AD-A263 435

JMENTATION PAGE

Form Approved
OMB No 0704-0188

(1)

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	April 1988	Final

4. TITLE AND SUBTITLE
ST. John's Bayou

5. FUNDING NUMBERS
DACW66-86-C-0083

6. AUTHOR(S)
Timothy C. Klinger
Lawrence L. Ayers
David B. Board James E. Price

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Historic Preservation Associates
Post Office Box 1064
301 West Mountain Street
Fayetteville, Arkansas 72702

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Dept. of the Army
Memphis District Corps of Engineers
B-202 Clifford Davis Federal Bldg.
Memphis, TN 38103

10. SPONSORING / MONITORING AGENCY REPORT NUMBER
206

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Unlimited

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

A intensive cultural resources survey was conducted. The survey resulted in the discovery of 21 previously unrecordedsites. It is recommended that two sites are eligible for inclusion in the National Register of Historic Places and that 7 others be further tested for National Register criteria.

14. SUBJECT TERMS	15. NUMBER OF PAGES
	168
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT

ST. JOHN'S BAYOU

TIMOTHY C. KLINGER
LAWRENCE L. AYRES
DAVID B. BOARD
JAMES E. PRICE

HPA

HISTORIC PRESERVATION ASSOCIATES REPORTS 88-6

APRIL 1988

(206)

ST. JOHN'S BAYOU

Cultural Resources Survey and Testing
in
Scott, Mississippi and New Madrid counties, Missouri

by

Timothy C. Klinger

Lawrence L. Ayres

David B. Board

and

James E. Price

Historic Preservation Associates
Post Office Box 1064
301 West Mountain Street
Fayetteville, Arkansas 72702

April 1988

Historic Preservation Associates Reports 88-6

Report submitted to the Department of the Army, Memphis District, Corps of Engineers in accordance with Contract No. DACW66-86-C-0083

ABSTRACT

This report documents the results of field survey of approximately 140 miles of drainage ditch in southeast Missouri and of test excavations conducted at 23MI599 and 23NM544. The survey resulted in the discovery of 21 previously unrecorded prehistoric and/or historic archeological sites. It is our opinion that 12 of the sites (23MI600, 23MI601, 23MI602, 23NM543, 23NM545, 23NM548, 23NM549, 23NM550, 23NM551, 23NM552, 23ST209 and 23ST211) are not significant in terms of current National Register of Historic Places criteria. Investigations at each of the other sites (23MI599, 23NM544, 23NM546, 23NM547, 23NM553, 23NM554, 23NM555, 23ST208 and 23ST210) resulted in evidence that, in suggests each could contain significant new information indicating a need for additional assessment. Recommendations for seven of the nine sites call for excavation of systematic postholes and test units. Test excavations at 23MI599 and 23NM544 documented relatively intact deposits, including a burial at 23NM544. Both sites are considered to be eligible for inclusion in the National Register of Historic Places.

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

TABLE OF CONTENTS (continued)

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

BACKGROUND AND PURPOSE OF THE REPORT

On 13 May 1986 the Memphis District, Corps of Engineers (COE) sought proposals under RFP DACW66-86-R-0053 for a background and literature search, and an intensive survey investigation without testing of the St. Johns Bayou Basin Project in Scott, Mississippi and New Madrid Counties, Missouri. This work was in partial fulfillment of the Memphis District's obligations under the National Historic Preservation Act of 1966 (P.L. 89-665), an amended; the National Environment Policy Act of 1969 (P.L. 91-190); Executive Order 11593, "Protection and Enhancement of Cultural Environment," 13 May 1971 (36 CFR Part 800); Preservation on Historic and Archeological Data, 1974 (P.L. 93-291), as amended; and the Advisory Council on Historic Preservation, "Procedures for the Protection of Historic and Cultural Properties" (36CFR800). The COE has proposed maintenance work entailing the dredging or cleaning out accumulated silt and debris in the ditches in the area.

The award of Contract DACW66-86-C-0083 was made on 6 August 1986 to Historic Preservation Associates (HPA). The first amendment to the contract, calling for addtional survey and the testing of 23NM544, was issued on 6 April 1987. The second amendment to the contract, calling for testing of 23NM599, was issued on 30 October 1987.

The purpose of this report is to document the results of our fieldwork and searches of the relevant literature and records relating to the project areas as required by the Scope of Work (Appendix A). The structure and content of the report adhere to the guidelines contained in The Management of Archeological Resources: The Airlie House Report (McGimsey and Davis 1977), to those relating to cultural resource surveys issued by the Missouri Department of Natural Reources (Weichman 1987).

PROJECT LOCATION AND DATES OF THE INVESTIGATION

St. Johns Bayou Basin is part of the Lower Mississippi watershed of the Lower St. Francis/Lower Mississippi drainage basin of Missouri (Wright 1987). The project corridors are distributed in the southwest portion of Mississippi County, the eastern portion of New Madrid County and the southeast portion of Scott County, Missouri (Figure 1).

Field investigations were conducted between 25 September 1986 and 30 July 1987. During this period, short gaps occurred during the field work; however, the only significant gap occurred between the latter part of January and the middle of June, when HPA awaited COE decisions on contract modifications.

PROJECT SPONSOR, PARTICIPANTS AND CURATION

The overall sponsor is the Department of the Army, Memphis District, Corps of Engineers (COE). The Contracting Officer for the program is Mr. Clinton E. Hopkins and the project liaison is Mr. Jimmy McNeil, both of the Memphis District office of the COE. The investigation was conducted by Historic Preservation Associates and the University of Missouri, Southeast Missouri Field Station. Mr. Timothy C. Klinger and Dr. James E. Price served as Co-Principal Investigators. Mr. David B. Board supervised the field work and was assisted by Mr. Lawrence L. Ayres, Mr. Robert Cande and Mr. Walter Punzman. Mr. Board and Mr. Ayres processed and analzyed the artifacts in the

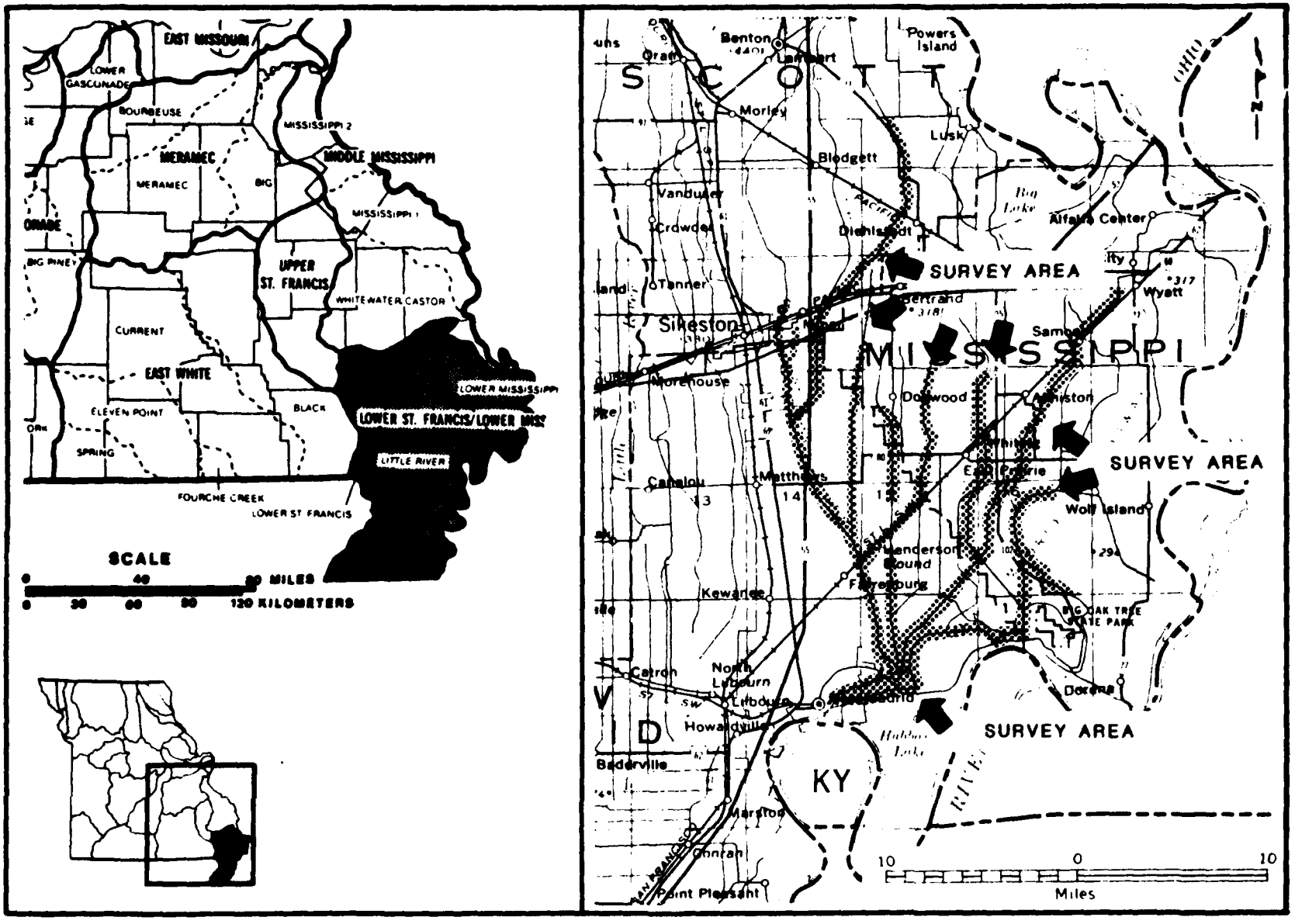


Figure 1. General project location

HPA laboratory and were assisted in the analysis by Dr. Price. A complete roster of project participants, along with their duties and qualifications, is inccluded as Appendix B.

All artifacts and accompanying records will be curated at the University of Missouri, Divison of American Archaeology, southeast Field Station.

SCOPE OF WORK

The complete Scope of Work for this contract is attached as Appendix A Some of the specifics of the contract are reviewed here. The main points of the Scope of Work state:

C-1. GENERAL

C-1.1. The Contractor shall conduct a background and literature search, an intensive survey investigation without testing of the St. Johns Bayou Basin Project Scott Mississippi, and New Madrid Counties, Missouri...

C-2. STUDY AREA.

C-2.1. The location of the St. Johns Bayou project is in Scott, Mississippi, and New Madrid counties, Missouri. The work will be conducted in approximately 4,768 acres, of which 959 acres are woodlands, and 3,808 acres are croplands. In some areas only one side of the bank will require survey while others will require survey on both sides...

C-3. DEFINITIONS

C-3.2. "Background and Literature Search" is defined as a comprehensive examination of existing literature and records for the purpose of inferring the potential presence and character of cultural resources in the study area. The examination may also serve as collateral information to field data in evaluating the eligibility of cultural resources for inclusion in the National Register of HIstoric Places or in ameliorating losses of significant data in such resources.

C-3.3. "Intensive Survey" is defined as a comprehensive, systematic, and detailed on-the-ground survey of an area, of sufficient intensity to determine the number, types, extent and distribution of cultural resources present and their relationship to project features...

C-3.7. "Testing" is defined as the systematic removal of the scientific, prehistoric, historic, and/or archeological data that provide an archeological or architectural property with its research or data value. Testing may include controlled surface survey, shovel testing, profiling, and limited subsurface test excavations of the properties to be affected for the purposes of research planning, the development of specific plans for research activities, excavation, preparation of notes and records, and other forms of physical removal of data and material, preparation reports on such data and material and dissemination of reports and other products of the research. Subsurface testing shall not proceed to the level of mitigation.

C-4. GENERAL PERFORMANCE SPECIFICATIONS

C-4.3 Intensive Survey.

a. Intensive survey shall include the on-the-ground examination of the study areas described in paragraph C-2.

b. Unless excellent ground visibility and other conditions conductive to the observation of cultural evidence occurs, shovel test pits, or comparable subsurface excavation units, shall be installed at intervals no greater than 30 meters throughout the study area.

c. When cultural remains are encountered, horizontal site boundaries shall be derived by the use of surface observation procedures (including controlled surface collection procedures described in Paragraph C-4.4.a. [C-4.3.e] below) in such a manner as to allow precise location of site boundaries. . .

C-4.5. Additional Investigations.

(1) Subsurface test units maybe required at many loci. The proposed number and distribution of such test units shall be recommended by the Principal Investigator on a site specific basis. This recommendation shall be made based on such variables as site size and potential intrasite variability, including, physiographic and geomorphic characteristics of the loci which may suggest variability in the presence or distribution of subsurface cultural deposits. The Contractor shall detail the rationale(s) for the placement and numbers of proposed test units in the management summary and report of field activities. Additional reporting requirements, examination of background literature and examination of standing buildings and structures may also be required at some sites. The exact nature of additional examination, the schedule, and the price of the work shall be negotiated with the Contracting Officer, and if an agreement is reached, a Change Order shall be issued prior to conduct [sic] of the work. Additional investigations will provide a data base of sufficient nature to allow determination of site eligibility to the National Register of Historic Places consistent with C-5.3.j.12 and (3) of this Scope of Work.

Subsequent modifications of the Scope of Work called for additional survey along with testing of two sites (23NM599 and 23NM544).

PROJECT DESCRIPTION AND POTENTIAL IMPACTS

The St. Johns Bayou Basin survey areas encompass 143.7 miles (231.26 km) of drainage ditches in Scott, New Madrid and Mississippi counties, Missouri. For the most part, these investigations focused upon a single side of the ditches. However, in certain sections of some ditches, both sides were surveyed; this added another 61.6 miles (99.13 km) to the survey area. The total distance of the areas surveyed encompasses 205.3 miles (330.39 km) of the basin. The width of the project corridor varied between 50 feet (15.24 m) and 350 feet (106.68 m). As aresult of these investigations, a total survey area of approximately 4,899.29 acres (1,982.74 ha) were surveyed.

The potential impacts to the project area would be in the form of mechanical dredging of the ditches, and the construction and maintenance of spoil berms from the silt and debris removed from the ditches. In addition, the entire width of the project corridor will be impacted by the tracking of heavy machinery and earth moving equipment, as well as being covered and mixed with the silt and debris removed from the ditches.

ENVIRONMENTAL SETTING

PHYSICAL ENVIRONMENT

Before discussing our investigations at the site, a short general discussion of the project area is warranted because such factors as topography, geology, soil fertility, flora, fauna and climate influence human settlement patterns. By identifying the environmental variables present at a site, a much greater understanding of the human use of the landscape can be achieved. On a broader level, insight into the reasoning behind settlement can be attained by understanding the environmental context of the site.

The St. Johns Bayou project is located in the Eastern (Cairo) Lowlands Division of the Lower Mississippi Alluvial Valley (Fisk 1944; Phillips, Ford and Griffin 1951:Figure 1). The Lower Mississippi Alluvial Valley, Lower Mississippi Valley, Mississippi Valley Embayment or "delta" is a broad structural trough between the Appalachian uplift on the east, and the Ozark Highlands on the west. A receding sea in pre-Pleistocene times filled the

trough with material, and the present valley was cut from the Gulf Coastal Plain. Alluvium in this area is about 200 ft thick, with most of the recent alluvium having been deposited during and after the glaciation period when the sea level was rising (Brown 1977:65-66).

The Cairo Lowland is bounded on on the west by Sikeston Ridge and includes that portion of the Mississippi meander belt between Commerce and New Madrid, Missouri (Fisk 1944:25-26). Sikeston Ridge is a north-south trending ridge separating lower areas to the east (Cairo Lowlands) and to the west (Morehouse Lowlands) (Fisk 1944). The ridge is 35 miles long and in the town of the New Madrid it is 5 miles (8 km) wide. Elsewhere to the north, the ridge is much narrower averaging about 2 miles (3.1 km) - 3 miles (4.8 km) wide. In the vicinity of New Madrid the ridge is only about 10 ft (3 m) in elevation, whereas to the north it rises to about 40 ft (12.2 m) in elevation. This ridge represents the most prominent landform in the eastern lowlands. Geologically, Sikeston Ridge is classified as a remnant of Quaternary Braided Stream Terrace 1 formed as the result of "cones of glacial outwash or valley train deposits" of the late Pleistocene Mississippi and Ohio rivers (Saucier 1974:Figure 1).

The southern end of Sikeston Ridge having been cut by the Madrid Bend of the Mississippi River produced an area of relatively high ground located adjacent to a major waterway; thus making an attractive location for prehistoric, historic and modern settlement. Prior to drainage, St. John's Bayou flowed along the east side of the ridge; St. Francis Bayou ran along the south side; and St. Ann Bayou ran along the west side of the ridge before draining into the river (Cottier and Waselkov 1974:49-50). These smaller streams could have provided easy access to the larger waterway for prehistoric and early historic travelers.

The project corridors cross a wide variety of soils in this relatively flat terrain (Table 1). The different soil types provide inforamtion on slope, topographic setting, drainage, proximity of the water table, flooding danger, natural fertility and native vegetation.

Cultivation and urbanization has long since removed the natural vegetation cover in this area. Wright (1987) indicates that much of the Mississippi Alluvial Plain was still covered by backswamps, meander belts, natural levees and large areas that were naturally ponded until large scale artificial drainage operations began in the late 19th century. The native vegetation prior to the drainage of this area consisted primarily of forest communities with probably less than 1% of the vegetation composed of native grassland (Wright 1987:B-12-1). Native prairie vegetation no longer grows in New Madrid County, but previously it was known to encompass about 1% of the Bosket soils (Brown 1977:67). In the prehistoric as well as the early historic period, the dominant terrestrial natural communities probably included wet bottomland forest, wet-mesic bottomland forest and swamp (Nelson 1985:53, 56 and 160).

In their reconstruction of the early nineteenth century environment of the southern end of Sikeston Ridge and adjacent lowlands, Cottier and Waselkov (1974:63, Figure 30:60) postulated that Sikeston Ridge on the higher elevations (300 ft or more) would have been covered with a prairie. They hypothesized that the lower elevations would have been covered with a Sweetgum-Elm plant community. In addition, they proposed that the adjacent lowlands would have supported a Sweetgum-Elm-Cypress seasonal forest plant community.

If correct, then the flora associated each of these plant communities would have supported a great variety of animal species adapted to a number of

Table 1

Soil types and characteristics

Soil Type (map symbol)	% Slope	Topographic Setting	Native Vegetation	Drainage	Depth to Water Table	Flood Hazard	Natural Fertility	Ditches	Archeological Sites Prehist.	Hist.	P/H
Alligator silty clay (33)	0 - 1	Floodplains	INA	Poor	0.5-2.0	Rare*	Medium	NC			
Alligator clay (At)	0 - 1	Slack-water areas	Oak, hickory, cypress, tupelo gum	Poor	0.0-1.0	Occasional	Medium	SJB, MS, LM, BP-NM, EB	23NM543		
Borrow pits (Bp)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	SJB, EB			
Bosket fine sandy loam (36)	0 - 1	Natural levees & terraces	INA	Well	6.0+	None	Medium	BP-NM			
Bowdre silty clay loam (37A)	0 - 3	Ridgetops	INA	Somewhat poor	1.5-2.0	Rare*	High	WD			
Cairo clay (Ca)	0 - 1	Slack-water areas	Cypress & water-tolerant hardwoods	Poor	0.0-1.0	Common	High	SJB			
Cairo silty clay (39)	0 - 1	Concave drainageways, channels & basins	INA	Poor	0.0-2.0	Frequent	High	NC			
Canalou loamy sand (Cd)	0 - 1	Natural levees	Mixed hardwoods, prairie	Moderately well	2.0-3.0	INA	Medium	SJB, NC, MD	23NM555	23NM549	23NM547
Caruthersville very fine sandy loam	0 - 3	Floodplains	INA	Moderately well	2.0-3.0	Rare	High	EB, WD			
Clana loamy fine sand (40)	0 - 1	Convex ridges & drainageways on natural levees	INA	Moderately well	2.0-3.0	None	Medium	SJB, NC, AS, MD, MS, BP-NM, SJD		23MI500	
Commerce silt loam (Cm)	0 - 2	Floodplains	Mixed hardwoods	Somewhat poor	1.0-3.0	Subject to flooding	High	EB			
Commerce silty clay loam (42, Cn)	0 - 1	Floodplains	Mixed hardwoods	Somewhat poor	1.0-4.0	Rare	High	SJB, LC, NC, LM, EB			
Cooter silty clay (Co)	0 - 1	Former channel & depressions	Mixed hardwoods & cypress	Moderately well	2.0-3.0	Occasional	Medium	SJB, LC, NC, LM, EB			
Crevasse loamy sand (CsB)	0 - 4	Natural levees	Cottonwood & willow	Excessive	3.5+	Above normal floods	Low	SJB, NC, MS, BP-NM	23NM553		23NM546
Crevasse loamy sand (CsC)	4 - 12	Natural levees	Cottonwood & willow	Excessive	3.5+	None	Low	SJB, LC, BP-NM	23NM554		
Diehlstadt sandy clay loam (45)	0 - 1	Flats, slightly concave depressions, basins	INA	Somewhat poor	1.0-2.0	Occasional	High	SJB, LC, NC, MS			
Diehlstadt loamy coarse sand (35)	0 - 1	Flats, slightly concave depressions, basins	INA	Somewhat poor	1.0-2.0	Occasional	High	MD, MS, SJD	23MI599		
Dubbs silt loam (Db)	0 - 2	Natural levees	Mixed hardwoods	Well	5.0+	INA	Medium	BP-NM			
Dundee silt loam (47)	0 - 1	Natural levees & terraces	INA	Somewhat poor	1.5-3.5	None	Medium	NC, BP-NM, SJD			
Dundee silty clay loam (Dn)	0 - 1	Natural levees	Mixed hardwoods	Somewhat poor	1.0-2.0	INA	Medium	BP-NM			
Gideon loam (Gd)	0 - 1	Floodplains	Cypress & mixed hardwoods	Poor	0.0-1.0	INA	High	SJB, LC, AS, MD		23NM550	
Gideon clay loam (Ge)	0 - 1	Floodplains	Cypress & mixed hardwoods	Poor	0.0-1.0	Occasional	High	SJB, LC, NC, AS, MD, MS			
Jackport silty clay loam (49)	0 - 1	Natural levees & low terraces	INA	Poor	0.0-1.0	None	Medium	BP-NM			
Lilbourn fine sandy loam (50, Lb)	0 - 1	Natural levees	Mixed hardwoods	Somewhat poor	0.0-1.5	Rare	Medium	SJB, AS, MD, MS, BP-NM, SJD		23NM552	
Mhoon silt loam (53)	0 - 1	Floodplains	INA	Poor	0.0-3.0	Rare	High	WD			
Orthents-water complex (67)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BP-NM			
Quarry pits (68)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BP-NM			
Reelfoot silt loam (54)	0 - 1	Lower parts of natural levees	INA	Somewhat poor	1.5-2.5	Rare	High	BP-NM, SJD, JB, WD			
Roellen clay (Ro)	0 - 1	Floodplains	Cypress, prairie	Poor	0.0-1.0	INA	High	NC, AS, MD, MS			
Roellen silty clay (55)	0 - 1	Floodplains	INA	Poor	0.0-1.0	Occasional	High	NC, MS, BP-NM, SJD			
Scotco sand (57B)	0 - 4	Natural levees	INA	Excessive	6.0+	None	Low	SJB, NC	23ST208 23ST209 23ST210		
Sharkey clay (Sr)	0 - 1	Slack-water/backswamp	Cypress & mixed hardwoods	Poor	0.0-1.0	INA	High	SJB, AS, MD, MS, LM, BP-NM, EB	23NM544		
Sharkey silty clay (58)	0 - 1	Broad flats	INA	Poor	0.0-2.0	Rare	High	NC, BP-NM, SJD, JB, WD		23MI601 23MI602 23ST211	
Sharkey silty clay loam (59, Sh)	0 - 1	Slack-water/backswamp	Cypress & mixed hardwoods	Poor	0.0-1.0	INA	High	SJB, NC, AS, MD, MS, BP-NM, EB, SJD, WD		23NM545	
Sikeston loam (61)	0 - 1	Floodplains	INA	Poor	0.0-1.5	Frequent	High	NC, AS, MD, MS			
Sikeston sandy clay loam (St)	0 - 1	Former swamps	Cypress, tupelo gum, water tolerant hardwoods	Poor	0.0-1.0	INA	High	SJB, LC, NC, AS, MD			
Tiptonville silt loam (63)	0 - 1	Natural levees or terraces	INA	Moderately well	2.5-3.5	None	High	BP-NM, WD			
Tunica silty clay loam (65)	0 - 1	Floodplains	INA	Poor	1.5-3.0	Rare*	Medium	BP-NM, JB			
Wardell loam (66, Wr)	0 - 1	Natural levees & floodplains	Mixed hardwoods	Poor	0.0-1.5	Rare	Medium	NC, AS, MD, MS	23NM548		

INA - Information not available
N/A - Not applicable
* Protected by man-made levees

habitats. The forest border areas would have supported an assortment of important animal species including deer, raccoon and turkey. St. John's Bayou, its tributary sloughs and swamps would have contained an abundance of mammals, migratory waterfowl, turtles and fish (Cottier and Waselkov 1974:73). Together they form a rich natural environment attractive for human settlement. The nature of biotic communities in the valley have been discussed in detail by Smith (1973) and Lewis (1974) and need not be repeated here.

The climate of the study area, characterized by comparatively mild winters and warm summers (McQuigg 1977:67), also would have been attractive to people in all time periods. Moreover, a frost free season of 180 to 200 days with rainfall averaging annually about 50 inches (Marshall 1965:5) present ideal climatic conditions for the production of agriculture.

Survey Environment

Most of the land that was surveyed was under cultivation. As a result, most of the flora that was encountered consisted of cultivated crops. These agricultural fields were predominately covered with soybeans, corn and milo. For the most part, these row crops provided good to excellent ground surface visibility. During the fall and winter, these fields were virtually clear of any ground cover; thus, presenting optimal ground surface visibility for surveying. In the spring and early summer, the crops had yet to develop and reach full maturity; therefore, visibility was still quite good. In certain small stretches of the corridors, we also encountered hay fields, fallow fields, fields in pasture, and fields planted in rye and other grasses. Small wooded tracts were also crossed. In addition, some of the ditches ran through industrial areas and local towns. In the southern part of the project area, several disturbances were present within or near the corridors. These included small localized ponds and sewage lagoons, and larger disturbances such as borrow pits produced by the construction of levees.

Most of the fauna observed were domestic animals. Other fauna observed included numerous migratory waterfowl and mammals such as beaver and muskrats. The presence of other common animals such as white-tailed deer, squirrel and rabbit, as well as various smaller rodents and birds, was evident by their tracks on the ground.

Weather conditions during the project ranged from being very hot and humid during the summer months, to very cold and frosty in the winter months. Few weather-related delays occurred; only severe weather such as thunderstorms and ice storms halted field work. Short delays also occurred when aerial chemical spraying of pesticides were being conducted.

CULTURAL ENVIRONMENT

Syntheses of prehistoric and histroic uses of southeast Missouri and northeastern Arkansas have been set out in several prior reports (Chapman 1975, 1980; House 1975; J. Price, C. Price et al. 1975; C. Price 1976; J. Price, C. Price and Harris 1976; C. Price and J. Price 1977; J. Price and C. Price 1977). These syntheses are similar to those for other areas of Missouri and, for the prehistoric begin with Paleo-Indian followed by the Archaic sequence and the Woodland and Mississippi periods (Table 2).

Table 2
Prehistoric cultural sequence in the project vicinity*

Stage	Period/Dates	Phase	Selected Artifact Associations
Paleo-Indian			
	Pre - 8000 B.C.	-------	Fluted point forms, Clovis and Folsom-like exotic cherts
Archaic			
Early	8000 - 5000 B.C.	-------	Dalton, very little known
Middle	5000 - 3000 B.C.	-------	No information
Late	3000 - 1800 B.C.	-------	Little information
Terminal	Poverty Point	O'Bryan Ridge	Large and small stemmed and notched point forms; full-grooved ax; winged bannerstones; Poverty Point (baked clay) objects; Poverty Point-like cultural manifestation
Woodland			
Early	Tchula	Pascola	Sand-tempered ceramics with pinching, punctation and incising; stemmed, contracting stemmed and notched projectile points
Middle	Markesville	La Plant (Barnes Ridge)	Zones, dentate sand-tempered ceramics and other "Hopewellian-like" materials (Poorly understood)
Late	Baytown	Dunklin	Sand-tempered Kennentt Plain and Barnes Cordmarked ceramics
		Hoecake	Clay-tempered ceramics: Baytown Plain, Mulberry Creek Cordmarked, Larto Red-filmed
Terminal	Coles Creek		Dunklin Phase may have continued through Coles Creek Period
Mississippi			
	Developmental	Hayti or Early Malden Plain	Shell-tempered ceramics; Neeley's Ferry Plain and Varney Red-filmed; vessels include jars without appendages and with outflaring rims and steeply angled shoulders; hooded bottles, small arrow points
	Expansion	Cairo Lowland	Shell-tempered ceramics; Neeley's Ferry and Bell Plain; variety of decoration; small arrow points
		Pemiscot Bayou	Shell-tempered ceramics; Neeley's Ferry and Bell Plain; variety of decorative techniques; small arrow points
	Late Prehistoric Protohistoric	Armorel (Late Nodena) (S. Williams 1978)	Bell Plain, Neeley's Ferry Plain; various applique, incised, noded, painted and punctate types; bone "buttons"; willow leaf and triangular arrow points; snub-nosed scrapers; small amount of historic trade goods

*Derived principally from S. Williams (1954), Phillips (1970) and J. Williams (1974).

Paleo-Indian Stage, 10,000-8000 B.C.

These prehistoric peoples were among the earliest known inhabitants of North America. Their lifestyle was probably based on a hunting and gathering pattern in use during the late Pleistocene when there were major adaptive changes of plant and animal populations in a changing climatic and environmental setting. Cultural characteristics and technological patterns seem to reflect these changes. Subsistence strategy was based on hunting both small and very large animals and on fishing, as well as on gathering edible plant resources such as nuts, berries and roots.

Fluted projectile points are usually considered the most obvious indicator of this stage throughout the New World. Although such points are found in southeast Missouri, they are not well represented (Chapman 1975:93). It is highly improbable, however, that the region was devoid of Paleo-Indians, and it appears more likely that Paleo-Indian remains simply have not been found. Evidence of these peoples may be deeply in alluvial stream valley deposits, on upland escarpments, or at the bases of points of land which extend from escarpments and are presently buried by alluvium.

It is assumed that Paleo-Indians were organized in bands similar to ethnographically known hunters-gatherers (Price and Krakker 1975). One would likewise assume that these bands moved throughout the area during different seasons of the year in order to exploit various differentially available resources. This would result in a number of small, temporary camps and processing stations, as well as a smaller number of larger base camps. Base camps are expected to occur in protected areas in stream valleys along the edge of the Ozark Escarpment and Crowley's Ridge; whereas, smaller activity area sites, perhaps identifiable by a single fluted projectile point fragment or a few scattered flakes, may occur anywhere within the region on land surfaces which were in existence in Paleo-Indian times.

The nature of the tool assemblage that accompanies the fluted point tradition in the Mississippi Valley is not well known, but it is suspected that the assemblage is similar to simple flake tools of the later Dalton period of the Early Archaic. Most early sites will probably be extremely difficult to identify because of the limited amount of archeological material and the lack of diagnostic artifacts, and the sites may go unrecognized (Klinger 1976:50).

Archaic Stage, 8000-500 B.C.

This long and complex cultural stage is marked by a succession of hunting and gathering subsistence-settlement strategies adapted to a variable post-Pleistocene environment. During this time human groups developed several highly efficient adaptations to specific environmental conditions. The stage is usually divided into three substages: Early, Middle and Late.

Like Paleo-Indian populations, Archaic groups apparently were organized into bands with similar settlement-subsistence organizations and social structures. Efficient hunting-gathering activities were based on seasonal mobility.

Early Archaic

The Early Archaic substage represents a lifeway and technology that is transitional between Paleo-Indian and later cultures. In southeast Missouri and northeast Arkansas, it is commonly represented by the Dalton culture which

is best known for its serrated Dalton style projectile point or knife (Goodyear 1974; House, Klinger and Schiffer 1975; Morse 1971, 1973 1975; J. Price and Krakker 1975). Other Early Archaic projectile point/knife forms include Hardin, Cache River, and Graham Cave, but the cultural relationships of their makers to Dalton or to each other is unknown.

Populations during the Dalton Period (Chapman 1975) appear to have been fairly dense across much of the area. There probably continued to be summer and winter base camps, supported by outlying subsidiary stations for extraction of natural products. These resources were gathered at different times of the year depending on their seasonal availability. Such yearly or seasonal extractive scheduling was likely the determining factor in site size and location (J. Price, C. Price et al. 1975; J. Price and Krakker 1975), and the pattern continued, with various minor alterations, throughout the Archaic.

In the project area only one site, 23ST60, yielded evidence of this stage in the form of a single Dalton point

Middle Archaic

Middle Archaic materials appear to be rather sparse in the Lowland region of southeast Missouri and northeast Arkansas. In the eastern Ozarks the period is well represented by Jakie and Table Rock Stemmed projectile point styles, but these forms are almost totally absent in the lowlands. There appears to have been a decline in the use of the Mississippi Valley lowlands during the period (Morse n.d.:14; Price, Price and Harris 1976:38).

Late Archaic

During the Late Archaic however, there is abundant evidence of an increasing population and more intensive use of the Mississippi Valley. The settlement-subsistence strategy appears to have changed very little throughout the Archaic stage. Based on data from southeast Missouri and northeast Arkansas, and general ethnographic information on band organization, it appears likely that large Archaic middens (the remains of large base camps) occur along lower reaches of major stream valleys in the Ozark Escarpment, Crowley's Ridge and perhaps around the base of the Commerce Hills north of the project area. These middens most likely occur on low stream terraces, natural levees and erosional remnants rather than immediately adjacent to present streams along their modern courses. Small limited activity or extractive sites are expected to occur throughout much of the area but probably with greater frequency on natural stream levees.

Site 23ST60, in the project area, yielded Late Archaic specimens.

Early Woodland, Tchula Period, Pascola Phase

In southeast Missouri this period spans from ca. 400 B.C. to ca. 100 B.C. and is noted for sand-tempered ceramics similar to Tchfuncte clay-tempered ceramics to the south and sand-tempered Alexander ceramics to the southeast (Phillips 1970:876). In southeast Missouri early sand-tempered wares are termed Pascola, named after the Pascola site in the Little River Lowland (S. Williams 1954). Pascola marks the beginning of the use of sand as a tempering agent and the introduction of ceramic technology into this region. Both Early Woodland (Tchula) and Middle Woodland (Marksville), as well as some Late Woodland (Baytown) ceramics resemble the paste of Barnes wares first

described by Stephen Williams in his dissertation (S. Williams 1954:204). Many of the sherds are so sandy that they have little clay content acting as a bonding agent and tend to crumble and erode very easily. A majority of these sherds are orange to brown in color and often exhibit fractures along coil lines. Throughout the sand-tempered ceramic tradition in southeast Missouri, most sherds are either plain or cordmarked.

Decorated sand-tempered ceramics are characteristic of the Tchula Period or Early Woodland and are the hallmark of the Pascola phase (J. Price 1986). Decorated sherds tend to occur as a superior ware, generally black to gray in color, with a harder paste containing slightly less sand and more clay, fired to extreme hardness compared to the balance of the sand-tempered ceramics in the region.

Decorated specimens share several attributes with Tchefuncte wares in Louisiana (Ford and Quimby 1945) and the Alexander series in Alabama (Haag 1939). Some sherds are reminiscent of Cormorant Cord-Impressed specimens on the Tchula horizon in the Yazoo Basin (Phillips 1970:77). Various modes of stamping closely resembling, if not identical to, Tchfuncte Stamped (Ford and Quimby 1945:56) are present in Pascola assemblages. These stamped decorations frequently appear to have been made by the cresent-shaped end of a piece of cane or a notched segment of cane or wood. One of the most common decorative techniques employed on Early Woodland ceramics in southeast Missouri from the Ozark Border eastward to the Cairo Lowland is pinching and fingernail punctations. These are very reminiscent of Tammany Pinched from Louisiana and Alexander Pinched from the Pickwick, Wilson and Wheeler Basins of northern Alabama (Haag 1939).

In the Western Lowland of southeast Missouri, a prevalent attribute on Early Woodland ceramics is the presence of bosses just below the rim on certain vessels. These usually occur as exterior bosses pushed up from the interior and in almost all cases the resulting hole was not smoothed over. Such bosses range in size from small, almost pointed, projections to ones 20 millimeters in diameter. Bosses such as these occur on Tammany Punctated Tchfuncte Plain and O'Neal Plain. Fabric impressed sherds resembling Withers Fabric Marked are also thought to date to the Tchula horizon but like some pinched types may prevail into later times (Phillips 1970:148, 161, 165 and 174).

Other surface treatments occurring on this ceramic series are net impressions, smoothed over cordmarking and various forms of punctations on body areas as well as on rims.

The lithic assemblage associated with Early Woodland exhibits large quantities of biface thinning flakes. A majority of chert debitage on the sites in the Western Lowland are pink and red, indicating that most were heat treated.

Diagnostic bifacial tools thought to date from the Tchula horizon are contracting-stemmed and small corner-notched projectile points/knives. It appears that the contracting-stemmed specimens were thinned and resharpened frequently until they were exhausted and discarded. These probably served as knives and may account for the relatively high frequency of biface thinning flakes on the sites. Associated corner-notched specimens seldom exhibit this degree of reuse and probably served as actual projectile points. Another diagnostic artifact associated with Early Woodland in the region is a circular biface which probably functioned as a generalized cutting and scraping tool.

Clay balls also occur on several sites and are thought to be affiliated with the Tchula materials.

Not all Tchula period ceramics in southeast Missouri are sand-tempered. Sites of this time period in the Cairo Lowland yield clay- or grog-tempered wares. A group of sites in that area, including Burkett and Weems, make up the Burkett phase (S. Williams 1954; Phillips 1970). This phase appears to be limited to O'Bryan Ridge in the Cairo Lowland.

Recently, the McCarty site near Marked Tree, Arkansas produced both sand-tempered Pascola ceramics as well as clay-tempered Tchfuncte wares (D. Morse and P. Morse 1983:145-159). It also produced clay balls or Poverty Point Objects similar to specimens associated with Tchula assemblages in southeast Missouri.

Sites 23NM546, 23NM554, 23NM555, 23ST208 and 23ST210 in the project area yielded Early Woodland cultural materials.

Middle Woodland, Marksville Period, La Plant Phase

This period, from approximately 100 B.C. to A.D. 400, was a time of Hopewell radiation in the Lower Mississippi Valley (Phillips 1970:886). The La Plant pnase is the only named phase in southeast Missouri that was defined on the presence of Hopewell or Marksville ceramics. It is located in the Cairo Lowland and has both sand- and grog-tempered ceramics associated with it. The La Plant site and the nearby Weems site have produced a variety of Hopewellian decorated sherds including specimens that are zoned and unzoned dentate stamped, incised, rocker stamped and barred ovoid stamped. Crosshatched rims, a good Hopewell attribute, are also present (Toth 1977). Hopewellian materials have also come from the St. Johns site on St. Johns Bayou. It produced Mabin Stamped. Old River Zoned Rocker Stamped and several crosshatched rims (Toth 1977:189).

Projectile point/knives associated with the Middle Woodland stage in southeast Missouri are typically stemmed, corner-notched and shallow side-notched or expanding-stemmed specimens

Middle Woodland materials throughout most of southeast Missouri are difficult to discern from Late Woodland specimens. Ceramics are mostly sand-tempered west of the Little River Lowland and are simply plain and cordmarked with little or no decoration. One decorative attribute may be diagnostic in the absence of a variety of diagnostic Hopwellian attributes. This is lip notches and cordwrapped cylinder impressions on vessel rims. This attribute is present on both clay- and sand-tempered ceramics in the Cairo and Little River Lowlands but absent on the Malden Plain and in the Western Lowland.

Sites 23NM546, 23NM544, 23NM555, 23MI599, 23ST60, 23ST208, and 23ST210 surveyed in the course of the present project yielded Middle Woodland specimens.

Late Woodland, Baytown Period, Dunklin and Hoecake Phases

The Baytown period spanned approximately 300 years from ca. A.D. 400 to 700. It was a time when the decoration of ceramics all but ceased (Phillips 1970:901) and it is difficult to build a ceramic sequence based on plain wares. It is a period when the dichotomous distribution of clay- and sand-tempered ceramics which began in the Tchula period reached its peak. Both pottery traditions continued to develop in the Central Mississippi Valley during the Baytown period. Clay-tempered ceramics were made along the

Mississippi meander belt while to the west along more ancient braided stream surfaces sand-tempered wares were made. Morse and Morse (1983:182) have postulated that there were at least 3 tribal groups distributed through the Central Valley at that time, each making different ceramics. They feel that the Dunklin phase, Hoecake phase and Baytown phase each represent a socio-political group that was in conflict with the other groups.

The Dunklin Phase

The Barnes ceramic series was first defined by Stephen Williams based on specimens found in Barnes Ridge during fieldwork conducted by Edward G. Scully and Stephen Williams for the University of Michigan's Central Mississippi Valley Survey. S. Williams (1954:204) defined the ceramics as having 2 types, Barnes Plain and Barnes Cordmarked. He defined Barnes Plain as

> ...a finely tempered plain ware in which the sand particles, although numerous in some specimens, are quite small. The texture is such that in running one's finger over the surface the sandy nature of the temper is immediately noticed. This description holds true for all the Barnes wares.

He also stated that Barnes Cordmarked was found with the plain ware and that both plain and cordmarked rimsherds have a folded or added rim strip.

Moselage (1962:20) noted that the sand-tempered assemblages from the Lawhorn site on the Malden Plain contained numerous textile-impressed sherds and he more or less hinted that a new type should be named to accommodate these. Marshall (1965:28) stated that he felt that most of the sherds which Moselage thought were textile-impressed were actually crosshatched cordmarked, although he did note that there were a few sherds in the J. R. Marrett site assemblage that looked like they were fabric-impressed.

Phillips (1970:43,94) further discussed the Barnes series and Barnes Plain was renamed Kennett Plain. Phillips stated, as had Williams, that the Barnes series was the hallmark of the Baytown culture, Baytown period, dating ca. A.D. 400 to 1000. More recent research has demonstrated that it did not extend this late in time.

Most investigators dealing with the Barnes series on the Malden Plain suggested it to be a regional variation of the clay-tempered Baytown series in the Little River Lowland and Cairo Lowland to the east and northeast (Phillips 1970:903; Moselage 1962:24; Marshall 1965:37). Phillips (1970:903) thought that the differences between the sand-tempered pottery of the Malden Plain and the clay-tempered pottery to the east, which he felt were contemporaneous, might be environmental but generally concluded that it was not.

The dichotomous distribution of the two types of wares, Barnes and Baytown, has long been known (S. Williams 1954; House 1975a:32, 1975b:157-158; Hopgood 1969:193; J. Williams 1974:43; Morse 1969:20; C. Price 1976a:26-27; Wallace 1969; J. Price and C. Price 1977:12; C. Price and J. Price 1977:20; Stewart 1976; Greer et al. 1978:4-10, Figure 7-1; D. Morse and P. Morse 1983:180). Within the past two decades, archeologists have been able to establish a general boundary between the wares. In southeast Missouri the dividing line generally follows the Little River.

Recent research has added more data to the known distribution of the two wares. Site 23NM285 at Gideon, Missouri in the Little River Lowland produced both sand-tempered and clay-tempered ceramics (C. Price 1979:29-30). Site 23ST177 at Miner, Missouri on Sikeston Ridge, produced sand-tempered ceramics (C. Price 1979:29-30). Yet another site, 23BU130, in Butler County, Missouri produced sand-tempered ceramics (C. Price 1979). Archeological test

excavations at 23DU244 in Kennett, Missouri yielded only sand-tempered Barnes ceramics (J. Price 1980:31). The new data reinforce the conclusion that there is a distinct dividing line between the two types of wares in southeast Missouri. Sites near the Little River, such as 23NM285, yield both ware types while those on the Malden Plain and west yield essentially only sand-tempered wares.

The chronological placement of the sand-tempered Barnes wares was in doubt for some time. They have been assigned to the Early to Middle Woodland substages by Moselage (1962:24). Marshall (1965:37) assigned them to the Baytown period, which is Late Woodland. C-14 dates were finally obtained for Dunklin phase wares at the Zebree site. They are A.D. 691 +/-74, A.D. 829 +/-70 and A.D. 863 +/-84 (SMU-414,415,432) (D. Morse and P. Morse 1983:182). It is highly probable that the sand-tempered ceramic tradition of southeast Missouri covers a long span of time. It began in Pascola ca. 500 B.C. and may end as late as A.D. 900 in some areas.

There is quite a variation in the size of sand particles that were used as a tempering agent in the sand-tempered wares across the known area of their distribution in southeast Missouri. Generally, the sand-tempered wares west of Crowley's Ridge have a finer sand employed as a tempering agent, while those between Crowley's Ridge and the Little River tend to have a much coarser sand for tempering. Whether this is the result of differential availability of various grades of sand, or it is attributable to cultural preference, is not known at the present time.

Another major difference between east and west in southeast Missouri lies in the form of rim treatment. Sand-tempered, presumably Late Woodland, wares on the Malden Plain and eastward often exhibit folded rims, a process involving inverting the rim and welding it to the side of the vessel to create a collar. This is a common attribute on clay-tempered Baytown wares to the east of the Malden Plain. This characteristic is almost totally lacking west of Crowley's Ridge.

Hoecake Phase

This phase is named for the Hoecake site in the Cairo Lowland and dates ca. A.D. 700 - 800 (D. Morse and P. Morse 1983:190). The Hoecake phase appears to represent a culture that was intermediate between Baytown and Mississippian. A hallmark of this phase is grog- or clay-tempered wares in which Mulberry Creek Cordmarked is more prevalent. Larto Red Filmed is also diagnostic of this phase. Check stamping, punctation and incising are also present but not common. Projectile points associated with the phase have expanding stems and are seemingly identical to those of the Dunklin phase.

Burial mounds containing log tombs occur in this phase as well as domestic architecture in the form of rectangular single-placed post structures (J. Williams 1974:56).

The Hoecake site and another site, Double Bridges, are rather large and indicate a significant nucleation of populations. These appear to be exceptions since there are many small Hoecake phase sites scattered about the landscape on elevated landforms in the Cairo Lowland.

Sites 23NM544, 23NM555, 23ST208, and 23ST210, surveyed in the course of the present project yielded evidence of Late Woodland components.

Mississippi Period, Emergent Mississippi, Big Lake, Hayti and Naylor Phases

Circa A.D. 700 major socio-political and technological changes began to take place in the Lower Mississippi Alluvial Valley that would ultimately generate the most complex culture in eastern North America in the prehistoric past. At about this time, the Coles Creek culture began to develop in the Lower Mississippi Valley, and the American Bottoms east of present day St. Louis became heavily populated. These regions witnessed new rapidly developing cultures. Throughout the Central Mississippi Valley from ca. A.D. 700 to A.D. 1000 changes took place in various areas which ultimately combined into a widespread culture known as Mississippian (Smith 1984:13-32). During this time there were major changes in artifact styles, the addition of many new artifact types, and new settlement and subsistence strategies. Changes were rapid, to the extent that the period can almost be considered a cultural revolution compared with other periods of prehistory in the Central Mississippi Valley (D. Morse and P. Morse 1983:202).

The rise of the Mississippi lifeway not only took place in the Mississippi Alluvial Valley but also in the stream valleys that drain the southeastern Ozarks of Missouri. Between A.D. 600 and 1000 cultures in the rugged southeastern Ozarks were in the mainstream of Mississippian emergence. Shell-tempered ceramic technology was in place very early in the region, before it began either at Cahokia or in the Cairo Lowland, the areas traditionally thought to be the homeland of Mississippian culture.

During this time of the Mississippian emergence important trade networks were established through which raw materials and finished products were established over the Mississippian heartland. The Ozark Highland produced hematite, galena, basalt, copper and salt as well as a multiplicity of chert resources. Mill Creek chert from southern Illinois was traded widely in the form of large agricultural hoes and spades as well as other bifacial tools.

It was probably during this time that the socio-political organization in the Central Mississippi Valley reached the level of Chiefdoms. Populations in both the American Bottoms and Cairo Lowland nucleated into large settlements while elsewhere in the Central Valley most populations occupied villages and smaller extractive sites.

The hallmark ceramic type for Emergent Mississippian is Varney Red. It was first documented by Stephen Williams (1954:209-210). This typically occurs in the form of jars with pronounced recurved or flaring rims with red slipping on the interior. Such vessels lacked any exterior surface decoration or appendages. Salt pans, small arrow points, small perforators and discoidals are also diagnostic artifacts of this substage.

While the early stages of this development cannot be called Mississippian in the classical sense, many of the basic Mississippian attributes such as shell-tempered ceramics, diverse vessel morphology, palisaded settlements and lowered floor structures can be traced back to this Developmental of Emergent Mississippian tradition.

Evidence from the Ozarks and Delta of southeast Missouri indicate that by A.D. 700 the tradition was in place and several lines of evidence point to an even earlier, perhaps A.D. 600, time frame for its beginning. It is highly probable that shell-tempered ceramics were employed here as early as A.D. 500. Another distinctly shell-tempered ceramic tradition, the Owls Bend tradition, is abundantly evident in the eastern Ozarks and Ozark Border. It is recognized by the presence of flat bottomed, shell-tempered vessels, sometimes bearing simple or checked stamps, with nearly vertical rims (Lynott, Monk and

J. Price 1984:1:12-20). These dark wares are distinctly different from those of the Varney tradition although chronometric dates on both assemblages exhibit apparent contemporaneity.

The Big Lake Phase

The best documented Emergent Mississippian site is the Zebree site, located on Big Lake in northeast Arkansas, excavated under the direction of Dan Morse (D. Morse and P. Morse 1977). The Big Lake phase contains all the hallmarks of the Varney tradition including, among other things, lowered-floor architecture, red-filmed ceramics, salt pans and discoidals.

The Hayti Phase

The Hayti phase is closely related to the Big Lake phase. It was documented by Richard A. Marshall at the Kersey site in Pemiscot County in southeast Missouri (Marshall 1965). The assemblage from the site contains large salt pans, Varney jars, hooded bottles and curious clay stoppers that were used as closures on bottles.

The Naylor Phase

Yet another related phase is the Naylor phase (J. Price, C. Price et al. 1975:56) named after Varney materials recovered from sites along the Ozark highland of Missouri. The best documented Naylor phase site is Gooseneck, located on the Current River in Carter County, Missouri (Lynott 1987) deep in the Ozark Highland. An extensive component of this phase was discovered at the Shell Lake site near Wappapello Dam in Wayne County, Missouri (J. Price and C. Price 1984).

No obviously diagnostic Emergent Mississippian archeological specimens were recovered during the course of the present survey.

Expansion or Middle Period Mississippi; Powers, Cairo Lowland and Malden Plain Phases

The period from ca. A.D. 1000 to A.D. 1350 witnessed the most rapid change in the prehistory of the Central Mississippi Valley. Large populations nucleated into an hierarchical settlement pattern ranging from large fortified civic-ceremonial mound centers to villages, hamlets, farmsteads and extractive sites. Throughout southeast Missouri and northeast Arkansas populations became centralized on sandy arable soils and there was almost total abandonment of adjacent areas in the Ozark Highland. In the Cairo Lowland, on the Malden Plain, on Sikeston Ridge and in the Western Lowland almost all arable land was occupied by Mississippian settlements. It was a time when horticulture became extremely important (Boutton, Klein, Lynott, J. Price and Tieszen 1984; Lynott et al. 1986) and communication and trade routes were well established in the southeast Missouri and northeast Arkansas regions.

The best documented manifestation during this time is the Powers phase in the Western Lowland near the Ozark Border (J. Price and Griffin 1979; Black 1979; J. Price 1978; Smith 1978). Peoples of the Powers phase occupied a sand dune region for a brief period, then abandoned and burned their town and other settlements.

The Cairo Lowland phase (Phillips 1970:925) lies on the extreme eastern side of southeast Missouri in the Cairo Lowland and on Sikeston Ridge.

Towosahgy, Crosno, Matthews, Sandy Woods and Lilbourn (Chapman et al. 1977) are among the major civic-ceremonial centers of this phase.

The Malden Plain phase is located on the Malden Plain in the central portion of southeast Missouri (S. Williams 1954:30). It also consists of several large civic-ceremonial centers with associated sites. The best documented sites of this phase is the Lawhorn site (Moselage 1962) and Cockrum Landing, also called the J. R. Marrett site (Marshall 1965b:34).

These Middle Period Mississippian complexes are noted for their large fortified sites with mounds, diverse shell-tempered ceramic vessel morphology and extensive cemeteries.

This period ended with a sudden and dramatic abandonment of most of southeast Missouri as well as adjacent parts of Illinois, western Tennessee and Kentucky and southern Indiana (S. Williams 1985). Causes that precipitated this abandonment are still being sought.

Middle Period Mississippian components were found to be present on sites 23NM555, 23ST208, and 23ST210. surveyed as part of the present project.

Late Mississippi, Protohistoric Period, Armorel Phase

By circa A.D. 1350-1400 almost all the braided stream surfaces and the Cairo Lowland were abandoned (J. Price et al. 1976; S. Williams 1977) and settlement concentrated in the lower St. Francis region in northeast Arkansas. In southeast Missouri permanent settlements existed along Pemiscot Bayou in the extreme southeastern Bootheel and into northeast Arkansas. Famous among sites of this period are Cambell (Chapman and Anderson 1955) and Nodena (D. Morse 1973). These late sites which were occupied until initial European contact have been included in the Armorel phase (S. Williams 1980:105-110). Several burials have been discovered on Armorel phase sites which have yielded historic goods in the form of iron knives; iron, copper and glass beads as well as a limited quantity of other items.

After circa A.D. 1650 southeast Missouri was essentially abandoned by aboriginal groups. It was not until the arrival of the French and Spanish colonists in the 18th century that the region was once again populated.

Historic Period

Historic Indian groups which lived in St. Johns Bayou project area and its vicinity included the Shawnee and Delaware (Goodspeed 1888:236; Houck 1908(1); Bradbury 1905). They were allowed to settle in southeast Missouri during the late eighteenth century to serve as a buffer against Spain's enemies, but were removed by a series of treaties with the U. S. government between 1815 and 1832 (Douglass 1912:44).

A trading post was established for the Indians in the New Madrid area on St. John's Bayou around 1787 by two Canadian fur trappers and traders named Francois and Joseph Lesieur (Goodspeed 1888:284; Douglass 1912:81). According to regional histories, these two gentlemen are considered to be the first Euro-American settlers in the area.

The abundance of timber, game and fertile soil quickly attracted early settlers to the area. The original town of New Madrid was laid out and settled in 1789 after George Morgan, an American, received a Spanish land grant (Goodspeed 1888:284; Douglass 1912:81). By 1810 about 3,165 people lived in the area (Hamilton 1980:70). Besides its status as a river town, New Madrid was also connected to St. Louis by an overland route. This route

evolved from a trail (Wood 1934:map 2) or trace (Wood 1934:35; Douglass 1912:108) to a road (Wood 1934:map 4) and later to a modern paved highway (U.S. Highway 61)(C. Price and Harris 1978:14).

Over time, the meandering of the river has greatly impacted the original town site. Since the 1825 federal plat, the New Madrid Bend of the Mississippi River has moved about 1.75 miles (J. Price and Harris 1978:13). The present city of New Madrid is located about 1 mile north of the original town site (C. Price and Harris 1978:14; J. Price and Harris 1978:13).

Another natural force effecting the area was the New Madrid earthquakes. These quakes ravaged the central Mississippi River valley between December 16, 1811 and February 7, 1812; followed by many aftershocks. The center of the quakes were in an area between the confluence of the Ohio and Mississippi rivers on the north and Memphis, Tennessee on the south. Reportedly, the tremors in this area flattened some forests; caused stretches of steep banks along the Mississippi to collapse; created chasms that were so wide that people had to fell trees in order to get across them; and created sunk lands. On the river, the quakes created rapids and, for a while, caused the river to reverse its flow. So powerful were the quakes that they were felt in Charleston, South Carolina, Washington, D.C. and in Boston, Massachusetts 1,000 miles away, where the rumbling was strong enough to ring church bells. Only a few of the settlers in the project area were killed, but the fate of many of the hundreds of people who were traveling or transporting goods on the river when the quakes occurred is unknown.

The effect of the earthquake on the town of New Madrid was devastating. Most of the structures in the town were leveled after the first tremors, and the area where the town was located sunk 15 feet. Many of the inhabitants, demoralized by the awesome effects on the land and the aftershocks, were quick to abandon the region (Hamilton 1980:70-73). Despite its severity the earthquake only temporarily disrupted settlement of the area (C. Price and Harris 1978:14; J. Price and Harris 1978:13).

When the war between the states broke out the majority of southeast Missouri's inhabitants sympathized with the Confederacy, although it was part of the Union. The settlements within the St. John's Basin were part of the First Military District of Missouri (Missouri Department of Natural Resources 1985).

Several skirmishes took place in the general area during the early part of the war (1861-1862). In 1861, Confederate forces under the command of General Pillow invaded southeast Missouri from Arkansas and captured New Madrid. In 1862, the town of New Madrid, along with Island Ten in the Mississippi River, were captured by Union forces under the command of General Pope (Douglas 1912:333-334). During the siege of New Madrid (March 3 - 12, 1862), General Pope may have had his headquarters in the Hunter-Dawson home (Caldwell 1963:113). In 1863, after the Confederate district headquarters in Pocahontas, Arkansas was captured, Confederate resistance by regulation troops ceased in the New Madrid area, although some guerrilla activity persisted until the end of the war (Douglass 1912:334). In the city of New Madrid, some Federals celebrated the end of the war by burning the Methodist Church and a number of other buildings (J. Price, Morrow and C. Price 1978:132).

By the 1870s, New Madrid with its approximately 700 people, 20 stores, two steam saw and grist mills, two steam cotton gins and presses, warehouses, and storage and shipment facilities for grains and cotton, three churches, two schools and one academy appeared to have recovered from the Civil War (Campbell 1874:398). Around this time a spur of the St. Louis-Southwestern

Railroad was constructed from Lilbourn to New Madrid. Later the Frisco Railroad from Marston to New Madrid was built (Douglas 1912:165).

REVIEW OF THE GLO DATA

The project townships were surveyed by the General Land Office beteen 1840 and 1862. Numerous early land grants are depicted to the west of the project area in range 14 east. The majority of these land grants are located on Sikeston Ridge. For the most part, the parcels are rectangular in shape and bear no relationship to the alignment of the townships, ranges and sections.

Despite the presence of numerous patented tracts, the project corridors only skirted one such parcel (Survey No. 2986) which was located in section 30 of T23N, R15E. No cultural improvements are depicted along the project corridor in this odd shaped parcel of 255.21 acres (103.3 ha). Almost equidistant between Maple Slough and St. James Ditch is a 640 acre (259 ha) tract of land (Survey No. 3187) patented for William James. To the south of East Bayou Ditch and to the east of both James Bayou and Wilkerson Ditch are depicted several fields, none of which extend into the project area. The main reason why early land grants do not embrace parts of the project corridors is simply because of these areas were, for the most part, low lying bottomland swamps.

Segment 1 of St. Johns Bayou is shown as Lake St. John on the T26N, R14E and T25N, R14E plats (Table 3). Both the T23N, R14E and T23N, R15E plats show segment 2 of St. Johns Bayou closely following the 1840 - 1862 course of St. Johns Bayou. Another section of segment 2 runs along "Inaccessible Mill Pond."

Segment 3 of East Bayou Ditch follows the 1840 course of East Bayou (as it is depicted on the T23N, 15E GLO plat). Beyond the head of this bayou segment 3 runs through a "Cypress Pond" in an area that was (according to the surveyors notes on the plat) "Inaccessible not surveyed." In sections 7, 17 and 18 in T23N, R16E segment 3 follows the configuration of an oxbow lake called "Spring Lake." In sections 17, 8, 9 and 4 of this same township and range, Wilkerson Ditch runs through what was then called "Cypress Lake."

The 1854 GLO plat of T24N, R16E shows the route of segment 2 of James Bayou to follow part of a large oxbow lake called "Ten Mile Pond." The nothern extension of segment 1 of James Bayou continues to follow the configuration of this oxbow lake and then closely follows its outlet, James Bayou, to the southeast.

PREVIOUS INVESTIGATIONS

A detailed summary of previous investigations is beyond the scope of this report. Archeological research has been conducted in the general location of the current project for over one hundred years beginning as early as the 1870's with the investigations conducted by George C. Swallow (1875). A flurry of investigations focusing on mounds and artifacts were undertaken in the area around the turn of the century (Table 4). Much later in this century (ca. 1940s - 1960s) archeologists concentrated their efforts on survey and salvage work. Some excavations of large impressive prehistoric sites also were undertaken. Cultural resources investigations represent the most recent research in the Sikeston Ridge and Cairo Lowland vicinity.

Table 3
Summary of Data from GLO Maps

DITCH	TOWNSHIP	RANGE	SECTION	CULTURAL OR ENVIRONMENTAL FEATURES
St. Johns Bayou	23N	14E	25,26,35	[Wilson's Bayou]
	23N	15E	20,29,	[Wilson's Bayou]
			20,30	Inaccessible Mill Pond
			6,7,17,18,20	[Lake St. John]
	24N	14E	24,25	[swamp]
	25N	14E	4,9,16,21,	Lake St. John
			27,28,34	Lake St. John
	26N	14E	9,16,17,	Lake St. John
			20,21,29,	Lake St. John
			32,33	Lake St. John
			32,33	Bayou St. John
			16,17,20,21	Cypress Sloo
Lateral "C"	25N	14E	4	Lake St. John
	26N	14E	21,28,33	Lake St. John
North Cut Ditch	25N	14E	3,10.15.16	Lake St. John
	26N	14E	1,11,12,13,	Swamp
			14,15,22,	Swamp
			23,27,34	Swamp
	26N	15E	6	Swamp
	27N	15E	4,9,16,20,	Swamp
			21,29,31,32	Swamp
Ash Slough	24N	14E	1,12	[Swamp]
	25N	14E	1,12,13	[Swamp]
	26N	14E	36	Swamp
	26N	15E	31	[Swamp]
Maple Slough	25N	14E	3,4	Bayou St. Nina
	25N	15E	33,34	Bayou (St. Nina)
Lower Main Ditch:				
Segment 1	23N	15E	20	Inaccessible Mill Pond
Birds Point-New Madrid	23N	15E	16	Cypress Pond
	24N	15E	16	Cypress Bayou
	24N	16E	5	Bayou [unnamed]
	25N	16E	32	Bayou [Black]
	25N	16E	32,33	Bayou [Black]
St. James Ditch	24N	15E	1	Cypress Bayou
	24N	15E	13,24	Cypress Swamp
East Bayou Ditch	23N	15E	21	East Bayou
			28	Wilson's Bayou
			16,15,10,11	Cypress Pond
	23N	16E	7,18,17	Spring Lake
			8,9,16,17	Cypress Lake
Wilkerson Ditch	23N	16E	4,9	Cypress Lake
	24N	16E	28	Four Mile Pond
(St.) James Bayou	24N	16E	3,4,8,9,16,	Ten Mile Pond
			17,21,28	Ten Mile Pond
			24,27,28,35	James Bayou

Table 4
Selected Previous Archeological Investigations
in the Cairo Lowlands and the Sikeston Ridge Vicinity

Investigator/Reference	Location and Description of Work
Swallow (1875) Evers (1880) Potter (1880) Thomas (1884, 1894) collecting Holmes (1903) Fowke (1910) Moore (1916)	Early mound exploration / Concentration on specimen
Adams and Walker (1942) Walker and Adams (1946)	Survey of New Madrid County, southern part of Cario Lowland Excavation of Matthews Site on the west side of Sikeston Ridge
S. Williams (1954) selected sites; sequence	Survey of Southeast Missouri, test excavation at established chronological
Marshall (1965)	Survey along proposed route of Interstate Highway 55
J. Williams (1966, 1968, 1971, 1974) and definition of	Land-leveling salvage excavations; investigation of large fortified towns, investigation of Baytown occupation Baytown Phases
Hopgood (1969)	Investigation of Baytown occupation
Klippel (1969)	Excavation at the Hearnes Site
Phillips (1970) sequence	Synthesis of Lower Mississippi Valley prehistoric
Redfield (1970) Redfield,	Survey in Southeast Missouri by James Ford and Alden interest in Dalton sites
Chapman et al (1974)	Investigation at Towosaghy and Lilbourne sites
Lewis (1974) strategies	Model of Mississippi Stage exploitative
C. Price (1976)	Cultural resources survey near town of North Lilbourne
J. Price (1976) system,	Cultural resources survey of proposed sewage and water Miner, Scott County
Greer (1978) of Morehouse Lowland across Southeast Missouri)	Cultural resources survey across northern end (part of longer survey
Iroquois Research St. Francis Institute (1978)	Cultural resources overview and predictive models for Basin
Tandarich (1978	Cultural resources overview, Mississippi County
Wilkie and Grantham (1978)	Cultural resources survey of Cole Subdivision, Sikeston

RESEARCH OBJECTIVES

The overall approach for these investigations is one which has been developing in this part of the Lower Valley for the past two decades, viz. the study and attempted understanding of man-land and man-man relationships in a complex yet rich environment. From an archeological perspective, this approach can be placed under the the general heading of identifying and explaining culture change through time in a confined geographical space. From a management perspective, the inherent goals of this kind of approach translate into being able to predict more precisely where cultural resources might be located and to be able to assess more accurately the importance or significance of the resources once they are identified.

Three interrelated components comprise the research program which guided the investigations outlined here. The first involves predicting if and where cultural resources might be located within the survey area. This task was guided by a design which J. Price and C. Price presented in their Predictive model of archaeological site frequency for informed management (1980). Much of the discussion which follows is from their report.

The second research goal was to assess the archeological significance of any sites determined to require additional investigation during the course of the survey. The need of additional investigation at any particular site was based on the results of negotiations with the Contracting Officer on a site by site basis.

A third goal of the research carried out was to document adequately the nature and extent of all archeological sites encountered during the investigation. This included a number of specific tasks based on the level of investigation involved.

NATURAL ENVIRONMENT AND SITE LOCATIONS

In order to explain patterns in both prehistoric and historic settlement systems in the area one must be fully aware of the natural environment which challenged the human populations in the Mississippi Valley for thousands of years. The Eastern Lowlands, in which the present project area is located, are a result deposition by the meandering Mississippi River which often abandoned natural levees to seek a gradient advantage, thus forming a series of oxbow lakes and backwater swamps. This produced closely packed aquatic and terrestrial habitats throughout the meander belt zone. Natural levees are of low relief, seldom exceeding six vertical meters above the surrounding floodplain. The aquatic habitat, prior to drainage, consisted of oxbow lakes and shallow backwater swamps, often called "cypries" in southeast Missouri. The interface between the terrestrial and aquatic habitats was probably composed of a myriad of minor ecotones (Lewis 1974:29) which in turn have been a primary factor in determining the location of human settlements during the prehistoric and early historic periods.

To the casual observer southeast Missouri and northeast Arkansas appear as a vast tract of arable land of extremely low relief bisected by Crowley's Ridge. What appears to be a simple landscape is actually complex. A great variety of landforms and soil types, in combination with riverine biota, made and make a diverse natural environment. A variety of prehistoric and historic populations used southeast Missouri from approximately 12,000 years ago to the protohistoric era, which began here ca. A.D. 1600. Historic populations made use of the area from the time of arrival of the first explorers, followed by trappers, pioneer subsistence agriculturalists, commercial agriculturalists

and timber harvesters to modern wholesale agriculturalists who presently use the bulk of the land. Landforms, natural resources and biota were used differently through time as the region witnessed hunting-gathering bands evolve into small sedentary communities and ultimately into huge, complex, near-urbane societies in the prehistoric past. Southeast Missouri and Northeast Arkansas were not marginal to major developments elsewhere in eastern North America, but rather seem to have been in the mainstream. All cultural stages are well represented by abundant archeological material.

In order to determine critical variables in site distribution it is necessary to determine what resources were critical to the population in question. In any environmental situation critical variables exist which determine the success or failure of a human population.

This is stressed by Clarke (1968:124-125):

> The environment of a culture system expresses the attributes external to that system and their varying and successive states in time and space. These environmental attributes may be partly perceived by the enclosed culture and partly not; from the culture's point of view some environmental attributes are inessential, some essential, and some are key attributes for that culture system.

It is likely that for human populations which have occupied the Lower Mississippi Alluvial Valley the most critical variables in determining site location were landforms, biotic communities and soil associations. It is also probable that no single one of these was the prime ingredient in determining site location; all three in combination established natural parameters within which a settlement strategy had to operate.

All of these variables are tightly interrelated in a deterministic fashion. Landforms represent depositional history which determines soil associations, which in turn together determine the biota.

Landforms

The terrain in the study area is varied from the highest elevation in the form of natural levees, to floodplains which were formerly shallow, seasonally or permanently inundated, to the low lying bayous which were permanently filled with deep water. Natural levees are elevated land forms which were generated by alluvial deposition from flooding streams and form the highest terrain in the study area. They are usually composed of sandy, well-drained alluvium which is rarely flooded when surrounding areas are inundated.

Floodplains are areas which were formerly occupied by both shallow and deep swamps or broad flat areas filled with slack water. On early maps of southeast Missouri they are shown as vast lakes. In fact, the entire Little River Lowland is often illustrated as a major lake and St. Johns Bayou was called Lake St. John.

Bayous, most of which are drained today, were permanent bodies of water and were much deeper than the swamps on the floodplain. They were formed through channel abandonment by major streams. A meander loop was often cut off by a course change which left a large oxbow bayou of lake. Nineteenth century maps (Frissell 1893-94) illustrate numerous such features in the general areas under investigation.

Professional archeologists as well as amateur collectors have long known that the major sites in much of the Mississippi Valley occur on higher landforms. Most surveys in the area, for example those conducted by Marshall (1965) and Hopgood (1969), reflect this phenomenon. Unfortunately, this fact

often becomes a self-fulfilling prophecy and investigators look for sites on elevated landforms where they are known to occur while ignoring lower landforms where site density is thought to be extremely low or nonexistent. This bias which has been evident in past survey work in southeast Missouri provides an inadequate data base from which to form predictive models. Until the entire surface area of a survey tract containing both high and low land is checked entirely, the frequency of sites as well as their size and location relative to various landforms will not be known. Nor will we know any culture specific preference for location on certain landforms in the past.

Biotic Communities

Biotic communities are determined by soil associations, that is, the terrain and soil types of which soil associations are composed. Soil types and elevation determine the kind of flora growing on them and in turn the flora determine the kinds and quantities of fauna present.

Biotic communities have received considerable attention by archeologist conducting research in the general area. Lewis (1974), in his study of Mississippian exploitative strategies, attempted a reconstruction of biotic communities in southern Mississippi County, Missouri. He recognized ten biotic communities in that area and thoroughly described their potential resources.

Cottier and Waselkov (1974:59-75) discussed the biotic communities near the Lilbourn site, a large Mississippian town in New Madrid County near the modern town of New Madrid. Biotic communities were also considered by J. Price (1974) in a study of Mississippian settlement and subsistence in the Western Lowlands, on Sikeston Ridge, and on Barnes and Sugar Tree ridges in the Cairo Lowland. In addition, Suzanne Harris (1980) has presented a model of biotic communities in the Little River Lowland as a part of a large multi-disciplinary study of the Zebree site (3MS20) and its environs.

