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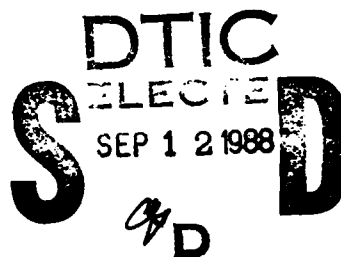
**US Army Corps
of Engineers**
New Orleans District

CULTURAL RESOURCES SERIES
Report Number: COELMN/PD-88/06

**ARCHEOLOGICAL TESTING AT TWO SITES NEAR
WHITE CASTLE, IBERVILLE PARISH, LOUISIANA:
16 IV 147 AND 16 IV 149**

FINAL REPORT

July 26, 1988



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Prepared for
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This report, prepared for the U.S. Army Corps of Engineers, New Orleans District, presents the results of archeological testing and significance assessments of the sites 16 IV 147 and 16 IV 149. Both sites are located on the bankline of the Mississippi River in Iberville Parish, Louisiana.

Site 16 IV 147 consists of a surface scatter of bricks and a fire-stained soil profile located at the bluff face of the Mississippi River. Site 16 IV 149 is a surface scatter of artifacts and a buried cultural lens, with artifacts eroding from the cutbank of the river. Auger testing, shovel testing, and bluff edge recordation were performed at both sites; artifactual and ecofactual remains from both sites were subjected to laboratory analyses.

Too little remains of Site 16 IV 147 for it to contribute further to the understanding of history. The cultural lens at Site 16 IV 149 represents domestic residential refuse dating from an occupation of Celeste Plantation during the 1830s, but very little of the original deposit remains intact. Neither site can be tied to features or structural remains, or to events significant to the history of the region. Neither site is recommended as eligible for the National Register of Historic Places.

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CHAPTER I

INTRODUCTION

During August and September, 1985, R. Christopher Goodwin & Associates, Inc. undertook cultural resources survey of the White Castle Revetment Item, along the batture of the Mississippi River in Iberville Parish, Louisiana (Goodwin et al. 1987). Additional testing was recommended at two historic archeological sites located during that survey effort, 16 IV 147 and 16 IV 149, in order to assess their significance applying the National Register of Historic Places Criteria of Significance (36 CFR 60.4). Pursuant to Delivery Order 11 of Contract DACW 29-85-D-0113, this report, prepared for the U.S. Army Corps of Engineers, New Orleans District, presents the results of archeological testing and significance assessments of the sites 16 IV 147 and 16 IV 149. The Scope of Services for this project, which provides additional background information pertaining to this study, is contained in Appendix I.

Over the next several years, the U.S. Army Corps of Engineers plans to construct a continuous, articulated concrete revetment along the entire downstream reach of the White Castle Revetment Item. This revetment will extend from the low water line several hundred feet into the river channel. Approximately two hundred feet of adjacent batture land will be graded in preparation for revetment construction; twelve or more vertical feet of earth will be removed from the top of the bankline. As Figure 1 illustrates, both sites 16 IV 147 and 16 IV 149 are located on the batture of the river, within the direct impact corridor of the planned construction.

The 1985 survey effort (Goodwin et al. 1987) enabled preliminary characterization of both of the sites under consideration here. Site 16 IV 147 consisted of a roughly three hundred meter long linear concentration of historic structural remains, primarily bricks, and other artifacts along the beach and bankline of the Mississippi River. Two features, designated F201 and F202, were recorded in the bankline profile; both consisted of small brick alignments indicative of former structural locations (Goodwin et al. 1987:45). Surface collection along the beach in this site area provided a small ceramic subassemblage dating from the late eighteenth and early nineteenth centuries. However, despite the presence of in situ structural remains at 16 IV 147, bluff profile recordation, auger and shovel testing, and the excavation of two 1 x 2 m test units failed to provide any indications whatsoever of artifactual remains in

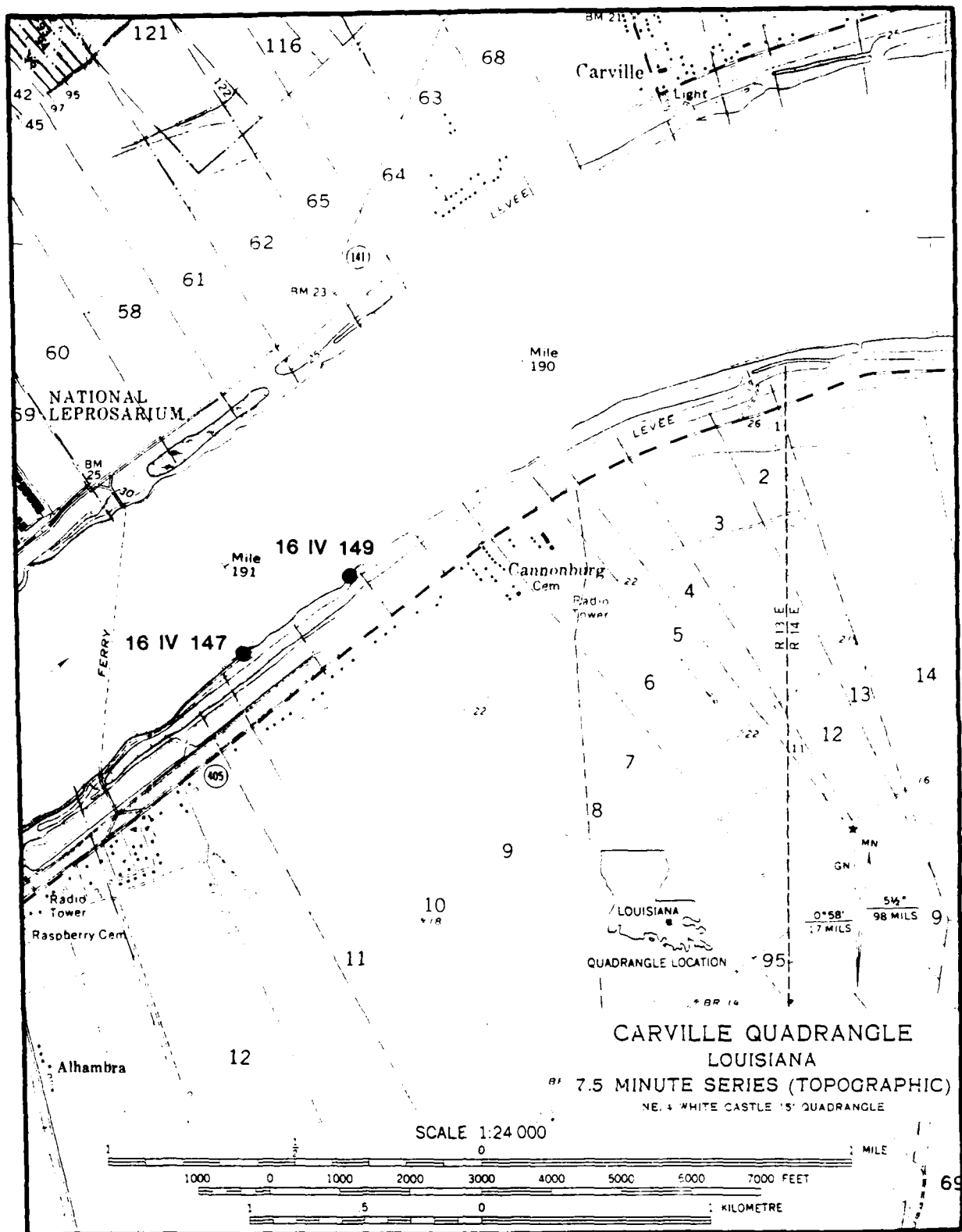


Figure 1. Excerpt from the 1974 Carville, LA 7.5' quadrangle map showing the location of sites 16 IV 147 and 16 IV 149.

association with the aforementioned brick features. For that reason, the research potential of the site, i.e., its ability to contribute to understanding of history [36 CFR 60.4 (d)], was unknown, and further testing was recommended.

In 1985, the site 16 IV 149 comprised an irregularly shaped surface scatter of historic ceramics, glass, brick, and coal along an approximately 30 x 40 meter long area of Mississippi River beach and bankline (Goodwin et al. 1987:71). Surface collection primarily along the beach provided a small but datable ceramic subassemblage indicative of an early nineteenth century occupation. Because the portion of the site that could be tested through excavation was both small and fragile, held in place by tree roots on the eroding river bluff, testing during 1985 was limited to profile recordation. Two profiles were cleaned and mapped; in one, a small (1 x 1 m) articulated brick course was found. Both profiles indicated the presence of an in situ lens of cultural remains, including crushed brick, charcoal, faunal remains, and domestic ceramic and glass sherds. Additional testing was recommended to evaluate the research potential of the site, pursuant to 36 CFR 60.4(d).

The 1985 study (Goodwin et al. 1987) also established thematic significance criteria for the project area. A thorough historical overview of the Iberville Parish area was developed, and specific land tenure histories were presented for the properties containing 16 IV 147 and 16 IV 149. Historic land use saw an initial allocation of small farms to Acadian refugees, followed by the consolidation of those small holdings into large sugar plantations. Two such estates, Celeste and Belle Grove Plantations, were dominant sugar producers in the project area.

Four major themes are significant in the local and regional history: (1) Acadian settlement of Iberville Parish; (2) development of the antebellum sugar industry; (3) recovery of the sugar industry during the postbellum period; and, (4) development of rice cultivation during the postbellum period. Because surface collections of ceramic sherds from both 16 IV 147 and 16 IV 149 contained relatively early types, such as debased Rouen faience and cream colored earthenware sherds, it was thought that these sites might be associated with Acadian settlement in Iberville Parish, an event with both local and regional significance [36 CFR 60.4(a)].

CHAPTER II

THE SETTING

The Natural Setting

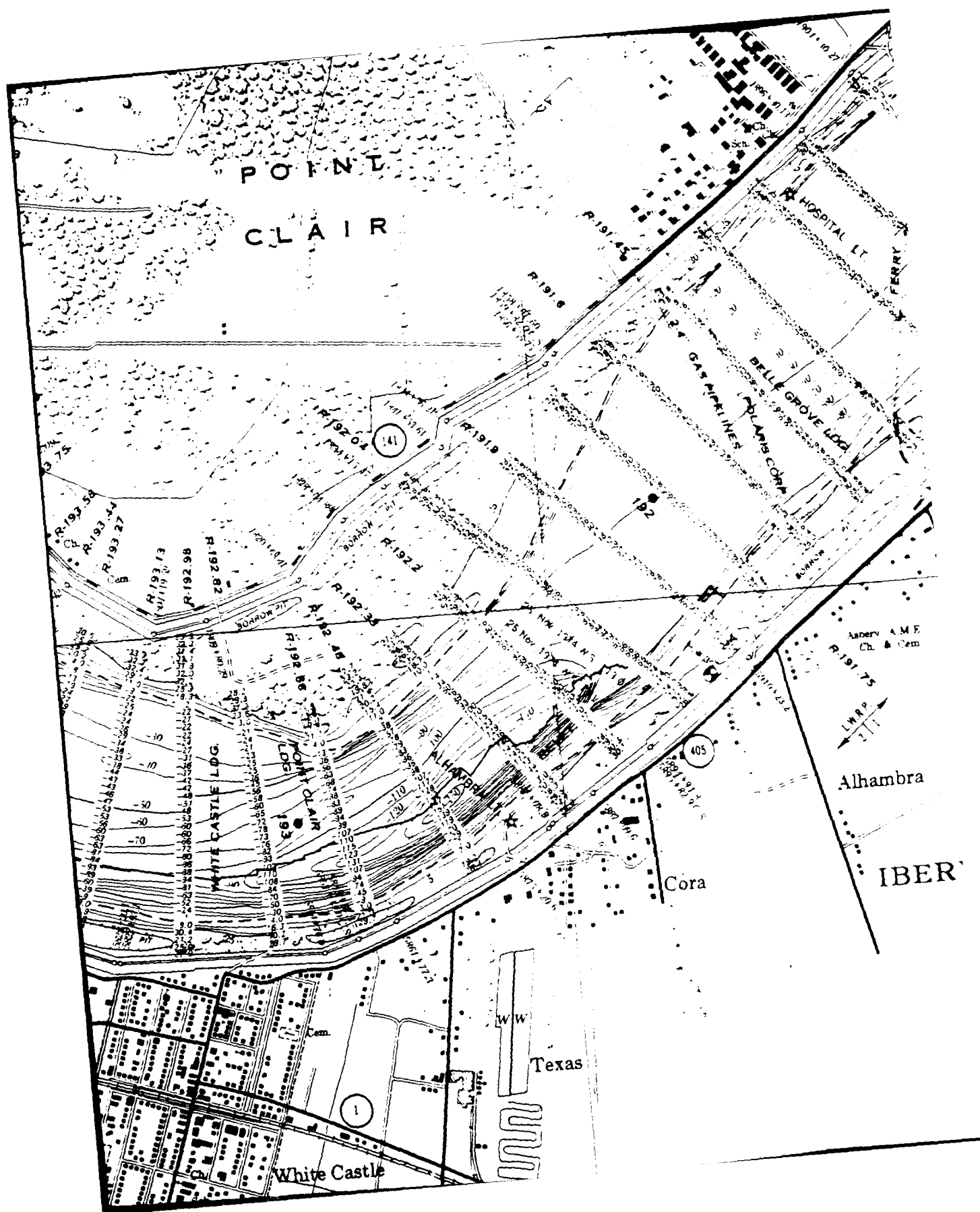
The White Castle Revetment project area, on the right descending bank of the Mississippi River between Miles 192.0 and 190.4, in Iberville Parish, Louisiana (Figure 2), lies within the modern meander belt of the Upper Mississippi River Deltaic Plain. The Mississippi River Deltaic Plain, an area of about 13,000 square miles, covers most of the state of Louisiana below the town of Angola (Harris 1961:25). The Mississippi River has occupied its present meander belt for approximately the last 4,800 years (Saucier 1974:22).

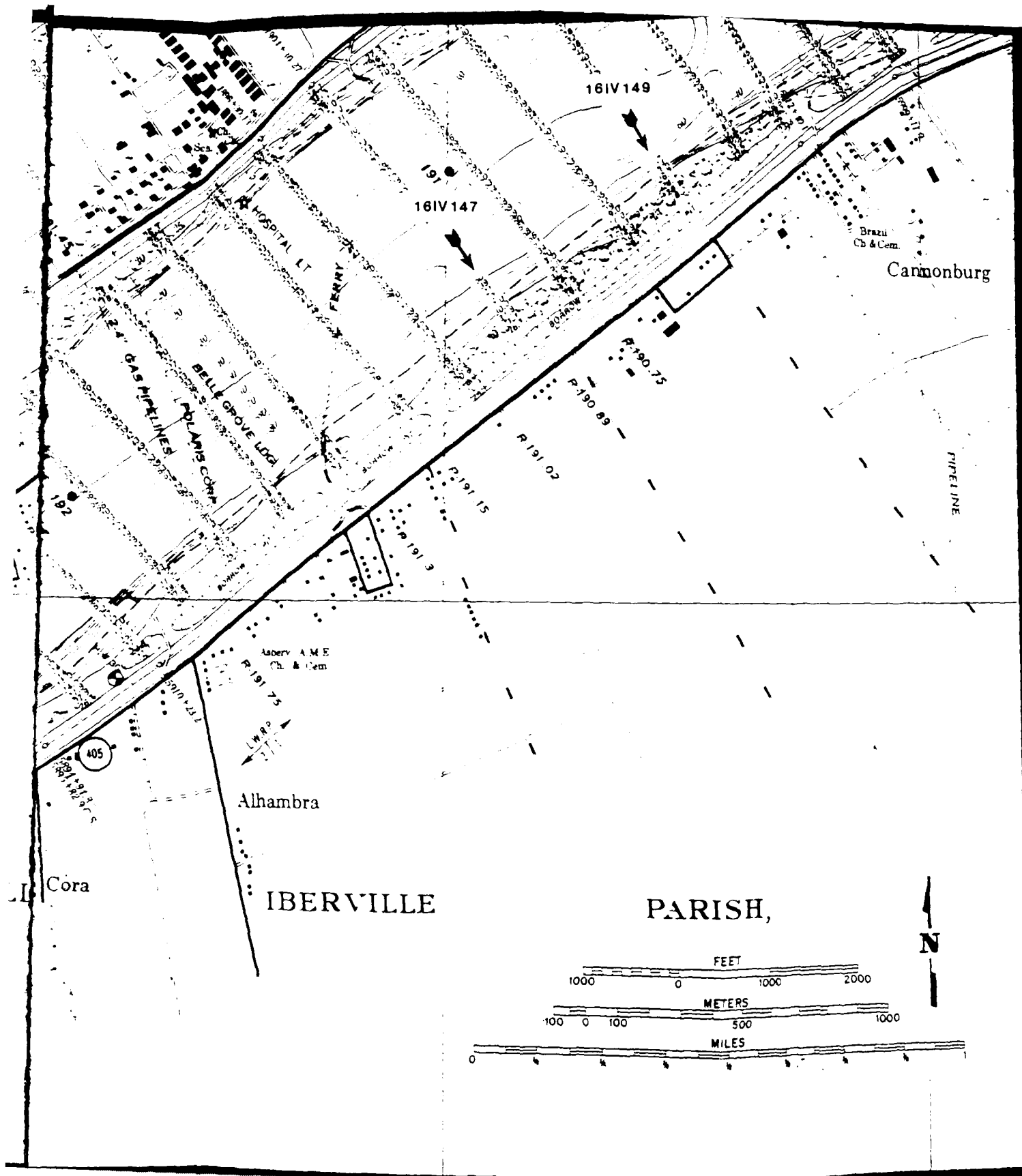
Historically, fluvial activity, including lateral migration and overbank deposition during flood stages, has been the dominant geologic process in the region. During overflows, the coarser materials carried by the floodwater were deposited first; they fell near the banks of the flooding river. The finer materials were carried farther inland. The coarser materials that accumulated near the river built high banks along the watercourse. These levee deposits are particularly thick on the inner sides of bends, where low alluvial ridges sloping away from the river were formed during overflow. The sediments deposited on the outside of bends during overflow are preserved in the form of low alluvial ridges typical of a flood plain. In the region of the project area under consideration here, natural levees attain widths of up to 5 km:

In the relatively undisturbed slopes south of White Castle, east of the Lone Star crevasse, there is about a mile of land with an elevation in excess of 20 feet, two miles in the range 15 to 20, a similar width in the range 10 to 15, one mile between five and 10, and over five miles between 2.5 and 5.0 (Russell 1938:54).

The broad elevated levee lands of the study area promoted effective large scale agriculture during the nineteenth and twentieth centuries.

However, the construction of artificial levees has altered the natural pattern of deposition and accretion. Most fluvial activity now is concentrated within the batture, or land lying between the river and the modern levee system. The White Castle project area is located entirely within the present day batture. Loamy and clayey soils characterize the





batture and adjacent natural levee deposits. Soils within the project area consist of Convent soils, frequently flooded (United States Department of Agriculture 1977:11). In times of flood, these soils are subject to scouring and deposition. Silty and sandy sediments mark the natural levee deposits of the river. On the surface, they form long linear units which project finger-like toward the Gulf; in the subsurface, they are seen as lenticular masses.

The batture soils support vegetation typical of initial stages of ecological succession. Initial willow forest is dominated by black willow (Salix nigra), with cottonwood (Populus deltoides), sycamore (Platanus occidentalis), and hackberry (Celtis laevigata) comprising the major overstory vegetation. Sweetgum (Liquidambar styraciflua), green ash (Fraxinus pennsylvanica), nuttall oak (Quercus nuttalli), water oak (Quercus arkansana), elm (Ulmus), and pecan (Carya illinoensis) may occur at higher elevations. Poison ivy, grape, trumpet creeper, groundnut, buckwheat vine, and sandvine are the predominant understory vegetation (Bahr et al. 1983).

Important faunal species present today include deer (Odocoileus virginianus), cottontail rabbit (Sylvilagus floridanus), swamp rabbit (Sylvilagus aquaticus), opossum (Didelphis marsupialis), raccoon (Procyon lotor), gray squirrel (Sciurus carolinensis), fox squirrel (Sciurus niger), and gray fox (Urocyon cinereoargenteus). Species that formerly were important in the region include black bear (Euarctos americanus), mountain lion (Felis concolor), and wolf (Canis lupus). In addition to mammalian species, birds, fish, and reptiles all are common in habitats both within and near the project area (Shelford 1963; Lowery 1974).

Recent Changes in the Project Landscape

Changes in the landscape caused by natural and anthropogenic agencies during the historic period also have implications for the preservation and recovery of archeological remains within the project area. These processes include overbank deposition, lateral migration of the river, and construction of artificial features such as revetments, protection levees, and borrow areas. All of these processes have impacted the project area. Both the location and the condition of cultural deposits identified during archeological testing in large measure are contingent upon these processes.

Caving banks caused by river scouring present the greatest threat to elevated alluvial lands along the Mississippi River; between 1865 to 1948, 374 miles of levee

were abandoned in favor of new locations because of caving banks in the Mississippi Levee Districts (Harris 1961:8). Examination of the Atchafalaya Basin Levee District maps (Figure 3) indicates that between 1883 and 1945, the river bankline in the project area was cut 200 feet. The 1974 7.5' White Castle and Carville quadrangles indicates that approximately another 150 feet of bankline have been lost since 1945. Since the 1985 survey (Goodwin et al. 1987), bankline erosion has continued to affect the site areas along this stretch of river. River scouring is evident in stratigraphic profiles from sites 16 IV 147 and 16 IV 149. Similarly, forty tree stumps were visible in the river in 1985 (Carrollton Gauge level = 4.08 on September 1, 1985), and only two near 16 IV 147 were observed in 1987 (Carrollton Gauge level = 1.60 on November 1, 1987). In 1985, collections of artifacts were made along the beach and bankline at both 16 IV 147 and 16 IV 149 (Goodwin et al. 1987). During the 1987 field season, no artifacts were observed along the river's edge, and the venues of the previous collections were no longer present.

In addition to river activity, anthropogenic factors have reshaped the batture since the 1985 field season. Tree felling and mechanized levelling by the Levee District between the river side levee toe and the bankline were observed by the Principal Investigator during a field visit in Winter, 1986. These activities did not effect either site. A large pipeline perpendicular to the levee between sites 16 IV 147 and 16 IV 149 also was emplaced during 1987; substantial clearing and excavation was undertaken for that project, but those efforts missed both site areas. Finally, a batture trail road (unpaved) currently is maintained parallel to the levee between the river's edge and the levee. that trail road impinges on site 16 IV 149; grading and levelling with a bulldozer has altered batture topography for the length of that road.

BANK LINE 1945 (AERIAL PHOTO)

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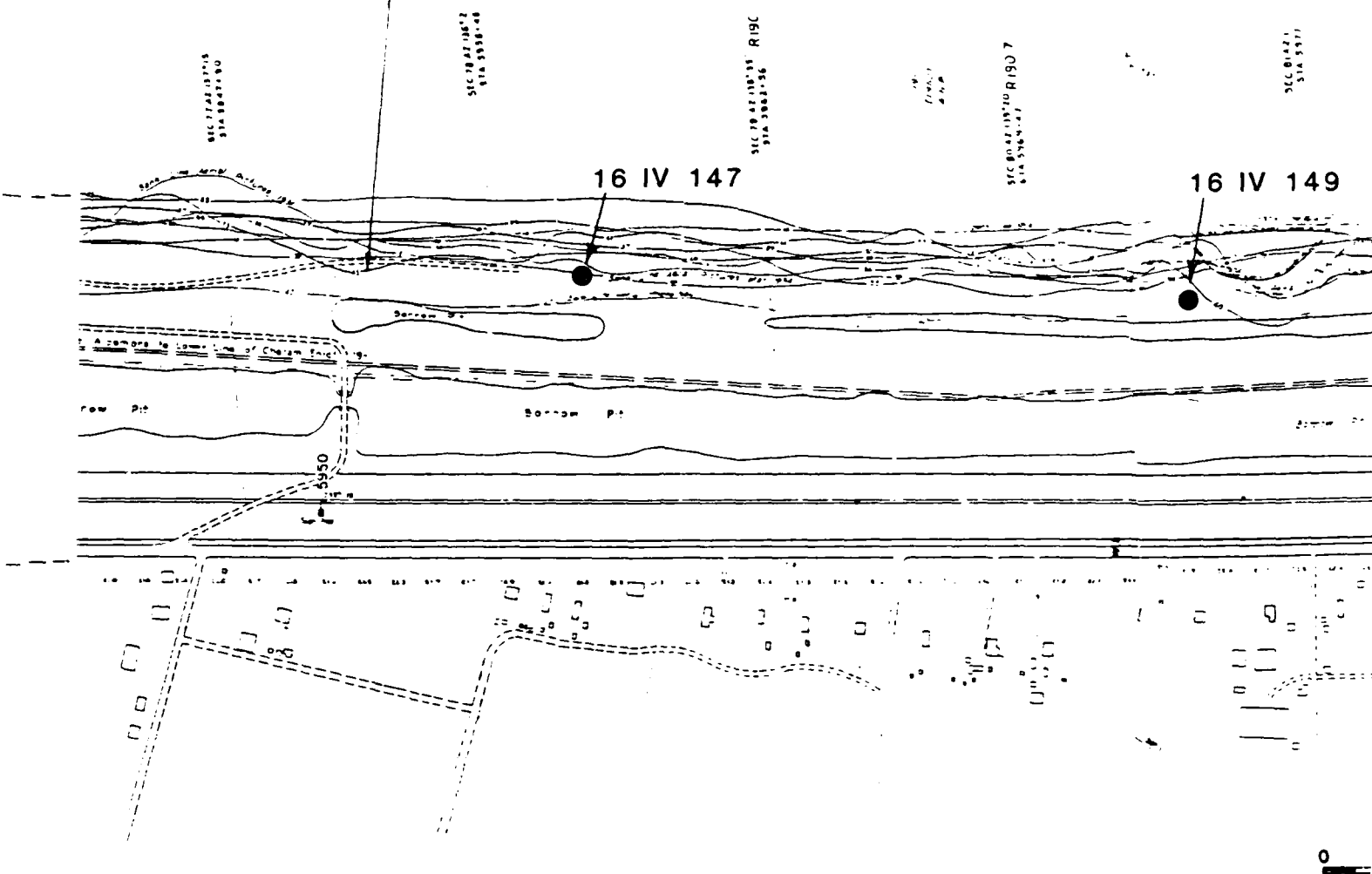


Figure 3. Excerpt from the Atchafalay District Caving Bank Survey bankline changes near the site

MISSISSIPPI RIVER

BANK LINE 1883

16 IV 149

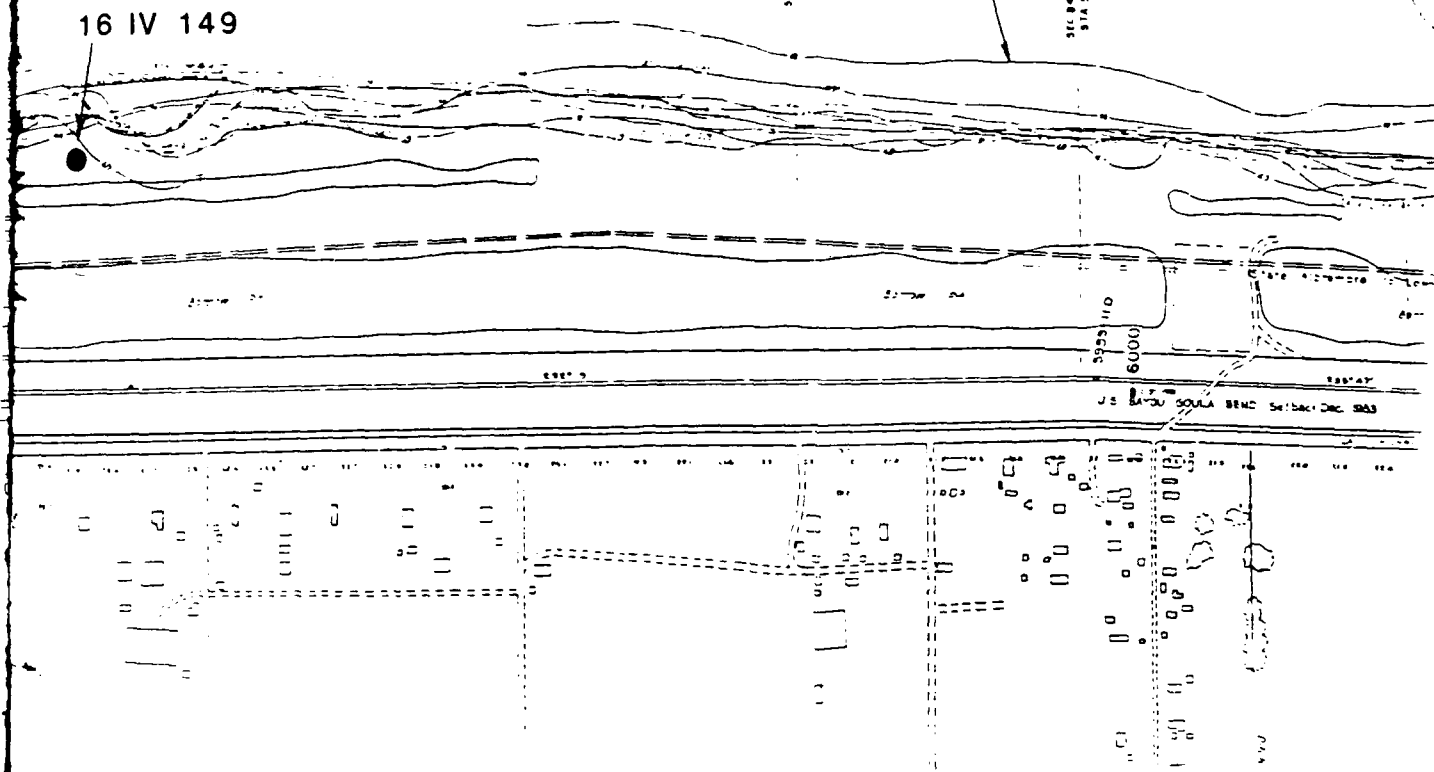
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The Atchafalaya Basin Levee
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CHAPTER III

HISTORIC OVERVIEW

The French Colonial Period

The earliest documented exploration of the lower Mississippi River valley was conducted by the colonial French. In 1682, Rene-Robert Cavalier, Sieur de La Salle, descended the Mississippi River from the Illinois Territory and claimed the lower Mississippi River valley region including the Iberville Parish study area for France. La Salle visited the Bayougoula village and the Mugulasha Indians near present day Bayou Goula. In 1685, Henri de Tonti retraced La Salle's Mississippi River route and stopped at the Bayougoula village. In 1699, Pierre le Moyne, Sieur d'Iberville, and his brother, Jean Baptiste le Moyne, Sieur de Bienville, entered the mouth of the river and ascended to the Bayougoula village. The Jesuit priest Father Paul Du Ru built a church at the Bayougoula village in 1700. However, during 1702 the village and church were destroyed in a Taensa Indian raid (McWilliams 1953:68).

Early eighteenth century French colonial policy in Louisiana included the granting of large agricultural concessions, mostly along the fertile lands of the Mississippi River. These concessions were sold to wealthy grantees by private monopolies, such as John Law's Company of the West. The earliest and closest concession to the study area was granted to M. Paris dit Duverney in 1718. The Paris concession was located at the "old village of the Bayagoulas," on the west bank of the Mississippi River (McWilliams 1953). Paris was a director of John Law's Company of the West, but he did not settle in the new Louisiana territory. Instead, the large concession was managed by M. Dubuisson for the absentee landlord. The first census of the Louisiana colony (1721) contains comments on the Paris concession. The census taker, Diron Dartaguet, wrote:

Sr. Dubuisson, consessionaire living at Bayagoulas (sic) on the Mississippi about thirty leagues above New Orleans, has tried wheat which succeeded very well and ripened perfectly. He had a very fine crop in relation to what he had sown. He had also sowed indigo seed which grew very well. It is thought that three crops might be raised or at least two very good ones in one year. Sr. Dubuisson has made a test which turned out very well and produced a good silk. He

sent samples to the company of the Indies and to Mr. Paris (Beer 1930: 220-221).

Penicaut, who was sent to the area by Governor Bienville in 1722 to make peace with the raiding Chitimachas, described the Paris concession:

The first concession established was that of M. Paris, managed by M. Dubuisson, who had brought his brother and his two sisters with him, with twenty-five persons and many personal possessions. It was located twenty-eight leagues above New Orleans on the left bank of the Missicipy (sic) going upstream, in the old village of the Bayogoulas. In addition to the tilling of fields, they established a silkworm factory there; for that reason they planted a great many mulberry seedlings (McWilliams 1953:211-212).

Disputes with the neighboring Chitimachas were common, but they did not successfully disrupt plantation activities (Goodwin, Gendel, and Yakubik 1986). However, the Paris concession along this stretch of the river was an isolated success. For the remainder of the French colonial period (1718-1762), few settlements were established in the region.

The Spanish Colonial Period

John Law's Company of the West collapsed in 1720 from over-speculation and from the sale of fraudulent stock by directors such as M. Paris dit Duverney (Fortier 1914; Bryant et al. 1982). The takeover of the Louisiana colony by the French crown did little to revive the struggling territory. With the exception of the German Coast settlements in what are now St. Charles and St. John the Baptist Parishes, the French failed to attract industrious homesteaders to cultivate the Mississippi River concessions. This failure, coupled with the intrinsic instability of indigo as a profitable cash crop, kept the Louisiana colony in debt. In 1762, France ceded the Louisiana Territory to Spain under the secret Treaty of Fontainebleau.

