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of Engineers
New Orleans District

CULTURAL RESOURCES SURVEY OF ST. JOHN THE BAPTIST, ST. CHARLES, AND JEFFERSON PARISHES CONSTRUCTION ITEMS

August 1996

FINAL REPORT

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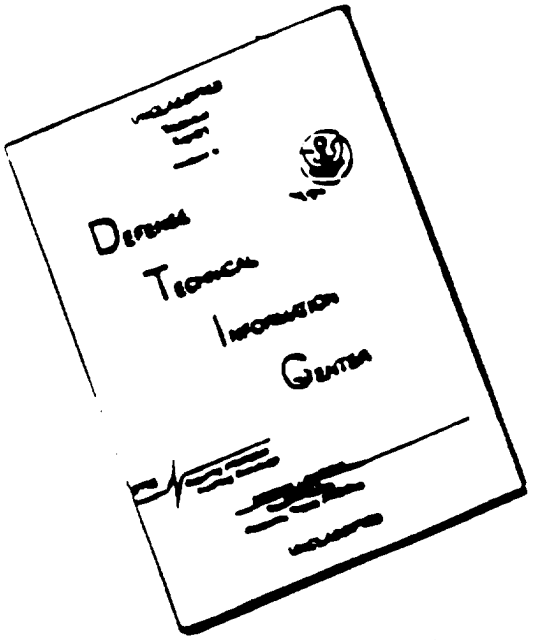
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October 16, 1996

Planning Division
Environmental Analysis Branch

To the Reader:

This cultural resources effort was designed, funded, and guided by the U.S. Army Corps of Engineers, New Orleans District, as part of our cultural resources management program. The work documented in this report was performed to provide information needed to assess project impacts to cultural resources which could result from construction of multiple items of the Mississippi River and Tributaries project.

This report has been reviewed and accepted by the New Orleans District. We concur with the contractor's recommendations. We commend the contractor's efforts and scholarship.

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17. COSATI CODES			18. SUBJECT TERMS (*Continue on reverse if necessary and identify by block number*)		
FIELD	GROUP	SUB-GROUP	Acadian Settlement	Cattle Ranching	Hope Plantation
			Angelina	Columbia Plantation	Jefferson Parish
			Archeology	Ferry Landing	Levee
			Batture	German Coast	Lower Edgard Levee Enlargement
			Camelia Plantation	German Settlement	(continued, page iii)

19. ABSTRACT (*Continue on reverse if necessary and identify by block number*)

Cultural resources investigations of multiple levee and revetment construction items located along the Mississippi River in St. John the Baptist, St. Charles, and Jefferson parishes, Louisiana, were conducted by R. Christopher Goodwin & Associates, Inc., from June to November 1987. The project area includes the area between the landside toe of the modern levee on both banks of the Mississippi River, from Mile 147.0 to 112.0. Nine construction items investigated within the project area include Vacherie, Angelina, Reserve, Willow Bend, Montz, Waterford, and Luling revetments, and the Upper and Lower Edgard levee enlargements. The study area under consideration in this report incorporates the natural levee of both banks of the Mississippi River, between River Mile 147.0 and 112.0. A total of 15 previously unrecorded archeological sites and two modern finds were recorded as a result of this effort. Sites 16SJB35, 16SJB36, 16SJB37, and 16SJB40 are located in St. John the Baptist Parish; Sites 16SC55, 16SC56, 16SC57, 16SC58, 16SC59, 16SC60, continued, page iii)

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18. SUBJECT TERMS (continued)

Luling	Revetments	Terre Haute Plantation
Lumber Industry	Rice Production	Transportation
Marmillion Plantation	Roussel Farm	Vacherie
Mississippi River	St. Charles Parish	Waterford
Montz	St. John the Baptist Parish	Willow Bend
Petrochemical Industry	Sugar Production	Zeringue

19. ABSTRACT (continued)

16SC61, 16SC62, 16SC63, and 16SC64 are in St. Charles Parish; and Site 16JE141 is located in Jefferson Parish. The two modern finds were recorded as Waterford 87-2 and Reserve 87-1.

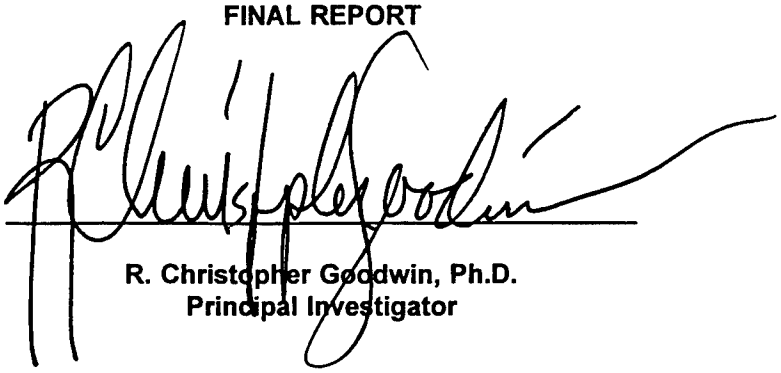
Site 16SC61, which contained numerous intact archeological remains from an apparent mid to late nineteenth century farmstead, was evaluated as a significant archeological resource; avoidance or data recovery excavations were recommended for this site. In addition, Site 16JE141 contains both prehistoric and early historic material; while that portion of the site located within the current project area lacks archeological integrity, significant archeological deposits may lie elsewhere within the site.

Other archeological sites revisited during these investigations include 16SJB29, 16SJB30, and 16SJB31; testing indicated that 16SJB29 contained intact wooden features that were evaluated as archeologically significant; avoidance or data recovery excavations were recommended for this site. Sites 16SJB30 and 16SJB31 both consisted of historic artifact scatters with minor prehistoric components; both sites lacked archeological integrity and research potential. Also, five previously recorded sites in the Upper Edgard item were revisited, tested, and evaluated. Site 16SJB28 contained historic and modern debris, Site 16SJB32 consisted of a late historic or modern pump house foundation, and Site 16SJB39 was found to be a large iron boiler housing with no associated materials. All three sites lacked archeological integrity, and no additional work was recommended at these three sites. Two loci, X16SJB-A and IA-ED-3, represent secondary modern artifact deposits and do not warrant additional work.

The historic development of the study area, focusing on trajectories of economic change and their impact on historic man-land relationships, is reviewed. Following the presentation of a period-based chronological overview, from colonial beginnings to the industrial age, significant themes in the history of the study area are delineated. Insofar as the effect on land-use was concerned, monocrop sugar agriculture and rice production during the postbellum period clearly are the dominate themes. For that reason, historical analyses of sugar and rice production for each of the nine project areas were conducted; in these analyses, sugar production patterns by reach were compared with statewide patterns, as well as with other reaches during the years 1844 - 1917. An analysis of land tenure also was undertaken to verify land-use patterns after the Civil War.

CULTURAL RESOURCES SURVEY OF ST. JOHN THE BAPTIST, ST. CHARLES, AND JEFFERSON PARISHES CONSTRUCTION ITEMS

FINAL REPORT



R. Christopher Goodwin, Ph.D.
Principal Investigator

By

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CHAPTER I

INTRODUCTION

Introduction

Cultural resources investigations of multiple levee and revetment construction items located along the Mississippi River (River Miles [RM] 147 - 112) in St. John the Baptist, St. Charles, and Jefferson parishes, Louisiana, were conducted by R. Christopher Goodwin & Associates, Inc., from June to November 1987 (Figure 1). These investigations were undertaken pursuant to Delivery Order Number 09, Contract DACW29-85-D-0113, for the U.S. Army Corps of Engineers, New Orleans District. Construction items examined as part of this investigation include Vacherie, Angelina, Reserve, Willow Bend, Montz, Waterford, and Luling revetments, and the Upper and Lower Edgard levee enlargements. These construction items, their acreage, location in river miles, station locations, and a brief description of investigations are summarized in Table 1.

As noted in the revised Scope of Services, (Appendix I) the proposed levee project will bring the existing levee up to design grade by providing landside, straddle, and riverside enlargements. Adverse impacts to cultural resources located within the top 3 m (10 ft) of the project corridor may result from the excavation of riverside borrow pits, and from the clearing of a corridor adjacent to the riverside toe of the levee.

Construction at these revetment items will include the placement of a continuous, articulated concrete mattress, mechanically laid from the low water reference plain to a point several hundred feet into the river channel. Adverse impacts to cultural resources may result from the removal of vegetation and grading to a standard slope within a 61 - 91 m (200 - 300 ft) wide project corridor.

The research plan governing this work was designed to locate, test, and assess the significance of cultural resources within the project area, applying the National Register criteria (36 CFR 60.4). The primary research objective was to develop a settlement and economic history for the project area and to compare and contrast that history with archeological data obtained in the field. Comparisons could provide a context for assessing project impacts to archeological sites located in the construction items while contributing to an understanding of prehistory and history (36 CFR 60.4[d]). They also were designed to provide information on the nature and extent of site destruction processes in the project area.

Survey Areas and Site Overview

Proceeding from upstream to downstream, the boundaries of the Vacherie Revetment Item, as well as the location of survey transects, are illustrated in Figure 2. Figure 3 illustrates the boundaries of the Angelina Revetment Item and includes the location of survey transects and archeological sites there. The upriver and downriver segments of the Reserve Revetment Item are shown in Figures 4 and 5; Figure 4 illustrates the survey area limits and survey transects for the survey area from RM 140.9 to 140.3-L, and Figure 5 contains the same information for the survey area between RM 136.6 and 135.4-L. The boundaries of the Upper Edgard Levee Enlargement Item, the location of survey transects, and the location of archeological sites are shown in Figure 6. Figure 7 illustrates the boundaries of the Willow Bend Revetment Item (RM 142.2 - 139.0-R) and the location of archeological sites recorded there. The boundaries of the Montz Revetment Item (RM 134.5 - 133.0-L) are shown in Figure 8. Figure 9 illustrates the boundaries of the Lower Edgard Levee Enlargement project area and shows the location of a previously recorded Site X16SJB-A that was evaluated as part of this study. Figures 10 and 11 show the survey area limits, survey transects, and location of archeological sites in the two survey areas within the Waterford

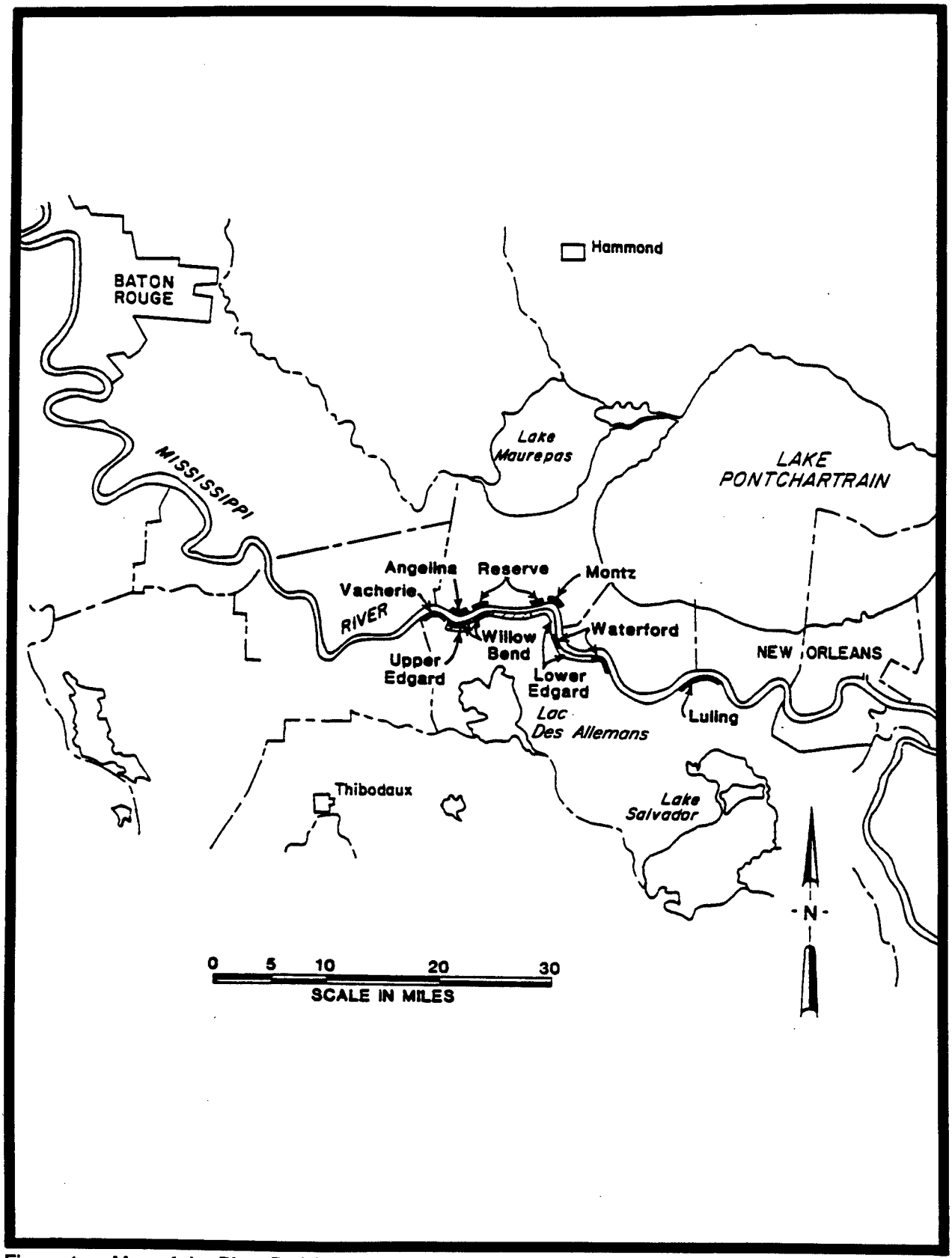


Figure 1. Map of the River Parish region, showing the location of nine revetment items in St. John the Baptist, St. Charles, and Jefferson Parishes.

Table 1. Summary of Construction Items Subject to Cultural Resource Investigations.

CONSTRUCTION ITEM	PARISH	RIVER MILE	STATION	ACREAGE	TERRAIN	ACTION
Vacherie Revetment	St. John the Baptist	146.7 - 144.0-R	D-86-D-200	141	Batture	Survey
Angelina Revetment	St. John the Baptist	143.2 - 141.6-L	D-110-D-156	93	Batture	Survey and test all discovered sites
Reserve Revetment	St. John the Baptist	140.9 - 140.3-L 136.6 - 135.4-L	D-141-U-106 D-63-D-120	40 74	Batture Batture	Survey both reaches
Upper Edgard Levee Enlargement	St. John the Baptist	143.2 - 137.0-R	LS 1720+00 -2080+00	532	Batture	Survey two borrow pits and test all previously recorded sites
Willow Bend Revetment	St. John the Baptist	142.2 - 139.0-R	U-60-U-30 D-53-D-110	69	Batture Batture	Test all previously recorded sites
Montz Revetment	St. John the Baptist	134.5 - 133.0-L	U-122-U-30	242	Batture	Included in literature search only; assess need for deep testing
Lower Edgard Levee Enlargement	St. John the Baptist and St. Charles	137.0 - 127.0-R	LS 2077+75 -2618+00	870	Batture	Assess need for deep testing and test one previously recorded site
Waterford Revetment	St. Charles	130.1 - 129.7-R 127.5 - 125.0-R	U-120-U-81 D-40-D-140	65 173	Batture Batture	Survey both reaches and test all discovered sites in the lower reach
Luling Revetment	St. Charles and Jefferson	116.9 - 112.0-R	D-56-D-292	238	Batture	Survey

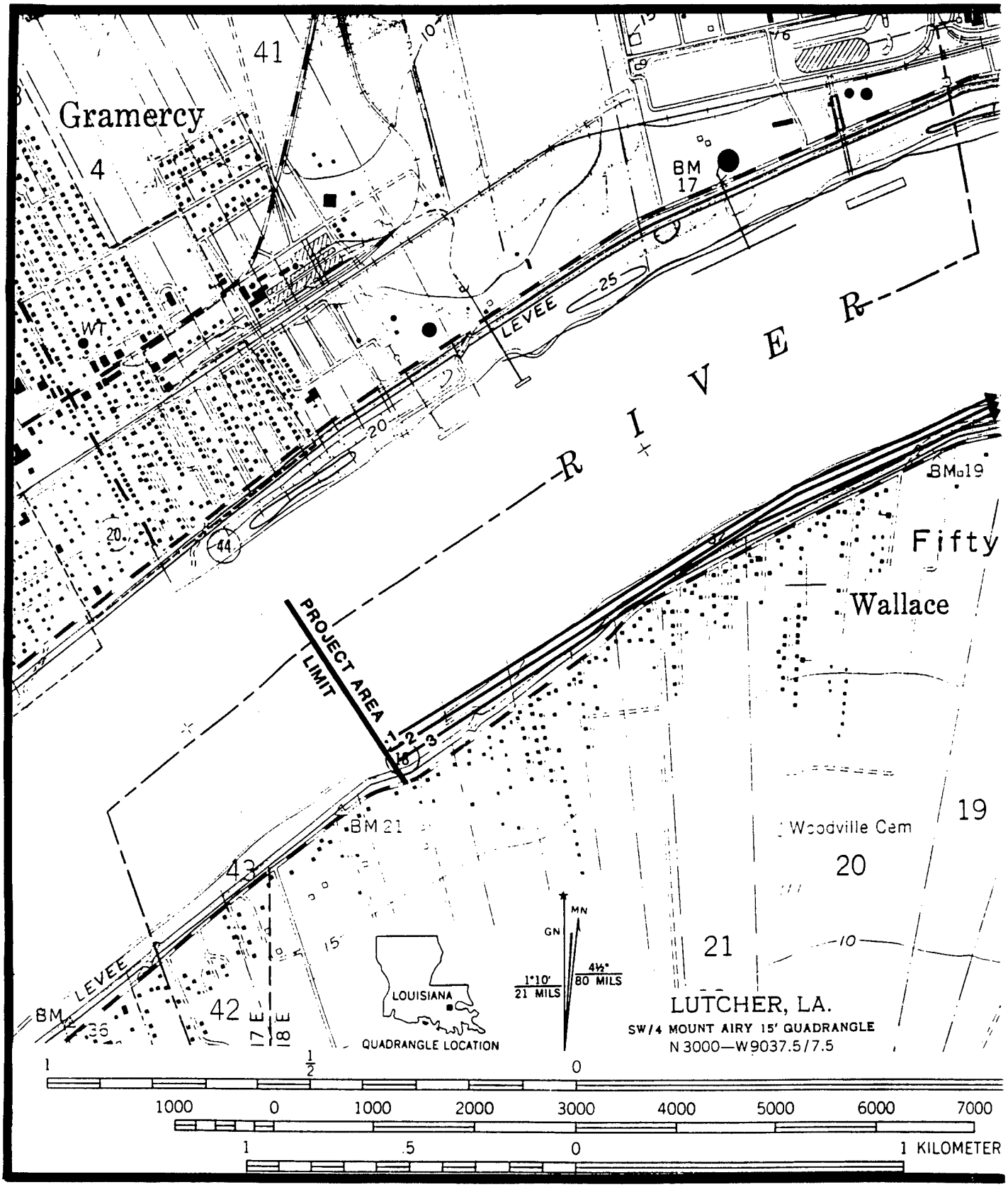
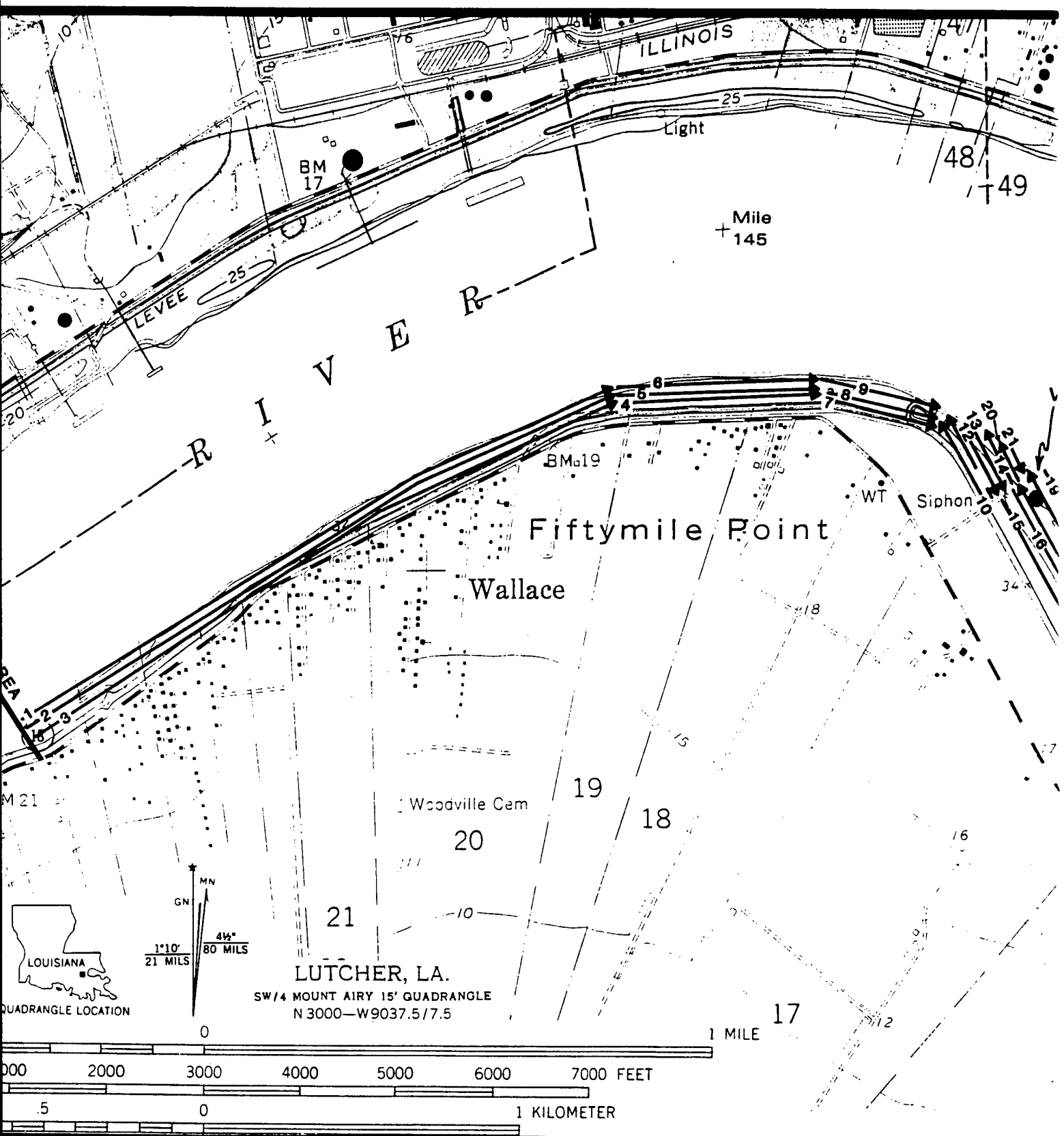
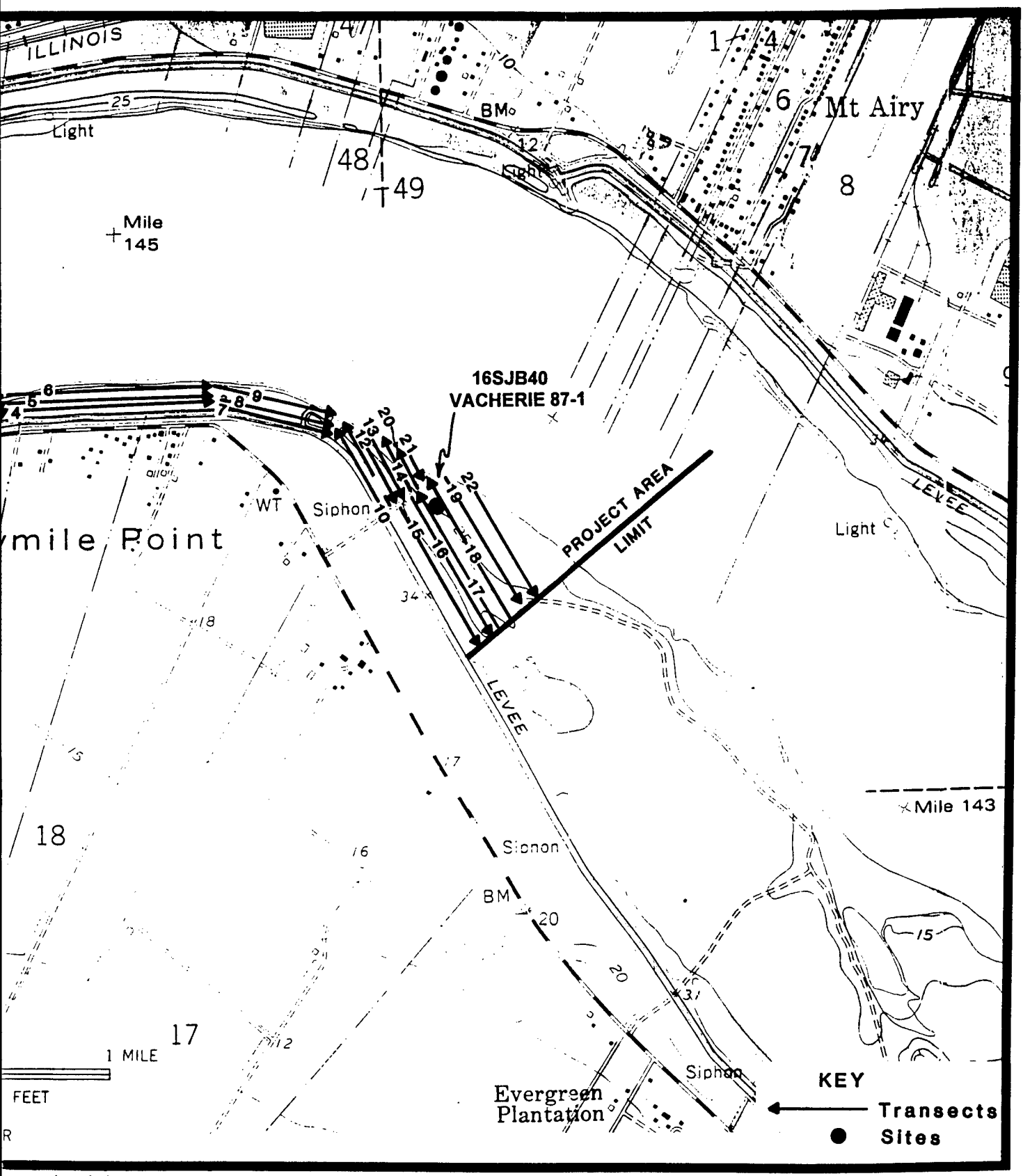


Figure 2. Excerpt from the Lutcher, Louisiana, 7.5' series topographic quadrangle, showing the location of all transects trav within the Vacherie Revetment project area (Miles 146.7-144.0-R).



na, 7.5' series topographic quadrangle, showing the location of all transects traversed and sites recorded
roject area (Miles 146.7-144.0-R).

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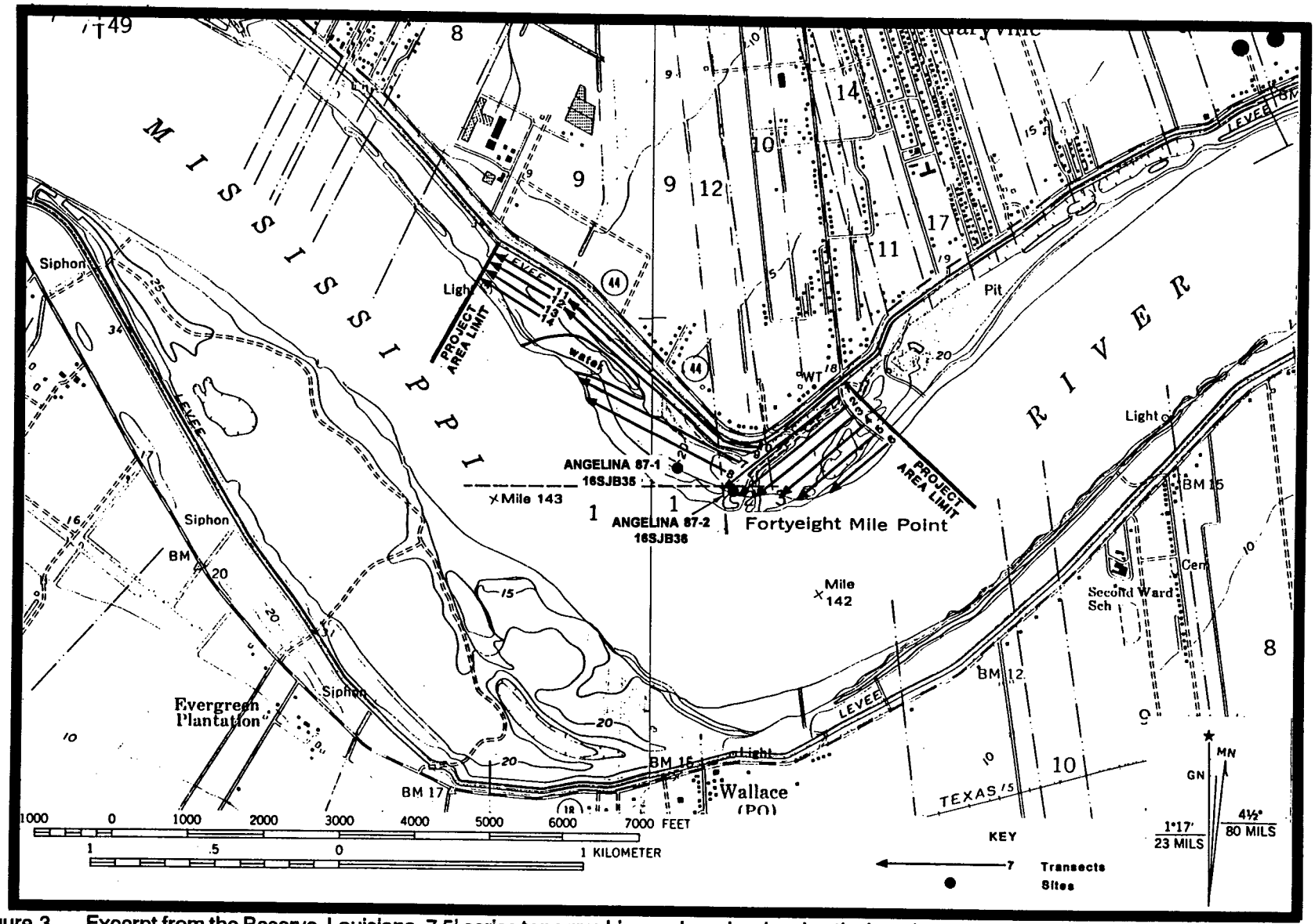


Figure 3. Excerpt from the Reserve, Louisiana, 7.5' series topographic quadrangle, showing the location of all transects traversed and sites recorded within the Angelina Revetment project area (Miles 143.2-141.6-L).

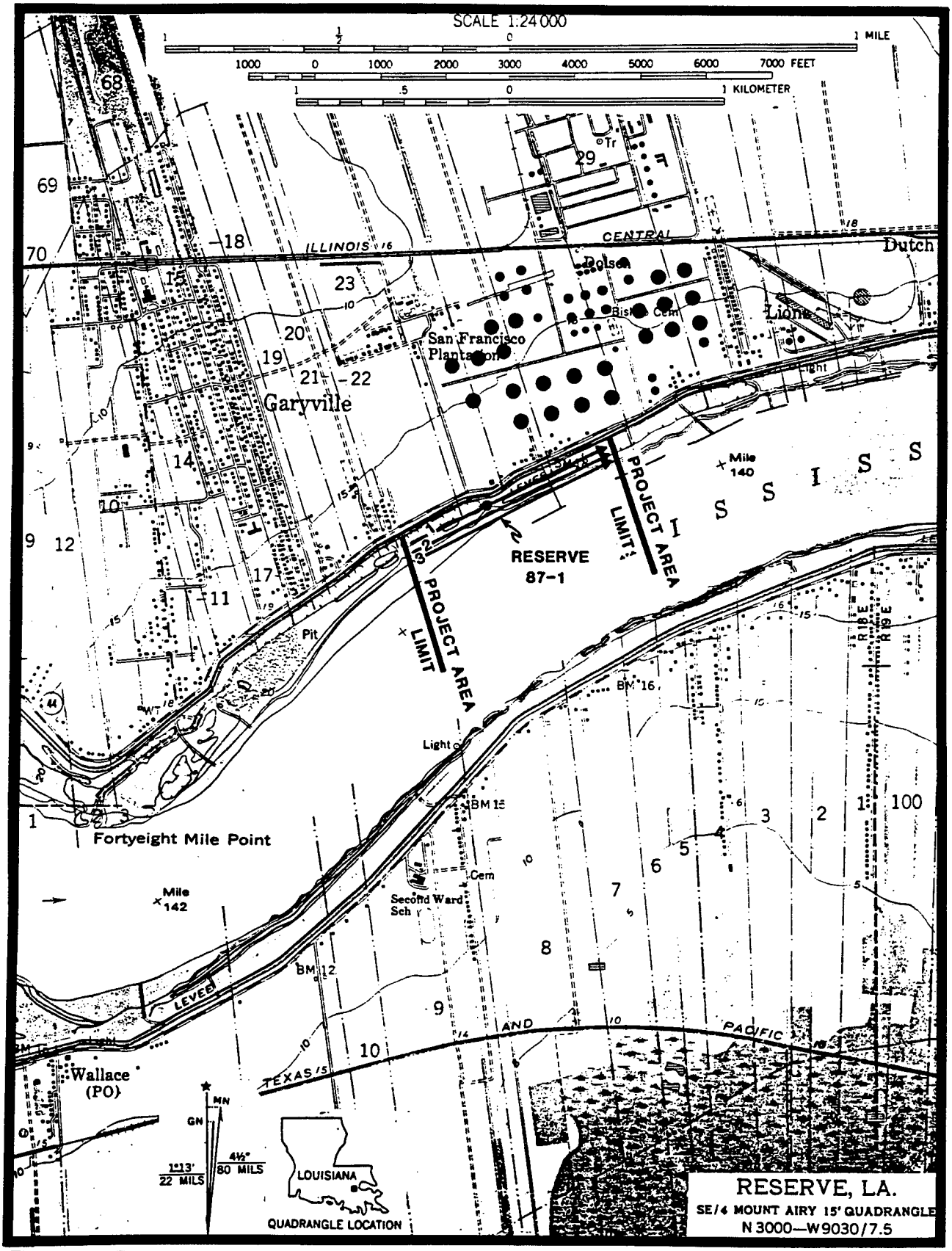


Figure 4. Excerpt from the Reserve, Louisiana, 7.5' series topographic quadrangle, showing the location of all transects traversed and sites recorded within the Reserve Revetment project area (Miles 140.9-140.3-L).

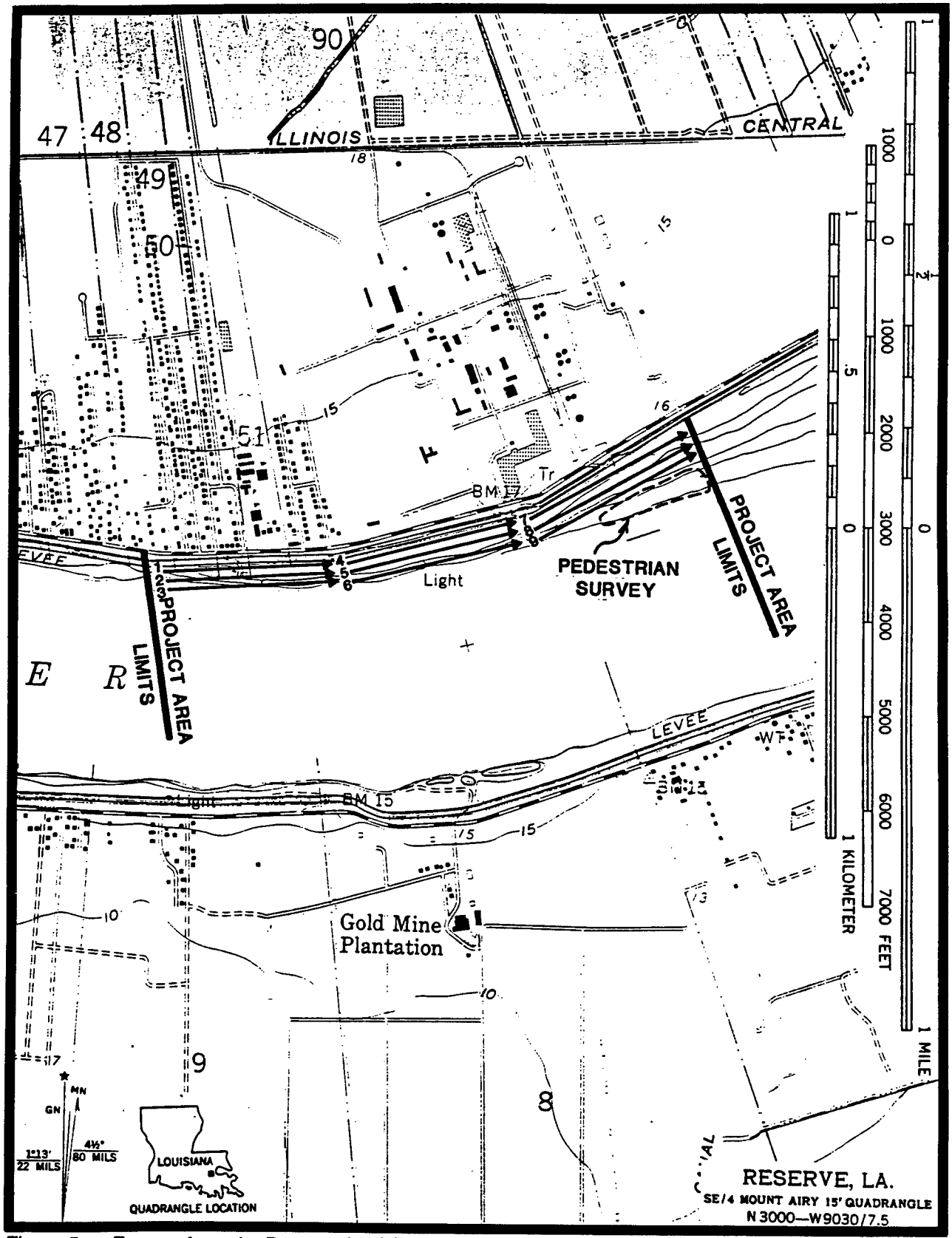


Figure 5. Excerpt from the Reserve, Louisiana, 7.5' series topographic quadrangle, showing the location of all transects traversed within the Reserve Revetment project area (Miles 136.6-135.4-L).

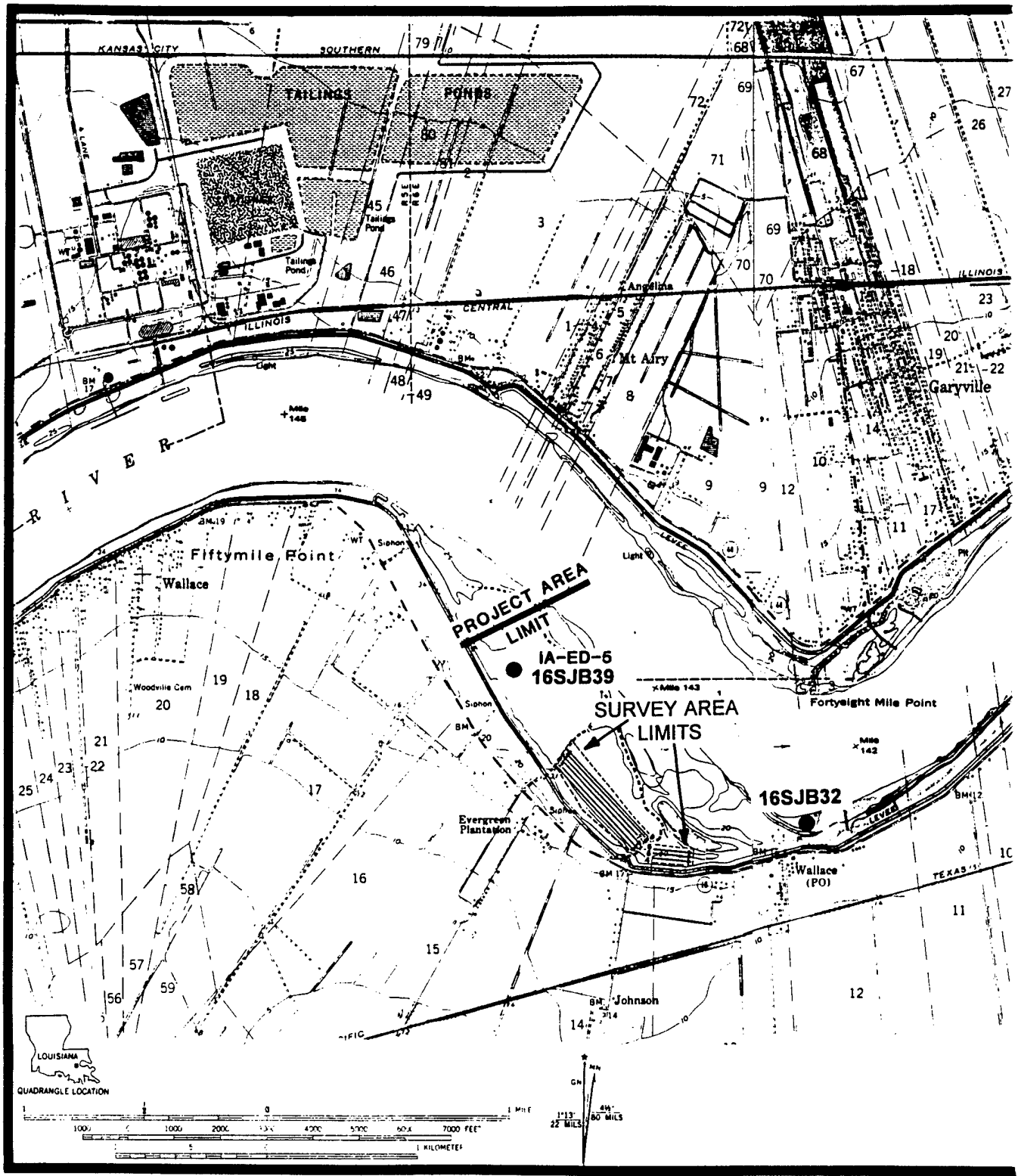
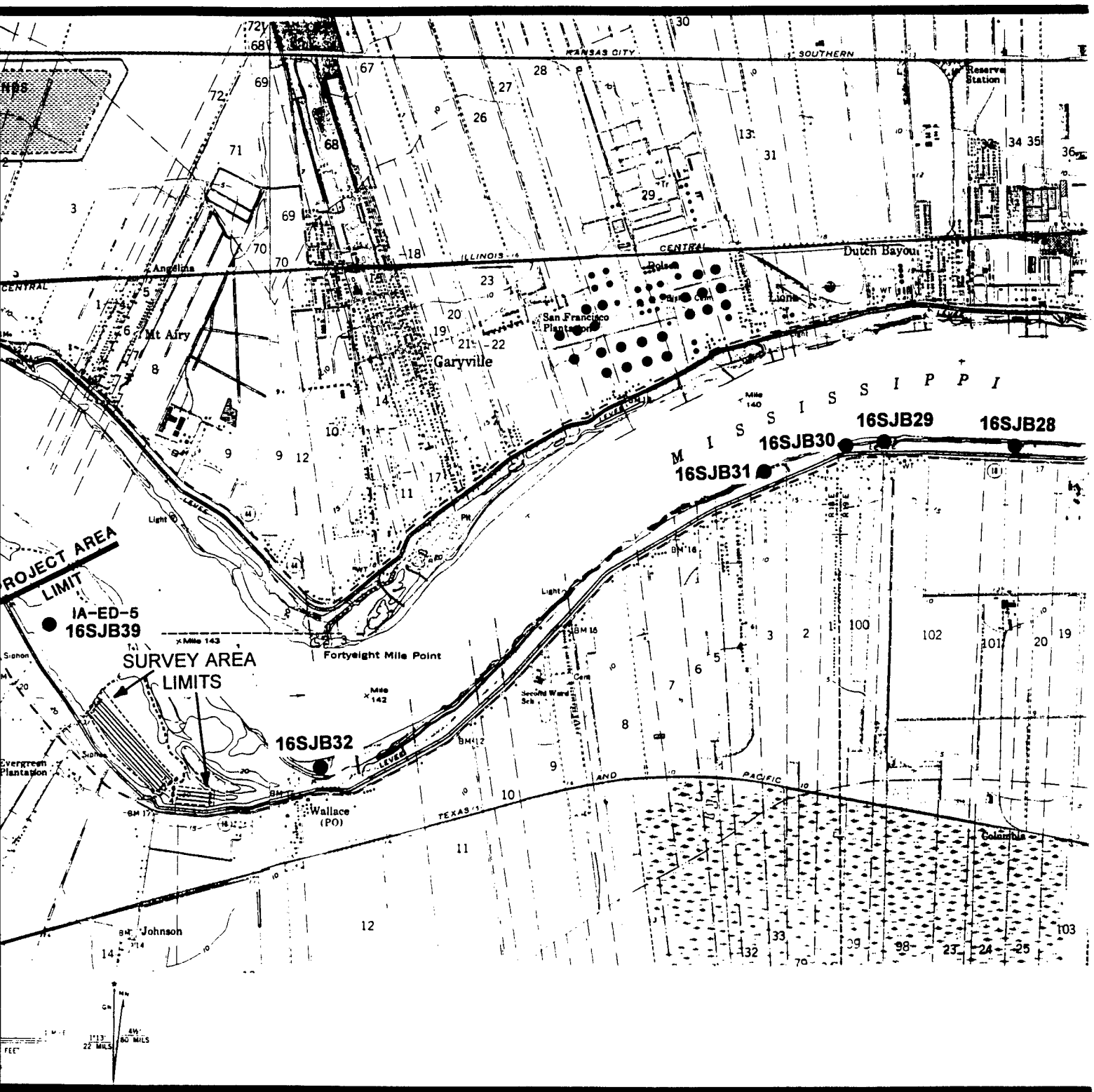
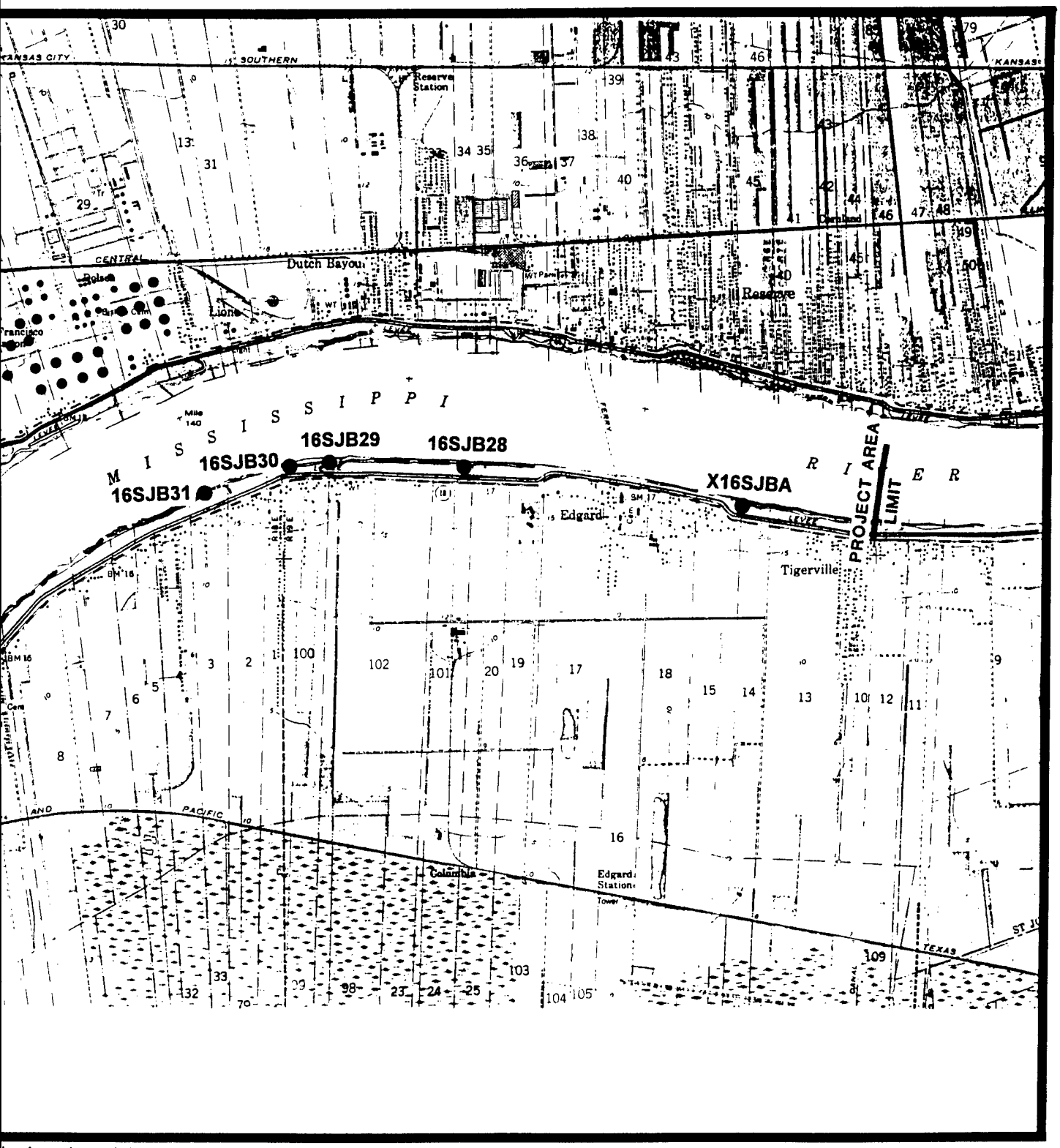


Figure 6. Excerpts from the Hahnville, Reserve, and Laplace, Louisiana, 7.5' series topographic quadrangles, sho Edgard project area.



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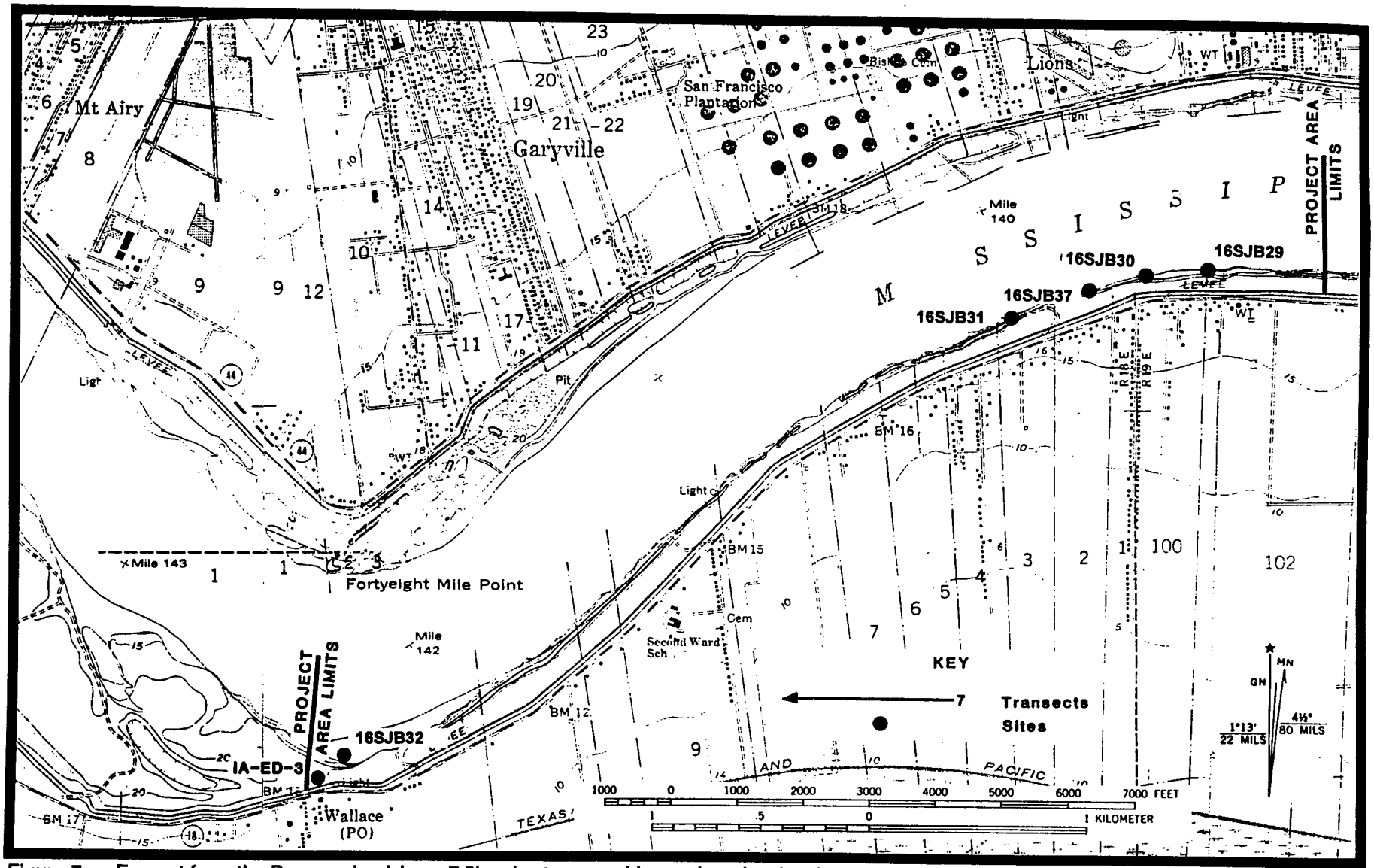


Figure 7. Excerpt from the Reserve, Louisiana, 7.5' series topographic quadrangle, showing the location of the sites recorded and identified in the Willow Bend Revetment project area.

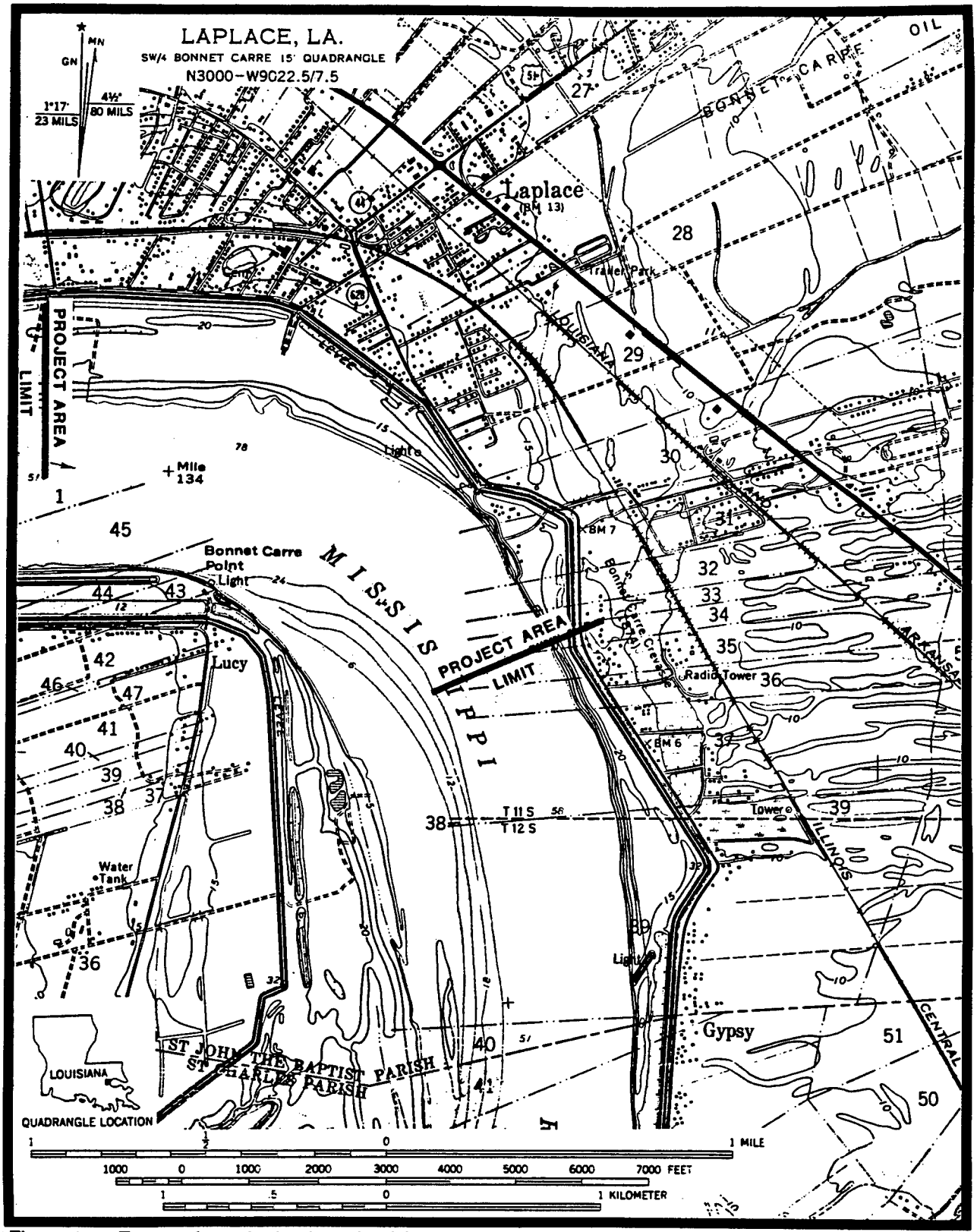


Figure 8. Excerpt from the Laplace, Louisiana, 7.5' series topographic quadrangle, showing the location of the Montz Revetment project area (Mile 134.5-133.0-L).

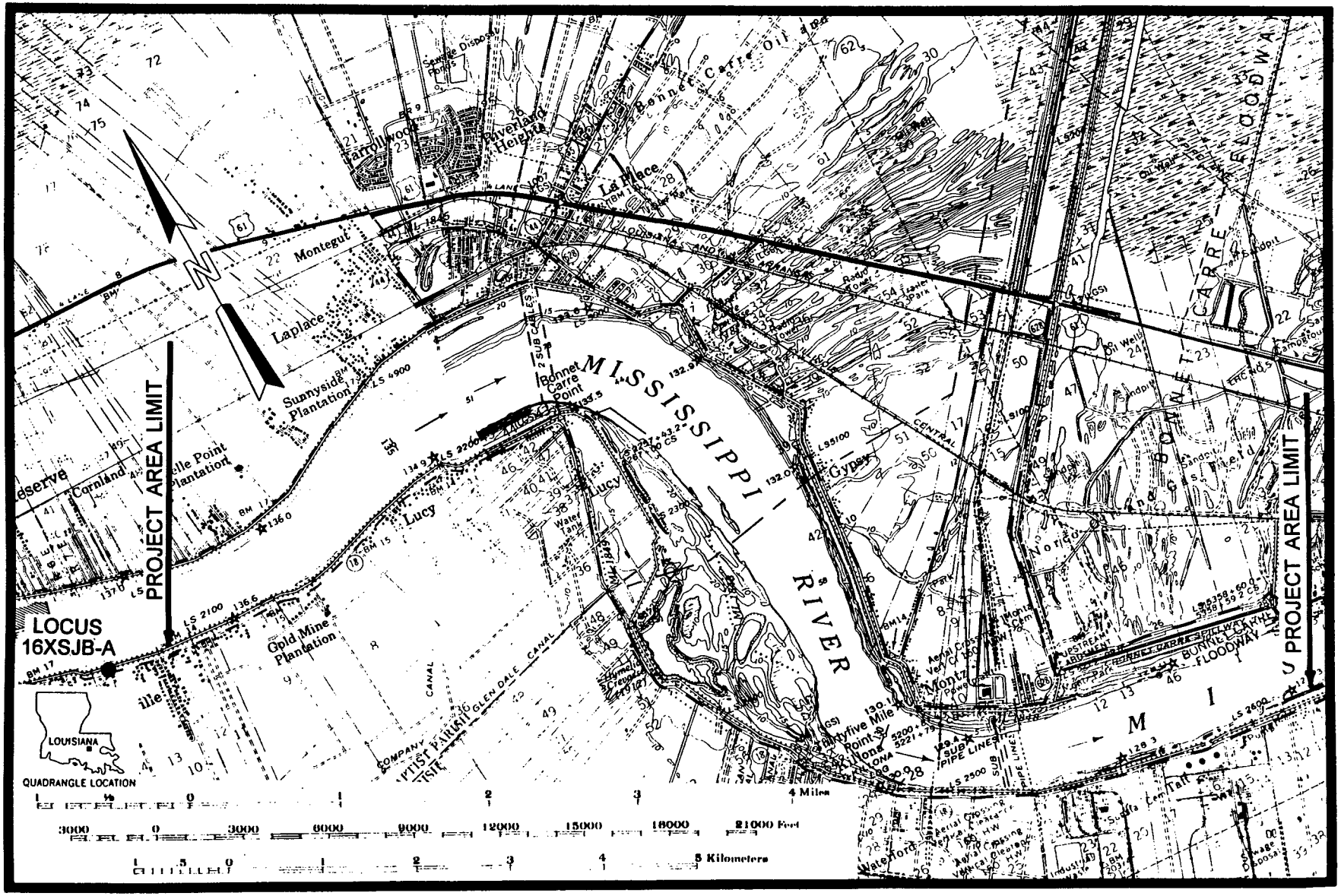


Figure 9. Excerpts from the Hahnville, Reserve, and Laplace, Louisiana, 15' series topographic quadrangles, showing the location of Site X16SJB-A and the Lower Edgard Levee Enlargement project area (Mile 137.0-127.0-R).

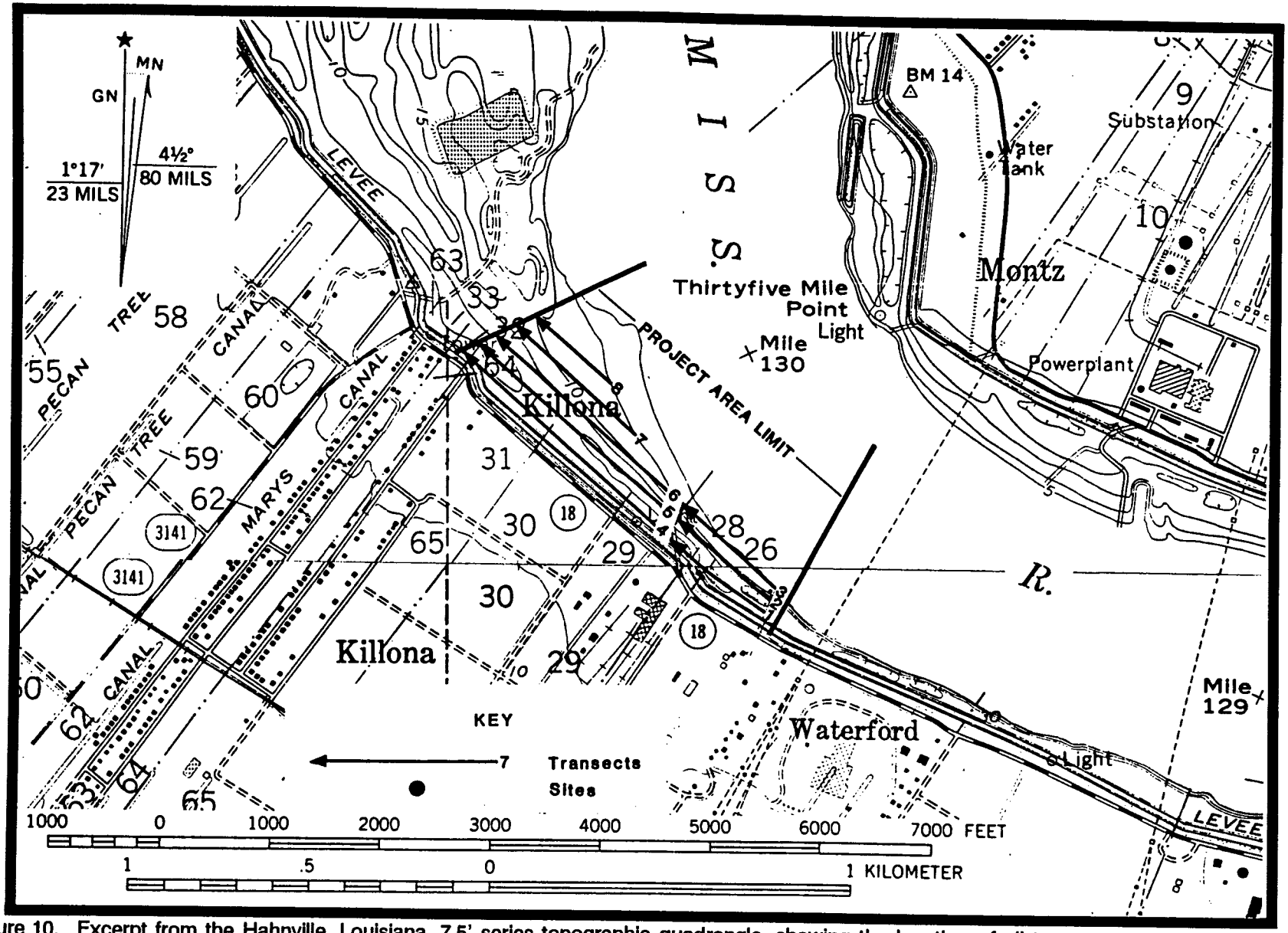


Figure 10. Excerpt from the Hahnville, Louisiana, 7.5' series topographic quadrangle, showing the location of all transects traversed within the Waterford Revetment project area (Mile 130.1-129.7-R).

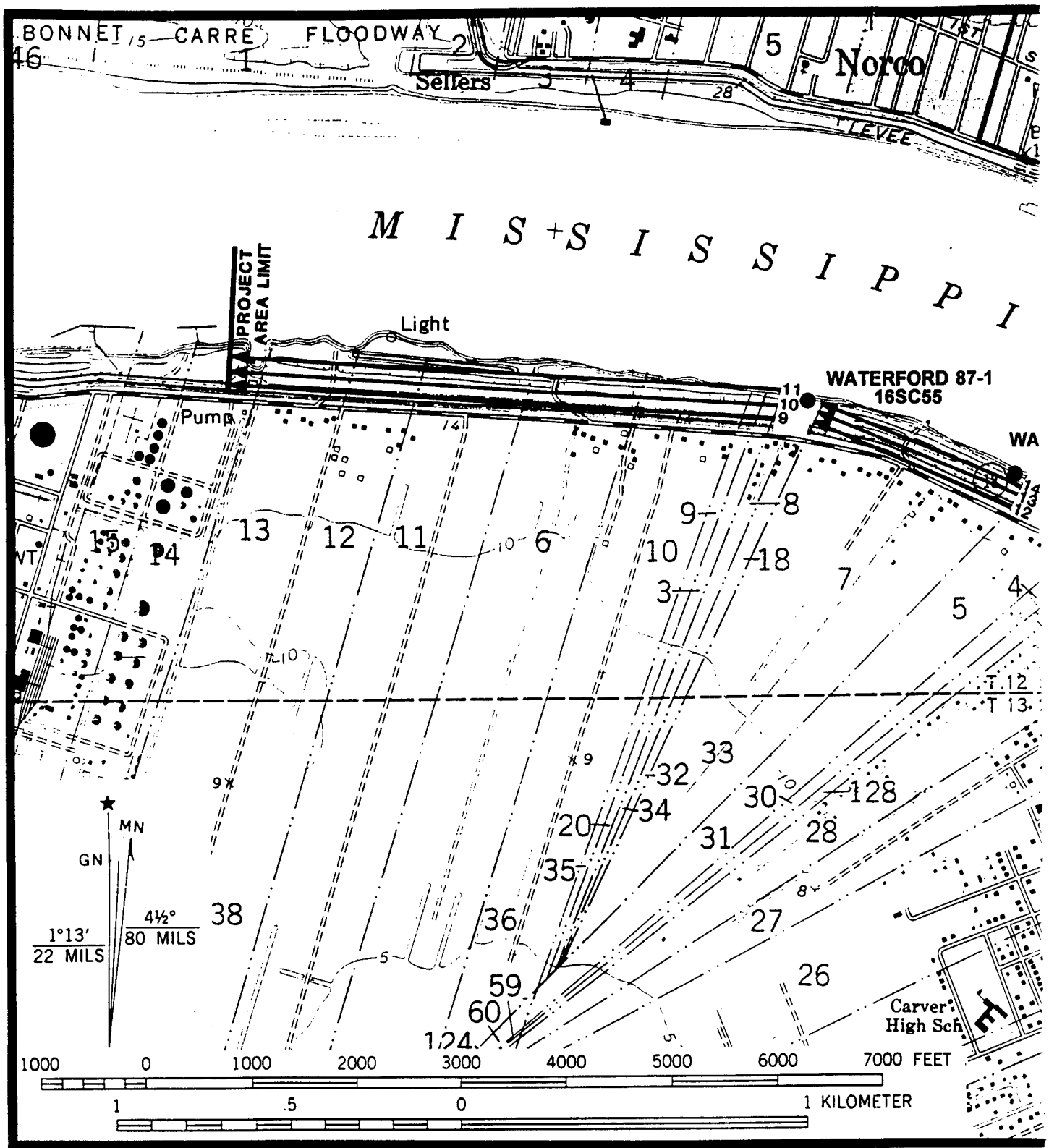
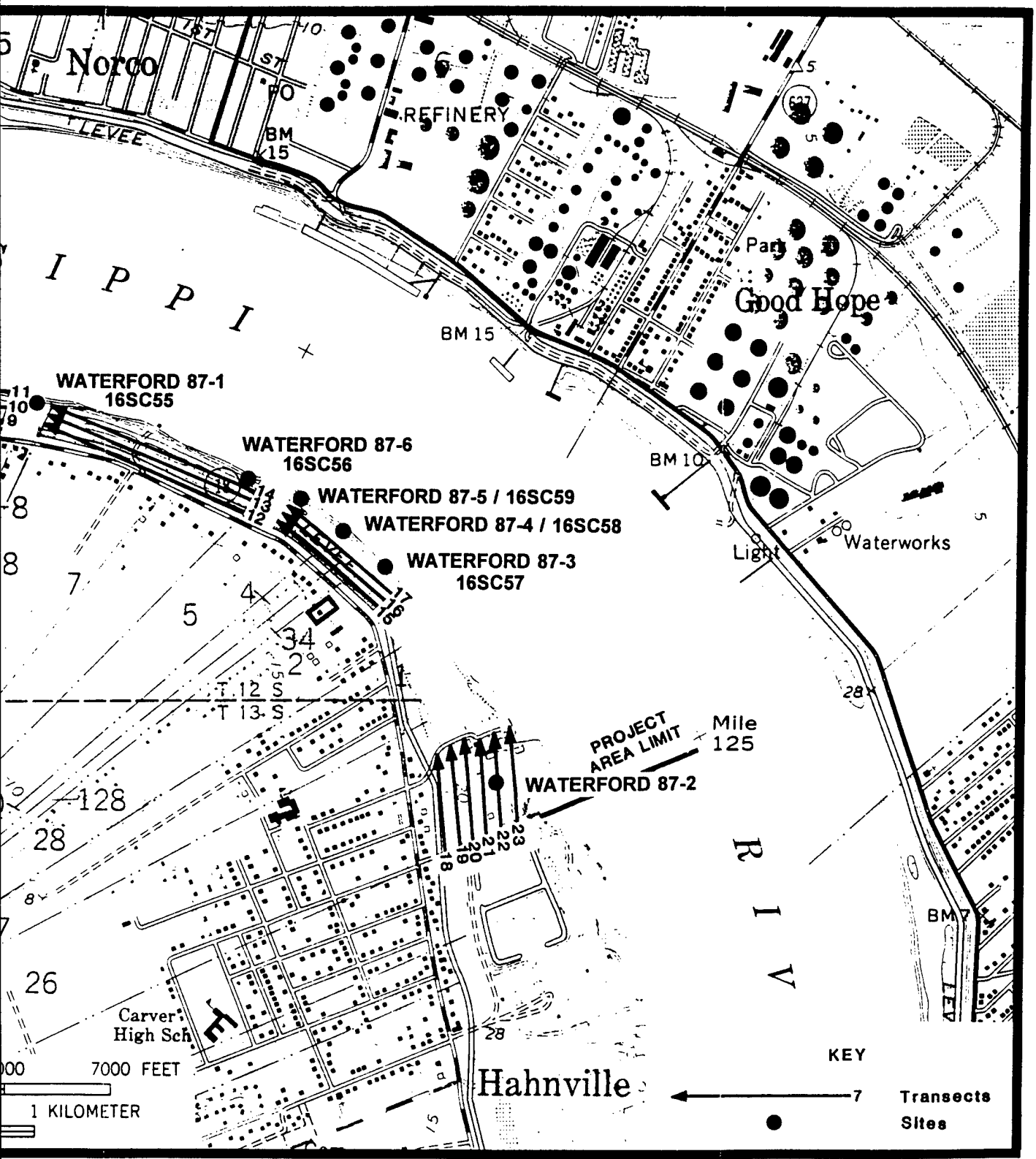


Figure 11. Excerpt from the Hahnville, Louisiana, 7.5' series topographic quadrangle, showing the location of all transec recorded within the Waterford Revetment project area (Mile 127.5-125.0-R).



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project area; Figure 10 illustrates the survey area between RM 130.1 and 129.7, while Figure 11 shows the survey area between RM 127.5 and 125.0. The boundaries of the Luling project area, and the survey transects and archeological sites within it, are illustrated in Figure 12.

Field investigations of the nine construction items were conducted between June and November 1987. Comprehensive, systematic, and detailed field examinations resulted in the discovery of 15 previously unrecorded archeological sites and two modern finds. Four of these sites (16SJB35, 16SJB36, 16SJB37, and 16SJB40) are located in St. John the Baptist Parish, 10 are in St. Charles Parish (16SC55 - 16SC64), and one new site, 16JE141, was recorded in Jefferson Parish. The two modern finds were designated Waterford 87-2 and Reserve 87-1.

Three previously recorded archeological sites (16SJB29 - 16SJB31) within the Willow Bend project area, and three sites (16SJB28, 16JE39, and X16SJB-A) and two modern finds (16SJB32 and IA-ED-3) previously recorded within the Upper Edgard project area also were revisited, tested, and evaluated. These six sites and two modern finds were recorded during a 1984 survey conducted by the National Park Service (Shafer, Clemensen, and Rhodes 1984). In total, 21 archeological sites and four modern finds were visited, tested, and evaluated within the nine project areas examined as part of this investigation (Table 2).

Organization of the Report

This report begins with a description of the natural setting of the project area, focusing on geomorphic features, soil conditions, and on floral and faunal associations common to this area. Previous archeological and cultural resources investigations conducted in and near the study area prior to the time of this survey are summarized in Chapter III. The geomorphology and man-land relationships in the project area are discussed in Chapter IV; in addition to reviewing natural processes, this chapter provides a discussion on the history of levee construction in the project area. To enable detailed examination of historic man-land relationships in the project area, as well as to make it possible to address the issue of deeply buried sites, a major mapping effort was undertaken for this project. Reductions of composite maps showing the diachronic pattern of changing banklines and levee positions in the study area also are contained in Chapter IV. These maps graphically illustrate the effect of riverine processes and of levee construction on cultural resources. Although construction is planned only within the nine project reaches, all 56 km (35 mi) on both banks of the river were mapped.

The prehistoric cultural history of the region is summarized in Chapter V. Expectations concerning the nature and location of potential prehistoric resources are presented. The historic development of the study area, focusing on trajectories of economic change and their impact on historic man-land relationships is reviewed in Chapter VI. Following the presentation of a period-based chronological overview, from colonial beginnings to the industrial age, significant themes in the history of the study are delineated. Insofar as the effect on land use was concerned, monocrop sugar agriculture and rice production clearly are the dominate themes during the postbellum period. For that reason, historical analyses of sugar and rice production for each of the nine project areas were conducted; in those analyses, sugar production patterns by reach were compared with statewide patterns, as well as with other reaches for the years 1844 - 1917. Rice production was compared with sugar production within the various reaches. To verify land use patterns after the Civil War, an analysis of land tenure then was undertaken. That analysis showed that only the Luling project area failed to fit the expected pattern.

The methods that were applied during fieldwork and artifact analyses are reviewed in Chapter VII. Detailed descriptions and interpretations of archeological sites in St. John the Baptist and St. Charles parishes, respectively, are provided in Chapters VIII and IX. The parish was the unit chosen for site descriptions, because it is the unit by which statewide cultural resources inventories are compiled. The final chapter of the report presents conclusions and recommendations that address the appropriate cultural

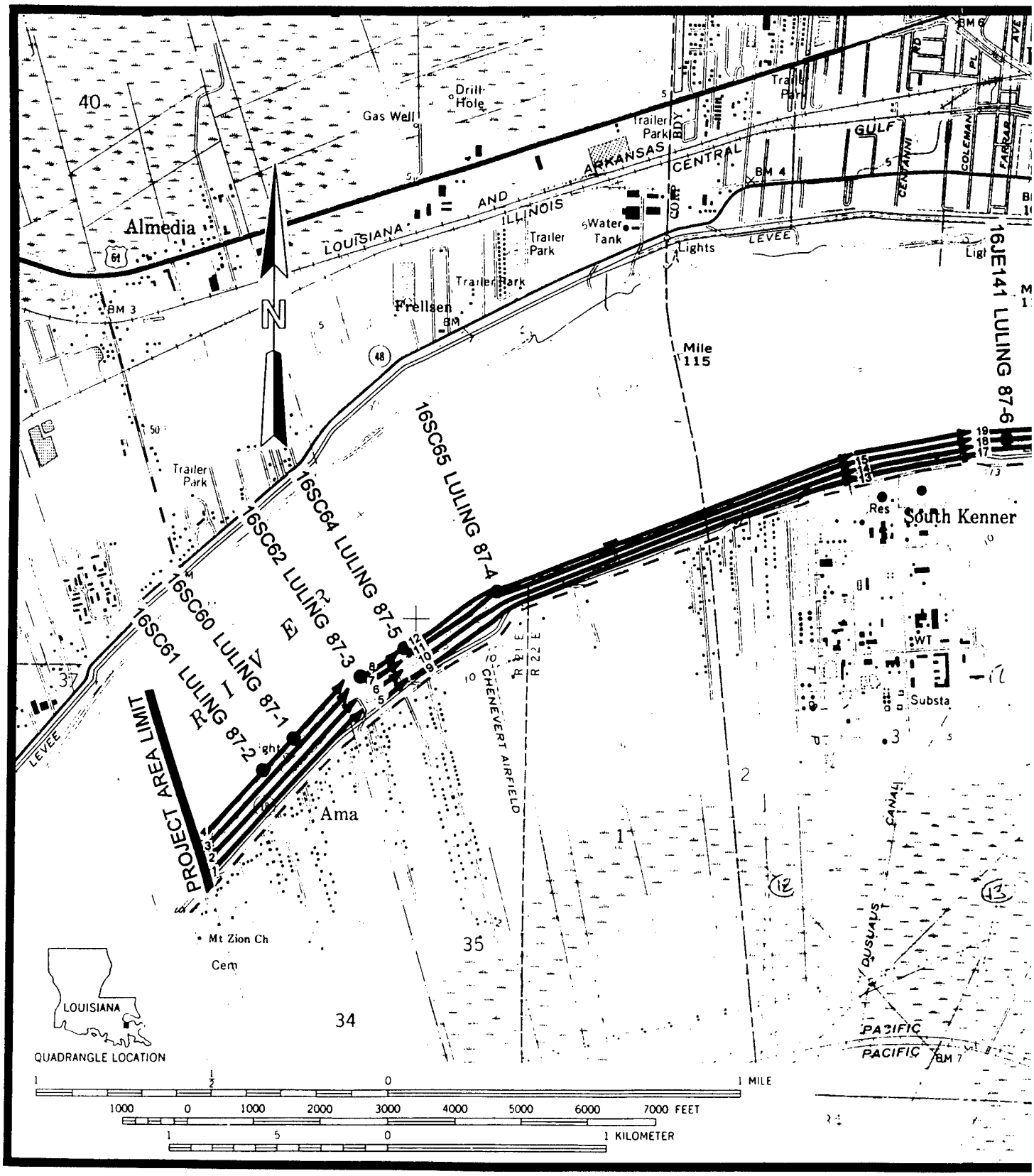
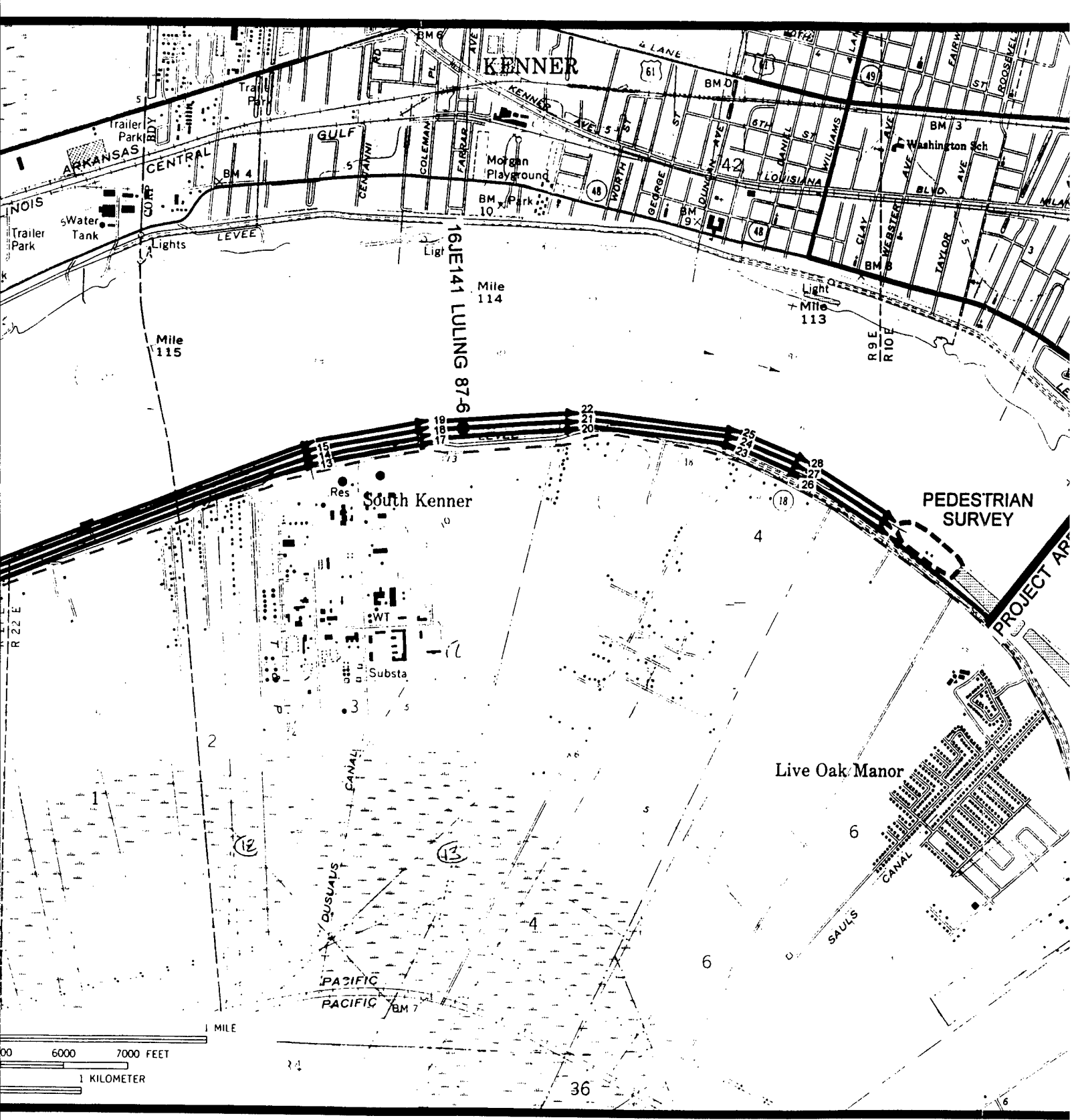
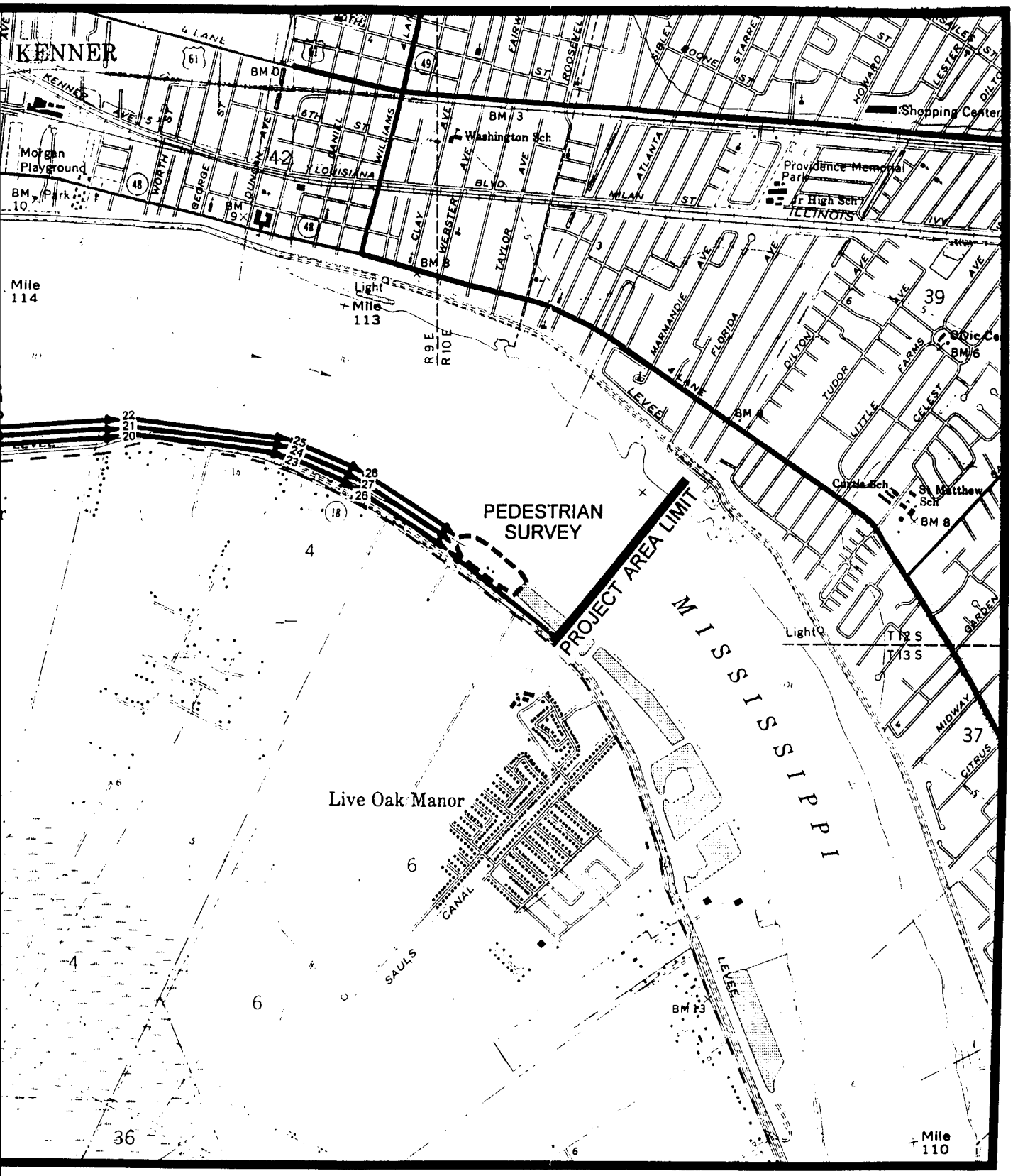


Figure 12. Excerpts from the Luling and New Orleans West, Louisiana, 7.5' series topographic quadrangles, showing the lo traversed and sites recorded within a portion of the Luling Revetment project area (Miles 116.9-113.1-R and



st, Louisiana, 7.5' series topographic quadrangles, showing the location of all transects of the Luling Revetment project area (Miles 116.9-113.1-R and 113.1-112.0-R).

(2)



e location of all transects
d 113.1-112.0-R).

(3)

Table 2. Archeological Resources Identified within the Nine Project Items.

CONSTRUCTION ITEM	IDENTIFIED RESOURCES
Vacherie Revetment	16SJB40
Angelina Revetment	16SJB35
	16SJB36
Reserve Revetment	Reserve 87-1
Upper Edgard Levee Enlargement	16SJB28
	X16SJB-A
	IA-ED-3
	16SJB32
	16SJB39
Willow Bend	16SJB29
	16SJB30
	16SJB31
	16SJB37
Montz Revetment	None
Lower Edgard Levee Enlargement	None
Waterford Revetment	16SC55
	16SC56
	Waterford 87-2
	16SC57
	16SC58
	16SC59
Luling Revetment	16SC60
	16SC61
	16SC62
	16SC63
	16SC64
	16JE141

resources management requirements of each of the sites identified during the course of this project. Finally, the effect of planned construction on each site in the project area is addressed.

CHAPTER II

THE SETTING

The 1987 Revetments study area lies within the Gulf Coastal Plain, a gently rolling area with elevations under 152.4 m (500 ft). The present study area is located within the Pontchartrain Basin, which includes parts of Orleans, Jefferson, St. Charles, St. John the Baptist, Livingston, Tangipahoa, and St. Tammany parishes (Newton 1987:12). The Mississippi River between Donaldsonville and New Orleans marks the southern boundary of the Basin (Saucier 1962:3). Elevations within this region range between 0 to 3 m (0 and 10 ft) NGVD (Newton 1987:12).

Climatically, this region lies within the Humid Subtropical zone. Due to the low relief of the area, very little variation in regional climate exists. Average annual precipitation is 136.9 cm (53.9 in). Mean annual temperature is 20.3° C (68.6° F); the first freezing temperatures occur, on average, on December 10, and the last freezing temperatures occur on February 18. The average growing season is 295 days (Goodwin and Jeter 1986:54).

The present study area is located on both the left and right descending banks of the Mississippi River, between RM 147.0 and 112.0. Nine discontinuous reaches within this study area were examined intensively (Figure 1; Table 1). The study corridor incorporates the batture of the Mississippi, extending from the riverside toe of the modern man-made levee to the water's edge.

Description of the Pontchartrain Basin

The study area comprises the southern boundary of the Pontchartrain Basin, near the dividing line between the Pontchartrain Basin and the Barataria Basin (Bahr et al. 1983). The Pontchartrain Basin lies within the Mississippi Alluvial Valley; it is bounded by the Mississippi River on the south and west, by the Pleistocene upland terrace formation on the north, and by a series of relict barrier islands and delta formations on the east (New World Research, Inc. 1983:18). More than 50 percent of the basin is covered by large shallow lakes, the largest of which is Lake Pontchartrain. The entire basin covers an area 129 km (80.2 mi) east to west, and 56 km (34.8 mi) north to south (New World Research, Inc. 1983:18).

Geomorphic Features Within the Study Area

Geomorphic features of the study area include the main channel of the Mississippi River and its natural levee. The following reviews the formational processes and the general characteristics of these features.

The Natural Levee

Natural levees consist of linear-shaped deposits formed when a river overflows its banks during episodes of flooding. Coarse sediments are deposited immediately adjacent to the river channel and fine sediments fall out of suspension at greater distances from the river. This results in the formation of a low, wedge-shaped landform parallel to the river and decreasing in thickness away from the river (Smith et al. 1986:10).

The natural levees of the Mississippi River within the study area are typically wedge shaped in cross section. They vary in width from 3.2 to 4.8 km (2 to 3 mi) near Donaldsonville, to 2.4 km (1.5 mi) near New Orleans. They rise to approximately 6 m (20 ft) above sea level (Saucier 1962:18). Sediments within the natural levee vary from firm to stiff silty clays interspersed with silt lenses at the levee crest, to pure clays with very little silt toward the backswamp. Levee sediments tend to be well oxidized and contain numerous small iron or manganese nodules. The sediments are typically tan or light gray-brown; mottling is often red, yellow, or black. Oxidation diminishes with the depth of the deposits increases.

Natural levees represent a preferred location for settlement. The reasons for this include the presence of optimum soil drainage, the availability of exploitable natural resources, its suitability to transportation routes, and protection from natural hazards such as floods, hurricanes, etc. (Smith et al. 1986:10; Poplin et al. 1987:18). This pattern of settlement also holds true for both the prehistoric and historic periods.

Crevasses

During periods of high water or flooding, the river can place great pressure on the natural levee. As water levels begin to drop, the super-saturated levee can become unstable (Newton 1987:40). This instability can result in the formation of small breaks or ruptures in the natural levee. These channels extend away from the main course, and allow floodwaters and sediments to pour through the opening into the backswamp. Crevasse channels generally are shallow; however, if a crevasse channel captures the dominant flow of the river, it can function like a distributary channel. The localized nature of crevasse channels is due to the fact that these channels generally receive flow only during periods of flooding.

The most significant crevasse within the present study area was the Bonnet Carré Crevasse. This crevasse was located upstream and west of the present Bonnet Carré Spillway, at approximately RM 133-L. The first crevasse on record opened on December 29, 1849. The crevasse was open in 1849, 1857, 1867, 1871, and between 1874 and 1882. On December 30, 1849, the crevasse measured 365.8 m (1,200 ft) wide; it steadily increased to 2,103 m (6,900 ft) across by July 1, 1850. Mean depth at high water was calculated at 1.8 m (5.5 ft).

Hardee (1876) later described the 1874 crevasse:

> The present crevasse, which was caused in the spring of 1874 by a breach in the levee at Bonnet Carré bend, about 35 miles above the city (New Orleans), is now 1370 feet in width, in a direct line across the gap, and as the discharge of water courses toward Lake Pontchartrain, 5 miles distant, it widens in a fan-like shape so that by the time it reaches the shore of the lake the flow of water has attained a breadth of more than 22 miles... (Hardee 1876).

This crevasse remained open until 1882. Although the need for a mechanism to control the threat of flooding below the Bonnet Carré crevasse was recognized early, it was not until 1929 that construction of the Bonnet Carré Spillway was begun.

The Main Channel

The modern Mississippi River is a meandering river. Meandering is a dynamic process that results in lateral migration of the river in a downstream direction. This lateral migration includes both the cutting

of banks and downriver accretion. This process is controlled by the poised nature of the river. In other words, the Mississippi River has no apparent tendency to either aggrade or degrade its channels; it generally carries as much sediment to the Gulf of Mexico as is brought in by its tributaries. Therefore, the sediment added to the river through cutting and caving is deposited on an aggrading bank within a fairly short distance. In effect, sediments are traded from caving banks to downriver point bars. The formation of these point bars is dependent on the volume of sediments deposited into the river by upriver caving banks. This, in turn, is dependent on the local characteristics of the alluvium (Fisk 1943:37-39; Walters and Simons 1983:321).

The primary factors governing cutting and accretion are the speed and direction of the river. At a bend in the river, the concave bank, where the river is forced to turn, is subject to cutting. The river moves faster in that area as it is turned by the river bank to a new direction. In addition to cutting the bank, the river also scours the river bed adjacent to the cutting bank, deepening the channel. Sediments cut from the river bank and river bed are held in suspension until the river slows and the sediments gradually are precipitated. This normally occurs at point bars, along the convex bank at the next river bend, or at a crossing bar, which may form on the river bed along a straight reach. The overall effect of these processes is to gradually change the course of the river (Elliott 1932:122-123).

Natural alluvial deposition has been altered by artificial levee construction. Flood waters that once inundated the natural levee now are confined to the river and the batture, i.e., the lands located between the river and the artificial levees. During overbank flooding, the artificial levees confine the river to an artificially narrow course. Since the river cannot spread across the broad natural levee, its speed during floods is considerably faster than it was prior to artificial levee construction. Therefore, much of the sediment load that previously was deposited across the broad natural levees now is dumped either on the artificially restricted batture, or at the mouth of the river. Thus, deposition of sediments on the batture is accelerated.

Soils

The following discussion of soil types and associations within the study area is based on the United States Department of Agriculture (USDA) soil surveys of St. James and St. John the Baptist parishes, of St. Charles Parish, and of Jefferson Parish (USDA 1973, 1983, 1987). Because of local differences, soils are discussed below by parish and by river mile.

St. John the Baptist (RM 147-131.7). Soils within this portion of the project area are included in the Convent-Silty alluvial land association and the Commerce-Sharkey association. The Convent-Silty alluvial land association is characterized by loamy soils that formed in recently deposited sediments of the Mississippi River. They are indicative of a batture environment, and they occur on both sides of the river. The association is made up of approximately 50 Convent soils and 35 percent Silty alluvial land. The remaining 15 percent includes Commerce, Sharkey, and Vacherie soils (USDA 1973:3).

The Commerce-Sharkey association is characterized by loamy and clayey soils. Elevations range from about 6.1 m (20 ft) above sea level near the river, to 3 m (10 ft) above sea level near the backswamp. The association consists of approximately 65 percent Commerce soils and 15 percent Sharkey soils. Convent, Vacherie, and Mhoon soils are included in the remaining 20 percent (USDA 1973:3).

The batture consists primarily of Convent and silty alluvial land soil types. These are frequently flooded silty soils with moderate permeability. Generally, Convent soils consist of a top stratum of dark grayish brown silt loam overlying a grayish brown stratified silt loam and very fine sandy loam (USDA 1973:13). Silty alluvial land occurs on lower ridges and in swales. The top stratum is a dark grayish brown

silt loam or silty clay. The underlying stratum is a stratified grayish brown silt loam and silty clay loam with some yellowish brown to gray mottling (USDA 1973:14).

The natural levee consists primarily of Commerce and Sharkey soil types. Commerce soils are somewhere poorly drained and have moderate to slow permeability. Generally, the top stratum is a dark grayish brown silt loam. The underlying strata consist of grayish brown and gray silt loam and silty clay loam (USDA 1973:9). Sharkey silty clay loam is a very slow, permeable soil that occurs in depressions in the lower parts of the natural levee. The top stratum consists of dark grayish brown to dark gray silty clay. The underlying stratum is a gray or dark gray clay with brownish mottling (USDA 1973:17). Generally, the natural levee is well suited to agricultural pursuits. The soils are fertile with slow to very slow runoff. Most cultivated areas are planted in sugarcane, although a number of truck crops also are grown (USDA 1973:11).

St. Charles Parish (RM 131.7-114.9). Soils within this portion of the project area are classified as the Convent-Commerce Association and the Commerce-Sharkey Association (USDA 1987). The Convent-Commerce Association is characterized by gently undulating, poorly drained loamy soils located on the batture of the Mississippi River. Because of their location, these soils are subject to scouring and deposition by fast moving floodwaters. The association is comprised of 49 percent Convent soils and 36 percent Commerce soils. The additional 15 percent is divided among a number of minor soil types (USDA 1987:10).

The Commerce-Sharkey Association consists of somewhat poorly drained to poorly drained loamy soils located on the natural levees of the Mississippi River. The somewhat poorly drained soils are located at higher positions within the levee profile and consist of silt loams and silty clay loams. The poorly drained soils are located at intermediate to low positions within the profile. The profile is represented by silty clay loams and clays. This association includes 54 percent Commerce soils and 31 percent Sharkey soils. The remaining 15 percent is composed of a number of minor soil types (USDA 1987:9).

As noted above, the batture consists primarily of Convent and Commerce soils. These somewhat poorly drained soils are subject to frequent flooding with the annual rise and fall of the Mississippi River. Convent soils typically are brown, mildly alkaline, fine sandy loams, very fine sandy loams, or silt loams. The underlying strata usually are grayish brown to gray, mottled silt loams. Commerce soils have a top stratum of dark brown silt loam or very fine sandy loam. The underlying strata are grayish brown, mottled, silt loams (USDA 1987:23). These soils support woodland type vegetation that includes cottonwood, oak, and hickory.

A number of different soil types are found on the natural levees of St. Charles Parish, including the Convent-Commerce soils discussed above. The Commerce silt loam frequently occurs in this portion of the study area. These are somewhat poorly drained soils located at high to intermediate positions with the levee profile. Typically, the top strata consist of dark grayish brown silt loams. The underlying strata consist of dark grayish brown, mottled silt loams. This soil type is well suited to cultivation and pasturage (USDA 1987:18-19).

Commerce silty clay loams are located in intermediate positions in the natural levee profile. The typical profile contains a top stratum of dark grayish brown, mottled silty clay loam. The underlying stratum consists of a gray silty clay loam, often mottled. This soil also is well suited to pasturage and cultivation (USDA 1987:20). Sharkey silty clay loams also are present within the project area. The top stratum consists of a dark grayish brown silty clay loam. The underlying strata consist of mottled clays grading from gray to dark gray. Sharkey soils are high in fertility and generally are used for cropland, pasture, and urban sites (USDA 1987:28).

Jefferson Parish (RM 114.9-112). Only a small portion of the study area is located within Jefferson Parish. This area is represented by a single soil association, the Sharkey-Commerce Association, found on the natural levees. The association consists of 50 percent Sharkey soils and 40 percent Commerce soils. The other 10 percent includes a number of minor soil types (USDA 1983:5).

The primary soil type of this association located in the study area is the Commerce silt loam. This somewhat poorly drained soil is located at a high position within the levee profile. The uppermost strata consist of very dark grayish brown silt loam. The underlying soil is a grayish brown silt loam to a dark grayish brown silt loam. This soil also is well suited to cultivation and pasturage (USDA 1983:21).

Floral and Faunal Associations

Two different floral and faunal communities exist within the present study area; these are associated directly with the two distinct geomorphic features present (i.e., the batture and the natural levee). The floral community of the batture consists primarily of hardwood forest. Stands of trees include sweetgum (*Liquidambar styraciflua*), green ash (*Fraxinus pennsylvania*), cottonwood (*Popular deltoides*), American elm (*Ulmus americanus*), water oak (*Quercus arkansana*), hackberry (*Celtis laevigata*), sycamore (*Platonus occidentalis*), and black willow (*Salix nigra*) (Mississippi River Commission 1987).

The natural levee is a highly fertile area well suited to cultivated crops and pasturage. Much of the area currently is under sugarcane cultivation. The natural floral community includes hardwoods such as live oak (*Quercus virginiana*), American elm (*Ulmus americana*), pecan (*Carya illinoensis*), and hackberry (*Celtis laevigata*). The understory includes water locust (*Gleditsia aquatica*), palmetto (*Sabal minor*), greenbrier (*Smilax rotundifolia*), and Spanish moss (*Tillandsia usneoides*).

During the historic period, important faunal species have included the black bear (*Euarctos americanus*), mountain lion (*Felis concolor*), deer (*Odocoileus virginianus*), cottontail rabbit (*Sylvilagus floridanus*), swamp rabbit (*Sylvilagus aquaticus*), raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), opossum (*Didelphis marsupialis*), gray squirrel (*Sciurus carolinensis*), and fox squirrel (*Sciurus niger*). In addition, several species of birds, reptiles, and fish were common in habitats both within and near the present project area (Lowery 1974; Shelford 1963).

CHAPTER III

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS

Previous Cultural Resources Studies near the Project Area

The current cultural resources survey includes portions of St. John the Baptist, St. Charles, and Jefferson parishes, Louisiana. This chapter reviews previous archeological investigations pertinent to the prehistory and history of the project area. Studies in the vicinity of the project area include Rivet (1976); Shenkel (1977); McIntire (1978); Beavers and Chatelain (1979); Glander et al. (1979); Castille (1980); Garrison et al. (1981); Goodwin et al. (1981); Iroquois Research Inc. (1982); New World Research (1983); Beavers (1983); Stuart and Greene (1983a, 1983b, and 1983c); Goodwin, Yakubik, and Gendel (1984); Goodwin, Yakubik, Stayner, and Jones (1984); Shafer, Torres, and Rhodes (1984); Shafer, Clemensen, and Rhodes (1984); Franks et al. (1986); Yakubik et al. (1986); Twiner (1986); and, Price (1987).

The first study in the vicinity of the current project area was a cultural resources survey of LA3127 from Vacherie to Killona, and LA 640 at Edgard, in St. James, St. John the Baptist, and St. Charles Parishes (Rivet 1976). During this pedestrian survey, one prehistoric site (16SJB5) dating from the Coles Creek period was identified. In addition, a site identified as a late nineteenth century tenant occupation was recorded. Neither of these sites were judged to be significant.

In 1977, Shenkel (1977) reported the results of a cultural resources survey of the Mississippi River Bank Protection Item located near RM 132.5-L, in St. John the Baptist and St. Charles parishes. Shenkel (1977:5) suggested that the absence of cultural resources in the upriver portion of the project area was due to the destructive effects of the Bonnet Carré crevasse and recent impacts from an existing boatyard. The absence of cultural resources in the downriver portion of the project area was attributed to subsidence.

A 1978 survey, conducted by McIntire (1978) at the proposed site of Shell Oil's Willow Bend chemical plant in St. John the Baptist Parish, resulted in the recordation of two sites (16SJB14 and 16SJB15) and five historic structures. Neither the two late nineteenth century mill sites, nor the five structures, were judged eligible for inclusion on the National Register of Historic Places.

Beavers and Chatelain (1979) reported on a cultural resources survey and assessment of the route of the proposed Marathon Pipe Line Company, 30" St. James to Garyville, Louisiana Pipeline in St. John the Baptist and St. James parishes, Louisiana. Their study consisted of a literature search and pedestrian survey supplemented by shovel testing along the planned pipeline route. No sites were recorded during the project.

Coastal Environments, Inc. (Glander et al. 1979) conducted a cultural resources evaluation for a proposed Mississippi River Bridge in the vicinity of Wallace, Louisiana. Four proposed bridge alignments located in St. James and St. John the Baptist parishes were examined. Archeological survey and testing, including magnetometer survey, was conducted at the Gramacy alignment; specific site assessments were undertaken at the three alternative alignments. Two nineteenth century sites (16SJB18 and 16SJB22) were judged to be potentially eligible for the National Register of Historic Places.

One study was conducted in the vicinity of the current project area during 1980. In this cultural resources survey, Castille (1980) evaluated the area of the Waterford 3 electric generating plant site, in St. Charles Parish, Louisiana. One site (16SC41), identified as the remains of a nineteenth/early twentieth

century sugar plantation was recorded. While no evaluation of the National Register of Historic Places eligibility of the site was made, avoidance during construction was recommended.

During 1981, two cultural resources studies were conducted in the vicinity of the current project area. Goodwin et al. (1981) reported on the cultural resources survey of the proposed sewerage system development project on the east bank of St. Charles Parish. No prehistoric or historic sites were identified during this investigation. Also in 1981, Garrison et al. (1981) conducted an archeological data recovery at two nineteenth century well sites (16SJB24 and 16SJB25), at Lucy Plantation in St. John the Baptist Parish. The study indicates that the two sites generally were contemporaneous, dating from the early to late nineteenth century. They both reflect the German/Acadian culture of the area.

Iroquois Research Institute (1982) recorded 14 sites during the cultural resources survey of 14 Mississippi River levee and revetment items. Three of these sites (16SJ32, 16SJ33, and 16SC47) were located near the project area, in St. James and St. Charles parishes. These sites dated from the nineteenth or early twentieth centuries. Site 16SC47 was identified as a concrete platform, located on the batture near RM 123.0-R (Iroquois Research Institute 1982:98). This platform probably functioned as a navigation light support. Site 16SJ32 was described as two low brick structures located near RM 154.5-R. No artifacts were associated with these structures (Iroquois Research Institute 1982:100-101). Site 16SJ33 was described as a brick and cinder block scatter, located just downriver from 16ST32, within Laurel Ridge Plantation. Iroquois Research Institute (1982:101) indicates that this site was referred to as an "old pumphouse" by some of the local residents. None of these sites was judged to be eligible for inclusion on the National Register of Historic Places.

In 1983, three studies were conducted in Jefferson Parish, in the vicinity of the current project area. New World Research, Inc. (1983) conducted a cultural resources survey of terrestrial and offshore locations of the Lake Pontchartrain and vicinity Hurricane Protection Project in Jefferson Parish, Louisiana. Also in 1983, Stuart and Greene reported on an archeological survey of the proposed Destrehan/Kenner levee enlargement (RM 121.1 to 109.8-L) (Stuart and Greene 1983a), and for the proposed Kenner Revetment (RM-117.2 to 108.6-L) (Stuart and Greene 1983b). These surveys were conducted in both Jefferson and St. Charles parishes. No significant cultural resources were identified during either of these surveys.

Also in 1983, Stuart and Greene (1983c) conducted an archeological survey in St. Charles and St. John the Baptist parishes. During this archeological survey of the proposed LaPlace/Destrehan Levee Enlargement (RM 133.1 to 121.1-L), no significant cultural resources were identified. Beavers (1983) conducted a preliminary archeological reconnaissance and assessment of Destrehan Plantation, in St. Charles Parish.

During 1984 and 1985, cultural resources investigations took place in St. James, St. John the Baptist, and St. Charles parishes. R. Christopher Goodwin & Associates, Inc., conducted three surveys in St. James Parish. Goodwin, Yakubik, and Gendel (1984) reported the results of investigations at Bourbon Plantation, on the Mississippi River, at RM 151.0-L in St. James Parish. Archival research, pedestrian survey, surface collection, and excavation provided evidence of a nineteenth century sugar house. The site had been severely impacted by fluvial processes.

Also during 1984, a portion of the Mississippi River batture between RM 148.5-R and RM 149.5-R, near Vacherie, in St. James Parish, was investigated (Goodwin et al. 1984). The Vacherie Batture Historic Site (16SJ40), with intact rice flume, and the Romeville Site (16SJ39) were identified during this survey. Further excavations were recommended. Site 16SJ40 is a multi-component, late eighteenth to early twentieth century historic site. Several rice flumes and privies constructed of cypress board were identified along the eroding Mississippi River bankline. Gravel and oyster shell lenses representative of relict levee roads clearly stratify concentrations of domestic habitation refuse dating from the early through late nineteenth century. During September 1987, R. Christopher Goodwin & Associates, Inc., performed data

recovery at the Vacherie site (16SJ40). Four areas of research were addressed. These areas included the postbellum development of rice agriculture on the Mississippi River, the differences between large and small farms along the river during the postbellum period, spatial variation in the arrangement of facilities and features between large and small farms, and formation and destruction of sites on the river batture (Goodwin et al. 1990).

Goodwin et al. (1986) reported the results of a cultural resources survey of the Angelina Revetment Item, also located in St. James Parish. During that survey, eight sites were recorded. Six of these sites, 16SJ41, 16SJ43, 16SJ44, 16SJ46, 16SJ47, and 16SJ48, yielded evidence of habitation refuse dating from the nineteenth and early twentieth centuries, but all eight sites lacked contextual integrity.

Shafer, Torres, and Rhodes (1984) reported on an archeological survey of the proposed Ormond levee project (RM 122-L), in St. Charles Parish. No cultural resources were identified during this survey. Another investigation by Shafer, Clemenson, and Rhodes (1984) was conducted in St. John the Baptist Parish, near Edgard, Louisiana. During this survey, eight sites or spot finds (16SJB28, 16SJB29, 16SJB30, 16SJB31, 16SJB32, 16SJB39, X16SJB-A, and IA-Edgard 3) were recorded within the limits of the current project area (Table 3). Each of these eight locations was relocated and retested during the current study. Data obtained from these eight loci are discussed in Chapters VIII and IX of this report.

Table 3. Sites and Spot Finds Identified by the National Park Service Survey of the Upper Edgard, Willow Bend, and Lower Edgard Construction Items.

STATE SURVEY NUMBER	FIELD NUMBER	DESCRIPTION
X16SJB-A	IA-ED-1	Headstone of Jean Pierre Toussaint
16SJB28	ED-1	Late nineteenth to early twentieth century domestic and industrial debris
16SJB29	ED-2	Rice flume, wooden revetment (doubtful) and nineteenth century domestic debris
16SJB30	IA-ED2	Surface scatter of nineteenth century artifacts (hypothesized to be old levee fill)
16SJB31	ED-3	Nineteenth century domestic debris (possible sealed deposit)
16SJB32	IA-ED-4	Concrete pad
None assigned	IA-ED-3	Concrete pad, industrial debris
16SJB39	IA-ED-5	Boiler or engine housing (possibly associated with Evergreen Plantation)

R. Christopher Goodwin & Associates, Inc., reported the results of a cultural resources inventory of the Montz Freshwater Diversion Project Corridor for the U.S. Army Corps of Engineers, New Orleans District (Franks et al. 1986). Fieldwork consisted of pedestrian survey and detailed mapping of the study area, including the town of Montz, in St. Charles Parish. Fieldwork also was designed to record and

evaluate the standing structures within the community of Montz, Louisiana. Detailed investigations and analyses were undertaken at the Montz Cemetery.

Another investigation conducted by R. Christopher Goodwin & Associates, Inc. in 1986 (Yakubik et al. 1986) reported the results of a cultural resources inventory of the Bonnet Carré Spillway. In the course of the survey, three sites were recorded: 16SC53, 16SC54, and 16SC52. Sites 16SC53 and 16SC54 consisted primarily of scattered historic bricks, and were judged to lack integrity due to the intensive earth moving activities noted throughout the area. Testing at 16SC52, the Roseland Sugar House, revealed intact foundation and support elements of the sugar house of Roseland Plantation; however, the structure itself apparently was demolished prior to the 1890s. The site was considered not eligible for National Register of Historic Places nomination. No additional work was recommended for sites 16SC52, 16SC53, and 16SC54.

Finally, two surveys in St. John the Baptist and St. James parishes were conducted in 1986 (Twiner 1986) and in 1987 (Price 1987). Neither one of these investigations identified any significant cultural resources.

National Register of Historic Places Properties

Five National Register of Historic Places properties occur near the project area in St. James Parish. All are standing structures or assemblages of buildings. One is the Oak Alley Plantation (Bon Sejour), located in the vicinity of the Vacherie construction item. St. Michael's Church Historic District, the Colomb House, Judge Poche Plantation House, and Manresa House of Retreats (Jefferson College) are located above RM 155.0 on the left descending bank of the Mississippi River.

Two National Register of Historic Places properties occur near the project area in St. John the Baptist Parish. They are the Bayou Jasmine Archeological Site located in the vicinity of LaPlace, Louisiana, and the San Francisco Plantation House located near Reserve, Louisiana.

Three National Register of Historic Places properties occur near the project area in St. Charles Parish. They are the Homeplace Plantation House (Kellar Plantation), located at Hahnville; the Destrehan Plantation located at Destrehan; and the LaBranche Plantation Dependency located in the vicinity of Kenner.

One National Register of Historic Places property occurs near the project area in Jefferson Parish, the Felix-Block Building located in Kenner. None of the aforementioned properties is located close enough to the project area to be effected by the planned undertakings.

Previously Recorded Sites Located Near the Project Area

The majority of archeological sites identified near the project area have been recorded within the last decades. A total of 50 previously recorded cultural resources loci have been located in the current project area. These 50 loci are presented in Table 4.

Table 4. Previously Recorded Historic Archeological Sites Located near the Project Area[1].

SITE NO.	SITE NAME	RIVER BANK AND MILE	RELATIONSHIP TO THE PROJECT AREA	RECORDED BY
St. James Parish				
16SJ6	Valcour Aime Plantation	Right, RM 152.0	Above Vacherie	Van Horn (1983)
16SJ8	Laura/DuParc Plantation	Right, RM 149.8	Above Vacherie	CEI (1979)
16SJ10	Homeplace Plantation	Right, RM 148.5	Above Vacherie	CEI (1979)
16SJ11	Hester Plantation	Left, RM 152.0	Above Vacherie	CEI (1979)
16SJ12	St. Elmo Plantation	Left, RM 150.0	Above Vacherie	CEI (1979)
16SJ13	Lutcher & Moore Lumber Company	Left, RM 147.0	Above Vacherie	CEI (1979)
16SJ14	St. Joseph Plantation	Right, RM 152.9	Above Vacherie	CEI (1979)
16SJ22	Gaudet House	Left, RM 148.3	Above Vacherie	CEI (1979)
16SJ25	Bessie K.	Right, RM 153.8	Above Vacherie	Barnes (1980)
16SJ29	T. Pouche	Left, RM 149.5	Above Vacherie	Barnes (1980)
16SJ36	Armant Plantation House	Right, RM 150.6	Above Vacherie	Van Horn (1983)
16SJ37	Welham Plantation	Left, RM 153.7	Above Vacherie	Van Horn (1983)
16SJ38	Bourbon Plantation	Left, RM 150.7	Above Vacherie	RCG (1983)
16SJ40	Vacherie Batture	Right, RM 148.8	Above Vacherie	RCG (1984)
16SJ41	Angelina Site 1	Left, RM 148.0	Above Vacherie	RCG (1985)
16SJ42	Angelina Site 2	Left, RM 147.9	Above Vacherie	RCG (1985)
16SJ43	Angelina Site 3	Left, RM 148.2	Above Vacherie	RCG (1985)
16SJ44	Angelina Site 4	Left, RM 146.3	Opposite Vacherie	RCG (1985)
16SJ45	Angelina Site 5	Left, RM 146.2	Opposite Vacherie	RCG (1985)
16SJ46	Angelina Site 6	Left, RM 148.3	Above Vacherie	RCG (1985)
16SJ47	Angelina Site 7	Left, RM 147.6	Above Vacherie	RCG (1985)
16SJ48	Angelina Site 8	Left, RM 147.6	Above Vacherie	RCG (1985)
St. John the Baptist Parish				
16SJB5	Bayou Becnel	N/A	Below Willow Bend	Rivet (1976)
16SJB6	Edgard Plantation	Right, RM 137.6	Below Willow Bend	Rivet (1976)
16SJB18	Zeringue House	Right, RM 146.0	Below Vacherie	CEI (1979)
16SJB19	Hymel	Right, RM 146.0	Below Vacherie	CEI (1979)
16SJB20	Schexnayder	Right, RM 146.0	Below Vacherie	CEI (1979)
16SJB22	Tassin House	Right, RM 137.5	Above Lower Edgard	CEI (1979)

Table 4, continued

SITE NO.	SITE NAME	RIVER BANK AND MILE	RELATIONSHIP TO THE PROJECT AREA	RECORDED BY
16SJB23	Willow Grove Store	Right, RM 144.7	At Vacherie	CEI (1979)
16SJB24	North Lucy	Right, RM 135.0	At Lower Edgard	Garrison et al. (1981)
16SJB25	South Lucy	Right, RM 135.0	At Lower Edgard	Garrison et al. (1981)
16SJB27	Goldmine Plantation House	Right, RM 136.0	Above Lower Edgard	Van Horn (1983)
St. Charles Parish				
16SC18	Destrehan Plantation	Left, RM 121.0	Below Waterford	CEI (1978)
16SC19	Homeplace Plantation	Right, RM 124.2	Below Waterford	CEI (1978)
16SC20	Ellington Manor	Right, RM 120.2	Above Luling	CEI (1978)
16SC21	Lehmann House	Right, RM 123.6	Below Waterford	CEI (1978)
16SC22	Fashion Plantation	Right, RM 123.5	Below Waterford	CEI (1978)
16SC23	Little Red Church	Left, RM 122.0	Below Waterford	CEI (1978)
16SC24	Ormond Plantation	Left, RM 122.9	Below Waterford	CEI (1978)
16SC25	La Garconniere	Left, RM 117.5	Opposite Luling	CEI (1978)
16SC47	Concrete Platform	Right, RM 122.5	Above Luling	Garson (1981)
16SC52	Roseland Sugar House	Left, RM 128.0	Opposite Waterford	RCG (1986)
16SC53	Scatter A	Left, RM 128.0	Opposite Waterford	RCG (1986)
16SC54	Scatter B	Left, RM 128.4	Opposite Waterford	RCG (1986)
Jefferson Parish				
16JE136	None	Left, RM 111.0	Below Luling	IRI (1980)
16JE137	None	Left, RM 112.5	Below Luling	Garson (1980)
16JE138	Elmwood Plantation	Left, RM 107.6	Below Luling	RCG (1983)
16JE140	Dusseau Plantation	Right, RM 114.0	At Luling	Clemensen (1983)
16JE141	Orange Grove Plantation	Right, RM 114.0	At Luling	Exnicios (1987)
16JE156	Magnolia Lane	Right, RM 105.0	Below Luling	RCG (1986)

KEY: CEI = Coastal Environments, Inc.
RCG = R. Christopher Goodwin & Associates, Inc.
IRI = Iroquois Research Institute

[1] = All recorded sites date exclusively from the Historic Period, except 16SJB5 which also has a prehistoric component. This data originated from the State Files, Louisiana Division of Archaeology, Department of Culture, Recreation and Tourism.

CHAPTER IV

GEOMORPHIC PROCESSES AND LAND-MAN RELATIONSHIPS

Introduction

The southeastern Louisiana parishes were formed as part of the Mississippi Deltaic Plain over the last 9,000 years. The geomorphic processes that built the regional delta landform are important factors to consider when conducting subsurface archeological investigations. The elevated natural levee and batture were preferred locations for human habitation. Furthermore, anthropogenic activities near the Mississippi River have impacted the local cultural resources base. This chapter addresses the regional geomorphic processes that formed the Mississippi Deltaic Plain, and the effects that riverine processes and man-made constructions have had on the cultural resources in the project area.

Geomorphic Processes

The Mississippi River delta is the largest active delta system in North America. In fact, the Mississippi River is unique because most North American rivers lack deltas of any kind, and instead have mouths that are embayed, i.e., the sea has entered the river mouth and flooded it (Lewis 1976). The Mississippi River Deltaic Plain, which is the eighth largest deltaic plain in the world, is a classic river-dominated delta system. When compared with 34 other major delta systems from around the world, the Mississippi River delta ranks first in its degree of riverine dominance over marine processes (Wright et al. 1974). The silts and clays deposited throughout the Mississippi delta over thousands of years include materials from mountains and valleys as far away as the Rockies (Kolb and Van Lopik 1958). To a lesser degree, periodic glaciation and encroachment from the sea (via the Gulf of Mexico) also have contributed layers of organic and inorganic materials to the delta.

The cycle of delta formation and subsequent abandonment, superimposed on an overall pattern of subsidence associated with the Gulf Coast monogeosyncline, has been and continues to be the dominant geomorphic process operating in southeastern Louisiana. A delta, broadly defined, is a landform characterized by depositional features, both subaerial and subaqueous, that are formed by fluvial sediments in the region around a stream mouth. Characteristic depositional features include distributary channels and their natural levees, river-mouth bars, interdistributary bays, tidal flats, tidal ridges, beaches, eolian dunes, swamps, marshes, and evaporite flats (Coleman and Prior 1983:139).

Within the last five thousand years, delta formation at the mouth of the Mississippi River has created most of the land in southeastern Louisiana, south of Baton Rouge. This is an ongoing process with literally tons of material being deposited into the Gulf daily. The Mississippi River annually carries a combined sediment load of approximately 500 million tons to the Gulf of Mexico (Lauden 1978). The amount of sediment carried in any one day is determined by the velocity and turbulence of the current. When the Mississippi River reaches the Gulf, there is a sudden drop in velocity, and the heaviest sediments are dropped at the mouth of the river where they form river mouth bars. These bars often bifurcate the flow of the river and pose a constant hazard to shipping. The river mouth bar builds above the water in much the same fashion as the natural levee during floods and high water. When a river mouth bar becomes visible above the water, it is called a shoal. The river is bifurcated further with the development of more shoals. Between these bifurcations, or distributaries, a number of basins are formed; they are bounded by the natural levees of the distributaries, thus their name, interdistributary basin. These interdistributary basins often are filled in by flooding and contain a high proportion of clay. When the basin is filled to within

one or two inches of the surface of the water, marsh grass often will take root. The clay in these basins is constantly undergoing compaction and desiccation, resulting in a constantly sinking environment. The continual growth of marsh grass, sedges, and rushes acts together with sediment deposition by flooding to create an intertidal mudflat. This keeps the area from becoming an interdistributary lake or bay, and thus from being reclaimed by the Gulf of Mexico.

The Mississippi River has had several major episodes of delta building in the past five thousand years; each delta represents a major change in the course of the river. A general chronological framework of these deltas has been established through decades of research by geologists, geomorphologists, and archeologists. Landmark studies include those of Russell (1936), Fisk (1944, 1956), Kolb and Van Lopik (1958), McIntire (1958), Welder (1959), Gould and Morgan (1962), Coleman and Gagliano (1964), Frazier (1967, 1974), Gagliano and van Beek (1970), Gagliano et al. (1979), Saucier (1974), Adams et al. (1976), and Gagliano (1984).

Frazier (1967) published the most comprehensive effort to date. He used data from more than 1,000 borings to define 16 individual but partially overlapping or coalescing lobes, each representing a pulse of delta building that occurred over a period of 200 to 1,500 years. Frazier also defined five major delta complexes, or groups of lobes; collectively, these complexes comprise the deltaic plain.

The Mississippi River has experienced at least seven lobe building episodes. The earliest of these, the Sale-Cypremort or Maringouin lobe, began building approximately 8000 years before present (B.P.) (Smith et al. 1986:38). It extended into what is today the Atchafalaya Bay. The next lobe to form, the Cocodrie, was active between approximately 5000 and 3500 B.P. (Gagliano et al. 1975:41). The Cocodrie lobe shifted sediments west of the former alluvial valley; however, some deposition of deltaic sediments occurred in the Pontchartrain Basin (Saucier 1962:62). The Teche Complex developed in the Terrebonne Bay region between 5800 and 3500 B.P. This series of coalesced lobes was succeeded by the St. Bernard delta complex, a series of delta lobes that formed within the Pontchartrain Basin.

During the St. Bernard delta building episode, the trunk channel and its distributaries deposited materials on top of the older Cocodrie surfaces that had subsided prior to the development of the St. Bernard complex (Saucier 1962:70). Deposition continued through the St. Bernard complex until approximately 200 B.P. (Smith et al. 1986:38-40). At that time, the trunk channel turned southward near the present city of Donaldsonville, Louisiana, and began forming the LaFourche delta complex. Approximately 100-1200 B.P., the trunk stream shifted eastward again occupying a portion of the former St. Bernard course (Smith et al. 1986:44-45). The Plaquemines delta lobe formed as a result of this shift in the trunk stream of the river. Approximately 500 B.P., the Modern or Balize delta began to extend southeastward from the Plaquemines delta. Of primary interest to the study area is the development of the St. Bernard delta complex and the later reoccupation of its former trunk channel. This course of the river has remained the significant channel of the river to the present time (Saucier 1962:68).

Riverine Processes

The Mississippi River deltaic plain can be divided into two parts - the upper deltaic and lower deltaic plains. The upper deltaic plain is older; it lies above the area of significant tidal/marine influences including the area of salt water intrusion. It is usually a continuation of the upriver alluvial valley where riverine processes predominate (Coleman and Prior 1983:140). The present project area lies primarily within this zone. The following section describes the riverine processes that are relevant to the upper deltaic plain and the study area.

The Mississippi River contains itself by building natural levees on both banks. Levees generally are formed when the river floods. As the river level rises above its channel, the excess water is spilled onto

the surrounding countryside where sediments then are deposited. This results in the formation of a low, wedge-shaped landform that parallels the river. The river sediments are carried in three ways. The heaviest particles (i.e., cobbles and boulders) are rolled along the bottom of the river channel and are referred to as the bed load. Lighter particles (i.e., sand, silt, and clay) are carried by the current and make up the suspended load. Soluble materials (i.e., salts, evaporates and other trace quantities) travel in solution. When the floodwaters top the channel of the river, the velocity of the current decreases as the water spreads onto the surrounding area. The suspended load then settles. The bed load generally is contained in the channel and pushed to the mouth of the river before settling. The load carried in solution precipitates when super saturation is reached. In this manner, the river builds its own natural levees. Levees are significant landforms in the Louisiana landscape; they represent the highest ground in the delta region.

Cutbanks are observed on the side of the river closest to the thalweg, (the deepest part of the river channel), where the velocity and turbidity of the current often scours the bank and causes slumping or caving banks to occur. The point bar is the side of the meander positioned furthest from the thalweg, where the velocity and turbidity of the current decrease. Point bars are subject to active and gradual deposition. The surfaces of point bars often are grooved with ridges and intervening swales where deposition has built up to push the meander into a U shape.

Changes in the landscape by natural agencies have implications for the preservation and recovery of archeological remains within the project area. Natural processes include overbank deposition and lateral migration of the river. These processes can obscure and destroy any cultural resources that occur on the associated features. Deposition of sediments on point bars and natural levees can cover both historic and prehistoric sites. Through desiccation and compaction of the clays, these sites can become more deeply buried. On cutbanks, where scouring and subsequent slumping are major processes, sites can be eroded and carried downstream.

Previous Construction Affecting the State of Cultural Resources

Human activity, including the construction of artificial features such as protection levees, borrow pits, and revetments, has effected the cultural resources within the study area. The need for flood control has been recognized since the earliest settlement of the Mississippi Valley. As French settlements were established along the Lower Mississippi River, so too were levees to protect against flooding.

The first levees were similar in design and construction to European ones; the cross sections were trapezoidal in shape and had steep slopes (Elliott 1932:172). By 1735, early Creole levees were constructed for a distance of 48 km (30 mi) above New Orleans (Elliott 1932:159; Harrison 1961:55). When the earliest levees were constructed, little or no provision was made to maintain uniform dimensions or other specifications. In fact, it was left to each planter to use his own judgment as to the size and type of levee required (Harrison 1961:55). The crowns of these earliest levees were quite low, seldom higher than 1.2 m (4 ft). This common form of levee persisted for at least a hundred years (Forshey 1874:270-271). These early levees provided riparian proprietors the flood control necessary to establish their plantations, to pasture cattle, and to cultivate fields.

The construction of Creole levees during the 1700s may have affected prehistoric archeological sites. Many of the Creole levees were built in areas likely to contain earlier cultural resources and could have disturbed the upper surfaces while simultaneously protecting the lower intact portions of these resources. The excavation of any adjacent borrow areas could potentially destroy subsurface cultural resources contained within the area.

After 1816, rapid progress was made on the construction of levees. Local and state governments gave increased aid to the riparian proprietors for larger and stronger levees. This led to regional legislation on levee location and construction in 1846. Between 1846 and 1879, the need for comprehensive flood control action initiated numerous investigations, proposals, commissions, and reports. Two of the more important investigations were: *Report of the Secretary of War Communicating Reports in Reference to the Inundations of Mississippi River* (1852), by Charles Ellet, and Humphreys and Abbot's *Report upon the Physics and Hydrolics of The Mississippi River*, published in 1867. These investigations were important in establishing a basis for understanding river dynamics and flood control techniques. However, "these efforts accomplished little towards the development of effective levee protection, as the floods from 1858 to 1874 abundantly testified" (Elliott 1932, Vol II:173).

Annual flooding of the Mississippi River throughout the historic period resulted in the passage of various state and local flood control legislation to protect the residents of the lower Mississippi River Valley. The creation of the Mississippi River Commission (MRC) by the congressional act of June 28, 1879, marked the beginning of a new period whereby the Federal Government became an active agent in flood control management. It also marked the beginning of a new period of levee construction. The MRC standardized Federal levee construction practices, and in 1882, it promulgated the following specifications:

> Crown width 8 feet, otherwise directed by the engineer; side slopes to be designated by the engineer; borrow pit to be located not less than 20 feet from the riverside toe of the structure; ground occupied by the levee to be cleared of trees, stumps, and all other perishable material; and trees and stumps to be cut level with the surface of the ground. When the levee was less than 5 feet in height, all stumps were grubbed out. The entire surface of the levee foundation was broken by spade or plow in order to bend with the levee section. A muck ditch 4 feet wide at the top, 2 feet wide at the bottom, and 3 feet deep was required. All stumps and roots crossing this ditch were to be removed beyond the base of the levee. The muck ditch was to be located on the riverside of the center line and 3 feet from that line (Elliott 1932 Vol II:174).

Hewson (1878:80) suggested that the clearing along the line of the levee ought to extend to all trees growing within their own respective lengths on either side of the crown of the levee. This effort was necessary because during high water the falling of a tree, from either side, across the levee, could cut down through the crown at least several feet, leading to the inundation of the adjoining plantations. Commenting on the excavation of levee borrow areas Hewson noted:

> Excavation of the ground outside a Levee is objectionable. In sandy or other weak earths it is even worse so than in clays. Under any circumstances such cuts ought to be removed as far as possible from the berm of the Levees but never less than 3 m (10 ft). The "pits" dug in such positions ought not to be continuous; but ought to be divided from each other by walls preserving the continuity of the natural surface. Separated thus from each other, these excavations will fill up the sooner under the depositions of floods (Hewson 1878:84).

Harrison (1961:101-102) reports that by 1880, Mississippi River levees averaged about 2 m (7 ft) in height. By modern standards, they were poorly constructed, being irregular in both grade and section. With the passage of the 1917 Federal Flood Control Act, and especially with the passage of the 1928 Flood Control Act, many of the activities of local levee boards gradually were assumed by the U.S. Army Corps of Engineers. Under the 1917 act, local interests were required to furnish all rights-of-way, to bear a substantial part of the cost of levee construction, usually one-third to one-half. Under the 1928 act, all

construction costs were assumed by the United States; the levee boards were responsible for obtaining rights-of-way, and for maintaining and inspecting the levee system.

New levee construction increased during the early decades of the twentieth century; levee standards also were revised. The new levees increased the confinement of the river waters, and increased the elevation of the river at flood stage. As a result, between 1881 and 1928, the levee grades increased. The levee grade at the Carrollton gauge was 6 m (18.1 ft) in 1881, and 7.7 m (25.2 ft) in 1928 (Elliott 1932, Vol II:179). In addition to the increased levee grades, soil materials were regulated to ensure strength. Three sections of different alluvial soil materials were laid down: clay, loam, and sand. In 1928, the top section was comprised of 75 percent or more clay, the middle section was comprised entirely of loam, and the bottom section was made of 75 percent or more sand (Elliott 1932, Vol II:175).

As levee construction became standardized, borrow methods followed suit. Borrowing from the land side of the levee no longer was used because it undermined the levee foundation and caused seepage. The post 1928 borrow pits were constructed on the riverside of the levee toe; borrows were separated by a large berm and were relatively shallow. Despite increased hauling capacities, borrow pits still were excavated in close proximity to the levee construction area. Better borrowing technology, such as hydraulic dredges, and tower machines (a slack cableway apparatus), made borrowing more efficient but required larger berm areas and better borrow pit roads and railways (Elliott 1932, Vol II:180-183).

With the increase in levee grade and section, levee subsidence increased. To prevent subsidence, which occurs primarily on the riverside of the levee, revetment construction was initiated. Revetment construction was designed to stop lateral migration of the river and undercutting of the artificial levee. Although revetment bank protection for levees was more expensive than levee set backs, it prevented bankline cavings, especially at river bends. Elliott defined a revetment as "a continuous covering which protects the bank from current attack" (Elliott 1932, Vol II:226). Revetments consist of continuous pavement laid along the bank below the water surface up to the toe of the bankslope. The materials for revetment usually were stone riprap or concrete mats, or both. Before applying the revetment, bank clearing and bank grading were necessary.

Archeological Site Prediction

Most frequently, archeologists working in the alluvial and coastal plain have postulated site locations based on observed correlations between site types and land forms, or specific terrain features. Natural levees, point bar ridges, and low terrace escarpments are known to contain prehistoric sites. In the coastal plain region, sites most often are found on the natural levees of distributary channels, and on the beach ridges and salt domes of the Gulf Coast. These areas and landforms were preferred for a variety of reasons including: optimum soil drainage, permeability, and slight sloping; availability of natural resources; proximity to routes of transportation; and, protection from natural hazards (i.e., flooding, hurricanes, etc.).

Behavioral models with higher order explanatory power, i.e., capable of explaining why certain site locations are chosen over others, are absent in the regional archeology (Smith et al. 1986:73). Geomorphic reconstruction remains the most popular technique for predicting site locations. The complexities of the natural environment and the affects of the human intervention previously discussed provide further complications when attempting to predict site locations.

Applications to the Project Area

In the preceding discussions, the effects of river action and of anthropogenic activities, e.g., levee construction, have been discussed with reference to cultural resources in the study area. It appears likely that cultural resources occur within the project area. Vertical accretion or deposition of sediments during floods and high water stages affects the preservation and destruction of sites in the project area. The Mississippi River batture has built up through vertical accretion more than any of the surrounding countryside because of the containment of this area by the artificial levee. For this reason, intact archeological sites are expected to be deeply buried.

Site destruction within the project area is expected to result from fluvial processes. Local scouring of the natural levee and point bar deposits is expected to have occurred prior to and immediately after construction of the original protection levees. Subsequent scouring would have less severe impacts to cultural resources due to the amount and restrictive nature of deposition within the batture. Lateral migration and cutbank erosion of the natural levee and overlying batture deposits appear to represent the primary riverine processes resulting in site destruction in the project area.

The following discussion examines each of the nine project items identified on Figure 1 and in Table 1. Figures 13 through 36 illustrate changing banklines, levee locations, and locations of standing structures that appear on historic maps dating from the late nineteenth and early twentieth centuries. Approximately 113 km (70 mi) of river bank (RM 147 - 112, both right and left descending banks) are depicted (Figures 13 through 36). Mississippi River Commission Charts from 1893 and 1921; levee district caving banks series maps; hydrographic survey charts; and, USGS quadrangles were mapped to scale on a recent 7.5' USGS quadrangle base. This process was undertaken by professional cartographers, using the camera lucida. Mylar film originals were color coded to assist in segregating historic bankline and levee alignments. Intermediate positives then were analyzed by a geomorphologist and by archeologists to interpret conditions and formulate predictions regarding the nature of archeological deposits within each construction item. Generalized geomorphic conditions observed within each construction item are presented in Table 5.

Vacherie Revetment

The Vacherie revetment project is located on a large point bar which forms a broad bend in the river on the west bank of the Mississippi River between RM 146.7 and 144.0 (Figure 13). This area can be divided into two distinct areas of geomorphic activity: 1) relative stability, and 2) aggradation. The upriver segment of the construction item between RM 146.7 and 144.4-R has achieved equilibrium between the forces of erosion and deposition; there has been little change in the shape and character of the edge of the river from 1876 to the present. However, the downriver segment of the item between RM 144.4 and 144.0 has aggraded laterally approximately 325 m (1,066 ft) during the past century.

The upriver section of the item currently is undergoing sedimentation by vertical accretion during floods and high water. Downriver aggradation is occurring due to the decrease in velocity and turbidity of the water as it makes the turn around the point bar; the thalweg is furthest from this stretch of batture. Due to the stability of the upriver section, and to aggradation at the downriver section of the Vacherie point bar, previous levees have not been washed away. Rather, they have been moved or modified following changing levee specifications.

The levee between RM 146.7 and 146.6-R has been set back approximately 50 m (164 ft) between 1816 and the present. Between RM 146.4 and 145.3, the present levee is positioned about 35 m (115 ft) back from the 1876 location of the levee; it is at the same location as the 1921 levee. Between RM 145.3 and 144.5, the modern levee has been set back. The alignment is less angular than earlier levees. The

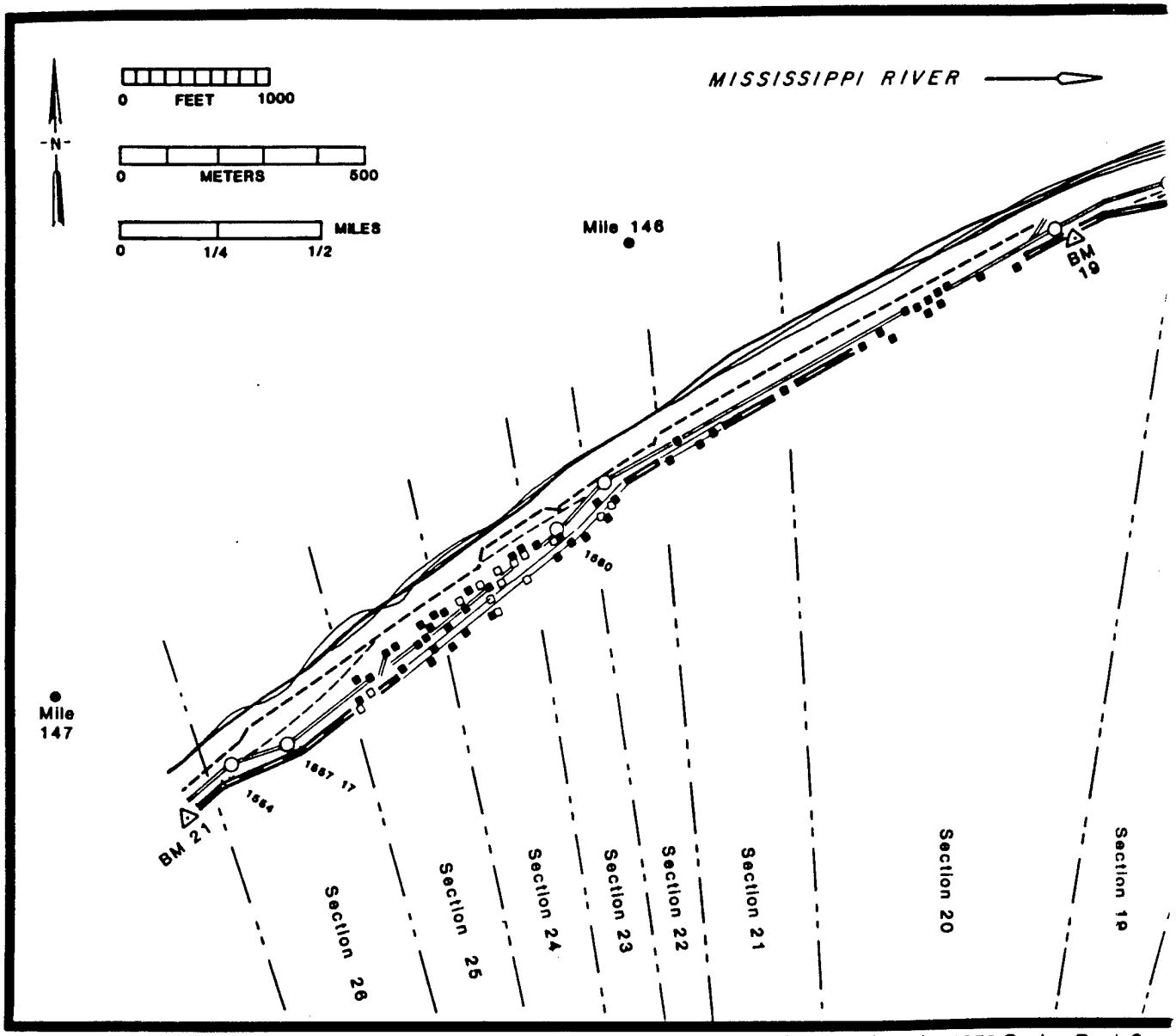
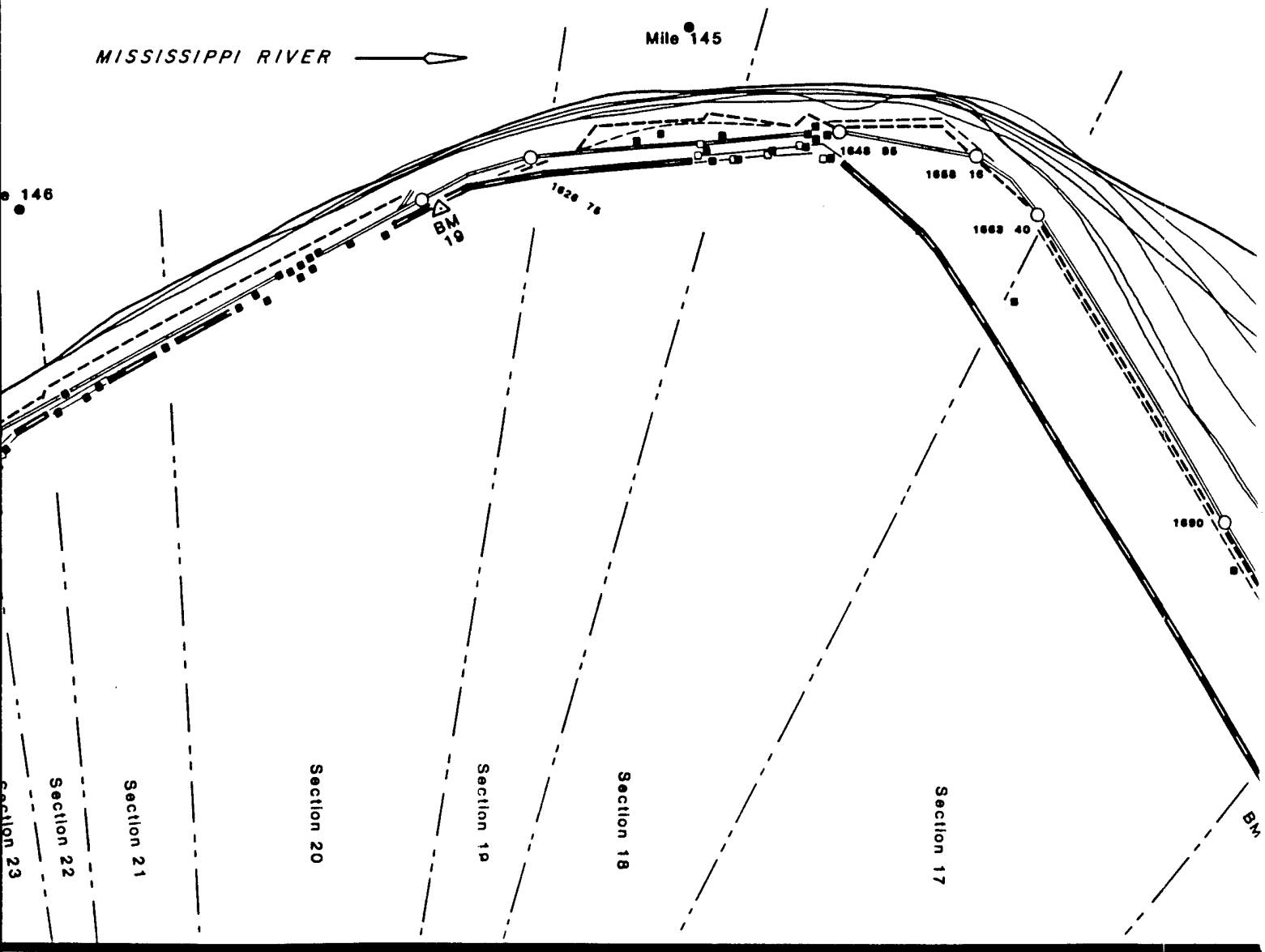
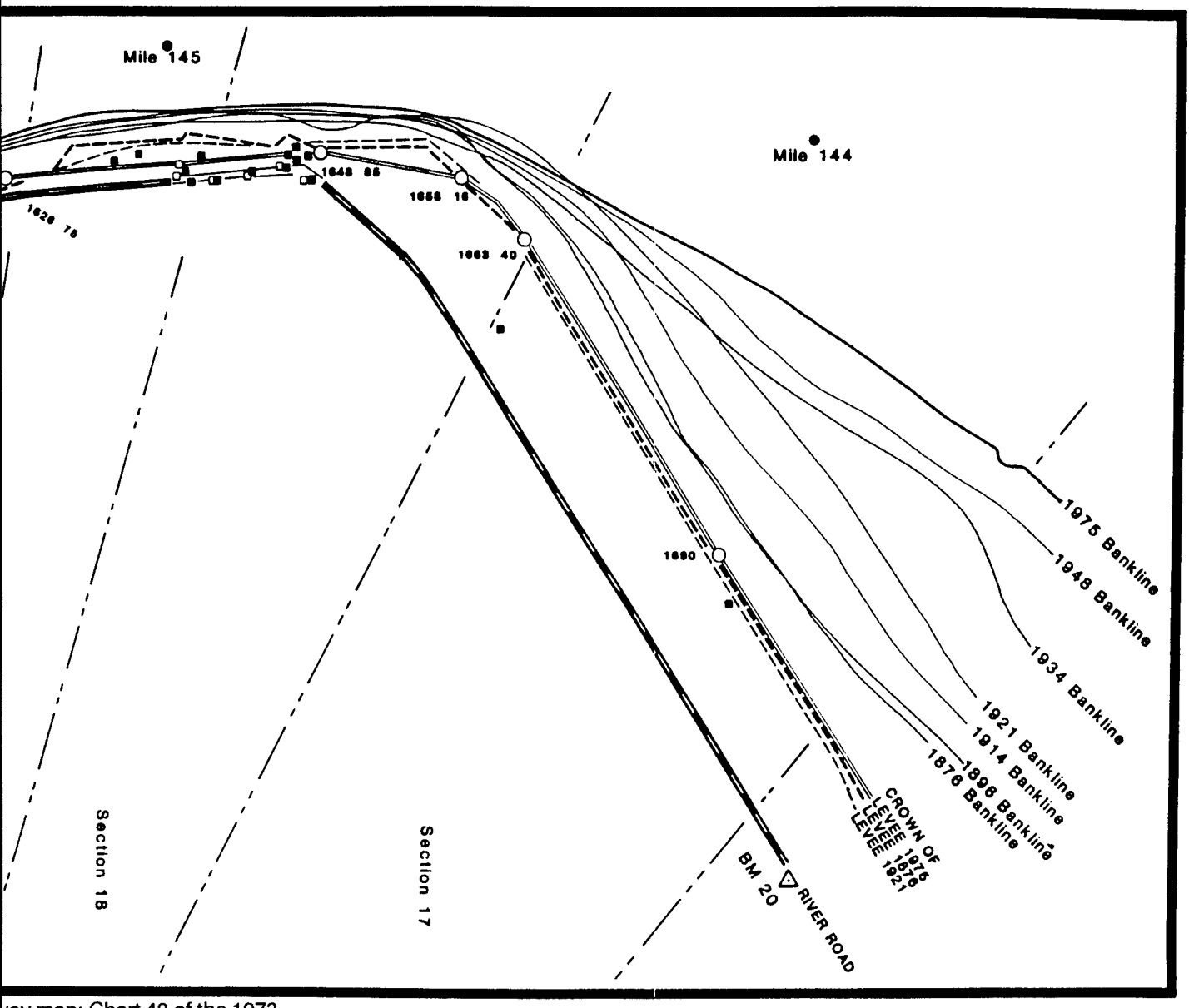


Figure 13. Composite of Chart 72 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Surv 1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Lutcher, Louisiana, 7.5'series topo Miles 146-144 (R).



Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 42 of the 1973-
the 1962 photorevised Lutcher, Louisiana, 7.5'series topographic quadrangle, showing



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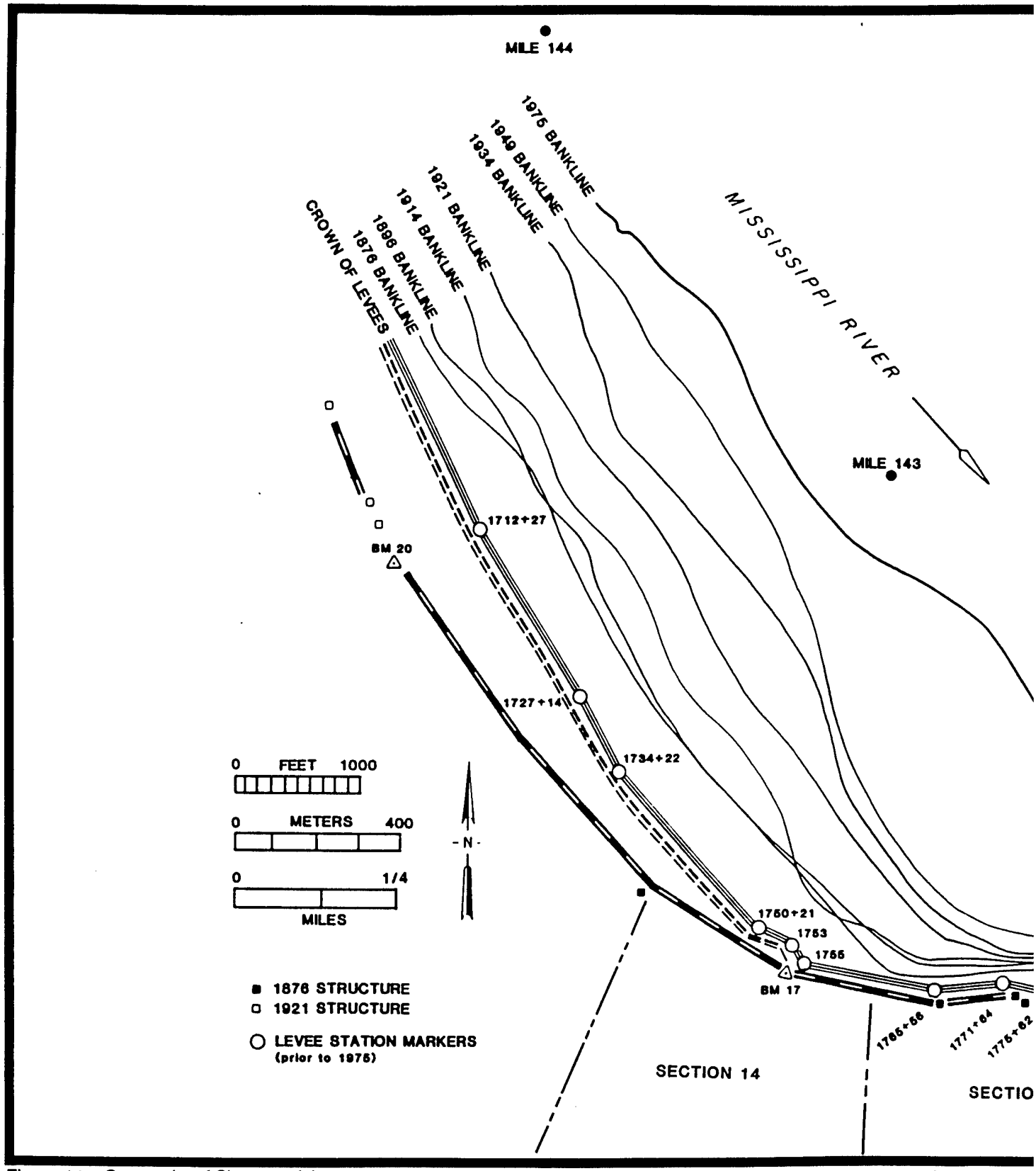
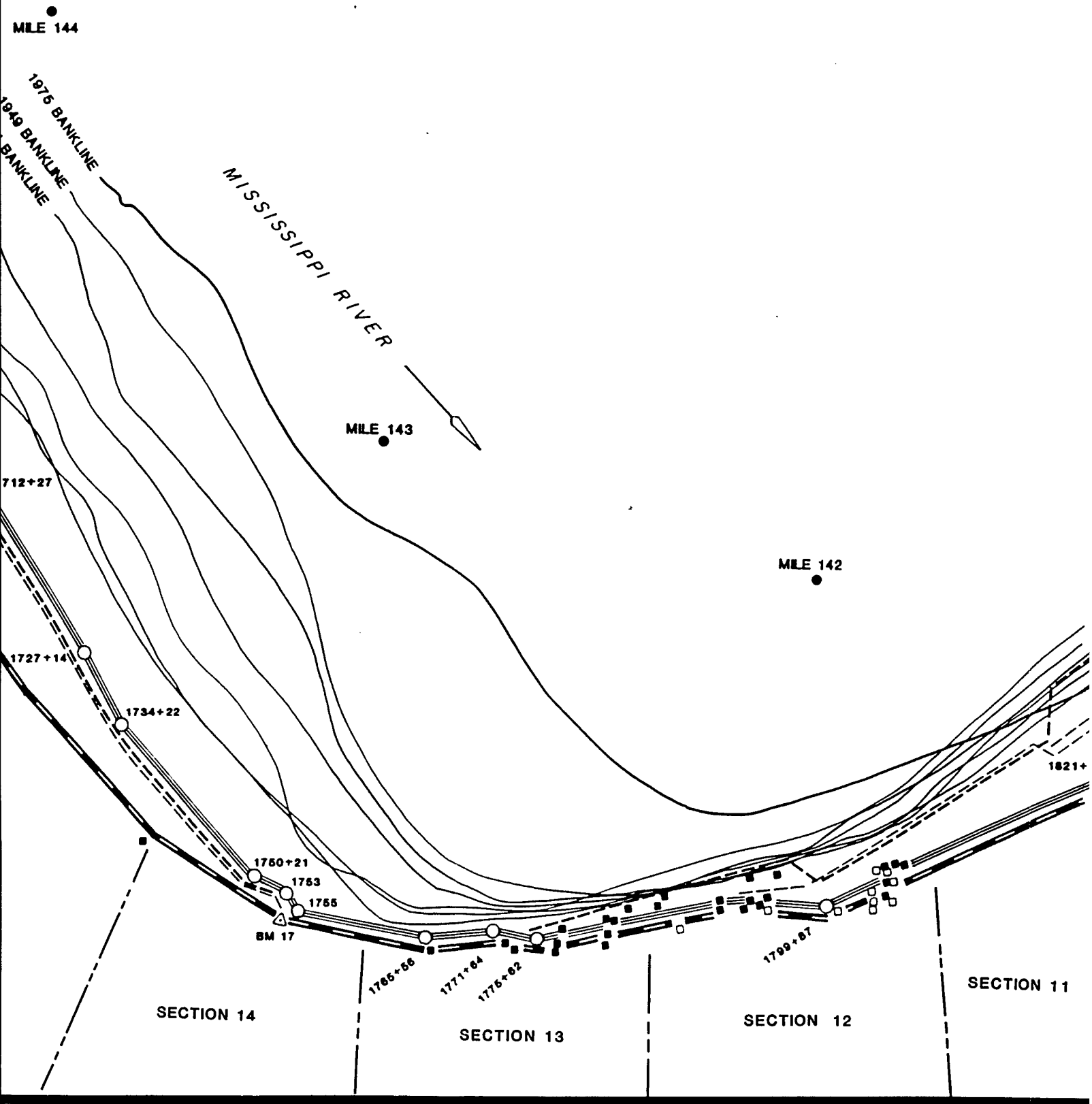
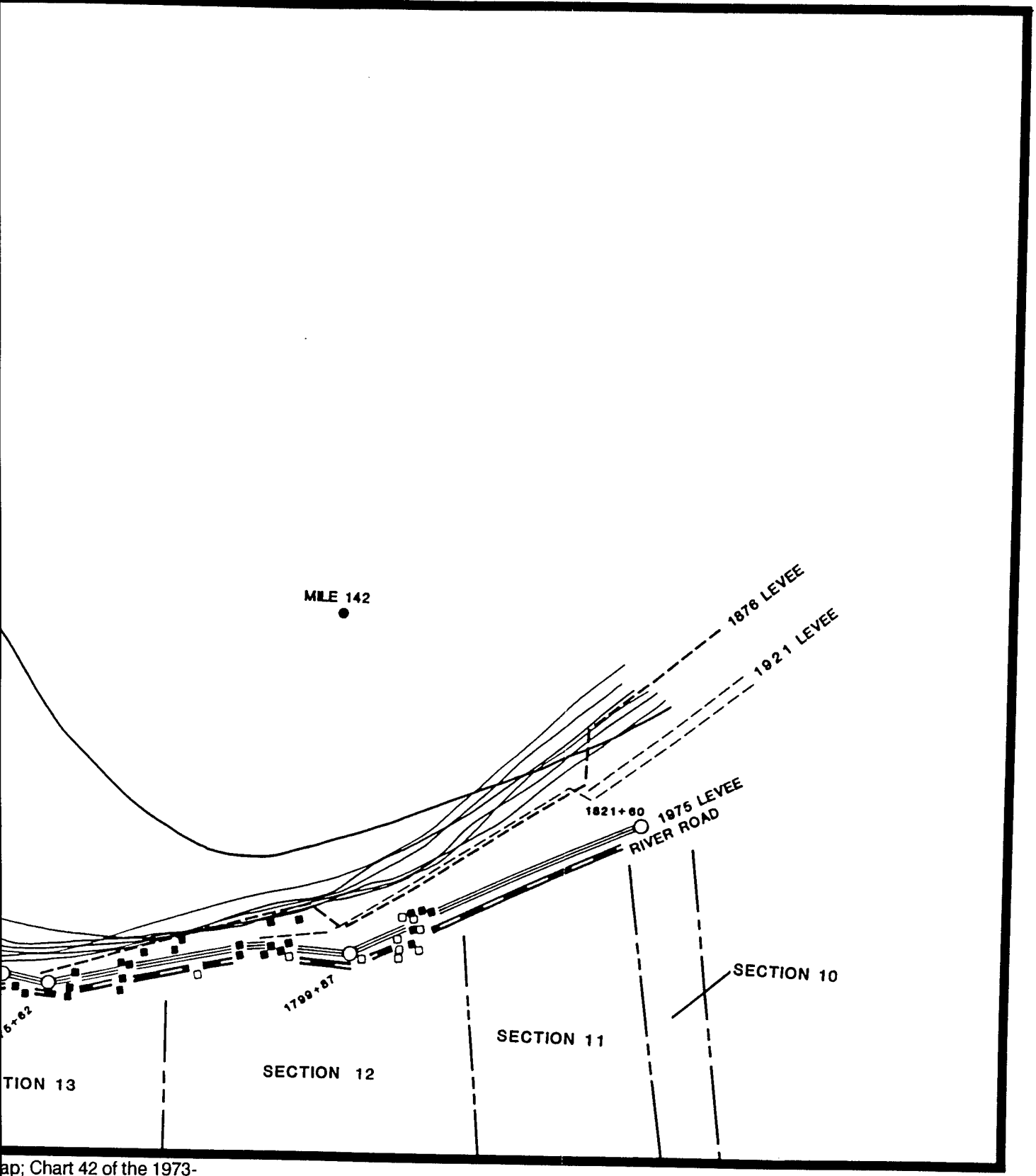


Figure 14. Composite of Chart 72 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey map; 1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Lutcher, Louisiana, and the 1962 photorevised 7.5' series topographic quadrangle, showing Miles 144-142 (R).



Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 42 of the 1973-
the 1962 photorevised Lutcher, Louisiana, and the 1962 photorevised Reserve, Louisiana,
es 144-142 (R).

