

**AN ARCHAEOLOGICAL SURVEY OF HIGH  
PROBABILITY AREAS WITHIN  
GEOKINETICS USA, INC.'S  
PERRY RANCH 3-D SEISMIC SURVEY IN  
BRAZORIA AND MATAGORDA COUNTIES, TEXAS**

VOLUME I: THE TERRESTRIAL SURVEY



**By**

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**Brazos Valley Research Associates  
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VOLUME I: THE TERRESTRIAL SURVEY

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## **ABSTRACT**

An archaeological survey of the Geokinetics USA, Inc.'s Perry Ranch 3-D seismic survey was conducted by Brazos Valley Research Associates (BVRA) in conjunction with Dixie Environmental Services Company (DESCO), LP from June 13, 2008 through July 18, 2008. A previous avoidance plan prepared for Quantum Geophysical, Inc. (now Geokinetics USA, Inc.) by BVRA identified high probability areas within the 88.6 square mile seismic project area. The client wants to drill within some of the high probability areas identified by BVRA in the avoidance plan (Moore and Baxter 2007). Therefore, archaeological investigations were required prior to drilling. These investigations visited 360 source point locations and conducted shovel testing or visual inspection in those areas that were not disturbed or under water. No previously unrecorded prehistoric sites were found during the terrestrial survey. In all, 361 source points were investigated. It is estimated that 2401 square feet was investigated at each source point. A total of 866,761 square feet (19.90 acres) was surveyed within the terrestrial high probability area, and no prehistoric or historic sites were found. However, a single grave containing the remains of Alcinda Bluit was observed. The date on the headstone reads 1809 – 1929. No additional information regarding this person was found during our research.

In addition to the terrestrial survey, a magnetometer survey of 177 source point locations was required due to the presence of an area considered by the State Marine Archeologist to be a high probability area for shipwrecks. This work was performed by PBS&J of Austin, and their report is presented as Volume II. The nautical survey found one anomaly in the current project area that resembled a magnetic signature that may represent a shipwreck. The source point involved was relocated to a point outside the 300-foot buffer. Another source point was also moved because of a location conflict with another presumed shipwreck anomaly found on a previous survey by PBS&J (Hudson et al. 2008) performed after the avoidance plan was submitted. The two potential shipwreck sites were avoided by moving the source points.

It is, therefore, recommended that the client be allowed to conduct the 3-D seismic survey as planned. Copies of the final report are on file at the Texas Historical Commission (THC), United States Army Corps of Engineers (USACE), Galveston District, DESCO, and BVRA. The field crew did not collect any artifacts.

## **ACKNOWLEDGMENTS**

The authors are grateful to the following individuals for their assistance. The staff at DESCO provided maps and supported the project by providing a field crew for the archaeological survey. The crew for the terrestrial archaeological survey consisted of Phil Bishop, Matt Carter, and Lisa Shaddox. Doug Jones of PBS&J performed the nautical survey. We are also appreciative of the assistance provided by Billy Fincher of Geokinetics USA, Inc. The figures and maps that appear in this report were prepared by Lili G. Lyddon of LL Technical Services and Edward P. Baxter. Debra L. Beene, William A. Martin, and Steve D. Hoyt. were the THC reviewers. The USACE reviewer was Nicole C. Minnichbach. PBS&J graciously allowed us to use information from one of their draft reports dealing with a remote sensing project at the mouth of the San Bernard River. Jamie Murray at the Brazoria County Historical Museum helped research the single grave found in the project area.

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## INTRODUCTION

Geokinetics USA, Inc of Houston, Texas was granted permission by the USACE, Galveston District (Permit Application number SWG-2007-1274) to conduct a 3-D seismic survey in an 88.6 square mile area (hereafter referred to as the current seismic project area) in Brazoria and Matagorda counties, Texas (Figure 1) under Nationwide Permit 6. It should be stated here that only a small portion of the project area involves Matagorda County. The purpose of this 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 proposed seismic survey involves the collection of seismic data through an established receiver grid that will record the reflected seismic waves of small explosive charges at set intervals across the project area.

By virtue of the Nationwide Permit 6 permitting process, this project was subject to the regulation of 33 CFR Part 325, Appendix C (Processing Department of Army Permits: Procedures for the Protection of Historic Properties: Final Rule 1990; with current Interim Guidance Document dated April 25, 2005). In an effort to minimize impacts to cultural resources in the project area, Geokinetics USA, Inc. sponsored an avoidance plan that was prepared by BVRA (Moore and Baxter 2007) and submitted to and approved by the USACE and THC in 2007. This plan identified the recorded cultural resource sites and provided for their protection through avoidance measures involving a buffer within which no seismic activities could take place. The plan also identified high probability areas for either prehistoric or historic terrestrial sites and for nautical sites and stated that these areas would be avoided unless an archaeological survey of the source point locations was conducted prior to drilling. Due to data quality issues, the client decided that drilling would be necessary within some of the high probability areas identified within the avoidance plan. Therefore, an archaeological survey was deemed necessary.

The project area covered in this report includes the aforementioned high probability areas. Any proposed source points placed within these areas were subject to archaeological investigations. This survey was divided into two phases. These phases are a terrestrial archaeological survey and a nautical magnetometer archaeological survey. The terrestrial investigation was performed by a team of archaeologists employed by DESCO, and the nautical investigation was performed by PBS&J of Austin, Texas. Edward P. Baxter, a consulting archaeologist, was contracted to oversee and aid in both the fieldwork and report preparation. BVRA was contracted to manage the project and produce the two reports. The terrestrial report is Volume I, and the nautical report is Volume II.

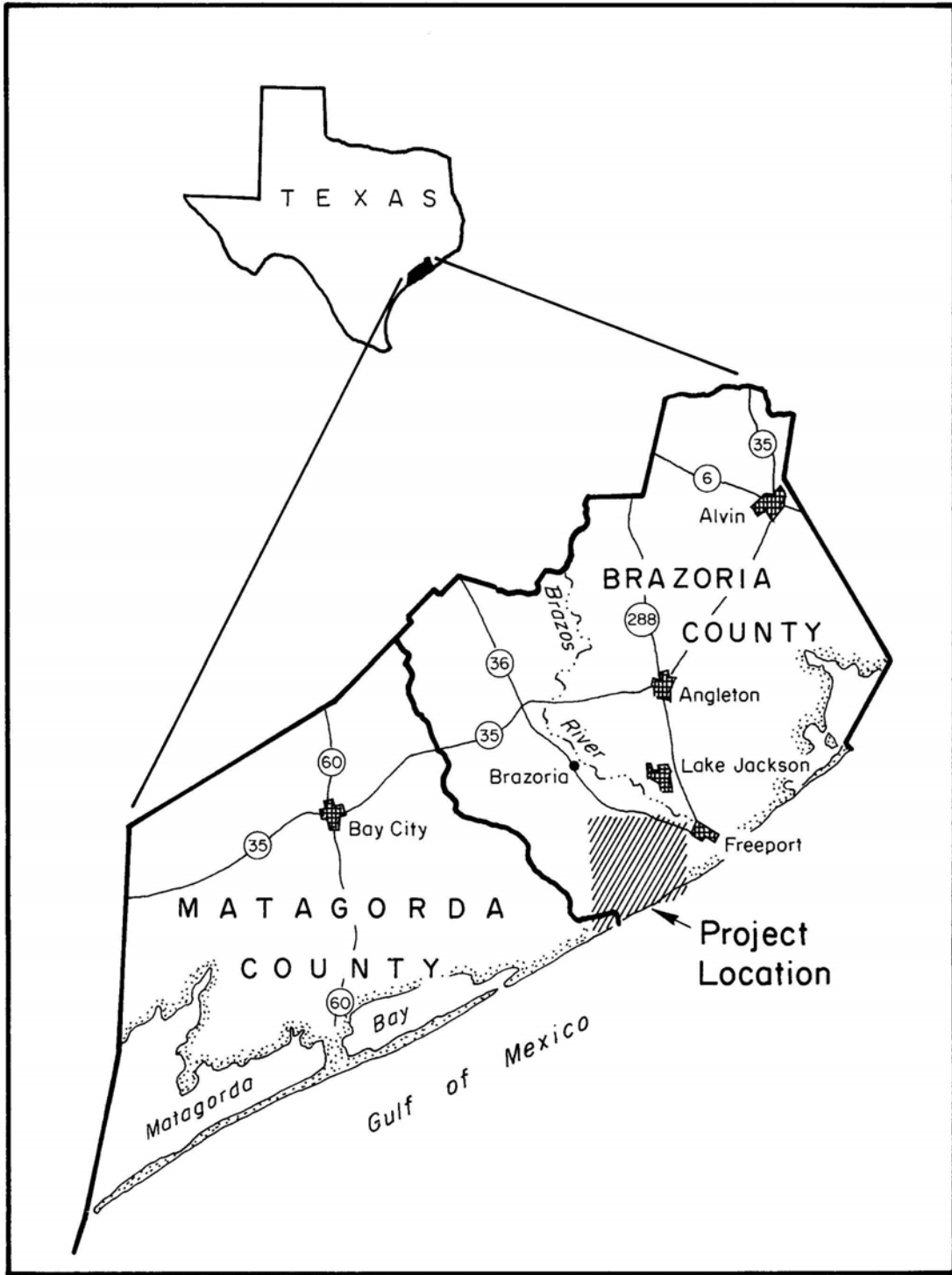


Figure 1. General Location



Water bodies encompassed within the project area consist of the San Bernard River, McNeal Lake, Pelican Lake, Jones Lake, Cedar Lakes, Cowtrap Lake, Jones Creek, Gulf Intracoastal Waterway, and a small portion of the Gulf of Mexico. No source points will be located in the San Bernard River, Jones Creek, or the Gulf Intracoastal Waterway. The project area encompasses the San Bernard National Wildlife Refuge and the Peach Point Wildlife Management Area. Topographic coverage of the project area is provided by four United States Geologic Survey 7.5' topographic quadrangles. They are Cedar Lakes East (2895-432), Cedar Lakes West (2895-341), Cedar Lane NE (2895-344), and Jones Creek (2895-433). The project area is depicted on the four topographic maps as Appendix I to this report.

## ENVIRONMENTAL DESCRIPTION

Portions of the following description of the area were excerpted from a contract report authored by Voellinger and Nash (1989:2), the soil survey for Brazoria County (Crenwelge et al. 1981), and a manuscript authored by Tanya Matherne of Dixie Environmental Services Company of Magnolia, Texas.

The project area is located on a broad plain within the Holocene delta formed by the Brazos and Colorado rivers. Other water sources include several lakes and a small portion of the Gulf of Mexico in the southeast corner. This area consists of nearly level terrain that is dissected by various streams flowing into the Gulf. In the project area there are only three major gulf-flowing streams. They are the San Bernard River, Redfish Bayou, and Jones Creek (a former channel of the Brazos River). The San Bernard River flows through the project area from Pleistocene uplands at the northern portion into and through the Holocene delta where it enters the Gulf of Mexico. The San Bernard River is not capable of forming its own delta. This river is characterized as a low energy stream originating within the Gulf Coastal Plain. At the north end of the project area just above the Eastern Branch Cemetery is a small segment of the Brazos River.

At its apex, the Holocene delta mentioned above is approximately 51 kilometers wide and extends inland about 35 kilometers. Surface features include levees of the San Bernard River system, chenier ridges (former beaches), and man-made levees associated with the Gulf Intracoastal Waterway. Overall, there are 1.5 meters of natural topographic relief. Most of the soils in the project area are poorly drained and slowly permeable. They are mostly clays that range from saline to non-saline. The climate is classified as moist sub-humid. Rain occurs throughout the year with 60% falling between April and September. Average annual rainfall is approximately 52 inches.

The project area is located within the Texan Biotic Province as defined by Blair (1950). This is the large ecotone between the forests of the Austroriparian Province to the east and the grasslands in the western part of the state. Local habitats consist of upland prairies, salt and brackish marsh, and shoreline. The upland prairies host wildlife including coyotes, hogs, and bobcats, while the shore areas host herons, ibis, sandpipers, avocets, and stilts. More uncommon marsh and water birds, including roseate spoonbills, whitefaced ibis, and yellow rails, make seasonal appearances in the area. Several islands in the Cedar Lakes area support a colonial waterbird rookery used annually by over 8000 nesting pairs of fifteen different species, including royal terns, laughing gulls, and Louisiana herons. The endangered eastern brown pelican is occasionally seen here also.

The Peach Point Wildlife Management Area and portions of the San Bernard National Wildlife Refuge are located within the project area. These areas provide essential winter habitat for birds on the Central Flyway, one of four major migratory routes over the continental United States. During the winter months, duck and geese populations reach peaks as high as 35,000 and 90,000, respectively. Numerous species of marine life, most notably several living reefs of colonial oysters, also inhabit the marshes and waters of the project area.

The landscape in the project area has been altered by the construction of the Gulf Intracoastal Waterway in 1938. The channel of the San Bernard River was dredged from the waterway to a point 46 kilometers upstream. Although the delta of the Brazos River continues to grow, the San Bernard River does not carry a load sufficient to develop its own delta. Without the contribution of the sediments by the Brazos River, the San Bernard River would probably empty into a small estuary about 30 miles north of its current mouth. Creation of a new Brazos River channel in 1929 has caused erosion to occur along the San Bernard westward to Brown Cedar Cut in East Matagorda Bay. Approximately eight meters of sediment erodes from the river annually. At the same time, the area east of the San Bernard continues to prograde. From 1853 to 1957, the shoreline east of the river receded approximately 380 meters. The same area prograded 230 meters from 1957 to 1974. By 1983, there was evidence of several generations of beach ridges that had generated recurves into the mouth of the San Bernard River, though the mouth had not yet migrated significantly westward (Klaus and Lin 2002:14). Beginning around 1984, the mouth of the San Bernard River was forced to migrate west (downdrift) due to the accumulation of recurves that had now formed a spit. Elongation of the spit proceeded slowly until the early 1990s when it accelerated rapidly. Kraus and Lin (2002) hypothesized that this sudden acceleration was due to a substantial flood in 1992 that deposited an estimated 8.4 million cubed meters of sediment at the new Brazos delta. This surge in sediment load was reworked into an elongated shoal down the coastline of the mouth of the Brazos River that eventually migrated westward and merged with the existing shoreline (Kraus and Lin 2002:12). The weak discharge of the San Bernard River has not been sufficient to maintain a stable channel cross-section or location, and continued littoral deposition since the 1992 flood has resulted in the constriction of the river mouth to the point that it is no longer navigable. Figure 2 illustrates the prairie grass that dominates the area investigated during the terrestrial portion of this study, and Figure 3 illustrates the marshy areas investigated during the terrestrial portion of this study.



