PREHISTORIC AND HISTORIC ARCHAEOLOGY IN RHEA AND ROANE COUNTIES, TENNESSEE: 40RH155, 40RH156, 40RE192

PREPARED FOR:

The Tennessee Department of Transportation
Office of Environmental Planning and Permits
James K. Polk Building, Suite 900
Nashville, Tennessee 37243

IN COORDINATION WITH:

The U.S. Department of Transportation
Federal Highway Administration

UNDER:

TDOT Project Nos. 72001-1260-04 and 73006-1206-04
Tennessee State Archaeological Permit Nos. 000174 and 000174R

BY:

Transportation Center
The University of Tennessee
Knoxville, Tennessee 37996

SUBMITTED FEBRUARY 1998
PUBLISHED 2001

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TENNESSEE DEPARTMENT OF TRANSPORTATION
OFFICE OF ENVIRONMENTAL PLANNING AND PERMITS
PUBLICATIONS IN ARCHAEOLOGY NO. 8

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PROJECT FUNDING AND ADMINISTRATION

Funding for this project and the publication of this report was provided by the U.S. Department of Transportation, Federal Highway Administration. The Tennessee Department of Transportation administered the project contracts.

Tennessee Department of Transportation, Authorization No. 401285, 500 copies. This public document was promulgated at a cost of $6.74 per copy. 2001.

ABSTRACT

This project was carried out for the Tennessee Department of Transportation (TDOT) and Chester IDE Associates, Inc., with TDOT as the lead agency. Archaeological investigations at three sites (40RH155, 40RH156, 40RE192) were performed in 1994 and 1995 by archaeologists from The University of Tennessee-Knoxville Transportation Center in conjunction with the construction of the State Route 29 (US 27) from Spring City to Rockwood, Rhea and Roane Counties, Tennessee. These sites contained evidence of prehistoric and historic occupations.

RHEA COUNTY

Site 40RH155 was an indeterminate prehistoric site with no discernible features or postholes.

Site 40RH156 was an historic farmstead site with two major occupations--a mid-19th century cabin site and a house with associated outbuildings dating from about 1866 to 1930. There is inconclusive evidence of an enslaved or free African-American occupation on the site, but no definitive statement regarding the ethnicity of any inhabitants of the site may be made.

ROANE COUNTY

Site 40RE192 was a historic cabin dating from about 1820 to about 1940. Nine features were defined and excavated, including a subfloor pit cellar and a chimney base. The size, shape, and disposition of six of the subsurface features was consistent with Historic Cherokee cabin sites of the same time period in the Hiwassee Reservoir area. A single indeterminate prehistoric pit feature was defined and excavated on the site as well.

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I. INTRODUCTION

C. Alan Longmire and Jay D. Franklin

This report documents investigations at sites 40RE192, 40RH155, and 40RH156 (Figures 1-3). Site 40RE192 is the location of an historic cabin dating between about 1815 and 1845. Site 40RH155 is a prehistoric lithic scatter of the late Archaic period. Site 40RH156 is an historic farmstead dating from about 1830 to around 1930 which had at least two occupation episodes. An occupation episode may present evidence for non-Euroamerican adoption of the Upland South pattern of landscape utilization.

Phase II and intensive Phase II investigations and Phase III data recovery on these three sites were conducted by archaeologists from the Transportation Center at The University of Tennessee-Knoxville. Field work took place from November 1994 to September 1995. Jay Franklin, Noëleen McIlvenna, and C. Alan Longmire were Archaeologists-in-Direct Charge. Charles Bentz was Archaeologist-in-General Charge.

The work was undertaken for Chester IDE and Associates, Inc. (IDE Project Number 15.0672.10) and the Tennessee Department of Transportation (TDOT) (TDOT Project Nos. 72001-1260-04 and 73006-1206-04 and Tennessee Division of Archaeology Permit Nos. 000174 and 000174R). The sites lay in the proposed right-of-way for the reconstruction of State Route 29 (US 27) from State Route 68 in Spring City, in Rhea County, to north of State Route 1 (US 70) in Rockwood, in Roane County, Tennessee.

All three sites were located during the Phase I survey for archaeological resources of the proposed State Route 29 (US 27) right-of-way performed by DuVall and Associates, Inc. in the spring of 1992 (Hays 1992). Phase II archaeological testing and intensive Phase II archaeological testing was undertaken at the sites by archaeologists from the Transportation Center at The University of Tennessee-Knoxville in the fall and winter of 1994 (Franklin et al. 1995a, 1995b). Transportation Center archaeologists also undertook Phase III archaeological data recovery on site 40RH156 in the late summer of 1995.

Site 40RE192 was initially plowed and disked and allowed to settle. A controlled surface collection was then conducted. Three 1 m x 1 m test units were placed in areas of highest artifact density. Six 2 m wide backhoe excavated power units and a block measuring 30 m N-S x 20 m E-W were stripped of plowzone in order to identify potential features and postholes.

Pit features were mapped and photographed in plan view. All features were bisected, and the fill from the first half of each was retained for water screening. Profiles were mapped and photographed. Flotation samples of no more than 10 liters were taken from 5 cm levels in the second half of each feature. The remaining soil was retained for water screening. A sample of the postholes were bisected and profiled and soil from the second half of each was retained for flotation.

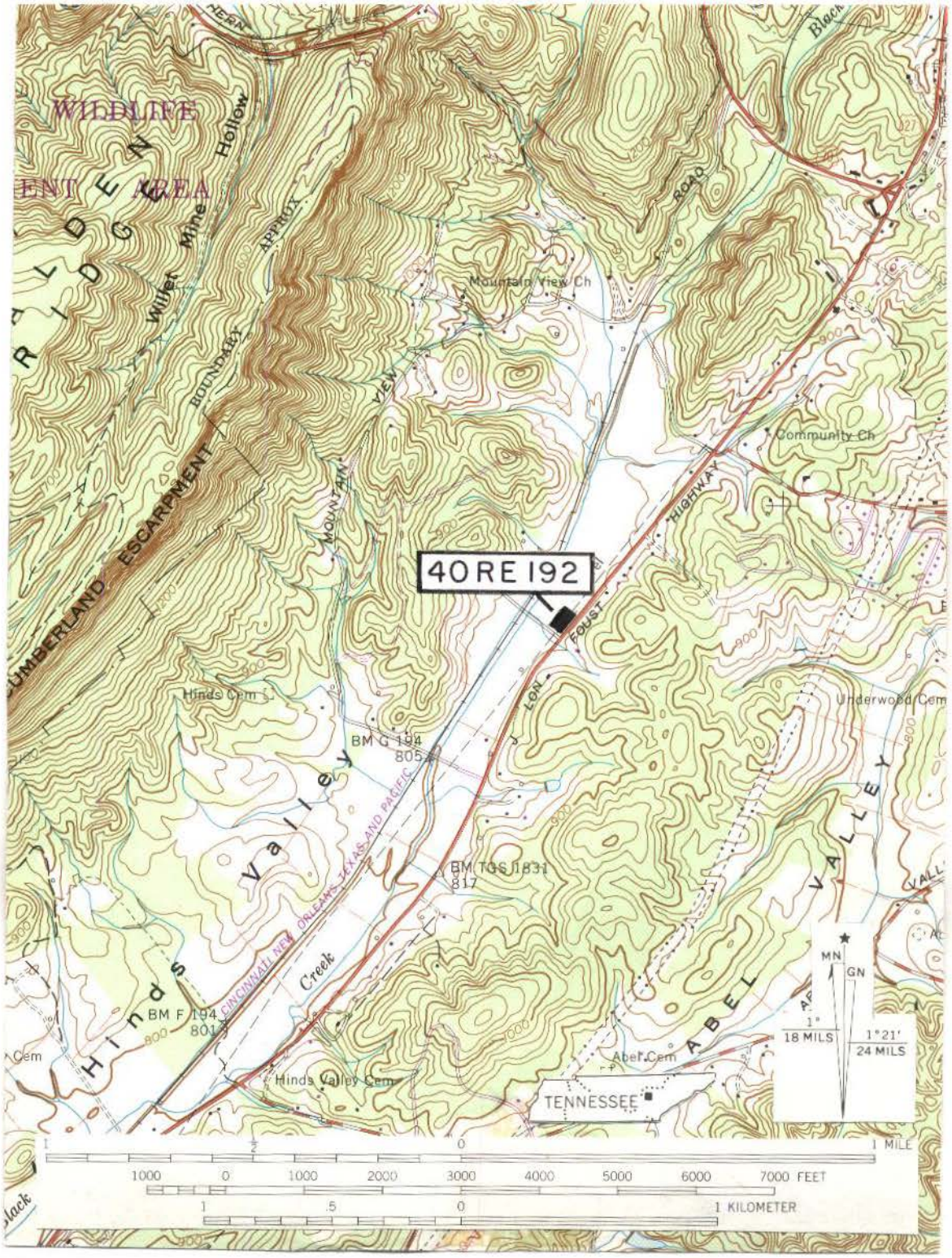


FIGURE 1. Site 40RE192 on U.S.G.S. 7.5 minute Rockwood (123 SW), Tennessee quadrangle.

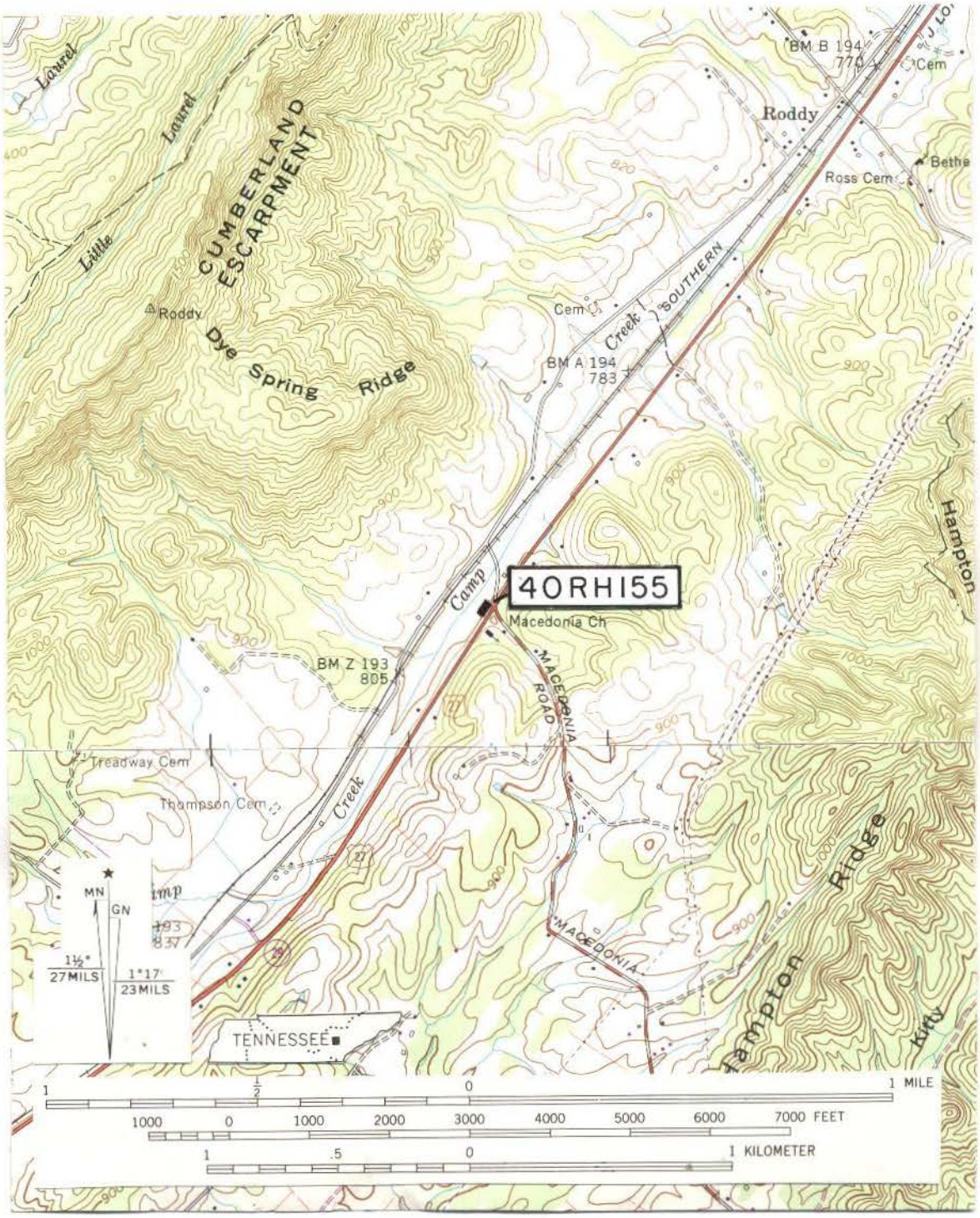


FIGURE 2. Site 40RH155 on U.S.G.S. 7.5 minute Roddy (117 SE), Tennessee quadrangle.

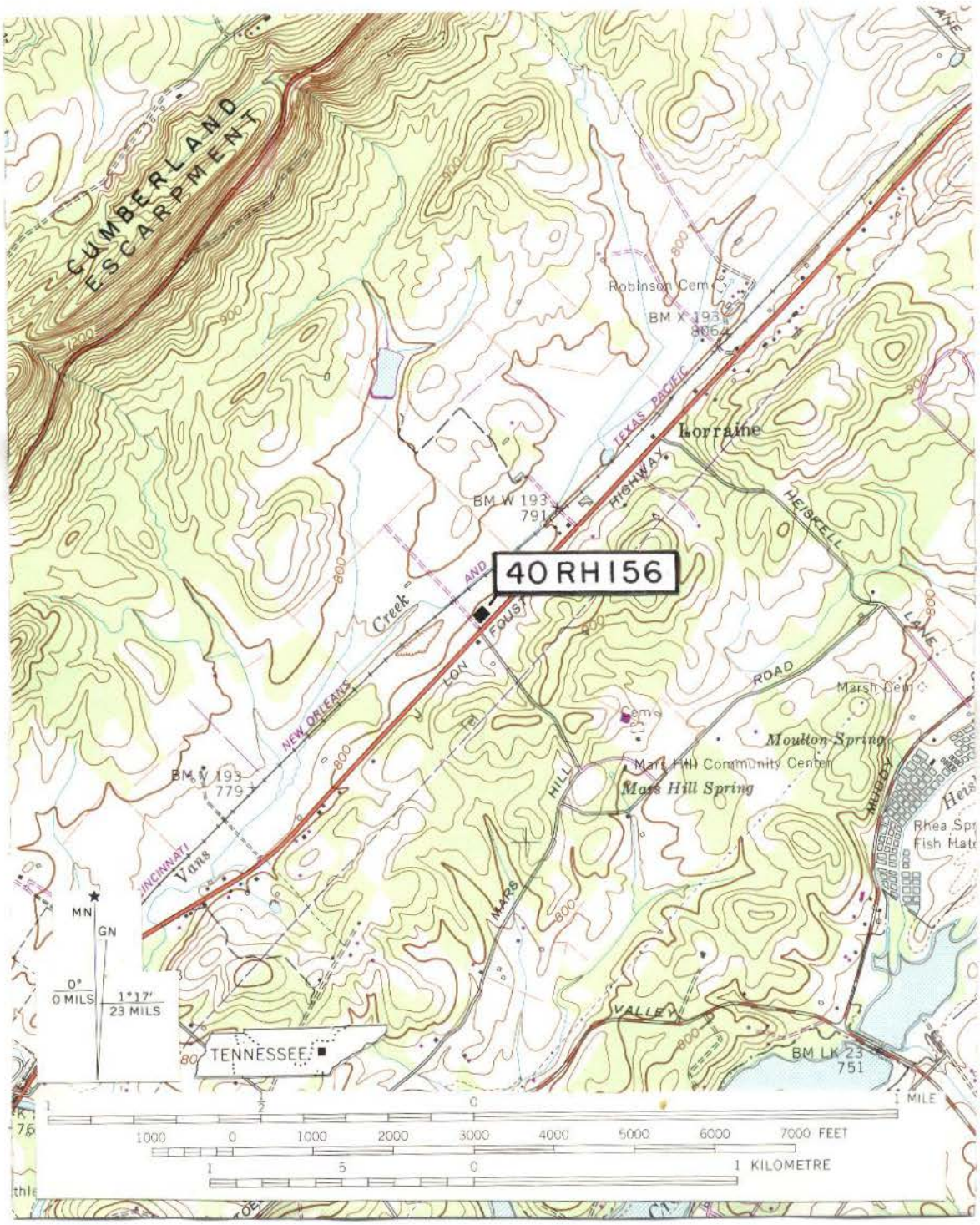


FIGURE 3. Site 40RH156 on U.S.G.S. 7.5 minute Spring City (118 NE), Tennessee quadrangle.

Based upon the contents and morphology of the features at site 40RE192, the site was an early historic cabin site with possible non-Euroamerican associations. The artifact assemblage is consistent with an early Euroamerican occupation but some of the artifacts and feature morphologies are very similar to Historic Cherokee sites of the same period (Riggs 1995).

Field procedures at site 40RH155 initially were identical to those employed at site 40RE192. Site 40RH155 was plowed and disked and allowed to settle. A controlled surface collection was then conducted. Artifact distribution maps were generated based on the surface collection results. Three 1 m x 1 m test units were placed in areas of highest artifact densities. Three 2 m wide backhoe excavated power units placed at no more than 10 m intervals were stripped of plowzone in order to identify potential features and postholes. However, no features or postholes were identified at the site.

Phase II testing procedures at site 40RH156 were also similar to those at sites 40RE192 and 40RH155. Site 40RH156 was initially plowed and disked and allowed to settle. A controlled surface collection was then conducted. Three 1 m x 1 m test units were placed in areas of highest surface artifact densities and one was placed within a suspected house area. Five 2 m wide backhoe excavated power units placed at no more than 10 m intervals were stripped of plowzone in order to identify potential features and postholes. The testing revealed a domestic structure area with chimney remains and an associated subfloor pit cellar, an outbuilding area with no subsurface deposits, an outbuilding area with some subsurface deposits, a second apparently isolated pit cellar, and a line of postholes apparently delimiting the inner yard/outer yard boundary west of the house area (Franklin et al. 1995b). These findings (a house, three possible outbuildings, and a row of postholes) were used to develop a research design for the Phase III investigations which would maximize data recovery.

Phase III data recovery began by reestablishing the grid and laying out four 2 m wide and one 1 m wide power unit transects which were placed alternately with the power unit transects from Phase II testing. An additional area around Feature 3, an outbuilding location, was stripped of plowzone in order to reveal the full extent of subsurface remains of that structure. A block area was also machine excavated around Feature 9, an early pit cellar, in an attempt to uncover any associated remains. Fourteen 1 m x 1 m test units were excavated in the house area, and an additional six units were placed in the subsurface remains at Feature 3.

Field notes, photographs, other records, and artifacts are being temporarily curated by the Transportation Center at The University of Tennessee-Knoxville. The Tennessee Department of Environment and Conservation, Division of Archaeology will be the final curation facility.

II. ENVIRONMENTAL SETTING

Lance K. Greene

PHYSIOGRAPHY

Five physiographic provinces occur in the State of Tennessee (Figure 4). From east to west these are: 1) Blue Ridge, 2) Ridge and Valley, 3) Appalachian Plateaus, 4) Interior Low Plateau, and 5) Coastal Plain (Fenneman 1938; Shimer 1971). The proposed project area lies entirely within the Ridge and Valley Physiographic Province.

The Ridge and Valley Province was formed as a large geosyncline during the Paleozoic. Subsequent folding and faulting during the later Paleozoic deformed the thick sediments, forming high narrow mountains. Later erosion downcut these mountains, wearing away the more soluble limestones and dolomites and leaving low ridges consisting of harder sandstones (Fenneman 1938:265-269; Luther 1977:72). The Ridge and Valley Province is drained to the south and west by rivers which flow into the Tennessee River such as the Powell, Clinch, Holston, French Broad, Little Tennessee, Hiwassee, Tellico, and Ocoee. Topographically, the Ridge and Valley Province is an assemblage of valley floors surmounted by long narrow even topped ridges (Fenneman 1938:196). Elevations for this Province in Tennessee range from 799 m AMSL on Clinch Mountain to 195 m AMSL on the Tennessee River near Chattanooga (Luther 1977:72).

GEOLOGY

The Ridge and Valley Province consists of rocks formed through slow sedimentary deposition during the Paleozoic Era. These deposits were laid down in a large geosyncline resulting in formations thousands of meters in thickness. The original sediments of the Ridge and Valley were deposited in this trough and also above the late Precambrian Ocoee Series to the southwest (King 1968:15; Luther 1977:69-70).

Deformation of the Ridge and Valley and Blue Ridge (Ocoee) provinces began in the Paleozoic, possibly during the middle Ordovician. Folding and faulting of the region occurred through a series of thrust faults ending sometime in the late Paleozoic. This deformation occurred along several major faults as well as smaller related fault lines. It caused the Ocoee Series along the western edge of the Great Smoky Mountains in the Blue Ridge Province to be pushed over the adjoining section of the Ridge and Valley deposits to the northwest (King 1968:15).

Both regions were also exposed to varying degrees of metamorphism during the Ordovician. Although the deposits of the Ridge and Valley and Blue Ridge provinces are of different origin, the structures and degrees of metamorphism are nearly identical. Continuous erosion since the Paleozoic has produced the modern day topographies of the Ridge and Valley and Blue Ridge provinces (King 1968:15).

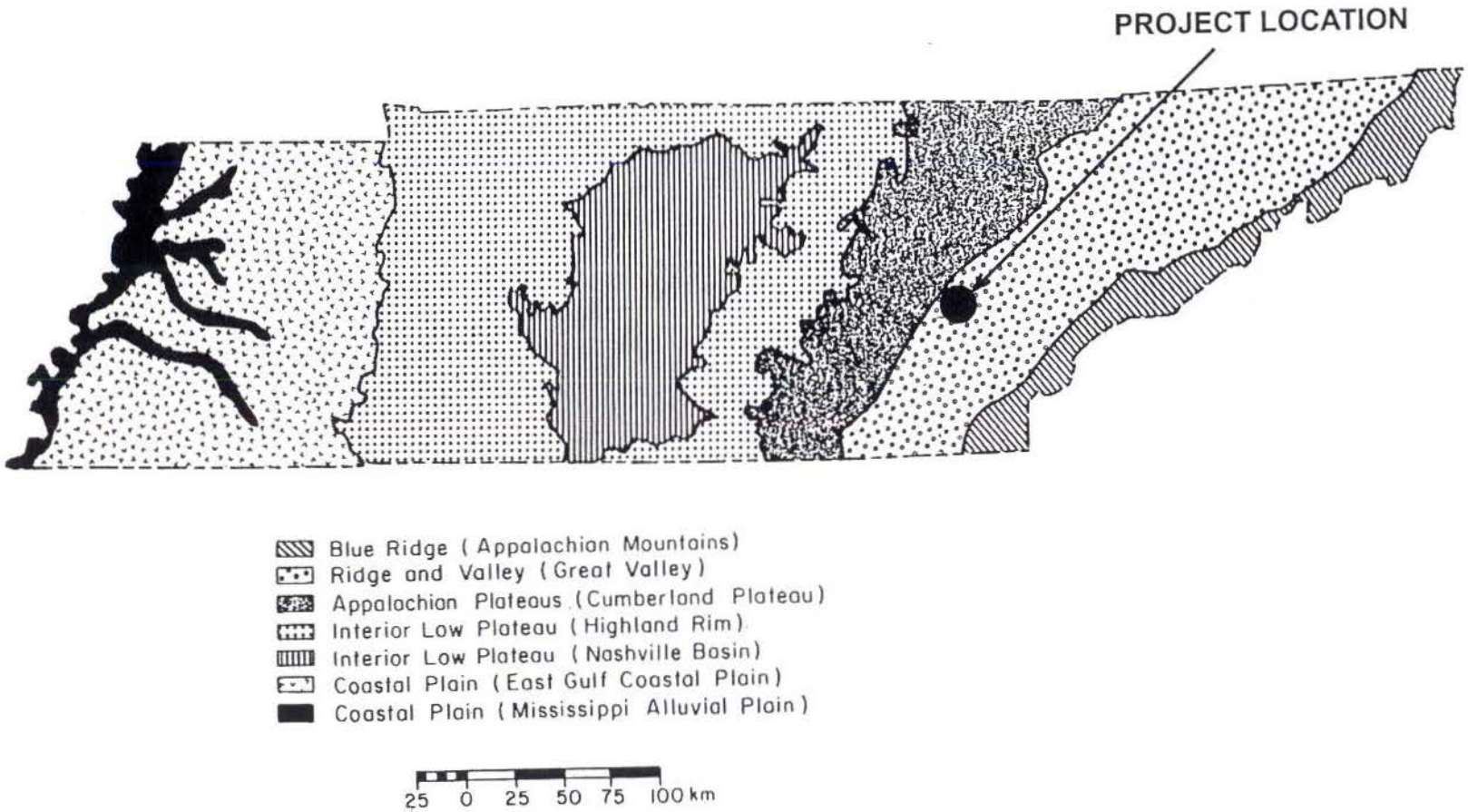


FIGURE 4. Physiographic provinces of Tennessee.

FLORA

The Ridge and Valley Province falls within the Carolinian Biotic Province which is characterized by temperate deciduous forests (Dice 1943:16-18). The entire Blue Ridge and all but the north and south areas of the Ridge and Valley are in the Oak-Chestnut Forest Region. This name is now used primarily for historical reference because the chestnut in this area has been destroyed through lumbering and by the chestnut blight which occurred in the early 20th century (Shelford 1963:38-39). Oak is the dominant hardwood, with black oak and white oak the most common species. Chestnut oak, scarlet oak, tuliptree, and other species are also present (Braun 1950:238).

Prior to the destruction of the chestnut, the oak-chestnut association occupied the majority of area in the Ridge and Valley Province. This forest type was closely associated with slopes, rarely occupying flat areas. The broad valley floors of the Ridge and Valley Province contained stands of white oak. Other species included tuliptree, hickory, red oak, black oak, and white pine in the northern part of the region. Mixed mesophytic communities were often found on slopes produced by recent erosion cycles but more commonly occurred in ravines near the Appalachian Plateaus than in areas separated by wide valleys. These areas contained a variety of species of which beech was the most common. Other species included basswood, sugar maple, tuliptree, and red oak (Braun 1950:237-240).

FAUNA

The Ridge and Valley Province contains a great diversity of fauna. Variations in the faunal assemblage from prehistoric to present times were caused mainly by human activity, although the changes have been few. The species listed have existed both in prehistoric and historic times.

Mammals found in this area include white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), raccoon (*Procyon lotor*), otter (*Lutra canadensis*), squirrel (*Sciurus* sp.), flying squirrel (*Glaucomys volans*), chipmunk (*Tamias striatus*), groundhog (*Marmota monax*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethica*), porcupine (*Erethizon dorsatum*), rabbit (*Sylvilagus floridanus*), bison (*Bison bison*), eastern elk (*Cervus canadensis*), gray wolf (*Canis lupus*), red wolf (*Canis rufus*), and eastern mountain lion (*Felis concolor*) (Kellogg 1939:257-297).

Rivers and streams contain abundant wildlife including fish, turtles, and mollusks. Species of fish include catfish (*Ictalurus* sp.), bullhead (*Ameiurus* sp.), gar (*Lepisosteus* sp.), sunfish (Lepominae), suckers (Catostomidae), and fresh water drum (*Aplodinotus grunniens*) (Kuhne 1939:19-115). The more common species of turtle include snapping turtle (*Chelydra serpentina*), mud turtle (*Kinosternum subrubrum*), and the spiny soft shelled turtle (*Tryonyx ferox*) (Hon 1963). Abundant pelecypods and aquatic gastropods are also found.

Avian species include wild turkey (*Meleagris gallapavo*), passenger pigeon (*Ectopistes migratorious*), Cooper's hawk (*Accipiter cooperi*), red-tailed hawk (*Buteo borealis*), osprey

(*Pandion haliaetus*), bald eagle (*Haliaeetus leucocephalis*), screech owl (*Otis asio*), barred owl (*Strix varia*), and great horned owl (*Bubo virginianus*) (Gainer 1933:7-43).

III. PREHISTORIC AND HISTORIC BACKGROUND

Lance K. Greene, Noëleen McIlvenna, and C. Alan Longmire

Archaeological research in the Blue Ridge and the Ridge and Valley of East Tennessee has established a chronology dating back 12,000 years. The information from these investigations provide a basis for an understanding of the cultural chronology that would be expected in the project area. A summary of the traits and attributes of each prehistoric time period is followed by brief histories of Rhea and Roane counties.

PALEO-INDIAN (10000-7500 B.C.)

The first humans to use the Ridge and Valley can be best described as small highly mobile bands of big game hunters and extremely adaptive gatherers. While the emphasis may have been on the hunting of such large game as mastodon or caribou, plant foods and small game were also used (Chapman 1985; McNett 1985).

The diagnostic artifacts of the Paleo-Indian stage include lanceolate shaped fluted and unfluted basally ground projectile point/knives (PPKs) such as the fluted and unfluted Clovis, the fluted Cumberland types, or the basally ground Dalton series. The fluted and unfluted Clovis and Cumberland PPKs date from 10000-8000 B.C. while the Dalton series date from 8500-7900 B.C. (Justice 1987). The Paleo-Indian tool kit also included a variety of bifacially worked knives and unifacially worked scrapers, knives, gravers, and spokeshaves (Morse 1973; Williams 1957). The unifacial tools are considered characteristic of the Paleo-Indian and are rarely found in later Archaic assemblages (Williams and Stoltman 1965).

Paleo-Indian sites are generally limited to surface finds along upland rivers and terraces. Chapman (1985) has hypothesized that many of the Paleo-Indian sites along the river edges may have been obliterated by runoff created by the melting of the Wisconsin glacier. The deposition that followed may have buried many of the other sites. Such deeply buried sites as Quad and Shawnee Minisink tend to support this hypothesis. None of the Paleo-Indian sites appear to have been occupied for an extended period of time.

The tool kit used by the Paleo-Indian cultures suggests a subsistence economy based primarily upon the hunting of animals. Currently there is a debate as to whether the major source of game was pleistocene megafauna such as mastodon and caribou or smaller game that was more readily available. Sites such as Island 35 in Tipton County, Tennessee (Graham 1982) and Kimmswick in Missouri (Williams 1957), where Clovis-like tools, bifacial and unifacial scrapers, and knives were found in probable association with the skeletal remains of mastodons, tend to support the hypothesis that the Paleo-Indians if not actively hunting the larger megafauna were at least taking advantage of trapped "chance finds."

Two Clovis sites, Meadowcroft Rockshelter (Adoviaso et al. 1978) in western Pennsylvania and Shawnee Minisink (McNett 1985) in eastern Pennsylvania indicate that early Paleo-Indian people were hunting white-tailed deer and small game as well as fishing. There is also evidence that plants including *Chenopodium*, hawthorns, and blackberries were collected.

Later Paleo-Indian (Dalton) sites such as Stanfield-Worley in Alabama (DeJarnette et al. 1962) along with sites in Arkansas (Morse 1973) show that white-tailed deer had become the main animal hunted. Smaller animals were also hunted but to a far lesser extent than deer. Through the rest of prehistory, white-tailed deer was the major source of animal protein for human populations in the Southeast (Hofman 1984; Robison 1986).

EARLY ARCHAIC (7500-6000 B.C.)

During the Early Archaic period seasonal camps were set up along the crests of river terraces. Stratified sites are found close to chert outcrops.

Evidence of subsistence is sparse but probably included white-tailed deer, bear, opossum, raccoon, squirrel, and turkey. Hickory nuts, acorns, and other nuts are increasingly exploited throughout the period (Chapman 1985:43-46).

Material culture includes the diagnostic Kirk Corner Notched, Decatur, St. Albans Side Notched, LeCroy Bifurcated Stemmed, and Kanawha Stemmed PPKs along with pitted cobbles, scrapers, and drills (Chapman 1985:38-41).

MIDDLE ARCHAIC (6000-3000 B.C.)

Middle Archaic sites are located in the upper levels of Early Archaic river terrace settlements. A drop in population density is indicated by the absence of Middle Archaic levels in some stratified sites. There are no major differences in features (Chapman 1985:48).

Tubular atlatl weights and netsinkers appear for the first time in Middle Archaic sites. This indicates that both terrestrial and aquatic resources were more intensively exploited. Walnuts are added to the list of arboreal seed crops preserved in the botanical remains (Chapman 1977:125; Lewis and Lewis 1961:40-43).

Lithic assemblage raw materials include chert and slate. Diagnostic PPKs are the Kirk Stemmed, Stanly Stemmed, Morrow Mountain Rounded Base, Halifax Side Notched, and White Springs/Sykes (Chapman 1985:49-50; Kimball 1985:276; Lewis and Lewis 1961:40-43).

LATE ARCHAIC (3000-900 B.C.)

During the Late Archaic period single-family occupations along the first river terraces are manifested by rock-filled firepits. Larger multifamily sites, represented by a denser pattern of these firepits, were established on a long-term basis (Chapman 1985:51-53).

Primitive horticulture first appears in the Late Archaic. Squash and gourd supplemented a diet chiefly provided by hunting, fishing, and gathering (Chapman 1985:52-55).

The Savannah River Stemmed and the Iddins Undifferentiated Stemmed are the diagnostic PPKs of this period. Stone tools also include grooved axes. Trade with others from outside the region is marked by the first appearance of nonlocal artifacts such as marine shell, copper, and soapstone bowls (Chapman 1985:51-53; Lewis and Kneberg 1958:34).

WOODLAND 1 (900-200 B.C.)

During the Early Woodland period settlements along the rivers and major tributaries of the Upper Tennessee River drainage may have been multiseasonal and occupied repetitively. Midden deposits up to 0.6 m deep and the first signs of structural remains suggest residential stability. Features excavated are usually oval-shaped pits containing fire-cracked rock (FCR) (Davis 1990:229-230; Salo 1969:143-144; Schroedl 1990:40-43).

White-tailed deer was the major source of protein for the Woodland 1 people. This was accompanied by mollusks, turtles, and fish. The faunal assemblage at 40RE108 also included beaver, squirrel, rabbit, and turkey. Hickory nuts were the most widely exploited of the gathered seed crops. Horticulture was still on a crude level and some sites have no cultigens at all (Schroedl 1990:90-91).

Woodland 1 has no diagnostic PPK but points are mostly stemless triangular types. The lithic assemblage also includes gorgets, pecked celts, atlatl weights, pestles, and pipes that are often crafted from slate and soapstone (Schroedl 1990:55-61).

The introduction of pottery delineates the beginning of the Woodland stage. Chief temporal predictors are tempering and surface treatment. Coarse crushed quartz tempering is the characteristic trait of Woodland 1 with either fabric or cord marked surface treatments (Watts Bar). Typically, vessel forms are deep kettle shapes with conoidal bases and lack appendages.

WOODLAND 2 (200 B.C.-A.D. 350)

Based on pottery types, Kimball (1985) subdivided Woodland 2 into Patrick 1 and Patrick 2. As these were the only cultural differences apparent, Woodland 2 is not subdivided here but ceramic variations are explained.

Woodland 2 sites are located primarily on first river terraces. Deep cultural deposits suggest intensive multiseasonal occupations.

Faunal and botanical assemblages vary little from Woodland 1. Deer, raccoon, squirrel, turkey, and turtle provided most of the protein at this time. Numerous notched netsinkers indicate a greater reliance on fishing. Cultigens such as squash, sunflower, and sumpweed augmented the

diet. The gathering of hickory nuts, acorns, and walnuts also played an important role in the subsistence strategy (Lewis and Kneberg 1941:30; Schroedl 1978:218-231).

Woodland 2 components are identified by triangular PPKs such as the Greeneville, Camp Creek, and Nolichucky types. Chipped stone tools also include drills, scrapers, and knife blades and ground stone tools consist of pecked celts, grooved axes, hammerstones, whetstones, mortars, and pestles. Steatite bowls and gorgets have also been recovered (Davis 1990:231-233; Lewis and Kneberg 1941:32; Schroedl 1978:233).

The ceramic assemblage of this period has been subdivided into two distinct groups. Patrick 1 is chiefly marked by the limestone tempered fabric impressed Long Branch pottery which comprises over 70% of the assemblage. Medium crushed quartz tempered check stamped sherds also occur. Patrick 2 is comparable to the early Candy Creek designation. The diagnostic ceramic types are limestone tempered check stamped (Wright Check Stamped) and medium crushed quartz tempered plain. Long Branch Fabric Marked is present but in smaller amounts than previously. Candy Creek Cord Marked and some complicated stamped sherds also occur but represent a small fraction of the assemblage (Kimball 1985:280; McCollough and Faulkner 1973:93-95; Schroedl 1978:179-183).

WOODLAND 3 (A.D. 350-600)

Woodland 3 settlements continued to be located along the river terraces, close to chert outcrops. At least semipermanent villages are indicated by deep midden deposits, kettle-shaped pits filled with FCR, and occasionally by structural postholes. Mounds of stone often containing burials and associated artifacts were reported by amateurs during the initial archaeological survey for the Norris Basin (Webb 1938). These mounds may have been associated with Woodland cultures and suggest a nonegalitarian social organization.

Corn cultivation occurs in Woodland 3, although the hunting of deer and gathering of hickory nuts remained the fundamental subsistence base. Aquatic resources (bivalves and gastropods) were being more intensively exploited as indicated by some shell midden deposits (McCollough and Faulkner 1973:113-115).

The Connestee Triangular point and the Bradley Spike are the diagnostic PPKs. Gorgets, cylindrical hammerstones, and imported prismatic blades are among the other stone tools common to Woodland 3 sites.

The ceramic assemblage incorporates sand tempered types; limestone tempered simple-stamped, complicated-stamped, incised decoration, punctate decoration, and red-filmed; and medium crushed quartz tempered simple-stamped. The sand tempered ceramics are similar to Connestee pottery types of North Carolina. Nonlocal ceramics also occur (Chapman 1985:70; Kimball 1985:280).

WOODLAND 4 (A.D. 600-900)

The excavation of Feature 402 at Hiwassee Old Town yielded a large Woodland 4 assemblage and was part of a component that "appears to be the product of a multiseasonal, perhaps semipermanent, occupation during the eighth century A.D." (Riggs n.d.).

Dietary patterns among the populations of the Woodland 4 show a broader scope of resources being exploited than in the past. White-tailed deer remained the foremost source of protein, supplemented by smaller mammals such as squirrel, raccoon, and rabbit and by birds including turkey and pigeon. The river as a supplier of food became much more important than previously. Aquatic turtles, a wide selection of fish, and mollusks further augmented the subsistence. Shell middens are one of the definitive traits of a Late Woodland occupation. Hickory nuts continue to comprise the bulk of the botanical assemblage, although palynological research would suggest at least a small measure of maize horticulture (Faulkner and Graham 1966:131-132).

Chipped stone tools include the small triangular Hamilton Incurvate projectile point and blades for cutting and scraping. Hoes, celts, and chisels were often worked from greenstone.

The ceramics are limestone tempered with plain (Mulberry Creek Plain) and cord marked surface treatments, usually with a strong predominance of plain. Brushed (Flint River Brushed) ceramics are also found more frequently in the southwest section of East Tennessee. Vessel forms appear to be primarily globular jars with flared rims (Faulkner and Graham 1966:133; Schroedl et al. 1990:180-183).

MISSISSIPPIAN 1, MARTIN FARM PHASE (A.D. 900-1000)

During the emergent Mississippian phase, settlements were usually located, as in Woodland times, along the first alluvial terraces. Villages expanded and became more permanent as evidenced by multiple structures, storage pits and hearths, and occasional platform mounds.

Martin Farm phase structures were square or rectangular buildings of flexed-pole, single-set, and wall trench construction. Structure 3 at Martin Farm was a square (4.9 m x 4.9 m) closed corner wall trench building with closely-spaced postmolds in the trench and a central fire hearth (Polhemus 1985:4; Schroedl et al. 1985:86-89).

The dietary records indicate an intensive use of maize. Squash, pumpkins, gourds, and sunflowers were also grown. Mollusks were collected in large quantities and the river yielded aquatic turtles and suckers as well. Deer, squirrels, raccoon, pigeon, and turkey were the primary terrestrial faunal resources (Bogan and Bogan 1985:381-390). Arboreal nuts, especially hickory nuts, and herbaceous plants such as maygrass and marsh elder are found in the botanical remains (Chapman 1985:77; Schroedl et al. 1985:456).

There is little, if any, variation in the lithic assemblage from Late Woodland times. It includes the Hamilton and Madison projectile points, celts, and decorative soapstone earspools (Schroedl et al. 1985:366-368).

The Martin Farm phase marks the ceramic transition between the limestone tempering of the Woodland stage and the shell tempering which defines the Mississippian. The limestone tempered cord marked and shell tempered plain are diagnostic types (Kimball 1985:148, 280). These types both appear in the assemblages of the later Mississippian 2. The distinguishing factor between Mississippian 1 and Mississippian 2 ceramics is "largely a difference in the frequency of occurrence rather than in the presence or absence of specific 'diagnostic' sherd categories" (Schroedl et al. 1985:227-229).

MISSISSIPPIAN 2, HIWASSEE ISLAND PHASE (A.D. 1000-1300)

The Early Mississippian Hiwassee Island phase settlements of the Ridge and Valley Province tend to be located on slightly higher ground and further back from the river than those of earlier times. Permanent stockaded villages are characterized by large civil structures erected on mounds at opposite ends of an open plaza (Chapman 1985:74-77; Lewis and Kneberg 1941:22, 1946:37-41; Polhemus 1985:3-6; Schroedl et al. 1985:466).

Structures of flexed-pole construction with wattle and daub walls are distinctive of this phase. Wall trench structures are either circular (6.4 m in diameter) or rectangular (7.9-13.5 m x 5.4-10.6 m).

Available dietary data indicate an agricultural economy with corn as the primary food staple. Squash and beans were also grown. Hunting, fishing, and gathering continued to play an important part in the subsistence pattern. Faunal resources included deer, turtle, turkey, and also some bear (Lewis and Kneberg 1946:44-46; Schroedl et al. 1985:390-400, 456).

Little technological variability is evident in the lithic assemblages of Mississippian 1 and 2 occupations. Hamilton, Madison, and Pentagonal projectile point types are the diagnostics for the Hiwassee Island phase. Other recovered stone tools include well-polished celts and chisels. Personal use items include steatite earspools and stone pipes. Awls, needles, and fishhooks were carved out of bone. Among the shell artifacts are gorgets, beads, and perforated mussel shells, often called hoes.

The ceramic assemblage is dominated by shell tempered plain sherds but other surface treatments include shell tempered cord marked, fabric marked, complicated stamped, red-filmed, and red-on-buff.

MISSISSIPPIAN, PISGAH PHASE (A.D. 1000-1400)

Pisgah sites are found on the alluvial floodplains of the Blue Ridge Province. Small settlements consisted of a few structures in a circle around an open plaza. Small structures, perhaps winter sleeping quarters, were built alongside more substantial houses. Defensive palisades were subject

to rebuilding to meet the needs of a growing or declining community. Larger ceremonial centers contained substantial platform mounds and semisubterranean earth lodges (Dickens 1976:206-207; Keel 1976:218; Purrington 1983:144).

Structures were square or slightly rectangular measuring 5.5-7.3 m along the outer walls. Buildings had single-set posts, wall trench entrances, and raised clay fire basins. Four central support posts may also have served as room dividers. Storage and clay borrow pits are located inside the structure (Dickens 1976:32-34; Purrington 1983:144).

"The Pisgah subsistence economy appears to have been based on approximately equal parts hunting, gathering and agriculture" (Dickens 1976:210). Faunal resources included deer and wild turkey while the collection of nuts and fruit and the cultivation of corn were also of major importance. Squash, beans, and sumpweed were also grown (Dickens 1976:202-205).

Pisgah burials were flexed and interred in three types of pits: simple oblong, central-chamber, or side-chamber. The pits are found either within or close by dwellings. Burial offerings are not common but include shell beads, gorgets, and earpins and some ground stone artifacts (Dickens 1976:128-131; Keel 1976:128).

Projectile points/knives from the Pisgah phase are small triangles knapped out of chert, quartz, quartzite, or slate. Retouch flakes were used as tools for cutting, boring, and scraping. Celts, mortars, anvil stones, hammerstones, and stone disks are also recovered. Implements carved from bone, such as awls and needles, are often found in pit fill (Dickens 1976:135-144; Keel 1976:217; Purrington 1983:142).

There are considerable differences between the ceramic types of the Pisgah phase and its East Tennessee contemporaries. Pisgah ceramics are principally sand tempered with inclusions of crushed mica. There are some examples of quartz, shell, and steatite tempering. The predominant surface treatment is rectilinear complicated stamping, which comprises over 80% of all the sherds. Curvilinear complicated stamped, checked stamped, and plain treatments comprise the rest of the assemblage. Vessel forms are typically globular jars with everted collared rims. Rims are usually punctated (Dickens 1976:171-186; Purrington 1983:143).

MISSISSIPPIAN 3, DALLAS PHASE (A.D. 1300-1600)

Dallas towns are normally found on the second river terrace in rich bottomlands suitable for horticulture. The settlements ranged from villages of ten pairs of winter/summer structures to a town ten times that size. The dwellings were grouped around a plaza which incorporated a public building, usually on a raised earthen platform. Larger towns had more than one mound. A defensive palisade encircled the entire settlement. Isolated farmsteads were rare (Baden 1985:53-54; Polhemus 1987:1240-1242).

Square structures with four main roof supports comprised the majority of Dallas dwellings. Building sizes ranged from 4.3-11.6 m x 4.1-11.6 m. Public or high status structures were constructed on top of mounds. These long rectangular buildings had floor areas of 72.5-130.0 m^2. Burials with exotic grave goods are linked with the public structures. All Dallas phase structures were of rigid single-set pole construction (Polhemus 1985:56-64).

The exploitation of food resources shows little change from the earlier Mississippian phases. Corn, beans, and squash were cultivated; deer, bear, turkey and small mammals were hunted; turtles, fish, and mollusks were taken from the river; and arboreal seed crops were collected.

The material culture of this Late Mississippian phase reflects an increasingly more complex and specialized society with more detailed and sophisticated craftsmanship. The temporally diagnostic Dallas Excurvate and Madison projectile points were manufactured from local chert and from imported raw materials such as chalcedony and jasper. Dover chert was flintknapped into long bifaced ceremonial "swords." Perforators, hoes, chisels, blades, *pieces esquilles*, celts, adzes, discoidals, and many other stone implements and nonutilitarian items are included in the lithic assemblage. Mica earspools, copper beads and talc earpins are among the more unusual examples of craftsmanship (Roberts 1987:709-828).

Marine shells, notably conchs, and artifacts worked from them were one of the largest categories of burial accouterments. Gorgets with a rattlesnake motif, cups, masks, beads, and ear ornaments were all manufactured from imported shell (Bogan and Polhemus 1987:994-1019).

Deer, bear, and turkey provided raw material for bone awls, gouges, and PPKs. Turtle shell rattles are recovered from burials (Bogan and Polhemus 1987:1042).

Although the largest number of pottery sherds recovered from Dallas occupations are shell tempered plain, the distinguishing trait of this phase is cord marking (McKee Island Cord Marked). More decorative embellishments are also typical of the ceramic assemblage. Applique fillets, incised and modelled surfaces that include zoomorphic effigies, and negative painted and burnished black pottery denote this Late Mississippian phase. Vessel forms include globular jars with vertical rims, lobed jars, and simple globular and cazuela bowls (Lewis and Kneberg 1946:96-106; Polhemus 1987:606-635).

MISSISSIPPIAN 4, OVERHILL CHEROKEE PHASE (A.D. 1600-1819)

Townhouse structures with either four or eight roof supports are found at all sites but Citico. The buildings are circular or octagonal and measure 18.3 m to 15.3 m in diameter. Occasionally there is a smaller rectangular summer pavilion alongside. Most dwellings are found in winter/summer pairs. Winter houses are identified by circular post patterns with four roof supports, a central hearth, and a diameter of approximately 6.7 m. Summer houses are square or rectangular, measure 3.6 m-6.1 m x 6.7 m-10.7 m, and often have burials in association. Other large rectangular buildings of more sturdy construction could have been year-round dwellings (Baden 1983:127-129; Schroedl 1986:539-542).

The introduction of domesticated animals and fruit trees by the European settlers brought greater diversity to the Cherokee diet. Faunal remains reflect the addition of cattle, swine, and chicken to the traditional assemblage of deer, bear, and small mammals. The botanical remains show that peach trees were now important although the cultivation of corn, squash, and beans still contributed the major part of the harvest. Hickory nuts, acorns, walnuts, and hazelnuts were gathered (Schroedl 1986:536-537).

Euroamerican influences on Cherokee material culture were enormous, expanding greatly the variety of both raw materials and the derived products. Stone tool manufacture was quickly replaced by traded iron implements. Baden (1983) suggests "lithic technology played a limited or no role in colonial Cherokee culture." The ceramic technology, however, remained relatively unaffected. The assemblage is overwhelmingly dominated by shell tempered plain (Overhill Plain). Shell tempered simple stamped, check stamped, and curvilinear complicated stamped ceramic types distinguish this ceramic series from that of the earlier Mississippian phases. Vessel types are mostly jars, hemispherical bowls, cazuela bowls, and pans. Acculturation is primarily measured through the quantity of Euroamerican goods apparent in the material culture. The vast inventory is numerically dominated by glass beads but metal, glass, bone, and ceramic artifacts found in conjunction with native technology also denote this phase and may often be an accurate temporal marker (Baden 1983:44, 144; Newman 1986:417-418, 448-452; Schroedl 1986:543-545).

HISTORIC EUROAMERICAN (A.D. TO PRESENT)

Roane County

Fort Southwest Point, established in 1792 as part of the Territory South of the River Ohio (Ramsey 1853), was the first permanent Euroamerican settlement in what became Roane County, which at that time was beyond the Cherokee frontier (Ford 1982:4). The county was established in 1801 and named for Archibald Roane, who governed Tennessee from 1801 to 1803 (Ramsey 1853). The area was gradually opened for Euroamerican expansion from 1792 until 1819, when the southwestern part of the county (which includes part of the project area) was ceded by the Cherokee as part of the Hiwassee tract (Ford 1982:5). Roane County had a subsistence-based agricultural economy, as did most of East Tennessee, until the second quarter of the 19th century when an iron industry was founded near what is now Rockwood. Corn was the primary crop, with a concomitant liquor distillation industry prior to the coming of the iron industry.

Rhea County

Rhea County was created in 1807 out of southwestern Roane County. It was named for John Rhea, a member of the 1796 Tennessee constitutional convention (Ramsey 1853). The 1805 Tellico Treaty had opened part of the county to Euroamerican settlement, but it was not fully open or settled until after the Hiwassee Tract cession of 1819 (Ford 1982:4). The first deed book

entries for Rhea County began in 1824. The early economy of Rhea County was very similar to that of Roane County, since iron deposits were found along the entire length of the Cumberland Escarpment. Rhea County was one of only three East Tennessee counties which sided with the Confederacy during the Civil War, due largely to the interests of the Waterhouse family who controlled most of the county from 1807 to 1865.

IV. RESEARCH DESIGN, THEORETICAL ORIENTATION, AND FIELD METHODOLOGY

C. Alan Longmire

RESEARCH DESIGN

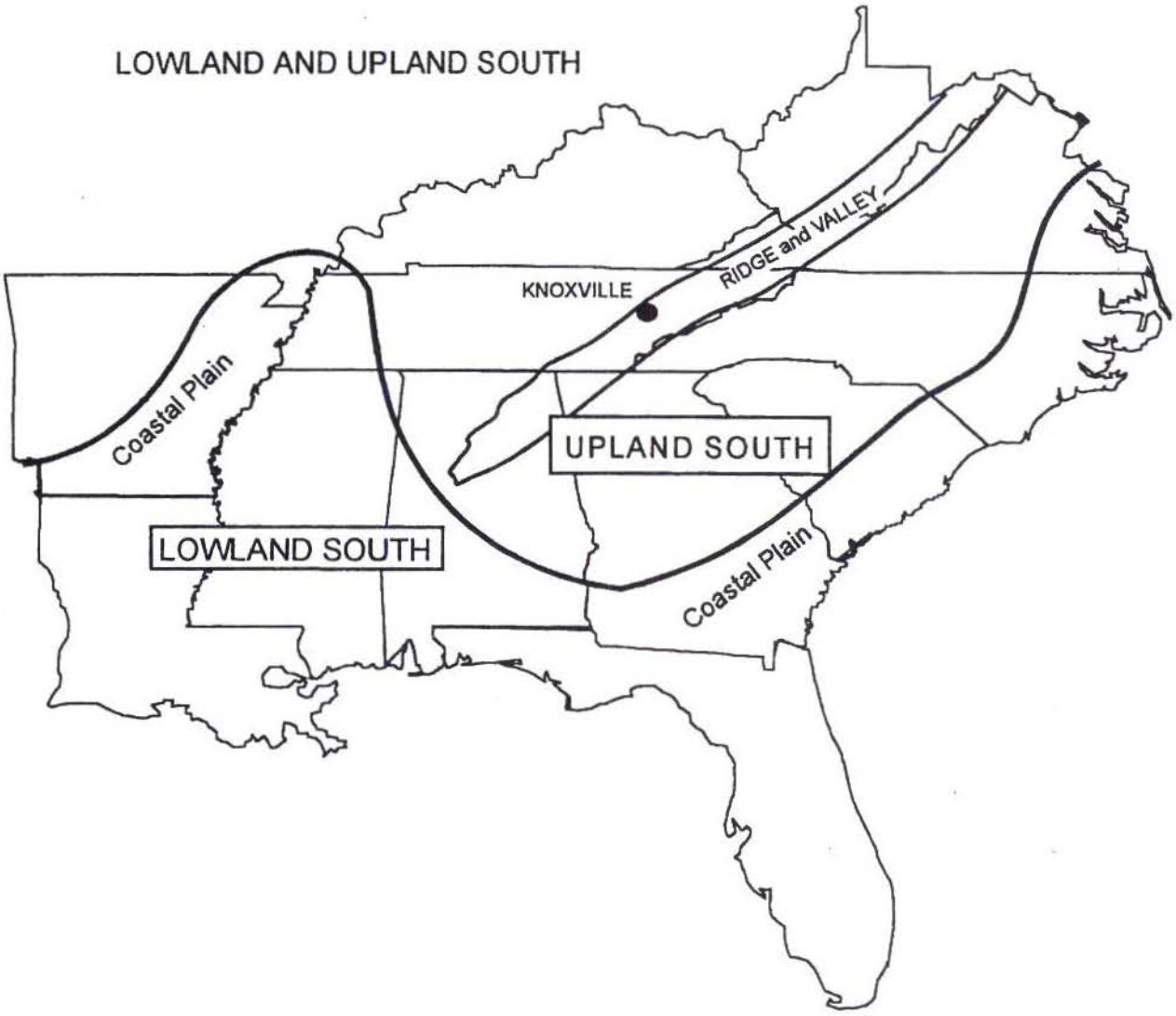
Very little research has been done to date on East Tennessee farmsteads of the time period represented by sites 40RE192 and 40RH156. Most research has focused on sites of obvious historic importance: 1) sites associated with important persons in the history of the state; 2) homesteads dating to the frontier period; or 3) ethnically historic sites such as slave cabins associated with affluent households. Examples of these sites include the Ramsey House (Roberts 1986), James White's second home (Faulkner 1984), the Nicholas Gibbs house (Faulkner 1988, 1989, 1990), and the Mabry house (McKelway et al. 1994). These sites represent a wealthy landowner's house, the home of the founder of Knoxville, a pioneer and Revolutionary War veteran's log cabin, and a wealthy farmer's slave cabins, respectively. A study of modernization on historic farmsteads in the nearby Watts Bar Reservoir area has recently been performed (Ahlman 1996), but the focus of that study is not similar to this one.

