

AN ARCHAEOLOGICAL SURVEY FOR CROSS BAYOU
EXPLORATION'S MIDWAY 3-D SEISMIC SURVEY IN THE
KISATCHIE NATIONAL FOREST IN WEBSTER PARISH, LOUISIANA



By

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Contract Report 209

2008

AN ARCHAEOLOGICAL SURVEY FOR CROSS BAYOU EXPLORATION'S
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IN WEBSTER PARISH, LOUISIANA

Lead Federal Agency:

United States Department of Agriculture, Forest Service

ARPA Permit Authorization Identification Number:

WIN060606

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ABSTRACT

A Phase I cultural resources survey of a 0.59 square mile area (375 acres) within the Caney Ranger District of the Kisatchie National Forest in central Webster Parish, Louisiana was conducted by Dixie Environmental Services Co., LP (DESCO) under the direction of Brazos Valley Research Associates (BVRA), the holder of the Archeological Resources Protection Act (ARPA) permit. The project commenced on August 16, 2008 and ended on August 18, 2008. The investigations consisted of a file search for known sites within the project area prior to the field survey and visual inspections and shovel tests at the 73 pre-determined source point locations. No previously recorded prehistoric sites or historic sites are known to be located within the project area, and no new sites were found as a result of this study.

ACKNOWLEDGEMENTS

The authors acknowledge the assistance of those individuals who participated in this project. Velicia Bergstrom (Forest Heritage Program Manager at the Kisatchie National Forest), Brian Cockrell (District Archeologist at the Caney Ranger District), and the staff at DESCO are thanked for their cooperation. We are especially grateful to Ms Bergstrom and Mr. Cockrell for allowing us to use portions of one of their management summaries in this report. At Cross Bayou Exploration, Fred Nicholson assisted us. The field crew consisted of John C. Hogg and Phil Bishop. Edward P. Baxter prepared the figures that appear in this report.

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INTRODUCTION

Cross Bayou Exploration of Shreveport, Louisiana is conducting a 3-D seismic survey that encompasses portions of the Caney Ranger District of the Kisatchie National Forest in central Webster Parish (Figure 1). The purpose of the seismic survey is to provide a high-resolution image of the subsurface geological features that will allow the client to effectively evaluate the hydrocarbon reserves underlying the project area. The survey requires the deployment of motion sensing devices (receivers) at regular intervals along receiver lines as well as the incorporation of energy sources at regular intervals along source lines. As proposed, there are 73 source points within the Kisatchie National Forest. Since the project area is on federal land, the Section 106 process was initiated, and an Archeological Resources Protection Act (ARPA) permit was required.

Prior to allowing the seismic survey to proceed, an archaeological investigation of the portion of the project area within the National Forest was required by the United States Forest Service. In order to comply with this request, DESCO was retained to ensure that this task was successfully performed. DESCO contracted with BVRA to perform the archaeological survey and write a report that will satisfy the Forest Service and the State Historic Preservation Officer (SHPO) of the state of Louisiana. The archaeological project area is located within Compartment 21 of the Caney Unit of the Caney Ranger District, the smallest and most northerly of the districts in the Kisatchie National Forest. The Caney Ranger District consists of three discontinuous tracts in Claiborne and Webster parishes and is 32,371 acres in size. BVRA conducted a file search for all known resources within the project area and performed archaeological investigations at each of the 73 source point locations within the National Forest portion of the project area. This report documents these efforts. The area investigated by the archaeological field crew is depicted on the 7.5' United States Geological Survey topographic quadrangle Minden North (32093-F3) (Figure 2). All records generated by this project have been submitted to the Forest Service Supervisor's Office in Pineville, Louisiana for curation.

