Logs, labor, and living: an archaeological investigation of African-American laborers at the Upper and Middle Landing sawmills at Natchez-Under-the-Hill

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LOGS, LABOR, AND LIVING: AN ARCHAEOLOGICAL INVESTIGATION OF AFRICAN-AMERICAN LABORERS AT THE UPPER AND MIDDLE LANDING SAWMILLS AT NATCHEZ-UNDER-THE-HILL

A Thesis

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in

The Department of Geography and Anthropology

By
Jerame Joseph Cramer
B.S., University of Southern Mississippi, 1995
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ABSTRACT

By combining investigations of two sawmill complexes at Natchez-Under-the-Hill, Mississippi, and ethnohistoric data from contemporaneous mill operations in the region, this thesis analyzes aspects of two mid-nineteenth century lumber operations. It focuses not only on the machinery and technology involved in these operations, but also on the individuals, many of whom were enslaved prior to the Civil War, whose skills and labors provided the backbone for these early milling enterprises. The data for this research were derived from archival documents, oral testimonies, and artifacts recovered from archaeological survey and excavation. The archaeological data comes from excavations carried out at the circa 1841-1870 Brown Cozzens Sawmill (the Well site 22AD993) in the summer of 1999 and the survey in the spring of 1999 of the Learned Mill Road Area.

Archaeological survey of the former Andrew Brown-Rufus Learned sawmill at Upper Landing and excavations at the Cozzens sawmill at Middle Landing yielded valuable information regarding the spatial layout of the mill complexes as well as details about the working and living conditions at these sawmills through time. At the former location of the Andrew Brown sawmill, only a few artifacts were recovered in the survey dating to the operation of the mill at this location from 1818 to 1917. Archaeological investigations at the former Cozzens Sawmill yielded information on the location and operation of this sawmill complex along the riverfront. A brick foundation provided information on the orientation and placement of the historic sawmill and its mechanical operation. Artifacts excavated from a brick-lined well represent an archaeological assemblage from a mid-nineteenth century sawmill complex. Parts of the mill’s machinery, food items, medicine bottles, clothing material, and personal items were excavated from the feature.

Through the analysis of the Upper and Middle Landing sawmill operations, which involved the compilation of various textual source, a greater understanding of not only the financial and technical operation of a mid-nineteenth century sawmill in Natchez was garnered, but a greater insight was gained into the social and spatial workings of a mill operation and the dangers workers faced during this turbulent time.
CHAPTER 1: INTRODUCTION

The history of commercial lumbering in the Lower Mississippi Valley spans from the colonial period through the present. Unfortunately little documentation exists on the early development of this industry, especially the pivotal period from the 1820s to the Civil War. Even less is known about the enslaved African-American laborers who were the primary labor force for the timber industry especially in the Lowland South prior to the Civil War. Through the investigation of two sawmill complexes at Natchez-Under-the-Hill as well as ethnohistoric data from contemporaneous mill operations in the region, this thesis attempts to reconstruct aspects of a mid-nineteenth century lumber operation focusing not only on the machinery and technology involved in the operation, but also on the individuals who skills and labors provided the backbone for these early milling enterprises.

The data for this research were derived from archival documents, oral testimonies, and artifacts recovered from archaeological survey and excavation. By attempting to bridge various historical and material resources, this thesis provides a more complete context for the artifacts recovered from excavations at two sawmill operations at Under-the-Hill. This includes providing functional data regarding the lumber mill complex layouts and providing social information about daily activities around the mill complex through time. Such information includes the location of activity areas, residences, and features and data related to the lifeways of the mill workers and residents such as social and spiritual activities, foodways, gender roles, skills, racial divisions, class divisions, health care, and population demographics. Through ethnohistoric analogies from contemporaneous accounts of lumber production, the archaeological assemblage, and archival data, this thesis discusses elements of everyday life for the laborers at two lumber mill plantations at Natchez-Under-the-Hill, Mississippi, focusing particularly on the period, from about 1820 to 1870.

The archaeological data comes from the study of two mid- to late-nineteenth century lumber mill operations at Natchez-Under-the-Hill in Adams County, Mississippi (Figure 1-1). Archaeological excavations were carried out at the circa 1840-1870 Brown Cozzens Sawmill (the Well site 22AD993) in the summer of 1999 (Figure 1-2). Survey and testing of the Learned Mill Road Disposal Area for the circa 1819-1917 Andrew Brown-Rufus Learned sawmill operation was carried out in the spring of 1999 (Figure 1-3).
Figure 1-1.
Location of the Learned Mill Road Area and the Well site (22AD993) at Natchez-Under-the-Hill (United States Geological Survey 1963).
Figure 1-2.
Location of the Well site (22AD993) relative to Minor Lots 16 and 17.
Archaeological fieldwork carried out within the Learned Mill Road Area. The fieldwork included: pedestrian survey, shovel tests, auger tests, and trenches. Note the location of the circa 1917 R.F. Learned sawmill site outside of the project area.
The excavations at the Well site (22AD993) and the survey and testing at the Learned Mill Road Area were carried out for the U.S. Army Corps of Engineers’ (USCOE), Vicksburg District’s Natchez Bluffs Stabilization and Natchez Riverfront Revetment projects. A distance of .5 km (3.25 miles) separates the two sawmill sites along the riverfront. Archaeological investigations took place in conjunction with background research, oral interviews, archival, and genealogical research. From the data recovered from the survey and excavation at the two sites, another objective of this study was to determine what a lumber mill archaeological assemblage from this period and region would look like and whether the assemblage could provide information on the technology employed at the mills through time? Thus, what were the material components of a sawmill operation during this time period? In the same manner, could the artifacts and their context help determine whether any of the artifact assemblage could be attributed to the laborers, enslaved or free, who worked at either the Brown Cozzens sawmill or the Andrew Brown Sawmill? If so, could information be ascertained from the assemblage regarding the lifeways (foodways, housing, clothing, medicines) of these workers and the gender and social makeup of the mill workforce?

Thus, an emphasis of this thesis focuses on the enslaved and free lumber mill workers at sawmills in southern Louisiana and Mississippi over a fifty-year period, approximately from the 1820s to the 1870s. Information on the daily life of mill workers was gathered from historic texts, oral narratives, historic maps, photographs, and archaeological excavations. Information was sought regarding the living and working conditions of laborers at the Brown Cozzens and Andrew Brown sawmills.

Another focus of this research dealt with the organization of space at an antebellum and early postbellum lumber mill site. I hypothesized archaeological and archival data would detect some residential, domestic and activity areas within an industrial sawmill complex. However, I felt that what domestic and personal space was discernable would also be very limited within an early sawmill complex. Another research goal was to investigate the temporal continuity and change within both the domestic and industrial assemblages from the two sawmill sites at Natchez-Under-the-Hill. Unlike the social and domestic assemblage of the laborers that shows continuity through time, technological advances were quickly changing and as a consequence the industrial assemblage provides evidence of an ever rapidly changing industry.
Historical Overview

The historical discussion of lumber mill operations begins with the initial establishment of water-powered lumber mills in the vicinity of New Orleans, Biloxi, Mobile, and other colonial settlements during the first few decades of the 1700s. Spanish, English, and especially French settlement and trade initiated a large commercial trade in timber and lumber in the Lower Mississippi Valley. Quickly after establishing forts and settlements along the coast of the Gulf of Mexico, French, and Spanish colonial authorities attempted to construct water-powered mills similar to those in seventeenth century Europe in order to exploit the vast wilderness of cypress, pine, and oak. The earliest saw mills and pug mills in southeastern Louisiana and the remaining Gulf Coast region occurred in or near the earliest European settlements like New Orleans, Natchez, Biloxi, Mobile, and Pensacola. As early as 1716 French authorities erected two water-powered sawmills in the area of Biloxi (Moore 1967:11, Surrey 1916:372) and possibly one upriver of New Orleans along the Chapitoulas coast (Bezou 1973:39).

From Mule to Water-Powered

Sawn lumber would have been available in Gulf Coastal ports quite early. Horse-drawn mills were found in the New Orleans area by the 1730s, and by the 1790s water-powered sawmills were built near the Mississippi River (Moore 1967:10-11; Vlach 1977:58, 60). Until the mid-1790s when sugar became profitable, despite the size and seasonal limitations of these early mills, lumber was the principal cash product for most of the French colonists near the Gulf Coast (Moore 1967:4). By the late-eighteenth century, the French administration realized that production of tropical products in Louisiana was not working and assigned the Louisiana colony a new role of supplying corn, livestock, and lumber to the French sugar islands (Moore 1967:5). Like agricultural production during this period, most of the labor used in felling and transporting timber was mainly enslaved Africans or African-Americans. However, not all such workers were enslaved, some were Free People of Color, Creoles, and Anglos or Acadians (Hall 1992; Sydnor 1933).

The American takeover of the Natchez District in 1798 and the Louisiana Territory in 1803 accelerated the development of the lumber industry across the Gulf Coast. Treaties, seizures, and sale of
Choctaw, Chickasaw, Creek, Chitimacha, Houma, and other Native tribal lands opened up more of the magnificent cypress, pine, and hardwood forests for timbering. An increasing demand for building materials in places like New Orleans and Pensacola fostered the development of more water-powered mills, brickyards, turpentine orchards, and other early industries along the rivers and bayous. Further assisting the development of the lumber industry in the Lowland South was the immigration of millwrights to this region.

Between 1810 and 1820 some of the earliest manufacturing industry along the Gulf Coast of Louisiana, Mississippi, and Alabama was erected along the bayous and rivers north of settlements at New Orleans, Biloxi, and Mobile (Figure 1-4) (Ellis 1981; Moore 1967). Along with water-powered sawmills and gristmills, brick kilns, pug mills, shipyards, and turpentine stills were also scattered across the coastal region by 1820 (Ellis 1981). Furthermore, enslaved African-Americans provided the skill and labor to operate many of these early antebellum industrial or manufacturing works (Hickman 1986; Starobin 1970).

Population growth and settlement in places like southern Louisiana and Mississippi placed a higher demand on the cypress, oak, and pine forests, and required more laborers. Consequently, the enslaved and freeman population in areas like Adams County, Mississippi, and St. Tammany Parish, Louisiana, found themselves more and more engaged in work outside of the agricultural-based economy and involved in crafts, trades, and small-scale industry. By 1850, in St. Tammany Parish, which is just north of Orleans Parish, the expanding manufacturing sector that included fifteen lumber mills, numerous brick kilns, charcoal operations and shipyards had become the leading employer for whites, slaves, and Free People of Color (Ellis 1981).

Steam-powered Mills

Some historians argue that the introduction of steam engines into the Lower Mississippi Valley during the first decade of the 1800s revolutionized the lumber industry overnight. Rather than revolutionized, it is more accurate to say that steam-power further industrialized and expanded the capacity of the already burgeoning lumber economy that was in place. Steam engines provided a more regulated daily output and a steady year-round power source. Consequently, there was a higher output of board feet, higher profits for owners, and an increased demand for timber and skilled laborers.
Although many historians associate steam-powered sawmills with the mid-to-late nineteenth century, by 1808, small, approximately twenty horsepower, steam-powered sawmills were established at four or five locations in the Lower Mississippi Valley including Bayou Sara, Manchac, Baton Rouge, New Orleans, and Natchez (Moore 1967:14-15). By 1820, there were eight steam sawmills in the state of Louisiana, six of which were in the vicinity of New Orleans and three of which were located on the batture in front of the city (Moore 1967:17-18). In Natchez, Mississippi, there were two steam sawmills constructed on the boat landing circa 1818 by Samuel Clements and Peter Little (Moore 1967:18; U.S. Census of Manufactures 1820).

By the 1840s several steam-powered sawmills were operating throughout the Lower Mississippi Valley and along the Gulf Coast of Alabama, Mississippi, and Louisiana. Geographically, these early steam-
powered sawmills were distributed along the major waterways, similar to the water-powered sawmills. Rather than needing the water for power, steam-driven mills needed access to water for transporting timber to the mill and lumber to market. Of course the proximity to the water also assisted in quickly carrying water to the boilers. Some mid-nineteenth century antebellum steam-powered sawmills included the Gunnison sawmill nine miles above Mobile, both Andrew Brown and Brown-Cozzens’ sawmills at Natchez-Under-the-Hill, Issac Franklin’s sawmill at Angola, Louisiana (Starobin 1970:26; Perrault et al. 2003), the Faures steam-sawmill in Gretna, Louisiana (Goodwin et al. 1985:254), the Foucher and Gardere sawmills near Harvey, Louisiana (Goodwin et al. 1985:254), the Millaudon steam-sawmill upriver of Barataria Road, Louisiana (Goodwin et al 1985:254), and Calvin Taylor’s sawmill in Handsboro, Mississippi (Hickman 1986). Unlike many of the water-borne sawmills, the steam-powered sawmills frequently operated year-round and sometimes day and night.

Part-time labor from farmers and slaves during the agricultural off-season increasingly gave way to more specialized workers, in particular enslaved Africans and African-Americans. The enslaved workers that milled and transported the lumber were either owned by the lumber firm or rented from other slave owners in the area. These laborers were engaged not only in manual labor tasks, but also in skilled crafts and trades tied to the lumber industry. Most of these earliest mills employed only twenty to thirty people exclusively working the lumber mill, the drying yards, and in the docks. Logging and rafting crews could be contracted or hired seasonally (Moore 1967; *Ingram vs. St. Tammany Police Jury* 1868). The cotton boom of the late 1840s and 1850s caused many sawmill operators to assure steady supplies of timber by having their own timber and rafting crews. These logging crews of enslaved and white laborers were often given extensive freedom to travel and handle finances as part of the job in the remote cypress backswamp (Moore 1967:74-97).

The Civil War closed or destroyed several of the early sawmill sites across the region and many of the enslaved craftsmen left the mills for other work, often in the Northeast. Some operations like the Andrew Brown lumber mill were able to make the transition to a wage and credit system and also maintain a supply of timber coming downriver and customers who could afford lumber during the depressed economic conditions of Reconstruction. Many other small milling operations such as the Brown Cozzens sawmill in Natchez, and
the Hosmer-Mortee Millhaven in Covington, Louisiana appear to have shut down because of the economic conditions in the late 1860s and 1870s. The expansion of the railroad in the 1880s and 1890s placed further pressure on the forests by allowing loggers access to forests away from waterways and a quicker more reliable system of transportation. Many of the small water and steam-powered sawmill operations closed down or shifted their increasingly mechanized operations closer to the rail lines.

**Methodology And Research Questions**

The archaeological studies of the Brown Cozzens and Andrew Brown lumber mill complexes within this thesis attempts to provide a humanistic study of these mid-nineteenth century industrial complexes through an analysis of the material culture from these sites in conjunction with historic maps and archival data. Thus, one of the initial objectives of this thesis was to determine what a lumber mill archaeological assemblage from this period and region would look like and whether the assemblage could provide information on the technology employed at the mill through time. In this manner, the artifacts and their context were also researched to determine whether any of the artifact assemblage could be attributed to the laborers, enslaved or free, who worked at either the Brown Cozzens sawmill or the Andrew Brown Sawmill. If so, could information be ascertained regarding the daily life (foodways, housing, clothing, medicines) of these workers and possibly their families? Thus, the focus of this research analysis is on the features, behavior, technology, and artifacts found in historic lumber mill sites in order to:

- provide functional and social information about lumber mill complex layouts- including the location of certain activities, residences, and features through time
- provide ethnohistoric analogies that are useful in the analysis and interpretations of a mid-nineteenth century lumber mill sites in the Gulf Coast
- use the archaeological assemblage, archival data, and ethnohistoric analogies to reconstruct elements of daily life for the laborers at a lumber mill plantation

The data from this research may be used to explore more expansive theoretical concerns such as ethnicity (Ferguson 1992), gender at lumber sites (Brashler 1991), power relations between slaves, wage laborers and owners (Foner 1947; Turner 1995), work songs and musical expression within the logwoods
(Jackson 1999), folk traditions and craftsmanship in early lumbering activities (Cramer 1998; Miller 1998), and the distribution and dealer system of the lumber industry (Flick 1986). However, due to the large amount of original data collected and keeping within the scope of a master's thesis, the focus here is on the description and interpretation of historic lumber mill activities, archaeological assemblages from such sites, and the visibility of the laborers and their activities found in archaeological testing and excavation. In addition, interpretations of this data will consider cultural factors such as gender, age, and race in relation to lumber mill social and spatial organization.

The topic of historic lumber mill sites in the American South is important to historical, industrial, plantation and African-American archaeology. These early lumber mill sites are important locations of economic power, employment, enslavement, environmental change, personal struggle, socialization, religious practice, and empowerment.

**Description Of Sites**

**Learned Mill Road Area**

In June of 1999 Coastal Environments, Inc. (CEI), for the USCOE conducted an archaeological survey in the area of Learned-Mill Road (see Figure 1-3). The project area, approximately 10.74 ha (26.54 ac), was located in the northern portion of Natchez-under-the-Hill, in the northwestern part of the City of Natchez, in west-central Adams County, in southwest Mississippi (see Figure 1-1). The archaeological survey and trenching conducted along Learned Mill Road was in area of land located below the bluffs bordered by the Mississippi River on the west side and the old “Magnolia Vale” property on the east side. Portions of the old Minor Lots 31 through 34 were investigated within this survey. The fieldwork attempted to locate any cultural remains associated with the historic mill operation at this location.

Prior to the initiation of the field investigations, a brief historical and archaeological background study was conducted to determine what types of cultural resources might be encountered during the survey. Historic maps and data indicate that numerous structures related to saw milling and other industrial activities on the property, from 1817 to as late as the 1950s, were located in the vicinity of the project area. Along the grid, which ranged from N00W00 to N235W105, archeological fieldwork in the Learned Mill Project Area
involved 73 shovel tests, eight auger tests, and 10 backhoe trenches. A total of 1,227 artifacts were recovered during the two months of archaeological investigations. Despite the high quantity of artifacts recovered, no intact or identifiable features, middens, or cultural remains that could be associated with either the antebellum or postbellum manufacturing activities could be located. However, a small percentage of artifacts from secondary beach surface collections and backhoe trenches clearly dated to the middle of the nineteenth century and may provide a small sample of the material culture associated with the sawmill complex built initially by Peter Little and his enslaved and free workers and later remodeled, expanded, and rebuilt by Andrew Brown and Rufus Learned’s laborers.

The Well Site (22AD993)

The second data set presented is the results from archaeological excavations carried out at the Well site (22AD993), the historic location of the circa 1840-1870 Brown Cozzens sawmill. The fieldwork was carried out from 1 July 1999 to 15 September 1999. The Well Site (22AD993) covers an approximately .14 ha (.35 ac) area (see Figure 1-2). Portions of the Old Minor Lots 16 and 17 (range lines R8.5-D and R9.25-D) were investigated within this survey. Like the Andrew Brown mill site, The Well Site (22AD993) is located below the bluffs and is bordered by the river on the west side and the bluffs on the east side.

Since the Well site is a multi-component site with at least two turn-of-the-nineteenth century house-sites as well the remains from the Brown Cozzens sawmill, this thesis will focus only on those features of the Well site that were contemporaneous with the sawmill’s operation from circa 1840 to 1870. Therefore the two main features discussed are Feature 1, a brick-lined well and Feature 7, a brick steam boiler foundation. The brick-lined well (Feature 1) was located during a 1998 survey of the Well site (22AD993). A shovel test was excavated within the interior of the well and a detailed plan of the well was drawn.

In the summer of 1999, the well was hand excavated by the author using a combination of arbitrary and natural strata (Figure 1-5). Using a datum established on the southwest side of the well, excavated material was water-screened through 1/4’ mesh for the first 60.5 centimeters below the datum (cmbd). From level 5 (60.5-70.5 cmbd) to level 58 (590-600 cmbd) 1/8-in screen was used. Artifacts were sorted into bags depending on their size and fragility and then brought back to the laboratory in Baton Rouge where they were
hand-washed, catalogued, and analyzed. Floatation samples were taken from several levels in which the artifact density was high. Furthermore, brick and mortar samples were taken from the brick courses composing the well. A total of 132,223 artifacts greater than ¼-in in size were recovered from Feature 1. An additional 29 artifacts were recovered during the exterior cleaning of the well and the builder’s trench.

Figure 1-5.
Excavation of Feature 1 at the Well site (22AD993).

A second feature located at the well site that appeared to be contemporaneous with the mill operation was a brick foundation (Feature 7). The foundation was cleaned, drawn to scale, mapped using a total station, and photographed. Given data from historic maps, its location, and construction style, Feature 7 appeared to be foundation for the sawmill's chimneystack and likely was situated next to the mill's steam boiler at the rear of the mill. The foundation was at least six courses thick in some places, probably enabling it to support the weight of the stack and the heat it produced.
Outline of Chapters

This thesis is divided into seven chapters covering the history of the lumber industry in and around Natchez, Mississippi from approximately the 1820s to the 1870s. Chapter 2 outlines the research objectives and methodology. Chapter 3 provides a brief description of the environmental and historical setting of the Gulf Coast region, concentrating on the early development and geographical distribution of the lumber industry in the Lower Mississippi Valley. Finally, chapter 3 explores the role and history of enslaved African-Americans within antebellum industrial settings, particularly sawmills in the Lowland South. Chapter 4 provides an overview of the previous archaeological investigations conducted at several mill sites along the Gulf Coast and in the Lower Mississippi Valley. Lastly, within this chapter the previous archaeological research within the immediate vicinity of the Middle and Upper Landing sawmills in Natchez are discussed.

Chapter 5 outlines the history of the two sawmill sites at Natchez-Under-the-Hill that are the primary case studies for this thesis. The Upper Landing sawmill owned by Andrew Brown and later by Rufus Learned was in operation at this location from 1818 to 1917. The mill was highly profitable during its operation during the antebellum period with an enslaved labor force and during the postbellum period with wage laborers. Phillip Sisloff, Brown Cozzens, and several other investors operated the steam-powered sawmill at Middle Landing from approximately 1841 to 1869. This operation produced less lumber, had fewer laborers, and was also less financially successful than the neighboring sawmill upriver.

Chapter 6 outlines the archaeological survey and excavations at the Upper and Middle Landing sawmill sites. The beginning of this chapter outlines the fieldwork carried out at the old Andrew Brown-Rufus Learned mill area, which included shovel tests, pedestrian survey, augers, and mechanical trenching. The remainder of chapter 6 summarizes the excavations of features at the Well Site (22AD993) associated with the mid-nineteenth century sawmill at Middle Landing.

Finally, chapter 7 presents my conclusions. The final section of this thesis will explore the results of the archaeological and historical investigations with regards to the spatial layout and social makeup of the mill complexes, and what changes took place within the domestic and industrial assemblages through time.
CHAPTER 2: RESEARCH OBJECTIVES AND METHODOLOGY

The previous chapter provides a brief historical overview on the transition of mule to water to steam powered sawmills, basically outlining the technological transitions of the industry as well as the economic, social, political, and environmental contexts of sawmills in the Lower Mississippi Valley and the Gulf Coast region. The first chapter also introduces the archaeological sites under investigation for this thesis and touches on the research design for the project. Chapter two delves more deeply into the research objectives and methodology employed within this thesis.

An important but overlooked element of colonial, plantation, African-American, regional, industrial, architectural, and environmental history is the development of the milling and lumber industries in states like Louisiana and Mississippi. Unfortunately, the limited archival data from this period does not often focus on the spatial and social aspects of the lumbering industry and instead is often dominated by financial statements, sales numbers, purchase agreements, and the legal tribulations of the mills. Helping to construct a more holistic picture, historical archaeology and ethnohistory offer methodologies for investigating the material culture and spatial layout of early lumber mill sites temporally. Archival and material cultural evidence allows for the piecing together of aspects of life within an early-eighteenth century lumber operation. Lives were filled with work, skill, hardship, worship, change, empowerment, enslavement, growth, and death.

A review of pertinent literature addresses the diversity in the antebellum and postbellum landscape of southern Louisiana and southern Mississippi. Information was gleaned from historical, geographical, folklore, and archaeological studies regarding sawmill sites from this region. Additional data for this thesis is drawn from the historical and archaeological investigations undertaken at the circa 1818-1917 Andrew Brown-Rufus Learned and the circa 1840-1870 Brown Cozzens Sawmills at Natchez-Under-the-Hill. Research questions address the spatial layout of these two sawmill complexes, living and working conditions at the mills, and activities carried out by the laborers who worked and possibly lived at the sawmill complexes. By examining an archaeological assemblage from a lumber mill site, insight into the mid-nineteenth century mill workers’ diet, housing, healthcare, trade and tools can be gleaned. Research reveals the extensive
economic contribution to nearly all aspects of production and transportation of lumber by the mill’s enslaved and free craftspeople. Historic literature and artifacts recovered from the investigation of these two mid-nineteenth century sawmill sites document the social and spatial landscape of these lumber operations with a focus on the unique circumstance of the enslaved and free laborers who worked or lived around these operations.

The data for this research were derived from archival documents and artifacts recovered from archaeological survey and excavation. By attempting to bridge various historical and material resources, this thesis sets a main objective of providing a thorough historical context for the artifacts recovered from the two sawmill operations. Through ethnohistoric analogies from contemporaneous accounts of lumber production, the archaeological assemblage, and archival data, this thesis discusses elements of daily life for the laborers at two lumber mill plantations at Natchez-Under-the-Hill, Mississippi, focusing particularly on the period, from about 1820 to 1870.

It was hoped that the lumber mill archaeological assemblages from the Upper and Middle Landing sawmills would provide additional information on the technology employed at the mills through time and that a portion of the artifact assemblage could be attributed to the laborers, enslaved or free, who worked at either the Brown Cozzens sawmill or the Andrew Brown Sawmill. Thus, if a portion of the artifacts could be associated with the laborers, information was sought regarding the lifeways (foodways, housing, clothing, medicines) of these workers and possibly their families through time. Ethnohistorical data gathered from historic accounts, ethnomusciology, folklore, oral narratives, historic photographs, and documents provides an even greater context of the working and living conditions around a mid-nineteenth century sawmill complex in southwest Mississippi. Data ascertained from these two early industrial sites may provide analogies that are useful in the analysis and interpretations of other mid-nineteenth century lumber operations in the Deep South.

These objectives are made especially difficult because of the limitations of historic and archaeological data from lumber mills sites. Archival documents from this period are scarce, biased towards race and class, and are often incomplete when dealing with topics such as spirituality, aesthetics, daily life, and working
conditions. Furthermore, archaeological data from many historic mill sites tends to be disturbed (given the nature of the site) and sparse when it comes to domestic remains. However, despite the difficulties, this research adds new data to the field of plantation, industrial, and African-American archaeology.

**Archaeology**

Historical Archaeology offers a means of studying past people with “history” and those “without history” that commonly have been excluded from written records (Little 1996:42). As Barbara Little writes in the essay, “People with History: An Update on Historical Archaeology in the United States”,

> A focus on people with history highlights Europeans’ history in relation to that of other peoples’, creating an archaeology of the Age of Discovery, colonization, and the development of the modern world system. A focus on people without history considers those issues from another viewpoint and not only is crucial to building a fuller European-American archaeology, but also has the desirable consequence of adding many more voices to our perception of the past [Little 1996:42].

In a similar manner, this research focuses not only on groups or individuals with a considerable written history such as Andrew Brown, but also on the enslaved and free laborers and their families at the lumber mill plantations who have for the most part been overlooked by historical discussions. This research does not intend to just be a supplement to the incomplete historical discussion on lumbering. Rather this research intends to use the material culture and historic documents to not only engage questions about the lifeways of the laborers and changes through time, but also to enrich the discussion on work and culture, empowerment, economic injustice, and environmental mismanagement.

**Plantation Archaeology and Sawmills**

Since Charles Fairbanks’ excavations of slave cabins at Kingsley Plantation on the northeast coast of Florida, archaeologists have been conducting research on plantation sites across the American South in order to broaden the knowledge and understanding of this important saga of American history. Leland Ferguson (1992) states with regards to the purpose of plantation archaeology, “. . . fragments of pots, the outlines of houses, and so forth represent a past material world that not only provided tools for cooking and shelter, but also served as symbols that reinforced people’s views of themselves as culturally distinct from others. Deciphering the meaning of those symbols teaches us about African American power” (Ferguson 1992:xliv). With respect to
enslaved peoples’ living conditions, Singleton (1995) writes:

The information gained through archaeology on living conditions has been very valuable in the interpretation of slavery. Although plantation records can contain considerable information on slaveholder provisions—housing, clothing, blankets, and food allotments—these sources are uneven. Archaeology can also provide information on how enslaved men and women lived in their houses and organized their domestic spaces as well as how plantation resources were distributed, utilized, or recycled [Singleton 1995:17].

**The Lumber Mill Plantation**

This thesis attempts to expand the commonly discussed cultural “landscape” in the antebellum Deep South to include some industrial operations, particularly sawmills. Several of the historically and archaeologically documented mid-nineteenth century sawmill operations show a considerable amount of commonality to the neighboring agricultural plantations. Some sawmill operations, such as the Andrew Brown, Brown Cozzens, and the Hosmer-Mortee, were worked by at least 15 to 40 laborers, the majority of whom were enslaved African-Americans. Many of the early sawmill complexes sat on vast tracts of land similar to many of the neighboring agricultural plantations. At several mill operations, owners lived on the property in a Big House overseeing the day-to-day operation. Like many of the agricultural plantations following the Civil War, many lumber operations switched to a credit and commissary system.

In many ways the lumber industry represents a multi-stage production similar to sugarcane or turpentine production. One part of the operation involves the agricultural side, which consists of the harvest of the cane and the chipping of the trees, or the cutting of trees. The other aspect of production is the industrial side, which includes refining the sugar or turpentine, or milling the timber. The sawmills in Natchez harvested the commodity in the far off logwoods, transported the commodity to the mill by river, and then industrially finished the raw commodity into lumber or planed lumber. In the Deep South, especially near port towns like Natchez and New Orleans, early industrial complexes were organized and operated like many agricultural plantations and were often just as profitable.

Although lumber and agricultural plantations were similar in scope, there are noteworthy differences between the operation of a “Lumber Mill Plantation” and that of a contemporaneous cotton or sugar cane plantation. Skills and trades within the logging industry historically appear to offer a greater opportunity for both enslaved and free workers to advance, even in a strict social caste and legal bondage system. Historic
documents indicate that certain enslaved craftsman, like Simon Gray and James Mathews, were able to garner wages and rise in positions of authority as crew chiefs or river pilots. Other skilled enslaved and free craftsman during this period were likely given additional wages, responsibility, or power in negotiation. However, most laborers in the industry had very little material possessions to show for the work and in the logwoods some were documented living in nothing more than lean-tos. During the antebellum period lumber production may have involved a greater amount of physical freedom for enslaved hands because loggers and rafters often had to travel many miles unsupervised in order to reach the timber, or to transport it. Furthermore, although there was a certain amount of danger involved in the agricultural fields, the timber industry during the period from the 1820s to the 1870s involved a higher amount of risk of death or maiming than most cotton or sugar cane operations.

Within several of the antebellum mill sites examined, enslaved African-Americans and Free People of Color performed not only labor intensive tasks such as cutting and transporting logs or lumber, but were sometimes placed in positions of power and judgment regarding the quality of timber to cut, how, where and sometimes when timber was to be moved. Furthermore, some individuals even brokered lumber and collected bills for the company or owner. The capitalist incentive of lumber production depended greatly upon individual skill and performance so much so that almost every step of early timber production required craftsman, which was often in short supply in areas like Natchez.

Laborers and sometimes their families adapted to these conditions and attempted to maintain cultural identity and negotiate a distinct form of power relations. A greater understanding of the activities that dominated the daily routine of the enslaved workers may offer a means to better relate to how the circumstance of enslavement at a lumber plantation was an instrument influencing the social organization and cultural practices of the laborers and their families within the domestic space of an antebellum sawmill. In the working environment, culture and social knowledge play out in many forms such as a conversation, a wood-skill, or metal or iron work, a joke about a girlfriend or the boss, a story about working in the woods of Alabama, a worksong, or a spiritual sung by a group of women and children collecting resin. Often in the historical and archaeological literature the relationship between labor, or work and culture is overlooked.
spawning some to critique, “The centrality of labour in the slaves’ experience seems so obvious that it has been taken for granted.” (Berlin and Morgan 1991:1). When reconstructing cultural lifeways of a community where work and skills are, among other things, keys to survival, it is important to place that group within a proper cultural context, whether it is in the domain of the woods, the mill, around the dwelling, or in a church, and often these boundaries can be very fluid. In addition to these aspects, recent studies of slavery in the Americas have focused more intently on work-related activities and culture since it dominated much of the time of the enslaved and free laborers at these industrial plantations. As Berlin and Morgan (1991) state, it is important to look at

. . . the slaves’ social organization, domestic arrangements, and linguistic and sartorial style that gave Afro-American culture its distinctive form during slavery. For the most part these aspects of slave life have been understood as emanating from the quarter, household and church rather than field and workshop. This emphasis has obscured the activities that dominated slave life. After all, slavery was first and foremost an institution of coerced labor [Berlin and Morgan 1991:1-2].

Thus, while the research and interpretation for this project places an added emphasis on techno-environmental aspects such as work skills, risks, and trades, it also integrates an examination of culture, class, power, and gender, not ignoring the spiritual and social aspects of lumber mill life at that time.

Archaeological Theory

In order to build a stronger context for the artifacts recovered from the ca. 1818-1917 Andrew Brown Sawmill and the ca. 1840-1870 Brown Cozzens Sawmill, this thesis draws upon previous works within historical archaeology, African-American archaeology, plantation archaeology, and industrial archaeology. Historic research and artifacts provide evidence of the social and spatial framework of mid-nineteenth century lumber mill complexes in southwest Mississippi and within the Lowland South in general.

Text and Context, Discourse and Daily Life

Artifacts rest within a social, spatial, cultural, temporal, and historical framework. Archaeologists see these relations along with others as the ‘context.’ This research emphasizes the context in which the artifacts were used, disposed, and recovered from a mid-nineteenth century lumber site. The term ‘context,’ according to Hodder (1986:2) has several broad types of meaning: the use of context as it relates to the artifacts that function within the larger behavioral and environmental condition and the context of the particular data and
the relationship with analysis in the present and the context of archaeological interpretations: “The context here is the structure of meaning into which the objects have to be placed in order to be interpreted. The argument is that objects are only mute when they are out of their ‘texts’” (Hodder 1986:2).

Notions of textuality and discourse are further developed in Christopher Tilley’s “Interpreting Material Culture” (1989). Tilley emphasizes the individual act of material culture, which he states must be “regarded as a contextualized social act involving the relocation of signs along axes defining the relationship between signs and other signs which reach out beyond themselves and towards others becoming amplified or subdued in specific contexts” (Tilley 1989:189). The artifact is seen as a symbolic medium, or discourse, conveying a social act form the past, which in turn must be translated in the present. However the process of translation of past discourses, according to Tilley, affords great difficulty because signs have multiple and sometimes contradictory meanings. He writes, “Material culture does not provide a mirror to society or a window through which we can see it. Rather, there are multiple transformations and relationships” (Tilley 1989:188). Tilley emphasizes the notion that translation and transcription of past discourse is negotiated through agendas and politics in the present, resulting in the creation of a whole new “text,” the archaeological report (Tilley 1989:192). The symbolic and contextual approach has been harshly criticized by processual archaeologists like Lewis Binford who portray it as “unscientific” and “idiosyncratic” (Trigger 1991:551-552; see Binford 1989 and Hodder 1991). Furthermore, processual archaeologists claim that such relationships determined among artifacts are irregular and too particular, and therefore, they are not verifiable.

The writings of Russian philosopher and humanist Mikhail Bakhtin offer another opportunity for an increased discussion regarding methodological practices and assumptions within the field, especially relating to notions of text, dialogue, and the act of translation. All of these issues have become critical within the field of archaeology as traditional models of interpretation have been de-centered and rejected for more nuanced viewpoints of the past. Although individual encounters operate within an expansive system or global situation, according to Bakhtin (1986) the exchanges that link people in their everyday lives in a local situation and on a personal level should be the focus of study for the human sciences. It is at the level of the unnoticed, ordinary, unsystematic event where Bakhtin says the true complexity and richness of human life
occurs: "we very keenly and subtly hear all those nuances in the speech of people surrounding us, and we ourselves work very skillfully with all these colors on the verbal palette. We very sensitively catch the smallest shift in intonation, the slightest interruption of voices in anything of importance to us in another person's practical everyday discourse" (Morson 1990:34).

Mikhail Bakhtin states that the "text" is the primary standard among the disciplines of the human sciences and therefore the "text" is the primary given reality and point of departure for the human sciences (Bakhtin 1986: 103,113). Bakhtin defines "text" as a, "reality of thought and experience," and “Where there is no text, there is no object of study, and no object of thought either" (Bakhtin 1996: 103). According to Bakhtin, text is understood to be a coherent complex of signs with multiple meanings in a complex set of relations (Bakhtin 1986:103). He adds, "We are interested in the specificity of the human sciences, which are oriented towards the thoughts, the meanings, the significations, etc., that come from the other, and that are realized and become accessible to the scholar only sub specie of the text" (1986:104). Although the texts Bakhtin espouses are symbolic, his interest is in the concrete forms of text interacting, interrelating, and expressing themselves in daily life (1986:114).

More recently, Martin Hall’s research in South Africa explores material culture in terms of ideological discourse. Hall sees artifacts as existing in a larger context where contact between various groups is seen as discourse, resulting in various texts and multiple meanings (Beaudry, Cook, and Mrozowski 1996:279). Hall relies upon the concept of discourse, drawn from Foucault (1972), with its emphasis on the importance of the sign (Beaudry, Cook, and Mrozowski 1996:279). Hall states, “The archaeology of the text has if anything a surfeit of politics. Central to this approach is Foucault’s notion of discourse” (Hall 1993:193). In Hall's approach material culture is seen as one of a number of interwoven and interactive texts, "which can explain one another" (Hall 1993:192). Hall (1993:192) says that where structural readings of the past are directed towards broad generalizations, textual archaeologist focus on a close reading of each situation. Hall attempts to relate localized speech situations or dialogues from artifacts. Therefore, Hall sees textual readings as merging easily with studies of representation, since both are part of the complex discourse of history. Although he uses the metaphor of written text, Hall's notion of a textual past attempts to interweave "pieces
of text" into a larger text, or a story with multiple dialogues. Hall uses fragments of diaries, government censuses, and kitchen records as a way of approaching "artifacts as integral parts of the statements through which people create and re-create themselves, and these statements integral parts of discourses that create and re-create one another" (quoted from Hall in Beaudry, Cook, and Mrozowski 1996:279). Martin Hall also uses James Scott's model of "everyday resistance" as espoused in Weapons of the Weak: Everyday Forms of Peasant Resistance (1985) as a bridge for channeling the material world into ongoing social discourse of empowerment and resistance to interpret slave sites in South Africa (Beaudry and Mrozowski 1996: 279). Objects are interpreted as part of a discourse of repression as well their strength and resistance that individuals must posses to survive day-to-day.

Similarly, historical archaeologist Mary Beaudry follows a comparable methodology with into her collaborative work at the turn-of-the-twentieth century Boott Mills boardinghouses in Lowell, Massachusetts. Artifacts recovered from the yards of tenements are not seen as just a passive product of economic behavior, but also as instrumental components of symbolic actions (Beaudry, Cook, and Mrozowski 1996:294). Beaudry, Cook, and Mrozowski (1996:287) write that historic documents are clear about the power of “corporate paternalism of the boardinghouse system, those same data evoke expression, if not of resistance, of personal aspirations and self-expression.” The self-expression, according to Beaudry, Cook, and Mrozowski, was carried out through the selection and use of certain material culture by tenement dwellers including household ceramics, imitation jewelry, white clay pipes, and hair ornaments (Beaudry, Cook, and Mrozowski 1996:287; Dutton 1989). Regarding context, the authors write,

Context is where meaning is located and constituted and provides the key to its interpretation. Recovery of meaning is predicated on recovery of context because context not only frames meaning by tying it to actual situations and events, but it is inextricably bound up with meaning. The existence of a context implies the presence of meanings functioning within it, and, conversely, meanings cannot exist in the absence of context [Beaudry, Cook, and Mrozowski 1996:281].

Careful research of historical documentation and literature helps develop constructs that can be synthesized to build a more complete cultural context for archaeological excavations; failing to develop a more complex cultural context may mean overlooking aspects of behavior (Schmidt and Mrozowski 1983:146).
Laurie Wilkie adapts a similar approach in her recent research on African-American and Afro-Bahamian consumer choice. In *Creating Freedom: Material Culture and African American Identity at Oakley Plantation, Louisiana, 1840-1950*, Wilkie (2000) addresses the context of consumer choice related to ethnic, regional, class, and personal choice. Within this work, she states that during the late-nineteenth century families were increasingly incorporated into global exchange networks, leading them to be consumers, rather than producers of the materials they used in cultural negotiations of identity. Therefore, one of the major lines of her research explores how individuals and families personalize and adapt mass-produced consumer goods to express ethnic, gender, race, and class values. Thus, class, ethnicity, and race are tied to African-American inhabitants’ purchases of certain patent medicines at Oakley Plantation and to Afro-Bahamian residents’ choices of colors and tones at Clifton Plantation in the Bahamas (Wilkie 2000; Wilkie and Farnsworth 1997).

This thesis adopts a similar contextualized approach to the interpretation of the material culture recovered from the Cozzens and Brown sawmill sites, while emphasizing the humanistic elements within the historic documents and artifact assemblage. By integrating a more thorough historical and environmental framework for these sawmill sites, this thesis sets out to explore the more personal aspects of life involving music, clothing, work, trials, tribulations, and the triumphs of the laborers therein.

**Archaeological Method**

Prior to the archaeological fieldwork at the circa 1818-1917 Andrew Brown-Rufus Learned sawmill and the circa 1840-1870 Cozzens sawmill, a thorough literature review, review of site cards, and interviews of local informants was conducted. A review of historic maps, documents, newspapers, local libraries, diaries, local histories, advertisements, and Natchez County courthouse surveys and plat maps that were produced between 1820 and 1880 was also carried out. Mississippi Department of Archives and History regulations were followed in the archaeological survey, testing, and excavations of the Brown-Learned sawmill and the Cozzens sawmill. Since the fieldwork was carried as part of a cultural resource management contract, there were some limitations placed upon the overall field research design—project limits, property boundaries, work areas, budgets, and time constraints.
At the Learned Mill Road Area, the archaeological survey was limited to a pedestrian survey, shovel testing, auger tests, and mechanical trenching within the 10.74 ha (26.54 ac) project area. A total of 73 shovel tests, eight auger tests, and 10 backhoe trenches were located within the project area (see Figure 1-3). Survey of this area was carried out to locate, identify, and document any remains associated with the early industrial complex. The survey consisted of teams shovel testing in 5 m intervals in high probability areas. All the dirt from the shovel tests was screened through ¼” screen. Additionally, auger and controlled mechanical trenching were conducted at the Learned Mill Road Area due to the extensive alluvial and colluvial overburden. The field methodology was also partly dictated by the type of environment and land features. What was not covered by oil field equipment was densely overgrown and hence limited surface visibility.

The initial work at the Well site (22AD993) involved locating, mapping, and excavating archaeological deposits. In conjunction with historic maps and archaeological evidence, the spatial layout of the circa 1840-1870 sawmill operation was determined at various periods. Because no secondary structures from the mill complex, especially residences or associated structures, were located during the 1999 fieldwork, data from this site was drawn mainly from Feature 1 (the well) and Feature 4 (the brick foundation). Ascertaining this data involved determining the nature and age of the deposits recovered from the two features and their relationship to the mill, mill owners, or laborers.

**Artifact Analysis**

Following field excavations all material from the fieldwork was brought to the laboratory in Baton Rouge where it was processed. The material was processed following Mississippi Department of Archives and History guidelines as well those for the Cobb Institute at Mississippi State University where the collection will be curated. Artifacts were cataloged, washed, sorted, weighted, and analyzed. Some artifacts were drawn or photographed while some leather and metal artifacts excavated from the well were conserved. The initial sorting of the artifacts recovered during the course of this study was based on the material composition of the various classes of artifacts considered: historic ceramics, glass, metal, brick, mortar, petroleum products, and other historic artifacts. These broad categories were sorted into sub-categories: iron, cupreous metals, plastics, window glass, handmade bricks, lime mortar, etc.
The analysis of the archaeologically recovered material also involved grouping the various types of artifacts into a functional typology. A combination of modified artifact pattern analysis systems (Cabak and Inkrot 1997; South 1977; Orser 1988) was used to create a way to classify the function of historic artifacts. Functional grouping of artifacts are supposed to provide meaningful units of comparison for archaeologists so that they can quantify and compare the frequencies of groups within the assemblage as well as with other assemblages. However, pattern analysis systems often have inconsistencies, appear to include a mixture of both functional and descriptive criteria, and major artifact groups appear to include artifact classes from several unrelated activities. Modified functional classifications are still useful especially for comparison with an assemblage to help ascertain distribution patterns. Thus, some artifacts recovered were divided into five functional groups: foodways; architectural, health and hygiene, personal/adornment, and industrial machinery. These groupings are modified from South’s (1977) and others (Cabak and Inkrot 1997; Wilkie and Farnsworth 1992; Orser 1988). Results of this analysis were then used to create general artifact distribution maps. For the well, the functional breakdown of the distribution of artifacts helped identify and plot potential activity-related deposits within this feature.

One difficulty with using ceramics, glass, nails, and tin can manufacturing techniques for dating sites is that changes in form and construction cannot be given as a precise date. Rather, dates range over a period of time to reflect a transition between the introduction of a new production technique, the spread of that particular technique, and the disuse of the predecessor manufacturing technique. Thus, onset and terminal dates must be seen to reflect averages. A modification of South’s (1977) Mean Ceramic Dating technique was used to calculate an approximate date for artifact deposits at the two sawmill sites. Mean Ceramic Dating has been adapted for use on datable bottles, nails, maker’s marks, and tin cans.

**Ceramics**

Ceramics were broken into three broad categories initially, hollowware, flatware or unidentifiable, and then into more specific vessel forms – bowl, cup, mug, pitcher, plate, platter, saucer, etc. - if possible. The historic ceramics were broken into four major categories based on manufacturing technique and composition, though not every type of ceramic was encountered during the course of the fieldwork: coarse
earthenwares, refined earthenwares, stonewares, and porcelain. Refined earthenwares were the most common historic ceramic recovered from both the Well site and the Learned Mill Road Area. Refined earthenwares were broken into four basic types: creamware, pearlware, whiteware, and ironstone. These categories probably meant little to consumers at the time, but are useful to historical archaeologist for chronological purposes.

Creamware is the earliest of the refined earthenwares and features a molded, cream-colored body and a cream to yellowish-green lead glaze. Creamwares were first produced in England during the mid 1700s (Miller 1993:4). Most creamwares recovered from archaeological site are undecorated, however hand-painted, transfer-printed, and annular decorated types occur infrequently. Experiments with clays and glazes during the later part of the eighteenth century led to the development of whiter, more refined earthenwares referred to as “pearlwares,” and they were manufactured from about 1780 to 1830 (Lofstorm 1976). The glazing of pearlware was lightly tinted with cobalt to whiten the yellowness. Because of the cobalt inclusion, pearlwares tend to have a light bluish cast in the glaze and have applied to them a variety of decorative techniques, including annular, hand-painted, and transfer-printed designs that increased their cost and value.

With the popularity of bone china during the first quarter of the nineteenth century, a preference grew for whiter earthenwares (Miller 1980:17). By the 1820s and early 1830s, pearlwares were replaced by improved whitewares that did not display the rich bluish tint (Hahn and Hahn 2001:78). Price (1982:14) and Moir (1987:102) suggest that the transition from pearlware-to-whiteware occurred in 1820 or 1830, though whitewares with blue puddling were produced as late as 1865. Many of the early whiteware forms and decorations were nearly identical to later pearlwares, thus making it difficult to distinguish pearlwares from early whitewares (Miller 1980:16; McAllister 2001; Snyder 1994, 1999). However, certain decorative techniques, such as decal, and colors, such as red and purple, appear to be associated with later whitewares.

Ironstone has dates of manufacture ranging between 1840 and 1910. Early ironstone exhibits a cold blue tint to its glaze similar to whiteware. Several nearly complete early ironstone vessels were recovered from Feature 1 at the Well site. A somewhat thicker and heavier ceramic than other refined earthenwares, ironstones possess a harder and heavier paste. Because its glaze and paste are of similar composition,
Ironstone glazes often exhibit a lesser amount of crazing than other refined earthenwares (Hahn and Hahn 2001). Ironstone, a cheaper utilitarian ware, often appears to be simply molded or undecorated.

The dating of refined earthenwares has been researched by several authors including Hunter and Miller (1994), Liebowitz (1985), Lofstorm (1976), Majewski and O’Brien (1987), Moir (1987), and Sussman (1977). Various decorative styles and forms of refined earthenwares can be sourced such as edge-decorated vessels (McAllister 2001), flow blue (Snyder 1994, 1999), and factory-made slipware (Sussman 1997). Of the refined earthenwares, only pearlware, early whiteware, whiteware, and early ironstone were recovered from the excavations at the Cozzens sawmill and the survey of the Brown-Learned Mill complex. Also recovered during the excavations were sherd of stoneware, yellowware and porcelain. Stonewares, a thick fine-grained body utilitarian ware have been produced throughout the United States from the 19th into the 20th centuries. Some early glazing and decorative techniques may be good indicators of manufacture date. However, in general, stonewares, like mid- to late-nineteenth century yellowwares, do not offer very good temporal information because of their wide-ranging manufacturing dates and lack of decoration.

Glass

In the laboratory glass was divided up initially into three broad categories including cylindrical, window, and other flat. Color, form, and manufacturing technique are all indicative of the date of production of a glass vessel. Numerous authors such as Dumbrell (1983), Fike (1987), Freeman (1964), Ketchum (1975), Munsey (1970), Putnam (1965, 1968), Switzer (1974), have written about bottle forms and manufacture dates. A general chronology of glass vessels can thus be formed based on various manufacturing techniques including the type of mold or the lipping technique. The earliest bottle forms recovered from the sawmill sites were free blown bottles with string lips that pre-date the 1870s (Munsey 1970:32), and post-bottom molded vessels that date between 1800 and 1917 (Miller and Sullivan 1984:88,89; Munsey 1970:249). Several three-piece dip molded bottles, which some authors date between 1810 and 1840 (Lorrain 1968) and others like Toulouse date between 1870 and 1910 (Tolouse 1969b), were also recovered from the well excavations. Most of the three-piece dip molded bottles recovered were manufactured using snap cases, this technique dates between 1860 to circa 1905 (Deiss 1986:93). No turn molded or cup-bottom molded vessels were
recovered from the Brown Cozzens sawmill and only a few were recovered from the survey of the Andrew Brown-Rufus Learned mill site. This style of vessel dates between 1880 and 1910/1917 (Miller and Sullivan 1984:88,89; Munsey 1970:39,40). Owens machine made-bottles, dating between 1904 and 1950 (Miller and Sullivan 1984:94) and general machine made bottles dating between 1904 and present (Miller and Sullivan 1984:93) were recovered in large numbers from a late-twentieth century bottle dump at the Learned Mill Area. However, no machine-made glass vessels were recovered from the excavations of the well, clearly suggesting at least a pre-1904 date.

A number of authors have addressed the topic of obtaining a mean occupation date through window glass (Ball 1979; Chance and Chance 1976; Cinadr and Brose 1978; Groscup 1972; Hanson and Hsu 1975; Orser 1983; Roenke 1978; Rothman 1981; Walker 1971). These studies suggest that during the nineteenth century window glass increased in thickness through time. Unfortunately, this technique was not useful in this study because of the limited sample of window glass recovered.

Metal

The metal was divided into several subclasses including lead, brass, ferrous, cupreous, and white metals. Ferrous or iron was the most common metal recovered from the two former sawmill sites. Large amounts of metal, including machine parts and canning tins were recovered during the excavation of the well. Most of the iron had deteriorated to such a point that it was not useful for analysis or dating. However, some nails and tin cans recovered from both the survey and excavation were used for dating purposes.

Common nails have been shown to provide valuable chronological information for sites (Nelson 1968; Edwards and Wells 1993). Nails can be divided into three basic categories consisting of hand forged, machine cut, and wire. The earliest nails were completely hand wrought (Types 1 and 2) and are not very reliable in dating, as their use began circa 1720 and continued into the early nineteenth century for their clinching abilities. Machine-cut nails (Types 3-10) are good chronological indicators. The various types of machine cut nails can be more accurately dated. Production of machine-cut nails began circa 1810 and continued until around 1900 (Bodey 1983:21). The early machine-cut nails were cut from sheets of iron and their heads were hand forged (Type 3) (Edwards and Wells 1993:12). Later machine-cut nails (Types 6-10)
were cut from a sheet of rolled stock and had machine-made heads. Type 6-10 nails date approximately from 1828 to around 1896 (Nelson 1968; Hahn and Hahn 2001:82). These later machine-cut nails can more accurately date by determining the direction of the metal grain, where the burrs are, if the heads are irregular (early) or regular (modern), and how the nail is pinched (Edwards and Wells 1993).

Wire nails were first produced in France as early as the 1820s, but were expensive and inferior to machine-cut nails. In 1851 wire nail machines were imported to Brooklyn, New York, where they were used to manufacture wire brads, but not larger wrought-iron wire nails (Noel Hume 1972:254). In 1877, the first American patent for a wire nail machine (Type 11) was issued (Edwards and Wells 1993:18). By the late 1880s steel wire nails (Type 12) were becoming popular and steel was beginning to replace iron (Edwards and Wells 1993). By 1900, the machine-cut nail industry was in decline and by 1920 only eight percent of the U.S. production was in cut nails (Edwards and Wells 1993:18).

Tin cans are another form of metal valuable for both dating a site and providing information about the lifeways at nineteenth century sites. One difficulty with using tin can manufacturing techniques is that tin and steel do not lend themselves to preserving well in the archaeological record. Unlike glass and ceramics, metals such as tin and steel tend to deteriorate in the alternating moist and dry surface environment. Several circa 1850-1870 sardine cans and 5-gallon tins were recovered from the Well site. Tin cans refer to all tin storage containers manufactured for foodstuffs and later tobacco. Although many recent cans are tinless, tin cans from the early 1800s to the present have been used for storage of vegetables, coffee, tea, jams, soup, fish, oysters, lobster, meat, cookies and candies, peanut butter and pop corn, and syrups (Busch 1979:2).

The manufacturing techniques used in the canning process have changed significantly since 1810 when the tin canister for canning was first patented by Peter Duran (Busch 1979:2). Thus, tin cans can be useful as a means of dating mid-nineteenth to mid-twentieth century sites because there is a rapid sequence of technological improvements in tin can manufacturing that can act as time markers. Tin can analysis also provides insight into the availability of certain food items available for purchase. Originally can manufacturing was a cottage industry. The local tinsmith made few cans along with his other tinplate wares. A skilled craftsperson could only fashion five or six cans an hour (Clark 1977:14). Tin cans up to the late 1840s were
manufactured completely by hand. The hole-in cap cans of the early nineteenth century were made of heavy iron and were especially clumsy (Clark 1977:14). The hole-in cap tin can changed little in style or form throughout the nineteenth century, but even before the Civil War there was substantial progress in the mechanization of its manufacture (Busch 1979:3). In 1851 the first steam engine was placed in a tinplate works and resulted in increased production and lowered cost as output went from a few cans per hour to fifty or sixty cans per hour (Clark 1977:11).

Before 1850-1855 canning was used for lobster, sardines, and oysters only (Orem 1914 quoted in Rock 1978:6). Between 1850 and 1855 canning expanded to include fruits and vegetables and even peaches in syrup (Orem 1914 quoted in Rock 1978:6). Then in 1856 Gail Borden developed condensed milk and brought it out in hole-in-cap cans. Borden was granted a patent for vacuum processing canned condensed milk, and he began to market his product across the country (Busch 1979:4). Probably the last major innovation in canning before the Civil War was in 1861, when American canners began to add calcium chloride to their cooking water and thus increased the reliability of the canning process (Busch 1979:4).

During the Civil War, canned goods were used extensively for soldiers’ rations (Busch 1979:4). By 1865, Richardson and Robbins Co. began packing chicken and turkey in tin cans; Cutting & Co. of San Francisco were canning peas, tomatoes, corn beans, asparagus, table peaches, pears, blackberries, raspberries, whortleberries, jams, jellies, salmon, roast beef, soup, bouillon and pie fruits (Rock 1978:9). By 1867 George Dunbar was experimenting with canning shrimp in Louisiana and a year later the Underwood Company began canning ground ham (Fontana et al. 1962:71). During the same period companies, such as Van Camp, attempted to further reduce the size of the tin cans smaller than the bulky 5-gallon cans (Rock 1978:8).

The decade between 1875 and 1885 saw the replacement of iron by steel for tinplate, spurred by the introduction of the open-hearth steel furnace (Busch 1979:4). The use of steel allowed for thinner coats of tin, but necessitated the introduction of a rim for attaching a top and a bottom (Busch 1979:4; Petroski 1992:186). The canning industry was further mechanized in 1876 with the introduction of the Howe floater, a device that automatically soldered on can ends and by 1883 all the processes of can making could be done by machine at a rate of 2500 an hour as compared to sixty cans an hour in the 1870’s, and five or six cans an
hour by hand-manufacture (Clark 1977:18). The formation of initially the American Can Company in 1901, whereby 123 factories merged, and later the Sanitary Can Company in 1904 revolutionized the canning industry (Busch 1979:6; Clark 1977:18). The merging of all these firms meant a great deal of standardization in the tin can shape and form. By the 1920s the hole-in top and hole-and-cap can was nearly extinct and replaced by the double seamed, sanitary can.

This chapter provides an overview of theoretical orientation behind this research as well the methodology used both in the field excavation and in the laboratory analysis. The techniques and literature used in the identification and categorization of artifacts were also discussed. In the following chapter there will be a discussion of the history of the Andrew Brown and later Rufus Learned’s sawmill enterprise at Upper Landing and the Sisloff and later Cozzens sawmill operation near Middle Landing.
CHAPTER 3: CULTURAL AND ENVIRONMENTAL OVERVIEW OF THE REGION

The first part of this chapter will provide a description of the environmental and geological landscape around Natchez, Mississippi and the surrounding forests where timber was extracted. The high market demand for quality cut timber during this period provides one explanation for widespread logging in the nineteenth and twentieth century in the Lower Mississippi Valley. The diversity, quantity, and size of trees within this region provides another explanation for the widespread rise of lumber manufacturing in places like Louisiana and Mississippi. Furthermore, a better understanding of the geology of the upland bluffs physiographic region helps clarify some of the challenges of conducting archaeological fieldwork alongside the dynamic Mississippi River and Natchez Bluffs. The second section of this chapter focuses on the historical background of the lumber industry in the Lower Mississippi Valley and along the Gulf Coast. Thus, this portion of the chapter identifies and briefly describes those factors that influenced the use and development of the project area by historic peoples. The environmental and historical setting should help build a more complete context for the artifacts recovered at the two early-nineteenth century sawmill complexes at Natchez-Under-the-Hill.

Environmental Setting

The Quaternary geology of the Lower Mississippi River Valley has been the subject of considerable research over the past 50 years. Fisk (1944), Saucier (1974) and Autin et al. (1991) have synthesized the results of the research both in terms of the nature of the sediments present and their age. Much of Fisk's work has withstood the test of time, but his chronology, developed prior to the advent of radiocarbon dating, has been revised. Summaries by Autin et al. (1991) and Saucier (1994) provide the basis for much of the present chronology.