Recent studies in Illinois (McCorvie et al. 1989) and Kentucky (Rotenizer 1992), however, have begun to document the archaeology of the common rural farmstead of the *Upland South tradition.* The Upland South region (Figure 5) is defined by Glassie (1968:114) as that part of the southeastern United States lying north and west of the Coastal Plain. The region is characterized by mountains, plateaus, and valleys, trailing into dissected uplands as the elevation falls towards the coastal plains (Otto 1989:82). The Upland South tradition as a cultural entity has been treated as a predominantly Anglo-American phenomenon, with traits derived from various other Euroamerican cultures such as the Finn-Swedes (Jordan and Kaups 1989) and the Germans (Glassie 1968). The Upland South tradition is defined as a type of spatial organization on rural farmsteads characterized by the following traits:

1. Outbuildings and barns are arranged around a dwelling in a seemingly disordered cluster determined by the occupant's conception of convenience.

2. Major buildings include the dwelling, barn, storehouse, smokehouse, and animal pens, all of which often serve multiple functions.

3. The location of the well/cistern, privy, storage shed, and chicken house are tied closely to the dwelling and formed areas that were usually associated with female activities and were periodically swept.



Source: McKelway, Henry S. 1994. *Slaves and Master in the Upland South - Archaeological Investigations at the Mabry Site*. Unpublished Ph.D. Dissertation, The University of Tennessee, Knoxville.

FIGURE 5. The Upland South region.

4. Barns and large animal and equipment shelters associated with male activity areas are located further away from the dwelling and its closely tied support structures. Access to these structures is around the dwelling and its yard rather than through the immediate yard.

5. The dwelling faces the probable path of approach.

6. The dwelling tends to be shaded by trees.

7. Fields and pastures are irregular, often dictated by topography.

8. Log construction is widely used.

9. There is a concept of modular construction based upon the pen or crib.

In Illinois and Kentucky there has been an effort to use these traits to produce a regional model for rural farmstead development so that farmsteads in one area may be compared with other such sites throughout the Upland South region. Site 40RE192 and site 40RH156 were investigated using an Upland South model for comparison. This procedure will allow data from these sites to be used in the eventual production of a regional database for the study of rural farmsteads that will be comparable to those of neighboring states which share in the Upland South tradition. The questions to be investigated in this report are as follows:

1. What effect does local environment have on historic settlement location, and do cultural factors help determine site location?

2. What is the spatial arrangement of the farmstead, and does it change through time? How does it compare to other Upland South farmsteads? How does it compare to farmsteads settled by other cultural traditions?

3. What dietary patterns and food preferences are evident in the artifacts recovered from the sites, and how do these compare with documented patterns for the Upland South tradition? Does the pattern change through time?

4. What socioeconomic conditions are indicated by the artifact assemblage? How do they compare to those of other domestic sites in East Tennessee?

5. How does the later occupation of site 40RH156 compare to McCorvie et al.'s (1989) model of Upland South occupations in southern Illinois and Rotenizer's model of Upland South occupations in Virginia and Kentucky? Does the evidence support the hypothesis that the Upland South tradition is comparable across its entire range?

THEORETICAL ORIENTATION

The overall paradigm of this report is culture history as defined by Trigger (1989:206): archaeological investigation with the conscious goal of placing a given cultural group, in this case rural small farmers, within a known history, that of 19th century East Tennessee.

FIELD METHODOLOGY

In order to maximize data recovery, the excavation strategy for sites 40RH156 and 40RE192 called for limited use of hand excavation to clarify details of structures and features while fence lines and yard areas were stripped by backhoe (Figure 6).

Based on data from 1 m x 1 m test units and power trenching of site 40RH156, the entire site area except for the house was stripped of plowzone with a backhoe. All of site 40RE192 was stripped as the area had been plowed and was comparatively small. This made it possible to trace the positions of past fence lines and locate outbuildings by the presence of postholes and subsurface features. All subsurface features were defined, photographed, mapped, and excavated by hand in two halves and by natural strata, with the exception of the cellars, which were excavated in quarters by natural strata subdivided into arbitrary levels (Figure 7).

Samples of fill for flotation (20 liters maximum) were collected from arbitrary 10 cm levels established in one half of each feature, and the remaining fill was water screened through 6.35 mm (1/4 inch) mesh hardware cloth. Four 1 m x 1 m test units were excavated by hand in 5 cm levels at site 40RE192, and seven 1 m x 1 m test units were excavated in 10 cm levels at site 40RH156. A 10 liter flotation sample was removed from the southwest corner of each level at both sites (Figure 8).

During the Phase III data recovery on 40RH156, fourteen 1 m x 1 m test units were placed strategically around the house areas in order to determine placement of doors and windows, the orientation of the structures, and the functions of different rooms in the house. Room function would be indicated by materials contained in the test units that may have fallen through the floorboards. An additional six test units were placed in the subsurface remains of Feature 3. All postholes were bisected and mapped in plan view and in profile, with the excavated soil trowel sorted for artifacts (Figure 9).

CURATION

Field notes, photographs, other records, and artifacts are being temporarily curated by the Transportation Center at The University of Tennessee, Knoxville. The Tennessee Department of Environment and Conservation, Division of Archaeology will be the final curation facility.

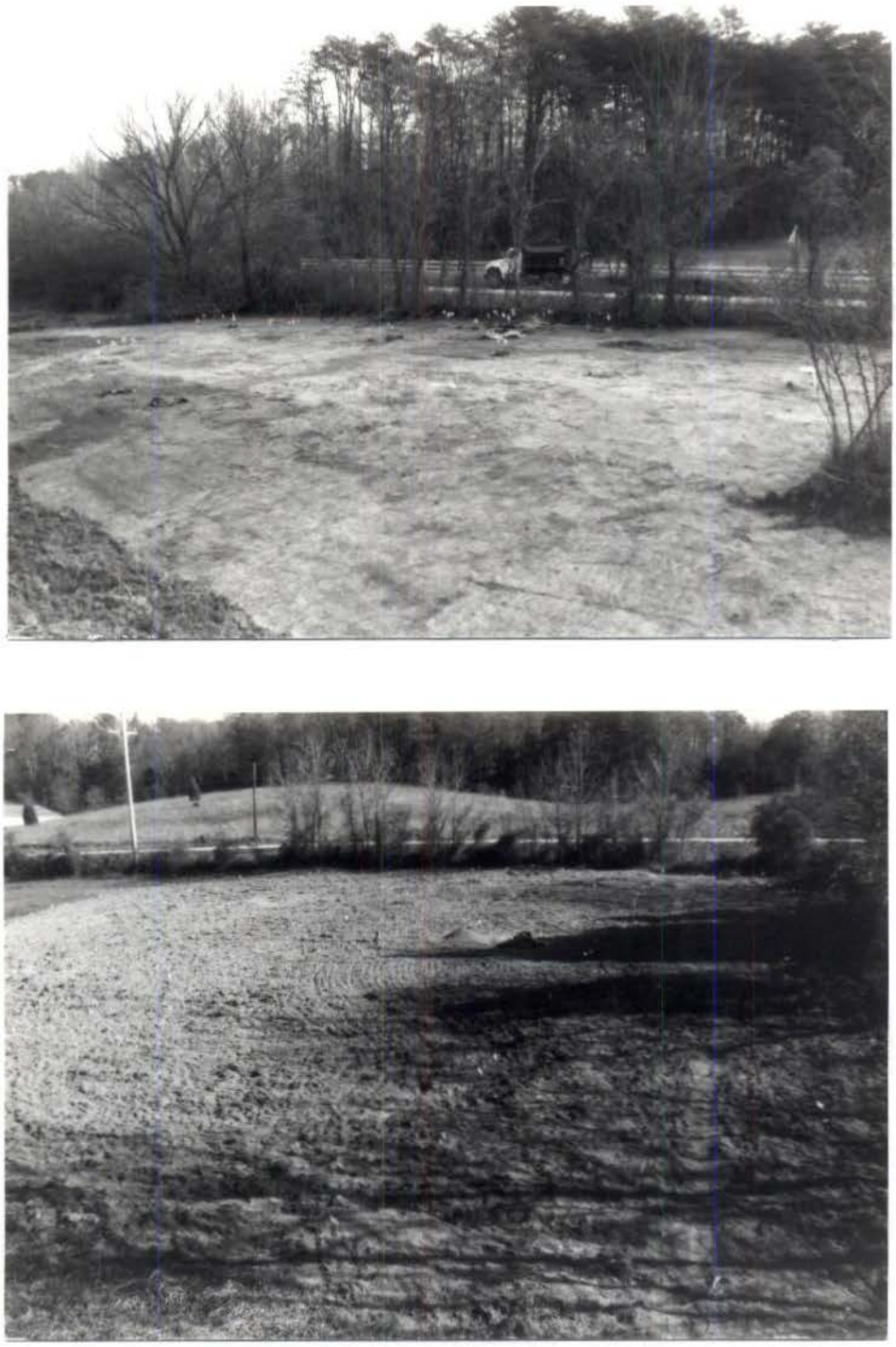


FIGURE 6. Sites 40RE192 and 40RH156. 40RE192, looking northeast from 1000 N, 1000 E (top) and 40RH156, looking east from 1000 N, 1000 E (bottom).

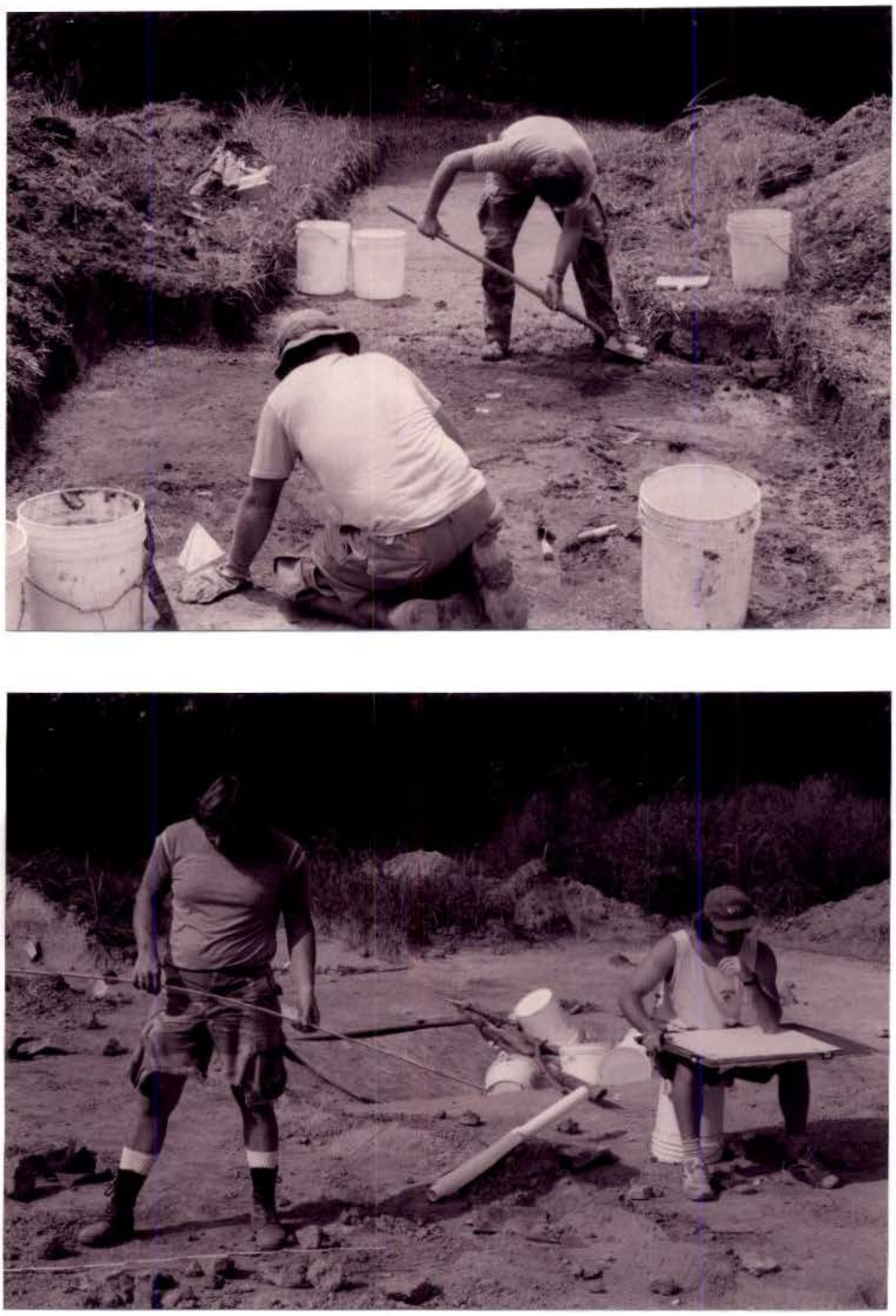


FIGURE 7. Defining a feature and mapping, 40RH156. Defining (top) and mapping (bottom).

FIGURE 8. Hand excavating a 1 m x 1 m test unit, 40RE192.

FIGURE 9. Bisecting a historic posthole, 40RH156.

V. ARTIFACT ANALYSIS PROCEDURES

Jay D. Franklin and C. Alan Longmire

SORTING

Water screening of all excavated fill through 6.35 mm (1/4 inch mesh) hardware cloth was carried out in the laboratory at The University of Tennessee, Knoxville. Laboratory analysis of the artifacts was undertaken immediately following the fieldwork. Artifacts were washed and sorted. Lithic debitage was analyzed by attributes. Historic artifacts were sorted and analyzed according to South's (1977) categories for historic materials analysis, with some modifications for 19th century. These modifications include the addition of a category for medicinal glass for the purpose of dealing with panel bottles, a type of artifact which does not appear in South's artifacts of the 18th century. Ceramics were sorted according to Miller's manufacturer's types and vessel forms for the 19th century (Miller 1980, 1991). Window glass was sorted by color and thickness, with dates being obtained through the use of Moir's (1987) formula for window glass thickness/date correlation in Texas. Curved glass was sorted according to color, vessel form, and method of manufacture. Nails were classified according to method of manufacture, size in pennyweight, and condition. Other metal was sorted by material and function. Important metal artifacts such as table knives were cleaned and stabilized through electrolysis. Architectural debris was sorted by material and weighed, due to the extremely fragmentary state of the brick, mortar, and daub from these sites.

LITHIC ANALYSIS

Debitage Attributes

The format used in this analysis allows for a variety of approaches when looking at knapped stone debris. Eleven attributes were recorded for each piece of debitage: (1) weight; (2) size; (3) flake portion; (4) complete/broken platform; (5) platform type; (6) platform facet count; (7) percentage of dorsal cortex; (8) type of cortex; (9) dorsal scar count; (10) raw material type; and (11) thermal alteration.

The samples were broken down into four size grades: 1" (2.54 cm); 3/4" (1.90 cm); 1/2" (1.27 cm); and 1/4" (0.64 cm). No debitage collected was smaller than 1/4".

Eight categories are used for flake portion:

1. Complete flake (a flake that has an intact platform, lateral margins, and a distal end);

2. Platform remnant bearing (PRB) flake (a flake where the platform is present but the distal end and/or lateral margins are gone);

3. Medial portion (neither platform nor distal end are present, however, both lateral margins are observable);

4. Distal portion;

5. Blocky shatter (neither the dorsal nor ventral face is discernible);

6. Split flake (split longitudinally from platform to distal end);

7. Flake fragment (a flake fragment which has no platform and no distal end, and at least one lateral margin missing); and

8. Thermal shatter (pieces assumed to have been unintentionally thermally altered, or in any case, pieces in which it is impossible to record diagnostic attributes).

The presence or absence of a complete platform was the next attribute recorded.

Four platform types were recorded: (1) crushed; (2) non-lipped; (3) lipped; and (4) cortical. Platform facet counts were recorded only on flakes or flake fragments with complete platforms.

Percentage of cortex on the dorsal surface was recorded next. Five categories apply: (1) 100%; (2) >50%; (3) <50%; (4) 0%; and (5) platform only. This attribute was not recorded for either blocky or thermal shatter.

Cortex type was recorded as matrix/residual, waterworn, patinated, or no cortex. This attribute was recorded for all pieces except thermal shatter for site 40RH155. For site 40RE192, this attribute was recorded for thermal shatter as well.

Dorsal scars are evidence of previous flake removals. Counts of these scars on each piece of debitage were recorded.

Raw material type was also recorded for each piece. If the material type could not be determined, it was listed as either indeterminate, local or indeterminate, non-local. Raw material type was recorded for all portions. In the case of thermal shatter, if the material type was not known, it was recorded as indeterminate local.

There were three possibilities for the thermal alteration category: (1) the piece showed no evidence of thermal alteration; (2) the piece was intentionally thermally altered to the degree that a change in color and/or luster is visible; or (3) the piece was unintentionally thermally altered, characteristics of which are potlidding, crazing, and crenulations. As mentioned before, all thermal shatter pieces were recorded as unintentional thermal alteration.

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The number of attributes recorded was sufficient to allow three approaches for lithic analysis. The three approaches can be used as separate or confirming lines of evidence. If all three approaches yield essentially the same results, then the analyst can place more stock into his or her conclusions.

Debitage Analysis Approaches

Mass Analysis

"The focus here is on a suite of procedures termed *mass analysis*, which is applied to size-graded aggregates of flaking debris" (Ahler 1989:85; emphasis in original). Ahler goes on to add that the critical element of study is not the individual flake, but rather "observations on a batch or some subset of the complete batch of debris from a single context" (1989:87). Mass analysis attributes recorded for the samples are listed below:

1. Total count of the sample;
2. Total weight (in grams) of the sample;
3. Counts across size grades;
4. Weights across size grades;
5. Percentage of thermal shatter;
6. Percentage of blocky shatter;
7. Percentage of unintentional thermal alteration;
8. Percentage of intentional thermal alteration;
9. Relative percentages of cortex presence;
10. Percentage of sample with lipped platforms; and
11. Raw material type.

Individual Flake Attribute Analysis

This approach involves a more detailed scrutiny of each piece of debitage. Attributes recorded for the mass analysis are important here as well. However, the primary attributes examined in this particular analysis are platform facet counts and dorsal scar counts. Although lithic reduction is most properly viewed as a continuous process, it is sometimes advantageous to break this continuum into stages for purposes of gaining insight into organization of technology. Both

platform facet counts and dorsal scar counts were separated into three categories. The presence of zero or one platform facet represent early stage reduction. Two platform facets are representative of middle stage reduction. Three or more platform facets are indicative of late stage reduction. These same numbers and stages apply to dorsal scar counts. A Loupe 10X hand lens was sometimes used to aid in the determination of these counts. In flakes with complete platforms, platform facet counts took precedence over dorsal scar counts. However, in those with incomplete or no platforms, dorsal scar counts were given priority (Magne 1989).

Interpretation-Free Approach

Because lithic analysts often disagree about the best methods for analyzing knapped stone debris, a third approach was also employed. Sullivan and Rozen (1985) argue for the implementation of an "interpretation-free" approach to analysis. They believe that traditional typologies are misleading. Their categories are as follows (1985:759):

1. Complete flakes;
2. Broken (PRB) flakes;
3. Flake fragments; and
4. Debris (blocky shatter).

The dominance of complete flakes and blocky shatter are more indicative of core (primary) reduction, while larger numbers of broken flakes and flake fragments are viewed as more representative of bifacial reduction. In actuality, this approach does not appear to be "interpretation-free" at all, only more general. Nonetheless, Sullivan and Rozen's approach was used in addition to the previous two.

Tools

Only a cursory examination of the tools was undertaken. This was done primarily because the objective of this analysis was to look at site function(s) and occupation intensities, which is better done through the analysis of the knapped stone debris. However, by comparing the debitage/tool ratio to the percentage of late stage debitage, and the number of tools and tool fragments to late stage debitage, the objective was more attainable. Temporal affiliations are assigned to tools whenever possible. In general, though, only tool type, raw material type, and weight are recorded.

HISTORIC ARTIFACT ANALYSIS

Ceramics

Ceramics are the most important class of artifact commonly found on historic sites because vessel form, paste, glaze, and decoration changes have been well recorded through time. Ceramics are broadly grouped into two major categories based on the amount of refining undergone by the clay in the process of manufacture--coarse and refined. Ceramics are also grouped by the temperature of firing the clay has received. The lowest temperature wares are called earthenware and are not vitrified. The earthenwares are porous and will not hold water unless glazed. Most tablewares are a refined type of earthenware, such as pearlware or whiteware. Unrefined earthenwares such as the yellow wares, redwares, and terracotta are often used for coarse utility vessels. The next higher firing temperature wares are the stonewares, which are partially vitrified and will hold water without a glaze. Ironstone and semiporcelain are refined stonewares, while coarse stonewares include salt glazed, bristol glazed, and Albany slip glazed crockery. The highest temperature ceramics are porcelains. Porcelain is fully vitrified and, in the highly refined specimens, the glaze is indistinguishable from the paste of the body.

The refined ceramic types recovered from sites 40RE192 and 40RH156 include creamware, pearlware, and whiteware refined earthenwares; ironstone and semiporcelain refined stonewares; and soft paste and hard paste porcelains. Coarse ceramic types recovered include unglazed and lead glazed redwares; yellow wares; and salt glazed, bristol glazed, and Albany slip glazed stonewares.

Refined Ceramics

Creamware

Creamware is a refined earthenware invented by Josiah Wedgwood in 1762 as a cheaper substitute for both Chinese porcelain and white salt-glazed stoneware (Noel-Hume 1970). It consists of a buff to creamy white clay body covered with a clear lead glaze, and after about 1800 is rarely decorated except for annular banding. Creamware was produced until around 1830, when it became indistinguishable from whiteware.

Pearlware

Invented by Josiah Wedgwood in the 1770s, this is a refined earthenware with a creamy white body covered with a clear lead glaze containing cobalt. Pearlware also was produced in an attempt to produce a cheap substitute for Chinese porcelain. The cobalt in the glaze makes the cream colored body appear whiter while the glaze itself takes on a distinct bluish cast, using exactly the same principle as adding bluing to white items of laundry. Pearlware was being manufactured all

over Great Britain by 1790 and continued in manufacture until its gradual replacement by whiteware over the period from circa 1825 to 1835 (Miller 1980).

Whiteware

Whiteware was not invented per se, but rather seems to have evolved from pearlware and creamware over time. The clay body is closer to being white than either creamware or pearlware, although there is evidence that manufacturers sometimes put cobalt in the clay rather than the glaze to achieve this effect (Miller 1991). Whiteware glazes contained lead in some degree for most of the 19th century. Lead containing glazes were gradually replaced by a clear felspathic glaze which is still used (Miller 1991). Whitewares first appear in the 1820s and were ubiquitous by the late 1830s.

Transitional Wares

Transitional wares are a category of convenience rather than a true ceramic type. All refined earthenwares which show characteristic traits of both pearlware and whiteware are classified as transitional wares and are given a date range corresponding with the period during which whiteware gradually superseded pearlware as the common table ceramic, 1820-1835. Historical archaeologists have long attempted to find an easy way to distinguish late pearlware from early whiteware (Noel-Hume 1970; Price 1979). The most common method is to look for blue puddling of the glaze combined with a refined thinness of the ceramic body and the use of certain colors for underglaze enameling (Price 1979:14-15). Unfortunately, this method can produce erroneous results. The slow whitening of pearlware and the vestigial bluing of whiteware, combined with the various manufacturers' use of the term "pearl" to refer to their wares long after the disappearance of what archaeologists call pearlware, combine to make a critical determination of ware type in some cases almost impossible for the years between 1820 and 1835. To make matters worse for those who use glaze tint as a criterion, there was a resurgence in the popularity of blue tinted glazes on whiteware produced for the provincial English and American markets in the 1840s (Miller 1980:17-18). Fortunately these later blue tinted whitewares are easily distinguished from the transitional period wares by their thickness and decoration. While the colors of underglaze enameling are probably the most helpful criterion in distinguishing late pearlware from early whiteware, in the case of sites 40RE192 and 40RH156 this method does not help; most of the wares classified as transitional are underglaze blue monochrome painted. The use of a transitional ware category in the calculation of mean ceramic dates (South 1977) will tend to even out the discrepancies that would appear with the use of arbitrary classification of these wares as either pearlware or whiteware. That this technique is effective in this respect at the two sites involved in this study is borne out by comparisons with dates derived from other artifact categories, such as window glass. The root of the debate over the determination of ware type can be reduced to one concern--chronology. The transitional wares category addresses this concern by providing a tighter date range for certain artifacts.

It is interesting to note that the potters who manufactured these wares and the archaeologists who classify them use different groupings. In the 18th century potters distinguished between

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creamware and pearlware, and they continued to do so into the 19th century. However, the potters who made whiteware did not distinguish between whiteware and creamware, which had been gradually getting whiter of body through its long existence. In fact, the two wares are a single evolutionary lineage (Miller 1980). Luckily for archaeologists, paste colors and decoration types allow dating all these wares with relative ease. The importance to archaeologists of the creamware/pearlware/whiteware evolution in which creamware and whiteware are actually the same is primarily a matter of socioeconomics, as Miller has pointed out with his tables of CC values for various 19th century ceramics. Simply put, after the invention of pearlware, pearlware was a semi-luxury item while creamware was not. According to the manufacturers' price lists, this held true as creamware became whiteware, with the price of pearlware gradually falling to match. By 1830, the type of ware was immaterial, as the price of the ware was based solely on the level of decoration (Miller 1980, 1991).

Ironstone

Ironstone was invented in England in 1814 by James Mason (Godden 1964:163), but did not begin to become popular in this country until the 1850s or later. It is a refined white-bodied stoneware with a white felspathic glaze and is partially vitrified, which is why it is also known as semiporcelain. Ironstone was heavier and harder than earthenware, and as a result was more durable and more expensive. One drawback to its popularity in this country was the fact that early ironstone could not be decorated colorfully as no technique of the time except blue transfer-printing could stand the heat of the firing. During the mid-19th century, however, various sanitation campaigns inspired the popularity of plain white dishes and simultaneously the ironstone industries of East Liverpool, Ohio, arose--a combination which ensured the long-term popularity of semivitrified wares in this country. From the 1870s to the 1920s ironstone was the most common type of tableware. Unfortunately, it is sometimes difficult to distinguish between ironstone and whiteware in archaeological remains.

Porcelain

Chinese porcelain was quite fashionable for the wealthy classes in the late 18th and early 19th centuries. Chinese porcelain is a hard-paste porcelain, so called because it is completely vitrified to the point where the glaze is indistinguishable from the body of a broken piece. It is a bluish-white in color and, if thin enough, is translucent. The Spode company of England, while trying to duplicate the properties of porcelain while firing at a lower temperature, invented Bone China in 1800 by mixing calcined animal bone and ground flint with white kaolin clays. Bone China is a soft-paste porcelain, so called because it is slightly porous and will stain if broken, and the glaze is distinct from the body. Relaxation of the high tariffs against Chinese porcelain by the British in the first quarter of the 19th century resulted in a glut, causing the market for Chinese porcelain to collapse as it was no longer expensive. Bone China, however, remains expensive to the present.

Table 1 is a list of dates used for analysis of refined ceramics from sites 40RE192 and 40RH156. In some cases these dates have been modified from their original sources in order to correspond with later time ranges encountered at site 40RH156. Modified dates are noted.

TABLE 1

DATES FOR HISTORIC CERAMICS

Type	Date Range	Mean Date	Source
Redware			
Clear Lead Glazed	ca. 1790-1830+	1820	Greer 1981
Manganese Oxide Tinted Lead Glazed	ca. 1790-1830+	1820	Greer 1981
Iron Oxide Tinted Lead Glazed	ca. 1790-1830+	1820	Greer 1981
Copper Oxide Tinted Lead Glazed	ca. 1790-1830+	1820	Greer 1981
Yellow Ware			
All Types	ca. 1840-1930+	1880	Smith 1984[a]
Stoneware			
Salt Glazed	ca. 1830-1880+	1860	Greer 1981
Albany Slip Glazed	ca. 1870-1930+	1890	Greer 1981
Bristol Glazed	ca. 1890-1930+	1910	Greer 1981
Creamware			
Undecorated	ca. 1762-1830	1796	South 1977
Pearlware			
Undecorated	ca. 1780-1830	1805	South 1977
Blue Shell Edged	ca. 1780-1830	1805	South 1977
Green Shell Edged	ca. 1780-1830	1805	South 1977
Edge-Decorated	ca. 1810-1830	1820	South 1977
Fineline Polychrome	ca. 1795-1815	1805	South 1977

Table 1. Dates for Historic Ceramics. continued.

Type	Date Range	Mean Date	Source
Broadline Polychrome	ca. 1815-1830+	1822	South 1977
Blue Hand-Painted	ca. 1780-1830	1805	South 1977
Transfer Printed	ca. 1795-1830	1812	South 1977
Annular/Mocha	ca. 1790-1830	1810	South 1977[a]
Transitional Wares			
All Types	ca. 1820-1835	1827	
Whiteware			
Undecorated	ca. 1830-1900+	1870	Smith 1984[a]
Blue Shell Edged	ca. 1830-1860+	1845	Smith 1984
Edge-Decorated	ca. 1830-1850+	1840	South 1977[a]
Fineline Polychrome	ca. 1830-1870+	1850	Smith 1984[a]
Broadline Polychrome	ca. 1830-1850+	1840	Miller 1980, 1991
Blue Hand-Painted	ca. 1830-1870+	1850	Smith 1984
Transfer Printed	ca. 1830-1900+	1870	Smith 1984[a]
Flowed (Flow Blue, etc.)	ca. 1840-1900+	1875	Smith 1984[a]
Spatter	ca. 1830-1860+	1845	Miller 1980, 1991
Stick Spatter	ca. 1850-1900+	1875	Miller 1980, 1991
Annular/Mocha	ca. 1830-1870+	1850	Smith 1884[a]
Embossed Plain White	ca. 1860-1900+	1880	Miller 1980, 1991
Thick "Hotel" Ware	ca. 1860-1900+	1880	Miller 1980, 1991
Decalcomania	ca. 1890-1900+	1900	Miller, 1980, 1991

Table 1. Dates for Historic Ceramics. continued.

Type	Date Range	Mean Date	Source
Ironstone			
Plain White	ca. 1830-1900+	1870	Smith 1984[a]
Embossed Plain	ca. 1830-1900+	1870	Smith 1984[a]
Blue Painted	ca. 1830-1870+	1850	Miller 1980, 1991
Blue Transfer Printed	ca. 1830-1900+	1870	Miller 1980, 1991
Decalcomania	ca. 1890-1900+	1900	Miller 1980, 1991
Bone China			
All Types	ca. 1800-1900+	1850	Miller 1980, 1991
Decalcomania	ca. 1890-1900+	1900	Miller 1980, 1991
Porcelain			
Oriental	ca. 1780-1900+	N.A.	Miller 1980, 1991
European	ca. 1780-1900+	N.A.	Miller 1980, 1991
American	ca. 1880-1900+	N.A.	Miller 1980, 1991

[a]The date range and mean have been modified to a later date than the source.

Sources: Greer, Georgeanna H., 1981, *American Stonewares*, Schiffer, Philadelphia; Miller, George L., 1980, Classification and Economic Scaling of 19th Century Ceramics, in *Historical Archaeology* 14(1):1-40; Miller, George L., 1991, A Revised Set of CC Index Values for Classification and Economic Scaling of English Ceramics from 1787 to 1880, in *Historical Archaeology* 25(3):1-25; Smith, Samuel D., 1984, Excavation of a Mid-Nineteenth Century Trash Pit, Wynnewood State Historic Site, Sumner County, Tennessee, *Tennessee Anthropologist* 8:133-181; South, Stanley, 1977, *Method and Theory in Historical Archaeology*, Academic Press, New York.

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Coarse Ceramics

Coarse utilitarian ceramics were usually of local manufacture. In some parts of the southern United States the local manufacture of utilitarian stoneware persists to the present day, though it has become more of a folk art curiosity than a necessity of life (Burrison 1983; Greer 1981; Ketchum 1991; Zug 1986).

Redware

Redware is a coarse earthenware which has been manufactured for centuries. The clay body is reddish-brown to buff colored and is usually covered with a lead glaze which may be clear or colored with various metallic oxides. Copper produces greens and blues, manganese produces a rich brown, and iron produces a deep blackish brown. The manufacture of unglazed redware in the form of flowerpots continues today. Redwares were primarily utility wares, such as crocks and beanpots, but refined redware pitchers and other table pieces were made as well. Redware was slowly supplanted by stoneware in East Tennessee beginning in the 1820s and was almost gone by the 1840s, but lead glazed utilitarian redware continued to be made in upper East Tennessee until the 1860s (Faulkner 1984).

Yellow Ware

Yellow ware is a buff-bodied coarse earthenware with a clear lead or felspathic glaze. It was first produced in 1828 in East Liverpool, Ohio. It was also produced at an early date in New Jersey, and production later spread from New England to the Mississippi River, with concentrations in Ohio and Illinois. Pfalzgraff of Pennsylvania produced a yellow glazed stoneware which was not a true yellow ware in the late 19th and early 20th centuries (Lehner 1988). Yellow ware was almost always a utilitarian ware, with bowls and pitchers being the most common forms. It was often given a form of annular decoration, with bands of colored slip placed horizontally on the vessel.

Stoneware

Stoneware production in East Tennessee started in the first quarter of the 19th century. Stoneware was harder, more durable, more watertight, and most of all less toxic than lead glazed redware and supplanted redware for food storage and preservation purposes by the second quarter of the 19th century. Salt glazed, the earliest form of stoneware, was invented in the 15th century in Germany. It is produced by throwing common salt (sodium chloride) into a kiln full of white-hot stoneware. The salt vaporizes and the sodium combines with the silica in the clay to produce a hard, heat resistant film of sodium silicate glass (similar to Pyrex) on all exposed surfaces of the vessels. The chlorine combines with available hydrogen and exits the kiln through the chimney in the form of hydrochloric acid vapor. After the Civil War and reconstruction era, local potters had access to store-bought glaze in the form of Albany slip, a brown silicious clay from the Hudson River near Albany, New York, which vitrifies at stoneware firing temperatures. Albany slip appears in this area in the late 1880s (Smith and Rogers 1979). Another store-bought

glaze was Bristol glaze, an opaque white felspathic/zinc oxide slip which was invented in Bristol, England during the 1860s and which appears in Tennessee around 1890. The bright white surface of a Bristol glazed vessel seems to have appeared more sanitary than the older brown salt glazed vessels, a point which was of social concern in the late 19th century. Bristol glaze and Albany slip often appear together on factory-made stonewares dating from 1890-1930, in the form of the familiar brown and white crockery which fills antique stores.

Table 1 includes a list of dates used for analysis of coarse ceramics from sites 40RE192 and 40RH156. In some cases these dates have been modified from their original sources in order to correspond with later time ranges encountered at site 40RH156. Modified dates are noted.

Glass

Glass falls naturally into two basic groups: curved and flat. Flat glass is almost always window glass and is discussed in this report as an architectural artifact. Curved glass is usually container or table glass--bottles, jars, bowls, drinking glasses, and plates.

Window Glass

Flat glass of the 18th century and 19th century, assuming that it is in fact window glass, can be roughly dated by means of various formulae. The formula by Moir (1987) perhaps provides the best results in the Southeastern United States. The formula is:

$$\text{initial date } i = (84.22 \times \text{Mean}) + 1712.7$$

This formula provides a date in actual calendar years which seems to be accurate within +/- 5 years in East Tennessee. Window glass gets gradually thicker through time, as methods of manufacture and raw materials improved (Roenke 1978). Most 19th century window glass was made by the cylinder method, wherein a worker took a large gob of glass on a blowpipe and slowly blew a free-hanging cylinder while leaning over the edge of an elevated platform. These cylinders could be as large as 18 inches in diameter and 8 to 10 feet long. After cooling slightly, the cylinders were split lengthwise and flattened out. When they had cooled completely they were cut into panes. Throughout the 19th century the processes for glassmaking improved slowly but consistently, resulting in thicker glass (Roenke 1978). After the advent of float glass in the early 20th century, window glass thickness is no longer a reliable dating method.

Container Glass

Container glass manufacturing technique is not easy to determine unless basal sherds and lip sherds are present, and if the sherds are very small (as is usually the case) vessel form is difficult to determine as well. For this project, curved glass was sorted by color, vessel form, and to a small extent thickness.

Container glass is not common on rural historic sites of the early 19th century in East Tennessee. Only after the invention of various machines for the semiautomatic production of jars and bottles in the period from 1850 to 1870 does glass become a common artifact in this area, mostly in the form of panel bottles and to a lesser degree canning jars. Early 19th century forms of container glass that are found with some frequency in East Tennessee are mostly wine and liquor containers. Free-blown and moldblown dark olive green bottle fragments are typical of sites predating 1830 (Jones and Sullivan 1985). Light green or amber moldblown pictorial or "historical" flasks are present from around 1825 to around 1840 (McKearin and McKearin 1941; Munsey 1970). Clear glass with a blue-green tint appears in freeblown and moldblown bottles and jars in the mid-1840s and quickly becomes the most common container glass type. Almost all bottles made prior to the invention of the snap case in 1855 have pontil marks on the base where the bottle was held on a rod with a little blob of molten glass while the neck was finished (Jones and Sullivan 1985). By 1860, empontiled bottles were rare. The invention of moveable plates in flat molds after the Civil War resulted in the panel bottle, in which was sold medicinal products of all descriptions until the Pure Food and Drug Act of 1906 put the makers of most patent medicines out of business (Munsey 1970). Panel bottles are important artifacts because they sometimes have the name and address of local druggists or patent medicine vendors embossed on the sides. With this information it is possible to speculate on the illnesses, real or imaginary, which plagued the former inhabitants of sites. Panel bottles are good dating artifacts if the druggist mentioned on the bottle can be identified in documentary records. Canning jars were invented in the 1850s but did not become common in East Tennessee until the 1890s, as they were more expensive and more fragile than locally made stoneware preserve jars. Only after 1900 did glass jars begin to replace stoneware in popularity in the South (Burrison 1983).

The most reliable indicator for dating container glass manufactured after the Civil War is the treatment of the lip, if the vessel is a bottle. Bottle lips were laid on by hand until the mid-1870s, when the lipping tool was introduced (Jones and Sullivan 1985:43). Fully mold formed lips appear in the 1880s, although they were not common until the 1890s. With the invention of the fully automatic Owens machine for bottle and jar manufacture in 1903, fully machine-made containers become ubiquitous (Jones and Sullivan 1985).

Glass color can also be used as a relative dating tool. The clear glass of the mid-19th century has a blue-green tint due to the soda ash and lime used to clarify it. As consumer pressures for pure food products increased in the later years of the century, the demand for cheap, nonleaded, truly colorless glass increased as well. Beginning about 1886, manganese dioxide was used to produce a colorless glass. An unplanned effect of this process is the fact that manganese-clarified glass will turn purple with prolonged exposure to ultraviolet light from the sun, resulting in what is

popularly called amethyst glass. With the advent of World War I, the supplies of manganese (which came from Germany) were cut off. After about 1915, selenium was used as the clarifying agent, resulting in a slightly yellowish glass. Arsenic was used from around 1930 to the present (Jones and Sullivan 1985).

Pressed Glass

Pressed glass tablewares are not easily dated as many patterns were produced over long periods of time. The early (1820-1850) "lacy" pressed glass is not commonly found in East Tennessee. As with container glass, pressed glass only became cheap and popular after the Civil War (Lee 1931, McKearin and McKearin 1941).

Metal

Non-Nail Metal

Metal artifacts are sorted first into groups per South (1977) and then by material of manufacture and function. Explanation and interpretation of non-nail metal artifacts is done on a group-or artifact-specific level due to variation in metal artifacts.

Nails

Prior to the invention of the nail cutting machine in about 1790, all nails were hand wrought in sizes and head shapes suited to their intended purpose. After the invention of machine cut nails, nail sizes were standardized according to the pennyweight system, which was later carried over to wire nails. Cut nails were not perfected until around 1830, although their use was quickly overtaking that of wrought nails for all but the most specialized functions in East Tennessee by the 1820s. After the introduction of fully machine-cut nails, wrought nails quickly disappear from the archaeological record. Cut nails are still produced for certain purposes, such as rough flooring and masonry work. Drawn wire nails were in use for furniture manufacture in England by the second quarter of the 19th century, but the machinery for their manufacture was not imported to this country until the last quarter of the century. In East Tennessee the replacement of cut nails with wire nails for general construction purposes was a gradual process, occurring in the 1880s and 1890s; thus it is common to find both kinds of nails on sites of the later 19th and early 20th centuries.

Architectural Materials

Brick and dressed stone from each site were weighed and a sample was retained.

Other Materials

Items such as buttons, beads, and tobacco pipes are analyzed following the listings by feature.

VI. SITE 40RE192

C. Alan Longmire, Jay D. Franklin, Noëleen McIlvenna, Christian Davenport, Walter E. Klippel and Gary D. Crites

The subsurface remains indicate site 40RE192 was an early to mid-19th century historic cabin site with no associated outbuildings. Prehistoric Early Archaic to late Woodland/Mississippian PPKs and a small amount of lithic debitage were recovered from the surface of the site. Site 40RE192 lies on a rise immediately west of State Route 29 (US 27) approximately 150 m east of Black Creek. The site was initially plowed and disked and allowed to settle. A controlled surface collection was then conducted across the site. All artifacts were collected within circular 5 m units, with collection time on each unit limited to five minutes. Test units were excavated by hand in areas of highest artifact densities. Six 2 m wide backhoe excavated power units were placed at no more than 10 m intervals across the site (Figure 10). These power units revealed the presence of three historic features and several potential postholes. A block area was then opened up with the backhoe across the portion of the site where the features were clustered. This excavation exposed six additional features (five historic and one prehistoric) and a row of historic postholes (Figure 11). Artifacts recovered from the features indicate an occupation from 1815 at the earliest to about 1845. The artifacts and the feature morphologies are not typical for historic cabin sites in East Tennessee.

ARCHIVAL RESEARCH

Site 40RE192 lies on property owned by James and Cleda Hinds of Rockwood. A deed search traces the ownership back to an ancestor of the current owner, a Joseph Hinds, who, according to family tradition, received the property through a land grant from the State of Tennessee in 1826. There are many records related to Joseph Hinds and his family in the earliest Roane County records.

The part of Roane County in which site 40RE192 is located was within the Hiwassee tract of Cherokee territory until the U.S./Cherokee treaty of February 7, 1819 (Ford 1982:4; Ramsey 1853:696). In July 1793, the State of North Carolina granted 1,000 acres (405 ha) to a Francis Maybury and four members of the Hinds family (Deed Book B1:262). This property was described as lying in the eastern district of the Cumberland Valley, on the east fork of White's Creek. White's Creek is about 8 km (5 miles) from site 40RE192. Maybury sold his shares in the land to the Hinds in 1802 (Deed Book A1:53). Between that date and 1846, there are many records of Joseph Hinds and his brothers buying and selling slaves and tracts of land in the area. It is difficult to ascertain exactly where these tracts lie on current maps. It seems likely that the 40RE192 property was once owned by either Joseph himself or one of his brothers during the period in which the archaeological remains indicate habitation.

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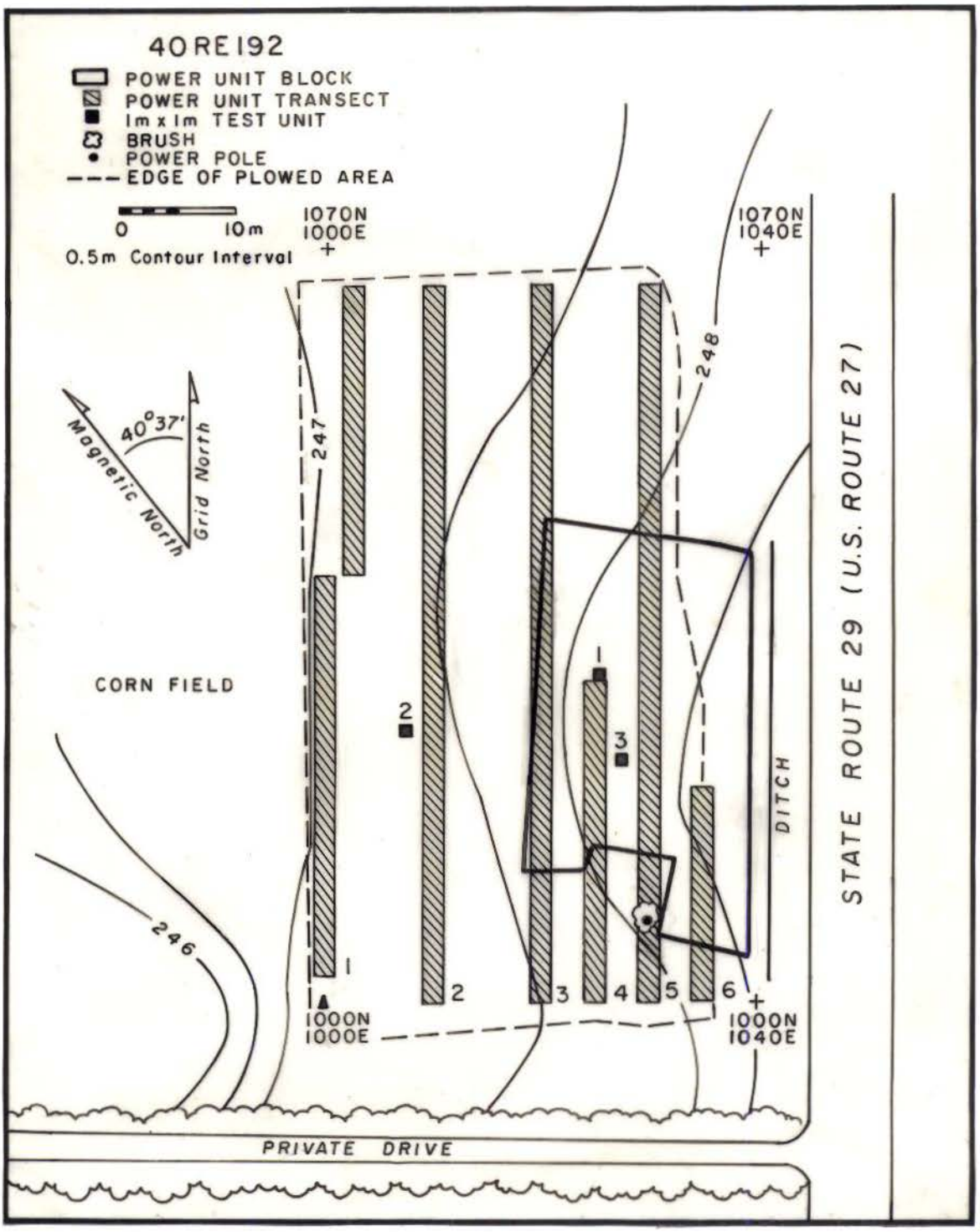

FIGURE 10. Test units and power units, 40RE192.

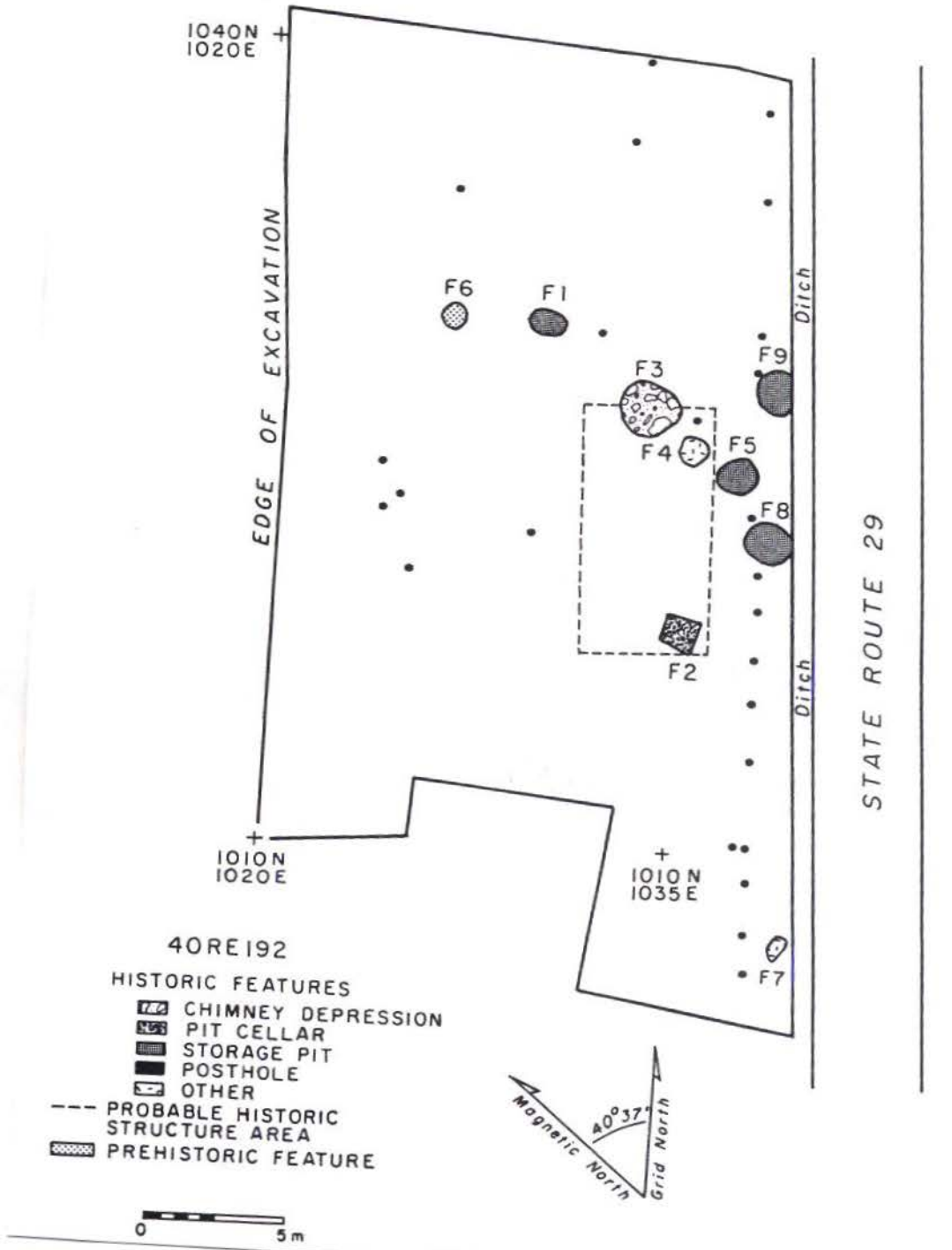

FIGURE 11. Site 40RE192 features.

FEATURES

Feature 1 was an historic oval circular pit that measured 102 cm N-S x 130 cm E-W in plan view and 11 cm in depth. It was probably used as a storage pit and may represent the base of a heavily disturbed or eroded pit. Feature 1 contained only one nail and one sherd of pearlware.

Feature 2 was an historic square pit cellar that measured 130 cm N-S x 130 cm E-W in plan view and 16 cm in depth (Figure 12). Only one soil zone was observed in Feature 2. This was a very dark brown silt loam. Numerous artifacts, including ceramics, nails, glass, beads, and faunal remains, were recovered from this feature. Feature 2 was the most important feature on the site for diagnostic purposes.

Feature 3 was an historic circular pit that measured 176 cm N-S x 206 cm E-W in plan view and 14 cm in depth (Figure 13). It probably was the base for a stick-and-mud chimney. This appears to be the case for three reasons: 1) the absence of any large stones or stone slabs; 2) the presence of an ash lens near the base of the feature; and 3) the presence of burned earth at the base of the feature. Feature 3 contained cut nails, ceramics, some glass, and a straight pin.

Feature 4 was an historic circular pit that measured 128 cm N-S x 108 cm E-W in plan view and 4 cm in depth. It is hypothesized to have been a depression caused by an animal, possibly a family pet, nestling underneath the house near the hearth. The only artifact recovered from Feature 4 was a fragment of a hog mandible.

Feature 5 was an historic cultural pit that measured 128 cm N-S x 140 cm E-W in plan view and 25 cm in depth (Figure 14). It was most likely an historic storage pit. It contained several large stones. Initially, it appeared as though this might be another chimney pad; however, no evidence of burning was noted either on the stones or within the feature. An 1839 silver dime was recovered from Level 3 in the east half of Feature 5. Other artifacts included nails, ceramics, glass, and a stoneware tobacco pipe fragment.

Feature 6 was a prehistoric circular pit that measured 93 cm N-S x 89 cm E-W in plan view and 25 cm in depth. It was the only prehistoric feature identified during the testing. It contained four pieces of lithic debitage and two calcined bone fragments, although a glass canning jar lid liner was found on the surface. This artifact was probably introduced by plow disturbance and as such represents surface trash.

Feature 7 was an historic circular pit that measured 85 cm N-S x 68 cm E-W in plan view and 25 cm in depth. Its function is unknown. Artifacts recovered from Feature 7 include ceramics, glass, and a jaw from a set of blacksmith's tongs. No other evidence of smithing activity was recovered from the site. As the narrowness of the right-of-way precluded any discovery of outbuildings, this finding must remain inconclusive.

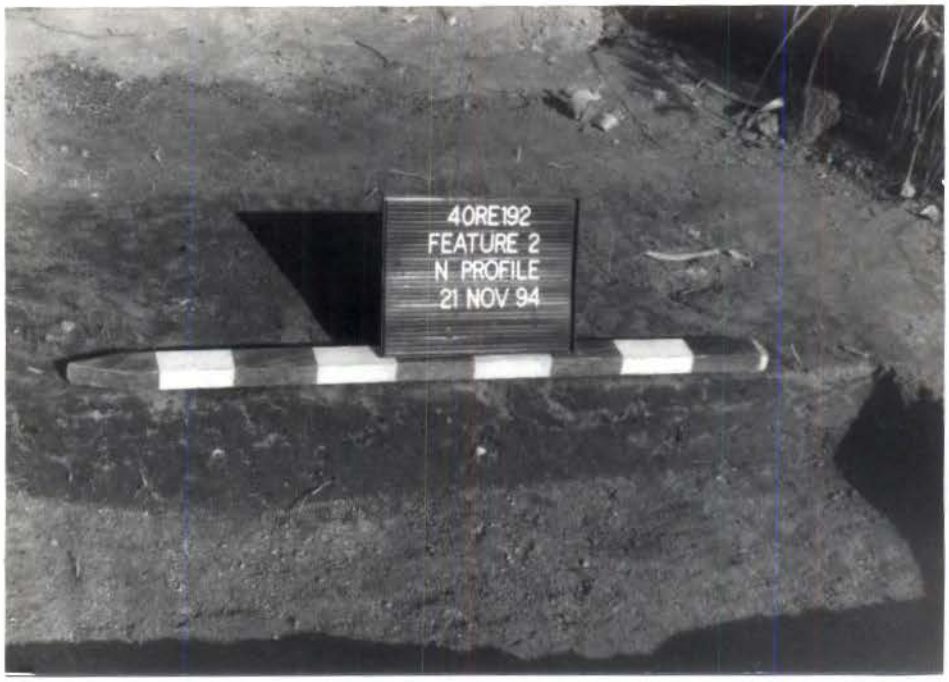

FIGURE 12. Feature 2, 40RE192. Profile (top) and completely excavated (bottom).

