AD-A134 295 ARCHEOLOGICAL SURVEY OF THE NEW HOUSE SITE HARLEM PLANTATION PLAQUEMINES..(U) GOODWIN (R CHRISTOPHER) AND ASSOCIATES INC NEW ORLEANS LA R C GOODWIN ET AL. 1/2

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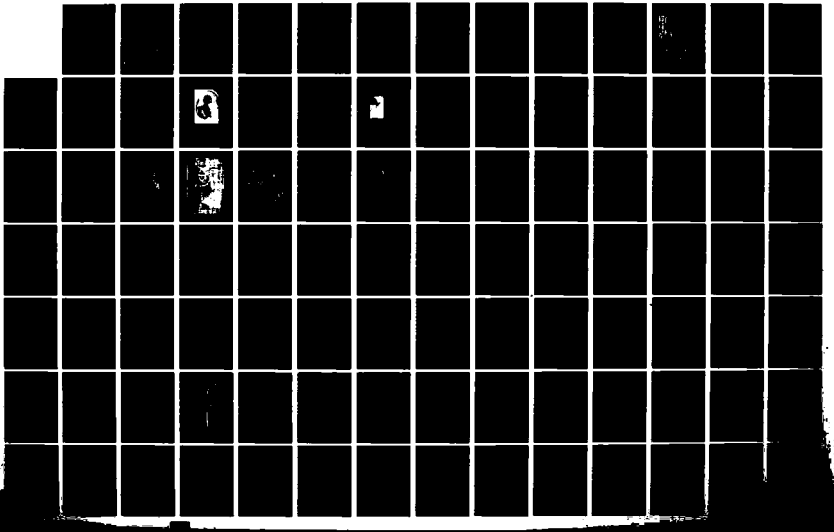

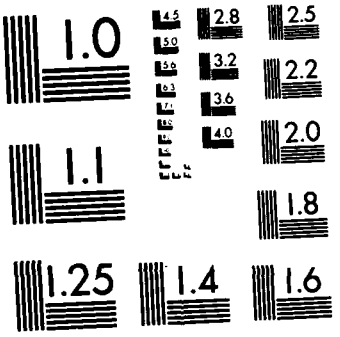

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CONTRACT NO. DACW29-83-M-0977

ARCHEOLOGICAL SURVEY OF THE NEW HOUSE SITE HARLEM PLANTATION, PLAQUEMINES PARISH, LOUISIANA

R. Christopher Goodwin and Associates, Inc.
1306 Burdette Street
New Orleans, Louisiana 70118

5 October 1983

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FINAL REPORT

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Prepared for
Department of the Army
New Orleans District,
Corps of Engineers
PO Box 60267
New Orleans, Louisiana 70160

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R. Christopher Goodwin & Associates, Inc., conducted an intensive archeological survey at the new house area, Harlem Plantation, Plaquemines Parish, Lousiiana, under Contract No. DACW29-83-M-0977 with the United States Army Corps of Engineers, New Orleans District. The Corps of Engineers is realigning a portion of the main line Mississippi River Levee at M-56-L, requiring the relocation of the Harlem Plantation great house. Harlem Plantation is listed on the National Register of Historic Places.

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20. Abstract.

A multistage archeological survey research effort was undertaken consisting of magnetometer and pedestrian survey, shovel and probe testing, and test excavation. This research effort demonstrated the proposed new house area relocation corridor, yard, and house site to be free of significant historic archeological features. Relocation at the Harlem Plantation house to the proposed site is recommended.

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INTRODUCTION

The United States Army Corps of Engineers, New Orleans District, is realigning a portion of the main line Mississippi River levee on the left descending bank at Mile 56 in Plaquemines Parish, Louisiana. The realignment of the levee will necessitate the relocation of the Harlem Plantation great house, a raised Creole Cottage built circa 1830-1840, which is listed on the National Register of Historic places. As part of the overall mitigation plan for Harlem Plantation, an archeological survey has been conducted to identify a location for the new yard and house site, and a relocation corridor for moving the Harlem great house, that will not disturb significant surface or subsurface cutlural resources. This report presents the results of the archeological survey of the proposed Harlem Plantation new house area, pursuant to the Scope of Services delineated for this contract, DACW-83-M-0977, as modified.

Harlem Plantation (16 PL 84), is a nineteenth century sugar and rice plantation located in Township 16S, Range 13E, Section 44, at mile 56 on the left descending bank of the Mississippi River in Plaquemines Parish, Louisiana (Figure 1). The archeological project boundaries provided in the Scope of Services delimit a 4.1 acre tract behind the present great house location, and between levee stations 1898+16 and 1902+16. Approximately 344 acres of the original Harlem property have been found eligible for inclusion on the National Register of Historic Places. The 4.1 acre tract under consideration here is part of the total Harlem site area. As stipulated in the study requirements for this project, an intensive archeological survey of the project area (Figure 2) was undertaken. Archeological methodology initially was guided by an on-site inspection and by archival materials supplied by the study manager. Additional archival research pertaining to the historic occupations of Harlem Plantation subsequently was undertaken to clarify the historic sequence and to provide locational data on former standing structures.

Field investigations at 16 PL 84 consisted of a multi-stage archeological survey effort that included magnetometer and pedestrian survey, shovel and probe testing, and test unit excavation techniques. Both field investigations and subsequent laboratory analyses were designed to determine the number of features present within the project area, and to evaluate their extent, depth, cultural associations, stratigraphy, and historic significance.

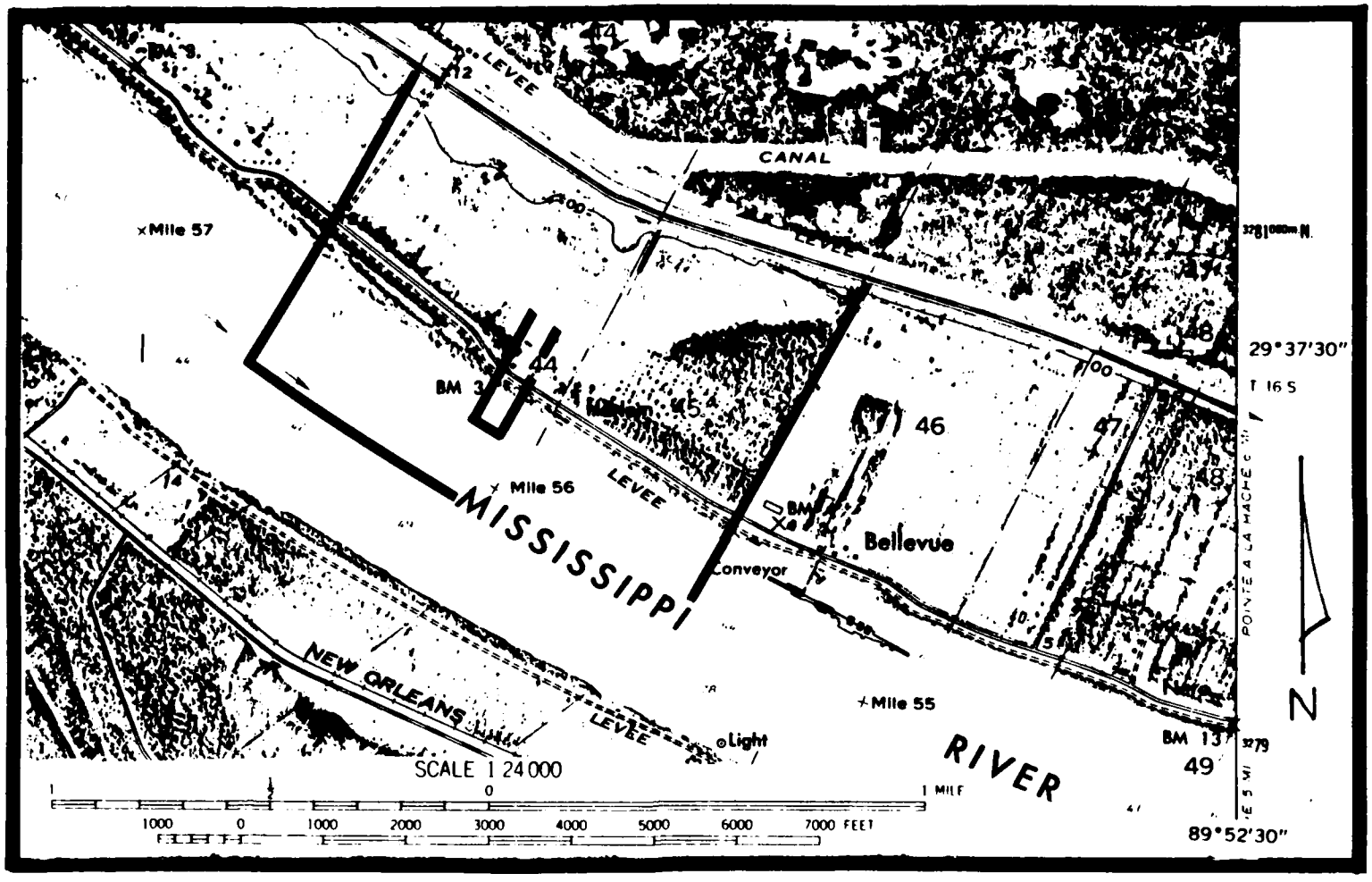


Figure 1. Excerpt of the 1973 Series USGS 7.5 Minute Phoenix Quadrangle, showing the project area and the National Register boundaries of Harlem Plantation.

The results of archival research pertaining to the historic occupations of Harlem Plantation; a detailed discussion of the field and laboratory methods employed during the course of this study; and, a discussion of research results are provided in the following pages. At each level of analytic treatment, the results of investigations are evaluated from an historic archeological perspective, and supported with graphic and tabular documentation.

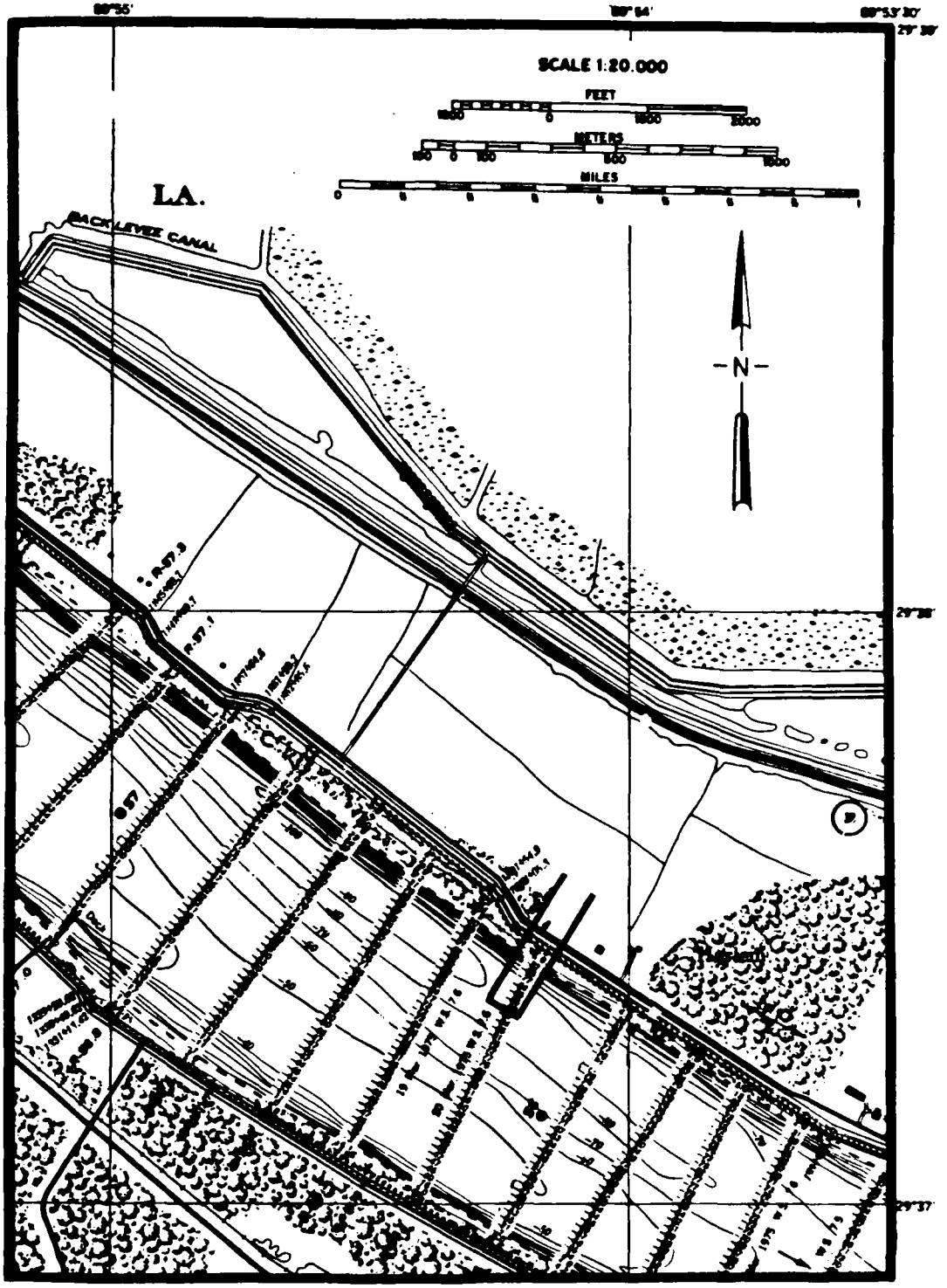


Figure 2. Excerpt of Mississippi River Hydrographic Survey 1973-1975 Chart 59, showing location of the project area.

THE HISTORIC SETTING

Prior archival research pertaining to Harlem Plantation provided an inadequate historic baseline against which archeological data could be evaluated, and failed to provide adequate contextual information on the history of the plantation. Therefore, additional archival research into the historic setting of the plantation was undertaken as part of this study, for the sake of completeness, although such an effort, in reality, was beyond the scope of services for this project.

Harlem Plantation, also known as "Old Harlem Plantation," is the product of the early nineteenth century consolidation of two smaller tracts of land. The downriver thirteen arpent tract (T16S, R13E, Section 45) was granted to Santiago Billaud during the 1780s by the Spanish governor of Louisiana, Etienne Miro. Billaud sold that property to Pedro Gautier in 1790 (P. Pedesclaux, May 12, 1970, New Orleans Notarial Archives), and the property was inhabited and cultivated by 1793. John Lanthois bought the thirteen arpent tract from Pedro Gautier's estate in 1805 (H. Brown, April 7, 1806, New Orleans Notarial Archives), and the federal land claim filed subsequently by Lanthois, as described in the American State Papers, documents the late eighteenth century occupation of the site:

> John Lanthois claimed a tract of land, situated on the east side of the river Mississippi, in the county of Orleans, containing thirteen arpents and eight toises in front, and forty arpents in depth (the lines closing one degree towards the rear), and bounded on the upper side by land of Daniel Clark, and on the lower by land of John Maurice Cormen.
>
> It appears that the land now claimed was actually inhabited and cultivated on the 20th day of December, 1803, and that the same was continually inhabited and cultivated by those under whom the present claimant holds for more than ten consecutive years preceeding (Lowrie and Franklin 1834:331).

This claim was confirmed by the government in 1812. Prior to its confirmation, Lanthois sold the property to Zacheus Shaw and William Swan in 1811 (M. de Armas June 20, 1811, New Orleans Notarial Archives. Nine days after this sale, Shaw and Swan acquired an adjacent upriver eighteen arpent parcel of land (T16S, R3E, Section 44) increasing the size of their holdings to a total of thirty-one arpents river frontage.

Ten arpents front of this latter eighteen arpent parcel originally were granted by Governor Miro to Pierre Andre Giraud in 1782. An additional four arpents were granted in 1787. The final four arpents of the eighteen arpent tract were inherited by Giraud from his son Antoine (P. Pedesclaux,

January 17, 1805, NONA). Giraud subsequently sold the property to the New York lawyer Edward Livingston in 1805 (P. Pedesclaux, January 17, 1805, NONA); Livingston later became Secretary of State of the United States under President Andrew Jackson. Livingston sold the property to Daniel Clark, the American Consul to Spain, eight months later (P. Pedesclaux, August 19, 1805). Clark and Livingston were the first of many luminaries to have been associated with Harlem Plantation. After the sale of the plantation, Livingston continued to hold the adjoining upriver property, as is shown in Clarke's land claim to the United States Government:

> Daniel Clark claims a tract of land, situated in the county of Orleans, and on the left bank of the Mississippi, containing eighteen acres (sic) front, by forty in depth bounded on the upper side by land of Edward Livingston, and on the lower by land of one Pierre Gautier. . . (Lowrie and Franklin 1834:310).

This claim was confirmed in 1812, but Clark had sold the property to William M. Johnson and George Bradish six years before (P. Pedesclaux, May 23, 1806, NONA).

Bradish and Johnson were bar and river pilots and sugar planters who resided on the right descending bank of the river on their plantation, which later became known as Magnolia. Since Bradish and Johnson used their residence plantation for sugar cultivation prior to 1800, and because their sugar mill on that plantation was one of the earliest in the Louisiana Territory (Goodwin and Yakubik 1982), it is likely that during their five year ownership of the eighteen arpent parcel at Harlem, Bradish and Johnson cultivated cane there on an absentee basis. However, the land at Harlem at that time was not considered prime sugar land:

> The sugar cane may be cultivated between the river Iberville and the city, on both sides of the river, and as far back as the swamps. Below the city, however, the lands decline so rapidly that beyond fifteen miles the soil is not well adapted to it (Heaton and Williams 1803:44).

As noted previously, Johnson and Bradish sold their upriver eighteen arpent parcel to Shaw and Swan (S. deQuinones, June 29, 1811, NONA) within days of their acquisition of the downriver thirteen arpent tract from John Lanthois. Shaw and Swan sold the entire thirty-one arpent property the following year to John Charles Wederstrandt (J. Lynd, May 21, 1812, NONA). Wederstrandt was a wealthy New Orleans merchant, and he also owned property in Iberville and in St. James Parishes during the early nineteenth century (Lowrie and Franklin 1834:296, 312).

By 1827, Wederstrandt was residing in St. James (H. Gordon, July 15, 1828 NONA). The Plaquemines Parish property at Harlem was to remain in Wederstrandt family ownership for the next fifty-five years.

John Charles Wederstrandt (Figure 3), grandfather and namesake of the purchaser of what would become known as Harlem Plantation, was born in Goteborg, Sweden. Family genealogists claim that he was the Swedish consul to France. He settled in La Rochelle, France circa 1730, where he married and produced three children. The younger of his two sons, Conrad Theodore, was born in La Rochelle in 1736, and he became a sailor at the age of twelve. Conrad was a trader to St.Domingue (Haiti) in 1758, when the English halted French shipping. As a result, Conrad settled near Queenstown, Maryland, in 1759. He married Mary Blake, and they had five children. John Charles, the purchaser of the Harlem property, was the eldest of that couple's four sons. John Charles Wederstrandt and two of his younger brothers, Philemon Charles and Robert Charles, moved to Louisiana as young men (Morse Wederstrandt Family Papers).

John C. Wederstrandt's property in Plaquemines Parish was thoroughly described in the 1812 Act of Sale:

> . . .all that plantation situated about twelve leagues below this city on the same side of the river Mississippi, being in front on said River eighteen arpents and in depth forty arpents, bounded on the upper side by the land now or lately of Edward Livingston, and on the lower side by the land of the appearers formerly belonging to John Lanthois. . .and also all that plantation adjoining the one described in the forgoing being in front on ( ) and in the acts of former owners 13 arpents on said river but according to the survey made by Barthelemy Lafon, the deputy of Isaac Briggs Surveyor General of the Lands of the United States south of Tenesse (sic) thirteen arpents and eight toises, ( ) the same more or less, bounded on the upper side by the Plantation above described and on the lower side by lands of Jean Marie Cormen, having forty arpents in depth. . .together with all the dwelling and other houses and buildings, fences, woods, trees, water ways water-courses (sic), profits, commodities advantages. . . (J. Lynd, May 21, 1812, NONA).

The description given above mentions "all the dwelling and other houses." This implies the existence of more than one dwelling on the property at this time. Although this could be a reference to slave cabins, these usually were listed as such, while the term "dwelling" would refer to a house where the owner or overseer might live. In either case, such "dwelling(s)" probably were located on the downriver

Figure 3. Portrait of John Charles Wederstrandt I, ca. 1738 (Morse Wederstrand Family Papers).

thirteen arpents of the plantation, which was noted as having "houses and improvements" on it in 1811 (M. de Armas, June 20, 1811, NONA).

John C. Wederstrandt did not live in any of the "dwelling(s)" on the property, since he resided variously in New Orleans and in St. James Parish. It is possible that his younger brother, Philemon Charles, lived at the plantation during the first decades of the nineteenth century. Prior to settling in Louisiana, Philemon became the second student ever enrolled at Georgetown College (now Georgetown University), which he entered in 1791 at the age of twelve (Daley 1957:68). At the age of eighteen, Philemon became a midshipman in the U.S. Navy, and he was assigned to the U.S.S. Constellation. During 1799, he participated in naval battles against the French vessels L'Insurgente and La Delagenge, and two years later, as a lieutenant, he served as a member of the American naval expedition against the pirates of Tripoli. Philemon also participated in the arrest of Aaron Burr (Daley 1957:68). In 1808, he was given command of the Argus, and in 1809 he was given command of the U.S. Flotilla at New Orleans. In 1814, Philemon served in the defense of Baltimore against the British fleet (Morse Wederstrandt Family Papers).

Sometime during this period, Philemon married Helen Smith, the daughter of a Baltimore judge. The couple purchased a plantation in St. Bernard Parish which measured 19 3/4 arpents front, and forty arpents in depth on both banks of Bayou Terre aux Boeufs (Lowrie and Franklin 1834: 589). This plantation, purchased circa 1820, apparently was their residence plantation, since Philemon was noted as a St. Bernard Parish resident in 1827 (H. Gordon, March 1827, NONA). However, Wederstrandt family genealogists claim that Philemon's daughter Margaretta Smith Wederstrandt was born at Harlem Plantation in 1816. Thus, it is possible that Philemon and/or his family lived at Harlem during the second decade of the nineteenth century. Another interesting family anecdote claims that Margaretta presented the Marquis de Lafayette with a laurel wreath and a basket of strawberries when he stopped at the plantation during a voyage to New Orleans on the steamboat Natchez in 1825 (Morse Wederstrandt Family Papers). No verification of this claim has been found, although it is known that Lafayette did travel to New Orleans on the Natchez on April 9, 1825 (Brandon 1944: 165-166). A member of Lafayette's party described the area in 1825:

> No variety in the vegetation is perceptable for sixty miles from the Balize. Hitherto nothing was to be seen but cypresses covered with the sombre tillandsia, called by the natives of the country, Spanish beard (Levasseur 1829:88).

Although the extent of Philemon's relationship with Harlem Plantation is uncertain, it is very likely that he had some role in overseeing the plantation's management for his brother, since Philemon lived in nearby St. Bernard, while John Charles lived farther away in St. James.

Despite his brilliant naval career, Philemon suffered financial difficulties during the 1820s. Perhaps in an effort to assist his brother, John C. Wederstrandt, who was unmarried and childless, donated the Harlem property to his brother's children on April 5, 1827 (H. Gordon, April 5, 1827, NONA). The recipients of the property were John Charles Perry, Margaretta Smith, Mary Blake, Helen Maria, and Theodora Wederstrandt, who were noted as all being under the age of puberty at that time. In addition, any yet unborn children of Philemon also were to receive an interest in the property (H. Gordon, April 5, 1827, NONA). Helen Smith Wederstrandt died at and was buried on the plantation in 1829, after having given birth to the youngest Wederstrandt child, Philemona Carroll (Morse Wederstrandt Family Papers). Philemon continued to manage the plantation for his children until his death. The great house presently standing on the plantation may have been built by Philemon for his large family, since the house exhibits features indicative of an 1830s-1840s construction date (Sam Wilson, personal communication 1983).

At least two of Philemon Wederstrandt's children became prominent members of society. John Charles Perry Wederstrandt, born in 1814, was educated in London and in Paris. After becoming a physician, he eventually was named Chief Surgeon of Charity Hospital in New Orleans. However, John C. P. Wederstrandt did not reside at Harlem Plantation; rather, he made his home at 157 Camp Street, in New Orleans (O. Drouet, March 26, 1864, NONA; Morse Wederstrandt Family Papers). Margaretta Smith, or "Maggy," as she was known, attended finishing school in New Orleans, and was married at Harlem Plantation on January 8, 1835, to Isaac Edward Morse (Figure 4). Morse had graduated from Harvard in 1829, and was a classmate and friend of Oliver Wendell Holmes. After their marriage, the couple lived in St. Martinsville, Morse's birthplace. Morse was elected to the U.S. Congress from St. Martinsville between 1844-1852. During the following three years, Morse served as Attorney General of Louisiana. Maggy was a preservationist, and in 1858 she was named the Vice Regent for Louisiana of the Mount Vernon Ladies Association (Morse Wederstrandt Family Papers).

Philemon continued to manage the plantation during the 1840s and 1850s, where he produced over 200 hogshead of sugar most years (Table 1). By 1850, a steam powered sugar mill was operating on the plantation, and in the following

Figure 4. Margaretta Wederstrand Morse, Isaac Edward Morse and one of their daughters. The inscription on the back shows that the photograph was given to the couple's son, Charles Nathan, as a "Christmas Souvenir" in 1863 (Morse Wederstrandt Family Papers).

Table 1 . Sugar Production at Harlem Plantation, 1844-1862.

Year	Manager	Hogsheads Produced	Average Price Per Hogshead[1]
1844	Philemon C. Wederstrandt	286	$ 45
1845-6	"	184	70
1849-50	"	203	60
1850-1	"	252	50
1851-2	"	268	48
1852-3	"	280	35
1853-4	"	412	52
1854-5	"	210	70
1855-6	"	95	110
1856-7	"	60	64
1857-8	"	225	69
1858-9	"	236	82
1859-60	"	210	N.A.
1860-1	"	290	N.A.
1861-2	"	500	N.A.

[1]Calculated at annual average price.

Sources: Champomier 1844-1862; DeBow 1858:469-70; Schmitz 1977.

year the name "Harlem" first was applied to the plantation (Champomier 1850-1853). During this same time period, John C. Wederstrandt died at age eighty at Harlem plantation. It is possible that John, a bachelor, was being cared for at Harlem, the residence of his closest relatives. In 1851, John Charles Perry Wederstrandt bought his sisters' interests in Harlem Plantation. All of his sisters had married by this date: Maggy has already been mentioned; Helen married Colonel John Dean Johnson; Theodora married Dr. Pierre Caveily Boyer; and, Philemona had married John Wetherburn Smith. The fifth sister, Mary Blake, died in 1846 (Morse Wederstrandt Family Papers). Despite his complete ownership of the plantation, John Charles Perry Wederstrandt did not live at Harlem; his father continued to manage the plantation.

Philemon Charles Wederstrandt died in 1857 and was buried on the plantation. Despite his death in 1857, Philemon continued to be listed as the manager of the plantation through 1862 (Champomier 1857-1862). It is doubtful that John Charles Perry Wederstrandt took over the operation of the plantation at the time of his father's death; he was a surgeon, not a planter, and he was in very poor health. After the outbreak of the Civil War, J. C. P. Wederstrandt had taken residence in New York. His sisters Philemona and Helen lived in New York during the war; possibly they cared for him during his illness (Second District Court, Orleans Parish, #20,313; Morse Wederstrandt Family Papers).