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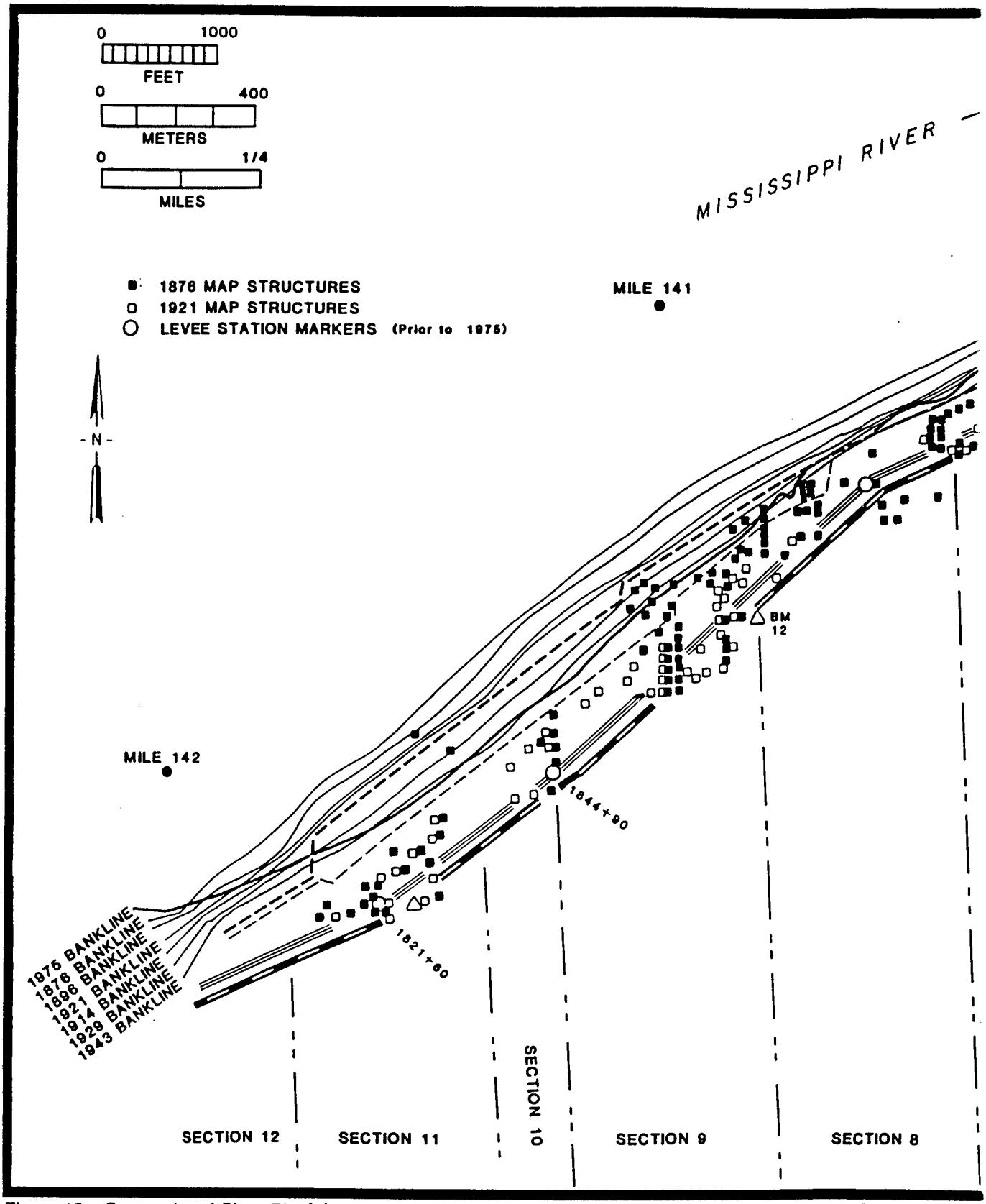
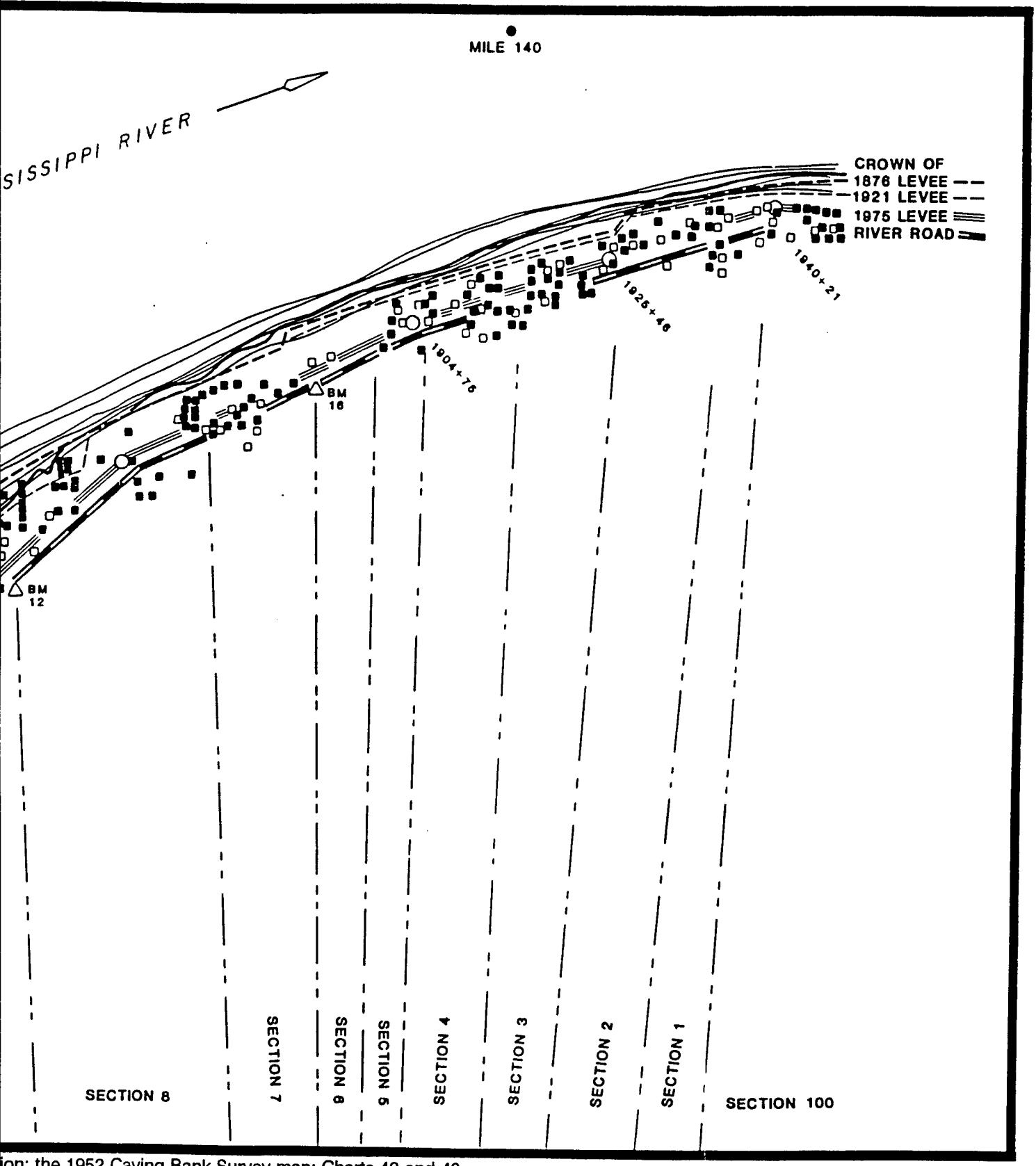


Figure 15. Composite of Chart 72 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank St of the 1973-1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Reserve, Louisi quadrangle, showing Miles 142-140 (R).



ion; the 1952 Caving Bank Survey map; Charts 42 and 43
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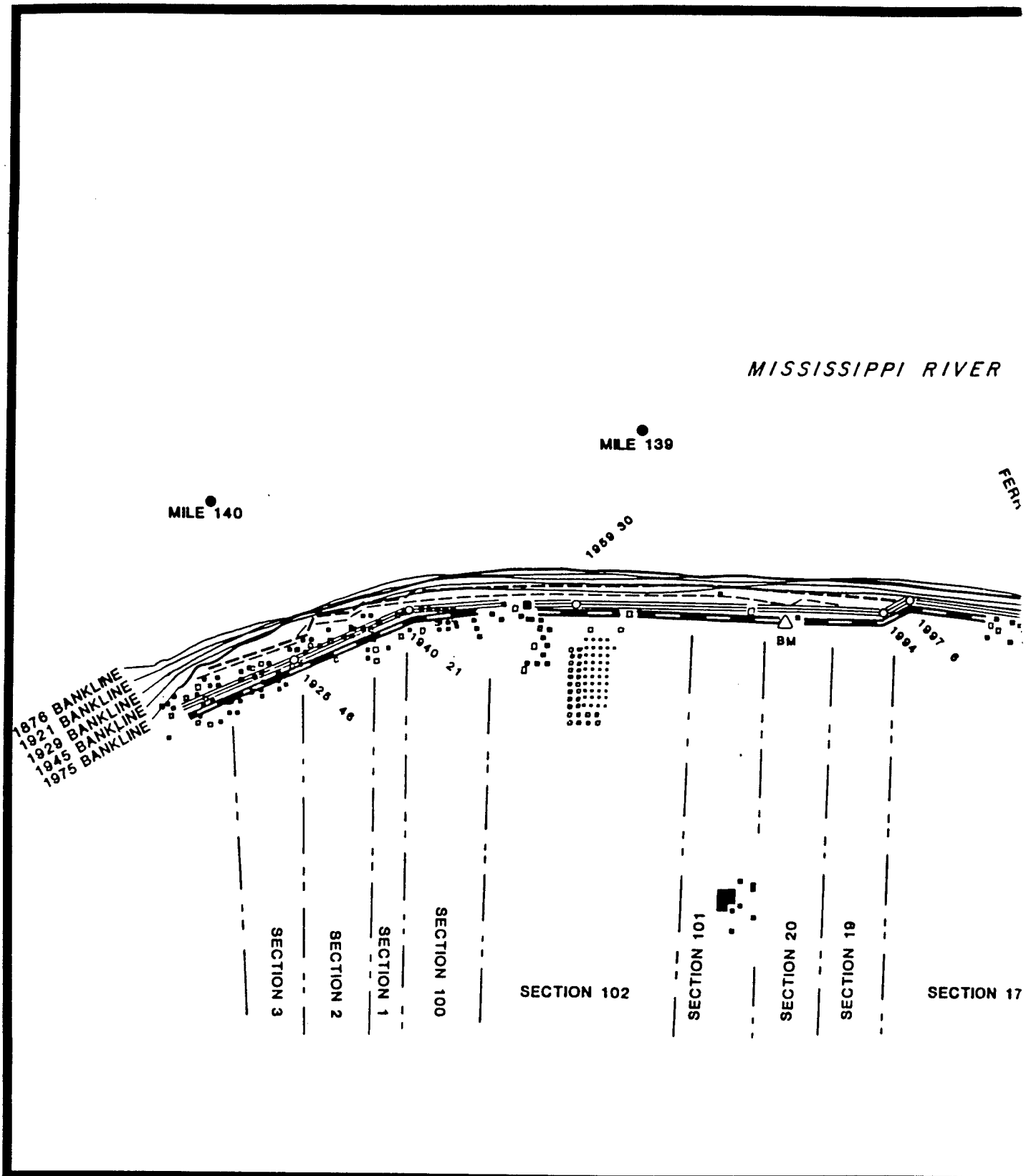
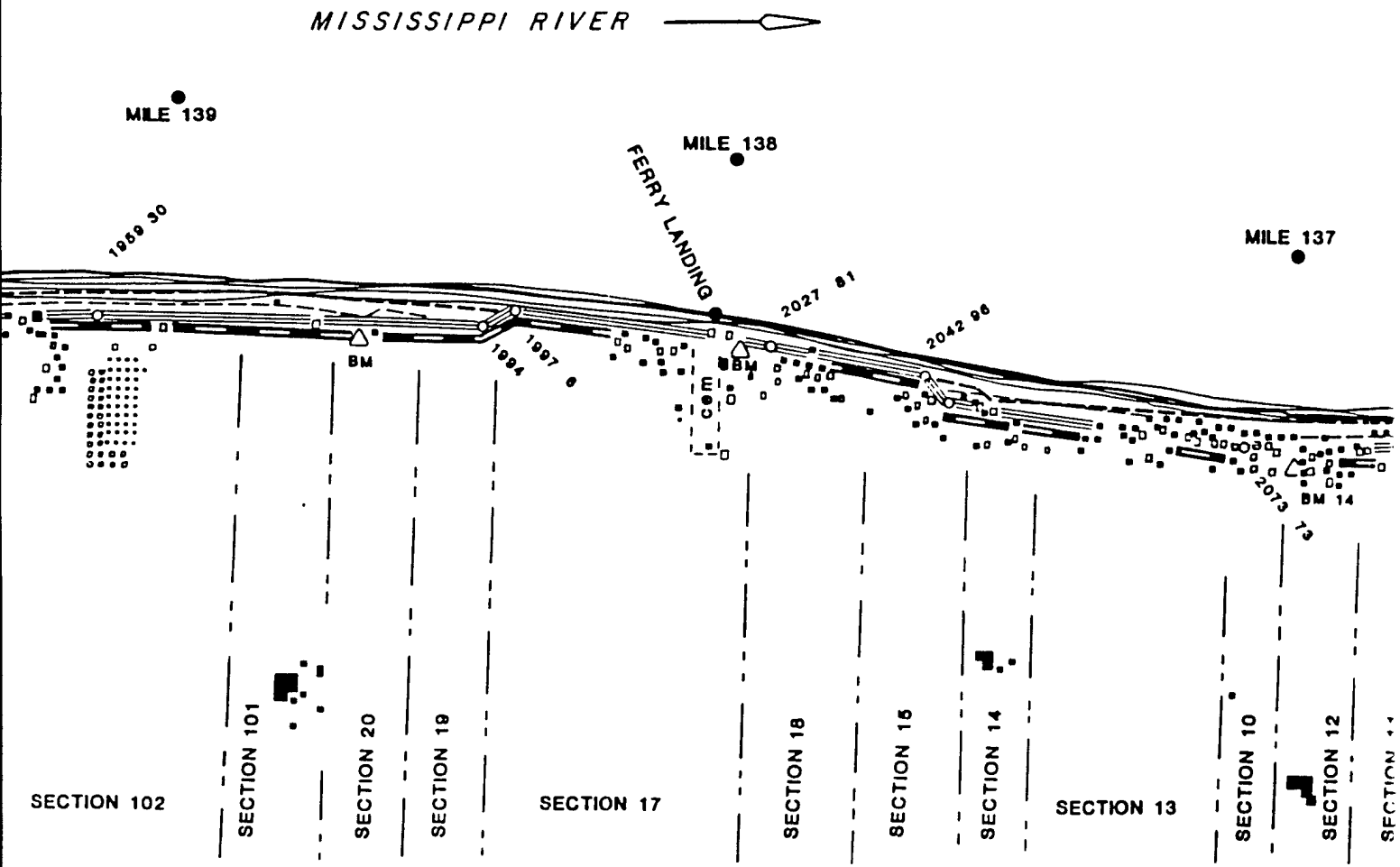
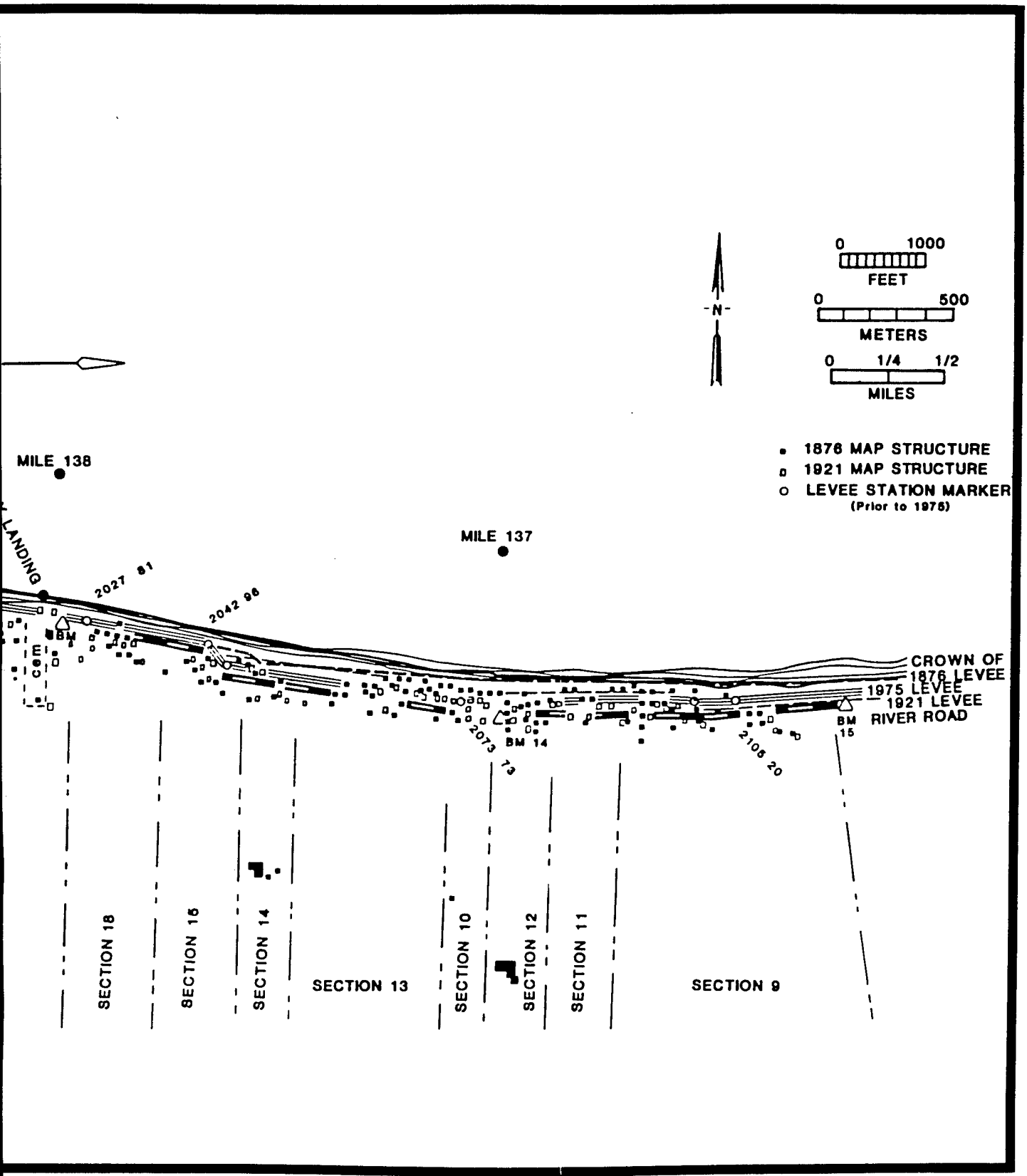


Figure 16. Composite of Chart 72 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey ma 1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Reserve, Louisiana, 7.5' series topograph Miles 140-137 (R).



1 Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 43 of the 1973-
d the 1962 photorevised Reserve, Louisiana, 7.5' series topographic quadrangle, showing



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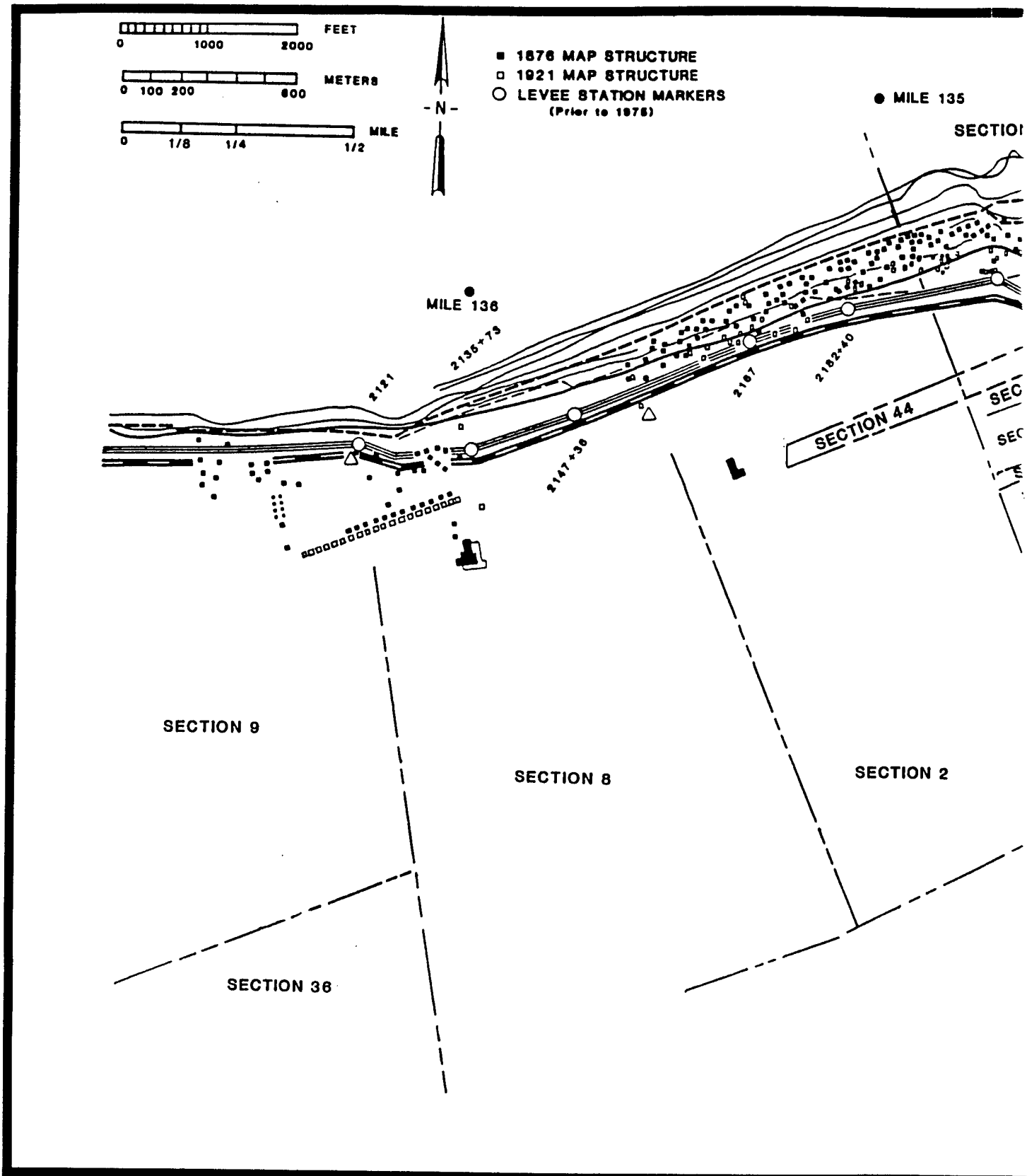
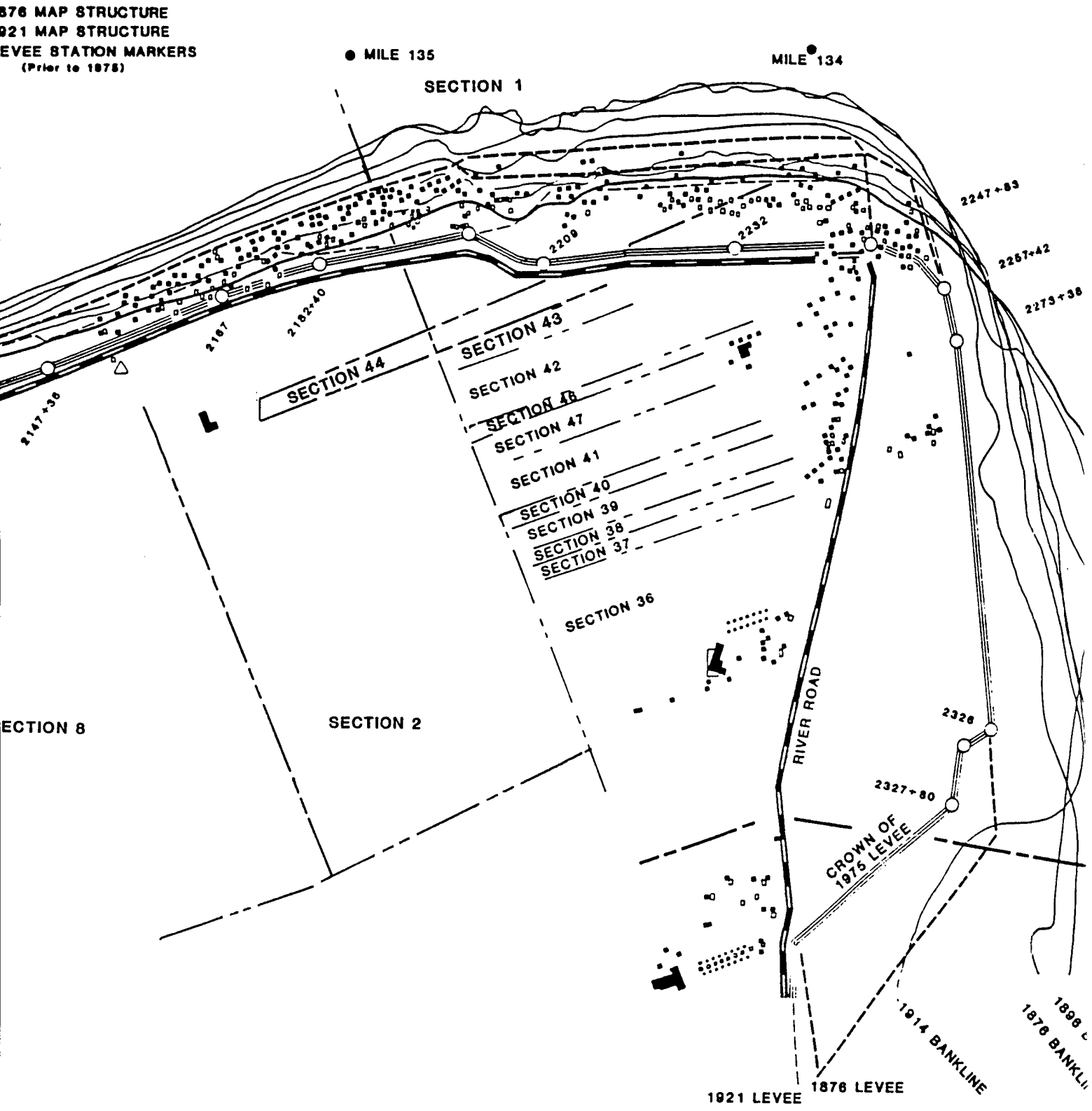
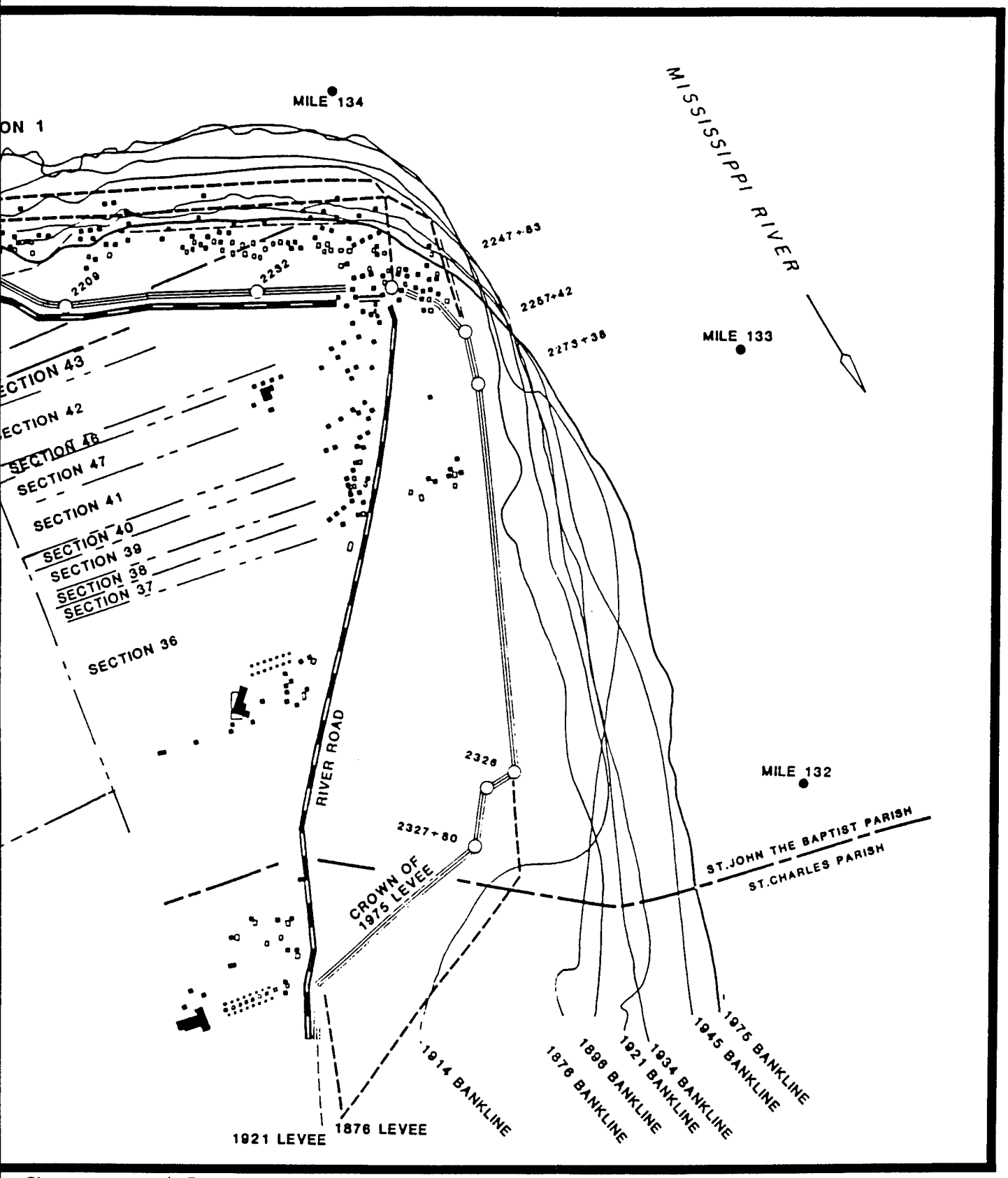


Figure 17. Composite of Chart 73 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; (of the Mississippi River Hydrographic Survey; and the 1967 photorevised Laplace, Louisiana, and the 1962 pl Louisiana, 7.5' series topographic quadrangles, showing Miles 136-132 (R).



lississippi River Commission; 1952 Caving Bank Survey map; Charts 43, 44, and 45
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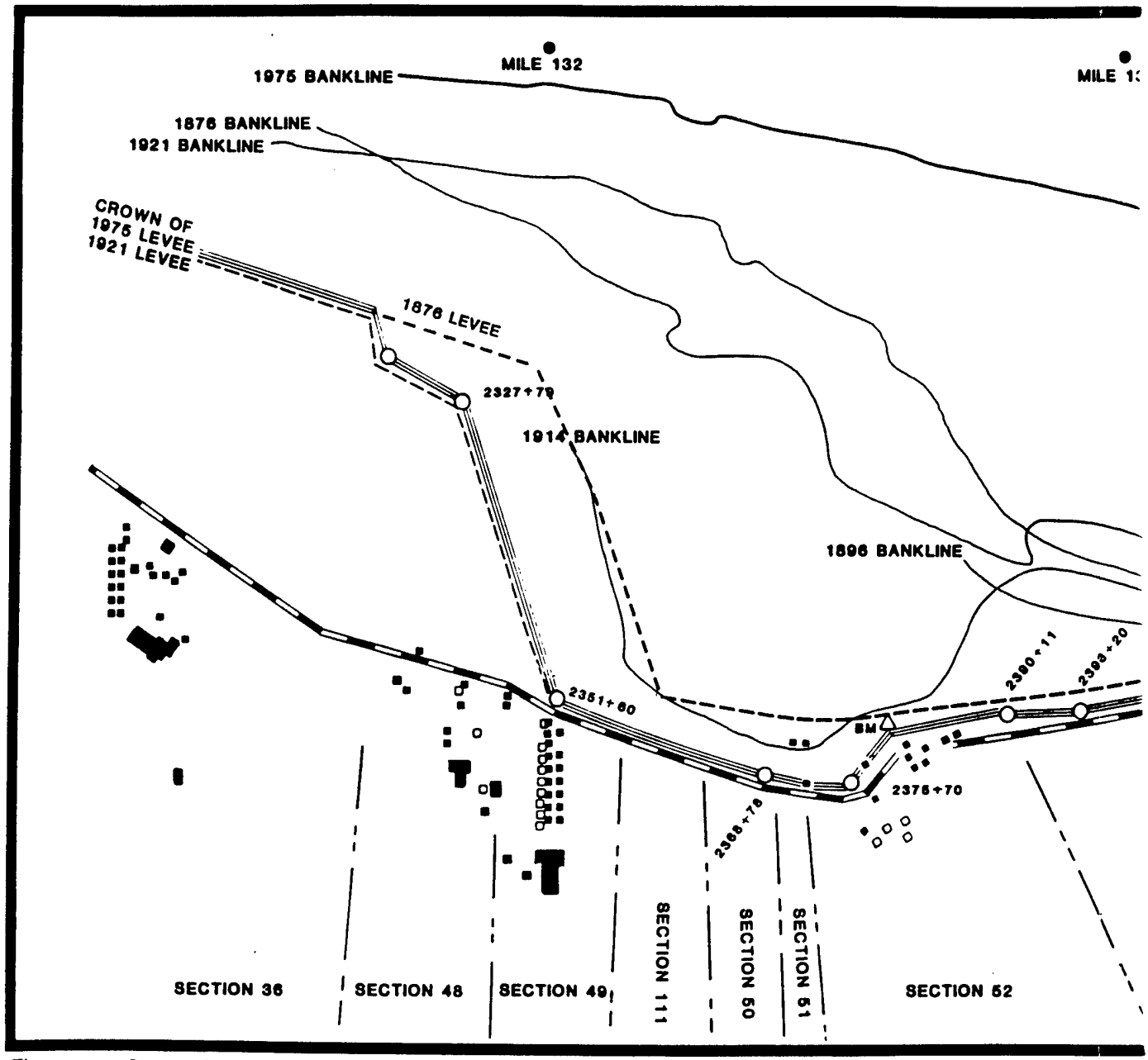
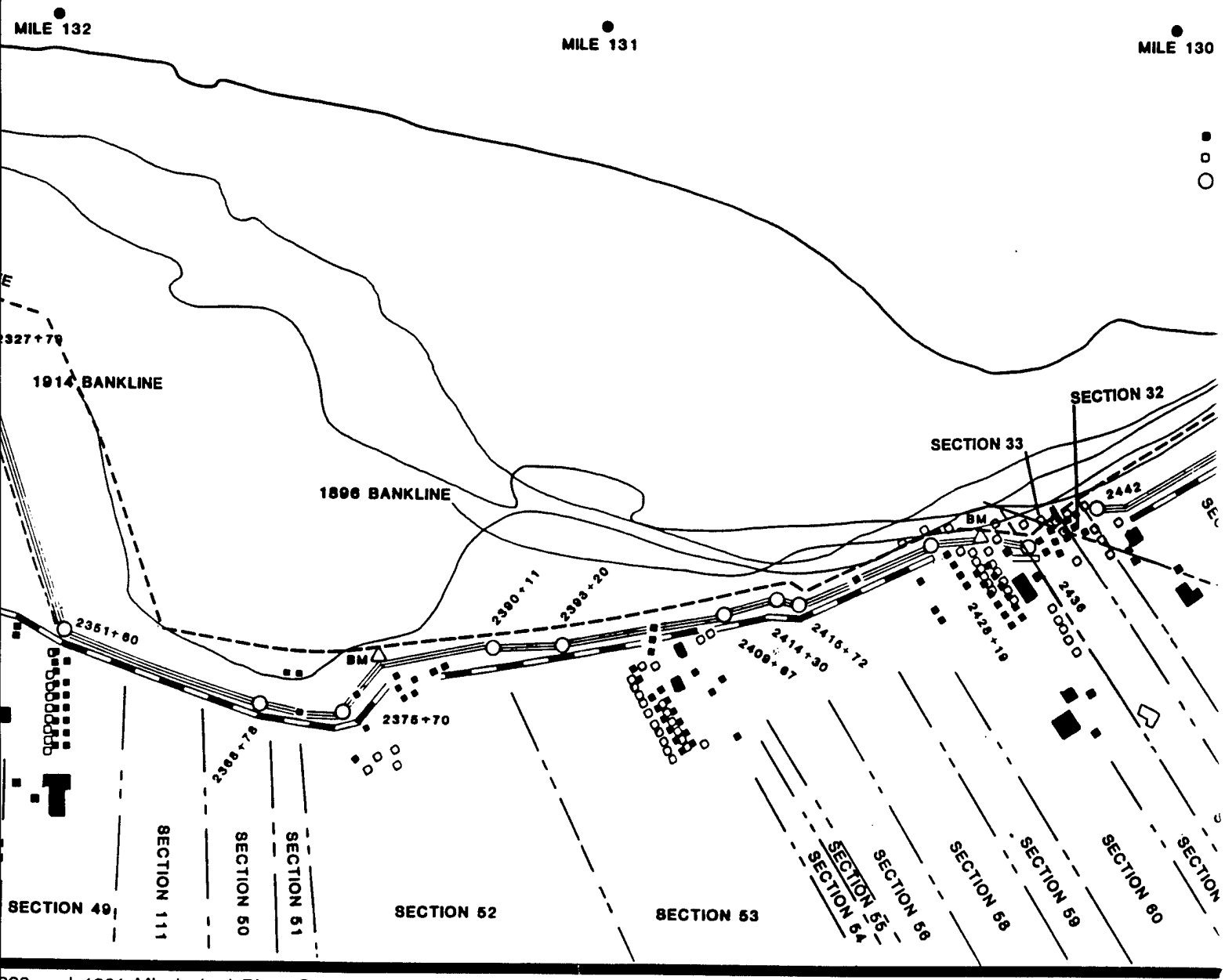
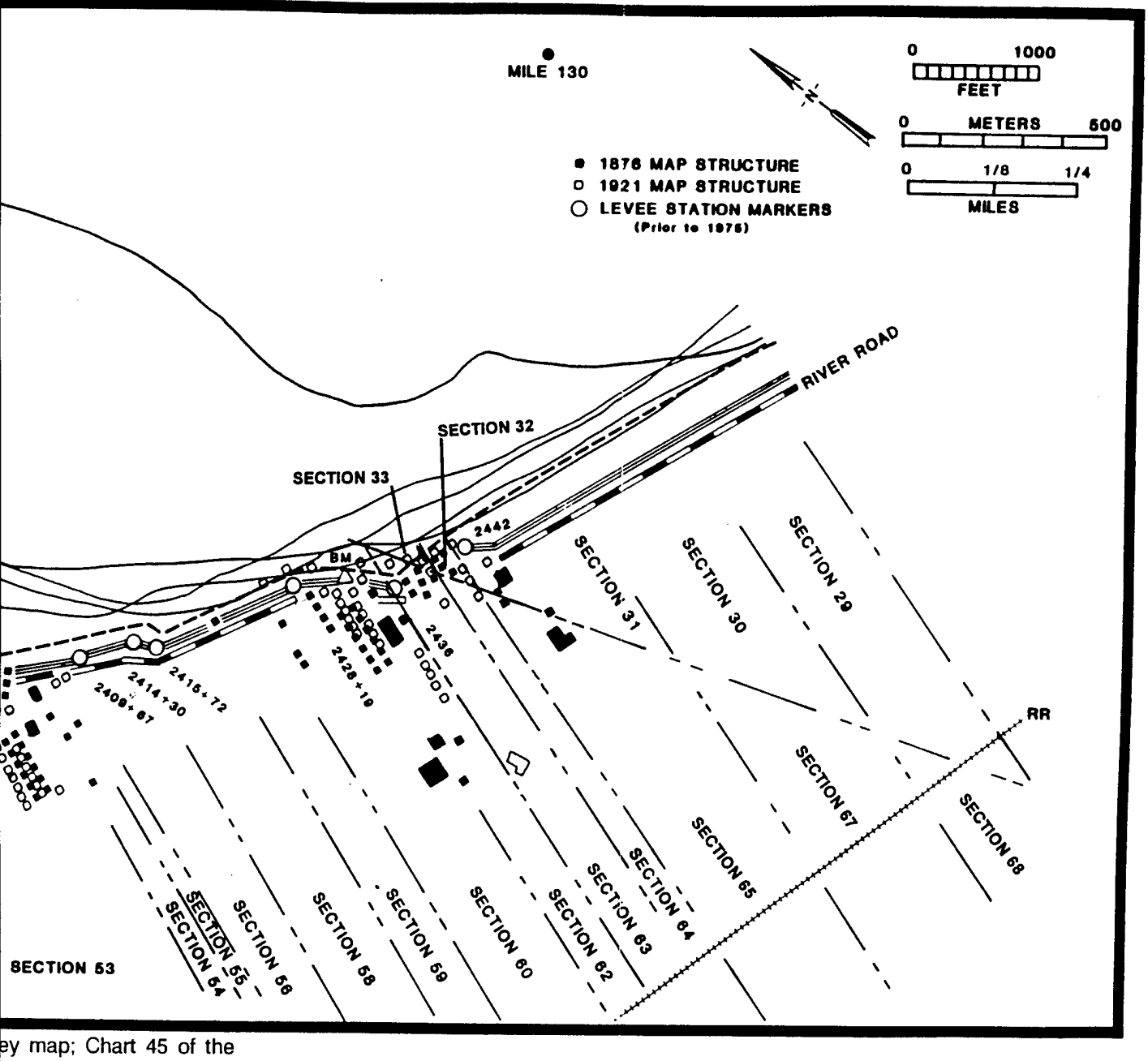


Figure 18. Composite of Chart 73 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank St Mississippi River Hydrographic Survey; and the 1967 photorevised Laplace, Louisiana, and the 1962 photo 7.5' series topographic quadrangles, showing Miles 132-130 (R).



893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 45 of the ; and the 1967 photorevised Laplace, Louisiana, and the 1962 photorevised Reserve, Louisiana, howing Miles 132-130 (R).



ey map; Chart 45 of the
vised Reserve, Louisiana,

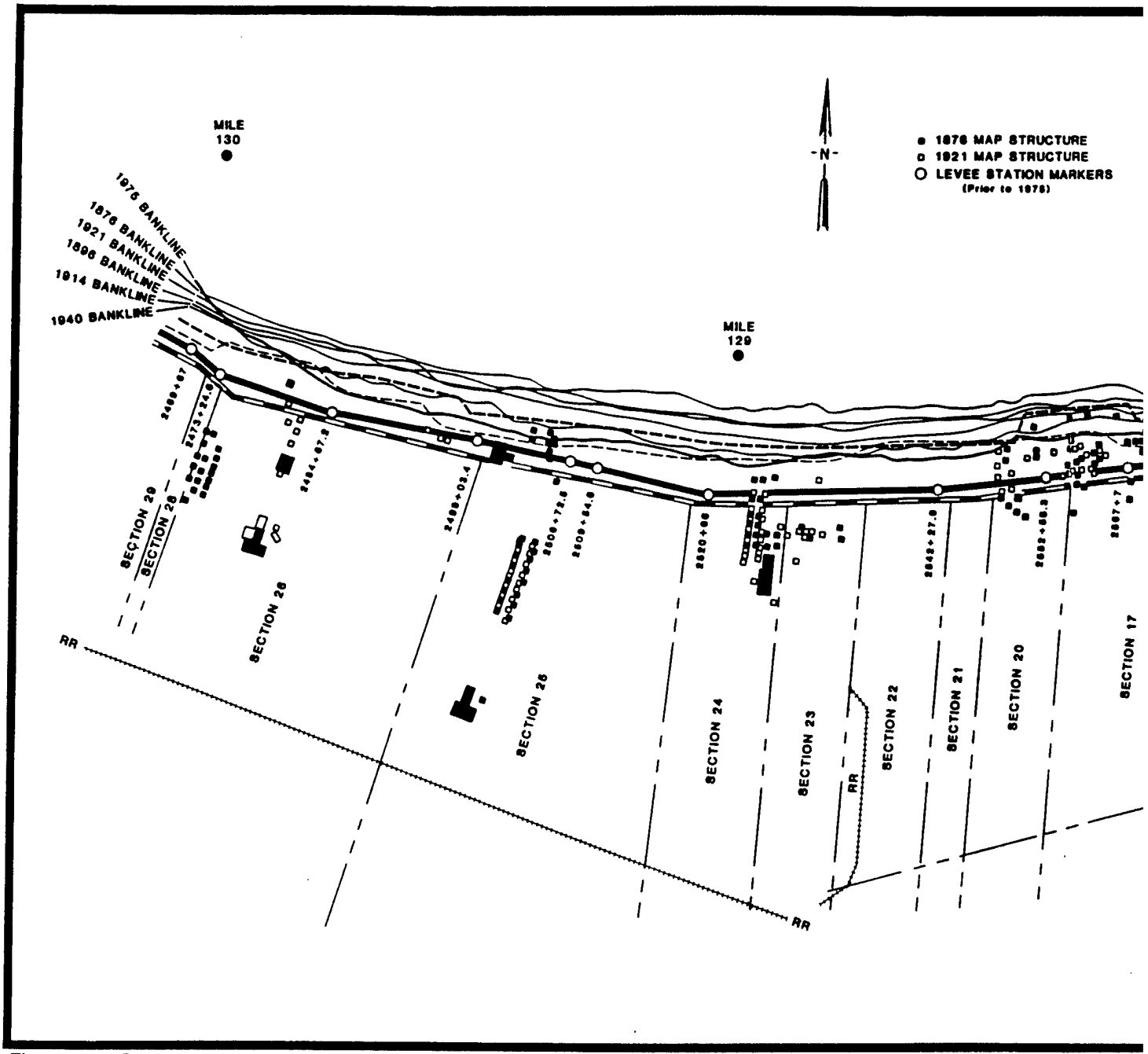
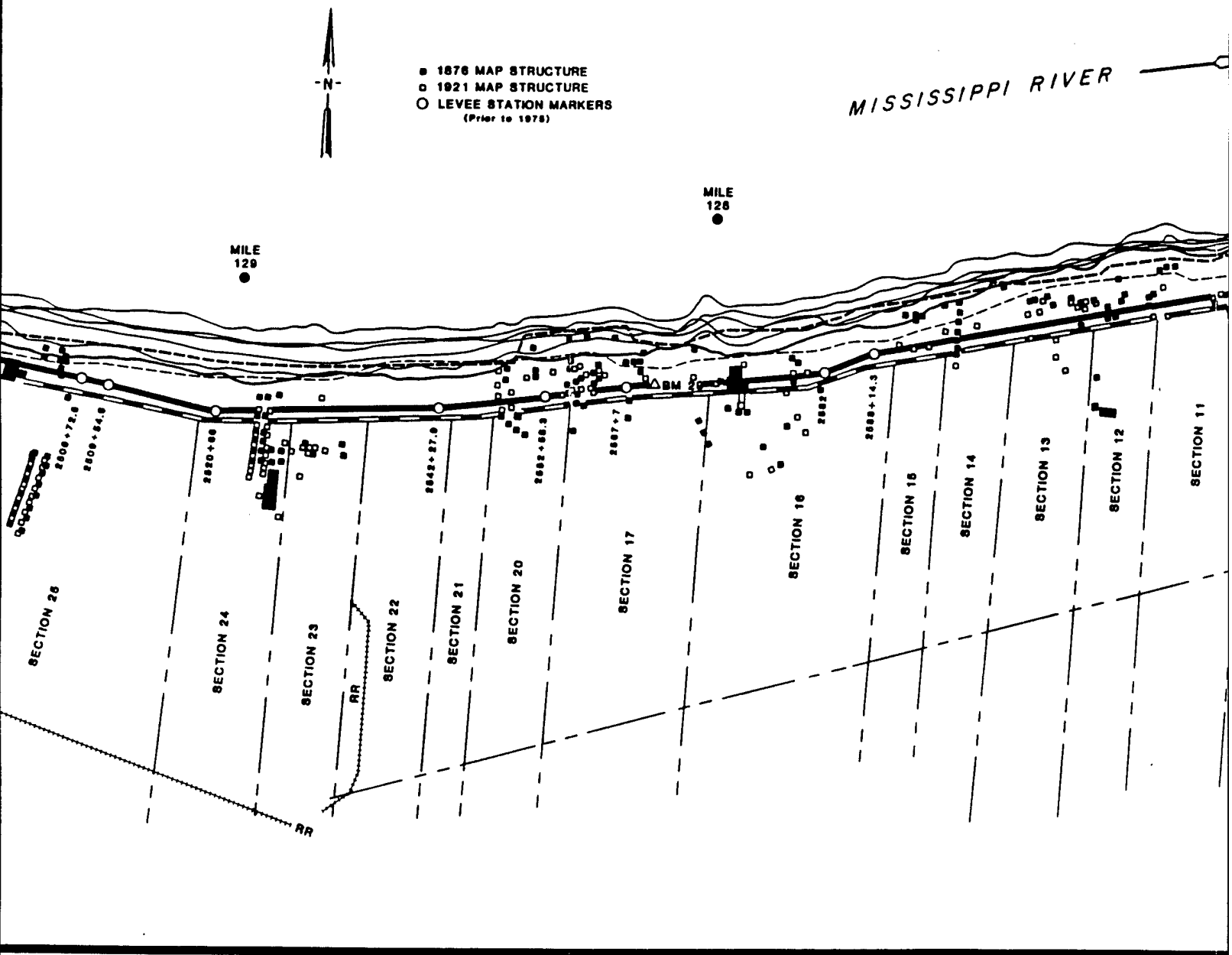
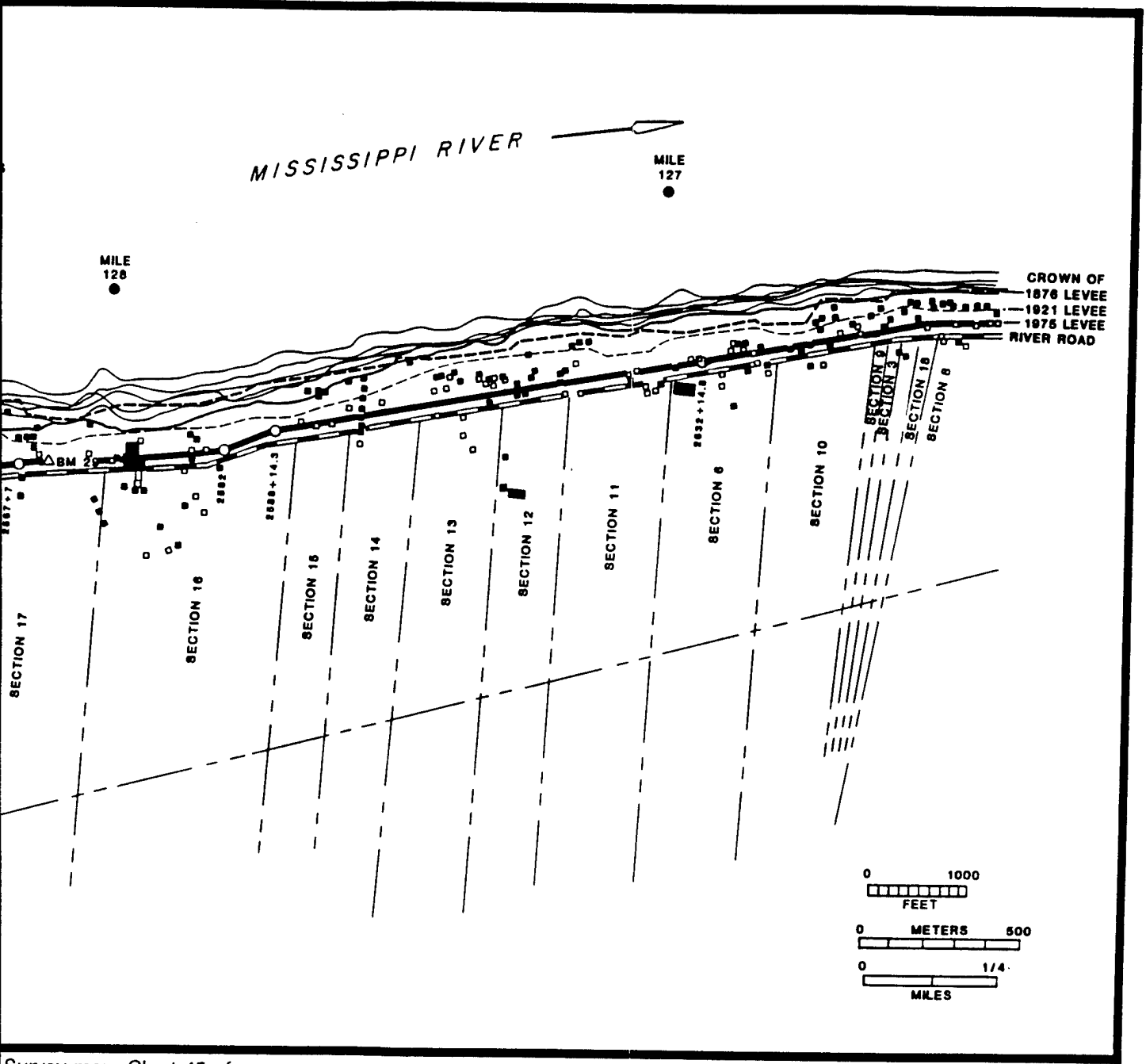


Figure 19. Composite of Charts 73 and 74 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Su the Mississippi River Hydrographic Survey; and the 1967 photorevised Hahnville, Louisiana, and Laplace, topographic quadrangles, showing Miles 130-127(R).



876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 45 of rvey; and the 1967 photorevised Hahnville, Louisiana, and Laplace, Louisiana, 7.5' series 130-127(R).



Survey map; Chart 45 of
e, Louisiana, 7.5' series

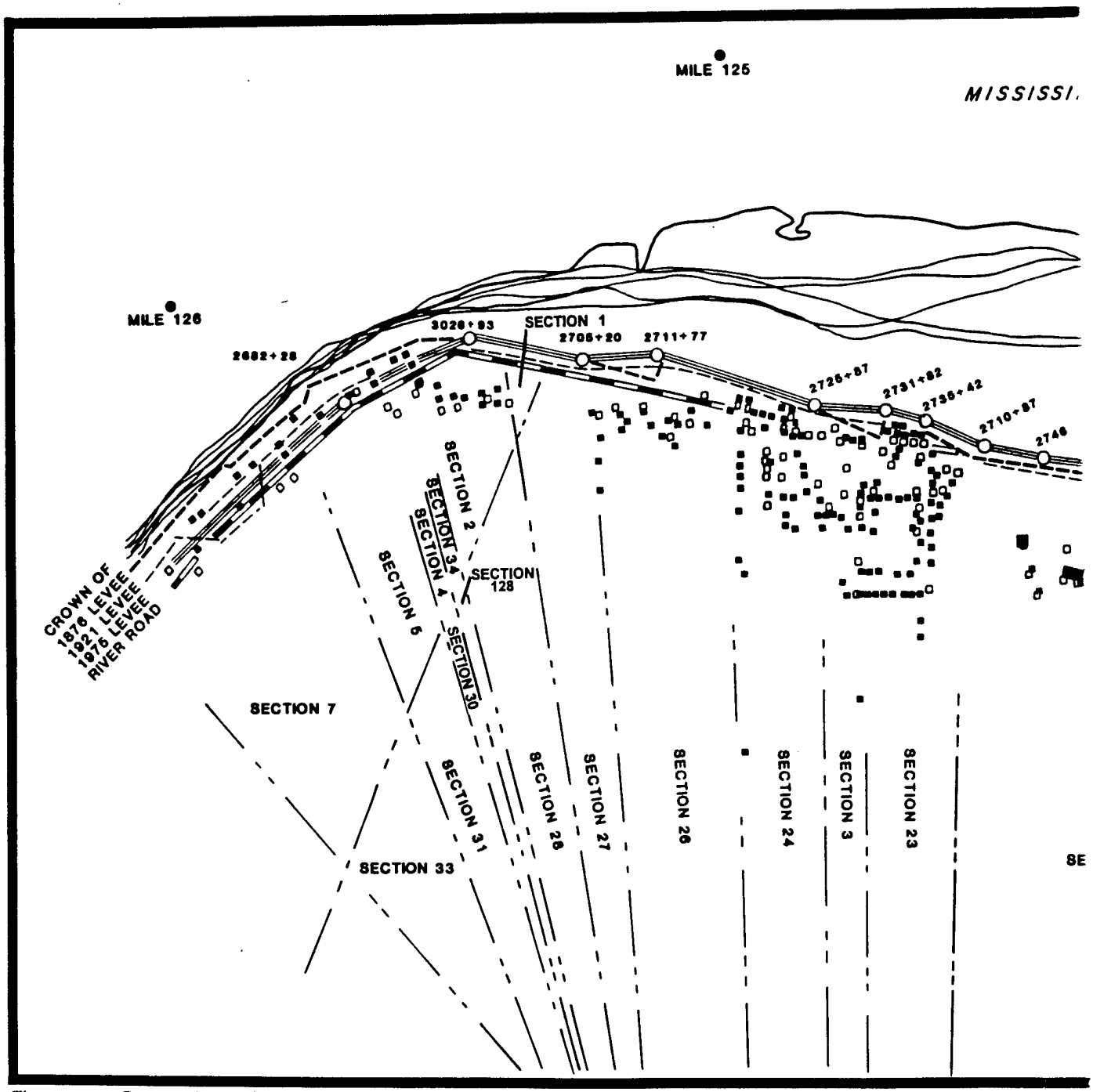
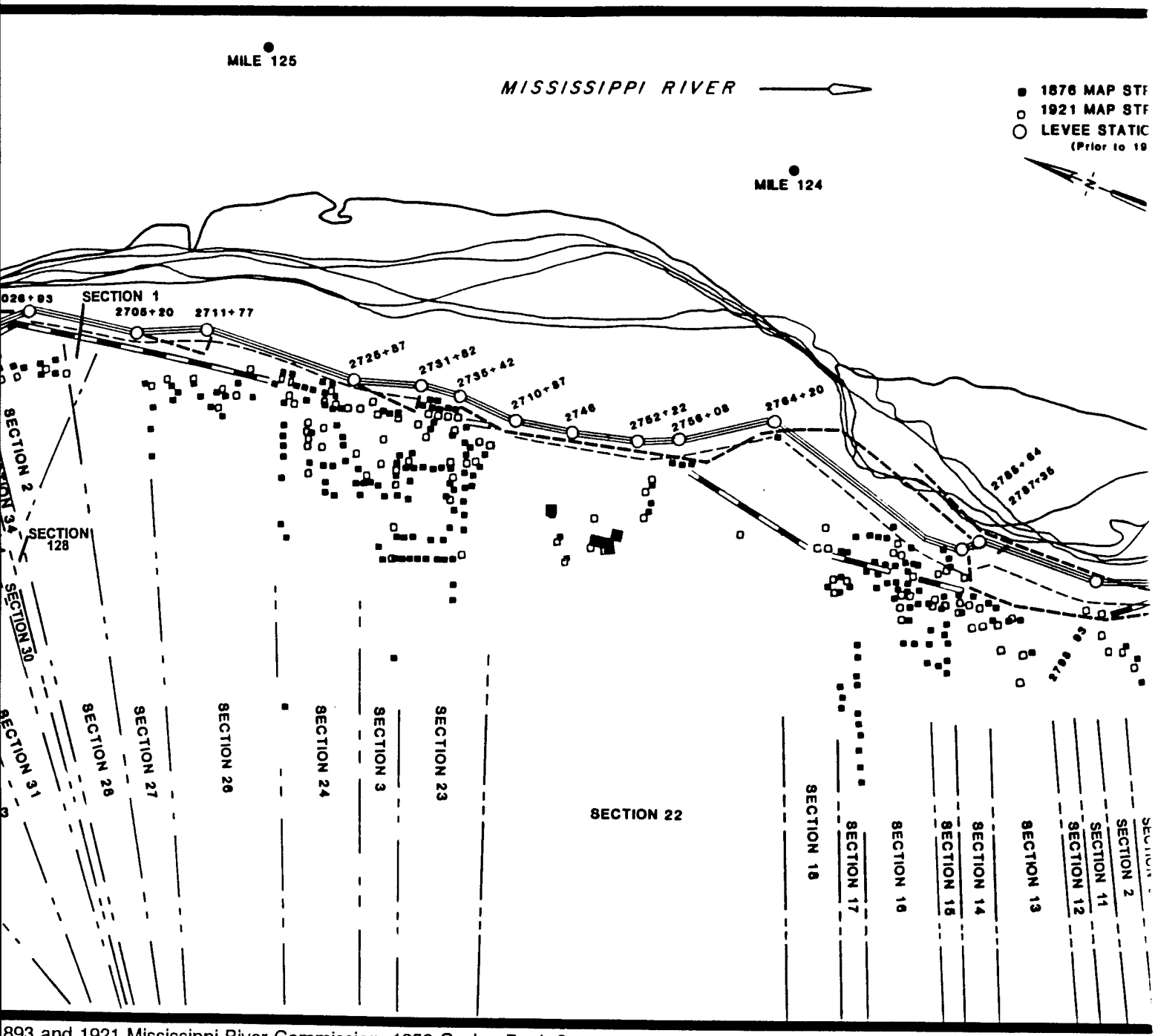
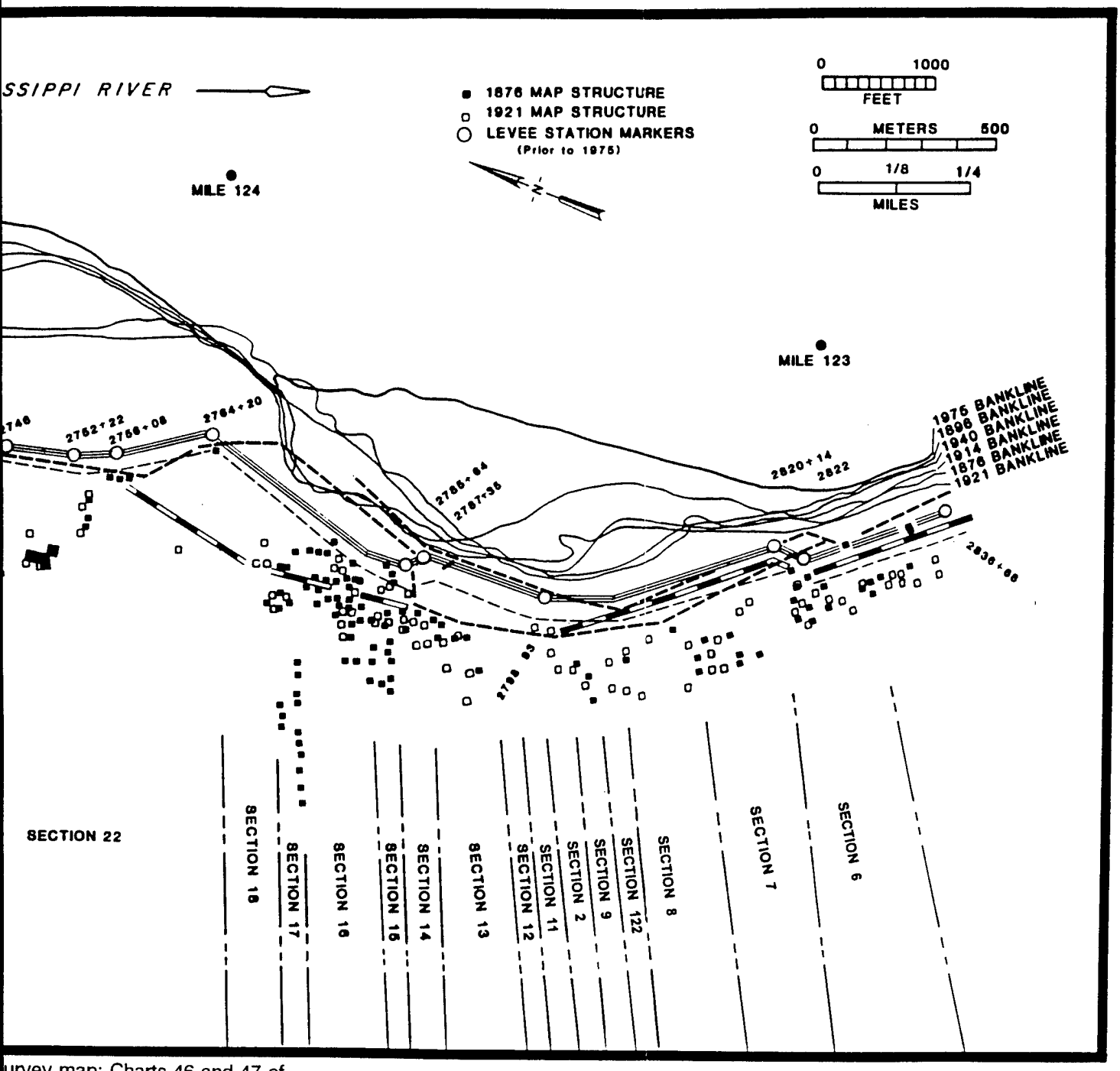


Figure 20. Composite of Chart 74 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey the Mississippi River Hydrographic Survey; and the 1967 photorevised Hahnville, Louisiana, 7.5' series topogr Miles 126-123 (R).



893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Charts 46 and 47 of urvey; and the 1967 photorevised Hahnville, Louisiana, 7.5' series topographic quadrangle, showing



urvey map; Charts 46 and 47 of
ppographic quadrangle, showing

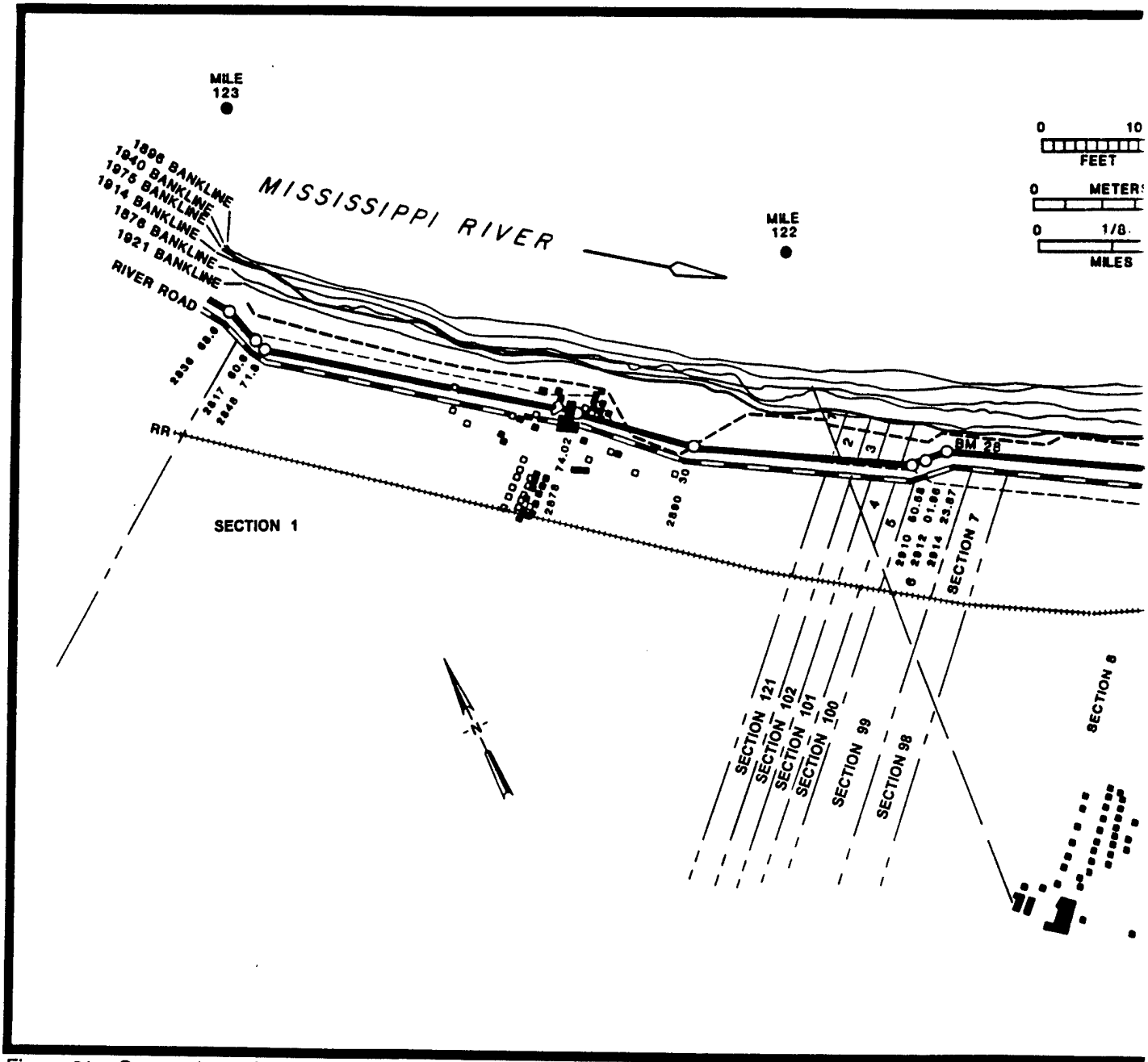
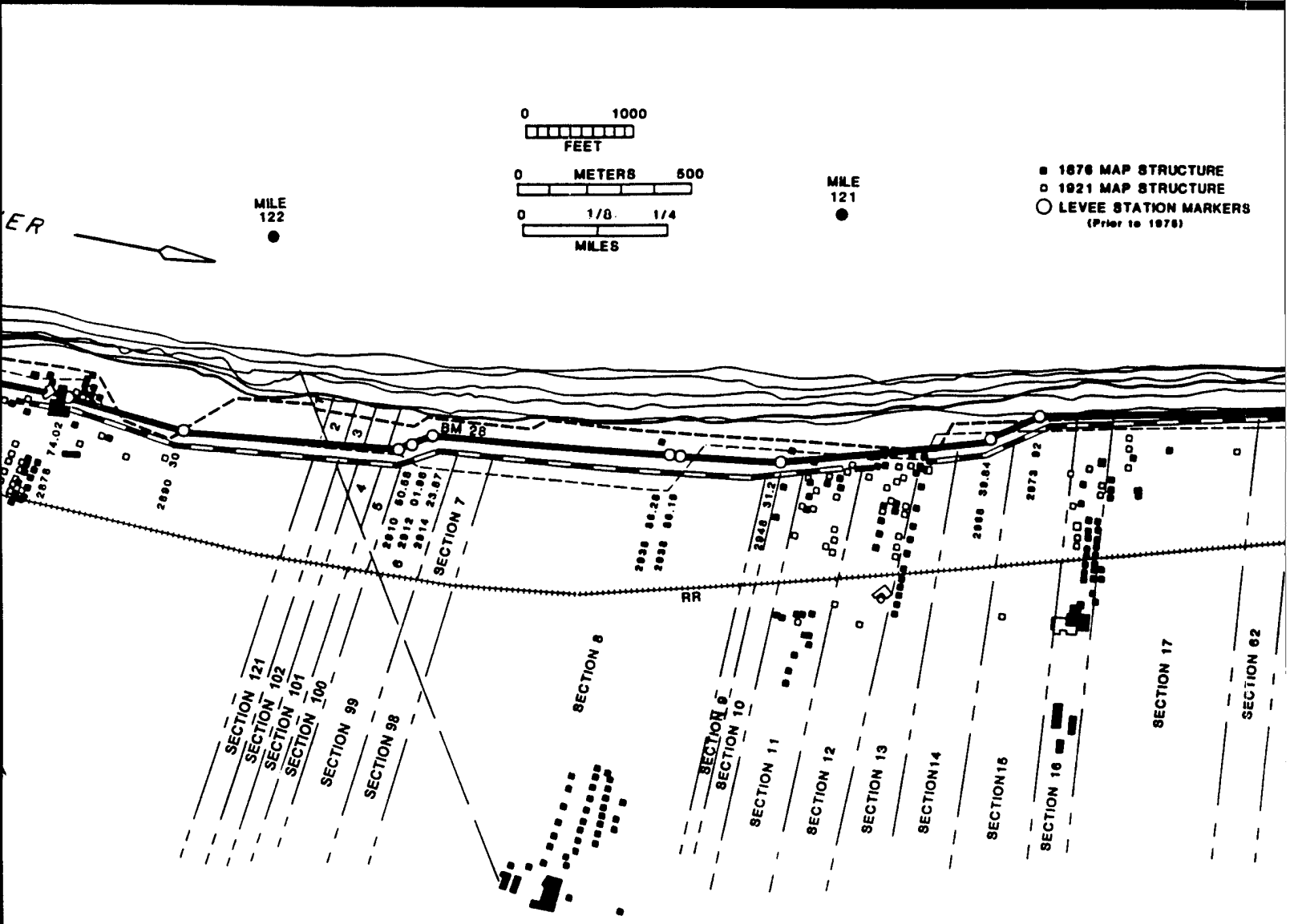
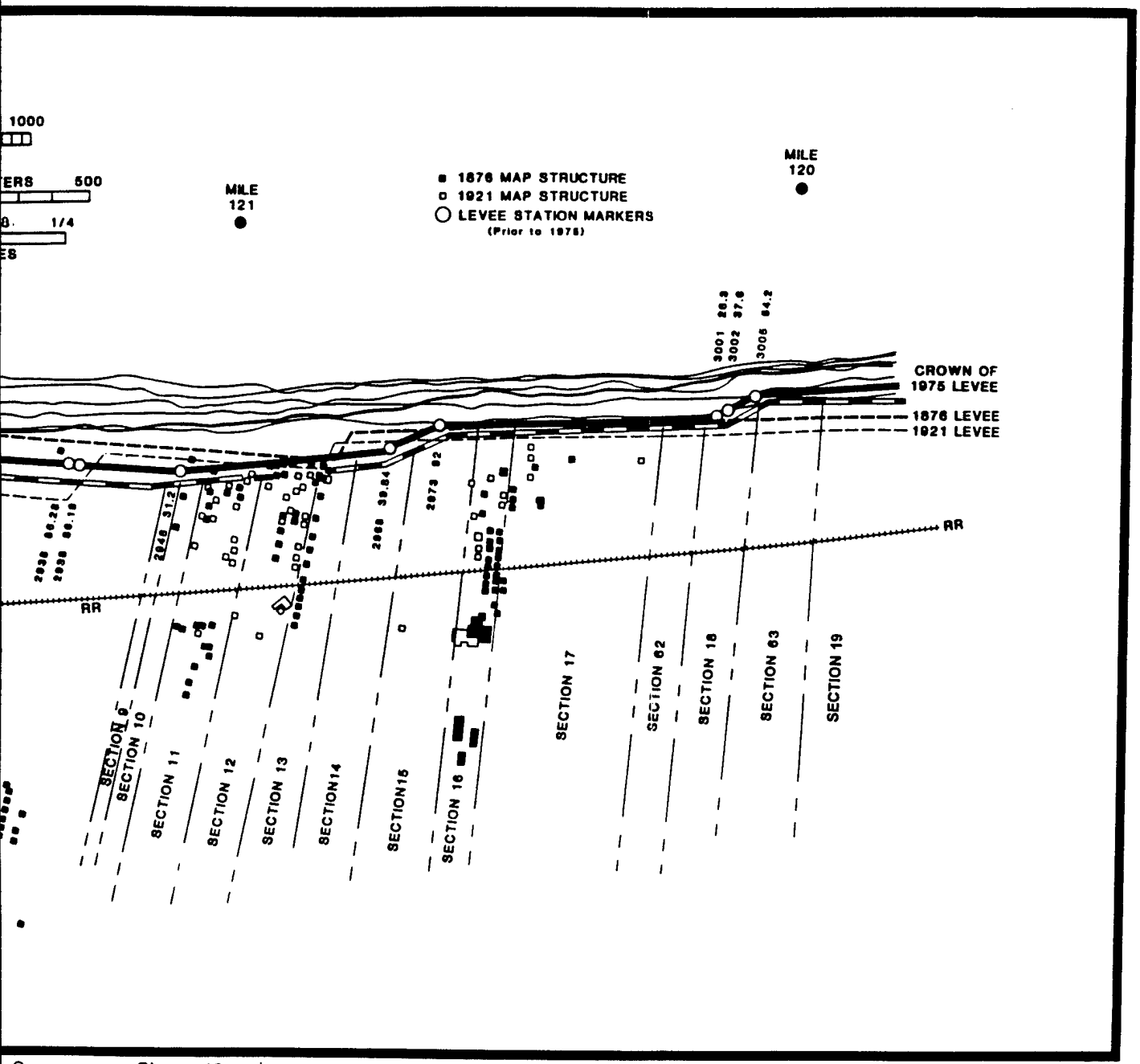


Figure 21. Composite of Charts 74 and 75 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Su 47 of the Mississippi River Hydrographic Survey; and the 1967 photorevised Hahnville, Louisiana, and Lulir topographic quadrangles, showing Miles 123-120 (R).



-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Charts 46 and Survey; and the 1967 photorevised Hahnville, Louisiana, and Luling, Louisiana, 7.5' series 23-120 (R).

(2)



k Survey map; Charts 46 and
Luling, Louisiana, 7.5' series

(3)

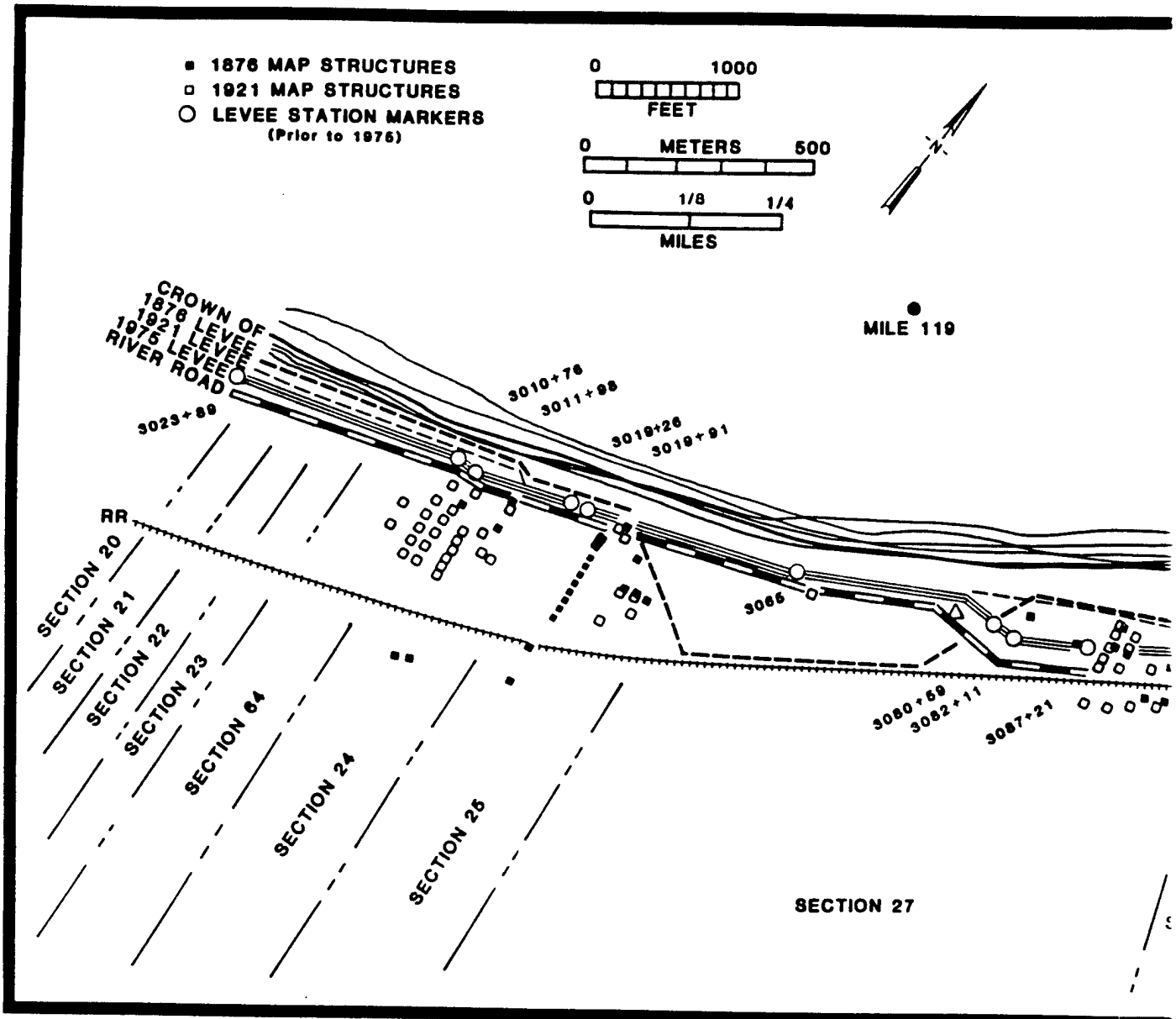
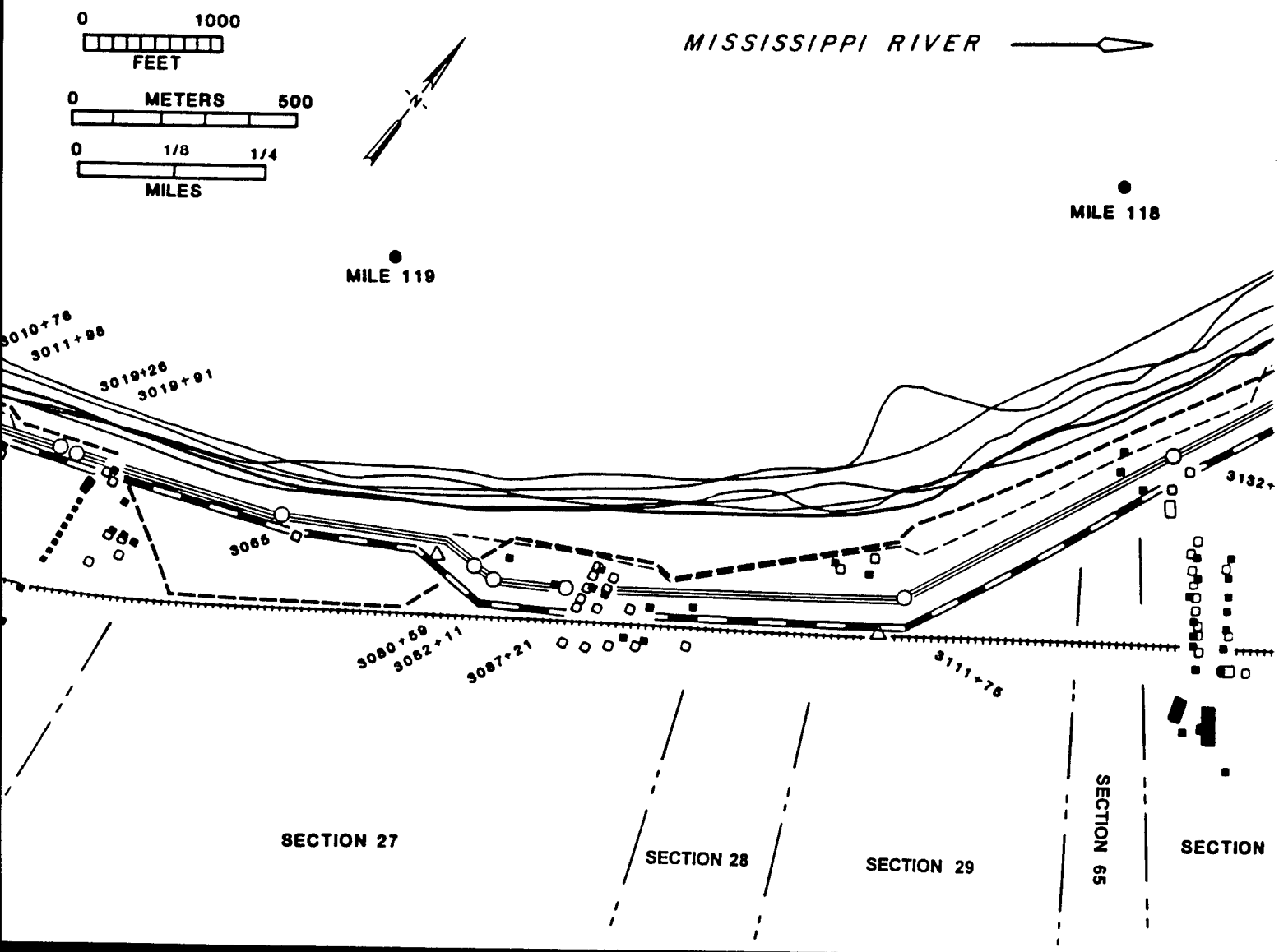
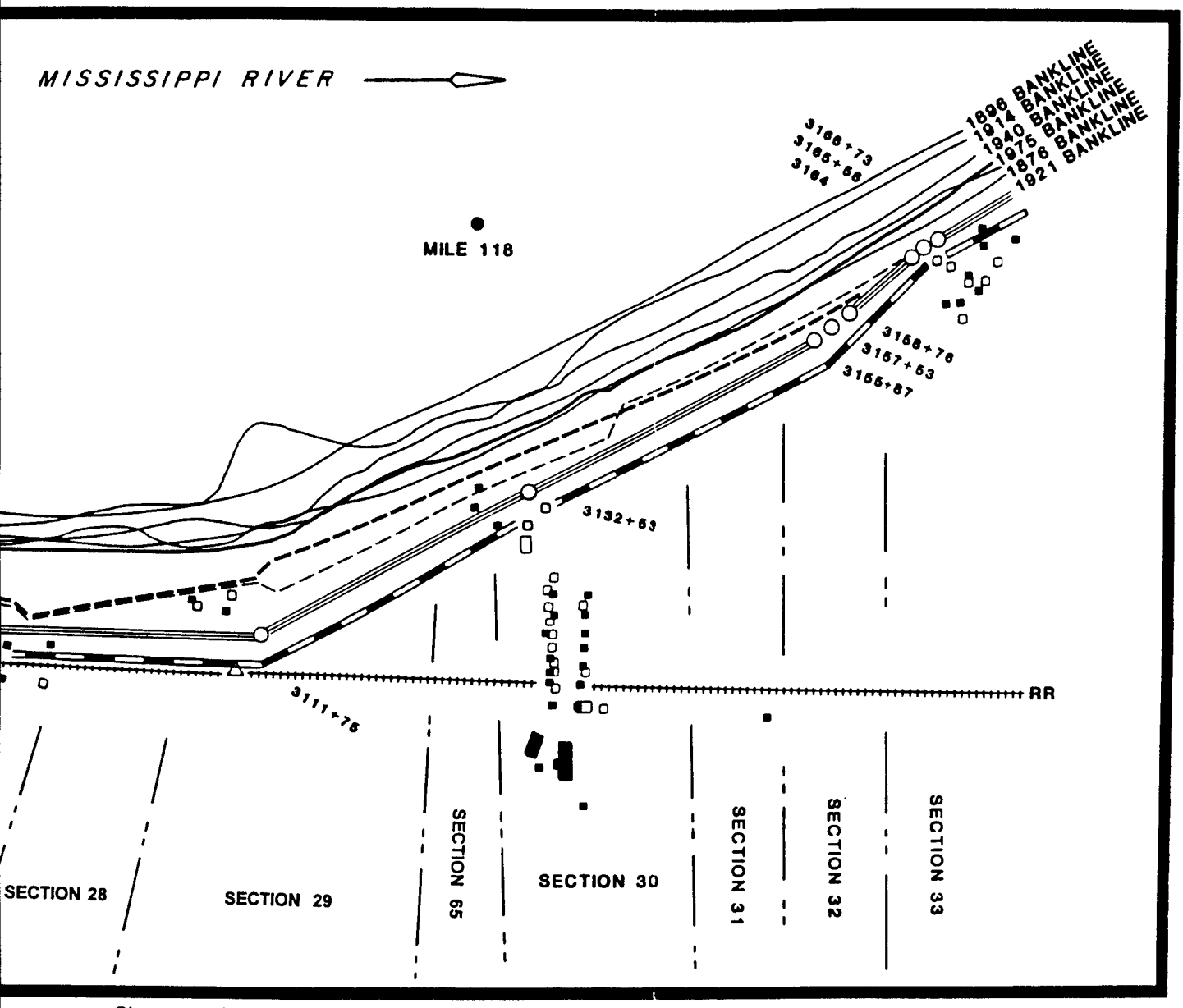


Figure 22. Composite of Chart 75 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Sur Mississippi River Hydrographic Survey; and the 1967 photorevised Luling, Louisiana, 7.5' series topographic 119-118 (R).



93 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 47 of the
and the 1967 photorevised Luling, Louisiana, 7.5' series topographic quadrangle, showing Miles



urvey map; Chart 47 of the
quadrangle, showing Miles

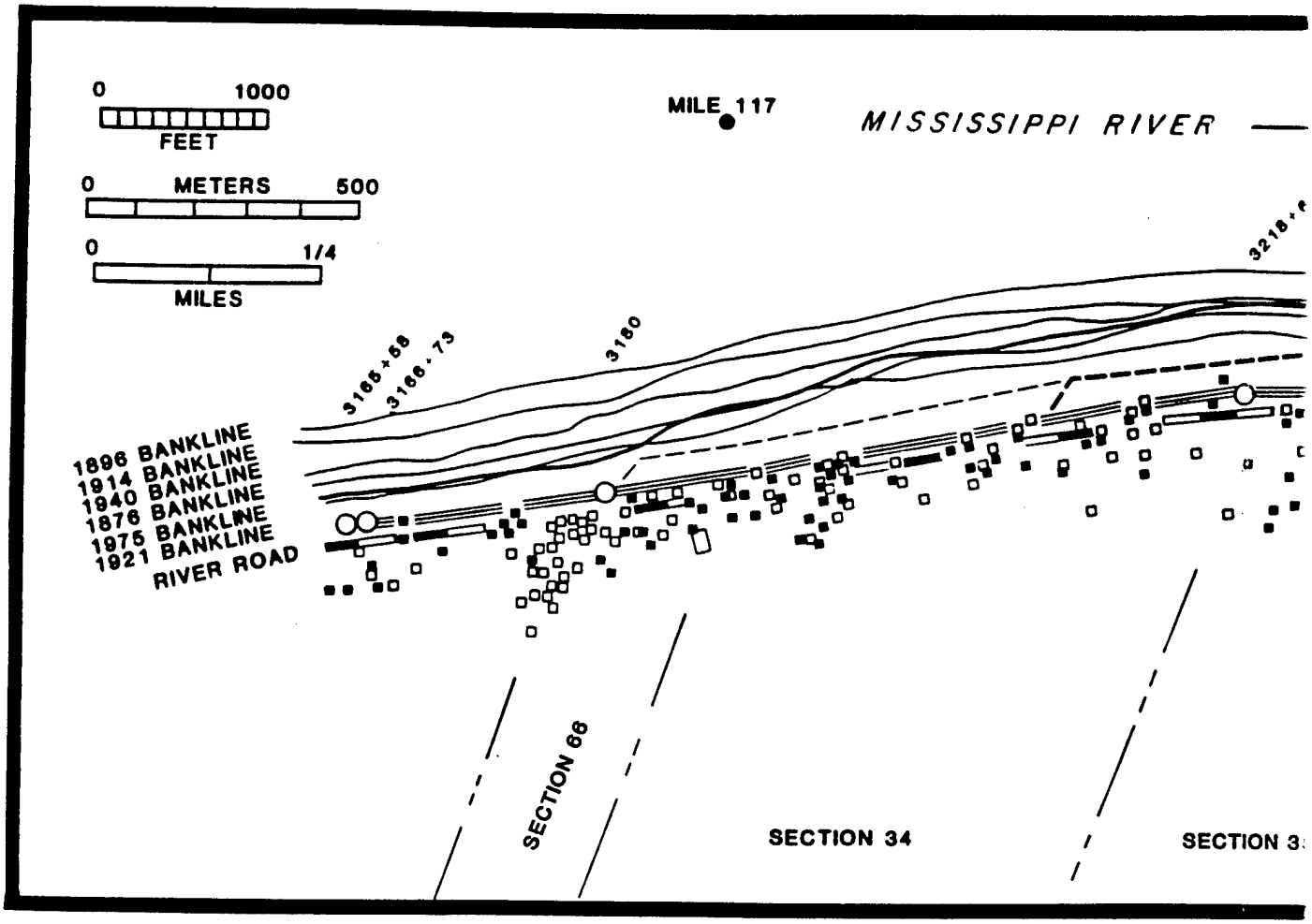
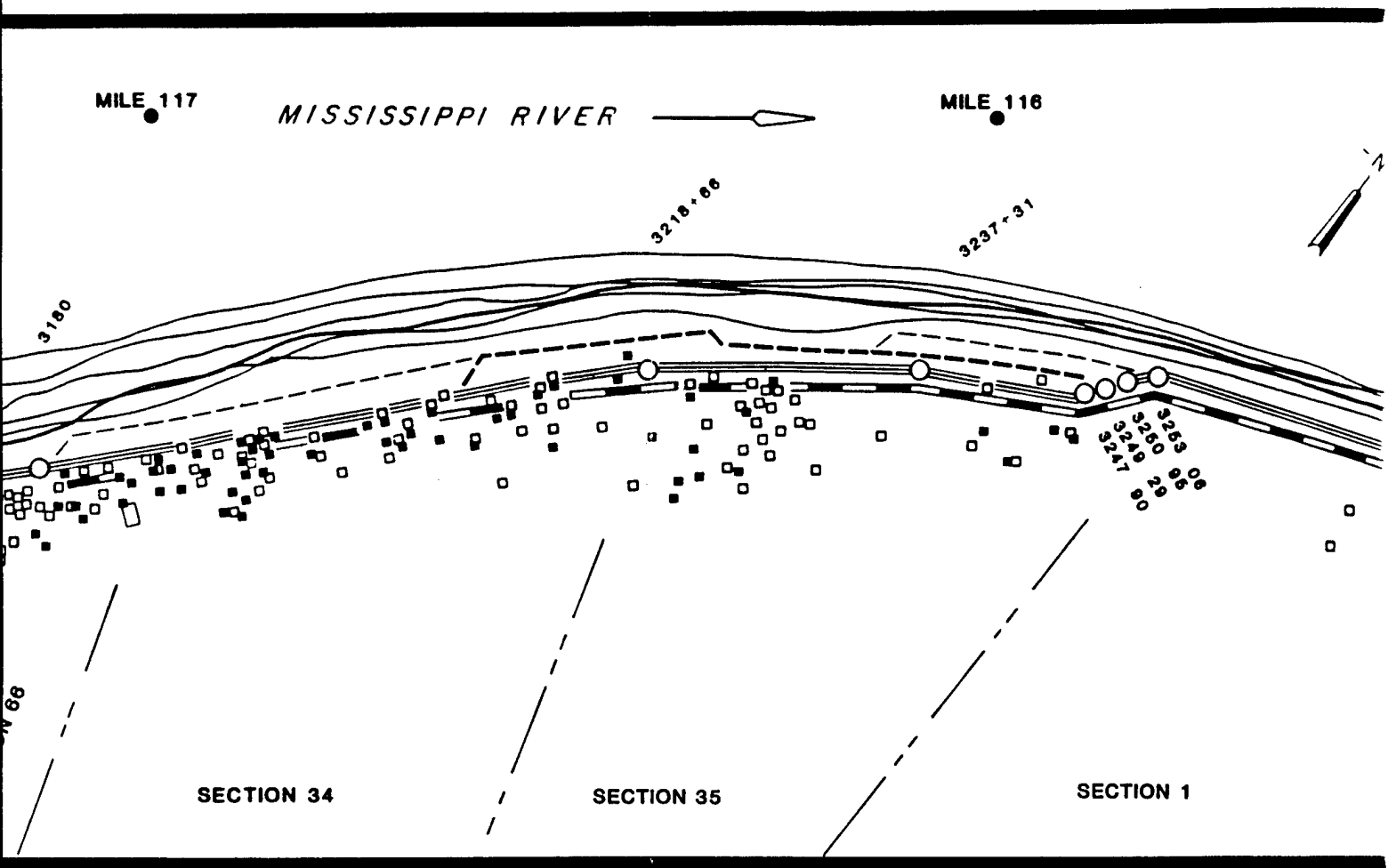
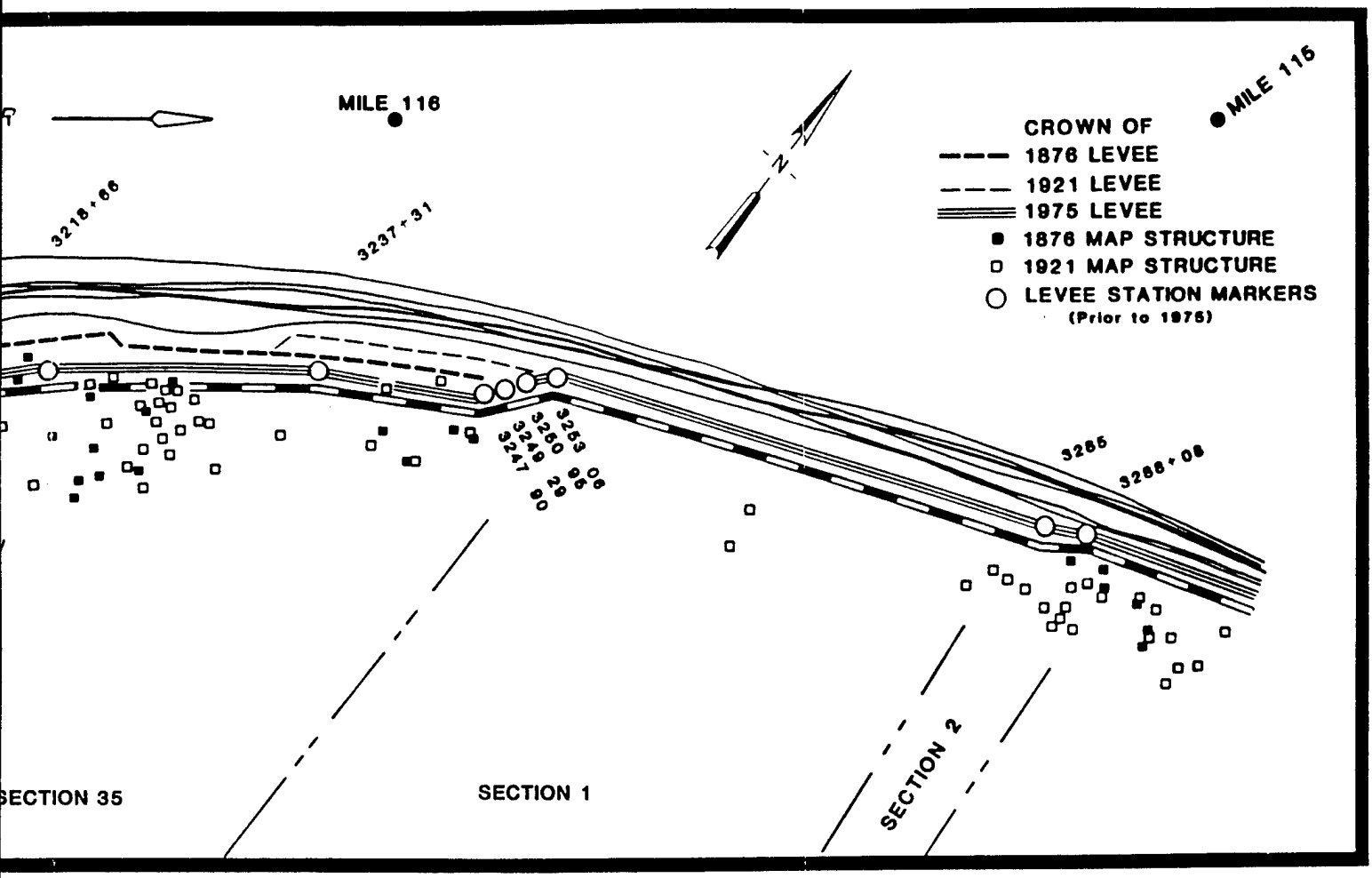


Figure 23. Composite of Chart 75 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Su Mississippi River Hydrographic Survey; and the 1967 photorevised Luling, Louisiana, 7.5' series topographic 117-116 (R).



393 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 48 of the and the 1967 photorevised Luling, Louisiana, 7.5' series topographic quadrangle, showing Miles



g Bank Survey map; Chart 48 of the
opographic quadrangle, showing Miles

(3)

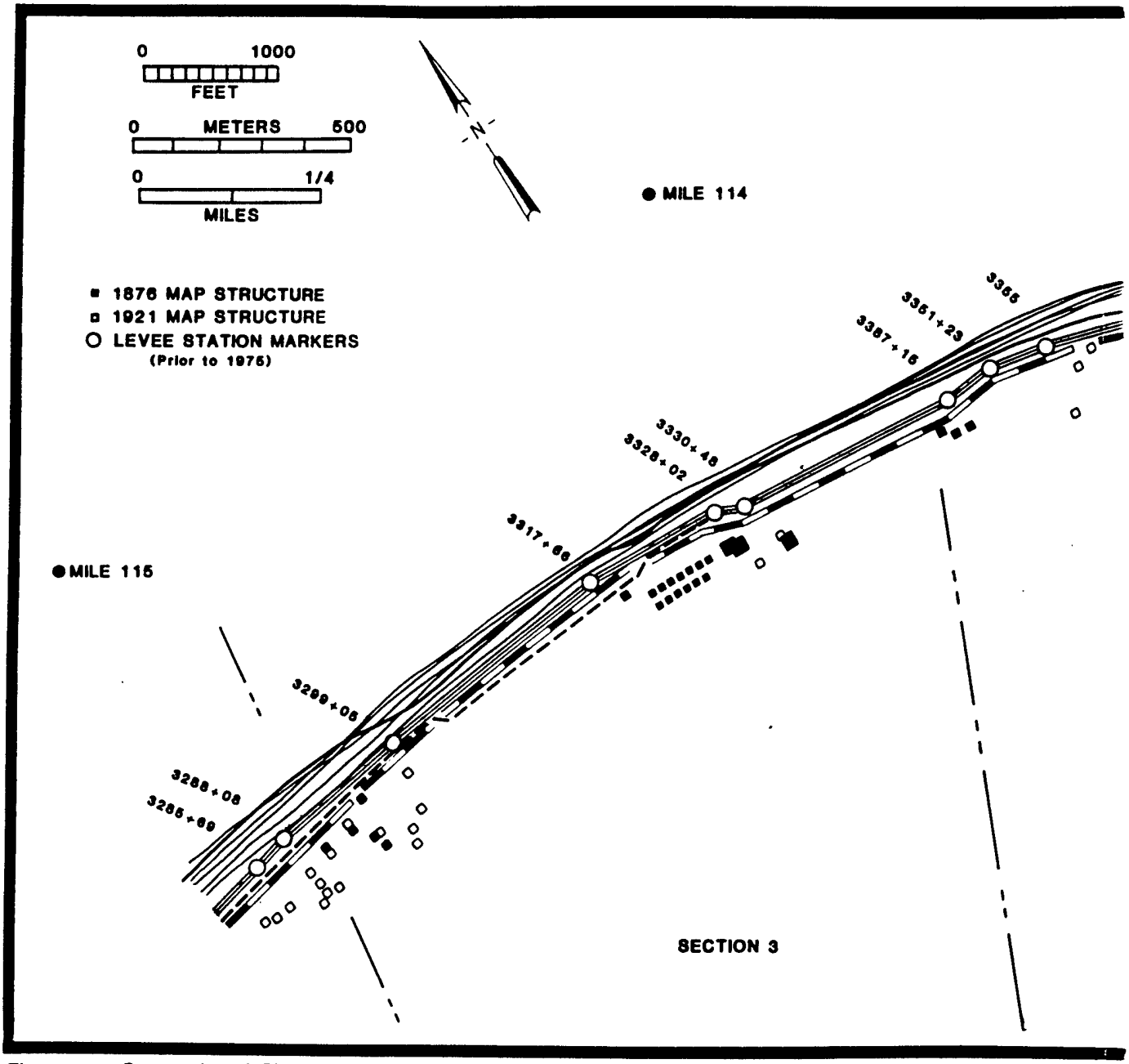
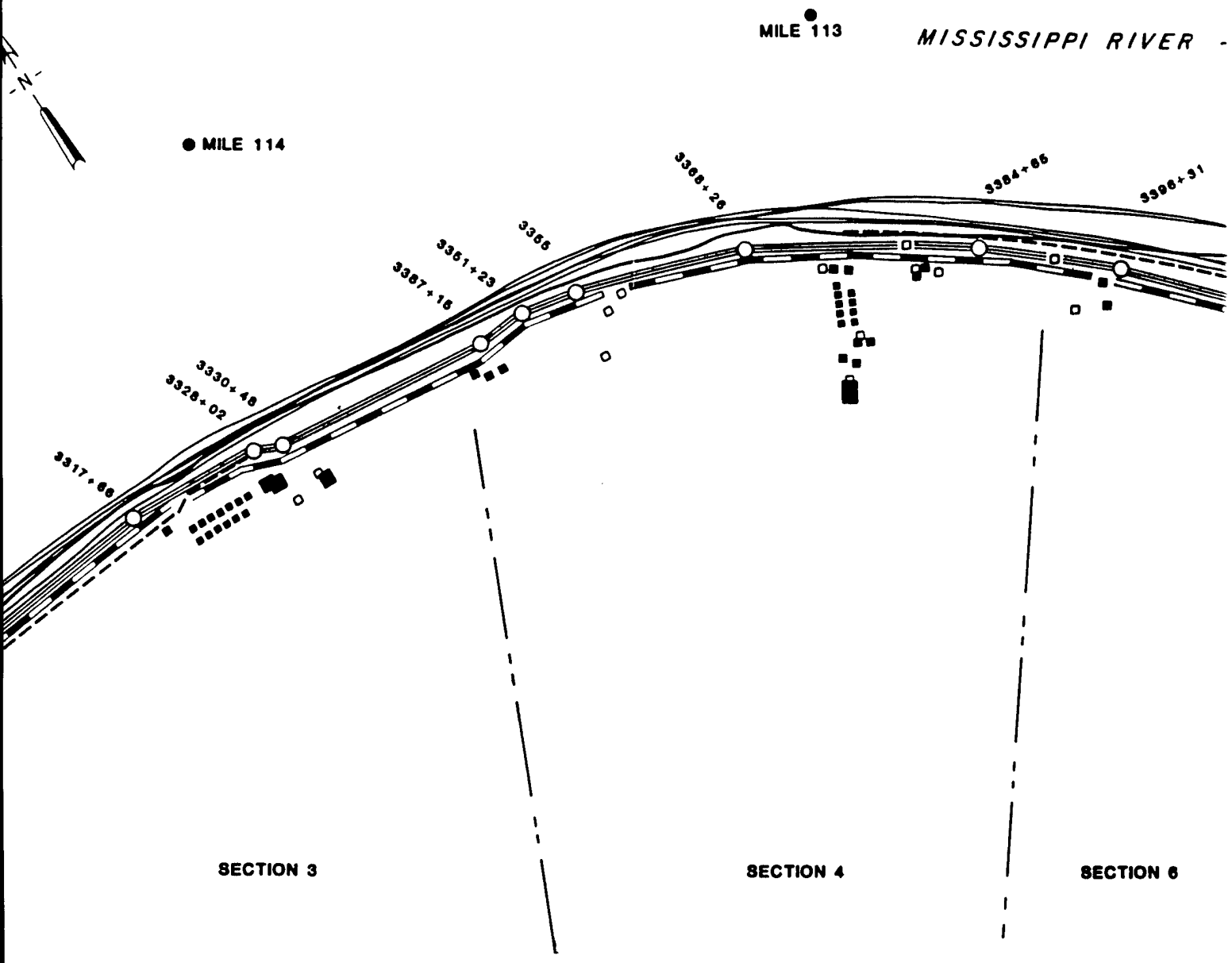
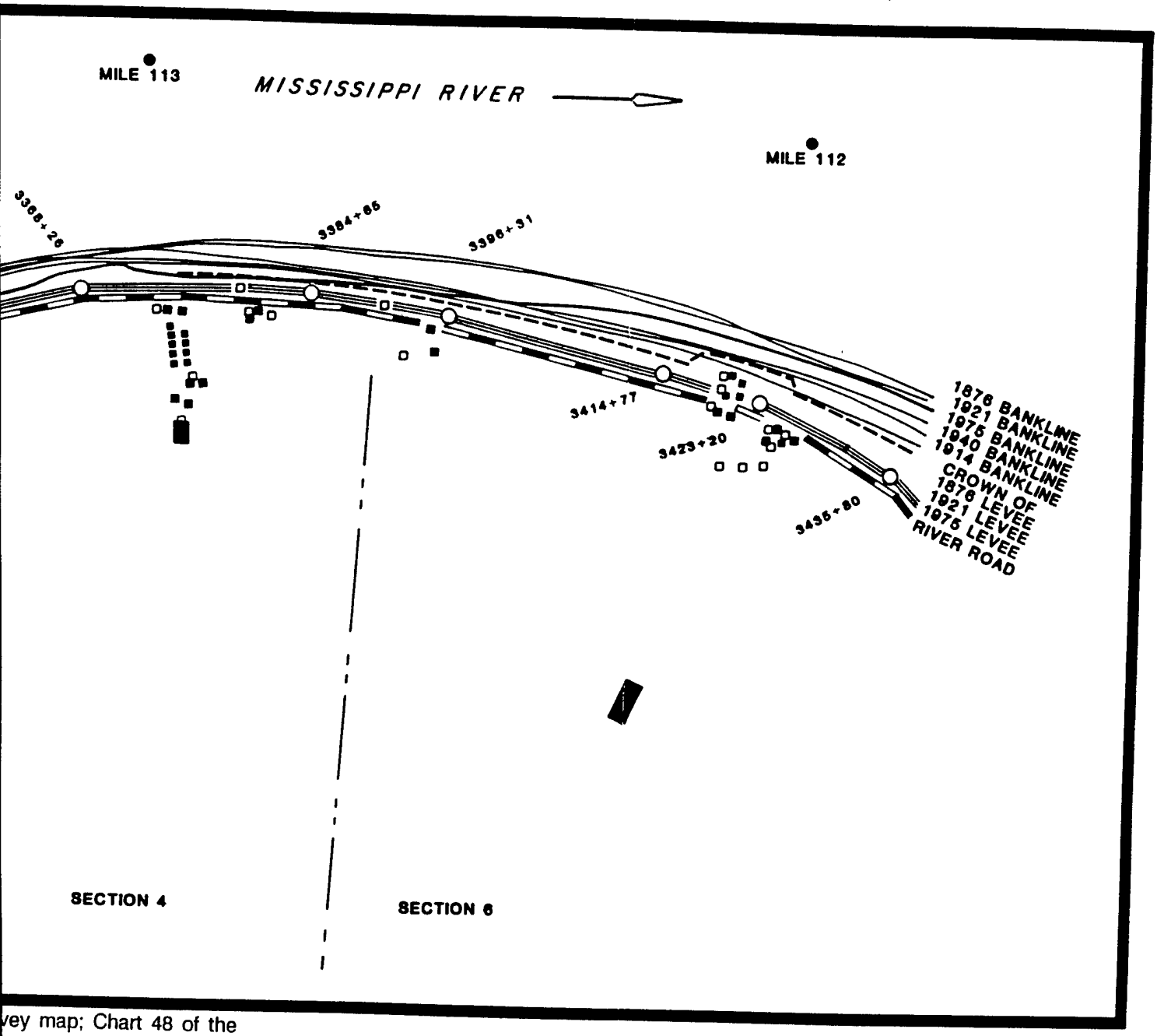


Figure 24. Composite of Chart 75 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank S Mississippi River Hydrographic Survey; and the 1967 photorevised Luling, Louisiana, and 1965 New Orlean topographic quadrangles, showing Miles 115-112 (R).



6-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 48 of the vey; and the 1967 photorevised Luling, Louisiana, and 1965 New Orleans West, Louisiana, 7.5' series Miles 115-112 (R).



vey map; Chart 48 of the
Vest, Louisiana, 7.5' series

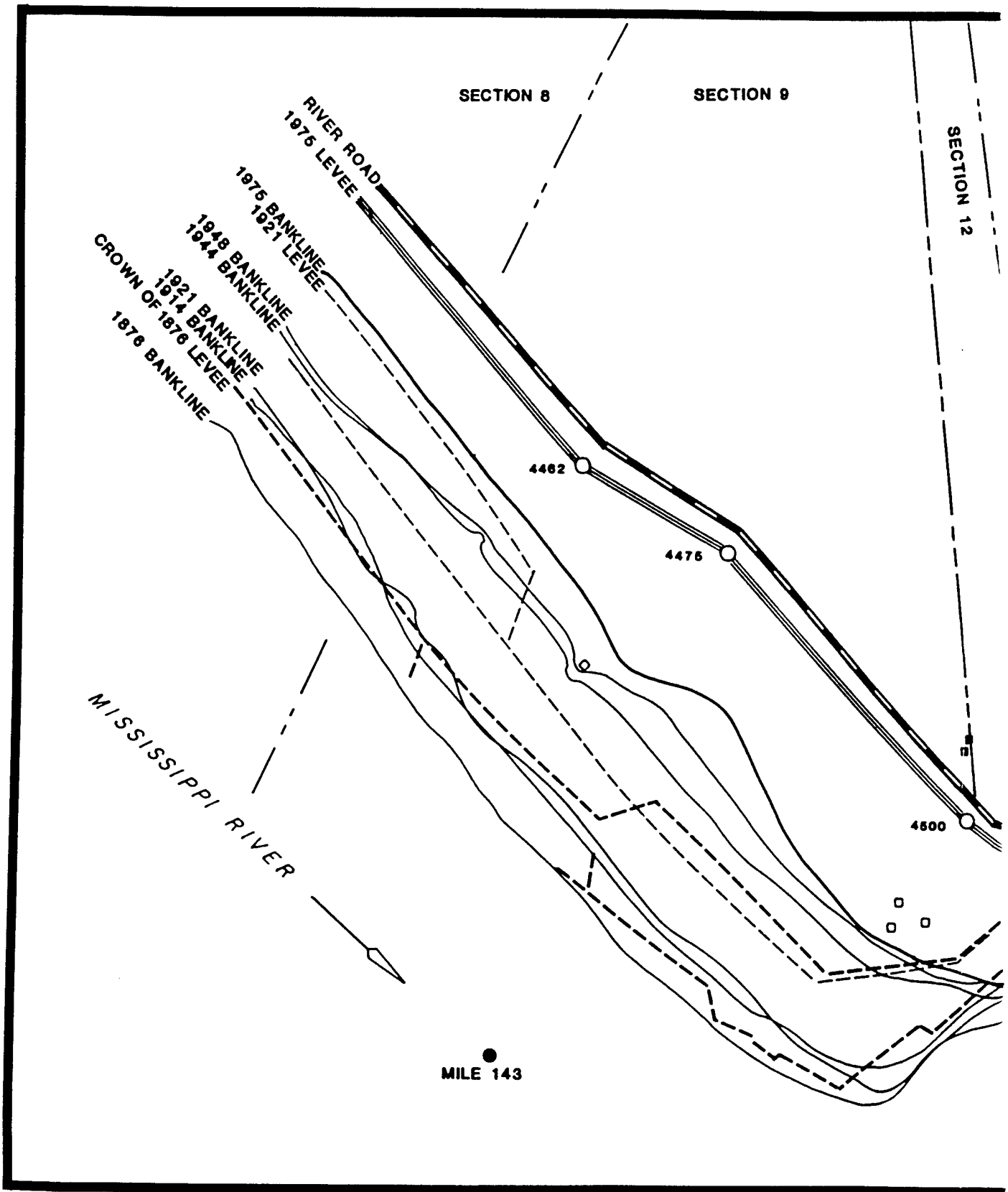
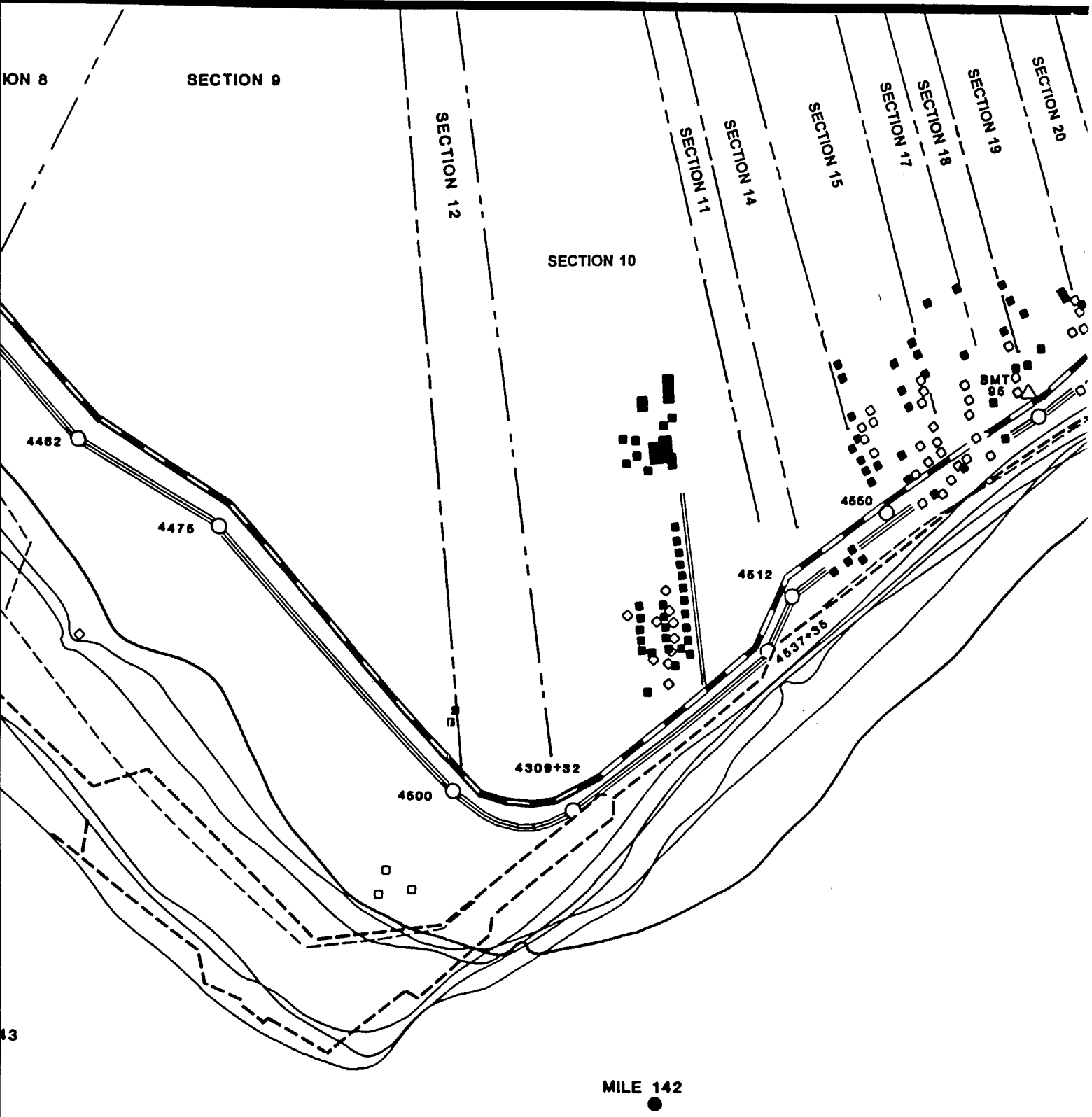
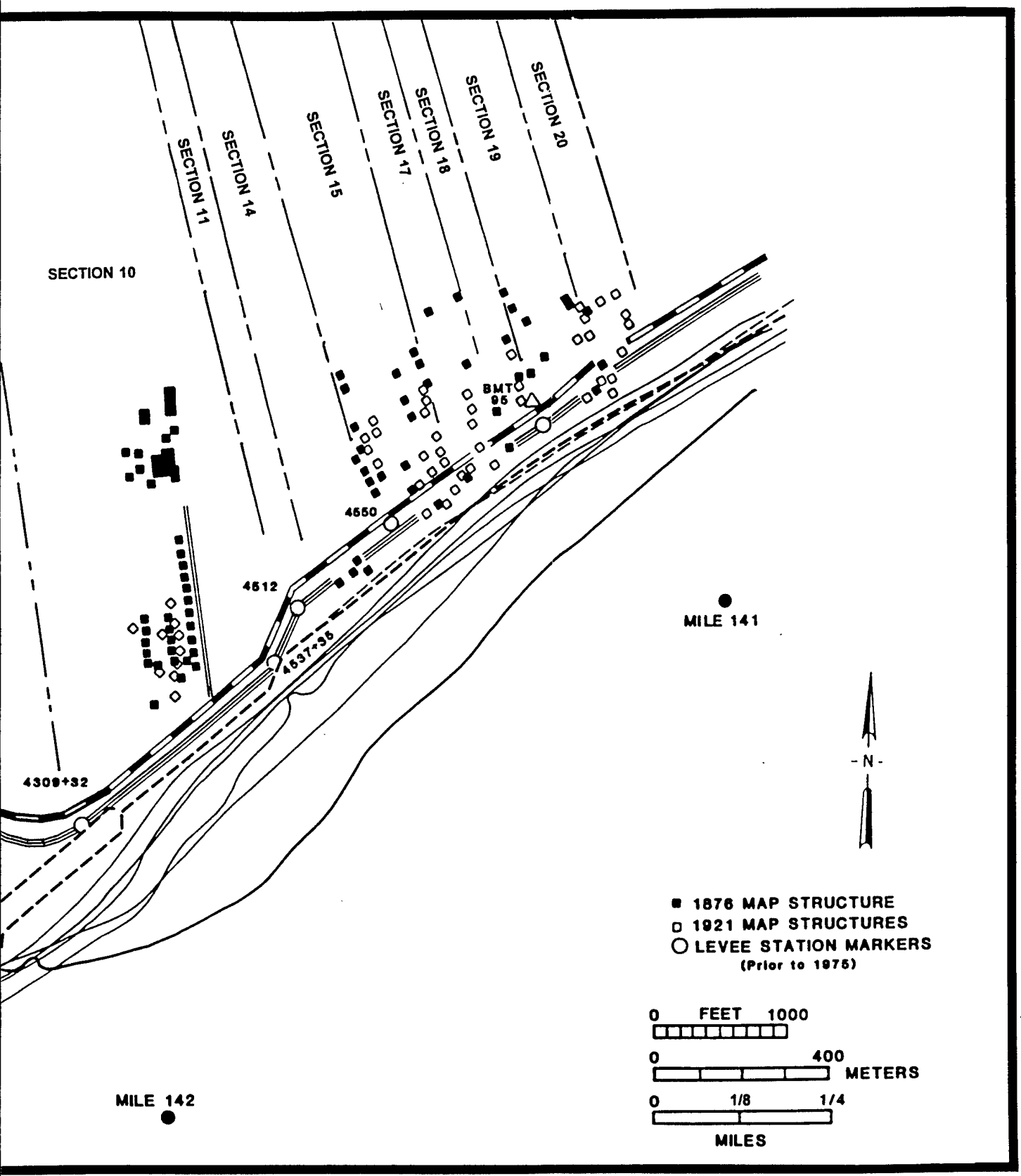


Figure 25. Composite of Chart 72 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey 1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Lutcher, Louisiana, and Reser topographic quadrangles, showing Miles 143-141 (L).



Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 42 of the 1973-
and the 1962 photorevised Lutcher, Louisiana, and Reserve, Louisiana, 7.5' series
1 (L).

(2)



map; Chart 42 of the 1973-
rve, Louisiana, 7.5' series

(3)

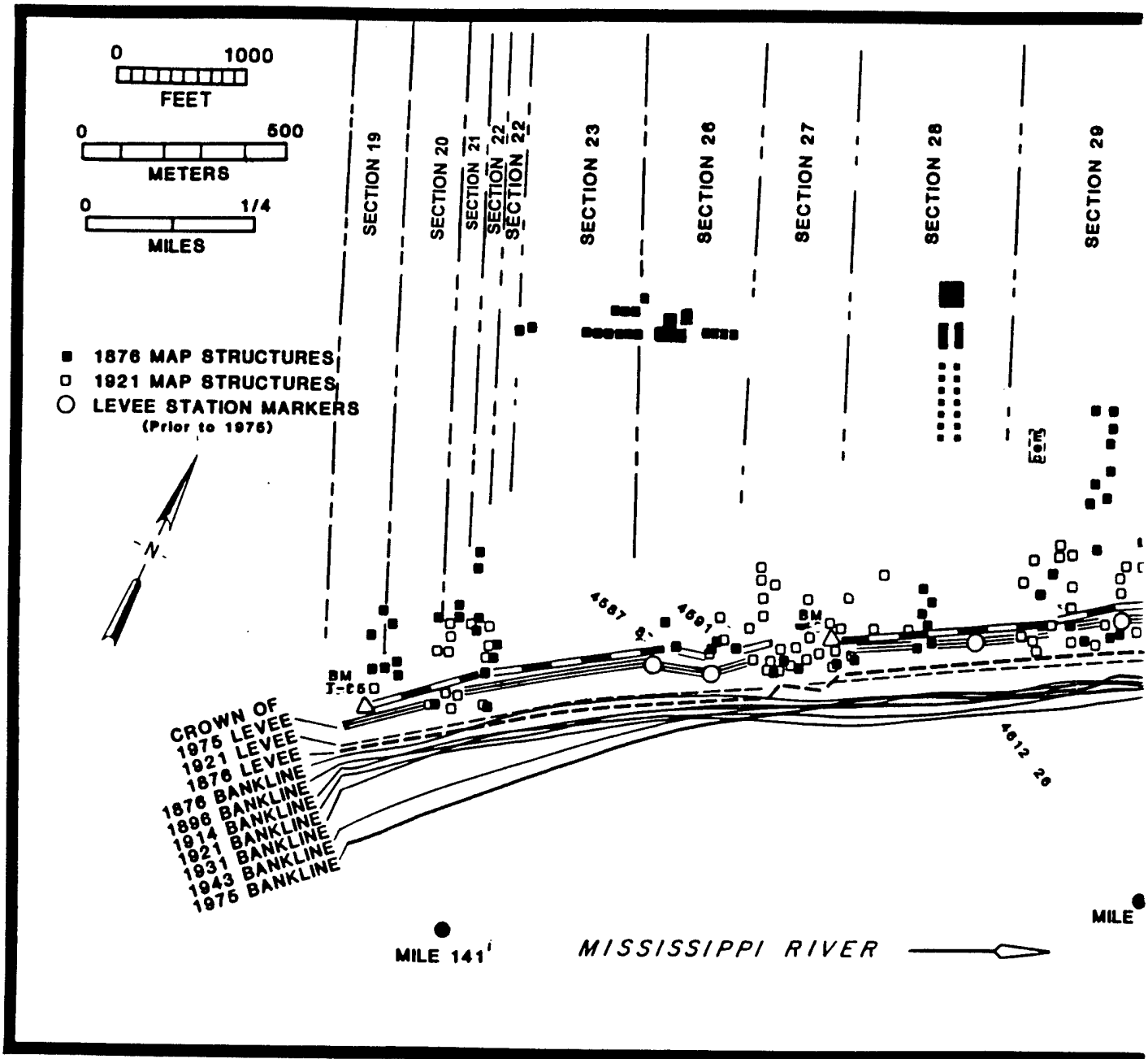
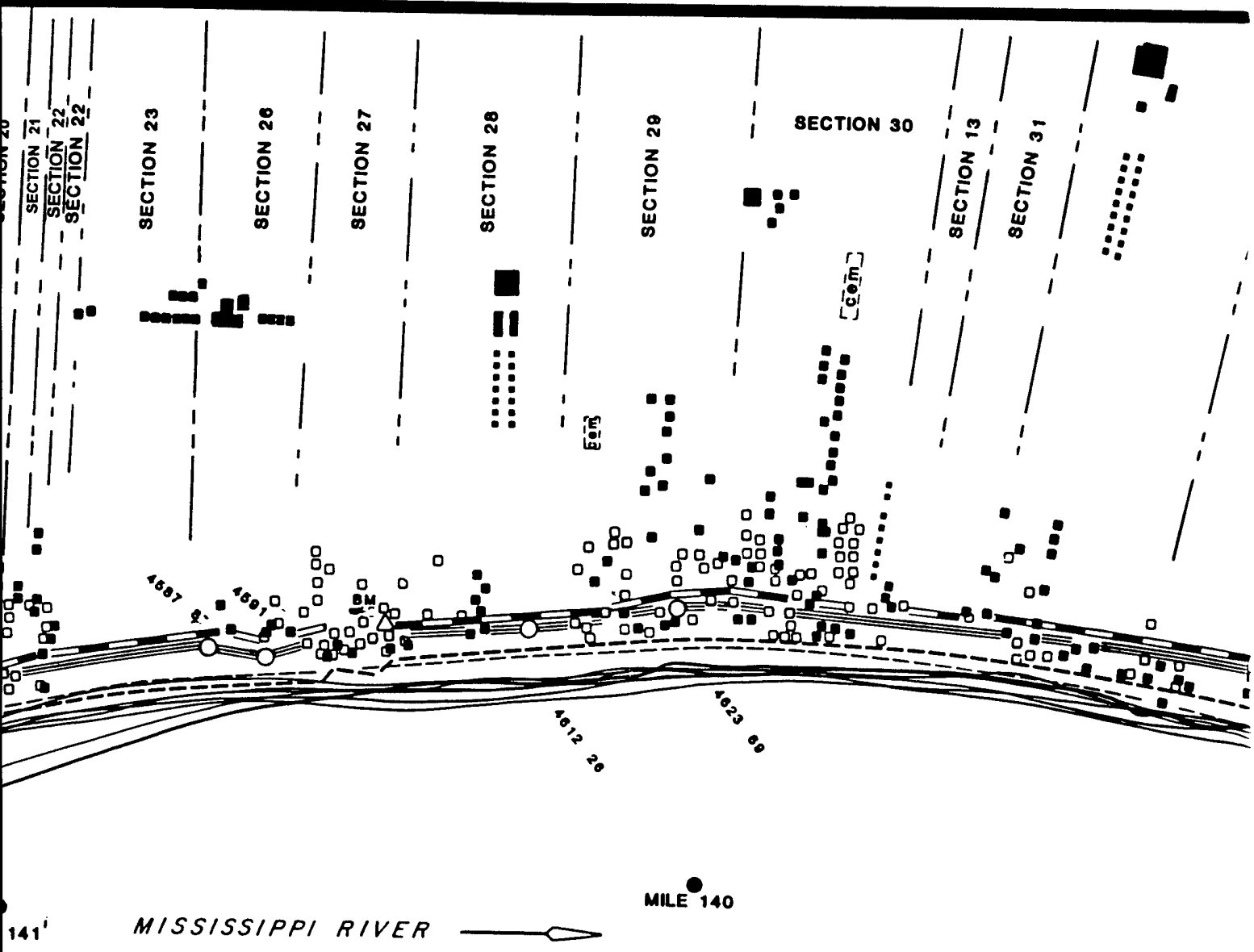
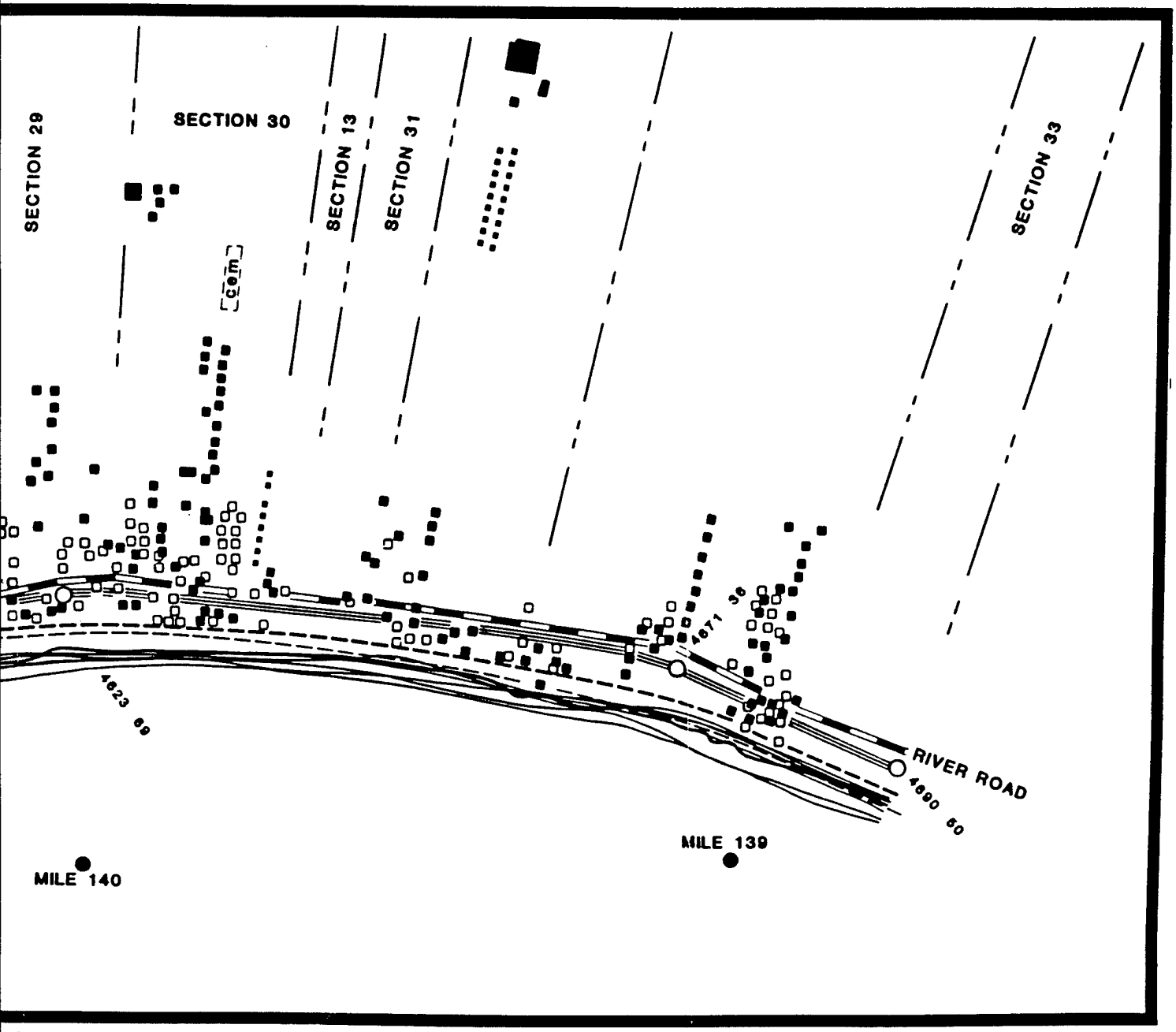


Figure 26. Composite of Chart 72 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey r 1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Reserve, Louisiana, 7.5' series topograp Miles 141-139 (L).



893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 42 of the 1973-
c Survey; and the 1962 photorevised Reserve, Louisiana, 7.5' series topographic quadrangle, showing



k Survey map; Chart 42 of the 1973-
s topographic quadrangle, showing

(3)

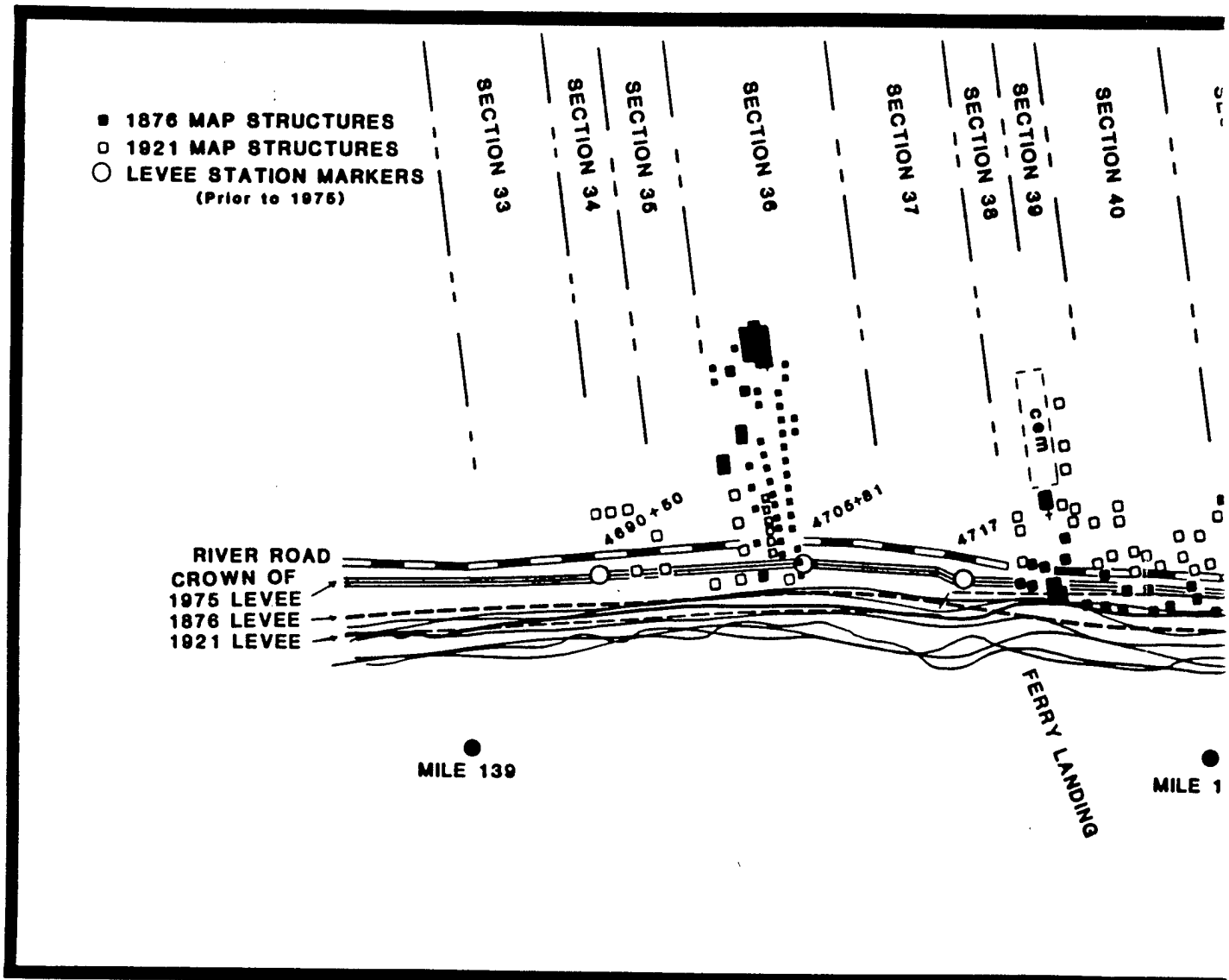
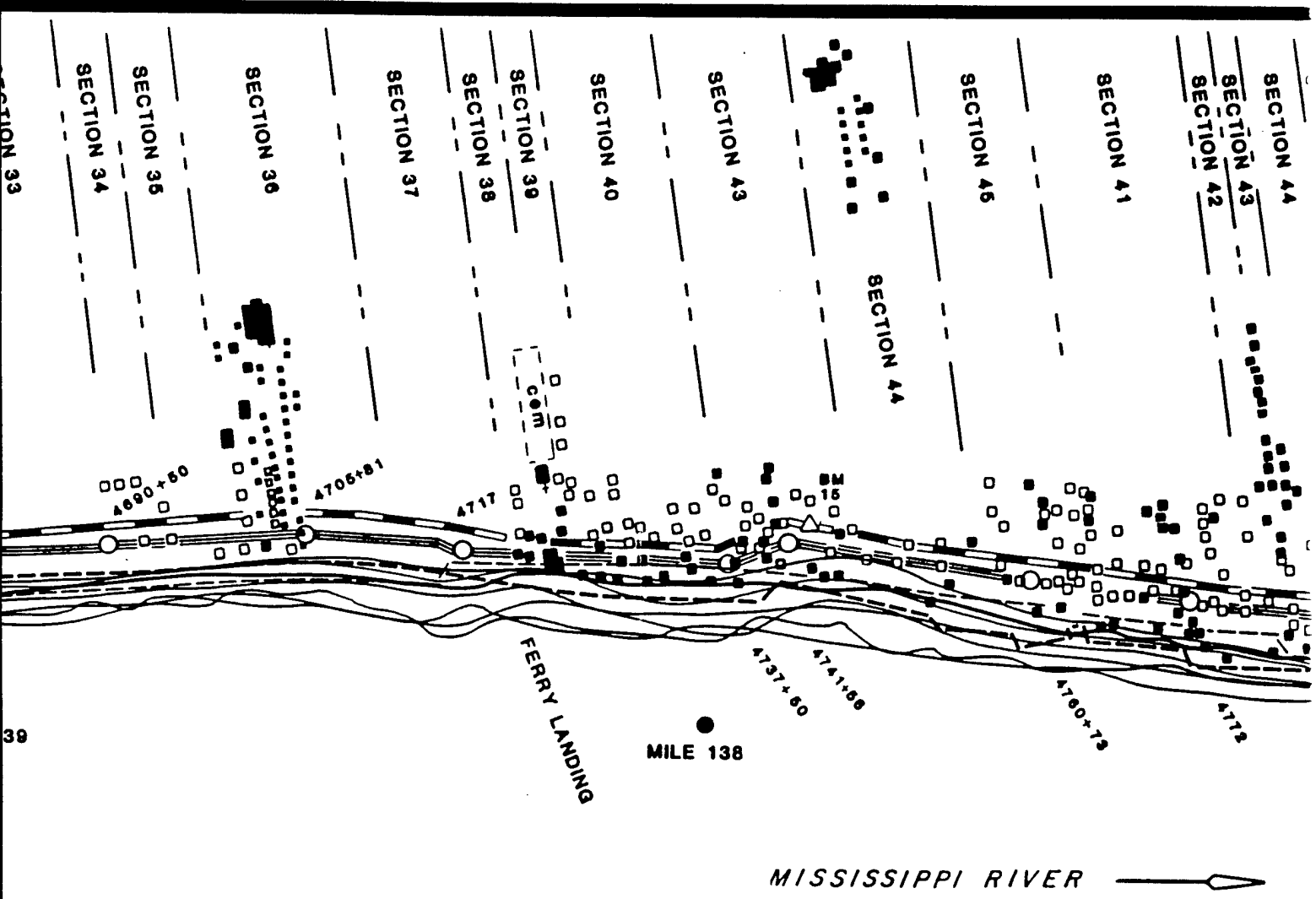
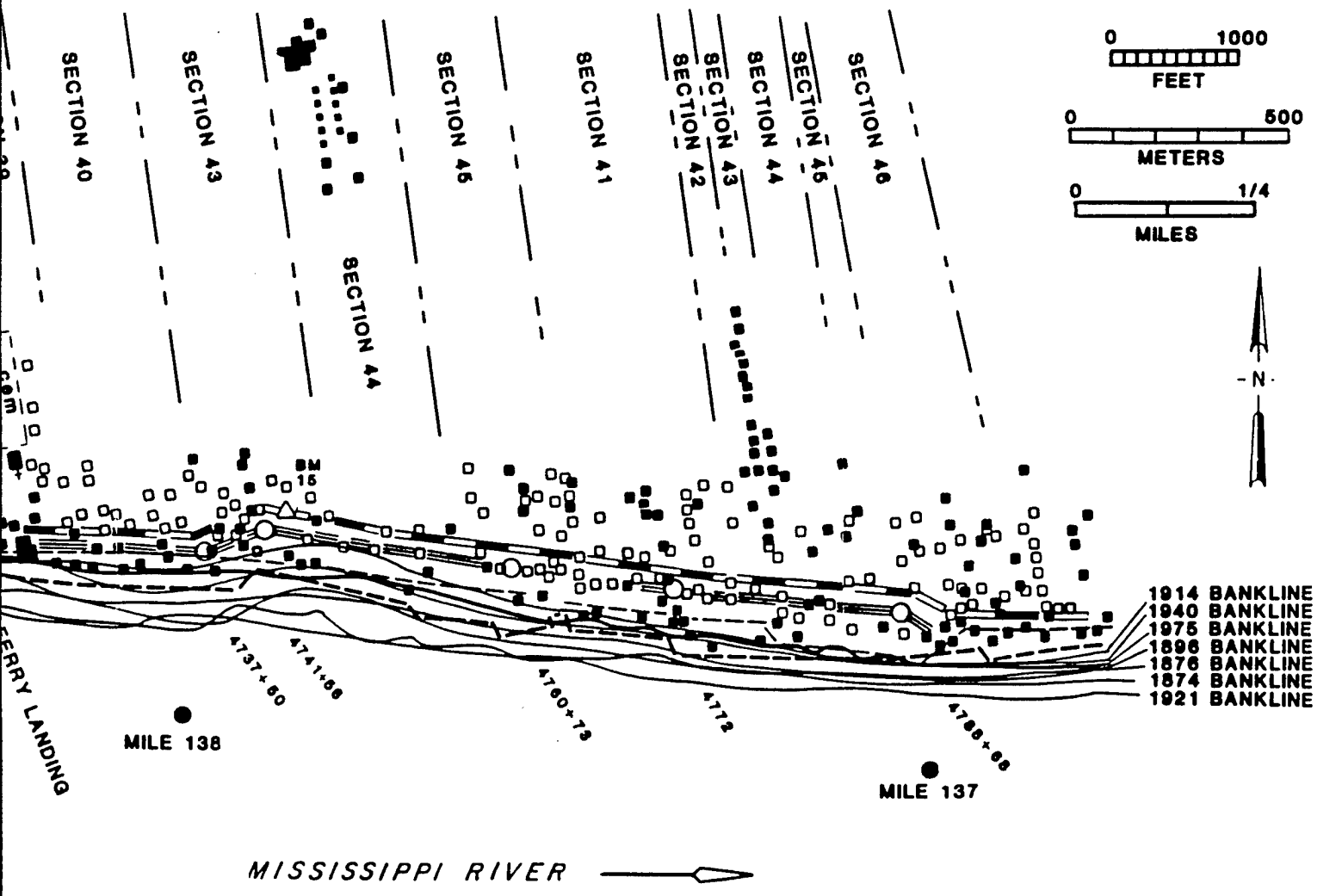


Figure 27. Composite of Charts 72 and 73 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bar of the 1973-1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Reserve, Louisiana, quadrangle, showing Miles 139-137 (L).



e 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 43 Hydrographic Survey; and the 1962 photorevised Reserve, Louisiana, 7.5' series topographic L).



he 1952 Caving Bank Survey map; Chart 43
Reserve, Louisiana, 7.5' series topographic

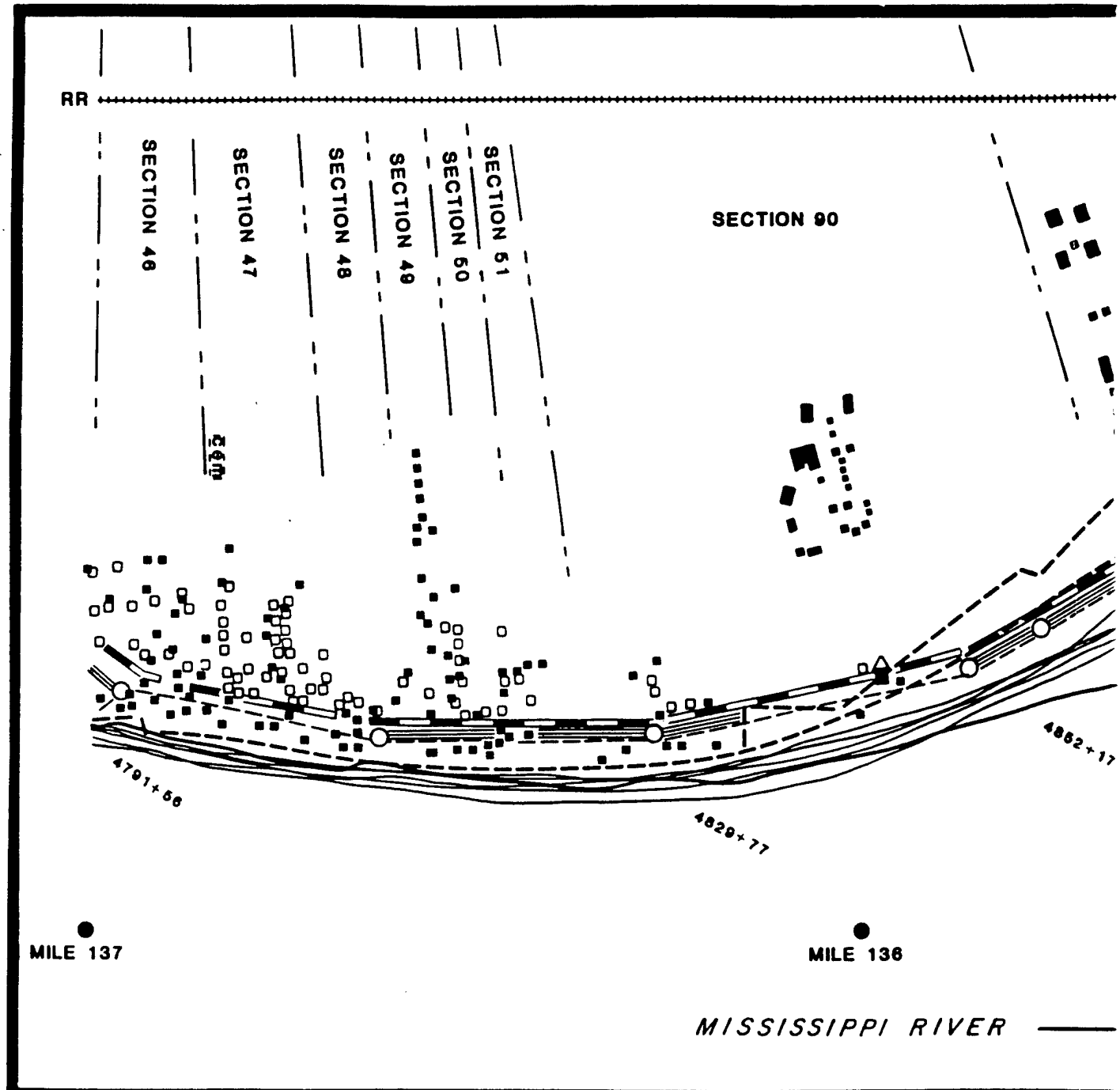
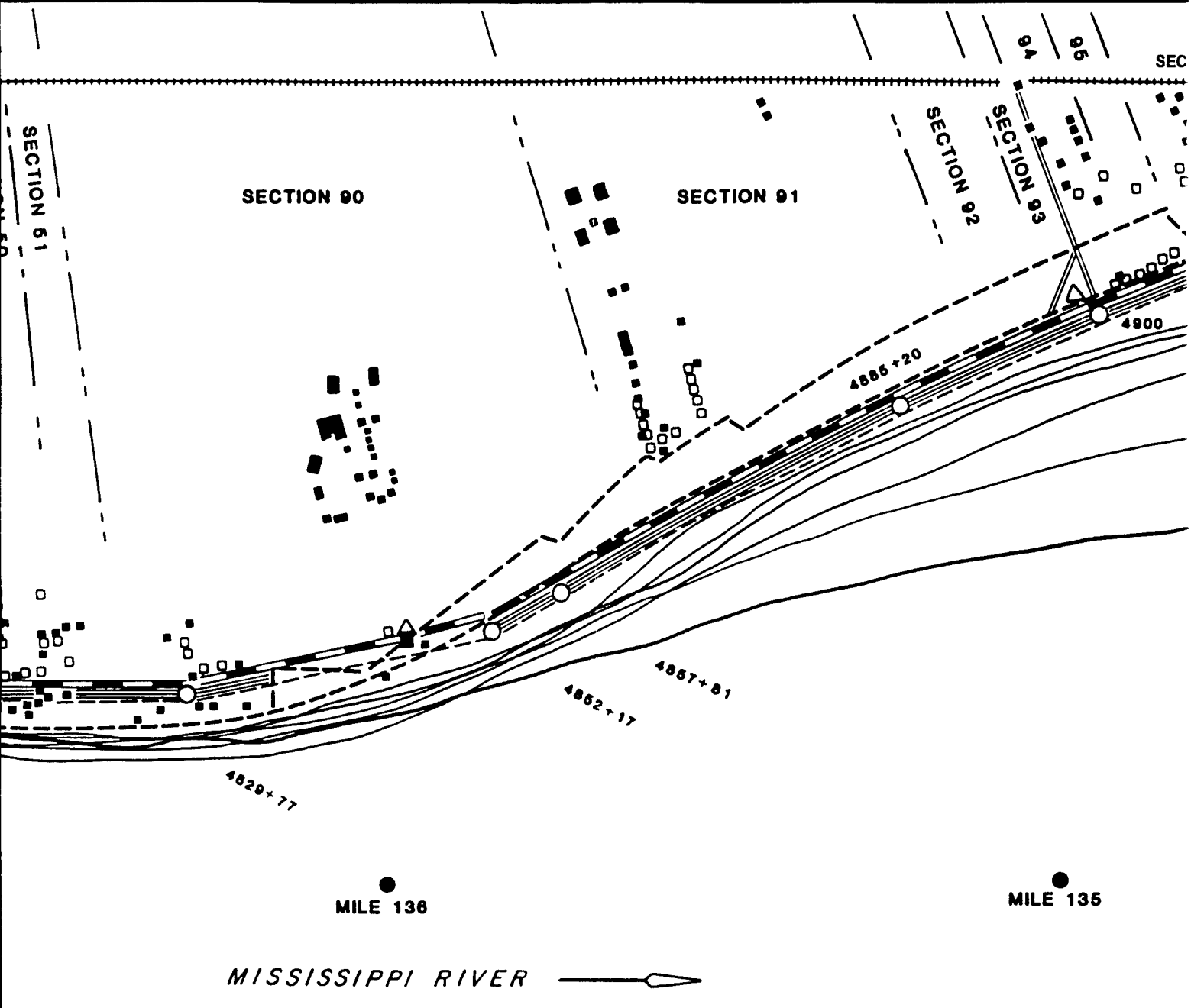
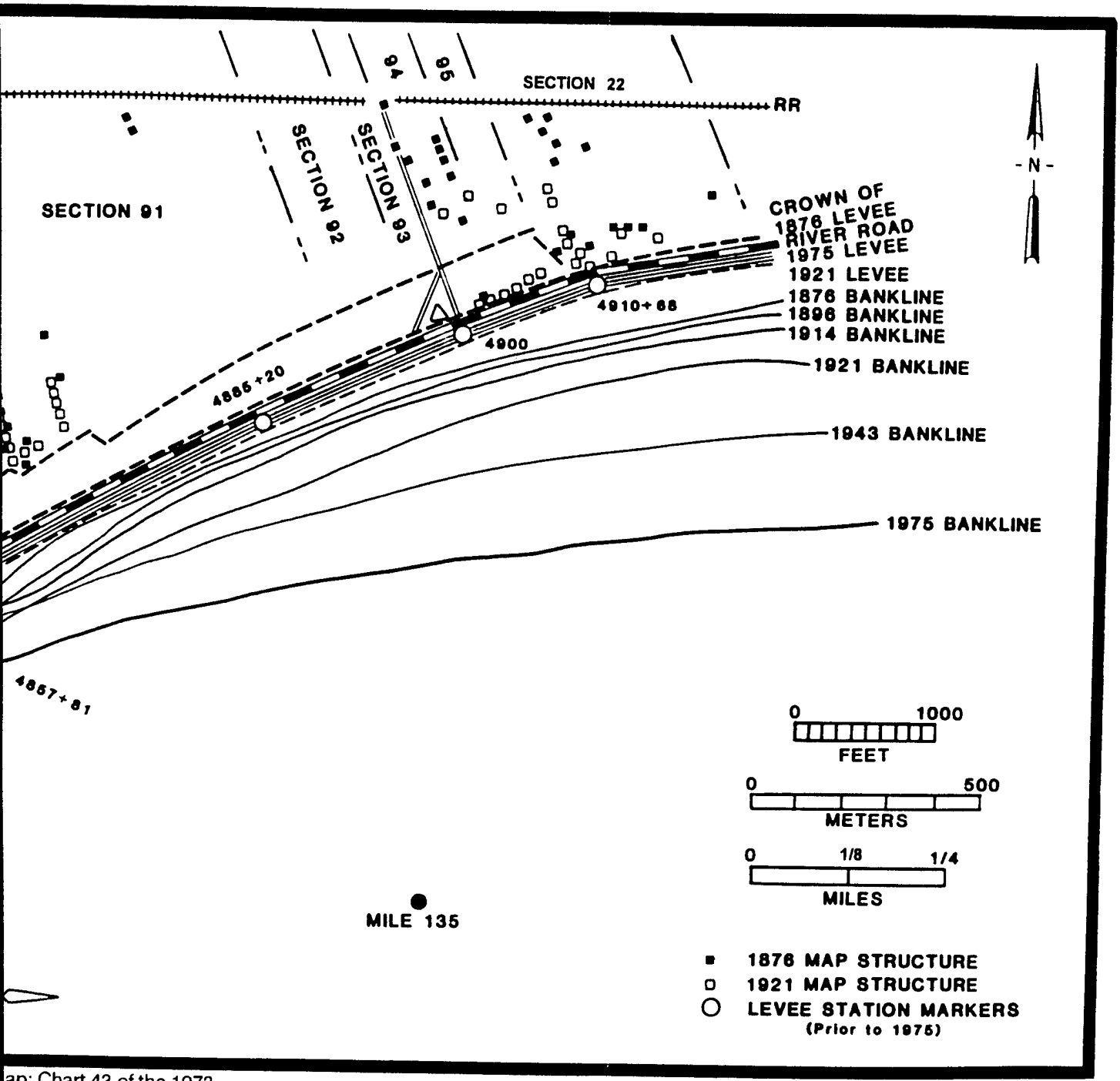


Figure 28. Composite of Chart 73 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey 1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Reserve, Louisiana, 7.5'series topogra Miles 137-135 (L).



93 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 43 of the 1973-
Survey; and the 1962 photorevised Reserve, Louisiana, 7.5'series topographic quadrangle, showing



ap; Chart 43 of the 1973-
hic quadrangle, showing

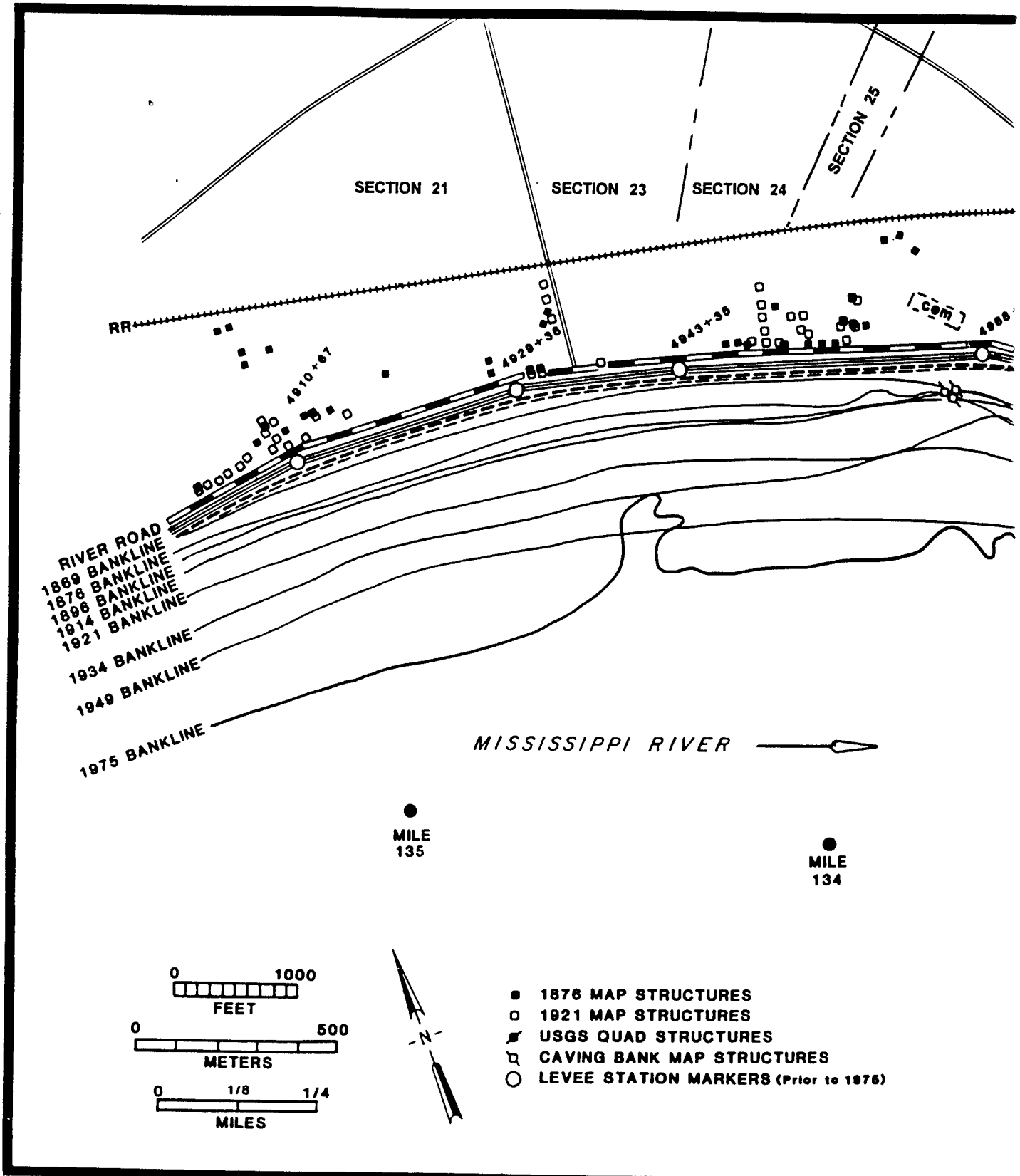
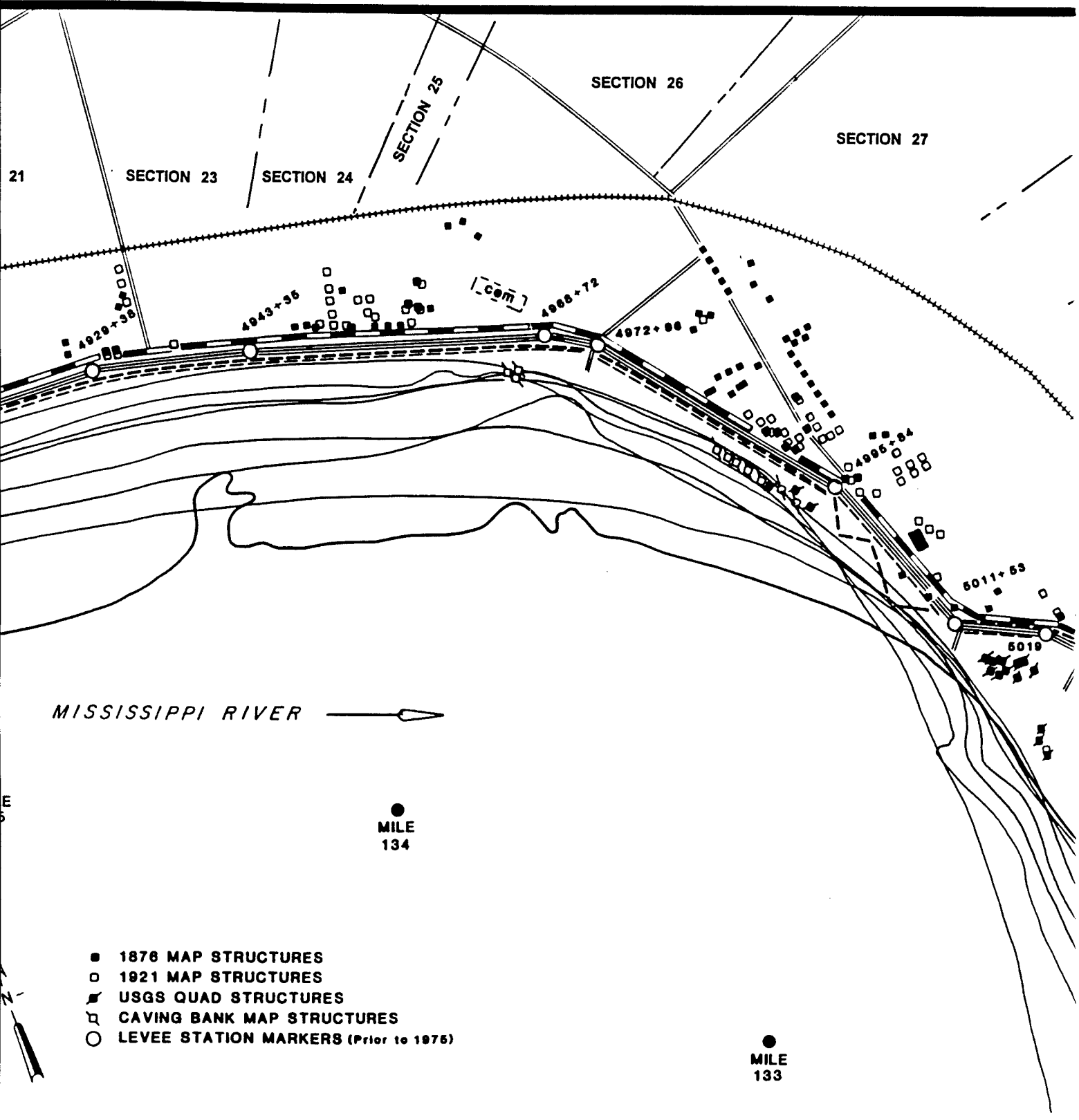
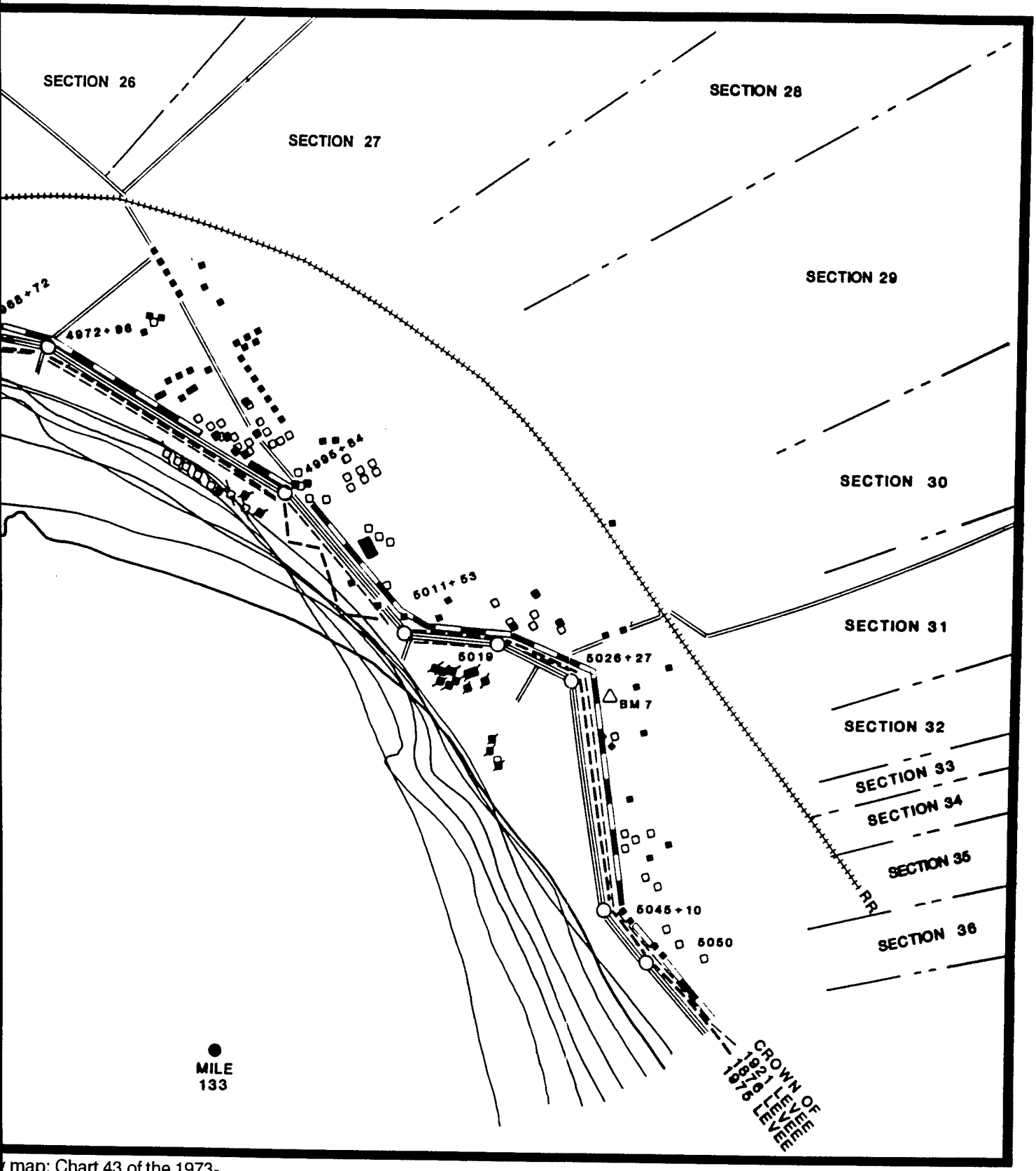


Figure 29. Composite of Chart 73 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey ma 1975 Mississippi River Hydrographic Survey; and the 1967 photorevised Laplace and Reserve, Louisiana, quadrangles, showing Miles 135-133 (L).