FIGURE 13. Feature 3 profile, 40RE192.

FIGURE 14. Feature 5 after excavation, 40RE192.

Feature 8 was an historic circular pit that measured 150 cm N-S x 160 cm E-W in plan view and 15 cm in depth. It appears to have been another storage pit. Artifacts recovered from this feature include fragments of sheet iron, ceramics, and glass.

Feature 9 was an historic circular pit that measured approximately 120 cm N-S x 100 cm E-W in plan view and 8 cm in depth. It was heavily disturbed by tree roots. It had also been intruded upon by recent ditching due to its proximity to the existing State Route 29. Only the unimpacted west half of this feature was excavated. Glass, ceramics, and a bone-handled table knife were recovered.

The postholes were determined to be unrelated to the structure and its occupation episodes, perhaps dating as late as the latter half of the 20th century.

PREHISTORIC ARTIFACT ANALYSIS

One prehistoric feature was excavated at site 40RE192 (see Figure 11).

The lithic debitage recovered at site 40RE192 consists of 140 pieces with a total weight of 147.8 g. Raw materials are Knox cherts (N = 106), indeterminate local cherts (N = 15), chalcedony (N = 9), Chickamauga chert (N = 5), Fort Payne chert (N = 4), and white vein quartz (N = 1). All of these raw materials appear to have been locally available (Milici and Swingle 1972). Because of the extremely small sample sizes, only the Knox chert sample is discussed.

Mass Analysis

The results of the mass analysis indicate primarily late stage reduction in the Knox chert sample. Ninety-six (90.6%) of the flakes fall within the 1/4" and 1/8" size grades, while there are no flakes greater than 1" and only one in the 3/4" size grade. In addition, 68.9% of the sample exhibits less than 50% or no dorsal cortex at all, again indicative of late stage reduction (Table 2).

Interpretation-Free Analysis

The results of this line of analysis coincide with the mass analysis. Complete flakes and blocky shatter, indicative of primary reduction, account for only 21.7% of the sample, while broken (PRB) flakes and flake fragments make up 66.0% of the total sample (Table 2).

Individual Flake Attribute Analysis

This last approach differs slightly with the other two. Late stage debitage makes up the largest percentage (29.2%) of the total sample. However, early and middle stage reduction percentages are only a few percentage points below this number (Table 2).

TABLE 2
KNOX CHERT DEBITAGE ATTRIBUTES, 40RE192.

Attribute	Count	Percentage of Sample
Dorsal Cortex		
100%	2	1.9
>50%	4	3.8
Platform Only	3	2.8
<50%	12	11.3
0%	61	57.5
Flake Type		
Complete	12	11.3
Blocky Shatter	11	10.4
Broken (PRB)	18	17.0
Fragment	52	49.0
Thermal Shatter[a]	13	12.3
Debitage Stage		
Early	26	24.5
Middle	25	23.6
Late	31	29.2
Blocky Shatter[a]	11	10.4
Thermal Shatter[a]	13	12.3

[a]Not included in this line of analysis.

Tools

Twenty-nine stone tools were recovered at Site 40RE192. Twenty-two (75.9%) of these are manufactured from Knox cherts. Most of the tools are bifaces, biface fragments, PPKs, and PPK fragments. Diagnostic artifacts include a Kirk Corner-Notched PPK, a Bifurcate Base Cluster PPK, a White Springs PPK, two Lowe Cluster PPKs, and two Hamilton PPKs. The only diagnostic artifact recovered that was not fashioned from Knox cherts was a Morrow Mountain PPK made from white vein quartz. The diagnostic artifacts recovered indicate a multicomponent occupation of site 40RE192 ranging from the Early Archaic to late in the prehistoric period. As such, the possibility of mixed assemblages is likely. However, by comparing the debitage/tool ratio to the percentage of late stage debitage for a given raw material, it is possible to gain some insight into the nature of the assemblage formation (Magne 1989). The debitage/tool ratio for Knox cherts recovered at site 40RE192 is nearly 5:1. Comparison of this ratio to 29.2% late stage debitage indicates an assemblage formed from tool/blank manufacture and situational repair in an area of raw material abundance. It is reasonable to hypothesize that site 40RE192 was a special use locale that was occupied briefly but repeatedly.

Feature 6

Feature 6 was the only prehistoric feature identified during the testing. It contained four pieces of lithic debitage and two calcined bone fragments, although a glass canning jar lid liner was found on the surface. This artifact was probably introduced by plow disturbance and as such represents surface trash, since no other lid liners were found in feature contexts on the site.

HISTORIC ARTIFACT ANALYSIS

Eight features were defined and excavated at site 40RE192 (see Figure 11). Five of these features were circular basin-shaped pits, an unusual form for historic features in East Tennessee. A square pit cellar and the remains of a chimney base were exposed as well.

Historic artifacts are analyzed by feature below. In this analysis, weighed architectural materials such as brick fragments and daub are not included in the artifact counts or artifact group frequencies.

Feature 1

Feature 1 contained only one indeterminate cut nail and one undecorated pearlware sherd.

Architecture Group	1	50%
Kitchen Group	1	50%
Total	2	

No accurately datable artifacts were recovered from Feature 1. Undecorated pearlware dates between 1780 and 1830 by the South (1977) scheme.

Feature 2

Feature 2 was an historic square pit cellar. A total of 959 artifacts, including ceramics, nails, glass, beads, and faunal remains, was recovered from this feature. Feature 2 was the most important feature on the site for diagnostic purposes.

Activity Group	14	1.5%
Architectural Group	43	4.5%
Arms Group	2	0.2%
Clothing Group	61	6.4%
Furniture Group	9	9.3%
Kitchen Group	792	82.6%
Medicinal Group	2	0.2%
Personal Group	36	3.8%
Total	959	

Activity Group (N = 14)

For Feature 2, this group consists of the stable and barn and hardware classes.

Stable and Barn (N = 8)

Large wrought iron pin	1	7.1%
Wrought horseshoe nails	6	42.9%
Square iron harness buckle	1	7.1%

The pin measures 250 mm in length and tapers from 26.1 mm to 12.1 mm in diameter. It is possibly a wagon kingpin.

Hardware (N = 2)

Double-pointed iron pin 6.4 cm long	1	7.1%
Small wire hook	1	7.1%

Miscellaneous Activity (N = 4)

Lead rod	1	7.1%
Piece of sulfur	1	7.1%
Black hemispherical objects	2	14.3%

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The lead rod is 48.6 mm long by 3.6 mm diameter. It may be lumber marking pencil. Sulfur was commonly used as a preserving agent for dried fruits as well as a disinfectant. The two black hemispherical objects are approximately 25 mm in diameter; their function and composition remain unknown.

Architecture Group (N = 43)

Mushroom-head wrought nails	2	4.7%
Rose-head wrought nails	3	7.0%
Wrought spike	1	2.3%
Wrought-headed cut nails	1	2.3%
L-Head cut nails	2	4.7%
Fully machine-cut nails	16	37.2%
Indeterminate nails	18	41.9%

The presence of five wrought nails could indicate a fairly early date of construction for the structure which at one time stood over Feature 2, as their use decreased dramatically following the introduction of machine-cut nails to this area in the first quarter of the 19th century. The ratio of cut nails to wrought nails (wrought spike not included) (3.8:1) could also indicate recycling of boards from older structures or a time lag in the replacement of wrought nails with cut nails in this area. However, the use of ratios is not very accurate since two thirds of the nails recovered cannot be identified as to method of manufacture. Wrought-headed cut nails date between 1796 and the late 1820s, when fully machine-cut nails replaced them in the area. A total of 70.1 g (0.15 lb) of brick and mortar fragments were recovered from Feature 2.

Arms Group (N = 2)

Lead ball 7 mm (.28 in) in diameter	1	50.0%
Lead sprue	1	50.0%

These two items were the only evidence of the use of firearms from site 40RE192.

Clothing Group (N = 61)

Buttons (N = 28)

Many buttons were recovered from Feature 2. Buttons were divided into two groups for this analysis--metallic and nonmetallic. The following list of nonmetallic buttons includes material. number of holes, type of center, diameter, and number of each type found.

Bone, 4-hole depressed center, 10.6 mm	1	1.6%
Bone, 4-hole depressed center, 12.7 mm	3	4.9%
Bone, 5-hole depressed center, 10.6 mm	2	3.3%
Bone, 5-hole depressed center, 12.7 mm	1	1.6%
Bone, 5-hole depressed center, 16.0 mm	7	11.5%

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Bone, 5-hole depressed center, 17.0 mm	4	6.6%
Shell, 4-hole depressed center, 9.3 mm	1	1.6%
White porcelain, 4-hole depressed center, 9.9 mm	1	1.6%

Metallic buttons were sorted according to composition. "Yellow metal" is used as a material instead of any specific metal name due to the difficulty involved in the correct determination of oxidized metal. The following list of metallic buttons includes material, shape, diameter, decoration on front and back, and total count for each button.

Yellow metal, domed, 18.6 mm, plain face, "BEST QUALITY" on back	1	1.6%
Yellow metal, domed, 18.6 mm, plain face, back illegible	1	1.6%
Yellow metal, domed, 20.3 mm, plain face, "London Double Quality" with stamped wreath on back	1	1.6%
Yellow metal, domed, 13.5 mm, plain face, back has reeded design	1	1.6%
Gilded metal, flat, 12.3 mm, 8-pointed star on face, "superfine dolcis" on back	1	1.6%
Yellow metal, flat, 18.1 mm, plain face, domed boss on back	1	1.6%
Yellow metal, flat, 2-piece, 18.2 mm, plain face, no back	1	1.6%
Yellow metal, flat, 2-piece, 12.5 mm, plain face, "double...gilt" on back	1	1.6%

These button types are only datable to within a 65 year period from 1800 to 1865 (Olsen 1963; South 1964) since none of the authorities can agree on the median dates. For instance, Olsen (1963) dates the first metallic button listed above from 1812 to 1820, while South (1964) dates it from 1837 to 1865. White glass buttons were in use by 1840 (Fink and Ditzler 1993). Commercial manufacture of shell buttons began in 1855 (Fontana and Greenleaf 1962), but the one recovered from Feature 2 seems to be of local manufacture and thus could date earlier.

Clothing Maintenance (N = 33)

Wound wire ball-headed tinned brass straight pins, averaging 32 mm in length	27	44.3%
Tinned brass flat-headed pins	3	4.9%
Fragments of iron straight pins	3	4.9%

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Wound wire ball-headed brass straight pins were only manufactured prior to 1824 (Noel-Hume 1970).

Furniture Group (N = 9)

Wrought iron mechanism parts	4	44.4%
Mirror glass, 1.05 mm in thickness	5	55.6%

The four wrought iron mechanism parts are probably from a door latch. The five sherds of mirror glass still retain amalgamated mercury silvering. This type of silvering dates from the early to mid-19th century (Roenke 1978:13).

Kitchen Group (N = 792)

The kitchen group is the most important group for purposes of dating and determination of status. Most artifacts of the kitchen group from site 40RE192 came from Feature 2. The group as a whole contains all items associated with the preparation, consumption, and storage of food.

Ceramics (N = 741)

Coarse earthenwares and stonewares:

Clear lead glazed redware	63	8.0%
Iron oxide lead glazed redware	27	3.4%
Salt glazed stoneware	1	0.1%
Total	91	11.5%

Refined earthenwares:

Annular wares: common cable	18	2.3%
Pearlware: undecorated	28	3.5%
Pearlware: blue shell edge	19	2.4%
Pearlware: green shell edge	1	0.1%
Pearlware: green edge-decorated	23	2.9%
Pearlware: blue transfer printed	57	7.2%
Pearlware: red transfer printed	3	0.4%
Pearlware: fineline underglaze polychrome	13	1.6%
Transitional wares: undecorated	180	22.7%
Transitional wares: blue edge decorated	11	1.4%
Transitional wares: underglaze blue hand painted	216	27.3%
Transitional wares: underglaze polychrome hand painted	27	3.4%
Transitional wares: black transfer printed	11	1.4%
Whiteware: undecorated	14	1.8%

Whiteware: underglaze polychrome broadline	19	2.4%
Whiteware: brown transfer printed	1	0.1%
Yellow-Glazed refined earthenware	3	0.4%
Total	644	81.3%

Porcelains:

Plain oriental hard paste porcelain	6	0.8%

The large number of redware sherds recovered from Feature 2 (Figure 15) indicates a date prior to 1830. By this time salt glazed stoneware was beginning to replace redware in the Southeast (Zug 1986:23). The single sherd of salt glazed stoneware fits with this interpretation.

The amounts of pearlware, transitional ware, and whiteware also point to the 1820s-1830s as an occupation date for the feature (Figure 16). The sherds of fineline underglaze polychrome pearlware saucer, however, date from 1795 to 1815 (South 1977) (Figure 17). It is unlikely that the site was occupied that early, due to the absence of creamware. The saucer was probably an heirloom piece which was brought to the site by the first occupants in the 1820s. The whiteware is all early, with the possible exception of the single brown transfer-printed sherd. The yellow glazed refined earthenware sherds are most unusual. They are reminiscent of Whieldon ware but undoubtedly date from the early 19th century. It is noteworthy that sherds of a similar ware were recovered from the James White Second Home Site, 40KN68, which was occupied from around 1790 until around 1854 (Faulkner 1984:64). An indication of the status of the occupants of the site is the large amount of tea wares, which include all of the underglaze painted wares (Figures 16 and 17), 42% of the total refined earthenwares (Figure 18).

The six sherds of porcelain are unusual for the time period in that there is no trace of decoration on them, not even a ghost image from overglaze enameling.

Glass (N = 24)

In this analysis, alcoholic beverage containers are included with the kitchen group glass.

Olive green wine bottle sherds	2	0.3%
Light green historical flask sherds	2	0.3%
Clear historical flask sherds	5	0.6%
Light green unidentified container sherds	4	0.5%
Clear unidentified container sherds	2	0.3%
Indeterminate glassware sherds	9	1.1%

The absence of canning jar fragments is another indication of a pre-Civil War date for site 40RE192. The vessels referred to above as historical flasks are sometimes known as banjo flasks (Munsey 1970). They are mold-blown bottles ranging in capacity from a half pint to a quart, generally depicting patriotic or historical scenes and designed for the purpose of holding distilled

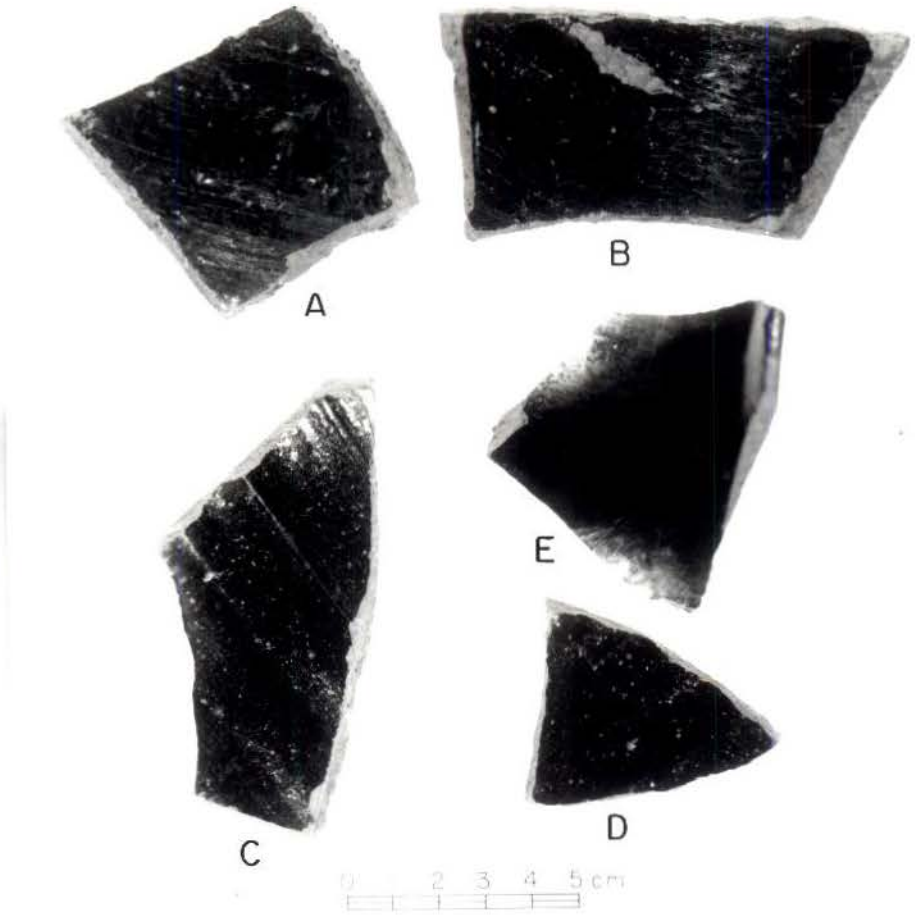

FIGURE 15. Lead-glazed redware from Feature 2, 40RE192. A-D — clear lead glaze (inside only), E — dark brown iron oxide tinted lead glaze on refined pitcher lip.

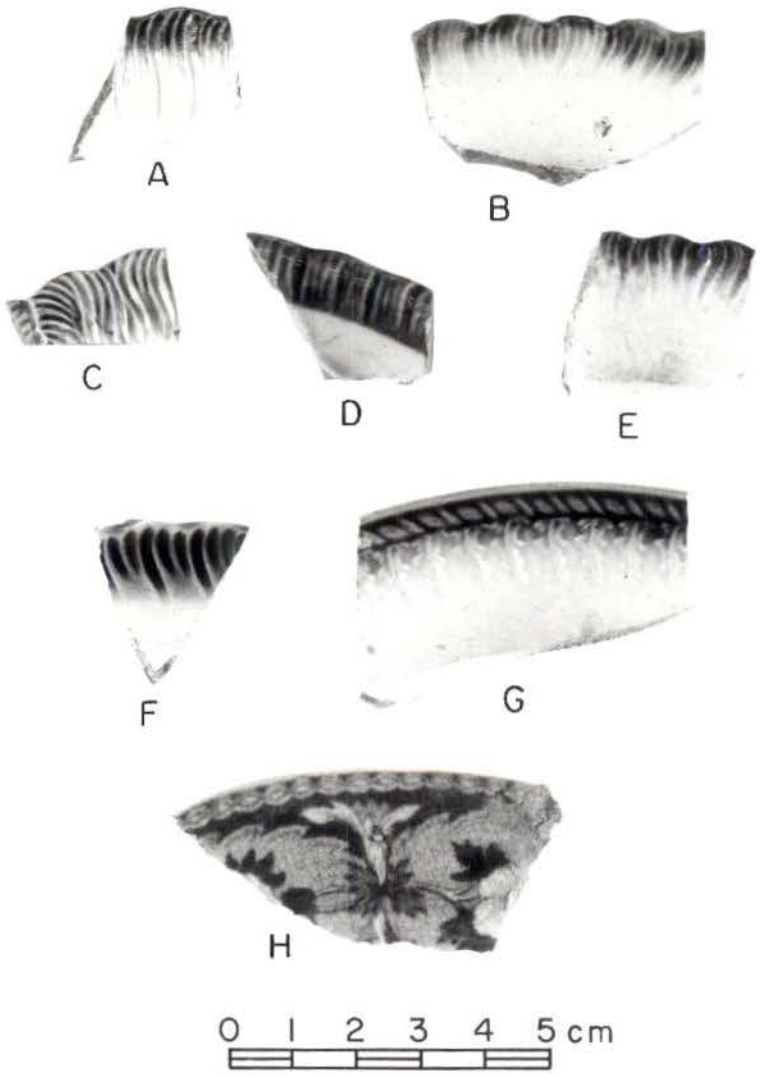

FIGURE 16. Pearlware from Feature 2, 40RE192. A-E — varieties of blue shell edged, F — green shell edged, G — green edge-decorated, H — historical blue transfer printed.

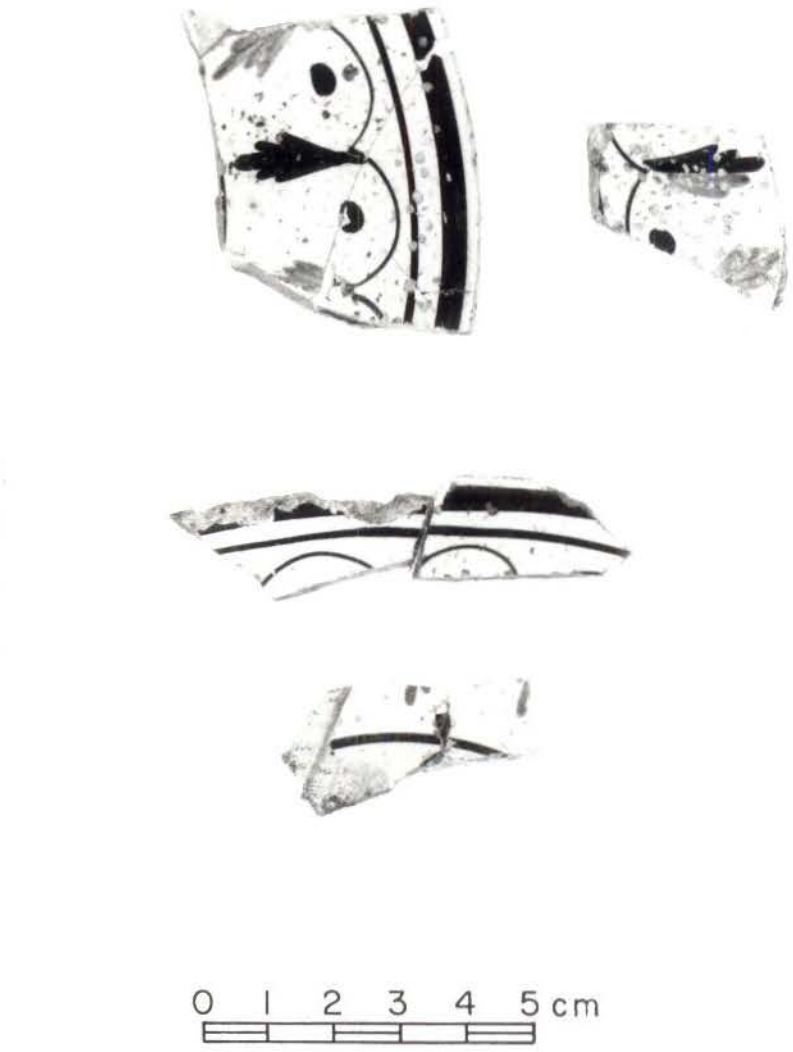

FIGURE 17. Fragments of fine line underglaze polychrome painted pearlware tea bowl from Feature 2, ca. 1795, 40RE192.

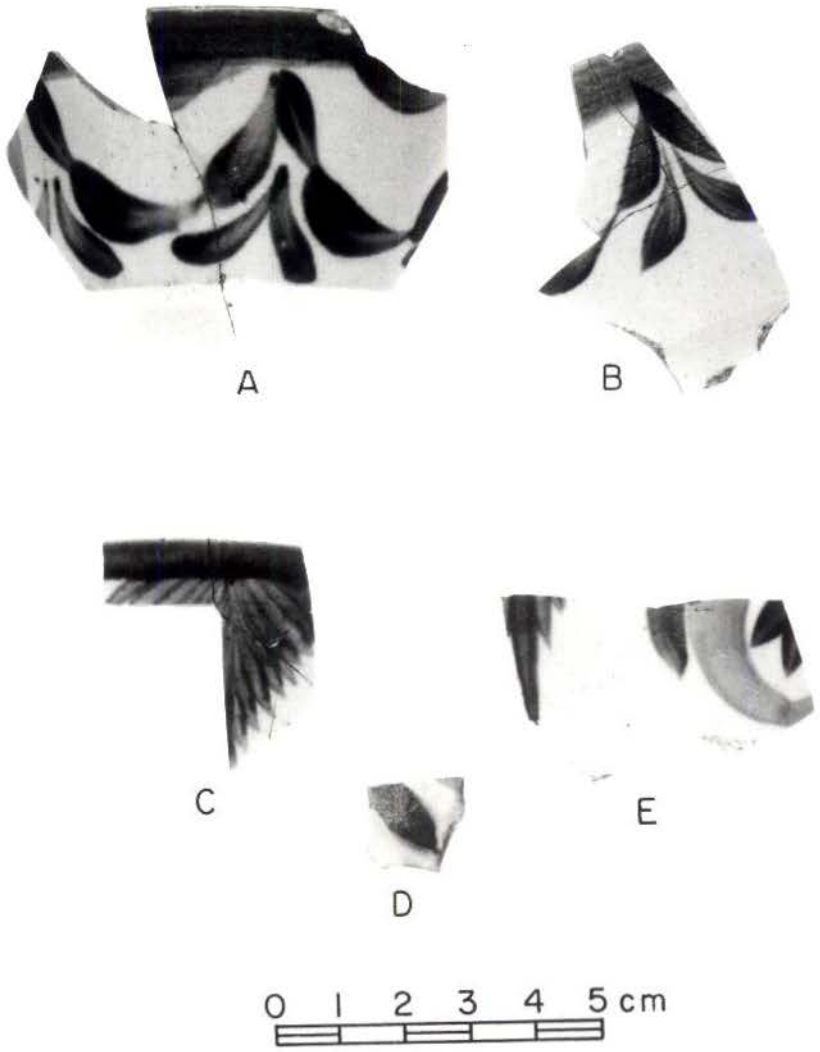

FIGURE 18. Underglaze blue hand-painted pearlware teacup fragments, 40RE192.

liquors (McKearin and McKearin 1941; Munsey 1970). They were popular from the 1820s to the 1840s.

Metalware (N = 27)

This category includes any metal items used in the production, storage, or consumption of food.

Table knife	1	0.1%
Table knife blade and handle fragments	5	0.6%
Tinware fragments	21	2.7%

The complete table knife recovered is broken into two pieces. It has a rounded point, forged in-place bolsters, and a carved bone handle (Figure 19). It is stylistically similar to table knives of the 1820s illustrated in Noel-Hume (1970). The 21 fragments of tinware containers include a handle for a tin cup complete with soldered end connections.

Medicinal Group (N = 2)

Clear glass vial sherds	2	100%

The two sherds of very thin clear glass most likely are from vials used for holding medicine.

Personal Group (N = 36)

This group includes all items carried on or about the person that are not items of clothing and items used on an everyday basis.

Perfume bottle bases	2	5.6%
Bone double-sided comb (Figure 20)	1	2.8%
Salt glazed stoneware tobacco pipe bowl fragment	1	2.8%
Glass beads	32	88.9%

One perfume bottle base is clear leaded glass with a fluted design and the other is one apple green with no further decoration. Both bases bear the marks of a glass-tipped pontil rod, indicating a date prior to 1870 (Jones and Sullivan 1985:45). The single salt glazed stoneware tobacco pipe bowl fragment is one of only two smoking-related artifacts from site 40RE192. Another pipe fragment was found in Feature 5.

The 32 glass beads were recovered (Figure 20) were classified according to the method developed by Kidd and Kidd (1970) for use in eastern Canada. Table 3 presents a description of the beads. In the Kidd and Kidd system, types beginning with the letter I are of blown manufacture, and types beginning with the letter W are of wire-wound construction. The color names used in Table 3 are those used by Kidd and Kidd. These beads were probably made in Austria or Bohemia between 1780 and 1830 (Fogelman 1991:6).

FIGURE 19. Table knife with carved bone handle, 40RE192.

FIGURE 20. Glass beads and double-sided bone comb recovered from Feature 2, 40RE192. Beads (top) and comb (bottom).

TABLE 3
GLASS BEADS FROM FEATURE 2, FROM 40RE192.

Type	Size	Glass (body/core)	Name of Color (body/core)	Sides/Shape	Bead Count
Ic13	4-6 mm	Clear	Brite Navy	6	2
IIIf2	6-10 mm	Clear/Translucent	Ultramarine/Aqua	8	9
IIIf1	6-10 mm	Clear/Translucent	Light Gray/Oyster White	8	9
Ic9	2-4 mm	Clear	Apple Green	5	1
Ic12	4-6 mm	Clear	Brite Copenhagen Blue	6	2
WIb16	6-10 mm	Clear	Brite Navy	Round	3
WIb11	4-6 mm	Opaque	Robin's Egg Blue	Round	1
WId1	6-10 mm	Clear	Amber	Donut	2
WIIIa1	6-10 mm	Translucent	White/Opaque Coral Overlay	Donut	3
					32

Based on Kidd, Kenneth E., and Martha Ann Kidd, 1970, *A Classification System for Glass Beads for the Use of Field Archaeologists*. Canadian Historic Sites: Occasional Papers in Archaeology and History 1. National Historic Sites Service, National and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa, Canada.

Dates

Feature 2 was the richest in material for the entirety of site 40RE192. It yielded many datable artifacts, most of which suggest an occupation beginning in the 1820s and continuing through the 1830s, but no later than the early 1840s. The lack of window glass to date is expected, since the structure was undoubtedly a log cabin with shuttered rather than glazed windows. The mean ceramic date (South 1977) is 1823.5. This date supports the apparent dates of the other artifacts from this feature. The buttons support an occupation in the early 19th century which continued until at least 1840.

Feature 3

Feature 3 was a large circular pit in which a stick-and-mud chimney was probably constructed. It contained cut nails, ceramics, some glass, and a straight pin.

Activity Group	2	5.6%
Architectural Group	12	33.3%
Clothing Group	1	2.8%
Kitchen Group	21	58.3%
Total	36	

Activity Group (N = 2)

Sheet iron or tinplate fragments	2	100.0%

Architecture Group (N = 12)

This is an important group in the interpretation of this feature as a hearth or chimney base made of sticks and mud. The great majority of the material is fired daub with the impressions of large sticks.

Cut nails	10	83.3%
L-head cut nail	1	8.3%
Hammer-dressed limestone	1	8.3%

The 79.5 g (0.18 lb) of brick fragments, if consolidated, would not be enough to compose one whole brick. The limestone flake weighed 217 g (0.48 lb) and was probably a byproduct of stone-shaping activities conducted for the foundations of the house. A total of 3,442.6 g (7.59 lb) of fired clay daub was recovered.

Clothing Group (N = 1)

Ball-head straight pin	1	100.0%

The single ball-head straight pin is a type dating before 1824 (Noel-Hume 1970).

Kitchen Group (N = 21)

Ceramics (N = 18)

Coarse earthenwares and stonewares:

Lead glazed redware	2	9.5%
Salt glazed stoneware	2	9.5%
Total	4	19.0%

Refined Earthenwares:

Pearlware: Underglaze Blue Hand Painted	3	14.3%
Pearlware: Underglaze Polychrome Broadline	1	4.8%
Pearlware: Blue Transfer Printed	2	9.5%
Pearlware: Undecorated	4	19.0%
Transitional Ware: Undecorated	2	9.5%
Whiteware: Underglaze Polychrome Broadline	2	9.5%
Total	14	66.6%

Almost all the refined earthenwares from Feature 3 are tea wares. The undecorated sherds may be pieces of the same vessels which produced the decorated sherds.

Glass (N = 3)

Dark olive green wine bottle sherd	1	4.8%
Light green historical flask sherd	1	4.8%
Indeterminate clear container sherds	1	4.8%

Two out of the three sherds from Feature 3 are from alcoholic beverage containers. The third is from an indeterminate container.

Dates

The artifacts from Feature 3 support a date in the 1820s-1830s for the site. The mean ceramic date of the feature is 1820.8 and the straight pin was manufactured prior to 1824.

Feature 4

Feature 4 is a depression hypothesized to be caused by an animal, possibly a family pet or a pig, nestling underneath the house near the hearth. The only artifact recovered from Feature 4 was a fragment of a hog mandible. No date is available for this feature.

Feature 5

Feature 5 was most likely an historic storage pit. It contained several large stones. An 1839 silver dime was recovered from Level 3 in the east half of Feature 5 (Figure 21). Other artifacts include nails, ceramics, glass, and a stoneware tobacco pipe fragment.

Activity Group	5	11.9%
Architecture Group	5	11.9%
Clothing Group	2	4.8%
Kitchen Group	27	64.3%
Medicinal Group	1	2.4%
Personal Group	2	4.8%
Total	42	

Activity Group (N = 5)

Pieces of sheet iron or tinplate	5	100.0%

The artifacts in this group are categorized as miscellaneous hardware.

Architecture Group (N = 5)

Feature 5 contained the most architectural material outside the immediate house area, including 135.8 g (0.30 lb) of brick fragments.

Mushroom head wrought nail	1	20.0%
Fully machine-cut nails	3	60.0%
Indeterminate nail	1	20.0%

Clothing Group (N = 2)

Small brass eyelet	1	50.0%
Iron shoe tack	1	50.0%

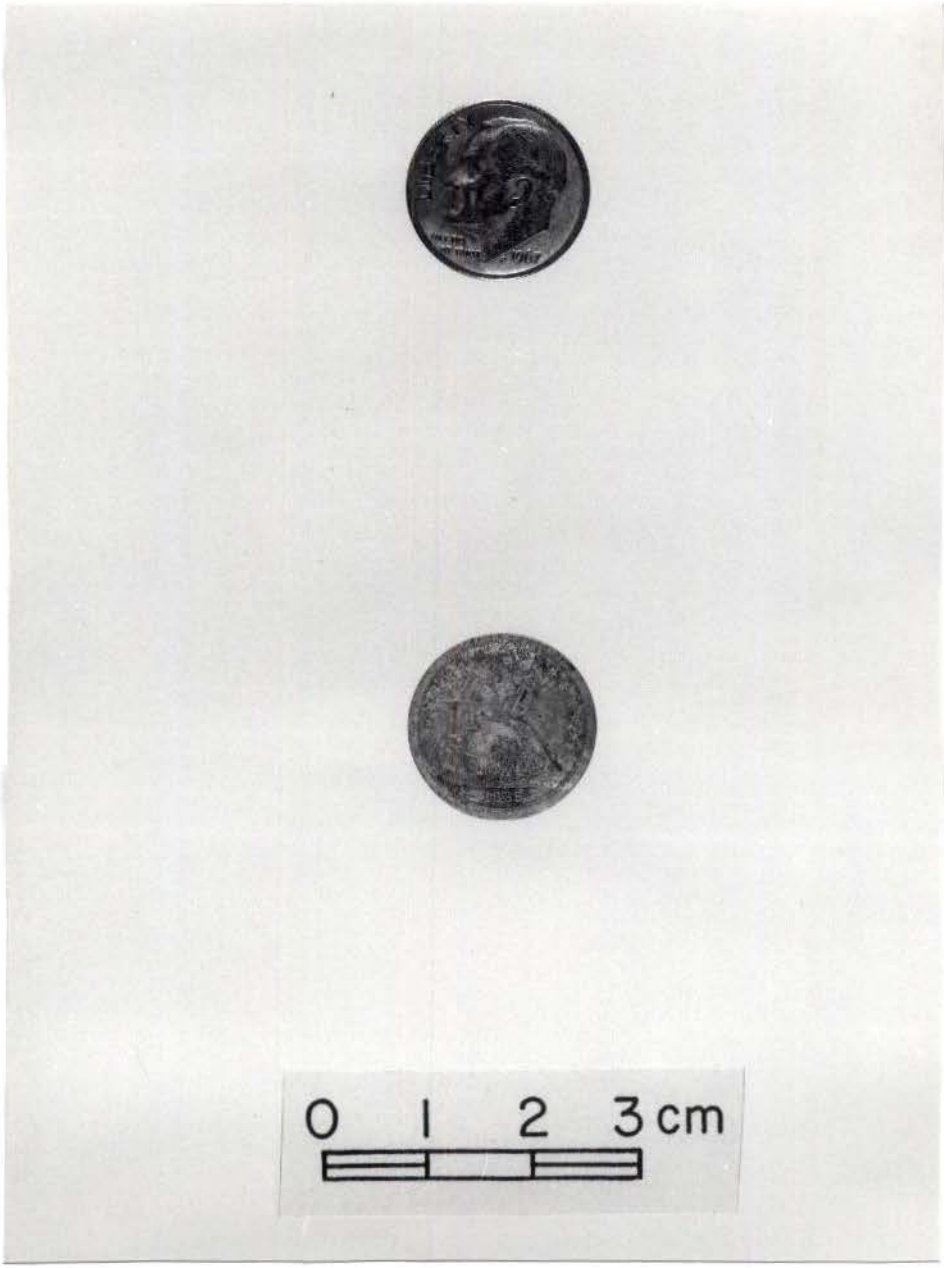

FIGURE 21. U.S. dime dated 1839 from Feature 5, 40RE192. Modern U.S. dime included for scale.

Kitchen Group (N = 27)

Next to Feature 2, Feature 5 had the largest selection of kitchen group artifacts on site 40RE192.

Ceramics (N = 21)

Coarse earthenwares and stonewares:

Salt glazed stoneware	2	7.4%

Refined earthenwares:

Pearlware: annular mocha	3	11.1%
Pearlware: blue transfer printed	1	3.7%
Pearlware: underglaze polychrome broadline	1	3.7%
Transitional wares: undecorated	3	11.1%
Whiteware: annular mocha	1	3.1%
Whiteware: undecorated	6	22.2%
Whiteware: blue shell edged	1	3.7%
Indeterminate burned earthenware	1	3.7%
Total	17	63.0%

Ironstone:

Ironstone: undecorated	2	7.4%

The ceramics are perhaps typical of the site in that most of them are from tea sets. The sherd of underglaze polychrome decorated pearlware is more useful for dating purposes than many other ceramics from the site since it bears maker's mark for the Davenport company of Longport, England. This particular mark was used between 1793 and 1810 (Godden 1964:189), thus adding another early 19th century date to the range for the site as a whole. The ironstone, however, could not date prior to 1814 and is most likely 20 or 30 years later than that date. The marked sherd may be another heirloom piece.

Glass (N = 6)

The kitchen group glass from Feature 5 consists entirely of fragments of unidentifiable containers that are placed in this category because they are most likely liquor bottles.

Indeterminate clear glass	2	7.4%
Indeterminate aqua glass	1	3.7%
Indeterminate light green glass	3	11.1%
Total	6	22.2%

Medicinal Group (N = 1)

Very thin blue-green container glass sherd	1	100.0%

A single sherd of very thin blue-green container glass was found under a rock at the bottom of the feature. It is probably from a medicine vial.

Personal Group (N = 2)

Stoneware tobacco pipe fragment	1	50.0%
1839 U.S. dime	1	50.0%

The 1839 U.S. dime showed some wear.

Dates

Feature 5 had some interesting artifacts for dating purposes. The dime has an indisputable date of 1839, and as it shows wear, it was not new when it entered the archaeological record. The mean ceramic date of Feature 5 is 1844. It is probable that the mean ceramic date is close to the terminal date of the feature. The Davenport sherd adds an early date of 1793-1810. The feature was probably filled in during the 1840s but reflects the earlier occupation of the site.

Feature 7

Artifacts recovered from Feature 7 include ceramics, glass, and a jaw from a set of blacksmith's tongs. No other evidence of smithing activity was recovered from the site.

Activity Group	2	20.0%
Architecture Group	0	0.0%
Kitchen Group	8	80.0%
Total	10	

Activity Group (N = 2)

Jaw portion of a pair of blacksmith's tongs	1	50.0%
Iron plate	1	50.0%

Feature 7 was the only feature on the site to yield any evidence of manufacturing or repair activities. The iron plate may be a worn plow point. No other evidence of smithing was found in this or in any other feature.

Architecture Group (N = 0)

The only architectural artifacts recovered from Feature 7 were two small brick fragments with a combined weight of 12 g.

Kitchen Group (N = 8)

Ceramics (N = 6)

Coarse earthenwares and stonewares:

Salt glazed stoneware	5	62.5%

Refined earthenwares:

Transitional wares: underglazed blue hand painted	1	12.5%

The stoneware sherds recovered from Feature 7 can be refitted to form part of the side of an unidentified vessel. The refined earthenware sherd is from a teacup.

Glass (N = 2)

Dark olive green wine bottle sherd	1	12.5%
Indeterminate clear container glass sherd	1	12.5%

The wine bottle sherd is the greater part of the base of the bottle. It has a deep kick-up and an iron pontil rod scar, indicating a date prior to the 1860s (Jones and Sullivan 1985).

Dates

The ceramics from Feature 7 are too small a sample to provide a good mean ceramic date but in combination with the glass a reasonable estimate may be made. Feature 7 falls within the 1820-1840 range established for the site as a whole.

Feature 8

Artifacts recovered from Feature 8 include fragments of sheet iron, ceramics, and glass.

Architecture Group	1	5.3%
Furniture Group	9	47.4%
Kitchen Group	9	47.4%
Total	19	

Architecture Group (N = 1)

Rose-headed wrought nail	1	100.0%

In addition, 83.8 g (0.18 lb) of brick fragments were recovered from Feature 8.

Furniture Group (N = 9)

Sheet iron or tinplate fragments	7	77.8%
Short curved iron strut 18.2 mm long	1	11.1%
Flat glass sherd	1	11.1%

The sheet iron or tinplate fragments and the iron strut are interpreted as the remains of a tin box, with the strut being a leg for the box.

The flat glass from Feature 8 is of great importance if it is window glass, as the Moir formula can be applied to yield a date. The sherd is 1.1 mm thick. According to the Moir formula, a date of 1805 is obtained. However, since this sherd is the only sherd of flat glass recovered from the entire site, it is likely that it is from an item of furniture, such as a mirror with the silvering worn off. If there were glass windows in the structure that once stood on the site, more window glass should have been present in the archaeological record.

Kitchen Group (N = 9)

Ceramics (N = 7)

Coarse earthenwares and stonewares:

Clear lead glazed redware	1	11.1%
Iron oxide tinted lead glazed redware	1	11.1%
Total	2	22.2%

Refined earthenwares:

Pearlware: blue shell edged	3	33.3%
Pearlware: undecorated	2	22.2%
Total	5	55.6%

Glass (N = 2)

Dark olive green wine bottle sherd	1	11.1%
Indeterminate clear container glass sherd	1	11.1%
Total	2	22.2%

Dates

Feature 8 was filled in during the early part of the occupation of the site. The flat glass date of 1805 and the mean ceramic date of 1809 both indicate that this is the case. The range of dates for the ceramics in this feature extend as late as 1830 at a minimum. The pearlware sherds appear to postdate 1820. In addition, the flat glass is probably not window glass.

Feature 9

Feature 9 was heavily disturbed by tree roots. Glass, ceramics, and a table knife blade were recovered.

Architecture Group	0	0.0%
Kitchen Group	9	100.0%
Total	9	100.0%

Architecture Group (N = 0)

A total of 19.9 g (0.04 lb) of brick fragments were recovered.

Kitchen Group (N = 9)

Ceramics (N = 3)

Refined earthenwares:

Pearlware: undecorated	1	11.1%
Burned indeterminate earthenware	2	22.2%
Total	3	33.3%

Glass (N = 5)

Indeterminate blue-green container sherds	5	55.6%

Metalware (N = 1)

Table knife	1	11.1%

A table knife blade with a rounded point and the remains of a bone handle were in the disturbed eastern profile of Feature 9. The shape of the blade is identical to the knife blades recovered from Feature 2.

Dates

The artifacts from Feature 9 seem to have the same date range as those from the other features on the site--between about 1820 and 1840.

Postholes

The postholes that were examined were determined to be unrelated to the structure and its occupation episodes, perhaps dating as late as the latter half of the 20th century. Unfortunately, not all of the postholes were examined. The small group to the west of the structure may have been related to another structure of some kind, perhaps an elevated corncrib.

Controlled Surface Collection Artifacts

A total of 344 historic artifacts were collected from the surface of site 40RE192 after plowing. The concentrations of these artifacts, however, bore no relation whatsoever to the location of subsurface features on the site. In addition, the general dates of most of the artifacts recovered in the controlled surface collection tend to be from 40 to 50 or more years later in time than the artifacts recovered from feature contexts. It is therefore concluded that the surface artifacts at site 40RE192 are the result of post-occupation dumping or other discard behavior, perhaps related to the development of the road which would become State Route 29. This hypothesis is strengthened by the presence of many modern glass bottle fragments and glass telegraph wire insulator fragments. The controlled surface collection artifacts may be broken down as follows: ceramics (N = 145), flat glass (N = 13), other glass (N = 142), nails (N = 17), metal (N = 15), and other (N = 12). The ceramics may be further divided into creamware (N = 1), pearlware (N = 19), transitional ware (N = 1), whiteware (N = 70), ironstone (N = 7), indeterminate refined earthenware (N = 5), stoneware (N = 32), redware (N = 10).

Additional Materials

The materials (N = 130) not included in the previous analyses are comparatively late historic detritus from the test units (N = 116), the postholes (N = 6), and the general surface collection (N = 8). These artifacts were not included in the analysis because, like artifacts recovered during the controlled surface collection, they seem to be the result of post-occupation dumping or other discard behavior. Artifacts from the test units consist of historic ceramics (N = 61), flat glass (N = 6), other glass (N = 30), nails (N = 9), metal (N = 5), and other (N = 5). The ceramics may be further divided into pearlware (N = 15), whiteware (N = 36), ironstone (N = 2), indeterminate refined earthenware (N = 2), stoneware (N = 4), and redware (N = 2). Artifacts from the postholes consist of ceramics (whiteware) (N = 1), other glass (N = 1), nails (N = 1), and metal

(N = 3). Artifacts from the general surface collection consist of historic ceramics (N = 8). The ceramics may be further divided into pearlware, (N = 2), whiteware (N = 3), ironstone (N = 2), and stoneware (N = 1).

FAUNAL ANALYSIS

A total of 2,389 pieces (1,571.4 g) of faunal material was recovered from site 40RE192. Faunal material was identified using the Vertebrate Comparative Skeletal Collection at The University of Tennessee, Knoxville.

Methods

The order, family, genus, or species of faunal material was initially determined. Identifiable classes include fish, amphibian, aves, and mammal. These classes were further divided in small/medium/large categories within the classes. Specimens that were not identifiable were placed into size categories of small/medium/large. These size categories were based on cortical thickness, percent of cancellous bone present, curve of the bone fragment, and general fragment size. For example, a large bone fragment with thick cortical bone and a slight curve would be classified as a large mammal. Element and element side were also recorded for the identifiable fragments. Maturity for species was determined according to epiphyseal fusion.

Faunal material was also coded according to provenience, modification, and states of epiphyseal fusion. Provenience for the bone material was recorded by feature, and the Number of Individual Specimens (NISP) was determined across the site. Modification categories include tool, polished, cut marked, burned, tooth marked, weathered, or ingested bone. Taxon and elements were recorded for bone tools, and polishing was also recorded as were cut marks on bone. Cut marks on the bones were recorded if single or multiple striations were discerned. Tables 4-6 list taxa present by provenience, the total amount of bone and weight by feature, and the total amount and weight of the recovered faunal remains by taxon from the site as a whole.

Faunal Remains by Provenience

Feature 1

Forty-one unidentifiable bone fragments (13.7 g) were recovered from Feature 1.

Feature 2

A total of 1,894 bone fragments (1,202.3 g) were recovered from Feature 2. This feature produced the highest number of identifiable remains.

bos sp. (cow), NISP = 1, one hyoid;

TABLE 4
TAXA PRESENT BY PROVENIENCE, 40RE192.

Provenience	Taxon	Weight (g)	NISP
Feature 2	*Bos* sp.	2.4	1
	Campostoma sp.	0.1	1
	Odocoileus virginianus	23.2	1
	Sciurus sp.	7.3	17
	Didelphis marsupialis	2.7	1
	Sus scrofa	201.7	45
	Sylvilagus floridanus	1.8	6
	Cricetidae	0.1	2
	Anas sp.	0.2	1
	Passeriformes	0.1	1
	Gallus gallus	8.9	9
	Rana sp.	0.2	2
Feature 5	*Sus scrofa*	10.7	5
	Sylvilagus floridanus	0.6	1
Feature 7	*Sus scrofa*	2.2	1
Feature 8	*Equus cf.* (mule)	60.8	1
	Sciurus sp.	0.2	2
Feature 9	*Sus scrofa*	9.3	1
Total	13 Taxa	332.5	98

TABLE 5
WEIGHT AND NUMBER OF BONE SPECIMENS BY PROVENIENCE, 40RE192.

Provenience	Total Weight (g)	Total Amount of Bone (N)
Feature 1	13.7	41
Feature 2	1,202.3	1,894
Feature 3	28.8	76
Feature 4	32.0	11
Feature 5	72.6	165
Feature 7	45.2	20
Feature 8	89.9	84
Feature 9	74.9	88
Controlled Surface Collection	2.3	2
Postholes	2.8	12
Test Unit 1	3.1	3
Test Unit 2	4.3	1
Test Unit 3	2.3	4
Total	1,571.4	2,389

TABLE 6
WEIGHT AND NUMBER OF SPECIMENS BY TAXA, 40RE192

Taxon	Total Weight (g)	Total Amount (N)
Unidentifiable	1,238.9	2,291
Anus sp.	0.2	1
Bos sp.	2.4	1
Campostoma sp.	0.1	1
Cricetidae	0.1	2
Didelphis marsupialis	2.7	1
Equus cf. (Mule)	60.8	1
Gallus gallus	8.9	9
Odocoileus virginianus	23.2	1
Passeriformes	0.1	1
Rana sp.	0.2	2
Sciurus sp.	7.5	19
Sus scrofa	223.9	52
Sylvilagus floridanus	2.4	7
Total	1,571.4	2,389

Didelphis marsupialis (opossum), NISP = 1, one right humerus;

Odocoileus virginianus (white-tailed deer), NISP = 1, one right ilium of the pelvis;

Sus scrofa (domestic pig), NISP = 45, two canines, one second premolar, one incisor, one lower left second incisor, one right second metacarpal, two first phalanges, two second phalanges, three third phalanges, three indeterminate phalanges, five fibula fragments (one left), one ulna fragment (one left), one femur fragment, one tibia, two third metacarpals (both right), one fifth metacarpal, three metapodials, one right second metatarsal, two radii (one right, one indeterminate), one left mandible, one left calcaneus, one right central tarsal, one femur, one hyoid, one central carpel, one left ulna, one right fourth tarsal, one right tibia, one third tarsal, one right radius carpus, one sternal fragment;

Sylvilagus floridanus (eastern cottontail rabbit), NISP = 6, two humeri (one right, one indeterminate), one metapodials, one left radius, one left scapula, and one right femur;

Sciurus sp. (squirrel), NISP = 17, two femurs (one right, one left), five humeri (three right, one left, one indeterminate), two mandibles (both left), two pelves (one left, one right ilium), three radii, one right scapula, one left tibia, and one caudal vertebra;

Cricetidae sp. (mouse), NISP = 2, two tibia (one right, one left);

Anas sp. (ducks), NISP = 1, one ulna;

Gallus gallus (domestic chicken), NISP = 9, one carpometacarpus, one right femur, two fibulas (one right, one left), one furculum, one humerus, one radius, one tarsometatarsus, and one ulna;

Order passeriformes (song bird), NISP = 1, one tarsometatarsus;

Rana sp. (toad), NISP = two, one ilium and one tibia; and

Campostoma sp. (stone roller), NISP = 1, one pharyngeal (0.1 g).

A total of 251 egg shell fragments (4.7 g) were also recovered.

Feature 3

Seventy-six unidentifiable bone fragments (28.8 g) were recovered from Feature 3.

Feature 4

Eleven unidentifiable bone fragments (32.0 g) were recovered from Feature 4.

Feature 5

A total of 165 bone fragments (72.6 g) was recovered from Feature 5. Six bone fragments were identifiable.

Sus scrofa (domestic pig), NISP = 5, one a incisor, one molar, one metapodial, one tibia, and one ulna (no determination to side or position could be made; and

Sylvilagus floridanus (eastern cottontail rabbit), NISP = 1, one right femur.

Feature 7

Twenty bone fragments (45.2 g) were recovered from Feature 7. One *Sus scrofa* premolar was identified.

Feature 8

Eighty-four bone fragments (89.9 g) recovered from Feature 8.

Equus cf. sp. (mule?), 60.8 g, NISP = 1, one left condyle of the mandible; and

Sciurus sp. (squirrel), 0.1 g, NISP = 2, one right humerus and one tibia.

Feature 9

Eighty-eight bone fragments (74.9 g) were recovered from Feature 9.

Sus scrofa (domestic pig), NISP = 1, one ulna.

Test Unit 1

Three unidentifiable bone fragments (3.1 g) were recovered from Test Unit 1.

Test Unit 2

One unidentifiable bone fragment (4.3 g) was recovered from Test Unit 2.

Test Unit 3

Four unidentifiable bone fragments (2.3 g) were recovered from Test Unit 3.

Controlled Surface Collection

Two unidentifiable bone fragments (2.3 g) were recovered during the controlled surface collection.

Posthole

Twelve unidentifiable bone fragments (2.8 g) were recovered from a posthole.

Summary of Fauna from Features

Domestic pig was the most numerous species present at site 40RE192. Both adults and juveniles were present at the site. This is marked by the presence of many unfused phalanges. Domestic pig was a major component of the diet. This is evident from the high degree of fragmentation of the faunal assemblage. Fragmentation could be a result of post-depositional processes, such as trampling by large mammals or ravaging by canids; however, the recovered remains do not demonstrate tooth marks of large carnivores, though some bones do display rodent gnaw.

The next most represented animals are squirrels, though no species can be positively identified because the lack of complete cranial remains and teeth. No cut marks were observed on the elements, nor was there any modification from burning.

Identified Species

Domestic Animals

Domestic mammals were introduced to North American in the 1500s. *Bos* sp. (cow), *Equus* sp. (mule), *Sus scrofa* (domestic pig), and *Gallus gallus* (domestic chicken) are represented in the faunal assemblage.

Nondomesticated Animals

Nondomesticated animals in the assemblage include *Odocoileus virginianus* (white-tailed deer), *Sylvilagus floridanus* (eastern cottontail rabbit), *Didelphis marsupialis* (opossum), *Sciurus* sp. (squirrel), Cricetidae (mice, voles, rats, and lemmings), *Campostoma* sp. (stone rollers), passeriformes (song birds), *Anas* sp. (ducks), and *Rana* sp. (frogs).

The habitat of white-tailed deer consists largely of forest, swamps, and open brushy areas. Deer group together in large units during the winter, but separate into smaller groups of two to three during the warmer months (Burt and Grossenheider, 1952). Deer are active from early evening to late morning. They feeds on green vegetation in summer and twigs and bark in winter. Deer can be found in heavy brush, in strips of forest with open areas, and near edges of swamps and weed patches (Burt and Grossenheider 1980).

The opossum is a marsupial which prefers farming areas and is usually active at night (Burt and Grossenheider 1980).