Figure 2. Prairie Grass Environment



Figure 3. Marsh Environment

## METHODS

The first step in this project was a review of the Texas Archeological Sites Atlas and the site files at TARL to ensure that no new archaeological sites or shipwrecks have been recorded in the project area since the avoidance plan was prepared. A Research Design was prepared and submitted to the THC and USACE for approval. The following methods describe the terrestrial survey. The methods followed during the magnetometer survey are described in the report by PBS&J (Volume II).

The survey crew visited each of the 360 source point locations placed within the established high probability areas. Each source point was evaluated, and shovel testing was conducted at those points where conditions were favorable. Areas found to be disturbed, under standing water, or having clay at the surface were not tested (n=61). The source points were marked with lath and flagging, and the source point number was written on each stake. In addition to shovel testing, the ground surface in the immediate area of each stake was examined for evidence of cultural materials or features. Overall, the Holocene soils were shallow with clay present at depths of <10 cm to 70 cm. The majority of the tests were terminated at 50 cm or less. Of the 299 shovel tests in the seismic project area, only 17 were dug to depths of 50 cm or greater. All excavated soil was passed through ¼ inch hardware cloth. The location of the source point locations appears on the topographic maps as Appendix I. The Log of Source Points Investigated (Appendix II) depicts the stake numbers for each source point, offset distance and direction, depth of shovel test, reason for termination of each test, and other comments such as soil type. Areas not shovel tested are easily recognized by the phrase “none” in the depth column.

Some source points were placed within the boundary of a National Register District, the Duranzo Plantation (41BO136). Prior to any archaeological investigation of this area, William A. Martin of the THC was consulted by Mr. Baxter (personal communication, June 30, 2008) as to the proper procedure for these investigations. The approved methods involved shovel testing, surface investigations, and a statement of no impact from other ground disturbing activities such as rutting.

## CULTURAL CONTEXT

### Introduction

A detailed discussion of the culture sequence of the project area is beyond the scope of this report. Although the project area is located in two coastal counties, it is part of the Southeastern Region of Texas as defined by the Texas Historical Commission. Figure 4 illustrates the Southeastern Region with Brazoria County highlighted. Detailed summaries of Southeast Texas prehistory have been prepared by various researchers with the most notable examples being the scholarly works by Lawrence E. Aten (1983a, 1983b) and Dee Ann Story, et al. (1990). In Ensor's (1991:5) prehistoric overview prepared for the Cypress Creek study, he states that the best chronological and stratigraphic data currently available for interpreting the successive cultural adaptations in Southeast Texas are found in the following sources: Wheat (1953), Shafer (1968, 1975, 1988), Patterson (1979, 1983), Hall (1981), Aten (1983b), and Ensor and Carlson (1988, 1989). As stated above, only a small portion of the project area is in Matagorda County. This county is within the area known as the Southern Coastal Corridor (Bailey 1987), and it is depicted in Figure 5.

It is generally accepted by most archaeologists that Southeast Texas prehistory is divided into three basic prehistoric periods: Paleo-Indian, Archaic, and Late Prehistoric. Some archaeologists (Kotter 1981) believed that there was a Formative Period that existed prior to Historic contact. More specific to the current project area, however, is the chronology discussed by Ambler (1970:4-7). His comments are inserted into the general chronology below.

### Paleo-Indian Period

The common conception of the Paleo-Indian period is the time following the last ice age (Pleistocene) in North America when man wandered about the continent in pursuit of mega fauna such as mammoth, mastodon, and now-extinct species of bison. Although not much is known about their diet, plants and other smaller animals probably was as important to the Paleo-Indians as an occasional mammoth or other large animal. Sites with *in situ* deposits dating to this period are few in number in Southeast Texas. Paleo-Indians are also noted for the manufacture of unique and distinctive projectile points. In Southeast Texas, a variety of Paleo-Indian points have been found, with most of the specimens obtained through surface collections. Two of the best known types associated with this period in Southeast Texas are *Clovis* and *Folsom*. Descriptions of these and other types discussed in this report are described in Turner and Hester (1985) and Suhm and Jelks (1962). In Southeast Texas, the Paleo-Indian period is thought to have lasted about 2000 years, from 10,000 B.C. to 8000 B.C. (Ensor 1991:8). No sites dating to this period have been reported in the project area. Paleo-Indian artifacts have been found at McFaddin Beach to the east in Jefferson County.

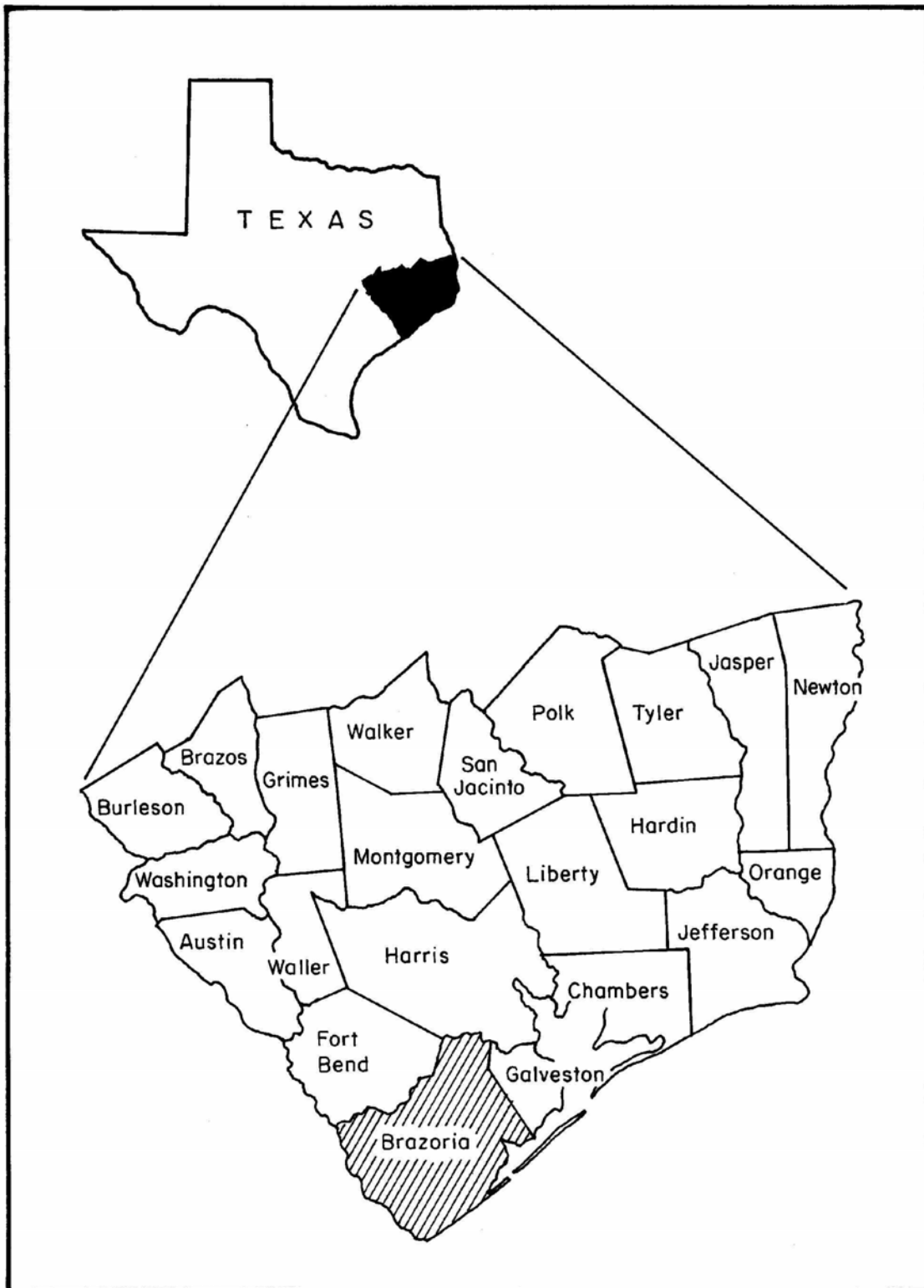


Figure 4. Southeast Region of Texas (after Moore 1989)



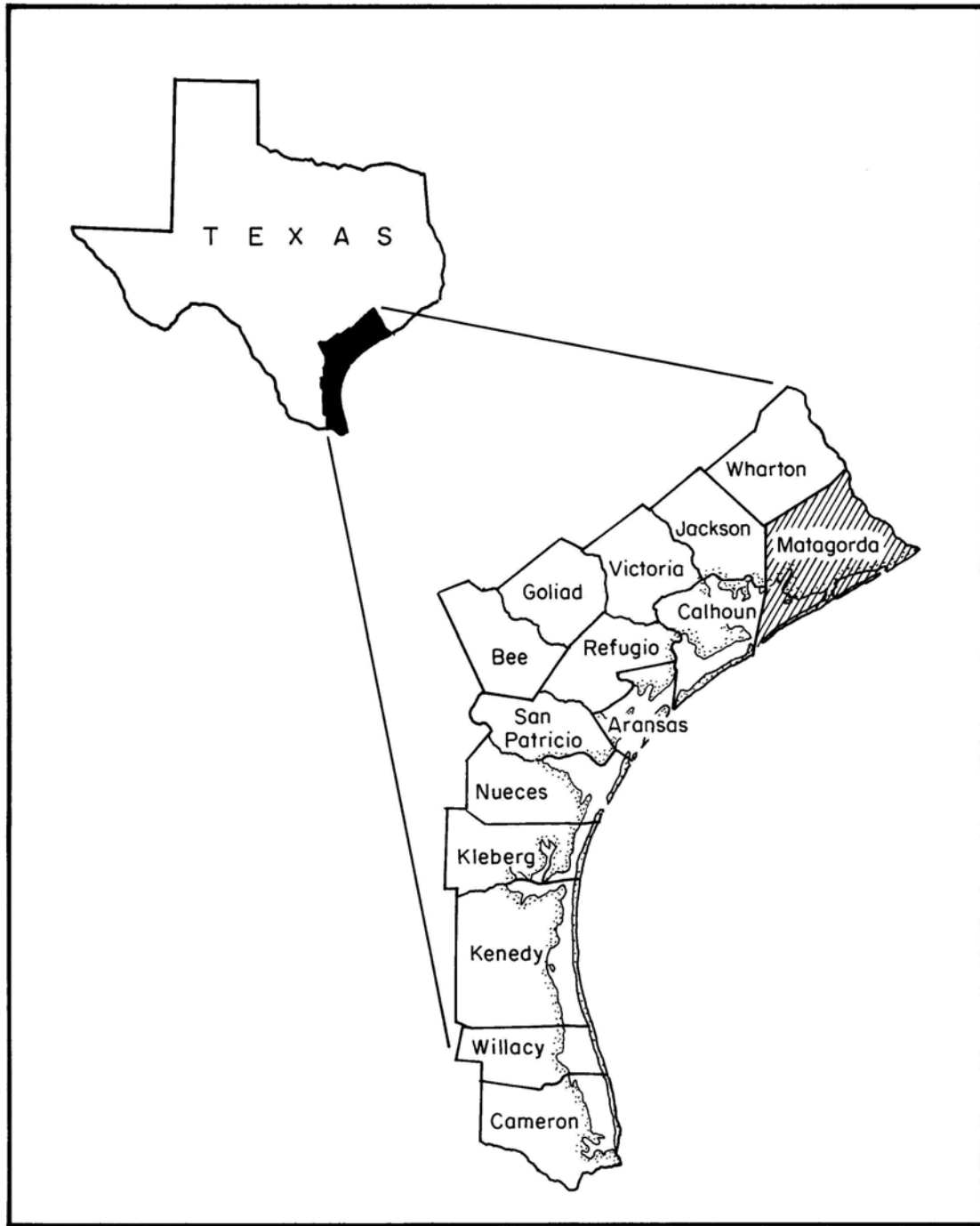


Figure 5. Southern Coastal Corridor Region of Texas (after Bailey 1987)

## Archaic Period

The Archaic period is generally defined as the period following the extinction of Pleistocene megafauna during which time small bands of hunters and gatherers roamed the countryside in search of plants and animals. During this time the overall population increased as evidenced by a greater number of sites. This period is divided into the Early, Middle, and Late periods. According to Ambler (1970:5), the term Archaic is used to refer to the pre-ceramic components found at several sites in the Wallisville Reservoir area. Sites containing Archaic materials in the Wallisville area are, according to Amber, few in number. Sites cannot be classified simply on the basis of an absence of ceramics, because some shell middens may lack artifacts completely, and the ceramics that were present on the surface could have been taken from the site by collectors. Subsurface testing is needed to make this determination. The presence of dart points at shell middens, especially the *Kent* type, is an indicator of an Archaic occupation. No Archaic sites have been reported in the current project area.

## Late Prehistoric Period

This period, also referred to as the Neo-Archaic, is marked by the addition of arrow points and the use of ceramics. Kotter (1981:33) believes few, if any, changes in subsistence strategies occurred during this time. The association of Gary points and ceramics strengthens his argument. No direct evidence of horticulture is known from this region. Kotter also states that the Late Prehistoric period probably continued to the time of Historic contact. Ensor (1991:8) separates the Neo-Archaic into Early and Late Ceramic periods with the Early Ceramic Period dating from A.D. 400 to A.D. 800, and the Late Ceramic Period dating from A.D. 800 to A.D. 1750. All of the prehistoric sites in the current project area have been dated to the Late Prehistoric period because of the presence of ceramics and arrow points, specifically the *Perdiz* type.

