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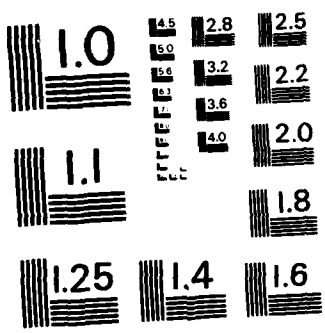

Archeological Assessments Report No. 16

Cultural Resources Survey of Two Proposed Facility Locations, Pine Bluff Arsenal Jefferson County, Arkansas

by.

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and
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Work Sponsored
by
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Fort Worth District
Order Number DACA63-82-M-0297

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Project Background

The Pine Bluff Arsenal has proposed to expand its facilities in two separate locations within the Arsenal boundaries. In compliance with and under the authority of the National Historic Preservation Act (Public Law 89-665), Executive Order 11593 (Protection and Enhancement of the Cultural Environment), Procedures for the Protection of Historic, Cultural Properties (36 CFR 800) and other authorities a cultural resources survey was conducted on these locations. This was carried out by Archeological Assessments, Inc. under agreement with the US Army Corps of Engineers, Fort Worth District, Order Number DACA63-82-M-0297.

Project Area Location and Description

The total acreage investigated was approximately 200 acres. Tract A (Figure 1) was located in the southwest ¼ of Section 7, Range 10W, Township 4S. This tract was heavily wooded with a mixed pine and hardwood cover. Ground visibility was zero over the entire tract. The topography was generally flat to rolling with heavy erosional dissection in the northern section. Timber had been cut from the tract several times and it was criss-crossed with ruts from logging roads.

Soils in Tract A are classified as Ouachita (well drained soils found in loamy sediment in floodplain), Pheba (poorly drained soils formed in arid medium textured sediments in the uplands), and Savannah (well drained soils formed in thick beds of loam sediment in the uplands) in the Soil Survey of Jefferson and Lincoln Counties (Gill, Larance and Fortner 1980). The eastern 2/3 of Tract A is composed of a Pleistocene Terrace; the western 1/3 is composed of residual soil of the Jackson Group formed during the Eocene. (Anonymous n.d.). At the time of field work 12 soil cores had been extracted as part of the evaluation of the land for the proposed facility. Cores in the project area consistantly revealed the top 2 to 2.5 feet of soil to be a light gray and yellowish brown silt, low in plastic which was stiff, damp and sandy. Shovel tests done during field work agreed with this description with one categorial exception; the profiles found in the prairie mounds.