The squirrel specimens (Number of Individual Specimens/NISP = 15, Minimum Number of Individuals/MNI = 6) belong to either the gray or fox species. No cranial remains with teeth were

recovered so species could not be determined positively. Squirrels inhabit pine and hardwood forests (Burt and Grossenheider 1980).

The Cricetidae family includes small to medium sized rodents. They live mostly on and in the ground, though some live in trees, others in aquatic environments, and others in rocky situations (Burt and Grossenheider 1980).

Stone rollers are a type of fish which use a hard ridge on the lower jaw to scrape algae and other food from rocks. Stone rollers are wide spread across the United States from New York west to North Dakota and south to South Carolina to Texas. Its habitat includes rocky riffles, runs, and pools of headwaters, creeks, and small to medium rivers (Page and Burr 1991).

Ducks are found from Florida to New England. Duck habitat includes marshes, wooded swamps, grain fields, ponds, rivers, lakes and bays (Peterson and Peterson 1980).

Frogs may be found on all continents except Antarctica (Conant and Collins 1991).

Discussion

It is important to note that both terrestrial and aquatic gastropods were recovered; however, none of these were identified. This is for two reasons. First, the terrestrial gastropods are probably intrusive. Second, the aquatic gastropods have such low frequency (NISP = 3) that they probably did not contribute a significant part to the diet of the people inhabiting the site.

The faunal analysis suggests that the people occupying the site were exploiting both wild and domestic animals, with pig supplying the most significant portion of meat in the diet.

BOTANICAL ANALYSIS

Thirty-two flotation light fraction samples and 33 waterscreen samples from nine cultural features were processed and sorted, and their botanical contents were identified. The light fraction contents represented 291 liters of floated fill. Flotation was accomplished in the Transportation Center archaeology laboratory using an "Owl Hollow" type recovery system (Crites 1978). Contents of flotation and waterscreen samples are presented in Tables 7 and 8.

Wood charcoal identification results are presented somewhat differently. In an attempt to secure a strong sample of wood charcoals identified to at least the generic level, an effort was made to obtain 20 identifications from both light fraction and waterscreen samples for each level of each feature. These were combined and are presented in Tables 9 and 10.

TABLE 7
PLANT REMAINS FROM 40RE192 FLOTATION SAMPLES

Flotation	Flotation Volume L	Nutshell N	Nutshell g	Seeds N	Seeds g	Maize N	Maize g	Wood Charcoal N	Wood Charcoal g	Sample Residue g	Total g
Feature 1											
Levels 1 and 2	20	-	-	-	-	-	-	18	0.72	0.15	0.87
Feature 2											
Level 1	20	-	-	-	-	-	-	735	10.27	2.15	12.42
Level 2	30	-	-	-	-	-	-	521	8.00	3.31	11.31
Level 3	20	-	-	-	-	3	0.06	308	2.43	0.57	3.06
Feature 2 Total	70	-	-	-	-	3	0.06	1,582	21.42	6.18	27.66
Feature 3											
Level 1	33	-	-	-	-	-	-	56	1.14	0.42	1.56
Level 2	30	-	-	-	-	2	0.03	411	7.56	1.12	8.71
Level 3	30	-	-	14	.08	6	0.12	623	8.12	3.23	11.55
Feature 3 Total	93	-	-	14	.08	8	0.15	1,090	16.82	4.77	21.82
Feature 4	-	-	-	-	-	-	-	-	-	-	-
Feature 5											
Level 1	10	-	-	-	-	-	-	-	-	0.06	.06
Level 2	10	-	-	-	-	-	-	89	0.86	0.35	1.21
Level 3	10	-	-	-	-	-	-	126	2.54	0.80	3.34
Level 4	10	-	-	-	-	-	-	115	1.72	0.50	2.22
Level 5	10	-	-	-	-	-	-	110	1.50	0.45	1.95
Level 5 Under Rock	10	-	-	-	-	-	-	4	0.10	0.10	0.20
Feature 5 Total	60	-	-	-	-	-	-	444	6.72	2.26	8.98

TABLE 7 (continued).

Flotation	Flotation Volume L	Nutshell N	Nutshell g	Seeds N	Seeds g	Maize N	Maize g	Wood Charcoal N	Wood Charcoal g	Sample Residue g	Total g
Feature 6											
Level 1	10	-	-	-	-	-	-	-	-	0.10	0.10
Level 2	10	-	-	-	-	-	-	-	-	0.02	0.02
Feature 6 Total	20	-	-	-	-	-	-	-	-	0.12	0.12
Feature 7											
Level 1	8	-	-	-	-	-	-	-	-	0.08	0.08
Level 2	10	3	0.54	-	-	-	-	-	-	0.08	0.62
Feature 7 Total	18	3	0.54	-	-	-	-	-	-	0.16	0.70
Feature 8	10	-	-	-	-	-	-	112	3.78	0.65	4.43
Feature 9	-	-	-	-	-	-	-	-	-	-	-
Total	291	3	0.54	14	.08	11	0.21	3,228	48.74	14.14	63.71

TABLE 8
PLANT REMAINS FROM 40RE192 WATERSCREEN SAMPLES

Flotation	Nutshell N	Nutshell g	Seeds N	Seeds g	Maize N	Maize g	Wood Charcoal N	Wood Charcoal g	Total g
Feature 1									
Levels 1 and 2	-	-	-	-	-	-	4	0.44	0.44
Feature 2									
Level 1	-	-	-	-	-	-	196	2.43	2.43
Level 2	-	-	-	-	13	0.64	120	10.89	11.53
Level 3	-	-	-	-	-	-	14	0.51	0.51
Feature 2 Total	-	-	-	-	13	0.64	330	13.83	14.47
Feature 3									
Level 1	-	-	-	-	-	-	2	0.07	0.07
Level 2	-	-	-	-	-	-	15	2.81	2.81
Level 3	2	0.19	-	-	-	-	23	2.54	2.73
Feature 3 Total	2	0.19	-	-	-	-	40	5.42	5.61
Feature 4	-	-	-	-	-	-	1	0.40	0.40
Feature 5									
Level 1	-	-	-	-	-	-	2	0.29	0.29
Level 2	-	-	-	-	-	-	1	0.09	0.09
Level 3	-	-	-	-	-	-	8	1.29	1.29
Level 4	-	-	-	-	-	-	10	0.64	0.64
Level 5	-	-	-	-	-	-	4	0.21	0.21
Level 5 - Under Rock	-	-	5	3.96	-	-	20	2.14	6.10
Feature 5 Total	-	-	5	3.96	-	-	45	4.66	8.62
Feature 6									
Zone A	2	0.21	-	-	-	-	3	0.23	0.44
Feature 7									
Level 2	-	-	-	-	-	-	4	0.84	0.84
Feature 8	1	0.08	-	-	-	-	253	36.18	36.26
Feature 9	-	-	-	-	-	-	20	3.81	3.81
Total	5	0.48	5	3.96	13	0.64	700	65.81	70.89

Notes: No sample volume indicated. All fragments recovered from 1/4" and 1/16" screens; no "residue."

TABLE 9
WOOD CHARCOALS FROM 40RE192 — *CARYA*, *JUGLANS*, *QUERCUS*, *FRAXINUS*, AND *GLEDITSIA*

Provenience	*Carya* spp. N	%	*Juglans* spp. N	%	*Quercus alba* N	%	*Quercus rubra* N	%	*Quercus* spp. N	%	*Fraxinus* spp. N	%	*Gleditsia triancanthos* N	%
Feature 1														
Levels 1 and 2	-	-	-	-	-	-	7	70.0	3	30.0	-	-	-	-
Feature 2														
Level 1	-	-	3	3.5	16	18.6	44	51.2	-	-	3	3.5	-	-
Level 2	-	-	-	-	16	22.2	49	68.0	-	-	-	-	-	-
Level 3	-	-	-	-	5	17.2	10	34.5	3	10.4	-	-	-	-
Feature 2 Total	-	-	3	1.6	37	19.8	103	55.1	3	1.6	3	1.6	-	-
Feature 3														
Level 1	-	-	-	-	-	-	5	21.7	8	34.8	2	8.7	-	-
Level 2	-	-	-	-	18	24.0	17	22.7	10	13.3	3	4.0	-	-
Level 3	-	-	-	-	11	16.4	22	32.8	4	6.0	4	6.0	3	4.5
Feature 3 Total	-	-	-	-	29	17.6	44	26.7	22	13.3	9	5.5	3	1.8
Feature 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feature 5														
Level 1	-	-	-	-	2	100	-	-	-	-	-	-	-	-
Level 2	-	-	-	-	-	-	20	95.2	-	-	-	-	-	-
Level 3	-	-	-	-	5	21.7	6	26.1	-	-	-	-	2	8.7
Level 4	-	-	-	-	7	26.9	2	7.7	4	15.4	-	-	2	7.7
Level 5	-	-	-	-	-	-	4	20.0	2	10.0	-	-	-	-
Level 5 Under Rock	2	9.5	-	-	4	19.05	10	47.6	4	19.05	-	-	-	-
Feature 5 Total	2	1.8	-	-	18	15.9	42	37.2	10	8.85	-	-	4	3.5

TABLE 9 (continued).

Provenience	*Carya* spp. N	%	*Juglans* spp. N	%	*Quercus alba* N	%	*Quercus rubra* N	%	*Quercus* spp. N	%	*Fraxinus* spp. N	%	*Gleditsia triancanthos* N	%
Feature 6														
Level 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zone A	-	-	-	-	-	-	1	33.3	2	66.7	-	-	-	-
Feature 6 Total	-	-	-	-	-	-	1	33.3	2	66.7	-	-	-	-
Feature 7														
Level 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feature 7 Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feature 8	6	10.0	-	-	34	56.7	16	26.7	-	-	-	-	-	-
Feature 9	-	-	-	-	2	12.5	2	12.5	2	12.5	-	-	-	-
Site Total	8	1.4	3	0.5	120	21.5	215	38.6	42	7.5	12	2.2	7	1.3

Note: Common names for wood taxa: *Carya* spp., hickory species; *Juglans* spp., walnut species; *Quercus alba*, white oak group; *Quercus rubra*, red oak group; *Quercus* spp., oak species; *Fraxinus* spp., ash species; *Gleditsia triancanthos*, honey locust.

TABLE 10

WOOD CHARCOALS FROM 40RE192 — *ULMUS*, *ACER*, *LIRIODENDRON*, *SALIX*, *PINUS*, *CARPINUS*, AND *JUNIPERUS*

Provenience	*Ulmus* spp. N	%	*Acer* spp. N	%	*Liriodendron tulipifera* N	%	*Salix* c.f. *nigra* N	%	*Carpinus caroliniana* N	%	*Pinus* spp. N	%	*Juniperus virginiana* N	%	Total
Feature 1															
Levels 1 and 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Feature 2															
Level 1	-	-	2	2.3	12	13.9	-	-	3	3.5	3	3.5	-	-	86
Level 2	-	-	3	4.2	-	-	-	-	-	-	4	5.6	-	-	72
Level 3	-	-	3	10.4	3	10.4	-	-	-	-	5	17.2	-	-	29
Feature 2 Total	-	-	8	4.3	15	8.0	0	0	3	1.6	12	6.4	-	-	187
Feature 3															
Level 1	-	-	-	-	6	26.1	-	-	-	-	2	8.7	-	-	23
Level 2	-	-	1	1.3	4	5.3	-	-	-	-	22	29.3	-	-	75
Level 3	-	-	2	3.0	18	26.9	-	-	-	-	-	-	3	4.5	67
Feature 3 Total	-	-	3	1.8	28	17.0	-	-	-	-	24	14.5	3	1.8	165
Feature 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feature 5															
Level 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Level 2	-	-	-	-	-	-	-	-	-	-	1	4.8	-	-	21
Level 3	-	-	4	17.4	3	13.0	-	-	-	-	3	13.0	-	-	23
Level 4	-	-	-	-	7	26.9	-	-	-	-	-	-	4	15.4	26
Level 5	2	10.0	10	50.0	-	-	2	10.0	-	-	-	-	-	-	20
Level 5 Under Rock	-	-	1	4.8	-	-	-	-	-	-	-	-	-	-	21
Feature 5 Total	2	1.8	15	13.3	10	8.85	2	1.8	-	-	4	3.5	4	3.5	113

TABLE 10. (continued).

Provenience	*Ulmus* spp. N	%	*Acer* spp. N	%	*Liriodendron tulipifera* N	%	*Salix* c.f. *nigra* N	%	*Carpinus caroliniana* N	%	*Pinus* spp. N	%	*Juniperus virginiana* N	%	Total
Feature 6															
Level 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zone A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Feature 6 Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Feature 7															
Level 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 2	-	-	-	-	-	-	-	-	-	-	3	100	-	-	3
Feature 7 Total	-	-	-	-	-	-	-	-	-	-	3	100	-	-	3
Feature 8	4	6.7	-	-	-	-	-	-	-	-	-	-	-	-	60
Feature 9	-	-	-	-	1	6.25	-	-	-	-	9	56.25	-	-	16
Site Total	6	1.1	26	4.7	54	9.7	2	0.4	3	0.5	52	9.3	7	1.3	557

Note: Common names for wood taxa: *Ulmus* spp., elm species; *Acer* spp., maple species; *Liriodendron tulipifera*, tulip poplar; *Salix nigra*, black willow; *Carpinus caroliniana*, ironwood/musselwood; *Pinus* spp., pine species; *Juniperus virginiana*, eastern red cedar.

Laboratory Procedures

All flotation samples were placed in a nested series of geological sieves with mesh sizes of 2 mm, 1 mm, and 500 µm. The screens were underlain by a catch basin and the "stack" of screens was gently shaken to sort materials into size classes to expedite sorting. All non-recent plant material retained in the 2 mm mesh screen was sorted into constituent categories (e.g., nutshell, wood charcoal, "seeds," etc.), then counted and weighed. Material retained in the 1 mm and 500 µm mesh screens (and catch basin) was scanned for seeds/fruit fragments. Those fragments were removed, counted by genus/species, then weighed. Remaining materials in the two smaller mesh size screens and catch basin were weighed as one sample component--residue. The amount of charred plant material in the residue was estimated (by weight) based upon control test samples from various depositional contexts.

Selection of wood charcoal fragments for identification was accomplished by placing the >2 mm float sample fragments in a serpentine pattern over a 1 cm^2 grid pattern and taking fragments from alternate vertical and horizontal grid units until 20 fragments were identified (if that many were preserved well enough to present anatomical landmarks needed for identification). In instances where fewer than 20 fragments were present in the >2 mm size class, all fragments were examined. Since all waterscreen samples were collected in >2 mm size screen mesh and presorted, the samples were not rescreened in the ethnobotany laboratory.

Comparative collections housed at the Frank H. McClung Museum at The University of Tennessee, Knoxville, served as the primary source for plant identification manuals (e.g., Core et al. 1979; Martin and Barkley 1961; Panshin and de Zeeuw 1980).

Results

The depauperate condition of botanical samples from 40RE192 probably reflects the combined influences of plant processing/packaging (i.e., more "processed" plant material such as corn meal), preparation (cooking with water and/or animal fat), disposal patterns, and associated preservation problems. The density ratio of plant remains (by weight) from flotation is only 0.219 g per liter of processed fill (63.71 g/291 liters). This is *not* a strong representation and, again, probably reflects food preparation, disposal, and associated preservation problems at the site. Because sample volume was not known for most waterscreen samples, density ratios are not computed. However, ubiquity figures are available for classes of material from both flotation and waterscreened samples. Ubiquity is a "relative" indicator of how common classes of materials are in the total suite of sample contexts. Indices are presented as a percentage of total depositional contexts sampled (Table 11). Using an index figure of ~50 as indicative of "common" occurrence on the sampled site area(s), only wood remains qualify.

Only eight nutshell fragments were found in >2 mm flotation and waterscreen samples combined. All fragments were derived from black walnut (*Juglans nigra*). Five of the 19 seeds/seed fragments recovered were peach pit fragments found in the Feature 5 waterscreen sample (see

TABLE 11
UBIQUITY OF BOTANICAL REMAINS, 40RE192

	Ubiquity Index	
	Flotation	Waterscreen
Nutshell	5.3	5.8
Seeds	5.3	5.3
Corn	15.8	5.3
Wood Remains	68.4	94.7

Note: Total sample depositional contexts = 19.

Table 8). The remaining 14 "seeds" were recovered from the Feature 3, Level 3 flotation sample (see Table 7). Thirteen of those were sumac seeds (*Rhus* spp.) and one was a rice grain (*Oryza* cf. *sativa*).

Twenty-four corn fragments were recovered (11 from flotation and 13 from waterscreen). Feature 2 yielded 16 (66.7%) of the fragments and Feature 3 yielded 8 (33.3%) of the fragments (see Tables 7 and 8). Feature 2 corn remains were cupules and Feature 3 corn remains were kernel fragments. None of the kernel elements were complete enough to provide metric/morphological data. Fourteen of the 16 cupules were complete enough to provide some *basic* morphological data. Cupule widths and lengths (in mm) are presented in Table 12.

The equivocal row number determinations in Table 12, based upon cupule angle measurements, reflect the problems of distortion resulting from carbonization and small sample size. Variation in cob element morphology can be expressed on a single ear and certainly within a sample population. If various cultivars are available--a distinct probability on historic sites--the problem of variability in morphology is exacerbated since the greatest variation between cultivars occurs in cupule length and width. (See King 1994 for a detailed discussion of variation in carbonized/ archaeologically recovered maize.)

Eighty-two percent of the 3,928 wood charcoal fragments recovered from 40RE192 came from flotation samples and 40.3% of the total was recovered from Feature 2 flotation. When waterscreen samples are added, Feature 2 yielded 41% of the total >2 mm wood charcoal count. An additional 28.8% of total wood charcoal came from Feature 3. (These two features accounted for 56% of sample flotation volume.)

Twelve genera and at least 13 species are represented in the wood charcoal sample (see Tables 9 and 10). Oaks (*Quercus alba*, *Q. rubra*, *Q.* spp.) accounted for 67.7% of identified fragments. The best second/third growth (disturbance) taxa (*Liriodendron tulipifera*, *Pinus* spp., and *Juniperus virginiana*) accounted for 20.3% of identified fragments. The dominance of the wood assemblage by oaks (*Quercus*) indicates availability of and preference for the genus (oak is a preferred wood for cooking/heating). The representation (20%) of tulip poplar (*Liriodendron tulipifera*), pine (*Pinus*), and eastern red cedar (*Juniperus virginiana*) probably reflects the general level of representation of those taxa in the area prior to intensive and sustained clearing for intensive historic period farming. All three taxa are common woody vegetation constituents around house sites.

Botanical Summary

The very low ratio of charcoal weight to quantified volume of feature fill is most probably a result of food processing technique(s) and post-depositional preservation problems at the site. The inventory (diversity) of plant remains is extremely low. Potential food taxa were black walnut (though the number of fragments could represent natural seed rain), sumac, rice, and corn. The sumac likely represents seed rain from specimens of the shrub growing throughout the site

TABLE 12
CORN MORPHOLOGICAL DATA, 40RE192

Cupule Width (external) (mm)	Cupule Length (mm)	Row Number (estimated)
7.0	1.0	8/10
9.5	1.6	8/10
9.0	2.0	8/10
9.3	2.0	8/10
8.3	2.0	8/10
7.0	2.0	8/10
7.3	2.0	8/10
9.5	2.3	8
9.7	2.0	8
9.8	2.1	8
9.7	1.9	8
8.0	2.1	10/12
7.5	2.0	10/12
6.0	1.1	10/12

area. However, sumac tea was once a popular drink in the region and the seeds may indicate preparation of the summer drink. The only distinct dietary material remains were the rice (a single grain) and corn (only 24 fragments).

Wood fragment identifications indicate preference for oak. Virtually no hickory was recovered. Hickory is a commonly distributed and frequently occurring till in the region. Taxonomic indicators of forest opening/disturbance are limited to tulip poplar, pine, and, to a lesser degree, eastern red cedar. The absence of dogwood and redbud is interesting. Both till types are common around homesites in the area.

DISCUSSION

Phase II and intensive Phase II testing were conducted at site 40RE192 in the late fall and early winter of 1994-1995. Subsurface remains revealed a small historic house site with several associated features, all of which were excavated. Initial analysis of artifacts from site 40RE192 suggested an early 19th century Euroamerican habitation, but further analysis suggested other ethnic groups (particularly Native Americans) may have been present on the site. The presence of multiple basin-shaped pit features containing historic materials, combined with the unusually large number of glass beads, argue for an historic Native American presence as well.

All subsurface materials recovered from the site place the occupation period from around 1815 to about 1845, a time period when many Native American groups in the Southeast (particularly the Cherokee) were living in log cabins and using the same ceramics as Euroamericans (Hudson 1976:449).

The high frequency of shallow circular storage pits in this early 19th century context was not expected. It is possible that such features are common on similar sites, but no other early 19th century farmstead sites have been investigated in the western East Tennessee Valley region (with the exception of site 40RH156) for comparative purposes. Of all the domestic historic sites in East Tennessee, none is known to have the profusion of circular basin-shaped pit features found at site 40RE192 (Andrews 1992; Faulkner 1984, 1988, 1989, 1990, 1995; Faulkner and Andrews 1994; McKelway 1994; Roberts 1986). Interestingly, such features are only known to the author to occur at early 19th century Pre-Removal Cherokee farmsteads in western North Carolina (Riggs 1996).

By the early 19th century, the Cherokees had embraced Euroamerican farming techniques and construction methods to such an extent that one Euroamerican historian has said that they had developed a "curiously pseudo-white agrarian culture" (Malone 1956:136). The use of square or rectangular pit cellars was widespread among many cultures in the Upland South, including the Cherokee, African-Americans, and Euroamericans (Phillippe and Walters 1986; Riggs 1996:97; Yentsch 1991). A circular basin shaped pit similar to the circular features at site 40RE192 was found at the Chewkeeaskee Cabin site (31CE276), an early 19th century Cherokee farmstead in western North Carolina (Riggs 1996:93). Riggs mentions, however, that such features are not well represented in 19th century contexts, although they are abundant on late 18th century Cherokee

sites (Riggs 1996:93; Schroedl 1986). The apparent size of the domestic structure at site 40RE192 may not fit the documented sizes of historic Cherokee cabins, however. If one assumes that Feature 2, the square cellar, was under one end of the house, the structure would have to have been at least 8 m (26 ft) long. This figure is far outside the range of cabin sizes of 3 to 4.3 m square (10 ft to 14 ft square) recorded for the Cherokee at the time of removal (Riggs 1996). It is slightly longer even than typical lengths for Euroamerican rectangular cabins, which are 5.5-6.7 m (18-22 ft) (Morgan 1990), although 7.9 m (26 ft) long side walls are not unknown among Glassie's (1965) "type II" cabins, to which Glassie assigns an Irish origin (Glassie 1965:154). Morgan and Medford also note the occurrence, though rare, of pre-1840 7.9 m (26 ft) long cabin walls in Grainger County, Tennessee (Morgan and Medford 1980:142).

Another possibility is that the cellar was not under the house, but rather was under an outbuilding. This was not an uncommon practice among the North Carolina Cherokee, particularly in the case of *asi* or hot houses (Riggs 1996:30). These *asi* were small, tightly built log structures typically 4.3 m (14 ft) square (Riggs 1996:30-31). If the cellar at site 40RE192 was beneath an *asi*, then the size of the cabin associated with the chimney base may not have been more than 4.3 m (14 ft) square. This interpretation could also explain the apparent misalignment between the chimney base and the cellar. The apparent absence of outbuilding remains at site 40RE192 may also be an indicator of non-Euroamerican occupation. Fully half of the 707 Cherokee properties in Riggs' study (50%) had no outbuildings listed on the removal inventories. Of those farmsteads which had only one outbuilding listed (25%), that building was an *asi* 15% of the time and a corncrib 85% of the time (Riggs 1996, Appendix A:257-277). Of those Cherokee farmsteads that had two outbuildings (10%), 78% of the time those two structures were an *asi* and a corncrib (Riggs 1996 Appendix A:257-277).

Hays reported the possibility of historic Native American occupation at site 40RE192 in the Phase I archaeological reconnaissance survey report based upon a single artifact recovered from a shovel test--a thick clear glass sherd that appeared to have been worked into a scraper (Hays 1992:16). That is not conclusive proof, however, as the use of broken glass as scrapers to smooth wooden objects or to scrape hogs during the butchering process is a well-known phenomenon among all ethnic groups in southern Appalachia. Hays argues that the sherd in question shows evidence of deliberate retouching after the fashion of chipped stone tools. However, it is very common to find pieces of glass that have been both unifacially and bifacially retouched by the action of plowing on historic sites. Hays cites two examples of glass scrapers recovered from historic Native American contexts (Hays 1992) but does not mention what kind of glass was used. The sherd from site 40RE192 is described as "thick clear glass" (Hays 1992:16). However, thick clear glass is not a common artifact of the early 19th century.

Thirty-two beads were found in the fill of Feature 2, the subfloor pit cellar. These beads were manufactured in Europe, probably in the early 19th century. Similar beads were often used as trade goods with Native Americans in the Northeast (Fogelman 1991; Kidd and Kidd 1970). Riggs states that the presence of glass beads cannot be taken as an ethnic marker in the Southeast due to the ubiquity of glass beads at all early to mid-19th century domestic sites in the region

(Riggs 1996:110). However, Riggs then mentions that beaded belts were an important, common, and a highly valued part of the male Cherokee wardrobe (Riggs 1996:110). With this knowledge, it seems possible that the relatively large quantity of beads (the highest concentration in Riggs' study was four beads in one feature) from site 40RE192 could have been used in or intended for use in a beaded belt. In addition, 22 glass beads were recovered from a rectangular pit feature at the Bell Rattle site, an historic Cherokee cabin site in Monroe County, Tennessee dating from ca. 1800-1826 (Riggs 1987:154). At some historic sites in Tennessee such as Castalian Springs (Smith 1984) and the First Hermitage (Smith ed. 1976), similar beads are found in African-American slave contexts. It is known that the Hinds brothers, who owned the land where site 40RE192 is located, were active in the local slave trade in the early 19th century. Site 40RE192 itself, however, does not appear to have been a slave cabin, as there were no other structures found nearby as should have been the case for an Upland South slave habitation (Andrews 1992; McKelway 1994; Vlach 1993).

The presence of artifacts related to blacksmithing activities in Feature 7 at site 40RE192 has no bearing on the ethnicity of the occupants of the site, as blacksmithing debris has been found on sites connected with all ethnic groups in East Tennessee, including the historic (Riggs 1987:155), African-American slaves (Andrews 1992), and Euroamerican settlers (Faulkner and Andrews 1994).

Ford (1982) compared artifact group frequencies from three different site types in an attempt to discern differences in sites occupied by the army, by Euroamerican settlers, and by historic Cherokee, respectively. The time span covered by Ford's comparison is 1792 to 1819, slightly earlier than site 40RE192. It is interesting, however, to compare site 40RE192 with Ford's results in Table 13. Site 40RE192 does not compare favorably with any of Ford's artifact group frequencies. No two groups at site 40RE192 correspond with the same group from any of Ford's patterns. The discrepancies could be due to the different time ranges, however.

The single major discrepancy between the artifactual record at site 40RE192 and that of the historic Cherokee sites in Riggs' study is the absence of Cherokee pottery at site 40RE192. All of the sites in Riggs' study produced Cherokee pottery (Riggs 1996). The lack of it at site 40RE192 is difficult to explain if the occupants of the site were indeed Cherokee. A possibility is that the distance of site 40RE192 from the mountainous heart of 19th century Cherokee culture and the proximity of the site to Fort Southwest Point resulted in a more thorough acculturation of the inhabitants, as far as that acculturation was reflected in the selection of storage vessels. Riggs states that the ubiquity of small quantities of Cherokee ceramics on 19th century historic Cherokee sites is due to the traditional practice of making hominy, and that the sherds represent broken hominy pots (Riggs 1996). However, it is possible to make hominy in redware pots as well.

In conclusion, while it is impossible to conclusively determine the identities of the occupants of site 40RE192, it is very likely that at least one occupant was Native American in origin. The artifact assemblage, with the exception of the quantity of beads (small numbers of beads have been recovered from almost all historic sites in Tennessee), is similar to early 19th century

TABLE 13
ARTIFACT GROUP FREQUENCIES

Artifact Group	Federal Government Pattern[a] (%)	Historic Settler Pattern[a] (%)	Cherokee Pattern[a] (%)	40RE192 Pattern[b] (%)
Activity	2.73	4.44	19.14	2.16
Architecture	24.81	15.45	0.40	5.82
Arms	0.28	0.34	0.24	0.20
Clothing	1.71	0.40	3.63	6.00
Furniture	0.48	0.00	0.00	0.84
Kitchen	19.95	79.00	48.77	81.33
Personal	0.16	0.07	0.30	3.38
Tobacco Pipe	0.15	0.07	0.30	0.19[c]
Subsistence Refuse	_	49.73	0.23	17.04

[a]Source: Ford, Thomas B., 1982, *An Analysis of Anglo-American — Cherokee Culture Contact During the Federal Period, The Hiwassee Tract, Eastern Tennessee*. Unpublished Master's thesis, the University of Tennessee, Knoxville.

[b]Analysis based on artifacts from feature contextx.

[c]Tobacco pipe also included in Personal Group count and percentage.

occupation by all known ethnic groups in East Tennessee (Andrews 1992; Faulkner 1984; 1988; 1989, 1995; Faulkner and Andrews 1994; McKelway 1994; Roberts 1986). The assemblage is also similar to Removal-period Cherokee farmsteads (Riggs 1996), with the exception of Cherokee pottery. The similarities in spatial organization to historic Cherokee cabin sites in western North Carolina are too strong to be dismissed, especially since southwestern Roane County was Cherokee land until 1819 (Ford 1982:4).

ANSWERS TO RESEARCH QUESTIONS

1. What effect does local environment have on historic settlement location, and do cultural factors help determine site location?

The local environment, a broad valley with abundant timber, water, and agricultural resources, would tend to encourage settlement by any human population. In fact, there was a prehistoric occupation of the site. In addition to this, the prehistoric site 40RE225 lies adjacent to site 40RE192 in the State Route 29 right-of-way. There is also a large prehistoric site in the bottomland of Hinds Creek immediately to the west of site 40RE192. Cultural factors do not appear to have a specific influence on the location of site 40RE192. Some cultural groups such as the Swiss-French and the Pennsylvania Dutch do tend to locate their farmsteads around certain topographical features in order to make use of traditional structures such as the bank barn, but historic Native Americans and Scot-Irish-English, the two most common cultures in the region, do not seem to have had marked preferences for any particular landscape feature other than water and arable land, both of which are available at site 40RE192.

2. What is the spatial arrangement of the farmstead, and does it change through time? How does it compare to other Upland South farmsteads? How does it compare to farmsteads settled by other cultural traditions?

As no outbuildings were discovered on the site, little can be said of the spatial arrangement of the farmstead at site 40RE192. The cabin which stood on the site during the occupation period was aligned roughly north-south, if it was a rectangular cabin, with the long axis parallel to both the Cumberland Escarpment and the trail that became State Route 29 (see Figure 11). It is not known which of these landscape elements (if either) was used to orient the house, but the route of State Route 29 is likely a path of some antiquity, following the natural corridor formed by the foot of the escarpment. Assuming the presence of a road in the present location of State Route 29 at the time of construction of a cabin on site 40RE192, the only characteristic of the Upland South pattern known to be applicable is that the house faced the probable path of approach. The only visible change in the spatial arrangement of the site is its disappearance, followed by the construction of a fence across the site area at a much later date. As mentioned previously, the spatial arrangement of the features at site 40RE192 does not fit any known Euroamerican pattern.

If there was an historic Cherokee occupation on the site, the alignment of the cabin becomes much more difficult to determine. If the hypothesis that the cellar was actually under an

outbuilding such as an *asi* is true, then the cabin may have been no more than 4.3 m (14 ft) square and thus could have been aligned with the features rather than with the road or the Cumberland Escarpment. It is unfortunate that no evidence of outbuildings was discovered at site 40RE192, because the presence of such information would have been of great importance in the study of the history of the Upland South pattern. If a family with enough Native American influence to be using the native pattern of storage pits also used the Upland South pattern of building and farm arrangement, an indication of the age, origin, and pervasiveness of the Upland South pattern would be established. A parallel case is that of the Nicholas Gibbs farm (40KN124) in northeast Knox County. Although Gibbs was German and his material culture preferences (at least in the matter of lead glazed redware table ceramics) were more German than not, the spatial arrangement of his farmstead appears to have been Upland South by 1800 (Faulkner 1988; 1990). If the Upland South tradition was so pervasive as to be "the way things were done" in East Tennessee by all assimilated cultures by 1800, it is possible that site 40RE192 should also fit the pattern. From the archaeological evidence at hand, however, a possible Native American influence at site 40RE192 outweighs that of the Upland South tradition.

3. What dietary patterns and food preferences are evident in the artifacts recovered from the site, and how do these compare with documented patterns for the Upland South tradition? Does the pattern change through time?

The residents of site 40RE192 followed the standard practice of the period in that they ate quite a bit of pork with a quantity of wild game for variety (see Table 4). The botanical remains from site 40RE192 were sparse and mostly uninformative in the way of foodways information in that the small sample size cannot produce reliable results. Corn, black walnuts, and rice were eaten on the site. The corn was probably used in the form of meal, which is common in both Upland South and Native American traditions. The occurrence of rice is somewhat surprising, but may represent a luxury import. The Hinds brothers were slave traders, and it is possible that the rice came back with them (or their purchases) from a trip to the markets at Charleston, where rice was grown in quantity. It is not known how the foodways on the site changed through time, as the time depth of occupation is so short.

4. What socioeconomic conditions are indicated by the artifact assemblage? How do they compare to those of other similar sites?

The artifact assemblage from site 40RE192 indicates a status level typical of moderate-scale landowners in comparison with other assemblages from other sites of the same period in East Tennessee. The relative abundance of teawares suggests a desire on the part of the occupants to display status objects for the benefit of visitors. However, the other wares recovered are moderate to high status items as well. The frequency of transfer-printed plate sherds suggests a fairly high standard of living (Miller 1980; 1991). The relative scarcity of porcelain, however, indicates a less expensive assemblage overall than those from such high-status sites as James White's second home (Faulkner 1984) and the Ramsey house (Roberts 1986). The 40RE192 assemblage is higher in Miller's CC value (Miller 1980, 1991) than the assemblage from 40RH156, however.

5. How does the occupation of site 40RE192 compare to McCorvie et al.'s (1989) model of Upland South occupations in southern Illinois and Rotenizer's (1992) model of Upland South occupations in Virginia and Kentucky? Does the evidence support the hypothesis that the Upland South tradition is comparable across its entire range?

Unfortunately, not enough information on spatial arrangement was found at site 40RE192 to allow direct comparison with these sites. In addition, the age of site 40RE192 relative to McCorvie et al. and Rotenizer sites makes a valid comparison difficult. Finally, the apparent Native American influence on the site and the lack of truly meaningful connections with the Upland South pattern on this site is an answer in itself. Spatially, site 40RE192 does not seem to fit the Upland South pattern. This site fits more closely with the historic Cherokee spatial pattern established in western North Carolina (Riggs 1996).

SUMMARY

From November 3 until January 13, 1995, archaeologists from the Transportation Center at The University of Tennessee-Knoxville conducted Phase II testing and intensive Phase II testing of site 40RE192. Testing revealed the subsurface remains of a small historic house site with several associated features. Due to the small size of the site, all features were excavated. Analysis of the artifacts from site 40RE192 suggested an early 19th century Euroamerican habitation. However, the presence of multiple basin-shaped pit features containing historic materials, combined with the presence of a large number of glass beads, argue for an historic Native American presence.

All historic subsurface materials recovered from the site place the occupation period from around 1815 to about 1845, a time period when many Native American groups in the area (particularly the Cherokee) were living in log cabins and using the same ceramics as Euroamericans. The spatial arrangement of the site is not similar to any known Euroamerican site of the same time period in East Tennessee. However, it is very similar to historic Cherokee farmstead cabins of the period 1800-1838 in the vicinity of Murphy, North Carolina (Riggs 1995).

The glass beads are a more indirect form of evidence. Glass beads identical to those found at site 40RE192 have been found (albeit in smaller numbers) on almost every historic site in East Tennessee that date to the same period. Glass beads have traditionally been considered an ethnic marker for Native American or African-American occupation in Tennessee historic archaeology. When combined with the spatial arrangement and morphology of the features at site 40RE192, these particular beads may be an ethnic marker pointing to an early 19th century occupation by at least one person of Native American extraction.

Prehistoric occupation at site 40RE192 is indicated by Early Archaic to late Late Woodland/Mississippian PPKs recovered during the controlled surface collection and a single subsurface pit feature.

VII. SITE 40RH155

Jay D. Franklin

Site 40RH155 was an indeterminate prehistoric site. It was located on a terrace immediately west of State Route 29 and approximately 30 m east of Camp Creek. The site was plowed and disked and allowed to settle. A controlled surface collection was then conducted. Artifact distribution maps were generated based on the surface collection results. Three 1 m x 1 m test units were placed in areas of highest artifact density. Three 2 m wide backhoe excavated power units placed at no more than 10 m intervals were stripped of plowzone in order to identify potential features and postholes. No features or postholes were identified within the backhoe excavated power unit transects (Figure 22). No diagnostic artifacts were recovered from the site. However, the controlled surface collection and test unit excavations yielded a moderate amount of lithic debitage (Figure 23), three biface fragments, a drill tip, and an indeterminate stemmed PPK.

PREHISTORIC ARTIFACT ANALYSIS

The lithic debitage recovered at site 40RH155 consists of 175 pieces with a total weight of 212.05 g. Raw materials are comprised of Knox cherts (N = 69), chalcedony (N = 26), St. Louis chert (N = 15), Chickamauga chert (N = 14), indeterminate local chert (N = 48), indeterminate nonlocal chert (N = 1), Fort Payne chert (N = 1), and quartz (N = 1). All of these raw materials appear to have been locally available (Milici and Swingle 1972).

The sample was divided into complete flakes, PRB flakes, flake fragments (including medial and distal portions), block shatter, and thermal shatter. Complete flakes, PRB flakes, and flake fragments were divided into reduction stages when possible following Magne's (1989) experimental research methodology. The attributes used to make these distinctions were platform facet counts and dorsal scar counts with zero or one platform facet/dorsal scar representing early stage reduction, two platform facets/dorsal scars representing middle stage reduction, and three or more platform facets/dorsal scars representing late stage reduction. Platform facet counts took priority on complete flakes and PRB flakes with complete platforms (Table 14). Dorsal scar counts were used for complete flakes and PRB flakes with broken platforms and flake fragments. Presence/absence of lipped platforms and presence/absence of cortex are also recorded. Flakes divided into debitage stages account for 62.9% (N = 110) of the lithic debitage. Block shatter accounts for 24% (N = 42) of the lithic debitage. Only presence/absence of cortex is recorded for block shatter. Thermal shatter accounts for 10.9% (N = 19) of the sample. Four flake fragments exhibit unintentional thermal shatter on their dorsal surfaces and therefore were not assigned to stage categories. Only raw material type was recorded for thermal shatter when there was no doubt as to type. Block and thermal shatter were not categorized by reduction stages, although some would argue that block shatter might be indicative of certain types of reduction (Sullivan and Rozen 1985). The sample as a whole does not appear to be representative of any particular

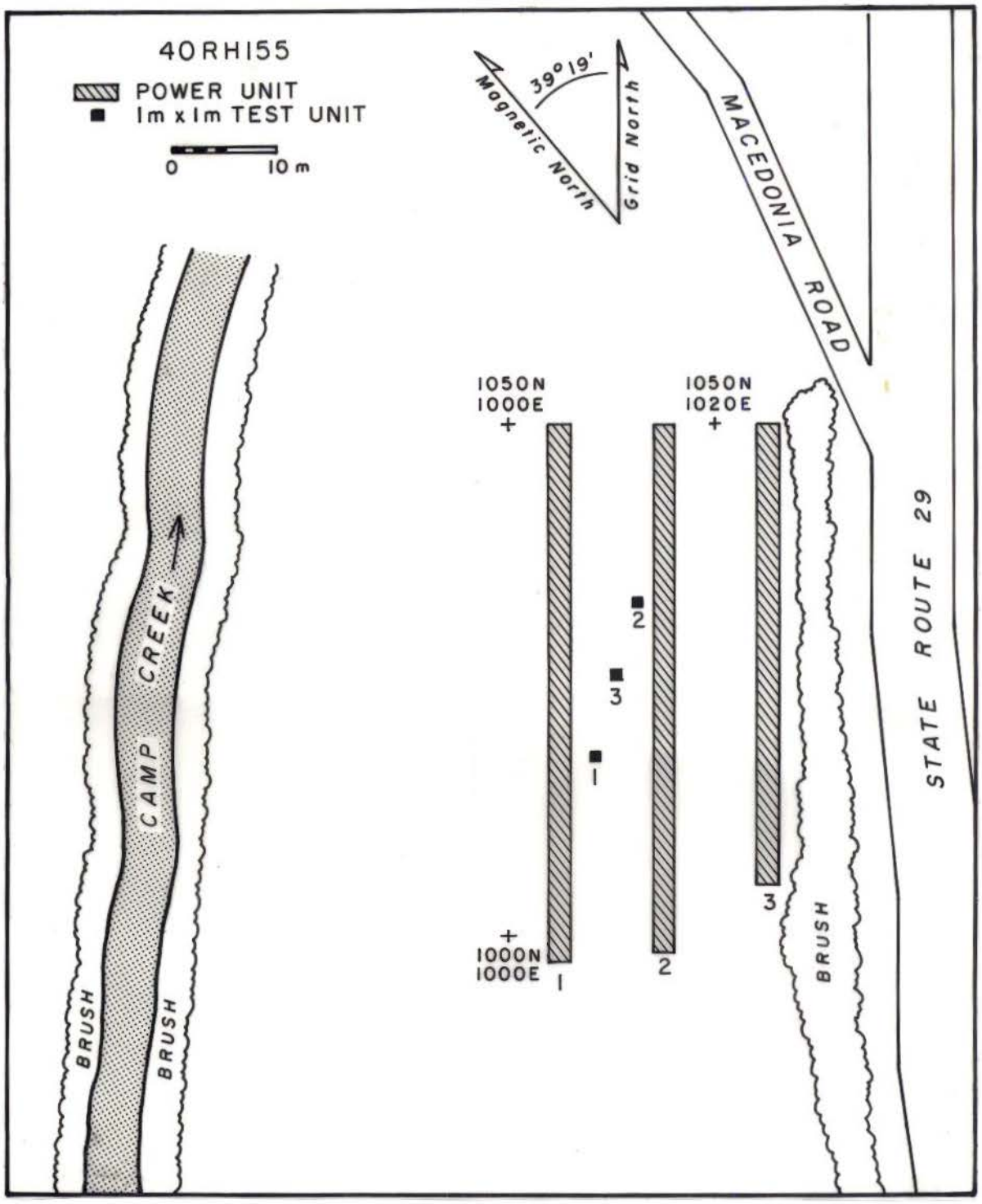

FIGURE 22. Test units and power units, 40RH155.

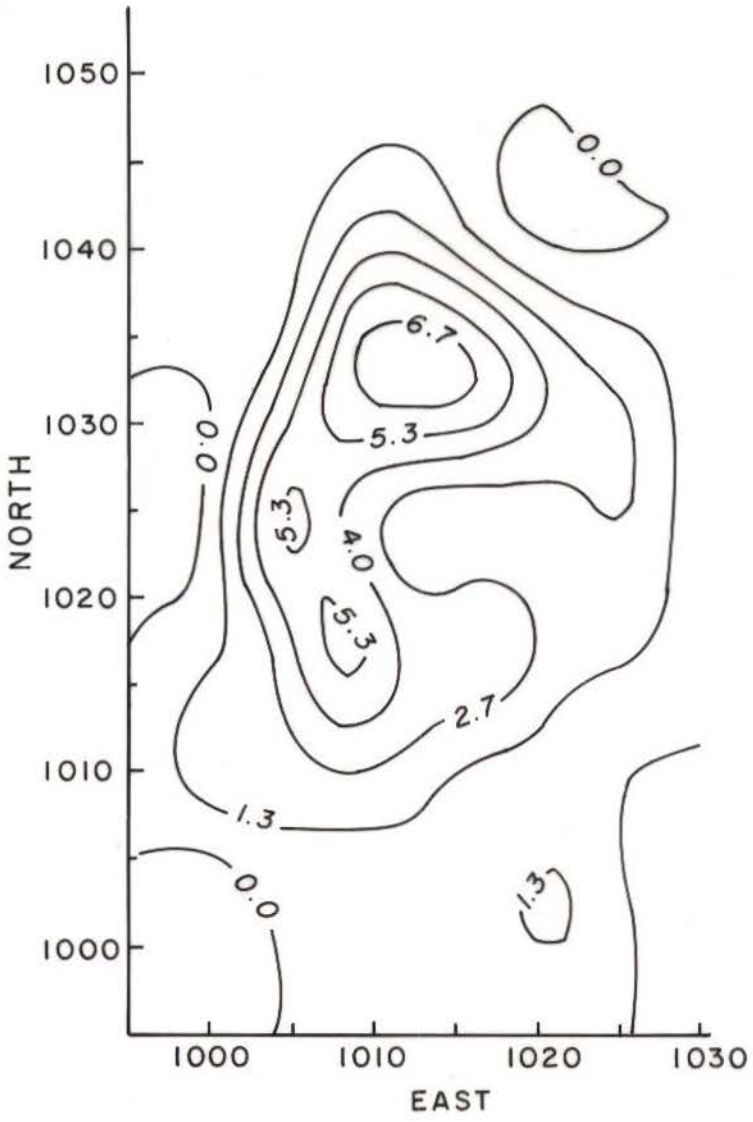

FIGURE 23. Surface distribution of lithic debitage, 40RH155.

TABLE 14
DEBITAGE RAW MATERIAL TYPES AND STAGES, 40RH155

Raw Material	Debitage Stage	Count	Percentage
All Types	Early	40	36.4
	Middle	38	34.5
	Late	32	29.1
		110	
Knox Cherts	Early	16	32.7
	Middle	18	36.7
	Late	15	30.6
		49	
Chalcedony	Early	6	28.6
	Middle	8	38.1
	Late	7	33.3
		21	
St. Louis Chert	Early	8	57.1
	Middle	5	35.7
	Late	1	7.2
		14	
Chickamauga Chert	Early	3	33.3
	Middle	2	22.2
	Late	4	44.5
		9	
Other	Early	7	41.2
	Middle	5	29.4
	Late	5	29.4
		17	

reduction stage (see Table 14). All three stages seem to be nearly equally represented. The same is true when the stages for three of the four raw materials are examined. The exception is St. Louis chert.

Only 2.3% of the sample has lipped platforms, which is generally accepted as a characteristic of bifacial reduction. However, lipped platform flakes are usually not overwhelmingly represented in experimental samples from bifacial reduction (Ahler 1989). It is also generally accepted that "cortex should decrease sharply following initial reduction stages" (Magne 1989:17-18). Therefore, the presence/absence of cortex in the sample was compared to the debitage stages represented. While the percentages of debitage stages do not heavily favor one particular stage, the percentages of cortex do not necessarily reflect the same breakdown. Nearly two-thirds (60.6%) of the sample exhibits no cortex at all, while only 28.6% has at least some cortex present (Table 15). The only exception is again the St. Louis chert.

Approximately three-fourths (78.3%) of the sample is in the 0.64 mm (1/4 inch) size grade. This fact coupled with the general lack of cortex in the sample might lead to an inference that primarily middle and late stage bifacial reduction was performed at this location (Patterson 1990; Stahle and Dunn 1982). However, amount of cortex is most likely correlated with initial cobble size. Further, a vast majority of this sample is represented by broken flakes which can skew the presence/absence of cortex noted. Lastly, as Magne (1989) points out, large amounts of small sized debitage are produced in all stages of reduction.

By comparing the debitage/tool ratio to the percentage of late stage debitage, it is possible to hypothesize site function. The debitage/tool ratio at site 40RH155 is 35:1. The overall percentage of late stage debitage is 13.7 (Magne 1989:19-20). By comparing the frequency of tools against the percentage of late stage debitage, diversity can be measured. Diversity appears to be low at site 40RH155. This would suggest that this location was a special use site where raw materials were readily available, probably a location at which tools and/or blanks were manufactured and situational repair occurred (Magne 1989:27-28). However, the sample recovered represents only a fraction of the entire site lithic assemblage and may represent more than one component. While diversity appears low at site 40RH155, diversity is heavily correlated with sample size (Phillip Carr, personal communication 1985). It may be that the St. Louis chert was being used differently than other raw materials. The sample of St. Louis chert was very small (N = 14) and diversity may not be properly represented.

SUMMARY

From November 3 until December 31, 1994, archaeologists from the Transportation Center at The University of Tennessee-Knoxville conducted Phase II archaeological testing at site 40RH155, an indeterminate prehistoric site. No features or postholes were identified. Geomorphological analysis indicated that the site was situated on a Pleistocene age landform and that no buried cultural deposits were present. No diagnostic artifacts were recovered from the

TABLE 15
PRESENCE/ABSENCE OF CORTEX ON DEBITAGE, SITE 40RH155

Raw Material	Absent	Present	Total
All Raw Materials	105	51	156
Knox Cherts	43	24	67
Chalcedony	19	7	26
St. Louis Chert	6	9	15
Chickamauga Chert	8	5	13
Other	29	6	35

Note: Presence/absence of cortex was not recorded for thermal shatter (N = 19).

site. However, the controlled surface collection and the test unit excavations yielded a moderate amount of lithic debitage, three biface fragments, a drill tip, and an indeterminate stemmed PPK.

Mass analysis (Ahler 1989) and an individual flake attribute analysis were conducted on the debitage in an attempt to gain insight into the assemblage formation processes and site function. The results of these procedures indicate that the site was a special use site where raw materials were readily available, probably a location at which tools and/or blanks were manufactured and situational repair occurred (Magne 1989:27-28).

VIII. SITE 40RH156

C. Alan Longmire, Noëleen McIlvenna, Toni Tessaro, and Gary D. Crites

Site 40RH156 was a mid-19th to early 20th century farmstead on a rise immediately west of State Route 29 and approximately 100 m east of Vans Creek. The site was initially plowed and disked and allowed to settle. A controlled surface collection was then conducted. Two 1 m x 1 m test units were placed in areas of highest artifact densities, one was placed within a suspected house area, and four test units exposed a pit cellar (Feature 2) for excavation. Five 2 m wide backhoe excavated power units placed at no more that 10 m intervals were stripped of plowzone in order to identify potential features and postholes (Figure 24). This testing revealed a domestic structure with chimney remains and an associated subfloor pit cellar, an outbuilding area with no subsurface deposits, an outbuilding area with some subsurface deposits, a second apparently isolated pit cellar that would have been associated with an outbuilding, and a line of postholes apparently delimiting the inner yard/outer yard boundary west of the house area (Franklin et al. 1995b). These findings (a house, three possible outbuildings, and a row of postholes) were used to select a research design for Phase III investigations which would maximize data recovery.

Phase III data recovery began by reestablishing the grid and laying out four 2 m wide and one 1 m wide power unit transects placed alternately within the power unit transects from the Phase II testing (Figure 24). After the excavation of six test units in Feature 3, an outbuilding location, a block area was machine stripped in order to reveal the full extent of subsurface remains of that structure. A block area also was machine excavated from around Feature 9, an early pit cellar, in an attempt to uncover any associated remains. Thirteen 1 m x 1 m test units were excavated in the house area. Two block areas were machine excavated in the house area after the test units were dug.

Discrete features were mapped and photographed in plan view and were then excavated. Features 1 and 3 were mapped and photographed in plan view, and 1 m x 1 m test units were excavated by hand within the feature areas. These 1 m x 1 m test units were excavated in 10 cm levels and the fills were water screened through 6.35 mm (1/4 inch) mesh hardware cloth. A 20 liter flotation sample was taken from each level to provide fine screen information. Features 7 and 9 were excavated in quarters in order to fully map the sequences of deposition within the two cellars. Each quarter was excavated in 10 cm arbitrary levels from a common datum unless obvious natural stratigraphy was present, in which case excavation proceeded by natural strata. A 20 liter flotation sample was taken from each level in order to provide fine screen information, while the remainder of the fill was water screened through 6.35 mm (1/4 inch) mesh hardware cloth. The remaining features were bisected, with all of the fill from the first half retained for water screening. The profiles were then mapped and photographed. Maximum 20 liter flotation samples were taken from 10 cm levels in the second half of each feature, with any remaining fill retained for water screening. Postholes were bisected and profiled. The fill from the first half was trowel sorted for artifacts. The second half for the postholes was left unexcavated.

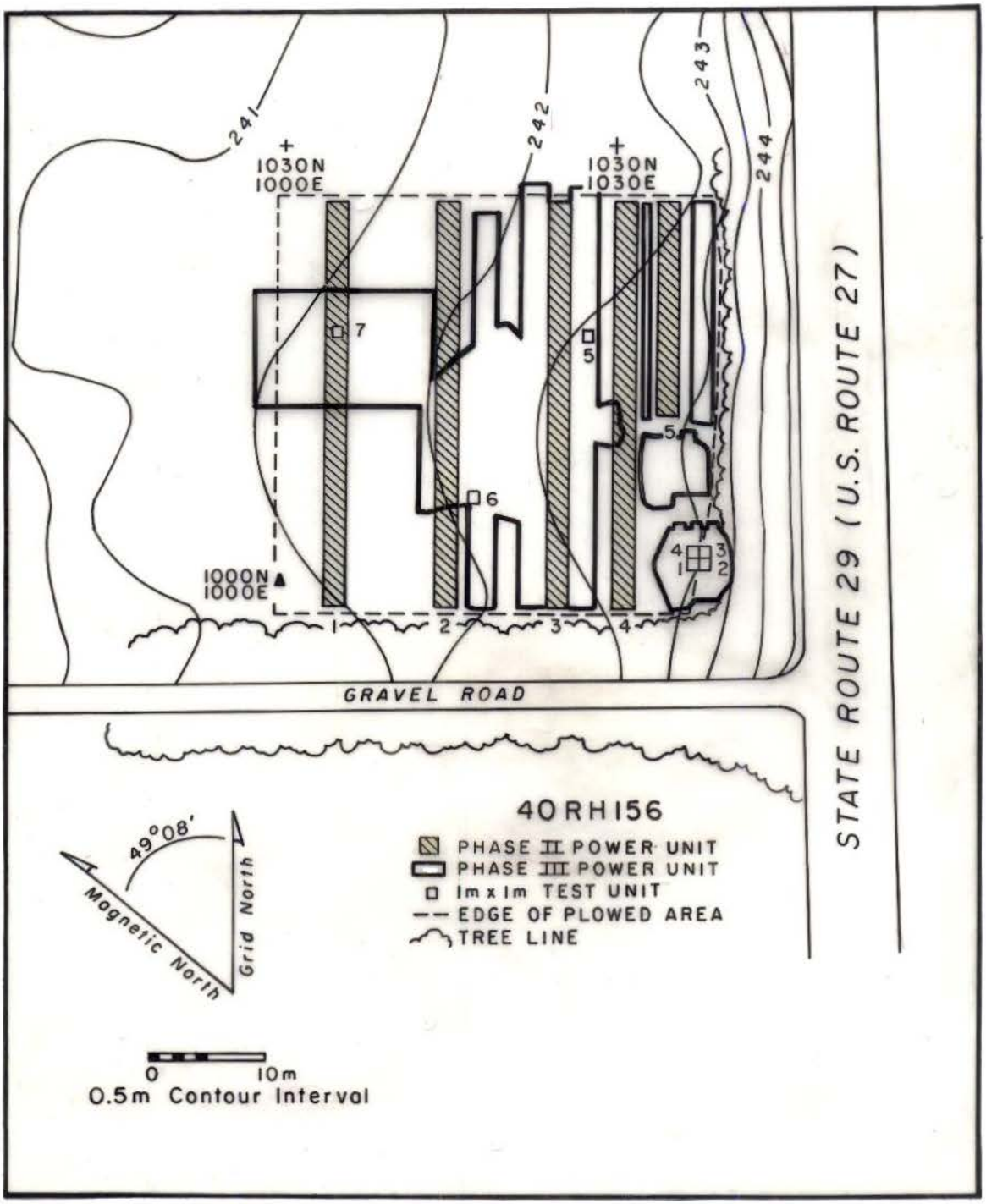

FIGURE 24. Test units and power units, 40RH156.