Plaquemines Parish was occupied by the Union Army beginning in 1862. During the remainder of the Civil War, Isaac Morse lived at and managed Harlem, while Maggy lived at her brother's house on Camp Street in New Orleans (Morse Wederstrandt Family Papers). After her brother's death, Maggy apparently began residence at Harlem, and in September, 1864, she applied for and received a permit from the Union Army to own a shotgun for the purpose of hunting (Morse Wederstrandt Family Papers). At this time, her brother's former agent and testimentary executor, P. Cazanave, handled the finances of the plantation. An overseer, J. J. Walker, supervised the daily management of the plantation (Second District Court, Orleans Parish #20,313). Maggy apparently also was involved in the management of the plantation at this time, since in October, 1864, she petitioned for the return of seven negro males who had been conscripted by the Union Army in 1863 (Morse Wederstrandt Family Papers). In March, 1864, the estate of J. C. P. Wederstrandt, both in New Orleans and in Plaquemines Parish, was inventoried. Structures existing on Harlem Plantation at that time included:

> Dwelling houses, Kitchen, Sugarhouse, Engine, Purgery, Carpenter's, Blacksmith's, Coopers' Shops, Draining Machine, etc. . .(Second District Court, Orleans Parish, #20,313).

Besides Harlem, John C. P. Wederstrandt's estate included a fifteen acre front property immediately downriver from Harlem, and a twenty-five arpent front parcel immediately upriver from Harlem. Thus, Wederstrandt's estate in Plaquemines Parish consisted of approximately seventy-six arpents front on the Mississippi River. Livestock, tools, and other movables also were inventoried and appraised at this time (Table 2). Interestingly, a list of the 138 "colored people" living at Harlem, including their names and ages, was included in the inventory.

> Owing to the present state of affairs, the above named colored people attached to Harlem Plantation were not valued or appraised, but due mention is hereby made of them for reference (Second District Court, Orleans Parish #20,313).

The seven conscripted Negro males also were included in this list. The total value of the Wederstrandt estate in Plaquemines Parish was appraised at $85,937.30.

The Harlem Plantation movables were auctioned at a sheriff's sale on January 24, 1865 (Table 3). The plantation, buildings, and improvements were not sold at this time; apparently there was no bidder for them (Second District Court, Orleans Parish, #20,313). The plantation itself, along with the downriver twenty-five arpent front tract (the upriver parcel had been sold previously to Bradish Johnson, the owner of Woodland Plantation) was sold at auction on June 27, 1867 (Figure 5). The advertisements of this sale provide the most complete listing of structural improvements to the plantation of any contained in the title history. The lack of any map evidence showing improvements to the property prior to 1892 necessitates a careful consideration of these structures and of their probable former locations.

The order of the listing of the structures may suggest their locations relative to each other, especially since the first set of structures listed all relate to the great house occupation. A dwelling (the great house) with a kitchen are listed, along with two cisterns, servants rooms, and six "other small buildings." It is hypothesized that these buildings comprised the great house habitation complex, which probably was located upriver from the present site of the great house. The 1872 Mississippi River Commission map, for which the topographic features were actually surveyed in 1893, shows no structures in the present location of the great house (Figure 6). However, a structure within an enclosed yard is shown on this map upriver from the present house site. It is possible that this was the former location of the plantation habitation complex. Also, it was customary to have separate living facilities for house servants and for field

Table 2. Items Inventoried at Harlem Plantation on March 23, 1864 (Second District Court, Orleans Parish, #20,313).

ITEMS	VALUE
2 American horses	$ 150.00
58 mules	7,200.00
17 cows	850.00
23 yearlings (cattle)	299.00
3 young calves	24.00
15 working oxen	750.00
13 three-mule carts	260.00
5 ox carts	100.00
7 small carts	84.00
18 two-mule plows	90.00
6 four-mule plows	42.00
3 six-mule plows	27.00
34 cane knives	8.50
1 wheel barrow	1.00
44 collars	11.00
42 bridles	21.00
42 pairs (hairs)	21.00
44 pairs trace chains	44.00
39 curry combs	7.80
44 hoes	10.00
16 axes	16.00
13 grubbing hoes	3.25
13 spades	6.00
8 shovels	4.00
14 cart saddles	14.00
3 cross-cut saws	3.00
1 whip saw	1.00
8 scythes	8.00
5 old two-horse carriages	200.00
1 four-wheel buggy	75.00
1 lot household and kitchen furniture	150.00
1 lot books	50.00
91 empty sugar hhds	127.50
73 empty molasses barrels	91.25
2 barrels bi-sulfite	20.00
1000 barrels of coal	1,000.00
75 cords wood	200.00
3200 hhd staves	96.00
300 bbls corn	300.00
1 coil cabble (sic)	50.00
1 corn sheller	10.00

Table 3. Items Auctioned from Harlem Plantation at a Sheriff's Sale in January, 1865 (Second District Court, Orleans Parish, #20,313).

ITEMS	VALUE
1260 barrels of corn in shucks	$ 1,260.00
14 empty hogsheads	30.37
37 empty molasses barrels	52.95
1 frame scale	15.00
1 coil rope	63.00
1 music box	6.00
1 lot cord wood	300.00
1 lot (slow) coal	80.00
Books	42.00
2 lamp stands	3.50
1 cypress table	1.00
1 old carriage	5.00
1 pair fire tongues (tongs)	3.00
1 sofa	10.75
1 armoir	12.00
1 washstand	3.75
1 lounge and mattress	3.00
2 old armoirs	2.75
1 bedstead	15.00
2 old bedsteads	18.00
1 small bed and mattress	3.00
3000 hhd staves	47.00
1 old side board	2.00
1 armoir	17.00
1 buggy	43.00
2 pictures	3.25
1 armoir	6.75
3 chairs	10.75
1 rocking chair	
2 old arm chairs	3.75
4 old tables	13.00
2 maps	2.25
1 cooking stove	12.00
5 old chairs	3.50
1 bedstead	40.00
1 rocking chair	3.00
1 small rug	2.00
1 mosquito frame	2.25

Table 3. Continued

ITEMS	VALUE
1 book case and books	22.00
1 ( ) harness	5.50
1 china candle stick	1.50
1 candle snuffer	
2 glass shades	.50
2 flower stands	.25
1 lot old books	3.75
1 side board	20.00
1 hat rack	1.00
1 bureau	8.00
1 clock	1.00
1 old carriage	14.00
1 corn sheller	1.00
1 old washing machine	1.00
1 lot coal oil lamps	4.00
10 gallons coal oil	14.00
1 sheet India rubber	4.25

SUCCESSION OF J. C. P. WEDERSTRANDT.

Second District Court of New Orleans,

No. 20,810.

BY V. REAUD,

Sheriff of the Parish of Plaquemines.

WILL BE SOLD AT PUBLIC AUCTION, ON

THURSDAY, JUNE 27, 1867,

AT THE MERCHANTS' AND AUCTIONEERS' EXCHANGE,

Royal street, between Canal and Customhouse Streets.

By virtue of two orders of the Hon. JOHN W. TOURO, Judge of the Second District Court of New Orleans, one bearing date April 26, 1867, and the other May 15, 1867, the following described property, to-wit:

1. THE OLD HARLEM PLANTATION,

Situated in the parish of Plaquemines, on the left bank of the Mississippi river, at about thirty-seven miles below the city of New Orleans, having thirty-one acres front on said river by forty arpents in depth; bounded above by land belonging to said succession, and below by land formerly belonging to said succession and now to Bradish Johnson, together with all the buildings and improvements thereon, (consisting of one dwelling house and kitchen, two cisterns, servants' rooms, and six other small buildings, one brick sugar house and machinery, in good order; two batteries, one in good order and the other wanting repairs, is attached to the same machinery; also, one corn mill, one cooper shop and tools, one kitchen and washing room, one store room, one draining machine, one large building for hospital, one blacksmith shop and tools, one carpenter shop and tools, eleven laborers' cabins, large enough to contain (150) one hundred and fifty laborers, two corn houses, one large stable with hay loft, overseer's house, kitchen, etc., twenty-two working mules, and fifty head of cattle, twelve large carts, 8 small mule carts, 4 ox carts, 18 plows, fifty arpents plant cane, seventy arpents first year rattoons, and thirty-five arpents second year rattoons.

2. ANOTHER TRACT OF LAND,

Situated in the parish of Plaquemines, on the left bank of the Mississippi river, at about 36 or 38 miles below the city of New Orleans, measuring about 28 arpents front by 40 arpents in depth; bounded above by land formerly belonging to Francis Fortin and now to Francis Fernandez, and below by the Old Harlem Plantation, together with all the improvements thereon.

TERMS AND CONDITIONS:

For the Old Harlem Plantation, firstly described: One-third cash, and the balance in equal amounts in notes at one and two years' credit, bearing interest at the rate of six per cent. per annum until maturity, and eight per cent. per annum from maturity until final payment; said notes guaranteed by special mortgage. The purchaser to assume the contract entered into with the freedmen on said plantation, and to pay them their monthly wages stipulated from the day of adjudication; and also, the cost of Internal tax.

For the tract of land secondly described--Cash, in U. S. Treasury notes.

(Signed) V. REAUD, Sheriff.

Parish Plaquemines May 20 1867

Figure 5. Advertisement of Sheriff's Sale for the Succession of J.C.P. Wederstrandt, held on June 27, 1867.

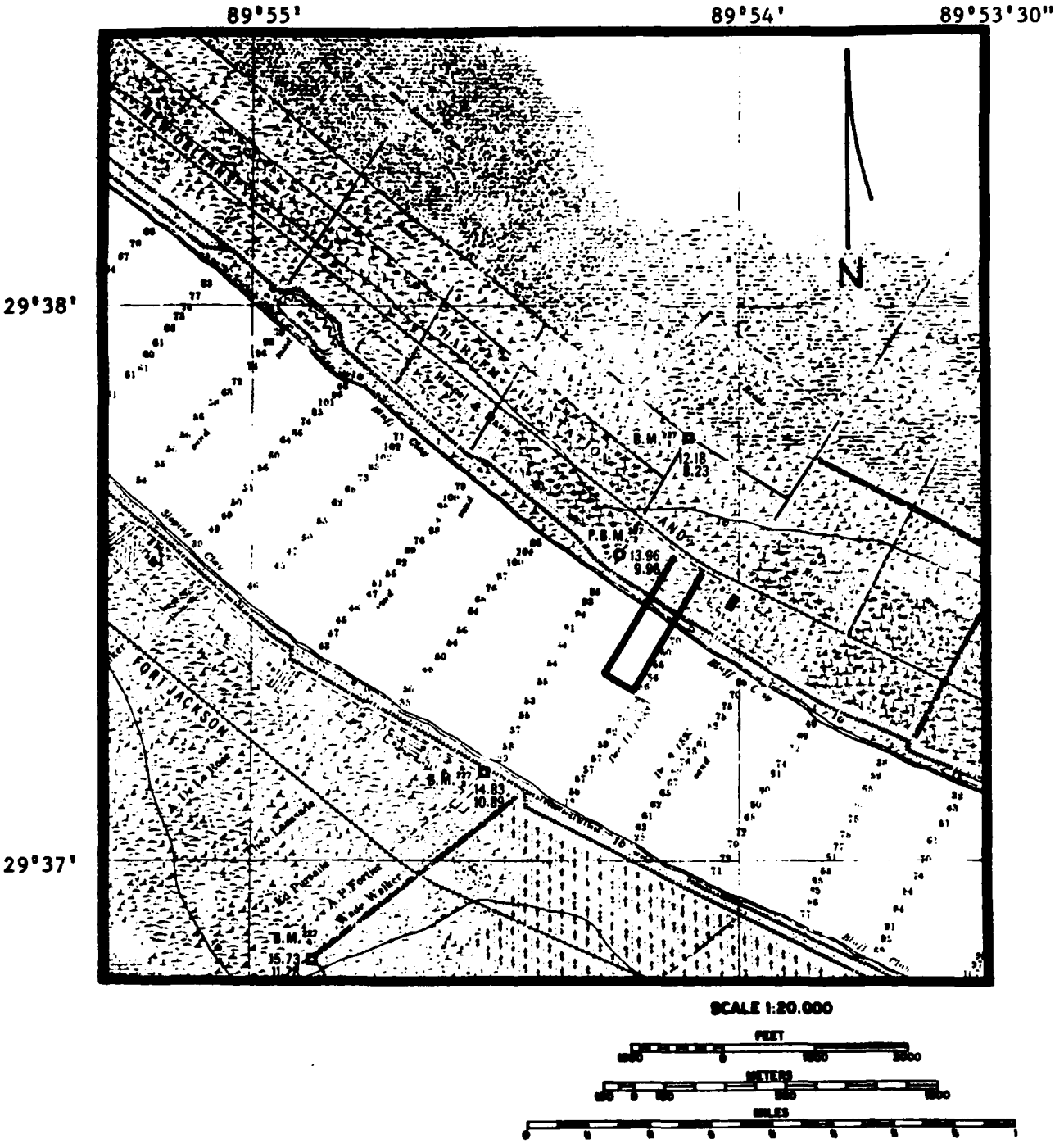


Figure 6. Excerpt of the 1872 Mississippi River Commission Chart No. 79, showing the project area.

hands during the antebellum period, and the distance from the quarters area of the site to the great house in this case would have necessitated such close quarters for house servants. The use of the term "servants rooms" suggests a single structure, rather than multiple cabins, for the servants. The six small buildings could have had a number of functions, but likely possibilities drawn from comparison to contemporary plantations, are office(s), garconnieres, and pigeonnaires. In addition, the buggy and the carriages listed in the plantation inventory suggest that one structure may have been a carriage house.

Also listed was a brick sugar house. Sugar houses (Figure 7) generally were 100-160 feet long and about 50 feet wide (Sitterson 1953:137). Bouchereau (1868-1869) notes that this particular structure at Harlem had a shingle roof. The mill (Figure 8), powered by a steam engine, and used for expressing the juice from the cane, probably was housed within the sugarhouse, although detached structures for the mill also were utilized on Louisiana plantations (Sam Wilson, personal communication 1983). Bouchereau (1868-1869) notes that the open pan method for the clarification and the evaporation of cane juice was used at this time at Harlem. This method involved the use of a set of four kettles of decreasing size called, respectively, the grande, the flambeau, the syrup, and the battery. The kettles were set into a masonry structure usually about thirty feet long by seven feet wide, within which was the furnace and the flue for conveying heat to the kettles (Figure 9a). The furnace was located under the battery, and an ash pit would have been located outside the sugar house, adjacent to that structure. Both coal and wood were no doubt utilized to fuel the furnace, since large quantities of both were noted in the plantation inventory (Table 2). The flue, at the opposite end of the kettle set, would have turned a right angle to the set and passed to the outside of the sugar house where it connected to the chimney (Sitterson 1953:141).

After the clarification and evaporation of the cane juice, it was emptied from the battery into shallow wood troughs, or coolers, and the sugar granules formed as the juice cooled (Figure 9b). The coolers were ten to twelve feet long, four feet wide, and eighteen inches deep (Thorpe 1853:763). There usually were about sixteen coolers in a sugar house (Sitterson 1853:143). After the completion of granulation, the sugar and molasses in the coolers were packed into hogsheads, or barrels of approximately 1000 pounds. The packing was done in the purgery, a room in the sugar house containing a large cement cistern overlain by timbers on which the hogsheads were placed (Figure 9c). The hogsheads had holes in the bottom, through which the molasses could drain into the cistern, leaving the granulated sugar (Thorpe 1853:763).

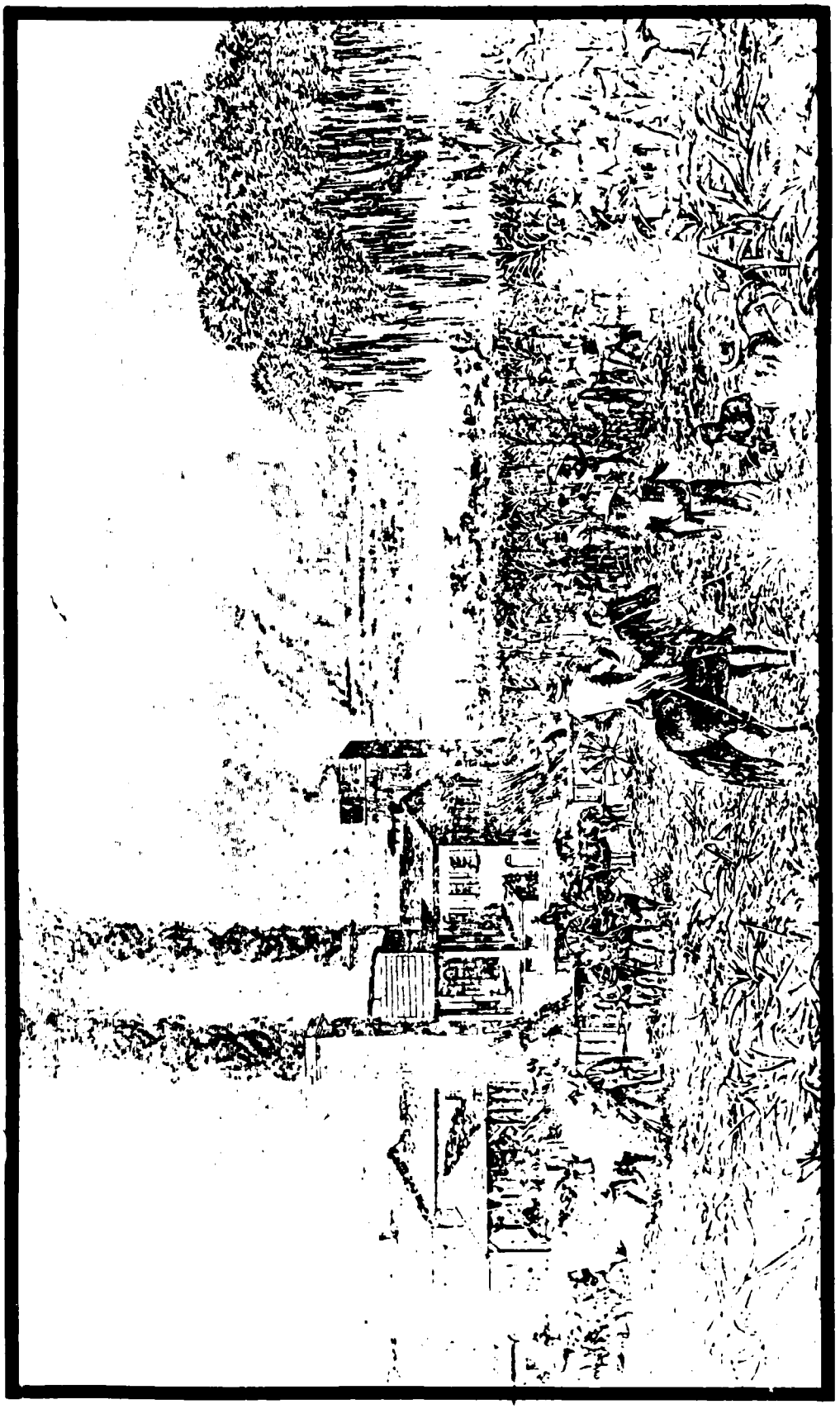


Figure 7. View of a sugar house from the cane fields (courtesy of the Louisiana Collection, Howard Tilton Library, Tulane University).

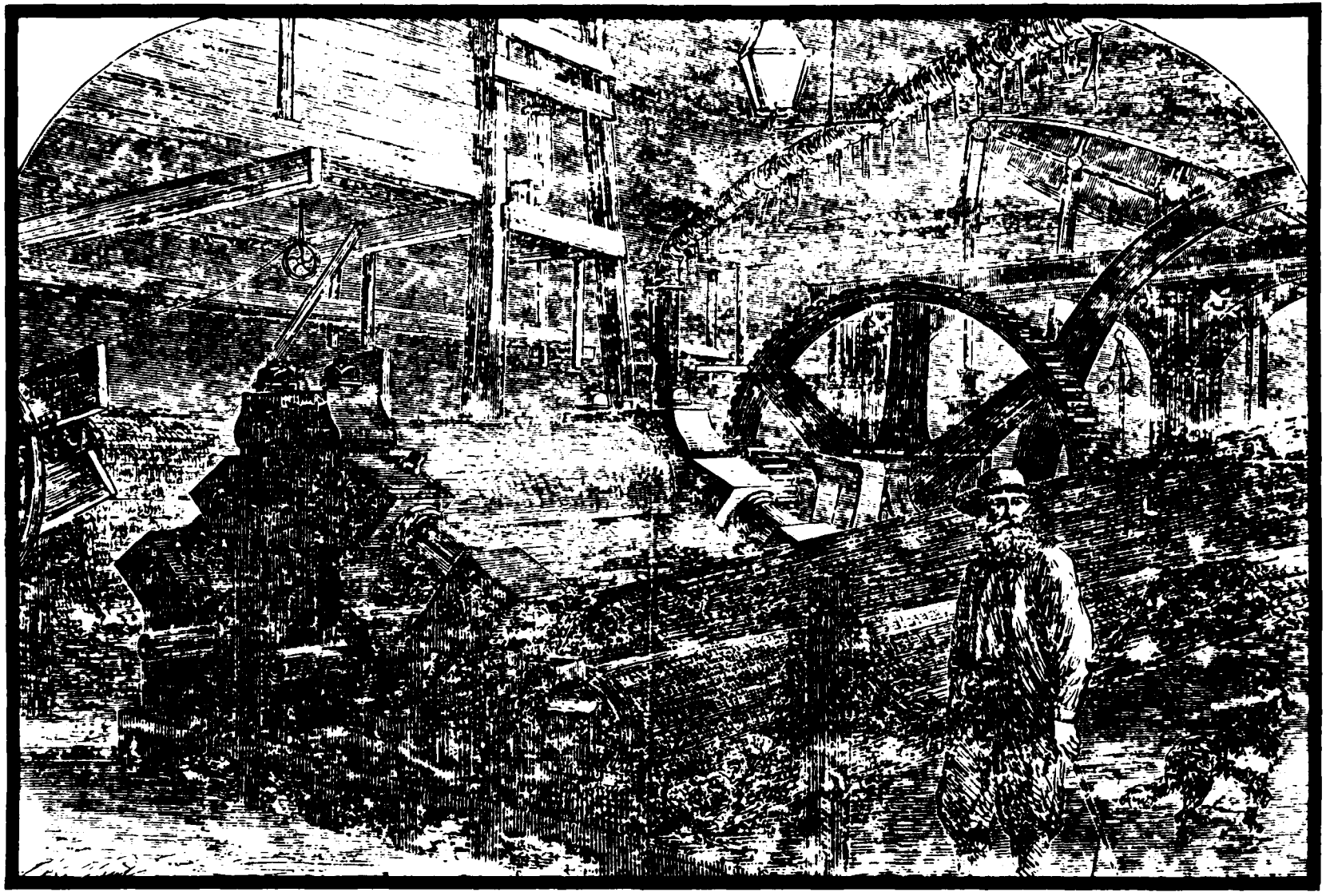


Figure 8. The Sugar Mill (Courtesy of the Louisiana Collection, Howard Tilton Library, Tulane University).

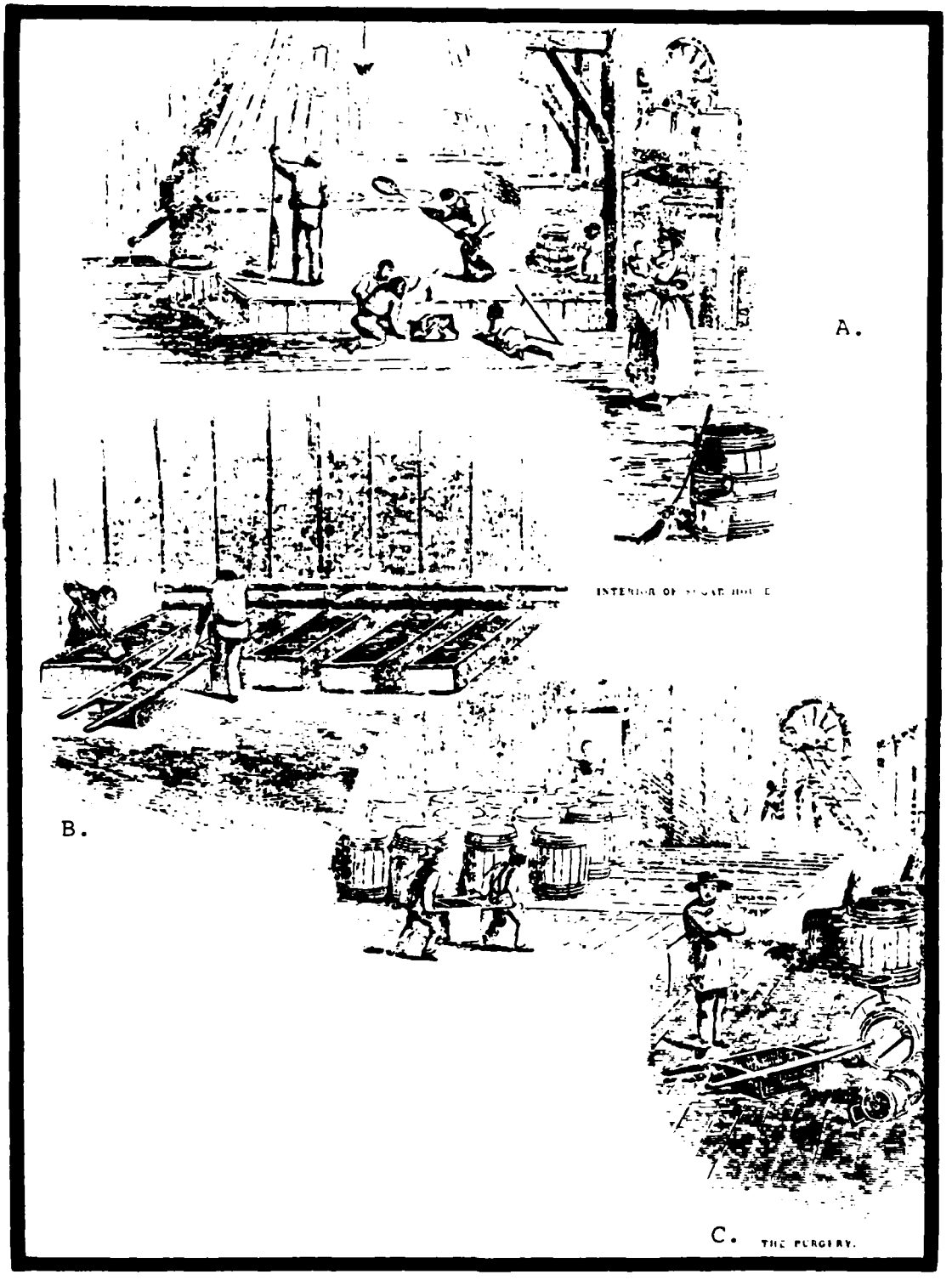


Figure 9. A. The open pan method. B. The coolers. C. The prugery (Thorpe 1853).

A cane shed for storing cane as it was brought in from the fields usually was attached to the sugar house on the same end of the house as the mill (Sitterson 1953:137). A cooper shop with tools also was listed in the sale of the plantation in 1867; this probably was located near the mill. Another structure which may have been located near the sugar house was the hospital. During the nineteenth century, the vapors from the sugar evaporation process, as well as the drinking of hot cane juice, were believed to have curative properties for colds, coughs, sore throats, dyspepsia (indigestion), heart diseases, and consumption of tuberculosis (Thorpe 1853; Cartwright 1852). Sick individuals often were taken to the sugar house during the sugar manufacturing season, and the proximity of the hospital and the sugar house would have facilitated this transfer.