(1)



and 1921 Mississippi River Commission; the 1952 Caving Bank Survey map; Chart 43 of the 1973- Survey; and the 1967 photorevised Laplace and Reserve, Louisiana, 7.5' series topographic L).



map; Chart 43 of the 1973-
a, 7.5' series topographic

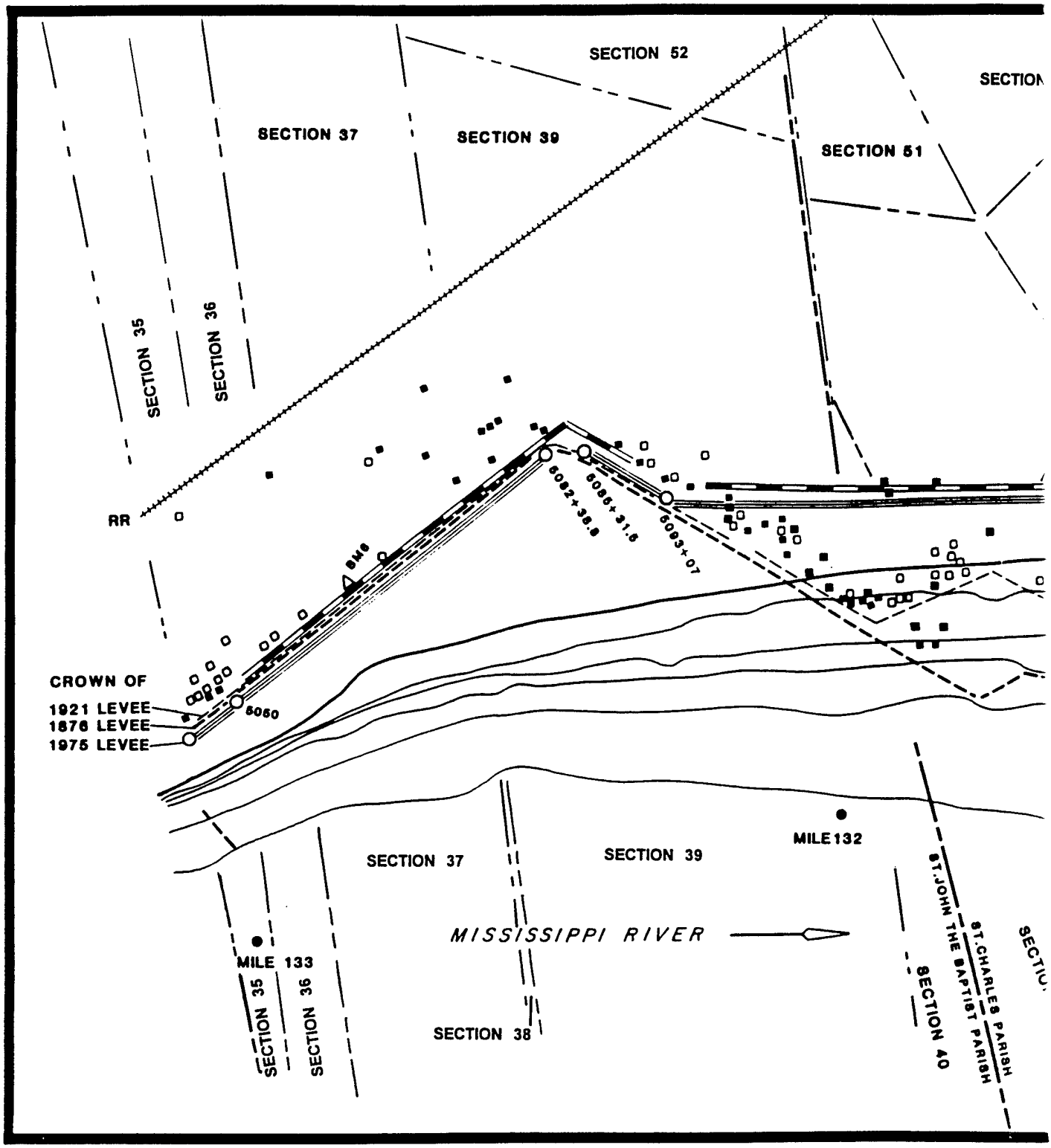
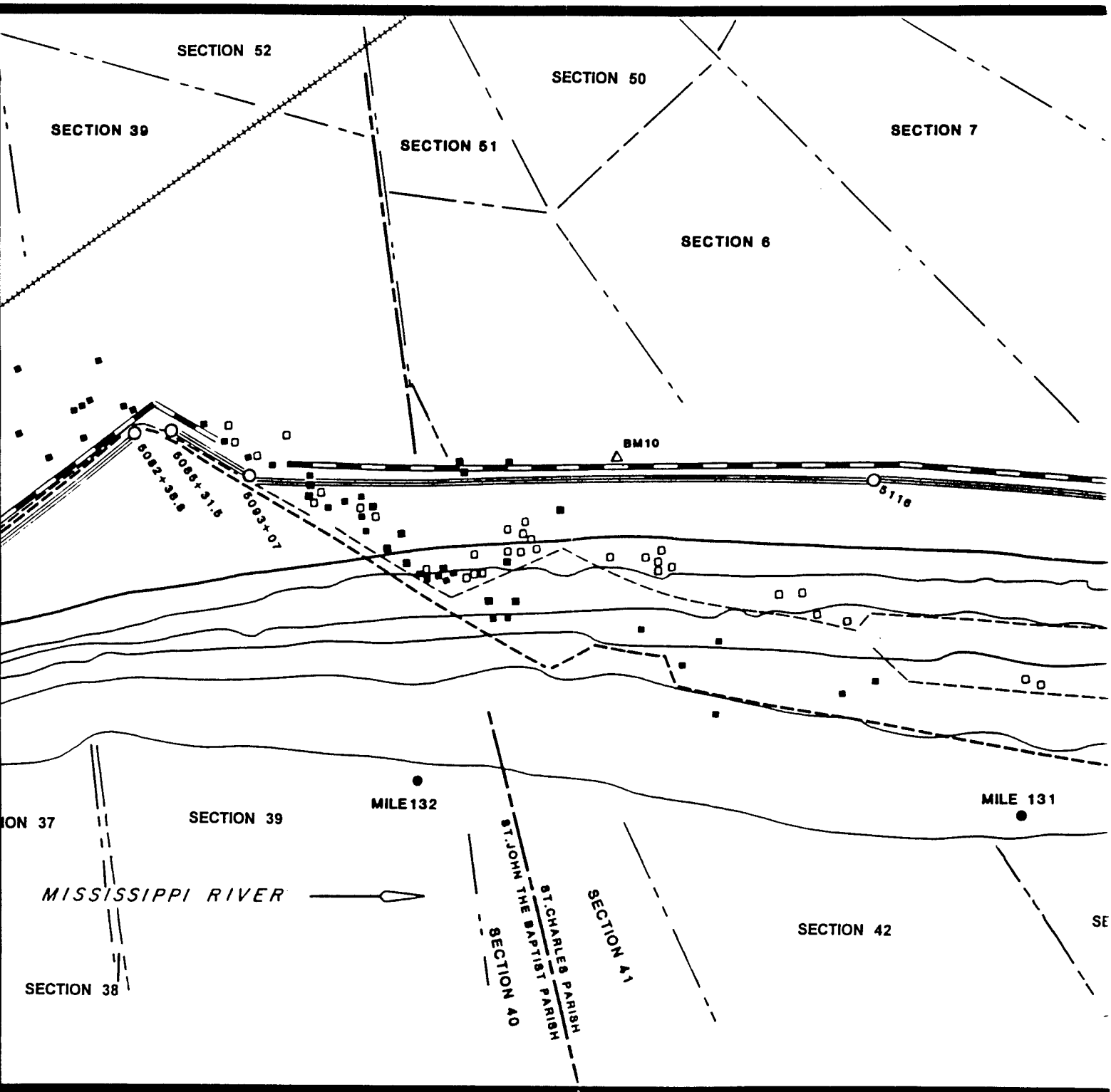
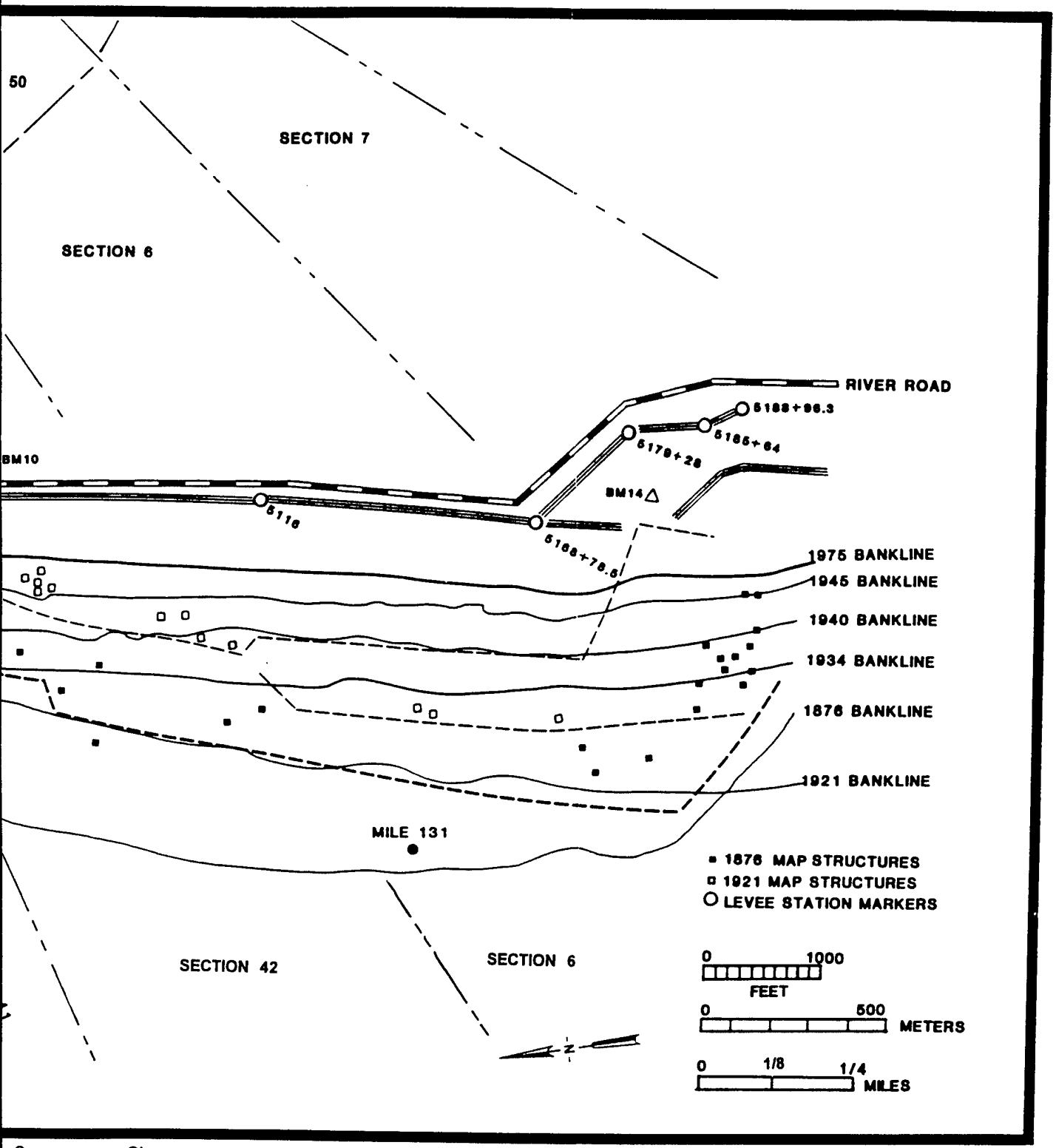


Figure 30. Composite of Charts 72 and 73 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bar and 45 of the 1973-1975 Mississippi River Hydrographic Survey; and the 1962 photorevised Reserve, Louisian quadrangle, showing Miles 133-131 (L).



he 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey map; Charts 44
i River Hydrographic Survey; and the 1962 photorevised Reserve, Louisiana, 7.5' series topographic
(L).



k Survey map; Charts 44
, 7.5' series topographic

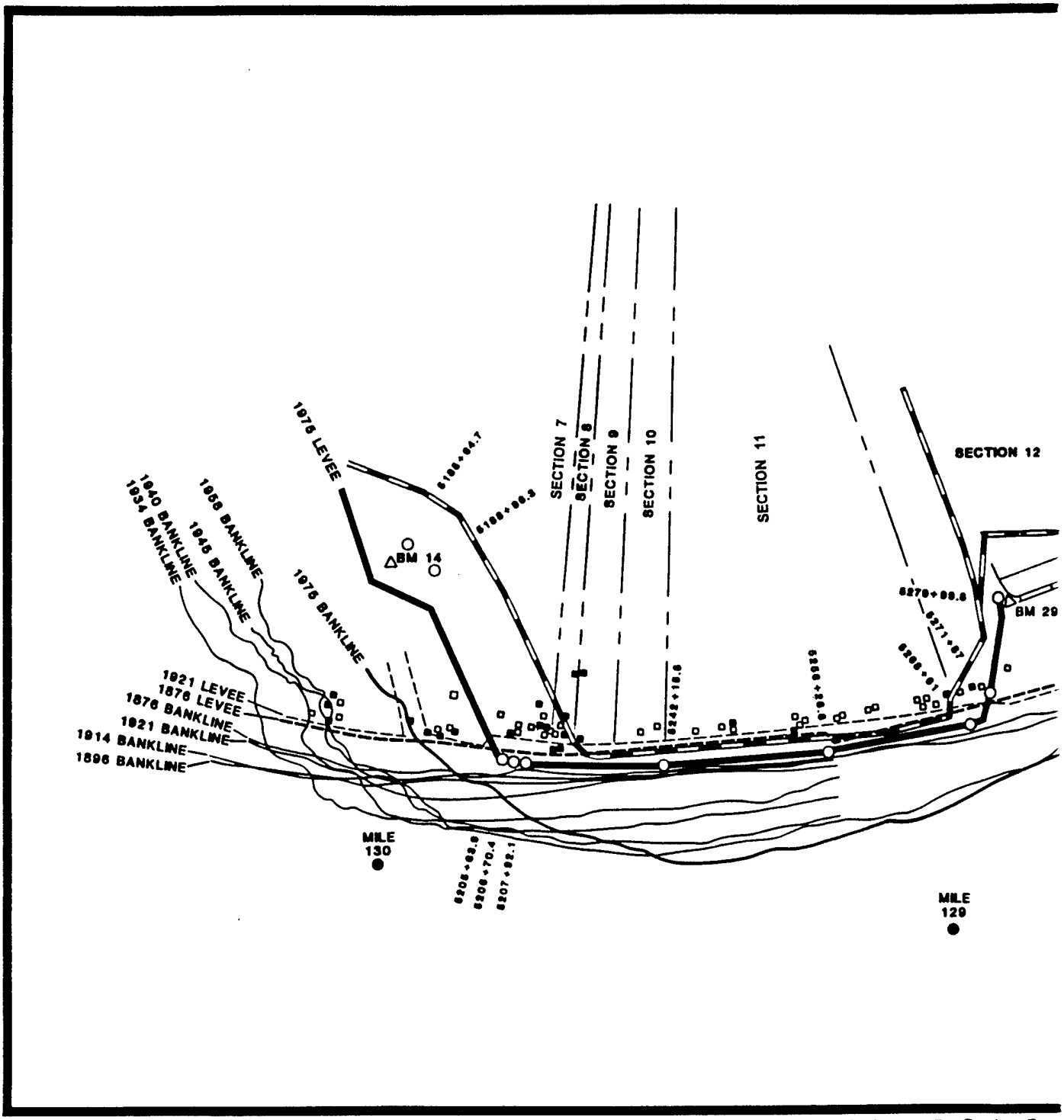
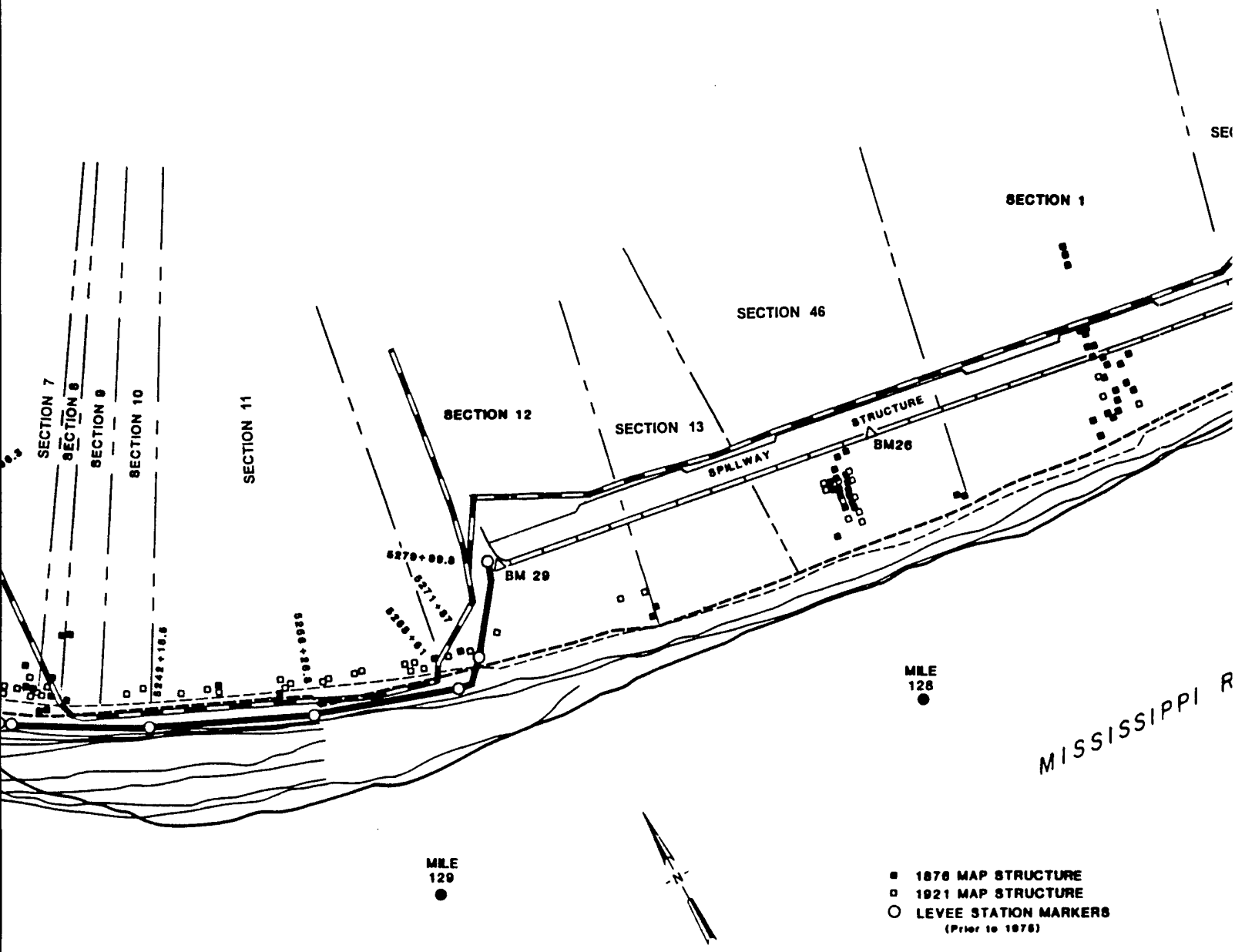
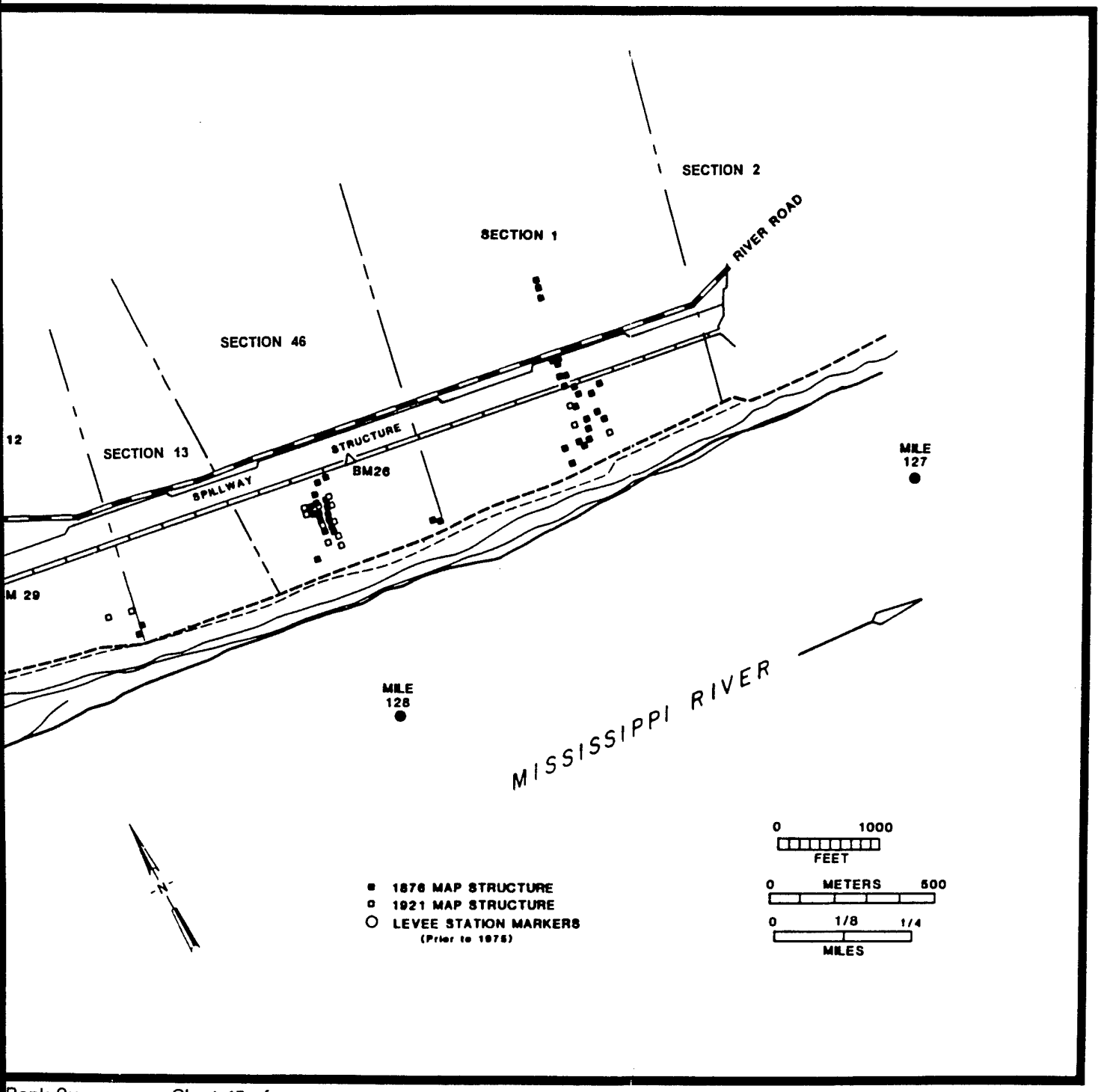


Figure 31. Composite of Charts 73 and 74 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Ban the Mississippi River Hydrographic Survey; and the 1967 photorevised Hahnville, Louisiana, and Lapla topographic quadrangles, showing Miles 130-127 (L).



93 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 45 of and the 1967 photorevised Hahnville, Louisiana, and Laplace, Louisiana, 7.5' series 27 (L).

(2)



Bank Survey map; Chart 45 of
aplace, Louisiana, 7.5' series

(3)

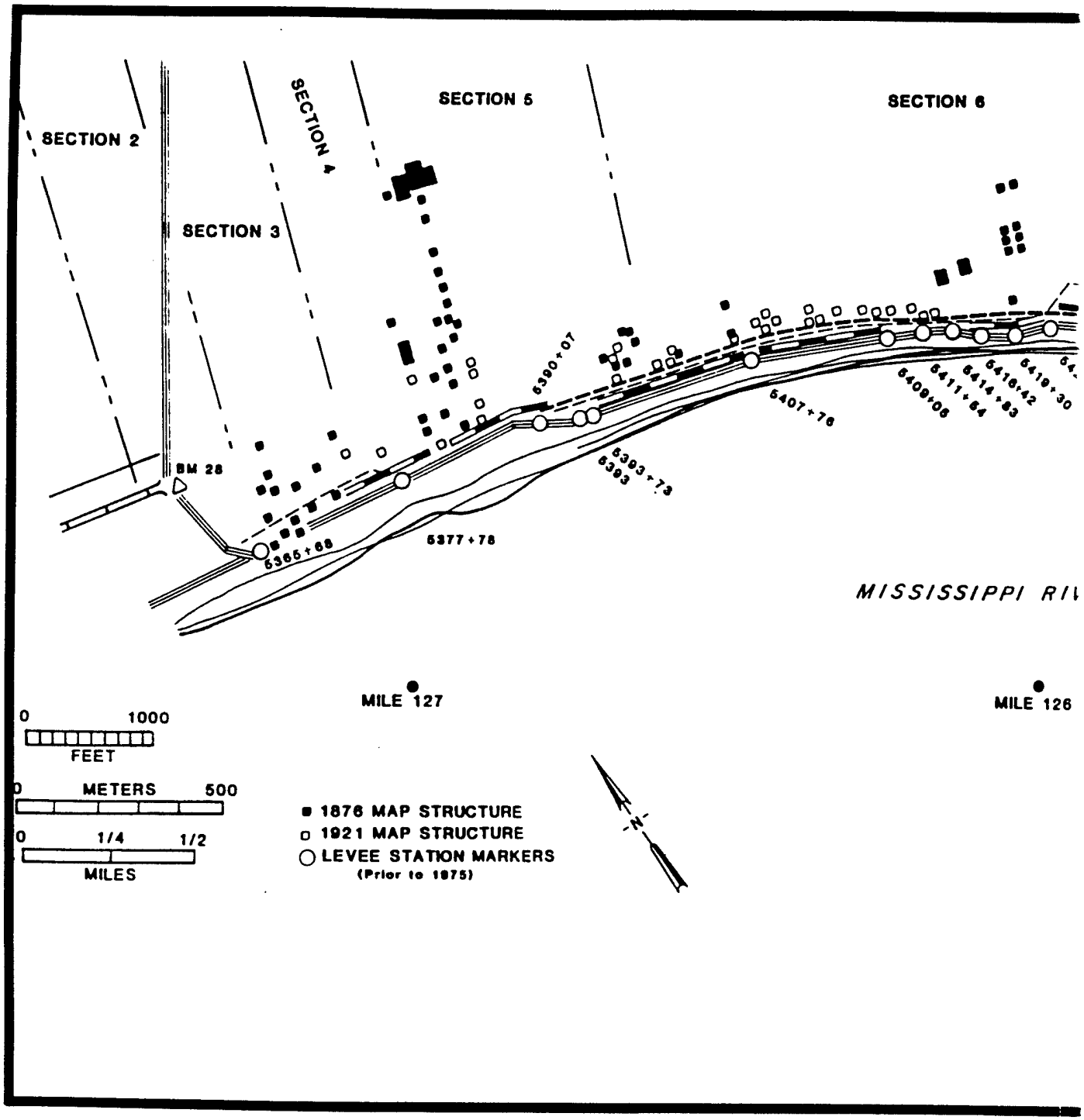
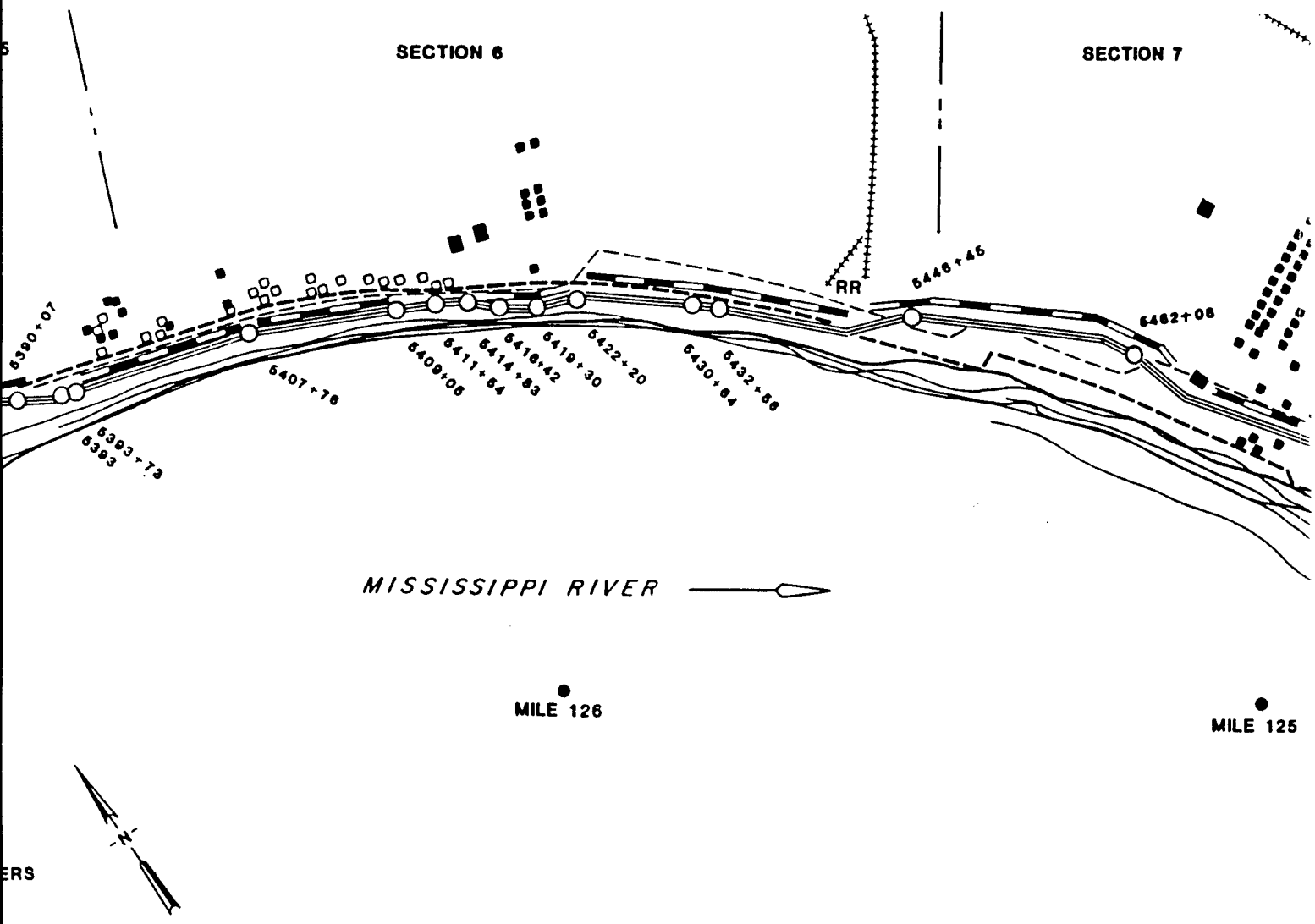
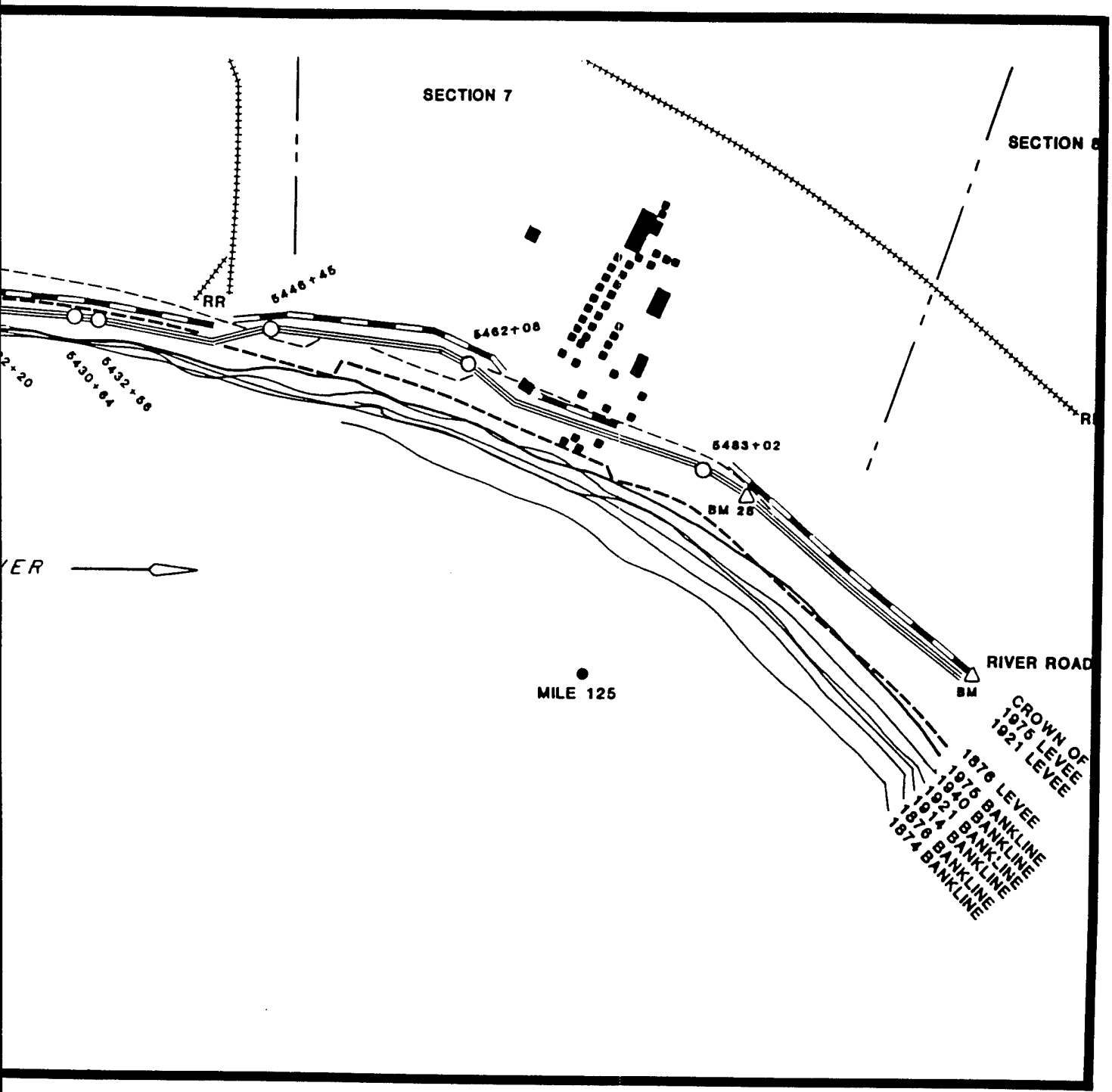


Figure 32. Composite of Chart 74 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Sur of the Mississippi River Hydrographic Survey; and the 1967 photorevised Hahnville, Louisiana, 7.5' serie showing Miles 127-125 (L).



and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Charts 45 and 46
rvey; and the 1967 photorevised Hahnville, Louisiana, 7.5' series topographic quadrangle,



vey map; Charts 45 and 46
s topographic quadrangle,

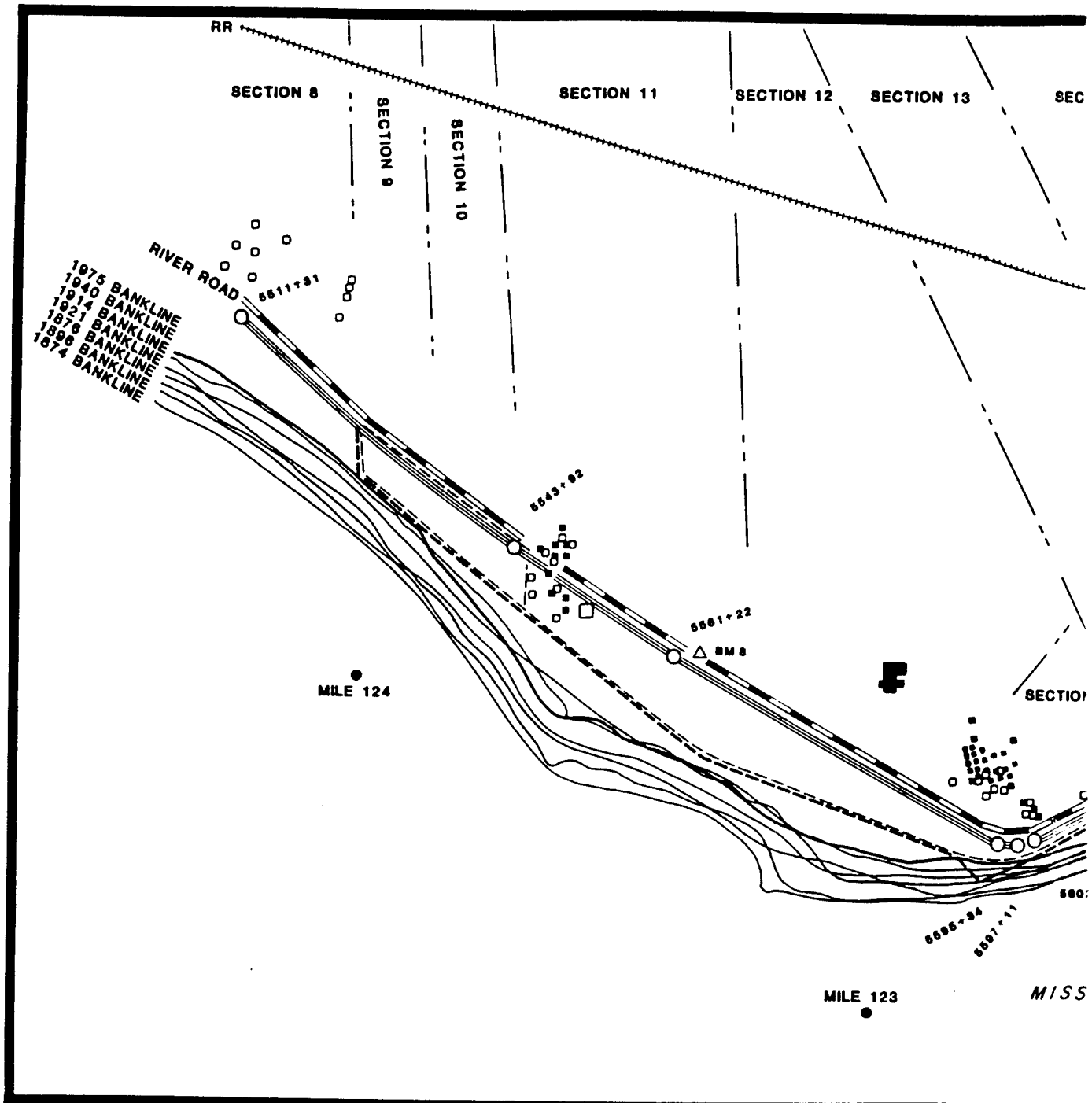
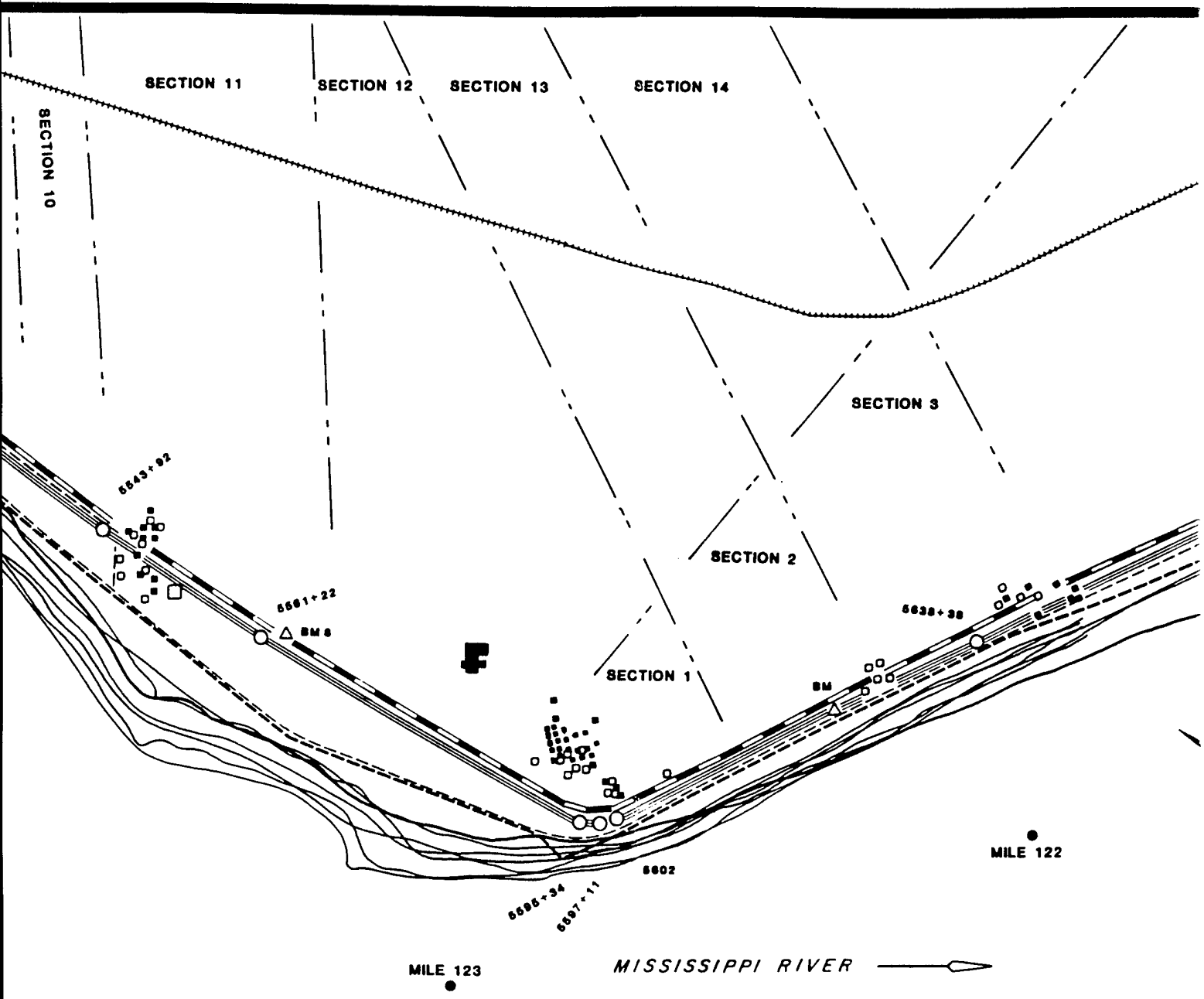
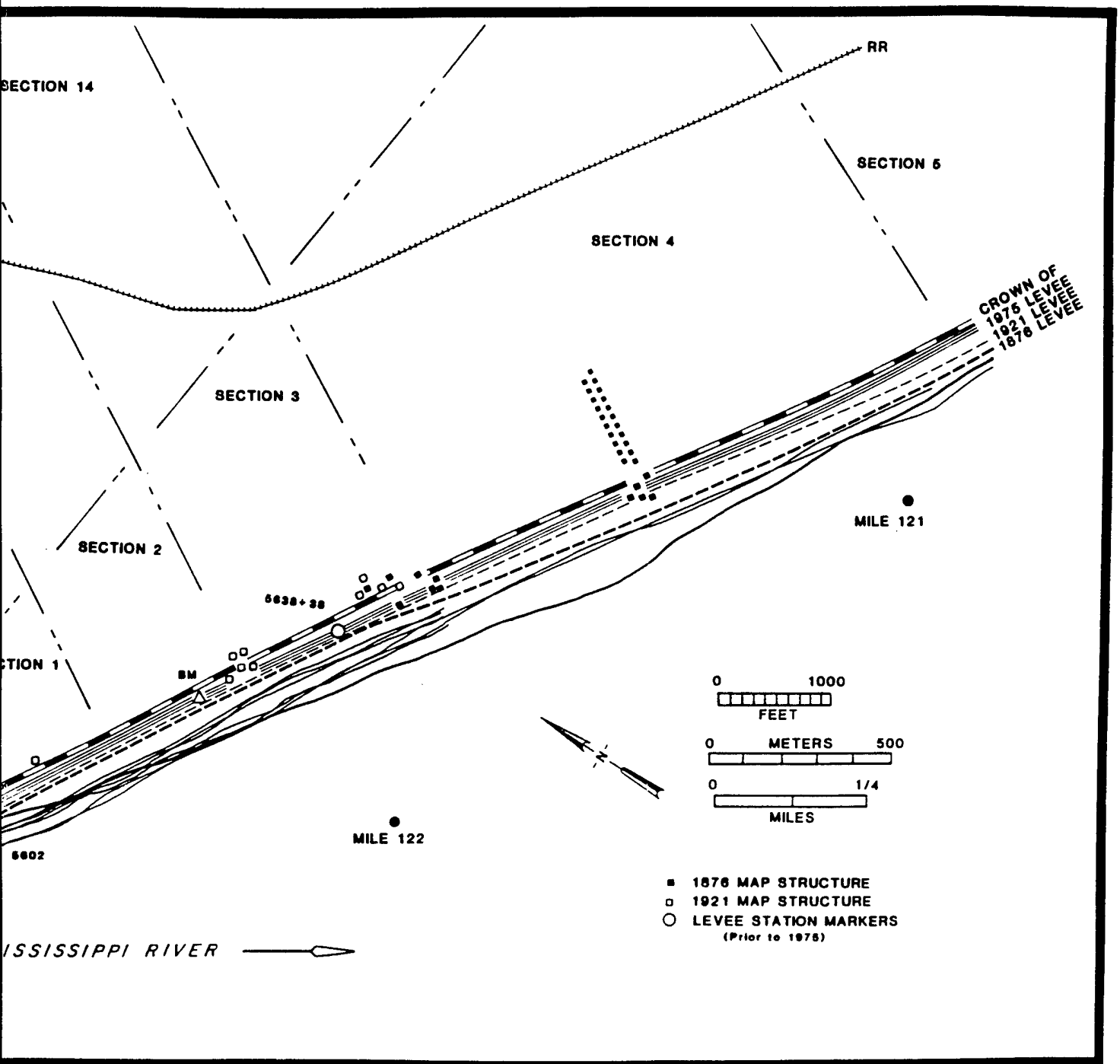


Figure 33. Composite of Chart 74 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Surve the Mississippi River Hydrographic Survey; and the 1967 photorevised Hahnville, Louisiana, and Luling, Louisi quadrangles, showing Miles 124-121 (L).



76-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Charts 46 and 47 of
ic Survey; and the 1967 photorevised Hahnville, Louisiana, and Luling, Louisiana, 7.5' series topogrpahic
-121 (L).



urvey map; Charts 46 and 47 of
ouisiana, 7.5' series topogrpahic

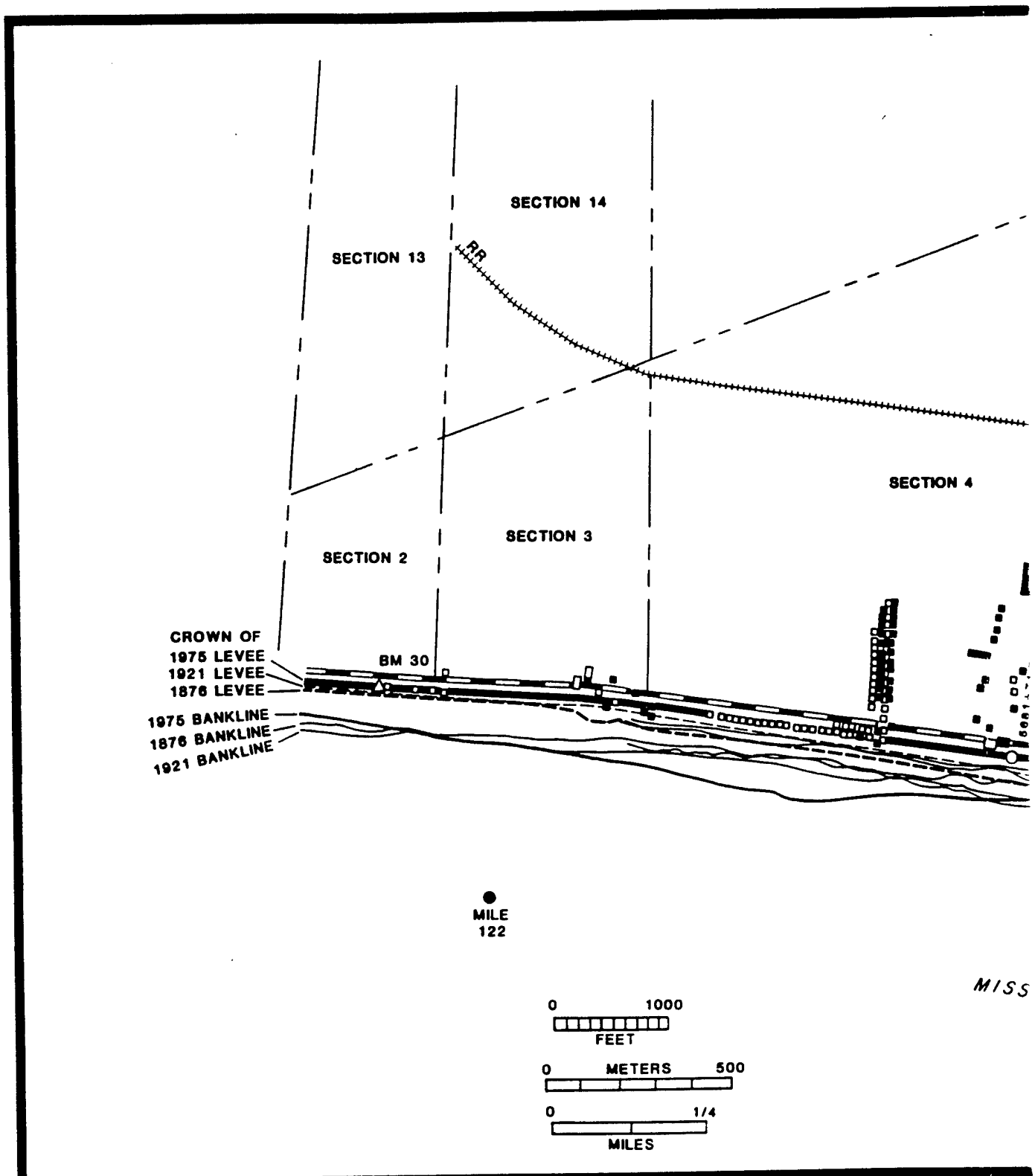
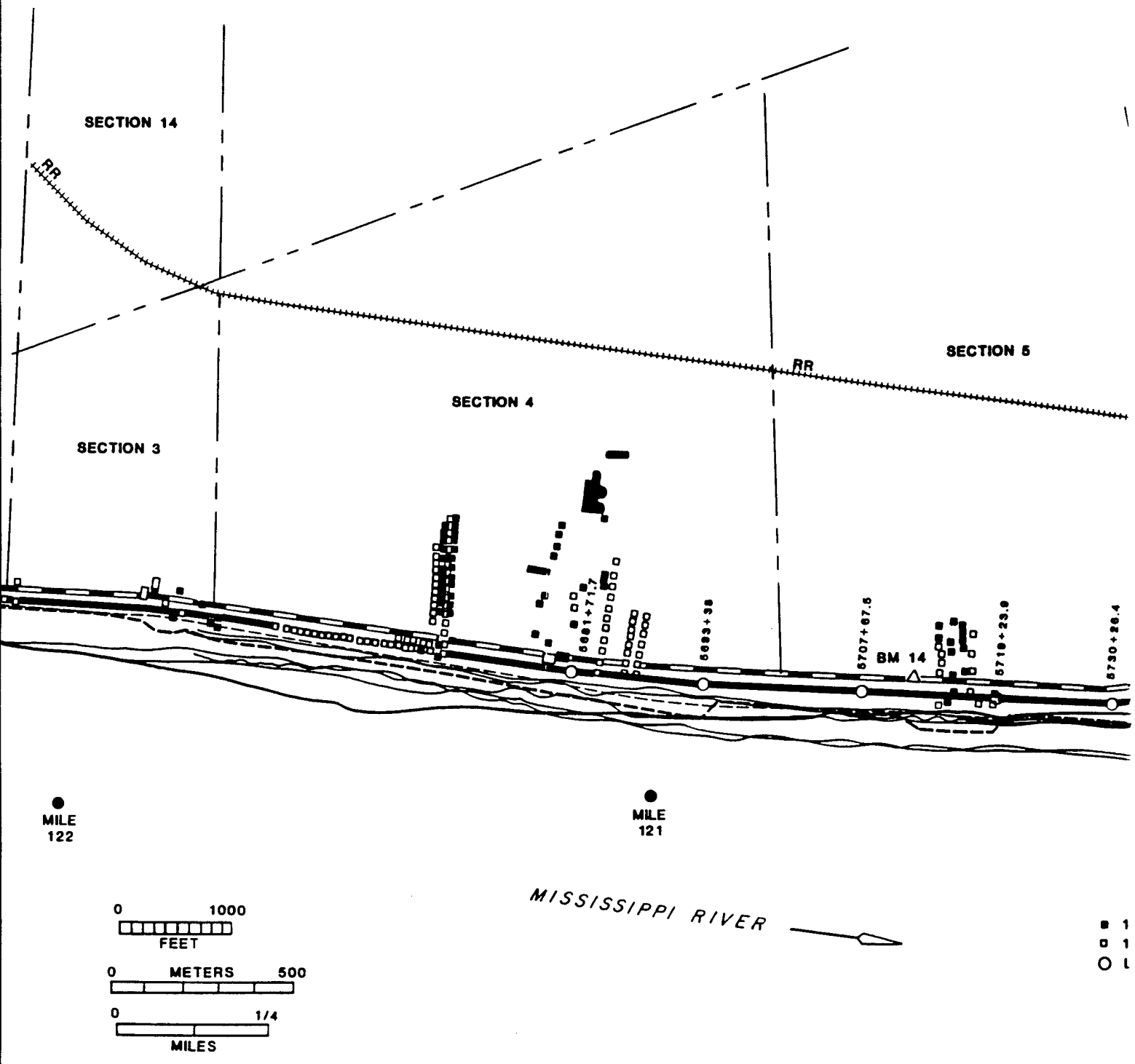
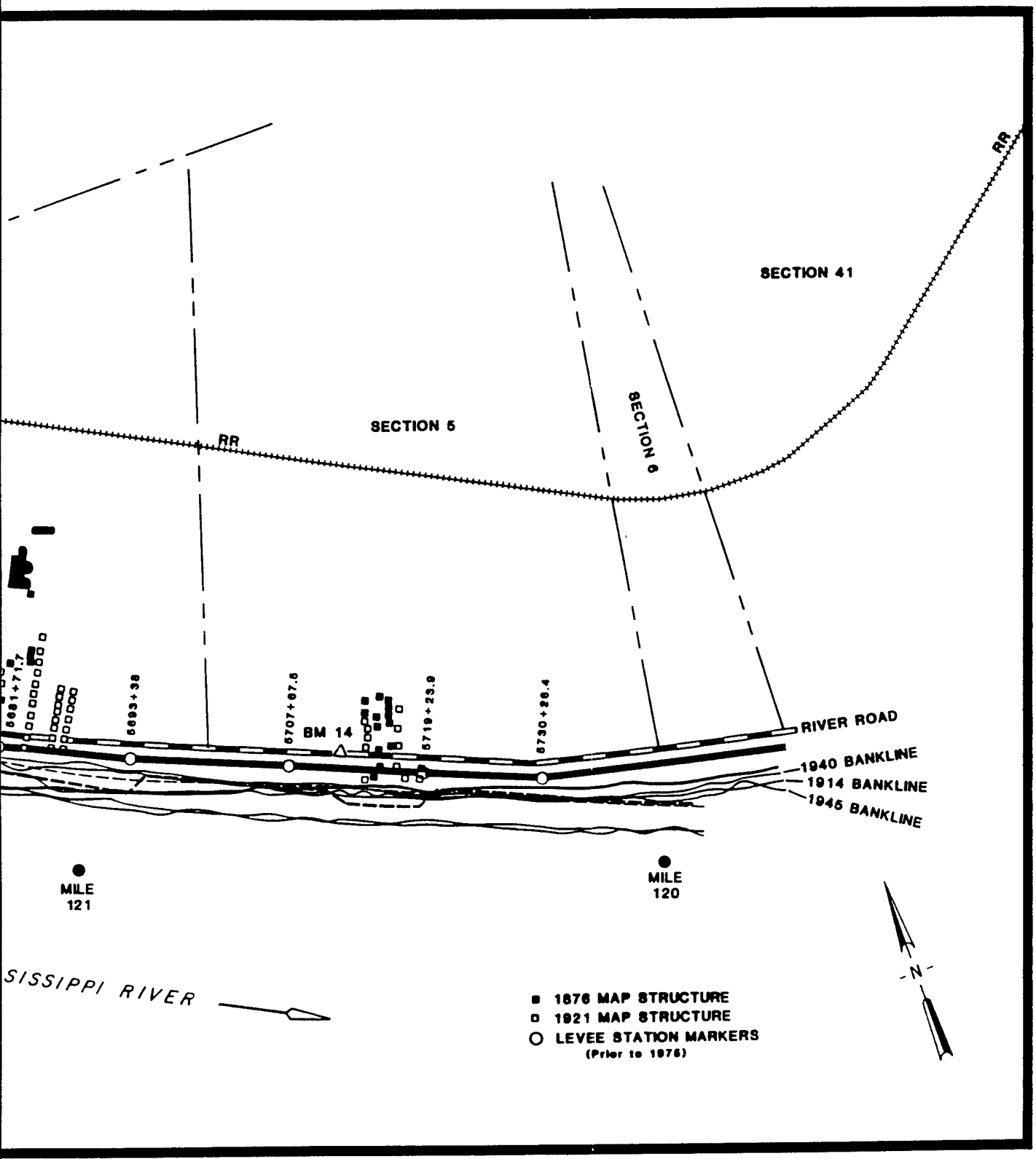


Figure 34. Composite of Charts 74 and 75 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving B the Mississippi River Hydrographic Survey; and the 1967 photorevised Hahnville, Louisiana, and Luling, Loui quadrangles, showing Miles 122-120 (L).



he 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 47 of urvey; and the 1967 photorevised Hahnville, Louisiana, and Luling, Louisiana, 7.5' series topographic (L).



Bank Survey map; Chart 47 of
uisiana, 7.5' series topographic

(3)

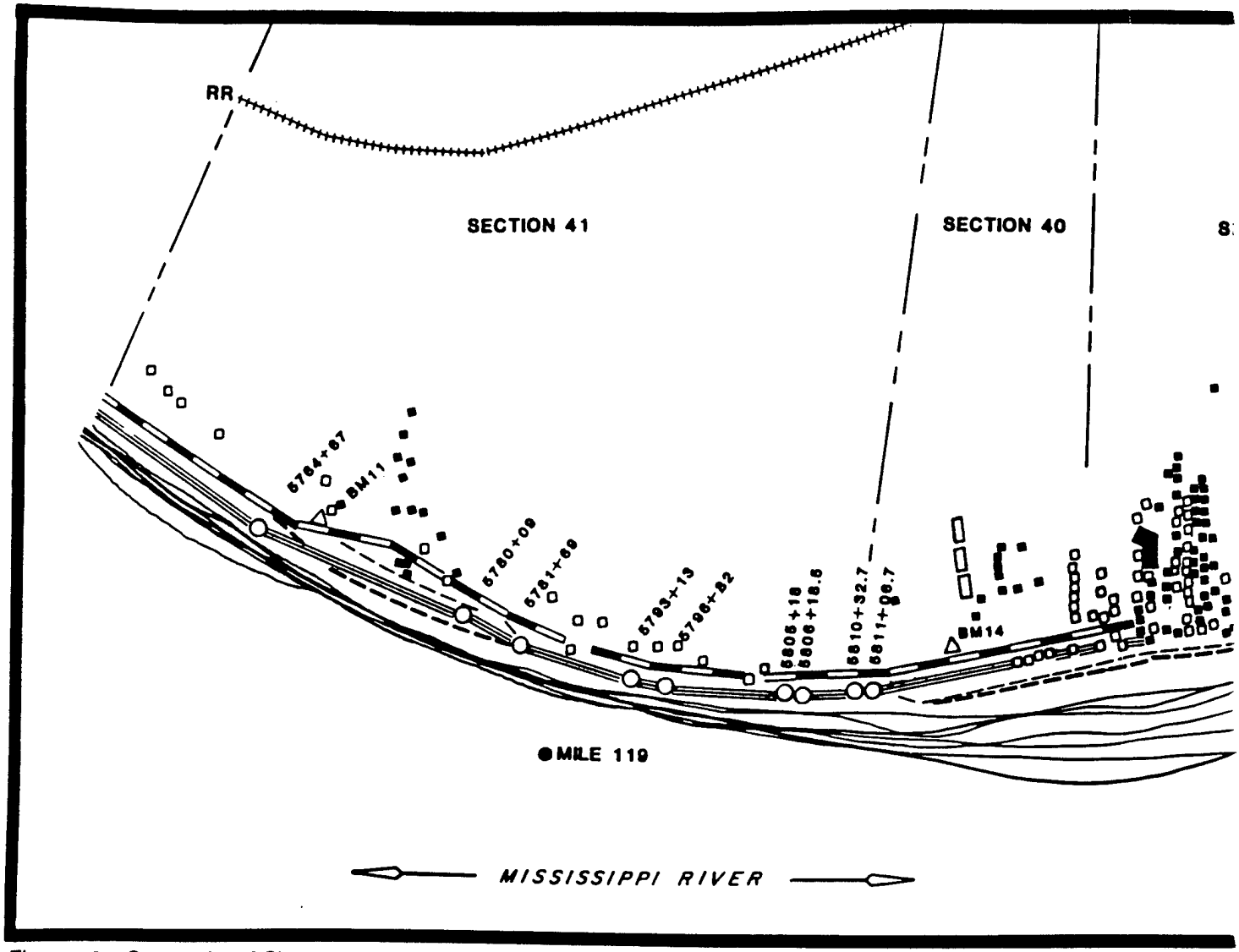
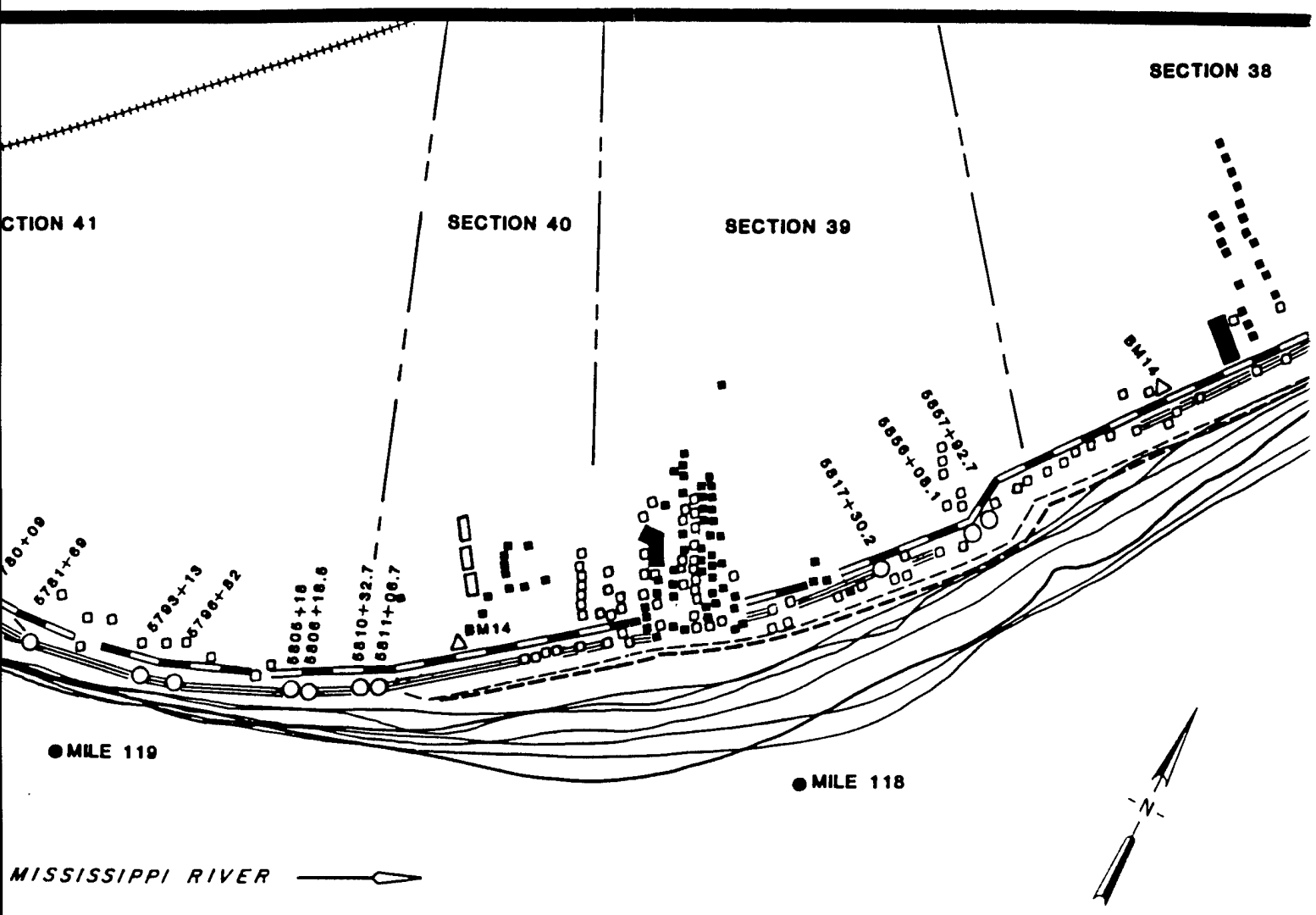
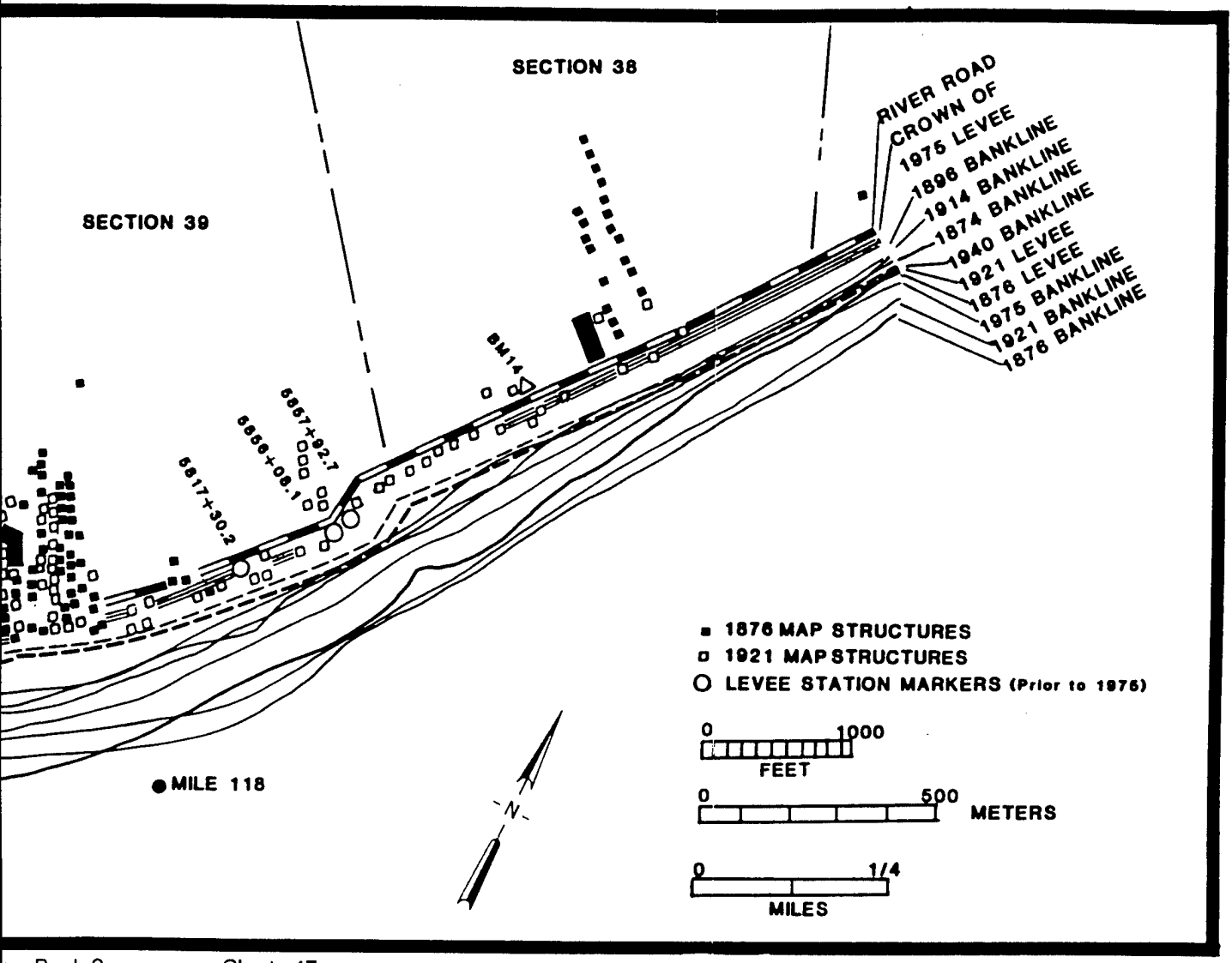


Figure 35. Composite of Charts 74 and 75 of the 1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank S and 48 of the 1973-1975 Mississippi River Hydrographic Survey; and the 1967 photorevised Luling, Louisiana, 7. quadrangle, showing Miles 119-118 (L).



1876-1893 and 1921 Mississippi River Commission; the 1952 Caving Bank Survey map; Charts 47
River Hydrographic Survey; and the 1967 photorevised Luling, Louisiana, 7.5' series topographic
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ng Bank Survey map; Charts 47
uisiana, 7.5' series topographic

(3)

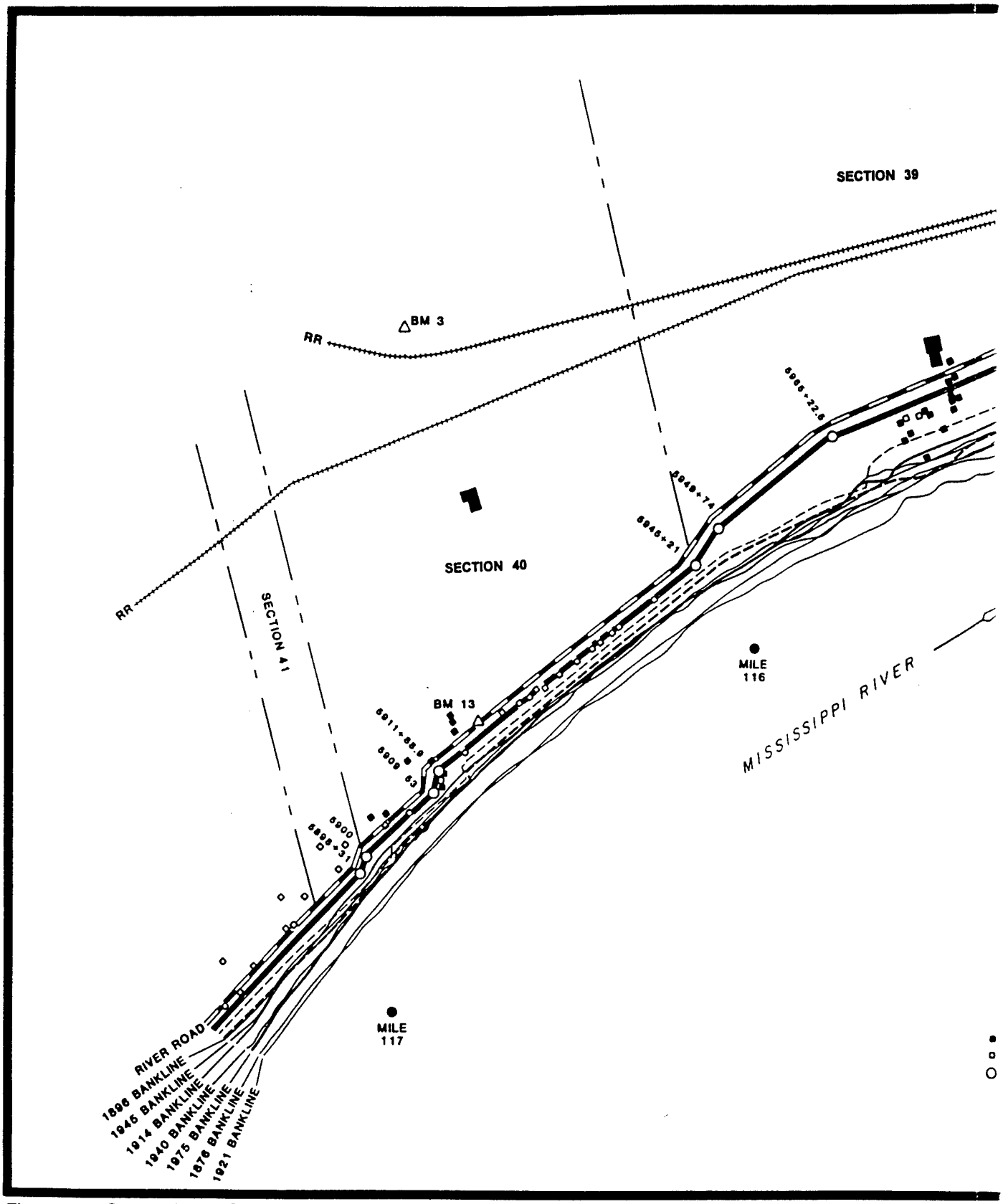
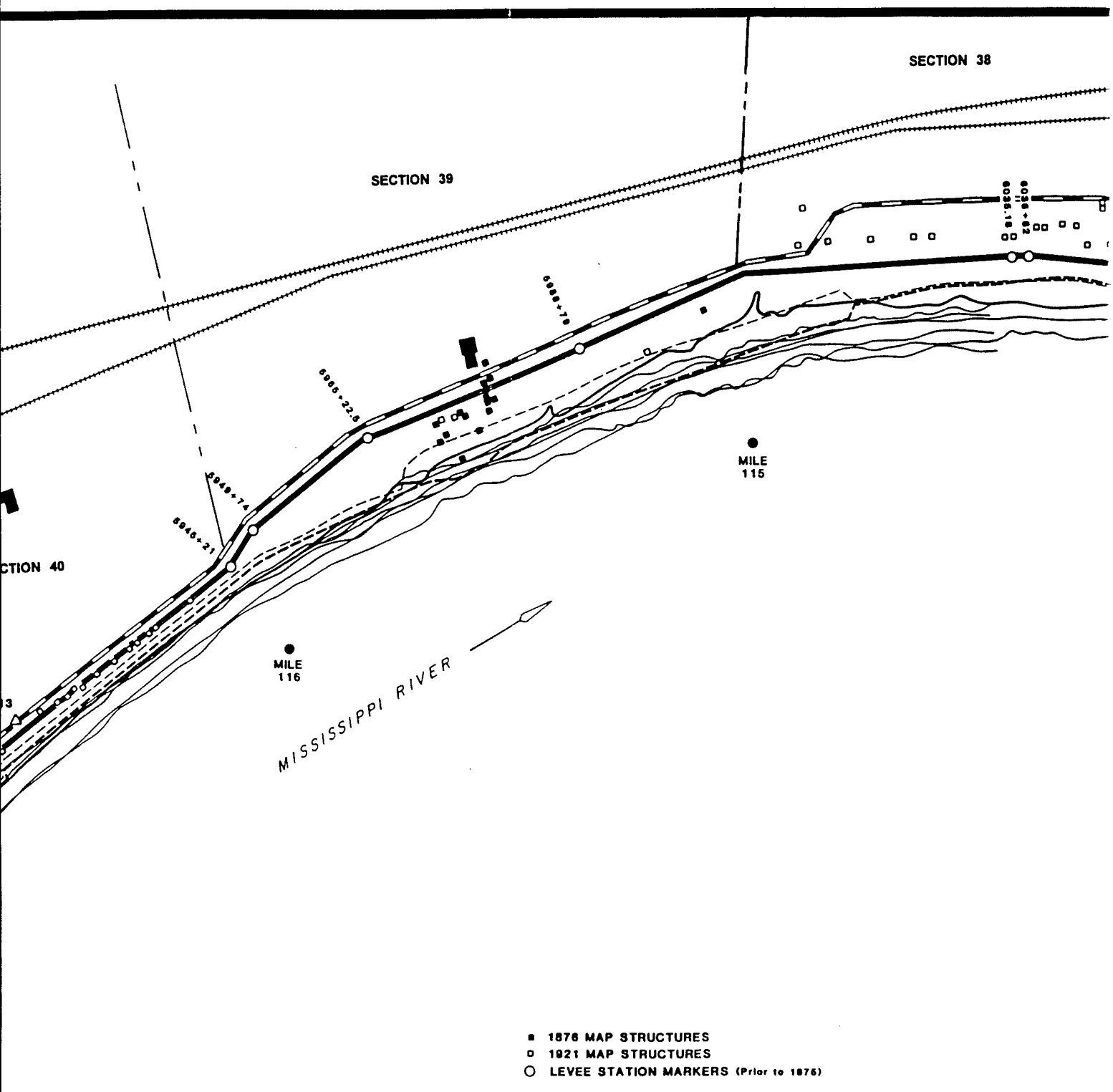
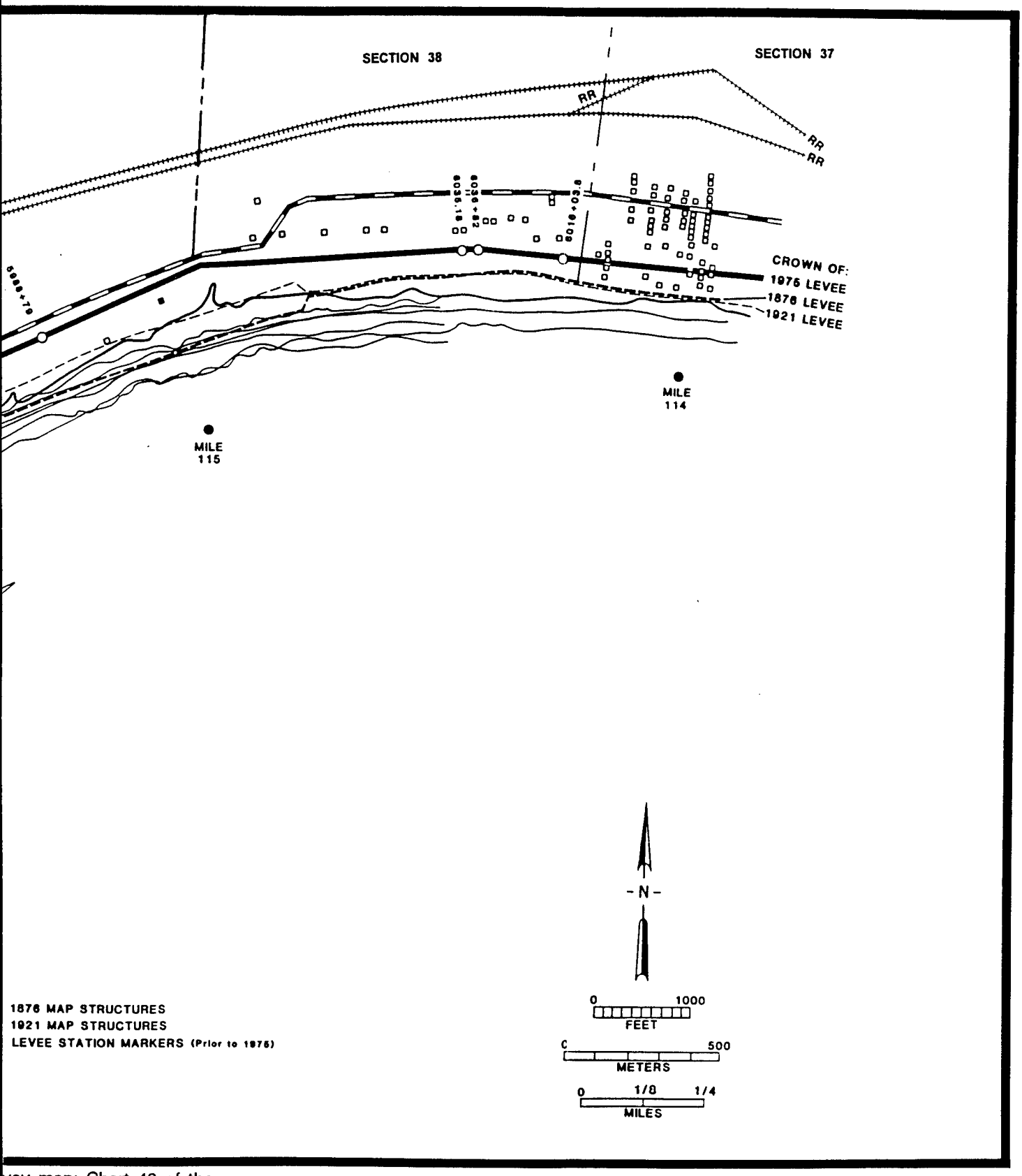


Figure 36. Composite of Chart 75 of the 1876-1893 and 1921 Mississippi River Commission; 1952 Caving Bank Su Mississippi River Hydrographic Survey; and the 1967 photorevised Luling, Louisiana, 7.5' series topographic 117-114 (L).



and 1921 Mississippi River Commission; 1952 Caving Bank Survey map; Chart 48 of the
the 1967 photorevised Luling, Louisiana, 7.5' series topographic quadrangle, showing Miles



vey map; Chart 48 of the
quadrangle, showing Miles

Table 5. Generalized Geomorphic Conditions within the Project Area.

CONSTRUCTION ITEM	RIVER MILES	BANK	AGGRADING	CUTTING	RELATIVELY STABLE
Vacherie	146.7 - 146.0	Right			X
	146.0 - 145.0	Right			X
	145.0 - 144.0	Right	X		
Angelina	143.2 - 142.0	Left		X	
	142.0 - 141.6	Left	X		
Reserve	140.9 - 140.3	Left			X
	136.6 - 136.0	Left			X
	136.0 - 135.4	Left	X		
Upper Edgard	143.2 - 142.0	Right	X		
	142.0 - 141.0	Right		X	
	141.0 - 140.0	Right		X	
	140.0 - 139.0	Right			X
	139.0 - 138.0	Right			X
	138.0 - 137.0	Right			X
Willow Bend	142.2 - 142.0	Right	X		
	140.2 - 140.0	Right		X	
	140.0 - 139.0	Right	X		
Montz	134.5 - 133.5	Left	X		
	133.5 - 133.0	Left		X	
Lower Edgard	137.0 - 136.0	Right		X	
	136.0 - 135.0	Right		X	
	135.0 - 134.0	Right		X	
	134.0 - 133.5	Right		X	
	133.5 - 133.0	Right	X		
	133.0 - 132.0	Right	X		
	132.0 - 131.0	Right	X		
	131.0 - 130.0	Right	X		
	130.0 - 129.0	Right		X	
	129.0 - 128.0	Right		X	
	128.0 - 127.0	Right		X	
Waterford	130.1 - 129.9	Right	X		
	127.5 - 127.0	Right		X	
	127.0 - 126.0	Right		X	
	126.0 - 125.5	Right			X
	125.5 - 125.0	Right	X		
Luling	116.9 - 116.0	Right			X
	116.0 - 115.0	Right			X
	115.0 - 114.0	Right		X	
	114.0 - 113.0	Right		X	
	113.0 - 112.5	Right			X
	112.5 - 112.0	Right	X		

location of the levee along the downriver end of the Vacherie construction item between RM 144.5 and 144.0-R has not changed since 1876.

Because the position of the bankline between RM 146.7 and 144.4 has not changed appreciably since 1876, there is a high probability that sites remain and are deeply buried. Deep testing would be required to uncover evidence of any sites. Both prehistoric and historic sites that have not been altered by levee construction and river erosion may be present. Conversely, the downriver segment of the construction item, between RM 144.4 and 144.0-R, could yield deeply buried sites near the present levee alignment. Progressively younger cultural resources are expected to occur towards the river, where recent sediments are actively being deposited.

Angelina Revetment

The Angelina Revetment construction item is located on a point bar on the east bank of the Mississippi River, between RM 143.2 and 141.6-L (Figure 25). The construction item can be divided into two distinctive sections with different geomorphic characteristics. The upriver section of the item between RM 143.2 and 142.3 has eroded; the river bank in this area has retreated as much as 450 m (1,475 ft) since 1876 (Figure 25). Conversely, the downriver section of the Angelina construction item, located between RM 142.3 and 141.6-L, has aggraded. The batture width has expanded approximately 260 m (850 ft) since 1876 as the entire point bar migrated slowly downstream. General causes of this erosion are undercutting, slumping, and saltation of individual particles by wave action.

The levee alignment has been set back successively to provide flood protection between RM 143.2 and 142.3 (Figure 25). The present-day levee is located 500 m (1,640 ft) back from the 1921 levee. Both the 1876 and 1921 levees have eroded into the river.

One of the four structures located between RM 143 and 142 on the 1921 Mississippi River Commission chart has been lost to erosion, but the sites of the other three structures are still intact. Any of the prehistoric or historic sites that may have been located along the upriver segment of the construction item, and on the riverside of the 1921 levee, would have been lost due to erosion. Any sites located in the downriver segment of the item would be expected to occur in the area between the former and existing levees. These sites would probably be buried deeply through vertical accretion.

Reserve Revetment

The Reserve Revetment construction item exhibits cutting banklines and point bar deposition (Figures 26 and 28). The segment between RM 140.9 and 140.3-L generally has remained stable but currently is undergoing accretion. The segment between RM 136.6 and 135.4 is located on a point bar; the upriver portion of this segment has remained relatively stable while the downriver portion has been laterally accreting.

Figure 26 shows that the segment between RM 140.9 and 140.7-L experienced about 10 m (33 ft) of lateral accretion between the years 1876 and 1896. From 1896 to 1914, the area eroded 60 m (197 ft). Between 1914 and 1921, the bankline accreted 50 m. This process of erosion and accretion has continued to the present.

A similar process of erosion and accretion is occurring between RM 140.7 and 140.3-L. From 1876 to 1940, the bankline remained relatively stable. From 1940 to 1943, about 80 m (265 ft) of lateral accretion occurred along the edge of the river. Since 1943, 80 m (265 ft) of the bankline has eroded.

The segment of the construction item positioned between RM 136.6 and 135.4-L can be divided into upriver and downriver sections. The upriver section, between RM 136.6 and 135.9-L, has remained relatively stable (Figure 28). The downriver section, between RM 135.9 and 135.4, has accreted 300 m (985 ft) since 1876. About 140 m (460 ft) of this accretion has occurred since 1943. The location of the present levee has remained unchanged since 1876.

The downriver segment of the Reconstruction Revetment construction item, between RM 135.9 and 135.4, contains a high probability for containing archeological sites. Any sites in this area are likely to be buried deeply by vertical accretion at greater distances from the river. Archeological sites are less likely to exist throughout the remainder of the construction item due to successive phases of deposition and erosion.

Upper Edgard Levee Enlargement

The Upper Edgard Levee Enlargement construction item is located near Edgard, Louisiana, on the west bank, between RM 143.2 and 137.0-R of the Mississippi River (Figures 2, 14, 15, and 16). At the upriver segment of the item, between RM 143.2 and 142.2, the width of the batture has expanded up to 600 m (1,970 ft) since 1876. In places, as much as 460 m (1,510 ft) of new land has accreted since 1943 alone (Figure 14). The location and alignment of the levee along this segment of the river has changed little since its original placement. The segment of the construction item located between RM 142.2 and 140.0 had been eroding slowly from 1876 to 1943 but has remained relatively stable since 1943 (Figure 15). Levee setbacks of about 110 and 120 m (360 and 394 ft) have occurred prior to 1921 and the present, respectively.

The location of the bankline between RM 140.0 and 138.4-R has undergone a sequence of changes. From 1876 to 1914 the bankline actively eroded; from 1914 to 1921 the bankline aggraded to its former 1876 location; and, from 1921 to 1929 about 55 m (180 ft) of the bankline eroded. The bankline has remained relatively stable since 1929 (Figure 16). Only minor modifications occurred to the levee in this segment location from 1876 to 1921, and the alignment of the modern levee has been set back approximately 30 to 70 m (98 to 230 ft) from its former alignment. The segment of the construction item between RM 138.4 and 137.6-R has remained stable since 1876. The modern levee occupies the same location and alignment as the 1876 levee (Figure 16). The lowermost segment of the construction item is located between RM 137.6 and 137.0-R. This segment has remained relatively stable through time. The existing levee was set back 30 to 70 m (98 to 230 ft) after 1921.

Potentially significant cultural resources within the upriver portion of the Upper Edgard Levee Enlargement construction item are most likely to occur between the present levee and the ca. 1934 bankline. However, the absence of any structures appearing on historic maps suggests that the probability of identifying any such sites is low. Levee enlargements that occurred between RM 143.2 and 142.2 and RM 138.4 and 137.6 would cover any archeological sites that happened to be located adjacent to former levees. Cultural resources are most likely to occur in areas where the bankline has remained stable or where levee construction has remained minimal. Because of the effects of erosion by the river and the relocation and enlargement of levees in this area, a large number of sites have been or will presumably be destroyed or buried.

Willow Bend Revetment

The Willow Bend Revetment construction item at RM 142.2 to 139.0-R is located within the limits of the Upper Edgard Levee Enlargement construction item, as shown in Figures 14 - 16. This item is comprised of upriver (U60 - U30) and downriver (D53 - D110) segments separated by the existing

revetment. Both segments of the construction item between RM 142.2 and 139.0-R were discussed previously (Figures 14 - 16).

Montz Revetment

The Montz revetment construction item is located on the east bank of the Mississippi River between RM 134.5 and 133.0 (Figure 29). The upriver segment of the item is aggrading; it has grown 460 m (1,510 ft) since 1869 as measured at RM 134.0. Conversely, the downriver section has eroded approximately 300 m (985 ft) since 1869. The bankline has remained more or less stable since 1934.

The location and alignment of the modern levee has changed little since 1876. A segment of the 1876 levee alignment between modern levee stations 4995+84 and 5011+53 was replaced prior to 1921. Sediments in the upriver segment of the Montz Revetment construction item are successively younger as the distance from the river increases. Archeological sites that are predicted to occur near the levee may be buried deeply by vertical accretion. Any sites present in the downriver segment of the item are likely to have been washed away and destroyed. Sites that were deposited away from the river in the downriver segment of the item are likely to have been buried by vertical accretion and may be at risk of being exposed and washed away.

Lower Edgard Levee Enlargement

The Lower Edgard Levee Enlargement construction item is located on the west bank of the Mississippi River from RM 137.0 to 127.0-R (Figures 16 - 19). The upriver segment is comprised of point bar deposits and the downriver segment is positioned along a cutbank. Various fluvial processes have influenced the nature of this construction item; each mile is discussed independently. Along the upriver point bar, both erosional and depositional processes are taking place. Erosion has been occurring between RM 137.0 and 136.0 since 1876. At RM 136.0, 130 m (425 ft) of erosion has occurred along the bankline. The 1876 levee has been washed away; the 1921 levee is located along the current bankline. The present levee has been set back 110 m (360 ft) from its 1921 position (Figures 16 and 17). As much as 280 m (920 ft) of bankline has eroded between RM 136.0 and 135.0 since 1876. About 80 m (262 ft) of erosion has taken place since 1949 alone. Erosion between RM 135.0 and 134.0 has resulted in the loss of both the 1876 and 1921 levees. The present levee is located 130 m (425 ft) behind the 1921 levee. From RM 134.0 to 133.5, the point bar is undergoing erosion. Below RM 133.5, the point bar is rebuilding. At RM 133.5, the modern levee is positioned 130 m (425 ft) landward of its former 1921 location. Between RM 133.5 and 133.0, the basic location and alignment of the levee has remained unchanged (Figure 17).

Between RM 133.0 and 132.0, about 200 m (655 ft) of erosion occurred from 1876 to 1896. Accretion of some 400 m (1,310 ft) of bankline has occurred since 1896. Since 1876, the levee along this segment of the item remains unchanged (Figure 17). At levee station 2326, the modern levee turns landward, following the former 1921 levee alignment; its location is set back from the historic levee of 1876. Between RM 132.0 and 131.0, about 800 m (2,625 ft) of erosion has occurred between 1876 and 1914, removing a part of the 1876 levee. Since 1914, however, the bankline has accreted by about 750 m (2,460 ft). With the exception of the segment of the 1876 levee that was destroyed, the modern levee has maintained its historic location between RM 132.0 and 131.0 (Figures 17 and 18).

Since 1914, about 750 m (2,460 ft) of accretion has occurred to the bankline between RM 131.0 and 130.0. The present levee generally is situated where it has been since 1876, but below levee station 2442, the modern levee is 60 m (197 ft) behind the former levees. The 1876 levee appears riverside of the 1896 bankline (Figure 18).

Since 1876, the bankline from RM 130.0 to below 127.0 has been eroding except for a small segment positioned between RM 129.9 and 130.0, which has accreted laterally since 1914. The erosion that is occurring from RM 130.9 to 129.0 has removed the 1876 levee and portions of the 1921 levee. Total erosion since 1876 in this area is 135 m (443 ft); the present levee has been set back about 50 m (164 ft). Any historic sites formerly present between levee station 2499+03.4 and 2509+54.6 have presumably been destroyed by erosion. Between RM 129.0 and 128.0, erosion has destroyed 150 m (492 ft) of the former bankline since 1876, destroying any historic sites which may have occurred there. The 1876 levee and most of the 1921 levee also have been destroyed. The present levee is located about 110 m (360 ft) back from the 1921 levee location.

About 150 m (492 ft) of the bank has been eroded, as well as about half of the 1876 levee between RM 128.0 and 127.5. Few historic sites may remain intact within this segment of the item. Those remaining intact would be located close to the modern levee.

Waterford Revetment

The Waterford Revetment construction item occupies an area from RM 130.1 to 129.7 and 127.5 to 125.0-R, on the west bank of the Mississippi River in St. Charles Parish, Louisiana (Figures 18 - 20). The two segments of the construction item area are separated by an existing revetment. The upriver segment (RM 130.1 - 129.7) is located on a cutbank and was discussed previously.

The downriver segment (RM 127.5 - 125.0) is situated on a point bar. Since 1876, about 60 m (197 ft) of the bankline has eroded from RM 127.5 to 127.0 (Figure 19). Both the 1921 levee and the present levee have been set back; the present levee is positioned approximately 110 m (360 ft) behind the 1876 levee. Between RM 127.0 and 126.0-R, about 50 m (164 ft) of bankline has been lost since 1876 (Figures 19 and 20). In addition, some parts of the 1876 levee have been destroyed. With one exception, the present levee alignment is located behind the 1921 levee; the modern levee coincides with the position of the 1921 levee from RM 126.2 to 126.0-R (Figure 20).

From RM 126.0 to 125.5-R, about 10 to 20 m (33 to 65 ft) of bankline erosion occurred between 1876 and 1896 (Figure 20). Since 1896, however, the bankline has remained relatively stable. The levee locations and alignments have changed over time. From RM 125.5 to 125.0-R, the bankline is accreting. For example, at RM 125.0, the width of the batture has increased 160 m (525 ft) since 1940 (Figure 20). The levee along this segment of the construction item has not changed since 1876.

Cultural resources are expected to occur within the upriver segment of the Waterford revetment construction item from RM 130.1 to 129.7-R. Deposition from lateral accretion is preserving sites that may be located there. Historic sites are most likely to occur on the point bar of the lower segment of the construction item between RM 127.5 and 126.5-R. Archeological sites also may be present closer to the present levee alignment. The condition of any such sites is uncertain due to the construction of the modern levee.

Luling Revetment

The Luling Revetment construction item is located between RM 116.9 and 112.0-R, on the west bank of the Mississippi River (Figures 23 and 24). Along this stretch of the river, a large point bar is present, although little or no deposition currently is taking place. River action along this point bar varies. The segment of bankline from RM 116.9 to 116.0-R has undergone alternate episodes of erosion and deposition between 1876 to 1940; however, it has remained relatively stable since 1940, at the approximate

position of the 1876 bankline. The existing levee is located about 10 to 50 m (33 to 164 ft) back from the former 1876 and 1921 levees.

Between RM 116.0 and 115.0-R, alternating episodes of erosion and deposition have occurred. Since 1940, approximately 15 m (49 ft) of bankline erosion has occurred. However, the 1975 bankline between RM 116.0 and 115.5 is situated at its approximate 1876 location (Figure 23). Former levee alignments join, and then follow the existing levee alignment at levee station 3253+06.8 (Figure 23). Since 1876, the width of the batture has increased by as much as 50 m (164 ft) from RM 115.5 to 115.0-R. The existing levee shares the same location and alignment as the former levees (Figure 23).

The segment between RM 115.0 and 114.0-R shows an increase of 50 m (164 ft) between the 1876 and 1896 banklines. The bankline has been eroding since 1896, and it currently is endangering the integrity of the modern levee which shares the same location and alignment as the 1876 and 1921 levees.

From 1921 to 1940, the width of the batture between RM 114.0 and 113.0-R has increased by 30 m (98 ft). The present levee along this segment of the construction item roughly coincides with the locations of the 1876 and 1921 levees, but the alignment has changed. Since 1940, approximately 30 m (98 ft) of bankline erosion has occurred, placing the modern levee in jeopardy.

The lowermost segment of the construction item is located between RM 113.0 and 112.0. From RM 113.0 to 112.5, 100 m (328 ft) of bankline erosion took place between 1876 and 1896. However, from 1896 to 1921, the width of the batture increased by 100 m; the levee then was moved 30 m (98 ft) towards the river. Since 1921, the bankline has eroded to its former location, washing away the 1921 levee. consequently, the present levee was set back about 60 m (196 ft) from the 1921 location. Between RM 112.5 and 112.0-R, the width of the batture has increased by 10 to 50 m (33 to 164 ft) since 1940; the present levee is 100 m (328 ft) landward from the 1921 levee location.

As seen in Figure 23, historic structures (e.g., from RM 116.9 to 116.0-R) have been covered by levee movement and enlargement in this area. Highly eroded batture areas, such as that between RM 115.0 and 114.0-R, would yield few if any *in situ* prehistoric or historic sites. Sites located along the bankline probably have been exposed by erosion.

CHAPTER V

PREHISTORIC SETTING

Introduction

This chapter provides an overview of the prehistory of the region that is designed to familiarize readers with the nature of prehistoric settlement, including the sequence of archeological cultures, their material culture, and their basic adaptive patterns. Documented prehistoric sites near the project area are located primarily on the west bank of the Mississippi River. Most of these sites have received only superficial investigation, consisting primarily of the analysis of artifactual materials collected from the surface. Subsurface excavation, which generally provides detailed stratigraphic, paleoenvironmental, and other contextual data, has not been conducted extensively at any prehistoric site near the project area.

At the broadest level, Louisiana prehistory extends from circa (ca.) 12,000 - 300 B.P. and can be divided into four general archeological stages. These four stages (Paleo-Indian, Archaic, Woodland, and Mississippian) represent developmental segments characterized by dominant patterns of subsistence and technology (Kreiger 1953; Willey and Phillips 1958). Each stage consists of a sequence of chronologically defined periods, which may be subdivided into phases based on sets of artifacts and other cultural traits characteristic of a particular geographic region (e.g., Jenkins 1979; Walthall 1980). While different systems have been used over the years to organize and describe the culture history of the region (e.g., the Paleo-Indian, Meso-Indian, and Neo-Indian eras used by Neuman 1984), the stage-period-phase system described by Willey and Phillips (1958) will be utilized in the discussion presented below. In recent years, eight cultural units have formed the prehistoric sequence of southeastern Louisiana: Paleo-Indian, Archaic, Poverty Point, Tchefuncte, Marksville, Troyville-Coles Creek, Plaquemine, and Mississippian (Smith et al. 1983). However, recent research (Kidder 1988) suggests that the Plaquemine culture is actually a variant phase of the Emergent Mississippian period and therefore will be discussed as such.

Paleo-Indian Stage (12,000 - 8000 B.P.)

Initial human occupation of the southeastern United States is generally believed to have occurred sometime between 10,000 and 12,000 years ago (10,000 - 12,000 B.P.). Paleo-Indian sites are characterized by a distinctive assemblage of lithic tools that include fluted and unfluted lanceolate projectile points/knives, unifacial end and side scrapers, gravers, and spokeshaves.

The earliest Paleo-Indian culture identified in North America has been named "Clovis," after the type-site in the Southwest. In the western United States, Clovis sites appear to fall within a relatively narrow time range, i.e., between 10,900 and 11,500 B.P. (Haynes 1991; Story et al. 1990:178). While the evidence for earlier "pre-Clovis" or "pre-projectile point" occupations continues to be debated, no earlier sites have been documented convincingly in North America. The lithic tool assemblage of the Clovis culture, and the Folsom culture of the Great Plains and Southern Plains, is generally referred to as the Llano complex. The smaller, fluted Folsom and unfluted Midland projectile points/knives once were thought to postdate Clovis; however, accepted radiocarbon dating of numerous Folsom components in Texas produced dates ranging from ca. 10,000 to 11,000 B.P. (Largent et al. 1991:323-332; Story et al. 1990:189). This suggests that the Folsom culture may be partially contemporaneous with Clovis culture.

The Plano complex represents a similar tradition in the Southern Plains. In East Texas and Louisiana, this complex is represented by unfluted lanceolate Plainview, Firstview, Hell Gap, and Angostura

projectile points/knives. These types first were thought to be unfluted variants of the Clovis type, but radiocarbon dating suggests a later temporal placement. Current data place the Plano complex from 8000 to 10,100 B.P. (Turner and Hester 1985:66, 141). Plano-type artifacts have been found throughout Louisiana (e.g., Cantley and Kern 1984; Hillman 1990:206-207). Gagliano (1963:12) recovered a single Plainview projectile point/knife from Jone's Creek near Baton Rouge.

Another Paleo-Indian tradition identified in North America is the Cody complex. This assemblage includes the stemmed lanceolate Scottsbluff and Eden projectile points/knives. Cody complex bifacial tools usually are identifiable by the presence of fine comedial pressure flaking. The uplands in the Texarkana region of northwest Louisiana, northeast Texas, and southern Arkansas have produced relatively large numbers of Cody Complex artifacts (Gagliano and Gregory 1965:62-77; Story et al. 1990:209), but reliable radiocarbon (^{14}C) dates have not been conclusive. These ^{14}C dates range from 9100 to 10,200 B.P. (Story et al. 1990:209), although Turner and Hester (1985:149) place the Scottsbluff projectile point/knife at ca. 8650 - 9120 B.P.

Paleo-Indian peoples are thought to have been highly mobile hunter-gatherers, organized in small bands or extended family groups. The formerly prevalent notion that the Paleo-Indian populations were represented by specialized big game hunters seems less tenable as information becomes available from a more inclusive set of Paleo-Indian sites. While sufficient evidence exists for the exploitation of large mammals (mega-fauna) including mammoth, mastodon, bison, caribou, and elk at sites in the western and northern United States, kill sites are rare in the Southeast. The occurrence of Clovis-like fluted projectile points/knives in the southeastern United States is thought to reflect contemporaneity with a culture similar to the Clovis sites recorded in the western and northern parts of the country. Whether or not this suggests that big game hunting was a dominant adaptive strategy in the Southeast is less certain because of the regional environmental differences associated with the availability of the big game species. For example, excavations at the Kimmswick site in southeastern Missouri produced Clovis projectile points in direct association with disarticulated mastodon bones, suggesting that Southeastern Paleo-Indian populations did exploit large Pleistocene mammals at least occasionally (Graham et al. 1981). Although there is little information upon which to base a dietary reconstruction, Paleo-Indian subsistence throughout the Southeast is believed to have encompassed a broad spectrum of resources, including fish, fowl, deer, small mammals, nuts, and gathered plants (Smith 1986:9-10; Steponaitis 1986:369; Walthall 1980:36). The exception could possibly be the Folsom culture. Folsom artifacts have been associated consistently with bison kill sites on the Great Plains. The lack of faunal evidence in association with Folsom finds in east Texas and Louisiana, due mainly to the highly acidic nature of the soils and the moist climate, precludes insight into the subsistence strategies of the area. Indications are that the Folsom culture could represent an adaptation to a specialized hunting strategy associated with the cyclical migration of large herds of bison (Story et al. 1990:189).

Most of the archeological evidence associated with the Paleo-Indian occupation of the southeastern region is limited to surface finds of diagnostic projectile points/knives (Mason 1962). In the Lower Mississippi Valley, Paleo-Indian projectile points/knives have been recovered along valley margins but rarely in the alluvial valley or along the coastal plain, and distributional studies indicate that Paleo-Indian sites in the eastern United States tend to be located on eroded terrace and plateau surfaces (Walthall 1980). Paleo-Indian and Early Archaic presence in the Lower Mississippi Valley is best documented from Maçon Ridge. Maçon Ridge is a relict Pleistocene braid plain that until recently was not known to contain sites older than the Late Archaic period (Saucier 1981). Hillman (1990) collected information concerning 121 sites on the Maçon Ridge from which over a thousand Paleo-Indian and "epipaleoindian" projectile points/knives have been collected, including 272 Dalton-Meserve, 39 Hardin, and over 400 San Patrice types. He concluded that Early and Middle Paleo-Indian occupation of Maçon Ridge apparently was sporadic or seasonal, possibly reflecting the somewhat inhospitable conditions caused by the excessive accumulation of wind-blown dust across open grasslands during the formation of the loess hills. The distribution of recorded sites suggests that Maçon Ridge was occupied more intensely during the Late

Paleo-Indian and Early Archaic periods. However, during the Late Paleo-Indian period, hunting camps and base camps normally were located very close to streams, ponds, or sloughs, on landforms generally no more than 1 m (3.3 ft) above the water source, even when higher elevations or ridges were located in the immediate vicinity. This preferential use of the area adjacent to the waterways may reflect the intensive use of wooded fringes along the waterways rather than the open grasslands. By the Early Archaic, settlement shifted to the higher elevations, possibly reflecting an environmental transformation of Maçon Ridge from open grasslands to open woodlands (Hillman 1990). Brain (1983) states that Paleo-Indian projectile points/knives have been found along relict channels of the Mississippi River and remnant Pleistocene surfaces in the floodplain that pre-date ca. 9000 B.P. Marshall (1984) notes that over 60 fluted projectile points/knives had been recorded in the Mississippi site files. In Louisiana, Paleo-Indian sites have been found along Tertiary upland ridges and uplands/floodplain bluffs (Guy and Gunn 1983). Projectile points/knives such as Clovis, Folsom, Scottsbluff, and Plainview have been found on the surface of these sites. Although the majority of these projectile points/knives have been found in northern Louisiana, a few have been found on late Pleistocene age Prairie Terrace deposits in southern Louisiana.

Archaic Stage (8000 - 3000 B.P.)

The term "Archaic" first was coined in the second quarter of the twentieth century as a descriptor for the pre-ceramic cultures that followed the Paleolithic Stage. Environmental pressures, a warming trend, and a drier climate at the end of the Pleistocene accompanied by a rise in sea level, resulted in a combination of technological and social developments (Willey and Phillips 1958). This economic shift resulted in highly diverse localized resource and food procurement strategies (Haag 1971). Caldwell (1958) referred to this hunting and gathering specialization as "primary forest efficiency;" Brain (1971) modified this phrase to "maximum riverine efficiency" in reference to southeastern riverine and coastal communities. Archaic peoples moved on a seasonal basis to exploit a home range defined by the availability of nuts, fruits, fish, game, shell fish, and other natural resources (Muller 1978). The increased number of sites dating from the Archaic Stage suggests an increase in population throughout the area. Muller suggested that Archaic societies were marked a system of fission and fusion. Macrobands formed during the spring and summer months, while in the winter months, smaller microbands exploited upland ranges (Muller 1978). Archaic populations apparently exploited a greater variety of terrestrial and marine species than their Paleo-Indian predecessors. Many populations with successful strategies during the Archaic sequence went on to develop the first quasi-permanent settlements (Neitzel and Perry 1977).

The Paleo-Indian to Archaic Stage transition was accompanied by a change in projectile point/knife morphology. These changes included the emergence of a wide variety of notched and stemmed projectile point/knife forms and the disappearance of the fluted projectile point/knife type. Nevertheless, evidence suggests that there was some continuity between the adaptations of the Paleo-Indian and the later Archaic peoples who occupied the deciduous forests of the region (Smith 1986). Archaic projectile point/knife sequences follow a general trend in haft morphology that progresses from side notched to corner notched to stemmed basal forms. However, these basal forms are not mutually exclusive. Other Archaic Stage flaked artifact types included adzes, scrapers, and choppers. During the latter half of the Archaic Stage granitic rock, chert, jasper, sandstone, slate, steatite, and scoria were ground and polished into a variety of stone ornaments and tools, which included beads, gorgets, bowls, and celts/axes. Burials dating from the Archaic also have been found at numerous sites (Neuman 1984; Walthall 1980). The Archaic Stage can be divided into three subdivisions or periods: Early Archaic, Middle Archaic, and Late Archaic.

Early Archaic Period

In the Southeast, the Early Archaic period generally begins ca. 8000 - 10,000 B.P., but because of regional variation and temporal overlapping of stages, the assignment of late Paleo-Indian and Early Archaic period artifacts to correct temporal stages can be confusing.

Dalton projectile points/knives are the temporal successors of Clovis projectile points and have been dated between 9900 and 10,500 B.P. in Arkansas and Missouri (Goodyear 1982:382). At the Stanfield-Worley Bluff Shelter in northwestern Alabama, the Dalton zone dates from somewhat later, between 9000 and 9700 B.P. (DeJarnette et al. 1962; Griffin 1974). Dalton projectile points have been found in association with Kirk Notched, LeCroy, Rice Stemmed, and Graham Cave projectile points/knives in Horizon 11 at the Koster site, which dates from 8700 to 8450 B.P. This suggests that Dalton points/knives may extend later in time than initially thought.

Dalton projectile points/knives are sometimes accompanied by bifacially chipped stone adzes that may represent woodworking tools. Chipped and ground stone celts, probably the functional equivalent of Dalton adzes, have been recovered from the Kirk Horizon in Zone 16 at the St. Albans site and from Early Archaic sites in the Little Tennessee River Valley (Smith 1986:14). Based on the archeological record, the presence of Dalton projectile points/knives in southeast Louisiana is expected to be limited. Artifacts associated with the Dalton culture usually are restricted to the northern portion of the state.

Some of the earliest recognized Terminal Paleo/Early Archaic projectile point/knife types identified in Louisiana are the San Patrice, Keithville, and Pelican forms (Webb et al. 1971). Previously ascribed to the area encompassing northwest Louisiana, northeast Texas, and southwest Arkansas, later investigations have extended the geographic range of San Patrice to include an area from central Texas to southwest Alabama, and from southern Louisiana to central Arkansas (Brain 1983:32; Cantley and Kern 1984; Giliberti 1995:personal communication). In southeast Louisiana, San Patrice projectile points/knives have been recovered from East Baton Rouge Parish (Gagliano 1963:112), one of the parishes encompassed by Management Unit IV.

The San Patrice culture represents an adaptation of hunters/gatherers to the resources of a more restricted area. The hallmark of the San Patrice is the almost exclusive use of local lithic materials for the production of tools. Tool assemblages include San Patrice *var. Hope* and St. John projectile points/knives, hafted scrapers, Albany side scrapers, unifacial scrapers, burins, and engravers (Webb et al. 1971). More recently, Keithville *var. A and B*, San Patrice *var. Geneill*, and New River projectile point/knife types have been added to the assemblage (Brain 1983; Giliberti 1995:personal communication). Reliable ^{14}C dates for these types are virtually unknown, but estimates, based on morphology and stratigraphic placement, range from ca. 8000 to 10,000 B.P. (Brain 1983:25; Story 1990:202; Turner and Hester 1985:147; Webb 1981). Ensor (1986) suggests that the San Patrice projectile point/knife type, and related forms in the Southeast, may have developed from the earlier Dalton projectile point/knife forms. Story (1990:197), however, thinks that both Dalton and San Patrice types evolved from the earlier fluted point traditions.

Throughout the Early Archaic, the subsistence pattern probably resembled that of the preceding Paleo-Indian Stage. Early Archaic peoples traveled seasonally in small groups between a series of base camps and extractive sites, hunting deer and collecting acorns and nuts (Chapman and Shea 1981; Lentz 1986; Parmalee 1962; Parmalee et al. 1976). However, the extent to which the floodplain environments of the lower Mississippi Alluvial Valley were utilized remains unknown.

Tools associated with food processing, including manos, milling stones, and nutting stones, are first recovered from Early Archaic period sites. Commonly utilized plant foods, such as walnuts, hickory nuts, and white oak acorns could be hulled and eaten without cooking or additional processing (Larson 1980). Herbaceous seeds, which became an important food source later in the Archaic Stage, generally were

absent during the Early Archaic (Chapman 1977; Lentz 1986). While living floors associated with hearths, shallow pit features, and milling tools are known from the Early and Middle Archaic, there is little evidence suggestive of below-ground food storage or of substantial structures (Steponaitis 1986:371).

Much of our knowledge regarding Paleo-Indian and Archaic lifeways is limited by problems of preservation. Lithic tools often are the only artifacts to survive, but they provide only limited information about a narrow range of activities (i.e., manufacture and maintenance of tools, processing of meat and hides, and working of wood and bone). Although they rarely are preserved in the archeological record, clothing, baskets, and other artifacts made of perishable materials such as bone, wood, antler, shell, hair, hide, plant fiber, and feathers were no doubt an important part of the Archaic cultural tradition. Impressions of woven mats and net bags preserved in fired clay hearths from Kirk strata at the Icehouse Bottom Site provide rare insight into the richness of the Early Archaic material culture (Chapman and Adovasio 1977).

The Early Archaic cultures immediately preceding San Patrice are little understood in Louisiana. So far, diagnostic projectile points/knives dating from the Early Archaic period, including Cache River, Calf Creek, Kirk, and Palmer only have been recovered from questionable contexts and in limited numbers. The large Early Archaic sites, such as those identified in Florida, Georgia, Alabama, Tennessee, and the Carolinas, have yet to be recorded.

In or adjacent to southeast Louisiana several sites contain Early Archaic material. One such site, the Claiborne Site (22HA501), is an approximately 11 ac (4.5 ha) multi-component site located on a terrace overlooking the left descending bank of the Pearl River. Site 22HA501 is known primarily for its Poverty Point affiliation. Excavations at this site in 1979, directed by Greenwell (1984:133) produced, "A large variety of" unspecified "Paleo-Indian-Archaic transition and Archaic points..." that were recovered from a singe stratum located underneath features dating from the later Poverty Point occupation. Additional work by Bruseth (1991) reports that Kirk and Morrow Mountain points/knives, although rare, were recovered from the site. Gagliano's (1963:12) survey of "preceramic" sites in southern Louisiana and Mississippi found that Kirk Serrated projectile points/knives were not uncommon for the southeastern portion of the state.

Middle Archaic Period

During the Middle Archaic, three interrelated events occurred that helped shape the culture. First, the effects of continental glaciation subsided, resulting in a warmer and drier climate. Sometime prior to 3000 B.P., modern climatic and environmental conditions prevailed. Second, sociopolitical organization changed in some areas; an increased emphasis on ranked societies resulted in an increase in territorialism and in regional diversification. Finally, technological improvements occurred, particularly with respect to groundstone, bone, and antler implements.

This period is typified by the Morrow Mountain Horizon. Small to medium-sized, triangular projectile points/knives with short tapered stems characterize the Morrow Mountain Horizon. Morrow Mountain forms are distributed widely; they have been recovered from the eastern seaboard to as far west as Nevada, and from near the Gulf of Mexico to as far north as New England (Walthall 1980). In Louisiana, the Middle Archaic is represented by projectile points/knives that include Morrow Mountain, Johnson, Edgewood, and possibly Calcasieu types (Campbell et al. 1990:96; Green 1991; Perino 1985:195). Excavations at 16VN791 in Vernon Parish, Louisiana, recovered evidence of a long tradition of corner notched projectile points/knives beginning in the late Middle Archaic. It has been suggested that these points, and others in the region, were derived from types incipient to central Louisiana (Campbell et al. 1990).

Late Archaic Period

The Late Archaic period represents a time of population growth, evidenced by an increasing number of sites found throughout the United States. Stone vessels made from steatite, occasional fiber-tempered pottery, and groundstone artifacts characterize the Late Archaic. Late Archaic projectile point/knife types found throughout Louisiana include corner notched and stemmed forms.

In the eastern United States, the Late Archaic economy focused on a few resources, including deer, mussels, and nuts. Jenkins (1979) recognized a seasonal procurement strategy in Middle Tennessee during the Late Archaic. During the spring, macrobands formed to exploit forested riverine areas. Archeological investigations of Late Archaic shell middens and mounds indicate a reliance on shellfish, fish, and riverine fauna and flora. During late fall and winter, Late Archaic peoples split into microbands and subsisted on harvested and stored nut foods and faunal species commonly found in the upland areas.

Archaic period sites typically are found along the boundary of Quaternary and Tertiary areas with relatively flat or undulating bluff tops that overlook the floodplains. Within Management Unit IV, Late Archaic sites appear on the Prairie terraces and relict levees (Gagliano 1963). Archaic style projectile points/knives commonly are found throughout the state; however, few of Louisiana's discrete, intact archeological deposits dating from the Archaic have been excavated systematically, analyzed, and comprehensively reported (Neuman 1984). Late Archaic sites that have been systematically studied in the west-central and northern part of the state, have yielded projectile points/knives that include Gary, Kent, Palmillas, Carrollton, Marcos, Bulverde, Ensor, Ellis, Epps, Macon, Yarbrough, Motley, Pontchartrain, Delhi, and Sinner types. Groundstone objects recovered from these sites include celts/axes, plummets, and steatite bowl fragments (Campbell et al. 1990; Smith 1975).

In southeast Louisiana the Cedarland Plantation Site (22HA506), the Late Archaic type site for the Pearl River Phase, is a rangia shell midden located near the mouth of the Pearl River and adjacent to the Claiborne Site (22HA501). Artifacts recovered from this site include Gary and Pontchartrain projectile point/knife types, modified bone/antler tools, steatite vessels, utilized shell, and ornamental items (beads/plummets). A small number of clay lined fire hearths also have been identified at this location.

Poverty Point Culture (4000 - 2500 B.P.)

Poverty Point represents a transitional culture that originated ca. 4000 B.P. and is best represented at the type site (16WC5) in northeast Louisiana. The site is situated adjacent to Bayou Macon and near several major rivers, including the Mississippi, Tensas, Ouachita, and Boeuf. This riverine location was ideal for exploiting the flow of trade goods from other regions (Jeter and Jackson 1990:142; Muller 1978; Neitzel and Perry 1977) and for cultural diffusion. Evidence of long distance trade at Poverty Point includes ceramics from the St. Johns River region of Florida and lithic materials from deposits in Arkansas, Illinois, Indiana, Missouri, Ohio, Oklahoma, and Tennessee (Connaway et al. 1977:106-119; Gibson 1974:26, 1979, 1994; Jeter and Jackson 1990; Lehmann 1982:11-18; Webb 1982:13-14). Poverty Point culture probably represents the first chiefdom-level society to develop in the eastern United States (Gibson 1985a; Muller 1978).

The Poverty Point site (16WC5) is distinguished primarily by its large earthworks and its complex microlithic industry. The earthworks include six segmented ridges, 15 to 46 m (50 to 150 ft) wide, that form five sides of an octagon, and several other Poverty Point mounds scattered throughout the immediate site area. The largest mound, Mound A, may be a large bird effigy (Webb 1982). At the time of its construction, Poverty Point was the largest earthwork in the Americas.

Materials identified at Site 16WC5 and associated with Poverty Point culture include the atlatl, plummets, beads and pendants, thin micro flints/blades, clay cooking balls and objects (figurines/fetishes), as well as both food storage and preparation containers. Container types consisted of steatite vessels, evidence of baskets and basketry, and untempered ceramic material; most ceramic vessels have been primarily sand tempered, although a minority of grit tempered, clay tempered, and fiber-tempered ceramic and untempered sherds and vessels have been recovered. Webb (1982) also reported the recovery of seed processing implements, stone hoe blades, nutting stones, and milling stones. Earthen ovens also have been identified.

Brain (1971) identifies Poverty Point as a bottomland occurrence, and Webb (1982) suggests that Poverty Point sites typically are found in four locations. These areas include the Quaternary terraces or older land masses that overlook major stream courses, along major river levees of active or relict river channels, at river-lake junctions, and along coastal estuaries or older land surfaces located within a coastal marsh area. These sites appear to be located in areas ideal for exploiting forest-edge resources and for transporting exotic materials. Sites range in size from large ceremonial centers to small hamlets or foraging stations.

In southeast Louisiana, small shell middens located along the shoreline of Lake Pontchartrain exhibit Poverty Point traits and suggest seasonal and specialized adaptations to marsh environments. These sites represent two phases of Poverty Point culture: the Bayou Jasmine phase and the Garcia phase. Bayou Jasmine phase sites are located on the western shore of the lake as well as along the natural levee ridges of the Mississippi River distributaries. Garcia phase sites are located along the eastern shore of Lake Pontchartrain. The Garcia Site (16OR34), the type site for the Garcia phase, was found to contain a beach deposit of *Rangia* shells and midden debris. Radiocarbon dates from Bayou Jasmine phase components cluster around 3450 B.P., while Garcia phase sites date about 1,000 years later (Gagliano 1963; Gagliano and Saucier 1963). Bayou Jasmine phase sites, such as the type site located along the western shore of the lake exhibit Poverty Point traits exclusively (Duhe 1976). In contrast, Garcia phase sites, i.e., those found along the eastern shore, contain both bone, tool, and microlithic industries (Gagliano and Saucier 1963). Additionally, the Claiborne Site (22HA501, occupied during the Archaic Stage) is considered by Webb (1977) to be a Poverty Point regional center.

Woodland Stage (3000 - 900 B.P.)

Despite the many innovations introduced during the Poverty Point cultural period, this culture is portrayed frequently as either a Late Archaic period culture or as a pre-Woodland transitional manifestation. The Woodland Stage in Louisiana is characterized by a combination of itinerant and possibly sedentary agriculture, the introduction of the bow and arrow, and the widespread use of ceramics. The Woodland Stage includes three periods: Early Woodland, Middle Woodland, and Late Woodland. The Early Woodland (ca. 2500 - 2000 B.P.) is represented by the Tchefuncte culture, the Middle Woodland (ca. 2000 - 1600 B.P.) is associated with the Marksville culture and to a lessor extent the Troyville culture, and the Late Woodland (ca. 1600 - 800 B.P.) originated with the Troyville culture but is dominated by Coles Creek culture. In most parts of the region, the Woodland Stage was eclipsed by the Plaquemine culture (i.e., the florescence of the Mississippian Stage).

Tchefuncte Culture (2500 - 2000 B.P.)

Tchefuncte culture is characterized by the first widespread use of pottery, although within the context of a Late Archaic-like hunting and gathering tradition that maintained a Late Archaic-like tool inventory (Byrd 1994; Neuman 1984; Shenkel 1981:23). The culture first was identified at the type site (16ST1), located southeast of the current Mandeville project Item on the north shore of Lake Pontchartrain,

(Ford and Quimby 1945; Weinstein and Rivet 1978). Later, the Tchefuncte culture was defined by Ford and Quimby (1945) based on Works Progress Administration excavations at Big Oak Island (16OR6) and Little Woods Midden (16OR15), situated on the southeastern edge of the lake. Originally, Tchefuncte culture was thought to be an adaptation to the southwest Louisiana coast and to the central portion of the Vermilion River in south-central Louisiana. Tchefuncte or Tchefuncte-like ceramics now have been found in southeast Missouri, northwest Mississippi, the Yazoo Basin, coastal Alabama, and east Texas (Brookes and Taylor 1986:23-27; Mainfort 1986:54; Neuman 1984; Webb et al. 1969:32-35; Weinstein 1986:102). In coastal Louisiana, six phases have been designated for the Tchefuncte period. From west to east, these are the Sabine Lake phase bordering Sabine Lake in southeast Texas and southwest Louisiana; the Grand Lake phase in the Grand lake and Vermillion Bay area; the Lafayette phase on the west side of the Atchafalaya basin (west of the Vermillion River); the Beau Mire phase below Baton Rouge in the Ascension Parish area, and the Pontchartrain phase encompassing Lake Maurepas and Lake Pontchartrain in the Pontchartrain Basin (Weinstein 1986:108). For the purpose of this review, a date range extending from ca. 2500 to 2000 B.P. for the Tchefuncte period will be used; however, research suggests that dates for the Tchefuncte period differ quite widely from region to region and occasionally within the same region (Webb et al. 1969:96; Weinstein 1986). Most agree that Tchefuncte dates from as early as 2700 B.P. in the south and that it diffuses to the north, where it is known as Tchula, and terminates sometime around 1900 B.P. (Gibson and Shenkel 1988:14; Perrault and Weinstein 1994:48-49; Shenkel 1974:47; Toth 1988:19). There is, however, evidence supportive of coastal Tchefuncte sites that were in existence until ca. 1700 B.P. (Byrd 1994:23; Neuman 1984:135). If these dates are correct, it implies that the last remaining coastal Tchefuncte communities were coeval with late Marksville culture (Toth 1988:27-28).

Tchefuncte ceramics were fired at a low temperature and tempered with either sand or clay (Phillips 1970). The northern Tchula variant ceramics are clay/grog tempered or temperless and are often associated with minor amounts of distinctive sand tempered "Alexander series" incised, pinched, and plain ceramic types, which may represent material traded from northern Alabama (Jenkins 1982; Williams and Brain 1983). Vessel forms consist of bowls, cylindrical and shouldered jars, and globular pots that sometime exhibit podal supports. Many vessels are plain; however, some are decorated with punctations, incisions, simple stamping, drag and jab, and rocker stamping. Punctated types are more numerous than stamped types, but parallel and zoned banding, stippled triangles, chevrons, and nested diamonds also represent popular motifs. During the later portion of the Tchefuncte period, red filming also was used to decorate some vessels (Perrault 1994:46-47; Speaker et al. 1986:38; Phillips 1970).

Most Tchefuncte sites are classified as coastal middens, or as inland villages or hamlets. Settlement usually occurred along the slack water environments of slow, secondary streams that drained bottomlands, floodplain lakes, and littoral zones (Neuman 1984; Toth 1988:21-23).

For the most part, the stone and bone tool subassemblages remained nearly unchanged from the preceding Poverty Point culture. Stone tools included boat stones, grooved plummets, chipped celts, and sandstone saws; bone tools included awls, fish hooks, socketed antler points, and ornaments. In addition, some tools such as chisels, containers, punches, and ornamental artifacts were manufactured from shell. Projectile points/knives characteristic of Tchefuncte culture include Gary, Ellis, Delhi, Motley, Pontchartrain, Macon, and Epps (Ford and Quimby 1945; Smith et al. 1983:163).

Tchefuncte burials and artifacts suggest an egalitarian social organization. The population probably operated at the band level, with as many as 25 to 50 individuals per band. The widespread distribution of similar ceramic types and motifs implies a patrilocal residence with exogamous band marriage (Speaker et al. 1986:39).

Examination of faunal and floral remains from Morton Shell Mound (16IB3), a coastal Tchefuncte shell midden, suggests that some coastal sites were occupied on a seasonal basis, usually in the summer and autumn, and possibly during the spring (Byrd 1994:103). The preponderance of freshwater fish

remains at sites such as Big Oak Island (16OR6) and Little Oak Island (16OR7) indicates a reliance on aquatic resources (Shenkel and Gibson 1974).

Marksville Culture (2100 - 1600 B.P.)

Marksville culture, named for the Marksville site (16AV1) in Avoyelles Parish, often is viewed as a localized version of the elaborate midwestern Hopewell culture (Toth 1988:29-73). Marksville peoples probably used a hunting, fishing, and gathering subsistence strategy much like those associated with earlier periods. A more highly organized social structure is implied by the complex geometric earthworks, conical burial mounds for the elite, and unique mortuary ritual systems that characterize Marksville. Some items, such as elaborately decorated ceramics, were manufactured primarily for inclusion in burials. Burial items include pearl beads, carved stone effigy pipes, copper ear spools, copper tubes, galena beads, and carved coal objects. Toward the end of the Marksville period, Hopewellian influences declined, and mortuary practices became less complex (Smith et al. 1983; Speaker et al. 1986).

The Marksville period, for the purpose of this study, is assigned an age from ca. 2100 to 1600 B.P. (Kidder 1988:52; Toth 1988:9). Radiocarbon dates associated with Marksville ceramics from other regions of the Southeast suggest that the introduction of Hopewellian traits into the Lower Mississippi Valley possibly started as early as 2200 B.P. and lasted to ca. 1550 B.P. (Ford 1988:63; Mainfort 1988:143-144).

Ceramic decorative motifs such as cross-hatching, U-shaped incised lines, zoned dentate rocker stamping, cord-wrapped stick impressions, stylized birds, and bisected circles were shared by Marksville and Hopewell cultures (Toth 1988:45-50). Additional Marksville traits include a chipped stone assemblage of knives, scrapers, celts, drills, ground stone atlatl weights and plummets, bone awls and fishhooks, baked clay balls, and medium to large stemmed projectile points. A variety of exotic artifacts commonly found at Marksville sites suggests extensive trade networks and possibly a ranked, non-egalitarian society. Some commonly found exotic items include imported copper earspools, panpipes, platform pipes, figurines, and beads (Toth 1988:50-73; Neuman 1984). The utilitarian material culture remained essentially unchanged, reflecting an overall continuity in subsistence systems (Toth 1988:211).

Gagliano (1979) suggests that subsistence activities were cyclical and seasonal, revolving around two or more shifting camps. In the vicinity of the current project item, shellfish collecting stations on natural levees and lower terraces around Lake Pontchartrain and Lake Maurepas were occupied and utilized during the summer months. During the winter months, semi-permanent hunting/gathering camps on the prairie terrace were occupied. This subsistence technique reflects the fission and fusion that probably originated during the Archaic Stage.

Troyville-Coles Creek Period (ca. 1600 - 800 B.P.)

Troyville culture, called Baytown elsewhere, was named after the mostly destroyed Troyville mound group (16CT7) in Jonesville, Louisiana. Troyville represents a transition from the Middle to Late Woodland period that culminated in Coles Creek culture (Gibson 1984). Neuman (1984) places the beginning of Troyville culture at ca. 1605 B.P., and Kidder (1988:57) places the beginning of the Coles Creek at ca. 1200 B.P. The continuing developments of agriculture and the refinement of the bow and arrow during this time, radically altered subsequent prehistoric lifeways. During the Troyville cultural period, bean and squash agriculture may have became widespread based on the appearance of large ceramic vessels. This shift in subsistence practices probably fostered the development of more complex settlement patterns and social organization.

The Late Woodland Coles Creek culture emerged from Troyville around 1200 B.P. and encompassed an era of considerable economic and social change in the Lower Mississippi Valley. By the end of the Coles Creek period, communities became larger and more socially and politically complex, large-scale mound construction occurred, and there is evidence for resumption of long-distance trade on a scale not seen since Poverty Point times; this implies the reemergence of a chiefdom-like society in the Southeast (Muller 1978). Coles Creek ceramics have been recovered from early Cahokia contexts dating ca. 1100 B.P. in southeastern Missouri (Kelly 1990:136). Material and sociopolitical concepts thus possibly migrated into the Lower Mississippi Valley, along with trade items. These changes probably initiated the transformation of Coles Creek cultural traits into what is now recognized as the Plaquemine culture about 800 B.P.

The theory that subsistence based on intensive maize agriculture was a hallmark of Coles Creek culture, can no longer be supported (Kidder 1992). Although Coles Creek populations exhibit tooth decay rates consistent with a diet based on starchy foods such as maize, limited archeobotanical evidence for maize in Coles Creek midden deposits suggests that consumption of some other starchy foods must be the cause (Kidder 1992; Steponaitis 1986). The preponderance of evidence now available indicates that cultivation and consumption of maize was not widespread in the lower Mississippi valley until after the Coles Creek period, ca. 800 B.P. (Kidder 1992:26; Kidder and Fritz 1993). Thus, while maize existed during the Coles Creek period, and has been recovered archeologically, it was not the economic basis of the society.

Earlier assumptions about the nature and extent of social and political differentiation during Coles Creek also must be reexamined. Square-sided, flat-topped mounds believed to serve as platform bases for elite structures appear first during Coles Creek. However, evidence for the elite residential or mortuary structures often said to be associated with Coles Creek mounds remains elusive prior to 1000 B.P. (Kidder and Fritz 1993; Smith 1986; Steponaitis 1986). Nevertheless, both the form of the platform mounds and their arrangement around plazas is possibly indicative of Meso-american influence (Willey and Phillips 1958; Williams and Brain 1983).

The Coles Creek peoples continued to use Troyville wares, with some elaborations (McIntire 1958). The Churupa Punctated and the Mazique Incised designs, both of which are characteristic of the Troyville culture, were used by both Coles Creek and Plaquemine pottery makers (McIntire 1958). Similarly, French Fork Incised, which formed the basis for many Troyville classifications, continued to be used well into the Coles Creek period (Phillips 1970). Coles Creek peoples developed a new ceramic complex that included larger vessels and a wider range of decorative motifs, usually situated on the upper half of the vessel (Neuman 1984). Coles Creek Incised, Beldeau Incised, and Pontchartrain Check Stamped characterize the period (Phillips 1970; Gibson 1976; Weinstein et al. 1979). A distinctive decorative type, Coles Creek Incised, contains a series of parallel incised lines perpendicular to the rim of the vessel, often accompanied underneath by a row of triangular impressions (Gibson 1976; Phillips 1970:70; Phillips et al. 1951:96-97). Several of the ceramic motifs suggest outside cultural influences. French Fork Incised motifs and decorative techniques, for example, mimic almost exactly Weeden Island Incised and Weeden Island Punctated from the Northwest Florida Gulf Coast (Phillips 1970:84; Phillips et al. 1951:101; Willey 1949:411-422). Pontchartrain Check Stamped ceramics also appear at the same time as the resurgence of the check stamped ceramic tradition during Weeden Island III in Northwest Florida (Brown 1981:31).

Coles Creek sites primarily were situated along stream systems where soil composition and fertility were favorable for agriculture. Natural levees, particularly those situated along old cutoffs and inactive channels, appear to have been the most desirable locations (Neuman 1984).

Most large Coles Creek sites contain one or more mounds. Coles Creek mounds typically are larger, and exhibit more building episodes than the earlier Marksville burial mounds. Burials occasionally are recovered from Coles Creek mounds; however, the primary function of the mounds appears to have

been ceremonial. At some Coles Creek sites, mounds are connected by low, narrow causeways; sometimes, plazas are associated with these multiple mound sites (Gibson 1985b).

The complexity of Coles Creek mound systems suggests a more complex social structure; a centralized authority and sizable labor force must have existed to build, maintain, and utilize these mounds. The centralized authority probably was of a special religious class, while the general population occupied the region surrounding the large ceremonial centers (Gibson 1985b; Neuman 1984; Smith et al. 1983).

Small Coles Creek sites consist mostly of hamlets and shell middens, and they normally do not contain mounds. Coles Creek shell middens commonly occur in the coastal region on higher portions of natural levees (Springer 1974).

Mississippian Stage (800 - 300 B.P.)

The Mississippian Stage represents a cultural climax in population growth and social and political organization for those cultures occupying the southeastern United States (Phillips 1970; Williams and Brain 1983). In the lower Mississippi valley, the advent of the Mississippian Stage is signaled at sites along the lower Mississippi and along the northern Gulf Coast by the arrival of such traits as shell tempered ceramics, triangular arrow points, copper-sheathed wooden earspools, and maize/beans/squash agriculture from the Cahokia area (Williams and Brain 1983). Formalized site plans consisting of large sub-structure "temple mounds" and plazas have been noted across the southeast at such places as Winterville, Transylvania, Natchez, Moundville, Bottle Creek, Etowah, and Kolomoki (Williams and Brain 1983; Hudson 1978; Walthall 1980; Knight 1984).

Emergent Mississippian Period (800 - 550 B.P.)

The Emergent Mississippian period Plaquemine culture represents a transitional phase from the Coles Creek culture to a pure Mississippian culture (Kidder 1988). As stated in the discussion of Troyville-Coles Creek culture, interaction with the emerging Mississippian cultures of the Middle Mississippi Valley probably exerted enough influence during the latter part of the Coles Creek period to initiate the cultural change that eventually became the Plaquemine culture. The Medora Site (16WBR1), described by Quimby (1951), typifies Plaquemine culture. Plaquemine peoples continued the settlement patterns, economic organization, and religious practices established during the Coles Creek period; however, agriculture, sociopolitical structure, and religious ceremonialism intensified suggesting a complex social hierarchy. Plaquemine subsistence probably was based mainly on agriculture and supplemented by native plants and animals. Sites typically are characterized as ceremonial sites, with multiple mounds surrounding a central plaza, and dispersed villages and hamlets (Neuman 1984; Smith et al. 1983).

Although Plaquemine ceramics are derived from the Coles Creek tradition, they display distinctive features that mark the emergence of a new cultural tradition. In addition to incising and punctating pottery, Plaquemine craftsmen also brushed and engraved vessels (Phillips 1970). Plaquemine Brushed appears to have been the most widespread ceramic type. Plaquemine ceramic types included Leland Incised, Hardy Incised, L'Eau Noire Incised, Anna Burnished Plain, and Addis Plain. By ca. 550 B.P., the Plaquemine culture apparently had evolved into a true Mississippian culture (Kidder 1988:75).

Late Mississippian Period (550 - 300 B.P.)

During this time, several traits that are now definitive of the Mississippian period were wide-spread across most of the Southeast. These diagnostic traits include well-designed mound groups, a wide

distribution of sites and trade networks, shell tempered ceramics, and a revival in ceremonial burial of the dead (Griffin 1990:7-9).

Mississippian subsistence was based on the cultivation of maize, beans, squash, and pumpkins; collection of local plants, nuts, and seeds; and fishing and hunting of local species. Major Mississippian sites were located on fertile bottomlands of major river valleys; sandy and light loam soils usually composed these bottomlands. A typical Mississippian settlement consisted of an orderly arrangement of village houses, surrounding a truncated pyramidal mound. These mounds served as platforms for temples or as houses for the elite. A highly organized and complex social system undoubtedly existed in order to plan these intricate communities.

Ceramic types are characterized by shell tempering, an innovation that enabled potters to create larger vessels (Brain 1971; Steponaitis 1983). Ceramic vessels included such forms as globular jars, plates, bottles, and pots. The loop handle has appeared on most Mississippian vessels. Decorative techniques include engraving, negative painting, and incising; modelled animal heads and anthropomorphic images also adorned ceramic vessels. Other Mississippian artifacts include chipped and groundstone tools; shell items such as hairpins, beads, and gorgets; and mica and copper items.

Protohistoric Populations

The protohistoric inhabitants of the study area belonged to two linguistic groups. The Bayogoula, Quinipissa, and Houma spoke the Muskogean language; the Chawasha spoke the Tunican language (Driver 1969; Swanton 1911, 1952).

In 1699, Pierre Le Moyne d'Iberville and a small expedition encountered a Bayogoula/Mugulasha settlement at the modern town of Bayou Goula. In 1700, d'Iberville returned to the Bayogoula/Mugulasha village, accompanied by Father Paul Du Ru, a Jesuit missionary. Du Ru eventually supervised the construction of a church at the Bayogoula/Mugulasha village; thus, Bayou Goula may be considered the oldest French settlement in Louisiana. However, later that same year the church was destroyed amid intertribal conflict. The Bayogoula Indians fled the area following a massacre by the Taensa Indians. By 1718, the region of Bayou Goula was settled by the Chitimacha. The Bayogoula appear to have been one of the agricultural Muskogean societies (Giardino 1984:253).

The Houma Indians occupied areas along the Mississippi River and within the Mississippi Delta region (Giardino 1984). The Houma initially were encountered by LaSalle and Tonti in 1682-85 near the Red River, north of Baton Rouge. Under pressure from the Tunica, the Houma left the area, and in 1709 they were located in the region between Donaldsonville and Union. In 1718, they occupied three villages between Burnside and Convent. Until 1766, the Houma occupied the region between Burnside and Darrow, following which the tribe moved toward Terrebonne Parish (Giardino 1984).

During the contact period, a number of groups including the Quinipissa and Chawasha were referred to as "wandering tribes" by Iberville. Although locational instability probably predated the arrival of Europeans, the causes of a complex series of short-distance population movements are not fully explained. Transient alliances were common, and at times two or more ethnically distinguishable groups occupied a single settlement (Davis 1984). Raiding and warfare also were observed by early European explorers and settlers (Giardino 1984).

In 1682, LaSalle recorded the existence of a Quinipissa village located beside the Mississippi River, probably in the area of present-day Good Hope and Destrehan. In 1700, Iberville and Sauvole reported that the village, consisting of seven or eight cabins located on a portage from Lake Pontchartrain to the Mississippi west of modern New Orleans, was abandoned. The Colapissa Indians may have been the

same group as the Quinipissa; after about 1718, they were living in the area of LaPlace. These groups probably were agriculturalists related to more sedentary Muskogean peoples residing farther east.

CHAPTER VI

AN ECONOMIC HISTORY OF THE PROJECT AREA

Introduction

The research plan governing archival and historical research for this project was designed to develop settlement and land use histories for the project area; to apply those histories in a predictive manner; and to compare and contrast developmental histories with archeological data obtained in the field. These procedures help to evaluate the significance of archeological sites, applying the National Register of Historic Places criteria of significance (36 CFR 60.4[a-d]). They also were designed to provide information on the nature and extent of site destruction in the project area.

A synthetic/analytical approach was used to evaluate historical data pertaining to the project area. For the colonial period, the data classes were limited; in particular, no detailed maps of the study region were found. Consequently, a narrative approach was selected for the early historic periods. For the antebellum period, additional sources were available that enabled segments of the project area to be distinguished in terms of both land use and settlement patterns. The earliest, most detailed, and most comprehensive of these sources are the original land claims filed following the annexation of the area by the United States in 1803. The original claims describe the extent of properties and are accompanied by reasonably accurate surveys that correlate directly with present-day maps. The land claims provide data that was used to discern regional settlement patterns from the beginning of the nineteenth century.

Beginning in 1844, sugar and rice production figures are available for the study region; however, subsistence farms were not inventoried, nor was rice production for home consumption. Some of the producers listed in the reports held acreage both within and beyond the confines of a particular segment of the project area. Despite these shortcomings, the sugar and rice reports paint a fairly accurate picture of land use along this stretch of the Mississippi River.

Norman's Chart, compiled in 1858, is another source useful for identifying land use and settlement patterns during the antebellum period. This chart, or map, depicts the contemporary land holdings immediately prior to the Civil War. Although it does not correlate precisely with either the original claim maps or with later maps of the region, when used in conjunction with the land claim maps and the sugar and rice reports, changes in the size of land holdings can be distinguished.

The Civil War seriously disrupted the economy of the region. With the exception of the sugar reports for the 1861-62 crop, no distinctive data are available for this period which detail the specific segments of the project area. The postbellum period provides a more definitive database from which to ascertain land use and settlement patterns. Sugar and rice reports resumed with the 1868-69 crop; additionally, the Mississippi River Commission surveys furnished specific locations of structures and settlements.

The land that included the project area originally was settled by German immigrants to Louisiana. By the late eighteenth century, the small landholdings that characterized the German settlement pattern in the river region had been consolidated into substantial estates for monocrop agriculture. By the early nineteenth century, a few of these large tracts had been subdivided by succession, but they continued to be operated as unified plantations.

Within the first two decades of the nineteenth century, sugarcane became the most important crop in both St. John the Baptist and St. Charles parishes. Following the disruption resulting from the Civil War

and a series of disastrous levee crevasses, sugar cultivation was curtailed and rice production increased in portions of the project area. As the economy recovered during the late nineteenth century, dramatic differences developed in the dominant crops being cultivated and in patterns of settlement within the region.

As a consequence of this trajectory of change, historic development in the project area may be characterized by two major themes: (1) settlement and land use on the German Coast and (2) the development of antebellum sugar plantations. Following the Civil War, one or both of the following major themes characterize the individual segments of the project area: (1) the postbellum expansion of the rice industry and (2) the postbellum recovery of the sugar industry. Agricultural land use patterns relate closely to the above-cited themes because the economics of sugar cultivation required sizeable tracts of land to assure profitability. In order to study these themes, emphasis was placed on the most concrete data available: the sugar and rice reports, which cover production from 1844 through 1917, excluding 1863-68. Detailed analysis of sugar and rice cultivation involved the compilation by project item of production figures for 16 specific years between 1844 and 1917, inclusive. Although agricultural production trends varied between individual project items and the state as a whole, a pattern does emerge. Following the Civil War, sugar cultivation recovered to resume its role as the driving force in the economy of the study area. Consequently, the dominant land pattern following the Civil War should have been one of continued consolidation. To determine whether or not land consolidation resumed after the Civil War, a sample group consisting of 37 percent of the sections contained within the various project items was selected and studied. The results of this research and the historical reconstruction of land use patterns in the study region are discussed below.

The French Colonial Period

The fertile alluvial lands along the Mississippi River in the project area were settled for cultivation as early as 1730. The general area that became St. John the Baptist and St. Charles parishes was known as "La Côte des Allemands," the German Coast, because the first settlers were German-speaking people from the Palatinate, Alsace, and Lorraine regions of the Rhine Valley.

The first successful European claim to the Lower Mississippi Valley was made by La Salle for France in 1682. In spring of 1699, Pierre Le Moyne, Sieur d'Iberville, entered the mouth of the Mississippi River and reclaimed the river and its valley in the name of Louis XIV, king of France. Iberville realized then that the future of the first colonies in the Lower Mississippi Valley would depend on the success of cultivating the delta. Unfortunately, "the first settlers did not want to work [because] the people expected to find gold, silver, and pearls as the Spaniards had done in Mexico" (Deiler 1975:9). Antoine Crozat established the first trade and concession patent in the Lower Mississippi Valley for the French crown in 1712. Crozat also expected immediate mercantile profits from mining and trading. Instead of homesteaders and slaves, though, most of the first settlers along the Gulf Coast were ex-convicts, prostitutes, and opportunists.

By 1717, Crozat's failed venture was replaced by a patent for the Company of the West. The lack of supplies and money, compounded by company mismanagement, did little to improve conditions at the first settlements. In 1719, Scotsman John Law took over the Company of the West and established another trade and concession contract in the name of the Company of the Indies. It was under the Law patent that the first successful agriculture was established on land concessions along the Mississippi River. Law's agreement with the Duc d'Orleans, regent for young Louis XV, was to bring 3,000 white settlers and 6,000 black slaves to Louisiana to promote agriculture and trade. Law accomplished some of these aims by attracting thousands of Rhine Valley refugees who sought peace and prosperity in the New World. Law's company brought German settlers first to Arkansas, and eventually to the study area above New Orleans.

Attracted by the incredible advertisements propagated by Law's Company of the West, thousands of German speaking people decided to leave their war-torn Rhine Valley homeland and settle in the French territories across the Atlantic. Deiler (1975) reprinted excerpts from one of Law's pamphlets distributed in the Rhineland in 1720. The following passage from that pamphlet accentuates the type of propaganda that attracted Rhinelanders who were desperate for a new start to Louisiana:

> The land is filled with gold, silver, copper, and lead mines. If one wishes to hunt for mines, he need only go into the country of the Natchitoches. There we will surely draw pieces of silver mines out of the earth. After these mines we will hunt for herbs and plants for the apothecaries. The savages will make them known to us. Soon we shall find healing remedies for the most dangerous wounds, yes, also, so they say, infallible ones for the fruits of love (Deiler 1975:13).

Between 1719 and 1721, at least 9,000 German settlers attempted to embark from French ports for the Gulf Coast. Out of this number, Deiler calculated that only 6,000 actually sailed across the Atlantic, and only 2,000 of these survived to reach the colonies (Deiler 1975:17).

The very first Germans to settle along the Mississippi River above New Orleans were families who arrived aboard *Les Deux Freres* at Biloxi in 1719. Unlike the majority of Germans who eventually settled the German Coast after the failure of Law's Arkansas concession in 1722, these first German families were not engagees (Deiler 1975:50,51). An unsigned addendum attached to the census of 1721 entitled, *Census of Inhabitants and Concessionaires of New Orleans and Surrounding Places*, translated by Dr. Jay K. Ditchy (1930), describes the first German Coast settlements:

> The German families which may comprise about 330 persons of all sexes and ages are; twelve leagues above New Orleans to the left on going up the river on a very good soil where formerly there were wild fields which are easy to clear. The Germans are divided into three "bourgs," the land of which is of very great extent, has never been flooded. As these people are very industrious it is hoped that this year they will have an abundant harvest and that they will succeed in coming years in making good settlements in the colony (Beer 1930:224,225).

The most reliable descriptions of the first German villages were compiled in two censuses taken in 1724. One was entitled *Census of the German Village Hoffen* dated November 12, 1724; the other, *Census of inhabitants from New Orleans to Ouacha or the German Village*, was dated December 20, 1724. Both describe two German villages located approximately ten leagues (thirty miles) above New Orleans on the right bank of the Mississippi, one and one-half miles inland from the river. The first German village was settled by twenty-one families, apparently those who were aboard *Les Deux Freres* (Deiler 1975). Both it and a second village were destroyed by the great hurricane of September, 1721.

By 1722, Law's Arkansas River settlement, like the disastrous initial beach villages at Biloxi and Mobile Bay, had failed. The description in the 1721 census addenda hints of hard conditions at the Arkansas settlement: "The concession of Mr. Law is parcelled out in the Arkansas country where there are eighty whites who are working there.... The land of the Arkansas country is good although there was a very small harvest last year" (Beer 1930:223-224). There were more than eighty white settlers in Arkansas. It is likely that the "eighty whites" in the census did not include engagees or children. By 1722, the Arkansas settlement was abandoned, and more than 170 of these refugees arrived in New Orleans (Deiler 1975:38). A financially shrewd Governor Bienville convinced these hardy survivors to settle the fertile lands

above the city instead of returning to Europe. The German engagees from Arkansas settled along the natural high levees on the right bank of the Mississippi River, establishing the three bourgs also described in the 1724 census: Hoffen, Mariental, and Augsburg. The two original German coast settlements, known together as "Karlstein," had been abandoned.

Census data from the 1720s and 1730s indicate that most of the sixty households of the German Coast settlements quickly adapted to the environment. The 1724 census noted:

> All these German families in the present census raise large quantities of beans and mallows, and do much gardening, which adds to their provisions and enables them to fatten their animals, of which they raise many. They also work to build levees in front of their places.... their small frontage on the river brings them so close together that they look like villages.... They would consider themselves very happy to get one or two negroes, according to the land they have, and we would soon find them to be overseers.... They could also feed their negroes very well on account of the great quantity of vegetables they raise. They could also sell a great deal to the large planters, and these, assured of a regular supply, could give more attention to the raising of indigo, the cutting of timber, and to other things suitable for exportation to France (Deiler 1975:90-91).

By 1731, the small German farmsteads included a chapel and cemetery. Deiler reminds us of the effort that was required from these pioneers to survive:

> The census of 1731 shows that, ten years after the arrival of the Germans, there were no horses nor oxen to draw them.... No draught animals, no plows, no cows, no wagons to haul the products.... The only agricultural implements furnished were pickaxe, hoe, and spade (Deiler 1975:58).

Despite the climate, flooding, disease, and hostile Native Americans, the German Coast settlements not only survived but prospered. By 1731, the settlement had expanded to the left bank of the river (Maduell 1972:146-147; Deiler 1975:7677), and the initial "Red Church" of St. Charles Borromeo was established in present Destrehan in 1740. The left bank was considered dangerous because of raiding Native Americans. As a result, a small fort with one gun *en barbette* was placed on the left or east bank. Pittman, writing in 1770, described both the church and the fort:

> At the German settlements, on the west side of the river, is a church served by the Capuchins; and a small stockaded front of the center of the settlements on the east side of the river; an officer and twelve soldiers are kept there for the police of that quarter. This post was originally erected as an asylum for the inhabitants who first settled there, and were much molested by the Choctaws and Chickasaws, who in alliance carried on a war against the settlers on the Mississippi (Pittman 1973:22, 23, *sic* throughout).

Through the remainder of the French colonial period, additional German, French, and Acadian immigrants settled along what was to become known as the Cote d'Or, or Golden Coast.

The produce from the fertile Golden Coast was very important to the entire economy of the New Orleans colony. Jeffreys, writing at the end of the French Colonial period, described the economy of the German colonists:

> Ten leagues before the stream reaches New Orleans is the settlement of the Germans, who after the disgrace of Mr. Law, abandoned his plantation at Arkansas, and obtained leave of the council to settle in this country. Here, by means of their application and industry, they have got extremely well cultivated plantations, and are purveyors of the capital, whether they bring, weekly, cabbages, salads, fruits, greens, and pulse of all sorts, as well as vast quantities of wildfowl, salt pork, and many excellent sorts of fish. They load their vessels on the Friday evening, towards sunset, and then placing themselves two together in a pirogue, to be carried down by the current of the river, without ever using their oars, arrive early on Saturday evening at New Orleans, where they hold their market, whilst the morning lasts, along the bank of the river, selling their commodities for ready money. After this is done, and when they have provided themselves with what necessities they want, they embark again on their return, rowing their pirogues up the river against the stream and reach their plantations in the evening with provisions, or the money arising from the produce of their labors (Jeffreys 1761:147, *sic* throughout).

Figure 37 shows the German Coast settlements on both banks of the Mississippi River in 1760. Through the remainder of the French regime in Louisiana, the colonists continued to establish an agricultural base while the political atmosphere in France became more desperate. Although the Louisiana territory was politically strategic to the French in their war with England, the French could not afford the large, unprofitable colony.

The news that France had ceded the Louisiana territory to Spain in the secret Treaty of Fountainbleau in 1762 reached the colony in 1764. The Louisiana colonists, especially the large plantation owners above New Orleans, became militant in their attempts to keep the colony under the dominion of France. When Don Antonio Ulloa arrived in 1766, he did so with little Spanish military support. Ulloa was forced to withdraw from the Louisiana colony by Lafreniere and a local militia comprised of Germans, French, and Acadians (Gayarre 1903:Vol.II,124-243).

In August, 1769, Don Alejandro O'Reilly arrived from Havana with a 21 ship flotilla carrying 2,654 Spanish soldiers. The arrival of O'Reilly marked the beginning of the Spanish regime in Louisiana. To show his strength, he immediately demanded the surrender of the revolutionary leaders. O'Reilly invited Lafreniere and his co-conspirators to a reception where they were promptly arrested. Lafreniere, Jean-Baptiste Noyan, Pierre Caresse, Pierre Marquis, and Joseph Milhet were executed by firing squad on October 25, 1769, at the military barracks in New Orleans (Gayarre 1903:Vol. II, 314-343).

The Spanish Colonial Period

The arrival of the Spanish did little to change the agrarian society along the Mississippi River above and below New Orleans. In general, the economic and demographic patterns initiated during the French colonial period continued to develop under Spanish rule. However, commodities and trade patterns changed. The increasing failure of indigo was one development that changed agricultural patterns in the area during the late French and early Spanish periods. However, rice and vegetable agriculture continued to dominate the German Coast agriculture until the end of the Spanish occupation, when smaller landholders began consolidating with others to form large sugarcane plantations.

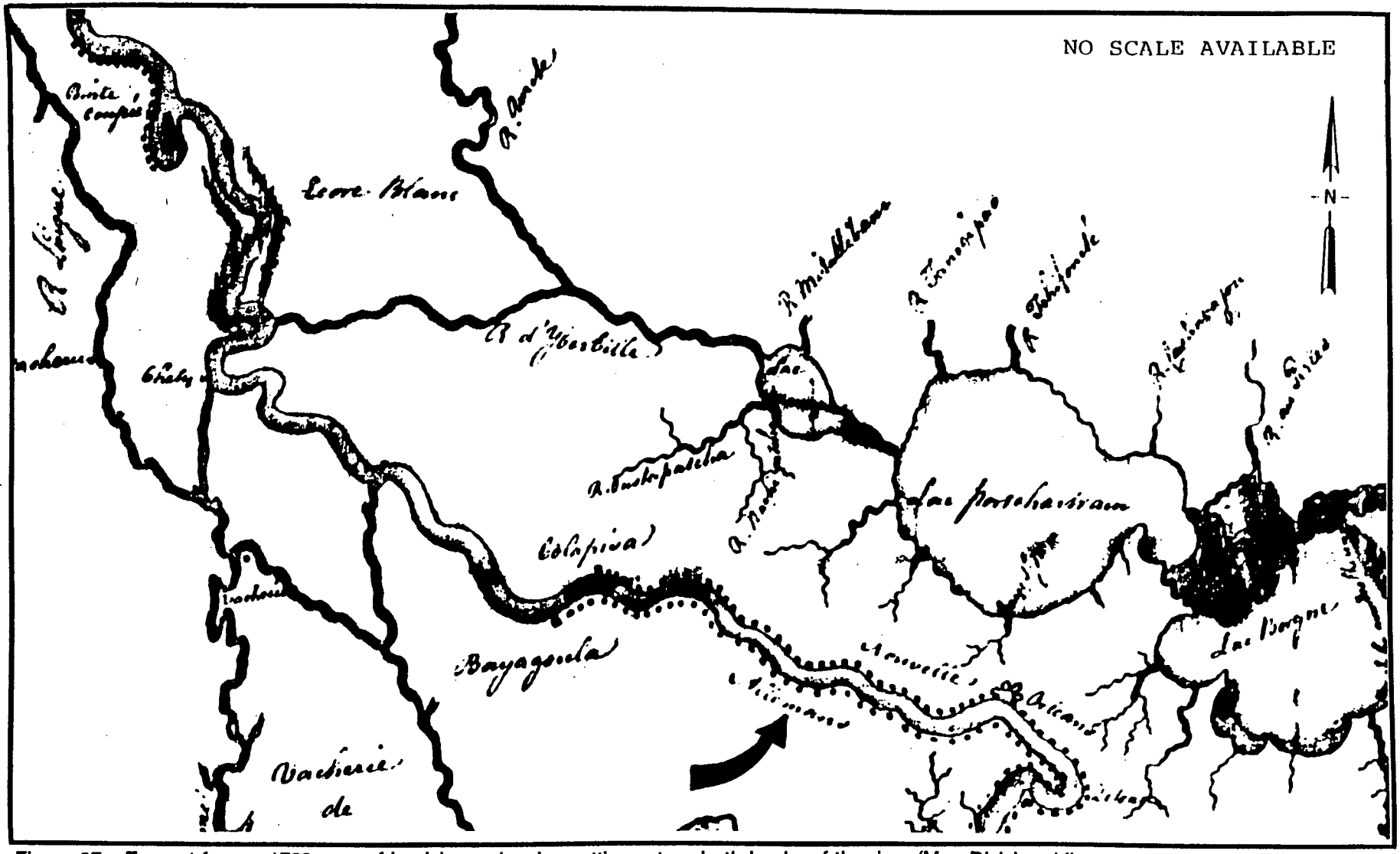


Figure 37. Excerpt from a 1760 map of Louisiana, showing settlement on both banks of the river (Map Division, Library of Congress).

During the Spanish period, the port of New Orleans grew from the legal and illegal trade with Americans and English from the northern territories, and continued to be the a major port of call for immigrant and slave ships. The German Coast was a choice destination for many of arrivals. The 1770 census accounted for a drastic increase in the number of negro slaves and French landholders along the tracts of the lower German Coast of St. Charles Parish. The ratio of black slaves to whites (591 to 327, respectively) indicates that there were affluent planters along both sides of the river during this period. This same pattern was present in the upper German Coast in St. John the Baptist Parish. The 1783 census showed dramatic population increases for slaves, whites, and "Free People of Color."

The 1770 census also reported that corn, beans, and rice continued to be the main cultigens raised in this stretch of the Mississippi River. C. C. Robins described rice agriculture on the German Coast during the Spanish period:

> The rice plantations which are operated mainly by the Germans, whom I mentioned earlier, along with a few others are watered in the same way by trenches cut in the levee, and they also can only be watered during the period of flood. The river spills into the fields but never drains them. In lower Egypt, the Egyptians water their fields during the flooding of the Nile, and a lack of flooding means failure in the harvest. Just so in Louisiana, a failure of the river to flood prevents the saw mills from turning and the rice fields from being flooded. Rice cultivation could be much extended in Louisiana (Robin 1966:112).

By the turn of the nineteenth century, the discovery that sugar could be produced on a large scale in southern Louisiana, and could compete with other foreign markets, changed the agriculture in St. John the Baptist and St. Charles parishes. The establishment of the classic Mississippi River plantation culture, where numerous slaves worked large tracts of land, was fully evident in both parishes by the time of the Louisiana Purchase (de Laussat 1940).

The Antebellum Period

The new American government was met with little opposition by the planters of the German Coast. Pierre St. Amant was appointed local representative for the region by Governor Claiborne. In 1807, the Louisiana Legislature passed an act dividing Orleans into nineteen parishes. The County of the German Coast was divided into St. John the Baptist and St. Charles parishes. Americans immediately began to settle in the region, attracted to the opportunities offered by the new sugar industry. The alluvial soils along the river below Baton Rouge were well suited for cane cultivation. As early as 1792, it was realized that sugarcane was profitable on a large scale. The planters of St. John the Baptist, St. Charles, and Jefferson parishes invested in large scale sugar plantation agriculture. By 1860, most of the land in the vicinity of each item within the project area was growing sugarcane. The growth of the sugarcane plantation economy resulted in the growth of the slave population in the area. In 1860, St. Charles Parish, as an example, had 3,719 slaves, compared to 900 whites, and 200 "Free People of Color" (Pritchard 1938:1114).

The Civil War and Aftermath

The Civil War's destruction of the slave-based agricultural economy in the project area did not end without conflict or strife. According to Yoes (1973), after Federal troops captured Boutte Station and Bayou des Allemands in 1862, militia regiments from St. Charles, Rapides, and Terrebonne parishes, and a battalion of Texas Rangers under the command of General John C. Pratt, recaptured Boutte Station.

Confederate Major James A. McWaters of the Rapides militia advanced to the Hahnville courthouse. At the courthouse, Federal troops forced their retreat (Yoes 1973:83-85).

The early surrender of New Orleans and the surrounding parishes encouraged the recruitment of the large slave populace by the occupying Union forces. By the time the Louisiana Legislature ratified the abolition of slavery in 1864, many Blacks from the project area already were enlisted in the Union Army (Yakubik et al. 1986).

After the war, a critical labor shortage encumbered the recovery of the sugar industry in the project area. Many former slaves sought freedom in the northern states. After the failure of bringing Chinese labor to the sugar parishes of Louisiana, the Louisiana Immigration and Homestead Company was established in 1870 to attract European agricultural laborers (Bouchereau and Bouchereau 1871; Giordano 1978). Among this foreign labor pool, the Italian immigrant farmer proved to be a most effective worker (Scarpaci 1972).

Despite the improved labor conditions, the recovery of the sugar industry was slow. The panic of 1873 further depressed sugar prices; coupled with inundation of the cane fields, and the lack of capital to finance new ventures, the sugarcane industry was in need of reorganization. The "Central Factory System" was initiated, whereby private sugar mills would refine the cane for the surrounding planters. This type of cooperative agriculture saved profits on the refining end, and supported the labor costs.

Rice Agriculture during the Reconstruction Period

Bouchereau and Bouchereau's statements also show increasing levels of rice production in the project area after the Civil War. This was another response to the lack of capital for sugar production. Bouchereau wrote in 1878:

> Many of the old sugar plantations are planted in rice for want of the necessary means to rebuild or repair sugar houses, etc., while others are only partially cultivated owing to the encroachment of water from crevasses, and many are completely abandoned on account of overflow (Bouchereau and Bouchereau 1877-1878:XX).

The following year he noted, "Rice culture has proved itself to be a paying crop, and we hope to see many plantations now idle profitably employed in its culture" (Bouchereau and Bouchereau 1879:117). In one sense, rice was the appropriate crop to replace sugar after the Civil War. While water from unmaintained levees ruined cane, it was necessary for rice cultivation. Detailed discussions of rice agricultural technology have been presented elsewhere (Goodwin et al. 1984).

The Late Nineteenth through Mid-Twentieth Century

The project area and the surrounding regions remained predominantly rural in the early twentieth century, although the economic base in the area slowly shifted from sugar monocrop cultivation to agricultural diversification combined with industry.

In the late nineteenth century, sugar retained its importance as a cash crop. One observer noted, "the survey area possessed a fine tier of sugar plantations on either bank of the Mississippi.... The plantations extend back to a line of woods, varying between a quarter and a half mile distant from the levee. These woods soon change into a willow, cypress, and gum swamp" (Lockett 1969). Rice agriculture

was becoming increasingly important by the late nineteenth century. Sugar and rice production were supplemented by raising of corn, potatoes, jute, oranges, figs, strawberries, plums, and garden vegetables. These were exported to New Orleans and other markets (Fortier 1914:410). Although sugarcane remained the major cash crop in much of the project area through the first half of the twentieth century, it continued to be supplemented and challenged by commercial fishing and trapping, dairying, truck farming and cattle raising (St. Charles Parish Planning Board 1952:11-12). Rice and soybeans replaced sugar as the predominant cash crops between 1950 and 1975 (Maruggi and Hartl 1981:334).

Lumbering became a major industry in the vicinity of the project area towards the turn of the nineteenth century. Logging companies such as the Lotham Cypress Company and the St. Bernard Cypress Company took advantage of The Timber Act of 1879, and cut large cypress stands during the first decades of the twentieth century. The St. James Timber Company began manufacturing cross-ties for the railroads in 1895. The decline of plantation agriculture had increased unemployment dramatically in the project area. While many individuals sought work in other regions of Louisiana and the United States, the lumbering industry provided the necessary employment to allow many families to remain in their homes. Although most of the cypress was depleted in St. Charles Parish by 1918, lumbering still was active in the project area as late as 1927.

In 1929, the Louisiana Power and Light Company extended electricity to much of the project area. Industrial facilities, particularly following the end of World War II, began to replace some of the agricultural properties along the east bank of the project area. The west bank area continued to survive on an economy based upon agriculture and the raising of livestock.

Factors that encouraged industrial growth included a readily available labor pool, access to railroad facilities, proximity to New Orleans, and a 90-foot deep channel along the east bank of the Mississippi River; the latter facilitated the passage of ocean-going vessels. Industry was based primarily on oil; refineries and storage terminal tanks were constructed. The first terminal tank was built by Mexican Petroleum Company in Destrehan in 1914. The New Orleans Refining Company, an affiliate of Shell Oil, subsequently constructed a refinery and storage tank facility near Sellers. Other companies followed this example.

Productive oil fields were discovered in the area in 1938. The discovery of additional fields brought in more companies. In addition to producing petroleum and natural gas, companies such as the Shell Oil Company opened chemical plants. This rapid industrial growth since World War II resulted in a tremendous increase in the population. Although no major population centers have emerged in the vicinity of the project area, it would be safe to estimate that the surrounding population has more than doubled since 1950 (St. Charles Parish Planning Board 1952:10,73-83; Yoes 1973:193-196,221; Public Affairs Research Council of Louisiana 1973:1-8).

Sugar and Rice Production and Settlement Patterns in Louisiana

The United States Congress placed a tariff on sugar as early as 1794. Established as a revenue measure, the tariff became a protective shield for sugar producers in the Louisiana Territory in 1803. Until 1846, Louisiana sugar growers remained insulated from foreign competition. In 1846, an *ad valorem* tax structure was adopted. Although in effect it lowered the level of protection granted to sugar (Whitten 1970:227), sugar production in Louisiana continued to increase gradually until 1859.

The extremely high profits made from the 1858-59 crop (Whitten 1970:233) brought an immediate and tremendous expansion of sugar cultivation. Production nearly tripled for the next three years. Production figures are not available for the 1862-63 crop; by the time that crop was harvested, much of the sugar producing region of Louisiana had been overrun by Union forces. The smaller crop which had been

planted that year was decimated further by the destruction of fields. Many of the sugar houses also were destroyed, particularly those along the Mississippi River that could be shelled by passing Union war ships.

The next available production figures are for the 1868-69 crop. Although the Civil War had been over for more than two years before that crop was planted, production amounted to less than 15 percent of the 1861-62 crop. Prior to 1870, many of the sugar planters had shifted to rice cultivation. Although not as profitable, it required considerably less capital and labor. The tremendous increase in rice production during the 1880s resulted in more small farmers being listed in the sugar and rice reports. Most of these individuals were descendants of the small landowners who occupied portions of the various project items at the beginning of the nineteenth century.

Following a turbulent period during the early 1870s, continuous economic improvement in the industry until the early 1890s brought a steady increase in the amount of sugar produced. The 1888-89 crop surpassed that of 1858-59, but it remained only 43 percent of the 1861-62 crop. Production increased dramatically between 1889 and 1894. The 1893-94 crop exceeded that of 1861-62, but the price of sugar fell (Sitterson 1953:294).

The lack of profits in 1894, coupled with the failure of the United States Congress to pay the bounty promised by the McKinley Tariff of 1890, caused production to plummet. The 1898-99 crop was less than half that of 1894-95. New life was pumped into the sugar industry in the late 1890s, and the downward trend was reversed. The Dingley Tariff, enacted in 1897, raised the duty on both raw sugar and inferior processed sugar (Sitterson 1953:303, 327-28, 341).

Even more important than the new tariff rates were the higher profits derived from the 1896-97 and 1897-98 crops. The potential for even greater profits increased the availability of credit. Planters immediately began cultivating additional acreage. The 1899-1900 crop surpassed that of 1894-95, and the 1902-3 crop was nearly three times that of 1894-95 (Sitterson 1953:303). Sugar production in Louisiana peaked with the 1903-4 crop of nearly 400,000 tons; it then remained stable at about 300,000 tons for several years. The 1906-7 crop was the smallest during the period between 1903 and 1912.

Following the bumper crop of 1911-12, the sugar industry began a period of steady decline. Weather damaged the 1912-13 crop, as did mosaic and other plant diseases. The economic climate was also bad for sugar planters. Many economized in the wrong areas and went bankrupt as a result. Poor land use resulted in fewer and fewer tons of cane being produced per acre.

To compound these problems, the United States Congress passed the Underwood-Simmons Tariff in 1913. This bill provided for the free admission beginning in 1916. This period of decline in sugar production resulted in twelve parishes losing 1/6 of their population by 1930. The only exceptions to this continued drop in production, which lasted until the 1930s, were the 1915-16 crop, due to World War I, and the 1920-21 crop (Sitterson 1953:294, 341,344-45,348; Center for Louisiana Studies 1980:45).

Land Use and Settlement Patterns within the Project Area

The above description of the economy and sugar production in the state of Louisiana represents a standard against which the items within the project area can be compared. A comparison to this standard is possible for the period between 1844 and 1917 because of the availability of production figures for those years. Sugar production in the segments should closely parallel that of the state between 1844 and 1917; during that time, land holdings should have continued their consolidation. Two reasons for a deviation to occur from the expected pattern logically would be natural disasters and a decision to pursue rice as the dominant agricultural product over sugar.