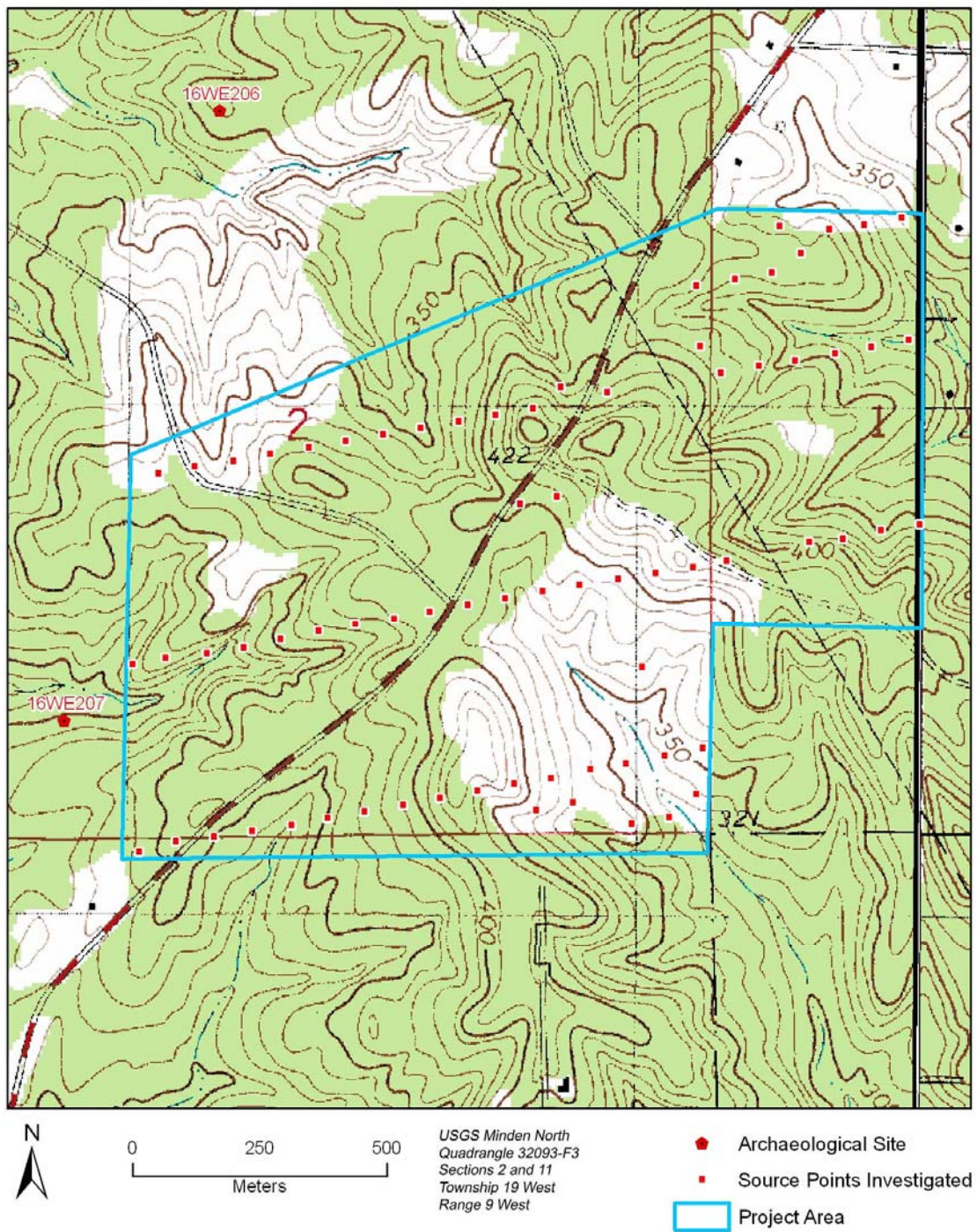


Figure 2. Project Area on Minden North Topographic Quadrangle

ENVIRONMENTAL SETTING

The following information was taken from an in-house report by Brian Cockrell and Velicia Bergstrom (2008) and a report of Land Resource Regions and Major Land Resource Areas of the United States by the United States Department of Agriculture (2006). The project area is located within Major Land Resource Area 133B as defined by the United States Department of Agriculture and is part of the West Gulf Coastal Plain Section of the Coastal Plain Province of the Atlantic Plain. This area consists of level to steep uplands that are intricately dissected by streams, some of which have broad floodplains. The average annual precipitation in this area is 39 to 63 inches, and most of the rainfall occurs in late summer and fall. The average annual temperature is 61 to 68 degrees Fahrenheit, and the freeze-free period averages 270 days. Water is generally abundant in the area due to precipitation, perennial streams, and the supply of ground water. Bedrock aquifers are the main source of ground water.

The Caney Ranger District consists of lands that, for the most part, have been restored to forest from pre-existing sugar cane and cotton fields. Land use in this Major Land Resource Area is for the production of timber and pulpwood. Figure 3 illustrates the wooded nature of the project area. The terrain throughout the Caney Ranger District is typical of a dissected plateau and is bounded on the east by the Ouachita River floodplain and on the west by the floodplain of Bayou Dorcheat. Streams commonly have steep-sided, flat-bottomed valleys. Vegetation is predominantly pine and oak/hickory. The dominant trees in this Major Land Resource Area are loblolly pine, shortleaf pine, sweetgum, southern red oak, white oak, flowering dogwood, and post oak. The area generally slopes southward toward the Gulf of Mexico. Formations range from the Claiborne of the Eocene in the northern part of the state to the Jackson, Vicksburg, Grand Gulf, and Terrace formations of the Eocene, Oligocene, Miocene and Pleistocene, respectively (Hough 1959). In general, the dominant order of soils in this Major Land Resource Area are Alfisols and Ultisols. Typically, they are deep, well drained to poorly drained, and loamy or clayey. There are two soil associations with in the survey area. They are Darley gravelly loamy fine sand, 1 to 5 percent slopes (Da) and Darley gravelly loamy fine sand, 5 to 12 percent slopes (DE).

Da soils are typically found at an elevation of 200 to 450 feet on the shoulder or summit of interfluvies. The parent material is an iron-rich clayey fluviomarine deposit. This soil is well drained, has a low available water capacity (about 3.9 inches), does not flood, and the depth to the water table is more than 80 inches. A typical profile of this soil type is gravelly loamy fine sand (0 to 10 inches), clay (10 to 44 inches), and sandy clay loam (44 to 65 inches).



Figure 3. View of Woods

DE soils are typically found at an elevation of 200 to 450 feet on the shoulder or summit of interfluvies. The parent material is an iron-rich clayey fluviomarine deposit. This soil is well drained, has a low available water capacity (about 3.8 inches), does not flood, and the depth to the water table is more than 80 inches. A typical profile of this soil type is gravelly loamy fine sand (0 to 12 inches), sandy clay (12 to 30 inches), clay (30 to 50 inches), and fine sandy loam (50 to 65 inches).

PREHISTORIC CULTURE SEQUENCE

Paleoindian Period

It is believed by most archaeologists that human populations may have entered North America as early as 10,000 B.C. There is archaeological evidence that large, now-extinct animals such as mammoth and mastodon were hunted in other parts of North America by Paleoindians using distinct projectile points that are known today as *Clovis* and *Folsom*. When examples of these types are found in northwestern Louisiana they are usually recovered as surface finds from eroded surfaces or areas with no firm context that can associate them with other artifacts. According to Gagliano and Gregory (1965), most Paleoindian sites in Louisiana are found on Pleistocene terraces where erosion has exposed surface remains. They state that surface materials at these sites are generally sparse, suggesting limited use and short-term occupations compatible with a hunting and gathering life style. According to Cockrell and Bergstrom (2008), sites dating to this period are few in number and have been identified on lands owned by the National Forest. No Paleoindian sites have been recorded in the vicinity of the current project area. Another point type often associated with the Paleoindian period is *San Patrice*. This type has been found at sites with good context and is believed by some archaeologists to belong to the Early Archaic Period or a transitional period between Paleoindian times and the beginning of the Archaic Period. At site 16GR58 in Grant Parish, Keller (1981) found a grinding stone and a *San Patrice* point in what appeared to be a direct association. Other diagnostic artifacts of the Paleoindian Period in Louisiana are the *Dalton* point and *Albany* scraper (Cockrell and Bergstrom 2008). This period may have lasted until circa 8000 B.C.

Archaic Period

The Archaic period began in Louisiana circa 8000 B.C., and it represented a time when the environment was changed by post-glacial weather conditions. Also during this time populations increased in size, even though groups remained small in number. Caldwell (1958) believes that a pattern of shifting occupation and specialized resource utilization based on seasonal availability occurred during the Early Archaic. He refers to this as “primary forest efficiency.” Artifacts associated with the Archaic Period in Louisiana include ground stone tools (celts), grinding stones, nutting or pitted anvil stones, drills, abraders, and stemmed projectile points made from local materials (Cockrell and Bergstrom 2008). Projectile points assigned to the Early Archaic in Louisiana include *Edgewood* and *Yarborough* (Servello 1983). Perino (1968) reports points identical to the *Palmer* type have been found at sites in Louisiana. The Early Archaic Period lasted from circa 8000 B.C. to 6000 B.C. No Early Archaic Period sites have been reported in the current project area.