Soil Associations

Soils have been mapped and described by the U.S. Department of Agriculture, Soil Conservation Service for all of the project areas. Individual soil types are combined into soil associations. A soil association is defined as terrain with a distinctive proportional pattern of soils, and will normally consist of one or more major soils and at least one minor soil Brown (1977:2). The description of an association will include the terrain (level, undulating, etc.) as well as the drainage capacity.

Soil scientists have identified seven soil associations in New Madrid County (Brown 1977), six in Mississippi County and ten in Scott County (Festervand 1981). These soil associations were not equally occupied by human populations in the past, and the known and anticipated correlation of archeological sites with certain types provides the major data set for predicting the distribution and size of such sites.

Soil as a variable in the determination of settlement patterns has been recognized and described by various archeologists working in southeast Missouri and northeast Arkansas (Lewis 1974; Cottier and Waselkov 1974; J. Price 1974; Morse and Morse 1977; Tandarich and Regan 1978; and Klinger 1976) Except for Tandarich and Regan's investigation and that conducted by Klinger, almost all previous work has concentrated on the correlation of Mississippi Period sites with particular soil types. Research has been conducted on correlation of earlier prehistoric sites with certain soil types near the

study areas through work conducted by Cottier (1974:87) in Mississippi and New Madrid Counties on the association of Baytown (late Woodland) with sandy loams and the work of Morse and Morse (1977) on the Big Lake transect survey where they studied the distribution of Barnes (late Woodland) sites in relation to soil types. The most detailed analysis of the relationship between soil attributes and archeological sites in southeast Missouri was conducted by Tandarich and Regan (1978) in a portion of Mississippi County. Their research was based on data from general survey records accumulated over many decades and should be tested by intensive on-the-ground pedestrian survey.

SITE SIGNIFICANCE AND LITHIC ANALYSIS

While lithic analysis has been an important part of the overall research effort in the Lower Valley for the past decade, there are still many basic questions that remain either partially or completely unanswered in any satisfactory way.

It is probably safe to say that on most sites in this region the percentage of artifacts on which archeologists make their interpretations favors the lithic assemblage. Although it is true that many of the later sites are dominated by ceramics, the sheer number of smaller sites representing all of the prehistoric sequence points to assemblages with only occasional pottery -- assemblages which are dominated by lithics.

When a review of what is really known about the nature and character of the lithic assemblages from any time period in this region is made, it is evident that much basic research remains to be addressed. Due to this situation, the investigations carried out in this project were guided by a series of general questions focusing on the total collections. Relating to any period in the prehistoric sequence, these questions asked (after Morse et al. 1982:NE9):

1. What did the artifact assemblage consist of?

2. What was the functional variability represented in the assemblage?

3. What specific tool kits were used?

4. What manufacturing techniques were used?

In addition to the above, the more specific research questions for the Lower St. Francis/Lower Mississippi study unit (Wright 1987:B-12-5 - B-12-6) were also considered.

Although these questions provided a general theme for the artifact analysis, it was never believed that definitive answers could be given them based on the limited scope of investigations at each site. What was anticipated, however, was that the surface and subsurface samples would provide sufficient data on which to assess whether the sites could be important sources of information on these basic questions.

In addition, once the collections were cataloged and analyzed, they were re-examined to isolate a series of site-specific questions about which each site had the potential to add important information.

Implementation of these problem areas in the field involved the collection of all artifacts on small sites and controlled samples on larger scatters. On the two sites where testing was carried out the excavated soils were sifted through 1/4 inch mesh.

NATURE AND EXTENT OF THE ARCHEOLOGICAL RESOURCES

The final set of research goals also related to establishing site significance. As such, this series of basic yet important questions relates to the nature of the sites themselves (after Klinger and Mathis 1978:58)

1. What is the nature of the archeological deposits (disturbed, undisturbed, well preserved, no preservation?)

2. What is the areal extent (both vertical and horizontal dimensions) of the archeological deposits?

3. During what general cultural-historical time periods(s) were the sites occupied?

4. What was the general function of the sites in terms of the range of activities represented?

METHODOLOGY

PRE-FIELD INVESTIGATIONS

A background search including a literature review and a records check was conducted for all project survey areas designated in the Scope of Work. This included a review of the records of the Missouri Archaeological Survey and the Department of Natural Resources to obtain information on known cultural resources in the area. The National Register of Historic Places was also examined to locate any significant cultural resources within the individual survey areas. A review of the reports of previous investigations in the general area was conducted to provide information on the types of resources that are found in the area and any previous surveys involving the ditches.

FIELD WORK

The field methodology used during this project was consistent with the normal field procedures used by HPA and as outlined in the Scope of Work. A pedestrian field reconnaissance of sufficient intensity to identify potentially significant resources was conducted along each of the drainage ditches for the purpose of locating, recording and describing extant cultural resources in the form of prehistoric and historic sites. During the pedestrian survey, shovel testing was employed wherever ground surface visibility was significantly obscured. The intensity of the surface reconnaissance varied in relationship with the degree of surface visibility, disturbances and surface water. In specific locations where the ROW was inundated and the surface water was excessive due to the apparent existence of borrow pits (eg. in the southern part of the project area adjacent to the Birds Point/New Madrid Levee), the investigation by both surface reconnaissance and shovel testing was limited to areas of higher potential, or those that were apparently undisturbed.

In general, transect and shovel test intervals of approximately 30 meters were used. Where employed, shovel tests were roughly 30 cm in diameter and excavated as deep as cultural material could be discerned. The excavated

matrix was carefully examined utilizing a screen of 1/4 " hardware cloth to determine the presence or absence of cultural material.

SITE RECORDING

Upon location of any site a more intensive examination of the area was begun. Transects with intervals of 10 m or less were used to determine the horizontal distribution of artifacts or features. If the ground surface visibility was very low, shovel testing was also employed. A select surface collection of cultural material was recovered from prehistoric and historic sites for later analysis. On sites where all cultural material was not retained, a controlled collection grid was established and the cultural material from 25% of the collection units was collected. All cultural material recovered from controlled collection units or subsurface tests was retained for analysis. A sketch map of each site was prepared using a compass and pacing. If more accurate measurements were required, a metric tape was used in lieu of pacing. Nearby landmarks were clearly indicated on the field maps to aid in relocating the site. Notes for each site were made to allow all necessary site forms to be completed and the site location was accurately plotted on a USGS topographic map of the area.

ADDITIONAL INVESTIGATIONS

At sites where negotiations with the Contracting Officer determined that additional investigations were warranted, a series of posthole tests were excavated across the site to determine the depth of the cultural deposit(s) and to locate potential areas of artifact concentration(s) below the surface. A limited number of 1 m x 1 m test units were excavated in 10 centimeter arbitrary levels until at least two consecutive levels of sterile, non-cultural deposits were excavated or definite evidence of *in situ* deposits were encountered. All subsurface tests were backfilled after excavation and recording was completed.

ANALYSIS AND LABORATORY METHODS

The artifacts collected in the course of the survey were processed for analysis on inclement days by the field team or in the HPA laboratory. Processing included washing, preliminary sorting and labeling necessary for analysis, preservation and curation. Methods of cleaning depended upon the nature of the material. Lithic specimens were scrubbed in water with a bristle brush. Prehistoric ceramics were carefully cleaned to assure that tooling or decorations were not damaged. Historic ceramics, metal, bricks and similar artifact classes were washed in water and also scrubbed with a bristle brush.

Tools or other diagnostic prehistoric artifacts were analyzed and assigned (if possible) to established types by Dr. James Price. All of the remaining lithic artifacts were analyzed in the HPA laboratory in light of a reduction sequence including flakes of primary and secondary decortication, retouch and thinning flakes and various waste categories. This approach aided in the assessment of site type (e.g., base settlement/specialized activity areas) as well as in the identification of age and possible activities that may have taken place.

Specimens were cataloged using the Archaeological Survey of Missouri site number. Before specimens were analyzed they were labeled to avoid the

loss of provenience. Diagnostic artifacts such as bifacial tools and ceramics were individually labeled. Other artifacts were placed in clearly labeled plastic bags. All archeological materials collected were placed in standard curation containers and each clearly labeled as to contents and ownership. All artifacts and related records will be curated with the University of Missouri, Columbia.

RESULTS OF PEDESTRIAN SURVEY

DITCH SEGMENTS WITH NEGATIVE RESULTS

Of the 22 ditch segments intensively surveyed during the St. Johns Bayou Basin project, 13 segments contained no archeological sites (Table 5).

Lateral "C"

The 3.0 miles (4.8 km) of Lateral "C" surveyed between mile 0 - 3.0 was surveyed intensively within a 50 ft (15.25 m) right-of-way (ROW) on the west bank. Ground cover within the approximate 12 acres (4.9 ha) of the ROW included cultivated row crops (50%), pasture or fallow fields (20%) and residential or industrial areas (30%). Due to the good to excellent (51% - 100%) visibility within the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing.

Ash Slough: Segment 2

The second survey segment of Ash Slough, between mile 9.0 - 10.0, was surveyed intensively within a 115 ft (35 m) ROW on the east bank. Ground cover within the approximate 14 acres (4.9 ha) of the ROW was composed of cultivated fields. Due to the good to excellent (51% - 100%) visibility within the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing.

Main Ditch #10: Segment 2

The second survey segment of Main Ditch # 10, between mile 4.5 - 6.6, was surveyed intensively within a 150 ft (45.75 m) ROW on the east bank. Ground cover within the approximate 18 acres (7.3 ha) of the ROW was primarily composed of cultivated row crops (89%) with a small amount of pasture or fallow ground (11%). Due to the good to excellent (51% - 100%) visibility within the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing.

Lower Main Ditch: Segments 1, 2 and 3

Each of the three survey segments of Lower Main Ditch were surveyed intensively. Mile 0 - 0.25 was surveyed within a 200 ft (70 m) ROW on the west bank. Ground cover within the approximate 6 acres (2.43 ha) of the ROW was composed of forest and/or second growth requiring limited shovel testing in addition to surface reconnaissance.

Mile 0.25 - 3.0 was surveyed within a 200 ft (70 m) ROW on the east bank. Ground cover within the approximate 66.6 acres (27 ha) of the ROW was composed of cultivated row crops. Due to the good to excellent (51% - 100%)

Table 5
Location and recommendations of sites by ditch segment

Ditch	Segment(mile)	+/- (#)Sites Located	Sites Recommended for Additional Testing
St. Johns Bayou	0.0 - 20.0	+ (1)	23NM544*
	20.0 - 26.7	+ (5)	23NM546, 23NM547, 23NM553 and 23ST208
Lateral "C"	0.0 - 3.0	-	
North Cut	0.0 - 18.7	+ (5)	23NM554, 23NM555 and 23ST210
Ash Slough	0.0 - 9.0	+ (1)	
	9.0 - 10.0	-	
Maple Slough	0.0 - 11.9	+ (3)	23MI599*
Main Ditch	0.0 - 4.5	+ (2)	
	4.5 - 6.6	-	
Lower Main Ditch	0.0 - 0.25	-	
	0.25 - 3.0	-	
	3.0 - 5.8	-	
Birds Point/New Madrid Levee	0.0 - 8.0	-	
	8.0 - 25.3	+ (2)	
St. James	0.0 - 10.8	+ (1)	
East Bayou	0.0 - 4.5	-	
	4.5 - 5.5	+ (1)	
	5.5 - 13.6	-	
Wilkerson Ditch	0.0 - 3.25	-	
	3.25 - 4.0	-	
James Ditch	5.5 - 10.8	-	
	10.8 - 12.8	-	

Note: * indicates sites that have been tested during current project

visibility within the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing.

Mile 3.0 - 5.8 was surveyed within a 120 ft (36.6 m) ROW on the east bank. Ground cover within the approximate 40.7 acres (16.47 ha) of the ROW was composed of cultivated row crops. Due to the good to excellent (51% - 100%) visibility within the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing.

Birds Point/New Madrid Levee: Segment 1

The first survey segment of the Birds Point - New Madrid levee ditch, between mile 0 - 8.0, was surveyed intensively within a 215 ft (65.5 m) ROW on the east bank. Ground cover within the approximate 209 acres (84.58 ha) of the ROW was composed primarily of forest and/or second growth (79%) with a small amount of cultivated row crops (21%). The good to excellent (51% - 100%) visibility within the cropland was adequately surveyed by surface reconnaissance; whereas, the wooded section of the survey area required regular shovel testing to determine the presence or abasence of cultural resources.

East Bayou Ditch: Segments 1 and 3

The first survey segment of the East Bayou Ditch (labeled Mud Ditch on the topographic maps), between mile 0 - 4.5, was surveyed intensively within a 285 ft (86.9 m) ROW on the west bank. Ground cover within the approximate 155 acres (62.7 ha) of the ROW was divided almost equally between fields of cultivated row crops and forest or second growth. Due to the good to excellent (51% - 100%) visibility within the cultivated fields of the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing. Part of the cultivated fields were inundated at the time of the survey. These areas were carefully observed for any signs of low rises that could indicate site locations and the areas were inspected wherever possible. Within the forested areas, the ROW was also closely inspected for the presence of high probability areas and undisturbed areas. The wooded areas were shovel tested at regular intervals wherever surface visibility was low.

The third segment of the East Bayou Ditch, between mile 5.5 - 13.6, was surveyed intensively within a 215 ft (65.5 m) ROW on the east bank. Ground surface visibility within the approximate 211 acres (85.4 ha) of the ROW was composed primarily of forest and/or second growth (87.7%) with a small amount of cultivated row crops (12.3%). Because of the good to excellent (51% - 100%) visibility in the cultivated fields, a surface reconnaissance of these areas provided adequate survey coverage. Lower visibility in the wooded necessatated shovel testing at regular intervals to determine the presence or absence of sites in these areas.

Wilkerson Ditch: Segments 1 and 2

Both segments of Wilkerson Ditch were surveyed intensively. Mile 0 - 3.25 was surveyed within the 300 ft (91.4 m) ROW on the west bank. Ground cover within the approximate 188 acres (76.1 ha) of the ROW was composed entirely of cultivated row crops. Because of the good to excellent (51% - 100%) visibility within the ROW, surface reconnaissance was conducted with sporadic shovel testing.

Mile 3.25 - 4.0 was surveyed within a 330 ft (100.6 m) ROW on the east bank. Ground cover within the approximate 30 acres (12.1 ha) of the ROW was composed of cultivated row crops. Due to the good to excellent (51% - 100%) visibility within the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing.

James Bayou: Segments 1 and 2

Both segments of James Bayou (listed in the scope-of-work as St. James Bayou and including part of Ten Mile Pond) were intensively surveyed. Mile 5.5 - 10.8 was surveyed within a 165 ft (50.3 m) ROW on the west bank. Ground cover within the approximate 106 acres (42.9 ha) included cultivated row crops (58%), pasture or fallow fields (9%) and forest or second growth (33%). Surface reconnaissance was conducted in the cultivated fields because of the excellent (51% - 100%) visibility; whereas, the low visibility exhibited in the remainder of the survey segment required shovel testing at regular intervals to determine the presence or absence of cultural resources.

The second segment of James Bayou, between mile 10.8 - 12.8, was surveyed within a 100 ft (30.5 m) ROW on both banks of the ditch. Ground cover within the approximate 48 acres (19.4 ha) was composed entirely of forested or second growth tracts. Ground surface visibility was variable. Where visiblity was fair some shovel testing was conducted; where it was poor shovel testing at regular intervals was conducted.

DITCH SEGMENTS WITH MINIMAL RESULTS

Of the 22 ditch segments intensively surveyed during the St. Johns Bayou Basin project (Table 5) five segments contained only archeological sites for which no additional work is recommended.

Ash Slough: Segment 1

The 9.0 miles (14.5 km) of Ash Slough between mile 0 - 9.0 was surveyed intensively within a 250 ft (75.2 m) ROW on the east bank. Ground cover within the approximate 263 acres (106.4 ha) of the ROW was composed entirely of cultivated row crops. Because of the good to excellent (51% - 100%) visibility within the ROW, a surface reconnaissance survey with intermittent shovel testing was undertaken. The survey of this segment resulted in the location of one site, 23NM548.

23NM548

23NM548 is located northwest of Highway 80 in a cultivated field 23 meters east of Ash Ditch. The site consisted of a very small lithic scatter of 4 flakes (3 interior flakes and 1 modified flake) in an area 10 m x 10 m (100 m^2) (Appendix B, Figure 2). A 100% collection of the four artifacts was conducted.

23NM548 is located in a area covered by a dark brown (10YR3/3) Wardell sandy clay loam (Brown 1977:30), has suffered disturbances the result of agricultural practices, the most recent being the cultivation of soybeans.

The low density of material present suggests that a very short term specialized activity took place at the site during an unknown prehistoric period. As all the data at this site has been collected and the has no

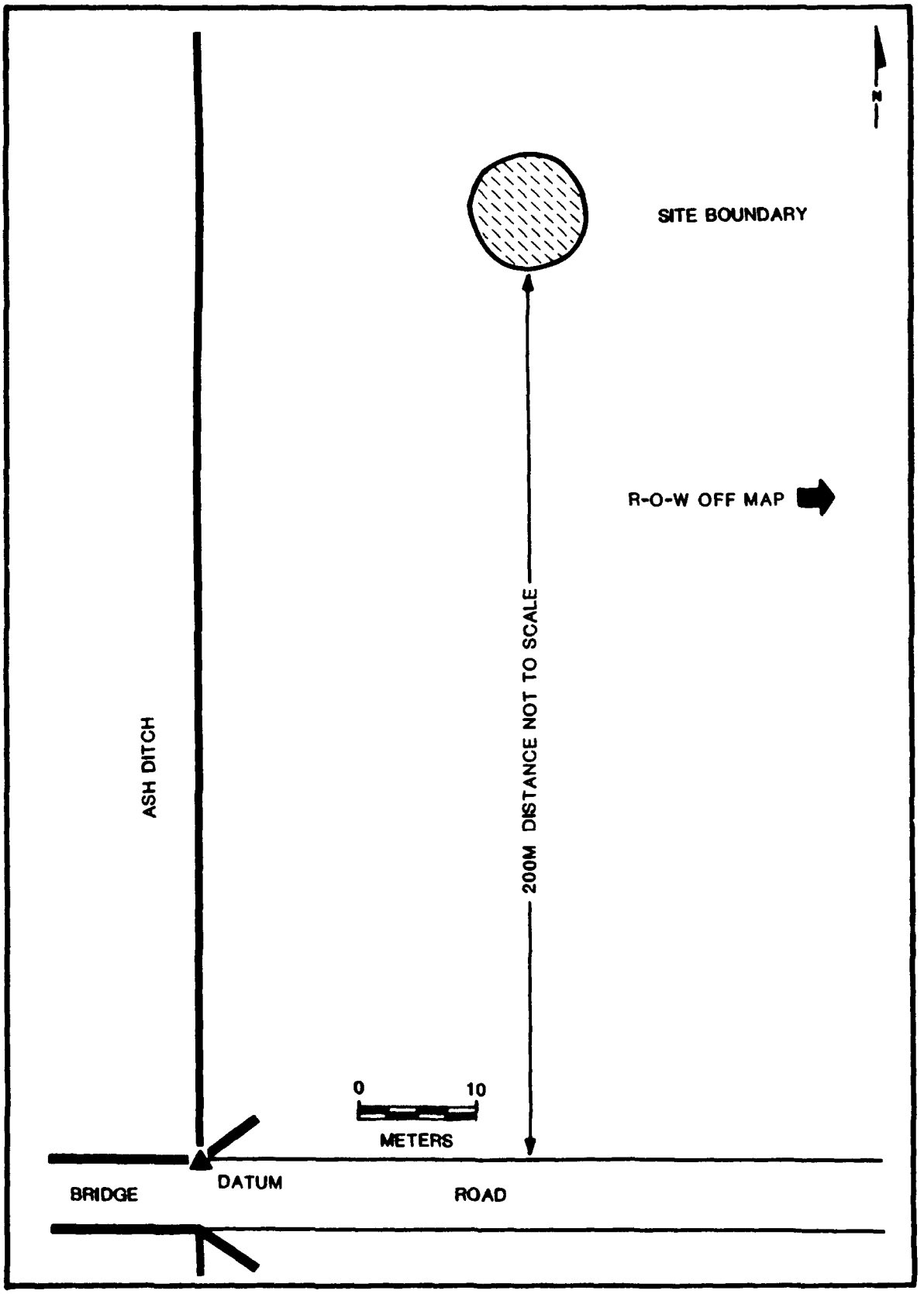


Figure 2. Sketch map 23NM548

potential yield any additional information, no further work is recommended at this site.

Main Ditch #10: Segment 1

The first segment of Main Ditch #10, between mile 0 - 4.5, was surveyed intensively within a 200 ft (70 m) ROW on the east bank. Ground cover within the approximate 109 acres of the ROW was composed primarily of cultivated row crops (69%) mixed with areas of pasture or fallow fields (31%). Due to the good to excellent 51% - 100%) visibility within the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing in the areas of low surface visibility. The survey of this segment resulted in the location of two sites, 23NM549 and 23NM550.

23NM549

23NM549 is located south of Highway 80 approximately 18 meters east of Main Ditch #10 and consists of an historic artifact scatter spread over an area 52 m x 40 m (2,080 m^2) of which an area approximately 40 m x 40 m (1,600 m^2) is located within the ROW (Figure 3). The only apparent cause of disturbance observed at this site has been the result of agricultural practices with the most recent being the cultivation of soybeans providing an over all visibility of 70% around the site. The soil at the site is a dark yellowish brown (10YR4/4) Canalou loamy sand. Because of the density of artifacts observed during the general surface collection, our investigations at this site also included a controlled surface collection.

A general surface collection of probable diagnostic artifacts was made over the entire site area to insure the collection of all material that would assist in the interpretation of the site. The surface collection resulted in an assemblage of six artifacts including one piece of clear bottle glass, one piece of miscellaneous earthenware and four fragments of miscellaneous metal.

To aid the understanding of the surface distribution of cultural material a grid of 100 collection units were designated in an area 50 m x 33 m. As the site was currently in soybeans the collection units were set up to follow the rows between the beans resulting in individual units measuring approximately 25 m x 60 cm (15 m^2). A collection was made of all cultural material located from each of 25 units in the grid selected from a table of random numbers. A total of 863 artifacts were collected and include clear bottle glass (308), blue bottle glass (63), purpled bottle glass (27), amber bottle glass (25), milk glass (16), miscellaneous earthenware (48), plain whiteware (69), clear window glass (86), brick (36) and concrete (1) fragments, miscellaneous pieces of metal (53), nails (29), cinders (31) and coal (41). Other items recovered include pieces of green bottle glass (4), opaque bottle glass (2), transfer printed whiteware (3), greenware (1), plain (1) and transfer printed porcelain (1), pieces of rubber (2) and plastic (1), shingles (9), shell (1) bone, (1), and a battery fragment (Appendix B). In addition, one interior lithic flake, one primary decortication flake and one possible fire-cracked-rock indicate a very minor prehistoric component.

These data indicate that the site dates from the late nineteenth to the early - mid twentieth century. It is an historic site that could have been the location of a residence or simply an historic dump. While the larger collections from units 15, 24, 38 and 39 appear to indicate areas of concentration within the site, there is no evidence such as foundations or cellar depressions to suggest that these were particular activity areas while

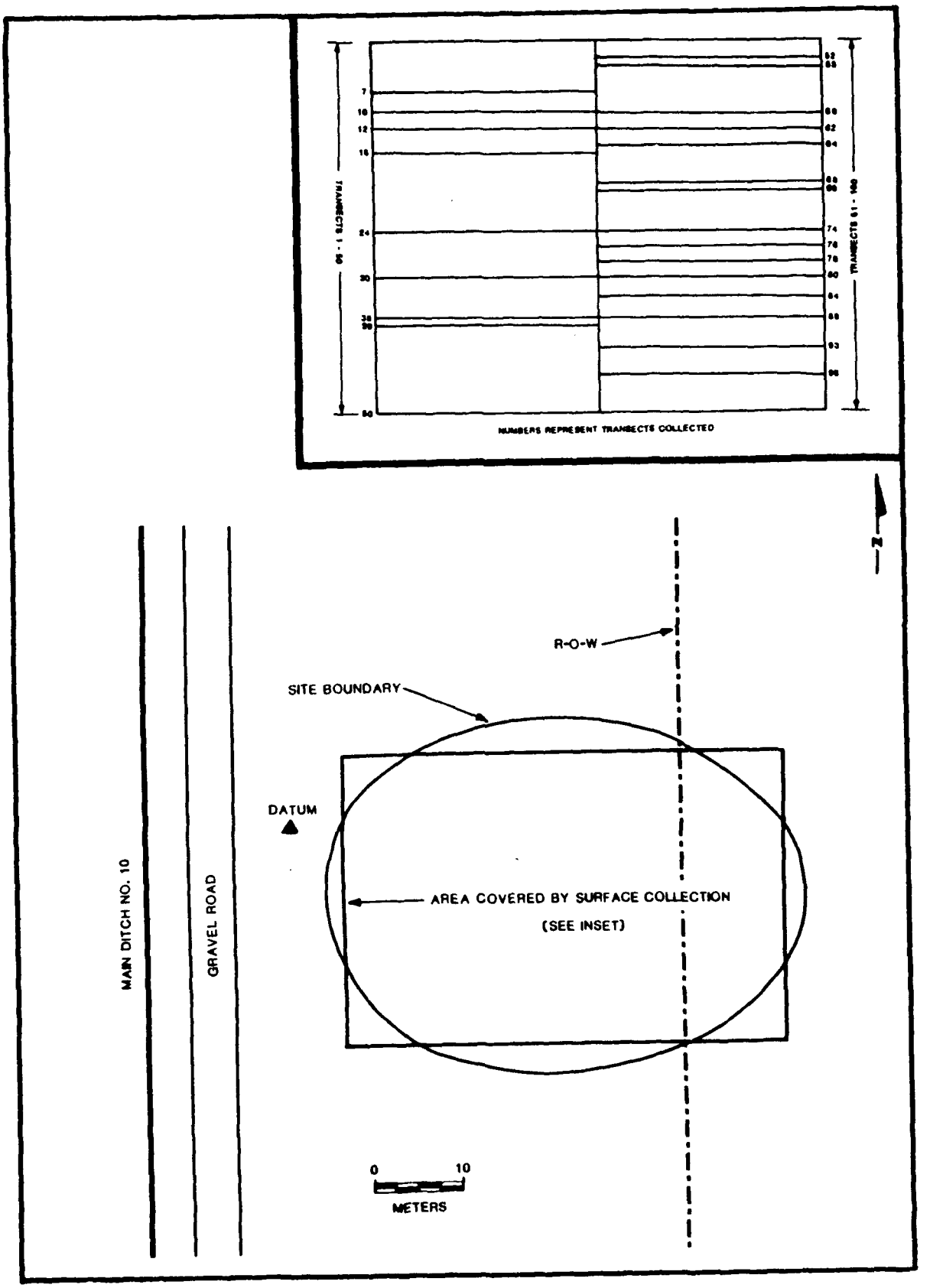


Figure 3. Sketch map 23NM549

the site was occupied. 23NM549 contains data, which when viewed even in its most favorable light, would not make it make eligible for inclusion National Register of Historic Places. Therefore, we recommend no further cultural resource work at the site.

23NM550

23NM550 is located approximately 1 mile (1.6 km) south of Highway 80. The site is located 18 meters east of Main Ditch #10 and consisted of an historic artifact scatter spread over an area 45 m x 39 m (1,755 m^2) of which an area approximately 43 m x 39 m (1,677 m^2) is located within the ROW (Figure 4). The only apparent cause of disturbance observed at this site has been the result of agricultural practices with the most recent being the cultivation of soybeans providing an over all visibility of 70% around the site. The soil in the immediate area of the site is a dark brown (10YR3/3) Gideon sandy loam. Based on the density of artifacts observed during the general surface collection when the site was first located the investigations at this site included a controlled surface collection.

A general surface collection of probable diagnostic artifacts was made over the entire site area to insure the collection of all material that would assist in the interpretation of the site. The surface collection resulted in a assemblage of five artifacts including one piece of clear bottle glass, three fragments of plain whiteware and one piece of miscellaneous earthenware.

To aid the understanding of the surface distribution of cultural material a grid of 100 collection units were designated in an area 40 m x 33 m (Figure 4). As the site was currently in soybeans the collection units were set up to follow the rows between the beans resulting in individual units measuring approximately 20 m x 60 cm (12 m^2).

A collection was made of all cultural material located from each of 25 units in the grid selected from a table of random numbers. A total of 453 artifacts were recovered (Appendix B) including clear bottle glass (175), purpled bottle glass (22), amber bottle glass (8), blue bottle glass (18), green bottle glass (4), plain whiteware (81), transfer decorated whiteware (5), milk glass (16), miscellaneous earthenware (19), fragments of window glass (40), plain (8) and blue (1) porcelain, brick (6) and concrete (1) fragments, miscellaneous pieces of metal (20), pieces of rubber (6) and plastic (5) along with some pieces of opaque bottle glass (5), a nail, asbestos tile (1), coal (4), an electtrical fuse, an eye glass lens fragment, green-glazed ceramics (2) and porcelain doll parts (2). In addition, a possible milling stone fragment was recovered.

These data indicate that the site dates from the late nineteenth to the early - mid twentieth century. The site could have been the location of a residence or simply an historic dump. The only area of any concentration of cultural material was in the vicinity of collection units 14, 17 and 18 but there was no evidence such as foundations or cellar depressions to suggest that this area was the location of any particular activity while the site was occupied. There was no evidence recovered to suggest that this site contains cultural evidence that would make it eligible to the National Register of Historic Places. It is therefore the recommendation of HPA that no further work take place on this site.

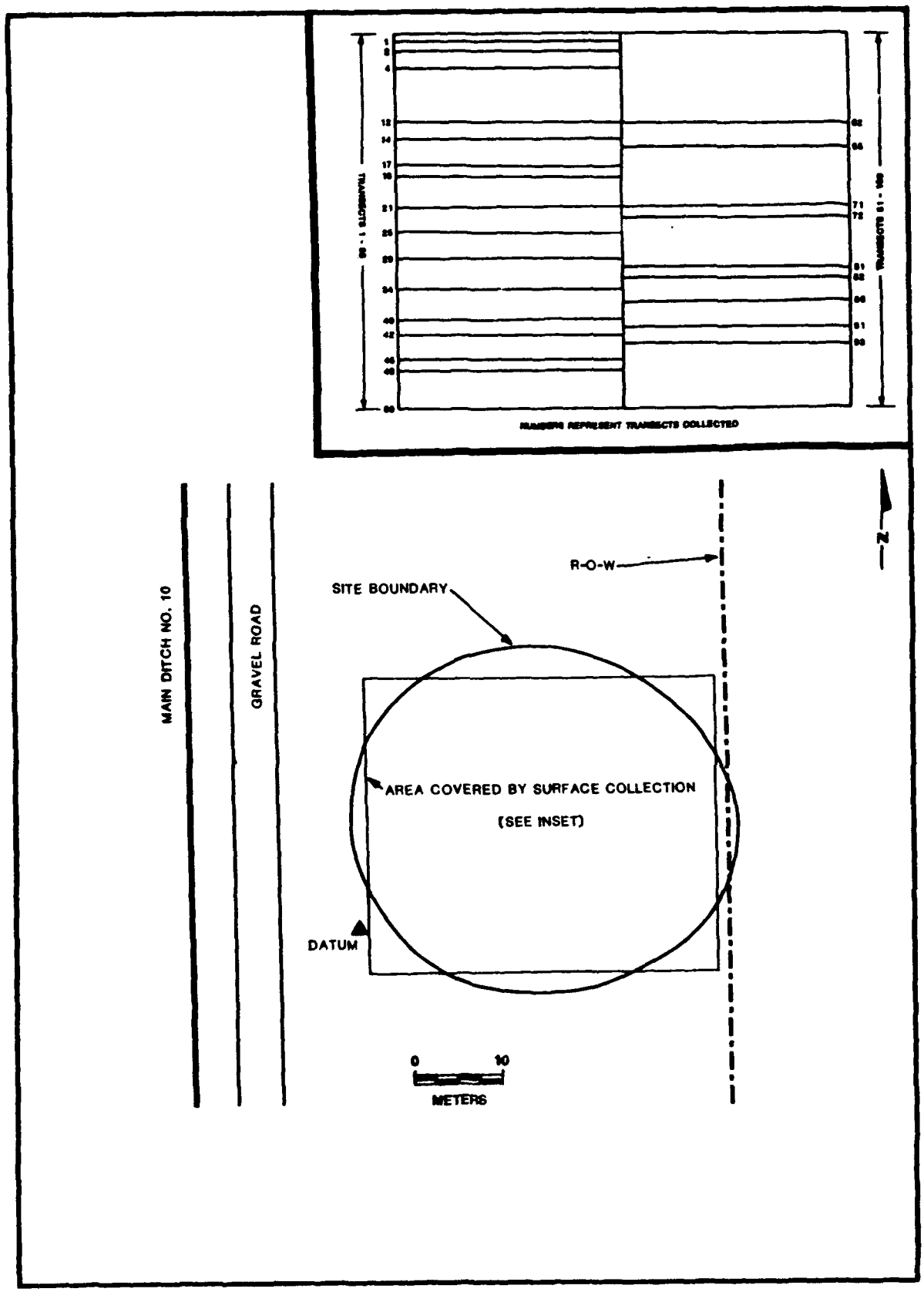


Figure 4. Sketch map 23NM550

Birds Point/New Madrid Levee: Segment 2

The second segment of Birds Point/New Madrid Levee, between mile 8.0 - 25.3, was surveyed intensively within a 50 ft (15.2 m) ROW on both banks of the ditch. Ground cover within the approximate 210 acres of the ROW was composed primarily of cultivated row crops (73.3% of the east bank and all of the west bank) mixed with small areas of pasture or fallow fields (11.6% of the east bank) and small wooded lots (15.1% of the east bank). Due to the good to excellent 51% - 100%) visibility within the majority of the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing in the areas of low surface visibility. The survey of this segment resulted in the location of two sites, 23MI601 and 23MI602 as well as an additional portion of a third, previously identified site, 23NM551.

23MI601

23MI601 is located approximately 2.5 miles (4.0 km) south of Highway 60/62. The site is located 3 meters southeast of the Birds Point/New Madrid Levee ditch and consisted of an historic artifact scatter with a very small prehistoric component spread over an area 150 m x 10 m (1,500 m^2), all of which is located within the ROW (Figure 5). The only apparent cause of disturbance observed at this site has been the result of agricultural practices, the most recent being the cultivation of soybeans. The soil was a dark brown (10YR3/3) Sharkey silty clay. Ground surface visibility was around 70%. Because of the low density of artifacts, a 100% general surface collection was conducted.

The 32 artifacts that were recovered included 2 interior flakes, 3 pieces of clear bottle glass, 1 piece of blue bottle glass, 7 pieces of purpled bottle glass, 2 pieces of green bottle glass, 1 piece of amber bottle glass, 12 fragments of plain whiteware, 2 pieces of milk glass, 1 piece of miscellaneous earthenware and 1 fragment of porcelain.

No areas of artifact concentrations were present. No remains of foundations or cellar depressions were observed.

Based on these data, 23NM601 represents the remains of a small historic site, dating from the late nineteenth to the early - mid twentieth century, that could have been the location of a residence or more than likely an historic trash dump. Based upon our preliminary review, the site does not appear to contain data which when viewed in its most favorable light would make it eligible for the National Register of Historic Places. No further cultural resources work is recommended at 23NM601.

23MI602

23MI602 is located approximately 1.25 miles (2.0 km) west of the junction of county roads 77 and TT. The site is located in a cultivated field 5 meters southeast of the Birds Point/New Madrid Levee Ditch. 23NM602 represents an historic artifact scatter spread over an area 100 m x 20 m (2,000 m^2), of which an area approximately 100 m x 13 (1,300 m^2) is in the ROW (Figure 6). The only apparent cause of disturbance observed at this site has been the result of agricultural practices, the most recent being the cultivation of soybeans. The plowed field provided an over all visibility of 70% around the site. The soil in the immediate area of the site is a very

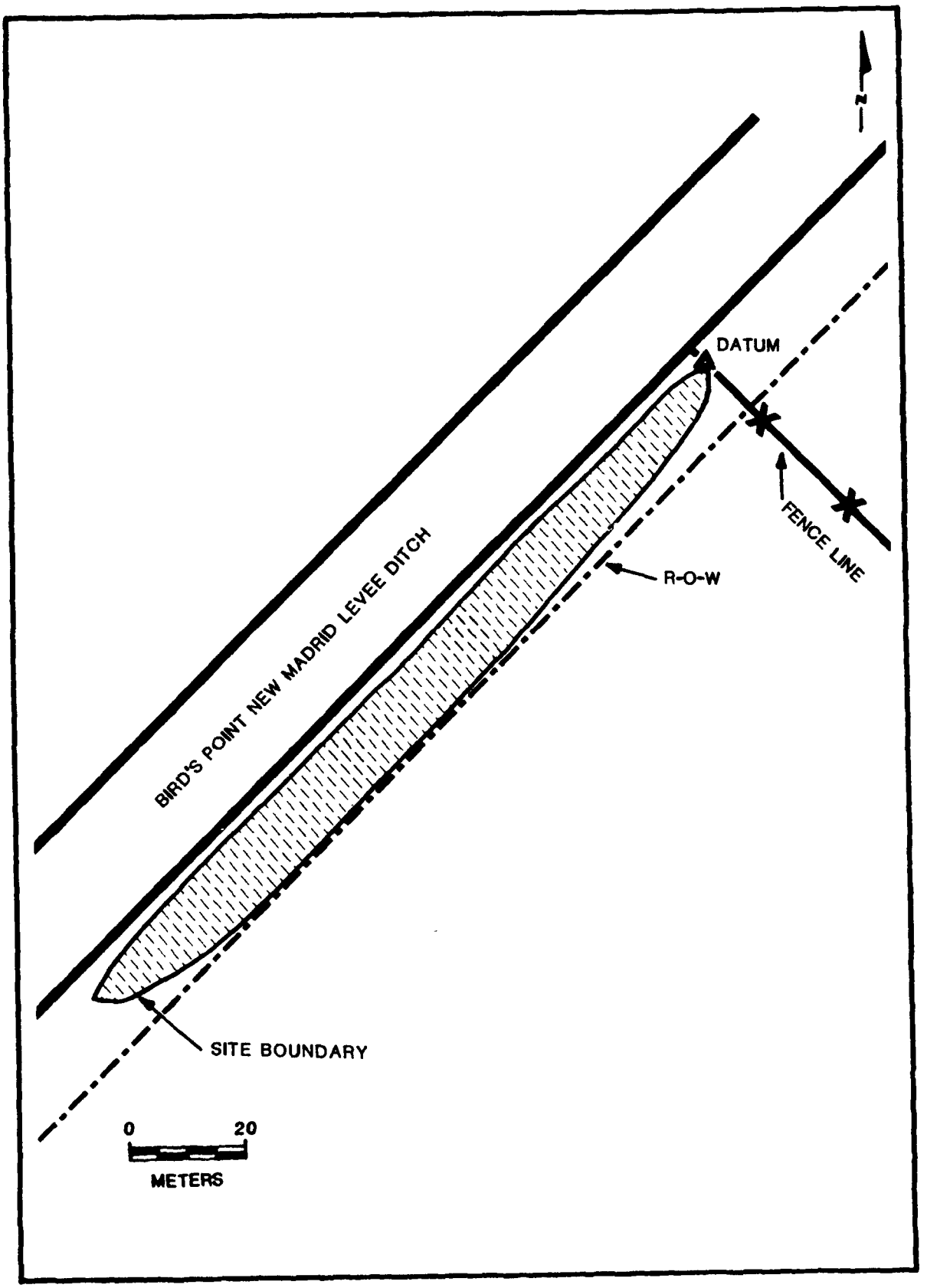


Figure 5. Sketch map 23MI601

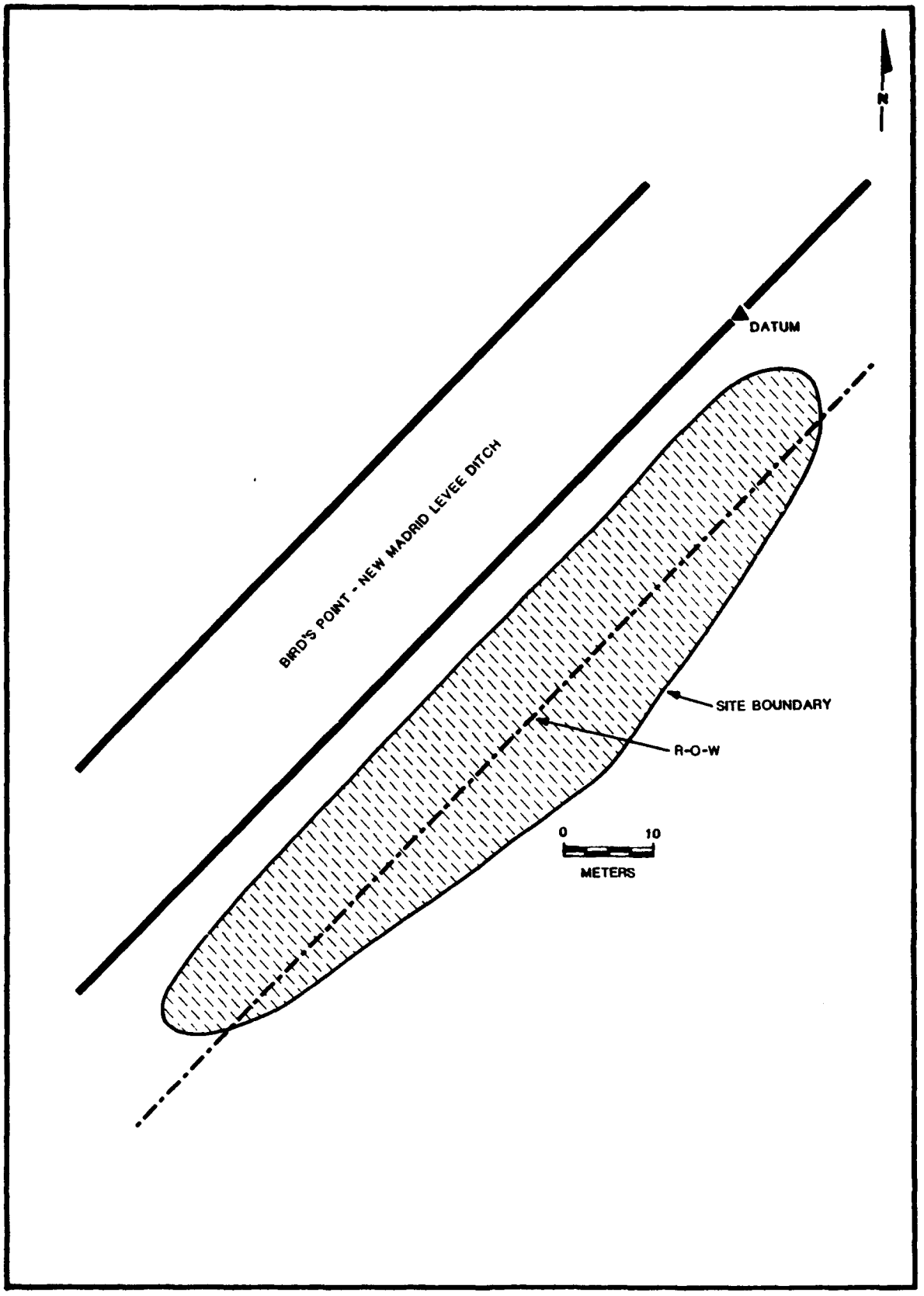


Figure 6. Sketch map 23MI602

dark grayish brown 10YR3/2 Sharkey silty clay. Because of the low density of of artifacts at the site, a 100% surface collection was conducted.

Among the 31 artifacts recovered were 6 pieces of clear bottle glass, 3 pieces of blue bottle glass, 1 piece of green bottle glass, 1 piece of amber bottle glass, 3 fragments of plain whiteware, 7 fragments of miscellaneous earthenware, 4 fragments of clear window glass, 2 fragments of red brick, 2 pieces of miscellaneous metal and 2 cinders.

No areas of artifact concentrations could be identified. No remains of foundations or cellar depressions were observed to suggest the location of any particular activity while the site was occupied.

Based on these data this site represents the remains of a small historic site, dating from the late nineteenth to the early - mid twentieth century. more than likely it represents an historic trash dump. It is only a remote possibility is that the scatter represents the remains of a residence. Based upon our preliminary review, the site does not appear to contain data which when viewed in its most favorable light would make it eligible for the National Register of Historic Places. No further cultural resources work is recommended at 23NM601.

A small section of site 23NM551 also crossed this segment of ditch, but as its primary location is near the first segment of Maple Slough Ditch, it will be discussed with that segment of the project.

St. James Ditch

St. James Ditch, between mile 0 - 10.8, was surveyed intensively within a 175 ft (53.3 m) ROW on the east bank of the ditch. Ground cover within the approximate 216 acres (87.42 ha) of the ROW was composed primarily of cultivated row crops (96.3%) mixed with small areas of pasture or fallow fields (3.7%). The good to excellent (51% - 100%) visibility along most of the corridor allowed for close visual inspection of the turned up soil in the plowed field. Shovel testing was done only in the areas displaying low surface visibility. The survey of this segment resulted in the location of 23MI600 and 23NM551.

23MI600

23MI600 is located 35 meters east of St. James Ditch approximately 1 mile (1.6 km) west of Highway 105. The site consists of historic artifact scatter spread over an area 50 m x 30 m (1,500 m^2). A large portion of the site measuring 18 m x 30 m (540 m^2) extends into the ROW (Figure 7). The site has been disturbed by plowing. The recently plowed field provided 100% visibility of recently turned soil. The soil is a dark brown (10YR3/3) Clana loamy fine sand. Because of the low density of artifacts a 100% surface collection was conducted.

Among the 54 artifacts recovered were 4 pieces of clear bottle glass, 11 pieces of blue bottle glass, 4 pieces of purpled bottle glass, 1 piece of amber bottle glass, 17 fragments of plain whiteware, 1 fragment of whiteware with flowblue decoration, 1 piece of milk glass, 5 pieces of miscellaneous earthenware, 6 fragments of clear window glass, 2 fragments of porcelain and two fragments of red brick.

No areas of artifact concentrations were present. Also absent were foundations or cellar depressions.

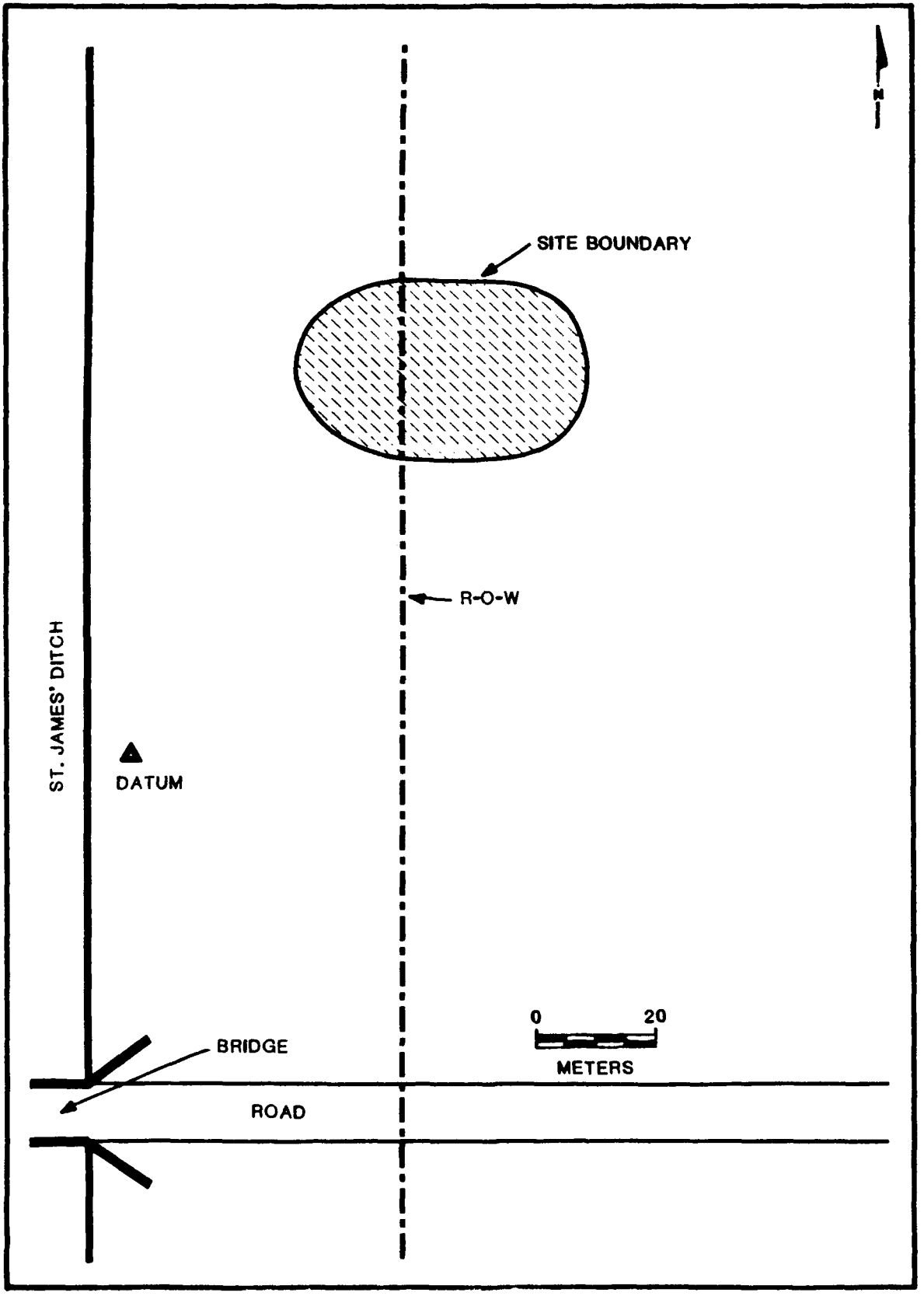


Figure 7. Sketch map 23MI600

Based on these data this site represents the remains of a small historic site, dating from the late nineteenth to the early - mid twentieth century, that could have been the location of a residence but more than likely is an historic trash dump.

Based upon our preliminary review, the site does not appear to contain data which when viewed in its most favorable light would make it eligible for the National Register of Historic Places. No further cultural resources work is recommended at 23NM600.

A small section of site 23NM551 also crossed this segment of ditch but as its primary location is near the first segment of Maple Slough Ditch it will be discussed with that segment of the project.

East Bayou: Segment 2

The second segment of East Bayou ditch, between mile 4.5 - 5.5, was surveyed intensively within a 215 ft (65.5 m) ROW on the west bank of the ditch. All of the approximately 26 acres (10.52 ha) of this corridor was covered with cultivated row crops. Because of the good to excellent 51% - 100%) visibility within the ROW, a surface reconnaissance was conducted. Shovel testing was limited to areas of low surface visibility. The survey of this segment resulted in the location of 23NM543.

23NM543

23NM543 is located approximately 0.3 miles (0.5 km) north of county road WW and about 25 meters west of East Bayou. The site consists of a moderate scatter of prehistoric lithics spread over an area 6 m x 12 m (72 m2), all of which is located within the ROW (Figure 8). The site has been disturbed by agricultural practices. The recently harvested soybean field provided visibility of 85%. The soil is a dark yellowish brown (10YR3/2) Alligator clay. No areas of artifact concentration were present. No soil discolorations suggestive of subsurface features or deposits. Because of the low density of artifacts a 100% surface collection was conducted.

Among the 43 artifacts recovered were 3 primary decortication flakes, 12 secondary decortication flakes, 14 interior flakes, 1 retouched flake, 1 piece of lithic shatter, 5 biface fragments, 1 aborted preform and 6 unidentified bone fragments were observed.

Based on these data, chronological placement of this prehistoric site could not be determined. The small number of artifacts are all that remain of an ephemeral prehistoric occupation which occurred on this location on this landform sometime in prehistory. The site probably functioned as some sort of specialized activity area.

Based upon our preliminary review, the site does not appear to contain data which when viewed in its most favorable light would make it eligible for the National Register of Historic Places. No further cultural resources work is recommended at 23NM543.

DITCH SEGMENTS CONTAINING POTENTIALLY ELIGIBLE SITES

Four ditch segments along three of the ditches in the project area contained sites potentially eligible for inclusion on the National Register of Historic Places. Not all of the sites along these segments contain significant data. The investigations conducted at these sites (23MI599 and 23NM544) is discussed in a latter section. What follows below is discussion

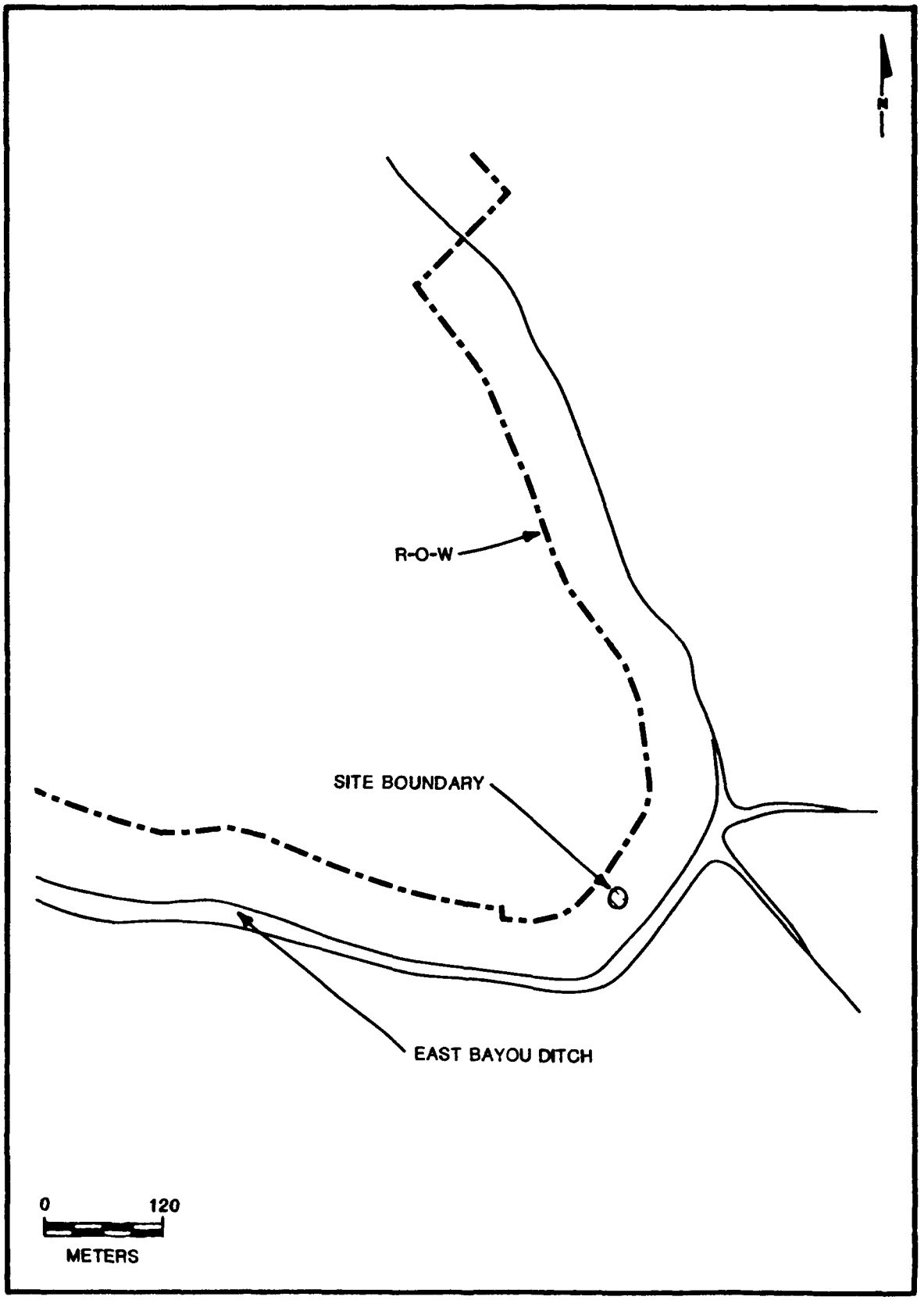


Figure 8. Sketch map 23NM543

of the results of our survey along St. Johns Bayou segments 1 and 2, the North Cut Ditch and Maple Slough.

St. Johns Bayou: Segments 1 and 2

The first segment of St. Johns Bayou ditch, between mile 0 - 20.0, was intensively surveyed within a 350 ft (106.7 m) ROW on both banks of the ditch. Ground cover within the approximate 1,634 acres (662.28 ha) of the ROW was composed primarily of cultivated row crops (67.9% of the east bank and 57.5% of the west bank) with the remaining acreage in pasture or fallow fields (7.5% of the west bank) and wooded lots (32.1% of the east bank and 35.0% of the west bank). Because of the good to excellent 51% - 100%) visibility within the majority of the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing and shovel testing at regular intervals in the areas of low surface visibility. The survey of this segment resulted in the location of 23NM544 along the west bank.

Based on the results of the general collection and a controlled collection, this site was considered potentially eligible for the NRHP. Upon consultation with the contracting officer this site was determined worth receiving additional work. The description of the site and the investigations are provided in a later section.

The second segment of St. Johns Bayou ditch, between mile 20.0 - 26.7, was surveyed intensively within a 250 ft (76.2 m) ROW on the east bank of the ditch. A later modification to the contract altered the original survey ROW to include a 250 ft (76.2 m) ROW on the west bank between mile 20.4 - 23.0 and a 100 ft extension of the ROW, making a total of 350 ft (106.7 m), on the east bank between mile 26.1 - 26.6.

Ground cover within the approximate 167 acres (67.6 ha) of the ROW was composed primarily of cultivated row crops (62.0%) with the remaining acreage in pasture or fallow fields (32.9%). Because of the good to excellent 51% - 100%) visibility within the majority of the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing and shovel testing at regular intervals in the areas of low surface visibility.

The survey of this segment resulted in the location of 23NM546, 23NM547, 23NM553, 23ST208 and 23ST209. During the survey of the second segment of St. Johns Bayou Ditch a previously recorded site (23ST60) was revisited.

23ST60

23ST60 is located approximately 1.0 mile (1.6 km) west of Interstate Highway 55. The site, being situated on a sandy rise 150 meters east of St. Johns Bayou, is in the vicinity of where a rise is noted on the 1852 GLO map of this range and township. Nearby is the confluence of Cypress Slough and "Lake St. John" as indicated on the 1818 - 1852 GLO map (see also the description of 23ST208).

23ST60 consists of a prehistoric artifact scatter. The site has been disturbed by agricultural practices, but at the present time the field is fallow. Because of the very sparse vegetation in the field ground surface visibility was approximately 75% - 100%. The soil in the field is a dark yellowish brown (10YR3/4) Scoto sandy loam.

It was only after diagnostics had been collected off of this site when it was learned that 23ST60 actually is located outside of the ROW. Although not in Appendix B, they have been included in the collections and have been analyzed because of their relevance to helping to understand the other

prehistoric sites in the project area. The collection of artifacts from this site includes seven PP/Ks and biface fragments.

The first projectile point/knife, a Dalton Serrated, was manufactured from a mottled reddish brown and tan chert and measures 58 mm x 19 mm x 6.5 mm (length x width x thickness) (Figure 9a). The stemless point exhibits a rhomboid shaped cross section on a straight to slightly convex blade. The blade edge has been beveled in resharping and exhibits a serrated blade edge. Though the lobes have been broken, a small flake or flute appears to have been removed from the base. Points of this type date to the Early Archaic period.

The second projectile point/knife, a Table Rock Stemmed point, was manufactured from a gray chert that measures 59 mm x 19 mm x 8.5 mm (Figure 9b). The stemmed point exhibits a plano-convex cross section on a slightly convex blade and a concave stem. Similar points have been dated to the Middle Archaic period.

The third projectile point/knife was manufactured from a light pink chert and measures 79 mm x 36 mm x 11.5 mm (Figure 9c). The stemmed point exhibits a biconvex cross section on a convex blade with a concave stem. This point could not be assigned to any particular type but appears similar to the general point styles of the Late Archaic period.

The fourth projectile point/knife was manufactured from a light gray chert and measures 44 mm x 34 mm x 9 mm (Figure 9d). This corner notched point exhibits a straight to convex blade shape with a corner notched base and slightly convex basal edge. Though it could not accurately be assigned to any particular type, it is similar to the general point styles of the Late Archaic through Woodland periods.

The fifth projectile point/knife was manufactured from a light gray quartzite and measures 45 mm x 27 mm x 8.5 mm (Figure 9e). This specimen has a straight to slightly convex blade shape with a corner notched base and slightly convex basal edge. One corner of its base is missing. Although it could not accurately be assigned to any particular type, it is similar to the general point styles of the Late Archaic through Woodland periods.

The sixth projectile point/knife was manufactured from a brownish tan chert and measures [36 mm] x 26 mm x 9 mm [broken dimension] (Figure 9f). This stemmed point exhibits a straight blade shape with a contracting stem. Its tip and the edge of the base of the specimen are missing. Enough of the specimen is present to be able to identify it as a Gary Stemmed which date to the Early and Middle Woodland period.

The seventh artifact from 23ST60 was a small light tan quartzite biface fragment measuring [31 mm] x 15 mm x 6 mm (Figure 9g).

These data help in understanding the depth of prehistory in the project area. The seven artifacts that were collected represent a very small biased sample of the material on the site. Based upon our observations this site appears to possibly represent the remains of a summer-fall family base settlements (Klinger 1978). As this site lies outside of the ROW no recommendations for the current project are appropriate. However, if any future plans threaten this site additional testing will be needed to investigate its potential for significance.

