

**ARCHEOLOGICAL INVESTIGATIONS
AT LAKEPORT PLANTATION
Summary Report, AAS Project 03-02
May 2003**

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Submitted to
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Archeological Investigations at Lakeport Plantation SUMMARY REPORT

Randall L. Guendling

INTRODUCTION

The Lakeport Plantation Project is an ambitious endeavor in historic preservation designed to preserve and protect the last remaining standing antebellum plantation house in the Arkansas Delta. Lakeport Plantation is an example of a now-vanished landscape of cotton plantations once found throughout the Mississippi delta lands. In Chicot County alone some 51 plantations existed just along the Mississippi River in 1860, part of a plantation agricultural system that occupied the fertile bottomlands of all the major rivers in the Gulf Coastal Plain and Mississippi Alluvial Valley of Arkansas. Today, Lakeport remains the sole example of a "Gone With the Wind" plantation house in Arkansas.

As part of the preservation effort the structure itself will be stabilized, restored, studied and interpreted in both a historical context through study of the region and in a practical context as a heritage tourism attraction. The property also will be used for academic purposes by Arkansas State University the current owner of the structure. The implementation of specific project goals will be a multi-year and multi-phased task.

The study of the antebellum plantation and its postbellum equivalent, the tenant farm system, has a substantial literature. However, much of the research has been at a macro-economic level or consists of biographical studies of elites. The history of everyday life on plantations occupies a much narrower space on the academic bookshelf. One specific goal of the team of scholars assembled to participate in the Lakeport project is to rescue the story of the unknown individuals who built and ran the cotton empires at the lowest rung of participation. Many of these persons were enslaved African-Americans.

Anyone who has worked in historic preservation has, at one time or another, felt the frustration of unanswerable historical questions. Rarely are the every-day occurrences, such as building techniques, recorded in any systematic way, and rarer still, will they be conveniently stored in a handy archive. One source of historical data, often unrecognized, is the physical evidence of human activity buried in the ground, which can be interpreted by professionals trained in historical archeology. Historical archeology, as practiced in North America, is a subfield of anthropology that uses the methods of archeology, combined with documentary techniques of history to study the people of the recent past. Much of the initial stabilization and restoration work to be carried out at the Lakeport plantation house will disturb the immediate area around the foundation, potentially destroying the only information available on the timing and processes of building the house.

For this reason two historical archeologists, Skip Stewart-Abernathy and Randall Guendling from the Arkansas Archeological Survey (AAS), have been included on the Lakeport team. Stewart-Abernathy has initiated a series of oral history interviews with both Johnson family members and local residents who have been connected with Lakeport Plantation in the past as part of a long-term local region study. Guendling supervised the archeological excavations reported here in close cooperation with the restoration planning overseen by Charles Witsell, Jr.

The first phase of stabilization and restoration was initiated on August 5, 2002, as an archeological investigation mapping the topographic surface and all the structures comprising the plantation complex, followed by using geophysical mapping of subsurface anomalies in the accessible areas near the house for future reference and possible investigation. Excavations were initiated on August 19 and continued systematically around the house until September 19, 2002 to gather information from the subsurface areas

near the foundation. A second field phase was conducted from March 31 to April 11, 2003, to excavate selected areas of the dairy, smokehouse and log structure outbuildings also concentrating on the subsurface areas near foundations.

REMOTE SENSING

The non-invasive identification of subsurface features on archeological sites using geophysical technology has become prevalent in the United States as equipment and individuals trained in its applications have become more available. The Arkansas Archeological Survey has developed this capability. The second week of the investigations was devoted to remote sensing applications by a team led by Jamie Lockhart, AAS remote sensing specialist. The area immediately surrounding the plantation house was staked with 10 meter by 10 meter grids and the grid system was systematically extended to the larger open areas (that were not planted in cotton) to the south and west as the budgeted time allowed.

Although the team used three geophysical techniques, magnetometry, electrical conductivity and electrical resistivity, only the latter technique was used on all the grids. Electrical resistivity measures changes in resistance to a weak electrical current fired into the soil through a series of probes. It is not overly sensitive to metal objects in the sediments (present in abundance at Lakeport) and the configuration of the equipment allows a single operator to cover a two meter wide transect on a single pass. Magnetometry and conductivity applications require four passes to cover two meters. An unusually wet August provided constant replenishment of soil moisture levels needed for optimal equipment performance. The data recorded by the resistivity apparatus is converted to a grey palette after computer processing (Figure 1), visually displaying the pattern of high (black) and low (white) resistance values for interpretation. A general rule of interpretation is that nature is responsible for irregular patterns and humans are responsible for geometric ones.

The patterns displayed in Figure 1 are red highlighted in Figure 2. Particularly interesting are the dark indications (markedly high values) adjacent to the south, east, and north foundation walls of the house as well as the dark band running east-west from the front porch at the right side of Figure 2. Stewart-Abernathy's oral history informants identified a brick walkway in the front yard interpreted to be the dark band. Excavation later exposed the walkway. The high values next to the foundation were interpreted as a massive brick footing, but this proved to be an oversimplification. Excavation showed the foundation shadow on Figure 2 was a brick paving skirting the entire house, an unprecedented feature in Arkansas architecture. The density and distribution of patterns behind (west of) and south of the house show an intriguing accumulation of features including possible fence lines, water lines and road ways (linear patterning) and vanished buildings (rectangular patterning). The importance of geophysical data at the outset of the project cannot be over-emphasized; remote sensing data from as large an area as possible allows the identification of the whole plantation complex including vanished structures that now only exist in old photographs or memories. The practical consequences are unintended destruction of features can be avoided, and where that is not possible, future excavation can be targeted to specific anomalies rather than wasting costly field time attempting to locate possible features.

EXCAVATION STRATEGY

The excavation strategy was predicated on a long-term commitment to study and restore Lakeport Plantation. Thus there was no necessity to identify and attempt to answer every research question in a single field session. Archeological field work was designed to collect information from contexts that were potentially threatened by stabilization and reconstruction. Those contexts were the exterior foundation around the main house, the detached kitchen, and the connecting commissary (Figure 3). The large cistern in the rear court yard formed by the commissary ell and the small cistern off the northwest corner of the kitchen were also scheduled for repair, and both were tested.