Eleven laborers' cabins were located on the plantation in 1867; like the sugar house, the former locations of these structures are shown on the 1872 Mississippi River Commission Map (Figure 6). Several of these structures continued to stand well into the twentieth century. The 1872 Mississippi River Commission map, as well as the 1892 Fort Livingston Quadrangle map (Figure 10), show that besides the double row of cabins on either side of the plantation road that extended back into the field, several other structures were located between the railroad and the river. This latter area contained the industrial structures of the plantation. The arrangement of structures probably is similar to that which was present in 1867, with all major structures other than the cabins having been located on the river side of the area that later would be the site of the railroad.

In the slave occupation area, the slave kitchen and wash house probably were located in close proximity to the quarters houses. A separate kitchen for slaves where meals were cooked communally was common during the antebellum period; many planters felt that slaves were incapable of feeding themselves properly if they were issued food and then left to their own devices. The prior existence of such a structure at Harlem is documented in the J.C.P. Wederstrandt succession papers, which distinguish between kitchens at the great house, overseer's house, and in association with a wash room. The sequence of structures inventoried gives the impression that the slave kitchen and wash room were located near the industrial buildings.

Another group of structures includes those related to animal husbandry, such as the stable with a loft, the two cornhouses for the storage of feed, and the blacksmith's shop, all of which were present on the property in 1867. Not included on the list of structures, but undoubtedly present, were one or more barns. Also listed in the 1867 inventory was a carpenter's shop and a corn mill. The latter

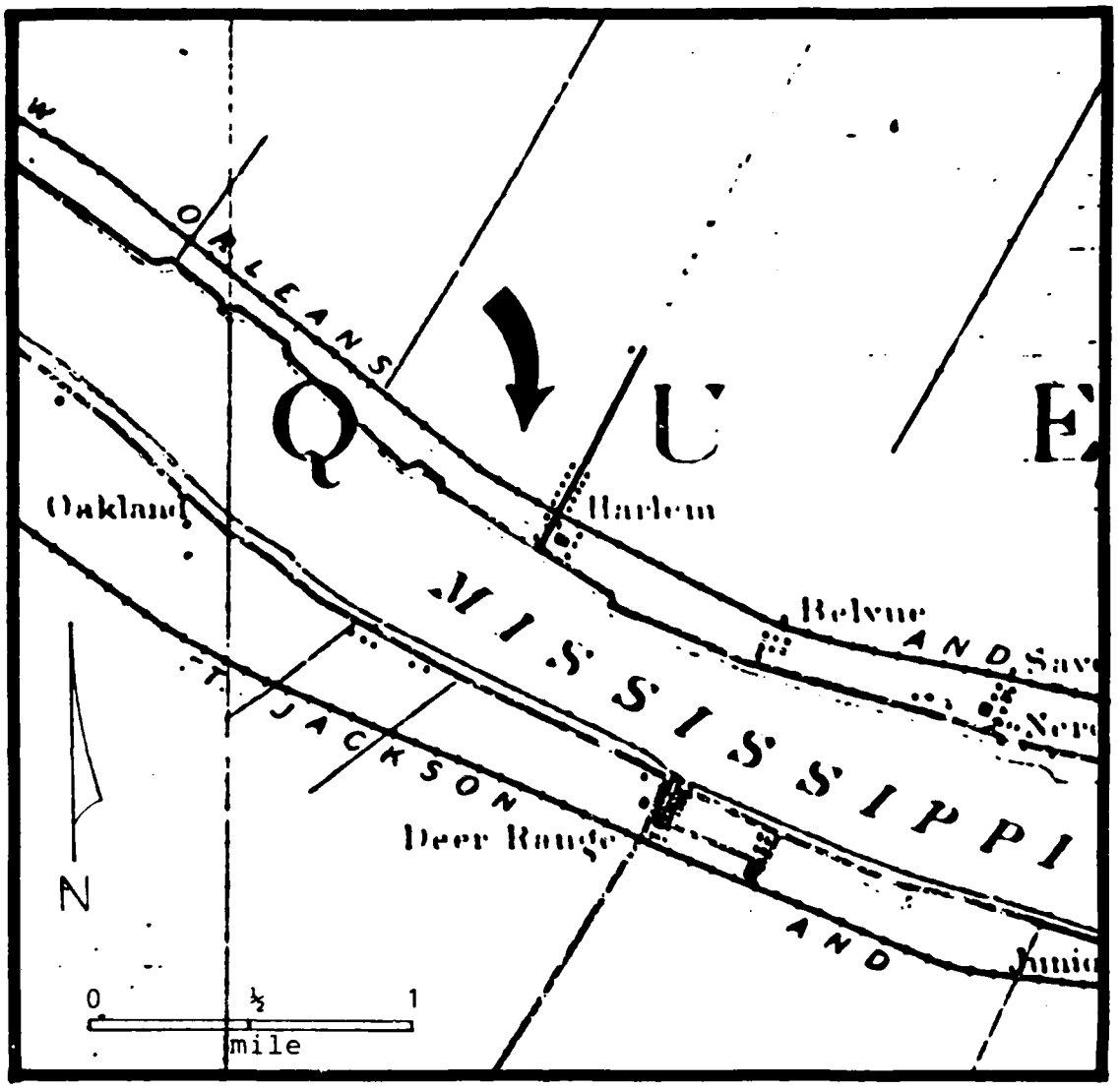


Figure 10. Excerpt from the 1892 Fort Livingston Quadrangle Map showing Harlem Plantation. Note: Harlem Plantation great house is not illustrated.

might have been located nearby the corn houses for convenience; it also could have been located adjacent to the sugar house, since it served an industrial function.

Finally, Harlem Plantation had an overseer's house, with its own kitchen. It is hypothesized, based on the configuration shown on an April, 1934 aerial photograph that the overseer's house was located on the downriver edge of the industrial complex, immediately adjacent to the railroad bed on the river side. Indirect evidence for this is the presence, in the air photo, of a special access road to the former standing structure there. Overseers' houses usually were located near the slave quarters (Scarborough 1966:36-8), as this hypothesized location was, and constituted more comfortable dwellings than those alloted to the slaves. The location of the overseer's house did vary; at Magnolia Plantation the overseer's house was located between the great house and the slave quarters; at Uncle Sam Plantation, it was located behind the stable and carriage house.

As a final note, a draining machine was listed on the advertisement for Wederstrandt's succession sale. Only frost was more destructive to cane than standing water, so a system of draining the fields was necessary:

> In draining a plantation, it is customary to cut parallel ditches about two hundred feet apart, from the front to the rear of the plantation, with cross ditches every six hundred feet. This complication of artificial canals requires not only an enormous outlay of capital and occupation of valuable land, but also taxes the scientific engineer to give them their proper levels. In many instances, it is found impossible to accomplish this, and costly draining-machines have to be called into service. The voyager on the Mississippi. . .will often notice, far off in the dark moss-covered swamp the constantly-puffing steam, that so eloquently speaks of the industry of man (Thorpe 1853:755).

Benjamin W. Huntington purchased Harlem Plantation on June 27, 1867, at the Sheriff's sale already noted. During the three years that he and his wife held the plantation, sugar was raised there (Table 4). Apparently the Huntingtons lived in New Orleans and Natchez, and ran the plantation on an absentee basis (P. Cuvillier, May 26, 1870, NONA). The property was sold in June of 1870 to Victor Meyer, who in turn, sold the property to Edward Smith in October of that year (P. Cuvillier, June 7, 1870, NONA; October 14, 1870, NONA).

After the Civil War, many planters lost their plantations due to financial difficulties. It would take years for Louisiana's sugar industry to recover from the war. Sugar

Table 4. Sugar and Rice Production at Harlem Plantation, 1868-1898.

YEAR	OWNER/MANAGER	HOGSHEADS PRODUCED	BARRELS RICE PRODUCED
1868-9	B. W. Huntington	177	----
1869-70	"	151	----
1870-1	Edward Smith	155	----
1871-2	"	186	----
1872-3	"	212	----
1873-4	"	127	430
1874-5	"	1631 tons cane-sold	685
1875-6	"	Sold cane to Bellevue	1028
1876-7	"	1112 tons cane sold to Dymond	652
1877-8	"	---	----
1878-9	"	115	378
1879-80	"	326	114
1880-1	"	265	695
1881-2	"	128	782
1882-3	"	284	----
1883-4	"	214	----
1884-5	Andrew Hero	---	----
1885-6	Not listed	---	----
1886-7	"	---	----
1887-8	"	---	----
1888-9	C. Duplessis	---	211
1889-90	Not listed	---	----
1890-1	"	---	----
1891-2	"	---	----
1892-3	"	---	----
1893-4	"	---	----
1894-5	"	---	----
1895-6	"	---	----
1896-7	Simon Leopold[1]	---	----
1897-8	"	---	----

1. Simon Leopold continued to operate the plantation until 1917, but no crops are reported after 1889. After 1903, Belair Station was the railroad stop for the plantation (Bouchereau 1868-1917).

prices, exceptionally high after the war, fell steadily until the late 1880s (Table 5). The largest sugar crop made in the state prior to the Civil War was that of 1861, and for most of the remainder of the nineteenth century sugar production did not even approach the scale obtained during the antebellum high. This was the result of:

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

The loss of a slave labor base encumbered the recovery, and former slaves were judged so uniformly to be lazy, evil, and a political strength to the foes of the former plantocracy that Bouchereau (1870-1871:XIX) formally endorsed the use of Chinese and German contract labor. Perhaps the greatest impediment to revitalization of the sugar industry was the pervasive lack of capital. Without money, sugar houses could not be rebuilt for the manufacture of sugar. Levees also could not be repaired, and as a result much of the former sugar plantation holdings were inundated. In response to the lack of capital, Bouchereau (1873-1874: XII; 1876-1877; 1877-1878:XX) repeatedly urged the separation of the agricultural and industrial aspects of sugar production. This was the "Central Factory System," where each planter no longer would own his mill, and a centralized mill would serve the needs of many surrounding planters. The benefits of this system were obvious; the greatest labor expenditure was in the actual manufacturing of sugar from cane, and the centralized system helped to alleviate some of the planters' labor difficulties. It also assisted the planter who didn't have the capital to rebuild his sugar house; and, it allowed small scale planters to produce sugar without incurring the cost of a mill.

Harlem Plantation, though, passed through the Civil War with its sugar house intact. Edward Smith cultivated cane and manufactured sugar 1870-1874 (Table 4). But during the 1873-1874 season, the sugar house at Harlem burned. Because 127 hogsheads were manufactured that year, it may be assumed that the fire was the result of an accident during sugar making towards the end of the season (Table 4). The loss of his sugar house placed Smith in a similar situation to that of other post-war Louisiana planters. Fortunately, Smith had made the decision to diversify his crops that year, and he also planted rice.

Even during the antebellum period, rice cultivation was widely and profitably practiced in Plaquemines Parish (Wilkinson 1848; Ginn 1940:549). The importance of rice to Louisiana became greater after the war. In many of the parishes, rice cultivation was the response to the lack of

Table 5. Sugar and Rice Prices, 1867-1889 (Bouchereau 1868-1889).

YEAR	AVERAGE PRICE AT NEW YORK OF REFINING GRADES	AVERAGE PRICE OF GRANULARED (REFINED) SUGAR	PRICE RANGES FOR PRIME AND CHOICE RICE
1867	10.06	---------	----------
1868	10.62	---------	----------
1869	11.17	---------	----------
1870	9.37-1/2	---------	----------
1871	8.54	---------	----------
1872	8.08	---------	----------
1873	8.31	---------	----------
1874	N.A.	---------	----------
1875	N.A.	---------	6 - 7-1/4
1876	7.41	---------	4-3/4 - 6
1877	7.86	10.89	6 - 7-1/8
1878	6.30	9.30	5-3/4 - 6-3/4
1879	5.81-1/4	8.81	6-5/8 - 7-7/8
1880	6.91-1/2	9.80	5-1/4 - 6-3/4
1881	6.71	9.70	5-7/8 - 7-3/4
1882	---------	9.34-1/2	5-3/8 - 6-1/2
1883	---------	8.65	(Ave. Prime) 5.89 (Ave. Choice) 6.33-1/3
1884	---------	6.75	(Prime) 5-1/2 - 6
1885	---------	6.52	(Prime) 5 - 5-3/4
1886	---------	6.23	(Ave. Prime) 4.079 (Ave. Choice) 4.33-1/3
1887	---------	6.02	(Ave. Prime) 5.273 (Ave. Choice) 5.48
1888	---------	7.18	(Ave. Prime) 5.10 (Ave. Choice) 5.51
1889	---------	7.89	----------

requisite capital for sugar production. Bouchereau wrote:

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

In a real sense, rice was the appropriate crop to plant after the Civil War: while water from unmaintained levees ruined cane, it was necessary for rice cultivation. In contrast to the falling sugar prices, rice prices remained relatively stable after the war (Table 5).

The cycle of rice planting began in February, with the digging and cleaning of ditches. In March, plowing began, and the crop was planted from the middle of March to early April. The fields were flooded twice. The fields then were hoed, flooded again, drained, hoed, and then the "lay by flow" flood was let into the fields. The crop was harvested in September. The rice then was threshed and husked; by the latter part of the nineteenth century this process was mechanized (Ginn 1940:550-551). If the rice planter did not have his own machinery, the rice was taken to a central mill. There were five such mills in New Orleans by the 1870s (Ginn 1940:552).

Smith's response to the loss of his sugar house was logical; he increased rice production, and while he continued to grow cane, he sold it to neighboring plantations with functioning mills (Table 4). In the 1875-1876 season, Smith produced 1028 barrels of rice; Harlem and Star Plantations tied that year as the third largest rice producers in Plaquemines Parish, the largest rice producing parish in the state (Bouchereau 1875-1876).

No sugar or rice crop was produced in the 1877-1878 season, but the following year the sugar house was rebuilt. Again, it took the form of a brick structure with a shingle roof. It is unlikely that the fire would have destroyed completely the massive brick walls typical of sugar houses, and the new structure probably reused the remains of the old building. However, Smith did acquire new sugar manufacturing equipment for the sugar house; he purchased a steam tram, a vacuum pan apparatus, and a centrifuge. Smalley (1887:116) offered a contemporary account of such a facility:

> Next in order in advance from the old open kettles is the "steam tram," which is a series of vats with a coil of steam pipe at the bottom of each to do the boiling without direct action of fire, and thus preventing

> "carmeling" or the inversion of sucrose into glucose; next is the vacuum pan with its attendant centrifugal machines. . .

In the vacuum pan (Figure 11), the sugar in the last stage of production was boiled to the point of granulation without a vacuum, resulting in the recovery of more and better quality sugar (Sitterson 1953:146). The centrifuge separated the sugar from the molasses. Both were placed in a revolving sieve, and the molasses was driven out as the sieve spun at 2000 revolutions per minute (DeBow 1851:89). These apparatuses made a purgery in the sugar house unnecessary. By the following year, sugar production surpassed all but pre-Civil War levels, and one year later Smith processed the cane grown at Fanny Plantation as well as his own (Bouchereau 1877-1881).

Smith produced his last rice crops in the 1881-1882 season, but he continued to cultivate cane until 1884 (Table 4). During these years, Smith's finances deteriorated, probably having been drained by the investment necessary to restore his sugar house. Smith lost Harlem to a creditor, Charles P. McCan in January, 1881 (24th Judicial District Court, Plaquemines Parish, #328). Nevertheless, Smith continued to operate the plantation (Bouchereau 1881-1882), and the following year Smith bought the plantation back (A. Hero, Jr., February 15, 1882, NONA). He lost it again in 1884 (24th Judicial District Court, Plaquemines Parish, #629). The new owner, Andrew Hero, Jr., only held the property for a year, and no crop was reported (Bouchereau 1884-5). Hero then sold the property to Charles McCan's father, David C. McCan (C. Audry, September 4, 1885, NONA). During McCan's ownership, Harlem was not listed in the sugar and rice reports, and it is uncertain what the plantation was used for at this time (Bouchereau 1885-1887). McCan sold the plantation in 1887 to Simon and Isaac Haspel and Aaron Davis (A. Hero, Jr., November 3, 1887, NONA). During the following 1888-1889 season, C. Duplesis, either a manager for or a lessee from the Haspels and Davis, brought in a small crop of 211 barrels of rice. This was the last crop reported for Harlem plantation in the sugar and rice reports until 1896 (Bouchereau 1888-1890). Despite this, the Haspels and Davis grew rice at Harlem at least in 1893, as shown on the 1872 Mississippi River Commission map (Figure 6); it may have been shipped elsewhere for processing. No mention was made of the Harlem sugar house in the 1888-1889 report; although it continued to stand at least until 1893 (Figure 6), it probably had been partially or even entirely dismantled.

It also was during this time period that the construction and operation of railroads in Plaquemines Parish began. In 1887, the New Orleans and Gulf Railroad Company completed laying tracks between Poydras and Bohemia. The route from

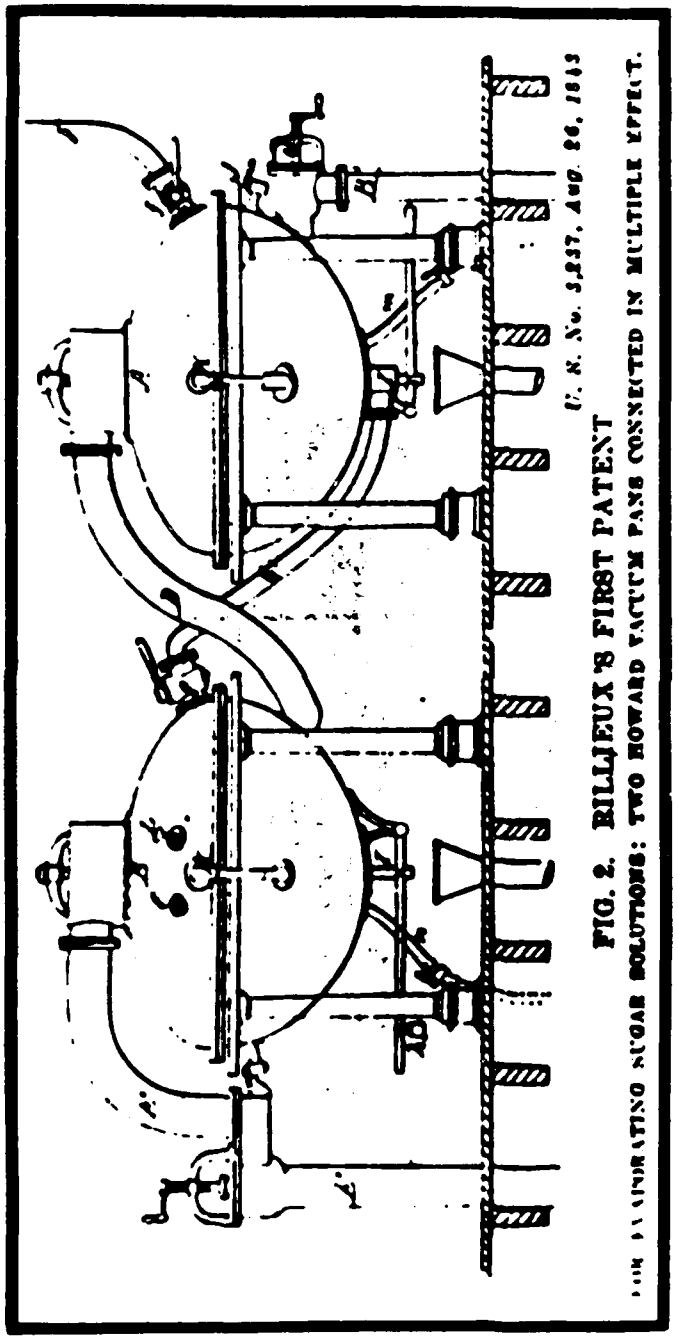


Figure 11. A vacuum pan apparatus (Begnaud 1980).

New Orleans to Poydras previously had been laid. In 1891, the route was transferred to the New Orleans and Southern Railway Company. This line later was sold to the Louisiana and Southern Railway Company in 1896 (Meyer 1975:9).

Between 1896-1917, Harlem Plantation was operated by Simon Leopold, although no crop was reported during this period (Bouchereau 1896-1917). The sugar house had been dismantled sometime during the period 1893-1896 (Underwriters Inspection Bureau 1896), so no sugar was being manufactured on the plantation. However, the railways facilitated central factory system production, so it is possible that cane or rice was grown at Harlem under Leopold's tenure and shipped elsewhere for processing. There was a train station at Harlem between 1896-1903; after this date the plantation used the station at Bellair Plantation (Bouchereau 1896-1917).

On December, 13, 1898, the Haspels and Davis incorporated as "Haspel and Davis Milling and Planting Company." The charter stated that the company was domiciled at Pointe a la Hache:

> The object and purposes of this corporation and the nature of the business to be carried on by it are declared to be engaged in and to a general mercantile business; to purchase or lease lands either for sale or for the cultivation thereof in rice, sugar cane and other agricultural products, or to lease such lands to other persons or corporations for the purpose of profit; to raise livestock on its lands or the lands leased by it; to carry on a general store in connection with its business; to construct and operate railroads, tramways and canals for the transportation of its products, and for all other purposes. . .(F. J. Druffous, December 13, 1898, NONA).

Since one company business was leasing land, it is likely that Simon Leopold was renting the property from Haspel and Davis. If the corporation had been operating the plantation, the name of the company would have been listed in the sugar and rice reports as operators. Indeed, Leopold continued to run the plantation after Haspel and Davis sold it to Charles W. Buckley in 1910 (F. Marx, November 28, 1910, NONA). It may be assumed, then, that the new owner maintained the lessee on his property, rather than having acquired a foreman from the corporation.

During the early twentieth century, substantial structural changes were made at Harlem Plantation. Between 1893 and the 1920s the great house and double pen cabin were moved to their present locations (U.S. Army Corps of Engineers 1982) (Figure 12). By 1935, a barn stood on the approximate location of the former sugar

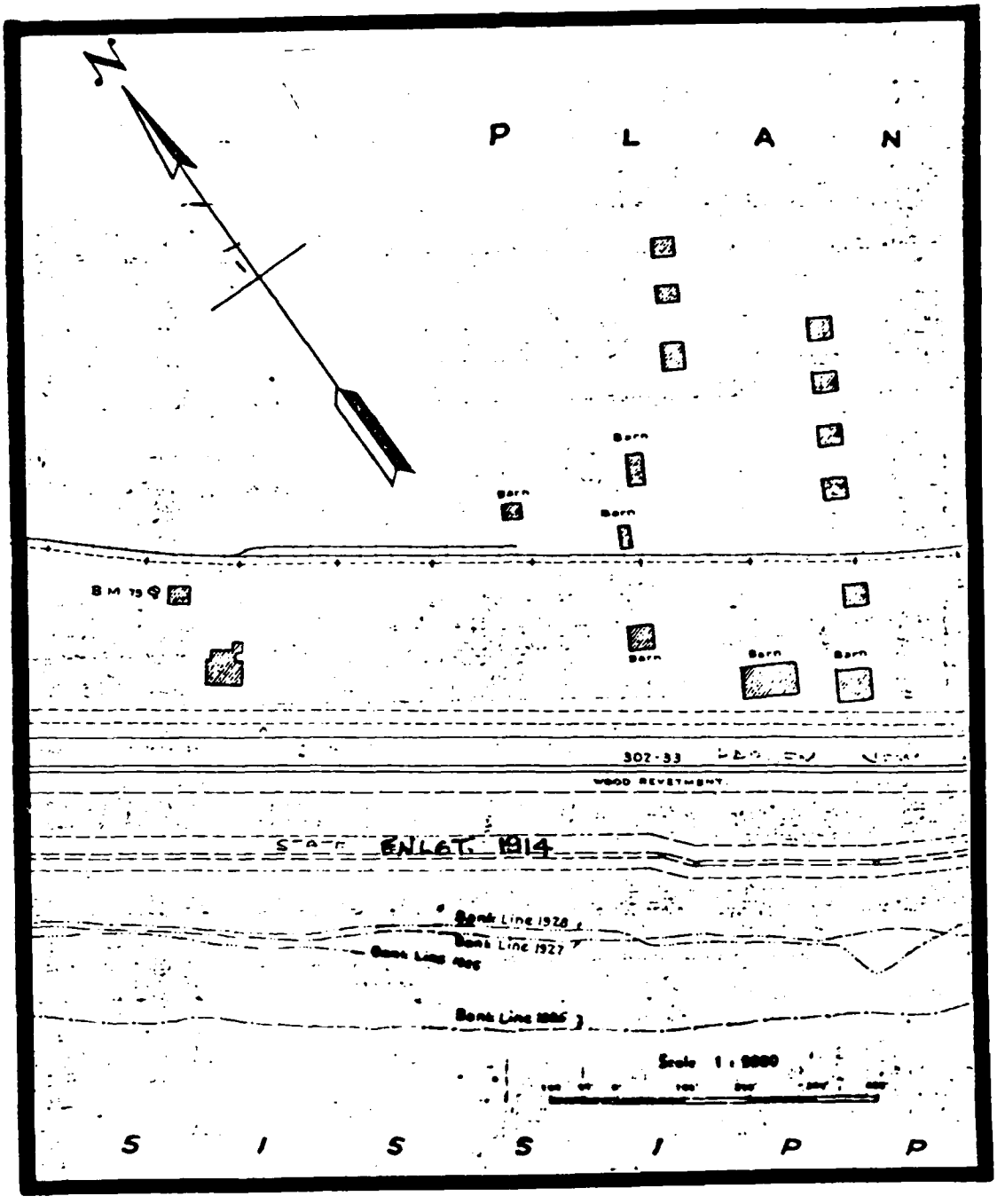


Figure 12. Excerpt of the 1935 Continuous Survey, Lake Borgne Basin Levee District, showing the project area.

house, which had been demolished between 1893-1896. In addition to this, five small "barns," or perhaps, more properly, sheds, were located in the former industrial area of the site. Comparison of the 1935 (Figure 12) and 1892 maps (Figure 10) show that three of these structures, two barns and the unlabled structure on the river side of the railroad tracks, may have been extant at least since 1892, or built near the sites of former standing structures. The scale of the 1892 map makes it difficult to make a precise determination, however by 1935, a few of the cabins in the quarters area had been demolished, and it is uncertain if these structures were still functioning as laborers cabins at this date.

A 1934 air photo of the property provides additional detail on the plantation layout at this time. This photo shows a spur off of the plantation road to one structure on the river side of the railroad and that was not marked as a barn on the 1935 map (Figure 12). It is hypothesized that this structure was the overseer's house. Further evidence of this is the existence of a small structure adjacent to it, shown on the 1945 map (Figure 13), which probably was a privy.

Additionally, this 1934 air photo shows groves of trees, probably oranges, on the plantation at this date. These trees were gone by 1967. Expansion of commercial citrus production in Louisiana, particularly in Plaquemines Parish, occurred during the 1920s (Montgomery and Finske 1945). This boom was short-lived; freezes in 1951 and 1962 destroyed most of the trees in Plaquemines Parish.

By 1945, still fewer of the former standing structures were left standing (Figure 13). Two more cabins in the quarters area had been demolished by this date, as had the two small barns on the plantation side of the railroad. Only one of the structures on the river side of the railroad was left standing, and two smaller structures were located on the approximate site of the largest barn shown on the 1925 map. It is possible that these were built from the remains of the older barn. In addition, several very small structures were shown on the 1945 map. These probably were privies and/or sheds. Only three structures still are standing today.