* Much of the following information was taken from a Management Summary prepared by Brian Cockrell and Velicia Bergstrom (2008) with their permission.

The Middle Archaic lasted from circa 6000 B.C. to 3000 B.C. and is best known in Louisiana in the southern and southeastern areas of the state, mainly along the central coast and the Amite River. This period is typified by the beginning of mound construction and stone artifacts such as celts, *atlatl* weights (bannerstones), and axes. Projectile point styles included corner-notched and stemmed types (*Evans*, *Williams*, and *Lange*). No Middle Archaic sites have been reported in the current project area.

The last manifestation of the Archaic in Louisiana (Late Archaic Period) began circa 3000 B.C. and ended about 1500 B.C. This terminal Archaic period is best represented in Louisiana in the extreme eastern portion of the state. Artifacts typically associated with this period are steatite (soapstone) vessels, and projectile point types such as *Gary*, *Kent*, *Ellis*, *Ensor*, *Motley*, *Marcos*, *Morhiss*, and *Palmillas*. According to Cockrell and Bergstrom (2008), Archaic sites in the Kisatchie National Forest are best known from excavations at 16GR58 (Keller 1981), 16VN24 (Guderjan and Moorehead 1983), 16VN80 (Servello 1983), and 16VN338, 16VN340, and 16VN396 (Cantley and Kern 1984). No Late Archaic sites have been reported in close proximity to the current project area.

Poverty Point Culture

The culture known as Poverty Point began in Louisiana about 1500 B.C. and lasted until 500 B.C. It is regarded by many archaeologists as the “earliest relatively complex cultural organization in Louisiana.” The Poverty Point site (16WC5) is located in northeastern Louisiana and contains semi-circular ridges and mounds of earthen construction, and it was likely the hub of a vast trade network (Gibson 1980). Clay cooking balls and an exotic lapidary industry which includes stone figurines, beads, pendants, and microlithic tools represents the technology of Poverty Point culture (Webb 1982). It was also the time when ceramics first appeared. Types associated with Poverty Point culture include the fiber-tempered *Wheeler* series, sand-tempered *Alexander* wares, and Tchefuncte ceramics. No sites dating to this period are present in the Caney Ranger District.

Tchefuncte Period

This culture lasted from 500 B.C. until approximately A.D. 1 and was first defined by Ford and Quimby (1945). Settlements belonging to this culture were small, scattered, and located mainly in slack water environments of slow-moving streams, floodplain lakes, and littoral zones (Toth 1988). Subsistence during the Tchula Period was based on collecting plant foods and shellfish as well as hunting. Pottery use became widespread during this time, and these vessels would have improved food storage capabilities. Diagnostic pottery styles include decorative techniques of punch-and-drag incising and laminated paste, apparently the result of the absence of any tempering agent. Conical burial mounds are often found at inland sites (Shenkel 1984). Gibson (1968) proposed a north Louisiana Tchefuncte phase in the stream valleys of Little River and the Ouachita River. The Russell Landing phase was later identified in the Red River mouth area (Phillips 1970). Archaeological sites containing evidence of Tchefuncte culture are scarce in central and northwestern Louisiana, but ceramics from this period have been reported at sites in southern Natchitoches Parish (Campbell et al. 1980). Material recovered from these sites included *Orleans Punctated* and *Lake Borgne Incised* sherds in association with of *Pontchartrain* projectile points. Cockrell and Bergstrom (2008) believe that the Evangeline, southern Catahoula, Kisatchie, and Vernon Ranger districts have potential for Tchefuncte occupations. Few definite Tchefuncte sites have been found in the Kisatchie National Forest, and not one is in close proximity to the current project area.

Marksville Period

The Marksville culture followed Tchefuncte and lasted until A.D. 400. According to Cockrell and Bergstrom (2008), it appears to be Louisiana's manifestation of the Hopewell culture that diffused from Ohio and Illinois. Toth (1988) describes the northern Hopewellian influence as ephemeral contacts affecting mortuary practices and ceramic decoration of Lower Valley peoples, but having little or no effect on subsistence strategies. Subsistence continued to be based primarily upon collecting and hunting with an increased emphasis upon horticulture and incipient agriculture. Settlements appear large, almost permanent, and tended to be located on the terraces of major streams. Marksville ceramics decorated with geometric and effigy designs are traceable to the Illinois Valley peoples. Furthermore, burial mound construction containing lavish offerings of copper, rare minerals and other objects point to elaborate mortuary practices and a significant trade and exchange network (Neuman 1984). Sites dating to this period are rare in the Kisatchie National Forest. A single Marksville sherd typed as *Marksville Incised*, variety Marksville was found at site 16GR495 within the Catahoula Ranger district (Mayer 1993). Sites containing Marksville occupations have been found nearby, including the Whatley site (16GR37) (Thomas and Campbell 1978) and Clear Creek Bay (16GR20) (Keller et al. 1983). Marksville villages with associated mounds have also been reported from the Cane River Basin (Gregory and Curry 1978; Campbell et al. 1980) near the Kisatchie District. Marksville pottery was found during a recent survey in the Winn Ranger District (Moore et al. 2008).

Baytown Period

Baytown has been the focus of much debate by archaeologists, and it is used synonymously by some with Marksville, Troyville, and Coles Creek (Phillips et al. 1951). It is known, however, that this period marks the advent of the bow and arrow, platform mounds constructed for mortuary purposes, and a subsistence strategy based on intensive collection of riverine sources (Belmont 1984). Interaction with the early Weeden Island culture of the Florida coast is evident through ceramic styles such as human effigy vessels, animal rim effigies, red slipping, and red-and-white painting that indicate ties to the east (Williams and Brain 1983; Belmont 1984). Baytown sites containing such ceramics are scarce in the uplands of the Kisatchie National Forest, but surface scatters of red-filmed ceramics have been found on virtually every district. A recent survey recovered numerous grog-tempered sherds in the Winn Ranger District that are typically associated with the Baytown culture (Moore et al. 2008).