The Phase III excavation of site 40RH156 revealed 6 more features and 40 more postholes. The features include an early pit cellar (Feature 9), a deliberate bird burial (Feature 10), two shallow pits (possibly animal wallows) beneath structures (Features 11 and 12), a long oval basin-shaped pit beneath the house (Feature 13), and a small pit full of ash, brick, and charcoal near the chimney (Feature 15). All features were excavated, including Feature 7 which was partially dug during the Phase II testing. Hand excavation in the chimney area indicated that the house identified in Phase II testing was a single pen house with an end chimney rather than a central chimney as previously thought. Feature 9 represents an earlier house on the site, pushing the dates of historical occupation for site 40RH156 back some 30 years. Based on these investigations, site 40RH156 was a farmstead occupied from the 1830s until the 1920s or 1930s.

Artifacts recovered from the site indicate an occupation from around 1830 to around 1930. There is a possibility of an African-American occupation of the site as either slaves or as tenant farmers in the mid-19th century.

ARCHIVAL RESEARCH

The property on which site 40RH156 is located was Cherokee territory until 1819 (Ford 1982:4). The trail of ownership by Euroamericans is complicated and frustrating. The land speculator Syocklet Donelson acquired a grant of 19,000 acres (7,689 ha) of what would become northern Rhea County from North Carolina in 1795. After Donelson's death, R. G. Waterhouse bought the property from Donelson's widow in 1807 (Broyles 1991). Donelson's heirs contested the sale, and the ownership was not settled until 1824 when Deed Book A of Rhea County becomes filled with the many properties of R. G. Waterhouse. (Entries 1-16 are exclusively Waterhouse land, acquired from the Donelson estate.) Entry 12 on page 7 of the first deed book of Rhea County is the survey by R. G. Waterhouse of 650 acres (9,263 ha) of land which would later contain 40RH156. R. G. Waterhouse died in 1827 and passed much of his property to his son Franklin, including site 40RH156 (Rhea County Will Book A). Franklin Waterhouse and his brother Darius were ardent Confederates during the Civil War, with Franklin serving in the home guard. After the war Franklin Waterhouse sold 450 acres (182 ha) including site 40RH156 to Luther Heiskell from Missouri, a 37 year old farmer with a wife and five children (Rhea County Deed Book J:482; U.S. Census 1870). It is unlikely that Waterhouse or Heiskell ever lived at site 40RH156--Waterhouse owned most of the northern part of the county (Broyles 1982) and Heiskell has a road and creek named for him about a mile (1.6 km) from the site. The property was inherited by Heiskell's youngest daughter in the early 20th century (no date available). The present owner of the portion of the property containing site 40RH156 bought it from Heiskell's granddaughter in 1977 (Rhea County Deed Book 159:212-214).

FEATURES

Site 40RH156 is an historic farmstead site with three distinct components:

1. Early historic cabin site, represented by Feature 9, domestic structure;

2. Post-Civil War farmstead represented by the Structure 1 area and Features 3, 4, 7, 10, 11, and 12, 1860s-1920s; and

3. Twentieth century pasturage, represented by the remains of a livestock loading chute located just west of the proposed right-of-way, immediately south of the site area as defined by the Phase I survey, 1930s-present. The site is currently used as a hay field.

These three components overlap one another in time as well as space according to the artifactual record. Materials recovered from the top of Feature 9 indicate continued use of the domestic structure which once stood over the cellar as an outbuilding during the post-Civil War occupation of the site. In addition, artifacts found scattered in front of the chimney pad during mechanical stripping of the house area seem to indicate use of the house as a tool or equipment storage facility for a time after the abandonment of the structure's domestic functions. Feature 3 was constructed late in the second occupation component and survived long enough before it burned down for older residents of the area to remember that a barn stood at this location. Finally, the livestock chute outside the right-of-way was constructed in part with reused lumber from earlier structures, as many peg holes were visible in some timbers which did not correspond to any structural components of the chute. It must be recognized, however, that since the presence of the chute indicates a post-motor vehicle date for the structure, the pegged timbers could easily have been transported from elsewhere.

Six historic features and one structure were identified on the site during the Phase II testing (Franklin et al. 1995b) (Figure 25). Two additional features (Features 5 and 6) were portions of an erosional gully. Three of the features were investigated. Feature 2, a pit cellar associated with Structure 1, was fully excavated. Feature 7, a pit cellar representing a probable outbuilding location, was partially excavated. A 1 m x 1 m test unit was placed in a power unit trench in the Feature 3 area (Franklin et al. 1995b).

Phase III data recovery resulted in the identification of six more features (all of which were fully excavated) and in the clarification of uncertainties surrounding all of the features identified in the Phase II testing (Figure 25). One additional feature (Feature 14) was a tree disturbance.

Structure 1 was an area defined during the Phase II testing as the location of the house associated with the Feature 1 chimney and the Feature 2 cellar. Structure 1 was initially thought to be a saddlebag type house with rooms to the north and south of the Feature 1 chimney. Phase III data recovery revealed that Feature 1 was actually an end chimney with the structure extending to the south. Structure 1 measured approximately 6.7 m (22 ft) N-S x 5.5 m (18 ft) E-W based on the distribution of associated features and foundation stones. This is a common dimension for a single pen cabin (Morgan 1990:30). The Structure 1 area outside Features 1 and 2 was investigated with seven 1 m x 1 m hand excavation units and power stripped blocks. Four of the hand units located to the north of the chimney were outside the house. Power stripping revealed Features 13 and 15 in the Structure 1 area.

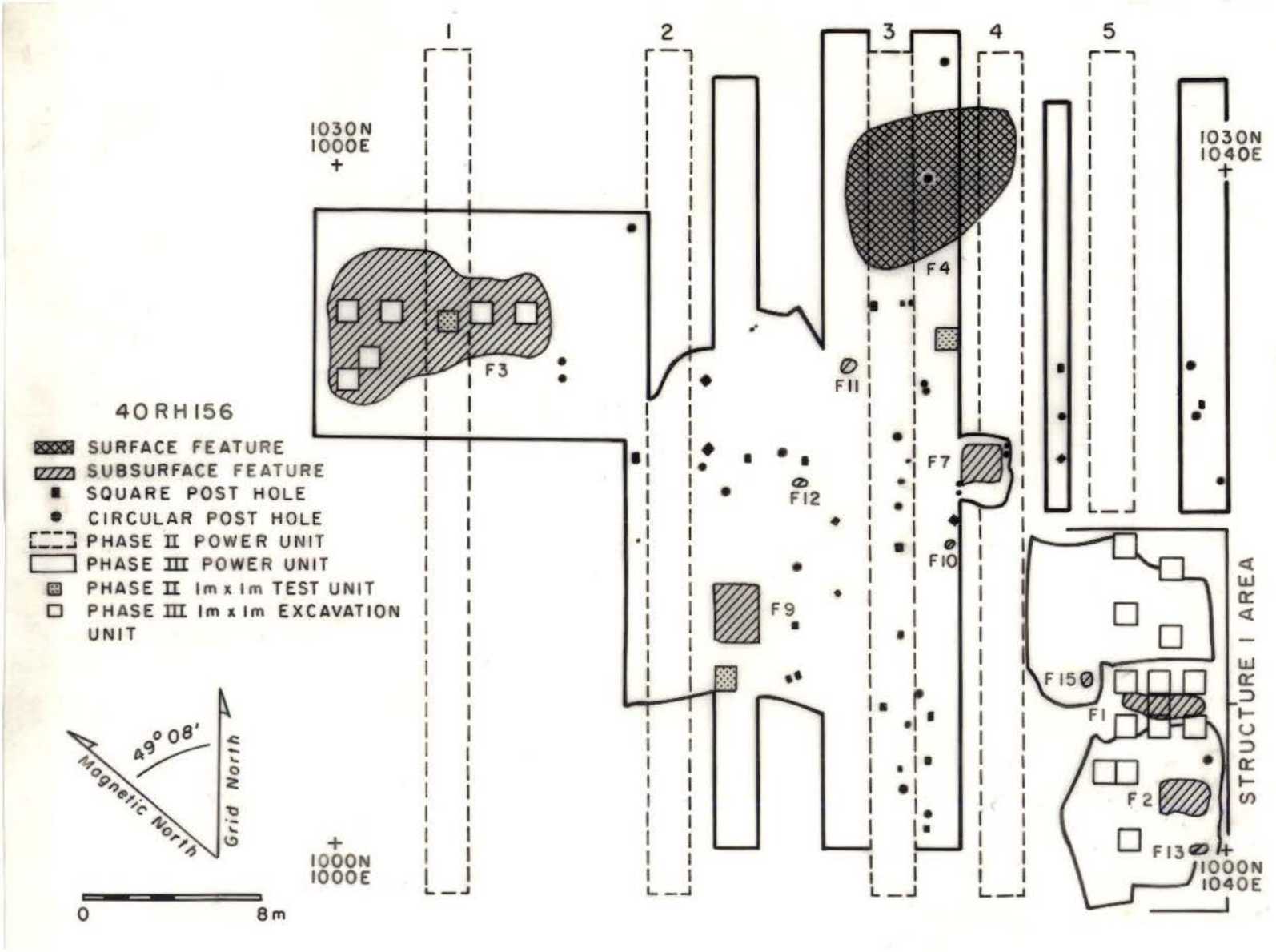

FIGURE 25. Feature, structure, and posthole distribution, 40RH156.

Feature 1 consisted of a roughly rectangular group of limestone blocks and rubble with a few brick fragments. Surface remains of this feature measured approximately 341 cm E-W x 289 cm N-S (Figures 26 and 27). It was originally interpreted as the remains of a central chimney/ hearth area. No excavation was done in this feature during the Phase II testing (Franklin et al. 1995b). During the Phase III data recovery, seven 1 m x 1 m units were excavated to delimit and investigate the chimney/hearth. The Phase III data recovery revealed that the feature was in fact much smaller and measured approximately 253 cm E-W x 103 cm N-S in plan view. This fact, along with the lack of domestic debris from four 1 m x 1 m test units placed to the north of the feature, resulted in the reinterpretation of the feature as the base of a gable end chimney. The excavation of the feature resulted in the conclusion that this chimney was a very late addition to Structure 1, circa 1913--perhaps replacing an earlier, less durable chimney. A similar chimney still stands approximately 1.6 km northeast of the site (Figure 28).

Feature 2 was completely excavated during Phase II testing. Four 1 m x 1 m units were excavated to expose this feature. Feature 2 was a pit cellar that measured 232 cm E-W x 182 cm N-S in plan view and 40 cm in depth (Figure 29). Feature 2 contained artifacts dating from the middle of the 19th century up to the first quarter of the 20th century.

Feature 3 was defined in the Phase II testing as an outbuilding area that measured approximately 900 cm E-W x 250 cm N-S (Figure 30). Phase III data recovery redefined these measurements as 988 cm E-W x 350 cm N-S and 5-14 cm deep. One 1 m x 1 m test unit was excavated in the feature during the testing and six additional test units were dug in the feature during data recovery to determine the functional significance of this structure (Figures 31 and 32). Archaeological and informant information indicate that a barn was built on this location around 1900 which burned at some point after the disappearance of the other structures on the site.

Feature 4 was defined as an outbuilding area during Phase II testing based on surface collected materials and soil quality. Phase III data recovery found no subsurface evidence of this structure. Artifacts recovered from the controlled surface collection in the area were predominantly canning jar fragments and utilitarian stoneware fragments with a minor amount of whiteware and window glass. Two solarized glass sherds were also recovered indicating a date range of 1886-1915.

Features 5 and 6 were portions of an erosional gully extending through two Phase II testing trenches. It measured 750 cm E-W x 600 cm N-S.

Feature 7 was found and partially investigated during Phase II testing and was completely exposed and excavated during Phase III data recovery. It was a square pit measuring 2.09 m N-S x 1.96 m E-W in plan view and 50 cm in depth (Figure 33). The presence of an earthen step (Figure 34) cut into the west wall of the feature suggests it was either a root cellar under an outbuilding constructed specifically to cover it, or that it was a type of structure known as a "flower kiln," used for overwintering tender perennial plants (Charles Faulkner, personal communication 1995). The artifacts recovered from this feature suggest that it was filled in during the first quarter of the 20th century.

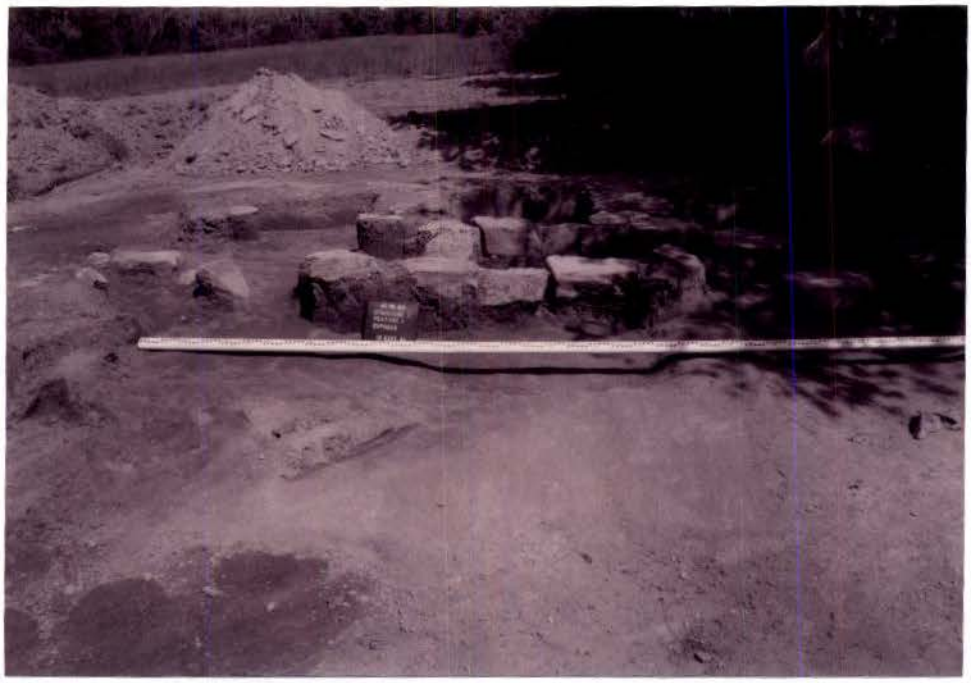

FIGURE 26. Feature 1, 40RH156. Plan view before excavation, looking east (top) and profile after excavation, looking north (bottom).

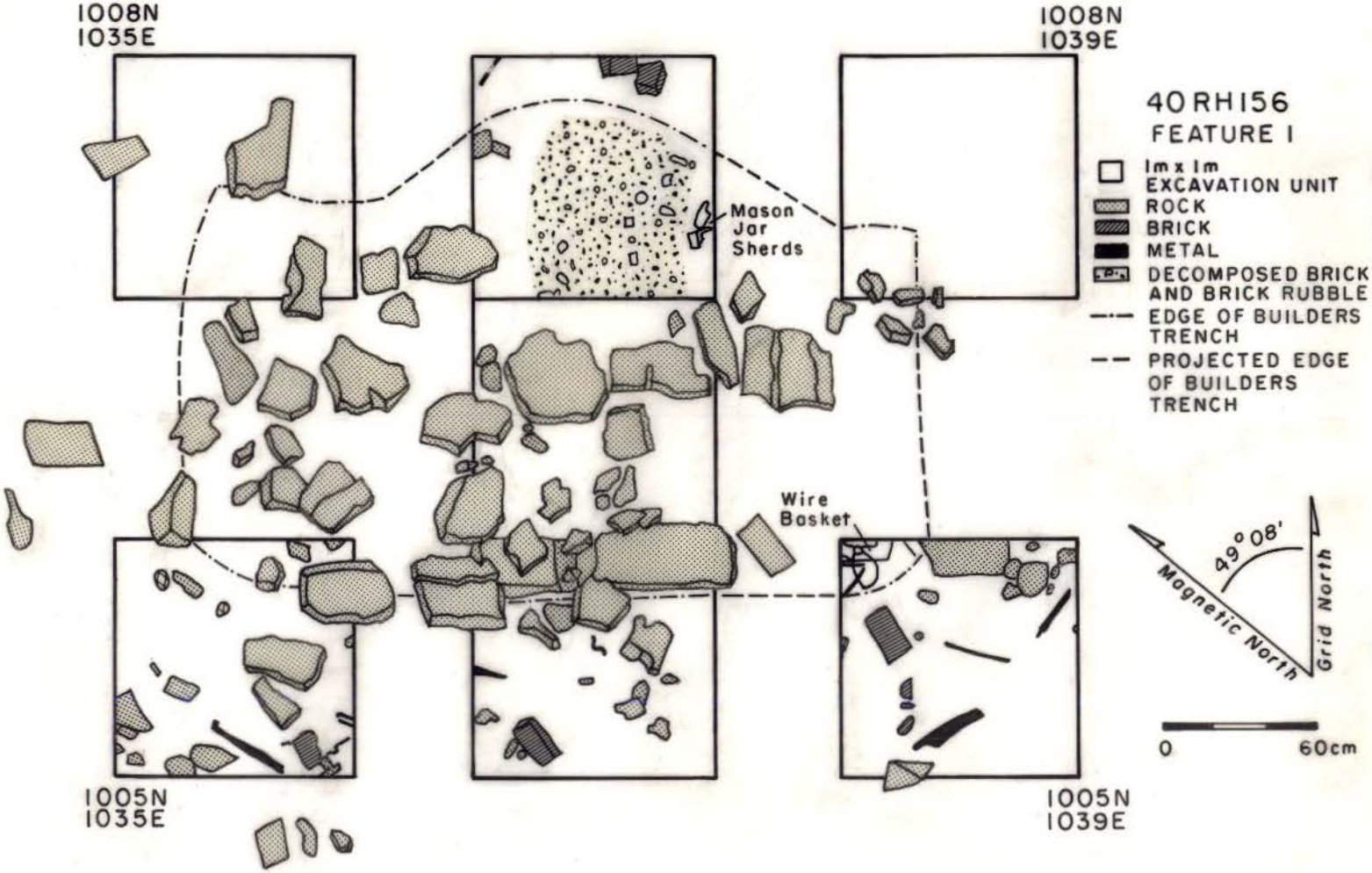

FIGURE 27. Feature 1 plan view after excavation, 40RH156.

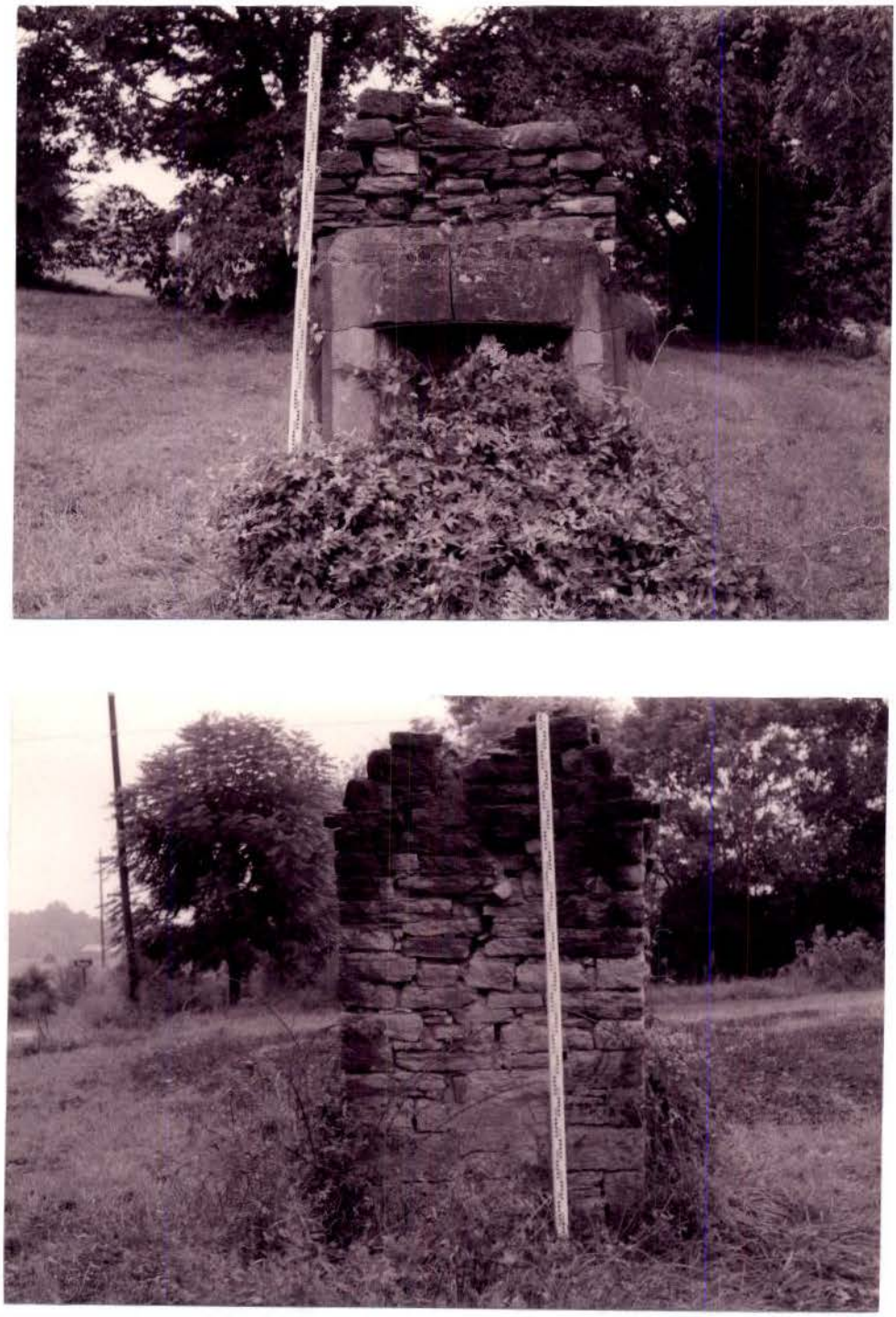

FIGURE 28. Ruined stone chimney with red clay mortar near 40RH156.

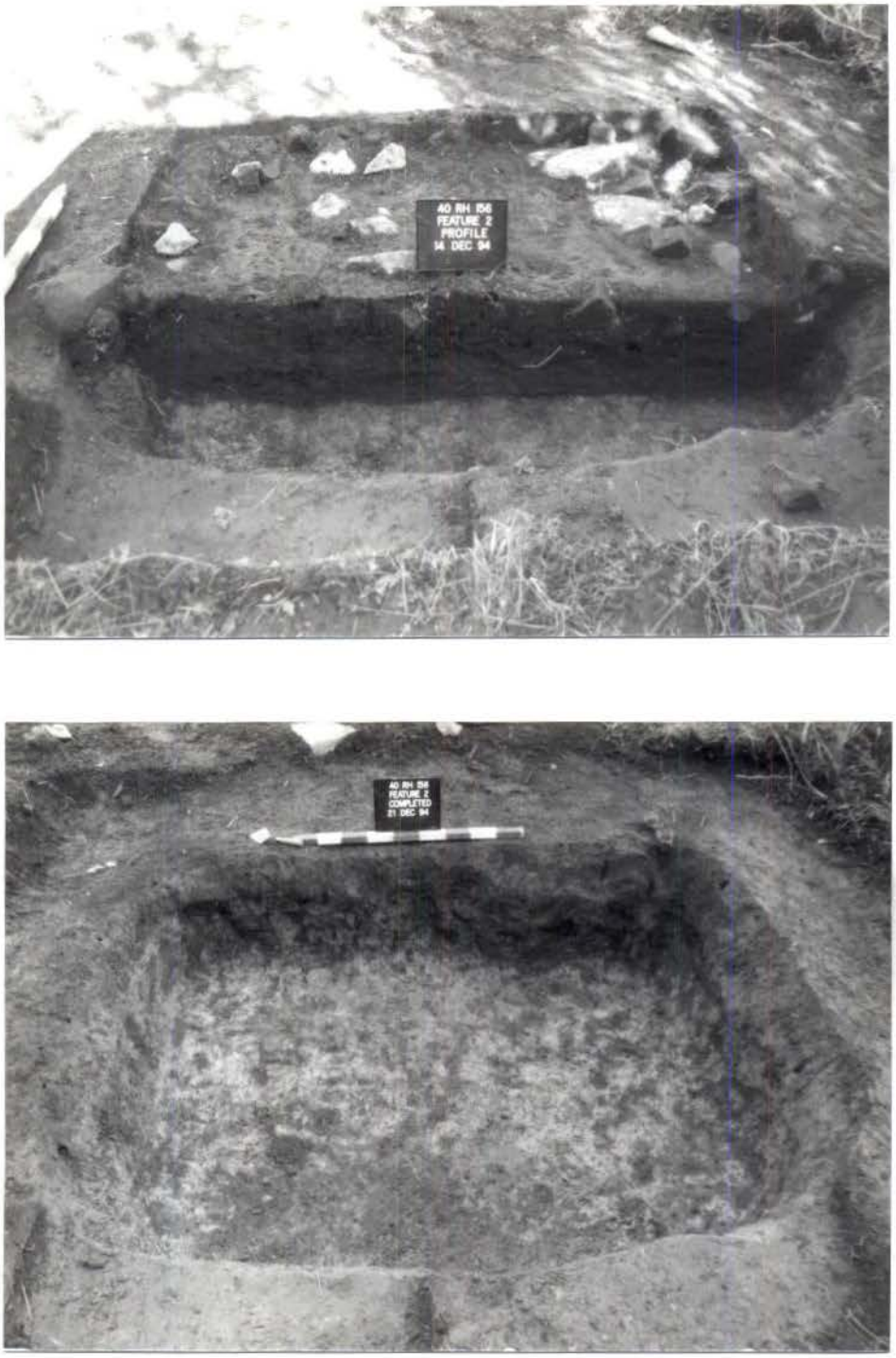

FIGURE 29. Feature 2, 40RH156. Profile, looking north (top) and completely excavated, looking east (bottom).

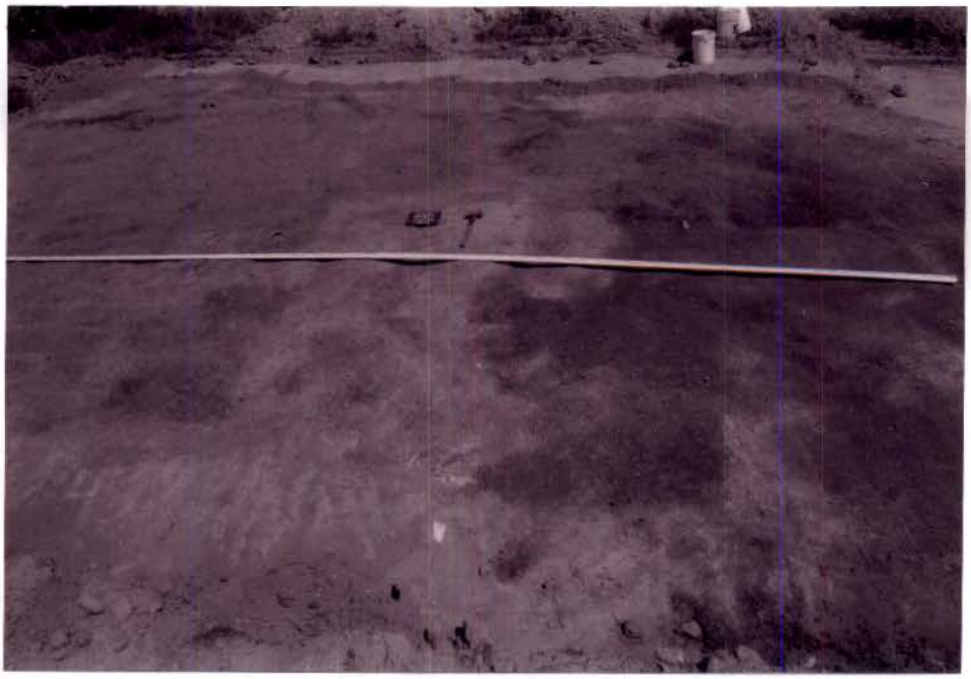

FIGURE 30. Feature 3, 40RH156. Looking north.

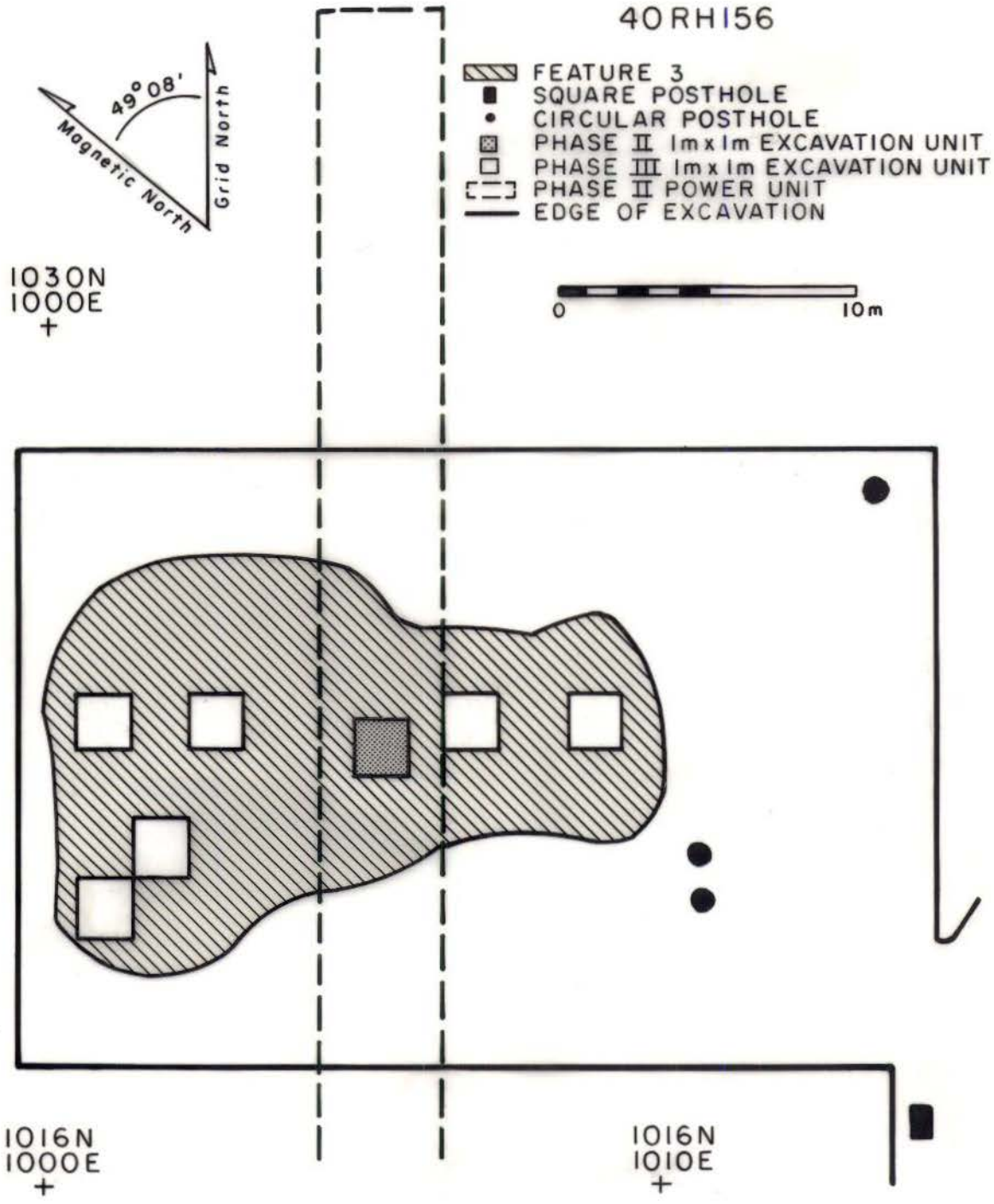

FIGURE 31. Feature 3 plan view, 40RH156.

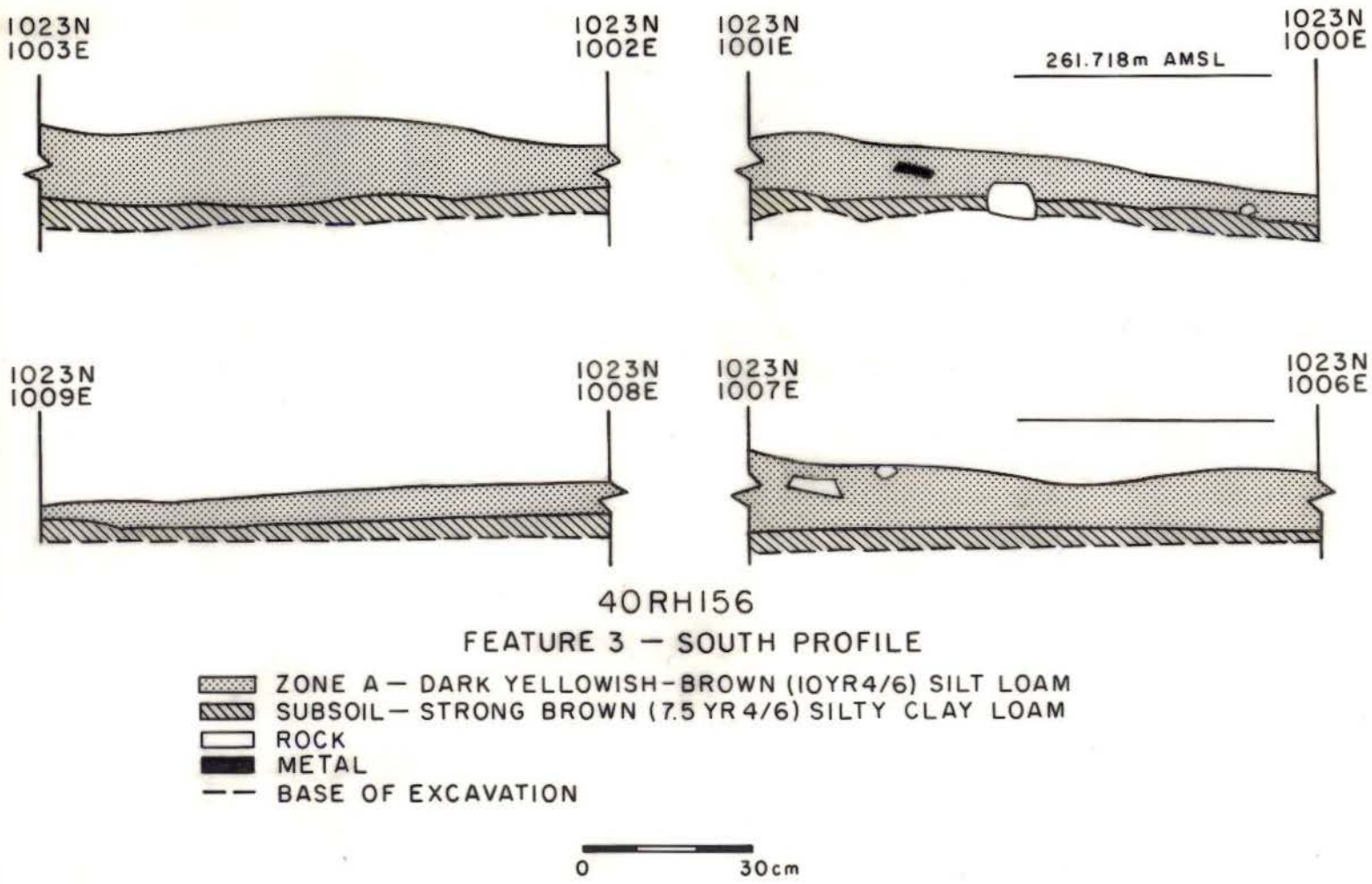

FIGURE 32. Feature 3 profile, 40RH156.

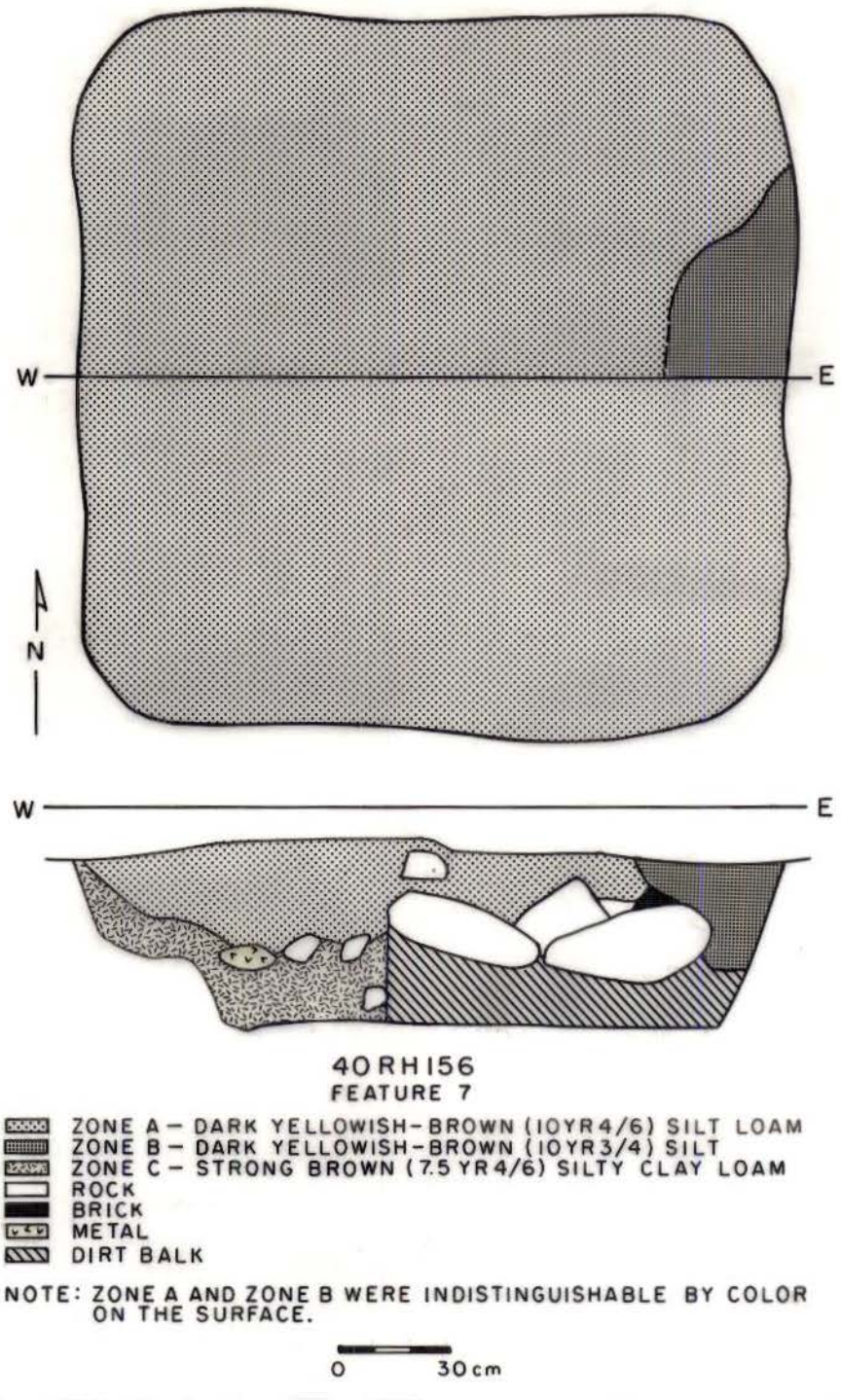

FIGURE 33. Feature 7 plan and profile, 40RH156.

FIGURE 34. Feature 7, 40RH156. Excavation in progress, looking north (top) and earthen step on west wall, looking west (bottom).

Feature 8 was exposed and mapped during Phase II testing and was thought to be a possible builders trench. Further work revealed this feature to be a telephone cable trench placed along State Route 29 in the 1970s.

Feature 9 was discovered during power trenching in the Phase III data recovery. It was a square pit cellar that measured 250 cm N-S x 251 cm E-W in plan view and 37 cm in depth (Figures 35-37). The dates and dispositions of the artifacts in this cellar indicate that it was beneath a domestic structure built by 1830 and abandoned by the 1850s.

Feature 10 was a small circular pit that measured 17 cm in diameter and 5 cm in depth. It appears to be a duck burial pit. It was located behind (west of) the later house and adjacent to Feature 7. The uncooked condition of the bones suggests that this feature is the burial place of a child's pet.

Feature 11 was a shallow ovoid depression filled with nails. It may represent an animal wallow beneath an unidentified outbuilding. The depression measured 96 m E-W x 40 m N-S in plan view and 13 cm in depth.

Feature 12 was a basin-shaped pit of unknown function that measured 32 cm E-W x 25 cm N-S in plan view and 12 cm in depth. It contained an unidentifiable flake of glass.

Feature 13 was a long oval pit located beneath or along the side of Structure 1. Feature 13 measured 140 cm E-W x 35 cm N-S in plan view and 33 cm in depth (Figure 38). The artifacts it contained date from the 1860s to the 1930s with one exception--a silver Spanish coin dated 1803 with a hole punched in the upper rim. This artifact is discussed further below.

Feature 14 was a tree disturbance.

Feature 15 was a shallow circular basin-shaped pit that measured 25 cm in diameter and 10 cm in depth. Feature 15 was adjacent to Feature 1 and was filled with ash, charcoal, and the remains of a leather boot heel.

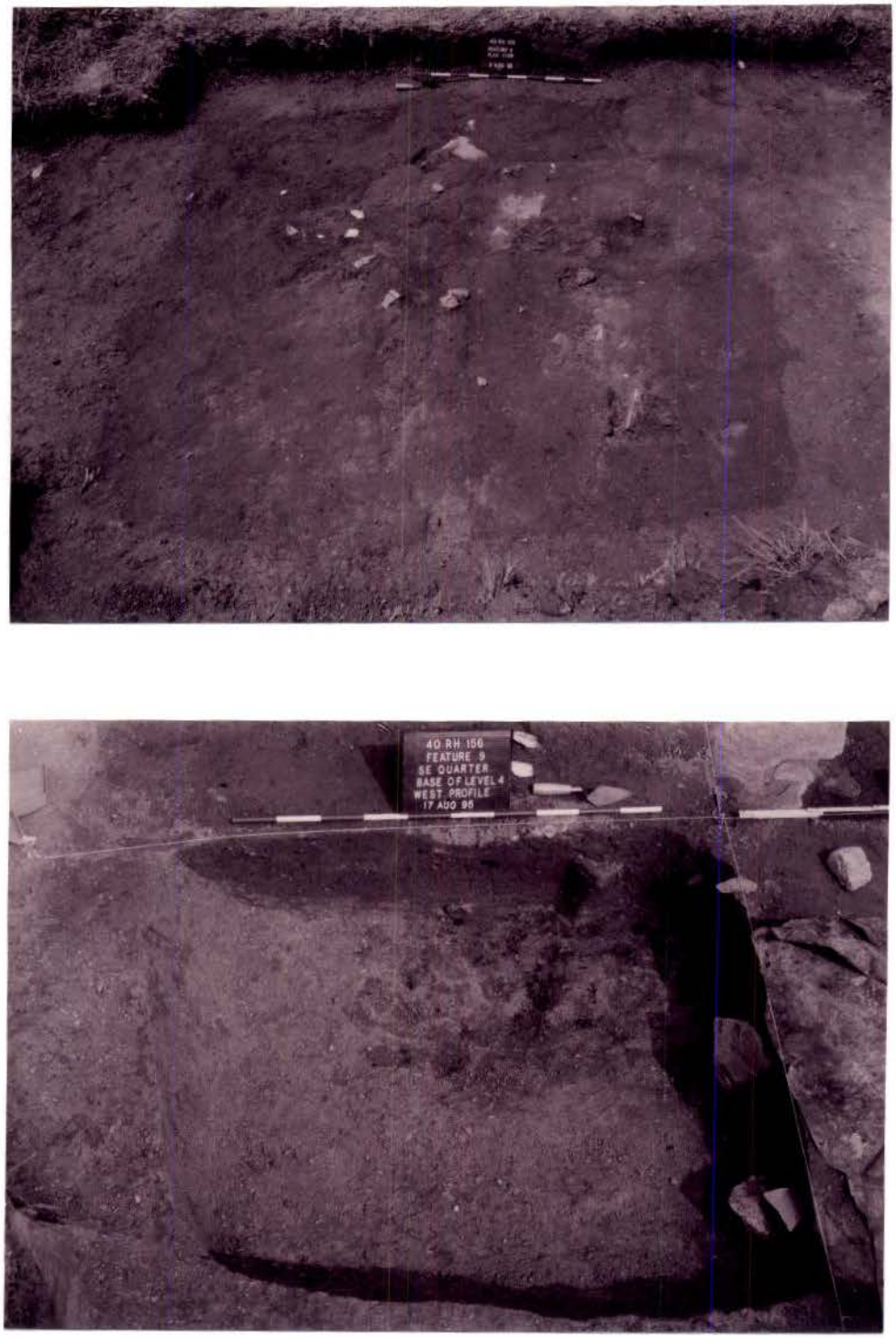

FIGURE 35. Feature 9, 40RH156. Plan view, looking west (top) and profile of southeast quarter, looking west (bottom).

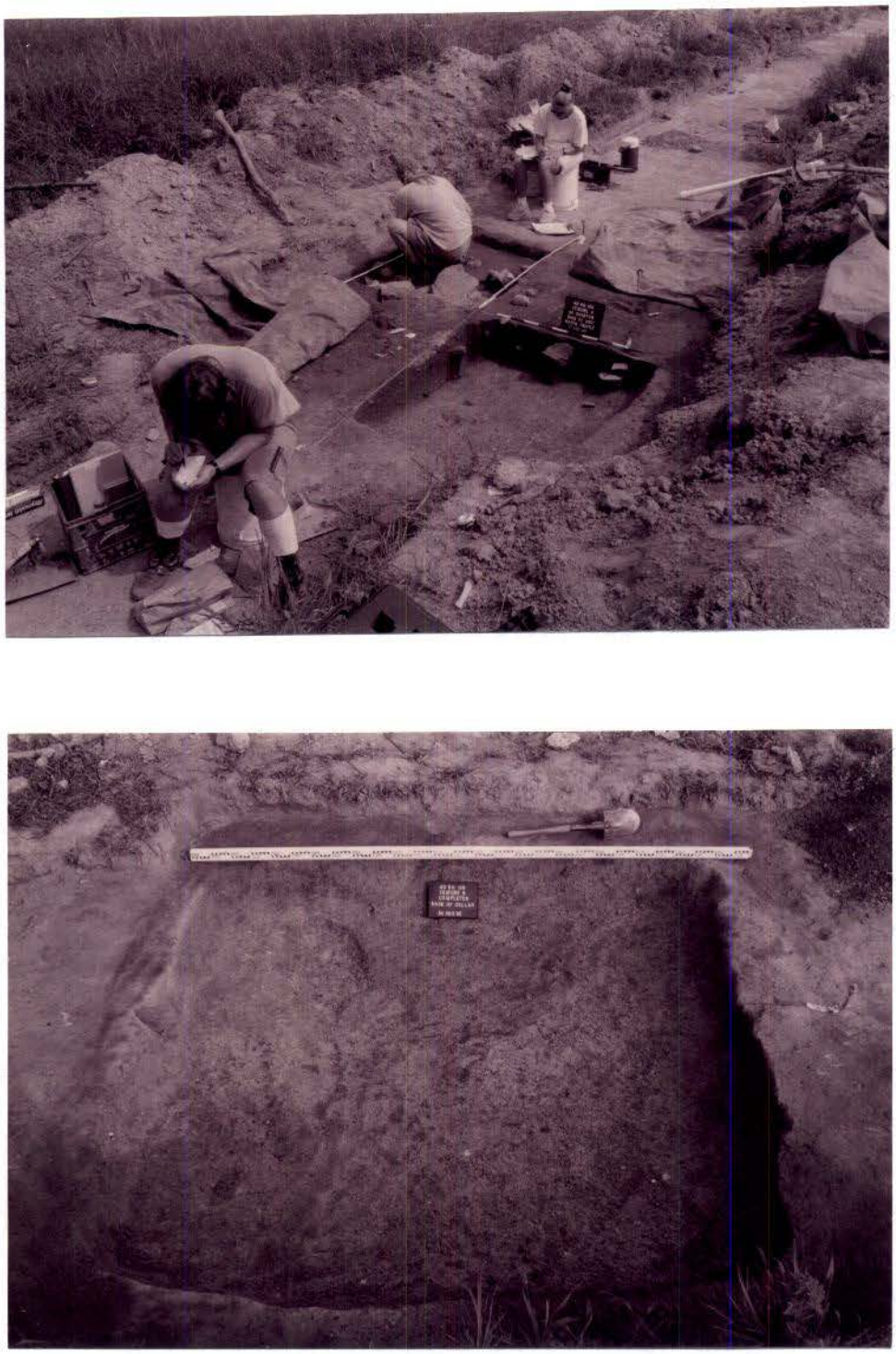

FIGURE 36. Feature 9 during and after excavation, 40RH156. Excavation by opposite quarters in progress, looking northwest (top) and completely excavated, looking west (bottom).

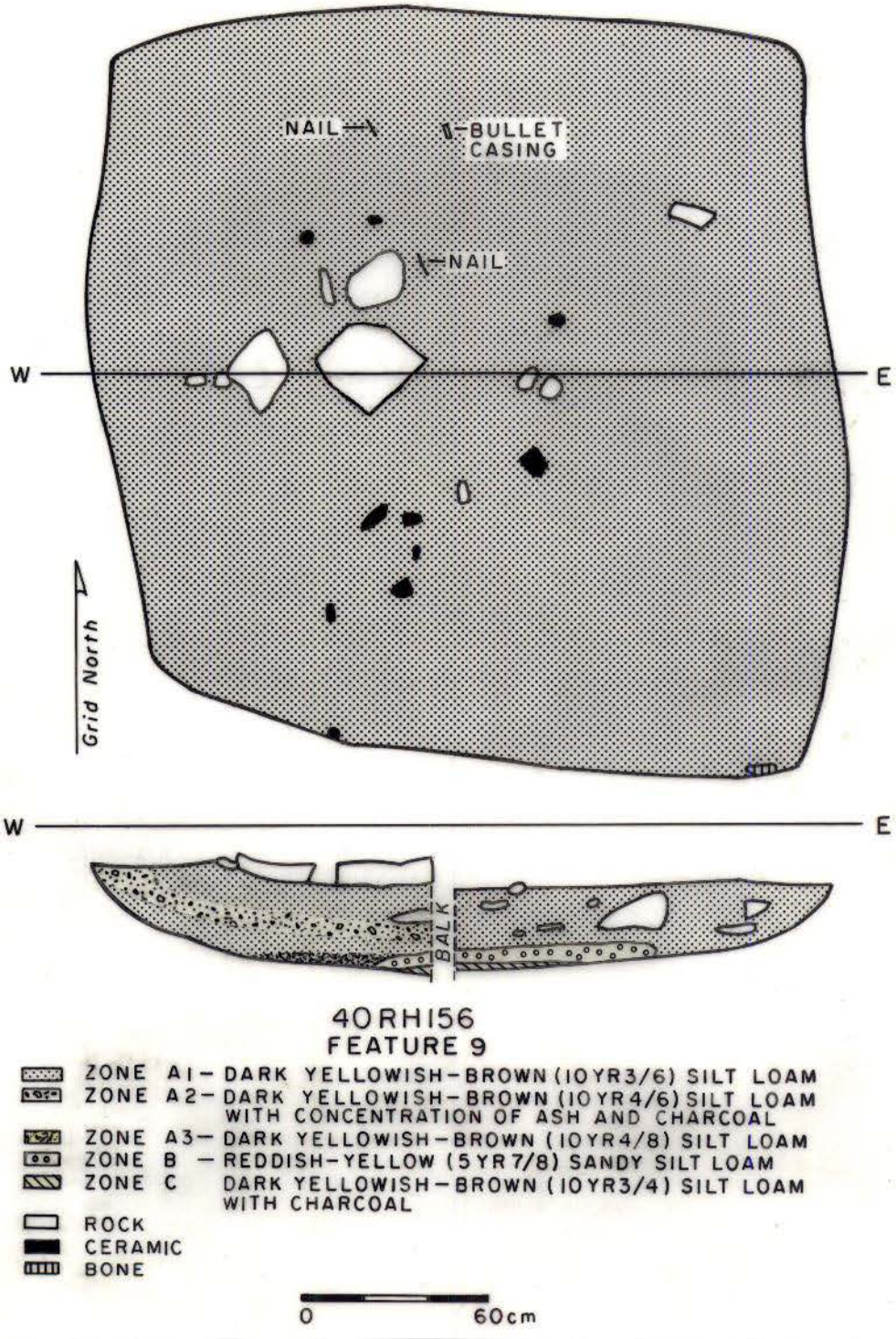

FIGURE 37. Feature 9 plan and profile, 40RH156.