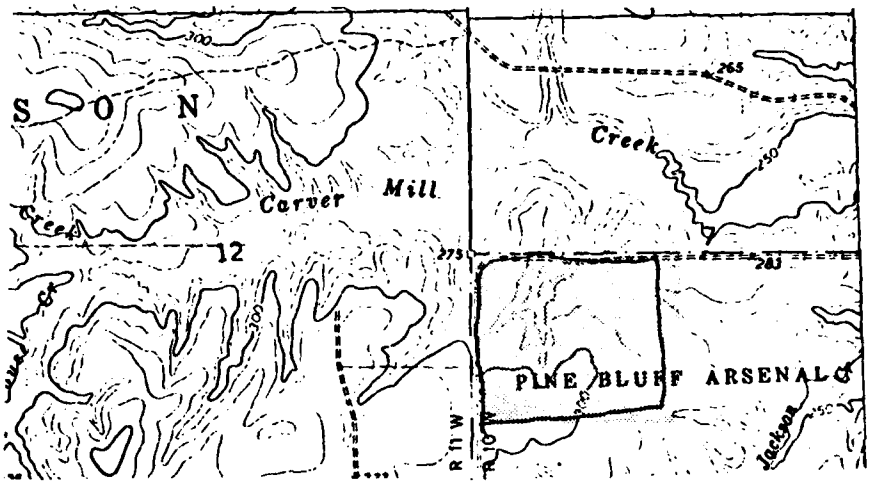

Figure 1. Tract A

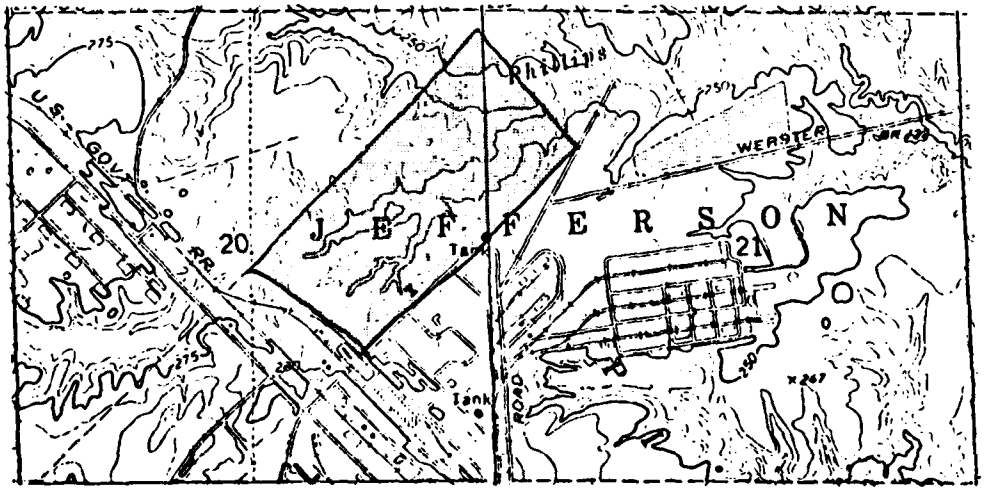

Figure 2. Tract B

Tract A and Tract B both contained a large number of small mounds or knolls, referred to as pimple or prairie mounds in the geologic literature. These features are very very sandy and homogenous in structure and are generally regarded as eolian features. The soil profile for these was consistent light to yellowish sandy soil topped by 3-5 cm of humus.

Tract B (Figure 2) is situated in the east½ of Section 20 and northwest ¼ of Section 21, R10W, T4S. This tract, also thickly covered with mixed pine and hardwood vegetation, is drained by the upper reaches of Phillips Creek which has heavily dissected the area creating areas of relief well over 3 meters. The only relatively flat area of the Tract is a small portion between the two branches of this drainage. Approximately the western 1/3 of Tract A has been substantially altered by past projects. Earth moving activities have removed large portions of the top soil and changed the creek course.

The soils in Tract B are also composed of Ouachita, Pheba and Savannah soil types. Typical soil profiles match those in Tract B. Further, numerous (more than 30) prairie mounds were also found here. A typical soil profile was taken near the south center of the Tract approximately 100 m south of Phillips Creek. The upper 3 cm was composed of humus which covered a light yellow sandy soil deposited 25 cm thick which overlay yellow sandy layers of undetermined depth.

With the exception of a cleared power line running roughly northwest to southeast across the center of the Tract, ground visibility was zero. Ground visibility within the power line right of way was 50% or better.

Records Search

No prehistoric or historic sites are recorded for these areas with the Arkansas Archeological Survey. The State Historic Preservation Officer has determined that there are no sites listed on or eligible for the National Register of Historic Places recorded for the project areas.

Culture History - Pine Bluff Arsenal Environs

A cultural historical summary of southeast Arkansas, specifically the Pine Bluff Arsenal evnirons, relies primarily on the Arkansas State Plan (Davis et al 1980). The required brevity of this summary necessitates the presentation of data in tables (1-3) in order to adequately present prehistoric and historic chronology. Additional historical references consulted include Goodspeed (1889), Nuttall (1821), Harris (1894), Lewis (1932), and Leslie (1976; 1981).