The research questions guiding the fieldwork were generalized from the direct experience of the historic archeologists and historic architect at other mid-nineteenth century structures at Old Washington State

Lakeport Mansion, Chicot County, Arkansas

Electrical Resistance

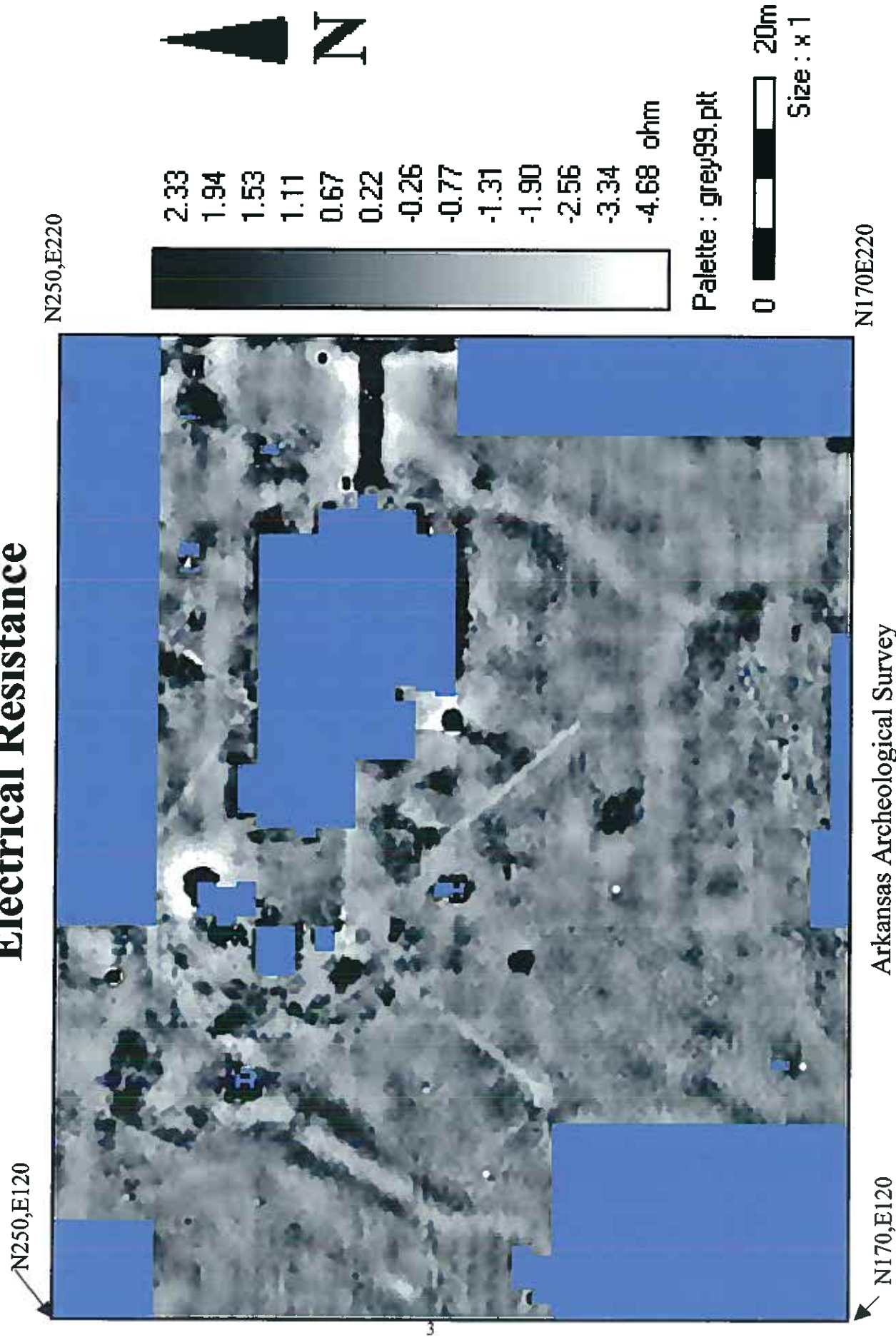


Figure 1. Grey palette image of resistivity values.