## Formative Period

This stage is viewed by Kotter (1981:34) as a time when changes in social and economic organization occurred. These changes were accompanied by a dependence of agriculture. The presence of mound and village sites in the area are viewed as evidence of this period. However, if agriculture was practiced in the region it was probably not widespread. Sorrow and Cox (1973) believe that evidence of this stage in the region may exist due to the large number of sites in the Navasota River Basin containing ceramics. No Formative Period sites have been reported in the current project area.

## Historic Period

The following discussion came from the *Handbook of Texas* (bound copy), the *Handbook of Texas Online*, searches by subject on the Internet (which included local historic markers), and a contract report by Voellinger and Nash (1989). The latter contains very detailed information regarding southern Brazoria County and vicinity.

The first European contact with Indians in the region occurred in 1528 when members of the *Narvaez Expedition* found themselves stranded on an island in the Gulf of Mexico off the Texas coast. From a journal kept by *Cabeza de Vaca*, a survivor of that group, we have learned much of what we know about the indigenous peoples of Southeast Texas. There was competition between the Spanish and French for this part of Texas, and Spanish and French traders were active on the lower Trinity River in the 1740s. The Orcoquisac Archeological District in Chambers County contains sites representing Spanish and French influence in the area. The French established a trading post for the *purpose* of establishing commerce with the nearby Akokisa village of *El Orcoquisac*. The post, referred to as Blancpain's trading post (41CH57), is also the site of the first location of *Presidio San Agustin de Ahumada*. In this district (in addition to 41CH57) there is a possible Indian *rancheria* (41CH22) that may be the Akokisa village mentioned above, the second site of the *Presidio San Agustin de Ahumada* established in 1766 (41CH53), and the site of *Mission Nuestra Senora de la Luz* (41CH54). Other historic Indian groups in the area were the Karankawa, Coapite, and Copane. They were present when the first expeditions traveled the lower Trinity River. In the Wallisville area, evidence of the Akokisa is limited to the *Presidio San Agustin de Ahumada* and from a few surveyed sites (Ambler 1970:6-7). Historic Indian artifacts known from this period include sand-tempered pottery and bone-tempered pottery (*Orcoquizac Plain*) as well as items of European manufacture such as metal objects and glass beads. No historic period Native American sites have been reported in the current project area.

The native Indian group known to inhabit the costal area was the Karankawa. They were a coastal group had the reputation as fierce warriors. First contact with this tribe was made by members of the Navarez Expedition in 1528. *Alvar Nunez Cabeza de Vaca* and three of his companions, members of this expedition, was captured by a Karankawa band. De Vaca lived among them for eight years before returning to Mexico. He kept a journal that contains valuable information about the daily life of these Indians. In 1685, the Karankawa encountered the French when LaSalle landed at Matagorda Bay with 300 colonists; however, a local Karankawa band killed most of them.

In the early 1800s, Stephen F. Austin brought the first of his colonists to the area where they landed at the mouth of the Brazos River. They were known as the “Old Three Hundred” and settled along the alluvial bottomlands of the San Bernard River and Jones Creek among other streams. Most of the settlers relied on cotton and sugar to make a living and founded large plantations that relied on slave labor. The earliest sugar plantation in the project area was Ellerslie (41BO80), which was founded in 1824 (Leezer 2006:Table 2-1). Archival research determined that it was in operation until 1900 when it was destroyed by a hurricane. Ellerslie was followed by Peach Point, which was established in 1832 by James Franklin Perry and his wife, Emily Austin Perry. Peach Point was used as a slave plantation until 1863 with cotton and sugar cane the primary crops. According to the Texas Archeological Sites Atlas, the Gulf Prairie Cemetery was a pioneer cemetery that was originally part of the Peach Point Plantation. It was used by descendents of James Franklin Perry and his wife, Emily Austin Bryan Perry, Stephen F. Austin’s sister, and by the community since 1829. Stephen F. Austin had a home in the area and was buried at this cemetery in 1836. This is one of the cemeteries in the Perry Ranch 3-D seismic survey area. When James Perry died in 1853, his wife gave 200 acres of the original plantation to William Joel Bryan who made his home there and developed a thriving cotton and cattle business known as the Duranzo plantation (41BO136). During the early 20<sup>th</sup> century, the property was used to graze cattle. Figure 6 depicts the site at the time of this survey.

The community of Jones Creek is located in the project area and was settled in the 1820s by Anglo-American families including several of the “Old Three Hundred” who established large cotton plantations in the area. The early settlers had several clashes with local Karankawa bands. In 1824, the Battle of Jones Creek was fought between the colonists of the lower Brazos River and the Indians on the bank of what is now Jones Creek. The creek where the battle took place and the nearby community took their names from Randal Jones, the leader of the colonists in the battle with the Karankawa.

In 1832, the Mexican government organized a separate municipal district and called it Brazoria. As a result, Brazoria became one of the original Texas counties following Texas independence in 1836. The town of West Columbia in west-central Brazoria County is the site of the first capital of Texas and dates to pre-revolutionary days. Jones Creek ceased to grow following the end of plantation life after the Civil War. Before the end of slavery after the end of the Civil War agriculture, which depended on slave labor, was so important in the area that Brazoria County was the wealthiest county in Texas. When slaves were no longer available, the large plantations were divided into smaller farms. Some were converted to pasture, and others became prison farms. Transportation of goods along the coast and up the San Bernard River was a major part of the economy. The presence of six shipwrecks in the project area and vicinity are a testimony to the hazards of water travel. The Gulf Intracoastal Waterway was constructed in the early 20<sup>th</sup> century and provided an alternate route of transportation in an east-west direction across the southern portion of Brazoria County.



Figure 6. View of Duranzo Plantation Pasture

Jones Creek is the only named community in the Perry Ranch 3-D project area. By 1949, it became important as one of several municipalities and towns making up the Brazosport industrial and port area. In 1956, its population reached 2851 and had nine businesses. By 1957, the community included Perry's Landing, Peach Point, Peach Crest, and Gulf Park, a residential community established in 1927 by Robert E. L. Stringfellow and P. George Maercky. Jones Creek was incorporated in 1970. Today, there is no major development in the low-lying marshy areas of south Brazoria County within the project area, and much of this region is only accessible by boat or helicopter.

Between 1861 and 1864, several Confederate fortifications and defensive emplacements were erected at the mouth of the San Bernard River. In this area, the shallow sandbar provided a natural naval defense, so the forts were designed to defend against Union troops advancing up the coast on foot towards Velasco rather than as protection against Federal gunboats that frequented the area (Marchand 1864). In September of 1861, the area was protected by a small sand fort with a 12-pounder cannon *en barbette* on the western bank of the river mouth (Gadus and Freeman 2005:135). This structure was referred to as Fort San Bernardo. In December of that year, the Union schooner *Sam Houston*, on patrol off the Texas coast, reported a 24-pounder at the fort (Gadus and Freeman 2005:136). In 1863, the fortifications were reinforced, and construction of a second earthwork on the east bank of the river below Jones Creek began. Although the fort came under attack, construction continued and by January 15 of 1864, two new gun platforms had been completed and a third begun (Gadus and Freeman 2005:141). A few days later, the fort was visited by Colonel Valery Sulakowski who found problems with the fort's construction, and he ordered it to be demolished and replaced with another fort north of Jones Creek (Gadus and Freeman 2005:141). Figure 7 depicts the extent of Confederate fortifications in the project area in 1863. According to Doug Jones (personal communication, July 18, 2008), the northern fort would have been located around the modern-day intersection of the river with the Gulf Intracoastal Waterway.

The economy of the area following the war suffered greatly. The loss of slaves was viewed by the plantation owners as a loss of wealth and property. In addition, land values decreased because many of the landowners could no longer farm their vast holdings. This loss of real estate assets resulted in debt for many of the plantation owners (Fenneman 2004:102). According to Creighton (1975:257), "A scarcity of consumer goods, the confiscation of cotton by the reconstruction government, and the psychological toll of an uncertain future sent Brazoria County into economic chaos." In the period from the late 1870s through the 1880s, the economy of the county improved as the per capita debt was less than half of the average for the United States, and an influx of foreign immigrants and displaced southerners increased the local population (Creighton 1975:272-272). Convict labor was used to revive crop production and corn, grains, potatoes, fruits, wild grapes, sugar, and cotton became major exports (Kleiner n.d.).

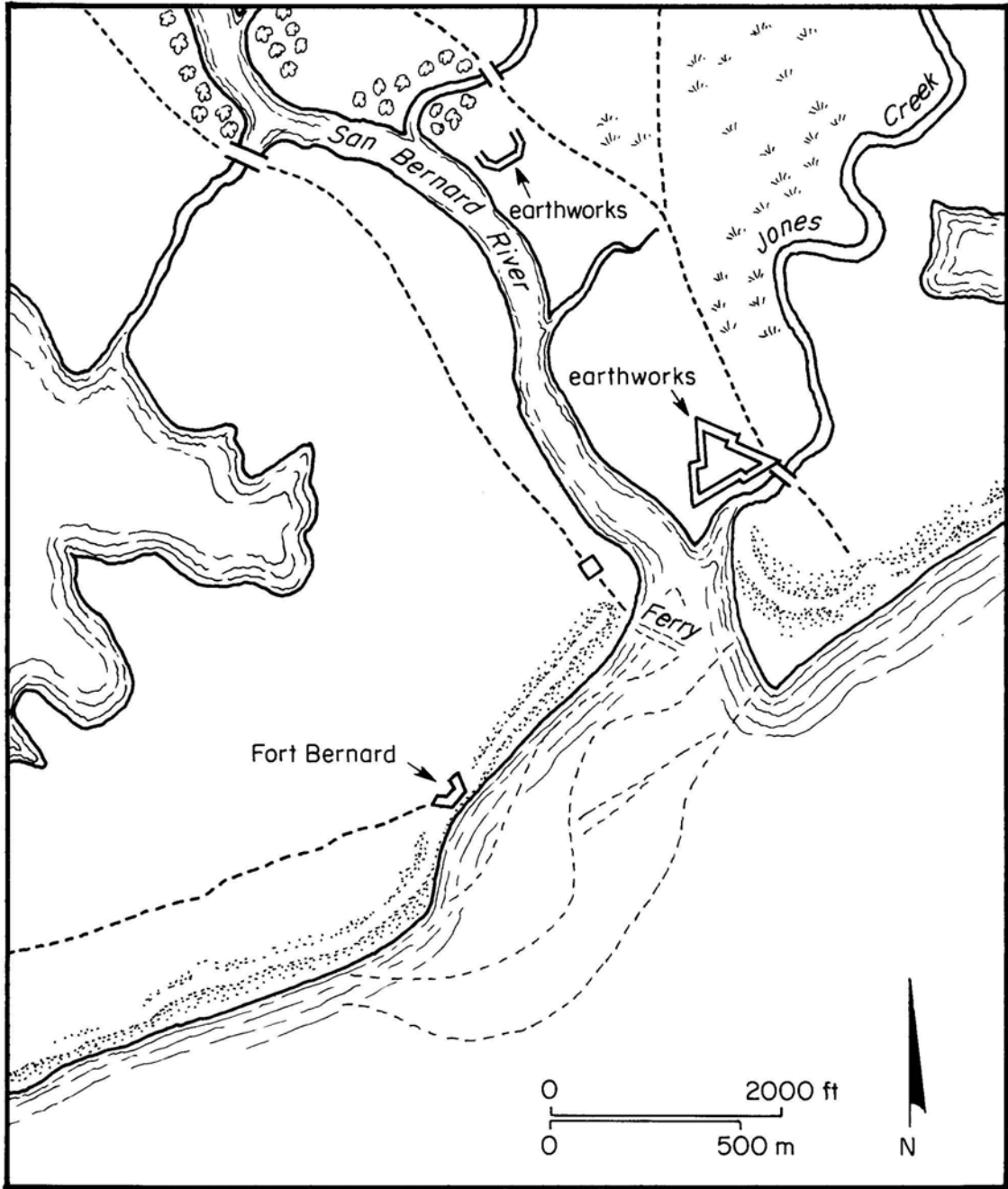


Figure 7. 1863 Map of Confederate Fortifications

At the turn-of-the-century, Brazoria County tourism became an important part of the local economy. Following the devastating hurricane of 1900, Mrs. Josephine Thompson built a four-room house at the mouth of the San Bernard River. It was sold to a Mrs. Cornett Ramsey in 1912, additions were made to the original structure, and the building became a hotel. Overnight lodging and meals were made available to tourists and fisherman. This structure is referred to by some as the Johnston's Beach Hotel. According to Gadus and Freeman (2005:91), it was in operation until at least September of 1924. Photographs of the hotel are found in the report by Hudson et al. (2008). Figure 8 depicts the location of the hotel as shown on a United States Coast and Geologic Survey map dated 1934.

In 1902, oil was discovered in the area, and the local agricultural economy was gradually supplanted by petroleum and mineral production. The first oil field was at Kaiser Mound in West Columbia. In 1912, sulfur began to be mined (Kleiner n.d.). According to Hudson et al. (2008), the major center of economic importance shifted from the San Bernard River to Freeport. An examination of the river by the USACE in 1919 (Baker 1919:2) reported that "there are no towns of any importance along the river, and so far as known there is but one small launch engaged in hauling freight." At that time, all of the land adjacent to the river was devoted to farming and raising cattle, and nearly all products were transported to market by wagon or rail (Hudson et al. 2008:12). The Gulf Intracoastal Canal was built in 1913, and it connected the San Bernard River with the Brazos River. To the east, it entered Galveston Bay, and to the west it entered Matagorda Bay. This artery became the main means of transporting goods by water in the area, and (as a result) most of the surrounding riverside settlements were bypassed (Hudson et al. 2008:12).