In order to determine if a specific segment of the project area differed significantly from the expected pattern of economic development, agricultural production data were compiled from the sugar and rice reports. The pattern of sugar production for each of the nine project items is compared to the statewide pattern in a series of graphs. Because of the consolidation of land holdings and the methods used to report production in certain areas, data collected for sugar and rice production could not be limited strictly to the area extending back from the river in each of these areas. The river frontage actually included in the databases for each of the nine project items are detailed in Figure 38, which includes that portion of Norman's Chart also used in the land holding analysis.

The results are presented in upriver to downriver order, beginning with those project items located on the left descending bank of the Mississippi River. Three of the nine items within the project area are noncontiguous. These are the Reserve, Willow Bend, and Waterford project items (Figure 1). Numerical suffixes have been added to distinguish between the upriver and downriver portions of the noncontiguous project items (Figure 38).

Angelina (RM 143.2 - 141.6)

When originally surveyed, the Mississippi River only flowed past three sections in this project area, which is located within a prominent bend in the river. These sections had a combined river frontage of 54 arpents. Erosion by the river, however, altered this situation; the lowermost section originally fronting the river has washed almost entirely away. As a consequence of the changing course of the river, an additional section, originally located behind the lowermost mentioned above, now borders the river.

The two uppermost sections initially had a combined frontage of forty arpents. These constituted the largest single contiguous holding by an individual at the beginning of the nineteenth century throughout the study area. Cultivation of these two sections began about 1770. Immediately downriver was a small holding, followed by one having a frontage of ten arpents. Permanent habitation of these sections apparently occurred in the late 1780s.

By 1858, the uppermost section formed Dr. J.H. Loughborough's Esperance Plantation. The lowest section formed a sizeable portion and possibly all of a plantation belonging to D. Adams. The small section in between had not yet been absorbed into either of the neighboring plantations. Following the Civil War, the entire project item, excluding the small center section which had been subdivided, formed part of Hope Plantation. Further consolidation of holdings occurred in the late nineteenth century; this continuation resulted in grouping of sugar and rice production figures for all holdings between Angelina and Hope plantations, inclusive.

Sugar production in the project item followed the statewide pattern until the beginning of the present century. At that time, production in the state boomed, but at Angelina a steady decline began. The 1902-3 crop was nearly 1/3 less than that of 1898-99; the 1906-7 crop was barely 1/4 that of 1902-3. Except for the disastrous sugar crop of 1911-12, which was destroyed, production in the Angelina area remained between 325,000 and 400,000 pounds. Rice production was slow to develop in this project item because sugar made a tremendous recovery immediately following the Civil War. Beginning in the 1880s, rice production expanded almost overnight, and increased, along with sugar, throughout the decade. Rice production figures are unavailable for the years after 1889, but the tremendous increase in sugar production during the 1890s indicates that rice fields were converted to the growing of cane. There is no significant deviation in the nineteenth century statewide pattern of sugar production and land use patterns in the Angelina project item (Appendix II; Figure 39; Table 6) (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Mississippi River Commission [MRC] 1893).

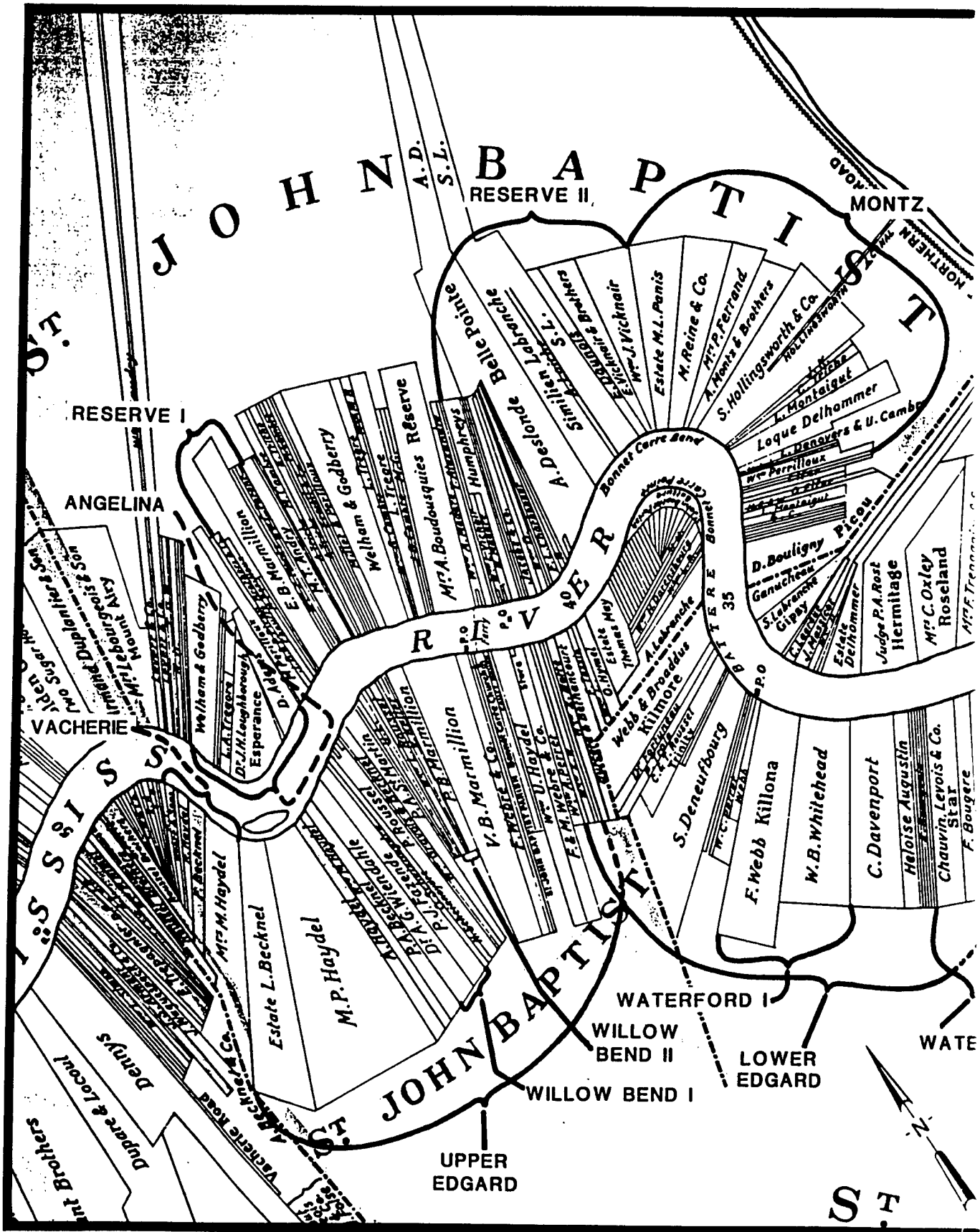


Figure 38. Excerpt from Persac's 1858 (Norman's Chart) Plantations on the Mississippi River from Natchez to New (of the reaches (Map on file, R. Christopher Goodwin & Associates, Inc.)

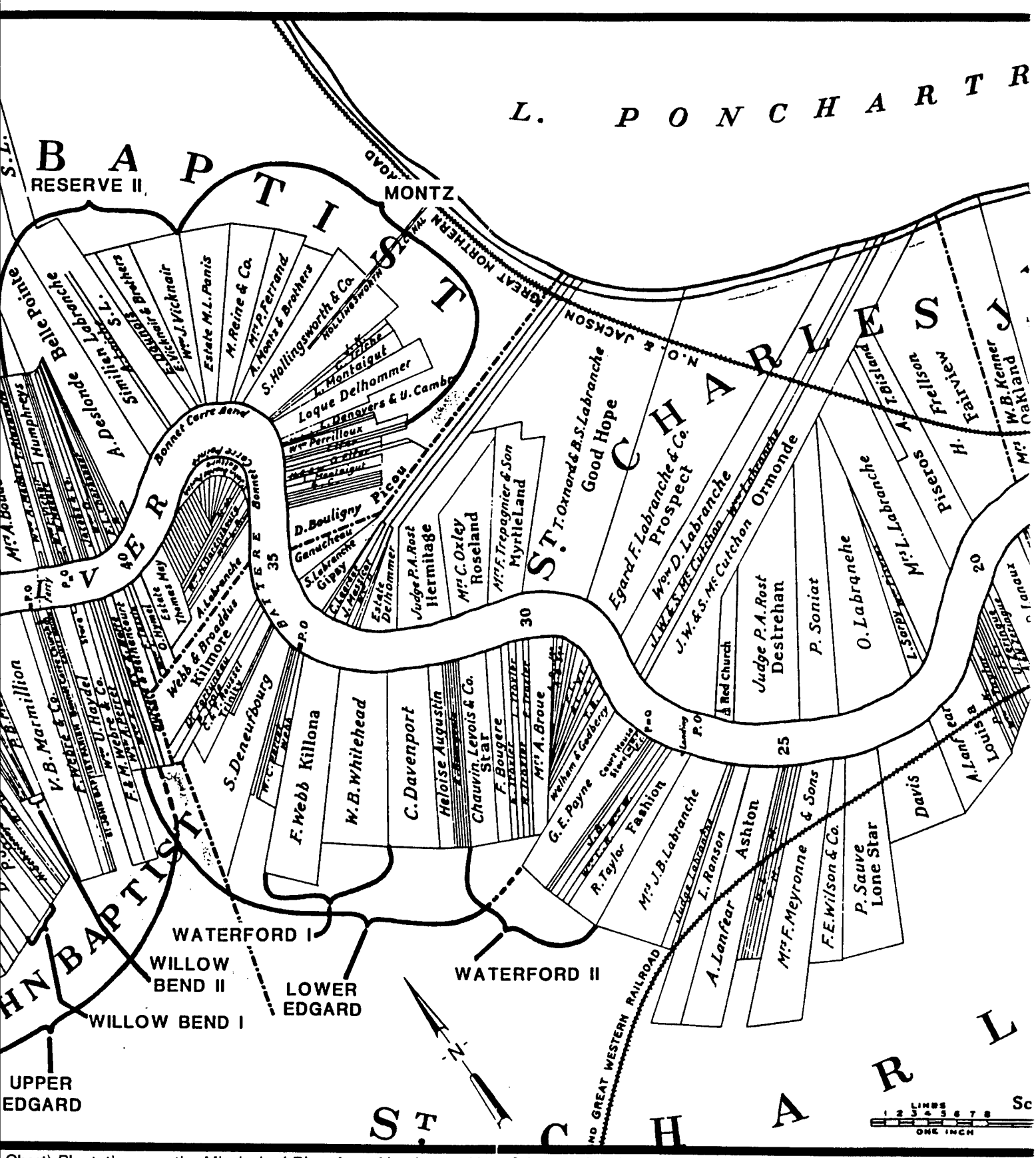


Chart) Plantations on the Mississippi River from Natchez to New Orleans, showing the location
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(3)

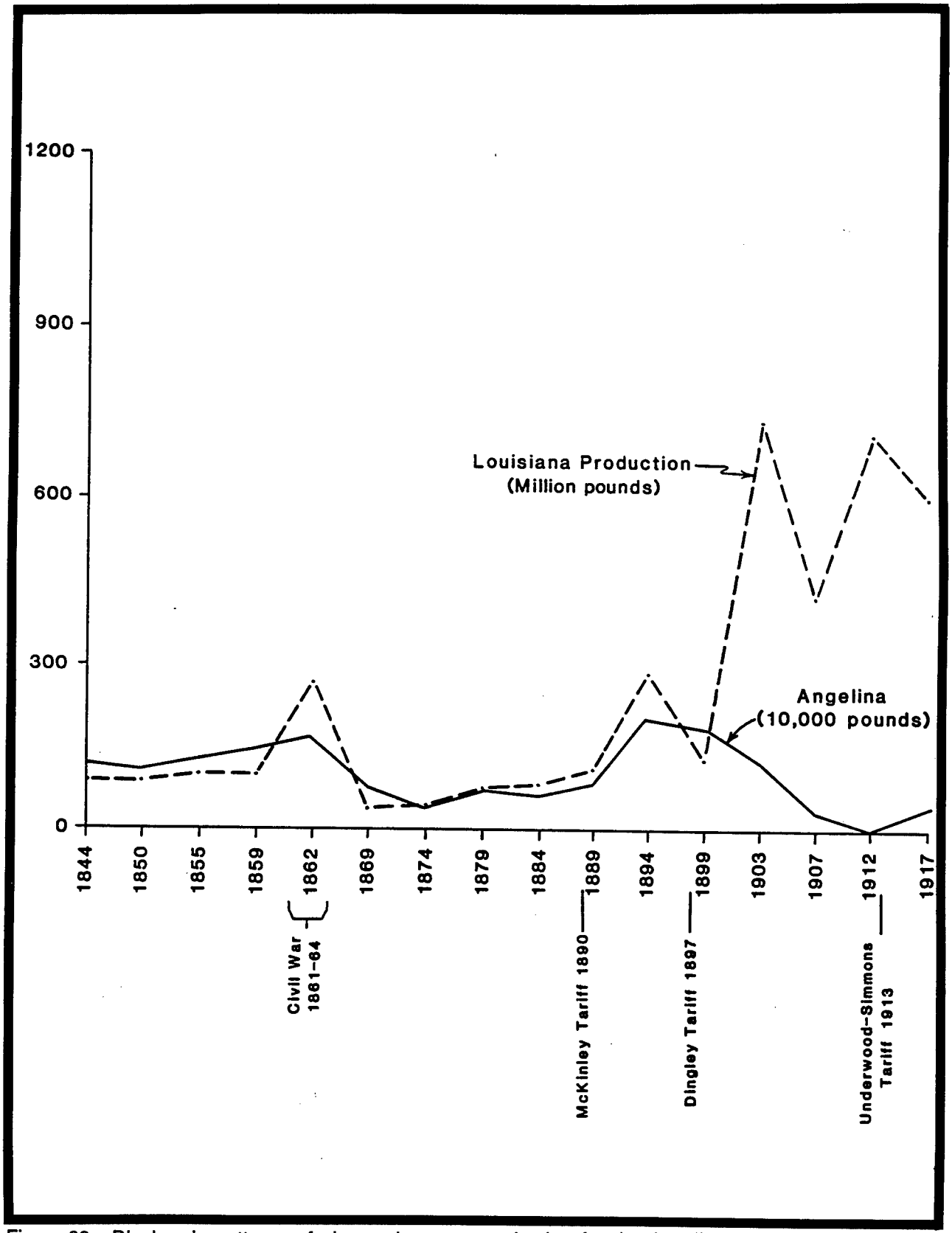


Figure 39. Diachronic patterns of change in sugar production for the Angelina construction item and Louisiana between 1844 and 1917.

Table 6. Sugar and Rice Production for the Angelina Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	1,125,000	
1850	1,045,000	
1855	1,233,000	
1859	1,380,000	
1862	1,554,000	
1869	719,128	2,400
1874	370,000	9,200
1879	670,000	39,000
1884	586,000	600,000
1889	803,250	682,020
1894	803,250	
1899	1,800,000	
1903	1,225,873	
1907	325,500	
1912		
1917	394,928	

Reserve I (RM 140.9 - 140.3)

Three modest sections, each having an initial average frontage of five arpents, form this segment of the project area. The upper section appears to have been settled in the 1770s. Two individuals shared title to the land at the beginning of the nineteenth century. Grants for the center and lower sections were issued in 1780. These both were owned by members of the Treigle family in 1803.

By 1858, Section 23, the upper section, was part of E.B. Marmillion's plantation. The remaining two sections belonged to the Montz and Parent families, respectively. They worked the two sections in partnership. Following the Civil War, the upper section was subdivided. The upriver portion of this section became part of Emily, or Emilie, Plantation. The lower portion of this section, as well as the two lower sections, were consolidated to form the San Francisco Plantation.

Sugar production in this project item almost perfectly paralleled that of the state. The single exception was in 1917. By that time, San Francisco Plantation and Union Plantation, immediately downriver, were operated by the San Francisco Planting and Manufacturing Company, Limited. The

officers of that firm obviously took advantage of the higher profits resulting from World War I, and increased production.

Although sugar cultivation rebounded more slowly in this project item than in the Angelina item, rice never became a popular crop. No significant deviation exists between the statewide pattern of sugar production and land use patterns in the Reserve I project item (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 40; Table 7; MRC 1893).

Table 7. Sugar and Rice Production for the Reserve Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	718,000	
1850	728,000	
1855	733,000	
1859	929,000	
1862	990,000	
1869	328,500	39,200
1874	226,000	3,000
1879	592,000	
1884	506,000	
1889	1,215,250	168,804
1894	2,516,773	
1899	1,669,942	
1903	2,049,245	
1907	1,254,400	
1912	2,221,000	
1917	5,000,000	

Reserve II (RM 136.6 - 135.4)

At the beginning of the nineteenth century, this project item consisted of three small holdings at the upper end and one substantial plantation. The area was settled between 1784 and 1792. The single plantation contained more than 75 percent of the river frontage within the project item.

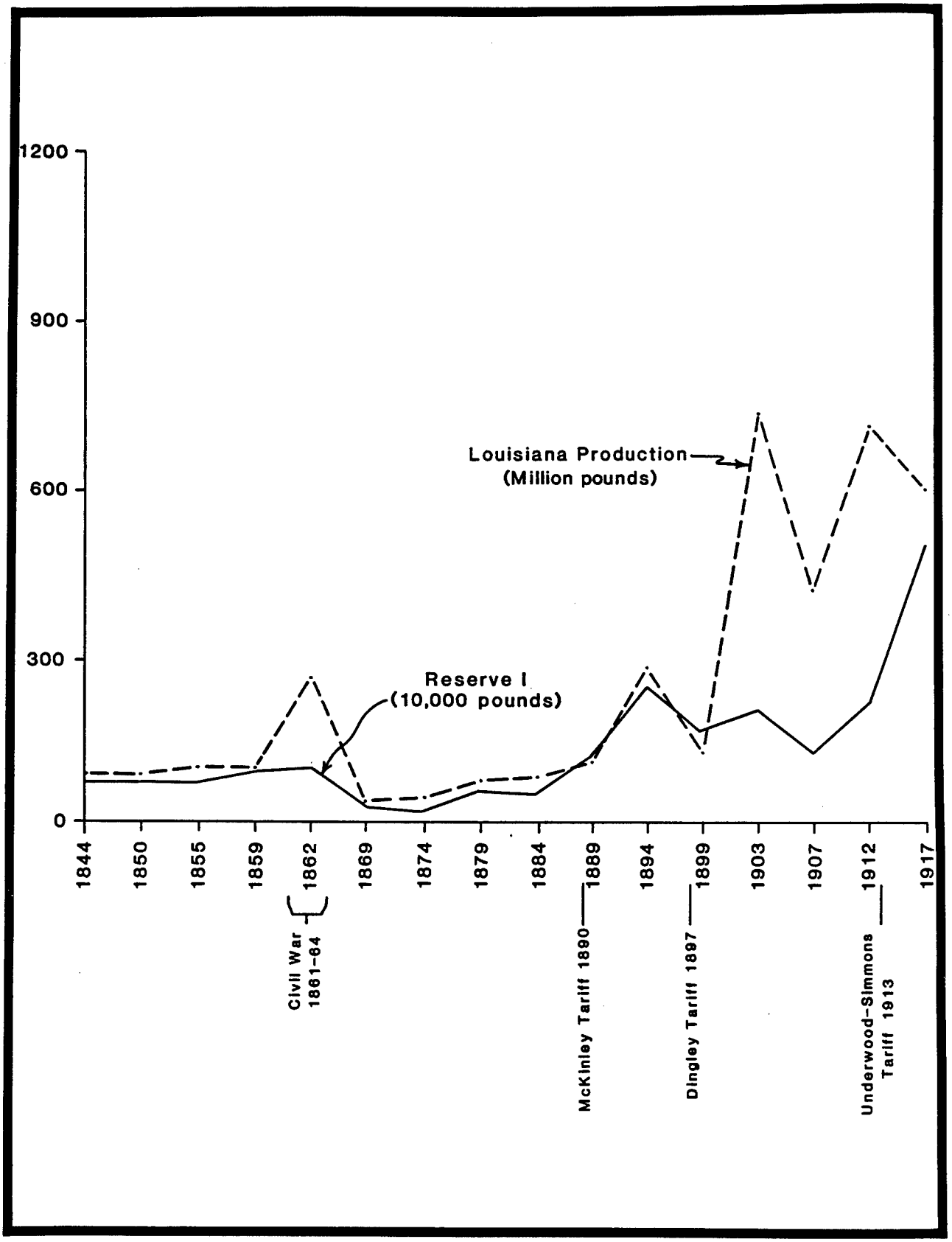


Figure 40. Diachronic patterns of change in sugar production for the Reserve I construction item and Louisiana between 1844 and 1917.

In 1858, F.L. Charbonner cultivated the uppermost section. The lower section formed A. Deslonde's Belle Pointe Plantation. One of the two middle sections had been divided, and these three parcels, each having a frontage of less than two arpents, divided the two plantations.

Following the Civil War, the project item continued to be divided between two plantations, but these were considerably larger than either of the prewar plantations. Land consolidation was so extensive that the lower plantation stretched downriver to include the uppermost section of the Montz project item. Consequently, sugar and rice production data from this section are included here, rather than with the Montz project item. For that reason, and because of inconsistencies in listings of planters along the river in the sugar and rice reports, production figures for every planter below Glencoe and above Union Plantations were grouped for analysis. This substantially larger database also includes the Reserve I project item. Most of the small holdings that existed between the two plantations before the Civil War were subdivided further after that conflict ended.

The pattern of sugar production in this project item before the Civil War ran exactly opposite to that of the state at large. Between 1844 and 1859, sugar production in the project item declined. When the boom came following 1859, cane cultivation in this area dropped more than 50 percent. Production closely paralleled that of the state following the Civil War until 1889. Sugar planters in this project item never recovered from the Civil War. Total production never exceeded half of that of the 1858-59 crop.

Rice was cultivated extensively in the area following the war. Nearly two million pounds were produced in 1888-89. Production figures are not available for the 1890s and beyond, but rice must have remained the dominant crop. Sugar cultivation had ceased by 1903. Significant deviation over a period of time exists between the statewide pattern of sugar production and the pattern for this portion of the Reserve project item. In fact, as will be seen, the Reserve II and Luling project items are the only two out of the twelve in this study area where rice replaced sugar as the dominant crop by 1900. Unlike Luling, however, at Reserve II the pattern of land ownership remained the same as that for the project items where sugar cultivation predominated; small holdings continued to be merged to form ever larger plantations (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 41; Table 8; MRC 1893).

Montz (RM 134.5 - 133.0)

Of the four project items on the left bank, Montz is the closest to New Orleans. Consequently, it was the first to be settled. Land transactions between individuals are recorded as early as 1760. Little change in land holdings occurred in the Montz project item during the first half of the nineteenth century.

In 1858, the vast plantation of S. Hollingsworth & Company (Section 27) divided the project item. Four smaller but still substantial plantations comprised the upper portion of the project item. Two of the six lower sections had been subdivided by that time. With the exception of the plantation of Loque Delhommer, which rivaled those above Hollingsworth's in size, the holdings in this stretch of the project item were much smaller. One section, for example, had been subdivided into three parts, the largest of which comprised the modest plantation of L. Montaigut.

Following the Civil War, consolidation occurred within the project item. The uppermost section eventually was consolidated with the lowest section of Reserve II. The plantations of Delhommer and Montaigut, which were adjacent before the war, were united. The elimination of smaller holdings in the upper portion of the Montz project item was duplicated in the lower portion. There, however, the driving force was not consolidation. The Bonnet Carre Crevasse of 1874 destroyed the holdings of several of the small farmers at the lower end of the project item.

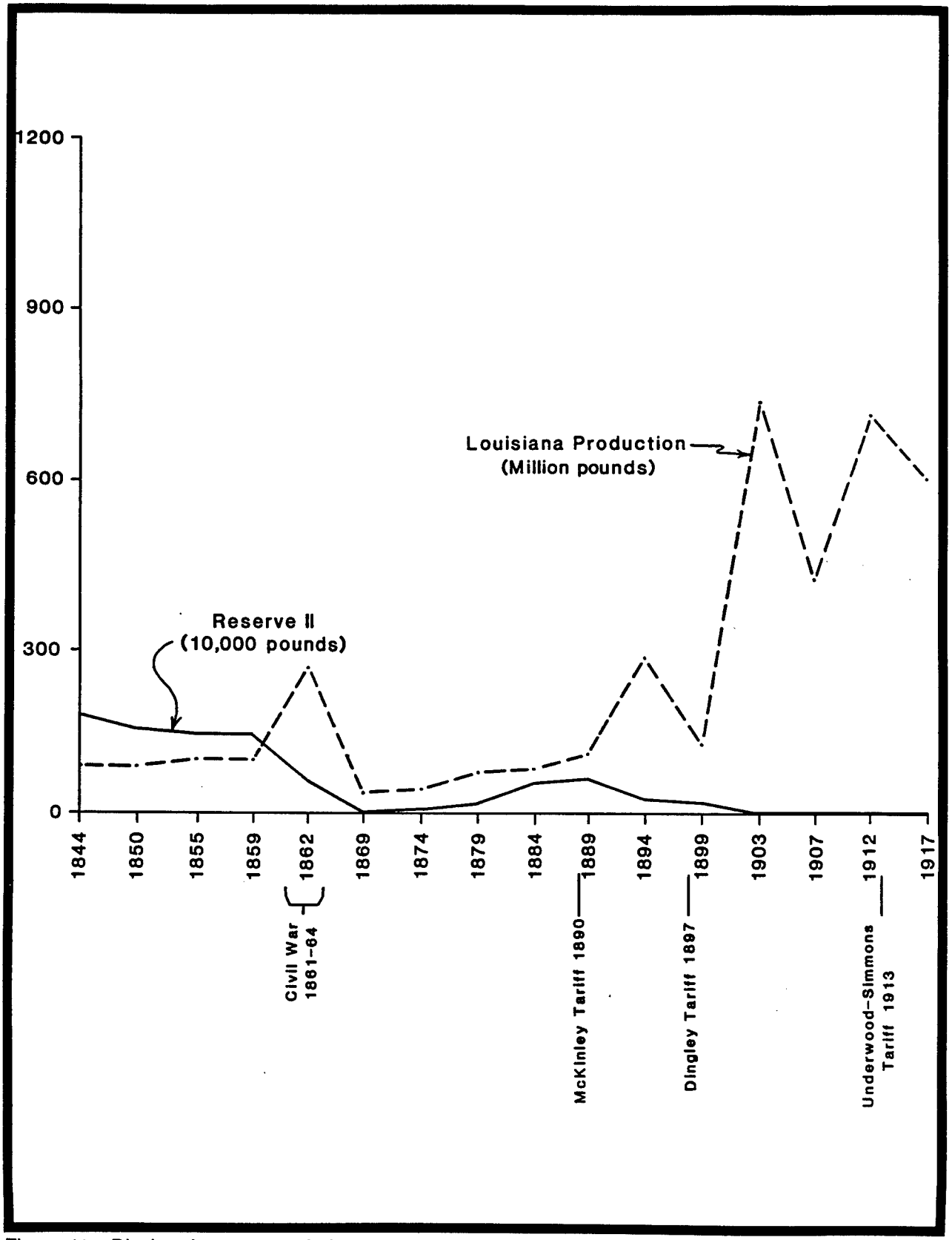


Figure 41. Diachronic patterns of change in sugar production for the Reserve II construction item and Louisiana between 1844 and 1917.

Table 8. Sugar and Rice Production for the Reserve II Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	1,817,000	
1850	1,568,000	
1855	1,449,000	
1859	1,450,000	
1862	590,000	
1869	63,670	322,200
1874	65,000	1,256,400
1879	193,000	785,600
1884	554,000	902,000
1889	649,750	1,988,388
1894	318,213	
1899	220,800	
1903		
1907		
1912		
1917		

Sugar production in this project item closely paralleled the statewide pattern until the late 1890s. When state production plummeted in 1899, planters in this project item continued to produce record harvests. This trend continued until production abruptly halted in the first decade of the twentieth century. Of all of the years surveyed, rice only was reported in 1874. No significant deviation prior to 1899 exists between the statewide pattern of sugar production and that of the Montz project item (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 42; Table 9; MRC 1893).

Vacherie (RM 146.7 - 144.0)

This project item was inhabited as early as 1776. Throughout the nineteenth century, the upper portion of this project item consisted of small landholdings. By frontage, from upriver, the sections of the project item were as follows: one moderate, four small, one moderate, one large, one moderate, and two large. The last two were owned by the Deslondes family. Being located in a bend of the river, the sections within this project item contain less acreage than the average section of the same river frontage.

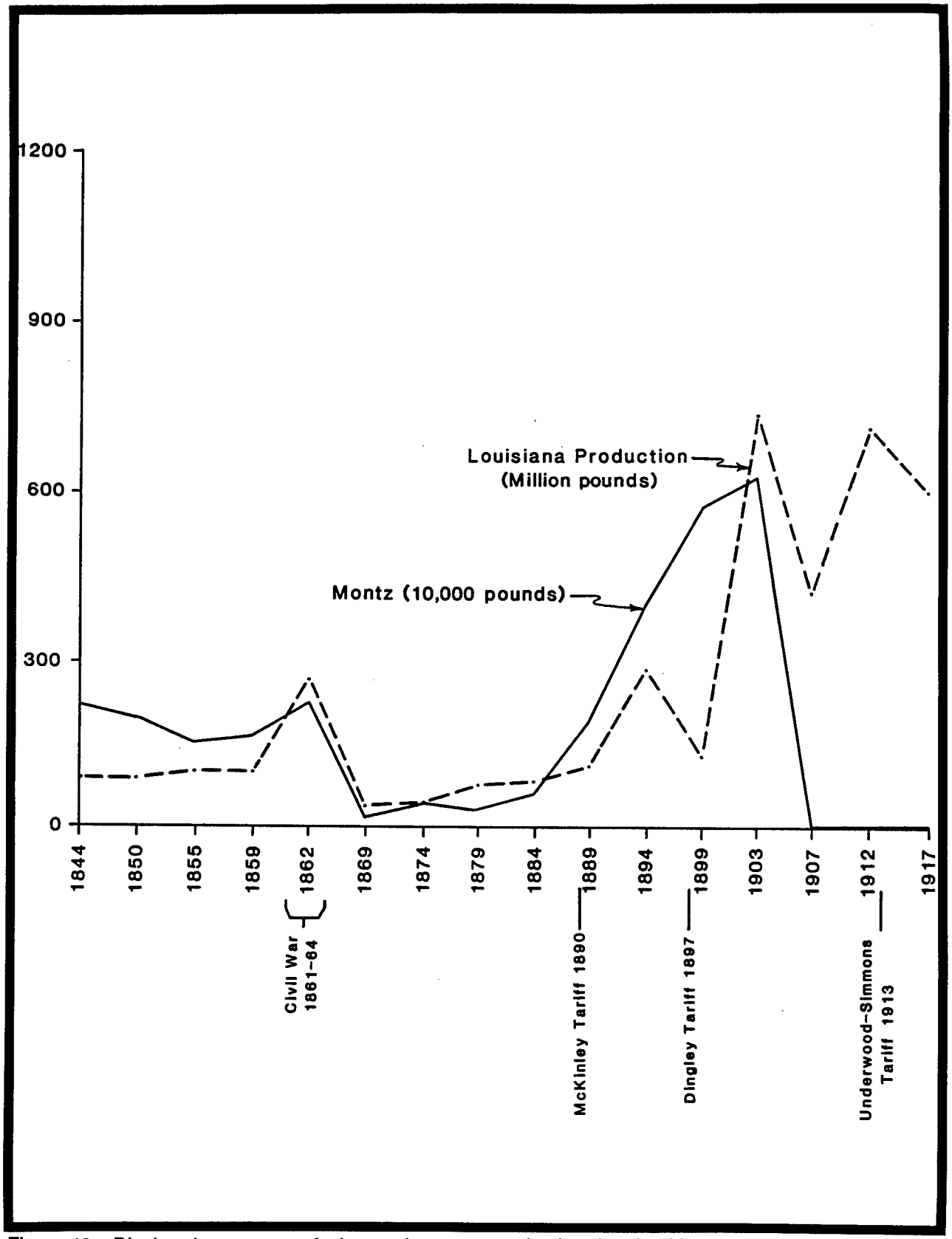


Figure 42. Diachronic patterns of change in sugar production for the Montz construction item and Louisiana between 1844 and 1917.

Table 9. Sugar and Rice Production for the Montz Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	2,140,000	
1850	1,917,000	
1855	1,495,000	
1859	1,610,000	
1862	2,211,000	
1869	210,000	
1874	453,000	6,000
1879	335,000	
1884	610,000	
1889	1,942,260	
1894	3,923,447	
1899	5,750,000	
1903	6,272,091	
1907		
1912		
1917		

By 1858, the lowermost section formed part of Mrs. M. Haydel's plantation, which was the only large plantation associated with this project item before the Civil War. Immediately upriver were three small plantations. Sugar and rice production for the small farmers at the upper end of the project item were omitted from the production figures; prior to the Civil War, these farmers had their cane ground at the Roussel Brothers' plantation, which was located immediately upriver from and outside of the limits of the study area.

Following the Civil War, the lower portion of this project item formed part of the Whitney Plantation; the upper portion continued to be divided among small farmers. This project item had a distinctive pattern of sugar production. It followed the statewide trend from 1844 to 1855. Instead of gradually increasing, however, the 1858-59 crop was less than 1/3 that of 1854-55. The moderate recovery reported in 1862 was followed by a downward trend which did not reverse until after 1880.

Suddenly, production soared in this project item throughout the 1880s, beginning a boom that did not extend to the remainder of the state for another decade. Then, nearly as quickly, the trend reversed itself. The 1888-89 crop was down nearly 40 percent from that of 1884-85. Production had ceased

altogether by 1894. Ironically, the only year that showed substantial rice production was 1884, which was also the record year for cane cultivation.

Obviously, the small farmers and planters in this project item were cultivating something. Because reported sugar and rice production were extremely low in a period before the development of truck farms in this region, only one possibility remains. Sugar or rice, and undoubtedly both on some holdings, continued to be produced. This production, as with that of the upper portion of this project item during the antebellum period, must have been combined with the production figures of some larger producer upriver or on the Vacherie backoff. Consequently, the absence of data prohibits concluding that this project item varied significantly from the expected economic pattern. The production included in the Table 10 ends upriver with Webre's plantation because the antebellum production reports of the small farmers above Webre's plantation were combined with those of a more substantial plantation, which was located beyond the limits of the project area (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 43; Table 10; MRC 1893).

Table 10. Sugar and Rice Production for the Vacherie Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	356,000	
1850	409,000	
1855	527,000	
1859	160,000	
1862	461,000	
1869	228,546	76,800
1874	154,000	5,200
1879	102,000	
1884	2,230,000	709,000
1889	1,637,658	
1894		
1899		
1903		
1907		
1912		
1917		

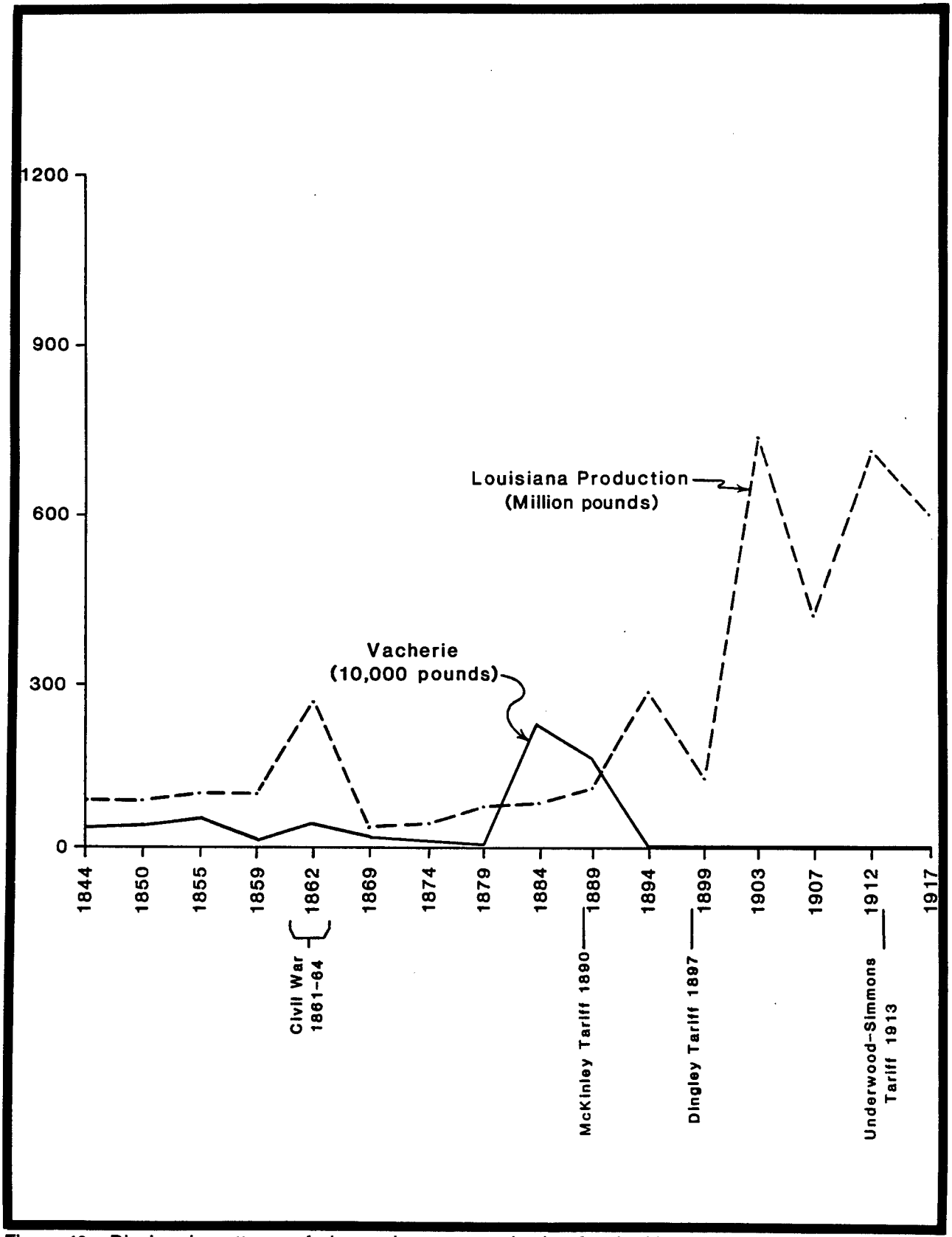


Figure 43. Diachronic patterns of change in sugar production for the Vacherie construction item and Louisiana between 1844 and 1917.

Upper Edgard (RM 143.2 - 137.0)

Settlement in this area was sufficient by 1770 to warrant a grant of land from Governor Unzaga to the people of St. John the Baptist Parish. They were to construct a church on the property (T12S/R19E/Section 16), which had a frontage of four arpents and which is located at the lower end of the project item. Three sections immediately below the church were owned by George, Jean, and Francois Weber. These men were brothers who had inherited the property; each owned a tract of land with an uneven frontage. The division was also uneven. The first two men received just over five arpents; the third received just over three arpents.

When the original claims were made to the United States government, many of the sections had owners with the same last name. These sections, however, were separated by another section owned by someone with a different surname. In all likelihood, that individual married into the family; when the property was divided by succession prior to the federal claims, that individual gained possession of a portion of what once had been a much larger grant. Instances such as the two described are relatively common throughout the project items.

Twenty-seven sections are contained within this project item. Beginning upriver, at the time of the original survey there were four sections with a frontage of more than ten arpents, followed by twelve sections with a frontage in excess of four but less than ten arpents. A single large section followed, with the remaining sections varying from just over three to ten arpents frontage.

By 1858, the two largest sections, in terms of river frontage, had been divided. Only one plantation of similar size had been created by consolidation of smaller holdings. The remaining holdings remained relatively unchanged. Following the Civil War, there were numerous small producers of sugar and rice. Few of the larger plantations survived the war intact. Those plantations expanded, and by the early 1890s reported production was limited to four holdings. Beginning upriver and with the largest producer, those plantations were named Carroll, Columbia, Church, and Fruit.

Sugar production in this project item was extremely erratic. While statewide production gradually increased between 1844 and 1859, the cane planted in the central third of this project item was decimated by flooding in 1850. The 1849-50 crop was only 63 percent of the 1843-44 crop. A modest recovery in 1855 was followed by a second severe drop in 1859. By 1862, however, the area had recovered and production soared. The 1861-62 crop surpassed that of 1843-44.

Unlike the state as a whole, the sugar industry rapidly recovered in this project item. The 1878-79 crop nearly equaled that of 1861-62. Sugar production dropped approximately 20 percent during the next decade, when much of the acreage was converted to rice fields. Although rice production figures are not available for 1894, it must have been considerably reduced because the sugar crop of 1893-94 was nearly 50 percent more than that of 1888-89.

Sugar production remained high into the twentieth century, despite the statewide drop in 1899. Production in the project item did drop along with that of the state in 1907, only to bounce back in 1912. Like the officers of the San Francisco Planting and Manufacturing Company, the two remaining sugar producers in this project item (Evergreen and Columbia Plantations) took advantage of the situation in Europe. Their 1916-17 crop exceeded five million pounds, the largest reported in the study area following the Civil War.

The differences between production patterns for this project item and the state before the Civil War are due primarily to flooding. The unusually rapid recovery of the sugar industry following the Civil War resulted in substantial, though not significant, deviation in comparison with the statewide pattern of sugar production. The Upper Edgard project item shares this exceptional recovery rate with the Lower Edgard

item, and, after 1895, undoubtedly with Willow Bend I and Willow Bend II (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 44; Table 11; MRC 1893).

Table 11. Sugar and Rice Production for the Upper Edgard Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	4,573,000	
1850	2,894,000	
1855	3,326,306	
1859	1,037,000	
1862	5,130,000	
1869	859,651	173,000
1874	1,130,000	105,600
1879	4,439,000	123,400
1884	3,263,105	5,096,000
1889	3,474,608	3,032,964
1894	4,998,867	
1899	4,423,690	
1903	4,430,992	
1907	1,179,000	
1912	3,975,000	
1917	5,040,000	

Willow Bend I (RM 142.2 - 142.0)

The upriver portion of the Willow Bend project item is contained within the Upper Edgard project item; it falls within a single section. Having the substantial frontage of sixteen arpents, this section was divided prior to the Civil War. In 1858, it contained the moderate-sized plantations of Dr. A. G. Wiendahle and P. J. Fazende. Following the Civil War, this project item became part of Wego Plantation.

Sugar production in this project item roughly was parallel to that of Upper Edgard throughout the nineteenth century. It falls within the center portion of that river stretch that was devastated by flooding in 1850. In 1869, rice was the dominant crop. No sugar production was reported. During the 1870s, the cultivation of sugar resumed, and rice production disappeared. This pattern was reversed throughout the following decade when sugar production was curtailed, and millions of pounds of rice were harvested. Rice production figures are not available after 1889, and no sugar production is indicated for the 1893-94 crop.

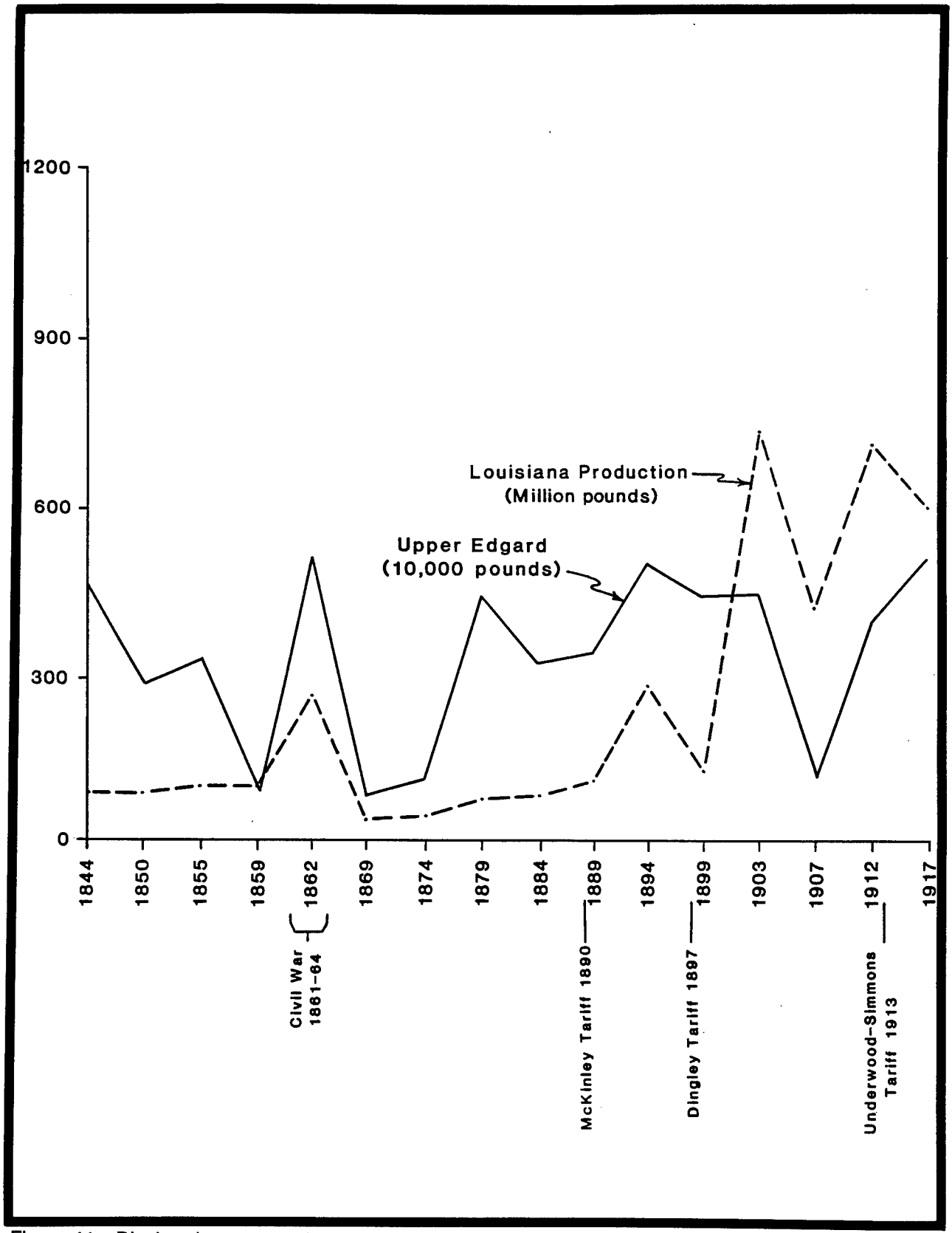


Figure 44. Diachronic patterns of change in sugar production for the Upper Edgard construction item and Louisiana between 1844 and 1917.

Later sugar production, if any, is impossible to determine because of property consolidation. The continued consolidation, as opposed to development patterns in the upper Luling project item, indicates that a monocrop economy continued into the twentieth century. The pattern in the Upper Edgard project item substantiates this conclusion. Production in the area during this period is shown in the graph illustrating the sugar production pattern for Willow Bend II (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 45; Table 12; MRC 1893) (Figure 46).

Table 12. Sugar and Rice Production for the Willow Bend I Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	854,000	
1850	334,000	
1855	537,306	
1859	175,000	
1862	450,000	
1869		123,000
1874	172,000	
1879	325,000	
1884	235,000	2,055,000
1889	54,050	1,121,202

Note: By 1894, production in Willow Bend I Construction Item is combined in such a large tract (shown in Willow Bend II Construction Item) that no significant comparison is possible.

Willow Bend II (RM 140.2 - 139.0)

At the beginning of the nineteenth century, five small sections with a frontage of just over four arpents constituted the upper end of the project item. The uppermost was owned by Yves Berthelot, and the second and third were owned by the Roussel family. Ownership of the fourth section was in dispute between the widow and heirs of Marmillion and Thomas Bechnel. Bechnel also owned the fifth section. The lowest section consisted of twelve arpents frontage, and belonged to Pierre Marmillion. Located within a bend of the river, these sections did not have the average acreage for such a frontage.

By 1858, the disputed section and the one owned outright by Bechnel had been consolidated under V. Keeler. The remaining sections were retained by the same families. After the Civil War, the Berthelot family retained their section. The lower five sections of the project item were combined to form Columbia Plantation. By 1894, the uppermost section and additional holdings as far as Willow Bend I were added to Columbia Plantation.

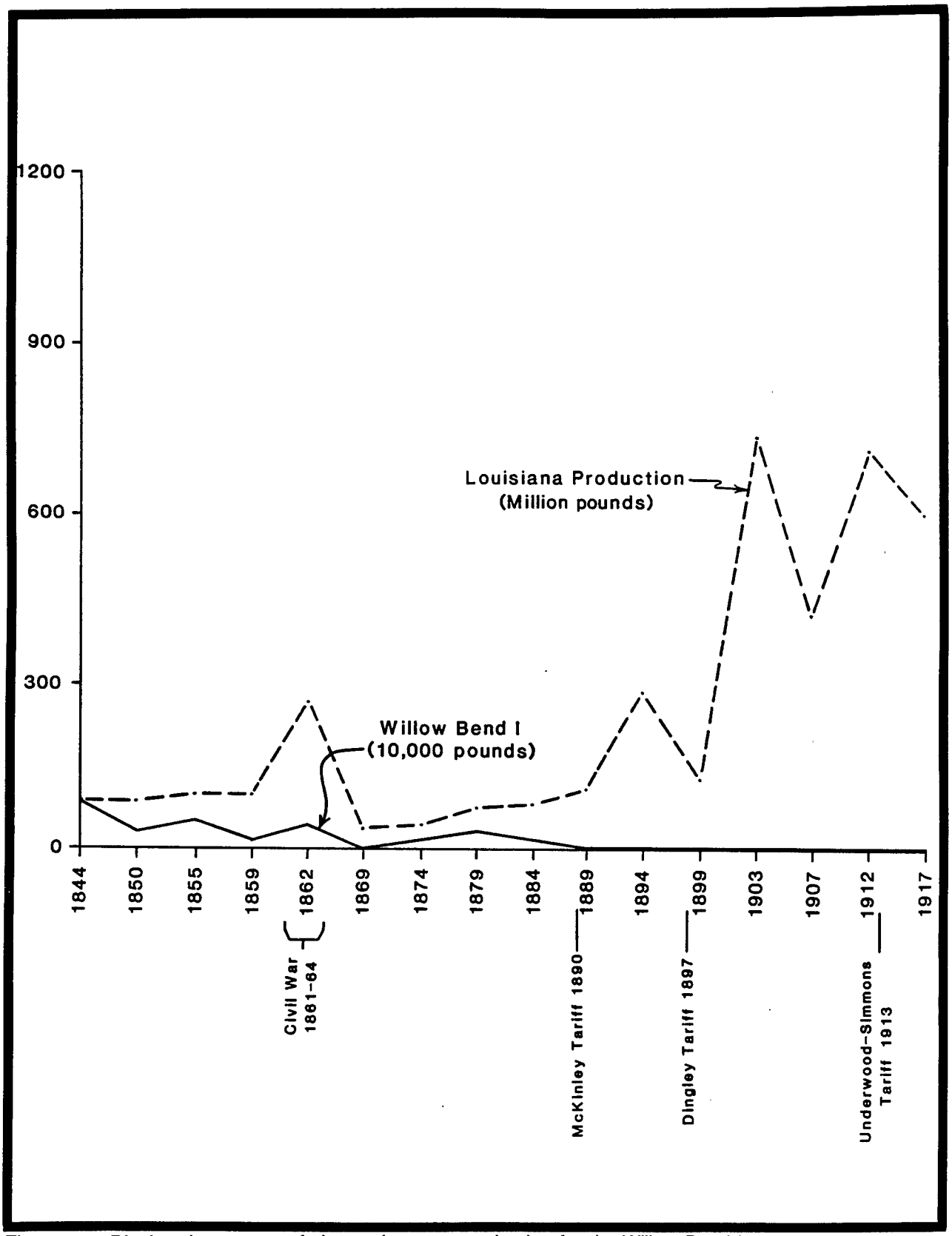


Figure 45. Diachronic patterns of change in sugar production for the Willow Bend I construction item and Louisiana between 1844 and 1917.

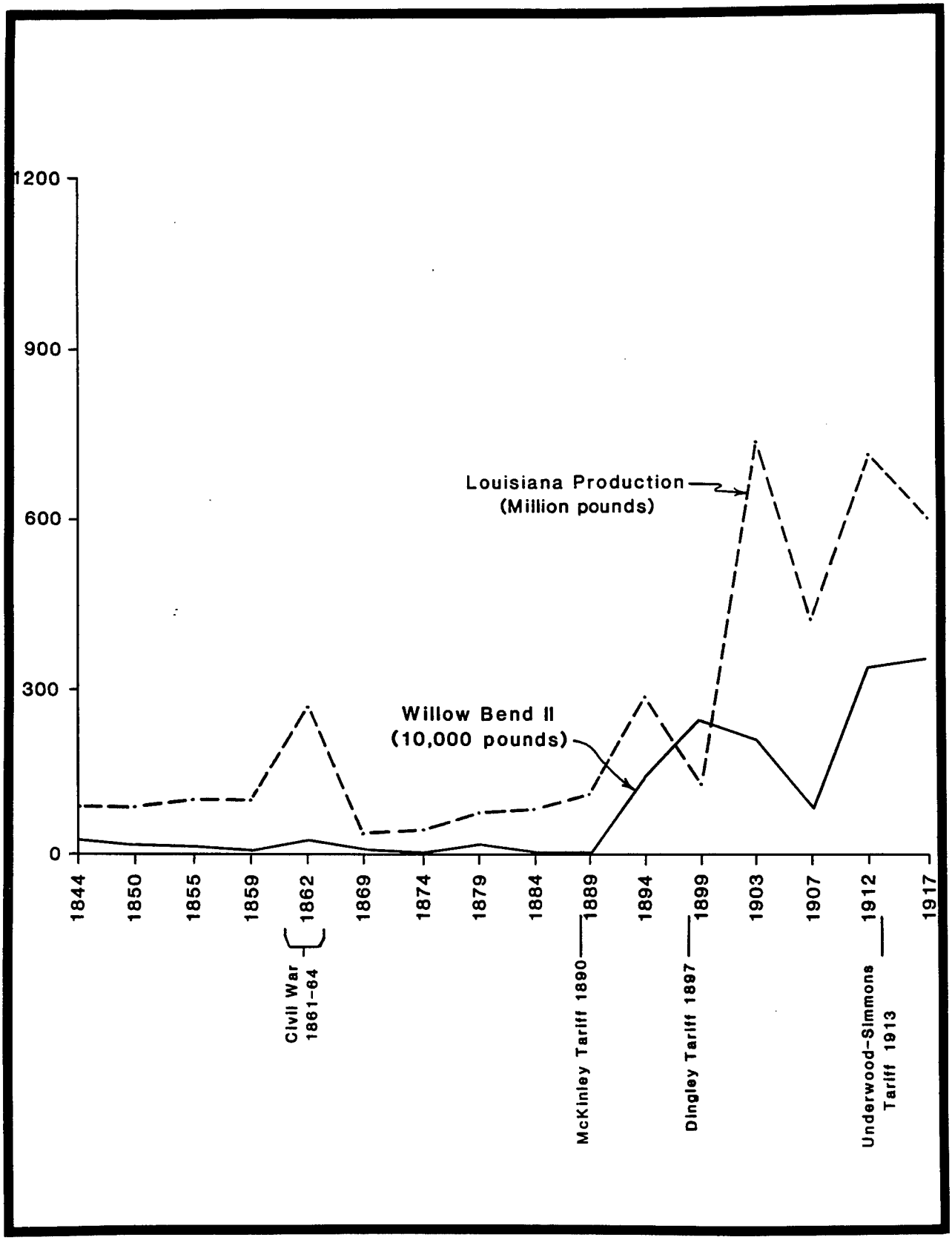


Figure 46. Diachronic patterns of change in sugar production for the Willow Bend II construction item and Louisiana between 1844 and 1917.

Unlike the Angelina and Luling project items, the production data for Willow Bend II do not include any area before it became consolidated under the same owner as Willow Bend II. As with Willow Bend I, Willow Bend II is also contained in the central third of the Upper Edgard project item. Willow Bend II was devastated by flooding in 1850, but the planters along this river stretch did not suffer as severe a loss as those upriver. Sugar production steadily declined in this project item between 1844 and 1859, and then soared in 1862 to surpass the crop of 1843-44. The sugar industry was slow to recover following the Civil War.

Although a limited quantity of rice was harvested in 1869, its cultivation remained as erratic as that of sugar in this project item until 1889. Although rice production exceeded a million pounds in that year, and sugar was all but extinct, the absence of data regarding rice production makes it impossible to determine if this trend continued within the project item. The graph indicates that by 1894, sugar production in the project item had soared to nearly 1.4 million pounds. This tremendous increase primarily was due to consolidation with additional holdings upriver, the production data for which, unlike Angelina and Waterford II, were omitted from previous years. No significant deviation exists between the statewide pattern of sugar production and land use patterns in this project item. A more accurate portrayal of agricultural trends for the entire Willow Bend project item after 1890 can be gleaned from the graph illustrating the pattern of sugar production in the Upper Edgard project item (Figure 44) (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 46; Table 13; MRC 1893).

Lower Edgard (RM 137.0 - 127.0)

In the early nineteenth century, the holdings within this project item could be divided broadly into two sectors. The upper sector comprised about one-third of the project item; the holdings there were small to moderate. Three of these had substantial river frontages, but because they were located on the Bonnet Carre Point, their acreage was substantially less than the average for such a frontage. At an earlier time, they apparently were part of a single grant of 37 arpents made to the Bossier family. The balance of the project item was interspersed with holdings ranging from one-half arpent front to more than fourteen arpents.

An unusual property dispersement existed in this project item at the time the original claims were made to the United States government. Just above the St. John the Baptist - St. Charles Parish line were three sections belonging to Justice, Godefroy, and Ursin Perret. The first two had single arpent frontages; they claimed to have cultivated their holdings since 1787. Ursin Perret, on the other hand, claimed to have cultivated his plantation with a frontage of 17 arpents since 1776.

By the time of the Civil War, it appears that a portion of the upper section located on Bonnet Carre Point had been subdivided. Consolidation, however, was the pattern in the lower sector. An excellent example of this was F. Webb's plantation, located near the center of the project item. Several small holdings also were combined prior to 1858 to form Killona. Following the Civil War, most of the project item was consolidated into seven plantations. Beginning upriver, these plantations were Gold Mine, Kennemore, Millikin, Killona, Waterford, Star, and Pelican.

Sugar production in the Lower Edgard project item was almost identical to that of Upper Edgard until the 1880s. As with the latter project item, it was extremely erratic. While statewide production gradually increased between 1844 and 1859, the 1849-50 crop for Lower Edgard was only 67 percent of the 1843-44 crop. A modest recovery in 1855 was followed by a second drop in 1859. By 1862, however, the area had recovered and production soared. The 1861-62 crop surpassed that of 1843-44 by more than 20 percent. Following the Civil War, the sugar industry in this project item recovered more rapidly that the state as a whole, but not quite as rapidly as the Upper Edgard project item. The 1884-85 crops exceeded that of 1861-62.

Table 13. Sugar and Rice Production for the Willow Bend II Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	266,000	
1850	179,000	
1855	170,000	
1859	86,000	
1862	285,000	
1869	83,040	16,000
1874	63,000	
1879	229,000	123,400
1884		114,000
1889	54,050	1,121,202
1894	1,385,966	
1899	2,450,000	
1903	2,067,047	
1907	900,000	
1912	3,375,000	
1917	3,500,000	

During this same period, rice cultivation was expanding. Rice production for the project item increased from 183,000 pounds in 1869 to more than a million pounds by 1889. Unlike Upper Edgard, cultivation of both crops expanded simultaneously. Although rice production figures are not available beyond 1889, the rice industry must have suffered as fields were converted to the growing of cane. Such a change must have occurred because the sugar crop of 1893-94 was nearly 50 percent more than that of 1888-89. Sugar production dropped off after 1894, but it remained above its antebellum high (in 1862) until 1917. No significant deviation over time exists between the Lower Edgard project item and the statewide pattern of sugar production; land use patterns which the other project items dominated economically by monocrop agriculture (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 47; Table 14; MRC 1893).

Waterford I (RM 130.1 - 129.7)

By 1803, the second, fourth and fifth of the five sections comprising this project item were owned by Madame Ranson and her son. Their combined holdings amounted to just over 20 arpents. Because of their uneven frontage, it appears that the intervening section had passed to a daughter by succession.

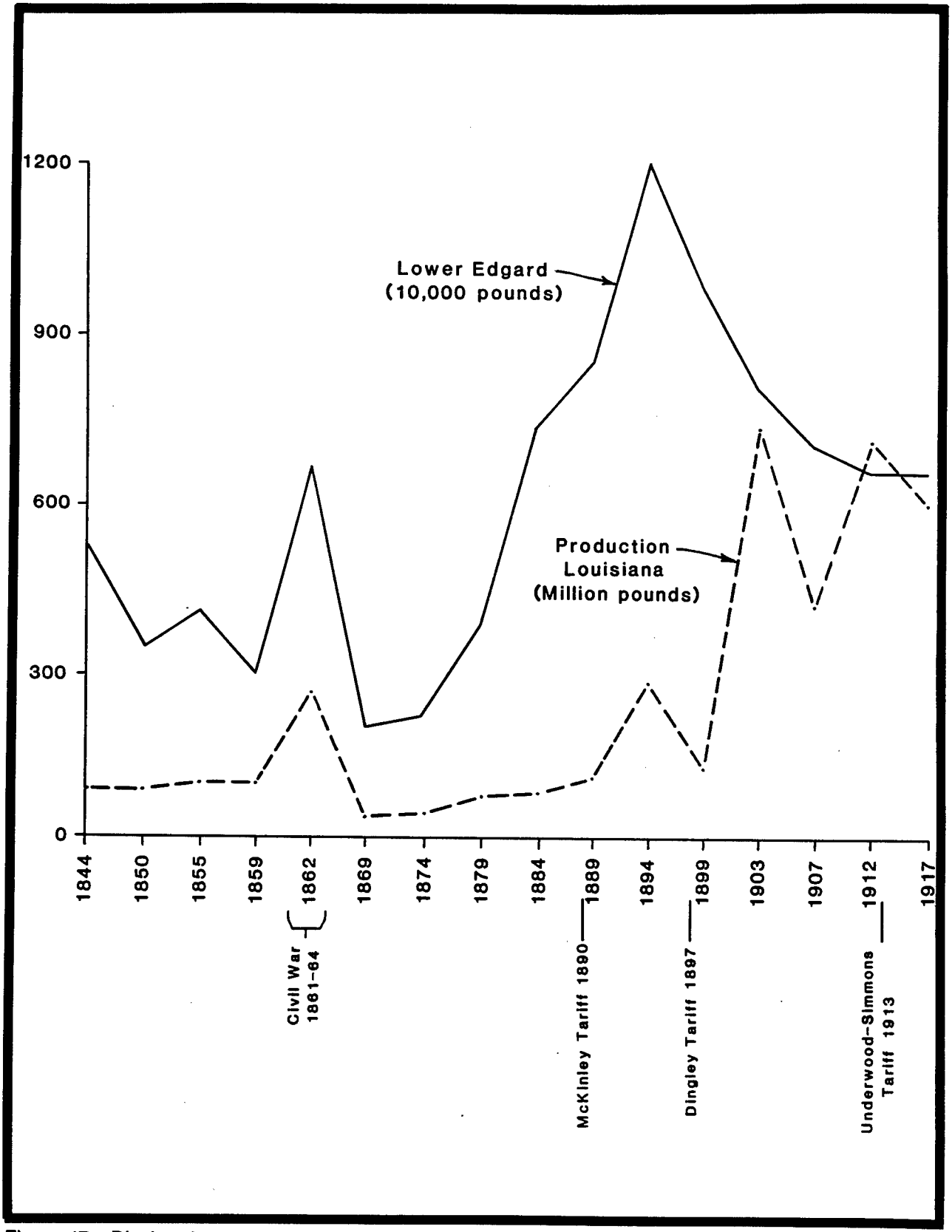


Figure 47. Diachronic patterns of change in sugar production for the Lower Edgard construction item and Louisiana between 1844 and 1917.

Table 14. Sugar and Rice Production in Lower Edgard Reach (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	4,204,000	None
1850	3,466,000	None
1855	4,078,000	None
1859	2,991,000	None
1862	6,640,000	None
1869	2,010,331	183,000
1874	2,248,000	421,800
1879	3,858,000	227,600
1884	7,341,000	500,000
1889	8,526,679	1,143,234
1894	12,010,665	None
1899	9,808,650	None
1903	8,057,368	None
1907	7,044,340	None
1912	6,487,000	None
1917	6,550,662	None

By 1858, the lower four sections formed W. B. Whitehead's plantation. The upper section had been combined with other small holdings to form F. Webb's Killona. Following the Civil War, this project item remained divided between two plantations: Killona and Waterford.

Sugar production in this project item closely resembled the statewide pattern between 1844 and 1899. During each of the four years surveyed in the twentieth century, however, sugar production in Waterford I was exactly opposite that of the state. The 1902-3 crop was 26 percent less than that of 1898-99, whereas the 1906-7 crop precisely equaled that of 1898-99. Production dropped off 20 percent in 1912, only to rebound with a 25 percent increase in 1917. Of all the project items still producing sugar in 1917, this one had the most stable production rate in the early twentieth century. It was also the only project item that never produced rice. No significant deviation prior to the twentieth century exists from the statewide pattern of sugar production. The difference that arose in the early twentieth century would indicate that the sugar planters in this vicinity enjoyed a substantially more secure economic base than they did elsewhere in the state (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 48; Table 15; MRC 1893).

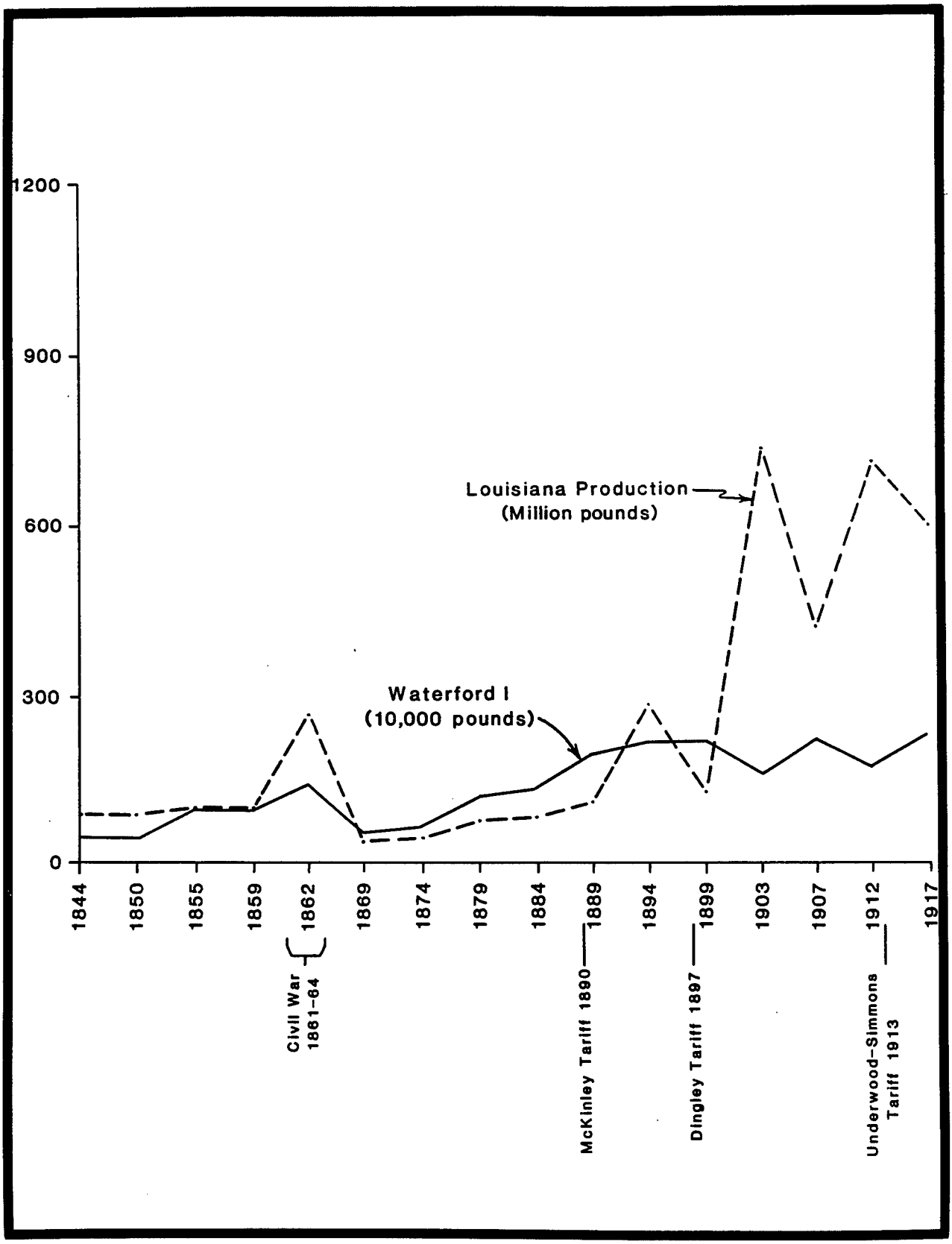


Figure 48. Diachronic patterns of change in sugar production for the Waterford I construction item and Louisiana between 1844 and 1917.

Table 15. Sugar and Rice Production for the Waterford I Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	485,000	None
1850	485,000	None
1855	1,062,000	None
1859	950,000	None
1862	1,421,000	None
1869	592,515	None
1874	650,000	None
1879	1,222,000	None
1884	1,375,000	None
1889	1,961,024	None
1894	2,172,854	None
1899	2,200,000	None
1903	1,621,056	None
1907	2,200,000	None
1912	1,750,000	None
1917	2,319,576	None

Waterford II (RM 127.5 - 125.0)

Only one of the eighteen sections contained in Waterford II had a river frontage in excess of six arpents; five consisted of no more than a single arpent. These small tracts were the result of successions. When the original claims were filed with the United States government, the sixth, seventh, and eighth tracts (moving downriver) all were owned by Honore Zeringue. The eleventh and twelfth sections were owned by members of the Friloux family. Both they and the owner of the ninth section claimed the tenth. Members of the Dorvin family claimed the fifteenth, sixteenth, and seventeenth sections.

Consolidation and division of the 1803 holdings prior to the Civil War were limited in this project item. The upper portion of the project item consisted of small plantations, whereas the lower portion was comprised almost entirely of extremely small holdings. Massive consolidation after 1865 involving the lower end of the project item brought about the inclusion of property beyond the limit of the project area. For this reason, sugar and rice production figures from outside of the project item were included and analyzed throughout the period studied. Production figures represent the area above Labranche-Speranza Plantation up to and including Star Plantation.

Except for a 51 percent drop in sugar production between 1844 and 1850, the Waterford II project item closely paralleled the statewide pattern until 1899. The downward trend which began in 1894 continued gradually in this project item until sugar cultivation ceased altogether in 1917. The rice industry was well entrenched in this project item by 1869. For the next twenty years, cultivation of rice expanded at a rapid rate. In 1884 and 1889, twice as many pounds of rice were produced as sugar. Although rice production figures are not available beyond 1889, the rice industry in this area must have suffered as fields were converted to the growing of cane. Such a change must have occurred because the sugar crop of 1893-94 was more than double that of 1888-89. No significant deviation exists between the Waterford II project item and the statewide pattern of sugar production (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 49; Table 16; MRC 1893).

Table 16. Sugar and Rice Production for the Waterford II Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	2,286,000	
1850	1,109,000	
1855	1,410,000	
1859	1,616,000	
1862	3,038,000	
1869	374,760	182,000
1874	348,000	891,400
1879	917,000	860,600
1884	1,202,000	2,435,000
1889	1,000,000	2,273,346
1894	2,044,617	
1899	1,263,150	
1903	895,665	
1907	656,760	
1912	651,000	
1917		

Luling (RM 116.9 - 112.0)

The seven sections comprising the Luling project item included only one with a frontage of less than fourteen arpents. That section, located in the middle of the project item and having three arpents frontage, was claimed by a free man of color in 1803. Two of the uppermost sections were claimed jointly

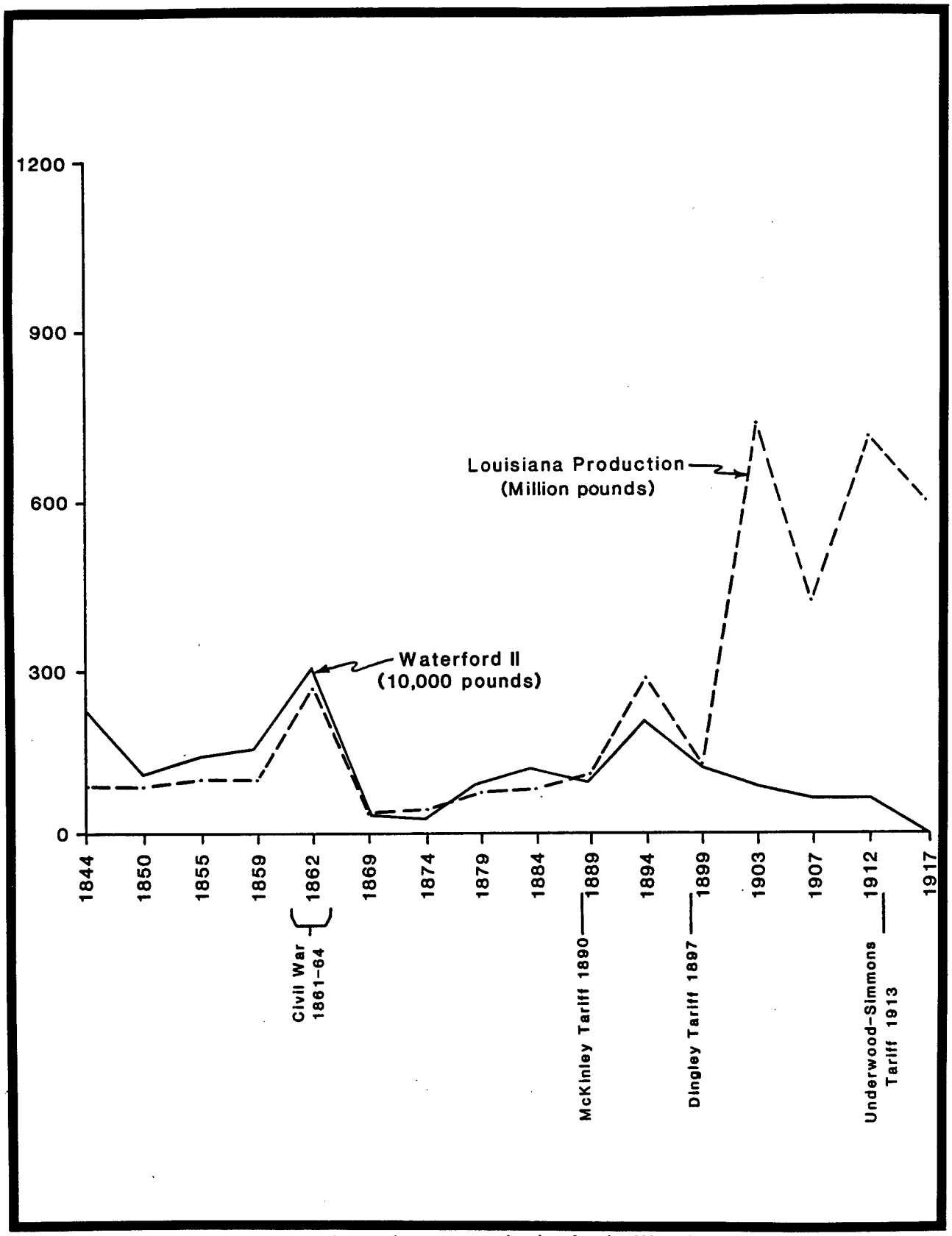


Figure 49. Diachronic patterns of change in sugar production for the Waterford II construction item and Louisiana between 1844 and 1917.

by David Lanaux, Alphonse Fossier, and George Rixner. Their two sections had a combined frontage of just over forty-four arpents.

The substantial plantations already established by 1800 at or near the ends of the project item flourished during the first half of the nineteenth century. By 1858, the center of the project item consisted of several small holdings. These averaged approximately one arpent front. This pattern of settlement remained the same following the Civil War in the center and lower sectors of the project item.

The upper portion of the project item, however, changed considerably in the decades following the Civil War. Initially, the sizeable holdings of the Zeringue and Lanaux families remained intact. The Zeringues, undoubtedly for economic reasons, changed from sugar to rice cultivation; but the Lanaux tract continued to produce sugar. Eventually the latter, then known as Alice Plantation, changed to rice as well. The increasing shift to rice production in the area corresponded with a significant change in land ownership in this portion.

Sugar production in this project item closely matched that of the state until 1879, although a portion of the fields were flooded in 1850. While the state as a whole continued its slow recovery following the Civil War, sugar cultivation in this project item gradually disappeared during the 1880s. Pound per pound, sugar and rice production were almost even in 1869. Rice cultivation expanded along with sugar during the 1870s, but at a much slower rate. This trend was reversed in the 1880s. As sugar cultivation came to an end, rice production soared. The 1888-89 crop was nearly four times that of a decade earlier. Although there are no production figures available, rice cultivation undoubtedly continued after 1889 because sugar production had ceased and had not started again as of 1917.

Significant deviation after 1880 existed between agriculture in the Luling project item and the other project items, as well as between Luling and the state as a whole. The uniqueness of the Luling project item, as detailed above and in Figure 50, involved both sugar production and land use (Champomier 1844-1859; Bouchereau and Bouchereau 1869-1917; Appendix II; Figure 50; Table 17; MRC 1893).

Discussion

As the preceding synopses illustrate, sugar cultivation dominated in the study area. No rice production was reported in any of the project items prior to the Civil War. Undoubtedly, some rice was produced for home consumption, but it was not a cash crop during the antebellum period. Following the Civil War, sugar production in Angelina, Reserve I, Montz, Waterford I, Waterford II, Upper Edgard, and Lower Edgard closely paralleled or exceeded the statewide recovery rate. This was especially true in the Upper and Lower Edgard project items, which contain the largest river frontages.

There also were exceptions to this pattern. Although cane was harvested in the vicinity of the Reserve II project item until the end of the nineteenth century, sugar planters there never truly recovered from the economic devastation caused by the Civil War. In the Willow Bend I project item, rice was the dominant crop in the late 1860s; sugar predominated in the 1870s; and rice was dominant in the 1880s.

Postbellum production figures for the Vacherie project item virtually defy analysis. The only year that witnessed substantial rice production following the Civil War was 1884; that also was the record year for cane cultivation in this project item. Obviously, the small farmers and planters in this project item were cultivating something. Because reported sugar and rice production were extremely low in the period before the development of truck farms, sugar or rice, and undoubtedly both on some holdings, continued to be produced. This production, as with that of the upper portion of this project item during the antebellum period, must have been combined with production figures of some larger producer upriver or on the Vacherie backoff.

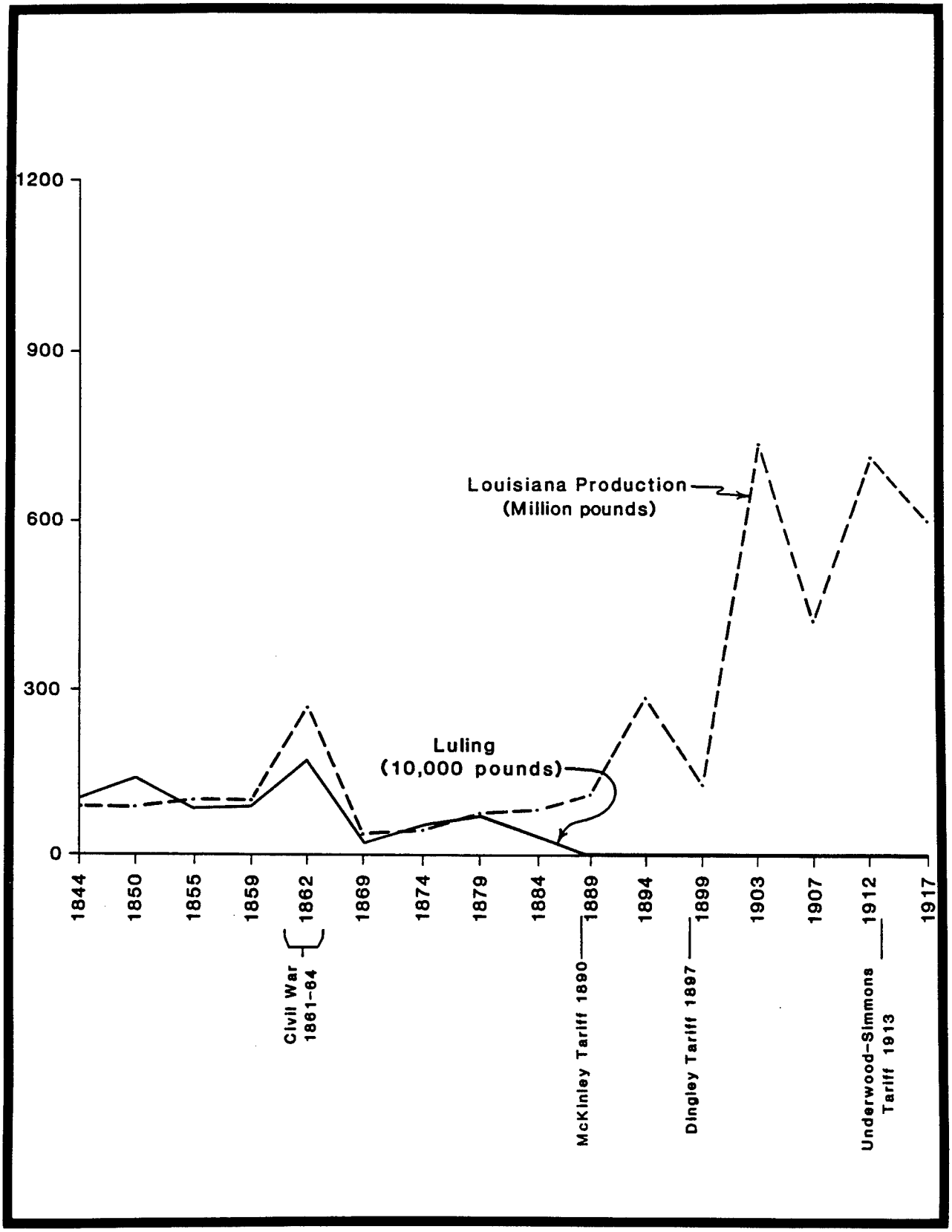


Figure 50. Diachronic patterns of change in sugar production for the Luling construction item and Louisiana between 1844 and 1917.

Table 17. Sugar and Rice Production for the Luling Construction Item (after Champomier 1844 - 1859; A. and L. Bouchereau 1869 - 1917).

YEAR	SUGAR/NET POUNDS (HOGSHEAD = 1,000 LBS.)	RICE/NET POUNDS (BARREL = 200 LBS.)
1844	992,000	
1850	1,359,000	
1855	796,000	
1859	827,000	
1862	1,645,000	
1869	189,750	204,000
1874	434,000	166,400
1879	667,000	386,800
1884	345,000	1,091,000
1889		1,417,388
1894		
1899		
1903		
1907		
1912		
1917		

The only major exception to the overwhelming dominance of sugar over rice occurred in the Luling project item. The cultivation of sugar in that project item ceased in the 1880s. Rice production dominated the economy of this project item by the end of the 1880s.

Postbellum Patterns of Land Holdings

Before the Civil War, the growth of the sugar industry directly corresponded with a consolidation of land holdings. It could be surmised, therefore, that this pattern of consolidation should have continued after the sugar industry recovered sufficiently to exceed its antebellum production. A study of selected sections was undertaken to determine what changes in settlement pattern occurred during the years immediately following the Civil War. To determine the patterns of land use, data from the original United States land claims (Appendix II), from Norman's Chart of 1858 (Figure 38), and from the Mississippi River Commission surveys (1893 and 1921) were gathered. At least a 20 percent sample of the sections contained in each project item were used in this comparison. Three criteria were used to select sections for study. The first criterion included those 24 sections that contained the 25 archeological sites visited during this study. These were included not only to acquire more information about the sites, but also to

see if a pattern existed that might indicate the presence of additional significant sites not previously discovered. To assure adequate geographic coverage of each project item, sections at each end of those items not already selected by the first criterion then were added to the sample. A review of the resulting list of 42 sections indicated that two project items, Montz and Lower Edgard, did not have the minimum stipulated sample fraction (20 percent) of their sections in the study sample. Additional sections for these project items were selected; their sizes and locations were varied intentionally. As a result of these selection criteria, 49 of the 134 sections (37 percent) in the project area were selected for comparative analysis.

Before the Civil War, a few of the sections owned by a single individual in 1803 were divided, usually through succession. Most of these sections, however, either were combined later to form substantial plantations or they already contained sufficient acreage to constitute a respectable plantation holding. A comparison of the 49 sample sections on Norman's 1858 chart (Figure 38) and the 1893 Mississippi River Commission surveys demonstrates that this pattern of consolidation continued after the war. This trend also is substantiated by the sugar reports. Into the 1890s, fewer and fewer growers were producing more and more sugar.

The single exception to the above pattern was found in the Luling project item, where sugar production had ceased by 1889. A comparison of 1803 claims and the 1893 Mississippi River Commission survey also indicates a different trend in land ownership in the upriver portion of the Luling item. Of the 49 sections used in the comparison, only one showed an increase in the number of residents from the antebellum to the postbellum eras. As will be seen, differences between the upriver end of the Luling item and the other project items studied appear to be reflected in differences in archeological settings and in recovered artifacts. For these reasons, a detailed land tenure history of Section 34, the upriver portion of the Luling project item, was undertaken.

Succession and Land Transfer in Upper Luling

Section 34 in T13S, R21E, measures approximately 14 arpents front on the Mississippi River. General land tenure for this property, from original acquisition through 1879, is depicted in Figure 51. From the late postbellum years forward, Section 34 was subdivided into smaller tracts and conveyed among family members and various other parties.

According to the original United States land claims for Louisiana compiled in the *American State Papers*, Baptiste Daspit St. Amand was in possession of the 14-arpent, 27-toise tract forming Section 34, T13S, R21E, for over ten years prior to 1803 (Lowrie and Franklin 1834:3:262). By late 1805, though, the downriver eight-arpent frontage of that tract was held by former militia captain Louis-Augustin Meullion, uncle of Baptiste St. Amand. Meullion was one of the most successful planters along the lower German Coast during the Spanish colonial period; his largest plantation was located directly across the Mississippi River from the subject property. On September 18, 1805, Meullion sold the former St. Amand eight arpents to Spanish lieutenant colonel Zenon Trudeau, who in turn reconveyed the tract to Baptiste St. Amand on December 21, 1807 (Conrad 1981:19, 58, 95, map insert).

Sometime between 1803 and 1806, Baptiste St. Amand transferred title to the six-arpent tract above the former Meullion/Trudeau property to his brother, Pierre. Pierre Daspit St. Amand also owned Sections 33 and 66, adjoining the upper side of Section 34. In February 1806, Pierre St. Amand reconveyed that six-arpent parcel to his brother, giving Baptiste St. Amand title once again to the entire 14-arpent tract (Louisiana Surveyor General ca. 1854:T13S, R21E; Original Acts of Judge Achille Troüard 1805-1806:21, Act No. 10, St. Charles Parish Clerk of Court).

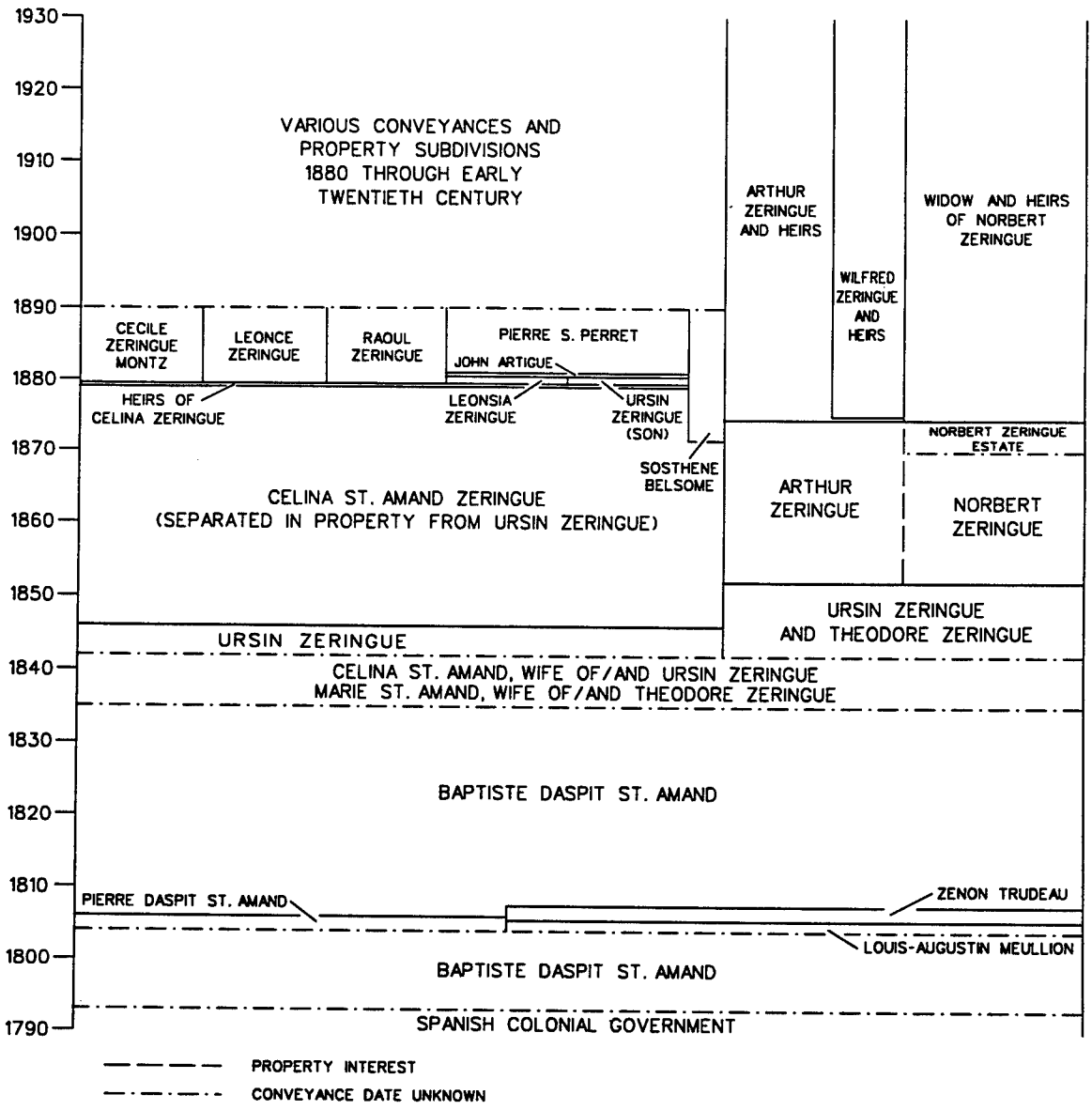


Figure 51. Archival reconstruction of land ownership in the Luling Revetment Item in Section 34, T13E, R21E.

Historically, Section 34 belonged for the longest period of time to the Zeringue family. Zeringue brothers Ursin and Theodore married the daughters of Baptiste St. Amand in the mid-1830s; Ursin Zeringue married Célina St. Amand on April 19, 1835, and Theodore Zeringue married Marie Zéolide St. Amand on June 20, 1837. A cursory review of the original French records did not reveal the exact date of acquisition; however, it is likely that the St. Amand sisters inherited the property or, possibly, acquired their respective land interests as dowries (Original Acts of J. L. LaBranche 1831-1835:85, Act 140; 1835-1844:235, Act 128, St. Charles Parish Clerk of Court).

Célina St. Amand Zeringue "was separated in property" from Ursin Zeringue by District Court judgment in New Orleans on January 20, 1846. Three months later, she purchased the upper nine arpents of Section 34 in her own right. Ursin Zeringue, meanwhile, continued to hold joint title to the lower five arpents with his brother Theodore until 1852 (Conveyance Book A, Folio 112 [COB A:112]; COB D:204, COB F:114, St. Charles Parish Clerk of Court).

In the spring of 1852, following the death of Theodore Zeringue, the Zeringue brothers tract was sold at Sheriff's sale to Arthur Zeringue and Norbert Zeringue. Twenty-two years later, Arthur and the widow of Norbert Zeringue, Euphrosine Folse Zeringue, partitioned their holdings; Arthur took possession of the two and one-half-arpent upriver portion, while the Widow Zeringue secured title to the two and one-half arpent downriver property. On December 5, 1874, Arthur Zeringue sold his downrivermost arpent to Wilfred Zeringue (Act 167:145; COB A:112; COB D:583, 628, St. Charles Parish Clerk of Court). Arthur, Wilfred, Mrs. Norbert Zeringue, and their heirs maintained ownership of these tracts well into the twentieth century.

The Widow Ursin Zeringue (although legally separated from her husband, Célina St. Amand Zeringue attained widowhood status upon the death of Ursin ca. 1869) retained title to her upriver nine arpents for 25 years. The first subdivision of her property was the sale of her downrivermost one-half arpent to Sosthene Belsome on June 22, 1871. Célina Zeringue maintained ownership of the balance of the tract until her death eight years later, ca. May 1879. On November 20 of that year, her eight and one half-arpent estate was divided into five equal lots, designated in downriver numerical order 1-5; these tracts were conveyed to her heirs, the children of Célina and Ursin Zeringue, by drawn lot. Cecile Zeringue Montz, wife of Paul F. Montz, received uppermost Lot 1; brothers Leonce and Raoul Zeringue gained title to Lots 2 and 3, respectively. Leoncia (or Leonsia) Zeringue, wife of Felix Zeringue, acquired Lot 4, while her brother Ursin Zeringue took possession of downriver Lot 5 (COB D:204; COB F:114, St. Charles Parish Clerk of Court). Throughout the late nineteenth and early twentieth centuries, the Zeringue tracts were further subdivided and sold to various owners.

The 1879 Zeringue heirs partition included structures as well as real estate. With acquisition of Lot 1, Cecile Zeringue Montz gained the main house, described as a one-story frame house on brick postings with a modern frame kitchen attached. Also situated on Lot 1 were a clapboard two-room laborer's cabin, wooden-framed and "bricked between posts," and a "modern shed with one old horse rice mill inside." Lot 2, conveyed to Leonce Zeringue, contained "four laborers plantation cabins," and Lot 3, belonging to Raoul Zeringue, held two laborers' cabins. There was no mention of any appurtenances located in 1879 on Lots 4 and 5 (COB F:114, St. Charles Parish Clerk of Court).

The archival study of land ownership for Section 34, T13S, R21E, provides agricultural information, as well as real estate documentation. The previously mentioned partition of the estate of the Widow Ursin Zeringue (1879) and the title abstracts of Norbert and Arthur Zeringue reveal that during the postbellum decades of the nineteenth century, rice, not sugarcane, was the primary cultigen grown on the properties in Section 34 of T13S, R21E. This probably is indicative of the regional agricultural trend during the postbellum years.

The depressed agricultural base in the upper Luling construction item during the post Civil War period forced many large planters who no longer could afford labor costs to subdivide their property. The smaller farmers, on the other hand, consolidated their holdings with others to use cooperative methods of cultivation. As noted above, a rice mill had been established on the Zeringue property prior to 1879 (COB F:114, St. Charles Parish Clerk of Court). The early subdivision of the property in the upper limits of the Luling construction item may have occurred because cooperative rice cultivation among a large contingency of small farmers might have been economically advantageous compared to a few large property owners providing all the necessary capital.

The pattern of property division and the conversion from sugar to rice cultivation described above is not unique to the upper Luling construction item. It occurred in portions of some of the other construction items included in this study. The distinctiveness with Luling is that so many farmers along a single stretch of the lower Mississippi River chose to continue to plant rice after the sugar industry had managed to overcome the devastation wrought by the Civil War.

Applicability of Significant Themes to the Individual Project Items

As noted above, four major themes apply to the study area. The first of these is settlement and land use patterns on the German Coast during the colonial period. This theme, detailed above, applies to all of the project items contained within the project area. The second major theme comprises the development of sugar cultivation as the dominant industry in the river parishes. The growth of this industry was related directly to the change in the pattern of land holdings, i.e., small farms were consolidated into substantial sugar plantations prior to the Civil War. This second theme also applies to all of the project items.

Following the Civil War, two major themes emerge, both of which involve monocrop agriculture. The first of these themes is the postbellum birth and expansion of the rice industry. After the Civil War, rice became a cash crop because financial resources were lacking throughout the majority of the project area to rebuild the sugar industry. Rice production could be undertaken by small farmers, and the number of producers listed in the sugar and rice reports in the decades following the Civil War in portions of some of the project items substantiate this pattern of land use. Rice production only replaced sugar as the principal cash crop in two substantial portions of the project area: Reserve II and Luling project items. A substantial change in the pattern of land use and settlement, however, only occurred in the Luling project item.

The final significant theme is the postbellum recovery of the sugar industry. For the Angelina, Reserve I, Montz, Waterford I, Waterford II, Upper Edgard, and Lower Edgard project items, this theme is dominant. Although the data available cannot demonstrate the dominance of sugar at Willow Bend I and II, because they both are contained within the limits of the Upper Edgard project item, it is probable that they should be included in the list above. The available data do not permit specific determination of the dominance of either sugar or rice in the Vacherie project item during the late nineteenth century. Clearly, agriculture remained the dominant industry in this area.

CHAPTER VII

FIELD SURVEY, SITE TESTING, AND LABORATORY METHODOLOGY

Pedestrian Survey and Subsurface Testing

Intensive pedestrian survey was augmented by systematic subsurface shovel testing in the Angelina, Waterford, Vacherie, Reserve, Upper Edgard, and Luling construction items. Field survey within each of these construction items consisted of a series of pedestrian transects spaced 20 m (65.6 ft) apart; these were aligned parallel to the riverside toe of the Mississippi River Protection Levee. Prior to entering the field, project maps were studied to determine the location, azimuth, distance, and access for each transect. However, dense vegetation and extensive water-filled borrow areas often hindered the survey effort, and resulted in the realignment of the preplanned transects. In such instances, transect record forms were updated to reflect any changes in field methodology.

Transects within each construction item were assigned a transect number. At the beginning of each transect, black and white 35 mm photographs were taken of the point of origin of each transect. Then, the field crew leader established and maintained spacing and direction for the crew along each transect. The beginning and end of each transect were flagged and labeled with flagging tape, so that each transect could be easily relocated.

Surface visibility along survey transects was not uniform. Careful ground inspections were made in areas where surface visibility conditions were enhanced by the presence of sparse vegetation or by erosional processes. Visibility was improved greatly along trails, along the Mississippi River bankline, around animal burrows, in drainage ditches, and at tree falls. Inspection of the exposed ground surface along each transect was augmented by a systematic subsurface shovel testing regime. Shovel tests, measuring 30 x 30 cm (11.8 x 11.8 in), were excavated at 50 m (164 ft) intervals along each transect. Shovel tests were numbered sequentially, and a surface sketch map illustrating shovel test placement was compiled for each construction item. Artificial and geomorphological features, and all natural drainages, also were drawn and mapped on transect record forms. Transect record forms are on file at R. Christopher Goodwin & Associates, Inc., New Orleans, Louisiana.

Shovel tests were excavated to an average depth of 40 cm (15.7 in) below surface. The substrata exposed by this technique were examined by hand-sorting for the presence of artifacts and ecofacts. All field specimens were carefully packaged and then labeled with the appropriate provenience information. Soil determinations concerning color and texture were cross-checked for consistency using a Munsell Soil Color Chart, the *Soil Survey of St. James and St. John the Baptist Parishes, Louisiana* (United States Department of Agriculture 1973), and the *Soil Survey of St. Charles Parish, Louisiana* (United States Department of Agriculture 1987).

Previously recorded archeological sites and suspected site areas located within construction items not selected for intensive survey were field visited and verified prior to conducting subsequent site testing. Each archeological site encountered during the field survey was staked and flagged for relocation. Three temporary site markers, a site datum, and upriver and downriver site limits were set as horizontal controls. Site datum stakes were set at the approximate center of each surface scatter. Upriver and downriver stakes were set near the water's edge, at the approximate end points of the site scatters. Site boundaries were defined and verified by intensive surface inspection and through systematic shovel and auger test regimes. The horizontal extent of each site was calculated from the results of the site verification process. Site specific testing methodologies will be discussed subsequently with reference to each site. Site plan

maps were drawn for all sites. Artifacts were collected from each site surface; at least one specimen of each artifact type was collected. Photographs showing the location of each site were taken. Sites were plotted on 7.5' quadrangles, and on aerial photo mosaic project area maps.

Site Testing

Several techniques were employed to determine site boundaries, and to determine whether intact cultural deposits were present at each site. Subsurface examinations included shovel testing, probing around surface features, auger testing, the excavation of 1 x 1 m (3.3 x 3.3 ft) and 1 x 2 m (3.3 x 6.6 ft) test units, and the cleaning of bluff edge profiles. All five subsurface excavation techniques are described in detail below.

Shovel and auger tests were excavated along rays extending from the site datum or some other known point tied into the datum. Round nosed shovels were used to expose subsurface deposits to a depth of 30 cm (11.8 in), while a Dutch auger was used to assess subsurface deposits to a depth of 1.5 m (4.9 ft). The spacing of both shovel and auger tests varied from 5 to 10 m (16.4 to 32.8 ft), and depended on the diameter and configuration of the identified site surface scatters. Information from each auger test was recorded using the techniques described for transect shovel tests. Soil samples were obtained from each stratum encountered at a site and were packaged separately in the field and brought back to the laboratory for comparison and analysis. On occasion, when a surficial feature was encountered, probing with a metal probe was used to establish the vertical and horizontal extent of the feature.

Test excavation units, 1 x 1 m (3.3 x 3.3 ft) or 1 x 2 m (3.3 x 6.6 ft) in dimension, were excavated at sites to provide additional information on site stratigraphy, depth of cultural deposits, and the presence or absence of features. Each test unit was excavated in 10 cm (3.9 in) arbitrary levels to a depth of 1.5 m (4.9 ft) or until sterile clay was encountered. Horizontal measurements within each excavation unit were controlled by referencing the four corner stakes. Vertical measurements within units were established by fastening a line level and string to the bottom of the unit datum stake. The string and line level were held in place by notching the stake at the surface. Vertical control was accomplished by a series of datum planes derived from an arbitrary "0.0 below datum" in each test unit. The profiles and floors of units were kept neat and level at all times. Information from each 10 cm (4 in) arbitrary level was recorded separately on each excavation level record form for comparison with levels above and below. Floor plans were drawn at the base of each 10 cm (4 in) level. Basal depths were recorded at the midpoint and each of the four corners of each unit. Floor plans included piece plots for individual artifacts, soil matrix descriptions, and the recordation of features. Root and animal disturbances were noted when present. In addition, each excavation unit profile was studied, and drawn to scale. Field specimens recovered during excavation were found either *in situ*, or during the hand sorting of unit fill. Artifacts recovered from a single excavation level or feature were bagged as a unit. Bags were marked with the site number, test excavation unit number, level number, subunit (feature) number, date, and the name of the excavator.

A feature record form was completed for each feature encountered during excavation. Feature information included the feature number, its vertical and horizontal location within a particular excavation unit, feature dimensions, stratigraphic notes, photos, sketches, and associated objects. Large surface features such as rice flumes, wharf supports, privies, and slab board structures were assigned feature numbers; they also were tied into the site datum, and fully recorded. Recordation included the drawing of plan views, limited excavation, and auger testing.

Artifactual remains were observed eroding from and deflating down the bluff edge (or cutbank) on several sites. Thus, several bluff edge stratigraphic profiles were exposed to record the nature and extent of subsurface cultural deposits. Each profile was cleaned, mapped, and photographed. Profile locations

were tied-in to site datums. In addition, an infrared EDM transit was employed to provide vertical and horizontal control for several sites. Sites 16SJB29, 16SJB31, and 16SJB37, 16SC61, and JE141 were tied into existing U.S. Army Corps of Engineers levee marker stations.

Laboratory Methodology and Analyses

As bagged field specimens entered the lab, each was assigned a bag number. All artifacts were washed and sorted into their respective material categories. During cataloging, these materials were encoded onto a computerized site catalog, to allow manipulation of parts or all of the data sets. This catalog was organized hierarchically. The first or primary level was the category, based on the format currently employed by the Louisiana Division of Archeology. The second level was the functional group, based on the artifact group typology established by South (1977). The third level was the type, based on diagnostic attributes. The fourth and final level was the subtype, which when combined with category, group, and type, provides a unique code at a detailed level of pattern analysis.

Historic ceramics and glass were described using formal archeological classification. Metal and miscellaneous artifacts were identified and described whenever their condition permitted. Artifact assemblages were classified on the basis of function in an effort to discern the functional nature of each site; the method used is adapted from South's (1977:95-96) classification defining the Carolina Artifact Pattern. The identification and classification of both ceramic and glass artifacts are emphasized here because of their utility in chronological reconstructions. A chronology of ceramic and glass types found during this study is presented in Table 18.

Typology and Chronology

Artifact analysis of remains from sites in the St. John the Baptist, St. Charles, and Jefferson parishes study area was attempted on a chronological and functional basis. Standard typological methods were applied as a prelude to chronological and functional reconstruction. Artifacts exhibiting specific manufacturing marks were dated by identification with documented forms, and by using standard references such as Godden (1964), Kovel and Lovel (1986), Lehner (1988), and Toulouse (1971). Ceramic sherds, glass, nails, and bricks all provided chronological information. As Table 19 illustrates, 17 historic sites had datable remains. These sites will be discussed individually in Chapters VIII and IX of this report. All 17 of these sites dated from the nineteenth and twentieth centuries. Artifact analysis suggests that 10 of the 17 sites contained artifacts from more than one period. Mean ceramic dates and mean glass dates were not calculated for these assemblages since the recovered assemblages were too small to afford statistical reliability. The following review beings with the chronological ramifications of the artifact assemblages.

Ceramics

A total of 598 ceramic sherds were recovered from 18 sites (Table 20). For those ceramic sherds from the study area that did not exhibit manufacturers' marks, dates were assigned based upon researched use-trend patterns. Based on technological and stylistic variables, a fairly coherent and well-developed classification has been developed for eighteenth century ceramics. Classification of nineteenth century ceramics is not as well developed. Gradual changes in paste and glaze, and the use of homologous decorations on differing wares, complicate attempts to delineate a concise ceramic chronology for this period. Nevertheless, seven ceramic types with 10 distinct decorative designs were identified among the assemblages.

Table 18. Attribute Chronology of Ceramic Wares, Glass, and Nails Recovered during Cultural Resources Investigations.

MATERIAL TYPE	USE POPULARITY DATE RANGE	MEDIAN DATE	DATE SOURCE
CERAMIC WARE AND DECORATION			
Creamware			
Lighter Yellow	ca. 1775 - 1820	1798	South 1977
Pearlware			
Plain	ca. 1780 - 1830	1805	South 1977
Transfer printed	ca. 1795 - 1840	1818	South 1977
Underglaze polychrome	ca. 1795 - 1815	1805	South 1977
Underglaze blue, hand painted	ca. 1780 - 1820	1800	South 1977
Whiteware			
Plain	ca. 1820 - 1900+		South 1977
Transfer printed	post ca. 1820		Miller 1989 (p.c.)
Whiteware/Ironstone	ca. 1813 - 1900+		Godden 1965; South 1977; Wetherbee 1985
Ironstone			
Plain	post ca. 1845[1]		Miller 1989 (p.c.)
Yellowware			
Plain	ca. 1830 - 1900	1865	Ramsay 1947
Dipped/Annular	ca. 1840 - 1900	1870	Ramsay 1947
Rockingham/Bennington	ca. 1830 - 1900	1870	Ramsay 1947
Ceramic Decorative Techniques			
Scalloped rim, impressed curved lines	ca. 1802 - 1832	1817	Miller n.d.
Scalloped rim, impressed straight lines	ca. 1809 - 1831	1820	Miller n.d.
Scalloped rim, impressed bud	ca. 1813 - 1834	1824	Miller n.d.
Unscalloped rim, impressed lines	ca. 1841 - 1857	1849	Miller n.d.
Embossed Patterns	ca. 1823 - 1835	1829	Miller n.d.
Rococo	ca. 1788 - 1812	1800	Miller n.d.

Table 18, continued

MATERIAL TYPE	USE POPULARITY DATE RANGE	MEDIAN DATE	DATE SOURCE
Mocha	ca. 1795 - 1890	1843	South 1977
Stoneware			
Gray bodied, Ginger beer	ca. 1850 - 1900		Ketchum 1971
DIAGNOSTIC GLASS ARTIFACT ATTRIBUTES			
Tooled lip	ca. 1820s - 1920s		Jones and Sullivan 1985
Amethyst-color	ca. 1875 - 1920		Jones and Sullivan 1985
Turn-paste mold	ca. 1870s - 1920s		Jones and Sullivan 1985
Post-bottom mold	ca. 1850 - Present		Jones and Sullivan 1985
2-Piece mold	ca. 1750 - 1880		Jones and Sullivan 1985
Machine-made	post ca. 1920[2]		Jones and Sullivan 1985
NAILS			
Machine-cut (unid. head style)	ca. 1790 - 1890s+		Nelson 1968
Wire	post ca. 1890		Nelson 1968

[1]Has a manufacturer's date range of 1813 - 1900+ (Wetherbee 1985; Godden 1965).
[2]Has a manufacturer's date range of post 1903 (Jones and Sullivan 1985).

Table 19. Probative Site Chronologies of Historic Sites.

SITE	MULTI-COMPONENT	HYPOTHETICAL SITE CHRONOLOGY
16SJB35	No	1820 - 1900
16SJB36	No	1775 - 1820
16SJB29	Yes	1840 - 1910 1920 - Present
16SJB30	Yes	1820 - 1890 1920 - Present
16SJB31	No	1790 - 1880
16SJB37	Yes	1825 - 1880 1920 - Present
16SC55	No	1820 - 1885
16SC56	Yes	1800 - 1860
16SC57	Yes	1820 - 1880 1920 - Present
16SC58	Yes	1810 - 1860 1920 - Present
16SC59	No	1800 - 1920
16SJB40	Yes	1820 - 1895 1920 - Present
16SJB28	No	1810 - 1860
16SC60	Yes	1810 - 1875 1920 - Present
16SC61	Yes	1820 - 1870 1920 - Present
16SC62	Yes	1820 - 1900 1920 - Present
16SC63	No	1820 - 1880
16JE141	Yes	1780 - 1870 1920 - Present

Table 20. Historic Ceramics by Site within the Project Area.

CERAMIC WARE	16 SJB 35	16 SJB 36	16 SJB 29	16 SJB 30	16 SJB 31	16 SJB 37	16 SC 55	16 SC 56	16 SC 57	16 SC 58	16 SC 59	16 SJB 40	16 SJB 28	16 SC 60	16 SC 61	16 SC 62	16 SC 63	16 JE 141	TOTAL
Porcelain																			
Plain, Soft		1		1		3						4							9
Plain, Hard						2						1							3
Institutional				2		1			1										4
Transfer Printed				2															2
Over-Glaze, Hand Painted				2					1							1			4
Gilded						1													1
Molded, Hard									2										2
Applique											1								1
Under-Glaze, Hand Painted												1		1		1			3
Creamware																			
Plain					1					1	1				6				9
Pearlware																			
Plain				1		1		3		6	1			1	11				24
Transfer Printed			3	1				2			1				2				9
Mocha			2				2				2								6
Shell Edged			1																1
Scalloped Rim																			
Impressed Bud				1	1	1		1											4
Curved Lines					2	1				1				1					5
Straight Lines								2		2					1				5
Embossed Pattern					2								1						3

Table 20, continued

CERAMIC WARE	16 SJB 35	16 SJB 36	16 SJB 29	16 SJB 30	16 SJB 31	16 SJB 37	16 SC 55	16 SC 56	16 SC 57	16 SC 58	16 SC 59	16 SJB 40	16 SJB 28	16 SC 60	16 SC 61	16 SC 62	16 SC 63	16 JE 141	TOTAL
Hand Painted							1				1				1			1	4
Annular											1				2			1	4
Polychrome														1					1
English Mocha					10			4					1						15
Tin-Enamelled Earthenware																			
Faience					1					4	1				4				10
Rouen Faience					1					2									3
Whiteware																			
Plain	2		17	38				7			13			2	13	1	2	3	98
Flow Blue					1					1				3	4			3	12
Transfer Printed			3	5	11		2		27	15			2	2	10			5	82
Annular/Dipped			1			1				2	2				13			2	21
Colored Glaze						2			1										3
Shell Edge										1									1
Scalloped Rim Curved Lines Straight Lines Impressed Bud				1		1	1	2	1	2				2	1 3 1			1 1	6 8 3
Unscalloped Rim Impressed Lines					5	3									1			1	10
Embossed Pattern					2				1		5							1	9
Rococo Edge													1						1

Table 20, continued

CERAMIC WARE	16 SJB 35	16 SJB 36	16 SJB 29	16 SJB 30	16 SJB 31	16 SJB 37	16 SC 55	16 SC 56	16 SC 57	16 SC 58	16 SC 59	16 SJB 40	16 SJB 28	16 SC 60	16 SC 61	16 SC 62	16 SC 63	16 JE 141	TOTAL
Blue Hand Painted				1						1					2				4
Polychrome				1	9														10
Batt Printed				1															1
Decal									3		2								5
Molded									4										4
Ironstone																			
Plain, White			1	6	1	16	1		2	2	1			2	1		1	4	38
Plain, Gray											1								1
Transfer Printed				6									1		5				12
Molded						1			1	1									3
Decal			1																1
Hand Painted				1		1													2
Annular/Dipped															1				1
Lustre																1			1
Sponged Decorated				2															2
Whiteware/ Ironstone	2				1	37													40
Yelloware																			
Plain				1											2				3
Annular/Dipped														2		1			3
Rockingham									1						2				3

Table 20, continued

CERAMIC WARE	16 SJB 35	16 SJB 36	16 SJB 29	16 SJB 30	16 SJB 31	16 SJB 37	16 SC 55	16 SC 56	16 SC 57	16 SC 58	16 SC 59	16 SJB 40	16 SJB 28	16 SC 60	16 SC 61	16 SC 62	16 SC 63	16 JE 141	TOTAL
Brownware									1										1
Stoneware, Domestic																			
Brown, Plain			1			1													2
Brown, Salt-Glaze			1			1													2
Brown, Albany Slip			2			7												1	10
Brown, Clear-Glaze						1													1
Brown, Bristol Slip									3										3
Brown, Brown-Glaze															1				1
Gray, Plain				1															1
Gray, Salt-Glaze					1				1	1					2			1	6
Gray, Albany Slip				1		7									1			1	10
Gray, Brown-Glaze						1													1
Gray, Alkaline-Glaze						1													1
Ginger Beer Bottle			3	2			1								1				7
Redware																			
Plain															3			7	10
Clear-Glaze					2				2										4
Agate															1				1

Table 20, continued

CERAMIC WARE	16 SJB 35	16 SJB 36	16 SJB 29	16 SJB 30	16 SJB 31	16 SJB 37	16 SC 55	16 SC 56	16 SC 57	16 SC 58	16 SC 59	16 SJB 40	16 SJB 28	16 SC 60	16 SC 61	16 SC 62	16 SC 63	16 JE 141	TOTAL
Unglazed				2		1													3
Sprigged							1												1
Buff Bodied Earthenware																			
Plain						6								1				5	12
Clear Glaze										1									1
TOTAL	**4**	**1**	**36**	**79**	**41**	**110**	**9**	**24**	**50**	**45**	**33**	**6**	**6**	**18**	**95**	**5**	**3**	**39**	**598**

Tin glazed earthenware is considered in three categories. Faience is the general term for tin glazed ware manufactured in France. Similar wares from Holland and England are known as delft. Equivalents in Italy, Iberia, and Mexico are called majolica. Tin glazed earthenware has a soft porous paste, ranging in color from cream to pink. The glaze or enamel is a thick and opaque covering, produced by adding tin oxide to a lead glaze.

Creamware is a refined earthenware identified by its thin cream colored paste and clear glaze with a slight green tint. A fashionable tableware, creamware frequently was left undecorated, or decorated only with molded decorative motifs. Applied techniques, while not as popular, were not uncommon. Creamware first was perfected by Josiah Wedgewood ca. 1762; by the 1790s, its popularity had secured England's domination of the ceramic market. Whereas "delftware" and white salt-glazed stoneware represented an attempt to fulfill the Englishman's desire for Chinese porcelains, creamware offered an alternative. Creamware's success can be attributed to the timely tariff imposed on the importation of porcelain; to astute marketing techniques (Miller 1980); and, to its cost, which was substantially lower than porcelain. The popularity of creamware began to wane during the late eighteenth century when Wedgewood developed a new ware. This ware, termed **pearlware** by archeologists and historians, is characterized by its cream-white paste covered with a thin soft blue to blue/green glaze which was thinly potted, especially at the foot rings (Sussman 1977). The bluing was added to imitate the bluish cast of Chinese porcelains. The development of an English "bone china" gradually decreased the desirability of Chinese porcelains. To remain in competition for the porcelain market, potters gradually began to add less bluing to their pearlware glazes until the glaze became almost clear. This clear glazed version generally is referred to as **whiteware**, although no distinction was made by the potters themselves between wares with bluing and those without. Throughout this period, decorations on both wares remained the same.

Introduction of the ware most commonly referred to as **ironstone** added a new dimension to the refined earthenware progression. Ironstone first was produced around 1813, but it did not go into widespread use until the 1840s. This more durable ware became very popular in the Americas. One variety which contained bluing--some say in the paste, while others say in the glaze--was instrumental in the revival of a preference for blue glazed "pearlware." This "revival pearlware" had a harder, more brilliant glaze than the earlier version; tinting ranged from deep blue to almost colorless (Sussman 1977).

For more than a century, few notable changes occurred in the pastes and glazes of either of these wares. Changes did occur in decorative designs. These variations of design were used on both ironstone and whiteware. Stylistic attributes can be used to date ironstones, whitewares, and ironstone/whiteware with more precision. Stylistic documentation, such as George Miller's chronology of shell-edged ceramic differences (personal communication 1985), and Wetherbee's (1985) stylistic documentation of ironstone patterns, has provided temporal ranges based upon decoration for some types. The following decorative types were present on pearlware, whiteware, and ironstone sherds among the site assemblages in the study area.

Edged Ware. Edged ware, more commonly called shell-edged, was manufactured primarily in blue and green. In use as early as 1775, it was one of the first patterns applied to pearlware. Early examples were intricately molded, presumably to represent naturalistic shell rims. Through time, incised and molded decoration became increasingly simplistic until the rims became unscalloped. Incision devolved to simple straight lines. Under-glaze hand painting applied to enhance molded designs followed a similar progression. In early examples, color application followed the relief of the molding; in later examples, the color was no more than a straight band following the circumference of the rim.

Transfer Printing. Transfer printing was produced by English potters as early as 1750, but it only was applied as over-glaze decoration until post-1760. This process started with a design engraved on copper plating. Once the plate was covered with paint, tissue paper was placed over it, transferring the

design to the paper, which in turn was transferred to the ceramic object. When the color was dry, the paper was washed off, leaving only the painted design. Transfer printing enabled the potter to produce identical intricate detailed designs on innumerable matching pieces at a cost far below that of similar hand-painted pieces (Miller 1980:4).

Mocha. Dendritic and/or finger-trailed "common cable" decorative designs applied on a dipped background with banded borders occurred from the eighteenth through nineteenth centuries. Examples of this design were evident on early refined English earthenwares, pearlwares, and whitewares.

Flow Blue. Flow Blue is a variation of transfer printing introduced in the early 1820s by Josiah Wedgewood II. Thought by some to have been a mistake of the potters, this decorative design was produced intentionally by placing cobalt transfer printed wares in saggers during the glaze firing, with the result that the color flowed outside the lines of the pattern. There are two distinct categories of Flow Blue. "Old" Flow Blue was used primarily on stoneware; patterns were excessively blurred, often beyond the point of pattern recognition. "New" Flow Blue was used on ironstones during the late 1800s to early 1900s. Designs are sharper in definition, and often were embellished with overglaze gild (Blake 1971:iv).

Yelloware can be distinguished by yellow paste and clear glaze. The process for manufacturing yelloware was introduced in the United States as early as the 1830s; it rapidly became popular. Generally, yellowares from American sites are regarded as being of domestic manufacture. Usually unmarked, yelloware vessel forms include items such as large bowls, chamber pots, spittoons, and ginger beer bottles. Stylistically, decorations can be divided into three basic categories: simple banding or rings in white, yellow, brown, or blue; rockingham-type glaze, the most popular of the yelloware decorative designs characterized by a dark brown to yellow sponged-glaze effect known as tortoise shell; and, a third, less popular variation consisting of designs similar to those evidenced on English mocha. In popular use from the mid-1850s until the turn of the century, yellowares still are produced in limited numbers. Modern versions generally are whiter in paste, and have a yellowed glaze.

Porcelain is a highly vitrified ceramic with an alkaline glaze. It first was manufactured in Asia and later in England, continental Europe, and the United States. Porcelain clay was used to produce fine dinnerware, accessory serving pieces, and ornamental pieces such as figurines.

Stoneware is a hard paste impermeable ceramic. Glazes, while commonly used, are considered aesthetic rather than functional. While American potters always had the resources to produce their own stonewares, it was not until the late eighteenth century that serious attempts to produce commercial stoneware were undertaken. Salt glazed stoneware was in limited production during the early eighteenth century (at the same time salt glaze was declining as a primary pottery type in Europe). It flourished in early to mid-nineteenth century, but popularity waned in the latter half of the century.

From 1775 to the 1850s, stoneware vessel shapes and decorative designs were influenced by the highly stylized European forms. During the mid-nineteenth century, several factors were instrumental in the change of stoneware shape and decorative technology. Advancements in glass and refrigeration technology, and increased demand necessitated the sacrifice of detail in form and decoration for more utilitarian shapes and simplistic decorative techniques. By 1890, most stoneware was undecorated and mechanically mass produced. This enabled small companies to stay in the increasingly competitive container market. Stoneware ale bottles were in production in the latter half of the nineteenth century, and generally have a buff body and yellow glaze (Goodwin et al. 1986).

Ceramic sherd classifications for 18 collections from St. John the Baptist, St. Charles, and Jefferson parishes are tabulated in Table 20.

Glass

A total of 289 glass artifacts or sherds were recovered as a result of the fieldwork. Since 45 percent (n = 2) of all glass artifacts recovered comprised diagnostic bottle glass sherds, a detailed bottle glass chronology was developed.

Technology for mold-produced bottles has existed for centuries. However, not until the seventeenth and eighteenth centuries, when hinged metal molds were developed, did mold-blown bottle manufacturing begin to replace the free blown bottle (Munsey 1970:38). Use of these molds did not become ubiquitous until after the early 1800s. At that time, technological advancements occurred rapidly in the glass manufacturing industry. Development of shoulder and full height molds, new empontilling methods, and improved finishing techniques were primary areas of advancement. Shoulder height molds are characterized by absence of, or disappearance of, seam lines just above the curve of the shoulder. Main types are the shoulder height multi-piece (1820 - 1920), and the one piece dip mold.

On full height molds, vertical seams appear from the base to just below the lip. Above this point, seams are obliterated during the finishing process. Principal varieties of this mold type include bottom hinge 1810 - 1880 (Munsey 1970:39), with a basal seam running either diagonally or straight across the bottom; multi-part leaf mold; 1850 - 1920, with two, three, or four vertical leaf parts and a separate base part; and, a three-part dip mold 1850 - 1920, an improved version of the dip mold that allowed more variation in bottle shape than was possible with the traditional dip mold. Separate basal parts, such as cup and post bottom, often are used as a descriptive terms; these mold attributes provide no date specific information, since they appear on both machine made and hand molded containers.

Two additional molding variations were turn-paste and plate molds. Turn-paste molds (1870 - 1920) produced a symmetrical bottle by turning a bottle inside a paste coated mold. While this method obliterated seam lines, it also prevented the embossment of bottles. Plate molding, ca. 1821 - 1920 (Jones and Sullivan 1985:49), which involved removable or interchangeable plates, was an adaptation of the previously mentioned molds. Thus, the same main or base mold could be used to manufacture bottles with different embossments.

There were four common methods of holding bottles during the finishing stage of free and mold blown glass. All methods held the bottle by the base, allowing the craftsman free access to finish the bottle lip. Two of these methods were glass tipped, using either a solid iron bar or blow pipe. Solid iron bar pontils are characterized by a solid jagged circular scar left when the rod was broken off from the bottle base. Blow pipe scars are similar, except scars are jagged rings, not solid as is the rod scar. While both methods are employed still on some art glass, their use on bottles was replaced by bare iron empontilling in the mid 1800s. Examples of both of these methods are present in the assemblages from the study area.

Bare iron empontilling was a quicker process; it involved a flared iron rod that, when heated red hot, was applied directly to the bottle base surface. Upon removal, a smooth indented circular scar remained. This method was popular until early 1870, when it was replaced by the snap case method as the primary empontilling method. While no bottles exhibiting scars indicative of bar iron empontilling have been identified from the project assemblage, it was an important step in the chronology. A snap case empontilling device "is defined as a four pronged clip attached to an iron rod, a closely fitting case of wrought iron mounted on a long handle from which only the neck of the bottle is allowed to project" (Jones 1985:46).

The last step in bottle production is called the finish. This step involves the formation of bottle lips. Two primary methods employed in the mid to late nineteenth century were the lipping tool and flared or fired lip. A lipping tool is a hand held clamp and plug device. The plug was placed in the bore of the

reheated bottle neck, with the two pronged clamps around the outer edge. The tool was rotated manually, thus shaping the lip. Evidence of this method is the obliteration of mold seams on the neck, horizontal striations in the glass, and an excess of puddled glass on the neck at the bottom of the tooled finish. Examples of this bottle finish were found on project sites 16SC55, 16SJB37, 16SC61, 16SC63, 16JE141, and 16SJB40.

Fired or flared lip is a method by which the neck of a full height mold bottle is reheated by placement in a 'glory hole' of the furnace. This reheating melts and smoothes rough edges left by the mold. Additionally, this process also fades or obliterates seam marks, depending upon the amount of reheating and the distinctiveness of seam marks.

Late nineteenth century glass container manufacturing became progressively more mechanized, starting with the development of semi-automatic machinery (ca. 1880), and culminating with the introduction of a fully automated version (1903). The first successful implementation of a fully mechanized process was developed by Michael Owens; by the 1920s, his machines had become the number one manufacturing method in North America. Differences between semi-automatic and fully automatic machines primarily involved the method of transference of molten globs from furnace to mold. Semi-automatic machines received the glob via manual transportation, while fully automatic machines were fed directly from the furnace, eliminating any manual involvement. Cost and ability to fill increasing demands, and not quality, were the reasons for this change. Machine manufactured bottles, while retaining some quality standards, could be produced at quicker rate and with less labor. With lower production cost passed on to the consumer, machine made bottles quickly became the preferred product.

During the late nineteenth century, attempts to manufacture clear container glass were undertaken. The first attempts used manganese as a clearing agent. Its instability often caused the glass to discolor to an amethyst tint. Eventually, it was found that the addition of arsenic to the recipe allowed for the stabilization of the clear metal.

Identifiable glass types were collected from 14 sites. These are shown in Table 21. The ages of diagnostic glass attributes are shown in Table 18.

Nails

There are three chronological stages based on the technological changes of nails: wrought nails, cut nails, and wire-drawn nails. While wrought nails still are manufactured today, they are used primarily for restoration and reproduction purposes. Wrought nails were the primary source of construction fasteners during the seventeenth and early eighteenth centuries. The use of wrought nails ended with the introduction of machine-cut nails (Nelson 1968). Cut nails were introduced in the 1790s. These nails had a machine-cut body with a handmade head. Not until technological advancements around 1815 had produced a totally machine made version did cut nails begin to replace wrought nails as primary construction fasteners (Nelson 1968). Wire-drawn nails first were introduced into the United States from Europe around 1850. These earlier wire nails were used primarily for box construction; they were not adapted for building construction until the ca. 1870s. Although cut nails still are preferred by some builders today, they were replaced nearly universally by the wire nail by the turn of the century (Nelson 1968). Table 18 summarizes nail chronology (dating) for the sites in question.

Table 21. Recovered Glass Sherds by Site within the Project Area.

SITE	TYPE OF SHERD	AMOUNT
16SC55	Applied	1
	Hand Turned Lip	1
	Non-Machine Made Bottle	1
	Post Bottom Mold	1
	Plate Mold	1
	Table Glassware	1
	Unidentified Bottle Glass	1
	Unidentified Glass	1
		Total 8
16SC56	Machine Made Bottle	2
	Unidentified Bottle Glass	2
	Unidentified Glass	1
		Total 5
16SC57	Machine Made Bottle	1
	Machine Made Base	2
	Table Glass	8
		Total 11
16SC58	Machine Made Bottle	3
	Unidentified Bottle Glass	6
	Unidentified Glass	3
		Total 12
16SC59	Machine Made Bottle	6
	Table Glassware	1
		Total 7
16SJB28	Applied Lip	1
	Unidentified Bottle Glass	1
		Total 2

Table 21, continued

SITE	TYPE OF SHERD	AMOUNT
16SJB29	Applied Lip	1
	Iron Pontil	2
	Machine Made Bottle	2
	Unidentified Bottle Glass	11
	Unidentified Glass	6
		Total 22
16SJB30	Machine Made Bottle	27
	Table Glassware	3
	Unidentified Bottle Glass	5
	Unidentified Glass	12
		Total 47
16SJB36	Unidentified Bottle Glass	1
		Total 1
16SJB37	Hand Turned Lip	2
	Fire Polished Lip	1
	Lip Liner	1
	Machine Made Bottle	16
	Post Bottom Mold	1
	Table Glassware	5
	Turn Paste Mold	4
	Unidentified Bottle Glass	28
	Unidentified Glass	2
		Total 60
16SC60	Blow Pipe Pontil	1
	Fire Polished Lip	1
	Machine Made Bottle	4
	Post Bottom Mold	2
	Table Glassware	4
		Total 12

Table 21, continued

SITE	TYPE OF SHERD	AMOUNT
16SC63	Hand Turned Lip	1
	2 Piece Mold	1
		Total 2
16JE141	Applied Lip	1
	Blow Pipe Pontil	1
	Fire Polished Lip	1
	Hand Turned Lip	1
	Machine Made Base	4
	Table Glassware	2
	Unidentified Bottle Glass	11
		Total 21
16SC40	Hand Turned Lip	2
	Machine Made Bottle	15
	Unidentified Bottle Glass	3
		Total 20

Functional Analysis

Materials recovered during the investigations examined on the basis of function in an attempt to establish use patterns and to assist in classifications. While the basic structure of South's (1977) classification system was retained, redefinition and expansion of his groups were conducted to address more adequately the needs of this assemblage.

Kitchen group materials were defined as those material remains directly associated with food preparation and service. This included ceramic food service and storage vessels; glass food containers, serving vessels, and drinking vessels; metal implements, cooking vessels, and utensils; and food remains such as bones, cobs, nuts, seeds, pits and shells, e.g., oyster shells.

Architecture group artifacts were identified as those elements directly associated with the building environment. Not included were those elements used to enhance the building environment. Typically included artifacts were brick, mortar, nails, window glass, building hardware, cementing agents, shingles, etc.

Furniture group artifacts were those determined to be associated with the enhancement of the building environment. Besides the obvious furniture elements, this group included flower pots, mirror glass, figurines, and other miscellaneous decorative household items. The Arms group was designed to encompass all forms and varieties of weaponry. This included gun and pistol parts, and ammunition, as well as knives, swords, bayonets, etc.

The Clothing group designated artifacts directly associated with clothing such as buttons, snaps, etc.; accessory clothing items such as belt buckles, shoe hooks, and shoes; and those items used in the construction and repair of clothing such as needles, pins, scissors, and thimbles.

Personal group artifacts included those elements that are directly associated with an individual or with individual use. Besides coins and keys, this group included items of cosmetic and personal hygiene use, combs, brushes, and all writing materials. The only exception to classification was the exclusion of tobacco-related artifacts, which were detailed in their own group.

The Tobacco group provided a detailed breakdown of tobacco pipes by material, style and segment.

Activities groups could be more aptly called the miscellaneous group of this classification system. It was designed to encompass those elements that had more than one possible function, or those which did not fit into any of the previous functional group classifications. These artifacts include tools, toys, table items, and miscellaneous hardware elements.

Table 22 presents the result of functional analyses of artifacts from 18 sites within the study area. Of these assemblages, 17 are dominated by Kitchen class remains; one (16SJB35) constitutes primarily Architectural remains. Thus, the majority of sites recovered during this survey effort appear to represent domestic residential refuse.

Table 22. Results of Historic Artifact Functional Group Analyses by Site.

SITE	FUNCTIONAL GROUP	NUMBER OF ARTIFACTS	PERCENTAGE
16SJB28	Kitchen	8	88.9
	Total	**8**	**88.9**
16SJB29	Kitchen	63	84.0
	Architecture	10	13.3
	Activities	2	2.7
	Total	**75**	**100.0**
16SJB30	Kitchen	131	70.8
	Architecture	49	26.5
	Furniture	1	0.5
	Clothing	1	0.5
	Personal	1	0.5
	Activities	2	1.1
	Total	**185**	**99.9**
16SJB31	Kitchen	45	90.0
	Architecture	1	2.0
	Arms	2	4.0
	Tobacco	1	2.0
	Activities	1	2.0
	Total	**50**	**100.0**
16SJB35	Kitchen	4	36.4
	Architecture	7	63.6
	Total	**11**	**100.0**
16SJB36	Kitchen	5	100.0
	Total	**5**	**100.0**
16SJB37	Kitchen	199	85.8
	Architecture	22	9.5
	Furniture	1	0.4
	Arms	3	1.3

Table 22, continued

SITE	FUNCTIONAL GROUP	NUMBER OF ARTIFACTS	PERCENTAGE
	Activities	7	3.0
	Total	**232**	**100.0**
16SJB40	Kitchen	55	96.5
	Architecture	1	1.7
	Personal	1	1.7
	Total	**57**	**99.9**
16SC55	Kitchen	54	94.7
	Tobacco	1	1.8
	Personal	1	1.8
	Activities	1	1.8
	Total	**57**	**100.1**
16SC56		69	89.6
	Architecture	1	1.3
	Furniture	1	1.3
	Arms	3	3.9
	Clothes	1	1.3
	Tobacco	1	1.3
	Personal	1	1.3
	Total	**77**	**100.0**
16SC57	Kitchen	65	97.0
	Architecture	1	1.5
	Activities	1	1.5
	Total	**67**	**100.0**
16SC58	Kitchen	66	97.0
	Architecture	1	1.5
	Clothes	1	1.5
	Total	**68**	**100.0**

Table 22, continued

SITE	FUNCTIONAL GROUP	NUMBER OF ARTIFACTS	PERCENTAGE
16SC59	Kitchen	40	97.6
	Activities	1	2.4
	Total	**41**	**100.0**
16SC60	Kitchen	36	87.8
	Architecture	2	4.9
	Arms	1	2.4
	Personal	1	2.4
	Activities	1	2.4
	Total	**41**	**99.9**
16SC61	Kitchen	125	77.2
	Architecture	7	4.3
	Furniture	1	0.6
	Arms	3	1.8
	Clothing	8	4.9
	Tobacco	3	1.8
	Personal	3	1.8
	Activities	12	7.4
	Total	**162**	99.8
	Kitchen	21	91.3
	Furniture	1	4.3
	Activities	1	4.3
	Total	**23**	**99.9**
	Kitchen	5	100.0
	Total	**5**	**100.0**
	Kitchen	52	91.2
	Furniture	1	1.7
	Arms	1	1.7

Table 22, continued

SITE	FUNCTIONAL GROUP	NUMBER OF ARTIFACTS	PERCENTAGE
	Clothing	1	1.7
	Tobacco	1	1.7
	Activities	1	1.7
	Total	**57**	**99.7**

CHAPTER VIII

SITE DESCRIPTIONS AND INTERPRETATIONS

Introduction

A total of 25 cultural resources loci are recorded in the entire project area. This total includes six previously recorded sites (16SJB28, 16SJB29, 16SLB30, 16SJB31, 16SJB32, and 16SJB39) discovered during a 1984 National Park Service, Denver Service Center survey (Shafer, Clemensen, and Rhodes 1984). A total of 15 previously unrecorded sites (16SJB35, 16SJB36, 16SJB37, 16SJB40, 16SC55, 16SC56, 16SC57, 16SC58, 16SC59, 16SC60, 16SC61, 16SC62, 16SC63, 16SC64, and 16JE141) and four modern cultural resources loci (X16SJB-A, 1A-ED3, Waterford 87-2, and Reserve 87-1) are identified. Table 23 provides a tabulation of cultural resources loci, a synopsis of testing methodologies, and an assignment of cultural components for each locus.

Angelina Reach Sites

16SJB35

Site 16SJB35 is a linear deposit of late nineteenth to early twentieth century historic artifacts located on the bankline of the Mississippi River (Figure 52). This site is located on a high bank, approximately 350 m (1,148.3 ft) northwest (azimuth 295°) of Site 16SJB36. Three structures were present in this area ca. 1921 (Figure 25). Erosion and redeposition may have contributed to the present distribution of artifacts in a linear pattern along the banktop. The horizontal extent of the site is small, covering 15 m (49.2 ft) across its north/south axis, and 15 m (49.2 ft) across its east/west axis. The vertical extent of cultural material below the surface did not exceed 60 cm (23.6 in).

All of the artifacts on the surface of the site were collected. The artifacts include: two whiteware/ironstone plain sherds, two whiteware plain sherds, five wire nails, one wire spike, and one unidentified metal object. Based on South's (1977) functional classification system for historic artifacts, the functional class representation at 16SJB35 is limited to the Architecture (63.6 percent) and Kitchen (36.4 percent) groups. However, since the site is composed of road fill, these secondarily deposited artifacts do not define the site's function. Temporal date range information is derived from the whiteware (1820-1900+). The wire drawn nails suggest that the site post-dates ca. 1890 (Nelson 1968). One stratigraphic profile, 1 m (3.3 ft) wide by 1.2 m (3.9 ft) deep, was cleaned along the bluff edge to investigate the nature of the subsurface deposits present at the site (Figure 53). Strata A through H represent a series of reworked clay and sand overbank deposits. The soils between about 15 and 62 cm (5.9 and 24.4 in) below datum are all culturally sterile. Between 62 and 80 cm (24.4 and 31.5 in) below datum, a band of gray (10 YR 5/1) road fill, Stratum I, is present. Nails, shell fragments, and flecks of charcoal are present within this road fill. Strata J, K, and L represent another series of overbank deposits. All are culturally sterile. In addition, one Dutch auger test (Figure 54), was placed 4 m (13.1 ft) southeast of the bluff edge stratigraphic profile to ascertain the horizontal extent of the buried road surface. Six strata, consisting of culturally sterile sands and clay were identified. A small lens of road fill approximately 1 cm (.4 in) thick was encountered at a depth of 82 cm (32.3 in) from the surface. The size of the lens indicates that the landward shoulder of the road tapers off at this point. The auger test, which was excavated to a depth of 1.4 m (4.6 ft), failed to recover additional cultural remains.

Table 23. Archeological Sites, Testing Methods Applied, and Components Documented for the Project Area.

CONSTRUCTION ITEM	SITE(S)	TESTS APPLIED	COMPONENT(S)
Angelina	16SJB35	1 Auger Test 1 Bluff Profile	Historic
Angelina	16SJB36	N/A	Historic
Willow Bend	16SJB29	15 Augur Tests 3 1 x 2 m Units 1 1 x 1 m Units 6 Probes 4 Shovel Tests 1 X-Y-Z Tie-in	Prehistoric Historic
Willow Bend	16SJB30	8 Auger Tests 1 1 x 2 m Tests	Historic
Willow Bend	16SJB31	6 Auger Tests 1 Bluff Profile 1 1 x 2 m Unit 1 Coordinate Tie-in	Prehistoric Historic
Willow Bend	16SJB37	12 Auger Tests 1 Bluff Profile 1 1 x 2 m Unit 1 1 x 1 m Unit 1 Coordinate Tie-In	Prehistoric Historic
Waterford	16SC55	6 Shovel Tests 2 Auger Tests 1 1 x 1 m Unit	Prehistoric Historic
Waterford	16SC56	6 Shovel Tests 2 Auger Tests 1 Bluff Profile	Prehistoric Historic
Waterford	State Survey Number Not Assigned (Waterford 87-2)	N/A	Modern Shipyard
Waterford	16SC57	6 Shovel Tests 2 Auger Tests	Historic
Waterford	16SC58	6 Shovel Tests 2 Auger Tests	Historic
Waterford	16SC59	6 Shovel Tests 2 Auger Tests	Historic
Vacherie	16SJB40	9 Shovel Tests	Historic

Table 23, continued

CONSTRUCTION ITEM	SITE(S)	TESTS APPLIED	COMPONENT(S)
Reserve	State Survey Number Not Assigned (Reserve 87-1)	8 Shovel Tests	Modern Standing Structure
Upper Edgard	16SJB28	5 Auger Tests 5 Probes	Historic
Upper Edgard	X16SJB-A	9 Shovel Tests	Historic
Upper Edgard	State Survey Number Not Assigned (IAED3)	12 Shovel Tests	Modern Cement Pad
Upper Edgard	16SJB32	9 Shovel Tests	Modern Cement Pad
Upper Edgard	16SJB39	9 Shovel Tests 7 Probes	Historic Cast Iron Boiler
Luling	16SC60	6 Shovel Tests 2 Auger Tests 1 Bluff Profile 1 1 x 1 m Unit	Prehistoric Historic
Luling	16SC61	12 Shovel Tests 6 Probes 12 Auger Tests 1 Bluff Profile 2 X-Y-Z Tie-Ins 2 1 x 2 m Units 2 1 x 1 m Units	Prehistoric Historic
Luling	16SC62	6 Shovel Tests	Historic
Luling	16SC63	6 Shovel Tests	Historic
Luling	16SC64	N/A	Modern Cement Pad
Luling	16JE141	6 Shovel Tests 4 Auger Tests 1 X-Y-Z Tie-In 2 1 x 1 m Units	Prehistoric Historic

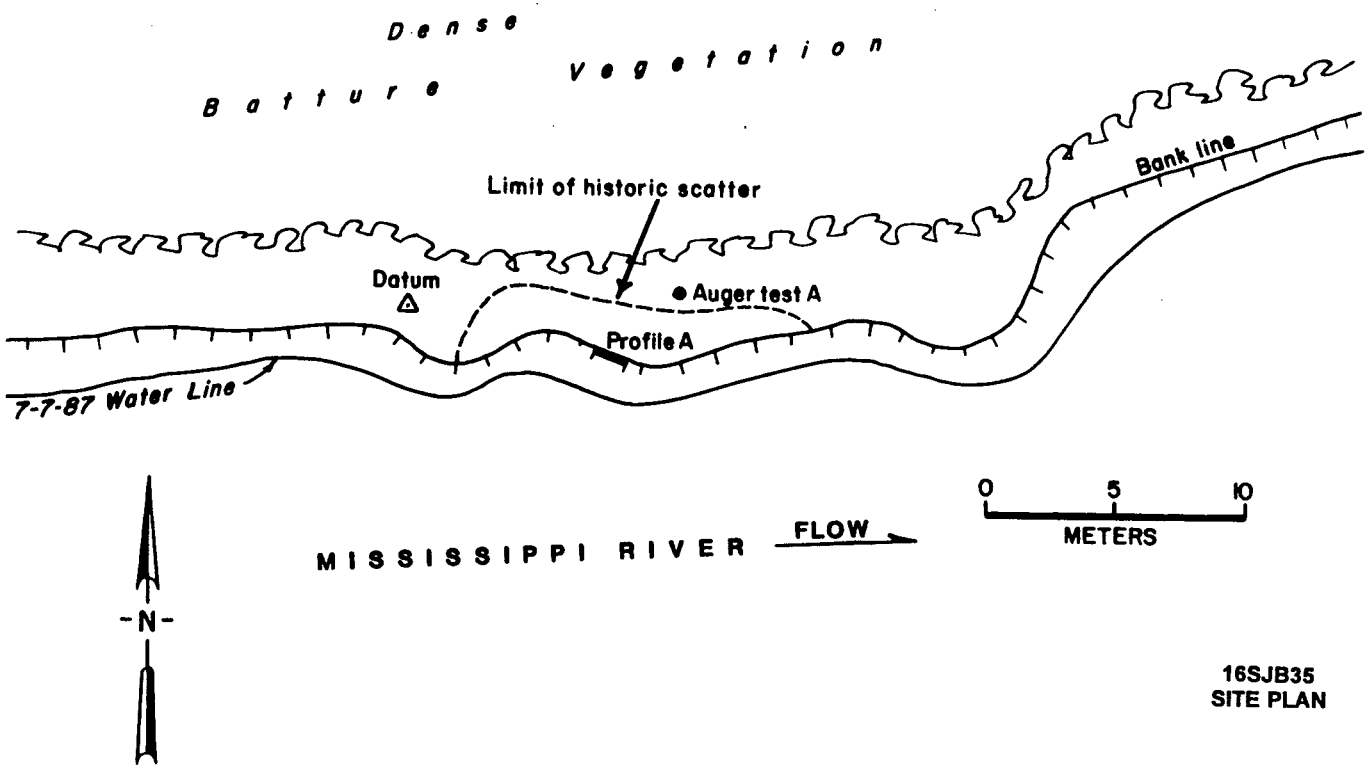
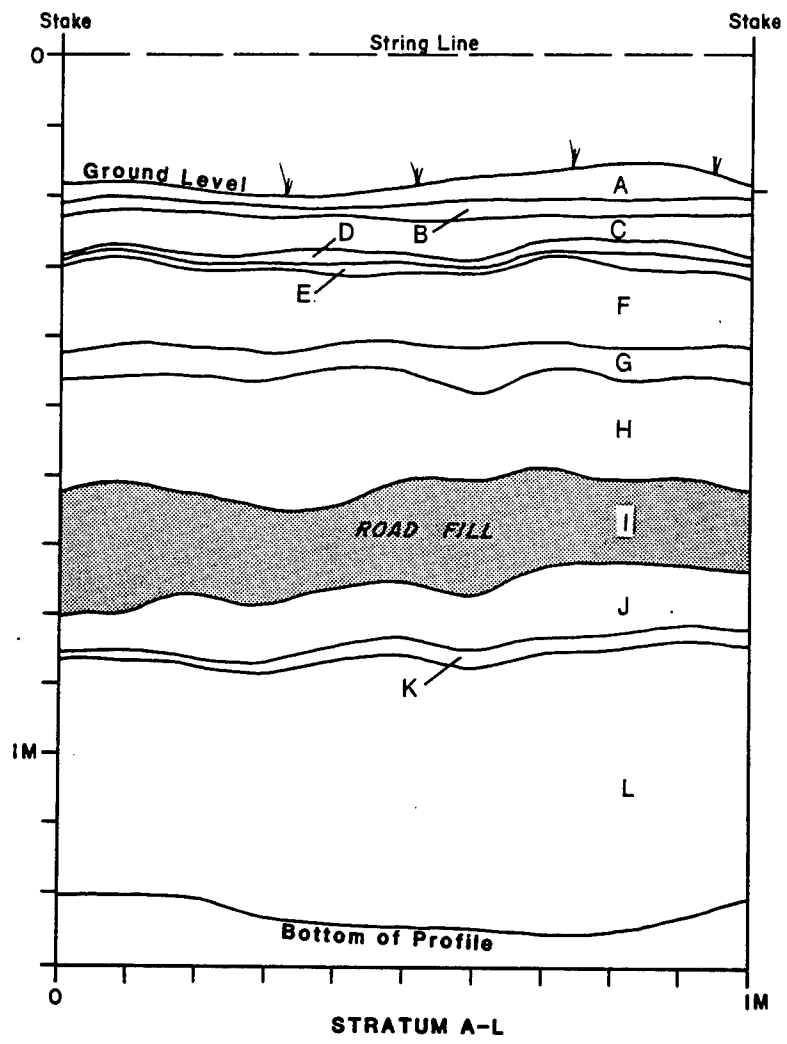


Figure 52. Site plan of 16SJB35.



A 10YR 5/3 brown sandy clay
B 10YR 4/1 dark gray clay band
C 10YR 4/1 sandy clay band
D 10YR 5/3 sand
E 10YR 4/1 clay band
F 10YR 5/3 sandy clay
G 10YR 4/1 clay
H 10YR 5/3 sandy clay
I Road fill
J 10YR 3/1 clay
K 10YR 5/3 sand
L 10YR 3/1 clay

Figure 53. Drawing of 16SJB35 bluff edge stratigraphic profile.

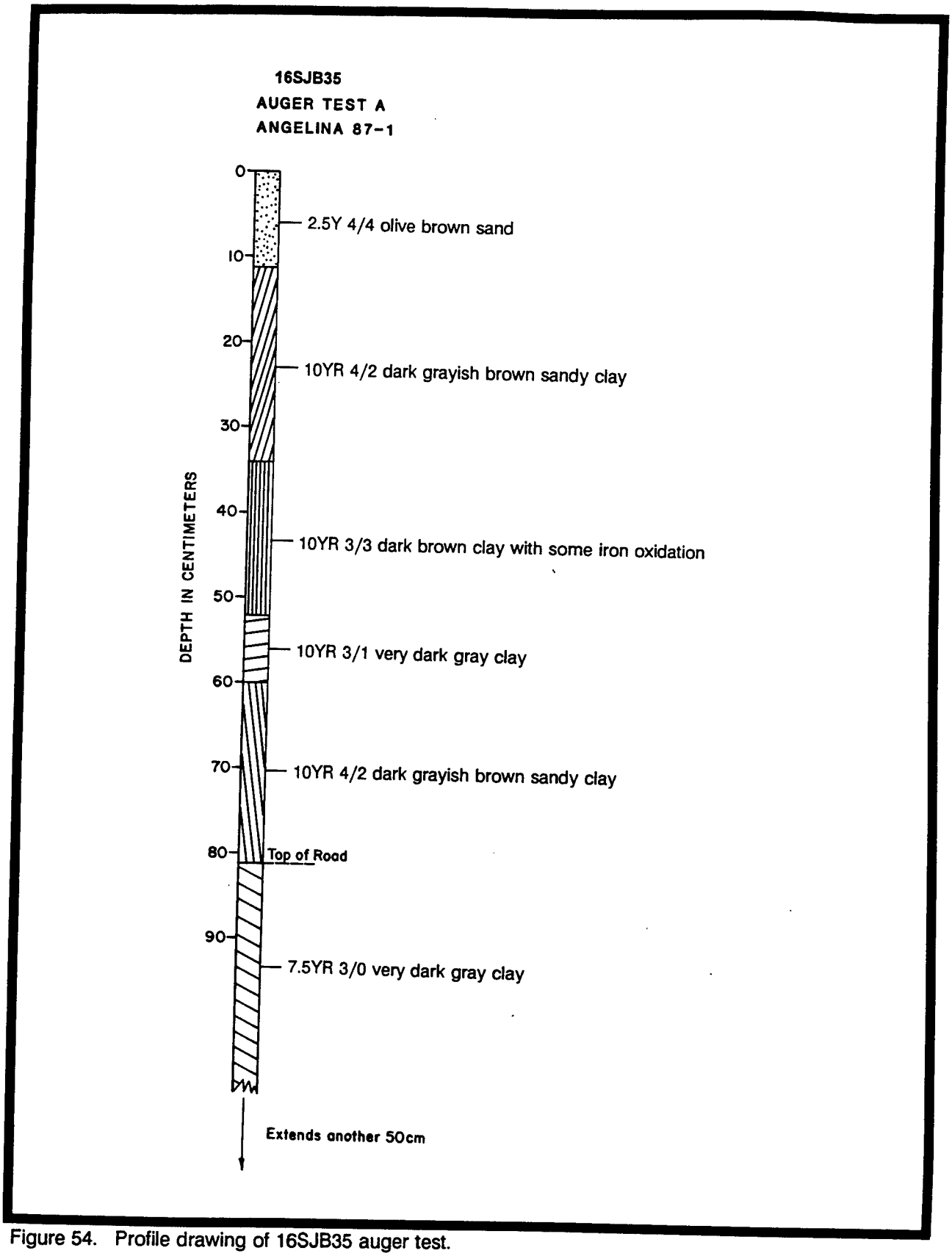


Figure 54. Profile drawing of 16SJB35 auger test.

Site 16SJB35 is a very sparse historic scatter that consists of secondary deposits associated with a former road. No evidence of the three structures appearing on the ca. 1921 MRC map was encountered at the site. Any research potential of artifacts collected from site is abrogated by their lack of contextual integrity. Therefore, no further archeological investigations are recommended at 16SJB35.

16SJB36

Site 16SJB36 is an irregular deposit of late nineteenth and early twentieth century historic artifacts located on the bankline of the Mississippi River (Figure 55). The site is located on a high bank approximately 350 m (1,148.3 ft) southeast (azimuth 115°) of 16SJB35. The horizontal extent of the site is quite small, covering 5 m (16.4 ft) across its north/south axis, and 15 m (49.2 ft) across its east/west axis. The site is a sparse scatter of historic artifacts on an eroded section of the bankline. An examination of a natural profile created by bank slumping and river wash indicated that intact subsurface cultural deposits are not present within the immediate vicinity of the site's bluff edge. Erosion and redeposition may have contributed to the present distribution of artifacts in an irregular pattern along the bankline.

All of the artifacts lying on the surface of the site were collected. Artifacts collected included: one creamware sherd, one light green champagne bottle with a flat finish, two horse teeth, and two unidentified mammal long bone fragments. Functionally identifiable materials associated with 16SJB36 are all Kitchen group artifacts. The artifacts may represent a refuse disposal. Precise functional interpretation is difficult due to the small assemblage size, and to the presence of only one functional class of artifacts. The presumed date range of 1775 - 1820 was obtained from a single creamware sherd; additional diagnostic materials from the site would be required to provide a more reliable date for the site.

Feature 1, a metal (iron) hoop, was recorded along the bankline at 16SJB36. Approximately one-half of the hoop was protruding from the bank. The hoop is the outer rim of a wooden wagon wheel. It may have derived from use of the former road observed at 16SJB35, approximately 350 m (1,148.3 ft) upriver.

Site 16SJB36 represents road fill or remnants of a pre-1876 levee that formerly was situated in the area (Figure 25). This small historic scatter lacks contextual integrity. No intact cultural deposits have been located at this site. The research potential of the artifacts collected from the site's surface is abrogated by their lack of contextual integrity. Therefore, no further archeological investigations at 16SJB36 are recommended.

Willow Bend Reach Sites

16SJB29

As originally defined during the 1984 National Park Service survey, Site 16SJB29 consisted of a 213.4 by 9.1 m (700 by 30 ft) linear scatter of historic ceramic and glass sherds, found in association with a linear vertical alignment of boards, and a wooden hand-pegged sluice or drain. The 50 artifacts collected from the surface of the site consisted of mineral water bottles, aqua fruit jars, Freeman bricks, colored curved glass, undecorated whiteware sherds, heavy olive glass sherds, amethyst glass, transfer printed ware, and paneled bottles. The site was assigned a domestic function; it was affiliated with Anglo-American or Afro-American late nineteenth to early twentieth century household activity. However, given the information provided by the National Park Service concerning the presence of the wooden sluice and revetment, this site is clearly multi-functional in nature. Examination of riverine changes in the project area vicinity indicate that the bankline has been fairly stable over the past century (Figures 7 and 16).

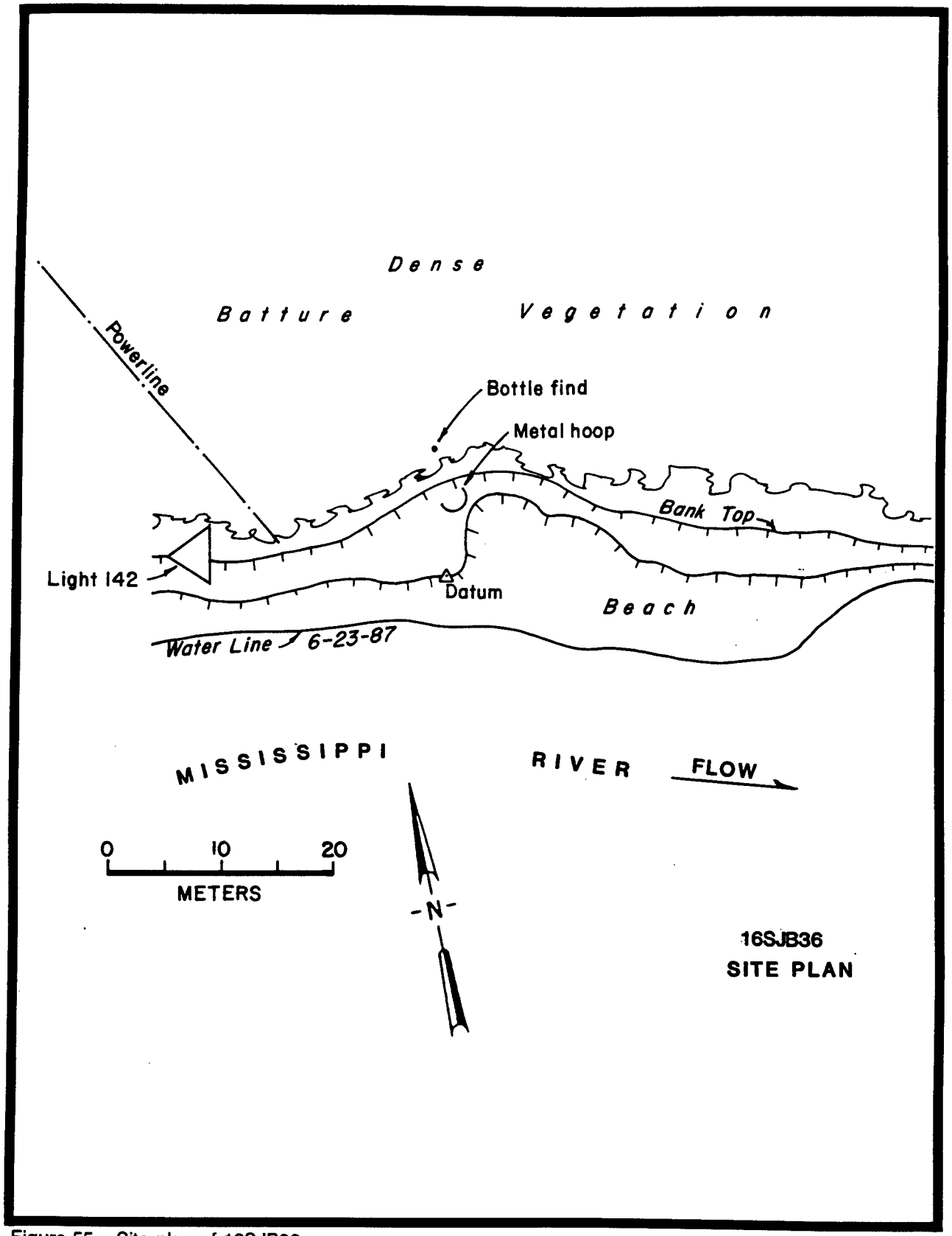


Figure 55. Site plan of 16SJB36.

During the summer and fall of 1987, R. Christopher Goodwin & Associates, Inc., relocated, identified, and assessed the significance of Site 16SJB29. This report incorporates all data from the unfinished National Park Service report (Shafer, Clemensen, and Rhodes 1984). The surface inspection of Site 16SJB29 by R. Christopher Goodwin & Associates, Inc., resulted in the identification of a linear scatter of mid-nineteenth to early twentieth century historic artifacts on the bankline of the Mississippi River (Figure 56). The site is located along a low bank approximately 100 m (328.1 ft) to the east (azimuth 90°) of 16SJB30 (Figure 4). The horizontal extent of the site surface scatter is large, covering 30 m (98.4 ft) across its north/south axis, and 80 m (262.5 ft) across its east/west axis. Erosion and redeposition may have contributed to the present sparse distribution of artifacts in a linear pattern along the bank and beach. Four wooden features were noted near the center of the site.

The 112 artifacts collected during the 1987 surface examination of 16SJB29 include: brick fragments, iron shovel parts, roofing tiles, oyster shells, bottle glass, milk glass, ironstone ginger beer bottle sherds, domestic brown stoneware, whiteware, ironstone, porcelain, pearlware, and cut/wrought and wire nail fragments. In addition, two boiler grates, slag, and coal, possibly from a steam engine, were found in association with Feature 1, but were not collected. The artifacts collected from 16SJB29 may range in age from 1795 to the present. However, the majority of the remains date from late nineteenth to early twentieth century. Of the 112 artifacts collected in 1987, 67 percent have been classified into three functional groups. The Kitchen group comprises 56.2 percent; the Architecture group has 9 percent; and the Activities group has 1.8 percent. The large assemblage of kitchen related artifacts indicates that food related activities occurred on the site. Architectural elements include: four bricks, one piece of mortar, two pieces of window glass, one roofing tile, one cut nail, and one wire nail. Other related artifacts consist of one shovel part and one segment of heavy chain.

Material recovered from 16SJB29 suggests that the site dates primarily from the early nineteenth to early twentieth century. This date is indicated by the recovered ceramic sherds such as pearlware, whiteware, and ginger beer bottle fragments; it is reinforced by the presence of a cut nail and amethyst colored bottle glass (Table 18), as well as by elements generally attributed to nineteenth century home sites. These items include a child's school slate, and a ball clay pipe stem fragment.

Site 16SJB29 was augered, shovel tested, and probed extensively (Figure 57). Out of 15 auger borings, only one, auger test number six, produced any evidence of material culture below the surface of the site. In auger test six, one whiteware sherd was encountered at a depth of 25 cm (9.8 in) below the surface. However, no evidence of an intact midden was found to exist below the site's surface. In addition to the auger tests, four shovel tests were placed between Features 2 and 4 to determine if these two features articulated. The results of these tests were positive. Additional probing in and around the site's features served to delineate their boundaries.

The linear vertical alignment of boards (possible wooden revetment), as well as the wooden hand pegged sluice (rice flume), photographed on the site by the National Park Service in 1984 were not observed in 1987.

Currently, four intact subsurface features exist at 16SJB29 (Figure 56). Initially, it was hypothesized that Feature 1 represented the remains of a boat. However, a thorough field examination of this feature led to a different interpretation; the working hypothesis that this feature was a boat did not withstand field inspection. Instead, Feature 1 is a trough-like structure made of cypress planking supported on cypress posts. This long, narrow, shallow structure is oriented perpendicular to the Mississippi River. It consists of two tapering lines of cypress planking 1 m (3.3 ft) apart on its southern end, and 2.5 m (8.2 ft) apart on its northern end. Both side walls of the structure are virtually identical, measuring 50 cm (19.7 in) high, 5 m (16.4 ft) long, and 2.5 cm (1 in) wide.

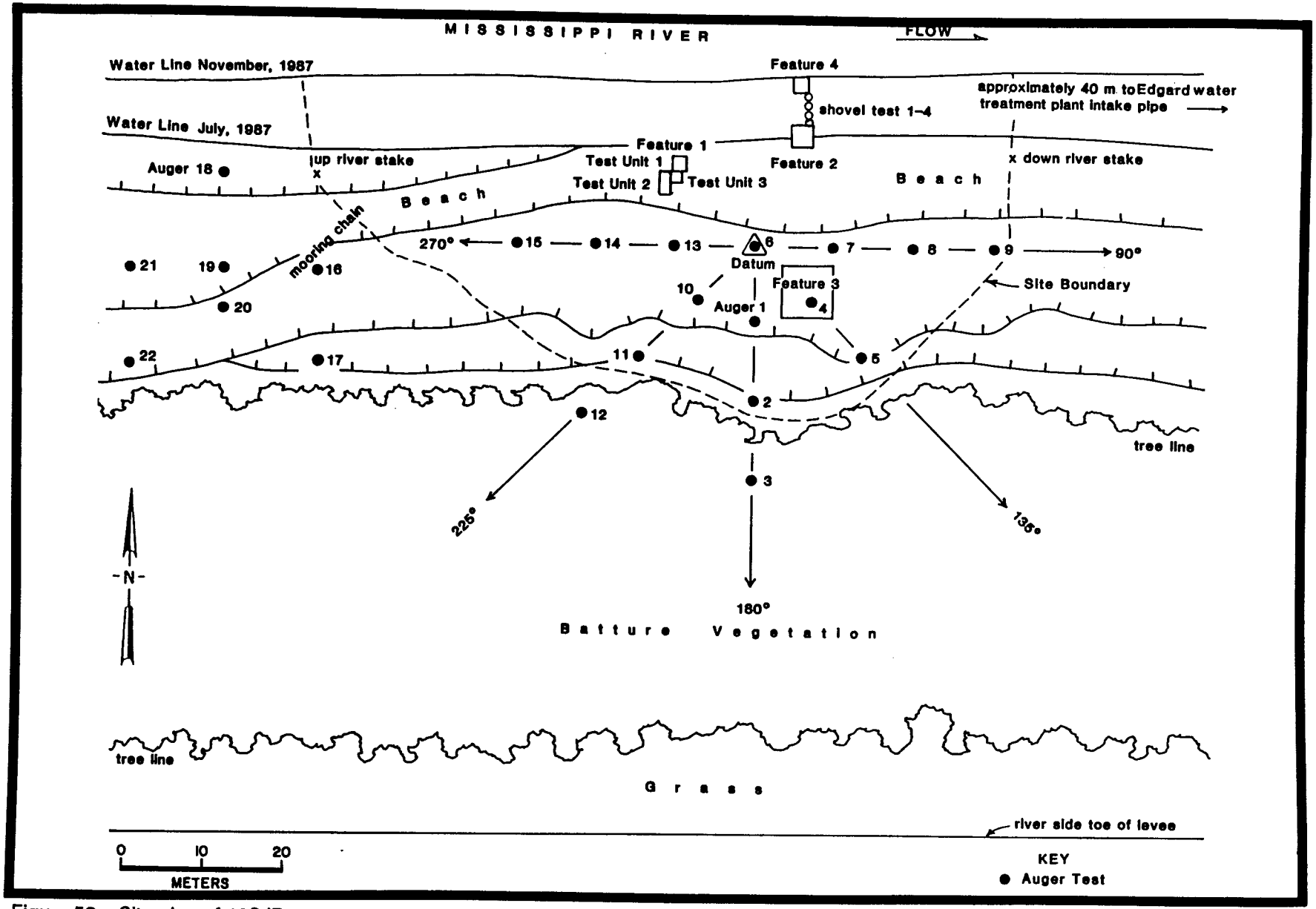


Figure 56. Site plan of 16SJB29.