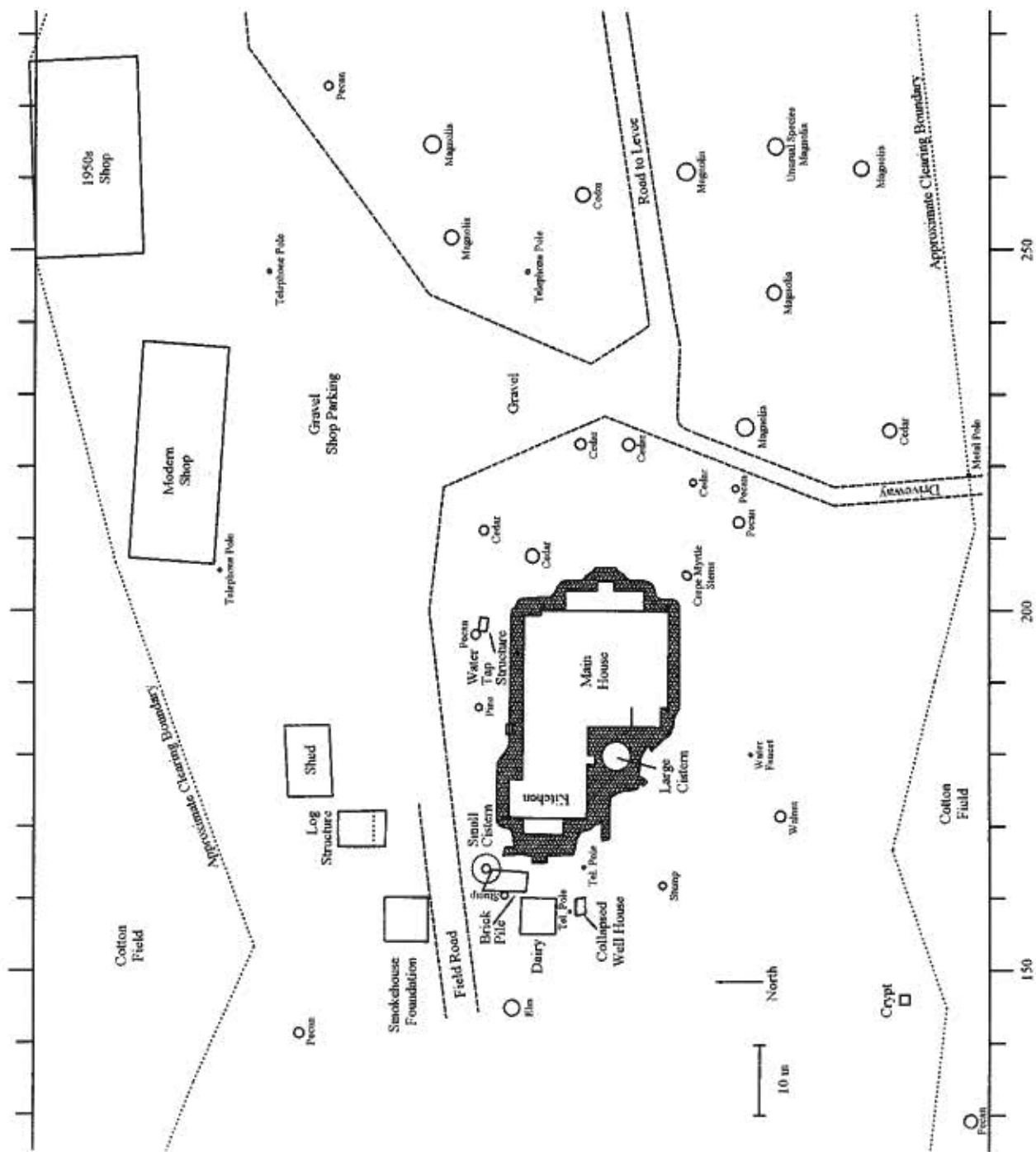


Figure 3. Plan of plantation core area with brick paving mapped.

Park, the Old State House and Arkansas Territorial Restoration (now Historic Arkansas Museum). In most cases excavation units served a dual purpose, uncovering historical detail as well as addressing structural engineering concerns. The questions we sought to answer were: What did the pre-construction landform look like? Was there an earlier occupation on the site? How was the foundation constructed – in narrow builder's trenches? What does the foundation look like and is it adequate to continue in its function or must it be rebuilt? What does the chimney footing look like and is it adequate to continue in its function or must it be rebuilt? Was the commissary ell original or was it constructed later to join a detached kitchen to the house? Were the existing steps originally configured differently – larger or smaller? How were the missing original steps configured? Does the herringbone pattern brick walkway next to the front porch lead anywhere or is it only decorative?

Excavation units were placed next to the foundation and keyed to a datum (N200 E200) set south of the southeast corner of the house. Against the foundation, units were usually 1 m x 2 m, and expanded to 2 m x 2 m where necessary. To investigate some specific areas suggested by site-generated hypotheses, we opened small irregular shaped units later mapped with the total station. Sediments were screened through ¼ inch mesh to retrieve artifacts; these bagged and tagged for later analysis. Recent artifacts, recognizable as modern discards (i.e., trash) were not collected. Similarly, large iron objects associated with modern agricultural equipment were not collected. Deeper units were excavated in 10 cm levels through fill deposits and screening terminated when the undisturbed alluvial B or C horizon sediments were reached. By the end of the spring fieldwork the crew had excavated 24 one by two meter units, 6 two by two meter units and 7 irregular units.

Excavation unit level recording forms and, where necessary, feature forms were completed for each 10 cm level or possible feature, and both color slide and black and white photographs and floor plan drawings were made. Representative wall profiles of each unit were drawn, described, and annotated with Munsell soil color designations. The project archeologist also maintained detailed daily notes during all phases of the excavations. Vertical and horizontal control was maintained with a total station from an arbitrary datum set southeast of the site. A USGS benchmark set just north of the front yard was found to have been destroyed, so an arbitrary value of 45 meters above sea level (estimated from USGS Quadrangle maps) for the elevation was used throughout the excavations.

At the end of the fieldwork a copies of all annotated scaled profile maps, a set of color slides documenting architectural features and digital mapping data for all topographic and site plan mapping were provided to Witsell, Evans and Rasco for their use in restoration planning.

ARCHEOLOGY OF LAKEPORT PLANTATION HOUSE

The following section presents the interpretation of architectural features exposed and documented during the excavations in 2002 and 2003 in the context of the research questions posed in the forgoing section.

LANDFORM

The present topographic surface surrounding the Lakeport Plantation house, like much of the Arkansas delta today, is deceptively flat. This is a recent phenomenon resulting from deforestation, erosion, plowing, historic floods and land leveling on a massive scale. In the nineteenth century the natural topography of floodplain was undulating; high natural levees along active and abandoned channels declined into back swamp areas that were wet most of the year and alternating ridges and swales denoted the surface of both levees and terraces and terrace remnants. On the floodplain and terraces, elevation differences of as little as a few inches often determinanted of what flooded and what stayed dry in all but the worst flood years.

The plantation house at Lakeport, built in 1859, would have been erected on the highest ground available near the preferred site, probably a low ridge. The present topography indicates the house is sited

along a northeast-southwest trending low ridge on the back side of the natural levee of the Mississippi River. The ridge was identified from the plotted elevation readings and is not perceptible to persons on the ground. However, we cannot be sure the present surface reflects the nineteenth century surface. Excavations in late summer 2002 and in the spring of 2003 documented numerous surface fill deposits around the plantation core. Many are relatively thick and they appear to be discontinuous, rendering identification of an 1859 surface impossible at present.

One area where the original landform is identifiable, albeit in an altered form, is next the foundations. One of the surprises of the fieldwork was the discovery that the brick herringbone paving exposed in the southwest corner of the front porch was not a walkway, but a continuous brick paving that extended completely around the house (discussed below). Construction details prove that it was built at the same time as the plantation house and is not a later addition. Thus, the paving seals an 1859 land surface, and while this was found to be technically true, that surface was not an undisturbed one. It was composed of two fill episodes backfilled during the construction of the house. The implications of these fill horizons are discussed below.