Coles Creek

This culture lasted from circa A.D. 700 to A.D. 1000 and was widespread in the state of Louisiana. It is a well-defined complex that was first defined on the basis of its ceramic assemblage that includes incised, punctuated, and stamped decorative modes largely restricted to the upper portion of vessels (Brown 1984). The culture is also identified by small “sub-structural mounds” around plazas (Williams and Brain 1983). Coles Creek development appears to have been centered in the Tensas Basin and remained limited, although pervasive in the lower half of the Lower Mississippi Valley (Brown 1984). An increase in the number of settlements and socio-religious centers during this time may be resultant of the combined effectiveness of agriculture and the bow and arrow (Williams and Brain 1983). A major site of this period just east of the Catahoula Ranger District is the Clear Creek Bay site (16GR20). This is a major Coles Creek occupation with three large mounds (Keller and Campbell 1983). Four smaller mounds were also reported to be associated with this site. Other examples are known along Saline Bayou and near Little River. According to Brian Cockrell (personal communication, August 27, 2008), sites belonging to this culture are present in the Kisatchie National Forest. Ceramics identified as Coles Creek were recovered during a recent survey in the Winn Ranger District (Moore et al. 2008).

Mississippian Period

Between A.D. 900 and A.D. 1000 agricultural based chiefdom societies in the area of the confluences of the Missouri and Ohio rivers began to disseminate their ideas and technologies. The introduction of shell tempering, an emphasis on truncate mound construction, and placement of mound centers near rivers are major influences of this culture (Steponaitis 1986). This culture is represented by major centers at Moundville in Alabama, Etowah in Georgia, and throughout most of the southeastern United States. Two regional variations developed in Louisiana, but no Mississippian sites are known within the Kisatchie National Forest. Shell-tempered pottery was found in the Winn Ranger District during a recent survey (Moore et al. 2008).

Plaquemine Culture

Plaquemine is viewed by Phillips (1970) as an outgrowth of the Coles Creek culture that began around A.D. 1000, and sites of this period are found throughout much of Louisiana. Williams and Brain (1983) interpret the culture to be a less complete Mississippian influence or “cultural hybridization” of Coles Creek and Mississippian cultures. The Plaquemine Culture is characterized by monumental ceremonial centers, complex political systems, and an art style with graphic symbolism. Evidence of Plaquemine occupations in the Kisatchie National Forest is rare. It has been suggested by Keller (1983) that the Forest lies within an area of central Louisiana that may have acted as a buffer zone between the Caddoan groups in the northwestern part of the state and Plaquemine groups to the southeast. Gregory et al. (1987) argue that the Plaquemine population in the Lower Red River Valley, especially the Catahoula Lake basin, experienced a Caddoan influence. This culture lasted through the early part of the Historic Period. No Plaquemine sites are known to exist in or near the project area.

Caddo Culture

The Caddo culture began in the northwestern part of Louisiana about A.D. 900, lasted until historic times, and is marked by the emergence of a decorative style of pottery such as globular wares with dark, polished surfaces and angled rims. Exteriors were decorated with engraved curvilinear designs. Ceremonial centers with mounds and central plazas that had emerged during the Coles Creek Period continued in Caddoan Culture (Cockrell and Bergstrom 2008). Caddoan cultural development appears to have been one of complex changes characterized by the oscillation of chiefdoms that apparently reintegrated in tribal confederacies by historic times (Cantley and Kern 1984). However, there is debate as to how Caddoan culture developed and under what influence. Caddoan settlement patterns in the Red River bottom area tended to consist of villages along secondary streams with clusters of smaller sites located in peripheral floodplain settings (Girard 1997). Research at Fort Polk suggests that the Caddoan settlement pattern in the Red River Valley did not occur in the upland settings of the Fort (Thomas, et al. 1992). This appears to be the case on much of the area that is now Kisatchie National Forest. Caddoan sites, although not abundant, occur in most districts of the Kisatchie National Forest. Present evidence suggests that small bands of Caddo, probably represented by nuclear family or extended family groups, moved into the area of the Forest along the larger interior drainages (Cockrell and Bergstrom 2008). Caddoan pottery was found in the Winn Ranger district during a recent survey by Brazos Valley Research Associates (Moore et al. 2008).

HISTORIC PERIOD

In 1690, Henri de Tonti encountered the Natchitoches, a Caddoan tribe, while searching for the LaSalle Expedition in the area of the present town of Natchitoches in northwest Louisiana (Webb and Gregory 1978). His exploration of the Red River Valley provides historians with some of the earliest and best accounts of the area. Other historic Caddo groups in Louisiana at the time of contact included the Adaes, Doustioni, Natchitoches, Ouachita, and Yatasi who were primarily concentrated around the present towns of Natchitoches, Mansfield, Monroe, and Robeline. The Natchitoches and other Caddoan groups were visited in 1700 by Jean Baptiste Lemoine de Bienville who returned the next year with Louis Juchereau St. Denis while seeking markets for trade (Swanton 1911; Gregory 1974). Bienville's contacts led to French settlement and trade with Caddoan and other groups in the following years. The Caddo survived the political and economic conflicts between the French and Spanish, but American government Indian policies after the Louisiana Purchase in 1803 brought drastic changes, and they were eventually removed to Oklahoma in 1835 (Gregory 1974). Although the French had been in Louisiana since 1682, the first permanent settlement in the state was established at Natchitoches in 1714. In an effort to counter the French threat at Fort St. Jean Baptiste aux Natchitoches, the Spanish established the presidio and mission *Neustra Senora del Pilar de Los Adaes* west of Natchitoches (Bolton 1962).

There were several confrontations between the settlers, soldiers, and local Indian groups in the early part of the 18th century. In 1720, Diron Dartaguet (Inspector of Louisiana troops) reported attacks by the Chicachas (Chickasaw) Indians on travelers delayed at "Grand Rapid." Post du Rapides was established in 1722 at present-day Pineville in order to protect travelers on their way to Natchitoches. However, the greatest conflict between the French and Indians in this area occurred in 1729 when the Natchez, enraged by French incursions in the Mississippi Valley, attacked Fort Rosalie in present-day Natchez, Mississippi. The Natchez warriors killed 250 men and took 300 women and children prisoner (Utley and Washburn 1977). The French and their Choctaw allies retaliated and destroyed the Natchez village. The Natchez then fled into Louisiana and were virtually destroyed outside Natchitoches by combined French and Indian forces (Swanton 1952). The Natchez then broke up and dispersed into areas as far away as the Carolinas (Milling 1969).

