identifiable architectural features and artifacts, the site area was determined to be 73 m (239 ft) north to south by 55 m (17 ft) east to west (Table 20). Three architectural clusters were located and consisted of a number of sandstone blocks and driveway remnant (Cluster 1), a concrete box well, brick pile, and coal pile (Cluster 2), and an open refuse area or dump (Cluster 3)[Figure 15; Table 19].

Artifacts identified during the surface collection included 24 Kitchen Group artifacts, seven Activities Group artifacts, and one Architecture Group artifact (Table 25). Examples of recovered artifacts are shown in Plate 21.

The general date range indicated by these artifacts is ca. 1820 to the present, which precedes and encompasses the dates of 1939 and 1951 as indicated by cartographic data and aerial photographs (Table 20). In comparison with the other historic farmsteads recommended for further work, the Beaver Road farmstead (33 Pk 195), shows some evidence of agricultural activity in the artifact assemblage by the recovery of a pulley or flywheel that may be associated with farm equipment (Plate 22), and the recovery of leather straps that may represent harnesses for horses or other livestock (Table 25). It is considered probable that subsurface features could still be present at this site.

33 Pk 197 (Dutch Run Road Farmstead)

This site was located on the first terrace south of Little Beaver Creek adjacent to Dutch Run Road in upland mixed hardwoods and scrub thicket approximately 30 m (100 ft) southwest of the USDOE PORTS facility security gate on Dutch Run Road (Figure 2). This site was located during visual inspection, and was also subjected to surface collection; however, no artifacts were identified (Table 6). On the basis of identifiable architectural features, the site area was determined to be 35 m (115 ft) north to south by 30 m (98 ft) east to west. Only one cluster of prominent architectural features were identified, which consisted of a rectangular concrete foundation with raised walls, a driveway depression, and a concrete box well [Figure 16; Table 19].

Since no artifacts were encountered during surface collection, temporal data for this site is limited to a date of 1951 as indicated by the aerial photographs (Table 20). This may indicate that this farmstead was a relatively recent, short-lived occupation dating ca. 1951. In terms of site function, the Size and configuration of the concrete foundation is somewhat suggestive of a barn; however, there is no direct evidence to corroborate this conclusion. Furthermore, in spite of the fact that no artifacts were identified during the surface collection, it seems likely that subsurface features and artifacts are present. One factor limiting the surface collection was the heavy growth of scrub vegetation in general, and dense poison-ivy thickets in particular.

33 Pk 203 (Ruby Hollow Farmstead)

This site was located on the first terrace north of Little Beaver Creek in riparian growth and upland mixed hardwoods approximately 30 m (100 ft) east of the western boundary fence of the USDOE PORTS Facility (Figure 2). Site 33 Pk 203 was named the Ruby Hollow farmstead based on the suggestion that a community by the name of Ruby Hollow once existed in this area (Jennifer Chandler, personal communication 1997). This site was located during visual

inspection and was also subjected to surface collection and shovel testing (Table 6). On the basis of identifiable architectural features and artifacts, the site area was determined to be 140 m (459 ft) north to south by 150 m (492 ft) east to west (Table 20). Seven architectural clusters were located, and consisted of a concrete doorstep, parts of an automobile, and an old fence line (Cluster 1), a sandstone block root cellar remnant, a concrete box cistern and well, and a circular depression (Cluster 2), a scatter of rough-cut sandstone block and a USDOE Firing Range sign (Cluster 3), a circular depression and associated sheet metal roof (Cluster 4), a concrete foundation/garage and driveway (Cluster 5), a concrete foundation with elevated side walls [Plate 23] and associated old fence line (Cluster 6), and a concrete foundation, a scatter of rough-cut sandstone block , brick and rock piles, and associated old fence line and driveway (Cluster 7)[Figure 17; Table 19].

Artifacts identified during the surface collection included 56 Kitchen Group artifacts, four Architecture Group artifacts, three Activities Group artifacts, one Clothing Group artifact, and one Furniture group artifact (Table 26). Examples of artifacts are shown in Plate 24. No artifacts were identified during the excavation of eight shovel test pits (Figure 17).

The general date range indicated by these artifacts is ca. 1820 to the present, which precedes and encompasses the dates of 1915, 1939, and 1951 indicated by cartographic data and aerial photographs (Table 20). In comparison with the other historic farmsteads recommended for further work, the Ruby Hollow farmstead (33 Pk 203) covers the largest area in extent, and represents one of the most visible of the historic farmsteads in terms of prominent architectural features and artifact densities (Tables 19 and 26). In spite of the fact that no artifacts were identified during shovel testing, the density of artifacts collected from the surface and the state of preservation of many of the prominent architectural features suggest that subsurface features are likely to be present.

33 Pk 206 (Terrace Farmstead)

This site was located on a gently sloping terrace/toe ridge above a jurisdictional wetland east of Little Beaver Creek in an old field growth habitat approximately 366 m (1,200 ft) west where a gated gravel access road on the USDOE PORTS facility boundary fence meets McCorkle Road (Figure 2). Site 33 Pk 206 was named the Terrace farmstead in reference to the landform it occupies. This site was located during visual inspection, and was also subjected to surface collection and shovel testing (Table 6; Figure 18).

Unlike the other historic farmsteads recommended for further work, 33 Pk 206 also yielded a prehistoric component. This component was identified during the shovel testing of Quadrant II Area 9 (Figure 18) and consisted of one flake of Vanport and one flake of Delaware/Columbus chert (Table 27). Since additional shovel test pits failed to yield any other prehistoric cultural materials, this prehistoric component is judged to be lacking in visibility and in focus. Furthermore, since these two flakes were found in an abandoned agricultural field associated with historic remains, the integrity of this low-density lithic scatter has been compromised. Therefore, the prehistoric component of 33 Pk 206 does not have the potential to provide significant new or additional information concerning the prehistory of the region. No further work is recommended for the prehistoric component of 33 Pk 206.

On the basis of prominent historic architectural features and artifacts, the site area for the Terrace farmstead was determined to be 120 m (394 ft) north to south by 172 m (564 ft) east to west (Table 20). Six architectural clusters were located, and consisted of a rough-cut sandstone foundation and hand-hewn beams (Plate 25), brick pile, and old fence line (Cluster 1), a ceramic pipe well and concrete cistern box (Cluster 2), a rectangular depression with concrete fragments (Cluster 3), remains of a wood-frame and sheet-metal building (Cluster 4), a scatter of rough-cut sandstone blocks (Cluster 5), and a wood-frame outbuilding base (Cluster 6)[Figure 18; Table 19].

Historic artifacts identified during the surface collection and shovel testing included 17 Kitchen Group artifacts, 13 Architectural Group artifacts, and 15 Activities Group artifacts (Table 27). Samples of collected artifacts are shown in Plate 26.

The general date range indicated by these artifacts is 1820 to the present, which significantly precedes and encompasses the dates of 1906, 1912, 1939, and 1951 as indicated by cartographic data and aerial photographs (Table 20). In comparison with the other historic farmsteads recommended for further work, the Terrace farmstead (33 Pk 206) may represent one of the older historic components identified. This preliminary statement is based on the identification of a number of cut nails which were observed embedded in two sizable hand-hewn beams or rafters still present on top of the sandstone foundation. While cut nails are still manufactured today, their peak period of production was from 1790 to the 1890s (Nelson 1968). This mid-nineteenth century date is in contrast with the majority of historic farmsteads recommended for further work, which date around the turn-of-the-century or later (Table 20). Furthermore, the presence of what appears to be a house foundation (Cluster 1) made from locally available, minimally modified sandstone, also suggests an earlier date than the concrete foundations which did not become dominant until after 1890 (Grimsely 1906).

The state of preservation of the architectural features and the density of historic artifacts at the Terrace farmstead also indicate that subsurface features probably exist at this site.

33 Pk 211 (Bamboo Farmstead)

This site was located on a gently sloping preglacial terrace/ridgetop above the valley of an unnamed tributary of Little Beaver Creek to the west and a portion of the USDOE PORTS facility railroad to the east. Site 33 Pk 211 was located some 152 m (500 ft) southeast of the X-735 landfill (Figure 2). Site 33 Pk 211 was located in upland mixed hardwoods and old field habitats, with a conspicuous grove of bamboo located near the center of this historic farmstead complex (Figure 19). This site was located during visual inspection and was also subjected to surface collection and shovel testing (Table 6).

On the basis of prominent architectural features and artifacts, the site area for the Bamboo farmstead was determined to be 90 m (295 ft) north to south by 130 m (426 ft) east to west (Table 20). Seven architectural clusters were located and consisted of a concrete pad for a garage (Plate 27) and associated open refuse scatter (Cluster 1), a series of 15 rough-cut sandstone block footers (Cluster 2), a dressed sandstone foundation/cellar (Plate 28), associated concrete box well, bell-shaped, brick-lined cistern and scattered rough-cut sandstone blocks (Cluster 3), two parallel rows of rough-cut sandstone blocks and brick pile (Cluster 4), a combination sandstone block footer and concrete building foundation (Cluster 5), a scatter of large sandstone block (possible root cellar or spring house)[Plate 29] (Cluster 6), and a concrete box cistern, capped concrete well, and concrete trough (Cluster 7)[Figure 19].

Historic artifacts that had been identified during the surface collection and shovel testing included 27 Kitchen Group artifacts, two Architectural Group artifacts, and three Activities Group artifacts (Table 28), Examples of artifacts are shown in Plate 30.

The general date range indicated by these artifacts is from ca. 1890 to 1964, which corresponds well with the dates of 1915, 1939, and 1951, as indicated by cartographic data (Table 20). In comparison with the other historic farmsteads recommended for further work, the Bamboo farmstead (33 Pk 211) yielded the most sizable and well-preserved sandstone foundation/cellar (Plate 28) [Cluster 3]. In addition, the brick-lined cistern was also evidence of refined masonry, and compares in Size and configuration to the brick-lined, bell-shaped cistern identified at the North Shyville farmstead (33 Pk 211)[Plate 18](Cluster 1, Cistern 1). Another potentially interesting aspect of the Bamboo Site relates to the sandstone footers in Cluster 2 (Figure 19) . These footers are very similar in Size and arrangement

to the footers of the Mount Gilead chapel at the Mount Gilead Cemetery (33 Pk 189)[Figure 9; Plate 6]. The state of preservation of the architectural features and the density of historic artifacts indicate that subsurface features at the Bamboo farmstead (33 Pk 211) are likely to be present.

33 Pk 212 (Railside Farmstead)

This site was located on a first terrace in old field and upland mixed hardwoods habitats, 16 m (52 ft) south of a gravel access road that runs south off of Schuster Road, and is situated next to the railroad associated with the USDOE PORTS facility (Figure 2). This site was located during visual inspection, and was also subjected to surface collection. On the basis of identifiable architectural features and artifacts, the site area was determined to be 152 m (499 ft) north to south by 76 m (249 ft) east to west (Table 6). Five architectural clusters were located, and consist of a telephone pole, rough-cut sandstone footers, bricks and building debris (Cluster 1), a concrete root cellar (Cluster 2) [Plate 31], a capped concrete well (Cluster 3 [Plate 32]), a concrete foundation with associated sandstone block, wooden boards, and old fence line (Cluster 4), and a well lined with unmodified sandstone (Plate 33) [Cluster 5](Table 19; Figure 20).

Artifacts identified during the surface collection included 9 Kitchen Group artifacts and three Activities Group artifacts (Table 29). A sample of artifacts is shown Plate 34.

The general date range indicated by these few artifacts is 1931 to the mid-twentieth century, which accords well with the dates of 1906, 1939, and 1951 as indicated by cartographic data and aerial photographs (Table 20). Furthermore, one of the few artifacts identified at this site with a specific date range is a Clorox® bottle that dates to 1954 or later (Table 29). This is somewhat problematic in light of the 1952 construction date for the USDOE PORTS facility, unless this bottle is unrelated to the architectural features present, or if this portion of the USDOE PORTS facility was acquired at a later date. Nevertheless, in spite of a paucity of artifacts, portions of the Railside farmstead may date to periods earlier than the mid-twentieth century. In particular, the presence of a well lined with local, unmodified sandstone is potential evidence for an earlier historic component, since concrete well boxes tend to predominate in more recent periods, as concrete or Portland cement became an important masonry material after 1890 (Grimsely 1906). In spite of the low density of artifacts recovered during the surface collection, the number and state of preservation of the architectural features identified suggest that the potential for subsurface features at the Railside farmstead is considered to be high.

33 Pk 213 (Log Pen Farmstead)

This site was located on a toe ridge/ bench in upland mixed hardwoods approximately 274 m (900 ft) south of the railroad associated with the USDOE PORTS facility (Figure 2), and is actually located where the Holt Cemetery (33 Pk 214)[PIK-207-12] is depicted on the Waverly South , Ohio (1992) USGS 7.5' topographic quadrangle. Site 33 Pk 213 was named in reference to the log and sheet metal building identified at this site. The Log Pen farmstead was located during visual inspection and was also subjected to surface collection (Table 6).

On the basis of identifiable architectural features and artifacts, the site area was determined to be 14 m (46 ft) north to south by 9 m (29 ft) east to west (Table 20). Only one architectural cluster was located, and consisted of the remains of a collapsed log structure, a scatter of rough-cut sandstone blocks, and sheet-metal roofing [Figure 21; Table 19; Plate 35].

Artifacts identified during the surface collection included 33 Kitchen Group artifacts, one Personal Group artifact, and one Furniture Group artifact (Table 30). A sample of artifacts is shown in Plate 36. One artifact recovered from Cluster 1 was not available for detailed analysis. This artifact was a fragment of a green glass candy dish or bowl with a pressed floral design (Table 30). This artifact represented the only object scanned by individuals from Health Physics that yielded a significant levels of radioactivity. As a result, this artifact was not released for analysis. Since none of the other 33 objects recovered from this site yielded significant levels of radiation, it at least seems plausible that the radioactivity associated with this object could have been due to its particular origins of manufacture, and may well be unrelated to its location within the USDOE PORTS facility.

The general date range indicated by the artifacts recovered and analyzed is ca. 1820 to present, which corresponds fairly well with the dates of 1906 and 1939 as indicated by cartographic data and aerial photographs (Table 20). In comparison with the other historic farmsteads recommended for further work, the Log Pen farmstead (33 Pk 213) represents the most substantial wood frame structure identified during the archaeological surveys of the PORT facility. The Log Pen farmstead is also similar to the Beaver Road (33 Pk 195) and Dutch Run Road (33 Pk 197) farmsteads in that it also appears to represent a single historic building/residence affiliated with a somewhat shorter use-life than the other historic farmsteads recommended for further work. Therefore, the Log Pen farmstead is also considered likely to yield subsurface features.

33 Pk 217 (Stockdale Road Dairy)

This site was located on a preglacial terrace/toe ridge above the north bank of Little Beaver Creek in an old field and upland mixed hardwood habitats some 244 m (800 ft) east of the North Access Road, where it crosses Little Beaver Creek (Figure 2). Site 33 Pk 217 was named the Stockdale Road Dairy because of its location adjacent to what was once marked as the Stockdale Road on the Piketon, O. (1951) USGS 15' topographic map, and because the foundation of a dairy barn was identified at this site (Plate 37). This site was located during visual inspection and was also subjected to surface collection (Table 6).

On the basis of prominent architectural features and artifacts, the site area for the Stockdale Road Dairy was determined to be 185 m (607 ft) north to south by 85 m (279 ft) east to west (Table 20). Six architectural clusters were located, and consisted of a concrete foundation for a three gable barn with steel pipe still present for the cattle stalls (Plate 37), a capped concrete cistern and well with a reservoir trough, and an open concrete box well (Plate 38) [Cluster 1], a building outline indicated by a series of rough-cut sandstone footers and an old fence line (Cluster 2), a concrete pad for an outbuilding (Cluster 3), a concrete garage pad (Cluster 4), a square depression with sandstone blocks, some sheet metal, a circular earthen well depression, and an old fence line (Cluster 5), and two semicircular-to-square depressions (Cluster 6)[Figure 22; Table 19])

Historic artifacts identified during the surface collection included 18 Kitchen Group artifacts, five Architectural Group artifacts, three Activities Group artifacts, and one Furniture Group artifact (Table 31). Several artifacts are shown in Plate 39.

The general date range indicated by these artifacts is from ca. 1820 to the present, which precedes and encompasses the dates of 1906, 1939, and 1951, as indicated by cartographic data and aerial photographs (Table 20). In comparison with the other historic farmsteads recommended for further work, the Stockdale Road Dairy (33 Pk 217) yielded the most substantial evidence for a specific historic agricultural activity, as seen in the form of the dairy barn foundation (Cluster 1). The view of this site as a dairy complex was further supported by the identification of a steel milk can lid that was noted near Cluster 2, but was not collected, and by the recovery of a colorless glass milk bottle fragment associated with the well in Cluster 5 (Table 31). The state of preservation of the architectural features and the density of historic artifacts indicate that subsurface features at the Stockdale Road Dairy are likely to be present.

33 Pk 218 [PIK-205-12] (Cannett Farmstead)

This site was located on a gently sloping toe ridge in oak-hickory forest and scrub thicket habitats above the valley of the unnamed tributary that drains into the X-611B Sludge Lagoon which is 305 m (1,000 ft) further down stream (Figure 2). Site 33 Pk 218 was given the name Cannett farmstead based on the identification of a mailbox fragment with the name "Cannett" painted on it. This site was located during visual inspection and was also subjected to surface collection (Table 6).

On the basis of prominent architectural features and artifacts, the site area for the Cannett farmstead was determined to be 155 m (509 ft) north to south by 75 m (246 ft) east to west (Table 20). Six architectural clusters were located and consisted of a scatter of rough-cut sandstone blocks, a post and old fence, ornamental plants (daffodils), and an iron porch swing (Cluster 1), a relatively intact cement and sandstone root cellar (Plate 40), a bale of fence wire, a 1930s-1940s era washing machine, a mailbox and sheet-metal fragments (Cluster 2), a scatter of sandstone blocks and a sandstone-lined well with a concrete box at ground surface (Plate 41) [Cluster 3], an open refuse dump pile (Cluster 4), a roof from a wood-frame and sheet-metal outbuilding (Plate 42) [Cluster 5] , and a sheet metal livestock water tank, sandstone blocks, wooden planks, and sheet-metal from an outbuilding (Cluster 6)[Figure 23; Table 19].

Historic artifacts identified during the surface collection included 29 Kitchen Group artifacts, two Architectural Group artifacts, and two Activities Group artifacts (Table 32). Examples of artifacts are shown in Plates 43-45.

The general date range indicated by these artifacts is from ca. 1820 to the present, which corresponds well with the dates of 1906, 1939, and 1951, indicated by cartographic sources and aerial photographs (Table 20). In comparison with the other historic farmsteads recommended for further work, the Cannett farmstead (33 Pk 218) yielded one of the most substantial assemblages of ceramics (Table 32; Plates 43 and 45). In retrospect it was somewhat surprising how few historic ceramics came from the majority of historic farmsteads identified, particularly in contrast to glass containers which were very conspicuous on most historic farmsteads. This sample may have resulted from our inability to locate the privies, or sealed subsurface refuse deposits which could have contained the bulk of the ceramics.

The Cannett farmstead is also unusual in that it represents the only historic site identified within the USDOE PORTS facility that had a relatively intact architectural feature. This was the concrete and sandstone root cellar associated with Cluster 2 (Plate 40). As a result of the identification of a structure remnant, an OHI was also completed for this site [PIK-205-12]. This root cellar probably avoided demolition by being built into the side of a ravine bank and

was in a sense already at "ground-level," particularly when viewed from the top of the sloping toe ridge. However, other root cellars identified at the other farmsteads were also likely to have been semi-subterranean by design. Nevertheless, the demolition of these farmsteads prior to the USDOE PORTS facility plant construction appears to have been focused on razing these buildings to ground level, and this action has probably contributed indirectly to the preservation of some subsurface features and artifacts by sealing them.

In sum, the state of preservation of the architectural features at the Cannett farmstead and the density of historic artifacts recovered suggest that subsurface features are likely to be present, and further work is recommended.

4.4 The Predictive Model Results

Multivariate analyses predicted that the model had a high probability of correctly identifying areas where prehistoric sites would and would not be found. Given available information, modest predictions were also made concerning the location of historic sites.

The results of the reconnaissance survey support the predictive model. Habitat I, consisting of disturbed areas such as managed grasslands, wetlands, and pine, was predicted to have a low probability for site location. Three sites were identified in this habitat, including an historic farmstead remnant (33 Pk 187), a USDOE PORTS-related site (33 Pk 188), and a historic dump (33 Pk 216). None of these sites are considered eligible for nomination to the NRHP. Habitat II, consisting of old field and scrub thicket with mixed hardwoods, was considered a high probability area for the location of historic sites. A total of 11 sites (30.6 percent) were identified in this habitat, including four historic farmsteads, two isolated historic finds, one historic dump, and four isolated prehistoric finds (none of which were diagnostic). The four historic farmsteads (33 Pk 184 [Davis farmstead], 33 Pk 185 [South Shyville farmstead], 33 Pk 193 [Iron Wheel farmstead], and 33 Pk 211 [Bamboo farmstead]) are all considered potentially eligible for listing on the NRHP, but none of the remaining sites are eligible.

Habitat III, consisting of ridgetops with upland-mixed hardwood forest, was considered a high probability area. It produced 12 sites (33.3 percent), including six historic farmsteads, one cemetery, one historic dump, three USDOE PORTS-related sites, and one prehistoric lithic scatter. The historic farmsteads (33 Pk 194 [North Shyville farmstead], 33 Pk 195 [Beaver Road farmstead], 33 Pk 197 [Dutch Run Road farmstead], 33 Pk 212 [Railside farmstead], 33 Pk 213 [Log Pen farmstead], and 33 Pk 217 [Stockdale Road Dairy]) are potentially eligible for nomination to the NRHP, but the remaining sites are ineligible.

Habitat IV, a low probability area consisting of upper slopes with upland-mixed hardwood forest, produced no sites.

Habitat V was a high probability area of oak-hickory forest on ridgetops. This area produced eight sites (22 percent), including one historic farmstead, one site with an historic farmstead component and a prehistoric lithic scatter component, four historic dumps, one site with a cemetery and an isolated prehistoric find, and one additional isolated prehistoric find. The cemetery (33 Pk 189 [Mount Gilead Cemetery]) is recommended for preservation and the two historic farmsteads (33 Pk 206 [Terrace farmstead] and 33 Pk 218 [Cannett farmstead) are considered potentially eligible for listing on the NRHP. None of the prehistoric sites or components are considered eligible. The dumps also are not eligible for the NRHP.

Habitats VI and VII were two low probability areas which produced no sites. Habitat VI was confined to the lower slopes and unknown terraces with oak-hickory forest, while Habitat VII contained riparian areas with stream ranks greater-than-or-equal-to 3 and their associated floodplains.

Habitat VIII was considered a high probability area; it consists of riparian areas of major streams and their associated flood plains and first terraces. One historic farmstead (33 Pk 203 [Ruby Hollow farmstead]) was located in this habitat; it is considered potentially eligible for nomination to the NRHP.

Habitat IX was the remaining high probability habitat, consisting of second and higher order terraces and bluffs with beech-maple forest. This habitat was confined to one small area in the extreme southwest corner of the USDOE PORTS facility, but it produced a prehistoric lithic scatter (33 Pk 210) which is potentially eligible for listing on the NRHP.

Neither Habitat X, consisting of benches and lower slopes with beech-maple forest, nor Habitat XI, the successional maple forest, produced sites. Both habitats were considered low probability.

The predictive model thus has provided a functional and efficient means of directing future survey and research efforts for the USDOE PORTS facility and surrounding area. All high probability areas produced sites which are considered potentially eligible for nomination to the NRHP or which were recommended for avoidance. Only one low probability habitat, Habitat I, produced sites. However, none of these are eligible for the NRHP. In addition, it was found that some old field areas, portions of the high probability Habitat II, could be considered low probability based

on the level of disturbance. Habitat II areas associated with railroad beds or adjacent to access roads or other plant-related facilities were routinely disturbed to such an extent that no eligible sites were present in such areas.

5.0 SUMMARY AND RECOMMENDATIONS

Under contract with Lockheed Martin Energy Systems, Inc., ASC Group, Inc. has completed a Phase I literature review, reconnaissance survey, and predictive model of prehistoric and historic archaeological site location for the USDOE Portsmouth Gaseous Diffusion Plant (PORTS Facility) in Scioto and Seal townships, Pike County, Ohio (Figure 1). The archaeological fieldwork was conducted from September 16 through September 27, 1996, and from April 23 through May 13, 1997. An architectural survey was conducted concurrently, the results of which will be submitted as a separate report (Coleman et al. 1997).

The purpose of these investigations was to determine whether cultural resources exist within the project area, and if possible, to determine if those resources were eligible for inclusion on the National Register of Historic Places (NRHP). A research strategy combining literature review, a predictive model, and field reconnaissance was employed, resulting in the identification of 36 previously undocumented archaeological sites (33 Pk 184-33 Pk 219) within the USDOE PORTS facility boundary (Figure 2; Table 6).

Using the NRHP criteria for evaluation of potentially eligible cultural resources, five prehistoric isolated finds, one prehistoric lithic scatter, two historic isolated finds, seven historic scatters or open refuse dumps, four historic plant-related structure or building remnants, and one historic farmstead remnant do not have good focus or visibility and thus lack integrity. They do not meet any of the NRHP criteria and are considered ineligible for nomination to the NRHP. No further work is recommended for these sites. Two historic cemeteries identified within the USDOE PORTS facility boundary (Mount Gilead Cemetery [33 Pk 189; PIK-206-9] and Holt Cemetery [33 Pk 214; PIK-207-12], and were recommended for preservation despite the fact that cemeteries are generally not eligible for nomination to the NRHP.

The remaining 14 sites are considered potentially eligible for inclusion on the NRHP. These sites consist of one prehistoric lithic scatter (33 Pk 210), and 13 historic farmsteads (Table 20). As a whole, this group of 14 sites, or components thereof, possess site integrity and are considered likely to produce additional important information concerning the prehistory or history for the region. These sites meet Criterion D, and thus avoidance, preservation, or assessment is recommended for these sites. Below a brief discussion is provided for each site recommended for preservation, or assessment, in light of the potential significance of the two historic cemeteries including 33 Pk 189 [PIK-

206-9] Mount Gilead Cemetery, and 33 Pk 214 [PIK-207-12] Holt Cemetery [Section 5.1], followed by a discussion of the significance of the lithic scatter at 33 Pk 210 (Section 5.2), and then followed by a discussion of the 13 historic farmsteads recommended for further work (Table 20) [Section 5.3]. This report concludes with a brief discussion of the archaeological resources within the USDOE PORTS facility as a whole and summarizes the particular significance of all these resources [Section 5.4].

5.1 Significance of the Historic Cemeteries

Four historic cemeteries were identified within or immediately adjacent to the USDOE PORTS facility: The Daley Cemetery (Talbott-Dailey Cemetery), the Bailey Chapel Cemetery, the Mount Gilead Cemetery (33 Pk 189) [PIK-206-9], and the Holt Cemetery (33 Pk 214)[PIK-207-12]. These four cemeteries vary significantly in their size and present condition, yet each represents a significant expression of the local nineteenth and early twentieth century rural communities which they served, or continue to serve today.

First, the abandoned Daley (Talbott-Dailey) Cemetery appears to represents a focal point for some of the earliest Euro-American settlement in present-day Scioto Township. While the Daley Cemetery only shares one side of a boundary fence with the USDOE PORTS facility, and is therefore not on USDOE property and not a part of this survey proper, its ultimate fate is probably linked to events that may affect the plant facility. It was on this basis that a recommendation for avoidance was offered, so that this important historic site could remain unaffected by activities related to the USDOE facility.

The Bailey Chapel Cemetery has been, and continues to be, a focal point of the local community since the mid-nineteenth century. This cemetery and associated chapel shares two sides of its boundary with the USDOE PORTS facility, and like the Daley Cemetery, was not subject to evaluation for this survey proper; nevertheless, its significance is that it is only known example of a surviving congregation within or adjacent to the USDOE PORTS facility that was able to maintain its original chapel and cemetery after plant construction, and may serve as a working model for interpreting the archaeological remains of religious buildings or cemeteries within the USDOE PORTS facility boundary. It was on this basis that avoidance was recommended for the Bailey Chapel and associated cemetery.

The Mount Gilead Cemetery (33 Pk 189) [PIK-206-9] represents a cemetery and previous chapel location that is no longer in use, but continues to be maintained in spite of the fact that it is entirely within the boundaries of the USDOE PORTS facility boundary. This site represents the most conspicuous evidence of mid-nineteenth through early

twentieth century settlement within the USDOE. PORTS facility, and is the most suggestive of Upland South cemeteries identified in other regions (Jeane 1978). Furthermore, the remains of the chapel at the site preserves some of the original spatial and contextual relationships of this rural upland religious complex. It was on this basis that continued preservation was recommended for the Mount Gilead Chapel and associated cemetery.

The Holt Cemetery (33 Pk 214) [PIK-207-12] represents a cemetery within the USDOE PORTS facility that was recently abandoned. This cemetery was located in one of the more remote portions of the USDOE. PORTS facility, and the original access road to it, which is depicted on the 7.5' USGS Waverly South, Ohio (1992) topographic quadrangle, is becoming overgrown due to its infrequency of use. This cemetery only had three extant headstones (Figure 10; Plates 10-12), in spite of the fact that it is likely that at least 15 other graves are or were, originally located at the cemetery. Like the Mount Gilead Cemetery (33 Pk 189)[PIK-206-9], this cemetery was probably in use from the nineteenth through early twentieth centuries; however, unlike Mount Gilead, this cemetery is not surrounded by extensive alteration due to the USDOE PORTS facility construction, and is in the vicinity of a number of roughly contemporaneous historic sites including 33 Pk 212 (Railside farmstead) and 33 Pk 213 (Log Pen farmstead), which could shed light on the relationship between these cemeteries and contemporaneous nineteenth century and early twentieth century historic farmsteads. It was on this basis that preservation was recommended for the Holt Cemetery.

5.2 The Significance of Lithic Scatter 33 Pk 210

Site 33 Pk 210, represents a unique prehistoric lithic scatter in that it exists in one of the least altered habitats within the USDOE PORTS facility boundary in particular, and in Scioto and Seal townships in general (Table 6). While a moderate amount of archaeological investigations have identified a number of significant archaeological resources within the vicinity of the USDOE PORTS facility (Table 1), very few sites of significance have been identified in the uplands. Potentially, 33 Pk 210 may represent such a site, and could significantly add to our knowledge of prehistoric upland land use, and/or settlement in south central Ohio.

It is recommended that 33 Pk 210 be subjected to an assessment survey in order to investigate its potential significance. This could be accomplished by the careful hand-excavation of approximately five 1 m by 1 m test units evenly spaced across the hilltop. Each 1 m by 1 m test units would be excavated down just below the soil/subsoil interface in order to identify any subsurface pits, hearths, posts, or other buried prehistoric features and associated artifacts that may be present.

5.3 Significance of the Historic Farmsteads

A total of 13 historic farmsteads were identified and recommended for further work during the Phase I reconnaissance survey at the USDOE PORTS facility (Table 20). These 13 historic farmsteads span the mid-nineteenth through mid-twentieth centuries (Table 20) and can be divided into three major groupings: A) remnants of a single building and associated architectural features and artifacts (33 Pk 193 [Iron Wheel farmstead], 33 Pk 195 [Beaver Road farmstead], 33 Pk 197 [Dutch Run Road farmstead], and 33 Pk 213 [Log Pen farmstead]), B) remnants of multiple buildings, architectural features, and artifacts, likely associated with a single residence or primary activity (33 Pk 184 [Davis farmstead], 33 Pk 185 [South Shyville farmstead], 33 Pk 206 [Terrace farmstead], 33 Pk 212 [Railside farmstead], 33 Pk 217 [Stockdale Road Dairy], and 33 Pk 218 [Cannett farmstead] and C) remnants of multiple buildings, architectural features and artifacts, likely associated with multiple residences, associated architectural features, and artifacts, indicative of rural hamlets or sites of multiple activities (33 Pk 194 [North Shyville farmstead], 33 Pk 203 [Ruby Hollow farmstead], and 33 Pk 211 [Bamboo farmstead].