The alluvial valley of the Mississippi River consists of the Holocene floodplain and a series of Pleistocene terraces that represent earlier floodplains, deltaic plains, or nearshore marine deposits (Ryan 1994:6). Therefore, water action and erosion have sculpted much of the physical landscape in the valley. Slope processes and fluvial events within the adjacent alluvial plain have dominated the geophysical evolution of the Mississippi Alluvial Valley. Mass wasting processes, such as sheetwash and mudflows, have continually
shaped this valley wall. Fluvial down cutting, combined with the meandering of streams has resulted in the formation of stepped terrace sequences in the Natchez area (Ryan 1994:6). Due to the dynamic nature of this area, the destruction and/or preservation of cultural deposits needs to be understood in order to properly interpret the archaeological record.

**Physiography**

The Holocene floodplain of the Mississippi River is composed of its current meander belt, portions of relict meander belts, and backswamp areas. Each meander belt consists of the landforms created by the river. Meander belts contain a variety of depositional environments, including natural levees, point bars, abandoned channels, and backswamps. Saucier (1994) has identified a sequence of six major meander belts, or stages, numbered from most recent to oldest (Stages 1-6). Dates for the stages of the Mississippi River extend over the past 9,000 years.

The project area consists of the Mississippi Alluvial Plain Physiographic Unit and the Bluff Hills Physiographic Unit. The Mississippi River Alluvial Plain Physiographic Unit is characterized by deposits of varying depths of detrital materials resulting from erosional and depositional activities of the Mississippi River and its tributaries (Boggess 1994b:5). The surface of the alluvial plain is not level and is slightly irregular because of characteristic floodplain features produced as a result of fluvial activity - lateral stream migration, overbank flooding, and deposition - which create sediment deposits of varying depth (Wells et al. 1999:9; Morris 1970:45; Boggess 1994b:5). These surface floodplain features include abandoned river courses, crevasse channels, natural levees, point bar deposits and backswamp areas. The soils of the Mississippi Alluvial Plain are characteristically composed of sands, silts, gravels, and clays.

Hardwood bottomland forests and cypress forests typify the flora of the Mississippi Alluvial Plain. These forests occur along major streams throughout the region, particularly on the expansive floodplains. The flora of the floodplain is characterized by an assemblage of bottomland hardwoods and water-tolerant species such as bald cypress (*Taxodium distichum*), water tupelo (*Nyssa aquatica*), and black willow (*Salix nigra*) (Brown 1965:8). Many enormous oaks, hickories, cottonwoods, sycamores, and other hardwoods (wetter sites are often dominated by cypresses) benefit from the nutrient-rich soil that results from regular flooding,
rapid decomposition, and abundant soil moisture (Alden et al. 1999:37). The soils vary from sand to heavy clays. The wetter areas tend to be dominated by bald cypress (Taxodium distichum), pond cypress (Taxodium distichum var. nutans), tupelo gum (Nyssa aquatica), red maples (Acer rubrum var. drummondi), water hickory (Carya aquatica), pumpkin ash (Fraxinus profunda), and a number of small shrubs such as buttonbush (Cephalanthus occidentalis), sweet pepperbush (Clethra alnifolia) and smooth alder (Alnus serrulata) (Brown 1965:8,9; Tiner 1993). In other poorly drained areas of the floodplain, but drier than the cypress swamps, the forests have a canopy of overcup oak (Quercus lyrata), bitter pecan (Carya cordiformis), green ash (Fraxinus pennsylvanica), black willow (Salix nigra), hackberry (Celtis laevigata), honeylocust (Gleditsia triacanthos), waterlocust (Gleditsia aquatica), and sycamore (Platanus occidentalis).

In even drier areas of the floodplain forests such as along natural levees, there is growth of sweetgum (Liquidambar styraciflua), cherrybark oak (Quercus falcata), cow oak (Quercus prinus), Nuttall oak (Quercus nuttallii), Shumard oak (Quercus shumardii), water oak (Quercus nigra), honeylocust (Gleditsia triacanthos). This type of forest is often referred to as the “pin-oak flats” (Brown 1965:9). Due to timbering, clearing of land for agriculture, and levee construction, much of the vast old growth cypress and hardwood bottomlands in the Lower Mississippi Valley are gone. Patches of primeval bottomland hardwood forests can be seen in the Sweetgum, Green Ash, and Overcup Oak Research Areas in the Delta National Forest in Northwest Mississippi, in the Leaf River Management Area in southeast Mississippi, or at Bayou Cocodrie National Wildlife Refuge near Ferriday, Louisiana.

The Bluff Hills Physiographic Unit is characterized by high ridges forming divides between streams, with the strongest features generally running north-south and secondary ridges falling off east and west (Boggess 1994b:5). The soils are alluvial and colluvial materials, primarily loess. The majority of the Bluff Hills Unit is between 200 and 400 ft above msl (mean sea level), with differences of 30 m (100 ft) or more between ridges and stream bottoms common (Childress et al. 1976). The elevation of the top of the bluffs at the head of Roth’s Hill Road in Natchez, Mississippi, is approximately 200 ft above msl, while the nearly level surface of the flood plain below, the location of the former Brown-Learned sawmill, was 70 ft above msl (Boggess 1994b:5; Childress et al. 1976).
The oldest and base geologic formation exposed in the Natchez Bluffs is the Hattiesburg Formation (Church and Hunt 1984). The Hattiesburg Formation is composed primarily of clay, shale, sand, sandstone and silt (Church and Hunt 1984:12, 14). This Miocene age formation was deposited during one of several cycles of marine transgression and regression, which have occurred in this area since the late Jurassic (Church and Hunt 1984:12). The Citronelle Formation overlies the Hattiesburg Formation in northern Adams County (Vestal 1942). The Citronelle Formation is a fluvial deposit composed of sand, chert, and quartz gravel with silt and clay strata. Typically, the Citronelle Formation is highly oxidized (Church and Hunt 1984:15). This formation overlies the Hattiesburg and Pascagoula Formations and underlies the loess deposits.

The upper portion of the fluvial deposit in Natchez, which in some instances comprises approximately 30 m (100 ft) of gravel, sand, silt, and clay, is identified as the Natchez Formation (Church and Hunt 1984:16). The Natchez Formation is a Pleistocene age terrace deposit of the Mississippi River composed of glacial outwash. The Natchez Formation is composed of clay, silt, sand, and gravel arranged in a general fining-upward sequence. Loess deposits of Pleistocene age overlie the Natchez Formation and other older deposits in Adams County (Church and Hunt 1984:17). Loess is composed primarily of quartz and secondarily of feldspars, carbonates, clay minerals and assorted heavy minerals (Church and Hunt 1984:19). Loess has the ability to stand in high vertical faces. This property is attributed to the cementation of grains, an internal skeletal structure of calcareous root tubules, and a high permeability, which allows loess to remain dry (Church and Hunt 1984:19).

Pleistocene glaciations and associated sea level fluctuations have had a profound influence on erosion and deposition within the study area. Repeated glaciation in the north-central United States has resulted in the Mississippi River cutting deeply into the older formations, and the preservation of several alluvial terraces within the Lower Mississippi Valley (Church and Hunt 1984:12). During glaciations, thick deposits of loess were spread over the uplands adjacent to the Mississippi Valley. Loess deposits, mainly from Mississippi River alluvium, were transported by westerly winds. Therefore, the thickest and most extensive loess deposits are along the eastern bluffs facing the valley (Church and Hunt 1984:13). The eolian loess can reach a depth
of over 75 ft (23 m) near the Vicksburg-Natchez area (Wells et al. 1999:9). The loess is deeply dissected by erosion and in places there is local relief of 30 m (100 ft) (Saucier 1994:34).

The natural vegetation of these regions originally consisted of upland pine and hardwood forest, characterized primarily by longleaf pine (*Pinus palustris*), and several deciduous oaks (*Quercus* spp.), hickories (*Carya* spp.), ash (*Fraxinus* spp.), etc. (Kniffen 1968:35-36). The upland Longleaf pine forest is composed primarily of longleaf pine (*Pinus palustris*) and grasses. Like wet prairies and pine flatwoods, the upland pine forests are maintained by fire. Much of the primeval longleaf forests of the southeastern United States have destroyed and less than five percent of the approximately 70 million acres of these magnificent pineland forest remains. Much of the what remains is secondary growth or younger, but there a few areas where old growth longleaf pine can be seen -- such as the Bienville Pines Scenic Area in Forest, Mississippi, or the Caroline Dormon Preserve in Natchitoches Parish, Louisiana.

Upland hardwood vegetation includes white oak (*Quercus alba*), cherry bark oak (*Quercus falcate* var. *pagodifolia*), southern red oak (*Quercus falcata*), sweetgum (*Liquidambar styraciflua*), white ash (*Fraxinus americana*), tulip popular (*Liriodendron tulipifera*), cucumber tree (*Magnolia acuminata*), water oak (*Quercus nigra*), Shumard oak (*Quercus shumardii*), post oak (*Quercus stellata*), bitternut hickory (*Carya cordiformis*), shagbark hickory (*Carya laciniosa*), sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), black cherry (*Prunus serotina*), flowering dogwood (*Cornus florida*), roughleaf dogwood (*Cornus drummondii*), and redbud (*Cornus florida*). Areas of upland hardwoods include the western portion West Feliciana Parish, Louisiana and Adams County, Mississippi. A variety of historic activities have significantly altered the natural vegetation of the upland hardwoods so that today there is little resemblance to the early historic or prehistoric conditions (Wells et al. 1999:9).

**Climate**

The climate of the study area is humid subtropical, characterized by abundant precipitation distributed throughout the year. Seasons are marked by warm summers and mild winters. The average daily maximum for Adams County is 78 degrees Fahrenheit and the average daily minimum temperature is 55.7 degrees Fahrenheit (Morris 1970:49). The proximity to the Gulf of Mexico moderates the temperature of the
region, but sometimes produces monsoon-like tropical storms (Kniffen 1968:18). During the winter, periodic polar air masses move across the region, often bringing freezing temperatures. The region has annual average precipitation of around 140 cm (55 in), which is generally well distributed throughout the year. Severe droughts are uncommon but have occurred in recent years. Heavy rainfall, often resulting in flooding, can be associated with summer thunderstorms and with hurricanes. Extremely heavy rainfall has contributed to failures of the bluffs throughout Adams County on several occasions. These failures vary in scale.

**Historical Overview**

When Europeans initially traversed the Gulf Coast and the Lower Mississippi Valley, many of the early explorers were struck by the magnificence of the flora. Around them were the coastal marshes and dunes, the wet prairies, pine savannas, the hardwood or alluvial bottomlands, and the upland pine and oak forests. Early botanical explorations in Alabama, Louisiana, and Mississippi detail the lushness and diversity of the vegetation, as well as the size and abundance of trees. For example, William Bartram, visited near the Escambia River in Alabama around 1775 and noted,

> it is fact one vast flat grassy savanna and Cane meadows, intersected or variously scrolled over with narrow forest and groves, on the banks of creeks and rivulets, or hommocks and swamps, at their sources; with long leaved Pines, scatteringly planted, amongst the grass; and on the high sandy knolls and swelling ridges, Quercus nigra, Quercus flammula, Quercus incana, with various other trees and shrubs as already noted, inhabiting such situations. The rivulets however exhibited a different appearance; they are shallower; course more swiftly over gravelly beds, and their banks are adorned with Illicium groves, Magnolias, azaleas, Halesia, Andromeda, &c. The highest hills near large creeks afford high forest with abundance of Chestnut tree [Van Doren 1928:322-323].

Bartram goes on to describe some of the astonishing magnitude of the trees near the Mobile River:

> Opposite this bluff, on the other side of the river, is a district of swamp or low land, the richest I ever saw, or perhaps any where to be seen: as for the trees I shall forbear to describe them, because it would appear incredible; let it suffice to mention, that the Cypress, Ash, Platanus, Populus, Liquidambar, and others, are by far the tallest, straightest, and every way the most enormous that I have seen or heard of. [Van Doren 1928:328].

Thomas Hutchins travels in the Mississippi Valley and West Florida in the late 1760s and early 1770s document not only the Europeans and Native Americans living in the area, but also the bountiful vegetation of the region. He wrote of the flora and soils around New Orleans,

> This country is principally timbered with all the different kinds of oak, but mostly with live oak of the largest and best quality, uncommonly large cypress, black walnut, hickory, white ash, cherry, plum, poplar trees, and grape vines; here is found also a great variety of shrubs and medicinal roots. The
lands bordering the rivers and lakes are generally well wooded, but at small distance from them are
very extensive meadows, of savannas, of the most luxuriant soil, composed of a black mould about
one and a half feet deep, very loose and rich, occasioned, in part, by the frequent burning of the
savannas; below the black mould, it is a stiff clay of different colours [Hutchins 1968:48].

Another early description of the coastal flora comes from historian John F. H. Claiborne’s trip through Piney
Woods of south Mississippi. In 1840 while in Greene County, Claiborne wrote, “The growth of giant pines is
unbroken for a hundred miles or so, save where river or large water course intervene (quoted in McDaniel
1986:174). Of Jones County he wrote,

Much of it is covered exclusively with the long leaf pine; not broken, but rolling like the waves in the
middle of the great ocean. The grass grows three feet high and hill and valley are studded all over
with flowers of every hue. The flora of this section of the State and thence down to the seaboard is
rich beyond description. [quoted in McDaniel 1986:174].

Eighteenth and nineteenth century descriptions of the vegetation across the region emphasize the size,
quantity, and diversity of trees. These forests became a main economic resource for the region over the next
100 to 200 years. The vast and once tame less forests documented by early writers were a principle factor in
the early growth of cities like New Orleans and Natchez.

Colonial Mill Operations

Any discussion on the history of lumber mills in southern Louisiana and Mississippi should begin
with the French colonial settlements at New Orleans, Natchez, Biloxi, and Mobile during the first few
decades of the eighteenth century. European settlement along the Gulf Coast initiated a large commercial
trade in timber and lumber in the Lower Mississippi Valley. Quickly after establishing forts and settlements
along the coast of the Gulf of Mexico, French and Spanish colonial authorities attempted to construct mills
similar to those in seventeenth century Europe in order to utilize the vast wilderness of cypress, cedar, pine,
and oak. Water-powered sawmills had been in use in France and Germany by at least the 1200s or 1300s
(Panchak 1999). The earliest sawmills and pug mills in southeastern Louisiana and the remaining Gulf Coast
region would have occurred in or near the earliest European settlements-New Orleans, Natchez, Biloxi,
Mobile, and Pensacola (Figure 3-1).
As early as 1716, there were sawmills in the colony of Louisiana. There were two water-powered sawmills erected by French authorities in the area of Biloxi and there is a later allusion to one on the Beaulieu property along the Chapitoulas coast about ten miles upriver from New Orleans (Bezou 1973:39). However, when attempting to establish more water-powered mills in the New Orleans vicinity, French officials failed due to the lack of free-flowing water channels and they were forced in 1724 to utilize animal-powered mills with two teams of four horses (Moore 1967:11). The topography of the deltaic region surrounding New Orleans and other coastal cities and especially in the nearly flat floodplain areas, limited the expansion of water mills given the minute elevation changes and thus low head of water. Furthermore, early attempts at
wind-powered mills such as those found in Holland, were for the most part failures, being located in a region where the winds were constantly changing (Giraud 1991:247). Regarding the difficulty of establishing water-powered mills in the region, the Company of the West Indies identified that only one water mill was actually sawing lumber along the lower Mississippi by 1729 (Moore 1967:11). Thus, initially much of timber in the colonies was cut and made into planks by hand (Moore 1967:10).

Trees were either cut by an axeman and made into planks on the spot by a two-man handsaw (Moore 1967:10), or the tree was girdled, left to dry, and then cut into 10 and 12 feet sections during a dry period (Mancil 1972; Moore 1967:10). Once the area was flooded by the Mississippi in the spring, the logs were assembled into rafts for transportation to a mill downriver (Mancil 1972; Moore 1967:10-11). The girdling forced the dead trees to dry out, allowing the timber to be floated by raftsmen (Moore 1967:10). Pre-industrial French logging practices depended on hand labor, and often a sufficient number of logs could not be brought from the swamps to keep the few sawmills at the time operating regularly (Mancil 1972:63; Wheland and Pearson 1999:15).

However, sawn lumber would still have been available in large colonial settlements such as New Orleans quite early because horse-drawn mills were found in the New Orleans vicinity by the 1720s, and by the 1790s water powered sawmills began to be found with greater frequency near the Mississippi River (Moore 1967:10-11; Vlach 1975:58, 60). Just outside of settlements at New Orleans, Biloxi, Mobile, or even Natchez, was a vast resource of virgin forest. Not only were some of the French colonial plantations in this region successful in their production of agricultural commodities, but many estates also supplemented their income with the production of lumber, wax, bricks, and several other goods in great demand in the early frontier setting. Often wax myrtle or lumber production occurred during a lull in other plantation activities. During the early- to mid-eighteenth century, plantations along the Mississippi River became increasingly self-contained economic units-producing their own vegetables, raising cattle, milling their own lumber, and having various craftsmen construct or repair machinery and equipment on the plantation (Bezou 1973). Probably, the most lucrative of all these secondary operations during this period was the processing and selling of cut lumber (Bezou 1973).
Therefore, it should be of no surprise that the census of 1724 in New Orleans refers to a large load of wood hewn into planks, posts, beams, and boards that was worth at least 12,000 *livres* to the Chauvin brothers (Bezou 1973:23). The Chauvin brothers were Chapitoulas plantation owners who by 1724 were likely operating a sawmill on their plantation about 10 miles upriver from New Orleans. Historic documents highlight an incident1 whereby the construction of the Chauvin’s sawmill flooded the neighboring plantation owned by Dubreuil (Giraud 1991:193; Bezou 1973:21).

Dubreuil was another Chapitoulas area plantation owner in the 1720s and 1730s. Dubreuil was a successful planter with indigo, sugar and staple foods like rice, potatoes, wheat, beans, and corn. For Dubreuil, however, “the most substantial resource of his plantation was timber” (Dawdy and Mathews 1998). In the 1730s, Dubreuil used his slaves and the vast timber supply of his plantation to enter the construction business2. To carry out these projects, Dubreuil may have also built and operated a sawmill on his plantation to mill his cypress forests (Dawdy and Mathews 1998).

Other evidence of a sawmill on the Chapitoulas Coast in the 1730 comes from a suit filed against Joseph Chauvin Delery. In August 1730, Delery hired Joseph Blanpain to “build a mill…with six saws, to be finished by Christmas of the same year” (Goodwin et al. 1985:147). However, shortly afterwards Delery refused to pay the contractor, claiming that the sawmill was incapable of sawing (Goodwin et al. 1985:147). Blanpain claimed that the workmanship was not the problem, rather Delery allowed too little flow to the race, “thereby flooding and stalling the wheel” (Goodwin et al. 1985:147). Thus, it appears that several sawmills were constructed around New Orleans and other coastal colonial cities by the 1730s (Bezou 1973:39; Giraud 1991:142-143).

Exploitation of the timber resources by colonists along the Gulf Coast and in the Lower Mississippi Valley began with a degree of regularity after 1725 (Giraud 1991:142-143). Prior to this, because of a shortage of labor, trees were often cut upon need and without regard to a particular season. Yet the timber in this region needed to be cut and split when “out of sap,” which meant in the beginning of winter (Giraud 1991:143). By the 1720s the forest became the primary resource for the French settlements across the coast
and in parts of the Lower Mississippi Valley:

While enabling them to find useful employment for their slaves during the slack winter season, it also ensured them a regular income: planks could be sold for seven sols each and shingles for 20 livers a thousand. Timber, rather than tobacco was thus the first basis for the establishment of the colony. Yet this resource was exploited only primitively—mainly by slave labor. Some of the inhabitants tried to set up sawmills along the river, but such mills were badly made and the inconstant level of the river allowed them to function only sporadically [Giraud 1991:143].

Thus, using enslaved laborers and with a greater understanding of forestry practices, colonists cut and milled a large amount of lumber given the limitations of these early mills.

During the early-eighteenth century, the few workers at the sawmills were usually seasonal and primarily agricultural workers and not lumber specialists (Moore 1967:12). Like much of the agricultural production, most of the individuals involved in felling and transporting timber in the Deep South were enslaved Africans (Starobin 1970). However, not all such workers were slaves, some were Free People of Color and Creoles. Historian Henry Sterkz (1972) states that Free People of Color held jobs other than those connected with agriculture in Louisiana, “They could find employment in such skilled trades as coopers, rafters, wheelwrights, blacksmiths and millwrights . . . boatmen, and woodcutters” (Sterkz 1972:216-217). Even a group of maroons has been documented working in the lumber industry in Louisiana around the 1780s in the area between the mouth of the Mississippi River and New Orleans: “. . . the Spanish authorities were made aware of a higher level of organization among the maroons of Bas du Fleuve. The maroons living in the cipriere maintained a symbiotic relationship with sawmill owners. They cut and squared cypress logs, dragged them to the sawmills, and were paid for each log delivered” (Hall 1992:207). The maroons later testified that both women and men participated in the logging and were paid one and a half reales for each piece of squared timber. The maroons would drag the logs out of the bush and place them in a canal and pole them to a point where they were met by a cart that brought the logs to water-powered sawmills (Hall 1992:210). Thus, the sawmill owners may have felt breaking Spanish Law was offset by their need for laborers in these remote areas.

After the mid-eighteenth century, French settlers increasingly utilized levees and canals to control floodwaters (Dawdy and Mathews 1998; Goodwin et al. 1985:147). Many concessionaries and contractors used enslaved laborers to dig artificial waterways through their holdings along the river (Goodwin et al.
Like the Chauvin mill, water would flow through ditches, canals, and levied bayous from the river to the backswamps and eventually back to the river. This flow could turn a mill wheel during periods of high water. In the ditch or canal leading from the river to the backswamp, a waterwheel was mounted and attached to a mill: “Swamp water flowing through the ditch turned the wheel and also conveyed sawlogs from the cypress brake to the mill” (Moore 1967:12). These small water-powered sawmills were efficient enough for plantation owners to mill a portion of the cypress backswamp in order to clear the land for further planting and to have sawn wood for repairs, new construction, or to sell locally. As early as the 1740s, felled timber was floated along canals to mills located along the Mississippi River (Goodwin et al. 1985:147).

In 1762 Hutchins described the activities at plantations along the Mississippi River from New Orleans to Natchez,

> In the autumn, the planters employ their slaves in cutting down and squaring timber, for sawing into boards and scantling. The carriage of this timber is very easy, for those who cut it at the back of their plantations make a ditch, which is supplied with water from the back swamps, and by that means conduct their timber to the river with very little labour: others send their slaves up to the cypress swamps, of which there are a great many between New Orleans and Point Coupéé. There they make rafts of the timber they cut, and float down to New Orleans. Many of the planters have saw-mills, which are worked by the waters of the Mississippi, in the time of the floods, and then they are kept going night and day till the waters fall. The quantity of lumber sent from the Mississippi to the West India islands is prodigious, and it generally goes to a good market [Hutchins1968:38-39].

The 1803 hand-colored engraving by Boqueta de Woiseri provides a bird’s eye view of New Orleans from the Marigny plantation and illustrates a water-powered lumber mill on the edge of the city (Figure 3-2). This type of water-powered sawmill continued to be used throughout the Lower Mississippi Valley well into the nineteenth century (Moore 1967:12).

Despite the size and seasonal limitations of these early mills, until sugar became profitable for the Coastal colonies, lumber was the principal cash product for most of the colonists until the mid-1790s (Moore 1967:4). When tobacco and indigo proved to unsuccessful commercial crops, the abundant and diverse timber resources became an essential element in the economy of inland Louisiana and according to Giraud (1991:141): “The forest that clothed the banks of the river had hardly been touched”. However, Le Page du Pratz hints that the effects of the early lumber industry could be seen in the deforestation around cities:
The cypresses were formerly very common in Louisiana; but they have wasted them so imprudently, that they are now somewhat covered their houses, and they sawed the wood into planks which they exported at different places. The price of wood now is three times as much as it was formerly [Hanger 1996:9].

Initially unaware of cypress’ strengths and resistance to rot and woodborers, the French builders quickly recognized the value of cypress for construction in tropical environments. On the basis of experiments conducted as early as 1709, French authorities recommended that it be used in preference to other woods in construction since cypress resisted decomposition when set in water or in the soil, and it was more supple, lighter and easier to work than live oak (Moore 1967:4; Giraud 1991:141). Regarding the quality of timber in this region, du Pratz wrote,

White and red cedars are very common upon the coast. The incorruptibility of the wood, and many other excellent properties which are well known, induced the first French settlers to build their houses of it…

Next to the cedar the cypress-tree is the most valuable wood. Some reckon it incorruptible; and if it be not, it is a least a great many years in rotting [Hanger 1996:8].

By the late-eighteenth century, the French government realized that producing tropical products in Louisiana was not working and assigned the Louisiana colony the new role of supplying corn, livestock, and lumber to the French sugar islands (Moore 1967:5). Thus, timber and sawn lumber offered a valuable trade commodity for the French colonies in Louisiana and Mississippi (Moore 1967:5-8). Although pine, oak, and cedar were exported, cypress was the staple (Moore 1967:4).

However, the majority of plantations in Louisiana during the colonial period still focused on agricultural crops such as indigo and sugar rather than lumber. Thus, there were still little in the way the development of a lumber industry except a few cypress sawmills scattered about near New Orleans (Carpenter 1847:116). French settlers maintained lumber prices were still too low and that there was a lack of skilled labor within the colony in regards to the knowledge of timber production (Mancil 1972).

Furthermore, the export timber from Louisiana and other French territories declined after 1785 because of competition with the United States and a reduced market in the war torn Caribbean (Hanger 1996:7, 8). Additionally, the early animal- and water-powered sawmills in use were limited in scale and often could only operate seasonally.
The 1803 hand-colored engraving by Boqueta de Woiseri provides a bird’s eye view of New Orleans from the Marigny plantation and illustrates a water-powered lumber mill on the edge of the city (source: Historic New Orleans Collection, Accession No. 1958.42). In the engraving, the sawmill is located just in front of the American flag. Note the stacks of lumber and timber adjacent to the mill and the canal apparently running from the river to the mill.

American Control of the Louisiana Territory and the Natchez District, “Under My Wings”

The American takeover of the Natchez District in 1798 and purchase of the Louisiana Territory in 1803 accelerated the development of the lumber industry across this region. Treaties, seizures, and sale of native tribal lands opened up more of the magnificent cypress, pine, and hardwood forests for timbering. There was an increase in the numbers of settlers and a corresponding demand for building materials in places like New Orleans, Natchez, and Pensacola, particularly after several devastating fires. This fostered the development of more water-powered mills, brickyards, turpentine orchards, and other early industries on the rivers and bayous. By 1803, there were at least seven sawmills located on plantation canals just on the west bank of the Mississippi River upriver of New Orleans (Goodwin et al. 1985:147). This accelerated growth did have a cost. As historical geographer Michael Williams writes of the period around 1810 and 1820,

The quickened pace of economic activity and the expansion of settlement had far-reaching implications for the forests, for in every way the demand for wood, and wood-derived products rose phenomenally, and enormous areas were denuded of their forest cover [Williams 1982:12].
Further assisting the development of the milling industry in this area was the immigration of skilled millwrights, engineers, and entrepreneurs from northeastern states like Pennsylvania and from Europe who contributed knowledge on mill construction and operation to the new American states. (Figure 3-3).

Between 1810 and 1820, some of the earliest manufacturing industry in Louisiana and Mississippi was erected along the bayous and rivers near coastal cities like New Orleans, Biloxi, and Mobile (Ellis 1981; Hickman 1986; Brooms and Solomon 1997). These more upland mill sites along the Gulf Coast were further inland, usually along the Pleistocene terrace edges. These areas had a greater amount of topographical change than mill sites in the floodplain or valley. Along with water-powered saw and gristmills, other industries were developing across the coastal region by 1820 including brick kilns, shipyards, and turpentine stills (Ellis 1981:107-108; Christian 1972). These early manufacturing industries were established along streams or near bodies of water so products like turpentine, rosin, charcoal, bricks, and lumber could be easily transported to markets in port cities.

![Figure 3-3. A circa 1880s photograph of water-powered sawmill in Pennsylvania. This type of mill would have been similar to those millwrights erected along the terrace edges in West Florida in the nineteenth century (source: photograph in author’s possession).](image)
Furthermore, enslaved African-Americans performed much of this early antebellum industrial work (U.S. Census Records 1820, 1830; Starobin 1970). The use of an enslaved workforce in an industrial setting was not unique to the southern states, as early as the eighteenth century enslaved laborers were used in coal mines and iron mills in Maryland and Virginia (Lewis 1979).

The agricultural boom of the 1820s to the 1850s in the American South corresponded with another construction boom and heavy demand for building materials especially in cotton port towns like New Orleans, Natchez, and Mobile. Consequently, the enslaved and freeman population in these areas found themselves more and more engaged in work outside of the agricultural based economy and involved in crafts, trades, and small industry. In St. Tammany Parish, just north of Orleans Parish, by 1850, the expanding manufacturing sector -- including some 14 sawmills, 15 brickyards, charcoal burners and shipyards -- had become the leading employer in the Parish for whites, slaves, and Free People of Color (Ellis 1981:108-109).

One example of the expansion of the lumber industry during the early American Period is the Hosmer-Mortee Millhaven in St. Tammany Parish, Louisiana. This mill in Old West Florida is typical of many of the water-powered mills of this period. The area that has come to be known as Hosmer's mill was probably established in 1819, when the property was acquired by a recent émigré, Jeremiah Miller. By 1821 Jeremiah Miller, father of Branch and Thomas, was listed as operating a sawmill on the Bogue Falaya River, north of Covington, Louisiana (Ellis 1981:107). In that year he was given authorization to clear logs and tress from the Bogue Falaya to give free navigation from Covington to Miller's Mill (Ellis 1981:107). The 1820 census shows a Jeremiah Miller as owning 16 slaves, eight males between the ages of 14f and 45, and six female slaves between 14 and 45 (Slave Schedules, St. Tammany Parish 1820). Historic records also indicate that the Millers constructed a wooden dam and sawmill on the Bogue Falaya at the Hosmer-Mortee site around 1820 (Ellis 1981:107,108). In 1822 Jeremiah Miller died and a probate inventory was created for his property that details medicines, foodstuffs, general goods, lumbering equipment, and personal goods. Items included 5lbs of candy, two dozen plates-valued at $2.25, one leather saddle, and one iron tea kettle (St.
Tammany Parish Clerk of Court, Probate for J. Miller 1822). Other items found on the probate included: one pound of opium, two listings of laudanum, sage, brandy, and whiskey.

In 1823 James Hosmer, an American veteran of the War of 1812, acquired the property from the Millers. Probate and Parish tax records show that in 1828 James Hosmer, the owner of the mill, had sixteen enslaved Africans and African-Americans working as blacksmiths, sawyers, teamsters, choppers, and laborers (St. Tammany Parish Clerk of Court, J. Hosmer 1832). Court depositions from the Ingram vs. St. Tammany Police Jury (1868) case, which included testimony by James Hosmer Jr., T.J. Mortee, an overseer, and two freeman river rafters, provide some limited accounts of the daily work routine around Hosmer-Mortee Mill (St. Tammany Parish Clerk of Court). The depositions describe between 30 to 40 individuals including enslaved laborers, slaves hired from local owners, Free People of Color, and the white overseers working in the dangerous log woods six and sometimes seven days a week cutting and hauling lumber, from sunrise to sunset and then rafting timber using a surge of water from the dam and the mile-long pond upstream.

James Hosmer died in 1831 leaving a widow and numerous children. His widow, Anise, petitioned the court and obtained title to the property by Sheriff Sale in 1832. The 1832 probate was created for Hosmer’s valuables and significantly the first names, ages and occupations of James Hosmer’s eighteen slaves living on his property are given (Table 3-1). Fourteen of the enslaved laborers at the mill were male and the five occupations of these men included blacksmith, sawyer, teamster, chopper, and laborer (St. Tammany Parish Clerk of Court, 1832 James Hosmer Probate). Subsequently, Anise Hosmer married T.J. Mortee, who took over operation of the mill or mills. The 1840 U.S. Census indicates that T.J. Mortee may have expanded the mill operation because of an increased demand for lumber. The census list T.J. Mortee in 1840 as operating a sawmill and owning 22 slaves, 15 of which are listed as employed in manufacturing and trades. Fourteen of the enslaved males were age 10 and over and four of the enslaved females were age 10 and over (U.S. Census Slave Schedules, St. Tammany Parish 1840). Although, the census does not list any Free People of Color living at the mill, it is likely that Mortee was using Free Persons of Color in certain lumber operations. The 1845 La Tourrette’s Reference Map of Louisiana Plantations shows a landholding labeled T.J. Mortee’s Mill at the approximate location of the former mill site. Furthermore, the circa 1863 map Northern
Coast of Lake Pontchartrain shows a “Mortee’s Mill” along the Bogue Falaya north of Covington, Louisiana (Banks and Abbot 1863). T.J. Mortee operated the mill up until the late 1860's or 1870's7 (Ingram vs. St. Tammany Police Jury 1868). The former Hosmer-Mortee estate lay vacant until the 1890s when the church sold the land to a local farmer (Father Breaux, personal communication 1998).

Table 3-1.
James Hosmer's enslaved residents in 1831 (J. Hosmer Probate Inventory, March 1831, St. Tammany Parish Clerk of Court).

<table>
<thead>
<tr>
<th>NAME</th>
<th>SEX</th>
<th>AGE</th>
<th>OCCUPATION</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tims</td>
<td>Male</td>
<td>60</td>
<td>-------</td>
<td>$175</td>
</tr>
<tr>
<td>Williams</td>
<td>Male</td>
<td>29</td>
<td>Blacksmith</td>
<td>$700</td>
</tr>
<tr>
<td>Joseph</td>
<td>Male</td>
<td>25</td>
<td>Laborer</td>
<td>$600</td>
</tr>
<tr>
<td>John</td>
<td>Male</td>
<td>25</td>
<td>Chopper</td>
<td>$600</td>
</tr>
<tr>
<td>John</td>
<td>Male</td>
<td>23</td>
<td>Laborer</td>
<td>$600</td>
</tr>
<tr>
<td>Moses</td>
<td>Male</td>
<td>21</td>
<td>Laborer</td>
<td>$600</td>
</tr>
<tr>
<td>Aaron</td>
<td>Male</td>
<td>25</td>
<td>-------</td>
<td>$650</td>
</tr>
<tr>
<td>Allen</td>
<td>Male</td>
<td>27</td>
<td>Sawyer</td>
<td>$650</td>
</tr>
<tr>
<td>Henry</td>
<td>Male</td>
<td>38</td>
<td>Good Sawyer</td>
<td>$800</td>
</tr>
<tr>
<td>Osborn</td>
<td>Male</td>
<td>25</td>
<td>Teamster</td>
<td>$700</td>
</tr>
<tr>
<td>Clayton</td>
<td>Male</td>
<td>18</td>
<td>Laborer</td>
<td>$600</td>
</tr>
<tr>
<td>Peter</td>
<td>Male</td>
<td>26</td>
<td>Good Sawyer</td>
<td>$700</td>
</tr>
<tr>
<td>David</td>
<td>Male</td>
<td>18</td>
<td>Teamster</td>
<td>$600</td>
</tr>
<tr>
<td>Nelly</td>
<td>Female</td>
<td>20</td>
<td>Cook</td>
<td>$450</td>
</tr>
<tr>
<td>May</td>
<td>Female</td>
<td>17</td>
<td>House Servant</td>
<td>$500</td>
</tr>
<tr>
<td>Patsy</td>
<td>Female</td>
<td>20</td>
<td>House Servant</td>
<td>$600</td>
</tr>
<tr>
<td>Caroline</td>
<td>Female</td>
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<td>Patsy’s Child</td>
<td>No Data</td>
</tr>
</tbody>
</table>

Craft Traditions, Daily Life And Housing Of Lumber Workers

During the mid-nineteenth century, sawmill and logging operations such as the Andrew Brown, Brown Cozzens, and Hosmer-Mortee sawmills were operated and worked predominantly by hand and were
dependent on occupational craft skills of the laborers. Trees were chopped by axe and sometimes sawn and timber was hauled by animal, either overland to the nearest sawmill or brought to a river and rafted or poled to a mill or wood dealer. Millwrights kept the mills running properly, while blacksmiths tended to the operation of the machinery. River pilots and rafters braved the unpredictable streams and port towns delivering lumber and timber, while teams of loggers picked and cut the highest grade cypress, cedar, pine, or hardwood trees available in the hills, bottomlands, or savannahs. Many of these occupational skills were carried from the family farm, learned through apprenticeship on a plantation or mill, or possibly brought from a mother country. Such skills were invaluable assets in the logwoods during this early period (Cramer 1998; Hickman 1962).

Craft skills were part of almost every aspect of early lumber operations, especially in transporting the giant trees and in the operation of the sawmill. In the uplands, teams of oxen, mules or horses transported felled trees overland, or the timber was hauled to a stream for rafting. Alternatively, timber could be cut, stamped with an identifying mark, and left for seasonal floods so logs could be floated in cribs or in a log drive. By the late 1840s and 1850s, with many of the rafts removed on waterways such as the Red River, large cribs of timber were being brought down both Red River and the Mississippi River (Moore 1967:57). These rafting crews, often made up of slaves, free blacks and whites, were usually composed of six to twelve men who would sleep, play music, and cook on the rafts (Figure 3-4). River piloting and rafting was dangerous work and required a considerable skill and knowledge of the river currents, snags, water levels, and awareness of the dangers of robbery at many port towns like Natchez and New Orleans. Jackson County, Mississippi resident Ollie Vice, and ninety-six year old George County, Mississippi, resident Louis Habard, both observed that timber in the early 1900s was initially cut adjacent to the creeks and streams, pegged together into “cribs,” and rafted down rivers to mill operations along the Mississippi Gulf Coast (Habard 1996; Vice 1996). Rafting crews used push-poles to guide the log rafts down the stream.
The skills and variety of craftsmen, many of whom were enslaved during the antebellum period, at a typical sawmill in the Deep South is partially demonstrated in *Slave Testimony*. Within this work John Blassingame (1977) collects oral testimonies, speeches, letters, and newspaper clippings of enslaved African-Americans who were skilled laborers, such as Jonathan Thous and A.J. Jones who were both slaves in Kentucky and both were millwrights who had learned the trade through apprenticeship. Cicero Finch George, who was 81 when he was interviewed in 1929, provides a most insightful dialogue of the number of craftsmen probably found on many antebellum mills in Louisiana or Mississippi (Blassingame 1977:582). Cicero had one brother who was a carpenter, another who was a wheelwright, and knew the blacksmiths on the plantation well since he was an ox team driver and a log roller which required yokes and chains that had to be repaired frequently (Blassingame 1977:580-584).

Laborers in the lumber industry from the early-nineteenth century onward were becoming more skilled and specialized in the lumber trades. The sawyers and graders had to know how to pick valuable trees, when and how the tree had to be chopped, which direction the tree would fall, how much board feet the tree would yield, and how it would be transported to the mill. Rivermen and pondmen worked the timbers from
the water to the log haul, which carried the logs into the mill. At the sawmill a millwright and a carriage
runner kept the system of pulleys, chains, lifts, and saws working efficiently, while the sawyer determined the
angle to cut the timber. The blacksmith forged new parts for worn machinery, and the filer had the arduous
task of keeping the saws sharp.

**Oral Interviews with Loggers and Drivers**

Oral interviews conducted with former worker or residents in these early timber operations shed
further insight into some of the craft skills used not only during the late-nineteenth and early-twentieth
century, but were probably indicative of some occupational crafts in use during the research period from the
1820s to the 1870s. These twentieth century analogues provide some information regarding the dangers, craft
skills, and aspects of the living conditions in the logwoods and may reflect some parallels to life in the
industry prior to the Civil War.

One of the craft skills documented through oral interviews was that of mule, oxen, and draft horse
drivers. Animal drivers had to control several thousand pound teams often by voice command and a whip.
The drivers needed to know limitations of each animal given the terrain, load, and animal. Although horses
and mules were used to haul felled trees from logging woods during the nineteenth and early twentieth
century, lumbermen often used oxen (Figure 3-5) to remove timber because of their strength and relatively
low cost, and because of the topography. Oxen were especially useful in the swampy and boggy conditions
found in the hardwood bottomlands of Mississippi. Joe Refer, a former lumberman, said in a 1976 interview,

> Another thing about oxen, you could take them in the woods on soft ground. You see, you can’t
> work a mule on soft ground; they’re scared of mud and their feet are little. But, you can take an old
> ox and he’s not scared of it, they’re a woods animal. You can put one out in a swamp where mud is
> that deep and he can’t pull too much in that mud, but he’ll go through it and pull every pound he can
> in there. They can get around in the woods, over logs or anything. They’re a woods type…These
> things that we’ve got in these pastures [today], he might break his neck if he was out in the woods now… [Refer 1976:12].

The reliability of oxen in wet hardwood bottomlands and pine forests made them an ideal work animal in
southern Louisiana and Mississippi.
Ox driving is considered one of the oldest occupations in the Mississippi back country (Hickman 1962:132). Ollie Vice, a life-long resident of Helena, Mississippi, raises oxen as his father and uncle did before him. In a recorded interview with the author, he stated that wild cows were found throughout the woods of southern Louisiana, Mississippi, and Alabama, and were known by a variety of names like “Piney-Woods Red Stroke” or “Florida Cracker Cattle” (Vice 1996). Ox driver Bruce Conway also comes from a long line of drivers. His grandfather, James Jefferson Conway, his father, Bura Conway, and his two uncles were all ox drivers. Bruce Conway’s ninety-six year old father, Bura Conway, described driving a team:

You call them by name and tell them to get up. Call his name and he abide by it. You want to go to the right, you tell them, that’s them lead or head oxen, ‘Back Spot! Get back Spot!’ and he’ll turn to the right. And if you’re calling them to you, you say ‘Whoa Spot!’ and motion the whip and he will come back to you [Bura Conway 1996].

Reverend I.O. Anderson, whose father, Vic Anderson, was also an ox driver, recalled the use of voice commands while driving oxen,

Ox, like I said, you had to talk to them. You couldn’t guide them like you did a horse, they could go back ‘Gee, Haw, Back,’ or something like that. ‘Back, go back, Tony!’ I would tell him like that. I’d
say ‘Whoa! And he would stop. ‘Let’s go Tony!’ I talk to him like talking to somebody more than anything else [Anderson 1996].

Ox teams were arranged in a similar manner. The oxen were “matched” or “paired with a companion” (Anderson 1996). If a team has four pairs of oxen, or “four yoke,” the first pair is the “lead,” the second pair is the “first swing,” the third is the “second swing,” and the rear pair called the “tongue if you were pulling a wagon, or if you were pulling logs, it’s the chain steers,” (Bruce Conway 1996). The rear pair often included the largest and strongest:

You put your big steers on the tongue of a wagon because they have to hold that wagon downhill and the bigger they are the better they are… Normally, you put your smaller ones in the front because they’re faster, but depends on which pair you get trained well enough to be in the front. They’re the lead. Wherever they go, the rest of them are going to follow. If they are pretty well receptive in learning, fast and smart and listen, they make the best leads [Bruce Conway 1996].

Other occupational crafts such as blacksmithing and woodworking were just as essential in the logwoods. Most of the ironware used in logging had to be hand-forged, the yokes had to be hand-cut, and the logging equipment such as wagons and carts had to be restored and rebuilt frequently. Bruce Conway stated “everything on my father’s team was hand crafted except for the chain” (Bruce Conway 1996). Bura Conway and Vic Anderson purchased the majority of their yokes, tongs, and hooks from Ed Fairley, an African-American blacksmith from Brooklyn, Mississippi. When he was younger, Reverend Anderson crafted several yokes from local black gum and bows out of hickory, using a foot adze (Figure 3-6). Bruce Conway learned to make ox yokes and to blacksmith from observing Ed Fairley. Bruce can construct seven different size ox yokes form memory: “You select wood which is not knotted, and straight, and at least five foot long. I'll cut it and take it to a sawmill and have them square it, and then I draw it out and cut it out from memory” (see Figure 3-6) (Bruce Conway 1996). Ollie Vice cut the neck shape for ox yokes out of black gum, using one of his father’s two yoke patterns which are over a century old. Ollie Vice also blacksmiths all of his iron rings, staples, and hooks, as well as restoring log wagons and two-wheel log carts from memory (Vice 1996). Additionally, some local ox drivers also made cowhide chairs and braided their own leather ox whips.

Oral interviews also document the dangers of the occupation. Work in a sawmill or cutting and transporting timber entailed untold risk during the early-twentieth century. Bruce Conway recalled that one his of father’s African-American ox team drivers who was hard of hearing was killed by a falling tree that hit
him in the head (Bruce Conway 1996). George County, Mississippi, resident Louis Habard spoke of his brother, who was a sawyer like himself, being killed on a scaffold while cutting down a giant cypress because the crosscut saw got stuck and cut open his side (Habard 1996). Willie B. Reid, a resident of Lawrence County, Mississippi, recalled her family’s life in a mobile timber camp where some workers lived in “houses on wheels” (Figure 3-7). Mrs. Reid described her family’s camp car as being approximately ten by twenty feet in size and consisting of three rooms connected in a L-shape, with a tarp hanging between the flat roofs to from a walkway (Reid 1996). Mrs. Reid spoke of her younger sister’s struggle with a respiratory disease at the logging camp (Reid 1996).

Using oral histories to interpret past archaeological sites using analogies from the more recent past could be problematic if cultural continuity is assumed incorrectly. Continuity over time is a challenging assumption because the processes of cultural change, such as industrialization and modernization, affect communities on many levels. How much of the material culture and the physical activities are laden with the same cultural meanings to the participants in both the nineteenth and twentieth centuries? Generally speaking it is possible to illuminate patterns of similarity to create analogs to study general meanings (Abraham 2001:7). An analogy, as defined by Webster’s Dictionary is an inference that if two or more things agree with one another in some respects they will probably agree in others.

Oral narratives describing late-nineteenth and early-twentieth century logging and camp life provide some analogues for certain life threatening conditions workers faced in a mid-nineteenth logging operation. Clearly, the technological and social changes between the mid- to late-nineteenth century altered lifeways in the lumber industry significantly. In particular, slavery’s end and the railroad’s increased dominance transformed the industry. However, continuities among time periods included many of the skills, craft traditions, and dangers associated with the work.
Figure 3-6.
Top: Reverend I.O. Anderson holding an ox yoke he carved in the 1940s from black gum (Source: Photograph by author). Bottom: Bruce Conway, a resident of Richton, Mississippi, is making an ox yoke from memory (Source: photograph by Jennifer Abraham).
A circa 1900s photograph of a mobile timber camp in the Piney Woods of south Mississippi (Gill Hoffman Collection, McCain Archives, University of Southern Mississippi). The mobile camp cars housed workers and their families until cutting was completed in that section of the woods and then the camp would be moved to a new location.

**Housing**

The housing of enslaved and free lumber workers during the mid-nineteenth century would have varied from plantation to plantation or milling operation to milling operation. Given the nature of the business, most of the housing was likely simple wood structures with few amenities. In some instances barracks, such as those used for slaves on some sugar islands in the West Indies, may have been used to house antebellum mill workers. In more transient log camps or turpentine camps nothing more than simple lean-tos connected by tarps were used to house workers. One 1848 visitor to a lumber camp (Figure 3-8) described the rude lean-to’s housing as “barely wide enough for five or six men to lie in, closely packed side by side—their heads to the back wall, and their feet stretched to the open front, close by a fire kept up through the night.” In this shelters, the visitor added, “The roof is sloping, to shed the rain and where highest, about four feet from the floor…The [wood] shavings…make a bed for the laborers” (Starobin 1970:60, Lewis 1848 [1968] 122-123).
Musical Expression in the Log Woods

Obviously, a 12 to 16 hour workday in the woods or mill dominated much of the physical time for the laborers during the antebellum and early postbellum period. However, artistic and spiritual expression were likely incorporated into the daily work routine of the laborers, or performed after sunset. In the antebellum setting, such expression would have provided a psychological release and an opportunity for communal bonding as well as means of creating social distance from the owner: “Slave music, slave religion, slave folk belief—the entire sacred world of the black slaves—created the necessary space between the slaves and their owners and were the means of preventing legal slavery from becoming spiritual slavery” (Levine 1977:80). Thus, music, storytelling, and religion expression around the plantation, in the logwoods or on a raft of timber, provided an opportunity for enslaved people to assert themselves, their history, their spirituality, and their social satire in a form the owners or employers would have likely underestimated or disregarded as nonsense.
Song and music are such valuable cultural features yet they often elude the archaeological record. Levine (1977) states that “From the time of slavery until well into the twentieth century, black laborers wielded axes, sledge hammers, spades, and hoes loaded and unloaded ships, rowed boats, dug ditches, husked grain, picked crops and lined track to the accompaniment of song” (Levine 1977:208). Music in the work setting such as the logwoods played many important roles. Work songs provided valuable timing and instruction to the workers as they carried out dangerous tasks such as loading and unloading heavy equipment, laying track, or tree cutting. Many plantation owners realized this and rewarded some song leaders since work songs could control the pace and bring the workers together as cohesive group set to a daily steady rhythm (Figure 3-9). An African-American prisoner describes the role of music in lumber cutting:

When you’re swinging that diamond [axe] you got to have somebody who knows how to handle a diamond and knows the song where he can push for it. When you’re working with that diamond you got eight or twelve men on a tree with the axes and all of them swinging in union, in rhythm...So it’s just regular harmony [Quoted in Levine 1977:208].

Bruce Jackson provides a similar discussion in his analysis of Texas convict worksong tradition, *Wake Up Dead Man*. Regarding the value of worksongs to African-American prisoners cutting timber, Jackson writes (1999):

When the convicts cut down large trees, they often work with several men around one trunk—I have seen as many as eight on a tree, and some convicts have told me that when a really thick trunk is being chopped there may be even more than that. If there are four men working on a tree, two will work on a cut on one side, two will work on a cut on the other. One of the cuts will be closer to the ground than the other (the older woodcutters can just about aim where the tree will fall)... Ideally, if the axes are sharp and strokes well-placed, a chip pops out every other stroke... So one always swings in phase with the person 180° around the tree; one is always one half-cycle out of phase with persons on either side of oneself... Timing is critical in this work: if one is too far forward or too far back at the wrong time, there is danger of lopping off the fingers of another man’s hand or having one’s own fingers severed; there is danger of having the axe of the man behind you imbed itself in your skull. The song keeps the workers in time, and the timing keeps the axe strokes regular and thereby supplies the metric frame for the body of movements of all persons in any one work group [Jackson 1999:31-32].

Therefore, certain work songs appear to assist in timing the movement of the workers so several individuals could coordinate very dangerous actions in close company without injuring the person near them.
Work songs not only kept the workers in unison, but also provided relief from the psychological hardship and repetitiveness of the work itself. An elderly African-American inmate in Texas in the 1960s recalled the role of music in creating a cohesive group about loggers,

It just feels like to me I can do that kind of work better on account of when you get singing good you can do good work. Whenever we’re cutting trees down all the guys get together and sing songs and so I guess we pass off the time more better. Looks like you do your work more better and you keep steady working and it don’t seem like the work is hard [Jackson 1999:25].

Work songs were also used as a mechanism for social criticism. These rhythm chop songs used by inmates in the late nineteenth and early-twentieth century dealt with serious topics such as their sentence and prison life. Songs could sadly, but humorously, denounce some of the social injustices of the penal system as they were like used earlier to criticize the slave system.
Some music played around the mill or in the logwoods at night likely provided social relief from the tensions of the day. Around these early camps and mill sites, the roots of blues, country, jazz, and zydeco were developing. By the late nineteenth and early-twentieth, lumber camps and juke joints in mill towns provided an ideal location for the interaction and sharing of various music styles-- Cajun, Irish-Celtic, jug bands, and African-American blues. A worksong during the day could be transformed into a social number at night. At least in the postbellum lumber camps, workers with a diverse musical repute interacting allowed for the crossover of diverse early musical genres: worksongs, spirituals, blues, country, and jazz. The lumbering activities of the two sawmills examined within this thesis, was spread from New Orleans to the Yazoo Basin, an area where jazz and blues were developing.

Antebellum mill operations often did not have a designated church on the grounds for either the free or enslaved laborers. Therefore, spiritual songs found their way into the daily repertoire of many of the plantations daily activities. Oral histories with elderly residents of South Mississippi, many former lumber camp residents in the early 1900s, recall turpentine workers - women, men, and children - singing spirituals as they walked for miles from pine to pine collecting resin for refining (Vice 1996). Such postbellum spirituals, like prison work songs, likely had their roots in the earlier antebellum days. Other spiritual worship may have been carried out in conjunction with a community wide celebration like a death or a river baptism. Thus, performance within and around an antebellum or early postbellum mill community within southern Louisiana and Mississippi provided a means of release and a chance to publicly criticize the surrounding social system, and furthermore, most songs offered a mechanism for maintaining cultural values.

Solomon Northup

In Twelve Years a Slave, Solomon Northup recollects his life in New York as a freeman and his scandalous kidnapping in March of 1841 that brought him to Louisiana where he was sold to a lumber mill operator. Much of Northup’s life as a slave was spent working at a lumber mill in the forests of south-central Louisiana during the mid-nineteenth century. His intelligence, musical skills as a fiddler, and carpentry skills made Solomon a highly viable asset to his owner. William Ford purchased Solomon Northup in 1841 from a slave pen in New Orleans to provide another hand for his sawmill near Bayou Boeuf.
Soon after his arrival in Avoyelles Parish, Solomon began to work with William Ford’s other slaves at the water-powered lumber mill on Indian Creek. Northup describes the activities, “a colored man, driving three yoke of oxen, attached to a wagon load of lumber, drove into the opening” and “On Ford’s arrival at the mills, we were employed in piling lumber, and chopping logs, which occupation we continued during the remainder of the summer” (Eakin and Lodgson 1968:67, 69). Interestingly, regarding women performing certain duties, Solomon relates:

In the course of a fortnight, four black girls came down from Eldret’s plantation—Charlotte, Fanny, Cresia and Nelly. Axes were put into their hands, and they were sent out with Sam and myself to cut trees. They were excellent choppers...At piling logs they were equal to any man. There are lumberwomen as well as lumbermen in the forests of the South [Eakin and Lodgson 1968:116].

Ford openly allowed his mill workers to read and own Bibles (Eakin and Lodgson 1968:69) and the amount of independence Ford allowed his slaves caused a community uproar and many whites scorned Ford as unfit to own slaves, although he was one of the wealthiest landholders in the area. Solomon demonstrating his ingenuity suggested an idea that would result in increased profit for Ford. Until that time on Ford’s plantation, all milled lumber was hauled by ox and cart, so Solomon suggested building a raft and floating the lumber downstream. The white foreman Adam Taydem scorned the idea, but Ford permitted Solomon to try the experiment:

Having removed the obstructions, I made up a narrow raft, consisting of twelve cribs. I was quite skillful, not having forgotten my experiences...on the Champlain canal. One hand could manage three cribs. I took charge of the forward three, and commenced poling down the creek. In due time we entered the first bayou, and finally reached our destination in a shorter period of time than I had anticipated [Eakin and Lodgson 1968:70-71].

Solomon’s fate would soon shift again as he was sold to do construction work and then to a cotton planter®. Solomon Northup’s story provides insight into the operation of a sawmill and the daily life of an enslaved craftsman at a mid-nineteenth century logging operation in the Lower Mississippi Valley.

**Spread of Steam-Powered Sawmills Across the Lower Mississippi Valley**

The introduction of steam engines into the Lower Mississippi Valley during the first decade of the nineteenth century transformed the lumber industry during the nineteenth-century by further mechanizing the timber business:
In the long view of the use and abuse of woodlands in the United States the years from about 1810 to the Civil War were pivotal and crucial. Basically they were 50 years during which the country was transformed from a predominantly self-sufficient, rural, agricultural, almost peasant economy, to a highly commercial, urban, industrialized one, when ‘take-off’ occurred after a period or rapid technological change during the 1820s [Williams 1982:12].

The introduction of steam-power was especially important initially in the valley or floodplain, because of the low head of water. Moore (1967) credits this significant economic development partly to New Orleans residents Captain James McKeever (or McEver) and Louis Valcourt, a French emigré. Around 1802 these imaginative business associates drew up a plan to construct and operate a steam-powered river vessel between Natchez and New Orleans. The following year they ordered a high-pressure steam engine, for which they agreed to pay $6,000, from the Philadelphia-based inventor, Oliver Evans (Moore 1967:13). Evans, who has been described as the American James Watt, personally supervised the manufacturing of the engine in 1803 (Moore 1967:13).

The hull of the 80 by 18 foot river vessel was to be built on the Mississippi River and supervised by McKeever; the engine machinery was to be sent by sea with Valcourt to New Orleans and set up in the boat (Thurston 1884:156). Soon after installing the engine in the steamboat, a rise in the river broke the boat’s moorings and carried it into the backswamps, where it was stranded beyond hope of recovery (Moore 1967:13). The permanent grounding of their steamboat left Valcourt and McKeever on the verge of bankruptcy (Moore 1967:13). William Donaldson, a New Orleans merchant, and director of the Bank of Louisiana, offered to lend Valcourt and McKeever money if they would salvage their Evans engine to drive one of his sawmills (Moore 1967:13).

Soon, Valcourt and McKeever’s mill was producing 250 board feet of lumber per hour or 3,000 lineal feet of lumber per twelve hours (Thurston 1884:156; Moore 1967:14). During the first year of operation, the Philadelphia workmen reported that the steam-powered engine ran nearly continuously, without trouble (Moore 1967:14). However, a fire in 1806 destroyed the entire sawmill operation (Moore 1967:14, Thurston 1884:156). Influenced by the success of the Valcourt and McKeever Mill, William Donaldson constructed a twenty-horsepower steam sawmill at Manchac on the shores of Lake Maurepas around 1807 (Moore 1967:14-15). The mill’s engine drove a gang mill of four saws or three saws and a gristmill. The mill
was a financial success and Donaldson earned no less than $70,000 in three and a half years (Moore 1967:15). Furthermore, the mill reduced lumber prices in New Orleans from $50 to $40 for a thousand board feet during this period (Moore 1967:15).

The successful utilization of steam power by sawmills in the vicinity of New Orleans attracted a great deal of attention, especially from the wealthy cotton planters of the old Natchez District (Moore 1967:16). The first steam-powered sawmills historically documented in Natchez were built between 1803 and 1815. Some of the first steam sawmills in Lower Mississippi Valley were erected at Natchez Under-the-Hill. Despite the high cost of Evans’ steam engines, two were used to power sawmills near Natchez before 1815 (Moore 1967:16). Between 1808 and 1814 William Herrins utilized an Evans engine in his Montesano sawmill, which was located near the foot of Silver Street at Natchez-Under-the-Hill. The mill manufactured cypress and white oak planking, which was floated to New Orleans on rafts (Moore 1967:17). Herrins used the steam engine to drag sawlogs up the riverbank to the mill and to propel the saw. The log carriage of the Montesano mill could handle trees up to 30 feet in length (Moore 1967:17).

Across the river in present day Vidalia, Louisiana, Reuben Nichols erected a 20 horsepower Evans-powered sawmill in 1812. In April of that year, Nichols wrote Evans that he was satisfied with the “wonderful performance of our engine. We are driving at present three saws and mill-stones with great ease, and it does not appear to me that we use half its power” (quoted in Moore 1967:17). Evans would often guarantee the engine for several years and assure his customers that no other Evans’ engine (Figure 3-10) would be erected in their district. A steam engine that could cut around 5,000 board feet in twelve hours cost around $6,000 to $10,000 at this time (Moore 1967:17). A $7,000 investment during the early 1800s was a sizable financial risk to take for basically an unproven piece of technology at this time period. The cost of the engine may partly explain the initial slow expansion of steam-power across the Lower Mississippi Valley during the first half of the 1800s.
Figure 3-10.
Evan’s non-condensing steam engine, circa 1800. (Thurston 1884). This engine is similar to the engines used in early steam-powered sawmills across the Lower Mississippi Valley.