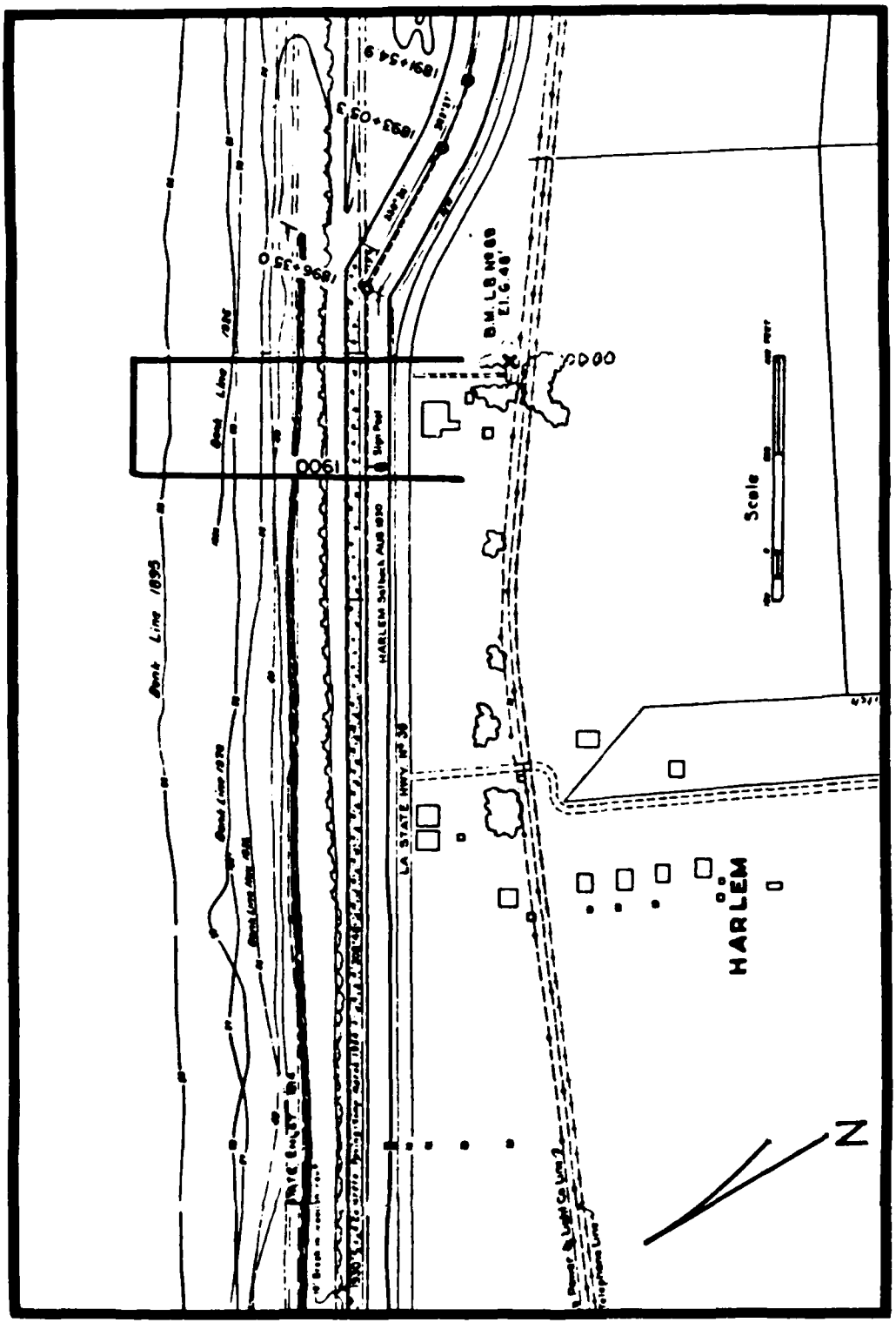


Figure 13. Excerpt of the 1945 Lake Borgne Levee District Map showing the project area.

PREVIOUS RESEARCH

Previous research pertaining to Harlem Plantation, 16 PL 84, consisted of an archeological survey of the site conducted by Iroquois Research Institute, under Contract No. DACW29-80-D-0107 for the Army Corps of Engineers, New Orleans District (Iroquois Research Institute 1982). The level of investigation contracted was that of "intensive cultural resources survey for the purpose of locating historic and prehistoric cultural remains, and assessing their significance" (Iroquois Research Institute 1982:2). The survey effort at Harlem, which was undertaken as part of a cultural resources survey of three Mississippi River revetment items in Plaquemines Parish, Louisiana, consisted of transect survey, surface collection, and limited sub-surface testing in the area of brick scatters and features associated with the Harlem Plantation industrial complex, which is outside the present project area. An arcnitectural description of the Harlem Plantation great house was provided, although archeological testing in this area of the plantation was not undertaken.

Considerable attention also was given to the dating of the Harlem great house (Iroquois Research Institute 1982:105-110). Three hypotheses were presented:

1) It may have been built in the decade between 1830 and 1840 and remodeled around 1910;

2) It may have been newly built or almost entirely rebuilt from ruins in 1910;

3) It may have been built prior to 1812, remodeled between 1835 and 1840, and remodeled again around 1910 (Iroquois Research Institute 1982:105).

Although arguments for each of these hypotheses were presented by Iroquois, ultimately the first of these hypotheses was favored. Iroquois explained the absence of the house on the 1872 Mississippi River Commission Map (Figure 6) as a result of the house being in a state of disrepair at that time.

Instead, it now seems more likely that the great house was moved to its present location sometime between 1893 and the 1930s (US Army Corps of Engineers 1982), and that it was renovated at the time of the move. The elderly Plaquemines Parish historian, J. Ben Meyer, remembers the

house being "built" at its present location during the 1920s. It is possible, in fact, that he remembers the moving of the house (Rod Lincoln, personal communication 1983). Since the levee was set back in the upriver parcel that may have been the former location of the great house in 1925, it seems probable that the house was moved at this time. Extensive testing, undertaken as part of the program of research described herein, demonstrated that refuse from the great house dated primarily from the twentieth century. This, too, supports the present hypothesis that the great house was moved to its present location during the twentieth century.

Although no site maps were included in the Iroquois (1982) report, an appendix to the report provided field maps to all the sites as well as field observation forms (Carroll Kleinhans, personal communication 1983). The Iroquois report also provided a written review of cartographic data. A lengthy bibliographic list of historic maps also was contained in the report. An attempt was made to integrate the historic data with the archival data collected, but this was unsuccessful.

The Iroquois study (1982) provided a lengthy discussion of the historic development of southern Louisiana. However, information specifically relevant to the historic growth and development of Plaquemines Parish for the most part was not provided. Some additional detail on parish history was provided in the section of the Iroquois report (1982) on the development of Harlem Plantation. Broad patterns of economic and social change in the parish (e.g., Meyer 1975; Roland 1957; Sitterson 1938; Montgomery and Finske 1945) generally were not addressed.

Archival research pertaining to Harlem Plantation focused on the chain of title for the property. While the title chain provided is relatively complete and accurate, the archival research as a whole was incomplete insofar as little attempt was made to relate the archival data to the archeological potential of the plantation. Only a partial list of goods auctioned from the plantation in January, 1865, was given (Iroquois Research Institute 1982: 66), which created the false impression that these goods were the only movables to be found on the plantation at that time. In fact, the list was much longer (Table 3), and many of the items inventoried had archeological ramifications. Previous research (Iroquois 1982) did not include the Morse-Wederstrandt Family Papers which were available at Tulane University's Howard-Tilton Memorial Library Special Collection. These papers provided important

historical, genealogical and biographical information not contained in notorial, conveyence, succession and court records. Furthermore, only a very small portion of the information contained in the J.C.P. Wederstrandt succession was presented. This, no doubt, was a result of the project scope of work, which did not require exhaustive archival research.

Although Iroquois (1982) made use of informant interviews to provide data on former standing structures, such data were not well integrated with the results of archeological testing. Although hypothesized functions of the archeological features were presented, there was a lack of specificity as to what function related to what feature.

In short, previous research into the history of Harlem Plantation conducted by Iroquois Research Institute (1982) provided a cursory examination of the history of the property, detailed discussion of the architecture of the great house, and a short discussion of brick features located in the former plantation industrial complex, outside the project area under consideration here. The present project, having undertaken more detailed archeological testing and archival research, has increased our understanding of the archeological, archival, social and economic history of the Harlem Plantation, and specifically of the present great house area.

FIELD INVESTIGATIONS

Methodology

As noted previously, field investigations of the Harlem new house area were undertaken as part of an overall mitigation plan for the plantation that stipulated the relocation of the plantation great house. The objective of this survey, then, was the identification of a relocation corridor and of a new yard and house site free of significant cultural features that might be effected by the relocation process. The survey area evaluated herein was identified by the present landowner as an appropriate venue for the new house site; thus, the field investigations described below were designed to evaluate the desirability or feasibility of implementing the landowner's recommendations.

Field investigations at the new house area at Harlem Plantation, 16 PL 84, in Plaquemines Parish, Louisiana, were designed to determine the number of archeological features present in the potential impact corridor; their nature and extent; their cultural and stratigraphic associations; and, their significance. Field research at 16 PL 84 initially was guided by a pre-survey inspection of the project area, and by archival data supplied by the Study Manager. Additional archival research pertaining to the historic occupations of Harlem Plantation was undertaken to clarify the historic sequence and to provide locational data on former standing structures. This research effort was necessitated by the paucity of archeologically relevant archival data in previous reports on Harlem. Pursuant to the Scope of Services, an intensive archeological survey of the 4.1 acre tract located behind the present location of the Harlem Plantation great house was conducted (Figure 14).

The initial phase of field work was designed to locate, identify, and map all cultural remains within the project area. This aspect of the study took the form of a combination of pedestrian survey and surface collection, magnetometer survey, probe and shovel testing, and test excavation procedures. Cultural remains of potential historic archeological significance were identified during the course of this survey effort, and recommendations for a program of excavation to determine the nature, extent, and significance of these archeological features were submitted to the Study Manager. These recommendations resulted in a Modified Scope of Services requiring the implementation of a program of test excavation. Seven additional 1 x 2 meter archeological test units subsequently were excavated at five different localities within the project area in order to determine the nature and significance of the buried historic deposits.

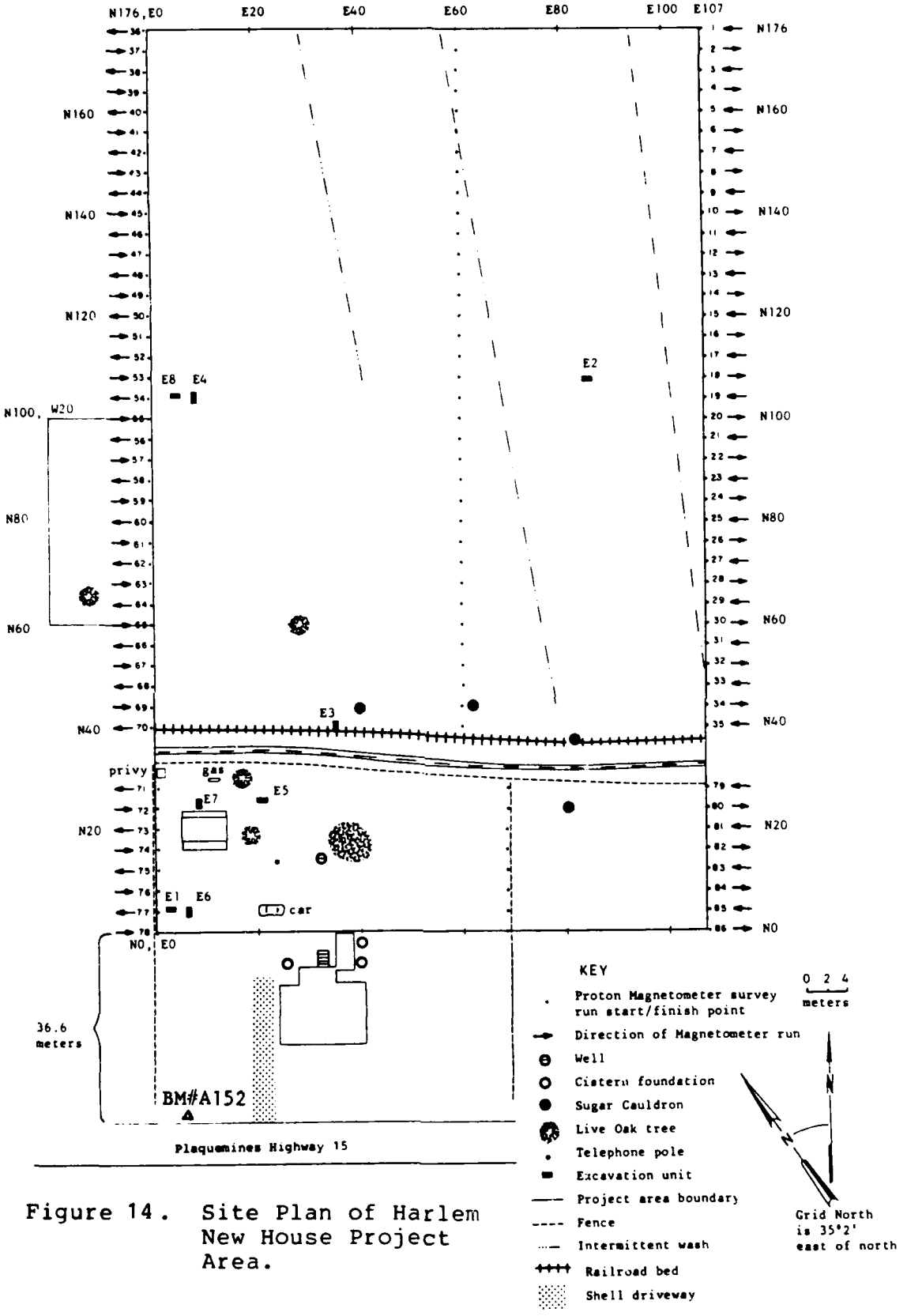


Figure 14. Site Plan of Harlem New House Project Area.

Prior to commencement of archeological survey, grid control was established for the project area. Horizontal and vertical controls for the site were established using USGS Benchmark #A152, 1951 series (3.097' N.G.V.D.), located near the upriver boundary of the archeological project area (Figure 14), as a fixed reference. A fence line upriver from the Harlem great house was designated by the Study Manager as a boundary of the survey area, and the southwest corner of the grid system, which served as the archeological datum and which was designated N0, E0, was established inside the fence line at 36.6 meters from Plaquemines Highway 15. The datum was determined to have an elevation of 3.073' N.G.V.D. Grid baselines were established north and east of datum; these were staked at 20 meter intervals. Four-meter increments, the specified magnetometer interval, were marked with flagging paint. The remaining portion of the grid system for the Harlem new house site project area then was surveyed and marked in the same manner from transit stations along the baselines. All distances were chained.

Magnetometer Survey

Following the establishment of the grid system, a magnetometer survey of the Harlem new house area was conducted. The proton precession magnetometer has been demonstrated to be a very useful tool in the detection and delineation of subsurface archeological features that do not present visible surface manifestations (Goodwin, Yakubik, and Goodwin 1983). Magnetically anomalous areas within archeological sites are seen in the magnetometer record as changes in or differences between archeological features and the surrounding medium or soil matrix. Such anomalies include changes in magnetism in disturbed soils, residual or remnant magnetism in fired stones or baked clays, or alignment of stones or brick walls, foundations, and floors. The amplitude and character of such anomalies is dependent upon such variables as depth of burial, contact to the surrounding soil, other sources of magnetism or noise, and the magnetic properties of the site at large.

The proton precession magnetometer utilizes the precession of spinning protons of hydrogen atoms in various liquid hydrocarbons to measure total magnetic intensity in a given area. The protons in such liquids as benzene, gasoline, kerosene, and other light oils, as well as alcohol and water, behave as small, spinning magnetic dipoles. The billions of nuclei spinning at random in even a relatively small volume of such a liquid can be temporarily polarized by application of an intense electromagnetic field, usually a coil wound around an inert container holding the liquid. When the

aligned protons are released by termination of the field, they instantly begin to revert to a state of randomness. In the early part of this process, the protons precess for a time about the direction of the earth's magnetic field. During this phase, the entrained protons generate a weak electrical signal in the same coil utilized to polarize them. This signal is precisely proportional to the total intensity of the earth's magnetic field at that point in time. Localized magnetic disturbances created by various natural and man-made features and events impinge on this process and affect signal strength. The proton precession magnetometer is an extremely sensitive instrument capable of measuring the earth's field and the effect of other magnetic influences, that is, the "ambient magnetic field," to within one gamma or less.

At the Harlem new house area, an EG & G, Geometrics Model 806 magnetometer was used; this was interfaced with a Hewlitt Packard 6810 recorder, which provided a permanent and continuous record of magnetic data on a 6 inch wide strip chart. Magnetometer transects were surveyed across the entire project area using a four-meter lane spacing. Transects were numbered sequentially, and their grid locations were noted both on the continuous magnetometer strip chart record and in the field notes. The land head, or sensor, was carried on an aluminum pole by a two-man crew; the second technician in that crew also carried flagged lead weights, so that whenever an anomalous reading was noted by the magnetometer operator, a verbal command to "mark" resulted in the placement of the flagged marker at the point of the magnetic anomaly. The magnetometer strip chart record was keyed to grid markers, called "events," so that grid control was inherent in the permanent magnetometer record. The continuous strip chart record also was observed by an archeological recordation specialist, who was responsible for both field and map verification of magnetic anomalies. The archeological recordation specialist field checked the placement of weighted flags, and transferred their horizontal proveniences to the site master map. The sequence, direction, and placement of the magnetometer transects surveyed at the Harlem New House site are shown in Figure 14.

After completion of the initial phase of magnetometer survey, each anomaly encountered was evaluated to determine its characteristics and the need for intensive magnetometer survey at narrower lane spacings or for subsurface testing. High amplitude anomalies (greater than 20 gammas) or low amplitude anomalies observed in parallel transects were resurveyed using a tighter lane spacing (two meters), on grid lines normal to the original track, to verify the size,

shape, and distribution of the anomalies. Those with potential significance also were contoured, to provide more detailed characterization of the anomalies. Low amplitude "spot finds," and low amplitude linear or repetitive anomalies were listed for subsequent probe and shovel testing.

In general, areas north of the N60 line (Figure 14) were "quiet" magnetically, so that small point anomalies, such as nails and bits of ferrous debris, were observable in contrast to the magnetic background. Even geomorphic features, such as drainage ditches, swales, and earthen spoil piles were recognized by their low amplitude (approximately 5 gamma) differential signatures. Table 6 sumarizes the low amplitude anomalies encountered at the Harlem New House site. Figures 15 and 16 illustrate the configuration that was characteristic of such anomalies; Figure 15, which illustrates Run (transect) 28 on the N68 line, was observed to have been caused by a ditch. In addition to these spot finds, several low amplitude repetitive or redundant readings of about 10-15 gammas were suggestive of more extensive buried features. These were noted north of the N60 grid line. Figure 17 illustrates the strip chart record for magnetometer transect 54 (Table 6), along the N104 grid line, where one such redundant pattern was noted. As will be seen, shovel and probe testing of this area, coupled with test excavation of two 1 x 2 meter units, showed this area to contain redeposited or disturbed brick structural remains in association with coal cinders, slag, and small sheet and slab metal pieces.

Two adjacent magnetometer targets of very high intensity were noted during the survey of that portion of the Harlem new house area north of the N60 grid line. The largest of these anomalies had an intensity of greater than 1000 gammas, and this anomaly was large and dipolar. The center of this anomaly was located at N70, E4. The distribution and orientation of folding seen in the contour map of these anomalies suggested that several randomly oriented objects may have been involved (Figure 18). The second large anomaly had a center at N80, W15 and also exhibited an intensity of about 1000 gammas. The contoured field (Figure 18) exhibits a tighter, elongated, dipolar pattern. Folding and distribution of this anomaly suggested that more than one object was the source. As will be seen, each of the high intensity anomalies were the object of intensive shovel testing at 2 meter intervals along rays originating at the center of the anomalies.

In sharp contrast to the area north of the N60 grid line, the portion of the survey area south of that line became increasingly noisy towards Louisiana Highway 39 due to the presence of iron sugar cauldrons, barbed wire fences,

Table 6. Run number, grid location, and intensity of magnetometer targets.

Run number	Grid test location N	E	Intensity (gammas)	Description
18	108	70-90	10	dipolar
28	68	60-70	5	dipolar
39	164	42-70	5	dipolar
54W	104	0-40	10-15	dipolar
55E	100	0-40	5	monopolar
60	80	36-44	7.5	dipolar
61	76	42	.5	dipolar
64	64	30-42	15	
65	60	20-40	20	dipolar
66	56	40-60	20	dipolar

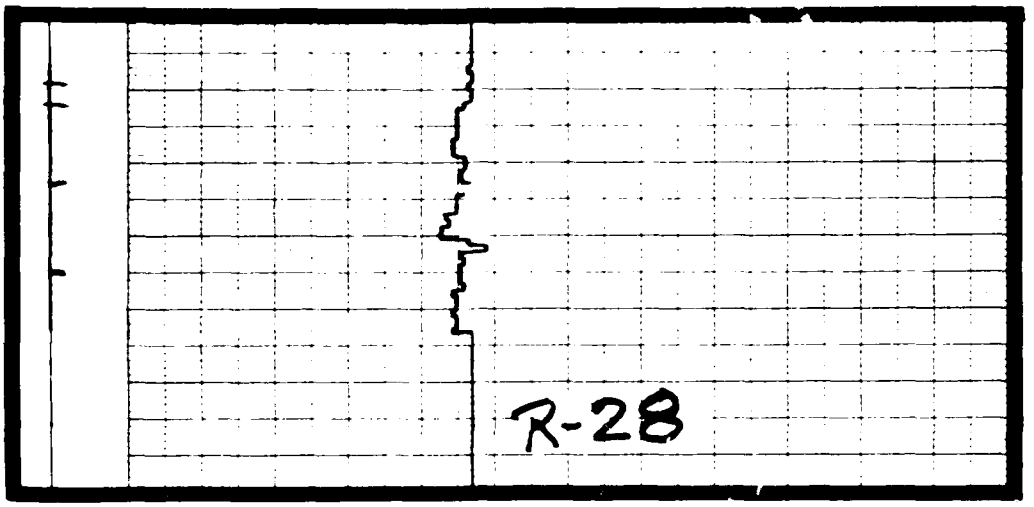


Figure 15. Low amplitude magnetic anomaly caused by geomorphic feature in magnetometer transect 28.

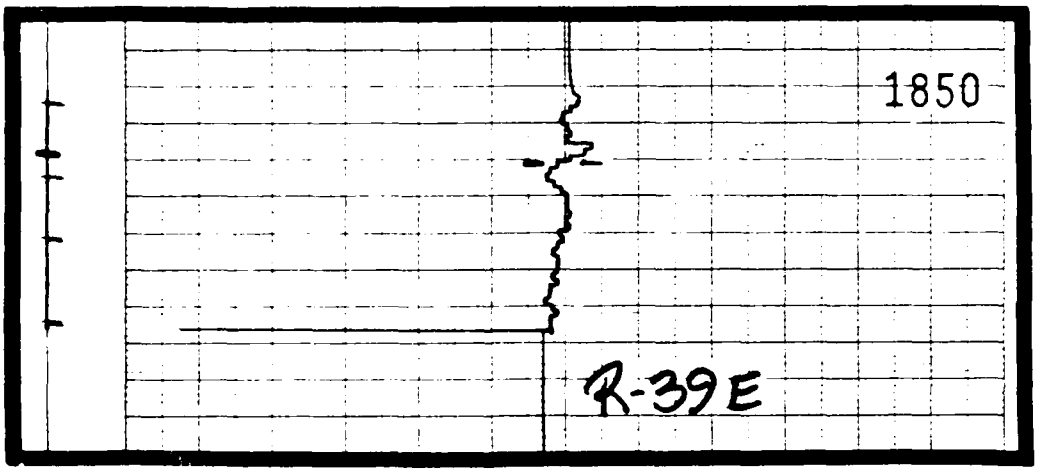


Figure 16. Low amplitude magnetic spot find in magnetometer transect 39.

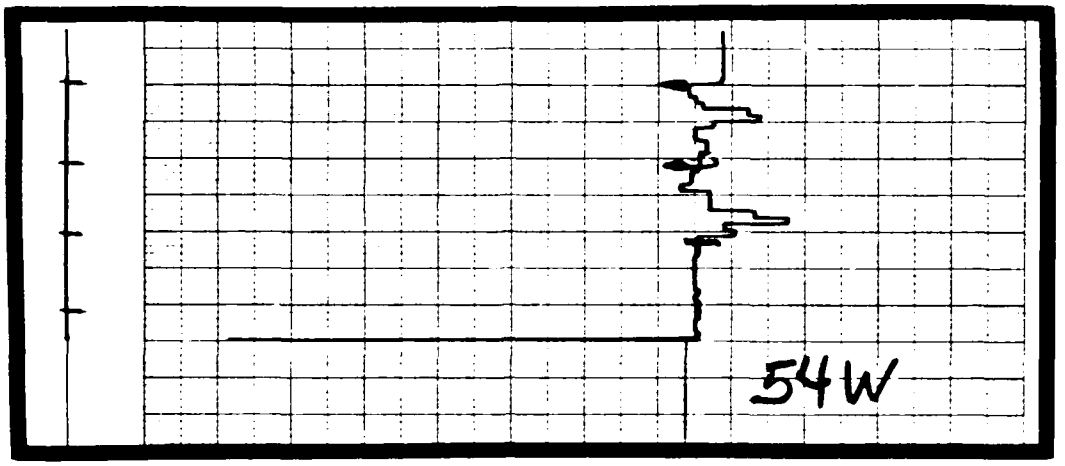


Figure 17. Magnetometer strip chart record of magnetometer transect 54, showing repetitive 10-15 gamma anomalies.