23NM546

23NM546 is a historic and prehistoric site located in a fallow field 20 meters east of St. Johns Bayou about 1.0 mile (1.6 km) west of Interstate Highway 55. The site consists of a prehistoric and historic artifact scatter

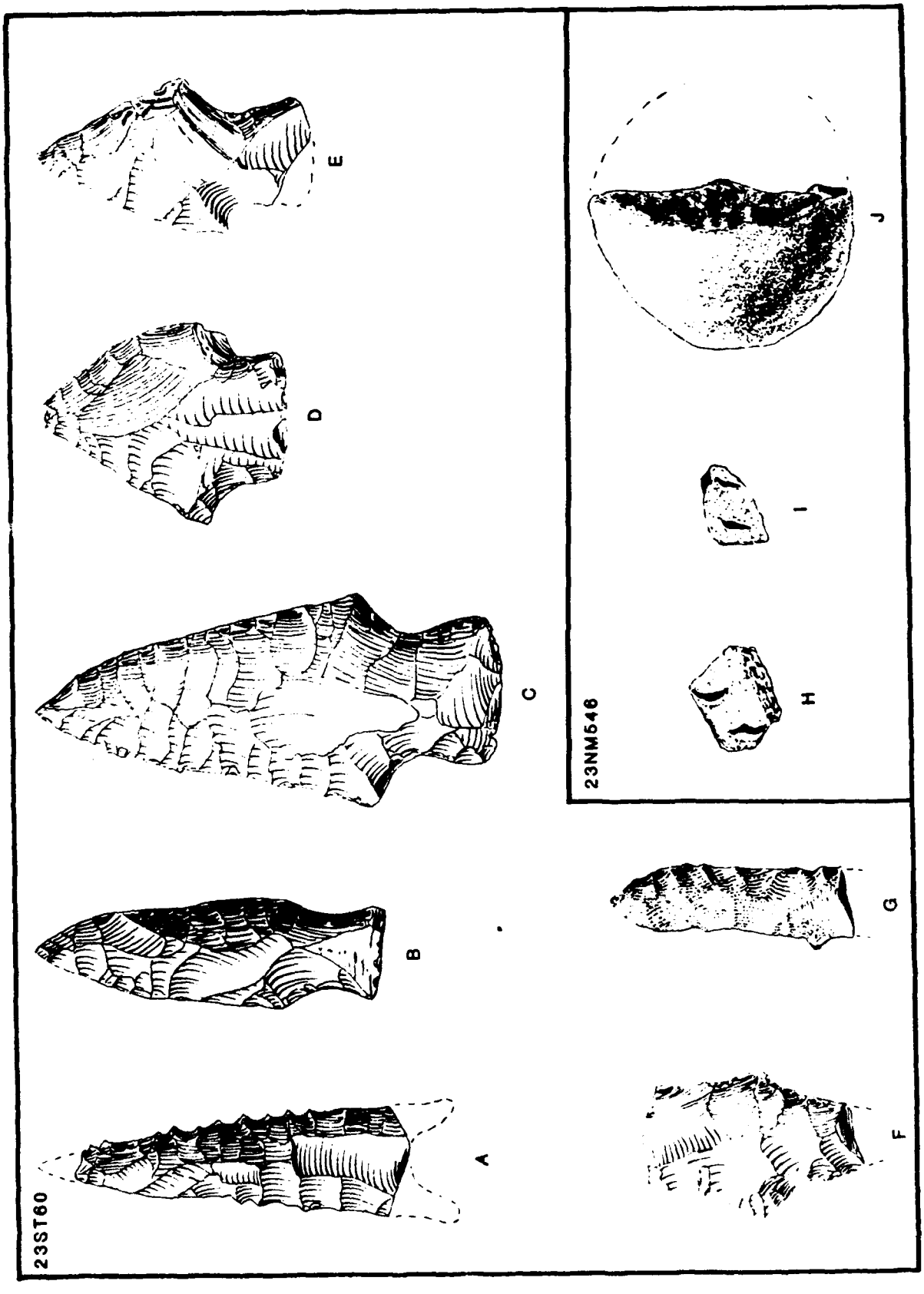


Figure 9. Diagnostic Artifacts Recovered During Project

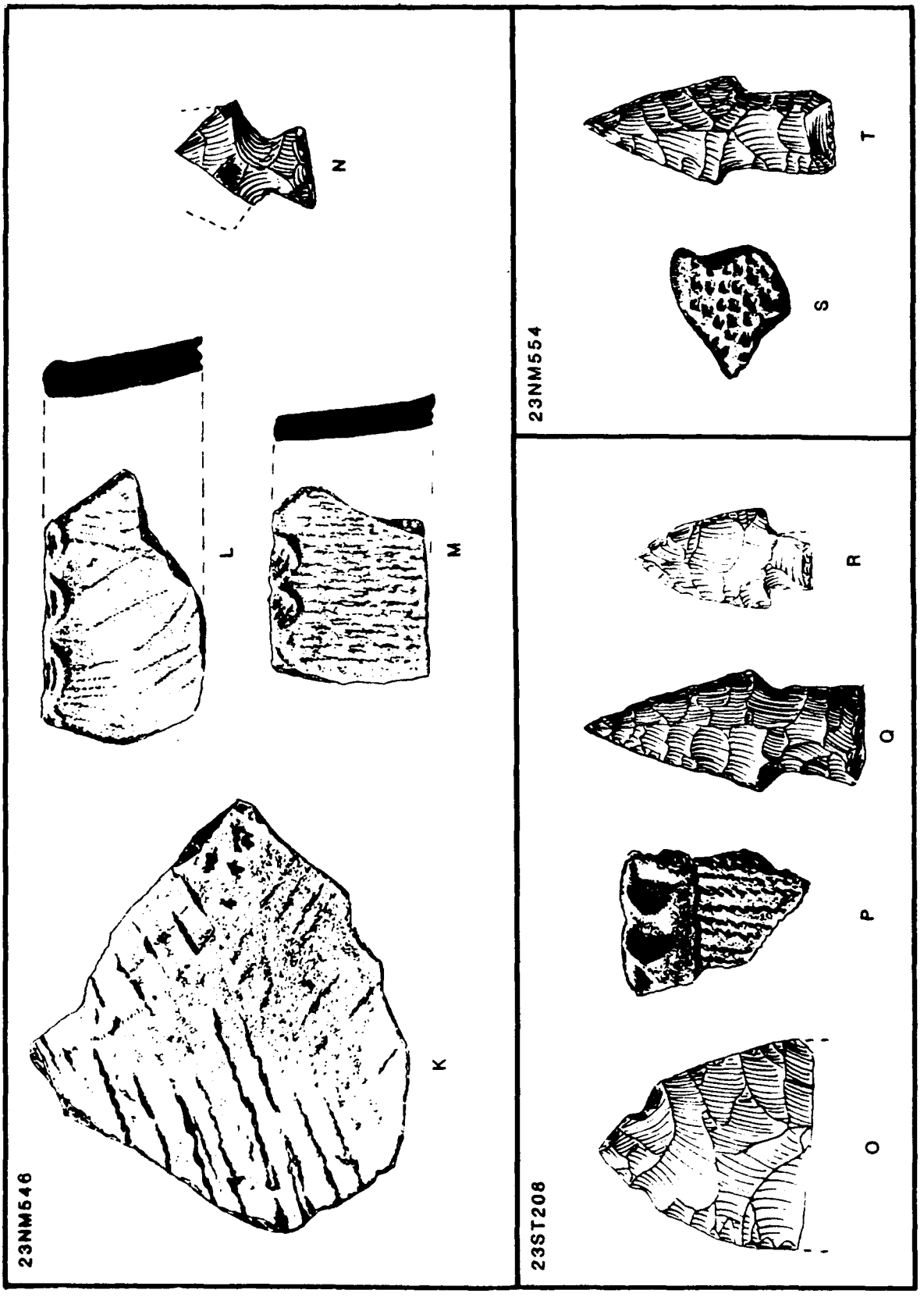


Figure 9. Continued

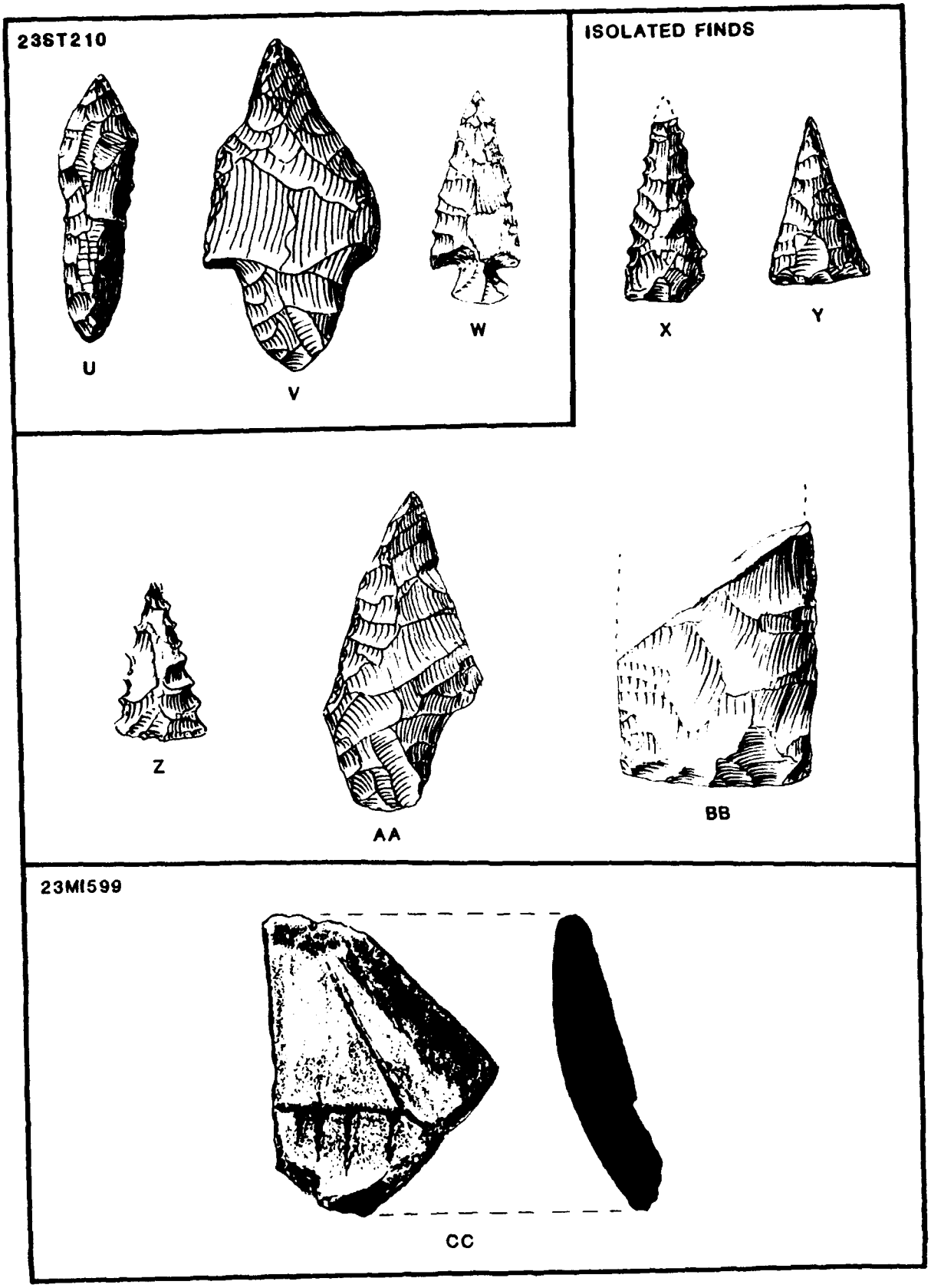


Figure 9. Continued

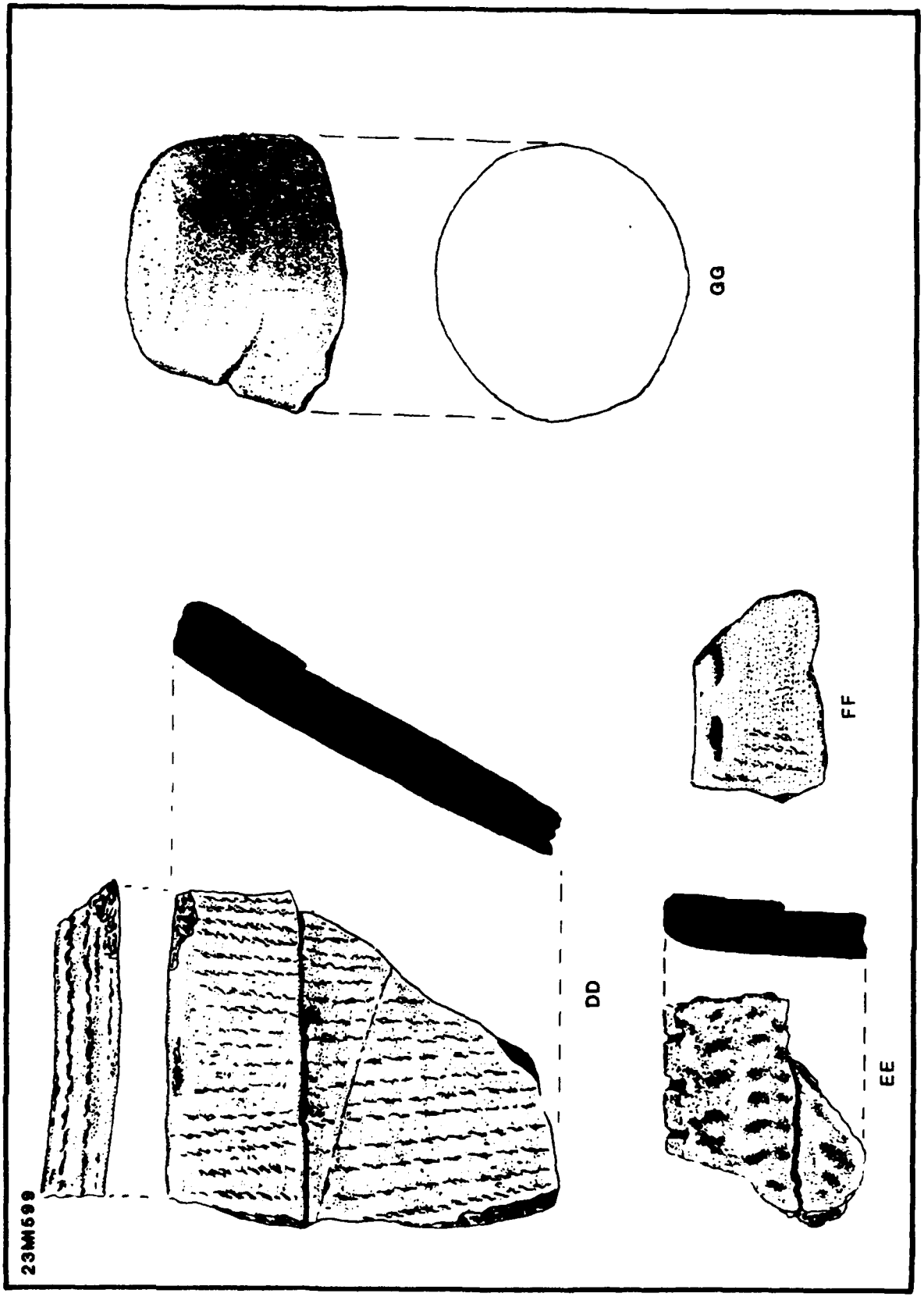


Figure 9. Continued

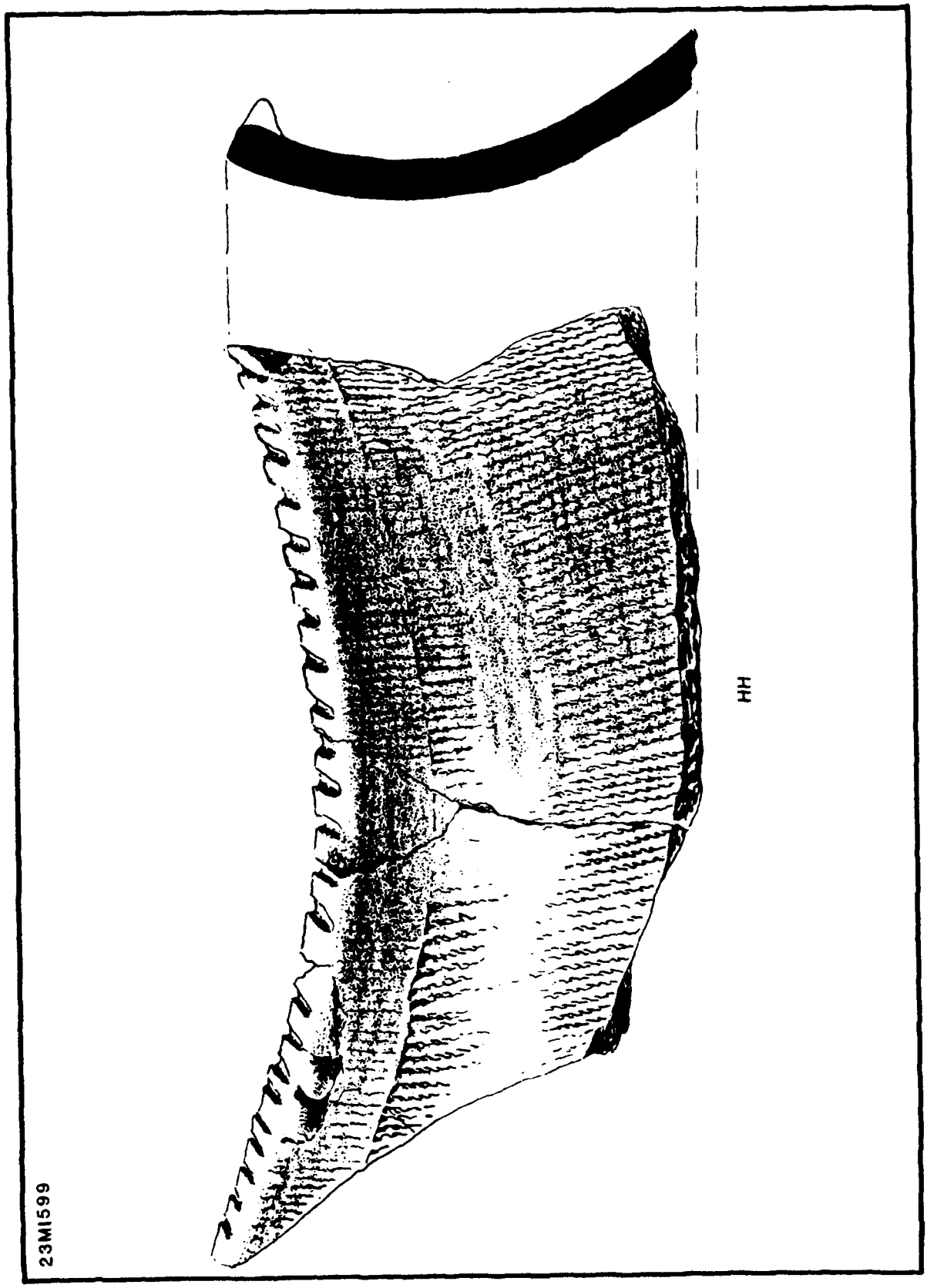


Figure 9. Continued

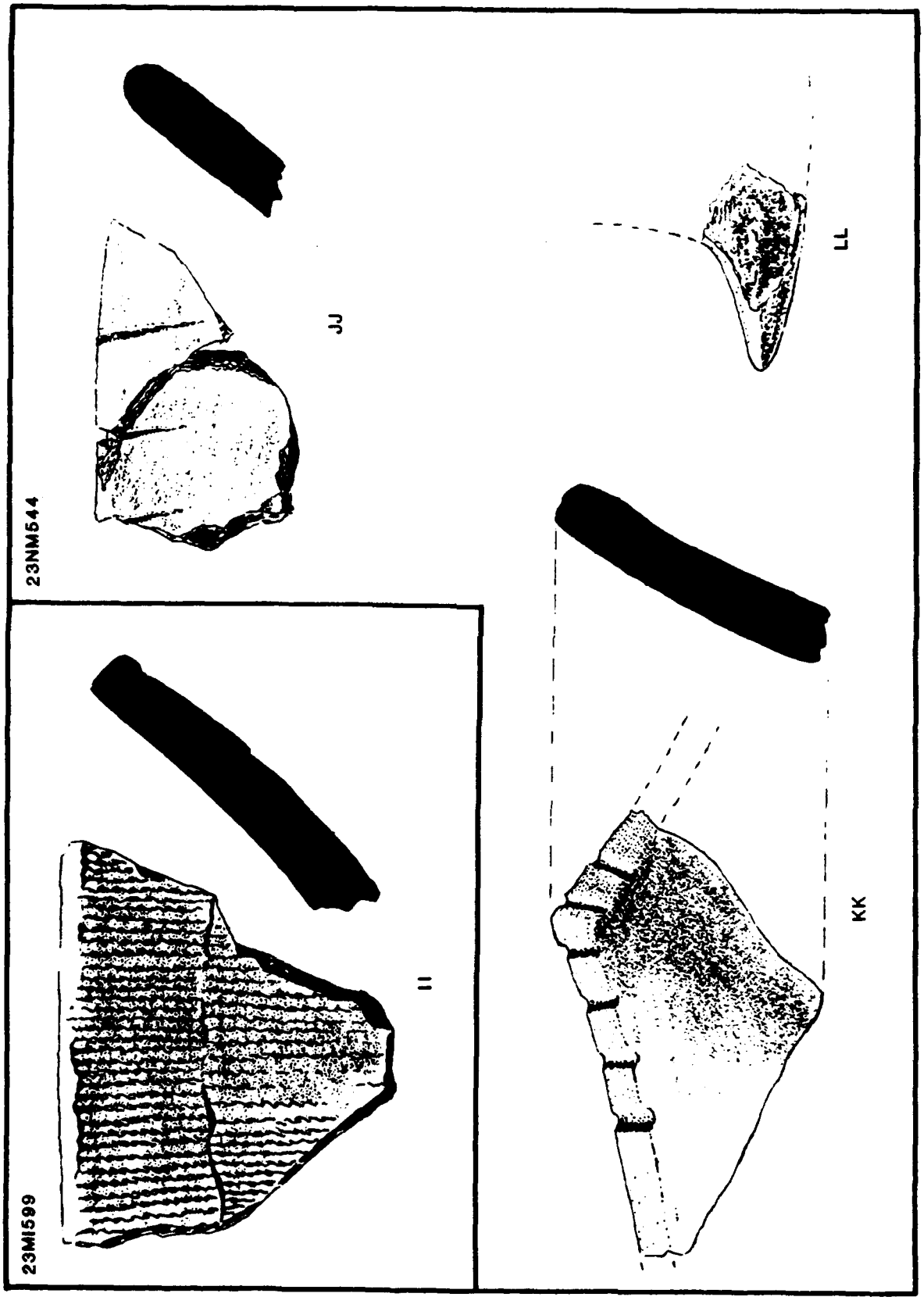


Figure 9. Continued

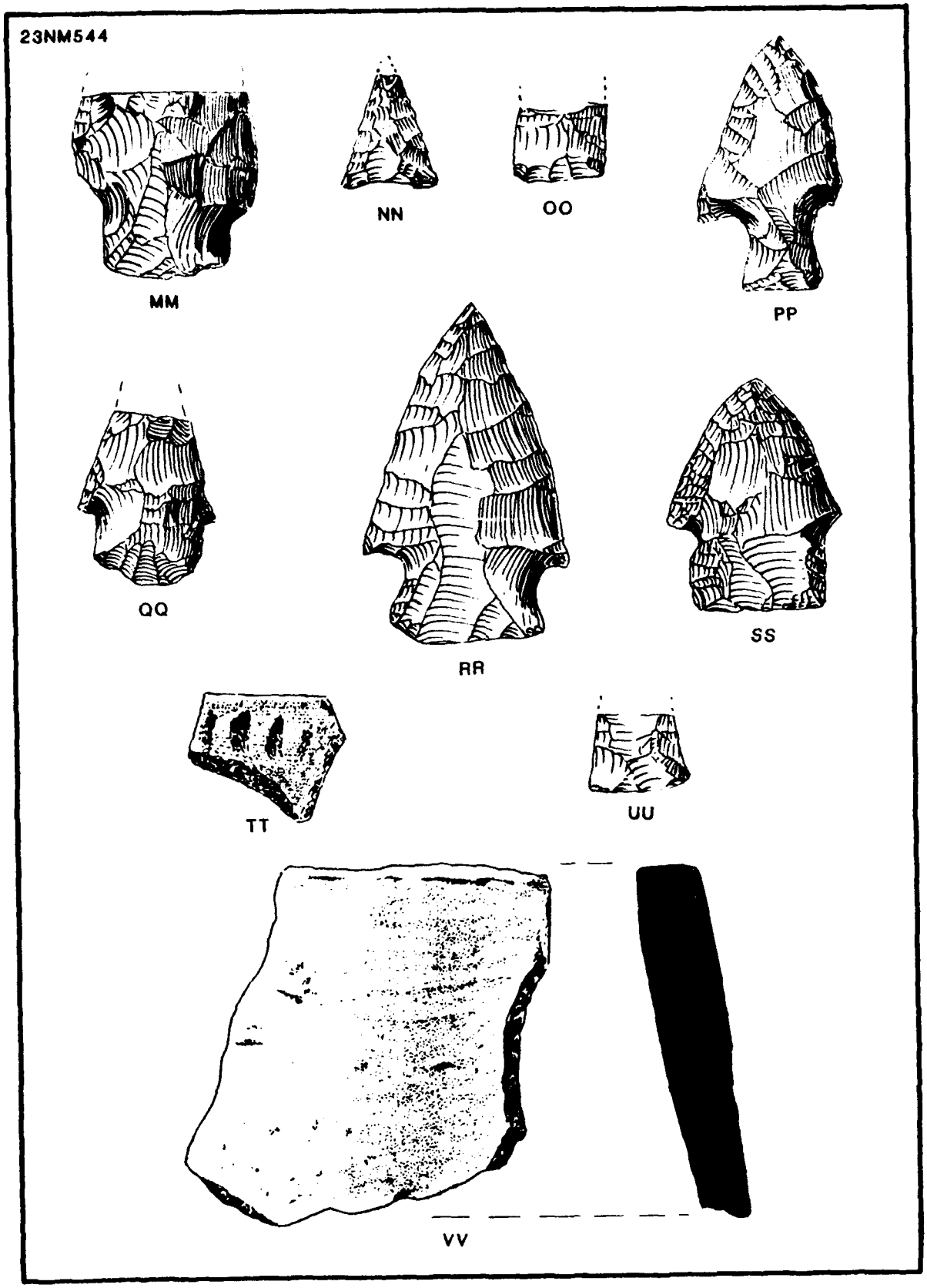


Figure 9. Continued

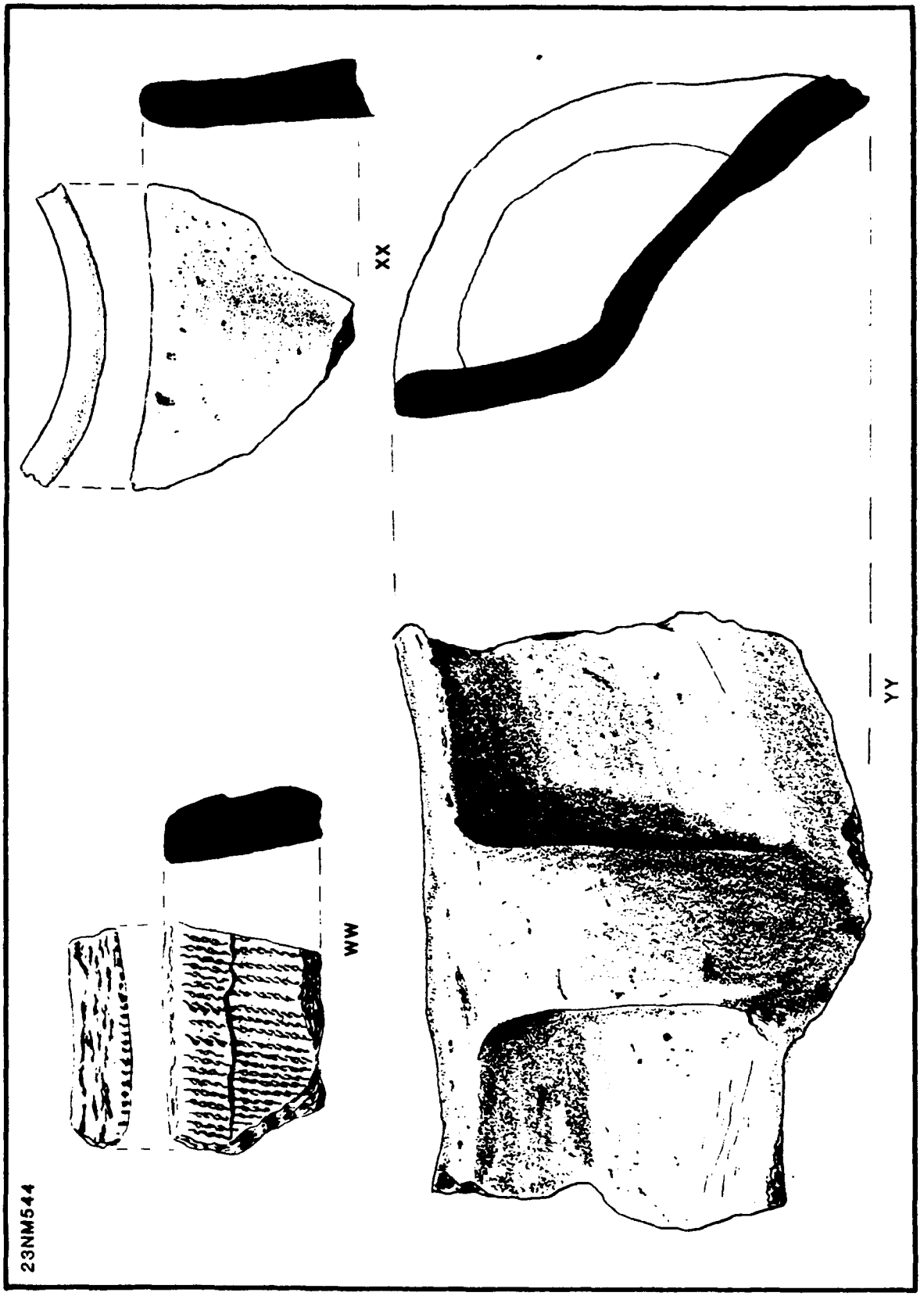


Figure 9. Concluded

about 70 m x 370 m (25,900 m2) in horizontal extant. The ROW encompasses about 56 m x 370 m (20,720 m2) of the site (Figure 10).

Although the field is fallow, agricultural practices in the past have disturbed the cultural deposits. Surface visibility at the site was about 60%. Soil covering this landform was a dark brown (10YR3/3) Canalou loamy sand.

As a result of the general surface collection, a concentration of prehistoric material was found in the northern part of the site; whereas, the historic material appeared to be concentrated in the southern part of the site.

A mixture of both prehistoric and historic material was present in a swale located between the two concentrations. A general surface collection of probable diagnostic artifacts was made in the swale. Among the 62 artifacts recovered in this area were 11 interior flakes, 1 primary decortication flake, 2 modified flakes, 1 biface fragment, 13 Kennett Plain body sherds, 1 Kennett Plain rim sherd, 18 Barnes Cord Marked body sherds, 1 Barnes Cord Marked rim sherd, 4 Poverty Point Object fragments, 1 piece of clear bottle glass, 1 piece of purpled bottle glass, 2 fragments of transfer printed whiteware, 1 piece of milk glass, 1 fragment of miscellaneous earthenware and 4 fragments of concrete.

Because of the high density of artifacts, a controlled surface collection was also conducted at 23NM546. A grid of 6 m^2 collection units was laid out in each of the two observed artifact concentrations, in order to aid in the understanding of the surface distribution of cultural material at the site. A collection was then made of all cultural material in 25% of the units in the grid which were selected from a table of random numbers.

In the northern third of the site, designated locus A, a grid measuring 36 m x 48 m of 6 m^2 units was established. Of the 48 units in this grid, a random sample of 12 (25%) were selected. The random sample units selected for the controlled surface collection included unit numbers 1, 5, 9, 10, 20, 22, 25, 26, 33, 37, 42 and 48. The assemblage from the controlled collection in locus "A" totaled 968 artifacts (Appendix B).

Collection unit A-1 yielded the second lowest total number of artifacts. Of the 13 artifacts recovered in this unit were 3 interior flakes, 2 retouch flakes, 5 pieces of Kennett Plain body sherds and 3 Barnes cord Marked body sherds.

Of the 12 units, collection unit A-5 had the fifth highest density of artifacts. A total of 89 artifacts were recovered in this unit including 2 secondary decortication flakes, 10 interior flakes, 2 retouch flakes, 3 fire cracked rocks, 10 Kennett Plain body sherds, 46 Barnes Cord Marked body sherds, 8 indeterminate Barnes body sherds, 6 miscellaneous pieces of burned clay, 1 piece of clear window glass and 1 unidentified bone fragment.

Collection unit A-9, on the other hand, had the fifth lowest density of artifacts of the 12 units. The 67 artifacts collected in this unit included 1 secondary decortication flake, 4 interior flakes, 1 retouch flake, 1 fire cracked rock, 8 Kennett Plain body sherds, 35 Barnes Cord Marked body sherds, 15 Barnes indeterminate body sherds, 1 Pascola fingernail punctate body sherd (Figure 9h) and 1 piece of miscellaneous burned clay.

The median density of artifacts is represented by collection unit A-10. A total of 80 artifacts were recovered in this unit including 1 secondary decortication flake, 9 interior flakes, 3 retouch flakes, 14 Kennett Plain body sherds, 31 Barnes Cord Marked body sherds, 2 Barnes Cord Marked rims sherds, 15 Barnes indeterminent body sherds, 6 pieces of miscellaneous burned clay and 1 cinder.

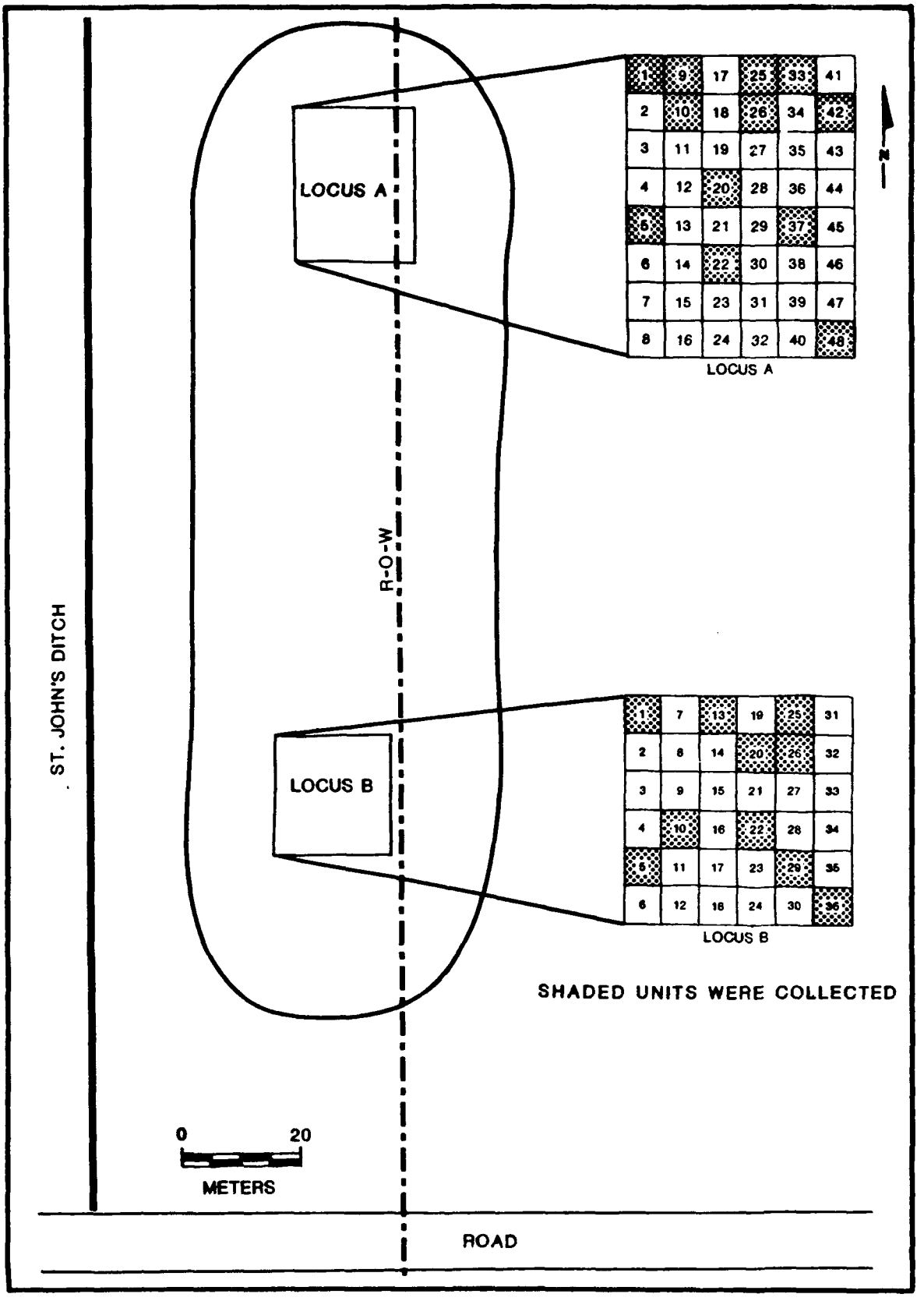


Figure 10. Sketch Map 23NM546

Collection unit A-20 yielded the second highest number of artifacts out of the 12 random sample units. Among the 145 artifacts collected this unit were 1 primary decortication flake, 2 secondary decortication flakes, 14 interior flakes, 2 retouch flakes, 3 pieces of fire cracked rock, 34 Kennett Plain body sherds, 53 Barnes Cord Marked body sherds, 19 Barnes indeterminent body sherds, 1 Mulberry Creek Cord Marked rim sherd, 1 Pascola pinched body sherd (Figure 9i) 12 pieces of miscellaneous burned clay, 1 piece of clear bottle glass and 2 unidentified bone fragments.

In terms of artifact density, surface collection unit A-22 ranked ninth out of the 12 units. The 51 artifacts recovered from this unit includes 1 secondary decortication flake, 1 interior flake, 2 broken flakes, 3 fire cracked rock, 22 Kennett Plain body sherds, 16 Barnes Cord Marked body sherds, 1 Kennett Plain rim sherd, 1 Mulberry Creek Cord Marked body sherd and 4 pieces of miscellaneous burned clay.

No other surface collection unit at locus "A" produced more artifacts than surface collection unit A-25 which yielded 152 artifacts. Among these items were 1 secondary decortication flake, 14 interior flakes, 1 retouch flake, 5 pieces of lithic shatter, 1 biface, 5 pieces of fire cracked rock, 65 Kennett Plain body sherds, 44 Barnes Cord Marked body sherds, 1 Barnes Cord Marked rim sherd, 1 Barnes Punctate body sherd, 11 pieces of miscellaneous burned clay and 3 unidentified bone fragments.

Of the 12 units, surface collection unit A-26 yielded the fourth highest number of artifacts. The 131 artifacts recovered from this unit includes 4 secondary decortication flakes, 23 interior flakes, 7 retouch flakes, 1 modified flake, 2 pieces of lithic shatter, 5 fire cracked rocks, 18 Kennett Plain body sherds, 42 Barnes Cord Marked body sherds, 1 Barnes Cord Marked rim sherd, 1 Pascola pinched body sherd, 24 Barnes indeterminent body sherds, 2 pieces of miscellaneous burned clay, 1 Mulberry Creek Cord Marked body sherd, 1 Mulberry Creek Cord Marked rim sherd, 1 fragment of Poverty Point Object, 1 fragment of miscellaneous earthenware and 1 fragment of unidentified bone.

Of the 12 units, surface collection unit A-33 had the eight highest number of recovered artifacts. The assemblage of 55 artifacts from collection unit A-33 includes 1 secondary decortication flake, 9 interior flakes, 1 retouch flake, 2 pieces of lithic shatter, 5 fire cracked rock, 15 Kennett Plain body sherds, 1 Kennett Plain rim sherd, 19 Barnes Cord Marked body sherds and 2 pieces of miscellaneous burned clay.

Surface collection unit A-37 exhibited the third highest artifact density of the 12 units. Among the 137 artifacts recovered in this unit were 2 secondary decortication flakes, 11 interior flakes, 8 flakes, 1 broken flake, 8 pieces of lithic shatter, 7 fire cracked rocks, 17 Kennett Plain body sherds, 52 Barnes Cord Marked body sherds, 25 Barnes indeterminent body sherds, 2 Mulberry Creek Cord Marked rim sherds, 1 Poverty Point Object (Figure 9j) 1 piece of clear bottle glass, 1 piece of plain whiteware and 1 porcelain button.

Ranking tenth in artifact density was surface collection A-42. The 43 artifacts collected from this unit included 1 secondary decortication flake, 7 interior flakes, 2 retouch flakes, 1 modified flake, 1 piece of lithic shatter, 20 Kennett Plain body sherds, 8 Barnes Cord Marked body sherds, two pieces of miscellaneous burned clay and 1 cinder.

Of the 12 units, surface collection unit A-48 yielded the least amount of artifacts. Only two artifacts were found on the surface in this unit: an interior flake and an unidentified bone fragment.

Prehistoric ceramics represent the dominate artifact class represented at locus "A". A variety of wares was present. All but one of the units

(A-48) yielded sherds from Kennett Plain and Barnes Cord Marked vessels. Sherds from a Mulberry Creek Cord Marked vessel or vessels were recovered in units A-20, A-22 and A-37. A Pascola Fingernail Punctate sherd was found in unit A-9. Pascola Pinched sherds were recovered in units A-20 and A-26. In addition, one sherd from a Barnes Punctate vessel was recovered in unit A-25. Burned clay was also found in most of the surface collection units. A diagnostic piece of burned clay, in the form of Poverty Point Object fragments (also referred to as baked clay objects), was recovered in units A-26 and A-37. Besides these artifacts, lithic debitage was found lightly distributed in all 12 of the random sample surface collection units.

In addition to the 100% collection from the random sample surface collection units, all potentially diagnostic artifacts that were observed on the surface in other units not selected as a random sample unit were collected by their unit provenience (Appendix B). These included 1 tested cobble, 2 cores, 1 secondary decortication flake, 1 broken flake, 1 utilized bifacial thinning flake, 1 small corner-notched pp/k, 1 piece of fire cracked sandstone, 2 Barnes Cord Marked body sherds (Figure 9k), 2 Barnes Cord Marked rim sherds, along with 2 Barnes Cord Marked rim sherds with cord-wrapped cylinder impressed rims (Figure 9l and 9m).

The projectile point measuring [22.5 mm] x [17 mm] x 7 mm [broken dimension] was manufactured from a reddish brown chert (Figure 9n). This point could not be placed within any established types but is similar to general types used during the Woodland period.

In locus "B", a 36 m x 36 m grid of 6 m^2 units was established over the southern third of the site. Of the 36 units in the grid, a random sample of nine (25%) units were selected for the controlled collection. The random sample units included unit numbers 1, 5, 10, 13, 20, 22, 25, 29, and 36. The assemblage from the controlled collection in locus "B" totaled 631 artifacts.

Of the nine surface collection units in locus "B" selected in the random sample, unit B-1 had the second lowest artifact density. Of 567 artifacts recovered in the random units, 35 (6%) were recovered in this unit; these included 2 Kennett Plain body sherds, 10 pieces of clear bottle glass, 5 pieces of purpled bottle glass, 5 pieces of plain whiteware, 1 piece of milk glass, 1 piece of clear window glass, 1 piece of undecorated porcelain, 2 red brick fragments, 1 clay marble and 7 cinders.

The 55 artifacts recovered in Unit B-5 represent 10% of the total number of items recovered in the random sample units. Among the 55 artifacts were 1 secondary decortication flake, 1 interior flake, 22 pieces of clear bottle glass, 1 piece of blue bottle glass, 1 piece of purpled bottle glass, 3 pieces of amber bottle glass, 7 pieces of plain whiteware, 2 pieces of milk glass, 1 piece of miscellaneous earthenware, 10 pieces of clear window glass, 4 miscellaneous pieces of metal, 1 nail and 1 piece of coal.

Unit B-10 had the third lowest artifact density of the nine units. The 43 items recovered from this unit represent 8% of the total amount of artifacts recovered in the random sample units. Among the items recovered were 2 interior flakes, 3 Kennett Plain body sherds, 2 pieces of miscellaneous burned clay, 16 pieces of clear bottle glass, 1 piece of blue bottle glass, 3 pieces of purpled bottle glass, 1 piece of red bottle glass, 1 piece of plain whiteware, 1 milk glass, 1 piece of miscellaneous earthenware, 5 fragments of clear window glass, 1 fragment of plain porcelain, 5 miscellaneous pieces of metal and 1 cinder.

Surface collection unit B-13 had the third highest artifact density of the nine units. Among the 65 artifacts (11%) recovered from this unit were 3 interior flakes, 3 Kennett Plain body sherds, 2 pieces of burned clay, 20

pieces of clear bottle glass, 2 pieces of blue bottle glass, 1 pieces of purpled bottle glass, 1 piece of green bottle glass, 1 piece of plain whiteware, 1 piece of transfer printed whiteware, 2 pieces of milk glass, 4 pieces of miscellaneous earthenware, 6 pieces of clear window glass, 2 pieces of plain porcelain, seven red brick fragments, and six miscellaneous pieces of metal.

The most amount of cultural material found in any of the nine units in locus "B" was recovered in unit B-20. The 127 artifacts collected from this unit represent 22% of all the artifacts recovered in the random sample units. B-20 yielded 1 secondary decortication flake, 1 piece of ground or pecked sandstone, 3 Kennett Plain body sherds, 2 pieces of burned clay, 3 turtle shell fragments, 49 pieces of clear bottle glass, 6 pieces of blue bottle glass, 1 piece of green bottle glass, 2 pieces of amber bottle glass, 11 pieces of plain whiteware, 1 piece of banded whiteware, 2 pieces of milk glass, 7 pieces of miscellaneous earthenware, 5 pieces of clear window glass, 1 part of porcelain doll, 1 red brick fragment, 13 miscellaneous pieces of metal, 3 nails, 1 metal jar lid, 3 pieces of coal, 9 cinders, 1 unidentified historic ceramic and 1 fragment of a slate pencil.

Unit B-22, second in terms of artifact density, also registered 22% of the total number of artifacts collected in random units. Of the 123 artifacts were collected from the surface in this unit were the following: 1 primary decortication flake, 1 secondary decortication flake, 1 interior flake, 1 piece of lithic shatter, 3 Kennett Plain body sherds, 1 shell tempered plain body sherd, 43 pieces of clear bottle glass, 4 pieces of blue bottle glass, 11 pieces of purpled bottle glass, 1 piece of green bottle glass, 1 piece of amber bottle glass, 23 pieces of plain whiteware, 2 pieces of transfer printed whiteware, 1 piece of whiteware decorated with a scalloped edge flow-blue design, 3 pieces of milk glass, 4 pieces of miscellaneous earthenware, 5 pieces of clear window glass, 1 fragment of blue porcelain, 5 miscellaneous pieces of metal, 2 nails, 1 fragment of a red glass bottle, 2 fragments of coal, 5 cinders and 1 unidentified bone fragment.

Fourth, in terms of artifact density, was unit B-25 which produced 58 artifacts (10% of the random units total). These items include 1 piece of burned clay, 11 pieces of clear bottle glass, 8 pieces of blue bottle glass, 10 pieces of purpled bottle glass, 5 pieces of plain whiteware, 1 piece of milk glass, 5 pieces of miscellaneous earthenware, 3 pieces of clear window glass, 1 fragment of plain porcelain, 3 fragments of red brick, 3 miscellaneous pieces of metal, 6 cinders and 1 unidentified fragment of bone.

The 51 artifacts from collection unit B-29 represents 9% of the total amount of artifacts recovered from the random units. The items collected from this unit includes 1 Kennett Plain body sherd, 12 pieces of clear bottle glass, 10 pieces of purpled bottle glass, 1 piece of amber bottle glass, 7 pieces of plain whiteware, 3 pieces of transfer printed whiteware, 1 fragment of milk glass, 8 pieces of miscellaneous earthenware, 1 piece of blue porcelain, 3 fragments of red brick, 1 miscellaneous piece of metal, 2 fragments of coal and 1 cinder.

The lowest density of artifacts among the nine units was observed in unit B-36 where only 10 artifacts (2%) were recovered. Among these artifacts were 2 pieces of plain whiteware and single items of burned clay, clear bottle glass, blue bottle glass, porcelain doll part, red brick, miscellaneous metal and cinder.

In addition to the 100% collection from the random sample of collection units all potential diagnostics observed in other units were collected under their unit provenience and are included in Appendix B. These items included 1

core, 22 Kennett Plain body sherds, 1 Kennett Plain rim sherd, 5 Barnes Cord Marked body sherds, 1 shell tempered body sherd, 1 piece of miscellaneous burned clay, 4 pieces of clear bottle glass, 3 pieces of purpled bottle glass, 1 fragment of plain whiteware, 5 fragments of transfer printed whiteware, 1 fragment of scalloped edge whiteware, 7 pieces of miscellaneous earthenware, 1 part of a porcelain doll, 5 miscellaneous pieces of metal and 1 fragment of unidentified bone.

Within the two loci, concentrations were noted during the controlled collection indicating possible activity areas. The concentration in locus "A", centered around collection units 20, 25 and 26. In this part of the site, one or more activity areas may be present, judging by the density of lithic debris and Kennett Plain and Barnes Cord Marked sherds collected from these three units. As both loci are at slightly higher elevations separated by a shallow swale the concentration in locus "A" may be the location of a small Middle Woodland period Barnes habitation or resource extraction site. A small amount of Early Woodland material was also recovered in loci "A".

The concentration observed in loci "B" centered around collection units 20 and 22 could indicate the location of a late nineteenth or early twentieth century historic activity area. However, as bottle glass fragments were the primary artifact types in this area, this concentration could be the result of a small trash dump containing numerous jars or bottles. As no additional evidence was observed to suggest that the historic component contains information that would qualify it for the National Register of Historic Places, no additional work is recommended on that part of the site.

On the other hand, based on our investigations at locus "A", additional assessment work is recommended to determine if intact prehistoric subsurface deposits are present at the site, and if so, whether the site meets the criteria for listing on the National Register of Historic Places.

23NM547

23NM547 is located approximately 1.0 mile (1.6 km) west of Interstate Highway 55. The site is located 9 meters east of St. Johns Bayou and consisted of both a prehistoric and historic artifact scatter spread over an area 45 m x 240 m (10,800 m^2) all of which is located within the ROW (Figure 11). Examination of the artifact distribution reveled that the primary concentration of cultural material was located in the southern half of the site. The only apparent cause of disturbance observed at this site has been the result of agricultural practices. At the time of the investigation the current vegetation at the site was soybeans, providing an over all visibility of 75% - 90% around the site. The soil in the immediate area of the site is a dark grayish brown (10YR4/2) Crevasse loamy sand. Our investigations at the site employed the use of a general surface collection as well as a controlled surface collection.

As a result of the general surface collection 71 artifacts were recovered including 1 primary decortication flake, 1 secondary decortication flake, 8 interior flakes, 1 piece of lithic shatter, 2 pieces of fire-cracked-rock, 6 Kennett Plain body sherds, 20 Barnes Cord Marked body sherds, 5 pieces of clear bottle glass, 1 piece of blue bottle glass, 1 piece of purpled bottle glass, 2 pieces of amber bottle glass, 1 piece of plain whiteware, 2 pieces of transfer printed whiteware, 4 pieces of milk glass, 7 pieces of miscellaneous earthenware, 1 piece of plain porcelain, 2 fragments of red brick, 1 piece of miscellaneous metal, 1 piece of blue insulator, 1 piece of coal, 2 cinders and 1 fragment of shell.

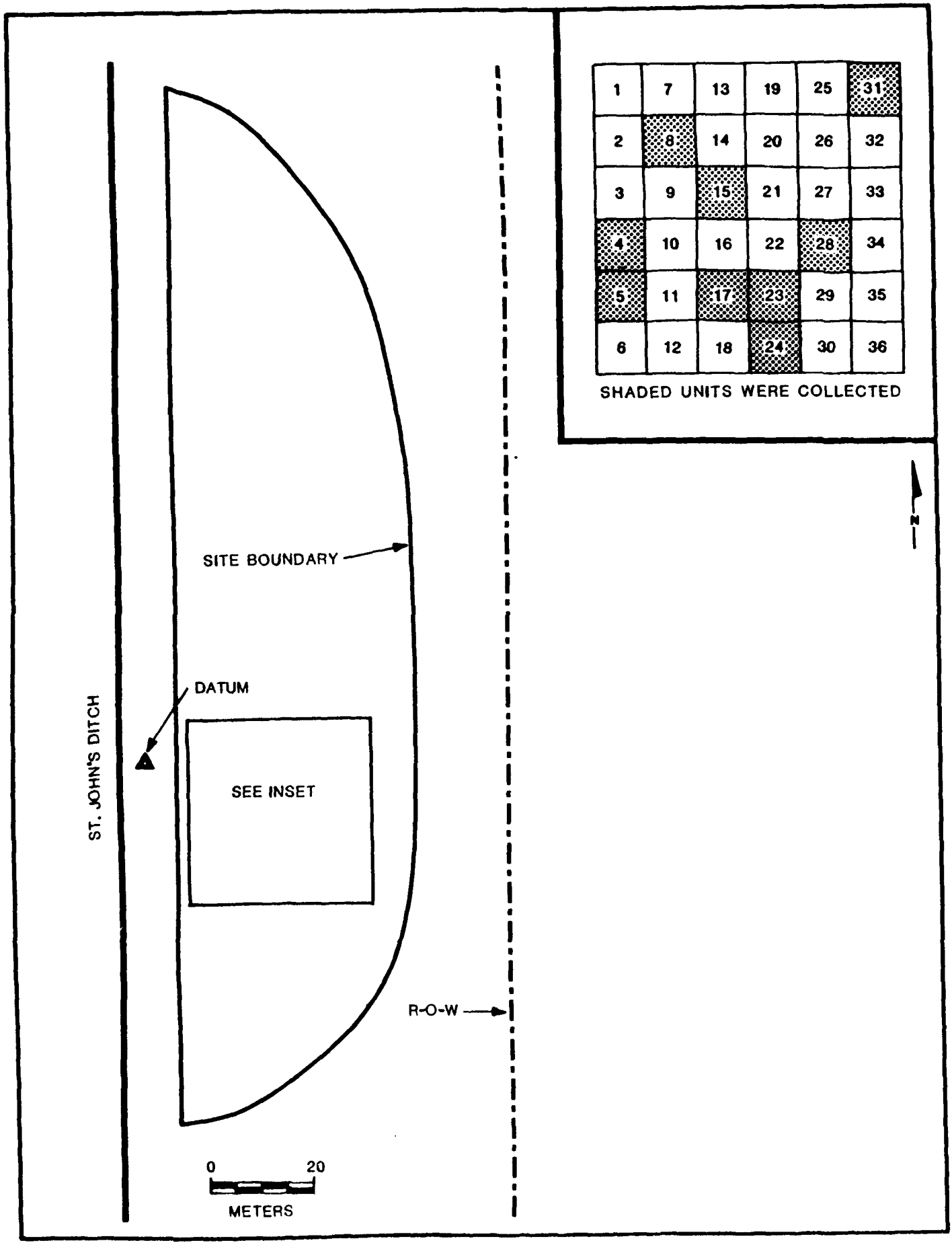


Figure 11 Sketch Map 23NM547

To aid the understanding of the surface distribution of cultural material a 36 m x 36 m (1296 m^2) grid of 6 m^2 collection units was designated in the concentrations of cultural material. A collection was made of all cultural material located from 25% of the units in the grid selected from a table of random numbers. The units chosen for the controlled collection were numbers 4, 5, 8, 15, 17, 23, 24, 28 and 31. The assemblage from the controlled collection totaled 266 artifacts.

A total of 40 artifacts representing 15% of the total number of artifacts recovered from the random units was collected in unit 4. Among these items were 3 Kennett Plain body sherds, 6 pieces of clear bottle glass, 2 pieces of purpled bottle glass, 1 piece of green bottle glass, 3 pieces of amber bottle glass, 5 pieces of plain whiteware, 1 piece of transfer printed whiteware, 6 pieces of miscellaneous earthenware, 2 pieces of clear window glass, 1 piece of red brick, 3 miscellaneous pieces of metal, 3 pieces of coal, 3 cinders and 1 piece of rubber.

Of the nine random sample surface collection units, unit 5 had the second highest artifact density. Among the 65 artifacts (24%) recovered in this unit were 1 primary decortication flake, 1 piece of fire-cracked-rock, 1 Kennett Plain body sherd, 8 pieces of clear bottle glass, 6 pieces of blue bottle glass, 5 pieces of purpled bottle glass, 1 piece of green bottle glass, 1 piece of amber bottle glass, 9 pieces of plain whiteware, 2 pieces of transfer print, 1 piece of milk glass, 3 pieces of miscellaneous earthenware, 2 pieces of clear window glass, 1 fragment of red brick, 4 pieces of coal, 15 cinders and 4 pieces of miscellaneous metal.

Only 5% of the artifacts collected from the random units were recovered in unit 8. Among the 14 items recovered were 1 interior flake, 1 piece of a blue glass bottle, 2 pieces of a purple glass bottle, 2 pieces of plain whiteware, 1 piece of miscellaneous earthenware, 5 pieces of clear window glass, 1 red brick fragment and 1 piece of miscellaneous metal.

Collection unit 15 yielded 19 artifacts representing 7% of the total number of artifacts recovered in the random sample units. Collected from the surface of this unit were 1 Kennett Plain body sherd, 1 Barnes Cord Marked body sherd, 2 pieces of clear bottle glass, 1 piece of purpled bottle glass, 2 pieces of plain whiteware, 4 pieces of miscellaneous earthenware, 1 fragment of clear window glass, 1 fragment of red brick, 3 pieces of coal and 3 cinders.

The assemblage of 21 artifacts (8%) from collection unit 17 includes 8 pieces of clear bottle glass, 4 pieces of blue bottle glass, 3 pieces of purpled bottle glass, 1 piece of milk glass, 1 fragment of miscellaneous earthenware, 2 fragments of clear window glass, 1 fragment of red brick and 1 piece of miscellaneous metal.

Artifact density was greatest in unit 23 where 92 artifacts (35%) were recovered. These include the following: 6 pieces of clear bottle glass, 2 pieces of blue bottle glass, 1 piece of purpled bottle glass, 1 piece of green bottle glass, 2 pieces of plain whiteware, 2 pieces of miscellaneous earthenware, 2 pieces of clear window glass, 4 fragments of red brick, 4 miscellaneous pieces of metal, 9 fragments of coal and 59 cinders.

Collection unit 24 yielded 10 artifacts (4%) including 1 each of clear, blue, purpled, green and amber bottle glass, 1 piece of plain whiteware, 2 fragments of clear window glass and 1 fragment of concrete.

Only 5 artifacts, representing just 2% of the total artifact collection from the random sample units, were found in collection unit 28. These items

included 1 Barnes Cord Marked body sherd, 2 pieces of clear bottle glass, 1 piece of blue bottle glass and 1 piece of miscellaneous metal.

Collection unit 31, the last of the random sample, contained no cultural material.

Within the controlled surface collection grid, a slight concentration was revealed in the area of units 4, 5 and 28 which may indicate an area of cultural activity. No above ground historic features were observed or other evidence that would suggest that this site is more than the location of an historic trash dump.

In regard to the prehistoric component, it is not known whether undisturbed subsurface deposits are present at the site. The surface material suggests this site represents the remains of a Late Woodland habitation site. Additional assessment work is recommended for the prehistoric component at this site to evaluate its significance.

23NM553

23NM553 is located approximately 1.0 mile (1.6 km) west of Interstate Highway 55. The site is located 30 meters east of St. Johns Bayou and consisted of both a prehistoric and historic artifact scatter spread over an area 190 m x 830 m (157,700 m^2) most of which is located outside of the ROW (Figure 12). Based on the review of the GLO maps this site is on a rise on the east bank of one of the main channels of St. Johns Bayou, described as Lake St.John, at the time of the GLO survey between 1818 and 1852.

Examination of the artifact distribution reveled that the primary concentration of cultural material was, an area approximately 80 m x 140 m (11,200 m^2), located in the southern half of the site. The only apparent cause of disturbance observed at this site has been the result of agricultural practices. At the time of the investigation, the field had recently been plowed providing an over all visibility of approximately 100% around the site. The soil in the immediate area of the site is a dark yellowish brown (10YR3/6) Crevasse loamy sand. Based upon the density and extent of the artifacts observed during the general surface collection when the site was first located, the investigations at this site included a controlled surface collection.

A general surface collection was conducted over the whole site area. The primary goal of the general surface collection was to collect all probable diagnostic artifacts to help in the interpretation of the site. The surface collection resulted in the recovery of 44 artifacts including 3 secondary decortication flakes, 8 interior flakes, 2 retouch flakes, 1 broken flakes, 2 dart point fragments, 1 fragment of ground or pecked stone, 5 pieces of Kennett Plain body sherds, 8 pieces of Barnes Cord Marked body sherds, 2 pieces of Barnes Punctate body sherds, 1 fragment of miscellaneous burned clay, 1 Poverty Point Object fragment, 2 pieces of blue bottle glass, 3 pieces of purpled bottle glass, 1 piece of amber bottle glass and 4 pieces of plain whiteware.

To aid the understanding of the surface distribution of cultural material a 36 m x 36 m (1,296 m^2) grid of 6 m^2 collection units was designated in the area of heaviest concentrations of cultural material. A collection was made of all cultural material located from 25% of the units in the grid selected from a table of random numbers. The units chosen for the controlled collection were numbers 2, 3, 11, 15, 17, 23, 30, 33, and 34.

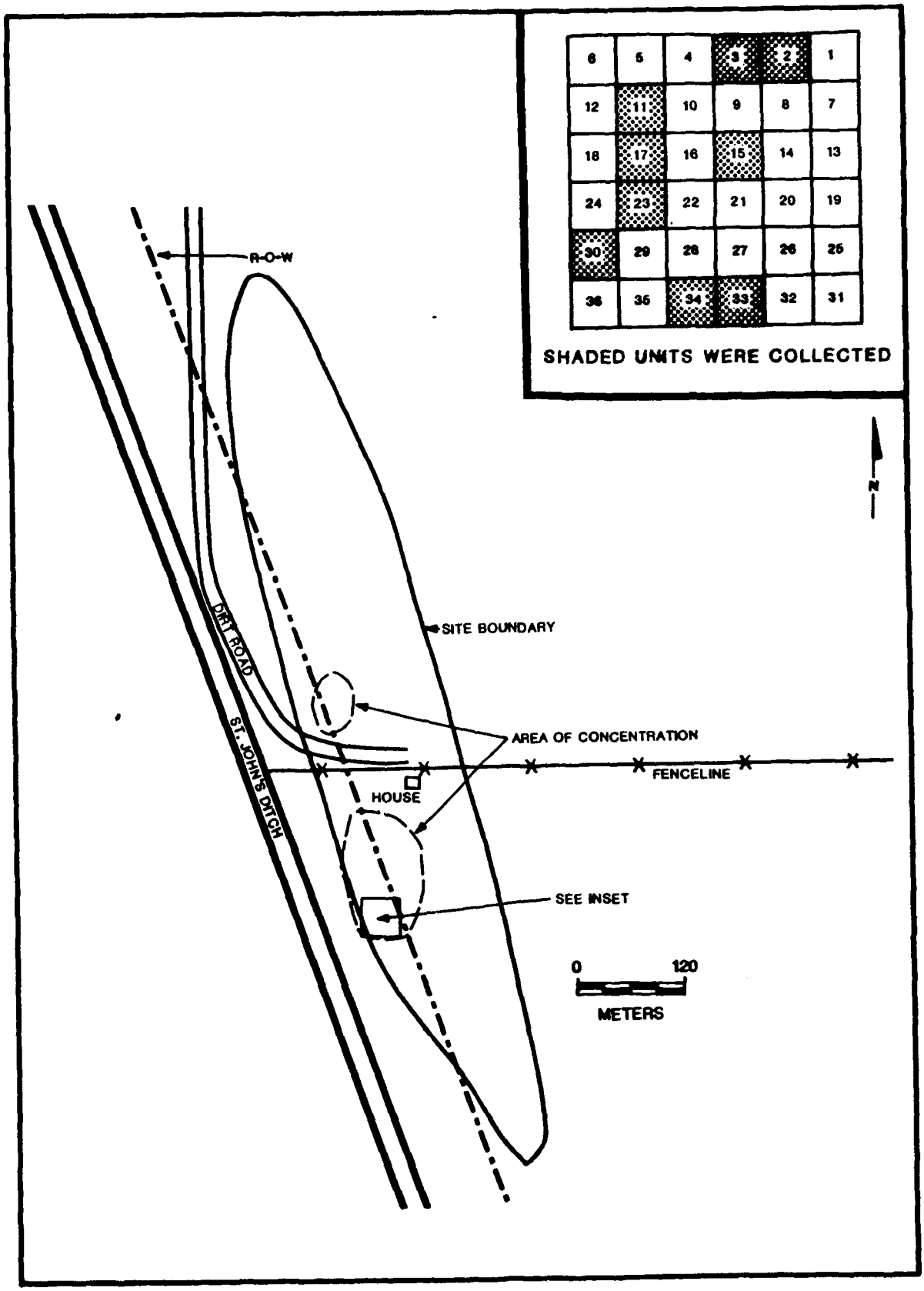


Figure 12. Sketch Map 23NM553

On the average, less than nine artifacts were recovered per random sample surface collection unit. As a result of the 25% sample, only 77 artifacts were recovered from the surface in the units chosen at random.

Only 1 artifact, an interior flake, was found in unit 2. Six artifacts including 1 interior flake, 1 Kennett Plain body sherd and 4 pieces of miscellaneous burned clay were recovered in unit 3. Two Kennett Plain body sherds were collected in unit 11. Nine artifacts were recovered from unit 15 including 4 interior flakes, 1 Kennett Plain body sherd, 1 piece of clear bottle glass, 2 pieces of amber bottle glass and 1 fragment of miscellaneous earthenware. Ten artifacts were found in unit 17 including 3 interior flakes, 2 retouch flakes, 1 fire cracked rock, 3 Barnes Cord Marked body sherds and 1 piece of miscellaneous burned clay.

Unit 23 yielded the most material of any of these nine units. The 16 artifacts found in this unit includes 3 interior flakes, 1 Kennett Plain body sherd, 1 Barnes Cord Marked body sherd, 4 pieces of miscellaneous burned clay, 4 pieces of clear bottle glass, 2 pieces of purpled bottle glass and 1 fragment of plain whiteware.

Unit 30 yielded the second highest number of artifacts of the nine units. Among the 13 artifacts recovered from this unit were 2 secondary decortication flakes, 4 interior flakes, 1 modified flake, 3 Kennett Plain body sherds, 1 piece of blue bottle glass and 2 pieces of plain whiteware.

Ten artifacts apiece were collected from units 33 and 34. Among the items found in unit 33 were 1 secondary decortication flake, 1 interior flake, 2 Kennett Plain body sherds, 3 pieces of miscellaneous burned clay, 2 pieces of purpled bottle glass and 1 fragment of miscellaneous metal. Among the 10 artifacts recovered in unit 34 were 3 interior flakes, 5 Kennett Plain body sherds, 1 Barnes Punctate rim sherd and 1 fragment of miscellaneous rubber.

The results of the controlled surface collection indicate that the density of cultural material at the site was relatively light. No above ground historic features were observed or other evidence that would suggest that the historic component of this site is more than the location of an historic trash dump.

However, the possibility of prehistoric subsurface deposits may exist. A high potential for its use during prehistoric times is suggestive by the location of the site on a rise overlooking St. Johns Bayou. The site may have functioned as either a specialized activity area or some sort of base camp. Additional assessment work is recommended at this site.

23ST208

23ST208 is located approximately 1.0 mile (1.6 km) west of Interstate Highway 55. The site is located 50 meters east of St. Johns Bayou located on a sandy rise. This site is in the general location of a rise noted on the GLO map of this area and was near the confluence of Cypress Slough and "Lake St. John" as indicated on the 1818 - 1852 GLO map . The site consisted of a prehistoric artifact scatter spread over an area 75 m x 130 m (9750 m^2) of which an area approximately 25 m x 85 m (2125 m^2) is located within the ROW (Figure 13). The only apparent cause of disturbance observed at this site has been the result of agricultural practices. At the time of the investigation, the field was fallow, but because vegetation was very sparse, visibility was very good to excellent (approximately 75% - 100%). The soil at the site was a dark yellowish brown (10YR3/4) Scoto sandy loam.

A general surface collection was conducted over the whole site area with a primary goal being to collect all probable diagnostic artifacts to help in

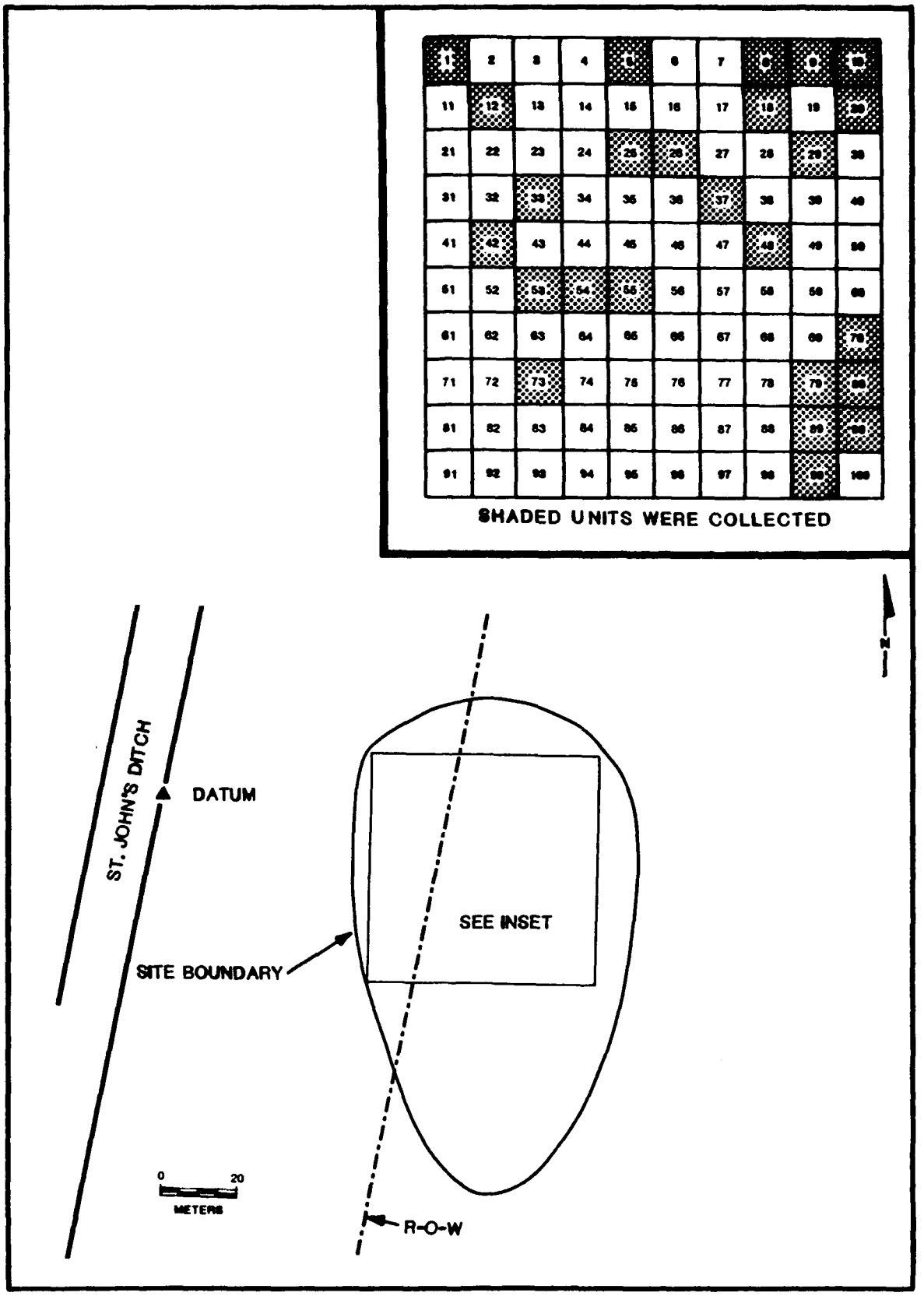


Figure 13. Sketch Map 23ST208

the interpretation of the site. As a result of the general surface collection 13 artifacts were recovered including 1 modified flake, 1 bifacial preform, 1 indeterminent bifacial fragment, 1 biface tip with alternately beveled lateral notches (Figure 9o), 1 possible bifacial base fragment, 1 small stemmed projectile point/knife that appears similar to general Woodland types, 1 pitted cobble, 1 miscellaneous ground or pecked stone, 1 Barnes Cord Marked rim sherd, 1 Mulberry Creek Cord Marked rim sherd, 1 Mulberry Creek Cord Marked rim sherd with a folded and pinched rim (Figure 9p) and 2 fragments of possible Poverty Point Objects.

The projectile point was manufactured from a brown or dark tan chert measures 47.5 mm x 19 mm x 9 mm (Figure 9q). It exhibits a biconvex cross section on a straight blade and a slightly expanding stem. Although this point could not be accurately typed, its general shape is similar to small stemmed points associated with Woodland period tool assemblages.

Because of the density and extent of the artifacts observed during the general surface collection when the site was first located, a controlled surface collection was also conducted.

To aid the understanding of the surface distribution of cultural material a 60 m x 60 m (3,600 m^2) grid of 6 m^2 collection units was designated in the area of heaviest concentrations of cultural material. A collection was made of all cultural material located from 25% of the units in the grid selected from a table of random numbers. The units chosen for the controlled collection were numbers 1, 5, 8, 9, 10, 12, 18, 20, 25, 26, 29, 33, 37, 42, 48, 53, 54, 55, 70, 73, 79, 80, 89, 90 and 99. As a result of this surface collection 387 artifacts were recovered from the random units (Appendix B). No artifacts were recovered from collection units 1 and 10.

No above ground historic features were observed or other evidence that would suggest that the small historic component of this site is more than the location of a light historic artifact scatter.

Prehistoric lithic debitage was found to be lightly distributed across the site. Lithic material was recovered from all of the collection units except for units 1, 8, 10, 20 and 70. The arrow point found in collection unit 54 was manufactured from a light reddish tan chert flake and measured 30 mm x 17 mm x 3.5 mm (Figure 9r). It exhibits a convex blade shape with corner notched base. While this point could not be accurately placed within any particular type category it general shape is similar to those of the Middle Mississippi period.

The predominate artifact type recovered within the random sample surface collections at this site was prehistoric ceramics (n=187; 48% of 387). Only two types of prehistoric ceramics are represented: Kennett Plain and Barnes Cord Marked. Of these two types, Kennett Plain sherds were the most plentiful (n=141; 75%) followed by Barnes Cord Marked (n=46; 25%).

Based upon the results of the controlled surface collections, an almost continuous distribution of Kennett Plain sherds across the site was revealed: Kennett Plain sherds were recovered in every collection unit except for units 1, 10 and 20. Although the site was littered with Kennett Plain sherds, a definite concentration or concentrations of them were apparent in units 18, 21, 26, 33 and 37; indeed, these units account for 60% (n=85) of the Kennett Plain sherds recovered at the site.

Likewise, the Barnes Cord Marked sherds were found to be distributed widely across the site. Sherds of this type were recovered in all the control units except for units 1, 5, 10, 20, 48 and 55. As in the case of the

concentration(s) of Kennett Plain sherds in units 18, 21, 26, 33 and 37, a similar concentration or concentrations of Barnes cord Marked sherds in these units is evident (n=26; 57%).

The higher densities in these five units are suggestive of two or more activity areas. This site may have functioned either a small habitation site or a often used specialized activity area over an extended period of time. Based on these data the site may have been occupied at various times during the Early, Middle and Late Woodland and Middle Mississippi periods. However, the possibility of prehistoric subsurface deposits may exist. The location of the site on a rise overlooking St. Johns Bayou would have been attractive for people in prehistory.

Further assessment of this site is recommended to assess its significance.

23ST209

23ST209 is located approximately 0.5 miles (0.8 km) south of the Missouri Pacific railroad. The site is located 19 meters east of St. Johns Bayou ditch and consisted of a very small prehistoric artifact scatter spread over an area 3 m x 3.5 m (10 m^2), all of which is located within the ROW (Figure 14). The only apparent cause of disturbance observed at this site has been the result of probable agricultural practices, and more recently residential and/or commercial activities around the site. The soil at the site is a dark grayish brown (10YR3/2) Scoto Sand.

Because artifact density at the site was low a 100% surface collection was conducted. Six artifacts were recovered at the site including 1 secondary decortication flake and 5 interior flakes.

Based on the cultural remains observed, this site is the remains of a small prehistoric site of indeterminate function. No areas of artifact concentrations could be identified. Based upon our preliminary review, this site contains data which, even when viewed in its most favorable light, would not make it eligible for inclusion on the National Register of Historic Places. No further cultural resources work is recommended at this site.

North Cut Ditch

The project area along North Cut Ditch, between mile 0 - 18.7, was surveyed intensively within a 180 ft (54.9 m) ROW on both banks of the ditch. Later modifications to the contract required an additional 100 ft (30.5 m) ROW surveyed on the east bank between mile 3.2 - 4.4, and on the west side between mile 16.7 and 17.3 of North Cut Ditch. Ground cover within the approximate 816 acres (330.24 ha) of the ROW was composed primarily of cultivated row crops (88.3% of the east bank and 78.8% of the west bank) with the remaining acreage in pasture or fallow fields (6.1% of the east bank and 16.3% of the west bank), wooded lots (2.2% of the east bank)and residential or commercial areas (3.4% of the east bank and 4.9% of the west bank). Due to the good to excellent 51% - 100%) visibility within the majority of the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing and shovel testing at regular intervals in the areas of low surface visibility. The survey of this segment resulted in the location of 23NM552, 23NM554, 23NM555, 23ST210 and 23ST211.

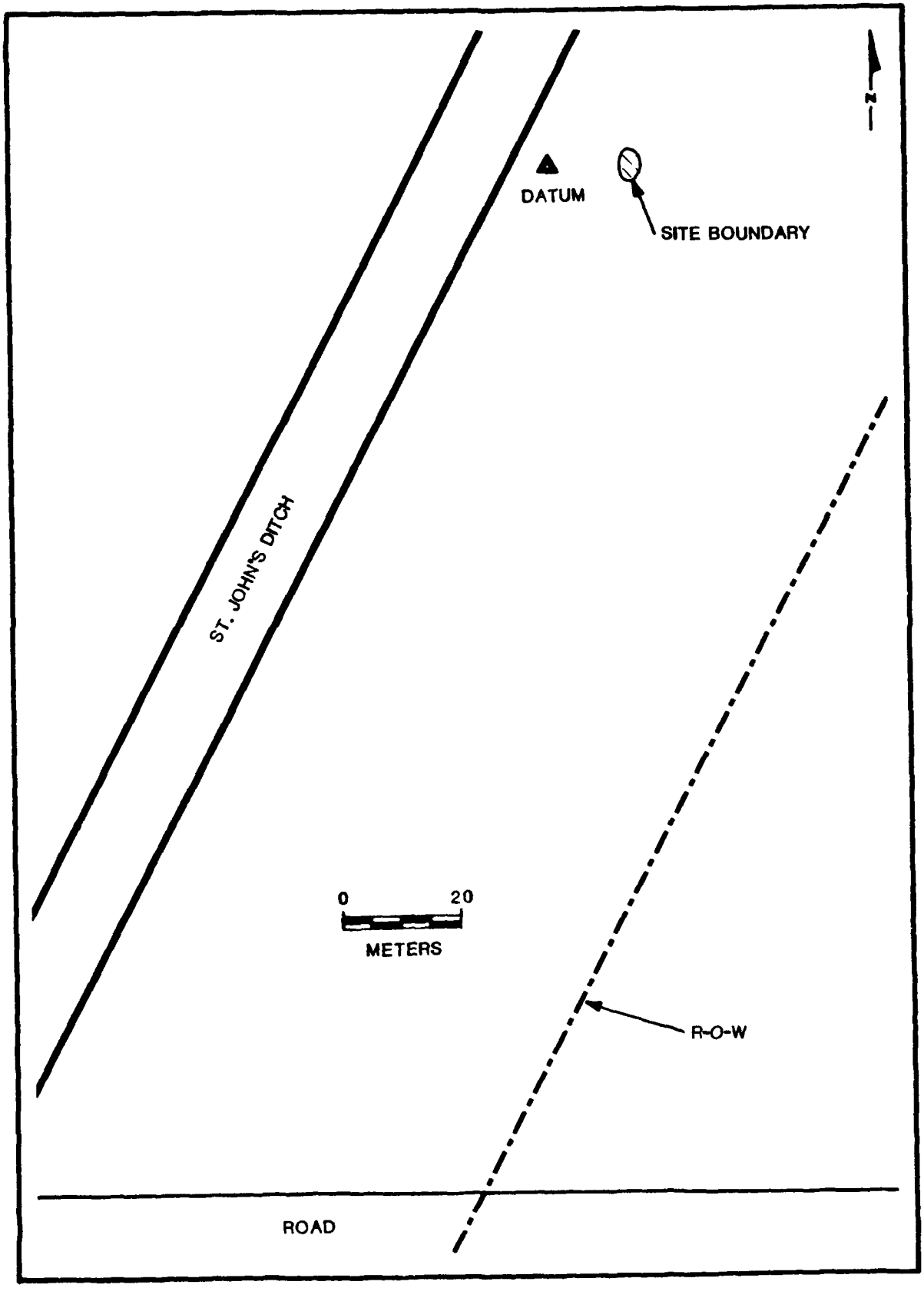


Figure 14. Sketch Map 23ST209

23NM552

23NM552 is located approximately 0.5 mile (0.8 km) west of Interstate Highway 55. The site is located at the edge of North Cut Ditch and consisted of the remains of an historic bridge that was destroyed in the construction of a more modern bridge at the same location (Figure 15). The site size is limited to the location of several blocks of stone each approximately 30 cm3 and found within a 2 m x 2 m area near the waters edge. No other evidence of the original bridge was observed. Based upon our preliminary review, this site contains data which, even when viewed in its most favorable light, would not make it eligible for inclusion on the National Register of Historic Places. No further cultural resources work is recommended at this site.