FOUNDATIONS

The standard method of constructing foundations, both historically and today, is to dig a wide U-shaped trench into compacted soil and to put down a brick or concrete pad called a footer to support the foundation wall. The footer is always wider than the foundation wall. When finished, the foundation wall bisects the original U-shaped trench and backfilling the trench creates two features, an inside and outside builders trench. A builders trench is usually little wider than the footer and parallel to the foundation wall. Lakeport Plantation was notable in that there was no builders's trench next to the foundations.

Six 1 x 2 m units were dug to the bottom of the foundation footer at the corners of the main house and kitchen. The footers and foundation walls are massive structures of low-fired, hand-made bricks. The vertical foundation walls sit on footers composed of four courses of bricks, each extending out a half brick width (measured along the long axis) beyond the course above, a brick laying process called corbeling (Figure 4). The thickness of the walls could not be determined, but the corbeling process would result in a 4:1 footer to wall ratio, providing a very wide bearing surface for the two story structure. The elevation of the lowest footer course differed less than six centimeters (2.4 inches) from the mean along the entire foundation indicating the original construction was probably measured with a spirit level or optical instrument.

The original foundation wall exterior was covered with stucco made from the same soft lime mortar used to cement the bricks of the foundation together. Above bellum stucco has either weathered off or been overlain with modern Portland cement stucco. In a few places along the front of the house, the earlier tan stucco can be seen under the white Portland cement where it has deteriorated. Below the paving in the front of the house, original stucco still adheres to large sections of the foundation wall. In two units the original stucco extends to three courses below the paving where it forms a

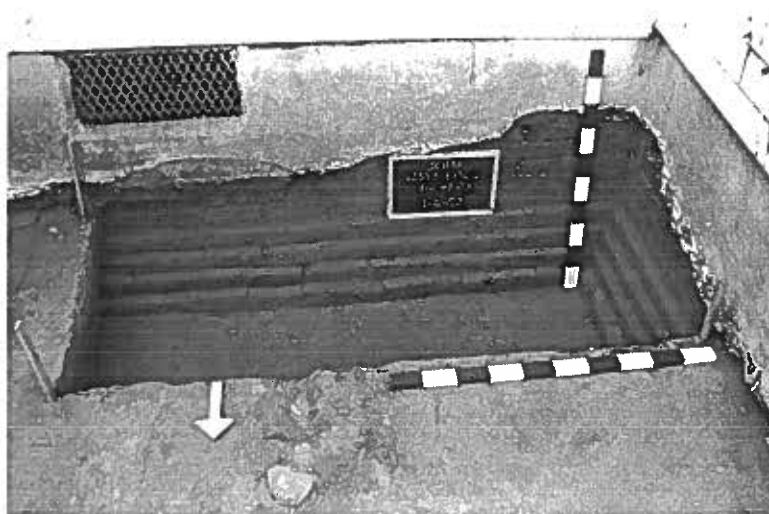


Figure 4. Foundation test unit at juncture of east kitchen wall and north commissary wall. Note corbeled footer. (AAS Neg. No. 2002 5333)

horizontal lip over the first corbeled course, but a centimeter or two above the brick indicating the foundation was partially backfilled before the stucco was added.

The foundation units were one meter wide, which should have been ample room to expose a builder's trench if present. Rather than a definable trench though, two fill deposits extended across the entire profile (Figure 5). Further, this same fill profile was found in all the foundation units opened around the exterior of the house and in the one chimney base unit under the house. This consistent profile can only be explained by large scale earth moving, rather than the more targeted hand-dug builder's trenches.

Prior to laying out the foundation the top of the ridge apparently was removed, possibly using mule drawn slip scoops well-documented in nineteenth century levee construction. The upper sediments were pulled away down to the undisturbed C horizon, and the footprint of the foundation leveled. Once the exterior foundation walls, porch piers, interior wall foundations, chimney footers and brick drains were built, the interior spaces were backfilled and the exterior spaces next to the foundation partially backfilled (Figure 5, Ap2a horizon) to the top of the corbeled footer. The exterior foundation walls were stuccoed, and the house framed and exterior sided. At some point during construction a very clayey fill was added (Figure 5, Ap2 horizon). This fill contains a heavy admixture of brick fragments, mortar and copious cut nails in all construction use sizes, indicating it was either in place during the most active construction or stockpiled at the edge of the immediate construction area.

The Ap2 fill is not Commerce silt loam, the soil type underlying the house, but may have been selected for its clay content to form a relatively water resistant surface under the paving. The final construction phase was the landscaping of the exterior installing a brick paving apron in a herringbone pattern surrounding the whole house.

No artifacts, such as domestic dishes, were recovered from below the paving that would suggest an earlier occupation of the house site. All of the artifacts from below the paving were related to construction of the plantation house itself. Similarly, no features attributable to an earlier occupation were encountered either.

One of the research questions posed by the configuration of Lakeport plantation house was whether the kitchen was originally attached or the ell was a later addition. The ell was not a later addition. A foundation unit placed at the critical juncture of the kitchen east wall and the north wall of the ell (Figure 4) showed each alternate course of bricks was undamaged and interbedded from the bottom of the footer to the top of the foundation wall. This could only have been done at the time of construction without heavily damaging the soft low-fired bricks.

Finally, the exposure and recording of the massive foundations allowed a structural engineer to review the documentation and certify the foundation as adequate to continue in its function. The consequences of this certification not only save grant restoration funds that can be applied to other priorities, but obviate the need to disturb the intact archeological deposits elsewhere around the foundation.