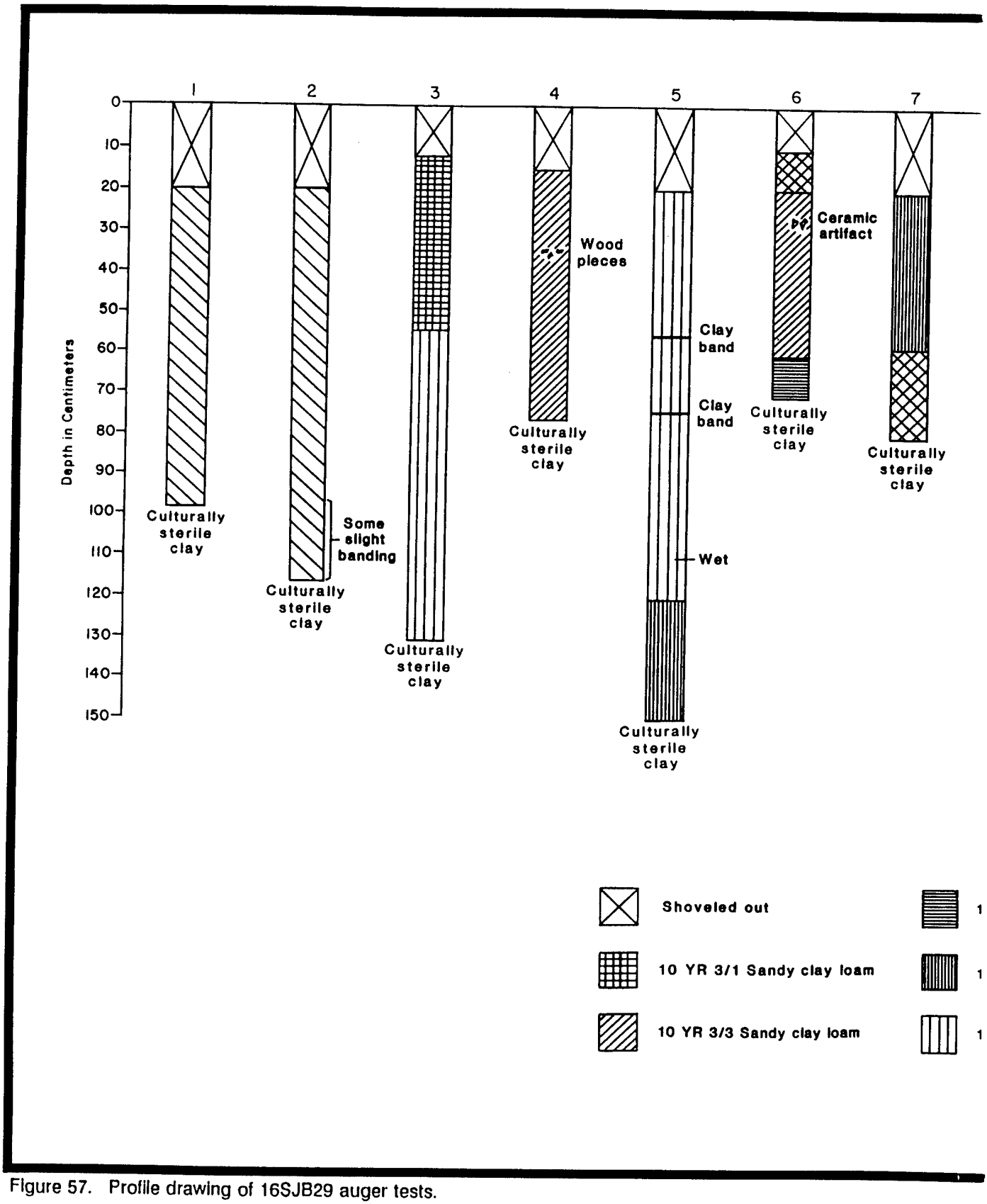
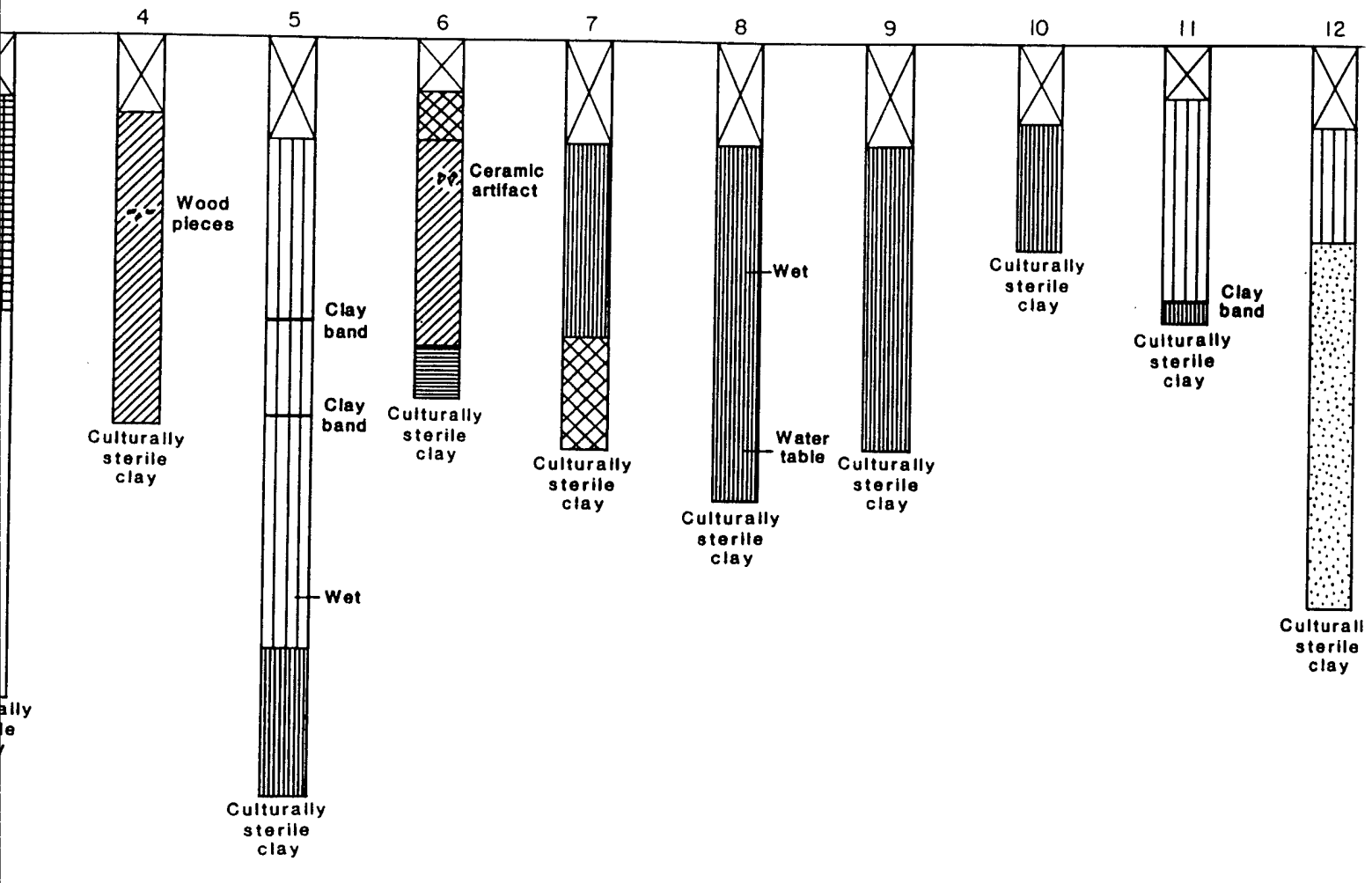
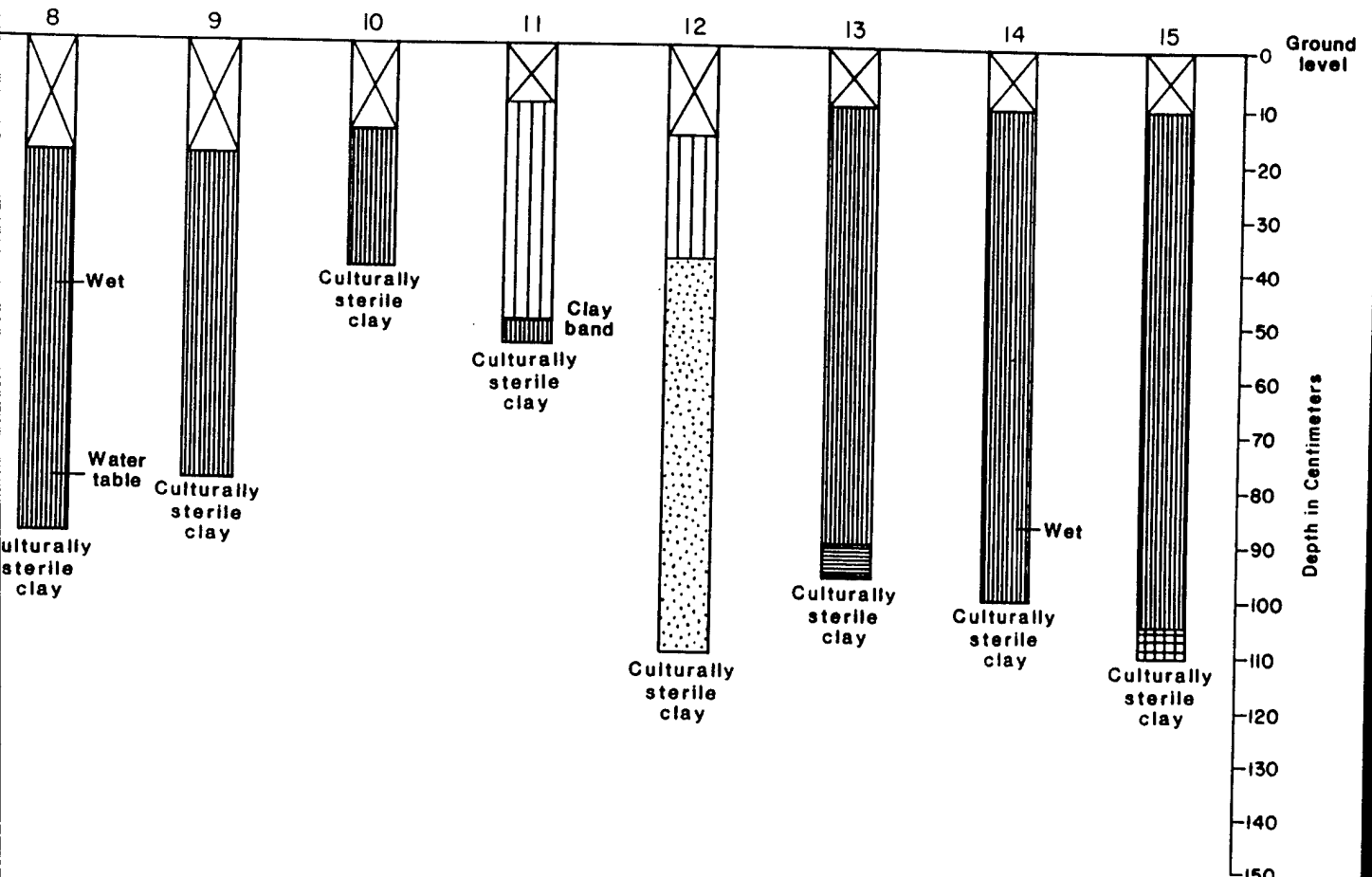


Figure 57. Profile drawing of 16SJB29 auger tests.



KEY

Shoveled out	10 YR 4/1 Clay	10 YR 5/1 Clay loam
10 YR 3/1 Sandy clay loam	10 YR 4/2 Mottled clay loam	10 YR 5/3 Sandy clay loam
10 YR 3/3 Sandy clay loam	10 YR 4/3 Sandy clay loam	10 YR 6/3 Sand



KEY

YR 4/1 Clay

YR 4/2 Mottled clay loam

YR 4/3 Sandy clay loam

10 YR 5/1 Clay loam

10 YR 5/3 Sandy clay loam

10 YR 6/3 Sand

One 1 x 2 m (3.3 x 6.6 ft) unit, one 1.5 x 2 m (4.9 x 6.6 ft) unit, and one 1 x 1 m (3.3 x 3.3 ft) unit were placed at Feature 1. All three of these units were excavated in arbitrary 25 cm (9.8 in) levels. Unit 1, located along the northeastern side of this feature, was designed to expose the interior surface of the wooden plank structure. The east wall stratigraphic profile of Unit 1 is described below (Figure 58). Note how the cypress board planks dip down as they approach the river to the north. The placement of this structure on an angle may have served to keep its contents dry. The two cypress side boards overlap, with the interior of the top of the board protruding over the exterior surface of the bottom board. The sharpened post, illustrated in Figure 58, has been driven into the ground. Floor boards are not present on the structure.

Based on the data collected during the 1987 excavations, the precise function of this feature was uncertain. Its function or precise relationship to Features 2, 3, and 4 in the area could not be determined by way of archival research. Therefore, it was difficult to make any statement about this feature's function on the basis of such limited field evidence.

Units 2 and 3 also were placed over Feature 1. Unit 2 was placed along the southwestern side of Feature 1 to record the exterior surface of the feature; in conjunction with Unit 1, it served in a controlled comparison of the soil strata both inside and outside of Feature 1. Unit 3 was placed in the feature.

Features 2, 3, and 4 share a common linear alignment. Together, they appear to be part of the same structure, which was oriented perpendicular to the Mississippi River (Figure 56). Verification procedures for Features 2 and 4 included sketching and photographing their surficial aspects, and shovel testing between these two features to determine their subsurface extent. Wood found in all four shovel tests indicates that these two features articulate. Other than cut nails embedded in the cypress boards of these structures, additional artifacts were not observed in association with these features. Feature 2, probatively defined as a pier support, was found at the waterline during the July 1987 inspection of this site. During the month of November 1987, the river had fallen appreciably. As a result, Feature 2 was covered with dense grassy vegetation, and Feature 4, originally underwater, was fully exposed. Feature 2 consists of four large upright cypress posts, buried in river silt. The four corner posts are 20 by 20 cm (7.9 by 7.9 in) in dimension. The southwestern corner post has a slot chiseled out for the placement of a wooden peg. A line of upright cypress planks 2.5 cm (1 in) thick extends across the feature between its southwestern and southeastern corner posts. Traces of similar planking also are apparent on the east and west walls of the feature. Feature 4 also is constructed of cypress timbers. Only the surficial aspect of Feature 4 was verified during the November investigation. From mid-point to mid-point, Feature 4 is located 5 m (16.4 ft) due north of Feature 2. They are in perfect north/south alignment. Feature 4 consists of two parallel cypress plank side boards which are 1.4 m (4.6 ft) apart. These horizontal boards run perpendicular to the Mississippi River. A series of upright planks each 2.5 cm (1 in) thick and 30 cm (11.8 in) wide run along the interior edge of each side board. Twenty-five meters to the south of Feature 2, Unit A, a 1 x 2 m (3.3 x 6.6 ft) unit, was placed over the western half of Feature 3 (Figure 59). The four artifacts recovered *in situ* from unit A date from 1840 to the present. These artifacts included: one historic sherd classified as Kitchen group, and two brick fragments and one wire nail classified as Architecture group. On the basis of the above observations, it was concluded that these three associated features (2, 3, and 4) could represent the remnants of a foundation for a large pier that extended into the Mississippi River.

Based on the 1987 excavations at Site 16SJB29, the site was considered significant because of the presence of four historic features (representing a wooden trough and a possible pier), and of an associated historic artifact scatter. These features possessed sufficient archeological context for further research and comparative analysis. Further investigation of this site could yield information important in regard to nineteenth century landings on the Mississippi River.

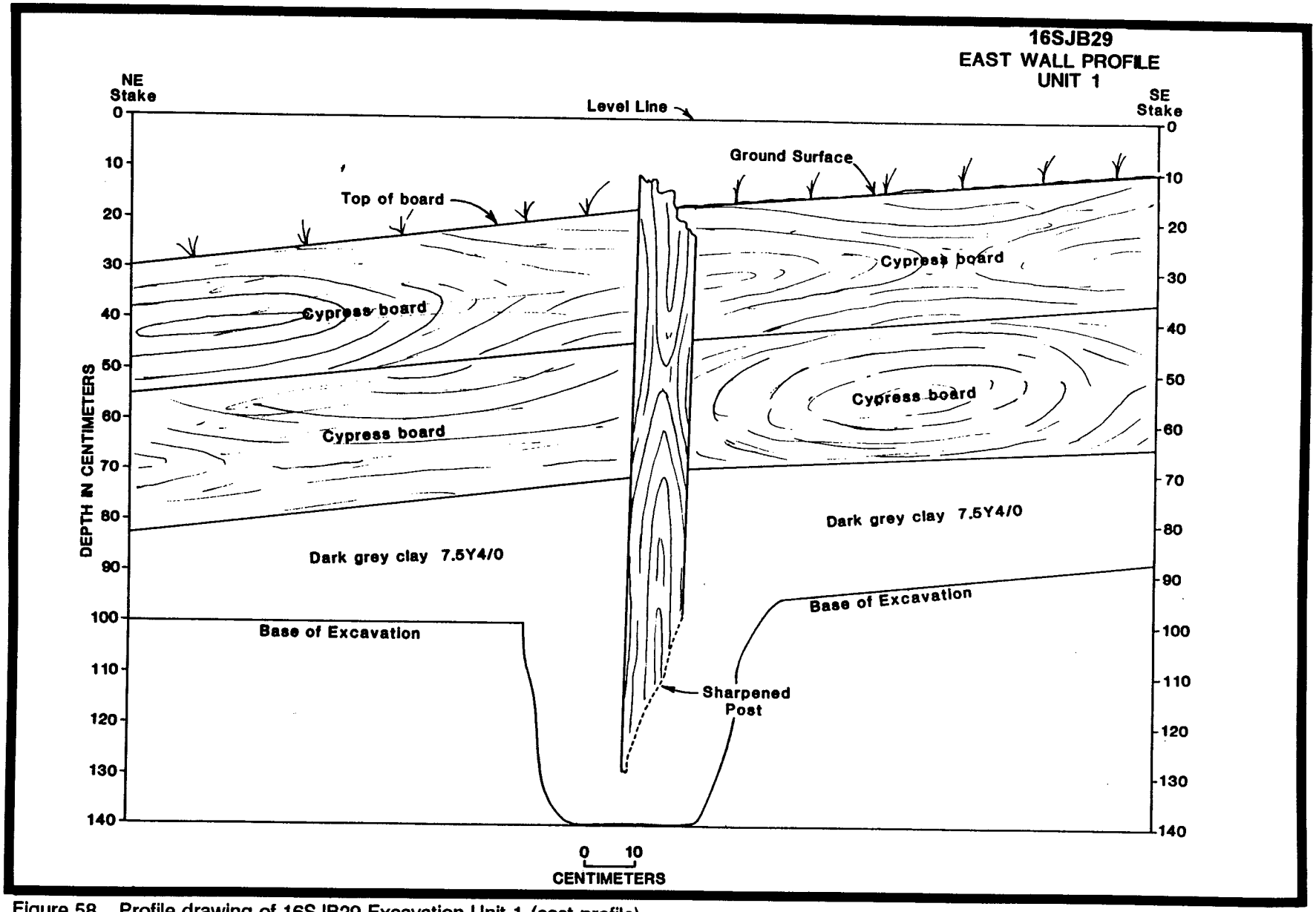


Figure 58. Profile drawing of 16SJB29 Excavation Unit 1 (east profile).

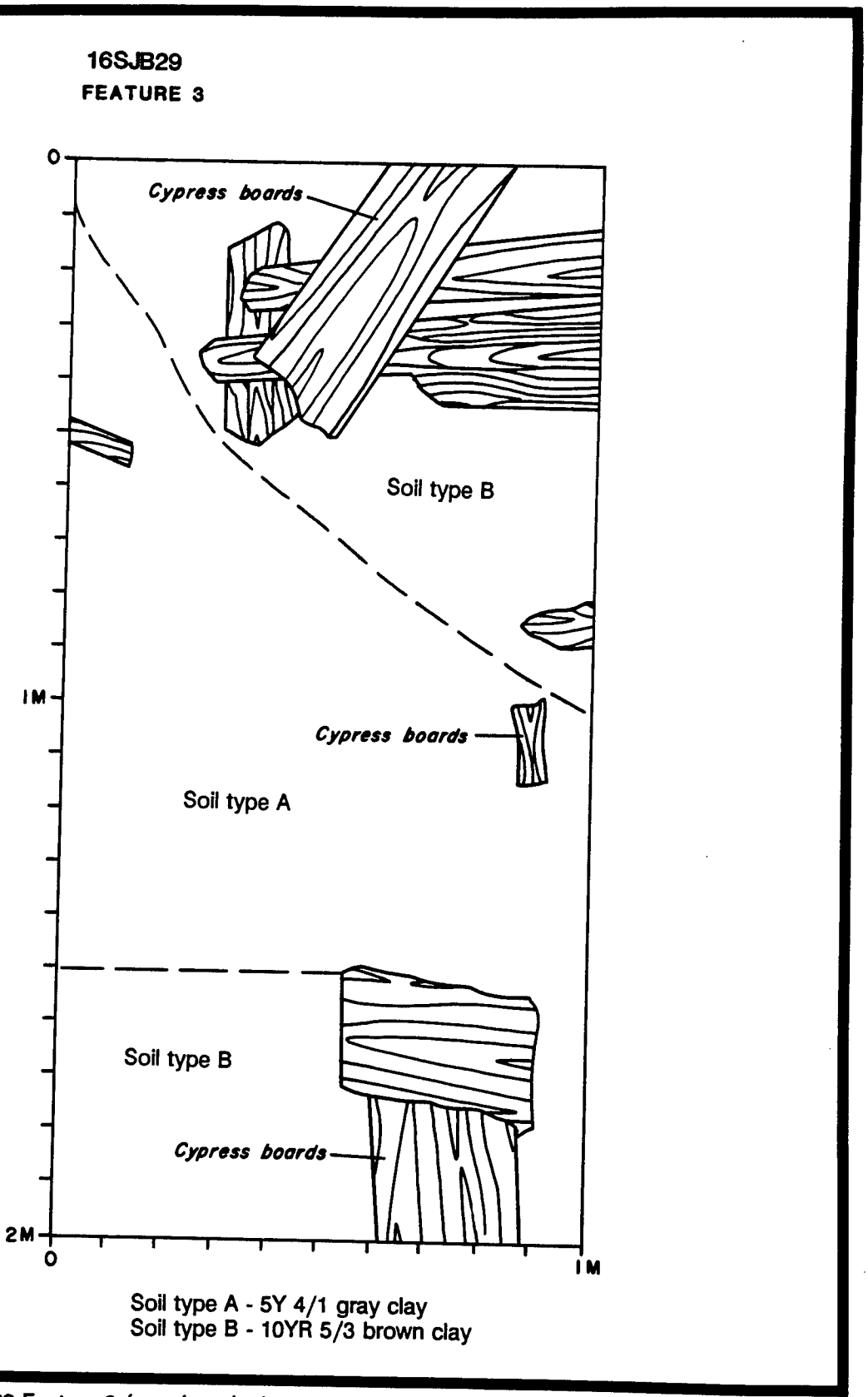


Figure 59. 16SJB29 Feature 3 (wooden plank structure).

Data recovery excavations conducted at the site in 1988 demonstrated that Features 2, 3, and 4 represented portions of a late nineteenth to early twentieth century rice irrigation flume system. River water would flow through a square wooden water intake into a rectangular wooden box located at the southern end of the flume. From there, it was pumped over the artificial levee to irrigate river rice fields. Feature 1 was interpreted as the possible remains of an earlier rice flume system. Results of the data recovery excavations at 16SJB29 are discussed elsewhere (Goodwin et al. 1989).

16SJB30

Site 16SJB30 originally was identified during the 1984 National Park Service survey (Shafer, Clemensen, and Rhodes 1984). A total of 25 artifacts collected from this site were suggested to represent nineteenth century surface scatter of artifacts. The historic materials collected include: brick, slag, annular ware, whiteware, pearlware, stoneware, shell, ferrous nodules, porcelain, horse teeth, and bottles dating from the late nineteenth century to ca. 1924.

In 1987, R. Christopher Goodwin & Associates, Inc., reinvestigated Site 16SJB30. This site is a linear deposit of late prehistoric and late nineteenth to mid-twentieth century historic artifacts located on the bankline of the Mississippi River (Figure 60). The site is located on a cutbank of the Mississippi River approximately 50 m (164 ft) east (azimuth 90°) of 16SJB37. The horizontal extent of the site is large, curving 30 m (98.4 ft) across its north/south axis and 115 m (377.3 ft) across its east/west axis. Erosion and redeposition may have contributed to the present distribution of artifacts in a linear pattern along the cutbank. The vertical extent of cultural material below the surface did not exceed 150 cm (59 in).

Artifacts collected from the surface of the cutbank include pearlware, porcelain, transfer printed ironstone, yelloware, whiteware, redware, creamware, asbestos shingle fragments, mortar, brick fragments, milk glass, bottle glass fragments, a metal box knife, brass clock parts, square cut spikes, modified wood fragments, oyster shells, coal fragments, and a "Jax" beer can. Artifacts from this collection date from 1800 to the present. Many are nineteenth century historic artifacts, although all identified glass recovered during the surface collection of 16SJB30 is twentieth century machine made bottle glass. The functional classification of materials from the surface collection includes: Kitchen group (91.7 percent), Architecture group (5.3 percent), Furniture group (0.7 percent), Clothing group (0.7 percent), and Activities group (0.7 percent). The Furniture, Clothing, and Activities groups have one element each. They are clock parts, a porcelain button, and a shovel part.

Two Mississippi Plain, *var. Pocahontas*, sherds were located on the surface of this site. This ware type dates from the terminal Mississippi period into historic contact (Phillips 1970).

Auger testing at 16SJB30 was designed to determine the vertical and horizontal dimensions of the site. A total of eight auger tests, excavated to depths of between 1.35 and 1.5 m (4.4 and 4.9 ft) below surface, were placed strategically along five rays originating at the site datum (Figure 60). Three auger tests yielded artifacts. On ray 200° in auger test 1, there was modern refuse from 0 to 25 cm (0 to 9.8 in) below the surface. On ray 155° in auger test 2, there was one small historic sherd in the silt loam. On ray 232° at 47 m (154.2 ft) from the site datum, a metal fragment was found 60 cm (23.6 in) beneath the surface. Soils data and color descriptions are provided for all eight auger tests in Figure 61. A total of six ecofacts and artifacts were recovered during auger testing.

Functional analysis results indicate that 66.6 percent of the artifacts recovered represent Kitchen group elements. These items include two oyster shell fragments, a tin can fragment, and pieces of glass. The one Architecture (16.7 percent) group item is a piece of window glass. The Personal group assemblage (16.7 percent) also consists of only one item, a plastic perfume bottle labelled "Avon, Occur,

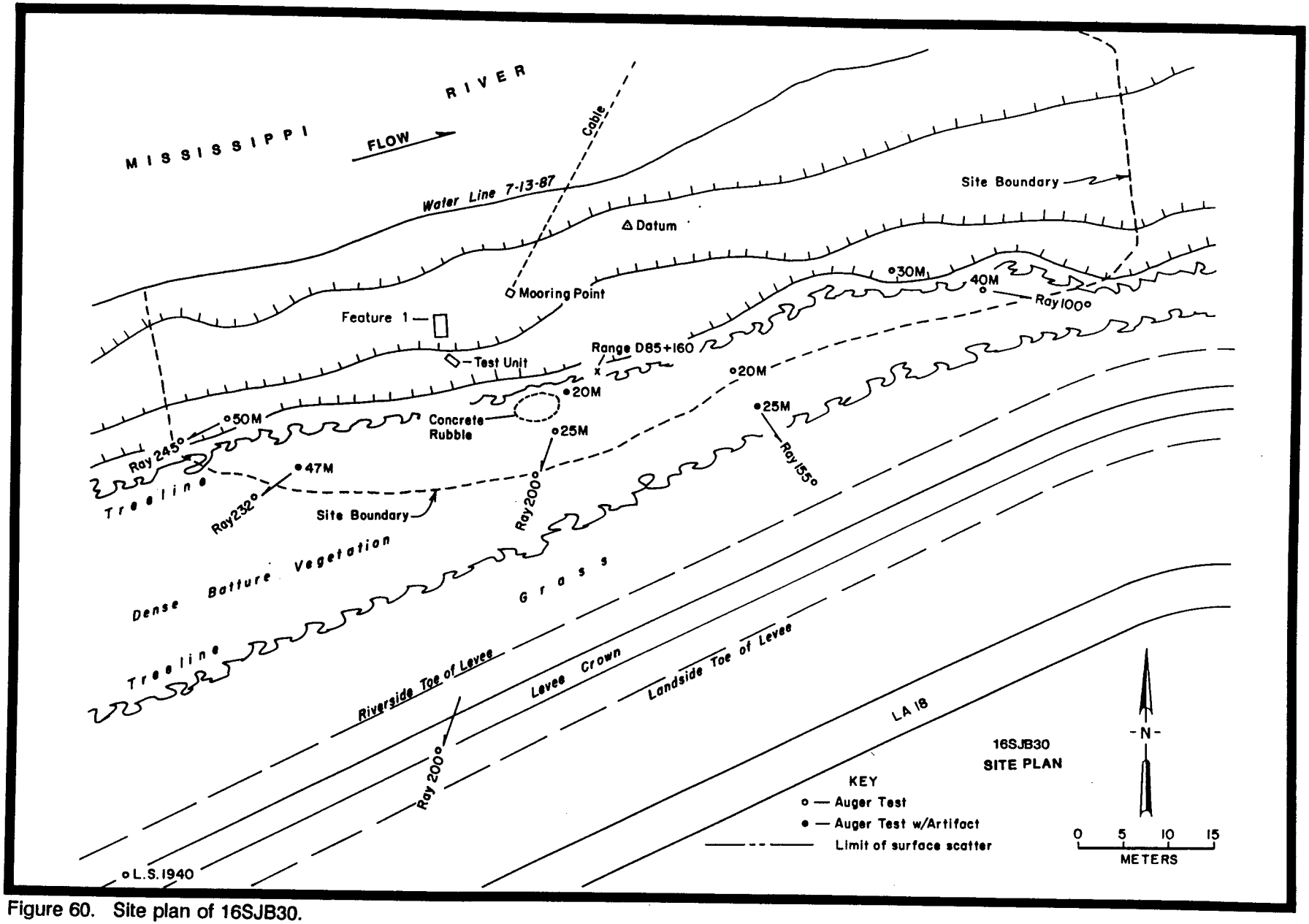


Figure 60. Site plan of 16SJB30.

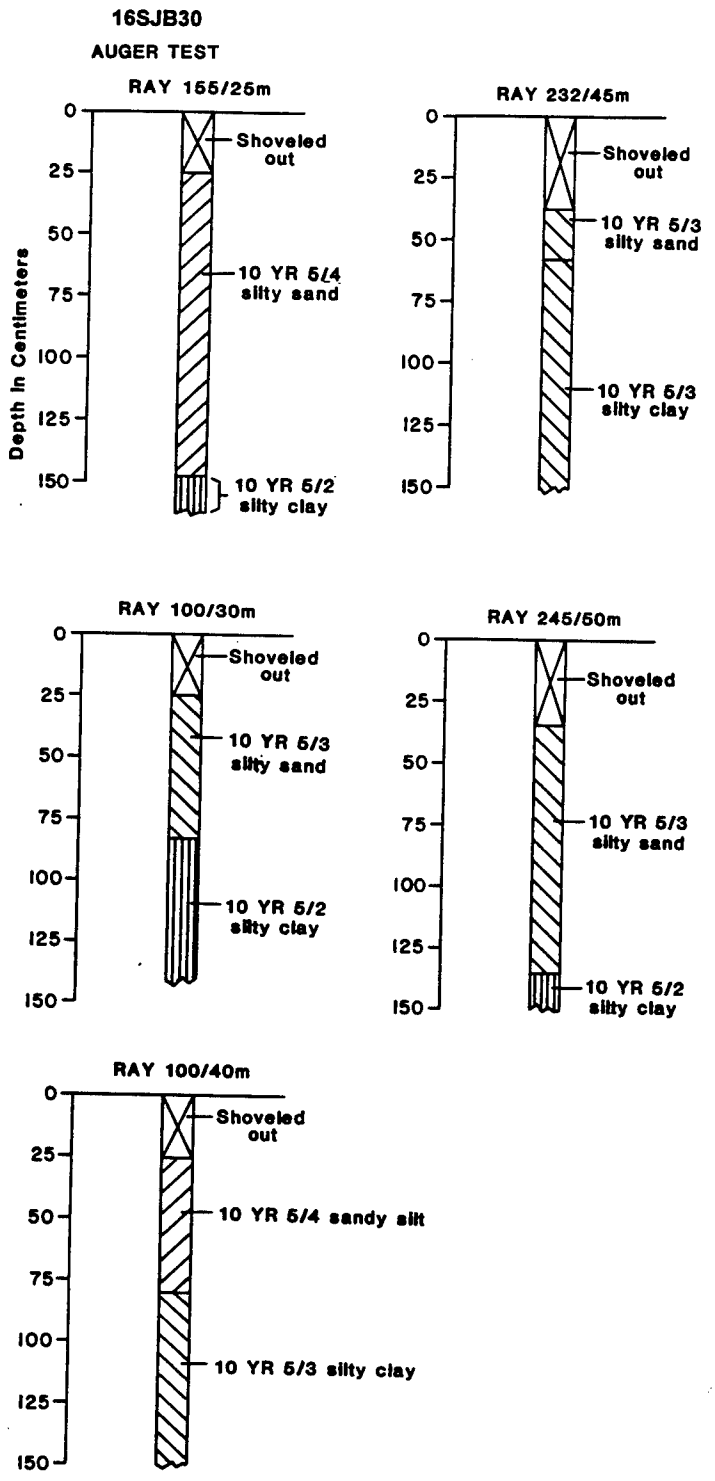


Figure 61. Profile drawing of 16SJB30 auger tests.
Sheet 1

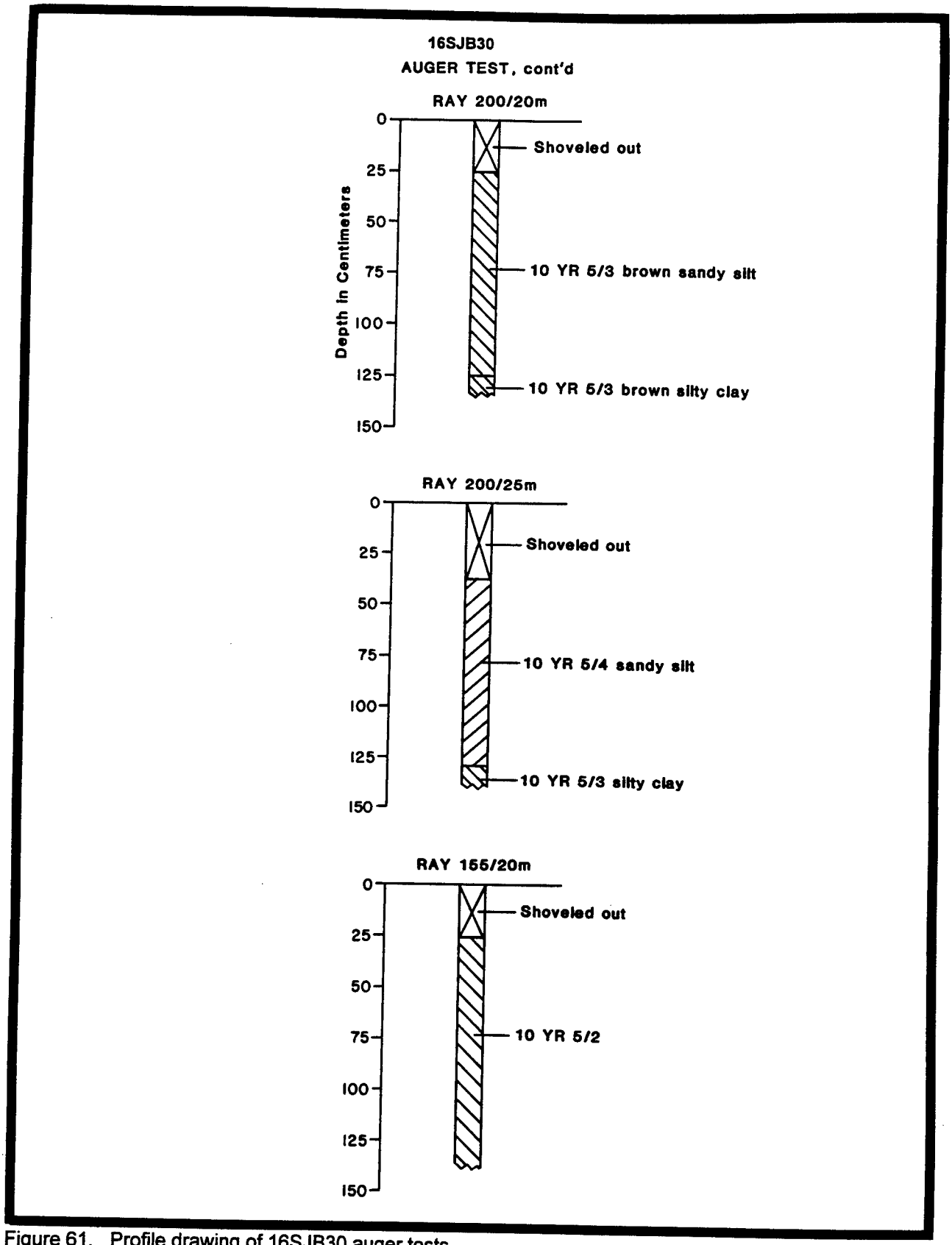


Figure 61. Profile drawing of 16SJB30 auger tests.
Sheet 2

Cologne Mist." No other date specific information was obtained from these artifacts. From the results of the auger tests, it is apparent that no evidence of intact subsurface cultural deposits exists at the site.

A 1 x 2 m (3.3 x 6.6 ft) unit, test unit A, was placed 25 m (82 ft) southwest (azimuth 235°) of the site datum. This excavation was designed to expose occupation surfaces, to obtain associated artifacts, and to retrieve stratigraphic information. The north wall stratigraphic profile is shown in Figure 62, and the west wall stratigraphic profile is shown in Figure 63. Neither occupational levels nor intact cultural deposits were identified during the course of this excavation. A lens-shaped deposit of brick and mortar was observed between 130 and 160 cm (51.2 and 63 in) below datum in both the north and west profiles. This deposit is secondarily deposited levee fill, and as such, it does not constitute an intact cultural deposit. Artifacts from the combined proveniences of test unit A at 16SJB30 collectively were subjected to functional analysis. Three functional groups were identified: Kitchen (9.1 percent), Architecture (84.1 percent), and Activities (2.3 percent). Kitchen group artifacts included oyster shells, a cast iron skillet part, and two pieces of bottle glass. Architectural items consisted primarily of brick fragments, with one miscellaneous timber fragment. The concentration of brick rubble represents structural debris, but the lack of structural integrity prohibits specific interpretation.

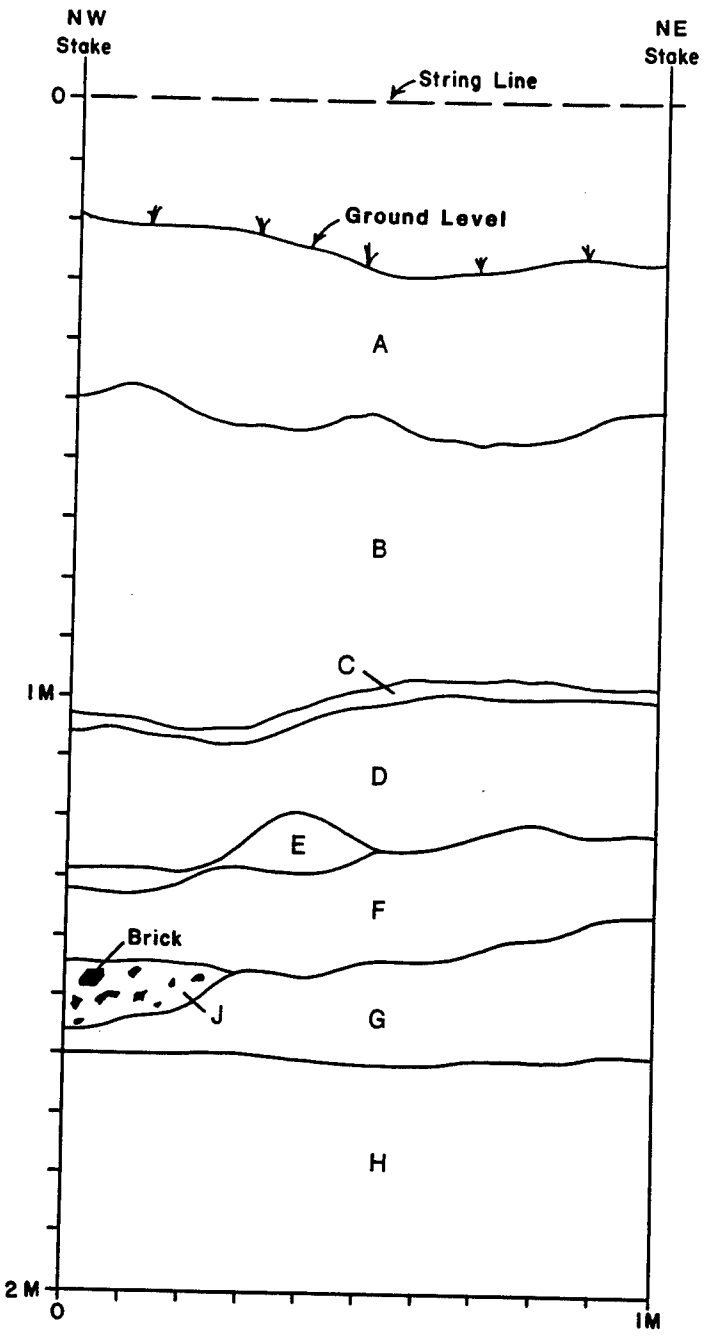
Feature 1 at Site 16SJB30 consists of four cypress slab boards set upright into the cutbank (Figure 64). The working hypothesis that this feature is a privy did not withstand field investigation. A small 50 x 50 cm (19.7 x 19.7 in) test was placed on the eastern edge of the slab boards. Excavation within this area to a depth of 50 cm (19.7 in) failed to produce any evidence of structural integrity or artifacts. In addition, auger tests (Figures 65 and 66) placed within and outside of the feature did not allow confirmation of this structure as a privy. Thus, no evidence was obtained that would indicate that this feature functioned as a privy. It was concluded that there was not enough structural evidence to determine the precise function of Feature 1.

Both the surface scatter and the feature present at Site 16SJB30 lack contextual integrity. No intact cultural deposits have been located at the site. The research potential of surface artifacts is limited severely by this lack of context. Since these materials are redeposited, it is not possible to interpret site function. Thus, no additional archeological investigations are recommended at 16SJB30.

16SJB31

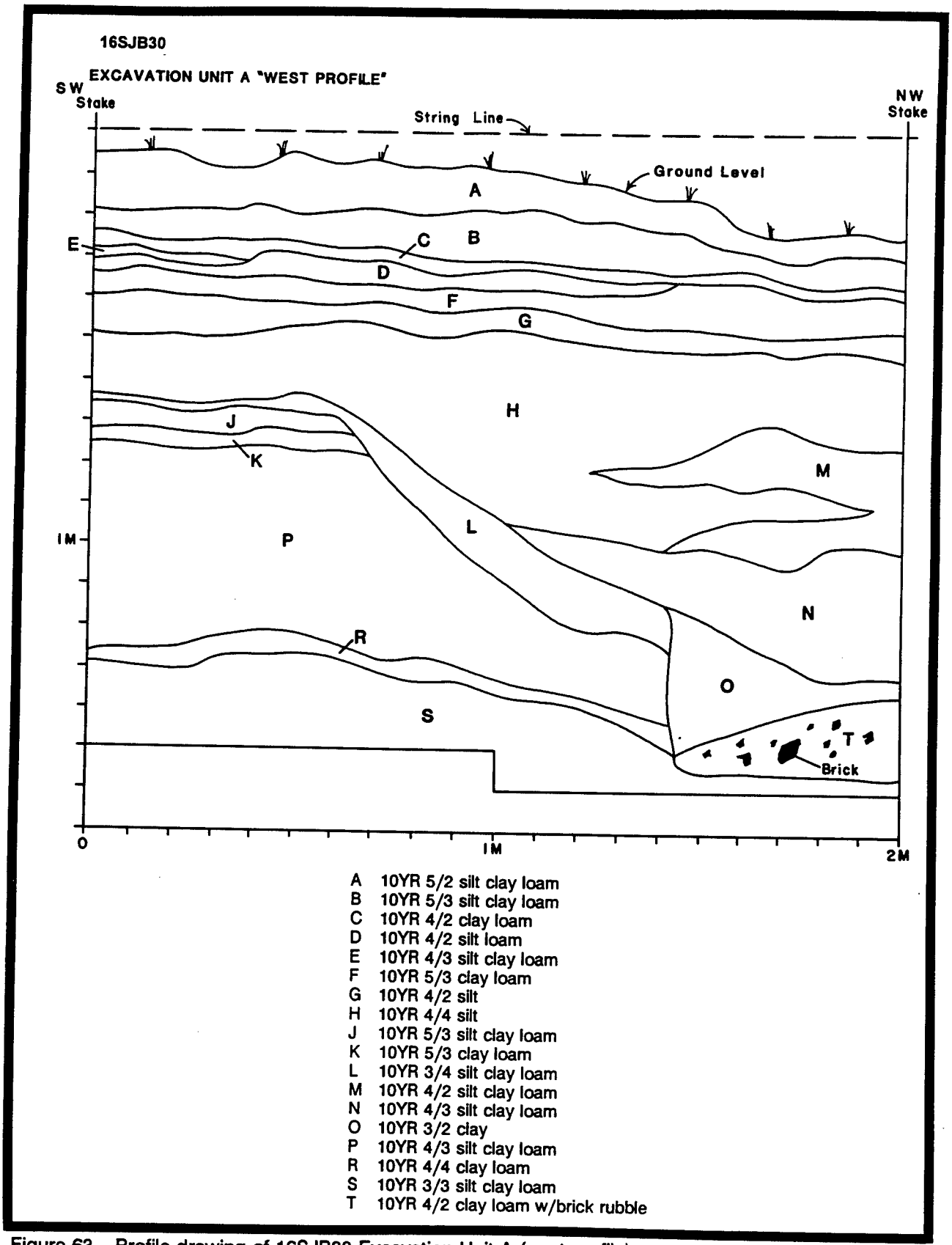
Site 16SJB31 first was identified in 1984 during the pedestrian archeological survey conducted by the National Park Service. The area and dimensions of the site covered 7.6 m (25 ft) north/south by 32.9 m (108 ft) east/west. This site was described as an historic artifact scatter, with a thick 45.7 cm (18 in) band of dark silt in the bluff edge. The material observed at the site consisted of brick and lime mortar, bone, annular ware, edge decorated blue and purple transfer prints, whiteware, flow blue whiteware, and ferrous nodules. Based on the type and diversity of artifacts represented, the National Park Service interpreted the function of the site as domestic. They viewed the site as potentially significant based on its potential for undisturbed deposits (Shafer, Clemensen, and Rhodes 1984).

During the 1987 field investigation conducted by R. Christopher Goodwin & Associates, Inc., Site 16SJB31 was defined as a linear deposit of prehistoric and historic artifacts, located on the beach and bank of the Mississippi River (Figures 4 and 67). The site is located on a steep cutbank approximately 200 m (656.2 ft) to the west (azimuth 270°) of 16SJB37. The horizontal extent of the site is small, covering 30 m (98.4 ft) across its north/south axis, and 50 m (164 ft) across its east/west axis. Erosion and redeposition may have contributed to the present distribution of artifacts in a linear pattern along the beach. Cultural materials were not found below the surface of the site in any of the tests performed, but they could be observed in a thick gray zone of silt exposed on the vertical face of the bluff. The site datum was tied into Levee Marker Stations 268 and 269.



A 10YR 5/2 silt loam
B 10YR 5/3 silt clay loam
C 10YR 4/3 silt clay loam
D 10YR 5/4 clay silt loam
E 10YR 5/1 clay
F 10YR 4/3 silt clay loam
G 10YR 4/1 levee fill clay
H 10YR 4/3 silt clay loam
J 10YR 4/2 clay loam w/brick rubble

Figure 62. Profile drawing of 16SJB30 Excavation Unit A (north profile).



A 10YR 5/2 silt clay loam
B 10YR 5/3 silt clay loam
C 10YR 4/2 clay loam
D 10YR 4/2 silt loam
E 10YR 4/3 silt clay loam
F 10YR 5/3 clay loam
G 10YR 4/2 silt
H 10YR 4/4 silt
J 10YR 5/3 silt clay loam
K 10YR 5/3 clay loam
L 10YR 3/4 silt clay loam
M 10YR 4/2 silt clay loam
N 10YR 4/3 silt clay loam
O 10YR 3/2 clay
P 10YR 4/3 silt clay loam
R 10YR 4/4 clay loam
S 10YR 3/3 silt clay loam
T 10YR 4/2 clay loam w/brick rubble

Figure 63. Profile drawing of 16SJB30 Excavation Unit A (west profile).

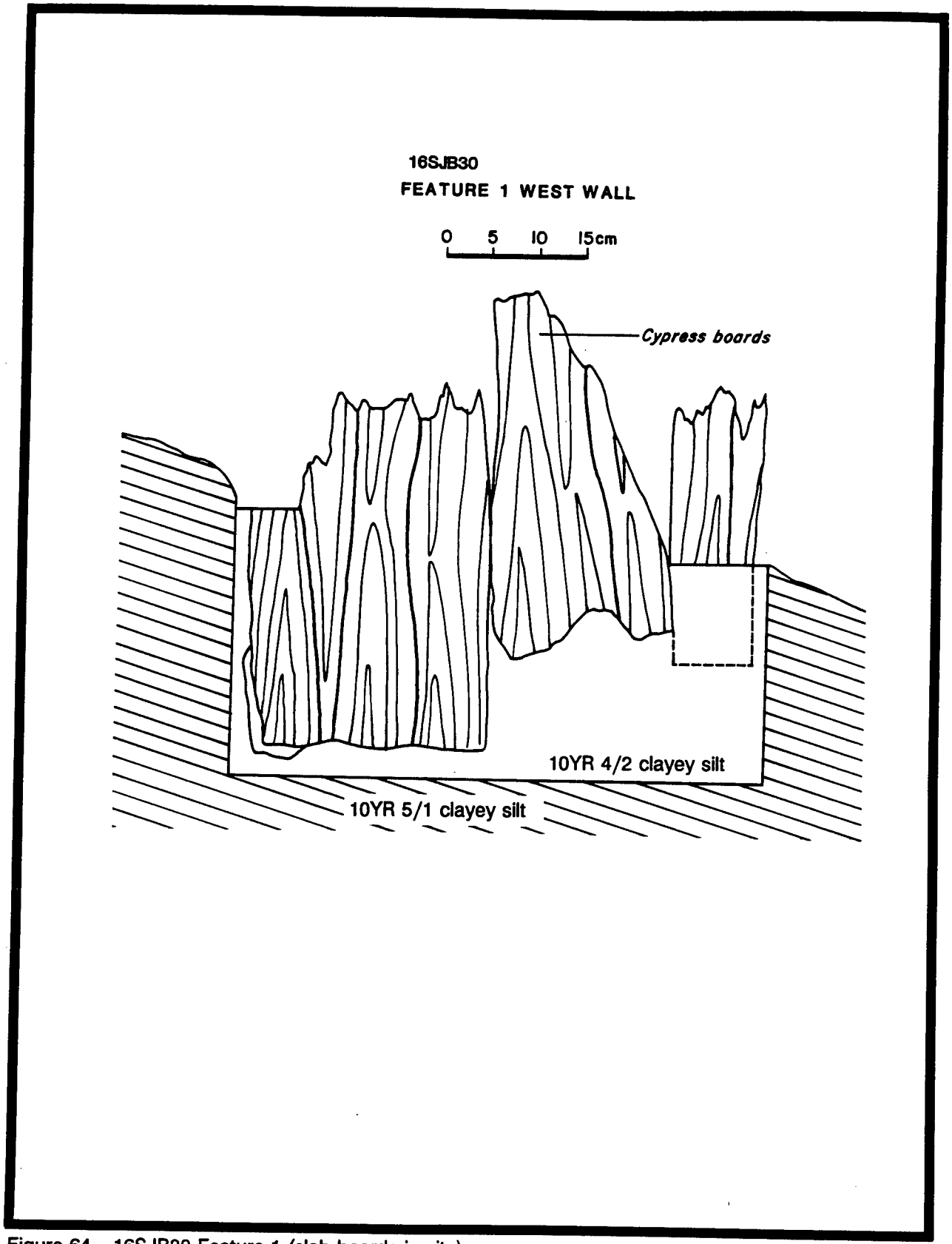


Figure 64. 16SJB30 Feature 1 (slab boards in situ).

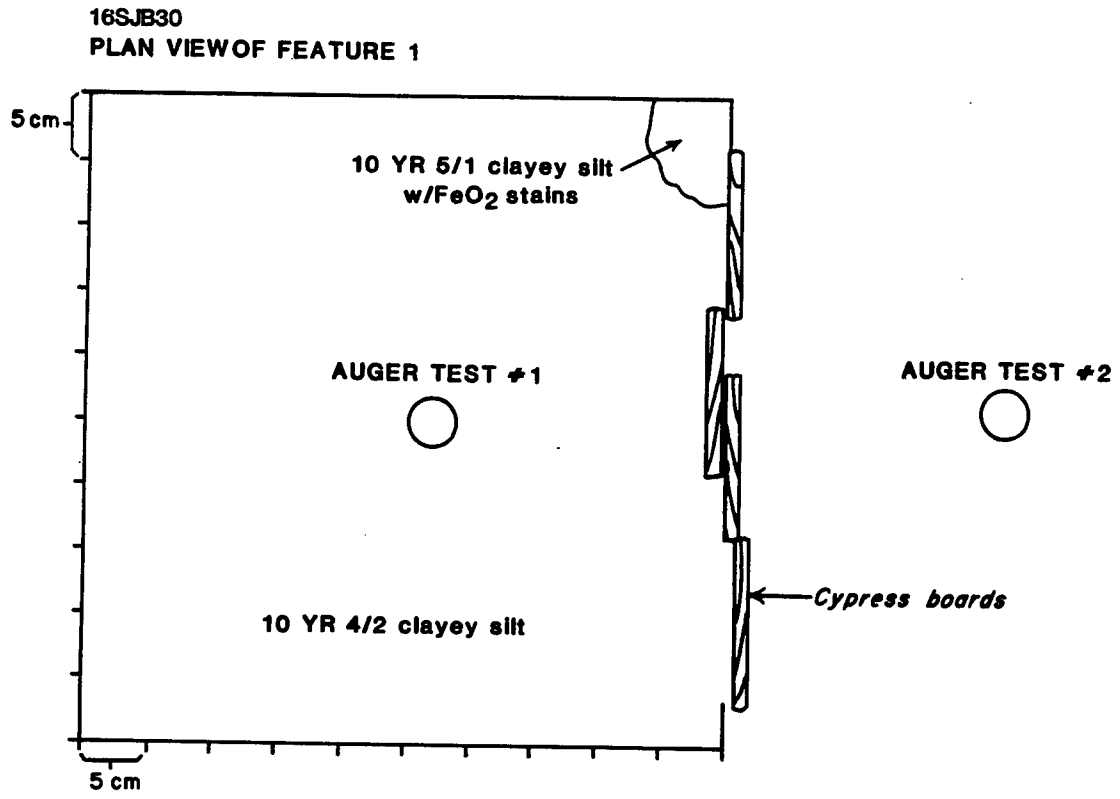


Figure 65. Plan view of Feature 1 at 16SJB30 showing the placement of auger tests 1 and 2.

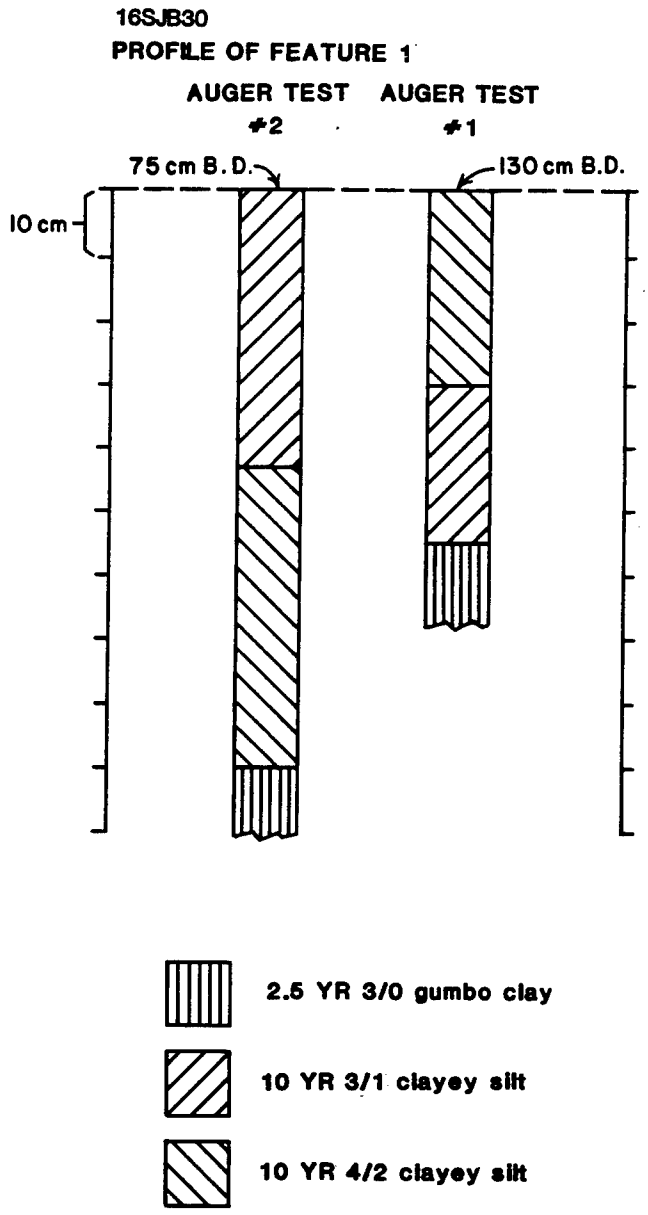


Figure 66. Profile drawing of 16SJB30 Feature 1 auger tests 1 and 2.

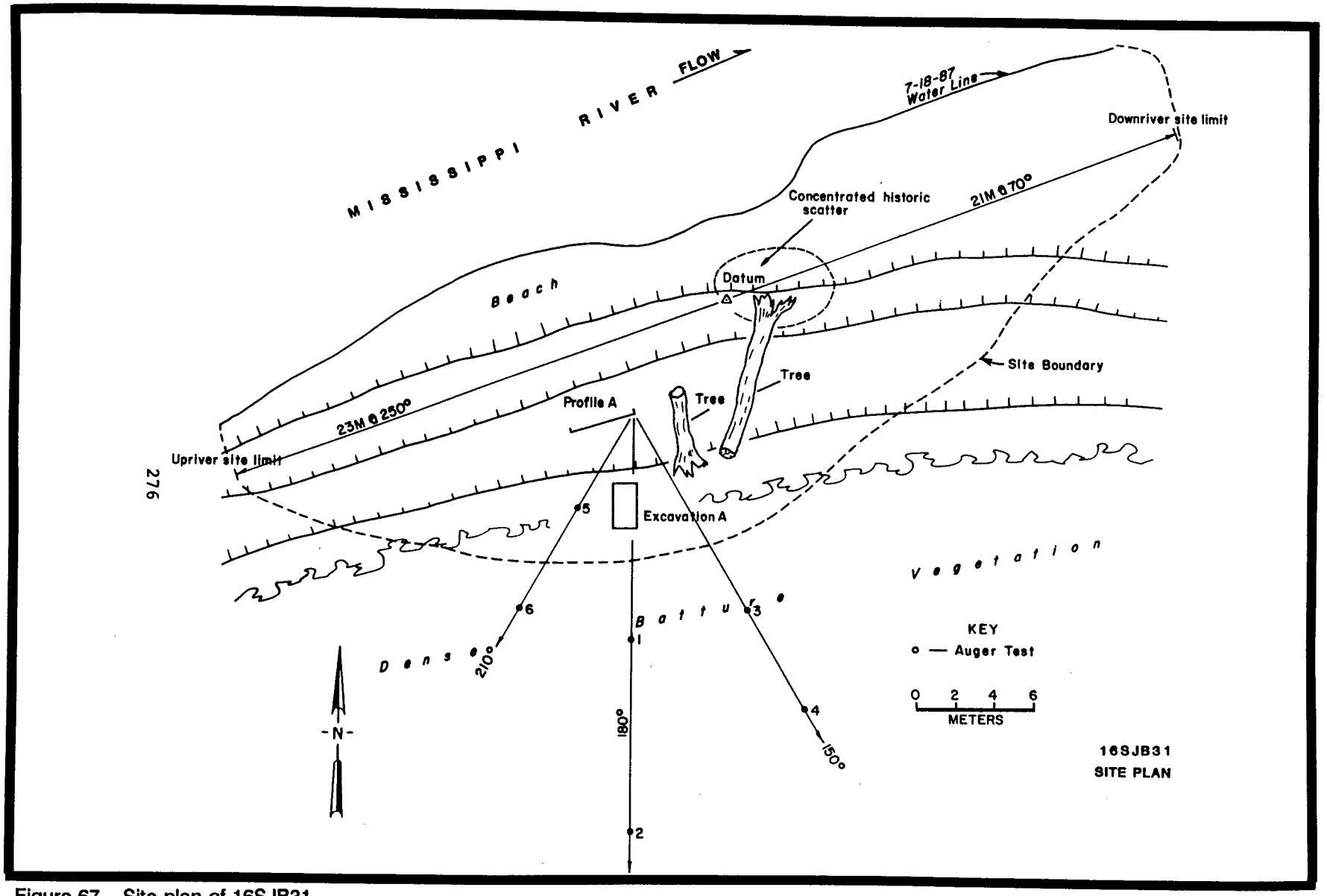


Figure 67. Site plan of 16SJB31.

Historic artifacts collected from the surface of the site date from the ca. 1790s to the 1880s. Artifacts collected from the site include English mocha pearlware, whiteware, creamware, ironstone, pearlware, redware, lead shot, an English gun flint, a Kaolin pipe stem fragment, a porcelain marble, a metal faucet, and a tin glazed apothecary jar. These artifacts give substantial evidence of a nineteenth century domestic site. The five functional classes that comprise the collection of historic artifacts recovered from the surface scatter at 16SJB31 are Kitchen group (87.6 percent), Architecture group (1.9 percent), Arms group (5.6 percent), Tobacco group (1.9 percent), and Activities group (1.9 percent). An additional 1.9 percent of the material could not be classified functionally. The variability in ceramic types indicates substantial food preparation and service. Items such as a porcelain marble suggest the presence of a child or children. A gun flint and the lead shot denote hunting or defense activities. A ball clay pipe stem represents a leisure activity.

Prehistoric artifacts collected from the surface at 16SJB31 included 2 Addis Plain, *var. unspecified*, and 1 Bell Plain, *var. St. Catherine*, sherds. Addis Plain typically dates from the Mississippi period and may date as late as protohistoric/contact times (Neitzel 1983). Bell Plain, *var. St. Catherine* is identified as a terminal Mississippi period ware (Phillips 1970).

Auger testing at Site 16SJB31 was designed to determine the possible extent of the horizontal and vertical dimensions of subsurface cultural deposits. A total of six auger tests excavated to a depth of between 80 cm (31.5 in) and 1.4 m (4.6 ft) below the surface were placed strategically across the surface of the site, along rays extending from the northeast stake of Profile A (Figure 68). All six auger tests failed to recover additional cultural remains.

A stratigraphic profile cleaned along the bankline (Figure 69) illustrates the placement of a band of gray (10YR 5/1) road fill on top of a former bankline surface 80 to 90 cm (31.5 to 35.4 in) below datum. Nail and brick fragments are contained within the matrix of this fill. Two overbank deposits, a culturally sterile, dark grayish brown (10YR 4/2) clay loam, Stratum B, and a very dark gray (10YR 3/1) clay, Stratum A, have been deposited on top of the roadbed.

One 1 x 2 m (3.3 x 6.6 ft) unit was placed on the banktop 3.8 m (12.5 ft) due south of the northeast stake of Profile A (Figure 67). The north wall stratigraphic profile is shown in Figure 70, and the west wall stratigraphic profile is shown in Figure 71. Neither occupation levels, nor intact cultural deposits were identified during the course of this excavation. No evidence of intact cultural deposits exists on the site. Since the surface scatter present at 16SJB31 lacks sufficient integrity to contribute to the understanding of man's use of the Mississippi River, and its natural levee through time, revetment construction will not create adverse effects to any significant cultural resources at this site.

16SJB37

Site 16SJB37 is a linear deposit of late prehistoric and mid-nineteenth to late twentieth century historic artifacts located on the bankline of the Mississippi River (Figures 4 and 72). The site is located approximately 50 m (164 ft) due west (azimuth 90°) of 16SJB30. The horizontal extent of the site is large, covering 20 m (65.6 ft) across its north/south axis and 150 m (492.1 ft) across its east/west axis. The site is a dense surface scatter of late prehistoric and historic artifacts deflating down an eroded section of the bankline. Barge moorings and associated cables periodically alter the bankface. This disturbance has exposed and displaced many artifacts. In addition, erosional processes have scoured the landward slope of the banktop. These processes have resulted in the redeposition of artifacts in a linear configuration along the banktop, cutbank, and beach. The vertical extent of cultural material did not extend below the site's surface.

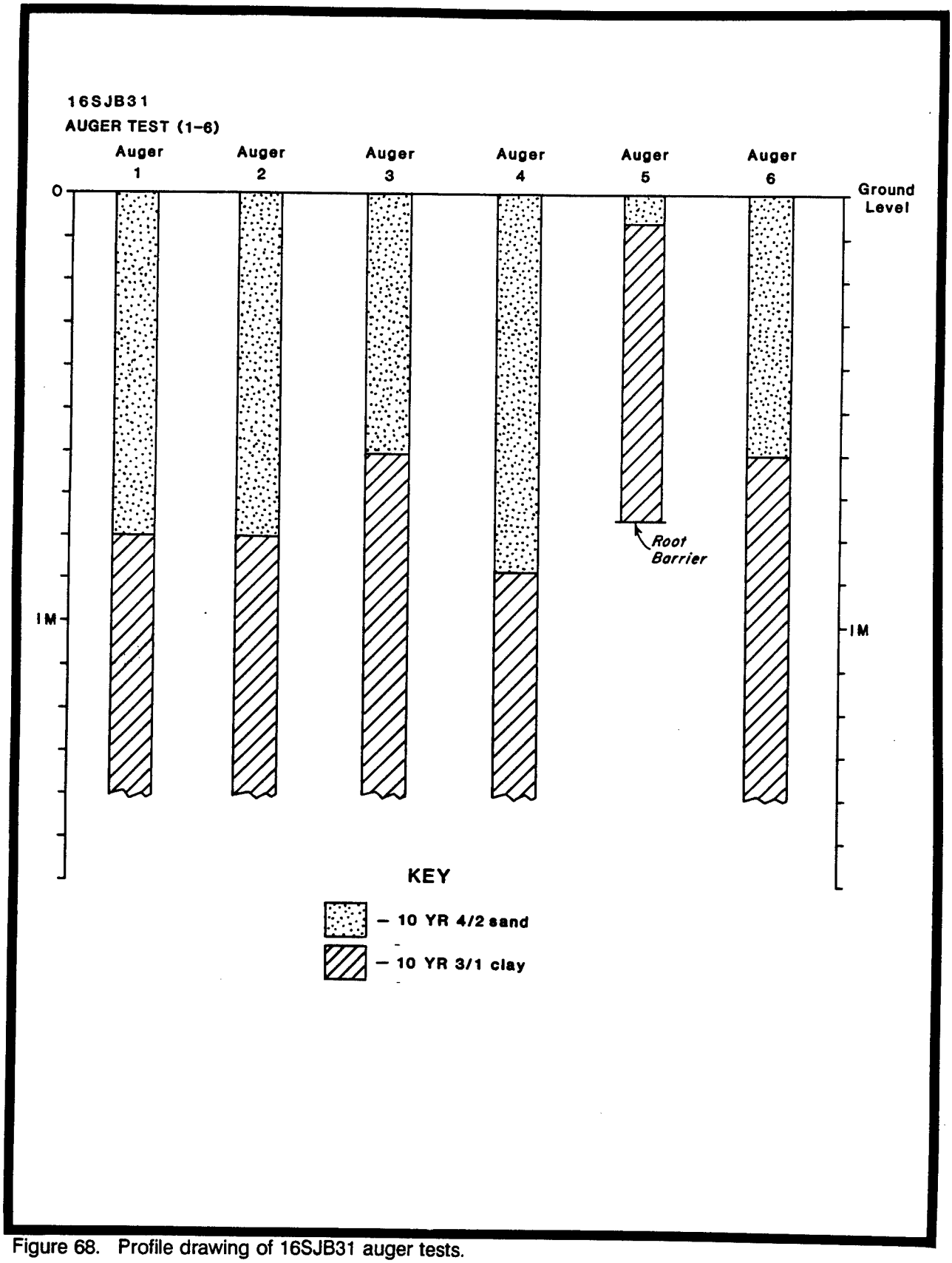
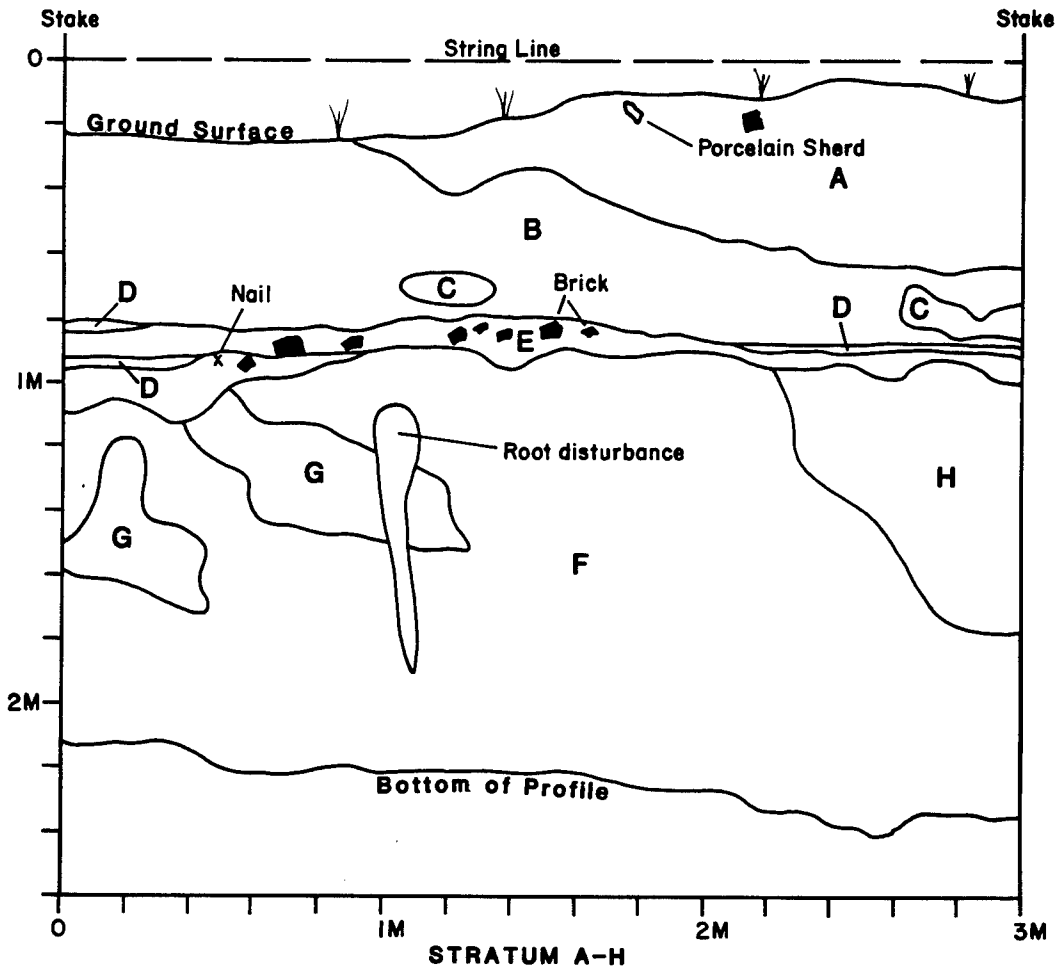
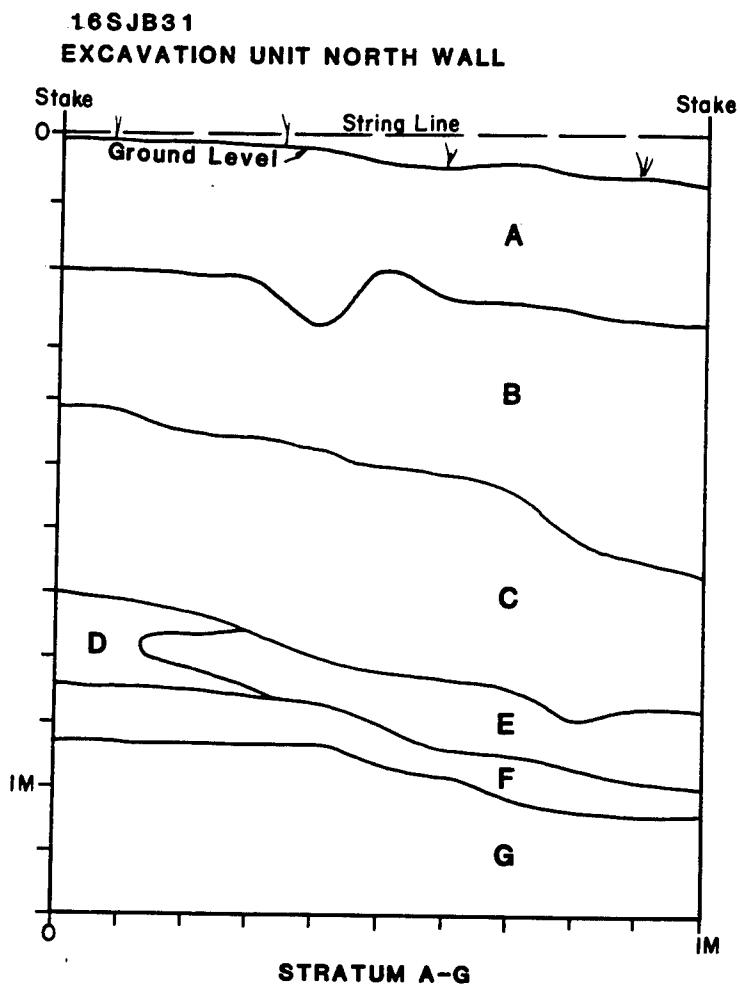


Figure 68. Profile drawing of 16SJB31 auger tests.



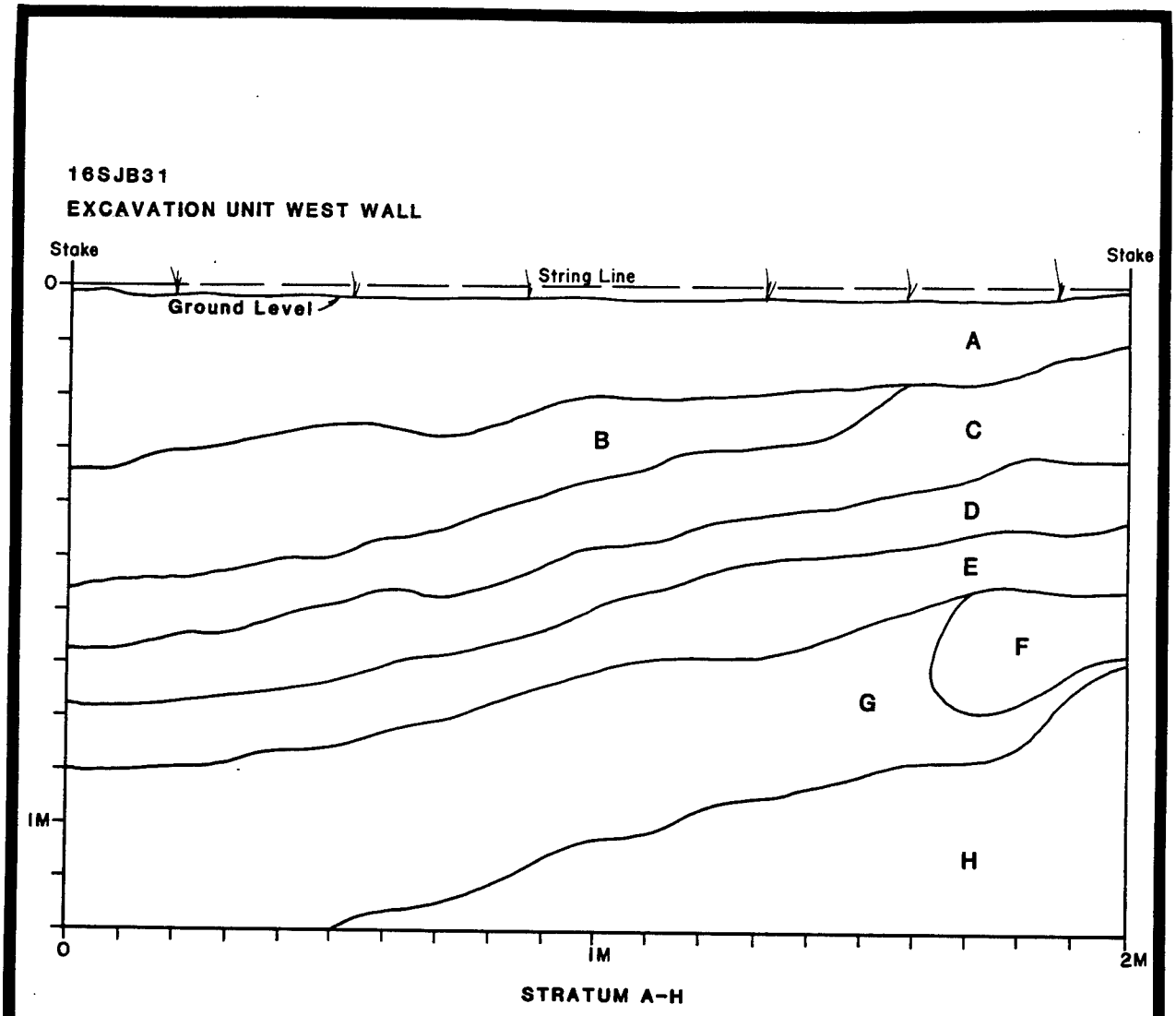
A 10YR 3/1 very dark gray clay
B 10YR 4/2 dark grayish brown mottled clay loam
C 10YR 3/1 very dark gray clay
D 10YR 5/3 silt loam
E 10YR 5/1 clay loam
F 10YR 4/1 clay
G 10YR 5/3 silt loam
H 10YR 5/3 clay silt loam

Figure 69. Drawing of 16SJB31 bluff edge stratigraphic profile.



A 10YR 3/3 silt clay loam
B 10YR 3/3 clay loam, blocky and granular
C 10YR 5/4 silt loam
D 10YR 5/3 silty clay loam
E 10YR 4/2 clay
F 10YR 5/3 silty clay loam
G 10YR 4/1 clay

Figure 70. Profile drawing of 16SJB31 Excavation Unit A (north profile).



A 10YR 5/3 sand
B 10YR 4/2 silt clay loam
C 10YR 4/1 clay loam, heavy Fe oxidation
D 10YR 3/1 clay loam, heavy Fe oxidation
E 10YR 4/1 clay loam
F 10YR 5/4 silt loam
G 10YR 3/2 clay, fine and dense
H 10YR 3/2 silty clay loam, crumbly

Figure 71. Profile drawing of 16SJB31 Excavation Unit A (west profile).

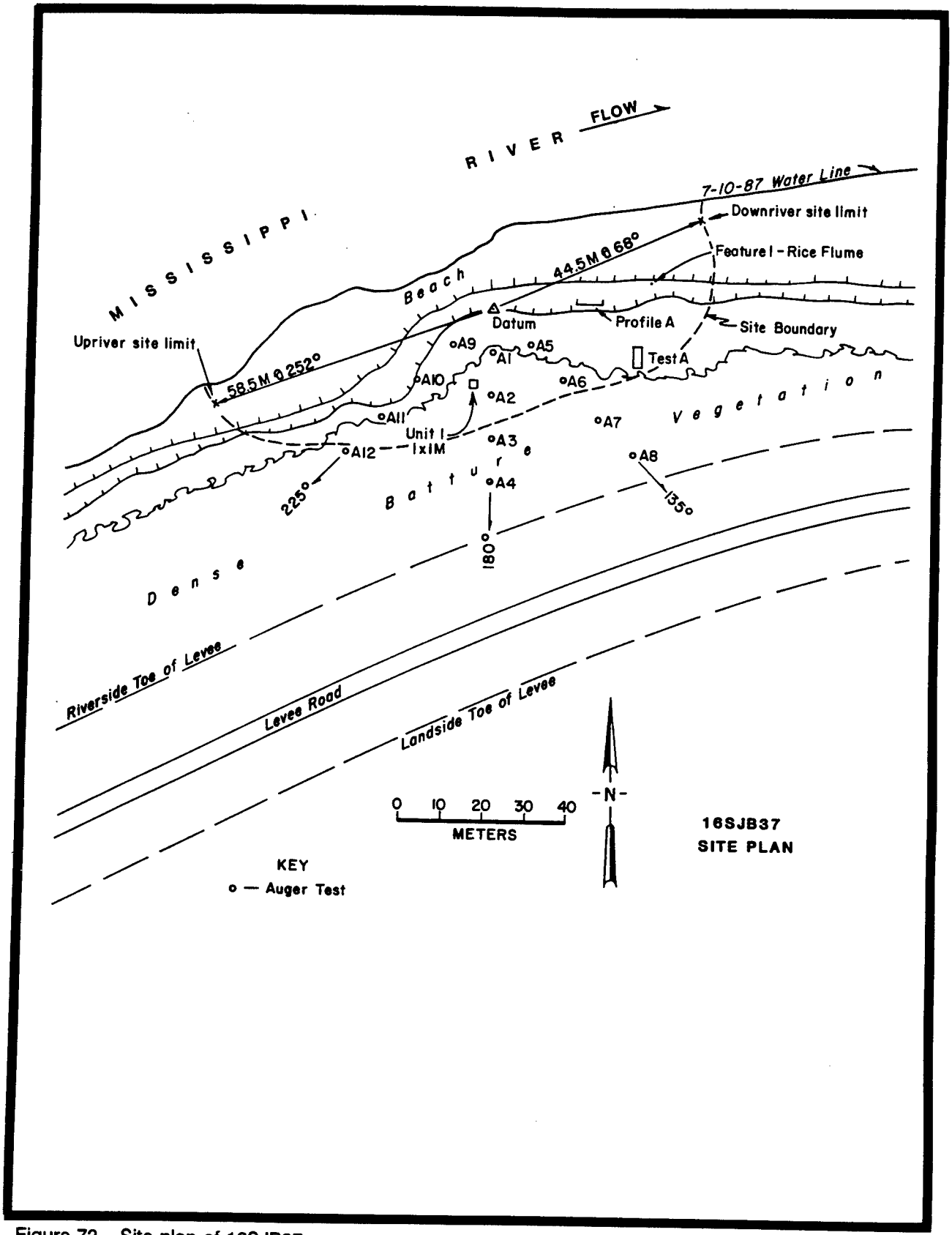


Figure 72. Site plan of 16SJB37.

The 224 historic artifacts collected from the surface of the site date from 1825 to the present. Historic artifact categories include: bottle fragments, tableware, window glass fragments, ceramic tiles, mortar and brick fragments, machine cut nails, pieces of coal, pieces of slate, oyster shells, iron hoe, and axe blades, iron railroad spikes, iron kettle parts, .25 caliber center fire cartridges, size 3 buckshot, earthenware, transfer printed pearlware, whiteware, soft and hard paste porcelain, domestic stoneware, yelloware, ironstone, and redware. Approximately 96 percent of surface collected materials from 16SJB37 could be classified according to function. The largest functional representation is within the Kitchen group (82.2 percent). However, artifacts from the Architecture (9.3 percent), Activities (3.1 percent), and Arms (1.3 percent) groups also are present. The cooking, food service, and food remains elements included in the Kitchen group supply firm evidence of food related activities. The architectural elements suggests the presence of a structure, but the function of that structure is unknown. A cultivating hoe and axe also are present. Activities related artifacts commonly are associated with a home site.

Seven historic ceramic types, representing 76 datable sherds, suggest a mid to late nineteenth century occupation at the site. One historic sherd bore the manufacturer's stamp "Burford Bros," an East Liverpool, Ohio pottery company in business from 1879 to 1904 (Lehner 1988). The presence of twentieth century glass within this otherwise nineteenth century assemblage may result from secondary deposition or recent riverbank usage. Other datable historic artifacts include cut nails (ca. 1790 - 1890s+) and two different types of nineteenth century bottle glass. If the presence of twentieth century machine made bottle glass can be attributed to secondary deposition, the temporal statistics for glass are comparable to those of the ceramics and nails.

The prehistoric component at 16SJB37 is represented by 28 sherds, which date from the Mississippi period. Included among these specimens are 7 Addis Plain, *var. unspecified*, 1 Avoyelles Plain, *var. Dupree*, 16 Baytown Plain, *var. unspecified*, 1 Fatherland Incised, *var. unspecified*, 2 Mississippi Plain, *var. Pocahontas*, and 1 unclassified sherd.

Auger testing at 16SJB37 was designed to determine the vertical and horizontal extent of subsurface cultural deposits (Figure 72). A total of 12 auger tests, excavated to depths of between 70 cm and 1.5 m (27.6 in and 4.9 ft) below surface, were placed at 10 m (32.8 ft) intervals along three transects oriented southeast (azimuth 225°) from the site datum (Figure 73). These site verification procedures provided additional information on the nature of subsurface deposits, but failed to recover additional cultural remains.

To investigate natural and cultural subsurface deposits, a 3 m (9.8 ft) long by 1.4 m (4.6 ft) deep bluff edge stratigraphic profile was cleaned along the bankline (Figure 74). A thorough examination of the profile revealed a narrow band of cultural debris that may represent a remnant of an historic levee road; the pre-1876 levee and its road formerly stood a short distance south of the modern river course, in the general vicinity of the bankline (Figure 16). This 10 cm (3.9 in) thick band of probable road fill, comprised of a gray (10YR 5/1) puddled clay (Stratum B), is present from 20 to 40 cm (7.9 to 15.7 in) below datum. Inclusions of secondarily deposited bone, bricks, shell, and charcoal fragments are found interspersed throughout this matrix.

Stratum C consists of 25 cm (9.8 in) of dark gray (10YR 4/1) culturally sterile silty clay located 40 and 60 cm (15.7 and 23.6 in) below datum. Finally, Stratum D, a very dark grayish brown (10YR 3/2) culturally sterile clay, is present 1.35 and 60 cm (.5 and 23.6 in) below datum. No evidence of intact subsurface cultural deposits exists in the profile.

One 1 x 2 m (3.3 x 6.6 ft) unit was placed on the landside slope of the bank. This test was designed to examine, in horizontal aspect, the probable historic roadbed; to retrieve stratigraphic information; and, to recover artifacts and ecofacts. A drawing of the north wall stratigraphic profile is shown in Figure 75. The adjoining west wall stratigraphic profile is shown in Figure 76.

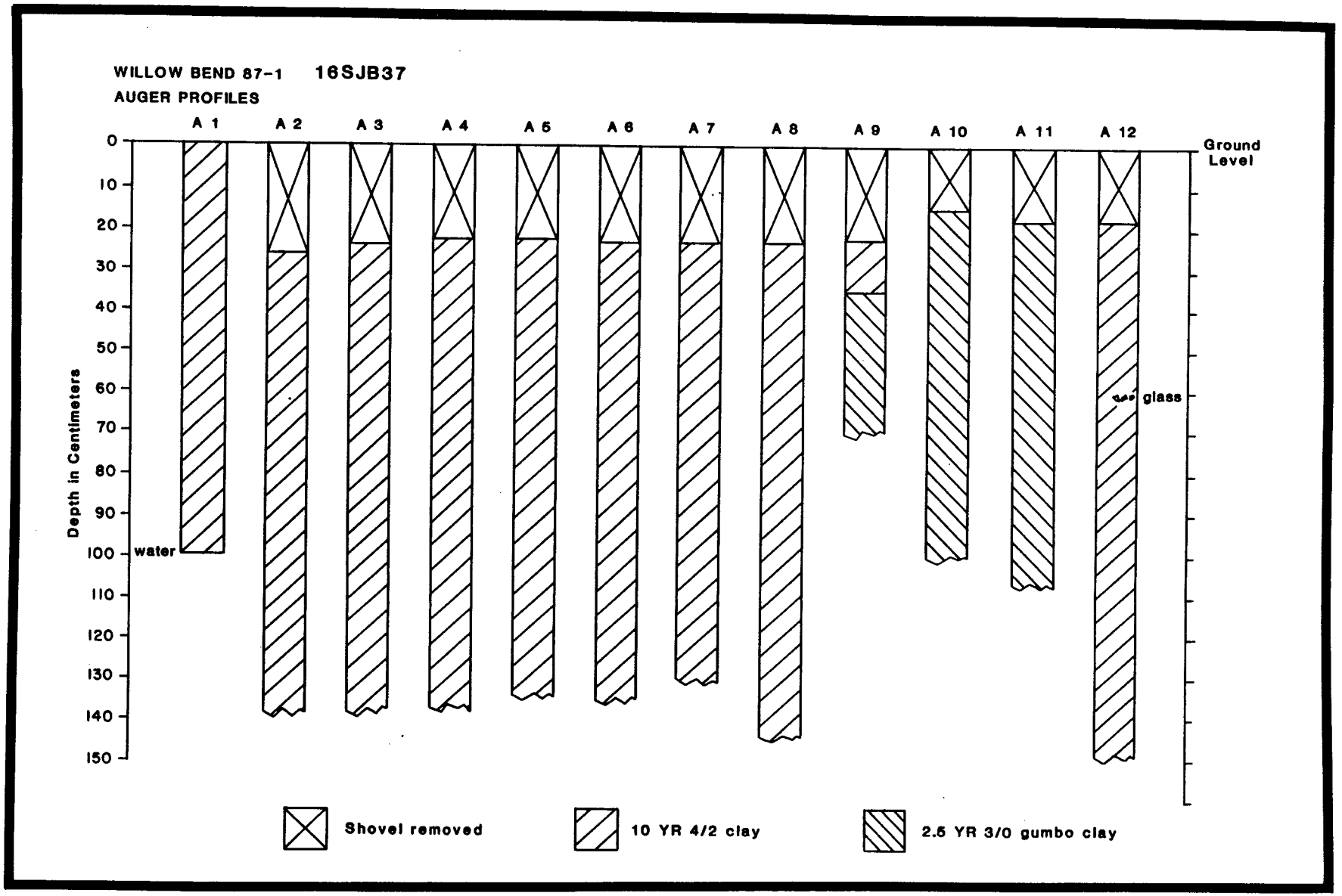
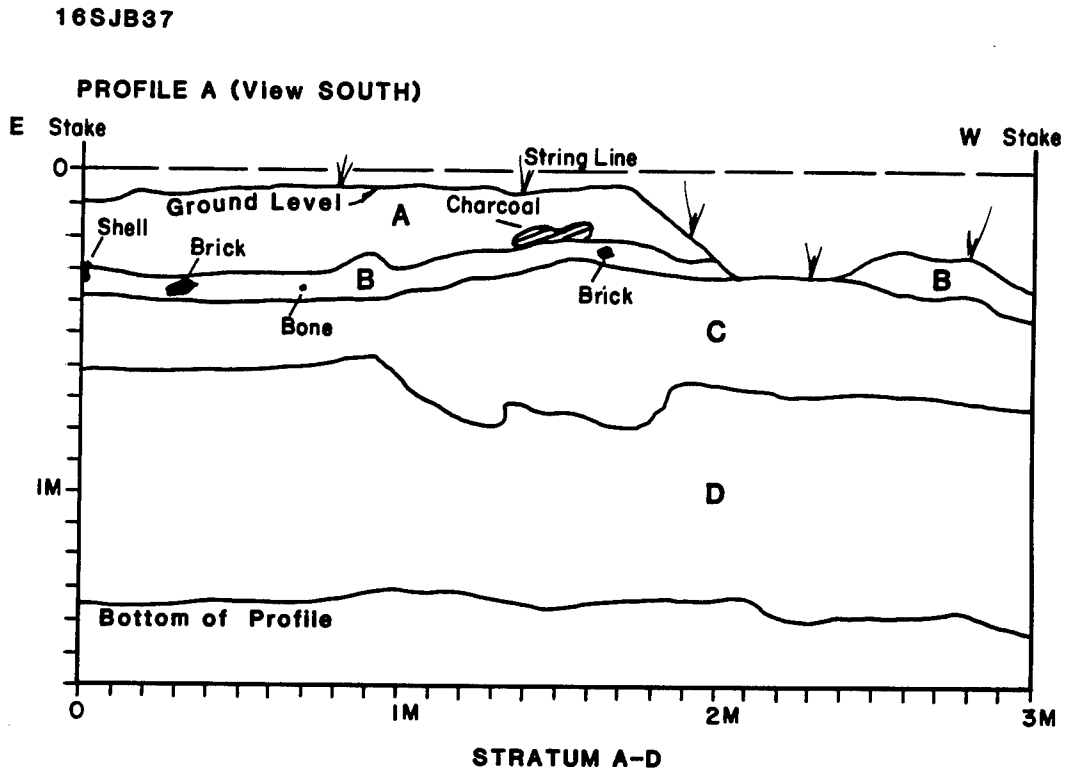
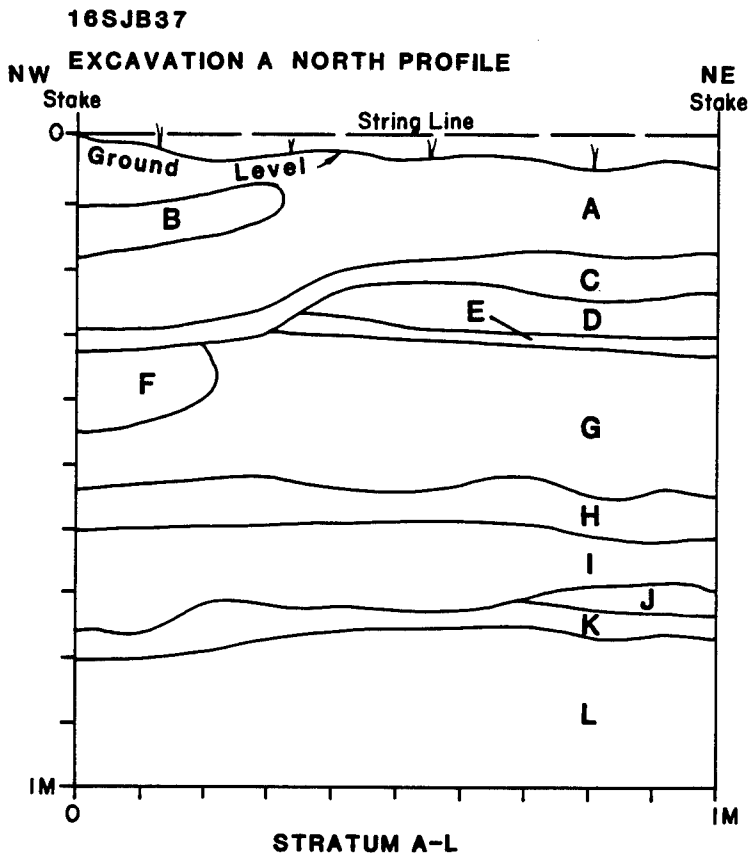


Figure 73. Profile drawing of 16SJB37 auger tests.



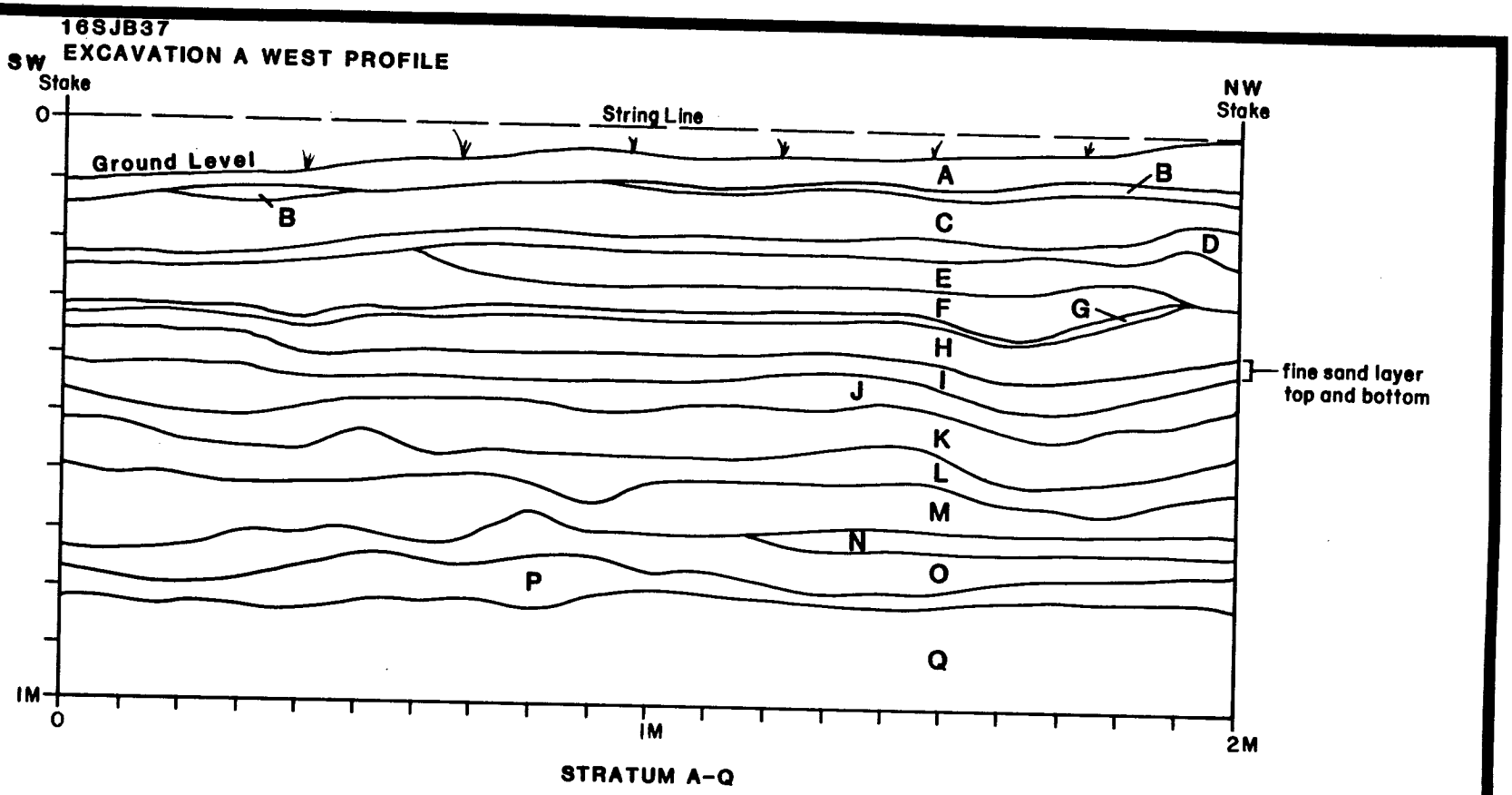
A 10YR 3/1 very dark gray silty clay
B 10YR 5/1 gray puddled clay
C 10YR 4/1 dark gray silty clay
D 10YR 3/2 very dark grayish brown clay

Figure 74. Drawing of 16SJB37 bluff edge stratigraphic profile.



A 10YR 4/3 silty clay loam
B 10YR 5/4 sand
C 10YR 3/2 clay loam
D 10YR 4/2 sandy clam loam
E 10YR 4/2 sand
F 10YR 2/1 silt loam with much organic matter
G 10YR 4/2 clay loam
H 10YR 3/3 clay loam
I 10YR 4/2 clay loam
J 10YR 3/3 clay loam
K 10YR 4/3 clay loam
L 10YR 3/2 clay loam

Figure 75. Profile drawing of 16SJB37 Excavation Unit A (north profile).



A 10YR 5/3 silty loam
B 10YR 6/4 sand
C 10YR 4/4 sandy loam
D 10YR 3/3 clay loam
E 10YR 3/2 clay loam
F 10YR 3/3 sandy clay loam
G 10YR 4/3 sandy laom
H 10YR 3/3 sand loam; micro layer sand 7.5YR 4/4
I 10YR 4/2 sandy clay loam; micro layer sand 7.5YR 4/4
J 10YR 3/3 sandy clay loam
K 10YR 4/2 clay loam
L 10YR 4/3 clay loam
M 10YR 3/3 clay loam
N 10YR 3/3 clay loam
O 10YR 4/3 clay loam
P 10YR 3/3 clay loam
Q 10YR 3/2 clay loam

Figure 76. Profile drawing of 16SJB37 Excavation Unit A (west profile).

Within the north profile, Strata A through L represent culturally sterile, reworked overbank deposits of clay, loam, and sand. The edge of the road was not located in this area of the site, and no artifacts or ecofacts were observed. Along the top of the west profile, the landward slope of the batture surface may be observed. It was possible to record the stratigraphy in greater detail from this cross-sectional view of the banktop's landward slope. Within the west profile, Strata A through Q are culturally sterile, reworked overbank deposits of clay, loam, and sand. An examination of the strata within both profiles failed to shed additional light upon the nature of subsurface cultural deposits at Site 16SJB37. This finding reflects the disturbed nature of the reworked overbank deposits in this area of the batture.

An historic flume (Figure 77) of cypress board and cut, square nail construction was designated as Feature 1 at Site 16SJB37. This rectangular box structure is 66 cm (26 in) wide and 16 cm (6.3 in) in height. It protrudes from the cutbank for 1.2 m (3.9 ft) to the north. Above the flume, fissures have formed in the bank slope, delineating the outline of the trench used to set it in place. On its northern edge, the flume shows evidence of extensive battering, which has resulted in the displacement and splintering of several cypress boards. This flume is in poor and deteriorating condition.

No intact subsurface features, besides the road fill and flume described above, have been identified at 16SJB37. Additional elevational data obtained during the site tie-in portion of field investigations are significant here, because they shed further light on the nature of the erosional processes responsible for the redeposition of surface occurring artifacts (Figure 78). A coordinate tie-in was established for Site 16SJB37. The site datum was tied into Levee Marker Stations 269 and 270. The original occupation surface at the level of the banktop road, and for another 40 cm (15.7 in) beneath that level, appears to have been completely eroded from the batture. Therefore, prehistoric sherds present along the cutbank originally may have been *in situ* beneath the landward slope of the bank, at a depth shown as the "reference plane" in Figure 78. Such *in situ* deposits have scoured away over time, leaving the surface scatter. To test this working hypothesis, Unit 1, a 1 x 1 m (3.3 x 3.3 ft) unit (Figure 72), was placed on the crest of the banktop in an effort to expose evidence of a prehistoric midden in an unscoured portion of the site. Unit 1 was excavated in 10 cm (3.9 in) arbitrary levels. Level 3 was the last level to produce artifacts. All artifacts recovered were representative of the historic period. This test permitted recordation of the presence and extent of shallow subsurface remains on the banktop, but failed to produce any evidence of an underlying prehistoric component. Thus, the origin of the prehistoric materials at 16SJB37 is unknown; however, they appear to have been scoured out from the land side of the banktop and later incorporated into recent overbank deposits.

At 16SJB37, intact cultural deposits are absent in all portions of the site except along the crown of the bankline. The stratigraphic bluff edge profile placed on the north face of the bankline revealed that recent scouring and slumping of overbank deposits has redeposited artifactual remains along the slope, and at the base of the bank. Further erosion and redeposition may have contributed to the linear distribution of historic and prehistoric artifacts along the bank and shoreline. Given the resulting lack of contextual integrity for these artifacts, this site is not considered to possess sufficient information or integrity to contribute to the understanding of man's use of the Mississippi River and its natural levee through time.

Feature 1, a fragmented historic flume of cypress board and square nail construction, remains *in situ* within the matrix of the site's bankline. However, because of its poor condition and the presence in the region of numerous better exemplars (Goodwin et al. 1984), this architectural feature is not considered significant. Therefore, no further archeological investigations at 16SJB37 are recommended.

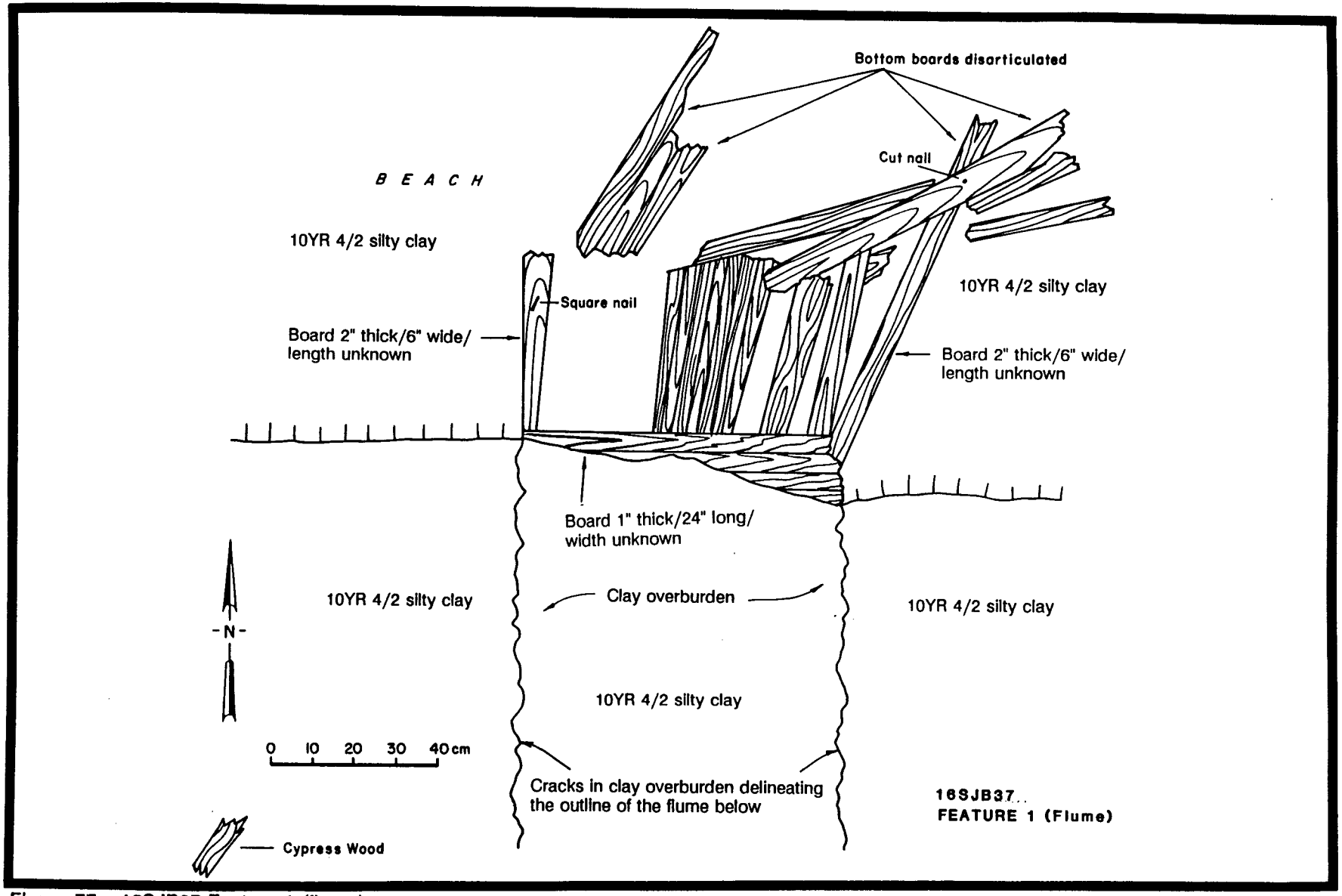


Figure 77. 16SJB37 Feature 1 (flume).

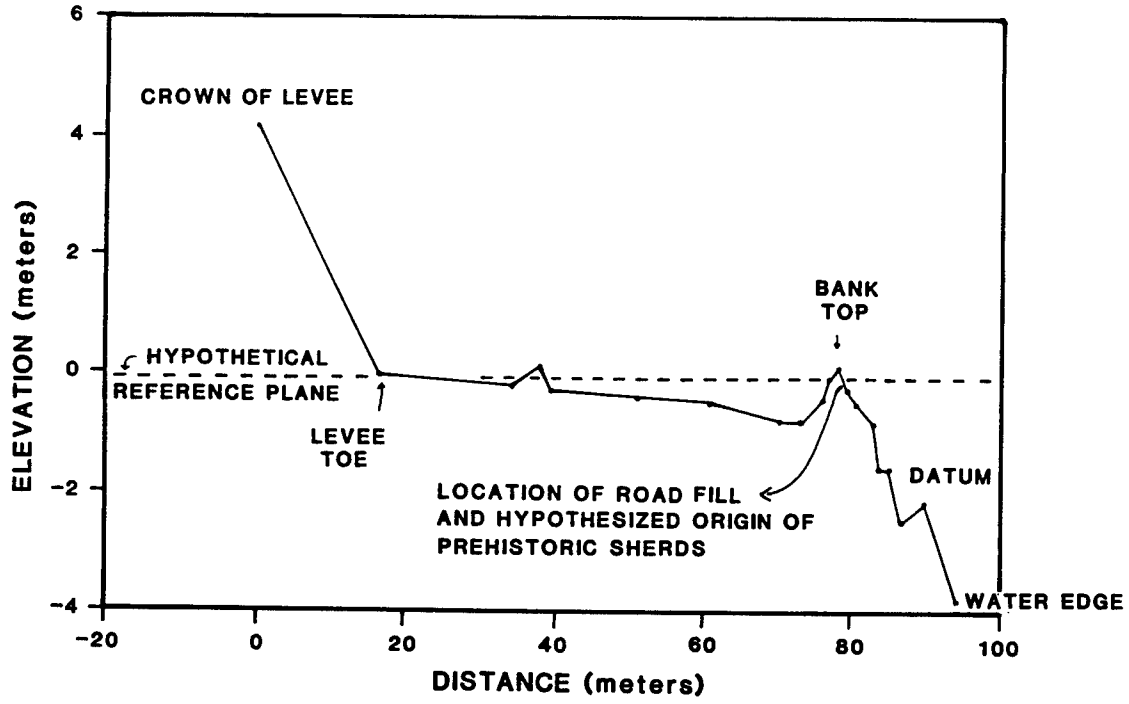


Figure 78. Elevational data from 16SJB37, showing a topographic profile from the levee crown to the water's edge.

Waterford Reach Sites

16SC55

Site 16SC55 is a linear deposit of late prehistoric and mid-nineteenth century historic artifacts located on the bankline of the Mississippi River (Figure 79). The site is located on a high bank approximately 300 m (984.3 ft) northwest (azimuth 292°) of 16SC56. The horizontal extent of the site is large, covering 30 m (98.4 ft) across its north/south axis and 150 m (492.1 ft) across its east/west axis. Erosion and redeposition may have contributed to the present distribution of artifacts in a linear pattern along the bankline.

Historic artifacts collected from the site date from 1795 to the present. Historic artifacts collected during a surface examination of the site include glass bottle fragments, a ball clay pipe bowl, whiteware, English mocha pearlware, ironstone ware, redware, and a school slate fragment. Four functional groups are reported in this surface collection. Kitchen group artifacts comprise 88.9 percent of the assemblage, and consist primarily of nineteenth century ceramics and glass. One Activities group artifact (3.7 percent), a porcelain marble, one Tobacco group artifact (3.7 percent), a ball clay pipe bowl, and one personal group (3.7 percent) artifact, a child's school slate, comprise the remainder of the assemblage. This surface collection contains artifacts typical of a nineteenth century habitation site. Six ceramic types contributed to the mean ceramic date of 1848. These types are transfer printed ware; whiteware; shell-edged, mocha, and transfer printed pearlwares; plain white ironstone; and stoneware ginger beer bottles.

In addition to the historic materials, 10 prehistoric sherds were collected. They include 1 Addis Plain, *var. Ratcliffe*, 2 Baytown Plain, *var. unspecified*, and 7 Baytown Plain, *var. Troyville* sherds. Baytown Plain, *var Troyville* ceramics date from ca. 600 - 800 A.D. (Phillips 1970), while the Addis Plain, *var. Ratcliffe* sherd can be attributed to the protohistoric to historic contact period (Neitzel 1983). All of these sherds were undecorated.

The subsurface examination of Site 16SC55 consisted of a systematic shovel and auger testing regime. Six shovel tests and two auger tests were placed across the batture to verify the horizontal extent of the site. The shovel tests were devoid of cultural remains, suggesting that the boundary of the site is confined to the beach and bankline. The origin of the surface artifacts is unknown; however, they appear to have been eroded and later incorporated into recent overbank deposits. Auger tests (Figure 79) produced evidence of historic artifacts to a depth of 20 cm (7.9 in) below surface.

Additional subsurface recordation included a 1 x 1 m (3.3 x 3.3 ft) unit placed at the banktop to locate subsurface cultural deposits, stratigraphy, cultural associations, and to obtain temporal data. A careful, controlled excavation demonstrated that the vertical extent of cultural material did not exceed 10 cm (3.9 in) below the surface within the area of Unit 1.

Because of riverine erosion, the contextual integrity of this mid-nineteenth century domestic habitation site has been destroyed. Given the resulting lack of contextual integrity for this artifact scatter, this site is not considered to possess sufficient information or integrity to contribute to the understanding of man's use of the Mississippi River, and its natural levee through time.

16SC56

Site 16SC56 is a linear deposit of late prehistoric and nineteenth century historic artifacts located on a low bank approximately 300 m (984.3 ft) southeast (azimuth 112°) of 16SC55 (Figure 80). The horizontal extent of the site is small, covering 10 m (32.8 ft) across its north/south axis and 70 m (229.7 ft) across its east/west axis. The site is a sparse concentration of prehistoric and historic artifacts along

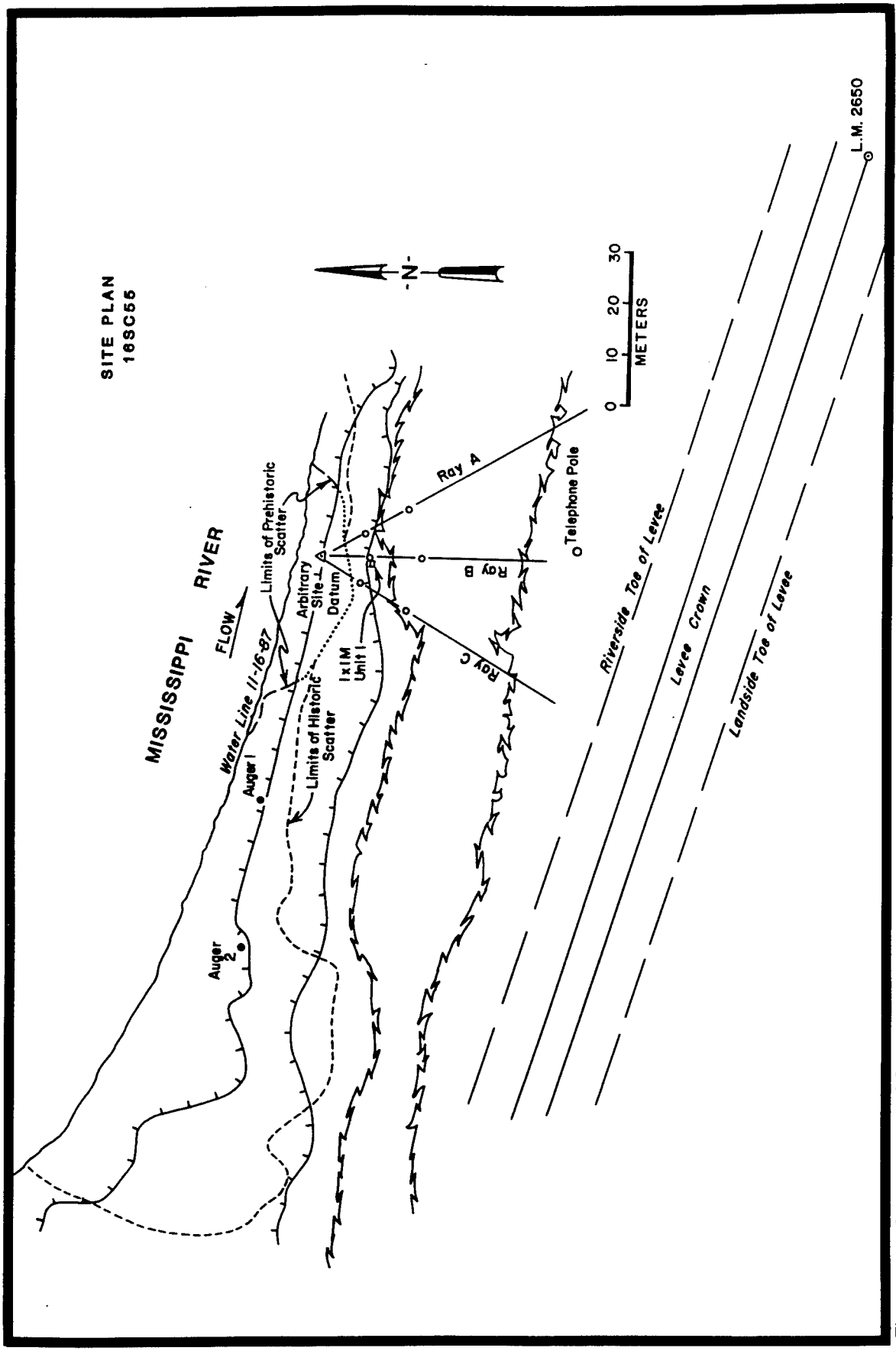


Figure 79. Site plan of 16SC55.

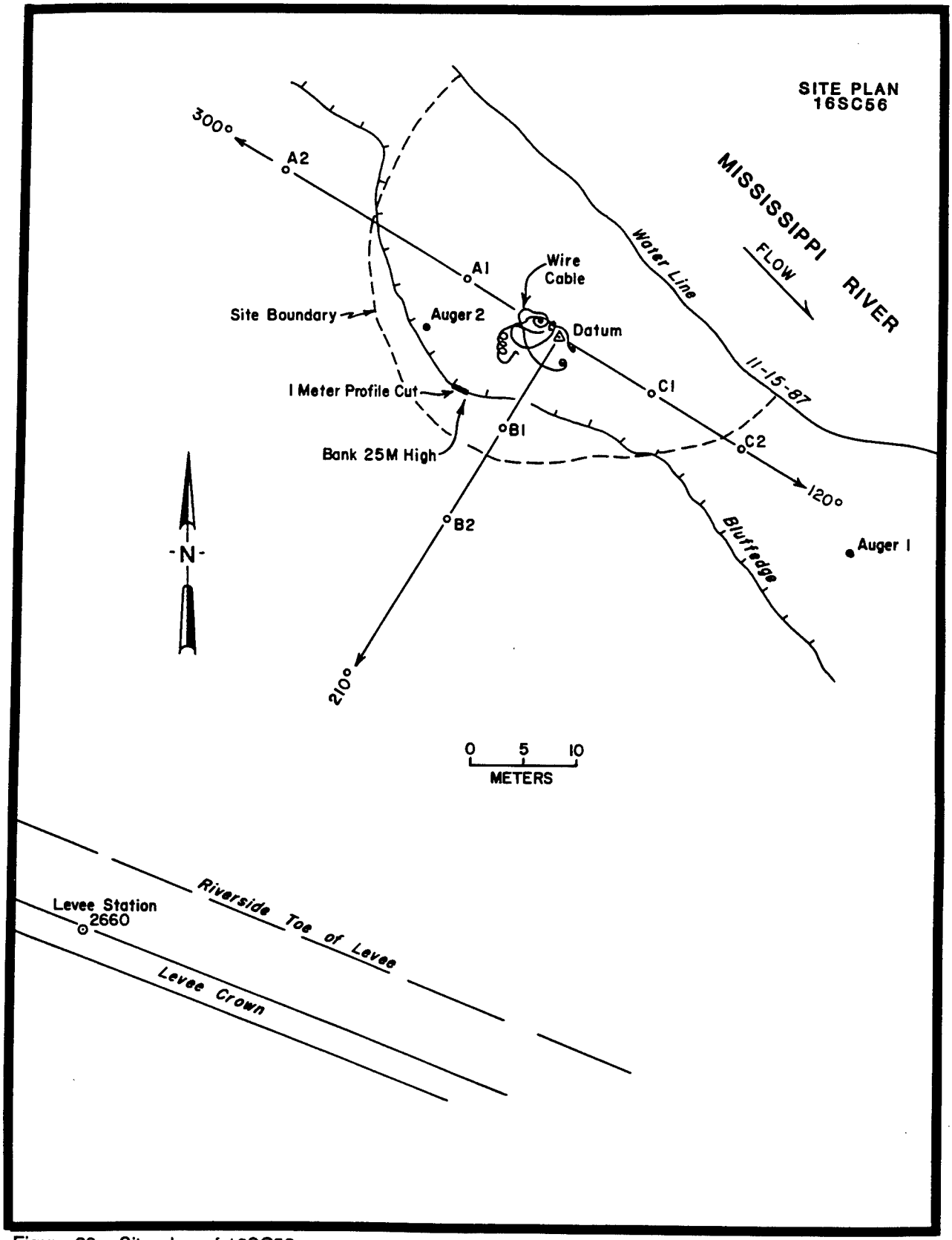


Figure 80. Site plan of 16SC56.

the bankline. Erosion and redeposition may have contributed to the present distribution of artifacts in a linear pattern along the bankline. The vertical extent of cultural material below the surface did not exceed 40 cm (15.7 in).

A total of 79 historic artifacts collected from the surface of the site may date from 1795 to 1900. Artifacts collected include: a school slate fragment, .65 caliber lead shot, .35 caliber center fire shell casings, buff bodied earthenware, English mocha pearlware, ironstone, whiteware, and a Kaolin tobacco pipe stem fragment. Over 97 percent of the surface collected artifacts from 16SC56 are functionally identifiable materials. Kitchen group artifacts comprise 87.3 percent of the total, while the remainder belong to the Architecture (1.2 percent) group, Furniture (1.2 percent) group, Arms (3.8 percent) group, Tobacco (1.2 percent) group, and Personal group (1.2 percent). A temporal mean ceramic date of 1841 was calculated using seven identified ceramic types. The presence of other nineteenth century materials such as cut nails, a ball clay pipe stem fragment, and a lined school slate, exemplify a typical assemblage of domestic artifacts from this time period. One ironstone sherd displayed the manufacturer's mark "IMPERIAL/IRONSTONE CHINA/JOHN ALCOCK." The 1853-1861 date of this sherd (Godden 1964) indicates that the site includes a mid-nineteenth century or later component.

Evidence for a prehistoric Mississippi period component is present on the surface of Site 16SC56. One Bell Plain, *var. St. Catherine* sherd was collected at the base of the bluff edge. This ware has been associated with the terminal Mississippi period (Phillips 1970).

The subsurface examination of Site 16SC56 consisted of a systematic shovel and auger testing regime. Six shovel tests and two auger tests were placed across the batture to verify the horizontal extent of the site. Both shovel and auger tests were devoid of cultural remains suggesting that the boundary of the site is confined to the beachline. Riverine erosion has destroyed the contextual integrity of these resources, which were found eroded and deflated onto the beach. One stratigraphic profile was cleaned at the edge of the bluff (Figure 80). No intact cultural deposits were observed or recorded.

Waterford 87-2

As part of the field investigations, a shipyard present at the downriver limit of the Waterford Reach has been mapped and documented. The shipyard, Waterford 87-2, has an elliptical configuration. The horizontal extent of this cluster of cultural material is large, covering 150 m (492.1 ft) across its north/south axis, and 250 m (820.2 ft) across its east/west axis (Figure 81). Large metal boatways and associated gearing, several cement pads, and three wooden dry docks are present. None of these features possessed sufficient integrity to warrant detailed documentation.

Testing in the form of limited shovel test excavations in this area was designed to provide data concerning the depth, extent, integrity, and nature of cultural deposits. These shovel tests, however, produced no evidence of subsurface historic or prehistoric deposits. As part of the research effort, current and historical aerial photographs, as well as historic map data, an examination of archival sources, and oral informants were used to determine a land use history for the area. It was determined that Waterford 87-2 is a modern (post 1959) shipyard locality. Therefore, it was not considered a significant resource. It consists almost entirely of surface material and features dating from the 1960s. No *in situ* deposits were observed. No site number was assigned to this location by the Louisiana Division of Archaeology, given its recent age.

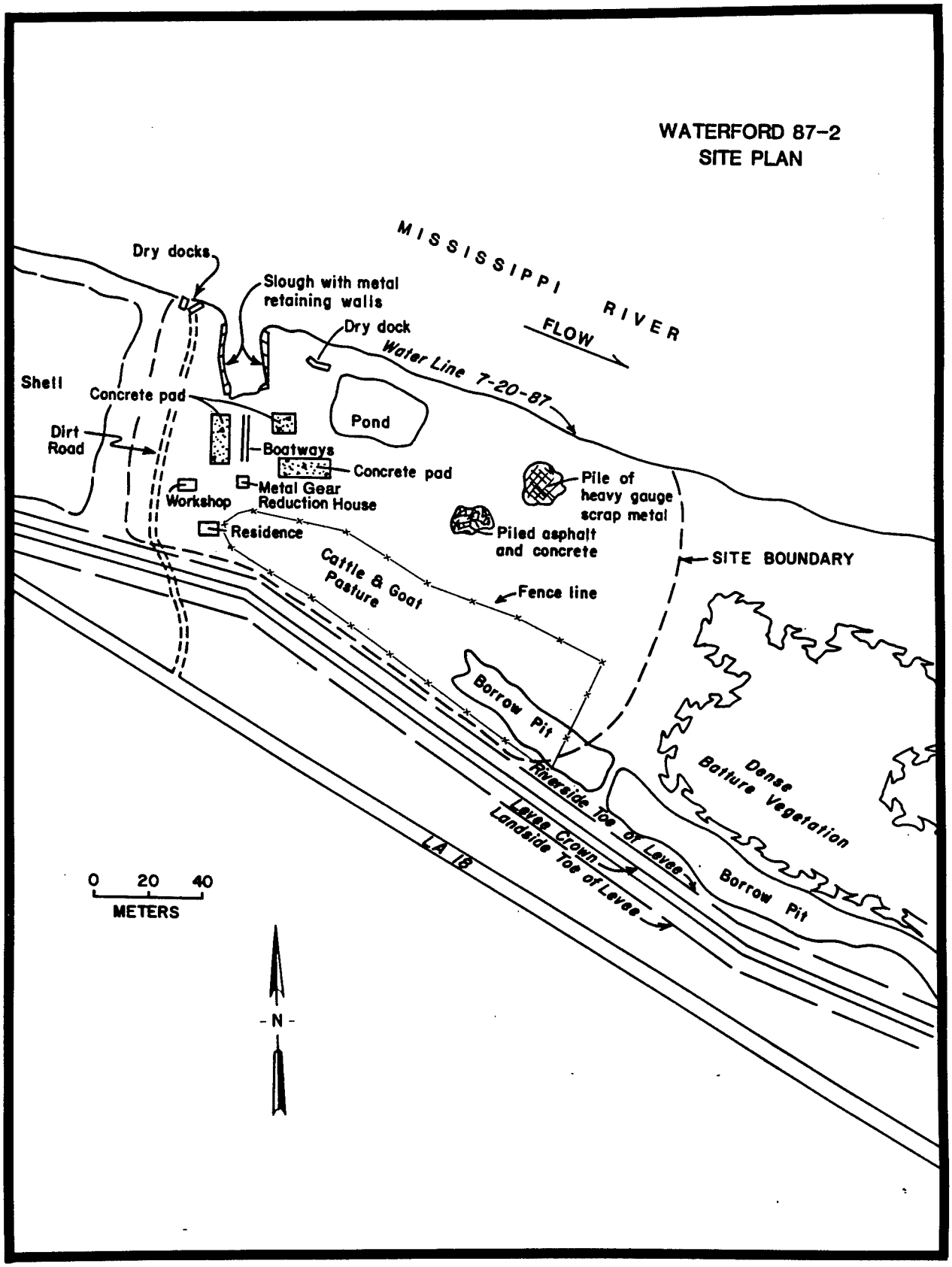


Figure 81. Site plan of Waterford 87-2.

16SC57

Site 16SC57 is an irregular shaped deposit of mid-nineteenth to late twentieth century historic artifacts located on the bankline of the Mississippi River (Figure 82). This site is located approximately 200 m (656.2 ft) southeast (azimuth 125°) of Site 16SC58. The horizontal extent of the site is small, covering 20 m (65.6 ft) across its north/south axis and 40 m (131.2 ft) across its east/west axis. The vertical extent of cultural material below the surface did not exceed 40 cm (15.7 in). The 68 artifacts collected during a surface examination of the site include: ironstone, domestic brown and gray stoneware, whiteware, yelloware, brownware, tiles, porcelain, table glassware, and machine made bottle glass.

Approximately 75 percent of the surface collected artifacts from 16SC57 are functionally identifiable materials. Functional analysis of these materials revealed that 95.6 percent of the artifacts belong to the Kitchen group. About 75 percent of the 54 ceramic sherds provided date specific information contributing to the mean ceramic date of 1843. This estimate includes 27 late transfer printed whiteware sherds, three ironstone sherds, one yelloware sherd, and three modern decal decorated sherds.

These artifacts may range in age from 1820 to the present. A mean ceramic date of 1843, and the presence of other nineteenth century materials such as domestic brown and domestic gray stoneware, exemplify a typical assemblage of domestic household artifacts from this time period.

Six shovel tests and two auger tests were excavated at Site 16SC57. From the results of these tests, it is apparent that no intact subsurface cultural deposits exist at the site. Site 16SC57 does not possess sufficient integrity to contribute to the understanding of the history of the region, due to the destruction of the site through natural erosional and depositional processes.

16SC58

Site 16SC58 is a linear deposit of modern trash intermixed among a sparse concentration of historic cultural materials located on the bankline of the Mississippi River (Figure 83). This site is located on a low bank approximately 200 m (656.2 ft) northwest (azimuth 305°) of Site 16SC57. The horizontal extent of the site is small, measuring 25 m (82 ft) across its north/south axis and 50 m (164 ft) across its east/west axis.

Artifacts collected during a surface examination of the site included: creamware, pearlware, whiteware, domestic gray stoneware, ironstone, faience, earthenware, coal, machine made bottle glass, and a belt buckle. Over 97 percent of the artifacts collected from the surface of 16SC58 are functionally identifiable materials. More than 94 percent were identified as Kitchen group items. One Clothing group element, a belt buckle, and one Architecture group element, an unidentified nail, constitute the remaining classified artifacts.

Dating information was available for 48 ceramic sherds. This sample represents five ceramic types: whiteware (transfer printed, shell edged plain), pearlware (annular and plain), ironstone, creamware, and faience (Rouen). A mean ceramic date for these sherds is calculated as 1834.

Six shovel tests and two auger tests were designed to determine the spatial extent of the vertical and horizontal dimensions of the site (Figure 83). The vertical extent of cultural material below the surface did not exceed 40 cm (15.7 in). One intact feature was located at Site 16SC58 (Figure 84). This plank privy is constructed of vertical cypress boards. This feature is presently eroding out of the bluff edge. The southern profile of Feature 1 was recorded, as shown in Figure 84. No artifacts were recovered from the shovel test placed within the feature. The hypothesis that Feature 1 was a privy is derived from scanty

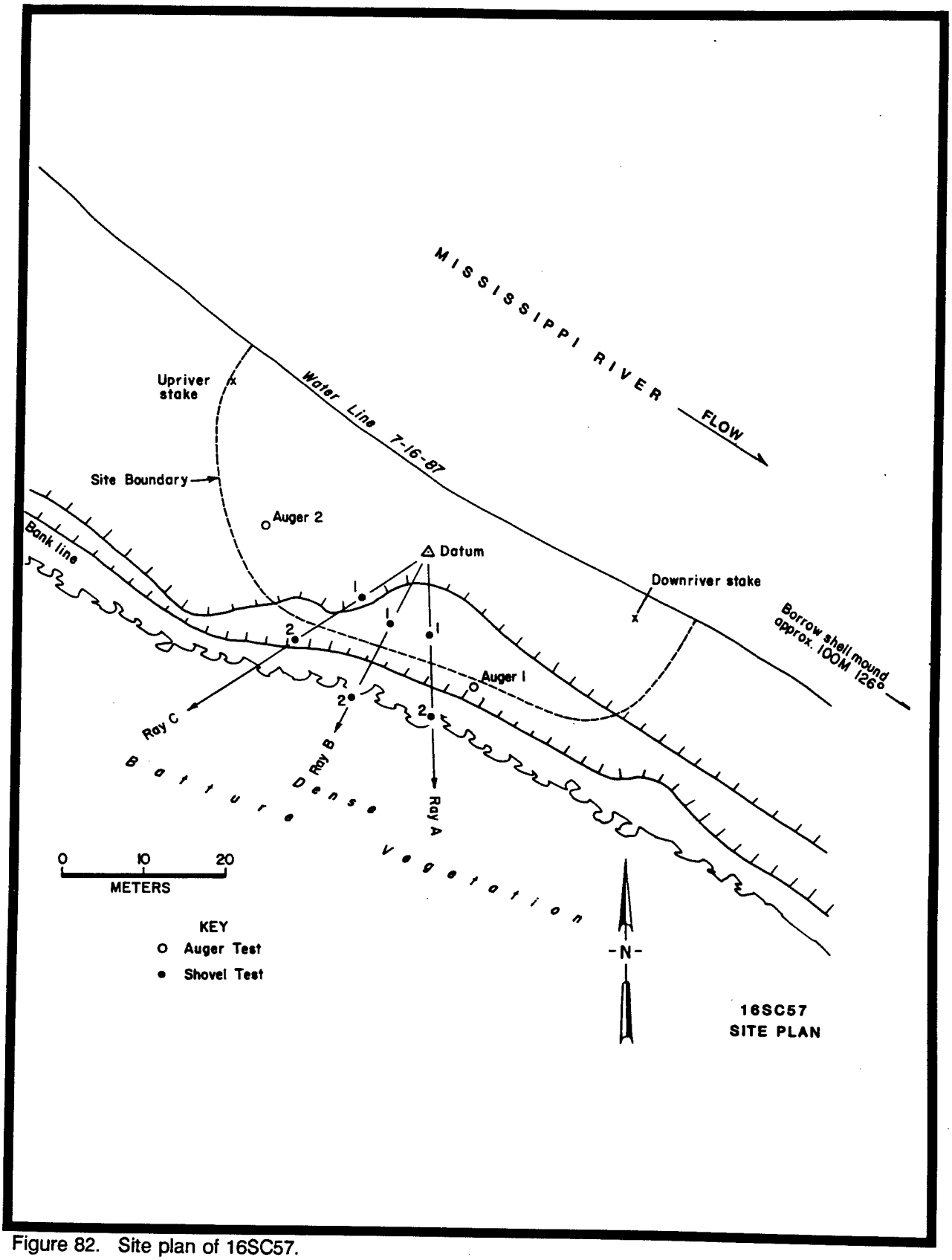


Figure 82. Site plan of 16SC57.

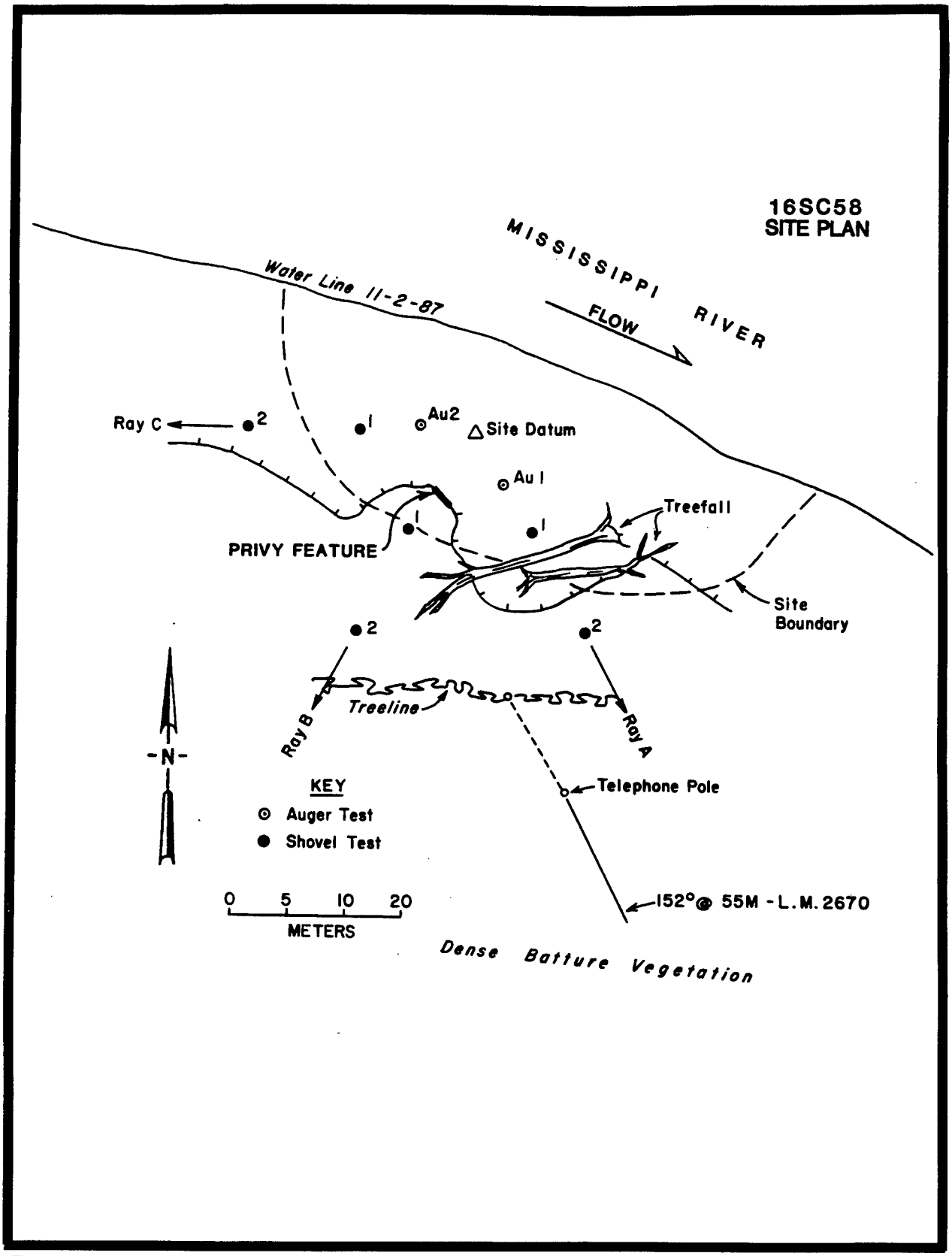
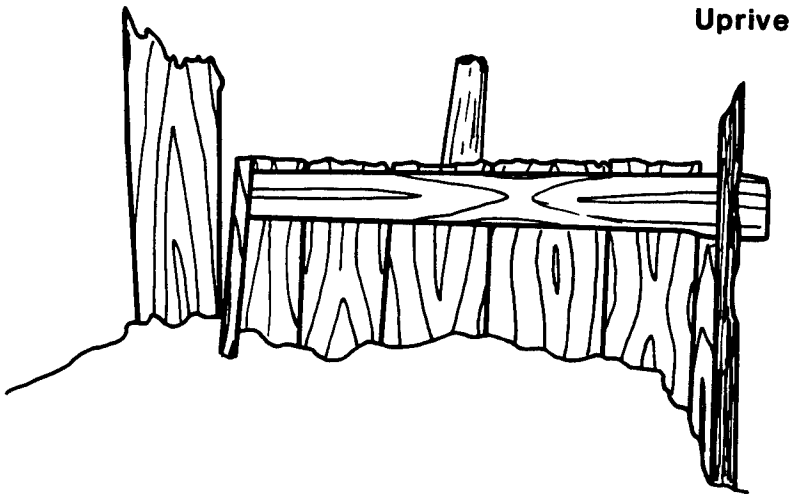


Figure 83. Site plan of 16SC58.

16SC58
FEATURE 1

Downriver

Upriver



ROUGH SKETCH OF PRIVY WALL PROFILE

Figure 84. 16SC58 Feature 1 (privy).

structural evidence observed in the field. Given the lack of intact cultural deposits, Site 16SC58 does not possess sufficient integrity to contribute to our understanding of the history of the region.

16SC59

Site 16SC59 is a linear deposit of historic artifacts located on the bankline of the Mississippi River (Figure 85). This site is located on a low bank approximately 150 m (492.1 ft) northwest (azimuth 305°) of Site 16SC58. The horizontal extent of the site is small, covering 20 m (65.6 ft) across its north/south axis and 50 m (164 ft) across its east/west axis.

Artifacts collected from the surface of Site 16SC59 include whiteware and machine made bottle glassware. All of the artifacts recovered during the surface collection have been classified functionally. A total of 40 artifacts are Kitchen group elements (97.6 percent). The remaining artifact (2.4 percent), a single piece of lamp glass, represents the Activities group.

A mean ceramic date of 1858 was established using four ceramic types. These include whiteware (plain, decal, and embossed), ironstone, creamware, and pearlware (Plain and transfer printed). Machine made bottle glass fragments were the only additional datable artifacts.

Six shovel tests and two auger tests were designed to determine the vertical and horizontal dimensions of Site 16SC59 (Figure 85). The vertical extent of cultural material below the surface did not exceed 40 cm (15.7 in). Feature 1, a vertical cypress plank privy, was recorded on the beach at the base of a tree deadfall. The privy is constructed of vertical cypress boards, held together on all four corners by square cut nails driven into upright cypress posts. No intact subsurface deposits were found within Feature 1. The hypothesis that Feature 1 was a privy is derived from structural evidence apparent in the field. It also may have served as a well. Given the lack of intact cultural deposits, Site 16SC59 does not possess sufficient integrity to contribute to our understanding of the history of the region.

Vacherie Reach Sites

16SJB40

Site 16SJB40 is an irregular deposit of historic artifacts located in a sugarcane field (Figure 86). The site is located on the batture approximately 950 m (3,116.8 ft) northwest (azimuth 330°) of Site 16SJB39, which is located within the Upper Edgard construction item. The horizontal extent of the site is small, covering 50 m (164 ft) across its north/south axis and 60 m (196.9 ft) across its east/west axis. The vertical extent of cultural material below the surface did not exceed 40 cm (15.7 in).

A total of 76 artifacts were recovered from 16SJB40. These artifacts were recovered during shovel tests and surface collection. The functional representation by group for these artifacts is as follows: Kitchen (72.3 percent), Architecture (1.3 percent), and Personal (1.3 percent). The Architectural element is a porcelain electrical insulator. A pocket watch represents the personal group. Kitchen group ceramics and bottle glass are indicative of food related activities. The ceramics from 16SJB40 are all nineteenth century materials. They have a mean ceramic date of 1858. In addition, there are 17 datable bottle glass artifacts. Included among these artifacts are two manually applied tooled finishes (ca. 1820s - 1920s), and 15 pieces of machine made bottle glass produced after 1903 (Jones and Sullivan 1985).

Site 16SJB40 was examined through the systematic excavation of nine shovel tests along three rays that emanated from the dirt two track leading to the Mississippi River (Figure 86). All nine tests were excavated to 30 cm (11.8 in) below the ground surface. No intact subsurface deposits were located in

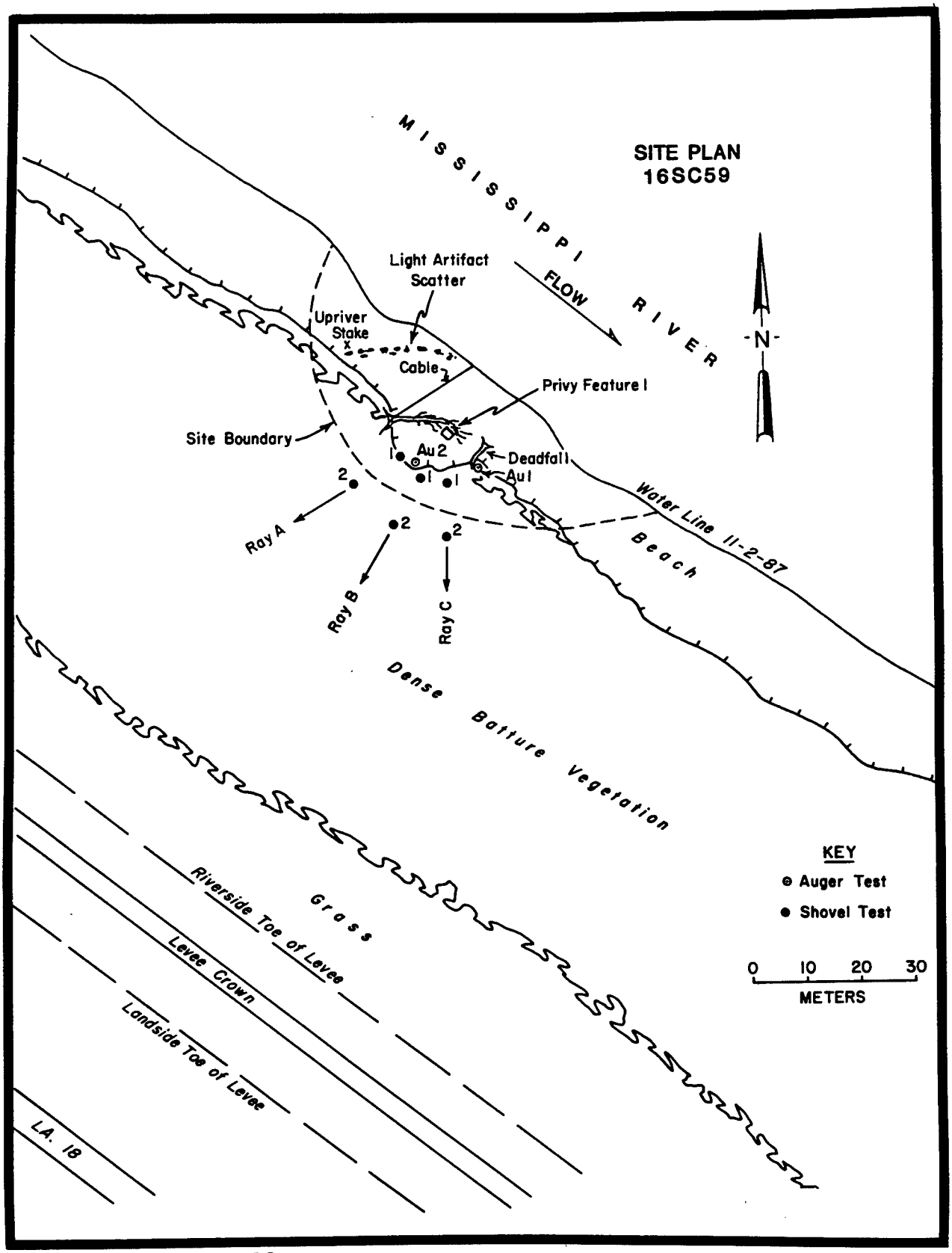


Figure 85. Site plan of 16SC59.

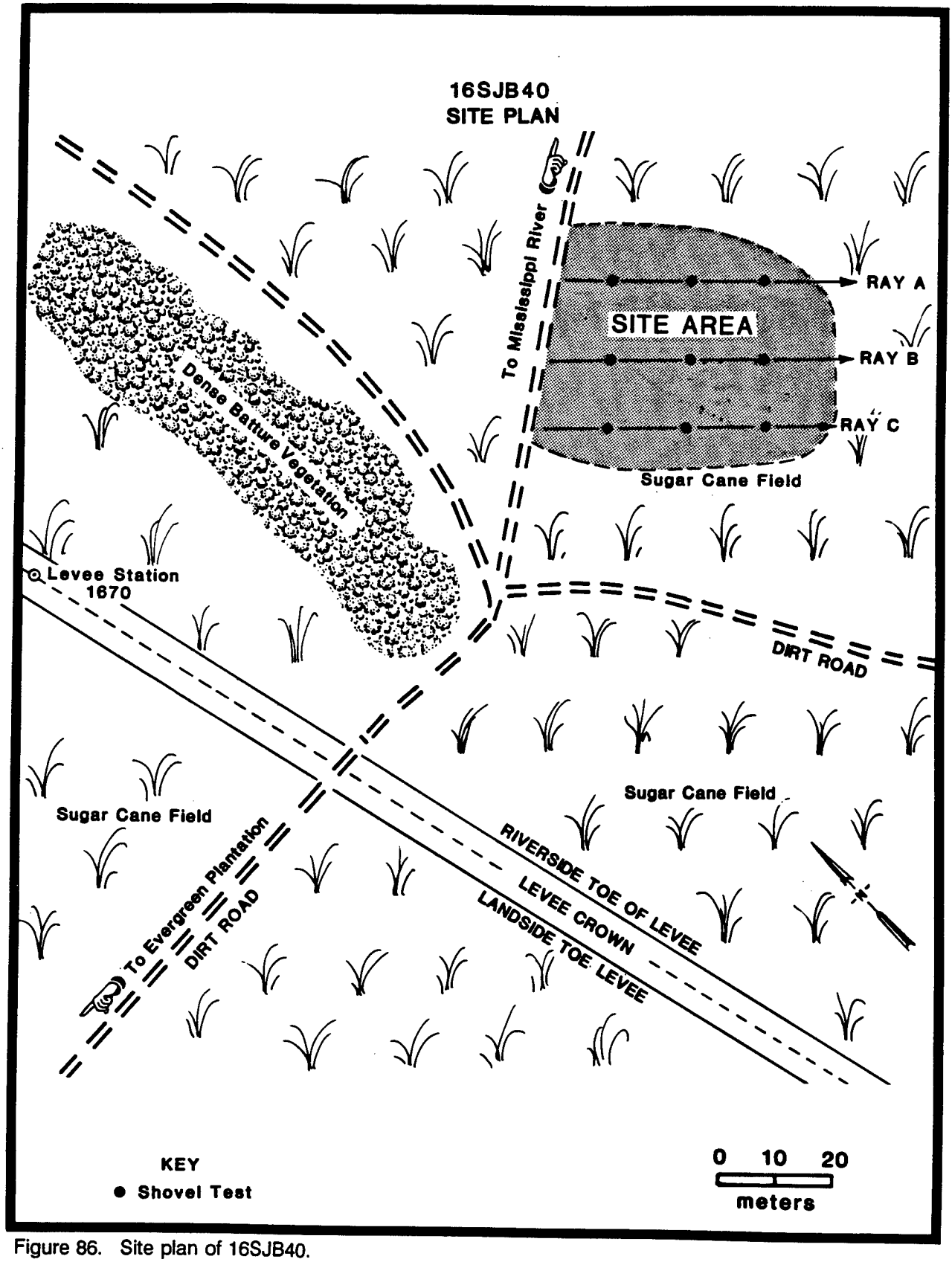


Figure 86. Site plan of 16SJB40.

these tests. Extensive plowing for the cultivation of sugarcane has resulted in the virtual destruction of the site. Due to the very poor preservation of the site, and the lack of subsurface remains, 16SJB40 does not possess sufficient integrity to contribute to the understanding of the history of the region.

Reserve Reach Sites

Reserve 87-1

Reserve 87-1 is a post-1945 standing structure, which is associated with modern irrigation activities at San Francisco Plantation. This structure is a 6.5 by 7 m (21.3 by 23 ft), L-shaped, single room cypress post and heavy stud frame building (Figure 87). The roof and sides of the building are constructed of corrugated sheet metal. The floor of the structure is composed of poured concrete and packed earth. The building covers two 3 m (9.8 ft) deep poured concrete water pumping tanks with associated piping and valves.

Verification procedures included the placement of eight shovel tests excavated at 10 and 20 m (32.8 and 65.6 ft) intervals along rays emanating from each of the four corners of the shed. These tests were designed to determine whether or not subsurface features were present. Further testing was not necessary at the site, given the negative results of the shovel testing regime. Inside the structure, on the south wall roof rafters, the inscription, "Remember 1949" was written in black paint. Perhaps the pumping activities within this pumping station were halted in 1949. The shed, supported by creosote poles, stands approximately 4.6 m (15 ft) tall. It is sheathed with modern corrugated sheet metal. This modern structure is neither a clear example of any one recognized architectural type, nor does it represent a stylistic transition associated with a regionally important theme. Given the recent age of this structure, no site number was assigned to it by the Louisiana Division of Archaeology.

Upper Edgard Reach Sites

16SJB28

Site 16SJB28 was discovered during the 1984 National Park Service survey (Shafer, Clemensen, and Rhodes 1984). The 1984 survey team recorded the site position with respect to terrain as on top of the bank and along the water line below the banktop. The site configuration was recorded as linear. It measured 54.9 m (180 ft) E-W, and 30.5 m (100 ft) N-S. This scatter consisted of nineteenth and twentieth century artifacts distributed along a line parallel to the Mississippi River waterline. Several cultural features were recorded in association with these artifacts. They included three brick and mortar pilings, large metal tanks, vertical boards at the water line, and concrete pillars. The artifacts collected from the site include whiteware, pearlware, bricks, cut nails, and porcelain. These artifacts were found intermixed with modern trash closer to the river road. Limited shovel and probe testing was conducted to determine the depth and origin of the artifacts. It was concluded that the artifacts present on the site in fact were redeposited there.

R. Christopher Goodwin & Associates, Inc., relocated, identified, and assessed the significance of Site 16SJB28. The site is a circular deposit of late eighteenth to early twentieth century artifacts located on the banktop and beachline of the Mississippi River (Figure 88). It is located approximately 900 m (2,952.8 ft) east (azimuth 95°) of Site 16SJB29. The horizontal extent of the site is small, covering 50 m (164 ft) across its north/south axis, and 55 m (180.4 ft) across its east/west axis.

This observation was made from an examination of the contents of five auger tests. These tests extended along four rays that originated from the site datum. Rays were spaced at fifty degree increments. One auger test and one probe test were placed 50 cm (19.7 in) south of the site datum. The remaining

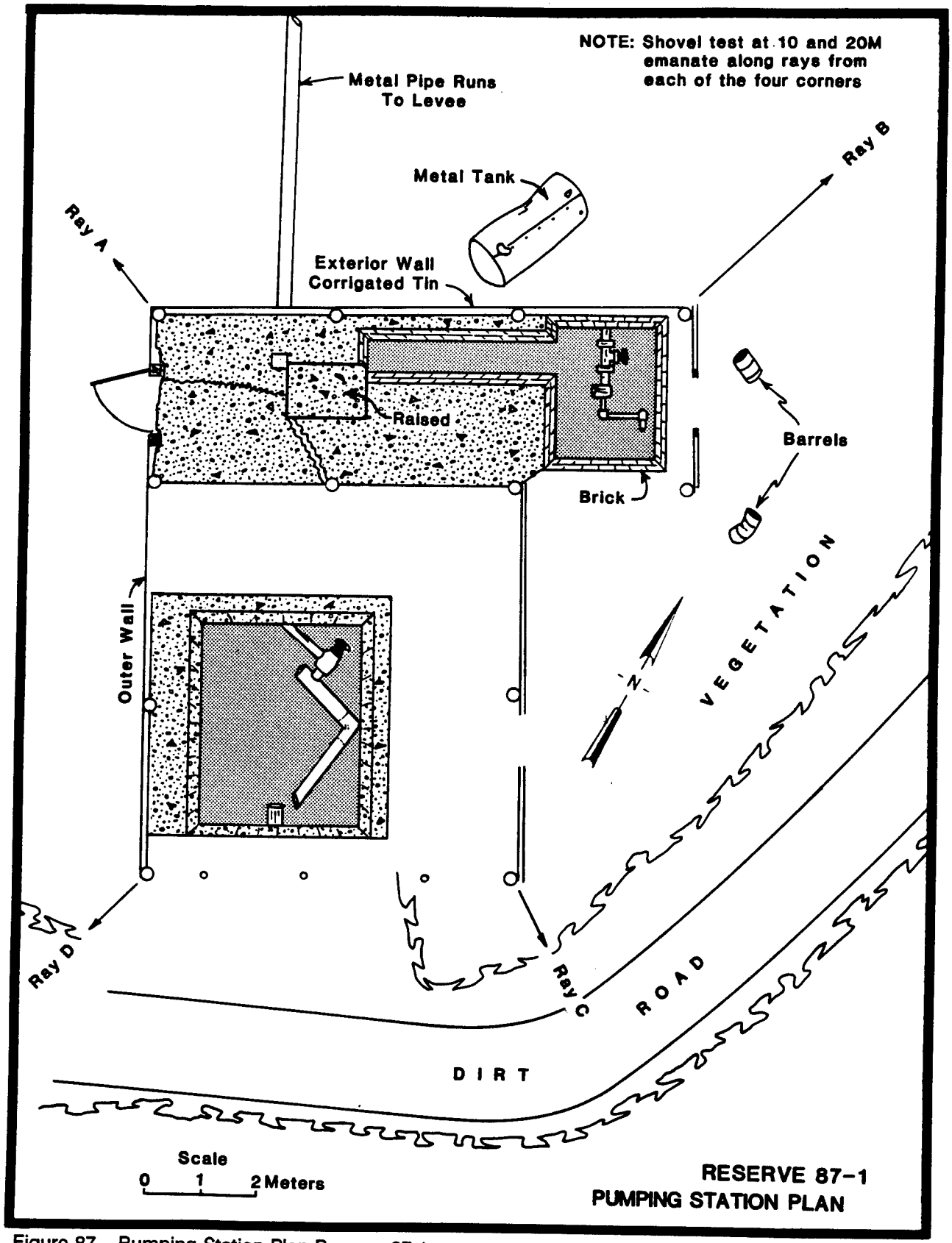


Figure 87. Pumping Station Plan Reserve 87-1.

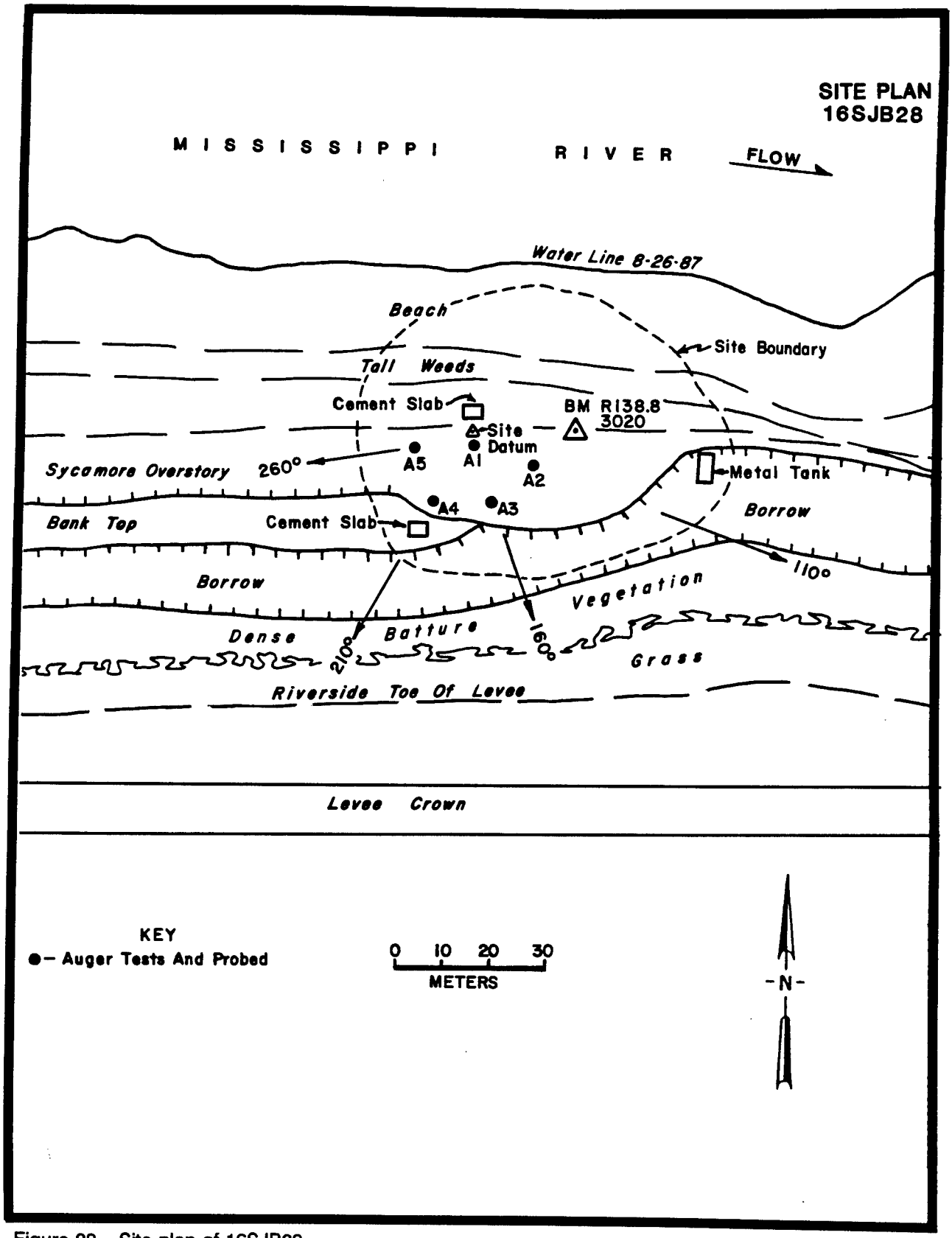


Figure 88. Site plan of 16SJB28.

four auger and probe tests were placed at 15 m (49.2 ft) intervals along each ray from the site datum (Figure 89). All five tests were excavated through sandy clay loam to a depth of 1.5 m (4.9 ft). From these tests, it was apparent that the vertical extent of cultural material did not extend below the surface of the site (Figure 89). The materials collected from the surface of the site include whiteware, ironstone, pearlware, metal fragments, and bottle glass. All of these belong within the Kitchen group. They denote food service and storage activities. Dating information is noted for five identified ceramic types. Dates range from 1780 to 1900. A mean ceramic date of 1837 has been tabulated for this collection.

A 1987 inspection by R. Christopher Goodwin & Associates, Inc., of Site 16SJB28 found no trace of the vertical boards at the water line, the brick pilings, or the large metal tanks reported by the National Park Service. Due to fluvial erosion, it is very probable that the site surface has been altered and structural features either have been buried by river sediments or destroyed.

Two disarticulated cement slabs and one small metal tank were located on the site. All three objects appear to have resulted from trash dumping activities within the batture. Due to the very poor preservation of the site, the continuing erosion of the bank, and the lack of intact subsurface remains, 16SJB28 does not possess sufficient integrity to contribute to the understanding of the history of the region.

X16SJB-A (IA-ED-1)

Site X16SJB-A previously was recorded during the 1984 National Park Service survey (Shafer, Clemensen, and Rhodes 1984). As originally defined, X16SJB-A consisted of a spot find, described as a white marble tombstone in two pieces with the inscription "Ici-expose Toussaint Jean Pierre, dece c. 24 Sept 186_." The National Park Service located this tombstone on top of a linear deposit of modern trash, found just inside the tree line from the mowed batture. The orientation of this trash deposit parallels the riverside toe of the levee.

R. Christopher Goodwin & Associates, Inc., inspected Site X16SJB-A in 1987 and found an historic tombstone secondarily redeposited on top of a linear deposit of modern trash. Site X16SJB-A is located within the batture of the Mississippi River (Figure 90), approximately 2 km (1.2 mi) downriver from 16SJB28. The horizontal extent of the trash pile is substantial. It measures 15 m (49.2 ft) across its north/south axis, and 110 m (360.9 ft) across its east/west axis. The vertical distribution of the modern trash deposit is restricted to the surface and to a depth of 30 cm (11.8 in) below surface.

The subsurface examination of X16SJB-A included systematic probing and the excavation of nine shovel tests (Figure 91). The average depth of shovel tests was approximately 40 cm (15.7 in) below the present ground surface. No intact subsurface deposits were located in the sandy clay loam matrix of these tests. This extensive trash dump, which occurs along the landward edge of the batture tree line near the riverside toe of the levee, is typical of much of the batture. Such dumps represent the refuse of local residents and contractors. The linear configuration of the dump may result from the bulldozing of trash along the levee toe into the tree line to keep the levee toe clean. In addition, fluvial action may have altered the configuration of the modern trash dump. The trash dump could not be shown to be associated with a definable historic occupation.

The process by which Toussaint's historic tombstone came to rest on top of this modern trash heap is unknown. It is important to stress that no evidence of a cemetery, or structures, or other artifacts corresponding to the Toussaint tombstone were discovered on the site. Therefore, Toussaint's tombstone must have been brought to this area by man and redeposited there. Toussaint's tombstone was not collected, nor were any other artifacts observed within the general matrix of the trash heap.

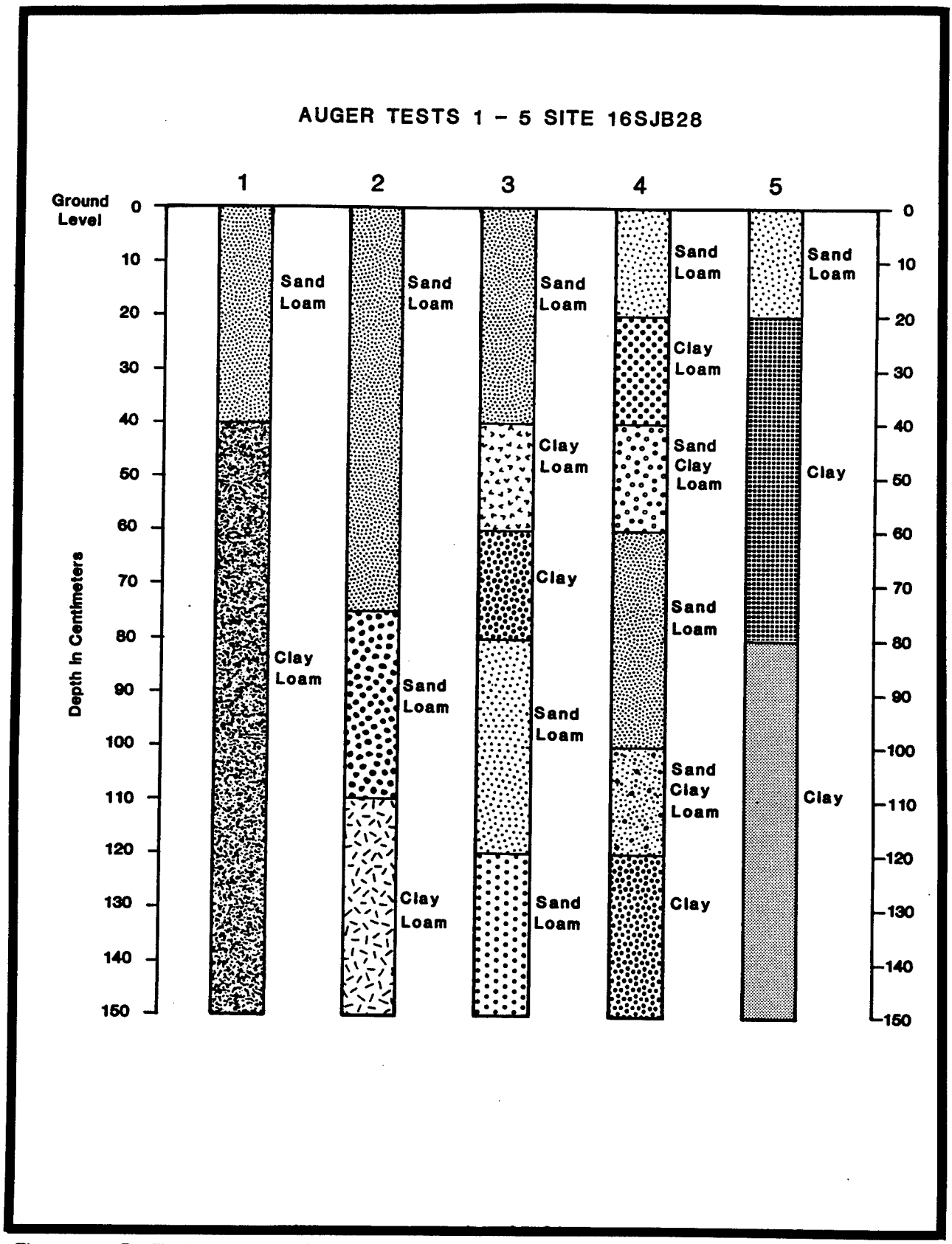


Figure 89. Profile drawing of 16SJB28 auger tests.