23NM554

23NM554 is located approximately 0.5 mile (0.8 km) west of Interstate Highway 55. The site is located 15 meters east of North Cut Ditch and consisted of a prehistoric artifact scatter located on a low sand rise. Based on the topography of the area, it appears that the location of North Cut Ditch, at this point, is close to the previous location of some unnamed slough. The known site size covers an area of 128 m x 175 m (22,400 m^2) of which an area approximately 40 m x 120 m (4800 m^2) is located within the ROW (Figure 16). The only apparent cause of disturbance observed at this site has been the result of agricultural practices. At the time of the investigation, the field had recently been plowed providing an over all visibility of near 100% around the site. The soil at the site was a dark brown (10YR4/3) Crevasse loamy sand.

A 100% surface collection was made at the site. A grid of 10 m units was laid out over the site area. Although this size of units was larger than that specified by the scope of work, it was determined in the field to be a satisfactory approach to the site. Each collection unit was then collected and the general artifact types (eg. flake, ceramic, shatter/fcr, ppk/biface, cobble or grinding stone) from each unit were recorded while in the field. The individual collection unit provenience of the artifatcs were not recorded resulting in a single general surface collection. The densities indicated on Figure 16 show the relative locations of the artifacts observed in the field.

Among the 107 artifacts collected from the surface of the site were the following items: 1 (1%) tested cobble, 1 (1%) core, 10 (3%) primary decortication flakes, 3 (9%) secondary decortication flakes, 38 (36%) interior flakes, 2 (2%) retouch flakes, 3 (3%) pieces of lithic shatter, 3 (3%) modified flakes, 4 (4%) broken flakes, 1 (1%) stemmed projectile point/knife, 4 (4%) fire cracked rock, 1 (1%) miscellaneous ground or pecked stone, 11 (10%) Kennett Plain body sherds, 7 (6%) Barnes Cord Marked body sherds, 1 (1%) Barnes Cord Marked rim sherd, 1 (1%) Pascola Punctate body sherd (Figure 9s), 6 (6%) fragments of Poverty Point Objects and 10 (9%) miscellaneous pieces of burned clay.

The projectile point recovered in the general collection was manufactured from a grayish chert and measures 42 mm x 18 mm x 7 mm (Figure 9t). This point exhibits biconvex cross section with a straight to slightly convex blade shape and a slightly expanding stem. Although the point could not be accurately placed within any particular typological category it is similar to the stemmed points of the Woodland period.

The artifact densities indicate the location of the concentration of the cultural material. Based on the topographic location and the cultural remains

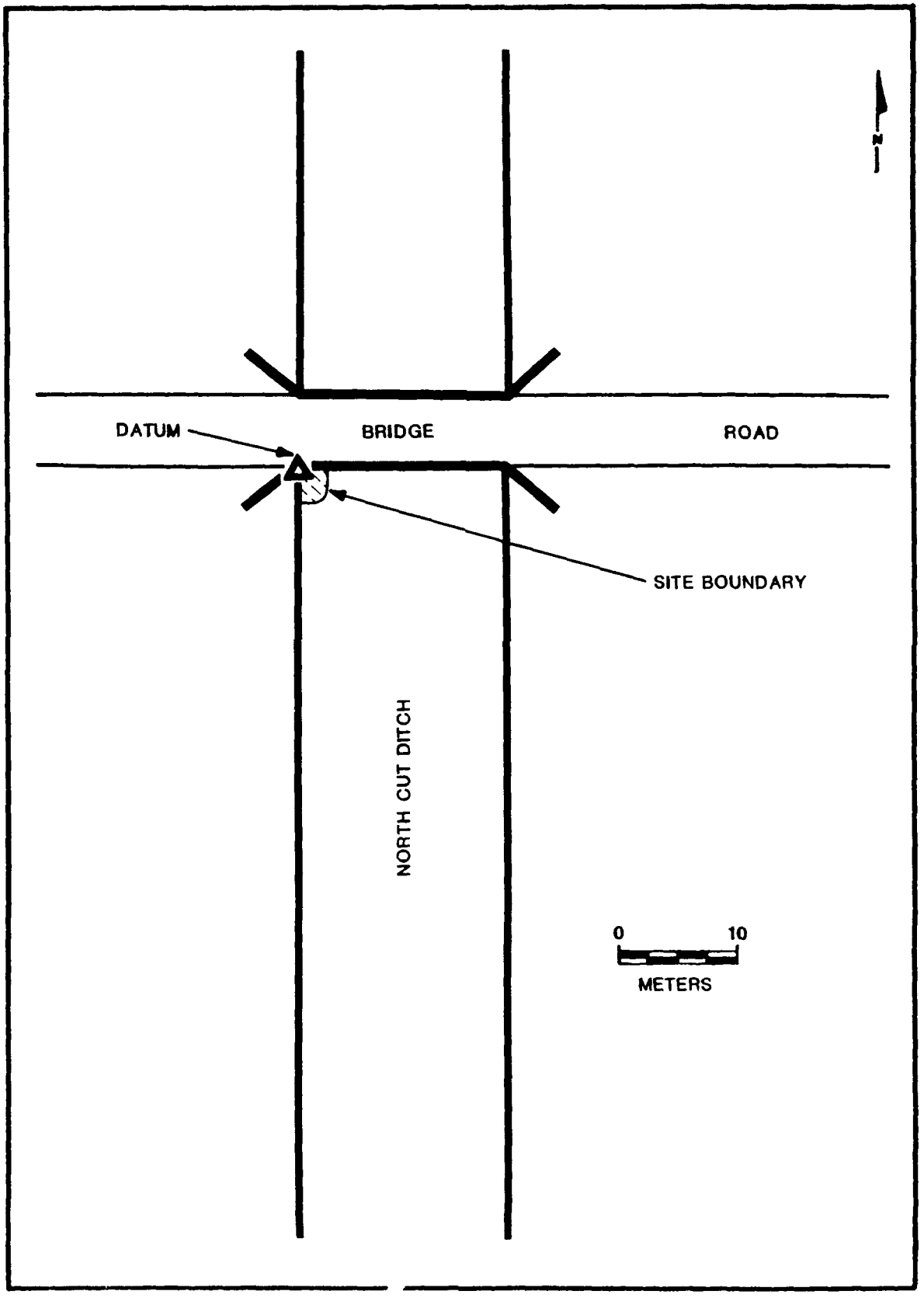


Figure 15. Sketch Map 23NM552

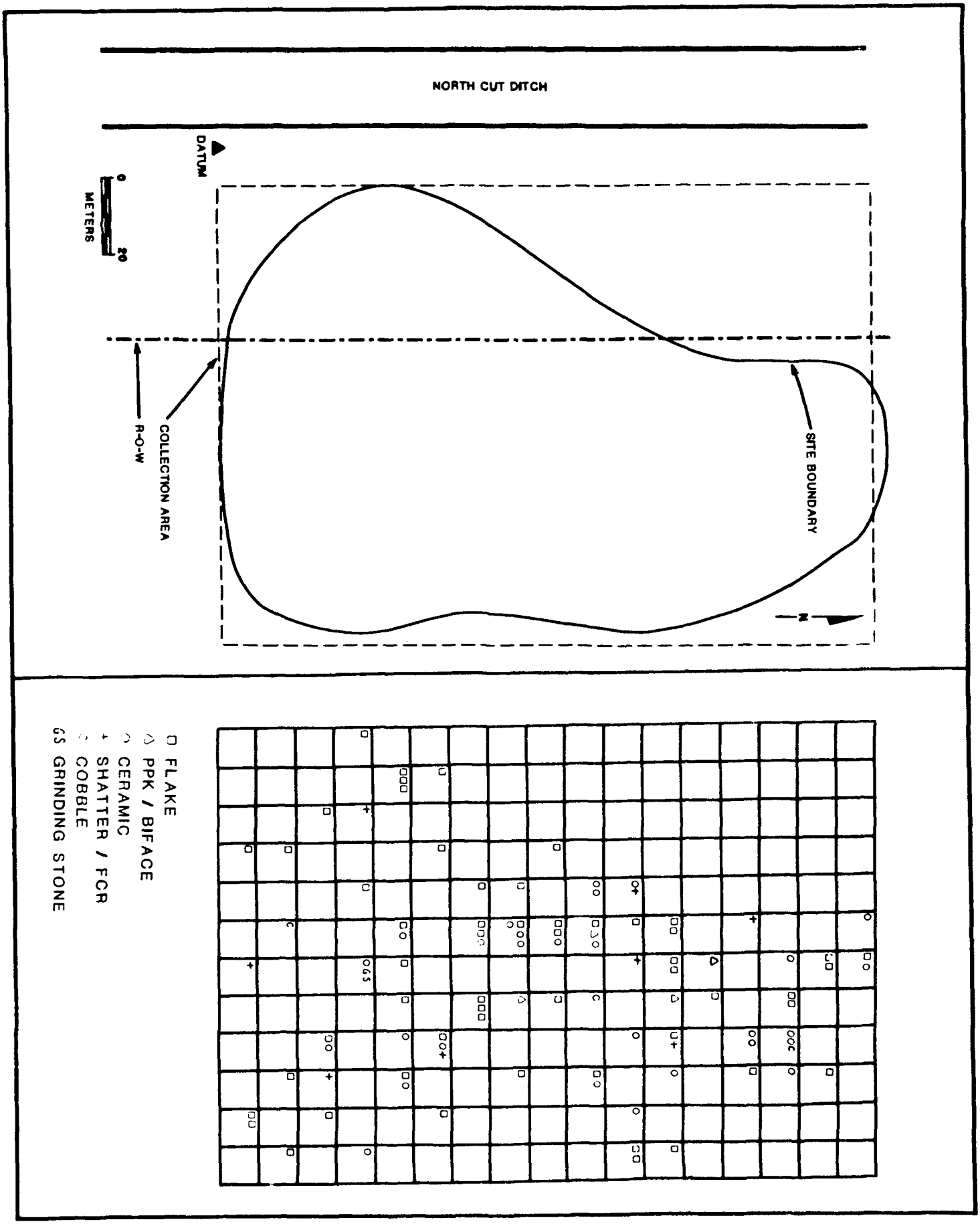


Figure 16. Sketch Map 23NM554

observed, this site is the remains of a small prehistoric base camp during the Early and Late Woodland periods. While the surface matrix is extremely soft and loose there is the potential that the remains of subsurface features or other deposits may be recovered from below the plowzone.

Archeological testing of this site is recommended to assess its significance.

23NM555

23NM555 is located approximately 0.5 mile (0.8 km) west of Interstate Highway 55. The site is located 17 meters east of North Cut Ditch and consisted of a prehistoric artifact scatter located on a low sand rise. Based on the topography of the area it appears that the location of North Cut Ditch at this point is close to the previous location of some unnamed slough. The known site size covers an area of 55 m x 63 m (3,465 m2) of which and area approximately 38 m x 63 m (2,394 m2) is located within the ROW (Figure 17). The only apparent cause of disturbance observed at this site has been the result of agricultural practices. At the time of the investigation the field had recently been plowed providing an over all visibility of near 100% around the site. The soil in the immediate area of the site is classified as Canalou loamy sand and was a dark brown 10YR4/3. Based on the density and extent of the artifacts observed during the initial investigations a 100% surface collection was made over the entire site area.

During the investigation of this site a grid of 10 m units was laid out over the site area. Although this size of units was larger than that specified by the scope of work, it was determined in the field to be a satisfactory approach to the site. Each collection unit was then collected and the general artifact types (eg. flake, ceramic, shatter/fcr, bone or cobble) from each unit were recorded while in the field. The individual collection unit provenience of the artifatcs were not recorded resulting in a single general surface collection. The densities indicated on Figure 17 show the relative locations of the artifacts observed in the field.

The 550 artifacts collected at the site included the following: 1 (§1%) core, 6 (1%) primary decortication flakes, 19 (3%) secondary decortication flakes, 118 (22%) interior flakes, 4 (1%) retouch flakes, 31 (6%) pieces of lithic shatter, 1 (§1%) modified flake, 1 (§1%) pp/k stem fragment, 57 (10%), fire cracked rocks, 7 (1%) pieces of Hematite, 105 (19%) Kennett Plain body sherds, 2 (§1%) Kennett Plain rim sherds, 84 (15%) Barnes Cord Marked body sherds, 1 (§1%) Barnes Cord Marked rim sherd, 1 (§1%) Pascola Punctate body sherd, 1 (§1%) Old Town Red body sherd, 1 (§1%) Mississippi Plain rim sherd, 32 (6%) fragments of Poverty Point Objects, 74 (13%) miscellaneous pieces of burned clay and 3 (§1%) fragments of unidentified bone.

The pp/k fragment recovered in the general collection was manufactured from a brownish gray chert. The remaining portion of this point is a slightly expanding stem. Due to the poor condition of the fragment it could not be accurately placed within any typological category.

The artifact densities indicate the location of the majority of the cultural material and suggest the location of the primary activity area in a small, 20 m x 30 m, area. This site possibly represents the remains of a small prehistoric base camp. Cultural material recovered during the investigation indicates this site was occupied during the Early, Middle and Late Woodland and Middle Mississippi periods. As the surface matrix is extremely soft and loose, the concentration of material suggests that subsurface features may be present below the plowzone.

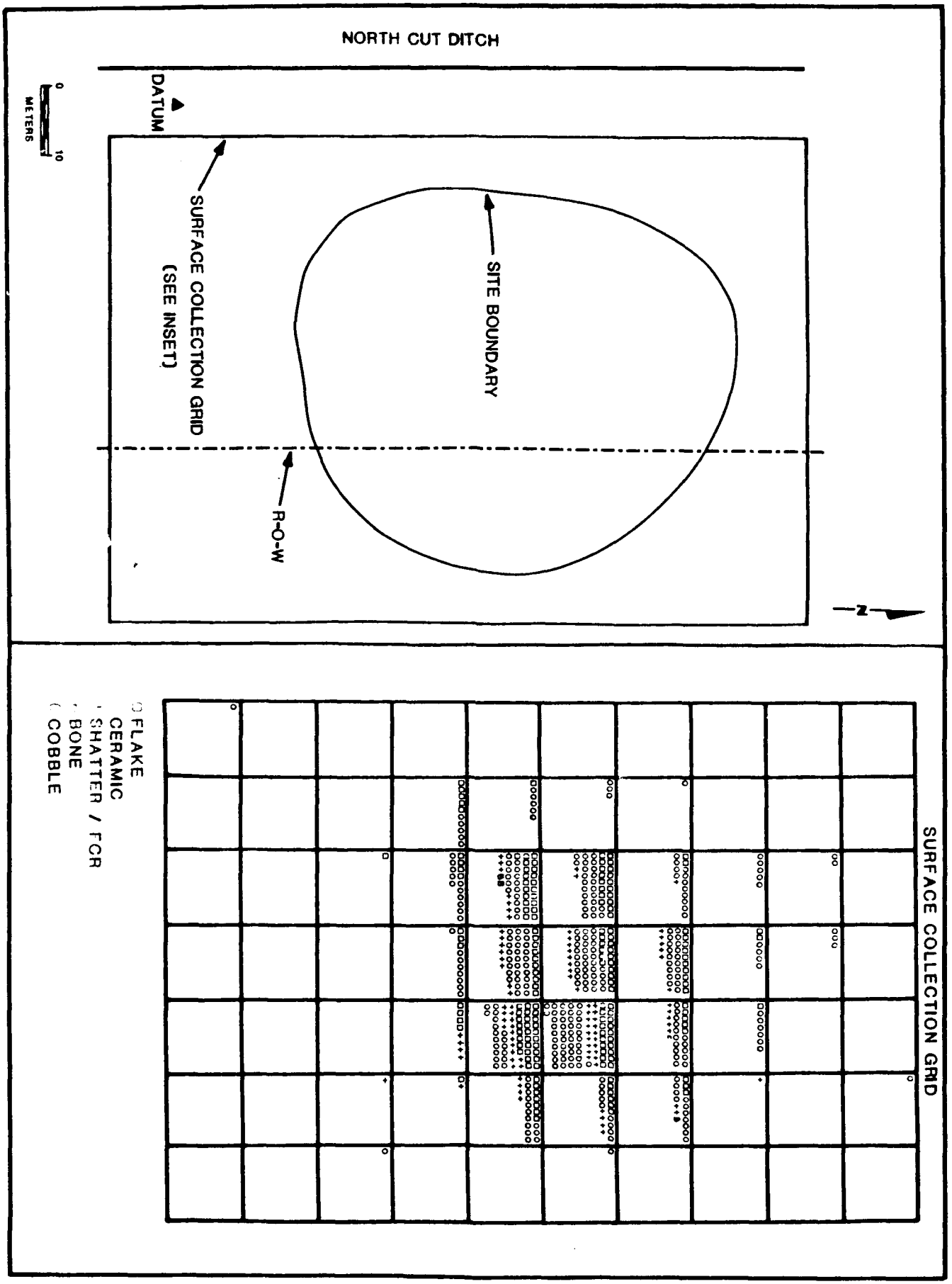


Figure 17. Sketch Map 23NM555

Archeological testing of this site is recommended to assess its significance.

23ST210

23ST210 is located approximately 0.3 miles (0.4 km) east of Highway 77. The site is located 35 meters west of North Cut Ditch on the east slope of a sandy rise. This site is in the general location of the edge of a back swamp noted on the 1854 GLO map of this area. The site consisted of a prehistoric artifact scatter spread over an area 125 m x 375 m (60,210 m2) of which an area approximately 20 m x 180 m (3,600 m^2) is located within the ROW (Figure 18). The only apparent cause of disturbance observed at this site has been the result of agricultural practices. At the time of the investigation the field was fallow but in the area the vegetation was very sparse providing an over all visibility of approximately 75% - 100% around the site. The soil in the immediate area of the site is classified as Scoto sandy loam which was a dark yellowish brown 10YR3/4. Based on the density and extent of the artifacts observed during the general surface collection when the site was first located, the investigations at this site included a controlled surface collection.

A general surface collection was taken over the whole site area with a primary effort to collect probable diagnostic artifacts to insure the collection of all material that would assist in the interpretation of the site. The general surface collection resulted in an 20 artifacts including 5 bifacial fragments, 1 bi-pointed perforator, 1 large projectile point/knife, 1 corner-notched arrow point, 1 miscellaneous ground or pecked stone, 1 pestle, 1 pitted cobble, 2 Kennett Plain body sherds, 1 Barnes Cord Marked body sherd, 1 Mississippi Plain rim sherd, 2 pieces of clear bottle glass, 1 piece of amber bottle glass, 1 fragment of plain whiteware and 1 fragment of miscellaneous earthenware.

The bi-pointed perforator was manufactured from a reddish brown chert and measures 45.5 mm x 14 mm x 10 mm (Figure 9u). The large arrow point was manufactured from a red chert and measures 56 mm x 31 mm x 7 mm (Figure 9v). The distal end has been modified for use as an awl or perforator. It exhibits a flattened cross section and a contracting stem with a rounded base. This point is most similar to the Gary type used during the Early and Middle Woodland periods. The arrow point was manufactured from a very light tan chert and measures 37 mm x 15 mm x 4 mm (Figure 9w). It exhibits a flattened cross section with a convex blade shape and a small corner notched base. Although this arrow point could not be clearly typed it is most similar to those types used during the Middle Mississippi period.

To aid the understanding of the surface distribution of cultural material a 60 m x 60 m (3,600 m2) grid of 6 m^2 collection units was designated in the area of heaviest concentrations of cultural material. A collection was made of all cultural material located from 25% of the units in the grid selected from a table of random numbers. The units chosen for the controlled collection were numbers 3, 4, 6, 8, 12, 16, 17, 27, 29, 33, 35, 36, 39, 43, 45, 49, 59, 62, 65, 68, 73, 76, 82, 87 and 91. The controlled collection totaled 143 artifacts.

A single fire cracked rock was in unit 3. Unit 4 yielded 1 secondary decortication flake and 2 fire cracked rocks. Among the 18 artifacts recovered from unit 6 were 1 secondary decortication flake, 5 interior flakes, 2 retouch flakes, 9 fire cracked rocks and 1 Barnes Cord Marked body sherd. Unit 8 produced 3 secondary decortication flakes, 2 interior flakes, 2 fire

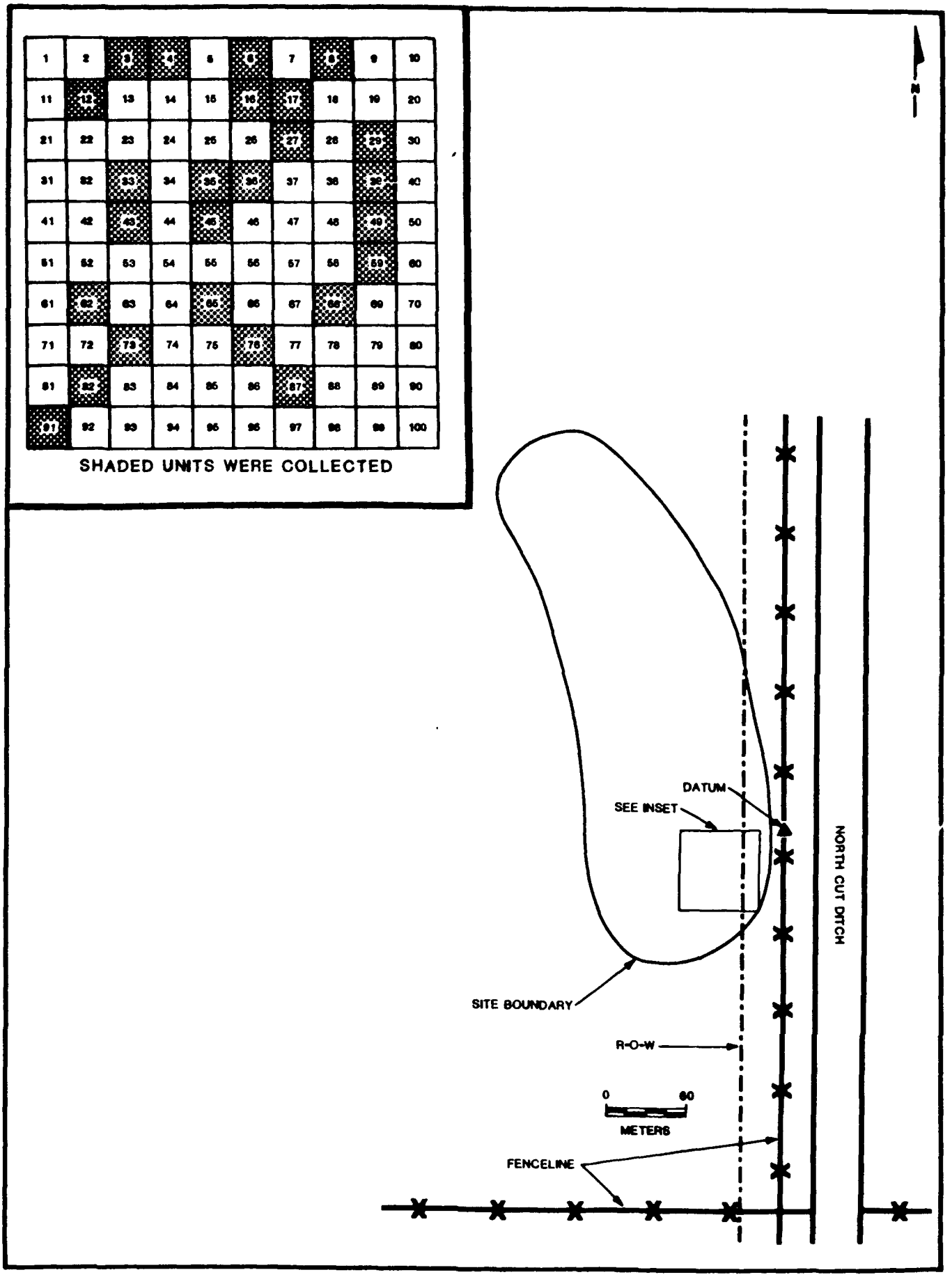


Figure 18. Sketch Map 23ST210

cracked rocks and 1 square-stemmed projectile point/knife fragment of indeterminent type. A single retouch flake was in collection unit 12. Unit 16 had 2 interior flakes and 4 fire cracked rocks in it. One interior flake and 3 fire cracked rocks were in unit 17. Unit 27 yielded 3 interior flakes and 3 fire cracked rocks. Among the 19 artifacts recovered in unit 29 were 6 interior flakes, 2 retouch flakes, 10 fire cracked rocks and 1 biface fragment. Unit 33 produced 1 primary decortication flake, 2 secondary decortication flakes, 2 interior flakes and 1 fire cracked rock. Unit 35 had 2 interior flakes and 1 fire cracked rock in it. Unit 36 had 1 secondary decortication flake, 2 interior flakes and 1 fire cracked rock. Seven fire cracked rocks were in unit 39; 3 more were in unit 43. Unit 45 yielded 5 secondary decortication flakes, 1 interior flake, 1 fire cracked rock and 1 piece of miscellaneous burned clay. Found in unit 49 were 1 core, 1 interior flake and 6 fire cracked rocks. Unit 59 had 1 secondary decortication flake, 3 interior flakes and 3 fire cracked rocks in it. Two interior flakes and 3 fire cracked rocks were found in unit 62. A secondary decortication flake, 1 interior flake and 4 fire cracked rocks were recovered in unit 65. Two interior flakes were in unit 68. Unit 73 had 1 interior flake and 1 piece of unmodified lithic. Recovered in unit 76 were 3 interior flakes and 5 fire cracked rocks. Unit 82 yielded 2 interior flakes; unit 87 yielded 1 core and 4 pieces of lithic shatter; and a single interior flake was recovered from collection unit 91.

Although the average density of the cultural material over the controlled collection area was relatively low, it is suggested that this site represents the remains of a small base camp repeatedly used over a long time span. Among our collections are diagnostic artifacts from the Early, Middle and Late Woodland and Middle Mississippi periods. In examining the James Sneed collection (Mr. Sneed farms the land where the site is located), Dr. James Price noted that the Sneed collection includes projectile points from Dalton through the Proto-Historic periods, several chert hoes, celts, a broken discoidal and a mortar. Evidence of such a lengthy period of occupation make this site unique in the project area; consequently, it has the potential to provide information on a number of research questions. The possiblity exists that subsurface features or other deposits may be present below the plowzone.

Further assessment of this site is recommended to assess its significance.

23ST211

23ST211 is located approximately 1.0 mile (1.6 km) east of Highway 77. The site is a railroad bridge connected with the recently abandoned Missouri Pacific Railroad (Charleston-Oran Line) that crosses North Cut Ditch in its route. The current site size is limited to the bridge and that part of the grade within the project ROW (Figure 19). A collection of 1 railroad spike and 2 pieces of gravel from the grade was retained as part of the investigation of this site.

Although the location and use of the railroad has had important affects on the local economy and history of the area, the site has almost no archeological research value. Based upon our preliminary review, this site contains data which, even when viewed in its most favorable light, would not make it eligible for inclusion on the National Register of Historic Places. No further cultural resources work is recommended at this site.

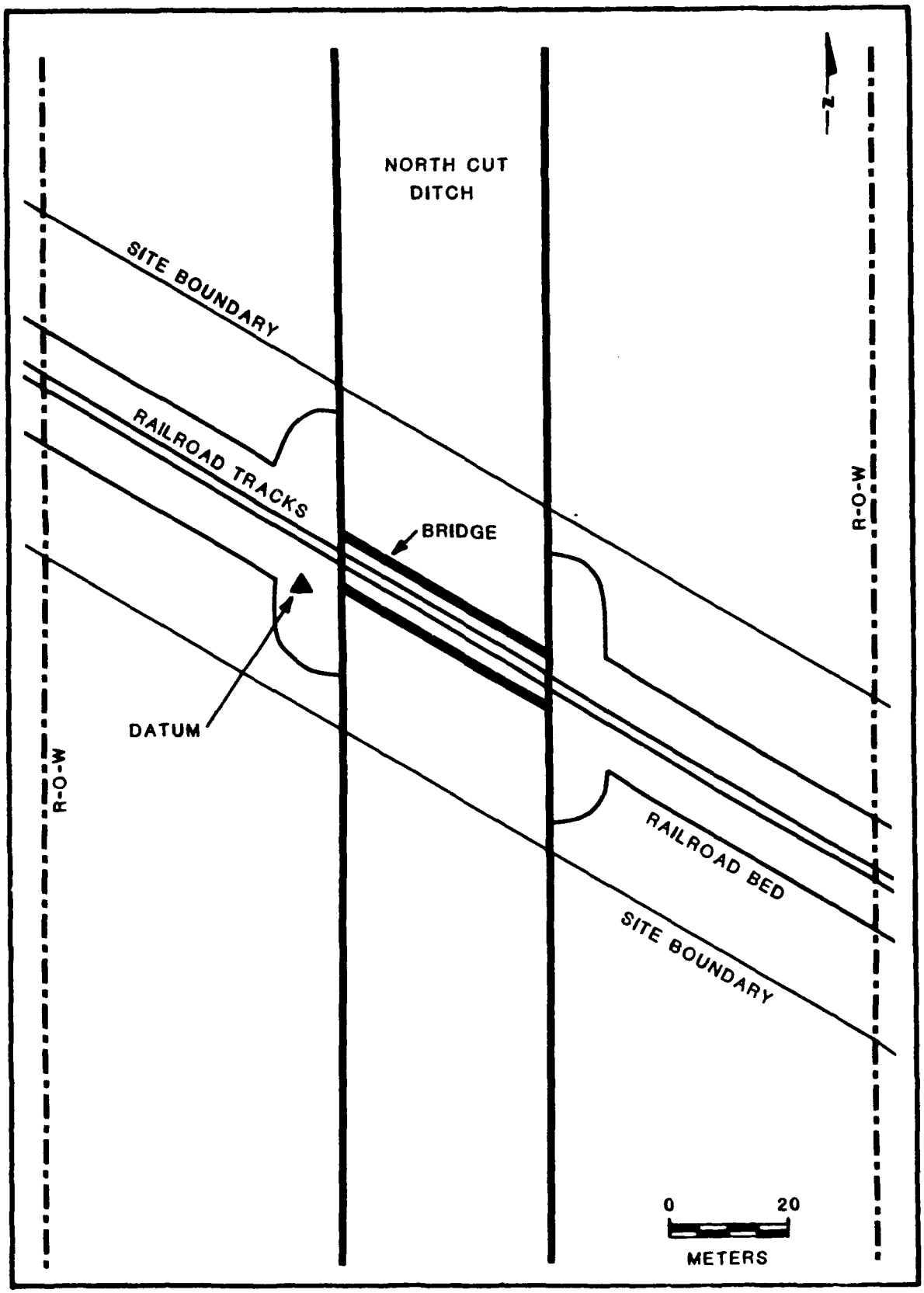


Figure 19. Sketch Map 23ST211

Maple Slough

The 11.9 miles (19.2 km) of Maple Slough surveyed between mile 0 - 11.9 was surveyed intensively within a 200 ft (61.0 m) ROW on the east bank. Later modifications to the contract required the west bank of Maple Slough, between mile 7.2 - 8.2, to be surveyed within the same ROW limits. Ground cover within the approximate 293 acres (118.58 ha) of the ROW was composed primarily of cultivated row crops 86.0% with some areas that were fallow or were pasture (11.4%) and a small amount of wooded areas (2.6%). Because of the good to excellent (51% - 100%) visibility within most of the ROW, survey was limited to surface reconnaissance with only sporadic shovel testing in the areas of low visibility. The survey of this segment resulted in the location of 23NM545, 23NM551 and 23MI599.

Based on the results of the general collection and a controlled collection, 23MI599 was considered potentially eligible for the National Register. Additional assessment work was conducted at this site through a modification of the basic survey contract. These phase II investigations are described below in a later section of this report.

23MI545

23MI545 is located approximately 2.5 miles (4.0 km) north of County Highway P. The site is located 40 meters east of Maple Slough ditch and consisted of an extensive historic surface scatter covering an area 150 m x 150 m (22,500 m^2) of which an area approximately 20 m x 150 m (3,000 m^2) was within the ROW (Figure 20). The only apparent cause of disturbance observed at this site has been the result of agricultural practices and at the time of the investigation the field had recently been plowed providing an over all visibility of near 100% around the site. The soil in the immediate area of the site is classified as a dark brown (10YR4/3) Sharkey silty sand.

To aid the understanding of the surface distribution of cultural material a 60 m x 60 m (3600 m^2) grid of 6 m^2 collection units was designated in the area of heaviest concentration of cultural material. A collection was made of all cultural material from 25% of the units in the grid selected from a table of random numbers. The units chosen for the controlled collection were numbers 3, 11, 12, 13, 20, 23, 24, 25, 31, 33, 34, 35, 37, 38, 40, 48, 52, 53, 60, 64, 65, 66, 67, 76, 80, 87 and 90. The controlled collection totaled 2,655 artifacts.

The 78 artifacts from collection unit 3 includes 27 pieces of clear bottle glass, 3 pieces of blue bottle glass, 5 pieces of purpled bottle glass, 2 pieces of green bottle glass, 2 pieces of amber bottle glass, 7 pieces of plain whiteware, 7 pieces of blue glazed whiteware, 1 piece of embossed whiteware, 1 piece of milk glass, 7 pieces of miscellaneous earthenware, 13 pieces of clear window glass, 3 pieces of blue window glass, 1 fragment of red brick and 3 pieces of miscellaneous metal.

The 68 artifacts from collection unit 11 includes 15 pieces of clear bottle glass, 10 pieces of blue bottle glass, 4 pieces of purpled bottle glass, 1 piece of green bottle glass, 1 piece of violet bottle glass, 12 pieces of plain whiteware, 1 piece of embossed whiteware, 1 piece of milk glass, 2 pieces of opaque glass, 7 pieces of miscellaneous earthenware, 5 pieces of clear window glass, 1 piece of purpled window glass, 3 pieces of blue window glass, 1 piece of plain porcelain, 2 pieces of black brick and 2 pieces of miscellaneous metal.

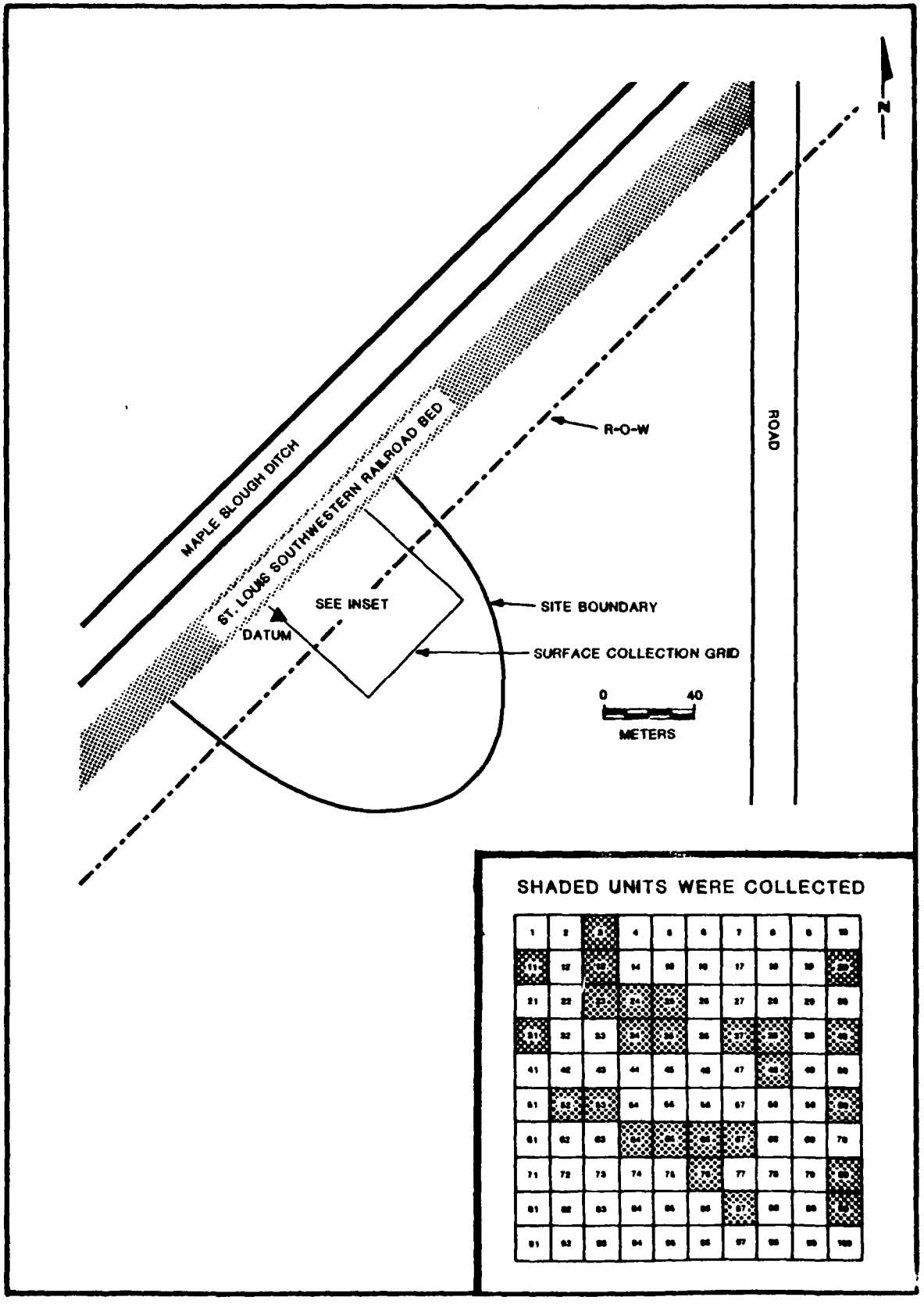


Figure 20. Sketch Map 23NM545

The 78 artifacts from collection unit 13 includes 24 pieces of clear bottle glass, 7 pieces of blue bottle glass, 10 pieces of purpled bottle glass, 4 pieces of amber bottle glass, 6 pieces of plain whiteware, 5 pieces of miscellaneous earthenware, 7 pieces of clear window glass, 1 piece of purpled window glass, 4 pieces of blue window glass, 3 pieces of plain porcelain, 3 pieces of embossed porcelain and 4 pieces of miscellaneous metal.

The 283 artifacts from collection unit 20 includes 97 pieces of clear bottle glass, 31 pieces of blue bottle glass, 24 pieces of purpled bottle glass, 3 pieces of pink bottle glass, 8 pieces of green bottle glass, 27 pieces of amber bottle glass, 21 pieces of plain whiteware, 2 pieces of transfer print whiteware, 1 piece of green glaze whiteware, 7 pieces of milk glass, 24 pieces of miscellaneous earthenware, 31 pieces of clear window glass, 3 pieces of blue window glass, 1 piece of plain porcelain, 2 pieces of transfer print porcelain and 1 piece of miscellaneous metal.

The 50 artifacts from collection unit 23 includes 8 pieces of clear bottle glass, 5 pieces of blue bottle glass, 5 pieces of purpled bottle glass, 2 pieces of amber bottle glass, 7 pieces of plain whiteware, 1 piece of milk glass, 2 pieces of opaque bottle glass, 4 pieces of miscellaneous earthenware, 12 pieces of clear window glass, 1 piece of plain porcelain, 2 pieces of miscellaneous metal and 1 nail.

The 29 artifacts from collection unit 24 includes 2 pieces of blue bottle glass, 3 pieces of purpled bottle glass, 1 piece of amber bottle glass, 9 pieces of plain whiteware, 1 piece of milk glass, 6 pieces of miscellaneous earthenware, 5 pieces of clear window glass, 1 piece of plain porcelain and 1 part of a porcelain, doll.

The 47 artifacts from collection unit 25 includes 5 pieces of clear bottle glass, 3 pieces of blue bottle glass, 12 pieces of purpled bottle glass, 4 pieces of green bottle glass, 1 piece of amber bottle glass, 8 pieces of plain whiteware, 2 pieces of transfer print whiteware, 1 piece of feather edge whiteware, 1 piece of scalloped edge whiteware, 2 pieces of milk glass, 3 pieces of miscellaneous earthenware, 4 pieces of clear window glass and 1 piece of plain porcelain.

The 165 artifacts from collection unit 31 includes 32 pieces of clear bottle glass, 28 pieces of blue bottle glass, 14 pieces of purpled bottle glass, 2 pieces of green bottle glass, 1 piece of amber bottle glass, 36 pieces of plain whiteware, 2 pieces of hand painted whiteware, 2 pieces of milk glass, 2 pieces of opaque bottle glass, 20 pieces of miscellaneous earthenware, 14 pieces of clear window glass, 10 pieces of plain porcelain, 1 piece of miscellaneous metal and 1 nail.

The 39 artifacts from collection unit 34 includes 6 pieces of clear bottle glass, 5 pieces of blue bottle glass, 7 pieces of purpled bottle glass, 2 pieces of amber bottle glass, 6 pieces of plain whiteware, 10 pieces of miscellaneous earthenware, 2 pieces of clear window glass and 1 piece of miscellaneous metal.

The 18 artifacts from collection unit 35 includes 5 pieces of clear bottle glass, 1 piece of blue bottle glass, 3 pieces of purpled bottle glass, 2 pieces of amber bottle glass, 2 pieces of plain whiteware, 1 piece of milk glass, 1 piece of opaque bottle glass, 2 pieces of miscellaneous earthenware and 1 piece of miscellaneous metal.

The 28 artifacts from collection unit 37 includes 2 pieces of clear bottle glass, 2 pieces of blue bottle glass, 4 pieces of purpled bottle glass, 1 piece of amber bottle glass, 5 pieces of plain whiteware, 1 piece of milk glass, 4 pieces of miscellaneous earthenware, 1 piece of clear window glass, 1 piece of plain porcelain, 4 pieces of miscellaneous metal and 3 nails.

The 43 artifacts from collection unit 38 includes 2 pieces of clear bottle glass, 7 pieces of blue bottle glass, 11 pieces of purpled bottle glass, 3 pieces of green bottle glass, 6 pieces of plain whiteware, 3 pieces of embossed whiteware, 3 pieces of milk glass, 1 piece of miscellaneous earthenware, 3 pieces of clear window glass, 2 pieces of plain porcelain, 1 piece of miscellaneous metal and 1 nail.

The 71 artifacts from collection unit 40 includes 2 pieces of clear bottle glass, 6 pieces of blue bottle glass, 16 pieces of purpled bottle glass, 1 piece of pink bottle glass, 12 pieces of plain whiteware, 2 pieces of milk glass, 16 pieces of miscellaneous earthenware, 7 pieces of clear window glass, 3 pieces of miscellaneous metal and 6 nails.

The 40 artifacts from collection unit 48 includes 5 pieces of clear bottle glass, 4 pieces of blue bottle glass, 11 pieces of purpled bottle glass, 1 piece of green bottle glass, 3 pieces of plain whiteware, 3 pieces of milk glass, 7 pieces of miscellaneous earthenware, 2 pieces of clear bottle glass, 1 piece of miscellaneous metal and 3 nails.

The 304 artifacts from collection unit 52 includes 70 pieces of clear bottle glass, 35 pieces of blue bottle glass, 39 pieces of purpled bottle glass, 11 pieces of green bottle glass, 1 piece of amber bottle glass, 47 pieces of plain whiteware, 1 piece of scalloped edge whiteware, 7 pieces of milk glass, 3 pieces of opaque bottle glass, 30 pieces of miscellaneous earthenware, 37 pieces of clear window glass, 1 piece of plain porcelain, 4 pieces of red brick, 5 pieces of miscellaneous metal, 9 nails and 4 interior flakes.

The 203 artifacts from collection unit 53 includes 37 pieces of clear bottle glass, 21 pieces of blue bottle glass, 27 pieces of purpled bottle glass, 5 pieces of green bottle glass, 5 pieces of amber bottle glass, 30 pieces of plain whiteware, 1 piece of transfer print whiteware, 5 pieces of milk glass, 4 pieces of opaque bottle glass, 25 pieces of miscellaneous earthenware, 22 pieces of clear window glass, 2 pieces of purpled window glass, 5 pieces of plain porcelain, 1 piece of red brick, 7 pieces of miscellaneous metal, 4 nails and 2 interior flakes.

The 50 artifacts from collection unit 60 includes 8 pieces of clear bottle glass, 9 pieces of blue bottle glass, 5 pieces of purpled bottle glass, 2 pieces of amber bottle glass, 5 pieces of plain whiteware, 1 piece of whiteware with flow blue decoration, 1 piece of milk glass, 6 pieces of miscellaneous earthenware, 6 pieces of clear window glass, 1 piece of plain porcelain, 4 pieces of miscellaneous metal, 1 nail and 1 clay marble.

The 66 artifacts from collection unit 64 includes 9 pieces of clear bottle glass, 8 pieces of blue bottle glass, 19 pieces of purpled bottle glass, 1 piece of green bottle glass, 1 piece of amber bottle glass, 8 pieces of plain whiteware, 2 pieces of milk glass, 7 pieces of miscellaneous earthenware, 5 pieces of clear window glass, 1 piece of purpled window glass, 1 pieces of transfer print porcelain and 4 pieces of miscellaneous metal.

The 65 artifacts from collection unit 65 includes 17 pieces of clear bottle glass, 6 pieces of blue bottle glass, 7 pieces of purpled bottle glass, 1 piece of green bottle glass, 4 pieces of amber bottle glass, 7 pieces of plain whiteware, 1 piece of transfer print whiteware, 1 piece of green glaze whiteware, 1 piece of milk glass, 14 pieces of miscellaneous earthenware, 2 pieces of clear window glass and 4 pieces of miscellaneous metal.

The 76 artifacts from collection unit 66 includes 7 pieces of clear bottle glass, 9 pieces of blue bottle glass, 15 pieces of purpled bottle glass, 3 pieces of green bottle glass, 4 pieces of amber bottle glass, 14 pieces of plain whiteware, 1 piece of transfer print whiteware, 1 piece of

whiteware with flow blue decoration, 10 pieces of miscellaneous earthenware, 2 pieces of clear window glass, 1 piece of plain porcelain, 1 piece of transfer print porcelain and 8 pieces of miscellaneous metal.

The 82 artifacts from collection unit 67 includes 22 pieces of clear bottle glass, 11 pieces of blue bottle glass, 14 pieces of purpled bottle glass, 1 piece of green bottle glass, 2 pieces of amber bottle glass, 1 piece of milk glass, 12 pieces of plain whiteware, 9 pieces of miscellaneous earthenware, 6 pieces of clear window glass, 1 piece of plain porcelain, 1 porcelain doll part and 2 pieces of miscellaneous metal.

The 149 artifacts from collection unit 76 includes 40 pieces of clear bottle glass, 10 pieces of blue bottle glass, 19 pieces of purpled bottle glass, 2 pieces of green bottle glass, 5 pieces of amber bottle glass, 34 pieces of plain whiteware, 2 pieces of transfer print whiteware, 1 piece of milk glass, 19 pieces of miscellaneous earthenware, 9 pieces of clear window glass, 1 piece of plain porcelain, 2 pieces of porcelain door knob, 3 pieces of miscellaneous metal and 2 nails.

The 165 artifacts from collection unit 80 includes 33 pieces of clear bottle glass, 21 pieces of blue bottle glass, 25 pieces of purpled bottle glass, 1 piece of green bottle glass, 22 pieces of plain whiteware, 4 pieces of milk glass, 1 piece of opaque bottle glass, 20 pieces of miscellaneous earthenware, 27 pieces of clear window glass, 5 pieces of plain porcelain, 4 pieces of miscellaneous metal and 2 nails.

The 294 artifacts from collection unit 87 includes 69 pieces of clear bottle glass, 30 pieces of blue bottle glass, 27 pieces of purpled bottle glass, 8 pieces of amber bottle glass, 1 piece of violet bottle glass, 1 piece of gray bottle glass, 69 pieces of plain whiteware, 2 pieces of transfer print whiteware, 6 pieces of milk glass, 32 pieces of miscellaneous earthenware, 36 pieces of clear window glass, 6 pieces of plain porcelain, 1 porcelain doll part, 3 pieces of miscellaneous metal, 2 nails and 1 clay marble.

The 164 artifacts from collection unit 90 includes 46 pieces of clear bottle glass, 17 pieces of blue bottle glass, 14 pieces of purpled bottle glass, 2 pieces of green bottle glass, 2 pieces of amber bottle glass, 25 pieces of plain whiteware, 1 piece of transfer print whiteware, 9 pieces of milk glass, 16 pieces of miscellaneous earthenware, 26 pieces of clear window glass, 2 pieces of plain porcelain, 1 piece of transfer print porcelain, 1 piece of miscellaneous metal and 2 nails.

While it is obvious that this site has a dense scatter of historic material it is suggested that this site is the result of a late 19th - early 20th century refuse pile or dump. No structures or structural remains (eg. standing walls or foundations) were present and while there were large amounts of glass and ceramics the percentage of building materials was quite small. No evidence of any features were observed and the entire site area has been disturbed at least as deep as normal plowing depth for some time.

Based upon our preliminary review, this site contains data which, even when viewed in its most favorable light, would not make it eligible for inclusion on the National Register of Historic Places. No further cultural resources work is recommended at this site.

23NM551

23NM551 is the abandoned St. Louis Southwestern Railroad (Watt-Lilbourn Line) that is within the ROW of Maple Slough Ditch along much of its route and comes into contact with or crosses St. Johns Bayou, St James Ditch and the Birds Point/New Madrid Levee Ditch. The current site size is considered to be

the width of the grade (64 ft or 19.5 m) for a distance of approximately 30 miles (48.3 km) with a total site area of 232 acres (94 ha). A small general collection of 2 pieces of clear bottle glass, 1 piece of blue bottle glass, 5 pieces of green bottle glass, and 1 piece of miscellaneous metal.

While the location and use of the railroad has had important affects on the local economy and history of the area documentary and historical research would be most beneficial in understanding the railroads local importance. Based upon our preliminary review, this site contains data which, even when viewed in its most favorable light, would not make it eligible for inclusion on the National Register of Historic Places. No further cultural resources work is recommended at this site.

ISOLATED FINDS

Sixteen isolated finds were recorded during the survey project. In each case intensive efforts took place to investigate the possibility that the isolated find was not part of a low density site. The individual finds were each recorded on the topographic maps and were cataloged with the other cultural material collected during the survey.

Five isolated finds were recovered during the survey of St. Johns Bayou. IF 10 is a purpled glass jar lid. IF 11 is 1 secondary decortication flake and 1 interior flake recovered during the survey. IF 12 is a piece of milk glass. IF 15 is a triangular, serrated arrow point similar to types used during the Middle Mississippi Period that was recovered during the survey. The arrow point was manufactured from a reddish tan mottled chert and measures 23 mm x 13 mm x 5 mm (Figure 9x). IF 16 is a triangular arrow point similar to types used during the Middle Mississippi Period. The arrow point was manufactured from a very light reddish tan chert and measures 29 mm x 16 mm x 5 mm (Figure 9y).

Four isolated finds were recovered during the survey of North Cut Ditch. IF 1 is Kennett Plain body sherd. IF 2 is a triangular, serrated arrow point similar to types used during the Middle Mississippi Period. The arrow point was manufactured from a reddish speckled tan chert and measures 28 mm x 16 mm x 4 mm (Figure 9z). IF 13 is a Gary stemmed projectile point/knife, a type made during the Early to Middle Woodland Period that was recovered during the survey. It measures 55 mm x [26 mm] x 8 mm [broken and re-worked shoulder] (Figure 9aa). IF 14 is an intact ground stone celt.

Three isolated finds were recovered during the survey of Ash Slough Ditch. IF 3 is a square base biface manufactured from a grayish brown chert and measured [47 mm] x 34 mm x 7 mm [broken dimension] (Figure 9bb). IF 6 is a ground stone celt piece. IF 7 is Barnes Cord Marked body sherd.

Two isolated finds were recovered during the survey of the Birds Point/New Madrid Levee Ditch. IF 4 is a piece of whiteware containing a small section of the makers mark. IF 5 is a piece of a blue glass powerline insulator.

Two isolated finds were recovered during the survey of East Bayou Ditch. IF 8 is a Barnes Cord Marked body sherd. IF 9 is a Kennett Plain body sherd.

ADDITIONAL INVESTIGATIONS

Following the completion of the field work, negotiations were conducted to determine the need of additional investigations at certain sites within the

project area. These negotiations resulted in the decision to further assess 23MI599 and 23NM544 to determine their ability to meet National Register criteria. This testing was carried out during the summer of 1987.

23MI599

23MI599 is located near East Prairie, Mississippi County, Missouri. The land on which the site is located, owned by Russell, Ashby and Babb, Inc., is operated by Mr. Roland Ashby, Charleston, Missouri and farmed by Mr. Danny Babb, East Prairie, Missouri.

The site is located on both sides of Maple Slough Ditch covering an area 325 meters along the ditch north-south while extending 20 meters west of the ditch and 45 meters east of the ditch for a maximum combined width of 75 meters (Figure 21). Cultural deposits extended to a maximum depth of 120 centimeters below the surface in test unit 3. When originally located, only the east side of the ditch was within the right-of-way. Based on this, the original general collection and the controlled collection was made the part of the site located east of the ditch. The later modification of the right-of-way to include the west bank of the ditch resulted in the knowledge that the site boundaries extended across the ditch and the decision to test that part of the site west of the ditch.

While the field in which the site is located has not been land leveled in the past a variety of disturbances have affected the site. The earliest known disturbance probably resulted from the New Madrid earthquake. Mr. Danny Babb described observing evidence of steam vents in nearby fields during land leveling operations. Further evidence of the earthquake consisted of fissures were observed during excavation at the site. Another major disturbance to the site is represented by the construction and maintenance of the ditch. Additional and continuing disturbances are occurring from the agricultural use of the field. Mr. Babb indicated that in addition to the normal plowing and cultivating the field has been worked once with a subsoiler/ripper to a depth of 12 to 18 inches (30 cm to 45 cm) with the tines set on 30 inch (76.2 centimeters) intervals.

Physical Environment

23MI599 is located in agricultural fields on both sides of the present location of Maple Slough Ditch near the town of East Prairie, Missouri. While the original location of Maple Slough could not be determined, it may have been located a short distance to the east in a slightly lower area. the soils in the area of the site have been classified as Clana loamy fine sand, with Diehlstadt loamy coarse sand and Sikeston loam soils being located nearby. The Clana loamy fine sand soil is described as a "nearly level, moderately well drained soil on convex ridges and along drainageways on natural levees (Festervand 1981:35)". Soil properties for the Clana series include dark brown loamy fine sand 0 cm - 18 cm below the surface (bs), dark yellowish brown grading into yellowish brown mottled loamy fine sand from 18 cm - 83 cm bs and dark yellowish brown mottled loamy fine sand from 83 cm to 150+ cm bs. The soil has rapid permeability with slow surface run off. The natural fertility and organic content are both rated as medium which combined with the easily tillable nature of the soil makes it suited for cultivated row crops with minimal preparation.

At the time of our survey, the vegetation at the site consisted of corn field stubble which allowed excellent ground surface visibility (76% - 100%).

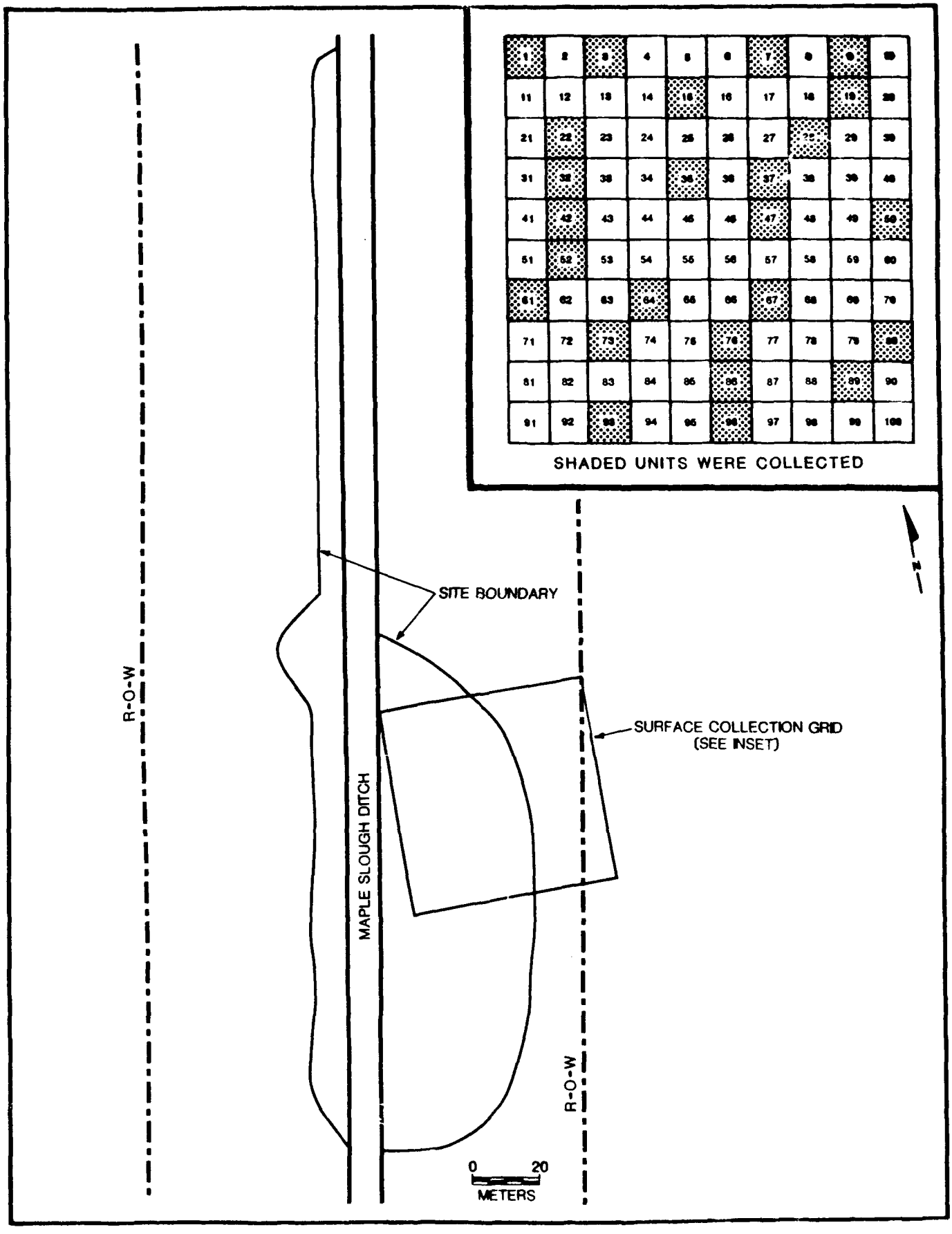


Figure 21. Sketch Map 23MI599

At the time the site was tested, the fields having been replanted in corn were almost mature. Just north of the site was a field of soybeans. Ground surface visibility was still good to excellent (51% - 100%) as the rows between the stalks were open and free of debris.

General Surface Collection

A general surface collection of probable diagnostic artifacts was made over the entire site area to insure the collection of all material that would assist in the interpretation of the site. Surface deposits were restricted to an area 180 m x 75 m in the southern most part of the site. The extension of the site to the north was based on subsurface deposits discovered during posthole testing.

The surface collection resulted in a total 11 artifacts including 1 pitted cobble; 1 preform; 3 Barnes Cord Marked body sherds; 1 Baytown Plain pan rim sherd, folded rim; 1 Mulberry Creek Cord Marked notched rim sherd, folded rim; 1 Mulberry Creek Cord Marked notched rim sherd; 1 Mulberry Creek Cord Marked rim sherd, folded rim (Figure 9cc) and 2 Mulberry Creek Cord Marked rim sherds. One of the Barnes Cord Marked body sherds was collected on the west side of the ditch with the rest of the general collection coming from the east side of the ditch.

Controlled Surface Collection

To aid the understanding of the surface distribution of cultural material a grid of 100 6 meter^2 collection units were designated in an area 60 m x 60 m. A collection was made of all cultural material located from each of 25 units in the grid selected from a table of random numbers. The controlled collection totaled 517 artifacts.

Collection unit 1 yielded 23 artifacts including 9 concretions, 4 Kennett plain body sherds, 4 Barnes Cord Marked body sherds, 2 pieces of clear bottle glass, 1 piece of purpled bottle glass, 1 piece of miscellaneous metal and 2 cinders.

Unit 3 contained 111 artifacts including 2 secondary decortication flakes, 2 interior flakes, 3 retouch flakes, 1 fire cracked rock, 7 concretions, 79 Kennett Plain body sherds, 1 Kennett Plain rim sherd, 11 Barnes Cord Marked body sherds, 2 pieces of clear bottle glass, and 3 cinders.

Collection unit 7 produced 25 artifacts including 12 concretions, 9 Kennett Plain body sherds, 2 Barnes Cord Marked body sherds, 1 Baytown Plain pan rim sherd with smoothed cord marks on lip, and 1 piece of milk glass.

Among the 33 artifacts recovered in unit 15 were 2 secondary decortication flakes, 8 concretions, 16 Kennett Plain body sherds and 7 Barnes Cord Marked body sherds.

Collection unit 22 contained 44 artifacts including 1 secondary decortication flake, 1 interior flake, 1 aborted preform, 1 discoidal, 3 concretions, 29 Kennett Plain body sherds, 6 Barnes Cord Marked body sherds and 2 cinders.

Collection unit 28 yielded 7 artifacts including 1 secondary decortication flake, 2 concretions, 2 Kennett Plain body sherds and 2 Barnes Cord Marked body sherds.

The 33 artifacts collected in unit 32 included the following items: 1 secondary decortication flake, 2 interior flakes, 1 fire cracked rock, 2 concretions, 15 Kennett Plain body sherds, 1 Kennett Plain rim sherds, 9 Barnes Cord Marked body sherds, 1 Barnes Cord Marked rim sherds and 1 cinder.

Collection unit 35 contained 19 artifacts including 1 interior flake, 1 concretion, 10 Kennett Plain body sherds and 7 (36.84%) Barnes Cord Marked body sherds.

Our surface collection of random sample unit 37 produced only 3 Kennett Plain body sherds.

In collection unit 42, 20 artifacts were recovered including 1 piece of shale, 10 Kennett Plain body sherds, 1 Barnes Cord Marked rim sherd, 1 Kennett Plain rim sherd, 5 Barnes Cord Marked body sherds, 1 cinder and 1 piece of coal.

Collection unit 47 yielded only 1 Kennett Plain body sherd and 1 Barnes Cord Marked body sherd.

One Kennett Plain body sherd was the only artifact recovered in random sample surface collection unit 50.

Among the 34 artifacts found in unit 52 were 1 secondary decortication flake, 2 interior flakes, 1 modified flake, 19 Kennett Plain body sherds, 9 Barnes Cord Marked body sherds, 1 piece of burned clay, 1 cinder and 1 piece of coal.

The 18 artifacts recovered in unit 61 included 1 secondary decortication flake, 11 Kennett Plain body sherds, 5 Barnes Cord Marked body sherds and 1 piece of purpled bottle glass.

Collection unit 64 yielded 26 artifacts including 1 interior flake, 12 Kennett Plain body sherds, 11 Barnes Cord Marked body sherds, 2 Barnes Cord Marked rim sherds.

Among the 54 artifacts in unit 73 were 1 secondary decortication flake, 2 interior flakes, 1 modified flake, 24 Kennett Plain body sherds, 20 Barnes Cord Marked body sherds, 1 Barnes Cord Marked rim sherd, 4 pieces of burned clay and 1 cinder.

Collection units 76 and 87 both yielded 2 Kennett Plain body sherds.

A single concretation was collected in random sample unit 80.

Collection unit 93 contained 57 artifacts including 1 tested cobble; 1 secondary decortication flake; 2 interior flakes; 30 Kennett Plain body sherds; 21 Barnes Cord Marked body sherds; 1 Mulberry Creek Cord Marked rim sherd, folded rim and 1 cinder.

A single interior flake was all that was recovered in collection unit 96.

Of the 25 selected collection units, 4 individual units (numbers 9, 19, 67 and 89) contained no cultural material.

Posthole Testing

The survey of the west bank of the ditch resulted in the decision to test that part of the site. To determine the best location for placing the test units a linear series of postholes were excavated at 10 meter intervals across the long axis of the site until two or more negative tests were found together. Test units were later dug within two areas of artifact concentration.

Of the 37 posthole tests that were excavated across the site, 23 produced positive results and 14 produced negative results. Because of a noticeable difference in the compactness of the soil (possibly due to the use of the subsoiler/ripper mentioned above), the postholes were excavated in two basic levels. The first level, called level 1, extended from the surface to about 40 centimeters below surface. The second level, called level 2, extended from about 40 centimeters below surface to about 100 centimeters below surface.

Artifact concentrations were noted in the area of posthole tests 1 and 2 North and 8 and 9 South. A total of 71 artifacts were recovered as a result of the posthole testing at this site.

Posthole 0-N/S contained a single interior flake in level 1 with negative results in level 2.

North of location 0-N/S 13 postholes were excavated in 16 locations. Posthole 1-N was negative in level 1, but contained 1 Barnes Cord Marked exfoliated rimstrip in level 2. Posthole 2-N was negative in level 1, but 2 Kennett Plain body sherds were found in level 2. Posthole 3-N was negative in level 1, but had 2 Kennett Plain body sherds in level 2. Posthole 4-N was negative in level 1, but had a piece of shatter in level 2. Posthole 5-N was negative in both levels. Posthole 6-N was negative in level 1, but level 2 produced 1 interior flake, 1 Barnes Cord Marked body sherd, 1 Barnes Cord Marked cord-wrapped cylinder impressed rim sherd and 3 Barnes Cord Marked rim sherds. In posthole 7-N a Barnes Cord Marked body sherd was recovered in level 1, but level 2 was negative. No posthole was excavated in the 8-N location. Posthole 9-N was negative in level 1, but level 2 yielded 1 secondary decortication flake, 2 interior flakes, 1 Kennett Plain body sherd, 3 pieces of burned clay and 1 piece of unidentified bone. No posthole was excavated in the 10-N location. Posthole 11-N was negative in level 1, but yielded a Kennett Plain body sherd in level 2. No posthole was excavated at the 12-N location. Posthole 13-N was negative in level 1, but level 2 contained 3 Kennett Plain body sherds. Posthole 14-N was negative in level 1, but level 2 produced a Kennett Plain body sherd. No cultural materials were recovered from the postholes at 15-N and 16-N.

To the south of location 0-N/S, 18 postholes were excavated. Posthole 1-S was negative in level 1, but level 2 produced 1 Barnes Cord Marked body sherd and 2 pieces of burned clay. Posthole 2-S was negative in both levels. Posthole 3-S was negative in level 1, but contained a interior flake in level 2. Posthole 4-S was negative in level 1, but produced a Kennett Plain body sherd in level 2. Posthole 5-S was negative in level 1, but level 2 contained 2 Kennett Plain body sherds and 2 Barnes Cord Marked body sherds. Posthole 6-S yielded 1 Barnes Cord Marked exfoliated rimstrip and 1 Barnes Cord Marked body sherd. Posthole 7-S contained a Kennett Plain body sherd in both level 1 and level 2. Posthole 8-S yielded 1 Kennett Plain body sherd and 3 Barnes Cord Marked body sherds in level 1, and 5 Kennett Plain body sherds in level 2. Posthole 9-S was negative in level 1, but level 2 produced 1 interior flake, 5 Kennett Plain body sherds, 2 Barnes Cord Marked body sherds and 1 piece of charcoal. In posthole 10-S, 2 Kennett Plain body sherds were recovered in level 1; level 2 was negative. No artifacts were recovered from either level in posthole 11-S. Posthole 12-S produced a single Barnes Cord Marked body sherd from level 1; level 2 was negative. No artifacts were recovered from either level in posthole 13-S. In posthole 14-S, level 1 produced 3 Barnes Cord Marked body sherds and 1 piece of burned clay; level 2 was negative. Posthole 15-S was negative in level 1, but level 2 yielded 4 Kennett Plain body sherds and 1 Barnes Cord Marked body sherd. Both levels in posthole tests 16-S, 17-S and 18-S were negative.

Additional posthole tests dug at positions 4-N/1-W, 4-N/2-W, 5-S/1-W and 5-S/2-W also yielded negative results from both levels.

Test Units

Three 1 m x 1 m test units were excavated at the site. Each unit was excavated to a maximum depth of 140 centimeters below surface (bs). At the

base of this level, a posthole was then excavated in the bottom of each unit to extend the total maximum depth of the excavation to 250 centimeters bs. The location of test units 1 and 3 was based on the results of the posthole testing; test unit 2 was located near test unit 1 in order to provide additional information nature and extent of the cultural deposits in this area.

Test Unit 1

Test unit 1, with its northeast corner 6 meters north of posthole 1-N, was located halfway between posthole tests 1-N and 2-N . Test unit 1 was excavated in arbitrary 10 centimeter levels to a depth of 1.1 meters below (unit) datum. At the base of this level, a posthole was excavated in order to extend the investigation to a total depth of 2.20 meters. Although the natural stratigraphy was evident in the profile of the unit, it was a sharp break. Because of this reason, the unit was excavated by arbitrary levels and not by natural stratigraphy. As test unit 2 was excavated immediately west of to help understand the stratigraphy of test unit 1, the combined profiles are presented in Figure 22.

A total of 134 artifacts were recovered from Test unit 1. Levels 1 through 9 produced cultural material; levels 10 and 11, as well as the posthole test excavated at the base of level 11, were culturally sterile.