Disputes over territories in the New World resulted in military action by European powers during the eighteenth century. France and England fought each other beginning in 1754 during the French and Indian War. By 1756, the conflict had spread to Europe (Taylor 1975). Spain became embroiled in the conflict toward the end of the war after agreeing to an alliance with France. Despite Spain's support, the French were forced to seek peace with England because of mounting losses and costs. France ceded Louisiana to Spain in 1762 by the Treaty of Fountainebleau as compensation for losses incurred during the war, if not to rid her of a colony that posed economic strains on the French government (Taylor 1975).

The war ended in 1763 with the Treaty of Paris. There are several tracts of land now within the confines of the Kisatchie National Forest that are documented as once being part of Spanish Land Grants. One such site, the Old Spanish Oak site (16NA380), was discovered in 1988 in conjunction with heritage survey pursuant to a timber sale. At that time it was noted as containing intact surface deposits (Dorian 1988) and a semicircular line of six over-mature live oaks. Local tradition allowed that part of Section 33 was once a Spanish Land Grant; thus, the name Spanish Oak site. Forest Service land acquisition records do not reflect this tradition. The Government Land Office (GLO) map of July 1832 shows that Township 6 North, Range 7 West, Section 33 as a standard section. And yet, one cannot overlook the fact that these older oaks were purposely planted and the local reports of colonial occupation (Dorian 1988).

Spain ceded Louisiana back to France with the secret Treaty of San Ildefonso of 1800. The United States viewed any foreign control of the Mississippi River as detrimental to its survival. Thus, the United States initiated talks with France for the purchase of New Orleans. Negotiations lasted for months until France unexpectedly offered to sell the entire Louisiana colony. The Louisiana Purchase in 1803 gave control of the Mississippi to the United States while doubling its geographical area (Taylor 1975). The population increased greatly following the United States taking possession of the Louisiana colony. With the invention of the cotton gin in 1793 and the process of sugar granulation, plantation agriculture became the dominant economy. Small landholders were eventually pushed out of the fertile alluvial valleys into the surrounding Pine Hills. The activities of the Union forces in the area destroyed much of the local property as well as the general economy, which became stagnated and did not revive until the 1890s when emphasis was placed on the lumber industry. Central Louisiana became a major lumbering center that resulted in the development of a number of sawmills in the area. By the 1930s, the "cut and get out" logging methods left vast areas of cutover lands. As mills ran out of wood and employment in the lumber industry began to close, subsistence farming began to increase. The United States government purchased much of the cutover land leading to reforestation and the creation of the Kisatchie National Forest (Burns 1981). In 1933, President Theodore Roosevelt created the Civilian Conservation Corps (CCC). The successful intent was to employ thousands of young men during peacetime to battle against destruction and erosion of our natural resources. Louisiana certainly had their share of CCC camps, some of which are now a part of the Kisatchie National Forest. With the outbreak of World War II, the Kisatchie National Forest played a vital role in the training of United States troops. The United States Army was authorized the use of a total of 95,315 acres for the establishment of Camp Polk at the Vernon District, Camp Livingston (16RA360) and the Breezy Hill Artillery Range at the Catahoula District, Camp Claiborne (16RA373) at the Evangeline District, and a number of bombing ranges on the Caney, Catahoula, Winn, and Evangeline Districts (Burns 1981). Although the Air Force still maintains a bombing range on the Evangeline District and Fort Polk currently utilizes a portion of the Vernon District, Camps Claiborne and Livingston were abandoned at the close of the war, and the buildings were salvaged. These areas are now covered in forest, but the remains of the structural foundations are still present.

PREVIOUS INVESTIGATIONS

It is beyond the scope of this report of negative findings to document all work performed in Webster Parish by professional archaeologists. According to Cockrell and Bergstrom (2008), systematic surveys or inventories of the Kisatchie National Forest did not begin until the late 1970s. The first professional investigation was performed under the supervision of Hiram P. Gregory in the Kisatchie Ranger District in 1972 (Gregory and Curry 1972). In 1976, Forest Service archaeologists began surveying areas planned for forest-related projects such as timber harvests and land exchanges. These surveys were conducted between 1977 and 1982 under the guidance of Forest Archaeologist John Keller, Ph.D. Since that time, Forest Service archaeologists have conducted numerous surveys in the Caney Ranger District and recorded approximately 200 sites. These surveys have been performed pursuant to ground disturbing activities such as timber harvesting, salvage timber operations (tornado damage), and/or the construction of wildlife ponds. The work by Forest Service archaeologists were reported in individual documents referred to as a Management Summary, and these summaries are on file at the Kisatchie National Forest offices in Pineville and Homer. The current survey is the first to be conducted in the Caney Ranger District by a private contract firm. Not all prehistoric time periods represented in Louisiana have been documented in the Caney Ranger District, but artifacts associated with Paleoindian, Archaic, Marksville, Baytown, Coles Creek, and Caddoan cultures have been recovered in this area. These sites include lithic scatters, campsites, and mounds. Historic sites in the Caney Ranger District date to the latter part of the 19th century and the early part of the 20th century and include farmsteads, homesteads, a lookout tower, roads and trams, a CCC site, trash dumps, and cemeteries. Also present are many areas where a maximum of four artifacts were recovered, and these localities are classified as isolated finds according to criteria established by the State Historic Preservation Officer for Louisiana. Many of the in-house surveys were in low probability areas where archaeological sites are not present.

The nearest cultural resources survey to the current project area was conducted by Timothy Phillips, a staff archaeologist working for the Kisatchie National Forest in 1986 (Phillips and Willingham 1986). This survey was conducted prior to logging operations, and two historic sites (16WE206 and 16WE207) were recorded, both outside the current project area. Site 16WE206 contains a prehistoric component (flakes and a distally retouched artifact) and a historic component consisting of earthenware sherds, glass fragments, and a snuff bottle fragment. This site is 690 meters to the north and west of the nearest source point in the current project area. Site 16WE207 is described on the site form as a house site dating from the late 19th to the early 20th century. It produced earthenware sherds, a brown-glazed crockery sherd, bottle fragments, snuff bottle fragments (amber glass), porcelain fragments, one salt-glazed crockery sherd, and two polychrome sherds. This site is 170 meters southwest of the nearest source point in the current project area.