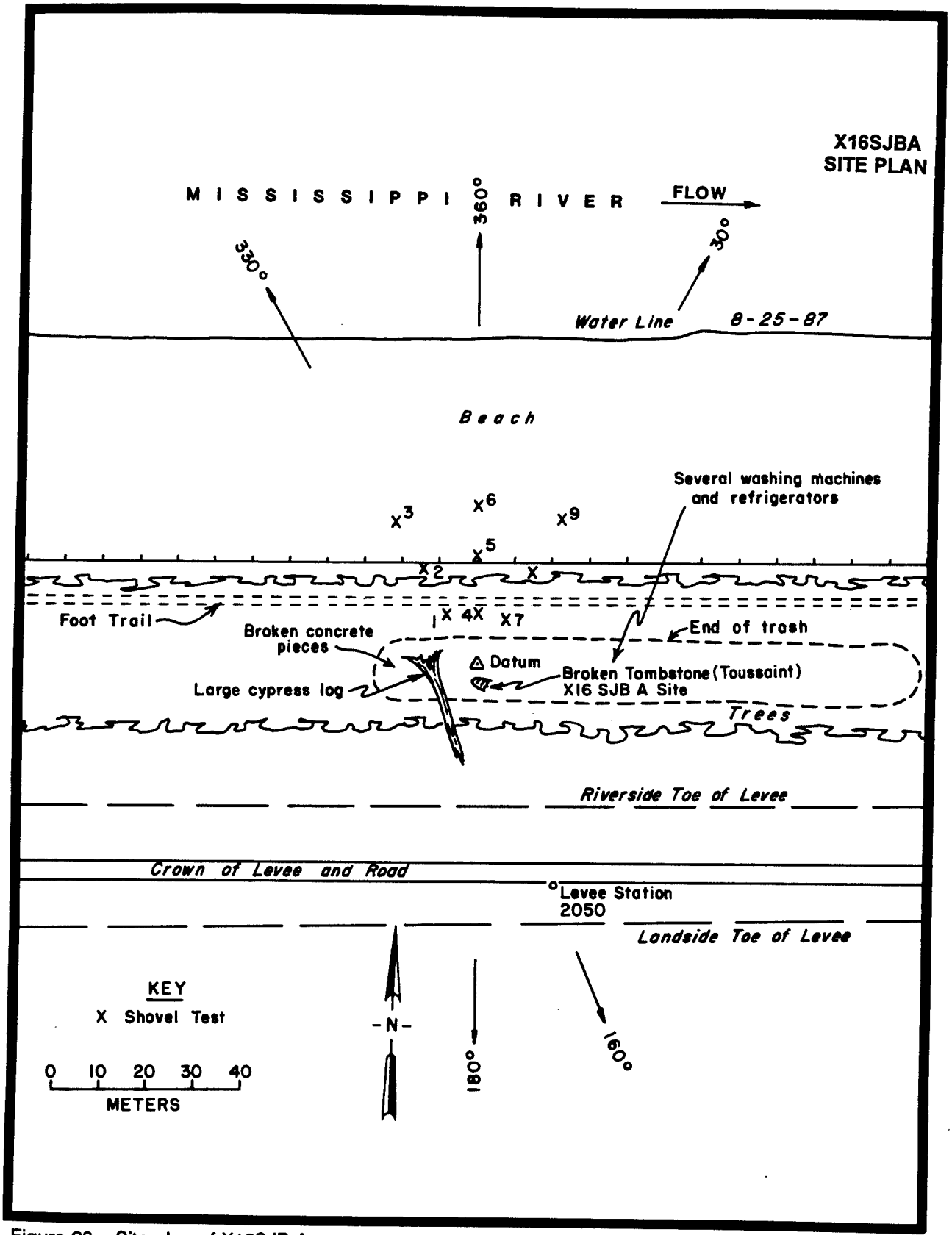


Figure 90. Site plan of X16SJB-A.

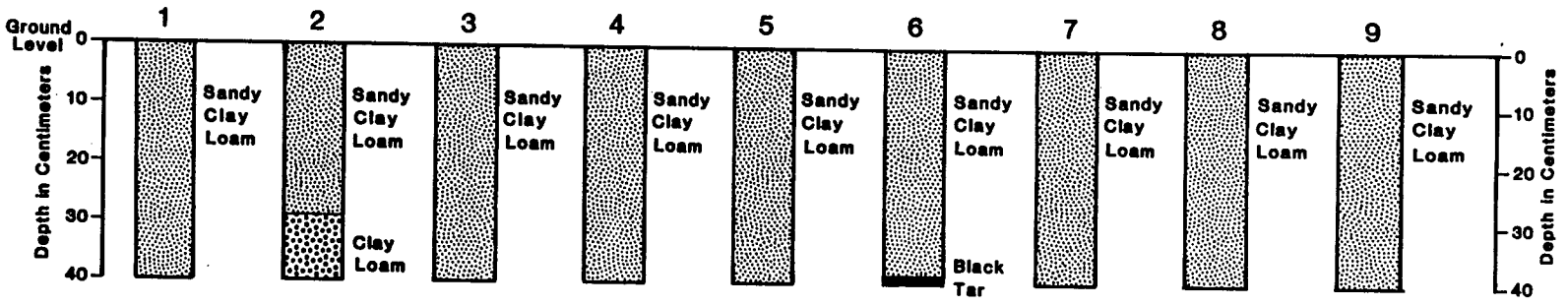


Figure 91. Profile drawing of X16SJB-A shovel tests.

An error was made during the National Park Service investigation in recording the inscription on the Toussaint tombstone. The inscription reads "Ici repose Toussaint Jean Pierre, dece c 24 Sept 186_," not "Ici expose Toussaint Jean Pierre, dece c 24 Sept 186_," as reported by the National Park Service. The integrity of this tombstone in terms of its context has been lost as a result of its secondary redeposition.

IA-ED-3

IA-ED-3 was discovered during the 1984 National Park Service survey. It was described as a large concrete pad with iron auger-like equipment draped over its top and side. The Park Service archeologists questioned a local informant, who suggested that the pad was a pump base for crawfish farming activities (Shafer, Clemensen, and Rhodes 1984).

R. Christopher Goodwin & Associates, Inc., relocated, identified, and assessed the significance of IA-ED-3 in 1987. IA-ED-3 is a cement pad roughly 2 m (6.6 ft) across its north/south axis, and 2 m (6.6 ft) across its east/west axis (Figure 92). A metal bin lays across the northeast edge of the pad. Inside the bin is an auger-like rod. Its function is unknown. The pad is located just inside the tree line of the batture, and on top of the spoil from a drainage ditch (Figures 92 and 93). This ditch parallels the riverside toe of the levee. From an inspection of 12 shovel tests (Figure 94), no cultural material was noted below the surface within this area.

IA-ED-3 does not possess integrity, and it does not possess further research potential. Given its recent age, IA-ED-3 was not assigned a site number by the Louisiana Division of Archaeology.

16SJB32

Site 16SJB32 previously was recorded during the 1984 National Park survey. The site was interpreted as representing a donkey engine platform. It was described as a concrete and wood structure with anchor bolts set into the main portion. The Park Service archeologists inspected the platform, and found it to be made of poor concrete (Shafer, Clemensen, and Rhodes 1984).

R. Christopher Goodwin & Associates, Inc., relocated, identified, and assessed the significance of Site 16SJB32 in 1987. The site is a concrete pad located 150 m (492.1 ft) northeast of IA-ED-3 (Figure 95). This site is located deep within the wooded batture, approximately 120 m (393.7 ft) to the north of the levee road. The dimensions of the pad are small, covering 2 m (6.6 ft) across its north/south axis by 4 m (13.1 ft) across its east/west axis (Figure 96). No cultural materials were encountered on the surface of the ground.

This concrete pad is a pump house foundation. Verification at Site 16SJB32 included mapping, photographing and shovel testing the site area, as well as probing around the concrete support. From an inspection of nine shovel tests, no artifacts were observed in association with the structure (Figure 97). The structure is located deep within the batture, where it is surrounded by dense vegetation, primarily composed of sycamore, hackberry, oak, and a thick vine and weed undergrowth. A large, shallow depression was noted to the northwest of the structure.

The structural remains present at Site 16SJB32 appeared to be representative of mid to late twentieth century building materials. Given the recent age of the structure, plus the lack of associated intact cultural deposits, this site does not possess sufficient integrity to contribute to our understanding of the history of the region.

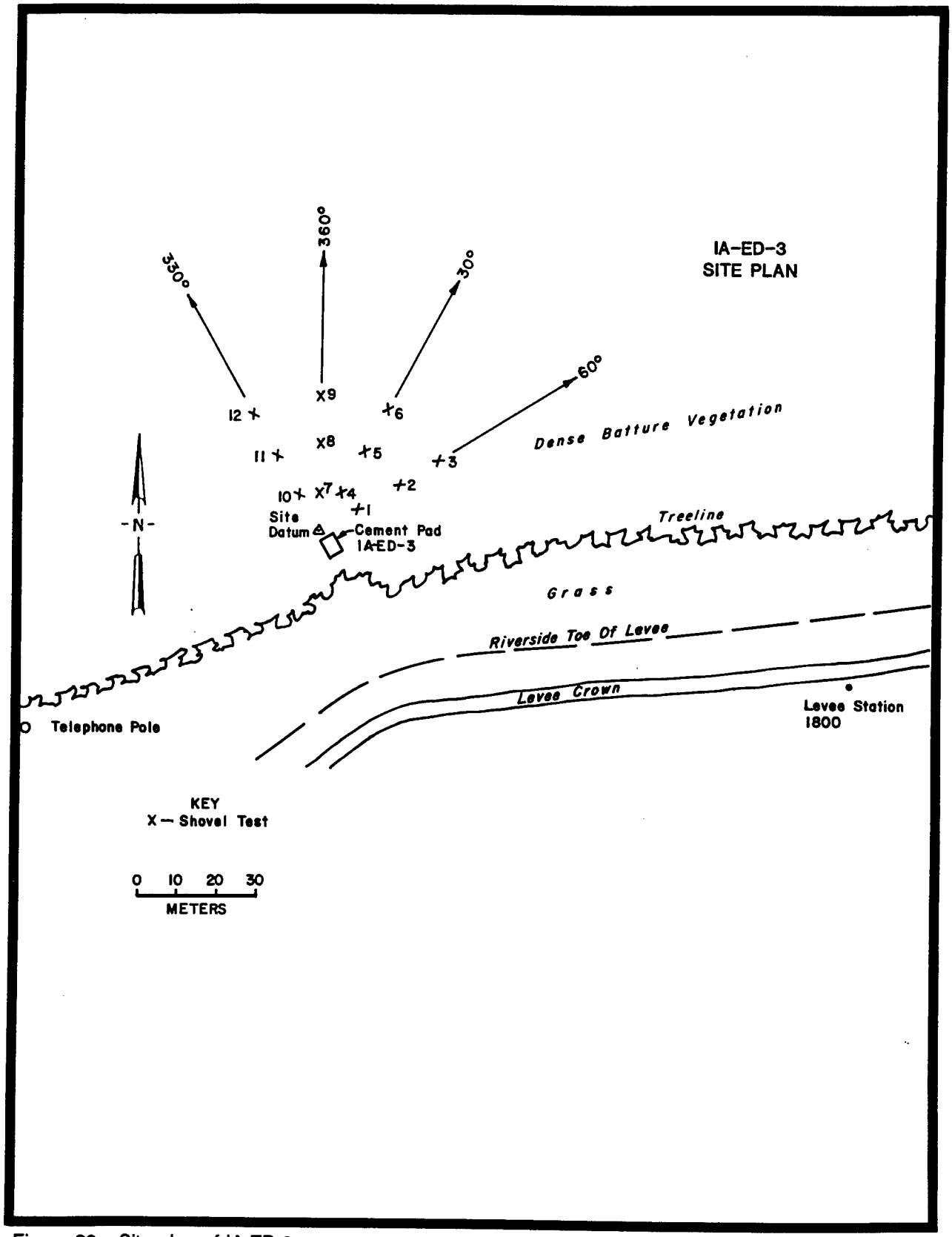


Figure 92. Site plan of IA-ED-3.

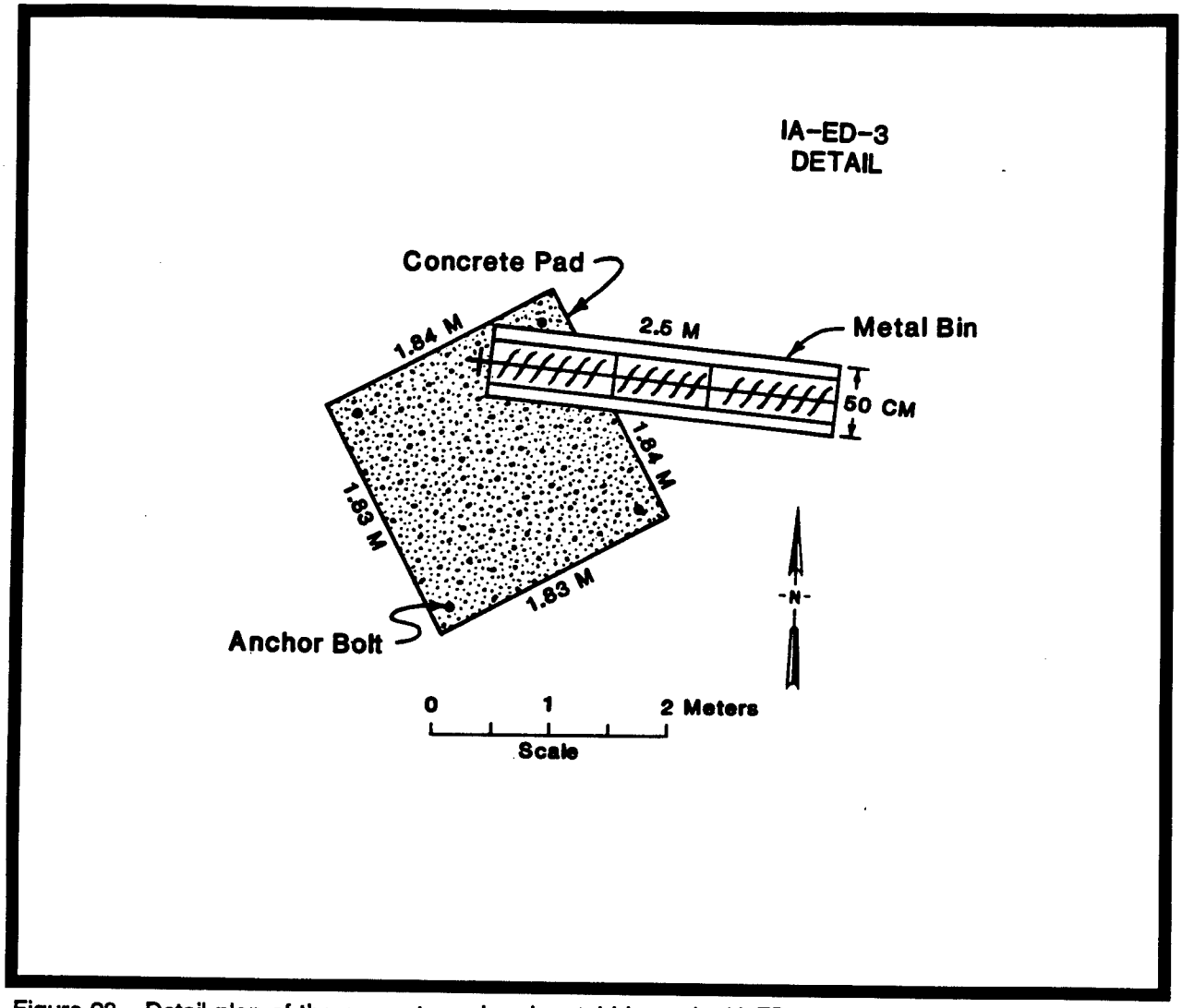


Figure 93. Detail plan of the concrete pad and metal bin at site IA-ED-3.

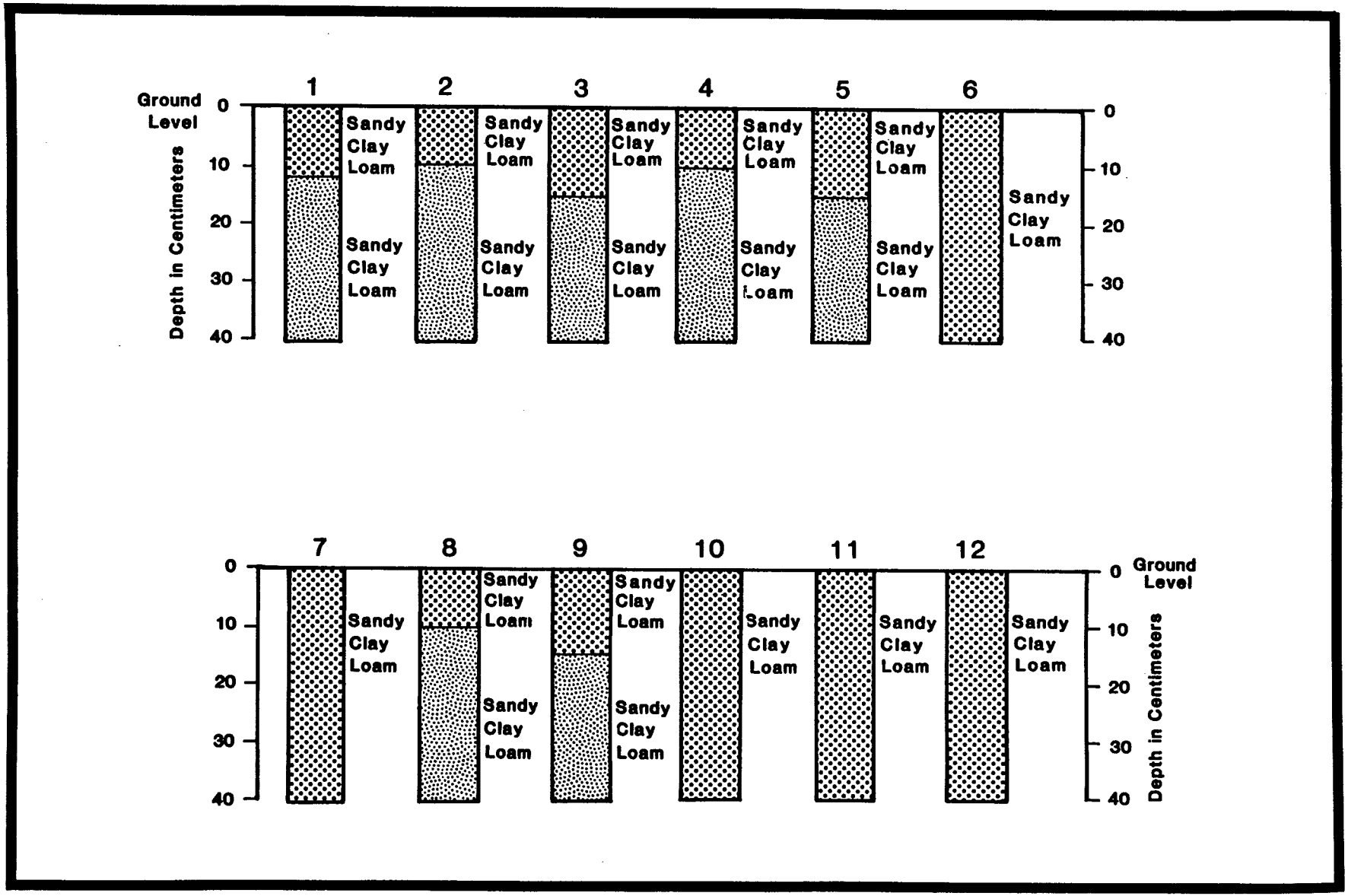


Figure 94. Profile drawing of IA-ED-3 shovel tests.

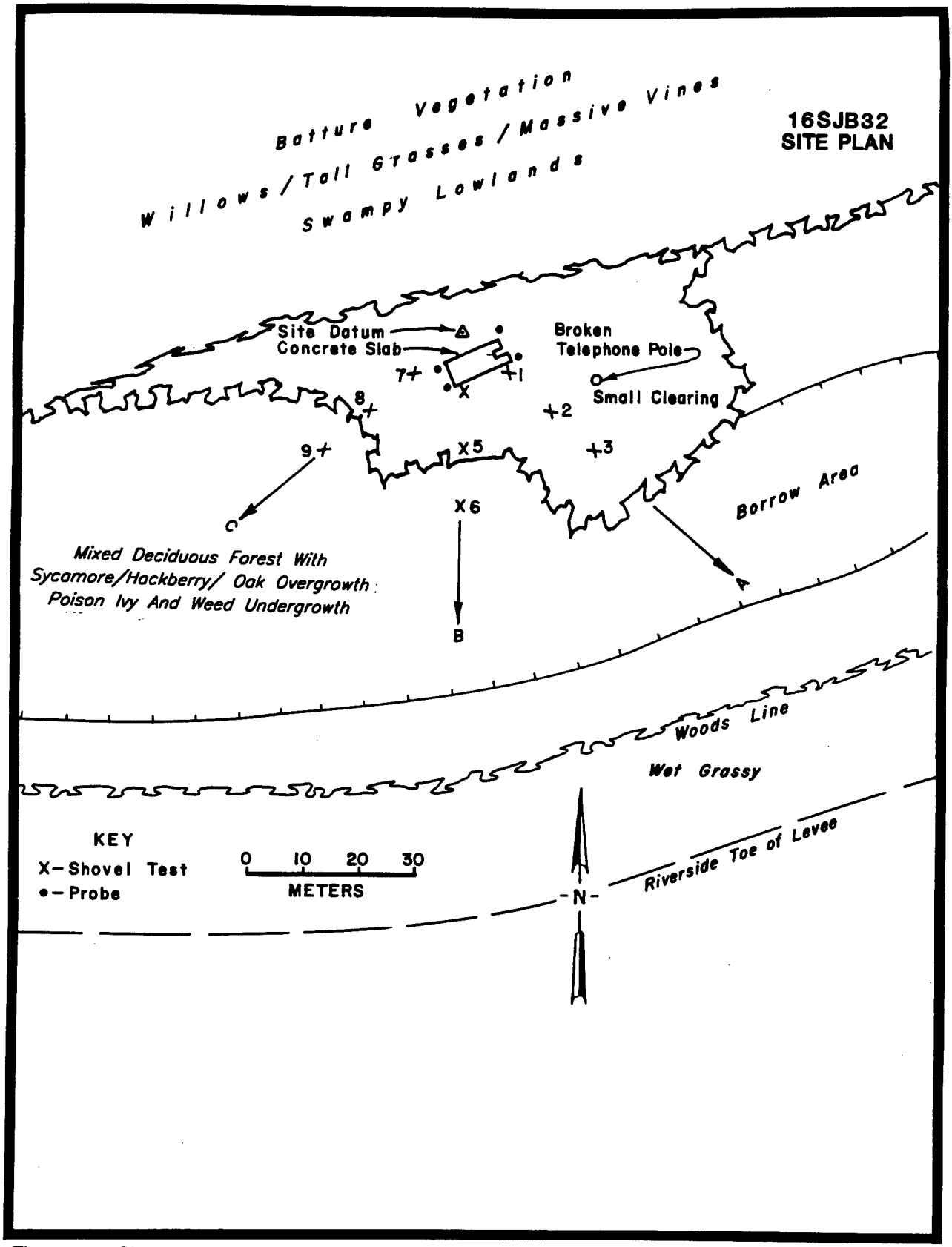


Figure 95. Site plan of 16SJB32.

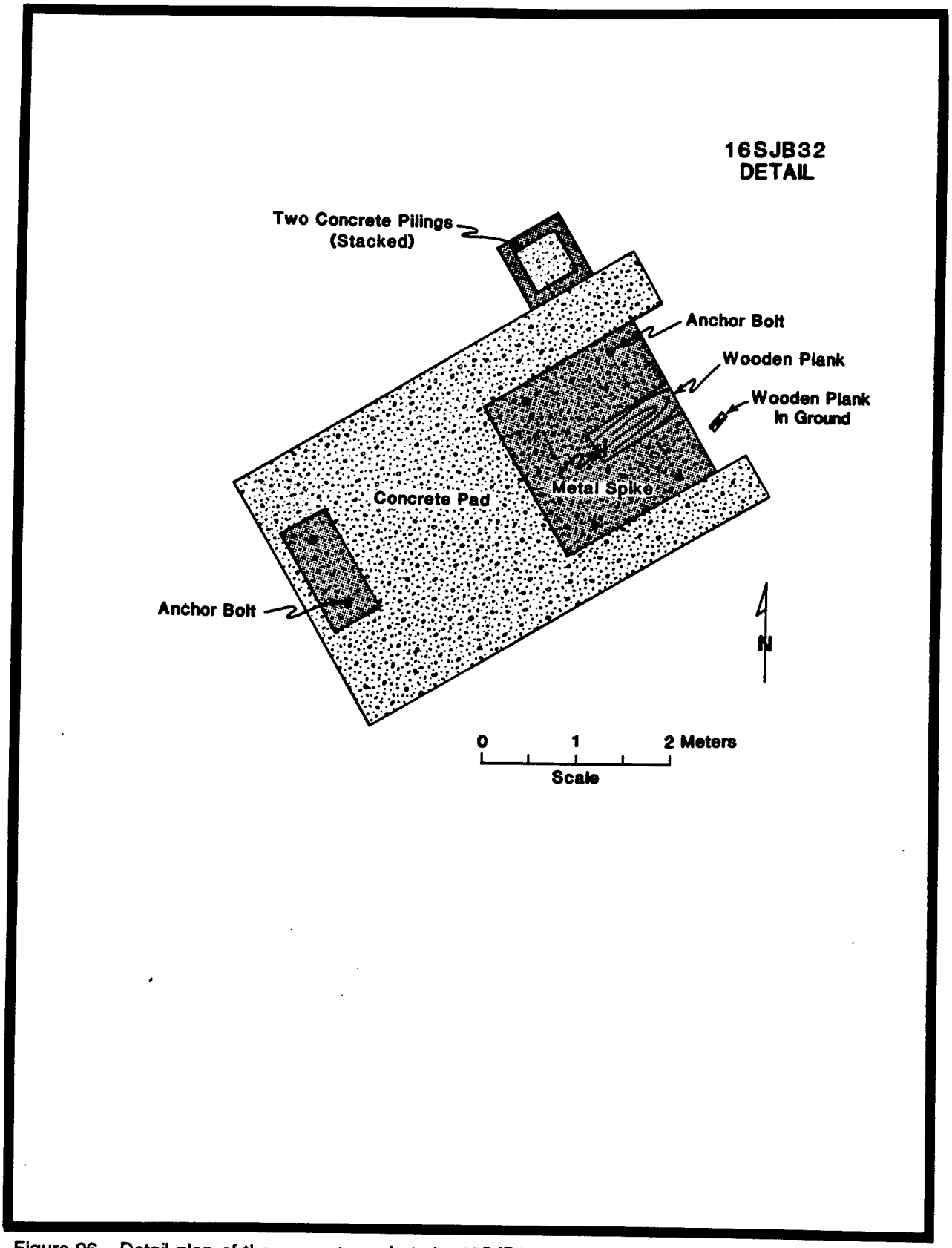


Figure 96. Detail plan of the concrete pad at site 16SJB32.

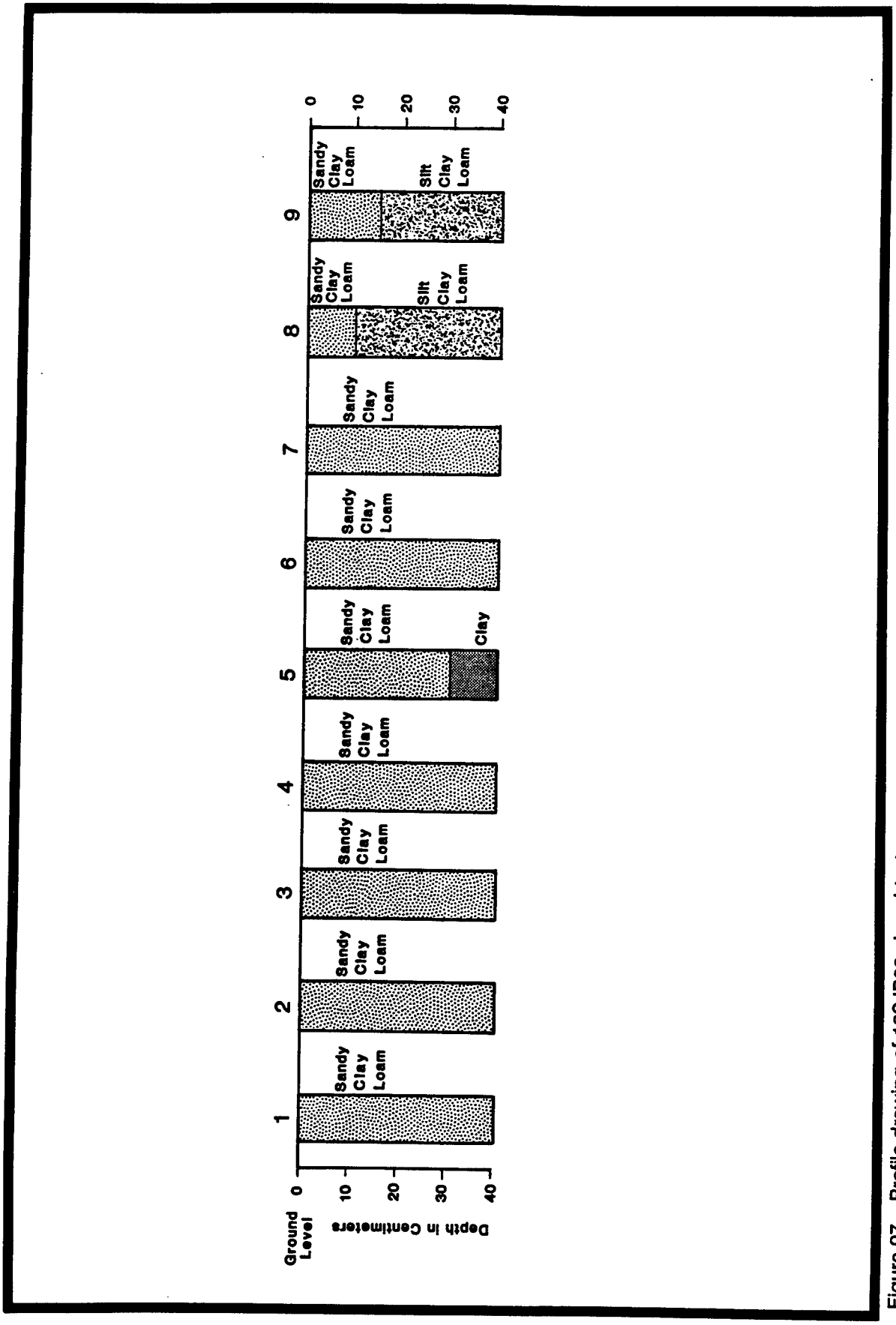


Figure 97. Profile drawing of 16SJB32 shovel tests.

16SJB39

Site 16SJB39, a cast iron boiler, previously was recorded during the 1984 National Parks Service survey as Spot Find IA-Edgard-5 (Shafer, Clemensen, and Rhodes 1984). At that time, an error was made in regard to the site's specific location. As indicated on the spot find form completed by the National Park Service and on file at the Louisiana Division of Archaeology, the site is located at approximate RM 143, 91 m (298.6 ft) east of the levee road and 1.6 km (1 mi) south of Levee Station 1710. In reality, Site 16SJB39 is located 120 m (393.7 ft) northeast of Levee Station 1710.

R. Christopher Goodwin & Associates, Inc., relocated, identified, and assessed the significance of 16SJB39 in 1987. Site 16SJB39 is a large iron boiler housing half-buried within the clayey soils of the batture (Figure 98). The boiler is located within the reforested batture, approximately 650 m (2,132.5 ft) northeast of the gate on the dirt road maintained by Evergreen Plantation (Figure 99). The boiler is located 120 m (393.7 ft) northeast (azimuth 45°) of Levee Station 1710. As shown in Figure 98, nine shovel tests and seven probes were utilized to investigate subsurface deposits. No cultural materials were encountered below the surface of the ground through shovel testing (Figure 100).

Site 16SJB39 does not possess sufficient integrity to contribute to the understanding of the history of the region. Due to the lack of contextual integrity, and due to the absence of associated cultural remains, the site does not possess further research potential, and cannot be considered eligible for the National Register.

Luling Reach Sites

16SC60

Site 16SC60 is a linear deposit of prehistoric and historic artifacts located on the bankline of the Mississippi River approximately 300 m (984.3 ft) southwest (azimuth 230°) of Site 16SC61 (Figure 101). The horizontal extent of the site is small, covering 80 m (262.5 ft) across its north/south axis and 40 m (131.2 ft) across its east/west axis. The vertical extent of cultural material below the surface did not exceed 15 cm (5.9 in).

The cultural materials collected from the surface of this site consisted of pearlware, whiteware, porcelain, yelloware, ironstone, earthenware, machine made glass, table glassware, architectural glass, asbestos shingles, personal glass, gun cartridges, and metal tools. Five functional classification groups are identified from the 43 artifacts recovered during surface collection at 16SC60. Approximately 95 percent are functionally identifiable. Groups include Kitchen (83.7 percent), Architecture (4.6 percent), Arms (2.3 percent), Activities (2.3 percent), and Personal (2.3 percent). The presence of numerous distinct ceramic and bottle vessel types suggest substantial food related activities. Items such as tools, a perfume bottle, and spent gun cartridges suggest activities that can be attributed to domestic household activities. Ten datable ceramic sherds provide a mean ceramic date of 1840. However, this date is not reliable, due to the small sample size. Datable glass bottles fall into two groups, machine made and those with diagnostic nineteenth century attributes.

Prehistoric materials also were collected from the site. Two Baytown Plain, *var. unspecified* sherds were found at the toe of the bluff edge, and one Evans stemmed projectile point was collected there. Neither of these artifacts types has a concise date range. Evans points have been found at the Poverty Point site, but not in clear association with the Poverty Point culture (Perino 1985). Baytown Plain, *var. unspecified* is found throughout the Mississippi Period.

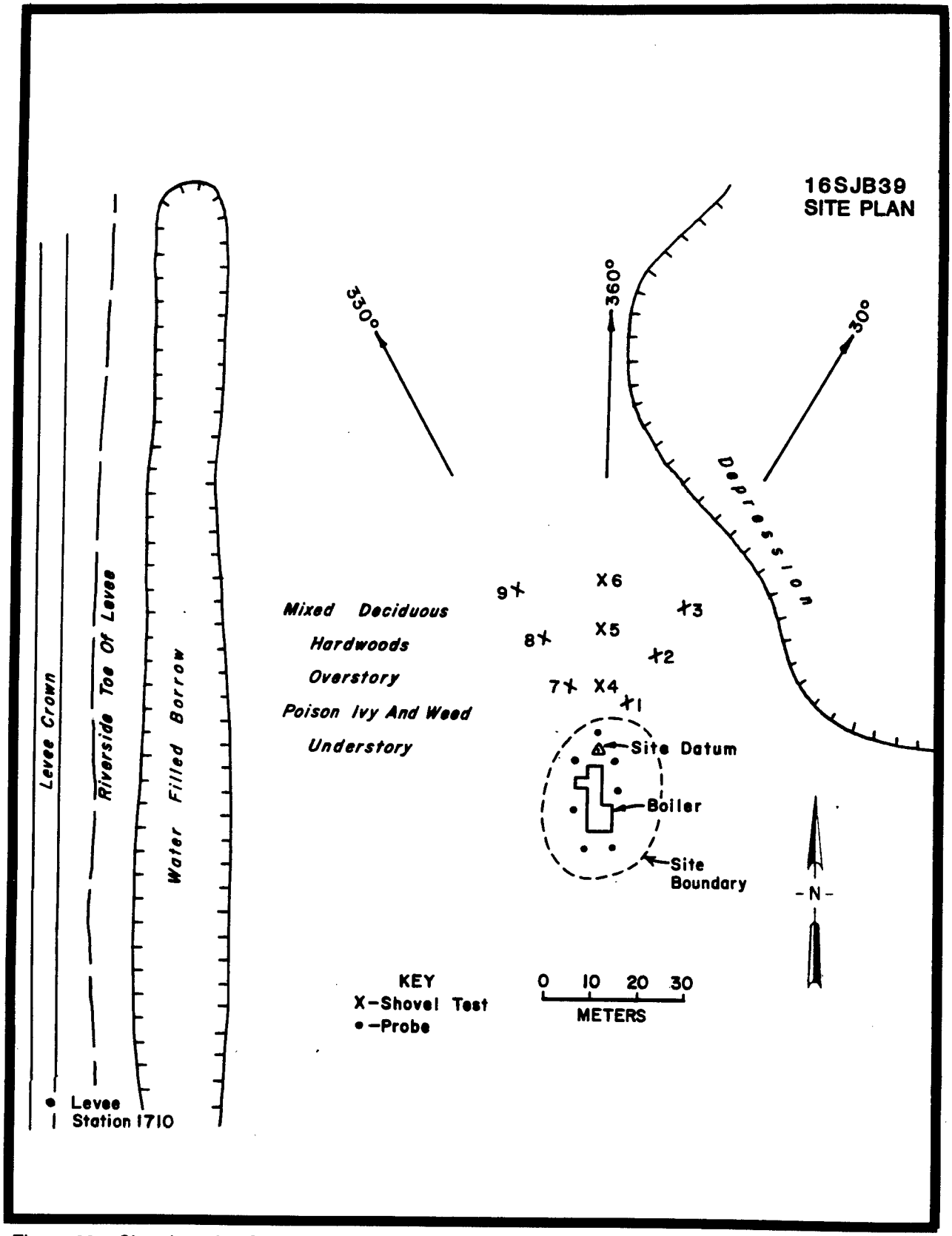


Figure 98. Site plan of 16SJB39.

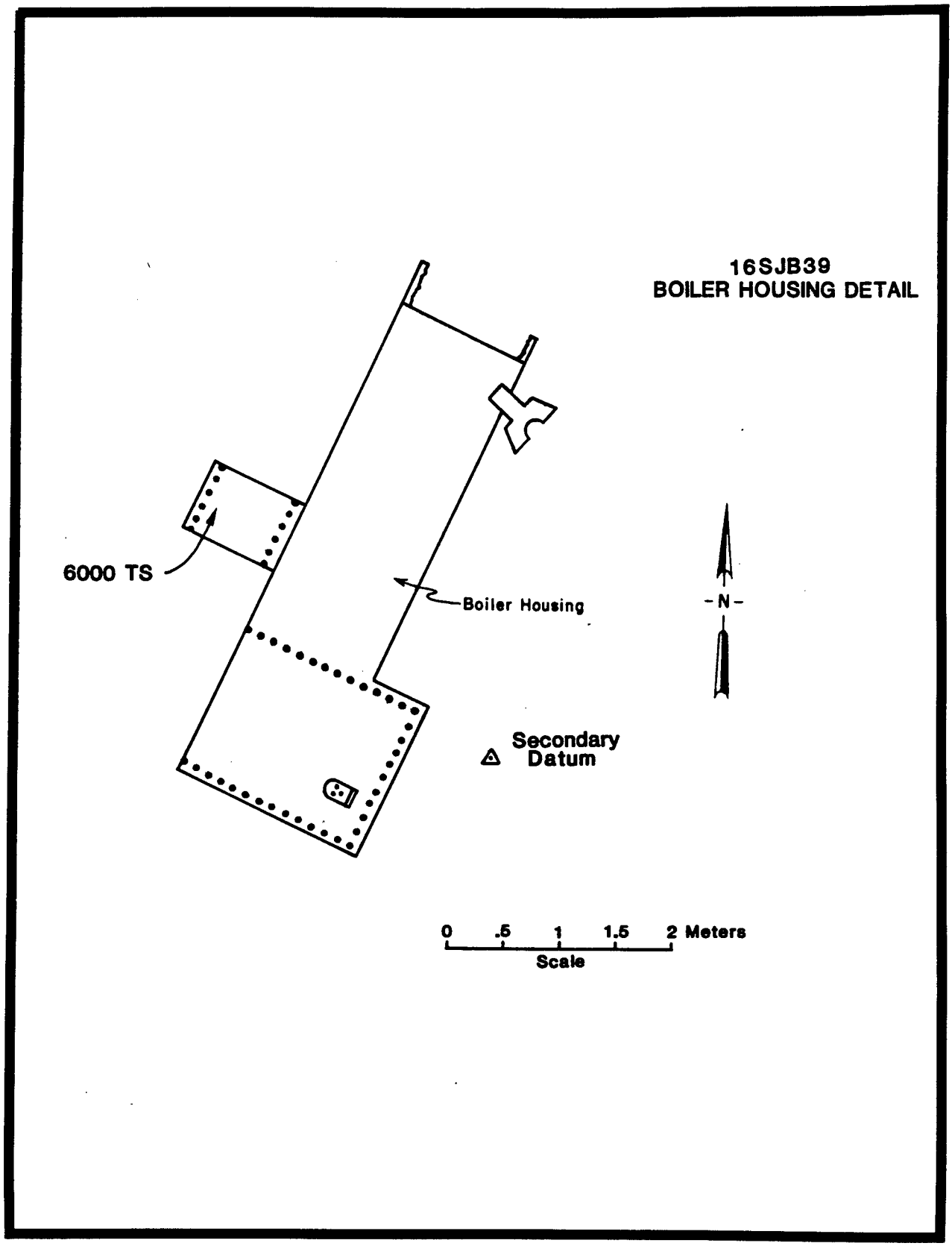


Figure 99. Boiler housing detail at 16SJB39.

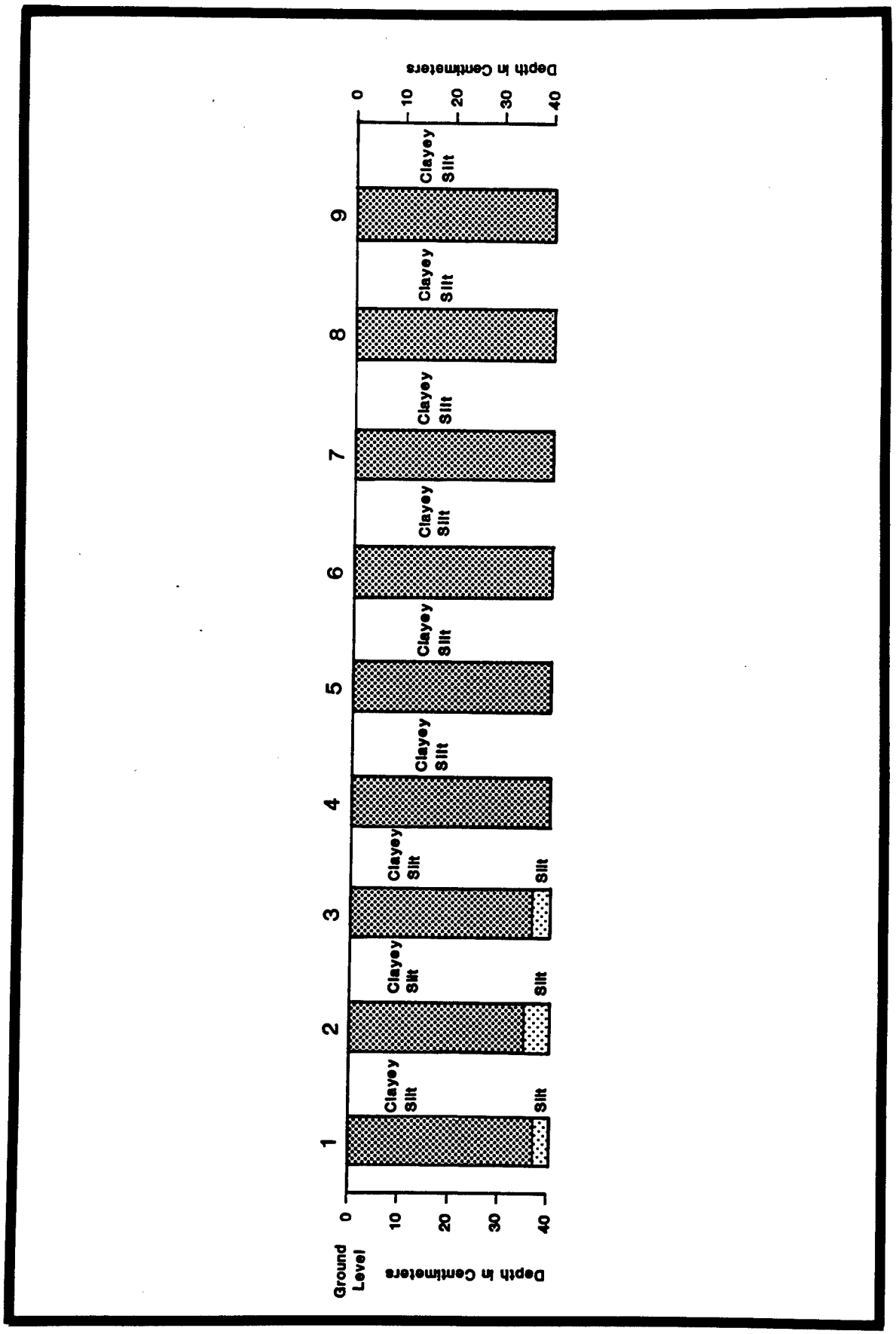


Figure 100. Profile drawing of 16SJB39 shovel tests.

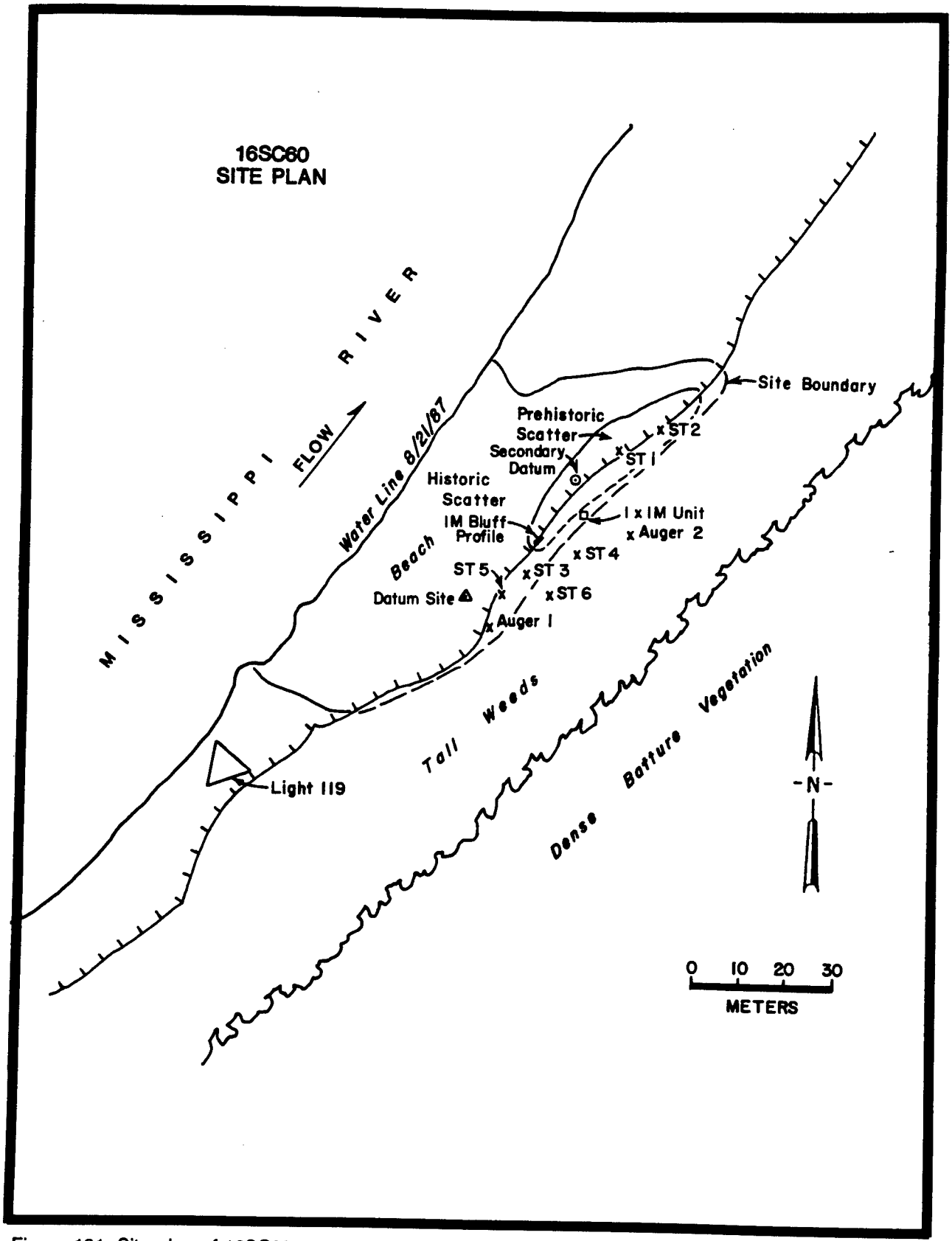


Figure 101. Site plan of 16SC60.

Site 16SC60 was examined through the excavation of six shovel tests. These tests were placed on the bluff edge and banktop. Shovel tests were excavated to an average depth of 30 cm (11.8 in) below the ground surface. These shovel tests failed to recover additional cultural remains. Auger testing at 16SC60 was designed to determine both the stratigraphic setting and the presence or absence of more deeply buried cultural deposits. Two auger tests were excavated on the site, one on the banktop and one at the bluff edge. These tests were excavated to a depth of 1.5 m (4.9 ft) below surface. Both tests revealed a series of clayey silt and silty clay overbank deposits which were devoid of cultural remains.

One 1 m (3.28 ft) long bluff edge stratigraphic bluff edge profile was cleaned along the bluff, to document the nature and extent of subsurface deposits (Figure 102). In this area of the site, a culturally sterile dark gray (5Y 4/1) mottled clay (Stratum A) is present from 0 to 50 cm (0 to 19.7 in) below surface. Stratum B consists of a culturally sterile light gray (5Y 6/1) chalky clay. This thin stratum varied between 5 and 20 cm (2 and 7.9 in) thick. Finally, a culturally sterile olive (5Y 4/4) silty clay was present from 70 cm (27.6 in) below surface to the base of the profile at 94 cm (37 in) below surface.

One 1 x 1 m (3.3 x 3.3 ft) unit was designed to recover additional cultural remains and information about the nature of subsurface deposits. The unit was excavated in arbitrary 10 cm (3.9 in) levels. The north and west wall stratigraphic profiles of this unit are illustrated in Figure 103, and described below. The entire unit is characterized by a series of culturally sterile overbank deposits. Within the west profile, Stratum A consists of a dark gray (5Y 4/1) clay between 0 and 35 cm (0 and 13.8 in) below surface. Feature 1, a basin-shaped pit contained a few flecks of charcoal but no other artifacts. A barge mooring cable anchored nearby appears to be responsible for the subsurface disturbance noted here as Feature 1. Stratum B, a light gray (5Y 6/1) band of dry chalky clay between 30 and 40 cm (11.8 and 15.7 in) below surface, appears to represent reworked overbank deposits. Finally, Stratum C, an olive (5Y 4/4) silty clay was present from about 40 to 50 cm (15.7 to 19.7 in) below the surface. The soil characteristics of the north profile are identical to those described for the west profile above, given the exception of a large animal burrow that bisects the north profile from top to bottom.

In summary, no intact cultural remains were identified at 16SC60. Due to the very poor preservation of the site, the continuing erosion of the bank, and the lack of intact subsurface remains, 16SC60 does not possess sufficient integrity to contribute to the understanding of the history of the region. Therefore, aside from the surface collections retrieved during this study, and the associated locational data, this site is not considered to have further research potential.

16SC61

Site 16SC61 is a linear deposit of prehistoric and historic artifacts located on the bankline of the Mississippi River approximately 300 m (984.3 ft) northeast (azimuth 43°) of Site 16SC60 (Figure 104). The horizontal extent of the site is large, covering nearly 400 m (1,312.3 ft) across its east/west axis and 50 m (164 ft) across its north/south axis. The vertical extent of cultural material below the surface of the ground does not exceed 1.3 m (4.3 ft). Materials found on the surface of the site include: whitewares (plain, shell edged, and hand painted), faience, redwares, creamwares, annular pearlwares, cut nails, bricks, mortar, window glass, gun cartridges, gun flints, buttons, beads, belt buckles, a hook and eye fastener, a bone comb, a ring, an 1883 "V" nickel, molded pipe bowls, ball clay pipe stems, iron axes, hoes, a milling stone fragment, and various other hardware elements such as chain segments, wire, a padlock, machinery parts, and a harness part. The majority of these artifacts are typical of a domestic household setting. However, articles associated with the presence of women and children are noticeably absent.

Temporal dates have been assigned to 31 percent of the surface collected materials. This number includes 32 ceramic sherds, 22 glass elements, one coin (1883 "V" nickel), and one cut nail. The mean ceramic dates for the ceramic types range from 1820 to 1875. Approximately 50 percent of the diagnostic

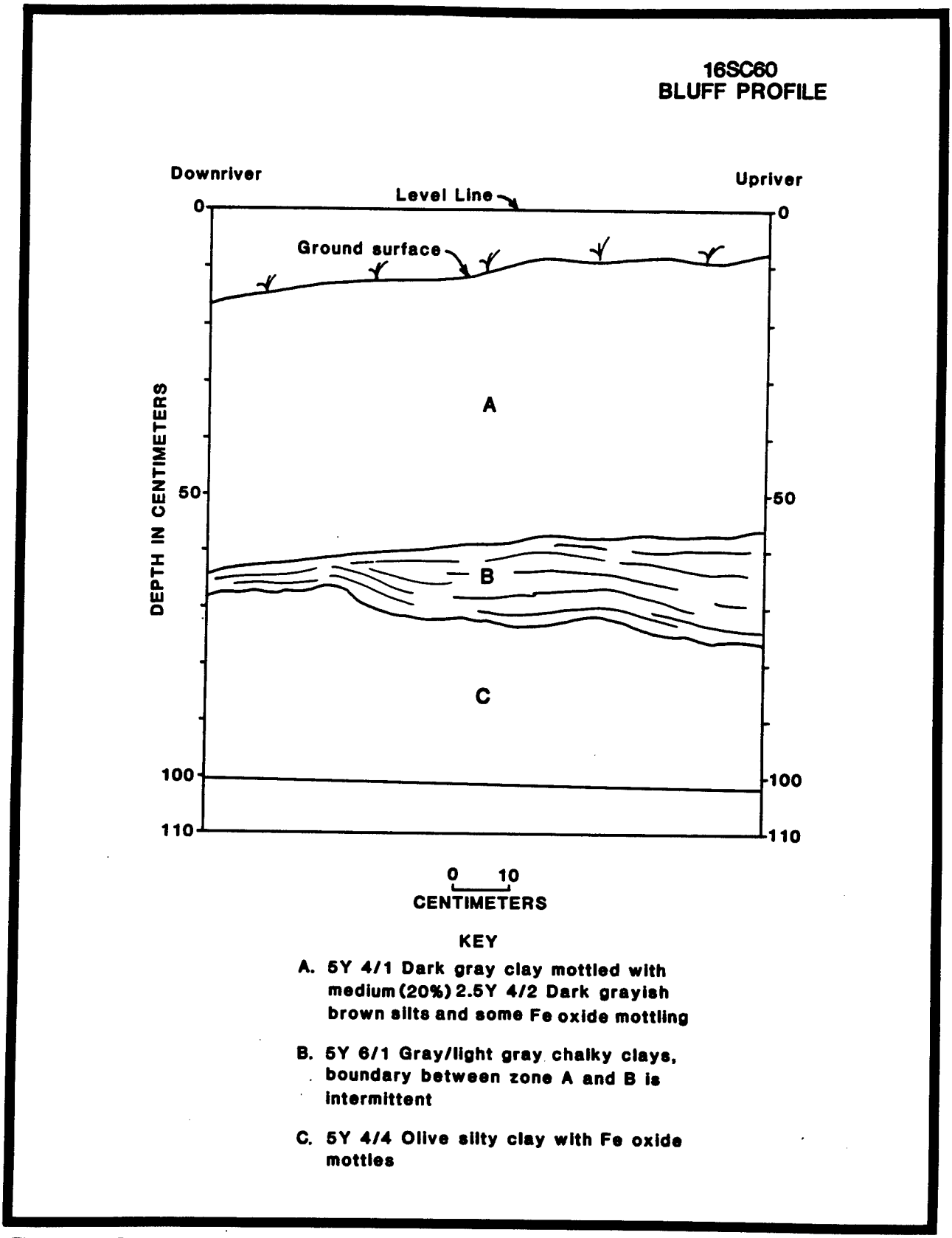
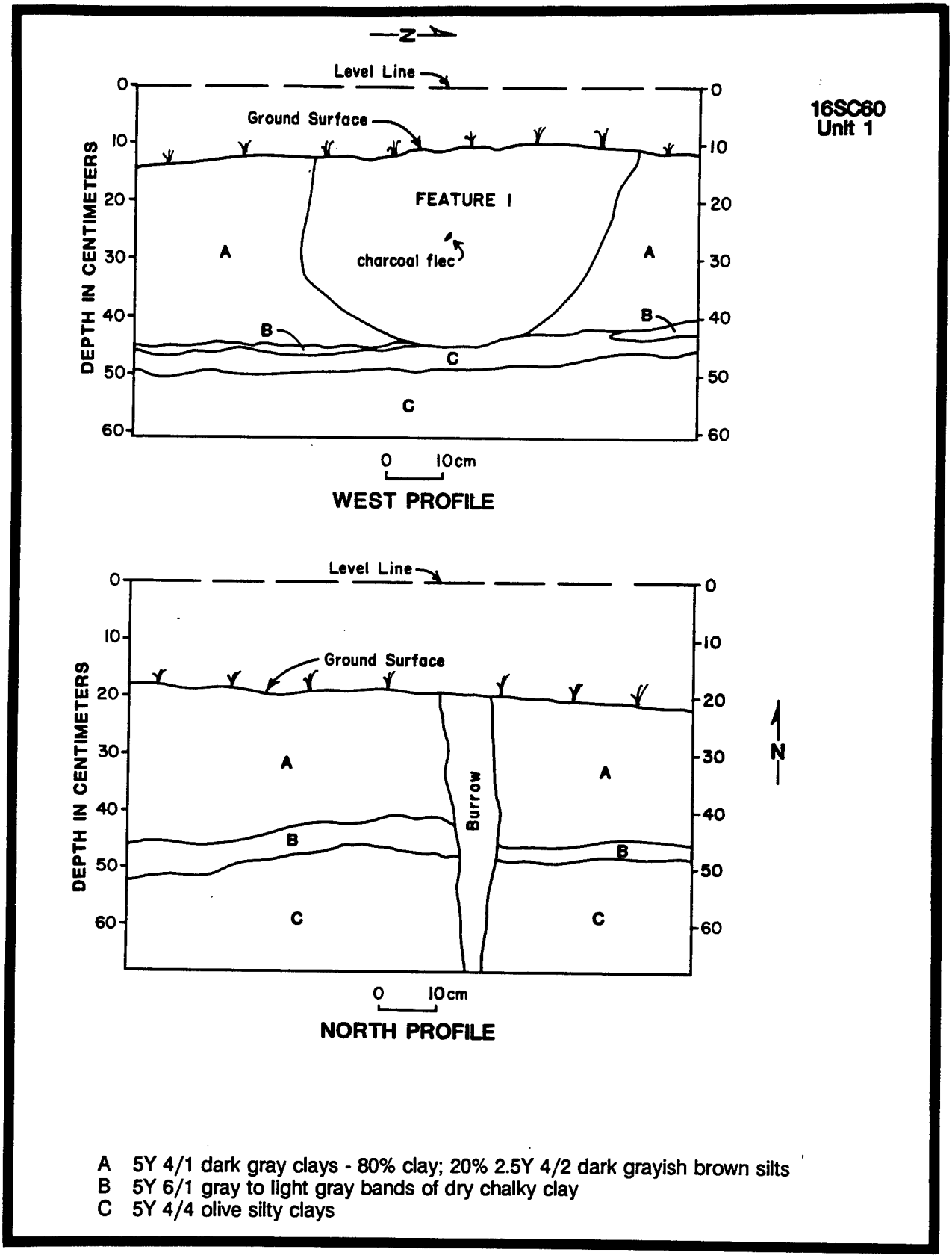


Figure 102. Drawing of 16SC60 bluff edge stratigraphic profile.



A 5Y 4/1 dark gray clays - 80% clay; 20% 2.5Y 4/2 dark grayish brown silts
B 5Y 6/1 gray to light gray bands of dry chalky clay
C 5Y 4/4 olive silty clays

Figure 103. Profile drawing of 16SC60 Feature 1.

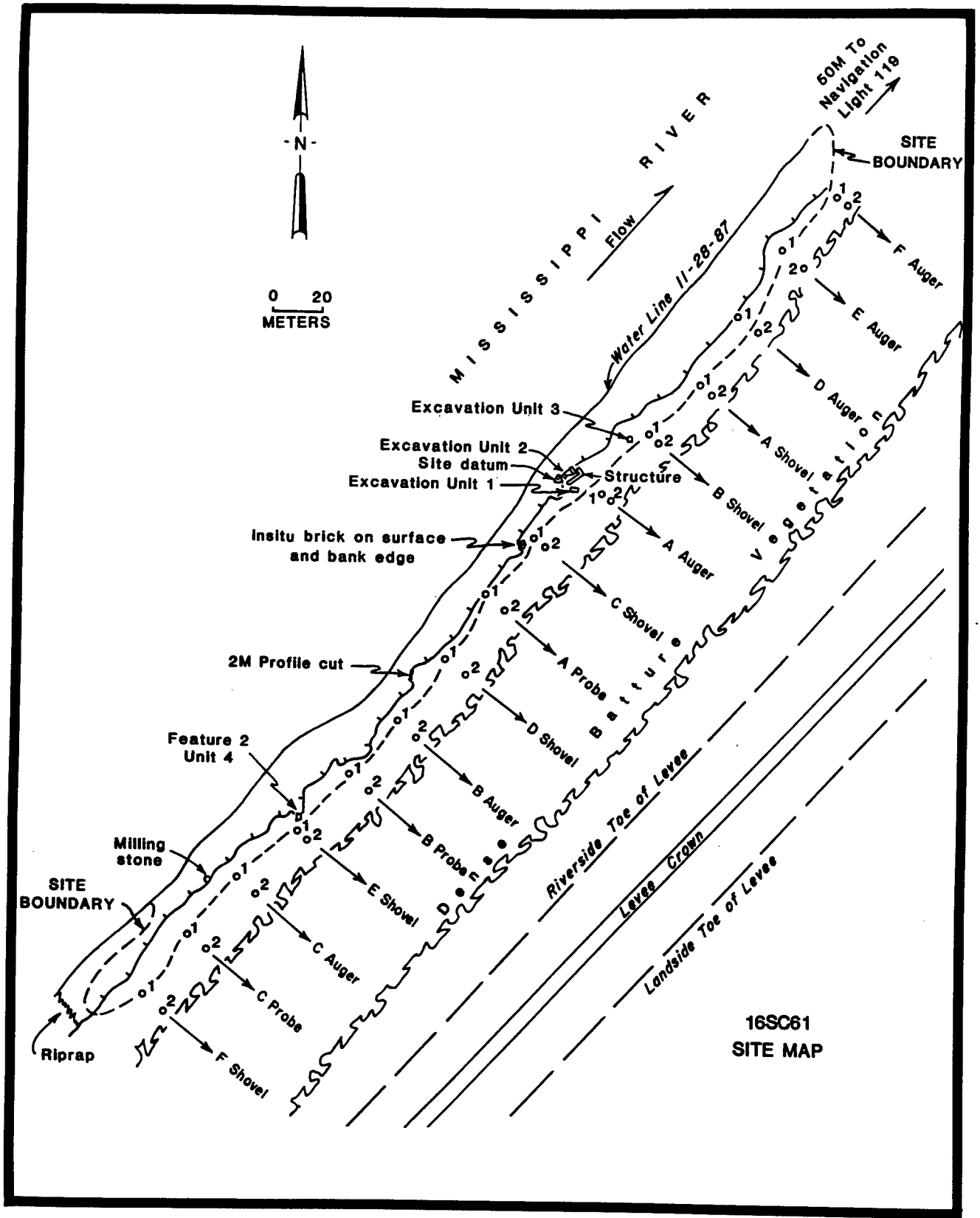


Figure 104. Site plan of 16SC61.

glass gathered during the surface collection is twentieth century machine-manufactured bottle glass (post-1920). Based on manufacturing techniques, the mean glass date for the remainder of the glass is 1874. Several examples of "Dr. Bell's Pine-Tar Honey for Coughs and Colds" were recovered. While no information was ascertained regarding their particular product, advertisements for other products distributed by this company date from 1875 to 1891.

Evidence for a prehistoric component at the site was noted. It consists of one Mississippi Plain, *var. Pocahontas*, one Fatherland Incised, *var. Bayou Goula*, and one Marksville Incised, *var. unspecified* sherd.

A total of 12 auger tests and six probe tests were excavated to depths ranging from 80 cm to 1 m (31.5 in to 3.3 ft). Test locations are shown on the site map (Figure 104). This series of systematically placed tests were excavated to provide data on the nature and depth of deposits and extent of the site. Auger test stratigraphy is summarized in Table 24. All 12 auger tests proved to be culturally sterile. Stratigraphy summarized in Table 24 suggests the deposition of heavy alluvial sedimentation across the site area.

In addition, 12 shovel tests were excavated across the site (Figure 104). The 12 shovel tests placed on the site were excavated to a depth of 30 cm (11.8 in). These shovel tests provided additional information on the nature of subsurface natural deposits, but failed to recover additional cultural remains.

To investigate natural and cultural subsurface deposits, a 2 m (6.6 ft) long by 2 m (6.6 ft) deep stratigraphic profile was cleaned along the bankline (Figure 105). A thorough examination of the profile revealed the presence of cultural debris in Strata A-G to a depth of 1 m (3.3 ft) below the ground surface. Brick fragments were recorded, interspersed throughout Stratum G, a 20 cm (7.9 in) thick deposit of dark brown (10YR 4/3) silt. Below this deposit, a series of culturally sterile overbank deposits, Stratum H, was present from about 1 to 2 m (3.3 to 6.6 ft) below the surface.

During a pedestrian survey, a large reddish orange brick scatter was noted along the beach and within the matrix of the cutbank. Bricks could be seen along a 200 m (656.2 ft) portion of the bankline in the site area. The fact that brick fragments predominate across most of the site's surface attests to the extensive degree of cutbank erosion, which has occurred on the site.

A large reddish orange brick architectural feature (Feature 1) was recorded in the center of the brick scatter (Figure 106). The configuration of the features, and the fact that domestic utilitarian artifacts were associated, suggests that the structure represented a domestic site, probably a household. The southern foundation wall, a collapsed chimney, and the remnant of a brick patio are all that remain of the laid brick structure. The southern foundation is composed of large, soft, red bricks, and lime mortar. It is 4 m (13.1 ft) long and 50 cm (19.7 in) wide. It reaches a height of approximately 50 cm (19.7 in) above the ground surface. The brick foundation rests on a stratum of clay loam. Inside the foundation area, an ashy deposit with numerous charcoal fragments and associated fire bricks are present. This deposit may represent a collapsed chimney. Several sherds of blue shell-edged pearlware were collected just below the surface of this area in an ashy deposit. An intact solid brick floor patio area was found to the east, adjacent to the east wall foundation. These hard patio bricks are shiners. They are characterized by a greenish gray self-glazed surface.

Additional testing at 16SC61 focused on the area in and around Feature 1. One 1 x 2 m (3.3 x 6.6 ft) unit was opened in this area (Figure 106). Unit 1, located at the southeastern corner of the feature, was designed to expose the surface of the buried occupation surface that was observed along the face of the bluff edge. The unit was excavated in both 10 cm (3.9 in) arbitrary and natural levels. A plan view of the Level 6 floor (Figure 107), and the east wall stratigraphic profile (Figure 108) are described below. The buried occupation surface was defined in Level 6, 70 cm (27.6 in) below the ground surface. This surface

Table 24. Auger Test Stratigraphy at 16SC61.

TEST	DEPTH IN CENTIMETERS	SOIL DESCRIPTION
A_1	0 - 27	10YR3/3 Dark Brown Silty Clay
	27 - 42	2.5Y5/2 Grayish Brown Silty Clay
	42 - 62	10YR4/3 Brown Silty Clay
	62 - 82	7.5YR4/6 Brown Silty Clay
A_2	0 - 27	10YR3/3 Dark Brown Silty Clay
	27 - 42	2.5Y5/2 Grayish Brown Silty Clay
	42 - 62	10YR4/3 Brown Silty Clay
	62 - 82	7.5YR4/6 Brown Silty Clay
B_1	0 - 27	10YR4/3 Brown Silty Clay
	27 - 42	10YR4/2 Dark Grayish Brown Silty Clay
	42 - 62	10YR4/4 Dark Yellowish Brown Silty Clay
	62 - 82	2.5Y4/2 Dark Grayish Brown Silty Clay
B_2	0 - 27	10YR4/3 Brown Silty Clay
	27 - 42	10YR4/2 Dark Grayish Brown Silty Clay
	42 - 62	10YR5/4 Yellowish Brown Silty Clay
	62 - 82	10YR6/4 Light Yellowish Brown Silty Clay
C_1	0 - 27	10YR4/3 Brown Silty Clay
	27 - 42	2.5Y5/2 Grayish Brown Silty Clay
	42 - 62	2.5Y5/4 Light Olive Brown Silty Clay
	62 - 82	2.5Y4/2 Dark Grayish Brown Silty Clay
C_2	0 - 27	10YR4/4 Dark Yellowish Brown Silty Clay
	27 - 42	7.5YR5/6 Strong Brown Silty Clay
	42 - 62	10YR4/3 Brown Silty Clay
	62 - 82	2.5Y5/2 Grayish Brown Silty Clay
D_1	0 - 25	10YR3/3 Dark Brown Silty Clay
	25 - 40	2.54/4 Olive Brown Silty
	40 - 80	5Y5/2 Olive Gray Silty Clay
	80 - 100	2.5Y4/2 Dark Grayish Brown Silty Clay

Table 24, continued

TEST	DEPTH IN CENTIMETERS	SOIL DESCRIPTION
D_2	0 - 25	2.5Y5/6 Light Olive Brown Silty Clay
	25 - 40	2.5Y4/4 Olive Brown Silty Clay
	40 - 80	2.5Y4/4 Olive Brown Silty Clay
	80 - 100	2.5Y4/2 Dark Grayish Brown Silty Clay
E_1	0 - 25	2.5Y5/6 Light Olive Brown Silty Clay
	25 - 40	2.5Y4/2 Grayish Brown Silty Clay
	40 - 80	2.5Y4/2 Grayish Brown Silty Clay
	80 - 100	2.5Y4/4 Olive Brown Silty Clay
E_2	0 - 25	2.5Y5/6 Light Brown Silty Clay
	25 - 40	2.5Y4/4 Olive Brown Silty Clay
	40 - 80	2.5Y4/4 Olive Brown Silty Clay
	80 - 100	2.5Y4/2 Dark Grayish Brown Silty Clay
F_1	0 - 25	10YR3/3 Dark Brown Silty Clay
	25 - 40	2.5Y4/4 Olive Brown Silty Clay
	40 - 80	5Y5/2 Olive Gray Silty Clay
	80 - 100	2.5Y4/4 Dark Grayish Brown Silty Clay
F_2	0 - 25	2.5Y5/6 Light Olive Brown Silty Clay
	25 - 40	2.5Y4/4 Olive Brown Silty Clay
	40 - 80	2.5Y4/4 Olive Brown Silty Clay
	80 - 100	5Y3/2 Dark Olive Gray Silty Clay

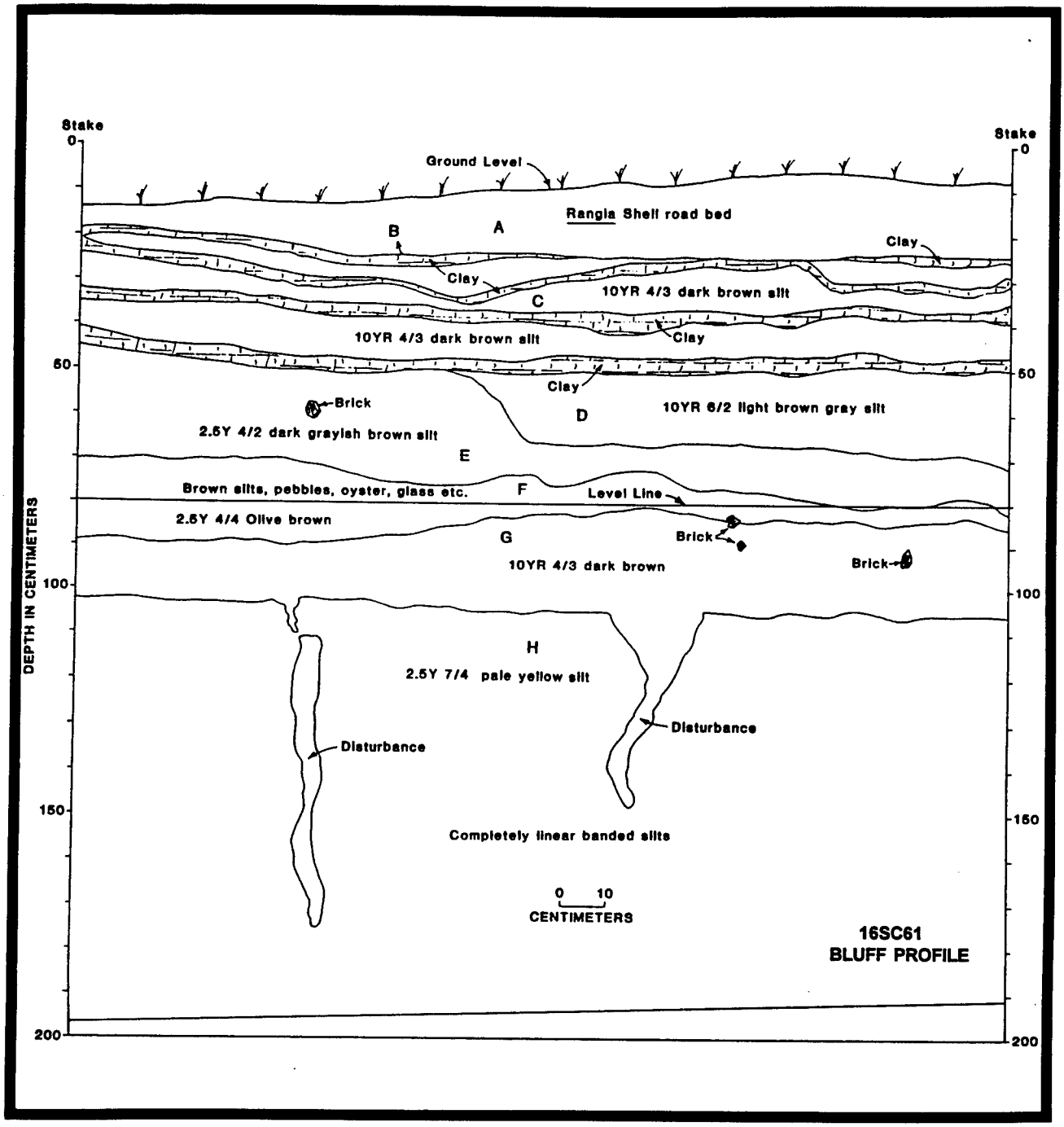


Figure 105. Drawing of 16SC61 bluff edge stratigraphic profile.

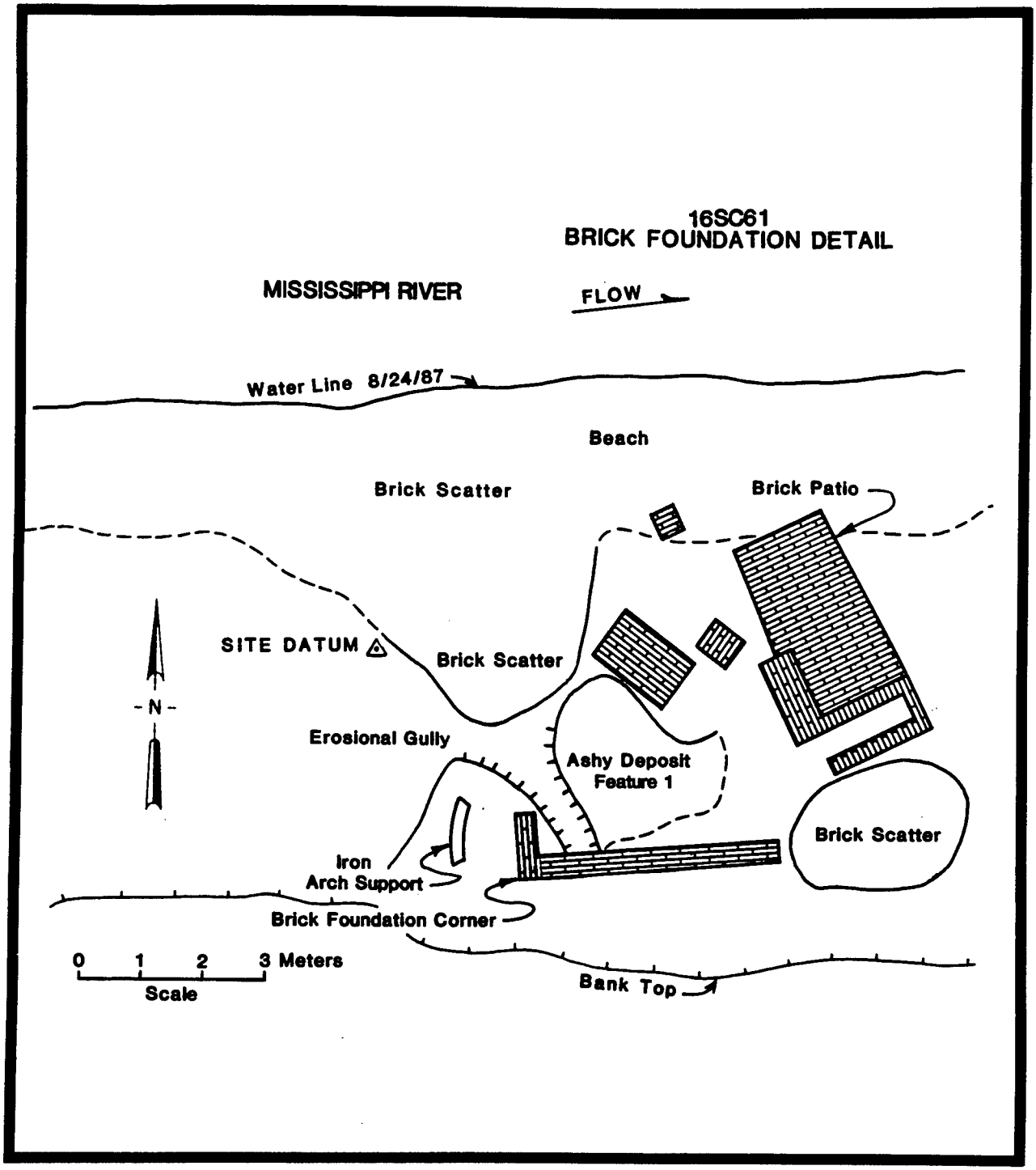


Figure 106. 16SC61 brick foundation detail.

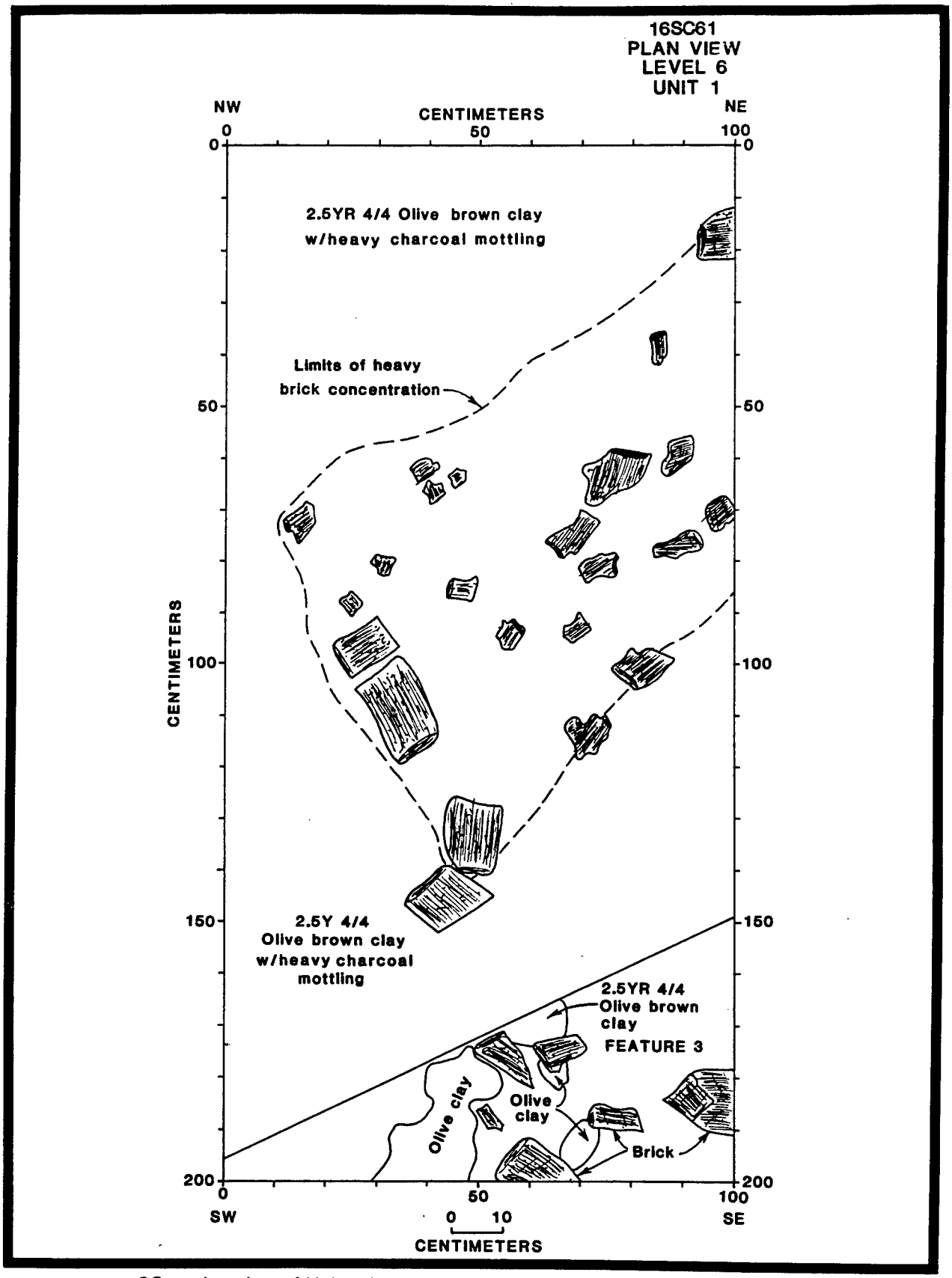


Figure 107. 16SC61 plan view of Unit 1, Level 6.

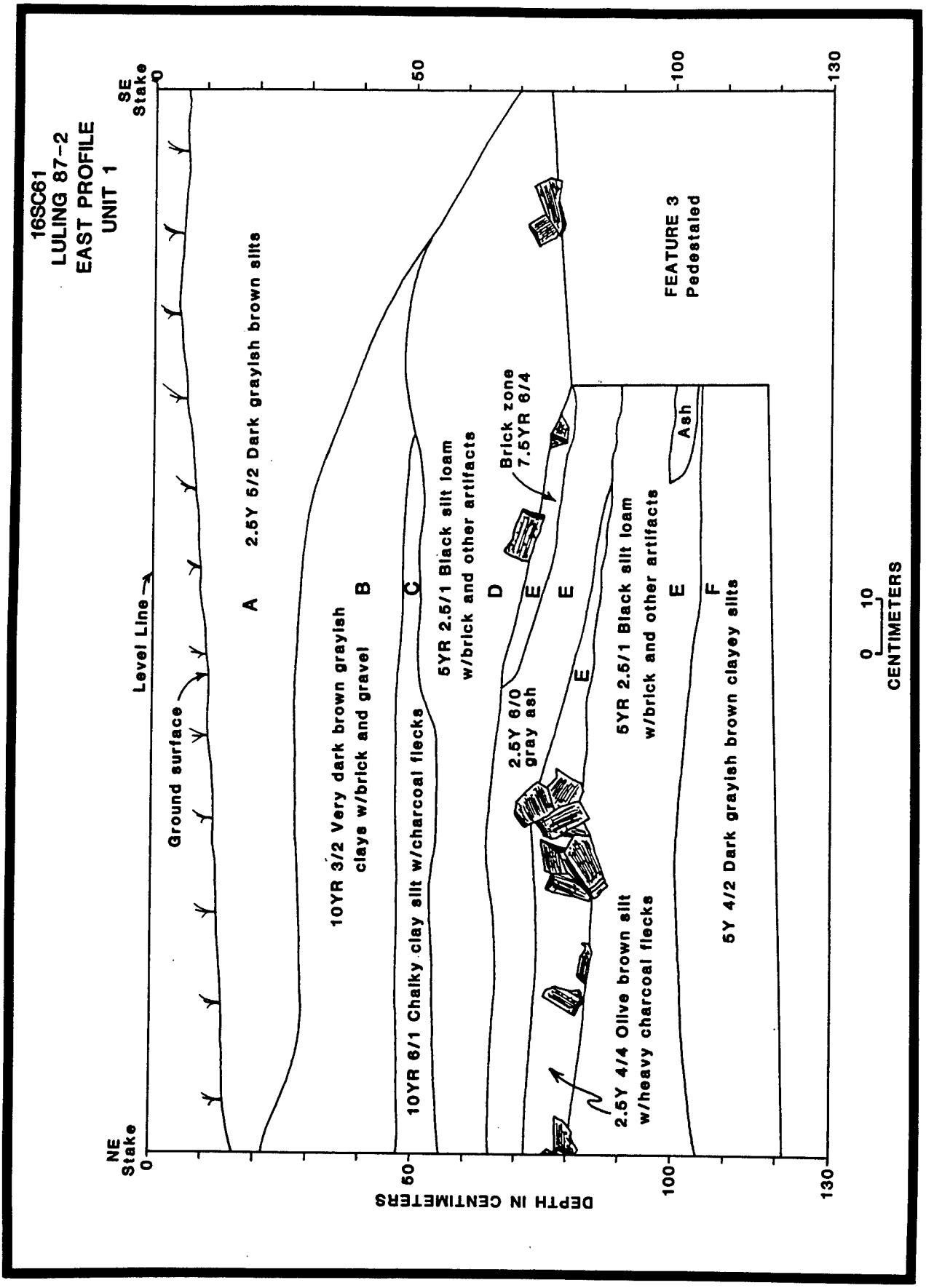


Figure 108. Profile drawing of 16SC61 Excavation Unit 1 (east profile).

was comprised of olive brown clay heavy with charcoal. An extensive mass of brick rubble was exposed near the center of the unit. These bricks clearly are derived from Feature 1. In the southeastern corner of the unit, evidence of a construction trench, Feature 3, was encountered. Within Feature 3, there is a lower density of charcoal; also the average size of the brick rubble is smaller.

Stratum A of Unit 1 consists of dark grayish brown (2.5Y 4/2) silts. Historic sherds, bottle glass fragments, and charcoal flecks were present in this redeposited overbank deposit. A very dark brown grayish (10YR 3/2) clay (Stratum B) occurs immediately below Stratum A. Stratum B contains both brick rubble and gravel. Stratum C, a light gray (10YR 6/1) band of chalky clay and silt appears to represent a fluvial deposition. Stratum D is a black (5YR 2.5/1) silt loam deposit containing brick and other artifacts such as yelloware, whiteware, ironstone, pearlware, buff bodied earthenware, square cut nails, and various unidentifiable iron fragments.

Stratum E is designated as the brick deposit. It consists of gray (2.5Y 6/0) ash, light brown (7.5YR 6/4) ash, olive brown (2.5Y 4/4) silt with heavy charcoal flecks, and black (5YR 2.5/1) silt loam. As such, it represents the occupation floor drawn as Level 6 in Figure 107. Stratum F is a culturally sterile dark grayish brown (5Y 4/2) clayey silt between 1.1 m (3.6 ft) below the surface and the floor of the unit at 1.3 m (4.3 ft) below surface.

Unit 2, a 1 x 1 m (3.3 x 3.3 ft) test, was placed inside Feature 1, on top of the fallen chimney deposit of ash, charcoal, and brick rubble. The entire ashy lens covers approximately a 2 m (6.6 ft) square area. The unit was excavated in arbitrary 10 cm (3.9 in) levels. The west wall stratigraphic profile is described below (Figure 109). Stratum A, a brown (10YR 5/3) clay deposit, was located between 0 and 5 cm (0 and 2 in) below surface. Stratum A was full of brick rubble from the former structure, as well as ash and charcoal from the former chimney that stood on this spot. Stratum B, a dark gray (7.5YR 3/1) clay deposit, reached a depth of about 15 cm (5.9 in) below the surface. It contained small brick fragments, charcoal, and historic sherds. Stratum C was a layer of brown (10YR 5/3) clay which clearly corresponded to the brick and charcoal rubble in the two strata above; Stratum D was a layer of dark gray (7.5YR 3/1) ash typical of fireplace refuse. Below Stratum D, a culturally sterile clay was encountered from about 40 cm (15.7 in) below surface to the base of the unit at 50 cm (19.7 in) below surface. Unit 2 confirmed the presence of a fireplace feature, but failed to shed additional light upon the structure's age.

Unit 3, a 1 x 1 m (3.3 x 3.3 ft) unit, was placed on the site 30 m (98.4 ft) northeast of the brick foundation, to determine if a difference in artifact diversity occurs downriver from the structure. The unit was excavated in arbitrary 20 cm (7.9 in) levels to a depth of 1.2 m (3.9 ft). From the ground surface to a depth of 40 - 45 cm (15.7 - 17.7 in) below surface, a deposit of very dark gray (10YR 3/1) clay with artifact inclusions was encountered. From 40 - 45 cm (15.7 - 17.7 in) to a depth of approximately 70 - 74 cm (27.6 - 29.1 in) below surface, virtually sterile deposits of very dark grayish brown (10YR 3/2) and light olive brown (2.5Y 5/4) soils were encountered. These soils rested on an approximately 20 cm (7.9 in) thick cultural deposit of dark brown (10YR 3/3) clay loam that contained a dense concentration of brick and charcoal; this cultural deposit terminated abruptly at approximately 90 cm (35.4 in) below surface. The final stratum encountered within the unit extended from 90 to 120 cm (35.4 to 47.2 in) below surface; it was comprised of culturally sterile brown (10YR 5/3) clay.

Unit 4, a 1 x 2 m (3.3 x 6.6 ft) unit, confirmed the presence of Feature 2 within the cutbank bluff edge, but failed to shed additional light upon its origin or age (Figure 104). Feature 2 is defined as a surficial concentration of historic artifactual remains present along the cutbank and terrace of the Mississippi River. The unit was excavated in arbitrary 20 cm (7.9 in) levels, and the west and south wall stratigraphic profiles were drawn (Figures 110 and 111). Stratum A is a brown (10YR 4/3) silt with wavy laminae of silt loam inclusions. Strata B, C, and D, light olive brown (2.5Y 5/6) clays, represent deposits that are typical of fluvial deposition. Stratum D is laminated with eight distinct bands of clay mottled with ferrous oxides. Stratum E, a dark gray (2.5Y 4/0) silty clay deposit bearing cultural material, showed considerable variability

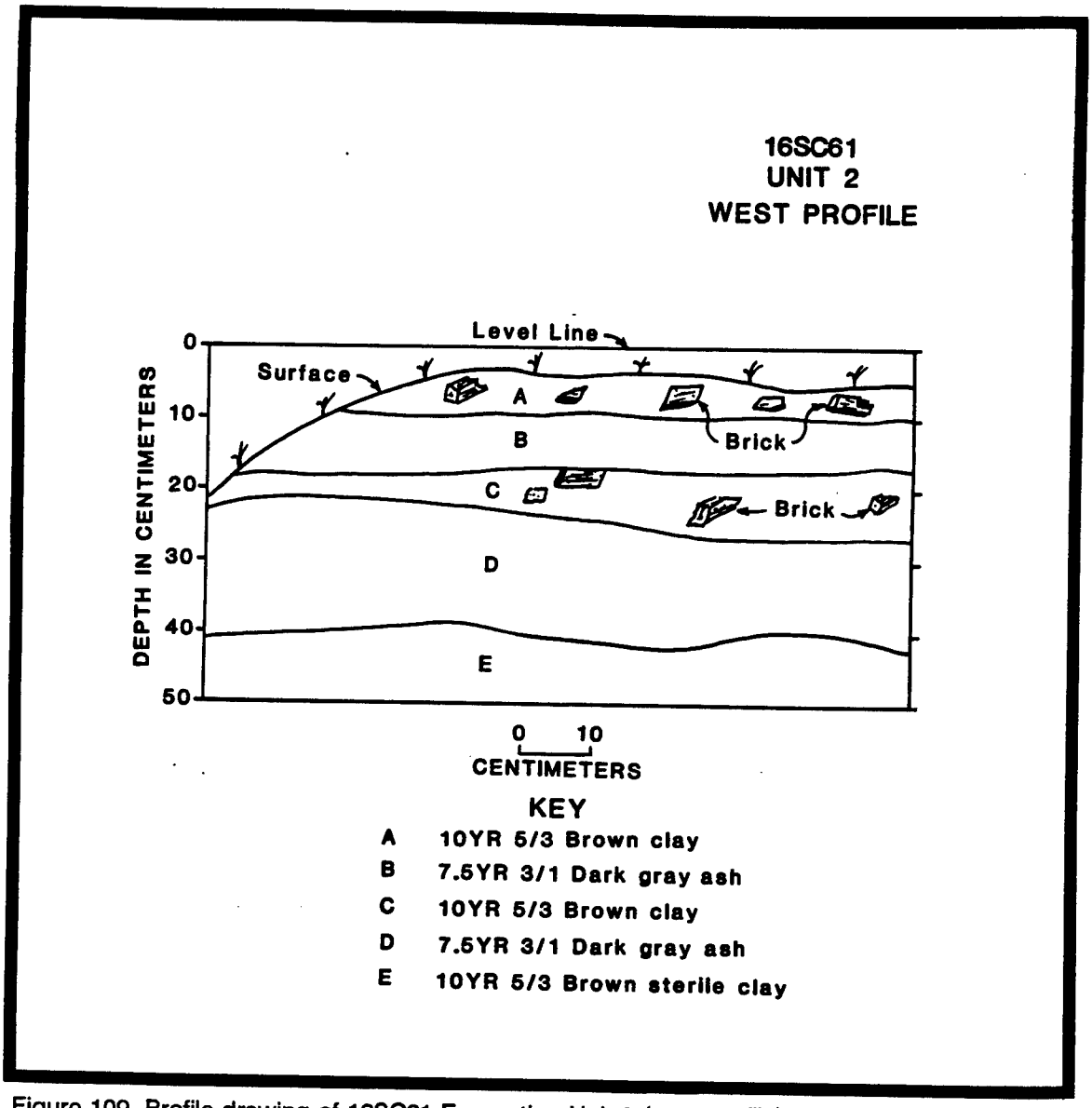


Figure 109. Profile drawing of 16SC61 Excavation Unit 2 (west profile).

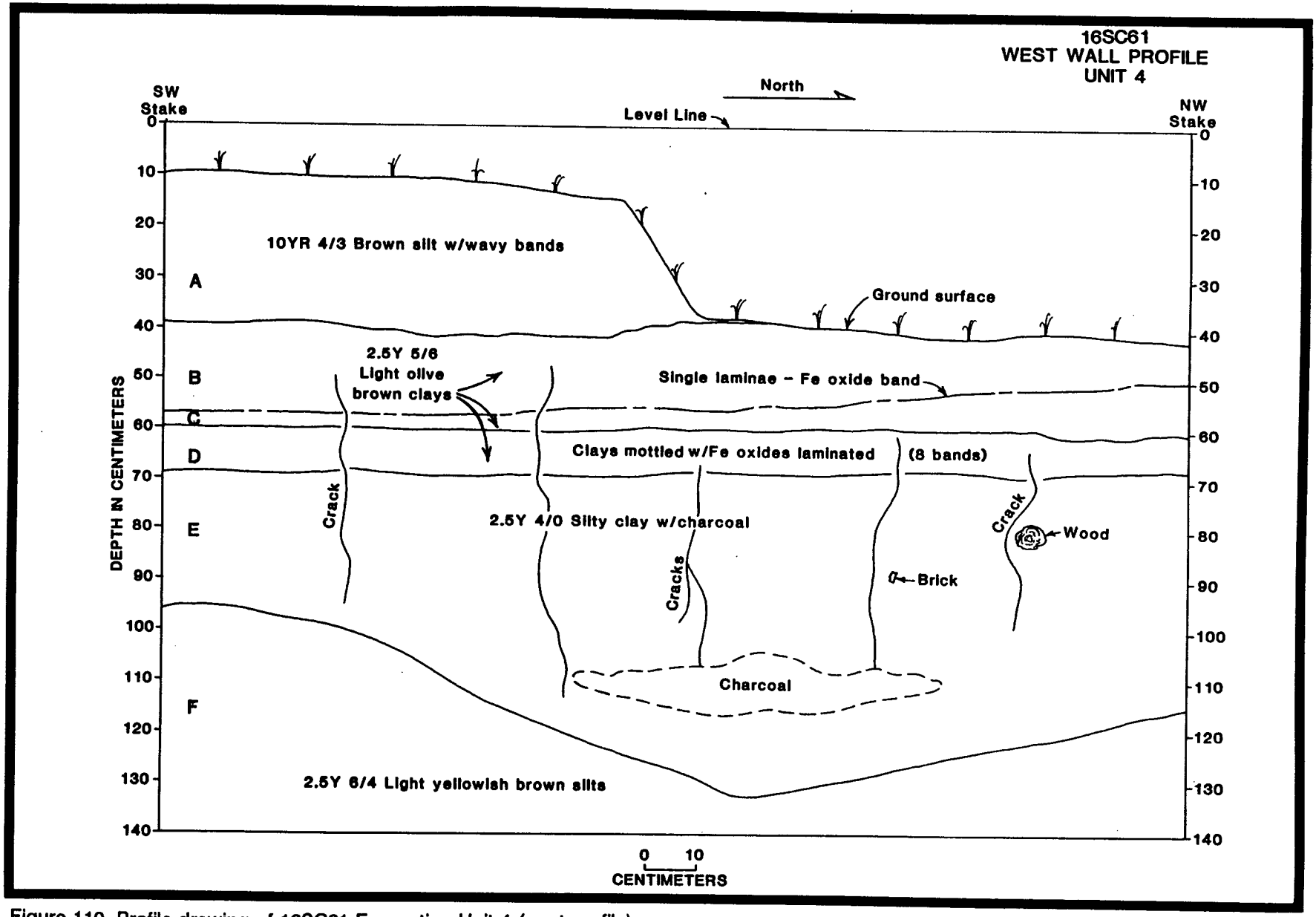


Figure 110. Profile drawing of 16SC61 Excavation Unit 4 (west profile).

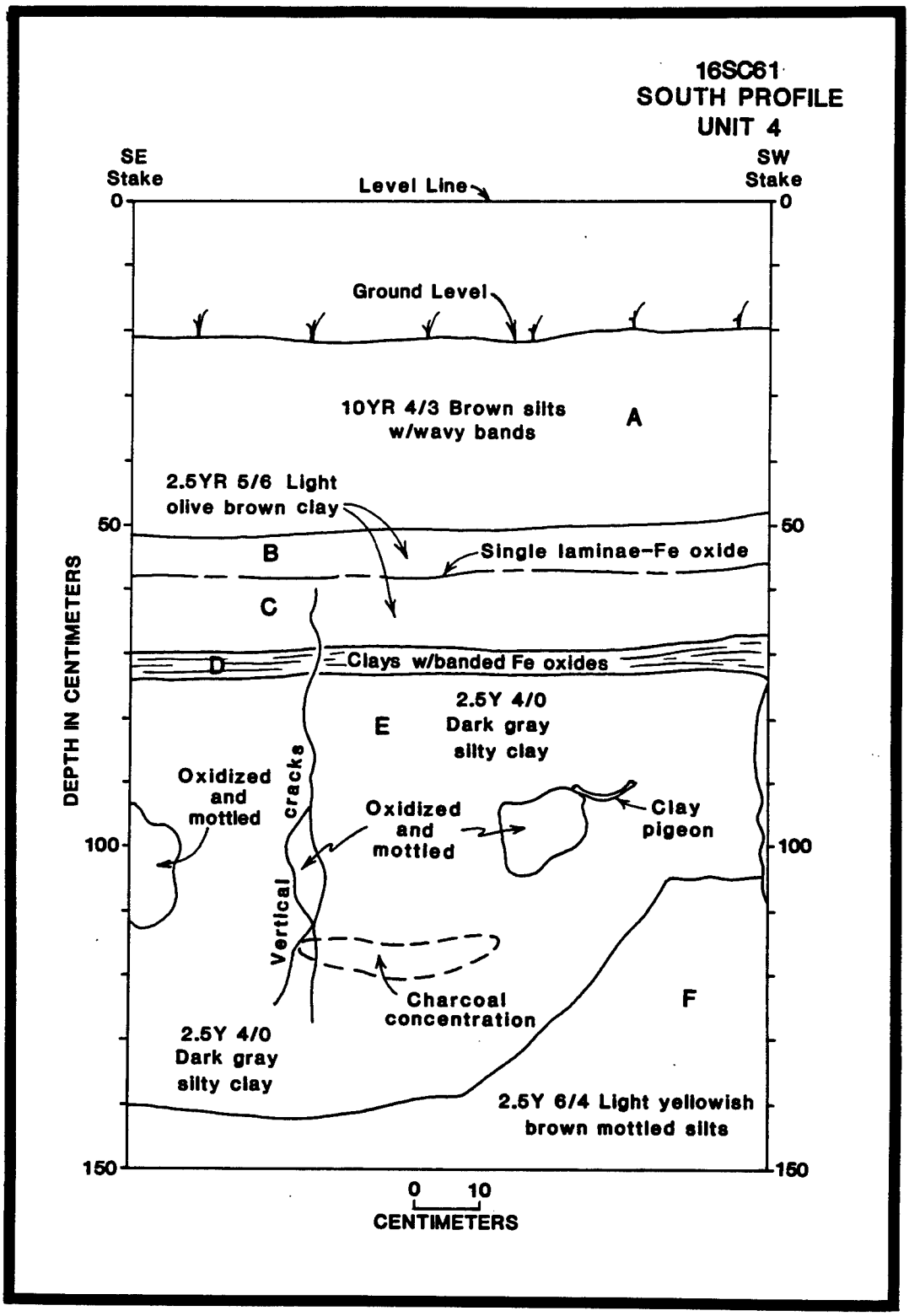


Figure 111. Profile drawing of 16SC61 Excavation Unit 4 (south profile).

in the amount of charcoal present within its matrix. These cultural materials presumably originated at this level, and later were covered by an overbank deposit. Stratum F, a light yellowish brown (2.5Y 6/4) silt represents another culturally sterile overbank deposit.

An x-y-z coordinate was established for this *in situ* site. The site datum (Figure 104) was tied-in to two levee marker survey stations, numbers LMS 459 and LMS 460. Future research at 16SC61 would produce additional data relevant to previously identified themes significant to the history of the project area, due to the contextual integrity of the subsurface historic assemblage as exhibited and recorded during the 1987 examination of the site.

16SC62

Site 16SC62 is a circular deposit of historic artifacts located on the west bank of the Mississippi River (Figure 112). The site is located on the beach approximately 1,000 m (3,280.8 ft) northeast (azimuth 48°) of navigation light 119. The horizontal extent of the site is small, covering 15 m (49.2 ft) across its north/south axis and 15 m (49.2 ft) across its east/west axis.

Artifacts recovered from the surface of the site include: porcelain, porcelain figurine fragments, yelloware, ironstone, whiteware, machine made bottle glass, and melted glass. All artifacts in the surface collection assemblage from the site were classified functionally. Identified groups are Kitchen (91.3 percent), Furniture (4.3 percent), and Activities (4.3 percent). The Kitchen group includes ceramics and bottle glass. The Furniture group is represented by a ceramic figurine fragment. The Activities group is represented by one indeterminate hardware element. The percentage of Kitchen group items indicates a high probability for a domestic household setting. The presence of the figurine fragment adds to this probability. However, lacking more artifacts of varying functional classification, no further interpretation can be made. Six complete bottles of "Dr. Bell's Pine-Tar Honey for Cough and Colds" were collected from the site. These bottles may date from 1875 to 1891.

The ceramic count from the site was too small to allow reliable temporal determination. However, a formulated mean ceramic date of 1860 is based on three sherds. A 1920 post date for machine manufactured bottle glass (43 percent of the site assemblage), is the only other temporal information available.

Examination of 16SC62 included a systematic shovel test regime. Shovel tests were excavated at 10 m (32.8 ft) intervals along three rays (Figure 112) to delimit the horizontal extent of the site. No artifactual remains were encountered in these six shovel tests. The paucity of cultural remains makes interpretation of the size of the site, formation of the site, and its historic use difficult. The interpretation offered is that the site represents the remains of an early twentieth century trash dump. Field investigations demonstrated that much of the site has been lost to the Mississippi River through bank and beachline erosion. Due to the very poor preservation of the site, the continuing erosion of the bank, and the lack of intact subsurface remains on the beach, 16SC62 does not possess sufficient integrity to contribute to the understanding of the history of the region. Because of the lack of contextual integrity, and due to the absence of associated cultural remains, the site does not possess further research potential.

16SC63

Site 16SC63 is an elliptical deposit of historic artifacts located on the first terrace and beach of the batture (Figure 113). The site is located approximately 525 m (1,722.4 ft) northeast (azimuth 25°) of Site 16SC64. The horizontal extent of the site is small, covering 30 m (98.4 ft) across its north/south axis and

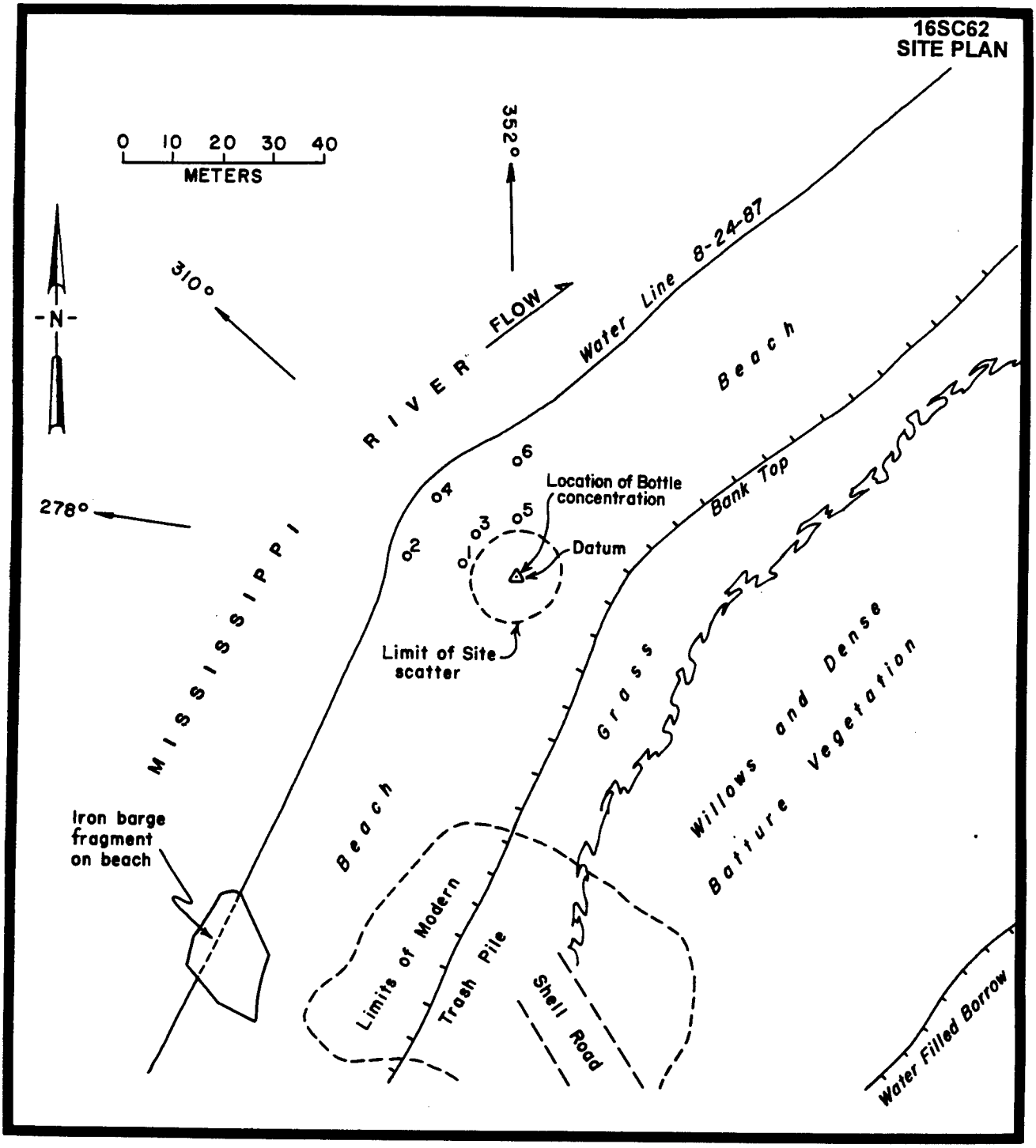


Figure 112. Site plan of 16SC62.

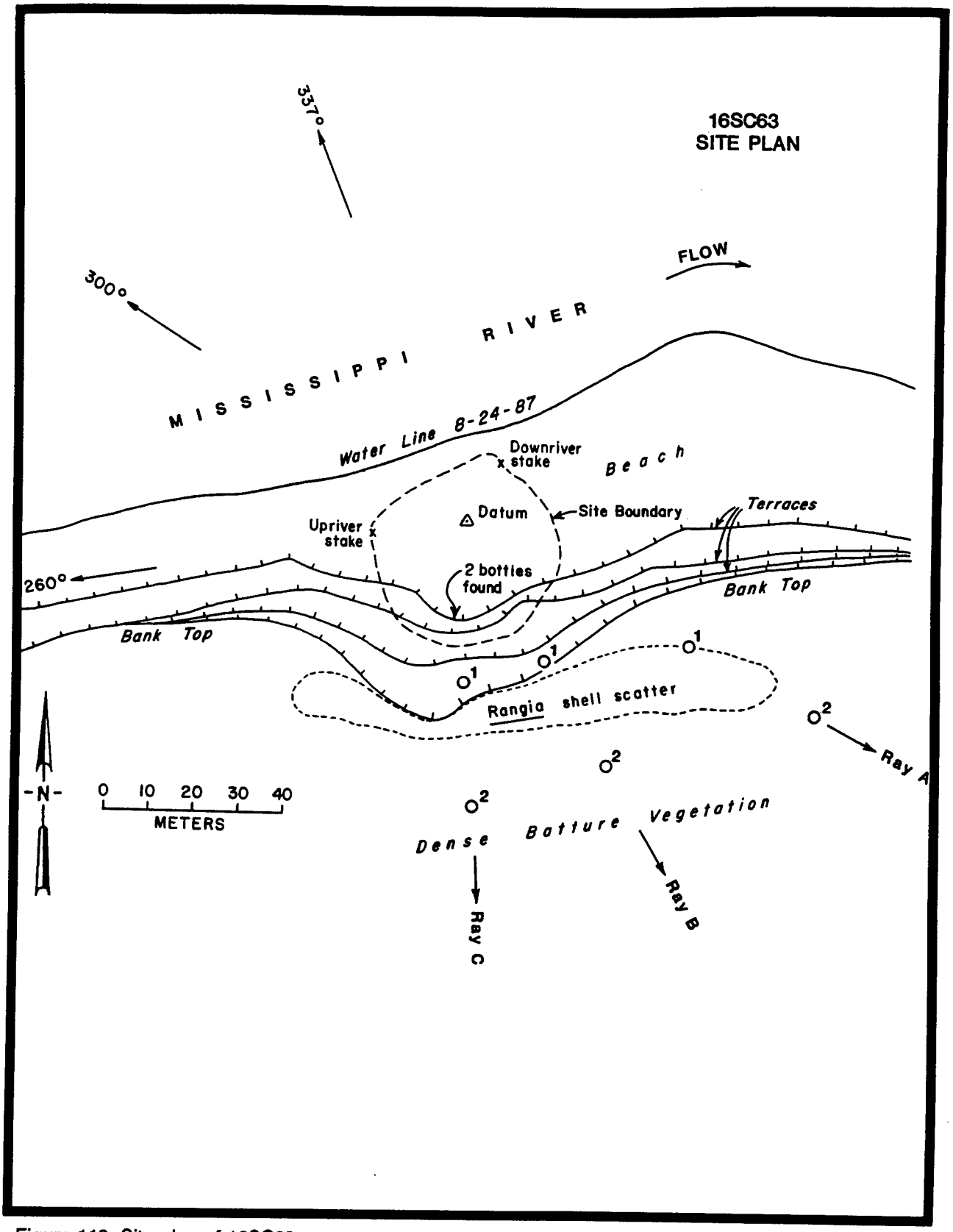


Figure 113. Site plan of 16SC63.

30 m (98.4 ft) across its east/west axis. The vertical extent of cultural material below the surface did not exceed 10 cm (3.9 in).

Materials found on the surface of the site included one whiteware sherd, one ironstone sherd, and three fragments of bottle glass. These five artifacts are identified as Kitchen group elements. Aside from a recognition of food service activities, no further interpretation is possible based upon this information. The mean ceramic date calculated for the site is 1858. The mean bottle glass date is 1865. Date ranges for all artifacts are in the mid to late nineteenth century. While 100 percent of the artifacts provide dating information, this date is not considered reliable, since the total assemblage numbers only five artifacts.

Examination of 16SC63 included a systematic shovel test regime. Shovel tests were excavated at 30 m (98.4 ft) intervals along three rays, to delimit the horizontal extent of the site (Figure 113). No artifacts were found in these six shovel tests. The paucity of cultural remains makes interpretation of the size of the site, formation of the site, and its historic use difficult to identify. This lack of a substantive archeological assemblage obviates research potential. Moreover, the site appears to have been completely destroyed by fluvial processes. Therefore, no further work is recommended.

16SC64

Site 16SC64 is a square concrete pad located along the banktop of the batture (Figure 114). The site is located approximately, 2,000 m (6,561.7 ft) northeast (azimuth 75°) of navigation light 119. The horizontal extent of the site is small, covering 10 m (32.8 ft) across its east/west axis. An intensive surface inspection around the cement pad did not produce any other structural or artifactual remains except for a pile of shingles and a pile of logs. No materials were collected from the surface of the site, and probing within the site boundary did not yield any further evidence of subsurface structural remains. Since this site does not possess contextual integrity, and due to the lack of a viable assemblage, further research at this site will not produce additional data relevant to previously identified themes significant to the history of the project area.

16JE141

Site 16JE141 is a linear deposit of late prehistoric and contact period Native American ceramics and historic sherds. The site is located 40 m (131.2 ft) to the northeast (azimuth 20°) of USE Bench Mark 65 LLD, on the beach of the batture. The horizontal extent of the site is small, covering 20 m (65.6 ft) across its north/south axis by 80 m (262.5 ft) across its east/west axis. The vertical extent of located prehistoric material below the surface did not exceed 20 cm (7.9 in), and the vertical extent of historic material below the surface did not exceed 50 cm (19.7 in).

Historical materials found on the surface of the site include: whiteware, ironstone, pearlware, creamware, faience, yelloware, earthenware, B & K mineral glass, aqua-blue water bottle fragments, french gun flints, cut nails, brick fragments, oyster shell, slag, bone toothbrush, mirror glass, and mammal teeth. Approximately 77 percent of these artifacts may be assigned to the Kitchen group. The ceramic wares provide a mean date of 1840. Inclusive ware types are whitewares, pearlwares, and ironstones. Additional temporal dates are provided from glass fragments. These include one tooled lip bottle finish (ca. 1820s -1920s) and four machine made bottle glass fragments that were manufactured after 1903.

An x-y-z coordinate tie-in was established for Site 16JE141. The site datum was tied into USE BM station 65 LLD, and into Levee Marker Stations 492 and 493. Two 1 x 1 m (3.3 x 3.3 ft) units, A and B, were placed on the terrace of Site 16JE141 just to the south of the site datum (Figure 115). These units were designed to retrieve stratigraphic information, and to obtain associated artifactual remains. Both units

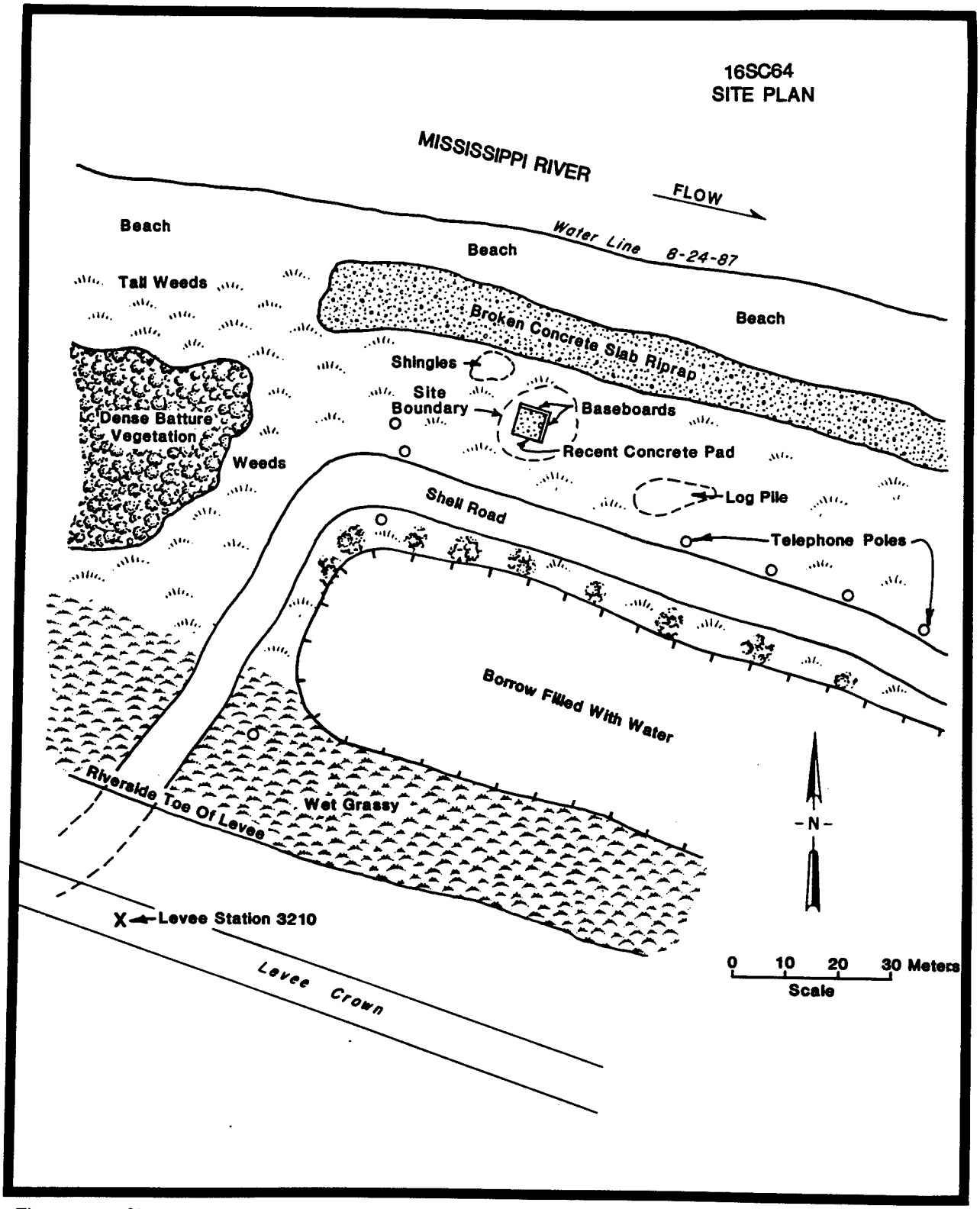


Figure 114. Site plan of 16SC64.

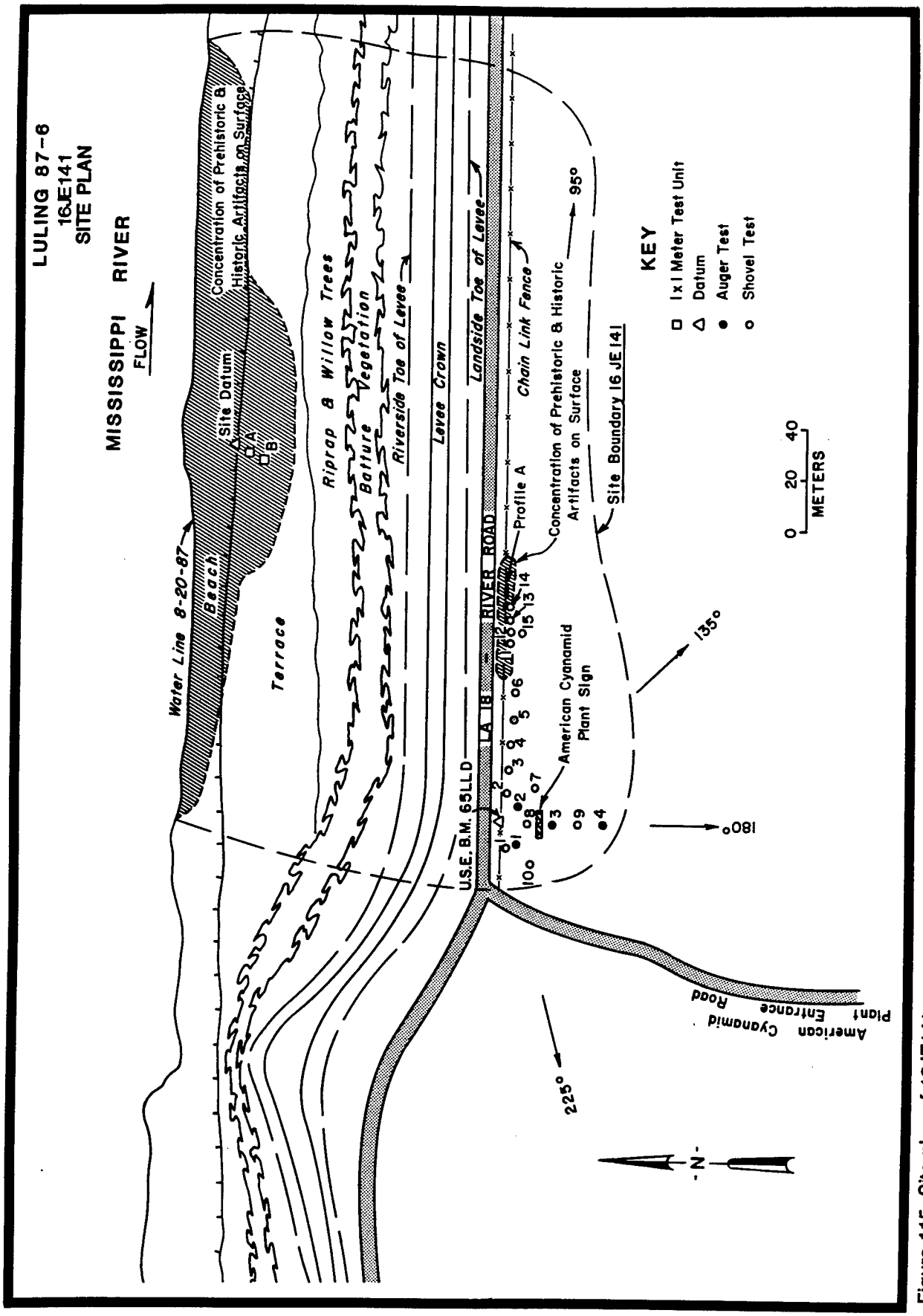


Figure 115. Site plan of 16JE141.

were tied into the site datum and then excavated in arbitrary 20 cm (7.9 in) levels. Both units exhibited nearly identical stratigraphy, and both proved to be culturally sterile, except for the top 20 cm (7.9 in), where both Native American and historic materials were encountered. The east wall stratigraphic profile of Unit A is described below (Figure 116). Stratum A was a humus zone containing both prehistoric and historic material between 0 and 22 cm (0 and 8.7 in) or 2.2 and 2.4 m (7.2 and 7.9 ft) (NGVD) below surface. Stratum B, a dark grayish brown (2.5Y 4/2) mottled silt, appears to represent reworked overbank deposits. Stratum C, a grayish brown (2.5Y 5/2) silt with clay inclusions, also appears to represent reworked overbank deposits. Stratum D, a dark grayish brown (2.5Y 4/2) mottled silt, represents another culturally sterile overbank deposit. Finally, Stratum E, a grayish brown (2.5Y 5/2) silty clay deposit, was excavated to a depth of 1 m (3.3 ft).

A total of 15 shovel tests and four auger tests also were excavated on that portion of 16JE141 located across the River Road on American Cyanamid Company property. These tests were designed to determine site size, the nature of cultural material below the surface, the archeological context of the site, and the extent of disturbance, if any. The Goodwin & Associates, Inc., field crew was assisted by Mr. Bryan Guevin, M.A., archeologist with the Louisiana Division of Archaeology, and by Mr. and Mrs. John Polk, interested avocational archeologists. Mr. Polk is the employee of American Cyanamid who originally reported the site to the Louisiana Division of Archaeology. Figure 115 illustrates the spatial arrangement of the tests. A record of the depth of artifacts and of stratigraphy was made for each test. Temporal and functional analyses were performed on the contents of each test in the laboratory. Results of these analyses are given in Table 25. The tests revealed that historic and prehistoric materials are found across the surface of the site. The majority of the historic sherds collected from the site are late eighteenth century English creamwares. However, the earliest historic material collected from the site consists of French debased Rouen faience sherds which may date as early as 1750.

Prehistoric materials collected by R. Christopher Goodwin & Associates, Inc., from the surface of the site and to a depth of 20 cm (7.9 in) below the surface include: eight Addis Plain, *var. unspecified*, three Addis Plain, *var. Ratcliffe*, 20 Baytown Plain, *var. unspecified*, one Fatherland Incised, *var. unspecified*, and one Mississippi Plain, *var. Pocahontas*. These materials range in age from A.D. 1000 to historic contact.

The Native American materials at 16JE141 are confined to the upper 20 cm (7.9 in). However, the soil has been disturbed to that depth. The mixture of historic and Native American materials along the chain link fence line (Figure 115), probably resulted from secondary redeposition through ditch, road, and levee construction activities in that area. Thus, neither the historic nor the prehistoric component of Site 16JE141 demonstrate contextual integrity. Given the lack of intact prehistoric and historic deposits, a direct association between the two components has not been demonstrated through the minimal testing performed by R. Christopher Goodwin & Associates, Inc., on American Cyanamid Company property. The limited testing performed there was designed to minimize disturbance to the cultural resource. Therefore, it should be recognized that the results presented here are not incontrovertible. Given the shallow nature of the site, any substantial testing to evaluate the significance of the site should consist of a systematic horizontal stripping program.

Due to the shallow depth of the site and the lack of intact subsurface remains, at least that portion of 16JE141 located on the batture in the New Orleans District project area does not possess sufficient integrity to contribute to the understanding of the history of the region. However, the remainder of the site located outside of the project area has not been tested substantively or evaluated; significant archeological deposits may lie elsewhere within the site.

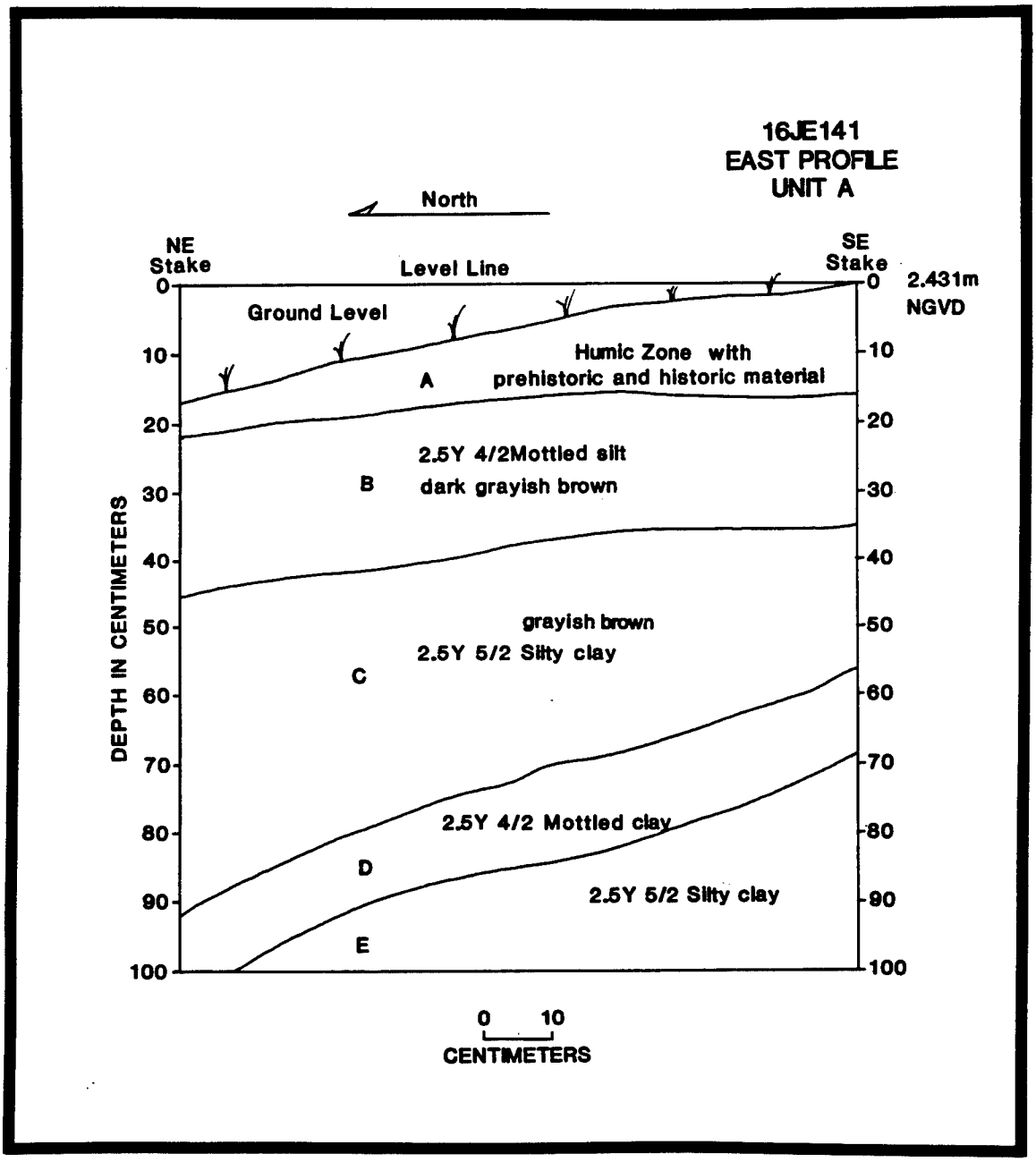


Figure 116. Profile drawing of 16JE141 Excavation Unit A (east profile).

Table 25. Summary of Archeological Test Results at 16JE141.

TEST	DEPTH OF CULTURAL DEPOSITS	COMPONENT(S)	FUNCTIONAL GROUPS	DATE RANGE
Surface Collection	Surface	Prehistoric and Historic	Kitchen and Architecture	1790 - 1830
Profile A	Surface	Prehistoric and Historic	Kitchen	1790 - 1815
SHOVEL TESTS				
1	0 - 20 cm	Historic	Kitchen and Architecture	1780 - 1830
2	0 - 40 cm	Historic	Kitchen and Architecture	1780 - 1820
3	0 - 34 cm	Historic	Kitchen and Architecture	N/A
4	0 - 40 cm	Historic	Architecture	N/A
5	0 - 26 cm	Historic	Kitchen and Architecture	1780 - 1830
6	0 - 26 cm	Historic	Kitchen	1780 - 1830
7	0 - 32 cm	Historic	Kitchen and Architecture	1762 - 1820
8	0 - 30 cm	Historic	Kitchen and Architecture	1762 - 1820
9	0 - 22 cm	Historic	Kitchen and Architecture	1780 - 1820
10	0 - 34 cm	Historic	Kitchen and Architecture	1795 - 1830
11	0 - 20 cm	Historic	Kitchen and Architecture	1762 - 1820
12	0 - 25 cm	Prehistoric and Historic	Kitchen and Architecture	1762 - 1820
13	0 - 22 cm	Historic	Architecture	1815 - 1870
14	0 - 22 cm	Historic	Kitchen and Architecture	1762 - 1820
15	0 - 22 cm	Historic	Architecture	N/A
AUGER TESTS				
1	0 - 18 cm	Historic	Kitchen	1780 - 1830
2	N/A (Sterile)	N/A	N/A	N/A
3	N/A (Sterile)	N/A	N/A	N/A
4	N/A (Sterile)	N/A	N/A	N/A

CHAPTER IX

INTERPRETATIONS, CONCLUSIONS, AND RECOMMENDATIONS

Evaluation of Archeological Sites

The intensive batture survey conducted by R. Christopher Goodwin & Associates, Inc., for this project proved very effective. A survey of approximately 23.2 discontinuous km (14.4 discontinuous mi) of Mississippi River batture led to the discovery of 15 new sites and the recordation of eight other cultural resources loci. In the following discussion, each of the 25 sites described in Chapter VIII is evaluated. As noted above, 21 sites and four spot finds were identified within the project area.

As detailed in Chapter VII, an intensive pedestrian survey was implemented using linear transects parallel to the bankline of the Mississippi River. Maximum transect width was 20 m (65.6 ft). Shovel tests were placed along each transect at 50 m (164 ft) intervals. Additionally, after transects were completed within each project corridor, a walkover of the beachline and cutbank of the Mississippi River was performed. This area proved to have the best potential for revealing buried archeological sites.

Each site and spot find identified and discovered during cultural resources survey of the nine construction items was assessed by applying the National Register of Historic Places criteria of eligibility (36 CFR 60.4). Table 26 summarizes the results of this evaluation. Local, state, and national levels of significance also are addressed in justifying the significance or non-significance of each site.

In order to be considered a significant representation of a theme or pattern of importance in North American prehistory or history, a site must meet one of the four established criteria [36 CFR 60.4 (a-d)]. The quality of significance in American history or archeology, is present in sites that possess integrity of location, design, setting, materials, workmanship, and association, and that:

A. are associated with events that have made a significant contribution to the broad patterns of our history; or,

B. are associated with the lives of persons significant in our past; or,

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

D. have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR 60.4)

As a significant exemplar of events of historical significance, a site must possess the traits necessary to convey an historical or thematic context. In addition to having a strong association with those events, a site must possess contextual integrity. To manifest the requisite integrity for National Register eligibility, a site must possess *in situ* surface or subsurface cultural deposits.

Table 26. Significance Assessment of Sites in the Project Corridor.

SITE NUMBER AND NAME	AFFILIATION	NRHP CRITERIA				LEVELS			INTEGRITY	SIGNIFICANCE
		A	B	C	D	LOCAL	REGIONAL	NATIONAL		
16SJB28, ---	Historic (Columbia Plantation)	N	N	-	N	-	-	-	N	N
16SJB29, ---	Historic (Columbia Plantation)	Y	N	-	Y	Y	Y	N	Y	Y
16SJB30, ---	Prehistoric (Mississippian) Historic (Columbia Plantation)	N	N	-	N	-	-	-	N	N
16SJB31, ---	Prehistoric (Mississippian) Historic (Columbia Plantation)	N	N	-	N	-	-	-	N	N
16SJB32, (IA-ED-4)	Modern Cement Pad	N	N	-	N	-	-	-	Y	N
16SJB35, Angelina 87-1	Historic (Hope Plantation)	N	N	-	N	-	-	-	N	N
16SJB36, Angelina 87-2	Historic (Hope Plantation)	N	N	-	N	-	-	-	N	N
16SJB37, Willow Bend 8701	Prehistoric (Mississippian) Historic (Columbia Plantation)	N	N	-	N	-	-	-	N	N
16SJB39, (IA-ED-5)	Historic Boiler (Whitney Plantation	N	N	-	N	-	-	-	Y	N
16SJB40, Vacherie 87-1	Historic (Whitney Plantation)	N	N	-	N	-	-	-	N	N
No. not assigned, Reserve 87-1	Modern Standing Structure	N	N	-	N	-	-	-	Y	N
X16SJB-A, (IA-ED-1)	Historic (Columbia Plantation)	N	N	-	N	-	-	-	N	N
No. not assigned, (IA-ED-3)	Modern Cement Pad	N	N	-	N	-	-	-	Y	N
16SC55, Waterford 87-1	Prehistoric (Mississippian) Historic (Small Land Holdings)	N	N	-	N	-	-	-	N	N

Table 26, continued

SITE NUMBER AND NAME	AFFILIATION	NRHP CRITERIA				LEVELS			INTEGRITY	SIGNIFICANCE
		A	B	C	D	LOCAL	REGIONAL	NATIONAL		
16SC56, Waterford 87-6	Prehistoric (Mississippian) Historic (Kilona Plantation)	N	N	-	N	-	-	-	Y	N
No. not assigned, Waterford 87-2	Modern Shipyard	N	N	-	N	-	-	-	Y	N
16SC57, Waterford 87-3	Historic (Small Land Holdings)	N	N	-	N	-	-	-	N	N
16SC58, Waterford 87-4	Historic (Small Land Holdings)	N	N	-	N	-	-	-	Y	N
16SC59, Waterford 87-5	Historic (Small Land Holdings)	N	N	-	N	-	-	-	Y	N
16SC60, Luling 87-1	Prehistoric (Mississippian) Historic (Small Land Holdings)	N	N	-	N	-	-	-	N	N
16SC61, Luling 87-2	Prehistoric (Mississippian) Historic (Small Land Holdings)	Y	N	-	Y	Y	Y	N	Y	Y
16SC62, Luling 87-3	Historic (Small Land Holdings)	N	N	-	N	-	-	-	N	N
16SC63, Luling 87-4	Historic (Small Land Holdings)	N	N	-	N	-	-	-	N	N
16SC64, Luling 87-5	Modern Cement Pad	N	N	-	N	-	-	-	Y	N
16JE141, Luling 87-6	Prehistoric (Mississippian) Historic (Orange Grove Plantation)	N	N	-	N	-	-	-	N	N

KEY: Y = Yes N = No

As shown on Table 26, six of the sites located in St. John the Baptist Parish are affiliated solely with historic period occupations. These sites are 16SJB28, 16SJB29, 16SJB35, 16SJB36, 16SJB39, and 16SJB40. Three sites (16SJB30, 16SJB31, and 16SJB37) are characterized by both prehistoric and historic components. Four modern loci (16SJB32, Reserve 87-1, IA-ED-3, and X16SJB-A) are too recent to be considered. In St. Charles Parish, five sites (16SC57, 16SC58, 16SC59, 16SC62, and 16SC63) are affiliated solely with historic period occupations. Four sites (16SC55, 16SC56, 16SC60, and 16SC61) are characterized by both prehistoric and historic components. Two loci (Waterford 87-2 and 16SC64) are modern constructions. Site 16JE141, located in Jefferson Parish, has both a prehistoric and an historic component.

As discussed in Chapter VIII, two of the sites listed on Table 26 produced evidence supporting evaluations of significance. These two sites, 16SJB29 and 16SC61, have potential for contributing information important to the history of the project area. Site 16JE141 was not evaluated completely; however, portions of the site located within the proposed construction item are considered not significant. The remaining cultural resources loci enumerated on Table 26 are not considered significant pursuant to 36 CFR 60.4 because either they do not have demonstrable research potential, or they lack archeological integrity, or both.

Research during the cultural resource investigation of multiple levee and revetment construction items located along the Mississippi River in St. John the Baptist, St. Charles, and Jefferson parishes, Louisiana, then, has resulted in the documentation of two potentially significant sites. The significance of these sites is based on their potential to contribute to the scientific or humanistic understanding of the past. The data available, plus the data likely to be recovered if the sites are more thoroughly investigated, are discussed below.

The available data for documenting the significance of site 16SJB29 reflect the temporal, spatial, and formal dimensions of the site. Recovered artifacts suggest that site 16SJB29 dates from as early as the 1830s to as late as the terminal nineteenth century. As the description in Chapter VIII illustrates, in 1987, site 16SJB29 consisted of a surface scatter of historic artifacts, as well as four *in situ* cypress slab board features. The spatial arrangement of the features at site 16SJB29 suggested that Features 2, 3, and 4 shared a common linear alignment, and that together, they were components of a riverine-oriented construction, possibly a pier or docking facility. A careful investigation of Feature 1 did not produce any evidence of its articulation with the other three. However, its parallel alignment with Features 2, 3, and 4, and its perpendicular orientation to the river's edge, suggested that the function of all four features might be related. A more detailed study of the features present at 16SJB29 could elucidate past behaviors which occurred in conjunction with human use of the Mississippi riverfront during the nineteenth century. The location of the site in Sections 100 and 102 of Township 12S, Range 19E, indicated its historic affiliation with Columbia Plantation and/or an adjacent upriver small farm.

The research potential of site 16SJB29 was at the interface between plantation archeology and the archeological nature of transportation service centers such as landings in nineteenth century Louisiana. The presence of steam engine boiler grates, slag, and coal across the site's surface suggested that steamboats may have docked here at a river transportation facility. This possible landing may have served as a ferry landing or transhipment port for goods across the river to and from Columbia Plantation, or to and from the world market.

Thus, the features at 16SJB29 suggested an association with an event in the local and regional history, a nineteenth century plantation river transportation service center [36 CFR 60.4(a)]. The four *in situ* features at 16SJB29 also possessed sufficient integrity to suggest significance pursuant to 36 CFR 60.4(d). Further potential for significant and productive research remained at the site; therefore, data recovery excavations were recommended to uncover additional data regarding early river transportation service centers.

The available data for documenting the significance of site 16SC61 reflect the temporal, spatial, and formal dimensions of the site. Artifacts recovered from site 16SC61 date from approximately 1820 to the 1870s and 1920 to the present. Intact features found at the site are regarded as an early to mid-nineteenth century residence, with evidence of outbuildings. The site is located in Section 34 of T13S, R21E, and was owned by Ursin and Theodore Zeringue from 1835 until 1879.

Site 16SC61 consists of at least two components: a prehistoric occupation marked by Marksville and Mississippi period ceramic wares, and an historic occupation marked by artifacts and features dating from the mid-nineteenth century and artifacts dating from the early to mid-twentieth century. Brick structure remains are present in the approximate center of a 100 m (328 ft) long sealed midden, which is readily observable in the face of the cutbank. The linear spatial arrangement of the surficial features across the beach and bankline, coupled with the presence of similar and temporally equivalent artifacts among these features, suggests their historic association. Feature 1, a brick residence, evidenced an intact southern foundation wall, a collapsed chimney, and an intact brick-lined patio area. Other pieces of construction debris in association consisted of large slag-like door and window supports, imported Italian floor tiles, and marble slabs. The marble may have served as furniture components or as mantles or fireplace inserts.

The cultural midden at 16SC61 is a large. This lens of brick, ash, and other cultural remains covering an area approximately 100 m (328 ft) in width. Its maximum thickness is nearly one meter. Given the abundance of cultural remains at the site, and their contextual integrity, it is apparent that this site has the potential for providing a well preserved example of a mid to late nineteenth century small farmstead residence. A large milling stone fragment and evidence of barn and farming hardware just upriver from the brick residence attest to the diversity of activities to be explored at 16SC61. Future research at the site should help to elucidate differences between farmsteads along the river and upland south farmsteads; between small farmsteads and large plantations; and, between small farmsteads and rural villages of southeastern Louisiana. Site 16SC61 was acquired by the Zeringue brothers through marriage to the daughters of Baptiste Daspit St. Amand; thus, the property remained in the same family from the late eighteenth century to the late nineteenth century. This might affect positively the ability to study the use of heirloom goods, relative goods replacement frequencies, breakage rates, and a range of behavioral aspects both related to nineteenth century life and to broader issues in archeological method and theory. The fact that the Zeringue (Zeringer) family settled the region very early adds more time depth to behavioral or ethic studies on the German Coast.

Given the *in situ* brick foundation and the extensive midden upon which it rests, site 16SC61 obviously manifests the requisite integrity for National Register eligibility. As Table 26 shows, site 16SC61 is significant under the requirements of criterion A. The historic foundation clearly is associated with local and regional events which have proven to be of historical consequence to the development of antebellum and postbellum agriculture in the region. Site 16SC61 has sufficient context, depth, and antiquity to contribute to the scientific or humanistic understanding of the past, as defined by Criterion D of the National Register (36 CFR 60.4). It is significant at the local and state levels.

Based on the results of the 1987 excavations, the two sites, 16SJB29 and 16SC61, therefore, require further recommendations. Unless avoidance of adverse effect through project redesign can be implemented successfully, both 16SJB29 and 16SC61 should be subjected to Phase III data recovery programs. These intensive recovery projects would mitigate adverse effect on these significant cultural resources. Data recovery at both sites must be carried out in a manner that will assure that the maximum amount of historical and archeological information will be recorded. Both large-scale block excavations and extensive stratigraphic investigations are required.

The data recovery effort should be performed within the context of an explicit research design formulated in recognition of all prior investigations in the study area and surrounding region. Proposed additional research at site 16SJB29 should be designed to provide information on antebellum river

transportation service centers and other salient features of plantation commerce. The additional research at site 16SC61 should be designed to provide information on antebellum and postbellum land use, and on the relationships that existed between mid-nineteenth century farmsteads and large plantations. Both research designs should be undertaken well in advance of planned fieldwork; additional and detailed archival and geomorphological study should form a portion of the research design effort.

Finally, data recovery excavations at site 16SJB29 were conducted in 1988, subsequent to the current investigations. These excavations demonstrated that the features located within site 16SJB29 were part of a type of rice flume irrigation system not previously recorded intensively in the region. The results of the 1988 excavations are discussed elsewhere (Goodwin et al. 1989).

Management Recommendations

The Revised Scope of Services calls for the predictive modeling of subsurface prehistoric and historic site locations between RM 147.0 and 112.0 (Appendix I). Historic and geomorphic data relevant to previously constructed and previously surveyed reaches (i.e., the Montz Revetment and the Lower Edgard Levee Enlargement) were to be analyzed to determine whether buried resources were present and whether they would have been damaged by previous nineteenth and twentieth century construction. The results of our map study, when coupled with the geomorphic considerations presented in Chapter IV and with the historical data complied in Chapter VI, permit clear-cut decisions in these regards. Although the maps presented here are an excellent research tool, this direct historical approach is not a panacea. Site prediction cannot be addressed meaningfully without a theoretical and substantive understanding of the influences of cultural, fluvial, and geomorphological processes upon cultural resources located in the batture along the Mississippi River.

The 1893 and 1921 Mississippi River Commission maps, the 1952 Pontchartrain and Lafourche Basin Levee District Caving Bank Survey maps, and recent USGS topographic quadrangles provide excellent locational data for predicting high probability areas for the location of sites dating from the historic period. Although maps showing the locations of standing structures prior to the Civil War have not been recovered to date, it is likely that the spatial organization of plantations and farmsteads at least was similar during the antebellum and postbellum periods. Areas where standing structures were located according to historic cartographic data were assumed to have the highest probability of containing historic archeological remains. Agricultural fields were considered low probability areas, because the documented patterns of activity and of refuse disposal in Louisiana show that fields generally do not bear substantial cultural remains.

The vast majority of former standing structures were located beneath and landward of the present levee. Thus, the present levee and river road area should be considered sensitive, since they may cover prehistoric and historic sites. However, these areas of high site probability also are likely to be highly disturbed due to construction activities. Specific areas within the project boundary (the riverside toe of the present levee to the water's edge) that formerly contained historic standing structures are presented in Table 27. These areas of high site probability, organized by Township, Range, and Section, are based on locational information of former standing structures and features derived from historic maps. Table 28 combines the high probability areas defined on the basis of map work and geomorphic expectation.

The following recommendations for deep testing to locate subsurface prehistoric and historic sites on both banks between RM 147.0 and 112.0 are organized by river mile, and by parish, beginning upriver with RM 147.0 in St. John the Baptist Parish. Factors affecting the state of preservation of cultural resources within the project area are many. They may be demolished or preserved by both natural and anthropogenic processes. Foremost among the natural processes are fluvial features (i.e., point bars, cutbanks, ridges, swales, crevasses, relict channels, etc.) of the Mississippi River. The river bank within

Table 27. Sections with Standing Structures Riverside of the Modern Levee.

SECTION	PRESENCE	ABSENCE
VACHERIE REACH, RIVER MILE 146.7 TO 144.0-R, T12S, R18E		
26		0
21	X	
20	X	
19	X	
18	X	
17 (16SJB40)		0
25	X	
24	X	
23	X	
22		0
ANGELINA REACH, RIVER MILE 143.2 TO 141.6-L, T11S, R6E		
9	X	
12		0
10		0
RESERVE REACH, RIVER MILE 140.9 TO 140.3-L		
22	X	
23		0
26 (Reserve 87-1)		0
27	X	
28	X	
RESERVE REACH, RIVER MILE 136.6 TO 135.4-L, T11S, R7E		
91		0
90	X	
51		0
50	X	
49	X	
48	X	
UPPER EDGARD REACH, LEVEE ENLARGEMENT, RIVER MILE 143.2 TO 137.0-R, T12S, R18E		
17		0
16		0
15		0

Table 27, continued

SECTION	PRESENCE	ABSENCE
14		0
13	X	
12 (16SJB32) (IA-ED-3)	X	
11	X	
10	X	
9	X	
8	X	
7	X	
6	X	
5	X	
4	X	
3 (16SJB31	X	
2 (16SJB37)	X	
1 (16SJB30)	X	
UPPER EDGARD REACH, LEVEE ENLARGEMENT, RIVER MILE 143.2 TO 137.0-R, T12S, R19E		
100 (16SJB30) (16SJB29)	X	
102 (16SJB29)	X	
101	X	
20 (16SJB28)		0
17	X	
18	X	
15	X	
14 (X16SJBA	X	
13	X	
10	X	
12	X	
WILLOW BEND REACH, RIVER MILE 142.2 TO 142.0-R, T12S, R18E		
13	X	
12	X	

Table 27, continued

SECTION	PRESENCE	ABSENCE
WILLOW BEND REACH, RIVER MILE 140.2 TO 139.0-R, T11S, R18E		
4	X	
3	X	
2	X	
1	X	
WILLOW BEND REACH, RIVER MILE 140.2 TO 139.0-R, T11S, R19E		
100	X	
102	X	
MONTZ REACH, RIVER MILE 134.5 TO 133.0-L, T11S, R7E		
24		0
25		0
26		0
27		0
28	X	
29	X	
30	X	
31	X	
32		0
33		0
34		0
35		0
LULING REACH, RIVER MILE 116.9 TO 112.0-R		
34	X	
35	X	
LULING REACH, RIVER MILE 116.9 TO 112.0-R, T13S, R22E		
1		0
2		0
3		0
4		0
6	X	

Table 27, continued

SECTION	PRESENCE	ABSENCE
LOWER EDGARD REACH, RIVER MILE 137.0 TO 127.0-R		
12	X	
11	X	
9	X	
8	X	
2	X	
45	X	
44	X	
43	X	
42	X	
46	X	
47		0
41		0
39		0
38		0
37		0
36		0
48		0
49 Hymelia Crevasse (1912)		0
111		0
50		0
51	X	
52		0
53		0
54		0
55		0
56		0
58		0
59		0
60	X	
62	X	

Table 27, continued

SECTION	PRESENCE	ABSENCE
LOWER EDGARD REACH, RIVER MILE 137.0 TO 127.0-R, T12S, R20E		
33		0
32		0
31		0
30		0
29		0
28		0
26	X	
25	X	
24	X	
23	X	
22		0
21		0
20	X	
17	X	
16	X	
15	X	
14	X	
13	X	
12	X	
11	X	
6	X	
WATERFORD REACH, RIVER MILE 127.5 TO 125.0-R, T12S, R20E		
14	X	
13	X	
12	X	
11	X	
6	X	
10	X	
9	X	
3	X	

Table 27, continued

SECTION	PRESENCE	ABSENCE
8	X	
18	X	
7	X	
5	X	
4	X	
34	X	
2	X	
1	X	
WATERFORD REACH, RIVER MILE 127.5 TO 125.0-R, T13S, R20E		
27		0
26	X	
WATERFORD REACH, RIVER MILE 130.1 TO 129.7-R, T12S, R20E		
31		0
30		0
29		0
28		0
26	X	

Table 28. Summary of Bankline Morphology, Historic occupation, and Recommendations for Deep Testing by Reach and River Mile.

ITEM	RIVER MILE	BANKLINE			PRESENCE	HISTORICAL	
		STABLE	CUTTING	AGGRADING		ABSENCE	DEEP TESTING
RIGHT DESCENDING BANK							
Vacherie	147.0 - 146.0	X			X		
	146.0 - 145.0	X			X		
	145.0 - 144.0			X	X		Y
Upper Edgard	144.0 - 143.0			X		O	
Upper Edgard/Willow Bend	143.0 - 142.0			X		O	
Upper Edgard	142.0 - 141.0		X			O	
Upper Edgard/Willow Bend	141.0 - 140.0		X			O	
	140.0 - 139.0	X				O	
Upper Edgard	139.0 - 138.0	X				O	
	138.0 - 137.0	X				O	
Lower Edgard	137.0 - 136.0		X		X		
	136.0 - 135.0		X		X		
	135.0 - 134.0		X		X		
	134.0 - 133.0		X Between 134 - 133.3	X Between 133.3 - 133	X		Y
	133.0 - 132.0			X		O	
	132.0 - 131.0			X	X		Y
	131.0 - 130.0			X	X		Y
Lower Edgard/Waterford	130.0 - 129.0		X		X		
	129.0 - 128.0		X		X		
	128.0 - 127.0	X			X		

Table 28, continued

ITEM	RIVER MILE	BANKLINE			PRESENCE	HISTORICAL	
		STABLE	CUTTING	AGGRADING		ABSENCE	DEEP TESTING
Waterford	127.0 - 126.0		X		X		
	126.0 - 125.0		X 126 - 125.5	X 125.5 - 125	X		Y
Literature Search	125.0 - 124.0			X		O	
	124.0 - 123.0			X		O	
	123.0 - 122.0	X			X		
	122.0 - 121.0		X		X		
	121.0 - 120.0	X				O	
	120.0 - 119.0	X				O	
	119.0 - 118.0		X		X		
	118.0 - 117.0		X			O	
	117.0 - 116.0	X				O	
	116.0 - 115.0	X				O	
	115.0 - 114.0		X			O	
	114.0 - 113.0		X			O	
	113.0 - 112.0			X		O	
LEFT DESCENDING BANK							
Angelina	144.0 - 143.0		X		X		
	143.0 - 142.0		X			O	
	142.0 - 141.0			X		O	
Reserve	141.0 - 140.0	X			X		

Table 28, continued

ITEM	RIVER MILE	BANKLINE			PRESENCE	HISTORICAL	
		STABLE	CUTTING	AGGRADING		ABSENCE	DEEP TESTING
Literature Search	140.0 - 139.0	X			X		
	139.0 - 138.0		X		X		
	138.0 - 137.0		X		X		
Reserve	137.0 - 136.0	X				O	
	136.0 - 135.0			X		O	
Montz	135.0 - 134.0			X		O	
	134.0 - 133.0			X		O	
Literature Search	133.0 - 132.0		X		X		
	132.0 - 131.0		X		X		
	131.0 - 130.0		X		In River		
	130.0 - 129.0			X		O	
	129.0 - 128.0			X	X		Y
	128.0 - 127.0	X			X		
	127.0 - 126.0		X			O	
	126.0 - 125.0		X		X		
	125.0 - 124.0		X			O	
	124.0 - 123.0		X		X		
	123.0 - 122.0	X				O	
	122.0 - 121.0			X	X		
	121.0 - 120.0		X		X		
	120.0 - 119.0	X				O	
	119.0 - 118.0			X	X		

Table 28, continued

ITEM	RIVER MILE	BANKLINE			PRESENCE	HISTORICAL	
		STABLE	CUTTING	AGGRADING		ABSENCE	DEEP TESTING
	118.0 - 117.0	X				O	
	117.0 - 116.0		X		X		
	116.0 - 115.0		X		X		
	115.0 - 114.0		X		X		

X = Presence O = Absence Y = Yes

the project area may show signs of these features, which can be used to aid in predicting the nature and kinds of archeological deposits. In addition to these natural processes, various cultural processes have a relationship to the state of preservation of cultural resources. This human activity factor has led to the construction of artificial levees, rip-rap, deep riverside borrow pits, and various forms of drainage improvements, such as slope grading. These activities could either destroy or preserve cultural resources.

The combined result of the natural and cultural processes has been a significant loss in prehistoric and historic sites. Aggrading banks are areas of high sediment deposition rates; thus, they appear to have the best potential for the preservation of *in situ* remains. Conversely, aggrading banks would have the least potential for discovering sites due to the presence of new landforms in these areas.

Cutting banks and other areas of active erosion have the least potential for *in situ* preservation of cultural remains. Conversely, these areas show the best potential for revealing remains from buried archeological sites. The processes of deflation and erosion work in tandem to expose these resources. Disturbance by construction along the batture also may have contributed to exposure and destruction.

Table 28 categorizes the dominant bankline formation process (i.e., aggradation, cutting, and stability) within the project area and uses the presence or absence of historic structures riverward of the existing levee as a method for predicting the potential for cultural resources. Reach-specific structure data are detailed by Township, Range, and Section as shown in Table 27.

The historic and geomorphological data relevant to the Vacherie Revetment construction item suggest a high probability for *in situ* buried cultural remains, between RM 145.0 and 144.0-R. This mile of bankline is subject to high silt deposition and, therefore, to *in situ* preservation of cultural remains. It is recommended that deep testing be performed in the Vacherie Revetment item between RM 146.7 and 144.0 to locate buried resources. Both prehistoric and historic sites that have not been altered by levee construction and river erosion may be present in this area. Between RM 144.4 and 144.0, buried resources should be found near and under the riverside toe of the present levee.

The historic and geomorphological data relevant to the Angelina Revetment item suggest a low probability for *in situ* buried cultural remains. Exposure and erosion have led to the subsequent destruction of cultural remains in this area. Deep testing is not recommended for the Angelina Revetment item. The river is cutting the upriver section of the Angelina point bar, and depositing on the downriver section. The downriver section has a greater probability of revealing undisturbed cultural material; however, the historic map data suggest that no structures ever were built in the downriver section.

The historic and geomorphological data relevant to the Reserve Revetment item suggest a low probability for *in situ* buried cultural remains. Exposure and erosion have led to the subsequent destruction of cultural remains in this area. It is not recommended that deep testing be performed in either of the two segments comprising the Reserve Revetment item. The upriver section of the Reserve item, from RM 140.9 to 140.3, is a cutbank. This section of the river has gone through a series of cutting and aggrading episodes which have led to site exposure, destruction, and loss. The downriver section of the Reserve Revetment item, from RM 135.9 to 135.4, shows strong geomorphic potential for site preservation; however, the historic map data are negative.

The historic and geomorphological data relevant to the Upper Edgard Levee Enlargement item suggest a low probability for *in situ* buried cultural remains. Exposure and erosion have led to the subsequent destruction of cultural remains in this area. According to the historic map data, the Upper Edgard Levee Enlargement item does not possess deep historic site potential. Evidence for historic structures has not been documented riverward of the toe of the levee in this section of the batture. However, each mile of the batture between RM 143.2 - 137.0-R has been affected by riverine processes differently through time. Thus, from RM 143.2 to 142.2-R and RM 140.0 to 138.4-R, the formation of the

batture has been influenced by massive lateral accretion. The potential for deeply buried prehistoric sites exists in this area.

The historic and geomorphological data relevant to the Willow Bend Revetment item suggest a low probability for *in situ* buried cultural remains. Exposure and erosion have led to the subsequent destruction of cultural remains in this area. It is recommended that no deep testing be performed in the Willow Bend Revetment item. The river has both deposited and cut into the batture at various times within this reach. The map data gives little indication of historic occupation along this portion of the batture. Those sites which may have existed in this area would have been exposed and destroyed by previous river cutting episodes. Then the sterile batture would have been silted over by various aggrading episodes in the past.

The historic and geomorphological data relevant to the Montz Revetment item suggest a low probability for *in situ* buried cultural remains. Exposure and erosion have led to the subsequent destruction of cultural remains in this area. There does not appear to be a need for deep testing within the Montz Revetment, which is located on the left descending bank of the Mississippi River between RM 134.5 and 133.0. The historic map data indicate that no historic structures were located along this meander. However, through the years both erosion and deposition process have occurred here. The upriver portion is eroding. In the upriver portion, prehistoric sites may be buried by vertical accretion. However, the distribution of prehistoric sites found elsewhere within the project area suggest that deep testing for them would be futile.

The historic and geomorphological data relevant to the Lower Edgard Levee Enlargement item suggest a high probability for *in situ* buried cultural remains, between RM 134.0 and 130.0-R. This mile of bankline is subject to high silt deposition and, therefore, to *in situ* preservation of cultural remains. Interestingly, the historic and geomorphic data do indicate a need for deep testing within the Lower Edgard Enlargement item, particularly between RM 134.0 to 133.0 and RM 132.0 to 130.0. There, the historic map data reference historic structures whose remains currently would be silted over by aggrading fluvial processes. The potential for prehistoric sites within this reach is high, as well.

The historic and geomorphological data relevant to the Waterford Revetment item suggest a high probability for *in situ* buried cultural remains, between RM 125.5 and 125.0-R. This half-mile of bankline is subject to high silt deposition and, therefore, to *in situ* preservation of cultural remains. Deep testing is recommended for the Waterford Revetment item, as well. Between RM 125.5 and 125.0, the presence of historic structures is known. This fact, coupled with the presence of a bankline subject to high silt deposition, suggests that deeply buried sites may be present. Extensive subsurface testing within this half mile long deposition zone may produce evidence of prehistoric occupation.

The historic and geomorphological data relevant to the Luling Revetment item suggest a low probability for *in situ* buried cultural remains. Exposure and erosion have led to the subsequent destruction of cultural remains in this area.

The need for deep testing within the Luling project area is not an issue because the geomorphological processes that have altered the batture in this area have served either to alter or to obliterate deeply buried cultural resources.

Because batture clays are proven to be nearly impenetrable when investigated with a hand operated Dutch auger, further deep testing regimes should incorporate either power augers or backhoe equipment to investigate the nature and extent of subsurface cultural remains.

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PERSONAL COMMUNICATIONS

Joseph Anthony Giliberti, 1995

George L. Miller, 1985 and 1989.

APPENDIX I

SCOPE OF SERVICES

MODIFICATION 001
to
SCOPE OF SERVICES
CULTURAL RESOURCES SURVEY OF
ST. JOHN THE BAPTIST AND ST. CHARLES PARISH CONSTRUCTION ITEMS

DELIVERY ORDER 009, CONTRACT NO. DACW29-85-D-0113

5d. Definition of Site 16PL37. The Contractor will prepare a detailed, scaled plan map of 16PL37 and all associated features within the area illustrated on Enclosure 10. These features include the modern levee alinement, riverside levee toe, two riverside levee ramps, the bankline, 16PL37 (as originally defined), IA-ET-1, the present navigation light and an abandoned light base. The plan map will include two perpendicular cross-sections of the site and immediate surroundings to illustrate elevational variability within the site boundaries.

The Contractor will systematically auger the site and surrounding area, using no greater than a 20m transect interval within the boundaries of 16PL37 and a 50m transect interval outside 16PL37 (Enclosure 11). Augering will gather data to test each of the following hypotheses.

(1) 16PL37 is Fort St. Mary, an eighteenth century French military installation;

(2) 16PL37 is a late nineteenth to early twentieth century site which directly incorporates the artificial levee;

(3) 16PL37 lies on relatively recent point bar deposits;

(4) the eighteenth century land surface in Plaquemines Parish is 2 to 3m below the modern surface elevation.

The sampling distribution will be mapped and illustrated on the plan map and an aerial mosaic project map. All auger cores will be recorded, and a sample of the total number will be subjected to chemical and particle analyses. All fieldwork must be completed by 7 August 1987.

The plan map, auger distribution map, auger log and analyses results shall be submitted to the COR by 7 September 1987. The COR will provide any requests for clarification or changes by 21 September 1987. The Contractor shall incorporate or resolve all comments and submit one copy each of the final drawings, auger log and analyses results by 5 October 1987.

LMNPD-RA

2 June 1987

Revised
SCOPE OF SERVICES
CULTURAL RESOURCES SURVEY OF
ST. JOHN THE BAPTIST AND ST. CHARLES PARISH CONSTRUCTION ITEMS

CONTRACT DACW29-85-D-0113

1. Introduction. This delivery order calls for a cultural resource investigation of multiple levee and revetment construction items located along the Mississippi River in St. John the Baptist and St. Charles Parishes, Louisiana. The study area includes the right and left descending banks of the Mississippi River between miles 147.0 and 112.0 (Figure 1, Hydrographic Survey Charts 42 to 48). The Contractor will complete inventory survey of known project items within St. John the Baptist and St. Charles Parishes (and to lesser extent, Jefferson Parish); relocate, identify and test eight sites/spot finds identified by previous survey; assess the impact of proposed US Army Corps of Engineers projects in this reach; and forecast the locations of significant resources in areas likely to be disturbed by future maintenance and emergency projects in the study area. The work is phased to accommodate investigation of portions of three revetment items scheduled for FY87 construction. The contract period for this delivery order is 255 days.

2. Description of the Study Area. The study area incorporates the natural levee of both banks of the Mississippi River roughly between miles 147.0 and 112.0. The study area is larger than the survey area, which is made up of discontinuous reaches of proposed project rights-of-way on the Mississippi River batture. Two levee enlargement items and the final portions of seven revetment items are scheduled for eventual construction. These are listed in Table 1 and incorporate some overlap in shared easements. Plan drawings for each item are attached to this scope of service (Enclosures 1 through 9). Where survey is required, the survey corridor will extend from the riverside toe of the Mississippi River levee to the river's edge, between the upstream and downstream project ranges or levee stations listed in Table 1.

3. Project Impact. The subject levee projects will bring the existing levee up to design grade for this particular reach of the river. The Upper and Lower Edgard Levee Enlargement Items (Enclosures 4 and 7) include segments of landside, straddle and riverside enlargement, all of which require minimal land disturbance. Short segments of landside levee setback are included in the Upper Edgard Levee Enlargement Item, adjacent to Evergreen Plantation. The major impacts to the landscape and to cultural resources come from the excavation of riverside borrow pits (typically 10 feet deep), and the clearing of a corridor adjacent to the riverside toe of the levee to construct drainage improvements.