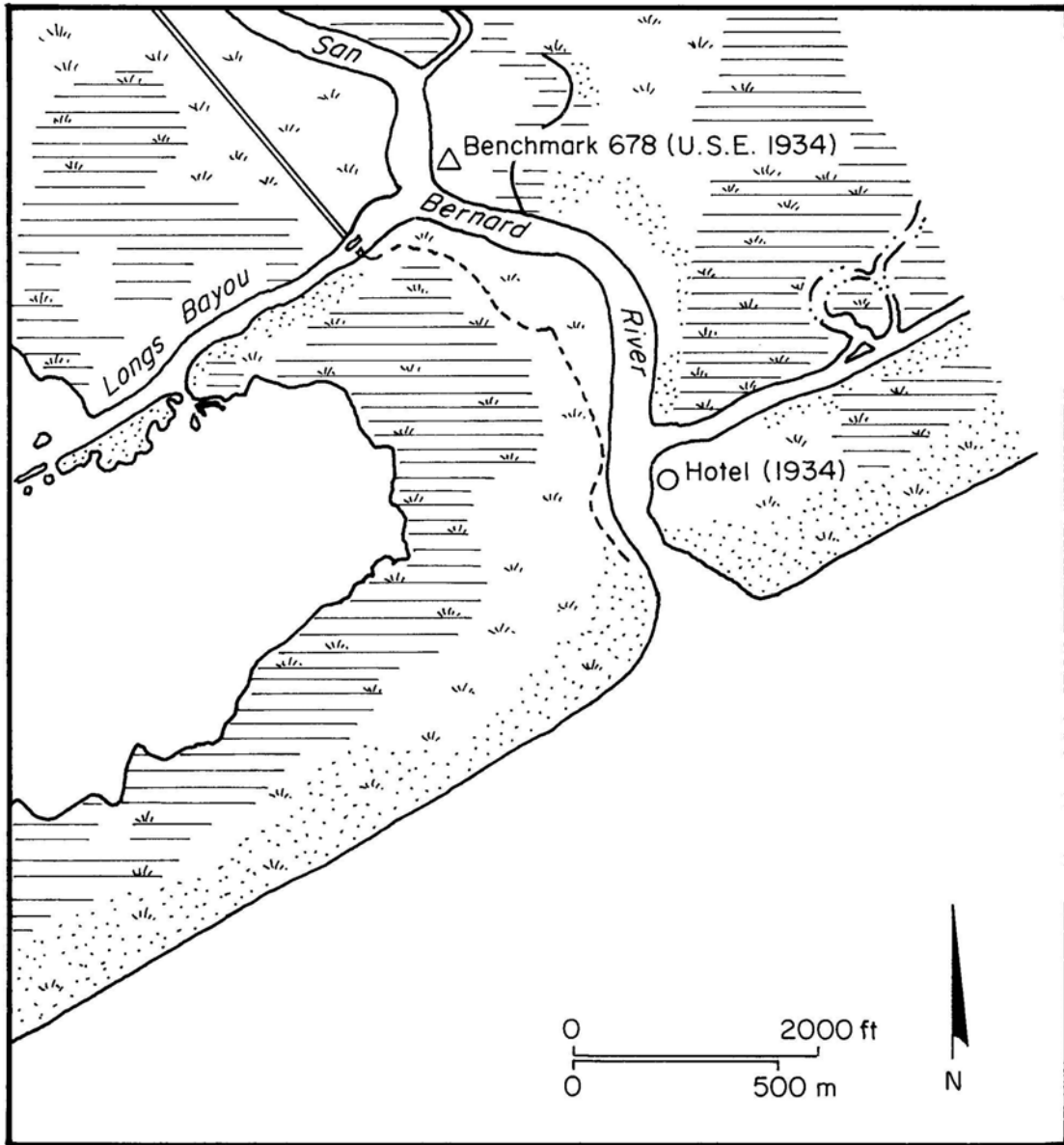


Figure 8. 1934 Chart Showing Location of Johnston's Beach Hotel  
(reproduced with permission of the Texas General Land Office)

## PREVIOUS ARCHEOLOGICAL WORK

A search of the Texas Archeological Sites Atlas and the maps at TARL and the THC revealed the presence of seven area archaeological surveys, eighteen linear archaeological surveys, and two surveys that are area and linear within the current project area. The only surveys that recorded sites were the Seadock project (Research Staff 1974) and the Gulf Intracoastal Waterway project from the Brazos River floodgates to Port O'Connor by Prewitt and Associates, Inc. (Gadus and Freeman 2005). The remaining surveys did not record sites, are scattered across the project area, and vary in size from 15 acres to 1010 acres. Most of these surveys were regulated by the Galveston District of the USACE. Other agencies include the Department of Energy (DOE), Environmental Protection Agency (EPA), Federal Energy Regulatory Agency (FERC), Rural Electrification Agency (REA), Texas Antiquities Committee (TAC), and the United States Fish and Wildlife Services (USFWS).

It should be stated here that many of the early surveys did not follow the current survey methods, which are more precise and involve shovel testing in most cases and backhoe trenching in some cases. Also, mapping technology is much better now. Many of the earlier surveys were simply visual observations of eroded areas and did not involve any subsurface investigation. The survey for the Seaway Pipeline and Depot (Nightengale 1980) serves as an example of the quality of work conducted in the past. The survey was not plotted on the Atlas, and the only map found was drafted for the report on a Xerox copy of pieced-together quadrangles that were copied as one map. This project area map is very hard to read, and it was transposed in ArcView by scanning and linking known points to the topographic quadrangles that formed the background. The only subsurface investigation conducted was a series of probes along a ridge, which they define as a high probability area. Since no definition of a probe is given in the report, the reader does not know if probes are another way of referring to shovel testing with screening. Also, the report does not give the length and width of the pipeline and the dimensions for the depot. Also, some of the reports documenting surveys are not available, and some of the surveys were done in-house by archaeologists from the Galveston Corps. In many cases there are no reports, only letters on file, which are not possible to find.

Twenty-five previously recorded archaeological sites in the general seismic project area are plotted on the Texas Archeological Sites Atlas and the maps at TARL and the THC. The majority of the twenty-five sites (n=21) are prehistoric shell middens located along the San Bernard River. The remaining four sites are historic and consist of two plantations, a cemetery, and a 1930s era house site.

Six shipwrecks are plotted on the Texas Archeological Sites Atlas and on the maps at the office of the State Marine Archeologist within the current seismic project area. Although these ships sank in modern times, the actual age of these vessels is not known. Each wreck has a number assigned by the THC, and this number is mentioned in the nautical report (Volume II).

Five cemeteries are present within the project area. Three were labeled on the topographic maps, and one is plotted on the Archeological Sites Atlas and the maps at TARL as 41BO170. Two of the cemeteries have numbers assigned by the THC, one was found by a visual inspection of the topographic quadrangles, one was found by comparing church names to a list published by the Brazoria County Cemetery Association which gives latitude and longitude information, and one was plotted by a local informant. All five cemeteries are reported on the list. The age of one cemetery was found during a review of a contract report by Espey, Huston & Associates, Inc. (Voellinger and Nash 1989), but the specific age of the other three cemeteries is not known. Some, however, are mentioned as being associated with historic plantations and communities. Not one of these cemeteries will be affected by the proposed drilling.

## **RESULTS AND CONCLUSIONS**

This survey investigated 360 source point locations within the terrestrial high probability areas. No archaeological sites were identified, and no artifacts were collected. According to historical records, the Confederate fort and the 20<sup>th</sup> century hotel were destroyed. No evidence of these two historic sites were found during this survey. Source points at the Duranzo Plantation (41BO136), located within a National Register District, were investigated. The plantation site is well known, and it was buffered for avoidance. The proposed source points were located in outlying plantation land, which were probably fields and pasture. The drills to be employed in this area are listed as no/low impact vehicles; therefore, no adverse impact to the area is anticipated. The nautical high probability area was subjected to a magnetometer survey, and the results of this investigation are reported in the PBS&J report (Volume II). A single grave was found at source point 50181017. This grave is described and illustrated in Appendix III.

## **RECOMMENDATIONS**

No prehistoric or historic sites were found during the archaeological survey of high probability areas within the proposed 3-D seismic survey area. It is, therefore, recommended that the seismic survey be allowed to proceed as planned. The single historic grave must be avoided. Should, however, evidence of a cultural resource site be encountered at any of the source points visited and shovel tested during this study, all work must cease at the location until the situation can be evaluated by the THC and the USACE. Also, if additional source points within high probability areas are proposed, the THC and the USACE must be notified in case additional survey by professional archaeologists is warranted.

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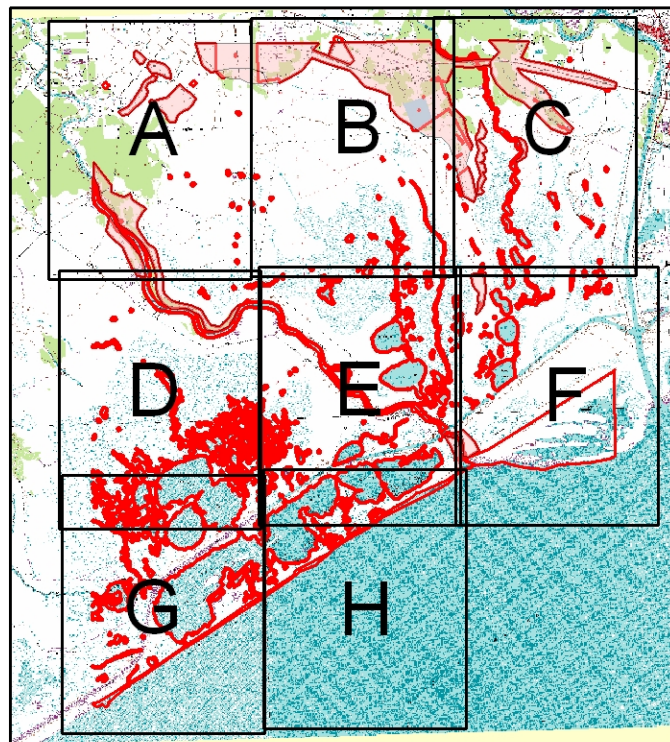
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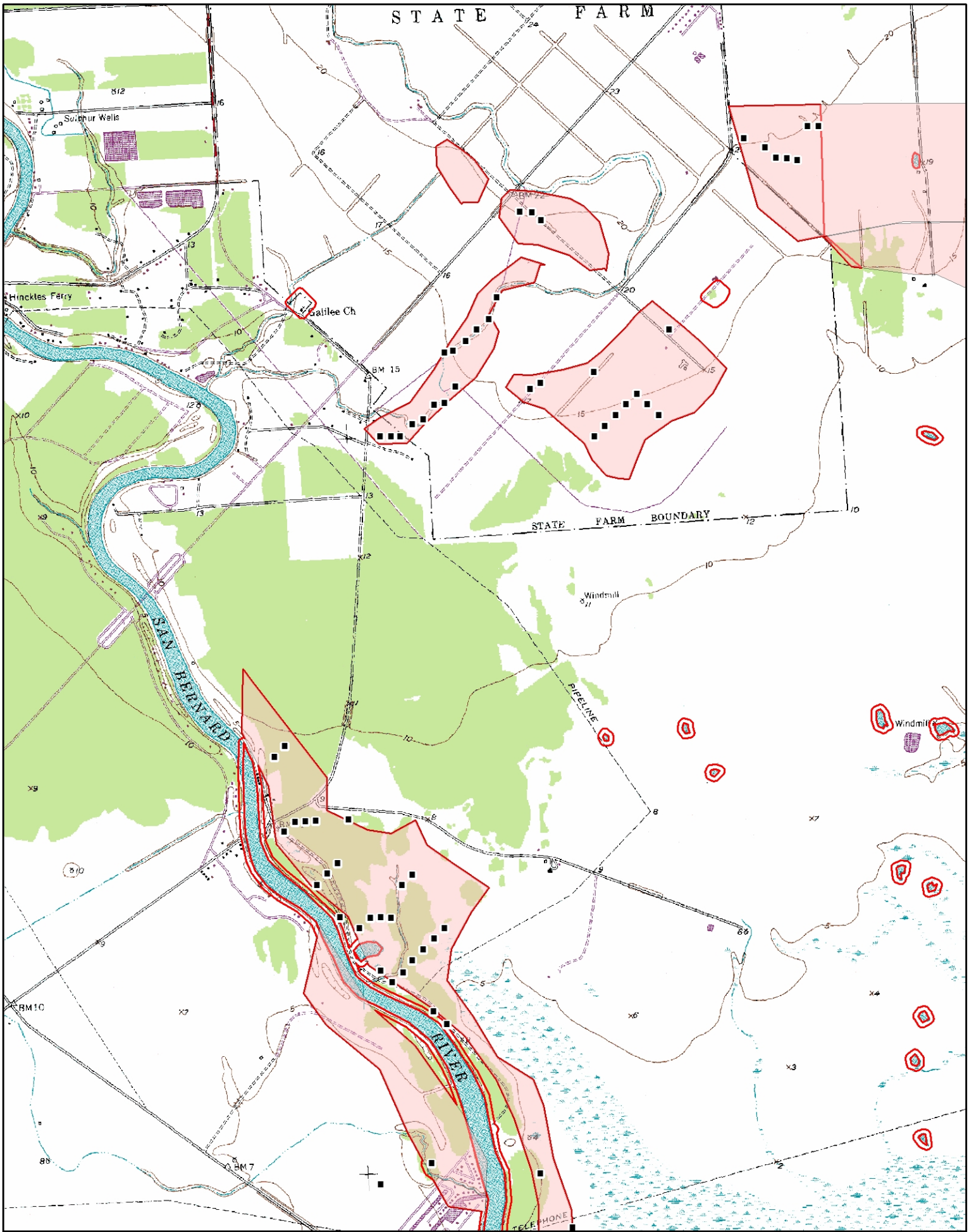
APPENDIX I

PROJECT AREA ON TOPOGRAPHIC QUADRANGLES

(Source Points Investigated)