Within the first couple of decades of the nineteenth century the use of steam power spread rapidly throughout the lumber industry in the Lower Mississippi Valley. Steam-powered engines increased the capacity and sometimes reliability of the milling operation when compared to water-powered mills. By 1820, there were eight steam sawmills in the state of Louisiana, six of which were in the vicinity of New Orleans, three of which were located on the batture in front of the city. In Natchez, Mississippi, there were two steam sawmills constructed by the upper-boat landing around 1818 by Samuel Clements and Peter Little (Moore 1967:18; US Census of Manufactures 1820).

These sawmills in New Orleans, Manchac, and Natchez represented some of the earliest steam-powered industry in the region, but also in the United States. The timber industry was somewhat of an economic anomaly given the agrarian nature of Louisiana and Mississippi’s economies during the first half of the nineteenth century. Other large steam-powered sawmills operating in the Lower Mississippi Valley and along the Gulf Coast during this period included the Gunnison sawmill nine miles above Mobile, both Andrew Brown and Brown-Cozzens’ sawmills at Natchez-Under-the-Hill, Issac Franklin’s sawmill at Angola, Louisiana (Starobin 1970:26; Perrault et al. 2003), the Faures steam-sawmill in Gretna, Louisiana (Goodwin et
al. 1985:254), the Foucher and Gardere sawmills near Harvey, Louisiana (Goodwin et al. 1985:254), the Millaudon steam-sawmill upriver of Barataria Road, Louisiana (Goodwin et al 1985:254), and Calvin Taylor's sawmill in Handsboro, Mississippi (Moore 1967:18, 39; Hickman 1986).

The Gunnison sawmill in Mobile was a steam-powered establishment that cut yellow pine and included a gang of five saws and a log carriage which could hold timbers as long as 60 feet (Moore 1967:18-19). Using enslaved laborers, Gunnison “sold more than a million lineal feet of lumber from his mill, of which three-fourths went to foreign customers” (Moore 1967:18). After a fire in 1823, the mill was rebuilt and enlarged. The new mill machinery featured two sets of gang saws containing four saws each, and an average output of 24,000 feet of lumber during a 12 hour work day: “An ordinary water-powered sawmill employing two saws by contrast would cut less than 2,500 feet during the same period of time” (Moore 1967:19).

During the 1830s, the combination of increased markets and new timbering technologies stimulated the development and growth of the forest industries in Southern Mississippi. One of the first steam sawmills on the Mississippi coast was built in Pascagoula around 1835 (Napier 1985:57). By 1840 there were ten steam sawmills operating just in southern Hancock County, Mississippi (Napier 1985; Pearson and Saltus 1996; Saltus and Pearson 1997). Furthermore, one of the largest sawmills on the Mississippi Gulf Coast was located in the Pascagoula area and employed twenty-five slaves in 1850. According to the U.S. census figures, operators of forest industries on the Gulf Coast of Mississippi owned 200 slaves in 1850 and around 400 in 1860 (Hickman 1986:80). During the antebellum period, the Handsboro Mill in Mississippi (1845-1880) sawed and transported lumber using African-American slaves either owned by Taylor or rented from other owners in the area. For their labor, Taylor would provide food and shelter in a cabin and pay their owners twenty-five dollars a month (Hickman 1986:79). Following the Civil War, the mill continued to operate using wage laborers (Hickman 1986:79-80).

Not only were steam engines employed in large sawmill operations, but by the mid-nineteenth century, as the price of this new technology decreased and its reliability began to be proven, a number of planters along the Mississippi River erected small steam-powered sawmills on their plantations (Figure 3-11).
These mills often required skilled mechanics, fireman, oilers, and engineers to operate the engine properly and safely. Enslaved workers with such skills were “valued double and triple ordinary field workers” (Bacot et al. 2000:66). The high value of enslaved lumber workers was also partly due to the dangers, risks, and deaths associated with the operation of a sawmill, logging and rafting activities. Because of the risks, many owners refused to lease out their slaves to lumber operations (Moore 1967:138, 139).

Figure 3-11.

A few slave owners provided “supplemental wages” for woodcutters, raftsmen, and mill workers who put in additional time or effort (Moore 1967). Additionally, some owners allowed slaves to work for themselves after certain tasks had been completed. One example is William Dix’s plantation in Pointe Coupee Parish, Louisiana. Dix operated a cotton plantation and wood yard along the Mississippi River at Raccouri Cut-off during the mid-nineteenth century (Spillman 2001). The money from the wood sales went to Dix, but
Dix allowed his woodchoppers to cut timber to sell for themselves on Sundays, nights, and on any day of the week after the 12 cords had been cut. Dix even supplied the woodchoppers with teams to haul the wood to the river without charge [Spillman 2001].

According to John King an enslaved cotton worker and woodcutter at Dix’s plantation, the required 12 cords of wood could be cut by Thursday, leaving Friday and the weekend for him to work on cutting wood: “John recalled several times he had as many as 50 cords of wood on the bank of the Mississippi River to sell to the steamers, pocketing the money for himself” (Spillman 2001). With the money made from cutting wood, King purchased livestock from Dix, including several cows, a horse and a mule (Spillman 2001). King also used some of his “wood money” to buy provisions like “sugar and syrup” (Spillman 2001).

Part-time help from farmers and slaves during the agricultural off-season increasingly gave way to full-time, more specialized workers. An increasing number of enslaved Africans and African-Americans and Free People of Color were involved in cutting, transporting, or milling timber: “Slaves were used greatly to log the pine, cypress, and live-oak in the swamps and forests from Texas to Virginia and especially along the Gulf Coast” (Starobin 1970:25). These laborers were engaged in both manual labor tasks but also in skilled crafts and trades tied to the lumber industry: blacksmiths, coopers, animal drivers, building contractors, millwrights, river pilots, log sawyers, and mill engineers (Ellis 1981; Hickman 1986; U.S. Census Records 1820-1860; Upton 1986). Most of these early mills (Figure 3-12) employed only 20 to 30 people exclusively working the lumber mill, the drying yards, and in the docks. Logging and rafting crews could be contracted or hired seasonally. The cotton boom of the late 1840s and 1850s caused many sawmill operators to assure steady supplies of timber by having their own timber and rafting crews.

One example of an African-American craftsman is Bernard Benoit. Benoit appears to have been an enslaved blacksmith working at one of the several antebellum lumber operations in Harrison County, Mississippi. Benoit purchased his freedom and became a Free Person of Color sometime in the 1830s (Powell 1999a). In 1836, Benoit appears to have purchased about 80 acres of land including parts of what is presently known as Bayou Bernard just north of present-day Gulfport, Mississippi (Powell 1999a). Bernard’s name and reputation as a skilled craftsman appears to have lasted through the generations similar to the

![Figure 3-12. The interior layout of a mid-nineteenth century sawmill (Holmes 1960).](image)

In the early years of lumbering, logs had to be rafted to the mills downriver. During log drives, the timber was stamped with an identifying owner’s mark like cattle (Sullivan and Powell 1985:31). Dressed lumber destined for outside markets was then shipped by wood schooners built locally (see Pearson and Saltus 1996; Powell 1996) to centers on the Gulf Coast such as New Orleans or Mobile. Before the establishment of railroads, commercial lumbering would have been impossible were it not for the availability of this cheap water transportation and slave labor.

The other significant innovation during this period to the sawmill machinery involved the mill saws. Most early mills would have relied on a sash saw, or a gang mill. A sash saw (Figure 3-13) is a thin narrow blade stretched in a wooden frame:
A gang mill is basically a sash mill equipped with two or more saw blades:

The frame, which held the saws was called the sash because it rose and fell between guide posts exactly as a window sash is raised and lowered. A gang saw was capable of reducing logs to planks with a single forward motion of the carriage. In the vernacular of the nineteenth-century Southern lumbermen, sash saws generally had only a single blade and gang saws had several [Moore 1967:15].

Gang saws, with two or three or more blades set parallel in the sash to cut several boards at once, appeared in Maine about 1650 (Tunis 1965:26).

Figure 3-13.
An illustration of a sash saw in operation (source: Philips 1996).

The circular saw was patented in England as early as 1777 and 1804 (Wood 1935). The circular saw is a metal disk or blade with saw teeth on the edge as well as the machine that causes the disk to spin. The first patent for this type of saw in the United States was taken out by Benjamin Cummings in 1814, but it came into more general use following the patent of Eastman and Jaquith (1820) of Brunswick, Maine (Wood 1935). Powered by water and then by steam, its output varied from 500 to 1,200 feet a day. Early saws were around 48 inches in diameter. An 1824 circular sawmill in Maine was reputed to have turned out a 20 ft long
board every minute (Wood 1935:163). Although the circular saw was patented quite early, it was several
decades before there was widespread availability and use of this new blade technology.

The newly invented circular sawblade attracted a great deal of attention of mill operators in the
Lower Mississippi Valley. In 1838, a mill at Port Gibson, Mississippi, installed a circular saw for cypress
planks (Moore 1967:54). Many were forced to weigh the strengths and weaknesses of this new technology
while upgrading their sash sawmills. By the 1840s and early 1850s sawmills began to replace less efficient
reciprocal saws, which cut up and down, with circular saws (Howe 2002). Circular saws were less useful for
cutting white or yellow pine because of resin build up in the teeth, but this was not as big of a problem for
hardwood or cypress. The higher velocity of circular saws meant they could cut in less time than required by
a gangmill, but the high velocity also meant higher temperatures and thus an increased chance of fire
(Moore 1967:54). Circular blades could cut thinner planks than a sash saw, but can only cut logs half the
diameter of the saw. Furthermore, the blades of circular saws become dull quickly and require a skilled
sawyer. A portable circular sawmill manufactured by George Page and Company of Baltimore was sold
across the South during the early 1840s and was virtually standard for small mills during this period, though
other models were also employed by this date across the region (Block 2002; Moore 1967:55).

Lumber profits prior to the Civil War were large when compared with investment and labor costs.
Henry Weston, originally from Maine, and eventually owner of a mill at Logtown, Mississippi, in Hancock
County, bragged that he "made money like smoke" (Napier 1985:58; Pearson and Saltus 1996). A short
depression in the business occurred in the late 1850s. At this time only a fraction of the sawmills in the
region were operating (Pearson and Saltus 1996; Saltus and Pearson 1997).

**Civil War and Reconstruction’s Effect on the Lumber Industry**

During the war the local cotton and lumber industries were suspended like most commercial
activities. The devastating impact of the Civil War on the economy of Mississippi was felt long after the war.
For instance, as long as five years after the war there were fewer sawmills in all of east Louisiana and southern
Mississippi than had existed in just a few parishes or counties in the 1850s (Pearson and Saltus 1996).
Following the Civil War, the material wealth and vast landless poor of Southern states like Mississippi were cast into a new exploitative market economy. The population of the area changed as the regional economy shifted to wage labor. At some lumber operations wages were paid in company tokens good at the commissary or salon (Hoffman 1992). Although the Civil War and Reconstruction slowed the development of the lumber industry briefly, and a few mill operations closed or were destroyed during the conflict, overall the affects on the industry were mild. The forests of the Lowland South were an obvious opportunity for wealth. The forests resources across this region represented some 60 percent of the nations’ total (Ezel 1963:15). These forests took on added value with the destruction of the virgin forests in the Great Lakes region and much of the Upland South (Ezel 1963:15).

Some of the enslaved craftsmen left the South for mill work elsewhere, often in the North. In some cases the labor shortage had become so severe in parts of Mississippi around the turn-of-the-nineteenth century that one observer noted in 1907 noted that “not a single mill had enough workers” (Hickman 1986:85). To alleviate the labor shortage in many Lowland South lumber operations, a debt peonage system developed, stricter vagrancy laws were passed, and there was increase in the arrest of poor people for minor offenses (individuals who were later leased to farmers or loggers). Stricter vagrancy laws passed by many southern states during the late-nineteenth and early-twentieth century, such as Mississippi’s Governor James K. Vardaman’s “drastic vagrancy law!”, were used to force many of the poor into the logging industry (Hickman 1986:85). However, the vagrancy acts appears to have worsened the labor situation in states like Mississippi as many African-Americans felt the law was directed at them and left the state in significant numbers (Hickman 1986:85).

Somewhat offsetting the labor shortage following the Civil War was the widespread use of prison labor (Figure 3-14). Many African-Americans prisoners were used in the forest industries of the Gulf South, especially logging and turpentine around the turn-of-the-nineteenth century (see Tegeder 1996; Powell 1978). These prison lumber operations gained a reputation as graveyards for workers as many prisoners fell victim to diseases such as malaria or dysentery, and/or were beaten or killed by trigger-happy guards on horseback. J.C. Powell a former prisoner camp worker in Florida described in his 1890s book some of the abuses and
punishment of prisoners that included shutting a prisoner up in an airtight box without light, hanging a convict up by his thumbs, feeding prisoners only Irish potatoes, and forcing prisoners to swallow water funneled into their mouths until they died (Powell 1978; Womack 1998).

Figure 3-14.
An engraving of African-American convicts chopping logs in the forests of Louisiana (King 1874:120).

The exodus of many African-Americans to the North also resulted in some mill owners in Louisiana and Mississippi recruiting Italian, Finnish, German, Puerto Rican, and other immigrant groups to offset the labor shortage (Hickman 1986:86). However, for the most part this was unsuccessful and throughout much of the late-nineteenth and early-twentieth century the lumber industry especially in the Lower Mississippi valley and Gulf South continued to be labored predominantly by African-American, Acadian, and Anglo-Celtic craftsman (Hickman 1986, Cramer 1998:27). Many of the African-American workers were transplants from the rice and cotton plantations of the Delta and Carolinas seeking higher wages, but were forced into a region at a time of extreme racial intolerance and violence. Many areas saw White Cappers, the forerunner of
the Klu Klux Klan, attempt to prevent black labor from entering the log woods and lumber mills, which is ridiculous since African-Americans had been involved in commercial logging since the colonial period.

For those former slaves that remained at the sawmills or in the logwoods, the transition for African-Americans from slavery to freedom in the lumber industry was of little consequence (Hickman 1986:81). Approximately half of the workers involved in the lumber industry during and after Reconstruction were African-American (Hickman 1986; Hoffman 1992; Powell 1999b). Henry Lienhard’s sawmill and brickyard at Handsboro was the largest employer of black labor in Harrison County, Mississippi during the late-twentieth century (Powell 1999b). Between 1892 and 1895, some 64 percent of Henry Lienhard’s workforce was African-American: “They made up 40 percent of his skilled work force, and all were registered to vote” (Powell 1999b). In many cases the position of African-Americans in forest industries differed little from their antebellum status. Some aspects of the business such as the turpentine industry, construction and maintenance of the logging railroads, and shingle making, were carried out by African-Americans almost exclusively, thus, revealing a continued segregation, if not a stratification in the tasks and jobs within the Post-Civil War forest industry. Workdays continued to be 10 to 14 hours and sometimes longer, while work weeks were often six and seven days. African-American workers were generally employed as unskilled workers in the most dangerous and difficult jobs (Figure 3-15), but some became blacksmiths, woods supervisors and in a small number of cases former slaves became large owners of timberland (Hickman 1986:81).

Wesley Fairley, a former slave from Perry County in south Mississippi, had a John Henry-like legend surrounding his somewhat unique lumbering days north of Biloxi: “Fairley, weighing above two hundred pounds and fully seven feet in height, possessed great strength and endurance” (Hickman 1986:81). During the Civil War, Fairley was a Union guard and assumed responsibility for L.N. Dantzler’s well being. Dantzler had grown up near Fairley and would become one of the largest timber barrons in the country. After the war, Fairley became one of the main suppliers of logs for the Dantzler mill near Moss Point, Mississippi. Fairley bought logged tracts of land, and rafted timber down Black Creek and the Pasgoula Rivers to the sawmills at Moss Point, Mississippi:

Fairley was, by common consent, the “creek runner” on Black Creek. He selected rafting crews and made all the decisions on log drives...According to local tradition, Fairley prevented the bankruptcy
of the Dantzler Lumber Company....a long drought produced shallow water that made timber rafting difficult, if not impossible. With ships at anchor and no cargoes of lumber available, the company faced with, ruinous costs. Fairley using spike poles and his large crew of blacks pushed through shallow water to their destination [Hickman 1986:81].

Through Fairley’s skills as a rafter, logger, and animal driver, he was able to rise to a position of power and prominence that many recently emancipated African-Americans dreamed of but were not able to achieve during this period of racial intolerance.

Figure 3-15.
An early-twentieth century photograph of African-American and white laborers loading cut timber onto wagons in Franklin Parish, Louisiana (source: Franklin Parish Collection, Lower Mississippi Valley Collection, Hill Memorial Library, Louisiana State University).

Conflicts regarding the cutting of timber on public lands in Louisiana and Mississippi began to be an issue prior to and during the Civil War (Norgress 1936:21-22), but became even more of a problem during Reconstruction. Since large tracts of land in Louisiana and Mississippi prior in the early 1870s were still ungranted, the Federal government viewed this property and these timber holdings as a Federal resource. The Timber Act of 1876 passed by the United States Congress opened up the sale of vast tracts of publicly owned pine and cypress forests to timbermen (Norgress 1936:267-27). By taking advantage of relaxed land laws speculators, many representing Northern lumber firms and banks, acquired vast tracts of land holdings across
states like Louisiana and Mississippi. However, many local loggers and farmers disagreed with the Federal government’s ownership of timber rights especially near streams because spoliation was a long-standing practice. The dispute over timber rights reached a climax soon after Carl Schurz, who was appointed Secretary of the Interior in 1877, initiated legal proceedings to punish trespassers, or to collect damages for waste already committed (Ayers 1996:122-126). Federal marshals armed with shotguns began patrolling and blockading rivers like the Pascagoula in south Mississippi. Government agents seized shipments of timber. The dispute was settled before any large scale armed conflict by a judge who ruled that agents could not block navigable waters (Ayers 1996:126).

With the spread of the railroad network and steam-powered sawmills across Louisiana and Mississippi by the late 1800s, the pace of timbering activities was accelerated. Increasing mechanization within the industry as older methods of lumbering became inefficient, led lumber companies to began more environmentally destructive clearing practices using draglines (Figure 3-16). With the construction of the railroad, mill operators were freed from the unpredictable nature of the rivers and were finally able to make the industry a year-around enterprise (Ayers 1996:124). Timber barons erected sawmills all along the railroad lines. In 1870 the South accounted for only 11 percent of the nation’s lumber total, and by 1910 the region produced 45 percent (Ayers 1996:125). In fact the thriving timber industry during the period between 1904 and 1915 ranked Louisiana second in production and Mississippi third in timber production states in the United States. Some of the largest sawmills in the world were erected in southern Louisiana and Mississippi.

Railroad and steam driven circular saw made large-scale harvesting of timber products possible (Kelley 1986:36). Mill technology evolved from sash to circular saws and eventually to the extremely efficient band saw, which could cut up to 140,000 bd. ft. of timber in an 11-hour day (Clarkson 1964:30). Band saws were used for the first time in 1889 (Norgress 1936:36). Though timbering activities had been going on in the lower Mississippi and Gulf Coast since the 1700s, major cutting efforts began in the 1890s when much of area was still thickly forested in pine, cypress, and hardwoods. Construction of sawmills after that date quickly drained the local labor supply and depleted the area’s forest products. The story of a giant cypress tree felled along the Amite River in Livingston Parish, Louisiana, illustrates the destruction of the native forests:
The story of this tree is remarkable. It came into being hundreds of years before Columbus discovered America. It apparently dates back to the seventh century. It must have been a veteran at the time when Alfred the Great ruled in England. The Indians, perhaps, hid their canoes in its shade. Century after century it has defied the elements and has withstood the axes. Amazing as is the long career of this giant Louisiana tree, far more marvelous is the story it might have told before it was felled to be converted into lumber. If its great branches could have spoken, if the murmuring of its leaves might have been interpreted, what scenes it might have portrayed, what secrets it might have revealed of a past long gone! Yet, mute as it might seem, there is a warning from this fallen giant. Its huge stump with its 1,300 rings seems to proclaim that this cypress tree was one of the last of its kind. It belonged to that forest primeval so fast disappearing. Easier was it to struggle against storm and lightning than against the invasion of the woodsman, and the whir of the sawmill [Louisiana Conservation Review 1931:1, quoted in Norgress 1936:8-9].

Figure 3-16.
Steam skidder using a dragline to clear pine trees in the Piney Woods of South Mississippi (source: Hoffman Collection, McCain Archives, University of Southern Mississippi). Train rides in the 1920s and 1930s once through a jungle of trees looked increasingly like an eroded desert of stumps.

Some operations like the Andrew Brown lumber mills were able to make the transition to a wage and credit system and maintain a supply of timber and customers during the depressed economic conditions following the Civil War. Many other small milling operations such as the Brown-Cozzens sawmill in Natchez and the Hosmer-Mortee Millhaven in Covington, Louisiana appear to have shut down because of the poor economic conditions in the 1870s. The expansion of the railroad in the 1880s and 1890s placed further pressure on the forests and many of the small water- and steam-powered sawmill operations failed as timber
operations shifted towards the rail lines, and increased in size and mechanization. However, for many of the workers involved in the lumber industry the technological and mechanical innovations in the industry during the later part of the nineteenth and early part of the twentieth century had little consequence on their quality of life when it came to adequate housing, hourly, wages, and health care.

Endnotes

1 The Chauvin brothers planned to erect a levee to protect the mill and power it by opening a ditch that would channel off water from the river to act as millrace: "Unfortunately, their levee diverted the overflow from its natural outlet . . . The upstream fields of the Sainte-Reyne concession were swamped" (Giraud 1991:193). Access was also cut off to the cypress groves that Dubreuil used for building timber.

2 Dubreuil is credited with the construction of two monumental barracks, the first Charity Hospital, the restoration of the Balize establishment, and the Ursuline Convent (Dawdy and Mathews 1998).

3 Besides drainage, the larger canals linked the forests with major water routes.

4 On their return trips from the sugar islands these vessels would bring back syrup, sugar, rum, and manufactured goods from France (Moore 1967:5).

5 Thus, these sites closer to the uplands provided a swifter head of water and more power for mills.

6 Hosmer's mill was probably established on land deeded to Duncan McIntyre by a grant from the Spanish Government in or about 1806 (Reeves 1980). In 1815 the property was involved in a lawsuit, whereby the land was acquired by David Tate (St. Tammany Parish Clerk of Court, Sheriff Sale 1815). Within the same year, Tate sold the property to a "free woman of color" from the Caribbean, Roseally Maxen. Maxen may have used the property for "turpentine orchards" (St. Tammany Parish Clerk of Court folio122, Covington, Louisiana).

7 The Hosmer-Mortee mill was likely abandoned in the 1870s due to competition with steam sawmills located close to rail lines, the difficulty finding laborers to replace the former enslaved workforce, the depressed economic conditions of the area during Reconstruction, and Mortee's elderly age.

8 William Ford hired Solomon out to John Tibeats to build a weaving-house and mills. Solomon describes Tibeat as a quick-tempered and violent individual (Eakin and Lodgson 1968). Solomon was rescued from a cotton plantation in Marksville, Louisiana in 1853.

9 Despite the initial hope that these early steam engines would free the mill operators from the seasonal fluctuations in water levels, operators soon realized that flooding and extremely low water levels that prevented the transport of timber rafts were still problematic. Furthermore, operators also realized that the reliability of these early steam-powered sawmills could also be questionable at times given that they were more susceptible to fire and mechanical failure than water-powered mills.

10 The success of the Gunnison sawmill inspired the construction of a similar mill within Mobile that operated between 1823 and at least 1838, using a labor force of enslaved African-Americans (Moore 1967:19).

11 Vardaman's vagrancy act provided for the imprisonment from 10 to 20 days for all idle able-bodied men and a second offense extended the time of imprisonment to 90 days (Hickman 1986:85).
CHAPTER 4: PREVIOUS ARCHAEOLOGICAL AND HISTORICAL INVESTIGATIONS

Previous archaeological and historical research on the history, operation, distribution, and diversity of lumber mills across the Lower Mississippi Valley and Gulf Coast regions during the eighteenth, nineteenth, and early twentieth centuries provide a more complete background and context for the artifacts recovered from the former Andrew Brown and the Brown Cozzens sawmill complexes. Previous research at other sawmill sites within the region illustrates the commonalities and differences between various logging and milling operations through time and from location to location.

From the prior chapter it should be clear that commercial logging along the lower Mississippi River began during the colonial period and intensified between the 1840s and 1900s. The water and steam-powered sawmills have given way to gas, diesel, or electrically driven plants. The old mills for the most part have faded away and deteriorated into the past. Furthermore, little is known about the workers, many of whom were enslaved African-Americans prior to the Civil War. Although previous archaeological and historical research has shed some light on these early industrial mills and communities, most of the historical and archaeological research on the topic of southern lumbering has focused on the late-nineteenth and early-twentieth-century and not on the precursory development of the industry.

Historical Research on the Logging Industry

Several thorough historical reviews of the lumber industry have been published covering a wide range of topics. Nollie W. Hickman’s (1962) *Mississippi Harvest: lumbering in the longleaf pine belt, 1840-1915* provides a comprehensive foundation work on the antebellum and postbellum lumber industry in southern Mississippi including the technology, craft skills, and laborers involved. Hickman’s work covers the transition of slave labor to wage labor and water-based logging to railroad-based logging in Mississippi. Hickman provides a thorough overview of the lumber trade in the Piney Woods of Mississippi up to the 1940s. Gill H. Hoffman’s (1992) *Dummy Lines Through the Longleaf: A History of the Sawmills and Logging Railroads of Southwest Mississippi* and (1998) *Steam Whistles in the Piney Woods* provide a detailed history of the development of the logging industry and associated technology in south Mississippi. Hoffman’s books are rich in detail and have numerous maps and historic photographs, including pictures of workers and their families at mobile logging
camps, locomotive wrecks, company tokens, animal teams, etc. Thus, considerable information can be
gleaned from these works regarding the lifeways mill towns or logging camps in south Mississippi during the
turn-of-the-twentieth century. A detailed account of east Texas lumber can be found in *Nameless Towns: Texas
Sawmill Communities, 1880-1942* written by Thad Sitton and James H. Conrad (1998). Using oral histories,
archival data, and historic photographs, Sitton and Conrad attempt to reconstruct life in what are now mostly
ghost towns in east Texas. Given the topic of this thesis, John Hebron Moore’s (1967) *Andrew Brown And
Cypress Lumbering In the Old Southwest* is an essential piece of historical research. This work provides a wealth
of information on the early cypress industry in the Lower Mississippi Valley and in particular Andrew
Brown’s business practices. Drawing much of the information about Brown and his enterprises from the
Rufus F. Learned Collection in the Lumber Archives at the University of Mississippi, Moore provides a
detailed history of the of the Andrew Brown mill up to the 1870s when Rufus Learned became the owner.

**Archaeological and Geographical Surveys of Mill Sites**

Unfortunately, only a limited number of archaeological investigations have been carried out on
lumber sites within the Gulf Coast region and even fewer have been published or presented at national
conferences. However, several surveys and excavations conducted by universities, cultural resource firms,
and federal agencies offer good comparative data. This research has yielded information regarding the
prevalence, spatial patterning, and temporal distribution of eighteenth to early-twentieth-century mill sites,
particularly sawmills, across the coastal region and parts of the Lower Mississippi Valley.

Archaeological and geographical surveys and excavations at early sawmill sites have been carried out in
West Florida, in Harrison County, Mississippi, near Mobile, Alabama, and in the southern Louisiana
parishes of Jefferson, Saint Hellena, Saint Tammany and Tangipahoa, and Terrebonne. Archaeological,
historical, and geographical surveys located water and steam-powered sawmills sites within this region,
principally along waterways and especially near port cities like Biloxi, Mobile, New Orleans, Natchez and
Pensacola. Dates for the mill sites range from the Spanish, French, and English colonial period to the more
numerous early American and even more numerous late American period sites. Furthermore, some of these
mill sites were occupied over several decades under different national governments.
Mill Site Surveys in West Florida

Archaeological survey and testing of mill sites across this region illustrate the continuity, change, and development of the lumber industry in this region. The University of West Florida’s *Mill Site Reconnaissance in Northwest Florida* (Phillips 1993b) details the location, history, and condition of water-powered mills in the survey area from the colonial period to the 1930s. Most of the mills located during Phillips’ (1993b) survey were on waterways near a city or settlement. In *The Water-Powered Industries of Northwest Florida: An Archaeological Reconnaissance* Phillips (1996) indicates that among the 58 mills located in the survey, four were said to be of the British period (1763-1781), while six were from the Second Spanish period (1781-1821), and 22 were Early American (1821-1860) water-powered mills. One example discussed is the circa 1816 Clear Creek sawmill community. This Second Spanish period mill complex included at least 14 structures, a large dam, a sawmill, and a raceway leading to a slough just off the river (Phillips 1996:129-130). The earliest documented water-powered industries in northwest Florida are two British sawmills dating from the 1760s, though little archaeological or historical information is known about these sites (Phillips 1996:127).

Regarding these English colonial sawmills, the author states,

> the evidence indicates that the English selected mill seats on the first terraces near major waterways, close to the colonial settlements in and near Pensacola. The British sawmill communities were undoubtedly small, probably consisting of the mill facilities and structure to house a millwright and several laborers [Phillips 1996:127].

The Phillips (1996) reports that many of the British and Spanish period mill heads were reused during the American period.

Another detailed archaeological report on one of the earliest American industrial complexes in Florida was the work conducted at Arcadia (Phillips 1993a). Arcadia was an early nineteenth-century water-powered mill complex located in northwest Florida near the city of Milton. Arcadia operated from 1817 to 1855. The Arcadia research project was “designed to ‘reconstruct’ Arcadia by learning how the site was designed and constructed, and how it worked” (Phillips 1993a:3). Excavations at Arcadia revealed that one mill was probably located at the base of the dam and a second sawmill near a canal was possibly built during an expansion period around 1833. Furthermore, Phillips states that archaeological evidence indicated that a mid-nineteenth century textile mill was located on the eastern side of the site (Phillips 1993a:191). From the
historical and archaeological investigations at the site, Phillips states a more complete picture of the spatial and social layout of this early industrial complex is provided:

The industries included water-powered sawmills, planning and lathing machines, a grist mill, bucket and pail factory, shingle mill and cotton textile mill as well as a stone quarry and a tannery. A mule-drawn railroad and a 16 mile long log flume provided means of transportation for the industries. The owners and laborers lived in small communities on the hillsides nearby [Phillips 1993a:192].

Like portions of Natchez-Under-the-Hill, West Florida’s Arcadia represents an early-to mid-nineteenth century multi-dimensional industrial complex probably utilizing slave labor to manufacture and refine a variety of products, but unfortunately very little mention is given to the laborers within this work.

**Mill Site Surveys in South Alabama**

Troy State University has carried out several surveys for mill sites in southern Alabama. Brooms and Solomon’s (1997) report details a survey for water-powered mills in Pike County, Coffee County, and Covington County Alabama. This report includes site cards, photographs, brief descriptions, and maps of each of the mill sites located. Brooms and Solomon (1997) state that gristmills were the most common mill sites located, but the survey found sawmills, cotton gins, and turbines to produce electricity. Four mills were a combination grist and sawmill, three mills were a combination grist and cotton, two were exclusively sawmills, three produced electricity, and one was a water-powered turpentine mill (Brooms and Solomon 1997:12). Brooms and Solomon write that most of the sites had dams that controlled water-flow, most often with a wooden gate that could be raised or lowered (Brooms and Solomon 1997:12). Furthermore, most of the mills located by the Troy State survey were on tributaries, and most dated from the mid- to the late-nineteenth century. The survey located a few mill sites that continued to operate into the twentieth century due to upgrades made in the mills’ machinery and structure. Flooding appeared to be the biggest nemesis to the mill operations investigated.

Troy State University and the University of South Alabama carried out an archaeological investigation at the Kennedy Mill Site (1BA301) in Baldwin County, Alabama, beginning in 1983. Brooms and Smith (1996) state that the Kennedy Mill appears to have been established in 1811 when a man-made canal was excavated to divert the fast flowing water form Rains Creek to a mill complex. Two mills were
constructed at the site and were used for sawing lumber and were likely operated using an enslaved labor force (Brooms and Smith 1996:121, 24). In 1813, a Creek Indian uprising resulted in the burning of the mill (Brooms and Smith 1996:22, 24). Five years later it was rebuilt. In 1820 a pile of debris caught fire and the mill was engulfed in fire and destroyed again (Brooms and Smith 1996:24). It appears that the sawmill was never rebuilt (Brooms and Smith 1996:24,155).

From the archaeological and historical research conducted, Brooms and Smith (1996:156) state that the Kennedy Mill complex was one of the first mills to be built in what later became the State of Alabama. Furthermore, they state that the majority of the wooden dam exposed during mitigation work was in an excellent state of preservation (Brooms and Smith 1996:76). Numerous spikings were found in situ during the work: “Spikings were planks used to form the wall of the dam as well as to create a wall (bulkhead) around the mud cells to keep them from eroding” (Brooms and Smith 1996:104). Though no evidence of the water-wheel was found, sections of an inclined raceway were discovered (Brooms and Smith 1996:109). Brooms and Smith state that the Kennedy Mill most likely utilized a long, eight-paddled, paddle-wheel and probably “have turned at about one hundred to one hundred and twenty revolutions per minute” and utilized an under-shot wheel (Brooms and Smith 1996:120) (Figure 4-1). Only 422 artifacts that dated to the nineteenth century were recovered from the mitigation work. This included only two pieces of ceramics, three glass bottle fragments, and three whole bottles (Brooms and Smith 1996:128). Only a small sample of diagnostic material was recovered from the Kennedy Mill site and only a few of these artifacts were related to the lifeways of the individuals who worked at the site in the early-nineteenth century. Therefore, most of the data concerning the mill’s impact on the surrounding community, the social makeup of the mill workforce, or warfare’s effect on cultural lifeways appears to have been drawn form historic documents.
Figure 4-1.
Water-powered mill technology: a.) Pitchback wheel; b.) Overshot wheel; c.) Breast wheel; d.) Undershoot wheel; e.) sawmill with Flutterwheel (source Evans 1850; Phillips 1996:35).
Sawmill Sites in Southern Louisiana

Christopher Goodwin & Associates’ 1985 report of historic and archaeological sites in Jefferson Parish, Louisiana, includes a list of historic water-powered and steam sawmills that operated just outside of New Orleans from 1730s to the 1920 and thus provides a detailed history of the development of the lumber industry on the East and West banks of the Mississippi River in Jefferson. Goodwin et al. (1985) state that the French exploited the rich forests of Jefferson Parish since the beginning of the colonial period. This report discusses the location, owners, technology, and distribution of a variety of early mills in Jefferson Parish, but unfortunately, little remains of the twelve or more sawmills located by Goodwin et al. (1985) in historic documents. They report that all of the mills located through historic document research and fieldwork had been destroyed with one possible exception (Goodwin et al. 1985:148).

A few comprehensive surveys for mill sites have been conducted north of Lake Pontchartrain in the Florida Parishes of southeast Louisiana. Allan Saltus has surveyed and mapped several mid- to late-nineteenth and early twentieth-century water-powered mill sites in Saint Tammany, Tangipahoa, and Washington parishes (Saltus 2001). Geographer Milton Newton has conducted another survey of mill sites in the Old West Florida Parishes. In Newton’s (1986) article “Water-Powered Sawmills and Related Structures in the Piney Woods,” he focuses on the geographic distribution of historic watermills in Saint Helena and Saint Tammany parishes, Louisiana, and in Amite County, Mississippi. Newton mapped the location of mill sites across the region and the mill features at particular locations. In Saint Helena Parish, Newton located at least 30 mill sites, some of which were discovered through fieldwork, and others that were discovered through historic documents (Newton 1986:164). Regarding the location of mill sites, their generalized layout and construction, Newton writes:

The basic concept of a mill site in the Gulf South includes a building, a dam, a wheel or turbine, and a situation, all of which have small variations…The building was in all known cases a long, narrow structure that had a gable roof with gable to the ends and the ridge perpendicular to the stream. Set across the stream, it used the high banks of an incised stream as its foundation…The mill works stood inside the mill house, the shaft extending through the floor to the wheel below. Flow over the milldam, directed into a single steam, turned the wheel [Newton 1986:159].

Furthermore, Newton states that the “most common site for a small mill in the gently sloping Gulf South was a small, tight meander of a modest upland stream (Newton 1986:161).
Within his survey for historic mill sites, Newton focuses on the particular case site, the Hosmer-Mortee Millhaven, in Covington, Louisiana. Newton describes the site, “Somewhat surprisingly, perhaps, at least some ‘plantations’ were logging and lumbering operations . . . along the Bogue Falaya . . . a sawmill plantation was established in the early nineteenth century” (Newton 1986:166). The location of the mill site was evident from the timbers lying across the Bogue Falaya. Regarding Hosmer-Mortee Mill, Newton describes the mill’s location, structure and work-related activities:

The mill occupied a point on the lower arm of the tight meander, leaving a share of the meander to carry away the tailwater. The miller’s house stood on the left bank, far enough back to place it above the normal flood zone . . . The milldam, which occupied the location of the timbers in the stream bed, was eight feet high. At the base of the dam, the pond was about eight feet deep . . . During the normal week, the crew cut logs in the surrounding forest floated them on the millpond to the mill, cut them into squared timbers, formed the timbers into rafts, and floated the rafts of timbers to the head of schooner navigation...The rafts, made up of squared timbers, were assembled below the dam and held in readiness for Saturday, when they would be sent to market. Early on Saturday morning, the water held behind the milldam was released and left flowing until evening. On the flood, the crew conducted the rafts to Covington, where the timbers were market to schooner captains. Even during the dry season, the millpond would have been refilled by Monday morning, and thus the mill ready to resume sawing timbers [Newton 1986:167-168].

Newton states that Hosmer-Mortee mill ceased operation somewhere after 1867 and possibly around the time that H.C. Collins, Assistant Engineer, in June 30, 1884 was assigned to survey the Bogue Falaya River from its mouth to a point twenty-five miles above the City of Covington (Newton 1986). During the survey he reported a sawmill a few miles north of Covington where a head of water was eight feet high and the pond was less than a mile long, but it is not clear weather the mill was still operating at this time (Reeves 1980). Newton states that around the 1870s, rail networks began to be established through Saint Tammany Parish, and Covington, the parish seat, became a major railroad depot (Newton 1986:168). Steam-powered sawmills operated by wage labor were established all along the major rail networks. Hosmer's Mill, like many small water-powered sawmills, likely could no longer compete and probably shut down operations around this period (Newton 1986:168).

In the summer of 1998 through the spring of 1999 the Hosmer-Mortee Milhaven site was revisited by archaeological students and volunteers from Louisiana State University (Cramer 2002). A pedestrian survey was conducted of the adjacent river and bank, roads, and property to locate any visible surface cultural remains (Cramer 2002). Features on the property were mapped by transit and a global positioning system.
Various maps, including drawings done by Milton Newton, Father Breaux, and a parish surveyor in 1978, aided the survey (Figure 4-2). According to Newton (1986), the mill structure at Hosmer-Mortee probably resembled a shotgun house in form and was a long narrow building with a gable roof with gables to the ridge perpendicular to the stream. The floor of the mill house probably stood around 20 feet above the bed of the stream and had an eight-foot dam (Newton 1986:159). Because of the low head of water, the Hosmer-Mortee Mill likely used an undershoot mill. Some features of the mill's layout remain such as timbers and a portion of the dam in the Bogue Falaya. The bypass diversion, which allowed water to flow around the mill in case of high water, was also documented (Cramer 2002).

Other cultural features on the property that were recorded during the site revisit: included two river fords associated with an old road, a brick-lined well, and the remains of the former Miller's Big house (Cramer 2002). The former site of the big house had been disturbed by residential construction, but was still systematically surface collected in five-meter blocks and mapped (Cramer 2002). The remains from the Big House included brick, wood shingles, burnt glass, ceramics, and cut nails scattered across an approximately 15 square meter area. Ceramics from the Big House area appear to be a mixture of undecorated creamware, transfer-printed pearlware, decal decorated whiteware and span from circa 1810 to 1910 (Cramer 2002). The Hosmer-Mortee Big House collection may provide a good example of an American nationalist set of ceramics with distinctly American versions of British ceramics such as the Lewis and Clark pattern (Laurie Wilkie, personal communication 1998). This would seem to correspond well with the historic documentation of James Hosmer’s ownership of the estate soon after Louisiana was granted statehood in the Union and Saint Tammany Parish was created. The consumer choice evidenced in Hosmer’s ceramics may also reflect his noted history of conflict with the British in particular his service in Louisiana during the War of 1812.
Figure 4-2.
During the survey, the area east (rear) of the big house (see Figure 4-2), along the driveway became the main focus of archaeological testing (Cramer 2002). This 15m by 55m area between the well and the spring had a surface scatter of cut nails, pane glass, and bricks suggesting at least one, possibly two, or three structures were located in this area. According to the current landowner, local historians, and a parish surveyor’s map (see Figure 4-2) this area had once had the pronounced remains of a long building or possibly several small buildings or cabins indicated by the remains of a series of small brick piers paralleling the drive, which had since been removed. The area was thought to be the “slave quarters” during the mill’s operation in the mid-nineteenth century (see Figure 4-2).

Auger and shovel tests indicated that historic deposits of brick, ceramic, glass could be found from the surface to 10, 20 and a maximum of 40 centimeter in depth. A three-by-three meter excavation block revealed a brick pier with sand and shell mortar (Cramer 2002). Sherds of blue-banded yellowware and early whiteware, along with some fragments of animal bone were recovered within this block. Other artifacts excavated from this area included two kaolin tobacco pipe bowls, a pipe stem, and a whole late-nineteenth century beer bottle (Cramer 2002). A second excavation block laid out closer to the driveway located a single course wide row of bricks, a mid-nineteenth century iron door hinge, brass fasteners, the remains of a doorknob, a horseshoe, a small concentration of bottle glass, and mid- to late-nineteenth century ceramic sherds. Thus, suggesting a doorway was located in this area. Excavations east of the Feature 1 (the pier) and the possible doorway, uncovered the partial remains of a second brick pier and a possibly a drip line (Cramer 2002). Artifacts recovered from the possible dripline included machine cut nails, a yelloware bowl, a mocha-annular cup or mug, and a minieball. Thus, from the 1998-1999 archeological testing it appears that at least one structure or cabin stood along the drive to the mill behind the former Hosmer-Mortee big house. Artifacts suggest an occupation from the early to mid-nineteenth until possibly the late-nineteenth century when the structure may have been converted into a shed (Cramer 2002).

The low density and trampled nature of the artifacts across the site makes it extremely difficult to determine the function or size of the structure associated with the brick piers. The structure was likely made of sawn lumber, it had handmade brick piers and given the artifact distribution, the structure probably had a
wood floor. Based on the piers and dripline excavated, the structure would have been at least 14 ft by 12 ft or 4.5 m by 4 m (Cramer 2002). However, the building could have been longer and/or larger, since not all of the structural piers may have been located. Shovel tests and two excavation units across the remaining yard area parallel to the driveway east of the previously mentioned piers recovered very little cultural material, although a few sherds of whiteware and a possible brick pier were located; these items may represent the remains of a second or third structure or cabin within this area or maybe associated with the previously mentioned structure.

With regards to the housing for the enslaved and possibly free laborers at the Hosmer and later Mortee Sawmill, the millhaven may have had a series of small wood frame cabins or a long, wood frame barracks that could house 10 to 20 male laborers, behind the Miller’s Big House. Barracks may reflect back on James Hosmer’s military background. Barracks may also partly explain the paucity of domestic artifacts around the yard area (Cramer 2002). The historical demographics for the site show that were three to five times as many male slaves as female slaves living at the site in the mid-nineteenth century (Newton 1986; U.S. Census Records Saint Tammany Parish 1820-1860). Furthermore, the neighboring property once James Hosmer’s daughters plantation, had a servants or former slave dwelling that was a long building with five or six small rooms, similar to a barracks (Father Breaux, personal communication 1998).

Early-Twentieth Century Lumber Sites in Louisiana and Mississippi

Archaeological investigations of more recent lumber operations have been carried out at several sites in south Louisiana and Mississippi. A few of these works will be discussed to provide insight into the continuity and changes that took place within the lumber industry after the Civil War and into the turn-of-the-twentieth century.

In 1982 Coastal Environment, Inc. conducted excavations at the 1903-1917 Good Land sawmill (16TR114). This sawmill/community complex consisted of the milling and lumberyard area, the main residential/commercial support complex consisting of the town of Chacahoula, in Terrebonne Parish, and the black employees residential area (Whelan and Pearson 1999). Since the proposed highway right-of-way crossed only the milling complex and former black residential area, archeological investigations were confined
to these two areas (Whelan and Pearson 1999). The site was surveyed by magnetometer, mapped, surface collected, and thirty-two units were excavated. Whelan and Pearson (1999) write that the layout of the residential area appears to be two rows of houses and outbuildings separated by a central road running the length of the crevasse (Whelan and Pearson 1999:22,25,29). Archaeological evidence indicated a pattern of secondary refuse toward the rear of yards at the edge of the cypress swamp (Whelan and Pearson 1999:59). Unfortunately, Whelan and Pearson state that it was difficult to delineate a single residential limit at the site and the boundaries of individual houses were not well defined. Regarding ethnicity of the occupants, Whelan and Pearson (1999:142) state that the archaeological record produced little evidence that could support any ethnic identification. The assessment of the diet of the Good Land residents was not as successful as anticipated due to preservation factors. From the faunal evidence the authors write that black residents at Good Land consumed middle price meats-chuck, short ribs, and full plate. However, picnic shoulder pork cuts appear to have a favored cut at Good Land, and Whelan and Pearson (1999:143) state that this could be possibly reflector of ethnicity of the African-American residents.

Overall, Whelan and Pearson (1999) write that Good Land Cypress Company represented a transient industry employing largely transient workers. The typical cypress logging operation lasted only long enough to remove the economically harvestable trees. Then the mill was closed and the entire complex moved to another location in 1917. This would appear to follow the cut out and get out attitude of many early-nineteenth century logging operations.

Another excavation carried out at an early twentieth lumber mill site was the fieldwork at the Donner Sawmill Residential Area (16TR116) in 1989. The Donner Sawmill Residential Area comprised the residential area of the Dibert, Stark and Brown Cypress Co., Ltd., the sawmill at historic Donner, in Terrebonne Parish, Louisiana. The mill was in operation between 1900 to 1938, when it was abandoned. The Donner operation was one of the largest cypress sawmills in the country along with a self-sustaining community to house its workers (Hahn and Schwab 1998:242). Hahn and Schwab (1998) state that background research, oral interviews, pedestrian survey, probing, shovel tests, and hand excavation of 17 1-by-1 m test pits were carried out in the residential area of historic Donner. Nine of the test pits were excavated in the yard area of former
residences occupied by a series of white sawmill workers. The eight remaining test pits were dug in an area formerly occupied by a single residence associated with the sawmill management. Hahn and Schwab (1998) write that over 80 historic features were examined at Donner and a total of 58,835 artifacts were recovered during the course of the survey and excavations. Most of the datable artifacts fell between 1910 and 1935.

Hahn and Schwab write, “The life of the sawmill worker was apparently a very migrant one. Both mill personnel and swampers moved from house to house and company to company as availability of work dictated, with the result that most did not remain in one structure for more than a few years” (Hahn and Schwab 1998:242). A consequence of this mobility and expansion of the sawmill capacity, was the “the continual construction and demolition of structures within the community of Donner. Housing that was adequate in 1900 was woefully inadequate 20 years later and was sometimes replaced by newer structures” (Hahn and Schwab 1998:242-243). Historical and archaeological investigation revealed that the worker houses themselves were square or rectangular in shape and were wood-framed, clapboard-sided structures built on top of brick pier foundations and contained between 100 and 180 square meters (1,075.27 and 1,925.48 square feet) of living area (Hahn and Schwab 1998:240). A boardwalk passed along the lots to provide easy access to the sawmill. According to Hahn and Schwab, the boardwalk was a necessity in Donner, despite the community being ringed by a levee and pumped dry the area often remained damp and muddy (1998:240). Around the houses gardens were planted by many of the residents of Donner to supply the various households with fresh vegetables and canned goods (Hahn and Schwab 1998:241). According to the authors, shovel tests indicate that trash disposal was most concentrated in the rear of the backyard of the lumber residences and although evidence of outbuildings were located, the function of the buildings could not be determined (Hahn and Schwab 1998:240).

The United States Forest Service in 1997 carried out archaeological excavations at Camp Dantzler near Howison, Mississippi. Around 1895, L.N. Dantzler built a logging mill along the newly built Illinois Central Gulf Railroad. A small town, Howison sprung up next to the logging mill. The segregated black and white community worked not only in the woods, the mill, but also at the turpentine kilns, though turpentine was almost exclusively carried by African-American workers including women and children. Camp Dantzler
represented a logging camp where black families lived and worked around 1900 next to the dummy line leading to the mill in Howison.

During the 1997 excavations at Camp Dantzler, volunteers dug several units in and around the remains of one of the brick turpentine kilns. Reams and Cramer (1998) state that although the base of the kiln was disturbed, the crew was able to determine the general size and shape of this early industrial feature. Excavations were also carried out at the African-American section on the south side of the camp. Along with a drip line for a structure, ceramics, pieces of children’s toys, window glass, medicine bottles, eating utensils, and turpentine equipment were recovered (Reams and Cramer 1998; Young 2002). The archaeological record at Camp Dantzler indicates that the turpentine workers’ houses were small, wooden, and were moved about as sections of the forest became depleted (Young 2002).

Preliminary historical and archaeological investigations into this early 1900 logging and turpentine camp revealed the socially, racially, and economically stratified conditions at this early African-American industrial community in the Piney Woods of Mississippi. Historical evidence and material remains demonstrate that this turpentine village was a family camp where women and children not only resided, but may also have been employed (Reams and Cramer 1998). The occupation at Camp Dantzler seems to have extended over a 30-year period, which is quite extensive for an early logging community. Around the domestic residences, artifacts recovered included saws, hackers for chipping trees, mule bits, ceramic turpentine cups, medicine bottles, ceramics, bottle glass, and doll parts. Clearly, within the town’s domestic life, work, and industry operated in very close realms (Reams and Cramer 1998). From historic accounts of the turpentine industry and material culture excavated, such as numerous patent medicine bottles, it appeared that the workers at Camp Dantzler were caught in a struggle for a living wage against a system of credit and company bosses, against illness caused by the contact with gum dip or exposure to vapors during the distillation process (Reams and Cramer 1998).

**Research on Lumber and Gender**

An archaeological investigation in West Virginia examines the social makeup of late nineteenth and early-twentieth century lumber camps. Janet Brashler (1991) offers insight into the later development of
lumber operations and the gender makeup of the lumber industry during this period in her article “When Daddy Was a Shanty Boy: The Role of Gender in the Logging Industry of Highland West Virginia.” Within this work Brashler focuses on the relationship between gender, family organization and economic and subsistence strategies in the context of industrialization in rural West Virginia. Brashler writes that from the literature and some oral histories, women would appear absent from the rigorous life in the lumber camps (Brashler 1991:54). However, from the recent work at the Monogahela National Forest, it is evident that women and children were present in some logging contexts (Brashler 1991:54-55).

Brashler notes that as logging shifted from a family enterprise to a highly integrated industrial operation, men increasingly spent their time in lumber camps or towns rather than the family farm. But at the same time, a few women and children began appearing in logging camps: “Boys worked with their fathers occasionally in the logging enterprise. Older girls and women participated in the logging enterprise by foraging, driving supply wagons, and occasionally driving teams of horses skidding logs” (Brashler 1991:58). Women and family members adapted to the industrial corporation and began working wage jobs preparing food as cooks, or running boarding houses (Brashler 1991:59).

Brashler states that the logging camps within the project area in West Virginia differed from the more permanent camps of the Great Lake states in that shanties were brought in for temporary housing for workers. These mobile communities allowed for the cutting operation to completely move when the area had been logged out. The shanties were often located adjacent to the main railroad line on a number of spurs (see Figure 3-7). The gender and age composition of the camps would have varied depending on the various types of operations including milltowns, family company camps, single-gender camps, and temporary family shanty camps (Brashler 1991:66). Brashler concludes,

The pattern of shanty camp and family company camp is one that appears to have evolved as companies sought to employ laborers who moved from family farm to town as a result of industrialization of their region. Companies were understandably interested in reliable labor, and it seems likely that the mixed-gender family logging camp was a successful adaptation on the part of both the company and the family to the rural kin-based society of Appalachia. Families could stay together and the company had a reliable labor pool [Brashler 1991:66].

Brashler emphasizes that the gender and age makeup are dependent on the type of logging operation and the time period. Thus, historians and archaeologist must be careful not to make overt
generalizations about the social or gender makeup of the industry as a single-gendered masculinized setting and the same can be said about the archaeological data.

Previous Archaeological Research at Natchez-Under-the-Hill

During the extreme low water period of 1988, numerous watercraft remains were observed along the east bank of the Mississippi River in the vicinity of Natchez, Mississippi. In order to evaluate these remains, the Vicksburg District Corps of Engineers contracted Coastal Environments Inc. to conduct an investigation of the area in 1991. The result of this fieldwork included both historic documents research as well as intensive survey of the Natchez riverfront (Saltus et al. 1995). A total of 18 watercraft were located, including several scow barges, a possible steamboat, a wood skiff, and a model hull vessel. Of the 18 watercraft investigated by Saltus et al. (1995), five were determined significant in terms of National Register criteria, five were determined to be not significant, while the significance of eight of the vessels could not be determined from the available data. No watercraft clearly associated with one of the sawmills located Under-the-Hill was discovered during the 1998 survey (Saltus et al. 1995).

In July of 1994 Archaeologists Unlimited conducted an archaeological survey of portions of Natchez, Mississippi focused primarily on the 100 block of Main Street and portions of Under-the-Hill at Roth’s Mill/Upper Landing site, in the old Minor Lots 8,9,10,11,12,13, and 14. Archaeologists Unlimited conducted historic documents research, pedestrian survey, and auger bores in some areas. Boggess (1994b:69) writes that although a preliminary overlay of historic maps suggested that all residential and industrial features known from early maps that were located within the project area had eroded into the river. The pedestrian survey identified five areas of archaeological interest in the Under-the-Hill section. These areas included the circa 1890 Natchez Water Supply & Sewer Company, an area of pre-1870 bricks and residential debris slightly north of the water works, an outcropping of ceramic-quality clay in the cut bank, and several additional concentrations. Furthermore, Boggess (1994b) states that Archaeologists Unlimited identified an area of both industrial and early-nineteenth century domestic remains, including a cistern, and identified this site as the Susan Spruil House Site. This site is located approximately .5 km downriver of the former Andrew Brown Sawmill and .3 km down river of the Brown Cozzens Sawmill site. Since neither the former Brown Cozzens
Sawmill nor the Andrew Brown Sawmill were within Boggess’ 1994 survey area, no evidence of the mills or residences were uncovered by the survey conducted by Archaeologists Unlimited.

In 1997 Archaeologists Unlimited conducted another survey of Natchez-Under-the-Hill (Bogges et al. 1997). This survey overlapped with portions of the project area discussed within this thesis around Learned Mill Road and therefore provided a good reference source. This report provides a thorough background history of the area including maps and deed information on the Andrew Brown Sawmill. Although Archaeologists Unlimited’s 1997 survey did not locate any sites related to the old sawmill, their research did yield data on three sites in the area including two abandoned structures associated with the historic Bellevue subdivision formed from after of the closure of the Bellevue Oil Mill around 1840. These two structures on the former Bellevue property were located approximately a quarter of mile upriver from the historic location of the Andrew Brown Sawmill.

In 1998 and 1999 Coastal Environments, Inc. conducted two additional surveys above and below the Natchez Bluffs: the 1998 Natchez Riverfront Revetment Survey (Hahn 1998) and the 1998-1999 Natchez Bluffs Stability Project (Hahn 1999a). As stated in Chapter 1, the brick-lined well (Feature 1) was located during CEI’s 1998 summer survey of the Well site (22AD993) for the Natchez Riverfront Revetment. During the 1998-1999 Natchez Bluffs Stability Project survey, a shovel test was excavated within the interior of the well (Feature 1) and a detailed plan of the well was drawn. The shovel test encountered large quantities of brick and could be excavated only to 80 centimeters below surface (cmbs). CEI returned to the Well site in April 1999 to conduct further testing at the Well site. During the testing, two areas were mechanically excavated so that additional studies could be made of the well. Upon arrival at the site in April 1999, it was found that riverine erosion had exposed a brick feature attached to the northwest quadrant of the well. Probing revealed that the new feature possessed only a top and two sides, and attached to the well through an opening in the well wall. To further explore the construction of the well, the southwest quadrant of the area surrounding the well was mechanically excavated to a depth of approximately two and a half meters. It immediately became obvious that a very deep builder’s trench surrounded the well. Although several brick fragments were included within the seven strata comprising the builder’s trench, no dateable artifacts were
noted in its contents. From these investigations, it was determined that 22AD993 was eligible for the
National Register of Historic Places.

Chapter 4 provides an overview of the archaeological and historical research in the Lower Mississippi
Valley and Gulf Coast on the historical development of the lumber industry. This research demonstrates the
importance of sawmills and logging to the economic development and cultural organization of many
communities, towns, and cities within this region. Furthermore, material culture, historic documents, and
oral testimonies highlight the significant dependence of the lumber industry on African-American labor in
this region. Archaeological work at these sawmills and mill/turpentine communities illustrate the significant
development and changes in technology within the industry from the 1800s to the 1900s as well as the stark
lack of progressiveness in the housing, hours worked, sometimes wages, and general housing and living
conditions of the laborers. Archaeological work also shows variation in the sawmill operating in the
floodplains and those in the uplands terrace. This thesis builds upon that base of knowledge and provides
case studies and material culture from two mid- to late-nineteenth century sawmill sites in Natchez,
Mississippi. Chapter Five and Six will show that the archaeological and historical investigations at the circa
1818-1917 Andrew Brown and the circa 1840-1870 Brown Cozzens Steam Sawmills have yielded information
regarding the layout and operations of these early industrial complex, and also data on the laborers who
operated these mills and supplied the plants with timber.
CHAPTER 5: SAWMILL OPERATIONS AT NATCHEZ-UNDER-THE-HILL

Chapter Five focuses on the two major mid-nineteenth century sawmill complexes at Natchez-Under-the-Hill. The Andrew Brown Sawmill near Upper-Landing and the Brown Cozzens Sawmill near Middle-Landing are examined within this thesis. The history of two mill operations is discussed especially concerning their spatial layout through time, the lumber plantation landscape, the social and occupational life of the workers, and the machinery and technology employed at the mills. Thus, this chapter begins the discussion of the changing spatial patterns, demographics, and material culture of the two sawmill complexes. This information was ascertained through ethnohistorical and archival data related to the Andrew Brown-Rufus Learned Sawmill and McFadden-Sisloff-Cozzens Sawmill. To this end, historic photographs, maps, and documents are provided to aid in the historical archaeological excavations at the mill complex (see Chapter 6). Chapter 5 also includes a brief discussion of the history of landownership of each property, and how both historic mills struggled with riverbank stabilization. Both sites are situated in a geologically unstable region between a slumping bluff and an eroding riverfront bank. This environmental or geological locale clearly not only affected the historical layout of the mill sites, but also the preservation of archaeological material at the sites.