The significance these classes of historic "farmsteads" is that they represent a variety of nineteenth through twentieth century patterns of settlement and activity, which, can collectively yield significant information concerning such rural upland settlements which have so far largely gone undocumented in Pike County, and much of the uplands of south-central Ohio (Rickey & Co. 1983).

It is suggested here that a representative site be chosen from each of these classes of historic farmsteads and investigated further by conducting an assessment survey. Specifically, at each chosen farmstead type, a series of 50 cm (20 in) by 50 cm (20 in) shovel test pits be used to locate subsurface features such as privies, or sealed refuse deposits, buried foundations, etc., around each major cluster of building remains and associated architectural features. After the 50 cm (20 in) by 50 cm (20 in) shovel tests have been completed, areas identified with high potential for yielding further subsurface features or concentrations of diagnostic artifacts, will be subjected to 1 m (3 ft) by 2 m (6.5 ft) test trenches in an effort to further delineate subsurface feature and artifact patterning.

5.4 Significance of the Archaeological Resources As A Whole

During the Phase I reconnaissance survey, 36 archaeological sites were identified using a combination of visual inspection, surface collection, and shovel test pit excavation; these results revealed a number of significant factors

concerning the formation processes that have affected the preservation and condition of these sites, which make these resources somewhat unlike most other comparable archaeological sites in the region.

First, during these investigations, it became clear that site preservation quality significantly increased the greater the distance between the site and the Perimeter Road or other plant-related activities. In fact, visual inspection confirmed that virtually all of the areas within the Perimeter Road surrounding the primary cluster of buildings at the USDOE PORTS facility plant were substantially disturbed, and thus, were determined to be highly unlikely to yield any archaeological resources in context. In contrast, peripheral areas furthest from the Perimeter Road, yielded most of the archaeological sites identified (Figure 2).

Prehistoric sites were generally few in number and low in density (Tables 7, 8, and 17). It is difficult at this level of investigation to determine if this is indicative of local prehistoric upland settlement, or if this is a consequence of extensive disturbance due to the construction activities.

In contrast to prehistoric sites, historic sites were abundant, and relatively conspicuous, despite the fact that only one pre-construction era building was identified on the USDOE PORTS facility (root cellar at 33 Pk 218 [PIK-205-12] Cannett farmstead). In fact, the construction of the plant facility has indirectly preserved many of these historic archaeological resources. In areas peripheral to major construction activities at the USDOE PORTS facility, pre-existing buildings were apparently razed, and were subsequently left virtually undisturbed for the past four and a half decades. This contrasts sharply with what often happens to abandoned historic buildings or structures in more accessible locations. These sites often become vandalized, scavenged, or further broken up by new construction or agricultural activities such as plowing.

Evidence that the historic sites at the USDOE PORTS facility had undergone a somewhat different set of site formation processes was further evidenced in the abundance of whole glass containers recovered from a number of these sites (see Plates 14, 16, 17, 21, 24, 26, 30, 34, 36, 44). Furthermore, the noted lack of abundant historic ceramics may indicate that this class of artifacts still remain in sealed subsurface contexts such as privies or refuse pits, and have not been displaced.

Another significant aspect of the historic sites is that as a result of the rather unique set of circumstances associated with the building of the USDOE PORTS facility, nearly all of the historic sites identified support the notion of an absolute end-date for pre-plant related activities around 1952. This kind of uniform end-date for a group of

archaeological sites is usually affiliated with what are called "catastrophic assemblages" which are often extremely productive for detailed, and temporally-specific kinds of archaeological information. While the archaeological resources identified at the USDOE PORTS facility do not represent a turn-of-the-century era "Pompeii" for southern Ohio, they do offer a relatively unique set of archaeological resources which may offer a higher level of potential for yielding significant information.

In sum, the Phase I Archaeological Survey for the Portsmouth Gaseous Diffusion Plant (PORTS) Facility in Scioto and Seal Townships, Pike County, Ohio, has been completed. The survey identified 14 sites that are recommended for assessment and preservation. The remaining areas do not contain significant archaeological deposits, and no further work is recommended.

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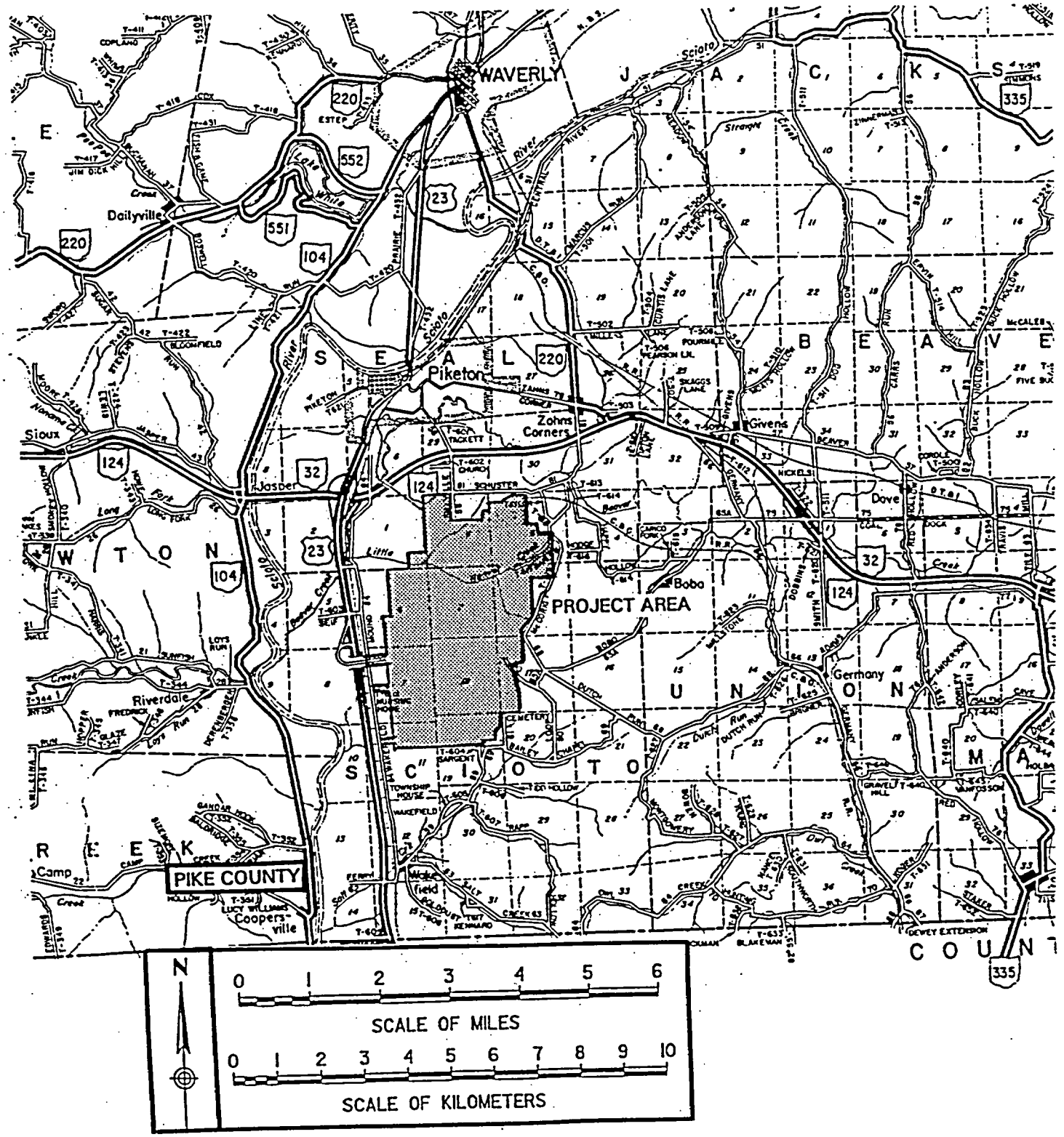
7.0 APPENDIX A: FIGURES

Figure 1. Portion of the Ohio Department of Transportation map showing the location of the USDOE.


WAVERLY
Piketon
Dailyville
Zohns Corners
Givens
Josper
Dove
Boba
Germany
Riverdale
Coopersville
PROJECT AREA
PIKE COUNTY
N
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SCALE OF MILES
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SCALE OF KILOMETERS

Figure 2. Digitally produced map of PORTS facility showing Quadrants I-IV, survey areas, disturbed high probability areas, and sites located during the archaeological surveys.
(See enclosed envelope)

Figure 3. Historic buildings within the PORTS facility boundary indicated on the 1912 Rand McNally & Co. Map of Pike County, Ohio.

(See enclosed envelope)

Figure 4. Historic buildings and roads within the PORTS facility boundary indicated on the Otway, Ohio (1917), Piketon, Ohio (1915), Sciotoville, O-KY (1911), and Waverly, Ohio (1906) USGS 15' topographic quadrangles.

(See enclosed envelope)

Figure 5. Historic buildings and/or structures within the PORTS facility boundary indicated on the 1939 and 1951 aerial photos provided by Jennifer Chandler (LMES).
(See enclosed envelope)

Figure 6a. Place of origin and total immigrants and migrants to Pike County and Seal Township, 1850 (after Wilhelm 1982).

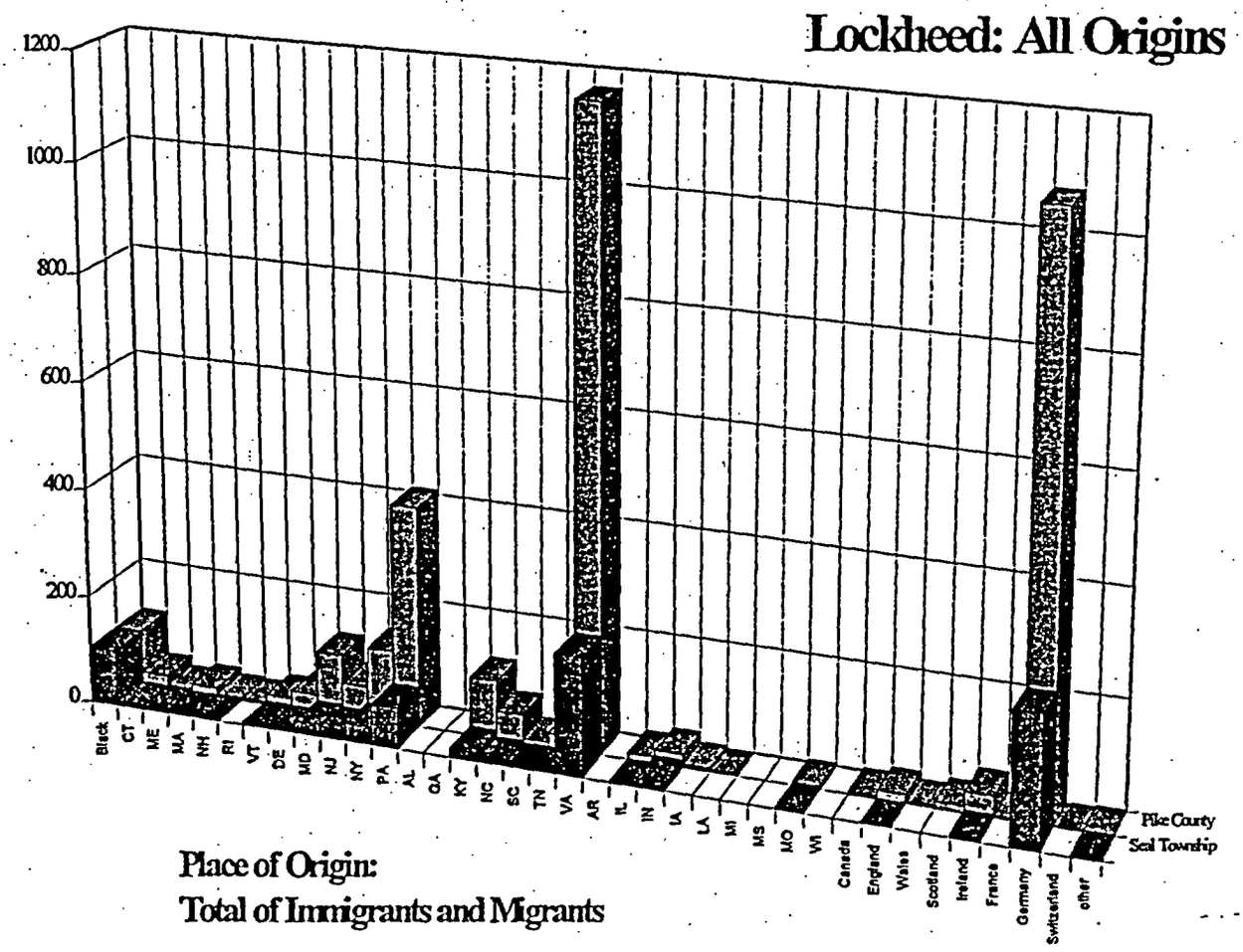
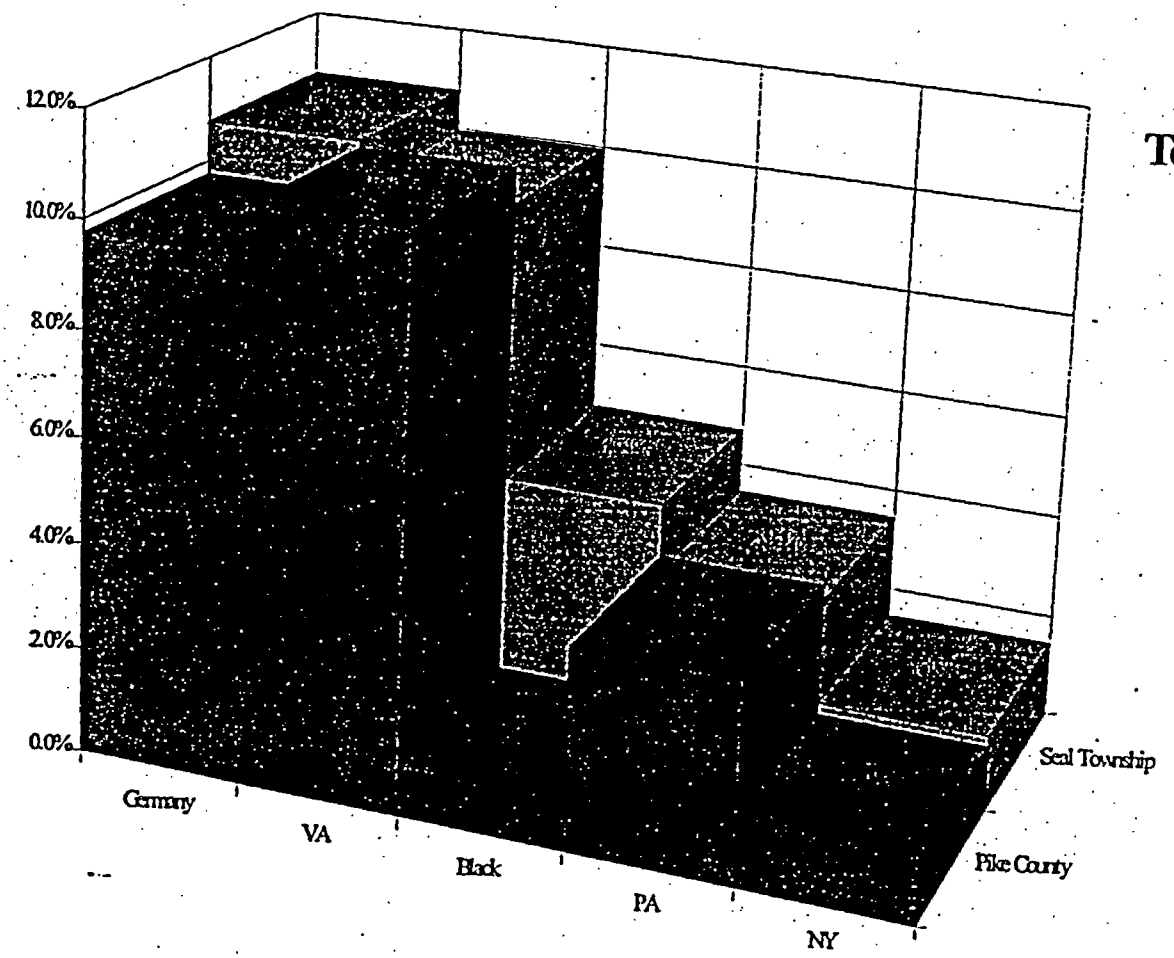

Lockheed: All Origins
1200
1000
800
600
400
200
0
Black
CT
ME
MA
NH
RI
VT
DE
MD
NJ
NY
PA
AL
GA
KY
NC
SC
TN
VA
AR
IL
IN
IA
LA
MI
MS
MO
WI
Canada
England
Wales
Scotland
Ireland
France
Germany
Switzerland
other
Pike County
Seal Township
Place of Origin:
Total of Immigrants and Migrants

Figure 6b. The top five (5) places of origin for the population of Pike County and Seal Township in 1850 (after Wilhelm 1982).



Lockheed:
Top 5 Origin

Figure 7. AutoCad generated map of the predictive model indicating the habitat and probability of sites.
(See enclosed enveloped)

Figure 8. Schematic map of 33 Pk 210.

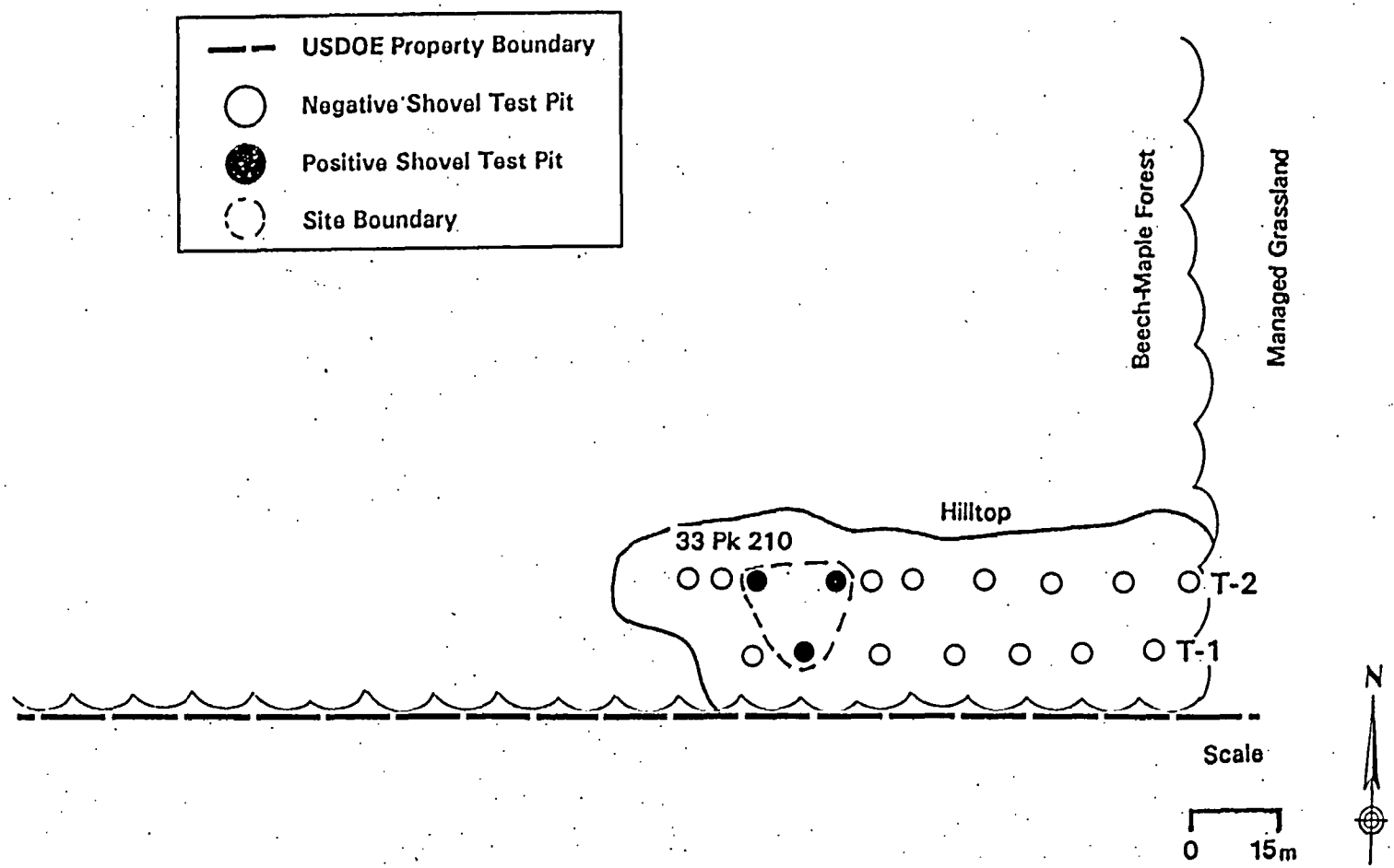

USDOE Property Boundary
Negative Shovel Test Pit
Positive Shovel Test Pit
Site Boundary
Beech-Maple Forest
Managed Grassland
Hilltop
33 Pk 210
T-2
T-1
N
Scale
0
15m

Figure 9. Schematic map of 33 Pk 189 (PIK 206-9).

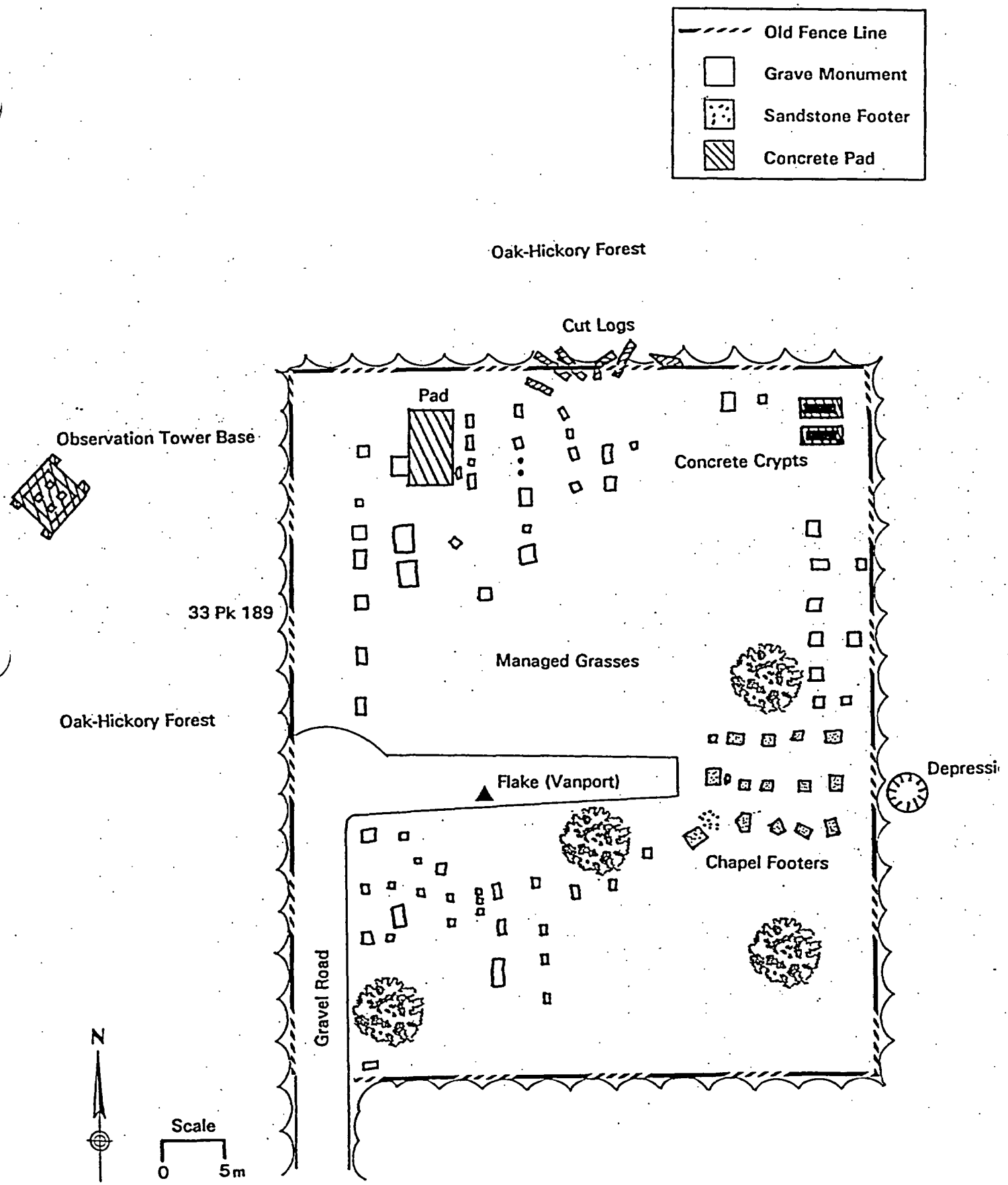

Old Fence Line
Grave Monument
Sandstone Footer
Concrete Pad
Oak-Hickory Forest
Cut Logs
Pad
Observation Tower Base
Concrete Crypts
33 Pk 189
Managed Grasses
Oak-Hickory Forest
Flake (Vanport)
Depressi
Chapel Footers
Gravel Road
N
Scale
0
5m

Figure 10. Schematic map of 33 Pk 214 (PIK 207-12).

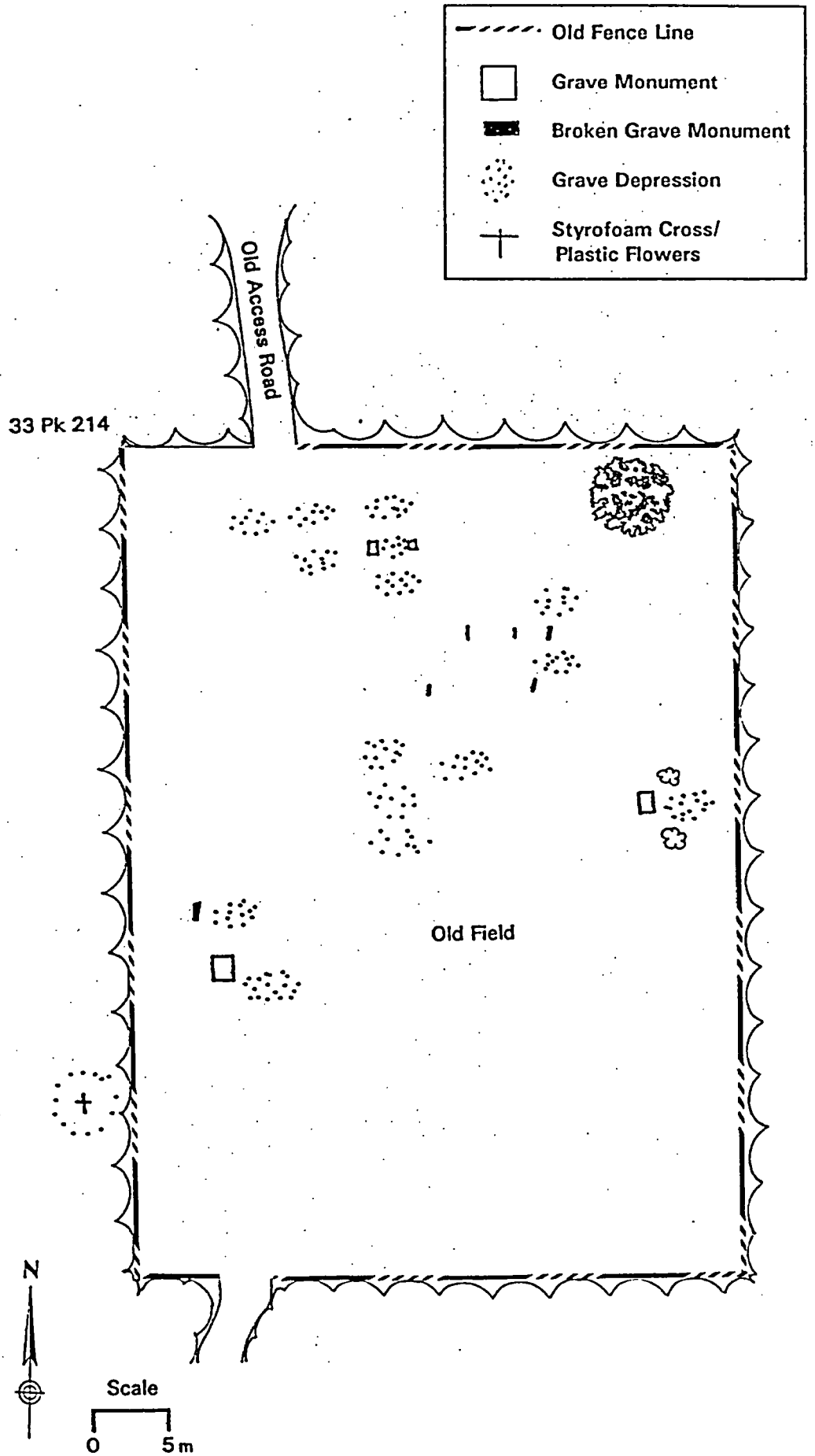

Old Fence Line
Grave Monument
Broken Grave Monument
Grave Depression
Styrofoam Cross/
Plastic Flowers
Old Access Road
33 Pk 214
Old Field
N
Scale
0
5 m

Figure 11. Schematic map of 33 Pk 184 (Davis farmstead).
(See enclosed enveloped)

Figure 12. Schematic map of 33 Pk 185 (South Shyville farmstead).

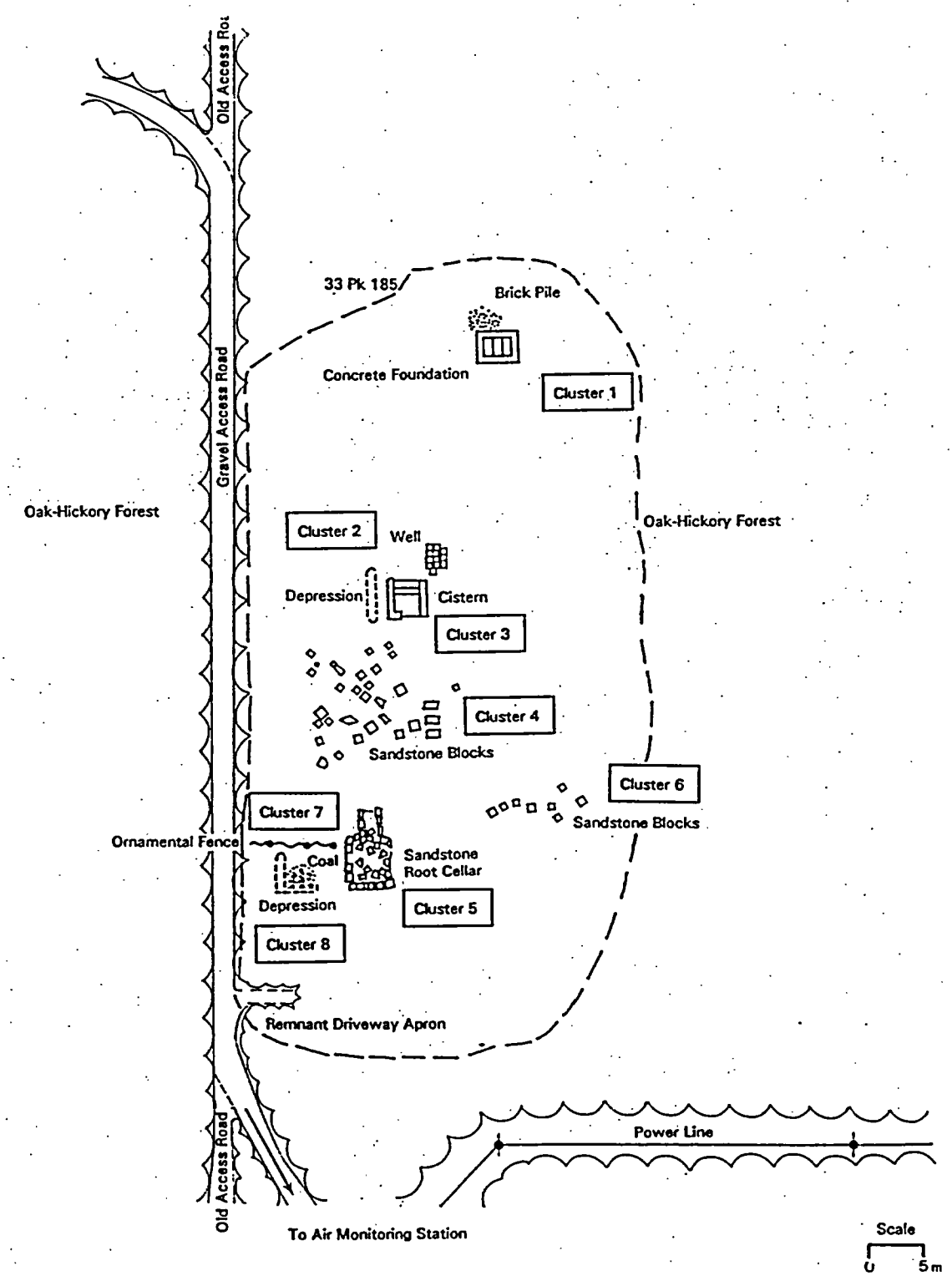

Old Access Road
Gravel Access Road
33 Pk 185
Brick Pile
Concrete Foundation
Cluster 1
Oak-Hickory Forest
Oak-Hickory Forest
Cluster 2
Well
Depression
Cistern
Cluster 3
Cluster 4
Sandstone Blocks
Cluster 6
Sandstone Blocks
Cluster 7
Ornamental Fence
Coal
Sandstone
Root Cellar
Depression
Cluster 5
Cluster 8
Remnant Driveway Apron
Power Line
Old Access Road
To Air Monitoring Station
Scale
0
5m

Figure 13. Schematic map of 33 Pk 193 (Iron Wheel farmstead).