The Iberville Parish region was sparsely populated between 1760 and 1785, except for isolated settlements on the east bank. The first Spanish governor, Don Antonio de Ulloa, arrived in Louisiana in 1766. Before Ulloa's ousting during the 1768 insurrection, over 200 Acadian refugees arrived in New Orleans. Ulloa sent them to the Spanish Fort of St. Gabriel on the Cote d'Iberville (Saucier 1951:83). Pittman

wrote of the first Acadians who settled this area of Iberville Parish ca. 1770:

The new settlements of the Acadians are on both sides of the river, and reach from the Germans to within seven or eight miles of the river Iberville (sic) [Bayou Manchac]. These are the remainder of the families which were sent by General Lawrence from Nova Scotia to our southern provinces; where by their industry, they did and might have continued to live very happy, but that they could not publicly enjoy the Roman Catholic religion, to which they are greatly bigoted. They took the earliest opportunity, after the peace, of transporting themselves to St. Domingo where the climate disagreed with them so much, that they in a few months lost near half their numbers; the remainder, few only excepted, were in the latter year 1763, removed to New Orleans, at the expense of the King of France (Pittman 1906:60-61).

Pittman's 1765 map (Figure 4) shows the Spanish Fort (St. Gabriel) and the Iberville Coast. The Acadian St. Gabriel settlement was not successful. Disease, food shortages, Indian raids, and lack of communication between French-speaking Acadians and the Spanish military contributed to its demise (Perkins 1985). Besides Acadians, the Spanish brought Spanish-speaking Islenos from the Canary Islands to the east bank of the Iberville Coast. Between 1765 and 1775, Governor Galvez sent Islenos to a post located below the confluence of the Iberville (Bayou Manchac) and Amite rivers. This military outpost, named Galveztown, was a strategically important, if small settlement; the population never exceeded 250. It eventually was abandoned during the early decades of the nineteenth century.

Census statistics from the Spanish period indicate that the Iberville Coast region continued to develop slowly. The first Spanish census of 1769 listed only 379 persons in the Iberville district; of these, 78 resided near the Paris concession (Fortier 1914:524). The district's population decreased to 277 in 1771 (Kinnaird 1945:196). By 1785, a number of Acadian families had settled on both sides of the Mississippi River near what is now the town of Plaquemine. The arrival of additional Acadian refugees increased the population of the area from 673 in 1785, to 944 in 1788 (Martin 1882:240, 242). The area became known as the "Acadian Coast." C. C. Robin described the Acadian Coast farmsteads in 1807:

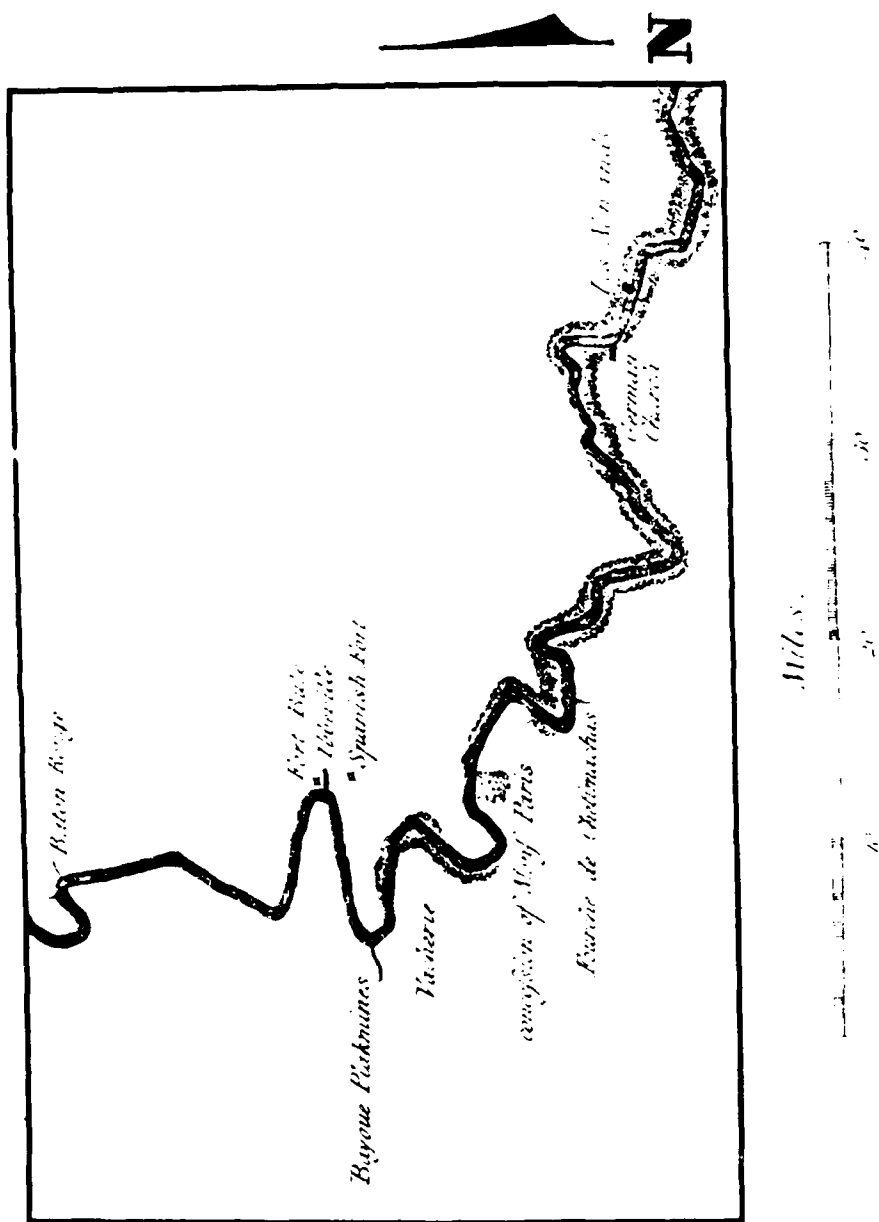


Figure 4. Excerpt from Pittman's 1765 Draught of the River Mississippi from the Balize up to Fort Chartres, showing Paris dit Duverney's concession (Louisiana Collection, Tulane University Library).

Twenty leagues above the city the Acadian coast begins and runs about another twenty up from there. Like the Germans they work their own farms. Only a few of them have Negroes. Already the population has risen so that the farms are subdivided into strips of two or three arpents frontage. You must remember that each plot ran back forty arpents from the river. Only about half of that depth, however, is under cultivation, the rest being inundated and covered with cypress and similar swamp vegetation. Rice, corn, several kinds of beans, melon (in season), pumpkin, salted pork and beef make up their principle diet. Their customs can be compared to those of our farmers of Beauce and Brie Good fellows! They do not show the zeal in their work that their European confreres would, for on the one hand, they are not pressed by the necessity, and on the other hand, the lack of outlets for their products discourages them from greater efforts. However, they are still Frenchmen, passionately loving their country, proud to work for it, and showing a great predilection for its products (Landry 1966:114-115).

During the Spanish period, a number of patents were granted for land claims along the study area. In 1774, Athanase Daiden received a patent for six arpents front on the Mississippi River by forty in depth, corresponding to Section 10 in T10S, R13E (Lowrie 1834:272). Louis Dardenne and Blas (Blaise) Lejeaune were formally granted parcels corresponding to Sections 9 and 8 of T10S, R13E. Dardenne was granted six arpents front by forty in depth, and Lejeaune was granted five arpents front by forty in depth (Lowrie 1834:228,242).

The 1777 census listed 212 persons living on the right bank of the river. The census did not list the above-mentioned Acadian grantees in the study area, nor were they listed in the colonial parish registers from St. Gabriel (Arsenault 1965:1039-1046). No historical information concerning these individuals has been found except for their appearance in the Spanish land grants.

The Antebellum Period

Geopolitical changes and agricultural innovations brought economic changes to Louisiana during the 1790s and early

1800s. Spain ceded Louisiana back to France in 1800 under the secret Treaty of Ildefonso. France sold the colony to the United States in 1803. In 1804, the U. S. Congress created a territorial government. In 1805, the first governor, William C. Claiborne, divided the Territory of New Orleans into twelve counties including that of Iberville. The new administrative system was unpopular; in 1807, the Legislature made nineteen parishes, again including Iberville (Brasseaux et al. 1977:11-12).

For a number of reasons, indigo, which had been Louisiana's primary cash crop, no longer could compete on the world market. Indigo produced in India was cheaper. Insect blights and inclement weather caused severe crop losses, and indigo exhausted the soil. An increase in the price of slaves made it difficult to obtain labor necessary for indigo production. Indigo production polluted the streams between Pointe Coupee and the Yazoo River (Holmes 1967:346-348). Other factors in the changing economy were the invention of the cotton gin and the development of a commercial process for extracting sugar from immature cane. Cotton and sugar cane cultivation rapidly became far more profitable than indigo.

Although the best areas for cotton cultivation were along the river in the Attakapas and Opelousas districts, north of Baton Rouge, cotton was grown as far south as St. James Parish during the early nineteenth century. Berguin-Duvallon described the area at that time:

The parish of Iberville then commences, and is bounded on the east side by the river if the same name, which, though dry a great part of the year, yet when the Mississippi is raised, it communicates with the lakes Maurepas and Ponchartrain, and through them with the sea; thus forming what is called the island of New Orleans. Except on the point just below Iberville [Bayou Manchac], the country from New Orleans is settled the whole way along the river, and presents a scene of uninterrupted plantations in sight of each other, whose fronts are all cleared to the Mississippi, and occupy on that river from five to twenty-five acres with a depth of forty; so that a plantation of five acres in front contains two hundred.

A few sugar plantations are formed in the parish of Cabahanose, but the remainder is devoted to cotton and provisions, and the whole is an excellent soil incapable of

being exhausted. The plantations are but one deep on the island of New Orleans, and on the opposite side of the river as far as the mouth of the Iberville, which is thirty-five leagues above New Orleans (Davis 1806:167-168, sic throughout).

The average yield of a superficial arpent of land was approximately 400 pounds of cotton, worth about \$100.00 during the early nineteenth century. One skilled slave (or farmer) could cultivate three arpents of land planted with cotton (Robertson 1911:155; Taylor 1976). Cultivation of cotton has been discussed in more detail elsewhere (Goodwin, Gendel, and Yakubik 1983, Goodwin, Yakubik, and Gendel 1983).

Acquisition of the Louisiana Territory stimulated American immigration into the region. Opportunities offered by the growing sugar and cotton industries attracted new settlers. These new agricultural industries required large investments for large tracts of land, slaves, sugar mills, cotton gins, levees, implements of husbandry, etc. In fact, the total investment for a sugar plantation often exceeded \$200,000.00 during the antebellum period (Taylor 1976:65). The small Acadian farmers and planters increasingly sold their holdings to large plantation owners or to wealthy speculators (White 1944:352).

Sugar production rapidly outdistanced that of cotton early in the nineteenth century both within the study area and in nearby St. James Parish. Berquin-Duvalon wrote:

The sugar cane may be cultivated between the river Iberville and New Orleans, on both sides of the Mississippi, and as far back as the swamps.... Above the Iberville [Bayou Manchac] the cane would be affected by the cold, and its produce would, therefore, be uncertain. Within these limits, the best planters admit that one quarter of the cultivation lands of any considerable plantation may be planted in cane, one quarter left in pasture, and the remaining half employed for provisions, etc. and a reserve for a change of crops. One Parisian arpent of one hundred and eighty feet square, may be expected to produce, on an average, twelve hundred weight of sugar, and fifty gallons of rum (Davis 1806:168-169; sic throughout).

Within the study area, the small farms were sold and consolidated into larger plantations primarily as a result of

the shift to sugar cane cultivation. Between 1800 and 1830, the study area changed from small farming to large scale sugar cane cultivation. Economic practices related to cane cultivation and the sugar industry are detailed elsewhere (Goodwin, Yakubik, and Gendel 1983; Goodwin, Stayner, et al. 1984).

Shortly after the Louisiana Purchase, the U. S. Government instituted territorial surveys and legal ratification of land ownership within those territories. Local landowners were required to register formal claims; legal ownership was based on proof of French or Spanish grants, patents, concessions, and orders of survey. If records were not available, proof of ten years of continuous habitation and cultivation prior to 1803 was accepted. All of the original United States claims for land within the project area were small tracts. Joseph Orillon claimed several small parcels corresponding to Section 9 of T10S, R13E, which originally was Louis Dardenne's Spanish grant (Lowrie 1834:242). Marie Joseph Hebert claimed a parcel of land corresponding to Section 10 of T10S, R13E (Lowrie 1834:272). Records indicate that through the first decade of the nineteenth century, small farmsteads comprised the primary land use within the project area.

Significant land use changes occurred in the study area during the next two decades, due to the establishment of a sugar cane plantation and to the arrival of Anglo-American planters. During that period, sugar planters Lauve and Shiff acquired Sections 8, 9, and 10 of T10S, R13E (Office of State Lands, Department of Natural Resources, Baton Rouge). Little information is available regarding the partners Lauve and Shiff. According to previous historical research (Goodwin et al. 1987), Lauve may have been Edward Lauve, Captain of the Port of New Orleans in 1825 (New Orleans Municipal Papers, Special Collections, Howard Tilton Library, Tulane University). Lauve and Shiff developed their holdings into a successful sugar plantation measuring about eighteen arpents front on the river. By 1844, that sugar estate was called "Celeste." It was under the management of Mrs. E. Lauve at least from 1844 to 1868 (Table 1, Figure 5). Celeste Plantation maintained a steam powered sugar mill; it produced more than 300 hogsheads of sugar in most years prior to the Civil War. In the bumper crop years of 1844, 1853, and 1861, the high yields were 578, 633, and 685 hogsheads of sugar, respectively (Table 1).

The Civil War and Its Aftermath

The Civil War devastated the prosperous region containing Iberville Parish. J.W. Dorr chronicled the value of

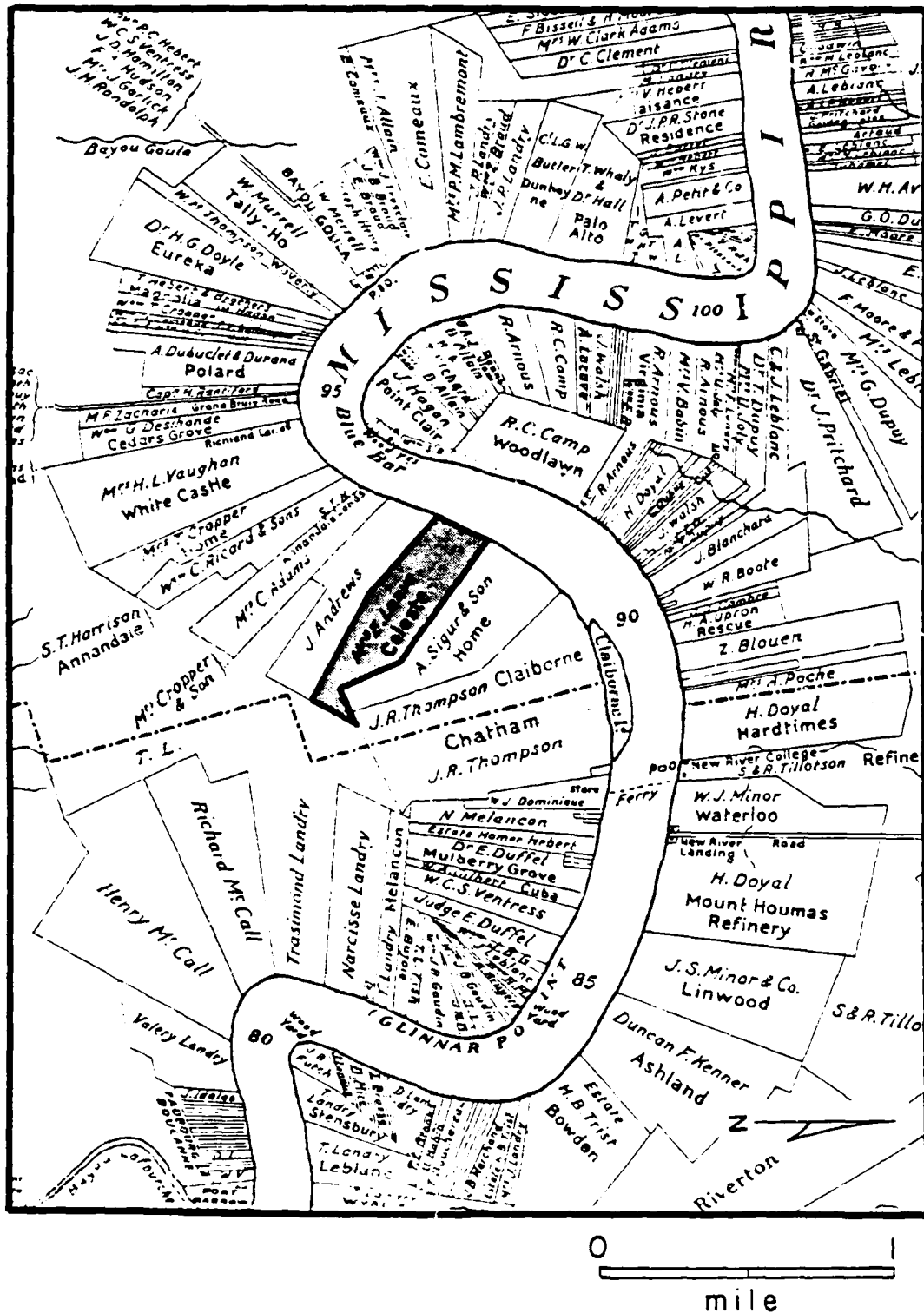


Figure 5. Excerpt from Norman's 1858 Plantations on the Mississippi River from Natchez to New Orleans (Map on file, R. Christopher Goodwin & Associates, Inc., New Orleans).

Table 1. Sugar Production at Celeste Plantation (Champomier 1844-1862; L. Bouchereau 1868-1877; A. Bouchereau 1878-1914).

<u>Year</u>	<u>Owner/Manager</u>	<u>Sugar in Hhds</u>	<u>Rice in Bbls</u>
1844 ¹	Mrs. E. Lauve	578	
1845	"	315	
1849	"	201	
1850	"	340	
1851	"	250	
1852	"	480	
1853	"	633	
1854	"	430	
1855	"	182	
1856	"	110	
1857	"	290	
1858	"	320	
1859	"	266	
1860	"	385	
1861	"	685	
1868 ²	"	84,926	
1869	Ulger Lauve	72,000	lbs.
1870	"	153,000	lbs.
1871 ³	"	51	
1872	"	----	
1873	F. S. Duffossat	----	
1874	"	----	
1875	Thos. Sellers & Co.	N.Y.	
1876	"	----	5,730
1877	"	----	4,285
1878	"	----	2,571
1879	"	N.Y.	
1880	Tristand Gauthreaux	----	3,475
1881	Ernest Triche	----	1,690
1882	J. J. Thompson	----	2,550
1883	Citizens Bank	----	----
1884	R. Laurent & Co.	----	4,222
1885	"	----	4,950
1886			
1888	Not Listed		
1889	Thompson & Wilkinson	----	5,675
1890			
1895	Not Listed		
1896 ⁴	James A. Ware	----	----

¹ Steam powered mill

² Brick shingle sugar house; steam and kettle apparatuses

³ Steam, kettle, and open pan apparatuses

⁴ Sugar production is not reported after this date, although Ware, and later Belle Grove Planting and Manufacturing Co. (1911-1916), continued to be listed until 1916

property in Iberville Parish on the eve of the Civil War. Dorr noted that the assessed value of property in Iberville Parish was approximately \$14,000,000.00. At that time, 33,000 acres were planted in cane; 22,000 were planted in corn; and 1,500 acres were in cotton. The white population of the parish was approximately 5,600; the slave population was approximately 10,000. Only 200 free men of color resided in the parish (Pritchard 1938:1129).

After New Orleans fell to Federal troops in 1862, Union gunboats ascended the Mississippi River; they shelled and occupied the town of Plaquemine. Union forces in Plaquemine confiscated St. Basil's Academy (presently St. Basil's Restaurant and Guest House) for their headquarters, and they built a fortification 400 yards southeast of the town on the Mississippi River. The fort was square and had bastions at each corner; it maintained eight heavy cannons. It was abandoned and dismantled after the war (Grace 1946:125; Riffel 1985:85). Although skirmishes in the parish were minimal, widespread confiscation of movables did occur (Grace 1946:125).

Louisiana's slave-based sugar industry was slow to recover. Prices fell, credit was tight, and it was nearly impossible to keep slaves on the plantations (Begnaud 1980:38-39; Goodwin and Yakubik 1982). As a result of these financial difficulties, many planters lost their estates. Bouchereau (1889-1890) noted some of the causes that prevented capital investment in sugar cane:

Changes in labor systems, bad politics and government, and fear that the (sugar) tariff would be abolished or greatly modified, preventing capital from being invested....(A. Bouchereau 1889-1890:53a).

A pervasive lack of capital and the loss of slave labor impeded the revitalization of the industry. Planters could not afford to rebuild their sugar houses, nor could they repair levees. Without the proper levees, many former sugar plantations were inundated during high water. The loss of slave labor further encumbered economic recovery. Former slaves migrated north, and those who stayed were regarded as unreliable; they were perceived by the white population as a political threat. L. Bouchereau (1870-1871:XIX) advocated employment of German and Chinese contract laborers. He also urged that agricultural and industrial aspects of sugar production be separated. His solution, the "Central Factory System," included centralized mills to serve the needs of many planters. This way, the increased labor costs could be absorbed by the savings from mill processing and manufacturing. This system also allowed smaller farmers to

participate in sugar cane cultivation.

Rice cultivation became a viable alternative to the high cost of sugar cane production for many planters in Iberville Parish. In 1877, Bouchereau wrote:

Many of the 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 (L. Bouchereau 1877-1878:XX).

Rice was a more appropriate cultigen after the Civil War: inundation, although harmful to the growth of sugarcane, was necessary for rice cultivation. The Reconstruction Period cultivation and economics of rice in the River Parishes are discussed in more detail elsewhere (Goodwin, Stayner, et al. 1984).

The Postbellum Period

Celeste Plantation attempted to reestablish its prominence as a profitable sugar plantation after the Civil War. It was acquired by Ulger Lauve, who was possibly Mrs. Lauve's son, in 1869. In 1868, a new brick shingle sugar house was erected at Celeste (Table 1). Despite the reinvestment in facilities, crop yields remained low at Celeste until 1871. Before the Civil War, Ulger Lauve lived in New Orleans; between 1856 and 1859, he was part owner of Sebastopol Plantation in St. Bernard Parish (Sebastopol Plantation Papers, Special Collections, Howard Tilton Library, Tulane University; Sebastopol Plantation Documents, Special Collections, Louisiana State University Library, Louisiana State University and Agricultural and Mechanical College). In 1873, Celeste Plantation was purchased by F. Soniat Duffossat; two years later, it was in the possession of Thomas Sellers and Company, who used it for rice cultivation (Table 1). During the 1880s, Celeste Plantation had a series of owners (Table 1).

Figures 6 and 7 show standing structures at Celeste in 1880 and 1921, respectively. In the early 1880s, a double row of tenant cabins extended perpendicular to the river into the fields. The large structure upriver from the cabins probably was the sugar house, which may have been converted into a rice mill. Residential buildings, including the owner's great house and the overseer's house, were located near the river. Both of the archeological sites under consideration here (16 IV 147 and 16 IV 149) are located

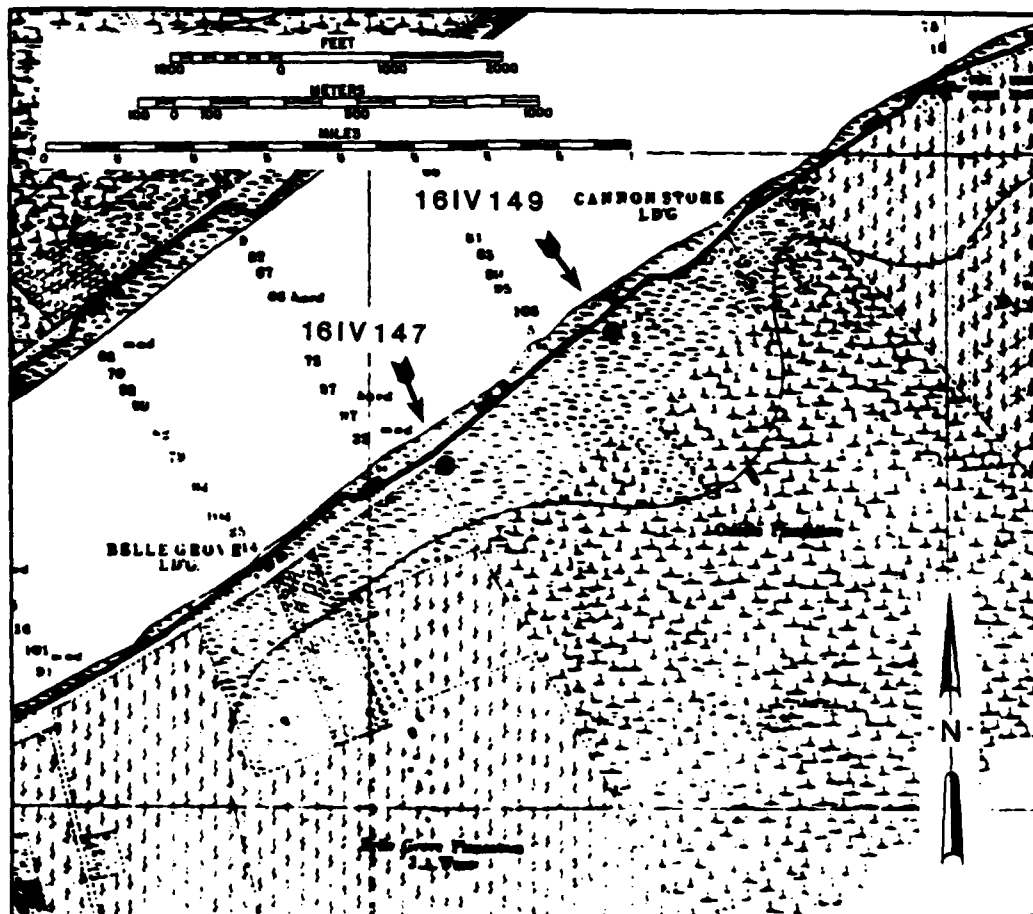


Figure 6. Excerpt from Chart 68 of the 1879-1880 Mississippi River Commission (drafted 1882-1883), (Map on file, R. Christopher Goodwin & Associates, Inc., New Orleans).

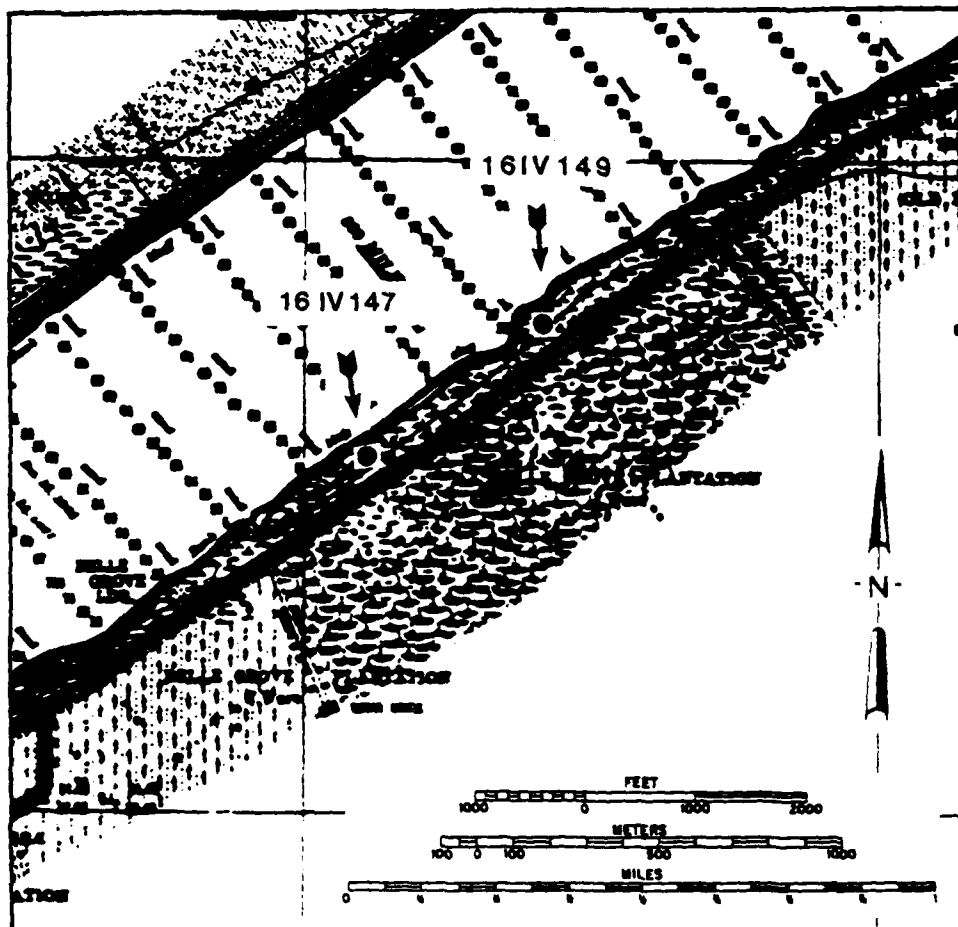


Figure 7. Excerpt from Chart 68 of the 1921 Mississippi River Commission (Map on file, R. Christopher Goodwin & Associates, Inc., New Orleans).

within the former boundaries of Celeste Plantation. An excerpt from an 1892 map of the Celeste and Mt. Salem Levees shows a "Celeste residence" in the vicinity of 16 IV 149 (Figure 8).

Twentieth Century Development

Agricultural production at Celeste was not reported after 1890. In 1896, when the plantation was purchased by James Ware, it was consolidated in the adjacent upriver Belle Grove Plantation (Figure 7). Sugar cane cultivation maintained its prominence throughout the twentieth century in Iberville Parish. Cotton production lessened, while rice, corn, fruit and pecans increased (Iberville Parish Planning Board 1945). Livestock breeding increased during the 1930s and 1940s, with former rice fields being used for pasture land. By the 1960s, cattle production was secondary to cane as a source of farm income (Iberville Parish Planning Board 1945; 1964). Soybeans, originally planted with corn to replenish the soil, have become a significant crop in recent years.

The lumber industry became increasingly important to the economy of Iberville Parish during the late nineteenth century. The town of Whitecastle developed around the Whitecastle Lumber and Shingle Company, Ltd. (The Southern Manufacturer 1900). Fortier (1914:525) claimed that more cypress shingles were manufactured in Iberville than in any other parish in Louisiana.

Industrialization has accelerated in Iberville Parish over the last twenty years. In 1956, Dow Chemical Co. established a Louisiana Division north of the town of Plaquemine. Goodyear Tire and Rubber Co., and Georgia Pacific, also have located plants located in the parish. Oil and gas fields were discovered in the 1940s (Davis 1940:141). However, this increased industrialization has not affected the predominantly rural project area.

Summary of Significant Historic Themes

Historic land use in the project area was typical of the Acadian river parishes. The area initially was occupied by small Acadian farmers. These small holdings eventually were consolidated into the larger Celeste sugar plantation. Celeste Plantation never recovered financially as a sugar plantation after the Civil War; rice cultivation was undertaken there during Reconstruction. The Celeste holdings were consolidated into Belle Grove Plantation around the turn of the century.

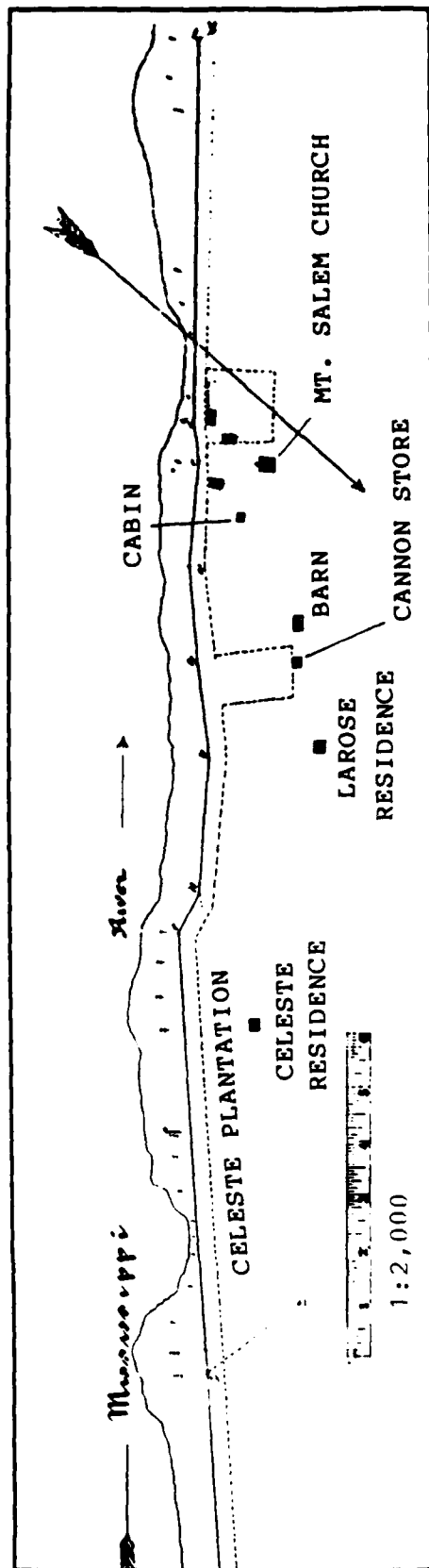


Figure 8. Excerpt from an 1892 map of the Celeste and Mt. Salem Levees (Office of Public Works, Baton Rouge).