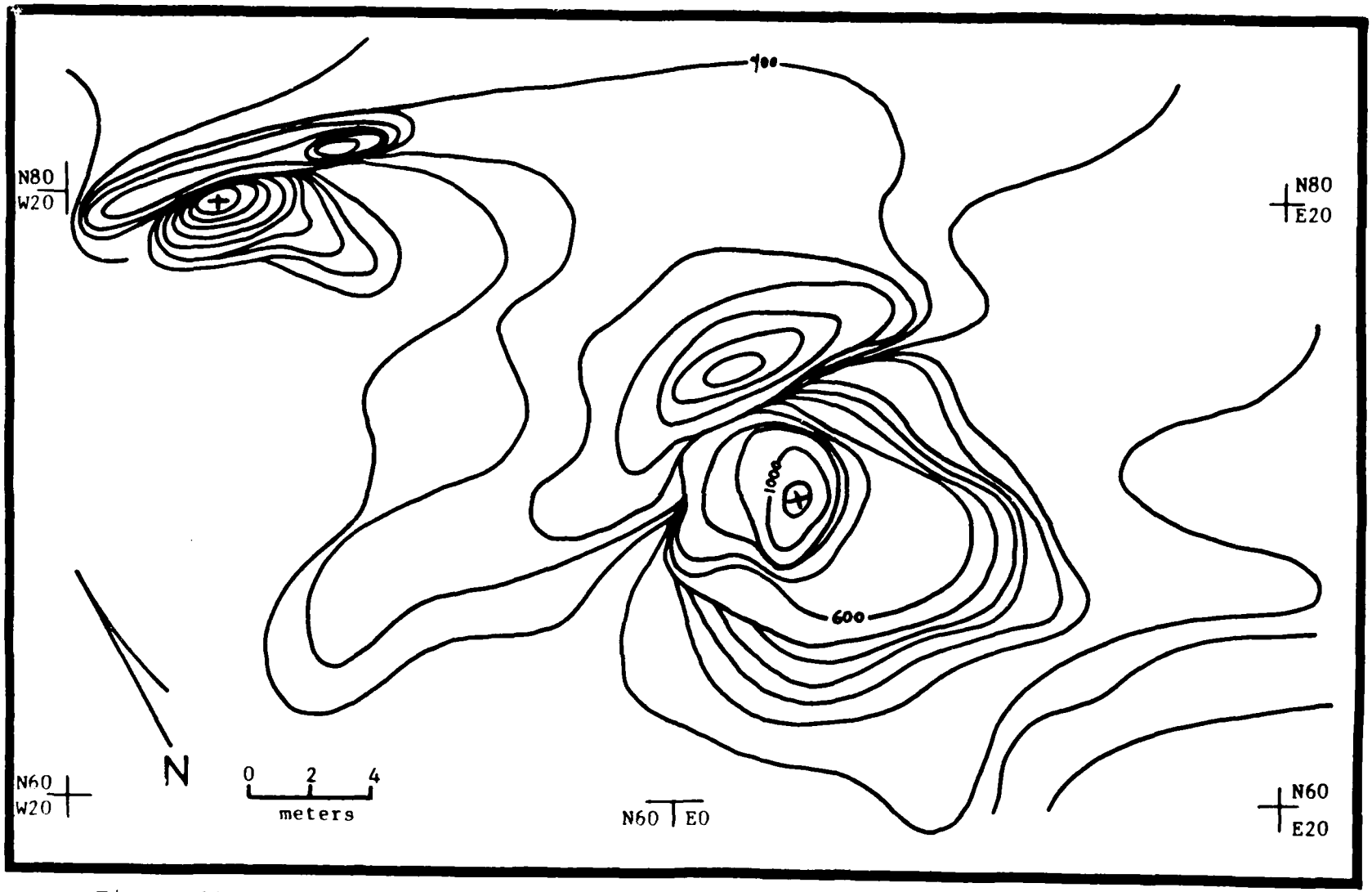


Figure 18. Contour map of 1000 gamma magnetic anomalies encountered at the Harlem New House site.

an outhouse, a former (New Orleans and Southern) railroad bed, gas tanks, a junked automobile, etc. In this area, then, the effect of irregular yet high amplitude back - ground noise confounded interpretation of the strip chart record. For this reason, a systematic shovel test regime was utilized south of the N60 line to identify subsurface features. Significantly, testing of many of the magnetically "noisy" areas south of the N60 grid line (Figure 14) failed to produce subsurface remains; those found tended to cluster around the driveway and double pen cabin area of the new house area. Thus, it became clear that at least some of the high amplitude readings south of grid N60 were spurious and were attributable to the magnetic setting of the area, rather than to actual subsurface archeological features. In other words, the ambient magnetic fields of those portions of the Harlem new house area north and south of the N60 line differed significantly.

Subsurface Testing: Phase I

Following the magnetometer survey of the project area, a shovel test regime was conducted that consisted of three distinct operations. Shovel tests of magnetometer targets were undertaken at predetermined locations within the project area; systematic shovel tests of the magnetically "noisy" area south of grid line N60 were conducted; and, shovel tests were placed along randomly selected rays from the centers of the two high intensity anomalies just described. Shovel test results were tabulated in the field by crew chiefs on pre-marked cards, using a shorthand notation for positive/negative results. Collections for each shovel test were bagged and labeled at the time of excavation; shovel tests that produced cultural remains had their stratigraphy mapped, while sterile loci were refilled immediately after testing.

The magnetometer survey identified a total of ten targets to be examined for the existence of subsurface features using shovel tests. Depending on the extent, shape, and intensity of the magnetometer targets, between one and eleven shovel tests were placed in each of the predetermined locations (Table 6). The results of the shovel testing of magnetometer targets are summarized in Table 7.

Shovel tests associated with magnetometer runs 28, 39, 55, 61, 64, and 66 (Figure 14) were devoid of cultural remains. The presence of geologic gradients, tree roots with ferrous oxide adhesions, water-filled depressions, or small unrecovered metal objects explained the presence of these magnetic anomalies, which ranged in intensity from 5 to 20 gammas.

Table 7. Presence of remains in shovel tests of magnetometer targets.

Run	Coordinates N	E	Brick frag.	Metal	Glass	Ceramic sherd	Bone	Coal
18	108	70	0	X	0	0	0	0
		74	X	0	0	0	0	0
		78	0	0	0	0	0	0
		82	0	0	0	0	0	0
		86	X	X	X	X	0	X
		90	0	0	0	0	0	X
28	68	60	0	0	0	0	0	0
		64	0	0	0	0	0	0
		68	0	0	0	0	0	0
39	164	40	0	0	0	0	0	0
		44	0	0	0	0	0	0
		48	0	0	0	0	0	0
		52	0	0	0	0	0	0
		56	0	0	0	0	0	0
54W	104	0	X	0	0	0	0	X
		4	X	0	0	0	0	X
		8	X	0	0	0	0	X

X=Present 0=Absent

Table 7, Continued.

Run	Coordinates N	E	Brick frag.	Metal	Glass	Ceramic sherd	Bone	Coal
54W	104	12	0	0	0	0	0	0
		16	X	0	0	0	0	0
		20	0	0	0	0	0	0
		24	0	0	0	0	0	0
		28	X	0	0	0	0	0
		32	X	0	0	0	0	0
		36	0	0	0	0	0	0
		40	0	0	0	0	0	0
55E	100	5	0	0	0	0	0	0
		10	0	0	0	0	0	0
		15	0	0	0	0	0	0
		20	0	0	0	0	0	0
		25	0	0	0	0	0	0
		30	0	0	0	0	0	0
		35	0	0	0	0	0	0
		40	0	0	0	0	0	0
60	80	36	0	X	0	0	0	0
		40	0	0	0	0	0	0
		44	0	0	0	0	0	0
61	76	42	0	0	0	0	0	0

Table 7, Continued.

Run	Coordinates N	E	Brick frag.	Metal	Glass	Ceramic sherd	Bone	Coal
64	64	32	0	0	0	0	0	0
		36	0	0	0	0	0	0
		40	0	0	0	0	0	0
65	60	20	0	0	0	0	0	0
		26	0	0	0	0	0	0
		32	0	0	0	0	0	0
		40	X	0	0	0	0	0
66	56	36	X	0	0	0	0	0
		40	0	0	0	0	0	0
		45	0	0	0	0	X	0
		50	0	0	0	0	0	0
		55	0	0	0	0	0	0
		60	0	0	0	0	0	0

Shovel tests at two magnetometer targets recovered only isolated cultural materials, and no features of historic archeological significance. Shovel tests at magnetometer run 65 produced a single, isolated brick, while a metal fragment was encountered at magnetometer run 60.

Archeological features of potential historic significance were encountered by shovel testing at magnetometer runs 54 and 18. At run 54 (N104, E0 - E20) a total of eleven shovel tests produced bricks, brick fragments, and coal (Table 7). Additional testing of this area with a 3/8" x 6' probe showed consistent hits at about 10 cm below surface, that had the characteristic "feel" of soft brick. Continued probing revealed that this feature had an extent of about 8 - 12 meters E-W (E0 - E12) and of between 2 - 4 meters N-S (N103 - N107). The extent of this feature led to the probative hypothesis that a brick floor, wall, pavement, or foundation had been found, which explained the 10 - 15 gamma anomalies noted in this area. Shovel testing at magnetometer run 18 (Figure 14; Table 7) likewise produced potentially significant remains; artifacts encountered included glass and pottery sherds, fragments of iron and brick, and a piece of coal. At N108, E86 a feature was identified (Table 7); it tentatively was interpreted to comprise refuse or fill. Ceramic sherds were recovered at 10 cm below surface, and brick was found at 25 cm below surface.

A systematic shovel test regime also was conducted in the project area south of grid line N60. As stated above, this portion of the project area was magnetically "noisy," due to the presence of sugar cauldrons, gas tanks, barbed wire fences, an automobile, etc. Magnetic targets there were not discrete; hence, the existence of cultural remains in this area was verified by shovel tests, excavated to a depth of 45 cm below surface, at 20 meter intervals along the six grid lines N0, N10, N20, N26, N40, and N50. Data recovered from the systematic shovel test regime are summarized in Table 8.

Shovel tests along grid line N0 produced no major archeological finds. All loci were sterile except tests at E0, E20, and E40 which produced Rangia shell fragments from modern driveway fill, brick fragments, and oxidized iron. The majority of shovel tests along grid line N10 were sterile and produced no features of historic archeological significance. As was the case at grid line N0, brick and shell fragments were recovered at E0 and E20. Along grid line N20 brick fragments and Rangia shell fill again were encountered at E0. At N20, E20 two bricks and mortar were found in the shovel test. The stratigraphy of this test was mapped, and a feature form was filed. The profile showed grass at the surface; a dark grayish-brown humus zone between

Table 8 . Presence of remains in systematic shovel tests.

Coordinates N	E	Brick Frag.	Metal	Bone	Wood	Oyster Shell	Rangia Shell	Coal	Gravel Lense	Slag	Asphalt
0	0	0	0	0	0	0	0	0	0	0	0
	20	X	0	0	0	X	X	0	X	0	0
	40	0	X	0	0	X	0	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0
10	0	X	X	0	0	0	X	0	0	0	0
	20	X	0	0	0	X	X	0	0	0	X
	30	0	0	0	0	X	0	0	0	0	0
	40	0	0	0	0	0	0	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0
20	0	0	X	0	0	0	X	0	0	0	0
	20	X	0	0	0	0	0	0	0	0	0
	40	0	0	0	0	0	0	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0

Table 8, Continued.

Coordinates N	Coordinates E	Brick Frag.	Metal	Bone	Wood	Oyster Shell	Rangia Shell	Coal	Gravel Lense	Slag	Asphalt
20	80	0	0	0	0	0	0	0	0	0	0
	100	0	0	0	0	0	0	0	0	0	0
	105	X	X	X	0	0	0	0	0	0	0
26	0	X	0	0	0	0	X	0	0	0	0
	20	X	0	0	X	0	X	0	0	0	0
	40	0	0	0	0	0	X	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	0	0	0	0	0
	100	0	0	X	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
	20	0	0	0	0	0	0	X	0	0	0
	40	0	0	0	0	0	0	0	0	0	0
	60	X	X	X	0	0	0	X	0	0	0
	80	0	0	0	0	0	0	0	0	X	0
	100	0	0	0	0	0	0	0	0	0	0
	105	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0
	20	0	0	0	0	0	0	0	0	0	0

Table 8 , Continued.

Coordinates N	Coordinates E	Brick Frag.	Metal	Bone	Wood	Oyster Shell	Rangia Shell	Coal	Gravel Lense	Slag	Asphalt
50	40	0	0	X	0	0	0	0	0	0	0
	60	0	0	0	0	0	0	0	0	0	0
	80	0	0	0	0	0	X	0	X	0	0
	100	0	0	0	0	0	0	X	X	0	0
	105	0	0	0	0	0	0	0	0	0	0

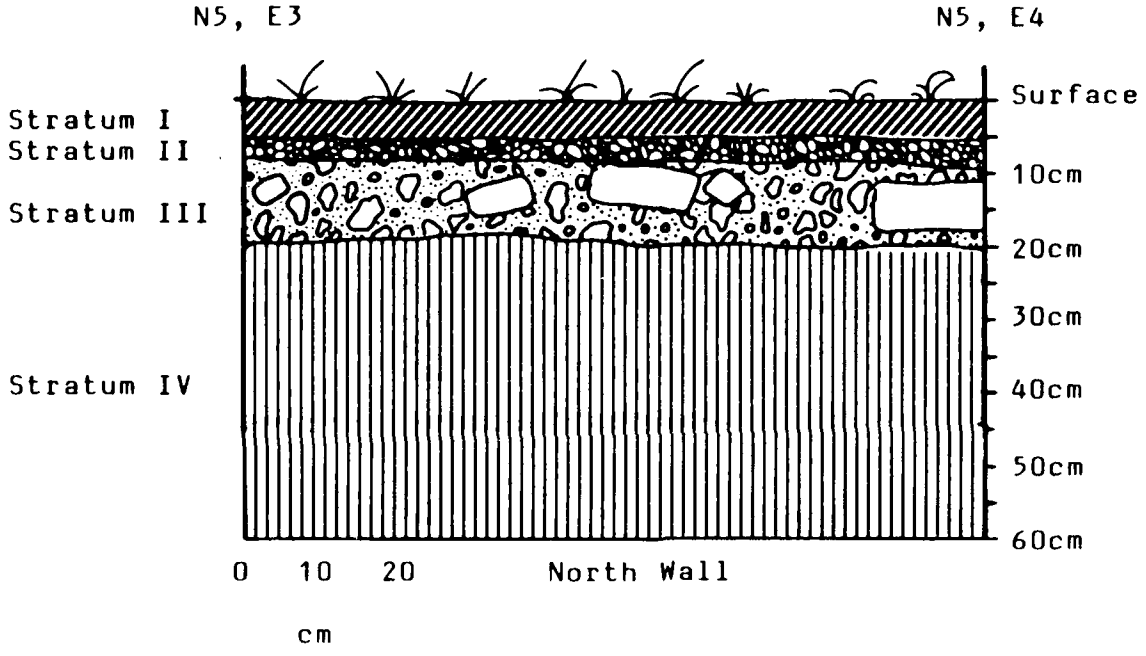
0-7 cm below surface; sandy clay with mortar and brick fragments at 7-15 cm; and, sterile dark grayish-brown soil between 15-30 cm. Along grid line N26 scattered brick fragments and shell (Rangia) were found at E0. At N26, E20 a cultural lens was identified at 18 cm below surface and consisted of in situ brick and mortar. A stratigraphic/feature form was filed for this test. The profile showed grass at the surface; a humus zone between 0-8 cm; and, a dark grayish-brown sandy clay with bricks, mortar, and rootlets between 8-28 cm below surface. Other shovel tests along grid line 26 produced Rangia shells and cow bone, but no other cultural remains were discovered. Several shovel tests along grid lines N40 and N60 revealed cultural material, including coal, brick fragments, metal, bone, and slag. However, no significant archeological features were encountered among these shovel tests.

Additional subsurface testing then was conducted at the two high intensity magnetic anomalies having centers at N70, E4 and N80, W15. A stake was positioned at the center of each anomaly, as shown in Figure 18, and shovel tests, spaced at 2 meter intervals, were placed along randomly generated rays from the center stakes. The rays were selected by specifying eight angles, with intervals of 45°, around the center stakes. Four of the eight angles were selected using a table of random numbers. As a result, shovel tests at 2 m increments were placed along rays of 225°, 45°, 315°, and 90°; testing was extended six meters beyond the contoured edges of the anomalies. A total of 56 shovel tests were excavated to a depth of 60 cm; all of these proved to be devoid of cultural remains. In addition the shovel tests were probed, and these deep probe tests only provided negative findings. Additional probing, however, away from the randomly selected rays, resulted in the discovery of large boulders or concretions of slag. As will be seen, though, this slag was determined in the laboratory not to have been the cause of the magnetic anomalies in these adjacent locales.

Aside from magnetometer survey and shovel and probe testing, one 1 x 2 meter stratigraphic control unit was excavated during the initial stage of fieldwork at the Harlem new house area. This unit was mapped into the grid system at N4 - N5, E2 - E4, southwest (grid) of the standing double pen cabin. Following the removal of the overburden, a layer of Rangia shell fill from the former driveway was recovered at 5-12 cm below datum. This shell layer was underlain by brick rubble fill to a depth of 20 cm below datum. Samples of the shell and brick-rubble fill were removed for later laboratory examination. The context and stratigraphy of the shell fill indicate this feature to be of recent origin; the current landowner, whose family purchased the property in 1946, remembers her father having had deposited the shell driveway fill after that date (Beverly Lopez 1983:

personal communication). Sterile dark grayish-brown clay was present at 20 cm below datum; it extended to the floor of the excavation unit at a depth of 50 cm. The stratigraphy of Unit 1 is shown in Figure 19. In general, this unit showed the stratigraphy in this area to be relatively undifferentiated. With the exception of the topsoil/humus zone and of the shell and brick lenses, the stratigraphy of this locale was uniform and devoid of cultural remains. Additional probing in the area of Unit 1 showed both the shell and brick rubble fill to have an extensive distribution in front of the double pen cabin structure (Figure 14). Because of the continuous subsidence of land in the part of Plaquemines Parish containing the Harlem site, the brick lens in Unit 1 probably represents an earlier (pre-1946) attempt to stabilize the elevation of the yard, and to facilitate drainage. No artifacts were recovered from Unit 1. However, the shallow depth of the brick feature and the superposition of shell fill immediately on top of that feature in the absence of an intervening humus or topsoil zone suggest a twentieth century depositional date for the brick. Although the soft red bricks used in the construction of this feature probably have a nineteenth century origin, we believe these bricks to have been reused in or recycled for this construction long after their date of manufacture; in the absence of artifactual cross dating, then, the stratigraphic setting alone has provided the basis for this interpretation.

With the backfilling of Unit 1, the initial phase of field work at the Harlem New House site was completed. To reiterate the results of those efforts, the magnetometer survey and shovel testing program identified cultural remains of potential historic archeological significance at several locations. The first area was located along grid line N108 between E70 - E90. Shovel tests of the approximately 10 gamma anomaly there revealed brick fragments, glass, ceramic sherds, and coal. The relatively undifferentiated remains might have been redistributed from elsewhere; in other words, they were not thought to be in primary context. However, shovel testing alone was not adequate to provide a sufficient explanation for their origin. Shovel tests along magnetometer run 54W at N104, E0 - E40, revealed concentrations of bricks and large brick fragments, and probe testing suggested the probability of a buried feature, such as a pavement, floor, or foundation. A third area was identified during the course of systematic shovel testing in the vicinity of the standing double pen cabin. Bricks and mortar were recovered from grid coordinates N20, E20 and N26, E20. Both were thought possibly to have been related to a brick pavement recorded in the 1 x 2 meter stratigraphic test unit (Excavation Unit 1) at N4 - N5, E2 - E4. Finally, a water-retaining depression located at N40, E36 has exposed a refuse deposit containing historic



EXCAVATION UNIT ONE
Stratigraphic Profile

Figure 19.

EXCAVATION UNIT ONE

N4-5, E2-4

Stratum I	Black (10YR 2/1) silty loam overburden containing grass roots, humic material and a few clam (Rangia) shells.
Stratum II	Lens of Rangia shell fill with some brick fragments.
Stratum III	Lens of brick rubble fill in eastern half of unit.
Stratum IV	Dark grayish brown (10YR 4/2) silty clay loam. No cultural remains.

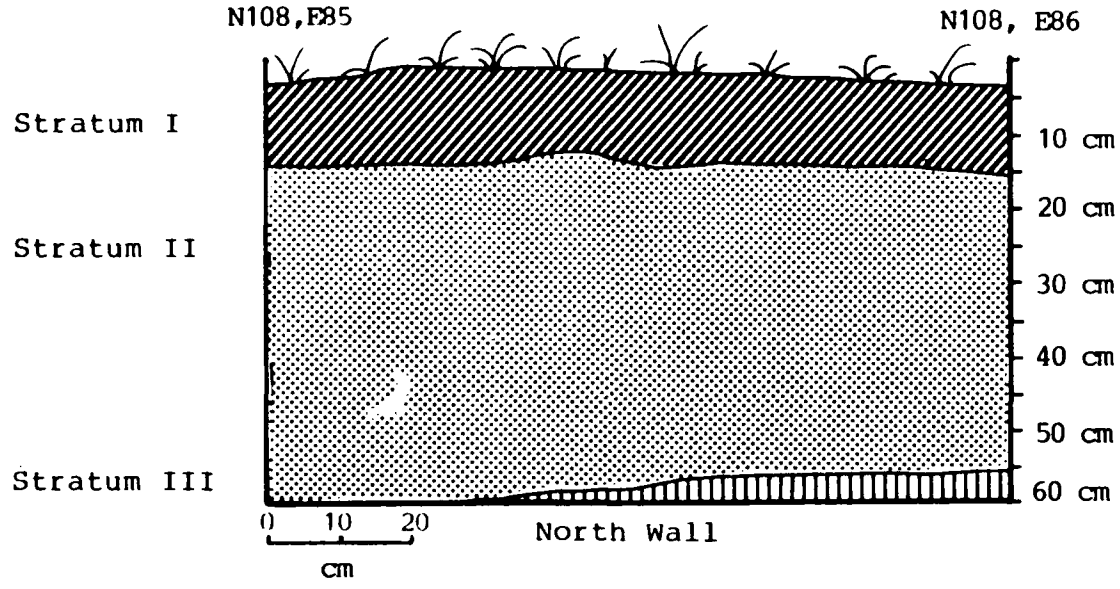
ceramics, glass, and metal. While the majority of the ceramic sherds recovered from the surface appear to date to the late 19th and early 20th centuries, it was reasoned that earlier material might have been stratified beneath the midden.

Subsurface Testing: Phase II

The necessity to define more precisely the extent, nature, cultural association, and significance of the features noted above resulted in the modification of the Scope of Services. Pursuant to the modified Scope of Services, seven additional 1 x 2 meter test units were excavated. The archeological materials recovered during these excavations, along with the stratigraphy and floor plans of the individual excavation units, are described below.

Excavation Unit 2 was placed on magnetometer run 18 at N107-108, E84-86. Unit 2 was excavated to 60 cm below datum; its stratigraphy is illustrated in Figure 20. Excavation by 15 cm arbitrary levels failed to reveal any structural remains or features either within the recent topsoil zone or in the basal silty clay strata. However, a brick, four wire nails, and twentieth century glass and ceramic sherds were found that presumably caused the low amplitude magnetic anomaly encountered in this area. The total lack of primary context for any of the remains recovered in Unit 2 verified the hypothesis that refuse in this locale had been redeposited from elsewhere on the site; the presence of several twentieth century artifacts (e.g., clear glass) below the topsoil zone, at depths of 45-60 cm below datum, probably can be attributed to crawfish action, since crawfish burrows were plentiful in this area.

Excavation Unit 3 was mapped into the grid system at N39-N41, E34-E36, at the location of an historic midden adjacent to the former Louisiana Southern railroad bed (Figure 21). Here, recent erosion had exposed a variety of artifacts at the surface of the eastern portion of the unit, including wire nails, oyster shells, whiteware, and a ceramic drainage pipe. Level 1 (0-15 cm) contained considerable quantities of artifacts, including clear glass fragments, whiteware, a metal chain, oyster shells, slag, coal, and a bone button. The Level 1 artifactual assemblage appears to date primarily or entirely from the twentieth century. Because Unit 3 crosscut a portion of the old railroad bed, and since antecedent erosion of the northern portion of the unit revealed a microstratigraphic cross section of the upper most strata of the unit, after the floor of Level 1 was levelled and recorded, the use of the arbitrary 15 cm excavation level technique was abandoned to permit recovery of depositional zones. The stratigraphy of Unit 3 is shown in Figure 21; the microtopography of Unit 3,



EXCAVATION UNIT TWO
Stratigraphic Profile

Figure 20.

EXCAVATION UNIT TWO

N107-108, E84-86

Stratum I	Very dark grayish brown (10YR 3/2) silty loam overburden, containing grass roots, humic material and cultural remains.
Stratum II	Dark gray (10YR 4/1) silty loam containing cultural materials.
Stratum III	Dark grayish brown (10YR 4/2) silty clay loam containing some cultural materials.

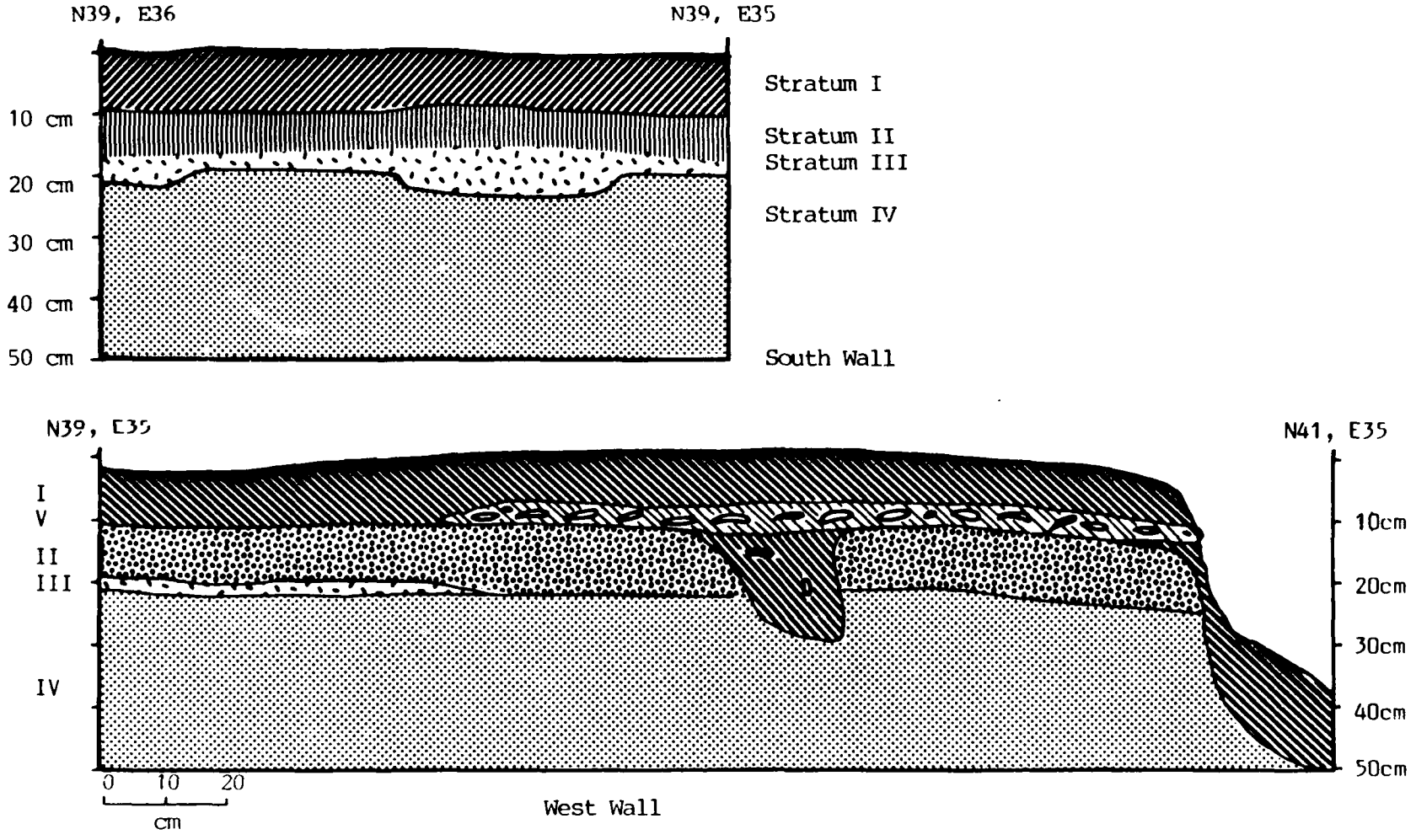


Figure . Excavation Unit Three Stratigraphic Profile

EXCAVATION UNIT THREE

N39-41, E35-36

Stratum I	Very dark grayish brown (10YR 3/2) silty loam containing humic material and a heavy concentration of cultural remains and roots. Stratum I was intrusive in places up to 35 cm in depth due to root action.
Stratum II	Dark gray (10YR 4/1) dry compacted crusty soil with a heavy concentration of cultural remains.
Stratum III	Dark gray (10YR 4/1) dry compacted crusty soil with few cultural remains.
Stratum IV	Dark grayish brown (10YR 4/2) silty loam, with some small roots. No cultural remains.
Stratum V	Lens of oyster and Rangia shells disturbed by intrusive roots.