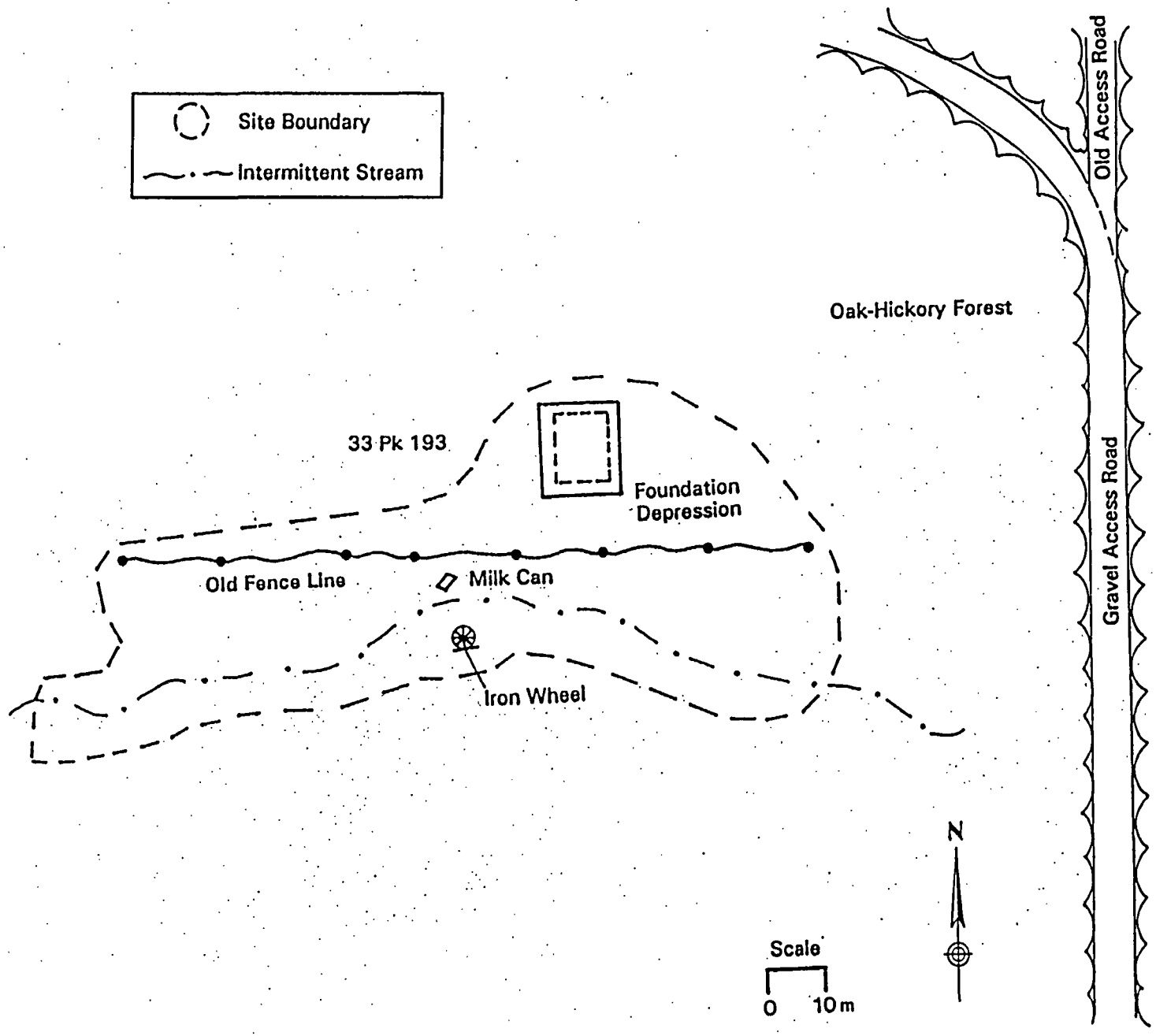

Site Boundary
Intermittent Stream
Old Access Road
Oak-Hickory Forest
33 Pk 193
Foundation Depression
Old Fence Line
Milk Can
Iron Wheel
Gravel Access Road
N
Scale
0
10 m

Figure 14. Schematic map of 33 Pk 194 (North Shyville farmstead).

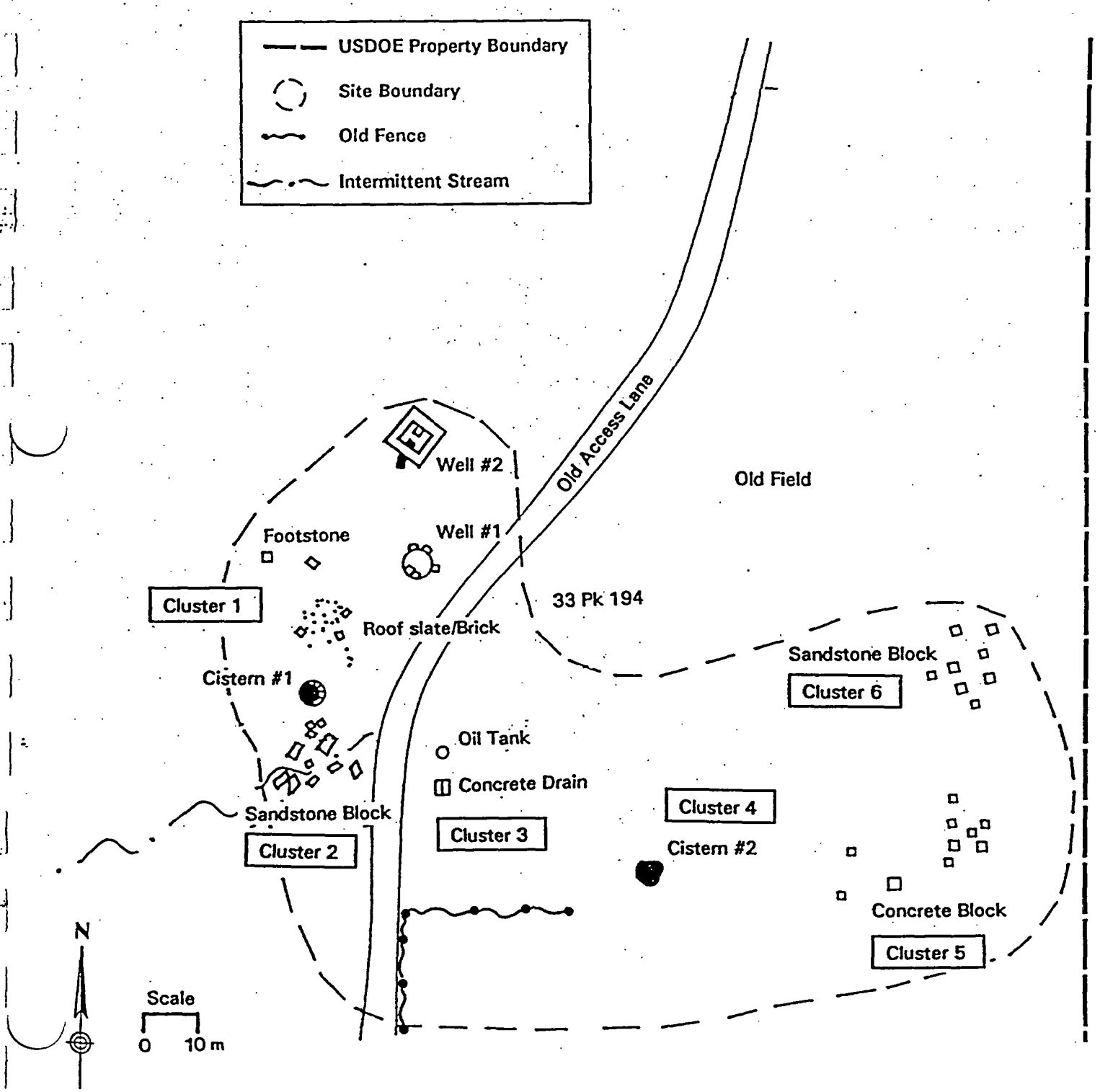

USDOE Property Boundary
Site Boundary
Old Fence
Intermittent Stream
Old Access Lane
Old Field
Well #2
Well #1
Footstone
Cluster 1
Roof slate/Brick
33 Pk 194
Cistern #1
Sandstone Block
Cluster 6
Oil Tank
Concrete Drain
Sandstone Block
Cluster 2
Cluster 3
Cluster 4
Cistern #2
Concrete Block
Cluster 5
N
Scale
0
10 m

Figure 15. Schematic map of 33 Pk 195 (Beaver Road farmstead).

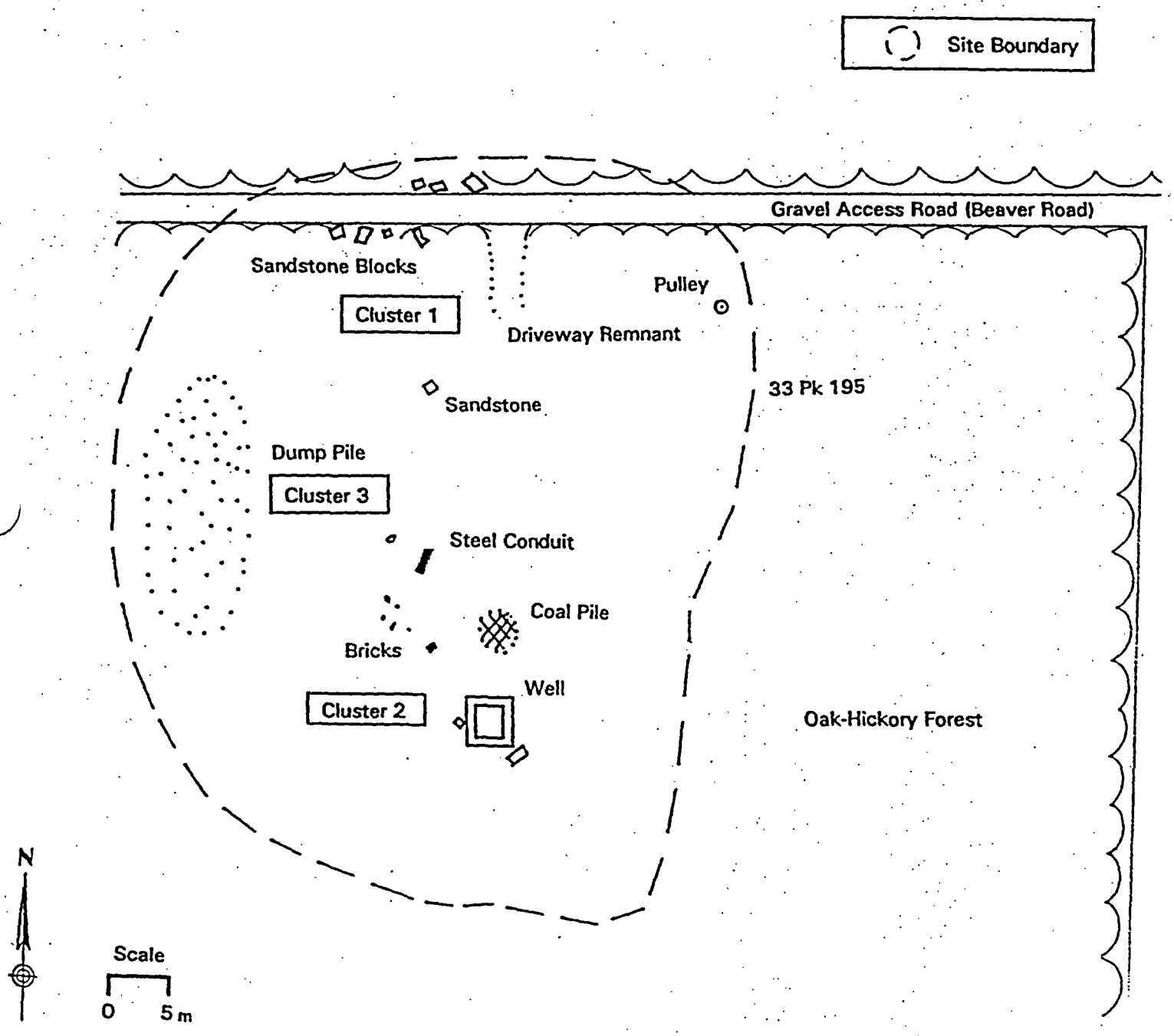

Site Boundary
Gravel Access Road (Beaver Road)
Sandstone Blocks
Cluster 1
Pulley
Driveway Remnant
33 Pk 195
Sandstone
Dump Pile
Cluster 3
Steel Conduit
Coal Pile
Bricks
Well
Cluster 2
Oak-Hickory Forest
N
Scale
0
5 m

Figure 16. Schematic map of 33 Pk 197 (Dutch Run farmstead).

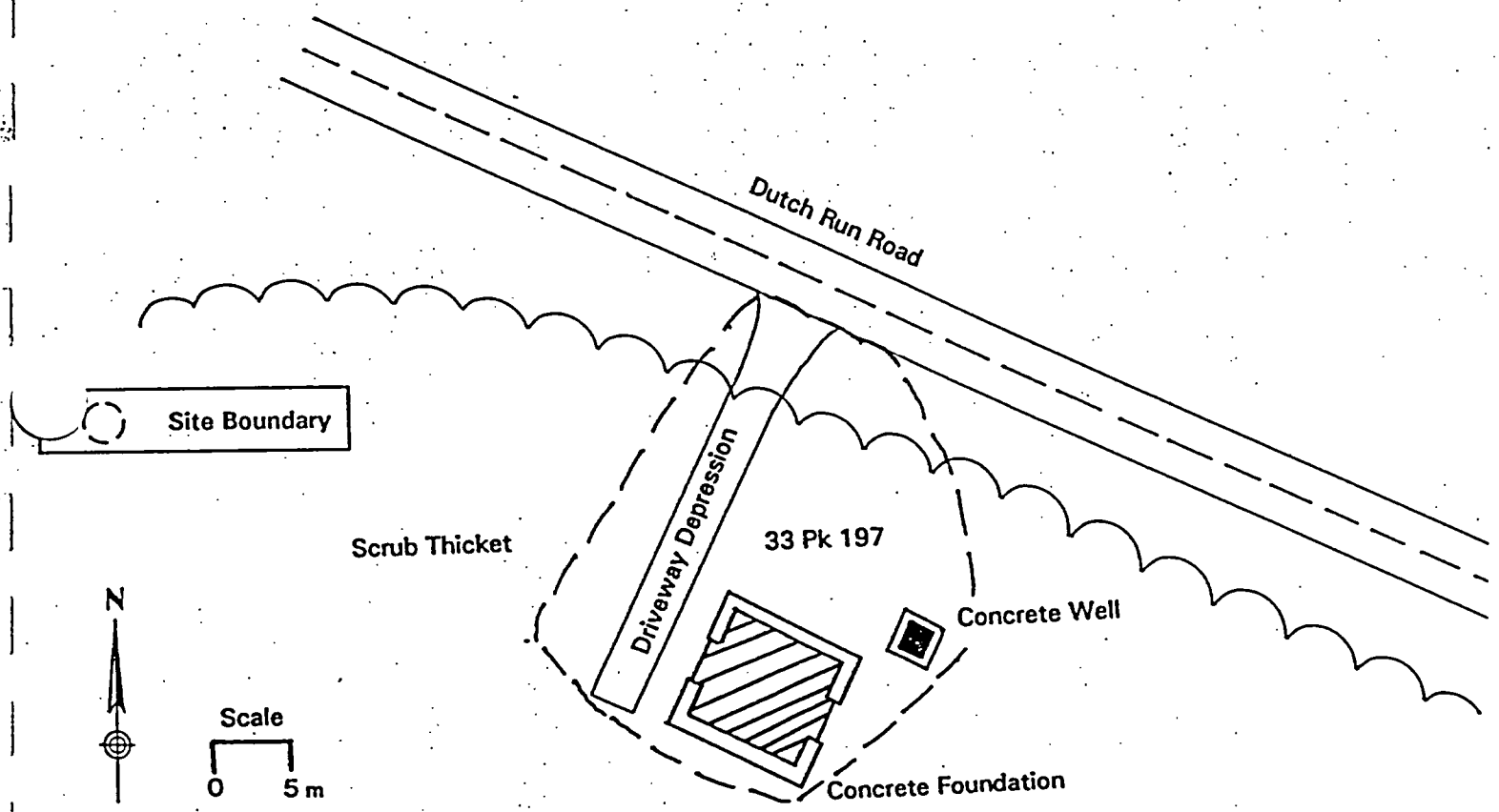

Dutch Run Road
Site Boundary
Scrub Thicket
Driveway Depression
33 Pk 197
Concrete Well
Concrete Foundation
N
Scale
0
5 m

Figure 17. Schematic map of 33 Pk 203 (Ruby Hollow farmstead).

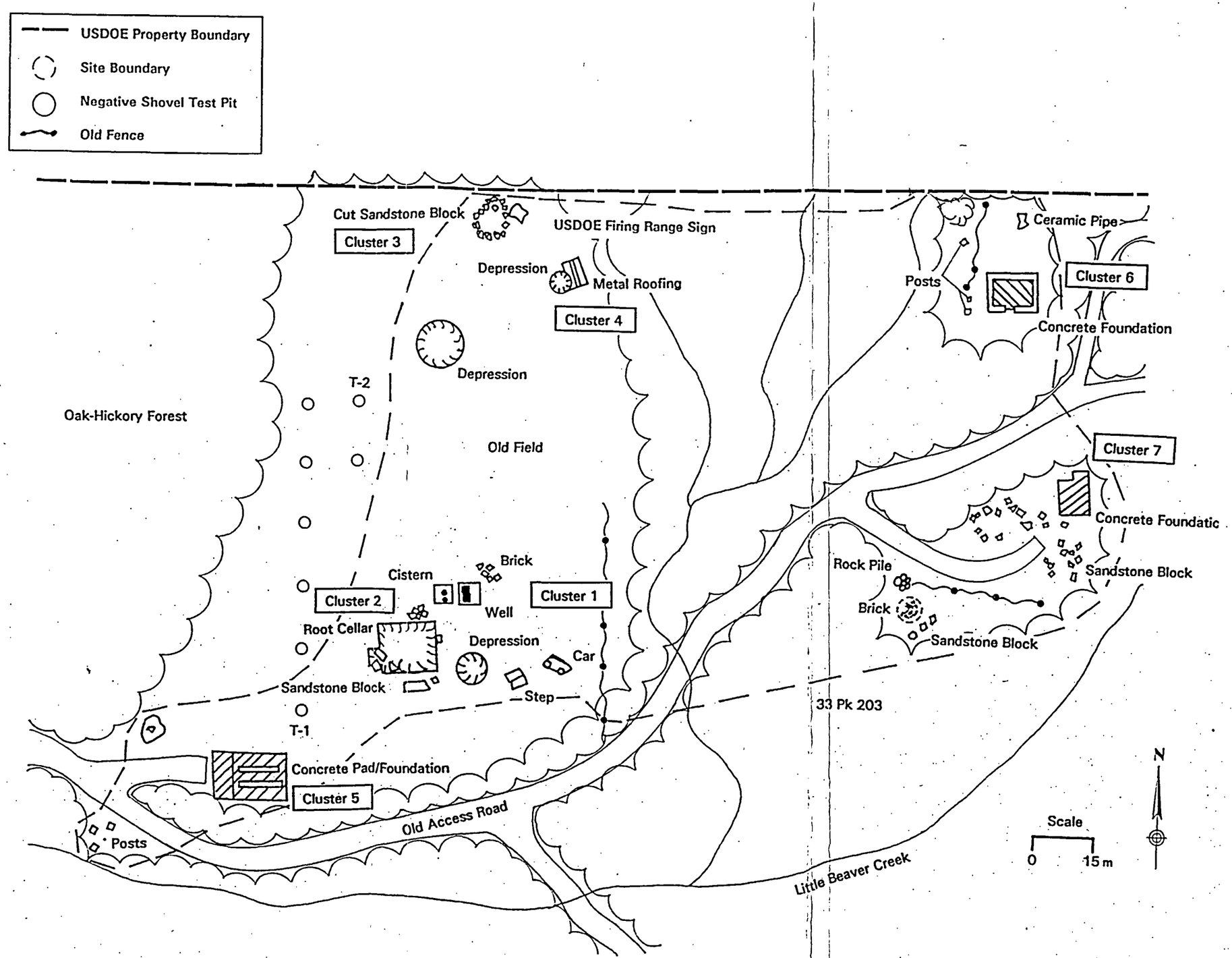

USDOE Property Boundary
Site Boundary
Negative Shovel Test Pit
Old Fence
Cut Sandstone Block
Cluster 3
USDOE Firing Range Sign
Depression
Metal Roofing
Cluster 4
Depression
T-2
Oak-Hickory Forest
Old Field
Cistern
Brick
Cluster 2
Well
Cluster 1
Root Cellar
Depression
Car
Sandstone Block
Step
T-1
Concrete Pad/Foundation
Cluster 5
Old Access Road
Posts
Little Beaver Creek
Ceramic Pipe
Posts
Cluster 6
Concrete Foundation
Cluster 7
Concrete Foundatic
Rock Pile
Sandstone Block
Brick
Sandstone Block
33 Pk 203
Scale
0
15 m
N

Figure 18. Schematic map of 33 Pk 206 (Terrace farmstead).

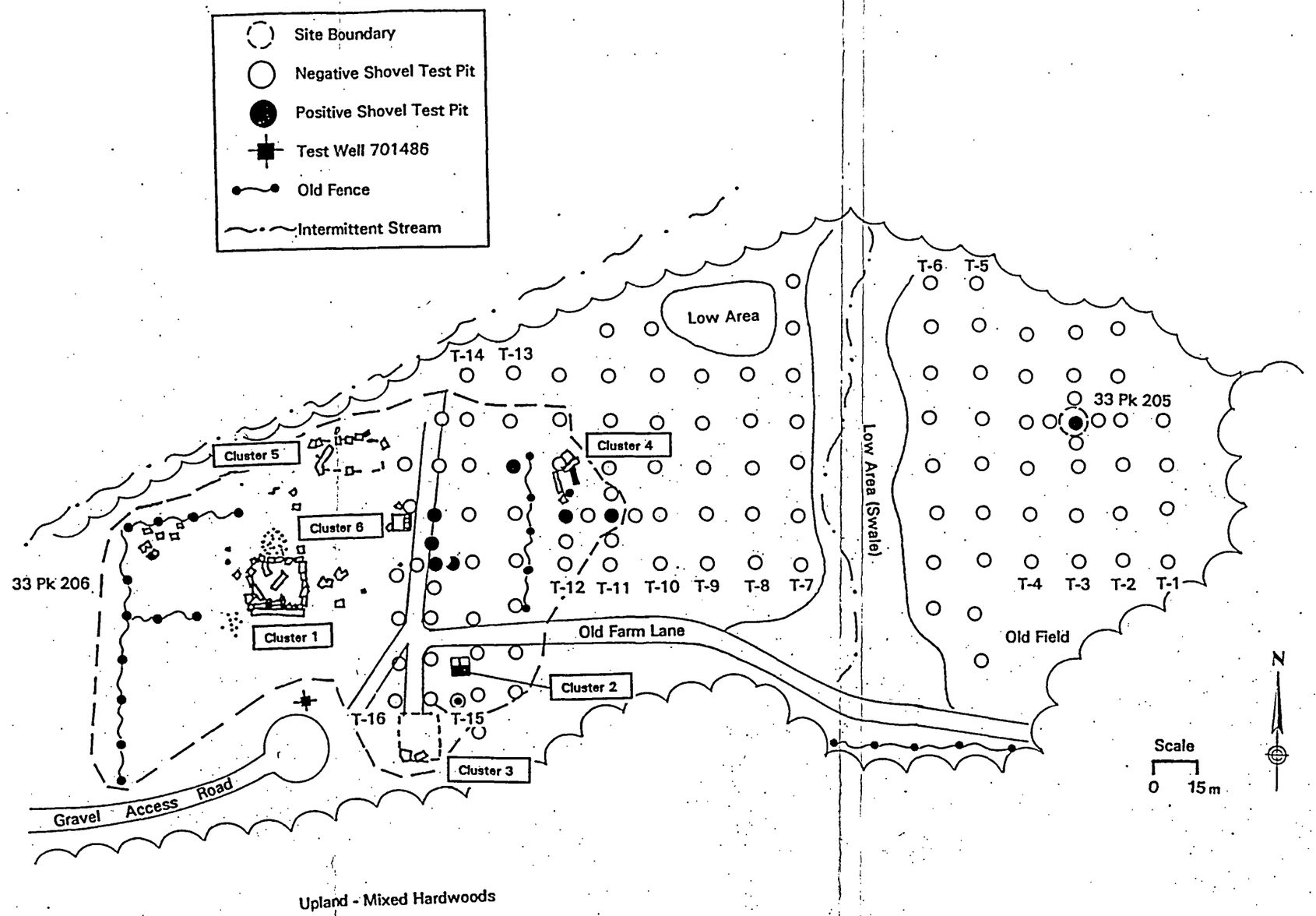

Site Boundary
Negative Shovel Test Pit
Positive Shovel Test Pit
Test Well 701486
Old Fence
Intermittent Stream
Low Area
T-14
T-13
T-6
T-5
33 Pk 205
Cluster 5
Cluster 4
Cluster 6
Low Area (Swale)
33 Pk 206
T-12
T-11
T-10
T-9
T-8
T-7
T-4
T-3
T-2
T-1
Old Field
Cluster 1
Old Farm Lane
Cluster 2
T-16
T-15
Cluster 3
Gravel Access Road
Scale
0
15 m
N
Upland - Mixed Hardwoods

Figure 19. Schematic map of 33 Pk 211 (Bamboo farmstead).
(See enclosed envelope)

Figure 20. Schematic map of 33 Pk 212 (Railside farmstead).

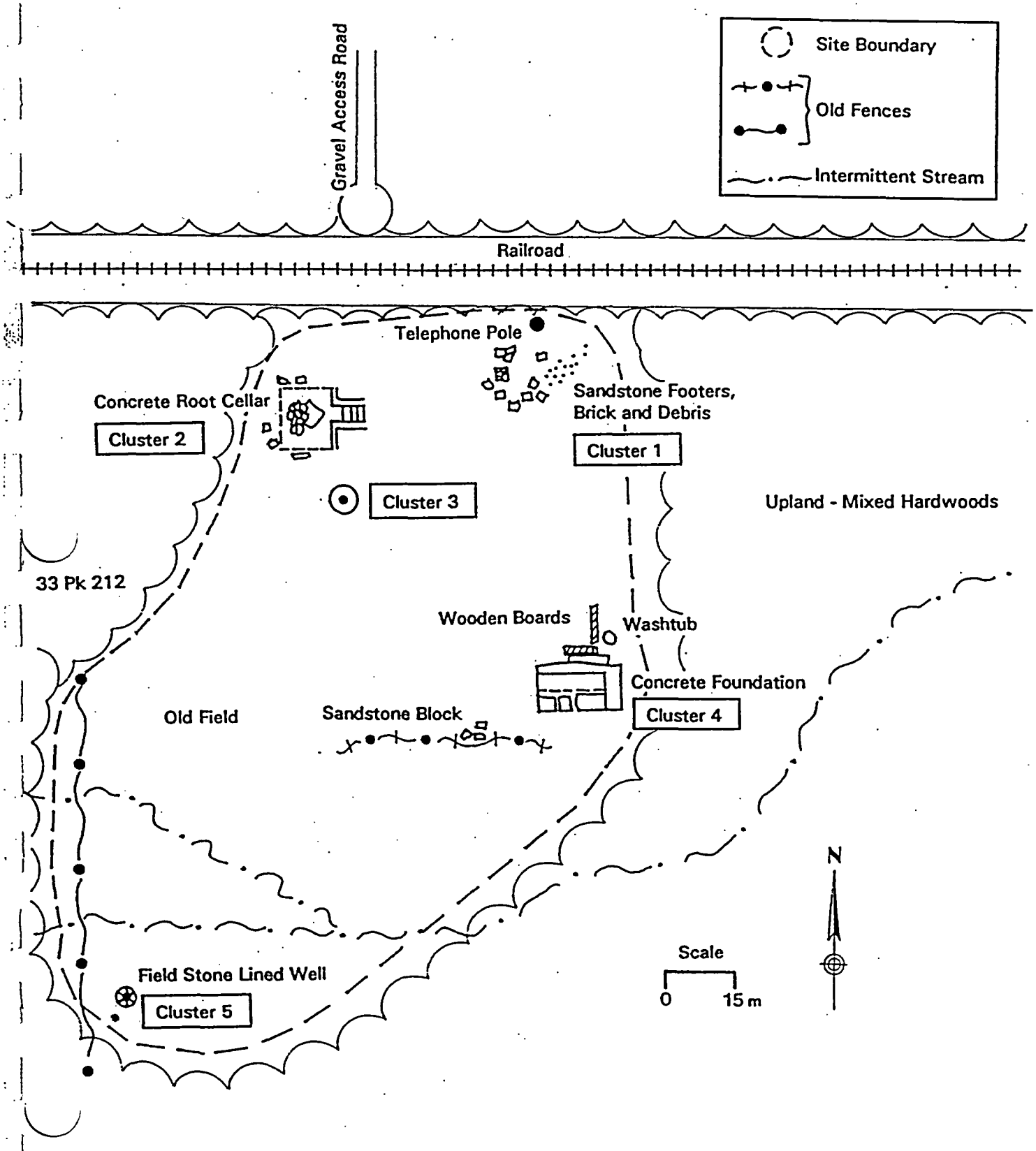

Site Boundary
Old Fences
Intermittent Stream
Gravel Access Road
Railroad
Telephone Pole
Concrete Root Cellar
Cluster 2
Sandstone Footers,
Brick and Debris
Cluster 1
Cluster 3
Upland - Mixed Hardwoods
33 Pk 212
Wooden Boards
Washtub
Concrete Foundation
Cluster 4
Old Field
Sandstone Block
N
Scale
0
15 m
Field Stone Lined Well
Cluster 5

Figure 21. Schematic map of 33 Pk 213 (Log Pen farmstead).