Revetment associated impacts are usually localized in a corridor immediately parallel to the riverbank. Each revetment reach will be stabilized with a continuous, articulated concrete mattress which is mechanically laid from the low water line to a point several hundred feet into the river channel. To prepare for revetting, a 200 to 300 foot wide corridor adjacent to the bankline will be cleared of all vegetation and graded to a standard slope. Slope grading will remove the upper bankline. Any cultural resource within 300 horizontal feet of the bankline and within 10 vertical feet of the ground surface has a high potential for being destroyed. Surficial resources further than 300 feet from the bankline may be subject to disturbance from the movement of heavy equipment, but buried sites will remain in situ.

Future impact in this reach may come from revetment and levee repair projects which require reworking areas (via revetment removal, bank grading, or borrow pit excavation for levee repair) where major construction is already completed. Occasionally, there is need to construct an emergency levee repair project which requires excavation of a borrow pit in a section of the batture which has not been surveyed. Many of the jobs in place were constructed prior to the initiation of inventory surveys in 1976.

4. General Nature of the Work to be Performed. The Contractor is responsible for: a) surveying approximately 14.4 discontinuous miles of Mississippi River batture, identified in Table 1; b) testing and unequivocally establishing the significance of all newly discovered sites in project easements scheduled for 1987 construction; c) relocating, identifying and unequivocally assessing the significance of 8 sites/spot finds identified by the National Park Service, Denver Service Center (Table 2); d) incorporating all data from the unfinished National Park Service survey of the Upper Edgard Levee Enlargement Item into the comprehensive final report of investigation for the study area; e) predicting the locations of subsurface prehistoric and historic sites between miles 147.0 and 112.0; f) preparing a separate draft report of investigation discussing three revetment items scheduled for 1987 construction; and g) preparing comprehensive draft and final reports of investigation for the total study.

Previously constructed and previously surveyed reaches are not to be resurveyed. Historic and geomorphological data relevant to these segments are to be analyzed to determine whether buried resources were ever present and whether they would have been damaged by previous construction. These analyses will be reported within the context of the physical environment of the Mississippi River batture, 19th and 20th century construction techniques, current knowledge of site distribution by period and phase on the natural levee, and the body of archeological work conducted on the Misissippi River's natural levee in Louisiana.

5. Study Requirements. The work to be performed by the Contractor will be divided into four phases: Investigation of 1987 Construction Items; Literature Search and Records Review; Intensive Survey and Site Assessment; and Data Analysis and Report Preparation.

a. Phase 1: Investigation of 1987 Construction Items. To meet temporal goals, the field work associated with this contract effort must be phased. Upon delivery order award, field and literature search investigations will commence in the following project reaches:

Angelina Revetment	M-143.2 to 141.6-L	D-110 to D-156	survey	1.06 miles
Willow Bend Revetment	M-140.2 to 139.0-R	D-53 to D-110	test	3 sites
Waterford Revetment	M-127.5 to 125.0-R	D-40 to D-140	survey	2.5 miles

The Angelina and Waterford Revetment segments have never been surveyed. All sites located by the survey of these items will be tested sufficiently to conclusively determine their National Register of Historic Places eligibility status. The referenced portion of Willow Bend Revetment was surveyed by the National Park Service in 1984, for which a draft report was prepared but was never completed. Re-survey of the Willow Bend easement is not required although literature search is necessary to identify sites 16SJB29, 16SJB30 and 16SJB31 (Table 2). These three sites will be tested and their significance conclusively established. The Contractor will inform the COR of the number of sites found during survey of each reach and will provide directions to all site locations prior to the initiation of site testing. The Contractor will give the COR advance notice of the testing schedule of sites 16SJB29, 16SJB30, and 16SJB31.

Four copies of a draft report of survey and testing of the 1987 construction items will be prepared and submitted to the COR no later than 3 August 1987, accompanied by one copy each of a State of Louisiana site or standing structure form for each resource located and/or investigated. A separate final report for this phase is not required. All salient data from this draft report and review comments will be incorporated into the comprehensive draft and final reports to be prepared for the total project.

b. Phase 2: Literature Search and Records Review. The Contractor shall commence, upon work item award, with a literature, map, and records review relevant to the project area. This phase shall include but not be limited to review of historic maps, the State Archeologist's site and standing structure files, the National Register of Historic Places, geological and geomorphological data, archeological reports, ethnohistoric records, historic archives, and public records.

At a minimum, the literature and records review will familiarize the reader with the geomorphology (point bars, cutbanks, crevasses, relict channels, etc.) of the study area; establish the distribution of prehistoric and historic sites in the region and their proximity to the study area; identify previously recorded sites, standing structures, National Register of Historic Places properties and National Landmarks in or in close proximity to the project area; provide national, regional and local context for assessing the historical, architectural and archeological contribution of all sites and structures located in the project area; and predict resources which can be expected to be located

within the project area (miles 147.0 to 112.0). Economic and social trends, channel migration, major natural events, and all previous construction affecting land use patterns and the state of preservation of predicted resources will be analyzed and presented. The literature search will place this contract effort within the context of similar work conducted previously along the Mississippi River.

General literature searches for portions of the area appear in reports of other cultural resource investigations in St. John the Baptist, St. Charles and Jefferson Parishes. These will be summarized and referenced but not repeated. This effort is meant to supplement and complete Corps of Engineers investigations in St. John the Baptist and St. Charles Parishes. The focus of this literature search will be on man's use of the Mississippi River and its natural levee through time. Specific data will be collected on each of the proposed construction items and on all sites located. Specific land tenure data will be necessary for assessing land use in areas of planned construction and in those areas which have never been surveyed. For areas which have already been constructed, slightly more general data regarding land use trends and settlement history in a defined reach will be acceptable.

The analysis of deeply buried sites requires definition of environmental principles affecting sites on the natural levee and an understanding of the application of these principles to any specific location on the river. Artificial alteration of the environment and its long-term effects must be taken into account. Data suggesting the need for deep testing to locate or investigate specific resources will be discussed with the COR prior to initiation of field work in those easements not scheduled for 1987 construction.

c. Phase 3: Intensive Survey and Site Assessment. Fieldwork in the areas designated for 1987 construction will commence upon delivery order award. Fieldwork in all other areas may be conducted concurrently, at the discretion of the Contractor.

An intensive survey is a comprehensive, systematic, and detailed physical examination of a project item for the purpose of locating and inventorying all cultural resources within the impact zone. The survey will be performed within the context of an explicit research design formulated in recognition of all prior investigations in the study area and surrounding region, and will include subsurface testing and evaluation of identified resources against the National Register of Historic Places criteria of significance (36 CFR 60.4). The survey will provide adequate information to seek determinations of eligibility from the Keeper of the National Register, and will innumerate project effects on each resource located within the study area. The evaluation will be conducted utilizing current professional standards and guidelines including, but not limited to :

the National Park Service's draft standards entitled, "How to Apply the National Register Criteria for Evaluation", dated June 1, 1982;

the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation as published in the Federal Register on September 29, 1983;

Louisiana's Comprehensive Archaeological Plan, dated October 1, 1983;

the Advisory Council on Historic Preservation's Section 106 Update/3 entitled, "Manual of Mitigation Measures (MOMM)", dated October 12, 1982.

The survey shall be an intensive pedestrian investigation augmented by systematic subsurface testing. Maximum transect width will not exceed 20 meters. The areas surveyed and all sites located within project boundaries will be recorded (in ink) to scale on the appropriate 7.5 minute quadrangle and aerial mosaic project maps. The quadrangle maps will be used to illustrate site forms (see below). The project maps will be returned to the COR with the draft report of investigation. All sites will be sufficiently tested using shovel, auger or other excavation techniques to determine and record site size, depth of deposit, stratigraphy, cultural association, function, approximate date of occupation, and condition. Site boundaries, test excavation units at sites (including test pits, shovel tests, auger intervals, backhoe trenches, etc.) and activity areas will be measured and mapped to scale. All scaled field maps will accurately reference grid locations in terms of levee stations or range markers in close proximity to the illustrated work area. The actual elevation (NGVD) of all sites, the top of bank, and top and bottom of cultural strata will be determined and mapped.

Eight previously recorded sites or spot finds (16SJB28, 16SJB29, 16SJB30, 16SJB31, 16SJB32, x16SJB-A, LA-Edgard 3, and LA-Edgard-5) will be relocated, identified and tested to determine their significance.

The COR will be informed ahead of time of the testing schedule of all sites.

The Contractor will fill out and file state site forms with the Office of the Louisiana State Archeologist and cite the resulting state-assigned site numbers in all draft and final reports of this investigation. The Contractor will submit updated state site forms to the State Archeologist for all previously discovered sites. These forms will correct previously filed information and summarize what is known of each resource as a result of this investigation. One unbound copy of each site or standing structure form will be submitted to the COR with the draft report.

All standing structures located in the survey area will be identified by function, dated and described using standard terminology of formal and/or vernacular architecture, as appropriate to each structure. Each standing structure will be recorded (using a simplified, standardized format selected by the Division of Archaeology and Historic Preservation), accompanied by a minimum of three, clear, black and white photographs showing front, back and side views of the structure. The Contractor will

determine whether subsurface features are present. If present, the structure and all features shall be treated as a site, which shall be mapped and recorded on State of Louisiana site forms. The Contractor shall assess the significance of all standing structures using information collected during the survey and literature search phases of this work item.

If sites exist in the project right-of-way which require further testing to determine their condition, data producing potential or significance, the need for further work will be discussed with the COR prior to the completion of all field work.

c. Phase 4: Data Analysis and Report Preparation. All survey and testing data will be analyzed using currently acceptable scientific methods. The Contractor shall catalog all artifacts, samples, specimens, photographs, drawings, etc., utilizing the format currently employed by the Office of the Louisiana State Archeologist. The catalog system will include site and provenience designations. Analyses of data from this effort will incorporate all data and artifacts collected by the National Park Service from the combined Upper Edgard to Lower Edgard Levee Enlargement Item and Willow Bend Revetment easements (approximately 77 artifacts). The Contractor will fully present the field methods and results of the National Park Service survey. This report represents the final report of the National Park Service investigation. The Contractor will document but correct any misinterpretation in the National Park Service data.

The Contractor will select and prepare artifacts to incorporate into the New Orleans District type collection from sites which are not found to be significant, and from which landowners make no request for the return of materials. Diagnostic artifacts will be selected which illustrate significant traits of an artifact type not already in the collection or which augment represented types by illustrating additional variability of type, style or method of manufacture.

All literature, map search, field and laboratory data will be integrated to produce a single, graphically illustrated, scientifically acceptable draft report discussing archeology in St. John the Baptist and St. Charles Parishes. Project impacts on all cultural resources located and/or tested by this study will be assessed. The Contractor shall provide justification of the rationale used and a detailed explanation of why each resource does or does not meet the National Register significance criteria (36 CFR 60.4). For each resource recommended as eligible to the National Register and assessed to be impacted by construction, the Contractor shall recommend mitigation alternatives. Inferential statements and conclusions will be supported by field, map or archival data. It will not be sufficient to make significance recommendations based solely upon the condition and artifactual content of the site in question. All significance assessments of sites and structures will be stated in terms of the context of similar Mississippi River floodplain sites.

6. Reports.

a. Monthly Progress Reports. One copy of a brief and concise statement of progress shall be submitted with and for the same period as the monthly billing voucher throughout the duration of the delivery order. These reports, which may be in letter form, should summarize all work performed, information gained, or problems encountered during the preceding month. A concise statement and graphic presentation of the Contractor's assessment of the monthly and cumulative percentage of total work completed by task shall be included each month. The monthly report should also note difficulties, if any, in meeting the contract schedule.

b. 3 August 1987 Draft Report. Four copies of a draft report of investigation of the 1987 construction items, one copy of each aerial mosaic project map accurately delineating site locations, and one set of site and/or standing structure forms for each cultural resource located in the survey area will be submitted to the COR no later than 3 August 1987. The draft report will state the research assumptions and goals governing this work; will succinctly describe the survey and testing techniques employed during the intensive survey; and will report the results of the literature search, survey, and testing (i.e., number, type and full descriptions of sites; assessment of project impact to each resource in the survey area); and will assess each site's significance.

c. Draft and Final Reports (Phases 1, 2, 3 and 4). Five copies of a draft report integrating all phases of this investigation will be submitted to the COR for review and comment 153 days after the date of the order. Appropriate portions of the 3 August 1987 draft report will be incorporated into the larger project draft report of investigation. The draft report will treat the study area as a unit, regardless of the construction schedule of specific items. The discussion of field and literature search results will be organized, however, to facilitate data retrieval for each named construction item in the study area.

An estimate of the acreage surveyed for this project and by the National Park Service (Upper to Lower Edgard Levee Enlargement Items) will be given in the report introduction.

The draft and final reports shall include all data and documentation required by 36 CFR 60-63 to prepare requests for Determination of Eligibility to the National Register of Historic Places for those sites recommended by the Contractor as significant. The Contractor shall recommend appropriate mitigation procedures for each significant cultural resource.

These written reports shall follow the format set forth in MIL-STD-847A with the following exceptions: 1) separate, soft, durable, wrap-around covers will be used instead of self covers; 2) page size shall be 8-1/2 x 11 inches with a 1-1/2-inch binding margin and 1-inch margins; 3) the text reference and Reference Cited formats of Society for American Archaeology will be used. Spelling shall be in accordance with the U.S. Government Printing Office Style Manual, dated Jauuary 1973.

The body of each report shall include the following: 1) introduction to the study and study area; 2) environmental setting; 3)review and evaluation of previous archeological investigations; 4) distribution of prehistoric and historic settlement in the study area; 5) research design; 6) description of field and laboratory methodology, statement of project objectives, analysis of effectiveness of methods; 7) data analyses and cultural material inventories; 8) data interpretation; 9) data integration; 10) conclusion; 11) recommendation; 12) references cited; and 13) appendices, as appropriate.

The COR will provide all review comments to the Contractor within 60 days after receipt of the draft reports (213 days after delivery order award). Upon receipt of the review comments, the Contractor shall incorporate or resolve all comments with the approval of the COR and submit one reproducible master copy and 40 bound copies of each report of investigation, and all separate appendices to the COR within 244 days after work item award.

In order to preclude vandalism, the draft and final reports shall not contain specific locations of archeological sites. Predicted site locations recommended for deep testing will appear in separate appendices from the main report.

d. Data Base Input. The Contractor will create a computerized data base of all known sites and standing structures on the Mississippi River natural levee in St. John the Baptist and St. Charles Parishes. The data base will be developed using D-Base III. ASIS (a D-Base III program) is available through New Orleans District. The format will approximate that chosen for the State of Louisiana data base. The final selection of data fields will be made with the COR. Missing information will be recorded as missing rather than left blank.

7. Disposal of Records and Artifacts. All records, photographs, artifacts, and other material data recovered under the terms of this delivery order shall be recorded and catalogued in a manner compatible with those systems utilized by the Louisiana SHPO and by State and Federal agencies which store archeological data. They shall be held and maintained by the Contractor until completion of the delivery order. Final disposition of the artifacts and records will be in accord with applicable Federal and State laws. Unless otherwise specified, artifacts will be returned to the landowner or permanently housed with the Louisiana Division of Archaeology and Historic Preservation or in a repository selected by the State Archeologist. The Principal Investigator shall inform the COR in writing when the transfer of data has been completed and shall forward to the COR a catalog of items entered into curation. The location of any notes, photographs or artifacts which are separated from the main collections will also be documented. Presently existing private archeological collections from the project area which are used in data analyses will remain in private ownership. The Contractor shall be responsible for delivery of the analyzed archeological materials to the individual landowners, the

Louisiana SHPO's office, or any other repository designated by the Government following acceptance of the final report. All artifacts to be permanently curated will be cleaned , stabilized, labeled, catalogued on typed State curation forms, and placed in sturdy bags and boxes which are labeled with site, excavation unit or survey collection unit provenience.

APPPENDIX II

CLAIMS MADE TO THE UNITED STATES GOVERNMENT FOR LANDS WITHIN THE PROJECT AREA

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ANGELINA REACH: ST. JOHN THE BAPTIST PARISH
RESERVE REACH I: ST. JOHN THE BAPTIST PARISH
RESERVE REACH II: ST. JOHN THE BAPTIST PARISH
MONTZ REACH: ST. JOHN THE BAPTIST PARISH
VACHERIE REACH: ST. JOHN THE BAPTIST PARISH
UPPER EDGARD REACH: ST. JOHN THE BAPTIST PARISH
WILLOW BEND REACH I: ST. JOHN THE BAPTIST PARISH
WILLOW BEND REACH II: ST. JOHN THE BAPTIST PARISH
LOWER EDGARD REACH: ST. JOHN THE BAPTIST AND ST. CHARLES PARISHES
WATERFORD REACH I: ST. CHARLES PARISH
WATERFORD REACH II: ST. CHARLES PARISH
LULING REACH: ST. CHARLES AND JEFFERSON PARISHES

ANGELINA PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T11S, R6E:

Section 9: No. 150--Honore Landrunf [Landreaux], Joseph Laveneu, and Jourdan, freres, claim a tract of land, situated in the parish of St. John Baptiste, on the left bank of the Mississippi, containing thirty-four arpents front, by forty arpents in depth, bounded above by lands of Major Lee, and below by lands of Colonel Croghan.

This land is claimed by purchase, and the claimant proves possession and cultivation upwards of thirty years; and witnesses state that there was a Spanish or French concession for this land (Vol. 3:591). [Note: This claim includes Section 1, T12S, R6E.]

Section 12: No. 97--Jean Helte claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing four arpents and two toises in front, and forty arpents in depth, and bounded on the upper side by land of Lorenzo Normand, and on the lower by land of Estevan, a free negro.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by the claimant, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:383). [Note: This claim includes Section 2, T12S, R6E.]

Section 10: No. 98--Antoine Vicuer claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing ten arpents in front, and forty in depth, and bounded on the upper side by land of Francois Dupont.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and for more than ten consecutive years next preceding. Confirmed (Vol. 2:383). [Note: This claim includes Section 3, T12S, R6E.]

T12S, R6E:

Section 1: No. 150--Honore Landrunf [Landreaux], Joseph Laveneu, and Jourdan, freres . . . (Vol. 3:591). [See Section 9, T11S, R6E.]

Section 2: No. 97--Jean Helte . . . (Vol. 2:383). [See Section 12, T11S, R6E.]

Section 3: No. 98--Antoine Vicuer . . . (Vol. 2:383). [See Section 10, T11S, R6E.]

RESERVE I PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T11S, R6E:

Section 23: No. 180--Edmond Bozonier Marmillon and Eugene Lartigue claim a tract of land situate in the parish of St. John the Baptist, on the left or east bank of the river Mississippi, containing six arpents front by the ordinary depth of forty arpents, and bounded above by land of Leon Vicner and below by other land of the claimants.

The said tract of land is claimed in virtue of purchase, founded on uninterrupted possession and constant habitation and cultivation thereof, by the claimants and those under whom the hold, for more than forty years past. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:695).

Section 26: No. 24--Andre Treigle claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing four arpents ten toises and two feet in front, and eighty arpents in depth, and bounded on the upper side by land of Pedro Sancouci, and on the lower by land of Theodore Treigle.

This is part of a tract of land of eight arpents twenty toises and four feet in front, and eighty arpents depth; the first depth of forty arpents of which has been inhabited and cultivated for more than ten consecutive years prior to the 20th December, 1803; and the second depth of forty arpents was granted to the father of the claimant, in the year 1780. Confirmed (Vol 2:377).

Section 27: No. 25--Theodore Treigle claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing four arpents ten toises and two feet in front, and eighty arpents in depth, and bounded on the upper side by land of Andre Treigle, and on the lower by land of Jean Treigle.

This is part of a tract of land of eight arpents twenty toises and four feet in front, mentioned in the last, No. 24; the first depth of forty arpents of which has been inhabited and cultivated for more than ten consecutive years prior to the 20th December, 1803; and the second depth of forty arpents was granted to the father of the claimant, in the year 1780. Confirmed (Vol 2:377).

Section 28: --Jean Treigle

RESERVE II PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T11S, R7E:

Section 48: No. R.&B.C.28--Auguste Madere, Sr.,

Section 49: No. 43--Honore Lagroue claims a tract of land situate in the parish of St. John the Baptist and on the east bank of the river Mississippi, containing two arpents fifteen toises and two feet front by the usual depth of forty arpents, and bounded above by land of Auguste Madere, Sr., and below by land of Philip Bredy.

The claimant proves peaceable possession and constant and uninterrupted habitation and cultivation of the said land, by himself and those under whom he holds, for the last forty years and upwards. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:683).

Section 50: No. 12--The widow and heirs of Jean D. Bredy, by virtue of purchase, a certain tract of land situated on the left bank of the river Mississippi, in the parish of St. John Baptist, measuring one arpent and a half front to said river, and forty in depth; bounded on the upper side by the lands of Honore Lagroue, and on the lower side by the lands of Charles Lasseigne. The land is now claimed in virtue of said purchase, and an uninterrupted possession, cultivation, and inhabitation, by the claimants, and those under whom they hold, from the year 1784 until now. We are, therefore, of opinion that this claim ought to be confirmed (Vol. 8:922).

Section 51: No. 195--Lasseigne claims a tract of land, situate in the parish of St. John Baptiste, on the left bank of the Mississippi, bounded on the upper side by lands of Philipe Bredi, and below by lands of widow Jacques Deslondes, containing two arpents front, and forty arpents in depth. This land is claimed by purchase, and the claimant proves that said land has been occupied by him and by those under whom he claims, before the year 1792 (Vol. 3:594).

Section 90: No. 167--widow of Jacques Deslondes and Andre Deslondes, her son, claim a tract of land situate in the parish of St. John Baptiste, on the left bank of the Mississippi, containing about twenty-two arpents and two-thirds front, and forty arpents in depth, bounded above by lands of Charles Lasseigne, and below by lands of Labranche, freres. The claimants prove possession and cultivation anterior to, and since the year 1792 (Vol. 3:592).

Section 91: No. 52--J. Bte. Hermogene and Similien Labranche. [This claim also includes Section 93, T11S, R7E, which lies east of the project item.]

MONTZ PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T11S, R7E:

Section 19: Commrs. Rcp. No. 26--Daniel Madere

Section 20: No. 414 & 650--Jacques Clement

Section 21: No. 111--Antoine Vichnair and Jacques Vichnair claim a tract of land, situate in the parish of St. John Baptiste, on the left bank of the Mississippi, having four and a half arpents (more or less) front, with a depth of forty arpents, bounded on the upper side by lands of Jacques Clemant, and on the lower side by lands of Michel Permy.

The claimants produce evidence of the purchase from the original proprietor, dated in the year 1788 (Vol. 3:588).

Section 23: No. 39--Pierre Becnel claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing five arpents and twenty feet in front, and forty arpents in depth, and bounded on the upper side by land of Adam Vicner, and on the lower by land of Jean Folse.

This land was sold to F. Clement, in the year 1796, at a judicial sale, and, in 1804, to the present claimant, by a like sale. It have been continually inhabited and cultivated for more than ten consecutive years prior to the 20th December, 1803: Confirmed (Vol. 2:379).

Section 24: No. 158--Jacques Charbonet claims a tract of land, situated in the parish of St. John Baptiste, left bank of the Mississippi, containing seven arpents and seven toises front, and forty arpents in depth, bounded above by lands of L. Bicknell, and below by lands of Andre Lassigne. The claimant holds by purchase, and produces successive sales from 24th October, 1760, down to himself (Vol. 3:592).

Section 25: No. 170--The widow and heirs of Andre' Lasseigne claim a tract of land situate in the parish of St. John the Baptist and on the east bank of the river Mississippi, containing two arpents front by the ordinary depth of forty arpents, and bounded above by land of M. Reine and below by land of widow Norbert Boudousquie.

The said tract of land was purchased by the late Andre' Lasseigne from Leonard Lasseigne on the 9th day of October, 1792; since which time it has been inhabited and cultivated by the said Andri', and after him, his widow and heirs, (the present claimants,) without any interruption whatsoever. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:694).

Section 26: No. 61--Madame Montz, widow of Antoine Montz, claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing four arpents seventeen toises and three feet in front, and forty arpents in depth, and bounded on the upper side by land of Mr. Lasseigne, and on the lower by land of Christophe Achstigre.

It appears that the husband of the claimant was put in possession of this land in the 1792, by the proper surveyor, and that it has been continually inhabited and cultivated ever since. Confirmed (Vol. 2:381).

Section 27: No. 101--Manuel Andry claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing thirteen arpents eighteen toises and two feet in front, and eighty arpents in depth, opening twenty-two degrees fifty-one minutes thirty seconds, and bounded on the upper side by land of the widow of Antoine Montz, and on the lower by land of the widow of Jacques Delonde.

It appearing that the land now claimed was inhabited and cultivated on the 20th December, 1803, and for more than ten consecutive years prior, the Board confirm the claim to the extent of the first depth of forty arpents, and reject it as to the second depth of forty arpents (Vol. 2:384).

Section 28: No. 59--Madame Deslondes, widow of Jacques Deslondes, claims a tract of land, situate on the east side of the river Mississippi, in the county of german Coast, containing four arpents in front, and forty arpents in depth, and bounded on the upper side by land of Mr. Andry, and on the lower by land of Madame George Deslondes.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and for more than ten consecutive years preceding. Confirmed (Vol. 2:380).

Section 29: No. 51--Madame Deslonde, widow of George Deslonde, claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing ten arpents in front, and forty arpents in depth, and bounded on the upper side by land of Michel Jacob, and on the lower by land of Matthias Camber.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by her, or those under whom she claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:380).

Section 30: No. 145--Henry Montz claims a tract of land, situate in the parish of St. John Baptiste, on the left bank of the Mississippi, containing four arpents front, by forty arpents in depth, bounded above and below by lands of Oliver Fourcelle. This land is claimed by purchase. The claimant produces the proces-verbal of Don Andry, executed on the 24th of January, 1776; and, also, proves settlement since the year 1792 (Vol. 3: 591).

Section 31: No. 214--Olivier Forcelle claims a tract of land, situate in the parish of St. John Baptiste, on the left bank of the Mississippi, measuring four arpents front, and forty arpents in depth, bounded on one side by lands of Henry Muntz, and on the other side by lands of F. Maurice Elfer.

This land is claimed by purchase, and the claimant proves possession and cultivation by himself, and by those under whom he claims, since the year 1792, and prior thereto (Vol. 3:595).

Section 32: No. 146--Widow Nicholas Elfert claims a tract of land, situate in the parish of St. John Baptiste, on the left side of the Mississippi, containing two arpents and a half front, by a depth of forty arpents, bounded above by lands of Oliver Fourcelle, and below by lands of Francois Clement. This land is claimed by purchase; the claimant produces the proces-verbal made by Don Andry on the 25th of January, 1776; and, also, proves settlement since the year 1792 (Vol. 3:591).

Section 33: No. 144--Francis Clement claims a tract of land situate in the parish of St. John Baptiste, on the left bank of the Mississippi, containing one arpent front, by forty arpents in depth, bounded above by lands of widow Nicholas Elfert, and below by Honore Lagrove.

This land is claimed by purchase, and the claimant refers to the proces-verbal made by Don Andry in the year 1776, for six arpents front, of which this is a part, and recorded in the preceding claim. He also proves possession since the year 1792 (Vol. 3:591).

Section 34: No. 143--Honore Lagrove or La Groue

VACHÈRIE PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T12S, R18E:

Section 26: No. 16--Andre Hymel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing six arpents in front, and forty in depth, and bounded on the upper side by land of madame Myettes, and on the lower by land of Madame Hautin.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:377).

Section 25: No. 45--Madame Hotin, widow of Benjamin Hotin, claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents in front, and forty arpents in depth, and bounded on the upper side by land of Jean Adam Romel, and on the lower by land of Antoine Hymel.

The husband of the claimant having been regularly put in possession of this land by the proper surveyor, in the year 1776, and the land having been continually inhabited and cultivated until on and after the 20th December, 1803: Confirmed (Vol. 2:379).

Section 24: No. 48--George Loupe claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing three arpents in front, and forty in depth, and bounded on the upper side by land of Madame Hotin, and on the lower by land of Charles Rhom.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:379).

Section 23: No. 226--Charles Rom claims a tract of land, situate in the parish of St. John Baptiste, right bank of the Mississippi, containing two arpents front, and forty arpents in depth, bounded above by lands of ----, and below by lands of ----.

The claimant holds by purchase, and proves, from successive deeds of sale, that said land has been possessed from the year 1793 (Vol. 3:596).

Section 22: No. 4--Madame Mayer, widow of Philip Mayer, claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing two arpents in front, and forty in depth, and bounded on the upper side by land of ---------- and on the lower by land of ----------.

This is part of a tract of land of three arpents front, on the usual depth of forty, surveyed for Michel Arcenaux in the year 1776, and sold by him to the husband of the claimant in 1783; and it appearing that the land has been inhabited and cultivated ever since the last-mentioned period, until on and after the 20th December, 1803. Confirmed (Vol. 2:376).

Section 21: No. 5--Antoine Treigner claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing five arpents in front, and forty in depth, and bounded on the upper side by land of Michel Arcenaux, and on the lower by land of David Rhom.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and for more than ten consecutive years next preceding. Confirmed (Vol. 2:376).

Section 20: No. 31--Madame Staire, widow of Jacques Staire, claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, contain fourteen arpents in front, and forty in depth.

It appears that the land now claimed was inhabited and cultivated by the claimant on the 20th December, 1803, and that the same was continually inhabited and cultivated for more than ten consecutive years next preceding. Confirmed (Vol. 2:378).

Section 19: No. 33--Michel Weber claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing six arpents in front, and forty arpents in depth, and bounded on the upper side by land of Jacques Estayre, and on the lower by land of Christophe Mayere.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:378).

Section 18: No. 58--Matthias Roussel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing eleven arpents in front, and forty arpents in depth, and bounded on the upper side by land of Michel Weber, and on the lower by land of Jean J. Haydel.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by the claimant, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:380).

Section 17: No. 44--Jean Jacques Haydel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing seventeen arpents in front, and forty in depth, and bounded on the upper side by land of Matthias Roussel, and on the lower by land of Nicolas and Jacques Haydel.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by the claimant, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:379).

UPPER EDGARD PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T12S, R18E:

Section 15: No. 46--Madame Becnel [Becknal] claims a tract of land, situate on the river Mississippi, (west side,) in the county of German Coast, containing twelve arpents and twenty-three feet in front, and eighty arpents in depth, and bounded on the upper side by land of Nicolas and Jacques Haydel, and on the lower by land of George Haydel.

This claimant having continually inhabited and cultivated the first depth of forty arpents of the land now claimed for more than ten consecutive years prior to the 20th December, 1803, the Board confirm her claim to that extent, and reject it to the second depth of forty arpents (Vol. 2:379).

Section 14: No. 57--George Haydel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing ten arpents in front, and eighty arpents in depth.

The first depth of forty arpents of this tract of land having been continually possessed by the claimant, or those under whom he claims, for more than ten consecutive years prior to the 20th December, 1803; and having obtained a regular order of survey for the second depth of forty arpents, in the year 1781, the claim is hereby confirmed (Vol. 2:380).

Section 13: No. 68--Jacques Troxler claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing thirteen arpents in front, and forty arpents in depth, and bounded on the upper side by land of George Christophe, and on the lower by land of Andre Hymel.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:381).

Section 12: No. 17--Andre Hymel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing sixteen arpents in front, and forty arpents in depth.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by the claimant, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:377).

Section 11: No. 66--Adam [or Andre] Weber) claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing six arpents and fourteen toises in front, and forty arpents in depth, and bounded on the upper side by land of Christophe Hymel, and on the lower by land of Antoine Weber.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by those under whom the claimant holds for more than ten consecutive years next preceding. Confirmed (Vol. 2:381).

Section 10: No. 67--Antoine Weber claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents and four feet in front, and forty arpents in depth, and bounded on the upper side by land of Mr. Lefebre, and on the lower by land of Antoine Borne.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:381).

Section 9: No. 77--Antoine Borne claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing nine arpents and a half in front, and forty arpents in depth.

It appears that this tract of land has been possessed and occupied either by the present claimant, or those under whom he claims, for more than ten consecutive years next preceding the 20th December, 1803. Confirmed (Vol. 2:382).

Section 8: No. 80--Madame Rodrigue claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing nine arpents in front, and forty arpents in depth.

It appears that the claimant did actually inhabit and cultivate the land now claimed n the 20th December, 1803, and that the same was continually inhabited and cultivated by her, or those under whom she claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:382).

Section 7: No. 71--Antoine Borne claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents in front, and forty arpents in depth, and bounded on the upper side by land of Jean Baptiste Rodrigue, and on the lower by land of Antoine Deslatte.
The claimant having purchased this land at a judicial sale made of it in the year 1788, and having continued in possession of the same ever since that period: Confirmed (Vol. 2:381).

Section 6: Pierre Fourche (No confirmation found, and no claim number listed on original township plat). Check **No. 175** for Section 75, which is an extension of Section 6 and has same owner.

Section 5: A. Sicksinder/Sickender/Secsnider (No confirmation found, and no claim number listed on original township plat).

Section 4: No. 123--Yves Bartelotte claims a tract of land, situate in the parish of St. John Baptiste, county of German Coast, on the right bank of the Mississippi, having four and a half arpents front, by forty arpents in depth, bounded on the upper side by lands of Delette, and below by lands of Noel Delette.

The claimant holds in right of purchase, and produces a bill of sale, made at public auction, by Manuel Andry, Spanish commandant, dated 8th November, 1796 (Vol. 3:589).

Section 3: No. 78--George Roussel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents and nineteen toises in front, and forty arpents in depth.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by the claimant, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:382).

Section 2: No. 63--Pierre Roussel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents in front, and forty in depth, and bounded n the upper side by land of Noel Deslattes, and on the lower by land of the widow Roussel.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:381).

Section 1: No. 198--Thomas Becknal [Becnel] or widow and heirs of Marmillion? claims a tract of land, situate in the parish of St. John Baptiste, on the right bank of the Mississippi, containing nine arpents front, and forty arpents in depth, bounded above by lands of Pierre Roussel, and below by lands of Pierre Maximillian.

This land is claimed by purchase, and the claimant proves possession and cultivation by him, and by those under whom he claims, from the year 1792 (Vol. 3:594). [Note: This claim includes Section 100, T12S, R19E.]

T12S, R19E:

Section 100: No. 198--Thomas Becknel . . . (Vol. 3:594). [See Section 1, T12S, R18E.]

Section 102: No. 11--Pierre Marmillon claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing twelve arpents in front, and forty in depth.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:376).

Section 101: No. 93--Michel Lennan claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing five arpents and seventeen toises in front, and forty arpents in depth, and bounded on the upper side by land of Pierre Mermillon, and on the lower by land of Jean Pierre Folse.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by those under whom the claimant holds for more than ten consecutive years next preceding. Confirmed (Vol. 2:383).

Section 20: No. 86--John P. Folse & Son; St. John the Baptist Parish; purchased at public auction Nov. 13, 1830 (Vol. 6:293).

Section 19: No. 199--Thomas Becknal claims a tract of land, situate in the parish of St. John Baptiste, on the right bank of the Mississippi, containing four arpents front, and forty arpents in depth, bounded above by the lands of Christopher Troxles, and below by lands of John Desnoyers.

This land is claimed by purchase, and the claimant proves possession in himself, and by those under whom he claims, from the year 1777 (Vol. 3:594).

Section 17: No. 49--Jean Desnoyers claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing eight arpents in front, and forty in depth, and bounded on the upper side by land of Francois Echtely, and on the lower by land of the parish church of St. Jean Baptiste.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and for more than ten consecutive years next preceding. Confirmed (Vol. 2:380).

Section 16: No. 5--The congregation of the Roman Catholic Church of St. John the Baptist claim a tract of land situate in the parish of St. John the Baptist, and on the west bank of the river Mississippi, containing four arpents front by eighty arpents in depth, and bounded above by land of Francois Rodriguez and below by land of John Weber.

The first or front depth of the said land was granted by the Spanish governor, O'Reilly, to the inhabitants of the said parish on the 21st day of February, 1770, for the purpose of building a church thereon, &c., and subsequently, to wit, on the 29th of December, 1774, Governor Onzaga issued, in favor of said inhabitants, an order of survey for the second or additional depth of forty arpents. The said land is now claimed under a late act, in virtue of the said grant and order, in consequence of the same having been sold at the public sale which took place in this city on the first Monday of November, 1830, under the President's proclamation of the 5th June preceding (Vol 6:702).

Section 18: No. 76--George Weber claims a tract of land, situate on the east side of the river Mississippi, in the county of German Coast, containing five arpents thirteen toises and five feet in front, and forty arpents in depth, and bounded on the upper side by land of the parish church of the parish of St. John the Baptist, and on the lower by land of Jean Weber.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and for more than ten consecutive years next preceding. Confirmed (Vol. 2:382).

Section 15: No. 50--Jean Weber claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing five arpents thirteen toises and five feet in front, and forty arpents in depth, and bounded on the upper side by land of George Weber, and on the lower by land of Francois Weber.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:382).

Section 14: No. 62--Francois Weber claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing three arpents four toises and four feet in front, and forty arpents in depth, and bounded on the upper side by land of Jean Weber, and on the lower by land of Jean Baptiste Labatut.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and for more than ten consecutive years next preceding. Confirmed (Vol. 2:381).

Section 13: No. 18--Jean Baptiste Labatut claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing ten arpents in front, and forty in depth, and bounded on the upper side by land of Francois Weber, and on the lower by land of Antoine Folse.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by those under whom the claimant holds for more than ten consecutive years next preceding. Confirmed (Vol. 2:377).

Section 10: Claimed by Madam Zephirin Barré. Act Feb. 10, 1897. No confirmation found (Surveyor General ca. 1897).

Section 12: No. 125--Eugene Bare claims a tract of land, situate in the parish of St. John Baptiste, on the west side of the Mississippi, having four arpents in front, by forty arpents in depth, bounded on the upper side by lands of Francis Jacob, and below by lands of Justin and Maximilian Bossier.

This land is claimed by purchase, and the claimant produces a deed of sale, by which it appears said land was possessed and cultivated in the year 1800 (Vol. 3:589). [Confirmed, January 6, 1821, Vol. 3:598]. -

WILLOW BEND I PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T12S, R18E:

Section 12: No. 17--Andre Hymel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing sixteen arpents in front, and forty arpents in depth.

It appears that the land now claimed was inhabited and
cultivated on the 20th December, 1803, and that the same was
continually inhabited and cultivated by the claimant, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:377).

WILLOW BEND II PROJECT ITEM: ST. JOHN THE BAPTIST PARISH

T12S, R18E:

Section 4: No. 123--Yves Bartelotte claims a tract of land, situate in the parish of St. John Baptiste, county of German Coast, on the right bank of the Mississippi, having four and a half arpents front, by forty arpents in depth, bounded on the upper side by lands of Delette, and below by lands of Noel Delette.

The claimant holds in right of purchase, and produces a bill of sale, made at public auction, by Manuel Andry, Spanish commandant, dated 8th November, 1796 (Vol. 3:589).

Section 3: No. 78--George Roussel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents and nineteen toises in front, and forty arpents in depth.

It appears that the land now claimed was inhabited and cultivated on the 20th December, 1803, and that the same was continually inhabited and cultivated by the claimant, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:382).

Section 2: No. 63--Pierre Roussel claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents in front, and forty in depth, and bounded n the upper side by land of Noel Deslattes, and on the lower by land of the widow Roussel.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:381).

Section 1: No. 198--Thomas Becknal [Becnel] or widow and heirs of Marmillion? claims a tract of land, situate in the parish of St. John Baptiste, on the right bank of the Mississippi, containing nine arpents front, and forty arpents in depth, bounded above by lands of Pierre Roussel, and below by lands of Pierre Maximillian.

This land is claimed by purchase, and the claimant proves possession and cultivation by him, and by those under whom he claims, from the year 1792 (Vol. 3:594). [Note: This claim includes Section 100, T12S, R19E.]

T12S, R19E:

Section 100: No. 198--Thomas Becknel . . . (Vol. 3:594). [See Section 1, T12S, R18E.]

Section 102: No. 11--Pierre Marmillon claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing twelve arpents in front, and forty in depth.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by him, or those under whom he claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:376).

LOWER EDGARD PROJECT ITEM: ST. JOHN THE BAPTIST AND ST. CHARLES PARISHES

T12S, R19E:

Section 12: No. 125--Eugene Bare claims a tract of land, situate in the parish of St. John Baptiste, on the west side of the Mississippi, having four arpents in front, by forty arpents in depth, bounded on the upper side by lands of Francis Jacob, and below by lands of Justin and Maximilian Bossier.

This land is claimed by purchase, and the claimant produces a deed of sale, by which it appears said land was possessed and cultivated in the year 1800 (Vol. 3:589). [Confirmed, January 6, 1821, Vol. 3:598]. -

Section 11: No. 82--Madame Lagrange, widow of Jean Baptiste Lagrange, claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing four arpents in front, and forty arpents in depth, and bounded on the upper side by land of Jean Baptiste Barre, and on the lower by land of Pierre Bossier.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and that the same was continually inhabited and cultivated by her, or those under whom she claims, for more than ten consecutive years next preceding. Confirmed (Vol. 2:377).

Section 9: No. 81--Pierre Bossier claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing six arpents seven toises and three feet in front, and forty arpents in depth, and bounded on the upper side by land of Madame Lagrange, and on the lower by land of George Bossier.

It appears that the claimant did actually inhabit and cultivate the land now claimed on the 20th December, 1803, and form more than ten consecutive years next preceding. Confirmed (Vol. 2:382).

Section 9: No. 124--Peter and George Bossie claim a tract of land, situate in the parish of St. John Baptiste, on the west side of the Mississippi river, having twelve and a half arpents front, by forty arpents in depth, bounded above by Justin and Maximilian Bossie, and below by lands of Manuel Garcia, with an opening eighty degrees.

The claimants hold in right of purchase, and produce a deed of sale, by which it appears said land was possessed and cultivated in the year 1791 (Vol. 3:589).

Section 8: No. 113--Manuel Garcier claims a tract of land, situate in the parish of St. John Baptiste, on the right bank of the Mississippi, having twenty-two arpents and nine toises in front, with a depth of forty arpents, making a superficies, as per plan annexed, of seven hundred and ninety-five arpents, bounded on the upper side by lands of George Bossier, fils, and on the lower side by lands of Pierre Bossier, pere.

The claimant holds by purchase, and proves possession in those under whom he claims, some time anterior to the year 1758 (Vol. 3:588).

Section 2: No. 30--Pierre Bossier claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing eighteen arpents in front, and forty arpents in depth, and bounded on the upper side by land of ----------, and on the lower by land of ----------.

It appearing that the land now claimed was inhabited and cultivated on the 20th December, 1803, and for more than ten consecutive years prior thereto, the Board confirm the claim to the extent of such depth as does not exceed forty arpents. Confirmed (Vol. 2:384).

Section 45: Rect. No. 95--Purchased by John Green from the land office in New Orleans during November, 1830. He paid $247.81 for 97.18 acres (Vol. 6:293).

Section 44: No. 64--Charles Darensbourg claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing two arpents in front, and forty in depth, and bounded on the upper side by land of David Hymel, and on the lower by land of Louis Lagrange.

It appears that the land now claimed was inhabited and cultivated by those under whom the claimant holds for more than ten consecutive years next preceding. Confirmed (Vol. 2:381).

Section 43: No. 139--Terence Le Blanc claims a tract of land, situate in the parish of St. John Baptiste, on the right bank of the Mississippi river, having two arpents front, with a depth of forty arpents, bounded above by lands of Charles Davensbourg, and below by lands of Alexis Pevret.

This land is claimed by purchase; and, from the deeds of sale exhibited, it appears it has been in the possession of the claimant, and those under whom he claims, since the year 1781 (Vol. 3: 590).

Section 42: No. 233--Alexis Perret claims a tract of land,situate in the parish of St. John Baptiste, on the right bank of the Mississippi, containing three and one-half arpents front, and forty arpents in depth, bounded on one side by lands of Terence Le Blanc, and on the other side by Magloire Martin.

This land is claimed by purchase, and the claimant proves possession and cultivation by himself, and by those under whom he claims, from the year 1787 to the present time (Vol. 3:596).

Section 46: Rect. No 96--Purchased by John Green from the land office in New Orleans during November, 1830. He paid $121.34 for 67.41 acres (Vol. 6:293).

Section 47: Rect. No. 97--Purchased by Daniel Warburg from the land office in New Orleans during November, 1830. He paid $167.15 for 53.92 acres (Vol. 6:293).

Section 41: Claimed by Maria M. Darensbourg. Act February 10, 1897. No confirmation found (Surveyor General ca. 1897).

Section 40: Rect. No. 91--Purchased by Wheaton J. Barney from the land office in New Orleans during November, 1830. He paid $67.14 for 33.57 acres (Vol. 6:293).

Section 39: Rect. No. 90--Purchased by Nathaniel Emerson from the land office in New Orleans during November, 1830. He paid $67.15 for 27.98 acres (Vol. 6:293).

Section 38: No. 230--Justine Perret claims a tract of land, situate in the parish of St. John Baptiste, right bank of the Mississippi, containing one arpent front, and forty arpents in depth, bounded above by lands of Hebert Darensbourg, and below by lands of Ursin Perret.

This land is claimed by purchase, and the claimant proves, by deeds of sale, that said land has been possessed since the year 1787, and to the present time (Vol. 3:596).

Section 37: No. 229--Godefroy Perret claims a tract of land, situate in the parish of St. John Baptiste, right bank of the Mississippi, containing one arpent front, and forty arpents in depth, bounded above by lands of Hebert Darensbourg, and below by lands of Ursin Perret.

This land is claimed by purchase; the claimant proves, by deeds of sale, that said land has been possessed from the year 1787 to the present time (Vol. 3:596).

Section 36: No. 86--Ursin Perret claims a tract of land situated in the parish of St. John Baptiste, right bank of the Mississippi, containing seventeen arpents front, and eighty arpents in depth.

This land is claimed by purchase, under a complete Spanish grant made in the year 1776. I am, therefore, of opinion this claim ought to be confirmed (Vol. 3:585).

[St. John the Baptist/St. Charles parish line]

Section 48: No. 110--Pierre B. St. Martin, Jun., claims a tract of land, situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having five arpents in front, by forty arpents in depth, being half of the tract, one-half of which is claimed by Pierre Pujal Perret, bounded on the upper side by lands of Madame Le Blan, and on the lower side by lands of Pierre P. Perret, as appears by the plat annexed.

This claim is precisely similar, and held by the same title as the preceding claim [Section 49: No. 108 or 109] (Vol. 3:588).

Section 49: No. 109--Pierre Pujal Perret claims a tract of land, situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having five arpents in front, by forty arpents in depth, and bounded on the upper side by lands of Pierre B. St. Martin, Jun., and on the lower side by lands of Rouel Perret, being half of a tract of land of which the said Pierre B. St. Martin claims the other half [Section 48: No. 109 or 110].

It appears that this land was originally the property of Robert Robin Delagny, and that it was in possession in the year 1784. The claimant holds by successive purchases under the said original owner (Vol. 3:588).

Section 111: Claimed by Felix Garcia. Act February 10, 1897. No confirmation found (Surveyor General ca. 1897).

Section 50: Rect. No. 98--Purchased by Thomas F. McCaleb from the land office in New Orleans during November, 1830. He paid $177.54 for 101.45 acres (Vol. 6:293).

Section 51: Rect. No. 99--Purchased by Nathaniel Emerson from the land office in New Orleans during November, 1830. He paid $165.67 for 97.45 acres (Vol. 6:293).

Section 52: No. 65--Mathieu Hottar claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing eight arpents and ten toises in front, and eighty arpents in depth, and bounded on the upper side by land of Noel Perret, and on the lower by land of Jean Boyer.

The claimant having continually possessed the first depth of the land claimed for more than ten consecutive years prior to the 20th December, 1803, the Board confirm his to that extent. The balance, being claimed by virtue of a decree of the Intendant in 1801, the Board do not consider themselves authorized to confirm, and do therefore reject it (Vol. 2:381).

Section 53: Claimed by Felix Garcia. O.B. 8 [or 3]. No confirmation found (Surveyor General ca. 1897).

Section 54: No. 90--Henry Armstrong James claims a tract of land situate in the parish of St. Charles and on the west bank of the river Mississippi, containing three-quarters of an arpent front by the ordinary depth of forty arpents, and bounded above by land of Andre Latour and below by land of widow Andre France.

The claimant proves uninterrupted possession and constant habitation and cultivation of said tract, by himself and those under whom he holds, for more than forty years past. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:687).

Section 55: No. 89--The widow and heirs of Andre France claim a tract of land situate in the parish of St. Charles and on the west bank of the river Mississippi, containing one-half of an arpent front by the ordinary depth of forty arpents, and bounded above by land of Henry Armstrong James and below by land of F. and A. Lorio.

The said tract of land is claimed in virtue of uninterrupted possession and constant habitation and cultivation thereof, by the claimants and those under whom they immediately hold, for upwards of forty years past. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:687).

Section 56: No. 88--François Lorio and Achille Lorio claim a tract of land situate in the parish of St Charles and on the west bank of the river Mississippi, containing three arpents front by forty arpents deep, together with an additional or second depth of forty arpents lying immediately in the rear of and adjacent to said first depth, and having a width or front of twelve arpents, bounded above by land of widow Andre France and below by land of Charles Perret.

The claimants prove uninterrupted possession and constant habitation and cultivation of the first depth of said land, by themselves and those under whom they hold, for more than forty years past; and of the second or additional depth thereof they prove the same uninterrupted possession and undisputed ownership for the same space of time back, the nature and quality of the soil rendering it in a great measure unfit for cultivation. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:687).

Section 58: Claimed by Mad. C. or E. Deneufbourg. Act February 10, 1897. No confirmation found (Surveyor General ca. 1897).

Section 59: No. 3--Ambroise Brou claims, by purchase, a tract of land, situate on the right bank of the Mississippi river, in the county of German Coast, parish of St. Charles, having two arpents one foot eight inches and six lines in front, by forty arpents in depth, and bounded on the upper side by lands of Jacques Brou, and on the lower by lands of Isidore, (a free person of color) as appears by the plat of survey executed by the Surveyor General of the Spanish Government.

Said land is one-half of a concession made by the Spanish Government, in the year 1784, to the person under whom the claimant holds. He also proves continued and uninterrupted possession and cultivation. I am, therefore, of opinion his claim ought to be confirmed (Vol. 3:578).

Section 60: No. 9--Widow of Philip De Neufbourg claims a tract of land situate in the parish of St. Charles, and on the west bank of the river Mississippi, containing four arpents front by the ordinary depth of forty arpents, and bounded above by land of Pierre Bauchet and below by land of the heirs of Marie Jeanne Gabrielle Lorio.

The claimant proves, according to law, constant and uninterrupted habitation and cultivation of the said land, for more than forty years past, which said tract was among those sold in this city on the first Monday in November, 1830, under the President's proclamation of the 5th of June preceding (Vol. 6:702).

Section 62: No. 4--The heirs of Francoise Gabriel Lorio and of Marie Jeanne Lorio claim a tract of land situate in the parish of St. Charles, and on the west bank of the river Mississippi, containing one arpent and a half front by the ordinary depth of forty arpents, and bounded above by land of the widow Lallande and below by land of Gilbert Darenebourg.

The said tract of land having been among those sold at the public sale which took place at New Orleans on the first Monday in November, 1830, under the President's proclamation of the 5th June preceding, is now claimed in virtue of constant and uninterrupted possession, habitation, and cultivation thereof, for more than fifty years past (Vol. 6:701-2).

Section 63: No. 107--Thomas F. McCaleb, New Orleans, 65.77 acres purchased November 13, 1830, at public sale (Vol. 6:293). [Note: This purchase includes Section 33, T12S, R20E.]

T12S, R20E:

Section 33: No. 107--Purchased by Thomas F. McCaleb from the land office in New Orleans during November, 1830. He paid $82.21 for 65.77 acres (Vol. 6:293). [Note: This purchase includes Section 63, T12S, R19E.]

Section 32: No. 7--Charles Aime Darensbourg claims a tract of land situate in the parish of St. Charles, and on the west bank of the river Mississippi, containing one arpent front by the ordinary depth of forty arpents, and bounded above by land of Alphonse Frederick and below by land of Andre Lorio.

The said tract of land is now claimed according to law, in virtue of purchase founded on constant and uninterrupted possession, habitation, and cultivation thereof, for more than forty years past. It was among those sold in this city on the first Monday in November, 1830, under the President's proclamation of the 5th of June preceding (Vol. 6:702).

Section 31: No. 234--Henry Lorvaux claims a tract of land, situate in the parish of St. John Baptiste, right bank of the Mississippi, containing five arpents in front, and forty arpents in depth, bounded on one side by lands of C. Daremsbourg, and on the other side by lands of C. Pane.

This land is claimed by purchase, and successive sales show that it has been in possession from the year 1787. The sale, dated in that year, expresses forty arpents in depth, and the sale made to the claimant in 1802, and a survey made in 1813, expresses eighty arpents in depth; but as no written evidence of title appears for the second depth, I am of opinion he is only entitled to the first forty arpents in depth (Vol. 3:596).

Section 30: No. 18--Madame widow Ranson and son claim two tracts of land, one having five arpents five toises two feet eight inches, by a depth of one hundred arpents, and the other having a front of one arpent, and a depth of one hundred arpents, both being part of the original grant mentioned in the preceding claim, as also appears from a plat of the survey: said land is situated on the right bank of the Mississippi, parish of St. Charles. The first mentioned tract is bounded on the upper side by lands of Henry Laureaux, and on the lower side by lands of Pierre Dolthonde; the second tract is bounded by lands of the said Pierre Dolthonde on the upper side, and on the lower side by lands of the claimants.

These tracts are claimed by purchase derived from title of Antoine Thomassin, mentioned in the preceding claim of P. Dolthonde, and, therefore, in my opinion, ought to be confirmed (Vol. 3:580). [Note: This claim includes Section 28, T12S, R20E.]

Section 29: No. 17--Pierre Dolthonde claims a tract of land, situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having four arpents five toises two feet and eight inches in front, by a depth of one hundred arpents, bounded on the upper side by lands of Madame Hinson, and on the lower side by the same, as will more fully appear by the plat executed by Mr. Portier, hereunto annexed.

The claimant produces, first, a concession from the Spanish Government, dated in 1776, for eleven arpents in front, by forty arpents in depth; and, secondly, a concession dated in 1777, for the same front, and sixty additional arpents in the rear, granted to Antoine Thomassin, under whom he claims by purchase; the land claimed being part of the land originally granted to said A. Thomassin, I am of opinion the claim ought to be confirmed (Vol. 3: 580).

Section 28: No. 18--Madame widow Ranson and son . . . (Vol. 3:580). [See Section 30, T12S, R20E.]

Section 26: No. 108--Pierre B. St. Martin and Madame widow Ranson, claim a tract of land, situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having fourteen arpents two toises and five feet front, with a depth of forty arpents, bounded on the upper side by lands of Madame Ranson, and on the lower side by lands of Charles Perret, as more fully appears from the plat annexed.

The claimants prove that this land was originally the property of Charles Darenbourg, and occupied by him in the year 1783, under whom they claim by successive sales (Vol. 3:588).

Section 25: No. 119--Charles Perret, Sen., claims a tract of land, situate in the parish of St. Charles, county of German Coast, west side of the Mississippi, having ten arpents front, by a depth of forty arpents, bounded on the upper side by St. Martin's, and on the lower side by lands of Madame widow Vaugine, as more fully appears from the plat annexed.

The claimant holds in right of purchase, and proves peaceable possession and cultivation, by himself and those under whom he claims, upwards of twenty-seven years (Vol. 3:589).

Section 24: No. 122--Mrs. widow Vaugine Darensbourg claims a tract of land, situate in the parish of St. Charles, county of German Coast, on the west side of the Mississippi river, having five arpents, less fifteen feet, front, by forty arpents in depth, bounded on the upper side by claim of Charles Perret, and on the lower side by the claim of Mrs. Brou, as more fully appears from the plat of the survey annexed.

The claimant holds in right of purchase, and proves possession in herself, and those under whom she claims, upwards of twenty-five years (Vol. 3: 589).

Section 23: No. 121--Mrs. Brou claims a tract of land, situated in the parish of St. Charles, county of German Coast, on the west side of the Mississippi river, having four arpents four toises and three feet front, by forty arpents in depth, bounded on the upper side by the claim of Mrs. Vaugine, and on the lower side by the claim of Charles Perret, Jun., as more fully appears from the plat of survey annexed (Vol. 3: 589).

Section 22: No. 120--Charles Perret, Jun. claims a tract of land, situate in the parish of St. Charles, county of German Coast, on the west side of the river Mississippi, having four arpents in front, by forty arpents in depth, bounded on the upper side by lands of Madame V. F. Brou, and on the lower side by the succession of Claudius Adam, as more fully appears from the plat annexed.

The claimant holds in right of purchase, and produces an authentic survey, dated in the year 1784; he also proves possession and cultivation (Vol. 3: 589).

Section 21: Claimed by C. Perret. Act February 10, 1897. No confirmation found (Surveyor General 1895).

Section 20: No. 521--Abraham Bourgeois claims a tract of land, situate in the county of German Coast, containing four arpents in front, by eighty arpents in depth. This tract of land is claimed by virtue of a complete grant, being part of a tract of twelve arpents and a half front, granted to Joseph Bourgeois, in May, 1787 (Vol 3:255).

Section 17: No. 520--Widow Bourgeois claims a tract of land, situate in the county of German Coast, on the right bank of the Mississippi, containing eight arpents and a half front, by eighty arpents in depth, and was bounded, in the year 1787, on one side by lands of Joseph Bourgeois, and on the other by lands of Charles Daringsbourg. This tract of land is claimed by virtue of a complete title, dated in the year 1787 (Vol. 3:255).

Section 16: No. 85--Chevalier Darensbourg claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing nine arpents in front, and eighty arpents in depth.

It appears that the claimant did actually inhabit and cultivate the first forty arpents depth of this land for more than ten consecutive years next preceding the 20th December, 1803, and that he obtained a regular warrant of survey for the second forty arpents depth in the year 1786. Confirmed (Vol. 2:382).

Section 15: No. 52--Jacques Falgout claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing three arpents and one toise in front, and eighty arpents in depth, and bounded on the upper side by land of Baptiste Camu, and on the lower by land of Charles Rixner.

The claimant having possessed the first depth of forty arpents of the land claimed for more than ten consecutive years prior to the 20th December, 1803; and having obtained from the Governor a regular warrant of survey, in the year 1786; for the second depth of forty arpents, the claim is hereby confirmed (Vol. 2:380).

Section 14: No. 53--Charles Rixner claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing three arpents and one toise in front, and eighty arpents in depth, and bounded n the upper side by land of Charles Falgout, and on the lower by land of Mr. Troxler.

It appears that the first depth of forty arpents of this land has been continually inhabited and cultivated for more than ten consecutive years next preceding the 20th December, 1803; and that Charles Falgout, under whose title the Claimant holds, obtained a regular warrant of survey from Governor Miro, in the year 1786, for the second depth of forty arpents. Confirmed (Vol. 2:380).

Section 13: No. 94--Peter Troxclair claims a tract of land situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having four arpents front, with a depth of forty arpents, bounded on the upper side by lands of Charles Rixner, and below by lands of Francis Troxclair.

This land makes part of another tract, and is included in the same survey which has been already confirmed to Francis Troxclair on the report of the Register and Receiver of Public Moneys for this district; and the same evidence adduced in that case applies equally to this, to wit: the permission of the proper Spanish officer to settle the land, but, by mistake, a report on this claim was omitted. Under these circumstances, I am of opinion it ought to be confirmed (Vol. 3:586).

Section 12: No. 499--Francis Troxclair claims a tract of land, situate in the county of German Coast, on the right bank of the Mississippi, having a front of four arpents, and forty arpents in depth. The claimant proves the permission of the proper Spanish officer to settle this land prior to the 20th of December, 1803, and cultivation (Vol. 3:264).

Section 11: No. 2--Ambroise Brou claims a tract of land on which he resides, situate in the county of German Coast, parish of St. Charles, on the right bank of the Mississippi river, having four arpents twenty-nine toises two feet three inches and six lines in front, by a depth of eighty arpents; bounded on the upper side by lands of Francois Troscler, and on the lower side by the lands of Jacques Brou.

This land is claimed in virtue of a concession of the Spanish Government to the father of the claimant (under whom he holds) of nine arpents twenty-six toises in front, by forty arpents in depth. Secondly, in virtue of a purchase of same front, and twenty arpents in depth, made by the said father of the claimant, of the Spanish Government. And, thirdly, in virtue of another concession of twenty arpents, in additional depth to the said front; the land of the claimant being half the whole, to wit, four arpents twenty-nine toises two feet three inches and six lines.

The documents exhibited by the claimant clearly prove that the concessions, stated by him to have been made by the Spanish Government, were duly made by that Government; and he further shows a continued possession and occupancy. I am, therefore, of opinion his claim ought to be confirmed (Vol. 3:573).

WATERFORD I PROJECT ITEM: ST. CHARLES PARISH

T12S, R20E:

Section 32: No. 7--Charles Aime Darensbourg claims a tract of land situate in the parish of St. Charles, and on the west bank of the river Mississippi, containing one arpent front by the ordinary depth of forty arpents, and bounded above by land of Alphonse Frederick and below by land of Andre Lorio.

The said tract of land is now claimed according to law, in virtue of purchase founded on constant and uninterrupted possession, habitation, and cultivation thereof, for more than forty years past. It was among those sold in this city on the first Monday in November, 1830, under the President's proclamation of the 5th of June preceding (Vol. 6:702).

Section 31: No. 234--Henry Lorvaux claims a tract of land, situate in the parish of St. John Baptiste, right bank of the Mississippi, containing five arpents in front, and forty arpents in depth, bounded on one side by lands of C. Daremsbourg, and on the other side by lands of C. Pane.

This land is claimed by purchase, and successive sales show that it has been in possession from the year 1787. The sale, dated in that year, expresses forty arpents in depth, and the sale made to the claimant in 1802, and a survey made in 1813, expresses eighty arpents in depth; but as no written evidence of title appears for the second depth, I am of opinion he is only entitled to the first forty arpents in depth (Vol. 3:596).

Section 30: No. 18--Madame widow Ranson and son claim two tracts of land, one having five arpents five toises two feet eight inches, by a depth of one hundred arpents, and the other having a front of one arpent, and a depth of one hundred arpents, both being part of the original grant mentioned in the preceding claim, as also appears from a plat of the survey: said land is situated on the right bank of the Mississippi, parish of St. Charles. The first mentioned tract is bounded on the upper side by lands of Henry Laureaux, and on the lower side by lands of Pierre Dolthonde; the second tract is bounded by lands of the said Pierre Dolthonde on the upper side, and on the lower side by lands of the claimants.

These tracts are claimed by purchase derived from title of Antoine Thomassin, mentioned in the preceding claim of P. Dolthonde, and, therefore, in my opinion, ought to be confirmed (Vol. 3:580). [Note: This claim includes Section 28, T12S, R20E.]

Section 29: No. 17--Pierre Dolthonde claims a tract of land, situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having four arpents five toises two feet and eight inches in front, by a depth of one hundred arpents, bounded on the upper side by lands of Madame Hinson, and on the lower side by the same, as will more fully appear by the plat executed by Mr. Portier, hereunto annexed.

The claimant produces, first, a concession from the Spanish Government, dated in 1776, for eleven arpents in front, by forty arpents in depth; and, secondly, a concession dated in 1777, for the same front, and sixty additional arpents in the rear, granted to Antoine Thomassin, under whom he claims by purchase; the land claimed being part of the land originally granted to said A. Thomassin, I am of opinion the claim ought to be confirmed (Vol. 3: 580).

Section 28: No. 18--Madame widow Ranson and son . . . (Vol. 3:580). [See Section 30, T12S, R20E.]

Section 26: No. 108--Pierre B. St. Martin and Madame widow Ranson, claim a tract of land, situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having fourteen arpents two toises and five feet front, with a depth of forty arpents, bounded on the upper side by lands of Madame Ranson, and on the lower side by lands of Charles Perret, as more fully appears from the plat annexed.

The claimants prove that this land was originally the property of Charles Darenbourg, and occupied by him in the year 1783, under whom they claim by successive sales (Vol. 3:588).

WATERFORD II PROJECT ITEM: ST. CHARLES PARISH

T12S, R20E:

Section 14: No. 53--Charles Rixner claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing three arpents and one toise in front, and eighty arpents in depth, and bounded n the upper side by land of Charles Falgout, and on the lower by land of Mr. Troxler.

It appears that the first depth of forty arpents of this land has been continually inhabited and cultivated for more than ten consecutive years next preceding the 20th December, 1803; and that Charles Falgout, under whose title the Claimant holds, obtained a regular warrant of survey from Governor Miro, in the year 1786, for the second depth of forty arpents. Confirmed (Vol. 2:380).

Section 13: No. 94--Peter Troxclair claims a tract of land situate in the parish of St. Charles, county of German Coast, on the right bank of the Mississippi, having four arpents front, with a depth of forty arpents, bounded on the upper side by lands of Charles Rixner, and below by lands of Francis Troxclair.

This land makes part of another tract, and is included in the same survey which has been already confirmed to Francis Troxclair on the report of the Register and Receiver of Public Moneys for this district; and the same evidence adduced in that case applies equally to this, to wit: the permission of the proper Spanish officer to settle the land, but, by mistake, a report on this claim was omitted. Under these circumstances, I am of opinion it ought to be confirmed (Vol. 3:586).

Section 12: No. 499--Francis Troxclair claims a tract of land, situate in the county of German Coast, on the right bank of the Mississippi, having a front of four arpents, and forty arpents in depth. The claimant proves the permission of the proper Spanish officer to settle this land prior to the 20th of December, 1803, and cultivation (Vol. 3:264).

Section 11: No. 2--Ambroise Brou claims a tract of land on which he resides, situate in the county of German Coast, parish of St. Charles, on the right bank of the Mississippi river, having four arpents twenty-nine toises two feet three inches and six lines in front, by a depth of eighty arpents; bounded on the upper side by lands of Francois Troscler, and on the lower side by the lands of Jacques Brou.

This land is claimed in virtue of a concession of the Spanish Government to the father of the claimant (under whom he holds) of nine arpents twenty-six toises in front, by forty arpents in depth. Secondly, in virtue of a purchase of same front, and twenty arpents in depth, made by the said father of the claimant, of the Spanish Government. And, thirdly, in virtue of another concession of twenty arpents, in additional depth to the said front; the land of the claimant being half the whole, to wit, four arpents twenty-nine toises two feet three inches and six lines.

The documents exhibited by the claimant clearly prove that the concessions, stated by him to have been made by the Spanish Government, were duly made by that Government; and he further shows a continued possession and occupancy. I am, therefore, of opinion his claim ought to be confirmed (Vol. 3:573).

Section 6: Claimed by Jacques Brou. No confirmation found (Surveyor General 1895).

Section 10: No. 514--Honore Zeringue claims a tract of land, by purchase, situate in the county of German Coast, on the left [sic)] bank of the Mississippi, having five arpents front on the river, and a depth of forty arpents, bounded on one side by lands of J. Brow, and on the other by lands of Margaret Borne. The

claimant proves that those, under whom he claims, settled and cultivated this land more than ten consecutive years prior to the 20th December, 1803 (Vol. 3:260).

Section 9: No. 515--Honore Zeringue claims, by purchase, a tract of land, situate in the parish of St. Charles, county of German Coast, having half an arpent front on the right bank of the Mississippi, and depth of forty arpents, bounded on one side by lands of Marguerite, a free woman of color, and on the other by lands of Henry, a free man of color. The claimant proves settlement and cultivation by those under whom he claims, more than ten consecutive years prior to the 20th December, 1803 (Vol. 2:260).

Section 3: No. 513--Honore Zeringue claims, by purchase, a tract of land, situate on the west side of the Mississippi, in the county of German Coast, having one arpent in front, and forty in depth, bounded on one side by lands of Henry Brow, and on the other side by lands of Valentine Roucelle. The claimant proves settlement and cultivation of this land, by those under whom he claims, more than ten consecutive years prior to the 20th December, 1803 (Vol. 3:260).

Section 8: No. 533--Valentin Roussel, a free man of color, claims a tract of land, situate in the county of German Coast, on the right bank of the Mississippi, having a front of one arpent, and a depth of thirty-five arpents, bounded on one side by lands of Honore Zeringue, and on the other by those of Michel Friloux. The claimant proves possession and cultivation from the year 1795 (Vol. 3:262).

Section 18: No. 642--Michel Friloux claims a tract of land, situate in the country of Orleans, on the right bank of the Mississippi, bounded above by lands of Valentine Roussel, and below by those of the claimant, containing fifteen toises in front, by a depth of forty arpents. The claimant purchased this land at public vendue in the month of April, 1806, with such improvements thereon as induce us to believe that it was long inhabited, although there is no positive evidence of the time when it was first settled. We think it similarly situated to that of Hypolite Hebert, at **No. 591** of these reports, to which we refer our opinion.

No. 591--Hypolite Hebert claims a tract of land on bayou Derbonne, containing six hundred and twenty-five and six-tenths superficial acres. There is evidence of settlement and cultivation of this land in the year 1801, and ever since, but no proof of permission to settle by the proper Spanish officer. The epoch at which we positively) know it was) settled, to wit, in 1801, is not the length of time prior to the 20th December, 1803, in which the law raises a presumption of permission from the proper officer to settle; yet, from the magnitude of the improvements in the year 1801, we think it a fair inference that it was inhabited a considerable time before, and, therefore, are of opinion that it would be an act of justice to confirm this claim (Vol. 3: 266).

Section 7: No. 641--Michael Friloux claims a tract of land, by purchase, situated in the county of German Coast, on the right bank of the Mississippi, having ten arpents and sixteen feet front, and forty arpents in depth, bounded on the side by lands of Mr. Lartigue, and on the other side by lands of Mr. Baudorier. It is proved that this land was inhabited and cultivated by those under whom the claimant holds more than ten consecutive years prior to the 20th December, 1803 (Vol. 3:262).

Section 5: No. 531--Paul Friloux and Peter Friloux claim a tract of land, situate in the county of German Coast, on the right bank of the Mississippi, having a front of four arpents and a depth of forty arpents, bounded on one side by lands of Michael Friloux, and on the other side by those of John Sechenender. The claimants prove habitation and cultivation of this land, by those under whom they claim, more than ten consecutive years prior to the 20th of December, 1803 (Vol. 3:260-61).

Section 4: No. 8--The widow and heirs of Frederick Toups claim a tract of land situate in the parish of St. Charles, and on the west bank of the river Mississippi, containing two arpents front by the ordinary depth of forty arpents, and bounded above by land of Pierre Friloux and below by land of Pierre Chenier.

The said tract of land having been sold in this city on the first Monday in November, 1830, under the President's proclamation of the 5th of June preceding, is now claimed under the late law, in virtue of purchase, founded on constant and uninterrupted habitation and cultivation thereof by the claimants and those under whom they hold, for more than forty years past (Vol. 6:702). [Note: This claim includes Section 34, T12S, R20E.]

Section 34: No. 8 and No. 24--Widow & Heirs of Frederick Toups in conflict with Edmond Fortier.

No. 8--The widow and heirs of Frederick Toups . . . (Vol. 6:702). [See Section 4, T12S, R20E.]

No. 24--Edmond Fortier claims a tract of land situate in the parish of St. Charles, on the west bank of the river Mississippi, and about twenty-eight miles above the city of New Orleans, containing one arpent front by the ordinary depth of forty arpents, and bounded by other lands of claimant.

The said tract of land is claimed in virtue of purchase, founded on ancient possession and constant and uninterrupted habitation and cultivation for upwards for forty years past. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:681).

No. 24--Edward Fortier, 1 arpent by 40 arpents, possessed for over 40 years (Vol. 6:907).

Section 2: No. 3--Andre Dorvin claims a tract of land situate in the parish of St. Charles, and on the west bank of the Mississippi, containing four arpents front by the ordinary depth of forty arpents, and bounded above by land of widow Frederick Toups and below by land of Edmond Wiltz.

The said tract of land originally formed part of a larger tract, regularly granted by the Spanish government to Antoine Dorvin on the 27th day of January, 1777, under which grantee the claimant holds in virtue of regular successive conveyances. It was among those sold at the public sale which took place at New Orleans on the first Monday in November, 1830, under the President's proclamation of the 5th June preceding. We are, however, of opinion that this claim is already confirmed by law (Vol. 6:701).

Batture in front of Section 2: 3.00 acres (Surveyor General:1895).

Section 1: No. 37--Antoine Dorvin claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing three arpents and twenty-two toises in front, and forty arpents in depth, and bounded on the upper side by land of Madame Chenier, and on the lower by land of Mr. Barran.

This land was surveyed in the year 1770, in favor of Alphonse Dorvin, who obtained a complete grant for the same in the year 1777; under which grant the present claimant holds. Confirmed (Vol. 2:379).

Batture in front of Section 1: 3.64 acres (Surveyor General 1895).

T13S, R20E:

Section 27: No. 37--Antoine Dorvin claims a tract of land, situate on the west side of the river Mississippi, in the county of German Coast, containing three arpents and twenty-two toises in front, and forty arpents in depth, and bounded on the upper side by land of Madame Chenier, and on the lower by land of Mr. Barran.

This land was surveyed in the year 1770, in favor of Alphonse Dorvin, who obtained a complete grant for the same in the year 1777; under which grant the present claimant holds. Confirmed (Vol. 2:379).

Batture in front of Section 27: 3.60 acres (Surveyor General 1895).

Section 26: No. 103--Chauvin and Boisclair Delery claim two tracts of land, situate on the west side of the river Mississippi, in the county of German Coast; one of said tracts containing five arpents and twenty toises in front, and forty arpents in depth, and bounded on the upper side by land of Antoine Dorvin, and on the lower by land of Edmond Fortier; and the other tract containing five arpents twenty toises and five feet in front, and forty arpents in depth, and bounded above and below by Antoine Dorvin.

It appears that the aforesaid tracts of land were inhabited and cultivated on the 20th December, 1803, and that they were continually inhabited and cultivated by those under whom the claimants hold for more than ten consecutive years next preceding. Confirmed (Vol. 2:384).

Batture in front of Section 26: 25.02 acres (Surveyor General 1895).

Section 24: No. 36--Antoine Dorvin

Batture in front of Section 24: 14.97 acres (Surveyor General 1895).

LULING PROJECT ITEM: ST CHARLES AND JEFFERSON PARISHES

T13S, R21E:

Section 34: No. 644--Baptiste Daspit St. Amant claims a tract of land, by purchase, situate in the county of German Coast, on the right bank of the Mississippi, having a depth of forty arpents, with a front of fourteen arpents twenty-seven toises on the Mississippi. The claimant proves that this land was possessed and cultivated by those, under whom he claims, more than ten consecutive years prior to the 20th December, 1803 (Vol. 3:262).

Section 35: No. 229--David Lanaux, Alphonse Fossier, and George Rixner claim a tract of land situate in the parish of St. Charles, and on the west bank of the river Mississippi, containing thirty arpents front by the ordinary depth of forty arpents, and bounded above by land of the widow Baptiste St. Amand and below by land of Baptiste Pacquet, a free negro. The claimants prove undisputed possession and constant and uninterrupted habitation and cultivation of the said land by themselves and those under whom they hold, for the last forty years and upwards. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:699). [This claim includes Section 1, T13S, R22E.]

T13S, R22E:

Section 1: No. 229--David Lanaux, Alphonse Fossier, and George Rixner . . . (Vol. 6:699). [See Section 35, T13S, R21E.]

[St. Charles/Jefferson Parish line]

Section 2: No. 55--Jean Baptiste Pacquet, a free negro, claims a tract of land situate in the parish of Jefferson and on the west bank of the river Mississippi, containing three arpents front by the ordinary depth of forty arpents, and bounded above by land of Messrs. Davis and Fossier and below by land of widow Eugene Fortier.

The said tract of land was purchased by claimant from the late George Rixner on the 9th day of November, 1797; since which time (and for a number of years previous) it has been constantly and uninterruptedly inhabited and cultivated as undisputed private property. We are therefore of opinion that this claim ought to be confirmed (Vol. 6:684).

Section 3: No. 493--Eugene Fortier claims a tract of land, situate in the county of Orleans, on the right bank of the Mississippi, having twenty-six arpents and ten toises front, and forty arpents depth. The claimant proves possession and cultivation ever since the year 1776 (Vol. 3:260).

Section 4: No. 350 and No. 563--Bernard Marigny

No. 350--Bernard Marigny

No. 563--Bernardo Marigny claims a tract of land, situate in the county of Orleans, on the right bank of the Mississippi, five leagues above the city of New Orleans, containing twenty-five arpents and five inches in front, with a depth extending as far as lake Washa. This claim is founded on a complete French title, which was duly submitted to the former Board of Commissioners of this district, and found

partly reported by them among the confirmed claims; but not having been definitely acted upon by said Board, the claimant has re-entered his claim which, we have no doubt, ought to be confirmed to him (Vol. 3:255).

Section 6: No. 552--Baltazar Dussuau [or Dussuan] claims a tract of land, situate in the county of German Coast, on the right bank of the Mississippi, having thirty-nine arpents and twenty-six toises front, and a depth of forty arpents, bounded on the one side by lands of Francis Delile Dupare, and on the other by those of Alexander Harang. The claimant proves possession and cultivation of this land ever since the year 1774 (Vol. 3:261).

APPENDIX III

SITE FORMS

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Luling 87-6 **STATE SURVEY NO:** 16 JE 141

OTHER SITE DESIGNATION:

SITE LOCATION AND APPROACH: Travel West 1/4 miles from South Kenner Avenue along LA 18, follow an azimuth of 26° to the Mississippi River approximately 80 m. The site is located directly across LA 18 from the American Cyanamid Company.

PARISH: Jefferson

USGS QUADS. 15 MIN: Hahnville, LA 15' 1969 **7.5 MIN:** Luling, LA 7.5'1967 Photorevised 1972 & 1979

GEOGRAPHIC COORDINATES: Lat. 29°57'62"N
Lon. 90°16'46"W

UTM COORDINATES: Zone 15 E 764100 N 3317940

_____ **OF THE** _____ **OF THE NE 1/4 OF SECTION** 3, **TOWNSHIP** 13S, **RANGE** 22E

PHYSICAL SETTING

LANDFORM: Batture, natural levee

GEOMORPHIC PROCESSES: Erosion, alluviation, point bar

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on Westbank of the Mississippi River

SOIL CHARACTERISTICS: Commerce silt loam

FLORAL COMMUNITIES: Willow and Sycamore overstory, tall weedsand, poison ivy

FAUNAL COMMUNITIES: Small mammals, reptiles, amphibians, insects, arachnids

NEAREST KNOWN SITE: 16 JE 141, located directly across road LA 18 on Luling 87-6's south side

SITE DESCRIPTION

SITE SIZE: 20 m N-S by 80 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Heavy, prehistoric ceramics are distributed across the entire site area. The distribution of historic artifacts does not appear to be as concentrated across the surface of the site.

DEPTH OF DEPOSIT/STRATIGRAPHY: From the surface to a depth of 40 cm below.

FEATURES: None

DATING/CULTURAL AFFILIATION: Late prehistoric/contact ceramics and historic material

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion

PRESENT USE: Barge mooring area with rock retainer wall

PRESENT AND FUTURE IMPACTS: Site will be destroyed by levee enlargement activities

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests, (4) auger tests, (1) x-y-z tie in, (2) 1 x 1 test excavation units.

DESCRIPTION OF MATERIAL: Historic sherds and gunflints, prehistoric materials Addis Plain, Baytown Plain, Mississippi Plain, Fatherland Incised.

SITE EVALUATION

RESEARCH POTENTIAL: Presence of prehistoric material and associated French contact historic materials provide an opportunity for securing temporal information and activity related data concerning historic contact in the lower valley.

STATE OR NATIONAL ELIGIBILITY: Not eligible.

RECOMMENDATIONS: Further testing on the southern end of the site to permit a detailed delineation of its southern boundary.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: Mr. John Polk
222 River Oaks Drive
Luling, LA 70070
504-785-2281

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

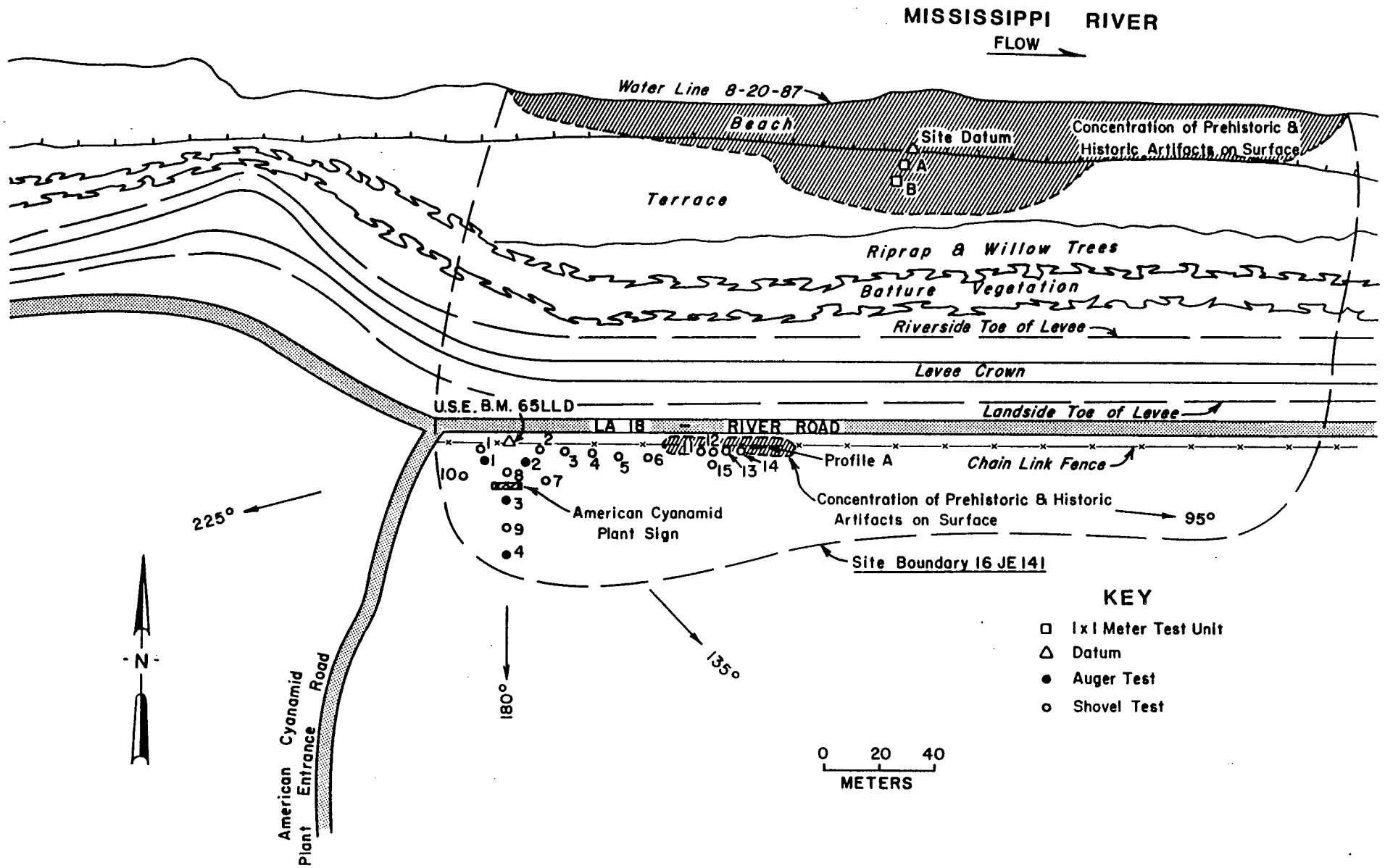
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

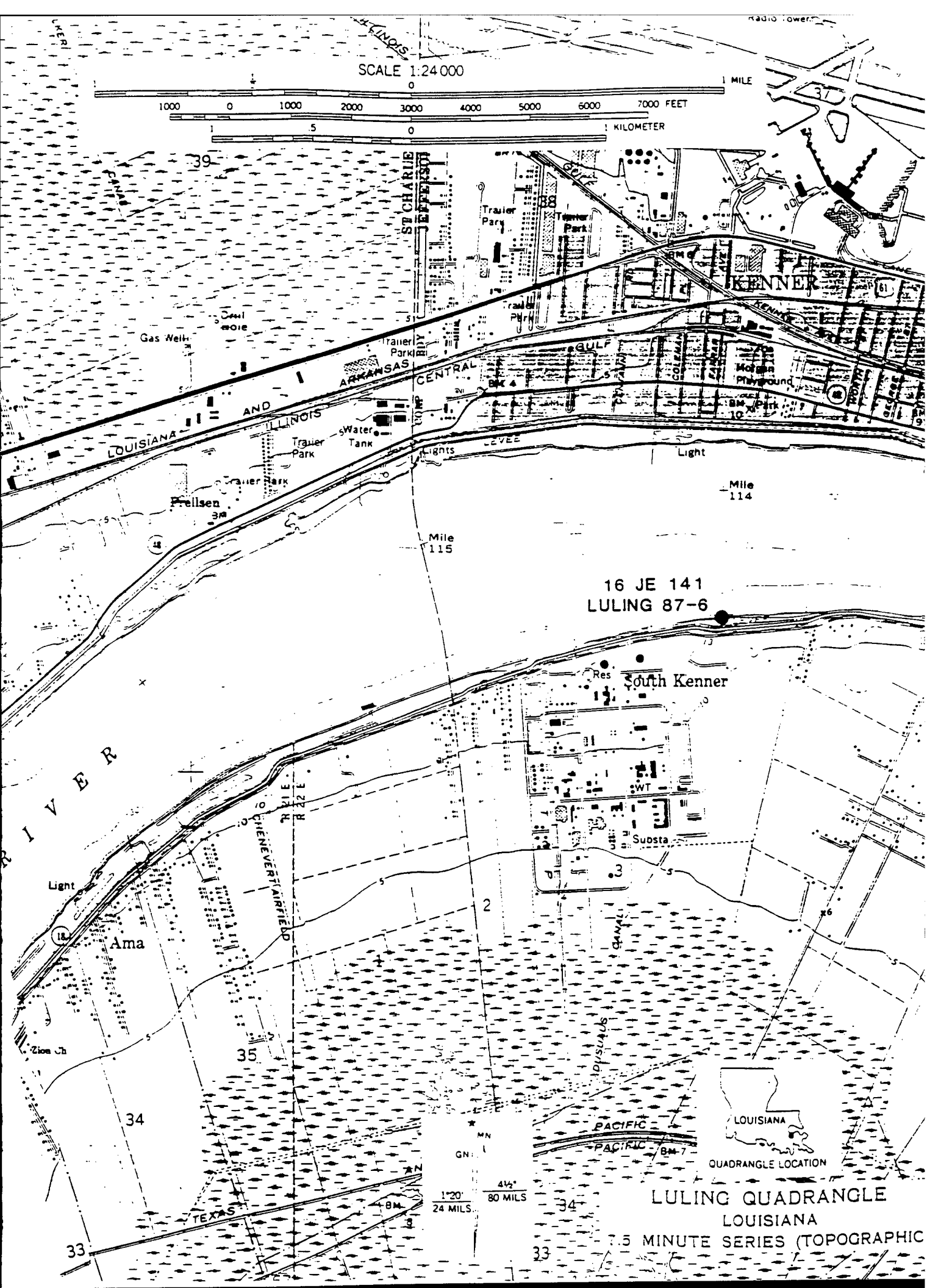
DATE: November 1, 1987

ADDITIONAL REMARKS

Material (prehistoric and historic) collected by Mr. John Polk was delivered to the State Archaeologist in October of 1987. A site update form was prepared for the Orange Grove Plantation Site (16 JE 141) by Joan Exnicios. Luling 87-6 appears to be a continuation of site 16 JE 141 across the levee and up to the river's edge.

LULING 87-6
16 JE 141
SITE PLAN




SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
KENNER
Trailer Park
Gas Well
Oil Hole
ARKANSAS
LOUISIANA AND
ILLINOIS
CENTRAL
GULF
Water Tank
Lights
LEVEE
Light
Mile 114
Mile 115
Prellsen
16 JE 141
LULING 87-6
South Kenner
Res
WT
Supsta
Ama
Light
CHENEVERT AIRFIELD
RANGE
CANAL
PACIFIC
LOUISIANA
QUADRANGLE LOCATION
TEXAS
BM
MN
GN
1°20'
24 MILS
4½°
80 MILS
LULING QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Waterford 87-2 **STATE SURVEY NO.:**

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the JCT of LA 18 and Highway 3160 at Hahnville, LA, proceed north on LA 18 for .6 mile. Turn right (east) onto levee road. Stop at the southwest corner of the base of the shell (borrow) mound. The site lies 50 m to the west (azimuth 120°).

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA, 1969 **7.5 MIN:** Hahnville, LA, 1967

GEOGRAPHIC COORDINATES: Lat. 29°58'50" N Lon. 90°24'10" W

UTM COORDINATES: Zone 15 E 750600 N 3319250

_____ **OF THE** ____ **OF THE NE 1/4 OF SECTION 26, TOWNSHIP 13S, RANGE 20E**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Waterford 87-3, 300 m to the northwest (azimuth 325°)

SITE DESCRIPTION

SITE SIZE: 150 m N-S by 250 m E-W

CONFIGURATION: Elliptical

DENSITY OF CULTURAL MATERIALS: Dense concentration of shipyard machinery and concrete building pads

DEPTH OF DEPOSIT/STRATIGRAPHY: Surface deposits

FEATURES: Waves and associated gearing, 3 dry docks remain: post-1959 structures

DATING/CULTURAL AFFILIATION: Shipyard: post-1959

PRESENT CONDITION/PRESERVATION: Metal machinery and cement padding remain on the site

PRESENT USE: Cow and goat pasture

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. Shovel tests at 50 m intervals on 6 transects 20 m apart.

DESCRIPTION OF MATERIAL: No material collected

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation,
and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

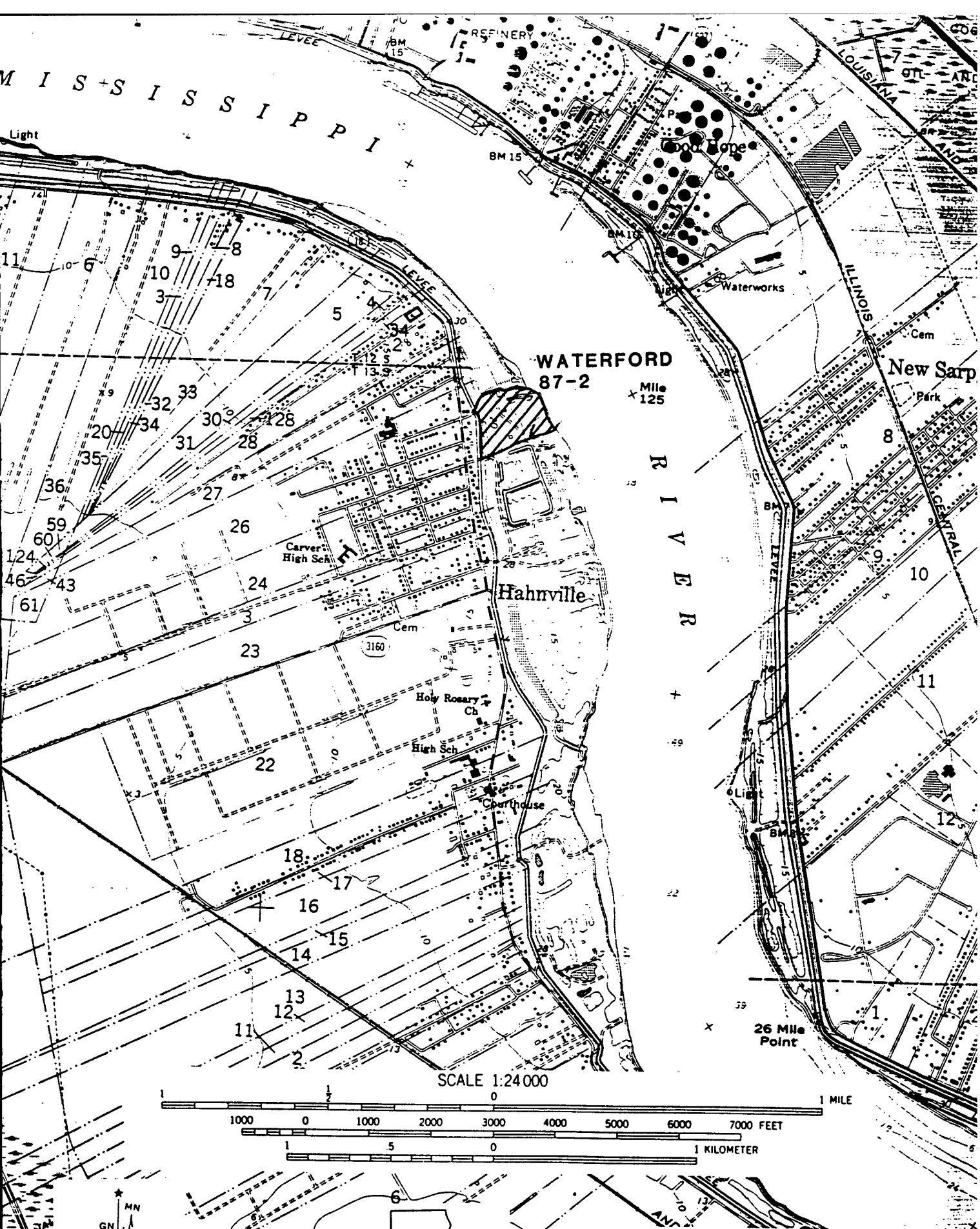
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist and St. Charles Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

This modern (post-1959) shipyard designated as Waterford 87-2 did not warrant a site plan.

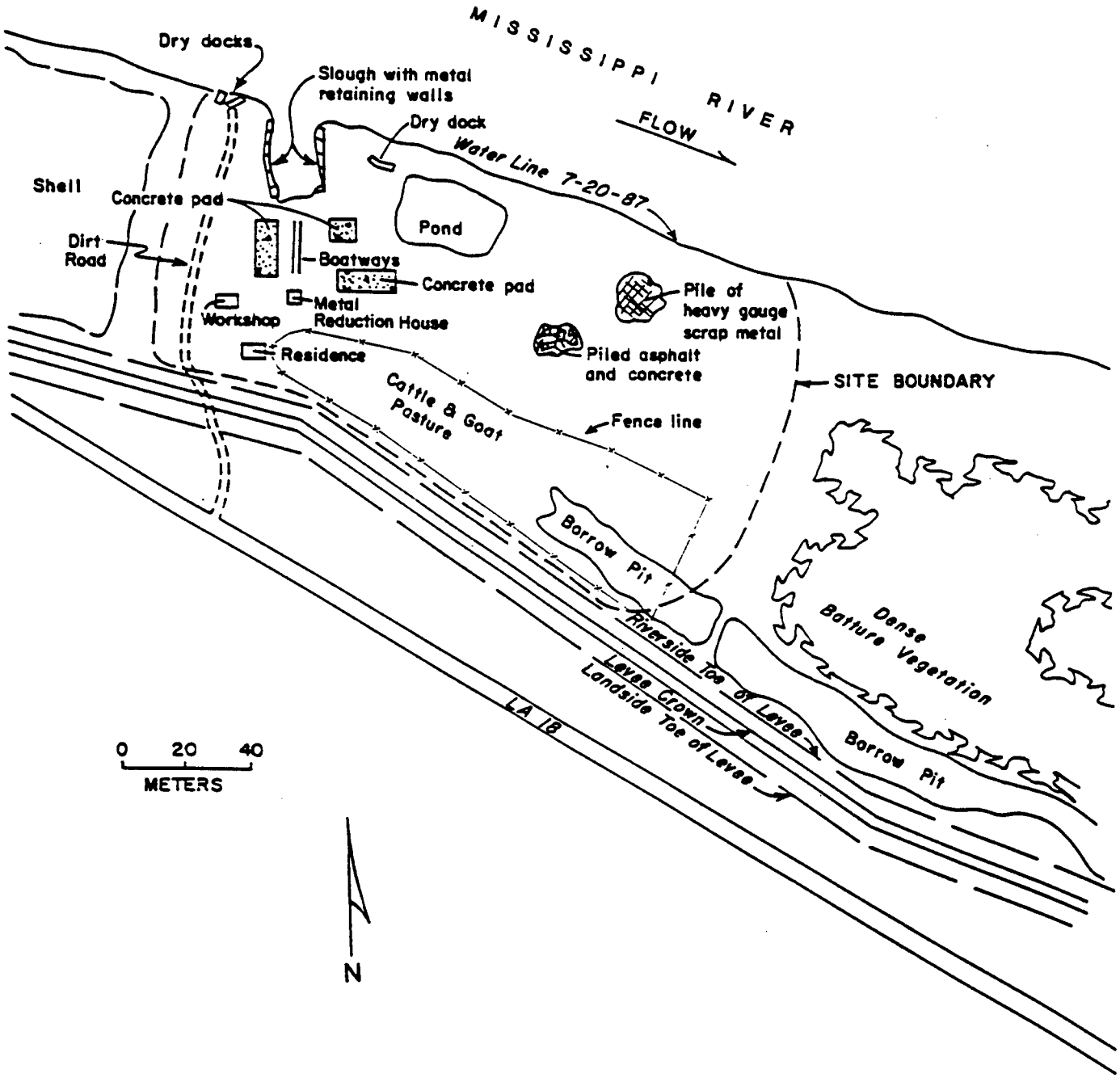


HAHNVILLE QUADRANGLE

LOUISIANA-ST. CHARLES PARISH

7.5 MINUTE SERIES (TOPOGRAPHIC)

WATERFORD 87-2
SITE PLAN



SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Waterford 87-1 **STATE SURVEY NO.:** 16 SC 55

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the JCT of LA 18 and Highway 3160 at Hahnville, LA, proceed north on LA 18 for .6 mile. Turn right (east) on to levee road. Proceed northwest for .7 mile. The site lies 75 m (azimuth 360°) from top of levee road.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA, 1969 **7.5 MIN:** Hahnville, LA, 1967

GEOGRAPHIC COORDINATES: Lat. 29°59'30" N Lon. 90°25'05" W

UTM COORDINATES: Zone 15 E 749100 N 3320310

_____ **OF THE** ____ **OF THE** ____ **OF SECTION**(S) 3, 7, 8, 9, 10, 18 **TOWNSHIP** 12S, **RANGE** 20E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on the batture of the west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Waterford 87-6, 300 m to the southeast (azimuth 112°)

SITE DESCRIPTION

SITE SIZE: 30 m N-S by 150 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Dense concentration of surface materials along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: From the surface to a depth of 40 cm below

FEATURES: None

DATING/CULTURAL AFFILIATION: Prehistoric & historic components

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests, (2) auger tests, and (1) 1 x 1 m excavation unit.

DESCRIPTION OF MATERIAL: (1) kaolin pipe bow "T-D"; (1) dark green bottle glass frag; (1) burnt white bodied ceramic; (1) school slate; (2) aqua bottle; (1) light green plate mold bottle; (1) ginger beer bottle fragment; (1) aqua glass fragment; (1) multilayered dipped, pressed multicolored glass; (2) dark green bottle bases (non-machine made); (6) prehistoric sherds.

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

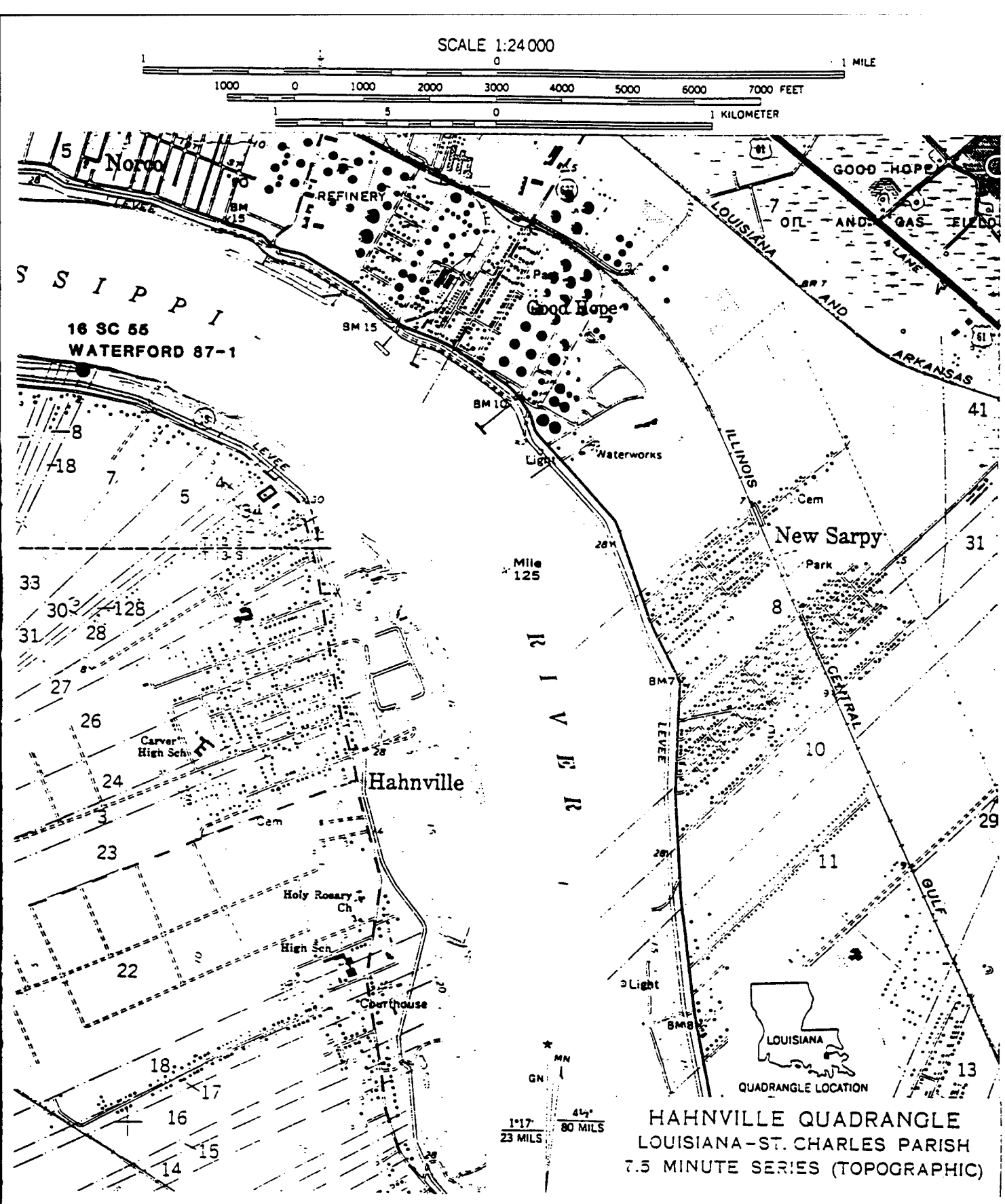
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist and St. Charles Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

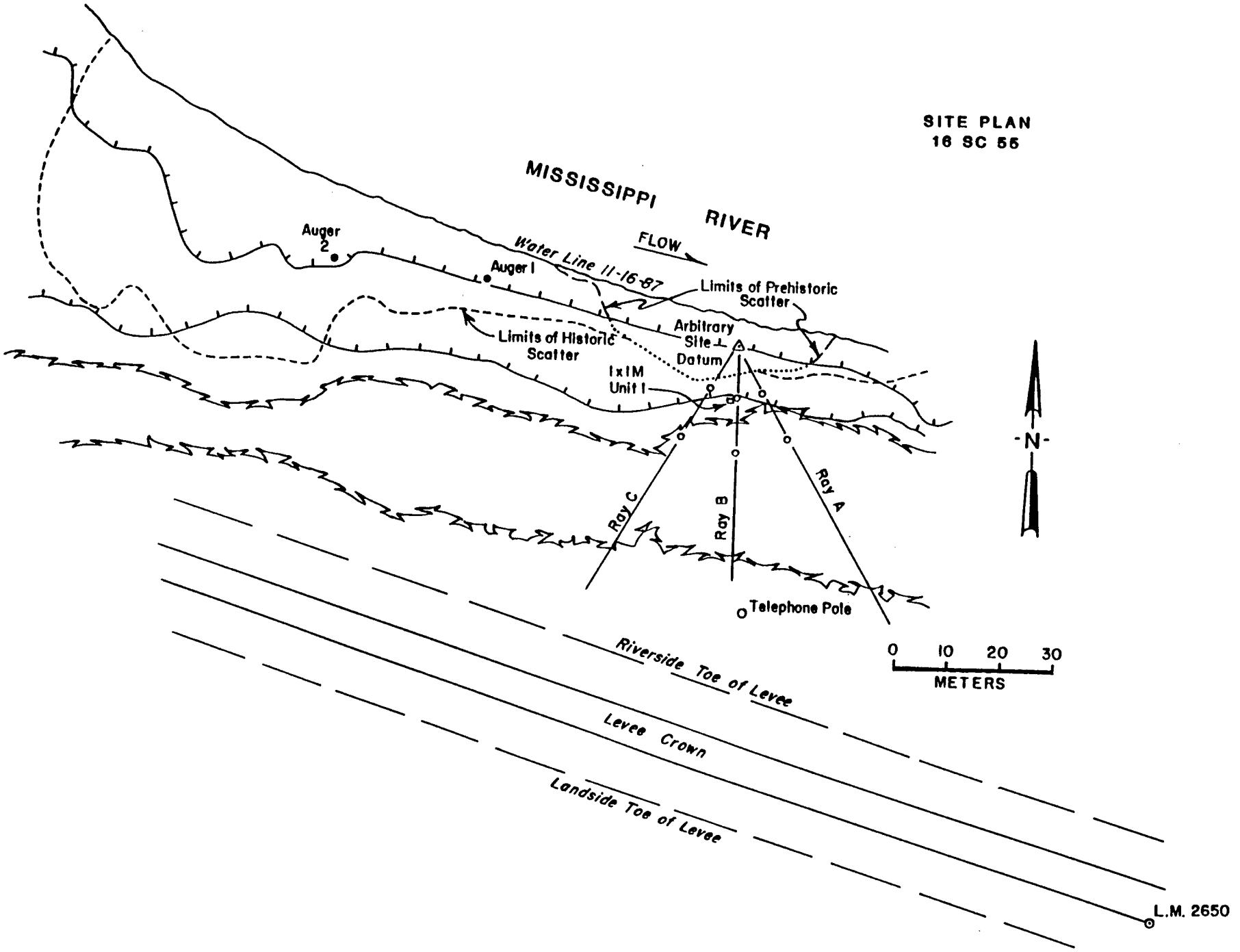
Artifacts collected from this site range in age from 1795 to the present. Erosion and redeposition may have contributed to the present distribution of artifacts in a linear pattern along the bankline.



HAHNVILLE QUADRANGLE

LOUISIANA–ST. CHARLES PARISH

7.5 MINUTE SERIES (TOPOGRAPHIC)


SITE PLAN
16 SC 55
MISSISSIPPI RIVER
FLOW
Auger 2
Auger 1
Water Line 11-16-87
Limits of Prehistoric Scatter
Limits of Historic Scatter
Arbitrary Site Datum
1x1M Unit 1
Ray C
Ray B
Ray A
Telephone Pole
N
0 10 20 30
METERS
Riverside Toe of Levee
Levee Crown
Landside Toe of Levee
L.M. 2650

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Waterford 87-6 **STATE SURVEY NO.:** 16 SC 56

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the JCT of LA 18 and Highway 3160 at Hahnville, LA, proceed north on LA 18 for .6 mile. Turn right (east) onto levee road. Travel northwest for .4 mile. The site lies 50 m (azimuth 10°) from top of levee road, between the batture vegetation and edge of the Mississippi River

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA, 1969 **7.5 MIN:** Hahnville, LA, 1967

GEOGRAPHIC COORDINATES: Lat. 29°59'15" N Lon. 90°24'45" W

UTM COORDINATES: Zone 15 E 749700 N 3320100

____ **OF THE** ____ **OF THE NE 1/4 OF SECTION 33, TOWNSHIP 12S, RANGE 20E.**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on the batture of the west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Waterford 87-5, 50 m to the southeast (azimuth 125°)

SITE DESCRIPTION

SITE SIZE: 20 m N-S by 25 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Sparse concentration of cultural materials along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: From the surface to a depth of 40 cm below

FEATURES: None

DATING/CULTURAL AFFILIATION: Prehistoric and historic components

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings & associated cables

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests, (2) auger tests, and (1) bluff edge stratigraphic profile.

DESCRIPTION OF MATERIAL: slate roofing tile; prehistoric sherd; lead shot .65 cal; center fire .35 cal; buff bodied earthenware; whiteware; pearlware; ironstone; redware; tobacco pipe; machine cut nail; machine made bottle glass.

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

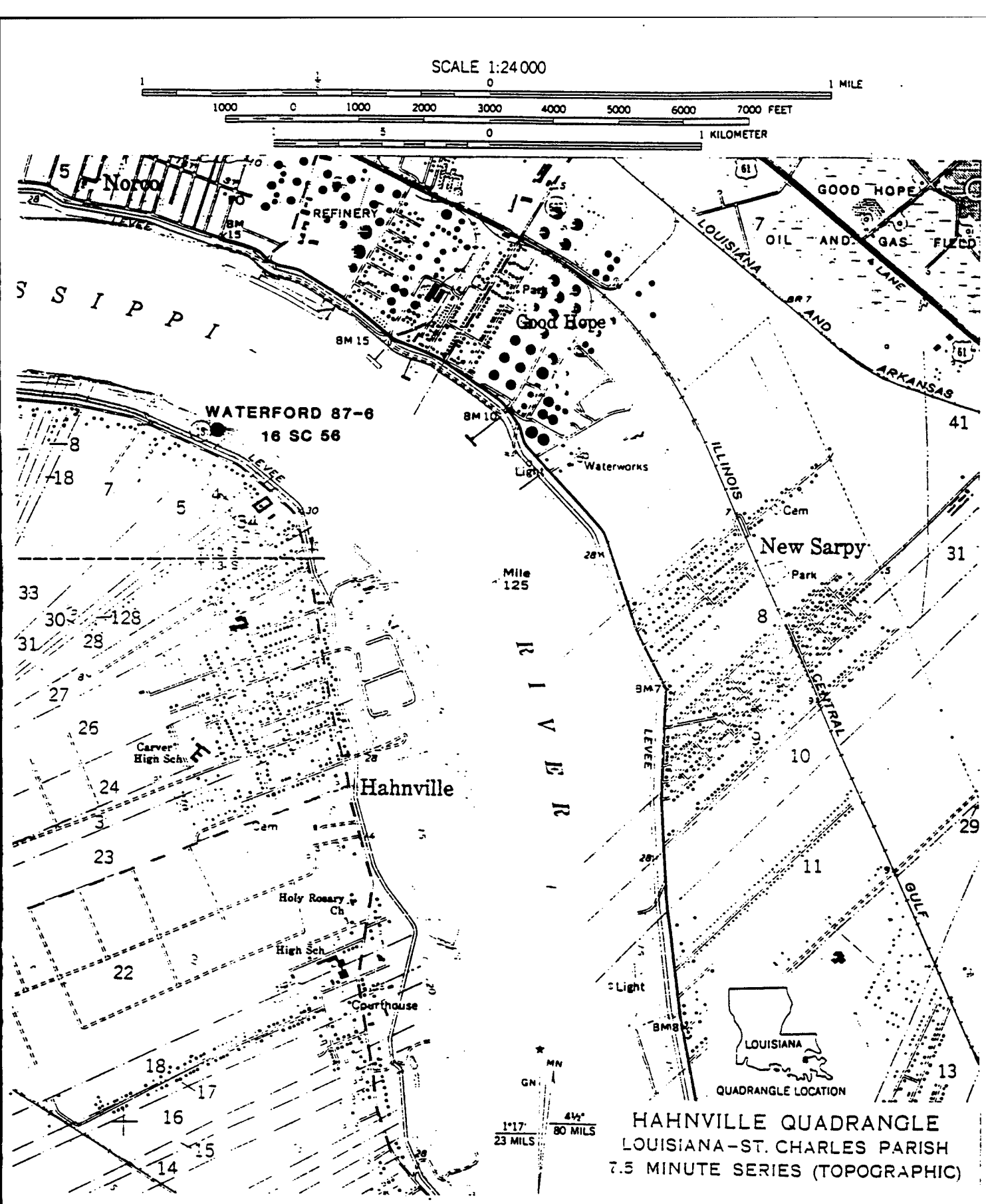
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George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

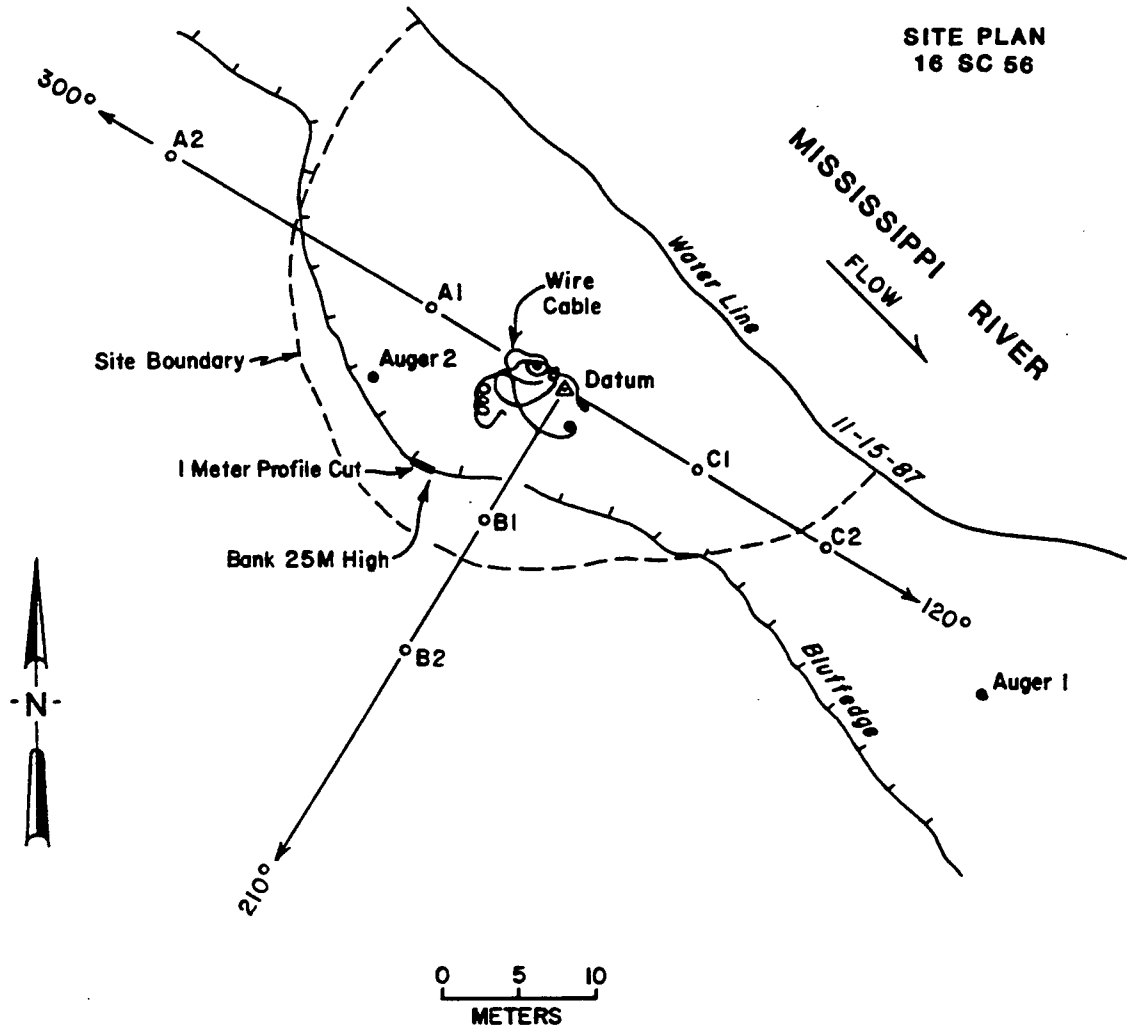
Artifacts collected from this site may range in age from 1795 to 1900.

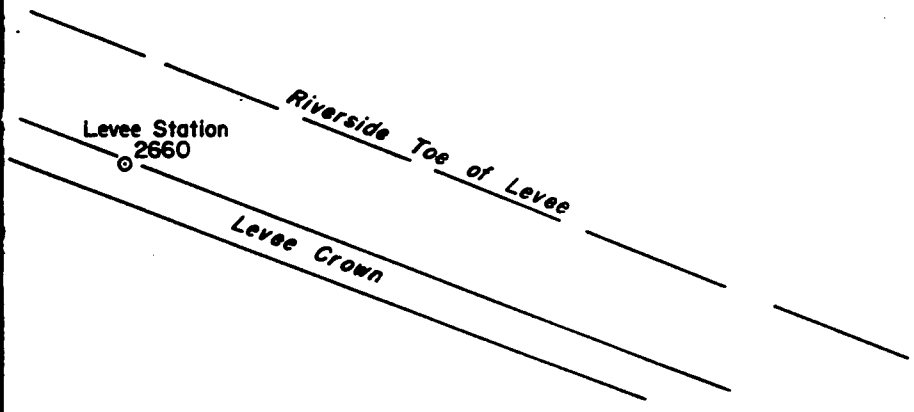


HAHNVILLE QUADRANGLE

LOUISIANA–ST. CHARLES PARISH

7.5 MINUTE SERIES (TOPOGRAPHIC)


SITE PLAN
16 SC 56
300°
A2
A1
Wire
Cable
Site Boundary
Auger 2
Datum
MISSISSIPPI RIVER
FLOW
Water Line
11-15-87
1 Meter Profile Cut
C1
B1
C2
Bank 25M High
120°
B2
Auger 1
Bluffedge
N
210°
0 5 10
METERS


Riverside Toe of Levee
Levee Station
2660
Levee Crown

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Waterford 87-3 **STATE SURVEY NO.:** 16 SC 57

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the JCT of LA 18 and Highway 3160 at Hahnville, LA, proceed north on LA 18 for .6 mile. Turn right (east) onto levee road. Stop at the southwest corner of the base of the shell (borrow) mound. The site lies 100 m to the northwest (azimuth 352°) between the batture vegetation and the edge of the Mississippi River.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA, 1969 **7.5 MIN:** Hahnville, LA, 1967

GEOGRAPHIC COORDINATES: Lat. 29°59'05" N Lon. 90°24'30" W

UTM COORDINATES: Zone 15 E 750100 N 3319800

_____ **OF THE** ____ **OF THE NW 1/4 OF SECTION 46, TOWNSHIP 12S, RANGE 20E**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Waterford 87-4, 50 m to the northwest (azimuth 305°)

SITE DESCRIPTION

SITE SIZE: 20 m N-S by 40 m E-W

CONFIGURATION: Irregular

DENSITY OF CULTURAL MATERIALS: Dense surface scatter along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: From the surface to a depth of 40 cm below

FEATURES: None

DATING/CULTURAL AFFILIATION: Historic (mid 19th to late 20th century)

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings & associated cables, and erosion.

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests, (2) auger tests.

DESCRIPTION OF MATERIAL: Historic sherds, bottle glass, and associated metal fragments

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation,
and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
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REFERENCES:

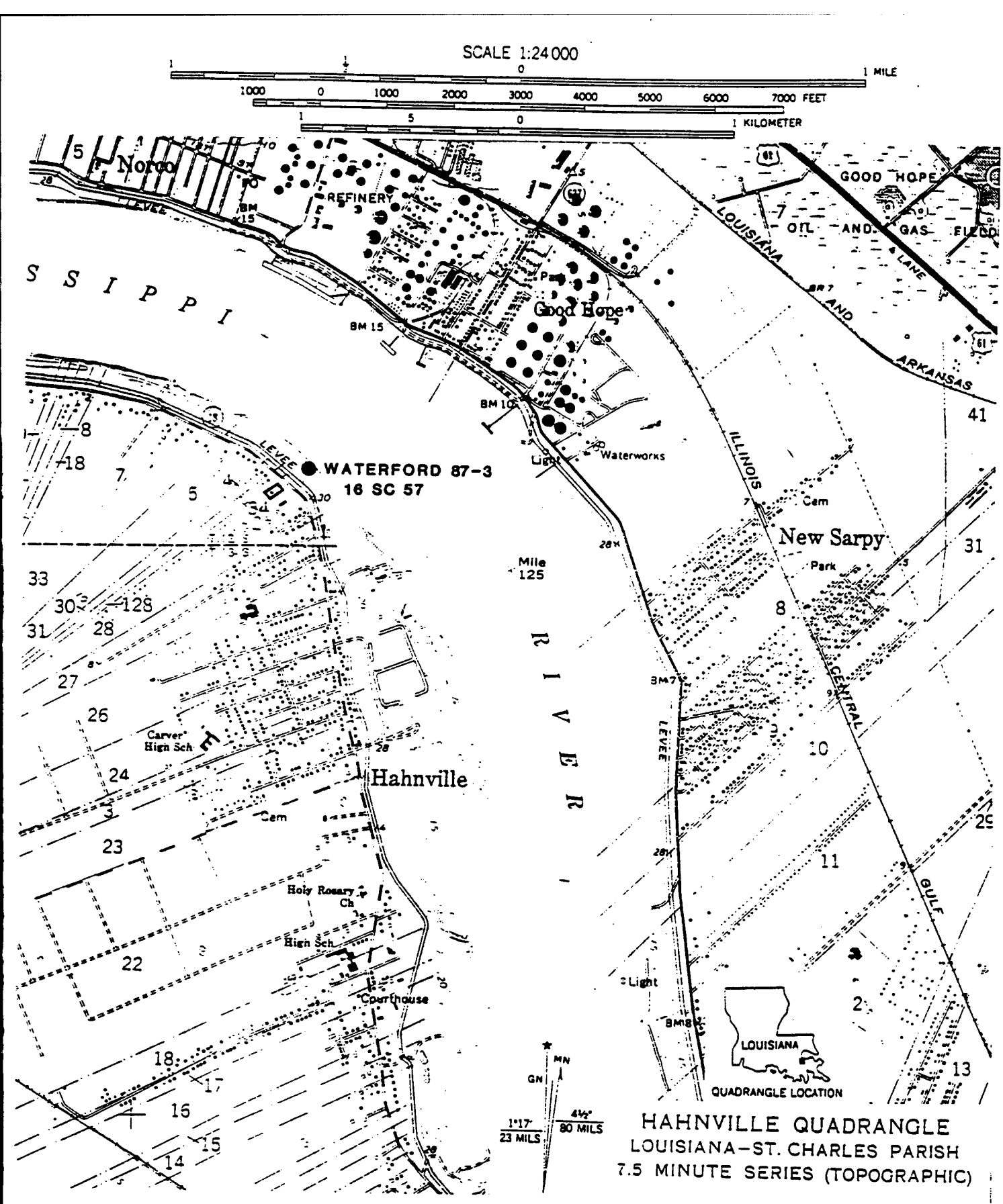
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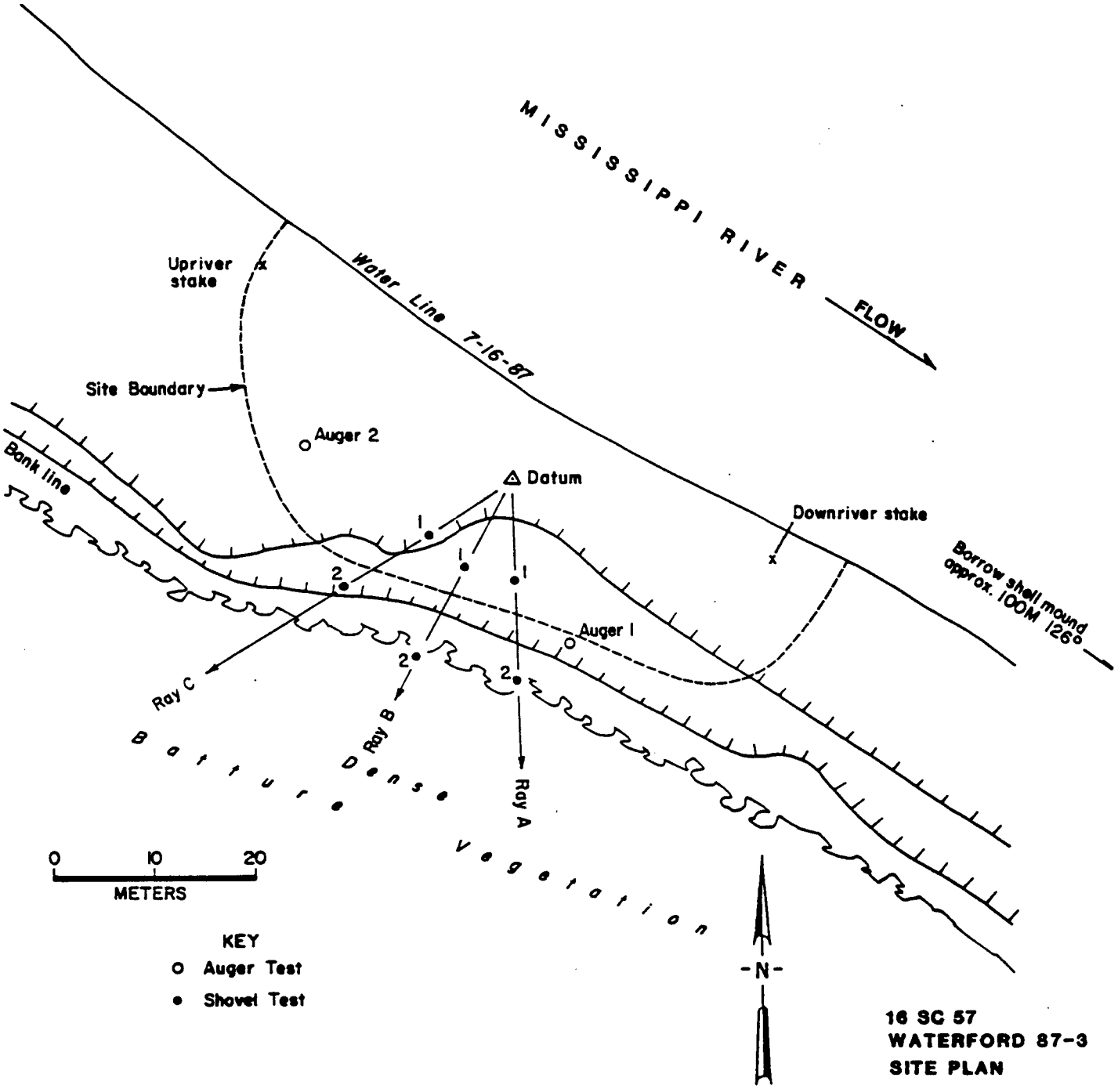
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site.


SCALE 1:24000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
Norco
REFINERY
LEVEE
BM 15
Good Hope
GOOD HOPE
OIL AND GAS FIELD
LOUISIANA
ARKANSAS
LANE
BM 10
Waterworks
Light
WATERFORD 87-3
16 SC 57
ILLINOIS
Cem
New Sarpy
Park
Mile 125
RIVER
CENTRAL
BM 7
Carver High Sch
Hahnville
Holy Rosary Ch
High Sch
Courthouse
GULF
Light
BM 8
LOUISIANA
QUADRANGLE LOCATION
MN
GN
1°17'
23 MILS
4½°
80 MILS
HAHNVILLE QUADRANGLE
LOUISIANA–ST. CHARLES PARISH
7.5 MINUTE SERIES (TOPOGRAPHIC)


MISSISSIPPI RIVER
FLOW
Upriver stake
Water Line 7-16-87
Site Boundary
Auger 2
Bank line
Datum
Downriver stake
Borrow shell mound approx. 100M 126°
Auger 1
Ray C
Ray B
Ray A
Borrow Dense Vegetation
0 10 20
METERS
KEY
Auger Test
Shovel Test
-N-
16 SC 57
WATERFORD 87-3
SITE PLAN

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Waterford 87-4 **STATE SURVEY NO.:** 16 SC 58

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the JCT of LA 18 and Highway 3160 at Hahnville, LA, proceed north on LA 18 for .6 mile. Turn right (east) onto levee road. Stop at the southwest corner of the base of the shell (borrow) mound. The site lies 150 m to the northwest (azimuth 343°) between the batture vegetation and the edge of the Mississippi River.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA, 1969 **7.5 MIN:** Hahnville, LA, 1967

GEOGRAPHIC COORDINATES: Lat. 29°59'10" N Lon. 90°24'35" W

UTM COORDINATES: Zone 15 E 749920 N 3319950

____ OF THE ____ OF THE NE 1/4 OF SECTION 4, TOWNSHIP 12S, RANGE 8E & ____ OF THE ____ OF THE NE 1/4 OF SECTION 5, TOWNSHIP 12S, RANGE 20E.

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Waterford 87-5, 50 m to the northwest (azimuth 305°)

SITE DESCRIPTION

SITE SIZE: 25 m N-S by 50 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Dense concentration of modern trash intermixed with sparse concentration of historic cultural materials

DEPTH OF DEPOSIT/STRATIGRAPHY: From the surface to a depth of 40 cm below

FEATURES: Feature 1 (privy)

DATING/CULTURAL AFFILIATION: Historic (mid 19th to late 20th century)

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings & associated cables

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests and (2) auger tests.

DESCRIPTION OF MATERIAL: Historic bottle glass and ceramics

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation,
and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

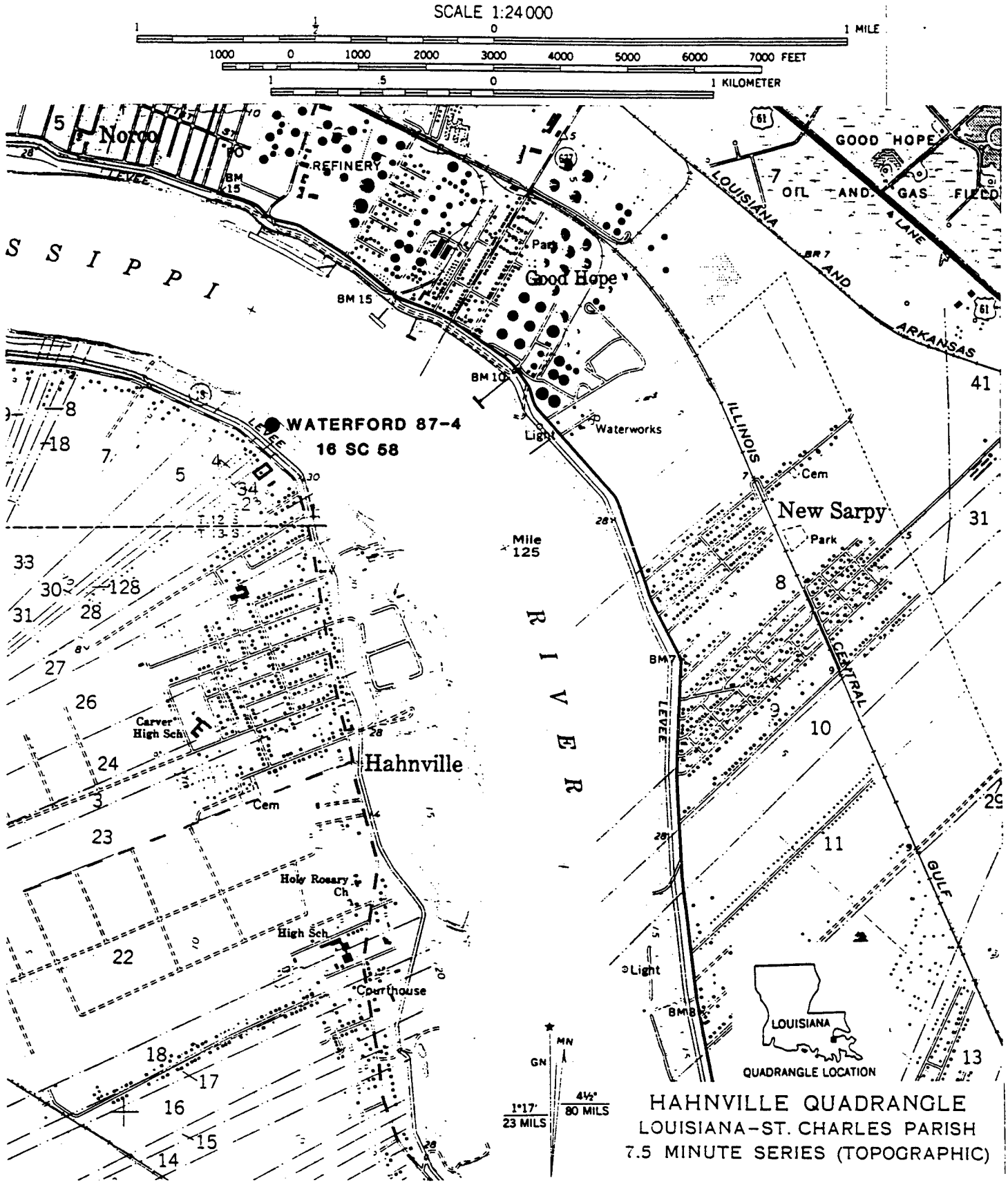
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist and St. Charles Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site.

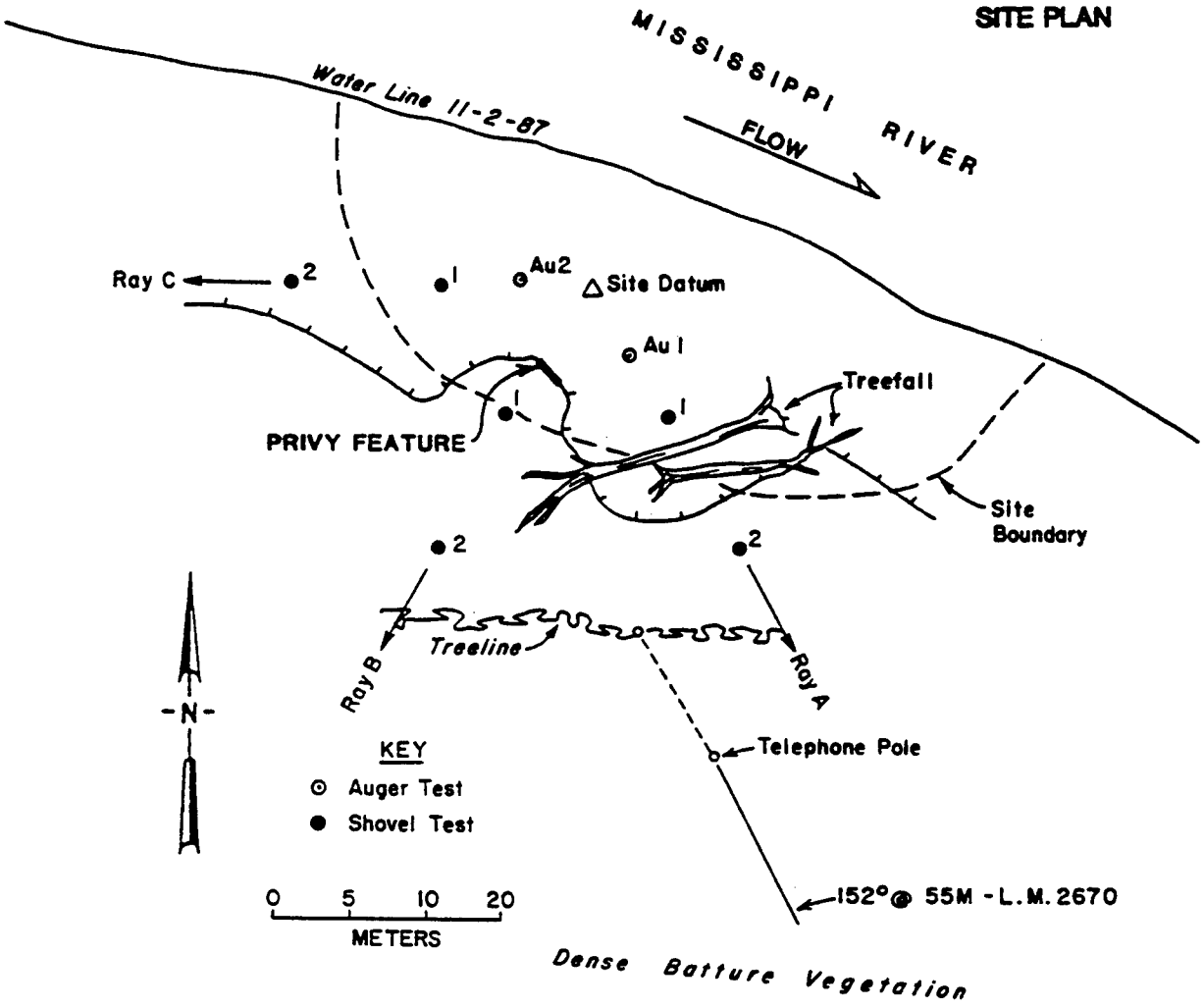


HAHNVILLE QUADRANGLE

LOUISIANA–ST. CHARLES PARISH

7.5 MINUTE SERIES (TOPOGRAPHIC)

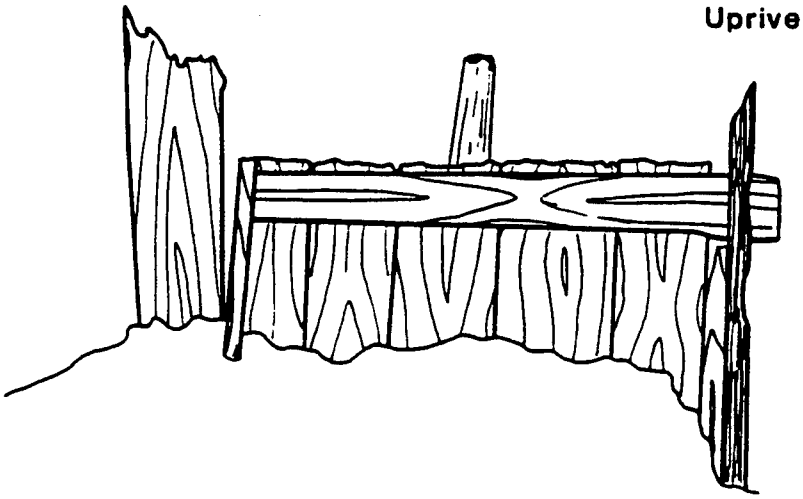
16 SC 58
SITE PLAN



16 SC 58
FEATURE 1

Downriver

Upriver



ROUGH SKETCH OF PRIVY WALL PROFILE

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Waterford 87-5 **STATE SURVEY NO.:** 16 SC 59

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the JCT of LA 18 and Highway 3160 at Hahnville, LA, proceed north on LA 18 for .6 mile. Turn right (east) onto levee road. Stop at the southwest corner of the base of the shell (borrow) mound. The site lies 200 m to the northwest (azimuth 340°) between the batture vegetation and the edge of the Mississippi River.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA, 1969 **7.5 MIN:** Hahnville, LA, 1967

GEOGRAPHIC COORDINATES: Lat. 29°59'10" N Lon. 90°24'40" W

UTM COORDINATES: Zone 15 E 749840 N 3320050

____ **OF THE** ____ **OF THE NW 1/4 OF SECTION 5, TOWNSHIP 12S, RANGE 20E.**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Waterford 87-4, 50 m to the southeast (azimuth 125°)

SITE DESCRIPTION

SITE SIZE: 20 m N-S by 50 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Sparse concentration of surface material along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: From the surface to a depth of 40 cm below

FEATURES: Feature 1 (privy)

DATING/CULTURAL AFFILIATION: Historic (mid 19th to late 20th century)

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion.

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests, and (2) auger tests.

DESCRIPTION OF MATERIAL: Historic bottle glass, and ceramics

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation,
and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

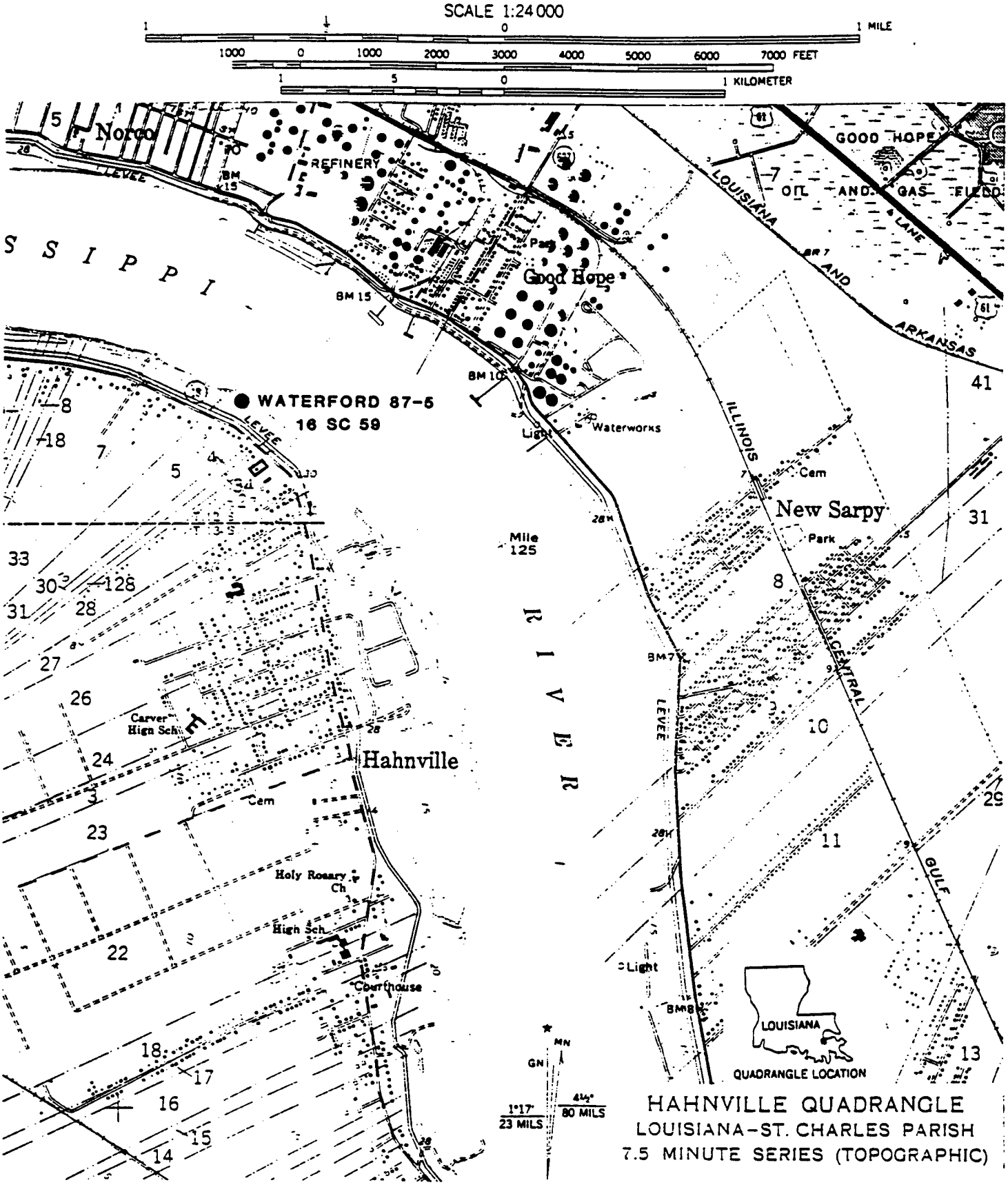
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist and St. Charles Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

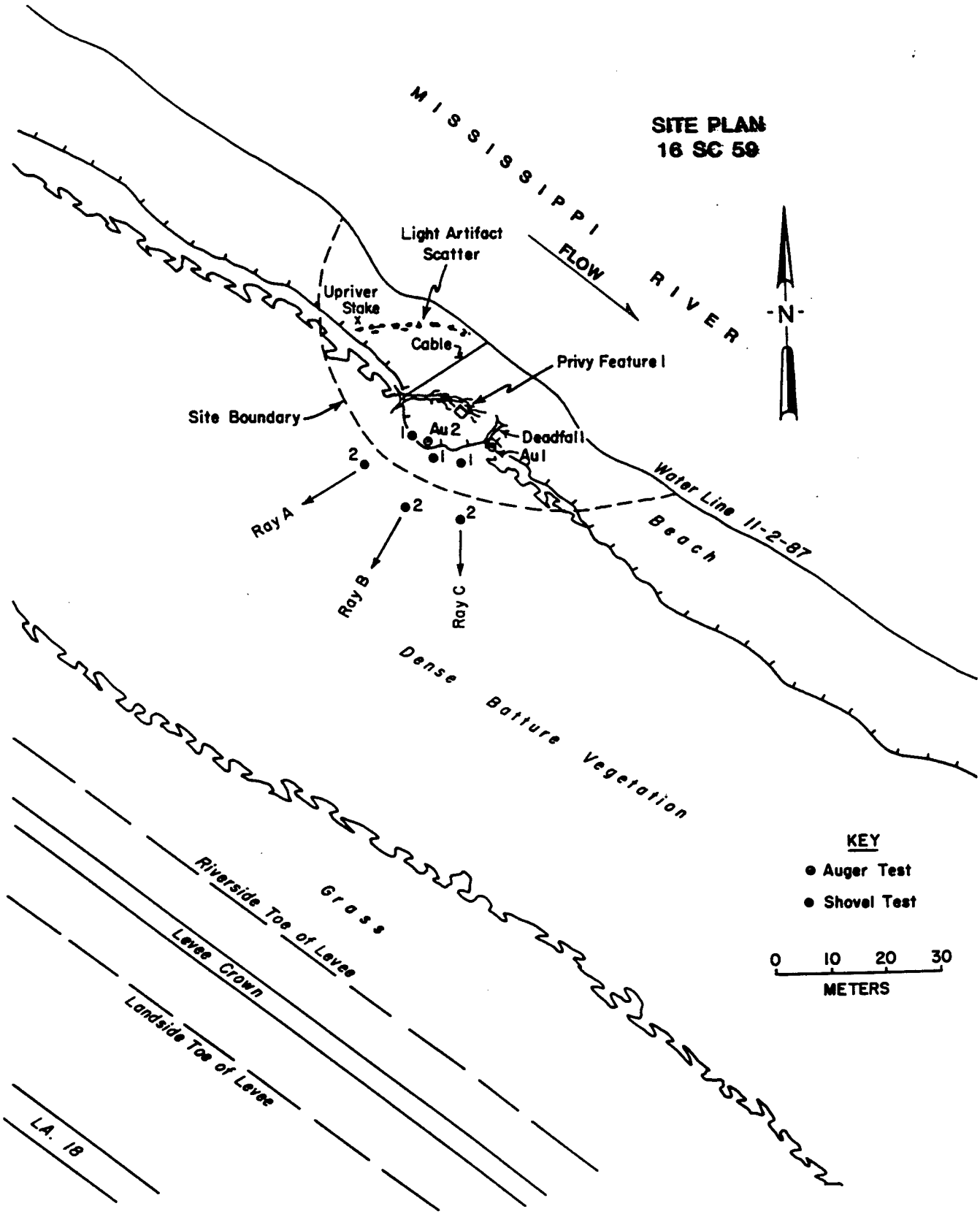
This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site.



HAHNVILLE QUADRANGLE

LOUISIANA–ST. CHARLES PARISH

7.5 MINUTE SERIES (TOPOGRAPHIC)


SITE PLAN
16 SC 59
MISSISSIPPI RIVER
FLOW
N
Light Artifact Scatter
Upriver Stake
Cable
Privy Feature I
Site Boundary
Au 2
Deadfall
Au I
Ray A
Ray B
Ray C
Water Line 11-2-87
Beach
Dense Batture Vegetation
Grass
Riverside Toe of Levee
Levee Crown
Landside Toe of Levee
LA. 18
KEY
Auger Test
Shovel Test
0 10 20 30
METERS

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Luling 87-1 **STATE SURVEY NO:** 16 SC 60

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: At Ama, Louisiana, proceed .6 miles NE from the intersection of LA 18 with Mt. Zion Church Road. Stop at navigation light at the landside toe of levee. Proceed on foot over levee crown and down to the riverside toe of levee. Site lies on the beach 250 meters to the North of the navigation light on the landside toe of the levee. (Note: Due to standing water in the borrow area, site may be reached by skirting the borrow to the Southwest.)

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA 15' **7.5 MIN:** Luling, LA 7.5' 1967 Photorevised 1972 & 1979

GEOGRAPHIC COORDINATES: Lat. 29°57'10"N
Lon. 90°17'50"W

UTM COORDINATES: Zone 15 E 7608599 E 3316480

_____ **OF THE** _____ **OF THE** NE 1/4 **OF SECTION** 34, **TOWNSHIP** 13S, **RANGE** 21E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Fluvial deposition and erosion

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on Westbank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, sands, loams, silts, clays

FLORAL COMMUNITIES: Willow and Sycamore overstory, tall weeds and poison ivy

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Luling 87-2 is located 300 meters from Luling 87-1. The azimuth from 87-1 to 87-2 is 223°.

SITE DESCRIPTION

SITE SIZE: 80 meters N-S by 40 meters E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: From surface to 40 cm below

FEATURES: None

DATING/CULTURAL AFFILIATION: Prehistoric and historic materials

PRESENT CONDITION/PRESERVATION: Poor

PRESENT USE: Fishing from bank, barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by levee enlargement activities

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests; (2) auger tests; (1) bluff edge profile; (1) 1 x 1 m excavation unit.

DESCRIPTION OF MATERIAL: (10) Datable historic sherds provide a mean ceramic date of 1840. Associated historic bottle glass found dating to the same period. Late prehistoric (Mississippian sherds) encountered

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

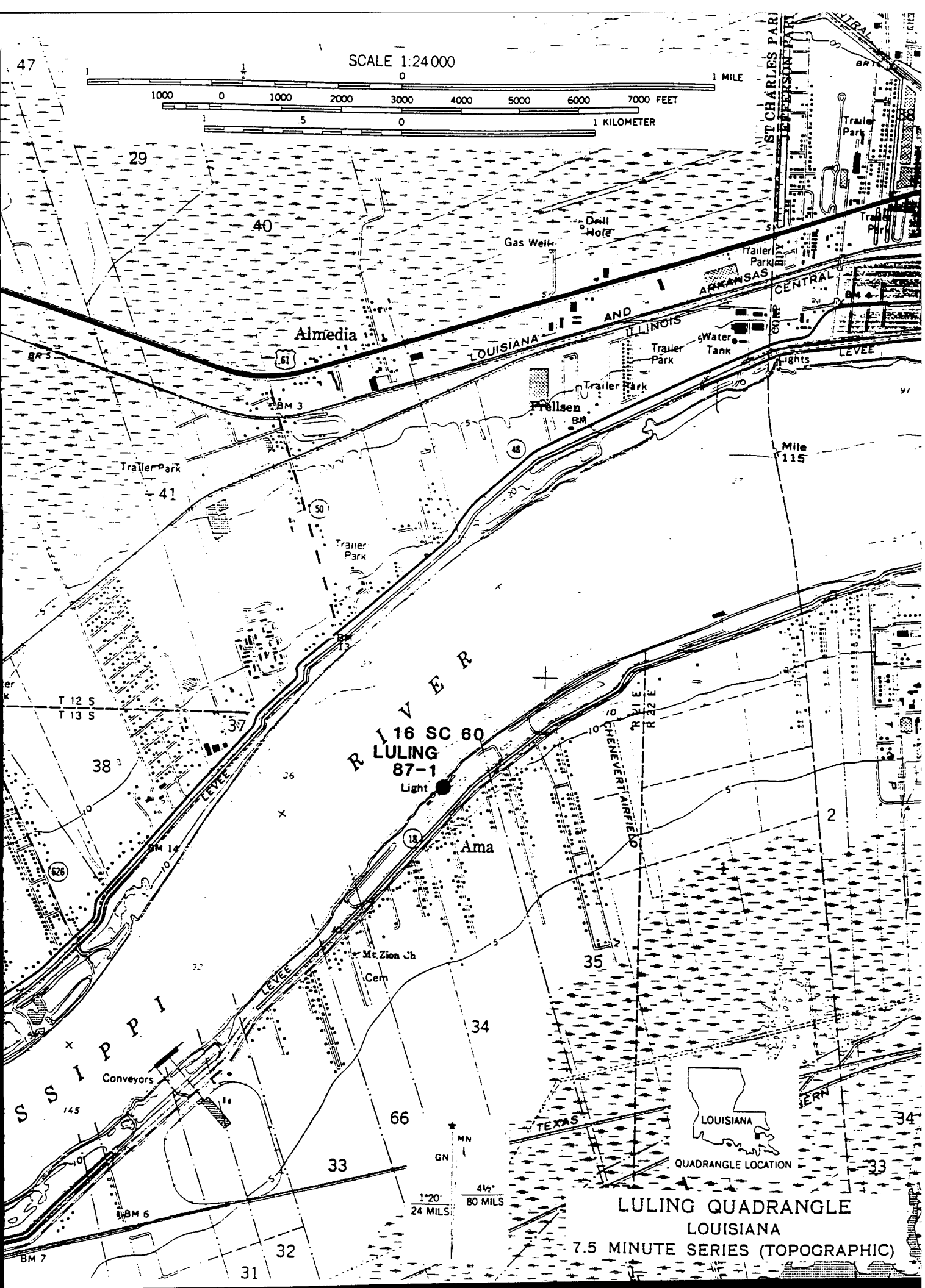
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

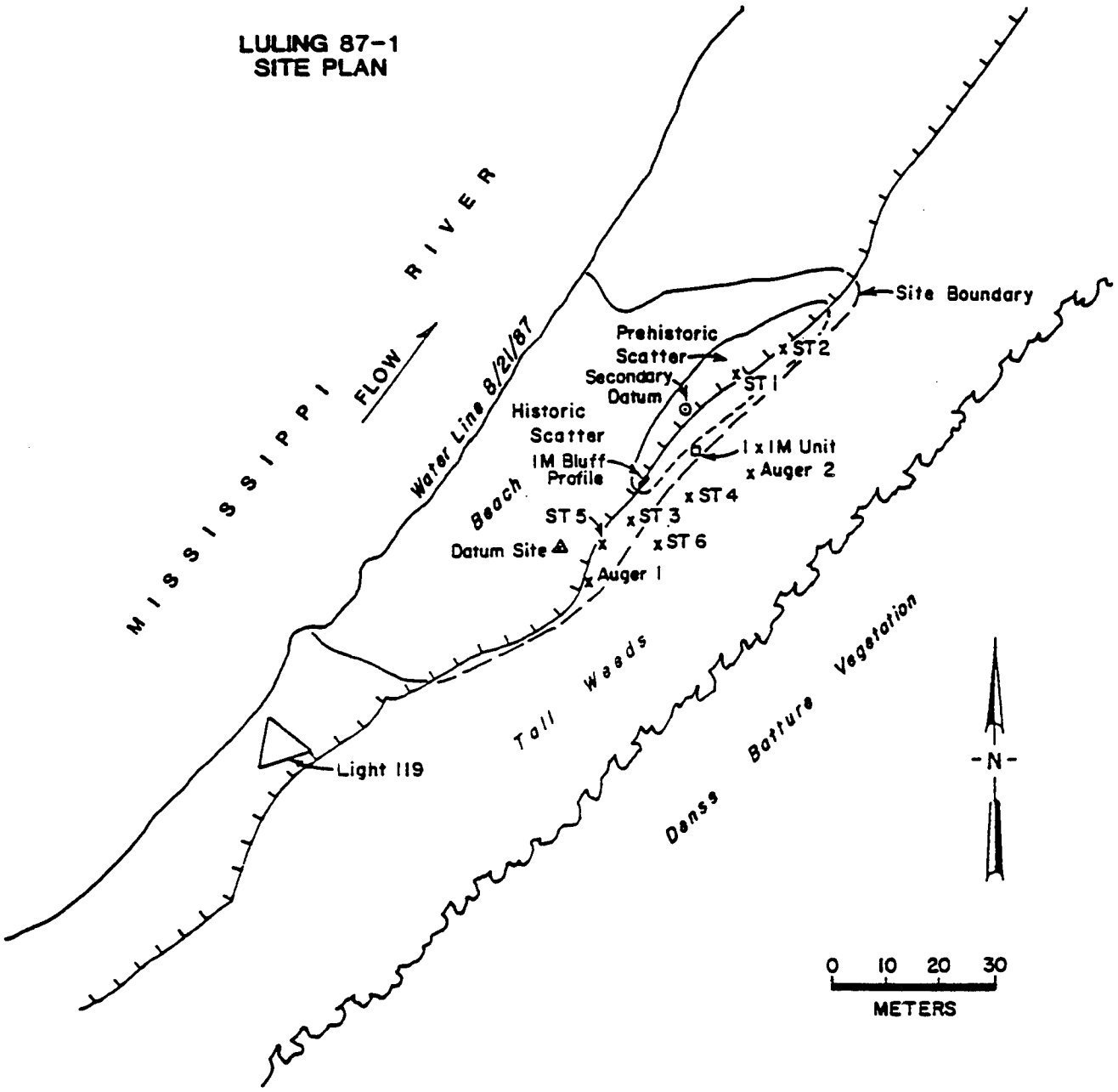
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site.


SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
ST CHARLES PARISH
JEFFERSON PARISH
Trailer Park
Drill Hole
Gas Well
ARKANSAS
CENTRAL
LOUISIANA AND ILLINOIS
Almedia
Water Tank
Lights
LEVEE
Prellsen
Mile 115
T 12 S
T 13 S
R 13 E
R 12 E
116 SC 60
LULING
87-1
Light
Ama
CHENEVERT AIRFIELD
Mt Zion Ch
Cem
MISSISSIPPI RIVER
Conveyors
TEXAS
LOUISIANA
QUADRANGLE LOCATION
LULING QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)


LULING 87-1
SITE PLAN
MISSISSIPPI RIVER
FLOW
Water Line 8/21/87
Site Boundary
Prehistoric
Scatter
Secondary
Datum
ST 2
ST 1
Historic
Scatter
IM Bluff
Profile
1 x 1M Unit
x Auger 2
Beach
ST 4
ST 5
ST 3
Datum Site
ST 6
Auger 1
Tall Weeds
Dense Batture Vegetation
Light 119
-N-
0 10 20 30
METERS

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Luling 87÷2 **STATE SURVEY NO:** 16 SC 61

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: At Ama, Louisiana, proceed .4 miles NE from the intersection of LA 18 with Mt. Zion Church Road. Stop .1 mile SW of navigation light on landside toe of levee. Proceed NW on foot over levee crown and down to the riverside toe of levee. Site is on beach 230 meters SW of navigation light.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA 15' **7.5 MIN:** Luling, LA 7.5'1967 Photorevised 1972 & 1979

GEOGRAPHIC COORDINATES: Lat. 29°57'8"N
Lon. 90°17'9"W

UTM COORDINATES: Zone 15 E 760745 N 3316520

_____ **OF THE** _____ **OF THE** NW 1/4 **OF SECTION** 34, **TOWNSHIP** 13S, **RANGE** 21E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Fluvial deposition and erosion

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on Westbank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, sands, loams, silts, clays
FLORAL COMMUNITIES: Willow and Sycamore overstory, tall weeds and poison ivy

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Luling 87÷1 is located 300 meters from Luling 87÷2. The azimuth from 87÷2 to 87÷1 is 137°.

SITE DESCRIPTION

SITE SIZE: 400 m N-S by 50 m E-W at widest point

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Heavy

DEPTH OF DEPOSIT/STRATIGRAPHY: On surface and to a depth of 140 cm below

FEATURES: 1 Large brick foundation, several surficial features marked by blow-outs along the bank face

DATING/CULTURAL AFFILIATION: Prehistoric and historic materials

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated labels, and erosion

PRESENT USE: Fishing from bank, barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by levee enlargement activities

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (12) Shovel tests, (12) auger tests, (6) probes, (1) bluff profile, 2 x-y-z coordinate tie-ins, (2) 1 x 2 m excavation units, (2) 1 x 1 m excavation units.

DESCRIPTION OF MATERIAL: Metal hardware, bone comb, ring, shoe hook, 1883 silver victory nickel, gun flints, cut nails, bricks, bottle glass, historic sherds with a mean ceramic date of 1843. Prehistoric component represented by Father-land Incised, var. Bayogoula, Mississippian Plain, and Marksville Incised, var. unspecified sherds.

SITE EVALUATION

RESEARCH POTENTIAL: Presence of the brick foundation and associated surficial features provide an opportunity for securing temporal information and activity related data concerning early plantation holdings on the Mississippi River.

STATE OR NATIONAL ELIGIBILITY: Potentially eligible

RECOMMENDATIONS: Further testing inside and outside of the brick foundation to permit its definition and to assess its significance.

RECORDS

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
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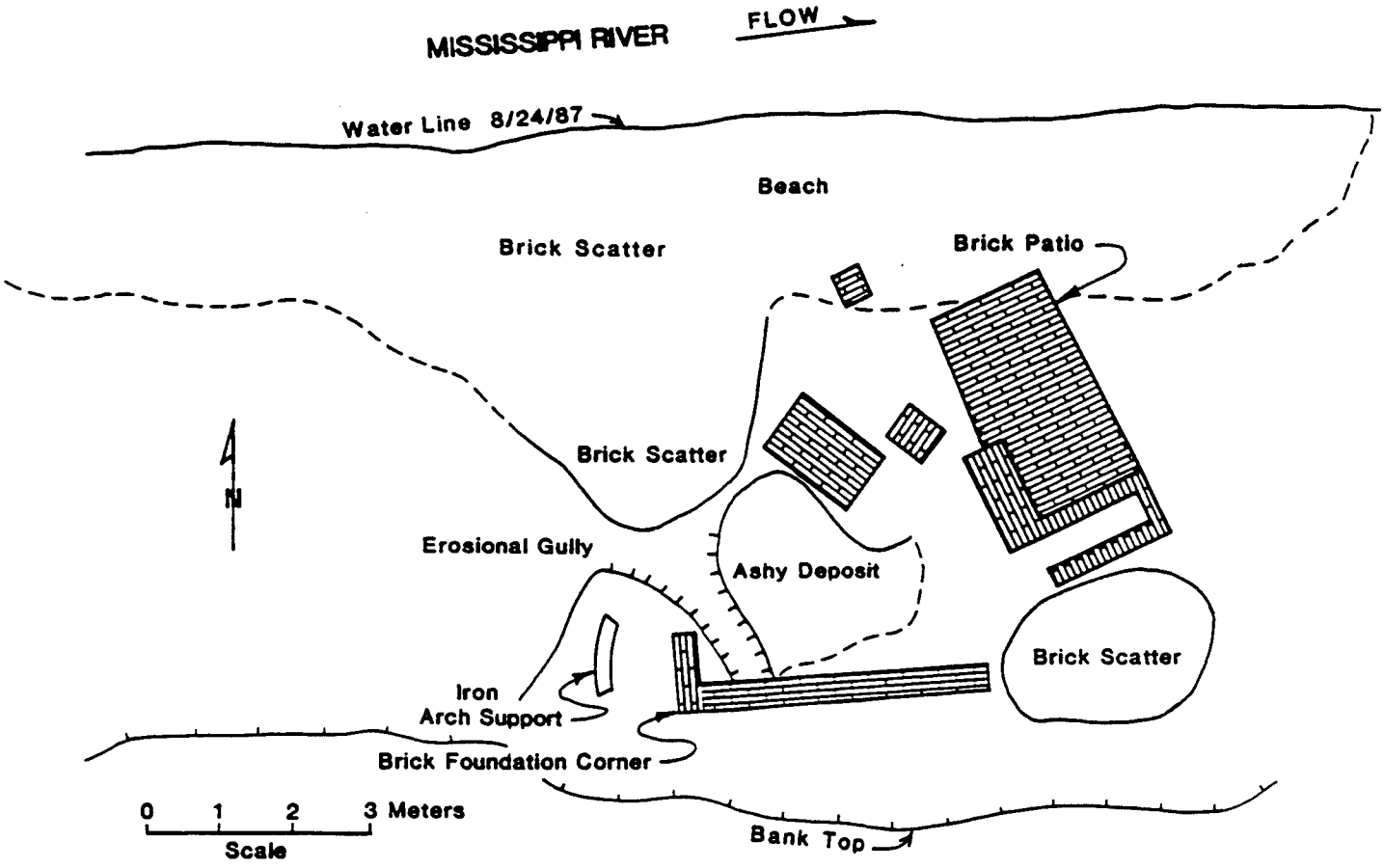
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

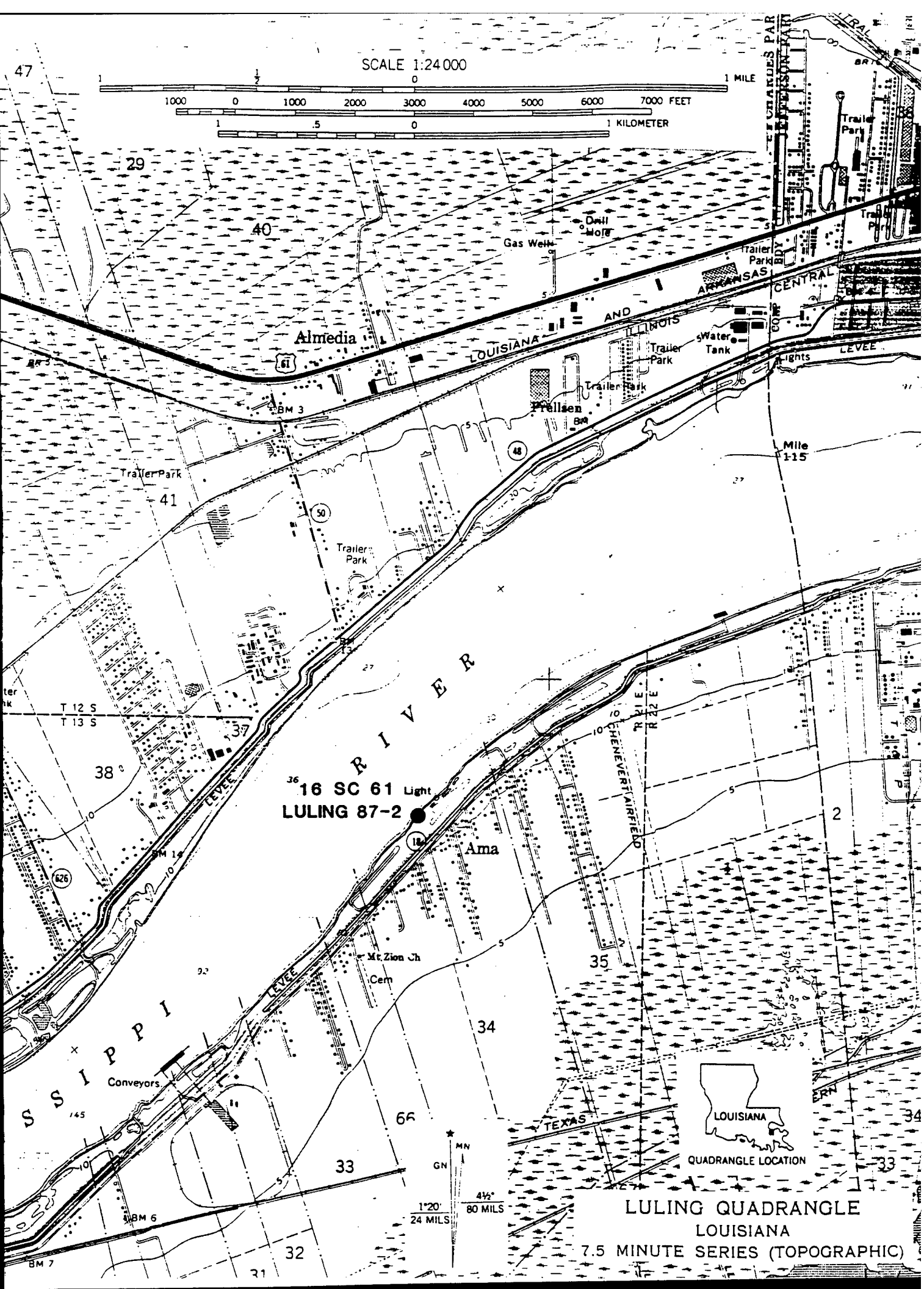
DATE: November 1, 1987

ADDITIONAL REMARKS

This site possesses intact cultural deposits. Its subsurface deposits have the integrity to contribute to the understanding of man's use of the Mississippi River and its natural levee through time.