TABLE 1: PREHISTORIC CULTURAL CHRONOLOGY, ARKANSAS RIVER LOWLAND ARCHEOLOGICAL REGION, SE ARKANSAS (Jeter et al 1980)

Temporal	Period/Phase	Settlement Pattern	Subsistence	Diagnostic Artifacts
	Paleo-Indian Period	Temporary camps	Gathering & hunting	Nonceramic Lithic-Clovis-like fluted point forms. Scrapers, gravers, burins, true blades.
8500 B.C.	Archaic Period	Seasonal base camps, Special activity camps	Gathering & hunting lifeway. Late Archaic-tropical & native cultigens influence subsistence	Nonceramic (possible exception may be Poverty Point components). Lithics-large hafted biface tools & assoc. lithic debris. Cobble tools Fire-cracked rock Novaculite heavily utilized Late Archaic-lapidary items from Poverty Point on some sites.
500 B.C.	Woodland Period			Ceramics marker-predominantly grog tempered
300 B.C.-100 B.C.	Tchula Period	Recorded sites few & scattered. Small low conical mounds-probably contain burials.	Uncertain-gathering & hunting. Possibly mixed w/cultigens	

TABLE 1: CONTINUED

Temporal	Period/Phase	Settlement Pattern	Subsistence	Diagnostic Artifacts
100 B.C.-A.D. 300	Marksville Period	Large & small midden sites with or without one or more concial mounds	Probable mixed economy of cultigens, gathering & hunting	Lithics-small narrow Gary stemmed project points.
A.D.300-700	Baytown Period	Larger sites suggest larger, more stable population. Conical, dome-shaped & platform mounds	Probable mixed economy with increasing dependence on cultigens	Lithics-small, slender Gary stemmed project points.
A.D.700-1000	Coles Creek Period	Large, multiple mound complexes & single mound sites to midden sites indicative of small villages, hamlets, farmsteads, or camp sites	Dependence on cultigens complemented with gathering & hunting	Lithics-quartz crystals, minor amounts of novaculite, igneous lamphrophyre, trachyte, syenitye, & magnetite.
A.D. 1000	Mississippian Period (Phase-Bartholonew, Wilmot, Bellaire, Kent, & Old Town)	Ceremonial centers, hamlets, farmsteads & camp sites. Late Miss-large fortified towns & villages	Corn-bean horticulture complemented by wild resources	Ceramics marker-predominantly shell tempered Lithics-arrow points
Post 1500	Late Mississippian/ Quapaw Phase Quapaw	Villages with extensive cemetery areas, sometimes temple and/or burial mounds & numerous smaller mounds around a plaza. Centers are on or very near major river floodplains	Horticulture complemented by wild resources	Ceramics marker-predominantly shell tempered and plain.

TABLE 2: ACTIVITY PERIODS FOR PROTOHISTORIC/HISTORIC CHRONOLOGY IN ARKANSAS (L. C. Stewart-Abernathy et al 1980:10-25)

Contact Period	1500-1840
Indirect Contact	1500-1660
Direct Contact	1660-1720
Coexistence Contact	1720-1770
Resettlement Contact	1770-1840
European	1500-1825
Spanish	1500-1700 (1825?)
French	1700-1825 (1850?)
Anglo-American	1780-2000
Pioneer	1780-1850
Maximum Occupation	1840-1930
Civil War	1860-1875
Plantation	1800-2000
Tenant Farm	1870-1950
Riverine	1780-1880 (1930?)
Railroad	1855-1950
Extractive Industry	1880-2000
Resort	1840-1930 (2000?)
Automobile	1920-2000
Urbanization	1890-2000
Localized Industry	1780-1930
Military	1880-2000