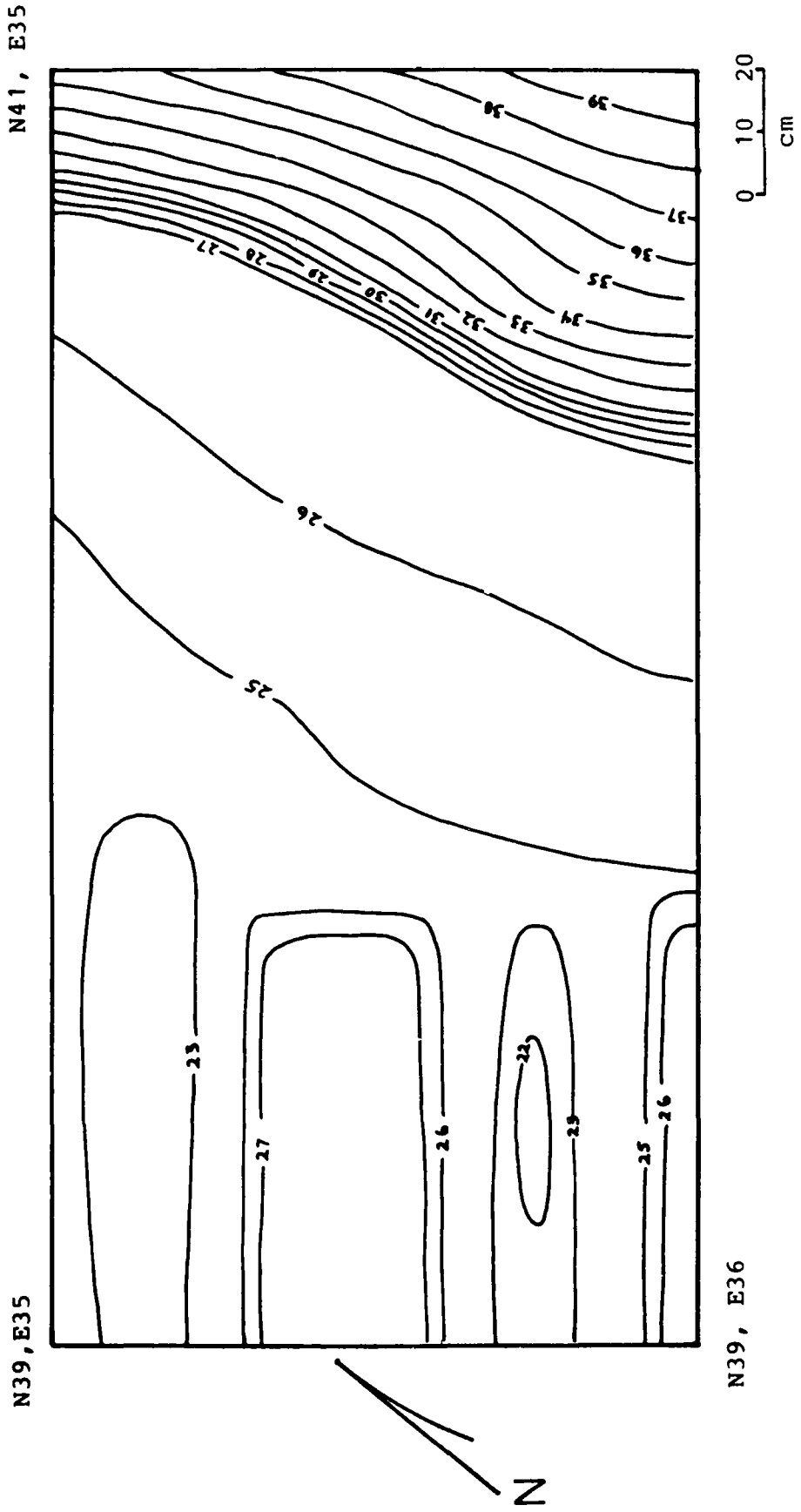


Figure 22. Excavation Unit Three Microtopographic Plan.

mapped with a 1 cm contour interval, is shown in Figure 22.

Below the uppermost overburden stratum of Unit 3 (Figure 21), Strata II and III, which were stripped following the depositional sequence, were found to comprise a dark grayish brown soil matrix mixed with substantial proportions of cinder and coal dust. The twentieth century artifact assemblage observed in Stratum I continued into Stratum II, albeit artifact density was very low atop the railroad bed, as compared to that of the sloping northern portion of the unit. Indeed, the primary difference between Strata II and III was the lack of cultural remains in Stratum III. In the northern two thirds of Unit 3, Stratum I was separated from Stratum II by an oyster shell lens (Figure 21, west wall).

At the interface of Strata III and IV, the former surface of the railroad bed was encountered. This well-compacted, crust-like surface contained the straight-edged impressions of the wooden railroad ties that crossed the railroad bed. These pressure-caused indentations were observed at 26-27 cm below datum; they were bordered at a slightly higher elevation by looser mounds of the cinder and coal dust bearing soil characteristic of Stratum III. This pattern may be observed in the microtopographic chart shown in Figure 22. Stratum IV was devoid of cultural remains.

In general, the stratigraphy of Unit 3 revealed sparse refuse on top of the railroad bed, and a twentieth century refuse deposit that was concentrated along the northern slope of the railroad bed feature. According to the landowner, this locale was a "main dumping area" for her family, which acquired the property in 1946 (Beverly Lopez 1983: personal communication). As will be seen, some of the artifacts recovered from Unit 3 antedate the post World War II period, suggesting that the Lopez family continued an earlier established refuse disposal pattern.

Excavation Unit 4 (N103-N105, E8-E9) was located on magnetometer run 54W; a magnetic anomaly of between 15-20 gammas, together with probe and shovel testing, had suggested the possible presence of an *in situ* brick pavement, floor, or foundation there. Upon clearing of the vegetation from the surface, red brick fragments intermixed with coal and slag were observed near the surface within the topsoil/humus zone. Below this upper stratum, a lens of small (0.1 - 2 cm) red brick fragments was present; this, in turn, was located directly above a layer of brick rubble which also contained fragments of coal and slag. Cinder and ash also were recovered from the soil matrix containing the brick rubble fill. Figure 23 illustrates the layer of brick rubble at a depth of 15 cm below datum. The haphazard

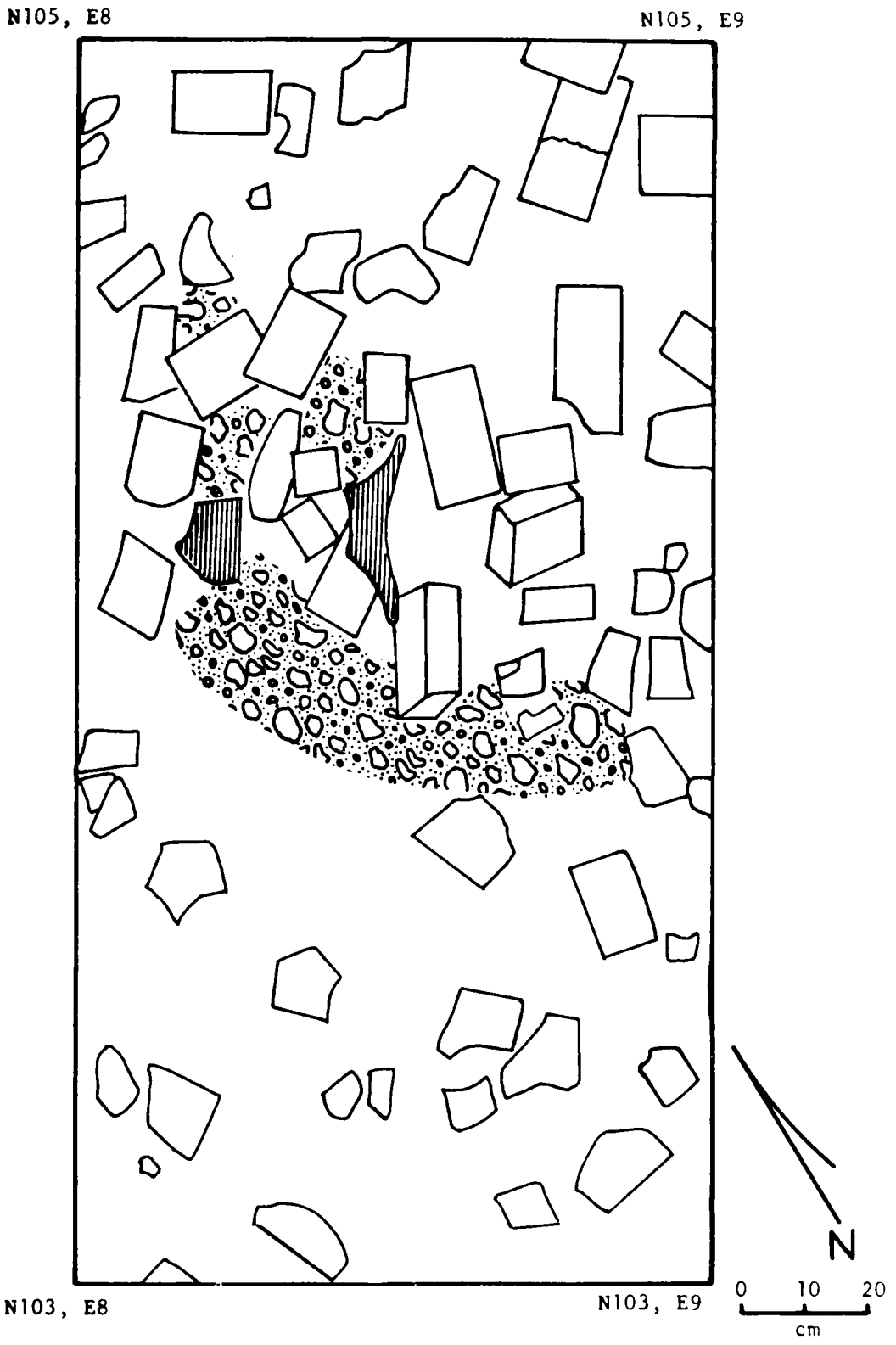
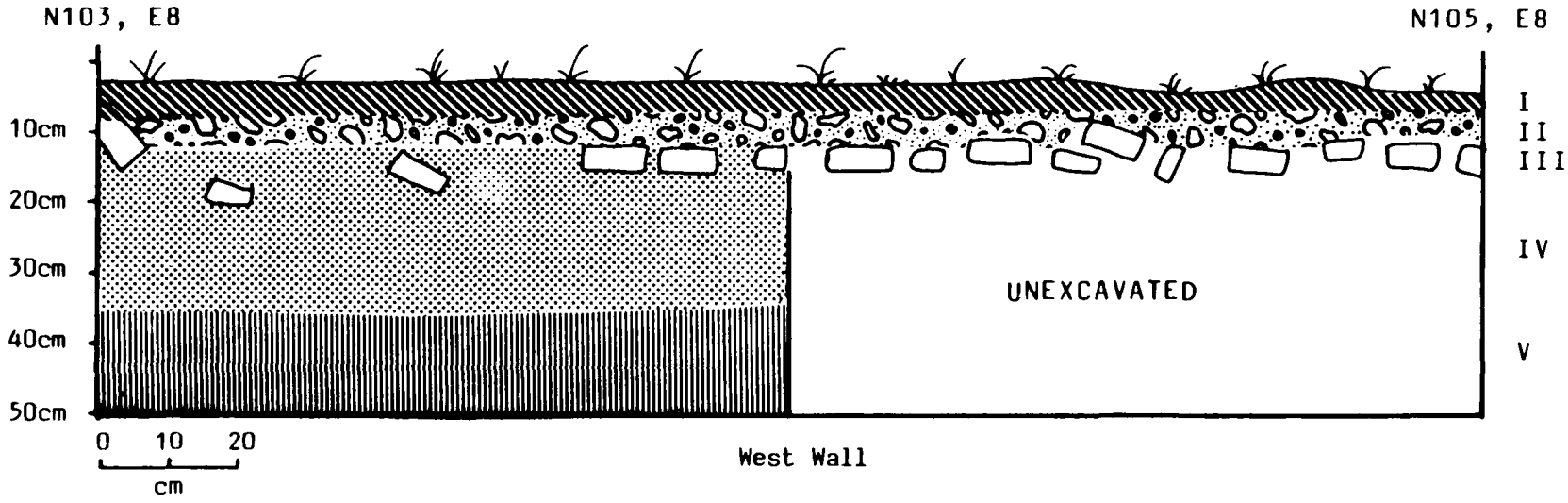


Figure 23 . Excavation Unit Four brick rubble fill.

and unorganized scatter of bricks and brick fragments found in Unit 4 clearly lacked the integrity suggested by the initial phase of probe and shovel testing at this locale. At a depth of 15 cm below datum, Excavation Unit 4 was bisected to collect stratigraphic data; the stratigraphic profile of Unit 4 is illustrated in Figure 24. As the profile indicates, the layer of brick rubble had little depth, although a few brick fragments were found to 40 cm below datum. With the exception of the fragments of brick and of the shallow subsurface lenses of brick rubble, coal, slag, cinder, and ash, Excavation Unit 4 was nearly entirely devoid of additional archeological material. Virtually no ceramics or glass (n_t = 2) were found. Sterile clay was present at a depth of 40 cm below datum.

Excavation Unit 4 was located within a depression at the northern margins of a wooded area within the project area; at the time of the magnetometer survey, the area was covered with shallow standing water. In addition, swamp peat was recovered from flotation samples of Excavation Unit 8, located on the same magnetometer transect (54W), two meters west of unit 4. This evidence suggests the probative hypothesis that a water-filled depression in this area served historically as a location for refuse disposal, or, alternatively stated, that the architectural debris found here constitutes small scale land fill. The presence of coal, slag, pig iron, cinder, and ash, suggests that the artifactual material originated within the industrial section of the plantation.

Excavation Unit 5 was located northeast (grid) of the standing double pen cabin at N25-N26, E20-E22 (Figure 14). At this location, systematic shovel testing had recovered brick fragments and mortar thought possibly to have been associated with the brick pavement recovered from Excavation Unit 1. Excavations revealed a rather undifferentiated natural stratigraphy (Figure 25), consisting of a dark humus layer from 0-15 cm below datum, and a sterile dark grayish brown silty clay loam between 15-45 cm below datum. Cultural material in the upper, humus stratum were concentrated in the western (grid) half of the unit; these consisted primarily of several bricks and of an intermittent brick fragment lens, intermixed with Rangia and oyster shell fragments and with mortar. No significant archeological features or other cultural remains were recovered, nor does it seem likely that the bricks were associated with the brick filled driveway area exposed in Excavation Unit 1. Rather, the unpatterned scatter of bricks (Figure 26) suggests a disturbed and secondary context. Probe testing in the area of Excavation Unit 5 showed that this brick scatter extended to the west (grid) behind the double pen cabin, where Excavation Unit 7 revealed a laid brick sidewalk. Thus, it seems likely that the brick fragment



EXCAVATION UNIT FOUR

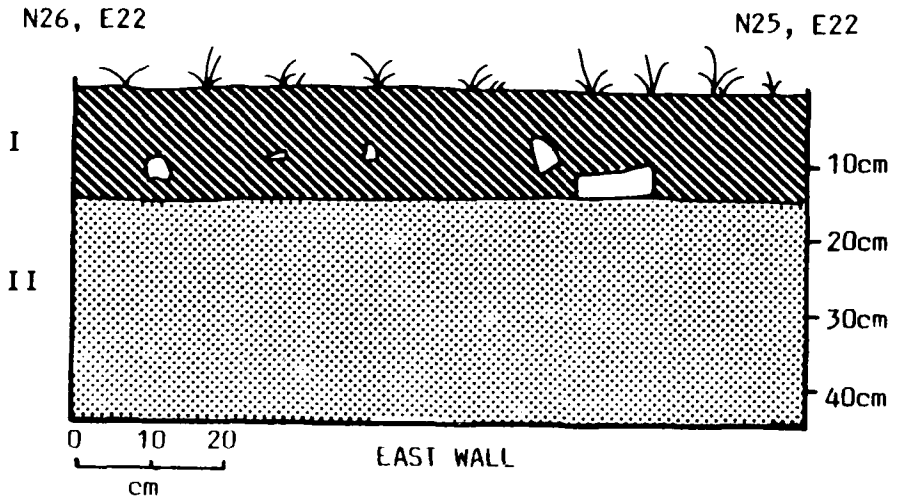
Stratigraphic Profile

Figure 24.

EXCAVATION UNIT FOUR

N103-105, E8-9

Stratum I	Very dark gray (10YR 3/1) silty loam overburden containing grass roots, humic material and very little cultural material.
Stratum II	Brick rubble
Stratum III	Random scatter of whole and half bricks.
Stratum IV	Dark grayish brown (10YR 4/2) silty loam with few cultural remains.
Stratum V	Grayish brown (10YR 5/2) silty clay loam. No cultural remains.



EXCAVATION UNIT FIVE
Stratigraphic Profile

Figure 25.

EXCAVATION UNIT FIVE

N25-26, E20-22

Stratum I	Very dark gray (10YR 4/1) silt loam overburden, containing some grass roots, humic material, and a small scatter of brick and brick fragments.
Stratum II	Dark gray (10YR 4/1) silty clay loam with no cultural materials.

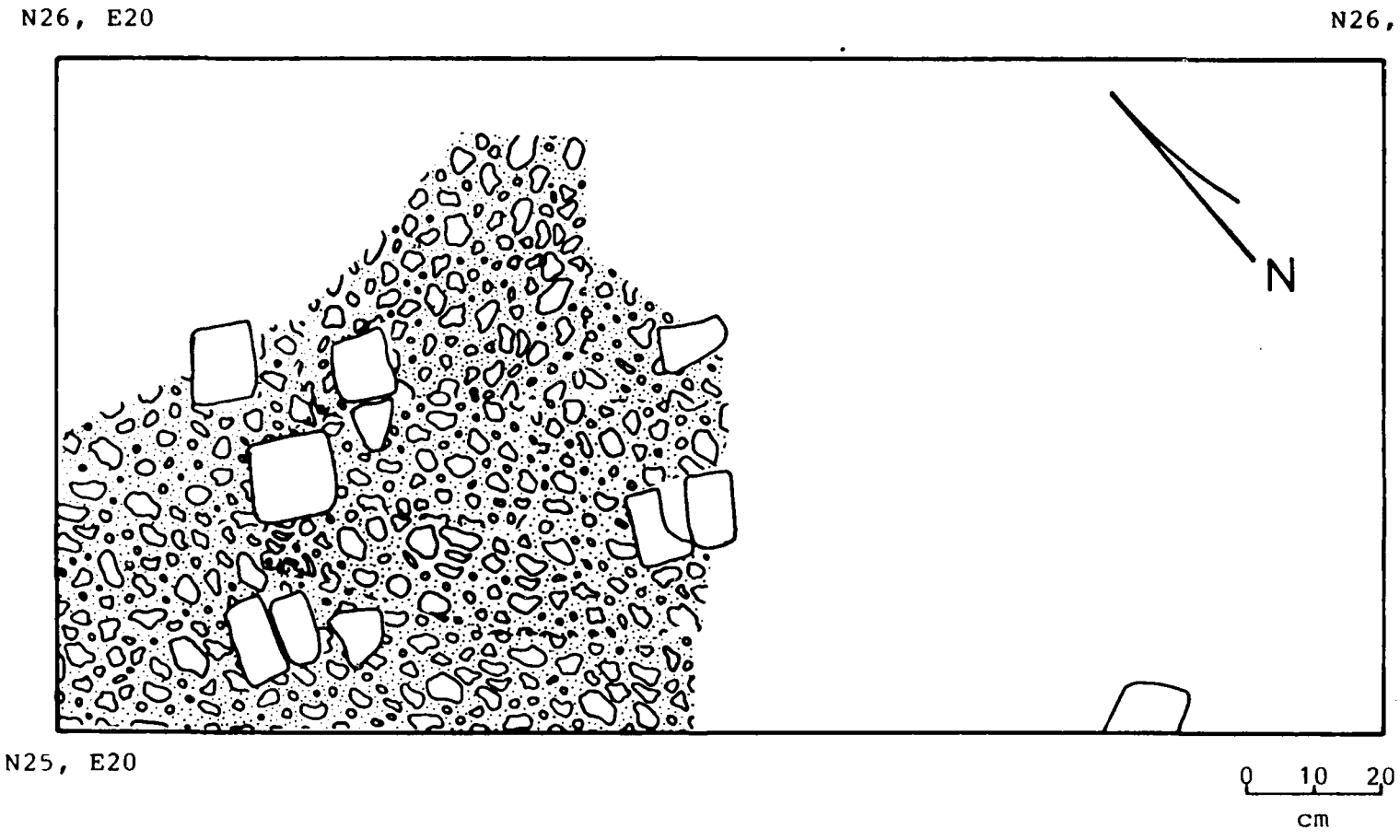


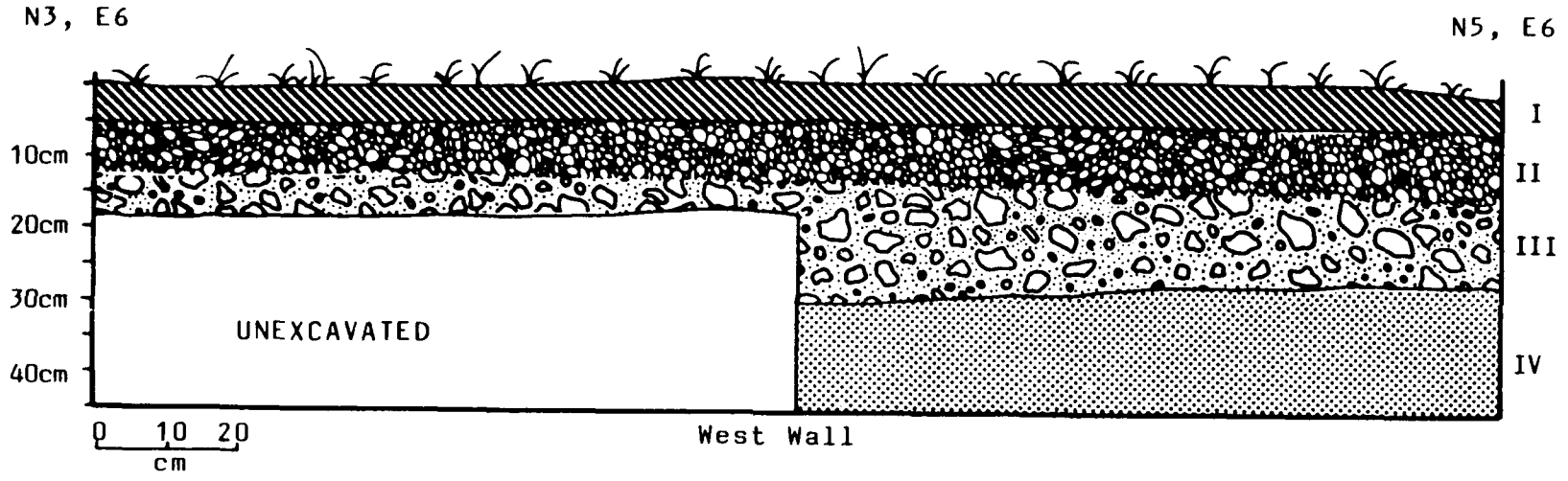
Figure 26. Excavation Unit Five brick rubble and shell filled feature.

concentration found in Unit 5 represents fill materi
later:lly beyond the double pen cabin sidewalk, to sta
ground surface and to facilitate run off.

Excavation Unit 6 was located two meters east o
at N3-N5, E6-E7, in front of the presently standing d
cabin (Figure 27). The excavation of Unit 6 exposed
similar stratigraphic profile and an analogous artif
inventory to those found in Excavation Unit 1 (Figur
Beneath a five cm stratum of topsoil/humus, a lens o
Rangia shell fill, with an average thickness of abou
was present. This shell fill was located directly a
layer of brick rubble; the latter extended to a dept
between 25-30 cm. Below the lens of brick rubble, a
culturally sterile, dark grayish brown silty clay loa
present. As in Unit 1, the natural stratigraphy was
only by the two cultural layers of shell and brick r
fill. This feature no doubt represents a portion of
driveway area described above for Unit 1, and confir
extent across the southwest (grid) portion of the pr
area in front of the quarters house and just upriver
Harlem great house. The superposition of shell fill
brick rubble fill illustrates a diachronic pattern,
the twentieth century, of repeated attempts to stabi
the elevation of ground surface to mitigate against
sidence processes. The relative thickness of the br
rubble fill in Unit 6 as opposed to that of Unit 1 s
either additional fill episodes near the great house
indicates that a greater amount of brick fill was pl
east (grid) of Unit 1, which was slightly closer to
quarters house front yard.

Excavation Unit 7 was located one meter behind
standing double pen cabin at N24-N26, E8-E9. Th
initially was selected for its potential to yield et
logical data pertaining to refuse disposal patterns,
it was expected that food refuse was thrown historic
off the back porch of the quarters house. However,
illustrated in the stratigraphic profile of Unit 7,
walkway was found to be present 2-3 cm below the pre
ground surface in the uppermost (humus) soil horizon
brick walkway, or sidewalk, is oriented perpendicula
long axis of the quarters house; it is 86 cm wide.
brick with a maker's mark (TROY) was noted in the po
of the walkway exposed in the excavation unit (Figur

The humus horizon, which continued to a depth o
15 cm, contained a few oyster shells and animal bone
A dark grayish brown silty loam containing brick fra
mortar, and oyster and clam (*Rangia* sp.) shells was



EXCAVATION UNIT SIX

Stratigraphic Profile

Figure 27.

EXCAVATION UNIT SIX

N2-5, E6-7

Stratum I	Black (10YR 2/1) humic loam overburden with grass roots and no cultural remains.
Stratum II	Lens of *Rangia* shells.
Stratum III	Lens of compacted and levelled brick rubble fill.
Stratum IV	Dark grayish brown (10YR 4/2) silty loam with no cultural remains.