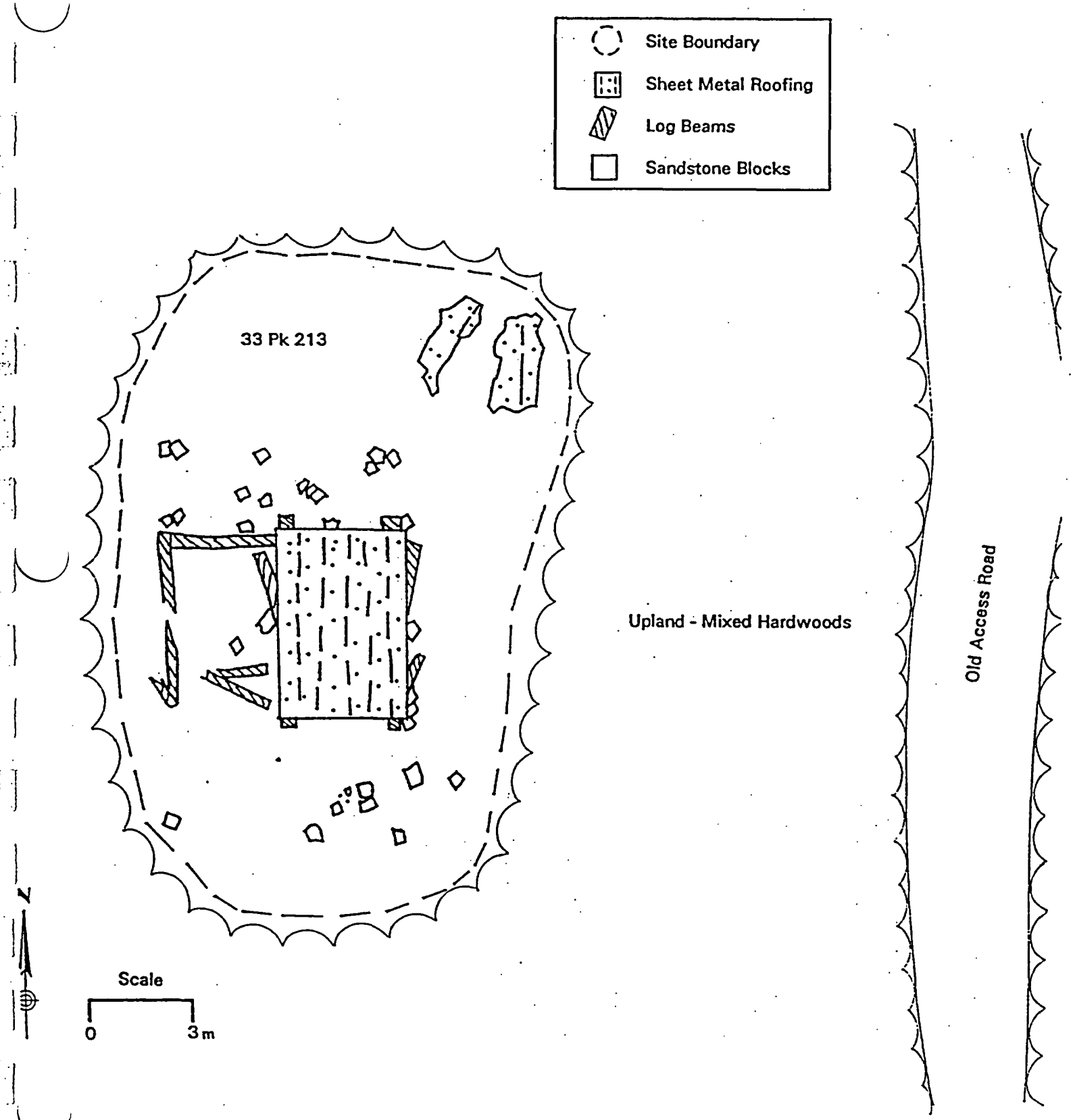

Site Boundary
Sheet Metal Roofing
Log Beams
Sandstone Blocks
33 Pk 213
Upland - Mixed Hardwoods
Old Access Road
N
Scale
0
3 m

Figure 22. Schematic map of 33 Pk 217 (Stockdale Road dairy).

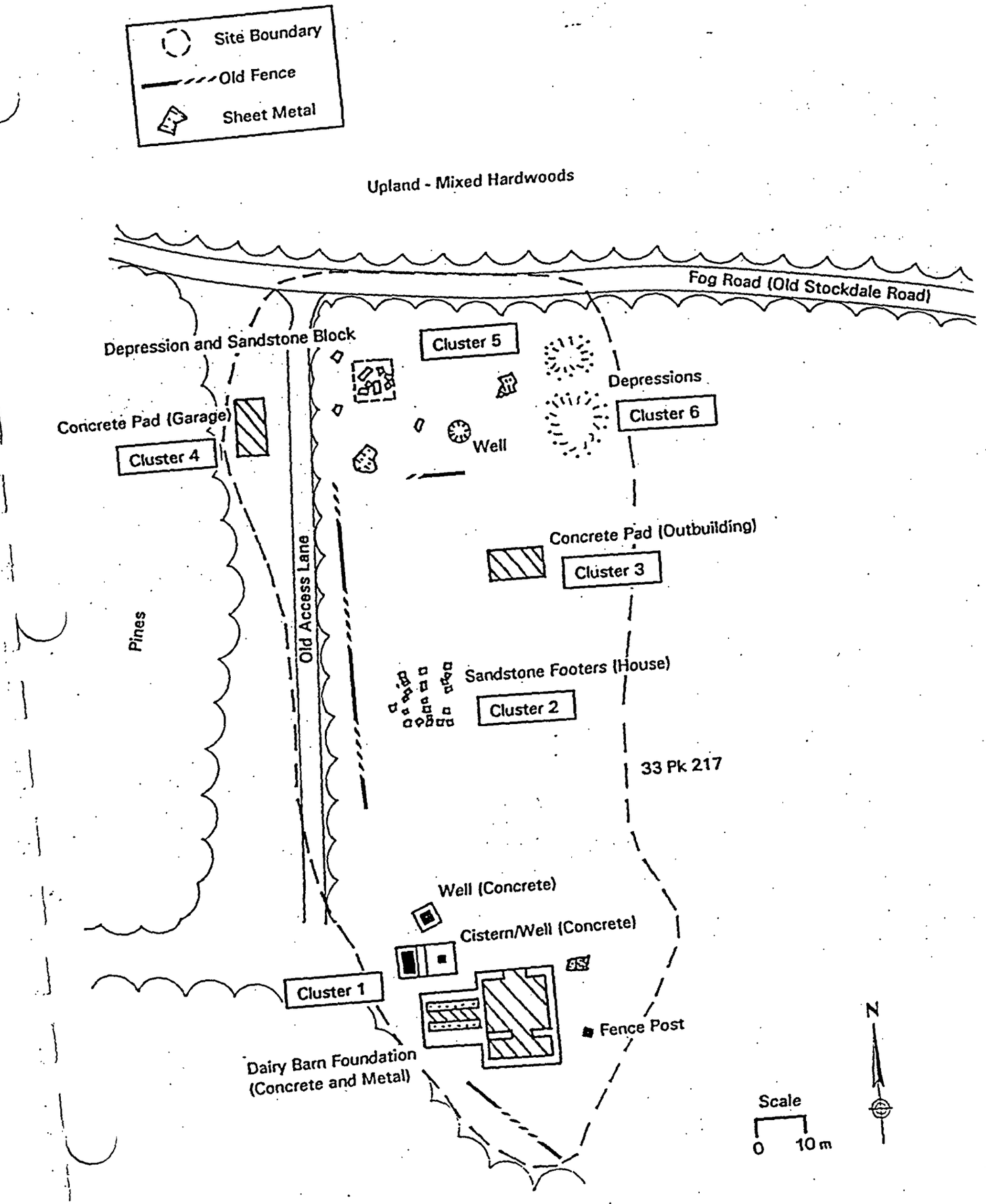
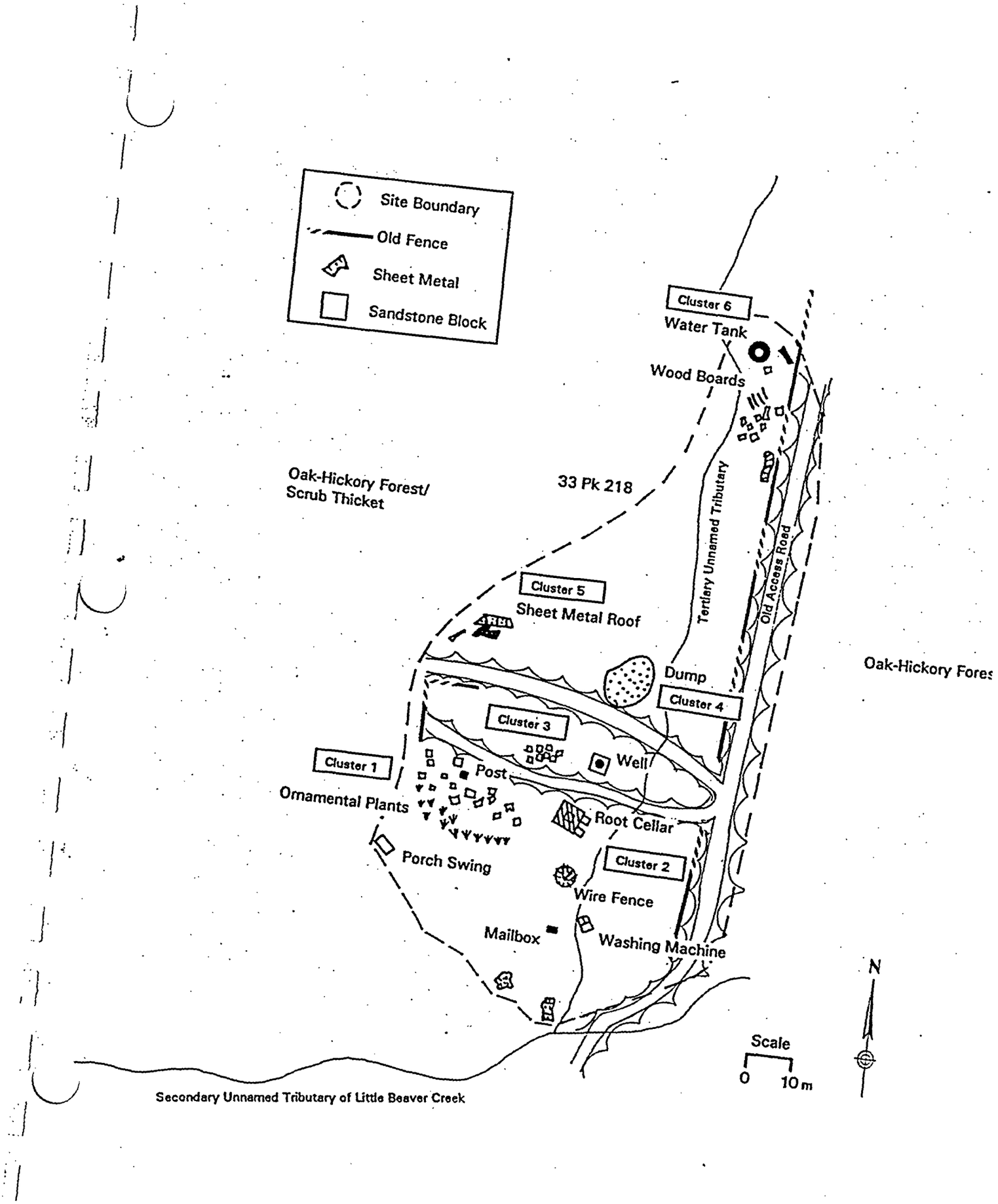

Site Boundary
Old Fence
Sheet Metal
Upland - Mixed Hardwoods
Fog Road (Old Stockdale Road)
Depression and Sandstone Block
Cluster 5
Depressions
Cluster 6
Concrete Pad (Garage)
Cluster 4
Well
Concrete Pad (Outbuilding)
Cluster 3
Old Access Lane
Pines
Sandstone Footers (House)
Cluster 2
33 Pk 217
Well (Concrete)
Cistern/Well (Concrete)
Cluster 1
Fence Post
Dairy Barn Foundation
(Concrete and Metal)
Scale
0
10 m
N

Figure 23. Schematic map of 33 Pk 218 (PIK 205-12).


Site Boundary
Old Fence
Sheet Metal
Sandstone Block
Cluster 6
Water Tank
Wood Boards
Oak-Hickory Forest/
Scrub Thicket
33 Pk 218
Tertiary Unnamed Tributary
Old Access Road
Cluster 5
Sheet Metal Roof
Dump
Cluster 4
Oak-Hickory Fores
Cluster 3
Well
Cluster 1
Post
Ornamental Plants
Root Cellar
Porch Swing
Cluster 2
Wire Fence
Mailbox
Washing Machine
N
Scale
0
10 m
Secondary Unnamed Tributary of Little Beaver Creek

8.0 APPENDIX B: TABLES

Table 1. Reported Archaeological Sites within a 6.5-Km (4 Mi) Study Radius of the USDOE PORTS Facility

OAI No.	USGS 7.5' Quadrangle	Site Type	Site Size	Landform	Cultural/Temporal Period	Reference(s)
33 Pk 1	Piketon	Mound Group	--	--	Early Woodland/Adena	Atwater (1820), Squier & Davis (1848)
33 Pk 2	Piketon	Mound	1 m high by 15 m diameter	Hill/Ridgetop	Early Woodland/Adena	Fowke (1902, 1928)
33 Pk 3	Piketon	Mound & Causeway	20 m diameter	Hill/Ridgetop	Early Woodland/Adena	Fowke (1902, 1928)
33 Pk 4	Piketon	Twin-peaked Mound	--	Upper Terrace	Early Woodland/Adena	Fowke (1902)
33 Pk 5	Piketon	Mound	40 m by 33 m by 6 m high	3rd or 4th terrace of Scioto River	Middle Woodland/Hopewell	Fowke (1902)
33 Pk 6	Piketon	Circular Earthworks with parallel walls & mound	--	--	Woodland	Fowke (1891)
33 Pk 30	Piketon	Camp	50 meters square	Terrace	Unassigned Prehistoric	OAI (1977)
33 Pk 31	Piketon	Unknown	ca. 5 meters square	Terrace	Woodland	OAI (1977)
33 Pk 35	Piketon	Habitation-Camp	1.5 hectares	Upland Bluff Edge	Early, Late/Transitional Archaic, E. & L. Woodland, and Mississippian	White (1978)
33 Pk 59	Piketon	Unknown Prehistoric	30 m by 20 m	River terrace/bench	Unassigned Prehistoric	Lindner (1980)
33 Pk 60	Piketon	Unknown Prehistoric	1 m by 1 m	Hilltop	Unassigned Prehistoric	Lindner (1980)
33 Pk 61	Piketon	Unknown Prehistoric	Unknown	Creek Floodplain	Unassigned Prehistoric	Lindner (1980)

Table 1. Reported Archaeological Sites within a 6.5-Km (4 Mi) Study Radius of the USDOE PORTS Facility

OAI No.	USGS 7.5' Quadrangle	Site Type	Site Size	Landform	Cultural/Temporal Period	Reference(s)
33 Pk 116	Piketon	Lithic Scatter	46 m diameter	Sideslope of steep upland ridge	Unassigned Prehistoric	DeRegnaucourt (1985)
33 Pk 137	Piketon	Lithic Scatter	900 sq meters	Upland Hill Slope/Bench	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 142	Piketon	Lithic Scatter	1000 sq meters	Second Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 143	Piketon	Lithic Scatter	11,250 sq meters	Second Terrace	Middle Woodland	Bush et al. (1987)
33 Pk 144	Piketon	Lithic Scatter	7,700 sq meters	Second Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 145	Piketon	Lithic Scatter	1,000 sq meters	Second Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 146	Piketon	Lithic Scatter	2,400 sq meters	Low Rise on Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 148	Piketon	Lithic Scatter	1,800 sq meters	Low Rise on Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 151	Piketon	Isolated Find	1 m by 1 m	Upland Hillslope/Bench	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 152	Piketon	Lithic Scatter	45 m by 5 m	First Terrace	Late Archaic	Bush et al. (1989)
33 Pk 153	Piketon	Habitation	60 m by 30 m	First Terrace	Late Archaic, Early and Middle Woodland	Church (1995)
33 Pk 155	Piketon	Lithic Scatter	80 m by 90 m	First Terrace	Late Archaic/Early-to- Middle Woodland	Bush et al. (1989)
33 Pk 159	Piketon	Lithic Scatter	25 meters square	Upland Hillslope/Bench	Unassigned Prehistoric	Bush et al. (1987)

Table 1. Reported Archaeological Sites within a 6.5-Km (4 Mi) Study Radius of the USDOE PORTS Facility

OAI No.	USGS 7.5' Quadrangle	Site Type	Site Size	Landform	Cultural/Temporal Period	Reference(s)
33 Pk 162	Piketon	Lithic Scatter	10 m diameter	Upland Hillslope/Bench	Late Archaic, Late Woodland, Late Woodland-Late Prehistoric	Bush et al. (1992)
33 Pk 163	Piketon	Lithic Scatter	250 sq meters	First Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 164	Piketon	Lithic Scatter	300 sq meters	First Terrace	Transitional Late Archaic/Early Woodland	Bush et al. (1987)
33 Pk 165	Piketon	Lithic Scatter	100 sq meters	Unrecorded	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 166	Piketon	Lithic Scatter	25 m by 10 m	Second Terrace	Late Archaic	Bush et al. (1992)
33 Pk 167	Piketon	Lithic Scatter	1,375 sq meters	Low Rise on Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 168	Piketon	Lithic Scatter	800 sq meters	Low Rise on Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 169	Piketon	Lithic Scatter	1,000 sq meters	Low Rise on Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 170	Piketon	Lithic Scatter	240 sq meters	Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 171	Piketon	Isolated Find	1 m by 1 m	Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 173	Piketon	Lithic Scatter	314 sq meters	Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 174	Piketon	Lithic Scatter	1,963 sq meters	Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 179	Piketon	Isolated Find	1 m by 1 m	Unrecorded	Late Archaic	OAI
33 Pk 180	Piketon	Mound	Unrecorded	Terrace	Woodland	OAI

Table 1. Reported Archaeological Sites within a 6.5-Km (4 Mi) Study Radius of the USDOE PORTS Facility

OAI No.	USGS 7.5' Quadrangle	Site Type	Site Size	Landform	Cultural/Temporal Period	Reference(s)
33 Pk 36	Waverly South	Unknown	152 m by 91 m	Upland Bluff Edge	Unassigned Prehistoric	White (1978)
33 Pk 37	Waverly South	Unknown	183 m by 61 m	Stream Terrace	Archaic	White (1978)
33 Pk 38	Waverly South	Unknown	91 m by 61 m	Knoll (erosional remnant)	Archaic	White (1978)
33 Pk 46	Waverly South	Mound	2-3 m with 10 m diameter	Base of Promontory	Early Woodland/Adena	White (1979)
33 Pk 47	Waverly South	Unknown	61 m by 30 m	Edge of Promontory	Late Archaic/Early Woodland	White (1979)
33 Pk 48	Waverly South	Unknown	15 m square	Edge of Promontory	Early Archaic	White (1979)
33 Pk 49	Waverly South	Unknown	15 m square	Edge of Promontory	Unassigned Prehistoric	White (1979)
33 Pk 50	Waverly South	Unknown	Larger than 30 m square	Edge of Promontory	Unassigned Prehistoric	White (1979)
33 Pk 138	Waverly South	Isolated Find	1 m by 1 m	Floodplain	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 140	Waverly South	Lithic Scatter	3,750 sq meters	Hill/Ridgetop	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 141	Waverly South	Isolated Find	1 m by 1 m	Fourth Terrace	Unassigned Prehistoric	Bush et al. (1987)

Table 1. Reported Archaeological Sites within a 6.5-Km (4 Mi) Study Radius of the USDOE PORTS Facility

OAI No.	USGS 7.5' Quadrangle	Site Type	Site Size	Landform	Cultural/Temporal Period	Reference(s)
33 Pk 147	Waverly South	Lithic Scatter	800 sq meters	First Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 149	Waverly South	Lithic Scatter	25 sq meters	First Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 150	Waverly South	Lithic Scatter	800 sq meters	Hill/Ridgetop	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 154	Waverly South	Lithic Scatter	700 sq meters	First Terrace	Early-Middle Archaic, Middle Woodland	Bush et al. (1987)
33 Pk 157	Waverly South	Lithic Scatter	625 sq meters	Hill/Ridgetop	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 158	Waverly South	Lithic Scatter	100 sq meters	First Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 160	Waverly South	Lithic Scatter	25 sq meters	Second Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 161	Waverly South	Lithic Scatter	5 sq meters	Second Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 172	Waverly South	Lithic Scatter	600 sq meters	Hill/Ridgetop	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 175	Waverly South	Lithic Scatter	1 m by 1 m	First Terrace	Unassigned Prehistoric	Bush et al. (1987)
33 Pk 177	Waverly South	Isolated Find	1 m by 1 m	Terrace	Unassigned Prehistoric	OAI (1993)
33 Pk 22	Wakefield	Earthworks	Unrecorded	Unrecorded	Woodland	Fowke (1891)

Table 1. Reported Archaeological Sites within a 6.5-Km (4 Mi) Study Radius of the USDOE PORTS Facility

OAI No.	USGS 7.5' Quadrangle	Site Type	Site Size	Landform	Cultural/Temporal Period	Reference(s)
33 Pk 32	Wakefield	Habitation site/ Mound	300 m by 80 m Mound= 30 m diameter, 4.6 m high	River Terrace	Early-Late Archaic, E. and M. Woodland	Lindner (1980) OAI
33 Pk 33	Wakefield	Habitation site/Mound	120 m by 58 m Mound=10.5 m by 8.5 m, by .5 m high	River Terrace	Early Archaic-Middle Woodland	Lindner (1980) OAI
33 Pk 52	Wakefield	Unknown Prehistoric	Unrecorded	Knoll above river terrace	Unassigned Prehistoric	Lindner (1980)
33 Pk 53	Wakefield	Unknown Prehistoric	Unrecorded	River terrace	Unassigned Prehistoric	Lindner (1980)
33 Pk 54	Wakefield	Unknown Prehistoric	Unrecorded	River terrace	Unassigned Prehistoric	Lindner (1980)
33 Pk 55	Wakefield	Unknown Prehistoric	80 m by 60 m	Knoll above river terrace	Early Archaic	Lindner (1980)
33 Pk 56	Wakefield	Unknown Prehistoric	130 m by 45 m	Knoll above river terrace	Unassigned Prehistoric	Lindner (1980)
33 Pk 57	Wakefield	Unknown Prehistoric	75 m by 135 m	River Terrace	Unassigned Prehistoric	Lindner (1980)
33 Pk 58	Wakefield	Possible Ironstone Quarry	60 m diameter	cutbank of river terrace	Unassigned Prehistoric	Lindner (1980)

Table 2. Sites Listed on the National Register of Historic Places (NRHP) within the 6.5-Km (4 Mi) Study Radius.

Site Name	Township	7.5' USGS Quad	Temporal Period	Specific Date Range	Condition	Nomination Year	Form Preparer
Piketon Mounds 33 Pk 1	Seal	Piketon, Ohio (1961)	Hopewell	300 B.C.-A.D. 400	Excellent (Altered)	1974	Scheurer (OHS)
Scioto Township Works I 33 Pk 22	Scioto	Wakefield, Ohio (1961)	Middle Woodland	300 B.C.-A.D. 700	Deteriorated (Altered)	1974	Drennen, III (OHS)
Van Meter Stone House and Outbuildings	Seal	Piketon, Ohio (1961)	19th Century	ca. 1801-1860	Excellent (Altered)	1973	Koe-Krompecher (OHS)

Table 3. Ohio Historic Inventory (OHI) Buildings Identified within the 6.5-Km (4 Mi) Study Radius

OHI No.	Township	Thematic Associations	Building Type/Plan	Style or Design	Original Use	Current Use	Dates/Period	Preparer and Date
PIK-97-9	Seal	Agriculture	American 4 Square	Neo-Classical	Residence Farm	Residence	ca. 1900-1915	J. Cardinal (1987)
PIK-98-9	Seal	--	Classic I	NAS	Residence	Bar/Lounge	1900+(?)	J. Cardinal (1987)
Bailey Chapel	Scioto	Greek Revival (Influence)	--	Vernacular	Church	Church	1847	T. Frey (1984)

Table 4. Predictive Model for Quadrants I, II, III, and IV

Environmental Division	Habitat	Probability
Disturbed		
Managed grasslands	I	Low
Wetlands		
Pine		
Old field	II	High historic
Scrub thicket with mixed hardwoods		
Upland-Mixed Hardwood Forest		
Ridgetops	III	High
Upper slopes	IV	Low
Oak-Hickory Forest		
Ridgetops	V	High
Lower slopes, unknown terraces	VI	Low
Riparian		
Stream rank greater-than-or-equal-to 3; floodplains	VII	Low
Stream rank less-than-or-equal-to 2; floodplains and T-1	VIII	High
Beech-Maple Forest		
T-2 and higher terraces, bluffs	IX	High
Bench, lower slopes	X	Low

Table 4. Predictive Model for Quadrants I, II, III, and IV

Environmental Division	Habitat	Probability
Maple Forest		
Successional	XI	Low

Table 5. Survey Areas and Results from the Phase I Reconnaissance

Quadrant	Area #	Sites Located	Habitat Types	Visibility %	Method(s) of Investigation	No. of Shovel Test Pits
I	1	33 Pk 186, 33 Pk 187, 33 Pk 188, 33 Pk 190,	MG, UMH	0	VI, SC, STP	28(14 at 33 Pk 186)(14 on ridgetop)
I	2	33 Pk 210	BM	0	VI, STP	17
I	3	0	MG, UMH, ST	0	VI	0
I	4	33 Pk 184, 33 Pk 191, 33 Pk 192	OF, ST, OH	5%	VI, SC, STP	20(20 at 33 Pk 184)
I	5*	0	MG	0	VI	0
I	6	33 Pk 185, 33 Pk 193, 33 Pk 195, 33 Pk 209	MG, OH, OF, M, UMH, ST	5%	VI, SC, STP	4(4 at 33 Pk 209)
I	7	33 Pk 194	OH, OF	5%	VI, SC, STP	9(9 on a ridgetop)
II	8	33 Pk 196, 33 Pk 197	MG, UMH	0	VI	14(14 on a ridgetop)
II	9	33 Pk 205, 33 Pk 206, 33 Pk 207, 33 Pk 208,	MG, OF, ST, R	5%	VI, SC, STP	169(1 at 33 Pk 205)(38 at 33 Pk 206)(1 at 33 Pk 207)(1 at 33 Pk 208)(128 on terrace)
III	1	0	OH, UMH, OF	0	VI	0
III	2	0	OH M, OPH	0	VI	0
III	3	0	MG, UMH ,OH, R, M	0	VI	0
IV	1	0	MG, OF UMH	0	VI, STP	35
IV	2	33 Pk 198, 33 Pk 199, 33 Pk 200, 33 Pk 201	OH, OF	0	VI, STP	221(1 at 33 Pk 198)(1 at 33 Pk 199)(2 at 33 Pk 200)(1 at 33 Pk 201)
IV	3	33 Pk 202	R	5%	VI, SC, STP	6(1 at 33 Pk 202)
IV	4	33 Pk 211	UMH, OF	5%	VI, SC, STP	46(8 at 33 Pk 211)

Table 5. Survey Areas and Results from the Phase I Reconnaissance

Quadrant	Area #	Sites Located	Habitat Types	Visibility %	Method(s) of Investigation	No. of Shovel Test Pits
IV	5	33 Pk 203	R, UMH	5%	VI, SC, STP	8(1 at 33 Pk 203)
IV	6	0	OF	0	VI, STP	29
IV	7	33 Pk 219	OH	0	VI, STP	6(6 on Ridgetop)(0 at 33 Pk 219)
IV	8	0	R, OF	0	VI, STP	23
IV	9	0	R	0	VI	0
IV	10	0	OH, M	0	VI	0
IV	11	0	R	0	VI, DST	13
IV	12	0	R	0	VI, DST	17
IV	13	0	MG	0	VI	--
IV	14	0	MG, UMH	0	VI	--
IV	15	0	OH	0	VI, STP	12
IV	16	0	OF, ST	0	VI, STP	29
IV	17	0	ST, OF	0	VI, STP	25
IV	18	33 Pk 204	ST, OF	0	VI, STP	56(1 at 33 Pk 204)
IV	19	33 Pk 215	OH	10%	VI	--
IV	20	33 Pk 216	OH. MG	10%	VI	--
IV	21	33 Pk 212,33 Pk 213, 33 Pk 214	UMH, ST	5%	VI	—
IV	22	0	MG, OF	0	VI	--

Table 5. Survey Areas and Results from the Phase I Reconnaissance

Quadrant	Area #	Sites Located	Habitat Types	Visibility %	Method(s) of Investigation	No. of Shovel Test Pits
IV	23	0	OH	0	VI, STP	38
IV	24	0	MG, OF	0	VI	0
IV	25	0	OH, OF	0	VI, STP	4(4 on ridgetop
IV	27	0	OH, ST, P	0	VI	--
IV	28	0	OF, MG	0	VI	--
IV	26	0	OH, P, M	0	VI	--
IV	29	33 Pk 218	OH, ST	10%	VI, SC	--
IV	30	33 Pk 217	P, UMH, R	5%	VI, SC, DST	4(4 deep test pits on alluvial terrace)
IV	31	0	UMH, M, OH, OF, MG	0	VI	--
IV	32	33 Pk 189	OH	10%	VI, SC	--

ey: BM = Beech Maple Forest; DST = Deep Shovel Test Pitting; M = Maple; MG = Managed Grassland; OF = Old Field; OH = Oak-Hickory; OPH = Old Pine Hardwoods; P = Pine; R = Riparian; SC = Surface Collection; ST = Scrub Thicket; STP = Shovel Test Pitting; UMH = Upland Mixed Hardwoods; VI = Visual Inspection; * = Inside Perimeter Road.

Table 6. Archaeological Sites Identified During the Phase I Reconnaissance Surveys.

OAI No.	Field Site No.	Quadrant	Area No.	Temporal Affiliations	Site Type	Site Size (M)	Landform	Comments
33 Pk 184	1	I	4	Historic (ca. 1820 -present)	Farmstead	70 by 65	hill/ridgetop	Further work recommended
33 Pk 185	2	I	6	Historic (ca. 1900-present)	Farmstead	70 by 35	hill/ridgetop	Further work recommended
33 Pk 186	3	I	1	Unassigned Prehistoric	Lithic Scatter	15 by145	hill/ridgetop	Point fragment recovered
33 Pk 187	4	I	1	Historic (ca. 1915-1951)	Farmstead Remnant	10 by 23	hill/ridgetop	Highly Disturbed
33 Pk 188	5	I	1	Historic (post-1952)	Worker's Barracks	140 by 85	hill/ridgetop	Highly Disturbed Plant-Related
33 Pk 189 PIK-206-9	6	IV	32	Unassigned Prehistoric Historic (ca. 1790-present)	Isolated Find, Cemetery, Tower Platform	55 by 50	hilltop	Preservation Recommended (For Cemetery & Chapel)
33 Pk 190	7	I	1	Historic (post-1952)	Radio Tower	30 by 18	hilltop	Highly Disturbed Plant-Related
33 Pk 191	8	I	4	Historic (ca. 1830's-present)	Open Dump	6 by 30	intermittent steam bed	
33 Pk 192	9	I	4	Historic (ca. 1900-present)	Open Dump	43 by 53	hill/ridgetop	
33 Pk 193	10	I	6	Historic (ca. 1820-present)	Farmstead	55 by 135	side slope/ bench, intermittent stream bed	Further work Recommended
33 Pk 194	11	II	8	Historic (ca. 1820-present)	Farmstead	110 by 150	hill/ridgetop	Further work recommended

Table 6. Archaeological Sites Identified During the Phase I Reconnaissance Surveys.