This chapter begins with an examination of the industrial growth and trade at Natchez-Under-the-Hill focusing on the Upper and the Middle Landings. The Natchez landings with the brawling, robberies, whores, and murders are often portrayed diametrically opposite of the wealthy “genteel” way of life on top of the hill. Furthermore, much of the documentation of the Natchez landings has largely focused on the “Rough and Tumble” frontier aspect of this port town only adding to the mythology, but “the vital economic role played by Natchez Under-the-Hill is largely unappreciated in the historiography of the region because of emphasis placed on the equally unique social phenomena related to the port” (Beard 1981:2,80). Furthermore, even less has been written about the laborers who were involved, many forcibly, in the commercial enterprises Under-the-Hill.

This thesis expands upon both the social and economic history of the Natchez landings illustrating the further complexity and ties between the wealthy financiers Above-the-Hill and the trade Under-the-Hill.
by focusing on the two major sawmills and their laborers at the port during the mid-nineteenth century. Clearly, Silver Street and the Lower Landing, with the brothels, bars, saloons, and merchants, was an important element of social and commercial life in Natchez; however, this thesis focuses on the industrial side of the port at Natchez, further upriver, along Water Street, on the sawmills at Middle and Upper Landing, which has been much less documented.

A tremendous amount of primary and secondary sources are available regarding the early Brown-Learned operation. However, there are only a few documents, including land transfers, slave records, historic newspapers, and one diary regarding the operation of the Sisloff-Cozzens Sawmill near Middle Landing. Although scant, these documents offer some commonalities with regards to the operation of these somewhat contemporaneous mills. Similarities include the use of enslaved labor, the need to annually renovate the mill machinery, and the dangers of working in and around an early mill. Some differences are also noted including the size of the workforce, the value of the lumber produced, and the financial stability of the two operations. Additionally, some of the extensive archival documents from the Andrew Brown operation may provide analogies for the somewhat historically obscure Cozzens Sawmill.

**Early Industrial Trade at the Upper and Middle Landing, Natchez-Under-the-Hill (1806-1859)**

The Brown Cozzens sawmill appears to have been located on the upriver portion of the Old Minor Lot 16 and the downriver portion of Minor Lot 17 (range lines R8.5-D and R9.25-D). The Peter Little sawmill, later owned by Andrew Brown and Rufus Learned occupied the upriver half of Minor Lot 32. Both mill complexes were located on Section 15, which was originally part of a much larger Spanish land grant given to Richard Harrison in 1783. It is presently unclear if any commercial or residential development occurred within the present project area during Harrison’s ownership of the property. Harrison kept the property for only a short time before Stephen Minor acquired it. Minor was a major landowner in the Natchez District and served as acting district governor from 1797 to 1798. In addition to owning land at Natchez-Under-the-Hill, Minor owned vast tracts of land and a plantation on top of the surrounding bluffs.

Several landings developed at Natchez-Under-the-Hill during Minor’s ownership of Section 15. As commerce along Mississippi River increased, so too did the number of warehouses, buildings, and landings
along the riverfront during the first couple of decades of the nineteenth century. One of the earliest manufacturers of cotton gins, Eleazer Carver of Bridgewater, Massachusetts, decided to establish a gin shop in Natchez and also one of the first saw mills in the Mississippi Territory “in order to saw lumber for his gin stands” (McMillan 1993). Carter built his first gin for Stephen Minor’s plantation and quickly built a reputation as first-rate mechanic, competing with local gin wrights David Greenleaf and several enslaved mechanics in the area (McMillan 1993). Carter maintained a friendship and a financial partnership with Stephen Minor and Carter’s gin shop and presumably his sawmill remained in operation from 1806 until 1816, a year after Stephen Minor died (McMillan 1993).

When Minor passed away his Natchez-Under-the-Hill holdings were deeded to his heirs. When Minor’s youngest son reached the age of majority in 1829, the estate’s Natchez-Under-the-Hill holdings had been partially subdivided into what subsequently became known as the Minor Lots (Boggess 1994b:22). The Minors appear to have encouraged the development of this portion of Natchez-Under-the Hill for mixed commercial and residential use, and many of the lots shown subdivided in 1829 already contained functioning warehouses, shops, or homes (Boggess et al. 1997:19; Sloan 1911). Furthermore, it is likely that given Eleazer Carter’s connection to Stephen Minor and that most of the trade in Natchez went through the port below the bluff, Carter’s early sawmill and gin shop were most likely located on one of the Minor Lots Under the-Hill. Furthermore, one rational for Carter returning to New England was that his “Puritan mind . . . found ‘Natchez under the hill’ and the rowdy frontier objectionable . . .” (McMillan 1993).

Shortly after the closure of Carter’s sawmill in 1816, two larger, steam-powered lumber mills began operating at Natchez-Under-the-Hill sometime prior to 1829. A map surveyed by Geo. Dougharty on 21 January 1829, of the Minor property shows the “P. Little Sawmill Site” on the upriver portion of Lot 32 (Figure 5-1) and what appears to be a representational sketch of a sawmill occupying the upriver half of Lot 32. Little’s property extended from near the river’s edge to the perimeter road that runs along the base of the bluff. On the downriver side of Little’s Lot 32, is Lot 31, which is described as “a Lot lately owned by Samuel Clement[s] [Clemarit or Clemants?] (now Mr. Dinsmore)” (Adams County Records [ACR], Deed Book...
Figure 5-1.
The circa 1829 Dougharty Map of the Minor Lots 31 through 36 at Natchez-Under-the-Hill (ACR, Deed Book ‘S’, folio 576). Note the location of Peter Little’s sawmill on the upriver half of Lot 32. A road passes though Lot 36 to just behind the sawmill and connects to Water Street near Lot 31 and what is now known as Learned Mill Road.

‘S’, folio 576, Chancery Clerk’s Office, Adams County Courthouse, Mississippi). According to historic documents, the Clements operated a sawmill just downriver of Little’s mill and therefore was likely located on Lot 31 (Boggess et al. 1997, Moore 1967). The Clement sawmill may have subsequently been replaced by a tanyard, after the mill site caved into the river sometime prior to 1829 (Boggess et al. 1997).

Minor Lots 16 and 17, the location of the Well site (Cozzens Sawmill), were controlled by the Minor family until around 1828 when Robert McFadden purchased Minor Lots 15 through 22 in February of 1829. All eight lots extended “From the brow of the bluff to [the] low water mark on the Mississippi River (ACR, Deed Book ‘U’, folio 492) and all together had a frontage of 1,142 ft (348 m). The lower boundary of the property was described as “a line common to the lot Number fifteen (No 15) and the lot Embracing [sic] the
warehouse lately occupied by Crayon [No 14]” (ACR, Deed Book ‘U’, folio 492). Not included in the sale was a road through the property. The exact location of the actual roadway, ‘Water Street’, varied according to floods and bank conditions (Boggess et al. 1997:19). The Map Showing Part of Natchez Miss. Known As Under The Hill 1829 from the survey made by Geo. Dougherty and redrawn by Theo. Sloan in 1911 (Figure 5-2) shows a road running Under-the-Hill through the McFadden property of Lots 15-22 all the way upriver through Lots 31-32, behind the Little mill, to at least Lot 36 (Sloan 1911). The 30-foot right-of-way (dual wagon-width) paralleled the river appears to be a continuation of Water Street, which connects further downriver with Natchez’s infamous Silver Street.

Figure 5-2.
A portion of the circa 1829 Map Showing Part of Natchez, Mississippi Known As Under-the-Hill redrawn by Sloan in 1911 showing Lots 31 through 33 (Sloan 1911). Little’s two-acre portion of Lot 32 measured approximately 345 ft north-south along the banks of the river and 495 ft east west (between the bluff and river). Note that between 1829 and 1911 the river eroded approximately 60 m (200 ft) of bank line near Peter Little’s sawmill site.
Another road in use during this period that connected the commercial trade of Under-the-Hill with Natchez-Upon-the-Hill is known today as Learned Mill Road. The small road began at the western-edge of present-day Madison Street and traveled down the bluff to near the rear of the Little sawmill. In order to serve a blossoming industrial and residential strip below the bluff and adjacent to the river, the historic road was constructed circa 1818 through a process of cutting and filling a portion of the loess bluff (Boggess et al. 1997:6). Learned Mill Road is one of the oldest wagon roads connecting the wealthy planters, merchants and their slaves in town on top of the bluffs with the settlement, shops, manufactories, and port Under-the-Hill (Boggess et al. 1997:18). The road may have been constructed in conjunction with the opening of Peter Little’s steam sawmill, which opened in 1818. The path from the river’s edge up the bluff probably provided a shorter route than Sliver Street for hauling cut lumber by horse and wagon to the city. Learned Mill Road may have also served other early mills erected around the same time period at Natchez-Under-the-Hill, such as Samuel Clements’ Mill. Therefore, it is logical to presume that the historic road was constructed to serve these industries and some residences, but the original Learned Mill Road may also be the site of a riding trail established by the Minors (Boggess et al. 1997:36).

Another early nineteenth century road, later known as Roth-Hill-Road, was originally known as the “Road to the Upper Landing” (Hahn et al. 2002). Like Learned Mill Road, the Road to the Upper Landing, which was likely constructed in the 1820s, connected the commercial and industrial development near Middle-Landing with the town on top. The road began at the intersection of Broadway and Main Streets, bent sharply to the north and rapidly descended the face of the bluffs to intersect with Water Street near the edge of the Mississippi River in the area historically described as Crayon’s Landing, just a few lots downriver of the Sisloff, later Cozzens, sawmill. Because of erosion, the road often changed its route down the bluff (Hahn et al. 2002).

**Development around Middle Landing at Natchez-Under-the-Hill (1829-1841)**

Like the upper landing lot, with the Clements mill and Peter Little-Andrew Brown sawmill the Middle Landing apparently was well developed by 1830. In 1830 C.A. Lesuer in several sketches of the Natchez riverfront depicted a number of buildings in the vicinity of the Middle landing near Lots 14 through
16, including warehouses, residences, and probably some commercial business (Figure 5-3). From the
growth, evidently like Stephen Minor, Robert McFadden must have been encouraged the development of the
area as a commercial port by either leasing or selling narrow parcels of land along the riverfront for
development. On November 2, 1832, McFadden sold the downriver portion of Lot 16 to George Smith, “a
free man of colour”, for $250. This narrow strip of property was described as:

All that lot or parcel of ground containing forty nine [feet] front whereon the said George Smith now
resides. . . The said lot of ground commencing at a point. . . two hundred and nine feet from the
northernmost end of the house in which the said Robert McFadden now resides. . . immediately
adjoining and below the road leading to the upper Landing. . .
[ACR, Deed Book ‘T’, folio 518].

From this transaction, clearly George Smith was residing on the property prior to its sale. Therefore, he may
have been leasing and living on the property since 1829 and had only recently acquired ownership. In May
of 1835, George sold the lot to Christopher Patterson and Frederick Stanton for $1,000 (ACR, Deed Book
‘W’, folio 141). Smith earned a profit of $750. The increase in the property value may have came from the
addition of another dwelling, but is also possible that the Smiths developed the small lot for commercial
purposes during their ownership (Boggess et al. 1997; Hahn et al. 2002), though it would appear that the
improvements were not financially significant enough to indicate the operation of a mill on the property.

Figure 5-3.
A drawing of Crayon’s warehouse by C.A. Lesuer in April 1830 (Register 1978:11). The warehouse,
purchased by Robert McFadden in 1829, was located at the junction of Water Street and the “Road
to Upper Landing” (Hahn et al. 2002).
Peter Little Steam Sawmill, Minor Lot 32 (1818-1828), Upper Landing, Natchez-Under-the-Hill

The same year that the Mississippi Territory was established, 17-year-old mechanic Peter Little had arrived by flatboat from Pittsburgh at the landing of Natchez-Under-the-Hill in 1798 (Moore 1967:23; Wood and Harrison 1978:9). He soon found employment with the business entrepreneur David Greenleaf, manufacturer of cotton gins and presses (Moore 1967:23). Peter worked amid a booming Natchez landing, thriving with trade. As he gained financial security, he, like many other white wealthy settlers, moved on top of the bluffs. He planted cotton and soon acquired property in Louisiana and in Mississippi (Wood and Harrison 1978).

Successful steam-powered sawmills belonging to men like McKeever and Valcourt, Carter, Donaldson, and Herrins likely influenced Little’s venture into the lumber industry as well as his experience as a mechanic building gins with David Greenleaf. These gins like early sawmills had moving wooden frame carriage systems and iron saws. Little embarked on a new endeavor in 1818: “Imagination pushed his inventive mind to work with an engine from an old sunken boat, thereby developing the idea for a steam circular saw for use in the lumber business” (Wood and Harrison 1978:10; also see Hicks 1974:104). From an estate sale Little acquired a portion of the old Minor property near the upper landing (see Figure 5-1 and 5-2). Around 1818, on the up-river portion of Lot 32, he constructed one of the first lumber mills using steam power on this section of the Lower Mississippi River. This mill, which was later purchased by Andrew Brown, operated for approximately 100 years (Wood and Harrison 1978).

The Peter Little Sawmill was located on the famous shelf of land below the bluffs called Natchez-under-the-Hill, about three-fourths of a mile from the “Upper Steamboat Landing.” Peter Little had selected this site for his mill because a natural cavity in the riverbank provided a current-free expanse of water in which logs could be stored. He subsequently improved the log pond by constructing a breakwater of logs and stones (Moore 1967:23). Little’s workers transported logs from the storage basin across the mud flats to the foot of the embankment by means of a canal, which lumbermen called a logway. Logs were then loaded on railway cars and hauled up the bank to the mill by a steam-powered railroad, or log stage (Moore 1967:23).
Little’s operation was typical of an early nineteenth century steam sawmill establishment. The mill had a five-horsepower steam engine powering a single sash saw. The mill cut approximately 3,000 lineal feet of lumber a day (Thompson 1958). Little’s mill, although steam-powered, closely resembled the sawmills of the colonial era in terms of the size of the operation and workforce. Although a couple of mechanical mills were operating in the Natchez area by this date, the majority of lumber used in construction in this area was rough-cut lumber by hand done whipsaw pits (Thompson 1958; Block 2002). Therefore, Peter Little’s mill, along with the Montesano Sawmill, and the Clements sawmill, all located at Natchez-Under-the-Hill prior to 1818, were revolutionary in terms of the development of lumber mill operations during the first few decades of the nineteenth century in the Lower Mississippi Valley.

Steam powered sawmills like Peter Little’s increased the reliability and output of lumber and thus aided the building boom in Mississippi, which had just achieved statehood a year earlier in 1817 (Hicks 1974:104). However, timber was a finite resource and this ‘boom’ destroyed most of the primeval forests in a great number of the major river valleys. Not only did these early mills consume natural resources, they also required cheap labor, whose record of existence is poorly documented. Almost nothing is known about the individuals who toiled at the sawmill during Peter Little’s early ownership. However, given that Little was a wealthy Natchez planter and sawmill operator, he, like many plantation and mill owners in the Deep South at this time, depended on enslaved African-Americans and some Free People of Color for most of the skilled and unskilled labor. At least some of these individuals were involved, if only seasonally, in the operation of the sawmill. Furthermore, the laborers and craftspeople working at Little’s mill likely included a mix of white and free blacks as well as slaves.

With the success of his lumber mill, Peter began to build his dream house. In December 1820, he paid Gamaliel Pease and his wife $3,000 to purchase 22 acres of land directly above Under-the-Hill landing (Wood and Harrison 1978:14). His brother-in-law, James Shryach Griffin, was a well-known architect from Baltimore. It is likely that James Griffin designed Rosalie Plantation, and it is also possible that Little’s associate, Andrew Brown, may have contributed to the design (Wood and Harrison 1978:14; Wilson
Andrew Brown Acquires the Little Steam Sawmill at Upper Landing (1827-1830)

During the early 1820s, Andrew Brown left Scotland for the United States. After working the building trades in Pittsburgh, he took passage to Natchez on a flatboat (Moore 1967:22). While most of Natchez was abuzz over cotton, Brown focused his attention on building construction. As a builder and contractor Andrew Brown became a customer of Peter Little (Kane 1947:134). However, it was not long after his arrival in Mississippi that Brown accepted employment from the locally famous merchant and sawmill operator. After gaining a favorable local reputation as an architect, Brown left Little’s firm and set up his own construction business. During this period, his wife Elizabeth and son, Andrew, Jr., arrived from Scotland to join Brown in Natchez (Moore 1967:23).

Between 1828 and 1829 Andrew Brown purchased the steam sawmill from his former employer, Peter Little, as means of assuring a dependable supply of lumber for his growing contracting business (Moore 1967:23). Brown worked out a purchase agreement for both the sawmill and the tract of land on which it was located, the upriver-side of Lot 32 (ACR, Deed Book ‘R’, folio 263). Andrew Brown took Charles Dart into equal partnership with him (Moore 1967:24). Dart was to manage the sawmill and Brown the building trades. Soon after purchasing the sawmill from Little, Brown employed eight slaves in the sawmill: Brown and Dart owned two and hired out six from their owners (Moore 1967:134). Two of the enslaved craftsmen, Bonapart (or “Boneypart”) and James Mathews, were purchased at this early date in and around 1829 and stayed with the lumber firm through at least the mid-1850s (Moore 1967).

Within a few months Brown grew dissatisfied with Dart’s management and took over the management of the sawmill himself by purchasing Dart’s investment in the partnership (Moore 1967:24). Heavily in debt, near bankruptcy, and still owing money to Little and various loggers for timber purchased on credit, Andrew Brown sought an emergency loan from his friend Stephen Duncan, who was one of the wealthiest cotton planters in the Natchez District. Thereafter, Duncan became an equal though silent partner in Andrew Brown’s lumber business (Moore 1967:24; Rothstein 1989:100). The first few years of operation...
were difficult for the new sawmill owner. Lumber prices were depressed and the mill was sawing only a fraction of its capacity. Furthermore, after Dart’s departure no lumber was being shipped downriver to plantations from Natchez to New Orleans (Moore 1967:25).

**A Sawmill near Middle Landing (1837-1838)**

As Andrew Brown was attempting to organize his newly acquired sawmill at Upper-Landing, Paterson and Stanton appear to have invested heavily into the narrow lot at Middle Landing that had recently been purchased from the “Free Person of Colour,” George Smith (ACR, Deed Book ‘AA’, folio 16). Furthermore, Smith may still have been financially involved with the property either as an investor, or helping manage the commercial operations, which by at least 1837 included a sawmill and a cotton gin (ACR, Deed Book ‘AA’, folio 16; Hahn et al. 2002). The cost of improving and developing the old Smith Lot may have forced Paterson, Stanton and to a lesser extent Smith, into debt. By 1837, they could not cover the taxes and financial obligations on the property. The Sheriff seized the lot and a public auction was held on April 11, 1837. The property, including the “Steam Saw Mill and Cotton Press thereon,” was sold at auction to Philip Sisloff and Robert McFadden for $31,000 dollars (ACR, Deed Book ‘AA’, folio 16). Despite the high amount of the sale, this figure still did not cover all of Patterson and Stanton’s debt, which amounted to $25,059.85 (Hahn et al. 2002). Some of this debt probably occurred not only with the purchase of machinery and timber for the early mill and press, but also with the purchase of enslaved laborers and craftsmen to operate these early industries.

Shortly after McFadden and Sisloff began operating the sawmill near Middle Landing, the two men were forced to sell a portion of the partnership in the sawmill to Thomas Gaw & Company (ACR, Deed Book ‘AA’, folio 108). This arrangement appears to have been made out of necessity by McFadden and Sisloff in order to assist in paying off financial obligations on the property. Gaw would remain a partner in the sawmill property for many years. About the time of the creation of the new partnership, William Johnson purchased a quantity of lumber form the Sisloff sawmill to construct his house. In July, 1838, the famous free black barber recorded:
3000 ft. of Flooring at 40 160.00
30 do was Boards 12.00
1200 ft of Sheeting [at] 20 24.00
114 Joist 161/2 F Long 21/2 – 110 – 3916 ft [at] 30 117.00
38 do 161/2 to 21/2 – 8 1045 [ft] 31.35
76 Rafters 12 ft L. 3 – 4 – 912 [ft] 27.36
12000 Shingles [at] 6 72.00
Hauling the above 37.00
2000 ft. Clear pine [at] $60 120.00
Hauling Same 4.00
Glazing window Light & Door Sash 60.00
Hara wase 75
Carpenter work 731.00
The Amount of Carpenters Bill in to-to $1469.19

[Hogan and Davis 1979:234]

The range of goods described in the bill indicates that the McFadden, Sisloff, and Gaw sawmill produced a wide variety of wood products, including finished goods such as window and door sashes. Presumably, most, if not all, of these products were produced at the sawmill located on the former George Smith Lot. Because the Smith Lot was approximately 50 ft wide, some of the lumber produced at the mill was likely dried and/or stored on McFadden’s neighboring property (Hahn et al. 2002). In addition to lumber storage, McFadden’s property may have been used for housing some of the mill workers.

In 1838 Henry Miller wrote, “There are several Cotton Presses here and several Saw Mills, with some Lumber yards, from which it might be properly called the port of Natchez” (Reps 1994:134). Miller was probably speaking of Andrew Brown’s sawmill and the neighboring Natchez Cotton Mill as well as McFadden, Sisloff, and Gaw’s Sawmill and cotton Press further downriver. Clearly by this time their sawmill was operating to such an extent that large quantities and varieties of timber were being sold, necessitating a lumberyard near the mill. Furthermore, the mill at Middle Landing was likely comparable in scale to the Andrew Brown Sawmill a few lots upriver near Upper Landing. Similar to the Andrew Brown operation, the Sisloff sawmill may have been worked primarily by enslaved laborers. Some confirmation of this comes from a death certificate for one of Phillip Sisloff’s enslaved laborers, Ned, who died on September 8, 1837, of “congestive fever” (Shumway 2002a). Clearly from this document Phillip Sisloff, a major partner in the sawmill, owned slaves during this period, and most likely a number of these individuals worked at his primary financial investment, the mill.
Andrew Brown Expands His Sawmill, Adds Laborers, and Constructs a Big House (1830-1840)

By the early 1830s, Andre Brown’s lumber business, just upriver of the Sislof mill, began to expand and show signs of profit. By 1835, he realized that the sawmill machinery he had acquired from Peter Little was inadequate to supply even the local demand and possibly to compete with a new sawmill downriver at Middle Landing. So as most of Natchez’s elite was investing in cotton, Andrew Brown overhauled a sawmill (Kane 1947:134; Moore 1967:26). Around the time of the renovations, Swiss artist Karl Bodmer painted a sketch of a portion of Natchez showing Under-the-Hill (Goetzmann 1984). In the left hand foreground of the painting (Figure 5-4) is the Andrew Brown sawmill and a residence or office behind the mill is barely visible. A second sawmill owned by Paterson and Stanton, at this time, is located near Middle Landing.

Figure 5-4.
Around 1833-1834, Swiss painter Karl Bodmer painted a portion of Natchez showing Under-the-Hill (Goetzmann 1984). In the left hand foreground of the painting is the Andrew Brown sawmill and a residence or office behind the mill is barely visible. Further downriver is the commercial development around Middle Landing, which included Crayon’s warehouse and possible Patterson and Stanton’s sawmill (below the left arrow) on George Smith’s former lot.

During the 1835-1836 renovations, Andrew Brown and the firm purchased new machinery that included larger saws for the mill, which had four times the capacity (Kane 1947:134). In the process of renovation Brown replaced the single-bladed sash saw with a much more efficient gangsaw of four blades that raised the capacity of the mill to around 10,000 board feet a day (Moore 1967:26). When Brown
reworked the mill, he also dug a canal across the mud flats to act as millpond so logs could be floated from the river to the mill (Kane 1947:134). According to an entry in William Johnson’s diary dated 26 April 1836, it appears that Brown’s renovations included adding a building to Lot 32: “A man by the name of Finley I believe after having just Finished a Large Building for Mr. Brown near the Saw Mill took a Chisel and cut his throat with it . . . ” (Hogan and Davis 1979:117).

The growth of Andrew Brown’s lumber trade in Natchez during this period can be attributed partly to business relations that he had cultivated with several of Natchez’s largest building contractors. When construction began on the Mississippi Rail Road Company’s line between Natchez and Canton, Brown supplied the company with cypress crossties at $30 per thousand feet and furnished various sizes of planking for buildings and bridges (Moore 1967:21). During the first year of construction, the railroad company purchased more than $9,000 worth of lumber from the Natchez Sawmill2 (Moore 1967:31).

With a greatly enlarged operation and an increased demand for lumber, Brown was in need of a larger work force. Although Brown often insisted that he opposed the institution of slavery for he considered himself a scientifically inclined man with firm Presbyterian principles, he nevertheless had a workforce that was composed mainly of enslaved Africans and African-Americans. So at the close of 1835, Brown purchased an additional five male slaves and one female, making a total of 17 enslaved workmen in the company (Moore 1967:27,134). Included in this purchase was an enslaved workmen named “Charles” who labored at the mill until his death many years later (Moore 1967:134). From this period until the Civil War, except for a few specialized services, Brown’s workforce in the sawmill and lumberyard was comprised nearly entirely of enslaved Africans and African-Americans. Some of the enslaved workforce belonged to the mill owner or the company, but many were hired from neighboring plantations during the off-season, a common practice of lumber mill operators in the Deep South during this period (Cramer 1999; Moore 1967:27).

Brown stated his preference for slaves stemmed from the unreliability of white wage laborers (Moore 1967:27). Given that the majority of African-American workers were held in legal bondage by their owners, statements regarding the reliability of white verse black laborers are somewhat distorted. Ironically, despite
Andrew Brown’s uneasiness with institution of slavery, he became one of the largest slave-owners in Natchez (Davis 1997:37).

Andrew Brown apparently only provided housing, some clothing, and food for his enslaved laborers. Moore (1967) states, “He fed them well in a commercial boarding house and provided them with clothing of good quality. In fact, the expense of clothing the slaves was significant item in the total cost of operating the sawmill” (Moore 1967:142). The types of clothing items Brown purchased for his enslaved workmen in the 1840s for the winter season included leather boots, “36 pairs of pants at $2 each, 26 flannel shirts at $1.50, . . . 18 ‘Roundebout’ jackets at $2.25 . . . 1 doz. Pairs of Lowell Pants for the Boys, 2 doz. Blue flannel shirts of the largest size & 1 doz. Each stripe & check, also of the largest & best” (Moore 1967:142). For the extreme heat and humidity in the summer, Brown ordered “ . . . 4 doz. Pairs cottonade pants & 4 doz. Shirts. I suppose that will be sufficient to give all of them 2 pair each” (quoted in Moore 1967:142). With some of their overtime wages, the enslaved workmen may have purchased additional clothing and personal items in the markets in Natchez or New Orleans.

Brown’s Reliance on the Enslaved Foremen, Simon Gray and James Matthews

About this same time period in the mid-1830s, Simon Gray’s owner, Andrew Donnan, a coal dealer and blacksmith in Natchez, hired Gray to Andrew Brown, Sr. (Moore 1967:83). Gray, who was described as a highly intelligent mulatto slave, became the first of Brown’s enslaved sawmill hands to be elevated to a position of authority, and Gray would work for Brown up until emancipation (Moore 1962). By 1838, Simon Gray, who had been hired as a common laborer, was captaining rafting crews from the Yazoo River to the sawmill in Natchez: “As head of a crew Gray was equipped with a pass signed by Brown which authorized him to travel free from interference by legal authorities anywhere he wished on the ‘Yazoo or any other river, under good conduct’” (Moore 1967:83). Gray was also entrusted with handling certain financial transactions, such as paying a crew of white and enslaved rafters, purchasing timber, and selling timber (Moore 1967:83; Anonymous Lumber Company Account Book 1841). His main task was running the Yazoo logging crew and preparing and rafting timber back to the mill. During busy periods, Brown had Gray negotiate the purchase of planks from a mill in Yazoo. By 1840, because of his skills and leadership Gray was promoted to a river
pilot and given a work crew. The monthly wages Brown paid to Gray went from eight to 20 dollars, which is what most white boatmen made (Moore 1967:88). Gray handled many business transactions for the mill and kept written records of purchases, sales, payment of crew wages, etc (Anonymous Lumber Company Account Book 1841). Gray was also allowed to do some of his own private enterprises raising supplemental income (Moore 1967:88). As Gray’s financial position improved he was able to convince Andrew Brown in 1850 to purchase his wife for $500 from a local owner (Moore 1967:89). In 1856 Gray purchased his son, Washington Gray, for $500 and likely had Brown assist him in the purchase. Subsequently, Washington would join his father on the mill’s payroll. Brown extended a considerable amount of liberty to Gray, considering he was still legally a slave living and working in Louisiana and Mississippi. Gray carried firearms on his trip because of the cash he often had. Furthermore, Gray was noted for his ability to handle the “roughest” and “toughest” of crews (Moore 1967). Simon Gray remained with mill until the fall of Vicksburg in 1863.

James Matthews was another enslaved craftsman at Andrew Brown’s mill. Like Simon Gray, James Matthews was a mulatto slave who rose to a position of authority in the lumber operation (Moore 1967:92). The firm bought Matthews as a laborer around 1829 (Moore 1967:92). By the 1840s, Matthews emerged as a “‘master’ of a flatboat, carrying lumber to New Orleans” (Moore 1967:93). Matthews received a bonus of five dollars as compensation for increased responsibility and was placed in charge of a crew of white river men and slaves engaged in rafting cypress from Old River, downriver to the sawmill at Natchez (Moore 1967:93). For this job Mathews was trusted with considerable sums of cash, long periods of isolation and numerous opportunities for escape, but Mathews apparently never took advantage of the situation unlike a few of his fellow friends and slaves who also worked for Andrew Brown (Moore 1967:93). Matthews was chief raftsman for the Natchez firm, and Gray was the primary boatman. An anonymous 1841 lumber ledger shows that both men were involved in the buying and selling of timber (Anonymous Lumber Company Account Book 1841; Moore 1967) (Figure 5-5). Despite the fear by some of the white managers in Brown’s company of trusting slaves with large amounts of cash, nearly all of the transactions carried out by Mathews and Gray were accomplished without incident (Moore 1967:94), and this 1841 ledger speaks to the
extent of the financial dealings that some of Andrew Brown’s enslaved craftsman conducted for Brown up and down the Mississippi River from Yazoo Delta in North Mississippi, to New Orleans. It illustrates the reliance Brown had upon these men and their crews to cut, purchase, and raft timber to the sawmill in Natchez as well as negotiate, broker, sell, and transport cut lumber to the markets in New Orleans and several plantations along the way.

**The Changing Social Dynamics of the Labor Force, and the Inherent Risks of the Trade**

In the colonial era, sawmills were worked by just a handful of laborers (5 to 20). The workers were a mix of slaves, Free People of Color, Creoles, and whites and a few were specialized laborers. From the 1820s to the 1850s, the use of an enslaved workforce in the industrial or manufacturing setting in the Deep South was substantially increasing, as was the number of specialized jobs. Between 1847 and 1848, Andrew Brown and Andrew Brown, Jr., purchased several enslaved laborers: They paid $600 for Daniel, $800 for George and Aleck, and $750 for Anthony (Moore 1967:134). Additionally, they purchased two girls, Judy and Julia, for house servants, paying $400 for each child. In November 1848 the company bought three men, William, Henry, and Dan Hunter for $800 each (Moore 1967:134-135). In 1851, Brown and Key continued to invest surplus funds into the purchase of slaves. Between them they purchased at least 35 male slaves to serve in the sawmill in Natchez and in the lumberyard at New Orleans, as well as on boating and rafting crews (Moore 1967:135). The company acquired “John Key, Garland, Jo Mac during 1851, and Tom Turner, Henry, Lewis, John Anderson, Will Selby, Jack Flournoy, Roland Napier, Mach, Henry, John Taylor, Wyatt, and Gale during 1858-1860” (Moore 1967:135). Andrew Brown invested his own funds to purchase William Hamilton, Dan Tucker, Isham Seaton, “Big” George Washington, Abraham, Gallon Weekly, “Little” George Rochester, Joe, and Scott Bowers in 1851 and 1852 (Moore 1967:135). A couple of years later, he added Burrell, Jacob Pugh, Frank and Dan Young (Moore 1967:135). In 1856, Key on behalf of the company purchased Bob, Pat, Horace, Tom Reuben, and Jim Cherry, to work in the New Orleans lumberyard; at the same time, Brown bought Washington Gray to accommodate his father, Simon Gray (Moore 1967:135). By 1860, Brown owned 46 male slaves and 10 female slaves (U.S. Census 1860 Adams County, Slave Schedules).
Figure 5-5.
An anonymous 1841 Lumber Ledger that most likely belonged to Andrew Brown’s lumber firm in Natchez. The ledger contains financial transactions including the sale and purchases of timber by the company (Anonymous Lumber Company Account Book 1841).
The size of Brown’s crew varied in size and composition depending on the production rate and season. In March of 1849, “when the mill was producing lumber on a seven-day schedule the names of thirty-one manual laborers were listed on the payroll” (Moore 1967:137). Five of these laborers were white. Of the African-Americans laborers, Brown hired eight from their owners on a semi-permanent basis (Moore 1967:137). Four enslaved laborers were hired temporarily during the high production period and the remaining sixteen African-Americans enslaved laborers were either owned by Andrew Brown, the firm, or were hired on a virtually permanent basis (Moore 1967:137; U.S. Census, Adams County, 1850). The occupational lifeways of most of these individuals would have centered around the sawmill in Natchez. A smaller number of the enslaved workers would have been involved in activities at the lumberyard in New Orleans, or in the acquisition or transportation of timber or lumber. Although, the occupational lifeways of these individuals maybe discernible through historic documents, other features of the social and cultural lifeways of these workers is more difficult to decipher.

Because records from this period are incomplete, it is likely that Brown purchased several other slaves over this time span. Furthermore, as stated earlier Brown’s mill extensively hired slaves from various owners in Natchez (Moore 1967:136). In fact, during the 1830s and 1840s, the hired slaves outnumbered the slaves belonging to the firm (Moore 167:136). These enslaved workers were usually available during the slow periods in between planting or harvesting.

The purchase of slaves undertaken by Brown and his various partners during the 1840s and 1850s were offset by a fairly high mortality rate among the enslaved workers associated with the sawmill. Between 1844 and 1861, a total of 17 enslaved African-Americans died of various causes (Moore 1967:138). This figure included hired slaves as well as those belonging to Andrew Brown and the firm. Of the 17, two were children of Brown’s female house servants, and another was an elderly woman (Moore 1967:138). Most of the 14 men who perished during this period while working for Brown fell victim to illness; nine male slaves died from yellow fever, cholera, pneumonia, or other diseases (Moore 1967:138; Shumway 2002a). The five other deaths included, Jacob Pugh, or Jake who was shot to death by Samuel Cox 4 (an overseer from a
nearby house), two drowned in the Mississippi River, one was killed by a boiler explosion in the mill, and one died as the result of a kick by a mule in the New Orleans lumberyard (Moore 1967:139; Shumway 2002a).

Because of the perceived risks involved in working at and around the sawmill, some owners were hesitant about allowing their slaves to carry out certain tasks associated with the sawmill industry at this time period. Charles A. LaCoste rented two of his slaves, George and Moses, to Andrew Brown. Having heard about one of Brown’s sawmill workers dying, and fearing for the well-being of his slaves, he wrote:

The recent loss of hands, by drowning, which you have sustained at the mill prompt me, once more, to recall to you mind the imperative conditions upon which I have hired to you the boys George & Moses viz: [sic] that they are to be employed on the shore, and not in any work on the River, either in rafting or floating logs to or from the mill. This condition I must insist upon your conforming to strickly [sic], for the safety of the boys is an object much greater solicitude to me than the amount of hire which I get from their labor … [quoted in Moore 1967:136-137]

Clearly from LaCoste’s letter, he objected having his two slaves working on the river.

Most of the trees brought down river to the sawmills in Natchez by rafting and/or log drives were from the Yazoo Valley and later the Red River Valley. Some of the timber cutting along the river and back swamps by this time was contracted out to smaller crews of loggers up in the delta. But mill operators such as Andrew Brown would also at times send additional crews of 10 to 20 slaves, some white loggers and a foreman, to log the cypress brakes the firm owned (Moore 1967). Sometimes a temporary work camp would be constructed with small shacks and a store and sometimes a small garden would be grown to supplement the workers’ diet (Moore 1967:154). Most often the white loggers lived in the temporary camp with the enslaved lumbermen. Once they felled enough timber, “about twelve hundred tears of timber redy [sic] to float when I get the dam dun [sic] and if the watter [sic] is not two hy [sic] I will finish cutting and cleaning up the balence [sic] of the timber” (quoted in Moore 1967:154), it would be brought down in large drives of vast mats or rafts of trees spiked together and a few loose. To float the trees a period of high water was needed, but not too high. Because of the unpredictable nature, timber drives and rafting was especially dangerous work for the rafting crews.

Once the rafts reached the mill they were separated and the eight to ten inches long iron square spikes had to been removed. Then each log was loaded onto a wooden platform, which had a system of chains that pulled the logs from the river to the log deck. At the log deck, the logs were inspected and
measured before entering the mill for sawing (Howard B. Peabody, Jr., personal communication 2002). The enslaved laborers guided the timber from the logway to the mill’s carriage system. Once the timber had been milled, laborers stacked the wood in piles for drying and then loaded some of the timber onto boats for transport downriver to plantations or to New Orleans.

As discussed earlier, some enslaved craftsmen, like Simon Gray and James Mathews, acted as crew chiefs for the logging operations, rafting drives, or as river pilots. These men had the responsibility over the entire crew, which was often comprised of a mixture of whites and slaves. The leadership responsibility entailed paying the crew, keeping them out of trouble in port towns like New Orleans, collecting payment for the lumber, and making sure all the laborers, especially the slaves, returned to the mill in Natchez. This supervision often could be difficult given the circumstances. Several enslaved laborers such as Jacob, John Key, and Dan Hunter attempted to escape on several occasions. According to Moore (1967) Brown apparently moved away from physically punishing or flogging his runaways by the 1850s because Brown feared this would just encourage further attempts (Moore 1967:144, 145). Rather, Andrew Brown appears to have sold slaves who attempted to escape on several occasions and tried to use incentives to maintain his workforce. However, Brown still would thrash workers because he had perceived they had done poor quality work (Moore 1967:145). William Thompson earned the distinction of being one of the only slaves employed at the Natchez lumber company who actually succeeded in making his way to freedom before the Civil War. Brown purchased William in 1851 for a sum of $1,000 to work in the engine room of the sawmill (Moore 1967:147). Thompson’s skill as steam engineer, his ability to write, and the spatial freedom that logging operations necessitated even for enslaved laborers, may have helped him escape to Canada. In a letter he wrote James Matthews on May 14, 1855, he states, “. . . Sir, since I have left employ [Andrew Brown’s sawmill in Natchez] I have been on the Great Western Railroad driving an Engine. I give my best Respects to Mrs. Marton and family, Andrew Bron [sic] and family, and all my Enquiren [sic] friends. . . ” (quoted in Moore 1967:147).

Along with runaways, Andrew Brown sometimes dealt with fights breaking out at the mill among his crew. In one incident one enslaved laborer bit another’s finger off (Moore 1967:143). A Natchez doctor was
called out to the mill, but since “mortification” had set in, the enslaved worker was transferred to Touro Infirmary in New Orleans (Moore 1967:143). Fighting was not unusual given the tense nature of the work, the long hours, the ease of access to alcohol Under-the-Hill, and the high number of young men involved in early lumber operations.

**Lumbering Skills and Specialties among Enslaved Laborers**

The use of an enslaved workforce was not uncommon in the American Deep South. Enslaved craftsmen manned most medium-sized and large sawmills in this region during the last thirty years of the antebellum period. Starobin (1970:25) states, “Slaves were used greatly to log the pine, cypress, and live oak in the swamps and forests from Texas to Virginia and especially along the Gulf Coast.” In the port towns near the expansive cotton plantations this was especially true:

In Vicksburg, for example, all of the sawmills utilized Negroes to some extent; and at Natchez and at Monroe, Louisiana, the mills were worked almost entirely by slaves, as were some of the establishments in New Orleans. Similarly, slave labor predominated in the export sawmills near Mobile, on the Gulf, and at Charleston, Savannah, and Darien on the Atlantic. Indeed most of the lumber exported from the ports of the lower South was probably manufactured with the aid of slaves [Moore 1967:27].

Andrew Brown used enslaved laborers extensively throughout his sawmill, though he did reserve the upper-level management and partner positions apparently just for whites. Though Andrew Brown certainly employed enslaved people in nearly every skilled positions at the mill, “and used some slaves in supervisory roles similar to slave drivers on the plantation, most of the blacks who worked for him were unskilled lumber hands” (Davis 1997:37). However, a few, like Simon Gray, James Matthews, Spencer, and Ned held positions within the mills as specialists such as engineers, sawyers, timber brokers, river-pilots or blacksmiths. For example, in 1846 for the relatively high price of $1,020, Brown purchased a twenty-four year old enslaved skilled blacksmith by the name of “Spencer” so that metalworking could be done at the mill (Moore 1967:134). Blacksmiths often commanded some of the highest labor costs at the time. Their skills were needed to fix and forge mill machinery as well as logging equipment such as chains and tools. The skills of the smith were learned through apprenticeship and years of practice. A good blacksmith was invaluable at early industrial sites.
Other lumber mill operations of this period, such as the Hosmer-Mortee Millhaven near Covington, Louisiana, had a similar mix of enslaved and free workers and highly skilled craftsmen and laborers. Both mills had a similar differentiation of value among their enslaved lumber workforce (see Table 3-1). Hosmer’s 29 year-old blacksmith, his teamster, and “Good Sawyer” were given the highest value of his 16 adult slaves at the millhaven (St. Tammany Parish Clerk of Court, James Hosmer Probate 1831). The gender and age makeup of both mill operations appear to been predominantly young to middle-age male slaves. The high proportion of enslaved males would suggest that the mill owners were not attempting to maintain the slave population through procreation like many agricultural plantations; rather they appeared to simply purchase new laborers when certain skills or duties were needed or if a death occurred.

The differentiation of values among the enslaved hands or technicians at an antebellum mill is likely attributed to several factors, including the availability of slave labor at that particular time or place, the skills of the individual, the age and sex of the slave, and possibly the darkness of skin color. At least in the case of the Andrew Brown Sawmill, mulatto or light-skinned slaves, such as James Mathews and Simon Gray, appeared to have held higher positions and value that than their dark-skinned counterparts within the milling operation. Therefore, Brown’s enslaved workers were likely given positions or valued based on a combination of several factors including age, skill, and skin color.

Although Andrew Brown, Sr. used enslaved laborers and craftsman in nearly every aspect of lumber production, he never placed an enslaved workman in the prestigious position of Sawyer to maintain the precision cutter blades (Davis 1997:37), however many other antebellum mills in the Deep South had enslaved workers in nearly every position within the mill operation, including Sawyer. For example the Gibbs & Gant operation in Charleston, South Carolina, reported in an 1833 Charleston Courier article that the skilled enslaved workforce was in charge of the entire Steam Sawmill operation including the positions of engineer and Sawyer (quoted in Moore 1967:28). Similarly, Brown Cozzens employed an enslaved craftsman named “Bill” as his engineer and blacksmith at his Nathcez sawmill in the 1850s (ACR, Deed Book ‘HH’, folio 661).
Magnolia Vale – A Lumber Plantation Under-the-Hill

During the 1830s, Andrew Brown was the principal lumber person in Natchez and his financial situation was continuously improving. While his counterparts in the cotton trade built imposing mansions high on the hill and kept their distance from the ruckus of Natchez-Under-The-Hill, Andrew Brown designed and built an equally imposing plantation home surrounded by fifteen acres of gardens on “this sensational sin strip, ignoring his noisy neighbors and creating the lush spot on the river known as ‘Brown’s Gardens’ (Figure 5-6), which the passing steamboat passengers crowded the rails to admire” (Thompson 1958; Wilson 1989: 150). This plantation Under-the-Hill (Figure 5-7) came to be known as “Magnolia Vale.” The house was located on Lot 34 and the front of the gardens and main drive to the home were on Lot 33 of the old Minor Tract. The entrance to the home connected to Learned Mill Road and to the sawmill, which sat on the adjacent downriver lot. Considered by many as the only plantation home ever to be built Under-the-Hill, the Brown’s house was described as,

A wide stuccoed-wooden structure, two-storied, it took the shape of an E, with three wings to the back; before it stood a simple, neatly balanced gallery with a double set of four Doric columns, supporting a tasteful shingled roof . . . It was a rectangle that enclosed a yard, chicken house, smoke house, wine press, and storage house [Kane 1947:135].

The 15 acres of gardens adjacent to the residence contained twisting trails, hedges, arbors, wisteria, orange trees, sweet olives, oaks, magnolias, and poplars (Kane 1947:136).

On 7 May 1840, a tornado devastated most of the structures Under-the-Hill including Magnolia Vale. This tornado was one of the most significant storms in United States history (Grazulis 1993). William Johnson described the storm in his diary as, “One of the Greatest Tornadoes that Ever was Seen in this place before” (Hogan and Davis 1979:280). On 8 May 1840, the Natchez Free Trader (NFT) estimated damages to buildings at $1,260,000 and total damages at $5,000,000. More than 300 people were killed or drowned and hundreds were wounded (NFT 1840a, 1840b). Although the extent of the damage accrued at the Andrew Brown Mill is not clear, it is unlikely the mill was destroyed because by January 1841 William Johnson records, “I made a Bargain to day [sic] with Mr A Brown for fifteen thousand Laths at three Dollars 50 cts per thousand” (Hogan and Davis 1979:314).
Andrew Brown’s gardens in 1875 (King 1875). Discussed by many steamboat passengers, the gardens between Magnolia Vale plantation and the sawmill were the subject of many photographs, engravings, and postcards.
Magnolia Vale is considered to be the only plantation built Under-the-Hill in Natchez (Moore 1967:following page 64). The home was constructed by Andrew Brown in the early 1830s and was severely damaged by a tornado in 1840. Magnolia Vale was destroyed by fire in the 1940s. The current home was rebuilt on the original foundation.

Tornado and the Construction of Another Sawmill at Middle Landing

The destructive tornado in May of 1840 devastated Natchez. Vast sections of the town on top as well as the port below the bluffs lay in ruins. The Natchez Free Trader wrote following the tornado, “many of our large warehouses and furnishing stores (Under-the-Hill) have been crippled and greatly restricted in their operations. . . . There are numerous dwellings in Natchez-under-the-Hill, as well as in the upper city, where every item of furniture, clothing and ornament was given to the gyrations of the whirlwind and lost irrevocably” (Moore 1958:74-75). Although there is no record of any sawmills being destroyed, the May 1840 tornado may well have severely damaged the circa 1836 steam sawmill and possibly destroyed the cotton press located at Middle Landing. Historic documents suggest that the McFadden, Sisloff, & Gaw Sawmill operation on the downriver portion of Lot 16 (the old George Smith Lot) may have been relocated around
this period. Since it is known that the Well site, located on the upriver portion of Lot 16 and the downriver edge of Lot 17, was the location of a sawmill by at least 1850, it is suggests that the 1836 sawmill located on the former Smith Lot was replaced in 1841 by a new steam-powered sawmill near the Well site.

Furthermore, seven months after the tornado had devastated Natchez and possibly severely damaged or destroyed the sawmill and/or the cotton press, McFadden, Sisloff, and Gaw had expand their business ventures by purchasing the remainder of McFadden’s Under-the-Hill property. This property purchase included the Well site. The transaction, which occurred on 10 December 1840, was made for $4,250 (ACR, Deed Book ‘CC’, folio 345). To pay for their interest in the rest of McFadden’s property, Sisloff and Gaw took out a mortgage from Frederick Stanton (Hahn et al. 2002).

A plat map of the original McFadden property—Minor Lots 15 through 22—was made upon McFadden, Sisloff, and Gaw’s acquisition of this property and a second map was prepared for the related mortgage (ACR, Deed Book ‘CC’, folio 345, 347). Although, neither map provides information regarding structures located on the property, the mortgage map does depict a spring passing through Minor Lot 16 in the area of the Well site. The head of the spring was located along the base of the bluff in the small cove, which was likely formed by erosion caused by the spring (Hahn et al. 2002). McFadden, Sisloff, and Gaw were still operating a sawmill following the tornado, because in 1841 they sold the property to Samuel Agnew and John Rees $31,000 on April 24, 1841. Included in the sale was the “Steam Saw Mill, Mesuages, lands, and tenements” (ACR, Deed Book ‘CC’, folio 511). It is presently unclear if the sawmill described in the 1841 sale is the same mill as noted in the 1837 transaction, or if a new sawmill had been constructed elsewhere on the investor’s other property prior to sale in April 1841, but after the tornado struck Natchez in May 1840.

This question is directly relevant to the excavations of the Well site because these transactions may the first documentary evidence of the construction of a steam sawmill at this location. Furthermore, there is no mention of the cotton press in the 1841 sale. Either the press had been destroyed by the tornado, cleared for the expanding lumber enterprise, or simply abandoned, which appears to be the least likely scenario given the financial solvency of the investors.
It is also unclear from the sales deed if the structures described as “tenements” were worker and/or slave housing associated with the mill. The 1841 transaction makes no mention of the quality of the “tenements”, or the number of structures. Although the number of tenements structures is not provided, the sales document does imply that there were multiple residences on the property. Given the power of the tornado that struck Natchez in 1840, the “tenements” may not have weathered the storm and, more than likely, were constructed soon after, possibly when McFadden, Sisloff, and Gaw constructed a new sawmill. These tenements may have been similar to, or the same structures that Ingram in 1835 had described as “wretched dwellings” (Register 1978:30). According to Ingram, the residents in this portion of Under-the-Hill during the late 1830s were a mixture of free and enslaved African-Americans and white laborers (Register 1978:30). Thus, the residents around these early sawmills Under-the-Hill were probably of this mixed demographic.

The steam-powered sawmill described above in the 1841 sale may have been a new sawmill constructed by Sisloff and McFadden and relocated on the previously acquired land purchased in 1840. One logical location for the new mill would be the Well site (22AD993) for several reasons. As stated above, it is known from historic maps, documents, and archaeological data, that the Well site was the location of a mid-nineteenth century sawmill. Furthermore, it is possible that the original circa 1836 steam sawmill on the old George Smith Lot had structural damage from the tornado, but the investors were able to salvage the expensive steam engine and move into a new location a short distance away. If a new mill had to be constructed following the storm, it would have likely would have been constructed immediately to both help pay for the loan on the property and to take advantage of the high volume of orders in the city from people reconstructing homes and businesses. The Well site would have been conveniently located being only about hundred to two hundred feet upriver on property the partners owned during this period. A short move upriver on Lot 16, would have provided a larger lot that had better access to the river for loading and unloading timber. Furthermore, a larger lot provided more area for the storage of lumber, and housing of workers. The placement of the circa 1841 sawmill was also probably dictated in part by the spring on Lot 16. By placing the sawmill next to the spring, water could be easily obtained for the boilers. This would have
been particularly true if a well and aqueduct system was used to bring spring water directly into the mill, essentially creating a supply of running water, but fifty years before city water would have been available (Hahn et al. 2002). Such a system would have been much more effective than pumping water up from the Mississippi River, filtering it, and then using it for the steam engine, or relying on rainwater caught off the mill roof to maintain water supplies for surrounding cisterns as appears was the case at the Andrew Brown Sawmill.

Sisloff and the other partners (except for Gaw) were likely forced into selling the sawmill, property and tenements that they recently constructed because of a judgment against them by the Circuit Court of Adams County for defaulting on their 1837 $15,500 loan to the Agricultural Bank (Hahn et al. 2002). To help pay for the acquisition, Agnew and Rees they took out a $30,000 bond from Philip Sisloff (Hahn et al 2002). Only shortly after this acquisition, Agnew and Rees were not able to make enough profit from the sawmill operation to repay the loan. After defaulting on the loan repayment, the sawmill and land were seized by the sheriff (ACR, Deed Book ‘DD’, folio 393). Again, this early industrial operation appears to have been in financial trouble and the owners were forced to sell the property. On 15 August 1842, William F. Minor purchased the property for $6,000 (ACR, Deed Book ‘DD’, folio 393).

Because these early transactions often do not provide detailed information, it is not known exactly what interest certain partners held in the mill property in the 1840s (Hahn et al. 2002). Similarly, it is not known who was operating the sawmill during this period or if the sawmill was indeed operating at to what capacity. The difficulty in piecing together the history of the Middle Landing sawmill, or mills, is due in part to its financial dealings involving many partners, many foreclosures and several sales over a short period of time. Unlike the Andrew Brown-Rufus Learned operation, which did at times struggle through some economic slowdowns but remained in the family for over a hundred years, the McFadden, Sisloff, & Gaw or Agnew and Rees sawmill was bought and sold, seized, and auctioned several times just between the late 1830s and early 1840s. Therefore, the extent of production at the Middle Landing sawmill during this period and who was involved in various financial aspects of the mill’s operation is murky.
Further Development of an Industrial Complex at Natchez-Under-the-Hill 1830s-1840s

The section of Natchez-Under-The-Hill between the Middle Landing and the Upper Landing near Andrew Brown's mill represented a small antebellum industrial zone. The prospering port at Natchez, along with increasing refinements in manufacturing technology, the abundance of natural resources in the New Mississippi Territory, and a plentiful supply of slave labor gave rise to several manufacturing enterprises Under-the-Hill. The prosperity of Natchez’s trade is affirmed by the fact that between 1790 and 1840, Natchez-Under-the-Hill was the primary port for raw staples for the Natchez District and Red River District and was also the primary distribution point of the “manufactured goods of the American East and Europe” and agricultural staples of the upper Mississippi Valley imported by the citizens of the Natchez District (Beard 1981:1). Between 1790 and 1830, south of Louisville, only New Orleans was more important with regards to trade than the Natchez landings (Beard 1981:1-2).

Almost all of the trade in Natchez went through the port Under-the-hill. With its warehouses, residences, groceries, brothels, saloons, gins, and mills, Natchez-Under-the-Hill was the “first port of the lower Mississippi in which river merchants from the upper valley could trade, it was also, for that very reason, a welcome haven for men weary of the trials and labors of one of the mightiest and most dangerous river in the world” (Beard 1981:3). The port offered not only a place to trade, sell, or buy goods, Under-the-Hill also offered all the social escapes of gambling, liquor, and prostitutes. Tanyards, cordwood operations, cotton gins, oil mills, lumber mills, and corn mills were erected along the base of the bluff, near the river. In 1835, Joseph Holt Ingraham wrote, likely alluding to the Andrew Brown sawmill and Natchez oil mill, “The northern end [of Natchez-Under-the-Hill] is composed of wretched dwellings, low taverns, and drinking shops . . . At the [northern] termination of this division is an excellent steam sawmill, and an oil mill” (Register 1978:30). In 1838 a visitor from Missouri described the landscape of Natchez-Under-the-Hill, [The lower town] consists mostly of several rows of houses, mostly small and trifling, and all of frame. There are some very fine store houses & two midling Hotels with a number of smaller taverns, Groceries, Groggeries, Doggeries, Dance Houses, &c...this is, however, the place where all the shipping and the trade of the place must pass through. There are several Cotton Presses here and several Saw Mills, with some Lumber yards, from which it might be properly called the port of Natchez [Reps 1994:134].
Thus, clearly besides saloons, brothels, and “places of ill-repute,” there were numerous “wretched dwellings” that likely housed workers, and additional shops and mills located Under-the-Hill by 1840.

At Middle Landing there was the sawmill, a cotton press in 1830s, and later a steam-powered corn mill in the 1840s. Near the intersection Water Street and the “Road to the Upper Landing”, were several warehouses and residences. Further upriver, neighboring Andrew Brown’s sawmill was Plummer and Company’s Oil Mill 6.

By 1831, Plummer and Company established an oil mill on a portion of Lot 32 purchased from William John Minor, younger son of Stephen Minor (Boggess et al. 1997:37, ACR, Deed Book ‘V’, folio 253). The mill was very successful, however the oil mill’s location adjacent to Brown’s sawmill and the tanyard did not allow for expansion (ACR, Deed Book ‘RR’, folio 418-419; Boggess et al. 1997:37). Given this dilemma, Plummer decided to build the Bellevue Oil Mill Under-the-Hill in 1835 (Moore 1967:30, Boggess et al. 1997:37). The new oil mill was built on Lots 35 and 36, about a 1/4 of mile upriver from the old location (ACR, Deed Book ‘V’, folio 296, 466), and the facilities included an extraction mill, a refinery, a foundry, warehouses, a wharf, and a storage area for the “oilcake” (Boggess et al. 1997:27). Andrew Brown’s sawmill received orders for $5,500 worth of planking for construction of warehouses between 1 December 1837 and 23 June 1838; Brown’s sawmill supplied other types of finished lumber to the Bellevue cotton press (Moore 1967:31-32). The cotton press was described in an 1837 Natchez Courier article as being “in constant operation day and night and probably doing more than any other press in the whole South,” (quoted in Moore 1967:31-32). The Bellevue and Natchez oil mills and the cotton press failed during the Crash of 1840 (Boggess et al. 1997:26).

Growth, Troubles, and Tragedy at the Andrew Brown Sawmill (1843-1853)

In 1843, Andrew Brown, Jr., went to work for his father and began operating a lumberyard in New Orleans. With the booming economy in New Orleans, Brown’s son was continuously urging his father to send him all the lumber the Natchez mill could cut and occasionally Andrew Brown, Jr., even purchased lumber from other sawmills in the New Orleans vicinity to fulfill orders. With prospects so bright the younger Brown expanded the New Orleans lumberyard by renting several adjoining lots on Magazine Street,
which gave him the space to hold more than a million feet of lumber (Moore 1967:46). No matter how busy the operation, younger Andrew Brown vowed never to let it interfere with his religious convictions. He often urged his father not to send boats of lumber starting on the Sabbath because it interfered with worship (Moore 1967:46). Andrew Sr. often justified this by paying his crew of fee and enslaved rivermen a supplemental amount for working on the Sabbath (Moore 1967:46). These supplemental wages paid to some of the enslaved laborers and craftsman may have offered some individuals some empowerment in the purchase of material culture and access to social activities. Andrew Brown operated his mill operation somewhat differently than many agricultural plantations on top of the bluffs in that he offered cash payments of around a dollar a day to slaves who worked on Sundays, holidays, or at night and also rewarded enslaved laborers that salvaged logs from the river by paying them the same rate paid white wage laborers (Moore 1967:141,142). Some of Brown’s own top managers like William Key felt strongly against the financial liberties allowed individuals like Simon Gray and the extra wages given to the laborers. Key’s racist remarks speak for themselves, “I don’t believe in giving Niggers money—the more they get the worse they are. God knows these Niggers are bad enough now!” (quoted in Moore 1967:142).

After tasks around the mill were completed, some workers likely walked to the more lively area of the port, near Silver Street. Brown apparently permitted some of his enslaved laborers to spend their extra wages at the market in Natchez (Moore 1967). On Sundays, many slaves and vendors turned the lower landing area of Natchez-Under-the-Hill into one of the largest markets for goods in the area (Beard 1981). These markets offered both the opportunity for merchants to sell their wares as well as some slaves, some of whom would travel in from neighboring plantations to sell their garden produce or wares (Abraham 2001).