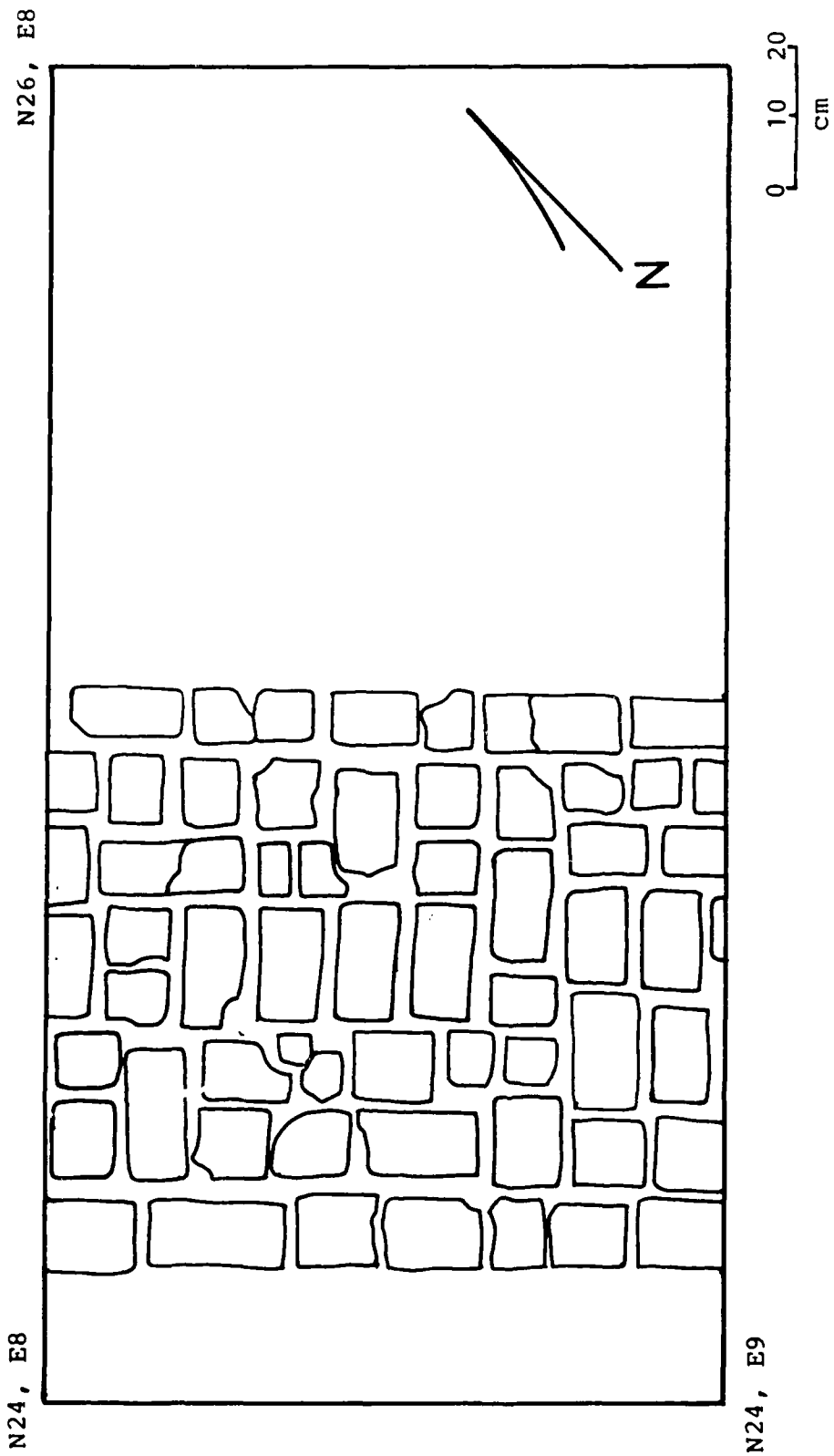
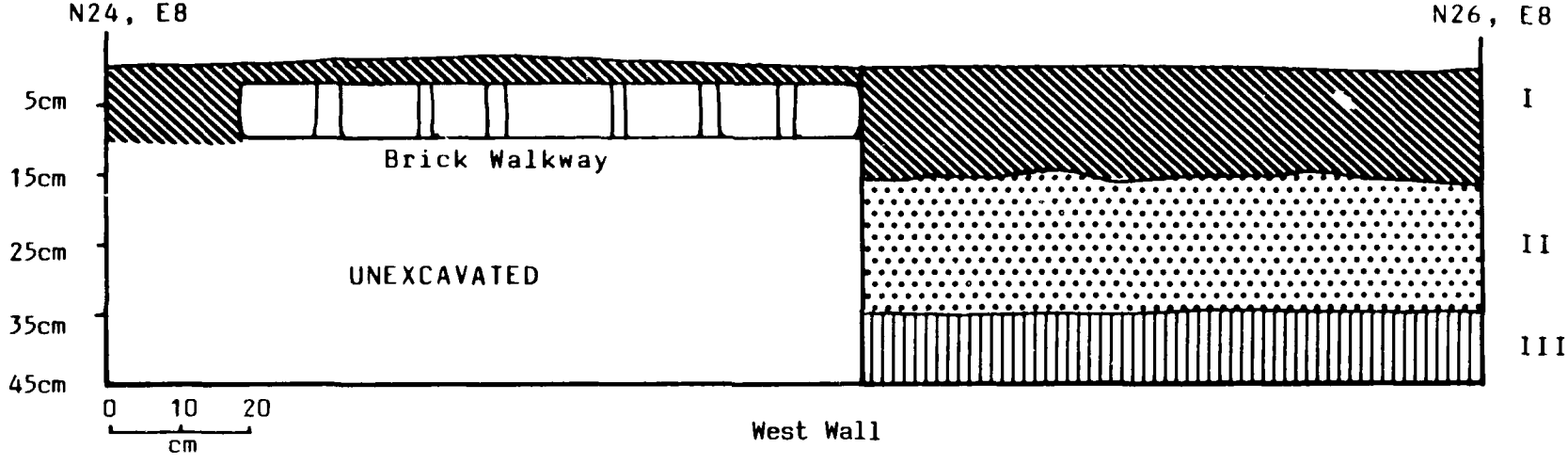


Figure 28. Excavation Unit Seven brick sidewalk feature.

between 15-35 cm below datum. The majority of the artifactual material recovered from the silty loam stratum is of recent origin, and includes wire nails, clear glass fragments, and twentieth century whiteware/ironstone ceramic sherds. Culturally sterile grayish brown silty clay was present at 35 cm below datum; this extended to the floor of the excavation unit at 45 cm. (Figure 29).

The yield of faunal remains from Excavation Unit 7 also was poor (n=3). The lack of the expected dietary remains at this locale and the small number of historic artifacts found suggest not only that the sidewalk was kept - or swept - clean during the period of its exposure, but also that the quarters house yard was policed with refuse having been dumped elsewhere on the plantation property. The construction of the brick walkway probably dates from sometime within the last fifty years. Its shallow stratigraphic setting relative to the brick rubble fill in the driveway south (grid) of the quarters house (Figure 30) indicates, at a minimum, that the walkway feature in unit 7 does not antedate the deposition of brick rubble fill in the driveway area. It was not possible to correlate bricks from the driveway area with those from the sidewalk feature using color or hardness, since Munsell color designations for bricks varied substantially within features and brick hardness varied little between features.

Excavation Unit 8 was located two meters west of Unit 4 (Figure 14) on magnetometer run 54W at N104-N105, E4-E6. As stated previously, this area was suspected, on the basis of magnetometer and probe data, to have contained evidence of a buried pavement, floor, or foundation. The stratigraphic profile for Unit 8 (Figure 31) illustrates the uppermost very dark grayish brown silty loam stratum that was present to about 10 cm below datum. This stratum contained a few coal fragments, but was otherwise devoid of cultural remains. Between 10-35 cm below datum, a few brick and coal fragments were recovered within a dark grayish brown silty loam. Sterile grayish brown silty clay loam was present between 35-45 cm below datum. Except for one metal gate hinge, the entire unit contained no artifactual remains besides brick and coal fragments. These remains presumably are related depositionally to the brick, coal, and cinder concentration encountered in the adjacent Excavation Unit 4. Traces of swamp peat in flotation samples from Stratum I in Unit 8 indicate that standing water was present there, just north of the small wooded area in the western project area; thus, it seems likely that the refuse from the adjacent excavation units 4 and 8 simply were dumped in a low lying area.



EXCAVATION UNIT SEVEN
Stratigraphic Profile

Figure 29.

EXCAVATION UNIT SEVEN

N24-26, E8-9

Stratum I	Very dark grayish brown (10YR 3/2) silty loam containing brick walkway, and modern cultural refuse.
Stratum II	Dark grayish brown (10YR 4/2) silty loam with brick rubble and mortar fragments, oyster shell, and few cultural remains.
Stratum III	Grayish brown (10YR 5/2) silty clay loam. No cultural materials.

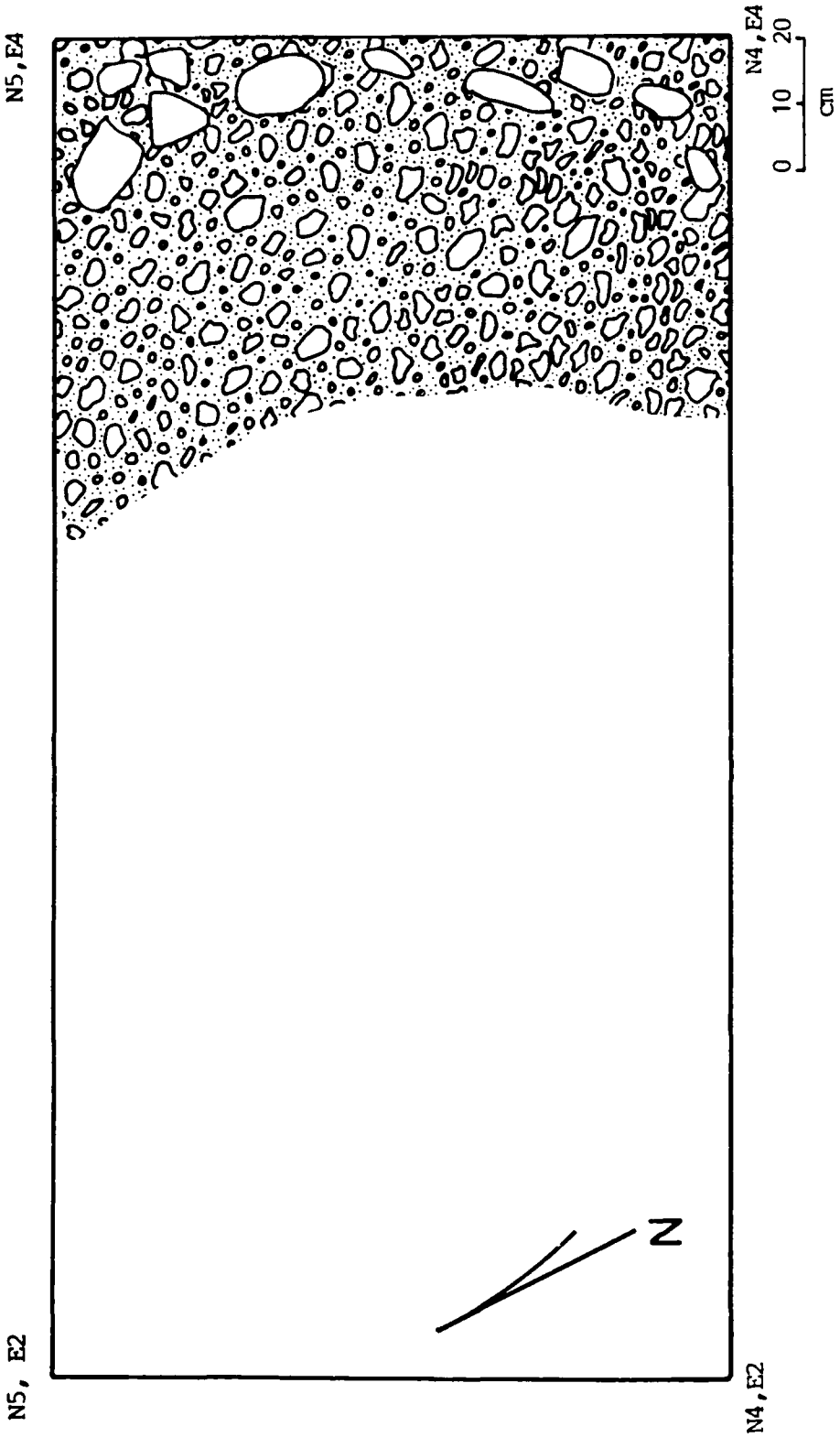
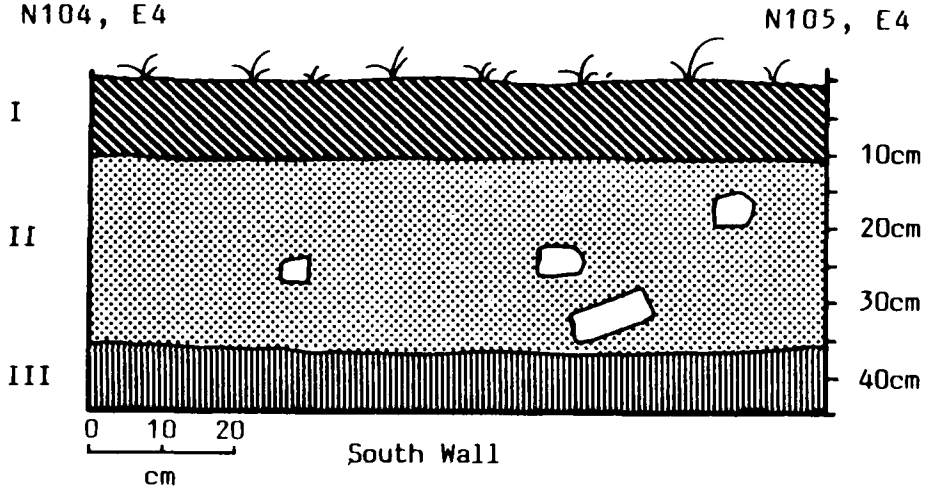


Figure 30. Excavation Unit One brick rubble feature.



EXCAVATION UNIT EIGHT

Stratigraphic Profile

Figure 31.

EXCAVATION UNIT EIGHT

N104-105, E4-6

Stratum I	Very dark grayish brown (10YR 3/2) silty loam containing humic material, grass roots, small shrub roots, and brick and coal fragments.
Stratum II	Dark grayish brown (10TR 4/2) silty loam with some brick and coal fragments.
Stratum III	Grayish brown (10YR 5/2) silty clay loam. No cultural materials.

Summary

Four areas of the Harlem new house area (Figure 14) were determined, on the basis of magnetometer survey and subsurface testing, to possess sufficient archeological data to warrant additional study using controlled excavation methods. A total of seven 1 x 2 meter test units subsequently were excavated at these locales to permit the accurate assessment of the significance of these finds. As outlined above, none of these units was found to contain significant buried cultural resources that would be adversely effected by the relocation of the Harlem great house. With the exception of the railroad bed (Figures 21 and 22), the only features recovered in situ comprised twentieth century shell and brick rubble fill areas adjacent to or within the residential portion of the plantation. All other features and deposits recovered during the course of this study derived from secondary redeposition of domestic and industrial refuse and debris.

The stratigraphy of the individual excavation units, as described above, indicated that all archeological materials at the Harlem new house area were located within soils characteristic of the Commerce-Mhoon-Sharkey association. These loamy and clayey, alkaline soils are typical of level to nearly level areas on natural levees of the Mississippi River and its distributaries. Analysis of soil samples from individual excavation units indicated a pH range between 6.8 and 7.6. Cultural remains generally were located in the upper 25 cm of the soil profile, within grayish brown (10YR 5/2) to dark grayish brown (10YR 4/2) silt loams. Below about 25-30 cm, culturally sterile dark grayish brown (10YR 4/2) silty clay loams were encountered.

The archeological materials recovered from the Harlem new house area consisted primarily of shell and brick rubble fill; isolated brick fragments; or, of brick rubble in obvious secondary context. Additional cultural remains recovered included metal objects; coal; slag; ceramics; glass; and bone. However, there was no evidence that any of these latter remains were in primary context, and the artifact assemblage as a whole numerically was extremely small. These findings are consistent with the expectations for artifact recovery noted in our proposal for archeological survey of the new house area at Harlem Plantation, which stated that a large artifact assemblage was not expected to be generated by this research effor . Laboratory analyses of the artifactual materials recovered from 16 PL 84 (see below) also failed to provide evidence for significant historic archeological remains, thereby confirming and complementing the field observations.

LABORATORY ANALYSIS

Laboratory analysis of artifactual and ecofactual remains recovered from 16 PL 84 was designed to aid in the determination of the origin, nature, chronology, stratigraphy, and significance of historic archeological features recorded during magnetometer survey, shovel testing, and unit excavation in the Harlem new house project area. In addition, laboratory analysis has provided a complete and permanent inventory and typological classification of all artifacts recovered during testing of the Harlem New House site.

Laboratory procedures and results are presented below; these include summaries of analyses of ceramics, glass, metal, bricks and brick fragments, soil matrix and flotation samples, and x-ray diffraction-spectrum analysis of slag from 16 PL 84. Artifacts were washed and separated according to type. Ceramics and glass were described using formal archeological classification. Metal and miscellaneous artifacts were identified wherever possible; they received less formal classificatory attention than the more time sensitive artifact classes of ceramics and glass. Bricks and brick fragments from the new house area are described in an effort to begin the process of developing a comparative data base for a future chronologically sensitive morphological and technological classification of bricks. Soil samples from the excavation units were processed by flotation and water screening in an attempt to recover archeological data not normally retrieved through hand excavation. Finally, the results of x-ray diffraction-spectrum analysis of slag and iron sugar cauldron samples from the Harlem new house area are described.

In general, a large artifactual assemblage was not recovered from 16 PL 84. Ceramics, glass, and faunal remains were rare; the majority of datable artifacts of these classes derive from late nineteenth to early twentieth century refuse deposits outside of the residential areas of the site. This is consistent with the expectations outlined in our proposal for this scope of work, which stated that a large artifact assemblage was not expected to be generated by this research effort because historic map and archival data provided no clearcut evidence of former structures within the project area. The small sample sizes of individual artifact categories, together with the secondary nature of the majority of the archeological contexts recovered, provide severe

limitations to the scope of analyses and to the nature of interpretations and generalizations that can be made. The primary value of the collection is that it will aid in the ongoing process of developing a comparative data base for late nineteenth and early twentieth century plantation sites in southern Louisiana.

Ceramic Artifacts

Although archeological classification of British eighteenth century ceramics is fairly coherent and well developed, no comprehensive typology of nineteenth and twentieth century Anglo-American ceramics exists. While South (1974) presented a taxonomy of nineteenth century ceramic types, it is not especially sensitive either to technological developments or to relationships between certain nineteenth century types. Miller (1980) suggested that classification of nineteenth century ceramics should be based on decorative type and on form. However, this method obscures or ignores both variability in paste and important chronological information. Consequently, the approach used here is a pardigmatic classification (Dunnell 1971:84) that is the product of the combination of unweighted classes of paste, glaze, and of decorative type (Lubik 1980). This method provides more complete definition of ceramic classes than now exists; it facilitates the handling of ambiguous and transitional ceramic types; and, it provides information concerning both chronology and social stratification. In the discussion following, ceramic artifacts have been divided into groups by paste. Glaze and decorative techniques then are examined for each paste group. The distribution of ceramic types for the Harlem New House site excavation units is shown in Table 9 .

Red colored earthenware has a distinctive paste color, due to the presence of iron compounds in the clay. Redware, made for utilitarian use, was produced commercially in many regions of the United States from the mid-eighteenth century onwards. Consequently, this type is relatively undiagnostic for dating purposes. The three sherds of unglazed redware from 16 PL 84 appear to have been pieces of modern flower pots.

Table 9 . Ceramic Frequencies by Excavation Unit at 16 PL 84.

	E2	E3	E4	E5	E6	E7	E8	Total
Whiteware/ironstone	9	65				2		76
Decaled Whiteware/ ironstone	7	6				2		15
Blue Transferprinted Whiteware/ironstone		2						2
Willow Pattern Blue Transferprinted Whiteware/ironstone		14						14
Stamped Whiteware/ ironstone		2						2
Porcelain		13	1					14
Decaled Porcelain		2						2
Blue Transferprinted Porcelain		4						4
Yellowware	1	1						2
Annular Yellowware		4						4
Late Spatter Yellowware	33	1						34
Brownware		4						4
Unglazed Redware	3							
TOTAL	53	118	1			4		176

AD-A134 295 ARCHEOLOGICAL SURVEY OF THE NEW HOUSE SITE HARLEM PLANTATION PLAQUEMINES..(U) GOODWIN (R CHRISTOPHER) AND ASSOCIATES INC NEW ORLEANS LA R C GOODWIN ET AL. 2/2

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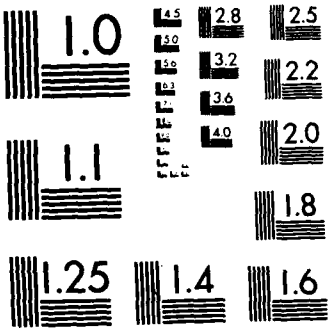

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Yellow-colored earthenware is a coarse American ceramic body type. The body color ranges from buff to brown-yellow. Different surface treatments were given to yellow-colored earthenware, depending on the function of the piece. Yellow-colored earthenware generally was molded into thick, heavy utilitarian shapes, and it was covered with a clear glaze. This type commonly is called "yellowware." Both undecorated and annular yellowware were recovered at 16 PL 84; these types date from 1830 into the twentieth century (Ramsey 1947:148).

Yellow-colored earthenware also was covered by a dense matte brown to black glaze called an "Albany slip." Also known as "Brownware," this type also was produced from 1830 into the twentieth century (Ramsey 1947:144). This variant most frequently was used for straight-sided crocks and storage jars.

The final variant of yellow-colored earthenware found at 16 PL 84 was late spatter yellowware. Late spatter, also known as "late sponge," was produced during the very end of the nineteenth century and the early twentieth century. It was used for heavy utilitarian pieces. It consisted of blue sponged decoration on an opaque white ground (Ray 1974:114). Most of the sherds of this type from 16 PL 84 appear to be from a single crock.

White-colored earthenware production began as a result of the introduction of small amounts of cobalt into the earlier cream-colored ceramic paste characteristic of the late eighteenth century. The white-colored earthenware ceramic body began to be developed in the early nineteenth century. Over time, the body of the these ceramic vessels became thicker and coarser, and the net result of these changes distinguishes white-colored earthenware from the cream-colored earthenwares. When covered with a transparent colorless glaze, white-colored earthenware is commonly called whiteware. A similar ceramic type developed in the mid-nineteenth century has been called ironstone, stone china, or graniteware; it also has a refined white colored earthenware body. Although some practitioners (Noel Hume 1970:130; South 1977:211) distinguish ironstone from whiteware, and while it seems likely that there are sufficient differences between these types in terms of body composition, body thickness, decoration, and color to warrant their segregation, it also is clear that these differences are poorly understood at the present time. Because there is little agreement in the literature on the criteria that distinguish these types, and since other authors have used a unicameral classification for them

(e.g., Lees 1980), the single classificatory unit of whiteware/ironstone was used in this study.

Whiteware/ironstone continues to be produced today. It frequently was undecorated. The majority of ceramics from 16 PL 84 were of a twentieth century origin. Stamped and transferprinted whiteware/ironstone sherds were recovered. Decalcomania, not used until the twentieth century, also was found on whiteware/ironstone sherds from 16 PL 84.

Hard paste porcelain first was produced by the Chinese in the eighth century, and over time Oriental porcelain came into such great demand that by the eighteenth century Chinese potters were producing porcelain solely for export.

Hard paste porcelain is very white, vitrified and translucent. Made from kaolin and petunse, it is fired at a high temperature and approaches glass in composition. The hard paste porcelain body has a tendency to fuse with the transparent feldspathic glaze, due to the high firing temperature. Both high firing temperature and the lack of good kaolin deposits hindered western production of hard paste porcelain. In 1710, a German at Dresden (Meissen) named Bottger produced the first western hard paste porcelain. During the nineteenth century, many manufacturers throughout Europe were able to produce hard paste porcelain; some factories in England and France were producing it as early as the eighteenth century (Wynter 1971). The first hard paste porcelain in the United States was produced ca. 1880. Porcelain recovered from 16 PL 84 primarily was undecorated. Decaled and transferprinted porcelain sherds also were recovered, and all appear to date from around the turn of the century.

Glass Artifacts

Few pieces of glass with identifiable attributes were recovered from 16 PL 84. The majority of glass sherds recovered were of clear glass. In 1864, William Leighton created a formula to produce a clear soda-based, lime glass that was less expensive, lighter, and just as clear as previously manufactured lead glass. As a result, clear glass appears in great quantities after the end of the Civil War. This clear glass was tinted with manganese oxide to eliminate the green color. Because of the manganese oxide, this glass tended to become amethyst-colored when exposed to the sun.

The majority of identifiable glass sherds from the Harlem New House site were from bottles manufactured using an automatic bottle machine. This machine was developed by Michael Owens; it was patented in 1903. All hand labor was eliminated by this process; the glass was drawn into the mold by suction. Bottles manufactured by this process have a ring seam around the base, and the side seams are continuous up

to and including the lip. By 1920 with the advent of the automatic bottle machine, the change over to automatic production of bottles was complete in America.

The only other glass sherd recovered from 16 PL 84 that had an identifiable attribute was a bottle neck with an applied lip. This technique employed the use of what was known as a lipping tool. This tool consisted of a central piece which was placed within the bottle neck, and an external arm, which, when rotated, formed an even lip of soft glass applied to the neck of the vessel. It should be mentioned that during this process of applying the lip and finishing the vessel, the neck seam had a tendency to be obliterated as a result of reheating the neck. Consequently, the seam only went partially up the neck. This technique of forming the lip was used during the second half of the nineteenth century (Goodwin and Yakubik 1982b). A list of glass artifacts from the Harlem new house area is shown in Table 10.

Metal Artifacts

As was the case for glass and ceramic artifacts, from the Harlem new house area, the majority of metal artifacts appear to have a twentieth century origin. Most of the metal artifacts were nails. One square cut nail was found; this type was first produced in 1790 and continued in production throughout the nineteenth century. Wire nails, which first were produced in 1850, did not come into widespread use until the turn of the century (Noel Hume 1970:253-254).

Other metal artifacts found included architectural hardware, such as hinges, a latch, and a lock plate; and items such as springs, a washer and nut, and a screw. In addition, a single piece of pig iron was recovered from Unit 4. A complete list of metal artifacts from the Harlem new house area is presented in Table 11.

Miscellaneous Artifacts

A variety of "miscellaneous" artifacts were recovered from 16 PL 84. The majority of these are modern; these include a twist tie, cellophane paper, aluminum foil, and a diet Pepsi cap. A complete list of these items is given in Table 12 .

Table 10. Glass Frequencies by Excavation Unit at 16 PL 84.

	E2	E3	E4	E5	E6	E7	E8	Total
Clear Glass	63	109		2		5		179
Clear bottle base - automated bottle machine		1						1
Clear bottle neck - automated bottle machine	4	2						6
Clear bottle base - automated bottle machine		2						2
Clear bottle base - base seam	1	7						8
Clear Tumbler Glass	1	8						9
Clear Etched Tumbler Glass		2						2
Clear Plate Glass		7						7
Clear Etched Glass		1						1
Clear Paneled Flask Glass		2						2
Brown Glass		3				1		4
Brown bottle - automatic bottle machine					1			1
Brown bottle neck - applied lip		1						1
Opaque Green Glass		1						1
Green Glass	2	15	1	2				20
Green plate glass		54						54
Green jar mouth - screw top		2						2
Green bottle neck - automatic bottle machine		1						1
Amethyst Glass	6	2						8
Amethyst Pressed Glass		1						1
Amethyst Tumbler Glass		2						2
Milk glass		15						15
Pressed Milk glass		1						1
Pink Glass		3						3
Pink Pressed Glass		4						4

Table 10, Continued.

	E2	E3	E4	E5	E6	E7	E8	Total
Pink Paneled Flask Glass		13						13
Blue glass		1						1
Blue bottle - automatic bottle machine		1						1
Yellow pressed glass		4						4
TOTAL	77	265	1	4	1	6		354

Table 11. Metal Frequencies by Excavation Unit at 16 PL 84.