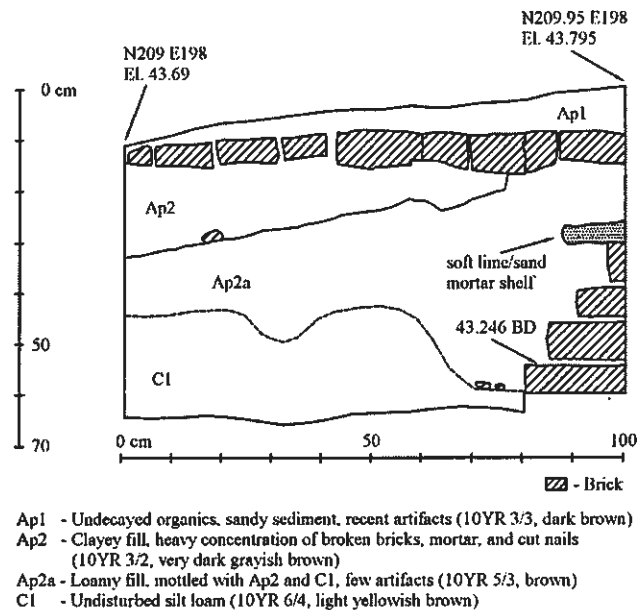


Figure 5. Foundation test unit west profile wall, southeast corner of the house.

PORCH FOUNDATIONS

One of the foundation excavation units was placed at northeast corner of the front porch and dug to the bottom of footer. It was somewhat of a surprise that we uncovered four corbeled brick courses at the same elevation as the house foundation units. The front porch footer was constructed the same as the house wall foundations, though the latter were designed to carry two story load-bearing walls. Such a massive foundation wall was not necessary for the relative light weight of the porch.

The northeast porch foundation was not uncovered, but its construction appears to be identical to the front porch. We removed deteriorated floorboards from the porch deck and exposed the top of the foundation wall. This was three wythes wide (a wythe refers to the width of a brick, in this case about 10 cm), probably the minimum thickness of the house foundation walls.

Three well-preserved, original low-fired brick porch piers were found still in place under the west-facing kitchen porch. The original remnants were under three modern piers rebuilt of highly vitrified brick, but the new piers were partially off-set at ground surface. Excavation to the footer of the central original pier exposed four corbeled brick courses supporting three surviving courses of original brick, again at the same elevation as the house foundations. The same soil profile of three horizons (Ap2, Ap2a, C1) was uncovered under the paving.

One of the piers supporting the corner of the butler's pantry at the southeast corner of the main house also was excavated and found to be identical to the kitchen porch piers. Like the continuous foundations of the front and northeast porches, the piers at the rear of the house were also over-built and much more massive than necessary.

CHIMNEY BASE

The chimney base footer was excavated in an irregular unit placed in the crawl space on the north face of the southwestern chimney (in the Doctor's Office, west of entrance foyer). It was dug to a depth of 50 cm below the ground surface. This exposed 11 courses of corbeled bricks supporting six visible courses of fireplace chimney stack. The width of the stack is 1.45 m, width of corbeling at both sides is 1.1 m making the overall width of footer 2.5 m. We could not observe north-south dimension, as the interior foundation wall was laid up against the chimney. The resulting soil profile is important as it indicates the portion of the building site covered by the house was prepared the same way as the near foundation areas on the exterior. The bottom course of footer is set into the C horizon, and the first fill deposit above that is identical to Ap2a in foundation units. This fill has virtually no artifacts and is capped with a fill of heavily mixed brick rubble, bats and mortar matching the upper fill Ap2 on the exterior. Very few nails were noted indicating the Ap2 fill was created in the process of finishing the brickwork. The floor joists and flooring for the first floor must have been installed soon after the interior spaces were backfilled sealing the crawl space off from deposition of dropped or discarded nails.

STEPS

Steps were present originally at five locations around the house: the main entrance at the front porch, the small northeast porch, the east facing door on the north side of the kitchen, the west facing porch at the rear of the kitchen and at the porch along the commissary ell facing the large cistern.

The former step location at the front porch was marked by disruptions to the herringbone paving pattern. The bricks of the paving have a linear gap parallel to the porch about where the riser of the extant replacement steps rest. But the gap is wider than the present steps, spanning the distance between the inside of the porch columns, about three meters. The bricks in front of the bottom step are uneven and worn, indicating the rise and run of the extant replacements are the close to the same as the original steps. In cleaning off paving around the steps, we found what appeared to be a course of bricks with mortar on

the top faces set lower than the surrounding paving. This could indicate the base of the original steps were supported on low brick piers, disassembled when narrower replacement steps were emplaced.

The brick paving extended all the way to the foundation at the front porch, but did not to the foundation of the northeast porch. Here, a linear row of bricks three wythes wide in a running bond pattern defined the bottom riser of the steps about 65 cm east of the front wall of the porch. This distance roughly matches extant photographs of the northeast porch steps.

A third set of steps is indicated at the east facing door of the kitchen. A photograph of the north facade shows a short deck off this doorway, and the archeology confirms a substantial low-fired brick pier support system. Two piers supported the north and south sides of the deck, each three wythes (35 cm) wide, and 1.3 m long resting on the Ap2 fill sediment. The south pier was built against the commissary wall and had four courses preserved; the north pier had only two courses preserved. A small, poorly preserved rectangular pier was midway between the two, only one course thick placed even with the north end of piers. This probably marked the end of deck at the first step down. No brick paving was present in the space covered by the deck and steps. A row of linear bricks 2.2 meters east of the wall marked the bottom riser, and bordered the herringbone patterned paving. The steps associated with the west kitchen porch and the commissary ell facing large cistern were not investigated.

PAVING

A surprising discovery during excavations was the presence of an extensive formal brick paving completely surrounding the plantation house. At first the Lakeport team thought the small area of exposed herringbone pattern brick work represented a walkway, but excavation quickly revealed the paving to be continuous across the front of the house, for the most part buried under windblown or water transported sediments. In the backyard it was buried under fill deposits.

The paving is defined by a soldier course of bricks laid on edge along their long axis at the outside edge. The soldier course was laid in a sinuous pattern from the front walk curving to a straight line parallel to the porch, then curving again through the corner formed by the front porches and the house. It straightens across the front of the northeast porch then curves around the northeast and southeast corners of the house and parallels the length of the house (Figure 3). Behind the soldier course whole bricks are laid flat in a herringbone pattern filling in all the area between the edge and the foundation. Along the north and south facades the width of the paving averages about 1.5 m (Figure 6) and dipped away from the foundation.