Although small area surveys have been conducted in the general area, only one major study has been carried out within one mile of the current project area. A typical, large-scale survey in the Caney Ranger District was performed in 2008 prior to a timber sale and involved an investigation of a 1554-acre tract scattered across the Caney Unit of the forest. This project was performed under the supervision of District Archaeologist Brian Cockrell and a crew consisting of four professional archaeologists, ten Heritage Resource Technicians, and eleven personnel with no training in archaeological survey. As a result of this endeavor, nine historic sites (16WE185, 16WE378, 16WE386, 16WE379, 16WE387, 16WE380, 16WE381, and 16WE383) and two prehistoric sites (16WE388 and 16WE382) were recorded. Additionally, twenty-six isolated finds were documented. The majority of these sites offer no research potential, and they are not recommended for protection.

According to Brian Cockrell, Forest Service personnel have conducted 42 cultural resource surveys in the Caney Unit of the Caney Ranger District between 1986 and 2008 under the supervision of Timothy G. Phillips, Charles G. Willingham, Larry Haikey, Velicia Bergstrom, and Brian Cockrell. The vast majority was related to timber sales. As a result of these investigations, 3112 acres were examined and only twenty-six prehistoric and historic sites were recorded. That is one site per every 119.69 acres.

METHODS

John C. Hogg visited United States Department of Agriculture (USDA) District Archeologist Brian Cockrell and checked his maps and files for previously recorded sites in the project area. Since the offices of the Louisiana Division of Archaeology were closed due to Hurricane Ike, this agency was not visited. The formal survey was conducted by John C. Hogg and Phil Bishop on August 16-18, 2008. Each source point location was visually inspected, and most (n=66) were shovel tested. The excavated shovel test fill was screened using ¼" hardware cloth. No shovel tests were excavated in roads or on steep slopes. The results of the investigations were written on a "Log of Source Points Investigated" (Appendix I), and the location of each source point was depicted on topographic maps (Appendix II). Shovel tests were terminated when they reached one meter in depth, sterile clay, bedrock, or standing water. Tests varied in depth from 10 cm to 70 cm with the majority being terminated between 30 cm and 60 cm. Only four tests were dug to depths greater than 59 cm. Source Points Investigated forms, printed on acid-free paper, were completed for each test and included the following information: (1) seismic grid coordinates, (2) depth of each shovel test, and (3) type of soil present. Edward P. Baxter, Consulting Archaeologist, managed the field survey and prepared project area maps depicting the general location of the project area, the boundaries of the project area, and two maps depicting the 73 source points visited. The archaeological survey crew followed an access route flagged by the surveyors and visually inspected the areas between source points. Each source point location was identified by a wooden lathe with the source point number marked on it. The surveyors provided ArcView shape files of the source point locations. There will be no additional ground disturbing activities other than the deployment of sensing devices within the project area that will affect historic properties.

Following the field survey, an avoidance plan (Appendix I) was prepared and submitted to the USDA in order to allow the drillers to receive permission to begin drilling while the formal report was being prepared. Following completion of all fieldwork, copies of the draft report were submitted to the Louisiana Division of Archaeology and the Kisatchie National Forest for review. All comments from these agencies were addressed in this final report, and the requisite number of final reports were delivered to all concerned parties. The Principal Investigator is the first author and is responsible for preparing a report that will satisfy the Kisatchie National Forest and the Louisiana SHPO. All records generated by this project have been submitted to the Forest Service Supervisor's Office in Pineville, Louisiana for curation.

RESULTS AND CONCLUSIONS

The records check at the Caney Ranger District, Kisatchie National Forest revealed no previously recorded sites in the project area. Two previously recorded sites were found to be in the vicinity of the 73 source point locations. They are 16WE206 and 16WE207. These are a multi-component site (16WE206) containing a prehistoric lithic scatter and an early 20th century historic scatter on a large knoll on a west trending ridge spur and a scatter of historic artifacts dating from the late 19th century through the early 20th century (16WE207) on a northwest trending ridge spur above a tributary of Caney Creek. The nearest seismic activity to site 16WE206 is 690 meters, and the nearest seismic activity to 16WE207 is 170 meters. All shovel tests were negative, and no prehistoric or historic sites were found as a result of this survey. Based on previous work in the Caney Unit of the Caney Ranger District, the current project area is viewed as a low probability area for archaeological sites.

RECOMMENDATIONS

Since no previously recorded archaeological sites were found to be within the project area and no sites were identified during the survey, it is believed that Cross Bayou Exploration's seismic activity within the area covered under the ARPA permit for this project will have not impact upon any cultural resources. Therefore, no further archaeological investigations are necessary within the project area of potential effect (APE) Monitoring is also not considered to be necessary since the client has stated that there are no plans to move or add any source points during the seismic survey.

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Appendix I
Log of Source Points Investigated
(all shovel tests negative)