TABLE 3: CHRONOLOGICAL SUMMARY OF POST MISSISSIPPIAN ACTIVITY IN THE PINE BLUFF ARSENAL ENVIRONS

1541-1542	DeSoto Expedition through central Arkansas
Late 1500s through mid 1600s	Increasing frequency of official and unofficial European contact with Indians
1673	Marquette and Joliet encounter Quapaw at mouth of Arkansas River
1689	French outpost established at Arkansas Post
1680s-1730s	Intensification of contact carried out by fur trappers, traders, military and clergy
1720-1721	LaHarpe expedition passed the Pine Bluffs on the Arkansas River and continued to fifty miles past Little Rock
1730s-1780s	Severe pressure on Quapaw resulting in demographic, social, political, and economic change
1750s-1770s	Formal settlement in vicinity of Arkansas Post by French farm families
1780s-1810s	Increasing utilization and eventual settlement of choice locations along the Arkansas River between Arkansas Post and the later site of Little Rock
1820s	Efforts to resettle Quapaw culminating with Quapaw cession in 1828 and removal of Quapaw as an organized group in Arkansas
1820s-1840s	Primary period in which major historic settlement patterns in Pine Bluff are established, including formation of Pine Bluff in 1830s
1840s-1900s	Infill of occupation away from the river
1890s-1930s	Maximum occupation concurrent with extensive timbering operations, followed frequently by rapid abandonment and reversion to second growth timber land
1880s-1910s	Completion of railroad corridors causing diminution of importance of riverine related activity and settlement
Early 1940s	Creation of Pine Bluff Arsenal, involving extensive landscape alterations including removal of surviving rural farming population and construction of extensive Arsenal related production, storage, administrative, and residential facilities

The Pine Bluff Arsenal is located in the Arkansas River Lowland archeological region as designated in the Southeast Arkansas section of the State Plan for the Conservation of Archeological Resources in Arkansas (Jeter et al 1980). This region consists of Fisk's Arkansas River Lowland, that part of the Boeuf Basin south of the Arkansas River, and those portions of the Arkansas and Bayou Bartholomew watersheds in the adjoining West Gulf Coastal Plain (Jeter et al 1980:4).

The prehistoric chronological framework for this region is the standard scheme of Paleo-Indian, Archaic, Woodland and Mississippian occupation periods. A number of sequential Woodland periods and Mississippian period phases have also been delineated for the Arkansas River Lowland archeological region (Table 1).

Protohistoric/Historic chronology for Arkansas consists of a series of activity periods (Table 2) which serve to subdivide the last four and a half centuries of human occupation in Arkansas (L. C. Stewart-Abernathy et al 1980). While all of these activity periods would be applicable in Southeast Arkansas, a more specific localized summary for the Pine Bluff Arsenal environs is particularly useful (Table 3).

Elaboration - Prehistoric Settlement

The likelihood of various prehistoric cultures occupying the Pine Bluff Arsenal Environs is dependent upon the environmental resources and terrain selectively soughtby any one culture. The escarpment bordering the Arkansas River floodplain along its western banks could contain buried Paleo-Indian or Archaic sites on remnants of old Pleistocene and early Holocene surfaces. Woodland and Mississippian period sites could be expected on natural levees in the Arkansas River floodplain to the east.

Elaboration - Historic Settlement

At the time of Nuttall's travels through Arkansas, he noted the growth and development of the region, mentioning specifically the grist and saw-mill industries being established (Nuttall 1821:101). Historic settlement of the Pine Bluff Arsenal vicinity began in the late 18th and early 19th centuries. Farmsteads were established all along the bluffs on the west banks of the river. This riverine oriented settlement incorporated Red Bluff and White Bluff upstream from the arsenal as well as Tripletts Bluff and Yellow Bluff on arsenal property. Goodspeed (1889:134) notes an operating post office at Red Bluff, and there was a landing at White Bluff (Harris 1894:88).