Money was likely not only used for additional clothing, food, and tablewares, but also on recreational activities such as music, liquor, gambling, and possibly women. Sometimes crews led by James Mathews and others would lie about the time required for a trip in order to stay an additional night in New Orleans (Moore 1967). Given the restrictions imposed at that time on people of darker skin, especially slaves, his workers were frequently arrested or in trouble for after-hours activities. Thus, at least in the case with Andrew Brown, operators sometimes had to bail out a few of the enslaved and free laborers from jail in Natchez or New
The description of Brown’s slaves acquiring alcohol differs somewhat from Ingraham’s account of intemperance Under-the-Hill among the enslaved population. Ingraham found it at least noteworthy that the one class of inhabitants whose member seldom got drunk and who could be relied upon, in fact, to stay sober despite the wide availability of whiskey, were the slaves (Beard 1981:66). This phenomenon, he wrote, “is owing to the discipline of plantations, the little means they have . . . to purchase, and last, though not the least, the fear of punishment” (quoted in Beard 1981:66).

In the summer of 1844, a rise in the Mississippi River threatened much of Natchez-Under-the-Hill. According to Monette (1903:468) the rise was “one of the most memorable floods ever known upon the Mississippi by civilized man.” Although the floodwaters did not ascend high enough to inundate Brown’s sawmill, the earthen floor of the mill was transformed into a wet soft mud bank (Moore 1967:52). Brown ordered the mill engines shut down for nearly six months because the supporting foundations were sinking below ground level (Moore 1967:52). Mud, sediment, and silt deposited from the rising waters were left for a distance of six hundred miles (Monette 1903). Mud deposited between the mill and the river channel sealed up the log channel from the mill to the river (Moore 1967:52). There was also likely some damage to the operation at Middle Landing sawmill just a short distance downriver, however it is unclear to the extent damage. The flood of 1844 was one of many episodes whereby water stage levels plagued production at the two steam-powered sawmills.

Following the flood, Andrew Brown ran his mill near capacity to keep up with the high volume of orders (Moore1967:53). Running the mill continuously meant increased dangers like machine failure, excessive heat, lamps causing fires, and working in darkness. The risks and danger to both the laborers and the machinery forced Andrew Brown to reconcile the fact that the lumber mill once again needed to be upgraded. Thus, in 1847 Andrew Brown attempted to modernize the mill’s machinery another time. The saw gates were modified to admit larger logs, and both the log carriage and its railroad were lengthened. Brown also replaced worn parts in the sash mill and repaired the railroad and cars by which logs were carried up the log stage to the sawmill carriage (Moore 1967:54).
The newly invented circular sawblade attracted a great deal of attention and Brown was forced to weigh the strengths and weaknesses of this new technology while upgrading his sawmill. Brown decided to add a complete mill of this type to his Natchez establishment as an essential part of the modernization program in the late 1840s (Moore 1967:54). He soon realized that it would be necessary to use the largest possible size saw blade since he seldom bought cypress logs of less than two feet in diameter, and he reckoned that 50 inches was the smallest saw that would serve his purposes (Moore 1967:55). The circular sawmill was found to have a capacity of more than 5,000 ft of lumber a day (Moore 1967:56). When the alterations were complete Brown conducted a test7 to determine the maximum capacity of the plant, and determined the extreme capacity to be approximately 25,000 ft a day, although some in the company continued to regard 15,000 ft as a more accurate average (Moore 1967:55,56).

By the late 1840s and the early 1850s, the Andrew Brown sawmill was operating near full capacity and was very profitable. In fact, the saws in the mill were not brought to a halt even once during the 1850s because of lack of sales, for the lumberyard in New Orleans was disposing of more cypress than the Natchez mill could cut (Moore 1967:112). A DeBow's Commercial Review (1848) describes the operation during this period:

The engine of Andrew Brown's splendid mill is in action fourteen hours each day, and its various operations employ from forty to fifty hands, producing a daily average of 15,000 feet of all kinds of lumber, or four millions five hundred thousand feet in a year. The lumber turned out at this mill is of such value that its average price is twenty-five dollars per thousand, amounting, by actual sales, during the year 1847, to fifty-six thousand dollars, with an increase of stock on hand of half a million feet of sawed lumber. One half of the above sum, or $28,000, was a clear profit over and above all expenses—a sum larger than that produced by any two of the best plantations in the State [DeBow's Commercial Review 1848: Vol. 5 p379,380].

Apparently the Brown sawmill in Natchez by the late 1840s was a sizable operation that was producing a fairly high grade of lumber. The retail value of the lumber produced at the mill can be partly ascertained from account books and William Johnson’s diary, which document the purchase of a variety of lumber from the two sawmill Under-the-Hill. On 21 March 1850, Johnson records (Hogan and Davis 1979:709) the amount and cost of lumber purchased from the sawmill:
I was under the Hill at Mr. Brown's mill. This was to get some lumber and I got as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Size</th>
<th>Length</th>
<th>Price per Unit</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 Scanlings</td>
<td>3x4</td>
<td>20 ft</td>
<td>$440 -- 1/2</td>
<td>$6.60</td>
</tr>
<tr>
<td>2 Posts</td>
<td>4x6</td>
<td>20 ft</td>
<td>$80 -- 1/2</td>
<td>$1.20</td>
</tr>
<tr>
<td>2 Ditos</td>
<td>4x6</td>
<td>16 ft</td>
<td>$64 -- 1/2</td>
<td>$0.96</td>
</tr>
<tr>
<td>16 Pieces</td>
<td>3x9</td>
<td>16 ft</td>
<td>$576 -- 1/2</td>
<td>$8.64</td>
</tr>
<tr>
<td>2 Pieces</td>
<td>4x6</td>
<td>30 ft</td>
<td>$120 -- 1/2</td>
<td>$1.80</td>
</tr>
<tr>
<td>588 ft W. Boarding</td>
<td></td>
<td></td>
<td>$588 -- 2</td>
<td>$11.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$30.96</td>
</tr>
</tbody>
</table>

On 24 October 1848, tragedy struck the Brown family when young Andrew Brown, Jr., who had had been running the New Orleans lumberyard, died of yellow fever (Shumway 1999). Following his son’s death, Andrew Brown reorganized the business and hired William I. Key. Key was a nephew of Mrs. Elizabeth Key Brown, and was also a Scottish immigrant who had settled in Natchez (Moore 1967:98). Key became a junior partner in the company, and in April of 1849, he took over the responsibility of managing the lumberyard and eventually a sash shop in New Orleans (Moore 1967:99). The sash factory, which was a subsidiary of Brown’s Natchez operation, was one of the biggest establishments of its type in the Deep South (Moore 1967:106). This highly successful operation continued until the Civil War (Moore 1967:151,161).

Because of machinery failure and the difficulty and time needed to replace cast and wrought iron parts, which had to be fabricated at foundries in Natchez or New Orleans, Brown often found himself waiting for parts or metal work to be done at the mill (Moore 1967:112-113). The steam boilers of the Natchez sawmill were especially troublesome and dangerous. Not only was the boiler room oppressively hot and smoky, the boilers required constant monitoring of the temperature, water levels, pressure, and for any leaks. Furthermore, the boilers had to be cleaned regularly. An explosion in the boiler room around 1853 caused the sawmill to remain idle for several months. In that same year, Andrew Brown’s wife, Elizabeth Key, died and a year or so later Brown remarried a widow named Lizzie Learned, who already had seven sons (Moore 1967:118; Kane 1947:137).

**Brown Cozzens Acquires the Sawmill Property at Middle Landing**

Soon after Minor acquired the sawmill property at Middle Landing from Agnew and Rees, Minor transferred legal ownership of the property to Jared D. Tyler, Jr., a resident of St. Louis, for $6,000 on 23 March 1846 (ACR, Deed Book ‘FF’, folio 345). Unable to pay for the property outright, Tyler mortgaged
the property through Minor. Tyler’s mortgage, however, notes that he and Brown Cozzens had taken out three promissory notes totaling $6,000 from Minor on November 6, 1845 (ACR, Deed Book ‘FF’, folio 345). This document implies that both Tyler and Cozzens purchased Minor’s interest in the Middle Landing sawmill by at least 1845. From deed transactions, it appears Gaw maintained his 25 percent ownership in the property, while Tyler held 50 percent interest in the sawmill and Cozzens 25 percent between 1846 and 1848 (Hahn et al. 2002). Though some of the main financial partners may be known, the actual operator of the sawmill at this time is unclear. It is unlikely that Jared Tyler, a resident of St. Louis, was running the sawmill and therefore it was likely Gaw or Cozzens. Gaw appears to be have had a continued involvement in the mill operation as a partner from at least 1838 to 1848 and Gaw’s financial involvement appears to be another link between the former McFadden and Sisloff sawmill located at the old George Smith Lot and the newer circa 1841 sawmill located just upriver.

Cozzens involvement at the sawmill as well as him possibly being the operator of the mill is confirmed in part by an 1847 entry in William Johnson’s diary. On 13 July 1847, Johnson noted that “To day I was Knocking about getting Lumber at the mills . . . Got I think thirty six Post from Mr Cossens . . . .” (Hogan and Davis 1979:234). Through Johnson’s statement, it may be assumed that while Cozzens, like Andrew Brown, was an architect and contractor, and though he only possessed a 25 percent interest in the property in 1847, he indeed may have been the sawmill’s operator. Thus, following Cozzens entry into the business, the mill is often referred to as the “Cozzens sawmill” (Mississippi Senate Bill 2551 2001). Although Johnson frequented the nearby Andrew Brown mill, he also bought lumber from “Mr Cozens” or “Mr Cossens” on several occasions in 1848 and 1849 (Hogan and Davis 1979:627, 645).

A lawsuit filed by the Agricultural Bank of Mississippi against Gaw ended his long financial relationship with the sawmill at middle landing. On 19 July 1848, Brown Cozzens purchased Gaw’s 25 percent interest in “the property known as McFadden & Sisloff Steam Saw Mill” (ACR, Deed Book ‘GG’, folio 625). Thus, by the summer of 1848 Brown Cozzens was in full ownership of the steam sawmill at Middle Landing.
Cozzens ownership and involvement in the former McFadden & Sisloff steam-powered sawmill is documented in an 1848 DeBow’s Commercial Review of the South and West (1848:379). The article describes the size, capacity, and labor force at the Natchez sawmill,

The steam saw-mill of Brown Cozzens, at the Middle Landing, employs ten hands, works the engine from 5 in the morning to 8 in the evening, fifteen hours each day, and turned out, during the year 1847, a little over eleven hundred thousand feet of boards and sawed lumber of all kinds, averaging in price eighteen dollars per thousand—making a total of $19,800 worth of work in a year [DeBow’s Commercial Review1848:379].

By comparison, the article states that the other Natchez sawmill nearby, Andrew Brown’s, produced lumber valued at $25 per thousand board feet and produced slightly more than four times as much lumber as the Cozzens sawmill in that year.

It was during this period that Frederick Piercy produced a detailed drawing depicting numerous buildings along the Natchez waterfront (Figure 5-8). The painting shows a number of residences, commercial enterprises, and outbuildings along Natchez-Under-the-Hill during this period. In particular, the landscape shows several structures in the vicinity of the Well site, or Minor Lots 15 through 17. Piercy’s 1850 drawing clearly depicts the Cozzens Sawmill around the vicinity of Minor Lot 16 and a cluster of buildings at Crayon’s Landing at the foot of what later became Roth’s Hill Road. Near the sawmill, is a possibly residence or boarding house and a two-story brick structure, which could be a steam-powered corn mill described in a 1852 sale (The Daily Courier 1852). In the upriver, rear corner of the mill, near the bluff, is a tall and narrow structure that was likely the chimney or boiler stack.

Based on Piercy’s image, the bank of the Mississippi River passed very close to the front of the Cozzens Sawmill. The proximity of the sawmill to the river was necessary to efficiently transport of timber from the river to the sawmill. In addition to these details, Piercy also accurately depicted the bluff line in the vicinity of the Cozzens Sawmill, showing the large cove immediately behind the mill. Its continued erosion contributed greatly to the quantity of colluvium (bluff slumpage) present at the Well site.
Figure 5-8.
Natchez-Under-the-Hill focusing on the area around Cozzens Sawmill as drawn by Frederick Piercy in the early 1850s (Reps 1994:135). Note the location of “Cozzens Sawmill,” the “Road to Upper Landing,” and the commercial development at “Crayon's Landing.”

Around the time of the Piercy drawing, Cozzens mortgaged his holdings to G. Malin Davis. Cozzens took out the mortgage primarily to cover over $1,600 in promissory notes that he had previously made to Davis (ACR, Deed Book ‘HH’, folio 296). Cozzens continued to have financial difficulties even after mortgaging the sawmill in 1850 (Hahn et al. 2002). In February 1852, Cozzens was forced to take out another mortgage, this time from William H. Fox. Like the Davis mortgage, the mortgage to Fox was taken to pay off some of Cozzens’ debt. Cozzens mortgaged the sawmill property to Fox in return for Fox paying off his debt to Britton & Co. (ACR, Deed Book ‘II’, folio 33).

Cozzens, possible realizing his worsening financial status, put the sawmill operation up for sale. On October 27, 1852, Cozzens placed an advertisement in The Daily Courier:

SAW MILL FOR SALE—The undersigned has concluded to offer for sale his valuable steam Sawmill, at Natchez upper landing, together with the various buildings connected with the same. The mill machinery and fixtures are all new, being in operation only six months. The landing is one of the finest and most convenient on the river. There are four dwelling houses under rent upon the premises, and one good corn-mill run by steam. The grounds are abundantly spacious for carrying on the business. Price and terms of payment reasonable and title indisputable. For further particulars apply to the undersigned on the premises, or to G. Malin Davis [The Daily Courier 1852].
Although the advertisement does not provide a great deal of detail about Cozzens’ operation, it does include some information about the physical and spatial makeup of the sawmill property. In addition to noting that new machinery was installed in the mill in the spring of 1852, which was likely paid for by the $500 loan that Cozzens took out from Britton & Co., the advertisement notes the presence of several other structures on the property. The new machinery in the sawmill was likely part of an upgrading of the steam engine, saw blades, and/or a carriage system. Additionally, a steam-powered corn-mill is described being located on the property. Although, there is no previous mention of the corn-mill at the site, the addition of this service is not surprising since many early mills documented in the Deep South both sawed lumber and ground corn. The “various buildings connected with the [sawmill]” described in this document, would likely have been a blacksmith shop, office, boiler room, and possible machine shop or boarding house. Also included in the advertisement is “four dwelling houses under rent upon the premises” (The Daily Courier 1852). The four rent houses noted in the advertisement may be one of the structures located immediately below the mill and/or at Crayon’s Landing in the 1850 Piercy drawing (see Figure 5-8) (Hahn et al. 2002). It is unclear form the either the 1852 advertisement or the 1850 painting whether these structures housed a workforce, possibly including enslaved laborers and if the “four dwelling houses” were they the same structures described as the “tenements” in an 1840 transaction (ACR, Deed Book ‘CC’, folio 511).

From insurance policies taken out on several enslaved laborers it is known that Brown Cozzens and his major partners at the time, J.D. Tyler and H.W. Chittenden, had insured at least six individuals owned by the Natchez sawmill (Table 5-1). Unfortunately, Cozzens’ insurance policies are not specifically dated, though many of the other policy numbers appear to have been taken out in the early 1850s. The group of enslaved laborers that were working at the Cozzens sawmill and had death insurance included Bill, Dennis, Henry, John, Stephen, and Tom (California Department of Insurance 2002). However, it is unclear whether Cozzens had only six enslaved laborers working at the mill or rather he simply insured only those individuals working in the most dangerous jobs, such as fireman, rafter, or sawyer. Additional slaves may have been hired out from local owners. Evidence for this may also be found in the insurance list. In addition to the six individuals listed as belonging to the Cozzens Sawmill, one additional slave, “Anthony,” is listed as being
“Employed in a saw mill handling lumber” in Natchez (see Table 5-1). However, this individual was not owned by the partners in the sawmill or by the neighboring Andrew Brown sawmill. Thus, it is likely that this individual was likely being leased from their owner by Brown Cozzens to provide an additional mill hand for his lumber operation. The 1848 DeBow’s describes the mill as having “10 hands” (DeBow’s Commercial Review 1848:379). Additional hands might have included whites, Free People of Color or slaves hired from other owners. Furthermore, like the Andrew Brown’s sawmilling operation, the number of laborers working at the Cozzens sawmill probably varied depending on several factors including the time of year and the economic conditions.

Further evidence of Cozzens using an enslaved workforce at his sawmill near middle landing comes from the Adams County Sexton Records (1825-1908). The Sexton Records indicate that at least two of Cozzens’ slaves were killed in the 1850s, possibly at the sawmill. A “Negro man” owned by “B. Cozzens” is listed as having been killed on August 3, 1851 (Shumway 2002a). The cause of death was described as “wounded in the side by the falling of a crobar” (Shumway 2002a). Given the nature of the injury, and his ownership by Cozzens during the early 1850s, this individual was likely one of Cozzens’ sawmill laborers and may have gotten maimed at the mill. On November 21, 1856, “a negro man” owned by “Brown Cozzens” was reported killed (Shumway 2002a). The cause of death was not reported. The trades of both of these individuals are not known nor whether either of these two individuals was among the insured slaves.

On December 11, 1857, deed books at the Adams County Courthouse record Brown Cozzens selling “A certain Negroman named Bill (commonly called Eastern Shore Bill) almost thirty years of age. . . and is his Engineer and Smith at his Sawmill” (ACR, Deed Book ‘HH’, folio 661). “Eastern Shore Bill” may be the same “Bill” that Cozzens had insured (see Table 5-1). Additionally, on September 10, 1849, Cozzens agreed to pay the promissory note on several slaves owned by Samuel Newman, in exchange Cozzens would employ the enslaved laborers at his sawmill. The enslaved individuals included in the agreement were:

. . . a dark mulatto about twenty eight years of age, the same purchased by the said Cozzens of one Elom, Betty about fifty years of age, Henry a Negro about twenty eight years of age and Mage[?] Brown a mulatto about thirty three years of age. All of said Negroes being the same now employed in and about said Cozzens Sawmill. . . permits Cozzens to the use and labor of slaves until sold as henceforth provided [ACR, Deed Book ‘GG’, folio 590].
Thus, the Adam County Sexton Records and the deed books not only confirm Cozzens’ use of enslaved laborers and skilled craftsmen at his businesses Under-the-Hill, but provide the only evidence that at least one woman was working at the sawmill. Given “Betty” was “about fifty years of age” (ACR, Deed Book G’G; folio 590), she was likely employed as a cook and/or a seamstress.

Table 5-1. Enslaved laborers at the Cozzens Sawmill during the 1850s that were insured (California Department of Insurance 2002).

<table>
<thead>
<tr>
<th>Name of Slave</th>
<th>County (or Parish), State</th>
<th>Other Identifying Information</th>
<th>Slaveholder</th>
<th>County (or Parish), State</th>
<th>Submitted By</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony</td>
<td>Natchez, MS</td>
<td>Employed in a saw mill handling lumber Policy Number(s): 1885</td>
<td>Ricks, CS</td>
<td>Same</td>
<td>New York Life Insurance Co.</td>
</tr>
<tr>
<td>Bill</td>
<td>Natchez, MS</td>
<td>To be employed in the Natchez saw mill Policy Number(s): 1274</td>
<td>J.D. Tyler Brown Cozzens &amp; H.W. Chittenden,</td>
<td>Same</td>
<td>New York Life Insurance Co.</td>
</tr>
<tr>
<td>Courtney</td>
<td>Natchez, MS</td>
<td>Boatman Policy Number(s): 1016 (1803)</td>
<td>Harrison, William</td>
<td>Same</td>
<td>New York Life Insurance Co.</td>
</tr>
<tr>
<td>Dennis</td>
<td>Natchez, MS</td>
<td>To be employed in the Natchez saw mill Policy Number(s): 1273</td>
<td>J.D. Tyler Brown Cozzens &amp; H.W. Chittenden,</td>
<td>Same</td>
<td>New York Life Insurance Co.</td>
</tr>
<tr>
<td>Henry</td>
<td>Natchez, MS</td>
<td>To be employed in the Natchez saw mill Policy Number(s): 1276</td>
<td>J.D. Tyler Brown Cozzens &amp; H.W. Chittenden,</td>
<td>Same</td>
<td>New York Life Insurance Co.</td>
</tr>
<tr>
<td>John</td>
<td>Natchez, MS</td>
<td>To be employed in the Natchez saw mill Policy Number(s): 1277</td>
<td>J.D. Tyler Brown Cozzens &amp; H.W. Chittenden,</td>
<td>Same</td>
<td>New York Life Insurance Co.</td>
</tr>
<tr>
<td>Stephen</td>
<td>Natchez, MS</td>
<td>To be employed in the Natchez saw mill Policy Number(s): 1275</td>
<td>J.D. Tyler Brown Cozzens &amp; H.W. Chittenden,</td>
<td>Same</td>
<td>New York Life Insurance Co.</td>
</tr>
<tr>
<td>Tom</td>
<td>Natchez, MS</td>
<td>Employed in the Natchez saw mill Policy Number(s): 1272</td>
<td>J.D. Tyler Brown Cozzens &amp; H.W. Chittenden,</td>
<td>Same</td>
<td>New York Life Insurance Company</td>
</tr>
</tbody>
</table>
Clearly Brown Cozzens owned at least a small number of enslaved craftsmen that operated his sawmill and Cozzens possibly hired out additional laborers from local owners. Where these individuals resided is not clear, but it would seem likely that the mill workers were living in the “tenements,” or some other nearby dwellings. The residential patterning at the Cozzens operation is murky compared to the ethnohistorical data on the neighboring Andrew Brown mill operation. Unlike Brown and Learned, the census data indicates that Brown Cozzens lived on or adjacent to the sawmill property and most likely lived on top of the hill like most of the wealthy Natchez residents (US Census Bureau, Adams County 1840, 1850, 1860). Whether Cozzens employed a white manager or an enslaved foreman to live near the mill and oversee the laborers is not clear.

*Cozzens’ Sawmill Falls into Bankruptcy, Andrew Brown Expands His Mill (1853-1859)*

Apparently Brown Cozzens was unsuccessful in negotiating a term of sale for the sawmill listed in the 1848 newspaper and therefore he apparently continued to operate the sawmill until at least 1853. Because Cozzens defaulted on the mortgage that he had with Davis in 1853, Davis became the owner of the sawmill. Shortly thereafter, Davis began selling interests in the business to a variety of people (ACR, Deed Book ‘KK’, folio 74, 200, 291). In fact by 1854, Davis no longer held any financial interest in the property (ACR, Deed Book ‘KK’, folio 292). As a result of Davis’ sale, in 1855 Thomas Jones possessed a 70 percent interest in the sawmill and Liddell 30 percent (Hahn et. al. 2002). Although Brown Cozzens no longer appeared to be a financial partner after 1853, Cozzens may still have been involved in the daily operation of the sawmill.

In June 1856, Jones mortgaged a 30 percent interest in his sawmill property holdings to William H. Fox (ACR, Deed Book ‘LL’, folio 87), the same lender that had provided money to Cozzens in 1852, for $2,147.15. The mortgage agreement notes that in addition to the property, the mortgage included:

> ...the same proportions in all the machinery, Engines, Tools, fixtures, privileges [sic] and appurtenances, belonging or in any wise appertaining to said land and Mill, which were belonging thereto on the 12th of November 1853, as well as any others which since that date have been, or at any time thereafter. ... [ACR, Deed Book ‘LL’, folio 87]

Even though the 1856 mortgage implies that the sawmill was still extant, and presumably operating, the number of turnovers that the mill endured in the 1850s likely did little to advance the quality of the
operation. Indeed, while the McFadden-Sisloff /Cozzens sawmill was obviously never as financially lucrative as the adjacent Andrew Brown sawmill, the former mill’s fortune appears to decline even further in the late 1850s. In 1858, George Roth took out a lease on part of Jones and Aldrich’s land below the sawmill (ACR, Deed Book ‘LL’, folio 582), implying that that portion of the property may have no longer been used for the sawmill. As best as can be determined, Roth continued to lease Aldrich and Jones’ sawmill property through the Civil War. Little is known about Roth’s use of the lower portion of the “Sawmill Lot” at that early date. Later documentation, however, indicates that Roth operated a woodyard in later years to provide cordwood to passing steamboats and it is likely that that was his intent in 1858. It is possible that a joint agreement was arranged with Aldrich and Jones, and this location would be where rafts of timber could be stored for both operations. As discussed earlier, Cozzens sold his enslaved steam engineer and blacksmith in December of 1857, and the sale of “Eastern Bill” marks either Cozzens selling his remaining interests in the financially troubled operation, or an attempt to take on a different and less active role in the Middle Landing sawmill company (ACR, Deed Book ‘HH’, folio 661).

While Brown Cozzens interest in the middle landing sawmill was being taken over by Jones and Liddel, Andrew Brown overhauled the machinery and expanded the capacity of his plant further downriver while the mill was shut down because the boiler explosion in 1853. During this time period, Brown contracted an “Automatic Log Mill” to be built, which incorporated a recently invented and patented Ferry circular sawmill (Moore 1967:115). While updating the Natchez mill, Brown added two cypress shingle-making machines from a St. Louis manufacturer (Moore 1967:115). In October 1859, Brown added yet a third machine, costing $360.50, for cutting siding planks (Moore 1967:114). However, the greatest productivity and capacity improvement of the sawmill came from replacing the gangsaws with four of the muley types.

Following Andrew Brown’s renovations of the mill in 1858 and 1859, the sawmill had substantially increased in capacity. The modernization of the mill cost the company over $15,000 (Moore 1967:116). Brown’s sawmill became one of the largest mills in the Eastern United States. Its capacity was estimated be to around 40,000 board feet a day, exceeding most mills in Savannah and Mobile and nearly equaling the
outputs of the largest mills in Charleston, South Carolina (Moore 1967:116). However, soon after remodeling the sawmill, in June 1860, the center boiler of the main steam engine exploded tearing a five-foot hole in the side of the cylinder and covering an enslaved workman with scalding water. The worker died in agony a few hours after the accident (Moore 1967:117).

Another dilemma facing the Brown sawmill at this time and most likely the Cozzens sawmill as well, was several episodes of high and low water. From 1855 to 1856, the Natchez mills suffered from extremely low water in the Mississippi River, which hampered the log rafts coming down river from the Yazoo Basin to the mill. Prior to these low water years, in 1853, high water inundated much of Under-the-Hill, and destroyed Brown’s planing shop. During the high water episode of 1853, the river rose to around 44.3 feet at Natchez (Mississippi River Commission [MRC] 1960:81), and much of Andrew Brown’s breakwater was washed away (Moore 1967:118). The loss off the breakwater apparently threatened the entire milling operation to such an extent that in August of that year Key wrote to Solomon that the breakwater “was a very important safeguard to the stability & permanence of the whole sawmill property” and repairing the breakwater was a top priority even if it meant stopping the mill and using the entire crew to fix it (quoted in Moore 1967:118).

Subsequently, in May of 1858 the Mississippi rose to 47.8 feet at Natchez, a level high enough to flood most of Natchez-Under-the-Hill (MRC 1960:81). According to the Natchez Free Trader, 25 May 1858, “one square of the two squares of Silver Street is all the space that’s left out of water” (quoted in Moore 1967:118). Brown’s mill was located on higher ground than most of Under-the-Hill and therefore it did not flood. However, the flood of 1858 turned the compact dirt foundation of the mill into mud and seriously damaged the breakwater. During the flood of 1858, again, concerns were raised about the importance of Brown’s breakwater or breakwaters for the protection of not only the sawmill operation, but also for many of the dwellings further downriver Under-the-Hill. The destruction was so extensive that many months were required for rebuilding portions of the breakwater that had been washed away (Moore 1967:119). Brown and Key’s laborers finished the repairs in 1860 (Moore 1967:119, Natchez Courier 1859b). Given the extensive damage to the breakwater, some merchants owning property below the bluffs learned from the flood that Brown’s jetty protected not only his property, but also their lots13.
The Civil War and Sawmill Industry in Natchez (1863-1865)

As the Civil War approached Rufus Learned voted against secession, and his father-in-law, Andrew
Brown, was considered by many to be a Unionist sympathizer (Kane 1947:139). But, when Mississippi finally
succeeded from the Union, Rufus volunteered (Kane 1947:139). Natchez saw very little fighting during the
Civil War. Andrew Brown sent most of enslaved laborers and craftsman up to the Yazoo Valley to gather
 timber during Grant’s siege of Vicksburg. The crew worked under Simon Gray and two white overseers until
the fall of Vicksburg on July 4th, 1863. Immediately following this victory for the Union, Federal troops
occupied Natchez and almost all of Andrew Brown’s crew of twenty or more slaves left the logging camp and
were never heard from again. Shortly before Natchez’s occupation, five enslaved workers from the sawmill
attempted to head towards the Federal lines and were caught by a Confederate patrol. One individual, Alfred
was shot and killed by the soldiers for refusing to be taken into custody (Moore 1967:155), which was made
even sadder because it was the end of the war near the Federal lines.

Union forces took over the sawmills at the Upper and Middle Landings, and subsequently occupied
Brown’s house Under-the-Hill. Military barracks were erected on the upriver side of the house on a portion
of Lot 35 (Hains 1864). Additionally, contraband barracks were located along the wagon road just upriver of
the Bellevue Subdivision and Brown’s home (Figure 5-9). The occupying Federal troops seized the sawmills
and their stockpiles of lumber. The Andrew Brown Sawmill came close to being burned, until the elderly
Andrew Brown, a Mason, located a fellow Mason of high rank among the Union troops and persuaded him
that it would be wise to keep the sawmill and operate it for the Federal authorities (Kane 1947:139;
Thompson 1958).

Several years later, in 1871 Andrew Brown or Rufus Learned on behalf of Andrew Brown filed a
Civil War damage claim before the Southern Claims Commission (Mills 1980:63). Brown claimed as a “pro-
Unionist,” that troops stole his lumber, damaged his sawmill and his home during the Union occupation of
Natchez (Mills 1980:63). The claim was accepted and Andrew Brown’s estate received nearly $10,000 in cash
Figure 5-9.
As a result of the legal and forced emancipation of the enslaved population in Mississippi, mill owners in Natchez lost their workforce and thus much of their capital investment. Though many of the recently emancipated African-American workers remained at the mill, just as many, such as Brown’s most important workers like Simon Gray, left the sawmill and were never heard from again (Moore 1967). Despite the losses in manpower, after a short time lapse the Natchez sawmill began to creep back into operation by doing business with the U.S. government. However, because of the postwar conditions, the ornate dressings sold by the New Orleans Sash subsidiary could not survive in a very tight financial market. Therefore, shortly after the war, the sash shop was dismantled (Moore 1967:152, 167).

The 1864 Map of the Defences of Natchez And Vicinity prepared and surveyed by Captain P. Hains, provides a detailed plan of Under-the-Hill near the end of the Civil War (see Figure 5-9). The Andrew Brown sawmill is located on the downriver side of the junction of the wagon-road (an extension of Water Street) and Learned Mill Road. Three buildings are located adjacent to the sawmill on the downriver side; presumably these are a lumber shed, blacksmith shop, and an office. Behind the mill, between Water Street and Learned Mill Road is a small fenced area with several small structures (see Figure 5-9). This area likely contained some residences, either a boarding house for the enslaved laborers and a stable and/or a manager’s house. Other structures around the mill likely included a blacksmith shop, a lumber shed, an office, and a stable.

Downriver from the sawmill, Magnolia Vale, surrounded by gardens, stretched from the junction of Learned Mill Road and the wagon road to the edge of Bellevue. Adjacent to and behind the big house, were four cabins that likely were residences for the enslaved domestic help as well as some of the laborers at the sawmill operation (Hains 1864). Adjacent and downriver of the mill, on the bluff side of the wagon road, several buildings are illustrated in the location of the former Natchez Oil Mill on Lot 32 (see Figure 5-9). These buildings were likely associated with the sawmill complex. On the adjacent downriver lot (31), was another complex of buildings that appear to have been divided into three separate fenced yards. Each fenced area seems to have had a large structure surrounded by several smaller structures (Hains 1864). It is unclear if these structures are part of the tanyard complex, or, if the area had been acquired by Andrew Brown and incorporated into the sawmill complex by this point.
When P. Hains drew the 1864 *Map of the Defences of Natchez and Vicinity* (Figure 5-10), he also drew several buildings along Water Street in the area consistent with Minor Lots 15, 16, and 17 near Middle Landing. From north to south, the buildings on the former Robert McFadden property included the sawmill, a possible warehouse or commercial building, immediately upriver of the former Smith sawmill tract; a dwelling (immediately south of the former Smith sawmill tract), a possible commercial building, and the warehouse/residences and the junction of Water Street and Roth’s Hill Road.

![Figure 5-10. A portion of the Hains' 1864 Map of the Defences of Natchez and Vicinity showing the location of the Jones and Aldrich Sawmill (formerly the Cozzens Sawmill) near Middle Landing.](image)

The Jones and Aldrich sawmill (formerly the Cozzens Sawmill) at Middle Landing is depicted on the 1864 map as a rectangular building measuring approximately 30.48 by 9.75 m (100 ft by 32 ft) with its long axis running east-west. A small, 3 by 3-m (9.84 ft by 9.84 ft), projection is also depicted attached to the sawmill’s northeast corner, most likely the location of the mill’s boilers and/or smokestack (Feature 4). The sawmill undoubtedly faced Water Street, which was located to its immediate west. Just a short distance beyond Water Street ran the Mississippi River. The rear of the sawmill was located only about 10 m (32 ft) from the base of the bluff. Thus, clearly by 1864, the sawmill was still extant, but it is unclear whether the
mill continued to operate and to what capacity. Furthermore, the location of the Middle-Landing sawmill appears to fall in the vicinity of the Well site (22AD993).

George Roth, Cordwood dealer and Real Estate Broker 1866-1871

On 31 December 1866, not long after the Civil War, George Roth purchased Aldrich’s 30 percent interest in the sawmill. In February of 1867 Roth purchased Jones’ interest in the operation at Middle landing (ACR, Deed Book ‘OO’, folios 324, 393). These two transactions left Roth in possession of all of the sawmill property at Middle Landing, but not all of the machinery and structures. The transference of deed from Thomas Jones to George Roth included a:

. . . parcel of ground in the City of Natchez & County of Adams, & State of Mississippi situated at the Natchez upper Landing on the margin of the Mississippi River formerly known as the McFadden and Sisloff Mill. . . being the same three tenths sold to said Thomas L. Jones by G Martin Davis and wife by Deed of 16th January AD 1855. . . Excepting there from three tenths [interest] of the wooden & iron flume, machinery & fixtures of the old saw mill therein & of the buildings upon said premises put there on upon a ground sent & said Exception being for the benefit of William H. Fox. . .

[ACR, Deed Book ‘OO’, folio 393]

Clearly by 1867 the sawmill was still standing, though considered “old” by this point. It unclear what is meant by the “wooden & iron flume.” The document may be referring to the log haul or ramp at the front of the mill. Additionally, Roth does not appear to have purchased Jones’ thirty percent interest in the mill buildings and machinery, rather this appears to have been transferred to William Fox’s possession, the same William Fox that Cozzens mortgaged the mill to in 1853 (ACR, Deed Book ‘II’, folio 33).

Although there are few Reconstruction-period legal documents that refer to Roth’s property, a number of images of Natchez-Under-the-Hill do exist. While most of those images focus on the landings along the foot of Silver Street, at least one depicts Roth’s property and the surrounding area (Figure 5-11). Drawn by Alfred R. Waud during the summer of 1871, the drawing depicts the area around Middle Landing looking downstream towards Silver Street. Waud’s drawing is quite important for it does not depict the former Cozzens Sawmill, which would have been located near the center of the image. Instead, the site of the sawmill, much of which is included within the limits of the Well Site, was occupied in 1871 by several smaller buildings, cordwood, and uncut logs. In the same cove once occupied by the Cozzens Sawmill, were two residences. Therefore, by at least 1871 and after Hains’ 1864 depiction, or around 1869, the sawmill had
been razed or removed by George Roth or William Fox. However, it is more likely that William Fox stripped and salvaged the mill to recoup some of the money owed to him. Because the focus of Roth’s economic interests appears to have been his wood yard on the property and since the Cozzens Sawmill was never particularly profitable, it is quite likely that Roth was not interested in the mill operation shortly after acquiring full possession of the property in 1867. Fox or Roth not only salvaged and leveled the mill, but they may have also removed several buildings depicted in the 1864 map, including residences, a commercial[?] structure, and a warehouse formerly at Crayon’s landing (see Figures 5-8 and 5-10).

Figure 5-11.
Alfred R. Waud’s 1871 drawing of Natchez-Under-the-Hill (Harper’s Weekly 1871). Waud depicts the George Roth’s cordwood operation near Middle landing, but the former sawmill at this location has apparently been removed by this time.

Roth’s property developed rather quickly over the next few years. By the time Henry C. Norman photographed the area in about 1880, several new buildings had been added to the property, and several had disappeared. Norman’s photograph, showing virtually the same location as Waud’s earlier drawing, depicts the area near Middle Landing with several structures and piles of cordwood and timber along the riverbank. Like the Waud drawing, no sawmill is visible in the circa 1880 photograph of the area.
George Roth and William Fox may have torn down the sawmill for several reasons and no single document appears to explain why, rather several sequences of events may have forced Roth’s interest in lumbering to shift from milling lumber to producing cordwood for steamboats. First, Fox’s part ownership just of the mill structures and machinery appears to hint that the operation was to be salvaged as a means of recouping debt owed by the mill investors to Fox. The “old saw mill” acquired by George Roth and William Fox in 1867 (ACR, Deed Book ‘OO’, folio 393) appears to have been outdated to compete with more up-to-date sawmills like Andrew Brown’s. Clearly by at least 1848, the Andrew Brown sawmill operation was already producing a higher grade and had a higher volume of lumber than the neighboring Cozzens sawmill (DeBow’s Commercial Review 1848:379). Brown and later Learned’s inventiveness and continued refurbishing of the mill’s machinery kept their output at levels greater than most of the mills in the region, if not the nation. Given the financial situation that the Sisloff or Cozzens and later Aldrich sawmill was often in, only a limited amount capital was likely available for upgrading engines, boilers, or saw blades. The outdistanced 1840s Cozzens sawmill likely became even more of a relic by the 1860s. As higher quality, thin-cut planking and higher volumes of orders could not be met with older sash or gang saws, the sawmill may have required a large financial investment to retrofit the operation to be more competitive and profitable.

The depressed economic conditions following the Civil War would not have been much of an incentive to invest in the construction trades and could have been another rational for shutting down the operation. The financial loss of the capital investment placed and lost in slave labor may have also proved financially devastating. Even the highly successful Andrew Brown sawmill faced fire, seizure and bankruptcy during and following the Civil War. Had Andrew Brown not been a “Union Sympathizer,” and had he not had the political connections to secure a contract with the Federal government to supply wood shortly after the war and be reimbursed for losses accrued to the mill during Union occupation, his mill may have also shutdown. Additionally, the mill’s location at Middle Landing placed the rear of the mill below the slumping bluff and the front of the mill along the eroding riverfront and may have also been in factor in Fox or Roth deciding to abandon the sawmill.
R.F. Learned and Lots 31 to 35, (1865 – 1923)

Rufus Learned Rises Quickly (1865 – 1871)

Although Learned was able to gain $10,513 in compensation for damages arising from the usage of the mill by the army in 1864 and Key and him were able to establish a large post-war customer with the Quartermaster-General’s department (Kane 1947:140; Moore 1967:158, 162), other problems arose quickly for the mill following the end of the war. There was some apprehension that Confederate sympathizers might take reprisal on the owners, or even set fire to the mill (Moore 1967:159). Brown also had to furnish his postwar wage hands with provisions and supplies on credit, thereby beginning a commissary system at the Natchez sawmill (Moore 1967:163). Some timber or logging bosses around the Natchez area, would go as far as prostitution, gambling, and selling liquor as a means of taking back hard earned wages from lumber workers and keeping these individuals prisoners of debt (Davis 1941:439). Following the Civil War, many black residents continued to work at the Learned Sawmill and other mills in Natchez. However, many African-Americans left the Deep South for the North when the opportunity arose. With numerous former slaves of the company gone, Brown recruited a white labor force for the mill and their wages represented an unfamiliar expenditure (Moore 1967:163) for a firm that had been reliant on exploiting an enslaved workforce. Furthermore, the Natchez mill needed a regular supply of logs, and Brown took steps to convince Federal officials to allow him to resume logging in the Yazoo Delta and employ timber crews to raft timber to the Natchez mill (Moore 1967:162-163). Between the summer of 1865 and spring of 1866, the mill was able to secure enough rafts of timber to keep operating.

With the sawmill beginning to prosper again after the post-war depression Learned planned for the future. Because Andrew Brown was almost incapacitated by his age and the junior partner, Key, was suffering from tuberculosis, Rufus Learned became manager of the operation (Moore 1967:164). On January 1, 1868, Learned married Elizabeth Brown, the younger daughter of his stepfather. When Key died during April of 1868, Rufus Learned became junior partner in the firm. When Andrew Brown died on January 28, 1871 the Learneds purchased the remaining interests in the millhaven and thus became sole owners of the lumber firm and Magnolia Vale (ACR, Deed Book ‘RR’, folio 418, 419; Moore 1967).
A plat map was prepared for Rufus Learned on 1 May 1872, showing Andrew Brown’s holdings (Figure 5-12) (ACR, Deed Book ‘RR’, folio 418, 419). By 1872, the Browns’ property spanned from Lot 31 to a portion of Lot 35. When Rufus F. Learned acquired the complex in 1872 the holdings consisted of Andrew Brown’s residence, the sawmill, the former Natchez oil mill, and possible a tanyard (see Figure 5-12) (ACR, Deed Book ‘RR’, folio 418, 419). The 1872 plat map shows Andrew Brown’s holdings divided into six sections. Most of the occupational activities at this time appear to be concentrated on lots 31 and 32, alternatively areas D, E, and F (see Figure 5-12). However, the location of the workers’ residences is not clear and could have been in the area of the former Natchez Oil Mill (E) or in the cabins behind Magnolia Vale.

Figure 5-12.
An 1872 map of Andrew Brown’s property holdings at Natchez-Under-the-Hill produced shortly after his death for Rufus Learned (ACR, Deed Book ‘RR’, folio 418-419; Saltus et al. 1995:28). The plat shows Lots 31 to the downriver portion of Lot 35, or correspondingly areas (A) to (F).
Though this thesis focuses on the period between 1820 to the 1870s, an understanding of the land use following Rufus Learned’s acquisition of the property provides a context for the spatial, material, and social changes that took place at the mill operation through the late nineteenth and early twentieth centuries. Furthermore, a greater understanding of the sawmill operation into the twentieth century provides some of the most significant information on the distribution and context of the archaeological material that was recovered during the survey as well some the post-depositional processes that occurred on the 15 acre site in more recent time.

Rufus Learned not only managed the finances of the mill, but he also continually updated the mechanics of the sawmill. In 1876 when he was in Philadelphia, Learned saw a scroll saw with a three to four inch band (Thompson 1958). Rufus decided that the band saw was the future of the lumber industry (Howard B. Peabody, Jr., personal communication 2002). Working with the mill designers J. A. Fay Egan Company of Cincinnati, Rufus Learned supervised the first building of a band mill to carry a six-inch saw which everybody in the trade said was impossible at the time (Thompson 1958). The mill was reworked to the specifications of the saw he special ordered from France. Learned’s Natchez mill was one of the first full scale lumbering operations in the United States to use a band saw. Learned further refined the efficiency of the band saw by having a thinner blade developed, which reduced waste and increased output (Howard B. Peabody, Jr., personal communication 2002).

Besides his financial interest in the mill, Rufus also invested in cotton mills, ice companies, railroads, banks, and steamboat packages (Kane 1947). By the 1880s and 1890s, the Learned families were considered one of the wealthiest families in Natchez (Kane 1947; Thompson 1958). Despite his increasing age, Rufus still retained his legendary temper especially when individuals attempted to compete against his financial interest (Kane 1947:140).

A census taken during August 1886 shows that R.E. Learned, Louise Learned, and Andrew Learned all lived at Magnolia Vale. The amount of capital invested in the lumber mill in 1886 was $17,000 and the value of the lumber products was set at $23,000 (Shumway and Shumway 2000). By 1886, 42 adult males were employed at the mill and no adult females were employed, while 7 youths are listed (Shumway and Shumway 2000).
The 42 men and possibly a few teenagers employed at the R.F. Learned Sawmill were likely a mix of blacks and whites.

The former Andrew Brown sawmill, by the 1880s renamed the “R.F. Learned Double Mill, Shingle & Planing Mill,” remained at its same location along the river in Lot 32 (MRC 1883; Sanborn-Perris Map Company [SPMC] 1886). The main sawmill building in 1886 (Figure 5-13) measured approximately 24.4 m (80 ft) wide fronting the river, by 51.8 m (170 ft) long (SPMC 1886). An approximately 9.1m-by-15.2 m (30 ft-by-50 ft) projection on the upriver, rear side, of the mill housed the chimneystack and was adjacent to the steam boilers. The mill machinery was powered by an 80 horsepower steam engine and the mill had a capacity of 25,000 board feet per day (SPMC 1886). Therefore, this engine had approximately 16 times the horsepower and the mill had eight times the daily capacity of the circa 1820s Peter Little operation.

Figure 5-13.
A portion of the 1886 Sanborn-Perris Fire Insurance Map of Natchez, Mississippi showing the R.F. Learned Shingle and Planing Mill (SPMC 1886). Note the shed, blacksmith shop, office, and cistern north of the mill and the two-room dwelling and kitchen south of the mill.
In 1886, three buildings, a shed, a blacksmith shop, and an office were located on the upriver side of the Learned mill adjacent to a cistern. Further upriver, were several lumber stacks for drying timber, which was still likely predominantly virgin cypress. About 60 m (200 ft) downriver of the mill, was a two-room dwelling that most likely housed a mill foreman or supervisor (SPMC 1886). A photograph likely taken around the turn-of-the nineteenth century depicts the sawmill, (Figure 5-14), from downriver. The photograph shows the mill proper, a log haul or “Jack Slip” projecting out the front of the building into the river, a chimney stack to the rear of the mill, and further upriver what maybe a timber bulkhead. Near the rear of the sawmill a dwelling or office is clearly depicted, while a second dwelling or structure barely visible to the rear of the mill. The historic photograph also illustrates how much riverbank erosion had occurred in this area by this time.

Figure 5-14.
A circa 1890s photo of the R. F. Learned Sawmill (former Andrew Brown mill) likely taken from Middle Landing (source: Gandy 1987:52). Stacks of lumber are located along the downriver side of the mill and what may be a cistern is located on the southwest corner of the mill's roof.
The 1892 city directory identifies several individuals living Under-the-Hill adjacent to Learned’s sawmill. Some of these people were like likely employed at the mill. This list includes G. Eisley (carpenter), Dix (fireman), B. Parker (gardener), G. Brown (laborer), J. Morris (laborer), L. Morris (porter), A.W. Blythe (sawyer), A. Butler (wood chopper), and R. Morris (wood sawyer) (Banner Publishing Company 1892). Nearly half of these individuals are listed as black. Some of these individuals might have worked at the neighboring cordwood operation owned by George Roth or the Chamberlain Saw and Shingle Mill, which had been begun operating Under-the-Hill by at least 1886 (SPMC 1886, 1892). The Chamberlain sawmill had a capacity of around 12,000 board feet per day and was powered by a 35 horsepower engine (SPMC 1892).

By 1892, the R.F. Learned operation at Natchez-Under-the-Hill was described as a “DOUBLE MILL, SHINGLE & PLANING MILL” (SPMC 1892). By at least 1892, the mill complex was sawing wood, planing wood, making shingles, and producing cordwood. The mill remained virtually unchanged since 1886, except for a warehouse that was now located on the upriver side of the office (SPMC 1892). In 1892, an average of 2,000,000 ft of lumber was stored at the Learned operation (SPMC 1892). One significant change between 1886 and 1892 was the update of the mill to include “city water,” which undoubtedly was connected to the Natchez Water Company operation whose new waterworks Under-the-Hill went on-line in 1892 (SPMC 1892; Hahn 1999a). Prior to this all water for the steam engines, drinking, and in case of fires would have come from the cisterns, wells, or the river.

In 1896 the R.F. Learned sawmills manufactured 7,500,000 board feet of lumber and disbursed $61,500 for labor and supplies (Power 1984). A bill from the Old R.F. Learned Band Saw Mill on company letterhead documents a $42 sale of lumber to a “G. W. Britton” documents one of many business transactions conducted daily at the mill during this period (Figure 5-15). By 1897 the mill complex still had the same basic layout except for the addition of a large 15-by-27 m (50t-by-90 ft) lumber shed and a stable near the two-room dwelling (SPMC 1897). A circa 1902 photograph of the R.F. Learned Sawmill (Figure 5-16) documents the old mill from an upriver perspective. The sawmill had a log haul projecting from mill to the river, a cistern for catching water off the large mill roof, an office, and a boiler stack in the background near the rear of the mill (Myrtle Bank Books 1983).
Figure 5-15.
A bill from the Old R.F. Learned Band Saw Mill on company letterhead documents a $42 sale of lumber to a “G. W. Britton.” Thus, documenting one of many business transactions conducted daily at the mill during this period (Historic New Orleans Collection, accession number 1971.96).
Figure 5-16.

A circa 1902 photograph of the R.F. Learned Sawmill (Myrtle Bank Books 1983). Note the cistern catching the water runoff from the mill roof. Also note the one-storey office building on the right side of the photo adjacent to the two-storey supply house. The office building is presently located near the entrance of Magnolia Vale.

Apparently by 1910 the engine of the sawmill had been elevated to ninety horsepower and the blacksmith shop had been moved again (Sanborn Map Company [SMC] 1904, 1910). By 1910 (Figure 5-17) there was also a change in the layout of the workers’ housing at the mill complex. On the upriver side of the sawmill, the two-room dwelling, there since at least 1886, had been converted into a four-room dwelling (SMC 1910). A total of 11 dwellings were located on the three lots near the toe of the bluff, approximately 30 m (100 ft) upriver from the sawmill. Spatially, the smallest dwellings were located on the lots closest to the mill. Although the four-room structure is the largest, each individual room is labeled as a separate dwelling and measured approximately 4.6 by 8.5 m (15 by 28 ft) (SMC 1910). The middle lot appears to have had mid-size dwellings, while the two downriver lots appear to have been the largest homes with slightly larger yard area than the neighbors and also have a hydrant located near these lots. Magnolia Vale, which would have been clearly the largest domestic dwelling, is also located below the bluff. The housing practices at Learned
mill may have been spatially patterned reflecting status and occupation in relation to proximity to the mill and
dwelling size. The smallest dwellings were likely for laborers who may have also lived at a boarding house or
in one of the numerous shanties Under-the-Hill, while the middle lots housed mid-level positions such as
skilled craftsman, and the largest two dwellings may have belonged to supervisors or foremen.

Figure 5-17.
A portion of the 1910 Sanborn *Fire Insurance Map of Natchez, Mississippi* showing the “R.F.
Learned & Son Saw Mill” (SMC 1910). Note the workers’ dwellings near the toe of the bluff. Also
note the “BREAK WATER/CONCRETE WALL/20’ HIGH” north of the mill, along the riverfront.
Rufus Abandons the Old Mill & Constructs the New R.F. Learned Mill (1917-1924)

In 1917, Rufus abandoned the former Andrew Brown sawmill, located on the upriver side of Lot 32 (Church and Hunt 1984:71, SMC 1925), which may have been in operation in the same location since Peter Little constructed a mill at this site around 1818. Problems with erosion or bank caving forced Learned to relocate to retreat away from the river's edge to a new site closer to the toe of the bluff (Church and Hunt 1984:71). In 1916, a year before the old mill was abandoned the river reached an unprecedented 53.5 feet in Natchez on February 15 (MRC 1960:79). As a means of comparison, during the Great Flood of 1927, the Mississippi River crested at 56.65 ft in Natchez (MRC 1960:82).

A new sawmill was constructed on Lot 33 approximately 220 m (700 ft.) upriver from the old mill site (Figure 5-18). The mill was completed in 1917 (Church and Hunt 1984:71; SMC 1925). The new Learned Sawmill like the older mill was initially powered by a steam engine and had a band saw. The new sawmill was an “L” -shaped structure (SMC 1925). The longer arm of the building, or “saw mill” portion, measured approximately 10.7 by 12.2 m (135 by 40 ft) (Hook 1932; SMC 1925). By 1925, the new mill produced 35,000 board feet per day (SMC 1925). The average stock on hand at this time was approximately 3,000,000 board feet of cut lumber and the mill workforce numbered around thirty individuals (SMC 1925; Howard B. Peabody, Jr., personal communication 2002). Five worker residences, or cottages, appear to have been located along the toe of bluff. A circa 1920s photograph of the Learned Mill (Figure 5-19), probably taken shortly after the mill opened, highlights the expansiveness of the drying racks as well as the proximity of the workers’ side-gabled cottages with front and rear porches overlooking small yards. These cottages appear to be the same dwellings shown near the toe of the bluff on the 1925 Sanborn map of the R.F. Learned sawmill operation (Figure 5-20), but these structures are not drawn on the 1910 map of the mill complex and thus were likely constructed around 1917 when the new steam-powered sawmill was completed and operational (SMC 1925, 1910).
Figure 5-18.
A 1932 U.S. Corps of Engineer Map showing the location of the old Andrew Brown-Rufus Learned Sawmill and the new R.F. Learned Sawmill (Hooks 1932). Note that the new L-shaped sawmill is located further from the river and closer to Magnolia Vale.

Figure 5-19.
A circa 1920s photograph of the R.F. Learned & Son Saw Sawmill likely taken from Learned Mill Road facing west towards the river (Moore 1967:following page 64). Note the side-gabled dwellings with front and rear porches near the lumberyard and bluff.
Figure 5-20.
The 1925 Sanborn *Fire Insurance Map of Natchez, Mississippi* showing the new “R.F. Learned & Son Saw Mill & Lumber Yard” (SMC 1925). Five dwellings are illustrated across the road from the lumberyard, near the toe of the bluff.
Another Generation – Andrew Brown Learned and Howard Peabody, Jr., (1924-1961)

Rufus F. Learned died on 26 March 1924, and is buried in the Learned tomb in the city cemetery in Natchez. After his death, his son, Andrew Brown Learned, took over the lumber operation. The mill, which was known by this period as the R.F. Learned and Son Band Saw Mill of Natchez, Mississippi, continued to operate without interruption (Thompson 1958). By the late 1940s Howard B. Peabody, Jr., Rufus Learned’s great grandson, became president of operation (Church and Hunt 1984; Thompson 1958). It was about this time period that the sawmill, with its crew of 20 to 30 men, switched to cutting bottomland hardwoods rather than cypress, because by the late 1930s most of the cypress trees along the rivers and bayous of Louisiana and Mississippi had been logged out. Cottonwoods, valuable for wood boxes and crates, and willows, or “poor man’s mahogany,” were also logged extensively (Howard B. Peabody, Jr., personal communication 2002; Thompson 1958). By 1961, one of the oldest sawmill operations in the United States closed down (SMC 1965; Thompson 1958).

African-American Lifeways Around the R.F. Learned Sawmill (1880s-1930s)

Despite the shift in labor practices following the Civil War, African-American workers remained a mainstay in the postbellum milling operations around Natchez, although in much reduced numbers. However, these workers and their families at the R.F. Learned Sawmill still represented a strong element of African-American culture in the Natchez area. Lumber and forestry enterprises continued to offer job opportunities outside of the cotton fields for individuals in Louisiana and Mississippi. Nathan Wright, the father of the famous American writer Richard Wright, was an illiterate sharecropper (Webb 1968). When Ella Wilson Wright and Nathan Wright and their two sons Richard and Leon Alan moved to Natchez in 1911, Nathan Wright was able to find work for a couple of years at a sawmill in Natchez, possibly at the Learned Sawmill (Wright 1993:455). The lumber industry in and around Natchez attracted a number of the rural white farmers and displaced African-Americans from the cotton plantations of the Delta and plain folk farmers of the Piney Woods. These individuals and families sought steady wages and often the only employment available to this mainly illiterate population was logging or working in a sawmill.
Although by the early 1900s most white workers at the R.F. Learned Sawmill were engaged in skilled work and most of the African-Americans were segregated to less skilled work, there were clearly some workers who had such exceptional skills and broke through some racial barriers. For example, Davis (1941) describes a group of African-American craftsmen at an unnamed planing mill (likely the Learned mill) in Natchez in the late 1930s,

One colored worker, for example, had to check twelve widths of planks by sight on a rapidly moving belt and direct his aid in sorting them. Continual rapid calculation was necessary to determine wastage in sawing and the resultant size of the planks. The work not only required great skill and speed but involved a heavy responsibility. A colored ‘grader’s’ work was even more skilled. He had to determine, by sight, the several grades of lumber contained in each plank on the moving belt and to calculate the number of square feet of lumber of each type in each plank, making allowances for knots and other variations in each of the twelve widths of planks. In addition, he had to calculate the amount of lumber required to make a certain number of products with the least waste [Davis 1941:431].

The lumber and forest industry has been a central aspect of Natchez’s economy and a livelihood for a large number of African-Americans, especially men, going back to the early nineteenth century. In 1929, 5.7 percent of Adam County’s population worked at a saw- or planing-mill (Davis 1941:260). In 1933, 190 white and 510 black laborers workers had a combined wage total of $290,000 at the largest planing mill in the area (Davis 1941:260-261). In many circumstances, white and black lumber employees worked at the same jobs together and often ate at the same tables together. However, because of racial segregation in the Deep South during this period, whites would often get jobs as foreman overseeing a black grader who may receive $13 a week for a job a white worker would get $50 to $75 a week for (Davis 1941:425, 431). In one case, when a planing-mill operation in late 1920s attempted to pay African-American employee wages that were twice those paid by local employers, the Chamber of Commerce insisted that the mills should reduce these wages, feeling that other black workers would feel “discontented” (Davis 1941:261). The mill hastily lowered wages by one-half (Davis 1941:261).

Anger and anxiety among the black labor force at this time especially related to pay inequality in the industrial sector led to the formation of unions, social action groups, and some African-American mill workers in Natchez became members of Marcus Garvey’s Universal Negro Improvement Association [UNIA] (Wilson 2002). Garvey’s message critiquing the treatment of blacks in America was evidently popular
among a number of African-American residents in Natchez, many of whom worked at lumber mills or as domestic servants. At meetings of the International Convention of the Negro Peoples of the World in the 1920s and 1930s, the strength of the organization in Natchez was discussed: “The city reported between 77 and 133 dues-paying UNIA members, making it the largest division in Mississippi . . . seven hundred blacks reportedly signed a petition for Garvey’s release from prison in 1927” (Wilson 2002). One Garveyite in the mid-1930s declared that Natchez had one of the “most loyal divisions in America” (Wilson 2002). As late as 1941, a sociological study of the area reported that, “a few lower-class individuals still maintain a rapidly dying branch of the Universal Negro Improvement Association and speak with nostalgia of Marcus Garvey” (Davis 1941:249). It is unclear how the profitable R.F. Learned Sawmill compared with other mills within the state and within the United States concerning worker compensation, safety, and racial and gender equity. Undoubtedly, some black mill workers in Natchez felt that their position in the segregated, racist, Natchez economy needed improvement.

From historic photographs taken during the Spring of 1890 (Figure 5-21), it appears that the area around the old Andrew Brown/R.F. Learned Sawmill took on another element of importance for African-American residents in Natchez. One photograph appears to be of a large group of predominantly African-Americans worshippers gathered along the riverbank in front of and downriver of the older R.F. Learned Sawmill for a baptism. At this industrial setting there appears to be a manipulation of the cultural landscape. The area around the steam sawmill appears to have been temporarily transformed into a place of spiritual cleansing on certain occasions. A locale normally associated with toil, risk of injury, and death was also the site of entry for a religious act of purity. Thus, the mill location, though private property, must of had certain periods of public accessibility, which may be tied to the Brown’s and Learned’s strong religious convictions. These baptismal ceremonies appear to have occurred on several occasions. This is evidenced by another set of ca.1913 photographs of the Natchez area (Figure 5-22). The photographs show a “Baptizing near saw mill,” which appears to be in front of the Learned Sawmill, but at a later date. Thus, around the turn of the nineteenth century the area around Learned Mill appears to have taken on a spiritual significance for many of the African-American residents of Natchez.
Figure 5-21.