Four major themes have special historical significance for the present project area and vicinity. They are: (1) Acadian farmstead settlement in Iberville Parish; (2) the antebellum development of the sugar cane industry; (3) recovery of the sugar industry during the postbellum period; and, (4) the development of the rice industry during Reconstruction. These four themes provide a framework for the evaluation of cultural resources recovered during archeological testing.

CHAPTER IV

PREVIOUS INVESTIGATIONS

Investigations Within the Project Vicinity

A number of archeological excavations have been conducted within the vicinity of the present study area. These investigations reflect in part the important role the region played during the early contact period in Louisiana. Excavations at the Bayou Goula Site (16 IV 11) located just north of the town Bayou Goula were reported by Quimby (1957). Excavations focused on the mounds and on several structures at the site. Two components were identified from the mound excavations: a prehistoric Coles Creek-Plaquemine component, and a contact period component. A number of refuse pits and eleven burials were excavated at 16 IV 11; the majority appeared to derive from the later historic component. Brown (1976) subsequently has argued that the house structures, originally thought to have been aboriginal, conform more closely to those of the early colonial French concession.

McIntire (1958:Plate 13) reported on work conducted at the Clara Murray Site (16 IV 12), also located just north of the town of Bayou Goula. Two pyramidal mounds, now extensively plowed, were present at the site. At least some of the ceramic artifacts were associated with the late Tchula period (200 B.C. - 1 B.C.). Marksville and Plaquemine materials also were present in the artifactual assemblage.

Fredlund (1982) examined two eighteenth century archeological sites at Bayou Goula. One previously unrecorded site, 16 IV 134, was tested; it yielded an impressive assemblage of aboriginal ceramic and chipped stone artifacts in association with eighteenth century European artifacts. Fredlund (1982) argued that 16 IV 134 may have been the site of the Bayogoula-Mugulasha Village visited by d'Iberville in 1699. Site 16 IV 11, traditionally thought to have been that site, apparently conforms to historical descriptions of the du Buisson-du Vernax Concession of 1718 (Giardino 1984).

A number of bankline surveys also have been conducted within the vicinity of sites 16 IV 147 and 16 IV 149. Bryant et al. (1982) reported on a bankline survey near the town of Bayou Goula, at the Tally Ho Plantation Site (16 IV 135). Bankline erosion and levee construction appear to have disturbed and destroyed evidence of the site in that project reach; the majority of remains were recent, and were recovered from the surface.

Goodwin, Stayner, et al. (1984) reported on a cultural resources survey of the New River Bend Revetment Item located on the east (left descending) bank of the Mississippi River in Iberville Parish. Three sites were recorded during that survey: the Hard Times Plantation Site (16 IV 143); the Carville Dump Site (16 IV 144); and, New River Bend Site 1 (16 IV 145). None of these sites was considered eligible for nomination to or inclusion on the National Register of Historic Places.

Pearson and Guevin (1984), and Goodwin, Gendel, and Yakubik (1986) completed independent investigations for the U.S. Army Corps of Engineers at the former location of the town of Bayou Goula. Archeological testing at 16 IV 131 first was conducted in 1983 (Pearson and Guevin 1984). Investigations were designed to assess the nature, character, and significance of cultural resources there. In addition, mitigation plans for cultural resources located within revetment boundaries were developed.

The 1983 field work included pedestrian survey, controlled surface collection, backhoe excavation, and hand excavation. The project area was subdivided into nine segments or "Survey Collection Areas," each 137 meters in length and extending from the water line to the riverside toe of the modern levee. The majority of artifactual remains occurred along the bankline of the Mississippi River. Subsequently, twenty-two collection localities were established along the bankline at areas where cultural remains were exposed (Pearson and Guevin 1984:89).

A total of twenty-two backhoe trenches were excavated during the 1983 investigations. The excavation of test trenches was designed to locate remains associated with the Bayou Goula Site (16 IV 11), and nineteenth and twentieth century structural remains from the town of Bayou Goula. All trenches were placed between the toe of the modern levee and the landside edge of the borrow pit, outside of the revetment impact area. No remains that could be correlated with Site 16 IV 11 were recovered. However, in situ deposits were recorded in the riverbank profile, Collection Area 3, Locality 3, Feature 1 (viz. Pearson and Guevin 1984); these remains were interpreted as residential debris from the late nineteenth and early twentieth century town of Bayou Goula. In addition, surface collections from Collection Areas 5 and 6 were interpreted as evidence of a late nineteenth century commercial district (Pearson and Guevin 1984:94).

The significance of the Bayou Goula Landing Site 3 (16 IV 131) was not resolved during the 1983 season, and revetment construction was postponed pending conclusive evaluation of the sites's significance. In 1985, R.

Christopher Goodwin & Associates, Inc. conducted archeological testing at Bayou Goula Landing and to assess the significance of the site, applying the National Register criteria. Investigations were conducted within the parameters of the research design for historic archeological study previously developed by Pearson and Guevin (1984). Additional theoretical and methodological issues not specifically addressed by Pearson and Guevin (1984) also were identified. These included the question of site abandonment in an historic context (Goodwin et al. 1986:38).

Finally, Goodwin et al. (1987) reported the results of a cultural resources survey of the White Castle Revetment Item, Iberville Parish. The study area was located on the west (right descending) bank of the Mississippi River. These investigations were designed to assess the nature, character, and significance, of cultural resources within the proposed revetment right-of-way downstream from 16 IV 11. Six sites (White Castle Site 1, 16 IV 147, 16 IV 148, 16 IV 149, 16 IV 150, and 16 IV 151), including the two under consideration here, were located during that survey effort. Artifacts associated with White Castle 1 were determined to represent remains of the Belle Grove warehouse which were incorporated into fill near the ferry landing at White Castle. Due to a lack of contextual integrity, White Castle 1 was not assigned a state site number (Goodwin et al. 1987:45). Site 16 IV 148 consisted of two small surface scatters including several aboriginal ceramic sherds and a small collection of historic glass. Because of the lack of intact cultural deposits, the site was not considered eligible for consideration for nomination to the National Register of Historic Places (Goodwin et al. 1987:71). Site 16 IV 150 consisted of a small collection of historic glass, metal, and brick fragments. Although a mean ceramic date of 1798.7 (n=6) was established for the artifacts, the lack of contextual integrity, and the paucity of remains precluded its consideration as a significant resource (Goodwin et al. 1987:80). Site 16 IV 151 consisted of a surface scatter of historic ceramic sherds, brick, and metal along the bankline of the Mississippi River. In addition, several aboriginal ceramic sherds were collected at the site. No intact cultural deposits were present at the site. The historic remains were interpreted as the remains of the Celeste Plantation great house complex.

Investigations at Other Pertinent Sites

Several other previously studied sites outside of the vicinity of the present project area are similar to those found at White Castle Revetment, and therefore merit review here. These sites have been studied more intensively; they

also provide more extensive collections of comparative materials from riverine sites dating from the antebellum period. Tally-Ho Plantation (16 IV 135) was located above White Castle and just below Bayou Goula. The plantation dates from approximately 1836. In 1980, test excavations were conducted at the site in order to determine whether evidence of any of the previous locations of the plantation was present (the plantation was reconfigured several times and buildings moved due to levee setbacks). No structural remains or intact artifactual deposits were located. Erosion and bankline movement appeared to have erased all evidence of the plantation. All artifacts recovered from the site were interpreted as having been redeposited during periods of flooding, and during the course of trash disposal during in historic and modern times (Bryant et al. 1982:293). The report (Bryant et al. 1982) includes only a catalogue of the artifacts collected from the site. It does not provide the results of artifact analyses (i.e. mean ceramic dates, etc.), making comparison with other assemblages difficult.

In 1982, Goodwin, Yakubik, and Goodwin (1983, 1984) conducted investigations at the Elmwood Plantation Site (16 JE 138). The site was found to be in excellent condition, with little subsurface disturbance. As a result, a tight whole-site chronology was developed, and construction events were dated with precision. In addition, changes in artifact patterns at the site over time could be correlated with documented historical events. Therefore, the assemblages from this site are an excellent source of comparative data for antebellum plantations along the Mississippi River.

In 1983, Goodwin, Gendel, and Yakubik reported the results of investigations at Lakeland Plantation (16 PC 33). The site consisted of a scatter of cultural refuse along the beach downriver from the St. Francisville Ferry Landing. Artifacts observed along the beach included nails, glass, ceramics, and bricks. In addition, three archeological features consisting of discrete scatters of bricks along the shoreline were defined during pedestrian survey. Associated archeological remains and map data indicated that one or more of these features represented the disturbed and redeposited materials of a barn associated with Lakeland Plantation. This investigation provided additional comparative information for a variety of site types along the Mississippi River.

In 1983, Goodwin, Yakubik, and Gendel conducted investigations at Bourbon Plantation (16SJ38), in St. James Parish, in order to provide an historic overview and evaluation of the research potential of the site. Field investigations at the site were designed to determine the extent, nature, stratigraphy, and cultural associations of

the site. Surface manifestations at Bourbon Plantation included several scatters of brick rubble, and the eroded remains of a wood-lined privy. Five backhoe trenches were excavated in the vicinity of the brick rubble observed along the cutbank; these revealed brick, masonry, brick rubble, and ash. Goodwin & Associates, Inc. determined that these features were associated with the former sugar house and adjacent yard of Bourbon Plantation. With the exception of brick, additional artifactual subassemblages were not recovered during the course of field investigations. This was due to the complete dismantling and removal of the Bourbon sugar house equipment in 1930. As a result, laboratory analyses of remains from the Bourbon Plantation site necessarily focused on the brick subassemblage; the majority of bricks dated from the mid-nineteenth century.

1985 Investigations at Site 16 IV 147

At the time of the 1985 field season, the Site 16 IV 147 consisted of a linear concentration of historic and prehistoric artifacts extending almost 360 m along the beach and bankline of the Mississippi River (Figure 9). In some places, artifacts occurred as far as 20 m landward of the water line, onto the wide bench or terrace above the cutbank. Historic structural and artifactual remains were observed eroding from the upper bluff edge (or cutbank) in several places. However, the vast majority of cultural debris occurred at the surface along the beach. In addition, a series of about forty tree stumps were observed along the beach and in the river, which was at low water at the time of survey. The trees extended along the entire length of the site, or for about 360 m. Methodologies applied at 16 IV 147 during the 1985 season included pedestrian survey and surface collection; auger testing; bluff profile recordation; and the excavation of two 1 x 2 m test units. The results of those efforts are described below; for more detailed information on the 1985 investigations, the reader is referred to Goodwin et al. (1987).

Pedestrian Survey and Surface Collection

An initial examination of the surface scatter along the beach at 16 IV 147 revealed the presence of two broad clusters of cultural material, designated Zones A and B (Figure 9). Zone A comprised the downriver 220 m of the site; it consisted of a heavy concentration of brick and brick rubble, ceramic sherds, and glass. Only scattered bricks were present in Zone B, or the upriver portion of the site, although ceramic and glass artifacts were common. A few aboriginal ceramic sherds were collected from the beach

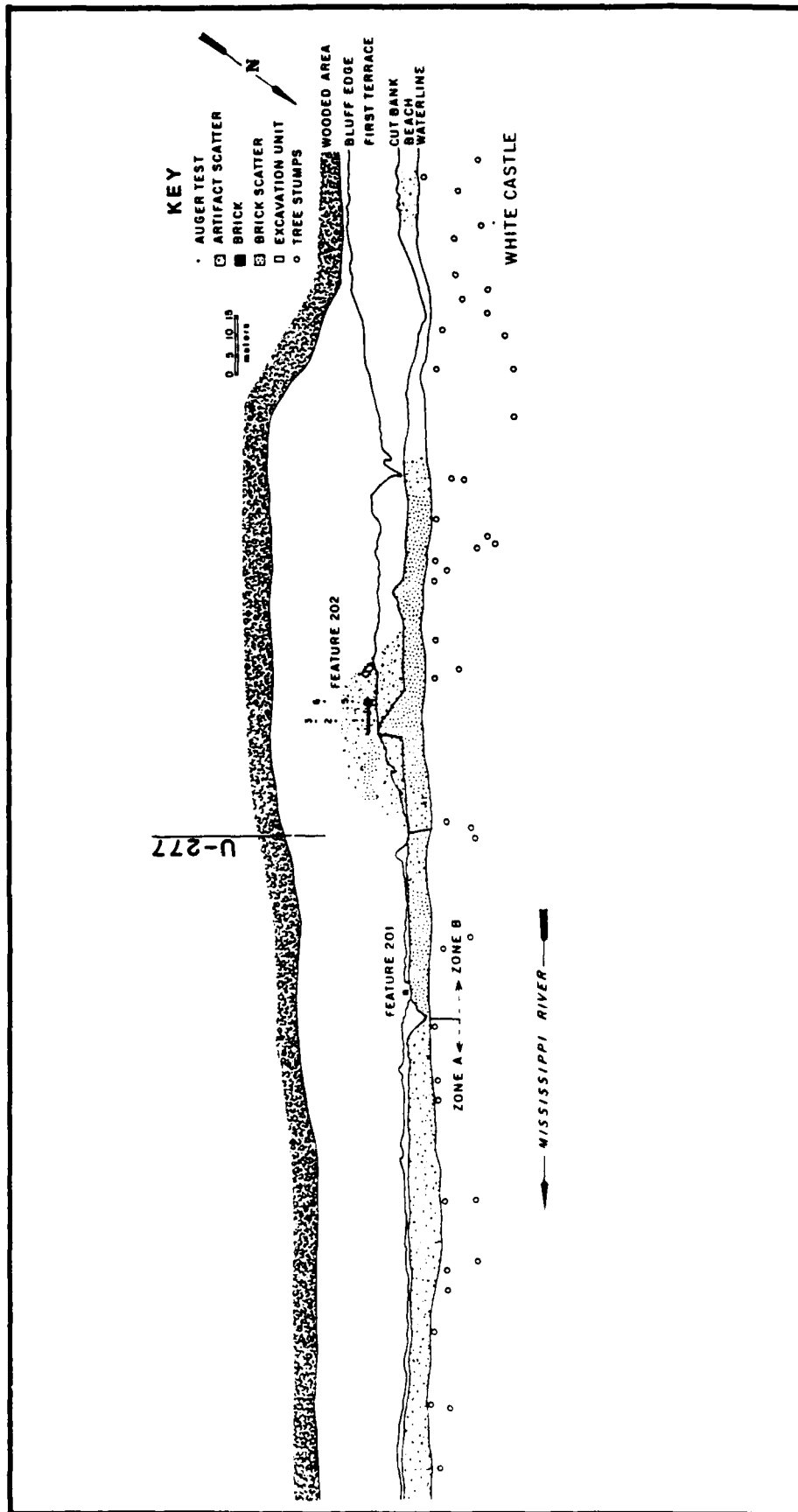


Figure 9. Site Plan of 16 IV 147 in 1985 (Goodwin et al. 1987:46).

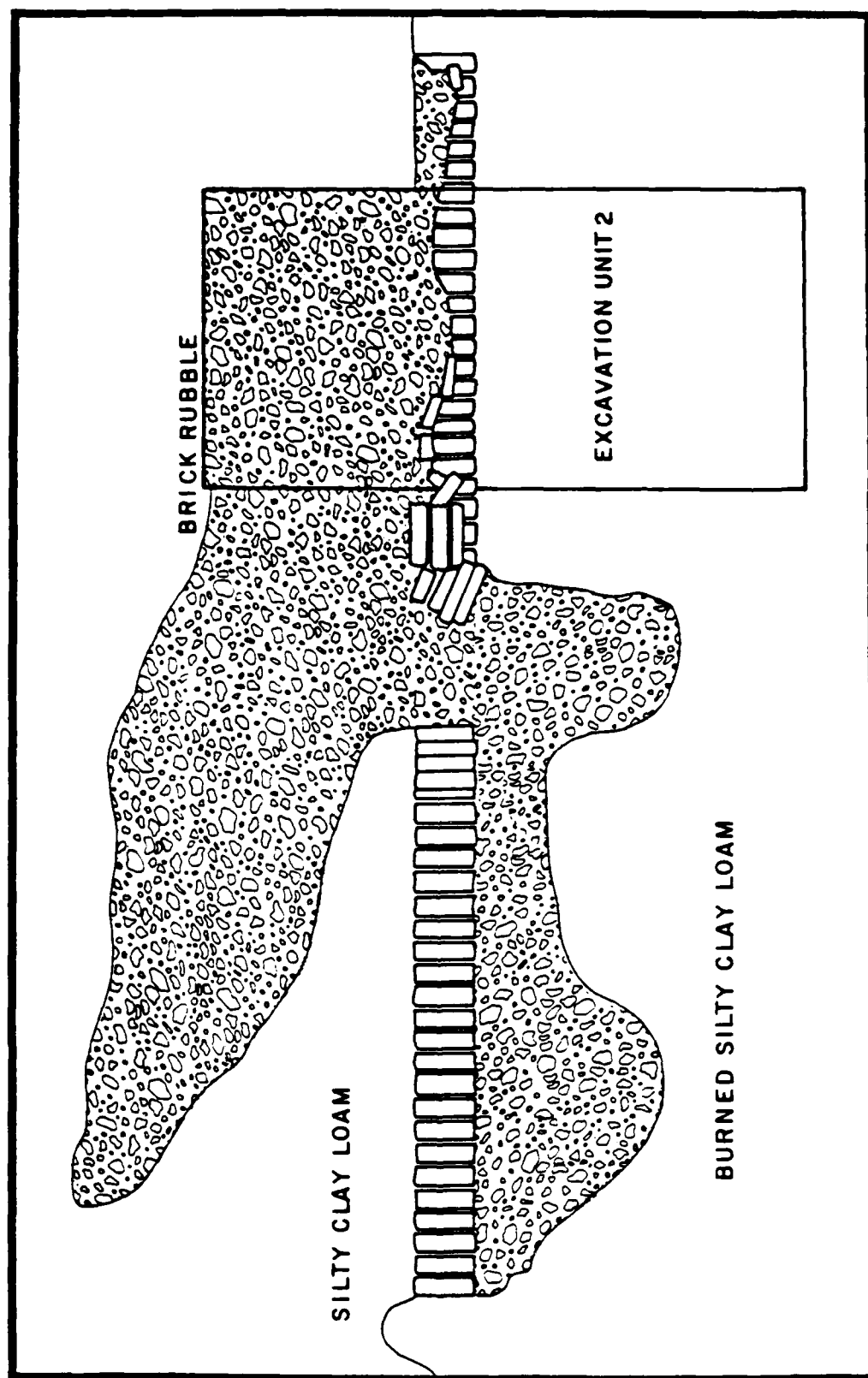
in both zones.

Pedestrian survey of the bankline also revealed two brick features located along the margins of the wide bench or terrace immediately adjacent to the cutbank (Figure 9). Feature 201 consisted of a small concentration of bricks and brick fragments eroding from the edge of the cutbank. This small feature measured 80 x 50 cm; it apparently represented the remaining vestiges of a structure, the vast majority of which already was lost to cutbank erosion. No additional artifactual remains were associated with Feature 201; probe testing failed to locate subsurface manifestations of the structure along the bluff edge.

Feature 202 consisted of a partially eroded linear alignment of bricks about 3.70 m in length located near the margin of the bluff edge, and exposed at the surface of the first bench or terrace of the batture (Figures 9 and 10). Only one course of bricks was well preserved, however, at least one additional course appears to have been present. Brick rubble extended about 1 m to either side of this brick alignment. On the east side of the brick alignment, the scatter of brick rubble appeared to be buried beneath overbank deposits. Many of the bricks exhibited traces of intensive thermal alteration, and the soil matrix between the brick alignment and the bluff edge was impregnated with charcoal and ash; it appeared to have been partially fused by intensive heat. The upriver extremity of the brick alignment was covered by a thin stratum of overbank deposits; these deposits thickened downriver.

Auger Testing

Auger testing at 16 IV 147 was designed to determine the extent of Feature 202 beyond those areas in which it was exposed at the surface and in profile along the bluff edge. A total of six auger tests, excavated to depths of between 40 and 110 cm below surface, were placed at five meter intervals along two transects oriented perpendicular to the bankline. Auger Test 1 was placed adjacent to the intact brick alignment exposed at the surface of Feature 202, and excavated to a depth of 40 cm below surface. The test revealed a series of clayey silt and silty clay overbank deposits; it was devoid of cultural remains. Auger Test 2 was placed five meters landward of Test 1, and excavated to a depth of 70 cm below surface. Brick fragments were encountered at 60 cm below surface, within a dark gray (10YR 4/1) silty clay. Auger Test 3 was placed 5 m landward of Test 2 and excavated to a depth of 110 cm below surface. One stratum of brown (10YR 5/2) sandy silt loam devoid of cultural remains was present. Auger Test 4 was located about



0 20 40 cm

FEATURE 202 - DETAIL, WHITE CASTLE

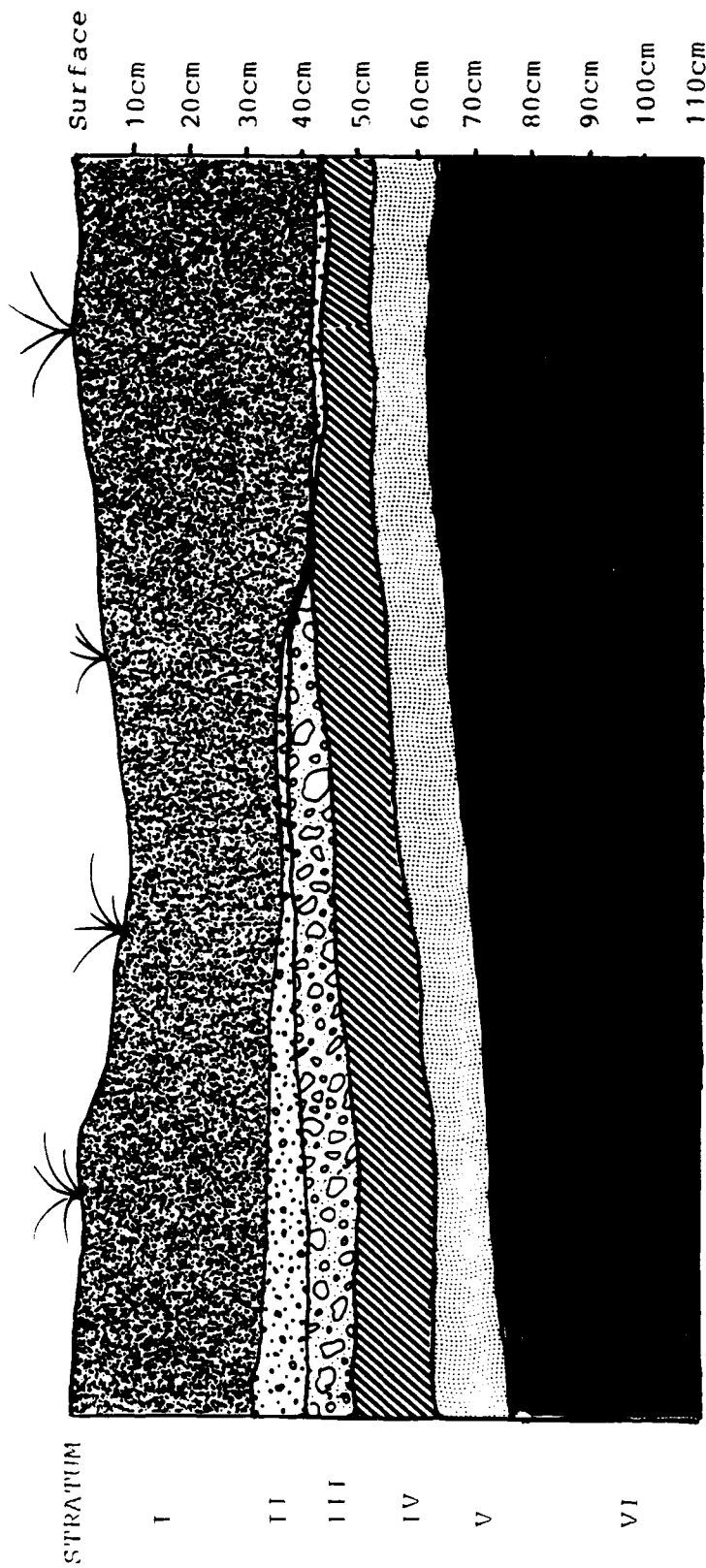
Figure 10. Detail of Feature 202 at 16 IV 147 in 1985; plan view (Goodwin et al. 1987:48).

two meters riverward of the brick alignment at Feature 202, about 1.5 m from the bluff edge. Three strata consisting of silty clay and sandy silt were identified. None contained cultural remains. Auger Test 5 was located 5 m landward of Test 4, and excavated to a depth of 65 cm below surface. Two strata consisting of culturally sterile silty clay were identified. The last auger test, Test 6, was located 5 m landward of Test 5; it was excavated to a depth of 60 cm below surface. One stratum of sandy silt loam, devoid of cultural remains, was present. While the majority of auger tests failed to recover additional cultural remains, brick fragments were encountered 60 cm below surface in Test 2.

Bluff Edge Stratigraphic Profile

One stratigraphic profile, with a total length of about seven meters, was cleaned along the bluff edge in order to document the nature and extent of Feature 202. At the upriver extreme of the profile, deposits associated with Feature 202 occurred only as a narrow band. A dark grayish brown (10YR 4/2) mottled silty clay loam (Stratum I) was present from 0 to 42 cm below surface (Figure 11). Stratum II consisted of eroded, yellowish red (5YR 5/8) brick fragments. This thin stratum, between one and two cm thick, represented the furthest upriver extent of Feature 202. Stratum III, present only in the downriver portion of Section I, was a grayish brown (10YR 5/2) silty clay loam with inclusions of crushed brick fragments. Stratum IV was a brown (10YR 5/3), culturally sterile silty clay loam between about 44 and 53 cm below surface. Stratum V, a light brownish gray (10YR 6/2) clayey silt loam between 53 and 64 cm below surface, also was devoid of cultural remains. Finally, a culturally sterile dark grayish brown (10YR 4/2) clay loam was present from 64 cm below surface to the base of the profile at 110 cm below surface (Figure 11).

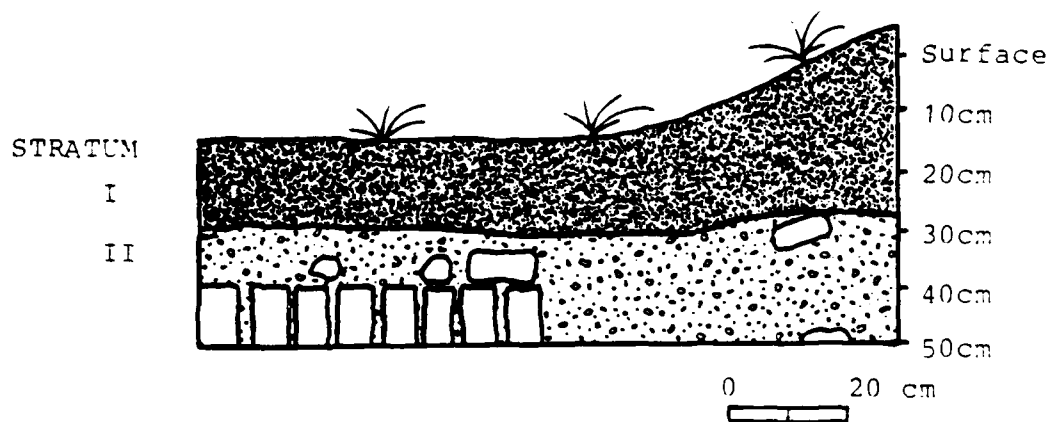
Stratum II (Feature 202) thickened downriver, and rested upon a series of overbank deposits. At the extreme downriver portion of the profile, a mass of brick rubble and mortar was present in Stratum II. A portion of the intact brick alignment was cleaned and drawn to scale (Figure 12). There, two courses of brick were present, although the upper course had been eroded severely. Thus, Stratum II of the bluff edge profile indicated an historic occupation surface. The brick rubble most likely derived from a former structure, perhaps that associated with the brick alignment in Feature 202.



KEY

- | | |
|--------------|---|
| Stratum I: | Dark grayish brown (10 YR 4/2) mottled clay loam |
| Stratum II: | Yellowish red (5 YR 5/8) eroded brick and brick rubble |
| Stratum III: | Grayish brown (10 YR 5/2) sandy silt with clay inclusions and crushed brick fragments |
| Stratum IV: | Brown (10 YR 5/3) silty clay loam |
| Stratum V: | Light brownish gray (10 YR 6/2) clayey silt loam |
| Stratum VI: | Dark grayish brown (10 YR 4/2) clay loam |

Figure 11. Bluff edge stratigraphic profile, Section No. 1 at 16 IV 147, in 1985 (Goodwin et al. 1987:57).



KEY

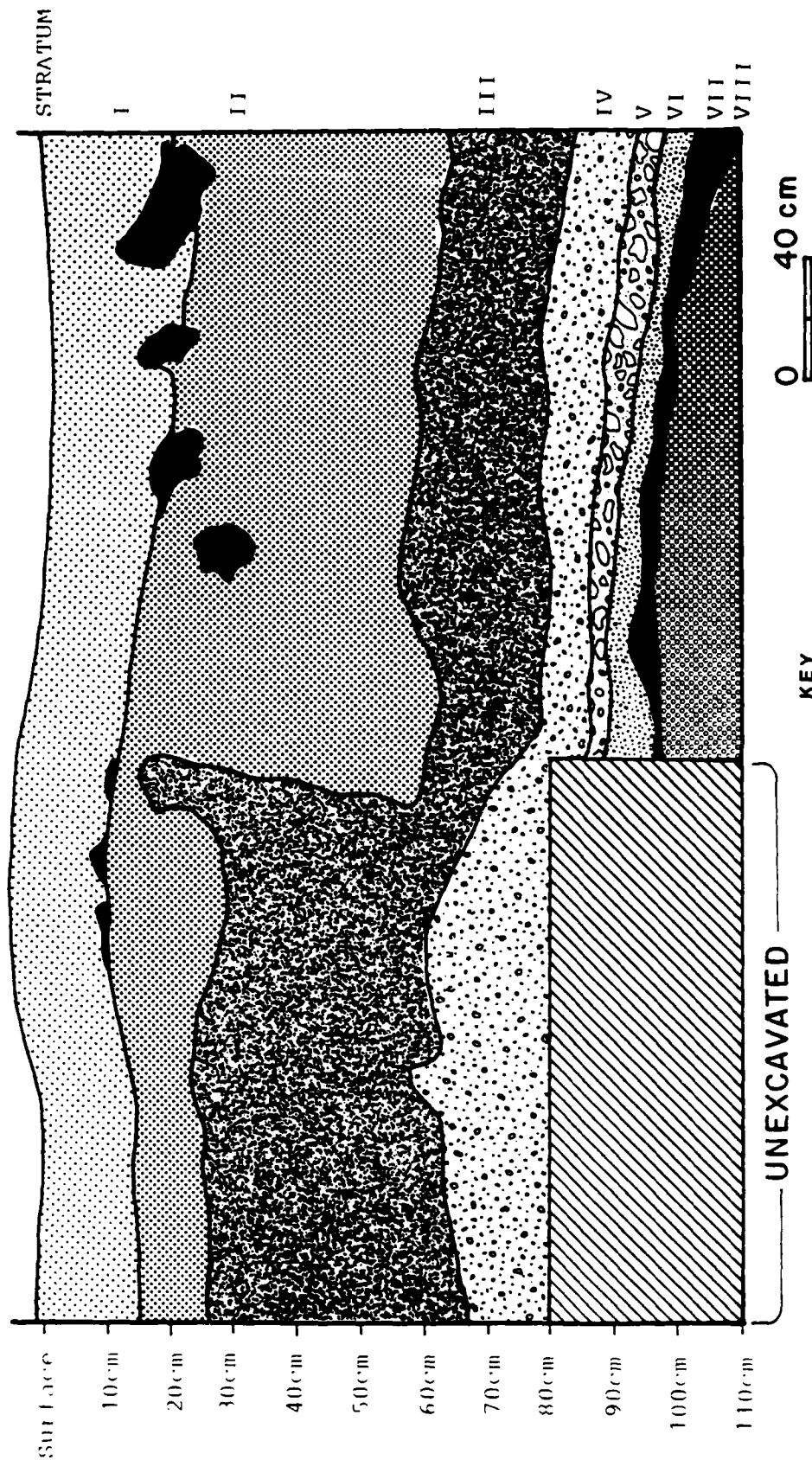
- | | | |
|---------|-----|--|
| Stratum | I: | Dark grayish brown (10 YR 4/2) mottled clay loam |
| Stratum | II: | Yellowish red (5 YR 5/8) eroded brick and brick rubble |

Figure 12. Bluff edge stratigraphic profile, Section No. 3A/4, at 16 IV 147, in 1985 (Goodwin et al. 1987:64).