An examination of available maps of the arsenal grounds and vicinity indicates settlement patterns prior to the establishment of the arsenal by the Army in the 1940s. A 1915 soils map shows riverine settlement along the Arkansas River, with a community at Tripletts Bluff and a network of roads with farmsteads scattered along them all along the high ground west of the river. Also on the 1915 map is the Iron Mountain and Southern Railway, located several miles from the river. It is paralleled by roads and houses as a result of settlement oriented along the railway system. The 1932 Pastoria Quadrangle has more communities concentrated along the railway than the 1915 map, indicating the continuing orientation of settlement along the railroad. McFadden Cemetery, noted on the 1932 but not the 1915 map, is near the Arkansas River about a quarter section south of a cluster of houses present on both maps.

By 1941 an official ground breaking ceremony was held to begin construction by the Army on 15000 acres of land purchased for use as an arsenal. Construction of storage facilities in the Tripletts Bluff area may have destroyed evidence of early settlement there. No farmsteads were observed on the maps in the project areas to be examined for this survey.

Field Work

Field work was conducted on March 10 and 11, 1982, by W. J. Bennett, Jr. and Mary Bennett. Mr. Ken Mazander of the Pine Bluff Arsenal accompanied them during most of the survey. The survey was conducted by walking transects spaced approximately 20-30 m apart. The transects were placed so as to follow generally, rather than intersect, the major topographic and hydrologic features of the Tracts. Because of the poor visibility shovel testing was conducted at 25-30 m intervals along the transects. These tests consisted of scraping back the duff over an area of 50 to 75 cm in diameter and digging a hole 25-30 cm in diameter to a depth of 25-30 cm. The soil from 5 tests were sifted through a ¼ inch hardware screen. All prairie mounds encountered were shovel tested.

Results

No significant prehistoric or historic sites were encountered during the survey. However, a number of recent elements related to the history of the Arsenal were noted. In Tract A an old boundary line for the Arsenal or a facility within it was noted in the south-eastern portion. This consisted of a barbed wire fence, 8 feet high with diagonal cross-arms set on 4 inch square wooden posts (Figure 3). Further, numerous old Forest Service markers were found in the western and northern portion of Tract A.

In Tract B an old fence which must have been a facility perimeter was noted. This formed the northern edge of the area (Figure 4). This line also contained square concrete footings (90 x 90 cm) for what we presumed were observation towers. A large light bulb was also found along this fence.

Finally, it was noted that almost all of the prairie mounds in the western half of Tract B were scared by old excavation activities. We believe these to have been left from attempts to locate prehistoric remains in these mounds. Elsewhere in the eastern half of Tract B in the promentory formed at the confluence of the two creek arms another access large area of excavation was noted. All of these disturbances were examined and no evidence of prehistoric materials or features were present.

Soil profiles in the prairie mounds consisted of an upper 3-5 cm humus zone covering a homogeneous deposit of light brown sand to depths of 50 cm or more. These profiles were all consistent with an eolian origin of these features. No evidence of cultural origin was found in any of these features.

Recommendations

We recommend no further archeological investigations for these tracts.