Two circa 1890 photographs of a spring baptism near the Learned Sawmill (Gandy 1987:84). Note the privy on the edge of the riverfront. The event could be heard from a distance: “singing of crowds and shouts of those having their sins washed away could be heard at great distance” (Gandy 1987:85). It appears that river has significantly eroded a portion of the property by this time.
Two circa 1913 photographs entitled, “Baptizing near saw mill” (Louisiana Lower Mississippi Collection, Louisiana State University). Note that the current free inlet used by the lumbermen to catch log rafts provided an ideal spot for baptisms, as did the gently sloping river’s edge near the mill.
Summary of the Historical Overview of the Brown-Learned and the Sisloff-Cozzens Sawmills

Within this chapter historic photographs, documents, newspaper accounts, census data, and literary accounts of the Andrew-Brown and the McFadden, Sisloff, Gaw- Cozzens sawmill operations were detailed to better ascertain the spatial layout or landscape of these early lumber enterprises, the material culture associated with their operation, and the social and political life of the workers, enslaved and free. Historical data indicates that both operations undertook several alterations in their layout, including the reconditioning of the mill’s machinery on several occasions. Prior to the Civil War, both sawmills appear to have used a labor force primarily composed of enslaved laborers who appear to have taken on a wide-ranging roles and duties at the mill, from foreman and boat captains, to simple mill hands. Records from the mid-nineteenth century record several industrial accidents at both of these mill operations indicating the high level of risk involved in working around an early industrial complex. Apparently some of the enslaved laborers, at least the Andrew Brown sawmill, were able to garner additional wages and had the spatial freedom and access to markets at Natchez-Under-the-Hill to make use of this money. What goods and services the workers purchased is unclear for historic documents. Regarding the laborers, it is unclear what role women or children played at these two early mill operations, thought it does appear that the demographic makeup of both of these mill operations was overwhelmingly young to middle-age African-American males.

This chapter reiterates the industrial landscape of the Upper and Middle Landings. This would appear to contrast with the more social and residential elements of Under-the-Hill along Silver Street near the Lower Steamboat Landing. However, Natchez-Under-the-Hill appears to have been contrasted against the wealth and genteel way of life on top of the bluffs. This social stratification of Natchez residences and lifeways upon closer analysis is not as clear as it may seem, since the two groups are more intertwined than is often stated. Many of the wealthy landowners such as Stephen Duncan who lived on top of the bluff were also financiers or customers at the operations Under-the-Hill.

When the Brown and Cozzens mills were contemporary competitors, they both relied on the Mississippi river as their main artery for trade. Furthermore, both sawmills were important factors in shaping the economic and physical landscape of the Lower Mississippi Valley. Additionally, the dynamic physical
geography of their location below the bluffs and next to the river played a vital role not only in the abandonment of both of the mills, but also in the archaeological findings (post depositional processes) as will be discussed in the next chapter. The ethnohistoric data detailed within chapter Five can be applied to the archaeological discussions of the two sawmill sites in the next chapter in order to broaden the context and scope of understanding of the social and economic development of the two mill complexes and the implications upon the material culture.

Endnotes

1 Brown’s firm designed and constructed several important buildings in Natchez during the 1820s, including the Old Masonic Temple that once stood at Main and Union streets (Wilson 1989:150).

2 One reason for Andrew Brown’s close business ties to the Mississippi Rail Road Company was that his partner Stephen Duncan was an administrator in the Rail Road Company (Moore 1967:30). Furthermore, in the 1830s Andrew Brown became the director of the Mississippi Rail Road Company for a period (Moore 1967:35).

3 An anonymous 1841 lumber ledger from Natchez, Mississippi, (see Figure 5-7) appears to have belonged to Andrew Brown, Sr. and it records the purchases and sales of timber by individuals at the mill including Simon Gray and James Mathews, along with transactions with wealthy Natchez businessmen such as Stephen Duncan and Andrew St. John Elliot.

4 The killing of Jake on October 20, 1856 by the overseer Samuel Cox resulted in a lawsuit being filed by Andrew Brown against Cox for the wrongful killing of his slave. Cox argued that Jacob Pugh was drunk and while Cox attempted to place him under arrest, a scuffle broke out and Pugh was shot. A jury apparently disagreed and Cox was sentenced to prison and Brown was awarded damages of $1,500 (Moore 1967:140).

5 Not included in the purchase of the remainder of McFadden’s property was the portion of Minor Lot 15 that included McFadden’s house, the Temple Lot, and the lots located at the foot of the Road to the Upper Landing (Crayon’s Landing) (ACR, Deed Book ‘CC’, folio 345; Hahn 2002).

6 The Natchez Oil Mill’s building was a story and a half high and measured 80 by 84 feet. The mill’s machinery consisted of a steam engine which powered eight hulling machines, five sets of grindstones, a machine for grinding the kernels of the seeds, eight cylinders for beating the meal, a cam press, and seven lever presses for removing oil from the meal (Moore 1967:29). Plummer, a resident of Memphis, Tennessee, owned the Mississippi rights to a mechanically advanced device for extracting and refining cottonseed oil (Boggess et al. 1997:26).

7 Brown’s crew, under an enslaved African-American foreman named Randall, succeeded in sawing six large logs and thus produced 12,995 feet of lumber. Another crew under Jacob, operating the circular sawmill, cut nine smaller logs and made 11,782 feet (Moore 1967:56).

8 After an unsuccessful adventure in selling pre-fabricated “knocked-down houses” to markets in California in 1849, Key and Brown established a new shop in Natchez to dress lumber for the New Orleans market. The initial steam-powered planing shop was “located a distance from the sawmill at Natchez-under-the-Hill,” but was relocated near the lumberyard in New Orleans to be closer to customers (Moore 1967:103).

9 The November 1853 date is in apparent reference to the sale of 30 percent interest in the property to Hardie by Davis, the same 30 percent interest that Jones was mortgaging (Hahn et al. 2002).

10 Included in Roth’s lease would have been the lower portion of Minor Lot 16 and the upper portion of Minor Lot 15 and would have included the former Smith Lot (Hahn et al. 2002).

11 Brown paid 800 dollars for the unit and for the rights to operate it (Moore 1967:115). The two circular saws installed in 1858-1859 were capable of cutting 20 thousand feet of lumber a day each (Thompson 1958).

12 Regarding muley saws, Moore (1967:116) states, “The blade of the muley saw was thicker than the usual sash mill saws, and tapered slightly in cross section from the points of its teeth toward the base of the saw. Muley saw operated at much higher speeds than gangsaws, making from four to six hundred strokes per minute… the muley mill made a single high-speed cut with each forward motion of the carriage, but it possessed an advantage over the circular sawmill in that it could handle logs of much greater diameter than a mill equipped with a single circular saw.”

13 Accordingly, several landowners Under-the-Hill petitioned the city of Natchez for public assistance to aid the lumber firm in repairing the breakwater (Moore 1967:119; Natchez Courier 1859a).

14 In 1834, a French patent for a band saw was granted. Two years later the first United States patent for a band saw was granted to B. Barker (IWW 1922). A band saw is a “endless belt of steel, having teeth formed along one edge and traveling continuously around an upper and lower pulley, with its toothed edge presented to the timber to be cut” (IWW 1922). Modern band saws can cut through logs much too large for any circular saw and can be modified for precision cutting.

15 Without direct rail or highway access, the mill struggled to transport their product to the regional markets. Furthermore, in 1961 Andrew Brown Learned passed away and the mill was dismantled (Howard B. Peabody, Jr., personal communication 2002; Church and Hunt 1984).
CHAPTER 6: ARCHAEOLOGICAL INVESTIGATIONS

The previous chapter provided an overview of the historical operations of the two major sawmill complexes located at Natchez-Under-the-Hill during the mid-nineteenth century. The detailed history of the landscape of both the Andrew Brown and the Brown Cozzens operations yielded analogies applicable to the archaeological research conducted at the two locations.

This chapter provides an overview of the archaeological survey and excavations at the circa 1818-1917 Brown-Learned and the circa 1841-1869 Sisloff-Cozzens sawmills at Natchez-Under-the-Hill. Within this section is a discussion of some of the archaeological deposits located during the survey at the Andrew Brown, later Rufus Learned, Sawmill, including artifact scatters possibly associated with circa 1828-1917 sawmill, and several concrete features/structures that were associated with the later circa 1917-1950s sawmill. Following the discussion of the Brown-Learned survey, is an overview of the archaeological investigations of the features at the Well site (22AD993) that appear to be related to the operation of the circa 1841-1869 sawmill at the site.

Questions addressed within Chapter 6 focus on whether any of the archaeological material or features located during the fieldwork can be associated with either of the two mill operations. Related to this, can the age and functions of the deposits or features located be ascertained, and if so, with whom and what are the deposits associated? Furthermore, can the location or layout of either of the historic sawmill be confirmed through the archaeological deposits? Do the dates of the deposits at the Well site correlate with the historically documented abandonment of the mill by at least 1871? And what kind of assemblage is represented at either the Andrew Brown or Brown Cozzens enterprise? Are the artifacts mainly industrially, architecturally, or domestically related? Lastly, can either of the assemblages provide a greater depth of history and understanding of the working and living conditions around the sawmills and thus the workers’ diet, clothing, healthcare, tools, occupations, social activities, or access to markets?
Learned Mill Road Survey

In June of 1999, an intensive survey adjacent to portions of Learned Mill Road in Natchez, Mississippi (see Figure 1-3) was performed for the U.S. Army Corps of Engineers (COE), Vicksburg District, in regard to the proposed Natchez Bluffs Stabilization Project. The proposed project area was approximately 10.7 ha (26.5 ac). The archaeological investigations of portions of the former Andrew Brown-Rufus Learned property were carried out over a two-month period. The project areas located in the northern portion of Natchez-under-the-Hill were bordered by the Mississippi River on the west side and adjacent to the old Magnolia Vale property on the east side. The project area covers portions of the old Minor Lots 31 through 34, or R15-U to R5.5-D.

The initial objective of the field research was to locate any archaeological, architectural, or material remains of the mill or workers’ housing, or any other features associated with the industrial complexes that once occupied portions of the former Brown-Learned property (Figure 6-1). Prior to the initiation of the field investigations, a historical and archaeological background study was conducted. Towards these ends, much of the historic data and maps discussed in the prior historical overview fell within or immediately adjacent to the project area (see Figure 1-3). Historic maps and data indicated that numerous structures related to saw milling and other industrial activities, from 1817 to as late as the 1950s, were located in the vicinity of the survey area. Furthermore, Boggess’ *Archaeological Investigations of the Learned Mill Road* (1997) overlapped in coverage with this survey and therefore provided a good reference source. Background information concerning the geological and cultural history of the project area was also utilized in the development of the field survey strategy. This information assisted in the identification of high probability locales for locating the mill, associated structures, and living areas.

1999 Survey of Portions of the Andrew Brown – Rufus Learned Mill Complex

In general, the archaeological survey was limited to a pedestrian survey, shovel testing, auger tests, and backhoe trenches. The survey consisted of a four-person team traversing 5 m intervals in high probability areas. The survey was limited to the confines of the 10.74 ha (26.54 ac) project area. The field methodology was also partly dictated by the type of environment and land features. For instance,
Archaeological investigations within project area (delineated in red) overlaid by author on the 1872 map of Andrew Brown’s property holdings produced shortly after his death (ACR, Deed Book ‘RR’, folio 418-419; Saltus 1995:28; Dixon 1962). Note the location of the trenches, augers, and shovel tests near the former site of the Natchez Oil Mill, tanyard, and Andrew Brown Sawmill. Also note that a portion of this area is covered by oil well platforms, pipelines, storage tanks, and telephones lines.
the survey area on the east side backed up to the toe of the bluff and on the west side abutted the Mississippi River and the floodplain. Additionally, as stated earlier, much of the project area had been previously disturbed by the construction of oil wells, storage tanks, and pipelines, which crisscrossed the site and thus limited subsurface testing in many locations. What was not covered by oil field equipment was densely overgrown and hence limited surface visibility.

Along the grid, which ranged from N00W00 to N235W105, the archaeological survey involved 73 shovel tests, eight auger tests, and 10 backhoe trenches. A total of 1,227 artifacts were recovered during the survey of the approximately 10 acre area. Despite the high quantity of artifacts recovered, with exception of several concrete features, no identifiable trash middens, features, or living surfaces that could be associated with either the antebellum or postbellum manufacturing activities that took place on the lots could be located. A small percentage of artifacts from secondary beach surface collections and a few artifacts from backhoe trenches date to the mid- to late-nineteenth century and may be material remains of the early sawmill complex built initially by Peter Little, later remodeled and expanded by Andrew Brown and Rufus Learned, but unfortunately these artifacts have lost much of their context.

1999 Pedestrian Survey of the Brown-Learned Mill Complex

During a pedestrian survey of the northern half of the project area (Figure 6-2), two concrete foundations and two concrete breakwaters were located at the northern end of the project area adjacent to the bank of the Mississippi River. These features were photographed, mapped, and drawn to scale. The two concrete foundations or piers (Foundation 1 and Foundation 2), pyramidal in shape, were located on the beach near the top bank near R7-U, which is on the upriver side of Lot 33 (see Figure 6-2). The pyramidal concrete piers were resting on square bases that were approximately 2.5 m (8.2 ft) long on each side. The two foundations were approximately 3 m (9.8 ft) tall and just over a meter in length near the top (Figure 6-3). Mold or pour seams indicated that the pyramids had been built in sections by pouring concrete into square timber frames with smaller and smaller squares of concrete on top one another (Figure 6-4). The top of the more northern structure (Foundation 1) had two parallel wooden beams, similar to railroad ties, set into the concrete with steel fasteners.
Figure 6-2.
Northern portion of the project area showing the breakwaters, foundations, and artifact scatter located during the archaeological survey (digitized by author). Note the location of the R.F. Learned & Son Sawmill site and the old mill office, both of which are located outside of the project area.
Figure 6-3.
Plan and elevations of Foundation 1 and Foundation 2 (digitized by author). These two concrete features were located on the beach near the top bank, on the upriver side of Lot 33, R7-U. Note the pour impressions on the two concrete foundations and the railroad tie on top of Foundation 1.
It would appear from their location and their form of construction that Foundation 1 and 2 were built by Rufus Learned for the new mill sometime after 1917, probably in the late 1920s or 1930s. Both the 1925 *Fire Insurance Map of Natchez, Mississippi*, (see Figure 5-19) and the 1932 *Mississippi River Natchez Front, Mississippi* (see Figure 5-18) map depict the R.F. Learned Mill with a log haul projecting from the sawmill along a northwesterly axis. For loading ease, the log haul would likely have started near ground or water level at the riverbank’s edge, but would have been elevated towards the sawmill in order to lift the logs level with the mill’s machinery. The platform, or haul, started on the northern side of the sawmill and ended at the river’s edge near a small cavity off of the river. This small cavity provided a current-free expanse of water in which logs could be stored until they were hauled to the mill.

Historic documents indicate that as early as the mid-1800s Andrew Brown Sawmill was hauling logs up the bank to the mill by a steam-powered funicular railroad, or log stage. Andrew Brown’s son-in-law, Rufus Learned, used a similar system to haul timber into the mill (Moore 1967:54; Howard B. Peabody, Jr., personal communication 2002). Such a log pull utilized a system of chains, cars, track, and ramps that dragged logs from the river cavity, or millpond, upon a platform, or trestle-tram, and carried the logs to the sawmill carriage (Howard B. Peabody, Jr., personal communication 2002).

The concrete foundations appear to have been located between the river’s edge and the former site of the circa 1917-1961 R.F. Learned Mill. This placement suggests that the concrete pyramids or pillars functioned as a support for some sort of ramp or trestle. According to historic map overlays, the concrete pillars were likely piers located in the middle, or the upper end of an elevated rail-like structure that carried logs to the mill from the river’s edge. The two piers were most likely built as early as 1917 or as late as the 1930s. No other features or structures associated with the log ramp or the mill were located near these concrete foundations in the northwestern corner of the project area.
Figure 6-4.
Crew members measuring and drawing Foundation 1 and Foundation 2. Note the two large railroad ties on Foundation 1.

Breakwater 1 and 2

During the 1999 pedestrian survey, another set of concrete structures was located approximately 130 m (430 ft) south down the beach from the two concrete pyramids. These two very large concrete walls appeared to stretch from the river’s edge to the top bank. Further investigation revealed that the two concrete features appeared to be breakwaters or spur dykes. They seemed to project on an east-west axis from the beach to the river. They were located partially in the river, on the beach, and immediately adjacent to and perpendicular to the top bank. These possible breakwater structures are positioned halfway between the old Andrew Brown Sawmill site and the later R.F. Learned Sawmill site in the adjacent pasture outside of the
project area. The location of the breakwater corresponds to approximately R3.25-U, which is on the
downriver half of Lot 33 (see Figure 6-2).

The breakwater structures consist of two large concrete footings (Figure 6-5) that include Breakwater
1, the more southern concrete structure and Breakwater 2, the apparent patch. The two concrete breakwaters
overlap and appear to be part of the same water control unit, but were likely constructed in different stages.
Breakwater 1 was originally at least 27 m (88.6 ft) long and 2.5 m (8.2 ft) wide (see Figure 6-5). However, an
approximately 6 m (19.7 ft) long piece nearest the riverbank edge broke off and rolled on its side. Breakwater
1 consisted of the 21 m (68.9 ft) long, intact piece, which stood 3 to 3.5 m (9.8 to 11.5 ft) above the ground
(Figure 6-6). On top of this base foundation a concrete wall reinforced by narrow gauge steel rail was
constructed on the upriver topside. The total height for Breakwater 1, including the base and the wall
erected on top, was between 5 and 6 m (16.4 and 19.7 ft). The wall may have been built either immediately
after the completion of the base or later on as a means of creating an even taller breakwater that was more
substantially reinforced to deal with high river crests.

Breakwater 2 was located on the upriver side of Breakwater 1 with an approximately .3 m (1 ft) gap
between the two structures. Breakwater 2 from a plan view had a U-shaped concrete foundation. The
upriver side of the U-shaped foundation extended 3 m (10 ft) onto the toe of the bluff, while the downriver
side of the foundation ended about .5 m (1.6 ft) from the toe of the bluff. The upriver side of the foundation
was approximately 15.5 m (50.8 ft) long and ran from just beyond the toe of the bluff to about 2.5m (8.2 ft)
beyond the missing piece in Breakwater 1. Breakwater 2 was between .7 to .8 m (2.3 to 2.6 ft) thick with
narrow gauge rails set into the concrete every 1 to 2 m (3.2 to 6.4 ft) for reinforcement. Mold seams along
the side of Breakwater 2 revealed that it was constructed using 1-by-8 in, 1-by-12 in, and 1-by-16 in, boards to
form molds for poured concrete. On the top surface of the west side of Breakwater 2, the name “ROBERT
HART” had been etched into the concrete (Figure 6-7).
Figure 6-5.
Plan view, west elevation, and south elevation of the two concrete breakwater structures (near R3.25-U). Note the location of the broken portion of Breakwater 1. Pour seams (noted by dashed lines on the south elevation) bisected the top portion of Breakwater 1.
Figure 6-6.  
Crew member on top of Breakwater 2 recording elevation.  Note the pour seams across the breakwater as well as the broken piece of Breakwater 1 in the left foreground of the picture.

Figure 6-7.  
The name “ROBERT HART” was etched into the concrete on the west side of Breakwater 2, possibly by a worker or contractor during construction of this feature.
The construction of riverfront earthworks on these pieces of property started quite early. Peter Little constructed a breakwater using rocks and logs soon after constructing the mill in 1818 as means of improving an expanse near the mill for storing logs (Moore 1967:23). By 1832, Andrew Brown was still using this breakwater for storing logs delivered from the Yazoo Delta (Moore 1967:32). Unfortunately, the location of this earliest breakwater is not clear from historic data. However, by at least 1864, two landforms, which appear to be breakwaters or jetties, were located on the upriver and downriver edges of the Andrew Brown property (see Figure 5-9).

The concrete breakwaters located during the survey appear to be tied to Rufus Learned’s struggle with the Mississippi River. Several flood episodes exposed both Brown and Learned to the serious weakness of this shelf of land during periodic episodes of high water, though no historic evidence can be found that Andrew Brown’s sawmill building was ever inundated by high water (Church and Hunt 1984). When Rufus Learned took over the sawmill operation from Andrew Brown, he not only inherited a thriving lumber trade, he also acquired a milling operation located on a shelf of land that seemed vulnerable to erosion, saturation, and sinking during floods. Kane (1947) states:

One of Rufus’ battles, and his hardest, was with the Mississippi. Years earlier, his land along the river had begun to crack and slough off. The earth was sinking, gradually, imperceptibly, in certain areas. It became all too evident that the river was tapping the shore by underground drainage. Many grew certain that all the property--gardens, mill, Magnolia Vale itself--would eventually tumble in. Not Rufus Learned. He put up a breakwater and worked over the bank. After a fashion he succeeded, for the erosion-like process slowed down. But the mill had to be given up, and a new one built on the ground long occupied by the gardens [Kane 1947:141].

Magnolia Vale also seemed endangered by the shifting sediment and Learned had the house set upon a system of iron plates and rollers so the house would ride on them (Kande 1947:141). Apparently the plan worked and the house was stabilized. Unfortunately, Magnolia Vale burned to the ground in 1947, and a new house designed by Richard Koch, which incorporated many elements of the original design, was erected on the old foundations for Howard Peabody and is still standing today (Wilson 1989:150; Delehanty and Martin 1996:157; Sansing et al. 1992:80).

A January 1910 Fire Insurance Map of Natchez, Mississippi (see Figure 5-17) and the 1911 Sloan map detail a breakwater in nearly the same location on the riverfront as Breakwater 1. The breakwater is drawn on
the map approximately 82.3 m (270 ft) upstream from the Old Sawmill or 21.3 m (70 ft) upriver from the northwest corner of the lumber shed. The 1910 map indicates that the breakwater was a concrete wall, “20’ HIGH”, and measured approximately 22.9 m (75 ft) long. This dimension is nearly identical to Breakwater 1’s recorded height at some locations of 19’6” and projects at nearly the same a west-north-west angle. The breakwaters that appear on the 1910 Fire Insurance Map of Natchez, Mississippi, (see Figure 5-17) and the 1911 Sloan map were likely constructed by Rufus Learned shortly before these maps were produced, or he simply improved a pre-existing feature to such a substantial height of 20 feet with concrete that it gained coverage.

Additionally, the location of Breakwater 1 corresponds with a bank line feature that appears to be a breakwater on the Mississippi River Natchez Front, Miss. map dated July-August 1932 (see Figure 5-18). This breakwater appears to be located halfway between the new R.F. Learned Sawmill and the “Abandoned Saw Mill”, approximately RU-3.25. The breakwater depicted on the 1932 map was approximately 6 m (20 ft) wide and 24.4 m (80 ft) long. Two wooden bulkheads are shown on the map angling from the bank line to the breakwater on both the upriver and downriver side and were most likely placed there for additional reinforcement. These wooden bulkheads could not be located during the survey. It is likely the mill owners constructed these features since no other timber bulkheads or breakwaters are shown on U.S. Corps of Engineers work maps showing the Natchez waterfront between 1932 and 1962 (Hooks 1932; Dixon 1962). The continued erosion of the riverbank near the mill may have been the impetus for constructing a second breakwater, most likely Breakwater 2. Breakwater 2 is nearly half the length of Breakwater 1, but Breakwater 2 is wider and taller. Breakwater 2 is also placed just east and west of the broken segment of Breakwater 1 and could have been a patch to prevent further water from eroding through the breakwater and around the toe of the bank. The concrete breakwater along with Rufus’ bank improvements must have succeeded in controlling the erosion of the riverbank for at least six or seven more years since the mill was not abandoned until 1917. According to the Sloan map, the erosion of the bankline from 1829 to 1911 amounted to around 60 m (200 ft) in the vicinity of the Peter Little Sawmill (Sloan 1911). This significant land loss likely motivated the construction of the timber bulkheads and the larger breakwater (or dyke).
Artifact Scatters.

On the immediate downriver side of Breakwater 1, around R3-U, a scatter of artifacts was located on the beach along the riverfront (see Figures 6-1 and 6-2). These artifacts were located while mapping the concrete breakwaters during the 1999 survey. The artifacts appeared to have eroded from the “shelf” on top of the beach. Upon closer analysis some of the artifacts surface collected near the breakwater comprised some the earliest datable artifacts collected during the survey of the former Brown-Learned mill site.

Artifacts scattered across this locale included several large cast iron machine parts, a light scatter of olive-amber bottle glass, a sherd of an edge-blue symmetrically scalloped pearlware plate, an annular decorated pearlware bowl, and a portion of a stoneware bottle (Figure 6-8). These artifacts are indicative of a site dating to the early- to mid-1800s. Although the artifacts collected were not in context and were eroding from the beach front and therefore there vertical loci had clearly changed, their horizontal location may be relatively stable and indicative of the location of a structure or activity area associated with the original sawmill site, which was located on the upriver half of Lot 32 or near RU-1. Since Andrew Brown and his family resided at Magnolia Vale near the toe of the bluff, the domestic wares including a plate, a bowl, a stoneware bottle collected near the river’s edge and the old sawmill site may be related to the laborers.

Several historic maps including an 1864 Map of the Defences of Natchez and Vicinity (see Figure 5-9) and the 1886 Fire Insurance Map of Natchez, Mississippi (see Figure 5-13) illustrate the older sawmill having several support buildings, all of which were located on the upriver side of the mill, close to the present location of the concrete breakwaters. According to these maps, the structures in this area included a shed, a warehouse, a dry house, a blacksmith shop and an office. Therefore, the small surface collection of cast iron, bottle glass, and historic ceramics may represent a midden deposit near one of these structures that has eroded onto the beach. Manufacture dates for the artifacts do correlate with the operation of a sawmill during the nineteenth century and nearly all the land between the old Andrew Brown Sawmill and the newer R.F. Learned Sawmill, where the surface artifacts were collected, was part of the sawmill complex or associated residences for nearly a century. However, given the limited quantity of artifacts collected and their lack of provenance, it is difficulty to discern with certainty the social context with which these artifacts were directly associated.
Figure 6-8.
Top: Light artifact scatter (approximately R3-U) of machine parts recorded on the immediate downriver side of Breakwater 1. Bottom: Light artifact scatter (approximately R3-U) on the immediate downriver side of Breakwater 1. Artifacts scattered across this locale included: a) a portion of a stoneware bottle; b) an annular decorated pearlware bowl; c) a sherd of an blue-edge scalloped pearlware plate.
Further downriver on the beach another surface scatter of artifacts was located during the pedestrian survey between R1.5-D and R.5-D, which is near the center of Lot 32. This scatter was on the downriver side of the former Andrew Brown/Peter Little Sawmill site. These artifacts, primarily, iron nails and machine parts, again appeared to be eroding from the toe of the beach. The heavily eroded beachfront also had a large amount of bricks and large pieces of mortar and concrete. The area was photographed and surface collected (Figure 6-9). Metal artifacts recovered during the surface collection included a large number of machine cut nails, spikes, wire cutters, a file and skidding tongs (Figure 6-10). Despite their loss of context, the artifacts along the beach may reflect activities near the old mill location or, an associated outbuilding such as a machine or blacksmith shop near this location. The 1872 Plat Map (see Figure 6-1) shows at least four structures associated with the sawmill along the centerline of Lot 32. One of these structures, the largest building near the toe of the bluff is labeled “Home” (see Figure 5-12). It is possible that the surface scatter may be associated with one of these workshops or residences, but the exact nature of these deposits is unclear. Unfortunately, the Mississippi River and an oil well pad have destroyed the context of these remains.

Figure 6-9.
Sketching the location of an artifact scatter on the riverbank. Artifacts included: concrete, ceramics, glass, nails, and iron tools. The scatter was located between R1.5-D and R.5-D, near an oil well. The area was photographed and surface collected.
Artifact scatter of iron, nails and machine parts, appeared to be eroding from the toe of the beach between R1.5-D and R.5-D. Artifacts recovered just beyond the oil well included: a) a skidding tong; b) single cut sharpening file; c) wire cutters; d-h) machine cut nails.
Subsurface Investigations at the Learned Mill Road Project Area

Shovel Test Survey

Systematic shovel tests were carried out only within the designated project area because of limited access to private lands (Figure 6-11; also see Figures 1-3 and 6-2). Shovel tests were excavated at 5 m intervals in areas where subsurface testing was possible. Shovel test pits were typically excavated to depths of 30 to 70 cmbs. Soil removed from each of the test pits was screened through 1/4-inch wire mesh. In all, 73 shovel tests were planned for the survey area. However, 23 locations on the grid could not be excavated because of ground disturbances. These disturbances included oil storage tanks, oil pumps, pipelines, a roadbed, or impenetrable undergrowth. Additionally, eight auger tests were conducted across the southern edge of the area.

Shovel tests and auger tests coordinates along the grid ranged from N10 W00 to N224 W115. Fifty 30-by-30 cm shovel test pits were excavated to various depths. In all, there were 26 positive shovel test pits. Of the eight auger tests, four were positive for cultural material. From the shovel tests and auger tests, 252 artifacts were recovered. Unfortunately the majority of these artifacts consisted of brick (n=45) and unidentifiable iron fragments (n=90). Other artifacts recovered included sherds of two ironstone bowls, a whiteware plate, and some olive-amber glass. However, the majority of shovel tests were only able reach depths on average of 40 to 60 cm below the surface, which meant the test pits were still within recent colluvial or alluvial deposits and not within early historic horizons (Figure 6-12).

Although some of the augers reached depths near 3.5 meters (10 feet), the soil consistency still appeared to be sandy alluvial and clayey colluvial layers. Furthermore, augers that were positive had cultural material (mostly brick fragments) over several meters and thus the deposits did not appear to be within any identifiable cultural horizons. For example, the auger at N140 W10 encountered brick from 50 cmbs to 330 cmbs and a nail around 200 cmbs. Therefore, cultural material appeared to be scattered from the surface to nearly three and a half meters (11.5 ft) below the surface without any clear cultural levels or concentrations. Therefore, shovel tests and auger tests provided only a limited amount information regarding the location, distribution, and makeup of the antebellum and postbellum occupation of the area.
Figure 6-11.
Southern portion of the Learned Mill Road Disposal Area (digitized by author). Note the location of the trenches, shovel tests, and augers. A total of ten concrete rails were recorded in parallel rows. The parallel rows were likely used for stacking and drying lumber at the R.F. Learned Sawmill.
Profiles of typical shovel tests excavated within the Learned Mill Road Disposal Area (digitized by author). The thin artifact zone included brick rubble, bottle glass, ceramic, plastic, and slate. However, because of the depths of the colluvial and alluvial soils across the area, the majority of the cultural material encountered during the shovel test survey was recently deposited.

During the shovel test survey ten concrete rail-like features set on top of the ground in parallel rows were located between ranges N245 W95, N240 W120, N213 W90, and N210 W115 (see Figure 6-11). The objects were shaped like train rails but were constructed of concrete. In a cross-section, the concrete rails measured 25 cm (10 in) wide on the base, 10 cm (4 in) wide at the top and were 20 cm (7 3/4 in) tall. The 10 rails appeared to be in two groups of four (rails 1 through 8) and the more eastern rails consisted of just a pair (rails 9 and 10) of rails. The westerly group of four rails (1-4) was approximately 6.6 m (21.7 ft) from the second group of centrally located four rails (5-8). The total length of the concrete rails was variable and ranged from approximately 28 m (91 ft) to 24 m (78 ft) long. The rails were spread across an approximately 800 square meter area.
The 1925 *Fire Insurance Map of Natchez, Mississippi* (see Figure 5-19) illustrates piles of lumber stacked from ground level to 20 ft high. The Learned lumberyard nearest the sawmill covered an area approximately 183 m (600 ft) north-south and approximately 91 m (300 ft) east-west. This was the area where freshly cut lumber was set on drying racks for shipment. Wood could sit for drying anywhere from a few months to a year. A circa 1920 photograph of the R.F. Learned Lumber Sawmill (see Figure 5-20) shows a several hundred foot area covered with cut lumber. The lumber appears to be stacked in rows parallel to the river and one another. From the photo it appears the long rows were composed of four or more support timbers or rails in parallel rows. The approximate area where the concrete rails were located during the shovel test survey corresponds with the location of a portion of the lumberyard shown on historic maps and photographs. Furthermore, the orientation of the stacks of lumber parallel to the river is consistent with the alignment of the concrete rails. Therefore, the concrete rails located during the shovel test survey were likely for drying lumber at the circa 1917-1961 R.F. Learned Sawmill. This would appear to be confirmed by Howard Peabody, Jr., former president of the R.F. Learned and Sons mill, who stated the company stacked lumber sometimes as high as 50 to 60 feet on concrete pilings in the 1940s and 1950s (Howard B. Peabody, Jr., personal communication 2002).

**Trenches**

As stated earlier the area encompassing much of the site of the Peter Little/Andrew Brown sawmill complex had been greatly impacted by oilfield production. Several subsurface oil pipelines (the locations of which were not shown on maps available to CEI) and oil wells limited the area that could be safely trenched using a backhoe. Furthermore, much of the riverside of the old Little/Brown Sawmill had eroded into the Mississippi River. Thus, archaeological trenches were limited to an area near the toe of bluff, across a roadbed, and partially into a floodplain. Mechanical trenching was carried out in this area in an attempt to locate several structures shown on historic maps and to relocate a possible hard living surface under the road identified during Boggess et al.’s (1997) survey. The buildings on the historic maps shown in this vicinity likely correspond to the antebellum tanyard located on Lot 31, the circa 1833–1841 Natchez Oil Mill located on the downriver side of Lot 32, and several support buildings and possible dwellings associated with the
Andrew Brown/Rufus Learned Sawmill on the upriver side of Lot 32. Therefore, it was anticipated that backhoe trenches would be able to penetrate below the recent thick colluvial and some alluvial deposits and reach cultural levels associated with the historic industrial complex near the toe of the bluff.

Following the establishment of the grid, seven backhoe trenches totaling 132 m (433 ft) in length were excavated in the project area (see Figure 6-11). Trench 1 was excavated on an east-west axis along the N20 transect between W00 and W21. Trench 1 was the southern most trench excavated along the toe of bluff and the road. The trench was excavated to a depth of around 1.75 m (5.75 ft) and was approximately 1m (3.3 ft) wide. Based on the observed stratigraphy of Trench 1 (Figure 6-13), the entire matrix appeared to be recent alluvium and colluvium. The excavation of Trench 1 yielded only 18 artifacts, which included six circa 1940s machine-made glass bottles, a wire nail, a decalcomania decorated whiteware sherd, and three sherds of undecorated porcelain.

![Figure 6-13. Profile of Trenches 1 and 7 (digitized by author). Trench 1 was the southern most trench excavated along the toe of the bluff and the haul road. Trench 7 was excavated on an east-west axis along the N135 transect between E15.0 and W01.0. Trench 7 was approximately 1 m wide and 14 m long. No artifacts were recovered from Trench 7 and Trench 1 yielded only 18 artifacts.](image-url)
Trench 2 was excavated on an east-west axis along the N45 transect between E08 and W16 (see Figure 6-11). Trench 2 was approximately 2 m (6.6 ft) wide. Trench 2 was excavated to a total depth of 2 m (6.6 ft) in the eastern sections and 2.6 m (8.5 ft) in the western sections. The first level of Trench 2, 0 to 10 cm, consisted of recent clay from bluff slumpage. Below this were several levels of clay clayey silt, and alluvial sand. The vertical depth in the trench ranged from the surface to approximately three meters.

A total of 912 artifacts were recovered from Trench 2, this included seven artifacts from the backdirt. The majority of the artifacts were collected from the west half of the trench. 711 artifacts were collected from section W00 to W05. Most of the 912 artifacts recovered from Trench 2 were identified as bottle glass. In fact there was such a high frequency of glass to any other artifact type as to such suggest this was dump site. Of the 209 whole or nearly complete glass vessels were identified from this assemblage, 91 were determined to be alcoholic beverage bottles, 32 were medical related, 36 were canning jars, 18 were condiment bottles, 13 were soda or cola bottles, 11 were cosmetic or perfume bottles, 7 were disinfectants, and 2 were fruit juice bottles.

From Trench 2, 186 datable bottles were excavated. The dates range for the bottles ranged from 1917 to 1969 (Table 6-1). The median dates for each of these vessels ranged from 1936.5 to 1952.5. A mean date of 1943 was obtained for all datable vessels. However, one bottle’s manufacture dates specifically after 1945. Thus, the dump was active to date at least to 1945, since the Fairmount Glass mark dates between 1945 and 1960 (Toulouse 1971:201). In fact all of the vessels in which manufacture style could be determined were machine-made, many were Owens machine-made. Given that the majority of glass vessels excavated from the deposit cease being manufactured in a particular style around 1953 and 1954, the trash dump encountered in Trench 2 appears to date between 1945 and the mid- to late-1950s.

A late 1940s date for the dump would appear to be supported by a few ceramic sherds recovered that had identifiable maker’s marks. One Shenango pottery mark recovered has a patent date filed in 1939 (Lehner, 1988: 419-423). A teacup with a McNicol backstamp dates between 1930 and 1954 (Kovel and Kovel 1986:145). Another maker’s mark with a “Made In Japan” stamp indicates that the ceramic was likely made prior to or after occupied Japan and thus likely dates between 1921 to 1941 or 1952 and the present
(Kovel and Kovel 1986). Some pieces of ceramics appear to date prior to WWII, but since ceramics tend to be curated, this would not appear to conflict with dating the dump between 1945-1954.

**Table 6-1.**

<table>
<thead>
<tr>
<th>Number of Bottles</th>
<th>Date Ranges</th>
<th>Median Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>1929-1954</td>
<td>1941.5</td>
</tr>
<tr>
<td>18</td>
<td>1919-1969</td>
<td>1944</td>
</tr>
<tr>
<td>18</td>
<td>1940-1954</td>
<td>1947</td>
</tr>
<tr>
<td>15</td>
<td>1920-1964</td>
<td>1942</td>
</tr>
<tr>
<td>12</td>
<td>1932-1953</td>
<td>1942.5</td>
</tr>
<tr>
<td>3</td>
<td>1939-1957</td>
<td>1948</td>
</tr>
<tr>
<td>1</td>
<td>1945-1960</td>
<td>1952.5</td>
</tr>
<tr>
<td>1</td>
<td>1917-1956</td>
<td>1936.5</td>
</tr>
</tbody>
</table>

Other artifacts collected from Trench 2 included rubber, metal, plastic, mortar, and shoe polish. Since much of the collection recovered from the deposit included whole bottles, it would appear that these artifacts were not likely from a bluff slumpage or being dumped over the edge of the bluff. The deposit was concentrated in a small area and apparently was dumped on site. The dates for the bottles and ceramics suggest a slightly earlier date for the dump than the mill’s abandonment in 1961. Median dates for bottles from the dump appear to cluster in the 1940s or 1950s. By 1965, only one of the former worker’s dwellings set against the toe of the bluff was still standing next to the recently abandoned sawmill and lumberyard (SMC 1965). The circa 1950s bottle dump could be associated with the abandonment of one of these former dwellings, but it is unclear if the artifacts were brought onto the site and dumped.

No historic artifacts were recovered from trenches 3, 4, or 5. In fact a plastic soda pop bottle was recovered at 3 meters below the surface in trench 4 and a piece of modern plastic was found near the base of excavation in trench 5. All three trenches were excavated to depths of around two meters. The soils of these trenches appeared to be recent alluvium and colluvium. Trench 6 was excavated on an east-west axis along the N125 transect. The approximately 1 m wide trench was 18 m long and excavated to a depth of 2.3 m. The first artifacts, brick flakes, recovered from this trench were around a meter below the surface. Around a meter and a half below the surface, a metal wire A&P grocery cart was excavated. Below this to near the base of excavation around two meters deep, the soil consisted mainly of a clayey-silt. Brick rubble, slate, and mortar were recovered in this stratum along with a .32 caliber long rim fire cartridge. Some of these artifacts
could possibly be associated with the later sawmill residents, but appeared to be intermixed with bluff slumpage. Trench 7 was excavated on an east-west axis along the N135 transect between E15.0 to E01.0. Around E05, brick fragments were encountered at a meter and a half below the surface. The brick appeared to be rubble and not intact. The depth of this trench ranged from 2.1 m to 3.9 m. The soils in Trench 7 (see Figure 6-13) appeared to be recent colluvial and alluvial deposits of sand, silt, and silty-clay.

The Landscape of the R.F. Learned Sawmill Complex

Presently, the former site of the circa 1917-1960s sawmill sits on private property in a pasture just east of the project area. The only surviving structure from the R.F. Learned or Andrew Brown Sawmill complex, with the exception of the breakwaters, is the circa 1900 mill office, which has been moved to the entrance to Magnolia Vale (Figure 6-14). Concerning the material landscape of the sawmill complex, besides the office, the reconstructed Magnolia Vale Big House occupies the same location of the home originally built by Andrew Brown. Much of the historic drive down Learned Mill Road and into the mill complex, still exists but the road to is now used to access the oil field. Other aspects of the historic sawmill landscape include the mammoth breakwater near the river's edge, the piers for the log ramp, and the rails for stacking timber.

Figure 6-14.
The former R.F. Learned Sawmill office now located near the entrance to Magnolia Vale. Besides the breakwaters, the old office is the only remaining structure from the sawmill operation. The office originally stood closer to the river near the old (pre-1917) sawmill.
Results of Archaeological Fieldwork at the Former Brown-Learned Sawmill Complex

Only a limited amount of archaeological material was recovered during the survey that provided information about the historically documented mill operation. Archaeologically there were no distinguishable historic living surfaces, horizons, middens, or architectural remains of the old mill encountered during the survey or during mechanical trenching around the circa 1818-1917 sawmill site. However, a few artifacts eroding from the beach appear to date form the mid-nineteenth century and could be associated with the old mill, but their context is unclear. However, the concrete features located near the riverfront including the remains of the breakwater, log ramp, and drying rack, provide additional details about the cultural landscape of Rufus Learned’s later sawmill operation, its changing layout, and its struggle with the river. Because of the paucity of artifacts at this site, most information regarding the lifeways of the workers must be drawn form historic documents.

The low density of archaeological deposits across the project area requires further explanation. The area investigated has been historically documented as both an antebellum and postbellum multi-faceted industrial complex. Much of the circa 1818-1917 sawmill site was covered in the 1920s and 1930s by a new sawmill complex. This site in turn was partially covered by a large amount of oil equipment in the late 1960s. Yet, some pockets of intact middens or features would have been anticipated even given all the disturbances within the area. However, the dynamic geological setting of this mill complex may be the more important rational for the lack of artifacts.

From the shovel tests, augers, and trenches excavated within the area of the former Andrew Brown sawmill, at least 2 to 4 meters thick layers of recent colluvial and alluvial soil deposits were found to be sitting on top of modern artifacts. Regarding the age and thickness of these deposits across this area, Church and Hunt (1984) state that the landmass in the general vicinity of the former Andrew Brown Sawmill has been sinking since historic times and is covered in many areas by thick deposits of sand, silt, and clay (Church and Hunt 1984:71). Large amounts of colluvial deposits from bluff slumpage as well as mudflows and to lesser degree alluvial deposits from the Mississippi River cover a large portion of the site. Furthermore, the eastern
migration and widening of the river have destroyed much of the circa 1817-1917 sawmill complex remains, some of which appears to be eroding onto the beach.

Evidence of the historic movement of the bluff near the site of the Learned Sawmill is based on borehole data, which contained historic cultural debris (Church and Hunt 1984:71). Historic debris, which included sawdust, boards, coal slag and bricks, representing the mill’s former land surface was found across the site at depths of 30 to 32 ft (10m) below the present surface (Church and Hunt 1984:64). Therefore, they concluded that the land surface of the circa 1818-1917 subsided episodically and as it settled it was being continually filled by cultural debris, colluvium, and more recently alluvium from the river (Church and Hunt 1984:73). Therefore, the extensive colluvial and recent alluvial deposits on top of the circa 1818-1917 sawmill site was a major factor in the paucity of historic cultural debris.

The archaeological data gathered through this research on the Andrew Brown and Rufus Learned Sawmill operation provided a very limited amount of material culture related to the operation of the early sawmill and the laborers who worked at the operations. The next section will expand upon the historical and archaeological analysis of mid-nineteenth century lumbering operations in Mississippi with a description of the cultural materials recovered from the site of the circa 1841-1869 Sisloff or Cozzens sawmill near Middle Landing at Natchez-Under-the-Hill.

Archaeological Investigations of the Sawmill at the Well Site (22AD993)

Data for this thesis was also obtained from fieldwork carried out during a U.S. Army Corps of Engineers, Vicksburg District project at Natchez-Under-the-Hill. The fieldwork was carried out by CEI to investigate the archaeological deposits at the Well Site (22AD993) in case they were disturbed or destroyed during riverfront construction. The fieldwork for this project was conducted from 1 July 1999 to 15 September 1999. The Well site is oblong in shape, measuring approximately 60 m (200 ft) north to south and 30 m (100 ft) east to west and covered an area of approximately .14 ha (.35 ac) area. As stated earlier, the Well site is a multi-component site that includes features associated with the remains of at least two late-nineteenth and early-twentieth century house sites as well a mid-nineteenth century sawmill. However, within
the present discussion, only those features and artifacts associated with the operation of the circa 1841-1869 sawmill will be discussed in detail.

Feature 4: Brick Foundation

Approximately two meters from the eastern side of the well (Feature 1), a brick foundation (Feature 4) was located (Figure 6-15). The approximately 10 ft by 10 ft feature’s west-side appeared to be on the verge of eroding out of the cut bank and possibly not long from partially collapsing. The square brick foundation appeared to be approximately one to two meters above the top of the well prior to excavation (Figure 6-16). The well appears to have lost a portion of the upper-segment due to erosion that could have made the well nearly the same height as the foundation. The foundation, or Feature 4, appears to have been located at the elevation of the mid-nineteenth century ground surface or the old sawmill ground level. A builder’s trench running along the foundation appears to confirm that this feature was constructed at this location and had not simply shifted there, though given the mass of the feature, any movement of this feature would have been unlikely. The thickness or industrial nature of Feature 4 is most likely the reason it survived the possible demolition of the mill and erosion of the river as well as colluvial flow from the bluffs. Subsurface testing around the foundation yielded virtually no artifacts and indicated that much of topsoil or former living surface of the mill had eroded into river.

Feature 4 measured approximately 2.9 m by 2.9 m (9.6 ft by 9.6 ft) (Figure 6-17). Near the center of the foundation, there was an inset square-hole that measured .66 m by .7 m (2.1 by 2.3 ft). The square foundation appears to be an industrial foundation. The foundation was at least six courses thick in sections (Figure 6-18). The location of Feature 4 appears to correlate with the northeast corner or projecting tip off of the rear of the sawmill (see Figure 5-10). This brick feature, from both its construction and location appears to be the foundation for the sawmill’s chimneystack. The solid construction of the feature would have been needed to support the weight of a smoke stack that could have been over 10 to 15 meters tall (30 to 50 ft), as well to protect from the enormous amount of heat. Given the apparent location of the foundation in relationship to the sawmill, the steam boilers were most likely located adjacent to the chimneystack and furnace in the northeast corner of the sawmill. Though the boilers likely sat next to the stack, the steam
engine could easily have been located almost anywhere within the mill structure since steam could be sent by pipes from the boilers to various points. Thus, from the apparent location of the chimney foundation and steam boilers, the well’s close proximity to Feature 4 makes sense. The well would likely have had a pump and a system of piping or aqueduct supplying water to the boilers and thus was located fairly close to the furnace and boilers in the northeast corner of the sawmill.

Figure 6-15.
Plan view of Feature 4. Note the southwest corner eroding, just beyond and below this corner is Feature 1 covered by tarps. Feature 4 appears to be the foundation for the sawmill’s chimneystack and represents the elevation of the old ground surface.
Figure 6-16.
Crew member drawing Feature 4, while the author works below inside the well. Note the difference in elevation between the foundation and the top of the well.
Figure 6-17.
A digitized plan view of Feature 4 (digitized by author). The brick foundation appears to have supported an industrial chimney stack.
Feature 4 provides the best evidence for the alignment and layout of the historic Sisloff or Cozzens sawmill. From this location of this feature as well as the historic 1864 Hains map and Piercy’s 1850 drawing, we know that the sawmill was oriented perpendicular to the river and that the chimney and boilers were located in the northeast corner of the sawmill. The area around this feature, near the furnace and boilers during the mill’s operation, would have been one of the most dangerous and challenging locations within mill complex for laborers to work. Logs would have entered the front of the mill along the log haul, which probably stretched from the river’s edge, where timber rafts were stored, to the front door of the mill. Workers guided logs with hooks along the mechanized log haul or ramp into the building and onto the carriage. After traveling down the carriage and being squared, the cut lumber probably came out the rear or downriver side of the mill and was likely stacked along the toe of the bluff.

No historic deposits associated with the former living surface of the sawmill were located near the foundation, nor were any other features associated with sawmill operation besides Feature 1 (the well) and Feature 4 (the chimney foundation) located during archaeological testing of this area. Erosion along the cutbank was causing even the collapse of the substantial Feature 4, which appears to historically been located.
near the rear of mill, furthest from the river. Furthermore, colluvial deposits from bluff slumpage covered much of the area between what would have been the rear of sawmill and the toe of the bluff. While testing and stripping this locale, most of the soils encountered were a sterile colluvial and alluvial matrix. One of the most significant artifacts found near Feature 4 was a peavey hook, which was located a few meters east of the foundation. Peavey or cant hooks were used by lumber workers to hook, roll, and pull logs out of the river or along the log haul into the mill carriage system. The peavey recovered near the chimney foundation was nearly identical to ones advertised in turn-of-the-twentieth century lumber catalogs and was likely used by laborers at the Middle Landing sawmill (Bryant 1913).

Feature 1 – The Well

Previous Investigations of Feature 1

As stated earlier, the brick-lined well (Feature 1) was located during CEI’s 1998 summer survey of the Well site (22AD993) for the Natchez Riverfront Revetment. A shovel test excavated within the interior of the feature encountered large quantities of brick and could be excavated only to 80 cm bs. In April of 1999 CEI mechanically excavated an area adjacent to the well so that additional studies could be made of Feature 1. Upon arrival at the site in April 1999, the riverine erosion had exposed a brick feature attached to the northwest quadrant of the well (Hahn 1999b). The recently exposed attachment possessed only a top and two sides, the bottom being unlined, and attached to the well through an opening in the well wall.

Feature 1, Site Preparation

When the well (Feature 1) was initially located in 1998-1999 a mature honey locust (Gleditsia triacanthos) had taken root around and in the upper portion of the well (see Figure 4-3). Since the interior of Feature 1 was to be excavated, it was determined that the tree had to be cut. Once the honey locust tree had been carefully removed, the brick-lined well was more fully visible. It appeared that a portion of the top of well had broken off within the last few years because of riverbank erosion (Figure 6-19). Therefore, given the presumed height of the ground surface during the sawmill’s operation from the brick foundation (Feature 4), which was 1 to 2 m (3.3 to 6.6 ft) above the well, it was estimated a similar size portion of the upper section
brick-lined segment of the well was once above the current top. At the initiation of the excavations, it was unclear how much of the well existed below ground.

Figure 6-19.
A photograph of the well showing the inlet/outlet feature projecting from it. Note the base of the brick foundation (Feature 4) protruding from the toe of the bank. The photograph is to the east-south-east.
The brick-lined well had a sand-lime mortar that was nearly non-existent and thus made the feature unstable. Therefore, some of the surrounding sterile sand had to be removed by a backhoe and by hand to relieve pressure on the exterior of the feature before excavations could commence. The exposed exterior top portion of the well, including the builder’s trench, was cleaned by hand and screened for artifacts. The builder’s trench had very little cultural material other than brick flakes, coal, and small iron fragments. No dateable artifacts were recovered within the builder’s trench. After the external cleaning and stabilization was complete Feature 1 was more clearly exposed and approximately 25 courses of brick were standing at a height of around 1.5 m above the surface (see Figure 6-19).

During the exterior cleaning of the well the drain/inlet attachment to the well was fully exposed. The drain/inlet feature abutted to the northwest quadrant of the well (see Figure 6-19). During the course of the cleaning process, it was found that the three-course thick feature sloped downward into the well on a 1/6° slope and was attached to the well about a half a meter below the existing top of the well. As stated earlier, the drain/outlet feature only had only a brick-lined top and two sides, the bottom being unlined. The opening in well appears to have been retrofitted and was shaped as an arch. Brick scatters aligned with the drain/inlet indicate that it was once was at least another 1.5m long.

Hand Excavations of Feature 1, the Well

The top of the deposits or level 1 within the well was 16 centimeters below the broken top of the brick well rim. The soils in the upper 80cm of the feature appeared to be a loose uniform sand and silty-sand (Table 6-2). Therefore the excavation of Feature 1 was conducted using arbitrary 10 cm levels intermixed with some natural levels when significant soil changes were encountered. Using a datum established on the southwest side of the well, excavated material was water-screened through ¼” mesh for the first 60.5 centimeters below the datum (cmbd). For levels 5 (60.5-70.5 cmbd) to level 58 (590-600 cmbd) ¼” and 1/8” screen mesh was used. Artifacts were sorted into bags depending on their size and fragility. Floatation samples were taken from several levels in which the artifact density was high. Furthermore, brick and mortar samples were taken from the brick courses composing the well.
Table 6-2.
Generalized soil stratigraphy of Feature 1 (digitized by author).

The reworked bricks surrounding the inlet hole were first encountered soon after the initiation of the excavations within the well. The 25 course high and 5 course wide retrofitted brick area spanned from approximately 35.5 to 190.5 cmbd. The inlet/outlet hole in the well was exposed between 70 and 110 cmbd (Figure 6-20). The inlet or outlet hole itself measured 18 cm wide and approximately 35 cm tall. The hole in the well wall abutted a two-course thick inlet/outlet feature, which appeared to have no bottom. The drain inlet/outlet projected out from the well for a distance of approximately .5 m. However, as stated earlier, surface brick scatters indicated that the drainage was at least 1.5m long or longer before eroding out. The top of the outlet hole was fitted with an arch, which provided additional support by distributing the structure load of the well around the opening. Two 61 cm (2 ft) long iron bars were found just above and below the arch that provided additional support. These architectural features affirmed that the inlet/outlet hole was intentionally built into the well wall and was not simply a group of missing or disorientated bricks.
Figure 6-20.
Drawing of the interior west-side of the well showing the inlet/outlet hole and the bolts found at the gaps between courses (Drawn by Thurston Hahn and Jerame Cramer; digitized by Curtis Latiolais).
Bonded with a slightly different mortar than the remainder of the well, both of the arches, some of
the surrounding bricks, and the drainage attachment appears to be a later addition to the original well
construction (Figure 6-21). Interestingly, the attachment was not constructed integrally to the wall. Rather, it
simply touches the opening in the well wall. Indeed, there is very little mortar joining the two. The well was
most likely fed by the historically documented spring or stream that runs through the old Minor Lot 16, and
still evidenced today. The opening appears to have been retrofitted into the well so additional water could be
pumped into the well (possibly from the river) so it could be used like a cistern, or, so overflow from heavy
rains would drain out of the well before the water level could rise into the machinery. Additionally, the outlet
could have been set up like an aqueduct, whereby a pump was used to push water out of the hole through a
system of ducts to the boiler room and thus providing a steady stream of water to the steam engine without
having to rely on cisterns and prior to the operation of the city waterworks. The missing bottom of the two-
course thick brick feature may indicate that a metal (copper or tin) pan or piping was used for the base to
carry water. The metal drainage pan may have eroded or been salvaged after the mill operations shut down.

Just above two meters below the datum, near the base of the replacement bricks for the patch, a
seam in the well wall was exposed. The seam appears around 190.5 cmbd as a gap in the brickwork. The
seam contained a high concentration of machine cut nails, iron rods, spikes, and bolts within the gap in the
wall (see Figure 6-20). The presence of nails, bolts and spikes suggest that wood planking was used in the
well’s construction. One possible explanation is that the well was constructed in stages or lifts. The well may
have been constructed by excavating a large hole or shaft, which was then lined with bricks. However, the
bricklayers could lay bricks only as high as they could reasonably reach, probably only six to seven feet. Once
that level was reached, it would become necessary to construct a platform, undoubtedly wooden, on which
the workmen could complete the next lift. In such a fashion, the well wall could be completed in a series of
lifts or stages. The high concentration of nails and iron as well as the wood remains may be indicative of
such a platform used during construction of Feature 1. The gap in the bricks around 190 cmbd would
indicate that this depth was the base of segment one and the top of segment two.
Figure 6-21.
A photograph of the interior around two meters (six feet) below the datum showing the apparently retrofitted inlet or outlet hole in the west side of the well.

Further evidence that the well was constructed in a discontinuous fashion or in lifts is provided in the brickwork. Below the gap present at 200 cmbd, the bricks are laid in a typical course-like fashion—one layer (course) on top of another. However, the upper 200 cm of the well above the gap was constructed quite differently. Rather than laying the bricks in courses, the bricks were laid in a spiraling counter-clockwise corkscrew manner. Not readily visible in plan view, particularly in a deteriorated condition, the efforts of the bricklayers are readily apparent in profile (see Figure 6-20). It is unclear what advantage such brickwork might possess and why the bricklayers or designers alternated between the two patterns. Following the recordation of the gap or seam and the retrofitted inlet/outlet hole in the well wall, excavations continued on deeper within the interior of the well.
During the excavations of level 22A and 23A (around 220 to 230 cmbd) a crack in the brick wall of the well was noticed on the upper segment of well that protruded above ground and had been recently excavated. The crack in the well started at the top of the bricks near the datum and went to around 190cmbd, at the gap in the well segments (Figure 6-22). Therefore, the upper brick-well cylinder had to be removed for safety reasons to avoid collapse. Given that the well had been excavated to a depth of 230 cmbd, the brick-well wall was disassembled to around 180 cmbd. Brick and mortar samples were kept from the well, drain, and patch. The two iron support rods from the arch were bagged for conservation. The datum, which was originally at the top of the well, was lowered two meters.

Figure 6-22.
Soon after excavating below the retrofitted drain, the upper brickwork split in half. The remaining upper-portion of bricks was removed by hand so excavations could continue.
Around the end of level 32E and 32F (340 cmbd) artifact density increased significantly (Table 6-3). Several brass bolts, a large iron bucket and a five-gallon barrel were exposed amidst pieces of bone, bottle glass, and pipe stems. The large amount of metal recovered from levels 32, 33, and 34 included a cast iron machine arm, part of an iron frame, a tin sardine can, the base of a tin can, and several machine cut iron nails and spikes. At the base of level 33E the top of one of the mill’s sash saws was visible. Artifact density within these three levels was much higher than the previous strata. The saw blade was exposed clearly by level 38 (Figure 6-23), and conversely artifact density increased across the level when compared to previous levels 35 to 37. The artifacts from level 38 appeared to be a mixture of food items, recreational beverages, and machine parts from the sawmill.

Between level 38E and 39E another segment in the brick-well was uncovered. Around 400 cmbd, there appeared to be a junction between the second and third segment of the well. Thus, segment 2, like segment 1, appeared to span a depth of approximately 2 m (6.56 ft). Around the interior wall of the well, between levels 38 and 39, three iron bolts and nuts were recovered along with 126 machine-cut nails. Again, this would appear to indicate that some form of platform, likely wooden, was placed at this depth during construction to assist the workers in reaching higher.