Test Excavation Units

Two 1 x 2 meter test excavation units were placed at Feature 202. Excavation Unit 1, located at the upriver end of the feature, was designed to expose the surface of the buried occupation surface which was observed along the bluff edge. The unit was excavated in arbitrary 10 cm levels; the north wall stratigraphic profile is described below (Figure 13). Stratum I was a light yellowish brown (10YR 6/4) silty clay loam with clay inclusions between 0 and 13 cm below surface. It apparently represents reworked slope deposits along the batture. Stratum II, a yellowish brown (10YR 5/4) clayey silt loam with clay inclusions and Stratum III, a dark gray (10YR 4/1) clay loam with silt loam inclusions, also appeared to represent reworked overbank deposits. Stratum III reached a depth of about 70 cm below surface; it most likely represents a facies of Stratum I of the bluff edge profile. Stratum IV was a gray (10YR 5/1) clay loam with scattered brick fragments extending from about 70 to 85 cm below surface. Stratum V was a layer of reddish yellow (7.5YR 6/8) eroded brick rubble, which clearly corresponded to the eroded brick stratum observed in the bluff edge profile. This thin (3-4 cm) stratum did not contain additional artifactual remains. Below Stratum V, a series of culturally sterile overbank deposits was present (Strata VI-VIII), from about 90 cm below surface to the base of the excavation unit at 110 cm below surface (Figure 14). Excavation Unit 1 confirmed the presence of Feature 202 beyond the margins of the cutbank, but failed to shed additional light upon its origin or age. This reflected the lack of associated artifactual remains.

Excavation Unit 2 was located normal to the brick alignment at Feature 202 (Figure 10); it was designed to expose a larger portion of the feature, to retrieve stratigraphic information, and to obtain associated artifactual materials. After the silty clay overburden was removed from the southern portion of the unit, an extensive mass of brick rubble was revealed (Figure 15). Some fragments clearly derived from a second course of bricks along a central alignment, while others derived from an unidentified structural component. Zones of burned sandy clay and burned clay were observed in the northern one-half of the unit. In the south wall stratigraphic profile of this unit, Stratum I consisted of yellowish red (5YR 5/8) bricks which formed the lower course of the brick alignment. The bricks exhibited traces of intensive thermal alteration, and were vitrified along the surfaces exposed in the profile. A dark yellow brown (10YR 5/6) clayey sand (Stratum II) occurred immediately below the brick, between 10 and 15 cm below surface. Stratum II appeared to be an artificially prepared bedding upon which the bricks were laid.



KEY	
I:	Light yellowish brown (10 YR 6/4) silty clay loam with moderate root disturbance and clay inclusions
II:	Yellowish brown (10 YR 5/4) clayey silt loam with clay inclusions
III:	Dark gray (10 YR 4/1) clay loam with silty loam mottling
IV:	Gray (10 YR 5/1) clay loam with brick fragments
V:	Reddish yellow (7.5 YR 6/8) eroded brick rubble
VI:	Pale brown (10 YR 6/3) silt loam with a low density of brick fragments
VII:	Dark gray (10 YR 4/1) clay loam
VIII:	Grayish brown (10 YR 5/2) silt loam

Figure 13. Profile drawing of 16 IV 147, Excavation Unit No. 1, north wall, in 1985 (Goodwin et al. 1987:65).

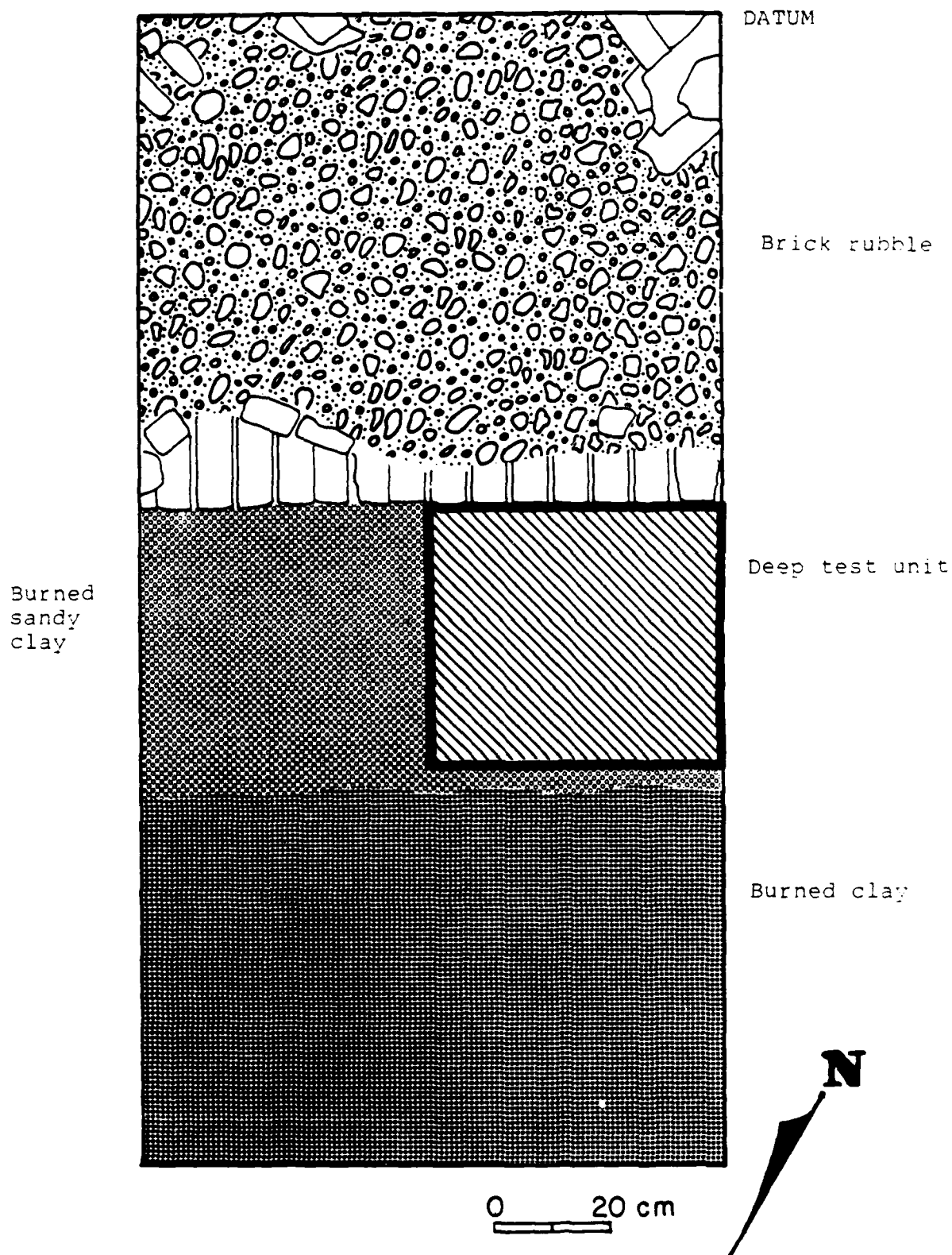
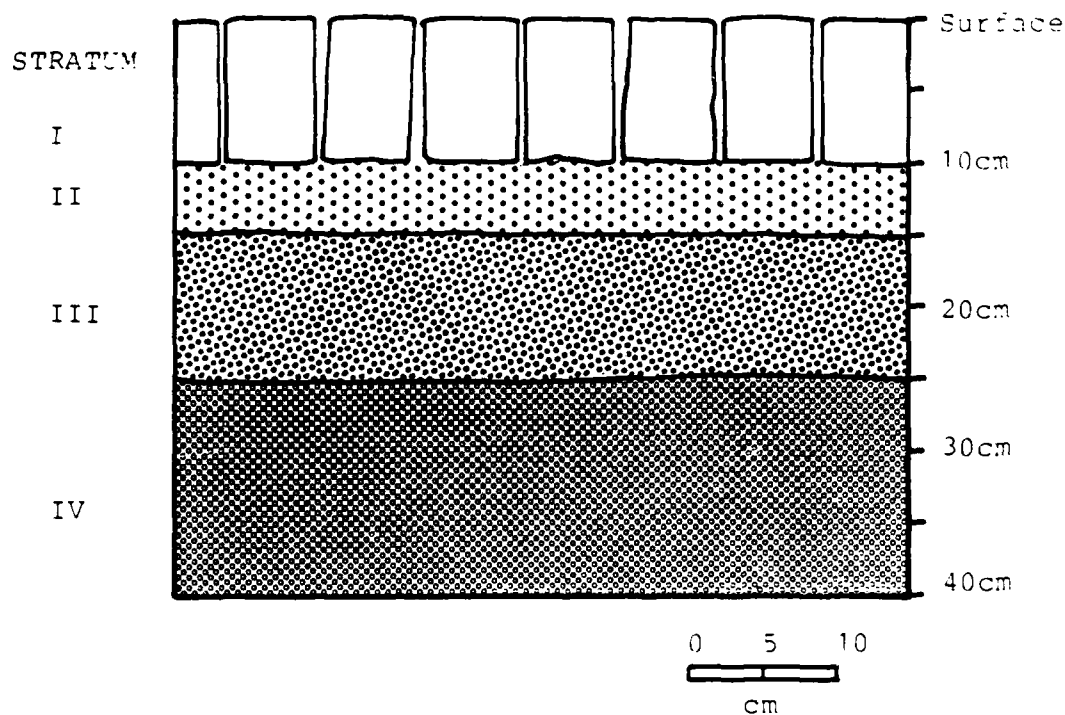


Figure 14. Plan of Excavation Unit 2 in 1985 showing the location of brick rubble, burned clay, and the 50 x 50 cm test pit (Goodwin et al. 1987:69).



KEY

Stratum	I:	Yellowish red (5 YR 5/8) soft brick
Stratum	II:	Dark yellowish brown (10 YR 5/6) fill
Stratum	III:	Black (2.5 Y 2/0) burned silty clay
Stratum	IV:	Dark gray (2.5 Y 4/0) silty clay

Figure 15. Profile drawing of 16 IV 147, Excavation Unit No. 2, deep test, south wall, in 1985 (Goodwin et al. 1987:70).

Stratum III (15-25 cm below surface) was a black (2.5Y 2.0) silty clay. The discoloration of this horizon appeared to derive from the thermal event which affected the entire feature. Stratum IV was a culturally sterile dark gray (2.5Y 4/0) silty clay between 25 cm below surface and the floor of the unit at 40 cm below surface. Excavation Unit 2 confirmed the structural integrity of the brick alignment at Feature 202, and revealed the depth to which the thermal activity affected the occupation surface. Additional intact structural features were not identified, and no additional artifactual remains, aside from bricks, were recovered.

1985 Investigations at Site 16 IV 149

In 1985, site 16 IV 149 consisted of a surface scatter of historic ceramics, glass, brick, and coal along the bankline, forming an irregular area measuring about 30 x 40 m. One hundred per cent of visible surface remains were collected from the bankline. In addition, cultural remains were observed eroding from the cutbank, about 20 m from the low water line. The bankline of the Mississippi River at 16 IV 149 was considerably eroded in 1985. However, several trees and thin root systems had impeded erosion somewhat. Immediately landward of the site, a road cut had been graded parallel to the river along the batture. This dirt trail road, and the excavation (grading) and vegetation clearing (tree removal) associated with its construction, effectively limited the horizontal extent of the site to a narrow and slightly elevated ridge along the river bank. The dirt road was graded to sterile subsoil. Thus, the largest component of the site at the time of fieldwork was the surface scatter along the beach, all of which necessarily lacked archeological context.

That portion of 16 IV 149 that could be tested through excavation was both small and fragile. It comprised a small linear strip, held in place by tree roots, and bounded on one side by the Mississippi River and on the other by the trail road. Two stratigraphic profiles were cleaned and mapped at this locality. Profile A was located at the point where a level of articulated bricks was observed. Stratum I, between 0 and 48 cm below surface, was a culturally sterile dark grayish brown (10YR 4/2) silty clay loam. Stratum II was a grayish brown (10YR 5/2) silty clay loam between 24 and 42 cm below surface, which appeared in profile as a lens contained within Stratum I. Stratum III was a dark grayish brown (10YR 4/2) silty clay loam between 42 and 60 cm below surface. A brick course occurred at the base of this stratum. Stratum IV was a culturally sterile brown (10YR 5/3) clayey loam between 60 and 85 cm below surface, above a grayish brown (10YR 5/2) clayey loam (Stratum V) from 85 cm to the base of

the profile at 160 cm below surface. After Profile A was cleaned and mapped, a small portion of the wall above Stratum III was removed to expose the brick in plan. An intact brick floor was encountered; however, additional probe testing indicated that the floor did not cover more than a 1 x 1 m area.

A second profile was placed about 5 m downriver from Profile A. The profile was one meter in width, and it was excavated to a depth of 120 cm below surface. Stratum I, between 0 and 25 cm below surface, was a grayish brown (10YR 5/2) silt loam containing crushed brick fragments, charcoal flecks, and fragments of coal. Stratum II, a thin lens between 25 and 30 cm below surface, was a light brownish gray (19YR 6/2) silt loam which contained a few scattered brick fragments. Stratum III, between 30 and 38 cm below surface, contained a dense concentration of cultural remains within a matrix of dark gray (10YR 4/1) silty clay loam. A number of brick fragments, charcoal, faunal elements, coal, ceramics, and glass were identified in this stratum. Stratum IV, between 38 and 50 cm below surface, was a dark grayish brown (10YR 4/2) clayey silt loam containing scattered coal and charcoal fragments. Stratum V, a gray (10YR 5/1) silty clay loam, extended from 50 to 97 cm below surface. It contained scattered charcoal and brick fragments. Stratum VI was a dark grayish brown (10YR 4/2) silty clay loam containing large fragments of charcoal, coal, and brick fragments. Inspection of the cutbank between Profiles A and B indicated that Stratum VI correlated with the level of the brick floor cleared at Profile A. Stratum VI was located between 97 and 108 cm below surface. A culturally sterile dark gray (10YR 4/1) clay loam was present between 108 cm below surface to the base of the profile at 120 cm below surface.

Although much of Site 16 IV 149 was considerably eroded, stratigraphic profiles indicated that a band of intact cultural deposits may have survived; the nature and research potential of those deposits was not determined during the 1985 survey effort. Both the small size and the fragility of the site were salient factors noted for consideration prior to additional testing (Goodwin et al. 1987).

CHAPTER V

FIELD INVESTIGATIONS

Introduction

Field investigations during the 1987 season at 16 IV 147 and 16 IV 149 were designed to permit the definitive assessment of the significance of each site, applying the National Register criteria (36 CFR 60.4). In particular, testing was intended to evaluate whether either site contained sufficient informational potential to warrant seeking a determination of eligibility for nomination to the National Register of Historic Places (Appendix I). Specific testing modalities, such as shovel and auger testing, topographic mapping, and hand excavation, were to be applied in order to record site size, depth of deposits, stratigraphy, cultural associations, functions, approximate dates of occupation, and condition.

One of the primary considerations in designing field work at both 16 IV 147 and 16 IV 149 was the fragility of the sites first observed in 1985 (Goodwin et al. 1987:111-113). The Convent Series soils in the White Castle area have been subjected to cutting, erosion, and slumping along the bank of the river; in fact, Site 16 IV 149 survived to the present only because tree roots held it in place. Similarly, 16 IV 147 was located on the beach and along the bank profile; preliminary conclusions from the 1985 field investigations were that the in situ brick feature (Feature 202) probably represented the back wall of a structure that had been lost to the river. Recognizing the intrinsic destructiveness of archeological excavation to the resource, subsurface testing at both of these sites was designed to minimize the amount of matrix excavated, while at the same time obtaining adequate vertical and horizontal coverage to permit accurate characterization of the sites.

At 16 IV 147, the major impediment to completing assessment of the significance of the site during the 1985 field season was the lack of any demonstrable association whatsoever between artifacts and architectural features (Goodwin et al. 1987:Passim). All of the artifacts collected during the 1985 field season were removed from the beach surface in front of the bank line containing in situ brick structural remains. Furthermore, the test excavations conducted in 1985, which have been described previously (Chapter IV), failed to produce any artifacts except for brick (Goodwin et al. 1987). And, no artifacts were observed in profile at 16 IV 147. Thus, the major task to be undertaken during the 1987 testing program was the search for

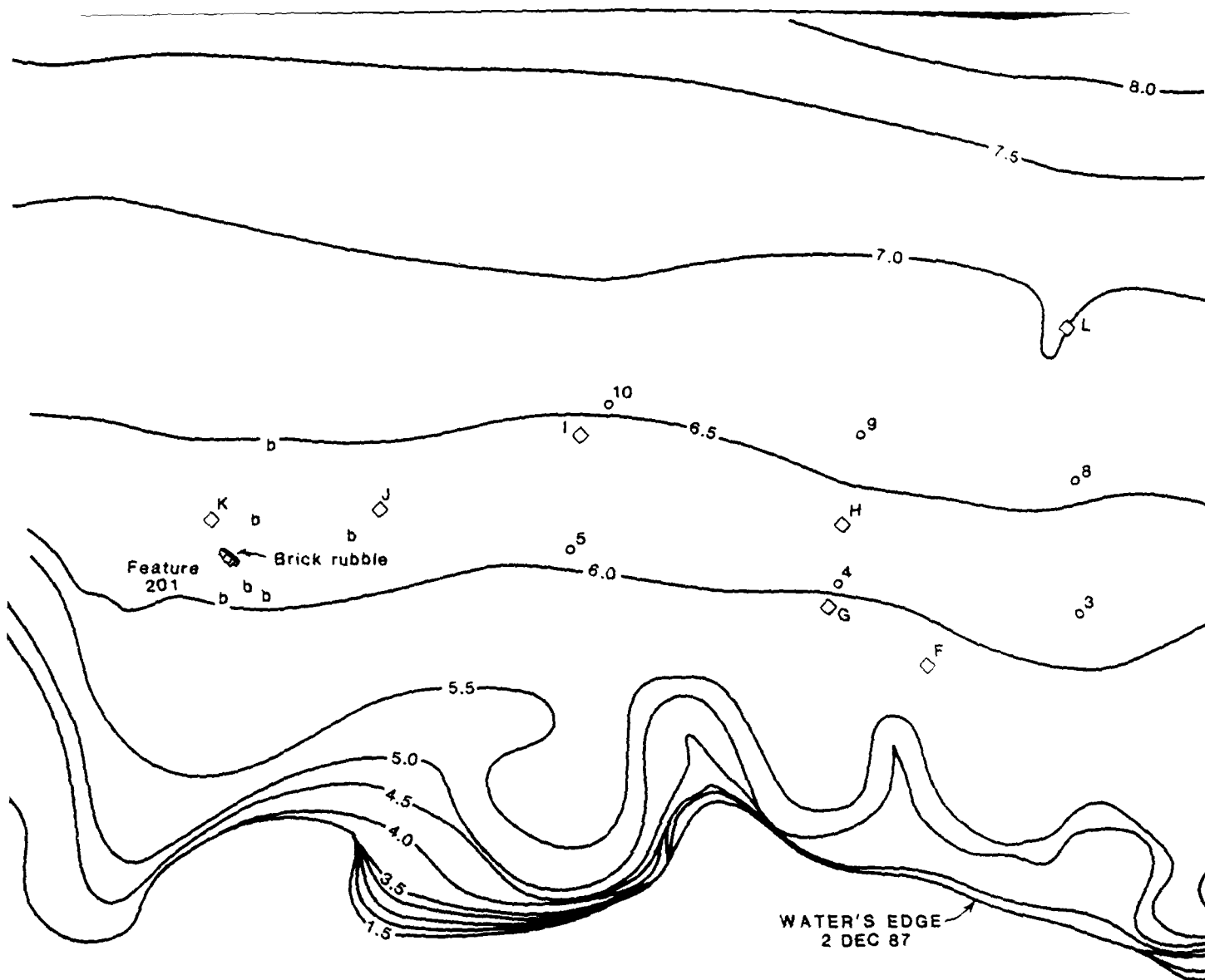
artifactual remains, either in situ or in direct association with historic architectural remains already documented at the site. Related objectives were documentation of the depositional and occupational histories of the site, and correlation of the physical remains with data pertaining to the history of the project area.

Site 16 IV 149 presented other methodological and research problems. The site was fragile: it was located on an outcrop of the bluff face held in place by tree roots and backed by a graded trail road. Furthermore, the site area was perceived to be small, so that more extensive testing regimes were inappropriate. As Goodwin et al. (1987:113) noted, even limited test excavation had the potential to test the site out of existence. Thus, an explicit objective of these investigations was to minimize the damage of excavation pending analyses and assessments. From the scientific and resource management perspective, evaluation of site significance required better characterization of the nature and research potential of the intact cultural deposit observed during the 1985 survey effort. In particular, the early date of surface collected ceramics from the vicinity of this site indicated that the architectural feature observed in profile during 1985 might represent the remains of an Acadian farmstead. As the thematic history of the region reviewed in Chapter III illustrates, such a find would have local and regional significance, if the collections obtained through testing had a demonstrable capability to illuminate historical understanding (Goodwin et al. 1987:111).

In the discussions that follow, the methodologies that were applied during the 1985 field season at each of these sites are reviewed, and the archeological results of field investigations are reported. In subsequent chapters of this report, the results of artifact and ecofact analyses are reviewed, and the nature of the sites is interpreted. The issue of significance is addressed in the concluding chapter.

1987 Investigations at Site 16 IV 147

The first task undertaken at 16 IV 147 was preparation of a detailed topographic site map. Emphasis was placed on the delineation of vertical relationships across the site area. A one half inch metal pipe, tied into levee marker stations with known horizontal and vertical coordinates, was emplaced as site datum (Figure 16). As the plan of 16 IV 147 illustrates, topographic contours were fairly regular away from the bluff face; contour lines in general were parallel to the river. All site remains fell below the vertical plane established at datum (7.04 m NGVD). The brick course defined as Feature 202 ranged in elevation from 6.30 m to 6.50 m



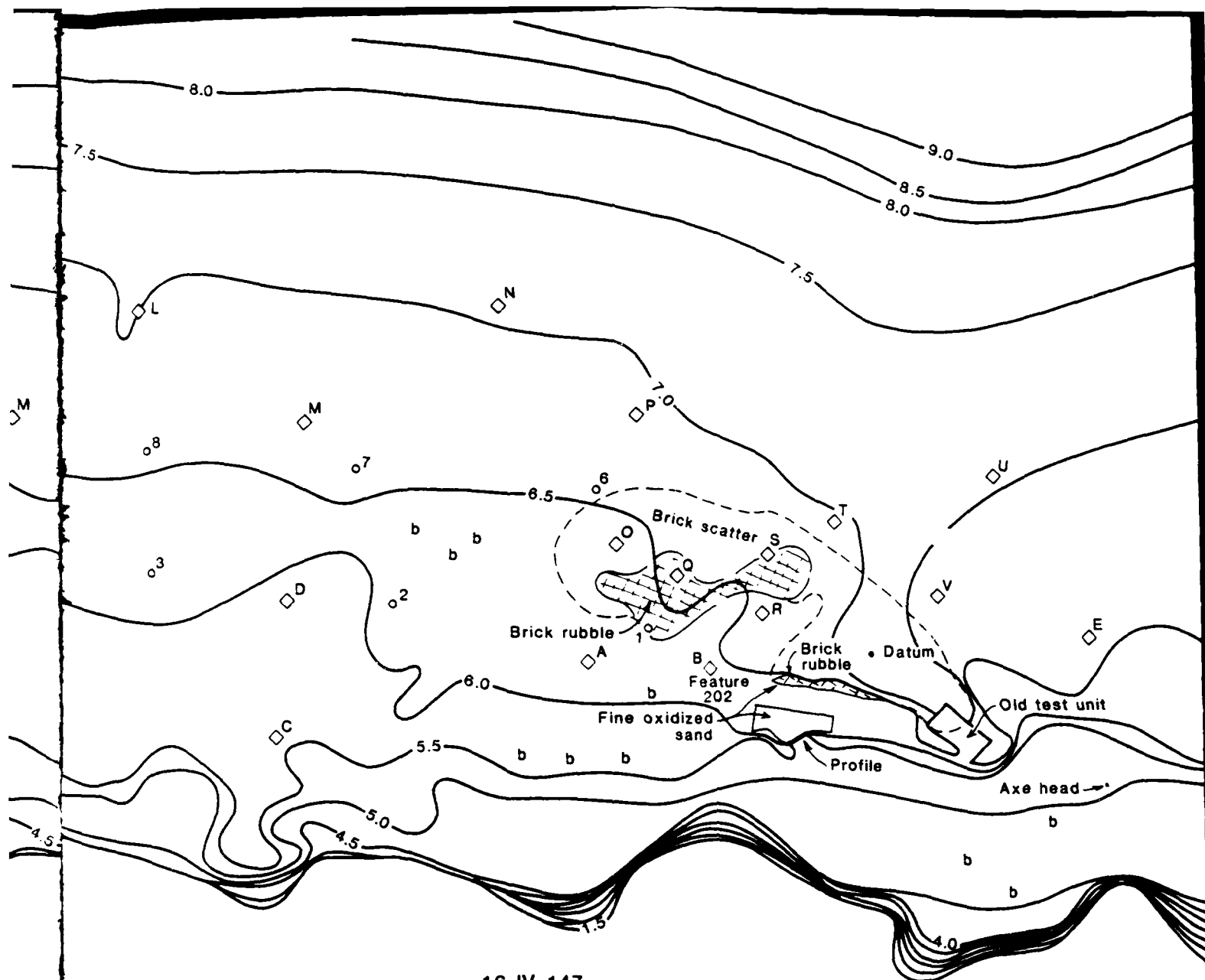
MISSISSIPPI RIVER

Flow

CONTOUR INTERVAL: .5M(50cm)


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METERS

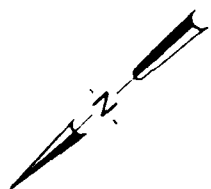
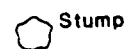




16 IV 147

KEY

- C Shovel Test
- 2 Auger Test
- b Brick fragments
-  Dense brick rubble
- Boundary of brick scatter



NGVD. Elevations at Feature 201 varied tightly around 6.10 m NGVD.

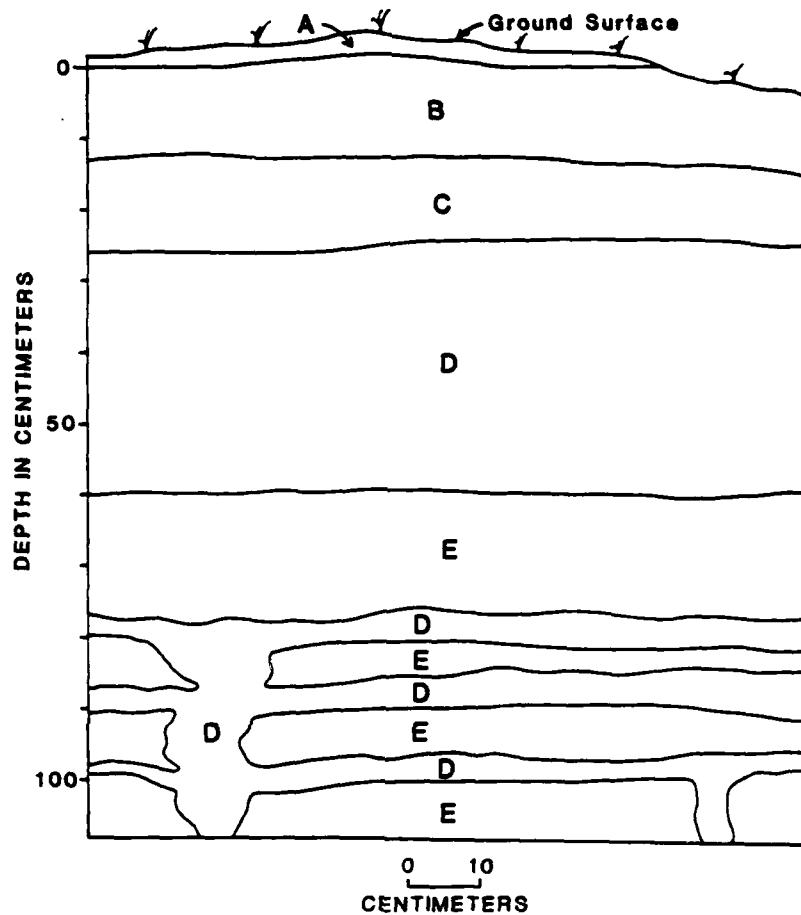
Perhaps the major difference in the site configuration was the absence of a beach terrace below the bluff face during the 1987 field season. It should be noted, however, that river level was low (approximately 2.0 feet at the Carrollton gage) at the time these field investigations were undertaken. No ceramic sherds were observed or collected during the 1987 field season. In fact, the only artifact encountered, with the exception of bricks, was a steel axe head in a deflated area at 5.1 m NGVD (Figure 16).

After topographic mapping was completed, a series of auger tests was initiated in order to define the horizontal limits of the site; to elucidate the stratigraphic milieu; and, to ascertain relationships, if any, between Features 201 and 202. Two rays of auger tests were established; each ray was placed within contour intervals observed to contain brick structural remains (6.0 - 6.5 m, and 6.5 - 7.0 m NGVD). Each auger test ray extended the entire length between the two features observed during 1985 (Features 201 and 202, see Figure 16). Ten auger tests were excavated to a depth of 1 m below ground surface. Soil zones defined in each auger test were mapped and described; Munsell soil colors also were recorded. Auger test profiles from 16 IV 147 are contained in Appendix II.

In general, the auger test regime at this site documented the recent depositional history of flood episodes and overbank deposits along this reach of the river. As Appendix II illustrates, the shallow subsurface at 16 IV 147 is characterized by interbedded silts and silty clays. Auger Test 3 is typical (Appendix II); it evidenced a dark gray (2.5Y 4/0) clay over a dark grayish brown (2.5Y 4/2) clayey silt, superimposed over a brown (10YR 5/3) silt, overlying a dark gray (2.5Y 4/0) clay. With the exception of these overbank deposits, only one auger test (Test 6) contained any other materials. In Auger Test 6, a small stone was found at 27 cm below surface within a dark gray (2.5Y 4/0) clay. As Figure 16 illustrates, Auger Test 6 was located immediately adjacent to the brick scatter defined as Feature 202.

A one meter bluff profile was cleaned and recorded adjacent to Feature 202 (Figures 16 and Figure 17). This profile confirmed the shallow cultural stratigraphy of the site. It also substantiated the impression gained during 1985: no artifacts whatsoever were observed during excavation of the profile. As Figure 17 illustrates, the exposed surface at the profile consisted of a burnt and fused 5YR 5/8 yellowish red silt. This stratum capped a black (2.5Y 3/0) carbonized and thermally altered clay-like

16 IV 147
BLUFF PROFILE



KEY

A. 5YR 5/8 Yellowish red
burned, oxidized, and fused
earthen crust

B. 2.5Y 3/0 Black carbonized
and thermally altered cf., clay

C. 2.5Y 5/2 Grayish brown silt

D. 5Y 3/1 Very dark gray silty
clay

E. 2.5Y 6/0 Gray silt mottled
with light olive brown 2.5Y 5/4
silt

Figure 17. Bluff profile at 16 IV 147.

material. Zones C and D (Figure 17) comprised grayish brown and very dark gray silts and clays; the former was discolored because of the thermally altered materials above it, while the latter was described as culturally sterile. Lower strata are characterized as interbedded dark gray, gray, and light olive brown silts and silty clays typical of flood deposited materials.

After auger testing and bluff profile recordation had failed to reveal any artifacts, fewer artifacts in association with structural remains, a program of test excavation was initiated. With the concurrence of the Contracting Officer's Representative, prior plans to excavate one or two 1 x 2 m test units were modified in the field in favor of a more extensive testing modality. Appendix II illustrates the profiles of twenty-two 50 x 50 cm shovel tests. These shovel tests were placed across the site area, and shot in with the electronic distance meter (EDM). As Appendix II illustrates, the stratigraphy observed in the shovel tests confirmed observations made both during the 1985 field season and during the auger test regime just described. Twenty of the shovel tests were devoid of cultural remains. Shovel Test D (Figure 16; Appendix II), which was located in a deflated area, produced small fragments of rounded and water-washed brick within the most surficial stratum. Shovel Test Q (Figure 16; Appendix II), which was located within the dense brick scatter immediately surrounding Feature 202, produced brick fragments in the uppermost 20 cm.