It apparently served both an aesthetic purpose and a practical purpose of diverting water away from the foundation, as well as preventing mud from splashing the siding.

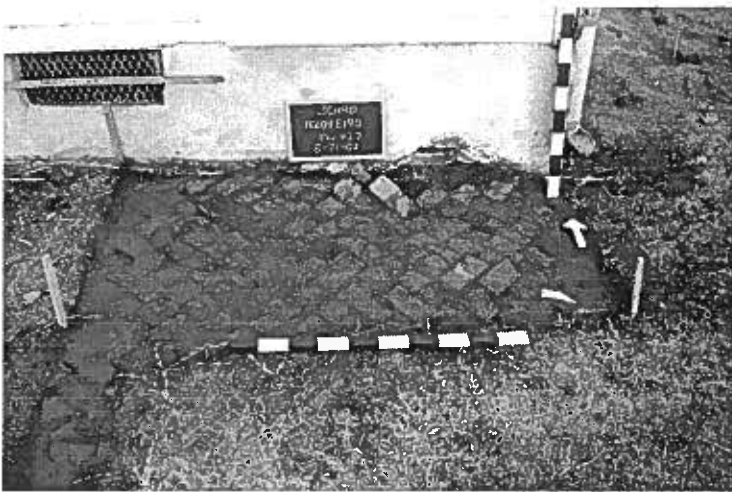


Figure 6. Brick paving at southeast corner of the house before excavation. Soldier course is in the lower left corner. (AAS Neg. No. 2002 5145)

In the back yard work areas the paving takes on a different and decidedly functional character. The soldier course is still present, but the curving symmetry is gone. In following the soldier course to define the extent of the paving, four walkways were defined (Figure 3). Two walkways were directly behind the kitchen; one went to the doorway of the dairy and the second terminated southeast of the small cistern, possibly at a now vanished lattice structure (dis-

cussed below). Two other walkways diverged from the paving in the commissary ell. One was southwest of the large cistern, but terminated within a few meters. The other headed due west, but was not followed to its end. These, too, are arrows pointing to former outbuildings or activity areas behind the house.

Although the paving was penetrated to repair or emplace utilities, the herringbone pattern was not restored after disturbance. All the penetrations were easily recognized and mapped because the brickwork was either thrown back as rubble or replaced with a simple running bond pattern.

WALKWAYS

The front walkway was highly visible in the remote sensing map (Figure 1) and when scaled measured about three meters wide. We probed across the area of the image and hit a solid surface a few centimeters below the sod measuring 2.9 meters wide. Excavation at the edge of the walkway exposed a narrow brick walkway just under the present surface. Made of highly vitrified bricks laid end to end in a running bond, this narrow walk lay on top of an earlier low-fired brick walkway. The portion of narrower walkway exposed was 35 cm wide and the earlier walkway extended 75 cm wider; both are only partial exposures of the south side of the front walk as identified in the geophysical map.

A unit placed next to the south edge showed the earlier walk was placed on top of a fill deposit composed of brick rubble which in turn lay on top of an undisturbed C horizon. The rubble horizon extends as far north as the north end of the front porch and probably farther north and east. This indicates a more pronounced topography once existed in the front yard than is visible today, perhaps part of the lower front side of the ridge requiring fill material before a walkway could be built.

BOX DRAIN SYSTEM

A second surprise of the excavation was the discovery of an underground brick box drain system that collected rainwater from the roof via wooden gutters and metal down spouts and funneled it to the two cisterns. The brick box drain system consists of a hollow box (for lack of a better term, called a drain box) constructed of mortared low-fired bricks, which takes the discharge of the down spouts and carries it away in hollow rectangular tunnels made of mortared bricks called the drain or box drain (Figure 7). The throat of box drain tunnel is higher than the total depth of the drain box, allowing it to function as a silting basin too. The entire system is gravity driven, so the drains slope toward the cisterns. The same type of underground brick drain system was discovered at the Old State House in Little Rock. The large cistern in the commissary ell and the small cistern northwest of the kitchen were fed by separate systems.

The small cistern was filled with water collected through three drain boxes. The first was at the northeast corner of the house, the second on the north facade at the west end of the northeast porch and the third was at the northwest corner of the kitchen. All three were connected to a single box drain that originated at the northeast corner of the house. The top of the box drain was at the surface of the paving in front of the northeast porch steps, but became

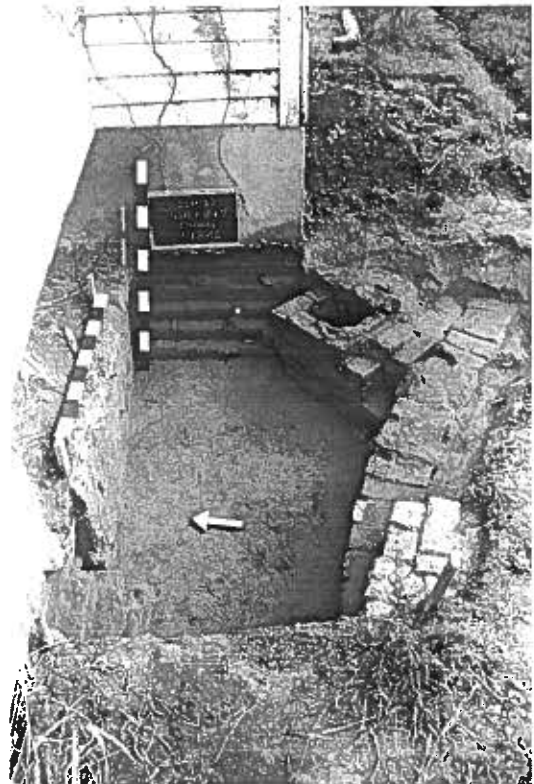


Figure 7. Excavated box drain and brick drain to large cistern at southwest corner of house. The lighter bricks at the lower right corner are paving bricks. (AAS Neg. No. 2002 5397)

progressively deeper as it curved west around the porch dipping under the paving shortly after turning west. Beginning at the second down spout, the original brick box drain had been partially removed and replaced with round salt-glazed tile. The replacement could be traced on the surface of the paving by a linear area of disrupted brick pattern.