OAI No.	Field Site No.	Quadrant	Area No.	Temporal Affiliations	Site Type	Site Size (M)	Landform	Comments
33 Pk 195	12	I	6	Historic (ca. 1820-present)	Farmstead	73 by 55	ridgetop	Further work recommended
33 Pk 196	13	II	8	Historic (ca. 1952-present)	Culvert/ drain pipes	8 by 1	intermittent steam bed	Plant-Related
33 Pk 197	14	II	8	Historic (ca. 1951)	Farmstead	35 by 30	first terrace	Further work recommended
33 Pk 198	15	IV	2	Unassigned Prehistoric	Isolated Find	1 by 1	pre-glacial terrace	
33 Pk 199	16	IV	2	Historic (ca. 1820-present)	Isolated Find	1 by 1	pre-glacial terrace	
33 Pk 200	17	IV	2	Historic (ca. 1820-present)	Historic Scatter	1 by 1	pre-glacial terrace	
33 Pk 201	18	IV	2	Historic (ca. 1890-present)	Isolated Find	1 by 1	pre-glacial terrace	
33 Pk 202	19	IV	3	Historic (ca. 1934-present)	Historic Scatter	15 by 15	first terrace	
33 Pk 203	20	IV	5	Historic (ca.1820-present)	Historic Farmstead	140 by 150	first terrace	Further work recommended
33 Pk 204	21	IV	18	Unassigned Prehistoric	Isolated Find	1 by 1	ridgetop	
33 Pk 205	22	II	9	Unassigned Prehistoric	Isolated Find	1 by 1	ridgetop	
33 Pk 206	23	II	9	Unassigned Prehistoric Historic (1820-present)	Lithic Scatter, Farmstead	120 by 172	first terrace	Further work recommended

Table 6. Archaeological Sites Identified During the Phase I Reconnaissance Surveys.

OAI No.	Field Site No.	Quadrant	Area No.	Temporal Affiliations	Site Type	Site Size (M)	Landform	Comments
33 Pk 207	24	II	9	Unassigned Prehistoric	Isolated Find	1 by 1	side slope, first terrace	
33 Pk 208	25	II	9	Unassigned Prehistoric	Isolated Find	1 by 1	hill/ridgetop	Biface Recovered
33 Pk 209	26	I	6	Historic (1933-1964)	Historic Scatter	1 by 1	ridgetop	
33 Pk 210	27	I	2	Unassigned Prehistoric	Lithic Scatter	15 by 15	hill/ridgetop	Further work recommended
33 Pk 211	28	IV	4	Historic (ca. 1890-1964)	Farmstead	90 by 130	ridgetop	Further work recommended
33 Pk 212	30	IV	21	Historic (ca.1931-present)	Farmstead	152 by 76	first terrace	Further work recommended
33 Pk 213	31	IV	21	Historic (ca. 1820-present)	Farmstead	14 by 9	terrace/toe ridge	Further work recommended
33 Pk 214 PIK-207-12	32	IV	21	Historic (ca. 1877-mid 20th century)	Cemetery	55 by 40	hilltop	Preservation Recommended
33 Pk 215	33	IV	19	Historic (ca. 1820-present)	Open Dump	12 by 6	ridgetop	
33 Pk 216	34	IV	20	Historic (ca. 1879-present)	Open Dump	6 by 5	ridgetop	
33 Pk 217	36	IV	30	Historic (ca. 1820-present)	Farmstead (Dairy)	185 by 85	pre-glacial terrace/toe ridge	Further work recommended

Table 6. Archaeological Sites Identified During the Phase I Reconnaissance Surveys.

OAI No.	Field Site No.	Quadrant	Area No.	Temporal Affiliations	Site Type	Site Size (M)	Landform	Comments
33 Pk 218 [PIK-205-12]	37	IV	29	Historic (ca. 1820-present)	Farmstead	155 by 75	toe ridge	Further work recommended
33 Pk 219	38	IV	7	Historic (post-1952)	Old Firing Range	70 by 75	side slope/ artificial bench	Highly Disturbed Plant Related

Table 7. Prehistoric Isolated Finds Identified During the Reconnaissance Survey.

OAI Number	Field Site No. (F.S.)	Provenience	Artifact Type	Raw Material	Heat Altered	Cortex	Count
33 Pk 198	F.S. 15	Quadrant IV, Area 2, Transect 2, Unit 7	Flake	Delaware/ Columbus	No	Yes	1
33 Pk 204	F.S. 21	Quadrant IV, Area 18, Transect 3, Unit 4	Shatter from Cobble	Unknown	Yes	No	1
33 Pk 205	F.S. 22	Quadrant II, Area 9, Transect 4, Unit 3	Flake	Unknown	No	No	1
33 Pk 207	F.S. 24	Quadrant II, Area 9, Transect 3, Unit 1	Flake	Delaware/ Columbus	No	No	1
33 Pk 208	F.S. 25	Quadrant II, Area 9, Transect 14, Unit 1	Crude Biface	Unknown	No	No	1

Table 8. Prehistoric Artifacts Recovered From Lithic Scatter 33 Pk 186.

OAI Number	Field Site No. (F.S.)	Provenience	Artifact Type	Raw Material	Heat Altered	Cortex	Count
33 Pk 186	F.S. 3	Quadrant I, Area 1, Surface of Boundary Road	Projectile Point Fragment	Upper Mercer	No	No	1
		Quadrant 1, Area 1, Transect 1, Unit 2	Flake	Delaware/ Columbus	No	Yes	1
		Quadrant I, Area 1, Transect 1, Unit 3	Flake	Upper Mercer	No	No	1

Table 9. Historic Isolated Finds Identified During the Reconnaissance Survey.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 199	F.S. 16	Quadrant IV, Area 2, Transect 6, Unit 8	Kitchen	Whiteware base fragment, plain and burnt	1	1820-Present	Magid 1984
33 Pk 201	F.S. 18	Quadrant IV, Area 2, Transect 9, Unit 10	Kitchen	Whiteware, scalloped rim, edge molded decoration, polychrome transfer print	1	1890-Present	Magid 1984

Table 10. Historic Artifacts Recovered from 33 Pk 200.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 200	F.S. 17	Quadrant IV, Area 2, Transect 9, Unit 2	Kitchen	Whiteware, burnt	1	1820-Present	Magid 1984
		Quadrant IV, Area 2, Transect 9, Unit 2	Kitchen	Redware, colorless glaze	2		
		Quadrant IV, Area 2, Transect 9, Unit 12	Architecture	Flat glass, aqua blue tint	1		

Table 11. Historic Artifacts Recovered from 33 Pk 202.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 202	F.S. 19	Quadrant IV, Area 3	Kitchen	Machine-made molded glass bottle with crown closure, green tint, Coke bottle, "Washington C.H., OH"	1	1949	Toulouse 1977
		Quadrant IV, Area 3	Kitchen	Milk bottle, colorless 1 pint, "Green Valley Dairy, Jackson, OH", Applied Color Label	1	1934-Present	Jones and Sullivan 1989

Table 12. Historic Artifacts Recovered from 33 Pk 209.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 209	F.S. 26	Quadrant 1, Area 6, Near Transect 1, Unit 1	Kitchen	Brown, machine-made pint bottle with textured panels (molded), aluminum cap with picture	2	1933-1964	Deiss 1981; Stewart and Consentino 1976

Table 13. Historic Artifacts Recovered from 33 Pk 191.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 191	F.S. 8	Quadrant I, Area 4, Surface	Activities	Hudson Hubcap	1		
		Quadrant I, Area 4, Ravine	Personal	Colorless medicine bottle, hard black rubber cap, "Dr. I. Preston", Piketon", applied paint label	1	1934-Present	Jones and Sullivan 1989
		Quadrant I, Area 4, Ravine	Personal	Vicks Vapo-Rub bottle, embossed base	3		
		Quadrant I, Area 4, Ravine	Kitchen	Colorless fruit jar finish, single thread, beaded, machine-made	1	1903-Present	Jones and Sullivan 1989
		Quadrant I, Area 4, Ravine	Kitchen	Coca-Cola, aqua glass, Chattanooga Glass Co. Bottle	1	1927-Present	Toulouse 1971
		Quadrant I, Area 4, Ravine	Kitchen	Colorless container glass	3		
		Quadrant I, Area 4, Ravine	Kitchen	Yellowware with bright yellow interior and exterior glaze	1	1830-Present	Magid 1984; South 1977
		Quadrant I, Area 4, Top of Ravine	Kitchen	Clear Ketchup bottle, fluted neck, Owens-Illinois Duraglas	1	1954-Present	Toulouse 1971
		Quadrant I, Area 4, Top of Ravine	Kitchen	Clear medicine vial, machine-made	1	1903-Present	Jones and Sullivan 1989
		Quadrant I, Area 4, Top of Ravine	Kitchen	Light blue glaze whiteware "Bee hive shape" container	1	1935-Present	Huxford and Huxford 1984
		Quadrant I, Area 4, Bottom of Ravine	Activities	Amber Clorox® bottle and lid, Owens-Illinois	1	1929-1954	Toulouse 1971

Table 14. Historic Artifacts Recovered from 33 Pk 192.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 192	F.S. 9	Quadrant I, Area 4, Surface Trash Pile	Activities	Roller skate	1		
		Quadrant I, Area 4, Surface Trash Pile	Kitchen	Drinking glass, emerald, Anchor-Hocking	1		
		Quadrant I, Area 4, Surface Trash Pile	Kitchen	Container Glass Bottle Base, colorless	1		
		Quadrant I, Area 4, Surface Trash Pile	Kitchen	Colorless ketchup bottle, duraglas, Thatcher Glass Manufacturing Co., NY	1	1900-Present; 1940-Present	Toulouse 1971
		Quadrant I, Area 4, Surface Trash Pile	Kitchen	Colorless condiment jar, Anchor-Hocking, Owen's scar	1	1903-Present	Jones and Sullivan 1989
		Quadrant I, Area 4, Surface Trash Pile	Kitchen	Colorless condiment jar and lid, Armstrong Cork Co. Glass Division	1	1938-1969	Toulouse 1971
		Quadrant I, Area 4	Kitchen	Colorless, oval food container jar, machine-made, threaded cap	1	1903-Present	Jones and Sullivan 1989
		Quadrant I, Area 4	Kitchen	Colorless, mayonnaise jar, threaded, Metro Glass Dairy Products	1	1949-Present	Toulouse 1971
		Quadrant I, Area 4	Kitchen	16 oz Pepsi bottle, applied color label, Obear-Nester Glass, East St. Louis	1	1915-Present; 1934-Present	Jones and Sullivan 1989; Toulouse 1971
		Quadrant I, Area 4	Kitchen	12 oz amber beer bottle, "Temperglas" Breckway, PA, embossed	1	1925-Present	Toulouse 1971

Table 14. Historic Artifacts Recovered from 33 Pk 192.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 192	F.S. 9	Quadrant I, Area 4	Kitchen	8 oz amber beer bottle, Anchor-Hocking, Duraglas	1	Post-1940	Toulouse 1971
		Quadrant I, Area 4	Kitchen	Cornflower blue fruit jar base, Owen's scar	1	1903-Present	Jones and Sullivan 1989
		Quadrant I, Area 4	Kitchen	Pepsi 12 oz can, pull-tab, "Have a Pepsi Day"	1	Recent 1970s	

Table 15. Historic Artifacts Recovered from 33 Pk 215.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 215	F.S. 33	Quadrant IV, Area 19 Surface Collection	Kitchen	Stoneware, light blue	1	1935-Present	Huxford and Huxford 1984
		Quadrant IV, Area 19 Surface Collection	Kitchen	Container glass, amethyst tint	1	1880-1918	Deiss 1981; Munsey 1970
		Quadrant IV, Area 19 Surface Collection	Kitchen	Container glass, colorless	1		
		Quadrant IV, Area 19 Surface Collection	Kitchen	Container glass, milk	1		
		Quadrant IV, Area 19 Surface Collection	Kitchen	Square machine-made bottle with screw top, Owens-Illinois, Indiana	1	1931-1951	Toulouse 1977
		Quadrant IV, Area 19 Surface Collection	Architecture	Wire nails	3	1890s-Present	Nelson 1968
		Quadrant IV, Area 19 Surface Collection	Architecture	Flat glass, greenish tint	2		
		Quadrant IV, Area 19 Surface Collection	Activity	Porcelain compartment dish with powder blue glaze, possible soap dish	1	1935-Present	Huxford and Huxford 1984

Table 16. Historic Artifacts Recovered from 33 Pk 216.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 216	F.S. 34	Quadrant IV, Area 20 Surface Collection	Kitchen	Square colorless glass bottle with screw top cap, machine-made, Owens-Illinois, produced Indiana	1	1936 or 1946	Toulouse 1977
		Quadrant IV, Area 20 Surface Collection	Kitchen	Colorless glass drinking glass, pressed, vertical design on lower portion, "CA &C" on base	1		
		Quadrant IV, Area 20 Surface Collection	Kitchen	Colorless glass bottle finish, screw on closure with metal cap, machine-made	1		
		Quadrant IV, Area 20 Surface Collection	Kitchen	Possible drinking glass fragments, blue tint	2		
		Quadrant IV, Area 20 Surface Collection	Kitchen	Miscellaneous colorless container glass fragment	1		
		Quadrant IV, Area 20 Surface Collection	Furniture	Colorless glass wavy rim/lip, lamp chimney glass	1	1879-present	Colonial Williamsburg Foundation 1983
		Quadrant IV, Area 20 Surface Collection	Activities	Orange colored, mushroom-shaped pole cap or end cap	1		

Table 17. Prehistoric Artifacts Recovered from 33 Pk 210.

OAI Number	Field Site No. (F.S.)	Provenience	Artifact Type	Raw Material	Heat Altered	Cortex	Count
33 Pk 210	F.S. 27	Quadrant I, Area 2, Transect 1, Unit 6	Flake	Delaware	Yes	No	1
		Quadrant 1, Area 2, Transect 2, Unit 6	Flake	Unknown	Yes	No	1
		Quadrant I, Area 2, Transect 2, Unit 7	Flake	Delaware	No	No	3
		Quadrant I, Area 2, Transect 2, Unit 7	Flake	Delaware	No	Yes	1

Table 18. Prehistoric and Historic Artifacts Recovered from 33 Pk 189.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 189	F.S. 6	Quadrant II, Surface	*	Flake, Vanport, cortex	1		
		Quadrant I, Mt. Gilead Cemetery	Kitchen	Amethyst glass tumbler	1	1880-1918	Deiss 1981; Munsey 1970
		Quadrant I, Mt. Gilead Cemetery	Architecture	Cut nail	1	1790-1890s	Nelson 1968
		Quadrant I, Area 8, Surface	Kitchen	Solarized Amethyst Tumbler	1	1880-1918	Deiss 1981; Munsey 1970
		Quadrant I, Area 8, Surface	Kitchen	Solarized Amethyst Container glass	2	1880-1918	Deiss 1981; Munsey 1970
		Quadrant I, Area 8, Surface	Kitchen	Violet tinted container glass goblet base/foot	1		
		Quadrant I, Area 8, Surface	Kitchen	3-sided colorless container glass with Owen's scar	1	1903-Present	Deiss 1981; Kendrick 1966
		Quadrant I, Area 8, Surface	Activities	Vase, milk glass, mold design base	1		

Key: * Prehistoric artifact

Table 19. Historic Farmsteads Recommended for Further Work: Architectural Features.

OAI #/ OHI #	Site Name	Quad and Area	Total Architectural Clusters	Prominent Architectural Feature Types											
				sf	ss	cf	g	r	b	o	w	c	fl	d	rd
33 Pk 184	Davis Farmstead	Q1, A-6	5		1	1	1				1	1	1	1	2
33 Pk 185	South Shyvillefarmstead	Q1, A-6	8		2	1		1		1	1	1	1	2	2
33 Pk 193	Iron wheel farmstead	Q1, A-6	1										1	2	
33 Pk 194	North Shyvillefarmstead	QII, A-8	6		3						2	3			1
33 Pk 195	Beaver Road farmstead	QI, A-6	3		1						1				2
33 PK 197	Dutch Run Road Farmstead	QII, A-8	1			1					1				1
33 Pk 203	Ruby Hollow farmstead	QIV, A-5	7		2	3		1					3	3	3
33 Pk 206 (Historic Component)	Terrace farmstead	QII, A-9	6	1	1					2	1	1	4		2
33 Pk 211	Bamboo farmstead	QIV, A-4	7	1	4		1				2	2	2		2
33 Pk 212	Railside farmstead	Q IV, A-21	5		1	1		1			2		1		
33 Pk 213	Log Pen farmstead	QIV A-21	1		1					1					
33 Pk 217	Stockdale Road Dairy	QIV, A-30	6		2		1		1		2	1	2	2	2
33 Pk 218 (PIK-205-12)	Cannett Family farmstead	QIV, A-29	6		3			1		2	1		2		2

Key: sf = sandstone foundation; ss = sandstone blocks/footers; cf = concrete foundation; g = garage (concrete); r = root cellar; b = barn (concrete foundation); o = woodframe outbuilding; w = well; c = cistern; f = old fence line; d = depression; rd. = old road or driveway.

Table 20. Historic Farmsteads Recommended for Further Work: Site Size and Temporal Affiliations.

OAI #/ OHI #	Site Name	Quad & Area	Site Size (m)	Aerial Photo/ Map Dates	Total Historic Artifact Counts	General Artifact Date Range Based on Analysis Dates
33 Pk 184	Davis farmstead	QI, A-6	70 n-s by 65 e-w	1939*	20	ca. 1820-present
33 Pk 185	South Shyville farmstead	QI, A-6	70 n-s by 35 e-w	1906*, 1951■	52	ca. 1900-present
33 Pk 193	Iron wheel farmstead	QI, A-6	55 n-s 150 e-w	1906*, 1939*	27	ca. 1820-present
33 Pk 194	North Shyville farmstead	QII, A-8	110 n-s 150 e-w	1906*, 1912▲, 1939*, 1951■	9	ca. 1820-present
33 Pk 195	Beaver Road farmstead	QI, A-6	73 n-s by 55 e-w	1939*, 1951■	32	ca. 1820-present
33 PK 197	Dutch Run Road farmstead	QII, A-8	35 n-s by 30 e-w	1951■	--	--
33 Pk 203	Ruby Hollow farmstead	QIV, A-5	140 n-s by 150 e-w	1915●, 1939*, 1951■	67	ca. 1820-present

Table 20. Historic Farmsteads Recommended for Further Work: Site Size and Temporal Affiliations.

OAI #/ OHI #	Site Name	Quad & Area	Site Size (m)	Aerial Photo/ Map Dates	Total Historic Artifact Counts	General Artifact Date Range Based on Analysis Dates
33 Pk 206 (Historic Component)	Terrace Site farmstead	QII, A-9	120 n-s by 172 e-w	1906*, 1912▲, 1939*, 1951■	47	ca. 1820-present
33 Pk 211	Bamboo farmstead	QIV A-4	90 n-s by 130 e-w	1915●, 1939*, 1951■	32	ca. 1890-1964
33 Pk 212	Railside Site farmstead	Q IV A-21	152 n-s by 76 e-w	1906*, 1939*, 1951■	12	ca. 1931-present
33 Pk 213	Log Pen Site farmstead	QIV A-21	14 n-s by 9 e-w	1906*, 1939*	35	ca. 1820-present
33 Pk 217	Stockdale Road Dairy	QIV, A-30	185 n-s by 85 e-w	1906*, 1939*, 1951■	27	ca. 1820-present
33 Pk 218 (PIK-205-12)	Cannett Family farmstead	QIV, A-29	155 n-s by 75 e-w	1906*, 1939*, 1951■	33	ca. 1820-present

Key: *= Waverly, O. (1906) USGS 15' quadrangle map. ▲=1912 Rand McNally Map of Pike County, Ohio. ●=Piketon, O. (1915) USGS 15' quadrangle map. *= 1939 Aerial Photographs. ■1951 Aerial Photographs

Table 21. Historic Artifacts Recovered from 33 Pk 184.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 184	F.S. 1	Quadrant 1, Area 6, Transect 2, Unit 5	Architecture	Aqua Flat Glass	2		
		Quadrant 1, Area 6, Transect 2, Unit 5	Architecture	Frosted Green Tinted Glass	1		
		Quadrant 1, Area 6, Transect 2, Unit 5	Kitchen	Container glass; colorless	1		
		Quadrant 1, Area 6	Kitchen	Whiteware	1	1820-Present	Magid 1984
		Quadrant 1, Area 6	Kitchen	Pry-off bottle finish, machine-made	1	1929-Present	Deiss 1981;
		Quadrant 1, Area 6	Kitchen	Mason jar rim, threaded, blue tint	2		
		Quadrant 1, Area 6	Furniture	Milk glass lampshade fragment	1		
		Quadrant 1, Area 6, Structure 1	Kitchen	Molded Glass, applied color label, colorless	2	1934-Present	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 1	Furniture	Glass Furniture Coaster, amber, Anchor-Hocking	1		
		Quadrant 1, Area 6, Structure 4	Kitchen	Glass bottle colorless, machine made, cork closure, Anchor-Hocking	1	1903-1915	Holscher 1965
		Quadrant 1, Area 6, Structure 4	Kitchen	Container glass, slight yellow tint	2	1916-1930	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 4	Architecture	Flat Glass, light blue tint	2		
		Quadrant 1, Area 6, Structure 4	Architecture	Flat Glass, colorless	1		

Table 21. Historic Artifacts Recovered from 33 Pk 184.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 184	F.S. 1	Quadrant 1, Area 6, Structure 4	Furniture	Molded Decorative glass, plate colorless	1		
		Quadrant 1, Area 6, Structure 4	Kitchen	Small Ball Mason jar, colorless	1		

Table 22. Historic Artifacts Recovered from 33 Pk 185.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 185	F.S. 2	Quadrant I, Area 6, Near Sandstone Block	Kitchen	Glass jar lid liner, milk glass, Boyd's Gen. Porcelain Lined Cap	1	1900-1930	Toulouse 1977
		Quadrant I, Area 6, Near Sandstone Block	Kitchen	Mason jar mouth; lighting closure, light blue tint	1		
		Quadrant I, Area 6, Near Sandstone Block	Personal	Medicine Bottle, colorless glass, aluminum screw top, Diamond Glass Co. machine-made	1	1924-Present	Polak 1994
		Quadrant 1, Area 6, Structure 1	Kitchen	Jar, colorless glass, screw top, machine-made	1		
		Quadrant 1, Area 6, Structure 1	Kitchen	Fluted bottle, polygon shape, molded, colorless glass, pry-off top	1	1929-Present	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 1	Kitchen	Bottle, colorless glass, screw top standardized, Machine-made, "Rawleighs Trademark"	1	1919-Present	Fike 1987; Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 1	Kitchen	Ball jar, screw top, blue tint	2		
		Quadrant 1, Area 6, Structure 1	Kitchen	Flask shaped bottle, metal cap, machine-made, light green tint glass	1		
		Quadrant 1, Area 6, Structure 1	Kitchen	Bottle, colorless glass, 4/5 quart, wine-brandy finish, cork closure	1	1903-1915	Jones and Sullivan 1898; Deiss 1981
		Quadrant 1, Area 6, Structure 1	Kitchen	Jar, screw top, colorless glass, 32 fl. oz.	1	1919-Present	Fike 1987; Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 1	Kitchen	Atlas, E-Z Seal fruit jar finish, Kivlan closure, light blue tint	1	1915-1930	Polak 1994

Table 22. Historic Artifacts Recovered from 33 Pk 185.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 185	F.S. 2	Quadrant 1, Area 6, Structure 1	Kitchen	Panel bottle, bead and neck ring finish, slightly yellow tint	1		
		Quadrant 1, Area 6, Structure 1	Kitchen	Amber glass, black rubber cap, full seam	1	1900-Present	Polak 1994
		Quadrant 1, Area 6, Structure 1	Kitchen	Colorless soda bottle, fluted, full seam	1	1900-Present	Polak 1994
		Quadrant 1, Area 6, Structure 1	Kitchen	Earthenware base, Bristol exterior, Albany interior	1		
		Quadrant 1, Area 6, Structure 1	Kitchen	Earthenware base, Albany interior and exterior	1		
		Quadrant 1, Area 6, Structure 1	Kitchen	Possible pitcher base, colorless (straw), embossed maker's mark, Turner Bros. Co., Terre Haute, IN	1	1910-1929	Toulouse 1971
		Quadrant 1, Area 6, Structure 1	Kitchen	Atlas E-Z Seal fruit jar, Kivlan closure, quart, light blue tint	1	1915-1930	Polak 1994
		Quadrant 1, Area 6, Structure 1	Kitchen	Presto Supreme Mason ½ pint fruit jar, colorless	1	1929-1946	Toulouse 1969
		Quadrant 1, Area 6, Structure 1	Kitchen	Mason's Patent colorless, one pint, machine-made, single thread closure jar	1	1900-1915	Toulouse 1969
		Quadrant 1, Area 6, Structure 1	Kitchen	Aqua/light green shoulderless fruit jar, one thread	1	1903-Present	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 1	Kitchen	Light blue, fruit jar beaded finish, one thread	1	1903-Present	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 1	Kitchen	Colorless fruit jar finish, beaded, one thread	1	1903-Present	Jones and Sullivan 1989

Table 22. Historic Artifacts Recovered from 33 Pk 185.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 185	F.S. 2	Quadrant 1, Area 6, Structure 1	Kitchen	Colorless soda bottle, fluted sides, Owens-Illinois bottle	1	1931 or 1941	Toulouse 1977
		Quadrant 1, Area 6, Structure 1	Kitchen	Colorless one pint whisky bottle, "Federal Law Prohibits Sale or Reuse of this bottle" embossed	1	1933-1964	Deiss 1981; Stewart and Consentino 1976
		Quadrant 1, Area 6, Structure 1	Activities/ Transportation	Straps, harness	3		
		Quadrant 1, Area 6, Structure 1	Kitchen	Colorless soda bottle, fluted, crown cap closure, Owens-Illinois, possible ketchup bottle	1	1932 or 1942	Toulouse 1971
		Quadrant 1, Area 6, Structure 1	Kitchen	Colorless ketchup bottle, fluted, thread cap, "11" on base, machine-made	1	Post-1903	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 1	Kitchen	Colorless ketchup bottle base, H.S. Heinz Co.	1		
		Quadrant 1, Area 6, Structure 1	Kitchen	Colorless soda/ketchup bottle, fluted, crown cap closure, Owens-Illinois	1	1932 or 1942	Toulouse 1971
		Quadrant 1, Area 6, Structure 3	Kitchen	Cornflower blue tinted, lightning closure fruit jar finish, 2 quart size, Dimple & Ear	1	1908-Present	Toulouse 1969
		Quadrant 1, Area 6, Structure 3	Kitchen	Cornflower blue tint, 1 quart fruit jar base	1		
		Quadrant 1, Area 6, Structure 3	Kitchen	½ pint colorless canning jar "Sterliglass", machine-made	1	1903-Present	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 3	Kitchen	Colorless whisky bottle, "The S.R. Watkins Co.", Owens-Illinois bottle	1	1935-1945	Toulouse 1971

Table 22. Historic Artifacts Recovered from 33 Pk 185.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 185	F.S. 2	Quadrant 1, Area 6, Structure 3	Kitchen	Fruit jar cap and lid liner	1	1915-1920	Toulouse 1971
		Quadrant 1, Area 6, Structure 3	Kitchen	Milk glass tea cup with green paint decoration	1		
		Quadrant 1, Area 6, Structure 3	Activities	Battery core, carbon with copper core	1		
		Quadrant 1, Area 6, Structure 5 Surface	Kitchen	Solarized amethyst drinking glass base fragment	1	1880-1918	Deiss 1981
		Quadrant 1, Area 6, Structure 5 Surface	Kitchen	Ball zinc cap with milk glass lid liner	1		
		Quadrant 1, Area 6, Structure 5 Surface	Kitchen	Blue glass Mason jar fragment with screw top finish	1		
		Quadrant 1, Area 6, Structure 5 Surface	Kitchen	Blue glass "Ball Perfect Mason" Mason jar fragment	1		
		Quadrant 1, Area 6, Structure 5 Surface	Architec-ture	Green tint flat glass			
		Quadrant 1, Area 6, Structure 7	Kitchen	Amber beer bottle, Obear-Nester Glass Co, E. St. Louis	1	1915-Present	Toulouse 1971
		Quadrant 1, Area 6, Structure 7	Kitchen	Fruit jar cap and liner, Genuine Boyd's Cap for Mason jars	1	1915-1920	Toulouse 1977
		Quadrant 1, Area 6, Structure 7	Kitchen	Colorless apple sauce jar, "Duraglas"	1	1940-Present	Toulouse 1971

Table 22. Historic Artifacts Recovered from 33 Pk 185.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 185	F.S. 2	Quadrant 1, Area 6, Structure 7	Kitchen	½ pint colorless canning jar (Owens-Illinois)	1	1933, 1943 or 1953	Toulouse 1971
		Quadrant 1, Area 6, Structure 7	Personal	Milk glass cold cream jar, machine-made	1	1903-Present	Jones and Sullivan 1989
		Quadrant 1, Area 6, Structure 8	Personal	Cough medicine bottle, colorless, "Blue Ribbon" ? Glass Co., Union, IN	1	1920-1930	Toulouse 1971
		Quadrant 1, Area 6, Structure 8	Kitchen	Wine bottle base, colorless, 4/5 quart, embossed	1		

Table 23. Historic Artifacts Recovered from 33 Pk 193.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 193	F.S. 10	Quadrant I, Area 6, Surface Ravine	Kitchen	Polygonal jar, lug threads, colorless glass	1	1906-Present	Fike 1987 Jones and Sullivan 1989
		Quadrant I, Area 6, Surface Ravine	Kitchen	Glass jar, colorless, machine-made, standardized screw top	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Glass jar, colorless, Anchor-Hocking, machine-made, standardized screw top	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Cork top glass bottle, colorless, machine-made	1	1903-1915	Deiss 1981 Jones and Sullivan 1989
		Quadrant I, Area 6, Surface Ravine	Personal	Vicks Bottle, cobalt blue glass, screw top, machine-made	1	1903-Present	Jones and Sullivan 1989
		Quadrant I, Area 6, Surface Ravine	Kitchen	"Atlas Seal" glass jar, colorless, lightning seal	1	1921-1964	Toulouse 1969
		Quadrant I, Area 6, Surface Ravine	Kitchen	Mason jar opening, standardized screw top, light blue tint, machine-made	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Container glass, blue	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Whiteware, multicolor decal	1	1890-Present	Magid 1984
		Quadrant I, Area 6, Surface Ravine	Kitchen	Square Bottle Base, green glass, Owens Bottle Co., Illinois	1	1924-1954	Toulouse 1977
		Quadrant I, Area 6, Surface Ravine	Kitchen	Stoneware fragments, bristol exterior, albany interior	1	Turn-of-Century	Magid 1984
		Quadrant I, Area 6, Surface Ravine	Kitchen	Stoneware fragment, two tone exterior, albany interior	2	Turn-of-Century	Magid 1984

Table 23. Historic Artifacts Recovered from 33 Pk 193.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 193	F.S. 10	Quadrant I, Area 6, Surface Ravine	Kitchen	Mason jar cap liner fragment, milk glass	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Scallop edge whiteware, mold decoration, semivitreous	1	1820-Present	Magid 1984
		Quadrant I, Area 6, Surface Ravine	Furniture	Decorated colorless glass	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Mason Ball jar, shoulder seal, blue tint	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	"Rawleigh's" bottle, clear glass, machine-made, screw top	4	1919-Present	Fike 1987
		Quadrant I, Area 6, Surface Ravine	Kitchen	Mason jar lid liner, milk glass	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Panel bottle, green tint	1		
		Quadrant I, Area 6, Surface Ravine	Kitchen	Whiteware, multicolor decal	1	1890-Present	Magid 1984
		Quadrant I, Area 6, Surface Ravine	Kitchen	Whiteware sherd	1	1820-Present	Magid 1984
		Quadrant I, Area 6, Surface Ravine	Personal	Vick's jar fragment, cobalt blue	1		
		Quadrant I, Area 6, Surface Ravine	Furniture	Molded glass, colorless	1		