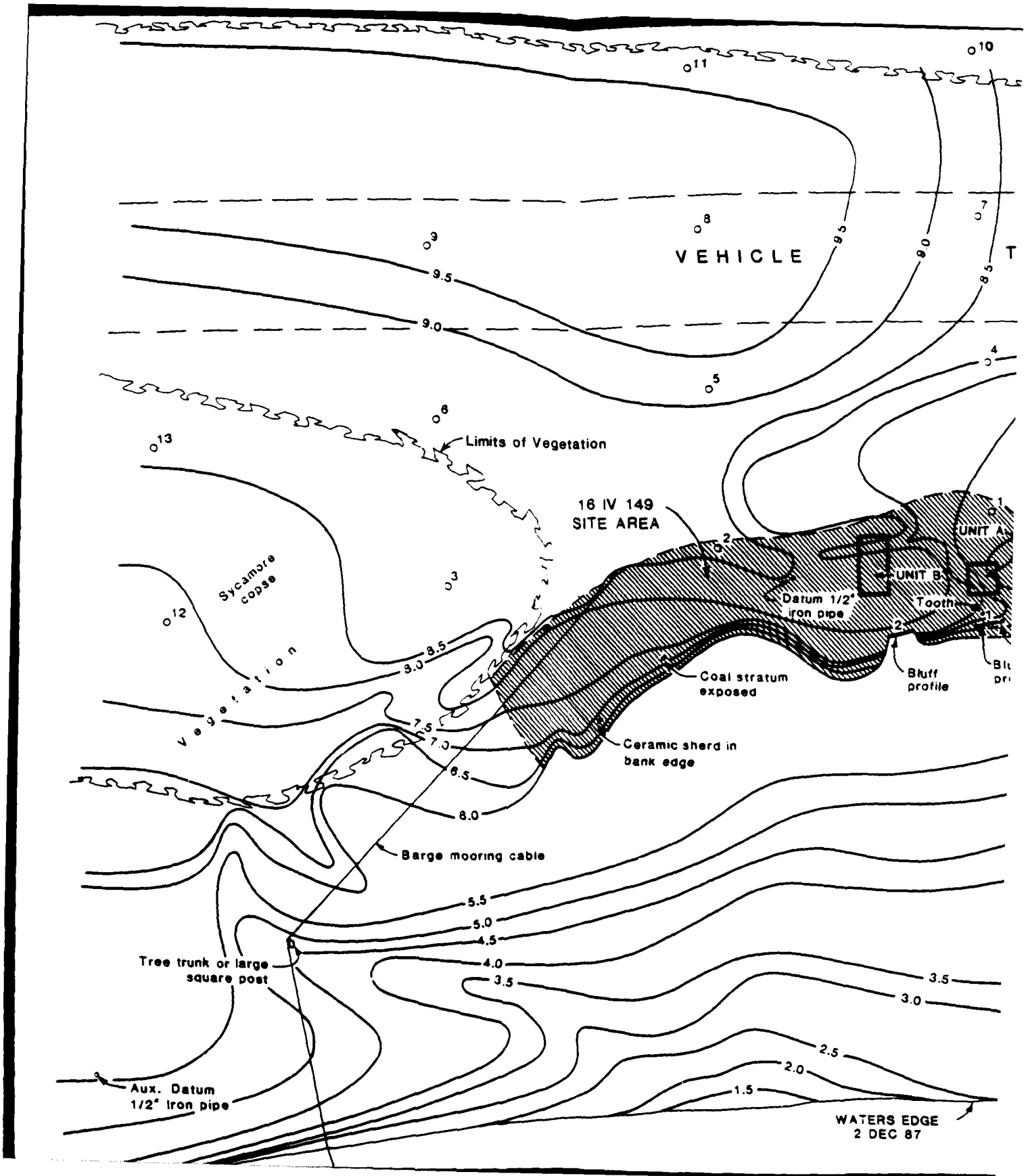
Archeological Site 16 IV 147, then, clearly consists of small surface and very shallow subsurface scatters of brick, at the locations designated as Features 201 and 202 during the 1985 season (Goodwin et al. 1987). In addition, the Feature 202 area contains thermally altered shallow subsurface stratigraphy indicative of the antecedent presence of fire. If the brick alignment documented in 1985 in fact was the back wall of a former standing structure, then that fire would have been inside or very immediately adjacent to the structure. No artifacts remain in the site area, and no buried features are present, that would indicate the function of that structure. The complete absence of any kind of domestic artifact or residue from the site area of 16 IV 147 may indicate that the early French and English ceramic sherds collected from the beach in 1985 (Goodwin et al. 1987) were secondarily redeposited by riverine activity, and that they did not originate in Site 16 IV 147. On the other hand, these ceramics may have originated from another component of the site, which has since been destroyed by the river. Field work during 1987 failed to reveal any association between artifacts and features. With the exception of a sample of bricks, which will be discussed in Chapter VI, no artifacts were collected from the site.

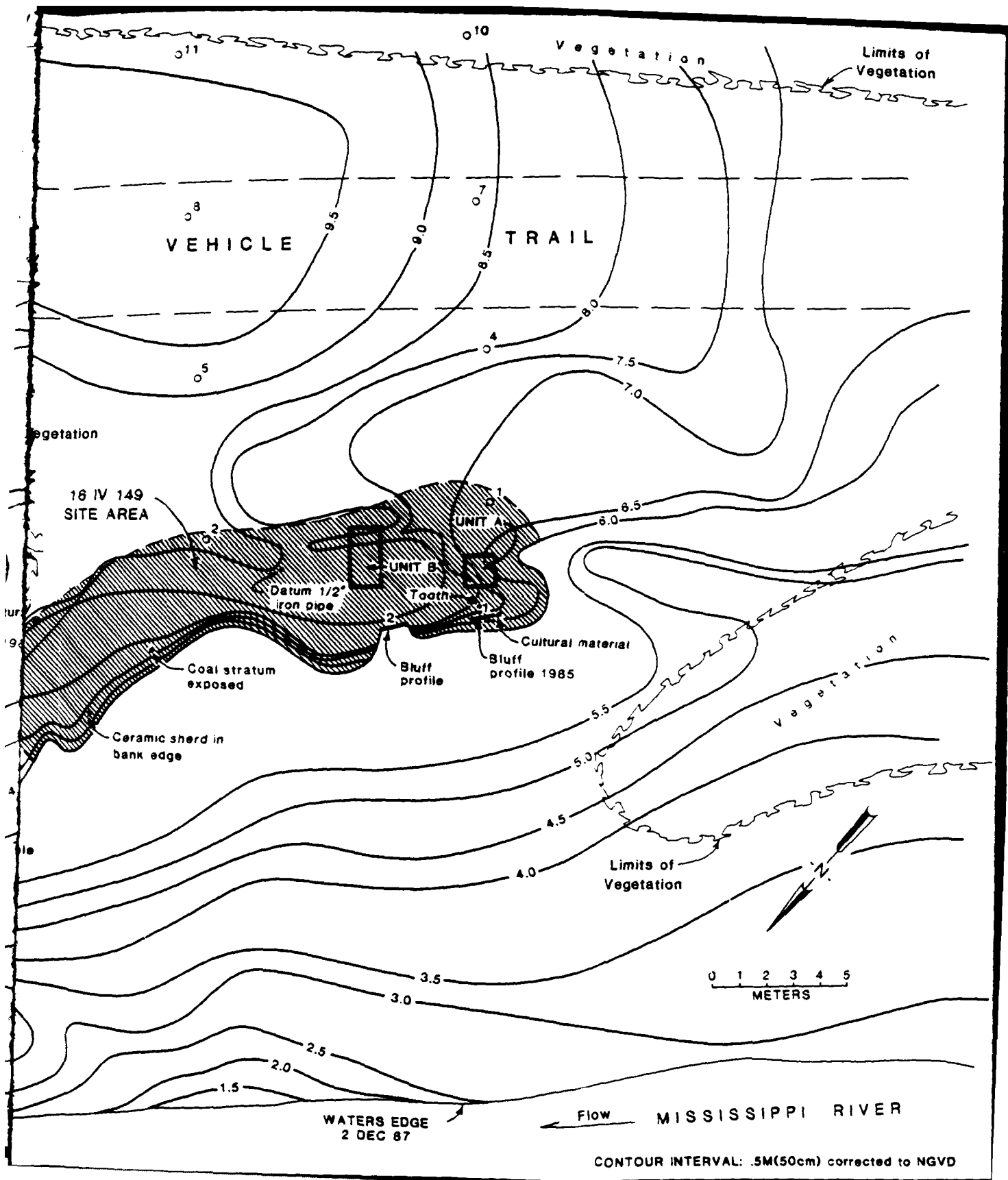
1987 Investigations at Site 16 IV 149

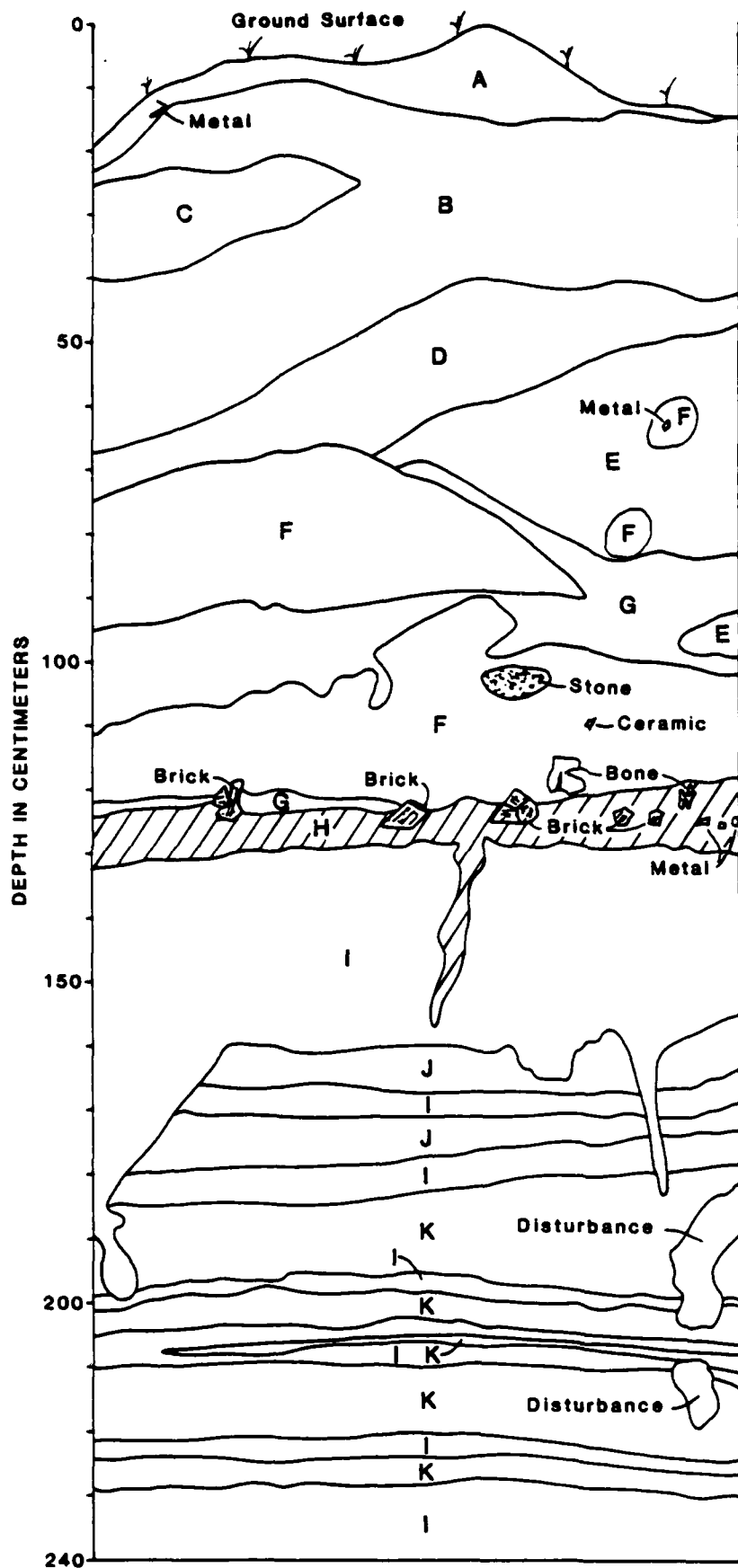
Field work at 16 IV 149 during 1987 began with topographic survey and the preparation of a site plan (Figure 18). Both a primary and a secondary datum were emplaced; these were tied into levee marker stations with vertical and horizontal control. Surface elevation at datum was 8.422 m NGVD. The brick feature observed during 1985 (Goodwin et al. 1987) was collapsed, and the bricks had washed away. Artifactual remains were eroding from the cutbank at the former location of the brick feature.

After completion of site mapping, a 1 m bluff profile was cut and cleaned along the cutbank in what appeared to be the central portion of the site. As Figure 18 illustrates, that profile was placed several meters downriver from the profile cleaned and recorded in 1985 (Goodwin et al. 1987). The 1987 bluff profile is shown in Figure 19. The stratigraphy at this site was relatively more complex than that observed at 16 IV 147. Instead of overbank and flood deposits, 16 IV 149 evidenced a series of fill episodes that appear to derive from historic levee construction, from road grading, or both. A brown silt overburden caps the site. Below that (Figure 19), six silt and silty clay strata were visible above the cultural lens recognized in 1985. All six of these strata (B, C, D, E, F, and G, Figure 19), comprised silts, clayey silts, and clays that contained a variety of artifactual and ecofactual remains. In addition, Strata C, D, E, and F (Figure 19) were mottled with clayey silt, silt, and ferrous oxide inclusions.

A close examination of Figure 19 will illustrate that the original ground surface in this site area was located stratigraphically at the top of the cultural Stratum H. With the exception of Stratum A, which is recent overburden, all of the intervening strata (B - G, Figure 19) represent fill episodes resulting from modification of the site area by man. The characteristic mottling; the presence of mixed and randomly appearing cultural remains in these strata; the frequent and obvious nodular ferrous oxide inclusions; the lack of regularity, e.g., horizontally bedded deposits; and the presence of heavier sediments containing larger clay loads atop silts, in a stratigraphically reversed profile, all are characteristic of man-made deposits resulting from levee construction. The difference between natural levee deposits and man-made levee deposits may be seen by the separation in the shapes and profiles of the strata above and below the cultural lens designated as Stratum H (Figure 19). Strata below the cultural lens exhibit the near horizontal bedding typical of periodic overbank deposition. Those above have a pinched appearance caused by episodic dumping, and subsequent natural sorting and runoff, of dredged fill.







16 IV 149
BLUFF PROFILE

KEY

- A. 10YR 5/3 Brown silt
- B. 2.5Y 4/2 Dark, grayish brown clayey silt with charcoal flecks, brick fragments, shell, and bone
- C. 10YR 5/3 Brown silt, heavily mottled
- D. 5Y 6/3 Pale olive silt with heavy 5Y 5/3 olive clayey silt mottling
- E. 2.5Y 4/2 Dark, grayish brown silty clay; mottled; lacks artifacts
- F. 2.5Y 4/2 Dark grayish brown clayey silt mottled with 2.5Y 5/2 silt; brick fragments, charcoal, and bone present
- G. 5Y 6/3 Olive silt with 5Y 5/3 olive clay mottling
- H. 2.5Y 4/2 Dark, grayish brown clayey silt; dense artifact concentration
- I. 5Y 3/1 Dark gray, very fine silty clay
- J. 2.5Y 6/0 Gray silt mottled with 2.5Y 5/4 silt
- K. 2.5Y 6/0 Gray clayey silt, heavily mottled

0 10
CENTIMETERS

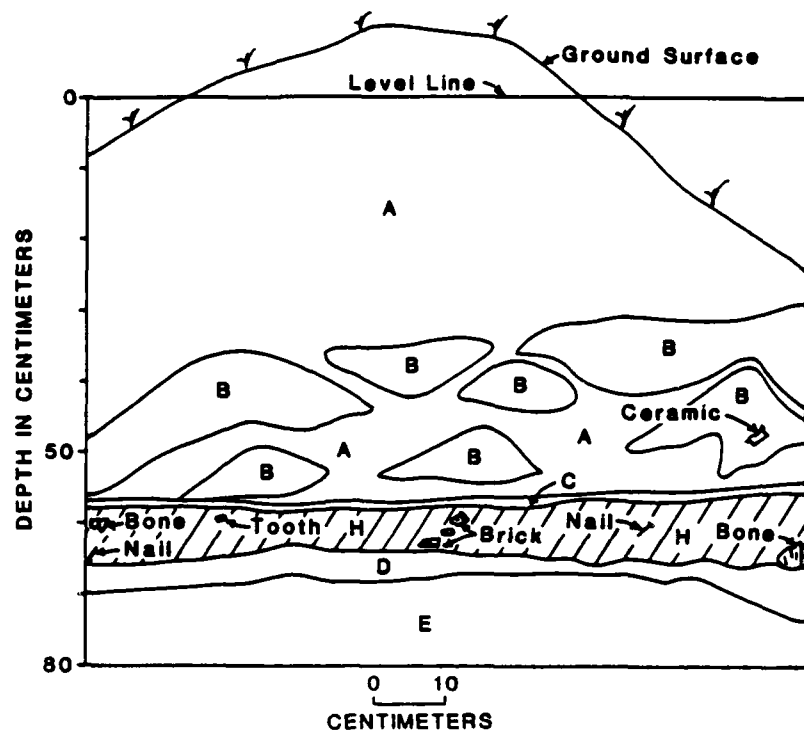
Figure 19. Bluff profile at 16 IV 149.

Assessment of significance of 16 IV 149, then required archeological focus on the cultural lens designated as Stratum H, a dark grayish brown clayey silt containing a dense concentration of artifactual and ecofactual remains. The fact that Stratum I, a dark gray very fine silty clay was observed to be richer organically than strata both above and below it, bolsters the conclusion that Stratum H was a surface that has been affected by leaching.

Following excavation of the bluff profile, a series of auger tests was initiated across the site area. The resulting profiles are contained in Appendix III. Auger tests were excavated at 10 m intervals along three rays roughly parallel to the river, and spaced 5 m apart (Figure 18). Two additional tests were placed close to the edge of the elevated road bed that truncates the site. A total of thirteen auger tests were excavated using a Dutch auger to a depth of two meters (Appendix III). Ten of those tests revealed disturbed depositional history like that previously discussed for the bluff face profile. Only three auger tests produced cultural remains. Auger Test 1 was placed behind the bluff face along the western edge of the probatively defined site area (Figure 18). In it, charcoal, brick fragments, and bone fragments were found in a 2.5Y 5/4 dark grayish brown clayey silt resembling the cultural lens defined as Stratum H in the bluff profile. In addition, the elevation of those cultural remains matched closely that of the lens. Auger Test 2 (Figure 18) also contained fragmented coal and brick in a dark grayish brown clayey silt. However, the elevation of those remains, fully one meter higher than Stratum H, indicates that cultural materials at this locale are contained in the disturbed levee fill deposit characterized as or analogous to Stratum B in the bluff profile (Figure 19; Appendix III). Similarly, coal found in Auger Test 3 (Figure 18; Appendix III) derived from a position more than one meter higher than Stratum H, in a setting that is clearly disturbed. With the exception of Auger Test 1, no intact cultural deposits were observed during auger testing at 16 IV 149. No cultural remains whatsoever were found underlying road fill landward of the site area. On the basis of auger testing and of examination of the cutbank profile, the site was observed to be limited to the bluff area (Figure 18).

Hand excavation of two test units followed completion of the auger testing. Test Unit A (Figures 18, 20, and 21) was a 1 x 1 m excavation placed on the west slope of the site, approximately .5 m landward of the cutbank near the location of the bluff profile excavated in 1985 (Figure 18). The placement of this unit was designed to test for the presence of additional architectural remains in the area that formerly contained bricks. A comparison of Figures 20 and 21 will

16 IV 149
UNIT A
EAST WALL PROFILE

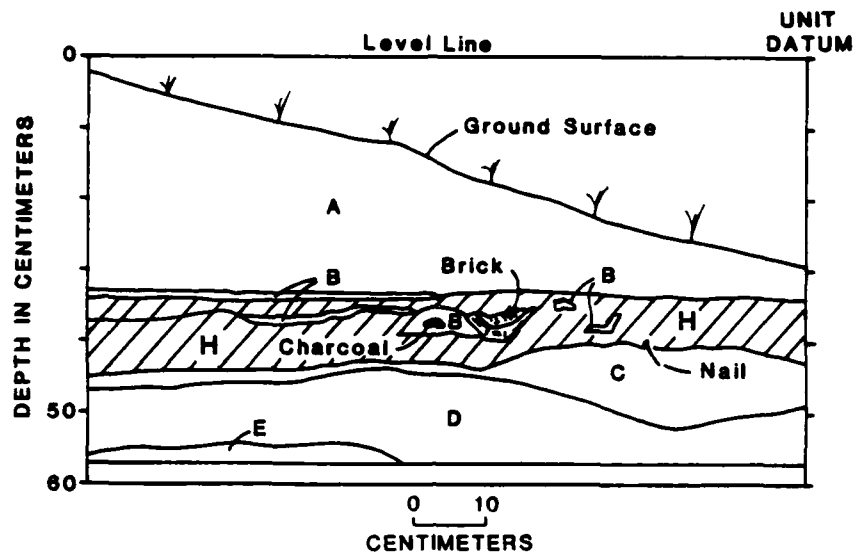


KEY

- A. 5Y 4/3 Olive silt with heavy mottling
- B. 2.5Y 5/2 Grayish brown silt; artifacts more abundant than in Zone A
- C. 10YR 5/4 Yellowish brown silt; contains small flecks of charcoal
- H. 2.5Y 4/2 Dark grayish brown silt; dense artifact concentration
- D. 5Y 3/1 Very dark gray, very fine silty clay; culturally sterile
- E. 2.5Y 5/4 Light olive brown silt, heavily mottled with small-sized 2.5Y 5/6 light olive brown inclusions

Figure 20. East wall profile of Unit A at 16 IV 149.

16 IV 149
UNIT A
SOUTH WALL PROFILE



KEY

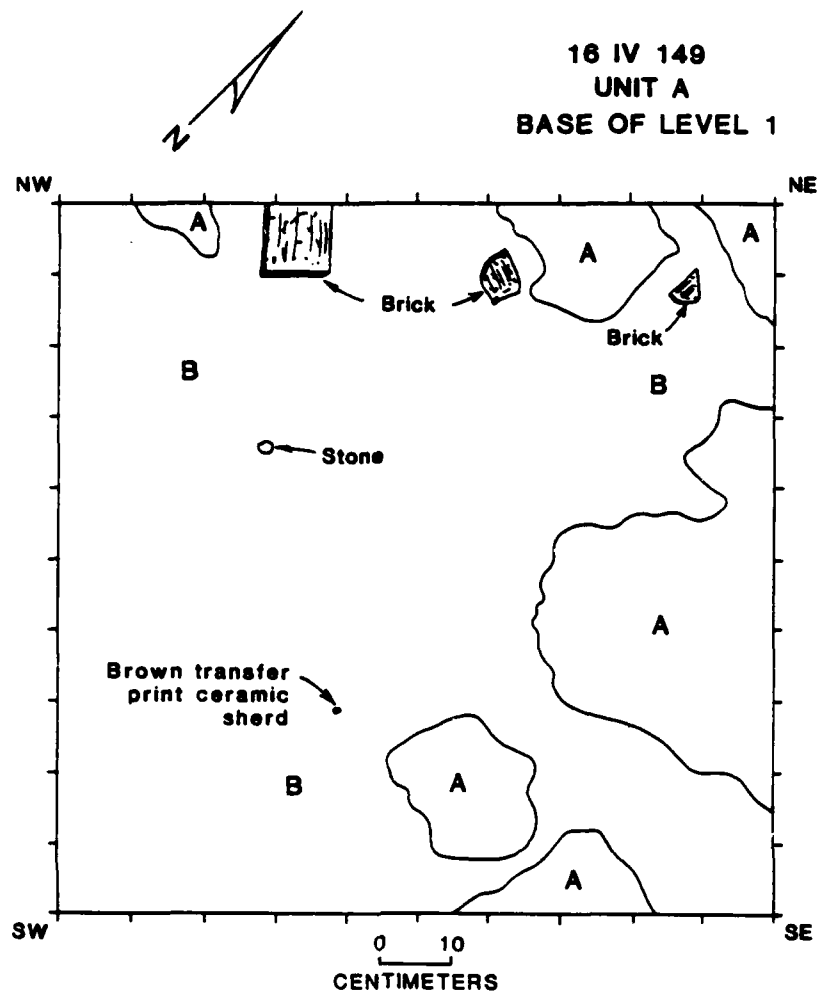
- A. 2.5Y 5/2 Grayish brown silt overburden mottled with 5Y 9/3 olive silt; few artifacts present
- B. 10YR 5/4 Yellowish brown silt with small flecks of charcoal
- H. 2.5Y 4/2 Dark grayish brown silt; dense artifact zone
- C. 2.5Y 4/2 Dark grayish brown clayey silt; low artifact concentration
- D. 5Y 3/1 Very dark gray, very fine silty clay; culturally sterile soil
- E. 2.5Y 5/4 Light olive brown silt heavily mottled with small-sized 2.5Y 5/6 light olive brown inclusions

Figure 21. South wall profile of Unit A at 16 IV 149.

illustrate the irregular surface topography in this area. Figure 20, the east wall profile of Unit A, illustrates the mixed and mottled levee fill deposits that sealed the cultural stratum designated as H. All materials from the disturbed levee fill in Unit A were collected as Level 1. A plan view of Unit A at the base of Level 1 (Figure 22) shows the admixture of these irregular deposits. In Unit A, the cultural lens, Stratum H, was located 6.83 m NGVD; in the bluff profile, Stratum H was located between 6.79 and 6.87 m NGVD. Within Stratum H in Unit A, ceramic sherds, coal, faunal remains, and brick fragments were noted and collected. However, no in situ architectural feature was present. Some of the artifacts within Stratum H in Unit A were burned; charcoal and ash were abundant. This may indicate that refuse in this area of the site had been burned.

Excavation Unit B was placed above both Unit A and the bluff profile recorded during the 1987 field season, near the highest elevation at the site (Figures 18, 23, and 24). As Figure 23 illustrates, the stratigraphic setting at Unit B displayed the same admixture of filled man-made levee deposits previously documented in the bluff profile. There was considerable variability in the placement of fill strata across the unit. In particular, Stratum D a pale olive silt mottled with oxidized inclusions, was a minor constituent near the west wall of the unit (Figure 23). However, it dominated the profile in the southern portion of the unit (Figure 24). This levee fill, unlike the strata that surmounted it was, with the exception of one small brick fragment, devoid of cultural remains. It is characteristic, however, of borrowed material observed in levee fill elsewhere along the river, e.g., Vacherie. Stratum H in Unit B resembled its homologues in the bluff profile and in Unit A. Its elevation was 6.89 m NGVD; an ashy lens, bone, and ceramic sherds were observed, as was a line of large brick fragments, shown here in plan view (Figure 25).

Test excavation at 16 IV 149, then, revealed an overwhelmingly disturbed stratigraphy above an 8 - 10 cm thick lens of cultural refuse. The strata above that lens included both borrowed natural levee deposits, i.e., Stratum D in Figures 23 and 24, and fill that resembles the in situ lens (Stratum H) in color, consistency, and constituents, e.g., Strata E and F in Figures 23 and 24. These homologues indicate a fill sequence preceded by both deep excavation away from the site area, and by shallow excavation nearby. No intact structural features remain at the site. And, the context and content of Stratum H across the site area indicate burned refuse. The nature of the site will be discussed further in Chapter VII of this report.

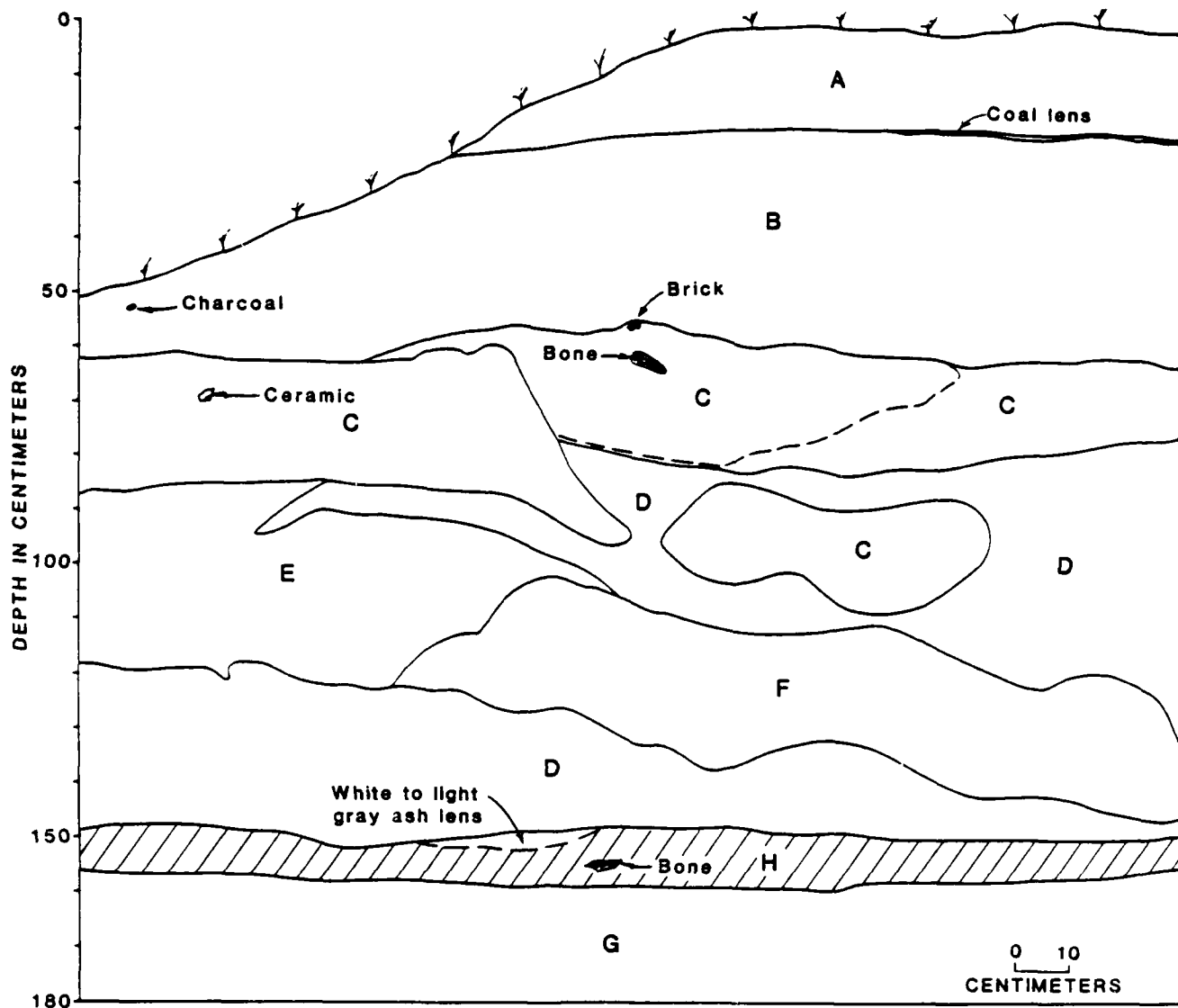


KEY

- A. 10YR 5/4 Yellowish brown silt mottled with charcoal flecks
- B. 2.5Y 4/2 Dark grayish brown silt with artifacts

Figure 22. Plan of base of Level 1 at Unit A, 16 IV 149.

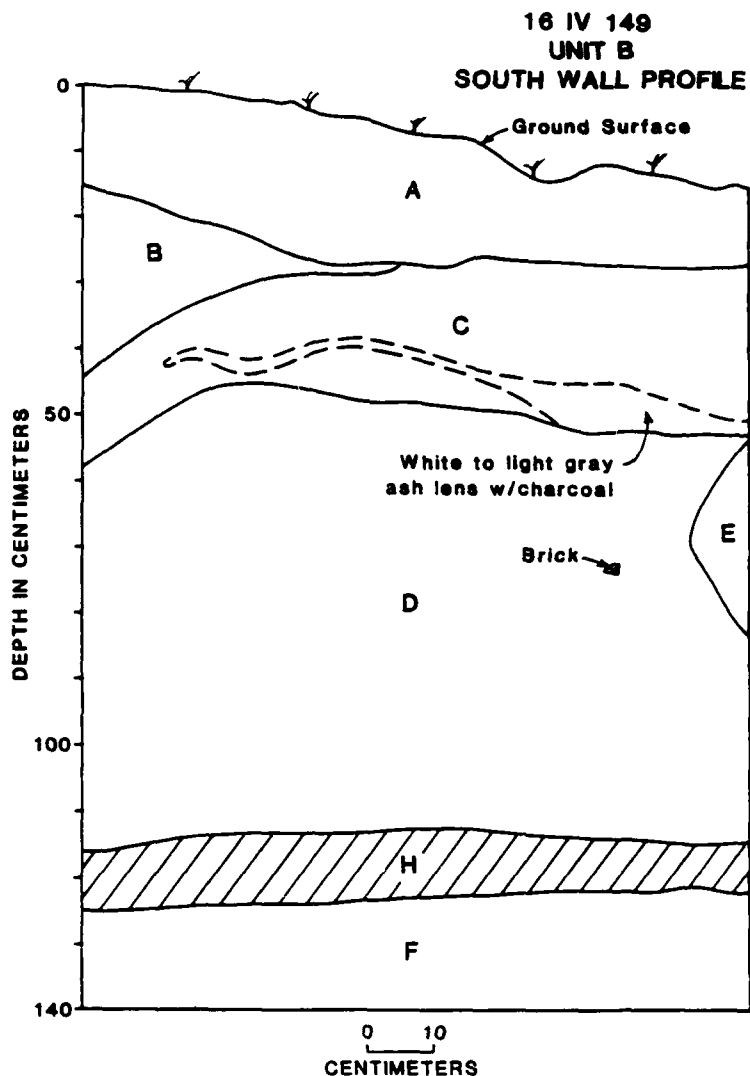
16 IV 149
UNIT B
WEST WALL PROFILE



KEY

- | | |
|--|--|
| <p>A. 10YR 5/3 Loosely compacted brown silt, containing artifacts, brick fragments, and some mortar</p> <p>B. 5YR 6/3 Pale olive silt mottled with heavy 5Y 5/3 olive clayey silt</p> <p>C. 2.5Y 4/2 Dark grayish brown silt with light gray ash throughout</p> <p>D. 5Y 6/3 Pale olive silt mottled with moderate small-sized 5Y 5/6 olive inclusions</p> | <p>E. 2.5Y 4/2 Dark grayish brown silty clay mottled with 2.5Y 4/2 olive brown rounded inclusions</p> <p>F. 2.5Y 4/2 Dark grayish brown silt mottled with 5Y 5/6 olive small-sized rounded inclusions; contains artifacts, brick fragments</p> <p>G. 5YR 3/1 Very dark gray, very fine silty clays with 5Y 5/6 olive inclusions</p> <p>H. 2.5Y 4/2 Dark grayish brown silt; dense artifact concentration</p> |
|--|--|

Figure 23. West wall profile of Unit B at 16 IV 149.