Key



STATE FARM

812

Sulphur Wells

Hinckles Ferry

Galilee Ch

BM 15

STATE FARM BOUNDARY

Windmill

PIPELINE

Windmill

SAN BERNARD RIVER

BM 10

BM 7

TELEPHONE

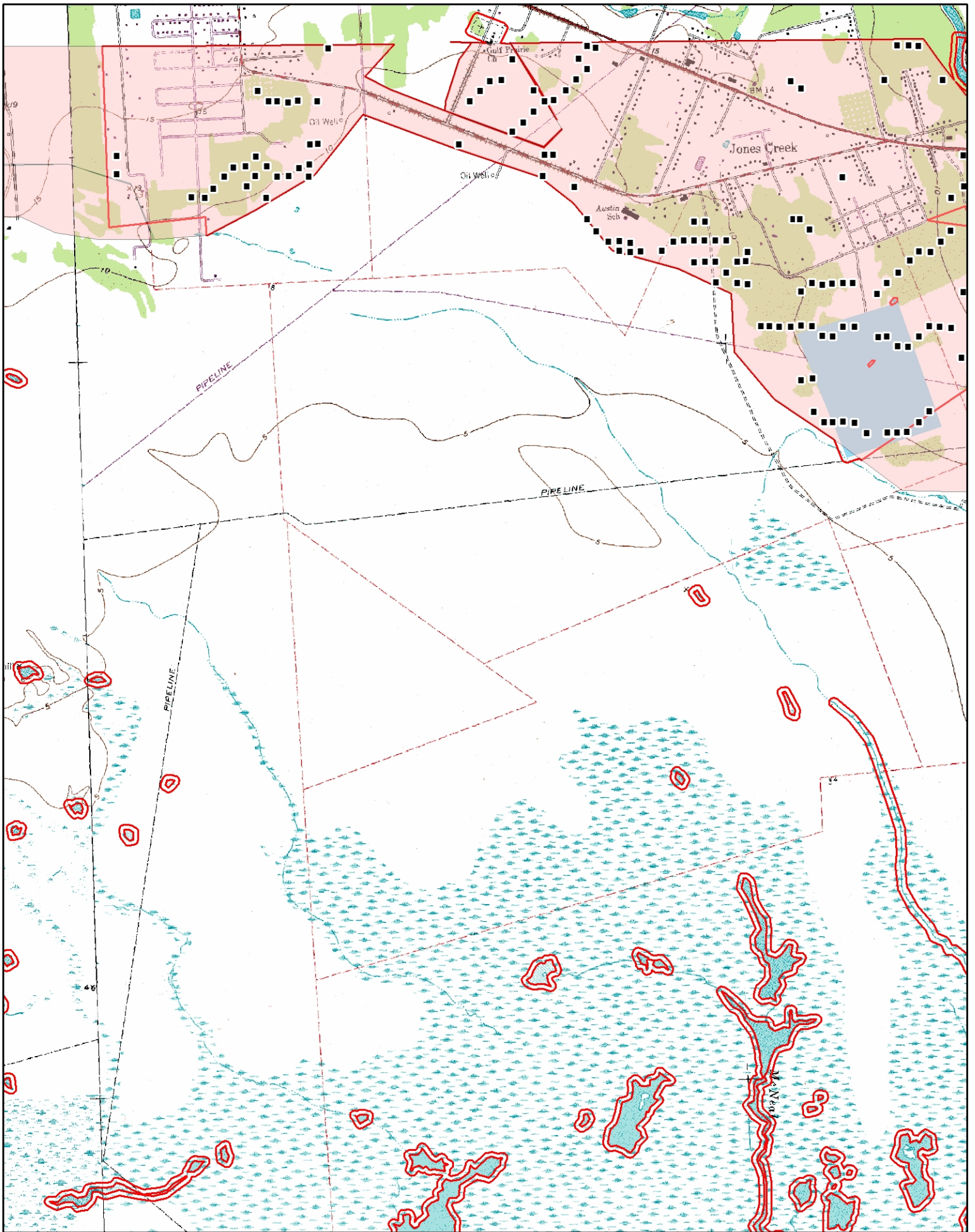


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USGS Cedar Lane NE, Tx  
Quadrangle 2895-344

Section A

- Investigated Source Point
- 100' Water Buffer
- Terrestrial High Probability Area
- National Register District

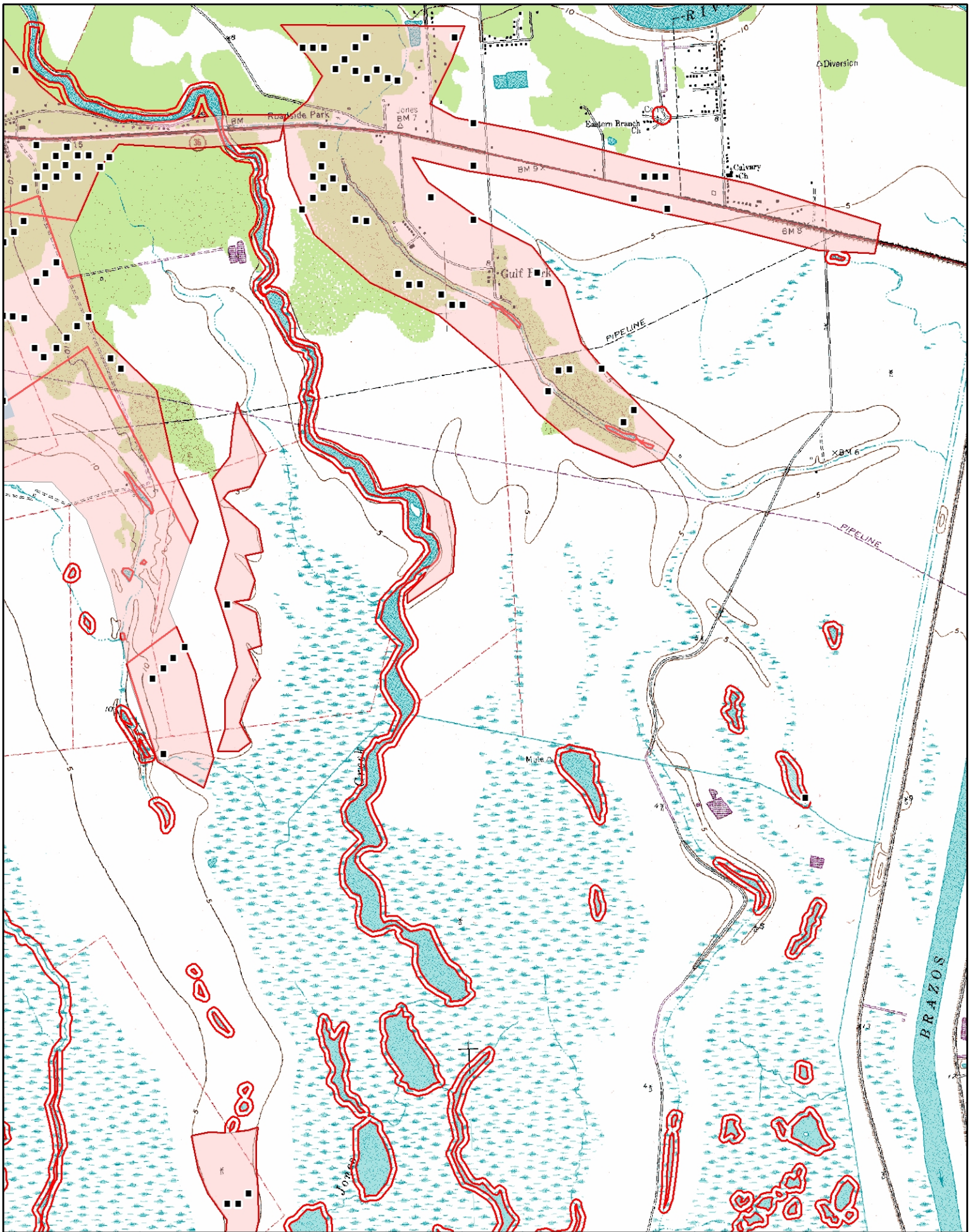


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 Quadrangles 2895-344 & 2895-433

**Section B**

- Investigated Source Point
- 100' Water Buffer
- Terrestrial High Probability Area
- National Register District

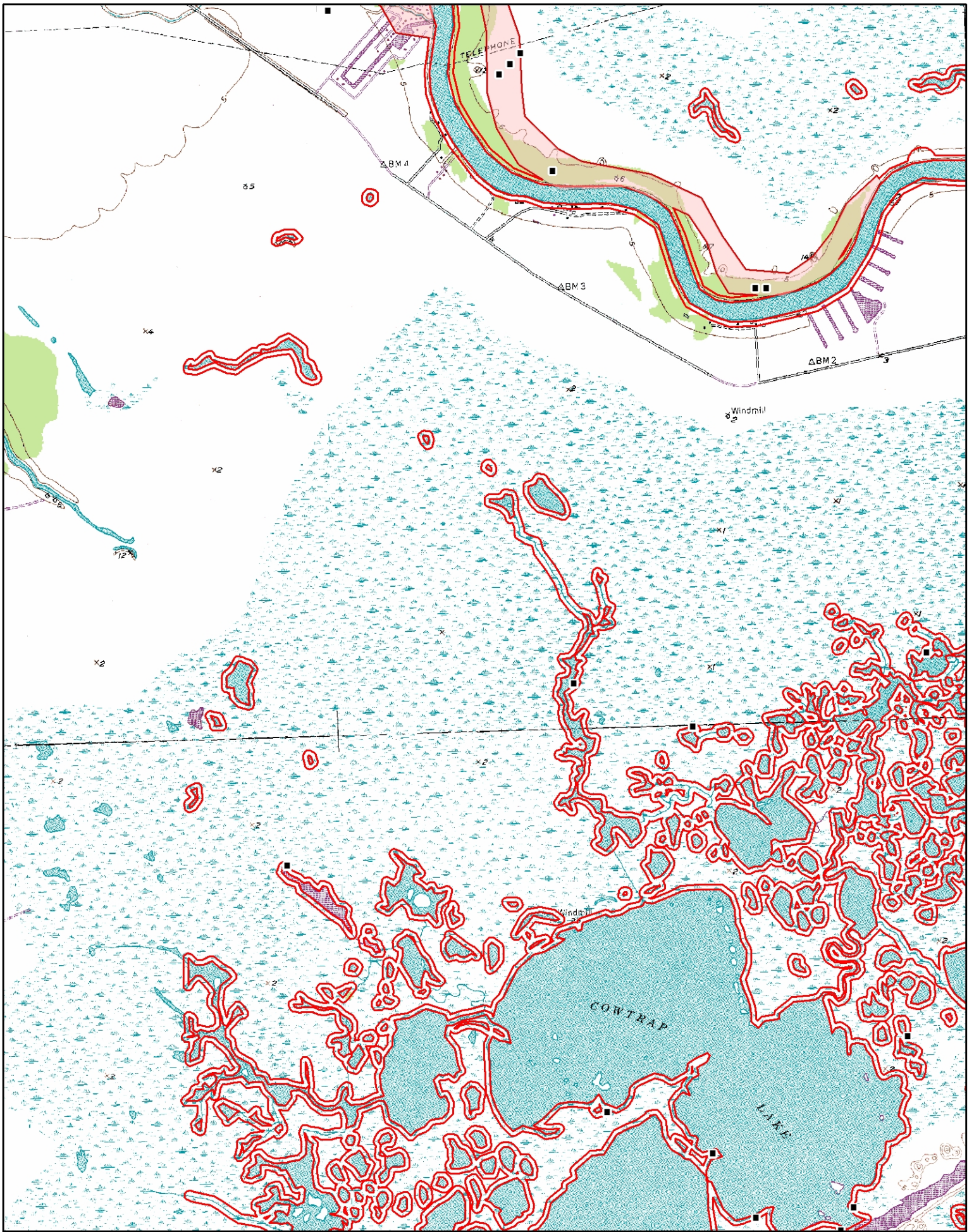


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USGS Jones Creek, Tx  
Quadrangle 2895-433

**Section C**

- Investigated Source Point
- 100' Water Buffer
- Terrestrial High Probability Area
- National Register District

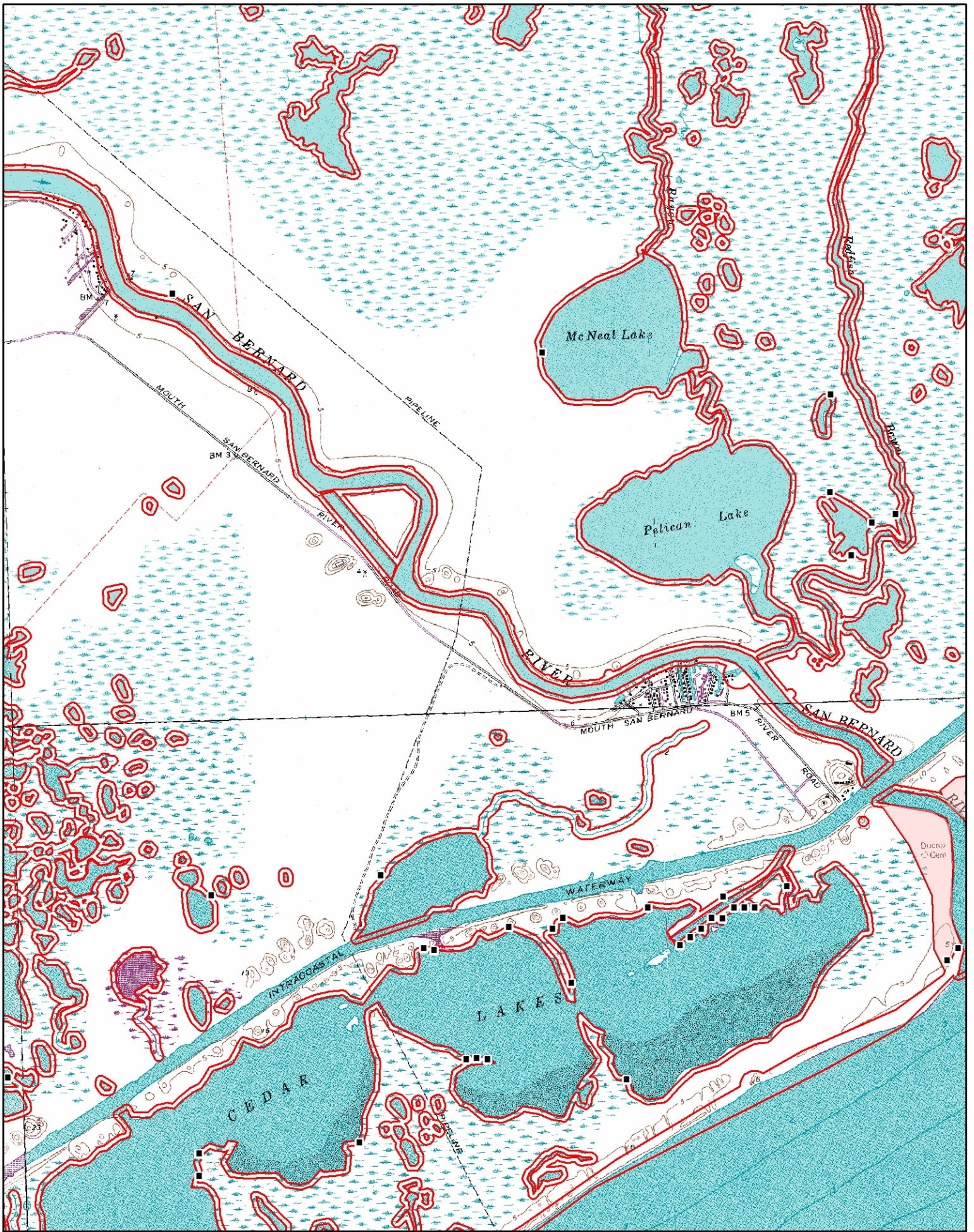


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USGS Cedar Lane NE & Cedar Lakes West, Tx  
Quadrangles 2895-344 & 2895-341