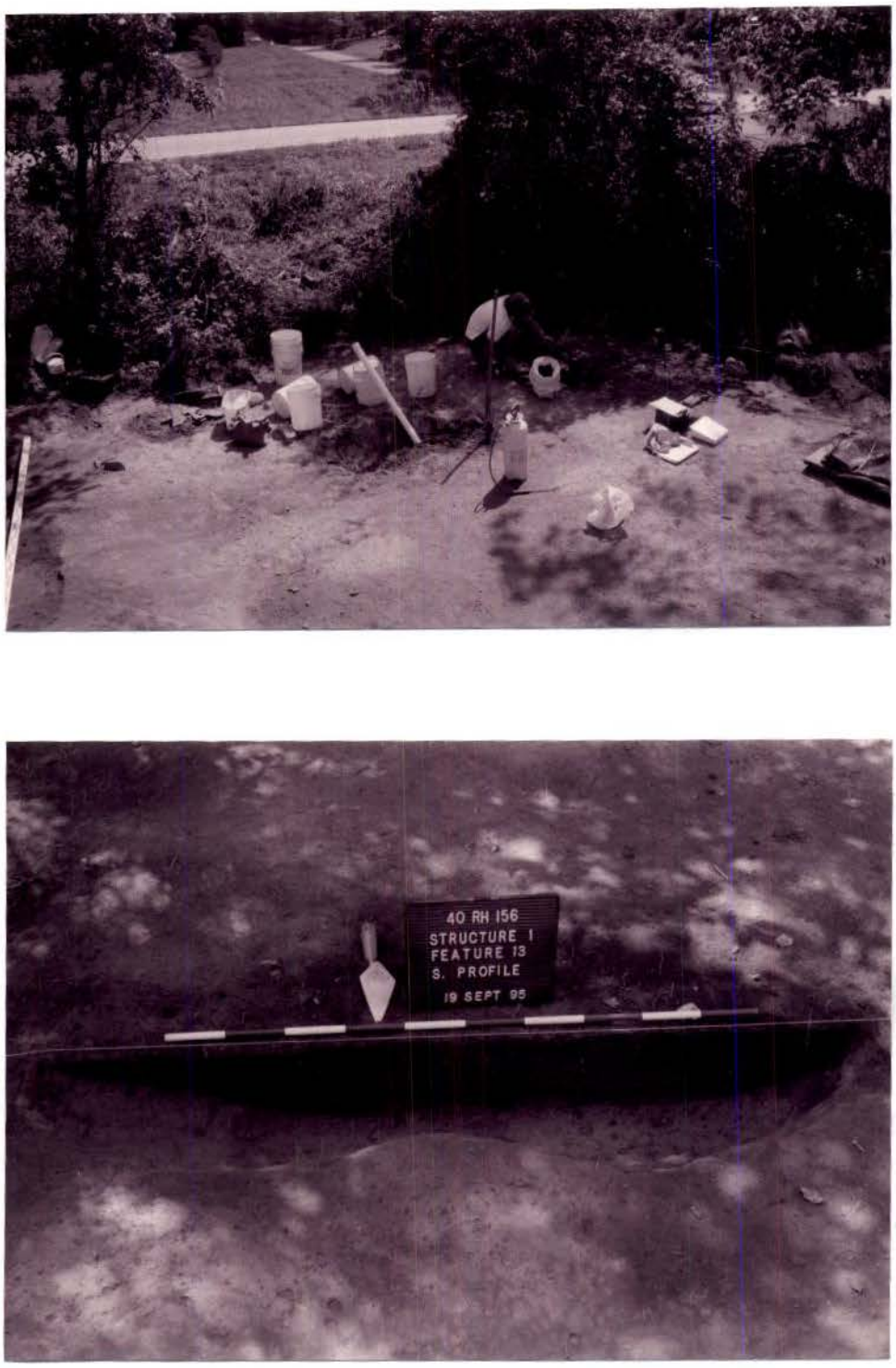

FIGURE 38. Feature 13, 40RH156. Excavation in progress, looking southwest (top) and profile, looking south (bottom).

ARTIFACT ANALYSIS

Structure 1

Structure 1 was the location of the house associated with the Feature 1 chimney, the Feature 2 cellar, and Features 13 and 15. The Structure 1 area outside Features 1 and 2 was investigated with seven 1 m x 1 m hand excavation units and power stripped blocks. Four of these hand units located to the north of the chimney were outside the house. The artifacts were recovered from the seven hand units.

Activity Group	38	3.9%
Architecture Group	624	64.0%
Arms Group	8	0.8%
Clothing Group	3	0.3%
Kitchen Group	222	22.8%
Medicine Group	50	5.1%
Personal Group	8	0.8%
Transportation Group	8	0.8%
Indeterminate Group	14	1.4%
Total	975	

Activity Group (N = 38)

This group includes artifacts used in outdoor activities, such as building and maintaining structures, animal husbandry and farming, or fabrication in a workshop setting.

Farm Tools (N = 4)

Mowing machine teeth	2	5.3%
Pair of pliers	1	2.6%
Pitchfork	1	2.6%

Miscellaneous Hardware (N= 34)

Bolts and other fasteners	8	21.1%
Pieces of wire	15	39.5%
Iron plate (cast, >2 mm thick)	1	2.6%
Iron sheet (< 2 mm thick)	9	23.7%
Chain	1	2.6%

There are no artifacts in the activity group which can be precisely dated but the assemblage appears to represent scrap metal of the sort that might accumulate in, around, or under a shed on an early 20th century farmstead.

Architecture Group (N = 624)

This group includes nails, window glass, bricks, and limestone rocks, both hammer-dressed and natural.

Cut nails	223	35.7%
Wire nails	225	35.1%
Lead-headed wire nails	17	2.7%
Indeterminate nails	11	1.8%
Window glass	148	23.7%
Limestone blocks		

The ratio of wire nails to cut nails (1.08:1) suggests a date around the beginning of the 20th century. The lead-headed wire roofing nails indicate the presence of a metal roof on the structure.

Arms Group (N = 8)

This group contains artifacts having to do with the use of firearms.

Brass cartridge cases	7	87.5%
Unfired lead bullet	1	12.5%

The brass cartridge cases recovered from Structure 1 are four .22 caliber long rimfire, one .38 special, one 12 gauge case head, and an indeterminate case fragment. The unfired lead bullet measures 8.1 mm in diameter (.32 caliber). It most likely came from a .32 caliber Smith and Wesson rimfire cartridge.

Clothing Group (N = 3)

This group includes artifacts which have to do with clothing such as buttons and buckles.

Buttons (N = 1)

A single button was recovered from Structure 1.

Hard rubber, 2-hole domed button	1	33.3%

Hard rubber buttons were invented in the 1850s and are still in use. This button does not have the Goodyear patent backstamp, implying a post 1870 date (Fink and Ditzler 1993:28).

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Other Items (N=2)

Eyelet	1	33.3%
Two-piece brass and iron snap	1	33.3%

Kitchen Group (N = 222)

Ceramics (N = 75)

Coarse earthenwares and stonewares:

Salt glazed stoneware	2	0.9%
Bristol glazed stoneware	9	4.1%
Total	11	5.0%

Refined earthenwares:

Transitional wares: underglaze polychrome	3	1.4%
Transitional wares: plain	2	0.9%
Whitewares: blue shell edged	1	0.5%
White ware: embossed plain	1	0.5%
Whiteware: plain	16	7.2%
Whiteware: flow blue transfer printed	4	1.8%
Whiteware: blue transfer printed/hand painted	1	0.5%
Total	30	13.2%

Ironstone:

Plain white	29	13.1%
Embossed white	1	0.5%
Total	30	13.6%

Porcelains:

Plain white	2	0.9%
Decalcomania	2	0.9%
Total	4	1.8%

Glass (N = 147)

Kitchen glass is divided into food canning jars, bottles, table ware, and indeterminate categories. The glass from the site is sorted by vessel type and glass color. The brown beer bottle glass is probably modern.

Blue-green canning jar sherds	29	13.1%
Clear indeterminate vessel sherds	66	29.7%
Brown beer bottle sherds	18	8.1%
Blue-green bottle sherds	4	1.8%
Clear pressed tableware sherds	9	4.1%
Clear tumbler sherds	8	3.6%
Clear liquor bottle sherds	4	1.8%
Light olive wine bottle sherds	2	0.9%
Indeterminate solarized sherds	7	3.2%
Total	147	66.3%

Medicine Group (N = 50)

Clear panel body sherds	48	96.0%
Solarized panel bottle sherds	2	4.0%

This group consists entirely of glass bottle fragments which were probably medicine containers, mostly of clear embossed panel bottles. Panel bottles date after 1967 (Lorrain 1968:40).

Personal Group (N = 50)

This group encompasses those artifacts that were probably carried or worn on the person for constant or daily use, hygiene, recreation, and adornment.

Rectangular slate pencil leads	3	37.5%
Writing slate fragments	2	25.0%
Stub-stemmed tobacco pipe fragment	1	12.5%
78 rpm record fragment	1	12.5%
Porcelain figurine or doll head fragment	1	22.5%

No dates are available for the rectangular slate pencil leads. Tobacco pipes have been placed into this group for this analysis. The stub-stemmed tobacco pipe fragment is of unglazed redware. The porcelain figurine or doll head fragment is a small chip.

Transportation Group (N = 8)

Rubber windlace/weatherstrip scraps	8	100.0%

These scraps are from the door seals of an automobile, circa 1930-1950.

Indeterminate Group (N = 14)

This is the catchall category for those items that cannot be placed elsewhere.

Brass and slate electrical components	3	21.4%
Brass and rubber light socket pieces	11	78.6%

Dates

Structure 1 was a house site associated with Features 1, 2, 13, and 15. It was probably a log cabin (based on the number of nails). The house was built shortly after the Civil War and was torn down in the early 20th century, perhaps as late as 1930.

Feature 1

Feature 1 consisted of a roughly rectangular group of limestone blocks and rubble with a few brick fragments. The excavation of the feature resulted in the conclusion that this chimney was a very late addition to Structure 1, circa 1916, perhaps replacing an earlier, less durable chimney. Feature 1 produced a total of 1,175 artifacts.

Activity Group	131	11.1%
Architecture Group	594	50.4%
Arms Group	4	0.3%
Clothing Group	18	1.5%
Furniture Group	2	0.2%
Kitchen Group	228	19.3%
Medicine Group	181	15.4%
Personal Group	11	0.9%
Transportation Group	3	0.3%
Indeterminate Group	7	0.6%
Total	1,179	

Activity Group (N = 131)

This group includes artifacts used in outdoor activities, such as building and maintaining structures, animal husbandry and farming, or fabrication in a workshop setting.

Farm Tools (N = 13)

Mowing machine teeth	8	6.1%
Pair of pliers	1	0.8%
Files	2	1.5%
Long-handled square socket T-wrench	1	0.8%
Scythe blade	1	0.8%

Miscellaneous Hardware (N = 118)

Bolts and other fasteners	21	16.0%
Pieces of wire	35	26.7%
Iron plate (cast, >2 mm thick)	1	0.8%
Iron sheet (< 2 mm thick)	53	40.4%
Iron strapping	2	1.5%
Bar iron (wrought, >10 mm thick)	4	3.1%
Steel ball bearing 12 mm in diameter	1	0.8%
Machine-made strap hinge	1	0.8%

There are no artifacts in the activity group which can be precisely dated, but the assemblage appears to represent scrap metal of the sort that might accumulate in, around, or under a shed on an early 20th century farmstead.

Architecture Group (N = 594)

This group includes nails, window glass, bricks, and limestone rocks, hammer-dressed and natural.

Cut nails	154	25.9%
Wire nails	222	37.4%
Lead-head wire nails	11	1.9%
Indeterminate nails	14	2.4%
Window glass	175	29.5%
Limestone blocks	18	3.0%

The ratio of wire nails to cut nails (1.44:1) suggests a date around the beginning of the 20th century. The lead headed wire roofing nails indicate the presence of a metal roof on the structure associated with the chimney.

The 175 sherds of window glass can be divided into two thickness groups. The first group (N = 156) averages 2.2 mm in thickness. The second group (N = 19) averages 1.75 mm in thickness. The two samples yield dates of 1898 and 1860, respectively. With the ceramic dates closely supporting this range, it would seem that this structure has a date range in the latter half of the 19th century through the early 20th century.

The brick sample (which is highly fragmentary) appears to be of handmade bricks of low quality, as the majority exhibit the crumbly, earthy texture associated with underfiring. A total of 18.44 kg (40.65 lb.) of brick rubble and mortar were recovered. The limestone blocks are dressed, but no hammer dressing flakes were recovered from this feature. This suggests that the stones were dressed elsewhere and brought to the site.

Arms Group (N = 4)

This group contains artifacts having to do with the use of firearms.

Brass cartridge cases	3	75.0%
Unfired lead ball	1	25.0%

The three brass cartridge cases recovered from Feature 1 are a .22 caliber long rimfire, a .22 caliber short rimfire (unfired), and a .32 caliber Smith and Wesson short rimfire. All three cartridges were introduced during the 1850s. Both .22 and .32 rimfire are still in production, although .32 rimfire is a specialty load. The unfired lead ball is 7.36 mm in diameter (.28 caliber). It may be a pellet of #0000 buckshot, or it may be a rifle ball, as when wrapped with a cloth patch it would fit a .30 caliber muzzle loading rifle barrel, which was not an unusual size for small game hunting.

Clothing Group (N = 18)

This group includes artifacts which have to do with clothing, such as buttons and buckles.

Buttons (N = 13)

Ten types of buttons were recovered from Feature 1. The list below includes material, number of holes, type of center, diameter, and number of each type found.

White porcelain, 4-hole depressed center, 10 mm	3	16.7%
Blue porcelain, 4-hole depressed center, 10 mm	1	5.6%
White porcelain, 2-hole depressed center, 9.9 mm	1	5.6%
Iron, 4-hole two piece depressed center, 11.1 mm	1	5.6%
Formed synthetic flower, 2-hole, 21.2 mm	2	11.1%
Hard rubber, 4-hole depressed center, 16.8 mm	1	5.6%
Hard rubber, 2-hole domed center, 14.2 mm	1	5.6%
Hard rubber, 2-hole flat, 24.5 mm	1	5.6%
Shell, 2-hole flat, 16.1 mm	1	5.6%
Shell, 4-hole flat, 20.3 mm	1	5.6%

These button types are datable only over a wide time range. Porcelain concave-center buttons date from the 1840s to the 1950s (South 1964). The synthetic button may be of syroco, a pressed wood fiber composite dating to the 1920s (Fink and Ditzler 1993:30). Hard rubber buttons were invented in the 1850s and are still in use, although the flat two hole rubber button is stamped "Goodyear N R Co Pat 1851". The patent for Goodyear's button making process

expired in 1870, so this button was probably manufactured prior to that date (Fink and Ditzler 1993:28).

Other Items (N = 5)

Hook and eye fastener	1	5.6%
Eyelet	1	5.6%
Straight pin fragment	1	5.6%
Hollow brass stud	1	5.6%
Two-piece brass and iron stud button	1	5.6%

The straight pin is of the flat headed variety, indicating a post-1824 date of manufacture (Noel-Hume 1970:254).

Furniture Group (N = 2)

Gilded escutcheon plate	1	50.0%
Sheet brass cog wheel 61.9 mm in diameter	1	50.0%

The sheet brass cog wheel is probably from a clock.

Kitchen Group (N = 228)

Ceramics (N = 43)

Coarse earthenwares and stonewares:

Lead glazed redware	2	0.9%
Yellow ware	1	0.4%
Salt glazed stoneware	1	0.4%
Albany slip glazed stoneware	2	0.9%
Total	6	2.6%

Refined earthenwares:

Pearlware: blue shell edged	2	0.9%
Pearlware: green shell edged	1	0.4%
Transitional wares: underglaze blue hand painted	2	0.9%
Transitional wares: mocha	1	0.4%
Whiteware: embossed plain	14	6.1%
Whiteware: annular	1	0.4%
Whiteware: red/green spatter	1	0.4%
Whiteware: flow blue transfer printed	2	0.9%
Whiteware: red transfer printed	1	0.4%
Burned/unidentified refined earthenware	1	0.4%
Total	26	11.2%

Ironstone:

Plain white	5	2.2%
Embossed white	1	0.4%
Total	6	2.6%

Porcelains:

Plain white	2	0.9%
Overglaze pink luster	1	0.4%
Overglaze indeterminate	1	0.4%
Embossed scalloped rim	1	0.4%
Total	5	2.1%

The two redware sherds are probably from the same vessel--a small crock with a clear lead glaze inside and a shiny dark brown iron oxide lead glaze outside. The yellow ware sherd is from a mug and has a horizontal band of brown slip on the exterior. The salt glazed stoneware sherd is burned, and the two Albany slipped sherds are of late manufacture, having been jiggered or press molded.

The refined earthenwares are mostly flatwares and tea wares.

Porcelain is difficult to date because most types are still being made. The plain white sherds appear to be oriental hard paste porcelain. The sherd with overglaze pink luster decoration appears to be from a teacup, circa 1830 to the present. Similar sherds were found in Feature 2.

Glass (N = 184)

Kitchen glass is divided into food canning jars, bottles, tableware, and indeterminate categories. The glass from the site is sorted by vessel type and glass color. The brown beer bottle glass is probably modern.

Blue-green canning jar sherds	7	3.1%
Clear canning jar sherds	4	1.8%
Clear indeterminate vessel	80	35.1%
Brown beer bottle sherds	84	36.8%
Blue-green bottle sherds	4	1.8%
Clear pressed tableware	1	0.4%
Clear tumbler sherds	2	0.9%
Indeterminate solarized sherds	2	0.9%
Total	184	80.7%

Metal Tableware (N = 1)

Iron spoon handle	1	0.4%

Medicine Group (N = 181)

Clear panel bottle sherds	181	100.0%

This group consists entirely of glass bottle fragments which were probably medicine containers, mostly of clear embossed panel bottles. Panel bottles date after 1867 (Lorrain 1968:40).

Personal Group (N = 10)

This group encompasses those artifacts that were probably carried or worn on the person for constant or daily use, hygiene, recreation, and adornment.

Apple green glass perfume bottle sherd	1	9.1%
Rectangular slate pencil leads	2	18.2%
Stub-stemmed tobacco pipe fragments	2	18.2%
Porcelain figurine or doll head	1	9.1%
Clay marble	1	9.1%
Coins	4	36.4%

No dates are available for the rectangular slate pencil leads. Tobacco pipes have been placed into this group for this analysis. The stub-stemmed tobacco pipe fragments are of unglazed redware. No dates are available for these artifacts due to their fragmentary nature. The porcelain figurine or

doll head is 15.56 mm high and by the hairstyle appears to date to the turn of the century. The clay marble is 14.65 mm in diameter.

A single United States cent was found within the sealed rubble fill of the chimney foundation. Since the 1916 date on this coin cannot be argued with as a *terminus post quem*, the chimney pad was built or rebuilt no earlier than that date. Two other coins were recovered from the builders trench surrounding the chimney pad and may date to the original construction of the house. These are 1859 and 1889 one cent pieces. The fourth coin is an 1861 one cent piece that has been pierced.

Transportation Group (N = 3)

Spark plugs	2	66.6%
Rubber inner tube scrap	1	33.3%

Two spark plugs made by Champion and inscribed "twist-off" were recovered in front of the chimney base. No date of manufacture is known, although the plugs must postdate 1900. These may be from a piece of farm equipment. A scrap of rubber inner tube was also recovered.

Indeterminate Group (N = 7)

This is the catchall category for those items that cannot be placed in other groups.

Fragments of leather	5	71.4%
Pieces of metal	2	28.6%

Dates

Feature 1 is a chimney pad with a builders trench built on the location of an earlier chimney pad. The early ceramics, window glass, and coins recovered from the feature are most likely materials from the ground surface which were redeposited at the time of construction of the last chimney foundation. Since a 1916 coin was found within the rubble fill of the sealed center section of the feature, the latest foundation could not have been built prior to that date.

Feature 2

Feature 2 was a subfloor pit cellar within Structure 1.

Activity Group	219	15.4%
Architecture Group	616	43.2%
Arms Group	3	0.2%
Clothing Group	41	2.9%
Kitchen Group	465	32.6%
Medicine Group	55	3.9%
Personal Group	23	1.6%
Transportation Group	1	0.1%
Indeterminate Group	4	0.3%
Total	1,427	

Activity Group (N = 219)

Farm Tools (N = 5)

Mower tooth	1	0.4%
Plow parts	4	1.8%

Stable and Barn (N = 10)

Harness singletree	3	1.4%
Horseshoe	1	0.4%
Machine-made horseshoe nails	4	1.8%
Iron harness buckles	2	0.9%

Miscellaneous Hardware (N = 204)

Bolts and other fasteners	9	4.1%
Pieces of wire	59	26.9%
Iron plate (>2 mm thick)	2	0.9%
Iron sheet (< 2 mm thick)	120	54.8%
Iron strapping	5	2.3%
Latch	1	0.4%
Scrap iron	8	3.7%

Architecture Group (N = 616)

Cut nails	455	73.9%
Wire nails	22	3.6%
Indeterminate nails	3	0.5%
Window glass	57	9.3%
Limestone (natural)	75	12.2%
Limestone (dressed)	4	0.7%

The ratio of cut nails to wire nails (20.7:1) indicates that the bulk of the construction activities on the site took place prior to the widespread use of wire nails in the area, or prior to 1890.

The 57 sherds of window glass can be divided into two thickness groups. The first group (N = 12) averages 2.572 mm in thickness. The second group (N = 44) averages 1.577 mm in thickness. One sherd was not included in the test because it had been warped by fire. The Moir formula was applied to the samples. The two samples yielded dates of 1929.31 and 1845.51, respectively. These dates could be explained by a long-term occupation beginning in the 1840s and being continued past the 1920s when a window was replaced. These dates correspond fairly closely with those derived from Feature 1.

The brick and the limestone blocks from Feature 2 represent foundation materials pushed into the cellar during demolition of the house. The brick sample appears to be of handmade bricks of low quality, as there are a few pieces which exhibit vitrification on one surface due to overfiring while the majority exhibit the crumbly, earthy texture associated with underfiring. The brick and mortar sample weighed 65.3 kg (144 lb.). The limestone blocks weighed 163.6 kg (360.7 lb.) and are for the most part undressed. Only four hammer-dressed flakes weighing 4.2 kg (9.4 lb.) were recovered. This suggests that the stones were used "as-is" for either footer piles or as fill between brick footers. Three of the larger limestone blocks show evidence of having been burned but are not otherwise modified.

Arms Group (N = 3)

Brass cartridge cases	3	100.0%

Three brass cartridge cases are a .22 caliber long rimfire, a .32 caliber short rimfire, and a .36 caliber short rimfire. All three cartridges were introduced during the 1850s (Parsons 1957). The final production date for .36 rimfire is not known, but both .22 and .32 rimfire are still in production. Although .32 rimfire is a fairly uncommon cartridge these days, it was in use in Smith and Wesson revolvers produced until the 1920s.

Clothing Group (N = 41)

Buttons (N = 29)

Eleven types of buttons were recovered from Feature 2. The list below includes material, number of holes, type of center, diameter, and number of each type found.

White porcelain, 4-hole depressed center, 10 mm	10	24.4%
White porcelain, 3-hole depressed center, 8 mm	1	2.4%
White glass plain swirlback, pinshank, 5.5 mm	1	2.4%
Red glass faceted swirlback, pinshank, 5.7 mm	1	2.4%
Bone, 5-hole depressed center, 17.1 mm	2	4.9%
Bone, 4-hole depressed center, 16.5 mm	7	17.1%
Iron, 4-hole two-piece depressed center, 11.1 mm	1	2.4%
Plain yellow metal domed, pinshank, 17.2 mm	2	4.9%
Plain yellow metal flat, pinshank, 14.3 mm	2	4.9%
Iron, three piece fabric-covered, pinshank, 18 mm	1	2.4%
Formed synthetic flower, 2-hole, 21.2 mm	1	2.4%

These button types are datable only over a wide time range. For example, bone buttons date from around 1800 to around 1870 (South 1964), as do the yellow metal examples (so called because brass, bronze, and copper are indistinguishable after long burial without metallurgical analysis, especially if the buttons were plated, gilded, or tinned, as was often the case). Porcelain concave-center buttons date from the 1840s to the 1950s (South 1964). Glass swirlback buttons (formed from a glob of glass pressed into a shallow depression and then swirled) date from the 1840s (Fink and Ditzler 1993:30). The synthetic button may be of syroco, a pressed wood fiber composite dating to the 1920s (Fink and Ditzler 1993:59) and is identical to the two synthetic buttons from Feature 1.

Buckles (N = 3)

Buckles	3	7.3%

The buckles recovered probably belong in the clothing group. One buckle is brass of the plain centerbar type; another buckle is brass with two tongues for use on webbing straps (a similar buckle was recovered from the James White Second Home Site, 40KN68) (Faulkner 1984:181 Figure H); and the third one is an elaborate nickel-plated spring-clip buckle of indeterminate metal, perhaps a belt fastener for a woman's dress. No dates are available for the buckles, although the stamped design on the nickel-plated example appears to be rather late.

Other Items (N = 9)

Hook and eye fasteners	2	4.9%
Grommets	4	9.8%
Straight pin fragment	2	4.9%
Iron boot heel tap	1	2.4%

The straight pins are of the flat headed variety, indicating a post-1824 date of manufacture (Noel-Hume 1970:254).

Kitchen Group (N = 465)

Ceramics (N = 248)

Coarse earthenwares and stonewares:

Lead glazed redware	5	1.1%
Salt glazed stoneware	9	1.9%
Bristol glazed stoneware	3	0.6%
Total	17	3.6%

Refined earthenwares:

Whiteware: "hotel ware"	33	7.1%
Whiteware: undecorated	116	24.9%
Whiteware: blue shell edged	5	1.1%
Whiteware: underglaze blue hand painted	5	1.1%
Whiteware: annular/mocha	9	1.9%
Whiteware: underglaze polychrome fineline (sprig)	12	2.6%
Whiteware: embossed plain	3	0.6%
Whiteware: red/green spatter	3	0.6%
Whiteware: blue transfer printed	3	0.6%
Whiteware: blue transfer printed/hand painted	1	0.2%
Whiteware: brown transfer printed	5	1.1%
Whiteware: flow blue transfer printed	5	1.1%
Burned/unidentified refined earthenware	22	8.9%
Total	222	47.6%

Porcelains:

Plain white	5	1.1%
Blue underglaze	1	0.2%
Blue sprig-decorated	1	0.2%
Molded with overglaze pink luster	2	0.4%
Total	9	1.9%

Eleven whiteware types were found in Feature 2. Undecorated whiteware is the most common (N = 116), but it is likely that many of these sherds are part of vessels which were at least partially decorated.

"Hotel ware" is sometimes considered a separate ware, but for this feature was included with the similar thick-bodied whitewares that are included with ironstone under the term "hotel ware", a heavy, thick-bodied plain white style of tableware which was popular from the 1870s to around 1910 (Moir 1987). Sherds of the "hotel ware" type (N = 33) were the third most common type recovered from Feature 2. Three sherds are marked, which is very helpful in the dating process. One sherd was produced by the Alfred Meakin company of England, established 1881. The appearance of the phrase "made in England" on the sherd indicates it was manufactured after 1891 (Godden 1964:425). Another sherd is impressed with the letters "OTE" preceded and followed by other letters which are partially broken away. If it said "HOTEL", it was produced by the Vodrey Pottery Company of East Liverpool, Ohio, between 1896 and 1928 (Lehner 1988:492). The other marked sherd is broken through the middle of the mark with only the lettering " -Bros.....anite" remaining. It is probable that it once said "Vodrey Bros. Semi-Granite", in which case it was produced in the 1880s (Lehner 1988:492).

Porcelain is difficult to date because most types are still being made. The plain white sherds appear to be oriental hard paste porcelain. The blue underglaze sherd is oriental hard paste porcelain and appears by the thickness and vitrification of the blue to be fairly late. The blue sprig-decorated piece may be of domestic manufacture and the type is still produced. The molded sherds with overglaze pink luster decoration appear to be from a teacup, circa 1830 to the present.

Glass (N = 211)

Blue-green canning jar sherds	7	1.5%
Clear canning jar sherds	5	1.1%
Clear indeterminate vessel	27	5.8%
Brown bottle sherds	38	8.2%
Green bottle sherds	10	2.2%
Clear pressed sherds	8	1.7%
Olive green wine bottle sherds	3	0.6%
Clear pressed tableware	2	0.4%
Clear indeterminate glass	84	18.1%
Cobalt blue indeterminate glass	2	0.4%
Green indeterminate glass	5	1.1%
Burned indeterminate glass	16	3.4%
Digested indeterminate glass (possible gizzard stones)	4	0.9%
Total	211	

Food canning jars, or Mason jars, are difficult to date from fragments, but are common on late 19th and early 20th century sites. The indeterminate jar category is made up of small sherds of curved glass impossible to ascribe to a particular type. The bottle glass category contains only those sherds large enough to determine vessel form. Most of the brown bottle sherds (N = 38, 8.2% of the category) are from a modern beer bottle with some of the foil label and paste remaining. The pressed glass sherds were not datable due to their fragmentary condition. The large quantities of indeterminate glass fragments from this feature are due to the extremely fragmentary nature of the sample. The sherds were simply too small to allow analysis.

Metal Tableware (N = 6)

Complete table knife blade	3	0.6%
Table knife blade fragments	2	0.4%
Bone handle section	1	0.2%

One of the complete blades has a flat full tang pierced with a rivet hole to secure the handle scales, which were probably of bone. A similar knife is pictured in Smith ed. (1976:Figure 2b). The broken bone handle scale is of the type used on table knives. No date is available for the knife blades, as they are too badly corroded to determine the original blade shape.

Medicine Group (N = 55)

Glass bottle fragments	30	54.5%
Mold-blown flat-sided vessel fragments	18	32.7%
Pale blue-green mold-brown flask fragments	7	12.7%

The glass bottle fragments were probably from medicine containers, mostly sherds of small thin vials. One fragment is of a clear embossed panel bottle, and one is a fragment of a green embossed panel bottle--neither of which bear readable characters. The mold-blown flat sided vessel could possibly be a container for either medicine or distilled spirits. The mold-blown flask could also represent a container for either medicine or distilled spirits.

Dates for this group are somewhat problematic: the small vial fragments do not include the bases, so the presence or absence of pontil marks is not known. The embossed panel bottles date after 1867 (Lorrain 1968:40). The flat mold-blown bottle does not bear a pontil mark, and thus postdates the Civil War (Lorrain 1968:40). The mold-blown flask sherds are too small to determine the pattern, and no basal sherds were recovered.

Personal Group (N = 23)

This group encompasses those artifacts that were probably carried or worn on the person for constant or daily use, hygiene, recreation, and adornment.

Daily Use Items (N = 14)

Rectangular slate pencil leads	3	13.0%
Slate	10	43.5%
Brass or copper umbrella or walking stick tip	1	4.3%

As the pieces of slate were of uniform thickness and of such small quantity, they probably represent the remains of a writing slate rather than a roofing slate. This theory is supported by the presence of the slate pencils. No dates are available for these items. Also in this subgroup is a brass or copper umbrella or walking stick tip. It still contains wood, and although the end is dented, it shows no use wear.

Recreational Items (N = 5)

Stub-stemmed tobacco pipe fragment	5	21.7%

Tobacco pipes have been placed into this group for this analysis. Two of the pipe fragments are of salt-glazed stoneware; the remaining three fragments are of unglazed redware. No dates are available for these artifacts due to their fragmentary nature.

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Personal Adornment (N = 4)

Opaque black glass bead	1	4.3%
Plastic/celluloid ornamental comb fragment	1	4.3%
Gutta percha/hard rubber hair pins	2	8.7%

The bead is of mandrel-wound manufacture, dating after 1832, or possibly even after 1870, if wound in a single turn (Smith ed. 1976:240). Celluloid and other brittle plastics were introduced in the 1870s, while hard rubber and gutta percha were in use for buttons and ornaments by the 1850s (Fink and Ditzler 1993:53).

Transportation Group (N = 1)

Screwtop spark plug	1	100.0%

The spark plug is made by Champion and is inscribed with "twist-off". It is identical to the two spark plugs recovered from Feature 1. No date is available.

Indeterminate Group (N = 4)

Rubber fragment	1	25.0%
Leather or gasket composition fragment with stitch holes	1	25.0%
Flattened horn fragment	1	25.0%
Flattened cylindrical piece of lead	1	25.0%

This is the catchall category for those items that defy placement elsewhere.

Dates

Many datable artifacts were recovered from Feature 2. The ceramics provide the clearest indicator of the age of the feature using South's (1977) Mean Ceramic Date formula as modified by Smith (1984) and the author for 19th century ceramics. The mean date of occupation by these indicators is 1862.9. It should be noted, however, that the only marked sherds date to the 1890s. The window glass dates of 1845 and 1929 bracket the mean ceramic date. The other datable artifacts, such as kitchen glass, nails, and buttons fit within this date range.

Feature 3

Feature 3 was the remains of a barn built in the late 19th to early 20th century. Many older area residents remember it as the only structure on the site. It was destroyed by fire before 1950, and had been abandoned for many years prior to its destruction. Seven 1 m x 1 m units were excavated in Feature 3 during the testing and data recovery.

Activity Group	11	2.9%
Architecture Group	336	88.4%
Arms Group	2	0.5%
Clothing Group	2	0.5%
Kitchen Group	24	6.3%
Medicine Group	4	1.1%
Miscellaneous Group	1	0.3%
Total	380	

Activity Group (N = 11)

Miscellaneous Hardware (N = 10)

Wire	4	36.4%
Iron plate (cast, > 2 mm thick)	1	9.1%
Iron strapping	1	9.1%
Wire fencing staples	4	36.4%

Stable and Barn (N = 1)

Copper harness rivet	1	9.1%

The rivet preserved a piece of thick leather.

Architecture Group (N = 336)

Cut nails	36	10.7%
Wire nails	236	70.2%
Indeterminate nails	40	11.9%
Window glass	3	0.9%
Sandstone hammer-dressing flakes	21	6.3%

The ratio of wire nails to cut nails (6.5 to 1) suggests a date around the beginning of the 20th century.

Two of the sherds of window glass were 2.2 mm thick and the third was 2.64 mm thick. The Moir formula was applied to the samples and yielded dates of 1898 and 1935, respectively. The glass from this feature may not have been part of the structure, however, as all three sherds show heavy wear characteristic of being trampled by animals. This fact in combination with the small size of the sherds (6.4 mm size grade) suggests the sherds were accidentally introduced into the barn.

The highly fragmentary brick sample is from handmade bricks of low quality similar to other brick found on this site. A total of 248.2 g (0.547 lb.) of brick rubble was recovered. The sandstone flakes (386.2g /0.851 lb.) are all 12.7 mm to 19.1 mm in size and may represent foundation or footer stone fragments. Conversely, they could also represent plow damage to footer stones.

Arms Group (N = 2)

.22 caliber rimfire cartridge	1	50.0%
Brass cartridge case	1	50.0%

The .22 caliber rimfire cartridge has a "Super-X" headstamp. Winchester's use of the "Super-X" stamp dates to the 1950s. The second brass cartridge case has a headstamp that reads "U.S. .410 - 12 m/m ALL BRASS". Logically it was used in a .410 shotgun, but the 12 mm designation on such cartridges is unusual.

Clothing Group (N = 2)

Unidentifiable burned synthetic button	1	50.0%
Black enameled metal snap	1	50.0%

Both objects appear to be 20th century objects.

Kitchen Group (N = 24)

Ceramics (N = 5)

Coarse earthenwares and stonewares:

Lead glazed redware	1	4.2%
Bristol glazed stoneware	1	4.2%
Total	2	8.4%

Refined earthenwares:

Burned/unidentified refined earthenware	2	4.2%
Total	2	4.2%

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Ironstone:

Plain White	1	4.2%
Total	1	4.2%

The redware sherd is clear lead glazed on the interior only and appears to be from a small crock. The Bristol glazed stoneware sherd is jiggered and is not identifiable as any specific vessel form. The two burned whiteware sherds are not datable. The ironstone sherd is a small piece of footring which has a late 19th century profile.

Glass (N = 19)

Blue-green canning jar sherds	1	4.2%
White glass lid liner sherds	2	8.4%
Clear indeterminate vessel	15	62.5%
Indeterminate solarized sherds	1	4.2%

Medicine Group (N = 4)

Clear panel bottle sherds	4	100.0%

This group consists entirely of glass bottle fragments which were probably medicine containers--clear embossed panel bottles. Panel bottles date after 1867 (Lorrain 1968:40).

Miscellaneous Group (N = 1)

Small tinned steel artifact, possibly part of an umbrella stay	1	100.0%

No date is available for this artifact.

Dates

Feature 3 was the remains of a 20th century barn which was abandoned and later burned. Of the small number of artifacts recovered, none were precisely datable. The artifact group percentages were compared to those of the Ramsey House barn assemblage (Table 16) (Faulkner and Owens 1995).

TABLE 16
BARN AREA ARTIFACT GROUP FREQUENCIES

Artifact Group[a]	Ramsey Barnyard[b]	Feature 3, 40RH156
Kitchen	13.6%	6.3%
Architecture	51.7%	88.4%
Furniture	0.3%	0.0%
Arms	0.0%	0.5%
Clothing	0.3%	0.5%
Personal	0.0%	0.0%
Tobacco	0.0%	0.0%
Activities	33.9%	2.9%

[a]Medicine and Miscellaneous groups are not included.

[b]Faulkner, Charles H., and Dalford Dean Owens, Jr., 1995, *Archaeological Testing of the Ramsey House Barnyard.* Department of Anthropology, The University of Tennessee, Knoxville. Report Prepared for the Tennessee Historical Commission and Association for the Preservation of Tennessee Antiquities, Knoxville Chapter.

The apparent lack of comparability of these two structures may be due to sampling bias. Another possibility is that barn assemblages may be highly variable, with an abundance of architectural materials being the only similar aspect.

Feature 4

Feature 4 was defined as an outbuilding area during Phase II testing based on surface collected materials and soil quality. Phase III data recovery found no subsurface evidence of this structure. Artifacts recovered from the controlled surface collection in the Feature 4 area were predominantly canning jar fragments and utilitarian stoneware fragments with a minor amount of whiteware and window glass. Two solarized glass sherds were also recovered, indicating a date range of circa 1886-1915.

Features 5 and 6

Features 5 and 6 were determined to be the remains of an erosional gully crossing the northern part of the site as seen in two different backhoe transects. No cultural material was found on the surfaces of these features.

Feature 7

Feature 7 was found and partially investigated during Phase II testing and was completely exposed and excavated during Phase III data recovery. It was either a root cellar under an outbuilding or a structure similar to a "flower kiln" or cold frame, used for overwintering tender perennial plants.

Activity Group	44	8.8%
Architecture Group	283	56.8%
Arms Group	1	0.2%
Clothing Group	8	1.6%
Furniture Group	1	0.2%
Kitchen Group	152	30.5%
Medicine Group	3	0.6%
Personal Group	6	1.2%
Total	498	

Activity Group (N = 44)

Farm Vehicle (N = 2)

Iron wagon wheel hub band	1	2.3%
Large iron pin	1	2.3%

This material is generally placed in the transportation group but due to the context it is felt that these artifacts belong in the activity group. The iron wagon wheel hub band measures 22 cm in diameter and the large iron pin measures 33.5 cm in length, 5 cm in width, and 3.2 cm in thickness. The pin may be a wagon or plow part or it may be a large drift punch.

Stable and Barn (N = 3)

Iron harness buckles	2	4.5%
Horseshoe	1	2.3%

The iron harness buckles consist of a rectangular double tongue center bar type that measures 36.5 mm x 20 mm and an oval single tongue heel bar type that measures 19 mm x 32.1 mm. The horseshoe was found in the feature during the Phase II testing.

Miscellaneous Hardware (N = 39)

Bolts and other fasteners	3	6.8%
Iron sheet (< 2 mm thick)	20	45.4%
Wrought bar iron (> 10 mm thick)	1	2.3%
Iron spike with chain loop	1	2.3%
Six iron chain links with a lead fasible link	1	2.3%
Unidentifiable iron scrap, possibly machine parts	1	2.3%

The mass of unidentifiable iron scrap weighs 5,719.1 g (12.61 lb.).

Architecture Group (N = 283)

Cut nails	150	53.0%
Wire nails	17	6.0%
Indeterminate nails	89	31.4%
Window glass	20	7.1%
Limestone (natural)	7	2.5%

The ratio of cut nails to wire nails (8.82 to 1) indicates that the bulk of the construction activities on the site took place prior to the widespread use of wire nails in the area, or prior to 1890. However, the large unidentifiable nail sample makes this determination unreliable.

The window glass sample from this feature is similar to the others from this site in that there are two thicknesses present: 1.75 mm (N = 12, dating to 1860) and 2.2 mm (N = 8, dating to 1898). It is doubtful that the structure over this feature had glass windows, given the small sample size. It is interesting to note, however, that these dates are identical to those from Feature 2.

The small brick sample (8.99 kg /19.84 lb.) probably represents simple disposal of old bricks. This hypothesis is strengthened by the presence of seven large unmodified limestone blocks in the pit, piled in such a manner as to suggest that the pit was deliberately filled in two or three episodes with as much bulky material as was readily available. The soil profiles in the feature corroborate this interpretation.

Arms Group (N = 1)

.22 caliber rimfire cartridge	1	100.0%

This recent artifact was manufactured by the Remington Arms Company.

Clothing Group (N = 8)

Buttons (N = 3)

White porcelain, 4-hole depressed center, 11 mm	2	25.0%
One-piece, hollow brass ball, with 2 holes in the base, 6.5 mm	1	12.5%

Porcelain concave-center buttons date from the 1840s to the 1950s (South 1964). This button may be a shoe button or a glove button.

Other Items (N = 5)

Brass shoe eyelets set in leather	4	50.0%
Brass straight pin	1	12.5%

The straight pin is of the flat headed variety indicating a post-1824 date of manufacture (Noel-Hume 1970:254).

Furniture Group (N = 1)

Mirror glass sherd	1	100.0%

The mirror glass sherd is blue-green in color and measures 1.2 mm in thickness. It does not have amalgamated mercury silvering and thus dates later than the mid-19th century (Roenke 1978).

Kitchen Group (N = 152)

Ceramics (N = 68)

Coarse earthenwares and stonewares:

Lead glazed redware	4	2.6%
Unglazed redware	2	1.3%
Salt glazed stoneware	4	2.6%
Albany slip glazed stoneware	8	5.3%
Total	18	11.8%

Refined earthenwares:

Whiteware: underglaze blue hand painted	1	0.7%
Whiteware: underglaze polychrome broadline	2	1.3%
Whiteware: blue shell edged	1	0.7%
Whiteware: mocha/annular	4	2.6%
Whiteware: blue transfer printed	1	0.7%
Whiteware: flow blue transfer printed	1	0.7%
Whiteware: flow black transfer printed	1	0.7%
Whiteware: hand-painted over blue transfer printed	1	0.7%
Whiteware: undecorated	13	8.6%
Burned/unidentified refined earthenware	4	2.6%
Total	29	19.3%

Ironstone:

Plain white	17	11.2%
Decalcomania	1	0.7%
Blue sprig	2	1.3%
Total	20	13.2%

Porcelains:

Plain white, molded	1	0.7%
Total	1	0.7%

The redware sherds are mostly clear lead glazed inside and out and are from storage vessels. The unglazed sherds are probably from a flowerpot. The stoneware sherds are all from storage vessels. The predominance of Albany-slip glazed ware indicates a late 19th century date.

The whiteware assemblage from Feature 7 is varied but small with the predominant vessel form (N = 16, 55.2%) being the plate. The presence of so many different decorative types in such small numbers is difficult to interpret, unless these sherds were simply part of the fill used to cap the pit. The small size of the sherds (average size grade 12.7 mm) indicates secondary deposition.

The ironstone assemblage is similar to the whiteware assemblage in vessel form with about half (N = 9, 45%) being plates. Another nine sherds seem to be from a vase. The disposition of the ironstone sherds is very similar to that of the whiteware sherds, and is indicative of secondary deposition.

The single sherd of porcelain is part of a thick cylindrical vessel, probably a shaving mug.

Glass (N = 83)

Blue-green canning jar sherds	10	6.6%
Clear indeterminate vessel	30	19.7%
Brown bottle sherds	10	6.6%
Green bottle sherds	2	1.3%
Blue-green bottle sherds	20	13.2%
Olive green wine bottle sherds	7	4.6%
White glass lid liner sherds	2	1.3%
Clear tumbler base	1	0.7%
Solarized tumbler base	1	0.7%

Food canning jars, or Mason jars, are difficult to date from fragments, but are common on late 19th and early 20th century sites. The indeterminate jar category is made up of small sherds of curved glass impossible to ascribe to a particular type. The bottle glass category contains only those sherds large enough to determine vessel form. The large quantities of indeterminate glass fragments from this feature is due to the extremely fragmentary nature of the sample. The sherds were simply too small to allow analysis.

Metalware (N = 1)

Iron spoon bowl	1	0.7%

A single iron spoon bowl measures 72 mm x 44 mm.

Medicine Group (N = 3)

Glass bottle fragments	3	100.0%

The glass bottle fragments were probably medicine containers. The three sherds are from panel bottles, two of which are of blue-green glass and one of which is of a clear panel bottle.

Personal Group (N = 6)

Daily Use Items (N = 3)

Rectangular slate pencil leads	2	33.3%
Writing slate fragment	1	16.7%

No dates are available for these items.

Recreational Items (N = 2)

Porcelain doll parts	2	33.0%

The porcelain doll parts consist of an arm and a leg.

Adornment Items (N = 1)

Perfume bottle	1	16.7%

This perfume bottle of ground and polished faceted clear glass with no neck was recovered from near the surface of the feature. The glass is leaded and may be optic molded instead of ground. It measures 3.56 cm across the flats and is 5.68 cm tall.

Dates

Feature 7 was constructed in the latter half of the 19th century. During its use life it was kept free of colluvial debris. Sometime after 1898 (the latest window glass date) the feature was filled in with two or three episodes of dumping over a short period of time. The presence of early 19th century ceramics is misleading, as they provide a Mean Ceramic Date of 1864.8. All of the datable non-ceramic artifacts suggest a date in the last decades of the 19th century for the terminal fill episodes of this feature. The early ceramics probably reflect secondary or tertiary deposition of fill into this feature, since the sherds are of such small size (12.7 mm). The

ironstones and utility ware sherds are much larger overall, averaging more than 25.4 mm in size grade. However, no reconstructable vessels are present. This also indicates secondary or tertiary deposition, since the relatively greater size of the ironstone and stoneware sherds may be due to the intrinsically greater hardness of these materials relative to earthenwares.

Feature 8

Feature 8 was exposed and mapped during Phase II testing, and was thought to be a possible builders trench. Further work during Phase III data recovery revealed this feature to be a telephone cable trench placed along State Route 29 in the 1970s.

Feature 9

Feature 9 was discovered during power trenching in the Phase III data recovery. The dates and disposition of the artifacts in this cellar indicate that it was beneath a domestic structure built by the 1830s and abandoned by the 1850s.

Activity Group	119	16.8%
Architecture Group	219	30.9%
Arms Group	9	1.3%
Clothing Group	34	4.8%
Furniture Group	10	1.4%
Kitchen Group	296	41.8%
Medicine Group	7	1.0%
Personal Group	13	1.8%
Indeterminate Group	1	0.1%
Total	708	

Activity Group (N =119)

Stable and Barn (N = 4)

Horseshoe, half	1	0.8%
Machine-cut horseshoe nail	1	0.8%
Rectangular harness buckles	2	1.7%

One buckle, measuring 23.9 mm x 19.0 mm, is of the single-tongue heel bar type with a sheet iron roller. The other measures 28.5 mm x 20.4 mm and is also of the heel bar type. It is unusual in that the single tongue is mounted on a sleeve the width of the frame. Both buckles are badly deteriorated and the measurements are approximate.

Miscellaneous Hardware (N = 115)

Iron plate	1	0.8%
Indeterminate iron sheet (< 2 mm thick)	83	69.7%
Sheet iron box fragments	27	22.7%
Wrought iron strapping	1	0.8%
Short wrought iron punches	2	1.7%
Indeterminate wrought iron	1	0.8%

The iron plate measures 56 mm x 99 mm x 3.8 mm and has a possible bullet hole. The piece of indeterminate wrought iron may be a tool part.

Architecture Group (N = 219)

Wrought nails	9	4.1%
Mushroom-head wrought nails	4	1.8%
Cut nails	175	79.9%
L-head cut nails	9	4.1%
Wire nails	1	0.5%
Indeterminate nails	6	2.7%
Window glass	2	0.9%
Hammer dressed sandstone flakes	12	5.5%
Architectural hardware	1	0.5%

The wire nail may be a late discard. Wrought nails in East Tennessee generally predate 1810, with the possible exception of the mushroom-headed variety. "Mushrooms," as they are known, were used to fasten thin planks such as shutters or doors until around 1830 (Sloane 1965) in New England and probably later in East Tennessee. The ratio of cut nails to wrought nails (14.2 to 1) indicates an early 19th century date.

The two sherds of window glass have an average thickness of 1.69 mm. When the Moir formula (1987) is employed, a date of 1855 is the result. This date is coterminous with the latest ceramic dates from the feature. Since only two small sherds of window glass were recovered, it is doubtful that the structure above Feature 9 had glass windows. It is more likely that the structure was used as a shed after the construction of Structure 1.

The brick (704.7 g /1.55 lb.) and clay chinking (145.1 g /0.32 lb.) fragments may be the remains of chinking between logs in the walls of the structure, or alternatively may be remains of a stick-and-mud chimney. The latter theory would explain the evidence of burning on most of the mortar and clay fragments, as there is no evidence that the structure itself burned.

Architectural hardware is present in the form of an iron latch hook that measures 56 mm long.

Arms Group (N = 9)

Blobs of lead sprue	3	33.3%
Cast lead balls	2	22.2%
Chunk of galena	1	11.1%
Spherical lead shot pellet	1	11.1%
Rifle-size gunflint	1	11.1%
.32 caliber cartridge case	1	11.1%

Several artifacts related to firearms use were recovered from Feature 9. The blobs of lead sprue, weigh a total of 6.3 g; the cast lead balls measure 9.1 mm in diameter (.36 caliber, weight 4.1 g each); and a chunk of galena (a lead ore) attest to the casting of bullets on the site. The single spherical lead shot pellet measures 2.9 mm in diameter (.113 in., weight 0.2 g, approximately #4 shot) and is probably a recent addition to the feature as it was swaged rather than drop-formed. The gunflint measures 21.7 mm x 18.6 mm x 6.96 mm and was manufactured of English black flint in the English style which attests to the presence of sporting flintlock firearms on the site, as military flints are wider than 25 mm (Woodward 1960:39). The cartridge case is a fired .32 caliber Smith and Wesson Short Rimfire case, which was not in production until 1861 (Parsons 1957:29). More of these were found in feature contexts elsewhere on the site.

Clothing Group (N = 34)

Buttons (N = 18)

White porcelain, 4-hole depressed center, 10 mm:	2	5.9%
Bone, 5-hole depressed center, ~18 mm:	4	11.8%
Bone, 5-hole flat, 17 mm	1	2.9%
Bone, 5-hole flat, 20 mm	1	2.9%
Ivory, 5-hole depressed center, 16.3 mm	1	2.9%
Iron, three piece, fabric-covered, 21.5 mm	3	8.8%
Iron, three piece, fabric-covered, 18 mm	1	2.9%
Yellow metal, flat, see below	4	11.8%
Yellow metal, two piece, flat	1	2.9%

These button types are datable only over a wide range of time. Bone buttons date from around 1800 to around 1870 (South 1964), as do the yellow metal ones. Porcelain concave-center buttons date from the 1840s to the 1950s (South 1964). Of the yellow metal buttons, only one has no markings. It is 15.9 mm in diameter and 0.8 mm thick. Following is a list of diameters and markings on the metal buttons (all have plain fronts):

Yellow metal, solid, 17.75 mm, "RICH GOLD COLOR" on back
Yellow metal, solid, 12.5 mm, "RICH COLOUR" on back
Yellow metal, solid, 20.06 mm, ".R.....QUALITY....." on back
Yellow metal, two piece, 18.6 mm, "IMPROVED PLATED" on back

Straight Pins (N = 11)

Straight pins	11	32.4%

All of the straight pins are made of tinned brass. Both the pre-1824 ball head type (N = 5) and the post 1824 flat head type (N = 6) were present (Noel-Hume 1970:254).

Other Items (N = 5)

Brass thimble	1	2.9%
Hook and eye fasteners	2	5.9%
Eyelet	1	2.9%
Iron and brass snap	1	2.9%

The brass thimble was cut and flattened (Figure 39). The iron and brass snap measures 15.48 mm in diameter.

Furniture Group (N = 10)

Brass flathead wood screw	1	10.0%
Cut tacks (< 2 mm long)	7	70.0%
Wire furniture nails	2	20.0%

This group encompasses a single brass flathead wood screw, seven cut tacks (less than 2 cm long), and two wire furniture nails. The use of wire nails in furniture dates to the 1850s.

Kitchen Group (N = 296)

Ceramics (N = 206)

Coarse earthenwares and stonewares:

Clear lead glazed redware	17	5.7%
Manganese oxide lead glazed redware	2	0.7%
Iron oxide lead glazed redware	3	1.0%

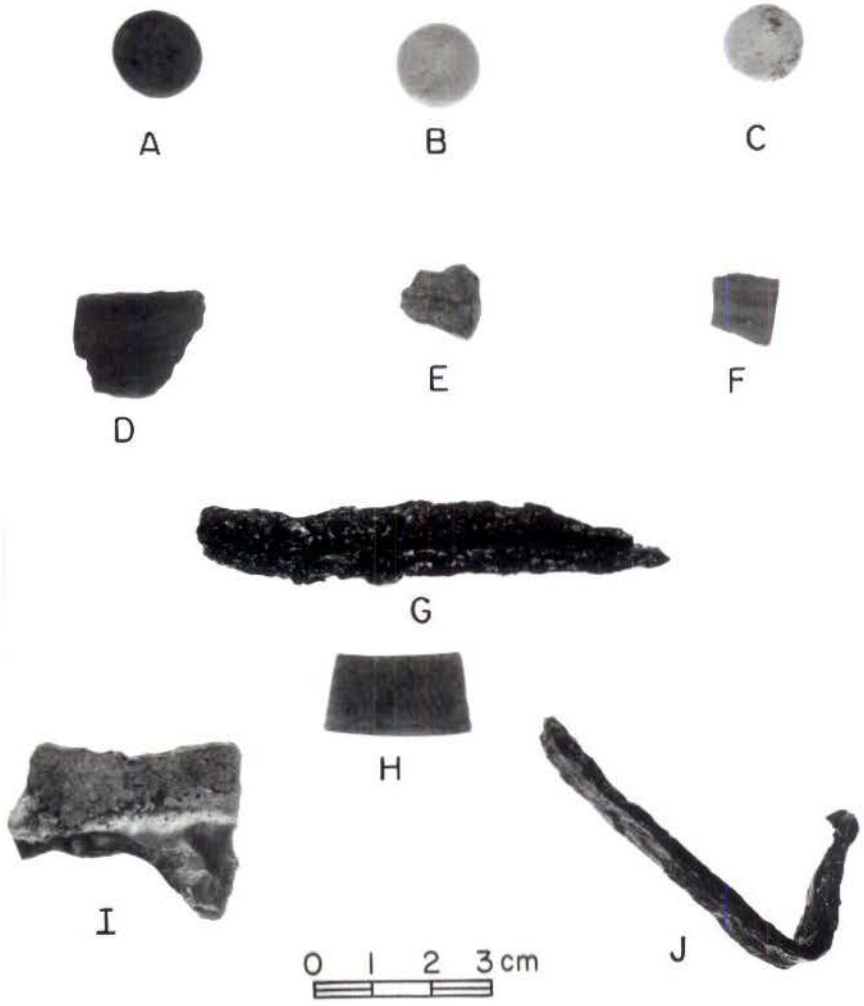

FIGURE 39. Artifacts from Feature 9, 40RH156. A-C — clay marbles, D-F — stub-stemmed tobacco pipe fragments, G — iron pocketknife frame, H — cut and flattened brass thimble, I-J — strike-a-light kit (I — battered chert striking flint and J — iron striking plate).