Table 24. Historic Artifacts Recovered from 33 Pk 194.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 194	F.S. 11	Quadrant I, Area 7, Surface	Kitchen	Whiteware, black transfer print, scalloped rim edge molded	1	1820-1860s	Miller and Hunter 1990:17
		Quadrant I, Area 7, Surface	Kitchen	Container glass base, light blue tint	1		
		Quadrant I, Area 7, Surface	Architecture	Coarse earthernware drain tile fragment	1		
		Quadrant 1, Area 7, Surface	Kitchen	Amber glass beer bottle neck, fragment cap, machine-made	1	1929-Present	Fike 1987 Jones and Sullivan 1989
		Quadrant I, Area 7, Surface	Kitchen	Container glass, colorless, molded decoration, blown	1		
		Quadrant I, Area 7, Surface	Kitchen	Stoneware, Bristol exterior, albany interior	4		

Table 25. Historic Artifacts Recovered from 33 Pk 195.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 195	F.S. 12	Quadrant I, Area 6, Coal Pile	Kitchen	Canning jar, diamond embossed, colorless, machine-made, screw top, Knox Glass Bottle Company	1	1924-1968	Toulouse 1977
		Quadrant I, Area 6, Coal Pile	Architecture	Ceramic insulator cap	1		
		Quadrant I, Area 6, Surface	Kitchen	Colorless glass jar, machine-made, screw top, polygonal	1		
		Quadrant I, Area 6, Surface	Kitchen	Colorless glass shoulder seal jar, Anchor-Hocking	1		
		Quadrant I, Area 6, Surface	Kitchen	Colorless glass jar, textured base, shoulder sealed	1		
		Quadrant I, Area 6, Surface	Kitchen	Amber glass duraglas bottom, Owens-Illinois	1	Post-1940	Toulouse 1977
		Quadrant 1, Area 6, Surface	Kitchen	Colorless glass wine bottle, machine-made, screw top	1	1940-1954	Toulouse 1977
		Quadrant I, Area 6, Coal Pile	Kitchen	Amber glass bottle	1	1945-1960	Toulouse 1977
		Quadrant I, Area 6, Trash Pile	Kitchen	Amber glass ovoid bottle, "Federal Law Forbids Sale", screw top	1	1934-1964	Jones and Sullivan 1989
		Quadrant I, Area 6, Trash Pile	Kitchen	Glass Bottle, panel, light green tint, Pierce Glass Company, embossed "Dr. Caldwell's, Monticello, Illinois:	1	1905-1977	Toulouse 1977
		Quadrant I, Area 6, Trash Pile	Kitchen	Amber panel glass bottle, machine-made, Owens-Illinois	1	1929-1954	Toulouse 1977
		Quadrant I, Area 6, Trash Pile	Kitchen	Colorless glass jar, shoulder seal	1		
33 Pk 195	F.S. 12	Quadrant I, Area 6, Trash Pile	Kitchen	Colorless drinking glass base, polygon, Owens-Illinois	1	1929-1954	Toulouse 1977

Table 25. Historic Artifacts Recovered from 33 Pk 195.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 195	F.S. 12	Quadrant I, Area 6, Trash Pile	Activities	Amber glazed redware, flower pot, fragment	1		
		Quadrant I, Area 6, South of Concrete foundation	Kitchen	Colorless glass bottle, "Vess Cola"	1	1948	Toulouse 1977
		Quadrant I, Area 6, Surface	Kitchen	Boyd's cap for Mason jar with ring, milk glass	1	1915-1920	Toulouse 1977
		Quadrant I, Area 6, Surface	Kitchen	Mason jar cap, milk glass with zinc cap	1		
		Quadrant I, Area 6, Surface	Kitchen	Syrup bottles, colorless glass, machine-made, molded glass with metal cap	2	1932-1953	Toulouse 1977
		Quadrant I, Area 6, Surface	Kitchen	Knox Mason jar with molded machine-made glass	1	1917-1956	Toulouse 1977
		Quadrant I, Area 6, Surface	Kitchen	Small machine-made molded medicine bottle, graduated	1	Post-1903	Jones and Sullivan 1989
		Quadrant I, Area 6, Surface	Kitchen	Small Hourglass profile flask shaped machine-made molded glass jar, Anchor-Hocking	1	Post-1903	Jones and Sullivan 1989
		Quadrant I, Area 6, Surface	Kitchen	Whiteware, plain, burnt pieces of teacup	2	1820-Present	Magid 1984
		Quadrant I, Area 6, Surface	Kitchen	Small medicine bottle, machine-made, molded colorless glass	1	Post-1903	Jones and Sullivan 1989
		Quadrant I, Area 6, Surface	Kitchen	Machine-made colorless glass dish with molded floral design, crimped edge	1		
		Quadrant I, Area 6, Surface	Activities	Possible horse harness, leather strap pieces	5		
		Quadrant I, Area 6, Surface	Activities	Iron Pulley wheel	1		

Table 26. Historic Artifacts Recovered from 33 Pk 203.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 203	F.S. 20	Quadrant IV, Area 5, Cluster E	Kitchen	Container glass, colorless	8		
		Quadrant IV, Area 5, Cluster E	Furniture	Painted ceramic figurine (possible horse), glazed	1		
		Quadrant IV, Area 5, Cluster E	Architecture	Electrical conduit, metal	1		
		Quadrant IV, Area 5, Cluster E	Kitchen	Jug base, "Ball" embossed on base, colorless	1		
		Quadrant IV, Area 5, Cluster E	Kitchen	Large Mason jar "Atlas Mason" embossed, screw top	1	ca. 1920	Toulouse 1969
		Quadrant IV, Area 5, Cluster E	Kitchen	Panel bottle fragment, blue-green tint	1		
		Quadrant IV, Area 5, Cluster E	Kitchen	Machine-made, molded, colorless, graduated medicine bottle, plastic screw cap, Whitall-Tatum and Co.	1	1935-1938	Toulouse 1977
		Quadrant IV, Area 5, Cluster E	Kitchen	Jug finish, screw top, handle, colorless	1		
		Quadrant IV, Area 5, Cluster E	Kitchen	Whiteware, plain	1	1820-Present	Magid 1984
		Quadrant IV, Area 5, Cluster E	Kitchen	Whiteware, blue transfer print	1	1820-Present	Magid 1984
		Quadrant IV, 20 m south of Structure 2	Kitchen	Whiteware, red transfer print	1	1890-Present	Magid 1977
		Quadrant IV, Area 5, Structure 2 North Radial	Kitchen	Colorless container glass	1		
		Quadrant IV, Area 5, Structure 3, Cluster A	Kitchen	Bottle, machine-made, molded, green with crown closure, 7-up applied color label	1	1952	Toulouse 1977

Table 26. Historic Artifacts Recovered from 33 Pk 203.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 203	F.S. 20	Quadrant IV, Area 5, Structure 3, Cluster A	Kitchen	Coca-Cola bottle, machine-made, molded, green tint, crown closure, Clarksburg, WVA.	1	1948	Toulouse 1977
		Quadrant IV, Area 5, Structure 3, Cluster A	Architecture	Flat glass, blue tint	1		
		Quadrant IV, Area 5, Structure 3, Cluster A	Kitchen	Container glass, colorless	4		
		Quadrant IV, Area 5, Structure 3, Cluster A	Kitchen	Whiteware, plain	2	1820-Present	Magid 1984
		Quadrant IV, Area 5, Structure 3, Cluster A	Kitchen	Milk bottle, colorless	1		
		Quadrant IV, Area 5, Structure 3, Cluster B	Kitchen	Whiteware, plain	3	1820-Present	Magid 1984
		Quadrant IV, Area 5, Structure 3, Cluster B	Kitchen	Whiteware, hand painted	3	1850-Present	Magid 1984
		Quadrant IV, Area 5, Structure 3, Cluster B	Kitchen	Machine-made drinking glass, molded geometric design, solarized amethyst	1		
		Quadrant IV, Area 5, Structure 3, Cluster B	Kitchen	Container glass, colorless	1		
		Quadrant IV, Area 5, Structure 3, Cluster B	Architecture	Window glass, green tint	1		
		Quadrant IV, Area 5, Structure 2	Kitchen	7-Up bottle, duraglas, Owens-Illinois, produced Fairmount, West Virginia	1	1946	Toulouse 1977
		Quadrant IV, Area 5, Structure 2	Kitchen	Colorless container glass	7		

Table 26. Historic Artifacts Recovered from 33 Pk 203.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 203	F.S. 20	Quadrant IV, Area 5, Transect 2, Unit 4	Kitchen	Whiteware, plain	4	1820-Present	Magid 1984
		Quadrant IV, Area 5, Transect 2, Unit 4	Kitchen	Whiteware, molded, hand painted annular band decoration	1	1850-Present	Magid 1984
		Quadrant IV, Area 5, Transect 2, Unit 4	Kitchen	Stoneware, Bristol salt glaze	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 5, Transect 2, Unit 4	Kitchen	Container glass, colorless	1		
		Quadrant IV, Area 5, Transect 2, Unit 4	Clothing	Button, "The HR Co", brass	1		
		Quadrant IV, Area 5, Transect 2, Unit 3	Kitchen	Whiteware, plain	3	1820-Present	Magid 1984
		Quadrant IV, Area 5, Transect 2, Unit 3	Kitchen	Container glass	2		
		Quadrant IV, Area 5, Transect 2, Unit 3	Kitchen	Whiteware, red transfer print, edge molded decoration	1	1820-1860s	Miller and Hunter 1990
		Quadrant IV, Area 5, Transect 2, Unit 3	Activities	Fragment of Dark glass	1		
		Quadrant IV, Area 5, Transect 2, Unit 3	Architecture	Nail, unknown	1		
		Quadrant IV, Area 5, Transect 1, Unit 5	Kitchen	Whiteware, scalloped edge	1	1775-1900	Miller and Hunter 1990

Table 26. Historic Artifacts Recovered from 33 Pk 203.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 203	F.S. 20	Quadrant IV, Area 5, Transect 1, Unit 2	Kitchen	Stoneware, bristol glaze	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 5, Transect 1, Unit 2	Kitchen	Stoneware, dark gray glaze	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 5, Transect 1, Unit 2	Activities	Ferrous blobs	2		

Table 27. Prehistoric and Historic Artifacts Recovered from 33 Pk 206.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 206	F.S. 23	Quadrant II, Area 9, Transect 11, Unit 2	*	Flake, Vanport, heat altered	1		
		Quadrant II, Area 9, Transect 15, Unit 4	*	Flake, Delaware/Columbus	1		
		Quadrant II, Area 9, Transect 15, Unit 4 South Radial	Architecture	Yellow brick fragments	3		
		Quadrant II, Area 9	Kitchen	Machine-made molded colorless glass bottle with crown cap closure, Duraglas, Owen-Illinois	1	1948	Toulouse 1977
		Quadrant II, Area 9, Transect 12, Unit 2	Architecture	Nails, very rusted	4		
		Quadrant II, Area 9, Cluster 1	Kitchen	Boyd's Genuine Mason jar liner fragment	1	1900-1930	Toulouse 1977
		Quadrant II, Area 9, Cluster 1	Kitchen	Milk glass lid liner fragment	1		
		Quadrant II, Area 9, Cluster 1	Kitchen	Zinc lid from canning jar	1		
		Quadrant II, Area 9, Cluster 1	Kitchen	Whiteware, plain, burnt	1	1820-Present	Magid 1984
		Quadrant II, Area 9, Cluster 1	Kitchen	Stoneware, interior Albany, exterior Bristol/Albany, salt glaze	1	Turn-of-Century	Magid 1984
		Quadrant II, Area 9, Cluster 1	Kitchen	Stoneware, Bristol	2	Turn-of-Century	Magid 1984
		Quadrant II, Area 9, Cluster 1	Kitchen	Machine-made, molded, green tint, glass bottle fragment with crown cap closure	1	1903-Present	Jones and Sullivan 1989

Table 27. Prehistoric and Historic Artifacts Recovered from 33 Pk 206.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 206	F.S. 23	Quadrant II, Area 9, Cluster 1	Kitchen	Machine-made molded, colorless glass bottle with screw cap, duraglas	1	1942-Present	Toulouse 1977
		Quadrant II, Area 9, Cluster 1	Architecture	Flat glass, green tint	1		
		Quadrant II, Area 9, Cluster 2	Kitchen	Beer bottle, "No return - not to be refilled", amber tint, crown cap	1		
		Quadrant II, Area 9, Cluster 2	Kitchen	Machine-made, molded amber glass bottle, screw top, Owens, Illinois	1	1950	Toulouse 1977
		Quadrant II, Area 9, Transect 13, Unit 3	Activities	Wire	1		
		Quadrant II, Area 9, Transect 15, Unit 3	Architecture	Wire Nails	2	1890s-Present	Nelson 1968
		Quadrant II, Area 9, Transect 15, Unit 7	Activities	Ferrous blobs	2		
		Quadrant II, Area 9, Transect 15, Unit 7	Activities	Rusted sheet metal	1		
		Quadrant II, Area 9, Transect 15, Unit 4 East Radial	Kitchen	Container glass, colorless	2		
		Quadrant II, Area 9, Transect 15, Unit 4 East Radial	Kitchen	Whiteware, plain	1	1820-Present	Magid 1984
		Quadrant II, Area 9, Transect 15, Unit 4 East Radial	Architecture	Wire nail	1	1890s-Present	Nelson 1968
		Quadrant II, Area 9, Transect 15, Unit 4 East Radial	Activities	Metal Fragments	5		

Table 27. Prehistoric and Historic Artifacts Recovered from 33 Pk 206.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 206	F.S. 23	Quadrant II, Area 9, Transect 15, Unit 5	Kitchen	Stoneware, Albany interior and exterior	1	Turn-of-Century	Magid 1984
		Quadrant II, Area 9, Transect 15, Unit 5	Architecture	Nails, unknown	2		
		Quadrant II, Area 9, Transect 15, Unit 5	Activities	Wire fragments	3		
		Quadrant II, Area 9, Transect 15, Unit 5	Activities	Ferrous blobs	3		
		Quadrant II, Area 9, Structure 2	Kitchen	Machine-made molded colorless crown closure, duraglas, Owen-Illinois, West Virginia, Applied color label "Drink Barq's It's good."	1	1940 or 1950	Toulouse 1977

Key: * Prehistoric artifact

Table 28. Historic Artifacts Recovered from 33 Pk 211.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 211	F.S. 28	Quadrant IV, Area 4, 10m SW of Building 2	Kitchen	Machine-made, molded, green tint, wine bottle, Owens-Illinois, Fairmont, West Virginia	1	1936-1946	Toulouse 1977
		Quadrant IV, Area 4, 10m S of Building 2	Kitchen	Machine-made, colorless, molded glass, pint bottle, aluminum cap, "Federal Law" Owens-Illinois	1	1933-1954	Toulouse 1977
		Quadrant IV, Area 4, 10m SW of Building 2	Kitchen	Machine-made, colorless, molded glass, pint bottle, aluminum cap, Federal disclaimer, Owens-Illinois, National Distillery	1	1935 or 1945	Toulouse 1977
		Quadrant IV, Area 4, Building 3	Kitchen	Stoneware, Albany interior, Albany and Bristol exterior	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 4, Building 3	Kitchen	Ball, blue tint, Mason jar, shoulder seal	2		
		Quadrant IV, Area 4, Building 3	Kitchen	Jar lid, colorless	1		
		Quadrant IV, Area 4, Building 3	Kitchen	Mason jar with Boyd's liner	1	1900-1930	Toulouse 1977
		Quadrant IV, Area 4, Building 3	Kitchen	Liner fragment	1		
		Quadrant IV, Area 4, Building 3	Kitchen	Jug top, amber glass cork closure	1		
		Quadrant IV, Area 4, Building 3	Kitchen	Container bottom, colorless glass, Owens-Illinois	1	1933-1953	Toulouse 1977
		Quadrant IV, Area 4, Building 3	Kitchen	Container bottom, colorless glass	1	1940 or 1950	Toulouse 1977
		Quadrant IV, Area 4, Building 3	Architecture	Flat glass	1		
		Quadrant IV, Area 4, Building 5	Architecture	Ceramic insulator	1		
		Quadrant IV, Area 4, Building 5	Kitchen	Solarized amethyst bottle fragment	1	1880-1914	Deiss 1981

Table 28. Historic Artifacts Recovered from 33 Pk 211.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
3 Pk 211	F.S. 28	Quadrant IV, Area 4, Building 7	Kitchen	Aluminum pot, small (not collected)	1		
		Quadrant IV, Area 4, Building 1	Kitchen	Zinc cap and liner, Mason top	1		
		Quadrant IV, Area 4, Building 1	Kitchen	Machine-made, molded colorless bottle, spout, cork closure	1	1903-1915	Deiss 1981 Jones and Sullivan 1989
		Quadrant IV ,Area 4, Building 1	Kitchen	Stoneware, crock fragment, Albany and Bristol exterior	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 4, Building 1	Kitchen	Coke bottle fragment, embossed "Portsmouth, OH", Owens-Illinois	1	1944	Toulouse 1977
		Quadrant IV, Area 4, Building 1	Kitchen	Machine-made, colorless, cylindrical bottle, Owens-Illinois, Gas City, IN	1	1935 or 1945	Toulouse 1977
		Quadrant IV, Area 4, Building 1	Kitchen	Colorless glass container base, "High Grade", Seabord Glass Co., Braddock, PA.	1	1943-1947	Toulouse 1977
		Quadrant IV, Area 4, Building 1	Activities	Metal can (paint?)	1		
		Quadrant IV, Area 4, Building 1	Activities	Oil can	1		
		Quadrant IV, Area 4, Building 2	Kitchen	Oval shaped, machine-made, molded, colorless bottle, graduated	1	1903-Present	Jones and Sullivan 1989
		Quadrant IV, Area 4, Building 5	Kitchen	Machine-made, colorless glass container, embossed "Distillery Troy, OH"	1	1903-Present	Jones and Sullivan 1989
		Quadrant IV, Area 4, Building 5	Kitchen	Machine-made, colorless whiskey bottle, cork closure	1	1903-Present	Jones and Sullivan 1989

Table 28. Historic Artifacts Recovered from 33 Pk 211.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 211	F.S. 28	Quadrant IV, Area 4, Building 1	Kitchen	Soda bottle type, colorless bottle with crown closure, embossed "---- Water" and stars	1		
		Quadrant IV, Area 4, Building 1	Kitchen	Machine-made, molded, colorless glass screw top bottle, Owens-Illinois, Fairmont, West Virginia	1	1946	Toulouse 1977
		Quadrant IV, Area 4, Building 1	Kitchen	Screw top, colorless, wine type bottle, "Federal Law Prohibits . . . "	1	1933-1964	Deiss 1981 Jones and Sullivan 1989
		Quadrant IV, Area 4, Building 1	Kitchen	Colorless pint-type bottle fragment, lower portion	1		
		Quadrant IV, Area 4, Building 1	Kitchen	Stoneware, Albany glaze	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 4, Building 1	Activities	Ohio License plate 1947, "805-JV or 805-JW"	1	1947	

Table 29. Historic Artifacts Recovered from 33 Pk 212.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 212	F.S. 30	Quadrant IV, Area 21	Activities	Clorox Bottle, amber, machine-made, glass, stippling all around bottle, embossed "Clorox" around top, Owens-Illinois	1	1954-Present	Toulouse 1977
		Quadrant IV, Area 21	Activities	Glass "cat's eye" marble	1		
		Quadrant IV, Area 21	Kitchen	Machine-made, molded, colorless tall square bottle, embossed horizontal lines near top, stopper top, Anchor-Hocking	1		
		Quadrant IV, Area 21, Building 4	Kitchen	Wine type bottle, colorless, screw closure, Anchor-Hocking	1	1938-Present	Toulouse 1977
		Quadrant IV, Area 21, Building 4	Kitchen	Ovate short, colorless bottle with wide screw closure, ridges on sides	1		
		Quadrant IV, Area 21, Building 4	Kitchen	Colorless container glass	2		
		Quadrant IV, Area 21, Well, Cluster 3	Kitchen	Textured colorless container bottom, Anchor-Hocking	1		
		Quadrant IV, Area 21, Well, Cluster 3	Kitchen	Colorless, pint type bottle, screw top, "wine" embossed on bottom, Owens-Illinois, Alton, IL	1	1931-1951	Toulouse 1977
		Quadrant IV, Area 21, Well, Cluster 3	Kitchen	Colorless container glass fragments	2		
		Quadrant IV, Area 21, Well , Cluster 3	Activities	Iron pry-bar	1		

Table 30. Historic Artifacts Recovered from 33 Pk 213.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 213	F.S. 31	Quadrant IV, Area 21, Cluster 1	Kitchen	Container Base, blue tint	1		
		Quadrant IV, Area 21, Cluster 1	Kitchen	Applied color label "Sun Crest" colorless soda bottle, made by Ball/Dr. Pepper Bottling Co., Portsmouth, Ohio	1	1934-Present	Jones and Sullivan 1989
		Quadrant IV, Area 21, Cluster 1	Kitchen	Colorless drinking glass cup fragments	29		
		Quadrant IV, Area 21, Cluster 1	Personal	Milk glass, submarine shaped lid for small container or dish	1		
		Quadrant IV, Area 21, Cluster 1	Kitchen	Atlas Mason jar	1	ca. 1920	Toulouse 1977
		Quadrant IV, Area 21 Cluster 1	Kitchen	Ball zinc Mason lid and liner	1		
		Quadrant IV, Area 21, Cluster 1	Furniture	Pressed floral design green glass bowl (withheld - radioactive)	1		

Table 31. Historic Artifacts Recovered from 33 Pk 217.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 217	F.S. 36	Quadrant IV, Area 30, Well, Surface	Kitchen	Colorless glass milk bottle finish	1		
		Quadrant IV, Area 30, Well, Surface	Kitchen	Stoneware base fragment, Albany interior, Bristol exterior	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 30, Well, Surface	Kitchen	Colorless glass jar, Anchor-Hocking, screw on cap beaded	1		
		Quadrant IV, Area 30, Well, Surface	Kitchen	Colorless glass panel bottle finish, machine-made, screw top, beaded	1		
		Quadrant IV, Area 30, Well, Surface	Furniture	Colorless chimney glass fragment	1	post-1899	Colonial Williamsburg Foundation 1983
		Quadrant IV, Area 30, Well, Surface	Kitchen	Amber glass Clorox bottle base, Owens-Illinois	1	1929-1954	Toulouse 1977
		Quadrant IV, Area 30, Well, Surface	Kitchen	Milk glass Mason jar cap with zinc ring "Genuine porcelain lined Mason jar cap"	1		
		Quadrant IV, Area 30, Well, Surface	Kitchen	Colorless glass bottle base, round with some stippling	1		
		Quadrant IV, Area 30, Well, Surface	Kitchen	Colorless glass bottle shoulder, molded blown glass, possible vinegar bottle	1		
		Quadrant IV, Area 30, Well, Surface	Kitchen	Colorless glass bottle shoulder, stippled on outside, "return" embossed on shoulder	1		
		Quadrant IV, Area 30, Well, Surface	Kitchen	Metal jar lid, screw top	1		

Table 31. Historic Artifacts Recovered from 33 Pk 217.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 217	F.S. 36	Quadrant IV, Area 30, Well, Surface	Activities	Small piece of aluminum connector for window	1		
		Quadrant IV, Area 30, Well, Surface	Activities	Ceramic insulator, electric fence	1		
		Quadrant IV, Area 30, Structure 2, Surface	Kitchen	Stoneware jug, Bristol and Albany exterior, Albany interior	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 30, Structure 2, Surface	Kitchen	Vicks Vapo-Rub bottle, cobalt blue	1		
		Quadrant IV, Area 30, Structure 2, Surface	Kitchen	Beaded neck glass jar with slight yellow tint, screw top closure	1	1940-1960	Toulouse 1977
		Quadrant IV, Area 30, Structure 2, Surface	Architecture	Flat glass, light green tint	2		
		Quadrant IV, Area 30, Structure 5, Surface	Kitchen	Whiteware bowl base	1	1820-Present	Magid 1984
		Quadrant IV, Area 30, Structure 5, Surface	Kitchen	Milk glass Mason jar cap liner fragments	2		
		Quadrant IV, Area 30, Structure 5, Surface	Kitchen	Amber container glass fragment	1		
		Quadrant IV, Area 30, Structure 5, Surface	Architecture	Flat glass, very light green tint	1		
		Quadrant IV, Area 30, Structure 5, Surface	Architecture	Flat glass, light green tint	1		

Table 31. Historic Artifacts Recovered from 33 Pk 217.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 217	F.S. 36	Quadrant IV, Area 30, Structure 5, Surface	Architecture	Yellow brick fragment, buff glaze	1		
		Quadrant IV, Area 30, Building 4, Surface	Activities	Steel hacksaw blade	1		
		Quadrant IV, Area 30, Structure 3, Surface	Kitchen	Colorless glass panel bottle with plastic cap, Owens-Illinois, produced Gas City, Indiana	1	1949	Toulouse 1977

Table 32. Historic Artifacts Recovered from 33 Pk 218.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 218	F.S. 37	Quadrant IV, Area 29, Cluster 1	Kitchen	Heinz polygonal jar, molded base design, Owens, Illinois	1	1934-1954	Toulouse 1977
		Quadrant IV, Area 29, Cluster 1	Kitchen	"Drey Perfect Mason", colorless glass jar with beaded rim, screw top, machine-made	1	1920	Toulouse 1969
		Quadrant IV, Area 29, Cluster 1	Kitchen	Stoneware jar, colorless glaze, Bristol exterior, Albany interior	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 29, Cluster 1	Kitchen	Colorless glass panel bottle, beaded neck, screw top, machine-made, Anchor-Hocking	1		
		Quadrant IV, Area 29, Cluster 1	Kitchen	Amber glass bottle glass stopper finish, "oxol" embossing	1	1925-Present	Toulouse 1977
		Quadrant IV, Area 29, Cluster 2	Architecture	Metal hinge with screws	1		
		Quadrant IV, Area 29, Cluster 3	Kitchen	Colorless glass bottle with crown cap, machine-made, Owens-Illinois, produced at Glasboro, NJ	1	1955	Toulouse 1977
		Quadrant IV, Area 29, Cluster 3	Kitchen	Colorless glass jar rim, beaded neck, screw top closure	1		
		Quadrant IV, Area 29, Cluster 3	Kitchen	Colorless glass jar rim, shoulder seal	1		
		Quadrant IV, Area 29, Cluster 3	Activities	Marbles, 1-milk glass and green 1-milk glass and yellow	2		
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass bottle , Ball molded glass, machine-made, aluminum screw top	1		

Table 32. Historic Artifacts Recovered from 33 Pk 218.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 218	F.S. 37	Quadrant IV, Area 29, Cluster 4	Kitchen	Red Rock soda bottle, colorless, applied color label, stippled all-over, crown cap, Owens-Illinois, Douglas	1	1954	Toulouse 1977
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass jar, screw top closure, machine-made	1		
33 Pk 218	F.S. 37	Quadrant IV, Area 29, Cluster 4	Kitchen	Square, colorless glass bottle stippled, Continental dist. corp. Philadelphia, PA, Whittal-Tatum	1	1935-1938	Toulouse 1977
		Quadrant IV, Area 29, Cluster 4	Kitchen	Stoneware jar fragment, Albany slip interior and exterior	1	Turn-of-Century	Magid 1984
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass bottle finish, beaded neck, screw top, blown mold with rings around neck	1		
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass panel bottle, beaded neck, Owens-Illinois, produced Streater, IL	1	1934-1954	Toulouse 1977
		Quadrant IV, Area 29, Cluster 4	Kitchen	Amber glass dropper bottler, screw cap, machine-made, Owens-Illinois produced Alton, Illinois	1	1934-1954	Toulouse 1977
		Quadrant IV, Area 29, Cluster 4	Kitchen	Cobalt blue Vicks bottle, screw top	1		
		Quadrant IV, Area 29, Cluster 4	Kitchen	Opaque glass coffee mug fragment, machine-made	1		
		Quadrant IV, Area 29, Cluster 4	Kitchen	Semi vitreous bowl fragment, decalcomania, gilded	1	1940-1955	Gates & Omerod 1982

Table 32. Historic Artifacts Recovered from 33 Pk 218.

OAI Number	Field Site No. (F.S.)	Provenience	Functional Group	Artifact Description	Count	Date Range	Reference
33 Pk 218	F.S. 37	Quadrant IV, Area 29, Cluster 4	Kitchen	Whiteware saucer fragment with decalcomania, faint scallop edge	1	1890-Present	Magid 1984
		Quadrant IV, Area 29, Cluster 4	Kitchen	Whiteware fragment	1	1820-Present	Magid 1984
		Quadrant IV, Area 29, Cluster 4	Architecture	Colorless flat glass	1		
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass Tabasco bottle, screw on cap, machine-made	1	1903-Present	Jones and Sullivan 1989
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass bottle shoulder stippled with crest design, "federal law prohibits . . ." embossed	1	1933-1964	Deiss 1981; Stewart & Consentino 1976
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass, miscellaneous fragment	1		
		Quadrant IV, Area 29, Cluster 4	Kitchen	Green tint glass bowl fragment with molded ripple and bubble design and cone feet, pattern mold	1		
		Quadrant IV, Area 29, Cluster 4	Kitchen	Colorless glass panel bottle beaded neck, machine-made, screw on closure, W. T. Rawleigh, Co., Freeport Illinois	1	1925	Toulouse 1977
		Quadrant IV, Area 29, Surface	Kitchen	Colorless glass Jergens bottle, screw closure, Anchor-Hocking	1	1938+	Toulouse 1977
		Quadrant IV, Area 29, Surface	Kitchen	Whiteware, painted interior with transfer print	2	1940-1955	Gates and Omerod 1982

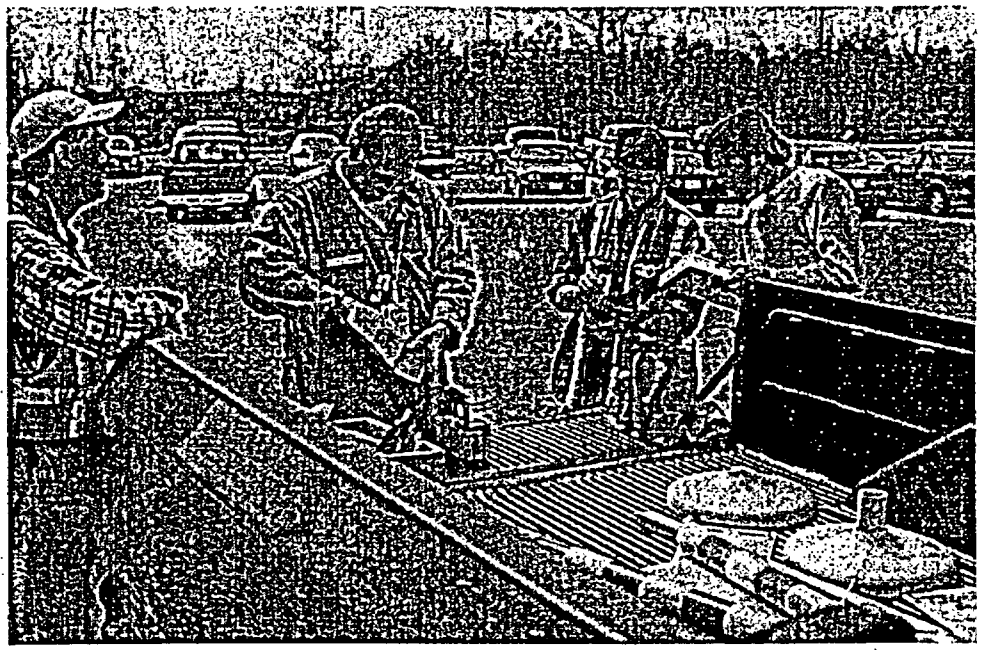


Plate 1. Artifacts being scanned by health-physics personnel.