KEY

- A. 10YR 5/3 Brown sandy silt
- B. 2.5Y 5/2 Grayish brown silt
- C. 2.5Y 4/2 Dark grayish brown silt, containing small brick fragments, artifacts, etc.
- D. 5Y 6/3 Pale olive silt heavily mottled with 5Y 5/6 olive silt
- E. 2.5Y 4/2 Dark grayish brown silty clay mottled with 2.5Y 4/4 olive brown silty clay
- H. 2.5Y 4/2 Dark grayish brown silt; dense artifact concentration
- F. 5Y 3/1 Very dark gray, very fine silty clays mottled with 5Y 5/6 olive silt

Figure 24. South wall profile of Unit B at 16 IV 149.

16 IV 149
UNIT B
LEVEL 5
FLOOR PLAN

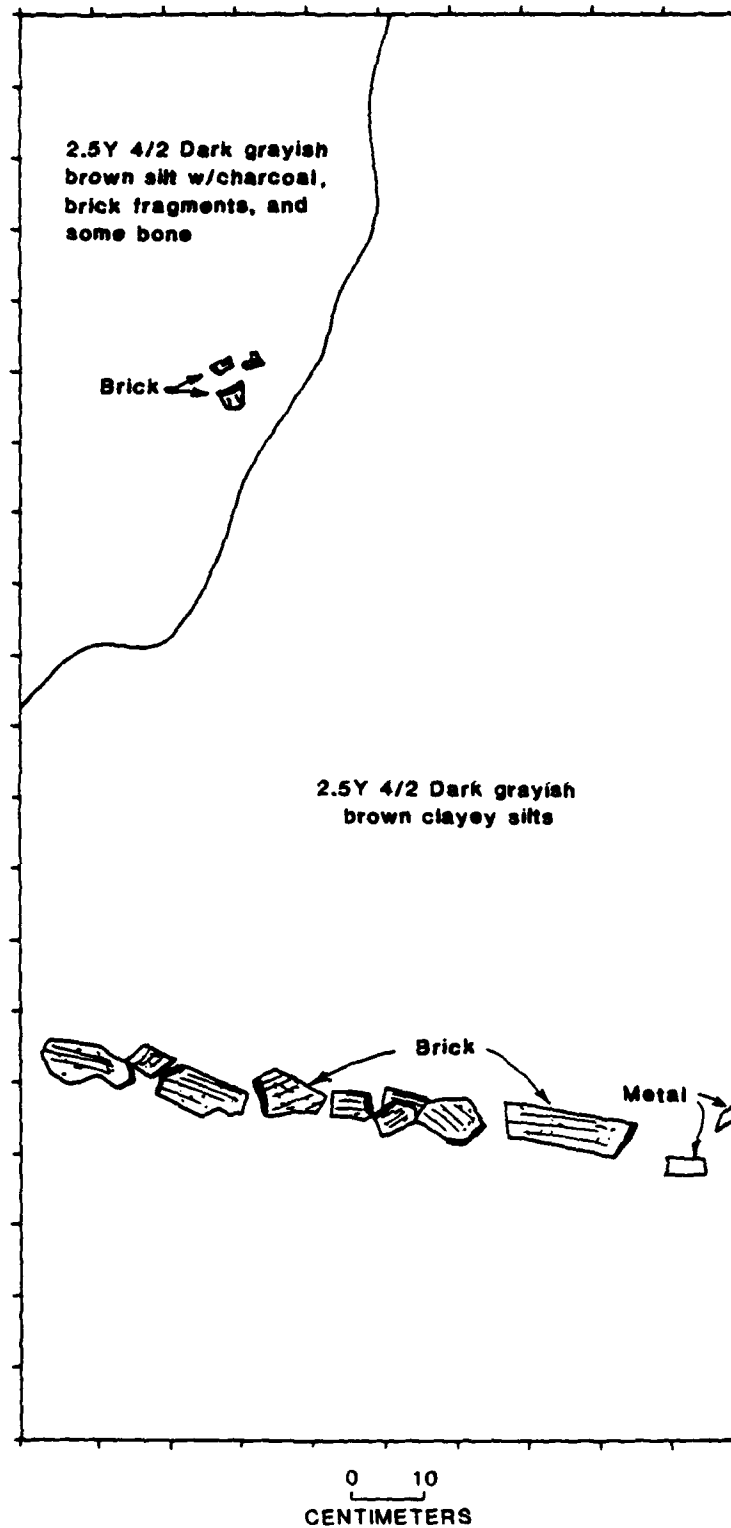


Figure 25. Floor plan of Level 5 at Unit B at 16 IV 149.

CHAPTER VI

LABORATORY ANALYSES

Introduction

Six hundred and thirty-two artifacts were recovered during archeological testing at 16 IV 149 during 1987. A total of 23 brick samples were collected from 16 IV 147. Artifacts recovered from 16 IV 149 included 176 ceramic sherds, 32 glass fragments, 121 nails, 63 brick fragments, and 175 animal bones and bone fragments. As noted previously, collections from 16 IV 149 were divided into two analytical units. The in situ cultural lens was represented by materials from Unit A, Levels 2 and 3, and by Unit B, Level 5. Disturbed overburden contexts were represented by materials from Unit A, Level 1; Unit B, Levels 1, 2, 3, and 4; and by materials recovered from the bluff profile.

All artifacts were washed and sorted into their respective material categories. During cataloguing, 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.

Site 16 IV 149 provided a small collection of ceramic sherds, glass fragments, bone, and metal (nails) artifacts. Those remains represent a number of domestic and economic functions which are described in subsequent sections of this report. In the case of ceramics, nails, and glass, those descriptions comprise formal archeological classifications. For other classes of artifacts, descriptions of the nature of the materials recovered are presented. The identification and classification of ceramic artifacts is emphasized here because of the utility of ceramics in chronological, socioeconomic, behavioral, and even demographic reconstructions. While glass artifacts also serve as chronological indicators and have other applications in site interpretation, glass artifacts recovered from 16 IV 149 displayed very few diagnostic attributes, and yielded very little useful or diagnostic information.

16 IV 149

Typology and Chronology

Artifact analysis of remains from White Castle was attempted on two levels. Standard typological methods were applied as a prelude to chronological reconstruction. Dating of the 16 IV 149 artifacts then was achieved by comparing the identified artifacts with others having documented use-popularity patterns. Ceramics, glass, nails, and bricks all provided chronological information. On a second level of analysis, both functional and socioeconomic attributes of the collection from 16 IV 149 were studied. The results of these experiments will be discussed later. The following review begins with the chronological ramifications of the artifact assemblages.

Ceramics. Since none of the ceramic sherds from 16 IV 149 exhibited manufacturers' marks, dates were assigned based upon researched use-trend patterns. Mean ceramic dates were calculated using the formula developed by South (1977). 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, eight ceramic types with ten distinct decorative designs were identified at 16 IV 149. Adjusted dates for these types are listed in Table 2.

Tin glazed earthenwares are 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. The only tin glazed sherd recovered from the White Castle project area was a small, plain rim sherd of debased Rouen faience. It has a thick pink paste, and a thin untinted glaze, attributes characteristic of French manufacture.

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 Wedgwood ca. 1762; by the 1790s, its popularity had secured England's domination

Table 2

CHRONOLOGY OF CERAMIC TYPES FOUND AT 16 IV 149

<u>Ceramic Ware & Decorative Type</u>	<u>Date Range</u>	<u>Mean Date</u>	<u>Source</u>
Ironstone, Annular	1813-1890	1851	Wetherbee 1985
Creamware, Plain	1762-1820	1791	South 1977
Pearlware, Plain	1780-1830	1805	South 1977
Pearlware, Mocha	1795-1830	1813	South 1977
Pearlware, Transfer Print	1795-1900	1848	South 1977/ Miller 1980
Pearlware, Underglaze Polychrome	1795-1815	1805	South 1977
Pearlware, Shell Edged	1795-1830	1813	Miller 1985 (personal communication)
Scallop, Curve Lines	1795-1845	1820	Miller 1985
Early Refined Earthenware, Mocha	1795-1890	1842	South 1977
Whiteware, Plain	1820-1900	1860	South 1977
Whiteware, Transfer Print	1820-1860	1840	South/Miller
Whiteware, Shell Edged	1795-1845	1820	Miller 1985
Scallop, Curved Lines	1795-1840	1818	Miller 1985
Scallop, Straight Lines	1830-1900	1865	Ramsey 1947
Yellowware	1820-1845	1833	Miller 1985
Embossed Pattern	1825-1891	1858	Miller 1985
Unscallop, Impressed Lines	1780-1870	1825	Miller 1985
Rococo Edge	1813-1900	1856	Goodwin, Gendel and Yakubik 1983b
Whiteware/Ironstone			
Yellowware, Plain	1830-1900	1865	Ramsay 1947
Yellowware, Dipped/Annular	1830-1900	1865	Ramsay 1947

of ceramic market. Whereas 'delftware' and white salt-glazed stoneware had attempted 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 Wedgwood 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 (Miller 1980:3). 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. One example of this ware was found at 16 IV 149 in Unit A, Level 2. 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 at 16 IV 149:

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 unscaloped. 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 18th through 19th century. 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).

Yellowware can be distinguished by yellow paste and clear glaze. The process for manufacturing yellowware was introduced in the United States as early as the 1830s; it rapidly became popular. Generally, yellowwares from American sites are regarded as being of domestic manufacture. Usually unmarked, yellowware 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 yellowware 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, yellowwares still are produced in limited numbers. Modern versions are generally whiter in paste, and have a yellowed glaze. One small plain yellowware sherd was recovered from Test Unit A, Level 2, at 16 IV 149.

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. Only one porcelain sherd, a small gilded fragment, was recovered from Test Unit A, Level 2, at 16 IV 149.

Table 3 illustrates the frequency and ages of the ceramic types discussed above at 16 IV 149. The mean ceramic date for the site at large is 1826. Dates for the undisturbed lens in Unit A, Levels 2 and 3, and Unit B, Level 5, cluster tightly around 1830. In the undisturbed levels, pearlwares outnumber the creamwares four to one. As noted above, in the late eighteenth century creamwares were the

Table 3

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**HISTORIC CERAMIC SHERD CLASSIFICATION, FREQUENCIES, AND MEAN
CERAMIC DATES FROM ALL EXCAVATED PROVENIENCES AT 16 IV 149**

=====

<u>Unit/Level</u>	<u>Ware Type</u>	<u>Frequency</u>	<u>Date Range</u>	<u>MCD</u>
A/1	Whiteware/ <u>Transfer Printed</u>	3	1820-1860	1840
A/2	Porcelain/ Gilded	1		
	Ironstone/ Annular	3	1813-1890	1851
	Pearlware/ Plain	15	1780-1830	1805
	English Mocha	3	1795-1890	1842
	Yellowware	1	1830-1900	1865
	Whiteware/ <u>Transfer Printed</u>	22	1820-1860	1840
	Scalloped Rim Curved Lines	1	1820-1845	1832
	Scalloped Rim Impressed Bud	1	1820-1850	1835
	Unscaloped Rim <u>Impressed Lines</u>	6	1850-1897	1873
	TOTAL	53		1835
A/3	Creamware	3	1762-1820	1791
	Pearlware/ Mocha	2	1795-1830	1813
	Whiteware/ <u>Transfer Printed</u>	7	1820-1860	1823
	TOTAL	12		1828
	UNIT TOTAL	68 (67) *		1834

<u>Unit/Level</u>	<u>Ware Type</u>	<u>Frequency</u>	<u>Date Range</u>	<u>MCD</u>
B/1	Creamware/ Plain	1	1762-1820	1791
	Pearlware/ <u>Plain</u>	4	1780-1830	1805
	Mocha	1	1795-1830	1813
	English Mocha	1	1795-1890	1842
	Whiteware/ <u>Transfer Printed</u>	1	1802-1860	1840
	Scalloped Rim Impressed Bud	2	1820-1850	1835
	<u>Embossed Pattern</u>	2	1820-1845	1832
	TOTAL	13		1823
B/2	Creamware/ Plain	4	1762-1820	1791
	Faience	1		
	Pearlware/ <u>Plain</u>	19	1780-1805	1805
	Transfer Printed	1	1795-1840	1817
	Whiteware/ <u>Flow Blue</u>	8		
	Transfer Printed	17	1820-1860	1840
	Late Dipped	2		
	Unscaloped Impressed Lines	3	1825-1891	1858
	<u>Embossed Pattern</u>	1	1820-1845	1832
	TOTAL	56 (45) *		1821

<u>Unit/Level</u>	<u>Ware Type</u>	<u>Frequency</u>	<u>Date Range</u>	<u>MCD</u>
B/3	Creamware Plain	1	1762-1820	1791
	Pearlware/ Plain	2	1780-1830	1805
	Whiteware/ <u>Transfer Printed</u>	2	1820-1860	1840
	Scalloped Rim Curved Lines	1	1820-1845	1832
	TOTAL	6		1819
B/5	Creamware/ Plain	2	1762-1820	1791
	Pearlware/ <u>Plain</u>	3	1780-1830	1805
	Polychrome Floral	1	1820-1840	1830
	Flow Blue	2		
	English Moch	8	1795-1890	1842
	Whiteware/ <u>Plain</u>	2	1820-1900	1860
	Transfer Printed	3	1820-1860	1840
	Scalloped Rim Curved Lines	1	1820-1845	1832
	Scalloped Rim <u>Impressed Bud</u>	1	1820-1850	1835
	TOTAL	22 (20)		1832
	UNIT TOTAL	85 (76)		1825

<u>Unit/Level</u>	<u>Ware Type</u>	<u>Frequency</u>	<u>Date Range</u>	<u>MCD</u>
PROFILE 1/1	Creamware/ Plain	2	1762-1820	1791
	Pearlware/ Annular	1	1790-1820	1805
	Whiteware/ Transfer Printed	1	1820-1860	1840
	Scalloped Rim Impressed Bud	1	1820-1850	1835
	TOTAL	5		1812
1/2	Pearlware/ Plain	10	1780-1830	1805
	Floral Polychrome	1	1820-1840	1830
	Mocha	1	1795-1890	1842
	TOTAL	12		1810
1/3	Pearlware/ Plain	2	1780-1830	1805
1/4	Creamware Scalloped Rim	1	1762-1820	1791
1/5	Pearlware/ Plain	2	1780-1830	1805
	Scalloped Rim Curved Lines	1	1795-1845	1820
	TOTAL	3		1813
	PROFILE TOTAL	23		1810
	SITE TOTAL	176 (166)		1826

* Parentheses denotes count used in Mean Ceramic Date Calculations.

most popular ware type. However, the introduction of pearlware into the market was readily accepted and during the first quarter of the nineteenth century, pearlware steadily increased in popularity until by the mid-1820s, it was by far the more popular of the two wares. About that time, whiteware began to make a strong showing in the marketplace. Since manufacturers' records make no mention of a distinction between pearlwares and whitewares, but rather list inventories according to decorative design, historic research has failed to explain this replacement. By the early 1840s, whitewares were more popular than pearlwares. The intact deposit at 16 IV 149 contains 52 per cent whitewares, 26 per cent pearlwares, and 6 per cent creamwares. These frequencies follow the general trend just discussed; in regional context, they are similar to those exhibited at the Elmwood Plantation for the component dating from 1820-1835 (Goodwin, Yakubik, and Goodwin 1983, 1984).

At first glance, Profile 1 at 16 IV 149 (Table 3) appears to have a somewhat lower mean ceramic date (ca. 1810). However, a closer examination of the date ranges reveals that ranges are comparable to those of the rest of the subassemblage, and that the wares and decorative designs found in the bluff profile collection also are evidenced in the other proveniences. Thus, the difference in age probably reflects the small sample size and is not significant.

Glass. Thirty-three glass artifacts were recovered from 16 IV 149. Of these, only one was identified as architectural window glass. The remainder were classified as bottle glass. Among that number, six elements demonstrated distinct diagnostic attributes: the solid rod pontil, the blow pipe pontil, and the applied lip finish. All three of these were characteristic of both the free-blown and molded bottles of the eighteenth and nineteenth centuries. However, the bottle sherds for which these technological attributes were noted, were not manufactured by the improved molding technology developed during the mid-nineteenth century. There is a notable lack of symmetry in the recovered bottle bases exhibiting pontil scars.

During these periods, empontilling was employed to hold bottles during the finishing stage. All methods held the bottles 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 that the scars are jagged rings. Both methods were replaced by bare iron empontilling in the mid-1800s. Examples of both methods are evident among the artifacts recovered during testing at

16 IV 149. Also, one example of a blow pipe pontil scar was found during the 1985 survey.

The last step in bottle production is called the finish. This step involves the formation of bottle lips. The applied ring lip was achieved by placing a heated plastic glass strip around the neck of the reheated bottle. One specimen illustrating this technique was identified at 16 IV 149.

In 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. There is a pronounced absence of either clear or amethyst-colored glass in the 16 IV 149 subassemblage. The primary colors of glass from the site were 'black' glass, usually a very dark green in color; olive green; and a very light green sometimes is called "decolorized" glass. All of these colors are typical of pre-Civil War glass manufacturing technology (McKearin and Wilson 1978).

An examination of the collective diagnostic attributes of the glass subassemblage suggests a date range for these materials from the late eighteenth to mid-nineteenth centuries. Factors leading to this conclusion were the presence of empontilling and lip finish technologies; the pre-Civil War molding technology employed in bottle manufacture; and color. The terminus ante quem for glass artifacts can be no later than the 1850s. Glass sherds from each provenience at 16 IV 149 are summarized in Table 4 (Munsey 1970:47-48).

Nails. There are three stages in the technological chronology 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 in the seventeenth and early eighteenth centuries. The use of wrought nails ended with the introduction of machine-cut nails (Nelson 1963). One wrought nail was recovered from 16 IV 149 during the 1985 survey.

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 they begin to replace wrought nails as primary construction fasteners (Nelson 1963). Corrosion due to continual exposure to ground waters prevented distinction of wrought or cut nails beyond recognition of

Table 4

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GLASS SHERDS BY PROVENIENCE AT 16 IV 149

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<u>Unit/Level</u>	<u>Description</u>	<u>Color</u>	<u>Frequency</u>
A/1	Blow Pipe Pontil	Dark Green	1
A/2	Unidentified Bottle Glass	Dark Green Aqua	8 1
A/3	Applied Lip	Dark Green	1
	Unidentified Bottle Glass	Dark Green	2
	TOTAL		13
B/5	Unidentified Bottle Glass	Dark Green	1
	TOTAL		1
<u>PROFILE/LEVEL</u>			
1/2	Unidentified Bottle Glass	Dark Green Aqua	1 1
1/4	Blow Pipe Pontil	Dark Green Aqua	1 2
	Unidentified Bottle Glass	Dark Green	11
1/5	Solid Rod Pontil	Dark Green	1
	Unidentified Bottle Glass	Dark Green	1
	TOTAL		18
	SITE TOTAL		32

their characteristic squared shape. Only one example from Test Unit A, Level 1, at 16 IV 149 could be identified positively as a cut nail. One hundred and nineteen nails recovered from Test Units A and B could be recognized by their squared shape. No nails were recovered from Profile 1.

Wire-drawn nails were first 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 1870s. Although cut nails are still preferred by some builders today, they were replaced nearly universally by the wire nail by the turn of the century (Nelson 1963). Only one wire nail was found among the artifacts at 16 IV 149.

The date range provided by the nail subassemblage from 16 IV 149 is too wide to refine the site chronology significantly. However, the combined date range for 119 of the 121 nails, from the seventeenth to the late nineteenth centuries, indicates a terminus ante quem ca. 1870. This date contributes useful data in the assessment of site occupation, by eliminating the possibility of site occupation during the last part of the nineteenth century.

Miscellaneous Artifacts

The few artifacts listed here under the heading "miscellaneous" are primarily personal items. Some of these are small items more likely lost than discarded. These include a brass thimble and one gunflint. The gunflint is a French "honey colored" flint. This type of gunflint was considered superior to the English black or gray flints even by the English prior to the War of 1812 (Noel Hume 1969:220-221). These French flints commonly are rounded at the back by secondary retouching, leaving a distinctive bulbous platform.

Several bowl and stem fragments from ball clay (kaolin), and molded reed stem pipes were recovered. While ball clay pipe stems have been included in archeological research based on datable bore size analyses, examples found during the testing at 16 IV 149 date from outside established parameters of statistical reliability. Reed stem pipe attributes are diagnosed on the basis of bowl shape and size, and decorative motif. The recovered reed stem pipe fragments were too small for recognition of any diagnostic attributes. The remaining items from 16 IV 149 consist of three fragments of a bone toothbrush, and one carved bone handle, which by shape, size, and lathed ornamentation, appears to have been a needle work implement.

Faunal Remains

Animal bones commonly are recovered in archeological excavations. Termed "faunal remains," these bones, fragmentary or whole, are the remains of mammals, reptiles, amphibians and birds. Most often faunal remains represent the dietary refuse of the site's former inhabitants. Identification of the bones from a site can aid researchers in reconstructing the dietary practices of past groups of people, insofar as meat consumption is concerned. Some bones also reveal the age and sex of an animal, providing additional information on animal husbandry.

A total of 178 faunal bones was recovered through test excavations at 16 IV 149. The bones are well preserved, and most are identifiable. During analyses of faunal remains, the skeletal element and species of animal from which each bone derived were identified first. Like elements within a species (left mandible, for example) then provided a count of the minimum number of individuals (MNI) within each archeological context. Bones from large domesticates were easiest to identify. Some bone fragments from medium-sized mammals may be pig (*Sus scrofa*) or a member of the family Artiodactyla, which includes sheep, goats and deer. Accordingly, these were labeled "*Sus/Artiodactyla*," depending upon the degree of identification possible. Positive identification of many of the pig elements was made. Smaller elements, labeled "Small Mammal/Bird," most probably represent wild game such as rabbit and opossum. An inventory of faunal elements from 16 IV 149 is shown in Table 5. Only bones from undisturbed contexts were applied comparatively. Most of the bones (76%) came from undisturbed deposits (Unit A, Levels 2 and 3; Unit B, Level 5). Also, this sample did not differ markedly from the bones recovered from disturbed layers (Tables 6 and 7).

Several observations may be made about the faunal remains from 16 IV 149. Most striking are the number of pig cranial bones, which comprise almost thirty per cent of the sample (Table 8). Fragments of mandibulae and maxillae are most common (63% of the cranial bones). Butchering marks are visible on some of these bones (17%), suggesting some further use of the head, rather than simply discard after removal from the body during butchering (Table 9). Traditional Southern foodways often include various portions of the pig head (brains, jowls, elements used in manufacturing head cheese).

Pig bones, cranial and post-cranial, make up almost 38 per cent of the faunal collection. The remainder of the assemblage is composed of post-cranial elements. Large domesticates (probably cow) make up 5 per cent, while

Table 5

Inventory of Faunal Elements from Excavations at 16 IV 149

Bluff Profile, Level 2

unid. mammal
1 frag.

Bluff Profile, Level 4

Sus scrofa
1 axis, distal epiphysis unfused, butchered

Unit A, Level 1

Sus scrofa
1 first molar, maxillary?, unid. side
1 innominate, acetabulum, unid. side, butchered
unid. mammal
3 frags.

Unit A, Level 2

Bos taurus
1 scapula?, frag., gnawed
1 unid. frag.
Sus scrofa
1 maxilla, left, frag., with intact third premolar,
fourth premolar and first molar
1 lacrimal bone, left, frag.
1 malar bone, left, frag.
2 maxilla, left, frags.
1 maxilla, left, frag., with intact first molar,
second molar and third molar (two-thirds
erupted), butchered
4 mandible, left, frags., with intact root of
third molar (erupted)
1 mandible, posterior medial section (fused right and
left halves)
1 orbital, unid. side, frag.
1 occipital, squamous section, frag.
1 canine, mandibular, left
1 medial incisor
1 root, medial incisor
1 medial incisor, frag.
1 lateral incisor
1 root, unid. molar
1 first molar, frag., burned
12 unid. cranial bones
1 occipital, paraoccipital process, butchered
1 mandible, unid. side, frag., burned
1 unid. vertebra, centrum, unfused epiphyses

- 1 thoracic vertebra, unfused epiphyses, burned
- 5 unfused epiphysis frags.
- 1 thoracic vertebra, unfused proximal epiphysis, fused distal epiphysis, butchered
- 3 frags. thoracic vertebra, unfused distal epiphysis, proximal end missing, butchered

Unit A, Level 3

Sus scrofa

- 1 maxilla, right, frag., burned
- 1 maxilla, right, frag., with intact premolars 1-4, first molar, second molar
- 2 mandible, right, frags., with intact second and third molars, butchered
- 1 mandible, unid. side, frag., with intact partial second molar, butchered

Sus/Artiodactyla

- 1 phalange
- 1 unid. long bone, frag., butchered
- 1 femur, midshaft frag.
- unid. mammal
- 1 frag., burned
- 2 frags.

Unit B, Level 1

Bos taurus

- 1 scapula, blade frag.

Unit B, Level 2, FS#2

Bos tauros

- 1 tibia proximal epiphysis, unfused, butchered
- 1 unid. molar, frag.

Small Mammal/Bird

- 1 unid. frag.

Sus Scrofa

- 1 canine, mandibular?, frag.
- 1 medial incisor
- 1 maxilla, unid. side, frag., with intact second molar
- 2 mandible, right, frags., angle of ascending ramus
- 2 unid. cranial bones, frags., butchered
- 1 unid. cranial bone, frag.

Sus/Artiodactyla

- 1 femur, midshaft frag.
- unid. mammal
- 10 frags.

Unit B, Level 2, FS#3

Sus scrofa

3 maxilla, right, frags., with intact third premolar,
fourth premolar, first molar, second molar, third
molar (unerupted)
1 mandible, right, frag., with intact fourth premolar,
first molar, second molar
1 unid. cranial bone, frag.
1 canine, maxillary
2 medial incisor, frags.
unid. mammal
1 frag.

Unit B, Level 3

Sus scrofa

1 mandible, right, frag., with intact fourth premolar,
first molar, second molar
unid. mammal
1 frag.

Unit B, Level 5

Bos taurus

2 unid. molar, frags.
1 carpal/tarsal bone, frag., butchered
2 unid. long bone, frags.

Sus scrofa

1 mandible, left, with intact first molar, second
molar, third molar (unerupted)
1 premolar, frag.

Sus/Artiodactyla

7 radius, unid. side, midshaft and distal frags.
4 ulna?, midshaft and distal frags.
1 ulna, proximal end frag.

Artiodactyla

1 mandible, right, frag.

Small Mammal/Bird

3 unid. frags.
unid. mammal
4 frags.
1 frag., burned

Table 6

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SPECIES DISTRIBUTION IN UNDISTURBED CONTEXTS AT 16 IV 149

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<u>Species</u>	<u>Number</u>	<u>Percentage</u>	<u>MNI</u>
<u>Bos taurus</u>	7	5.11	1
<u>Sus scrofa</u>	52	37.96	4
Artiodactyla	2	1.46	-
<u>Sus/Artiodactyla</u>	19	13.87	-
Small Mammal	7	5.11	-
Fish	4	2.92	-
Unid.	46	33.57	-
TOTAL	137	100.00	

Table 7

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SPECIES DISTRIBUTION IN UNDISTURBED CONTEXTS AT 16 IV 149

=====

<u>Species</u>	<u>Number</u>	<u>Percentage</u>
<u>Bos taurus</u>	3	7.32
<u>Sus scrofa</u>	20	48.78
Artiodactyla	--	--
<u>Sus/Artiodactyla</u>	1	2.44
Small Mammal	1	2.44
Fish	--	--
Unid.	16	39.02
TOTAL	41	100.00

Table 8

SUS SCROFA ELEMENTS, UNDISTURBED CONTEXTS AT 16 IV 149

<u>Element</u>	<u>Number</u>	<u>Percentage of total elements in undis- turbed contexts</u>
Cranial	43	29.92
Post-Cranial	11	8.03
TOTAL	52	37.95

Table 9

BUTCHERING MARKS, UNDISTURBED CONTEXTS AT 16 IV 149

<u>Species</u>	<u>Number</u>	<u>Percentage of total elements in undis- turbed contexts</u>
<u>Bos taurus</u>	1	.73
<u>Sus scrofa</u>	7	5.11
<u>Sus/Artiodactyla</u>	1	.73
TOTAL	9	6.57

medium-sized mammals constitute 15 per cent of the remains. Small mammals or birds account for 5 per cent, and fish represent almost 3 per cent of the assemblage. Butchering marks in the form of cleaver/axe chops or knife cuts are visible on 6.5 per cent of the bones. There were no sawed bones in the collection.

Due to the small sample size, it is not possible to determine if the species distribution observed at 16 IV 149 is comparable to faunal subassemblages recovered from rural antebellum sites elsewhere in the South. At Elmwood Plantation, Dr. Elizabeth Reitz found a high percentage of domestic mammals in the faunal subassemblage; a large amount of sheep/goat remains was observed (Goodwin, Yakubik, and Goodwin 1983, 1984). There was also a high percentage of rabbit and opossum remains in the subassemblage, with low percentages of wild birds and fish. These findings are noticeably dissimilar to faunal subassemblages from antebellum plantation sites in the Atlantic Coastal Plain. There, domestic mammals account for less than half of the faunal remains; wild game, including deer and fish, were exploited to a large extent. Differences in the diets of planters, overseers, and slaves are evident. The planter's diet was most diverse, consisting of domestic animals (mostly cow and pig), with large amounts of wild game and fish. Slave diets also included wild foods, although in lesser amounts. Overseers' diets were least diverse, with low percentages of wild foods (Reitz and Gibbs 1985). The small White Castle subassemblage does not appear to be particularly diverse, but its representation of hogs head elements is unusual.

16 IV 147

Artifacts recovered from 16 IV 147 consisted of brick samples and a few glass fragments. The glass artifacts displayed very little useful or diagnostic information; however, the sample of 23 bricks provided attribute classificatory information which was used to further the ongoing study of brick morphology.

Bricks

Bricks routinely are found during archeological investigations of industrial and residential historic sites in southern Louisiana. They commonly appear as elements of features such as floors, walls, foundations, and rubble fill. Most bricks found on south Louisiana sites were of local manufacture, although imported bricks have been identified at antebellum plantation sites. Unfortunately, there is currently no reliable technique for dating bricks accurately

in the absence of sufficient samples of other artifact classes. Ranges of variability in brick morphology, as well as the additional variable of reuse, have yet to be evaluated thoroughly. Investigation of attributes such as source materials, hardness, size, color, firing temperature, and morphology relative to mold and kiln technology, will be required before a history of south Louisiana brick types will have any veracity.

Recurrent research obstacles in the analysis of bricks from historic sites in southern Louisiana have been their recovery in disturbed, secondary contexts, and their reuse throughout a site's occupation history (Goodwin and Yakubik 1982; Goodwin, Cendel, and Yakubik 1983; Goodwin, Yakubik and Cendel 1983).

A brick sample of 23 bricks was recovered from Feature 202 at 16 IV 147. Observations recorded on the bricks included metric data (length, width, thickness); Munsell color designation; and hardness values using the Mohs scale. These data are shown in Table 10. Five bricks from Feature 202 showed signs of glazing and crystallization. These attributes did not result from intentional decorative processes, but rather from the bricks' immediate proximity to fire. Brick length ranged from 21.2 to 22.0 cm; the width varied from 10.2 to 11.3 cm; and thickness ranged from 4.7 to 6.0 cm. The average dimensions of 16 IV 147 bricks are 21.6 X 10.55 X 5.73 cm. The hardness, ranging from 1.5 to 3.5 on the Mohs hardness scale, had an average of 2.65. Comparisons with bricks recovered from the sugar house at Bourbon Plantation show very minor differences: the Bourbon Plantation bricks were on an average 1.9 cm longer, .27 cm narrower, and .65 cm thicker. These variations are an insignificant basis for positing any metric differences between the two sites.

The dimensions of the brick sample for 16 IV 147 are similar to those characterized as "country or plantation brick" (Shenkel and Beavers 1978). The distinguishing characteristic of this type is its thickness: this dimension generally is smaller than specimens of industrial manufacture for the corresponding time period. Additionally, when tested for hardness, the 16 IV 147 bricks ranged from 2.0 to 3.5 on the Mohs hardness scale. This relative softness also is characteristic of plantation manufacture. It results from low firing temperatures. The softness of these bricks, combined with their extended exposure to the river and to weathering, resulted in the fragmentation of a majority of evidenced bricks at the site.