Level 1 (0 cm - 10 cmbs) encompassed stratum A, a dark yellowish brown (10YR4/4) loamy fine sand, which had within its matrix many roots and rootlets of the grass and corn growing in this part of the field. The soil in this level has been extensively disturbed by agricultural practices. Three Kennett Plain body sherds and 2 Barnes Cord Marked body sherds were recovered in level 1. The presence of cultural material in this surface layer could indicate that level 1 was once part of an undisturbed cultural level, but due to the depth that has been disturbed through the subsoiling, these artifacts may be only the result of bits of a deeper cultural layer being pulled to the surface.

Three distinct strata were observed in level 2 (10 cm - 20 cmbs). Stratum A continued throughout part of the level and parts of what were eventually labeled strata B and D-2. Stratum B was a yellowish brown (10YR5/6) loamy fine sand, whereas stratum D-2 was a pale brown (10YR6/3) loamy fine sand. Stratum B was missed while excavating, and consequently was considered to be a possible feature in next level. Upon further excavation it was determined to be a probable natural feature (eg. filled in rodent burrow) that extended into the base of the unit. Among the 6 artifacts recovered from level 2 were 2 interior flakes, 3 Kennett Plain body sherds and 1 Barnes Cord Marked body sherd. The presence of the different strata suggest that this level is less disturbed than the first level.

All of the strata described above (A, B and D-2) extended partially into level 3 (20 cm - 30 cmbs). In addition, the level extended into stratum C, a very dark grayish brown (10YR3/2) loamy fine sand, and just into the top of stratum E, a dark grayish brown (10YR4/2) loamy fine sand. The identification of strata B and C, as a possible feature, was made at the base of this level; consequently, any cultural material located in it was mixed into the general collection for level 3. Of the 7 artifacts recovered in level 3, 3 were Kennett Plain body sherds and 4 were Barnes Cord Marked body sherds. The only clear sign of disturbance in this level was the probable rodent burrow. No clear evidence of disturbance from the subsoiler/ripper used in the field was present at this level in the floor or walls of the unit.

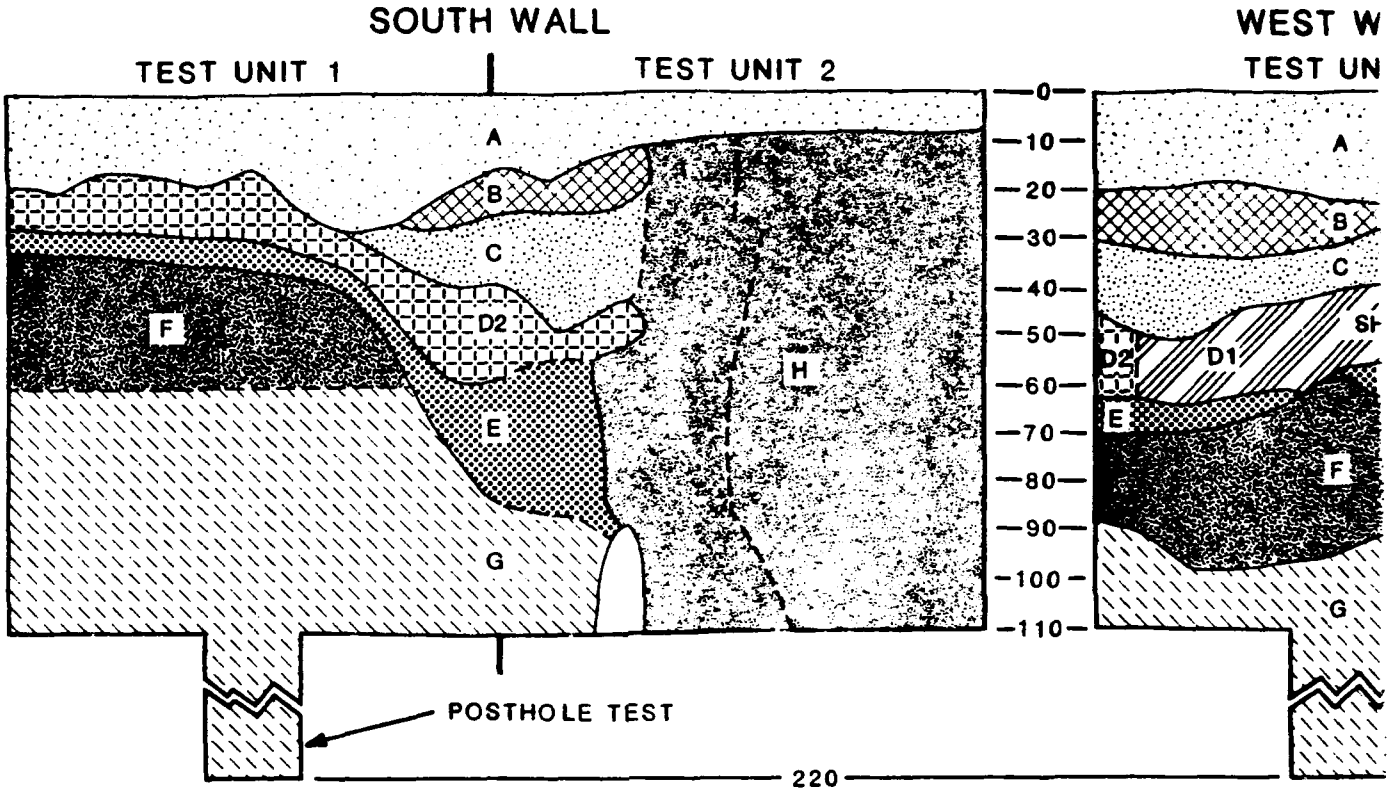
The strata described above continued into level 4 (30 cm - 40 cmbs), with the exception of stratum A which did not extend to this depth within the unit. Besides these strata, two additional strata were observed in the profile in this level. Stratum D-1, a yellowish brown (10YR5/6) loamy fine sand with mottles of 7.5YR4/4 dark brown coarse sand was observed connecting with previously described D-2 and stratum F, a pale brown (10YR6/3) loamy fine sand with dark reddish brown (2.5YR3/4) course sand and small concretions was observed under stratum E. This level would appear to be the primary cultural level based on the amount of artifacts recovered within it. Among the 75 artifacts recovered in this level were 1 piece of lithic shatter, 15 Kennett Plain body sherds, 40 Barnes Cord Marked body sherds, 1 large Barnes Cord Marked pan sherd with folded rim (Figure 9dd), 1 Barnes Cord Marked jar rim sherd with folded rim and notches (Figure 9ee), 1 Barnes Cord Marked exfoliated rim strip with 2 nodes (Figure 9ff), 2 Barnes Cord Marked exfoliated rim strips, 1 Barnes Cord Marked jar rim sherd with folded rim, 12 pieces of burned clay and 1 fragment of charcoal. Matrix from the area identified as the possible feature was screened separately, resulting in the recovery of an additional 3 artifacts including 1 Barnes Cord Marked body sherd and 2 Barnes Cord Marked jar rim sherds. During excavation it was observed that the majority of the cultural material came from the matrix of stratum E; indeed, several sherds were found laying horizontally at the base of this stratum.

During the excavation of level 5 (40 cm - 50 cmbs) it was observed that the primary strata (E and F) began dipping sharply in the western third of the unit. Besides these strata, small parts of strata B, D-1 and D-2 were observed in the western third of the unit where strata E and F were dropping lower. A dramatic decrease in the number and density of artifacts was noticed in this level. The artifacts recovered included 1 secondary decortication flake, 1 interior flake, 3 Barnes Cord Marked body sherds and 2 pieces of burned clay. The matrix from what was labeled the possible feature and later labeled stratum B was again screened separately, with the result that only a single interior flake was recovered from it. Though the artifact count was much lower than it was in level 4, it was noted that most of the cultural material in level 5 came from the matrix of stratum E in the western third of the unit.

By the time that level 6 (50 cm - 60 cmbs) was excavated it was evident that the possible feature was not cultural and was probably a rodent burrow. However, the matrix from it continued to be screened separately as long as it was easily distinguished from the surrounding matrix. The general matrix of this level included portions of strata B, D-1, D-2, E and F as the strata continued to drop at an angle in the western third of the unit. There were 11 artifacts recovered from the general matrix of this level including 4 Kennett Plain body sherds, 2 Barnes Cord Marked body sherds, 1 cylindrical sand-tempered fired clay object (Figure 9gg), 3 pieces of burned clay and 1 fragment of charcoal. The matrix excavated separately from stratum B contained 3 additional artifacts including 1 Barnes Cord Marked body sherd and 2 fragments of charcoal. As with levels 4 and 5, the artifacts were primarily in the area of Stratum E as it dipped down in the western third of the unit.

At the base of level 6, a soil color change was noted in the eastern two-thirds of the unit. This was later labeled as stratum G, a pale brown (10YR6/3) loamy fine sand mottled with strong brown (7.5YR4/6) course sand and small concretions. The primary difference between strata F and G was the color of the mottling which changed rather gradually, rather than abruptly as was the case with most of the other strata. In addition, a second

(1)



10YR4/4 SAND

10YR5/6 SAND

10YR3/2 SAND

10YR5/6 SAND WITH 7.5YR4/4 MOTTLES

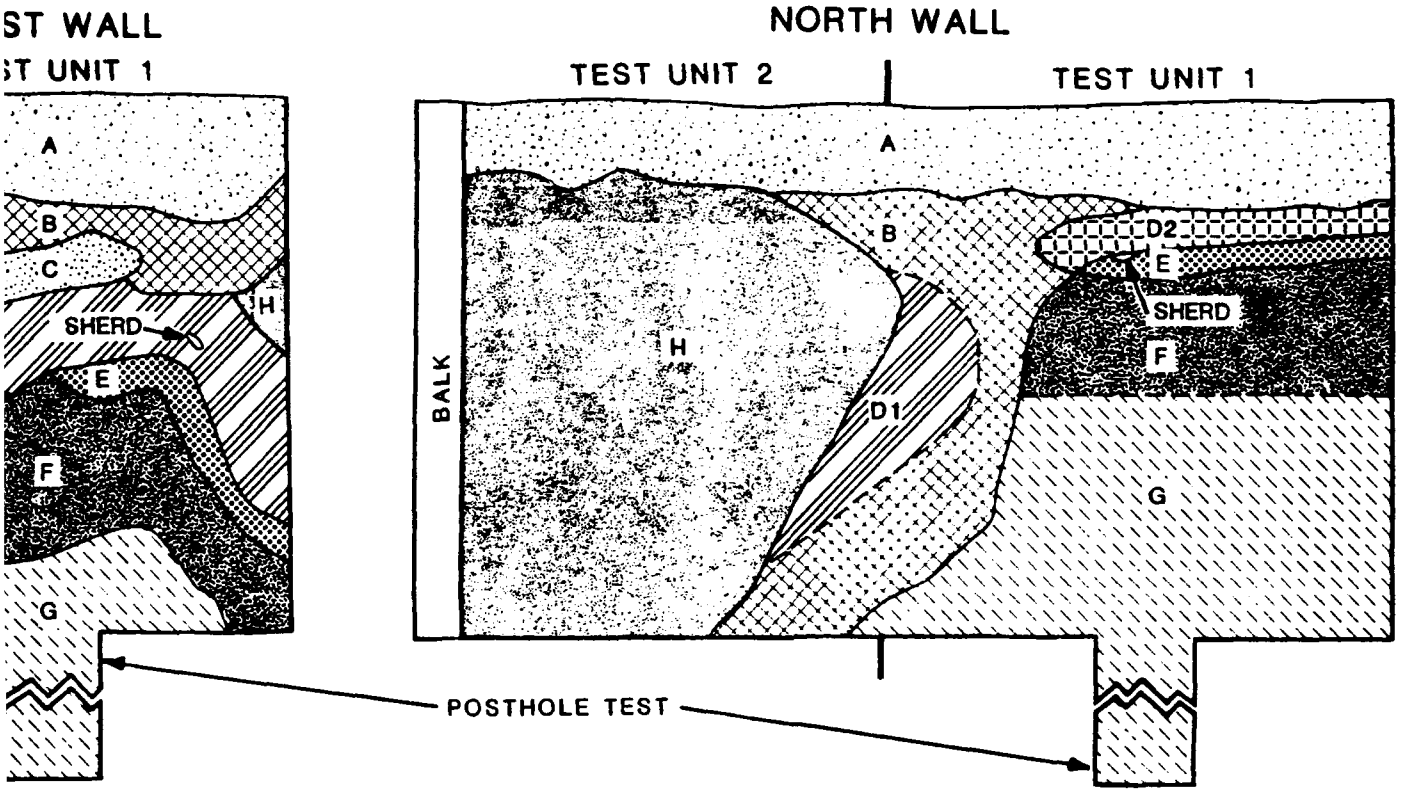
10YR6/3 SAND

10YR4/2 SAND

10YR6/3 SAND WITH 2.5YR3/4 MOTTELS

10YR6/3 SAND WITH 7.5YR4/6 MOTTLES

10YR6/3 SAND WITH 5YR5/6 MOTTLES



TTELS

.ES

ES

NOTE : DEPTH MEASURED IN CENTIMETERS BELOW THE SURFACE

Figure 22. 23MI599 Test Unit Profiles

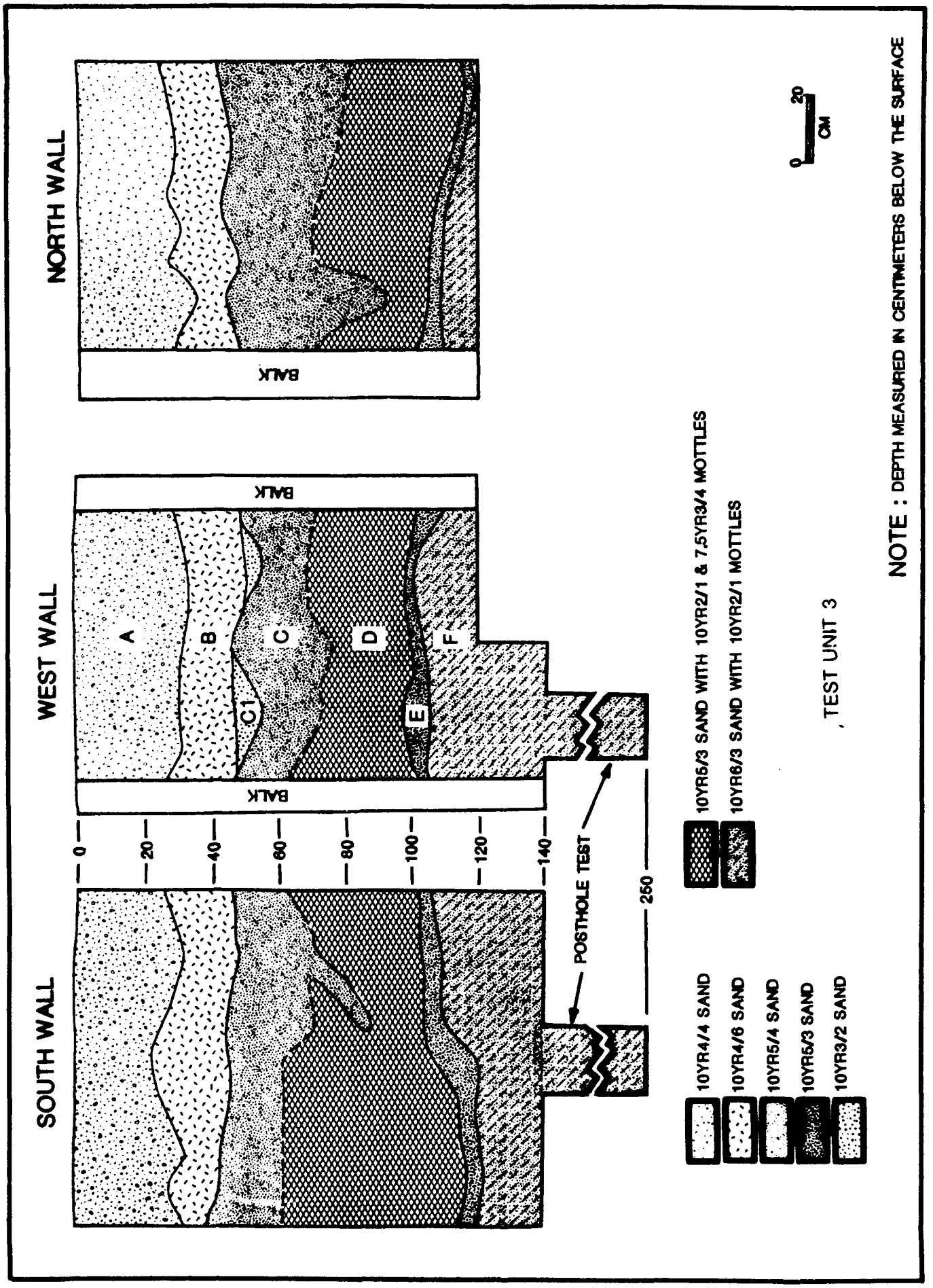


Figure 22. 23MI599 Test Unit Profiles (continued)

discoloration was noted and considered as possible feature 2. This discoloration was an area of dark brown (10YR3/3) loamy fine sand. One sherd observed in this possible feature in the floor of level 6 was collected as part of level 7.

The matrix of level 7 (60 cm - 70 cmbs) was basically the same as that of level 6 being composed primarily of strata B, E, and G. Feature 2, more or less shaped like a lens in the floor, was located at the juncture of strata E and G in approximately the center of the western fourth of the unit. The matrix from stratum B was not excavated separately from the general level, but the matrix from feature 2 was excavated and screened separately. By the base of the level, all evidence of the discoloration labeled feature 2 had disappeared. The general artifact collection recovered from level 7 indicates a continuing decrease in the cultural material from this unit. Only 4 artifacts were collected from the matrix including 1 interior flake, 1 biface fragment, 1 Kennett Plain body sherd and 1 Kennett Plain rim sherd. The matrix excavated from feature 2, on the other hand, contained an additional 8 artifacts including 1 Kennett Plain rim sherd, 5 Barnes Cord Marked body sherds 1 Mulberry Creek Cord Marked pan rim sherd and 1 Mulberry Creek Cord Marked jar rim sherd. This evidence appeared to support the probability that both feature 2 and stratum E were cultural, though the very sharp change in elevation evident in the profile and the continued presence of stratum B created doubt about the degree to which they were intact and undisturbed.

Little change was noted between the matrix of level 7 and that of level 8 (70 cm - 80 cmbs), with the exception of evidence of feature 2 which ended within level 7. The amount of cultural material continued to drop; only a single piece of lithic shatter was recovered from the matrix of the level.

Level 9 (80 cm - 90 cmbs) was basically a continuation of level 8, though the boundary between strata E and G was becoming more diffuse. There was a slight increase in the amount of cultural material in this level, but not enough to suggest that it was culturally produced. The 3 artifacts recovered from this level included 1 interior flake and 2 pieces of fire cracked rock. The continuing presence of stratum B, a natural disturbance, may provide one possible explanation for the presence of cultural material at this particular depth. Another possible explanation is the continued, though minor, presence of stratum E which appeared to be the primary cultural stratum, at least in the upper levels.

Levels 10 and 11 (90 cm - 110 cmbs) were excavated and screened, but no cultural material was recovered from either level. The matrix removed from the levels was primarily that of stratum G with a small amount of stratum B, though it was evident that Stratum B could only be followed into the western wall of the unit. A 110 centimeter posthole was excavated in the center of the unit to a depth 220 centimeters below unit datum. No change in the color or texture of the matrix was noted even though the water table was located approximately 170 centimeters below unit datum.

Test Unit 2

Test unit 2 was located just to the west of test unit 1 with its north east corner 6 meters north and 1 meter west of posthole 1-N. The primary purpose of test unit 2 was to obtain additional data to help understand the stratigraphy observed in test unit 1. Test unit 2 was excavated in arbitrary 10 centimeter levels to a depth of 1.1 meters below unit datum. However, the stratigraphy that was reveled was totally different from that in test unit 1

(Figure 22). In an effort to keep the data consistent, the datum of test unit 1 was utilized.

Test unit 2 yielded only 10 artifacts; all were found within the first five levels of the unit. Level 1 (0 cm - 10 cmbs) was primarily composed of stratum A, a dark yellowish brown (10YR4/4) loamy fine sand. The matrix was basically the same as that excavated in unit 1 except that stratum H, a very pale brown (10YR7/3) loamy sand with yellowish brown (10YR5/6) course sandy loam mottles was encountered near the base of the level. The eastern fourth of the level had stratigraphy that duplicated that in unit 1, but there was a rather abrupt change that occurred about 30 centimeters east of unit 1 as stratum H appeared. Only one artifact was recovered from level 1 of test unit 2, a single Barnes Cord Marked body sherd.

In level 2 (10 cm - 20 cmbs) the color of the matrix was basically the same as had been observed in the base of level 1. The eastern fourth was about the same as level 2 of test unit 1 (a bit of stratum A remaining, stratum B showing up and a bit of stratum C becoming evident). The other three-fourths of the level was composed of stratum H, the only changes being in the degree of mottling. In this level and those following, stratum H was excavated and screened separately from the matrix found in the eastern part of the unit. Of the 4 artifacts recovered from this level there was 1 piece of lithic shatter, 2 Kennett Plain body sherds and 1 fragment of charcoal. In the base of the level, the mottles were noted to run in consistent north-south linear lines which are probably best described as plow scars.

The same appearance of the matrix continued through level 3 (20 cm - 30 cmbs). The eastern 20 centimeters were composed of strata B and C, the rest was stratum H. The primary change in the matrix was in the evidence of plow scars which were no longer evident in the same numbers. However, two scars were evident, the center line of one about 35 centimeters from the west wall and the center line of the second about 90 centimeters from the west wall. The most probable explanation for these scars is that they are the result of the subsoiler/ripper that was used on the field. The only evidence of cultural material was a single Kennett Plain body sherd recovered in the screen.

Level 4 (30 cm - 40 cmbs) was the same as level 3, except that the scars of the subsoiler/ripper did not extend to the base of the level. Stratum C was evident in the southeast corner of the level, but the rest was composed of stratum H with only some minor variations in the degree of mottling. The only artifact recovered from this level was a single Kennett Plain body sherd.

A slight increase in artifact count (3) was found in level 5 (40 cm - 50 cmbs). About 20 centimeters of the southeast corner was the continuation of strata C and D while the rest of the level was composed of stratum H with some of stratum B showing up in the northeast corner. Two artifacts were recovered from strata H, a secondary decortication flake and a small piece of unmodified stone. A third artifact had been recovered while excavation test unit 1 when a Barnes Cord Marked body sherd was removed from the wall at 50 centimeters below surface. As this sherd was primarily located in the matrix of test unit 2 - level 5 - stratum D, it was included in this level but kept separate from the general collection of stratum H material.

In spite of the fact that the remaining levels were all culturally sterile, the remaining 6 levels (50 cm - 110 cm) were excavated, continuing in 10 centimeter levels, to provide consistency with test unit 1. Little change was noticed in the matrix throughout the rest of the unit, with the basic strata of test unit 1 extending into test unit 2 for 20 cm - 30 cm, where there was a rather abrupt change into stratum H.

Test Unit 3

Test unit 3 was located halfway between the locations of posthole tests 8-S and 9-S with its northeast corner being located 6 meters north of posthole 9-S. Test unit 3 was excavated in arbitrary 10 centimeter levels to a depth of 1.4 meters below unit datum; a posthole placed in the base of the unit extended the investigation to a total depth of 2.50 meters. Although the natural stratigraphy was evident in the profile of the unit (Figure 22), it was not distinct enough to excavate the unit by natural layers. A total of 171 artifacts were recovered from 12 levels of Test unit 3.

Level 1 (0 cm - 10 cmbs) was composed of stratum A, a dark yellowish brown (10YR4/4) loamy fine sand. The matrix was filled with roots of the grass and corn and had been extensively disturbed through agricultural practices. The 3 artifacts recovered from level 1 included 1 interior flake, 1 Kennett Plain body sherd and 1 Barnes Cord Marked body sherd. The presence of cultural material in this surface layer could indicate that level 1 was once part of an undisturbed cultural level, but due to the depth that has been disturbed by the practice of subsoiling, these artifacts may have been pulled to the surface by this agricultural practice.

Level 2 (10 cm - 20 cmbs) was also composed entirely of stratum 1, but was devoid of cultural material.

Most of level 3 (20 cm - 30 cmbs) was composed of stratum A with the second natural stratum, B, beginning to appear near the base of this level. Stratum B was a dark yellowish brown (10YR4/6) loamy fine sand that was very similar in color and texture to stratum A, but was slightly lighter in chroma. It is entirely possible that the differences between these strata are simply due to differences in moisture content, or some other relatively unimportant factor. Because they were relatively clear, they were mapped. The cultural evidence recovered from this level was limited to a single Barnes Cord Marked body sherd.

Stratum B extended into Level 4 (30 cm - 40 cmbs) but in this level did not produce any no cultural material.

The base of stratum B was reached about half way through level 5 (40 cm - 50 cmbs) as stratum C, a yellowish brown (10YR5/4) loamy fine sand, was encountered. The cultural evidence recovered from this level was composed of 10 artifacts including 1 interior flake, 1 modified flake, 1 piece of lithic shatter, 2 Kennett Plain body sherds, 4 Barnes Cord Marked body sherds and 1 Barnes Cord Marked notched rim sherd. The matrix from this level was screened without designating between strata. Most, if not all, of the cultural material recovered from this level was probably recovered from the base of the level in or near stratum C.

The primary cultural level in test unit 3, based on artifact count, was level 6 (50 cm - 60 cm). The soil matrix of this level was entirely within stratum C, though near the top of the level (48 cm - 55 cmbs), two lenses of a very dark grayish brown (10YR3/2) loamy fine sand were observed. These lenses were excavated separately, but no cultural material was recovered from them.

Level 6 yielded 124 artifacts including: 1 primary decortication flake, 6 interior flakes, 1 retouch flake, 1 modified flake, 2 pieces of lithic shatter, 38 Kennett Plain body sherds, 62 Barnes Cord Marked body sherds, 1 Barnes Cord Marked rim sherd with folded notched rim and 2 nodes (Figure 9hh), 1 Barnes Cord Marked pan rim sherd with folded rim (Figure 9ii), 1 Barnes Cord Marked pan rim sherd, 1 Barnes Cord Marked bowl rim sherd, 1 Barnes Cord Marked miniature vessel rim sherd, 4 pieces of burned clay and 4 fragments of

charcoal. No changes in the artifact density were observed between the top and bottom of the level during excavation.

Stratum C continued through most of level 7 (60 cm - 70 cmbs), though a gradual boundary between strata C and D began in the southern part of the unit near the base of the level. No variation in vertical artifact density was noticed during excavation, but based on artifact densities from upper and lower levels, the 18 artifacts recovered from this level probably were concentrated in the upper part of the level. Artifacts recovered from this level include 1 piece of lithic shatter, 7 Kennett Plain body sherds, 8 Barnes Cord Marked body sherds, 1 Barnes Cord Marked jar rim sherd with cordwrapped cylinder impressed notches and 1 Barnes Cord Marked jar rim sherd.

Level 8 (70 cm - 80 cmbs) encompassed stratum D, a brown (10YR5/3) loamy fine sand with black (10YR2/1) coarse sand and dark brown (7.5YR3/4) coarse sand mottling, that was evident throughout the unit, except for some small areas where stratum C dipped in this lower level. The mottling began very faint and grew stronger across the gradual boundary between strata C and D. The artifact count dropped sharply again through level 8, with only 3 artifacts -- 3 Barnes Cord Marked body sherds.

Level 9 (80 cm - 90 cm bs) was very similar to level 8, both in the appearance and texture of the matrix, and in the cultural material that was recovered from it. The matrix was primarily that of stratum D, except for small areas of stratum C still dipping into it. The artifact count continued to be very low, with only 3 artifacts recovered including: 1 secondary decortication flake, 1 Kennett Plain body sherd and 1 Barnes Cord Marked body sherd.

Within level 10 (90 cm - 100 cm bs), all evidence of stratum C disappeared and the beginnings of stratum E, a narrow stratum of brown (10YR5/3) sand that was free of mottling presented a clear change from stratum D. The artifact count remained similar to the previous 2 levels, with 4 artifacts recovered including: 2 interior flakes, 1 Barnes Cord Marked body sherd and 1 fragment of charcoal.

Level 11 (100 cm - 110 cmbs) appeared much the same as level 10, except that stratum E was showing up in more parts of the unit taking the place of stratum D, and it was becoming evident that stratum E was relatively thin (3 cm - 7 cm) with stratum F below. Stratum E was later identified as an earthquake crack (James E. Price: personal communication). The artifact count dropped slightly lower: only 1 Barnes Cord Marked body sherd and 1 Barnes Cord Marked rim sherd were recovered in level 11.

Near the base of level 12 (110 cm - 120 cmbs) stratum E was gone and the matrix was composed of stratum F, a pale brown (10YR6/3) loamy sand mottled with a black (10YR2/1) coarse sand or very small concretions. The only artifacts recovered from this level were 1 interior flake and 1 small fragment of charcoal.

Below level 12, the excavation of the unit was reduced to an area 50 cm x 100 cm in the south half of the unit. No additional cultural material was recovered from the unit through level 13 (120 cm - 130 cmbs) and 14 (130 cm - 140 cmbs). In the base of the south half of the unit, a posthole was excavated an additional 110 centimeters to check for deeply buried deposits. No changes in matrix from that of stratum F were observed throughout the posthole to its deepest point at 250 centimeters below datum. The water table was encountered while excavating the posthole, and the hole filled with water to a point 190 centimeters below surface datum.

Cultural Affiliation

23MI599 appears to have been occupied during the Woodland Period based on the available data. There is some evidence to suggest the presence of an Early and Middle Woodland occupation at the site. The evidence consists of a possible poverty point object found in test unit 1 (Early Woodland) and some recovered sherds displaying the decorative lip notching and cordwrapped cylinder impressions on rims that are distinctively Middle Woodland.

The major component at 23MI599 represents a Late Woodland Baytown Period, Dunklin and Hoecake phase occupation. An intensive Late Woodland occupation at the site is indicated by the great predominance of sand-tempered Kennett Plain and Barnes Cord Marked ceramics in addition to the clay-tempered Baytown Plain and Mulberry Creek Cord Marked ceramics that are also present.

Function

23MI599 appears to have functioned as a habitation site. The buried cultural layer (layer E in Test Unit 1 and 2 and layer C in Test Unit 3), yielding a high concentration of cultural material including large numbers of ceramics and burned clay stongly indicates intensive human occupation of this part of the landform.

Integrity

23MI599 has suffered damage from a number of sources such as those described earlier. Although the buried cultural layer is located below the area most likely to be disturbed from agricultural activities, the stratigraphy of the test units (Figure 22) indicate a major amount of disturbance has taken place. As indicated previously, one likely explanation for the disturbance of the matrix is from earthquake(s). This explanation is supported by the observation of possible earthquake fissures in Test Unit 3 and reported steam vents in the vicinity.

Although the site has suffered moderate damage, the site has great research potential. Despite the fact that our excavations did not recover evidence of definite midden deposits, except for the possible features recorded in test unit 3, the possibility exists that preserved organic remains that would provide data relating to subsistence are present at the site.

23NM544

23NM544 is located in near New Madrid, New Madrid County, Missouri. The land on which the east part of the site is located, is owned by WESTVACO, Wickliffe, Kentucky and managed by Mr. Jim Baer of the WESTVACO, Timberlines Division, Wickliffe, Kentucky. The western part of the site is part of Edwards Farms, Incorporated owned by Mrs. Medlow of Germantown, Tennessee, operated by Mr. Rice and farmed by Mr. Joe Broughton both of New Madrid, Missouri.

The site is located on the north side of a bend of St. John's Bayou covering an area 550 m by 325 m (178,750 m^2) of which an area 425 m x 70 m (29,750 m^2) lies inside the right-of-way (Figure 23). Within this area a much smaller area of concentration was noted of which only an area 6,400 m^2 was within the right-of-way. Cultural deposits extended into the clay a maximum depth of 60 centimeters below the surface in one of the postholes.

Although the fields where the site is located have not been subject to land leveling, a variety of other disturbances have affected the site. One major disturbance occurred through the use of part of the site as a tree farm. Mr. Broughton described seeing burials disturbed during live trees harvesting "about seven years ago" and noted that since that time no harvesting had occurred in that general location. Additional evidence of disturbance came from Mr. Baer, who provided the information that the tree farm side of the site had been pothunted about two years ago. He stated that WESTVACO had restricted access to the property since that time, in an attempt to prevent further vandalism. In addition, agricultural use of the field, on the west side of the tree line presents a continuing disturbing effect.

Physical Environment

23NM544 is located in agricultural fields on a terrace just north of a bend of St. John's Bayou near New Madrid, New Madrid County, Missouri. The soils on which the site is located compose the the Sharkey-Alligator association which according to Brown (1977:2):

> . . . consists of broad basins and former channels of the Mississippi and Ohio Rivers. The main areas of this association are along the flood plain of Little River and in St. Johns Basin. A few sloughs, bayous, lakes, and potholes are scattered throughout the association. The clayey sediment was deposited by still water in backswamp areas. The soils of this association are described as gumbo soils. They are at the lowest elevation in the county. When wet, these soils are sticky and plastic, and when dry, they crack.

Within this association site 23NM544 is located in Sharkey clay of the Sharkey soil series. The Sharkey series consists of deep, nearly level, poorly drained soils with very slow permeability and high natural fertility on which the native vegetation was bald cypress and mixed hardwoods (Brown 1977:27). The representative profile is described as having a surface layer of very dark gray, firm clay for the first 6 inches (0 cm - 15 cm bs) followed by a subsoil of very dark gray to gray, firm, plastic clay from 6 inches to 44 inches below the surface (15 cm - 112 cm bs) and an underlying matrix of gray clay (Brown 1977:27). It is common for cracks 2 cm - 15 cm wide to form in the Sharkey clay phase of this series due to the moisture depletion by agricultural crops (Brown 1977:28)

At the time the site was located in the fall during the current project, the vegetation consisted of unharvested soybeans on the west half of the site and a tree farm on the east half separated by a row of mature native hardwoods about 10 meters across. When the testing phase was conducted in the summer the new crop of soybeans had attained all most full growth and the tree farm was unchanged. The only known disturbance in the soybean field was from normal agricultural practices and there were no indications that the field had been land leveled. To the east side of the tree line disturbances in the tree farm have been more extensive: first, it was probably previously used for crop cultivation; second, the field having been used as a tree farm led to deeper disturbances during the harvest of live trees; and third, from at least one incidence of pothunting (Jim Baer:personal communication)

General Surface Collection

A general surface collection of probable diagnostic artifacts was made over the entire site area to insure the collection of all material that would

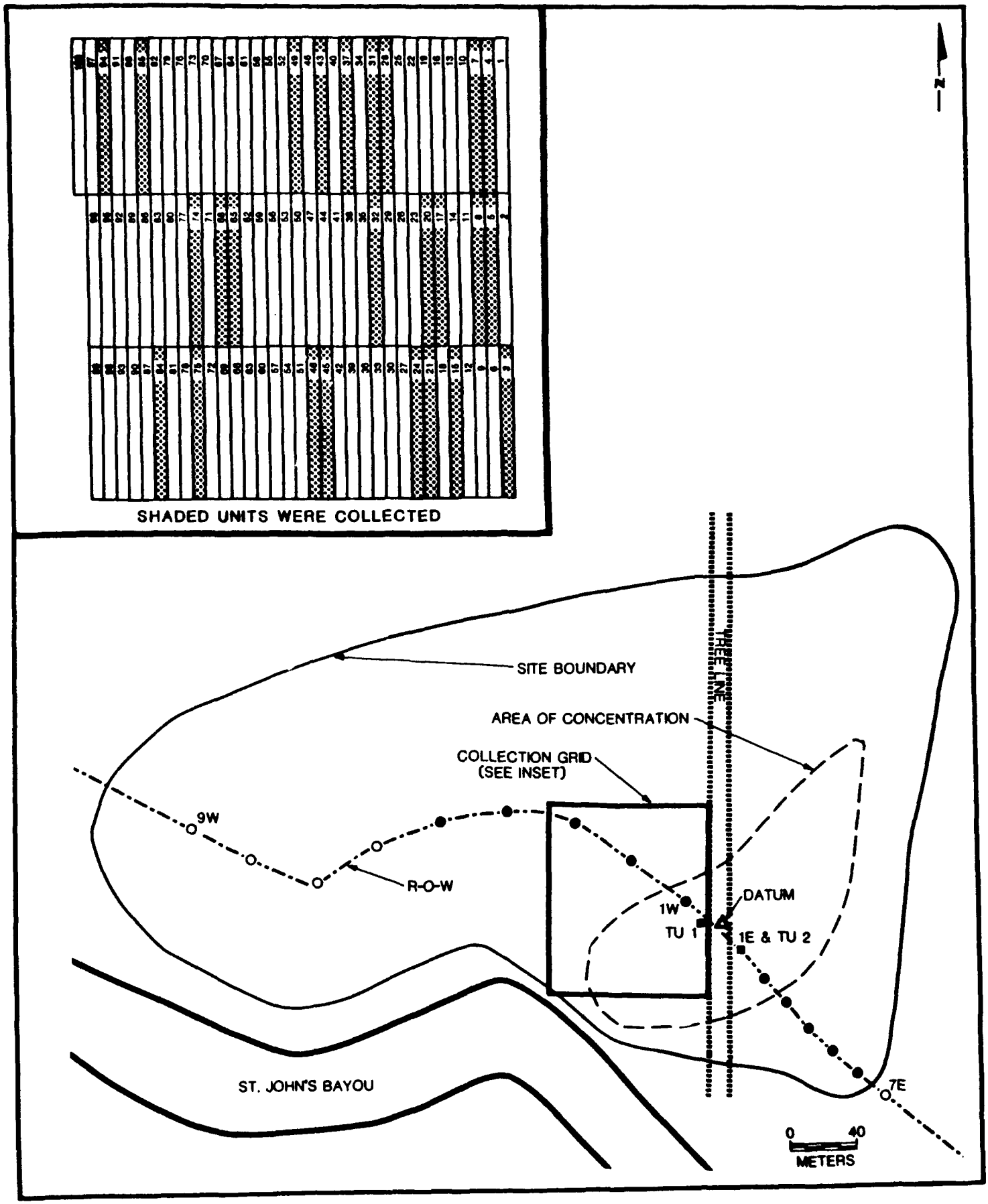


Figure 23. Sketch Map 23NM544

assist in the interpretation of the site. The surface collection was primarily restricted to the area of concentration noted above, although no attempt was made to keep the material from the east and west sides of the tree line separate.

This surface collection resulted in an assemblage of 84 artifacts including 1 tested cobble, 1 lithic core, 3 interior flakes, 1 modified flake, 1 piece of lithic shatter, 7 biface fragments, 1 biface, 1 projectile point/knife base fragment, 2 small triangular arrow points, 1 hammerstone, 1 pitted cobble, 1 discoidal fragment, 9 Kennett Plain body sherds, 1 Kennett Plain probable base fragment, 1 Kennett Plain pan rim sherd with cord Marked lip, 1 Kennett Plain jar rim sherd with folded rim, 2 Kennett Plain jar rim sherds, 1 Baytown Plain folded rim jar rim sherd, 1 Baytown Plain folded rim pan rim sherd, 1 Baytown Plain body sherd, 1 Baytown Plain bottle rim sherd, 1 Baytown Plain bowl rim sherd, 11 Baytown Plain rim sherds, 1 Baytown Plain pan rim sherd, 1 Baytown Plain shoulder sherd, 1 Baytown Plain jar rim sherd, 1 Baytown Plain incised body sherd, 5 Barnes Cord Marked body sherds, 1 Barnes Cord Marked jar rim sherd, 1 Barnes Cord Marked rim sherd with oblique cord notches on lip, 2 Mulberry Creek Cord Marked rim sherd with notches, 3 Mulberry Creek Cord Marked folded rim pan rim sherds, 1 Mulberry Creek Cord Marked rim sherd, 2 Barnes Incised body sherd, 5 shell tempered plain body sherds, 1 Bell Plain bowl rim sherd (effigy bowl ?), 1 Bell Plain bowl rim sherd, 1 Mississippi Plain bowl rim sherd with incised lines extending downward from the rim on exterior surface (Figure 9jj), 1 Mississippi Plain notch, scalloped-rim bowl rim sherd (Figure 9kk), 3 Mississippi Plain bowl rim sherds, 1 Mississippi Plain jar rim sherd, 1 shell tempered pottery trowel fragment (Figure 911), 1 fragment of and unidentified ceramic object and 1 fragment of fired clay object.

The pp/k was manufactured from a dingy brown chert and measures [33 mm] x 31 mm x 14 mm (Figure 9mm). It is is plano-convex in cross section and has a convex blade shape. The pp/k is too crude to type.

Of the two arrow points, one measures 19 mm x 16 mm x 5 mm and was manufactured from a brown chert flake (Figure 9nn). It is triangular in shape and exhibits a slightly concave base. The shape of this arrowpoint did not conform to any known point type.

The second arrow point consisted only of the base. The specimen, manufactured from a light tan chert flake, measures [12 mm] x 15 mm x 4 mm (Figure 9oo). It was triangular in shape and exhibits a flat base The shape of this arrowpoint also did not conform to any particular point type.

Controlled Surface Collection

To aid the understanding of the surface distribution of cultural material a grid of 100 collection units were designated in an area 100 m x 108 m. The size of the individual collection units were based on the available visibility within the soybean field; consequently, our collection units represent sections of a series of rows. Each collection unit measured approximately 1 meter wide by 36 meters (N-S) with ground surface visibility varying between 35% - 95%. A collection was made of all cultural material located from each of 25 units in the grid selected from a table of random numbers. The controlled collection yielded 1,844 artifacts.

Of the 25 units the collection unit exhibiting the lowest density of artifacts was Collection unit 3 which produced only 8 artifacts including 4 Kennett Plain body sherds, 2 pieces of miscellaneous burned clay and 2 fragments of clear bottle glass.

In contrast, the collection unit exhibiting the highest density of artifacts was unit 4. The 456 artifacts collected from this unit include: 1 primary decortication flake, 3 secondary decortication flakes, 38 interior flakes, 5 pieces of lithic shatter, 3 modified flakes, 1 biface fragment, 1 corner notched projectile point/knife, 2 pieces of fire cracked rock, 1 possible celt fragment, 1 fragment of unmodified sandstone, 216 Kennett Plain body sherds, 1 Baytown Plain pan rim sherd, 1 Baytown Plain body sherd, 1 Kennett Plain rim sherd, 48 Barnes Cord Marked body sherds, 2 Barnes Cord Marked rim sherds, 5 Mulberry Creek Cord Marked rim sherds, 4 fragments of fired clay objects (Poverty Point Objects), 118 pieces of miscellaneous burned clay, 1 fragment of amber bottle glass, 1 shotgun shell base and 2 fragments of bone.

Collection unit 5 contained only 29 artifacts including 1 lithic core, 1 secondary decortication flake, 5 interior flakes, 11 Kennett Plain body sherds, 3 Barnes Cord Marked body sherds, 4 pieces of miscellaneous burned clay, 3 fragments of clear bottle glass and 1 fragment of bone.

The third highest density of artifacts was observed in collection unit 7 which produced 193 artifacts including: 9 primary decortication flakes, 4 secondary decortication flakes, 28 interior flakes, 7 pieces of lithic shatter, 1 biface fragment, 1 aborted preform, 1 cobble fragment, 100 Kennett Plain body sherds, 1 Larto Red rim sherd, 1 Baytown Plain rim sherd, 1 Kennett Plain rim sherd, 9 Barnes Cord Marked body sherds, 2 fragments of fired clay objects, 27 pieces of miscellaneous burned clay and 1 fragment of burned clay.

Of the 25 collection units, collection unit 8 ranked tenth in terms of artifact density. Among the 56 artifacts recovered in this unit were 2 sandstone cobble fragments, 1 primary decortication flake, 3 interior flakes, 3 pieces of lithic shatter, 1 biface fragment, 1 small stemmed projectile point/knife, 18 Kennett Plain body sherds, 11 Barnes Cord Marked body sherds, 1 Barnes Cord Marked folded rim rim sherd, 14 pieces of miscellaneous burned clay and 1 fragment of clear bottle glass.

Collection unit 15 yielded only 20 artifacts including 1 interior flake, 6 Kennett Plain body sherds, 2 Barnes Cord Marked body sherds, 2 pieces of miscellaneous burned clay and 9 fragments of automotive window glass.

In regard to artifact density collection unit 17 ranked eleventh out of 25 units. The 46 artifacts recovered from this unit included 1 lithic core, 3 interior flakes, 1 pieces of fire cracked rock, 13 Kennett Plain body sherds, 1 Baytown Plain body sherd, 9 Barnes Cord Marked body sherds and 18 pieces of miscellaneous burned clay.

Ranking ninth in terms of artifact density is collection unit 20 which contained 61 artifacts. These included the following items: 1 secondary decortication flake, 8 interior flakes, 1 pieces of lithic shatter, 2 fragments of sandstone, 29 Kennett Plain body sherds, 1 Baytown Plain rim sherd, 10 Barnes Cord Marked body sherds, 7 pieces of miscellaneous burned clay and 2 fragments of white plastic.

Collection unit 21 displayed the third lowest density. This unit only produced 16 artifacts. These included 1 secondary decortication flake, 1 interior flake, 1 fragment of unmodified stone, 5 Kennett Plain body sherds, 2 Barnes Cord Marked body sherds, 5 pieces of miscellaneous burned clay and 1 fragment of red brick.

Collection unit 24 yielded only 17 artifacts including 2 interior flakes, 1 possible celt fragment, 3 Kennett Plain body sherds, 1 Barnes Cord Marked body sherds, 8 pieces of miscellaneous burned clay, 1 fragment of red brick and 1 fragment of coal.

The unit exhibiting the fourth highest density of material was unit 28. The 145 artifacts recovered from this unit include 1 lithic core, 1 secondary decortication flake, 24 interior flakes, 4 pieces of lithic shatter, 1 biface fragment, 1 piece of unmodified gravel, 3 pieces of fire cracked rock, 1 cobble fragment, 61 Kennett Plain body sherds, 1 Kennett Plain rim sherd, 22 Barnes Cord Marked body sherds and 25 pieces of miscellaneous burned clay.

Second in terms of artifact density was collection unit 31 which contained 268 artifacts. These included 2 secondary decortication flakes, 16 interior flakes, 2 pieces of lithic shatter, 5 pieces of fire cracked rock, 80 Kennett Plain body sherds, 1 Kennett Plain rim sherd, 22 Barnes Cord Marked body sherds, 138 pieces of miscellaneous burned clay, 1 fragment of white plastic and 1 of black vinyl.

Collection unit 32 containing 82 artifacts ranks it sixth on the list in terms of artifact density. Items recovered include 3 cobble fragments, 1 primary decortication flake, 6 interior flakes, 3 pieces of lithic shatter, 2 pieces of fire cracked rock, 35 Kennett Plain body sherds, 1 Kennett Plain folded rim rim sherd, 1 Baytown Plain body sherd, 2 Kennett Plain rim sherd, 17 Barnes Cord Marked body sherds and 11 pieces of miscellaneous burned clay.

Collection unit 37 exhibited the eight highest density. Among the 71 artifacts recovered were the following: 1 cobble fragment, 3 interior flakes, 1 biface, 4 pieces of fire cracked rock, 29 Kennett Plain body sherds, 9 Barnes Cord Marked body sherds, 1 Baytown Plain rim sherd and 23 pieces of miscellaneous burned clay.

Of the 25 collection units, the 33 artifacts collected from collection unit 43 represents the median. These items included 1 primary decortication flake, 1 secondary decortication flake, 3 interior flakes, 1 modified flake, 1 fire cracked rock, 1 fragment of unmodified sandstone, 1 fragment of granite ground stone, 18 Kennett Plain body sherds, 1 Baytown Plain rim sherd, 3 Barnes Cord Marked body sherds and 2 pieces of miscellaneous burned clay.

Collection unit 45 yielded just 27 artifacts including 1 primary decortication flake, 1 secondary decortication flake, 2 interior flakes, 1 piece of fire cracked rock, 9 Kennett Plain body sherds, 6 Barnes Cord Marked body sherds, 2 pieces of miscellaneous burned clay and 5 fragments of red brick.

The unit displaying the second lowest artifact density is collection unit 48 where only 15 artifacts were found. These included 1 interior flake, 7 Kennett Plain body sherds, 2 Barnes Cord Marked body sherds and 5 pieces of miscellaneous burned clay.

On the other hand, the 83 items recovered in collection unit 49 is the fifth highest in artifact density. Among these artifacts were 2 cobble fragments, 1 primary decortication flake, 1 secondary decortication flake, 14 interior flakes, 3 pieces of lithic shatter, 2 biface fragments, 2 pieces of fire cracked rock, 26 Kennett Plain body sherds, 1 Kennett Plain rim sherds, 20 Barnes Cord Marked body sherds, 1 Barnes Cord Marked rim sherd, 9 pieces of miscellaneous burned clay and 1 fragment of clear bottle glass.

The 34 artifacts recovered from collection unit 65 was enough to rank this unit 12th out of the 25 units. The artifacts recovered from this unit include 1 secondary decortication flake, 2 interior flakes, 21 Kennett Plain body sherds, 3 Barnes Cord Marked body sherds, 1 Larto Red body sherd and 6 pieces of miscellaneous burned clay.

Collection unit 68 contained only 27 artifacts including 3 interior flakes, 2 pieces of fire cracked rock, 9 Kennett Plain body sherds, 11 Barnes Cord Marked body sherds, 1 piece of miscellaneous burned clay and 1 fragment of clear bottle glass.

Ranking 7th in artifact density was unit 74 which contained 77 artifacts. These included 1 lithic core, 1 primary decortication flakes, 2 secondary decortication flakes, 3 interior flakes, 3 pieces of lithic shatter, 2 pieces of fire cracked rock, 46 Kennett Plain body sherds, 3 Kennett Plain rim sherds, 9 Barnes Cord Marked body sherds, 1 Baytown Plain jar rim sherd, 1 Baytown Plain shoulder sherd, 1 Mulberry Creek Cord Marked jar rim sherd, 1 piece of clear bottle glass, 1 piece of green bottle glass and 7 pieces of miscellaneous burned clay.

Collection unit 75 yielded the third lowest amount of artifacts of the 25 units. Among the 16 artifacts surface collected in this random sample unit were 2 secondary decortication flakes, 2 interior flakes, 1 piece of shatter, 1 piece of fire cracked rock, 6 Kennett Plain body sherds, 1 Kennett Plain rim sherd, 1 piece of miscellaneous burned clay, 1 fragment of red brick and 1 fragment of plain whiteware.

Containing just 20 artifacts was collection unit 84 which was also a low density of artifacts. These items included 2 interior flakes, 11 Kennett Plain body sherds, 1 Baytown Plain appendage fragment, and 6 Barnes Cord Marked body sherds.

Likewise, collection unit 85 contained just 29 artifacts including 2 interior flakes, 1 piece of lithic shatter, 2 biface fragments, 13 Kennett Plain body sherds, 6 Barnes Cord Marked body sherds 1 Mississippi Plain rim sherd, and 4 pieces of miscellaneous burned clay.

The last of these units also displayed a light artifact density. Collection unit 94 produced just 20 artifacts including 1 interior flake, 2 pieces of fire cracked rock, 2 pieces of unmodified sandstone, 9 Kennett Plain body sherds, 2 Barnes Cord Marked body sherds and 4 pieces of miscellaneous burned clay.

Of the 1,844 artifacts recovered as a result of the random sample surface collection, 58% (n=1,061) represent the remains of prehistoric ceramics. Five types of ceramics are present within this sample: Kennett Plain, Barnes Cord Marked, Baytown Plain, Mulberry Creek Cord Marked and Larto Red.

The vast majority of the sherds that were recovered (n=798; 75%) were from Kennett Plain vessels. Most of the remaining sherds (n=243; 23%) were from Barnes Cord Marked vessels. Only 1% (n=11) of the sherds were from Baytown Plain vessels. The remaining 1% represent Mulberry Creek Cord Marked sherds (n=6) and Larto Red sherds (n=3).

Kennett Plain sherds were found in every one of the 25 random sample collection units. Although found in every unit, this ceramic type was not uniformly distributed across the site. For example, 50% of the Kennett Plain sherds were collected from just three units, collection unit 4 (n=218; 27%), collection unit 7 (n=101; 27%) and collection unit 31 (n=81; 10%). In contrast, collections units 3 (n=4; less than 1%), 15 (n=6; less than 1%), 21 (n=5; less than 1%), 24 (n=3; less than 1%), 48 (n=7; less than 1%) and 75 (n=7; 1%) combined only account for 4% (n=32) of the total.

Barnes Cord Marked sherds were found in all but two (units 3 and 75) of the 25 random sample collection units. Like the Kennett Plain sherds, Barnes Cord Marked sherds are not uniformly distributed across the site. Four of the random sample collection units including unit 4 (n=50; 21%), unit 49 (n=30; 12%), unit 28 (n=22; 9%) and unit 31 (n=22; 9%) produced 51% (n=124) of the sherds of this type. On the other hand, of the units that produced evidence of this type of ceramics, units 15 (n=2; 1%), 21 (n=2; 1%), 24 (n=1; .5%), 48 (n=2; 1%) and 94 (n=2; 1%) yielded less than 4% (n=9) of the total.

Baytown Plain sherds were lightly distributed across nine of the random sample collection units including units 4, 7, 17, 20, 32, 37, 43, 74 and 84. The six Mulberry Creek Cord Marked sherds were found in only two units, unit 4 (n=5) and unit 74 (n=1). The three Larto Red sherds were found separately in units 7, 49 and 65.

Of the 1,061 sherds that were recovered as a result of the random sample surface collection, 275 (26%) were found in collection unit 4. Four of the five ceramic types found at the site were represented in this unit: these included Kennett Plain (n=218), Barnes Cord Marked (n=50), Baytown Plain (n=2) and Mulberry Creek Cord Marked (n=5).

Lithic debitage was also recovered from the random sample collection units. Except for unit 3, all units yielded chert artifacts representative of the lithic reduction sequence. Among the chipped tools that were recovered were two projectile point/knives.

The first pp/k was found in collection unit 4. The specimen, manufactured from a gray chert, measures 43 mm x 25 mm x 6 mm (Figure 9pp). It exhibits a flattened cross section with a convex blade shape and a corner notched base. Although this point could not be assigned to any particular type, its shape is similar to the general shape of corner notched varieties of the Woodland period.

The second pp/k was recovered in collection unit 8. This specimen, also manufactured from a gray chert, measures [30 mm] x 23 mm x 8 mm (Figure 9qq). It exhibits a biconvex cross section with a straight to concave blade shape and a straight stemmed base. Although this point could not be assigned to any particular type, its shape is similar to the general shape of stemmed varieties of the Woodland period.

Posthole Testing

Although the majority of the area of concentration was located outside of the indicated right-of-way, the posthole testing was conducted inside the project corridor. The line of postholes were continued along the edge of the ROW to the edge of the site, or until at least two consecutive negative tests were excavated.

To the west of the tree line, posthole 1-W was placed 20 meters west of datum and succeeding postholes were placed at 40 meter intervals across the site, for a total of 9 postholes west of the tree line. To the east of the tree line, posthole 1-E was located 20 meters east of datum and succeeding postholes were placed at 20 meter intervals to a point beyond the edge of the surface scatter, and into a deeply plowed section of the field.

On the west side of the site, the postholes were excavated to an average depth of 38 centimeters into the very compact clay subsoil. Compared to the subsoil, the plowzone was somewhat looser, more loamy and was around 10 centimeters deep. All material recovered from these tests came from the plowzone.

On the east side of the site, the posthole tests were excavated to an average depth of 55 centimeters due to greater depth of a looser matrix. In most cases on the east side, no difference in the matrix was noted throughout the depth of the posthole and cultural material was recovered at all depths.

Of the 16 posthole tests that were excavated, nine produced positive results and seven produced negative results. The nine positive posthole tests yielded a total of 101 artifacts.

Three of the posthole tests excavated to the west of datum were positive. Posthole test 1-W yielded 3 Kennett Plain body sherds, 1 Barnes

Cord Marked rim sherds, 1 Barnes Cord Marked body sherd and 1 piece of miscellaneous burned clay. Posthole tests 2-W and 3-W were negative. A single piece of burned clay was the only artifact recovered from posthole test 4-W. A shell-tempered body sherd was the only artifact recovered from posthole test 5-W. The remaining four postholes (6-W, 7-W, 8-W, and 9-W) excavated west of datum were all culturally sterile.

Six of the seven postholes excavated to the east of datum produced cultural materials. Posthole test 1-E yielded the most artifacts of any of the posthole tests excavated at the site. The 50 artifacts recovered from 1-E represent 50% of the total artifacts recovered as a result of the posthole testing (n=101). Among the items recovered from 1-E were 2 interior flakes, 1 piece of lithic shatter, 9 Kennett Plain body sherds, 4 Barnes Cord Marked body sherds, 1 Baytown Plain jar rim sherd, 6 shell-tempered plain body sherds, 23 pieces of miscellaneous burned clay, 3 unidentified bone fragment and 1 unidentified human bone fragment.

Posthole test 2-E yielded 16 items including 3 interior flakes, 1 fragment of red sandstone, 2 Kennett Plain body sherds, 1 Barnes Cord Marked body sherd, 5 shell-tempered plain body sherds and 4 pieces of miscellaneous burned clay.

Posthole test 3-E produced 2 interior flakes, 1 fragment of lithic shatter, 2 corner notched projectile points/knives, 4 Kennett Plain body sherds, 3 Barnes Cord Marked body sherds, 4 shell-tempered plain body sherds and 3 pieces of miscellaneous burned clay.

Of the remaining posthole tests: posthole test 4-E yielded 1 Kennett Plain body sherd, 2 Barnes Cord Marked body sherds and 2 shell-tempered plain body sherds; posthole test 5-E had only a shell-tempered plain body sherd in it; posthole test 6-E produced 1 interior flake and 1 Kennett Plain body sherd; and posthole 7-E was culturally sterile.

The first pp/k recovered in posthole 3-E was manufactured from a dark gray chert and measures 59 mm x 35 mm x 9 mm (Figure 9rr). The specimen exhibits a biconvex to flattened cross section with a convex blade shape and a corner notched base with a convex basal edge. The shape of this point did not resemble any of the established types.

The second pp/k recovered in posthole 3-E was manufactured from a light pink chert and measures 40 mm x 29 mm x 8 mm (Figure 9ss). It exhibits a flattened cross section with a convex blade shape and a corner notched base with a flat basal edge. The shape of this point did not resemble any of the established types.

Test Units

Two 1 m x 1 m test units were excavated to a maximum depth of 40 centimeters below surface (bs) with a posthole excavated in the bottom of the unit to extend the total maximum depth to 80 centimeters below surface.

Test Unit 1

Test unit 1 was located in the edge of the soybean field with the southeast corner 3 meters west of datum. The test unit was excavated in arbitrary 10 centimeter levels to a depth of 30 centimeters below surface with a 50 centimeter posthole excavated in the base of the unit extending the total depth to 80 centimeters (Figure 24). Only two slight color changes were noted in the matrix of the unit.

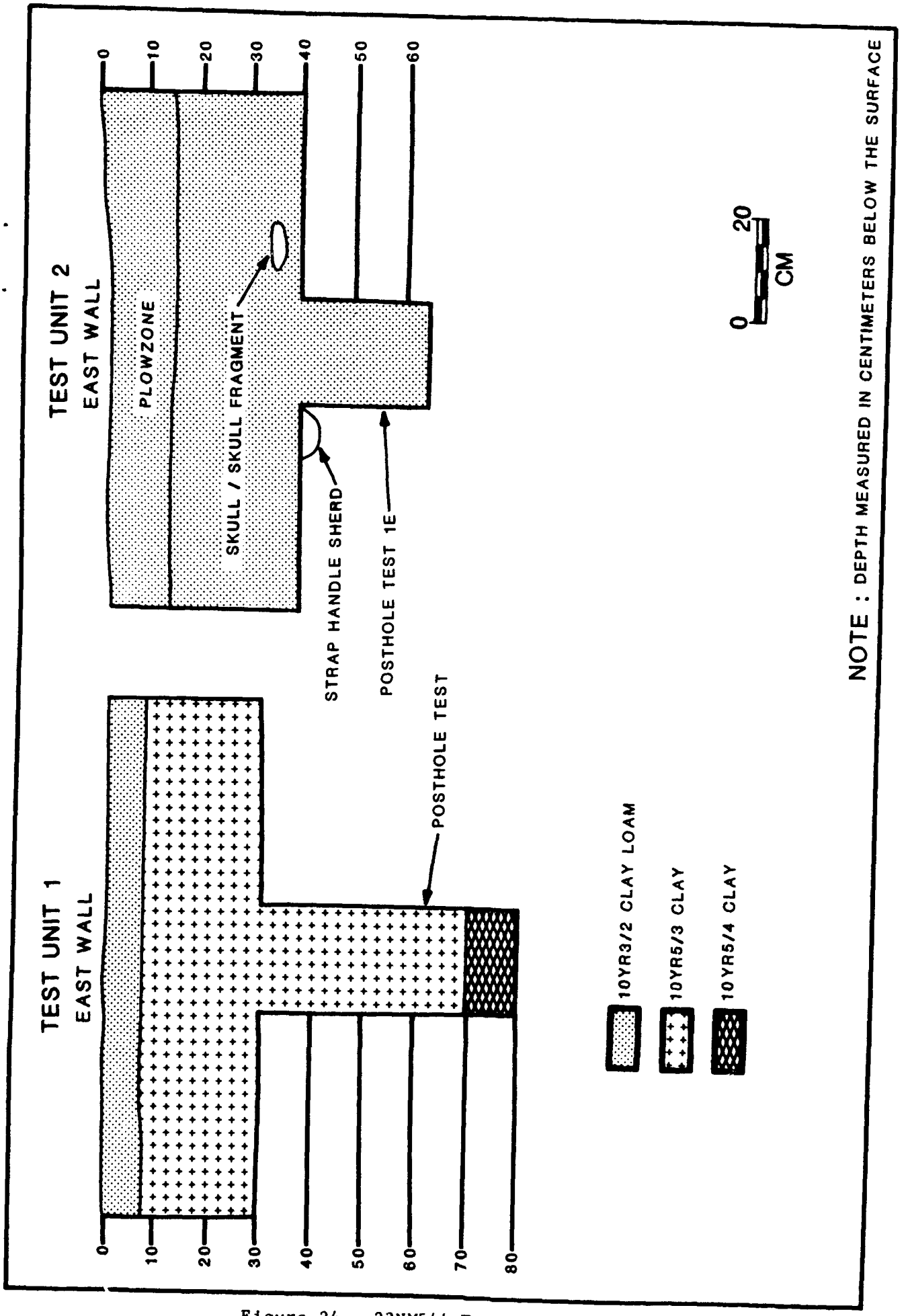


Figure 24. 23NM544 Test Unit Profile

Test unit 1 yielded a total of 43 artifacts, all of which were collected from level 1 (0 cm - 10 cm). Among the recovered artifacts were 8 interior flakes, 1 piece of lithic shatter, 1 piece of unmodified sandstone, 10 Kennett Plain body sherds, 11 Barnes Cord Marked body sherds, 7 shell-tempered plain body sherds and 5 pieces of miscellaneous burned clay.

The plowzone was evident in level 1 to a depth of 7 centimeters below surface. Below the very dark grayish brown (10YR3/2) loamy clay of the plowzone was a brown (10YR5/3) clay. The only other change in the soil color noticed in the unit appeared in the posthole excavated in the base of the unit. At 70 centimeters below surface a yellowish brown (10YR5/4) clay was encountered and was present for the lower 10 centimeters of the posthole.

Test Unit 2

Test unit 2 was located in a thicket in the tree farm. The unit was installed in this area based on the information provided by Mr. Joe Broughton, and on the results of our posthole tests excavated on the east side of the site. Test unit 2 was centered over posthole 2-E, which was the posthole that produced as much cultural material in one test as the rest of the posthole tests combined. Posthole 2-E was situated in the thicket, described by Broughton as the location of the burials exposed during tree harvesting 7 years ago.

The test unit was excavated in arbitrary 10 centimeter levels to a depth of 40 centimeters below surface with posthole 2-E in the base of the unit extending the total depth to 65 centimeters (Figure 24). Although no color changes were noted in the very dark grayish brown (10YR3/2) loamy clay matrix of the unit, differences in the degree of compactness indicated that the plowzone terminated about 15 centimeters below the surface.

Test unit 1 yielded a total of 741 artifacts. All were recovered from levels 1 - 4 (0 cm - 40 cm).

Level 1 (0 cm - 10 cm), embracing the upper part of the plowzone, produced 211 artifacts including 1 secondary decortication flake, 7 interior flakes, 1 triangular arrow point base, 2 pieces of fire cracked rock, 1 fragment of unmodified sandstone, 22 Kennett Plain body sherds, 15 Barnes Cord Marked body sherds, 1 Pascola fingernail punctate rim sherd (Figure 9tt), 62 shell-tempered plain body sherds, 88 pieces of miscellaneous burned clay, 3 unidentified bone fragments, 3 fragments of charcoal, 4 fragments of red brick and 1 cinder. The triangular arrow point base was manufactured from a dark gray chert and measures [14 mm] x 16 mm x 5 mm (Figure 9uu). This point fragment did not closely resemble any established arrow point type.

Level 2 (10 cm - 20 cm), comprising the base of the plowzone and the top of the subplowzone, contained 283 artifacts including 3 primary decortication flakes, 9 interior flakes, 4 pieces of lithic shatter, 25 Kennett Plain body sherds, 21 Barnes Cord Marked body sherds, 1 Baytown Plain jar rim sherd, 1 sand-tempered plain body sherd, 1 Bell Plain bowl rim sherd, 1 Mississippi Plain bowl rim sherd with notches, 89 shell-tempered plain body sherds, 2 shell-tempered plain rim sherds, 111 pieces of miscellaneous burned clay, 7 pieces of unidentified bone, 4 pieces of unidentified burned bone and 4 fragments of red brick. A number of very small fragments of charcoal were also collected.

Level 3 (20 cm - 30 cm) yielded 93 artifacts including 4 interior flakes, 2 pieces of lithic shatter, 1 fragment of unmodified sandstone, 17 Kennett Plain body sherds, 1 Baytown Plain bowl rim sherd, 1 tiny Baytown Plain rim sherd, 4 Barnes Cord Marked body sherds, 27 shell-tempered plain

body sherds, 1 Mississippi Plain bowl rim sherd, 1 Bell Plain bowl rim sherd, 22 pieces of miscellaneous burned clay, 11 unidentified human bone fragments and 1 unidentified bone fragment. A number of very small fragments of charcoal were also collected.

Level 4 (30 cm - 40 cm) produced 152 artifacts including 1 lithic core, 4 interior flakes, 2 pieces of lithic shatter, 1 fire cracked rock, 1 unmodified pebble, 12 Kennett Plain body sherds, 1 Kennett Plain sand-tempered jar rim sherd (Figure 9vv), 16 Barnes Cord Marked body sherds, 1 Mulberry Creek Cord Marked folded rim jar rim sherd (Figure 9ww), 1 Barnes Incised body sherd, 1 Barnes Redslip body sherd, 54 shell-tempered plain body sherds, 1 Mississippi Plain short-necked bottle rim sherd (Figure 9xx), 1 Mississippi Plain bowl rim sherd, 1 Mississippi Plain jar rim sherd with strap handle, 1 Mississippi Plain jar rim sherd, 31 pieces of miscellaneous burned clay, 18 fragments of unidentified human bone, 1 whole human phalanx and 2 unidentified bones. What appeared to be most of a human skull was observed in the east wall of the unit but it was not collected.

Although level 5 was not excavated, a large Mississippi Plain jar rim sherd with a strap handle (Figure 9yy) was observed in the top of the level and was collected. Posthole 2-E over which test unit 2 was centered was not excavated any deeper than its original 65 centimeter depth, prior to backfilling the unit. Excavation was halted in accordance with the Unmarked Human Burial Sites Act (Senate Bill 24) (Appendix C).

Cultural Affiliation

Based on the currently available data, it appears that the major components at 23NM544 date to the Late Woodland and Mississippi periods. A small amount of evidence of an Early Woodland component was also recovered during the investigations. Late Woodland occupation is supported by the heavy predominance of sand-tempered Kennett Plain and Barnes Cord Marked ceramics and clay-tempered Baytown Plain, Mulberry Creek Cord Marked and Larto Red-filmed ceramics as well as general Woodland type corner-notched and stemmed projectile point/knives. Mississippi period occupation is supported by the numerous examples of Mississippi Plain and Bell Plain ceramics and well as triangular arrow points. The evidence of Early Woodland occupation is limited to possible poverty point object fragments and examples of Pascola Punctate ceramics.

Function

All indications are that 23MI599 functioned as a habitation site. The presence of the human skeletal remains in Test Unit 2 and the high concentration of cultural material including large numbers of ceramics and burned clay, provide strong evidence of an intense occupation at the site.

Integrity

23MI599 has suffered damage from a number of sources such as those described earlier. Although the data recovered from Test Unit 1 suggested that the deposits in that portion of the site are shallow and disturbed through agricultural activities, the data recovered from Test Unit 2 suggest that undisturbed, intact cultural deposits are present at the site. Reports of burials being removed during tree farming activities, as well as reports of pothunting, when combined with the identification of human skeletal remains in

an apparent undisturbed context, affirm the potential for intact cultural deposits.

Although the site has suffered moderate damage, the potential for preservation of significant data relating to a wide variety of research questions is great.

CONCLUSIONS CONCERNING NATIONAL REGISTER ELIGIBILITY

The intensity of the field and background investigations conducted at 14 of the 21 sites recorded during this project was sufficient to determine whether each contained data that could be considered potentially significant from a local, state or national perspective. Sites that contain, or have the ability to produce, data significant to the prehistory and/or history of the area would be eligible for nomination to the National Register of Historic Places under current 36CFR60 criteria.

Assessing the integrity of the archeological deposits at the sites is the first step in identifying whether potentially significant data might be present. To ascertain whether a site contains potential for yielding significant information relating to prehistory or history many questions must be asked, such as: can in situ deposits be identified; are features or midden present; have floral or faunal materials been preserved; have natural adverse impacts, such as erosion and deflation, occurred; and have adverse impacts from cultural or natural processes substantially destroyed the archeological deposits.

Our evaluation of the St. Johns Bayou project sites is presented in Table 6. An assessment of poor integrity means that the deposits were badly disturbed by erosion, deflation and other natural and cultural impacts. At these sites, no data were encountered that suggested the deposits were intact and no indications of midden, features or in situ artifacts found. It is our opinion that these sites contain little or no potential for yielding important new information on the history or prehistory of the area. Sites 23MI600, 23MI601, 23MI602, 23NM543, 23NM545, 23NM548, 23NM549, 23NM550, 23NM551, 23NM552, 23ST209 and 23ST211 produced no data that would make them archeologically significant. No further cultural resources work is recommended at these sites or along portions of the corridors that yielded negative survey results. Nevertheless, the construction activities should be limited to the corridor to insure that no potentially significant deposits are affected. If intact cultural deposits are discovered during construction, work should stop and the State Historic Preservation Officer should be contacted immediately.

Sites 23NM546, 23NM547, 23NM553, 23NM554, 23NM555, 23ST208 and 23ST210 produced data suggesting that each had the potential to yield important information. Further assessment work is recommended to evaluate their significance.