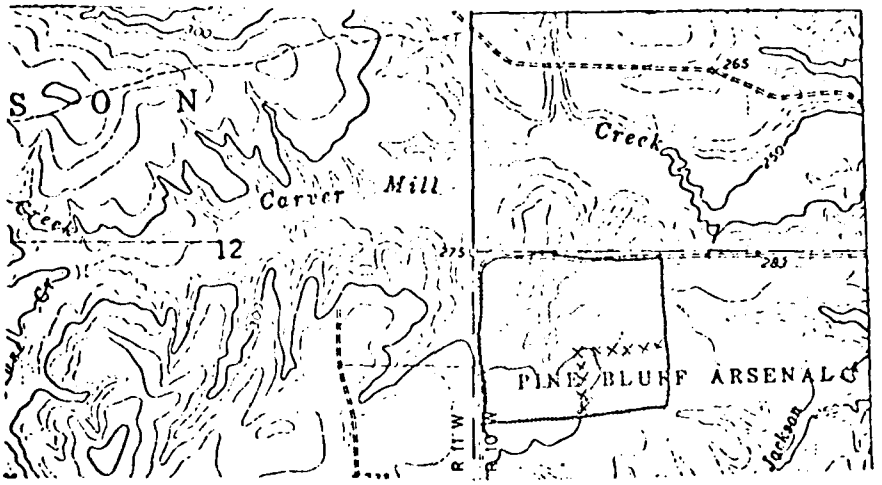

Figure 3. Tract A. Location of barbed wire fence

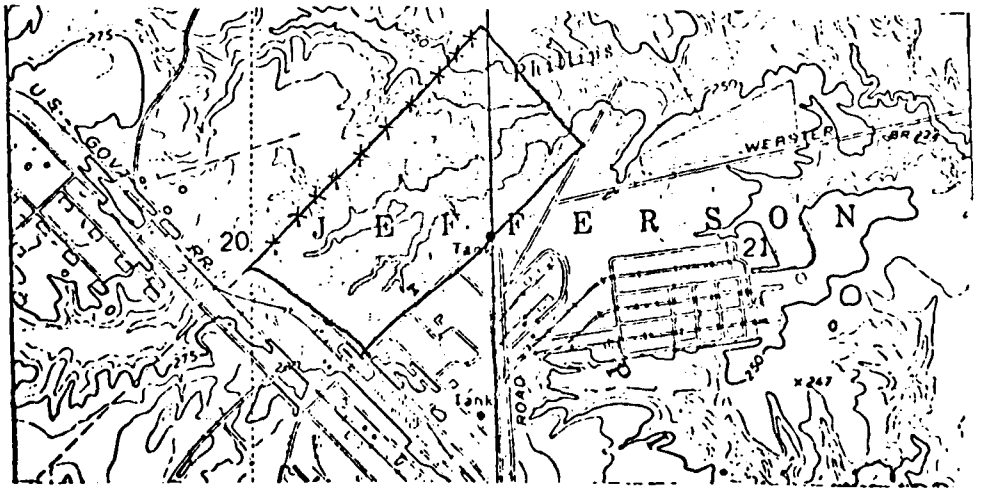

Figure 4. Tract B. Location of perimeter facility

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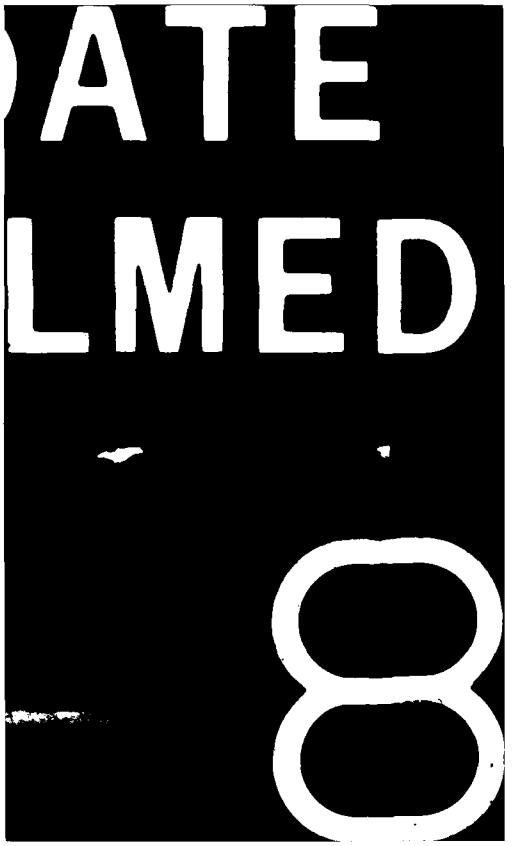
Maps Consulted

1915 Jefferson County Soils Map, Arkansas Agricultural Experiment Station

1932 Pastoria, Arkansas Quadrangle, U.S. Geological Survey, 15'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