LULING 87-2
BRICK FOUNDATION DETAIL





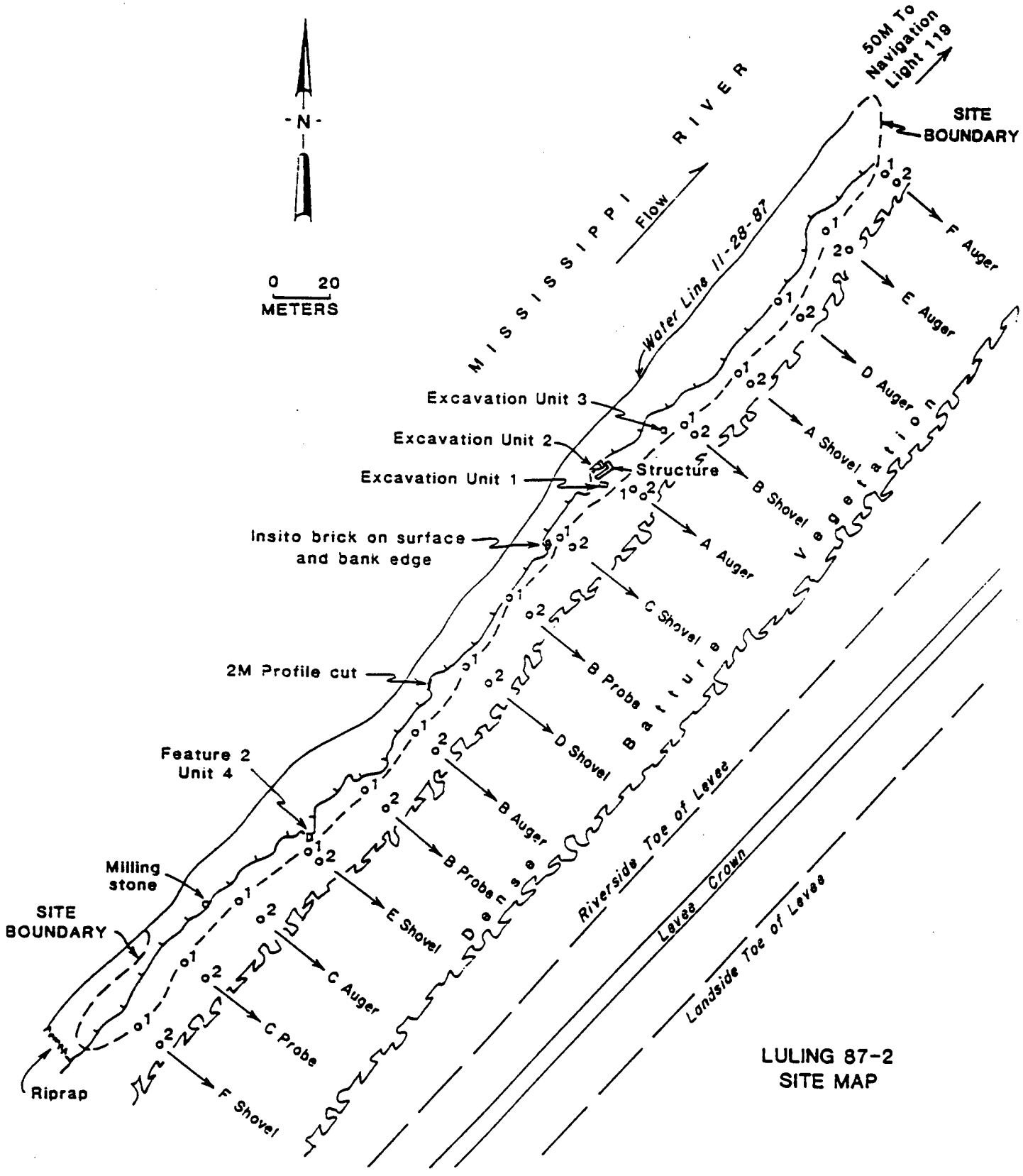
LULING QUADRANGLE

LOUISIANA

7.5 MINUTE SERIES (TOPOGRAPHIC)

APPENDIX I

SCOPE OF SERVICES



LULING 87-2
SITE MAP

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Luling 87-3 **STATE SURVEY NO:** 16 SC 62

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: At Ama, Louisiana, on LA 18 proceed .4 miles southwest of Chenevert Airfield, follow road across levee crown to the riverside toe of levee. Site is on beach at the north edge of the bend before the road takes a Southwest direction. From the bend, the site is due north 60 meters.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA 15' **7.5 MIN:** Luling, LA 7.5'1967 Photorevised 1972 & 1979

GEOGRAPHIC COORDINATES: Lat. 29°57'20"N
Lon. 90°17'50"W

UTM COORDINATES: Zone 15 E 761120 N 3316760

_____ **OF THE** _____ **OF THE** NW 1/4 **OF SECTION** 35, **TOWNSHIP** 13S, **RANGE** 21E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on Westbank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, sands, loams, silts, clays

FLORAL COMMUNITIES: Willow and Sycamore overstory, tall weeds and poison ivy

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Luling 87-5

SITE DESCRIPTION

SITE SIZE: 15 m N-S by 15 m E-W

CONFIGURATION: Circular

DENSITY OF CULTURAL MATERIALS: Sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: None

FEATURES: None

DATING/CULTURAL AFFILIATION: Historic materials, medicine bottles

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion

PRESENT USE: Fishing from bank, barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by levee enlargement activities

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests.

DESCRIPTION OF MATERIAL: 3 Historic sherds with a mean date of 1860 and a cache of 1920 post date median bottles.

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

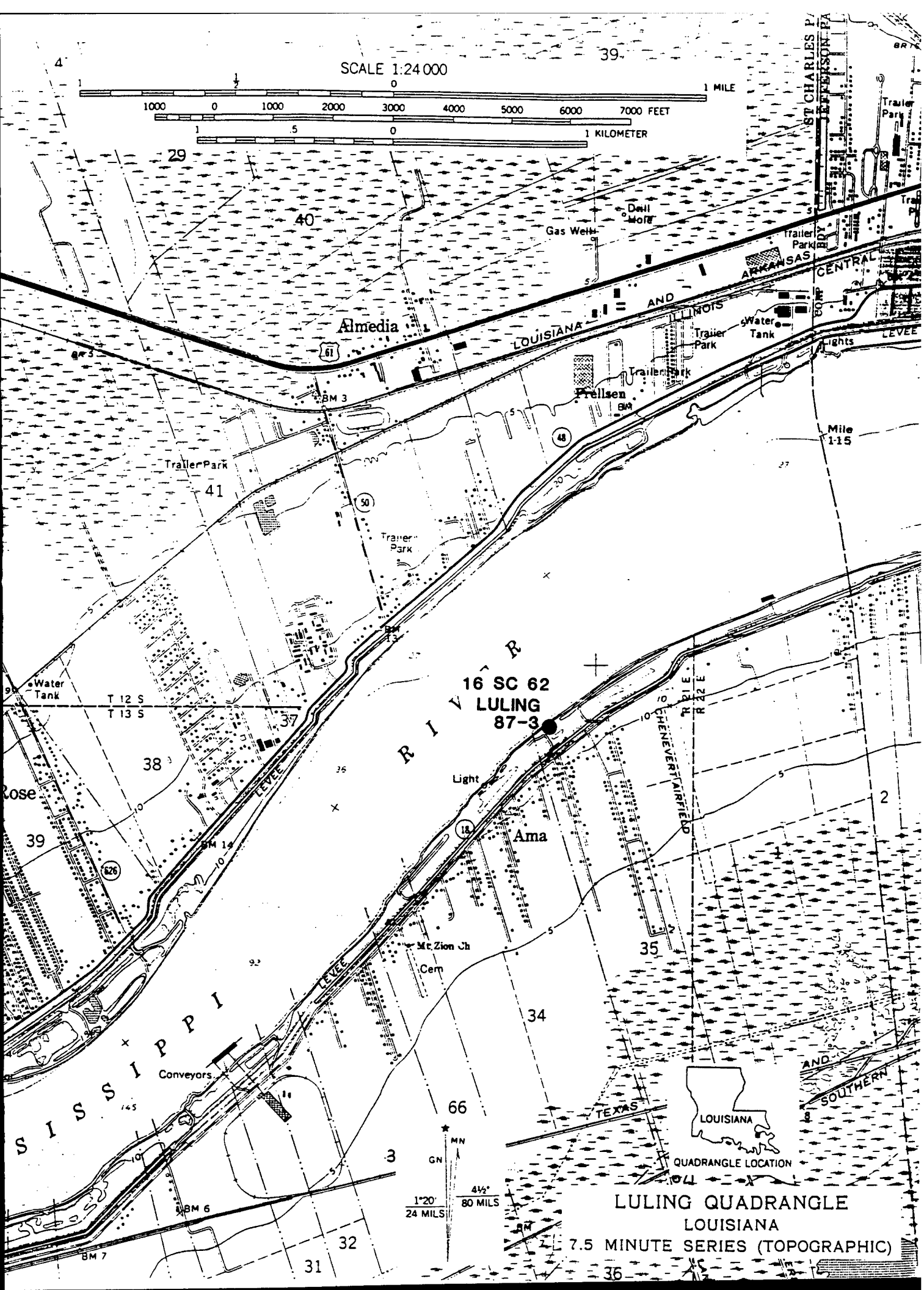
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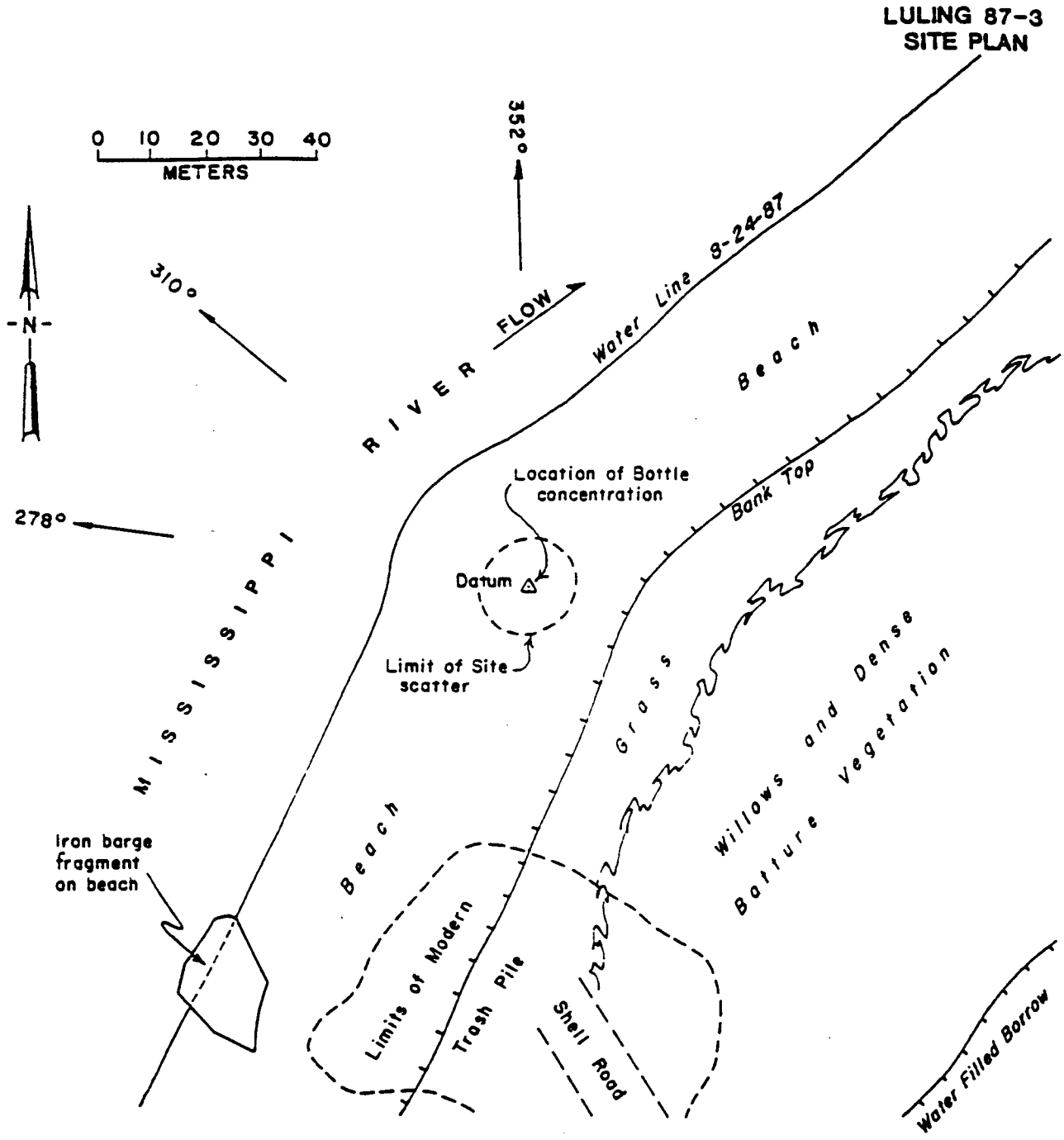
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

This site does not possess intact cultural deposits. Moreover, its surface deposits lack sufficient integrity to contribute to the understanding of man's use of the Mississippi River and its natural levee through time.


SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETER
Almedia
Prellsen
Ama
Trailer Park
Gas Well
Water Tank
Lights
Mile 1-15
LOUISIANA AND ARKANSAS
CENTRAL
LEVEE
16 SC 62
LULING
87-3
MISSISSIPPI RIVER
T 12 S
T 13 S
R 13 E
R 12 E
CHENEVERT AIRFIELD
Mt Zion Ch
Cem
Conveyors
TEXAS AND SOUTHERN
BM 3
BM 6
BM 7
BM 14
BM 15
LOUISIANA
QUADRANGLE LOCATION
LULING QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)


LULING 87-3
SITE PLAN
0 10 20 30 40
METERS
352°
310°
278°
-N-
RIVER FLOW
Water Line 9-24-87
Beach
Bank Top
Location of Bottle concentration
Datum
Limit of Site scatter
MISSISSIPPI
Grass
Willows and Dense Batture Vegetation
Iron barge fragment on beach
Beach
Limits of Modern Trash Pile
Shell Road
Water Filled Borrow

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Luling 87-4 **STATE SURVEY NO:** 16 SC 63

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: This site is located approximately 100 m West of the R 21/22 E line along river. It is approximately 525 m east northeast of Site Luling 87-5.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA 15' **7.5 MIN:** Luling, LA 7.5'1967 Photorevised 1972 & 1979

GEOGRAPHIC COORDINATES: Lat. 29°57'32"N
Lon. 90°17'19"W

UTM COORDINATES: Zone 15 E 761801 N 3317180

_____ **OF THE** _____ **OF THE** NE 1/4 **OF SECTION** 35, **TOWNSHIP** 13S, **RANGE** 21E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on Westbank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, sands, loams, silts, clays

FLORAL COMMUNITIES: Willow and Sycamore overstory, tall weeds and poison ivy

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Luling 87-5

SITE DESCRIPTION

SITE SIZE: 30.5 m N-S by 30.5 m E-W

CONFIGURATION: Elliptical

DENSITY OF CULTURAL MATERIALS: Sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: From surface to 40 cm below surface.

FEATURES: None

DATING/CULTURAL AFFILIATION: Historic site; mid to late 19th century.

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion

PRESENT USE: Fishing from bank, barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by levee enlargement activities

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area. (6) Shovel tests.

DESCRIPTION OF MATERIAL: Mean ceramic date: 1858. Formulated mean bottle glass date: 1865. (A total of 5 artifacts were collected.)

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

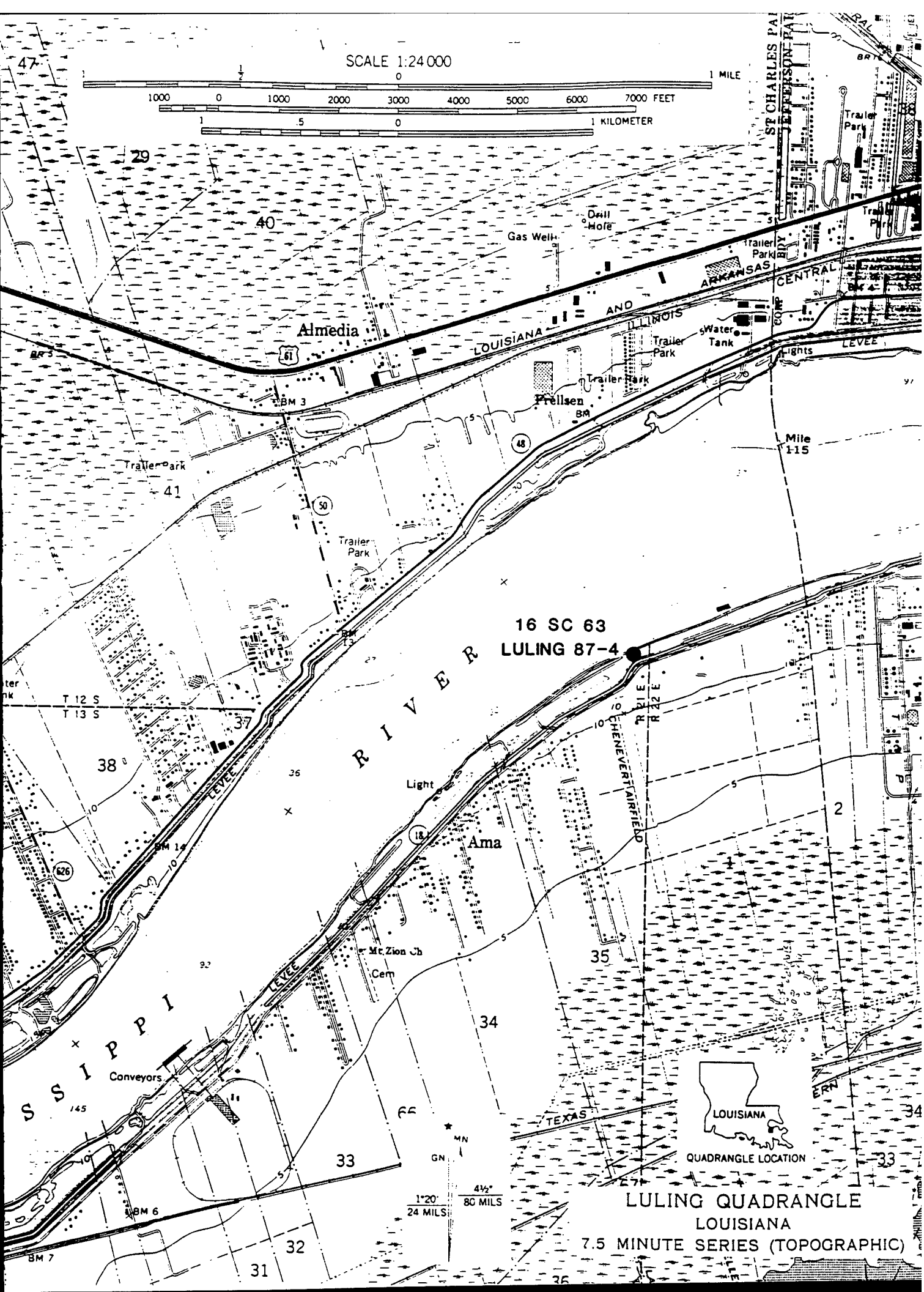
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

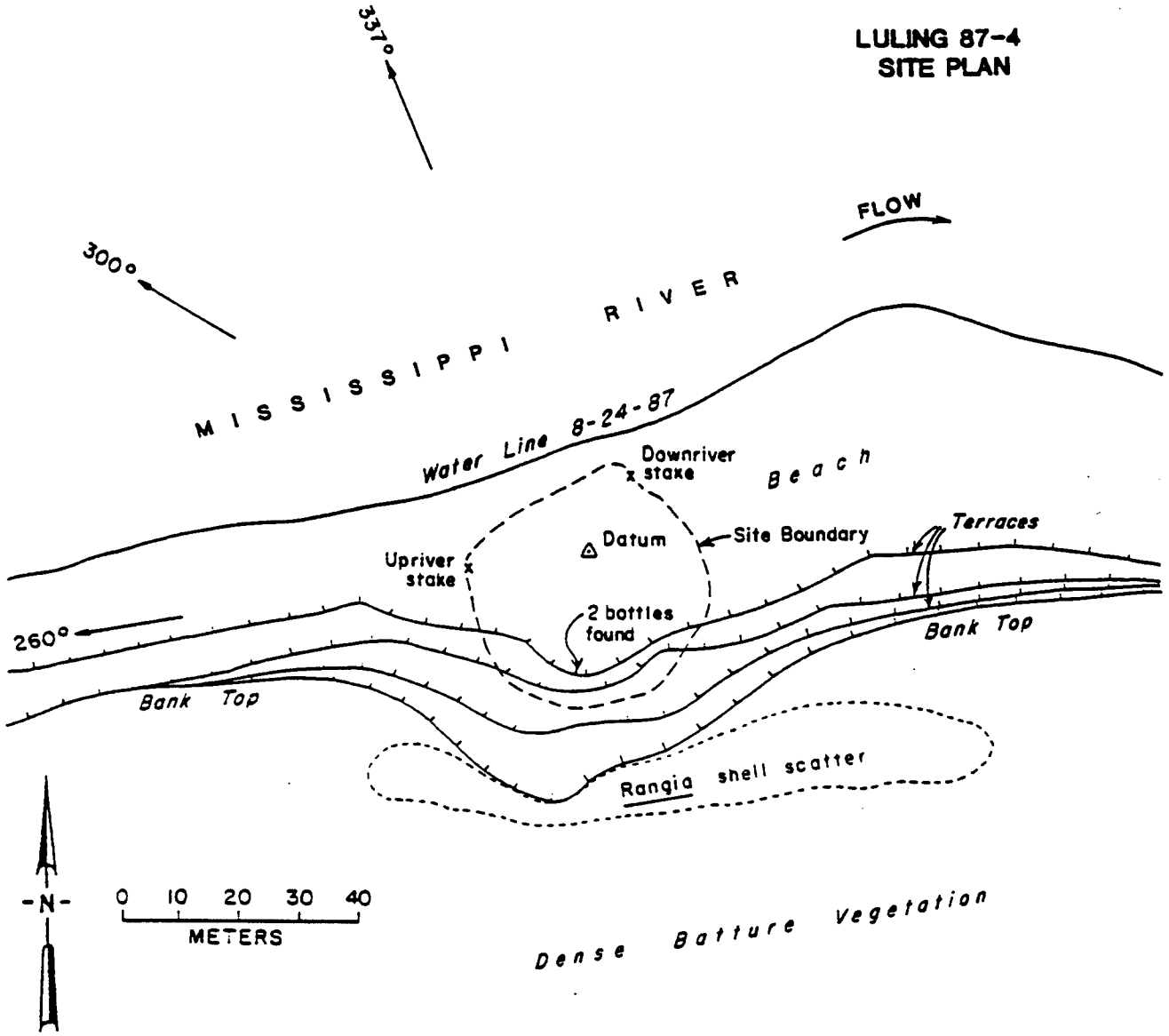
DATE: November 1, 1987

ADDITIONAL REMARKS

This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site.


SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
16 SC 63
LULING 87-4
Almedia
Ama
Prellsen
Trailer Park
Gas Well
Drill Hole
Water Tank
Lights
LEVEE
Light
Mt Zion Ch
Cem
Conveyors
CHENEVERT AIRFIELD
ARKANSAS LOUISIANA AND ILLINOIS CENTRAL
ST CHARLES PARISH
JEFFERSON PARISH
MISSISSIPPI RIVER
T 12 S
T 13 S
R 23 E
TEXAS
LOUISIANA
QUADRANGLE LOCATION
LULING QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

LULING 87-4
SITE PLAN



SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Luling 87-5 **STATE SURVEY NO:** 16 SC 64

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: Travel approximately .5 miles SW of Chenevert Airfield along LA 18 to the first shell road on the right. Take road over the levee and follow it until it curves back to the east northeast, (approximately 150 m). Site lies on the bank of the Mississippi River.

PARISH: St. Charles

USGS QUADS. 15 MIN: Hahnville, LA 15' **7.5 MIN:** Luling, LA 7.5'1967 Photorevised 1972 & 1979

GEOGRAPHIC COORDINATES: Lat. 29°57'27"N
Lon. 90°17'31"W

UTM COORDINATES: Zone 15 E 761320 N 3316885

_____ **OF THE** _____ **OF THE** NW 1/4 **OF SECTION** 35, **TOWNSHIP** 13S, **RANGE** 21E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on Westbank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, sands, loams, silts, clays

FLORAL COMMUNITIES: Willow and Sycamore overstory, tall weeds and poison ivy

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Luling 87-3, located 200 m to the southwest.

SITE DESCRIPTION

SITE SIZE: 10 m N-S by 10 m E-W

CONFIGURATION: Square concrete pad

DENSITY OF CULTURAL MATERIALS: Sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: None

FEATURES: Cement Pad

DATING/CULTURAL AFFILIATION: Post 1950s

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, erosion

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by levee enlargement activities

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area.

DESCRIPTION OF MATERIAL: None collected

SITE EVALUATION

RESEARCH POTENTIAL: None

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

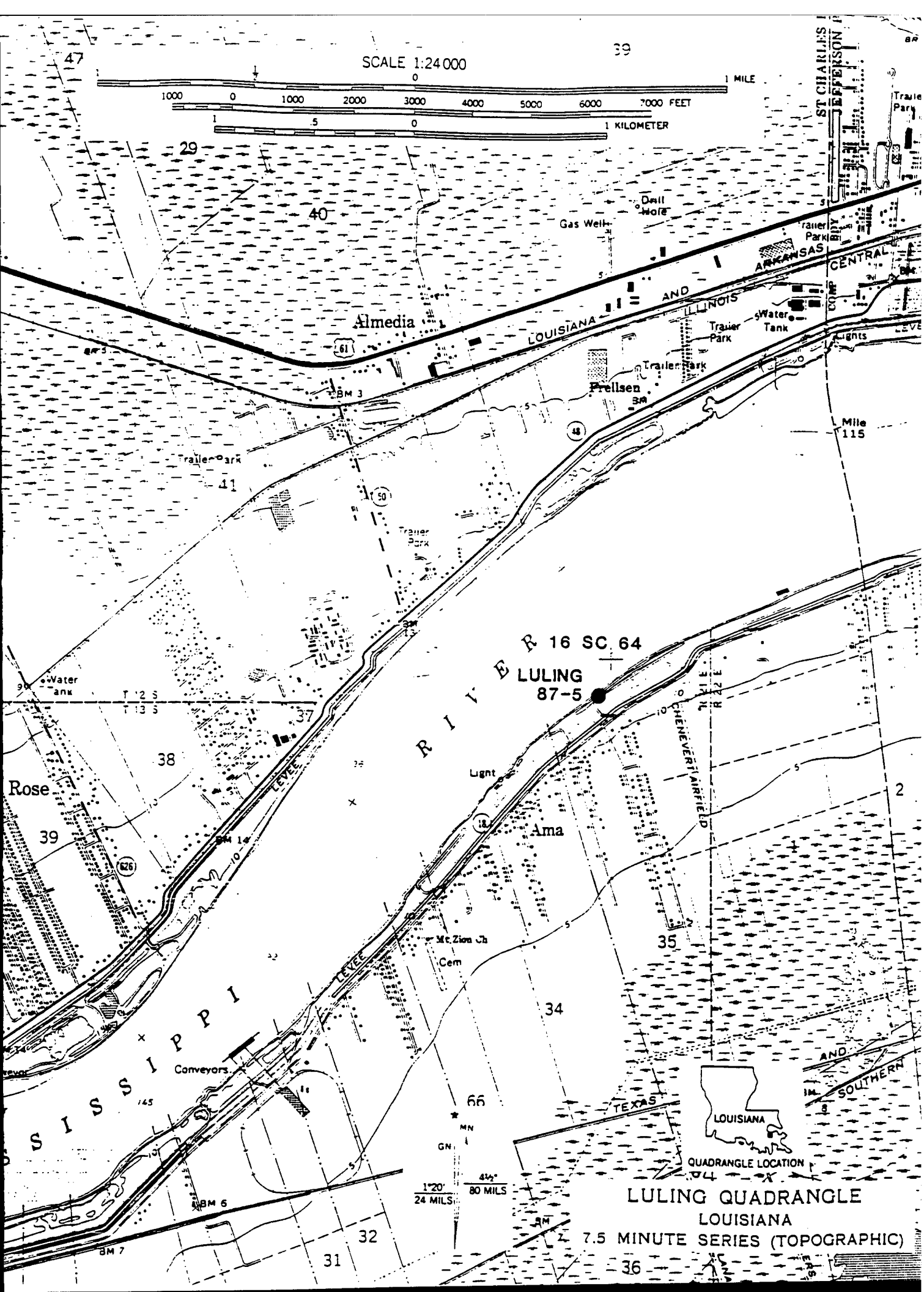
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1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

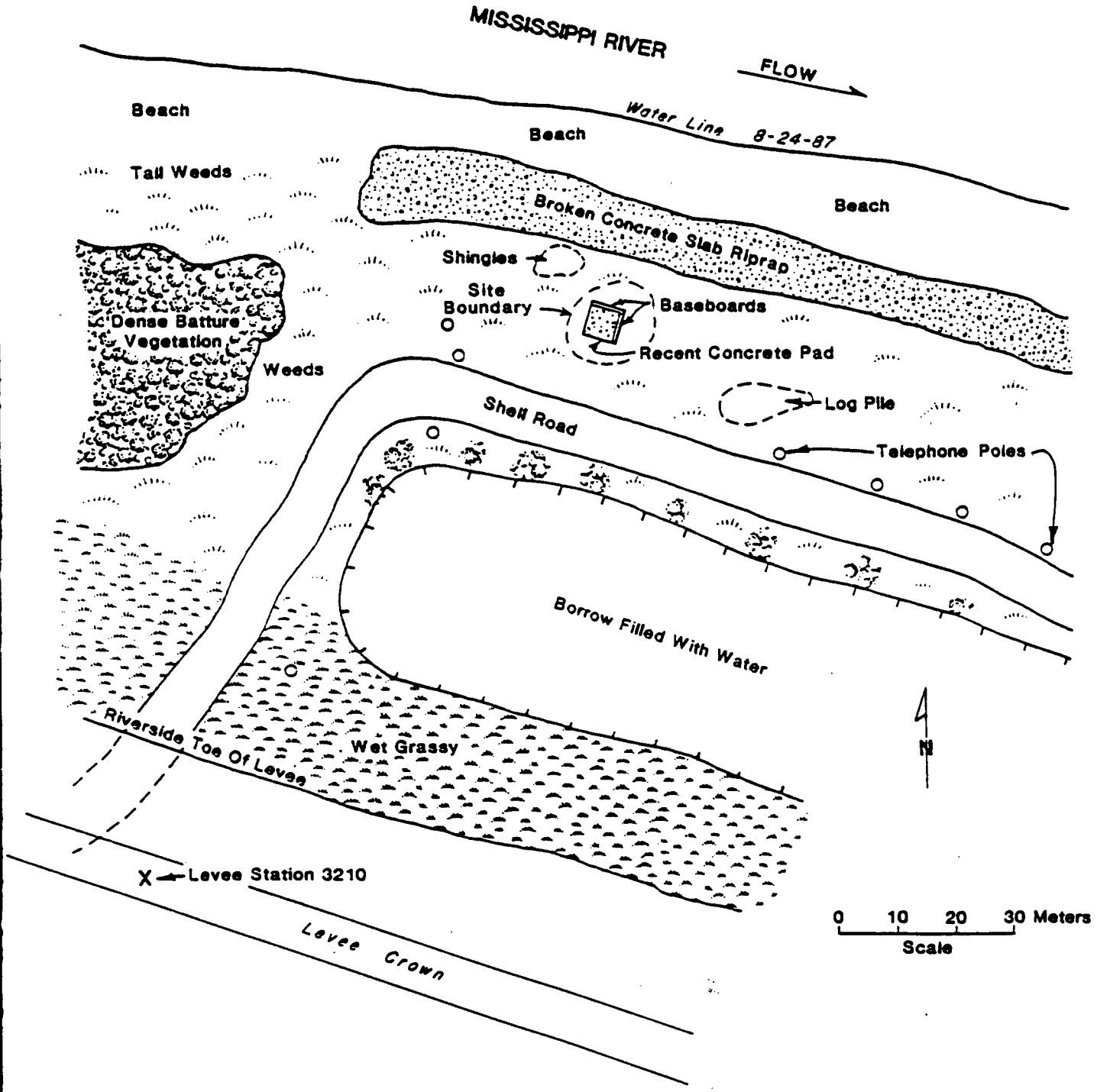
DATE: November 1, 1987

ADDITIONAL REMARKS

Apart from the recent cement pad, this site does not possess intact cultural deposits.


SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
ST CHARLES
JEFFERSON
Drill Hole
Gas Well
Trailer Park
ARKANSAS
CENTRAL
AND
LOUISIANA
ILLINOIS
Almedia
Water Tank
Lights
Prellsen
BM 3
Mile 115
Trailer Park
R 16 SC 64
LULING
87-5
RIVER
CHENEVERT AIRFIELD
Water Tank
T 12 S
T 13 S
Rose
Light
Ama
LEVEE
Mt Zion Ch
Cem
Conveyors
MISSISSIPPI
BM 6
BM 7
TEXAS
LOUISIANA
SOUTHERN
QUADRANGLE LOCATION
1°20'
24 MILS
4½°
80 MILS
LULING QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

LULING 87-5
SITE PLAN



SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO:** 16 SJB 28

OTHER SITE DESIGNATION: Edgard #1

SITE LOCATION AND APPROACH: At Edgard Ferry Landing, drive West on Levee Road to Station 1990 + 27; walk North to river bank (rt. descending) of the Mississippi. The site is located at the 138-6 mile mark.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mt. Airy 1962 **7.5 MIN:** Reserve Quadrangle

GEOGRAPHIC COORDINATES: Lat. 30°2'54"N
Lon. 90°34'09"W

UTM COORDINATES: Zone 15 N 3326360 E 734300

_____ **OF THE** _____ **OF THE** NW 1/4 S of **SECTION** 20, **TOWNSHIP** 12S, **RANGE** 19E

PHYSICAL SETTING

LANDFORM: Batture, part of delta deposits

GEOMORPHIC PROCESSES: Fluvial deposition and erosion

ELEVATION & RELIEF: 15 - 25 ft above MSL

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Located on bankline 45% slopes on top of bank above river and along waterlines.

SOIL CHARACTERISTICS: Convent soil associations

FLORAL COMMUNITIES: Cottonwoods, Hackberry, mixed deciduous trees.

FAUNAL COMMUNITIES: Muskrat, rabbit, squirrel, opossum, other small mammals

NEAREST KNOWN SITE: 16 SJB 29 Located 1 km up river, right descending bank

SITE DESCRIPTION

SITE SIZE: 55 m E-W X 50 m N-S

CONFIGURATION: Circular deposit

DENSITY OF CULTURAL MATERIALS: Sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: Top 25 cm (9-10") at midwater line has heavy deposition of artifacts

FEATURES: (1) Small metal tank and (2) concrete pillars

DATING/CULTURAL AFFILIATION: 19th - 20th Century Anglo/Afro American Period - domestic site

PRESENT CONDITION/PRESERVATION: Poor

PRESENT USE: Trash dump site

PRESENT AND FUTURE IMPACTS: Future levee enlargement may impact site

COLLECTIONS

SURVEY/EXCAVATION METHOD: Pedestrian survey conducted by NPS survey in 1984. R. Christopher Goodwin & Associates, Inc., relocated the site in 1987. (5) Auger tests were placed in the site to search for subsurface deposits.

DESCRIPTION OF MATERIAL: Whiteware and pearlware (sponge and edge decorated). Transfer print ceramics, plain whiteware, numerous brick, structural remains, cut nails, undecorated porcelain, modern trash closer to road.

SITE EVALUATION

RESEARCH POTENTIAL: None

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: See site form 16 SJB 31 for reference

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
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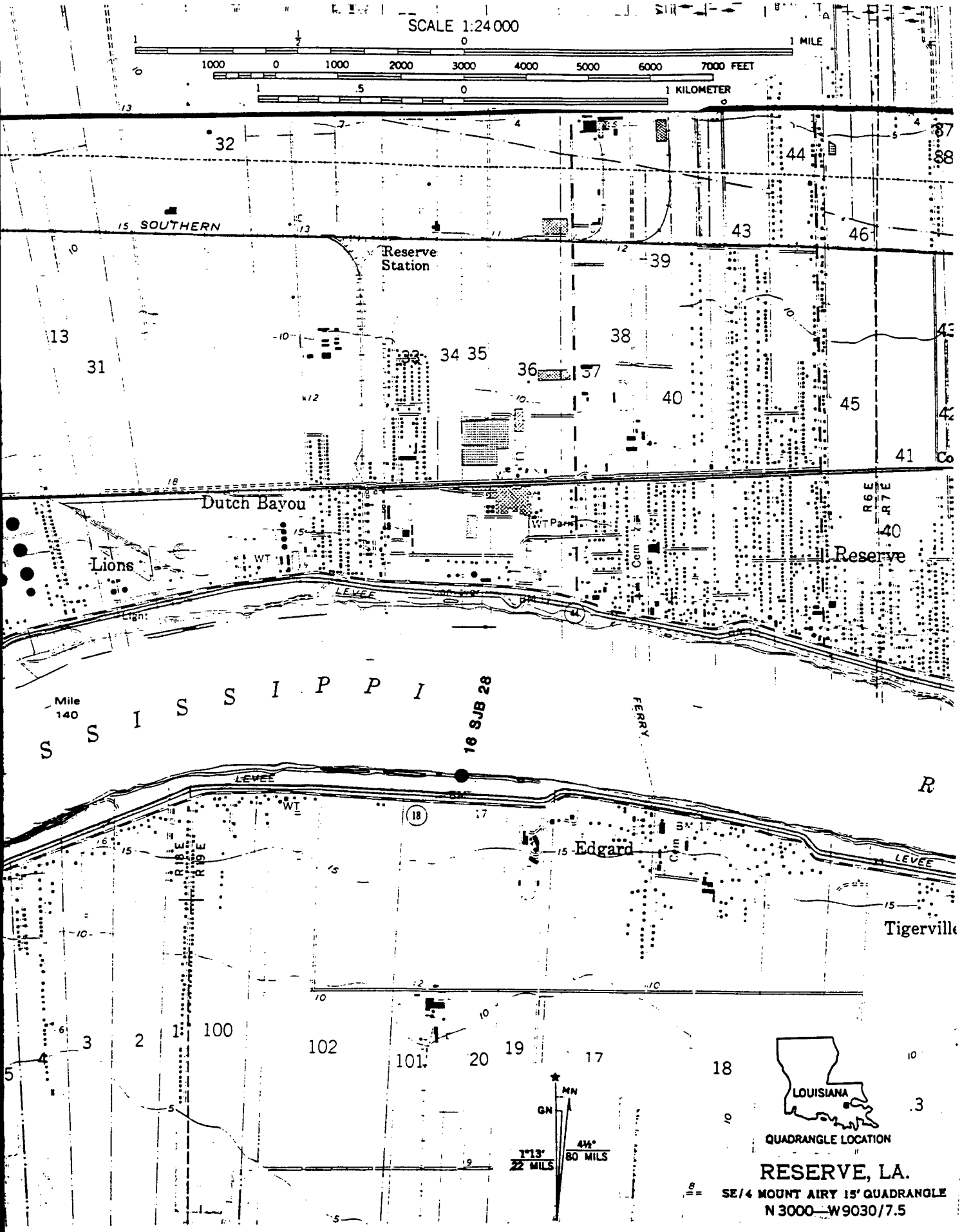
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

The (3) brick and mortar piles recorded on the site by the 1984 NPS survey were not present on the site during its 1987 investigation by R. Christopher Goodwin & Associates, Inc.

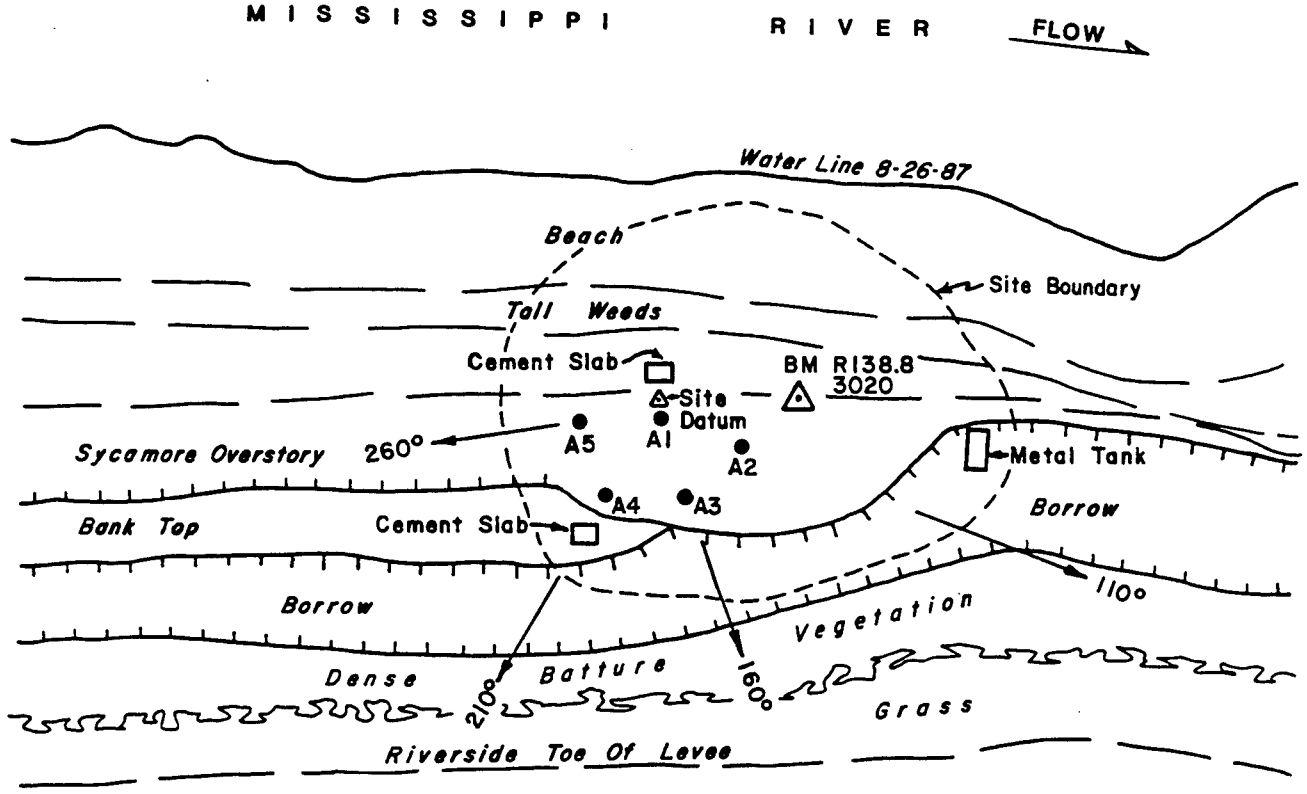
Two cement slabs and a metal tank were recorded on the site during the R. Christopher Goodwin & Associates, Inc. 1987 reinvestigation.



RESERVE, LA.

SE/4 MOUNT AIRY 15' QUADRANGLE
N 3000—W 9030/7.5

SITE PLAN
16 SJB 28



Levee Crown

KEY
● – Auger Tests And Probed

0 10 20 30
METERS

-N-

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: 16 SJB 29 **STATE SURVEY NO.:** 16 SJB 29

OTHER SITE DESIGNATION: Edgard-2

SITE LOCATION AND APPROACH:

From the junction of LA 18 and the Edgard ferry crossing, travel west on LA 18 for 1 mile. Stop at base of levee road across from the Edgard Water Treatment Facility. Proceed on foot over the levee road. Follow the water intake facility road to the Mississippi River. The site lies 30 m to the west (azimuth 270°) between the bank and the water's edge.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mount Airy, LA, 1962 **7.5 MIN:** Reserve, LA, 1962 (Photorevised 1981)

GEOGRAPHIC COORDINATES: Lat. 30°03'00" N Lon. 90°34'40" W

UTM COORDINATES: Zone 15 E 733357 N 3326360

_____ **OF THE** _____ **OF THE NW 1/4 OF SECTION 102, TOWNSHIP 12S, RANGE 19E &** _____ **OF THE** _____ **OF THE NE 1/4 OF SECTION 100, TOWNSHIP 12S, RANGE 19E.**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 5 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association: brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: 16 SJB 30, 100 m to the WEST (azimuth 270°)

SITE DESCRIPTION

SITE SIZE: 30 m N-S by 80 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Sparse surface scatter along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: Two meters below surface

FEATURES: Feature 1 (boat); Feature 2 (privy or docking facility); Feature 3 (slab board structure, function unknown).

DATING/CULTURAL AFFILIATION: Historic

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion.

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area; one (1) 1 x 2 m test excavation unit placed on top of Feature 3; (2) 1 x 2 m test excavation units placed on top of Feature 1; (1) 1 x 1 m test unit on top of Feature 1; (6) probes and (6) shovel tests between Features 2 and 3; fifteen (15) auger tests strategically placed on rays extending from the site datum and taken to a depth of 1.50 m.

DESCRIPTION OF MATERIAL: (1) brick fragment; (1) iron/steel shovel part; (1) unidentified metal object of iron/steel; (2) slag fragments; (2) oyster shells; (1) dark green bottle base with iron pontil; (1) buff bodied stoneware, salt-glazed/blue decorated Albany slip interior; (1) whiteware sherd; (1) aqua bottle base, post bottom mold. Note: all material collected from surface.

SITE EVALUATION

RESEARCH POTENTIAL: Presence of 4 intact features provide an opportunity for securing temporal information and activity-related data concerning early ferry boat landings on the Mississippi River.

STATE OF NATIONAL REGISTER ELIGIBILITY: Eligible

RECOMMENDATIONS: Further testing inside and outside of Features 1 and 2 should be conducted to permit their definition and to assess their significance with regards to National Register of Historic Places criteria.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: See site form 16 SJB 31 for reference.

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

Shannon, G. W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
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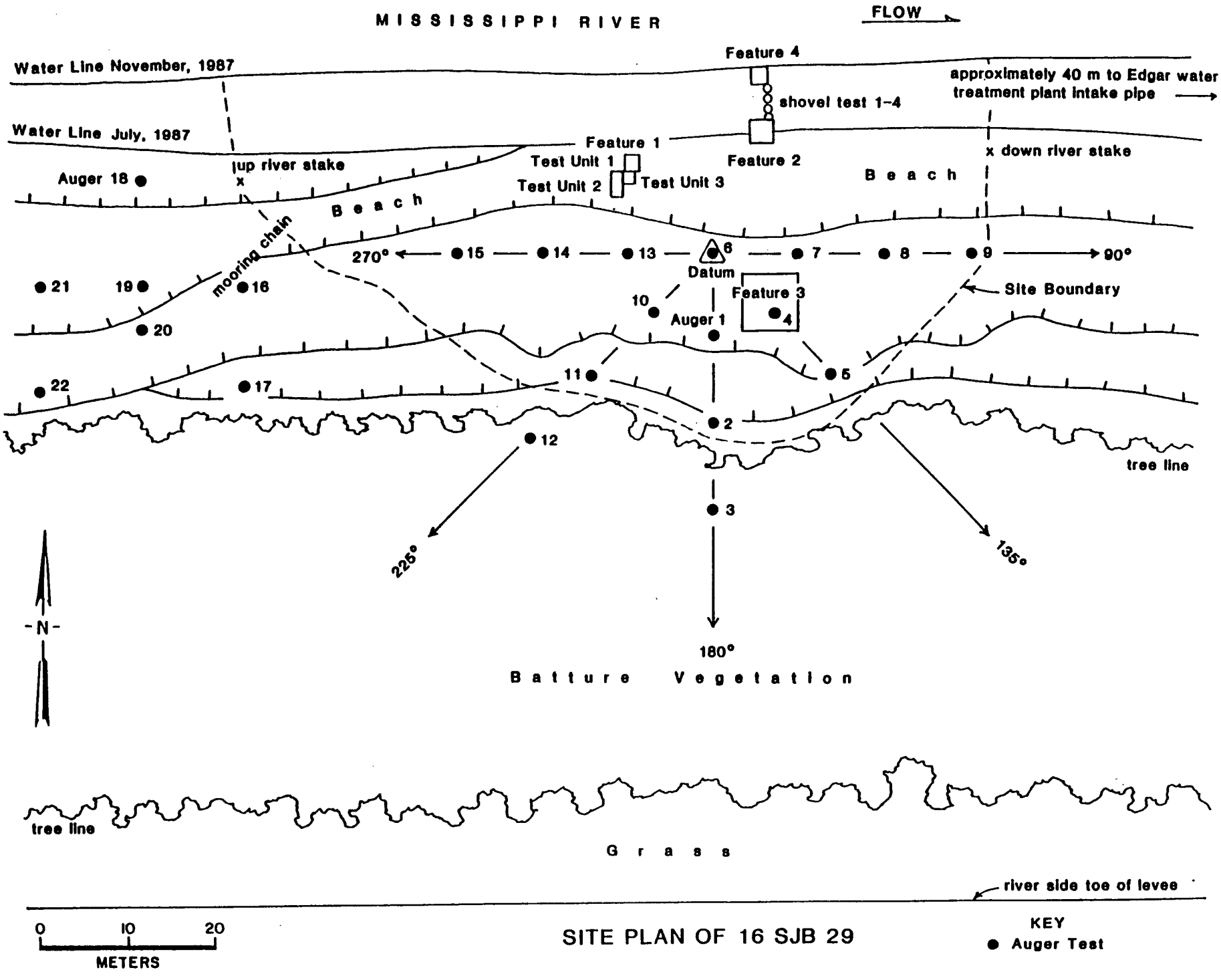
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

Site 16 SJB 29 is considered to be significant. The four historic features represent the remains of a ferry boat landing which connected with the road from Donaldsonville to Willow Bend, circa 1839.


16 SJB 29
MISSISSIPPI
Dutch Bayou
Lions
San Francisco Plantation
Garyville
Second Ward Sch
Cem
Light
Pit
Mile 140
ILLINOIS CENTRAL
AND PACIFIC
Columbia
SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
LOUISIANA
QUADRANGLE LOCATION
RESERVE QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)


MISSISSIPPI RIVER
FLOW
Water Line November, 1987
Water Line July, 1987
Feature 4
approximately 40 m to Edgar water treatment plant intake pipe
shovel test 1-4
Feature 1
Feature 2
up river stake
x down river stake
Auger 18
Test Unit 1
Test Unit 2
Test Unit 3
Beach
Beach
mooring chain
270°
90°
15
14
13
6
7
8
9
Datum
21
19
16
20
10
Auger 1
Feature 3
4
Site Boundary
22
17
11
5
2
12
3
tree line
225°
135°
180°
N
Batture Vegetation
tree line
Grass
river side toe of levee
0
10
20
METERS
SITE PLAN OF 16 SJB 29
KEY
Auger Test

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: 16 SJB 30 **STATE SURVEY NO.:** 16 SJB 30

OTHER SITE DESIGNATION: IA-Edgard-2

SITE LOCATION AND APPROACH:

From the junction of LA 18 and the Edgard ferry crossing, travel west on LA 18 for 1.3 miles. Stop at Club Grocery. Proceed north on foot to top of levee road. The site lies 60 m (azimuth 20°) between the batture vegetation and the edge of the Mississippi River.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mount Airy, LA, 1962 **7.5 MIN:** Reserve, LA, 1962 (Photorevised 1981)

GEOGRAPHIC COORDINATES: Lat. 30°02'52" N Lon. 90°35'00" W

UTM COORDINATES: Zone 15 E 733000 N 3326300

_____ **OF THE** ____ **OF THE NE 1/4 OF SECTION 1, TOWNSHIP 12S, RANGE 18E &** ____ **OF THE** ____ **OF THE NW 1/4 OF SECTION 100, TOWNSHIP 12S, RANGE 19E.**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 10 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Willow Bend 87-1, 50 m to the WEST (azimuth 270°)

SITE DESCRIPTION

SITE SIZE: 30 m N-S by 115 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Dense surface scatter along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: 0-150 cm below datum

FEATURES: Feature 1 (3 cypress boards, upright in bank, in situ); Feature 2 (historic levee fill)

DATING/CULTURAL AFFILIATION: Historic (late 19th to mid 20th century)

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion.

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area; one (1) 1 x 2 m test excavation unit taken to a depth of 1.50 m; eight (8) auger tests strategically placed on rays extending from site datum; an addition 2 auger tests placed inside and outside of Feature 1.

DESCRIPTION OF MATERIAL: (7) brick fragments; (2) clear glass; (4) wood fragments; (1) plastic bottle "AVON"; (1) JAX beer can; (1) light green window glass; (1) 6-oz. Coca-Cola bottle; (2) modern blue ceramics; (1) metal box knife; (1) brass clock part; (1) unidentified nonferrous metal object; (1) pearlware; (1) buff bodied stoneware; (1) pearlware, blue transfer print; (1) wire spike; (2) prehistoric sherds.

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: See 16 SJB 31 site form for reference

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
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REFERENCES:

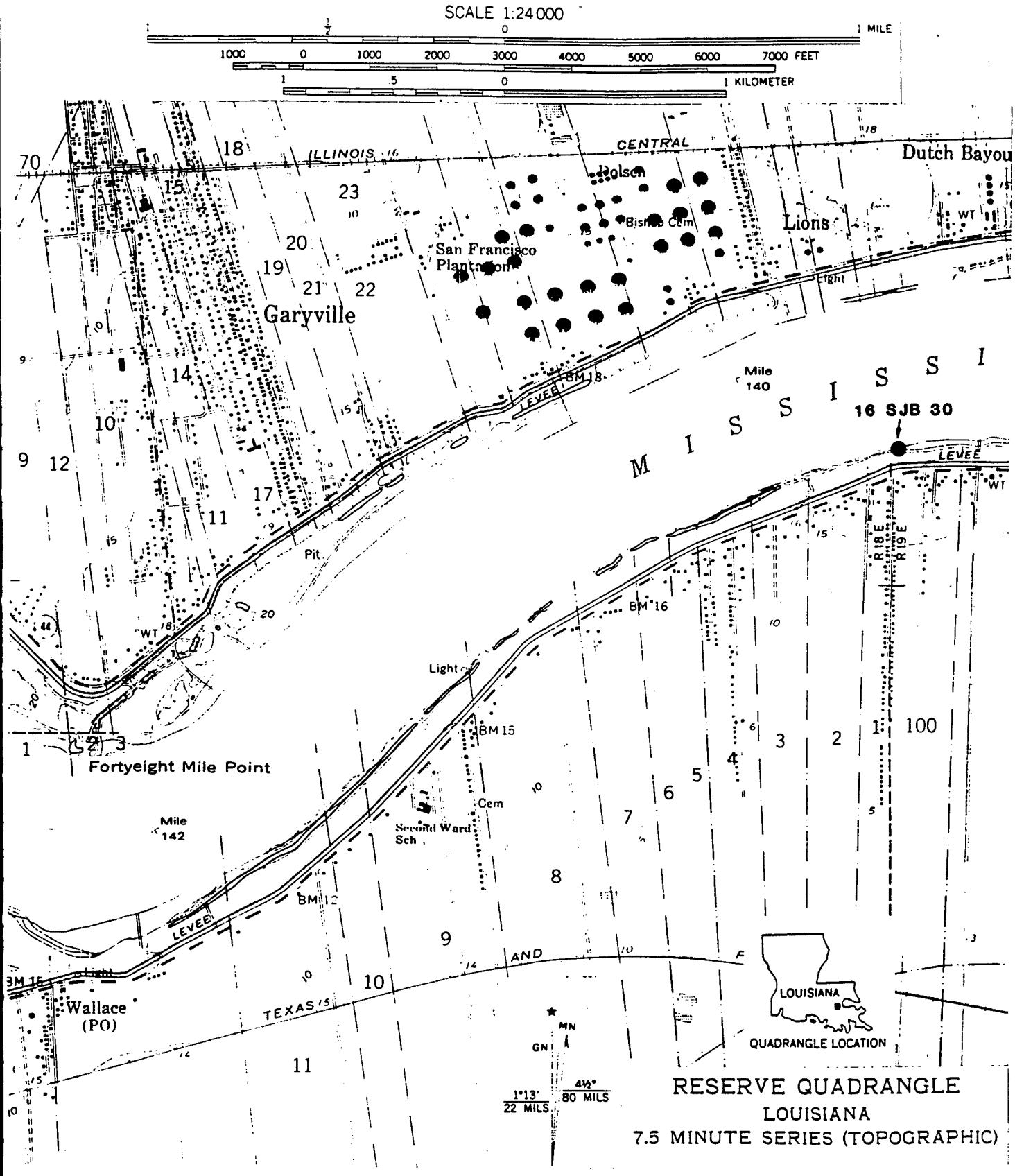
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RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

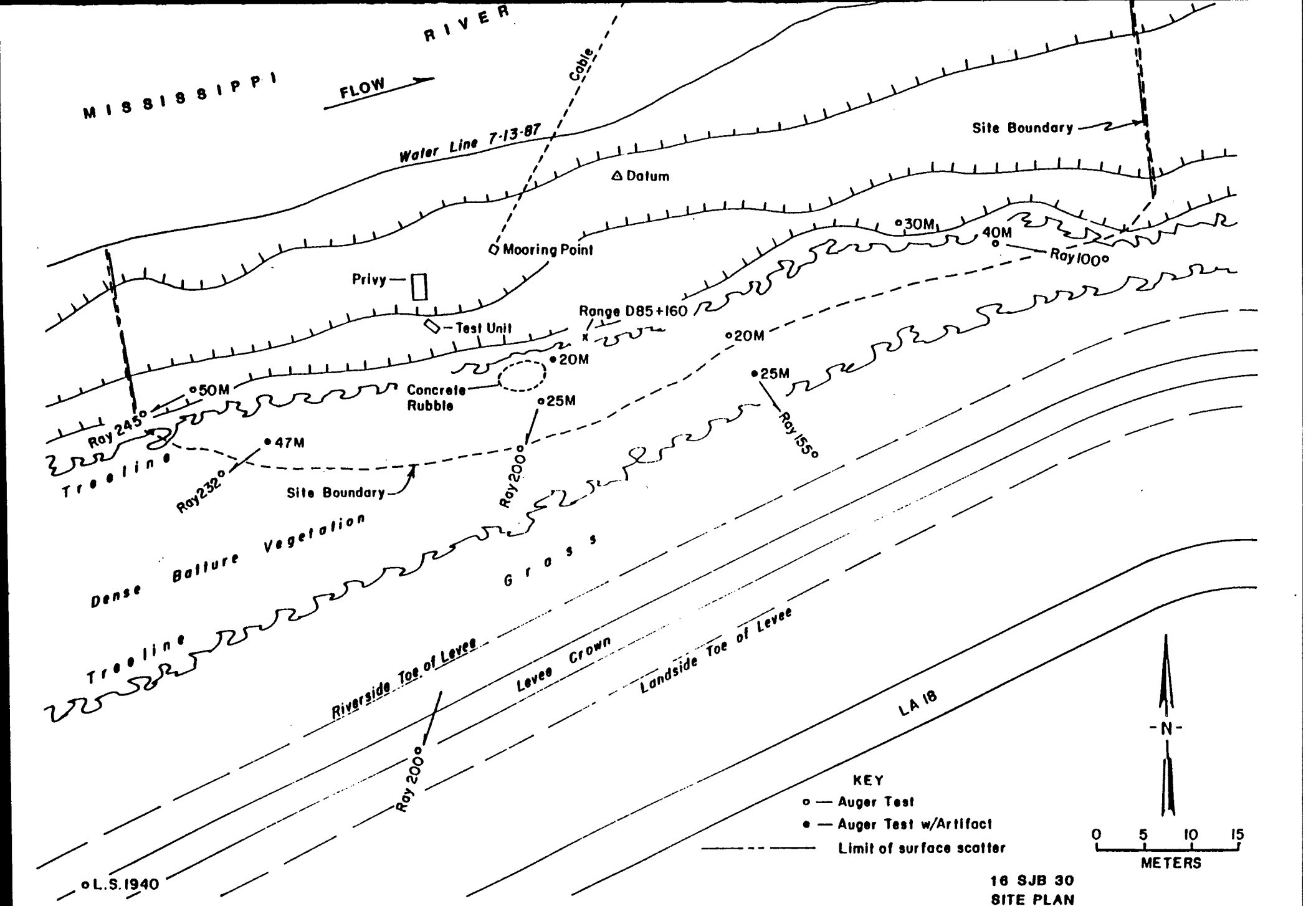
This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site. The data potential of surface artifacts is limited severely by this lack of context.



RESERVE QUADRANGLE

LOUISIANA

7.5 MINUTE SERIES (TOPOGRAPHIC)


MISSISSIPPI RIVER
FLOW
Cable
Water Line 7-13-87
Site Boundary
Datum
Mooring Point
30M
40M
Ray 100°
Privy
Range D85+160
Test Unit
20M
50M
Concrete Rubble
25M
Ray 245°
47M
Treeline
Ray 232°
Site Boundary
Ray 200°
Ray 155°
Dense Batture Vegetation
Grass
Treeline
Riverside Toe of Levee
Levee Crown
Landside Toe of Levee
LA 18
Ray 200°
L.S. 1940
KEY
o — Auger Test
• — Auger Test w/Artifact
Limit of surface scatter
-N-
0 5 10 15
METERS
16 SJB 30
SITE PLAN

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: 16 SJB 31 **STATE SURVEY NO.:** 16 SJB 31

OTHER SITE DESIGNATION: Edgard-3

SITE LOCATION AND APPROACH:

From the junction of LA 18 and the Edgard ferry crossing, travel west on LA 18 for 1.3 miles. Stop at Club Grocery. Proceed north on foot to top of levee road. The site lies 150 m (azimuth 290°) between the batture vegetation and the edge of the Mississippi River.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mount Airy, LA, 1962 **7.5 MIN:** Reserve, LA, 1962 (Photorevised 1981)

GEOGRAPHIC COORDINATES: Lat. 30°02'40" N Lon. 90°35'20" W

UTM COORDINATES: Zone 15 E 732420 N 3326100

_____ **OF THE** ____ **OF THE NW 1/4 OF SECTION 3, TOWNSHIP 12S, RANGE 18E**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 10 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: Willow Bend 87-1, 200 m to the EAST (azimuth 90°)

SITE DESCRIPTION

SITE SIZE: 30 m N-S by 50 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Dense surface scatter along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: Surface scatter only; 1 x 2 m excavation unit revealed no subsurface deposits

FEATURES: None

DATING/CULTURAL AFFILIATION: Historic (early 19th to late 20th century)

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion.

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area; one (1) bank line profile (3 m wide x 2.10 m deep); (1) 1 x 2 m test excavation unit, 1.20 m deep with (2) auger tests at base of level 12, arbitrary 10 cm levels of excavation; (6) auger tests 1.40 m in depth.

DESCRIPTION OF MATERIAL: (1) metal faucet; (3) redware, clear lead glaze; (1) porcelain marble; (1) tin glazed apothecary jar, green exterior/white interior; (1) gray salt-glazed stoneware; (1) whiteware, underglazed hand-painted polychrome; (1) lead shot; (1) English gun flint; (1) kaolin pipe stem frag; (1) chert pebble; (1) English mocha fragments; (1) flow blue whiteware; (4) prehistoric sherds.

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS:
Shafer, J., A.B. Clemensen, and D. Rhodes
1984 An Archeological Survey of the Proposed Upper Edgard Levee Project (M-143.5 to 137-R), St. James Parish, Louisiana. (Prepared for the U.S. Army Corps of Engineers, New Orleans District, by National Park Service, Denver Service Center, Southeast-Southwest Team.

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

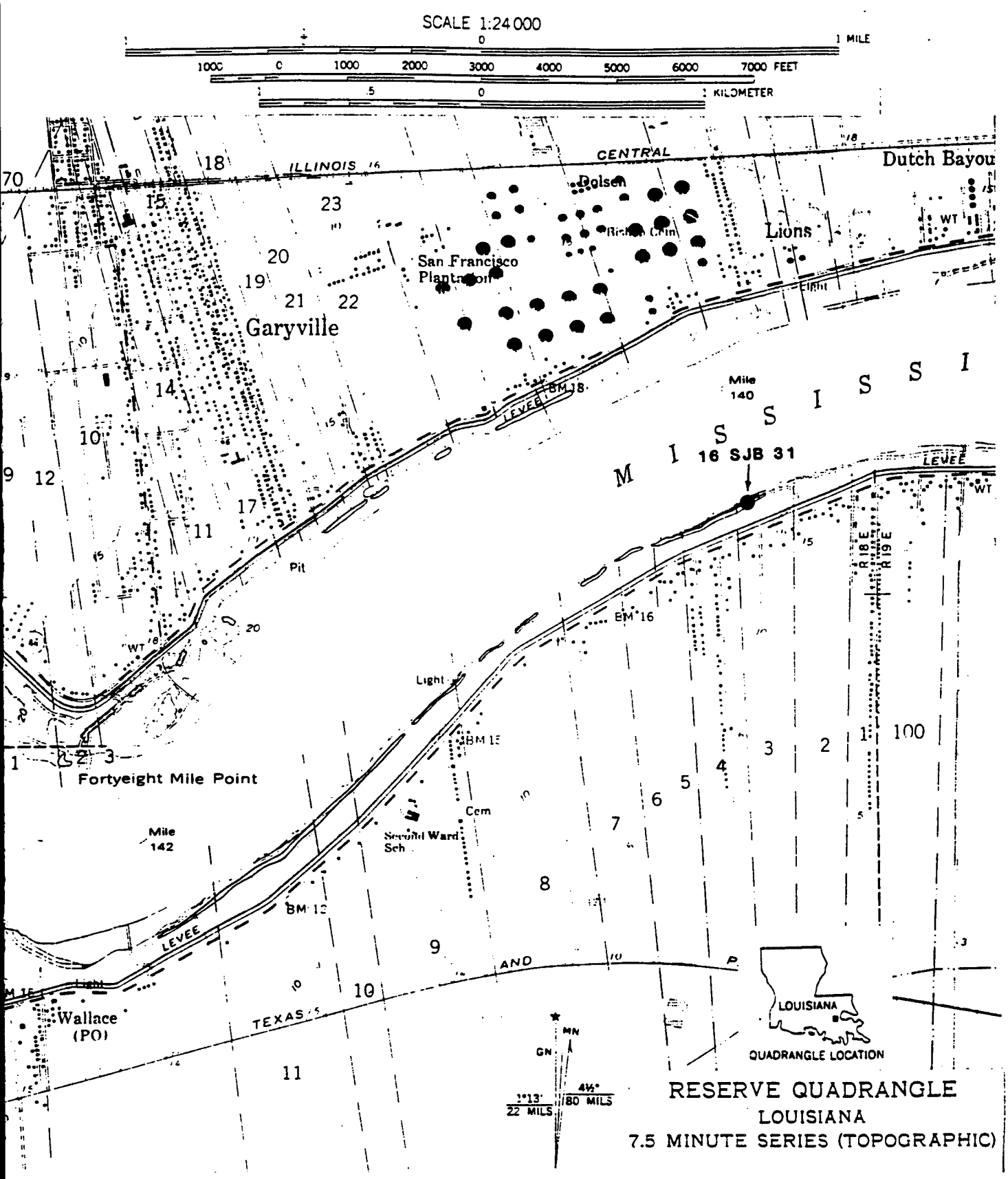
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist and St. Charles Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

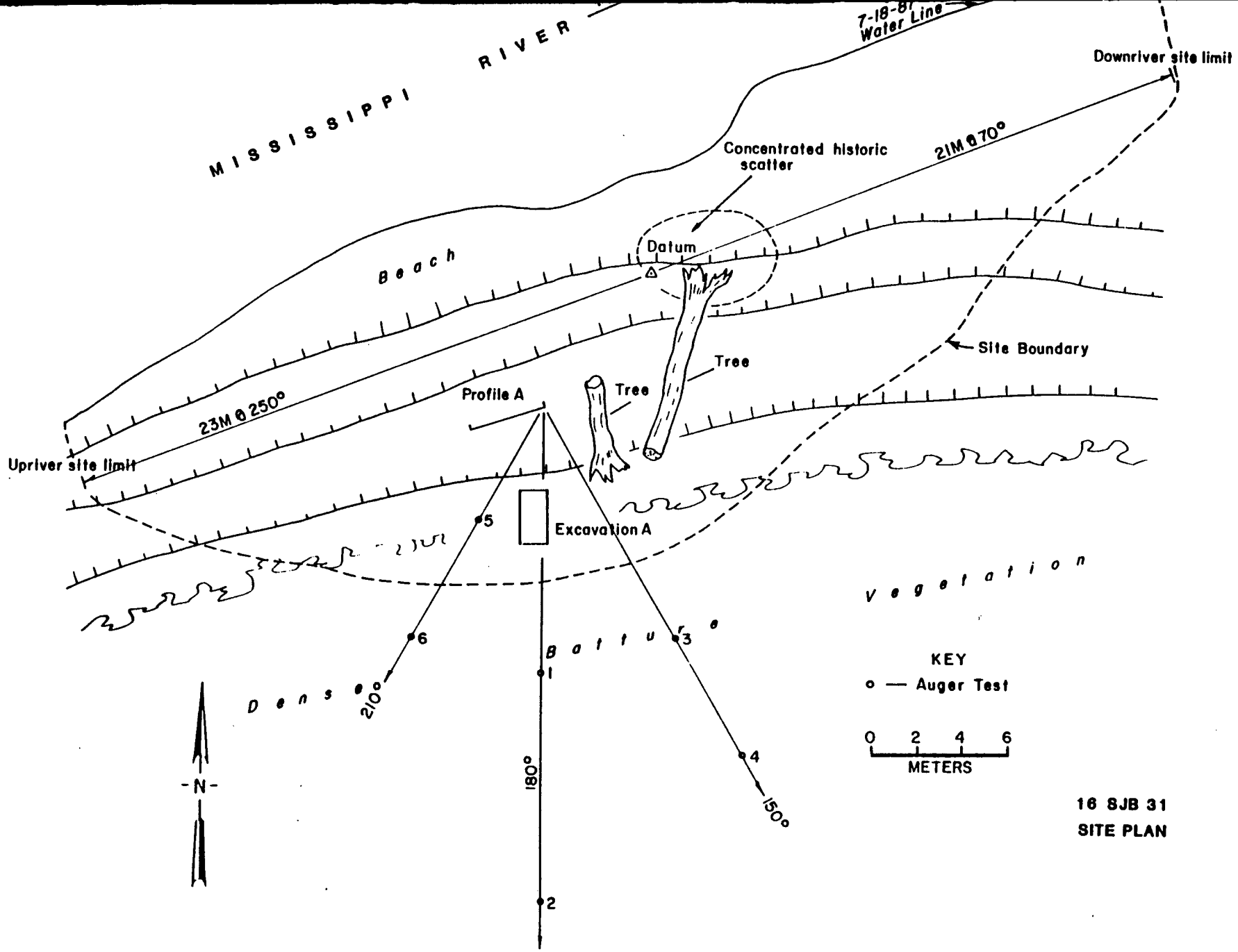
DATE: November 1, 1987

ADDITIONAL REMARKS

No evidence of intact cultural deposits exist on this site.



RESERVE QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)


MISSISSIPPI RIVER
7-18-81 Water Line
Downriver site limit
Concentrated historic scatter
21M @ 70°
Datum
Beach
Site Boundary
Tree
Tree
Profile A
23M @ 250°
Upriver site limit
5
Excavation A
Vegetation
Dense
Batture
6
3
1
210°
180°
150°
4
2
-N-
KEY
o — Auger Test
0 2 4 6
METERS
16 SJB 31
SITE PLAN

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: None **STATE SURVEY NO:** 16 SJB 32

OTHER SITE DESIGNATION: IA-ED-4

SITE LOCATION AND APPROACH: Proceed east from Wallace, Louisiana along levee road, walk to the large dump near station 1800. Walk approximately 400' (121 meters) from levee road North to site.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mt. Airy 1962 **7.5 MIN:** Reserve Quadrangle

GEOGRAPHIC COORDINATES: Lat. 30°1'36"N
Lon. 90°37'15"W

UTM COORDINATES: Zone 15 N 3323940 E 729400

_____ **OF THE** _____ **OF THE** NW 1/4 S of **SECTION** 12, **TOWNSHIP** 12S, **RANGE** 18E

PHYSICAL SETTING

LANDFORM: Delta deposits, batture

GEOMORPHIC PROCESSES: Fluvial deposition and erosion. Scours present throughout area.

ELEVATION & RELIEF: 10 ft above MSL. 3-6% undulating topography.

NEAREST WATER: Mississippi River at about 87 meters to North

POSITION WITH RESPECT TO TERRAIN: Located on a nearly level batture

SOIL CHARACTERISTICS: Convent soil associations

FLORAL COMMUNITIES: Mixed deciduous hardwoods, cottonwood, hackberry, dense horsetails, understory and various creepervines

FAUNAL COMMUNITIES: Small mammals, squirrels, rabbits, quail, predatory birds, lizards

NEAREST KNOWN SITE: IA-ED-3 at 150 m SW of Site 16 SJB 32

SITE DESCRIPTION

SITE SIZE: 5 m N-S by 10 m E-W

CONFIGURATION: Rectangular

DENSITY OF CULTURAL MATERIALS: One concrete pad

DEPTH OF DEPOSIT/STRATIGRAPHY: None

FEATURES: Concrete and wood structure with anchor bolts set into main portion. Oil stained dirt to one side; possible donkey engine platform.

DATING/CULTURAL AFFILIATION: Possibly related to crayfish farm as a pump station; appears to be fairly modern.

PRESENT CONDITION/PRESERVATION: Excellent

PRESENT USE: None

PRESENT AND FUTURE IMPACTS: 87 Revetment project slated. Site will be disturbed by levee enlargement activities.

COLLECTIONS

SURVEY/EXCAVATION METHOD: Intensive Pedestrian survey performed by National Park Service in 1984. Site relocated by R. Christopher Goodwin & Associates, Inc. in 1987. (9) Shovel tests.

DESCRIPTION OF MATERIAL: No collections made; 2 pieces of plain whiteware plate noted. Old car parts and other recent debris present nearby.

SITE EVALUATION

RESEARCH POTENTIAL: Limited, may contribute to an understanding of the development of crayfish farming in Southern Louisiana.

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: See 16 SJB 31 for reference

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

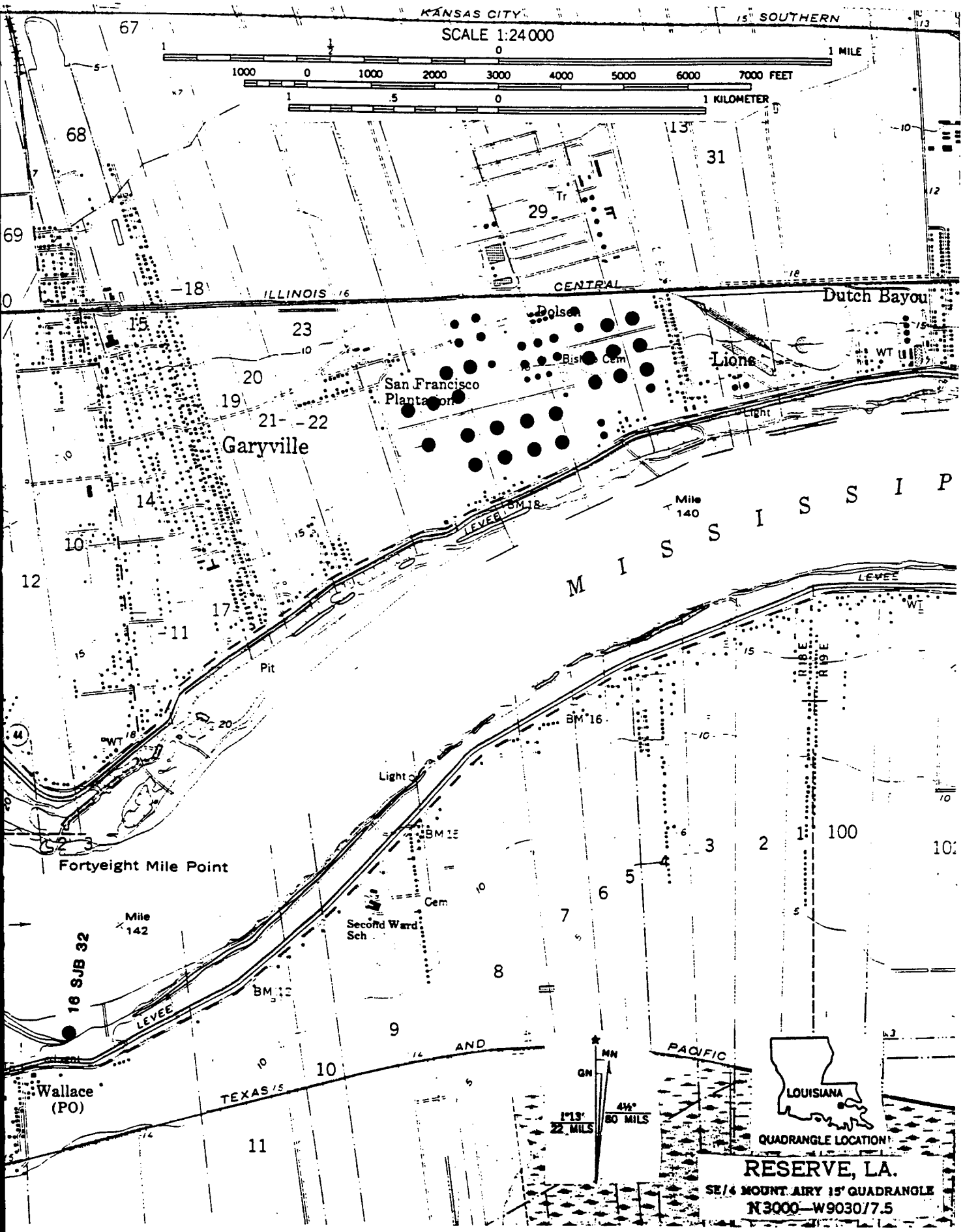
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

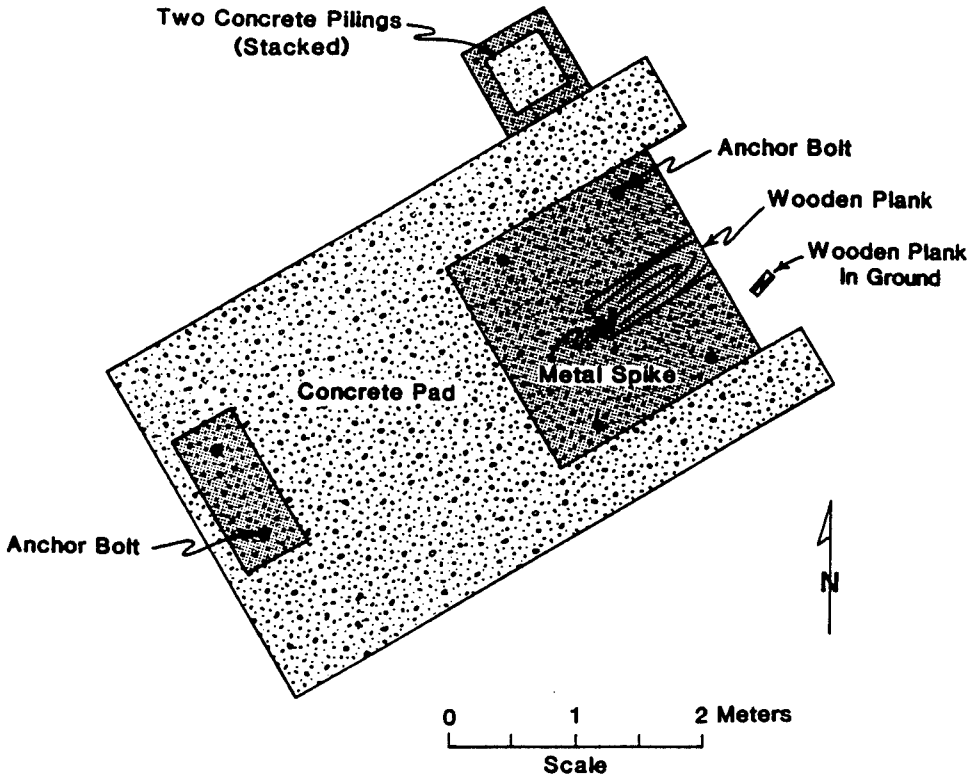
DATE: November 1, 1987

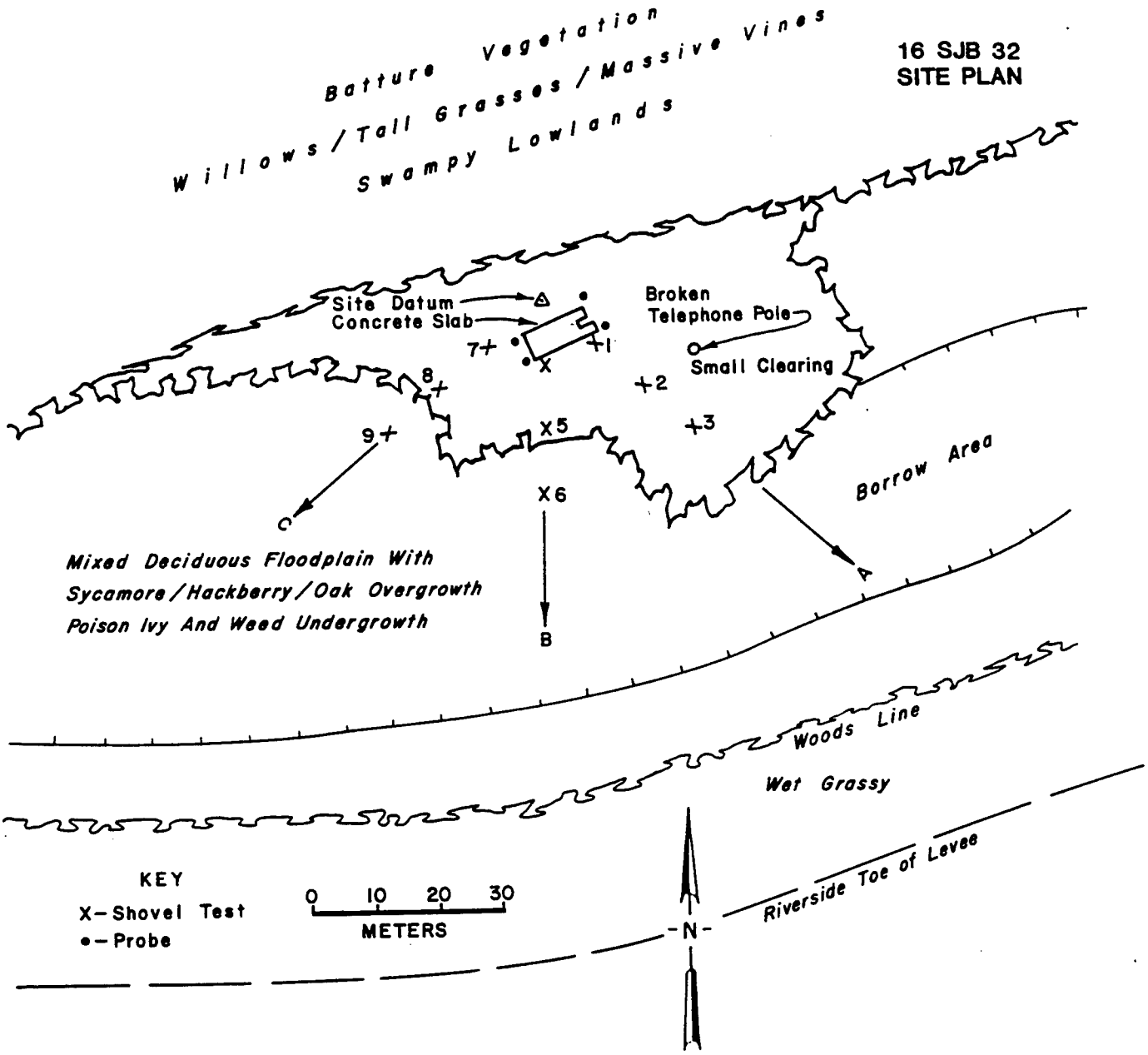
ADDITIONAL REMARKS

This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site.


KANSAS CITY SOUTHERN
SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
ILLINOIS CENTRAL
Dutch Bayou
Dolsen
Bishop Cem
Lions
San Francisco Plantation
Garyville
Light
Mile 140
LEVEE
BM 18
MISSISSIPPI
Pit
WT
BM 16
Light
Fortyeight Mile Point
Mile 142
Second Ward Sch
Cem
16 SJB 32
BM 12
LEVEE
Wallace (PO)
TEXAS AND PACIFIC
MN
GN
1°13'
22 MILS
4½°
80 MILS
LOUISIANA
QUADRANGLE LOCATION
RESERVE, LA.
SE/4 MOUNT AIRY 15' QUADRANGLE
N3000—W9030/7.5

16 SJB 32
DETAIL




16 SJB 32
SITE PLAN
Batture Vegetation
Willows / Tall Grasses / Massive Vines
Swampy Lowlands
Site Datum
Concrete Slab
Broken
Telephone Pole
Small Clearing
7+
8+
9+
X
+1
+2
+3
X5
X6
Borrow Area
Mixed Deciduous Floodplain With
Sycamore / Hackberry / Oak Overgrowth
Poison Ivy And Weed Undergrowth
A
B
C
Woods Line
Wet Grassy
Riverside Toe of Levee
KEY
X – Shovel Test
• – Probe
0 10 20 30
METERS
-N-

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Angelina 87-1 **STATE SURVEY NO.:** 16 SJB 35

OTHER SITE DESIGNATION: (Fish trap site)

SITE LOCATION AND APPROACH:

From the junction of LA 54 and LA 44 in Garyville, Louisiana, turn south onto the levee road, proceed southwest on levee road for 300 meters. Proceed south on foot of levee following the trail to the river bank. The site lies 300 m to the west (azimuth 270°).

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mount Airy, LA, 1962 **7.5 MIN:** Reserve, LA, 1962 (Photorevised 1981)

GEOGRAPHIC COORDINATES: Lat. 30°02'15" N Lon. 90°37'27" W

UTM COORDINATES: Zone 15 E 729120 N 3325000

_____ **OF THE** _____ **OF THE S 1/4 OF SECTION 9, TOWNSHIP 11S, RANGE 6E.**

PHYSICAL SETTING

LANDFORM: Batture, river cutbank

GEOMORPHIC PROCESSES: Riverine erosion/deposition, flooding

ELEVATION & RELIEF: 20 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: On cutbank; east bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association: sands (10 YR 5/3); clays (10 YR 3/1); and sandy clays (10 YR 5/3)

FLORAL COMMUNITIES: Willow and sycamore overstory, poison ivy and heavy weed understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects

NEAREST KNOWN SITE: Angelina 87-2, 0.4 km @ azimuth 115°

SITE DESCRIPTION

SITE SIZE: Historic scatter, 15 m N-S by 15 m E-W; portion of levee road

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Very sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: 50-60 cm below ground surface

FEATURES: None

DATING/CULTURAL AFFILIATION: Historic, late 19th/early 20th century

PRESENT CONDITION/PRESERVATION: Buried under 50 cm of alluvial deposit

PRESENT USE: None

PRESENT AND FUTURE IMPACTS: Future revetment construction will destroy entire site

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area; one (1) bank line profile (1.00 m wide x 1.20 m deep) for vertical control and one (1) auger test (1.50 m deep)

DESCRIPTION OF MATERIAL: (4) whiteware, plain; (5) wire nails; (1) wire spike; (1) unidentified metal object. All material from the surface.

SITE EVALUATION

RESEARCH POTENTIAL: Limited--may contribute to early transportation route studies

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work is recommended

RECORDS

OWNER/TENANT AND ADDRESS: Not known

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None recorded

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation,
and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

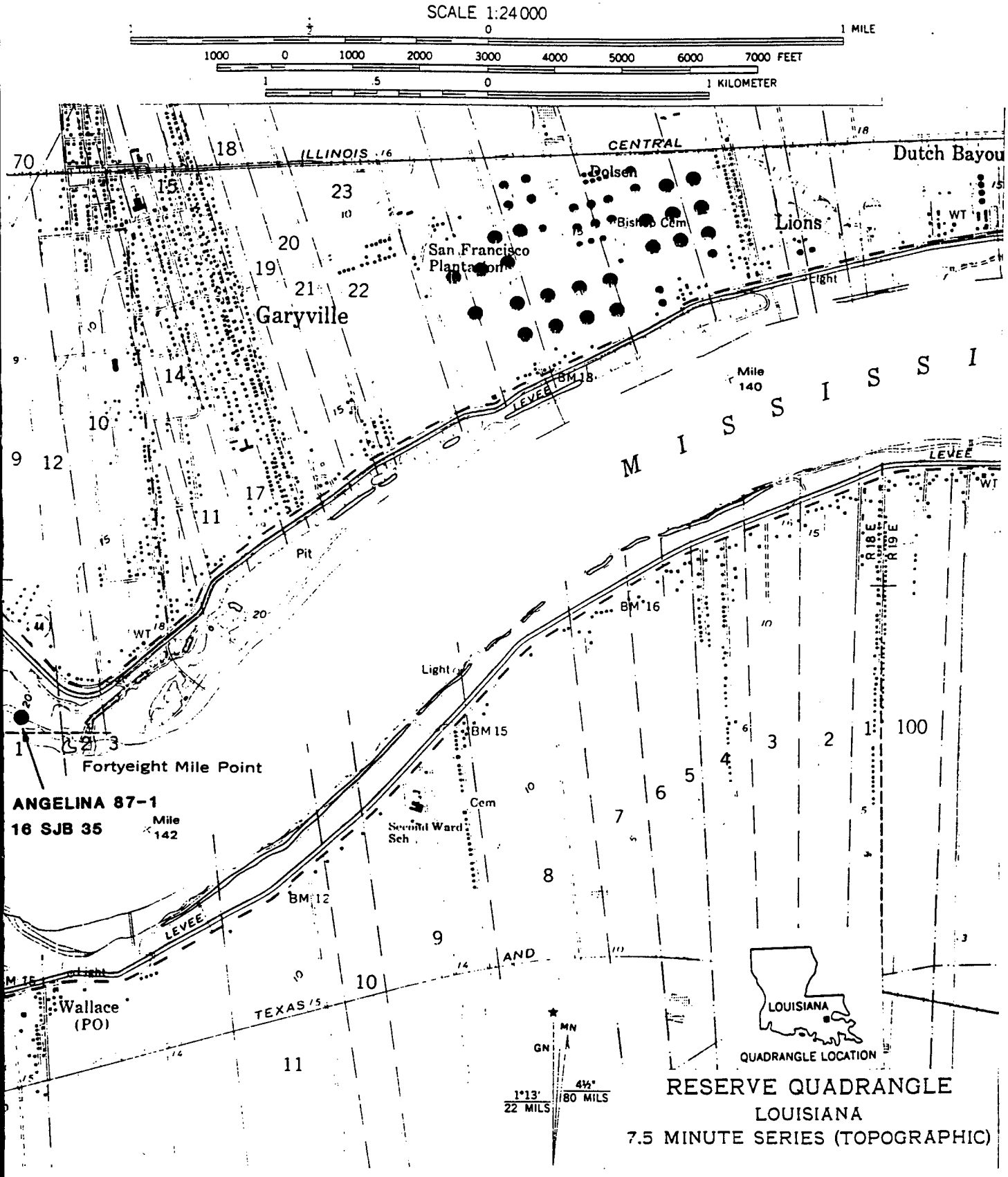
Shannon, G. W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
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RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

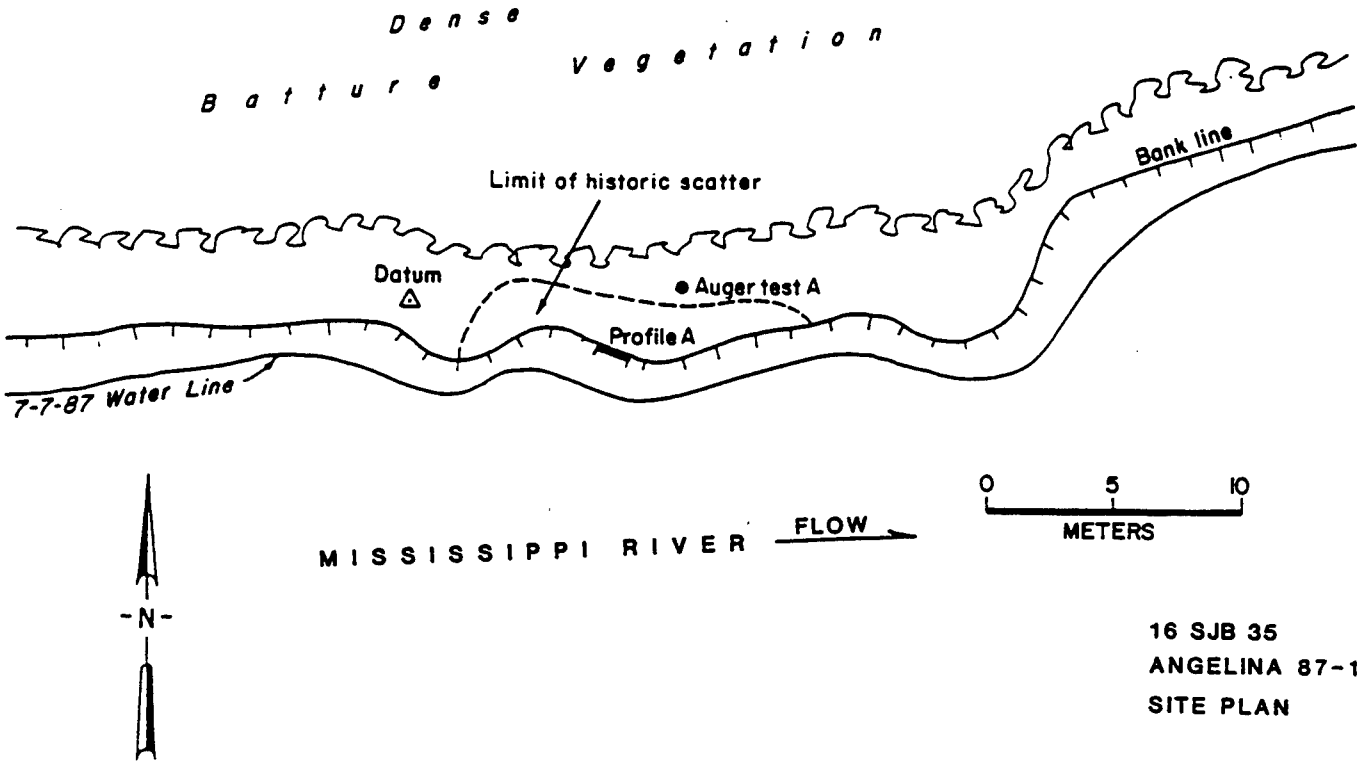
Evidence of levee road fill is still intact and visible along the face of the bank line. Fish traps were in place along the water edge of this site in June of 1987.



RESERVE QUADRANGLE

LOUISIANA

7.5 MINUTE SERIES (TOPOGRAPHIC)



16 SJB 35
ANGELINA 87-1
SITE PLAN

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Angelina 87-2 **STATE SURVEY NO.:** 16 SJB 36

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the junction of LA 54/LA 44 in Garyville, Louisiana, turn (SOUTH) onto the levee road, proceed (SW) on levee road for 300 meters. Proceed (SOUTH) on foot following the trail to the river bank. The site is located 30 m to the (WEST) (azimuth 280°).

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mount Airy, LA, 1962 **7.5 MIN:** Reserve, LA, 1962 (Photorevised 1981)

GEOGRAPHIC COORDINATES: Lat. 30°02'19" N Lon. 90°37'20" W

UTM COORDINATES: Zone 15 E 729350 N 3324905

_____ **OF THE** _____ **OF THE S 1/4 OF SECTION 2, TOWNSHIP 12S, RANGE 6E.**

PHYSICAL SETTING

LANDFORM: Batture, river cutbank

GEOMORPHIC PROCESSES: Riverine erosion, deposition, flooding

ELEVATION & RELIEF: 20 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: On cutbank; east bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association: sands (10 YR 5/3) and clays (10 YR 3/1)

FLORAL COMMUNITIES: Willow and sycamore overstory, poison ivy and heavy weed understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects

NEAREST KNOWN SITE: Angelina 87-1, 0.4 km @ azimuth 295°

SITE DESCRIPTION

SITE SIZE: Historic scatter, 5 m N-S by 15 m E-W

CONFIGURATION: Irregular

DENSITY OF CULTURAL MATERIALS: Very sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: Deposit limited to surface scatter

FEATURES: Feature 1 (metal hoop)

DATING/CULTURAL AFFILIATION: Historic, late 19th/early 20th century

PRESENT CONDITION/PRESERVATION: Disturbed by erosion & flooding

PRESENT USE: None

PRESENT AND FUTURE IMPACTS: Revetment construction will destroy the site

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area/no excavation.

DESCRIPTION OF MATERIAL: (1) creamware sherd; (1) light green champagne bottle, flat finish; (2) horse teeth; (2) mammal bones.

SITE EVALUATION

RESEARCH POTENTIAL: Little potential beyond locational and temporal information

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work is recommended

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None recorded

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation,
and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE AT: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

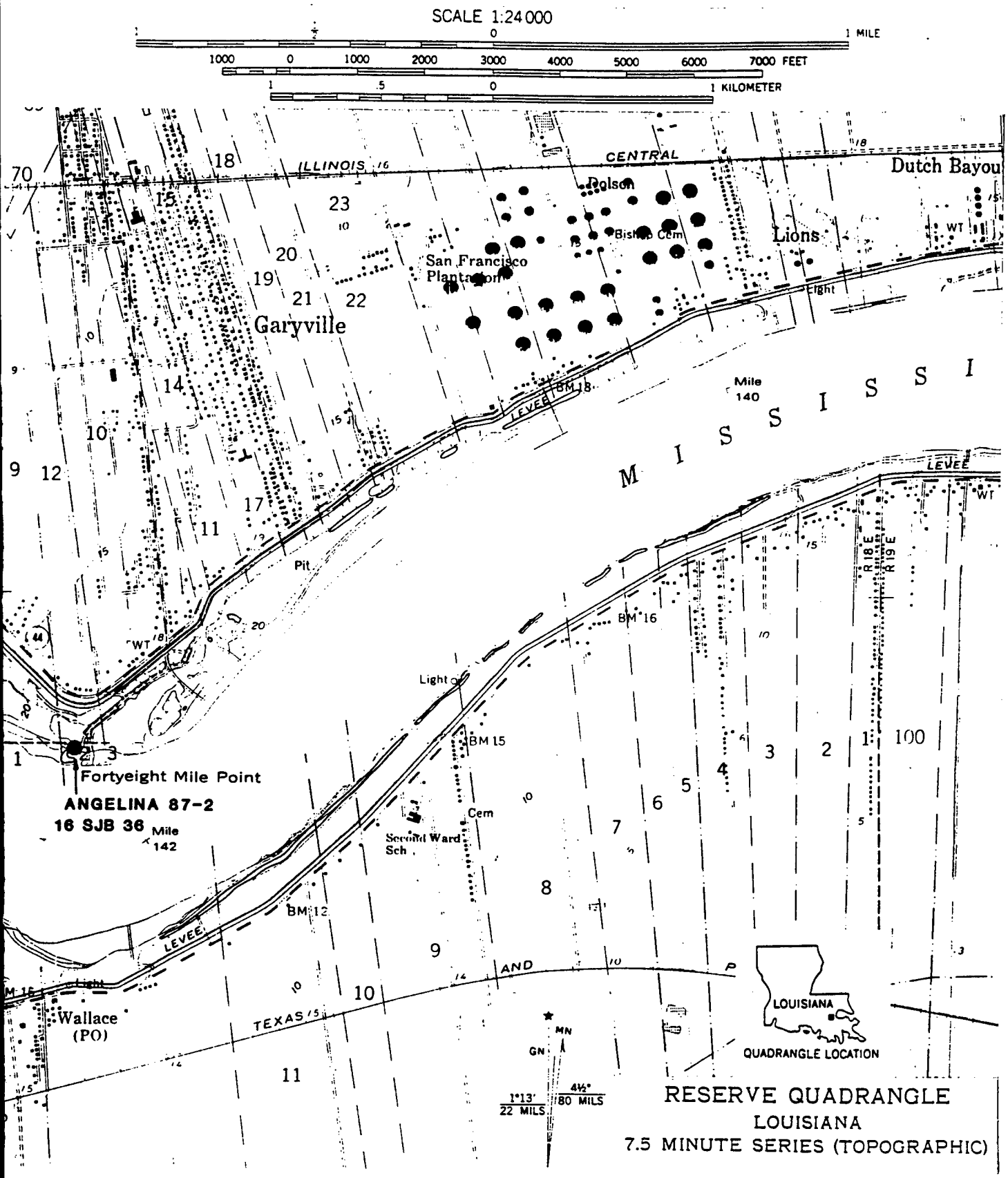
REFERENCES:

Shannon, G. W.et. al.
1987 Cultural Resources Survey of St. John the Baptist and St. Charles Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

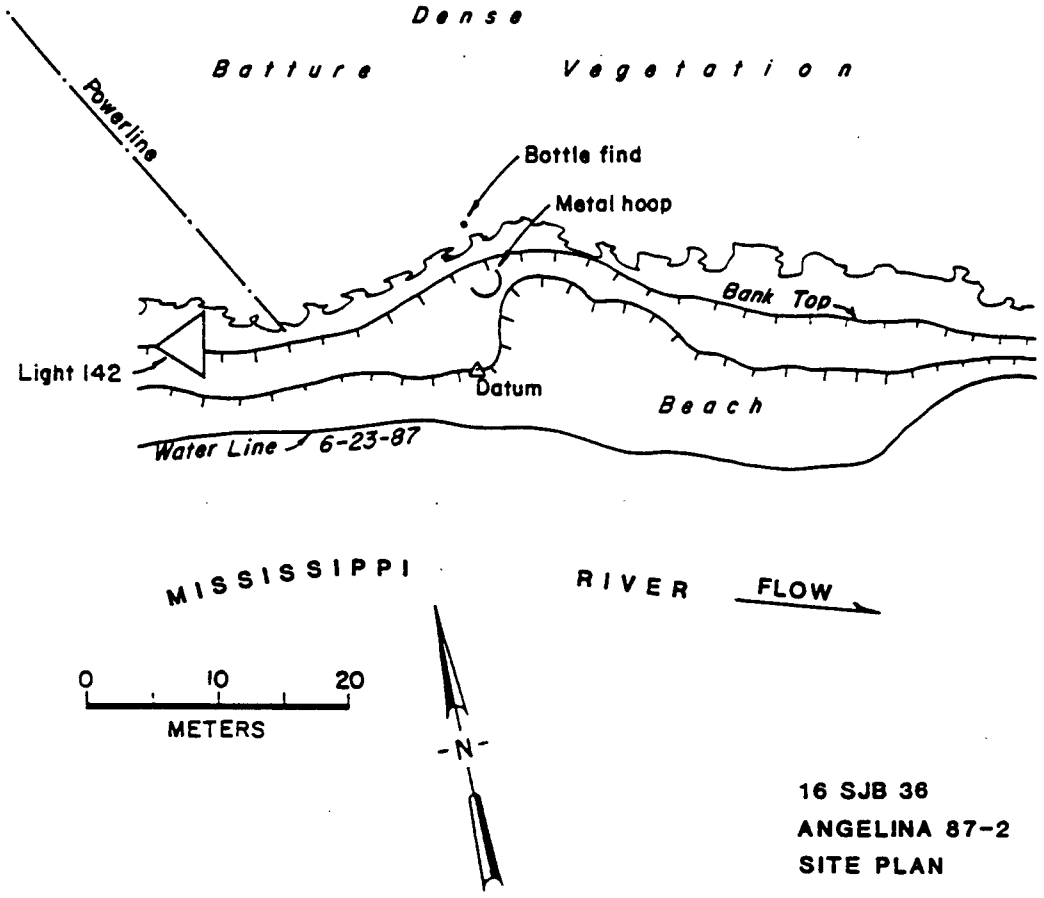
ADDITIONAL REMARKS



RESERVE QUADRANGLE

LOUISIANA

7.5 MINUTE SERIES (TOPOGRAPHIC)



16 SJB 36
ANGELINA 87-2
SITE PLAN

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Willow Bend 87-1 **STATE SURVEY NO.:** 16 SJB 37

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH:

From the junction of LA 18 and the Edgard ferry crossing, travel west on LA 18 for 1.3 miles. Park at Club Grocery. Proceed north on foot to top of levee road. The site lies 40 m (azimuth 350°) between the batture vegetation and the Mississippi River.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mount Airy, LA, 1962 **7.5 MIN:** Reserve, LA, 1962 (Photorevised 1981)

GEOGRAPHIC COORDINATES: Lat. 30°02'50" N Lon. 90°35'10" W

UTM COORDINATES: Zone 15 E 732800 N 3326300

_____ **OF THE** ____ **OF THE NE 1/4 OF SECTION 2, TOWNSHIP 11S, RANGE 18E**

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 10 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site lies on west bank of the Mississippi River

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Willow and sycamore overstory, tall weeds and poison ivy understory

FAUNAL COMMUNITIES: Small mammals, reptiles, birds, amphibians, insects, arachnids

NEAREST KNOWN SITE: 16 SJB 30, 50 m to the EAST (azimuth 90°)

SITE DESCRIPTION

SITE SIZE: 30 m N-S by 150 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: Dense surface scatter along the shoreline

DEPTH OF DEPOSIT/STRATIGRAPHY: Surface scatter only; 1 x 2 m excavation unit revealed no subsurface deposits

FEATURES: Feature 1 (rice flume)

DATING/CULTURAL AFFILIATION: Historic (mid 19th to late 20th century)

PRESENT CONDITION/PRESERVATION: Disturbed by barge moorings and associated cables, and erosion

PRESENT USE: Barge mooring area

PRESENT AND FUTURE IMPACTS: Site will be destroyed by revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area; one (1) bank line profile (3 m wide x 1.40 m deep); (1) 1 x 2 m test excavation unit, 1.0 m deep with (1) auger test at base of level 10; (1) 1 x 1 m test excavation unit, 1.0 m deep; (12) auger tests placed on rays extending from site datum.

DESCRIPTION OF MATERIAL: (5) redware; (5) buff bodied stoneware, Albany slip; (12) ironstone; (3) Rockingham glazed yelloware; (36) whiteware/ironstone; (5) amber glass bottle fragments; (3) soft paste porcelain; (9) whiteware blue transfer print; (6) clear bottle glass; (4) cut bone; (5) brick fragments; (3) possible gabbro stone; (2) railroad spikes; (28) prehistoric sherds.

SITE EVALUATION

RESEARCH POTENTIAL: Limited--may contribute to locational information of certain late prehistoric ceramic types

STATE OF NATIONAL REGISTER ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: Available at:
LA. Division of Archeology
Department of Culture, Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, Louisiana 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, Louisiana 70123

REFERENCES:

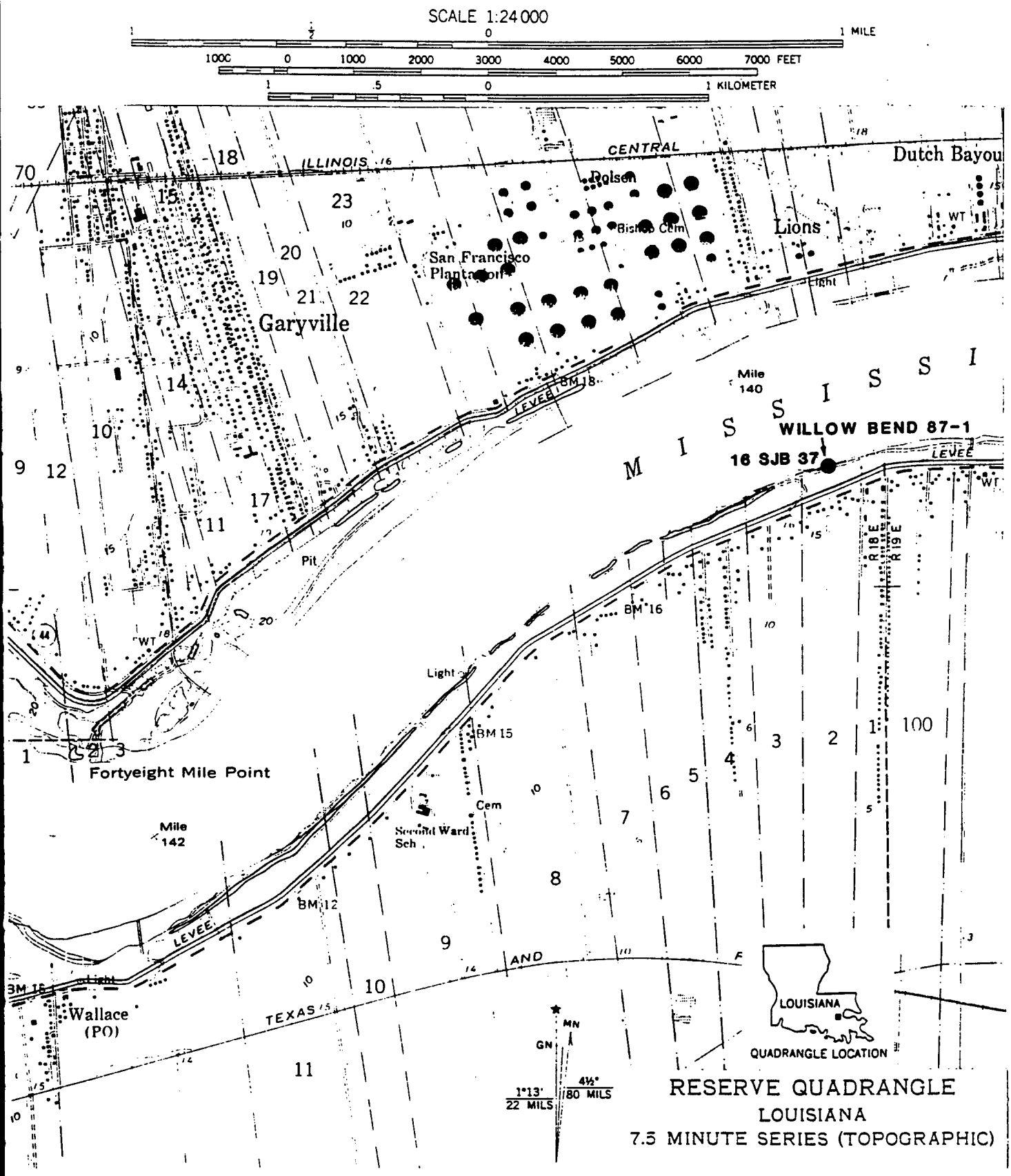
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist and St. Charles Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

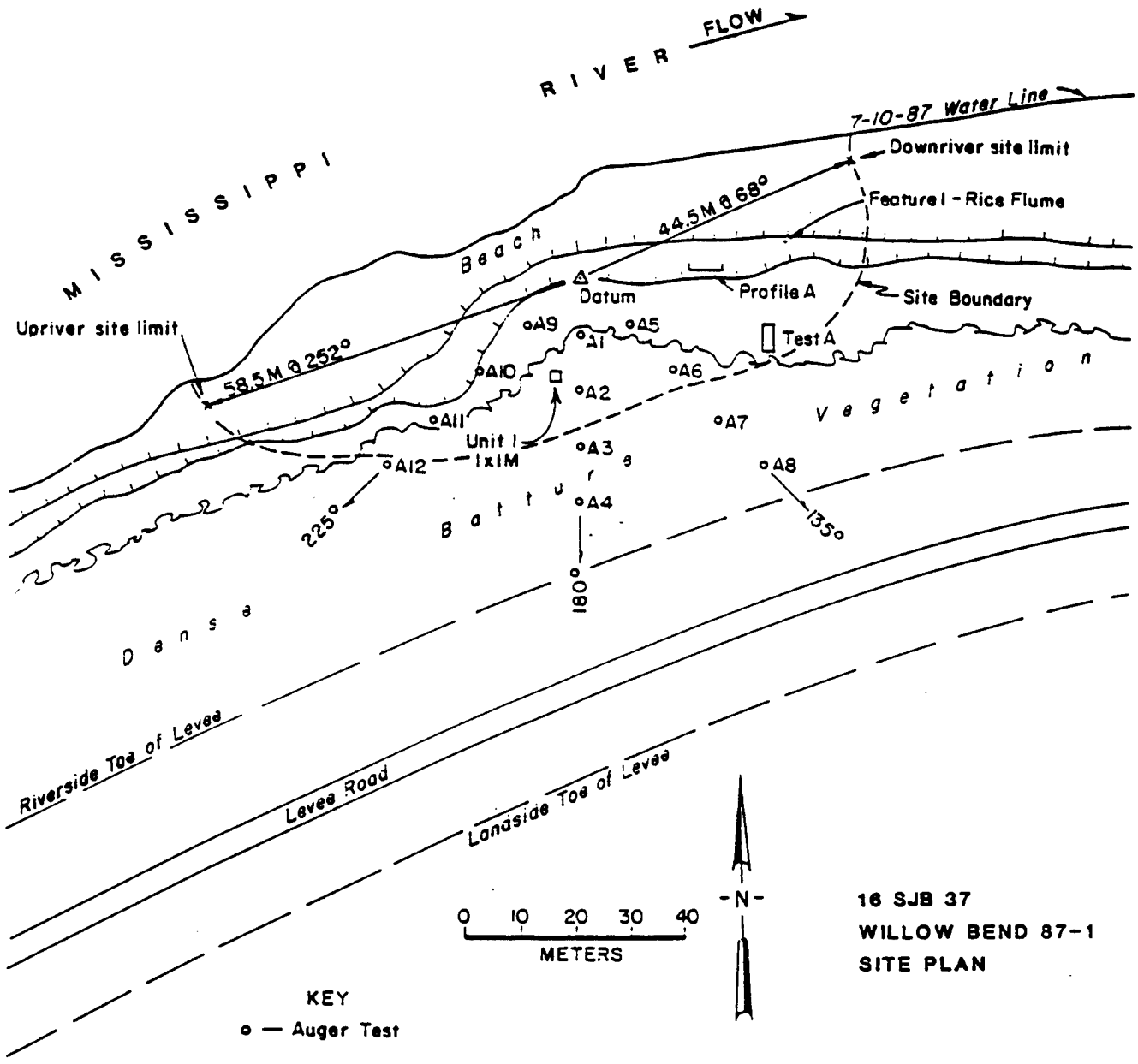
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

No intact subsurface deposits besides the road fill have been identified at 16 SJB 37.


SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
CENTRAL
ILLINOIS
Dutch Bayou
Dolsen
Bishop Cem
Lions
San Francisco Plantation
Garyville
Mile 140
LEVEE
BM 18
WILLOW BEND 87-1
16 SJB 37
MISSISSI
Pit
BM 16
Light
BM 15
Fortyeight Mile Point
Mile 142
Cem
Second Ward Sch
BM 12
LEVEE
AND
TEXAS
Wallace (PO)
LOUISIANA
QUADRANGLE LOCATION
MN
GN
1°13' 22 MILS
4½° 80 MILS
RESERVE QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)


FLOW
RIVER
MISSISSIPPI
7-10-87 Water Line
Downriver site limit
Feature I - Rice Flume
44.5M @ 68°
Beach
Datum
Profile A
Site Boundary
Upriver site limit
58.5M @ 252°
A9
A1
A5
Test A
A10
A6
A2
Vegetation
A11
A7
Unit I
1x1M
A3
A12
A8
225°
Batture
A4
135°
180°
Dansa
Riverside Toe of Levee
Levee Road
Landside Toe of Levee
0 10 20 30 40
METERS
-N-
KEY
o — Auger Test
16 SJB 37
WILLOW BEND 87-1
SITE PLAN

SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: IA-ED-5 **STATE SURVEY NO:** 16 SJB 39

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: Site is located approximately 120 m northeast of Levee Station 1710. Site is no more than 90 meters from water filled borrow parallel to levee.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mt. Airy 1962 **7.5 MIN:** Lutcher Quadrangle 1962

GEOGRAPHIC COORDINATES: Lat. 30°2'05"N
Lon. 90°38'29"W

UTM COORDINATES: Zone 15 N 3324899 E 727442

_____ **OF THE** _____ **OF THE** _____ **OF SECTION** North of and adjacent to Section 16, **TOWNSHIP** 12S, **RANGE** 18E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Fluvial deposition and erosion

ELEVATION & RELIEF: 0-3% slopes relatively level; 20 ft above MSL.

NEAREST WATER: Mississippi River at about 530 meters northeast

POSITION WITH RESPECT TO TERRAIN: Located on nearly level batture

SOIL CHARACTERISTICS: Convent soil associations

FLORAL COMMUNITIES: Deciduous hardwoods

FAUNAL COMMUNITIES: Rabbit, deer, opossum, armadillo, quail

NEAREST KNOWN SITE: Vacherie 87-1

SITE DESCRIPTION

SITE SIZE: 2.5 m N-S by 1.5 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: None noted other than the boiler housing located on the surface.

DEPTH OF DEPOSIT/STRATIGRAPHY: Shovel testing on rays around site did not display stratigraphic cultural units.

FEATURES: No features, structural or buried appeared to be associated with the metal boiler.

DATING/CULTURAL AFFILIATION: Late nineteenth century boiler housing.

PRESENT CONDITION/PRESERVATION: Excellent

PRESENT USE: Reforested batture

PRESENT AND FUTURE IMPACTS: Site will be disturbed by levee enlargement activities

COLLECTIONS

SURVEY/EXCAVATION METHOD: Site discovered by National Park Service Survey in 1984. Site relocated by R. Christopher Goodwin & Associates, Inc. in 1987. Pedestrian survey supplemented with (9) shovel tests at 10 m intervals on the site. (7) probes placed around the boundary of the boiler.

DESCRIPTION OF MATERIAL: None collected

SITE EVALUATION

RESEARCH POTENTIAL: Limited. May contribute to an understanding of the development of steam power for generating energy to run plantation machinery.

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS:

Shafer, J., A.B. Clemensen, and D. Rhodes
1984 An Archeological Survey of the proposed Upper Edgard Levee Project (M-143.5 to 137-R), St. John Parish, Louisiana. (A report prepared for the U.S. Army Corps of Engineers, New Orleans, District, Louisiana.)

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

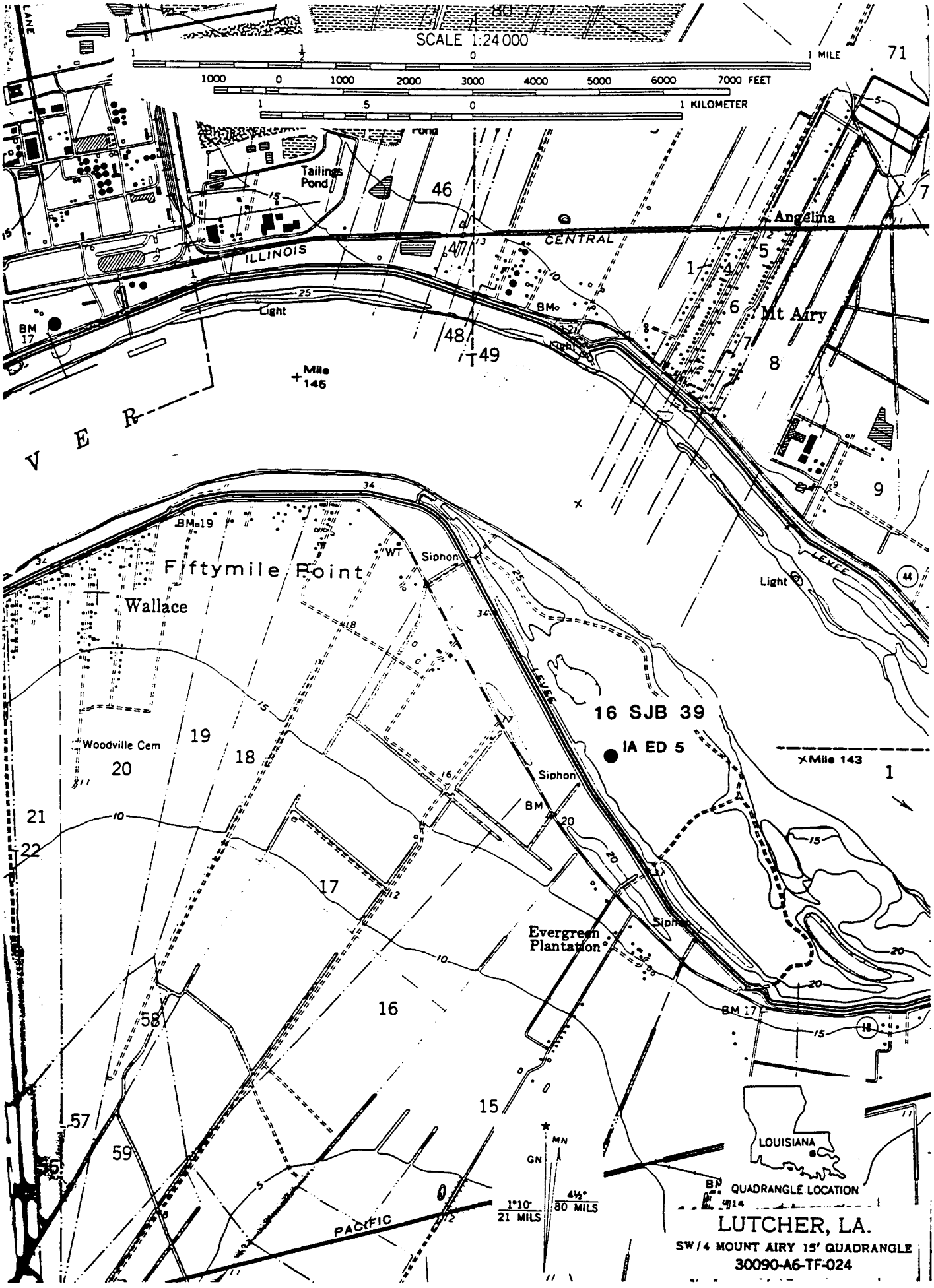
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

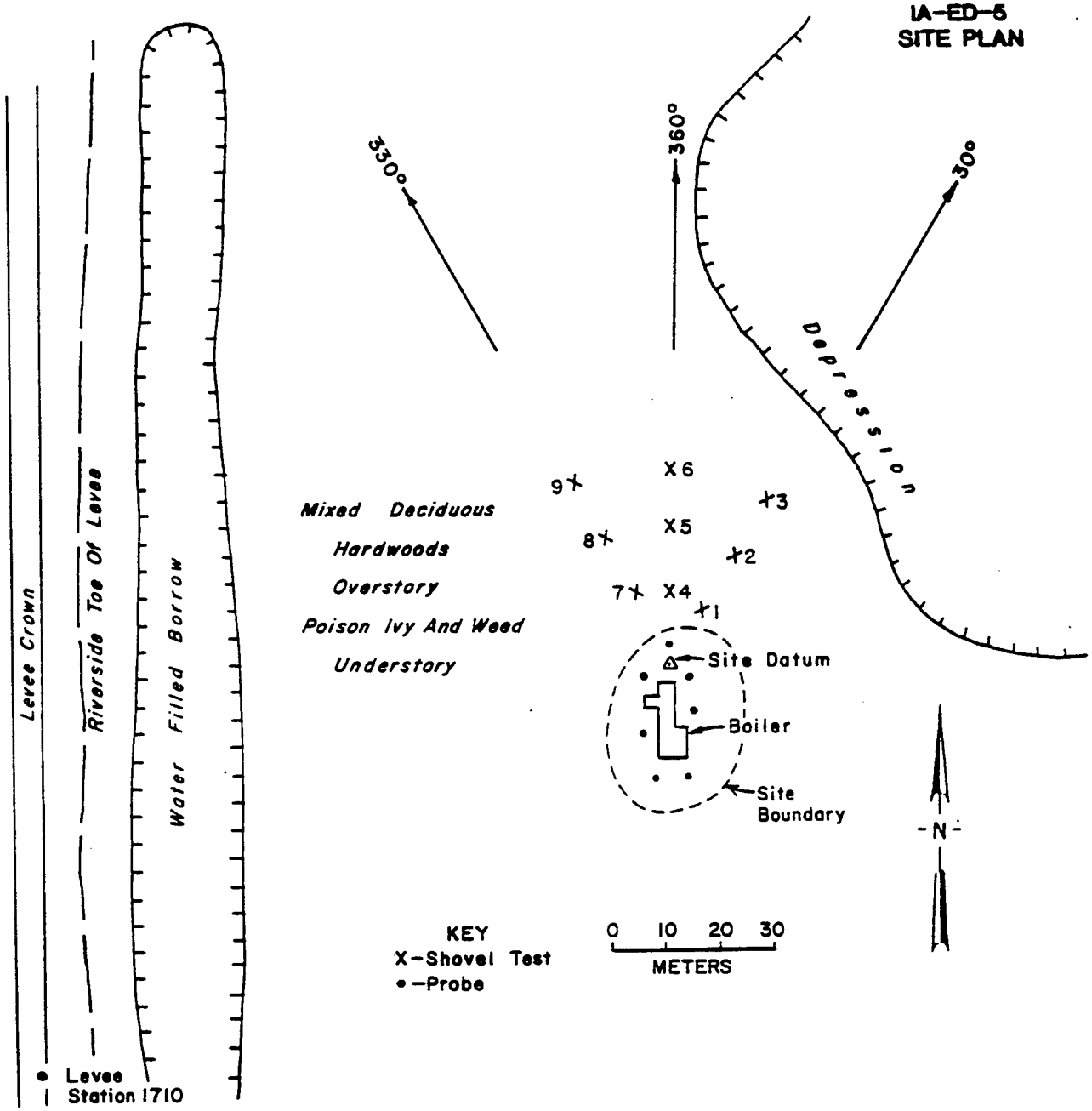
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

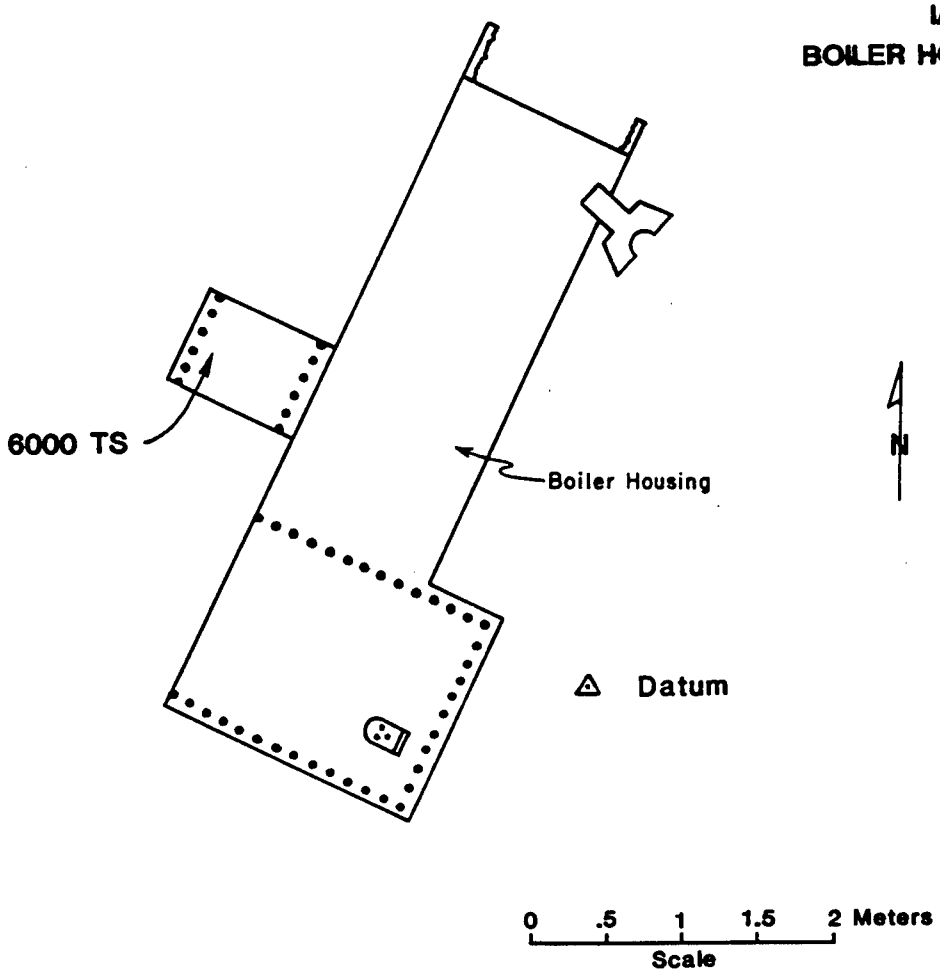
ADDITIONAL REMARKS

Note: The change made in the location of the boiler (IA-ED-5). The (NPS) survey placed the location of the boiler approximately 1800 feet or 550 meters too far to the South of its actual location.


SCALE 1:24 000
1 MILE
7000 FEET
1 KILOMETER
Tailings Pond
ILLINOIS CENTRAL
Angelina
Mt Airy
Light
BM 17
Mile 145
Fiftymile Point
Wallace
BMo19
WT
Siphon
LEVEE
16 SJB 39
IA ED 5
Mile 143
Woodville Cem
Evergreen Plantation
BM 17
LOUISIANA
QUADRANGLE LOCATION
PACIFIC
MN
GN
1°10'
21 MILS
4½°
80 MILS
LUTCHER, LA.
SW/4 MOUNT AIRY 15' QUADRANGLE
30090-A6-TF-024


IA-ED-5
SITE PLAN
330°
360°
30°
Depression
Levee Crown
Riverside Toe Of Levee
Water Filled Borrow
Mixed Deciduous
Hardwoods
Overstory
Poison Ivy And Weed
Understory
X6
X5
X4
1
2
3
7
8
9
Site Datum
Boiler
Site
Boundary
N
KEY
X-Shovel Test
•-Probe
0 10 20 30
METERS
Levee
Station 1710

IA-ED-5
BOILER HOUSING DETAIL



SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Vacherie 87-1 **STATE SURVEY NO: 16 SJB 40**

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: On LA 18, drive 1.25 miles from Evergreen Plantation, turn right on road crossing levee and proceed .2 miles. Site is 400 feet east of the riverside toe of the levee in the cane field.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mt. Airy 15' **7.5 MIN:** Lutcher,LA 7.5'
1962 Photorevised
1982

GEOGRAPHIC COORDINATES: Lat. 30°02'37"N
Lon. 90°38'50"W

UTM COORDINATES: Zone 15 E 727860 N 3325760

_____ **OF THE** _____ **OF THE** NW 1/4 Just North of and adjacent to **SECTION** 17, **TOWNSHIP** 12S, **RANGE** 18E.

PHYSICAL SETTING

LANDFORM: Batture/cane field

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 25 ft NGVD

NEAREST WATER: Mississippi

POSITION WITH RESPECT TO TERRAIN: Site is on West bank of Mississippi

SOIL CHARACTERISTICS: Convent association, brown-gray clays, loams, silts, and sands

FLORAL COMMUNITIES: Cane field, weeds

FAUNAL COMMUNITIES: Small mammals, birds, reptiles, amphibians, insects, arachnids

NEAREST KNOWN SITE: 16 SJB 23 is .5 miles NW of Vacherie 87-1

SITE DESCRIPTION

SITE SIZE: 50 meters N-S by 60 meters E-W

CONFIGURATION: Irregular

DENSITY OF CULTURAL MATERIALS: sparse

DEPTH OF DEPOSIT/STRATIGRAPHY: 40 cm

FEATURES: None

DATING/CULTURAL AFFILIATION: Late nineteenth century

PRESENT CONDITION/PRESERVATION: Farming

PRESENT USE: Cane field

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey. (6) Shovel tests.

DESCRIPTION OF MATERIAL: Historic ceramics are all 19th century materials with a mean ceramic date of 1858. Bottle glass dating to the same period also was found.

SITE EVALUATION

RESEARCH POTENTIAL: Little beyond locational and temporal information

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin & Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

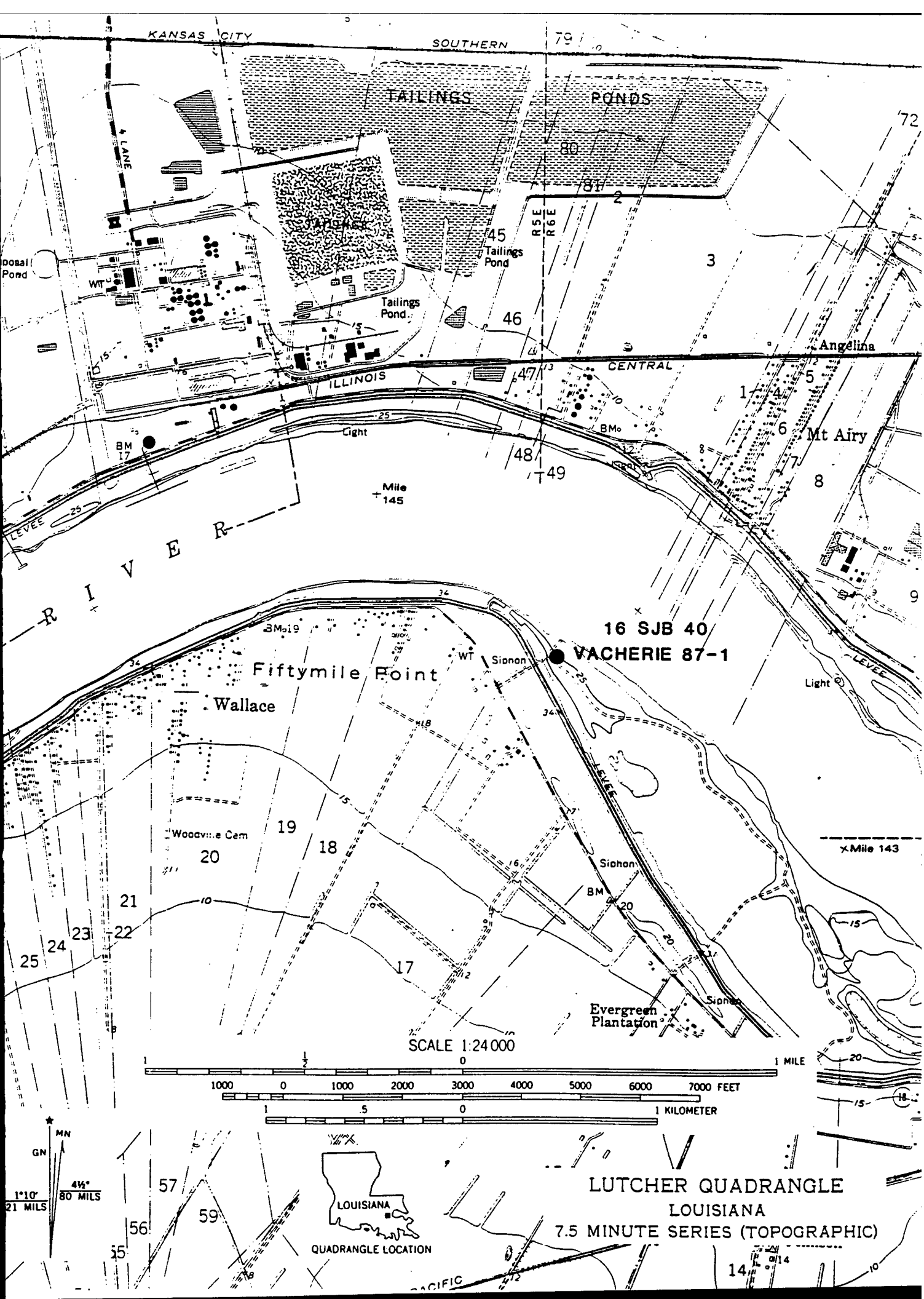
Shannon, G.W., et al.
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

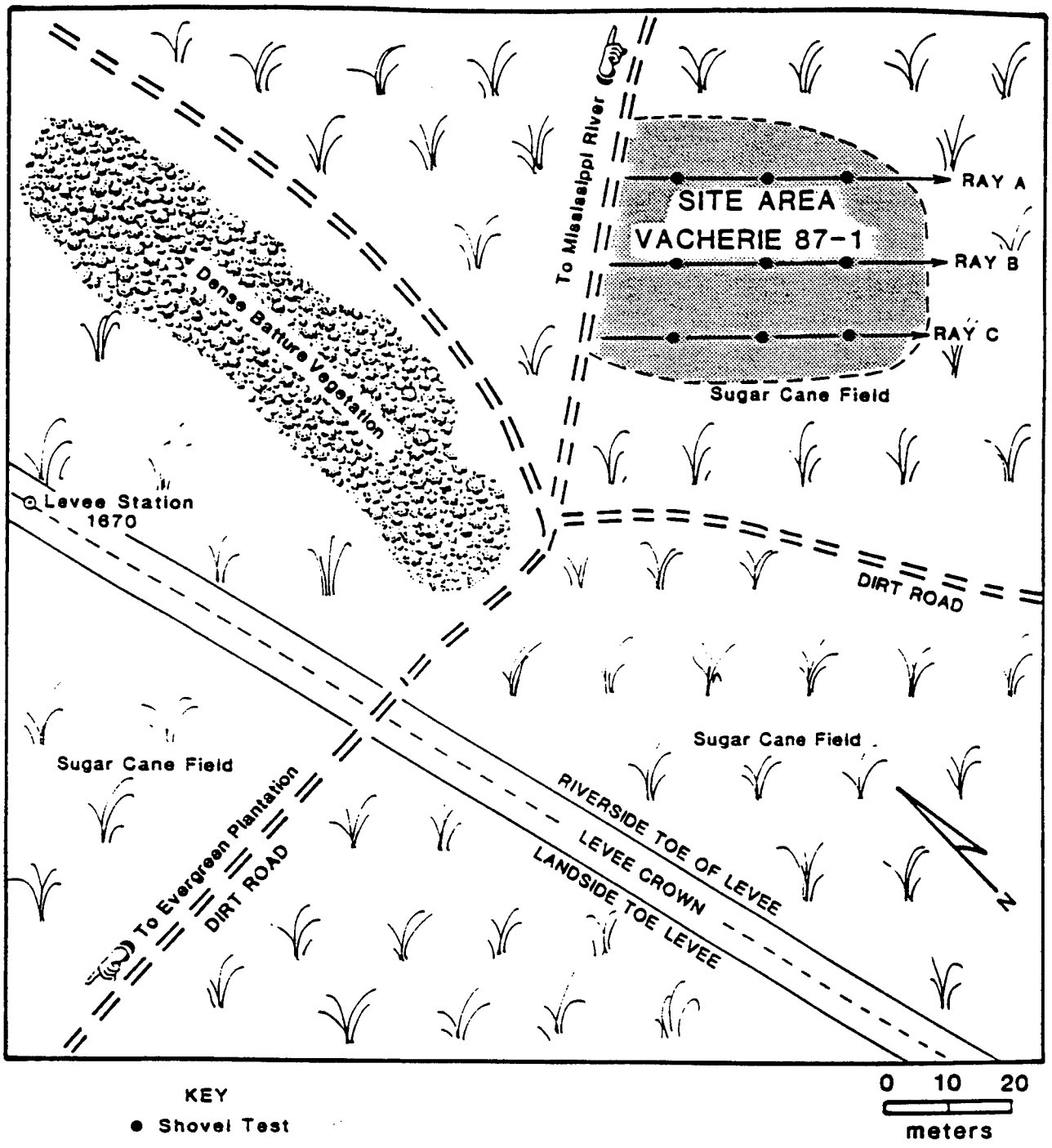
DATE: November 1, 1987

ADDITIONAL REMARKS

This surface scatter lacks contextual integrity. No intact cultural deposits have been located at the site.


KANSAS CITY SOUTHERN
TAILINGS
PONDS
LANE
Tailings Pond
Tailings Pond
WT
R5E
R6E
Angelina
CENTRAL
ILLINOIS
Light
BM 17
Mile 145
LEVEE
RIVER
16 SJB 40
VACHERIE 87-1
Fiftymile Point
Wallace
WT
Siphon
Light
LEVEE
Woodville Cem
Siphon
BM
Mile 143
Evergreen Plantation
Siphon
SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
MN
GN
1°10' 21 MILS
4½° 80 MILS
LOUISIANA
QUADRANGLE LOCATION
LUTCHER QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)

VACHERIE 87-1
SITE PLAN



SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: **STATE SURVEY NO:** X16 SJB-A

OTHER SITE DESIGNATION: IA-ED-1

SITE LOCATION AND APPROACH: Located on Batture. Go 785 meters West on levee from levee access road in Tigerville, then roughly 30 meters toward Mississippi River from riverside toe of levee.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mt. Airy 1962 **7.5 MIN:** Reserve Quadrangle

GEOGRAPHIC COORDINATES: Lat. 30°2'39"N
Lon. 90°32'58"W

UTM COORDINATES: Zone 15 N 3326050 E 736300

_____ **OF THE** _____ **OF THE** NW 1/4 S **of SECTION** 14, **TOWNSHIP** 12S, **RANGE** 19E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Subsidence, fluvial erosion and deposition

ELEVATION & RELIEF: 20 ft above MSL undulating 0-3% slope

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Located just inside treeline from mowed batture along levee

SOIL CHARACTERISTICS: Convent soil associations

FLORAL COMMUNITIES: Mixed deciduous trees.

FAUNAL COMMUNITIES: Rabbit, quail, squirrel, rodents

NEAREST KNOWN SITE: Estimated at 1/4 miles downriver from 16 SJB 28.

SITE DESCRIPTION

SITE SIZE: 15 m N-S by 110 m E-W

CONFIGURATION: Linear

DENSITY OF CULTURAL MATERIALS: A tombstone found among modern trash

DEPTH OF DEPOSIT/STRATIGRAPHY: Found in collection of modern trash running linear (E-W) along levee treeline

FEATURES: None

DATING/CULTURAL AFFILIATION: Tombstone dates to the 1860s

PRESENT CONDITION/PRESERVATION: Poor broken in two pieces

PRESENT USE: Trash pile

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey performed by the National Park Service, Denver Center, 1984 located the site. This site was relocated by R. Christopher Goodwin & Associates, Inc. in 1987. (9) Shovel tests were placed across the site.

DESCRIPTION OF MATERIAL: White marble tombstone in two pieces with inscription "Ici---repose Toussaint, Jean Pierre, dece---c24. Sept. 186-". The tombstone is 5 cm thick and 60 cm tall. It is found on the surface, lying flat on the ground.

SITE EVALUATION

RESEARCH POTENTIAL: None

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: The placement of this tombstone suggests that it has been secondarily deposited in this area, therefore, it is recommended that construction activities proceed in this area. No further work is required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: See 16 SJB 31 for information.

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

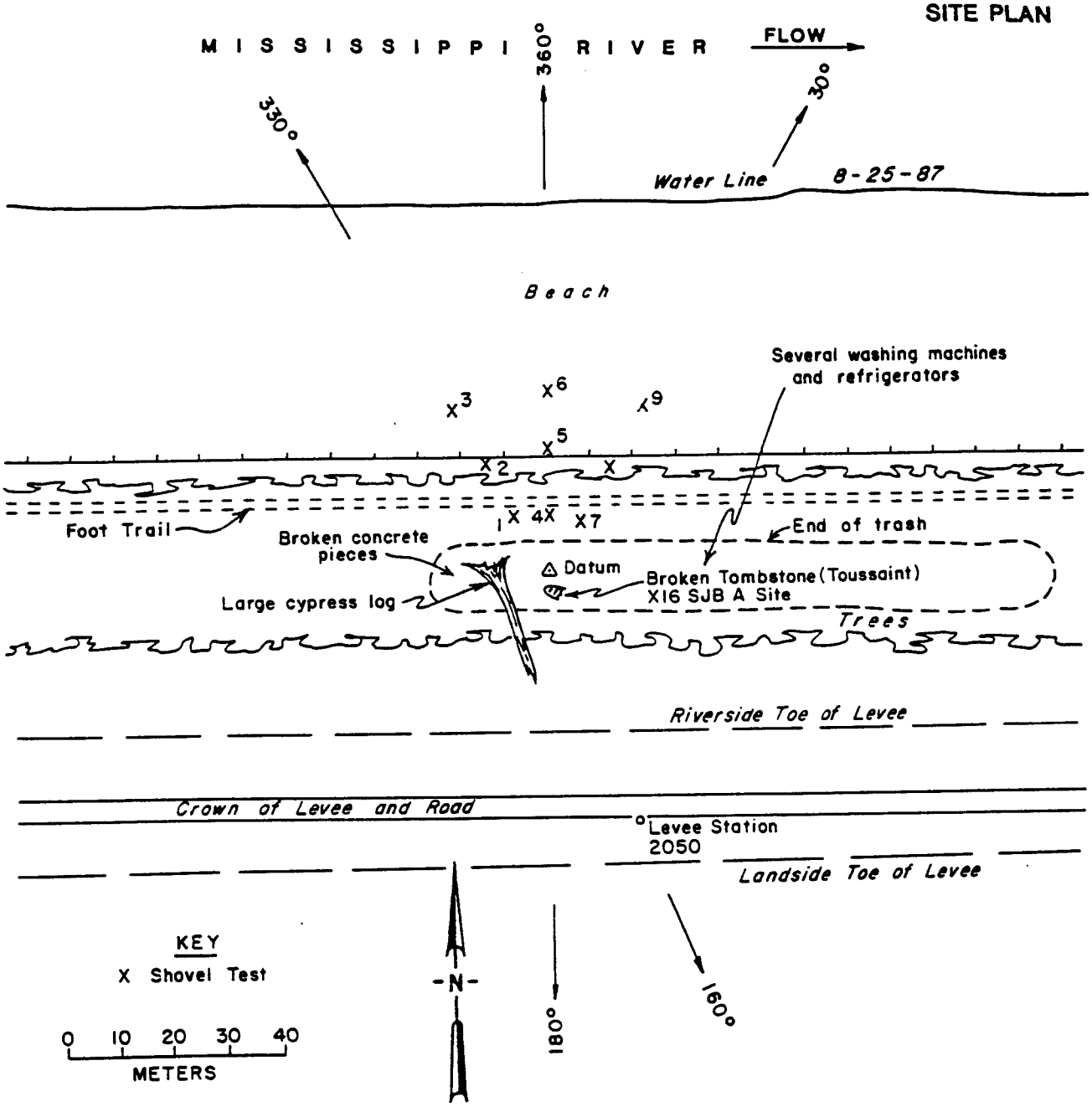
This spot find lacks contextual integrity. No intact cultural deposits have been located at the site.



RESERVE, LA.

SE/4 MOUNT AIRY 15' QUADRANGLE
N 3000—W 9030/7.5

X16 SJB A
SITE PLAN



SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: IA-ED-3 **STATE SURVEY NO:**

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: Travel East from Wallace, Louisiana along the levee road to a point 120 m South of Levee Station 1800, turn north and enter Batture. The site is located inside treeline along riverside toe of levee.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mt. Airy 1962 **7.5 MIN:** Reserve Quadrangle

GEOGRAPHIC COORDINATES: Lat. 30°1'34"N
Lon. 90°37'18"W

UTM COORDINATES: Zone 15 N 3323885 E 729350

_____ **OF THE** _____ **OF THE** NW 1/4 S **of SECTION** 12, **TOWNSHIP** 12S, **RANGE** 18E

PHYSICAL SETTING

LANDFORM: Batture, delta deposition

GEOMORPHIC PROCESSES: Fluvial deposition and erosion deposition

ELEVATION & RELIEF: 20 ft Above MSL 0-3% slopes gently undulating

NEAREST WATER: Mississippi River at 150 m to the North

POSITION WITH RESPECT TO TERRAIN: Located on a nearly level batture

SOIL CHARACTERISTICS: Convent soil associations

FLORAL COMMUNITIES: Mixed deciduous hardwoods, cottonwood, hackberry. Heavy ground cover of horsetail (understory). Also creepervines, poison ivy, etc.

FAUNAL COMMUNITIES: Small mammals, rodents, lizards, etc.

NEAREST KNOWN SITE: IA-ED-4 located approximately 150 m to NE

SITE DESCRIPTION

SITE SIZE: 2 m N-S by 2 m E-W

CONFIGURATION: Square cement pad

DENSITY OF CULTURAL MATERIALS: A cement pad with an associated metal bin on top

DEPTH OF DEPOSIT/STRATIGRAPHY: No stratigraphy or cultural deposits noted

FEATURES: Large concrete pad (approximately $2m^2$) with iron auger-like equipment draped over top and side. Pad has bolts into top.

DATING/CULTURAL AFFILIATION: Appears to be fairly modern and may date to 1950-1960 crayfish farming activities in the area.

PRESENT CONDITION/PRESERVATION: Disturbed

PRESENT USE: None

PRESENT AND FUTURE IMPACTS: Drainage ditch running along treeline parallel to river. Pad sits on top of spoils from ditch.

COLLECTIONS

SURVEY/EXCAVATION METHOD: This site was discovered by a National Park Survey in 1984. It was relocated by R. Christopher Goodwin & Associates, Inc. in 1987. Intensive pedestrian survey, and supplemental shovel testing conducted. (12) Shovel tests.

DESCRIPTION OF MATERIAL: No collections made.

SITE EVALUATION

RESEARCH POTENTIAL: Limited, may contribute to an understanding of the development of crayfish farming in southern Louisiana.

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work required.

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: See Site 16 SJB 31 for reference.

COLLECTIONS & AVAILABILITY: La Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
Associates, Inc.
5824 Plauche Street
New Orleans, LA 70123

REFERENCES:

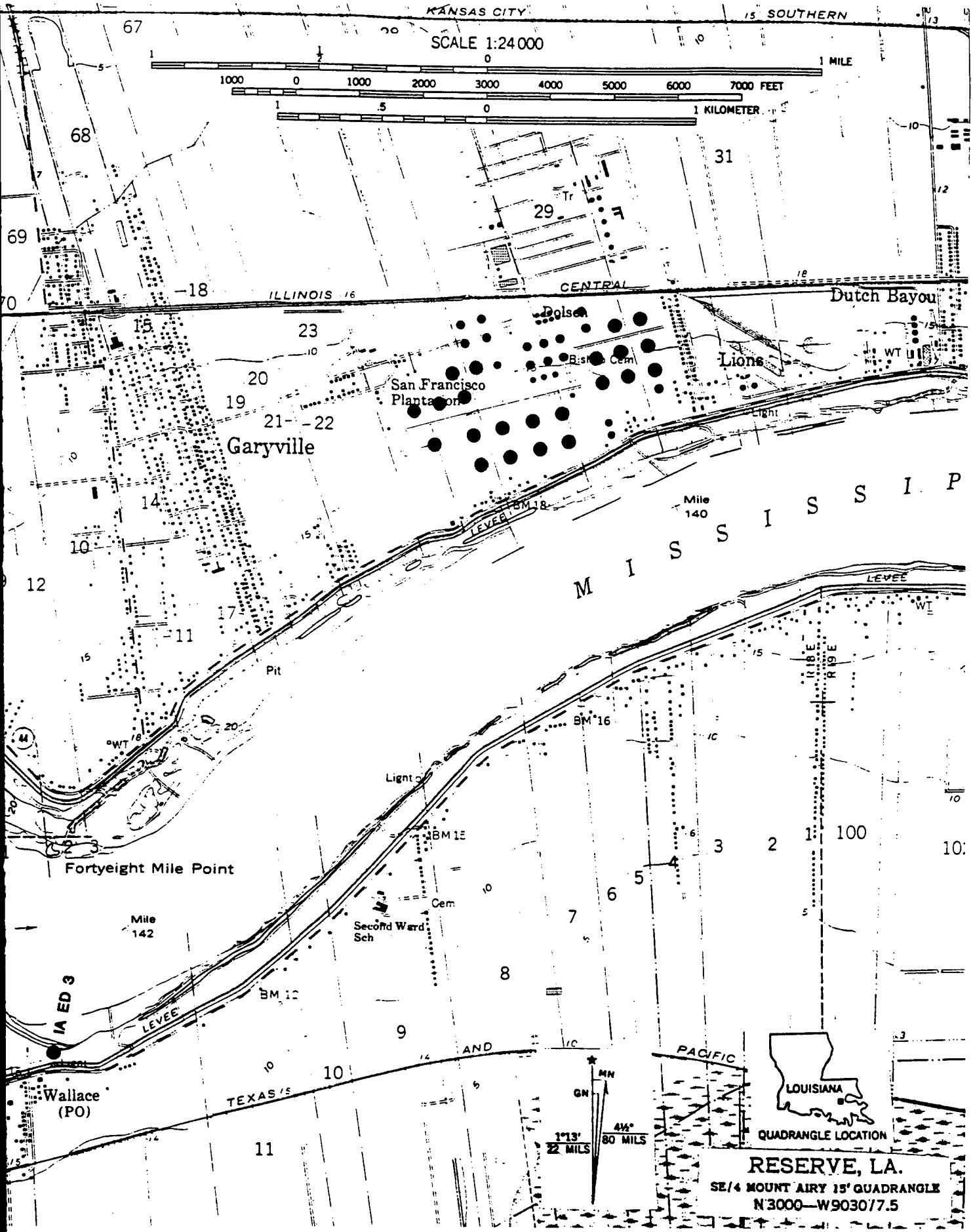
Shannon, G.W., L. Hewitt, L.A. Landry, C. Poplin, J. Turner, and R.C. Goodwin
1987 Cultural Resources Survey of St. John the Baptist Parishes Construction Items. (Draft report prepared for U.S. Army Corps of Engineers, New Orleans District, New Orleans, Louisiana.)

RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

This site does not possess intact cultural deposits. Its surface deposits lack sufficient integrity to contribute to the understanding of man's use of the Mississippi River and its natural levee through time.

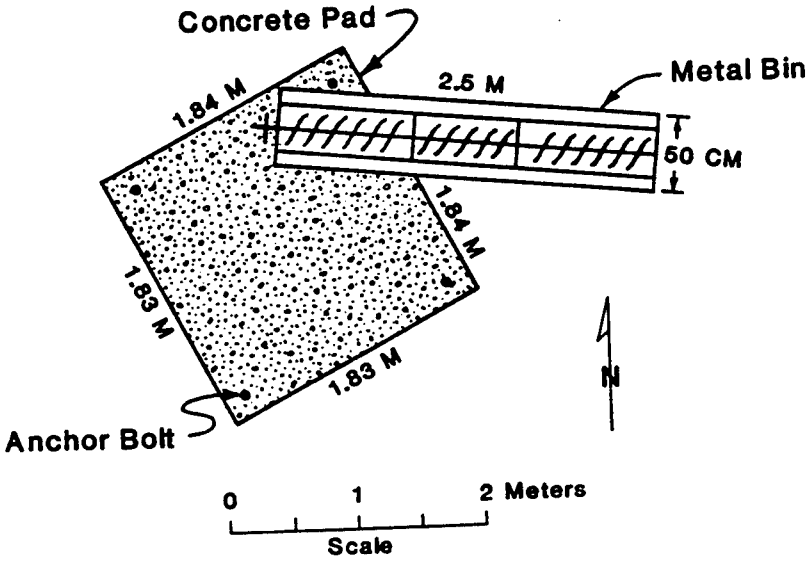


RESERVE, LA.

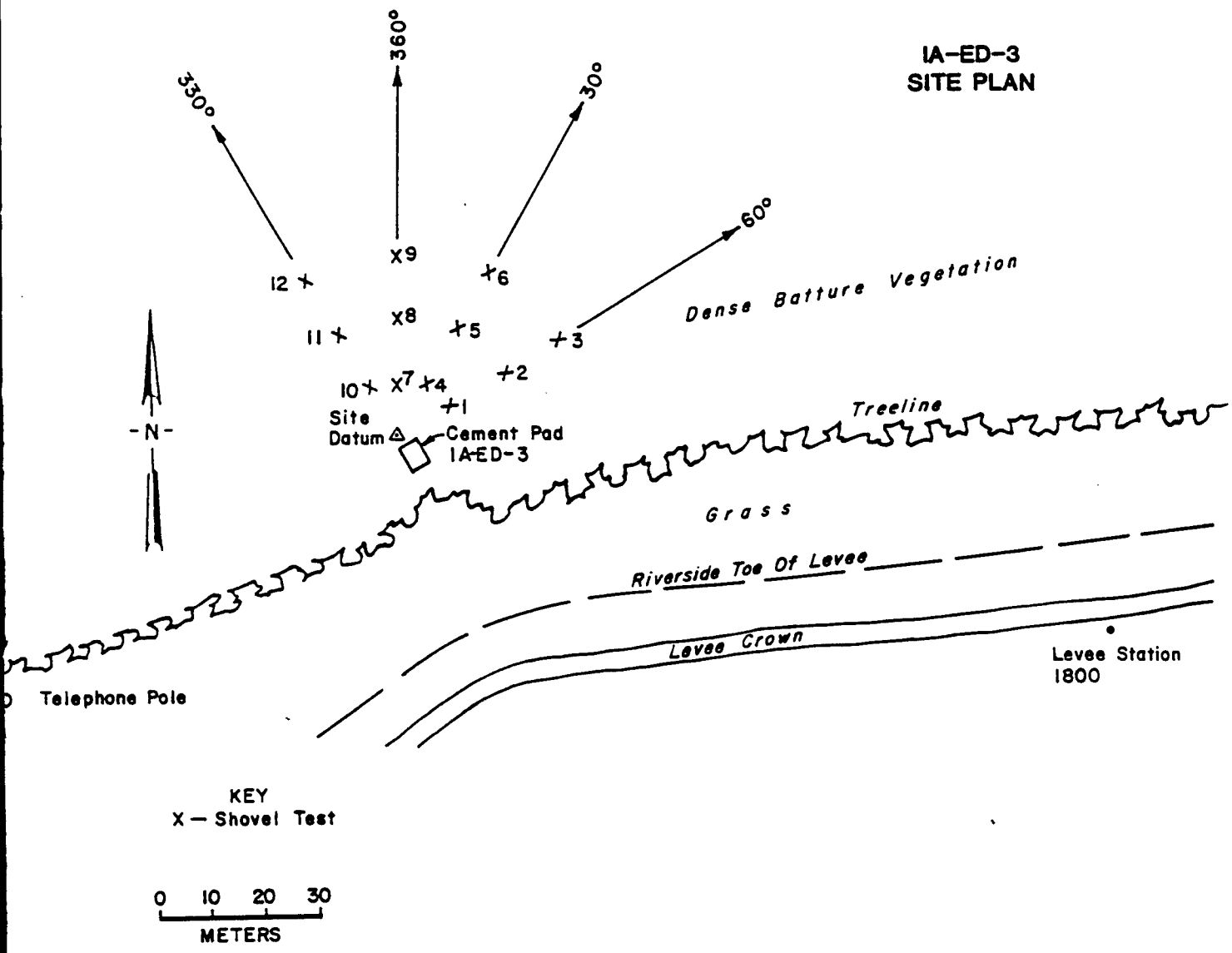
SE/4 MOUNT AIRY 15' QUADRANGLE

N3000—W9030/7.5

IA-ED-3
DETAIL



1A-ED-3
SITE PLAN



SITE RECORD FORM

LOCATIONAL DATA

SITE NAME: Reserve 87-1 **STATE SURVEY NO:**

OTHER SITE DESIGNATION: None

SITE LOCATION AND APPROACH: On LA 44 the site is South of the San Francisco Plantation , across the levee 50 meters in the batture, on the North end of the depression.

PARISH: St. John the Baptist

USGS QUADS. 15 MIN: Mt. Airy 15' **7.5 MIN:** Reserve, LA 1962 Photorevised 1981

GEOGRAPHIC COORDINATES: Lat. 30°2'45"N
Lon. 90°36'07"W

UTM COORDINATES: Zone 15 E 731200 N 3326400

_____ **OF THE** _____ **OF THE** S 1/2 of **SECTION** 26, **TOWNSHIP** 11S, **RANGE** 6E

PHYSICAL SETTING

LANDFORM: Batture

GEOMORPHIC PROCESSES: Erosion, alluviation

ELEVATION & RELIEF: 20 ft NGVD

NEAREST WATER: Mississippi River

POSITION WITH RESPECT TO TERRAIN: Site is on East bank of the Mississippi River

SOIL CHARACTERISTICS: Convent soils and silty alluvial land, frequently flooded

FLORAL COMMUNITIES: Willow and Sycamore overstory, tall weeds and poison ivy

FAUNAL COMMUNITIES: Small mammals, birds, reptiles, amphibians, insects, arachnids

NEAREST KNOWN SITE: 16 SJB 31 Located due SE on the right descending bank of the Mississippi River.

SITE DESCRIPTION

SITE SIZE: 10 m N-S x 10 m E-W, standing structure

CONFIGURATION: Square

DENSITY OF CULTURAL MATERIALS: Dense

DEPTH OF DEPOSIT/STRATIGRAPHY: Cement tanks beneath structure are 3 meters deep

FEATURES: 6.5 m x 7 m L-shaped single room cypress post and heavy stud frame structure. Gable and shed tin roof. Shed facing South exposure, no ventilation or gable ends. Corrugated sheet metal construction. Poured concrete and packed earth flooring.

DATING/CULTURAL AFFILIATION: Standing structure post - 1940

PRESENT CONDITION/PRESERVATION: Excellent

PRESENT USE: Currently not in use appears to be a water supply pumping station which is connected with San Francisco Plantation

PRESENT AND FUTURE IMPACTS: Site will be destroyed by future revetment construction

COLLECTIONS

SURVEY/EXCAVATION METHOD: An intensive pedestrian survey of the exposed shoreline and associated bank area (6) shovel tests on rays around the structure to determine whether subsurface features are present

DESCRIPTION OF MATERIAL: None collected

SITE EVALUATION

RESEARCH POTENTIAL: None

STATE OR NATIONAL ELIGIBILITY: Not eligible

RECOMMENDATIONS: No further work recommended

RECORDS

OWNER/TENANT AND ADDRESS: Unknown

INFORMANTS: None

PREVIOUS INVESTIGATIONS: None

COLLECTIONS & AVAILABILITY: LA Division of Archeology,
Department of Culture,
Recreation, and Tourism
666 N. Foster Drive
P.O. Box 44247
Baton Rouge, LA 70804

PHOTOGRAPHS & MAPS ON FILE: R. Christopher Goodwin &
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5824 Plauche Street
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REFERENCES:

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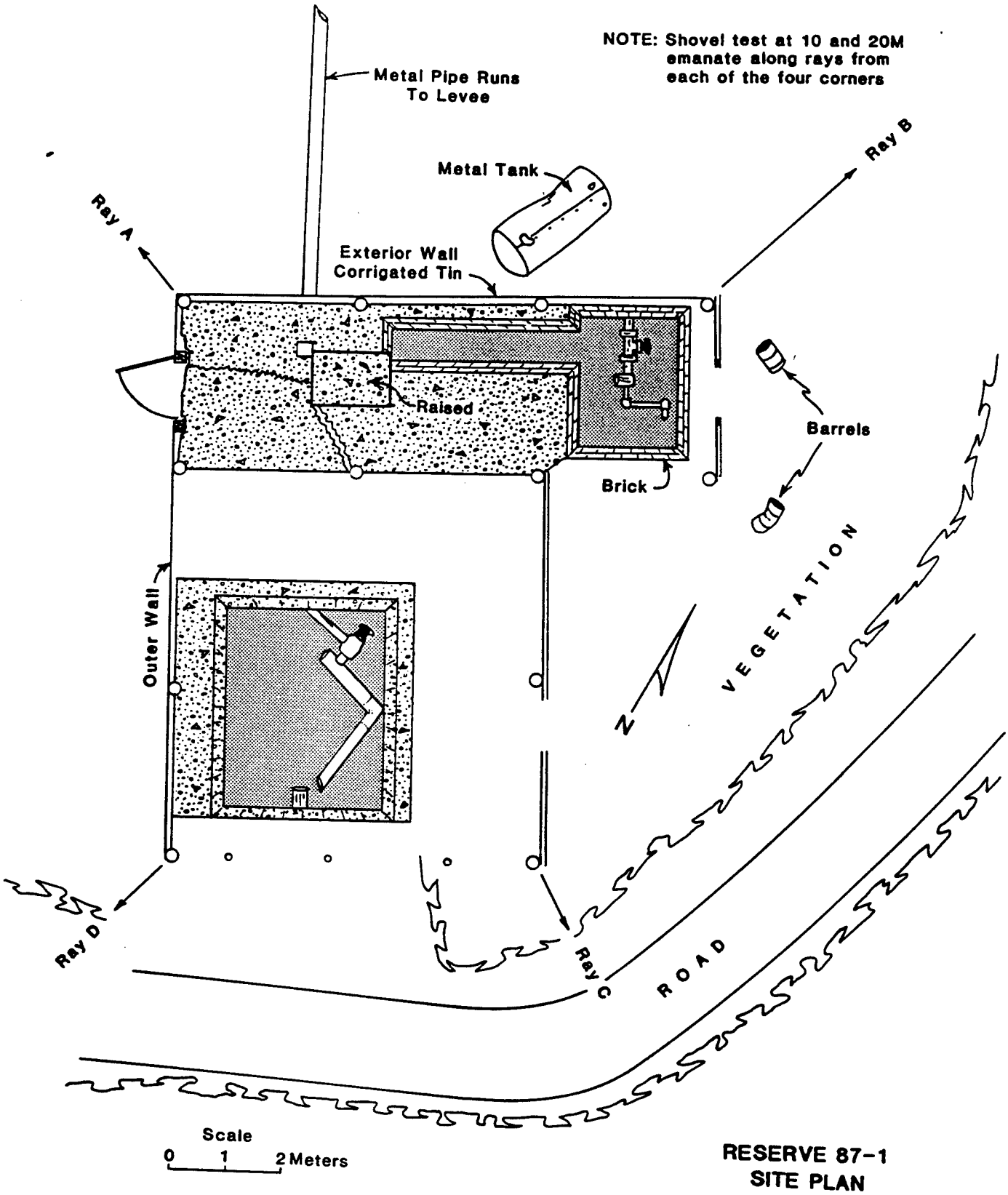
RECORDED BY: R. Christopher Goodwin & Associates, Inc.
George W. Shannon, Ph.D., Project Archeologist

DATE: November 1, 1987

ADDITIONAL REMARKS

No intact cultural deposits have been located around the perimeter of the site. Due to the recent age of this structure, it does not possess the quality of significance as defined by the National Register Criteria (36 CFR 60.4).


RESERVE 87-1
MISSISSIPPI
Garyville
San Francisco Plantation
Dutch Bayou
Lions
Bolser
Second Ward Sch
Cem
Pit
Light
BM 16
BM 15
BM 12
LEVEE
ILLINOIS CENTRAL
PACIFIC AND
Columbia
SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER
LOUISIANA
QUADRANGLE LOCATION
RESERVE QUADRANGLE
LOUISIANA
7.5 MINUTE SERIES (TOPOGRAPHIC)



RESERVE 87-1
SITE PLAN