The remaining two sites investigated during this project, 23MI599 and 23NM544, appear to meet the criteria for inclusion on the National Register of Historic Places and, if deemed eligible, should be the focus of an adequate mitigation/data recovery effort. Each site contained archeological deposits that have not suffered severe adverse impacts from natural processes or subsequent cultural activities, and each has excellent potential for having intact subsurface cultural features. Mississippi and Woodland remains are represented at these sites.

Table 6
Summary Chacteristics of the St. Johns Bayou Project Sites

Site Number	Cultural Affiliation	Hypothetical Function	Integrity	NRHP Eligibility
23MI599	Late Woodland	habitation	good	eligible
23MI600	Late 19th - Early 20th century	habitation/ trash dump	poor	not eligible
23MI601	Late 19th - Early 20th century & unknown prehistoric	habitation/ trash dump & specialized*	poor	not eligible
23MI602	Late 19th - Early 20th century	habitation/ trash dump	poor	not eligible
23NM543	unknown prehistoric	specialized*	poor	not eligible
23NM544	Early & Late Woodland, Mississippi	habitation	good	eligible
23NM545	Late 19th - Early 20th century	habitation/ trash dump	poor	not eligible
23NM546	Early & Late Woodland	habitation	good?	testing recommended
23NM547	Late 19th - Early 20th century & Late Woodland	habitation/ trash dump & habitation	good?	testing recommended
23NM548	unknown prehistoric	specialized*	poor	not eligible
23NM549	Late 19th - Early 20th century & unknown prehistoric	habitation/ trash dump specialized*	poor	not eligible
23NM550	Late 19th - Early 20th century	habitation/ trash dump &	poor	not eligible
23NM551	unknown historic	railroad	poor	not eligible
23NM552	unknown historic	bridge	poor	not eligible
23NM553	Late 19th - Early 20th century & Early? & Late Woodland	habitation/ trash dump & habitation	good?	testing recommended
23NM554	Early & Late Woodland	habitation	good?	testing recommended
23NM555	Early & Late Woodland, Mississippi	habitation	good?	testing recommended
23ST208	Late Woodland & Mississippi	habitation	good?	testing recommended
23ST209	unknown prehistoric	specialized*	poor	not eligible
23ST210	Early & Late Woodland, Mississippi	habitation	good?	testing recommended
23ST211	unknown historic	railroad	poor	not eligible

note: specialized* = specialized activity site

Besides its potential to provide a greater understanding of the prehistory of the region, 23MI599 offers a potential opportunity to investigate the effects of a severe earthquake on archeological sites. 23NM544 also has the potential important information on the subsistence-settlement strategies employed in the Woodland and Mississippian periods, but presents a different challenge to investigators. The fact that human remains are known to be present at this site requires the application of the recent Missouri Unmarked Human Burial Sites Act (Senate Bill 24) in determining the mitigation/data recovery.

We believe that the additional testing and mitigation/data recovery at these sites offers an excellent opportunity to gain a broader and more precise understanding of how the St. John's Bayou Basin was used in the prehistoric past.

TESTING AND MITIGATION RECOMMENDATIONS

TESTING RECOMMENDATIONS

As noted above and as part of the individual site descriptions, evidence collected from seven of the 21 sites recorded during this project suggests that they may contain important information that would make them eligible for the National Register of Historic Places. Each of these sites appears to have a potential for providing new and important information concerning cultural chronology and subsistence in a local and regional perspective. Therefore, we recommend that further assessment at 23NM546, 23NM547, 23NM553, 23NM554, 23NM555, 23ST208 and 23ST210 be undertaken to evaluate their significance.

MITIGATION RECOMMENDATIONS

Mitigation of clear or anticipated adverse impacts to cultural resources can take a number of different forms. We view the preservation or conservation of significant sites as a mitigation alternative that is always preferable to excavation or data recovery. If a site can be saved for the future, it should be. Data recovery should be considered only when it has been established that preservation is not a viable alternative.

23MI599

23MI599 is located on both sides of Maple Slough Ditch making it impossible to avoid by moving the anticipated impact to a different side of the drainage ditch. However, the preferred alternative would still be preservation through avoidance, which in this case would require that no impacts occur on either side of the ditch through construction, equipment tracking or maintenance activities.

If total avoidance is not a practical alternative a second alternative combining data recovery through excavation with preservation by burial under spoil dirt may be considered. This alternative would require sufficient data to be recovered to provide answers to current research questions, yet would allow for the protection of the unexcavated areas by the spoil berms.

The third alternative, data recovery through excavation with no preservation or protection would be the least desirable of the three. However, if the major portion of the site is to be impacted, it is the only alternative. This option would call for a sufficient portion of the site to

be excavated to allow for the recovery of all new and important information.

In the event that any part of the site is to be impacted and data recovery becomes needed, it is suggested that the mitigation plan include: additional test units, the removal of the plowzone from large surface areas to allow for the identification of features and carefully applied backhoe testing to investigate the geologic stratification and those changes in the cultural record that may have resulted from earthquakes.

23NM544

23NM544 is located on the east bank of St. John's Bayou. The fact that while no cultural material was identified on the west bank of the bayou opens the possible alternative for the site to be protected through avoidance. That is, if the impacts of the construction phase of the project can all be shifted to the west bank.

If total avoidance is not a practical alternative, a second alternative combining data recovery through excavation with preservation by burial under spoil dirt may be considered. This alternative would require sufficient data to be recovered to provide answers to current research questions yet allow protection of the unexcavated areas by the spoil berms. However, this alternative is applicable only if the impact (of any type) is limited only to that part of the site closest to the bayou, approximately 15 - 20 meters, where the investigation indicated only a very sparse surface scatter of cultural material.

If avoidance of the site cannot be achieved and the site must be impacted to some degree, data recovery through excavation will be necessary which, at this site, means that the recently passed Unmarked Human Burial Sites Act (Senate Bill 24:84th General Assembly) (Appendix C) will need to be considered. This act states in part:

> Section 2. When an unmarked human burial or human skeletal remains are encountered during archaeological excavation, construction, or other ground disturbing activities, whether found on or in any private lands or waters or on or in any lands or waters owned by the state of Missouri or its political subdivisions, agencies or instrumentalities, the provisions of sections 1 to 7 of this act shall apply.
>
> Section 3. 1. Any person knowing or with reason to know that an unmarked human burial or human skeletal remains are being disturbed, destroyed, defaced, mutilated, removed, or excavated, or exposed shall immediately notify either the state historic preservation officer or the local law enforcement officer with jurisdiction for the area in which the burial or remains are encountered.
>
> 2. When an unmarked human burial or human skeletal remains are encountered as a result of construction or agricultural earth disturbing activities or by a professional archaeologist in the course of an investigation all such activities shall cease immediately [Sic] within a radius of fifty feet of the point of discovery. Such activity shall not resume without special authorization from either the state historic preservation officer or the local law enforcement officer, whichever party has jurisdiction over and responsibility for such remains. Said parties shall act promptly and make a decision within a reasonable time...
>
> Section 4. 1. In cases where an unmarked human burial or human skeletal remains are discovered as a result of construction or agricultural earth disturbing activities and where the state historic preservation officer has been determined to have jurisdiction the state historic preservation officer shall determine whether removal of the human skeletal remains is necessary and appropriate for the purpose of scientific analysis. A general archaeological investigation of the site shall be conducted by a professional archaeologist and the professional archaeologist shall advise the state historic preservation officer of the physical location and the cultural and biological characteristics of the unmarked human burial or human skeletal remains within thirty days after the state historic preservation officer assumed jurisdiction over the burial or remains.
>
> 2. In cases where an unmarked human burial or skeletal remains are discovered by a professional archaeologist in the course of an investigation,

and where the state historic preservation officer has been determined to have jurisdiction, the professional archaeologist shall advise the state historic preservation officer of the physical location of the unmarked human burial or human skeletal remains within thirty days after the state historic preservation officer assumed jurisdiction.

The current knowledge of the location of at least one unmarked human burial and reports of others indicates that the State Historic Preservation Officer will need to be involved early in the planning of any potential impact to this site. As each discovery of human remains could individually cause temporary halts in construction activities, one potential method of archeological investigation would be the careful removal of the disturbed surface matrix with mechanized equipment to allow the determination of the exact location of each cultural feature and human burial. Using this method, a more exact count of the unmarked remains would enable the State Historic Preservation Officer to direct the following steps more easily.

In the event that it will be necessary to impact this site, it is highly recommended that the investigation include sufficient excavation to study the earlier components indicated by the possible poverty point object fragments and examples of Pascola Punctate ceramics.

REFERENCES CITED

Adams, Robert M. and Winslow Walker
1942 Archeological Surface Survey of New Madrid County, Missouri. The Missouri Archaeologist 8(2).

Black, Thomas K.
1979 The Biological and Social Analyses of a Mississippian Cemetery from Southeast Missouri: The Turner Site, 23BU21A. University of Michigan, Museum of Anthropology, Anthropological Papers No. 68. Ann Arbor.

Boutton, T. W., P. D. Klein, M. J. Lynott, J. E. Price and L. L. Tieszen
1984 Stable Carbon Isotope Rations as Indicators of Prehistoric Human Diet. In: Stable Carbon Isotopes, edited by Judith R. Turnlund and Phyllis E. Johnson. American Chemical Society, Symposium Series 258.

Bradbury, John
1905 Travels in the Interior of America, 1809 - 1811. Reprint of the 1819 edition in Early Western Travels 1748 - 1846, vol. V, edited by Reuben Gold Thwaites, Cleveland, Ohio.

Brown, Burton L.
1977 Soil Survey of New Madrid County, Missouri. USDA Soil Conservation Service in cooperation with Missouri Agricultural Experiment Station.

Caldwell, Dorothy J. (editor)
1874 Missouri Historic Sites Cataloue. State Historical Society of Missouri. Columbia, Missouri.

Campbell, R. A.
1874 Campbell's Gazetter of Missouri, II. R. A. Campbell, St. Louis, Missouri.

Chapman, Carl H.
1975 The Archaeology of Missouri, I. University of Missouri Press, Columbia.

1980 The Archaeology of Missouri, II. University of Missouri Press, Columbia.

Chapman, Carl H. and Leo O. Anderson
1955 The Campbell site, a Late Mississippi Town Site and Cemetery in Southeast Missouri. The Missouri Archaeologist, 17 (2-3).

Chapman, Carl H., John W. Cottier, David Dennman, David R. Evans, Dennis E. Harvey, Bradford L. Pope, Michael J. Reagan, Michael D. Southard, and Gregory A. Waselkov
1974 Investigation and Comparison of Two Fortified Mississippian Tradition Archaeological Sites in Southeastern Missouri: a Preliminary Compilation. The Missouri Archaeologist, 38.

Clarke, David L.
1968 Analytical Archaeology. Methuen and Co., London.

Cottier, John W.
1974 The Area Archaeological Reconstruction. In Investigation and Comparison of Two Nationally Registered Mississippian Archaeological Sites in Southeastern Missouri. Final report submitted to the National Endowment for the Humanities by the University of Missouri, Columbia.

Cottier, John W. and Gregory A. Waselkov
1974 The Environmental and Exploitative Reconstruction. In Investigation and Compression of Two Nationally Registered Mississippian Archaeological Sites in Southeastern Missouri. Final report submitted to the National Endowment for the Humanities by the University of Missouri, Columbia.

Douglass, Robert S.
1912 History of Southeast Missouri. Lewis Publishing Company.

Evers, E.
1880 The Ancient Pottery of Southeastern Missouri. In Contributions to the Archaeology of Missouri. St. Louis Academy of Science, Archaeology Section.

Festervand, D. F.
1981 Soil Survey of Cape Girardeau, Mississippi and Scott Counties, Missouri. USDA Soil Conservation Service in cooperation with Missouri Agricultural Experiment Station.

Fisk, Harold N.
1944 Geological Investigation of the Alluvial Valley of the Lower Mississippi River. War Department, Corps of Engineers, U.S. Army, Mississippi River Commission Publication No. 52.

Ford, James A. and George Quimby
1945 The Tchfuncte Culture, an Early Occupation of the Lower Mississippi Valley. Memoirs of the Society for American Archaeology, No. 2, American Antiquity 10(3) pt. 2.

Fowke, Gerard
1910 Antiquities of Central and Southeastern Missouri. Bureau of American Ethnology, Bulletin 38.

Frissell, N. C.
1893-94 Maps of Topographic Surveys of Southeast Missouri. Map on file with Missouri State Archives, Jefferson City.

Goodspeed Publishing Company
1888 History of Southeast Missouri. The Goodspeed Publishing Company, Chicago.

Goodyear, Albert C.
1974 The Brand Site: A Techno-Functional Study of a Dalton Site in Northeast Arkansas. Arkansas Archeological Survey Research Series 7.

Greer, John W. (Assembler)
1978 A Cultural Resource Study of the P62 Products Line Across Southeast Missouri. Archaeological Services Survey Report 2.

Haag, William G.
1939 Pickwick Basin Pottery Descriptions. Southeastern Archaeological Conference, Newsletter, 1(1).

Hamilton, Robert M.
1980 Quakes Along the Mississippi. Natural History 89(8):70-75.

Harris, Suzanne
1980 Reconstruction of the Nineteenth Century Environment. In Zebree Archeological Project Excavation, Data Interpretation and Report on the Zebree Homestead Site, Mississippi County, Arkansas, edited by Dan F. Morse and Phyllis A. Morse. Report submitted to and published by the U.S. Army, Corps of Engineers, Memphis District.

Holmes, W. H.
1903 Aboriginal Pottery of the Eastern United States, 1903. Twentieth annual Report of the Bureau of American Ethnology.

Hopgood, James F.
1969 An Archaeological Reconnaissance of Portage Open Bay in Southeast Missouri. Missouri Archaeological Society, Memoir 7.

Houck, Louis
1908 A History of Missouri,I. R. R. Donnelley and Sons Company, Chicago.

House, John H.
1975a Records Check and Summary of Prior Archeological Knowledge. In The Cache River Archeological Project: An Experiment in Contract Archeology. Assembled by Michael B. Schiffer and John H. House, pp. 29-34. Arkansas Archeological Survey, Research Series 8.

1975b Summary of Archeological Knowledge Updated With Newly Gathered Survey Data. In The Cache River Archeological Project: An Experiment in Contract Archeology. Assembled by Michael B. Schiffer and John H. House, pp. 153-162. Arkansas Archeological Survey, Research Series 8.

House, John H., Timothy C. Klinger and Michael Schiffer
1975 A Test of the the Dalton Settlement Pattern Hypothesis Using Cache Project Survey Data. In The Cache River Archeological Project: An Experiment in Contract Archeology. Assembled by Michael B. Schiffer and John H. House, pp. 93-101. Arkansas Archeological Survey, Research Series 8.

Iroquois Research Institute
1978 Predicting Cultural Resources in the St. Francis River Basin, a Research Design. Prepared for the U.S. Army Corps of Engineers, Memphis District.

Klinger, Timothy C.
1976 Summary of Regional Archeological Knowledge Prior to the 1976 Village Creek Archeological Project. In: Village Creek: An Explicitly Regional Approach to the Study of Cultural Resources. Assembled by T. C. Klinger. Arkansas Archeological Survey.

Klinger, Timothy C. (continued)
1978 Lowland Environmental Variability and Prehistoric Settlement Behavior in the Lower Mississippi Valley. Mid-Continental Journal of Archaeology, Vol. 3, No. 2.

Klinger, Timothy C. and Mark A. Mathis (assemblers)
1978 St. Francis II: and Archeological Assessment of Three COE Sponsored Channelization Projects in the St. Francis Basin, Arkansas. Arkansas Archeological Survey, Research Report 14. Arkansas Archeological Survey, Fayetteville.

Klippel, Walter E.
1969 The Hearnes Site: A Multicomponent Occupation Site and Cemetery in the Cairo Lowland Region of Southeast Missouri. The Missouri Archaeologist 31(1).

Lewis, R. Barry
1974 Mississippian Exploitative Strategies: A Southeast Missouri Example. Missouri Archaeological Society, Research Series 11.

Lynott, Mark J.
1987 An Archeological Evaluation of the Gooseneck and Owls Bend Sites, Ozark National Scenic Riverways, Southeast Missouri. Draft Report, National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Lynott, Mark J., T. Boutton, J. Price and D. Nelson
1986 Stable Carbon Isotope Evidence for Maize Agriculture in Southeast Missouri and Northeast Arkansas. American Antiquity, 51 (1).

Lynott, Mark J., S. Monk and J. Price
1984 The Owls Bend Site: An Emergent Mississippian Site in the Eastern Ozarks, Southeast Missouri. Missouri Archaeological Society, Quarterly, 1 (1).

Marshall, Richard A.
1965a An Archaeological Investigation of Interstate Route 55 through New Madrid and Pemiscot Counties, Missouri, 1964. Highway Archaeology Report No. 1. In cooperation with the Missouri State Highway Department and the U.S. Department of Commerce, Bureau of Public Roads.

1965b The Excavations at the J. R. Marret Site, 23DU12, Southeast Missouri. The Arkansas Archaeologist 6(2-3):21-38.

McQuigg, James D.
1977 Climate. In Soil Survey of New Madrid County, Missouri by Burton L. Brown p. 67. USDA Soil Conservation Service in cooperation with Missouri Agricultural Experiment Station.

Missouri Department of Natural Resources
1985 Conceptual Plan Hunter-Dawson State Historic Site. Missouri Department of Natural Resources, Division of Parks and Historic Preservation.

Moore, Clarence B.
1916 Additional Investigations on the Mississippi River, 1916. Journal of the Academy of Natural Sciences of Philadelphia, 2nd series, XVI:493-511.

Morse, Dan F.
n.d. Archeological Summary of the North Delta of Arkansas. Manuscript on deposit at the Arkansas Archeological Survey, Fayetteville.

1969 Introducing Northeastern Arkansas Prehistory. The Arkansas Archeologist, 10 (1-3).

1971 Recent Indications of Dalton Settlement Pattern in Northeast Arkansas. Southeastern Archeological Conference, Bulletin 13.

Morse, Dan F. (continued)
1973 Nodena. Arkansas Archeological Survey, Research Series 4.

1975 Paleo-Indian in the Land of Opportunity: Preliminary Report on the Excavations at the Sloan Site (3GE94). In The Cache River Archeological Project: An Experiment in Contract Archeology. Assembled by Michael B. Schiffer and John H. House. Arkansas Archeological Survey, Research Series 8.

Morse, Dan F. and Phyllis Morse
1977 Zebree Archeological Project: 1977. Draft copy of final report to the U.S. Army Corps of Engineers, Memphis District. Arkansas Archeological Survey.

1983 Archeology of the Central Mississippi Valley. Academic Press, Inc., New York.

Morse, Dan F., Neal Trubowitz, Phyllis Morse, Timothy Klinger, and Ross Dinwiddie
1982 Northeast Arkansas. In A State Plan for the Conservation of Archeological Resources in Arkansas, edited by Hester A. Davis. Arkansas Archeological Survey, Research Series 21. Arkansas Archeological Survey, Fayetteville.

Moselage, John
1962 The Lawhorn site. The Missouri Archaeologist. 24.

Nelson, Paul W.
1985 The Terrestrial Natural Communities of Missouri. Missouri Department of Natural Resources and the Missouri Department of Conservation, Jefferson City, Missouri.

Phillips, Philip
1970 Archeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955. Peabody Museum Papers, Vol. 60, parts I and II. Cambridge.

Phillips, P., J. A. Ford and J. B. Griffin
1951 Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-1947. Papers of the Peabody Museum of American Archeology and Ethnology, Harvard University, Vol. XXV, Cambridge.

Potter, W. B.
1880 Archaeological Remains in Southeastern Missouri. Contributions to the Archeology of Missouri. St. Louis Academy of Science, Archaeological Section.

Price, Cynthia R.

1976a A Cultural Resource Assessment of 6 USDA Forest Service Exchange Tracts. Report submitted to the USDA-Forest Service, Mark Twain National Forest, Rolla.

1976b Final Report of an Archaeological Survey and Cultural Resource Assessment for a Sewage Treatment Project for the Village of North Libourn, New Madrid, Missouri. Submitted to the Bootheel Regional Planning Commission and Economic Development Council, Malden, Missouri.

1979 An Intensive Cultural Resources Survey of Areas to be Disturbed by Improvements Along Ditch No. 30 (Inter-River Culvert), Butler County, Missouri: 1979. Center for Archaeological Research, Report No. 244. Springfield.

Price, Cynthia R. and Suzanne E. Harris

1978 A Cultural Resources Survey of Proposed Sewer Line and/of Water Main Routes in New Madrid Industrial Park Area, New Madrid, New Madrid County, Missouri: 1978, Center for Archaeological Research Report 155. Southwest Missouri State University, Springfield.

Price, Cynthia R. and James E. Price

1977 An Archeological and Historical Literature Review for the Cape-Jackson Metropolitan, Cape Girardeau County, Missouri. Report submitted to U.S. Army Corps of Engineers, St. Louis. American Archeology, University of Missouri, Columbia.

Price, James E.

1974 Mississippian Settlement Systems of the Central Mississippi Valley. Paper presented at an advanced seminar on Mississippian development. Sponsored by the School of American Research, Santa Fe.

1976 Final Report of an Archaeological Survey and Cultural Resource Assessment for a Sewage Treatment Facility and Expanded Water System for the Town of Miner, Scott County, Missouri. Report submitted to the town of Miner.

1978 The Settlement Pattern of the Powers Phase. In: Mississippian Settlement Patterns. Edited by Bruce D. Smith, pp. 201-231. Academic Press, New York.

1980 Archaeological Investigations at 23DU244, a Limited Activity Barnes Site, in the City of Kennett, Dunklin County, Missouri: 1980. Center for Archaeological Research, Report No. 309. Springfield.

1986 Tchula Period Occupation Along the Ozark Border in Southeast Missouri. In Early Woodland Archeology. Edited by Kenneth B. Farnsworth and Thomas E. Emerson. Center for American Archeology, Kampsville Seminars in Archeology, 2.

Price, James E. and James B. Griffin
1979 The Snodgrass Site of the Powers Phase of Southeast Missouri. University of Michigan, Museum of Anthropology, Anthropological Papers, No. 66, Ann Arbor.

Price, James E., and S. Harris
1978 A Cultural Resources Survey of the Proposed New Madrid Bend Access, New Madrid, New Madrid County, Missouri: 1978, Center for Archaeological Research Report 176. Southwest Missouri State University, Springfield.

1979 A Cultural Resources Survey of Areas Disturbed by Construction of Country Acres Subdivision, Minor, Scott County, Missouri: 1979. Center for Archaeological Research, Report No. 233, Springfield.

Price, James E. and James Krakker
1975 Dalton Occupation of the Ozark Border. University of Missouri, Museum of Anthropology, Museum Briefs No. 20, Columbia.

Price, James E., Lynn D. Morrow and Cynthia R. Price
1978 A Preliminary Literature Review of the Prehistoric and Historic Cultural Resources for the M & A Power Corporation Power Line Transect in New Madrid, Dunklin and Pemiscot Counties, Missouri and Mississippi County , Arkansas: 1978, Center for Archaeological Research Report 146. Southwest Missouri State University, Springfield.

Price, James E. and Cynthia R. Price
1977 An Archaeological Survey of Selected Portions of Cape LaCroix, Goose and Hubble Creeks in Cape Girardeau County, Missouri. Report submitted to U.S. Army Corps of Engineers, St. Louis. American Archaeology, University of Missouri, Columbia.

1984 Phase II Testing of the Shell Lake Site, 23WE627, near Wappapello Dam, Wayne County, Missouri, 1984. St. Louis District, U.S. Army Corps of Engineers, Cultural Resource Management Report No. 11.

Price, James E., Cynthia R. Price and S. Harris
1976 An Assessment of the Cultural Resources of the Fourche Creek Watershed. Report submitted to the USDA Soil Conservation Service by American Archaeology, University of Missouri, Columbia.

Price, James E., Cynthia R. Price, S. Harris, J. House and J. Cottier
1975 An Assessment of the Cultural Resources of the Little Black Watershed. Report submitted to the USDA Soil Conservation Service by American Archaeology, University of Missouri, Columbia.

Redfield, Alden
1971 Dalton Project Notes, I. Museum of Anthropology, Museum Brief 13, University of Missouri-Columbia.

Saucier, Roger T.
1974 Quaternary Geology of the Lower Mississippi Valley. Arkansas Archeological Survey Publications on Archeology Research Series No. 6.

Smith, Bruce D.
1978 Prehistoric Patterns of Human Behavior, a Case Study in the Mississippi Valley. Academic Press, New York.

1984 Mississippian Expansion: Tracing the Historical Development of an Explanatory Model. Southeastern Archeology, 3 (1).

Stewart, Judith
1976 Kennett/Baytown Distributional Variability: An Analysis Using the 1976 Village Creek collections. In: Village Creek: An Explicitly Regional Approach to the Study of Cultural Resources. Timothy C. Klinger, assembler. Report submitted to the USDA Soil Conservation Service, Little Rock. Arkansas Archeological Survey, Fayetteville.

Swallow, George C.
1875 Peabody Museum. Eighth Annual Report, Harvard University, Cambridge.

Tandrich, John P. and Michael J. Reagan
1978 Cultural Resource Overview of the Mississippi County Spillway Watershed and Peafield Drainage, Missouri. Appendix 1: Archaeological resource inventory and atlas. Missouri: Office of Historic Preservation.

Thomas, Cyrus
1884 Houses of the Mound Builders. Magazine of American History, February 1884:110-116.

1894 Report on the Mound Explorations. Bureau of American Ethnology, 12th Annual Report. Washington D.C.

Toth, Alan
1977 Early Marksville Phases in the Lower Mississippi Valley: A Study of Culture Contact Dynamics. Unpublished Ph.D. dissertation, Harvard University, Cambridge.

Walker, Winslow M. and Robert M. Adams
1946 Excavations in the Matthews Site, New Madrid County Missouri. Academy of Science of St. Louis, Transactions 31(4):75-120.

Wallace, David D.
1969 Southeast Missouri: Some Observations on Barnes/Baytown Ceramics. Manuscript on file, University of Missouri, Southeast Archaeological Research Center, Naylor, Missouri.

Weston, Donald E. and Michael S. Weichman (editors)
1987 Master Plan for Archeological Resource Protection in Missouri. Prepared by: Archaeological Associates and Environmental Systems Analysis. Under the direction of: Historic Kansas City Foundation. Prepared for: Division of Parks, Recreation and Historic Preservation; Missouri Department of Natural Resources, Jefferson City.

Wilkie, Duncan C. and Charles S. Grantham
1978 Cultural Resource Report of Cole Subdivision, Sikeston, Missouri. Report prepared for Mr. Charles M. Mitchell, Realtor, Sikeston, Missouri.

Williams, J. Raymond
1966 Fortified Towns of Southeast Missouri. Unpublished Masters Thesis, Department of Anthropology, University of Missouri-Columbia.

1968 Southeast Missouri Land Leveling Salvage Archaeology: 1967. Report submitted to the U.S. Department of the Interior, National Park Service, Midwest Region. University of Missouri-Columbia

1971 A Study of the Baytown Phases in the Cairo Lowlands of Southeast Missouri. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Missouri-Columbia.

1974 The Baytown Phases in the Cairo Lowland of Southeast Missouri. The Missouri Archeologist, 36.

Williams, Stephen
1954 An Archaeological Study of the Mississippian Culture in Southeastern Missouri. Unpublished Ph.D. dissertation, Yale University.

1980 Armorel: A Very Late Phase in the Lower Mississippi Valley. Southeastern Archaeological Conference, Bulletin 22.

1985 The Vacant Quarter and Other Late Events in the Lower Valley. Paper delivered at Towns and Temples Symposium, Memphis State University, October 16, 1985.

Wood, Martha M.
1934 Early Roads in Missouri. Unpublished Masters thesis, University of Missouri.

Wright, Christopher A.
1987 Part B: Study Units. In: Master Plan for Archeological Resource Protection in Missouri. Edited by Donald E. Weston and Michael S. Weichman. Prepared by: Archaeological Associates and Environmental Systems Analysis. Under the direction of: Historic Kansas City Foundation. Prepared for: Division of Parks, Recreation and Historic Preservation; Missouri Department of Natural Resources, Jefferson City.

SECTION C

Description/Specifications (Scope of Work)

Archeological Intensive Survey without Testing of the St. Johns Bayou Basin Project, Scott, Mississippi, and New Madrid Counties, Missouri.

C-1. GENERAL.

C-1.1. The Contractor shall conduct a background and literature search, an intensive survey investigation without testing of the St. Johns Bayou Basin Project Scott Mississippi, and New Madrid Counties, Missouri. Reports of these investigations shall be submitted. These tasks are in partial fulfillment of the Memphis District's obligations under the National Historic Preservation Act of 1966 (P.L. 89-665), as amended; the National Environment Policy Act of 1969 (P.L. 91-190); Executive Order 11593, "Protection and Enhancement of Cultural Environment," 13 May 1971 (36 CFR Part 800); Preservation of Historic and Archeological Data, 1974 (P.L. 93-291), as amended; and the Advisory Council on Historic Preservation, "Procedures for the Protection of Historic and Cultural Properties" (36 CFR Part 800).

C-1.2. Personnel Standards.

a. The Contractor shall utilize a systematic, interdisciplinary approach to conduct the study. Specialized knowledge and skills will be used during the course of the study to include expertise in archeology, history, architecture, geology and other disciplines as required to fulfill requirements of this Scope of Work. Techniques and methodologies used for the study shall be representative of the state of current professional knowledge and development.

b. The following minimal experiential and academic standards shall apply to personnel involved in investigations described in this Scope of Work:

(1) Archeological Project Directors or Principal Investigator(s) (PI). Individuals in charge of an archeological project or research investigation contract, in addition to meeting the appropriate standards for archeologist, must have a publication record that demonstrates extensive experience in successful field project formulation, execution and technical monograph reporting. It is mandatory that at least one individual acting as Principal Investigator or Project Director under this contract have demonstrated competence and ongoing interest in comparable cultural resources or archeological research in the Northeast Arkansas Region. Extensive prior research experience as Principal Investigator or Project Director in immediately adjacent areas will also satisfy this requirement. The requirement may also be satisfied by utilizing consulting Co-principal Investigators averaging no less than 24 paid hours per month for the duration of contract activities. Changes in any Project Director or Principal Investigator must be approved by the Contracting Officer. The Contracting Officer may require suitable professional references to obtain estimates regarding the adequacy of prior work.

(2) Archeologist. The minimum formal qualifications for individuals practicing archeology as a profession are a B.A. or B.S. degree from an

accredited college or university, followed by a minimum of two years of successful graduate study or equivalent with concentration in anthropology and specialization in archeology and at least two summer field schools or their equivalent under the supervision of archeologists of recognized competence. A Master's thesis or its equivalent in research and publication is highly recommended, as is the M.A. degree.

(3) Architectural Historian. The minimum professional qualifications in architectural history are a graduate degree in architectural history, historic preservation, or closely related fields, with course work in American architectural history; or a bachelor's degree in architectural history, historic preservation, or closely related field plus one of the following:

(a) At least two years full-time experience in research, writing, or teaching in American history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or

(b) Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history

(4) Other Professional Personnel. All other personnel utilized for their special knowledge and expertise must have a B.A. or B.S. degree from an accredited college or university, followed by a minimum of two years of successful graduate study with concentration in appropriate study and a publication record demonstrating competing in the field of study.

(5) Other Supervisory Personnel. Persons in any supervisory position must hold a B.A., B.S. or M.A. degree with a concentration in the appropriate field of study and a minimum of 2 years of field and laboratory experience in tasks similar to those to be performed under this contract.

(6) Crew Members and Lab Workers. All crew members and lab workers must have prior experience compatible with the tasks to be performed under this contract. An academic background in the appropriate field of study is highly recommended.

c. All operations shall be conducted under the supervision of qualified professionals in the discipline appropriate to the data that is to be discovered, described or analyzed. Vitae of personnel involved in project activities may be required by the Contracting Officer at anytime during the period of service of this contract.

C-1.3. The Contractor shall designate in writing the name or names of the Principal Investigator(s). Participation time of the Principal Investigator(s) shall average a minimum of 50 hours per month during the period of service of this contract. In the event of controversy or court challenge, the Principal Investigator shall be available to testify with respect to report findings. The additional services and expenses would be at Government expense, per paragraph 1.8 below.

C-1.4. The Contractor shall keep standard field records which may be reviewed by the Contracting Officer. These records shall include field notes, appropriate state site survey forms and any other cultural resource forms and/or records, field maps and photographs necessary to successfully implement requirements of this Scope of Work.

C-1.5. To conduct the field investigation, the Contractor will obtain all necessary permits, licenses; and approvals from all local, state and Federal authorities. Should it become necessary in the performance of the work and services of the Contractor to secure the right of ingress and egress to perform any of the work required herein on properties not owned or controlled by the Government, the Contractor shall secure the consent of the owner, his representative, or agent, prior to effecting entry on such property.

C-1.6. Innovative approaches to data location, collection, description and analysis, consistent with other provisions of this contract and the cultural resources requirements of the Memphis District, are encouraged.

C-1.7. No mechanical power equipment other than that referenced in paragraph C-4.5 shall be utilized in any cultural resource activity without specific written permission of the Contracting Officer.

C-1.8. The Contractor shall furnish expert personnel to attend conferences and furnish testimony in any judicial proceedings involving the archeological and historical study, evaluation, analysis and report. When required, arrangements for these services and payment therefor will be made by representatives of either the Corps of Engineers or the Department of Justice.

C-1.9. The Contractor, prior to the acceptance of the final report, shall not release any sketch, photograph, report or other material of any nature obtained or prepared under this contract without specific written approval of the Contracting Officer.

C-1.10. The extent and character of the work to be accomplished by the Contractor shall be subject to the general supervision, direction, control and approval of the Contracting Officer. The Contracting Officer may have a representative of the Government present during any or all phases of Scope of Work requirements.

C-1.11. The Contractor shall obtain Corps of Engineers Safety Manual (EM 385 -1-1) and comply with all appropriate provisions. Particular attention is directed to safety requirements relating to the deep excavation of soils.

C-1.12. There will be two categories of meetings between Contractor and Contracting Officer: (1) scheduled formal conferences to review contract performance, and (2) informal, unscheduled meetings for clarification, assistance, coordination and discussion. The initial meeting shall be held prior to the beginning of field work. Category (1) meetings will be scheduled by the Contracting Officer and will be held at the most convenient location, to be chosen by the Contracting Officer. This may sometimes be on the project site, but generally will be at the office of the Contracting Officer.

C-2. STUDY AREA.

C-2.1. The location of the St. Johns Bayou project is in Scott, Mississippi, and New Madrid counties, Missouri. The work will be conducted in approximately 4,768 acres, of which 959 acres are woodlands, and 3,808 acres are croplands. In some areas only one side of the bank will require survey while others will require survey on both sides. The following table defines the reach, acreage, and right-of-way and widths. See attached map.

Reach and Mileage	Acreage Woodlands	Acreage Cropland	Acreage Total	R.O.W. from Top Bank Single Side	R.O.W. from Top Bank Both Sides
St. Johns Bayou (0-20.0 mi)	733	901	1,634		350 ft.
St. Johns Bayou (20-26.7 mi)		167	167	250ft.E.Bk.	
Lateral "C" (0-3.0 mi)		12	12	50ft.W.Bk.	
North Cut Ditch (0-18.7 mi)	7	809	816		180 ft.
Ash Slough Ditch (0-9 mi)		263	263	250ft.E.Bk.	
Ash Slough Ditch (9-10 mi)		14	14	115ft.E.Bk.	
Maple Slough Ditch (0-11.9 mi)	8	285	293	200ft.E.Bk.	
Main Ditch #10 (0-4.5 mi)		109	109	200ft.E.Bk.	
Main Ditch #10 (4.5-6.6 mi)		18	18	750ft.E.Bk.	
Lower Main Ditch (0-.25 mi)		6	6	200ft.W.Bk.	
Lower Main Ditch (.25-3 mi)		66.7	66.7	200ft.E.Bk.	
Lower Main Ditch (3-5.8 mi)		40.7	40.7	120ft.E.Bk.	
Birds Point-New Madrid (0-8mi)	45	164	209	215ft.E.Bk.	
Birds Point-New Madrid(8-25.3mi)	79	131	210		50 ft.
St. James' Ditch (0-10.8 mi)		216	216	175ft.E.Bk.	
East Bayou Ditch (0-4.5 mi)	18	137	155	285ft.W.Bk.	
East Bayou Ditch (4.5-5.5 mi)	8	18	26	215ft.W.Bk.	
East Bayou Ditch (5.5-13.6 mi)	18	193	211	215ft.E.Bk.	
Wilkerson Ditch (0-3.25 mi)		118	118	300ft.W.Bk.	
Wilkerson Ditch (3.25-4 mi)		30	30	330ft.E.Bk.	
St. James Bayou (5.5-10.8)	13	93	106	165ft.W.Bk.	
St. James Bayou (10.8-12.8)	30	18	48		100 ft.
	959	3,808.4	4,768.4		

The project area may be located on the following topographic maps: Bayouville, Charleston, Hickman, New Madrid, Sikeston, Thebes, and Wickliffe, Missouri quadrangle.

C-3. DEFINITIONS.

C-3.1. "Cultural resources" are defined to include any building, site, district, structure, object, data, or other material relating to the history, architecture, archeology, or culture of an area.

C-3.2. "Background and Literature Search" is defined as a comprehensive examination of existing literature and records for the purpose of inferring the potential presence and character of cultural resources in the study area. The examination may also serve as collateral information to field data in evaluating the eligibility of cultural resources for inclusion in the National Register of Historic Places or in ameliorating losses of significant data in such resources.

C-3 3. "Intensive Survey" is defined as a comprehensive, systematic, and detailed on-the-ground survey of an area, of sufficient intensity to determine the number, types, extent and distribution of cultural resources present and their relationship to project features.

C-3.4. "Mitigation" is defined as the amelioration of losses of significant prehistoric, historic, or architectural resources which will be accomplished through preplanned actions to avoid, preserve, protect, or minimize adverse effect upon such resources or to recover a representative sample of the data they contain by implementation of scientific research and other professional techniques and procedures. Mitigation of losses of cultural resources includes, but is not limited to, such measures as: (1) recovery and preservation of an adequate sample of archeological data to allow for analysis and published interpretation of the cultural and environmental conditions prevailing at the time(s) the area was utilized by man; (2) recording, through architectural quality photographs and/or measured drawings of buildings, structures, districts, sites and objects and deposition of such documentation in the Library of Congress as a part of the National Architectural and Engineering Record. (3) relocation of buildings, structures and objects, (4) modification of plans or authorized projects to provide for preservation of resources in place, (5) reduction or elimination of impacts by engineering solutions to avoid mechanical effects of wave wash, scour, sedimentation and related processes and the effects of saturation.

C-3.5. "Reconnaissance" is defined as an on-the-ground examination of selected portions of the study area, and related analysis adequate to assess the general nature of resources in the overall study area and the probable impact on resources of alternate plans under consideration. Normally reconnaissance will involve the intensive examination of not more than 15 percent of the total proposed impact area.

C-3.6. "Significance" is attributable to those cultural resources of historical, architectural, or archeological value when such properties are included in or have been determined by the Secretary of the Interior to be eligible for inclusion in the National Register of Historic Places after evaluation against the criteria contained in 36 CFR 63.

C-3.7. "Testing" is defined as the systematic removal of the scientific, prehistoric, historic, and/or archeological data that provide an archeological or architectural property with its research or data value. Testing may include controlled surface survey, shovel testing, profiling, and limited subsurface test excavations of the properties to be affected for purposes of research planning, the development of specific plans for research activities, excavation, preparation of notes and records, and other forms of physical removal of data and the material analysis of such data and material, preparation of reports on such data and material and dissemination of reports and other products of the research. Subsurface testing shall not proceed to the level of mitigation.

C-3.8. "Analysis" is the systematic examination of material data, environmental data, ethnographic data, written records, or other data which may be prerequisite to adequately evaluating those qualities which contribute to their significance.

C-4. GENERAL PERFORMANCE SPECIFICATIONS.

C-4.1. Research Design.

Survey and testing will be conducted within the framework of a regional research design including, where appropriate, questions discussed in the State Plan. All typological units not generated in these investigation shall be adequately referenced. It should be noted that artifactual typologies constructed for other areas may or may not be suitable for use in the study area. It is, therefore, of great importance that considerable effort be spent in recording and describing artifactual characteristics treated as diagnostic in this study as well as explicit reasons for assigning (or not assigning) specific artifacts to various classificatory units.

C-4.2. Background and Literature Search.

a. This task shall include an examination of the historic and prehistoric environmental setting and cultural background of the study area and shall be of sufficient magnitude to achieve a detailed understanding of the overall cultural and environmental context of the study area. It is axiomatic that the background and literature search shall normally preceed the initiation of all fieldwork.

b. Information and data for the literature search shall be obtained, as appropriate, from the following sources: (1) Scholarly reports - books, journals, theses, dissertations and unpublished papers; (2) Official Records - Federal, state, county and local levels, property deeds, public works and other regulatory department records and maps; (3) Libraries and Museums - both regional and local libraries, historical societies, universities, and museums; (4) Other repositories - such as private collections, papers, photographs, etc.; (5) Archeological site files at local universities, the State Historic Preservation Office, the office of the State Archeologist; (6) Consultation with qualified professionals familiar with the cultural resources in the area, as well as consultation with professionals in associated areas such as history, sedimentology, geomorphology, agronomy, and ethnology.

c. The Contractor shall include as an appendix to the draft and final reports, written evidence of all consultation and any subsequent responses(s), including the dates of such consultation and communications.

d. The background and literature search shall be performed in such a manner as to facilitate the construction of predictive statements (to be included in the study report) concerning the probable quantity, character, and distribution of cultural resources within the project area. In addition, information obtained in the background and literature search should be of such scope and detail as to serve as an adequate data base for subsequent field work and analysis in the study area undertaken for the purpose of discerning the character, distribution and significance of specific identified cultural resources.

e. In order to accomplish the objectives described in paragraph C-4.2.d., it will be necessary to attempt to establish a relationship between landforms and the patterns of their utilization by successive groups of human inhabitants. This task should involve defining and describing various zones of the study area with specific reference to such variables as past topography, potential food resources, soils, geology, and river channel history.

C-4.3. Intensive Survey.

a. Intensive survey shall include the on-the-ground examination of the study areas described in paragraph C-2.

b. Unless excellent ground visability and other conditions conducive to the observation of cultural evidence occurs, shovel test pits, or comparable subsurface excavation units, shall be installed at intervals no greater than 30 meters throughout the study area. Note that auger samples, probes, and coring tools will not be considered comparable subsurface units. Shovel test pits shall be minimally 30 x 30 centimeters in size and extend to a minimum depth of 50 centimeters. Unit fill material shall be screened using 1/4" mesh hardware cloth. Additional shovel test pits shall be excavated in areas judged by the Principal Investigator to display a high potential for the presence of cultural resources. If, during the course of intensive survey activities, areas are encountered in which disturbance or other factors clearly and decisively preclude the possible presence of significant cultural resources, the Contractor shall carefully examine and document the nature and extent of the factors and then proceed with survey activities in the remainder of the study area. Documentation and justification of such action shall appear in the survey report. The location of all shovel test units and surface observations shall be recorded.

c. When cultural remains are encountered, horizontal site boundaries shall be derived by the use of surface observation procedures (including controlled surface collection procedures described in Paragraph C-4.4.a. below) in such a manner as to allow precise location of site boundaries on Government project drawings and 7.5 minute U.S.G.S. quad maps when available. Methods used to establish site boundaries shall be discussed in the survey report together with the probable accuracy of the boundaries. The Contractor

shall establish a datum at the discovered cultural loci which shall be precisely related to the site boundaries as well as to a permanent reference point (in terms of azimuth and distance) by means of a transit level. If possible, the permanent reference point used shall appear on Government blueline (project) drawings and/or 7.5 minute U.S.G.S. quad maps. If no permanent landmark is available, a permanent datum shall be established in a secure location for use as a reference point. The permanent datum shall be precisely plotted and shown on U.S.G.S. quad maps and project drawings. All descriptions of site location shall refer to the location of the primary site datum.

d. All standing buildings and structures (other than those patently modern, i.e., less than 50 years old) shall be recorded and described. For a building to be considered "standing" it must retain four walls and at least a skeletal roof structure. A building or structure found in the field to be partially or totally collapsed will be considered an archeological site. In these cases, data concerning construction materials and techniques and floor plan, if discernible, must be collected. The Contractor shall supply preliminary information concerning the suitability of a structure or building for relocation and restoration (structural soundness for example).

C-4.4 Cultural Resource Recording and Numbering. For each archeological site or architectural property recorded during the survey, the Contractor shall complete and submit the standard Missouri archeological site or architectural property survey form, respectively. The Contractor shall be responsible for reproducing or obtaining a sufficient quantity of these forms to meet the needs of the project. The Contractor shall be responsible for coordinating with the appropriate state agency to obtain state site-file numbers for each archeological site and architectural property recorded.

C-4.5 Additional Investigations.

(1) Subsurface test units maybe required at many loci. The proposed number and distribution of such test units shall be recommended by the Principal Investigator on a site specific basis. This recommendation shall be made based on such variables as site size and potential intrasite variability, including, physiographic and geomorphic characteristics of the loci which may suggest variability in the presence or distribution of subsurface cultural deposits. The Contractor shall detail the rationale(s) for the placement and numbers of proposed test units in the management summary and report of field activities. Additional reporting requirements, examination of background literature and examination of standing buildings and structures may also be required at some sites. The exact nature of additional examination, the schedule, and the price of the work shall be negotiated with the Contracting Officer, and if an agreement is reached, a Change Order shall be issued prior to conduct of the work. Additional investigations will provide a data base of sufficient nature to allow determination of site eligibility to the National Register of Historic Places consistent with C-5.3.j.12) and (3) of this Scope of Work.

(2) In order to accurately relate a site to research domains, (i.e. assess significance or insignificance), a variety of data gathering techniques may be required to insure recovery of the various types of data

which may be present at the site. These techniques may include radiocarbon dating, flotation and excavation of cultural features. When appropriate, these types of data gathering activities should be integral elements of the testing strategy.

C-4.6. Laboratory Processing, Analysis, and Preservation.

All cultural materials recovered will be cleaned and stored in deterioration resistant containers suitable for long term curation. Diagnostic artifacts will be labeled and catalogued individually. A diagnostic artifact is defined herein as any object which contributes individually to the needs of analysis required by this Scope of Work or the research design. All other artifacts recovered must minimally be placed in labeled, deterioration resistant containers, and the items catalogued. The Contractor shall describe and analyze all cultural materials recovered in accordance with current professional standards. Artifactual and non-artifactual analysis shall be of an adequate level and nature to fulfill the requirements of this Scope of Work. All recovered cultural items shall be catalogued in a manner consistent with Arkansas state requirements. The Contractor shall consult with appropriate state officials as soon as possible following the conclusion of field work in order to obtain information (ex: accession numbers) prerequisite to such cataloging procedures.

C-4.7. Curation.

Efforts to insure the permanent curation of properly cataloged cultural resources materials and project documentation in an appropriate institution shall be considered an integral part of the requirements of this Scope of Work. The Contractor shall pay all cost of the preparation and permanent curation of records and artifacts. An arrangement for curation shall be confirmed by the Contractor, subject to the approval of the Contracting Officer, prior to the acceptance of the final report.

C-5. GENERAL REPORT REQUIREMENTS.

C-5.1. The primary purpose of the cultural resources report is to serve as a planning tool which aids the Government in meeting its obligations to preserve and protect our cultural heritage. The report will be in the form of a comprehensive, scholarly document that not only fulfills mandated legal requirements but also serves as a scientific reference for future cultural resources studies. As such, the report's content must be not only descriptive but also analytic in nature.

C-5.2. Upon completion of all field investigation and research, the Contractor shall prepare a report detailing the work accomplished, the results, and recommendations for each project area. Copies of the draft and final reports of investigation shall be submitted in a form suitable for publication and be prepared in a format reflecting contemporary organizational and illustrative standards for current professional archeological journals. The final report shall be typed on standard size 8-1/2" x 11" bond paper with pages numbered and with page margins one inch at top, bottom, and sides. Photographs, plans, maps, drawings and text shall be clean and clear.

C-5.3. The report shall include, but not necessarily be limited to, the following sections and items:

a. Title Page. The title page should provide the following information; the type of task undertaken, the study areas and cultural resources which were assessed; the location (county and state), the date of the report; the contract number; the name of the author(s) and/or the Principal Investigator; and the agency for which the report is being prepared. If a report has been authored by someone other than the Principal Investigator, the Principal Investigator must at least prepare a foreword describing the overall research context of the report, the significance of the work, and any other related background circumstances relating to the manner in which the work was undertaken.

b. Abstract. an abstract suitable for publication in an abstract journal shall be prepared and shall consist of a brief, quotable summary useful for informing the technically-oriented professional public of what the author considers to be the contributions of the investigation to knowledge.

c. Table of Contents.

d. Introduction. This section shall include the purpose of the report, a description of the proposed project, a map of the general area, a project map, and the dates during which the investigations were conducted. The introduction shall also contain the name of the institution where recovered materials and documents will be curated.

e. Environmental Context. This section shall contain, but not be limited to, a discussion of probable past floral faunal, and climatic characteristics of the project area. Since data in this section may be used in the evaluation of specific cultural resource significance, it is imperative that the quantity and quality of environmental data be sufficient to allow subsequent detailed analysis of the relationship between past cultural activities and environmental variables.

f. Previous Research. This section shall describe previous research which may be useful in deriving or interpreting relevant background data, problem domains, or research questions and in providing a context in which to examine the probability of occurrence and significance of cultural resources in the study area.

g. Literature Search and Personal Interviews. This section shall discuss the results of the literature search, including specific data sources, and personal interviews which were conducted during the course of investigations.

i. Survey, Testing and Analytical Methods. This section shall contain an explicit discussion of the research design, and shall demonstrate how environmental data, previous research data, the literature search and personal interviews have been utilized in constructing the strategy. Specific research domains and questions as well as methodological strategies employed to address those questions should be included where possible.

j. Recommendations.

(1) This section should contain, where possible, assessments of the eligibility of specific cultural properties in the study area for inclusion in the National Register of Historic Places.

k. References (American Antiquity Style).

l. Appendices (Maps, Correspondence, etc.). A copy of this Scope of Work and, when stipulated by the Contracting Officer, review comments shall be included as appendices to the final report of investigations.

C-5.4. The above items do not necessarily have to be discrete sections. however, they should be readily discernible to the reader.

C-5.5. In order to prevent potential damage to cultural resources, no information shall appear in the body of the report which would reveal precise resource location. All maps which indicate or imply precise site locations shall be included in reports as a readily removable appendix (e.g. envelope).

C-5.6. No logo or other such organizational designation shall appear in any part of the report (including tables or figures) other than the title page.

C-5.7. Unless specifically otherwise authorized by the Contracting Officer, all reports shall utilize permanent site numbers assigned by the state in which the study occurs.

C-5.8. All appropriate information (including typologies and other classificatory units) not generated in these contract activities shall be suitably referenced.

C-5.9. Reports shall contain site specific maps. Site maps shall indicate site datum(s), location of data collection units (including shovel cuts, subsurface test units and surface collection units), site boundaries in relation to proposed project activities, site grid systems (where appropriate), and such other items as the Contractor may deem appropriate to the purposes of this contract.

C-5.10. Information shall be presented in textual, tabular, and graphic forms, whichever are most appropriate, effective and advantageous to communicate necessary information. All tables figures and maps appearing in the report shall be of publishable quality.

C-5.11. Any abbreviated phrases used in the text shall be spelled out when the phrase first occurs in the text. For example use "State Historic Preservation Officer (SHPO)" in the initial reference and thereafter "SHPO" may be used.

C-5.12. The first time the common name of a biological species is used it should be followed by the scientific name.

C-5.13. In addition to street addresses or property names, sites shall be located on the Universal Transverse Mercator (UTM) grid.

C-5.14. Generally, all measurements should be metric.

C-5.15. As appropriate, diagnostic and/or unique artifacts, cultural resources or their contexts shall be shown by drawings or photographs.

C-5.16. Black and white photographs are preferred except when color changes are important for understanding the data being presented. No instant type photographs may be used.

C-5.17. Negatives of all black and white photographs and/or color slides of all plates included in the final report shall be submitted to the Contracting Officer.

C-6. SUBMITTALS.

C-6.1. An extensive management summary shall be submitted, in accordance with the schedule in paragraph C-7.1, to the Contracting Officer within 10 days of the completion of survey. The management summary shall describe survey methods and the data yielded by those methods. The Contractor shall recommend specific additional studies necessary to obtain adequate data for National Register evaluation. The management summary shall include project maps showing boundaries of discovered cultural resources relative to project rights-of-way. The management summary shall also contain recommendations, based on geomorphic and other data, concerning the need for deep cultural resources testing and the type, numbers and locations of needed deep test units.

C-6.2. The Contractor shall submit 4 copies of the draft report and one unbound original and 25 copies with high quality binding, of the final report which include appropriate revisions in response to the Contracting Officer's comments.

C-6.3. The Contractor shall submit under separate cover 6 copies of appropriate 15' quadrangle maps (7.5' when available) or other site drawings which show exact boundaries of all cultural resources within the project area and their relationship to project features.

C-6.4. At any time during the period of service of this contract, upon the written request of the Contracting Officer, the Contractor shall submit, within 15 calendar days, any portion or all field records described in paragraph C-1.4 without additional cost to the Government.

C-6.5. When cultural resources are located during intensive survey activities, the Contractor shall supply the appropriate State Historic Preservation Office with completed site forms survey report summary sheets, maps or other forms as appropriate. Blank forms may be obtained from the State Historic Preservation Office. Copies of such completed forms and maps shall be submitted to the Contracting Officer within 30 calendar days of the end of fieldwork.

C-6-6. The Contractor shall prepare and submit with the final report, a site card for each identified resource or aggregate resource. These site cards do not replace state approved prehistoric, historic, or architectural forms or Contractor designed forms. These 5 X 8 inch cards shall be color-coded. White cards shall be used for prehistoric sites, blue cards for historic sites, green for architectural sites and yellow cards for potentially significant sites. Sites fitting two or more categories will have two or more appropriate cards. This site card shall contain the following information, to the degree permitted by the type of study authorized:

a. Site number

b. Site name

c. Location: section, township, and UTM coordinates (for procedures in determining UTM coordinates, refer to How to Complete National Register Forms, National Register Program, Volume 2.

d. County and state

e. Quad maps

f. Date of record

g. Description of site

h. condition of site

i. Test excavation results

j. Typical artifacts

k. Chronological position (if known)

l. Relation to project

m. Previous studies and present contract number

n. Additional remarks

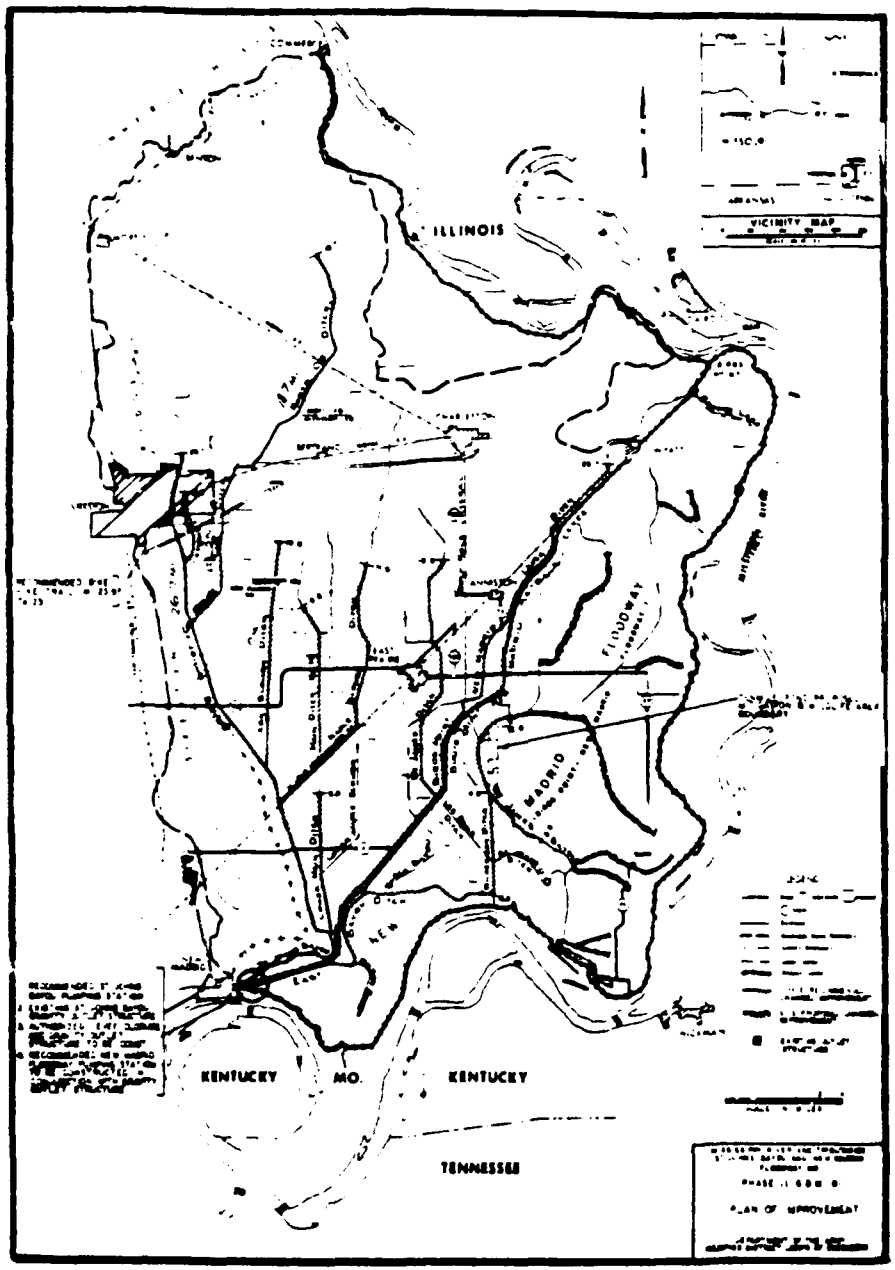
C-6.7. Documentation. The Contractor shall submit detailed monthly progress reports to the Contracting Officer by the 7th day of every month for the duration of the contract. These reports will contain an accurate account of all field work, laboratory procedures and results in sufficient detail to allow monitoring of project progress.

C-7. SCHEDULE.

C-7.1. The Contractor shall, unless delayed due to causes beyond his control and without his fault or negligence, complete all work and services under this contract within the following time limitations.

Activity	Completion Time (In calendar days beginning with acknowledged date of receipt of notice to proceed)
Survey	90
Submittal Management Summary	100
Submittal of Draft Report of Investigations	325
Submittal of Final Report of Investigations	385

C-7.2. The Contractor shall make any required corrections after review by the Contracting Officer. The Contracting Officer may defer Government review comments pending receipt of review comments from the State Historic Preservation Officer or other reviewing agencies. More than one series of draft report corrections may be required. In the event that the government review period is exceeded and upon request of the Contractor, the contract period will be extended automatically on a calendar day for day basis. Such extension shall be granted at no additional cost to the Government.



SECTION C
Description/Specifications (Scope of Work)

2. Page C-7, Section C-4.3, Intensive Survey, paragraph c. At the end of line three, delete the notation "Paragraph C-4.4.a." and substitute "C-4.3e."

3. Page C-8. After paragraph "d", insert the following four paragraphs:

e. Site Surface Collection

(1) Surface collection of the site area shall be accomplished in order to obtain data representative of total site surface content. Both historic and prehistoric items shall be collected. The Contractor shall carefully note and record descriptions of surface conditions of the site including ground cover and the suitability of soil surfaces for detecting cultural items (ex: recent rainfall, standing water or mud). If ground surfaces are not highly conducive to surface collection, screened shovel tests units shall be used to augment surface collection procedures. It should be noted, however, that such units should be substituted for total surface collection only where the presence of ground cover requires such techniques.

(2) Care should be taken to avoid bias in collecting certain classes of data or artifact types to the exclusion of others (ex: debitage or faunal remains) so as to insure that collections accurately reflect both the full range and the relative proportions of data classes present (ex: the proportion of debitage to finished implements or types of implements to each other). Such a collecting strategy shall require the total collection of quadrat or other sample units in sufficient quantities to reasonably assure that sample data are representative of such descrete site subareas as may exist. Since the number and placement of such sample units will depend, in part, on the subjective evaluation of intrasite variability, and the amount of ground cover, the Contractor shall describe the rationale for the number and distribution of collection units. In the event that the Contractor utilized systematic sampling procedures in obtaining representative surface samples, care should be taken to avoid periodicity in recovered data. No individual sample unit type used in surface data collection shall exceed 36 square meters in area. Unless a smaller fraction is approved by the Contracting Officer, surface collected areas shall constitute no less than 25 percent of total site are Detailed results of controlled surface collections shall be graphically depicted in plan view in the report of investigations.

(3) The Contractor shall undertake (in addition and subsequent to sample surface collecting) a general site collection in order to increase the sample size of certain classes of data which the Principal Investigator may deem prerequisite to an adequate site-specific and intersite evaluation of data.

(4) As an alternative to surface collecting procedures discussed above, where surface visibility is excellent, the Contractor may collect all visible artifacts. If such a procedure is undertaken, the precise proveniences of all individual artifacts shall be related to the primary site datum by means of a transit level.

DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT, CORPS OF ENGINEERS
B-202 CLIFFORD DAVIS FEDERAL BUILDING
MEMPHIS, TENNESSEE 38103-1894

Reply to Attention of:

March 6, 1987

Environmental Analysis Branch

Mr. Timothy C. Klinger
Historic Preservation Associates
P.O. Box 1064
Fayetteville, Arkansas 72701

Dear Mr. Klinger:

Reference is made to Contract DACW66-86-C-0083 for Cultural Resources Intensive Survey Without Testing of the St. John's Bayou Basin Project, Scott, Mississippi, and New Madrid Counties, Missouri.

We are interested in negotiating a modification to our contract to require additional survey and testing work. The additional work is within the authority of Clause 35, CHANGES-Fixed Price (Alternate 1), Clauses of the contract.

The tasks to be performed as the additional work are as follows:

a. On North Cut Ditch between mile 3.2 and mile 4.4, an additional 100 feet width along the east bank will be surveyed.

b. On North Cut Ditch between mile 16.7 and mile 17.3, an additional 100 feet width along the west bank will be surveyed.

c. On Maple Slough between mile 7.2 and mile 8.2, the west bank will be surveyed to the same right-of-way limits as the east bank (200 feet) was surveyed.

d. On St. John's Bayou between mile 20.4 and mile 23.0, the west bank will be surveyed to the same right-of-way limits (250 feet) as the east bank was surveyed.

e. On St. John's Bayou between mile 26.1 and mile 26.6, an additional 100 feet width along the east bank will be surveyed.

f. Cultural resources site number 12, located on St. John's Bayou in the vicinity of mile 3.6, will be tested for significance. A minimum of two 1m x 1m test units will be excavated, in the site, within the project right-of-way.

Should these tasks cause a change in the cost or time required for performance, you should submit your proposal as soon as possible, but not later than March 20, 1987. Itemized cost breakdowns should be submitted and should show labor, labor overhead, general and administrative overhead, materials, supplies, and profit in support of your proposal. Should you wish to suggest changes, these should be supported by separate, itemized breakdowns. Submit your proposal to:

Department of the Army
Memphis District, Corps of Engineers
ATTN: LMMCT
B-202, Clifford Davis Federal Building
Memphis, Tennessee 38103-1894

Upon receipt of your written proposal, we shall review it and schedule a negotiation conference at a mutually agreeable time at the Clifford Davis Federal Building, Memphis, Tennessee.

Should you have any questions concerning this matter, please contact Mr. Jimmy McNeil at (901) 521-3857.