Copper oxide lead glazed redware	2	0.7%
Plain early yellow ware	3	1.0%
Total	27	9.1%

Refined earthenwares:

Creamware: undecorated late (1820s)	11	3.7%
Pearlware: undecorated	3	1.0%
Pearlware: blue shell edge	13	4.4%
Pearlware: green shell edge	1	0.3%
Transitional wares: undecorated	10	3.4%
Transitional wares: blue edge decorated		
Leaf and scales pattern	4	1.4%
Egg and dart pattern	1	0.5%
Transitional wares:		
Annular wares: indeterminate	7	2.4%
Annular wares: common cable	1	0.3%
Transitional wares:		
Underglaze blue hand painted	10	3.4%
Underglaze polychrome hand painted	7	2.4%
Whiteware: undecorated	34	11.5%
Whiteware: simple stencil (green sprig)	6	2.0%
Whiteware: blue shell edge	2	0.7%
Whiteware: underglaze blue enameled edge	2	0.7%
Whiteware: stick spatter polychrome	8	2.7%
Whiteware: blue transfer printed	3	1.0%
Whiteware: blue transfer printed/hand painted	1	0.3%
Whiteware: blue transfer printed "flow blue"	3	1.0%
Whiteware: brick red transfer printed	1	0.3%
Whiteware: mulberry transfer printed	6	2.0%
Whiteware; annular wares, trailed slip, refitted	10	3.4%
Total	144	48.6%

Ironstone:

Semivitreous plain white	7	2.4%
Semivitreous plain white fluted rim	1	0.3%
Total	8	2.7%

Porcelains:

Bone china undecorated	7	2.4%
Bone china undecorated octagonal	2	0.7%
Bone china undecorated scalloped rim	1	0.3%
Bone china undecorated octagonal teacup, refitted	17	5.7%
Total	27	9.1%

The complete absence of stonewares from the utility vessel assemblage points to an early date, since stoneware displaced redware in East Tennessee during the first half of the 19th century. All but one of the redware sherds seem to be from storage vessels (Figure 40). The remaining sherd is somewhat refined and may be from a pitcher.

The variation in refined earthenware types from Feature 9 is truly staggering (Figures 41-43). Such an array of decorative patterns must have resulted in a very colorful table. While the variety is large, the actual number of vessels is quite small, since the undecorated sherds are in all probability parts of other decorated vessels. Less than 30 individual vessels produced these sherds, with over 20 different decorative techniques represented. The plate is the most common vessel form, followed by saucers, cups, and bowls, in that order. One transitional sherd was recovered with the mark of Thomas Mayer of Stoke-on-Trent, which dates between 1826 and 1838 (Godden 1964:423).

Contrasting the overwhelming amount of earthenwares with the semivitreous wares, it is obvious that the filling of this cellar took place prior to the increasing popularity of ironstone after the 1850s.

The bone china found in Feature 9 (Figure 44) seems to be the remains of a single cup and saucer. The cup has been reconstructed, and is handleless, tulip-shaped, and Irish-sized (Miller 1991). The saucer is too fragmentary for reconstruction. The overall style of the pieces is characteristic of an 1840s date.

Glass (N = 80)

Blue-green canning jar sherds	3	1.0%
White glass lid liner sherds	1	0.3%
Olive green wine bottle sherds	4	1.4%
Free-blown soda glass bottle sherds	52	17.6%
Soda glass historical flask sherds	1	0.3%
Clear glass tumbler/stemware sherds	5	1.7%
Frosted glass faceted tumbler sherds	9	3.0%
Cobalt blue indeterminate glass	1	0.3%

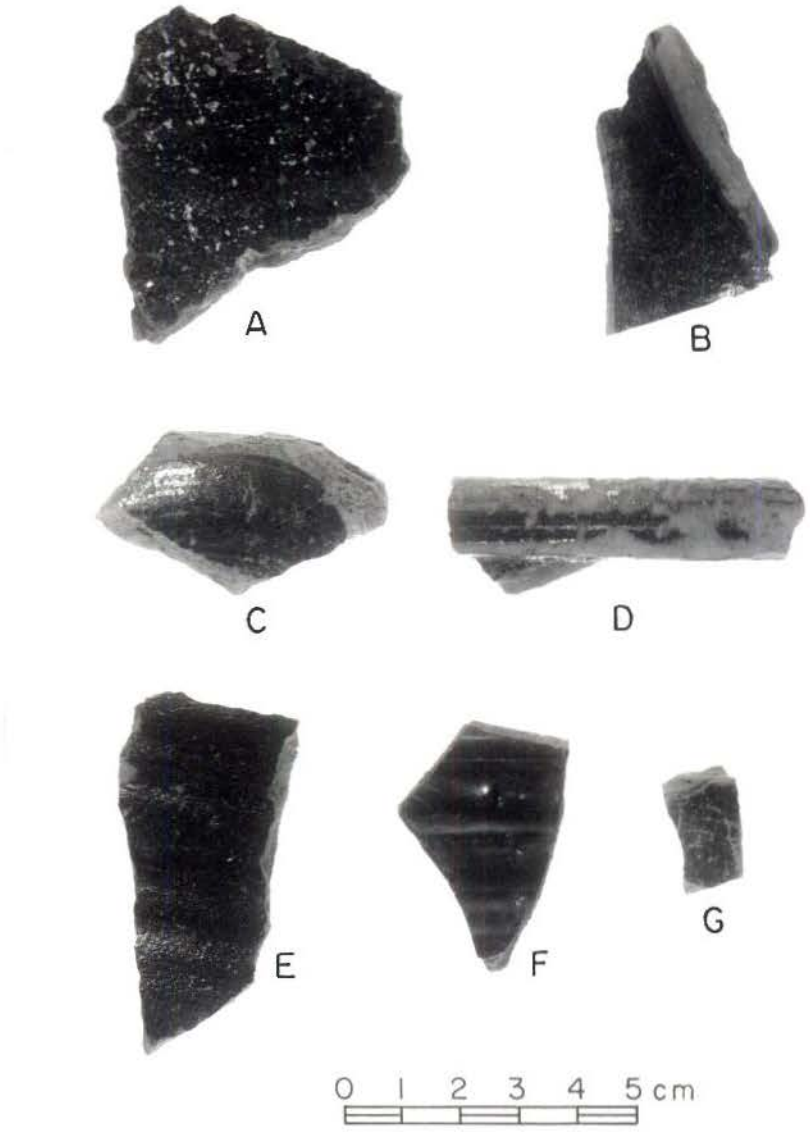

FIGURE 40. Lead glazed redware from Feature 9, 40RH156. A — copper oxide lead glazed body sherd, B — same glaze on rim, C — clear glazed on interior basal sherd, inside only, D — clear lead glazed on rim, E — dark brown manganese-oxide lead glazed, inside only, F — refined redware, clear lead glazed, G — clear lead glazed with darker slip decoration.

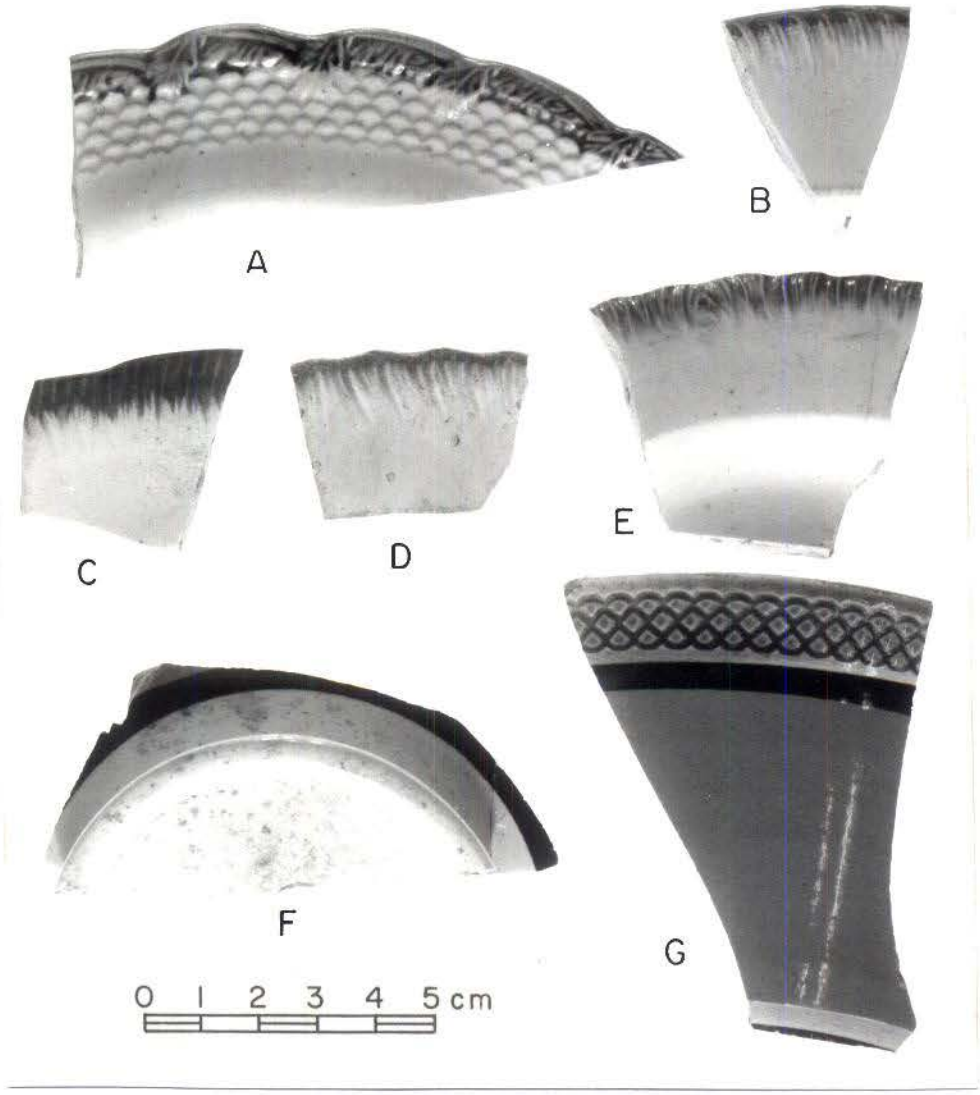

FIGURE 41. Refined earthenwares from Feature 9, 40RH156. A — blue edge-decorated transitional ware, B-C — blue shell-edged whiteware, D-E — blue shell-edged pearlware, F-G — annular decorated whiteware bowl fragments in blue, brown, and green with engine-turned decoration at rim.

FIGURE 42. Reconstructed annular whiteware bowl with wavy trailed slip banding and an engine-turned rim from Feature 9, 40RH156.

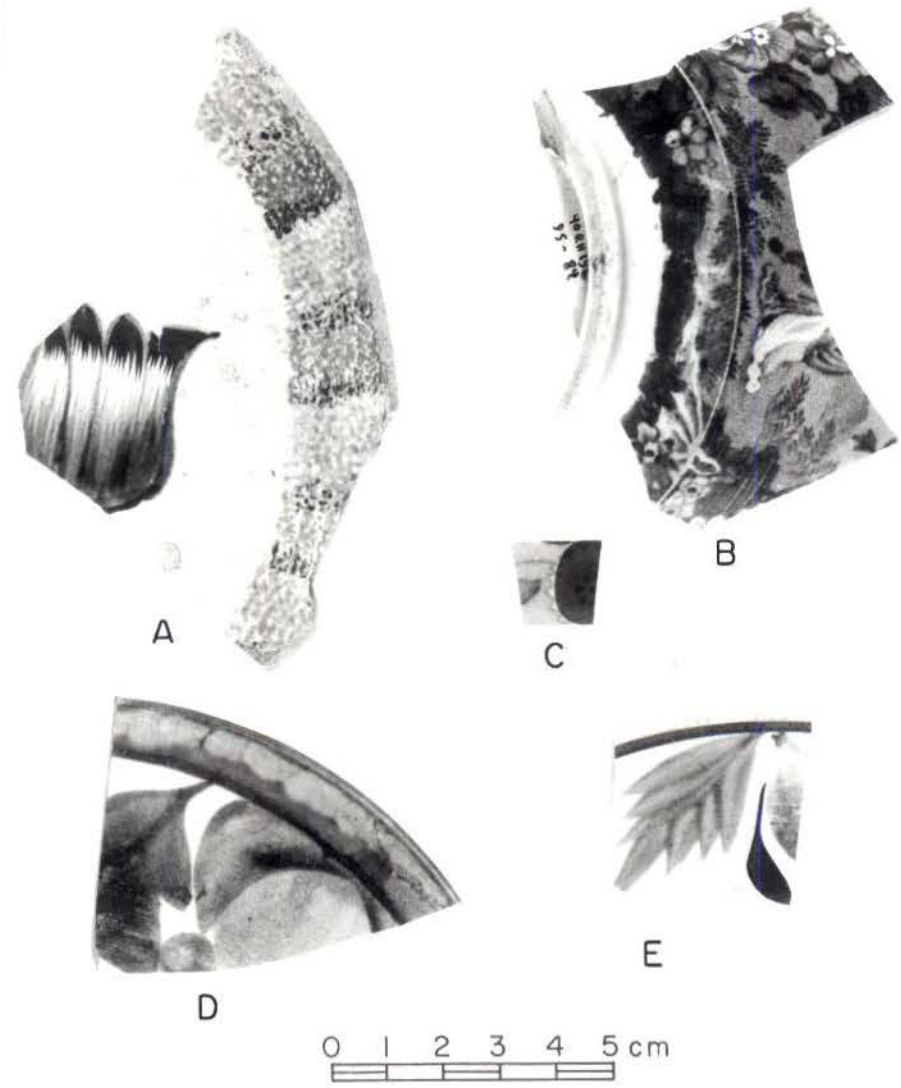

FIGURE 43. Additional refined earthenwares from Feature 9, 40RH156. A — whiteware plate fragment with green and blue stick spatter on edges and hand painted polychrome tulip in center, B — blue transfer printed transitional ware bowl fragment, C — blue transfer printed whiteware sherd with hand-applied yellow enamel under the glaze, D — underglaze blue hand painted transitional ware saucer sherd, E — broadline underglaze polychrome hand painted whiteware saucer sherd.

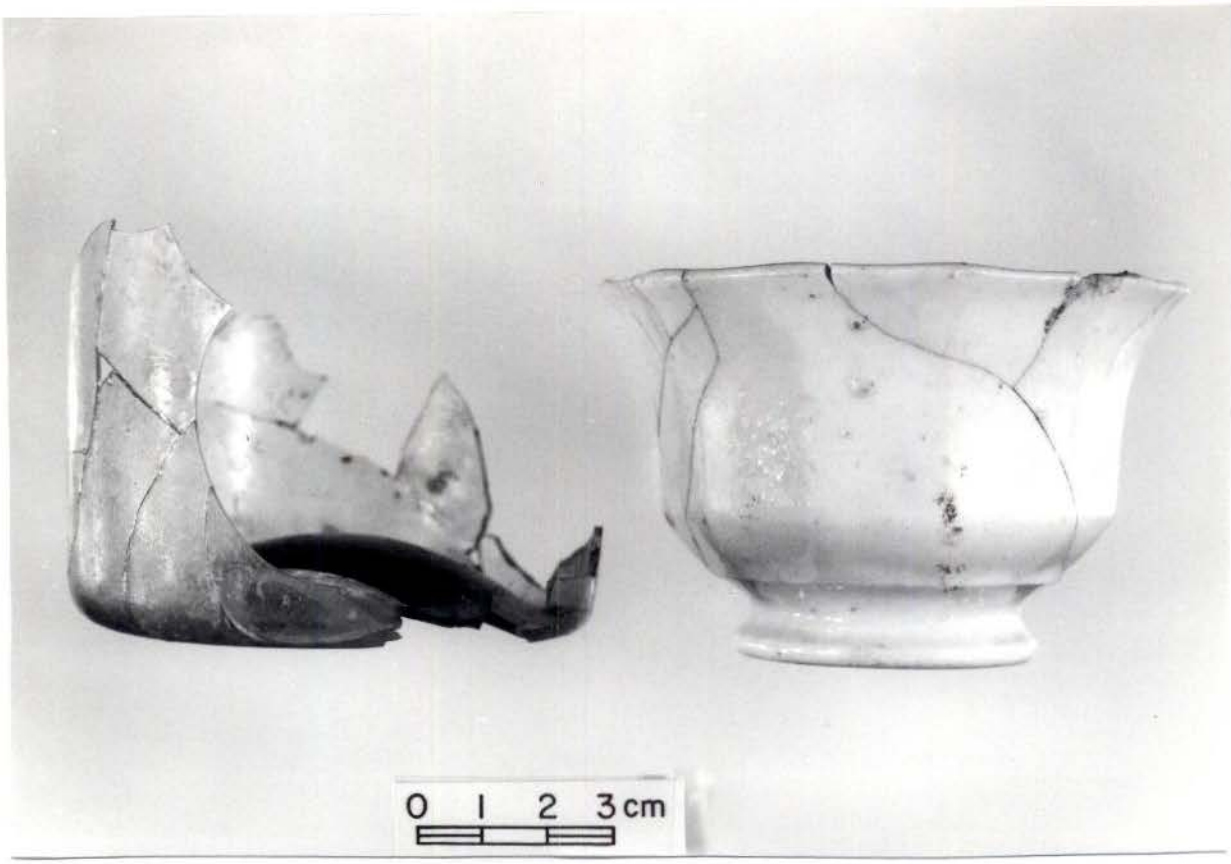

FIGURE 44. Free-blown clear glass bottle base and reconstructed bone china teacup from Feature 9, 40RH156. Bottle base (left) and teacup (right).

Burned indeterminate glass	3	1.0%
Digested indeterminate glass) (possible gizzard stone)	1	0.3%

The glass from Feature 9 is characteristic of the 1830s-1840s, with the exception of the canning jar and lid liner fragments, which were on the plowzone interface. Large freeblown clear glass bottles such as the one found here (see Figure 44) are not common. It was probably used for the storage of distilled spirits. Historical flasks are mold-blown liquor containers popular from the 1820s to the 1840s.

Metal Tableware (N = 10)

Iron two-prong fork with antler handle	1	0.3%
Iron spoon handles without bowls	3	1.0%
Tinned pewter spoon bowl without handle	1	0.3%
Table knife with antler handle scales	1	0.3%
Table knife with ivory handle scales	1	0.3%
Table knife blades without handles	3	1.0%

All of the knives have forged bolsters (Figure 45).

Medicine Group (N = 7)

Glass bottle fragments	7	100.0%

This group consists entirely of glass bottle fragments which were probably from medicine containers, since the sherds are from small thin vials. No date can be determined for these artifacts.

Personal Group (N = 11)

This group encompasses those artifacts that were probably carried or worn on the person for constant or daily use, hygiene, recreation, and adornment (see Figure 39).

Daily Use Items (N = 3)

Ivory pocketknife frame with blade fragment	1	7.7%
Strike-a-light kit	2	15.4%

The strike-a-light kit consists of a flat iron striker with an angled handle and a large chert flake that shows retouching consistent with use in a strike-a-light kit.

180-BACK

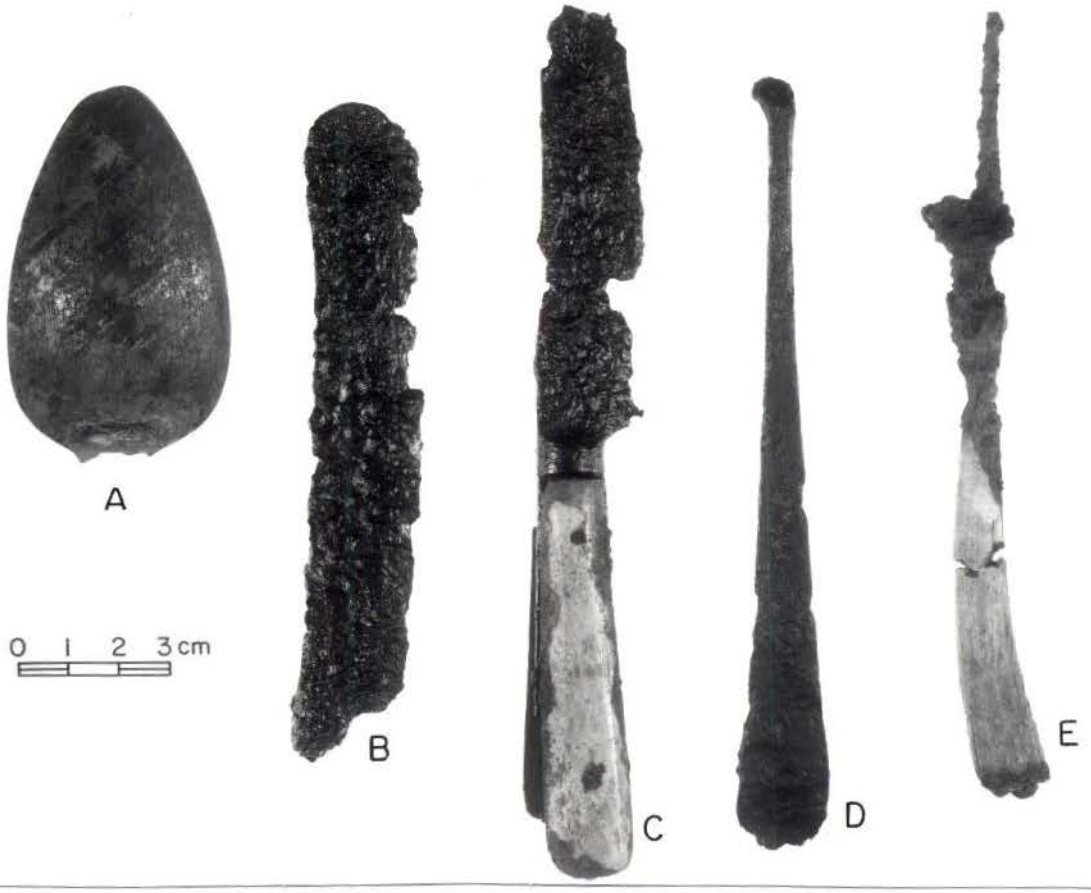

FIGURE 45. Kitchen Group metal tableware from Feature 9, 40RH156. A — tinned pewter spoon bowl, B — table knife blade, C — table knife with ivory handle scales, D — iron spoon handle, E — iron two-prong fork with drilled antler handle.

Recreational Items (N = 6)

Stub-stemmed tobacco pipe fragments	3	23.1%
Marbles	3	23.1%

Tobacco pipes are placed into this group. Three fragments of stub-stemmed tobacco pipes were found in Feature 9. Two pipe fragments are of redware and a third is unglazed stoneware. No dates were determined for these artifacts due to their fragmentary nature. The three clay marbles recovered from this feature measure an average of 14.75 mm in diameter (see Figure 39).

Personal Adornment (N = 4)

Glass beads	4	30.8%

The glass beads consist of one clear faceted, one blue faceted, one clear wire-wound, and one green wire-wound (Kidd and Kidd types If2, If5, wIb1, and wIb9, respectively).

Indeterminate Group (N = 1)

Brass washer-like disk	1	100.0%

The brass disk measures 31.47 mm in diameter and has reeded edges.

Dates

Feature 9 was the earliest feature on the site, with items dating as early as the 1820s. Few artifacts from this feature postdate 1850. The Mean Ceramic date is 1843.2. From all the evidence, it appears that Feature 9 was dug in the late 1820s or early 1830s and was then allowed to fill in gradually while also being used as an occasional dump site. Evidence of occasional dumping is indicated by the large size of some ceramic and glass artifacts found within the pit. The locations of the sherds of the reconstructed vessels support low-impact dumping and colluvial filling of the feature. The bone china teacup sherds were all within an area 8 cm in radius and some of the sherds were post-depositionally broken in place. The slip-trailed annular bowl sherds, on the contrary, were scattered throughout the entire northwest quadrant of the cellar, from the surface to the subsoil. No rodent disturbance was evident.

Feature 10

Feature 10 was first thought to be a posthole, but careful troweling revealed the presence of numerous faunal remains. Feature 10 was a small circular pit that appears to be a duck burial pit.

Feature 11

Feature 11 was a shallow ovoid depression filled with nails. It may represent an animal wallow beneath an as yet unidentified outbuilding.

Activity Group	2	2.7%
Architecture Group	69	92.0%
Kitchen Group	4	5.3%
Total	75	

Activity Group (N = 2)

Miscellaneous Hardware (N = 1)

Wire fencing staple	1	50.0%

Stable and Barn (N = 1)

Horseshoe nail	1	50.0%

Architecture Group (N = 69)

Cut nails	23	33.3%
Wire nails	41	59.4%
Indeterminate nails	5	7.3%

The ratio of wire nails to cut nails (1.78 to 1) suggests a date around the beginning of the 20th century. A total of 17.7 g (0.04 lb.) of brick fragments was recovered.

Kitchen Group (N = 4)

Kitchen artifacts in Feature 11 consist solely of container glass. No identifiable vessel forms were present in the feature.

Glass (N = 4)

Indeterminate solarized sherds	3	75.0%
Indeterminate burned sherds	1	25.0%

Dates

Feature 11 contained no artifacts which could be precisely dated. Solarized glass dates between 1886 and 1915 and wire nails were replacing cut nails in this area by 1890. Feature 11 most likely dates to the turn of the 19th-20th centuries.

Feature 12

Feature 12 was a basin-shaped pit of unknown function. It contained a single unidentifiable flake of glass. Feature 12 could not be assigned a date based upon this single artifact.

Feature 13

Feature 13 was a long oval pit apparently located beneath or along the side of Structure 1. The artifacts it contained for the most part date from the 1850s to the 1890s with one notable exception--a silver Spanish coin dated 1803 with a hole punched in the upper rim. Feature 13 yielded 92 historic artifacts plus one prehistoric chipped stone projectile point/knife (PPK).

Activity Group	6	6.5%
Architecture Group	42	45.7%
Clothing Group	9	9.8%
Kitchen Group	24	26.1%
Medicine Group	3	3.3%
Personal Group	8	8.7%
Total	92	

Activity Group (N = 6)

Miscellaneous Hardware (N = 6)

Sheet iron	3	50.0%
Shredded sheet brass	2	33.3%
Broken shaft of gimlet pointed wood screw	1	16.7%

The three pieces of rusty sheet metal are old rusty tinplate. Gimlet pointed screws postdate 1864.

Architecture Group (N = 42)

Cut nails	39	92.8%
Window glass	3	7.1%

The complete absence of wire nails places this feature before the last quarter of the 19th century. The window glass sample from this feature is 1.85 mm. When the Moir formula is applied, a date of 1868 is obtained. A total of 1.75 kg (3.86 lb.) of brick fragments was recovered.

Clothing Group (N = 9)

Buttons (N = 9)

White porcelain, 4-hole depressed center, 10.5 mm	1	11.15
Blue porcelain, 4-hole depressed center, 10.5 mm	1	11.15
Green porcelain, 4-hole depressed center, 10.5 mm	1	11.1%
Iron, two piece fabric covered, 18 mm	2	22.2%
Bone, 4-hole depressed center, 16.8 mm	1	11.1%
Tagua nut, 4-hole depressed center, 16.8 mm	1	11.1%
Hard rubber, domed, pinshank, 22.4 mm	1	11.1%
U.S. Army Artillery officers' iron-backed brass, 13.37 mm	1	11.1%

These buttons are all consistent with a mid-19th century date. The artillery officers' button (Figure 46) is of the period 1845-1880 (Wyckoff 1984:44-45). The iron back of this button is unfortunately too corroded to reveal any backmark it had. The hard rubber button is backmarked "Goodyear's Pat. N.R. Co.", a mark which dates from 1851 to around 1870 (Fink and Ditzler 1993). A button with a similar mark was found in Feature 1.

Kitchen Group (N = 24)

Ceramics (N = 18)

Coarse earthenwares and stonewares:

Salt glazed stoneware	1	4.2%
Total	1	4.2%

FIGURE 46. U.S. army artillery officer's button from Feature 13, three-piece construction with brass face and iron back, 40RH156. Modern U.S. dime included for scale.

Refined earthenwares:

Whiteware: underglaze polychrome broadline	2	8.3%
Whiteware: flow blue transfer printed	1	4.2%
Whiteware: red/green spatter	1	4.2%
Whiteware: undecorated	11	45.8%
Total	15	62.5%

Ironstone:

Plain white	1	4.2%
Total	1	4.2%

Porcelains:

Red enameled overglaze	1	4.2%
Total	1	4.2%

The stoneware sherd is of indeterminate vessel form. The predominant refined earthenware vessel forms are flat wares (39%), with the remainder being tea wares (22%) and indeterminate (22%). The single sherd of hard paste porcelain is probably a saucer.

Glass (N = 6)

Clear indeterminate vessel	1	4.2%
Solarized tumbler sherds	3	12.5%
Blue-green liquor flask sherds	2	8.3%

Medicine Group (N = 3)

Clear glass panel bottle sherds	3	100.0%

None of these have any diagnostic traits.

Personal Group (N = 8)

Daily Use Items (N = 7)

Rectangular slate pencil	1	12.5%
Writing slate fragments	6	75.0%

No dates are available for these items.

Personal Adornment (N = 1)

Spanish silver coin	1	12.5%

A Spanish silver coin dated 1803 was recovered from this feature. This artifact, combined with the other two pierced coins from this site, is one of the most interesting aspects of this site.

Dates

The silver coin bears a date of 1803, but was obviously well-used long after that date. The nails, ceramics, and buttons span the mid-19th century. The window glass gives a date of 1868 but is a statistically insignificant sample. The Mean Ceramic Date of 1858.2 adds another mid-century date.

Feature 14

Feature 14 was a tree disturbance.

Feature 15

Feature 15 was a shallow circular basin-shaped pit 25 cm in diameter adjacent to Feature 1. It was filled with ash, charcoal, and the remains of a leather boot heel.

Architecture Group	12	29.3%
Clothing Group	29	70.7%
Total	41	

Architecture Group (N = 12)

Cut nails	4	33.3%
Window glass	8	66.7%

The complete absence of wire nails places this feature before the last quarter of the 19th century. The window glass sample from this feature is most similar to one of the sherds from Feature 9. It is blue-green in color and averages 1.43 mm in thickness. The Moir date for this sample, which is well represented, is 1833. Such an early date for this feature was unexpected, given the proximity of this feature to the later house. It is possible that this glass was removed from the Feature 9 structure and redeposited here, for the house represented by Features 1 and 2 was certainly not in existence before 1850, and probably not until 1866. The size of the sherds suggests primary deposition. A total of 295.8 g (0.65 lb.) of brick fragments was recovered.

Clothing Group (N = 29)

Cut tacks	28	96.6%
Copper rivet	1	3.4%

An artifact which was apparently the remains of a leather shoe heel was found within the feature but deterioration was so advanced it could not be removed intact. Twenty-eight cut tacks rusted to tiny fragments of leather are all that remain. A copper rivet with a bit of leather preserved was also removed from Feature 15. It is not known whether this rivet was associated with the shoe heel.

Dates

The window glass date of 1833 is the only date obtained for this feature.

Postholes

All postholes at site 40RH156 were bisected, and the excavated halves were trowel-sorted for artifacts. Many postholes contained brick fragments and nails, but two postholes contained additional artifacts. Posthole 32 contained four large sherds of a salt-glazed stoneware preserve jar. Posthole 27 contained the oldest historic artifact from the site--a pierced silver Spanish coin dated 1773.

The postholes can be divided roughly into two associated groups. One group is a clear alignment of round and square postholes corresponding with the inner yard-outer yard boundary of the later house. This fence line was reconstructed at least twice, and corresponds with the locations of the outbuildings which produced Features 4 and 7, both of which were on the inner yard side

of the fence. The posts in this line were spaced 8 to 10 feet on center. The other group is a scattering of square postholes in the area between the later fence line and the early house location. These posts were probably associated with the early house but contained no artifacts to substantiate this assertion. In addition, these older postholes do not produce a distinct pattern. Other postholes on the site were both spatially and chronologically associated with the barn.

FAUNAL ANALYSIS

A total of 2,171 pieces (1,460.0 g) faunal remains was recovered from site 40RH156. Analysis of the faunal material was accomplished by using the Vertebrate Comparative Skeletal Collection located at The University of Tennessee, Knoxville.

Methods

Class, order, family, and genus or species of the faunal remains were determined when possible using the comparative collection. Classes were further divided into small/medium and large categories. Specimens that were not identifiable by class were placed into a size category. The size category each specimen was placed in was determined by cortical thickness, percentage of cancellous bone present, curvature of the bone fragment, and general size. An example of this can be ascertained by sizing a large bone fragment with thick cortical bone and slight curvature in the large animal class. This information was not pertinent to the faunal remains from the site so was not included in the final analysis. Element and element side was recorded for identifiable fragments. Species maturity was determined by epiphyses fusion.

Provenience and modification allowed faunal material codification. Provenience for the material (by feature) and the number of individual specimens (NISP) present was determined throughout the site. The modification category included tool, cut marks, or burned features on the specimen. These modifications were recorded for each specimen if present.

Table 17 lists genera or species, weight of specimens, NISP, and minimum number of individuals (MNI) present by feature. Table 18 lists bone weight and number of bone specimens by feature. Table 19 lists weight and number of specimens by taxon.

Faunal Remains by Provenience

Feature 1

Feature 1 contained 66 identifiable specimens (39.9 g) and 26 unidentifiable specimens (3.4 g). The following are identifiable specimens, NISP, and identifiable parts:

TABLE 17
TAXA PRESENT BY PROVENIENCE, 40RH156

Provenience	Taxon	Weight (g)	NISP	MNI
Feature 1	Cricetidae	4.7	38	5
	Ictaluridae	0.3	2	1
	Meleagris gallopavo	1.2	1	1
	Gallus gallus	<0.1	1	1
	Sciurus sp.	0.7	4	1
	Sus scrofa	21.8	5	1
	Sylvilagus floridanus	7.8	14	1
	Talpidae	0.3	1	1
Feature 2	*Anas* sp	0.3	4	2
	Cricetidae	17.8	108	7
	Ovis aries	83.0	3	1
	Sciurus sp.	1.8	4	1
	Sus scrofa	168.9	60	1
	Sylvilagus floridanus	33.7	53	2
	Gallus gallus	55.7	186	15
	Rana sp.	1.3	7	1
	Testudines	15.4	43	1
Feature 7	Cricetidae	1.1	2	1
	Ovis aries	4.2	1	1
	Sus scrofa	17.4	13	1
Feature 9	*Anas* sp.	5.0	6	2
	Cricetidae	1.1	15	2
	Ictaluridae	1.0	5	1
	Meleagris gallopavo	3.0	2	2
	Gallus gallus	0.8	8	1
	Sciurus sp.	2.2	11	2
	Sus scrofa	238.6	84	2
	Sylvilagus floridanus	2.4	9	3
	Testudines	0.6	4	1
Feature 10	*Anas* sp.	11.0	30	3
	Cricetidae	2.4	15	1
Feature 13	*Gallus gallus*	2.8	2	1
	Sus scrofa	9.4	7	1

(continued)

TABLE 17 (continued)

Provenience	Taxon	Weight (g)	NISP	MNI
Test Unit 4	Cricetetidae	0.1	5	1
	Phasianidae	0.1	2	1
	Sus scrofa	1.6	2	1
	Sylvilagus floridanus	0.8	1	1
Total		719.6	757	71

TABLE 18
WEIGHT AND AMOUNT OF BONE BY PROVENIENCE, 40RH156

Provenience	Total Weight (g)	Total Amount of Bone (N)
Feature 1	40.3	92
Feature 2	611.1	1,049
Feature 7	57.1	46
Feature 9	679.3	832
Feature 10	16.1	58
Feature 11	3.8	2
Feature 12	0.1	1
Feature 13	27.1	62
Test Unit 3	4.8	2
Test Unit 4	18.6	26
Posthole 5	1.7	1
Total	1,460.0	2,171

TABLE 19
WEIGHT AND NUMBER OF SPECIMENS BY TAXA, 40RH156

Taxon	Total Weight (g)	Total Amount (N)
Anas sp.	16.3	40
Cricetidae	27.2	183
Gallus gallus	59.5	199
Ictaluridae	1.3	7
Meleagris gallopavo	4.2	3
Ovis aries	87.2	4
Rana sp.	1.3	7
Sciurus sp.	4.7	19
Sus scrofa	457.7	171
Sylvilagus floridanus	43.9	76
Testudines	16.0	47
Talpidae	0.3	1
Unidentifiable	740.4	1,414
Total	1,460.0	2,171

Sus scrofa (domestic pig), NISP = 5, one molar (M3), two femur fragments, one right central tarsal (TC), and one epiphysis;

Sciurus sp. (squirrel), NISP = 4, one humerus, two pelves (one right and one left), and one vertebra;

Sylvilagus floridanus (eastern cottontail rabbit), NISP = 14, one incisor, one right scapula, one right ulna, two pelves (one right and one left), one astragalus, one right humerus, two metatarsal (MT) II, two MT III, one right tibia, one calcaneum, one right mandible;

Gallus gallus (domestic chicken), NISP = 1, beak;

Meleagris gallopavo (turkey), NISP = 1, carpometacarpus

Ictaluridae (catfish), NISP = 2, two skull fragments;

Talpidae (mole), NISP = 1, one right humerus;

Numerous Cricetidae (rodent), NISP = 38.

Feature 2

Feature 2 contained 468 identifiable specimens (377.9 g) and 581 unidentifiable specimens (233.2 g). Identifiable specimens are:

Sus scrofa (domestic pig), NISP = 60, sixteen rib fragments, five phalange III, five phalange I, five phalange II, one phalange V, one CU, two sesamoids, one phalange fragment, five vertebral epiphyses, two vertebrae, two M2s, two P3s, two M1s, two incisors (one burned), one P4, two unidentifiable tooth fragments, one right scapula fragment, two right fibulas, one left calcaneum, one trocanter, and one right lacrimal;

Ovis aries (sheep), NISP = 3, one left tibia and two humeri fragments (one left, one right);

Gallus gallus (domestic chicken), NISP = 186, 27 tarsometatarsals (10 right, 16 left, 27 unidentifiable as to side), 22 humeri (11 right, 11 left), 19 tibiotarsal (9 right, 10 left), 19 ulnas (10 right, 9 left), 13 femurs (8 right, 5 left), 15 coracoids (8 right, 7 left), 9 radii (4 right, 4 left, 1 unidentifiable as to side), 15 vertebrae, 14 ribs, 10 sternums, 3 scapulas (2 right, 1 unidentifiable as to side), 3 furculum, 3 phalanx, 2 phalanges, 1 MT I, 1 right carpometacarpal, and 11 skull fragments (9 frontals, 9 beaks, and 1 unidentifiable fragment);

195-First

Anas sp. (duck), NISP = 4, two right femurs, one right scapula, and one right coracoid;

Sylvilagus floridanus (eastern cottontail rabbit), NISP = 53, seven pelves (four left, three right), three sacrums, eight humeri (four right, four left), two femurs (one right, one left), one left ulna, four scapulas (three left, one unidentifiable as to side), two tibias (one right, one unidentifiable as to side), two calcaneums (one right, one left), five phalanges, two MT III, one MT II, one MT V, two left mandibles, two right maxillas, four incisors, and eight vertebrae;

Sciurus sp. (squirrel), NISP = 4, one right femur, one right mandible, and two pelves (one right, one left);

Rana sp. (frog), NISP = 7, four humeri, two femurs, and one pterigiophore;

Testudines (turtle), NISP = 43, eighteen carapace fragments, seventeen plastron fragments, one claw, two femurs, one skull fragment, and four unidentifiable fragments; and

Cricetidae (rodent), NISP = 108.

Feature 7

Feature 7 contained 16 identifiable specimens (22.7 g) and 30 unidentifiable specimens (34.4 g). Identifiable specimens are:

Sus scrofa (domestic pig), NISP = 13, four M2s, three maxillary canines, one M1, two incisors, one P3, one P4, and one tooth fragment (the P3 and the incisor have been burned);

Ovis aries (sheep), NISP = 1, one M2; and

Cricetidae (rodent), NISP = 2.

Feature 9

Feature 9 contained 144 identifiable specimens (254.7 g) and 688 unidentifiable specimens (424.6 g). Identifiable specimens are:

Sus scrofa (domestic pig), NISP = 84, three phalange IV, four phalange III, two right and left ulna carpals (CU), six phalange II, one right TC, five metacarpals (one right, two left, and two fragments), one right phalange I, two digit II, nineteen

fragmented ribs, two M2s, one M1, three P4s, three incisors, two right tibias, one sesamoid, one tooth fragment, one unidentifiable scapula piece, two calcanea (one left and one unidentifiable), five pelves (three left, one right), one right femur, one astragalus fragment, one left radius, fourteen epiphyses, and three vertebrae (one caudal, one cervical, and one unidentifiable);

Sciurus sp. (squirrel), NISP = 11, one vertebrae, one left fibula, one left ulna, two left humeri, one right scapula, two pelves (one left, one unidentifiable), one right calcaneum, one right radius, and one right mandible;

Sylvilagus floridanus (eastern cottontail rabbit), NISP = 9, three right pelves, two femurs (one left, one right), one left humerus, one right tibia, and two vertebrae;

Anas sp. (duck), NISP = 6, two right tibiotarsus, one right scapula, one right coracoid, one fragmented ulna, and one right femur;

Gallus gallus (domestic chicken), NISP = 8, three unidentifiable fragments, two phalanges, one vertebrae, one right tarsometatarsus, and one beak;

Meleagris gallopavo (turkey), NISP = 2, two right carpometacarpals;

Ictaluridae (catfish), NISP = 5, four skull fragments, one vertebrae;

Testudines (turtle), NISP = 4, two carapace fragments, and two vertebrae; and

Cricetidae (rodent), NISP = 15.

Feature 10

Feature 10 contained a large concentration of *Anas* sp. (duck) elements. All of the faunal remains from Feature 10 consisted of 45 identifiable specimens (13.4 g) and 13 unidentifiable specimens (2.7 g). Identifiable specimens are:

Anas sp. (duck), NISP = 30, four scapulas (two left, two right), three left ulnas, three vertebrae, one right humerus, one carpometacarpal, two mandibles (one right, one left), one right tarsometatarpal, one fibula, two femurs (one right, one left), one phalanx, two coracoids (one right, one left), two pygostyles, one right tibiotarsus, and six unidentifiable fowl remains; and

Cricetidae (rodent), NISP = 15.

Feature 11

Two unidentifiable specimens (3.8 g) were recovered from Feature 11.

Feature 12

One unidentifiable bone fragment (0.1 g) was recovered from Feature 12.

Feature 13

Feature 13 contained 9 identifiable faunal specimens (12.2 g) and 53 unidentifiable specimens (14.9 g). Identifiable specimens are:

> *Sus scrofa* (domestic pig), NISP = 7, one right phalange II, two CUs (one right, one left), one P3, one sesamoid, one left phalange III, and one epiphisis; and
>
> *Gallus gallus* (domestic chicken), NISP = 2, one tibiotarsus and one skull fragment.

Test Unit 3

Test Unit 3 contained two unidentifiable elements (4.8 grams).

Test Unit 4

Test Unit 4 contained 9 identifiable specimens (1.8 g) and 17 unidentifiable specimens (16.8 g). Identifiable specimens are:

> *Sus scrofa* (domestic pig), NISP = 2, both phalange II;
>
> *Gallus gallus* (domestic chicken), NISP = 2, one right tarsometatarsus and one right humerus; and
>
> Cricetidae (rodent), NISP = 5.

Posthole 5

One unidentifiable specimen (1.7 g) was recovered from Posthole 5.

Summary of Fauna

Domestic pig and domestic chicken were the most abundant species present on this site. Both adult and juvenile pigs were found as marked by the presence of many unfused phalanges. Domestic pigs and chickens were the major components of the diet. A high degree of fragmentation of the faunal material may be due to the trampling of large animals or the agricultural processes of the area. Most of the remains contain no cutmarks. The few examples of gnawing marks could be attributed to rodents as many rodent remains were found in the assemblage. A few bones in Features 2, 7, and 9 display modification from burning.

Two *Sus scrofa* femurs recovered from Feature 1 display cut marks, as do the *Ovis aries* specimens recovered from Feature 2. The largest number of remains from the *Sus scrofa* collection are from the foot element indicating this was probably the most available part of the animal for consumption. *Sylvilagus floridanus* (eastern cottontail rabbit) is the third most prevalent species found in the collection with *Sciurus* sp. (squirrel) following. No complete cranial remains of the squirrel were found to identify distinct species. Frequency of rabbit and squirrel specimens indicates the hunting of wild animals to supplement the diet of domestic animals.

Identified Species

Domestic Animals

The introduction of domestic species into North America began in the 1500s. Domestic species present in the faunal collection from site 40RH156 are *Sus scrofa* (domestic pig), *Ovis aries* (sheep), *Meleagris gallopavo* (turkey), and *Gallus gallus* (chicken).

Nondomesticated Animals

Sciurus sp. (squirrel) was represented in three (Features 1, 2, and 9) of the seven features and test units that contained identifiable remains. Because of the lack of cranial remains, distinct species could not be identified. Most specimens probably belong to either the grey or fox species (Burt and Grossenheider 1980).

Sylvilagus floridanus (eastern cottontail rabbit) was represented in four (Features 1, 2, and 9 and Test Unit 4) of the seven features and test units that contained identifiable remains. The eastern cottontail rabbit inhabits heavy brush, the edges of swampy areas, and open areas near forests. They are active during the evening to late morning and spend the daytime hours burrowed in the ground or beneath brush piles (Burt and Grossenheider 1980).

Cricetidae (mice, voles, rats, and lemmings) was represented in six (Features 1, 2, 7, 9, and 10 and Test Unit 4) of the seven features and test units that contained identifiable remains. Cricetidae live mostly on and in the ground. The family includes small to medium sized rodents. Representatives of this family can be found in all parts of North America (Burt and Grossenheider 1980).

Anas sp. (ducks) was represented in three (Features 2, 9, and 10) of the seven features and test units that contained identifiable remains. Ducks are found world-wide, inhabiting marshes, wooded swamps, ponds, lakes, and bays (Peterson 1990).

Ictaluridae (catfish) inhabit freshwater sources from Canada in the north to Gulf of Mexico in the south. They live in deep pools and runs over sand or rocks in small to large rivers and lakes (Page and Burr 1991). Features 1 and 9 contained catfish remains.

Rana sp. (frogs) inhabit all continents except Antarctica. They generally live in aquatic areas such as lakes, streams, ponds and bogs (Conant and Collins 1991). Only Feature 2 contained frog remains.

Testudines (turtles) also live on all continents except Antarctica and are particularly abundant in North America. Features 2 and 9 contained turtle remains.

Talpidae (moles) inhabit most of the United States and southern Canada and live just beneath the surface of the ground (Burt and Grossenheider 1980).

Discussion of Fauna

The people occupying site 40RH156 exploited both wild and domesticated mammals. The large mammal (pig) remains that were utilized do not appear to be the "meatier" portions of the animal. Although normal sized *Gallus gallus* (domestic chicken) and *Meleagris gallopavo* (turkey) are represented, the presence of domesticated chicken and turkey along with the remains of *Anas* sp. (duck) indicates a large portion of the diet consisted of fowl. No *Bos* sp. (cow) specimens were found which suggests that very little beef was consumed.

BOTANICAL ANALYSIS

Fifty-four vials of water-floated fill from Feature 9 at site 40RH156 were submitted for sorting and botanical identification. Samples had been systematically recovered from arbitrary excavation levels representing four feature quadrants and a central baulk. Discrete "zones" were recognized by the excavation team in the southwest and southeast quadrants. A total of 409 litres of feature fill was processed for recovery of plant remains (Table 20). Light and heavy fractions from quadrant level samples were used. Only light fraction from the central baulk was used.

Laboratory Procedures

Each flotation sample was placed in a nested series of geological sieves with mesh sizes of 2 mm, 1 mm, and 500 µm. The screens were underlain by a catch basin and the stack of sieves was shaken gently to sort materials into size classes for sorting. All non-recent plant material retained in the 2 mm mesh screen was sorted into constituent categories (e.g., wood charcoals, maize, etc.) and then counted and weighed. Material retained in the 1 mm and 500 µm mesh screens and catch basin was scanned for seed/fruit fragments. Those fragments were removed, counted by genus/species, and weighed. Remaining materials in the two smaller mesh size screens and catch basin (e.g., tiny wood charcoal fragments, inorganic feature matrix, etc.) were weighed as one sample component--residue. The amount of plant material in that component was estimated (by weight) using control test samples from various depositional contexts.

TABLE 20
PLANT REMAINS FROM FEATURE 9 FLOTATION SAMPLES, 40RH156

Provenience	Flotation Volume L	Wood Charcoal N	Wood Charcoal %	Maize N	Maize %	Asteraceae Seedhead N	Asteraceae Seedhead %	Seeds N	Seeds &	Residue g	Total g
Southwest 1/4											
Level 1	8	-	-	-	-	-	-	-	-	0.03	0.03
Level 2	20	175	5.84	-	-	-	-	-	-	0.16	6.00
Level 3	20	274	12.37	-	-	-	-	-	-	1.10	13.47
Level 4	20	189	15.15	-	-	-	-	-	-	0.45	15.60
Level 5, Zone A	20	47	1.83	-	-	-	-	-	-	0.12	1.95
Level 5, Zone B	5	-	-	-	-	-	-	-	-	0.11	0.11
Level 5, Zone C	10	1,125	10.40	-	-	-	-	-	-	2.50	12.90
Total	103	1,810	45.59	-	-	-	-	-	-	4.47	50.06
Northwest 1/4											
Level 1	40	95	1.51	-	-	-	-	-	-	0.15	1.66
Level 2	20	44	3.19	-	-	-	-	-	-	0.09	3.28
Level 3	20	426	13.40	5	0.08	-	-	-	-	0.96	14.44
Level 4	20	760	18.80	18	0.52	-	-	-	-	1.70	21.02
Level 5	10	21	0.56	-	-	-	-	-	-	0.11	0.67
Total	110	1,346	37.46	23	0.60	-	-	-	-	3.01	41.07
Southeast 1/4											
Level 1	20	30	1.06	5	0.09	-	-	-	-	0.30	1.45
Level 2	20	85	8.60	5	0.05	-	-	1	<0.1	0.21	8.86+
Level 3	20	93	2.79	-	-	-	-	-	-	0.20	2.99
Level 4, Zone B	25	7	0.43	-	-	-	-	-	-	0.08	0.51
Level 4, Zone C	12	699	8.73	-	-	-	-	-	-	2.10	10.83
Total	97	914	21.61	10	0.14	-	-	1	<0.01	2.89	24.64+

(continued)

TABLE 20 (continued)

Provenience	Flotation Volume L	Wood Charcoal N	Wood Charcoal %	Maize N	Maize %	Asteraceae Seedhead N	Asteraceae Seedhead %	Seeds N	Seeds &	Residue g	Total g
Northeast 1/4											
Level 1	20	63	3.56	-	-	-	-	-	-	0.07	3.63
Level 2	20	28	1.71	-	-	-	-	-	-	0.03	1.74
Level 3	20	84	3.99	-	-	1	0.02	-	-	0.12	4.13
Level 4	20	38	1.77	6	0.23	-	-	-	-	0.09	2.09
Total	80	213	11.03	6	0.23	1	0.02	-	-	0.31	11.59
Central Baulk											
Level 2	5	43	0.99	-	-	-	-	-	-	0.12	1.11
Level 3	5	28	0.89	-	-	-	-	-	-	0.04	0.93
Level 4	9	376	3.74	-	-	-	-	-	-	1.12	4.86
Total	19	447	5.62	-	-	-	-	-	-	1.28	6.90
Feature 9 Total	409	4,730	121.31	39	0.97	1	0.02	1	<0.01	11.96	134.26+

Selection of wood charcoal fragments for identification was accomplished by spreading the >2 mm flotation sample fragments in a serpentine pattern over a 1 cm^2 grid pattern and taking fragments from alternate horizontal and vertical grid units until 20 fragments were identified, if that many were preserved well enough to present anatomical landmarks needed for identification. In instances where fewer than 20 fragments were present in the >2 mm size class, all fragments were examined.

Comparative collections housed at the Frank H. McClung Museum at The University of Tennessee, Knoxville, served as the primary source for plant identifications. Secondary sources included standard plant identification manuals (Core et al. 1979; Martin and Barkley 1961; Panshin and de Zeeuw 1980).

Results

Considering the volume of processed fill from Feature 9 (409 litres), the density of recovered plant remains (by weight) is unimpressive. The density ratio is 0.328 g per litre of processed fill. This is *not* a strong representation and should be considered a cumulative result of feature function and cleaning, processing, and food plant consumption patterns, and plant preservation characteristics in the depositional context (especially if plant parts were not carbonized).

The only discernible crop plant in the feature samples was corn (*Zea mays*), and even this crop plant was represented by only 39 cupules. Wood charcoals accounted for 90.4% of all charcoal weight (no uncharred wood or corn were recovered). A good perspective on just how uncommon non-woody plant remains were in the Feature 9 sample is to consider their ubiquity, a "relative" indicator of how common classes of materials are in a suite of excavation contexts. Using an index figure of ≥50 as indicative of "common" occurrence, only wood remains qualify. The ubiquity index is presented as a percentage of total contexts sampled. Since only one feature is represented, the arbitrary excavation levels in four quadrants and the central baulk are used as sampled contexts.

Material Ubiquity Index:

Seeds	0.04
Fruit heads	0.04
Corn	20.80
Wood charcoal	91.70

Other than wood charcoal and the small amount of corn, one fragment of an aster seedhead and one *Geranium* (cranesbill) seed were recovered.

Corn cupules were recovered in samples representing three of the four feature quadrants (southeast, northeast, and northwest), with 74.4% of fragments recovered from the north portion of the feature. Cupule width and length measurements were obtainable on 17 and 15 cupules,

respectively (Table 21). Cupule width range was 5.9-8.8 mm with a mean of 6.9 mm. Length range was 0.0-1.5 mm with a mean of 1.1 mm.

This corn, based upon limited available cupule measurements, appears smaller than early 19th-century corn represented at site 40RE192. Cupule measurements for the 40RE192 sample yielded a mean width of 8.4 mm (range 6.0-9.8 mm). Equivocal row number estimates result from distortion of corn rachis (cob) elements that have been charred. This is compounded by the variation in cob element morphology on single ears and, of course, within populations. The availability of different cultivars would exacerbate the problem since the greatest variation between cultivars occurs in cupules (King 1994). As more 19th-century samples of corn are recovered from the Midsouth, important comparative morphological data will better facilitate discrimination of land races and cultivars.

Fifteen genera and at least 16 species are represented in the wood charcoal sample (Tables 22-24). One genus, *Quercus*, accounted for 51.7% of identified fragments. The inventory of identified wood charcoals includes taxa representing a variety of habitat/landform situations that occur in the site area/region. Five taxa in the sample are better indicators of second/third growth forest. Those taxa are *Diospyros virginiana* (persimmon), *Liriodendron tulipifera* (tulip poplar), *Prunus* spp. (cherry/plum), *Magnolia* spp. (Magnolia), and *Pinus* spp. (pine). These taxa accounted for 20.8% of identified wood fragments, with pine and tulip poplar accounting for 15.3%. This 20.8% representation of local secondary growth taxa is almost identical to the representation of such indicators in the 40RE192 sample. In that sample, secondary growth/open area taxa accounted for 20.3% of identified wood. As was the case for 40RE192, the representation of open habitat/secondary taxa at 40RH156 should be considered indicative of local representation around home sites in the area during the 19th century.