**Section D**

- Investigated Source Point
- National Register District
- Terrestrial High Probability Area
- 100' Water Buffer



N  
1:30,000

USGS Cedar Lakes East & Jones Creek, Tx  
Quadrangles 2895-432 & 2895-433

**Section E**

- Investigated Source Point
- 100' Water Buffer
- Terrestrial High Probability Area
- National Register District



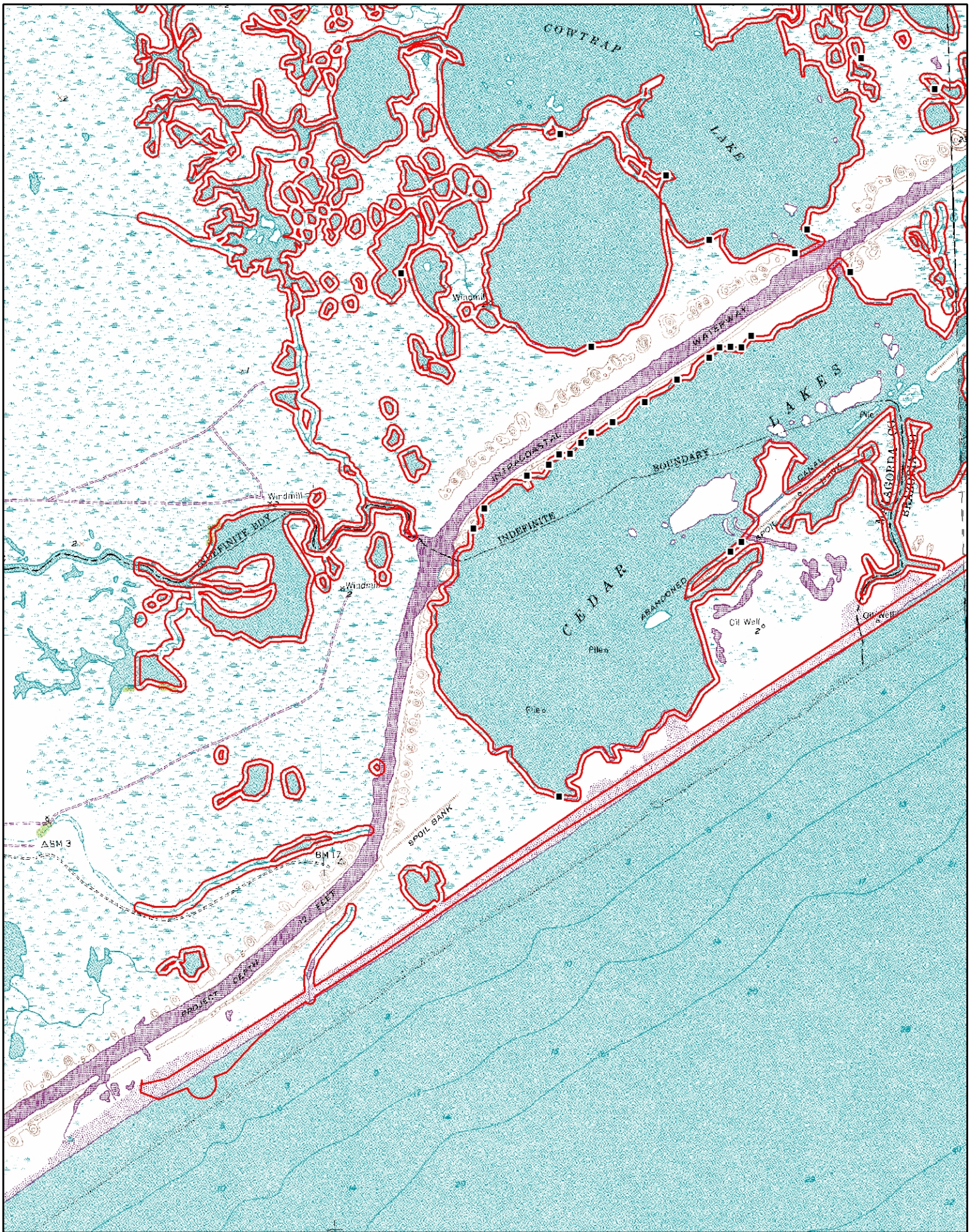
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USGS Cedar Lakes East & Jones Creek, Tx  
Quadrangles 2895-432 & 2895-433

**Section F**

- Investigated Source Point
- Terrestrial High Probability Area
- 100' Water Buffer
- National Register District



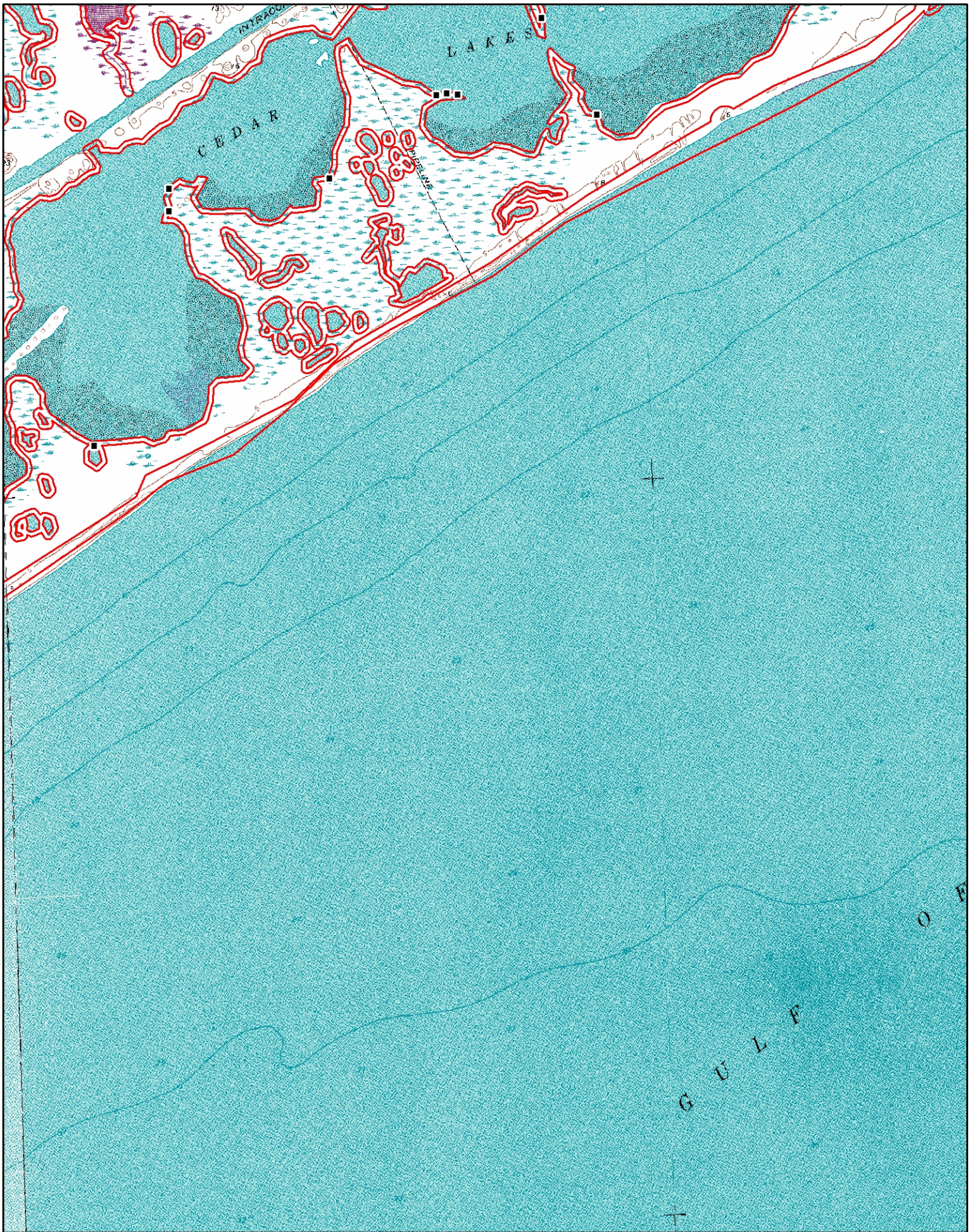


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USGS Cedar Lakes West, Tx  
Quadrangle 2895-341

**Section G**

- Investigated Source Point
- Terrestrial High Probability Area
- 100' Water Buffer
- National Register District



N  
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USGS Cedar Lakes East, Tx  
Quadrangle 2895-432

### Section H

■ Investigated Source Point  
■ 100' Water Buffer  
■ Terrestrial High Probability Area  
■ National Register District

## APPENDIX II: LOG OF SOURCE POINTS INVESTIGATED

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
1	6/13/08	Phil Bishop	50261052	660' north	40	hardpan silty clay loam
2	6/13/08	Phil Bishop	50261051	880' north	35	hardpan silty clay loam
3	6/13/08	Phil Bishop	50221032	440' north	20	low area; deeply cracked; gumbo clay
4	6/13/08	Phil Bishop	50201027	none	20	salt grass marsh; gumbo clay
5	6/13/08	Phil Bishop	50201028	none	20	salt grass marsh; gumbo clay
6	6/13/08	Phil Bishop	50201029	none	20	salt grass marsh; gumbo clay
7	6/13/08	Phil Bishop	50191026	none	20	hardpan silty clay loam
8	6/13/08	Phil Bishop	50161017	220' south	none	in road
9	6/13/08	Phil Bishop	50161016	220' north	none	in road
10	6/13/08	Phil Bishop	50151012	none	none	in ditch
11	6/13/08	Phil Bishop	50151013	none	35	blocky silty clay at 30 cm
12	6/13/08	Phil Bishop	50151014	none	30	blocky silty clay at 30 cm; cattle path
13	6/13/08	Phil Bishop	50151015	none	25	deeply cracked blocky silty clay loam; floodplain
14	6/13/08	Phil Bishop	50151016	none	15	hardpan silty clay loam
15	6/13/08	Phil Bishop	50151017	none	15	hardpan silty clay loam
16	6/13/08	Phil Bishop	50151011	440' north	15	hardpan silty clay loam
17	6/13/08	Phil Bishop	50141088	220' north	none	edge of road
18	6/13/08	Phil Bishop	50141007	660' north	18	blocky silty clay at 15 cm
		Phil				

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
25	6/13/08	Phil Bishop	50131006	none	none	in ditch
26	6/13/08	Phil Bishop	50131005	none	10	silty clay at surface; dried up channel
27	6/13/08	Phil Bishop	50131007	none	20	dense silty clay loam
28	6/13/08	Phil Bishop	50121002	none	none	in ditch
29	6/13/08	Phil Bishop	50301087	none	10	hardpan clay
30	6/14/08	Lisa Shaddox	50291188	660' north	50	hardpan clay
31	6/14/08	Lisa Shaddox	50301192	1100' north	30	hardpan clay
32	6/14/08	Lisa Shaddox	50261155	none	30	silty clay at 30 cm
33	6/14/08	Lisa Shaddox	50261154	none	30	silty clay at 30 cm
34	6/14/08	Lisa Shaddox	50261153	none	30	silty clay at 30 cm
35	6/14/08	Lisa Shaddox	50261152	none	<10	silty clay at 10 cm; disturbed pasture
36	6/14/08	Lisa Shaddox	50261151	440' north	<10	silty clay at 10 cm; disturbed pasture
37	6/14/08	Lisa Shaddox	50251146	none	15	silty clay at 15 cm; disturbed pasture
38	6/14/08	Lisa Shaddox	50251145	none	<10	silty clay at 10 cm; disturbed pasture
39	6/14/08	Lisa Shaddox	50251147	none	<10	silty clay at 10 cm; disturbed pasture
40	6/14/08	Lisa Shaddox	50251148	none	10	silty clay at 10 cm; disturbed pasture
41	6/14/08	Lisa Shaddox	50251149	220' south	10	silty clay at 10 cm; disturbed pasture
42	6/14/08	Lisa Shaddox	50251150	440' south	10	silty clay at 10 cm; disturbed pasture
43	6/14/08	Lisa Shaddox	50251151	none	10	silty clay at 10 cm; disturbed pasture
44	6/14/08	Lisa Shaddox	50251152	none	10	silty clay at 10 cm; disturbed pasture
45	6/14/08	Lisa Shaddox	50251153	none	10	silty clay at 10 cm; disturbed pasture
46	6/14/08	Lisa Shaddox	50241152	none	40	terminated at silty clay
47	6/14/08	Lisa Shaddox	50241153	none	35	clay
48	6/14/08	Phil Bishop	50341207	880' north	35	blocky silty clay loam; pasture
49	6/14/08	Phil Bishop	50341206	880' north	35	blocky silty clay loam; pasture