Sincerely,

Clinton E. Hopkins
Chief, Contracting Division
Contracting Officer

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
		23MI599		
Surface unit 01	0-0	Ceramics - Kennett Plain body	4	
Surface unit 01	0-0	Ceramics - Barnes Cord Marked body	4	
Surface unit 01	0-0	Misc. - Concretion	9	
Surface unit 01	0-0	Glass - Bottle, clear	2	
Surface unit 01	0-0	Glass - Bottle, purpled	1	
Surface unit 01	0-0	Metal - Misc.	1	
Surface unit 01	0-0	Misc. - Cinder	2	
Surface unit 03	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 03	0-0	Chipped lithics - Flake, interior	2	
Surface unit 03	0-0	Chipped lithics - Flake, retouch	3	
Surface unit 03	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 03	0-0	Misc. - Concretion	7	
Surface unit 03	0-0	Ceramics - Kennett Plain body	79	
Surface unit 03	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 03	0-0	Ceramics - Barnes Cord Marked body	11	
Surface unit 03	0-0	Glass - Bottle, clear	2	
Surface unit 03	0-0	Misc. - Cinder	3	
Surface unit 07	0-0	Misc. - Concretion	12	
Surface unit 07	0-0	Ceramics - Kennett Plain body	9	
Surface unit 07	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 07	0-0	Ceramics - Kennett Plain Pan rim	1	
Surface unit 07	0-0	Glass - Milk	1	
Surface unit 15	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 15	0-0	Misc. - Concretion	8	
Surface unit 15	0-0	Ceramics - Kennett Plain body	16	
Surface unit 15	0-0	Ceramics - Barnes Cord Marked body	7	
Surface unit 22	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 22	0-0	Chipped lithics - Flake, interior	1	
Surface unit 22	0-0	Chipped lithics - Preform, aborted	1	
Surface unit 22	0-0	Ground & pecked stone - Discoidal	1	Fragment
Surface unit 22	0-0	Misc. - Concretion	3	
Surface unit 22	0-0	Ceramics - Kennett Plain body	29	
Surface unit 22	0-0	Ceramics - Barnes Cord Marked body	6	
Surface unit 22	0-0	Misc. - Cinder	2	
Surface unit 28	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 28	0-0	Ceramics - Kennett Plain body	2	
Surface unit 28	0-0	Ceramics - Barnes Cord Marked body	2	Pan w/cord marks on lip
Surface unit 28	0-0	Misc. - Concretion	2	
Surface unit 32	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 32	0-0	Chipped lithics - Flake, interior	2	
Surface unit 32	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 32	0-0	Misc. - Concretion	2	
Surface unit 32	0-0	Ceramics - Kennett Plain body	15	
Surface unit 32	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 32	0-0	Ceramics - Barnes Cord Marked body	9	
Surface unit 32	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit 32	0-0	Misc. - Cinder	1	
Surface unit 35	0-0	Chipped lithics - Flake, interior	1	
Surface unit 35	0-0	Misc. - Concretion	1	
Surface unit 35	0-0	Ceramics - Kennett Plain body	10	
Surface unit 35	0-0	Ceramics - Barnes Cord Marked body	7	
Surface unit 37	0-0	Ceramics - Kennett Plain body	3	
Surface unit 42	0-0	Misc. lithics - Shale	1	
Surface unit 42	0-0	Ceramics - Kennett Plain body	10	
Surface unit 42	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 42	0-0	Ceramics - Barnes Cord Marked body	5	
Surface unit 42	0-0	Misc. - Cinder	1	
Surface unit 42	0-0	Mineral - Coal	1	
Surface unit 42	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit 47	0-0	Ceramics - Kennett Plain body	1	
Surface unit 47	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 50	0-0	Ceramics - Kennett Plain body	1	
Surface unit 52	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 52	0-0	Chipped lithics - Flake, interior	2	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 52	0-0	Chipped lithics - Flake, modified	1	
Surface unit 52	0-0	Ceramics - Kennett Plain body	19	
Surface unit 52	0-0	Ceramics - Barnes Cord Marked body	9	
Surface unit 52	0-0	Burned clay - Misc.	1	
Surface unit 52	0-0	Misc. - Cinder	1	
Surface unit 52	0-0	Mineral - Coal	1	
Surface unit 61	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 61	0-0	Ceramics - Kennett Plain body	11	
Surface unit 61	0-0	Ceramics - Barnes Cord Marked body	5	
Surface unit 61	0-0	Glass - Bottle, purpled	1	
Surface unit 64	0-0	Chipped lithics - Flake, interior	1	
Surface unit 64	0-0	Ceramics - Kennett Plain body	12	
Surface unit 64	0-0	Ceramics - Barnes Cord Marked body	11	
Surface unit 64	0-0	Ceramics - Barnes Cord Marked rim	2	
Surface unit 76	0-0	Ceramics - Kennett Plain body	2	
Surface unit 80	0-0	Misc. - Concretion	1	
Surface unit 87	0-0	Ceramics - Kennett Plain body	2	
Surface unit 93	0-0	Chipped lithics - Tested cobble	1	
Surface unit 93	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 93	0-0	Chipped lithics - Flake, interior	2	
Surface unit 93	0-0	Ceramics - Kennett Plain body	30	
Surface unit 93	0-0	Ceramics - Barnes Cord Marked body	21	
Surface unit 93	0-0	Ceramics - Mulberry Creek CM rim	1	Folded rim
Surface unit 93	0-0	Misc. - Cinder	1	
Surface unit 96	0-0	Chipped lithics - Flake, interior	1	Quartz
Surface unit 73	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 73	0-0	Chipped lithics - Flake, interior	2	
Surface unit 73	0-0	Chipped lithics - Flake, modified	1	
Surface unit 73	0-0	Ceramics - Kennett Plain body	24	
Surface unit 73	0-0	Ceramics - Barnes Cord Marked body	20	
Surface unit 73	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit 73	0-0	Burned clay - Misc.	4	
Surface unit 73	0-0	Misc. - Cinder	1	
Gen. East of Ditch	0-0	Chipped lithics - Preform	1	
Gen. East of Ditch	0-0	Ground & pecked stone - Pitted cobble	1	
Gen. East of Ditch	0-0	Ceramics - Mulberry Creek CM rim	2	
Gen. East of Ditch	0-0	Ceramics - Barnes Cord Marked body	2	
Gen. East of Ditch	0-0	Ceramics - Baytown Plain rim	1	Folded rim
Gen. East of Ditch	0-0	Ceramics - Mulberry Creek CM rim	1	Notched & folded rim
Gen. East of Ditch	0-0	Ceramics - Mulberry Creek CM rim	1	Folded rim
Gen. East of Ditch	0-0	Ceramics - Mulberry Creek CM rim	1	Notched rim
Gen. West of Ditch	0-0	Ceramics - Barnes Cord Marked body	1	
Test unit 1	0-10	Ceramics - Kennett Plain body	3	
Test unit 1	0-10	Ceramics - Barnes Cord Marked body	2	
Test unit 1	10-20	Chipped lithics - Flake, interior	2	
Test unit 1	10-20	Ceramics - Kennett Plain body	3	
Test unit 1	10-20	Ceramics - Barnes Cord Marked body	1	
Test unit 1	20-30	Ceramics - Kennett Plain body	3	
Test unit 1	20-30	Ceramics - Barnes Cord Marked body	4	
Test unit 1	30-40	Misc. lithics - Shatter	1	
Test unit 1	30-40	Ceramics - Kennett Plain body	15	
Test unit 1	30-40	Ceramics - Barnes Cord Marked body	40	
Test unit 1	30-40	Ceramics - Barnes Cord Marked rim	1	Folded & notched rim jar
Test unit 1	30-40	Burned clay - Misc.	12	
Test unit 1	30-40	Floral - Charcoal	1	0.4 g
Test unit 1	30-40	Ceramics - Barnes Cord Marked rim	1	Exfoliated rim, 2-node
Test unit 1	30-40	Ceramics - Barnes Cord Marked rim	2	Exfoliated rim strips
Test unit 1	30-40	Ceramics - Barnes Cord Marked rim	1	Jar w/folded rim
Test unit 1	30-40	Ceramics - Barnes Cord Marked rim	1	Pan w/folded rim
Test unit 1, Fea. 1	30-40	Ceramics - Barnes Cord Marked body	1	
Test unit 1, Fea. 1	30-40	Ceramics - Barnes Cord Marked rim	2	Jar
Test unit 1	40-50	Chipped lithics - Flake, sec. decort.	1	
Test unit 1	40-50	Chipped lithics - Flake, interior	1	
Test unit 1	40-50	Ceramics - Barnes Cord Marked body	3	
Test unit 1	40-50	Burned clay - Misc.	2	
Test unit 1, Fea. 1	40-50	Chipped lithics - Flake, interior	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Test unit 1	50-60	Ceramics - Kennett Plain body	4	
Test unit 1	50-60	Ceramics - Barnes Cord Marked body	2	
Test unit 1	50-60	Burned clay - Misc.	3	
Test unit 1	50-60	Floral - Charcoal	1	1.0 g
Test unit 1	50-60	Ceramics - Misc.	1	Cylindrical object
Test unit 1, Fea. 1	50-60	Ceramics - Barnes Cord Marked body	1	
Test unit 1, Fea. 1	50-60	Floral - Charcoal	2	3.1 g
Test unit 1	60-70	Chipped lithics - Flake, interior	1	
Test unit 1	60-70	Chipped lithics - Biface frag.	1	
Test unit 1	60-70	Ceramics - Kennett Plain body	1	
Test unit 1	60-70	Ceramics - Kennett Plain rim	1	
Test unit 1, Fea. 2	60-70	Ceramics - Kennett Plain rim	1	
Test unit 1, Fea. 2	60-70	Ceramics - Barnes Cord Marked body	5	
Test unit 1, Fea. 2	60-70	Ceramics - Mulberry Creek CM rim	1	Pan
Test unit 1	70-80	Misc. lithics - Shatter	1	Jasper
Test unit 1	80-90	Chipped lithics - Flake, interior	1	
Test unit 1	80-90	Misc. lithics - Fire-cracked rock	2	
Test unit 2,E. wall	0-10	Ceramics - Barnes Cord Marked body	1	
Test unit 2	10-20	Misc. lithics - Shatter	1	
Test unit 2	10-20	Ceramics - Kennett Plain body	2	
Test unit 2	10-20	Floral - Charcoal	1	0.6 g
Test unit 2	20-30	Ceramics - Kennett Plain body	1	
Test unit 2	30-40	Ceramics - Kennett Plain body	1	
Test unit 2	40-50	Ceramics - Barnes Cord Marked body	1	Stratum D, 50 cmbd
Test unit 2	40-50	Chipped lithics - Flake, sec. decort.	1	
Test unit 2	40-50	Misc. lithics - Unmodified stone	1	
Test unit 3	0-10	Chipped lithics - Flake, interior	1	
Test unit 3	0-10	Ceramics - Kennett Plain body	1	
Test unit 3	0-10	Ceramics - Barnes Cord Marked body	1	
Test unit 3	20-30	Ceramics - Barnes Cord Marked body	1	
Test unit 3	40-50	Chipped lithics - Flake, interior	1	
Test unit 3	40-50	Misc. lithics - Shatter	1	
Test unit 3	40-50	Chipped lithics - Flake, modified	1	
Test unit 3	40-50	Ceramics - Kennett Plain body	2	
Test unit 3	40-50	Ceramics - Barnes Cord Marked body	4	
Test unit 3	40-50	Ceramics - Barnes Cord Marked rim	1	Notched rim
Test unit 3	40-50	Ceramics - Barnes Cord Marked rim	1	
Test unit 3	50-60	Chipped lithics - Flake, pri. decort.	1	
Test unit 3	50-60	Chipped lithics - Flake, interior	6	
Test unit 3	50-60	Chipped lithics - Flake, retouch	1	
Test unit 3	50-60	Misc. lithics - Shatter	2	
Test unit 3	50-60	Chipped lithics - Flake, modified	1	
Test unit 3	50-60	Ceramics - Kennett Plain body	38	
Test unit 3	50-60	Ceramics - Barnes Cord Marked rim	1	2-nodes, folded & notched
Test unit 3	50-60	Ceramics - Barnes Cord Marked body	62	
Test unit 3	50-60	Ceramics - Barnes Cord Marked rim	1	Pan w/folded rim
Test unit 3	50-60	Burned clay - Misc.	4	
Test unit 3	50-60	Floral - Charcoal	4	3.0 g
Test unit 3	50-60	Ceramics - Barnes Cord Marked rim	1	Pan
Test unit 3	50-60	Ceramics - Barnes Cord Marked rim	1	Bowl
Test unit 3	50-60	Ceramics - Barnes Cord Marked rim	1	Miniature vessel
Test unit 3	60-70	Misc. lithics - Shatter	1	Jasper
Test unit 3	60-70	Ceramics - Kennett Plain body	7	
Test unit 3	60-70	Ceramics - Barnes Cord Marked body	8	
Test unit 3	60-70	Ceramics - Barnes Cord Marked rim	1	Jar w/cylinder impressed rim
Test unit 3	60-70	Ceramics - Barnes Cord Marked rim	1	Jar
Test unit 3	70-80	Ceramics - Barnes Cord Marked body	3	
Test unit 3	80-90	Chipped lithics - Flake, sec. decort.	1	
Test unit 3	80-90	Ceramics - Kennett Plain body	1	
Test unit 3	80-90	Ceramics - Barnes Cord Marked body	1	
Test unit 3	90-100	Chipped lithics - Flake, interior	2	
Test unit 3	90-100	Ceramics - Barnes Cord Marked body	1	
Test unit 3	90-100	Floral - Charcoal	1	0.4 g
Test unit 3	100-110	Ceramics - Barnes Cord Marked body	1	
Test unit 3	100-110	Ceramics - Barnes Cord Marked rim	1	
Test unit 3	110-120	Chipped lithics - Flake, interior	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Test unit 3	110-120	Floral - Charcoal	1	0.4 g
Posthole test 00N-S	0-40	Chipped lithics - Flake, interior	1	
Posthole test 01 N	40-100	Ceramics - Barnes Cord Marked rim	1	Exfoliated rim strip
Posthole test 02 N	40-100	Ceramics - Kennett Plain body	2	
Posthole test 03 N	40-100	Ceramics - Kennett Plain body	2	
Posthole test 04 N	40-100	Misc. lithics - Shatter	1	
Posthole test 01 S	40-100	Ceramics - Barnes Cord Marked body	1	
Posthole test 01 S	40-100	Burned clay - Misc.	2	
Posthole test 06 N	40-100	Chipped lithics - Flake, interior	1	
Posthole test 06 N	40-100	Ceramics - Barnes Cord Marked body	1	
Posthole test 06 N	40-100	Ceramics - Barnes Cord Marked rim	4	Crd.wrp/cylinder impressed rim
Posthole test 07 N	0-40	Ceramics - Barnes Cord Marked body	1	
Posthole test 09 N	40-100	Chipped lithics - Flake, sec. decort.	1	Jasper
Posthole test 09 N	40-100	Chipped lithics - Flake, interior	2	Both Jasper
Posthole test 09 N	40-100	Ceramics - Kennett Plain body	1	
Posthole test 09 N	40-100	Burned clay - Misc.	3	
Posthole test 09 N	40-100	Faunal - Unidentified bone	1	0.2 g
Posthole test 11 N	40-100	Ceramics - Kennett Plain body	1	
Posthole test 13 N	40-100	Ceramics - Kennett Plain body	3	
Posthole test 14 N	40-100	Ceramics - Kennett Plain body	1	
Posthole test 03 S	40-100	Chipped lithics - Flake, interior	1	
Posthole test 04 S	40-100	Ceramics - Kennett Plain body	1	
Posthole test 05 S	40-100	Ceramics - Kennett Plain body	2	
Posthole test 05 S	40-100	Ceramics - Barnes Cord Marked body	2	
Posthole test 07 S	0-40	Ceramics - Kennett Plain body	1	
Posthole test 07 S	40-10	Ceramics - Kennett Plain body	1	
Posthole test 08 S	0-40	Ceramics - Kennett Plain body	1	
Posthole test 08 S	0-40	Ceramics - Barnes Cord Marked body	3	
Posthole test 08 S	40-100	Ceramics - Barnes Cord Marked body	5	
Posthole test 09 S	40-100	Chipped lithics - Flake, interior	1	
Posthole test 09 S	40-100	Ceramics - Kennett Plain body	5	
Posthole test 09 S	40-100	Ceramics - Barnes Cord Marked body	2	
Posthole test 09 S	40-100	Floral - Charcoal	1	
Posthole test 10 S	0-40	Ceramics - Kennett Plain body	2	
Posthole test 12 S	0-40	Ceramics - Barnes Cord Marked body	1	
Posthole test 14 S	0-40	Ceramics - Barnes Cord Marked body	3	
Posthole test 14 S	0-40	Burned clay - Misc.	1	
Posthole test 15 S	40-100	Ceramics - Kennett Plain body	4	
Posthole test 15 S	40-100	Ceramics - Barnes Cord Marked body	1	
Posthole test 06 S	40-100	Ceramics - Barnes Cord Marked rim	1	Exfoliated rim strip
Posthole test 06 S	40-100	Ceramics - Barnes Cord Marked body	1	
		23MI600		
General surface	0-0	Glass - Bottle, clear	4	
General surface	0-0	Glass - Bottle, blue	11	
General surface	0-0	Glass - Bottle, purpled	4	
General surface	0-0	Glass - Bottle, amber	1	
General surface	0-0	Whiteware - Plain	17	
General surface	0-0	Whiteware - Flow Blue decoration	1	
General surface	0-0	Glass - Milk	1	
General surface	0-0	Earthenware - Misc.	5	
General surface	0-0	Glass - Window	6	
General surface	0-0	Porcelain - Plain	2	
General surface	0-0	Building material - Brick, red	2	
		23MI601		
General surface	0-0	Glass - Bottle, clear	3	Incl. 1 whole bottle "DES. PAT
General surface	0-0	Glass - Bottle, blue	1	
General surface	0-0	Glass - Bottle, purpled	6	
General surface	0-0	Glass - Bottle, green	1	
General surface	0-0	Glass - Milk	1	
General surface	0-0	Chipped lithics - Flake, interior	2	
General surface	0-0	Glass - Bottle, purpled	1	
General surface	0-0	Glass - Bottle, green	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
General surface	0-0	Glass - Bottle, amber	1	
General surface	0-0	Whiteware - Plain	12	
General surface	0-0	Glass - Milk	1	
General surface	0-0	Earthenware - Misc.	1	
General surface	0-0	Porcelain - Plain	1	
		23MI602		
General surface	0-0	Glass - Bottle, clear	6	
General surface	0-0	Glass - Bottle, blue	3	
General surface	0-0	Glass - Bottle, green	1	
General surface	0-0	Glass - Bottle, amber	1	
General surface	0-0	Whiteware - Plain	3	
General surface	0-0	Earthenware - Misc.	7	
General surface	0-0	Glass - Window	4	
General surface	0-0	Building material - Brick, red	2	
General surface	0-0	Metal - Misc.	2	2 iron, 1 cast.
General surface	0-0	Misc. - Cinder	2	
		23MI543		
General surface	0-0	Chipped lithics - Flake, pri. decort.	3	
General surface	0-0	Chipped lithics - Flake, sec. decort.	12	
General surface	0-0	Chipped lithics - Flake, interior	14	
General surface	0-0	Chipped lithics - Flake, retouch	1	
General surface	0-0	Misc. lithics - Shatter	1	
General surface	0-0	Chipped lithics - Biface fragment	5	
General surface	0-0	Chipped lithics - Preform, aborted	1	
General surface	0-0	Faunal - Bone fragment	6	
		23MI544		
General surface	0-0	Chipped lithics - Core	1	
General surface	0-0	Misc. lithics - Shatter	1	
General surface	0-0	Ceramics - Kennett Plain body	4	
General surface	0-0	Ceramics - Baytown Plain rim	1	Jar sherd
General surface	0-0	Ceramics - Barnes Cord Marked body	4	
General surface	0-0	Ceramics - Baytown Plain body	1	Incised
General surface	0-0	Ceramics - Shell Tempered Plain body	1	
General surface	0-0	Ceramics - Baytown Plain body	1	
General surface	0-0	Ceramics - Mississippi Plain rim	1	Notched scalloped rim
General surface	0-0	Chipped lithics - Flake, interior	3	
General surface	0-0	Chipped lithics - Biface fragment	4	
General surface	0-0	Ceramics - Baytown Plain rim	6	Jar or bowl
General surface	0-0	Ceramics - Kennett Plain base ?	1	
General surface	0-0	Ceramics - Mississippi Plain rim	1	Jar
General surface	0-0	Ceramics - Mulberry Creek CM rim	2	Jar or bowl (1 notched)
General surface	0-0	Ceramics - Shell Tempered Plain body	1	
General surface	0-0	Ceramics - Baytown Plain rim	1	Pan
General surface	0-0	Ceramics - Baytown Plain shoulder	1	
General surface	0-0	Ceramics - Mulberry Creek CM rim	1	Pan, folded rim
Surface unit 03	0-0	Ceramics - Kennett Plain body	4	
Surface unit 03	0-0	Burned clay - Misc.	2	
Surface unit 03	0-0	Glass - Bottle, clear	2	
Surface unit 13	0-0	Glass - Window, clear	7	
Surface unit 04	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 04	0-0	Chipped lithics - Flake, sec. decort.	3	
Surface unit 04	0-0	Chipped lithics - Flake, interior	38	
Surface unit 04	0-0	Misc. lithics - Shatter	5	
Surface unit 04	0-0	Chipped lithics - Flake, modified	3	
Surface unit 04	0-0	Chipped lithics - Biface fragment	1	
Surface unit 04	0-0	Chipped lithics - Dart point	1	Woodland
Surface unit 04	0-0	Misc. lithics - Fire-cracked rock	2	
Surface unit 04	0-0	Ground & pecked stone - Celt fragment?	1	
Surface unit 04	0-0	Misc. lithics - Unmodified sandstone	1	
Surface unit 04	0-0	Ceramics - Kennett Plain body	216	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 04	0-0	Ceramics - Mulberry Creek CM rim	5	
Surface unit 04	0-0	Ceramics - Barnes Cord Marked body	48	
Surface unit 04	0-0	Ceramics - Barnes Cord Marked rim	2	
Surface unit 04	0-0	Burned clay - PPO fragments	4	
Surface unit 04	0-0	Burned clay - Misc.	118	
Surface unit 04	0-0	Glass - Bottle, amber	1	
Surface unit 04	0-0	Metal - Shotgun shell base	1	Marked ELEY-KYNOCH
Surface unit 04	0-0	Faunal - Bone Fragment	2	One is burned
Surface unit 04	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 04	0-0	Ceramics - Baytown Plain rim	1	Pan
Surface unit 04	0-0	Ceramics - Baytown Plain body	1	
Surface unit 05	0-0	Chipped lithics - Core	1	
Surface unit 05	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 05	0-0	Chipped lithics - Flake, interior	5	
Surface unit 05	0-0	Ceramics - Kennett Plain body	11	
Surface unit 05	0-0	Ceramics - Barnes Cord Marked body	3	
Surface unit 05	0-0	Burned clay - Misc.	4	
Surface unit 05	0-0	Glass - Bottle, clear	3	
Surface unit 05	0-0	Faunal - Bone fragment	1	
Surface unit 07	0-0	Chipped lithics - Flake, pri. decort.	9	
Surface unit 07	0-0	Chipped lithics - Flake, sec. decort.	4	
Surface unit 07	0-0	Chipped lithics - Flake, interior	28	
Surface unit 07	0-0	Misc. lithics - Shatter	7	
Surface unit 07	0-0	Chipped lithics - Biface fragment	1	
Surface unit 07	0-0	Chipped lithics - Preform, aborted	1	
Surface unit 07	0-0	Misc. lithics - Cobble fragment	1	
Surface unit 07	0-0	Ceramics - Kennett Plain body	100	
Surface unit 07	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 07	0-0	Ceramics - Barnes Cord Marked body	9	
Surface unit 07	0-0	Burned clay - PPO fragments	2	
Surface unit 07	0-0	Burned clay - Misc.	27	
Surface unit 07	0-0	Faunal - Bone fragment	1	
Surface unit 07	0-0	Ceramics - Baytown Plain rim	1	
Surface unit 07	0-0	Ceramics - Larto Red rim	1	
Surface unit 08	0-0	Misc. lithics - Cobble fragment	2	Sandstone
Surface unit 08	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 08	0-0	Chipped lithics - Flake, interior	3	
Surface unit 08	0-0	Misc. lithics - Shatter	3	
Surface unit 08	0-0	Chipped lithics - Biface fragment	1	
Surface unit 08	0-0	Chipped lithics - Dart Point	1	Woodland
Surface unit 08	0-0	Ceramics - Kennett Plain body	18	
Surface unit 08	0-0	Ceramics - Barnes Cord Marked body	11	
Surface unit 08	0-0	Ceramics - Barnes Cord Marked rim	1	Folded rim
Surface unit 08	0-0	Burned clay - Misc.	14	
Surface unit 08	0-0	Glass - Bottle, clear	1	
Surface unit 15	0-0	Chipped lithics - Flake, interior	1	
Surface unit 15	0-0	Ceramics - Kennett Plain body	6	
Surface unit 15	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 15	0-0	Burned clay - Misc.	2	
Surface unit 15	0-0	Glass - Automotive	9	
Surface unit 17	0-0	Chipped lithics - Core	1	
Surface unit 17	0-0	Chipped lithics - Flake, interior	3	
Surface unit 17	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 17	0-0	Ceramics - Kennett Plain body	13	
Surface unit 17	0-0	Ceramics - Baytown Plain body	1	
Surface unit 17	0-0	Ceramics - Barnes Cord Marked body	9	
Surface unit 17	0-0	Burned clay - Misc.	18	
Surface unit 20	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 20	0-0	Chipped lithics - Flake, interior	8	
Surface unit 20	0-0	Misc. lithics - Shatter	1	
Surface unit 20	0-0	Misc. lithics - Sandstone fragments	2	Possibly ground.
Surface unit 20	0-0	Ceramics - Kennett Plain body	29	
Surface unit 20	0-0	Ceramics - Baytown Plain rim	1	
Surface unit 20	0-0	Ceramics - Barnes Cord Marked body	10	
Surface unit 20	0-0	Burned clay - Misc.	7	
Surface unit 20	0-0	Plastic - White fragments	2	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 21	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 21	0-0	Chipped lithics - Flake, interior	1	
Surface unit 21	0-0	Misc. lithics - Unmodified stone	1	Brick fragment?
Surface unit 21	0-0	Ceramics - Kennett Plain body	5	
Surface unit 21	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 21	0-0	Burned clay - Misc.	5	
Surface unit 21	0-0	Building material - Brick, r		
Surface unit 24	0-0	Chipped lithics - Flake, int		
Surface unit 24	0-0	Ground & pecked stone - Celt fragment?	1	
Surface unit 24	0-0	Ceramics - Kennett Plain body	3	
Surface unit 24	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 24	0-0	Burned clay - Misc.	8	
Surface unit 24	0-0	Building material - Brick, red	1	
Surface unit 24	0-0	Mineral - Coal	1	
Surface unit 28	0-0	Chipped lithics - Core	1	
Surface unit 28	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 28	0-0	Chipped lithics - Flake, interior	24	
Surface unit 28	0-0	Misc. lithics - Shatter	4	
Surface unit 28	0-0	Chipped lithics - Biface fragment	1	
Surface unit 28	0-0	Misc. lithics - Unmodified Gravel	1	
Surface unit 28	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit 28	0-0	Misc. lithics - Cobble fragment	1	Sandstone
Surface unit 28	0-0	Ceramics - Kennett Plain body	61	
Surface unit 28	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 28	0-0	Ceramics - Barnes Cord Marked body	22	
Surface unit 28	0-0	Burned clay - Misc.	25	
Surface unit 31	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 31	0-0	Chipped lithics - Flake, interior	16	
Surface unit 31	0-0	Misc. lithics - Shatter	2	
Surface unit 31	0-0	Misc. lithics - Fire-cracked rock	5	
Surface unit 31	0-0	Ceramics - Kennett Plain body	80	
Surface unit 31	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 31	0-0	Ceramics - Barnes Cord Marked body	22	
Surface unit 31	0-0	Burned clay - Misc.	138	
Surface unit 31	0-0	Plastic - White	1	
Surface unit 31	0-0	Vinyl - Black	1	
Surface unit 32	0-0	Misc. lithics - Cobble fragment	3	2 are sandstone
Surface unit 32	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 32	0-0	Chipped lithics - Flake, interior	6	
Surface unit 32	0-0	Misc. lithics - Shatter	3	
Surface unit 32	0-0	Misc. lithics - Shatter	3	
Surface unit 32	0-0	Ceramics - Kennett Plain body	35	
Surface unit 32	0-0	Ceramics - Kennett Plain rim	1	Folded rim
Surface unit 32	0-0	Ceramics - Barnes Cord Marked body	17	
Surface unit 32	0-0	Burned clay - Misc.	11	
Surface unit 32	0-0	Ceramics - Baytown Plain body	1	
Surface unit 37	0-0	Misc. lithics - Cobble fragment	1	Sandstone
Surface unit 37	0-0	Chipped lithics - Flake, interior	3	
Surface unit 37	0-0	Chipped lithics - Biface	1	
Surface unit 37	0-0	Misc. lithics - Fire-cracked rock	4	
Surface unit 37	0-0	Ceramics - Kennett Plain body	29	
Surface unit 37	0-0	Ceramics - Barnes Cord Marked body	9	
Surface unit 37	0-0	Ceramics - Baytown Plain rim	1	
Surface unit 37	0-0	Burned clay - Misc.	23	
Surface unit 43	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 43	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 43	0-0	Chipped lithics - Flake, interior	3	
Surface unit 43	0-0	Chipped lithics - Flake, modified	1	
Surface unit 43	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 43	0-0	Misc. lithics - Unmodified Sandstone	1	
Surface unit 43	0-0	Ground & pecked stone -	1	Pink granite
Surface unit 43	0-0	Ceramics - Kennett Plain body	18	
Surface unit 43	0-0	Ceramics - Baytown Plain rim	1	
Surface unit 43	0-0	Ceramics - Barnes Cord Marked body	3	
Surface unit 43	0-0	Burned clay - Misc.	2	
Surface unit 45	0-0	Chipped lithics - Flake, pri. decort.	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 45	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 45	0-0	Chipped lithics - Flake, interior	2	
Surface unit 45	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 45	0-0	Ceramics - Kennett Plain body	9	
Surface unit 45	0-0	Ceramics - Barnes Cord Marked body	6	
Surface unit 45	0-0	Burned clay - Misc.	2	
Surface unit 45	0-0	Building material - Brick, red	5	
Surface unit 48	0-0	Chipped lithics - Flake, interior	1	
Surface unit 48	0-0	Ceramics - Kennett Plain body	7	
Surface unit 48	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 48	0-0	Burned clay - Misc.	5	
Surface unit 49	0-0	Misc. lithics - Cobble fragment	2	Sandstone
Surface unit 49	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 49	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 49	0-0	Chipped lithics - Flake, interior	14	
Surface unit 49	0-0	Misc. lithics - Shatter	3	
Surface unit 49	0-0	Chipped lithics - Biface fragment	2	
Surface unit 49	0-0	Misc. lithics - Fire-cracked rock	2	
Surface unit 49	0-0	Ceramics - Kennett Plain body	26	
Surface unit 49	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 49	0-0	Ceramics - Barnes Cord Marked body	20	
Surface unit 49	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit 49	0-0	Burned clay - Misc.	9	
Surface unit 49	0-0	Glass - Bottle, clear	1	
Surface unit 65	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 65	0-0	Chipped lithics - Flake, interior	2	
Surface unit 65	0-0	Ceramics - Kennett Plain body	21	
Surface unit 65	0-0	Ceramics - Barnes Cord Marked body	3	
Surface unit 65	0-0	Ceramics - Larto Red body	1	
Surface unit 65	0-0	Burned clay - Misc.	6	
Surface unit 68	0-0	Chipped lithics - Flake, interior	3	
Surface unit 68	0-0	Misc. lithics - Fire-cracked rock	2	
Surface unit 68	0-0	Ceramics - Kennett Plain body	9	
Surface unit 68	0-0	Ceramics - Barnes Cord Marked body	11	
Surface unit 68	0-0	Burned clay - Misc.	1	
Surface unit 68	0-0	Glass - Bottle, clear	1	
Surface unit 74	0-0	Chipped lithics - Core	1	
Surface unit 74	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 74	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 74	0-0	Chipped lithic - Flake, interior	3	
Surface unit 74	0-0	Misc. lithics - Shatter	3	
Surface unit 74	0-0	Misc. lithics - Fire-cracked rock	2	
Surface unit 74	0-0	Ceramics - Kennett Plain body	46	
Surface unit 74	0-0	Ceramics - Kennett Plain rim	3	
Surface unit 74	0-0	Ceramics - Barnes Cord Marked body	6	
Surface unit 74	0-0	Ceramics - Baytown Plain rim	1	Jar
Surface unit 74	0-0	Burned clay - Misc.	7	
Surface unit 74	0-0	Glass - Bottle, clear	1	
Surface unit 74	0-0	Glass - Bottle, green	1	
Surface unit 74	0-0	Ceramics - Baytown Plain shoulder	1	
Surface unit 74	0-0	Ceramics - Mulberry Creek CM rim	1	Jar
Surface unit 75	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 75	0-0	Chipped lithics - Flake, interior	2	
Surface unit 75	0-0	Misc. lithics - Shatter	1	
Surface unit 75	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 75	0-0	Ceramics - Kennett Plain body	6	
Surface unit 75	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 75	0-0	Burned clay - Misc.	1	
Surface unit 75	0-0	Building material - Brick, red	1	
Surface unit 75	0-0	Whiteware - Plain	1	
Surface unit 84	0-0	Chipped lithics - Flake, interior	2	
Surface unit 84	0-0	Ceramics - Kennett Plain body	11	
Surface unit 84	0-0	Ceramics - Baytown Plain fragment	1	Appendage fragment
Surface unit 84	0-0	Ceramics - Barnes Cord Marked body	6	
Surface unit 85	0-0	Chipped lithics - Flake, interior	2	
Surface unit 85	0-0	Misc. lithics - Shatter	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 85	0-0	Chipped lithics - Biface fragment	2	
Surface unit 85	0-0	Ceramics - Kennett Plain body	13	
Surface unit 85	0-0	Ceramics - Mississippi Plain rim	1	
Surface unit 85	0-0	Ceramics - Barnes Cord Marked body	6	
Surface unit 85	0-0	Burned clay - Misc.	4	
Surface unit 94	0-0	Chipped lithics - Flake, interior	1	
Surface unit 94	0-0	Misc. lithics - Fire-cracked rock	2	
Surface unit 94	0-0	Misc. lithics - Unmodified Sandstone	2	
Surface unit 94	0-0	Ceramics - Kennett Plain body	9	
Surface unit 94	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 94	0-0	Burned clay - Misc.	4	
Posthole test 1W	0-18	Ceramics - Kennett Plain body	3	
Posthole test 1W	0-18	Ceramics - Barnes Cord Marked rim	1	
Posthole test 1W	0-18	Ceramics - Barnes Cord Marked body	1	
Posthole test 1W	0-18	Burned clay - Misc.	1	
Posthole test 4W	0-15	Burned clay - Misc.	1	
Posthole test 5W	0-15	Ceramics - Shell Tempered Plain body	1	
Posthole test 1E	0-65	Chipped lithics - Flake, interior	2	
Posthole test 1E	0-65	Misc. lithics - Shatter	1	
Posthole test 1E	0-65	Ceramics - Kennett Plain body	9	
Posthole test 1E	0-65	Ceramics - Baytown Plain rim	1	Jar
Posthole test 1E	0-65	Ceramics - Barnes Cord Marked body	4	
Posthole test 1E	0-65	Ceramics - Shell Tempered Plain body	6	
Posthole test 1E	0-65	Burned clay - Misc.	23	
Posthole test 1E	0-65	Human remains - UNID bone fragment	1	
Posthole test 1E	0-65	Faunal - Bone fragment	3	
Posthole test 2E	0-25	Chipped lithics - Flake, interior	3	
Posthole test 2E	0-25	Misc. Lithics - Red Sandstone	1	
Posthole test 2E	0-25	Ceramics - Kennett Plain body	2	
Posthole test 2E	0-25	Ceramics - Barnes Cord Marked body	1	
Posthole test 2E	0-25	Ceramics - Shell Tempered Plain body	5	
Posthole test 2E	0-25	Burned clay - Misc.	4	
Posthole test 3E	0-45	Chipped lithics - Flake, interior	2	
Posthole test 3E	0-45	Misc. lithics - Shatter	1	Jasper
Posthole test 3E	0-45	Chipped lithics - Dart Point	1	34 cmbs
Posthole test 3E	0-45	Ceramics - Kennett Plain body	4	
Posthole test 3E	0-45	Ceramics - Barnes Cord Marked body	3	
Posthole test 3E	0-45	Ceramics - Shell Tempered Plain body	4	
Posthole test 3E	0-45	Burned clay - Misc.	3	
Posthole test 3E	0-45	Chipped lithics - Dart Point	1	34 cmbs
Posthole test 4E	0-40	Ceramics - Kennett Plain body	1	
Posthole test 4E	0-40	Ceramics - Barnes Cord Marked body	2	
Posthole test 4E	0-40	Ceramics - Shell Tempered Plain body	2	
Posthole test 6E	0-50	Ceramics - Kennett Plain body	1	
Test unit 1	0-10	Chipped lithics - Flake, interior	8	
Test unit 1	0-10	Misc. lithics - Shatter	1	
Test unit 1	0-10	Misc. lithics - Unmodified Sandstone	1	
Test unit 1	0-10	Ceramics - Kennett Plain body	10	
Test unit 1	0-10	Ceramics - Barnes Cord Marked body	11	
Test unit 1	0-10	Ceramics - Shell Tempered Plain body	7	
Test unit 1	0-10	Burned clay - Misc.	5	
Test unit 2	0-10	Chipped lithics - Flake, sec. decort.	1	
Test unit 2	0-10	Chipped lithics - Flake, interior	7	
Test unit 2	0-10	Chipped lithics - Arrow point base	1	Mississippi Triangular
Test unit 2	0-10	Misc. lithics - Fire-cracked rock	2	
Test unit 2	0-10	Misc. lithics - Unmodified Sandstone	1	
Test unit 2	0-10	Ceramics - Kennett Plain body	22	
Test unit 2	0-10	Ceramics - Barnes Cord Marked body	15	
Test unit 2	0-10	Ceramics - Pascola Punctate rim	1	
Test unit 2	0-10	Ceramics - Shell Tempered Plain body	62	
Test unit 2	0-10	Burned clay - Misc.	88	
Test unit 2	0-10	Faunal - Bone fragment	3	Burned
Test unit 2	0-10	Floral - Charcoal	3	
Test unit 2	0-10	Building material - Brick, red	4	
Test unit 2	0-10	Misc. - Cinder	1	
Test unit 2	10-20	Chipped lithics - Flake, pri. decort.	3	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Test unit 2	10-20	Chipped lithics - Flake, interior	9	
Test unit 2	10-20	Misc. lithics - Shatter	4	
Test unit 2	10-20	Ceramics - Kennett Plain body	25	
Test unit 2	10-20	Ceramics - Barnes Cord Marked body	21	
Test unit 2	10-20	Ceramics - Sand Temp. Plain body	1	
Test unit 2	10-20	Ceramics - Shell Tempered Plain body	89	
Test unit 2	10-20	Ceramics - Shell Tempered Plain rim	2	
Test unit 2	10-20	Burned clay - Misc.	111	
Test unit 2	10-20	Faunal - Bone fragment	7	
Test unit 2	10-20	Faunal - Bone fragment-burned	4	Burned
Test unit 2	10-20	Floral - Charcoal	0	
Test unit 2	10-20	Building material - Brick, red	4	
Test unit 2	10-20	Ceramics - Baytown Plain rim	1	Jar
Test unit 2	10-20	Ceramics - Bell Plain rim	1	Bowl
Test unit 2	10-20	Ceramics - Mississippi Plain rim	1	Bowl with rim notches
Test unit 2	20-30	Chipped lithics - Flake, interior	4	
Test unit 2	20-30	Misc. lithics - Shatter	2	
Test unit 2	20-30	Misc. lithics - Unmodified Sandstone	1	
Test unit 2	20-30	Ceramics - Kennett Plain body	17	
Test unit 2	20-30	Ceramics - Baytown Plain rim	1	
Test unit 2	20-30	Ceramics - Barnes Cord Marked body	4	
Test unit 2	20-30	Ceramics - Shell Tempered Plain body	27	
Test unit 2	20-30	Ceramics - Mississippi Plain rim	1	Bowl
Test unit 2	20-30	Burned clay - Misc.	22	
Test unit 2	20-30	Human remains - UNID bone fragment	11	
Test unit 2	20-30	Faunal - Bone Fragment	1	Burned
Test unit 2	20-30	Floral - Charcoal	0	
Test unit 2	20-30	Ceramics - Baytown Plain rim	1	Bowl
Test unit 2	20-30	Ceramics - Bell Plain rim	1	Jar
Test unit 2	30-40	Chipped lithics - Core	1	
Test unit 2	30-40	Chipped lithics - Flake, interior	4	
Test unit 2	30-40	Misc. lithics - Shatter	2	
Test unit 2	30-40	Misc. lithics - Fire-cracked rock	1	
Test unit 2	30-40	Misc. lithics - Pebble	1	
Test unit 2	30-40	Ceramics - Kennett Plain body	12	
Test unit 2	30-40	Ceramics - Kennett Plain rim	1	Jar
Test unit 2	30-40	Ceramics - Barnes Cord Marked body	16	
Test unit 2	30-40	Ceramics - Mulberry Creek CM rim	1	Folded rim, jar
Test unit 2	30-40	Ceramics - Barnes Incised body	1	
Test unit 2	30-40	Ceramics - Barnes Red Slip body	1	
Test unit 2	30-40	Ceramics - Shell Tempered Plain body	54	
Test unit 2	30-40	Ceramics - Mississippi Plain rim	1	Short-necked bottle
Test unit 2	30-40	Burned clay - Misc.	31	
Test unit 2	30-40	Human remains - UNID bone fragment	18	
Test unit 2	30-40	Faunal - Bone fragment	2	Burned
Test unit 2	30-40	Human remains - UNID bone, whole	1	
Test unit 2	30-40	Ceramics - Mississippi Plain rim	1	Bowl
Test unit 2	30-40	Ceramics - Mississippi Plain rim	1	Jar with strap handle
Test unit 2	30-40	Ceramics - Mississippi Plain rim	1	Jar
Test unit 2	40-50	Ceramics - Mississippi Plain rim	1	Jar with strap handle
General surface	0-0	Chipped lithics - Flake, modified	1	
General surface	0-0	Ceramics - Baytown Plain rim	1	Pan with folded rim
General surface	0-0	Chipped lithics - Biface	1	
General surface	0-0	Chipped lithics - Biface fragment	3	
General surface	0-0	Chipped lithics - Dart point base	1	
General surface	0-0	Chipped lithics - Arrow point	1	Mississippi Triangular
General surface	0-0	Chipped lithics - Arrow Point base	1	Mississippi Triangular
General surface	0-0	Ground & pecked stone - D scoidal	1	Sandstone, flat sides, rounded
General surface	0-0	Ground & pecked stone - Hammerstone	1	
General surface	0-0	Ground & pecked stone - Pitted cobble	1	
General surface	0-0	Ground & pecked stone -	3	
General surface	0-0	Chipped lithics - Cobble tested	1	
General surface	0-0	Ceramics - Baytown Plain body	1	
General surface	0-0	Ceramics - Baytown Plain rim	5	
General surface	0-0	Ceramics - Barnes Cord Marked body	1	
General surface	0-0	Ceramics - Barnes Cord Marked rim	1	Jar

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
General surface	0-0	Ceramics - Barnes Incised body	1	
General surface	0-0	Ceramics - Shell Tempered Plain body	3	
General surface	0-0	Ceramics - Mississippi Plain rim	3	Bowl
General surface	0-0	Ceramics - Mississippi Plain rim	1	Bowl w/incised lines on rim
General surface	0-0	Ceramics - Shell Tempered UNID	1	Pottery trowel fragment
General surface	0-0	Ceramics - fired clay object frag.	1	
General surface	0-0	Ceramics - UNID	1	Frag. of unidentified object
General surface	0-0	Ceramics - Baytown Plain rim	1	Jar with folded rim
General surface	0-0	Ceramics - Baytown Plain rim	1	Bottle
General surface	0-0	Ceramics - Baytown Plain rim	1	Bowl with notches
General surface	0-0	Ceramics - Kennett Plain rim	1	Pan with cork marked lip
General surface	0-0	Ceramics - Kennett Plain rim	1	Jar with folded rim
General surface	0-0	Ceramics - Kennett Plain rim	2	Jar
General surface	0-0	Ceramics - Mulberry Ck. Crd.Mrkd.rim	1	With notches
General surface	0-0	Ceramics - Mulberry Ck. Crd.Mrkd.rim	2	Pan with folded rim
General surface	0-0	Ceramics - Barnes Cord Marked rim	1	Oblique cord marks on lip
General surface	0-0	Ceramics - Bell Plain rim	1	Effigy bowl?
General surface	0-0	Ceramics - Bell Plain rim	1	
Surface unit 47	0-0	Ceramics - Baytown Plain rim	1	Notched
Surface unit 47	0-0	Ceramics - Baytown Plain rim	1	
		23MM545		
Surface unit 03	0-0	Glass - Bottle, clear	27	
Surface unit 03	0-0	Glass - Bottle, blue	3	
Surface unit 03	0-0	Glass - Purpled	5	
Surface unit 03	0-0	Glass - Bottle, green	2	
Surface unit 03	0-0	Glass - Bottle, amber	2	
Surface unit 03	0-0	Whiteware - Plain	7	
Surface unit 03	0-0	Whiteware - Blue glaze	7	
Surface unit 03	0-0	Whiteware - Embossed	1	
Surface unit 03	0-0	Glass - Bottle, milk	1	
Surface unit 03	0-0	Earthenware - Misc.	7	
Surface unit 03	0-0	Glass - Window, clear	13	
Surface unit 03	0-0	Glass - Window, blue	3	
Surface unit 03	0-0	Building material - Brick, red	1	
Surface unit 03	0-0	Metal - Misc.	3	
Surface unit 11	0-0	Glass - Bottle, clear	15	7 burned
Surface unit 11	0-0	Glass - Bottle, blue	10	2 Dark Blue
Surface unit 11	0-0	Glass - Bottle, purpled	4	1 burned
Surface unit 11	0-0	Glass - Bottle, green	1	
Surface unit 11	0-0	Glass - Bottle, violet	1	
Surface unit 11	0-0	Whiteware - Plain	12	5 burned, 1 maker's mark
Surface unit 11	0-0	Whiteware - Embossed	1	
Surface unit 11	0-0	Glass - Bottle, milk	1	
Surface unit 11	0-0	Glass - Opaque	2	1 blue, 1 green, both burned
Surface unit 11	0-0	Earthenware - Misc.	7	
Surface unit 11	0-0	Glass - Window, clear	5	
Surface unit 11	0-0	Glass - Window, purpled	1	
Surface unit 11	0-0	Glass - Window, blue	3	
Surface unit 11	0-0	Porcelain - Plain	1	
Surface unit 11	0-0	Building material - Brick, black	2	
Surface unit 11	0-0	Metal - Misc.	2	1 large washer
Surface unit 13	0-0	Glass - Bottle, clear	24	3 burned
Surface unit 13	0-0	Glass - Bottle, blue	7	
Surface unit 13	0-0	Glass - Bottle, purpled	10	
Surface unit 13	0-0	Glass - Bottle, amber	4	
Surface unit 13	0-0	Whiteware - Plain	6	2 burned, 1 with partial maker's mark
Surface unit 13	0-0	Earthenware - Misc.	5	1 Sponge decorated, 1 burned
Surface unit 13	0-0	Glass - Window, clear	7	
Surface unit 13	0-0	Glass - Window, purpled	1	
Surface unit 13	0-0	Glass - Window, blue	4	
Surface unit 13	0-0	Porcelain - Plain	3	
Surface unit 13	0-0	Porcelain - Embossed	3	1 with blue tint decoration
Surface unit 13	0-0	Metal - Misc.	4	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 20	0-0	Glass - Bottle, clear	97	
Surface unit 20	0-0	Glass - Bottle, blue	31	
Surface unit 20	0-0	Glass - Bottle, purpled	24	
Surface unit 20	0-0	Glass - Bottle, pink	3	
Surface unit 20	0-0	Glass - Bottle, green	8	3 are "Coke bottle" color
Surface unit 20	0-0	Glass - Bottle, amber	27	
Surface unit 20	0-0	Whiteware - Plain	21	
Surface unit 20	0-0	Whiteware - Transfer print	2	
Surface unit 20	0-0	Whiteware - Green glaze	1	
Surface unit 20	0-0	Glass - Bottle, milk	7	1 with brownish coat
Surface unit 20	0-0	Earthenware - Misc.	24	
Surface unit 20	0-0	Glass - Window, clear	31	
Surface unit 20	0-0	Glass - Window, blue	3	
Surface unit 20	0-0	Porcelain - Plain	1	
Surface unit 20	0-0	Porcelain - Transfer print	2	
Surface unit 20	0-0	Metal - Misc.	1	
Surface unit 23	0-0	Glass - Bottle, clear	8	3 burned
Surface unit 23	0-0	Glass - Bottle, blue	5	
Surface unit 23	0-0	Glass - Bottle, purpled	5	
Surface unit 23	0-0	Glass - Bottle, amber	2	
Surface unit 23	0-0	Whiteware - Plain	7	2 burned
Surface unit 23	0-0	Glass - Bottle, milk	1	Small button?
Surface unit 23	0-0	Glass - Bottle, opaque	2	1 light blue, 1 dark blue
Surface unit 23	0-0	Earthenware - Misc.	4	2 burned
Surface unit 23	0-0	Glass - Window, clear	12	
Surface unit 23	0-0	Porcelain - Plain	1	
Surface unit 23	0-0	Metal - Misc.	2	
Surface unit 23	0-0	Metal - Nail	1	
Surface unit 24	0-0	Glass - Bottle, blue	2	
Surface unit 24	0-0	Glass - Bottle, purpled	3	
Surface unit 24	0-0	Glass - Bottle, amber	1	
Surface unit 24	0-0	Whiteware - Plain	9	1 burned
Surface unit 24	0-0	Glass - Bottle, milk	1	
Surface unit 24	0-0	Earthenware - Misc.	6	
Surface unit 24	0-0	Glass - Window, clear	5	
Surface unit 24	0-0	Porcelain - Plain	1	
Surface unit 24	0-0	Porcelain - Doll part	1	Arm
Surface unit 25	0-0	Glass - Bottle, clear	5	
Surface unit 25	0-0	Glass - Bottle, blue	3	
Surface unit 25	0-0	Glass - Bottle, purpled	12	
Surface unit 25	0-0	Glass - Bottle, green	4	1 burned
Surface unit 25	0-0	Glass - Bottle, amber	1	
Surface unit 25	0-0	Whiteware - Plain	8	
Surface unit 25	0-0	Whiteware - Transfer print	2	
Surface unit 25	0-0	Whiteware - Feather edged	1	
Surface unit 25	0-0	Whiteware - Scalloped edge	1	
Surface unit 25	0-0	Glass - Bottle, milk	2	
Surface unit 25	0-0	Earthenware - Misc.	3	
Surface unit 25	0-0	Glass - Window, clear	4	
Surface unit 25	0-0	Porcelain - Plain	1	
Surface unit 31	0-0	Glass - Bottle, clear	32	20 burned
Surface unit 31	0-0	Glass - Bottle, blue	28	5 burned
Surface unit 31	0-0	Glass - Bottle, purpled	14	4 burned, 1 stopper
Surface unit 31	0-0	Glass - Bottle, green	2	both burned
Surface unit 31	0-0	Glass - Bottle, amber	1	burned
Surface unit 31	0-0	Whiteware - Plain	36	34 burned, 1 maker's mark
Surface unit 31	0-0	Whiteware - Hand painted	2	1 cobalt, 1 brown
Surface unit 31	0-0	Glass - Bottle, milk	2	
Surface unit 31	0-0	Glass - Bottle, opaque	2	Blue
Surface unit 31	0-0	Earthenware - Misc.	20	
Surface unit 31	0-0	Glass - Window, clear	14	
Surface unit 31	0-0	Porcelain - Plain	10	
Surface unit 31	0-0	Metal - Misc.	1	Wing Nut
Surface unit 31	0-0	Metal - Nail	1	
Surface unit 34	0-0	Glass - Bottle, clear	6	1 burned
Surface unit 34	0-0	Glass - Bottle, blue	5	1 burned

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 34	0-0	Glass - Bottle, purpled	7	
Surface unit 34	0-0	Glass - Bottle, amber	2	
Surface unit 34	0-0	Whiteware - Plain	6	
Surface unit 34	0-0	Earthenware - Misc.	10	
Surface unit 34	0-0	Glass - Window, clear	2	
Surface unit 34	0-0	Metal - Misc.	1	
Surface unit 35	0-0	Glass - Bottle, clear	5	
Surface unit 35	0-0	Glass - Bottle, blue	1	
Surface unit 35	0-0	Glass - Bottle, purpled	3	
Surface unit 35	0-0	Glass - Bottle, amber	2	
Surface unit 35	0-0	Whiteware - Plain	2	
Surface unit 35	0-0	Glass - Bottle, milk	1	
Surface unit 35	0-0	Glass - Bottle, opaque	1	Blue
Surface unit 35	0-0	Earthenware - Misc.	2	
Surface unit 35	0-0	Metal - Misc.	1	
Surface unit 37	0-0	Glass - Bottle, clear	2	1 burned
Surface unit 37	0-0	Glass - Bottle, blue	2	1 burned
Surface unit 37	0-0	Glass - Bottle, purpled	4	1 burned, 1 stopper
Surface unit 37	0-0	Glass - Bottle, amber	1	
Surface unit 37	0-0	Whiteware - Plain	5	
Surface unit 37	0-0	Glass - Bottle, milk	1	
Surface unit 37	0-0	Earthenware - Misc.	4	
Surface unit 37	0-0	Glass - Window, clear	1	
Surface unit 37	0-0	Porcelain - Plain	1	
Surface unit 37	0-0	Metal - Misc.	4	
Surface unit 37	0-0	Metal - Nail	3	
Surface unit 38	0-0	Glass - Bottle, clear	2	
Surface unit 38	0-0	Glass - Bottle, blue	7	
Surface unit 38	0-0	Glass - Bottle, purpled	11	
Surface unit 38	0-0	Glass - Bottle, green	3	
Surface unit 38	0-0	Whiteware - Plain	6	
Surface unit 38	0-0	Whiteware - Embossed	3	
Surface unit 38	0-0	Glass - Bottle, milk	3	
Surface unit 38	0-0	Earthenware - Misc.	1	
Surface unit 38	0-0	Glass - Window, clear	3	
Surface unit 38	0-0	Porcelain - Plain	2	
Surface unit 38	0-0	Metal - Misc.	1	
Surface unit 38	0-0	Metal - Nail	1	
Surface unit 40	0-0	Glass - Bottle, clear	2	
Surface unit 40	0-0	Glass - Bottle, blue	6	1 burned
Surface unit 40	0-0	Glass - Bottle, purpled	16	1 burned
Surface unit 40	0-0	Glass - Bottle, pink	1	
Surface unit 40	0-0	Whiteware - Plain	12	1 with maker's mark
Surface unit 40	0-0	Glass - Bottle, milk	2	
Surface unit 40	0-0	Earthenware - Misc.	16	
Surface unit 40	0-0	Glass - Window, clear	7	
Surface unit 40	0-0	Metal - Misc.	3	
Surface unit 40	0-0	Metal - Nail	6	
Surface unit 48	0-0	Glass - Bottle, clear	5	
Surface unit 48	0-0	Glass - Bottle, blue	4	
Surface unit 48	0-0	Glass - Bottle, purpled	11	1 burned
Surface unit 48	0-0	Glass - Bottle, green	1	
Surface unit 48	0-0	Whiteware - Plain	3	
Surface unit 48	0-0	Glass - Bottle, milk	3	1 with purple tint
Surface unit 48	0-0	Earthenware - Misc.	7	
Surface unit 48	0-0	Glass - Window, clear	2	
Surface unit 48	0-0	Metal - Misc.	1	
Surface unit 48	0-0	Metal - Nail	3	
Surface unit 52	0-0	Glass - Bottle, clear	70	
Surface unit 52	0-0	Glass - Bottle, blue	35	
Surface unit 52	0-0	Glass - Bottle, purpled	39	
Surface unit 52	0-0	Glass - Bottle, green	11	
Surface unit 52	0-0	Glass - Bottle, amber	1	
Surface unit 52	0-0	Whiteware - Plain	47	
Surface unit 52	0-0	Whiteware - Scalloped edge	1	
Surface unit 52	0-0	Glass - Milk	7	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 52	0-0	Glass - Bottle, opaque	3	2 blue, 1 green
Surface unit 52	0-0	Earthenware - Misc.	30	
Surface unit 52	0-0	Glass - Window, clear	37	
Surface unit 52	0-0	Porcelain - Plain	1	
Surface unit 52	0-0	Building material - Brick	4	2 red, 2 black
Surface unit 52	0-0	Metal - Misc.	5	
Surface unit 52	0-0	Metal - Nail	9	
Surface unit 52	0-0	Chipped lithics - Flake, interior	4	
Surface unit 53	0-0	Glass - Bottle, clear	37	5 burned
Surface unit 53	0-0	Glass - Bottle, blue	21	5 burned
Surface unit 53	0-0	Glass - Bottle, purpled	27	2 burned, 1 stopper
Surface unit 53	0-0	Glass - Bottle, green	5	
Surface unit 53	0-0	Glass - Bottle, amber	5	
Surface unit 53	0-0	Whiteware - Plain	30	
Surface unit 53	0-0	Whiteware - Transfer print	1	
Surface unit 53	0-0	Glass - Bottle, milk	5	
Surface unit 53	0-0	Glass - Bottle, opaque	4	3 blue, 1 purple/white layered
Surface unit 53	0-0	Earthenware - Misc.	25	
Surface unit 53	0-0	Glass - Window, clear	22	
Surface unit 53	0-0	Glass - Window, purpled	2	
Surface unit 53	0-0	Porcelain - Plain	5	
Surface unit 53	0-0	Building material - Brick	1	Red
Surface unit 53	0-0	Metal - Misc.	7	
Surface unit 53	0-0	Metal - Nail	4	
Surface unit 53	0-0	Chipped lithics - Flake, interior	2	
Surface unit 60	0-0	Glass - Bottle, clear	8	
Surface unit 60	0-0	Glass - Bottle, blue	9	3 burned
Surface unit 60	0-0	Glass - Bottle, purpled	5	
Surface unit 60	0-0	Glass - Bottle, amber	2	
Surface unit 60	0-0	Whiteware - Plain	5	1 with maker's mark
Surface unit 60	0-0	Whiteware - Flow blue decoration	1	
Surface unit 60	0-0	Glass - Bottle, milk	1	
Surface unit 60	0-0	Earthenware - Misc.	6	
Surface unit 60	0-0	Glass - Window, clear	6	
Surface unit 60	0-0	Porcelain - Plain	1	
Surface unit 60	0-0	Metal - Misc.	4	
Surface unit 60	0-0	Metal - Nail	1	
Surface unit 60	0-0	Ceramics - Clay marble	1	
Surface unit 64	0-0	Glass - Bottle, clear	9	
Surface unit 64	0-0	Glass - Bottle, blue	8	
Surface unit 64	0-0	Glass - Bottle, purpled	19	
Surface unit 64	0-0	Glass - Bottle, green	1	
Surface unit 64	0-0	Glass - Bottle, amber	1	
Surface unit 64	0-0	Whiteware - Plain	8	
Surface unit 64	0-0	Glass - Bottle, milk	2	
Surface unit 64	0-0	Earthenware - Misc.	7	
Surface unit 64	0-0	Glass - Window, clear	5	
Surface unit 64	0-0	Glass - Window, purpled	1	
Surface unit 64	0-0	Porcelain - Transfer print	1	
Surface unit 64	0-0	Metal - Misc.	4	
Surface unit 65	0-0	Glass - Bottle, clear	17	2 burned
Surface unit 65	0-0	Glass - Bottle, blue	6	
Surface unit 65	0-0	Glass - Bottle, purpled	7	
Surface unit 65	0-0	Glass - Bottle, green	1	
Surface unit 65	0-0	Glass - Bottle, amber	4	
Surface unit 65	0-0	Whiteware - Plain	7	
Surface unit 65	0-0	Whiteware - Transfer print	1	
Surface unit 65	0-0	Whiteware - Green glaze	1	
Surface unit 65	0-0	Glass - Bottle, milk	1	
Surface unit 65	0-0	Earthenware - Misc.	14	
Surface unit 65	0-0	Glass - Window, clear	2	
Surface unit 65	0-0	Metal - Misc.	4	
Surface unit 66	0-0	Glass - Bottle, clear	7	1 burned
Surface unit 66	0-0	Glass - Bottle, blue	9	1 burned
Surface unit 66	0-0	Glass - Bottle, purpled	15	
Surface unit 66	0-0	Glass - Bottle, green	3	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 66	0-0	Glass - Bottle, amber	4	
Surface unit 66	0-0	Whiteware - Plain	14	
Surface unit 66	0-0	Whiteware - Transfer print	1	
Surface unit 66	0-0	Whiteware - Flow blue decoration	1	
Surface unit 66	0-0	Earthenware - Misc.	10	
Surface unit 66	0-0	Glass - Window, clear	2	
Surface unit 66	0-0	Porcelain - Plain	1	
Surface unit 66	0-0	Porcelain - Transfer print	1	
Surface unit 66	0-0	Metal - Misc.	8	
Surface unit 67	0-0	Glass - Bottle, clear	22	
Surface unit 67	0-0	Glass - Bottle, blue	11	
Surface unit 67	0-0	Glass - Bottle, purpled	14	
Surface unit 67	0-0	Glass - Bottle, green	1	
Surface unit 67	0-0	Glass - Bottle, amber	2	
Surface unit 67	0-0	Glass - Bottle, milk	1	
Surface unit 67	0-0	Whiteware - Plain	12	
Surface unit 67	0-0	Earthenware - Misc.	9	
Surface unit 67	0-0	Glass - Window, clear	6	
Surface unit 67	0-0	Porcelain - Plain	1	
Surface unit 67	0-0	Porcelain - Doll part	1	Unidentified fragment
Surface unit 67	0-0	Metal - Misc.	2	
Surface unit 76	0-0	Glass - Bottle, clear	40	
Surface unit 76	0-0	Glass - Bottle, blue	10	
Surface unit 76	0-0	Glass - Bottle, purpled	19	
Surface unit 76	0-0	Glass - Bottle, green	2	
Surface unit 76	0-0	Glass - Bottle, amber	5	
Surface unit 76	0-0	Whiteware - Plain	34	2 with maker's marks
Surface unit 76	0-0	Whiteware - Transfer print	2	
Surface unit 76	0-0	Glass - Bottle, milk	1	
Surface unit 76	0-0	Earthenware - Misc.	19	1 with sponge decoration
Surface unit 76	0-0	Glass - Window, clear	9	
Surface unit 76	0-0	Porcelain - Plain	1	
Surface unit 76	0-0	Porcelain - Door knob fragment	2	
Surface unit 76	0-0	Metal - Misc.	3	1 button? "Sexton Bros. St. Lois
Surface unit 76	0-0	Metal - Nail	2	
Surface unit 80	0-0	Glass - Bottle, clear	33	
Surface unit 80	0-0	Glass - Bottle, blue	21	Some insulator fragments
Surface unit 80	0-0	Glass - Bottle, purpled	25	
Surface unit 80	0-0	Glass - Bottle, green	1	
Surface unit 80	0-0	Whiteware - Plain	22	
Surface unit 80	0-0	Glass - Bottle, milk	4	
Surface unit 80	0-0	Glass - Bottle, opaque	1	Blue
Surface unit 80	0-0	Earthenware - Misc.	20	
Surface unit 80	0-0	Glass - Window, clear	27	
Surface unit 80	0-0	Porcelain - Plain	5	
Surface unit 80	0-0	Metal - Misc.	4	1 button "Morris Balton" shield
Surface unit 80	0-0	Metal - Nail	2	
Surface unit 87	0-0	Glass - Bottle, clear	69	7 bottle necks
Surface unit 87	0-0	Glass - Bottle, blue	30	
Surface unit 87	0-0	Glass - Bottle, purpled	27	
Surface unit 87	0-0	Glass - Bottle, amber	8	
Surface unit 87	0-0	Glass - Bottle, violet	1	
Surface unit 87	0-0	Glass - Bottle, gray	1	Sun glasses lens fragment?
Surface unit 87	0-0	Whiteware - Plain	69	2 with makers marks, 2 with sl
Surface unit 87	0-0	Whiteware - Transfer print	2	
Surface unit 87	0-0	Glass - Bottle, milk	6	
Surface unit 87	0-0	Earthenware - Misc.	32	
Surface unit 87	0-0	Glass - Window, clear	36	
Surface unit 87	0-0	Porcelain - Plain	6	
Surface unit 87	0-0	Porcelain - Doll part	1	Unidentified limb, hand painte
Surface unit 87	0-0	Metal - Misc.	3	
Surface unit 87	0-0	Metal - Nail	2	
Surface unit 87	0-0	Ceramics - Clay marble	1	
Surface unit 90	0-0	Glass - Bottle, clear	46	
Surface unit 90	0-0	Glass - Bottle, blue	17	
Surface unit 90	0-0	Glass - Bottle, purpled	14	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 90	0-0	Glass - Bottle, green	2	
Surface unit 90	0-0	Glass - Bottle, amber	2	
Surface unit 90	0-0	Whiteware - Plain	25	
Surface unit 90	0-0	Whiteware - Transfer print	1	
Surface unit 90	0-0	Glass - Bottle, milk	9	
Surface unit 90	0-0	Earthenware - Misc.	16	
Surface unit 90	0-0	Glass - Window, clear	26	
Surface unit 90	0-0	Porcelain - Plain	2	
Surface unit 90	0-0	Porcelain - Transfer print	1	
Surface unit 90	0-0	Metal - Misc.	1	
Surface unit 90	0-0	Metal - Nail	2	
		23WM546		
General surface	0-0	Chipped lithics - Biface fragment	1	Quartzite
Swale between loci	0-0	Chipped lithics - Flake, pri. decort.	1	
Swale between loci	0-0	Chipped lithics - Flake, interior	11	
Swale between loci	0-0	Chipped lithics - Flake, modified	2	
Swale between loci	0-0	Ceramics - Kennett Plain body	13	
Swale between loci	0-0	Ceramics - Kennett Plain rim	1	
Swale between loci	0-0	Ceramics - Barnes Cord Marked body	18	
Swale between loci	0-0	Ceramics - Barnes Cord Marked rim	1	
Swale between loci	0-0	Burned clay - PPO fragment	4	
Swale between loci	0-0	Glass - Bottle, clear	1	
Swale between loci	0-0	Glass - Bottle, purpled	1	
Swale between loci	0-0	Whiteware - Transfer print	2	1 brown, 1 blue
Swale between loci	0-0	Glass - Bottle, milk	1	
Swale between loci	0-0	Earthenware - Misc.	1	
Swale between loci	0-0	Building material - Concrete	4	
Surface unit A01	0-0	Chipped lithics - Flake, interior	3	
Surface unit A01	0-0	Chipped lithics - Flake, retouch	2	
Surface unit A01	0-0	Ceramics - Kennett Plain body	5	
Surface unit A01	0-0	Ceramics - Barnes Cord Marked body	3	
Surface unit A05	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit A05	0-0	Chipped lithics - Flake, interior	10	
Surface unit A05	0-0	Chipped lithics - Flake, retouch	2	
Surface unit A05	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit A05	0-0	Ceramics - Kennett Plain body	10	
Surface unit A05	0-0	Ceramics - Barnes Cord Marked body	46	
Surface unit A05	0-0	Ceramics - Kennett body	8	Indeterminable surface
Surface unit A05	0-0	Burned clay - Misc.	6	
Surface unit A05	0-0	Glass - Window, clear	1	
Surface unit A05	0-0	Faunal - Bone fragment	1	
Surface unit A09	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit A09	0-0	Chipped lithics - Flake, interior	4	
Surface unit A09	0-0	Chipped lithics - Flake, retouch	1	
Surface unit A09	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit A09	0-0	Ceramics - Kennett Plain body	8	
Surface unit A09	0-0	Ceramics - Barnes Cord Marked body	35	
Surface unit A09	0-0	Ceramics - Pascola Punctate body	1	
Surface unit A09	0-0	Ceramics - Kennett body	15	Indeterminable surface
Surface unit A09	0-0	Burned clay - Misc.	1	
Surface unit A10	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit A10	0-0	Chipped lithics - Flake, interior	9	
Surface unit A10	0-0	Chipped lithics - Flake, retouch	3	
Surface unit A10	0-0	Ceramics - Kennett Plain body	14	
Surface unit A10	0-0	Ceramics - Barnes Cord Marked body	33	
Surface unit A10	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit A10	0-0	Ceramics - Kennett body	15	Indeterminable surface
Surface unit A10	0-0	Burned clay - Misc.	6	
Surface unit A10	0-0	Misc. - Cinder	1	
Surface unit A20	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit A20	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit A20	0-0	Chipped lithics - Flake, interior	14	
Surface unit A20	0-0	Chipped lithics - Flake, retouch	2	
Surface unit A20	0-0	Misc. lithics - Fire-cracked rock	3	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit A20	0-0	Ceramics - Kennett Plain body	34	
Surface unit A20	0-0	Ceramics - Barnes Cord Marked body	53	
Surface unit A20	0-0	Ceramics - Mulberry Creek CM body	1	
Surface unit A20	0-0	Ceramics - Pascola Pinched body	1	
Surface unit A20	0-0	Ceramics - Kennett body	19	Indeterminable surface
Surface unit A20	0-0	Burned clay - Misc.	12	
Surface unit A20	0-0	Glass - Bottle, clear	1	
Surface unit A20	0-0	Faunal - Bone fragment	2	
Surface unit A22	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit A22	0-0	Chipped lithics - Flake, interior	1	
Surface unit A22	0-0	Chipped lithics - Flake, broken	2	
Surface unit A22	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit A22	0-0	Ceramics - Kennett Plain body	22	
Surface unit A22	0-0	Ceramics - Kennett Plain rim	1	
Surface unit A22	0-0	Ceramics - Barnes Cord Marked body	16	
Surface unit A22	0-0	Ceramics - Mulberry Creek CM body	1	
Surface unit A22	0-0	Burned clay - Misc.	4	
Surface unit A25	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit A25	0-0	Chipped lithics - Flake, interior	14	
Surface unit A25	0-0	Chipped lithics - Flake, retouch	1	
Surface unit A25	0-0	Misc. lithics - Shatter	5	
Surface unit A25	0-0	Chipped lithics - Biface	1	
Surface unit A25	0-0	Misc. lithics - Fire-cracked rock	5	
Surface unit A25	0-0	Ceramics - Kennett Plain body	65	
Surface unit A25	0-0	Ceramics - Barnes Cord Marked body	44	
Surface unit A25	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit A25	0-0	Ceramics - Barnes Punctate body	1	
Surface unit A25	0-0	Burned clay - Misc.	11	
Surface unit A25	0-0	Faunal - Bone fragment	3	
Surface unit A26	0-0	Chipped lithics - Flake, sec. decort.	4	
Surface unit A26	0-0	Chipped lithics - Flake, interior	23	
Surface unit A26	0-0	Chipped lithics - Flake, retouch	7	
Surface unit A26	0-0	Chipped lithics - Flake, modified	1	
Surface unit A26	0-0	Misc. lithics - Shatter	2	
Surface unit A26	0-0	Misc. lithics - Fire-cracked rock	5	
Surface unit A26	0-0	Ceramics - Kennett Plain body	18	
Surface unit A26	0-0	Ceramics - Barnes Cord Marked body	42	
Surface unit A26	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit A26	0-0	Ceramics - Pascola Punctate body	1	
Surface unit A26	0-0	Ceramics - Kennett body	24	Indeterminable surface
Surface unit A26	0-0	Burned clay - Misc.	2	
Surface unit A26	0-0	Burned clay - PPO fragment	1	
Surface unit A26	0-0	Earthenware - Misc.	1	
Surface unit A26	0-0	Faunal - Bone fragment	1	
Surface unit A26	0-0	Ceramics - Mulberry Ck.Crd.Mrkd body	1	1 rhyolite
Surface unit A26	0-0	Ceramics - Mulberry Creek CM rim	1	
Surface unit A33	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit A33	0-0	Chipped lithics - Flake, interior	9	
Surface unit A33	0-0	Chipped lithics - Flake, retouch	1	
Surface unit A33	0-0	Misc. lithics - Shatter	2	
Surface unit A33	0-0	Misc. lithics - Shatter	5	
Surface unit A33	0-0	Ceramics - Kennett Plain body	15	
Surface unit A33	0-0	Ceramics - Barnes Cord Marked body	19	
Surface unit A33	0-0	Ceramics - Kennett Plain rim	1	
Surface unit A33	0-0	Burned clay - Misc.	2	
Surface unit A37	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit A37	0-0	Chipped lithics - Flake, retouch	8	1 rhyolite
Surface unit A37	0-0	Misc. lithics - Shatter	8	
Surface unit A37	0-0	Chipped lithics - Flake, broken	1	
Surface unit A37	0-0	Misc. lithics - Fire-cracked rock	7	
Surface unit A37	0-0	Ceramics - Kennett Plain body	17	
Surface unit A37	0-0	Ceramics - Barnes Cord Marked body	52	
Surface unit A37	0-0	Ceramics - Mulberry Creek CM rim	2	
Surface unit A37	0-0	Ceramics - Kennett body	25	Indeterminable surface
Surface unit A37	0-0	Glass - Bottle, clear	1	
Surface unit A37	0-0	Whiteware - Plain	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit A37	0-0	Porcelain - Button	1	
Surface unit A37	0-0	Burned clay - Poverty Point Object	1	
Surface unit A42	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit A42	0-0	Chipped lithics - Flake, interior	7	
Surface unit A42	0-0	Chipped lithics - Flake, retouch	2	
Surface unit A42	0-0	Misc. lithics - Shatter	1	
Surface unit A42	0-0	Chipped lithics - Flake, modified	1	
Surface unit A42	0-0	Ceramics - Kennett Plain body	20	
Surface unit A42	0-0	Ceramics - Barnes Cord Marked body	8	
Surface unit A42	0-0	Burned clay - Misc.	2	
Surface unit A42	0-0	Misc. - Cinder	1	
Surface unit A48	0-0	Chipped lithics - Flake, interior	1	
Surface unit A48	0-0	Faunal - Bone fragment	1	
Surface unit A03 NS	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit A12 NS	0-0	Chipped lithics - Core	1	
Surface unit A13 NS	0-0	Chipped lithics - Tested Cobble	1	
Surface unit A13 NS	0-0	Ceramics - Barnes Cord Marked body	1	Pigment?
Surface unit A21 NS	0-0	Chipped lithics - Core	1	
Surface unit A28 NS	0-0	Chipped lithics - Flake, broken	1	
Surface unit B01	0-0	Ceramics - Kennett Plain body	2	
Surface unit B01	0-0	Glass - Bottle, clear	10	
Surface unit B01	0-0	Glass - Bottle, purpled	5	
Surface unit B01	0-0	Whiteware - Plain	5	
Surface unit B01	0-0	Glass - Milk	1	
Surface unit B01	0-0	Glass - Window, clear	1	
Surface unit B01	0-0	Porcelain - Plain	1	
Surface unit B01	0-0	Building material - Brick, red	2	
Surface unit B01	0-0	Ceramics - Clay marble	1	
Surface unit B01	0-0	Misc. - Cinder	7	
Surface unit B05	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit B05	0-0	Chipped lithics - Flake, interior	1	
Surface unit B05	0-0	Glass - Bottle, clear	22	
Surface unit B05	0-0	Glass - Bottle, blue	1	
Surface unit B05	0-0	Glass - Bottle, purpled	1	
Surface unit B05	0-0	Glass - Bottle, amber	3	
Surface unit B05	0-0	Whiteware - Plain	7	
Surface unit B05	0-0	Glass - Milk	2	
Surface unit B05	0-0	Earthenware - Misc.	1	
Surface unit B05	0-0	Glass - Window, clear	10	
Surface unit B05	0-0	Metal - Misc.	4	2 iron, 1 lead fishing weight,
Surface unit B05	0-0	Metal - Nail	1	
Surface unit B05	0-0	Mineral - Coal	7	
Surface unit B10	0-0	Chipped lithics - Flake, interior	2	
Surface unit B10	0-0	Ceramics - Kennett Plain body	3	
Surface unit B10	0-0	Burned clay - Misc.	2	
Surface unit B10	0-0	Glass - Bottle, clear	16	2 embossed
Surface unit B10	0-0	Glass - Bottle, blue	1	
Surface unit B10	0-0	Glass - Bottle, purpled	3	
Surface unit B10	0-0	Glass - Bottle, red	1	
Surface unit B10	0-0	Whiteware - Plain	1	
Surface unit B10	0-0	Glass - Milk	1	
Surface unit B10	0-0	Earthenware - Misc.	1	
Surface unit B10	0-0	Glass - Window, clear	5	
Surface unit B10	0-0	Porcelain - Plain	1	
Surface unit B10	0-0	Metal - Misc.	5	2 iron, 3 copper including 1 2
Surface unit B10	0-0	Misc. - Cinder	1	
Surface unit B13	0-0	Chipped lithics - Flake, interior	3	
Surface unit B13	0-0	Ceramics - Kennett Plain body	3	
Surface unit B13	0-0	Burned clay - Misc.	2	
Surface unit B13	0-0	Glass - Bottle, clear	20	
Surface unit B13	0-0	Glass - Bottle, blue	2	
Surface unit B13	0-0	Glass - Bottle, purpled	5	
Surface unit B13	0-0	Glass - Bottle, green	1	
Surface unit B13	0-0	Whiteware - Plain	1	
Surface unit B13	0-0	Whiteware - Transfer print	1	
Surface unit B13	0-0	Glass - Milk	2	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit B13	0-0	Earthenware - Misc.	4	
Surface unit B13	0-0	Glass - Window, clear	6	
Surface unit B13	0-0	Porcelain - Plain	2	
Surface unit B13	0-0	Building material - Brick, red	7	
Surface unit B13	0-0	Metal - Misc.	6	2 iron, 3 lead, 1 copper button
Surface unit B20	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit B20	0-0	Ground & pecked stone - Sandstone	1	Historic?
Surface unit B20	0-0	Ceramics - Kennett Plain body	3	
Surface unit B20	0-0	Burned clay - Misc.	2	
Surface unit B20	0-0	Faunal - Turtle Shell fragment	3	
Surface unit B20	0-0	Glass - Bottle, clear	49	
Surface unit B20	0-0	Glass - Bottle, blue	6	
Surface unit B20	0-0	Glass - Bottle, green	1	
Surface unit B20	0-0	Glass - Bottle, amber	2	
Surface unit B20	0-0	Whiteware - Plain	11	
Surface unit B20	0-0	Whiteware - Banded	1	
Surface unit B20	0-0	Glass - Milk	2	
Surface unit B20	0-0	Earthenware - Misc.	7	
Surface unit B20	0-0	Glass - Window, clear	5	
Surface unit B20	0-0	Porcelain - Doll part	1	Leg
Surface unit B20	0-0	Building material - Brick, red	1	
Surface unit B20	0-0	Metal - Misc.	13	4 iron, 2 lead, 1 copper
Surface unit B20	0-0	Metal - Nail	3	
Surface unit B20	0-0	Metal - Jar lid	1	Aluminum
Surface unit B20	0-0	Mineral - Coal	3	
Surface unit B20	0-0	Misc. - Cinder	9	
Surface unit B20	0-0	Historic Ceramic - Unidentified	1	
Surface unit B20	0-0	Misc. - Slate pencil	1	
Surface unit B22	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit B22	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit B22	0-0	Chipped lithics - Flake, interior	1	
Surface unit B22	0-0	Misc. lithics - Shatter	1	
Surface unit B22	0-0	Ceramics - Kennett Plain body	3	
Surface unit B22	0-0	Ceramics - Shell Tempered Plain body	1	
Surface unit B22	0-0	Glass - Bottle, clear	43	
Surface unit B22	0-0	Glass - Bottle, blue	4	
Surface unit B22	0-0	Glass - Bottle, purpled	11	
Surface unit B22	0-0	Glass - Bottle, green	1	
Surface unit B22	0-0	Glass - Bottle, amber	1	
Surface unit B22	0-0	Whiteware - Plain	23	1 has partial maker's mark gre
Surface unit B22	0-0	Whiteware - Transfer print	2	1 black, 1 green
Surface unit B22	0-0	Whiteware - Scallop edge	1	
Surface unit B22	0-0	Glass - Milk	3	
Surface unit B22	0-0	Earthenware - Misc.	4	
Surface unit B22	0-0	Glass - Window, clear	5	
Surface unit B22	0-0	Porcelain - Blue	1	Figurine fragment
Surface unit B22	0-0	Metal - Misc.	5	2 sheet iron, 2 cast iron, 1 3
Surface unit B22	0-0	Metal - Nail	2	
Surface unit B22	0-0	Glass - Bottle, red	1	Etched "1912"
Surface unit B22	0-0	Mineral - Coal	2	
Surface unit B22	0-0	Misc. - Cinder	5	
Surface unit B22	0-0	Faunal - Bone fragment	1	
Surface unit B25	0-0	Glass - Bottle, clear	11	
Surface unit B25	0-0	Glass - Bottle, blue	8	
Surface unit B25	0-0	Glass - Bottle, purpled	10	
Surface unit B25	0-0	Whiteware - Plain	5	
Surface unit B25	0-0	Glass - Milk	1	
Surface unit B25	0-0	Earthenware - Misc.	5	
Surface unit B25	0-0	Glass - Window, clear	3	
Surface unit B25	0-0	Porcelain - Plain	1	
Surface unit B25	0-0	Building material - Brick, red	3	
Surface unit B25	0-0	Metal - Misc.	3	2 iron, 1 lead
Surface unit B25	0-0	Misc. - Cinder	6	
Surface unit B25	0-0	Faunal - Bone fragment	1	Burned
Surface unit B25	0-0	Burned clay - Misc.	1	
Surface unit B29	0-0	Ceramics - Kennett Plain body	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit B29	0-0	Glass - Bottle, clear	12	1 with white spots, 1 embossed
Surface unit B29	0-0	Glass - Bottle, purpled	10	
Surface unit B29	0-0	Glass - Bottle, amber	1	
Surface unit B29	0-0	Whiteware - Plain	7	
Surface unit B29	0-0	Whiteware - Transfer print	3	1 black, 1blue, 1 green
Surface unit B29	0-0	Glass - Milk	1	
Surface unit B29	0-0	Earthenware - Misc.	8	
Surface unit B29	0-0	Porcelain - Blue	1	
Surface unit B29	0-0	Building material - Brick, red	3	
Surface unit B29	0-0	Metal - Misc.	1	Iron
Surface unit B29	0-0	Mineral - Coal	2	
Surface unit B29	0-0	Misc. - Cinder	1	
Surface unit B36	0-0	Burned clay - Misc.	1	
Surface unit B36	0-0	Glass - Bottle, clear	1	
Surface unit B36	0-0	Glass - Bottle, blue	1	
Surface unit B36	0-0	Whiteware - Plain	2	
Surface unit B36	0-0	Porcelain - Doll part	1	Face fragment
Surface unit B36	0-0	Building material - Brick, red	1	
Surface unit B36	0-0	Metal - Misc.	1	Copper
Surface unit B36	0-0	Misc. - Cinder	1	
Surface unit B02 NS	0-0	Ceramics - Kennett Plain body	1	
Surface unit B06 NS	0-0	Chipped lithics - Core	1	
Surface unit B06 NS	0-0	Glass - Bottle, clear	1	Neck
Surface unit B08 NS	0-0	Ceramics - Kennett Plain body	2	
Surface unit B09 NS	0-0	Ceramics - Kennett Plain body	3	
Surface unit B09 NS	0-0	Earthenware - Misc.	1	Has maker's mark
Surface unit B11 NS	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit B11 NS	0-0	Glass - Bottle, purpled	1	
Surface unit B11 NS	0-0	Whiteware - Transfer print	2	1 blue, 1 green pink and yellow
Surface unit B11 NS	0-0	Metal - Misc.	2	1 iron file, 1 32 cal. long ca
Surface unit B14 NS	0-0	Ceramics - Kennett Plain body	5	
Surface unit B14 NS	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit B14 NS	0-0	Burned clay - Misc.	1	
Surface unit B15 NS	0-0	Ceramics - Kennett Plain body	3	
Surface unit B15 NS	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit B15 NS	0-0	Ceramics - Shell Tempered Plain body	1	
Surface unit B15 NS	0-0	Whiteware - Transfer print	1	Blue
Surface unit B15 NS	0-0	Metal - Misc.	1	Copper button "SERVICE CLOTHES
Surface unit B16 NS	0-0	Ceramics - Kennett Plain body	1	
Surface unit B16 NS	0-0	Glass - Bottle, purpled	1	
Surface unit B16 NS	0-0	Whiteware - Scallop edge	1	
Surface unit B16 NS	0-0	Earthenware - Misc.	3	
Surface unit B18 NS	0-0	Ceramics - Kennett Plain body	1	
Surface unit B18 NS	0-0	Glass - Bottle, clear	1	
Surface unit B21 NS	0-0	Ceramics - Kennett Plain body	3	
Surface unit B21 NS	0-0	Glass - Bottle, clear	1	
Surface unit B21 NS	0-0	Whiteware - Transfer print	1	Brown "ALFRED MEAKIN ENGLAND"
Surface unit B21 NS	0-0	Faunal - Bone fragment	1	Burned
Surface unit B23 NS	0-0	Glass - Bottle, clear	1	
Surface unit B23 NS	0-0	Whiteware - Transfer print	1	Green, red and blue
Surface unit B23 NS	0-0	Earthenware - Misc.	1	"BUCK"
Surface unit B23 NS	0-0	Porcelain - Doll part	1	Right arm
Surface unit B26 NS	0-0	Metal - Misc.	1	Copper buckle with patent date
Surface unit B27 NS	0-0	Ceramics - Kennett Plain body	1	
Surface unit B27 NS	0-0	Earthenware - Misc.	1	
Surface unit B30 NS	0-0	Glass - Bottle, purpled	1	
Surface unit B30 NS	0-0	Whiteware - Plain	1	Partial maker's mark
Surface unit B30 NS	0-0	Earthenware - Misc.	1	
Surface unit B32 NS	0-0	Ceramics - Kennett Plain body	1	
Surface unit B32 NS	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit B32 NS	0-0	Metal - Misc.	1	Boot hook
Surface unit B35 NS	0-0	Ceramics - Kennett Plain body	1	
Surface unit B31 NS	0-0	Ceramics - Kennett Plain rim	1	
Surface unit A06 NS	0-0	Ceramics - Barnes Cord Marked rim	1	Cylinder impressed rim
Surface unit A27 NS	0-0	Chipped lithics - PP/K	1	Corner notched Woodland
Surface unit A27 NS	0-0	Misc. lithics - Fire-cracked sandstone	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit A30 NS	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit A30 NS	0-0	Chipped lithics - Biface thining flake	1	Utilized
Surface unit A04 NS	0-0	Ceramics - Barnes Cord Marked rim	1	Cylinder impressed rim
Surface unit A45 NS	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit A45 NS	0-0	Ceramics - Barnes Cord marked body	1	
		23NM547		
General surface	0-0	Misc. lithics - Shatter	1	
General surface	0-0	Ceramics - Kennett Plain body	1	
General surface	0-0	Ceramics - Barnes Cord Marked body	6	
General surface	0-0	Porcelain - Plain	1	
General surface	0-0	Glass - Milk	3	
General surface	0-0	Metal - Misc.	1	Copper button with arm & hammer
General surface	0-0	Chipped lithics - Flake, pri. decort.	1	
General surface	0-0	Chipped lithics - Flake, sec. decort.	1	
General surface	0-0	Chipped lithics - Flake, interior	8	
General surface	0-0	Misc. lithics - Fire-cracked rock	2	
General surface	0-0	Ceramics - Kennett Plain body	5	
General surface	0-0	Ceramics - Barnes Cord Marked body	14	
General surface	0-0	Glass - Bottle, clear	5	
General surface	0-0	Glass - Bottle, blue	1	
General surface	0-0	Glass - Bottle, purpled	1	
General surface	0-0	Glass - Bottle, amber	2	
General surface	0-0	Whiteware - Plain	1	
General surface	0-0	Whiteware - Transfer print	2	1 brown and 1 blue
General surface	0-0	Glass - Milk	1	
General surface	0-0	Earthenware - Misc.	7	
General surface	0-0	Building material - Brick, red	2	
General surface	0-0	Glass - Blue insulator	1	
General surface	0-0	Mineral - Coal	1	
General surface	0-0	Misc. - Cinder	2	
General surface	0-0	Faunal - Shell	1	
Surface unit 04	0-0	Ceramics - Kennett Plain body	3	
Surface unit 04	0-0	Glass - Bottle, clear	6	
Surface unit 04	0-0	Glass - Bottle, purpled	2	
Surface unit 04	0-0	Glass - Bottle, green	1	
Surface unit 04	0-0	Glass - Bottle, amber	3	
Surface unit 04	0-0	Whiteware - Plain	5	
Surface unit 04	0-0	Whiteware - Transfer print	1	Green and red
Surface unit 04	0-0	Earthenware - Misc.	6	
Surface unit 04	0-0	Glass - Window, clear	2	
Surface unit 04	0-0	Building material - Brick, red	1	
Surface unit 04	0-0	Metal - Misc.	3	2 iron, 1 copper leather rivet
Surface unit 04	0-0	Mineral - Coal	3	
Surface unit 04	0-0	Misc. - Cinder	3	
Surface unit 04	0-0	Rubber - Misc.	1	
Surface unit 05	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 05	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 05	0-0	Ceramics - Kennett Plain body	1	
Surface unit 05	0-0	Glass - Bottle, clear	8	
Surface unit 05	0-0	Glass - Bottle, blue	6	
Surface unit 05	0-0	Glass - Bottle, purpled	5	
Surface unit 05	0-0	Glass - Bottle, green	1	
Surface unit 05	0-0	Glass - Bottle, amber	1	
Surface unit 05	0-0	Whiteware - Plain	9	
Surface unit 05	0-0	Whiteware - Transfer print	2	1 blue, 1 orange and green
Surface unit 05	0-0	Glass - Milk	1	
Surface unit 05	0-0	Earthenware - Misc.	3	
Surface unit 05	0-0	Glass - Window, clear	2	
Surface unit 05	0-0	Building material - Brick, red, glazed	1	
Surface unit 05	0-0	Metal - Misc.	4	2 iron, 1 copper leather rivet
Surface unit 05	0-0	Mineral - Coal	4	
Surface unit 05	0-0	Misc. - Cinder	15	
Surface unit 08	0-0	Chipped lithics - Flake, interior	1	
Surface unit 08	0-0	Glass - Bottle, blue	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 08	0-0	Glass - Bottle, purpled	2	
Surface unit 08	0-0	Whiteware - Plain	2	
Surface unit 08	0-0	Earthenware - Misc.	1	
Surface unit 08	0-0	Glass - Window, clear	5	
Surface unit 08	0-0	Building material - Brick, red	1	
Surface unit 08	0-0	Metal - Misc.	1	Iron
Surface unit 15	0-0	Ceramics - Kennett Plain body	1	
Surface unit 15	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 15	0-0	Glass - Bottle, clear	2	
Surface unit 15	0-0	Glass - Bottle, purpled	1	
Surface unit 15	0-0	Whiteware - Plain	2	
Surface unit 15	0-0	Earthenware - Misc.	4	
Surface unit 15	0-0	Glass - Window, clear	1	
Surface unit 15	0-0	Building material - Brick, red	1	
Surface unit 15	0-0	Mineral - Coal	3	
Surface unit 15	0-0	Misc. - Cinder	3	
Surface unit 17	0-0	Glass - Bottle, clear	8	
Surface unit 17	0-0	Glass - Bottle, blue	4	
Surface unit 17	0-0	Glass - Bottle, purpled	3	
Surface unit 17	0-0	Glass - Milk	1	
Surface unit 17	0-0	Earthenware - Misc.	1	
Surface unit 17	0-0	Glass - Window, clear	2	
Surface unit 17	0-0	Building material - Brick, red	1	
Surface unit 17	0-0	Metal - Misc.	1	1 iron
Surface unit 23	0-0	Glass - Bottle, clear	6	
Surface unit 23	0-0	Glass - Bottle, blue	2	
Surface unit 23	0-0	Glass - Bottle, purpled	1	
Surface unit 23	0-0	Glass - Bottle, green	1	
Surface unit 23	0-0	Whiteware - Plain	2	
Surface unit 23	0-0	Earthenware - Misc.	2	
Surface unit 23	0-0	Glass - Window, clear	2	
Surface unit 23	0-0	Building material - Brick, red	4	
Surface unit 23	0-0	Metal - Misc.	4	3 iron, 1 copper
Surface unit 23	0-0	Mineral - Coal	9	
Surface unit 23	0-0	Misc. - Cinder	59	
Surface unit 24	0-0	Glass - Bottle, clear	1	
Surface unit 24	0-0	Glass - Bottle, blue	1	
Surface unit 24	0-0	Glass - Bottle, purpled	1	
Surface unit 24	0-0	Glass - Bottle, green	1	
Surface unit 24	0-0	Glass - Bottle, amber	1	
Surface unit 24	0-0	Whiteware - Plain	1	
Surface unit 24	0-0	Glass - Window, clear	2	
Surface unit 24	0-0	Building material - Brick, red	1	
Surface unit 24	0-0	Building material - Concrete	1	
Surface unit 28	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 28	0-0	Glass - Bottle, clear	2	
Surface unit 28	0-0	Glass - Bottle, blue	1	
Surface unit 28	0-0	Metal - Misc.	1	Lead pipe fragment
		23[illegible]548		
General surface	0-0	Chipped lithics - Flake, interior	3	
General surface	0-0	Chipped lithics - Flake, modified	1	
		23[illegible]549		
General surface	0-0	Glass - Bottle, clear	1	
General surface	0-0	Earthenware - Misc.	1	
General surface	0-0	Metal - Misc.	4	All iron: spark plug, hoe, chi
Surface unit 07	0-0	Glass - Bottle, clear	5	
Surface unit 07	0-0	Glass - Bottle, blue	1	
Surface unit 07	0-0	Glass - Bottle, purpled	1	
Surface unit 07	0-0	Earthenware - Misc.	1	
Surface unit 07	0-0	Glass - Window, clear	1	
Surface unit 07	0-0	Building material - Brick, red	2	
Surface unit 07	0-0	Metal - Misc.	2	Both iron