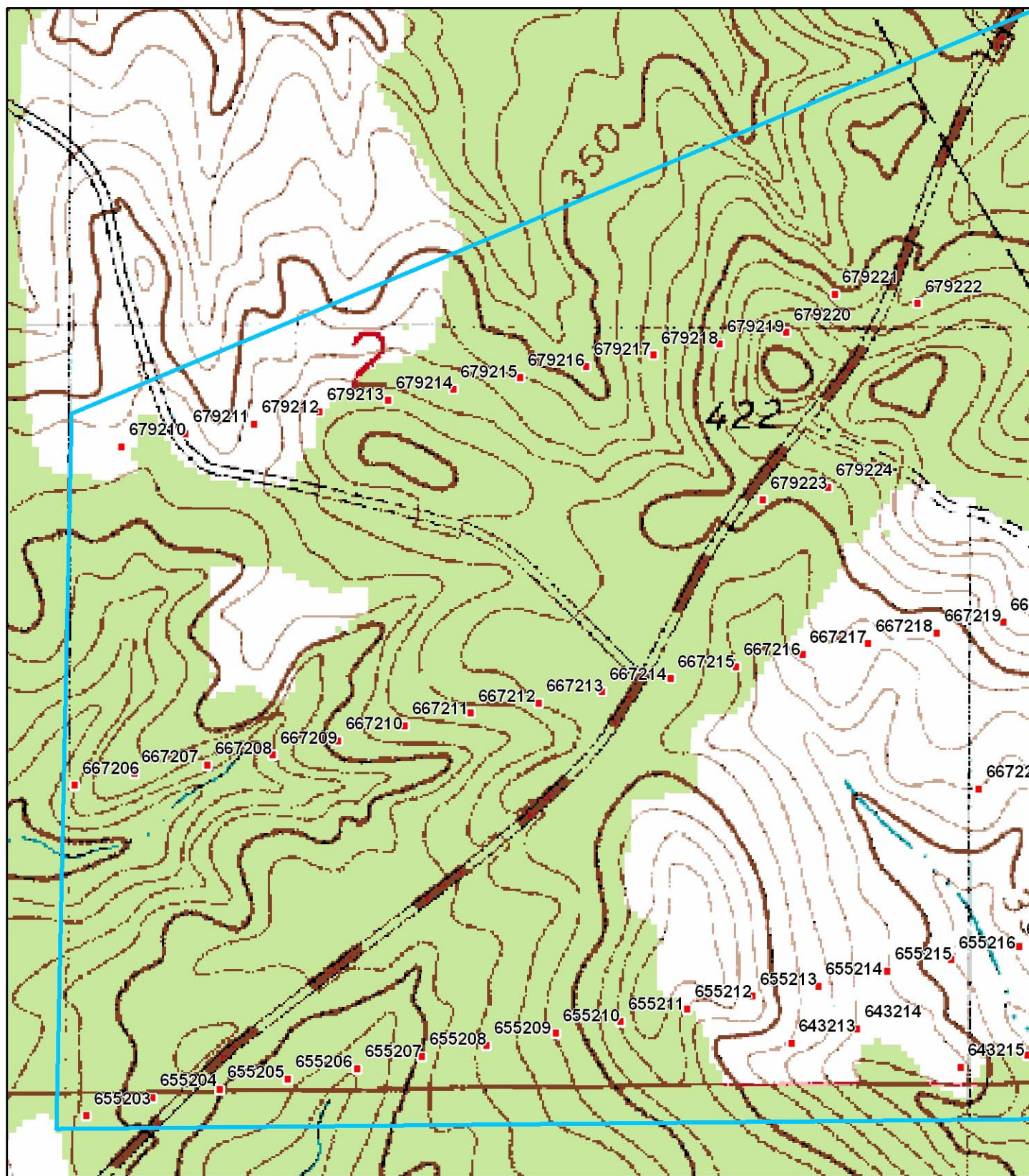
Log Number	Shovel Test	Source Point	Offset Distance/Direction	Test Depth (cm)	Comments	Recorder	Date
1	1	667206	none	36	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/16/08
2	2	667207	none	55	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/16/08
3	3	667208	none	65	Silty sand/ silty clay/ clay	John C. Hogg	08/16/08
4	4	667209	none	28	Silty sand/ clay	John C. Hogg	08/16/08
5	5	667210	none	60	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/16/08
6	6	667211	none	20	Silty clay/ clay	John C. Hogg	08/16/08
7	7	667212	none	50	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/16/08
8	8	667213	none	40	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/16/08
9	9	655218	none	50	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/16/08
10	10	655217	none	55	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/16/08
11	11	655216	none	50	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/16/08
12	12	655215	none	34	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/16/08
13	13	655214	220' N	45	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/16/08
14	14	655212	220' N	10	Clay/ sandstone	John C. Hogg	08/16/08
15	15	655209	none	50	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/16/08
16	16	655207	none	30	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/16/08
17	17	655205	none	30	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/16/08
18	18	667222	none	10	Eroded road clay	Phil Bishop	08/16/08
19	19	667224	none	10	Sand and gravel/clay eroded slope	Phil Bishop	08/16/08
20	20	667225	none	30	Sand and gravel/clay eroded slope	Phil Bishop	08/16/08
21	21	667227	none	20	Sand and gravel/clay eroded slope	Phil Bishop	08/16/08
22	22	667226	none	20	Sand and gravel/clay eroded slope	Phil Bishop	08/16/08
23	23	667221	none	25	Sand and gravel/clay eroded slope	Phil Bishop	08/16/08
24	24	667220	none	30	Sand and gravel/clay eroded slope	Phil Bishop	08/16/08
25	25	667219	none	45	Sand and gravel/clay eroded slope	Phil Bishop	08/16/08
26	26	667218	none	40	Dense Gravel/ clay	Phil Bishop	08/16/08
27	27	667223	880' W, 660' S	35	Silty sand/ Clay	Phil Bishop	08/16/08
28	28	667217	none	50	Silty sand/ gravel	Phil Bishop	08/16/08
29	29	667216	none	35	Gravel/ bedrock	Phil Bishop	08/16/08
30	30	667215	none	40	Sandy gravel/ clay	Phil Bishop	08/16/08
31	31	667214	none	50	Sandy gravel/ clay	Phil Bishop	08/16/08
32	32	643217	1100' N	47	Silty sand/ clay	Phil Bishop	08/16/08
33	33	643216	880' N	45	Silty sand/ gravel/ clay	Phil Bishop	08/16/08
34	34	643215	880' N	15	Deflated ridge, clay/ bedrock	Phil Bishop	08/16/08
35	35	643214	1100' N	20	Deflated Ridge, silty sand/ clay	Phil Bishop	08/16/08
36	36	643213	1100' N	35	Silty sand/ clay/ sandstone	Phil Bishop	08/16/08
37	37	655213	220' N	10	Eroded ridge, clay over bedrock	Phil Bishop	08/16/08
38	38	655211	none	10	Clay ruts and berms disturbed by logging	Phil Bishop	08/16/08
39	39	655210	none	15	Gravel and clay/ bedrock	Phil Bishop	08/16/08
40	40	655208	none	35	Silty sand and gravel/ clay	Phil Bishop	08/16/08
41	41	655206	none	25	Silty sand/ clay	Phil Bishop	08/16/08
42	42	655204	none	30	Disturbed ROW silty sand/ clay	Phil Bishop	08/16/08
43	43	655203	880' W, 440'S	40	Silty sandy loam/ clay	Phil Bishop	08/17/08
44	44	679224	880' W, 440'S	45	Sandy silt loam/ clay	Phil Bishop	08/17/08
45	45	679223	none	40	Sandy silt loam/ water. Disturbed by road	Phil Bishop	08/17/08
46	46	679222	none	50	Side slope, sandy clay loam/ large rocks	Phil Bishop	08/17/08
47	47	679221	110' N	10	Deflated slope, clay at surface	Phil Bishop	08/17/08
48	48	679220	none	40	Sandy clay loam and gravel/ clay	Phil Bishop	08/17/08
49	49	679219	none	10	Disturbed slope and rock/ clay	Phil Bishop	08/17/08
50	50	679218	none	15	Disturbed slope and rock/ clay	John C. Hogg	08/17/08
51	51	679210	none	40	Sandy silty loam/ sandy silt/ clay	John C. Hogg	08/17/08
52	no test	679211	none	no test	In ditch of FS Road 804	John C. Hogg	08/17/08
53	52	679212	none	25	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/17/08
54	53	679213	none	38	Sandy silty loam /sandy silt/ sandstone	John C. Hogg	08/17/08
55	54	679214	none	70	Sandy silty loam /sandy silt/ sandstone	John C. Hogg	08/17/08
56	55	679215	none	50	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/17/08
57	56	679216	none	50	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/17/08