Table 10

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**METRIC AND NON-METRIC ATTRIBUTES OF
SELECTED BRICKS FROM 16 IV 147**

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<u>Specimen No.</u>	<u>Length (cm)</u>	<u>Width (cm)</u>	<u>Thickness (cm)</u>	<u>Munsell</u>	<u>Hardness¹</u>	<u>Comments</u>
1.	21.8	10.5	5.7	5YR 5/6	3.5	
2.	21.5	10.5	5.7	5YR 5/6	3.5	
3.	21.2	10.5	5.5	5YR 5/6	3.5	
4.	22.0	10.5	6.0	5YR 5/6	2.7	some glaze
5.	21.8	10.5	6.0	2.5YR 4/8	2.5	
6.	-----	10.7	6.0	2.5YR 4/8	1.5	
7.	-----	10.6	5.8	10YR 4/8	2.5	some glaze
8.	-----	11.3	4.7	2.5YR 4/6	3.5	
9.	-----	10.2	5.8	5YR 4/6	3.0	glaze
10.	-----	10.6	5.9	2.5YR 4/8	2.0	
11.	-----	10.5	5.7	2.5YR 4/6	2.0	glaze
12.	-----	10.2	5.8	5YR 4/6	3.0	glaze
13.	-----	10.6	6.0	2.5YR 4/8	2.0	
14.	-----	10.5	5.7	2.5YR 4/8	2.0	

¹ Mohs' Scale.

CHAPTER VII

INTERPRETATIONS, CONCLUSIONS, AND RECOMMENDATIONS

The Historic Archeology of Site 16 IV 147

Archeological testing during 1985 and 1987 enabled characterization of site 16 IV 147 as a small brick alignment, a fire stain encompassing thermally-altered soils, and several amorphous brick scatters, along the batture of the Mississippi River. The singular aspect of the site was a total lack of artifacts, either in situ or in association with structural remains. In fact, with the exception of bricks, many of which were glazed by fire (i.e., "clinkers"), no artifacts whatsoever were observed during the 1987 investigations. The location of the fire-stained soil profile on the bluff face immediately adjacent to the brick alignment described as Feature 202 (Goodwin et al. 1987), and the absence of a similar alignment landward of the feature, strongly suggest that the fire was located inside of the structure reflected in Feature 202. Furthermore, the discrete size of the fire stain, combined with the depth and magnitude of thermal alteration of the soil matrix, indicate repeated firings in a controlled setting, rather than an ephemeral single burn.

The analysis of bricks collected from Site 16 IV 147 suggests that the historic structure from which the bricks derived probably was built during the nineteenth century. The size and shape of the bricks were typical of south Louisiana soft, red "country," or Mississippi River bricks made during the late eighteenth and antebellum nineteenth century (Shenkel and Beavers 1978; Goodwin, Yakubik, and Gendel 1983). Further refinement of the chronological placement of the site is difficult in the absence of other classes of datable remains. The morphology of the site indicates that the building included a furnace. The glazed and crystallized bricks indicate use in the immediate proximity of fire.

Because of the absence of domestic artifacts and features of any sort across the site area, the historic use of 16 IV 147 as a residence can be ruled out. In addition, no historic residences are recorded in the immediate vicinity of the 16 IV 147 site area. Figure 26, a composite of the 1879 and 1921 Mississippi River Commission maps, of the Atchafalaya Basin Levee District Caving Bank Survey map, and of modern hydrographic survey and USGS quadrangle maps, shows the absence of recorded structures around the 16 IV 147 site area from the last quarter of the nineteenth century to the present. The sugar house at Celeste Plantation was located

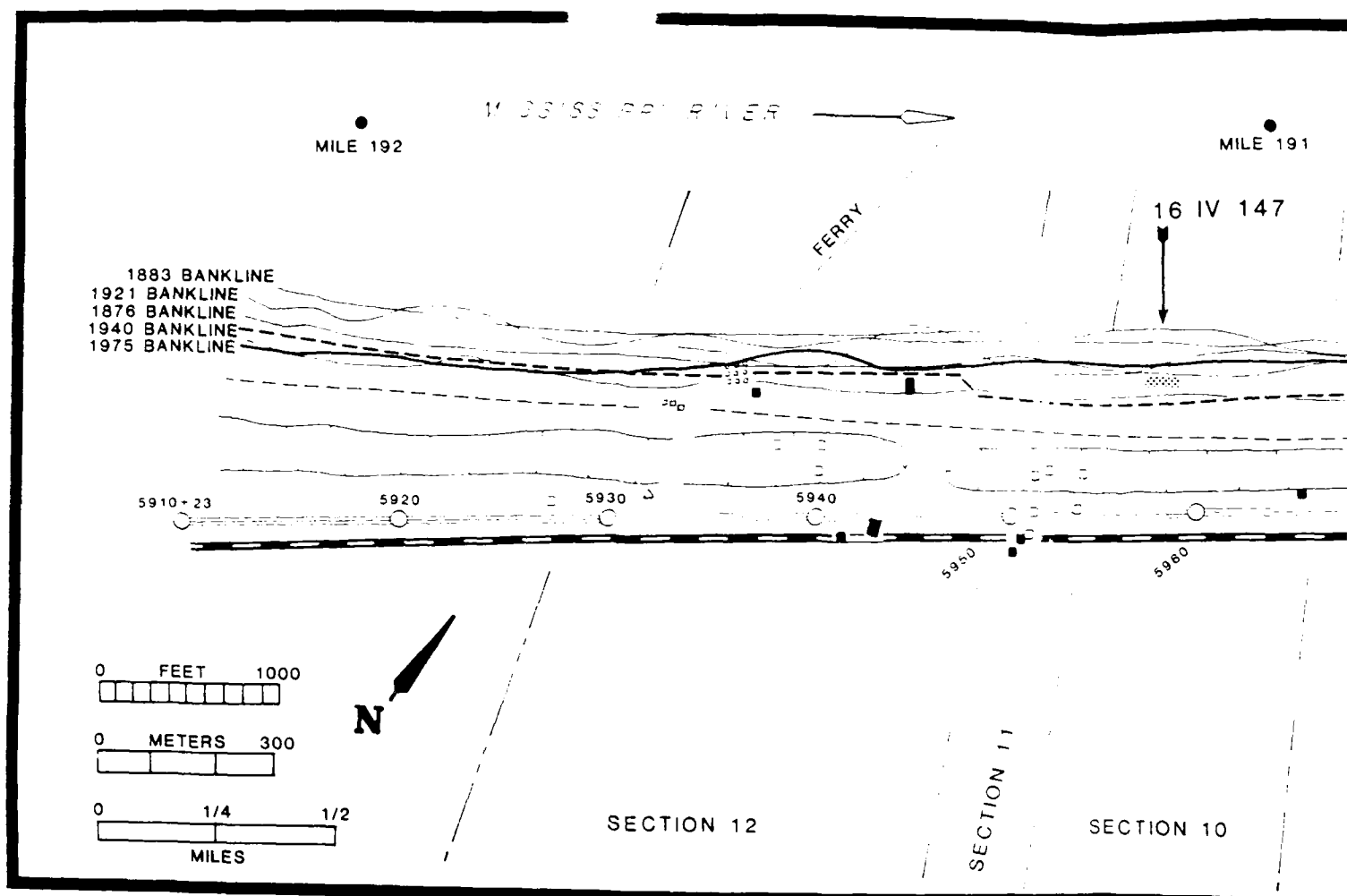
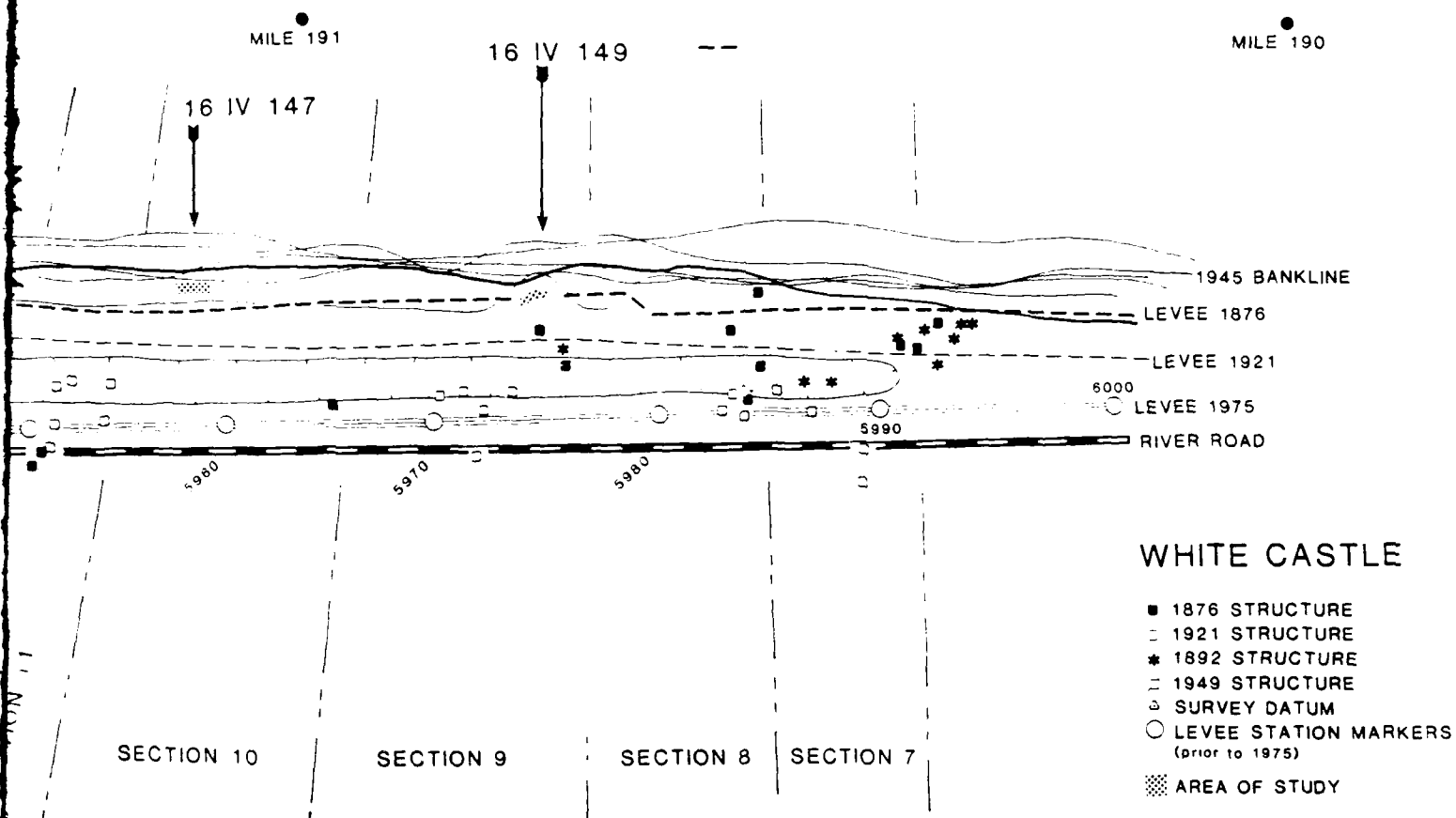


Figure 26. Composite map made from (1) 1880 and 1921 Mississippi River Survey; from Chart 41 Mississippi River Hydrographic Survey; and (2) the 1974 Carville, LA 7.5' scale map.



Composite map made from Chart 68 of the 1879-1921 Mississippi River Commission; from Atchafalaya Basin Levee District Caving Bank Map; from Chart 41 of the 1973-1975 Mississippi River Hydrographic Survey; and, from 1974 Carville, LA 7.5' series quadrangle.

well back from the river, behind the quarters houses in the fields in Section 9, downriver from the site area. Sugar and rice reports (Table 1) also do not note any new sugar house erection after 1844. In addition to the small size of 16 IV 147, then, locational data argue against the site representing the remains of a sugar house.

Alternative working hypotheses for the function of the site would include a colonial indigo plant, because a water course was required near the plant to flush the indigo waste products (Holmes 1967). However, indigo production required a large slave population, and during the colonial period this region did not contain any large plantations. Rather, in the late colonial period, small and relatively simple Acadian farmsteads dominated the region. Brick kilns and smoke houses would have been brick industrial structures used by these small farmers. However, brick waster was not present, nor were other structural remains that would have indicated even a small brick factory. Similarly, no ash lens or animal remains or residue were present that would suggest a smokehouse. These hypotheses, then, are not favored due to negative evidence.

During previous archeological survey of the New River Bend revetment area, in Iberville Parish almost directly across the river from 16 IV 147, the remains of a furnace that was used to fuel a boiler were encountered in 1984 (Goodwin et al. 1984:190-192). At that site, an iron furnace door was recovered in association with a brick alignment very similar in size and configuration to the one observed at Feature 202 of 16 IV 147. Pierre Larroque, president of Moresi's Foundry (personal communication 1984), confirmed that these remains derived from a furnace. Like 16 IV 147, the size of that structure at New River Bend (16 IV 145) was small for a brick kiln. Marked, commercially manufactured bricks were used in its construction. Similar furnaces also were used to fuel boilers that powered sawmills, and lumbering was an important activity in the area as early as 1859. However, no sawmill has been documented for either plantation, on either side of the river (viz. Goodwin, Stayner, et al. 1984). For these reasons, as well as because of the nature of the archeological deposit itself, the New River Bend feature was thought to derive from a boiler and engine complex that powered a water pumping station. Water would have been pumped from the river either to irrigate the postbellum rice fields, or to provide water to sugar and/or rice mills (Goodwin, Stayner, et al. 1984:190-1902; Pierre Larroque, personal communication 1984). Feature 202 at 16 IV 149 may have served an analogous function.

The Historic Archeology of Site 16 IV 149

Several levels of analyses were undertaken in an attempt to establish use patterns and the nature of 16 IV 149. The first of these involved functional analysis (South 1977). While the basic structure of South's classification system was retained, redefinition and expansion of his groups was conducted in order to apply the technique to this assemblage at a higher order of specificity. The functional groups are defined below.

Kitchen group materials were material remains associated directly with food preparation and service. They 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. These artifacts included brick, mortar, nails, window glass, building hardware, cementing agents, shingles, etc.

Furniture group artifacts were those 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. However, no Furniture group artifacts were recovered from 16 IV 149.

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. During the testing of 16 IV 149, a single French gun flint was the only Arms-related artifact recovered.

The Clothing group comprised 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. A brass thimble and the bone handle from a needlework implement were the only Clothing group artifacts recovered from the project area.

Personal group artifacts included those elements directly associated with an individual or with individual use. Besides coins and keys, this group included cosmetic and personal hygiene items, such as combs and brushes, and all writing materials. The only exception to standard classification was the exclusion of tobacco-related

artifacts, which were assigned to a distinct group. In the analysis of artifacts from 16 IV 149, three fragments of a bone toothbrush were classified in the Personal group.

The Tobacco group provided a detailed breakdown of tobacco pipes by material, style and segment. Fragments of both molded and unmolded ball clay stems and bowls, as well as fragments of reed stem pipes, were among recovered Tobacco group artifacts.

The Activities group more aptly could be called the "miscellaneous" group. It was designed to encompass those elements that had more than one possible function, or those that did not fit into any of the previous functional group classes. These artifacts included tools, toys, table items, and miscellaneous hardware elements. The only Activities-related artifact found during testing at 16 IV 149 was an unspecified metal tool handle recovered from the bluff profile.

Functional artifact group percentages were calculated for Site 16 IV 149; for the intact deposits (Stratum H); and, for the disturbed deposits. The results of this classification are shown in Table 11. A majority of artifacts from the site were classified as either Kitchen or Architecture elements. The percentages were analogous for both the intact and the disturbed deposits. However, the artifact assemblage of the Stratum H deposit contained a number of artifacts from other functional classes, including a brass thimble, one French gun flint, three fragments of a bone toothbrush, a carved bone handle from a needle craft implement, and ten tobacco pipe fragments from both ball clay and reed stem pipes. These artifacts, in conjunction with the ceramic and bottle glass subassemblages, strongly indicate the domestic residential original of this deposit. The very similar frequencies of functional classes in the disturbed overburden and the in situ lens (Stratum H) support the interpretation advanced in Chapter V of localized filling from and onto the 16 IV 149 site area. The total absence of the Furniture groups also corroborates the interpretation that the site represents a burned domestic refuse deposit, rather than a residence per se.

Ceramic price level scaling (Miller 1980) also was applied, in an attempt to determine the status of the people who created the remains. Based on the socioeconomic scaling classification of ceramics outlined by George Miller (1980:3), percentages of four ceramic groups, based on decoration, were calculated for 16 IV 149. An outline of Miller's classification, in order from the least to most expensive decorative ware types, is:

Table 11

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ARTIFACT FUNCTIONAL GROUP PERCENTAGES AT 16 IV 149

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<u>Functional Group</u>	<u>Site Total</u>	<u>In Situ Lens¹</u>	<u>Disturbed Deposits²</u>
Kitchen	63.0	65.8	61.4
Architecture	34.0	29.7	37.0
Arms	0.1	0.3	0.0
Clothing	0.1	0.3	0.0
Personal	0.6	1.1	0.0
Tobacco	2.0	2.8	1.2
Activities	0.1	0.0	0.4
TOTAL	99.9	100.0	100.0

¹ Artifacts from in situ lens recognized in Levels 2 and 3, Unit A, Unit B, Level 5.

² All artifacts from levee fill and overburden deposits.

1. Plain or undecorated wares
2. Minimal decoration
3. Simple hand painted wares
4. Transfer printed wares

A comparative analysis of ceramic socioeconomic scalings between the intact component at 16 IV 149 and that of Elmwood Plantation during the same time period, i.e., 1820-1835 (Goodwin, Yakubik, and Goodwin 1983, 1984), was conducted in order to assess relative status of the occupants. The results of that comparison are shown in Table 12. Percentages from 16 IV 149 reveal that over sixty per cent of wares were in one of the two lower status classifications, with a respectable percentage attributable to the highest classification. In contrast, over fifty per cent of the Elmwood Plantation wares were in the highest socioeconomic classification. The Elmwood component reflects the remains of an owner in residence, but at a smaller plantation than Celeste Plantation. The intact component at 16 IV 149, Celeste Plantation, demonstrates socioeconomic scaling illustrative of a somewhat lower status group than that of the contemporaneous Elmwood household.

The horizontal scatter of artifacts across sites is typical of the Brunswick Pattern defined by South (1977). That refuse disposal pattern is common at eighteenth century Anglo-American archeological sites. Data from the New Orleans General Hospital Site (Goodwin and Yakubik 1982) demonstrated that at least as early as the mid-1820s, refuse disposal patterns in urban areas of southern Louisiana had altered, and that enclosed concentrations such as trashpits and privies had become the primary refuse disposal venues. However, at Elmwood Plantation (Goodwin, Yakubik, and Goodwin 1983), the distribution of artifactual remains from the 1820-1835 component indicates a lag in this behavioral modification in rural areas. During a systematic crossmend analysis, mends were achieved between two English mocha and two transfer printed whiteware sherds. These mends were found between the Stratum H deposits in both Unit A and Unit B, demonstrating horizontal spread of the remains. The mean date for the ceramic assemblage of the 16 IV 149 deposit is analogous to the date range of the Elmwood component that exhibited the Brunswick Pattern.

Figure 26, the composite map already discussed with reference to 16 IV 147, illustrates the presence as early as 1876 of residential structures at Celeste Plantation immediately landward of 16 IV 149. The domestic residential

Table 12

=====

CERAMIC PRICE LEVEL FREQUENCIES AT
16 IV 149 (WHITE CASTLE) AND 16 JE 138 (ELMWOOD),
AFTER MILLER (1980)

=====

<u>Scaling Category</u>	<u>16 IV 149</u>	<u>16 JE 138</u>
Plain	31.2%	36.04%
Minimal Decoration	37.5	9.41
Hand Painted	3.0	1.82
Transfer Painted	28.1	52.73
TOTAL	99.8%	100%

nature of refuse at the site, coupled with a site chronology around the 1830s, indicate a likelihood that at least one of the structures had an antebellum origin. The moderately high socioeconomic status observed in ceramic sherds from the site indicates a derivation from other than the slave quarters; the juxtaposition of structures shown in Figure 26 appears to represent a great house and overseer's residence (see Figure 6). Celeste Plantation's slave quarters were located downriver and inland, in Section 9.

Finally, as Figure 26 illustrates, the Site 16 IV 149 is located directly within the construction right-of-way for the earthen levee built ca. 1876. This explains both the origin of the fill deposits above the cultural lens in Stratum H, and the reason why those overburden deposits are not deeper. Two levee construction episodes have occurred since the site was buried; both involved levee setbacks (Figure 26). Thus, historic map data scaled with the Camera Lucida, have corroborated the interpretation of the stratigraphic milieu of the site advanced above in Chapter V.

Conclusions and Recommendations

As the foregoing discussion illustrates, the archeological site 16 IV 147 today consists of a scatter of brick and of a fire-stained and thermally-altered soil profile, located at the bluff face of the Mississippi River. Except for the bricks that already have been described, no artifacts remain at the site. There is no association of remains with features; no features in addition to those described in 1985 remain (Goodwin et al. 1987). Although the precise historical function of the site cannot be determined with certainty, on the basis of configuration, of negative evidence, and of archeological analogy, the site is thought to represent the last vestiges of a nineteenth century furnace. Too little of the site remains to contribute further to understanding of history [36 CFR 60.4(d)]. And, no direct association with events that have contributed to the broad patterns of history can be ascertained [36 CFR 60.4(d)]. Therefore, site 16 IV 147 does not possess the qualities of integrity, nor does it have significance as defined in the National Register criteria. No further work is recommended.

The archeological site 16 IV 149 constitutes domestic residential refuse from an occupation at Celeste Plantation during the period around the 1830s. Only a small portion of the original refuse deposit remains intact; other parts of that refuse lens have been redeposited above Stratum H during multiple episodes of levee construction and/or road grading. The secondary nature of the deposit that remains in situ (Stratum H) also has been demonstrated by the presence of

ceramic crossmends between spatially distinct excavation units. Similarly, the cultural lens at 16 IV 149 presented evidence of burning. The absence of the Furniture group from the functional classification of remains provides further evidence for historic redeposition.

No features or structural remains that would elucidate past behaviors were recorded at the site. And, the postulated association with a singular event in the regional history, Acadian settlement (Goodwin et al. 1987), has been disproved. As a result, no direct association with events that have contributed to the broad pattern of history can be demonstrated [36 CFR 60.4(a)]. Although analyses of remains from 16 IV 149 have enabled characterization of the nature of those remains, as well as of the site in question, artifacts and ecofacts from the site do not have sufficient integrity to confer significance pursuant to 36 CFR 60.4(d). No further work is recommended.

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APPENDIX I
SCOPE OF SERVICES

SCOPE OF SERVICE
SIGNIFICANCE ASSESSMENT OF SITES 16IV147 AND 16IV149
WHITE CASTLE REVETMENT
DACW 29-85-D-0113

1. **General Nature of the Work to be Performed.** The Contractor shall complete the significance assessment of sites 16IV147 and 16IV149. The goals of this investigation are (a) to assess whether sufficient data exist to warrant seeking a determination of eligibility for nomination to the National Register of Historic Places for either site; (b) to analyze the data collected; and (c) to prepare a final report of investigation. Both sites are extremely fragile and may have been damaged since their discovery in 1985. It will be necessary to keep testing to the minimum necessary to assess significance without damaging the data producing potential of either site. The delivery order period is 135 days.

2. **Project Background.** Sites 16IV147 and 16IV149 were found in 1985 by R. Christopher Goodwin and Associates, Inc. during a survey conducted for the US Army Corps of Engineers, New Orleans District. Both sites are located in the downstream reach of the White Castle Revetment between miles 192.0 and 190.4, on the right descending bank of the Mississippi River. The purpose of the 1985 survey was to locate all sites in the revetment reach, but purposely did not include extensive site testing. A complete literature search specific to the reach was completed, and research themes were identified relevant to the study area and sites found.

Sites 16IV147 and 16IV149 appear to date from the late eighteenth to the early nineteenth centuries, yielding mean ceramic dates of 1779.7, 1792.1 and 1815.96. Both sites evidenced in situ subsurface cultural strata but lacked in situ artifact assemblages. This testing phase will locate and define all features or artifact bearing strata associated with these two sites.

3. **Project Impact.** The U.S. Army Corps of Engineers plans to construct the downstream reach of White Castle Revetment in segments, over a period of several years. Eventually, the entire reach will be revetted with a continuous, articulated concrete mattress which will extend from the low water line to a point several hundred feet into the river channel. To prepare for revetting, a 300 foot wide corridor will be cleared of all vegetation. The 150 to 200 foot strip immediately adjacent to the bankline will be graded to a standard slope. Slope preparation may remove 12 or more vertical feet from the bankline profile. Sites 16IV147 and 16IV149 will be removed in the process.

4. **Study Requirements.** The work to be performed by the Contractor will be divided into two phases: Testing and Assessment of Significance and Project

impact; and Data Analysis and Report Preparation. Any literature search of background study necessary to complete this study shall be conducted concurrently with the field investigation.

a. Phase 1: Testing and Assessment of Significance and Project Impact.
Phase 1 will commence within 5 days after work item award.

It may be necessary for the Contractor to acquire right-of-entry to remove artifacts for analysis and study.

The Contractor shall inspect the bankline to relocate features identified during the 1985 survey. Any new features or eroding deposits not previously reported will be mapped, recorded and tested. Recordation should include the location and extent of any alteration or erosion sustained by either site since 1985.

Both sites will be sufficiently tested using shovel, auger or other excavation techniques to determine and record site size, depth of deposit, stratigraphy, distribution of strata across the site, cultural association, function, approximate date of occupation, and condition. Testing shall proceed in a controlled manner. Site boundaries, test excavation units, feature boundaries and activity areas will be measured and mapped to scale on a detail site map. All test units will be profiled, drawn and photographed. All field maps will be scaled and will accurately reference grid locations in terms of levee stations or range markers in close proximity to the 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.

The Principal Investigator shall meet the COR on-site during the testing phase to discuss findings and recommendations.

All excavation units will be backfilled prior to completing field investigations.

This investigation shall conclude evaluation of 161V147 and 161V149 against the National Register of Historic Places criteria of significance (36CFR60.4). Adequate information will be retrieved to seek a determination of eligibility from the Keeper of the National Register, and to innumerate project effects on the resource. 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, 1962;

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, 1962.

b. Phase 2: Data Analysis and Report Preparation. The Contractor shall catalog all artifacts, samples, specimens, photographs, drawings, etc., collected under the terms of this work item, utilizing the format currently employed by the Office of the Louisiana State Archeologist. The catalog system will include site and provenience designations.

All coring and test excavation data will be analyzed using current scientific methods. Appropriate previously collected, and all newly collected, literature, map, field and laboratory data will be integrated to produce a graphically illustrated, scientifically acceptable report. 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 of Historic Places criteria of significance (36CFR60.4). It will not be sufficient to make recommendations based solely upon the condition and artifactual content of the site in question. All significance assessments of sites will be stated in terms of the context of similar Mississippi River floodplain sites. A research design for data recovery will be formulated should either site be assessed significant. The research design will identify hypotheses to be studied and data collection techniques required to gather or extract data necessary to address specific hypotheses. Site size, site condition, physical location and project impacts will be taken into account in recommending future data recovery methods. Inferential statements and conclusions will be supported by field, map, or archival data.

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 for 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 reports should also note difficulties, if any, in meeting the contract schedule.

b. Draft and Final Reports (Phases 1 and 2). Five copies of a draft report integrating all phases of the investigation will be submitted to the COR for review and comment within 60 days after work item award.

The draft and final reports shall include all data and documentation required by 36CFR60-63 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 present a research design and recommend appropriate mitigation procedures for each significant cultural resource. The Contractor shall clearly describe each site in terms of project impact, and shall identify, in illustration and discussion, any deposits, etc., which extend beyond the impact zone.

The written report shall follow the format set forth in MIL-STD-347A 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 on other edges; (3) the text

references and Reference Cited formats will follow the Society for American Archaeology Style Guide. Spelling shall be in accordance with the U.S. Government Printing Office Style Manual, dated January 1973.

The body of the report shall include the following: (1) introduction and identification of the study area; (2) environmental setting; (3) prehistoric and historic overview of the study area; (4) review and evaluation of previous archeological investigations; (5) statement of the research objectives of this undertaking; (6) description of field and laboratory methods; (7) presentation of data and cultural material inventories; (8) data analyses and interpretation; (9) data integration; (10) conclusions; (11) research design for mitigation if either site is found significant; (12) references cited; and (13) appendices, as appropriate.

The COR will provide all review comments to the Contractor within 45 days after receipt of the draft report (105 days after delivery order award). Upon receipt of the review comments on the draft report, 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 the final report and all separate appendices to the COR within 135 days after work item award. In order to preclude vandalism, the draft and final reports shall not contain specific locations of any archeological sites cited in discussion.

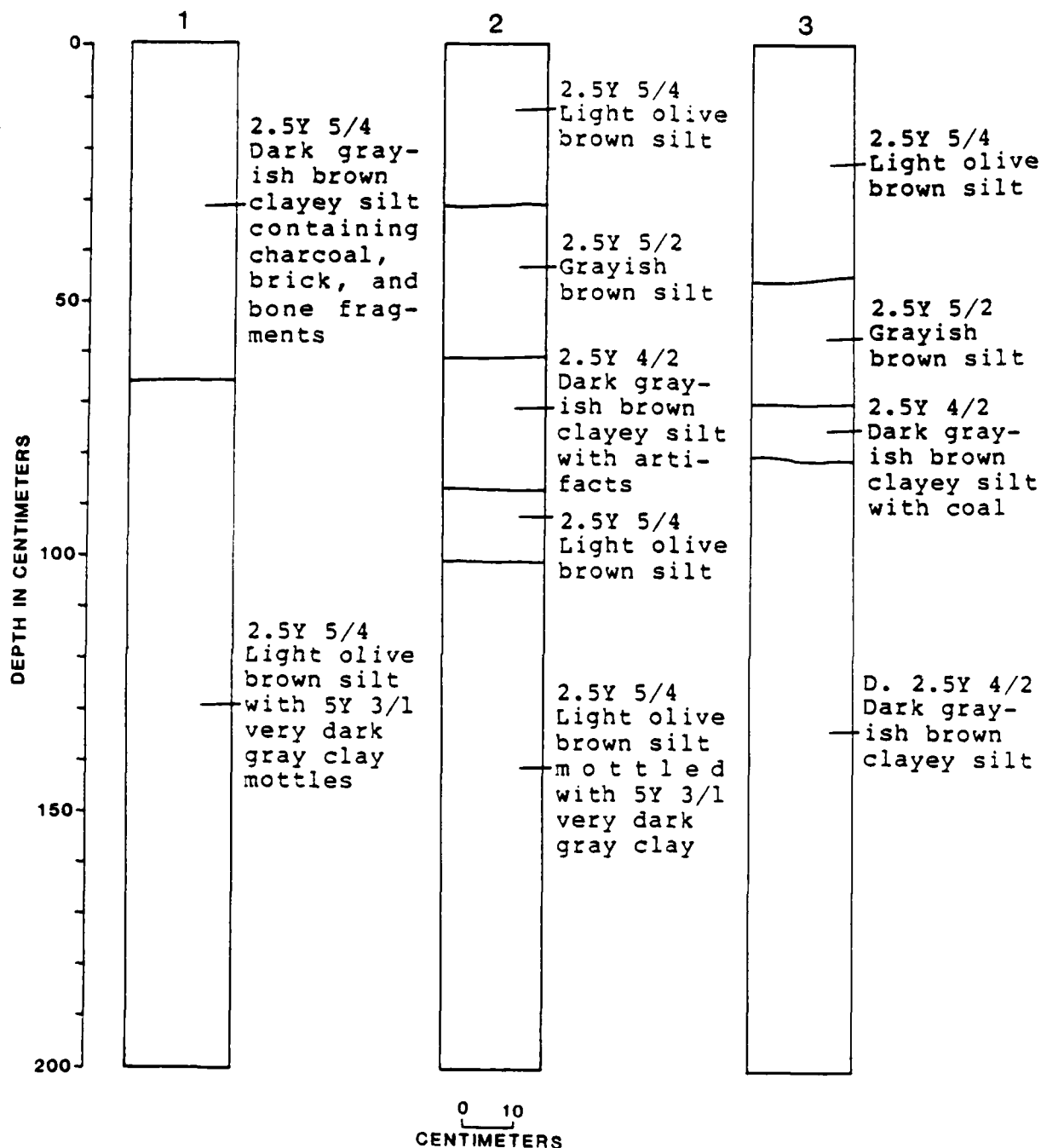
c. Site Forms. The Contractor will fill out an updated set of Louisiana site forms for both sites. These forms will correct previously filed information and summarize what is known of each resource as a result of this investigation. The Contractor shall file one set with the Office of the Louisiana State Archeologist; a duplicate set will be submitted to the COR. All sets will be distributed 115 days after delivery order award. The Contractor shall copy-furnish the COR with the letter transmitting the site forms to the State Archeologist.

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. 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 Archeology 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 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.