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 07	0-0	Misc. - Cinder	1	
Surface unit 10	0-0	Glass - Bottle, clear	19	
Surface unit 10	0-0	Glass - Bottle, blue	1	
Surface unit 10	0-0	Glass - Bottle, amber	1	
Surface unit 10	0-0	Whiteware - Plain	3	
Surface unit 10	0-0	Earthenware - Misc.	2	
Surface unit 10	0-0	Glass - Window, clear	1	
Surface unit 10	0-0	Building material - Brick, red	2	
Surface unit 10	0-0	Metal - Misc.	1	Iron buckle
Surface unit 10	0-0	Metal - Nail	1	
Surface unit 12	0-0	Glass - Bottle, clear	22	
Surface unit 12	0-0	Glass - Bottle, blue	4	
Surface unit 12	0-0	Glass - Bottle, purpled	2	
Surface unit 12	0-0	Whiteware - Plain	1	Door Knob Handle fragment
Surface unit 12	0-0	Earthenware - Misc.	6	1 Door Knob fragment
Surface unit 12	0-0	Glass - Window, clear	1	
Surface unit 12	0-0	Metal - Misc.	5	All iron: nut, bolt,staple,tac
Surface unit 12	0-0	Metal - Nail	1	
Surface unit 12	0-0	Rubber - Blue	1	
Surface unit 15	0-0	Glass - Bottle, clear	50	
Surface unit 15	0-0	Glass - Bottle, blue	4	
Surface unit 15	0-0	Glass - Bottle, purpled	5	
Surface unit 15	0-0	Glass - Bottle, green	1	
Surface unit 15	0-0	Glass - Bottle, amber	5	
Surface unit 15	0-0	Whiteware - Plain	7	
Surface unit 15	0-0	Earthenware - Misc.	5	
Surface unit 15	0-0	Glass - Window, clear	7	
Surface unit 15	0-0	Building material - Brick, red	6	
Surface unit 15	0-0	Metal - Misc.	1	Iron
Surface unit 15	0-0	Metal - Nail	5	
Surface unit 24	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 24	0-0	Chipped lithics - Flake, interior	1	
Surface unit 24	0-0	Glass - Bottle, clear	25	
Surface unit 24	0-0	Glass - Bottle, blue	1	
Surface unit 24	0-0	Glass - Bottle, purpled	4	
Surface unit 24	0-0	Whiteware - Plain	4	
Surface unit 24	0-0	Glass - Milk	2	
Surface unit 24	0-0	Earthenware - Misc.	2	
Surface unit 24	0-0	Glass - Window, clear	1	
Surface unit 24	0-0	Porcelain - Transfer print	1	Blue
Surface unit 24	0-0	Building material - Brick, red	4	
Surface unit 24	0-0	Metal - Misc.	2	1 copper, 1 iron
Surface unit 24	0-0	Metal - Nail	2	
Surface unit 24	0-0	Mineral - Coal	1	
Surface unit 24	0-0	Building material - Shingle fragment	1	
Surface unit 30	0-0	Glass - Bottle, clear	6	
Surface unit 30	0-0	Glass - Bottle, blue	1	
Surface unit 30	0-0	Glass - Bottle, purpled	1	
Surface unit 30	0-0	Whiteware - Plain	2	
Surface unit 30	0-0	Earthenware - Misc.	2	
Surface unit 30	0-0	Glass - Window, clear	6	
Surface unit 30	0-0	Metal - Misc.	1	Iron
Surface unit 30	0-0	Metal - Nail	1	
Surface unit 38	0-0	Glass - Bottle, clear	53	
Surface unit 38	0-0	Glass - Bottle, blue	12	
Surface unit 38	0-0	Glass - Bottle, purpled	4	
Surface unit 38	0-0	Glass - Bottle, green	3	
Surface unit 38	0-0	Glass - Bottle, amber	2	
Surface unit 38	0-0	Glass - Bottle, opaque	2	Both green
Surface unit 38	0-0	Whiteware - Plain	12	
Surface unit 38	0-0	Glass - Milk	1	
Surface unit 38	0-0	Faunal - Bone fragment	1	Burned
Surface unit 38	0-0	Earthenware - Misc.	6	
Surface unit 38	0-0	Glass - Window, clear	28	
Surface unit 38	0-0	Metal - Misc.	9	4 misc. iron, 1 iron button, 2
Surface unit 38	0-0	Metal - Nail	7	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 38	0-0	Mineral - Coal	26	
Surface unit 38	0-0	Misc. - Cinder	19	
Surface unit 38	0-0	Building material - Shingle fragment	8	
Surface unit 39	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 39	0-0	Glass - Bottle, cl[illegible]	[illegible]	
Surface unit 39	0-0	Glass - Bottl[illegible], [illegible]	[illegible]	
Surface unit 39	0-0	Glass - Bottle, amber	5	
Surface unit 39	0-0	Whiteware - Plain	9	1 door knob fragment
Surface unit 39	0-0	Earthenware - Misc.	3	
Surface unit 39	0-0	Glass - Window, clear	12	
Surface unit 39	0-0	Metal - Misc.	8	3 iron, 1 lead, 2 misc. copper
Surface unit 39	0-0	Metal - Nail	4	
Surface unit 39	0-0	Mineral - Coal	7	
Surface unit 39	0-0	Misc. - Cinder	1	
Surface unit 39	0-0	Plastic - White	1	
Surface unit 50	0-0	Glass - Bottle, clear	9	
Surface unit 50	0-0	Glass - Bottle, blue	1	
Surface unit 50	0-0	Glass - Bottle, purpled	1	
Surface unit 50	0-0	Glass - Bottle, amber	1	
Surface unit 50	0-0	Whiteware - Plain	5	
Surface unit 50	0-0	Earthenware - Misc.	1	
Surface unit 50	0-0	Metal - Misc.	2	Both iron
Surface unit 50	0-0	Faunal - Shell	1	Mother-of-pearl
Surface unit 52	0-0	Glass - Bottle, clear	8	
Surface unit 52	0-0	Glass - Bottle, blue	3	
Surface unit 52	0-0	Glass - Bottle, purpled	1	
Surface unit 52	0-0	Glass - Bottle, amber	1	
Surface unit 52	0-0	Whiteware - Plain	2	
Surface unit 52	0-0	Earthenware - Misc.	1	
Surface unit 52	0-0	Metal - Nail	1	12 gauge shotgun shell base
Surface unit 52	0-0	Metal - Nail	1	
Surface unit 53	0-0	Glass - Bottle, clear	6	
Surface unit 53	0-0	Glass - Bottle, amber	1	
Surface unit 53	0-0	Whiteware - Plain	1	
Surface unit 60	0-0	Glass - Bottle, clear	1	
Surface unit 60	0-0	Glass - Bottle, blue	2	
Surface unit 60	0-0	Glass - Bottle, amber	1	
Surface unit 60	0-0	Glass - Milk	1	
Surface unit 60	0-0	Building material - Brick, red	2	
Surface unit 60	0-0	Metal - Misc.	3	1 misc. iron, 2 iron staples
Surface unit 62	0-0	Glass - Bottle, clear	7	
Surface unit 62	0-0	Glass - Bottle, blue	4	
Surface unit 62	0-0	Glass - Bottle, purpled	1	
Surface unit 62	0-0	Whiteware - Plain	1	
Surface unit 62	0-0	Earthenware - Misc.	2	
Surface unit 62	0-0	Glass - Window, clear	4	
Surface unit 62	0-0	Building material - Brick, red	2	
Surface unit 62	0-0	Metal - Misc.	1	Cast iron
Surface unit 64	0-0	Glass - Bottle, clear	13	
Surface unit 64	0-0	Glass - Bottle, blue	4	
Surface unit 64	0-0	Glass - Bottle, purpled	3	
Surface unit 64	0-0	Glass - Bottle, amber	2	
Surface unit 64	0-0	Whiteware - Plain	2	
Surface unit 64	0-0	Glass - Milk	1	
Surface unit 64	0-0	Earthenware - Misc.	1	
Surface unit 64	0-0	Glass - Window, clear	1	
Surface unit 64	0-0	Porcelain - Plain	1	
Surface unit 64	0-0	Metal - Misc.	6	2 iron staples, 3 misc. iron,
Surface unit 64	0-0	Metal - Nail	3	
Surface unit 64	0-0	Misc. - Cinder	1	
Surface unit 68	0-0	Glass - Bottle, clear	4	
Surface unit 68	0-0	Glass - Bottle, blue	5	
Surface unit 68	0-0	Glass - Bottle, purpled	1	
Surface unit 68	0-0	Glass - Bottle, amber	1	
Surface unit 68	0-0	Whiteware - Plain	5	
Surface unit 68	0-0	Glass - Milk	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 68	0-0	Earthenware - Misc.	1	
Surface unit 68	0-0	Glass - Window, clear	3	
Surface unit 68	0-0	Building material - Brick, red	4	
Surface unit 68	0-0	Metal - Misc.	2	Both iron
Surface unit 68	0-0	Metal - Nail	2	Both iron
Surface unit 68	0-0	Building material - Concrete	1	
Surface unit 69	0-0	Glass - Bottle, clear	10	
Surface unit 69	0-0	Glass - Bottle, blue	4	
Surface unit 69	0-0	Glass - Bottle, purpled	1	
Surface unit 69	0-0	Whiteware - Plain	2	
Surface unit 69	0-0	Earthenware - Misc.	4	
Surface unit 69	0-0	Glass - Window, clear	3	
Surface unit 69	0-0	Building material - Brick, red	1	
Surface unit 69	0-0	Misc. - Cinder	1	
Surface unit 69	0-0	Rubber - Black	1	Stopper
Surface unit 74	0-0	Glass - Bottle, clear	3	
Surface unit 74	0-0	Whiteware - Plain	1	Spark plug fragment
Surface unit 74	0-0	Glass - Milk	1	
Surface unit 74	0-0	Earthenware - Misc.	1	
Surface unit 74	0-0	Metal - Misc.	2	1 cast iron, 1 iron bolt
Surface unit 76	0-0	Glass - Bottle, clear	1	
Surface unit 76	0-0	Glass - Bottle, blue	3	
Surface unit 76	0-0	Glass - Bottle, purpled	1	
Surface unit 76	0-0	Earthenware - Misc.	2	
Surface unit 76	0-0	Glass - Window, clear	2	
Surface unit 76	0-0	Building material - Brick, red	3	
Surface unit 76	0-0	Metal - Misc.	5	All iron
Surface unit 78	0-0	Glass - Bottle, clear	3	
Surface unit 78	0-0	Glass - Bottle, blue	1	
Surface unit 78	0-0	Whiteware - Plain	1	
Surface unit 78	0-0	Earthenware - Misc.	2	
Surface unit 78	0-0	Glass - Window, clear	1	
Surface unit 78	0-0	Building material - Brick, red	3	
Surface unit 78	0-0	Metal - Nail	1	
Surface unit 80	0-0	Glass - Bottle, clear	1	
Surface unit 80	0-0	Glass - Bottle, amber	1	
Surface unit 80	0-0	Whiteware - Plain	1	
Surface unit 80	0-0	Metal - Misc.	1	Iron
Surface unit 80	0-0	Misc. - Cinder	1	
Surface unit 81	0-0	Glass - Bottle, clear	2	
Surface unit 81	0-0	Glass - Bottle, blue	1	
Surface unit 81	0-0	Glass - Bottle, purpled	1	
Surface unit 81	0-0	Glass - Bottle, amber	1	
Surface unit 81	0-0	Whiteware - Plain	1	
Surface unit 81	0-0	Glass - Milk	1	
Surface unit 81	0-0	Earthenware - Misc.	1	
Surface unit 81	0-0	Building material - Brick, red	1	
Surface unit 81	0-0	Metal - Misc.	1	Iron
Surface unit 84	0-0	Glass - Bottle, clear	7	
Surface unit 84	0-0	Whiteware - Plain	3	
Surface unit 84	0-0	Whiteware - Transfer print	1	Pink and green
Surface unit 84	0-0	Glass - Milk	2	
Surface unit 84	0-0	Earthenware - Misc.	3	
Surface unit 84	0-0	Glass - Window, clear	4	
Surface unit 84	0-0	Metal - Misc.	1	Copper button "OSHKOSH/B'GOSH"
Surface unit 84	0-0	Misc. - Cinder	1	
Surface unit 88	0-0	Glass - Bottle, clear	11	
Surface unit 88	0-0	Glass - Bottle, blue	1	
Surface unit 88	0-0	Glass - Bottle, amber	2	
Surface unit 88	0-0	Whiteware - Plain	4	
Surface unit 88	0-0	Glass - Milk	4	Button
Surface unit 88	0-0	Earthenware - Misc.	1	
Surface unit 88	0-0	Glass - Window, clear	5	
Surface unit 88	0-0	Building material - Brick	2	1 red, 1 black
Surface unit 88	0-0	Misc. - Battery fragment	1	
Surface unit 88	0-0	Greenware - Misc.	1	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 93	0-0	Glass - Bottle, clear	2	
Surface unit 93	0-0	Glass - Bottle, blue	2	
Surface unit 93	0-0	Glass - Bottle, amber	1	
Surface unit 93	0-0	Whiteware - Plain	1	
Surface unit 93	0-0	Glass - Milk	1	
Surface unit 93	0-0	Glass - Window, clear	3	
Surface unit 93	0-0	Building material - Brick	1	Red
Surface unit 93	0-0	Mineral - Coal	5	
Surface unit 93	0-0	Misc. - Cinder	4	
Surface unit 96	0-0	Glass - Bottle, clear	5	
Surface unit 96	0-0	Glass - Bottle, blue	1	
Surface unit 96	0-0	Whiteware - Plain	1	
Surface unit 96	0-0	Whiteware - Transfer print	2	1 red and green, 1 blue
Surface unit 96	0-0	Glass - Milk	1	
Surface unit 96	0-0	Earthenware - Misc.	1	
Surface unit 96	0-0	Glass - Window, clear	3	
Surface unit 96	0-0	Building material - Brick	3	All red, 1 glazed
Surface unit 96	0-0	Mineral - Coal	2	
Surface unit 96	0-0	Misc. - Cinder	2	
		23MM550		
General surface	0-0	Glass - Bottle, clear	1	
General surface	0-0	Whiteware - Plain	3	3 electrical insulators
General surface	0-0	Earthenware - Misc.	1	
Surface unit 01	0-0	Glass - Bottle, clear	6	
Surface unit 01	0-0	Glass - Bottle, blue	1	
Surface unit 01	0-0	Glass - Bottle, green	1	
Surface unit 01	0-0	Whiteware - Transfer print	1	Green and red
Surface unit 01	0-0	Earthenware - Misc.	1	
Surface unit 01	0-0	Metal - Misc.	1	Iron
Surface unit 01	0-0	Plastic - Gray	1	
Surface unit 02	0-0	Glass - Bottle, clear	10	
Surface unit 02	0-0	Glass - Bottle, purpled	1	
Surface unit 02	0-0	Whiteware - Plain	1	
Surface unit 02	0-0	Glass - Milk	1	
Surface unit 02	0-0	Earthenware - Misc.	1	
Surface unit 02	0-0	Glass - Window, clear	1	
Surface unit 02	0-0	Metal - Misc.	1	Lead
Surface unit 04	0-0	Glass - Bottle, clear	4	
Surface unit 04	0-0	Glass - Bottle, blue	2	
Surface unit 04	0-0	Glass - Bottle, purpled	1	
Surface unit 04	0-0	Glass - Bottle, green	2	
Surface unit 04	0-0	Earthenware - Misc.	1	
Surface unit 04	0-0	Building material - Brick	1	Red
Surface unit 12	0-0	Glass - Bottle, clear	10	
Surface unit 12	0-0	Glass - Bottle, purpled	2	
Surface unit 12	0-0	Whiteware - Plain	1	
Surface unit 12	0-0	Glass - Milk	2	
Surface unit 12	0-0	Glass - Window, clear	1	
Surface unit 14	0-0	Glass - Bottle, clear	12	
Surface unit 14	0-0	Glass - Bottle, amber	2	
Surface unit 14	0-0	Glass - Bottle, opaque	1	Green plate fragment
Surface unit 14	0-0	Whiteware - Plain	5	1 with "Laughlin"
Surface unit 14	0-0	Glass - Milk	2	
Surface unit 14	0-0	Earthenware - Misc.	3	
Surface unit 14	0-0	Glass - Window, clear	2	
Surface unit 14	0-0	Metal - Misc.	2	1 iron, 1 lead
Surface unit 14	0-0	Mineral - Coal	2	
Surface unit 14	0-0	Rubber - Black	3	
Surface unit 14	0-0	Plastic - White	1	
Surface unit 17	0-0	Glass - Bottle, clear	18	
Surface unit 17	0-0	Glass - Bottle, purpled	1	
Surface unit 17	0-0	Glass - Bottle, amber	2	
Surface unit 17	0-0	Whiteware - Plain	10	
Surface unit 17	0-0	Whiteware - Transfer print	2	1 yellow and brown, 1 green

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 17	0-0	Glass - Milk	2	
Surface unit 17	0-0	Earthenware - Misc.	1	
Surface unit 17	0-0	Glass - Window, clear	4	
Surface unit 17	0-0	Porcelain - Plain	2	
Surface unit 17	0-0	Building material - Brick	1	Red
Surface unit 17	0-0	Metal - Misc.	4	3 misc. iron, 1 cast iron
Surface unit 17	0-0	Metal - Nail	1	
Surface unit 17	0-0	Building material - Asbestos tile frag.	1	
Surface unit 17	0-0	Glass - Bottle, opaque	1	Green
Surface unit 18	0-0	Glass - Bottle, clear	8	
Surface unit 18	0-0	Glass - Bottle, blue	1	
Surface unit 18	0-0	Glass - Bottle, purpled	2	
Surface unit 18	0-0	Whiteware - Plain	8	
Surface unit 18	0-0	Glass - Milk	1	
Surface unit 18	0-0	Earthenware - Misc.	1	
Surface unit 18	0-0	Glass - Bottle, opaque	1	Green
Surface unit 18	0-0	Ceramics - Electrical fuse fragment	1	
Surface unit 18	0-0	Plastic - Misc.	2	1 white, 1 blue toy wheel
Surface unit 18	0-0	Rubber - Misc.	1	Brown
Surface unit 21	0-0	Glass - Bottle, clear	12	
Surface unit 21	0-0	Glass - Bottle, purpled	1	
Surface unit 21	0-0	Whiteware - Plain	4	
Surface unit 21	0-0	Whiteware - Transfer print	1	Yellow and red
Surface unit 21	0-0	Earthenware - Misc.	1	
Surface unit 21	0-0	Glass - Window, clear	2	
Surface unit 21	0-0	Porcelain - Blue	1	Toy plate fragment
Surface unit 25	0-0	Glass - Bottle, clear	10	
Surface unit 25	0-0	Glass - Bottle, purpled	2	
Surface unit 25	0-0	Whiteware - Plain	4	
Surface unit 25	0-0	Glass - Milk	3	
Surface unit 25	0-0	Earthenware - Misc.	1	
Surface unit 25	0-0	Metal - Misc.	1	Iron
Surface unit 25	0-0	Mineral - Coal	2	
Surface unit 25	0-0	Glass - Bottle, opaque	1	Green
Surface unit 29	0-0	Glass - Bottle, clear	7	
Surface unit 29	0-0	Glass - Bottle, amber	1	
Surface unit 29	0-0	Whiteware - Plain	6	
Surface unit 29	0-0	Glass - Window, clear	3	
Surface unit 29	0-0	Porcelain - Doll part	1	Head fragment
Surface unit 29	0-0	Metal - Misc.	2	1 iron, 1 lead
Surface unit 29	0-0	Rubber - Misc.	1	Black stopper
Surface unit 34	0-0	Glass - Bottle, clear	10	
Surface unit 34	0-0	Glass - Bottle, blue	3	
Surface unit 34	0-0	Glass - Bottle, purpled	4	
Surface unit 34	0-0	Whiteware - Plain	2	1 has yellowish glaze
Surface unit 34	0-0	Glass - Window, clear	4	
Surface unit 34	0-0	Porcelain - Plain	1	
Surface unit 34	0-0	Building material - Brick	2	Red
Surface unit 34	0-0	Metal - Misc.	2	1 cast iron, 1 copper 12 gauge
Surface unit 40	0-0	Glass - Bottle, clear	6	
Surface unit 40	0-0	Glass - Bottle, purpled	1	
Surface unit 40	0-0	Whiteware - Plain	3	
Surface unit 40	0-0	Glass - Window, clear	2	
Surface unit 40	0-0	Metal - Misc.	2	Both iron
Surface unit 42	0-0	Glass - Bottle, clear	10	
Surface unit 42	0-0	Glass - Bottle, blue	1	
Surface unit 42	0-0	Glass - Bottle, amber	1	
Surface unit 42	0-0	Whiteware - Plain	7	
Surface unit 42	0-0	Whiteware - Transfer print	1	
Surface unit 45	0-0	Glass - Bottle, clear	3	
Surface unit 45	0-0	Glass - Bottle, purpled	2	
Surface unit 45	0-0	Glass - Bottle, amber	1	
Surface unit 45	0-0	Whiteware - Plain	3	
Surface unit 45	0-0	Earthenware - Misc.	1	
Surface unit 45	0-0	Glass - Window, clear	7	
Surface unit 45	0-0	Porcelain - Plain	2	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 45	0-0	Metal - Misc.	1	Iron
Surface unit 45	0-0	Rubber - Misc.	1	Black
Surface unit 46	0-0	Glass - Bottle, clear	2	
Surface unit 46	0-0	Glass - Bottle, blue	2	
Surface unit 46	0-0	Glass - Bottle, green	1	
Surface unit 46	0-0	Whiteware - Plain	7	
Surface unit 46	0-0	Glass - Milk	1	
Surface unit 46	0-0	Glass - Window, clear	4	
Surface unit 46	0-0	Building material - Brick	1	Red
Surface unit 46	0-0	Glass - Eye glasses fragment	1	
Surface unit 50	0-0	Glass - Bottle, clear	8	
Surface unit 50	0-0	Whiteware - Plain	3	
Surface unit 50	0-0	Glass - Milk	1	
Surface unit 50	0-0	Glass - Window, clear	1	
Surface unit 50	0-0	Porcelain - Plain	1	
Surface unit 50	0-0	Metal - Misc.	1	Iron
Surface unit 62	0-0	Glass - Bottle, clear	6	
Surface unit 62	0-0	Whiteware - Plain	2	
Surface unit 62	0-0	Glass - Milk	1	
Surface unit 62	0-0	Earthenware - Misc.	1	
Surface unit 62	0-0	Misc. - Milling Stone	1	For miter cuts
Surface unit 65	0-0	Glass - Bottle, clear	2	
Surface unit 65	0-0	Earthenware - Misc.	1	
Surface unit 65	0-0	Glass - Window, clear	1	
Surface unit 71	0-0	Glass - Bottle, clear	9	
Surface unit 71	0-0	Glass - Bottle, purpled	1	
Surface unit 71	0-0	Whiteware - Plain	5	
Surface unit 71	0-0	Green Glazed - Plain	1	Fiesta?
Surface unit 71	0-0	Glass - Milk	1	
Surface unit 71	0-0	Earthenware - Misc.	1	
Surface unit 71	0-0	Glass - Window, clear	1	
Surface unit 71	0-0	Porcelain - Plain	2	
Surface unit 71	0-0	Metal - Misc.	1	Iron
Surface unit 71	0-0	Plastic - Misc.	1	Black
Surface unit 72	0-0	Glass - Bottle, clear	7	
Surface unit 72	0-0	Glass - Bottle, blue	1	
Surface unit 72	0-0	Whiteware - Plain	4	
Surface unit 72	0-0	Earthenware - Misc.	1	
Surface unit 72	0-0	Glass - Window, clear	1	
Surface unit 81	0-0	Glass - Bottle, clear	8	
Surface unit 81	0-0	Glass - Bottle, blue	2	
Surface unit 81	0-0	Glass - Bottle, amber	1	
Surface unit 81	0-0	Whiteware - Plain	1	
Surface unit 81	0-0	Green Glazed - Plain	1	Fiesta?
Surface unit 81	0-0	Glass - Bottle, opaque	1	Green
Surface unit 81	0-0	Glass - Window, clear	3	
Surface unit 81	0-0	Metal - Misc.	1	Iron
Surface unit 82	0-0	Glass - Bottle, blue	1	
Surface unit 82	0-0	Glass - Bottle, purpled	1	
Surface unit 82	0-0	Whiteware - Plain	1	
Surface unit 82	0-0	Earthenware - Misc.	2	
Surface unit 86	0-0	Glass - Bottle, clear	5	
Surface unit 86	0-0	Glass - Bottle, blue	1	
Surface unit 86	0-0	Glass - Bottle, purpled	2	
Surface unit 86	0-0	Whiteware - Plain	2	
Surface unit 86	0-0	Building material - Brick	1	Red
Surface unit 86	0-0	Building material - Concrete	1	
Surface unit 86	0-0	Metal - Misc.	1	Cast iron
Surface unit 91	0-0	Glass - Bottle, clear	2	
Surface unit 91	0-0	Glass - Bottle, blue	1	
Surface unit 91	0-0	Whiteware - Plain	1	
Surface unit 91	0-0	Glass - Milk	1	
Surface unit 91	0-0	Earthenware - Misc.	1	
Surface unit 91	0-0	Glass - Window, clear	3	
Surface unit 91	0-0	Porcelain - Doll part	1	Right arm?
Surface unit 93	0-0	Glass - Bottle, blue	2	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 93	0-0	Glass - Bottle, purpled	1	
Surface unit 93	0-0	Whiteware - Plain	1	
Surface unit 93	0-0	Earthenware - Misc.	1	
		23MM551		
Locus A	0-0	Glass - Bottle, clear	2	Both insulator fragments
Locus A	0-0	Glass - Bottle, blue	1	Insulator fragment
Locus A	0-0	Glass - Bottle, green	5	All insulator fragments
Locus A	0-0	Metal - Misc.	1	Railroad spike
		23MM553		
General surface	0-0	Chipped lithics - Flake, sec. decort.	3	
General surface	0-0	Chipped lithics - Flake, interior	8	
General surface	0-0	Chipped lithics - Flake, retouch	2	
General surface	0-0	Chipped lithics - Flake, broken	1	
General surface	0-0	Chipped lithics - Dart Point fragment	2	
General surface	0-0	Ground & pecked stone - Misc. fragment	1	Celt fragment?
General surface	0-0	Ceramics - Kennett Plain body	5	
General surface	0-0	Ceramics - Barnes Cord Marked body	8	
General surface	0-0	Ceramics - Barnes Punctate body	2	
General surface	0-0	Burned clay - Misc.	1	
General surface	0-0	Burned clay - PPO fragment	1	
General surface	0-0	Glass - Bottle, blue	2	
General surface	0-0	Glass - Bottle, purpled	3	
General surface	0-0	Glass - Bottle, amber	1	
General surface	0-0	Whiteware - Plain	4	
Surface unit 02	0-0	Chipped lithics - Flake, interior	1	
Surface unit 03	0-0	Chipped lithics - Flake, interior	1	
Surface unit 03	0-0	Ceramics - Kennett Plain body	1	
Surface unit 03	0-0	Burned clay - Misc.	4	
Surface unit 11	0-0	Ceramics - Kennett Plain body	2	
Surface unit 15	0-0	Chipped lithics - Flake, interior	4	
Surface unit 15	0-0	Ceramics - Kennett Plain body	1	
Surface unit 15	0-0	Glass - Bottle, clear	1	
Surface unit 15	0-0	Glass - Bottle, amber	2	
Surface unit 15	0-0	Earthenware - Misc.	1	
Surface unit 17	0-0	Chipped lithics - Flake, interior	3	
Surface unit 17	0-0	Chipped lithics - Flake, retouch	2	
Surface unit 17	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 17	0-0	Ceramics - Barnes Cord Marked body	3	
Surface unit 17	0-0	Burned clay - Misc.	1	
Surface unit 23	0-0	Chipped lithics - Flake, interior	3	
Surface unit 23	0-0	Ceramics - Kennett Plain body	1	
Surface unit 23	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 23	0-0	Burned clay - Misc.	4	
Surface unit 23	0-0	Glass - Bottle, clear	4	
Surface unit 23	0-0	Glass - Bottle, purpled	2	
Surface unit 23	0-0	Whiteware - Plain	1	
Surface unit 30	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 30	0-0	Chipped lithics - Flake, interior	4	
Surface unit 30	0-0	Chipped lithics - Flake, modified	1	
Surface unit 30	0-0	Ceramics - Kennett Plain body	3	
Surface unit 30	0-0	Glass - Bottle, blue	1	
Surface unit 30	0-0	Whiteware - Plain	2	
Surface unit 33	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 33	0-0	Chipped lithics - Flake, interior	1	
Surface unit 33	0-0	Ceramics - Kennett Plain body	2	
Surface unit 33	0-0	Burned clay - Misc.	3	
Surface unit 33	0-0	Glass - Bottle, purpled	2	
Surface unit 33	0-0	Metal - Misc.	1	12 gauge shell base "U.M.C. Co
Surface unit 34	0-0	Chipped lithics - Flake, interior	3	
Surface unit 34	0-0	Ceramics - Kennett Plain body	5	
Surface unit 34	0-0	Ceramics - Barnes Punctate rim	1	
Surface unit 34	0-0	Rubber - Misc.	1	Black

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
		23MM554		
General surface	0-0	Chipped lithics - Tested Cobble	1	
General surface	0-0	Chipped lithics - Core	1	
General surface	0-0	Chipped lithics - Flake, pri. decort.	10	
General surface	0-0	Chipped lithics - Flake, sec. decort.	3	
General surface	0-0	Chipped lithics - Flake, interior	38	
General surface	0-0	Chipped lithics - Flake, retouch	2	
General surface	0-0	Misc. lithics - Shatter	3	
General surface	0-0	Chipped lithics - Flake, modified	3	
General surface	0-0	Chipped lithics - Flake, broken	4	
General surface	0-0	Chipped lithics - Stemmed PP/K	1	Square-stemmed, Woodland
General surface	0-0	Misc. lithics - Fire-cracked rock	4	
General surface	0-0	Ground & pecked stone - Misc.	1	Pink Granite
General surface	0-0	Ceramics - Kennett Plain body	11	
General surface	0-0	Ceramics - Barnes Cord Marked body	7	
General surface	0-0	Ceramics - Barnes Cord Marked rim	1	
General surface	0-0	Ceramics - Pascola Punctate body	1	
[illegible] surface	0-0	Burned clay - PPO fragment	6	
[illegible]eral surface	0-0	Burned clay - Misc.	10	
		23MM555		
General surface	0-0	Chipped lithics - Flake, interior	2	
General surface	0-0	Ceramics - Barnes Cord Marked body	2	
General surface	0-0	Burned clay - PPO fragment	2	
General surface	0-0	Chipped lithics - Core	1	
General surface	0-0	Chipped lithics - Flake, pri. decort.	6	
General surface	0-0	Chipped lithics - Flake, sec. decort.	19	
General surface	0-0	Chipped lithics - Flake, interior	116	
General surface	0-0	Chipped lithics - Flake, retouch	4	
General surface	0-0	Misc. lithics - Shatter	31	
General surface	0-0	Chipped lithics - Flake, modified	1	
General surface	0-0	Chipped lithics - PP/K Stem fragment	1	
General surface	0-0	Misc. lithics - Fire-cracked rock	57	
General surface	0-0	Mineral - Hematite	7	
General surface	0-0	Ceramics - Kennett Plain body	105	
General surface	0-0	Ceramics - Kennett Plain rim	2	
General surface	0-0	Ceramics - Barnes Cord Marked body	82	
General surface	0-0	Ceramics - Barnes Cord Marked rim	1	
General surface	0-0	Ceramics - Pascola Punctate body	1	
General surface	0-0	Ceramics - Old Town Red body	1	
General surface	0-0	Burned clay - Misc.	74	
General surface	0-0	Burned clay - PPO fragment	30	
General surface	0-0	Faunal - Bone fragment	3	
General surface	0-0	Ceramics - Mississippi Plain rim	1	
		23ST208		
General surface	0-0	Chipped lithics - Biface	1	Preform?
General surface	0-0	Ceramics - Mulbery Ck. Crd.Mrk. rim	1	Folded and pinched
General surface	0-0	Ground & pecked stone - Pitted cobble	1	
General surface	0-0	Ground & pecked stone - Misc.	1	Gray igneous
General surface	0-0	Ceramics - Mulberry Ck. Crd.Mrk. rim	1	Large bowl sherd
General surface	0-0	Ceramics - Barnes Cord Marked body	1	
General surface	0-0	Burned clay - PPO fragments	2	
General surface	0-0	Chipped lithics - Flake, modified	1	
General surface	0-0	Chipped lithics - Flake, broken	1	
General surface	0-0	Chipped lithics - Dart Point	1	Sm. stemmed PP/K
General surface	0-0	Chipped lithics - Dart Point fragment	1	Biface tip
General surface	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit 05	0-0	Chipped lithics - Flake, interior	6	
Surface unit 05	0-0	Ceramics - Kennett Plain body	9	
Surface unit 05	0-0	Ceramics - Barnes Cord Marked body	4	
Surface unit 05	0-0	Metal - Nail	1	
Surface unit 05	0-0	Misc. - Cinder	3	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 08	0-0	Ceramics - Kennett Plain body	3	
Surface unit 08	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 08	0-0	Glass - Bottle, purpled	3	
Surface unit 08	0-0	Whiteware - Plain	2	
Surface unit 09	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 09	0-0	Chipped lithics - Flake, modified	1	
Surface unit 09	0-0	Ceramics - Kennett Plain body	3	
Surface unit 09	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 09	0-0	Ceramics - Barnes Cord Marked rim	1	
Surface unit 09	0-0	Glass - Bottle, clear	1	
Surface unit 09	0-0	Glass - Bottle, purpled	2	
Surface unit 09	0-0	Whiteware - Plain	2	
Surface unit 09	0-0	Earthenware - Misc	1	
Surface unit 09	0-0	Misc - Cinder	1	
Surface unit 12	0-0	Chipped lithics - Flake, sec. decort.	3	
Surface unit 12	0-0	Chipped lithics - Flake, interior	1	
Surface unit 12	0-0	Ceramics - Kennett Plain body	3	
Surface unit 12	0-0	Ceramics - Barnes Cord Marked body	3	
Surface unit 12	0-0	Ceramics - Kennett Plain rim	1	
Surface unit 12	0-0	Faunal - Bone fragment	1	
Surface unit 12	0-0	Glass - Bottle, purpled	1	
Surface unit 12	0-0	Misc. - Cinder	1	
Surface unit 18	0-0	Chipped lithics - Flake, interior	5	
Surface unit 18	0-0	Ceramics - Kennett Plain body	14	
Surface unit 18	0-0	Ceramics - Barnes Cord Marked body	8	
Surface unit 18	0-0	Glass - Bottle, purpled	4	
Surface unit 18	0-0	Whiteware - Plain	2	
Surface unit 18	0-0	Earthenware - Misc.	1	
Surface unit 18	0-0	Misc. - Cinder	3	
Surface unit 20	0-0	Whiteware - Plain	2	
Surface unit 21	0-0	Chipped lithics - Flake, interior	7	
Surface unit 21	0-0	Chipped lithics - Flake, retouch	2	
Surface unit 21	0-0	Misc. lithics - Fire-cracked rock	4	
Surface unit 21	0-0	Chipped lithics - Drill/awl	1	2 ended
Surface unit 21	0-0	Misc. lithics - Shale	6	
Surface unit 21	0-0	Burned clay - Misc.	5	
Surface unit 21	0-0	Ceramics - Kennett Plain body	27	
Surface unit 21	0-0	Ceramics - Barnes Cord Marked body	7	
Surface unit 26	0-0	Chipped lithics - Cores	1	
Surface unit 26	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 26	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 26	0-0	Chipped lithics - Flake, interior	7	
Surface unit 26	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit 26	0-0	Misc. lithics - Shale	2	
Surface unit 26	0-0	Burned clay - Misc.	1	
Surface unit 26	0-0	Ceramics - Kennett Plain body	14	
Surface unit 26	0-0	Ceramics - Barnes Cord Marked body	8	
Surface unit 26	0-0	Misc. - Cinder	3	
Surface unit 29	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 29	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 29	0-0	Chipped lithics - Flake, interior	2	
Surface unit 29	0-0	Ceramics - Kennett Plain body	6	
Surface unit 29	0-0	Glass - Bottle, purpled	2	
Surface unit 29	0-0	Whiteware - Plain	2	
Surface unit 29	0-0	Glass - Milk	1	
Surface unit 29	0-0	Misc. - Cinder	1	
Surface unit 33	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 33	0-0	Chipped lithics - Flake, interior	9	
Surface unit 33	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 33	0-0	Ceramics - Kennett Plain body	8	
Surface unit 33	0-0	Glass - Bottle, clear	1	
Surface unit 33	0-0	Misc. - Cinder	2	
Surface unit 33	0-0	Faunal - Tooth fragment	1	Non-human
Surface unit 37	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 37	0-0	Chipped lithics - Flake, interior	1	
Surface unit 37	0-0	Chipped lithics - Flake, retouch	6	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 37	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 37	0-0	Ceramics - Kennett Plain body	12	
Surface unit 37	0-0	Ceramics - Barnes Cord Marked body	3	
Surface unit 37	0-0	Whiteware - Plain	1	
Surface unit 37	0-0	Glass - Window, clear	2	
Surface unit 37	0-0	Misc. - Cinder	5	
Surface unit 42	0-0	Chipped lithics - Flake, interior	5	
Surface unit 42	0-0	Ceramics - Kennett Plain body	4	
Surface unit 42	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 48	0-0	Chipped lithics - Flake, interior	3	
Surface unit 48	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 48	0-0	Ceramics - Kennett Plain body	10	
Surface unit 48	0-0	Burned clay - Misc.	1	
Surface unit 48	0-0	Whiteware - Plain	1	
Surface unit 48	0-0	Misc. - Cinder	1	
Surface unit 53	0-0	Chipped lithics - Flake, interior	5	
Surface unit 53	0-0	Burned clay - Misc.	1	
Surface unit 53	0-0	Ceramics - Kennett Plain body	6	
Surface unit 53	0-0	Ceramics - Barnes Cord Marked body	4	
Surface unit 54	0-0	Chipped lithics - Flake, interior	4	
Surface unit 54	0-0	Chipped lithics - Arrow Point	1	Middle Mississippi
Surface unit 54	0-0	Misc. lithics - Unmodified	1	Sandstone
Surface unit 54	0-0	Ceramics - Kennett Plain body	9	
Surface unit 54	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 55	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 55	0-0	Chipped lithics - Flake, interior	5	
Surface unit 55	0-0	Misc. lithics - Fire-cracked rock	1	Quartz
Surface unit 55	0-0	Ceramics - Kennett Plain body	4	
Surface unit 55	0-0	Glass - Window, clear	1	
Surface unit 70	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 70	0-0	Ceramics - Kennett Plain body	1	
Surface unit 70	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 73	0-0	Chipped lithics - Flake, interior	1	
Surface unit 73	0-0	Ceramics - Kennett Plain body	2	
Surface unit 73	0-0	Misc. - Cinder	1	
Surface unit 79	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 79	0-0	Chipped lithics - Flake, interior	1	
Surface unit 79	0-0	Ceramics - Kennett Plain body	2	
Surface unit 79	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 79	0-0	Misc. - Cinder	1	
Surface unit 80	0-0	Chipped lithics - Flake, interior	1	
Surface unit 80	0-0	Ceramics - Kennett Plain body	3	
Surface unit 80	0-0	Ceramics - Barnes Cord Marked body	2	
Surface unit 80	0-0	Porcelain - Plain	1	Weathered
Surface unit 80	0-0	Misc. - Cinder	1	
Surface unit 89	0-0	Chipped lithics - Flake, interior	1	
Surface unit 89	0-0	Ceramics - Kennett Plain body	1	
Surface unit 89	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 90	0-0	Chipped lithics - Flake, interior	1	
Surface unit 90	0-0	Ceramics - Kennett Plain body	4	
Surface unit 99	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 99	0-0	Chipped lithics - Flake, interior	1	
Surface unit 99	0-0	Ceramics - Kennett Plain body	5	
Surface unit 99	0-0	Glass - Bottle, clear	1	
Surface unit 99	0-0	Whiteware - Plain	1	
		23ST209		
General surface	0-0	Chipped lithics - Flake, sec. decort.	1	
General surface	0-0	Chipped lithics - Flake, interior	5	
		23ST210		
Surface unit 03	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 04	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 04	0-0	Misc. lithics - Fire-cracked rock	2	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
Surface unit 06	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 06	0-0	Chipped lithics - Flake, interior	5	
Surface unit 06	0-0	Chipped lithics - Flake, retouch	2	
Surface unit 06	0-0	Misc. lithics - Fire-cracked rock	9	
Surface unit 06	0-0	Ceramics - Barnes Cord Marked body	1	
Surface unit 08	0-0	Chipped lithics - Flake, sec. decort.	3	
Surface unit 08	0-0	Chipped lithics - Flake, interior	2	
Surface unit 08	0-0	Misc. lithics - Fire-cracked rock	2	
Surface unit 08	0-0	Chipped lithics - Dart Point fragment	1	Base
Surface unit 12	0-0	Chipped lithics - Flake, retouch	1	
Surface unit 16	0-0	Chipped lithics - Flake, interior	2	
Surface unit 16	0-0	Misc. lithics - Fire-cracked rock	4	
Surface unit 17	0-0	Chipped lithics - Flake, interior	1	
Surface unit 17	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit 27	0-0	Chipped lithics - Flake, interior	3	
Surface unit 27	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit 27	0-0	Chipped lithics - Biface fragment	1	Square-stemmed PP/K fragment
Surface unit 29	0-0	Chipped lithics - Flake, interior	6	
Surface unit 29	0-0	Chipped lithics - Flake, retouch	2	
Surface unit 29	0-0	Misc. lithics - Fire-cracked rock	10	
Surface unit 29	0-0	Chipped lithics - Biface	1	Aborted preform?
Surface unit 33	0-0	Chipped lithics - Flake, pri. decort.	1	
Surface unit 33	0-0	Chipped lithics - Flake, sec. decort.	2	
Surface unit 33	0-0	Chipped lithics - Flake, interior	2	
Surface unit 33	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 35	0-0	Chipped lithics - Flake, interior	2	
Surface unit 35	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 36	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 36	0-0	Chipped lithics - Flake, interior	2	
Surface unit 36	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 39	0-0	Misc. lithics - Fire-cracked rock	7	
Surface unit 43	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit 45	0-0	Chipped lithics - Flake, sec. decort.	5	
Surface unit 45	0-0	Chipped lithics - Flake, interior	1	
Surface unit 45	0-0	Misc. lithics - Fire-cracked rock	1	
Surface unit 45	0-0	Burned clay - Misc.	1	
Surface unit 49	0-0	Chipped lithics - Core	1	
Surface unit 49	0-0	Chipped lithics - Flake, interior	1	
Surface unit 49	0-0	Misc. lithics - Fire-cracked rock	6	
Surface unit 59	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 59	0-0	Chipped lithics - Flake, interior	3	
Surface unit 59	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit 62	0-0	Chipped lithics - Flake, interior	2	
Surface unit 62	0-0	Misc. lithics - Fire-cracked rock	3	
Surface unit 65	0-0	Chipped lithics - Flake, sec. decort.	1	
Surface unit 65	0-0	Chipped lithics - Flake, interior	1	
Surface unit 65	0-0	Misc. lithics - Fire-cracked rock	4	
Surface unit 68	0-0	Chipped lithics - Flake, interior	2	
Surface unit 73	0-0	Chipped lithics - Flake, interior	1	
Surface unit 73	0-0	Misc. lithics - Unmodified	1	Pink granite cobble
Surface unit 76	0-0	Chipped lithics - Flake, interior	3	
Surface unit 76	0-0	Misc. lithics - Fire-cracked rock	5	
Surface unit 82	0-0	Chipped lithics - Flake, interior	2	
Surface unit 87	0-0	Chipped lithics - Core	1	
Surface unit 87	0-0	Misc. lithics - Shatter	4	
Surface unit 91	0-0	Chipped lithics - Flake, interior	1	
General surface	0-0	Chipped lithics - Biface fragments	5	
General surface	0-0	Chipped lithics - Arrow Point	1	Corner-notched
General surface	0-0	Chipped lithics - Bi-pointed perforator	1	
General surface	0-0	Ground & pecked stone - Misc.	1	Slate object
General surface	0-0	Ground & pecked stone - Pestle	1	
General surface	0-0	Ground & pecked stone - Pitted cobble	1	
General surface	0-0	Ceramics - Kennett Plain body	2	
General surface	0-0	Ceramics - Mississippi Plain rim	1	
General surface	0-0	Ceramics - Barnes Cord Marked body	1	
General surface	0-0	Glass - Bottle, clear	2	

APPENDIX B
Project Collections

Unit Name	Depth (cm)	Artifact Description	Ct.	Comments
General surface	0-0	Glass - Bottle, amber	1	
General surface	0-0	Whiteware - Plain	1	
General surface	0-0	Earthenware - Misc.	1	
General surface	0-0	Chipped lithics - PP/K	1	Gary-modified tip
		23ST211		
General surface	0-0	Metal - Misc.	1	Railroad spike
General surface	0-0	Misc. lithics - Railroad Gravel	2	Rhyolite
		Isolated Artifacts		
IF-1	0-0	Ceramics - Kennett Plain body	1	
IF-2	0-0	Chipped lithics - Triangular arrow point	1	Mid. Miss. Serrated
IF-3	0-0	Chipped lithics - Biface fragment	1	frag. of sq. base
IF-4	0-0	Whiteware - Plain	1	"Carr/ China Co."
IF-5	0-0	Glass - Bottle, blue	1	Insulator fragment "PAT./JAN
IF-6	0-0	Ground Stone - Celt fragment	1	
IF-7	0-0	Ceramics - Barnes Cord Marked body	1	
IF-8	0-0	Ceramics - Barnes Cord Marked body	1	
IF-9	0-0	Ceramics - Kennett Plain body	1	
IF-10	0-0	Glass - Bottle, purpled	1	Jar lid "PAT. JANY. 11th/ 1898
IF-11	0-0	Chipped lithics - Flake, sec. decort.	1	
IF-11	0-0	Chipped lithics - Flake, retouch	1	
IF-12	0-0	Glass - Milk	1	Emdossed, tinted purple
IF-13	0-0	Chipped lithics - PP/K	1	Gary, E-M Woodland
IF-14	0-0	Ground Stone - Celt	1	
IF-15	0-0	Chipped lithics - Triangular arrow point	1	Mid. Miss. Serrated
IF-16	0-0	Chipped lithics - Triangular arrow point	1	Middle Mississippi

FIRST REGULAR SESSION

[TRULY AGREED TO AND FINALLY PASSED]

SENATE BILL NO. 24

84TH GENERAL ASSEMBLY

AN ACT

Relating to unmarked human burial sites, with penalty provisions

Enacted by the General Assembly of the State of Missouri, as follows

Section 1. As used in section 1 to 7 of this act, the following words and phrases mean:

(1) "Committee", the unmarked human burial consultation committee;

(2) "General archaeological investigation", refers to

(a) Excavations performed by professional archaeologists usually consisting of a structured scientific undertaking comprised of three segments including field investigations, laboratory analysis, and preparation and submission of a report of investigation; and

(b) Identification of the presence of human remains in excavated materials considered to occur at the completion of the laboratory analysis segment of the studies as above.

(3) "*Professional archaeologist*", a person who has a graduate degree in archaeology, anthropology, or closely related field, at least one year of full-time professional experience or equivalent specialized training in archaeological research, administration of management, or at least four months of supervised field and analytic experience in general North American archaeology and demonstrated ability to carry archaeological research to completion, as evidenced by a master of arts or master of

science thesis, or report equivalent in scope and quality;

(4) Skeletal analyst", a person possessing a post graduate degree representing specialized training in skeletal biology, forensic osteology, or other relevant aspects of physical anthropology. The skeletal analyst shall have a minimum experience of one year in conducting laboratory reconstruction and analysis, and shall have demonstrated the ability to design and execute a skeletal analysis, and to present the written results and interpretations of such analysis in a thorough scientific and timely manner;

(5) "Specific scientific investigations", refers to detailed studies of human remains by professional archaeologists, anthropologists, osteologists, or professionals in related disciplines.

(6) "State historic preservation officer", the director of the department of natural resources.

(7) "Unmarked human burial", any instance where human skeletal remains are discovered or believed to exist but for which there exists no written historical documentation or grave markers.

Section 2. When an unmarked human burial or human skeletal remains are encountered during archaeological excavation, construction, or other ground disturbing activities, whether found on or in any private lands or waters or on or in any lands or waters owned by the state of Missouri or its political subdivisions, agencies or instrumentalities, the provisions of sections 1 to 7 of this act shall apply.

Section 3. 1. Any person knowing or with reason to know that an unmarked human burial or human skeletal remains are being disturbed, destroyed, defaced, mutilated, removed, or excavated, or exposed shall immediately notify either the state historic preservation officer or the local law enforcement officer with jurisdiction for the area in which

the burial or remains are encountered.

2. When an unmarked human burial or human skeletal remains are encountered as a result of construction or agricultural earth disturbing activities or by a professional archaeologist in the course of an investigation all such activities shall cease immediately within a radius of fifty feet of the point of discovery. Such activity shall not resume without specific authorization from either the state historic preservation officer or the local law enforcement officer, whichever party has jurisdiction over and responsibility for such remains. Said parties shall act promptly and make a decision within a reasonable time. Jurisdiction will be determined as follows:

(1) If upon investigation, the local law enforcement officer determines that the human skeletal remains may be involved in a legal investigation, that officer will immediately assume all jurisdiction over and responsibility for such remains;

(2) If upon investigation, the local enforcement officer determines that the remains are not involved in a legal investigation, the state historic preservation officer or his duly designated representative shall assume responsibility for such remains.

Section 4. 1. In cases where an unmarked human burial or human skeletal remains are discovered as a result of construction or agricultural earth disturbing activities and where the state historic preservation officer has been determined to have jurisdiction *the state historic preservation officer shall determine whether removal of the human skeletal remains is necessary and appropriate for the purpose of scientific analysis. A general archaeological investigation of the site shall be conducted by a professional archaeologist and the professional archaeologist shall advise the state historic preservation officer of the physical location and the cultural and biological charac-*

teristics of the unmarked human burial or human skeletal remains within thirty days after the state historic preservation officer assumed jurisdiction over the burial or remains.

2. In cases where an unmarked human burial or skeletal remains are discovered by a professional archaeologist in the course of an investigation, and where the state historic preservation officer has been determined to have jurisdiction, the professional archaeologist shall advise the state historic preservation officer of the physical location and the cultural and biological characteristics of the unmarked human burial or human skeletal remains within thirty days after the state historic officer assumed jurisdiction.

3. Notwithstanding anything to the contrary herein contained no construction shall be suspended or delayed more than 30 days.

Section 5. Whenever an unmarked human burial or human skeletal remains are reported to the state historic preservation officer, the state historic preservation officer shall proceed as follows:

(1) Insofar as possible, the state historic preservation officer shall make reasonable efforts to identify and locate persons who can establish direct kinship with or descent from the individual whose remains constitute the burial. The state historic preservation officer in consultation with the most closely related family member, shall determine the proper disposition of the remains.

(2) When no direct kin or descendants can be identified or located, but the burial or remains can be shown to have ethnic affinity with living peoples, the state historic preservation officer in consultation with the leaders of the ethnic groups having a relation to the burial or remains shall determine the proper disposition of the remains. But, if the state historic preservation officer determines the

burial or remains are scientifically significant, no reinterment shall occur until the burial or remains have been examined by a skeletal analyst designated by the state historic preservation officer. In no event shall reinterment be delayed more than one year.

(3) When the burial or remains cannot be related to any living peoples, the state historic preservation officer, in consultation with the unmarked human burial consultation committee, shall determine the proper disposition of the burial or remains. But, if the state historic preservation officer determines the burial or remains are scientifically significant, no reinterment shall occur until the burial or remains have been examined by a skeletal analyst designated by the state historic preservation officer. In no event shall reinterment be delayed more than one year unless otherwise and to the extent determined by the committee.

(4) Notwithstanding subdivision (2) and (3) of this section the state historical preservation officer may seek approval from the unmarked human burial consultation committee to delay reinterment of the remains for an additional scientific study in a facility chosen by the state historic preservation officer. If the study is approved by the committee reinterment shall be delayed for a period as specified by the committee.

Section 6. 1. There is hereby created in the department of natural resources, an "Unmarked Human Burial Consultation Committee", which shall be composed of seven members to be appointed by the governor with the advice and consent of the senate. The members of the committee shall be appointed as follows: the state historic preservation officer, two members who are archaeologists or skeletal analysts, two native Americans who are members of an Indian tribe recognized by the United States of America, one member who is a non-Indian minority, and one non-Indian, non-minority member who is neither a

professional archaeologist nor a skeletal analyst. Members of the committee shall be residents of the state of Missouri.

2. The state historic preservation officer shall be chairman of the committee and shall serve a term which is contemporaneous with his employment as director of the department of natural resources. The terms of all other members of the committee shall be three years.

3. The committee shall meet at least once each calendar year, but may meet more often at the request of the state historic preservation officer.

4. The members of the committee shall serve voluntarily and shall not receive compensation for membership on the committee except that they shall be eligible to receive reimbursement for transportation expenses as provided for through the budget approved for the office of the state historic preservation officer.

5. All actions and decisions of the state historic preservation officer and the unmarked human burial consultation committee shall be in conformity with the provisions of the federal National Historic Preservation Act of 1966 as amended.

Section 7. Any person, corporation, partnership, proprietorship, or organization who knowingly disturbs, destroys, removes, vandalizes, or damages an unmarked human burial site commits a class C misdemeanor.

APPENDIX D

Project Participants

LAWRENCE L. AYRES was a field crew member, assisted in the analysis of the artifacts and wrote portions of the technical report. Mr. Ayres received a B.A. in antiquities from Southwest Missouri State University in 1980, a B.S. in secondary education from the University of Arkansas in 1987, and is ABT toward an M.A. in anthropology from the University of Arkansas.

DAVID B. BOARD directed the field work. Mr. Board received a B.A. in anthropology from the University of Tennessee in 1986.

ROBERT F. CANDE was a field crew member. Mr. Cande received a B.A. in anthropology from East Carolina University in 1975 and is presently working toward an M.A. in anthropology at the University of Arkansas.

TIMOTHY C. KLINGER served as Co-Principal Investigator and assisted in the preparation of the report. Mr. Klinger received an M.A. degree in anthropology from the University of Arkansas in 1977 and a J.D. from the University of Arkansas School of Law in 1982. Mr. Klinger is a member of the Society of Professional Archeologists and is a licensed attorney in the State of Arkansas.

JAMES E. PRICE served as Co-Principal Investigator and assisted in the preparation of the report. Dr. Price received a Ph.D. in anthropology in 1973 and is affiliated with the University of Missouri, Southeast Missouri Field Station in Naylor, Missouri.

WALTER PUNZMAN was a field crew member. Mr. Punzman received a B.A. in anthropology from the University of Arizona in 1982 and an M.A. degree in anthropology from the University of Arkansas in 1986.

SEAN ROBERTSON assisted in the preparation of the technical report. Mr. Robertson is currently working toward a B.S. in computer science engineering at the University of Arkansas.