Around four meters below the datum the sawblade was clearly discernible. Other artifacts recovered near the mill saw included: an early blue shell-edge whiteware plate (Figure 6-24), a molded early ironstone mug (Figure 6-25), the neck and base of a champagne bottle, a faceted clear-glass tumbler, a molded “Dr. Wistar’s Balsam of Wild Cherry” medicine bottle (Figures 6-26), a flow-blue decorated plate (Figure 6-27), brick, a sardine can (Figure 6-28), iron machine parts, cut nails, shoe nails, a 54 caliber Burnside minie-ball (Figure 6-29), a three-piece dip-molded preserve jar (Figure 6-30), coal, and wood. A high concentration of faunal material was also recovered within these levels including: hacked, sawn, and cut pig and cow bone, oyster shell, and a human tooth from level 41.
Table 6-3.
Nine major depositional events within the well.

<table>
<thead>
<tr>
<th>Levels</th>
<th>Depth</th>
<th>Dominant Soil Characteristics</th>
<th>Artifact Density</th>
<th>Comments</th>
<th>Notable Artifacts Recovered within each Depositional Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 14A</td>
<td>16.5 - 160.5</td>
<td>Silty-Sand with Cintronella Gravel</td>
<td>Low</td>
<td>Inlet/Outlet Hole</td>
<td>Brick fragments, mortar, machine cut nails, window glass, clear-blue bottle glass, olive bottle glass, ironstone, early whiteware sherds from an undecorated flatware vessel, wood, and unidentified iron.</td>
</tr>
<tr>
<td>15A to 23E</td>
<td>160.5 - 242</td>
<td>Sand with Pockets of Silt</td>
<td>Low to Medium</td>
<td>Gap Between Segment</td>
<td>An annular-decorated whiteware saucer, an ironstone rim sherd, hand-painted whiteware, sherds of porcelain bowl, yellowware, portions of a clear-blue pickle jar, shoe leather, machine cut nails, egg shell, a few bone fragments, a S. cingulata (pig) tooth, and oyster shell.</td>
</tr>
<tr>
<td>24D to 31E</td>
<td>250 - 330</td>
<td>Sand and Silty-Clay</td>
<td>Medium to Low</td>
<td></td>
<td>Sherds from a whiteware saucer, an undecorated pearlware sherd, part of a stoneware bottle, sherds of an ironstone hollowware vessel, pieces of a tin can, machine cut nails, shoe nails, a four-hole button, amber and olive colored bottle glass, coal, and mortar.</td>
</tr>
<tr>
<td>32E to 38E</td>
<td>330 - 400</td>
<td>Sand and Silty-Clay</td>
<td>Medium</td>
<td>Top of sawblade exposed</td>
<td>Several brass bolts, a large iron bucket, a five-gallon barrel, pieces of bone, pipe stems, a large amount of metal fragments, an undecorated ironstone plate and cup, a sherd of Rockingham yellowware, an olive-glass bostonneck, and a 20 cm long piece of wood.</td>
</tr>
<tr>
<td>38H to 42H</td>
<td>390 - 440</td>
<td>Silty-Sand with Clay and Charcoal</td>
<td>High</td>
<td>Base of Sawblade; Second Segment Gap Exposed</td>
<td>Blue shell-edge whiteware plate, a flow-blue whiteware plate, a molded early ironstone mug, olive-colored bottle glass, the base of a champagne bottle, the neck of a champagne bottle with a string lip, a faceted clear-glass tumbler, the neck of a pickle jar, a three-piece dip-molded preserve jar, &quot;Dr. Wistar's Balsam of Wild Cherry&quot; bottle, brick, a sardine can, metal strap, iron machine parts, unidentified iron, machine cut nails, shoe nails, a minie-ball, a rush swab, coal, wood, hickory, sawn, and cut pig and cow bone, oyster shell, and a human tooth.</td>
</tr>
<tr>
<td>43I to 48I</td>
<td>440 - 500</td>
<td>Silty-Sand with Clay</td>
<td>High to Medium</td>
<td>Concentration of Coal</td>
<td>Four-hole bone and Proctor bottles, an unglazed stoneware tobacco pipe bowl, a kaolin clay pipe stem, a molded ironstone mug and teacup, a flow blue early whiteware saucer, a black wire-wound glass bead, the base of an amber-colored beer bottle, a whole free-blow olive oil bottle, a three-piece dip-molded amber bottle with a lipping tool finish, the mouth of a clear-blue preserve jar, the base of champagne bottle, window glass, a &quot;MAGICAL EYE WASH&quot; medicine bottle, a whole English wine bottle, a clear-glass tumbler, a portion of a blue edge whiteware plate, shoe leather, a brass cuff link, machine cut nails, spikes, iron machine parts, brick fragments, and a 125 cm by 20 cm wide board.</td>
</tr>
<tr>
<td>49I to 52I</td>
<td>500 - 540</td>
<td>Sand and Silty-Clay</td>
<td>Low</td>
<td>Concentration of Coal</td>
<td>Oyster shell, faunal remains, machine cut nails, bottle glass, a wine bottle base, sherds of whiteware and ironstone, brick, and coal.</td>
</tr>
<tr>
<td>53J to 56J</td>
<td>540 - 580</td>
<td>Sandy-Clay</td>
<td>Medium</td>
<td>Water table of Spring</td>
<td>Sherds from a transfer-printed pearlware plate, olive-amber bottle glass, a portion of a patent medicine bottle, a glass bead, faunal material, wood remains, a minie-ball, a pocket knife, a marble, a hand-painted porcelain button, a whole champagne bottle, coal, several iron machine parts and a door hinge, bricks stamped with &quot;US&quot; and &quot;...Some...&quot;.</td>
</tr>
<tr>
<td>57J to 58K</td>
<td>580 - 600</td>
<td>Sand with Pockets of Clay</td>
<td>Low</td>
<td>Base of Well</td>
<td>Nails, brick fragments, and wood.</td>
</tr>
</tbody>
</table>
Figure 6-23.
The interior of Feature 1 showing the excavation floor at four meters (thirteen feet) below the datum. The top of a sash saw blade and a wine bottle are visible.

Figure 6-24.
A photograph of the interior of the well showing the excavation at 410 centimeters below the datum. Note the saw blade and portions of a Davenport plate. Also note the gap between the brick segments indicated by the protruding brick within the well.
Figure 6-25.
Several molded ironstone ceramic vessels were located within Feature 1 including two bowls and drinking cups. Included within this set were a reconstructed coffee mug, vessel number 36 (a.) and vessel number 30 (b.) a reconstructed early ironstone teacup.
Dr. Wistar's Cherry Balm a mid- to late-nineteenth century medicine was thought to heal lung ailments. Top: Reconstructed vessel number 3 was an early bottom-hinged molded bottle with a hollow glass rod pontil scar. The bottle has a date range of 1830 to 1860. Bottom: A reproduction of an 1843 advertisement for Wistars's Balsam.
Figure 6-27.
Early flow blue whiteware sherds recovered from Feature 1 shown at 100 percent. There appears to be at least two vessels, possible a bowl and a teacup.

Figure 6-28.
A photograph of portions of two sardines cans from the well. This type of can likely dates just prior to the Civil War. The more complete can on the right is vessel number 16. This can was located in level 34 (350-360 cmbd).
Figure 6-29.
Three firearm rounds were recovered from Feature 1 shown at 100 percent: a.) .577 caliber minieball found in level 54, b.) 54 caliber Burnside found in level 41, and c.) a 36 or 38 caliber pistol round found in Level 1.

Figure 6-30.
Among the vessels recovered from Feature 1 were several clear blue preserve and pickle bottles (a). Included among the whole bottles recovered was a free-blown olive oil bottle with a folded lip (b).
Near the base of level 42E/H (around four and a half meters deep) the cast iron saw blade was fully exposed (Figure 6-31). The saw blade was situated in the well lengthwise and orientated northwest to southeast. The blade was bent, but still was in excellent condition given it likely dated to the abandonment of the Cozzens sawmill around 1869 or earlier. The saw blade was removed at the end of level 42 (440 cmbd) and was immediately photographed, measured, and placed in a conservation tank. The iron saw blade (Figure 6-32) measures 211 cm (83 in) long, 15 cm (6 in) wide, and .5 cm (.25 in) thick. There were originally 28 teeth on the saw, which works out to be approximately 6 teeth per foot. The saw teeth on average measure 5 cm (2.5 in) from the tip of one tooth to the next. The teeth are about 4 cm (1.5 in) long.

Figure 6-31.
A photograph of the interior of Feature 1 at 440 cmbd. The sash saw blade was fully exposed at this level. Note the artifacts across excavation floor including an ironstone cup, a bottle mouth, and a bottle base.
Figure 6-32.
A photograph of the approximately 211 cm (83 in) long sawblade soon after it was excavated. Note the tapered top and bottom ends of the saw that have no teeth and were likely locked into the sash frame.
The upper 42 cm (16.5 in) of the saw is tapered and does not have any teeth. This tapered end would have been bolted and clamped into a wooden frame in the mill that resembled a window sash. (Figures 6-33). The bolt hole in the tapered end of the saw had a diameter of approximately 2 cm (.75 in). The sash lifted the saw up and down by a series of gears or belts that were turned by the steam engine. The saw blade would likely have cut on the down stroke at an approximate rate of two strokes per second or 120 strokes a minute continuously during the milling process (Williston 1976). A mechanical carriage pulled the logs past the saw.

Figure 6-33.
Historic sash saw at a sawmill in Rappahannock County, Virginia recorded for the Historic American Building Survey (HABS, VA, 79-SPER.V 2). This appears to have had a similar setup with the saw and carriage as the Cozzens mill except the Natchez operation was steam-powered and may have had two or three saws.
The mill may have contained anywhere from one sash saw to a set seven or eight. However, given the historic documentation of this mill’s daily capacity, this smaller operation was likely only using a gang of two, three, or four blades. It is unclear if the large mill saw recovered from Feature 1 was dumped because it had been damaged or if the owner at the time had upgraded to another blade and the fill was from a renovation. Furthermore, the blade could have been deposited into the well when George Roth or William Fox leveled the mill around 1869. Given, the iron blade appears to be from a mid- to late-nineteenth century sash sawmill, the blade was likely part of the machinery used at the Sisloff or Cozzens sawmill.

The first six levels excavated below the saw blade, levels 43 to level 48 (440 to 500 cm below datum), had significantly high amounts of artifacts, although the artifacts were not quite as numerous nor the size as seen in levels 38 to 43 (see Table 6-3). A large number of artifacts were recovered just below the sawblade including: several buttons, an unglazed stoneware tobacco pipe bowl (Figure 6-34), a molded ironstone mug and teacup (see Figure 6-25), a flow blue early whiteware saucer (see Figure 6-27), a black wire-wound glass bead (see Figure 6-34), a free-blown olive oil bottle (see Figure 6-30), a molded “MAGICAL EYE WASH” medicine bottle (Figure 6-35), a complete English wine bottle (Figure 6-36), a tumbler, shoe leather (Figure 6-37), a brass cuff link (see Figure 6-34), machine cut nails, iron machine parts (Figure 6-38), and a 125cm long and 20 cm wide board. These artifacts appear to be a mixture of food items, personal/adornment items, and architectural/machine parts.

Below the deposits surrounding the sawblade, around five meters (16 feet) below the datum, artifact density had diminished with the exception of a large amount of coal (see Table 6-3). Approximately 10,700 pieces weighing a total of 4.6 kilograms were recovered just from level 48. Around 550 cm below the datum, the historic spring feeding the well was encountered. Thus, in level 54, 5 to 7 centimeters of standing water was on top of the deposits. Artifacts from this section of the well included a piece of transfer-printed pearlware plate, a portion of a patent medicine bottle, a second wire-wound black glass bead (see Figure 6-34), well preserved faunal material (Figure 6-39), wood remains, a minie-ball (see Figure 6-29), a decorated pocket knife (see Figure 6-34), a hand-painted marble (see Figure 6-34), a hand-painted porcelain button (see Figure 6-34), a whole champagne bottle (Figure 6-40), machine parts, an iron door hinge, and fired bricks.
stamped with “US” and “....Sons.” The artifacts in this section of the well appeared to be concentrated on top of clay deposits in the north end of Feature 1, while the south half of this cylindrical feature was sandy and had a much lower density of artifacts. Again, it appears that the primary or secondary deposits encountered between levels 53 to 58 represent a mixture of personal items, architectural items, and items related to foodways.

Figure 6-34.
Artifacts categorized as Personal or Adornment items shown at 100 percent. Some of the artifacts recovered from Feature 1 within this category included: a. a mother of pearl inlaid pocket knife from level 52I; b.) an early hard rubber comb from level 55J; c.) a stoneware reed pipe recovered from levels 40H and 45I; d.) a brass cufflink with a mother of pearl center from level 44; e.) wire-wound black glass bead from level 43I; f.) black glass bead from level 55J; g.) a hand painted porcelain button from level 55J; h.) a four-hole bone button from level 16A; i.) a four-hole bone button recovered from level 16A; j.) a hand-painted clay marble from level 55J that likely dates between 1850 and 1890.
Several sherds from embossed medicine bottles were recovered from Feature 1 including: a.) Vessel number 35, a hinge-bottomed molded “EYE WATER” bottle with a pontil scar; b.) Vessel number 7, ”CARMINATIVE SYRUP” bottle also bottom-hinged molded. Bottles are shown at 100 percent.
Several bases and lips of English and French wine bottles were recovered from Feature 1. Two reconstructed wine vessels included: a.) Vessel number 4, a string-lipped French Wine bottle; b.) Vessel number 18, likely an English wine or ale, had an early double collar neck with a lipping tool finish.
Figure 6-37.
Shoe Leather remains from Feature 1. Approximately 110 artifacts that were identified as shoe parts were recovered from Feature 1.
Figure 6-38.
Several machine parts and tools were recovered from Feature 1. Top: a.) part of a crank arm from the mill’s machinery (level 53J); b.) an industrial-sized open face wrench (level 54J). Below: Several pieces of possible steam piping were found including gaskets, pipe caps, and an o-ring found in level 42H.
Figure 6-39.
Sample of faunal material recovered from Feature 1 including a cow mandible, cow vertebrae, a cow molar, pig incisors, two bird long bones, a pig humerus, and part of a cow’s ulna.
Figure 6-40.
One complete and one nearly complete champagne bottle: (a.) Vessel number 41 was recovered from level 55J; (b.) reconstructed vessel number 17 from levels 41E and 42H. Several bases and lips of other champagne bottles were also recovered in Feature 1.
At the base of Level 54J (about 560 cmbd) at least 10 cm of standing water was on top of the level within the well. A sump pump was used to drain the water from the well prior to further excavations. However, the water quickly filled back up in the brick feature through its porous walls. The pump removed the water at nearly the same rate the water flowed into the well from the natural spring beneath it. Therefore, the water level remained a constant 10 to 15 cm depth within the feature.

Level 56J (570 to 580 cmbd) appears to begin a tapering off of artifact concentration that continued until the base of the well. Within level 57K (580 to 590 cmbd), the end of segment 3 was exposed around 585 cmbd. Several nails and spikes were again recovered around the seam area. From around 585 cmbd to the base of excavation (600 cmbd), yellowish-brown alluvial sand with very little organic material was the dominant matrix. With the exception of a few nails and spikes, very little cultural material was recovered in this sandy-gravel stratum. Each level closer to 600 cmbd appeared to have less nails, brick fragments, wood, and artifacts than the previous levels. Within levels 57K and 58K, the underlying course or bottom row of bricks for the well feature was exposed. Brick samples from the base of the well were removed for comparison with bricks removed from other sections of the well. Therefore, the base of the brick-lined well sat almost six meters below the datum. The soil at the base of excavation (600 cmbd) was nearly pure sterile sand.

**Discussion of Feature 1**

The archaeological investigations of Feature 1 appear to confirm that this feature was a brick-lined well and likely dated to the mid-nineteenth century. However, the inlet/outlet patch near the top of the well indicated that the feature had been modified after its construction, possibly to function more as a cistern for water storage or vice-versa to be used as unit where water could be pumped from it at a steady rate. The top of the brick-lined well broke off prior to its location in 1998. From excavations, it is known that at least three 2 m segments of the well remained underground. It would appear likely that a one to two meter segment sat on top of what is currently labeled Segment 1. An additional one to two meter (three to six feet)
would have placed the top of the well at nearly the same elevation of Feature 4, which would have been equivalent to former land surface of the circa 1841-1869 sawmill.

The well appears to have been constructed in at least three stages, possibly four. Evidence for this comes from the concentration of nails, bolts, and spikes found around the rim of the well at 2 m increments. Additionally, some of these nails and spikes recovered had wood grains encrusted on them and remains of wooden boards were recovered from the interior of the well at various levels. This would indicate that the well had been constructed in a series of lifts, whereby a shaft was excavated and a wooden platform attached to the base. The shaft was then lined with bricks. The brick masons laid bricks as high as they could reasonably reach, probably only six to seven feet (two meters), which is equivalent to around thirty courses of brick. Once that level was reached, another platform would be constructed, undoubtedly wooden, on top of the completed segment so the laborers could complete the next lift. The old platforms were likely removed or destroyed. The former location of the platform would be indicated archaeologically by the gaps, concentration of nails and spikes, and wood remains.

Further evidence that the well had been constructed in a series of stages or lifts comes from the brickwork. The brick courses appear to spiral downwards in a counter-clockwise fashion until around two meters below the datum. After a small gap, the upper 2 m spiral coursework rested on a single course of bricks laid on end. Below this course, the remainder of the well appears to be laid in typical course-like fashion—one layer (course) on top of another. The different brick patterns separated by a concentration of nails and spikes would appear to reaffirm the argument that the well was constructed in different stages. Although the well appears to have been built in stages, the brick and mortar samples taken from the top to bottom of the well indicate that it was constructed of the same type of brick and mortar throughout the feature and therefore indicates that the entire well, with exception of the outlet, was constructed around the same time period.

The historical data suggests that enslaved laborers carried out many tasks at these early sawmills. Therefore, the construction of the well was an unsavory and dangerous task likely carried out by enslaved laborers working at the Middle Landing sawmill prior to the Civil War. More specialized enslaved masons
could have also been rented out from other owners in the area to assist in the construction. Some of the smaller personal artifacts recovered from the well could be from this early date as workers lost items like a knife, or button, or a necklace while working in and around the feature. Other artifacts within the well could have come from laborers, enslaved or free, throwing in some small trash items like chicken bones while working around the well. However, a large part of the deposit, in particular the upper four meters, within well appears to be intentionally re-deposited there later during either a renovation at the mill such at the refurbishing Brown Cozzens mentions in 1852, or during George Roth’s clearing of the site, or possibly during both events.

Given the brick-lined sawmill’s orientation on the 1864 Hains map (Figure 6-41), the well appears to have been located on the rear upriver-side of the sawmill, likely adjacent to the steam boiler(s) or engine room. The well likely provided water directly to the boiler(s). The often-retrofitted steamboat boilers, like engines, used in early sawmills usually came in a variety of sizes. Unfortunately, no historic documentation was found regarding either the size of the engine or boilers the Sisloff-Cozzens sawmill had during its approximately thirty years in business. However, historic documents describe the Andrew Browns sawmill in the 1840s and 1850s as having a 100 horsepower engine and three and later four double-flue variety steam boilers, which were approximately 24 ft long and with a 42 in diameter, purchased from Leeds and Company of New Orleans (Moore 1967:113,114).

Given that a steamboat uses about 375 gallons an hour with two engines, the single steam engine at the Cozzens mill likely required around 130 to 140 gallons an hour. Thus, during a 10-hour day, the boilers would require around 1300 gallons of water. The sawmill at Middle Landing may have solved this problem by having the well supply water to the boilers via a pump and a system of piping possibly evident by the inlet/outlet recorded near the top of the well. The well drew water from the spring that bisects the property. This type of system would have freed the mill operators from having to rely on cisterns or filtered river water. The sump pump used to clear water for the excavations pumped 20 gallons of water every three minutes out of the well, while maintaining a constant water level near the base of the well. Thus, presently the spring appears to be flowing at a rate of around 400 gallons an hour, which would appear adequate to supply water.
to at least one, possibly two, steamboat-size engines. A constant supply of water would have aided the boiler operator having to watch gauge cocks, sight cocks, or even listen for the sounds to indicate when more water was needed, because letting the water level below a proper level could have deadly results.

Figure 6-41.
Map showing the location of Feature 1 and Feature 4 in relation to the 1864 Hains map showing the location of the sawmill. Note the spring and approximate location of the Mississippi River currently (digitized by Curtis Langlois).
Besides supplying water to the mill and possibly a source of water for the workers, the well may have been a collection hole for refuse. Within the brick-lined well a diversity of cultural material was removed from the feature. Some of these artifacts appear directly related to the circa 1841-1869 sawmill operation including the sash saw and parts to a steam boiler and therefore reveal information regarding the technology employed at mill. These artifacts may also allude to the financial plight of the Middle Landing sawmill. Other artifacts may provide data about the diet and material possessions of mill workers, most of whom were likely enslaved, and possibly their access to markets in Natchez.

**Analysis of Artifacts Recovered From the Well**

Between 1867 and 1871, the former sawmill at Middle Landing was likely destroyed. One explanation for the mixture of industrial and personal/domestic debris, is that William Fox and George Roth closed down and cleared the unprofitable sawmill removing several buildings including the mill and possibly a “tenement,” boarding house, or outbuildings and pushing some of this material into the open well. Thus, many of the artifacts within the feature were collected from around the former mill complex and used to fill in the open hole. Therefore the cultural material within the well must be carefully scrutinized because its origins are not clear, but it may provide one of the few samples of food, beverages, and material culture of a mid-nineteenth century sawmill in the Lower Mississippi Valley.

During the excavation of the well approximately 9.64 m³ or 340.3 ft³ (± .68 m³ or 24 ft³) of soil was removed. Within this feature, 147,903 items including gravel, concretions, baked clay, and shell, were excavated during the 1999 fieldwork. A total of 132,223 artifacts greater than ¼-in in size were recovered from Feature 1. An additional 29 artifacts were recovered during the exterior cleaning of the well and the builder’s trench. Included among the 132,252 recovered artifacts were 184 ceramic sherds, 836 glass sherds, 6,564 pieces of metal, and 1,971 pieces of faunal material. Also included in this total was 19,603 pieces (459.3 kg) of brick, 4408 pieces (.42 kg) of charcoal, and 62,075 pieces (34 kg) of coal. Not included in the ¼” artifact total was 14,301 pieces (52.9 kg) of gravel. Additionally, a 10 percent sample of the 1/8-in matrix was sorted, weighed, and counted. A total of 79,896 1/8” artifacts were recovered from the 10 percent sample,
excluding gravel, concretions, baked clay, and land snail shells. From the 1/8\textsuperscript{th}-in sample, 47 sherds of ceramic, 143 glass shards, 2,041 pieces of non-human bone, and 4,612 pieces of metal were recovered.

The analysis of these materials attempted to determine if this assemblage represents cultural material from the circa 1841-1869 steam-powered sawmill that was located at this site. If this assemblage appears to be from the operation of the mill, could any of the remains be related to the workers who toiled and lived near this early industrial complex and what does the material culture tell us about their lives? Historic documents indicate that in the late 1840s and early 1850s when the Cozzens sawmill was probably near its peak in production, nearly 70 percent of the labor at the mill was enslaved (California Department of Insurance 2002; DeBow's Commercial Review 1848:379,380). Thus, the elements within the well that can be determined to be personal items of the workers at the sawmill or living in the tenements, likely were related to the enslaved workforce.

Artifact Distribution Within Feature 1

Understanding how the artifacts were distributed vertically within the feature assists in determining the nature of the deposits: Are the deposits clustered within certain depths, or do the artifacts appear to be disbursed throughout the feature in multiple episodes of deposition, or is there only one concentrated large deposit evenly distributed? Furthermore, identification of the patterning of the deposits within the well may assist in determining if the deposits were primary or secondary disposals and if these deposits are associated with particular events like the clearing of a structure, dumping of bottles, discarding of a lunch or dinner, the renovation of the mill’s machinery, or the leveling of the entire sawmill complex.

To better ascertain the distribution of artifacts within Feature 1, the graphic representation of the material culture within the feature was broken down into various categories: ¼ -in and 1/8 -in brick, ¼-in and 1/8-in mortar, machine parts, personal adornment items, architectural items, ceramics, glass, coal, and faunal remains. The personal adornment category included buttons, a pocketknife, necklace parts, cuff links, shoe parts, a comb, and beads. The architectural category included brick, mortar, window glass, a door hinge, and nails. The machine parts category included artifacts identified as related to machinery such as iron gears, iron parts, o-rings, two rubber gaskets, a steam boiler door, and the saw blade. Brick and mortar were
separated into ¼ and 1/8 to help determine whether the distribution of artifacts within the well was effected by the size and weight of the item, i.e. whether larger and/or heavier artifacts were concentrated at the bottom of the feature and smaller or lighter items were near the top.

From distribution graphs of the various artifact categories, there appears to be some patterning in the depths of various artifacts within the well. Both the mass and number of items appear to cluster within certain depths and not spread evenly from top to bottom. Furthermore, it does not appear that all of the artifacts are found at the bottom of the feature. In contrast it looks as if the main concentration or deposition is around four to four and a half meters below the datum or about two meters above the base row of bricks. This concentration appears to be a mix of machinery parts and tools related to the steam sawmill, personal items, glass bottles, and utilitarian tablewares. This main deposit around 4.5 m deep appears to be sitting on top of the largest coal and brick concentration within the feature. The brick and coal appear to be just above a layer of whole bottles and faunal material. However, it is unclear if these three distinct zones represent separate depositional episodes, or a single organized dumping.

Architectural materials were grouped together in order to see if there was a patterning in the large amount of brick, mortar and nails recovered within Feature 1. The distribution of architectural materials may help explain whether the deposits came from the clearing of a structure or structures, or from an earlier renovation of the mill’s machinery. Depositional patterns within the well provide a chronology of the mill’s structural history. Given the high number of artifacts within the architectural category, it is no surprise that artifacts from this functional class are distributed from the top to the bottom of the feature. However, the distribution of the architectural materials throughout the feature is not even and it appears that the architectural materials are concentrated in two, or possibly three, zones near the base of the well (Figure 6-42). Initially, there appears to be a concentration near the top five levels of the well. This cluster of architectural material near the top of the well may be from the bolts and nails holding the upper segment of the well that had broken off.
From level 6 to level 38 there appears to be a fairly consistent amount of architectural material, with no level having more than 100 pieces of brick, mortar, or nails. However near the base of the well, around level 39 (400-410 cmbd), there is a sharp rise in architectural material. Within level 39 there were 305 architectural artifacts. This number increased until level 44, which had 10,231 pieces of architectural material. The total amount of architectural material appears to diminish over the next three levels and then increase once again in level 48. Thus, the cluster beginning around level 48 (490-500 cmbd) may be associated with a different and earlier deposition, than the concentration around levels 39 to 44.
The ¼-in brick, the ¼-in mortar, and the architectural category (see Figure 6-42), appear to be concentrated at three depths within the well. Initially, there appears to be an elevated artifact count between the surface and level 3 (40.5-50.5 cmbd) (see Figure 6-42). The second cluster appears to be around level 43 (440-450 cmbd). The final high concentration of brick and mortar appears to be around levels 53 and 54 (540-560 cmbd). The architectural category, which was simply ¼ in brick, mortar as well as the nail counts was nearly indiscernible from the ¼ in brick plot because of the overwhelming number of brick fragments. Overall, it appears that the brick and mortar were concentrated in the bottom third of the well.

Approximately 91.7 percent (17,979 pieces) of all the brick recovered from within Feature 1 came from seventeen levels (41 to 57) of 58 total levels in the feature. By count the brick distributions appears to be nearly identical to the weight distribution. At least one of the three concentrations of brick and mortar is likely tied to the demolition of the mill or the destruction of structure near the mill. The other deeper deposits could possibly be related to an earlier refurbishing of the mill or the well.

Glass appears to be distributed throughout the feature. However, glass distribution by count (Figure 6-43) is similar to the brick in that the glass vessels and shards appear to be concentrated in certain levels and not spread evenly throughout the feature. Like the brick, glass appears to have the highest shard count around levels 41 and 42, where 121 and 163 shards were recovered from these two levels. Again, like the brick, the glass has a second concentration around levels 51 to 54. Furthermore, several whole bottles, mainly champagne and wine bottles were recovered within this zone. Thus, the majority of the glass shards and whole vessels were found in the bottom third of well between levels 38 and 54. Of the 781 ¼ in glass shards recovered from Feature 1, 603 were found in these 17 levels, or 77 percent of the glass.

Ceramics recovered from Feature 1 appear to follow a slightly different overall patterning than the brick, mortar, nails, and glass (Figure 6-44). The ceramics appear to be clustered higher up in well, near the mid-section of the well. There appears to be an initial concentration between the surface and 5 cmbd, three spikes between levels 20 and 27, and a sample of three to eight sherds per level between levels 32 to 36. The highest number of sherds per level appears to be between levels 40 and 45 (around the sawblade), in which between 5 and 15 sherds were recovered in each level. Below level 48 less five sherds were recovered at any
given level. Thus, it appears that the majority of ceramics recovered (122 out of 184) were recovered between level 26 (270-280 cmbd) and level 45 (460–470 cmbd). Within these twenty levels, 66 percent of the ceramics excavated from Feature 1 were located. Thus, the middle-third of the well had nearly two-thirds of the total ceramic assemblage.

![Graph showing the distribution of bottle glass throughout the well.](image)

*Figure 6-43.*
Figure 6-44.
Ceramic distribution within Feature 1 in relation to the various depths sherds were recovered. The overall ceramic count is shown in relation to the level they were excavated.

The coal appears to follow a distinct patterning from the ceramics in that the majority of the coal was found deeper than most of the ceramics and the saw blade. The two largest concentrations of coal are near the base of the well. The first concentration of coal is between levels 38 and 46 (390 and 480 cmbd). The second larger concentration of coal in terms of weight is between level 47 and level 58 (490 and 600). Overall, it appears that 96 percent of the coal, in terms of weight (49.2 kg of total 51.2 kg of coal), was found between levels 36 and 58. The level with the highest mass of coal was level 48. Nearly 6 kg were recovered from this 10 cm level. In contrast, levels 1 to 34 had a total of only .5 kg of coal. In terms of numbers of individual pieces of coal verse weight, the coal count (Figure 6-45) appears to be similar to the weight distribution in that the coal appears to be concentrated near the base of the well. However, looking at the count, it would appear that the coal is concentrated in a single cluster between levels 41 and 51 (see Figure 6-45), rather than two clusters as illustrated in the weight distribution table. The large amount of coal recovered may indicate that the furnace at the Sisloff or later Cozzens sawmill was fired using coal, rather than less efficient hardwood at least for part of the time.
Figure 6-45.
Graphs showing the distribution of coal, charcoal, clinkers, and slag throughout the approximately six meter deep well. The distribution is shown both in terms of weight (Top) and count (Below).
The faunal remains recovered from Feature 1 (Table 6-4) consist of one human tooth and a mixture of non-human bone including cow (*Bos taurus*), pig (*Sus scrofa*), chicken (*Gallus gallus*), and white-tailed deer (*Odocoileus virginianus*). No other human faunal material was recovered from the feature with exception of the tooth. The tooth was found in level 41 and in a mixed-context deposit surrounding the sawblade and therefore the tooth may have been thrown in accidentally when the site was cleared by Roth or Fox in the late 1860s. Why a human tooth was lying around the sawmill complex or how it got into the well could have occurred a number of ways. The human tooth in the well likely resulted from a worker accidentally knocking out a tooth out while maintaining the well, pump, or piping to the boilers or while working around the lumberyard, or a worker may have had a tooth pulled because of infection. Historic documents indicate that several fights occurred at Andrew Brown’s sawmill between his workmen, one resulting in the loss of a finger. A fight at the Sisloff-Cozzens sawmill between two workers around the well could have resulted in a tooth being knocked out and when the area was cleared, it was secondarily deposited into the well.

The highest percentage of identified faunal material was unidentified mammal and unidentified large mammal (see Table 6-4). The most abundant identified vertebrate faunal remains from Feature 1 were pig (*Sus scrofa*). One hundred and twenty-two individual elements were recovered from Feature 1, which was comprised at least two individuals. Cow (*Bos taurus*) remains were second to pig in the highest overall identified faunal remains. Twenty-nine individual cow elements were recovered. Given the mid-nineteenth century urban context of the site, white-tailed deer (*Odocoileus virginianus*) comprised a higher percentage of the faunal sample than expected. The twenty-three individual deer elements recovered from the feature represent at least two individuals. Along with the mammal remains, or at least two individual chickens (*Gallus gallus*) were also recovered from Feature 1. Thus, chickens represent 1.5 percent of the total number of individual specimens. Three unidentified fish elements and four unidentified turtle elements were also recovered from Feature 1. The fish and turtle specimens recovered from the well likely represent dietary remains of local staples from the river such as gar, catfish, buffalo fish or snapping turtle, but these remains could also be naturally occurring fauna trapped inside the well. The frog, toad, and snake remains recovered from Feature
1 were most likely non-dietary remains, but it is difficult to say with certainty since some species of snakes and frogs are eaten in many rural southeastern communities.

Table 6-4.
Vertebrate faunal remains from Feature 1.

<table>
<thead>
<tr>
<th>TAXA</th>
<th>NISP</th>
<th>% TOTAL NISP</th>
<th>MNI</th>
<th>Wt. (g)</th>
<th>% TOTAL Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAMMALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cow</td>
<td>29</td>
<td>2.43%</td>
<td>1</td>
<td>676.7</td>
<td>27.20%</td>
</tr>
<tr>
<td>Pig</td>
<td>122</td>
<td>10.22%</td>
<td>2</td>
<td>867.4</td>
<td>34.87%</td>
</tr>
<tr>
<td>White-tailed deer</td>
<td>23</td>
<td>1.93%</td>
<td>2</td>
<td>137.2</td>
<td>5.52%</td>
</tr>
<tr>
<td>Old world rat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human</td>
<td>1</td>
<td>0.08%</td>
<td>1</td>
<td>0.4</td>
<td>0.02%</td>
</tr>
<tr>
<td>Unidentified large mammal</td>
<td>304</td>
<td>25.46%</td>
<td>2</td>
<td>576.5</td>
<td>23.17%</td>
</tr>
<tr>
<td>Unidentified mammal</td>
<td>577</td>
<td>48.32%</td>
<td>7</td>
<td>201.9</td>
<td>8.12%</td>
</tr>
<tr>
<td>Total</td>
<td>1670</td>
<td>100.00%</td>
<td>12</td>
<td>2532.4</td>
<td>100.00%</td>
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<tr>
<td>BIRDS</td>
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<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>18</td>
<td>1.51%</td>
<td>2</td>
<td>8.27</td>
<td>0.33%</td>
</tr>
<tr>
<td>Unidentified bird</td>
<td>19</td>
<td>1.59%</td>
<td>3</td>
<td>13.5</td>
<td>0.56%</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>3.10%</td>
<td>2</td>
<td>11.42</td>
<td>0.46%</td>
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<tr>
<td>FISH</td>
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<td></td>
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<tr>
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<td>0.25%</td>
<td>0</td>
<td>0.11</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
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<td>0.25%</td>
<td>0</td>
<td>0.11</td>
<td>0.00%</td>
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<tr>
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<td>4</td>
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<td>1</td>
<td>5.35</td>
<td>0.22%</td>
</tr>
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<td>Unidentified snake</td>
<td>8</td>
<td>0.67%</td>
<td>1</td>
<td>0.3</td>
<td>0.01%</td>
</tr>
<tr>
<td>Total</td>
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<td>1.01%</td>
<td>2</td>
<td>5.65</td>
<td>0.23%</td>
</tr>
<tr>
<td>AMPHIBIANS</td>
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<td></td>
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<td>Unidentified frog</td>
<td>27</td>
<td>2.26%</td>
<td>1</td>
<td>2.9</td>
<td>0.12%</td>
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<tr>
<td>Unidentified frog or toad</td>
<td>17</td>
<td>1.42%</td>
<td></td>
<td>1.75</td>
<td>0.07%</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>3.69%</td>
<td>1</td>
<td>4.65</td>
<td>0.19%</td>
</tr>
<tr>
<td>UNIDENTIFIED</td>
<td>476</td>
<td></td>
<td></td>
<td>44.7</td>
<td></td>
</tr>
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</table>

Some of the identifiable cow and pig bones had been sawn, cut, and hacked. No discernable cut marks were found on any of the deer or any other remains except for some unidentifiable large mammals bones that had also been sawn and cut. Discernable pork cuts included the hind and forefoot remains, arm steak, head fragments, rib, loin roast, picnic shoulder, shoulder butt, and short cut ham. Discernable wholesale and butcher cuts included foreshank roast, chuck steak, rib, loin roast and neck. The most common meat cut discernable was pork picnic shoulder, followed by shoulder butt and short cut ham.
Regarding class or availability, no high grades cuts of steak, or other high price cuts were discernible and it appears that medium to low-cost portions of beef and pork were highly represented in the sample. Thus, the meat cuts may be an economic indicator that faunal refuse most likely came from the workers, enslaved or free, who toiled and lived in the general vicinity of the sawmill. Interestingly, the cuts of meat identified within Feature 1 appear to be very similar to the faunal assemblage recovered from excavations carried out at the African-American residential area at the 1903-1917 Good Land sawmill (16TR114) in Terrebonne Parish, Louisiana (see Whelan and Pearson 1999). However, it is not clear if both sites share a commonality in the choice of meats (i.e. picnic shoulder pork cuts) because of a similar socio-economic setting, ethnic choice, regional cuisine, or limited meat cuts were available through the mill owners. It could be a combination of several of these factors. Furthermore, the possible use of an enslaved female cook, Betty, at the Cozzens mill may have also been an influencing factor on the diet of the workers.

Although faunal material was found intermittently from the surface to the base of the well, most of the faunal remains appear to be concentrated near the bottom section of the well, between levels 42 to 56. However, it appears that there may be two concentrations of faunal material within the bottom section of the well, and thus possibly two distinct deposits (Figure 6-46). The upper deposit appears between levels 36 and 46. A possible second and earlier concentration was located between levels 48 to 56. The upper concentration appears to peak around level 37 (470-480 cmbd) with 154 pieces of bone and eggshell. The lower concentration appears to peak around level 54 (550-560 cmbd) with 499 pieces of bone and eggshell. It appears that a lot more pig, cow, and deer remains were in the deeper deposit. Of the identifiable fauna from these levels, one chicken bone, five cow bones, one deer bone, and 27 pig bones were recovered in the 1 m concentration between levels 36 and 46. In the 80 cm concentration between level 48 and 56, 13 chicken bones, 23 cow bones, 20 deer bones, and 87 pig bones were among the fauna from the deeper concentration. So, clearly both deposits appear to have the same type of food items, but the deeper, possibly older, deposit has more faunal material in terms of count and weight though it is a smaller deposit. Interestingly, pork appears to be the dominant food item in both concentrations, but in the deeper concentration pork appears
to makeup a smaller percentage of the food remains, and thus could reflect a change in diet or deposits from
two different tenements with varying number of individuals and choices of meat.

![Faunal Material](image)

**Figure 6-46.**
The number of faunal artifacts recovered by level within Feature 1.

The personal/adornment category included beads, buttons, a comb, cufflinks, beads, shoe parts,
necklace parts, a mother-of-pearl decorated pocketknife, and other items related to clothing or personal
appearance. Many of the smaller items within this category given their size, value and reusability, were most
likely not intentionally thrown into the well, rather they may have accidentally fallen out of workers’ pockets
or broken off while working around or in the feature, and thus could be a primary deposit. The very low
number of these items compared to other categories is not only indicative of the possible value and meaning of these items, but also of the wealth of the individuals to whom they belonged.

Some of the items within the personal/adornment category, if not a large share, probably belonged to the workers, either enslaved or free, working and living around the mill. Some of these items could have conceivably been distributed to the workers by the owner—flannel or cotton shirts, leather boots, etc. — since a large number of nearly identical porcelain and bone buttons as well parts of two or more lace-up leather shoe parts were found. However, some items like parts of a necklace, black beads, a single blue button, a cuff link, or a mother-of-pearl decorated pocket knife may have had more personal or financial value. These objects may have had sentimental or spiritual value, might have been family possessions, or may have simply been related to personal-appearance. Enslaved workers may well have acquired certain items like jewelry at markets. Enslaved craftsman at least at the Andrew Brown mill could earn “supplemental” money by working on holidays, at night, on the Sabbath, or possibly doing odd jobs with the owner’s approval (Moore 1967). The skills of the laborers and the economic and work conditions of these early sawmills sometimes provided the spatial freedom for enslaved laborers to access markets in Natchez and sometimes New Orleans and sometimes wages so they could purchase personal items.

The personal adornment items appear to be scattered intermittently from the surface to level 56 (Figure 6-47). After ceramics, the personal adornment category had the lowest overall number of artifacts. Within this category 28 buttons were recovered, 18 of which were bone buttons and 10 were porcelain buttons. Within Feature 1 the highest concentration of personal adornment items appears to be in the section between levels 40 and 48, around the saw blade. Within this section, the levels containing the highest number of personal items were level 40 (410-420 cmbd) with 26 artifacts, level 41 (420-430 cmbd) with 15 artifacts, and level 47 (480-490 cmbd) with 15 artifacts. Thus, many of the personal items appear to be in the same context or deposits that are associated with the saw blade. Therefore, it would appear that the deposits surrounding the blade are of a mixed nature and not exclusively industrial or structural, but also include clothing, jewelry, and personal items.
The machine parts category included various iron gears, o-rings, machine arms, a boiler door, rubber gaskets, and the saw blade. The distribution of this category provides insight into the number of renovations of the mill’s machinery at the Brown Cozzens sawmill or the abandonment of the mill and the depositions around the well. Below the small cluster of machine parts near the surface, there appears to be three major spikes near the mid and bottom section of the feature. The first spike of 26 artifacts occurs around level 33.
A second elevated artifact density appears around levels 42-43. The saw blade rested on the base of level 42 and the large amount of cast iron machine parts in level 43, were part of the same deposit. The third large concentration of machinery parts within the well occurs around 60 centimeters deeper, around level 47. In level 47, 48 artifacts identified as relating to machinery were recovered. Items from this level included an iron steam boiler plate with a nut and bolt still attached to it and several cast iron machine parts. This artifact concentration around levels 47-48, under the saw blade, may represent a refurbishing of the mill in the 1850s, a possible boiler explosion or mishap, or an early phase of shutting down the mill and clearing of the site.

From the gathered evidence regarding the vertical distribution of artifacts within the well there is clearly overlap among various categories or grouping in the distribution of artifacts, such that around level 42 (430-440 cmbd), a mixture of ceramic glass, machine parts, personal items, and architectural features were found in the same context surrounding the saw blade. However with regard to their distribution throughout the remainder of the feature, the various grouping do show differences in their distribution within the feature, such that the ceramics appear located upper section of well and coal towards the bottom. While, glass vessels were found from the top to the base of the feature, the majority of the glass, like coal, was found near the bottom of the well. Artifacts related to the personal items category appear to be spread throughout the feature. The various large deposits may represent different episodes of clearing or cleaning during the abandonment or renovations of the mill. Some of the smaller deposits may be the result of smaller daily activities such as a lunch or accidental loss of an object during maintenance work.

**Vessel Forms and Dates –Ceramics and Glass**

Within the collection of artifacts from Feature 1, 42 vessels were assigned vessel numbers. Of the 42 whole or reconstructed vessels, 29 were glass, 11 were ceramic, and two were metal. The two metal vessels were the saw blade (vessel number 15) and a sardine can (vessel number 16). The reconstructed vessels ranged from whole or nearly complete reconstructed vessels to some ceramic and glass vessels that were made up of only two or three sherds and composed less than a third of the vessel. Since the whole well was excavated and some of the vessels had large portions still missing this could indicate that a considerable
portion of the deposition was likely secondary rather than primary- i.e. a broken plate was thrown into the well while cleaning up. The less than complete cross-mended vessels were still assigned a vessel number because they cross-mended with a sherd from another provenience (or level) and had identifiable vessel forms. The cross-mending may indicate what levels within the feature represent a single deposit and thus show the link between various levels or the lack of connection between various levels. A better understanding of the artifact distribution within the well assists in uncovering the nature and of the deposits.

Of the 42 reconstructed or whole vessels excavated from the well, four are champagne bottles, three are French and English wine bottles, three are patent medicine bottles, five are beer-ale-or whiskey bottles, one vessel is an undecorated whiteware bowl, two are tumblers, four are preserve or pickle jars, one is a mug, one is a saucer, and three vessels are plates (Tables 6-5, 6-6, and 6-7). The 11 ceramic vessels assigned a vessel number included an edge-blue early whiteware plate with an unscalloped rim and impressed lines that had a Davenport maker’s mark (Figure 6-48) and either the year “5 5” or “6 5” stamped around the anchor. Unfortunately, a break in the plate makes the initial number on the maker’s mark somewhat unclear. Other reconstructed ceramics included an undecorated set of early ironstone tableware - a bowl, teacup, and a mug. The ironstone vessels appear to be of a similar design (see Figure 6-27) and could be part of an individual’s set of dishes, or part of a set owned by the mill and used by the workers.

Reconstructing the various vessels not only assisted the identification of vessel forms, but also provided data regarding the correlation of various deposits or levels within the well. The cross-mends show overlap between various depths from where a vessel was recovered, and these correlated areas likely represent particular deposits within the well. Of course, given the tree roots encountered within the feature, some smaller artifacts likely trickled down through the sandy matrix within the well, and thus settled deeper than initially deposited. Despite some settling, given Feature 1’s six-meter depth, some patterning was discerned with regards to vessel distribution within the well. Although some vessels appear to cross-mend over several meters, a number of vessels appear to cluster at certain depths and may indicate depositional events.
Table 6-5.
Reconstructed ceramic vessels with corresponding dates of manufacture.

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<tr>
<th>Material</th>
<th>MANUFACTURE</th>
<th>TYPE</th>
<th>DECORATION</th>
<th>COLOR</th>
<th>FORM</th>
<th>MAKER'S MARK</th>
<th>DATE</th>
<th>MEDIAN DATE</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Refine Earthenware</td>
<td>Whiteware</td>
<td>Undecorated</td>
<td></td>
<td>Plate</td>
<td>&quot;PRTD BK...HINA/...WARDS</td>
<td>1851-</td>
<td>1867</td>
<td>Godden 1964:231</td>
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<td></td>
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<td></td>
<td>[rocket]/...HALL&quot;</td>
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<td>1860</td>
<td>1844</td>
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<td>1860</td>
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<td>Whiteware</td>
<td>Haidpainted</td>
<td>Polychrome</td>
<td>Holloware</td>
<td>1840-</td>
<td>1860</td>
<td>1850</td>
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<td>1870</td>
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Table 6-6.
Reconstructed glass vessels with corresponding dates of manufacture.

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<tr>
<th>MANUFACTURE</th>
<th>TYPE OF MOLD</th>
<th>PONTIL MARK</th>
<th>LIPPING</th>
<th>COLOR</th>
<th>FORM</th>
<th>MARKINGS/EMBOSSED</th>
<th>DATE RANGE</th>
<th>MEDIAN DATE</th>
<th>REFERENCE</th>
</tr>
</thead>
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<td>Molded</td>
<td>Post Bottom Molded</td>
<td>Lipping Tool</td>
<td>Olive-Amber</td>
<td>Whiskey</td>
<td>Embossed &quot;CLARKE &amp; WHITE&quot; &quot;C&quot; &quot;NEW YORK&quot;</td>
<td>1830-1840</td>
<td>1835</td>
<td>Dismalld 1833; Murray 1970:240</td>
<td></td>
</tr>
</tbody>
</table>
| Molded          | Bottom-hinged Molded| Hallow Glass Rod| Folded Lip | Clear Blue | Medicine Bottle | Embossed "D.
WESTARK'S//BASALM OF WINE//CHERRY" | 1830-1860  | 1850        | Davis 1849; McKeen and McKeen 1978; Murray 1970:25; Putnam 1968:44 |
| Blown           | Hallow Glass Rod Pontil| String Lip | Olive       | French Wine | "BOSTO...ELEVITT" |                                | 1800-1845  | 1840        | Murray 1970:25 |
| Molded          | Und. Mold Type     | Lipping Tool | Olive-Amber | Beer or Whiskey | "..." |                                | 1820-1840  | 1830        | Dumbrell 1883; Murray 1970:240 |
| Molded          | Und. Mold Type     | Lipping Tool | Brown       | Beer Bottle |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984 |
| Blown           | Sand Pontil        | String Lip | Olive       | Champagne  |                                | 1800-1845  | 1822.5       | Davis 1949; Kendrick 1968:126; 127 |
| Molded          | Three-Piece Dip Mold | Und. Lipping Technique | Olive-Amber | Beer Bottle |                                | 1830-1895  | 1867.5       | McKeen and McKeen 1978:219; Kendrick 1968:126; 127 |
| Molded          | Three-Piece Dip Mold | Und. Lipping Technique | Clear Blue | Preserve Water |                                | 1830-1895  | 1867.5       | McKeen and McKeen 1978:219 |
| Molded          | Und. Mold Type     | Lipping Tool | Clear Blue | Olive Oil Preserve |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984 |
| Molded          | Two or Three-Piece Dip Mold | Und. Lipping Technique | Clear Blue | Preserve Water |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Post Bottom Molded | Und. Lipping Technique | Clear Blue | Preserve Water |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Und. Mold Type     | Und. Lipping Technique | Clear Blue | Preserve Water |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Post Bottom Molded | Und. Lipping Technique | Clear Blue | Cylindrical |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Und. Mold Type     | Clear Tumbler | Und. | Und. |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Und. Mold Type     | Lipping Tool | Clear Blue | Preserve Water |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Two or Three-Piece Dip Mold | Lipping Tool | Clear Blue | Preserve Water |                                | 1865-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Blown           | Sand Pontil        | String Lip | Olive       | Champagne  |                                | 1800-1845  | 1822.5       | Davis 1949; Kendrick 1968:126; 127 |
| Molded          | Three-Piece Dip Mold | Lipping Tool | Olive-Amber | Cylindrical |                                | 1856-1897  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Bottom-hinged Molded | Lipping Tool | Clear Blue | Medicine Bottle | Embossed "MAGICAL/EYE WATER" | 1840-1850  | 1850        | Davis 1949; Kendrick 1968:50; 51 |
| Blown           | Und. Pontil        | Und. Lipping Technique | Clear Blue | Olive Oil Bottle |                                | 1850-1880  | 1875        | Davis 1949; Kendrick 1968:50; 51 |
| Molded          | Und. Mold Type     | Clear Blue | Pickle Jar  | Clear Blue |                                | 1856-1897  | 1890.5       | Murray 1970:25; Jones 1971 |
| Molded          | Und. Mold Type     | Lipping Tool | Clear Blue | Bottle |                                | 1856-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Und. Mold Type     | Lipping Tool | Clear Blue | Cylindrical |                                | 1856-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |
| Molded          | Post Bottom Molded | Clear Blue | Cylindrical |                                | 1856-1917  | 1890.5       | Miller and Sullivan 1984:88; Murray 1970:240 |

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Table 6-7.
Significant metal artifacts with corresponding dates of manufacture.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th># OF ITEMS</th>
<th>TYPE OF METAL</th>
<th>SIZE/TYPE</th>
<th>MOLD</th>
<th>FORM</th>
<th>DATE</th>
<th>MEDIAN DATE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal</td>
<td>1</td>
<td>Cast Iron</td>
<td>Sash</td>
<td>Saw Blade</td>
<td>1810-1890</td>
<td>1850</td>
<td>Moore 1967</td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td>1</td>
<td>tin-enameled iron</td>
<td>Keyless</td>
<td>Sardine Can</td>
<td>1841-1885</td>
<td>1863</td>
<td>Busch 1979:3,4</td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td>3</td>
<td>tin-enameled iron</td>
<td>Hole-in-the-top</td>
<td>Tin Can</td>
<td>1839-1885</td>
<td>1862</td>
<td>Busch 1979:3,4</td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td>326</td>
<td>Iron</td>
<td>Type 6-10</td>
<td>Modern Machine Headed</td>
<td>Nail</td>
<td>1828-1896</td>
<td>1862</td>
<td>Edwards and Wells 1993</td>
</tr>
<tr>
<td>Metal</td>
<td>1</td>
<td>Iron</td>
<td>Type 12</td>
<td>Wire</td>
<td>Nail</td>
<td>1877-1999</td>
<td>1938</td>
<td>Edwards and Wells 1993</td>
</tr>
<tr>
<td>Metal</td>
<td>1</td>
<td>Lead .36 Caliber</td>
<td>3 Rings</td>
<td>Pistol Bullet</td>
<td>1846-1880</td>
<td>1863</td>
<td>Barnes 1972:318</td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td>1</td>
<td>Lead 54 Caliber</td>
<td>Burnside Cartridge</td>
<td>1856-1876</td>
<td>1866</td>
<td>Logan 1959</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal</td>
<td>1</td>
<td>Lead .577 Caliber</td>
<td>3 Groove Minieball</td>
<td>1855-1880</td>
<td>1867.5</td>
<td>Barnes 1972:318</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 6-48.
An unscalloped symmetrically impressed edge-blue decorated plate. Top: Sherds from reconstructed vessel 9 were found from level 23 to level 45. Below: A Davenport maker’s mark on the back of the plate. The year “55” or “65” is stamped around the anchor.
Vessels one through five had at least two pieces that cross-mended over four meters in depth (Figure 6-49). Some settling because of roots and animal burrows could explain at least vessels 1 and 4, which only had only a single sherd found near the top and another piece of the vessel three or four meters deeper. However, the majority of vessel two was found below 4 meters deep within the well, yet a shard of this bottle was found near the surface (see Figure 6-49). This would appear to indicate that from near the surface to just past four meters could all be one large deposit or filling episode within the well.

The distribution chart (see Figure 6-49) shows the relationship between artifacts and depth. From these graphs a clustering appears to occurred around 420 to 440 centimeters deep in the well, in the vicinity of the saw blade. The reconstructed vessels show a similar clustering around 400 cmbd to 450 cmbd. Nearly half of the reconstructed vessels were found within this zone. Clearly the deposit between the top of the saw blade (340cmd) and the base of the saw (440 cmd) appears to be the zone where most of the cultural material within this feature was located. Most of the reconstructed bottles, ceramic tablewares, and metal artifacts were located above 450 cmbd. An exception to this, are vessels 39 to 42, which include several whole champagne and wine bottles found near the base of the well. The champagne bottles near the bottom of the feature may be associated with a different depositional event than the actions that resulted in the artifact concentration around the sawblade.

Overall, the reconstructed and recovered ceramics appear to be undecorated utilitarian wares with only a few decorated wares (Figure 6-50). To gauge the value of the ceramic assemblage, Miller’s (1980) economic scaling of ceramics based on the cost relationships of variously decorated wares to the cheapest undecorated ware (cream-colored, or CC ware) will be discussed. According to Miller’s (1991) scale certain transfer-printed teacups and saucers recovered in 1860 index have value of 4.00, cost four times as much as contemporary undecorated CC teacup, and saucers have an index value of 1.00. Thus, most of the ceramics recovered from this feature had index values around 1.00 and appear to be a sample of undecorated, low-value wares. In fact only two transfer-printed sherds were recovered among the total of 168 ceramic sherds. Unfortunately, given a sample of only 13 reconstructed ceramic vessels, a CC value was not calculated. Furthermore, the mid- to late-nineteenth date of this collection is at the edge of the index’s range.
Figure 6-49.
Graph of cross-mended vessels excavated from Feature 1. Each symbol represents a sherd or sherd found in that level. The lines connecting the symbols indicate that the sherd(s) cross-mend with another sherd(s) in a different
Although very little decorated ceramic was recovered from Feature 1, a few hand painted early whitewares were recovered. This included: a.) vessel number 6, part of a possible saucer with a blue rim band; b.) vessel number 39, saucer decorated with a flowering vine; c.) part of spout decorated with flowers or a vine from level 1A. Ceramics shown at 100 percent.
With regards to all ceramic sherds excluding the stoneware vessels, of the 162 sherds, 114 were undecorated, or 67 percent. The utilitarian nature of this ceramic deposit is further illustrated with the heavy wear (cut marks) on an undecorated saucer from the feature that appears to have been used as a plate. The low value, utilitarian nature, and heavy use of the ceramic assemblage would appear to suggest that the ceramics within this assemblage may be associated with the laborers at the sawmill. These items could have been from a dining hall used to feed the laborers at the mill or a tenement near the mill that was torn down.

The large number of wine bottles and champagne bottles do not appear to correlate well with the low value of the ceramic wares thought to be used by enslaved or free workers. One explanation for this, especially the few whole large champagne bottles near the bottom of the feature, may be due to an accidental primary deposition by workers possibly reusing large glass vessels they found to get water for drinking from the well. Water-boys around lumber sites were common. Given the heat of the boilers and engine, and Natchez in the summer time, plentiful drinking water was essential. Rather than some of the larger alcohol bottles near the base of the well being related to enslaved or free workers drinking wine or champagne around the mill or some wealthy household or bar dumping their empty bottles into the sawmill well, these bottles may have been recycled water containers. However, some of the smaller beer and ale containers could have been drunk and disposed of secretly by workers. Even though slaves were strictly prohibited from drinking by law and Ingraham (Beard 1981:66) attests to the fact that slaves were rarely seen in “public” drinking, at least at the Andrew Brown mill alcohol consumption among the free and mainly enslaved workforce was known to happen on occasions. Some bottles could easily been dumped into the well, a place were they would never be found. Additional deposits of alcohol bottles likely occurred when the site around the mill was cleared around 1869 and trash that likely belonged to the workers, either recently emancipated slaves, or white laborers was thrown into the hole.

**Dating the Deposits Within the Well**

A modified version of South’s (1977) mean ceramic date was used to determine a mean occupation date from the datable ceramics, glass, firearms, and nails from the well. Using primarily the reconstructed vessels and the indefinable nails I dated the deposit or deposits within the well to determine if manufacture
dates for various categories of artifacts correspond with the historically documented operation of the Cozzens Sawmill and destruction under Roth or Fox. From the dates ascertained using various analysis guides, the ceramics, glass, and metal vessels appear to date the mean occupation of the site to the 1840s until the late 1860s or early 1870s, which corresponds closely to the circa 1839-1869 operation of the sawmill at the Middle Landing.

The nails recovered within Feature 1, with the exception of the one wire nail, were modern-machine headed nails and fell in the date range from approximately 1840 to 1880 (Edwards and Wells 1993). The one wire nail could be of a European variety, which could push the production date back from the 1900s to the late 1840s to 1860s (Adams 2002). The 393 other datable nails had a mean date of 1860. Thus, the identifiable nails from the feature appear to confirm that both the construction of the well and the deposits within the well date to around the mid-1800s. With regards to all of the datable metal, a median date range from 1850 to 1867.5 was garnered for the bullets, tin cans, saw blade, and nails, except the one wire nail (see Table 6-7). The metal object with the tightest date manufacturing date range appears to be a bullet. A 54 caliber Burnside recovered from level 41. This bullet had an approximate date of use between 1856 to 1876, and a median date of 1860 (Logan 1959; McKee & Mason 1980:29).