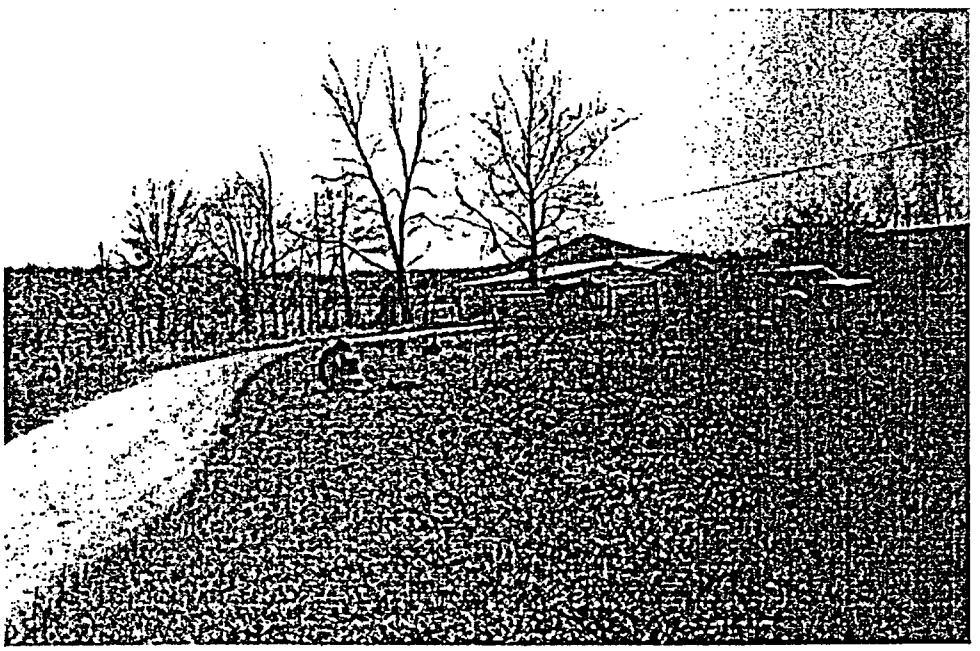


Plate 2. Shovel test pitting, 33 Pk 208; facing east.

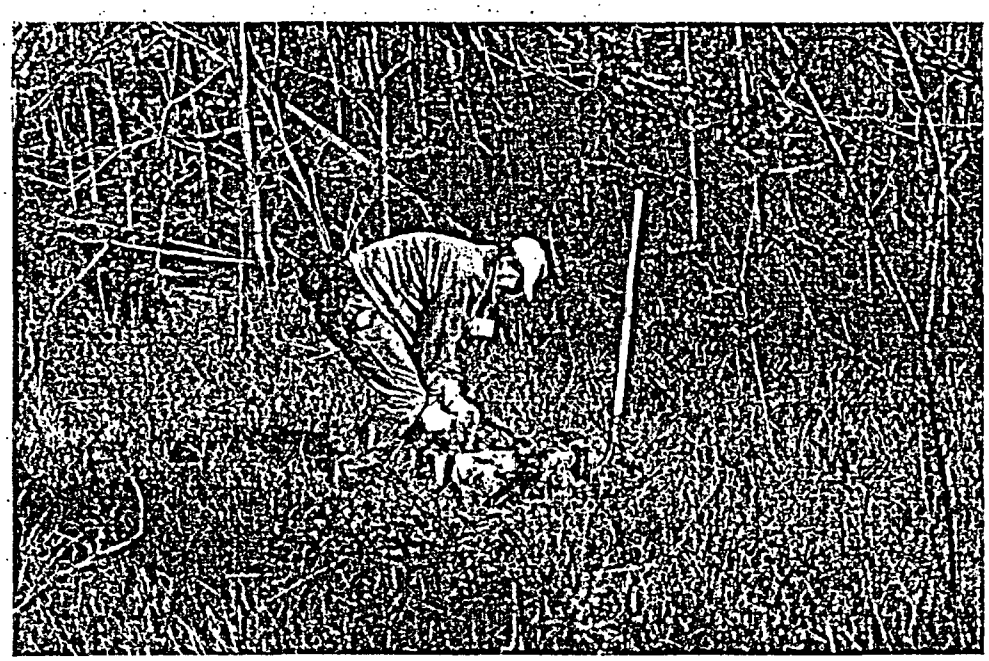


Plate 3. Quadrant IV, Area 11; deep shovel testing, facing south.

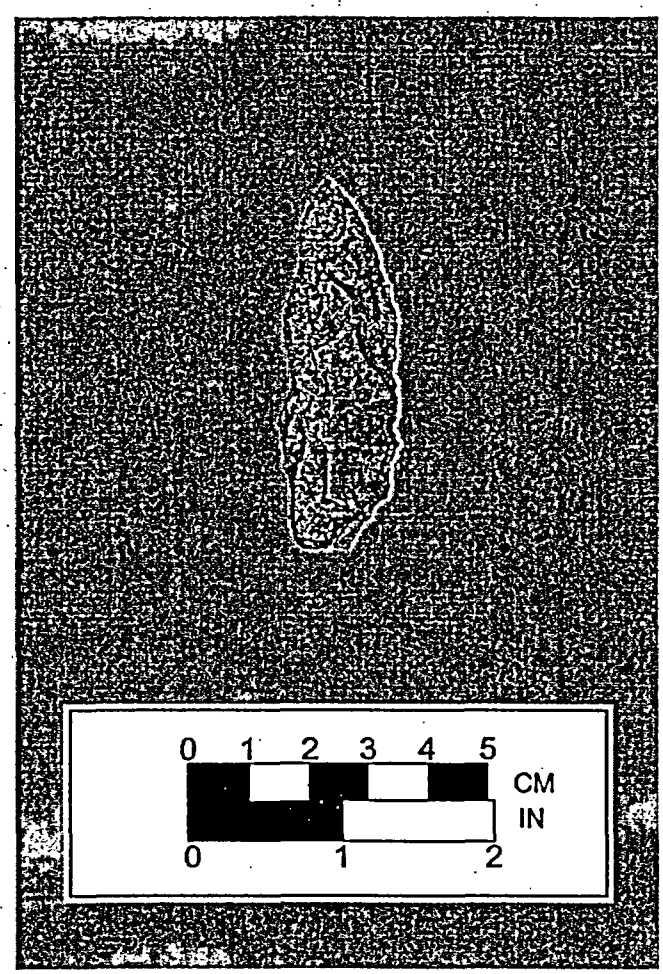


Plate 4. 33 Pk 208; biface made from an unknown chert.

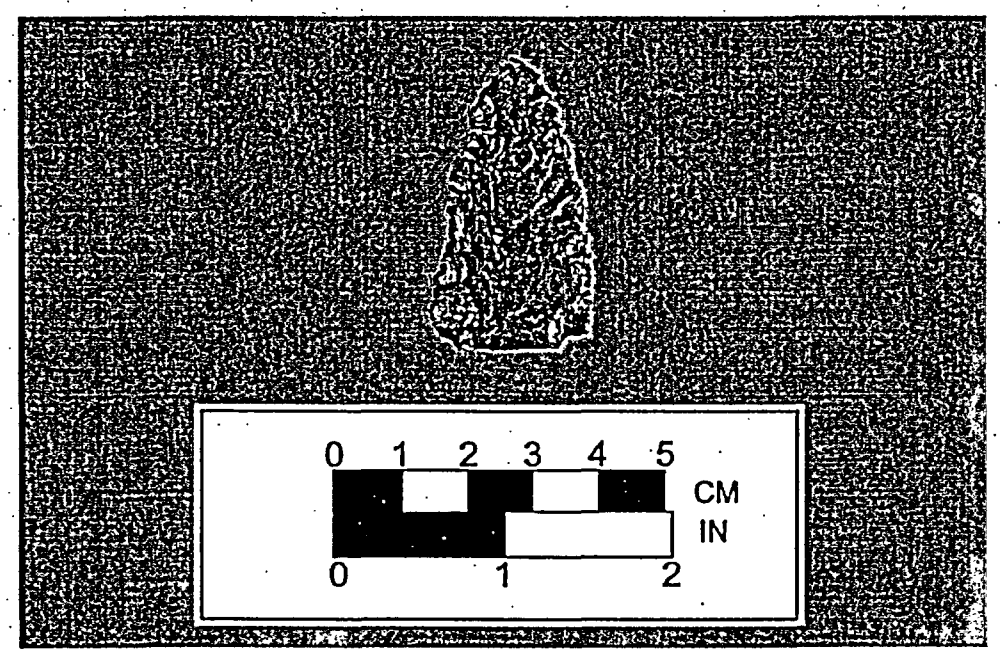


Plate 5. 33 Pk 186; projectile point tip made from Upper Mercer chert.

Plate 6. Mount Gilead Cemetery; facing northwest. Note chapel footers in foreground.

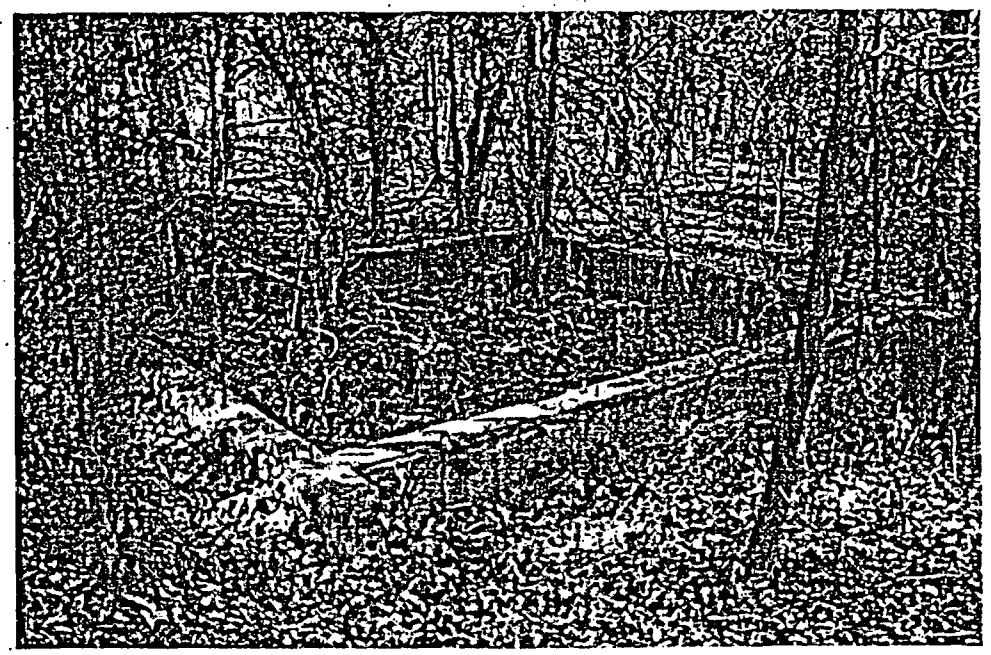


Plate 7. 33 Pk 189 (PIK-205-12). Mount Gilead Cemetery; plant-related observations platform base, facing south.

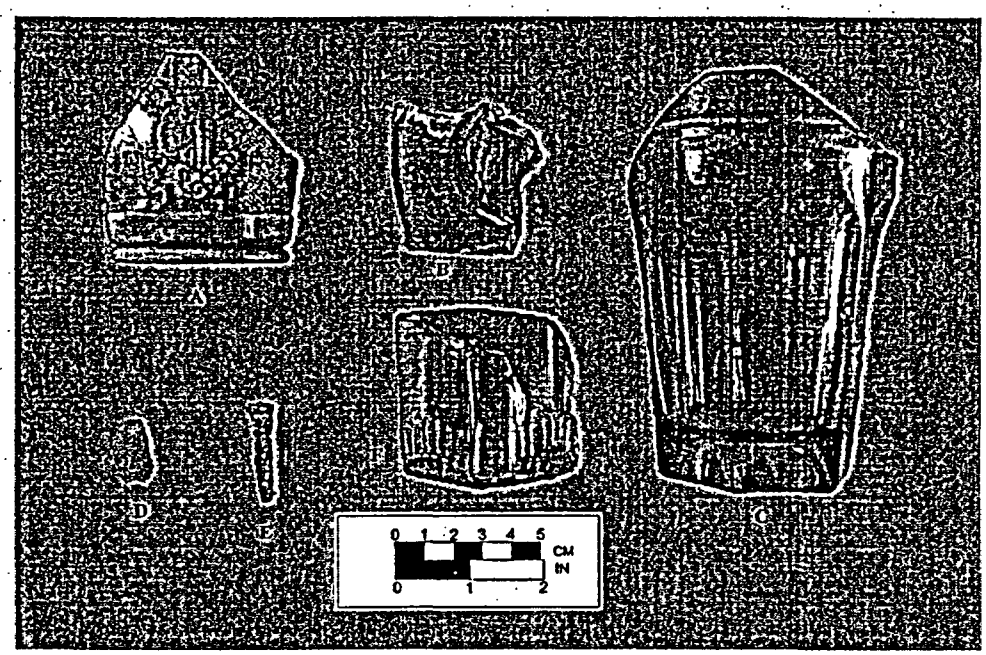


Plate 8. 33 Pk 189 (PIK-206-4), sample of artifacts surface collected from Mount Gilead Cemetery: A) molded milk glass vase base; B) violet-tinted glass goblet base fragment; C) solarized amethyst glass tumbler; D) Vanport flake; E) cut nail; and F) three-sided, machine-made, colorless glass bottle base.

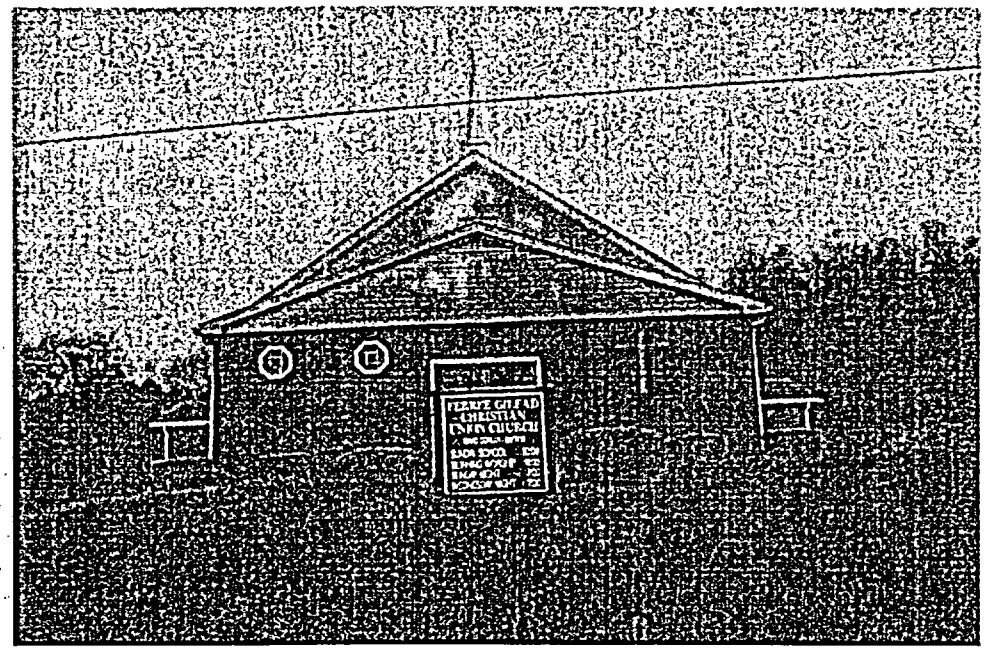


Plate 9. Ferree Gilead Christian Union Church. North of the U.S.D.O.E. property, facing south.

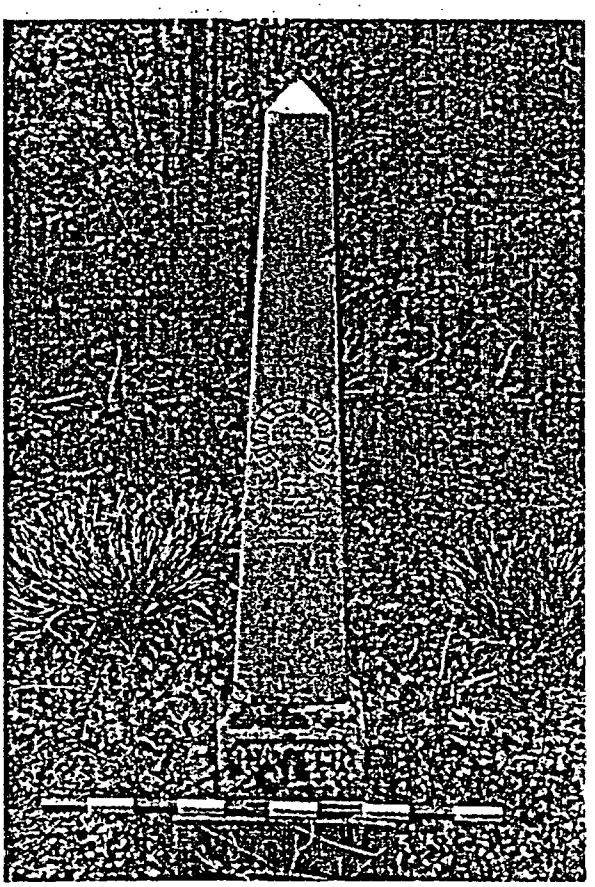


Plate 10. 33 Pk 214 (PIK-207). Charles Hunter gravestone, facing east.

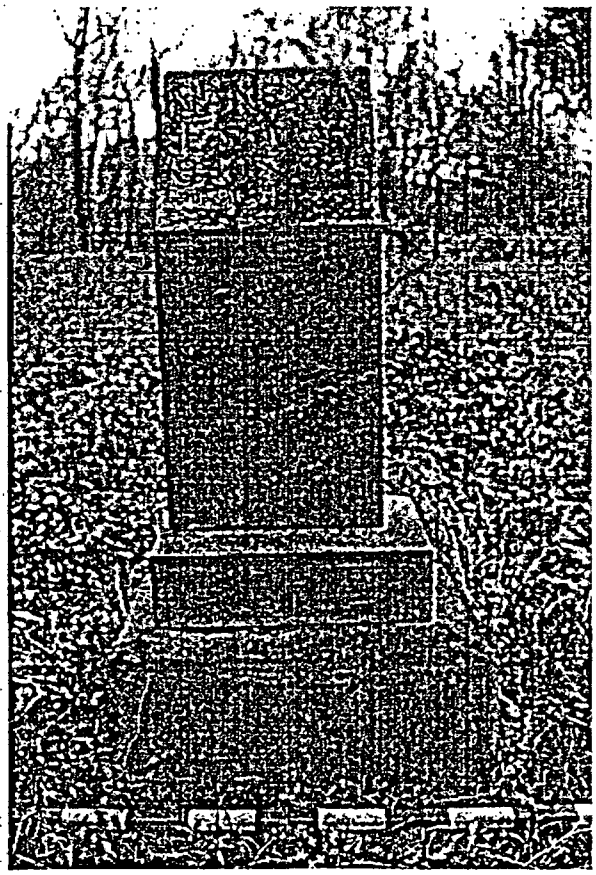


Plate 11. 33 Pk 214 (PIK-207). Nancy A. Farmer gravestone, facing east.

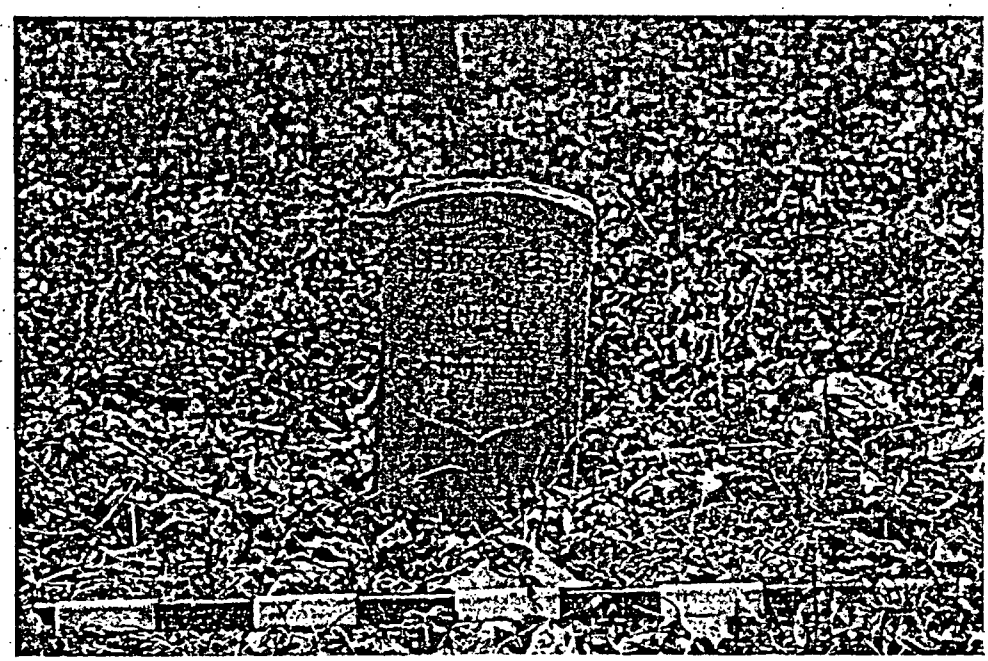


Plate 12. 33 Pk 214 (PIK-207). Henry Pry gravestone, facing east.

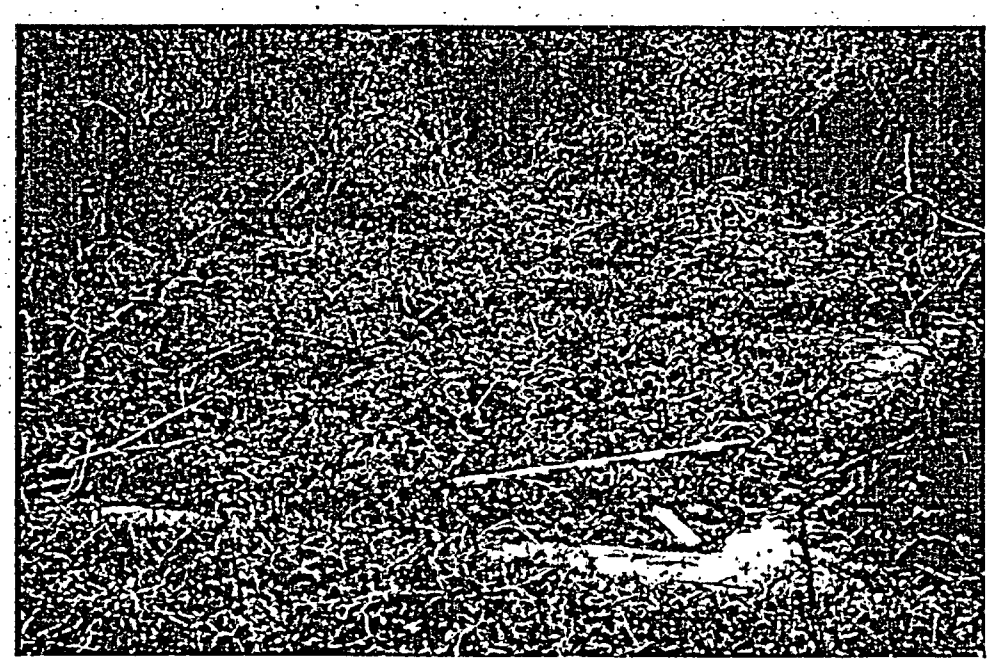


Plate 13. 33 Pk 184 (Davis farmstead). Concrete building foundation, looking north.

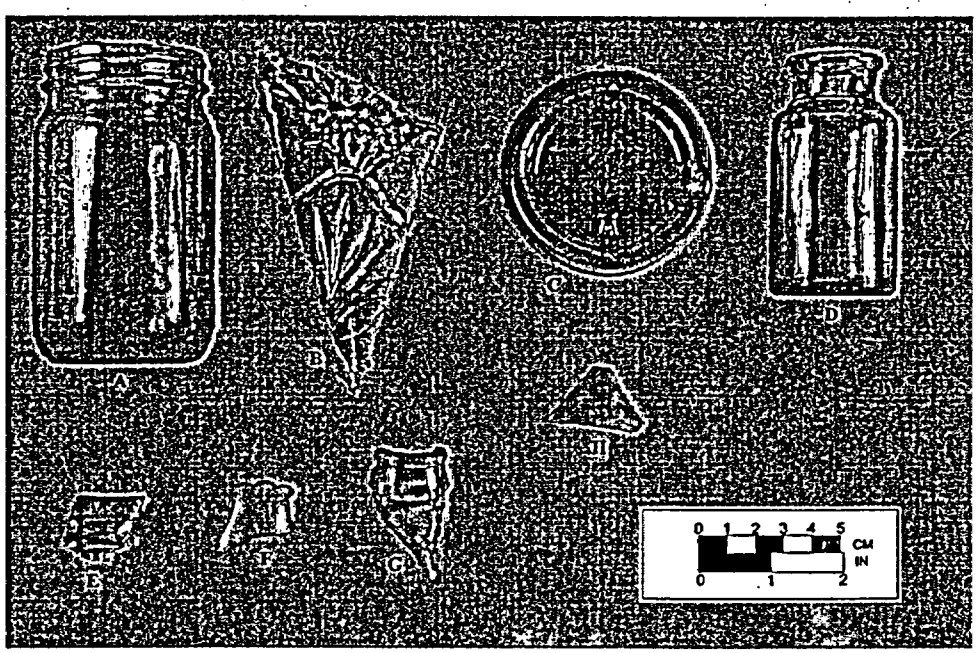


Plate 14. 33 Pk 184, sample of artifacts collected during surface collection and shovel testing: A) small Ball jar, colorless; B) colorless molded glass plate; C) amber glass furniture coaster; D) glass bottle, colorless, machine-made, cork closure, embossed Anchor-Hocking; E) blue glass fruit jar finish fragment; F) milk glass lampshade fragment; G) glass crown cap bottle finish; and H) aqua flat glass fragment.

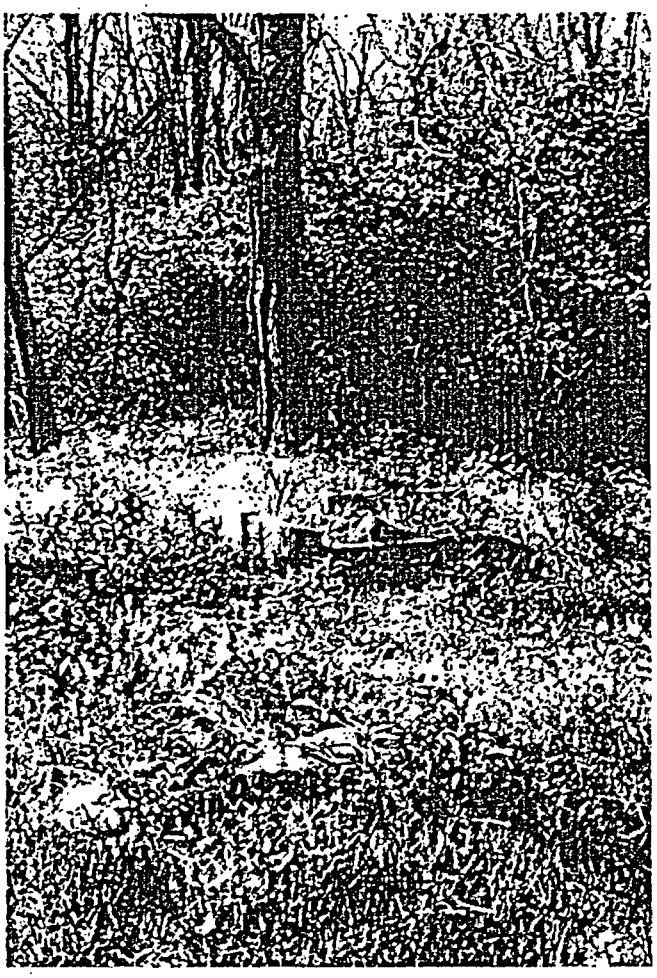


Plate 15. 33 Pk 185 (South Shyville farmstead). Foreground, covered wall; background, concrete cistern box, facing south

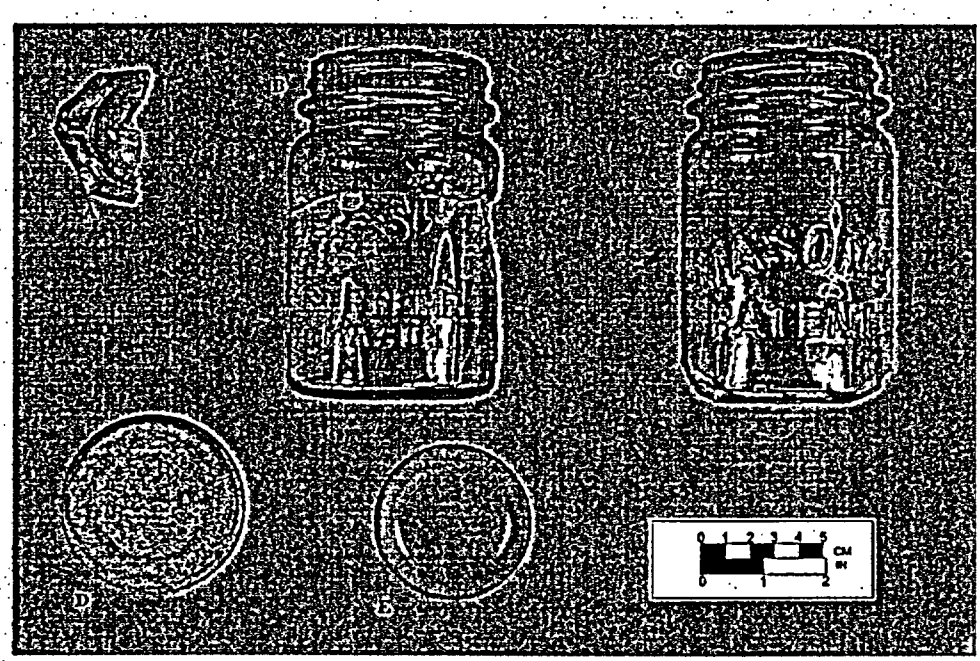


Plate 16. 33 Pk 185, sample of artifacts surface collected: A) solarized amethyst drinking glass base fragment; B) colorless glass "Mason's Patent" fruit jar; C) colorless glass "Presto Supreme Mason" fruit jar; D) zinc cap for fruit jar; and E) milk glass lid liner for fruit jar.

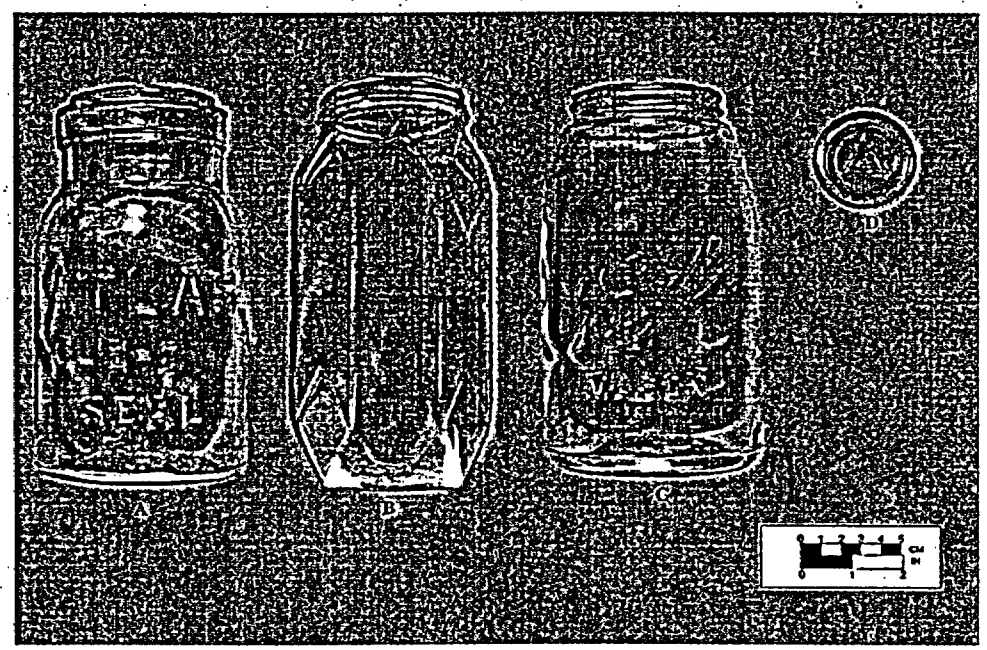


Plate 17. 33 Pk 193, sample of container jars recovered during surface collection: A) colorless glass lightning seal "A) "Atlas E-Z Seal" fruit jar; B) colorless glass screw top food container; C) cornflower blue glass "Ball Mason" tapered shoulder fruit jar; and D) cobalt blue "Vicks VapoRub" bottle (basal view).