Log Number	Shovel Test	Source Point	Offset Distance/Direction	Test Depth (cm)	Comments	Recorder	Date
58	no test	679217	none	no test	Steep slope and in drainage	John C. Hogg	08/17/08
59	57	691225	600' E, 1100' S	38	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/17/08
60	58	679225	none	45	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/17/08
61	59	679226	none	50	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/17/08
62	60	679227	none	40	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/17/08
63	no test	679228	none	no test	Deflated slope	John C. Hogg	08/17/08
64	61	679229	none	45	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/17/08
65	62	679230	none	65	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/17/08
66	no test	691226	none	no test	Steep slope and in drainage	John C. Hogg	08/18/08
67	63	691227	none	40	Sandy silty loam /sandy silt/ clay	John C. Hogg	08/18/08
68	64	691228	none	45	Sandy silty loam /sandy silt/ clay/ sandstone	John C. Hogg	08/18/08
69	no test	691229	none	no test	Outside Forest Boundary	John C. Hogg	08/18/08
70	65	691235	none	35	Sandy silty loam /sandy silt/ bedrock	John C. Hogg	08/18/08
71	no test	691237	none	no test	Outside Forest Boundary	John C. Hogg	08/18/08
72	no test	691236	none	no test	Outside Forest Boundary	John C. Hogg	08/18/08
73	66	691234	none	35	Stake pulled, paint on ground	John C. Hogg	08/18/08

APPENDIX II

PROJECT AREA MAPS DEPICTING SOURCE POINTS INVESTIGATED

(These maps overlap)



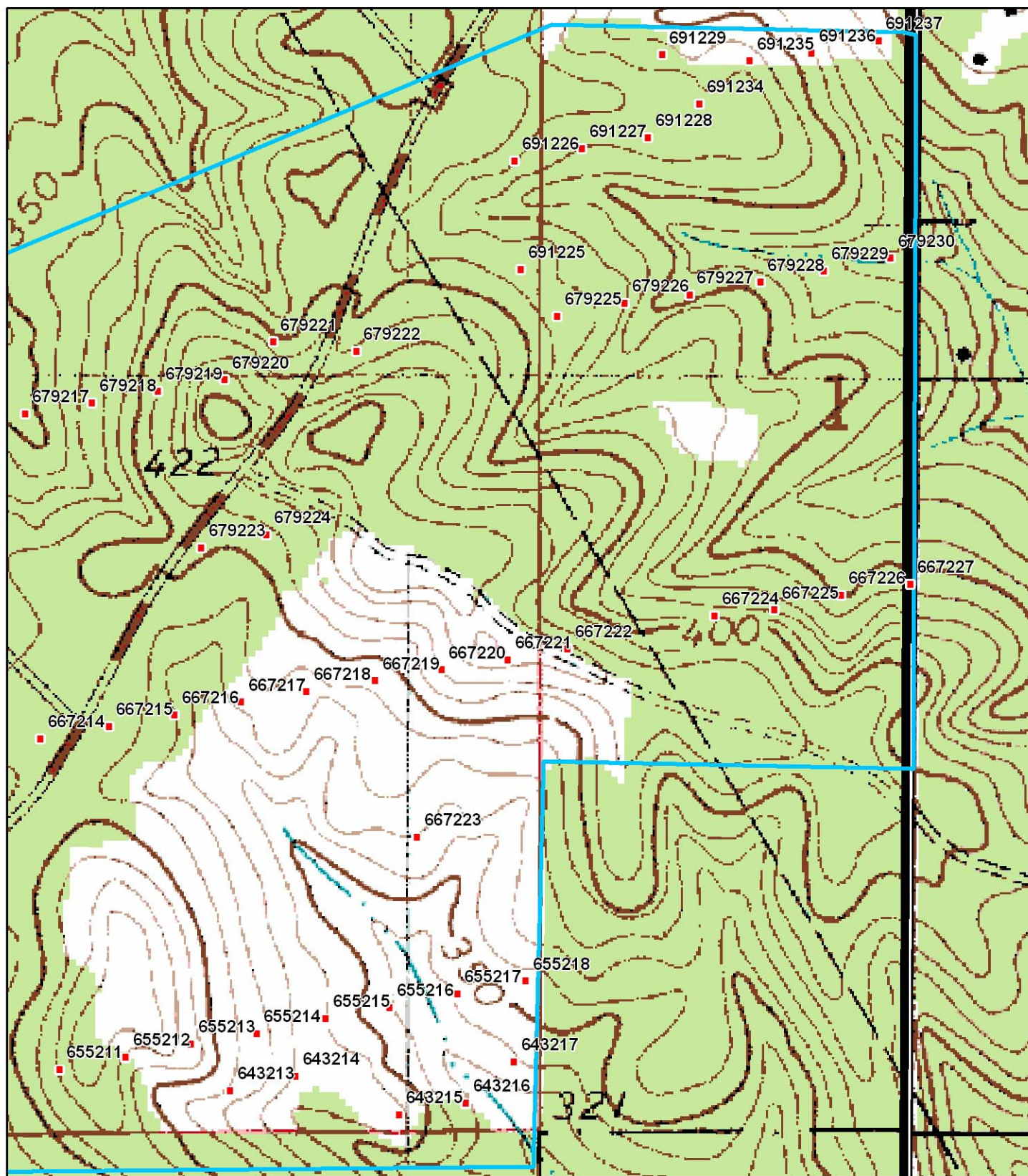
0 150 300
Meters

USGS Minden North
Quadrangle 32093-F3
Sections 2 and 11
Township 19 West
Range 9 West

■ Source Points Investigated

□ Project Area

Map 1



0 150 300
Meters

USGS Minden North
Quadrangle 32093-F3
Sections 2 and 11
Township 19 West
Range 9 West

■ Source Points Investigated

□ Project Area

Map 2