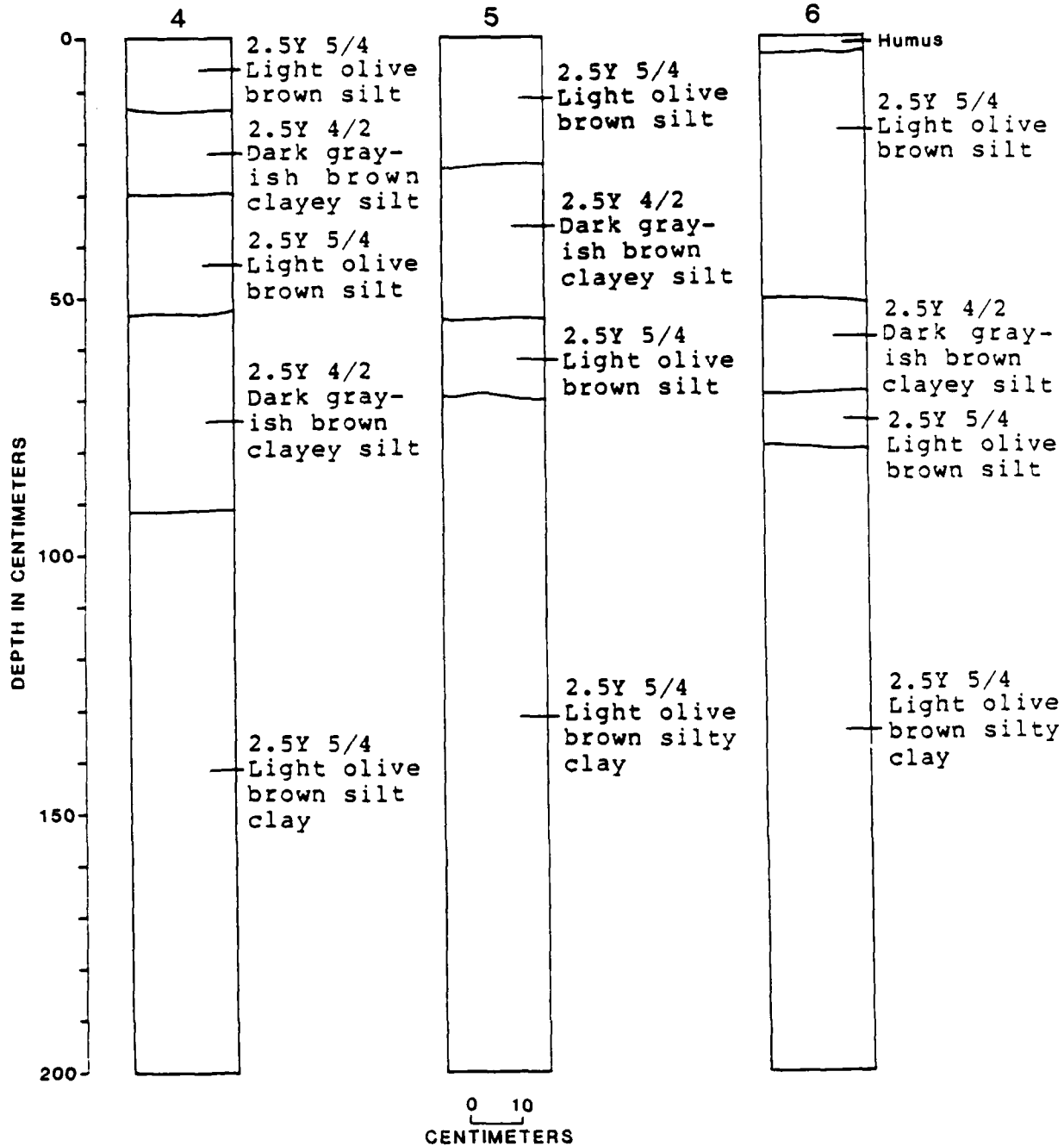
APPENDIX II

SHOVEL AND AUGER TEST LOG, SITE 16 IV 147

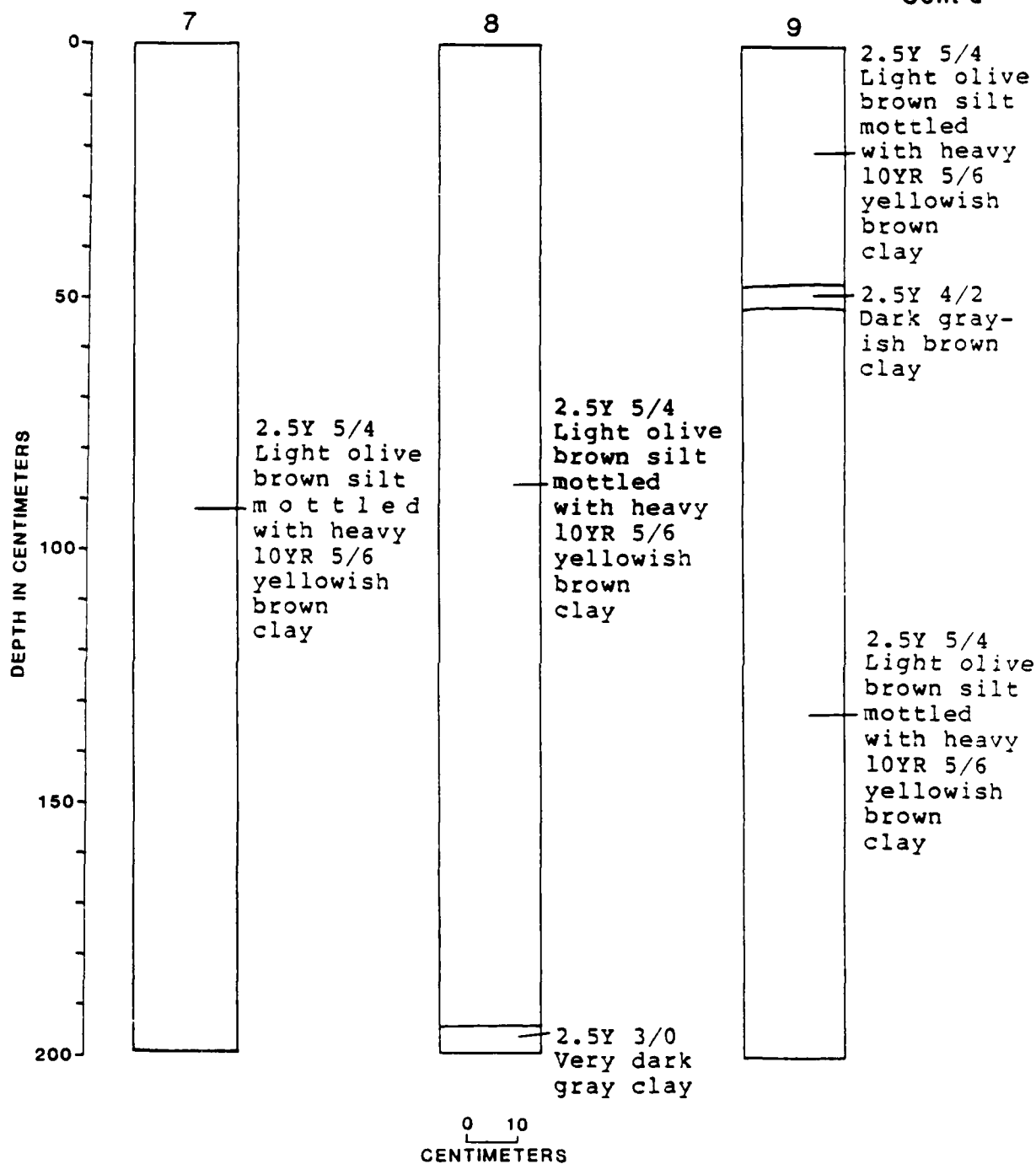
16 IV 149
AUGER TEST



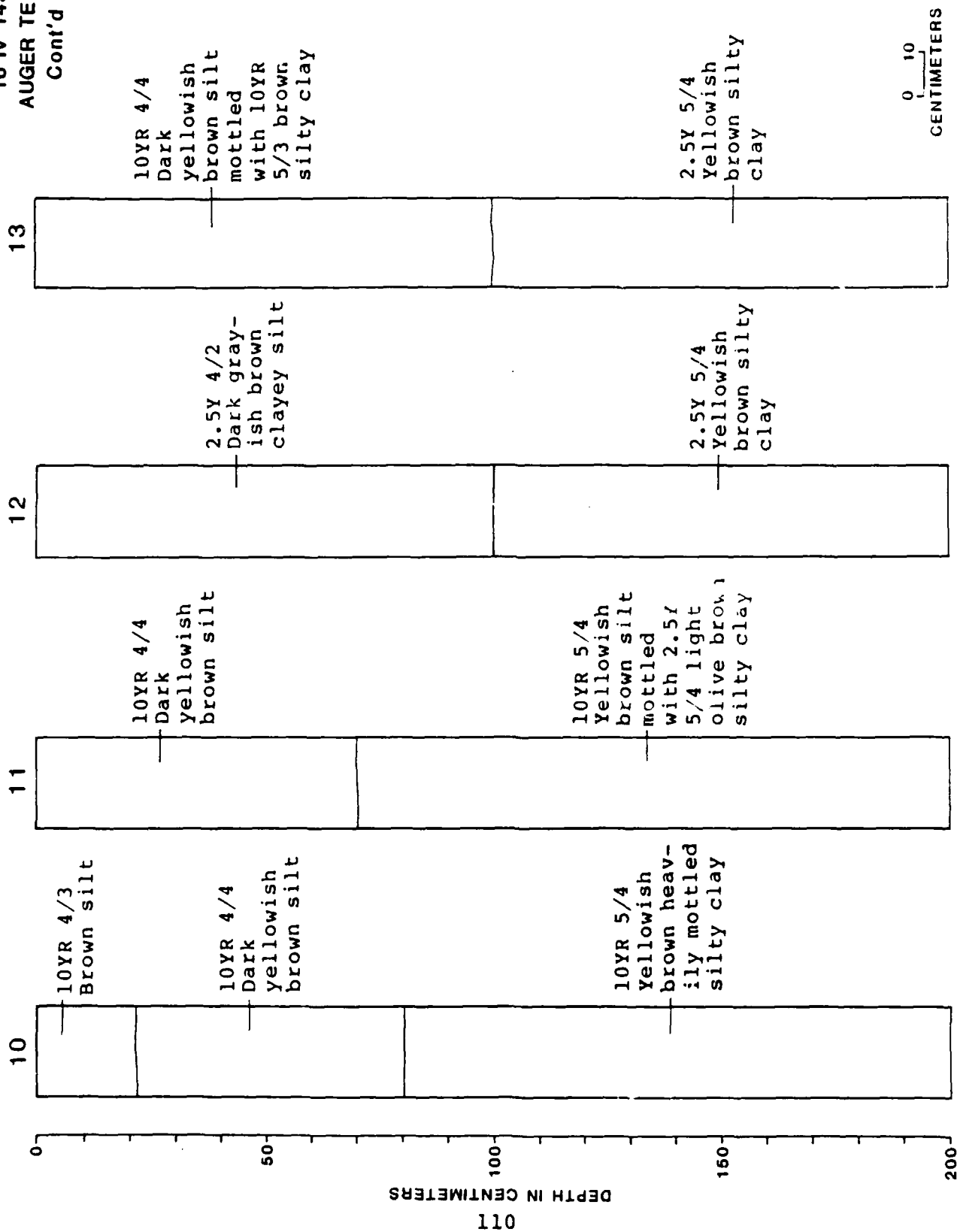
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AUGER TEST
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16 IV 149
AUGER TEST
Cont'd

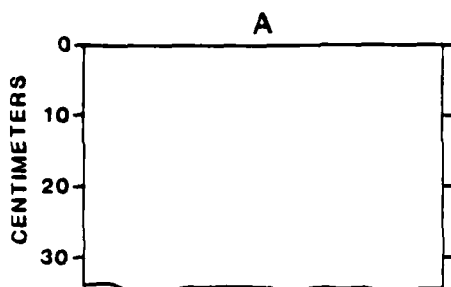


16 IV 149
AUGER TEST
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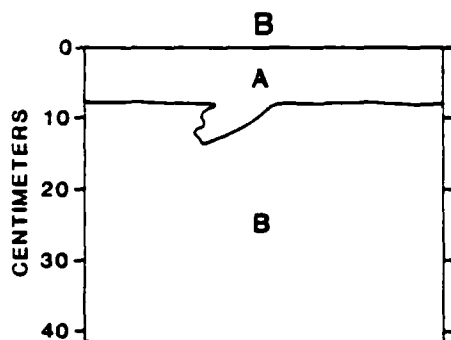


APPENDIX III

AUGER TEST LOG, SITE 16 IV 149

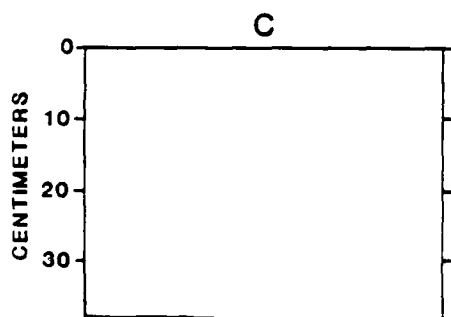


A
2.5Y 4/2
Dark, grayish brown clayey silt with heavy 10YR 4/4 dark, yellowish brown ferrous inclusions

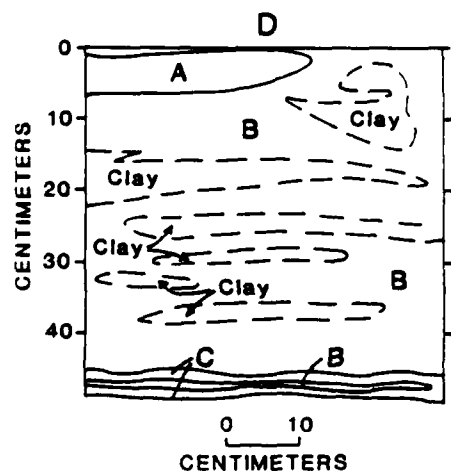


B
A. 2.5Y 4/2
Dark, grayish brown silty clay with blocky structure and 7.5Y 5/6 strong brown silt inclusions

B. 2.5Y 4/2
Dark, grayish brown silty clay heavily mottled with 10YR 4/4 dark, yellowish brown silt and 10YR 5/3 brown silts



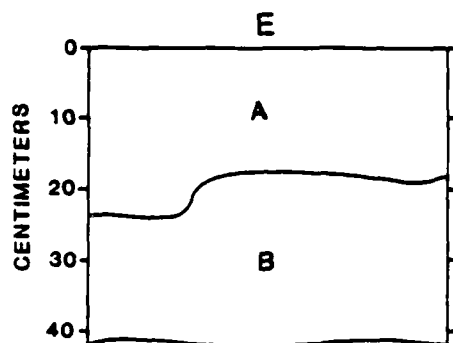
C
2.5Y 4/2
Dark, grayish brown clayey silt with heavy 10YR 4/4 dark, yellowish brown inclusions (30%)



D
A. 10YR 5/3
Brown silt coarsely mixed with very small, rounded brick fragments, shell, and wood fragments

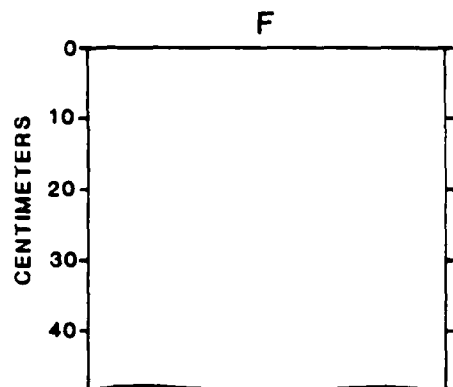
B. 10YR 5/3
Brown silt heavily mottled and interbedded with 7.5Y 4/2 brown clay and 2/5Y 4/2 dark, grayish brown clayey silt

C. 7.5Y 4/2 Brown clay

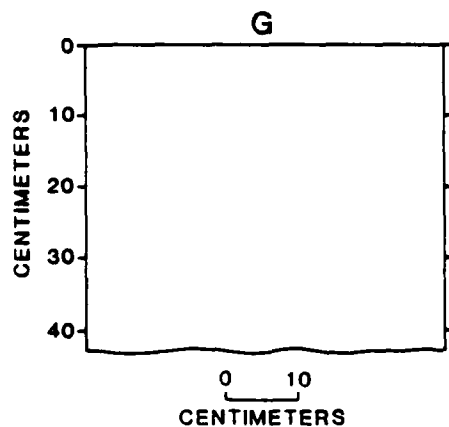


E
A. 2.5Y 5/2
Dark, grayish brown silty clay
mottled with 7.5Y 5/6 strong
brown silts

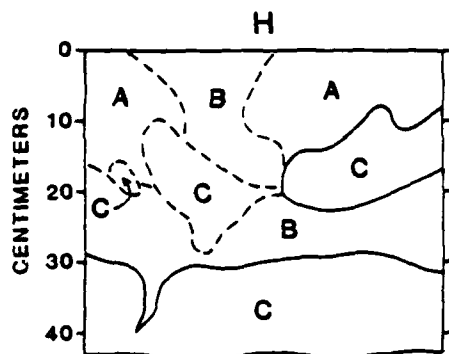
B. 10YR 5/3
Brown silt mottled with few
($<20\%$) 7.5YR 5/6 strong brown
silt inclusions



F
2.5Y 4/2
Dark, grayish brown clayey
silt mottled heavily with 10YR
4/4 dark, yellowish brown silt



G
2.5Y 4/2
Dark, grayish brown clayey
silt with heavy 10YR 4/4 dark,
yellowish brown silt mottling



H

A. 2.5Y 4/2

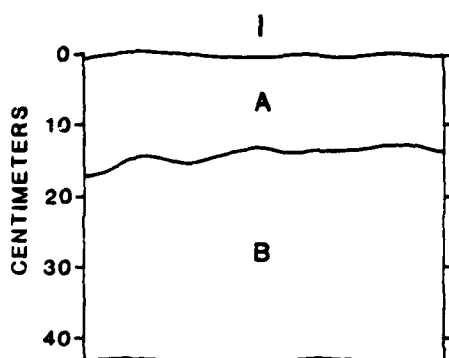
Dark, grayish brown clayey silt mottled with heavy dark, grayish brown clay and 10YR 4/4 dark, yellowish brown silt

B. 2.5Y 4/2

Dark, grayish brown clay mottled with heavy 10YR 5/3 brown silt

C. 10YR 5/3

Brown silt mottled with 2.5Y 5/2 grayish brown clayey silt



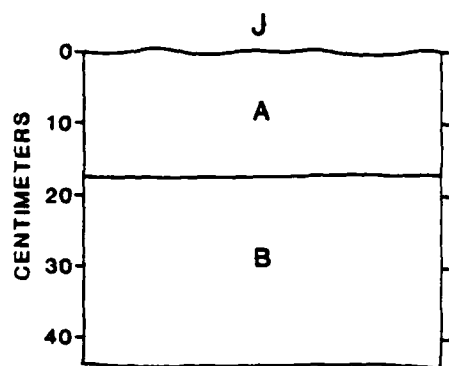
I

A. 2.5Y 5/2

Grayish brown clayey silt mottled with 10YR 4/4 dark, yellowish brown silt

B. 10YR 5/3

Brown silt mottled with 2.5Y 5/2 grayish brown clayey silt



J

A. 2.5Y 5/2

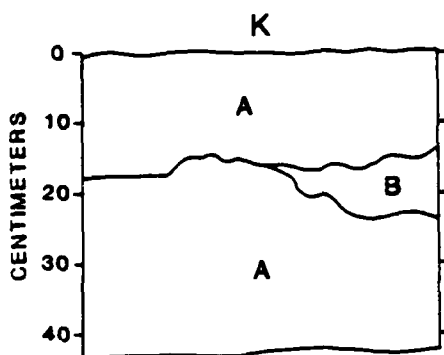
Grayish brown clayey silt mottled with medium 10YR 4/4 dark yellowish brown silt

B. 10YR 5/3

Brown silt mottled with 2.5Y 5/2 grayish brown and 2.5Y 4/2 dark, grayish brown clayey silt

0 10
CENTIMETERS

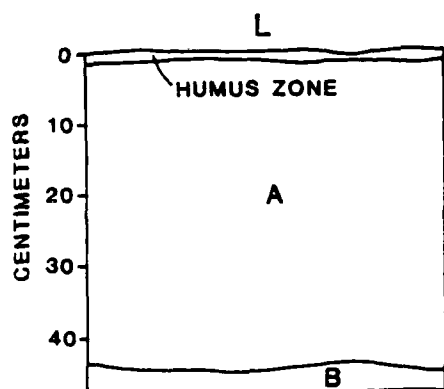
16 IV 147
SHOVEL TEST
Cont'd



K

A. 2.5Y 5/2
Grayish brown clayey silt
mottled with 10YR 4/4 dark,
yellowish brown silt

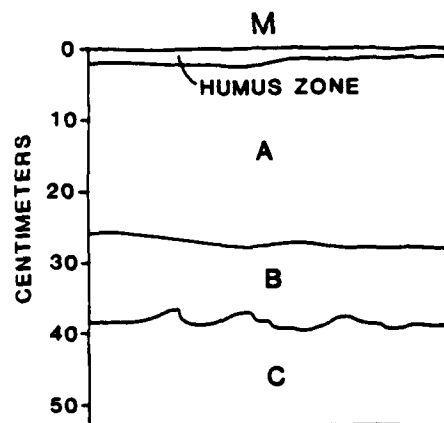
B. 10YR 5/3
Brown banded silt interbedded
with 10YR 4/2 dark, grayish
brown clayey silt bands



L

A. 10YR 5/3
Brown silt mottled with 2.5Y
4/2 dark, grayish brown clayey
silt inclusions and 10YR 4/4
dark, yellowish brown mottling

B. 2.5Y 5/2
Gray brown clayey silt with
few 10YR 4/4 dark, yellowish
brown inclusions



M

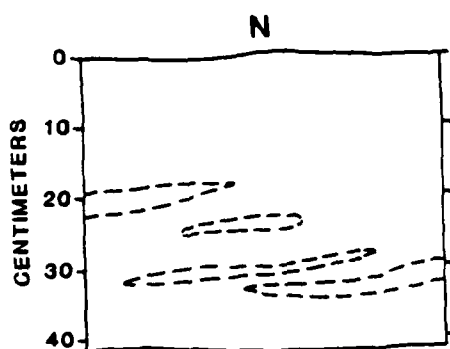
A. 10YR 5/3
Brown silt mottled with 2.5Y
4/2 dark, grayish brown clayey
silt

B. 2.5Y 5/2
Grayish brown clayey silt
mottled with 10YR 4/4 dark,
grayish brown silt

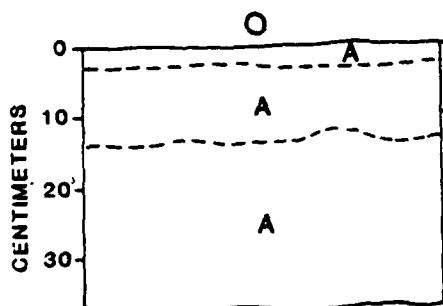
C. 2.5Y 5/2
Grayish brown clayey silt
mottled with heavy 10YR 5/3
brown silt and 10YR 4/4 dark,
yellowish brown silt

0 10
CENTIMETERS

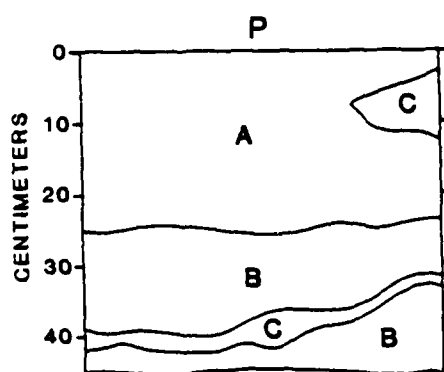
16 IV 147
SHOVEL TEST
Cont'd



N
10YR 5/3
Brown silt with 2.5Y 4/2 dark,
grayish brown clayey silt
interbedding



O
A. 10YR 7/4
Brown silt interbedded with
2.5Y 4/2 dark, grayish brown
clayey silt



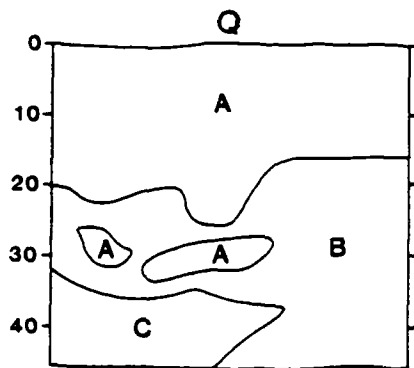
P
A. 10YR 5/3
Brown silt with 2.5Y 4/2 brown
silty clay bands

B. 2.5Y 4/2
Dark, grayish brown clayey
silt, heavily mottled with 10YR
5/3 brown silts and 10YR 4/4
dark, yellowish brown clayey
silt

C. 5Y 4/1
Dark gray silt banded with 10YR
4/4 dark, yellowish brown silt

0 10
CENTIMETERS

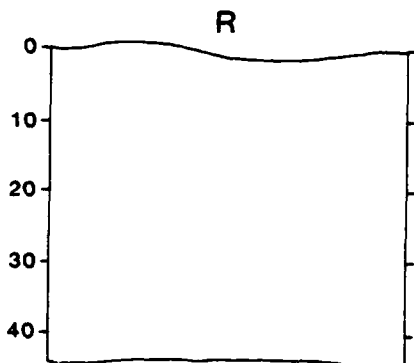
16 IV 147
SHOVEL TEST
Cont'd



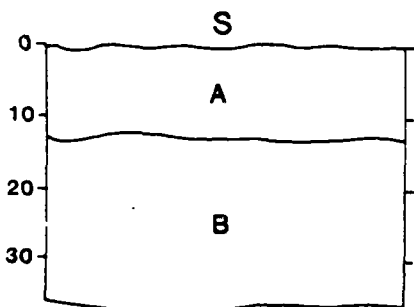
Q
A. 10YR 5/3
Brown silt mottled with 10YR 4/4 dark, yellowish brown silt

B. 10YR 5/3
Brown silt mottled with 2.5Y 4/2 dark, grayish brown clayey silt

C. 2.5Y 4/2
Dark, grayish brown clayey silt mottled with 10YR 5/3 brown and 10YR 4/4 dark yellowish brown silt

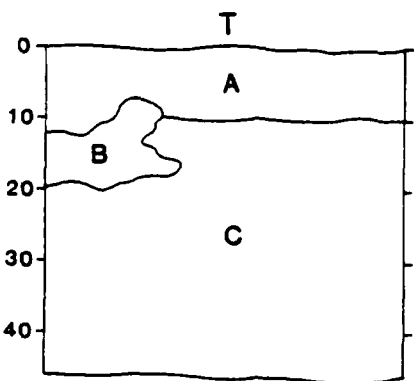


R
A. 2.5Y 4/2
Dark, grayish brown clay with heavy 10YR 4/4 dark, yellowish brown ferrous inclusions; fine root hairs throughout



S
A. 10YR 5/3
Brown sandy silt mottled with 2.5Y 4/2 dark, grayish brown silty clay

B. 2.5Y 4/2
Dark, grayish brown clay with heavy mottling



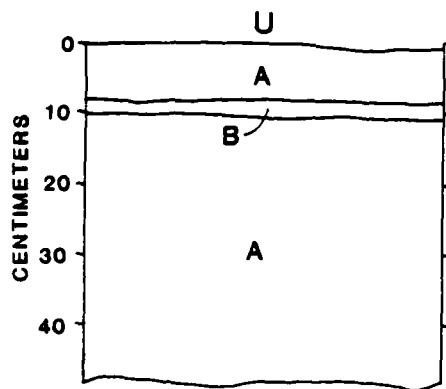
T
A. 2.5Y 4/2
Dark, grayish brown silty clay

B. 2.5Y 4/2
Dark, grayish brown silty clay

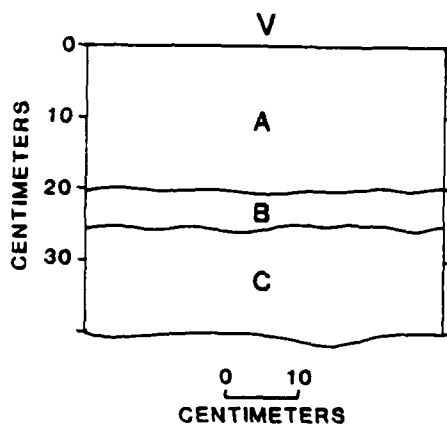
C. 10YR 5/3
Brown silt

0 10
CENTIMETERS

16 IV 147
SHOVEL TEST
Cont'd



U
A. 10YR 5/3
Brown silt
B. 2.5Y 4/6
Dark, grayish brown silty clay
C. 10YR 5/3
Brown silt



V
A. 10YR 5/3
Brown silt mottled with
2.5Y 5/6 light olive
brown silty clay
B. 2.5Y 5/2
Grayish brown silty clay
C. 10YR 5/3
Brown silt containing 7.5Y
5/6 strong brown oxidized
bands of silty clay

10YR 5/6
yellowish
brown silt
2.5Y 4/2
Dark gray-
ish brown
clayey silt
10YR 4/4
Dark yellow-
ish brown
silt with
heavy
mottling
2.5Y 4/2
Dark gray-
ish brown
silt with
heavy mot-
tling
2.5Y 4/0
Dark gray
clay

4

2.5Y 4/0
Dark gray
clay
2.5Y 4/2
Dark gray-
ish brown
clayey silt
10YR 5/3
Brown silt
2.5Y 4/0
Dark gray
clay

3

2.5Y 4/2
Dark gray-
ish brown
clayey silt
mottled
with 10YR
4/4 dark
yellowish
brown
silt
10YR 5/3
Brown silt
2.5Y 4/2
Dark gray-
ish brown
clayey silt

2

2.5Y 4/2
Dark gray-
ish brown
oxidized
clayey silt
2.5Y 4/2
Dark gray-
ish brown
clayey silt

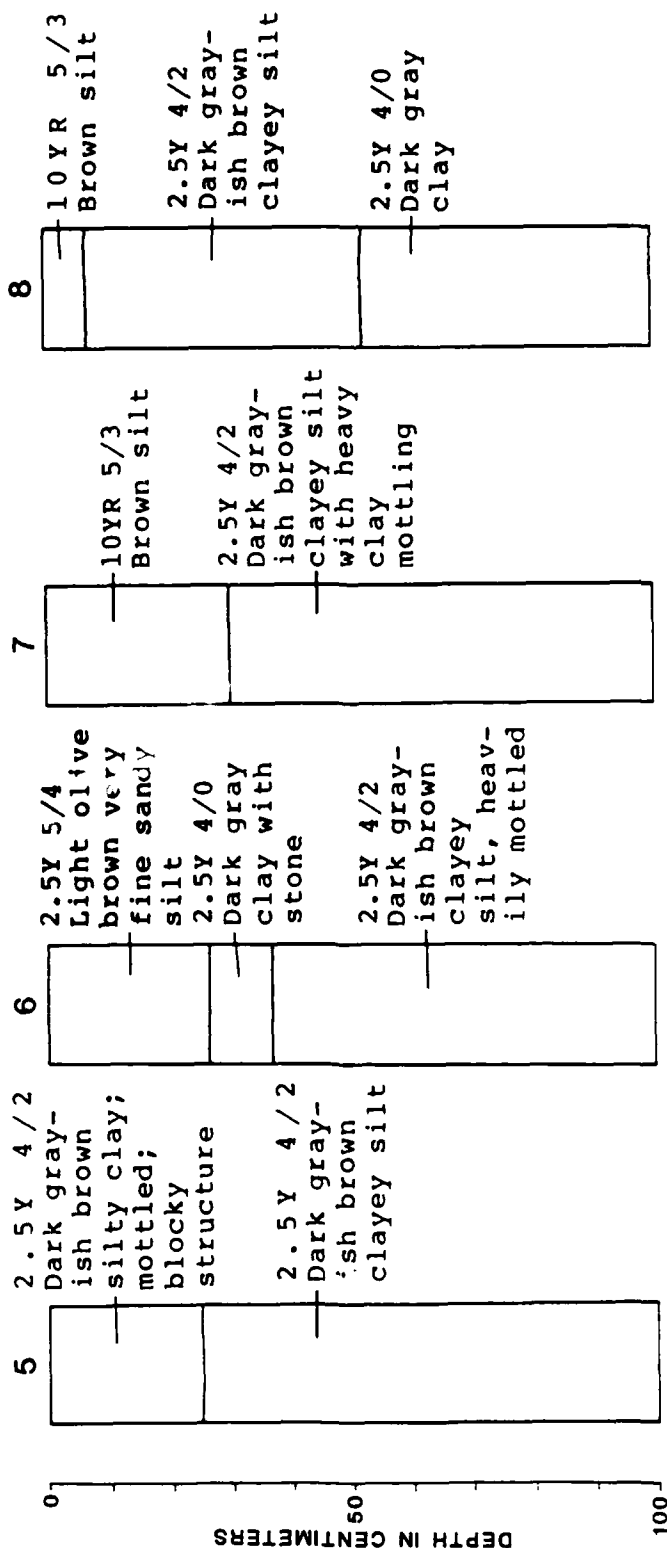
1

DEPTH IN CENTIMETERS

0
10
20
30
40
50
60

0 10
CENTIMETERS

16 IV 147
AUGER TEST
Cont'd



0 10
CENTIMETERS

16 IV 147
AUGER TEST
Cont'd