Magnolia recovered from Feature 9 at 40RH156 could be *Magnolia acuminata* (cucumber tree), *Magnolia tripetala* (umbrella Magnolia), *Magnolia fraseri* Walt. (Fraser Magnolia), or *Magnolia macrophylla* Michx (Bigleaf Magnolia). Bigleaf Magnolia is rare and difficult to cultivate. The Magnolia charcoal fragments are most likely from one of the first three species listed (see Elias 1980; Fowells 1965, for cultural/environmental data on Magnolias).

DISCUSSION

In addition to the pierced silver coin recovered from Feature 13, two more pierced coins were recovered from site 40RH156 (Figure 47). One of these coins is a U.S. one cent piece dated 1861 found in a 1 m x 1 m test unit near Feature 1. The other is a silver Spanish coin dated 1773 found in the fill of a posthole. Both silver coins are very worn and were thus already old when they were lost or discarded. None of the other artifacts from the site reliably predate the 1830s. Rhea County itself was not opened to Euroamerican settlement until 1805. Thus, the coins entered the archaeological record after this time. The connection between these coins is that they are all pierced. It is documented that African-American slaves and freedmen in the coastal islands of

TABLE 21
CORN MORPHOLOGICAL DATA FROM FEATURE 9, 40RH156

Cupule Width (mm)	Cupule Length (mm)	Row Number (estimated)
7.5	0.9	
8.8	1.4	
8.3	1.5	
7.4	-	
6.8	-	
6.5	1.1	8/10-row
6.5	1.0	
7.1	1.1	
7.0	1.2	
7.0	1.0	
6.8	1.0	
6.4	1.1	
6.9	0.9	
6.0	1.0	appears to be small 8-row
6.0	0.9	
5.9	0.9	
6.0	1.0	

TABLE 22
WOOD CHARCOALS FROM FEATURE 9, 40RH156 — *CARYA*, *QUERCUS*, *JUGLANS*, *CASTANEA*, AND *ULMUS*

	Carya spp.		*Quercus alba*		*Quercus rubra*		*Quercus* spp.		*Juglans* spp.		*Castanea dentata*		*Ulmus* spp.	
Provenience	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Southwest 1/4														
Level 2	2	-	3	-	-	-	3	-	-	-	-	-	-	-
Level 3	-	-	10	-	-	-	-	-	4	-	-	-	-	-
Level 4	-	-	-	-	12	-	-	-	-	-	-	-	-	-
Level 5, Zone A	-	-	8	-	-	-	3	-	-	-	-	-	1	-
Level 5, Zone C	-	-	3	-	-	-	-	-	-	-	-	-	-	-
Total	2	2.0	24	24.0	12	12.0	6	6.0	4	4.0	-	-	1	1.0
Northwest 1/4														
Level 1	-	-	9	45.0	-	-	2	10.0	-	-	-	-	-	-
Level 2	-	-	4	20.0	8	40.0	1	5.0	-	-	-	-	-	-
Level 3	-	-	-	-	-	-	12	60.0	-	-	8	40.0	-	-
Level 4	3	15.0	2	10.0	8	40.0	2	10.0	-	-	3	15.0	-	-
Level 5	1	10.0	-	-	-	-	4	40.0	2	20.0	-	-	-	-
Total	4	4.4	15	16.7	16	17.8	21	23.3	2	2.2	11	12.2	-	-
Southeast 1/4														
Level 1	-	-	-	-	5	33.3	5	33.3	-	-	-	-	-	-
Level 2	-	-	4	20.0	-	-	-	-	-	-	-	-	-	-
Level 3	-	-	6	30.0	7	35.0	2	10.0	-	-	-	-	-	-
Level 4, Zone B	-	-	-	-	-	-	2	100.0	-	-	-	-	-	-
Level 4, Zone C	-	-	-	-	13	32.5	4	10.0	-	-	-	-	-	-
Total	-	-	10	10.3	25	25.8	13	13.4	-	-	-	-	-	-

(continued)

TABLE 22 (continued)

Provenience	*Carya* spp.		*Quercus alba*		*Quercus rubra*		*Quercus* spp.		*Juglans* spp.		*Castanea dentata*		*Ulmus* spp.	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Northeast 1/4														
Level 1	-	-	20	100.0	-	-	-	-	-	-	-	-	-	-
Level 2	-	-	8	40.0	-	-	7	35.0	-	-	-	-	-	-
Level 3	-	-	12	60.0	-	-	-	-	-	-	-	-	-	-
Level 4	-	-	5	25.0	1	5.0	1	5.0	-	-	-	-	-	-
Total	-	-	45	56.25	1	1.25	8	10.0	-	-	-	-	-	-
Central Baulk														
Level 2	-	-	-	-	5	25.0	4	20.0	-	-	-	-	-	-
Level 3	-	-	3	23.1	-	-	-	-	-	-	5	38.5	-	-
Level 4	-	-	2	10.0	6	30.0	1	5.0	-	-	2	10.0	-	-
Total	-	-	5	9.4	11	20.8	5	9.4	-	-	7	13.2	-	-
Feature 9 Total	6	1.4	99	23.6	65	15.5	53	12.6	6	1.4	18	4.3	1	0.2

TABLE 23
WOOD CHARCOALS FROM FEATURE 9, 40RH156 — *FRAXINUS, DIOSPYROS, LIRIODENDRON, ACERA, LIQUIDAMBER, PLATANUS,* AND *SALIX.*

Provenience	*Fraxinus* spp.		*Diospyrus virginiana*		*Liriodendron tulipfera*		*Acer* spp.		*Liquidamber styraciflua*		*Platanus occidentalis*		*Salix nigra*	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Southwest 1/4														
Level 2	7	-	-	-	-	-	4	-	-	-	1	-	-	-
Level 3	-	-	-	-	-	-	6	-	-	-	-	-	-	-
Level 4	-	-	2	-	-	-	6	-	-	-	-	-	-	-
Level 5, Zone A	-	-	-	-	-	-	2	-	6	-	-	-	-	-
Level 5, Zone C	-	-	-	-	-	-	4	-	13	-	-	-	-	-
Total	7	7.0	2	2.0	-	-	22	22.0	19	19.0	1	1.0	-	-
Northwest 1/4														
Level 1	-	-	-	-	6	30.0	3	15.0	-	-	-	-	-	-
Level 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 4	-	-	-	-	-	-	-	-	-	-	-	-	2	10.0
Level 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	6	6.7	3	3.3	-	-	-	-	2	2.2

(continued)

TABLE 23 (continued)

Provenience	*Fraxinus* spp.		*Diospyrus virginiana*		*Liriodendron tulipfera*		*Acer* spp.		*Liquidamber styraciflua*		*Platanus occidentalis*		*Salix nigra*	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Southeast 1/4														
Level 1	-	-	-	-	-	-	2	13.3	-	-	-	-	-	-
Level 2	2	10.0	-	-	-	-	-	-	-	-	-	-	-	-
Level 3	-	-	-	-	2	10.0	3	15.0	-	-	-	-	-	-
Level 4, Zone B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 4, Zone C	-	-	-	-	-	-	-	-	5	12.5	8	20.0	-	-
Total	2	2.1	-	-	2	2.1	5	5.1	5	5.1	8	8.3	-	-
Northeast 1/4														
Level 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Level 3	-	-	3	15.0	5	25.0	-	-	-	-	-	-	-	-
Level 4	-	-	-	-	11	55.0	2	10.0	-	-	-	-	-	-
Total	-	-	3	3.75	16	20.0	2	2.5	-	-	-	-	-	-
Central Baulk														
Level 2	-	-	-	-	3	15.0	3	15.0	-	-	-	-	-	-
Level 3	-	-	-	-	-	-	3	23.1	-	-	-	-	-	-
Level 4	-	-	-	-	4	20.0	3	15.0	-	-	-	-	-	-
Total	-	-	-	-	7	13.2	9	17.0	-	-	-	-	-	-
Feature 9 Total	9	2.1	5	1.2	31	7.4	41	9.8	24	5.7	9	2.1	2	0.5

TABLE 24
WOOD CHARCOALS FROM FEATURE 9, 40RH156 — *PRUNUS*, *MAGNOLIA*, *PINUS*, AND TOTAL ALL SPECIES

Provenience	*Prunus* spp. N	*Prunus* spp. %	*Magnolia* spp. N	*Magnolia* spp. %	*Pinus* spp. N	*Pinus* spp. %	Total All Species
Southwest 1/4							
Level 2	-	-	-	-	-	-	20
Level 3	-	-	-	-	-	-	20
Level 4	-	-	-	-	-	-	20
Level 5, Zone A	-	-	-	-	-	-	20
Level 5, Zone C	-	-	-	-	-	-	20
Total	-	-	-	-	-	-	100
Northwest 1/4							
Level 1	-	-	-	-	-	-	20
Level 2	-	-	-	-	7	35.0	20
Level 3	-	-	-	-	-	-	20
Level 4	-	-	-	-	-	-	20
Level 5	3	30.0	-	-	-	-	10
Total	3	3.3	-	-	7	7.8	90
Southeast 1/4							
Level 1	-	-	-	-	3	20.0	15
Level 2	-	-	-	-	14	70.0	20
Level 3	-	-	-	-	-	-	20
Level 4, Zone B	-	-	-	-	-	-	2
Level 4, Zone C	4	10.0	6	15.0	-	-	4.0
Total	4	4.1	6	6.2	17	17.5	97

(continured)

TABLE 24 (continued)

Provenience	*Prunus* spp. N	*Prunus* spp. %	*Magnolia* spp. N	*Magnolia* spp. %	*Pinus* spp. N	*Pinus* spp. %	Total All Species
Northeast 1/4							
Level 1	-	-	-	-	-	-	20
Level 2	-	-	-	-	5	25.0	20
Level 3	-	-	-	-	-	-	20
Level 4	-	-	-	-	-	-	20
Total	-	-	-	-	5	6.25	80
Central Baulk							
Level 2	5	25.0	-	-	-	-	20
Level 3	-	-	-	-	2	15.4	13
Level 4	-	-	-	-	2	10.0	20
Total	5	9.4	-	-	4	7.6	53
Feature 9 Total	12	2.9	6	1.4	33	7.9	420

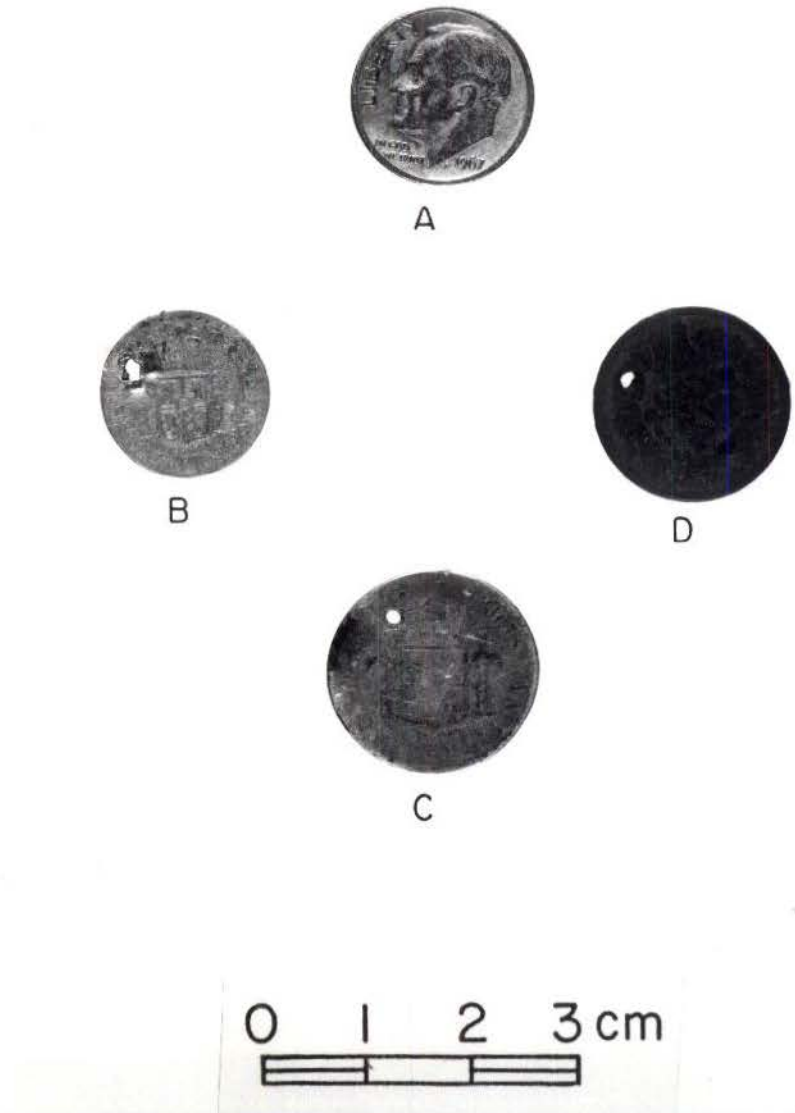

FIGURE 47. Pierced coins, 40RH156. A — modern U.S. dime included for scale, B — 1803 Spanish silver coin from Feature 13, C — 1773 Spanish silver coin, D — 1861 U.S. one cent piece.

Georgia were known to sometimes wear silver coins on thongs in order to ward off witchcraft or "conjure," the principle being that if the coin turned black one was being attacked by magical means (WPA Georgia Writers' Project, 1940:92-93, 125, 136). While the pierced coins alone do not prove the presence of African-American slaves, freedmen, or tenants, they do strongly suggest this. However, people of many cultures may wear coins for ornament or keep old coins for luck (Leland Ferguson, personal communication 1995).

Franklin Waterhouse owned the property on which site 40RH156 is located from 1827 until 1866. It is known that Waterhouse kept slaves. However, it is not known where Waterhouse lived in the thousands of acres he owned, nor where he and his slaves actively farmed. It is most likely that the structure on site 40RH156 belonged to a tenant or squatter on Waterhouse's land. The Confederate sympathies of Rhea County in general and of the Waterhouse family in particular insured that the area would be impoverished after the Civil War (Harris 1992). It is likely, therefore, that the sale of the land containing site 40RH156 to Luther Heiskell in 1866, just after the war, was due to financial reasons. It is doubtful that of his 450 acres (182 ha) Heiskell ever actually lived on site 40RH156. It is more likely that the Heiskell family lived closer to the Tennessee river in the area demarcated by Heiskell Lane and Heiskell Branch, located 1.2 km from site 40RH156 near a much more reliable water source. Under Heiskell's ownership it seems probable that site 40RH156 remained a tenant farm.

ANSWERS TO RESEARCH QUESTIONS

1. What effect does local environment have on historic settlement location, and do cultural factors help determine site location?

The environment at site 40RH156 is very much like that at site 40RE192 with the exception of the size of the water supply. Any location in the valley would be suitable for an agricultural settlement. Why then do two early 19th century farmsteads that could be located anywhere in the valley happen to lie in the right-of-way of State Route 29? Because what is now a state highway was once a path of some sort, even as early as 1820. No other explanation fits the distribution of sites along the corridor between the Cumberland Escarpment and the Tennessee River.

2. What is the spatial arrangement of the farmstead and does it change through time? How does it compare to other Upland South farmsteads? How does it compare to farmsteads settled by other cultural traditions?

As mentioned above, the early house at site 40RH156 has no associated outbuildings and cannot be measured by the Upland South model. However, the later farmstead has all the characteristics of the pattern:

- Outbuildings and barns are arranged around a dwelling in a seemingly disordered cluster determined by the occupant's conception of convenience.
- Major buildings include the dwelling, barn, storehouse, smokehouse, and animal pens, all of which often serve multiple functions.
- The location of the well/cistern, privy, storage shed, and chicken house are tied closely to the dwelling and formed areas that were usually associated with female activities and were periodically swept.
- Barns and large animal and equipment shelters associated with male activity areas are located further away from the dwelling and its closely tied support structures. Access to these structures is around the dwelling and its yard rather than through the immediate yard.
- The dwelling faces the probable path of approach.
- The dwelling tends to be shaded by trees.
- Fields and pastures are irregular, often dictated by topography.
- Log construction is widely used.
- There is a concept of modular construction based upon the pen or crib.

All of these traits were present at the later occupation of site 40RH156 with the exception of the privy and the well/cistern, as neither of these features were present. Additionally, plowing and road construction disturbance has erased any evidence of a swept yard. Access to the later barn was through a farm lane to the south of the house and its immediate yard. Since the artifacts from the surface of the cellar of the early house indicate some use as a shed after the later house was built, multiple use and reuse of structures was present. This aspect is carried over at the later house, which seems to have been used as a shed after the cessation of domestic activity at the site. The fence lines represented by the various lines of postholes across the site are certainly irregular, though not necessarily defined by topography. As for cultural factors of site 40RH156, the spatial patterning fits the Upland South model. This may or may not have to do with the later occupation of the site as no evidence of early outbuildings was found at the site. All outbuilding remains date to the later occupation. This fact raises some other interesting questions. For instance, if the post-Civil War occupation was at least partially by African-Americans, does the Upland South pattern of the farmstead reflect the African-American cultural landscape of East Tennessee or was the layout of the farm due to Euroamerican construction or influence? Or is this something which can even be recovered archaeologically? For discussion of African-

American tenant farmers in other parts of the later 19th century South, see Carlson (1990) and Stine (1990).

3. What dietary patterns and food preferences are evident in the artifacts recovered from the sites and how do these compare with documented patterns for the Upland South tradition? Does the pattern change through time?

Faunal evidence indicates that a large portion of the diet consisted of pig and fowl, including chicken, turkey, and duck, with a surprising amount of marginal portions represented. Squirrel, rabbit, fish, and turtle were exploited but deer were not represented in the faunal assemblage. Botanical analysis indicated the growing of corn crops. It must be remembered, however, that the botanical sample came solely from the early component of the site and is not representative of the later occupation. The prevalence of pork and corn in the diet is entirely consistent with the Upland South model, as are the minor amounts of wild protein present on the site. Faunal analysis does not indicate any great change in foodways between the early component and the late component at site 40RH156, with the exception of the emphasis on the more marginal pig parts during the later occupation.

4. What socioeconomic conditions are indicated by the artifact assemblage? How do they compare to those of other similar sites?

The material assemblage indicates status difference in the two components of site 40RH156. The early occupation was of moderate status with most of the ceramic wares being painted. Some transfer print was present as well but not in such quantity as at 40RE192. The remains of a single bone china cup and saucer probably represent a status display and may not have been used on a regular basis, as most of the teawares from the early component are blue hand-painted earthenware. A large clear glass handblown bottle was recovered from an early context, which may also indicate status. Large glass bottles were rare and expensive items in the backcountry prior to the Civil War (Brett Riggs, personal communication 1995). The status of the later occupation appears to have been lower than that of the early, although this is difficult to determine precisely due to the shifting fashions of ceramics in the latter 19th century. By the 1870s, undecorated white table ceramics were quite fashionable and have remained so even up to the present. Undecorated ceramics are also cheaper than decorated types, which makes determination of status a bit more difficult. Semivitrified wares were more expensive than earthenwares for all categories of decoration until the 1890s and thus their presence may be used as a relative indication of status. Of the plain wares from the later occupation of the site, most were earthenware until after 1890, which indicates a lower level of prosperity than during the earlier occupation. Faunal analysis also indicates a lower status through the increased use of the more marginal pig parts and the complete lack of beef bones. Several reasons are possible for a lower economic level during the post-Civil War years. Rhea county was impoverished after the war, and it is possible that very few people could afford the finer items. If the residents of the site were tenant farmers, as is suspected, a lower socioeconomic status would be expected as well. If the post-Civil War residents were not only tenants or sharecroppers but African-Americans as well, it is very likely indeed that they were of low socioeconomic status.

Unfortunately, no other Upland South farmsteads of this later period have been excavated in Tennessee, so there is no standard of comparison.

5. How does the later occupation of site 40RH156 compare to McCorvie et al.'s (1989) model of Upland South occupations in southern Illinois and Rotenizer's (1992) model of Upland South occupations in Virginia and Kentucky? Does the evidence support the hypothesis that the Upland South tradition is comparable across its entire range?

The later occupation at site 40RH156 corresponds closely to the manifestations of Upland South traditions in Illinois, Virginia, and Kentucky. The Upland South pattern is so internally variable that most all farmsteads of the post-Civil War era to the present within the Upland South region fit within the mold. Of importance in the case of 40RH156 is the ethnicity of the builder-occupants at the site during this time. No rural farmsteads belonging to or run by African-Americans of this time period have been excavated in the Upland South. The later component of site 40RH156 does indeed support the comparability of the Upland South pattern across its entire range, even when the cultural ancestry of the builders is not known.

SUMMARY

Site 40RH156 is an historic farmstead with three distinct components:

1. Early historic cabin site, 1820s-1850s;

2. Post-Civil War farmstead, 1860s-1920s; and

3. 20th century pasturage, 1930s-present.

These three components overlap one another in time as well as space according to the artifactual record. Materials recovered from the top of Feature 9 indicate continued use of the domestic structure which once stood over the cellar as an outbuilding during the post-Civil War occupation of the site. In addition, artifacts found scattered in front of the chimney pad during the mechanical stripping of the house area seem to indicate use of the house as a tool or equipment storage facility for a time after the abandonment of the structure's domestic functions. Feature 3, the barn, was constructed late in the second occupation component and survived long enough before burning down for the older residents of the area to remember before it. Finally, the livestock chute outside the right-of-way was constructed in part with reused lumber from earlier structures, as many peg holes were visible in some timbers which did not correspond to any structural components of the chute. It must be recognized, however, that since the presence of the chute indicates a post-motor vehicle date for the structure, the pegged timbers could have been transported easily from elsewhere.

The early occupation and the post-Civil War occupation do not appear to have been by the same people. This is likely because the site was sold after the war, the later house was built around that time, and the artifactual record changes dramatically. Ceramics from the early cellar are typical of a middle status assemblage. Ceramics from the late cellar and house area are more indicative of a lower status occupation. There could be many reasons for this. The Confederate sympathies of Rhea County in general and of the Waterhouse family in particular ensured that the area would be impoverished after the Civil War (Harris 1995). It is likely, therefore, that the sale of the land containing site 40RH156 to Luther Heiskell in 1866, just after the war, was due to financial reasons. It is doubtful if Heiskell ever lived on 40RH156. It is more likely that the Heiskell family lived closer to the Tennessee River in the area demarcated by Heiskell Lane and Heiskell Branch, 1.2 km from site 40RH156 near a much more reliable water source. Under Heiskell's ownership it seems probable that site 40RH156 became a tenant farm.

Site 40RH156 may have been occupied by African-Americans for at least part of the post-Civil War period. The presence of three pierced coins on the site suggests this interpretation. One of these coins, a U.S. one cent piece dated 1861, was recovered from a 1 m x 1 m test unit near the chimney base. A silver Spanish coin dated 1773 was recovered from the fill of Posthole 27. A second pierced silver Spanish coin dated 1803 was recovered from Feature 13 in the later house area and was associated with late 19th century ceramics. Both silver coins are very worn and were already old when they were lost or discarded. None of the other artifacts from the site reliably predate the 1820s. Rhea County itself was not opened to Euroamerican settlement until 1805. Thus, the coins probably entered the archaeological record after this time. While the pierced coins alone do not prove the presence of African-American slaves, freedmen, or tenants, they do strongly indicate this. However, people of many cultures may wear coins for ornament or keep old coins for luck (Leland Ferguson, personal communication 1995). Another possibility is that the original residents of site 40RH156 were of African-American origin. If one were to consider the 1773 coin as an artifact used for protection with the date matching the owner's birth date (a common practice, Wilkie 1995:144-145), the owner would have been 93 years old at the time of Heiskell's purchase of the land. While this is certainly possible, it is not probable.

Another possible artifact class which could be associated tenuously with an African-American occupation, according to Wilkie (1995), is the chipped stone projectile points from site 40RH156. As there was no detectable prehistoric occupation of the site, the six points which were recovered from historic feature context were placed there by historic peoples. Curation of prehistoric stone projectile points by African-Americans has been documented at sites in the deep south (Orser 1985) and in New Jersey (Geismar 1982). This activity has not been reported in the Upland South region, making the question of ethnicity an important issue at site 40RH156.

In many places, ceramic vessel form frequencies have been used to help determine the cultural context of sites where non-Euroamerican occupation is suspected but not known. Unfortunately, these comparisons have not been shown to be successful in the Upland South (McKelway et al. 1994). As in other cases from the region, the vessel form ratios of site 40RH156 are inconclusive.

The early occupation of site 40RH156 probably was by persons of Euroamerican extraction who may or may not have owned slaves. The site was probably abandoned during the Civil War, although this cannot be proven. During the post-Civil War period the site probably had at least one occupation by African-Americans.

IX. SUMMARY

The Transportation Center at The University of Tennessee-Knoxville conducted archaeological investigations at Sites 40RH155, 40RH156, and 40RE192 in 1994 and 1995. These sites will be impacted by the proposed reconstruction of State Route 29 (US 27), from State Route 68 in Spring City to north of State Route 1 (US 70) in Rockwood, Rhea and Roane Counties, Tennessee.

SITE 40RH155

Site 40RH155 was an indeterminate prehistoric site that did not contain any subsurface features or cultural deposits.

SITE 40RH156

Site 40RH156 was an historic farmstead dating from about 1830 until 1930. Features on the site included a pit cellar that probably was associated with a house built on the site around 1930, a second pit cellar and chimney base that were associated with a later house on the site, and a third pit cellar that was probably beneath an outbuilding. The earliest occupation of the site was probably by Euroamericans. The site was abandoned during the Civil War and may have been occupied by African-Americans for the least part of the post-Civil War period.

SITE 40RE192

Site 40RE192 contained the subsurface remains of a small historic house site with several associated features. Artifacts from the site suggest an early 19th century Euroamerican habitation. However, the presence of multiple basin-shaped pit features containing historic materials, combined with the presence of a large number of glass beads, argue for an historic Native American presence. Prehistoric occupation of the site is indicated by controlled surface collection material that includes Early Archaic to late Woodland/Mississippian diagnostics.

REFERENCES CITED

Adovasio, J. M., J. D. Gunn, J. Donahue, and R. Stuckenrath

1978 Meadowcroft Rockshelter, 1977: An Overview. *American Antiquity* 43(4):632-651.

Ahler, S. A.

1989 Mass Analysis of Flaking Debris: Studying the Forest Rather Than the Trees. In *Alternative Approaches to Lithic Analysis*, edited by D. O. Henry and G. H. Odell, pp. 85-118. Archaeological Papers No. 1. American Anthropological Association.

Ahlman, Todd Michael

1996 *Backward Farmers or Modernizing Farms? The Tennessee Valley Farms of East Tennessee in the Early Twentieth Century*. Unpublished Masters thesis, Department of Anthropology, The University of Tennessee, Knoxville.

Andrews, Susan C.

1992 *Spatial Analysis of an East Tennessee Plantation Houselot*. Unpublished Masters thesis, Department of Anthropology, The University of Tennessee, Knoxville.

Baden, William W.

1983 *Tomotley: An Eighteenth Century Cherokee Village*. Report of Investigations No. 36. Department of Anthropology, The University of Tennessee, Knoxville.

1985 Evidence of Changing Settlement Patterns in the Little Tennessee River Valley of East Tennessee. In *Exploring Tennessee Prehistory*, edited by Thomas Whyte, C. Clifford Boyd, Jr., and Brett H. Riggs, pp. 135-156. Report of Investigations No. 42. Department of Anthropology, The University of Tennessee, Knoxville.

Bogan, Arthur E., and Cynthia M. Bogan

1985 Faunal Remains. In *Archaeological Contexts and Assemblages at Martin Farm*, by Gerald F. Schroedl, R. P. Stephen Davis, Jr., and C. Clifford Boyd, Jr., pp. 369-410. Report of Investigations No. 39. Department of Anthropology, The University of Tennessee, Knoxville.

Bogan, Arthur E., and Richard R. Polhemus

1987 Faunal Analysis. In *The Toqua Site (40MR6): A Late Mississippian, Dallas Phase Town*. Report of Investigations No. 41. Department of Anthropology, The University of Tennessee, Knoxville.

Braun, E. Lucy

1950 *Deciduous Forests of Eastern North America*. Hafner, New York.

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Broyles, Betty J.

1982 *Rhea County, Tennessee, Census, Marriage, and Tax Records 1850 through 1900.* Rhea County Historical and Genealogical Society, Dayton, Tennessee.

1991 *History of Rhea County, Tennessee*. Rhea County Historical and Genealogical Society, Dayton, Tennessee.

Burrison, John A.

1983 *Brothers in Clay: The Story of Georgia Folk Pottery*. University of Georgia Press, Athens.

Burt, William, and Richard Grossenheider

1952 *A Field Guide to Mammals*. Houghton Mifflin, Boston.

1980 *A Field Guide to Mammals*. Houghton Mifflin, Boston.

Carlson, Shawn Bonath

1990 The Persistence of Traditional Lifeways in Central Texas. *Historic Archaeology* 24(4):50-59.

Chapman, Jefferson

1977 *Archaic Period Research in the Lower Little Tennessee River Valley--1975: Icehouse Bottom, Harrison Branch, Thirty Acre Island, Calloway Island.* Report of Investigations No. 18. Department of Anthropology, The University of Tennessee, Knoxville.

1985 *Tellico Archaeology: 12,000 Years of Native American History*. Report of Investigations No. 43. Department of Anthropology, The University of Tennessee, Knoxville.

Conant, Roger, and Joseph Collins

1991 *A Field Guide to Reptiles and Amphibians*. Houghton Mifflin, Boston.

Core, H. A., W. A. Côté, and A. C. Day

1979 *Wood Structure and Identification.* Syracuse University Press, Second Edition, Syracuse, New York.

Crites, Gary D.

1978 *Paleoethnobotany of the Normandy Reservoir in the Upper Duck River Valley, Tennessee*. Unpublished Masters thesis, Department of Anthropology, The University of Tennessee, Knoxville.

Davis, R. P. Stephen, Jr.

1990 *Aboriginal Settlement Patterns in the Little Tennessee River Valley.* Report of Investigations No. 50. Department of Anthropology, The University of Tennessee, Knoxville.

DeJarnette, David L., E. B. Kurjack, and J. W. Cambron

1962 Stanfield-Worley Bluff Shelter Excavations. *Journal of Alabama Archaeology* 8(1 and 2).

Dice, Lee Raymond

1943 *The Biotic Provinces of North America.* University of Michigan Press, Ann Arbor.

Dickens, Roy S., Jr.

1976 *Cherokee Prehistory: The Pisgah Phase in the Appalachian Summit Region.* The University of Tennessee Press, Knoxville.

Elias, Thomas S.

1980 *Trees of North America.* Van Nostrand Reinhold, New York.

Faulkner, Charles H.

1984 *An Archaeological and Historical Study of the James White Second Home Site.* Report of Investigations No. 28. Department of Anthropology, The University of Tennessee, Knoxville.

1987 Archaeology at the Roddy House: A Study of Threatened Domestic Sites in Knoxville, Tennessee. In *Proceedings of the Symposium on Ohio Valley Urban and Historic Archaeology*, Vol. V, edited by Donald B. Ball and Philip J. DiBlasi, pp. 66-77. Louisville, Kentucky.

1988 *Archaeological Testing at the Nicholas Gibbs House: Season 1.* Department of Anthropology, The University of Tennessee, Knoxville. Prepared for the Nicholas Gibbs Historical Society, Knoxville, Tennessee.

1989 *Archaeological Testing at the Nicholas Gibbs House: Season 2.* Department of Anthropology, The University of Tennessee, Knoxville. Prepared for the Nicholas Gibbs Historical Society, Knoxville, Tennessee.

1990 *Archaeological Testing at the Nicholas Gibbs House: Season 3.* Department of Anthropology, The University of Tennessee, Knoxville. Prepared for the Nicholas Gibbs Historical Society, Knoxville, Tennessee.

1995 Historic Component. In *The Aenon Creek Site(40MU493): Late Archaic, Middle Woodland, and Historic Settlement and Subsistence in the Middle Duck River Drainage of Tennessee*, edited by Charles Bentz, Jr., pp. 126-138. Publications in Archaeology No. 1. Environmental Planning Office, Tennessee Department of Transportation, Nashville.

Faulkner, Charles H., and Susan C. Andrews
1994 *An Archaeological Study of Sharp's Fort, Union County, Tennessee*. Department of Anthropology, The University of Tennessee, Knoxville. Prepared for the Tennessee Department of Environment and Conservation, Historical Commission, Nashville.

Faulkner, Charles H., and J. B. Graham
1966 *Westmoreland-Barber Site (40MI11), Nickajack Reservoir, Season 2*. Department of Anthropology, The University of Tennessee, Knoxville. Submitted to National Park Service, Contract No. 14-10-0131-01494.

Faulkner, Charles H., and Dalford Dean Owens, Jr.
1995 *Archaeological Testing of the Ramsey House Barnyard*. Prepared for the Tennessee Department of Environment and Conservation, Historical Commission, Nashville, and Association for the Preservation of Tennessee Antiquities, Knoxville Chapter.

Fenneman, Nevin M.
1938 *Physiography of Eastern United States*. McGraw Hill, New York.

Fink, Nancy, and Maryalice Ditzler
1993 *Buttons*. Courage, Philadelphia.

Fogelman, Gary L.
1991 *Glass Trade Beads of the Northeast*. Pennsylvania Artifact Series Booklet 70.

Fontana, B. L., and J. C. Greenleaf
1962 Johnny Ward's Ranch. *The Kiva* 28(1-2).

Ford, Thomas B.
1982 *An Analysis of Anglo-American--Cherokee Culture Contact During the Federal Period, The Hiwassee Tract, Eastern Tennessee*. Unpublished Masters thesis, Department of Anthropology, The University of Tennessee, Knoxville.

Fowells, H. A.
1965 *Silvics of Forest Trees of the United States*. U.S. Department of Agriculture Handbook No. 271. National Forest Service, U.S. Department of Agriculture, Washington, D.C.

Franklin, Jay D., Noëleen McIlvenna, Lance K. Greene, and Alan Longmire

1995a *Phase II Archaeological Testing and Intensive Phase II Archaeological Testing of Site 40RE192, State Route 29, Roane County, Tennessee*. Transportation Center, The University of Tennessee, Knoxville. Submitted to Chester IDE Associates, Inc., Nashville, Tennessee.

1995b *Phase II Archaeological Testing of Sites 40RH155 and 40RH156, State Route 29 (U.S. Route 27), Rhea County, Tennessee*. Transportation Center, The University of Tennessee, Knoxville. Submitted to Chester IDE Associates, Inc., Nashville, Tennessee.

Gainer, Albert

1933 *A Distribution of the Birds in East Tennessee*. Ornithological Society, Nashville.

Geismar, Joan H.

1982 *The Archaeology of Social Disintegration in Skunk Hollow: A Nineteenth Century Rural Black Community*. Academic Press, New York.

Glassie, Henry

1965 *Southern Mountain Houses: A Study in American Folk Culture*. Unpublished Masters thesis, The University of Pennsylvania, Philadelphia.

1968 *Pattern in the Material Folk Culture of the Eastern United States*. University of Pennsylvania Press, Philadelphia.

Godden, Geoffrey A.

1964 *Encyclopedia of British Pottery and Porcelain Marks*. Crown, New York.

Graham, Russell W.

1982 Clovis Peoples in the Midwest: The Importance of the Kimmswick Site. *The Living Museum* 44(2):27-39.

Greer, Georgeanna H.

1981 *American Stonewares*. Schiffer, Philadelphia.

Harris, William C.

1992 East Tennessee's Civil War Refugees and the Impact of the War on Civilians. *Journal of East Tennessee History* 64:3-19.

Hays, Christopher T.

1992 *A Phase I Archaeological Reconnaissance of the Proposed Impact Areas Along State Route 29 from Dayton to State Route 1, Rhea and Roane Counties, Tennessee*. DuVall and Associates, Inc., Nashville, Tennessee. Submitted to Tennessee Engineering, Inc. and Tennessee Department of Transportation, Nashville.

Hofman, Jack L.
1984 Hunter-Gatherers in the Nashville Basin of Tennessee 8000-5000 B.P. *Tennessee Anthropologist* 9(2):130-192.

Hon, Edgar A.
1963 *Bird Study in the Mid-South.* Tennessee Game and Fish Commission, Nashville.

Hudson, Charles
1976 *The Southeastern Indians.* The University of Tennessee Press, Knoxville.

Jones, Olive, and Catherine Sullivan
1985 *The Parks Canada Glass Glossary for the Description of Containers, Tableware, Flat Glass, and Closures.* National Historic Parks and Sites, Canadian Parks Service.

Jordan, Terry G., and Matti Kaups
1989 *The American Backwoods Frontier: An Ethnic and Ecological Interpretation.* Johns Hopkins University Press, Baltimore.

Justice, Noel D.
1987 *Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States.* Indiana University Press, Bloomington and Indianapolis.

Keel, Bennie C.
1976 *Cherokee Archaeology: A Study of the Appalachian Summit.* The University of Tennessee Press, Knoxville.

Kellogg, Remington
1939 Annotated List of Tennessee Mammals. *Proceedings of the United States National Museum* 86(3,051):245-303.

Ketchum, William C., Jr.
1991 *American Redware.* Henry Holt, New York.

Kidd, Kenneth E., and Martha Ann Kidd
1970 *A Classification System for Glass Beads for the Use of Field Archaeologists.* In Canadian Historic Sites: Occasional Papers in Archaeology and History 1. National Historic Sites Service, National and Historic Parks Branch, Department of Indian Affairs and Northern Development, Ottawa, Canada.

Kimball, Larry R.
1985 Chronology. In *The 1977 Archaeological Survey: An Overall Assessment of the Archaeological Resources of Tellico Reservoir*, edited by Larry R. Kimball, pp. 275-292. Report of Investigations No. 40. Department of Anthropology, The University of Tennessee, Knoxville.

King, Frances B.

1994 Variability in Cob and Kernel Characteristics of North American Maize Cultivars. In *Corn and Culture in the Prehistoric New World*, edited by Sissel Johannessen and Christine A. Hastorf, pp. 35-54. Westview, Boulder, Colorado.

King, Phillip

1968 *Geology of The Great Smoky Mountains National Park, Tennessee and North Carolina*. U.S. Department of the Interior, Washington, D.C.

Kuhne, Eugene R.

1939 *A Guide to the Fishes of Tennessee and the Mid-South*. Tennessee Game and Fish Commission, Nashville.

Lee, Ruth Webb

1931 *Early American Pressed Glass*. Published by the Author, Northboro, Massachusetts.

Lehner, Lois

1988 *Lehner's Encyclopedia of U.S. Marks on Pottery, Porcelain & Clay*. Collector Books, Paducah, Kentucky.

Lewis, Thomas M. N., and Madeline Kneberg

1941 *The Prehistory of the Chickamauga Basin in Tennessee: A Preview*. Tennessee Anthropology Papers No. 1. Department of Anthropology, The University of Tennessee, Knoxville.

1946 *Hiwassee Island: An Archaeological Account of Four Tennessee Indian Peoples*. The University of Tennessee Press, Knoxville.

1958 *Tribes That Slumber: Indian Times in the Tennessee Region*. The University of Tennessee Press, Knoxville.

Lewis, Thomas M. N., and Madeline Kneberg Lewis

1961 *Eva: An Archaic Site*. The University of Tennessee Press, Knoxville.

Lorrain, Dessamae

1968 An Archaeologist's Guide to Nineteenth Century American Glass. *Historic Archaeology* 2:35-44.

Luther, Edward T.

1977 *Our Restless Earth: The Geologic Regions of Tennessee*. The University of Tennessee Press, Knoxville.

McCollough, Major C. R., and Charles H. Faulkner
1973 *Excavations at the Higgs and Doughty Sites: I-75 Salvage Archaeology.* Miscellaneous Paper No. 12. Tennessee Archaeological Society, Department of Anthropology, The University of Tennessee, Knoxville.

McCorvie, Mary R., Mark J. Wagner, Jane K. Johnston, Terrance J. Martin, and Kathryn E. Parker
1989 *Archaeological Investigations at the Fair View Farm Site: A Historic Farmstead in the Shawnee Hills of Southern Illinois.* Cultural Resources Management Report No. 135. American Resources Group, Ltd., Carbondale, Illinois.

McKearin, George, and Helen S. McKearin
1941 *American Glass.* Crown, New York.

McKelway, Henry S.
1994 *Slaves and Master in the Upland South--Archaeological Investigations at the Mabry Site.* Unpublished Ph.D. Dissertation, The University of Tennessee, Knoxville.

McKelway, Henry S., Lance K. Greene, Gary Crites, and Amy L. Young
1994 *Slaves and Master in the Upland South--Data Recovery at the Mabry Site.* Transportation Center, The University of Tennessee, Knoxville. Submitted to Tennessee Department of Transportation, Nashville.

McNett, Charles W., Jr.
1985 *Shawnee Minisink: A Stratified Paleoindian-Archaic Site in the Upper Delaware Valley of Pennsylvania.* Academic Press, Orlando.

Magne, M. P. R.
1989 Lithic Reduction Stages and Assemblage Formation Processes. In *Experiments in Lithic Technology*, edited by D. S. Amick and R. P. Mauldin, pp. 15-31. BAR International Series 528. British Archaeological Reports, Oxford, England.

Malone, Henry T.
1956 *Cherokees of the Old South: A People in Transition.* University of Georgia Press, Athens.

Martin, Alexander C., and William D. Barkley
1961 *Seed Identification Manual.* University of California Press, Berkeley.

Milici, R. C., and G. D. Swingle
1972 *Geologic Map of the Roddy Quadrangle, Tennessee.* Division of Geology, Tennessee Department of Conservation, Nashville.

Miller, George L.

1980 Classification and Economic Scaling of 19th Century Ceramics. In *Historical Archaeology* 14(1):1-40.

1991 A Revised Set of CC Index Values for Classification and Economic Scaling of English Ceramics from 1787 to 1880. In *Historical Archaeology* 25(3):1-25.

Moir, Randall W.

1987 Socioeconomic and Chronometric Patterning of Window Glass. In *Historic Buildings, Material Culture, and People of the Prairie Margin: Architecture Artifacts, and Synthesis of Historic Archaeology*, edited by Randall W. Moir and David H. Jurney, pp. 73-81. Richland Creek Technical Series, Vol. V. Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas, Texas.

Morgan, John

1990 *The Log House in East Tennessee*. The University of Tennessee Press, Knoxville.

Morgan, John, and Joy Medford

1980 Log Houses in Grainger County, Tennessee. *Tennessee Anthropologist* 5(2):146-158.

Morse, Dan F.

1973 Dalton Culture in Northeastern Arkansas. *The Florida Anthropologist* 26(1):23-38.

Munsey, Cecil

1970 *The Illustrated Guide to Collecting Bottles*. Hawthorne, New York.

Newman, Robert D.

1986 Euro-American Artifacts. In *Overhill Cherokee Archaeology at Chota-Tanassee*, edited by Gerald F. Schroedl, pp. 415-468. Report of Investigations No. 38. Department of Anthropology, The University of Tennessee, Knoxville.

Noel-Hume, Ivor

1970 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.

Olsen, Stanley J.

1963 Dating Early Plain Buttons by their Form. *American Antiquity* 28(4):551-554.

Orser, Charles E, Jr.

1985 Artifacts, Documents, and Memories of the Black Tenant Farmer. *Archaeology* (6):48-53.

Otto, John Solomon

1989 *The Southern Frontiers, 1607-1860: The Agriculture of the Colonial and Antebellum South*. Greenwood, New York.

Page, Lawrence, and Brooks Burr

1991 *A Field Guide to Freshwater Fish, North America North of Mexico*. Houghton Mifflin, Boston.

Panshin, A. J., and Carl de Zeeuw

1980 *Textbook of Wood Technology*, Vol. 1. McGraw-Hill, New York.

Parsons, J. E.

1957 *Smith and Wesson Revolvers: The Pioneer Single-Action Models*. Morrow, New York.

Patterson, L. W.

1990 Characteristics of Bifacial Reduction Flake Size Distribution. *American Antiquity* 50:550-558.

Peterson, Roger

1990 *A Field Guide to Western Birds*. Houghton Mifflin, Boston.

Peterson, Roger, and Virginia Peterson

1980 *A Field Guide to the Birds*. Houghton Mifflin, Boston.

Phillippe, Joseph S., and William D. Walters, Jr.

1986 Rats, Damp, and Foul Miasma: Some Thoughts on the Literature and Archeology of Pioneer Cellars. *Wisconsin Archeologist* 67(1):37-46.

Pickell, Eugene Monroe

1971 *A History of Roane County, Tennessee to 1860*. Unpublished Master's thesis. Department of History, The University of Tennessee, Knoxville.

Polhemus, Richard R.

1985 *Mississippian Architecture: Temporal, Technological, and Spatial Patterning of Structures at the Toqua Site (40MR6)*. Unpublished Master's thesis. Department of Anthropology, The University of Tennessee, Knoxville.

1987 *The Toqua Site--40MR6: A Later Mississippian, Dallas Phase Town*. Report of Investigations No. 41. Department of Anthropology, The University of Tennessee, Knoxville.

Price, Cynthia R.

1979 *19th Century Ceramics in the Eastern Ozark Border Region.* Monograph Series Number 1. Center for Archaeological Research, Southwest Missouri State University, Springfield, Missouri.

Purrington, Burton L.

1983 Ancient Mountaineers: An Overview of the Prehistoric Archaeology of North Carolina's Western Mountain Region. In *The Prehistory of North Carolina: An Archaeological Symposium*, edited by Mark A. Mathis and Jeffery J. Crow, pp. 83-161. North Carolina Division of Archives and History, Department of Cultural Resources, Raleigh.

Ramsey, J. G. M.

1853 *The Annals of Tennessee History to the End of the Eighteenth Century.* Walker and James, Charleston.

Riggs, Brett H.

n.d. The Late Woodland Component. In *Archaeological Investigations at Hiwassee Old Town (40PK3)*, by Brett Riggs, George Crothers, and Norman Jefferson. Draft report submitted to the Tennessee Department of Conservation, Division of Archaeology, Nashville.

1987 *Socioeconomic Variability in Federal Period Overhill Cherokee Archaeological Assemblages.* Unpublished Masters thesis, Department of Anthropology, The University of Tennessee, Knoxville.

1995 *Historic Cherokee Occupation of the Hiwassee Reservoir Area, Cherokee County, North Carolina.* Paper presented at 52nd annual meeting of the Southeastern Archaeological Conference, Knoxville, Tennessee.

1996 *Removal Period Cherokee Households and Communities in Southwestern North Carolina.* Department of Anthropology, The University of Tennessee, Knoxville. Submitted to the North Carolina State Historic Preservation Office, Division of Archives and History, Department of Cultural Resources, Raleigh.

Roberts, Wayne D.

1986 *Archaeological Excavations at the Historic Ramsey House, Knox County, Tennessee.* Prepared for the Association for the Preservation of Tennessee Antiquities, Knoxville Chapter.

1987 Lithic Analysis. In *The Toqua Site--40MR6: A Later Mississippian, Dallas Phase Town*, edited by Richard Polhemus, pp. 689-909. Report of Investigations No. 41. Department of Anthropology, The University of Tennessee, Knoxville.

Robison, Neil Douglas

1986 *An Analysis and Interpretation of the Faunal Remains from Eight Late Middle Woodland Owl Hollow Phase Sites in Coffee, Franklin and Bedford Counties, Tennessee.* Unpublished Ph.D. dissertation, Department of Anthropology, The University of Tennessee, Knoxville.

Roenke, Karl G.

1978 Flat Glass: Its Use as a Dating Tool for Nineteenth Century Archaeological Sites in the Pacific Northwest and Elsewhere. *Northwest Anthropological Research Notes*, Memoir No. 4 (Vol. 12, No. 2, Pt. 2). Moscow, Idaho.

Rotenizer, David E.

1992 In the Yard: An Examination of Spatial Organization and Subdivision of Activity Areas on Rural Farmsteads of the Upland South. In *Proceedings of the Tenth Symposium on Ohio Valley Urban and Historic Archaeology*, edited by Amy Young and Charles Faulkner, pp. 1-22. Miscellaneous Paper No. 16. Tennessee Anthropological Association, Department of Anthropology, The University of Tennessee, Knoxville.

Salo, Lawr V.

1969 Bacon Bend (40MR25). In *Archaeological Investigations in the Tellico Reservoir, Tennessee, 1967-68; An Interim Report*, edited by L. V. Salo, pp. 142-150. Report of Investigations No. 7. Department of Anthropology, The University of Tennessee, Knoxville.

Schroedl, Gerald F.

1978 *The Patrick Site (40MR40), Tellico Reservoir, Tennessee*. Report of Investigations No. 25. Department of Anthropology, The University of Tennessee, Knoxville.

1986 Overhill Cherokee Archaeology from the Perspective of Chota-Tanasee. In *Overhill Cherokee Archaeology at Chota-Tanasee*, edited by Gerald F. Schroedl, pp. 531-551. Report of Investigations No. 38. Department of Anthropology, The University of Tennessee, Knoxville.

1990 *Archaeological Research at 40RE107, 40RE108, and 40RE124*. Report of Investigations No. 49. Department of Anthropology, The University of Tennessee, Knoxville.

Schroedl, Gerald F., C. Clifford Boyd, Jr., and R. P. Stephen Davis, Jr.

1990 Explaining Mississippian Origins in East Tennessee. In *The Mississippian Emergence*, edited by Bruce D. Smith, pp. 175-195. The Smithsonian Institution Press, Washington, D.C.

Schroedl, Gerald F., R. P. Stephen Davis, Jr., and C. Clifford Boyd, Jr.

1985 *Archaeological Contexts and Assemblages at Martin Farm.* Report of Investigations No. 39. Department of Anthropology, The University of Tennessee, Knoxville.

Schuyler, Robert L

1987 Archaeological Remains, Documents, and Anthropology: A Call for a New Culture History. *Historical Archaeology* 22(4):36-42.

Shelford, Victor

1963 *The Ecology of North America.* University of Illinois Press, Urbana, Illinois.

Shimer, John A.

1971 *Field Guide to Landforms in the United States.* Macmillan, New York.

Sloane, Eric

1965 *A Reverence for Wood.* Wilfred Funk, New York.

Smith, Carlyle S.

1960 Two 18th Century Reports on the Manufacture of Gun Flints in France. *Missouri Archaeologist*, 22:40-49.

Smith, Samuel D.

1984 Excavation of a Mid-Nineteenth Century Trash Pit, Wynnewood State Historic Site, Sumner County, Tennessee. *Tennessee Anthropologist* 8(2):133-181.

Smith, Samuel D. (editor)

1976 *An Archaeological and Historical Assessment of the First Hermitage.* Research Series No. 2. Division of Archaeology, Tennessee Department of Conservation, Nashville.

1993 *Fort Southwest Point Archaeological Site, Kingston, Tennessee: A Multidisciplinary Interpretation.* Research Series No. 9. Division of Archaeology, Tennessee Department of Conservation, Nashville.

Smith, Samuel D., and Stephen T. Rogers

1979 *A Survey of Pottery Making in Tennessee.* Research Series No. 3. Division of Archaeology, Tennessee Department of Conservation, Nashville.

South, Stanley

1964 Analysis of Buttons from Brunswick Town and Fort Fisher. *Florida Anthropologist* 17(2):113-133.

1977 *Method and Theory in Historical Archaeology.* Academic Press, New York.

Stahle, D. W., and J. E. Dunn
1982 An Analysis and Application of the Size Distribution of Waste Flakes from the Manufacture of Bifacial Stone Tools. *World Archaeology* 14:84-97.

Stine, Linda France
1990 Social Inequality and Turn-of-the-Century Farmsteads: Issues of Class, Status, Ethnicity, and Race. *Historic Archaeology* 24:37-49.

Sullivan, A. P., III, and K. C. Rozen
1985 Debitage Analysis and Archaeological Interpretation. *American Antiquity* 50:755-779.

Tennessee State Archives
n.d. Rhea County, Tennessee Deed Book A. McClung Historical Collection, Knox County Public Library, Knoxville. Microfilm.

n.d. Rhea County, Tennessee Deed Book J. McClung Historical Collection, Knox County Public Library, Knoxville. Microfilm.

n.d. Rhea County, Tennessee Deed Book 159. McClung Historical Collection, Knox County Public Library, Knoxville. Microfilm.

n.d. Rhea County, Tennessee Will Book A. McClung Historical Collection, Knox County Public Library, Knoxville. Microfilm.

Trigger, Bruce G.
1989 *A History of Archaeological Thought*. Cambridge University Press, Cambridge.

United States Bureau of the Census
1840 U.S. Census Population Reports: Rhea County, Tennessee. The University of Tennessee, Knoxville. Microfilm.

1840 U.S. Census Population Reports: Roane County, Tennessee. The University of Tennessee, Knoxville. Microfilm.

1850 U.S. Slave Census Records. The University of Tennessee, Knoxville. Microfilm.

1860 U.S. Slave Census Records. The University of Tennessee, Knoxville. Microfilm.

1870 U.S. Census Population Reports: Rhea County, Tennessee. The University of Tennessee, Knoxville. Microfilm.

1880 U.S. Census Population Reports: Rhea County, Tennessee. The University of Tennessee, Knoxville. Microfilm.

Vlach, John Michael

1993 *Back of the Big House: The Architecture of Plantation Slavery*. The University of North Carolina Press, Chapel Hill.

Webb, William S.

1938 *An Archaeological Survey of the Norris Basin in Eastern Tennessee*. Bureau of American Ethnology, Bulletin 118, Washington, D.C.

Wilkie, Laurie A.

1995 Magic and Empowerment on the Plantation: An Archaeological Consideration of African-American World View. In *Southeastern Archaeology* 14(2):136-148.

Williams, Stephen.

1957 The Island 35 Mastodon: Its Bearing on the Age of Archaic Cultures in the East. *American Antiquity* 22:359-373.

Williams, Stephen, and James B. Stoltman

1965 An Outline of Southeastern United States Prehistory with Particular Emphasis on the Paleo-Indian Era. In *Quaternary of the United States*, edited by H. E. Wright, Jr. and David G. Frey, pp. 669-683. Princeton University Press, Princeton, New Jersey.

Woodward, Arthur

1960 A History of Gunflints. *The Missouri Archaeologist* 22:30-39.

WPA Georgia Writers' Project, Savannah Unit

1940 *Drums and Shadows: Survival Studies Among the Georgia Coastal Negroes*. University of Georgia Press, Athens.

Wyckoff, Martin A.

1984 *United States Military Buttons of the Land Services 1787-1902: A Guide and Classificatory System*. McLean County Historical Society, Bloomington, Illinois.

Yentsch, Anne E.

1991 A Note on a 19th Century Description of Below Ground "Storage Cellars" among the Ibo. *African American Archaeology* 4:3-4.

Zug, Charles G., III

1986 *Turners and Burners: The Folk Potters of North Carolina*. University of North Carolina Press, Chapel Hill.

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