Plate 18. 33 Pk 194 (North Shyville farmstead). Bell-shaped, brick-lined cistern, facing east.

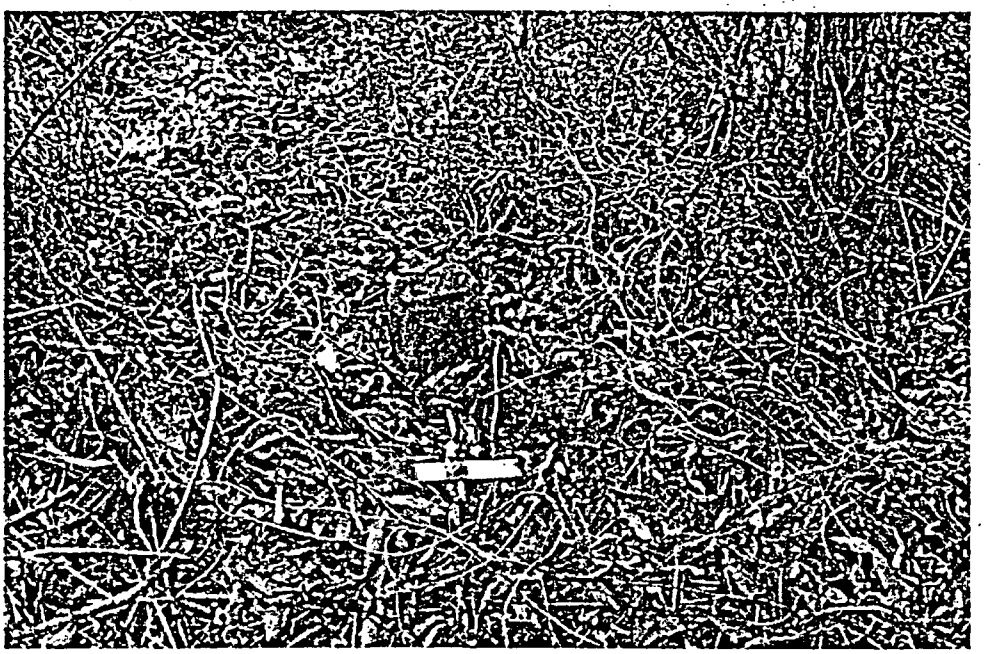


Plate 19. Possible grave footstone, facing east.

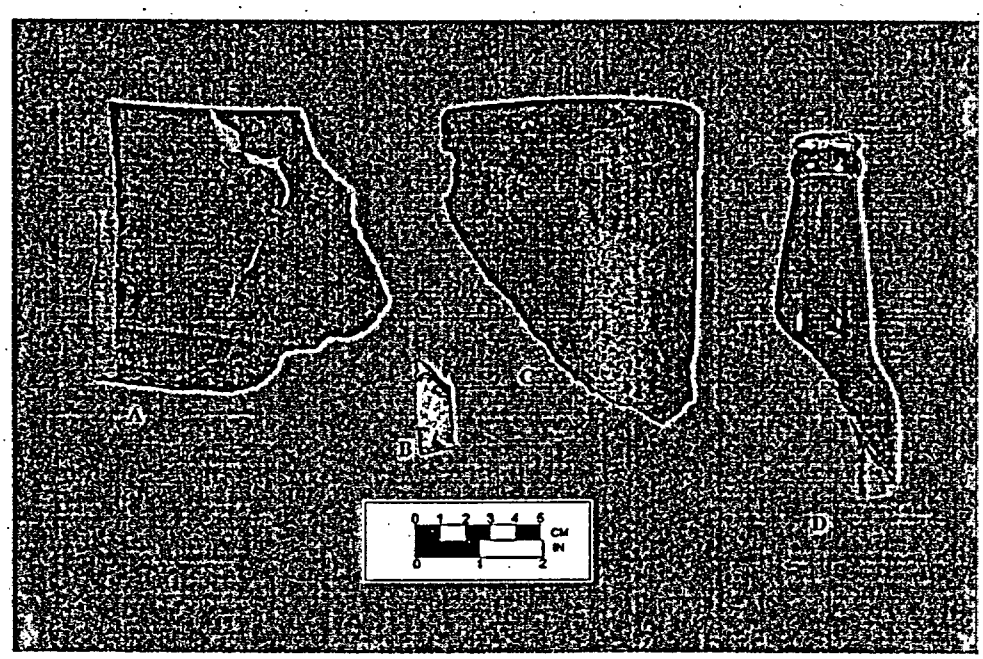


Plate 20. 33 Pk 194, sample of artifacts recovered from surface collection: A) Albany slip interior, buff exterior fragment; B) scallop-edged black transfer print whiteware rimsherd; C) coarse earthenware drain tile fragment; and D) amber glass crown cap bottle finish.

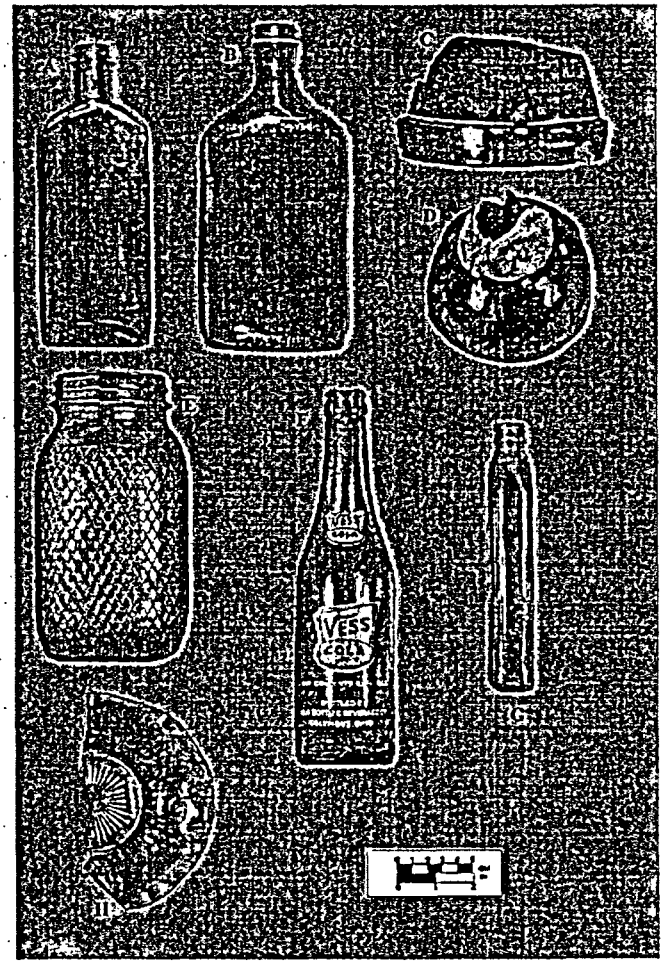


Plate 21. 33 Pk 195, sample of glass and ceramic artifacts from surface collection: A and B) amber glass whiskey bottles; C) brown-glazed redware flowerpot fragment; D) ceramic insulator cap; E) colorless glass screw top fruit jar, diamond embossed; F) "Vess Cola" colorless glass bottle with applied color label; G) light green glass medicine bottle; and H) colorless glass molded floral design, crimped edge dish fragment.

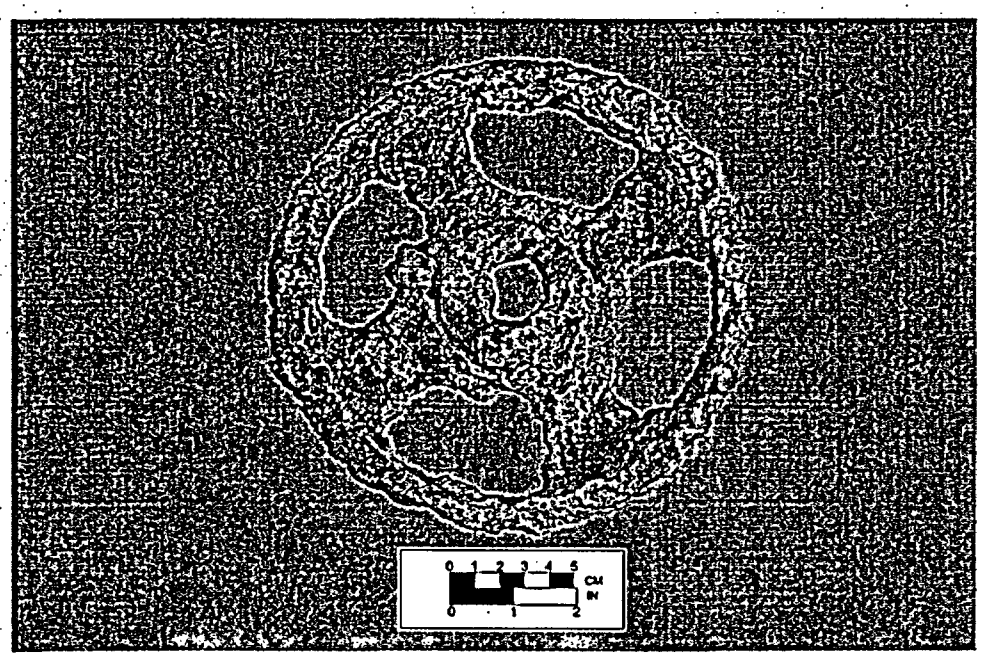


Plate 22. 33 Pk 195: Pulley.

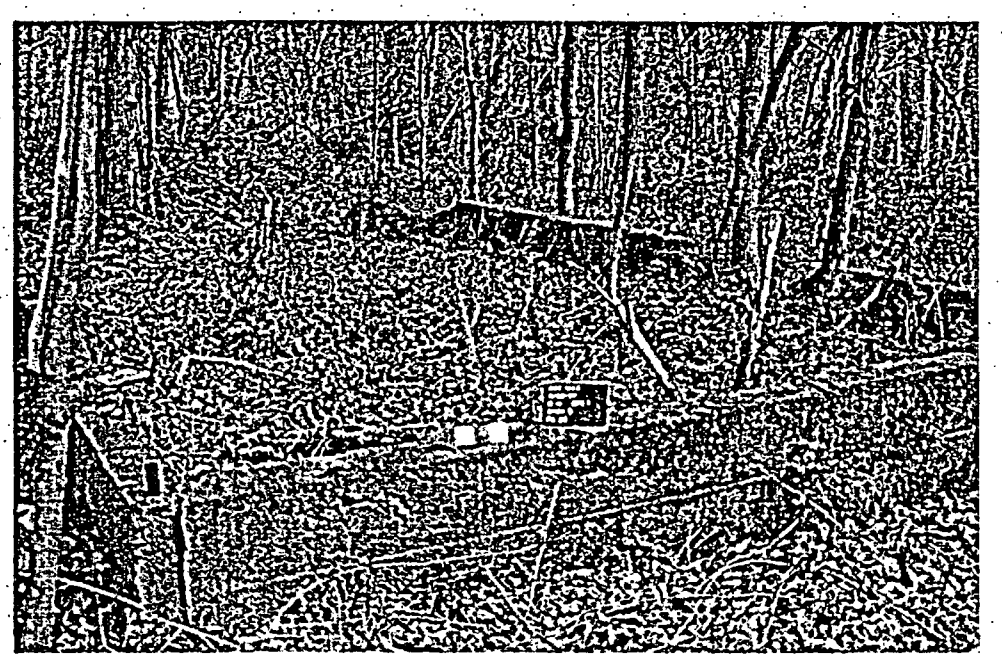


Plate 23. 33 Pk 203 (Ruby Hollow farmstead). Concrete foundation with elevated sidewalls, facing east.

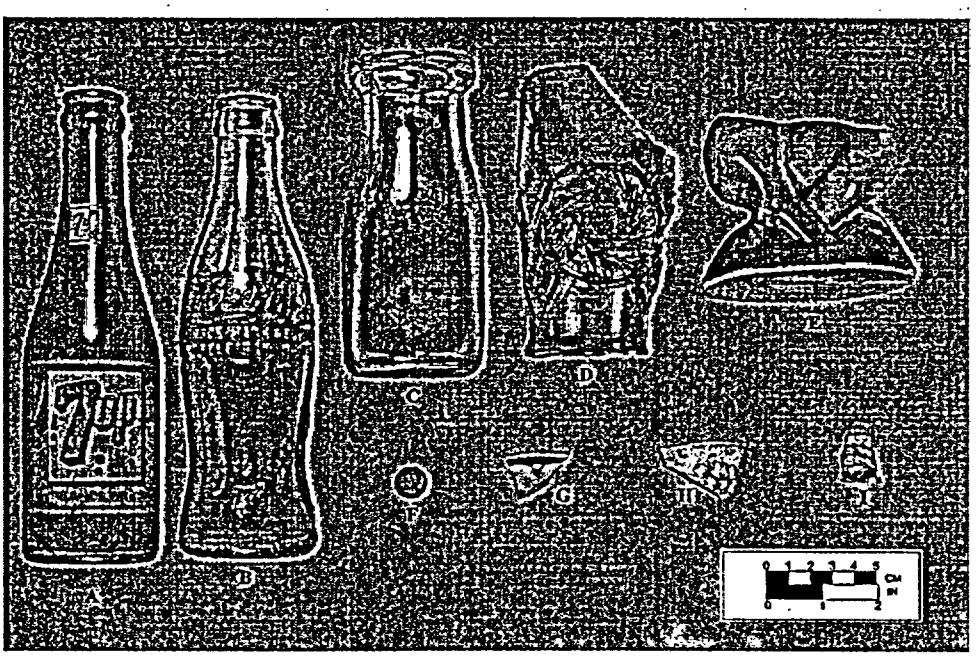


Plate 24. 33 Pk 203, sample of artifacts recovered during surface collection and shovel testing: A) green glass "7-up" bottle, applied color label; B) light green glass "Coca-Cola" bottle; C) colorless glass half pint milk bottle; D) molded design, solarized amethyst drinking glass; E) glazed ceramic figurine base; F) brass button embossed "The HR Co."; G) black annular band molded design whiteware rim; and H and I) red transfer print whiteware rim sherds.

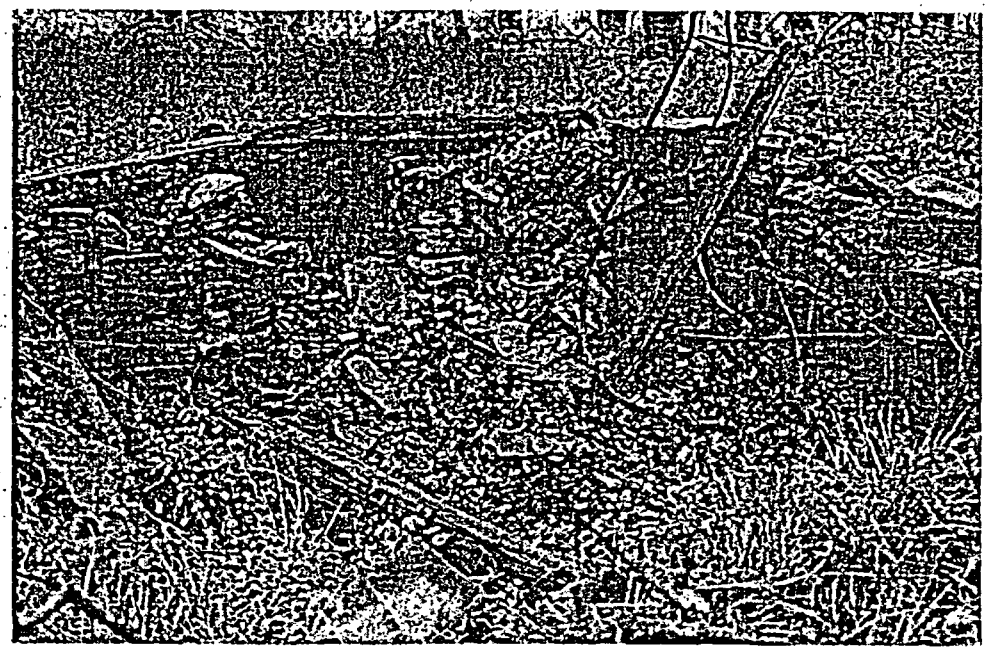


Plate 25. 33 Pk 206. Rough-cut sandstone foundation and hand-hewn beams, facing south-southwest.

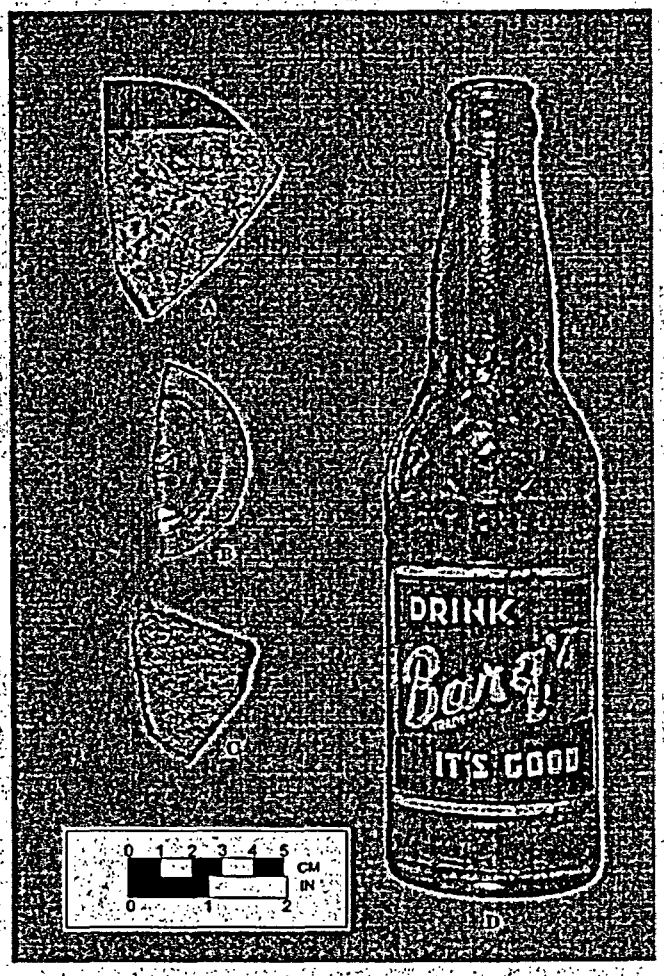


Plate 26. 33 Pk 206, sample of surface collected artifacts: A) Bristol/Albany salt glazed stoneware sherd; B) milk glass lid liner fragment; C) green flat glass fragment; and D) "Barq's" soda bottle, embossed, applied color label.

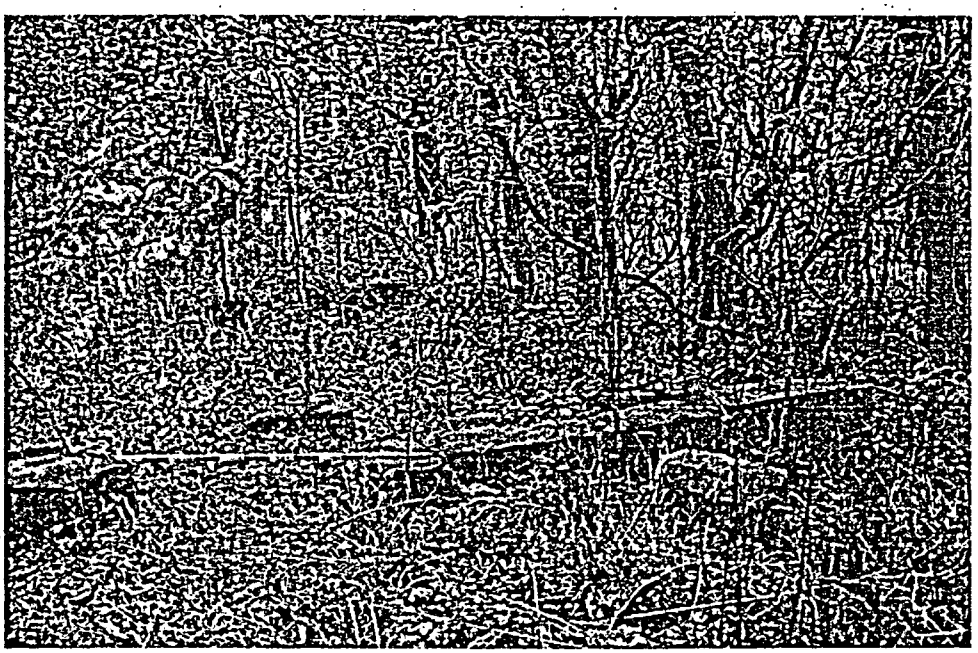


Plate 29. 33 Pk 211 (Bamboo farmstead). Large sandstone block (possible root cellar or spring house), facing south.

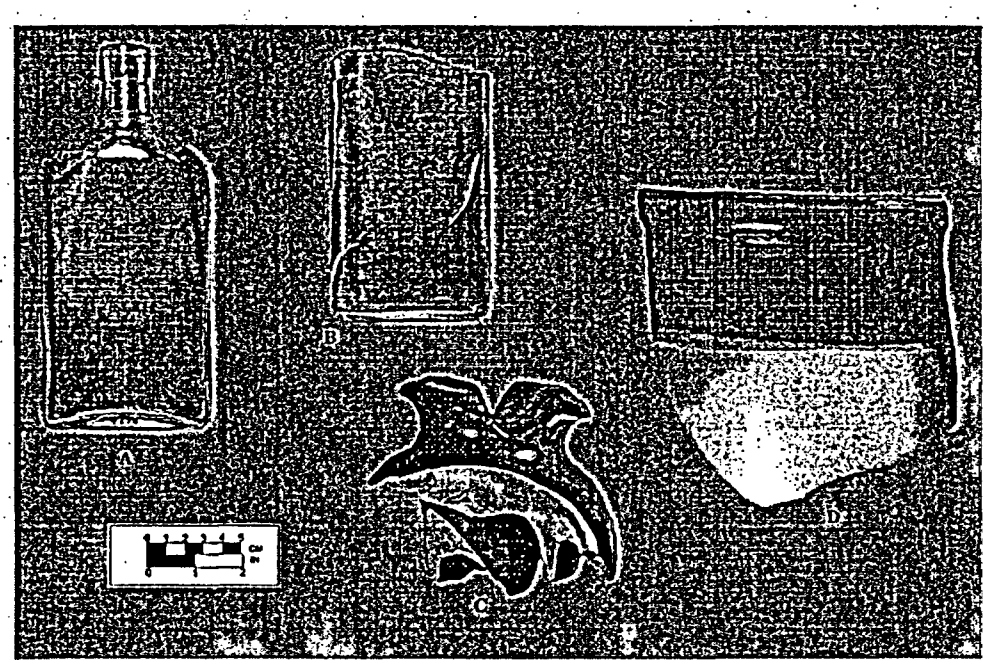


Plate 30. 33 Pk 211, sample of surface collected artifacts: A) colorless glass cork closure whiskey bottle; B) solarized amethyst bottle fragment; C) brown glaze ceramic insulator; and D) Bristol/Albany slip glazed stoneware crock fragment.

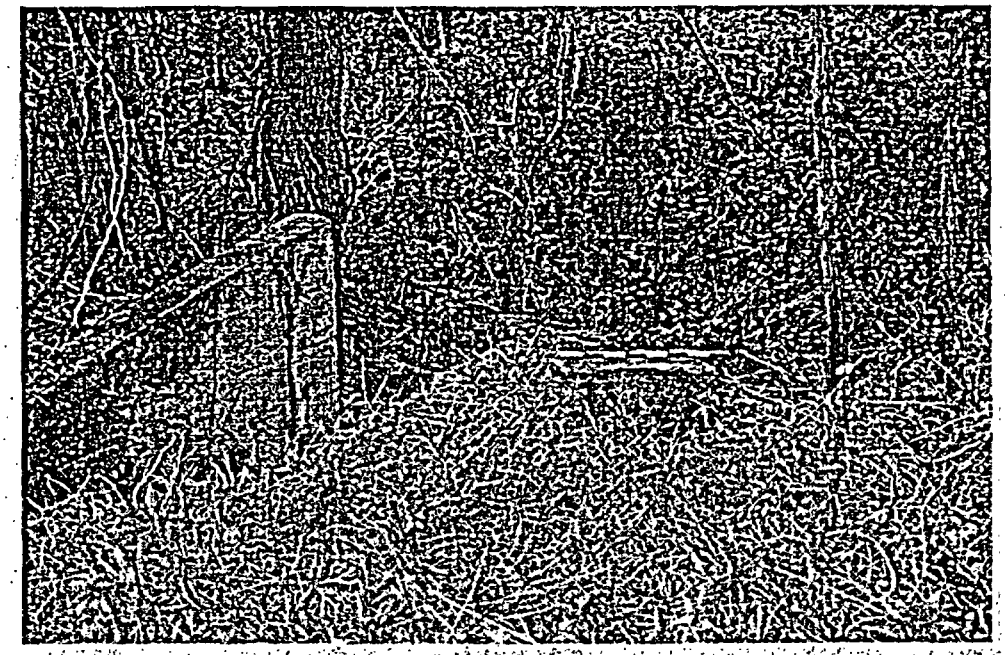


Plate 31. 33 Pk 212 (Railside Site farmstead). Concrete root cellar, facing west.

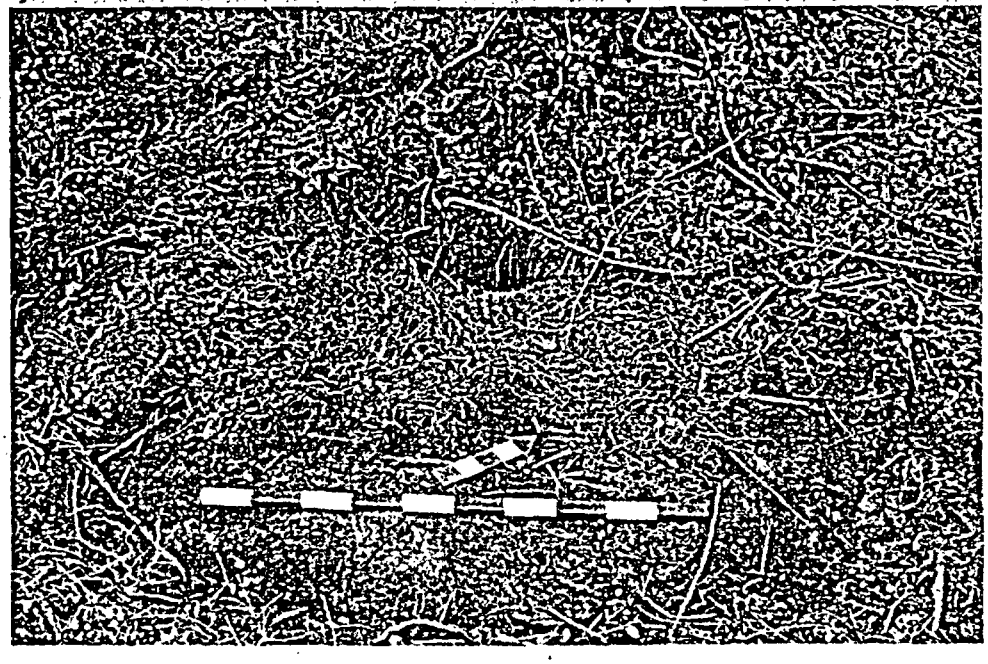


Plate 32. 33 Pk 212 (Railside Farmstead). Capped well, facing west-northwest.

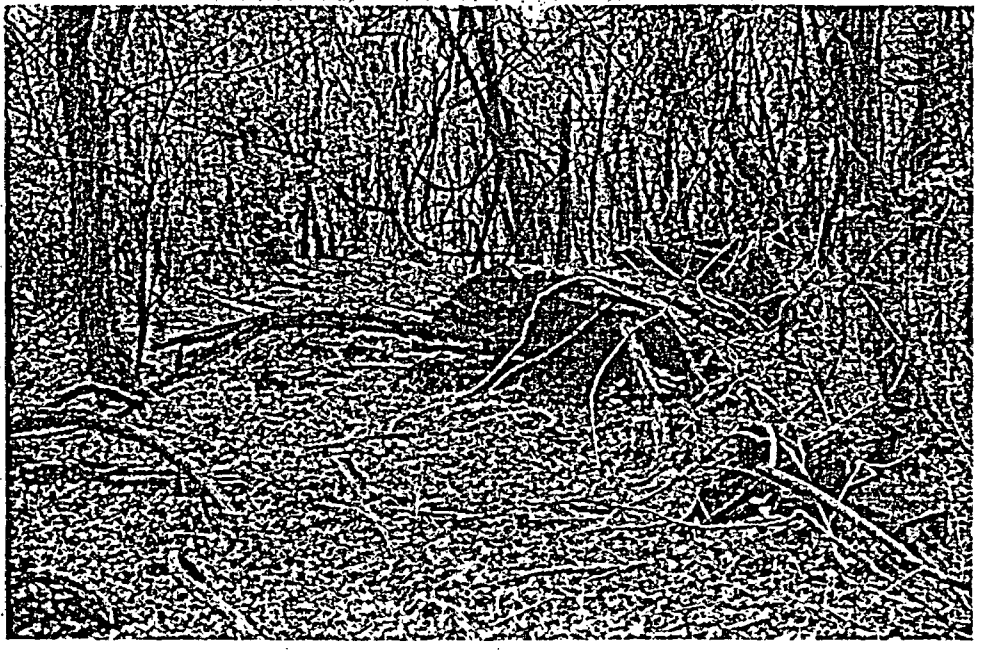


Plate 35. 33 Pk 212 (Log Pen Farmstead). Facing east.

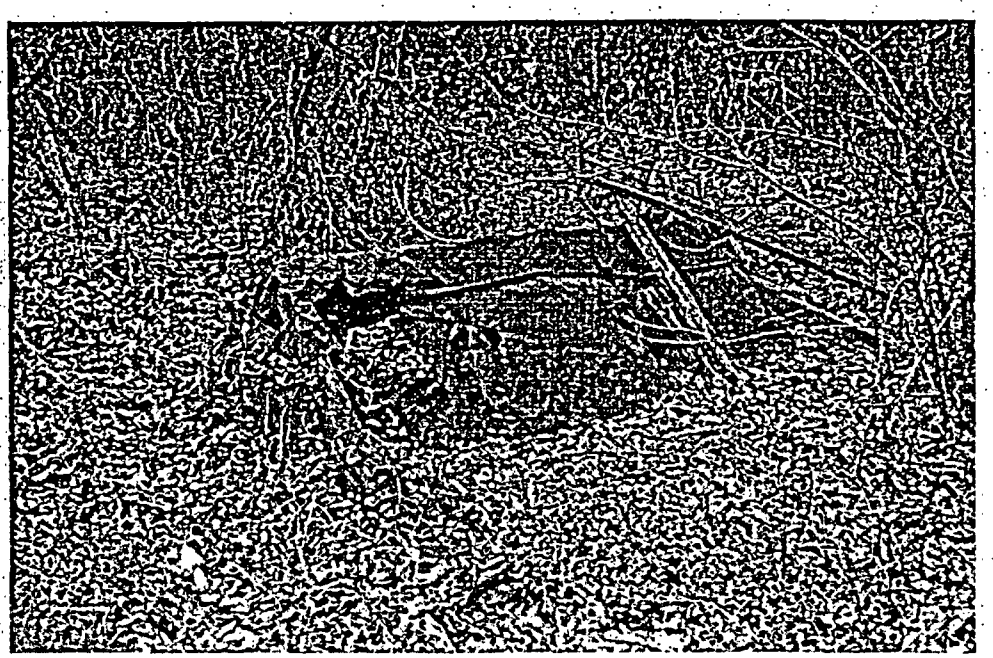


Plate 42. 33 Pk 218 (PIK-205) [Cannett Farmstead]. Woodframe and sheet metal outbuilding, facing north.

0 APPENDIX D: PROJECT DOCUMENTATION

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"PORTSMOUTH GASEOUS DIFFUSION PLANT", FIGURE 2

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D07