The large cistern was similarly filled, but by only two drain boxes, one at the southeast corner and one at the southwest corner of the south facade of the house (Figure 7). The box and drain were just below the surface of the paving at the southeast corner of the house, and the drain became deeper as it progressed west under the paving. At the second drain box the drain began curving sharply to the north to clear the butler's pantry pier and enter the large cistern. This prompted a question: why is the smaller cistern filled by three box drains and the larger cistern only two?

A unit was excavated at the southwest corner of the kitchen and at the inside of the ell next to the cistern to search for additional drain boxes. None were found. The kitchen foundation at the southwest corner had been rebuilt at some point using highly vitrified bricks, and the paving had been removed from most of the 1 m x 2 m area of the unit. A water line from the nearby pump house also crossed the unit. Both modifications could conceivably have destroyed a drain box, but few brick bats from a demolished feature were found in the fill. Elsewhere, the pattern of subsurface disturbance was restricted to the immediate area of the remodel, a remnant of the original feature was always present.

An undated twentieth century photograph shows a gutter suspended from the intersection of two roof lines at the inside of the ell, obviously filling the large cistern from the top. This mode of filling may very well represent a holdover from an earlier, original method of charging the cistern.

ARCHEOLOGY OF THE OUTBUILDINGS

DAIRY

One excavation unit was placed at the northwest corner of standing brick dairy. Three different layers of artifact-laden fill capped the surface. A builder's trench appeared at 30 cm below the surface, measuring about 27 cm wide parallel to the north wall. It did not extend beyond the corner. The builder's trench was filled with $\frac{1}{2}$ bricks (Figure 8), but no other artifacts were found except a small piece of glass and two cut nail fragments. The footer was comprised of four courses of low-fired bricks, but only the top two were corbeled. The bottom two courses were aligned under second corbeled course.

The profile of the north wall of the unit showed no builder's trench on the west dairy wall. Instead, a thin line (ca. 2 cm) of fill was defined next to the second corbel, but the undisturbed C horizon is in direct contact with the second, third and fourth courses. This means that on the west side the dairy the builder's cut a straight wall into undisturbed sediments and bricks were laid against the dirt wall as a form. The stratigraphic profile exposed at the dairy is a C horizon overlain with three separate fill episodes, none of which correspond to the Ap2 horizons next to the house. The sediments underlying the dairy indicate the site is not part of the large

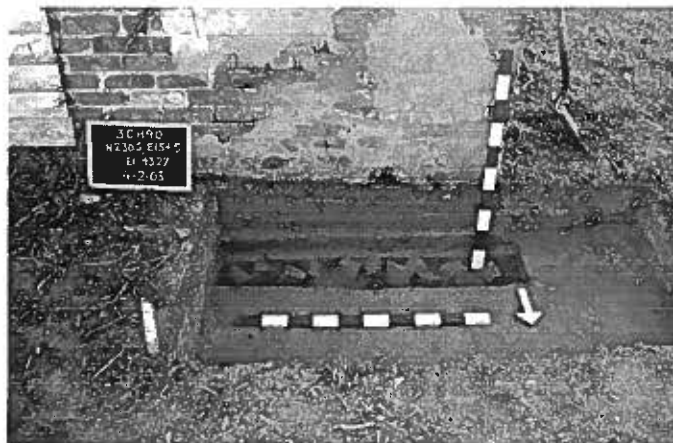


Figure 8. Builder's trench exposed at the northwest corner of the dairy. Note only two corbeled courses. (AAS Neg. No. 2003 2544)

scale earth moving seen at house. The edge of the large house excavation pit must lie between the dairy and the kitchen porch.

SMOKEHOUSE

Two excavation units were placed on the footprint of the demolished smokehouse, one outside the east wall and one across the west wall foundation. The east wall unit uncovered three distinct fill horizons on the exterior side. After digging through the fill, a well defined builder's trench 18 cm wide was defined in the C horizon at about 30 cm below the surface. The upper portion of the builder's trench was disturbed by later emplacement of a steel water pipe, but identifiable below it. The builder's trench was devoid of artifacts except for a small fragmented wine bottle. The base was found in the trench, but the matching body fragments were in the portion of the builder's trench disturbed by the waterline above. The low-fired brick footer underlying the east wall is identical to the dairy, four brick courses with only the first two corbeled and second two aligned under second corbeled course. Three brick courses of the wall are preserved above the footer.

The west unit straddles the foundation wall half inside the smokehouse and half outside. The smokehouse floor is brick covered. All of the bricks exposed in the unit are half bricks, possibly waste from the construction of the house and outbuildings. The floor bricks were laid in a running bond pattern perpendicular to the east and west walls. Removal of the bricks left thin lines of lime mortar and sand as if the interstices of the bricks had been filled by the builders. Underlying the brick floor were two fill deposits of very sandy silt loam, both contained fine brick and mortar fragments and some larger chunks of broken bricks, but no other artifacts. These deposits were underlain by undisturbed B/C horizons.

The west half of the unit showed a very different soil profile. Here two fill deposits, much darker than the subfloor fill, were full of artifacts. The upper fill was heavily laden with brick and mortar and may be the result of the demolition of the smokehouse in the 1980s. Both of these fills overlay what appears to be a natural A horizon that may be the original nineteenth-century surface. The A horizon at the west end of the unit is 10 cm lower than the top of B horizon under the floor. This indicates the smokehouse was built on a slope, part of the ridge defined by the topographic mapping.

The foundation wall itself is two wythes (20 cm) wide and identical to the east unit, however only two courses of wall above the corbeling were preserved. The two courses of corbeling extended the footer to 40 cm in width. A builder's trench was clearly defined in the C horizon at 30 cm deep on both sides of the wall; 13 cm wide on the outside (west) and 8 cm wide on the inside (east). Again a single broken wine bottle was found in the builder's trench on the outside of the building, but no other artifacts.

LATTICE BUILDING

Analysis of the panoramic photographs taken from the grove of trees in the front yard has identified a wooden lattice structure behind the kitchen and between the dairy and smokehouse. Two 2 m x 2 m excavation units were placed on the east side of the small cistern to investigate this area. The artifact assemblage recovered from the units was dominated by nails, both cut and wire, but no postmolds, piers or other structure indications were present. However, the large number of nails from the units would be consistent with the fasteners needed to hold together a lattice outbuilding.