	E2	E3	E4	E5	E6	E7	E8	Total
Wire Nail	4	86	2	4	5	11		112
Square Cut Nail				1				1
Misc. Nail		10		1		6		17
Spike		4						4
Screw		1						1
Bolt		1						1
Nut		1						1
Washer		1						1
Spring		4		1				5
Hinge		2						2
Gate Hinge							1	1
Bracket						1		1
Latch		2						2
Lock Plate		1						1
Chain		1						1
Small Wheel Hub		1						1
Wire		4						4
Bar		1						1
Strip Metal		2						2
Pig Iron		1						1
Misc. Metal		110						110
Brass Tube		1						1
Metal Pen Tip		1						1
Pencil Eraser Holder		1						1
Sugar Dispenser Top		1						1
TOTAL	4	237	2	7	5	18	1	274

Table 12. Miscellaneous Frequencies by Excavation Unit at 16 PL 84.

	E2	E3	E4	E5	E6	E7	E8	Total
Twist tie						1		1
Cellophane paper						2		2
Aluminum foil						1		1
Diet Pepsi Cap						1		1
Plastic Cap						1		1
Plastic Button	1							1
Test tube		1						1
St. Christopher Metal		1						1
Shotgun Shell Cap		1						1
Drainage Pipe		19						19
Pitch Cap		1						1
Carbon rod		1						1
Shoe Sole		6						6
Tooth (cow)	1							1
Bone		5		8		3		16
TOTAL	2	35		8		9		54

Bricks and Brick Fragments

The recovery of brick features such as floors, walls, foundations, and rubble fill, is a common occurrence at industrial or residential historic archeological sites in southern Louisiana. As yet there is no reliable technique for accurately dating such features in the absence of sufficient samples of other artifact classes. Indeed, synchronic and diachronic ranges of variability in brick morphology, as well as the additional variables of reuse and of postdepositional processes have yet to be evaluated thoroughly. In order to help rectify this situation, R. Christopher Goodwin and Associates, Inc., has initiated an ongoing research program into the characterization and classification of variables related to brick morphology, history, and brickmaking technology. Relevant attributes being investigated include source materials identification, hardness, size, color, firing temperature, and morphological attributes relative to mold and kiln technology.

In the case of the Harlem new house area bricks, it is necessary to reiterate the limited sample of artifacts, including whole bricks, that were recovered during the course of archeological testing. Only a handful of whole bricks were recovered, providing an insufficient sample for metric analysis. With the exception of the recent sidewalk found in Unit 7, brick features excavated at 16 Pl 84 were identified as refuse dumps or as brick rubble fill. No intact floors, walls or foundations were found in the project area, and the vast majority of bricks and brick fragments clearly were in disturbed contexts. In the absence of primary contexts, it is not possible to discern if samples of bricks from each excavation unit even were associated originally in time and space. Brick Munsell color designations for representative samples taken from the Harlem new house area are shown in Table [13]. Not unexpectedly, the results of Munsell color typing indicate a tremendous range of variability, both within and between individual excavation units. Brick Munsell colors span a range from 10 YR 3/6 to 7.5 YR 6/6; no distinct patterns or modes could be defined.

Hardness tests on samples of bricks from the Harlem new house area demonstrated a range of 2 - 5 on the Mohs scale. Despite the small sample, two modes appear in the data, at values of 2 and 4 - 5. Higher firing temperatures are associated with increased hardness, and this, in combination with the fact that the majority of these harder bricks

Table 13. Munsell Color Designations for Grab Bag Brick Samples from Harlem Plantation new house area.

Munsell Designation	Excavation Unit	2	3	4	5	6	7	8
10 R 3/6		0	x	0	0	0	0	0
10 R 4/4		0	0	0	0	x	0	0
10 R 4/6		0	0	x	0	0	0	0
10 R 5/3		x	0	0	0	0	0	0
10 R 5/6		x	0	0	0	0	0	0
2.5 YR 4/4		x	0	0	0	0	0	0
2.5 YR 4/6		0	0	0	0	x	0	0
2.5 YR 4/8		0	x	0	0	0	0	0
2.5 YR 5/6		0	0	0	x	0	x	0
2.5 YR 5/8		x	0	x	0	0	0	0
5 YR 3/4		0	x	0	0	0	0	0
5 YR 4/4		0	0	0	0	x	0	0
5 YR 4/6		0	0	0	0	0	0	x
5 YR 5/4		x	0	0	0	0	0	0
5 YR 5/6		x	x	0	0	0	0	0
5 YR 5/8		0	0	0	x	0	0	0
5 YR 6/6		0	x	0	0	0	0	0
7.5 YR 5/4		x	x	0	x	0	0	0
7.5 YR 6/6		0	0	x	0	0	0	0

were machine made, suggests a relatively recent e.g., twentieth century, date of manufacture. Bricks and brick fragments with lower hardness values probably date from the early to mid nineteenth century. However, systematic analysis of both color and hardness data from features at the Harlem new house area was confounded due to the demonstrable reuse, recycling, and redistribution of bricks within the project area. This fact is well illustrated at Excavation Unit 6, where brick rubble fill was found near the standing quarters house. At least four different hardness values were represented in bricks from this locale; this suggests multiple origins for the brick used in the rubble fill. A similar situation was noted for the brick piers below the quarters house, which contain a variety of brick types. Taken as a whole, these limitations in the data on bricks from the Harlem New House site preclude accurate typological assessment of chronological placement and obviate any generalizations or applications of these data except as a comparative data base for use in future studies.

Soils Analyses

Because excavation at the Harlem new house area involved entirely in situ recovery of remains, and since in field screening was not undertaken, soil matrix samples were taken from culture bearing deposits encountered during the course of field work. Three liter samples of the various soil matrices were brought to the laboratory for further analysis; approximately one liter of each of these samples was reserved for permanent curation. Soil samples were typed according to the Munsell soil color system, and pH was taken on all samples. The minimum pH recorded for Harlem New House site soils (Min Xi) was 6.8, at Unit 2, 0-15 cm below datum. Two samples had pH of 7.0: Unit 2, 15-30 cm below datum, and Unit 7, 0-15 cm below datum. All other soil samples from the site registered a pH of 7.6 (Max Xi; $\bar{X}$). Thus, soil pH test results failed to provide data that would discriminate between depositional settings at the various unit levels.

In addition to pH tests and to color designations, soil matrix samples from the Harlem new house area were subjected to two types of water-aided collection techniques. Both froth flotation, a process which collects floating particles from liquified soil samples, and fine screen collection, which collects small artifacts and natural materials through water screening, were used. The application of

these procedures permit the collection of material that normally would have been lost during in situ recovery through hand excavation or through dry screening alone. In addition to the collection of tool fragments and small sherds of ceramics and glass, flotation methods are particularly effective in recovering organic remains, such as food refuse e.g., bones and carbonized plant remains, or traces of construction materials and of fire, such as wood and charcoal.

The results of the recovery of remains from soil flotation samples from excavation unit levels at the Harlem new house area are shown in Table 14. Table 15 presents the results of fine mesh water screening of the Harlem soil samples. As Table 14 indicates, materials recovered from the flotation of the Harlem New House site soil matrix samples with one exception failed to provide either new data or significant changes in the numbers of artifacts or ecofacts recovered from the various excavation levels. Rather, both froth flotation results and fine mesh water screening provide redundancy to the data base, while at the same time failing to yield remains of sufficient size to permit more detailed or additional analyses. As Tables 14 and 15 show, small brick and coal fragments were the most frequent cultural constituents of detailed soil matrix analyses. These data demonstrate that in situ excavation without screening provided representative qualitative samples of the artifact assemblages from the Harlem New House site. The fact that glass fragments and ceramic sherds were notably rare in heavy fraction fine mesh water screen samples confirms the previously noted rarity of domestic refuse in the project area with the exception of habitation refuse recovered from the dump site at Excavation Unit 3. The recovery of only rare fragments of bone leads to the same conclusion. This is particularly noteworthy for the case of Excavation Unit 7, located near the standing quarters house, which was selected for excavation because of its hypothesized potential to yield subsistence remains. Although a few fragments of bone were recovered there, they were numerically insignificant. The one exception to the largely negative results of soils analysis was the recovery of swamp peat from between 0-15 cm below datum in Unit 8 during froth flotation of soil matrix samples from that provenience. This result lends credence to the interpretation that industrial debris was dumped as fill into a low lying area of the plantation.

Table 14. Recovery of Remains in Froth Flotation Samples from Excavation Units at Harlem Plantation New House site.

Excavation Unit	Depth (cm) Below datum	Peat	Shell	Coal	Charcoal	Slag	Wood
1	15-30	0	0	0	0	0	0
2	0-15	0	0	0	0	0	0
2	15-30	0	0	x	0	0	0
2	30-45	0	0	0	0	0	0
2	45-60	0	0	0	0	0	0
3	15-30	0	x	x	x	0	x
4	0-15	0	x	x	x	0	0
4	15-30	0	0	x	0	x	0
4	30-45	0	0	0	0	0	0
5	15-30	0	x	0	0	0	0
6	0-15	0	0	0	x	0	0
7	0-15	0	x	0	0	0	0
8	0-15	x	0	x	0	x	0
8	15-30	0	x	0	0	0	0
8	30-45	0	x	x	0	0	0

Table 15. Recovery of Remains from Fine Mesh Water Screen of Harlem Excavation Unit Soil Samples.

Excavation Unit	Depth BD (cm)	Brick Fragments	Mortar Fragments	Coal	Slate	Slag	Rangia Shell	Metal	Bone	Glass	Ceramic Sherds
1	15-30	0	0	0	0	0	0	0	0	0	0
2	0-15	0	0	x	0	0	0	0	0	x	0
2	15-30	x	0	x	0	0	0	0	0	0	0
2	30-45	x	0	0	0	0	0	0	0	0	0
2	45-60	0	0	0	0	0	0	0	0	0	0
3	15-30	0	0	x	0	x	0	0	0	0	0
4	0-15	x	x	x	x	x	0	0	0	0	0
4	15-30	x	0	x	0	x	0	0	0	0	0
4	30-45	0	0	0	0	0	0	0	0	0	0
5	15-30	0	0	0	0	0	0	0	0	0	0
6	0-15	x	0	0	0	0	x	0	0	0	0
7	0-15	x	x	0	0	0	x	x	x	x	0
8	0-15	x	0	x	0	0	x	0	0	0	0
8	15-30	x	0	x	0	0	0	0	0	0	0
8	30-45	x	0	x	0	0	x	0	0	0	0

X-Ray Diffraction - Spectrum Analyses

As noted in the section of this report describing field methodology, two high intensity magnetic anomalies of about 1000 gammas each were located just north of grid line N60. However, the placement of an extensive regime of shovel and probe testing along randomly selected rays from the centers of each of these two anomalies failed to produce any cultural remains whatsoever, nor did these techniques yield any indication of the causality for the anomalies. However, a large fragment of an unidentified slag was collected from the surface of the anomalous area; it was hypothesized to be foundry slag, because of the major magnetic anomaly. This sample was submitted for X-ray diffraction-spectrum analysis at the Freeport Minerals Research and Development Center. This was undertaken in order to test the hypothesis that it was foundry slag, and to facilitate evaluation of its role as a possible cause for the 1000 gamma magnetic anomalies. As a control, a small fragment from an iron sugar cauldron in the project area also was submitted for analysis.

The results of the X-ray diffraction-spectrum analyses are given in Table 16, which delineates the elements identified from each sample and their concentration levels. Sample 1, a fragment of the sugar cauldron, consisted of oxidized iron (Fe_2O_3) with a trace of quartz (SiO_2). Sample 2, the fragment of slag, was found to consist of portlandite ($Ca(OH)$) with a trace of calcite ($CaCO_3$). According to Mr. H. Pollet, Chief Chemist at the Colonial Sugar Refinery in Gramercy, Louisiana (personal communication 1983), the constituents identified in the slag sample from the Harlem new house area match those that would be found in bagasse slag from an old sugar refinery. At such a facility, prior to fifty years ago, bagasse was burned, in admixture with coal or oil, to fuel the boiler. Calcium hydroxide in the sample derives from the addition of lime to the raw cane for clarification purposes. The slag analysis, then, lends further credence to the hypothesis developed for Units 4 and 8 that debris in this area derived from the industrial portion of the plantation. However, X-Ray Diffraction analysis showed that the slag was not the cause of the 1000 gamma magnetic anomalies.

In an attempt to investigate further the causality of the two high intensity magnetic anomalies, the Harlem new house area was revisited well after field work had been completed. Transects across each of the magnetometer targets (Figure 18) were made with a White's Electronic

Table 16. X-ray diffraction - spectrum analyses of sugar cauldron and slag samples from Harlem Plantation.

Sample 1		Sample 2	
Element	Conc. Level	Element	Conc. Level
Fe	H	Fe	L
Zn	L	Zn	T
Cr	T	Cr	ND
Al	T	Al	T
Si	T	Si	T
P	T	P	T
S	T	S	T
Ca	T	Ca	H
Mn	T	Mn	T
		Cl	T
		Ti	T
		Sr	T
		Br	T
		Y	T

Guide to approximate concentration level:

H = High (>10%)
M = Medium (>1%)
L = Low (>.01%)

T = Trace (ppm)
ND = None Detected

metal detector. Shovel and probe tests were positioned at locations which showed positive readings on the metal detector. Numerous "hits" with the metal detector were recorded across the areas of the anomalies. However, shovel tests indicated that the sources were invariably surface or shallow subsurface ferrous objects. Upon removal of the overburden in which positive readings were encountered, further readings with the metal detector uniformly proved to be negative. Probes at these same locations again failed to locate objects that could have been sources either for the metal detector readings or for the anomalies recorded during the magnetometer survey.

During the course of the metal detector survey, sections of clay drainage pipe were noted in drainage ditches in the vicinity of the anomalies. It is possible, therefore, that the source of the anomalies may derive from a pumping machine, or fragments thereof, used for draining agricultural fields, since archival and historical records for Harlem Plantation have demonstrated the use of such equipment during the nineteenth century. Only further testing using power equipment would be effective in order to test this hypothesis, since the cause of the anomaly clearly is deeply buried. Because this unidentified feature complex is, in reality, outside of the great house relocation corridor, and because of the depth of its burial, such testing is not warranted at this time.

Summary

A small collection of artifacts (n=858) was recovered from 16 PL 84. The vast majority of the collection clearly dates from the twentieth century. The complete absence of cream-colored earthenware, or even of transitional types between cream-colored and white-colored earthenware, indicate that the ceramic artifacts cannot antedate the late nineteenth century. In addition, the presence of diagnostic twentieth century ceramic types, such as the late spatter yellowware, redware flower pots, and decal decorated ceramics, suggests an even later date for the ceramic collection. Similar results were obtained for the glass. The majority of the glass was clear, without the amethyst tint characteristic of soda based, maganise oxide tinted glass produced during the late nineteenth century. Hence, these clear sherds probably date from the twentieth century; the automatic bottle machine produced glass also clearly is twentieth century in origin. The overwhelming preponderance

of wire, rather than square cut nails matches the twentieth century date obtained from the ceramic and glass sherds recovered from the New House site. Twentieth century items such as plastic artifacts, aluminum foil, bottle caps, etc., strengthen an already overwhelmingly clear chronological conclusion. A twentieth century date for the majority of collection is consistent with the post 1893 date for the movement of the great house and double pen cabin to their present location.

No mean ceramic dates (South 1977) were calculated, since this technique is most effective for eighteenth and early nineteenth century collections, and because the limitations of the formula produce dates consistantly too early for younger collections. Analytical techniques such as economic scaling of ceramic artifacts (Miller 1980), and functional analysis, were not attempted because of the small size of the collection.

CONCLUSIONS AND RECOMMENDATIONS

This report describes archeological survey and subsurface testing of the Harlem New House site in Plaquemines Parish, Louisiana. The field investigations, aided in part by archival and historical research, consisted of an integrated program of magnetometer and pedestrian survey, shovel testing, and systematic test excavation. The field research and laboratory analyses were designed to evaluate the nature, extent, and significance of any buried historic archeological resources that might be effected by the relocation of the plantation great house.

The initial magnetometer and pedestrian survey and shovel and probe testing regime located a number of isolated finds of historic artifacts, such as brick fragments and ferrous metal scraps lacking archeological context and significance. Magnetometer targets with signatures characteristic of buried historic architectural features also were recorded. Shovel tests of magnetometer targets, together with systematic shovel testing in magnetically noisy zones within the project area, suggested the possible existence of in situ cultural remains over portions of the Harlem New House site. In order to evaluate these test results, seven 1 x 2 meter units were excavated to determine the nature and extent, stratigraphy, and cultural associations of the buried features.

Excavations revealed the presence of shallow subsurface cultural remains consisting primarily of redistributed or recycled brick fragments and rubble, Rangia shell fill, and twentieth century refuse deposits containing ceramic sherds, glass, ferrous objects, and shell and brick fragments. The only intact cultural features found have a relatively recent date of origin. These comprised the shell fill driveway area and the laid brick sidewalk located adjacent to the standing quarters house. All other remaining architectural materials were severely disturbed and in secondary or tertiary context.

Laboratory analyses of the cultural and natural materials recovered during testing and excavation confirm their recent and/or redeposited context. These analyses also demonstrated the paucity of evidence recovered pertaining to residential, industrial, agricultural, or to any other specialized activities known to have taken place during the historic

occupations of Harlem Plantation. Indeed, the total artifact assemblage recovered from the Harlem New House site was small. This may be attributed both to the absence of significant historical archeological features within the project area, and to patterns of refuse disposal revealed by surface and subsurface testing of the site.

Previous research at New Orleans General Hospital site, 16 OR 69 (Goodwin and Yakubik 1982b), and at Elmwood Plantation, 16 JE 138 (Goodwin et al. 1983), has examined in detail patterns of refuse disposal in nineteenth century Louisiana. Comparison of data on the spatial distribution of material remains from these sites suggested a rural-urban dichotomy in disposal patterns (Goodwin et al. 1983). While data from 16 OR 69 showed that at least as early as the mid-1820s urban refuse disposal utilized enclosed concentrations such as trash pits and privies, a rural lag in this behavior pattern appears to have occurred. Trash remains found at 16 JE 138 resembled the Brunswick Pattern defined by South (1977) as representative of eighteenth century Anglo-American sites. That is, horizontal scatters of artifacts were found across the site with concentrations occurring around structures. The distribution of material remains from 16 PL 84 falls between these two patterns. Test excavations adjacent to habitation areas were devoid of significant cultural remains, while the vast majority of cultural refuse from the Harlem new house area was recovered from the land side of the railroad bed in Unit 3 (Figure 14). In this area, refuse had been dumped and subsequently horizontally scattered, rather than having been deposited in discrete buried loci. Conversations with both the present tenant and the owner of Harlem Plantation confirmed that during the present occupation, habitation areas are policed, and garbage is removed and dumped away from the houses (Beverly Lopez; Newella Etienne, personal communication 1983). Distribution of earlier remains also seem to fit this pattern. Based on data from 16 PL 84, then, it may be hypothesized that during the latter half of the nineteenth century, current ideas of sanitation began to take hold in rural areas, leading to abandonment of the Brunswick refuse disposal pattern. However the existence of additional space in comparison to urban settings, permitted the secondary deposition of refuse outside of discrete, contained units.

Although field and laboratory investigation of the Harlem new house area provided information on the spatial patterning of material cultural remains, a systematic program of magnetometer survey and of subsurface excavation failed to provide evidence of significant buried historic archeological features or artifactual assemblages. Virtually all

remains encountered were of twentieth century origin, and, with the exception of a sidewalk and of a shell-filled driveway, no remains were found in primary context. As noted earlier, the objective of this research effort was to identify a relocation corridor and site for the Harlem great house, which will be moved as part of the overall mitigation plan for Harlem Plantation. The Harlem new house area examined during the course of the investigations described above was suggested as an appropriate relocation corridor and house site by the present land owner. This research effort has demonstrated that corridor and site (Figure 32) to be free of any significant surface and subsurface historic archeological features. Consequently, the use of the proposed corridor and new house area is recommended.

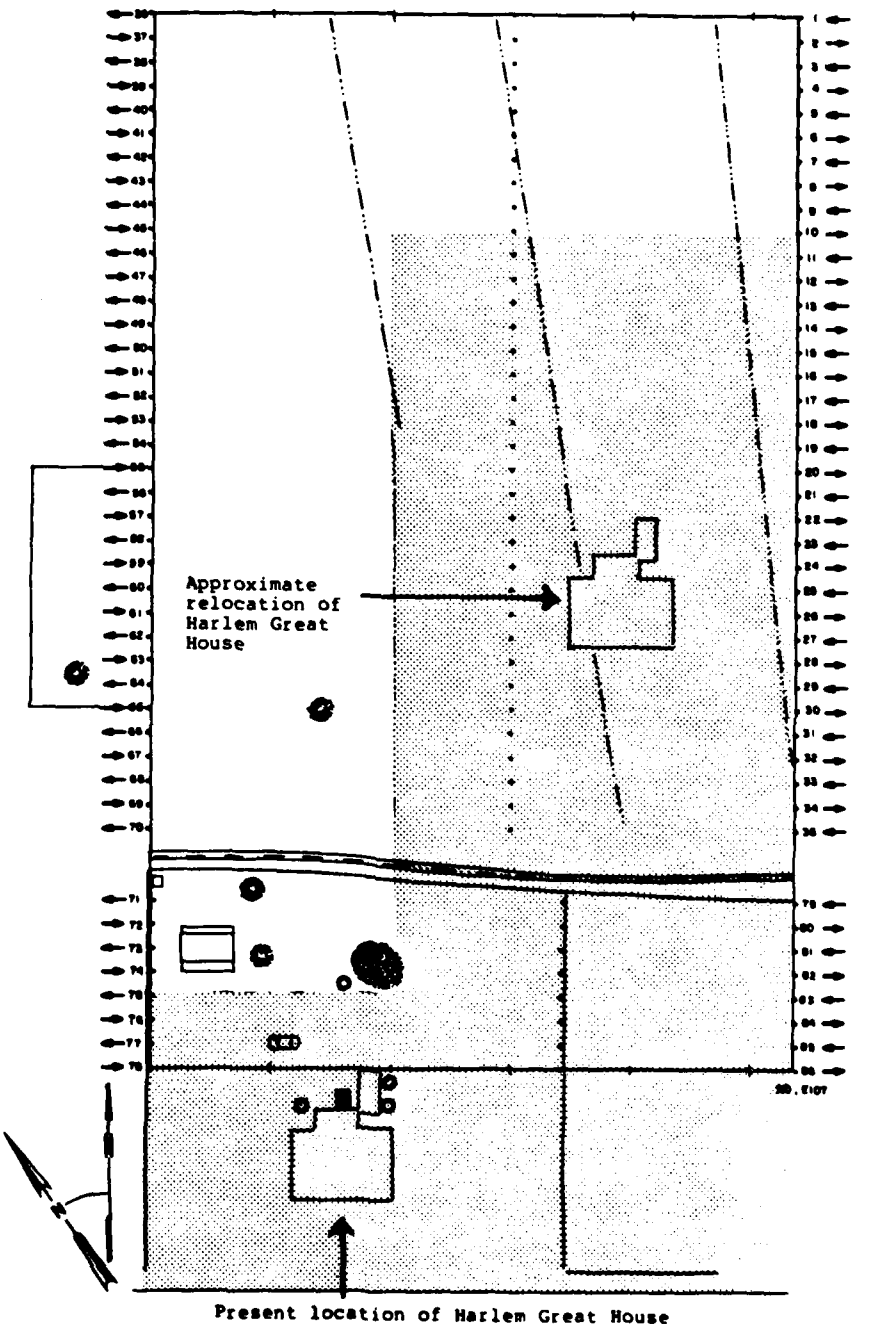

Figure 32. Harlem new house area relocation corridor.

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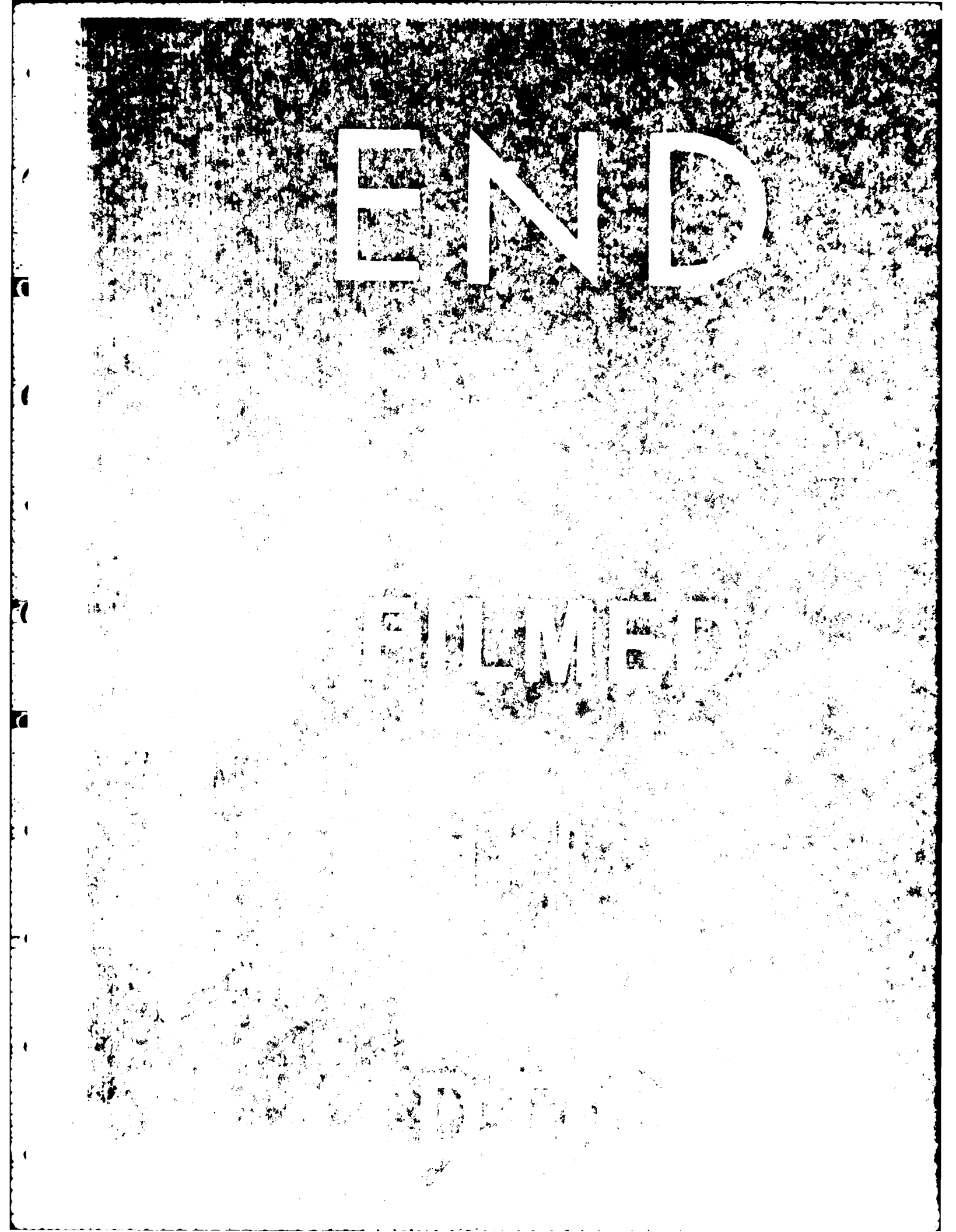
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