Overall the ceramics found in the well also appear to date to around the mid-1800s. The reconstructed refined earthenwares had a date range of 1828 to 1895, with a mean ceramic date of 1861.5 for all of the reconstructed ceramics. The ceramics with the narrowest manufacturing date ranges provided an even more precise time period for when the objects were dumped into the well. The Davenport plate appears to date between 1855 and 1865 (see Figure 6-48). A whiteware plate with a Ward’s maker’s mark dates between 1851 and 1882 (Godden 1964:231). The partially reconstructed polychrome hand-painted whiteware saucer has a date range of 1841 to 1860 (Lofstrom 1976:9). Lastly, several pieces of an early flow-blue decorated vessels likely date between 1825 and 1870. Thus, from the tightest dated ceramic vessels the age of the deposits in the well would appear to date from the 1840s to the 1860s, which is nearly identical to the nail date range.
With regards to mean ceramic dates for specific sections of the well, when looking at all datable sherds, not just the reconstructed vessels, by level or depth, the average mean ceramic date increases from the bottom of the well to the top, thus indicating older deposits may be on the bottom and more recent on top (Table 6-8). The very bottom deposits in the well have a mean ceramic date (MCD) of 1841, while the ceramics from the mid-section to have a MCD of 1860. Additionally, the top meter has a MCD date of 1862. However, because of the limited number of sherds in this sample and the narrow time range of the deposits, some of the levels that appear to have different mean dates may be part of the same deposit but statistically appear slightly different in age. However, there could be some time depth, though only a few decades, related to the vertical location of deposits in the well.

Regarding glass vessels recovered from Feature 1, since none of the bottles recovered from the well were machine-made and all were molded, blown, or pressed, the glass vessels from this feature likely date prior to 1904 (Miller and Sullivan 1984:93,94). Secondly, since no bottles within the feature were turn or cup-bottom molded, the glass vessels probably represent an assemblage that dates prior to the advent or popularity of these molding styles in the 1880s or 1890s (Munsey 1970:40). A few not as tightly dated free blown champagne bottles with string lips were likely made prior to the 1870s, but could be as early as the 1500 to 1700s (Munsey 1970:32). However, since Natchez-Under-the-Hill was not occupied and developed until at least the late 1790s, a beginning date for free-blown vessels of 1800 was used and an end date of 1870, yielding a mean date of 1835. Since string lipped bottles were disappearing by the 1870s as molded vessels became more popular, the deposits, especially near the base of the well where several of these type of vessels were recovered, likely date no later than the 1870s-1880s. With regards to other glass molds identified among the 28 reconstructed glass vessels, there were three bottom-hinged molded, three post-bottom molded, three three-piece dip molded, and one either two-piece or three-piece dip-molded bottles. These molding techniques date as early as 1800 to as late as the first couple of decades of the 1900s, with a mean date range from the mid to late 1800s (see Table 6-6).
Table 6-8.
Table showing the number of ceramic sherds found in various segments of the well and the date range and mean date for those sherds.

<table>
<thead>
<tr>
<th>Levels</th>
<th>Number of Sherds</th>
<th>Mean Ceramic Date</th>
<th>Date Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10</td>
<td>21</td>
<td>1862</td>
<td>1844-1879</td>
</tr>
<tr>
<td>11-20</td>
<td>13</td>
<td>1860</td>
<td>1844-1875</td>
</tr>
<tr>
<td>21-30</td>
<td>32</td>
<td>1860</td>
<td>1840-1881</td>
</tr>
<tr>
<td>31-40</td>
<td>45</td>
<td>1858</td>
<td>1840-1876</td>
</tr>
<tr>
<td>41-50</td>
<td>56</td>
<td>1849</td>
<td>1836-1862</td>
</tr>
<tr>
<td>51-58</td>
<td>2</td>
<td>1841</td>
<td>1797-1885</td>
</tr>
</tbody>
</table>

A few reconstructed bottles were tightly dated using a combination of elements – manufacture style, lip, pontil markings, and datable, embossed, brand labels. The Dr. Wistar’s Balsam of Wild Cherry bottle (see Figure 6-27) was manufactured using a hollow glass rod pontil and was hinged-bottom molded into a unique polygon shape with a folded lip. These techniques provide a narrow date range for its manufacture, which can be further tightened by the word patterning on the embossed label. From these various characteristics, the Dr. Wistar’s bottle appears to date between 1835 and 1870. An 1843 advertisement for the same type of bottle appears to partially confirm this date range (Putnam 1968:44). The range for this bottle appears to closely correlate with the historically documented operation of a sawmill at Middle Landing. Thus, the date of this bottle would suggest not only the age of the deposits around it, but also the possibility that this medicine was used by individuals living near and/or working at the mill during this time period.

Other datable patent medicine bottle include a “Carminative Syrup” that dates between 1855 and 1895 (Munsey 1970:29) and a bottom-hinged “Magical Eye Water” with a folded lip and pontil scar that likely dates between 1818 and 1860 (Davis 1949:32). Regarding the depths from which the medicines were recovered, the Dr. Wistar’s bottle was found from level 2 to 45, the Carminative bottle was in level 9, and the Magical Eye Water was recovered from level 44. Thus, none of the reconstructed medicine bottles appear to have been located in levels below 45 or 470 cmbd and at least two of the bottles appear to be part of the same depositional event as the sawblade and a majority of the ceramics. Even though certain vessels, such as the Dr. Wistar’s bottle, are found over two to four meters, the entire well feature may not be one giant single deposit of trash from leveling the mill complex. There may be some time depth to the well, if only around
thirty years. Secondly, the artifacts within the well may relate to several large depositional events and some smaller primary depositional events near the bottom that appear to be slightly earlier in date.

Overall, from the date ranges obtained from datable nails, ceramics, glass, and tin cans, a mean date range for the artifacts within the well appears to be circa 1840 to 1870. A mean occupation date of 1855 would appear to correlate with historic data in regards to the operation of the sawmill at this location. Furthermore, the mill was likely operating near maximum capacity in the late 1840s and early 1850s. Some artifacts date ranges extend earlier than this (some pearlware sherds) and a few artifacts ranges extend beyond this range (the wire nail). By and large, since the assemblage appears to be composed mainly of a mixture of early ironstone and early whiteware ceramics as well early molded glass vessel forms, it would appear that the deposits within the well are from a mid-nineteenth century context.

The Well: Cultural and Occupational Lifeways of the Workers

Indeed it appears that the assemblage from Feature 1 dates to around the mid-nineteenth century, though it is not as clear to whom it can be attributed. Evidently part of the assemblage is machinery from the sawmill and possibly architectural debris from the mill or outbuildings. The coal and charcoal appear to be evidence of a steam-powered operation. Along with the sash saw, industrial tools, boiler and steam engine parts, these deposits would appear to confirm the historical presence of a steam-powered sawmill near the landing in the mid-1800s. Furthermore, it would appear from the fairly narrow range of dates of the various artifacts, that the feature was filled and sealed after the site was abandoned and did not become a trash pit into the 1890s or 1900s.

Several of the tools from the well including an industrial size open-face wrench, would presumably have been used by laborers, many of whom were enslaved craftsman, to work on and maintain the mill’s machinery. While the tools and machine parts may be easily relatable to the sawmill operation at Middle Landing, the remaining artifacts within the feature appear to be related to foodways, hygiene, and personal adornment. The plates, saucers, bowls, pork, and beef remains all would relate to eating and foodways. The marble, tobacco pipes, cuff links, comb, and decorative buttons were likely related to socializing or social functions. Some portion of the alcohol bottles were likely drunk during these activities, others, as discussed
earlier, may have been used to collect water from the well. But who was doing this eating, drinking, socializing, and where were they doing it? Since none of historic living floor surface remained due to erosion, the delineation of the mill complex was based on the location of Features 1 and 4. Furthermore, the artifacts from the well cannot be directly tied to a particular structure or group of individuals. Therefore, the artifacts must speak for themselves.

The ceramic assemblage appears to be for the most part heavily used utilitarian wares suggesting that the mugs and bowls were likely used by lower-class individuals, possibly laborers or enslaved craftsman. On their plates was a diet consisting of mainly pork-butt or shoulder-butt and vegetables from tin cans with occasional portions of beef, chicken, fish, and venison. Additionally, eggshell and oyster shells were recovered, though neither in high quantities. This diet would again suggest a lower class, possible laborers’ diet. Additionally, the early tin foods found at this early industrialized mill complex may have provided a cost-effective and easy way to feed workers. Initially the sawmills at Natchez-Under-the-Hill were located in a setting on the Southwest frontier, where pig, chickens, beef, could easily be obtained locally and deer were likely shot near the mill. At the same time the Natchez port had access to national and international markets. Early canned goods from New Orleans, Boston, and New York were among those items available at the bustling port city. The sawmills, unlike many of the agricultural plantations in the surrounding area, could not grow foodstuffs for consumption on the grounds, rather with a limited amount of room (a very limited amount at the Cozzens sawmill) there was probably not even space for some pigs, chickens or a small kitchen garden. Therefore, most of the food for the laborers at the Cozzens sawmill appears to have been purchased, with exception of the deer and fish. Thus, the preserve bottles excavated from the well are somewhat of an anomaly, though some of these preserves may have been bought at markets or provided by the mill owner.

Some medicine bottles were found in the deposits adjacent to the mill saw. Were these early medicines used by the workers to treat ailments, or were they just thrown into the mill from elsewhere as the complex was leveled? Given the mid-nineteenth century manufacture dates for these vessels as well as their implied cures, these bottles could easily have been part of a medicine cabinet at an enslaved or free workers dwelling or at the sawmill. Medicines like the “Carminative Syrup” provided relief from stomach ailments
while the “Magical Eye Water” would seem to be a perfect remedy for irritated eyes or a scratched cornea from sawdust in an age prior to protective eyewear and masks. In an industrial sawmill small wood chips and dust were continuously spread through the air, and the eyes and the lungs would be vulnerable to infection.

Dr. Wistar’s syrup claimed to be “The best medicine known to man for incipient consumption, asthma of every stage, Bleeding of the Lungs, Coughs…and all diseases of the Pulmonary organs” (Putnam 1968:44).

Whether these medicine bottles, along with several others that could not be reconstructed or identified, belonged to individual laborers, part of small kitchen medicine cabinet, or got thrown into the well from another location during a renovation or clearing of the site is not clear.

Several items possibly related to social activities and personal adornment were excavated from the well, including bone and porcelain buttons, cuff links, two wire-wound black beads, part of a necklace, a marble, a stoneware reed pipe, an undecorated redware pipe bowl, and a kaolin pipe stem.

Several items related to clothing were identified from Feature 1 including 110 artifacts that were identified as shoe parts - sole, eyelets, or leather. Given that at least 36 eyelets and 65 shoe nails or rivets were identified, this would indicate that more than one shoe was in the feature. Interestingly, nearly all the shoe parts identified appeared to be from leather lace-up boots. These remains could be fragments of the common leather-lace boots worn by lumbermen around the logwoods or mills. The buttons recovered from Feature 1 appear to be a mix of utilitarian buttons since no shell and only one decorated button was found. Several four-hole porcelain buttons averaging in diameter 1.1cm (7/16 in) were found along four-hole bone buttons with diameters of 1.7 cm (11/16 in), and one one-hole bone button of the same diameter. From the quantity, size, and general lack of decoration, many of the buttons were likely from a garment like a button-up shirt, possibly a flannel or cotton work shirt.

Regarding social activities, but more directly related to the gender and age makeup of the individuals represented by these artifacts, besides the marble, no identifiable artifacts normally associated with children or childcare such as dolls, children’s medicines, bottles, miniature ceramics, ABC and motto plates, were identified among the artifacts analyzed. The decorated marble, which could have just as easily been a young man’s gaming piece, was the only artifact considered as a possible marker of a child’s presence. If the marble
was interpreted as a gaming piece, no distinct children’s items were found within Feature 1. With regards to the presence of women, gender is much more difficult to discern within the archaeological record. However, the artifacts within Feature 1 have little that would be associated with infants, birthing, women’s apparel (broaches, pins, pendants, highly decorated shell buttons), or medicines usually associated with women or children such as “Mexican Mustang Liniment,” “Mrs. Winslow’s Soothing Syrup,” “Dr. Hoopers Female Cordial,” or “Murry’s Fluid Magnesia,” which was “peculiarly adapted for females” (Davoli 1996:140; Denver 1968; Putnam1968:39).

From an 1850 Adams County deed, at least one woman, Betty was employed at the Cozzens mill. Given her age, she was most likely employed as a cook or seamstress (ACR, Deed Book ‘GG’, folio 590). Thus, clearly the mill operation was not a single-gender situation and some of the artifacts within Feature 1 may be related to women, cooked by a woman, made by a woman, and/or washed by woman, but no artifact stands out and indicates clearly the presence of women and children. Most of the domestic or occupational artifacts identified appear to be categorized as those generally associated with men or masculine activities: tools, engine parts, saws, boots, bullets, liquor, a pocketknife, and a man’s comb. Although it is difficult to say who or where the assemblage in the well came from, it is possible that the limited number of domestic items and those related to children, childcare, or women could be an indicator of a predominantly male environment, such as an area around an early industrial complex Under-the-Hill. Women were clearly present at the port, but in an area with a high number of drunks, laborers, boatmen, drifters, traders, thieves, and prostitutes, femaleness may have been downplayed. The area around the Upper and Middle Landings was likely made up predominantly of men, and many of the women who did work, cook, clean, labor, or live Under-the-Hill, were likely enslaved African-Americans. Artifacts from this part of Natchez could possibly be “defeminized” by an unusually masculine environment in a frontier port town in south Mississippi making it even more difficult to say whether or not a gender was or was not present. However, the nearly complete absence of artifacts associated with children, and only a few objects possibly associated with females, and the presence of items like an industrial saw and several tools may be telling as to the environment or context from which some of the artifacts in Feature 1 originated.
Summary of Archaeological Investigations at the Middle Landing Sawmill

Archaeological investigations at the former Cozzens Sawmill Site located near the Middle Landing at Natchez-Under-the-Hill provided details about the location and operation of this sawmill complex. Feature 4 provided information regarding the orientation and placement of the historic sawmill as well as its mechanical operation. Feature 1 may represent a cross-section assemblage of material from a mid-nineteenth century sawmill complex. Generally, the artifacts within the well date between the 1840s to around 1870, and therefore the cultural material within the well appeared to correlate with historically documented operation of a sawmill at this location at Natchez-Under-the-Hill. However, it is not clear where the artifacts within the well feature came from exactly and how they got into the well. The cross-mending of some of the reconstructed vessels indicates that the upper three to four meters may be one large deposit either from George Roth/William Fox clearing the area and salvaging mill equipment around 1869, or less-likely from a bluff slumpage that may have forced soils and some artifacts from the site into the open hole. With regards to the filling process, it is believed that the majority of the artifacts within the well came from the sawmill or the immediate area surrounding the mill. Clearly parts of the mill’s machinery are in the well, as well as food items, bottles, clothing material, and personal items. However, deposits in the deeper levels appear to reflect the same types of material found in the upper levels of the well and thus a general overall uniformity within the sample.

With regards to the deposits within Feature 1, a breakdown of the soil stratigraphy appears to indicate that there were five, possibly six, major soil layers (see Table 6-2) within the well that generally correspond with depositional events (see Table 6-3). These soil layers correspond closely with the overall breakdown of deposits within the well. Generally, levels 1 to 48 were very similar except levels 38 to 42, which had a dark organic zone with a high concentration of charcoal around the sawblade. These four levels appear to represent the main concentration of the upper-most deposit. The stratigraphy within the well appears to change very little between levels 49 to 52 (approximately five to five and a half meters below the datum). Overall, it appears that there were nine significant depositional events indicated by the artifact zones.

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However, many of these “events” may be part of a larger deposit and are classed as events because of soil changes, differences in fill material, or differences in artifact concentrations.

The top six depositional events that covered levels 1 to 48, were likely part of the same overall filling and probably represent one overall major deposit possibly related to the leveling of the sawmill in several stages around 1869. Levels 43I to 48I appear to be transitional between the major event above and the deposition of a large amount of coal and faunal material below in levels 49 to 52. This second major deposit may be related to an overhaul or refurbishing of the mill and its associated structures that was historically documented to have taken place at the mill in the 1850s. The third major deposit appears to be represented in levels 53 to 56. Within this base deposit, several personal artifacts including a comb, the pocket knife, a black glass bead were recovered along with the “MAGIC EYE WASH” bottle and several whole champagne bottles. This base deposit and possibly the oldest deposit within the well may provide the best sample of material directly from the mill’s daily operation and much of this material culture may be directly attributed to the mill workers. However, the general material found in the base deposit appears to be nearly identical to much of the cultural material found throughout much of the Feature 1, thus possibly attesting to the nature of the deposits as a whole from this feature and their relationship to the circa 1841-1869 sawmill and the workforce. In the following chapter, the significance of the artifacts recovered from Feature 1 as related to both the technology employed at this mid-nineteenth century steam-powered sawmill as well the lifeways of the workforce will be discussed further.

Endnotes

1 The lack of floodwaters overtaking the Andrew Brown Mill during its operation from 1818 to 1917 means that the sediment deposits containing historic cultural debris found in the borings in the area of the old sawmill site cannot be a result of vertical accretion of historic alluvium by floods of the Mississippi River (Church and Hunt 1984).

2 In the “A Short History of Steam Engines- Basic Steamboat Engine Components” (2002), a mathematical experiment determined that 2 ½ cups of water is needed for one stroke in the average steamboat. One full revolution of the paddle wheel requires two strokes of the piston. So in total 150 cubic inches or 2 ½ quarts of fresh water are need for each complete revolution of the paddlewheel on a steamboat with two engines. Thus, 2 ½ quarts of water was used every six seconds, or 375 gallons an hour, just to turn the paddle wheel.
CHAPTER 7: CONCLUSIONS

Only a limited amount of historical documents could be located describing the working and living conditions of sawmill within the Natchez, Mississippi, area during the mid-nineteenth century. Even less archaeological literature approaches the topic, which is somewhat surprising given the economic, social, and environmental ramifications that the early lumber industry had on the cultural and physical landscape of regions like south Mississippi. Most of the literature that has broached this topic has focused particularly on the later, more mechanized industry in the late-nineteenth and early-twentieth centuries, and only recently have these works sought to provide a more social or pluralistic history about the lumbering industry. This research reconciles the limited amount of written and archaeological data on the topic by integrating various sources. This thesis provides an original contribution to the knowledge and understanding of the technological operation of a mid-nineteenth steam-powered lumber operation in Natchez, Mississippi. More importantly this study presents original data on the work and social culture of enslaved African-Americans who labored within these mills. By bringing together various primary and secondary resources as well as archaeological data, this thesis provides a source of comparison with other lumber-related sites and a source for analogies that may be applied locally, regionally, or nationally in the interpretation of early industrial timber operations as well as African-American culture. This body of work has sought to expand or broaden the focus from machinery to the laborers and to emphasize the social dynamics of the locale. Unfortunately, the sawmill at Middle Landing was not well documented historically speaking; however, the archaeological remains were plentiful. Conversely, while there was ample historical evidence at the sawmill site upriver owned by Andrew Brown near Upper Landing, very little archaeological data was found there.

One goal within this thesis is to merge the historical texts about these two sawmill enterprises with the material culture and features (mainly at the Middle Landing sawmill) in order to more fully understand diachronically the cultural and physical layout of these two early sawmills. Thus, this research has utilized a combination of ethnohistorical data from sawmill sites across the Deep South interwoven with the historical and archaeological data from the two case studies at Natchez-Under-the-Hill to provide a more complete understanding of early industrial milling complexes. The archival data, oral interviews, and material culture
provide a more complete, pluralistic, and humanistic look at the spatial, social, and economic framework of mid-nineteenth century sawmill operations in and around Natchez.

Some of the social elements of the logwood and sawmill life documented by folklorists, ethnomusicologists, oral historians, and travelers’ accounts include work songs, spirituals, and baptisms in the nearby river that were part of the social milieu for some workers. These accounts provide glimpses of some aspects outside of the daily toils of timber and lumber of life for laborers. Furthermore, these documented social activities are especially important given the difficulty in discerning music and religion in the archaeological record and especially from the limited sample recovered from the two mill sites.

The social and occupational characteristics of the sawmill industry shows a great deal of continuity during the approximately first hundred to two hundred year history of commercial logging in the lower Mississippi Valley, while the technological characteristics of the industry appears to be marked by a greater amount of change and evolution over this same period. With the invention and refinement of a reliable and somewhat affordable steam engine, this technology quickly spread across the lower Mississippi Valley during the first couple of decades of the 1800s. The first steam-powered sawmills in the Deep South states were located near major port towns and settlements like Biloxi, Charleston, Donaldsonville, Mobile, Natchez, New Orleans, and Savannah. Some of the first steam sawmills in the Lower Mississippi Valley were erected at the landings at Natchez-Under-the-Hill on the old Minor Lots by at least 1818. The quite early introduction and spread of steam-powered sawmills occurred in places like Natchez for many reasons. A few include: the port’s location on the Mississippi River, the close proximity to vast forests, the first steamboats may have provided the first engines, the high economic demand for cut lumber on the southwest frontier, several millwrights and construction entrepreneurs living in the town, the availability of skilled labor from the nearby slave markets, and capital investment from wealthy bankers and landholders.

Usually industrialization is associated with metal and machines and not wood products, but the construction boom in parts of the Lowland South following the recent American takeover of a large portion of this region and the financial success of cotton for some, made cut wood for construction a high demand item. The newly invented steam engine yielded a reliable power source and thus an industrial catalyst for
entrepreneurs in the frontier and/or port towns like Natchez. The vast virgin cypress forests of the Louisiana and Mississippi deltas provided what seemed to be an infinite supply of some of the best wood in the world.

Historical documents and oral narratives indicate that enslaved African-American peoples were an essential element to the often-overlooked antebellum industries and occupied a diverse number of jobs within the economic structure of antebellum sawmills in the Deep South. Within this region, enslaved African-Americans and Free People of Color were employed in the majority of jobs in the lumber industry and many other manufacturing and transportation sectors prior to American Civil War. However, all of the enslaved laborers did not hold the same position within the framework of the sawmill operation. Historic documents indicate that there was some stratification in the responsibility, craft skills, “wages” paid to some, and the financial value of these workers.

Annual technological improvements made to the sawmills (such as the overhauling of the saws, the boilers or the steam engine) did not eliminate the need for laborers; rather, these mechanical improvements were matched by an increase in output and the need to purchase or hire additional hands. Antebellum timbering was not a single-gender occupation, enslaved women have been historically documented carrying even out some manual labor tasks such as logging, various archival records indicate that at the antebellum mill operations examined within this thesis, the labor force were nearly exclusively composed of men and often young men. This contrasts with the population demographics of the surrounding agricultural plantations. Following the Civil War, archaeological and historical literature indicates that women and children were more common in the lumber setting especially by the late-nineteenth and early-twentieth century, as many lumber operations –from mobile logging camps to mill towns - appear to be more familial-based situations. In contrast, the slave-based Cozzens or Brown sawmills do not appear to follow this pattern. Rather, these early mills have five to six enslaved male hands for every female living or working at the operation.

Many of the mill jobs that these craftsmen or laborers were forced into were extremely dangerous situations and these individuals were either disgracefully underpaid for these services, or enslaved prior to the Civil War. The ethnohistorical data provides some details about the toils and risks of this occupation during the nineteenth and early-twentieth century. The heat of the boilers, the engine, the lanterns, and the summer,
combined with the sawdust and wood, meant fires, boiler explosions, and heat exhaustion were a common threat. Crews varied in size from 10 to 30 to 50 people toiling in the logwoods, on lografts in the dangerous river, at the lumberyard, or in the mill. Undoubtedly, many witnessed lives lost. Records for the Brown and Cozzens sawmills indicate that several workers were killed in mill accidents, but most appeared to have died from diseases. Very few enslaved laborers achieved financial and local success and even less appeared to have been able to escape to freedom in the North or Canada, probably attesting to the difficulty in escape for the log crews through the delta swamps.

Following emancipation, the conditions within much of the lumber industry do not appear to improve significantly: “In almost all lumber mills black men were often assigned jobs deemed dangerous to life and limb and tasks that required great physical strength and endurance. Moreover, the lowest-paying jobs were often those held by blacks. Few if any mill owners and foreman came from the black population” (Hickman 1986:84). The machinery within the mills continued to get more complex, faster, and more dangerous, and yet neither wages nor working conditions seem to have significantly improved throughout the nineteenth century.

Early sawmills like Andrew Brown’s and Brown Cozzens’s were pivotal in the development of the timber industry. These operations were also instrumental in reshaping the physical and cultural landscape of the region. Vast stretches of forests were logged at ever increasing rates; in turn this lumber was used to construct places like Natchez and New Orleans. Although historic documents make note of the presence and use of enslaved African-Americans, these documents provide almost no recordation of the foodways, social activities, spiritual beliefs, musical talents, or material culture of this overlooked group. Sadly, these less documented aspects of mill life provide the greatest amount of information regarding cultural continuity, cultural change, and social struggle among the workers.

Archaeological survey of the former Andrew Brown sawmill at Upper Landing and excavations at the Sisloff-Cozzens sawmill at Middle Landing yielded valuable information regarding the spatial layout of the mill complexes as well some details about the working and living conditions at these sawmill sites through time, especially at the less documented Middle Landing operation. At the former location of the Little-
Brown-Learned sawmill complex few artifacts were recovered in the survey dating to the operation of the sawmill at this location from 1818 to 1917. Several concrete features likely from the circa 1917-1961 were located and appear to be more than simply concrete walls or pillars. The breakwaters attest to the struggle Rufus Learned had, like much of the early property owners Under-the-Hill like Andrew Brown had, with the river's floodwaters and erosion of the riverbank. The concrete pillars and rails mark locations where millions of board feet of wood were stacked. These documented landscape features from the later Learned operation not only reveal some of the physical barriers and psychological aspects of the mill operation, they also provide spatial landmarks that assist in deciphering the historic landscape and layout of the sawmill, albeit the later mill, through time. Unfortunately, at the Andrew Brown sawmill a mid-nineteenth century artifact assemblage was not collected that could answer some of the research questions or test hypotheses regarding the laborers or early sawmill operation.

The sawmill at Middle Landing owned by McFadden, Sisloff, Gaw, Cozzens and others was in many ways similar and different than the neighboring upriver sawmill owned by Andrew Brown and later Rufus Learned. Early on both of these operations had timber rafted downriver to the front of the sawmill. Rafts were dissembled and fed up the log haul into the mill. Initially, both mills utilized a steam-powered engine and either a single or gang of sash saws. Like Andrew Brown’s lumber complex, most if not many of the hands at the Brown Cozzens sawmill were enslaved men. Both mills at Natchez-Under-the-Hill appear to have had problems with erosion along the riverfront and bluff slumpage at the rear of their properties.

Some of the differences between the two operations illustrate the economic diversity and differing management styles within the industry even at a given locale. The Middle Landing sawmill operated a shorter period of time from around 1841 and to about 1869. The Middle Landing sawmill was a smaller operation, less profitable, with fewer workers, had a lower amount of production, and appears to have produced a lower quality or grade of lumber than the Brown sawmill upriver. Additionally, the Middle Landing sawmill appears to have had a long history of either financial mismanagement or bad fortune unlike the long-term economic success of the family owned sawmill upriver. Furthermore, unlike the thoroughly documented Upper Landing sawmill complex and big house, very little documentary evidence was found on the Sisloff or
Cozzens sawmill. Because of this factor, archaeological data from the mid-nineteenth assemblage recovered from the Well site (22AD993) are extremely informative.

Archaeological investigations at the Well site (22AD993) provided a unique opportunity to gain knowledge about the technological aspects of the operation, as well as the social and material life of the individuals who worked and lived at the Sissloff-Cozzens sawmill. Through a synchronic and diachronic analysis, insights were gained into the technology employed at the mill as well as the cultural change and cultural stability among the predominantly African-American workforce during this critical and yet understudied time period.

Most of the archaeological data found at the Well site related to the nineteenth century sawmill come from the small portion of the mill site that has yet to erode into the Mississippi River. Feature 4, a six-course thick, in places, foundation appears to have been the location for the mill’s chimney and furnace. This feature more than anything else from the site provides the historic orientation and location of the sawmill. This brick foundation not only identifies the rear or northeast corner of sawmill, but also the area that likely housed the furnace and boiler. This area of fire, steam, and probably coal, was the power source and also the epicenter of the sawmill. This area would have also been one of the most dangerous places to work in the mill as a fireman, engineer, or boiler operator. The present erosion of Feature 4 indicates another of the sawmill’s historic challenges: the river’s movement towards the front of the mill.

Because of this erosion, no living surface or other features like a foundation for the engine, piers for the mill, privies, or middens could be found with the exception of Feature 1. The lack of deposits or features around the mill site was also likely due to George Roth or William Fox salvaging or borrowing out some of the brick features following his acquisition of the property. Shortly after he acquired the property, he built several dwellings and he may have salvaged material from the sawmill operation for these projects.

Feature 1 appears to be a brick-lined well that likely provided water to the boilers from the historic springs located below this feature. The interior of the well had been filled with artifacts and alluvial and colluvial deposits probably sometime during the later half of the 1800s. The interior of the well was excavated to a depth of nearly six meters or just below the base layer of bricks. Feature 1 may represent a
cross-section of material culture from the mid-nineteenth century sawmill at Natchez-Under-the-Hill’s Middle Landing. Clearly part of the artifact assemblage recovered from Feature 1 was machinery from a sawmill. The approximately seven foot or 2.1 m long sash saw blade appears to be identical to sash saws documented at other contemporaneous sawmills across the region. Parts of a steam boiler, wrenches and a tremendous amount of coal recovered around four to five meters deep in the well appear to confirm that this operation was indeed steam-powered and was likely utilizing more efficient coal to heat the boilers rather than wood, which at a sawmill is somewhat surprising. It is not clear if the machine parts excavated from the well were dumped into the feature during one of the many bankruptcies or sales of this sawmill, or possibly part of a renovation or overhaul of the mill’s machinery. Finally, some if not many of the deposits in the well are likely associated with George Roth’s purchase of the land after the Civil War and his clearing of the property and William Fox’s salvaging of the useful machinery off the land shortly afterwards to make way for Roth’s cordwood operation. The likely sources for the artifacts deposited within the well are from the immediate area around the sawmill property and possibly from buildings or dwelling formerly associated with the sawmill that Roth and/or Fox salvaged and leveled on the property sometime after 1867. The sawmill was most likely disassembled and then leveled because it was technologically outdated and unable to compete, especially given the depressed lumber market after the war. Furthermore, an eroding riverbank combined with a slumping bluff may have impacted the mill site.

Any argument that all deposits from the well date to just one episode or deposition such as the clearing of the property or a major renovation may not take in account several factors. The distribution of artifacts within the well appears to be clustered in several areas and not evenly distributed throughout the feature. Furthermore, certain areas of the well contain distinctive deposits, such as coal, or whole champagne bottles, while other deposits around the saw blade are a mixture of architectural, domestic, personal and food-related items. Thus, the material within the well may represent various small depositions as well as one or two large depositions.

Unfortunately the artifacts from this feature cannot be associated with any particular person or persons. However, the analysis of this assemblage attempted to relate at least a portion of the artifacts to the
sawmill operated at Middle Landing. A portion of the assemblage appears to represent machinery from the mill while some of the assemblage may be associated with the laborers working and living around the site. One of the research goals of this thesis was to determine if any of the artifact assemblage excavated from the sawmill site could be attributed to the laborers, enslaved or free, who worked at the Sisloff-Cozzens sawmill. If so, could information be gleaned from these artifacts regarding the daily life (foodways, housing, clothing, medicines, social activities) of these workers and possibly their families?

The last chapter demonstrated that the cultural deposits excavated from the well were not composed exclusively of architectural material or machine parts, a considerable amount of faunal remains, tin cans, glass bottles, ceramics and personal and adornment items were found within the feature. Where these items came from and how they ended up in the feature is not clear. However, given the sawmill's location Under-the-Hill several lots upriver and downriver from any other development, these items likely did not come from far away and may have come from around the mill site. The mill saw recovered from the feature around four to four and a half meters deep, was deposited along with a large amount of domestic material that may have been associated with a secondary cleaning up or clearing of the site. Such a clearing or cleaning may have resulted from the removal of a “tenement” or boarding house on the property, which may have no longer been useful if the mill had shut down and especially if a large number of laborers left following emancipation. Some of the material from these former residences was likely redeposited into the well.

The datable glass, ceramic, and metal vessels from Feature 1 have mean dates from the early to late-nineteenth century. Many of the mean dates for these vessels are clustered around the mid-1800s. Furthermore, the most accurately dated artifacts appear to correspond to the historically documented circa 1840-1870 sawmill at the site. Thus, the assemblage from Feature 1 could represent a sample of material culture from the mid-nineteenth century sawmill operation and may provide material remains related to daily and social life: dinner, clothing, work boots, a pocketknife, and a necklace. Closer analysis of the artifacts indicates that not only does the artifact assemblage from the well appear to date to the sawmill's operation, the types of material culture within the well could be indicative of an assemblage being related to low income laborers, such as mill hands.
The faunal deposits recovered from the concentrations near the base of the well were similar with regards to the types and cuts of meats identified in the deeper and possible earlier deposit, which appears to be a larger concentration. The faunal assemblage from Feature 1 showed a great deal of similarity to meat cuts excavated from an African-American workers’ quarters at the circa 1911 Goodland sawmill site in southern Louisiana (see Whelan and Pearson 1999). The lack of high value steaks and other high value meat cuts, and the abundance of low and mid-value bulk cuts clearly could be indicative of sawmill diet. Overall, the meat remains within the well appear to represent a diet dominated by pork, with some portions of beef and chicken supplemented with deer and fish. Additionally, eggshell and oyster shells were recovered, though neither in high quantities. As stated earlier, the use of enslaved cook at the Cozzens mill may have also been a factor influencing the choice and cuts of meat used to feed workers.

Additional information regarding foodways of the individuals associated with the deposits within Feature 1, possibly enslaved mill workers, may be gained from the vegetable and sardine tins recovered during excavation. The presence of early tin-enameled iron cans indicates that the archaeologically discernable diet was a mixture of early mass-produced items as well as meat obtained from a butcher and some locally hunted. Fresh fruits and vegetables may have been obtained at local markets to supplement the apparent staple of pork and possibly beans from tin cans. Thus, the diet can be shown to reflect Natchez’s location as a town on the Southwest frontier where game and fish were still common, but also a major port town with a butcher and access to national and international markets. Early canned goods from New Orleans, Boston, and New York likely were among items available at the bustling port. Lumber mill owners probably quickly recognized the value of canned foods for feeding a manufacturing-based labor force efficiently where very little or no agricultural space was available between the bluff and riverbank.

Also related to foodways, several identifiable ceramic tablewares were found within Feature 1. The mixture of plates, saucers, bowls, cups, and mugs were mostly undecorated, but a few decorated wares were recovered. However, most of the decoration was limited to simple hand painted or annular designs. The ceramic assemblage from Feature 1 for the most part appears to represent low-value, utilitarian wares. This could be another possible indicator that this sample may be associated with workers or laborers at the
sawmill. The heavy use of the ceramics and cut marks on saucers found on a few vessels recovered from Feature 1 may be indicative about the class of individuals represented by this assemblage. The reuse of saucers as plates illustrates the heavy utilitarian nature of much of the ceramic wares from this assemblage.

Various items related to garments and shoes were also recovered from Feature 1. All but one of the 28 bone and porcelain buttons recovered from Feature 1 were undecorated, and many appear to be the same type and possibly from similar garments, such as set of flannel or cotton shirts issued to enslaved laborers along with leather boots. From the sizes, general lack of decoration, and quantity, these buttons were likely utilized on a button-up shirt, possibly a men’s work shirt. The shoe leather recovered from Feature 1 appears to represent at least one or may be two or three leather lace up boots and appear to be similar to leather work boots excavated from a circa 1900 turpentine camp in Howison, Mississippi (see Reams and Cramer 1997). Thus, the garment remains from Feature 1 may be indicative of work-related clothing associated with a mill setting. Additionally, no shell or decorated shell dress buttons were recovered from the feature. Only one nice cuff link and one hand painted porcelain button were found at the site, possibly representing a special occasion outfit.

Regarding social activities, a high number of alcohol vessels were recovered from the well. If the assemblage within the well came from the sawmill property, this would indicate that alcohol was available and drunk around the mill complex. Given the documentation of Andrew Brown’s enslaved and free laborers indulging themselves with one of Under-the-Hill’s abundant commodities, liquor, this would not seem irrational. However, some of the whole alcohol vessels, especially the wines and champagnes, recovered from Feature 1 may have been recycled and reused for secondary purposes. Their deposition in the well may be related to the storage of water and not alcohol. Furthermore, glass champagne bottles used to chill liquids have been excavated from the base of well at a plantation in nearby West Feliciana Parish, Louisiana (see Perrault et al. 2003).

The low amount of personal or adornment items, as well the absence of artifacts normally associated with children may again speak to the context of this assemblage. Historic records indicate a relatively low number of children at antebellum sawmills and this may be indicated archaeologically from the mid-19th
deposits from the Well site. The lack of items within Feature 1 normally associated with children or childbirth could be indicative of a masculine environment. Furthermore, mill laborers, enslaved for much of the history of this sawmill’s operation, likely would have had a limited amount of personal or material possessions. A nice pocketknife, necklace, or marbles for gaming, or a tobacco pipe are typical items that would have been carried around at an antebellum sawmill. Some of these personal items fancier garment items may have been purchased by enslaved laborers with “supplemental wages” that were often paid for extra work or from money they earned outside of their daily tasks.

The two black beads recovered from Feature 1 may be associated with the necklace clasp also found in the feature. Several archaeologists have linked the high occurrence of beads, especially blue and black, at southern plantation sites with African or African-American aesthetics. Unfortunately, not enough of the context of this assemblage is known to identify the spiritual, religious, symbolic, or possibly African meanings associated with the necklace or necklaces.

Though the majority of artifacts excavated from Feature 1 was brick, mortar, coal, and wood, clearly some of the assemblage from Feature 1 were machine parts related to a sawmill operation and some appear to be domestic goods possibly associated with the enslaved or free mill workers. Information regarding foodways, medical care, social activities may provide indications of conditions within and around the milling operation. The use of barracks style housing at the Sisloff or later Cozzens sawmill would have severely limited the domestic space. I hypothesized that there would be a paucity of outward gendered space at these early mill sites and what social space was available would be truncated because of the limited area at a mill setting. Because of erosion and bluff slumpage at both sites, not enough data could be collected about the social and spatial framework of these mills to either completely disprove or support this hypothesis. However, what outwardly visible gendered material evidence that could be discerned at the Middle Landing site appears to be associated with a masculine environment, possibly reflecting the high number of men working and living around an early industrial mill, though clearly these mill sites were not single-gendered.

From the research gathered within this thesis, a more accurate and humanistic portrayal of the antebellum lumber mills at Natchez-Under-the-Hill was attempted to provide documentation to this much
overlooked aspect of American history. Much has been written about the social milieu at the Natchez port, but little documentation exists about the early industrial and commercial growth around the steamboat landings. Furthermore, even less has been presented about the contributions African-Americans made to this burgeoning lumber industry in Natchez, and throughout the whole Lower Mississippi Valley and Gulf Coast. Through the analysis of the Upper and Middle Landing sawmill operations, which involved the compilation of various textual sources—archaeological, oral interviews, archival, secondary resources—a greater understanding of not only the financial and technical operation of a mid-nineteenth century sawmill in Natchez was garnered, but a greater insight was gained into the social and spatial workings of a mill operation during this turbulent time period.

This research provides not only documentary evidence that both of the Under-the-Hill sawmills analyzed within this thesis employed enslaved African-American workers, but also presents historical texts about these individuals’ clothing, work hours, occupations, supplemental wages, legal restrictions, and “values.” Archaeological data from the Cozzens Sawmill may provide additional material evidence of a portion of the mill workers’ diet, clothing, and personal items. Thus, the material culture from Feature 1, as well the spatial data from Feature 4, provide otherwise undocumented—historically or archaeologically—information about the spatial layout, the working and living conditions of enslaved African-Americans at the mid-nineteenth century sawmill at Middle Landing. Some of the artifacts recovered from the mill site may not directly reveal the social and cultural beliefs of the sawmill’s African-Americans laborers, but may hint at how these individuals, predominantly men, brought and adapted their aesthetics, foodways, craft skills, social life to an early sawmill setting along the Mississippi River. This research presents not only an overdue archaeological analysis of the economic role of enslaved African-Americans with an antebellum industrial setting and thus illustrating the diversity within the plantation landscape in the South, but also presents material evidence on how some enslaved African-American lumber mill workers in Natchez lived and coped with their dangerous, precarious, and unjust situation.
REFERENCES

Abraham, Jennifer

Anderson, I. O.
1996 [Interview by Jerame Cramer, 24 September, Forrest County, Mississippi. Tape recording and transcript. Special Collections McCain Library and Archives, University of Southern Mississippi, Hattiesburg.]

Abernathy, Stewart

Adams, William Hampton

Alden, Peter, Brian Cassie, Jonathan D.W. Kahl, Gil Nelson, Eric A. Oches, Harry Zirlin, and Wendy B. Zomblefer

Allen, R.H.

Anderson, I.O.
1996 Interview by Jerame Cramer, 24 September, Forrest County, Mississippi. Tape recording and transcript. Special Collections McCain Library and Archives, University of Southern Mississippi, Hattiesburg.

Anonymous Lumber Company Account Book
1841 Louisiana and Lower Mississippi Valley Collections, LSU Libraries, Louisiana State University.

Austin, John C.

Austin, Whitney, J., S.A. Burns, Bobby J. Miller, Roger T. Saucier, and John I. Snead

Ayers, Edward L.

Bacot, H. Parrott, Barbara SoRelle Bacot, Sally K. Reeves, John Magill, and John H. Lawrence (editors)
Bakhtin, M.M.  
1986 *Speech Genres & Other Late Essays*, edited by Michael Holquist and Caryl Emerson and translated by Vern McGee.  University of Texas, Austin.

Ball, Donald B.  

Banks, Maj. Gen. N. P., and Henry L. Abbot  
1863 *Department of the Gulf Map N. 9: Northern Coast of Lake Pontchartrain*.  Cartographic Library, Department of Geography and Anthropology, Louisiana State University, Baton Rouge.

Banner Publishing Company  
1892 *Directory of the City of Natchez, October 1st, 1892*.  Banner Publishing Company, Natchez.

Barnes, Frank C.  

Beard, Michael Francis  

Beaudry, Mary C., Lauren Cook, and Stephen A. Mrozowski  

Beaudry, M.C. and Stephen A. Mrozowski  

Berlin, Ira and Philip D. Morgan (editors)  

Bezou, Henry C.  

Binford, L. R.  

Blake, S.D.  

Blassingame, John  

Block, W.T.  
Bodey, Hugh
1983  
Nailmaking. Shire Album No. 87, Haverfordwest, Great Britain

Boger, Louise Ade
1971  

Boggess, Elizabeth M.
1994a  

1994b  

Boggess, Elizabeth M., Douglas H. M. Boggess and Katharine K. Moore
1997  

Boles, John B.
1995  

Brashler, Janet
1991  

Breaux, Father Dominique
1998  
Personal Communication with author.

Brooms, McDonald and Brad Solomon
1997  
A Survey of Water-Powered Mill Sites in Pike County, Coffee County, and Covington County Alabama. Troy State University Archaeological Research Center, Troy, Alabama.

Brooms, McDonald and April C. Smith
1996  
Archaeological Investigations at the Kennedy Mill Site: 1Ba301 in Baldwin County, Alabama. Troy State University Archaeological Research Center, Troy, Alabama.

Brown, Clair A.
1965  
Louisiana Trees and Shrubs. Claitor’s Publishing Division, Baton Rouge.

Bryant, Ralph Clement
1913  

Buchli, Victor A.
1995  
Busch, Jane

Cabak, Melanie A., and Mary M. Inkrot

California Department of Insurance

Carpenter, Caleb

Chance, David H., and Jennifer V. Chance

Childress, Sarah C., Michael Bograd and John C. Marble

Christian, Marcus

Church, Peter E. and Richard W. Hunt

Cinadr, Thomas J., and David S. Brose

Claiborne, J.F.H.

Clark, John G.

Clark, Hyla M.

Clarkson, Roy B.
Clayton, James D.  

Conway, Bruce  
1996  [Interview by Jerame Cramer, 30 July, Richton, Mississippi. Tape recording and transcript. Special Collections McCain Library and Archives, University of Southern Mississippi, Hattiesburg.]

Conway, Bura  
1996  [Interview by Jerame Cramer, 14 July, Petal, Mississippi. Tape recording and transcript. Special Collections McCain Library and Archives, University of Southern Mississippi, Hattiesburg.]

Coysh, A.W. and R.K. Henrywood  

Cramer, Jerame J.  


1998  Been Driving an Ox Team Through the Pines.  In *Mississippi Folklife*, Vol 30, Nos. 1 and 2. pp. 24-33

Daily Courier  
1852  “For Sale.”  *Natchez Daily Courier*, p1A.

Davis, Allison  

Davis, Dernoral  

Davis, Edwin A.  

Davis, Pearce  

Davis, Ronald L. F.  
Davis, William C.  

Davoli, Elizabeth L.  
1996  *In the Name of Prevention: An Examination of Patent Medicines in Ethnic Communities in Late-Nineteenth and Early Twentieth Century Louisiana.*  Unpublished Master's thesis, Department of Geography and Anthropology, Louisiana State University, Baton Rouge.

Dawdy, Shannon and Christopher Mathews  

*De Bow's Commercial Review*  
1848  5:379-380.

Deetz, James  

Deiss, Ronald William  

Delehanty, Randolph and Van Jones Martin  

Dixon, George  

Dumbrell, Roger  

Dutton, D. H.  

Du Pratz, S. A. La Page  

Edwards, Jay D., and Tom Wells  

Eakin, Sue and Joseph Lodgson (editors)  
1968  *Twelve Years A Slave By Solomon Northup,* Louisiana State University Press, Baton Rouge, Louisiana.
Ellis, Fredrick S.

Ellis, Gary

Ezell, John Samuel

Fairbanks, Charles Herron

Ferguson, Leland

Fike, Richard E.

Fisk, H.N.

Flick, Warren A.

Foucault, Michel

Foner, Philip S.

Fontana, Bernard L. and J. Cameron Greenleaf

Freeman, Larry

Gandy, Joan W. and Thomas H. Gandy


Giraud, Marcel
Godden, Geoffrey A. 

Goetzmann, William H. 
1984 Karl Bodmer’s America. Joslyn Art Museum and University of Nebraska Press, Lincoln.

Goodwin, R. Christopher, Jill-Karen Yakubik, Peter Gendel, Kenneth Jones, Debra Stayner, Cyd H. Goodwin, Galloway Selby, and Janice Cooper 

Gould, Virginia Meacham 

Grazulis, Thomas P. 

Greer, Georgeanna H. 

Grosscup, Gordon L. 

Habard, Stanley 
1997 Interview by Jerame Cramer, 11 November, Jackson County, Mississippi. Tape recording in author’s possession.

Hahn, Sara and Thurston H.G. Hahn 

Hahn, III, Thurston H.G. 


Hodder, Ian


Hoffman, Gilbert H.


Hogan, William Ransom and Edwin Adams Davis (editors)

Holmes, W.

Hooks, W.I.

Howe, Tony
2002  Growth of the Lumber Industry In Mississippi History Now.
http://mshistory.k12.ms.us/features/feature17/lumber.html>  An online publication of the Mississippi Historical Society.

Hunter, Louis C.

Hunter, Robert R. and George L. Miller

Hutchins, Thomas

Ingram vs. St. Tammany Police Jury
1868  St. Tammany Parish Clerk of Court, Folio 2B, 20, La Ann 226.

Industrial Workers of the World [IWW]

Jackson, Bruce
James, D. Clayton  

Janzen, Donald E.  

Jones, Oliver  

Kane, Harnett T.  

Kelley, David B.  

Kendrick, Grace  

Ketchum, William C.  

King, Edward  
1874  *The Great South; a record of journeys in Louisiana, Texas, the Indian Territory, Missouri, Arkansas, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Kentucky, Tennessee, Virginia, West Virginia, and Maryland*. American Publishing Company, Hartford, Connecticut.

Kniffen, Fred B.  

Kovel, Ralph and Terry Kovel  

La Tourette  
1846  *LaTourette's Reference Map of the State of Louisiana from the Original Surveys of the United States Which show the Spanish Grants, Townships, Sections, or mile square, Settlement Rights & C. also the Plantations with the Owner's names Engraved thereof*. Record group No. 77. National Archives, Washington, D.C.

Lehner, Lois  

Levine, Lawrence  

Lewis, Ronald L.  
Lewis, George

Liebowitz, Joan

Little, Barbara J.

Lofstrom, Edward

Logan, Herschel C.

Lorrain, Dessamae

*Louisiana Conservation Review*

Majewski, Teresita, and Michael J. O'Brien

Mancil, Ervin
1972  An Historical Geography of Industrial Cypress Lumbering in Louisiana. Unpublished Ph.D. dissertation, Department of Geography and Anthropology, Louisiana State University, Baton Rouge.

Mankowitz, Wolf

McAllister, Lisa S.

McBee, May Wilson

McDaniel, Sidney
McKearin, George S. and Helen McKearin

McKearin, Helen and Kenneth M. Wilson

McKee, W. Reid, and M.E. Mason, Jr.

McMillan, M. C.

McWhiney, Grady

Miller, George L.


Miller, George L. and Robert R. Hunter,

Miller, George L., and Catherine Sullivan

Miller, John

Mills, Gary B.

Mississippi Legislature

Mississippi River Commission [MRC]

Moir, Randall W.

Monette, John W.

Moore, Edith W.

Moore, John Hebron
1967 *Andrew Brown and Cypress Lumbering In the Old Southwest*. Louisiana State University, Baton Rouge.

Moore, Rose G. and Deborah L. Rotman

Morson, Gary Saul and Caryl Emerson

Morris, William M., JR.

Muellet, Paul F.

Munsey, Cecil

Myrtle Bank Books

Napier, John Hawkins
1985 *Lower Pearl River's Piney Woods - It's Land and People*. University of Mississippi, Jackson, Mississippi.

*Natchez Courier*
1859a Description of Breakwater Damage. 16 November. Natchez, Mississippi.
1859b Breakwater Rebuilt. 15 December. Natchez, Mississippi.

*Natchez Free Trader* [NFT]
1840a Horrible Storm!! Natchez in Ruins!!. 8 May: 1. Natchez, Mississippi.
1840b Dreadful Visitation of Providence. 15 May: 1. Natchez, Mississippi.
1858  Description of Flooding Under-the-Hill. 25 May: 1. Natchez, Mississippi.

Nelson, Lee H.  

New Orleans Times-Democrat  
1882  Description of the Natchez Cotton Mill. 26 August. New Orleans.

Newton, Milton  

Noel Hume, Ivor  

Norgress, Rachael Edna  

Orser, Charles E., Jr.  
1983  A Mean Flat Glass Dating Method for the Southeastern United States. Ms. on file, Department of Geography and Anthropology, Louisiana State University, Baton Rouge.


Panchak, Pat  
1999  “Landmarks in Time”  
IndustryWeek.com

Peabody, Howard B., Jr.  
2002  Personal communication with author.

Pearson, Charles E. and Allen Saltus, Jr.  

Perrault, Stephanie L., Sara A. Hahn, Thurston H. G. Hahn, III, Dayna Lee, Katherine M. Roberts, Joanne Ryan, and Roger T. Saucier  

Petroski, Henry  

Phillips, John C. Phillips  
1993a  *Arcadia: An Early 19th Century Water-Powered Industrial Complex in Northwest Florida*. Archaeology Institute, University of West Florida, Pensacola.
1993b  *Mill Site Reconnaissance in Northwest Florida.*  Archaeology Institute, University of West Florida, Pensacola.

1996  *The Water-Powered Industries of Northwest Florida: An Archaeological Reconnaissance.*  Archaeology Institute, University of West Florida, Pensacola.

Powell, J.C.

Powell, Murella


Power, Major Steve

Price, Cynthia R.
1982  *19th Century Ceramics in the Eastern Ozark Border Region.*  Monograph Series No. 1.  Center for Archaeological Research, Southwest Missouri State University, Springfield.

Putnam, H. E.

1968  *Bottled Before 1865.*  Rapid Blue Print, Los Angeles, California.

Reams, Robert and Jerame J. Cramer

Reeves, Charles
1980  *Charles Reeves vs. River Heights Property Owners,* filed in 6th Judicial District, St. Tammany Parish Clerk of Court.

Refer, Joe
1976  *An oral history with Joe Refer, native Mississippian* / *Interviewer: Orley Caudill.*  University of Southern Mississippi, Hattiesburg.

Reid, Willie B.
1996  Interview by Jerame Cramer, 1 August, Monticello, Mississippi.  Tape recording and transcript.  Special Collections McCain Library and Archives, University of Southern Mississippi, Hattiesburg.

Register, James
1969  *Views of Old Natchez (Early 1800's).*  Mid-South Press, Shreveport.

Reilly, Robin and George Savage

Reps, John W.

Riordan, Timothy B.

Rock, J.T.

Roenke, Karl G.

Rothman, Margaret Landhorne

Rothstein, Morton

Ryan, Joanne

Saltus, Allen R.

Saltus, Allen R., Jr., George J. Castille, III, and Charles E. Pearson

Saltus, Allen R., Jr., and Charles E. Pearson

Saint Tammany Parish Records
1810-1980  Clerk of Court, Archives, St. Tammany Parish Courthouse, Covington, Louisiana.
<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>Publisher</th>
<th>Location</th>
<th>Source</th>
</tr>
</thead>
</table>

Sansing, David G., Sim C. Callon, and Carolyn Vance Smith

Saucier, Roger T.
1994 | Geomorphology and Quaternary Geologic History of the Lower Mississippi Valley. | U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. |

Schmidt, P. R. and S.A. Mrozowski

Scott, James

Shumway, Robert

294

2002b “Rolls of the Several Military Organizations which entered the service of the Confederate States of America from the City of Natchez and Adams County, Mississippi” _Adams Co., MS Genealogical and Historical Research_. <http://www.natchezbelle.org/adams-ind/master.htm>

Shumway, Sarah and Robert Shumway

Singleton, Theresa

Sitton, Thad, and James H. Conrad
1998 _Nameless Towns: Texas Sawmill Communities, 1880-1942_. University of Texas Press, Austin.

Sloan, Theo.

Smith, Julia Floyd

Snyder, Jeffrey B.

South, Stanley

Spillman, Danell

Starobin, Robert S.
1970 _Industrial Slavery In The Old South_. Oxford University Press, New York.

Sterkx, H.E.
Sullivan, Charles L. and Murella Hebert Powell  

Surrey, N.M. Miller  
1916  *Commerce of Louisiana During the French Regime, 1699-1763*, New York.

Sussman, Lynne  


Switzer, Ronald R.  

Sydnor, Charles Sackett  

Tegeder, Michael David  

Thompson, Ray  
1958  Ray Thompson Papers, Box 2, Folder 7 “Saga of a Sawmill”, University of Southern Mississippi’s McCain Archives.

Thurston, Robert Henry  


Tilley, Christopher  

Tiner, Ralph W.  

Toulouse, Julian H.  


Trigger, Bruce  
Tunis, Edwin

Turner, Mary

United States Army Corps of Engineers, Vicksburg District [COE]

United States Census Office, 4th Census
1820 Digest of accounts of manufacturing establishments in the United States, and of their manufactures: Made under direction of the Secretary of State in pursuance of a resolution of Congress, of 30th March 1822. Gales & Seaton, Washington, D.C.

United States Geological Survey

United States Population Census: Adams County, Mississippi.
1820 Manuscript of Adams County, Mississippi. Microfilm on file, Bluebonnet Public Library, Baton Rouge, Louisiana.
1830 Manuscript of Adams County, Mississippi. Microfilm on file, Bluebonnet Public Library, Baton Rouge, Louisiana.
1840 Manuscript of Adams County, Mississippi. Microfilm on file, Bluebonnet Public Library, Baton Rouge, Louisiana.
1850 Manuscript of Adams County, Mississippi. Microfilm on file, Bluebonnet Public Library, Baton Rouge, Louisiana.
1860 Manuscript of Adams County, Mississippi. Microfilm on file, Bluebonnet Public Library, Baton Rouge, Louisiana.
1870 Manuscript of Adams County, Mississippi. Microfilm on file, Bluebonnet Public Library, Baton Rouge, Louisiana.
1880 Manuscript of Adams County, Mississippi. Microfilm on file, Bluebonnet Public Library, Baton Rouge, Louisiana.

United States Population Census: St. Tammany Parish, Louisiana.
1830 Manuscript of St. Tammany Parish, Louisiana. Microfilm on file, Hill Memorial Library, Louisiana State University, Baton Rouge.
1870 Manuscript of St. Tammany Parish, Louisiana. Microfilm on file, Hill Memorial Library, Louisiana State University, Baton Rouge.

297
United States Slave Schedule: St. Tammany Parish
1840 Manuscript of St. Tammany Parish, Louisiana. Microfilm on file, Hill Memorial Library, Louisiana State University, Baton Rouge.

1850 Manuscript of St. Tammany Parish, Louisiana. Microfilm on file, Hill Memorial Library, Louisiana State University, Baton Rouge.


Upton, Dell

Van Doren, Mark (editor)

Vestal, F.E.

Vice, Ollie

Vlach, John M.

Walbridge, William I.

Walker, John W.

Webb, Constance

Wells, Tom, Charles E. Pearson, George J. Castille, and William D. Reeves

Whelan, James Patrick, Jr., and Charles E. Pearson
Wilkie, Laurie A.  

1998 Personal Communication with author.

Wilkie Laurie A. and Paul Farnsworth  


Williams, Michael  

Williston, Ed M.  

Wilson, Andrew A. D.  

Wilson, Samuel Jr.  

Womack, Marlene  
1998 “Leasing of prisoners was one of Florida’s dark secrets,” March 29, Sunday, *The Panama City News Herald.*

Wood, Lucianne and Sarah Webster Harrison  

Wood, Richard G.  

Woodville Republican [WRWWA]  
1827 *Woodville Republican, and Wilkinson Weekly Advertiser.* 4(18):1A.

Wright, Richard  

Young, Amy  
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Jerame Joseph Cramer was born in New Orleans, Louisiana, in 1973. He grew up in Mandeville, Louisiana, with his parents and brothers. In 1991 he graduated from Mandeville High School and entered The University of Southern Mississippi that fall. Over the summers Jerame worked at a farm in Oloh, Mississippi, and at the University of Southern Mississippi’s Center For Marine Science at Stennis Space Center. After spending a year-abroad at the University of Swansea, Wales, Jerame returned home in 1995 to finish his Bachelor of Science degree majoring in cultural anthropology and minoring in biology. Following graduation, Jerame spent summers as an archaeological intern at Desoto National Forest in south Mississippi, consulting for a University of Southern Mississippi archaeological excavation of Saragossa Plantation in Natchez, Mississippi, and participating in an ethnographic survey of folklife in the Mississippi Pine Hills, which resulted in a publication of a special issue of Mississippi Folklife. In the fall of 1996, Jerame entered the master’s program of Louisiana State University’s Geography and Anthropology Department. While attending Louisiana State University, Jerame spent two semesters in the Bahamas as an archaeological field director at Clifton Plantation on New Providence Island.

He is currently employed as an archaeologist and biologist at a private environmental engineering firm in Baton Rouge, Louisiana, where he has worked on several projects including a soil survey of the Atchafalaya Basin, excavations of a colonial tavern near St. Francisville, Louisiana, excavations at New Africa Plantation near Donaldsonville, Louisiana, and excavations at a French Colonial cemetery in Natchez, Mississippi. All throughout his graduate and professional career, Jerame Cramer has participated in local and national conferences, presenting current research. In addition, he is an avid gardener, and loves hiking, bird watching, canoeing, backpacking, and traveling abroad.