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
50	6/14/08	Phil Bishop	50121003	none	20	hardpan silty clay loam; wet
51	6/14/08	Phil Bishop	50121004	220' south	20	hardpan silty clay loam; wet
52	6/14/08	Phil Bishop	50121005	440' south	20	hardpan silty clay loam; wet
53	6/14/08	Phil Bishop	50131008	660' north	none	disturbed terrace
54	6/14/08	Phil Bishop	50111002	none	20	silty clay at surface; floodplain
55	6/14/08	Phil Bishop	50111001	none	15	silty clay at surface; floodplain
56	6/14/08	Phil Bishop	50101052	none	35	silty clay at 30 cm
57	6/14/08	Phil Bishop	50101061	220' north	40	silty clay at 35 cm
58	6/14/08	Phil Bishop	50101050	220' south	30	compact silty clay at 20 cm
59	6/14/08	Phil Bishop	50101049	none	20	silty clay loam; disturbed pasture
60	6/14/08	Phil Bishop	50101048	220' north	15	hardpan silty clay at surface
61	6/14/08	Phil Bishop	50101047	880' north	10	hardpan silty clay at surface
62	6/14/08	Phil Bishop	50091045	440'south	10	hardpan silty clay at surface
63	6/14/08	Phil Bishop	50241150	220' south	30	silty clay loam: floodplain
64	6/14/08	Phil Bishop	50241149	220' south	32	silty clay loam; floodplain
65	6/14/08	Phil Bishop	50381171	220' south	10	hardpan sandy silt
66	6/14/08	Phil Bishop	50381170	220' south	10	hardpan sandy silt
67	6/14/08	Phil Bishop	50381169	none	10	hardpan sandy silt
68	6/14/08	Phil Bishop	50311163	none	15	hardpan silty clay loam
69	6/14/08	Phil Bishop	50311165	none	20	clay at 20 cm
70	6/14/08	Phil Bishop	50311164	none	40	clay at 35 cm
71	6/14/08	Phil Bishop	50311163	none	40	clay at 35 cm
72	6/14/08	Phil Bishop	50311162	none	46	compact silty clay at 42 cm
73	6/14/08	Phil Bishop	50311169	none	20	clay at 17 cm
74	6/14/08	Phil Bishop	50241146	none	20	hardpan silty clay loam

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
75	6/14/08	Phil Bishop	50241147	none	35	dense sandy clay loam at 32 cm
76	6/14/08	Phil Bishop	50241148	none	15	hardpan silty clay loam
77	6/14/08	Phil Bishop	50241154	none	20	sandy clay at 18 cm; bottomland
78	6/14/08	Phil Bishop	50241155	none	10	silty clay at surface
79	6/14/08	Phil Bishop	50241156	220' south	10	silty clay at surface; floodplain
80	6/14/08	Phil Bishop	50241157	660' south	none	wetlands
81	6/14/08	Phil Bishop	50241158	660' south	none	wetlands
82	6/14/08	Phil Bishop	50191112	440' north	none	clay at surface
83	6/15/08	Lisa Shaddox	50331204	660' north	35	very compact clay
84	6/15/08	Lisa Shaddox	50321201	440' south	<10	very compact clay; disturbed pasture
85	6/15/08	Lisa Shaddox	50321200	220' south	<10	very compact clay; disturbed pasture
86	6/15/08	Lisa Shaddox	50321199	440' south	45	clay at 45 cm
87	6/15/08	Lisa Shaddox	50271178	none	45	clay at 45 cm
88	6/15/08	Lisa Shaddox	50271177	none	30	clay in disturbed pasture
89	6/15/08	Lisa Shaddox	50301190	220' south	30	clay in disturbed pasture
90	6/15/08	Lisa Shaddox	50301191	440' south	<10	clay in disturbed pasture
91	6/15/08	Lisa Shaddox	50301189	220' north	<10	clay in disturbed pasture
92	6/15/08	Lisa Shaddox	50291187	880' south	<10	clay in disturbed pasture
93	6/15/08	Lisa Shaddox	50291186	660' south	<10	clay in disturbed pasture
94	6/15/08	Lisa Shaddox	50291185	220' south	<10	clay in disturbed pasture
95	6/15/08	Lisa Shaddox	50281181	none	30	compact clay
96	6/15/08	Lisa Shaddox	50281182	220' south	<10	disturbed compact silty clay
97	6/15/08	Lisa Shaddox	50271180	880' south	<10	disturbed compact silty clay
98	6/15/08	Lisa Shaddox	50271179	660' south	30	compact silty clay
99	6/15/08	Lisa Shaddox	50281184	1330' west	<20	disturbed compact silty clay

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
100	6/15/08	Lisa Shaddox	50281183	1330' west	<10	disturbed compact silty clay
101	6/15/08	Lisa Shaddox	50271176	440' south	<10	disturbed compact silty clay
102	6/16/08	Lisa Shaddox	50311199	none	55	compact clay
103	6/16/08	Lisa Shaddox	50311198	440' north	<10	compact clay in disturbed pasture
104	6/16/08	Lisa Shaddox	50181110	220' north	<10	very compact clay in disturbed pasture
105	6/16/08	Lisa Shaddox	50181111	220' north	<10	very compact clay in disturbed pasture
106	6/16/08	Lisa Shaddox	50181112	220' north	<10	very compact clay in disturbed pasture
107	6/16/08	Lisa Shaddox	50181113	none	<10	very compact clay in disturbed pasture
108	6/16/08	Lisa Shaddox	50181114	none	<10	very compact clay in disturbed pasture
109	6/16/08	Lisa Shaddox	50181115	none	<10	very compact clay in disturbed pasture
110	6/16/08	Lisa Shaddox	50181116	none	<10	very compact clay in disturbed pasture
111	6/16/08	Lisa Shaddox	50181109	220' north	<10	very compact clay in disturbed pasture
112	6/16/08	Lisa Shaddox	50181105	440' north	<10	very compact clay in disturbed pasture
113	6/16/08	Lisa Shaddox	50171106	none	<10	very compact clay in disturbed pasture
114	6/16/08	Lisa Shaddox	50171107	none	<10	very compact clay in disturbed pasture
115	6/16/08	Lisa Shaddox	50171108	220' south	<10	very compact clay in disturbed pasture
116	6/16/08	Lisa Shaddox	50201117	none	<10	very compact clay in disturbed pasture
117	6/16/08	Lisa Shaddox	50201118	880' south	<10	very compact clay in disturbed pasture
118	6/16/08	Lisa Shaddox	50201119	1660' south	<10	very compact clay in disturbed pasture
119	6/16/08	Lisa Shaddox	50201120	none	<10	very compact clay in disturbed pasture
120	7/2/08	Ed Baxter	50251141	440' south	10	Clay
121	7/2/08	Ed Baxter	50251140	220' south	40	Clay loam/clay
122	7/2/08	Ed Baxter	50251139	none	40	Clay loam/clay
123	7/2/08	Ed Baxter	50251138	220' north	30	Clay loam/clay
124	7/2/08	Ed Baxter	50251142	880' south	30	Clay loam/clay

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
125	7/2/08	Ed Baxter	50261144	440' north	40	Clay loam/clay
126	7/2/08	Ed Baxter	50261145	220' north	20	Clay loam/clay
127	7/2/08	Ed Baxter	50261146	none	30	Clay loam/clay
128	7/2/08	Ed Baxter	50261147	none	50	silty clay loam/ clay
129	7/2/08	Ed Baxter	50261148	none	40	Clay loam/clay
130	7/2/08	Ed Baxter	50241141	220' south	50	Clay loam/clay
131	7/2/08	Ed Baxter	40251140	none	50	Clay loam/clay
132	7/2/08	Ed Baxter	50241139	none	50	Clay loam/clay
133	7/2/08	Ed Baxter	50241138	220' north	<10	clay
134	7/6/08	Lisa Shaddox	50401222	none	35	Silty clay/ Clay
135	7/6/08	Lisa Shaddox	50231138	440' south	30	Silty clay loam/ slity clay
136	7/6/08	Lisa Shaddox	50231139	660' south	45	Silty clay loam/ slity clay
137	7/6/08	Lisa Shaddox	50231140	880' south	15	Clay loam/clay
138	7/6/08	Lisa Shaddox	50231141	1100' s	20	Clay loam/clay
139	7/7/08	Lisa Shaddox	50311210	880' south	15	road ROW disturbed black clay
140	7/7/08	Lisa Shaddox	50311207	none	20	road ROW disturbed black clay
141	7/7/08	Lisa Shaddox	50311208	220' north	15	road ROW disturbed black clay
142	7/7/08	Lisa Shaddox	50311209	none	20	road ROW disturbed black clay
143	7/7/08	Lisa Shaddox	50311216	1220' south 1360' west	25	road ROW disturbed black clay
144	7/7/08	Lisa Shaddox	50261156	none	35	Clay loam / clay
145	7/7/08	Lisa Shaddox	50271159	none	35	Clay loam / clay
146	7/7/08	Lisa Shaddox	50271158	440' north	<10	Black clay wetland, dry
147	7/7/08	Lisa Shaddox	50311169	none	20	silty loam/ silty clay
148	7/7/08	Lisa Shaddox	50261177	880' north	15	Clay
149	7/7/08	Lisa Shaddox	50261176	1100' north	15	Disturbed black clay



Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
150	7/7/08	Lisa Shaddox	50261178	660' north	20	Disturbed black clay
151	7/7/08	Lisa Shaddox	50261179	none	25	Black clay
152	7/8/08	Lisa Shaddox	50461110	220' north 1220' west	65	Sand/sandy clay @65 cm
153	7/8/08	Lisa Shaddox	50461111	220' north 1220' west	30	Disurbed dredge spoil
154	7/8/08	Lisa Shaddox	50461112	220' north 1220' west	none	In the old intracoastal waterway
155	7/8/08	Lisa Shaddox	50461113	220' north 1220' west	none	In the old intracoastal waterway
156	7/8/08	Lisa Shaddox	50461117	none	15	wet, black gumbo clay
157	7/8/08	Lisa Shaddox	50461116	none	25	wet, black gumbo clay
158	7/8/08	Lisa Shaddox	50461115	none	<10	wet, black gumbo clay
159	7/8/08	Lisa Shaddox	50461114	none	50	Sand/sandy clay @50 cm
160	7/8/08	Lisa Shaddox	50271185	220' north	none	In a small drainage
161	7/8/08	Lisa Shaddox	50271184	440' north	30	Clayloam/ clay @ 30 cm
162	7/8/08	Lisa Shaddox	50271187	1330' west	20	Very compact black gumbo clay
163	7/8/08	Lisa Shaddox	50271182	880' north	<10	Very compact black gumbo clay
164	7/8/08	Lisa Shaddox	50271183	880' north	<10	Very compact black gumbo clay
165	7/9/08	Lisa Shaddox	50251144	660' north	35	Sandy loam/ sandy clay
166	7/9/08	Lisa Shaddox	50251143	880' north	35	Sandy loam/ sandy clay, 2 brick fragments in the plow
167	7/9/08	Lisa Shaddox	50231137	1100' south	<10	Clay loam / clay
168	7/9/08	Lisa Shaddox	50231136	880' south	25	Clay loam / clay
169	7/9/08	Lisa Shaddox	50231135	660' south	20	Clay loam / clay
170	7/9/08	Lisa Shaddox	50231134	440' south	15	Clay loam / clay
171	7/9/08	Lisa Shaddox	50231133	220' south	20	Clay loam / clay
172	7/9/08	Lisa Shaddox	50231132	none	15	Clay loam / clay
173	7/9/08	Lisa Shaddox	50251137	660' north	15	Clay loam / clay
174	7/9/08	Lisa Shaddox	50241136	660' south	<10	Clay loam / clay

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
175	7/9/08	Lisa Shaddox	50241137	660' north	<10	Clay loam / clay
176	7/9/08	Lisa Shaddox	50271186	880' south 1320' east	<10	Compact black gumbo clay
177	7/9/08	Lisa Shaddox	50161091	440' north	<10	Compact black gumbo clay
178	7/9/08	Lisa Shaddox	50161090	220' north	<10	Wet black gumbo clay
179	7/9/08	Lisa Shaddox	5016186	440' north	<10	Compact black gumbo clay
180	7/11/08	Lisa Shaddox	50471104	220'N	70	sand; disturbed throughout; modern trash
181	7/11/08	Lisa Shaddox	50471103	220'N	70	sand; disturbed throughout; modern trash
182	7/11/08	Lisa Shaddox	50411028	220'S	80	sand; modern trash at 60 cm
183	7/11/08	Lisa Shaddox	50371029	none	<10	dredge spoils
184	7/11/08	Lisa Shaddox	50371030	220'N	<10	dredge spoils
185	7/11/08	Lisa Shaddox	50371034	none	<10	dredge spoils
186	7/11/08	Lisa Shaddox	50371036	220'S	<10	dredge spoils
187	7/11/08	Lisa Shaddox	50371037	220'S	<10	dredge spoils
188	7/11/08	Lisa Shaddox	50381038	1320'N	<10	dredge spoils
189	7/11/08	Lisa Shaddox	50381039	1320'N	<10	dredge spoils
190	7/11/08	Lisa Shaddox	50381040	1320'N	<10	dredge spoils
191	7/11/08	Lisa Shaddox	50381042	1100'N	<10	dredge spoils
192	7/11/08	Lisa Shaddox	50381045	880'N	<10	dredge spoils
193	7/11/08	Lisa Shaddox	50381048	660'N	<10	dredge spoils
194	7/11/08	Lisa Shaddox	50381051	440'N	<10	dredge spoils
195	7/11/08	Lisa Shaddox	50381052	440'N	<10	dredge spoils
196	7/11/08	Lisa Shaddox	50381053	220'N	<10	dredge spoils
197	7/11/08	Lisa Shaddox	50381054	none	<10	dredge spoils
198	7/11/08	Lisa Shaddox	50381055	none	<10	dredge spoils
199	7/11/08	Lisa Shaddox	50381064	660'S	<10	clay at surface