While tracing out the soldier course of the brick paving in the back yard, a single walkway was defined pointing east toward the small cistern. A substantial path 1.2 m wide bordered by soldier bricks and infilled with paving led to the test units and terminated as if at a vanished threshold. If the lattice structure identified in the backyard area did indeed cover the cistern, the walkway would appear to approach the corner. Another photograph of two African-American women, tentatively identified as Johnson family servants, shows them both standing in front of a lattice building. A door appears behind them, possibly in a corner of the structure, but the field of view is too narrow to recognize known landmarks.

LOG STRUCTURE

A log structure located north of the kitchen appeared to be part of the plantation complex, but had been converted for use as a garage. The original use of the structure seemed to be as a cabin indicated by the presence of windows, a door and random width tongue and groove flooring. The latter had been cut out for the garage and the south wall extended.

Two excavation units were placed to test an apparently undisturbed area along one wall. One unit was outside the east wall and one was placed parallel on the inside. Two areas of single courses of low-fired bricks were present under the wall at north and south ends of the outside unit. The brick courses were directly under the lowest log at the same elevation, but were 20 cm below the bottom of the log (Figure 9). Low-fired brick fragments and lime mortar fragments were recovered at the same level of the bricks. The two courses of bricks appeared to be the remnants of demolished piers from an earlier structure. A jumble of low-fired bricks was found in the north end of unit. The north pier appears to be resting on bed of mortar in turn resting on an undisturbed B horizon. Artifacts were plentiful, but mainly agricultural, though some cut nails and domestic items could be from a cabin occupation. The inside unit exposed the west side of the same piers. The bricks at north end formed a single course on the same mortar bed. A second jumble of low-fired brick was buried at the south end of the unit, but several were aligned with single course on exterior. This would make the pier about 30 cm (three wythes) wide.

The piers are buried under about 20 cm of fill and do not appear to have supported the present log wall. The north pier appears tumbled down to the east and the south pier tumbled to the west during purposeful demolition. Although the log structure may well be quite old, it was not original to the building site and may have been moved in from elsewhere after the previous structure was removed.

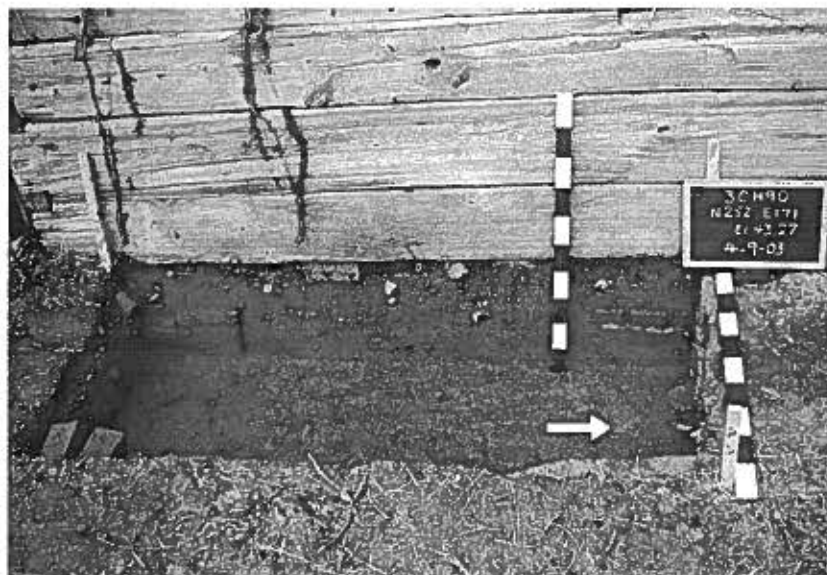


Figure 9. Two pier remnant brick courses in profile wall under lowest log of cabin. Note mortar bed under the brick at the north end (right side) of unit. (AAS Neg. No. 2003 2604)

SUMMARY CONCLUSIONS

Prior to laying out the house foundations the top of the ridge apparently was removed, probably using mule drawn slip scoops well-documented in nineteenth century levee construction. The upper sediments were pulled away down to the undisturbed C horizon, and the footprint of the foundation leveled. The elevation of the lowest footer course differed less than six centimeters (2.4 inches) from the mean along the entire foundation, some 35 meters along the long axis of the house, indicating the original construction was probably measured with a water level or optical instrument. Once the exterior foundation walls, porch piers, interior wall foundations, chimney footers and brick drains were built, the interior spaces were backfilled and the exterior spaces next to the foundation partially backfilled with Ap2a sediments to the top of the corbeled footer. The exterior foundation walls were stuccoed, and the house framed and exterior sided. At some point during construction a very clayey fill, Ap2 sediments was added. This fill contains a heavy admixture of brick fragments, mortar and copious cut nails in all construction use sizes, indicating it was either in place during the most active construction or stockpiled at the edge of the immediate construction area. The Ap2 fill is not Commerce silt loam, the soil type underlying the house, but may have been selected for its clay content to form a relatively water resistant surface under the paving.

The final construction phase was the landscaping of the exterior and installing a brick paving apron in a herringbone pattern surrounding the whole house. The brick dairy and the smokehouse were constructed at the same time as the house, but probably after the house was mostly completed using the remaining bricks. The brick dairy was standing by the time the paving walkways at the rear of the house were installed.

We may never know who built the various components of the original plantation house and outbuildings. One can speculate, probably correctly, that the elaborate plaster work cornices or faux marble mantelpieces inside the house were the work of master craftsmen imported from outside the immediate vicinity. But the unskilled or semi-skilled heavy labor of digging the house pit, making bricks, cutting timber, cleaving wooden shingles and carpentry were almost assuredly tasks carried out by work gangs drawn from the 150 slaves Lycurgus Johnson is known to have owned at the time. The architectural details of the standing plantation house bespeaks of the wealth, sophistication and planning of its owner. Its restoration is also a less obvious monument to the persons who were responsible for executing those plans, and upon whose labor the cotton empire was founded.