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
200	7/11/08	Lisa Shaddox	50391054	2200'S	none	in marsh
201	7/11/08	Lisa Shaddox	50401052	440'S	none	in marsh
202	7/11/08	Lisa Shaddox	50371059	880'S	none	in water
203	7/11/08	Lisa Shaddox	50351047	220'S	none	in marsh
204	7/11/08	Lisa Shaddox	50371046	1320' west	none	in water
205	7/11/08	Lisa Shaddox	50331022	220'S	none	in marsh
206	7/11/08	Lisa Shaddox	50331037	660'S	none	in marsh
207	7/11/08	Lisa Shaddox	50271007	440'N	none	in marsh
208	7/12/08	Lisa Shaddox	50351122	none	none	in marsh
209	7/12/08	Lisa Shaddox	50391149	220'N	none	in marsh
210	7/12/08	Lisa Shaddox	50401148	none	none	in marsh
211	7/12/08	Lisa Shaddox	50411142	none	none	in marsh
212	7/12/08	Lisa Shaddox	50411144	220'N	none	in marsh
213	7/12/08	Lisa Shaddox	50411146	none	none	in marsh
214	7/12/08	Lisa Shaddox	50441108	220'N	20	dredge spoils; oyster shell over clay
215	7/12/08	Lisa Shaddox	50441112	220'S	none	in marsh
216	7/12/08	Lisa Shaddox	50441109	none	none	in marsh
217	7/12/08	Lisa Shaddox	50421102	1100'N	30	dredge spoils
218	7/12/08	Lisa Shaddox	50421106	220'N	none	in marsh
219	7/12/08	Lisa Shaddox	50431100	440'N	none	in marsh
220	7/12/08	Lisa Shaddox	50441107	440'N	none	in marsh
221	7/12/08	Lisa Shaddox	50441106	440'N	none	in marsh
222	7/12/08	Lisa Shaddox	50441105	660'N	none	in marsh
223	7/12/08	Lisa Shaddox	50441104	660'N	none	in marsh
224	7/12/08	Lisa Shaddox	50441103	660'N	none	in marsh

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
225	7/12/08	Lisa Shaddox	50441102	660'N	none	in marsh
226	7/12/08	Lisa Shaddox	50431107	440'N	none	in marsh
227	7/12/08	Lisa Shaddox	50441097	1100'S	none	in marsh
228	7/12/08	Lisa Shaddox	50421107	220'N	none	in marsh
229	7/12/08	Lisa Shaddox	50171104	660'S	<10	disturbed pasture; black gumbo clay
230	7/15/08	Matt Carter	50281186	1320'E	40	cleared field; Houston black clay
231	7/15/08	Matt Carter	50261172	1320'E	20	disturbed pasture; clay
232	7/15/08	Matt Carter	50221145	1100'N	<10	mottled clay; lowland area
233	7/15/08	Matt Carter	50221146	880'N	<10	mottled clay; lowland area; frequent flooding
234	7/15/08	Matt Carter	50221147	660'N	<10	mottled clay; lowland area; frequent flooding
235	7/15/08	Matt Carter	50221143	1320'E/880'N	<10	mottled clay; lowland area; frequent flooding
236	7/15/08	Matt Carter	50231151	660'S	30	Houston black clay
237	7/15/08	Matt Carter	50231145	1320'E	70	compact silt / silty clay @ 65 cm
238	7/15/08	Matt Carter	50231146	1320'E	<10	mottled clay; in small depression with drying cracks
239	7/15/08	Matt Carter	50231147	1320'E	30	Houston black clay
240	7/15/08	Matt Carter	50231148	1320'E	30	Houston black clay with mottling
241	7/15/08	Matt Carter	50231144	1320'E	30	clay loam / clay @ 30 cm
242	7/15/08	Matt Carter	50241143	none	<10	mottled/disturbed clay loam; cistern nearby
243	7/15/08	Matt Carter	50241144	none	<10	mottled/disturbed clay loam; frequently used pasture
244	7/15/08	Matt Carter	50241145	none	<10	mottled/disturbed clay loam; frequently used pasture
245	7/15/08	Matt Carter	50261180	none	30	Houston black clay; mottling @ 30 cm
246	7/15/08	Matt Carter	50261181	none	30	Houston black clay; mottling @ 30 cm
247	7/15/08	Matt Carter	50261182	none	30	Houston black clay; mottling @ 30 cm
248	7/16/08	Matt Carter	50151089	1320'S	30	disturbed pasture; clay
249	7/16/08	Matt Carter	50151087	1100'S	30	disturbed pasture; clay

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
250	7/16/08	Matt Carter	50151085	220'S	30	disturbed pasture; clay
251	7/16/08	Matt Carter	50141079	1320'E/1100'S	35	silty clay loam / clay @ 35 cm
252	7/16/08	Matt Carter	50141084	1320'E/1540'S	20	disturbed mottled clay at surface
253	7/16/08	Matt Carter	50141085	660'S	20	disturbed cleared area with clay
254	7/16/08	Matt Carter	50141081	1320'E	35	mottled silty clay loam in cleared area
255	7/16/08	Matt Carter	50141083	1320'E/440'S	30	mottled silty clay loam in cleared area
256	7/16/08	Matt Carter	50151083	none	60	compact silty loam / silty clay @ 60 cm
257	7/16/08	Matt Carter	50151082	none	20	bottomland clay
258	7/16/08	Matt Carter	50141072	440'N	30	mottled silty loam; adjacent to old vehicle path
259	7/16/08	Matt Carter	50191123	2640'W/220'S	<10	disturbed cleared pasture; clay at surface
260	7/16/08	Matt Carter	50181117	220'N	<10	disturbed cleared pasture; clay at surface
261	7/16/08	Matt Carter	50191122	1320'W/880'N	<10	disturbed cleared pasture; clay at surface
262	7/16/08	Matt Carter	50191121	1320'W/880'N	<10	disturbed cleared pasture; clay at surface
263	7/16/08	Matt Carter	50171109	none	<10	disturbed cleared pasture; clay at surface
264	7/16/08	Lisa Shaddox	50151090	1540'S	<10	disturbed; mechanically cleared
265	7/16/08	Lisa Shaddox	50151088	1320'S	<10	mottled black gumbo clay
266	7/16/08	Lisa Shaddox	50151086	660'S	<10	compact black gumbo clay
267	7/16/08	Lisa Shaddox	50151084	220'S	<10	clay near surface
268	7/16/08	Lisa Shaddox	50141078	1320'E/1100'S	15	compact black gumbo clay
269	7/16/08	Lisa Shaddox	50151091	440'S	<10	disturbed pasture; clay
270	7/16/08	Lisa Shaddox	50141080	1320'E/220'N	20	clay loam / clay @ 20 cm
271	7/16/08	Lisa Shaddox	50141082	1320'E/220'S	20	clay loam / clay @ 20 cm
272	7/16/08	Lisa Shaddox	50151079	220'N	30	clay loam / clay @ 30 cm
273	7/16/08	Lisa Shaddox	50151080	none	20	compact black gumbo clay
274	7/16/08	Lisa Shaddox	50151081	none	none	in low wet area

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
275	7/16/08	Lisa Shaddox	50131072	880'S	15	clay loam / clay @ 15 cm
276	7/16/08	Lisa Shaddox	50191115	440'S	<10	disturbed pasture; compact clay
277	7/16/08	Lisa Shaddox	50191116	1320'S	<10	disturbed pasture; compact clay
278	7/16/08	Lisa Shaddox	50191119	2420'S	<10	disturbed pasture; compact clay
279	7/16/08	Lisa Shaddox	50191120	2640'S	<10	disturbed pasture; compact clay
280	7/16/08	Lisa Shaddox	50201121	1760'S	<10	disturbed pasture; compact clay
281	7/16/08	Lisa Shaddox	50191124	2640'W/1760'S	<10	disturbed pasture; compact clay
282	7/16/08	Lisa Shaddox	50191125	2640'W/1980'S	<10	disturbed pasture; compact clay
283	7/17/08	Matt Carter	50111031	none	<10	disturbed pasture; silty clay loam
284	7/17/08	Matt Carter	50111032	none	<10	disturbed pasture; silty clay loam
285	7/17/08	Matt Carter	50111033	none	<10	disturbed pasture; silty clay loam
286	7/17/08	Matt Carter	50111034	none	<10	disturbed pasture; silty clay loam
287	7/17/08	Matt Carter	50111035	none	<10	disturbed pasture; clay loam
288	7/17/08	Lisa Shaddox	50081024	880'N	30	disturbed; plowed field; clay loam / clay
289	7/17/08	Lisa Shaddox	50081025	660'N	30	disturbed; plowed field; silty clay loam / clay
290	7/17/08	Lisa Shaddox	50081026	220'N	30	disturbed; plowed field; silty clay loam / clay
291	7/17/08	Lisa Shaddox	50081022	440'S	40	disturbed; plowed field; clay loam / clay
292	7/17/08	Lisa Shaddox	50081021	660'S	20	disturbed; plowed field; silty clay loam / clay
293	7/17/08	Lisa Shaddox	50081019	660'S	<10	disturbed; plowed field; silty clay loam / clay
294	7/17/08	Lisa Shaddox	50081018	660'S	20	disturbed; plowed field; silty clay loam / clay
295	7/17/08	Lisa Shaddox	50091018	440'N	20	disturbed; plowed field; silty clay loam / clay
296	7/17/08	Lisa Shaddox	50091017	220'N	55	clay loam / compact clay
297	7/17/08	Lisa Shaddox	50081008	1320'E	30	disturbed; plowed field; silty clay loam / clay
298	7/17/08	Lisa Shaddox	50081009	1320'E	30	disturbed; plowed field; clay loam / clay
299	7/17/08	Lisa Shaddox	50081010	1320'E	20	disturbed; plowed field; clay loam / clay

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
300	7/17/08	Lisa Shaddox	50081017	440'S	30	disturbed; plowed field; silty clay loam / clay
301	7/17/08	Lisa Shaddox	50081020	660'S	15	disturbed; plowed field; very compact clay loam
302	7/17/08	Lisa Shaddox	50091025	1320'S	none	disturbed; roadway area
303	7/17/08	Lisa Shaddox	50091026	1320'S	none	disturbed; cleared field; small drainage
304	7/17/08	Lisa Shaddox	50111038	660'N	10	very compact clay in cleared pasture
305	7/17/08	Lisa Shaddox	50101031	440'S	20	mottled silty clay loam; low wet area
306	7/17/08	Lisa Shaddox	50111036	440'S	<10	disturbed pasture; compact clay loam
307	7/17/08	Lisa Shaddox	50111037	880'S	<10	disturbed pasture; compact clay loam
308	7/17/08	Lisa Shaddox	50071005	1320'E/1320'S	<10	disturbed; mechanically cleared; clay
309	7/17/08	Lisa Shaddox	50071006	1320'E/1540'S	30	disturbed; mechanically cleared; clay loam
310	7/17/08	Lisa Shaddox	50091013	440'N	<10	disturbed; mechanically cleared; clay loam
311	7/17/08	Lisa Shaddox	50151092	440'N	60	0-30 disturbed & mottled; 30-60 silty clay; 60 silty clay with
312	7/17/08	Phil Bishop	50231149	1320'E/880'S	15	clay; bottomland
313	7/17/08	Phil Bishop	50201128	2200' south	20	clay; bottomland
314	7/17/08	Phil Bishop	50201127	2420'S	20	clay; bottomland
315	7/17/08	Phil Bishop	50201129	2860'S	35	mottled clay loam / clay
316	7/17/08	Phil Bishop	50201126	2200'S	30	mottled clay loam / clay
317	7/17/08	Phil Bishop	50201125	1980'S	35	mottled clay loam / clay
318	7/17/08	Phil Bishop	50201124	1760'S	10	clay at surface
319	7/17/08	Phil Bishop	50201123	1760'S	10	clay at surface
320	7/17/08	Phil Bishop	50221132	1320'W/440'S	20	plowed fenceline; clay loam
321	7/17/08	Phil Bishop	50221133	1320'W/660'S	20	clay
322	7/17/08	Phil Bishop	50221134	1320'W/880'S	10	road bed edge
323	7/17/08	Phil Bishop	50221129	none	10	bare bottomland; clay loam
324	7/17/08	Phil Bishop	50221130	440'S	10	bare bottomland; clay loam

Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
325	7/17/08	Phil Bishop	50221131	660'S	20	0-15 sandy clay loam; clay at 15 cm
326	7/17/08	Phil Bishop	50211131	1660' south	20	0-15 sandy clay loam; clay at 15 cm
327	7/17/08	Phil Bishop	50211130	880'S	20	0-15 sandy clay loam; clay at 15 cm
328	7/17/08	Phil Bishop	50221128	none	5	disturbed roadside
329	7/17/08	Phil Bishop	50211126	none	15	sandy clay; clay at 15 cm
330	7/17/08	Phil Bishop	50211127	440'S	15	sandy clay loam; clay at 15 cm
331	7/17/08	Phil Bishop	50231142	1320'W/1540'S	45	sandy clay loam; clay at 40 cm
332	7/17/08	Phil Bishop	50231143	1320'W/1540'S	45	sandy clay loam; clay at 40 cm
333	7/18/08	Lisa Shaddox	50321067	440'N	none	in marsh
334	7/18/08	Lisa Shaddox	50371065	1320'W/1760'N	none	in marsh; already drilled
335	7/18/08	Lisa Shaddox	50381072	1320'N	none	in dried isolated marsh pond
336	7/18/08	Lisa Shaddox	50301045	220'N	none	in marsh
337	7/18/08	Lisa Shaddox	50281034	none	none	in water
338	7/18/08	Lisa Shaddox	50421066	1100'S	<10	in hydric soil
339	7/18/08	Lisa Shaddox	50411081	660'N	none	in marsh
340	7/18/08	Lisa Shaddox	50401083	1320'E/660'N	none	in marsh
341	7/18/08	Lisa Shaddox	50411096	1320'E/1980'S	none	in marsh
342	7/18/08	Lisa Shaddox	50411102	660'N	30	dredge spoil
343	7/18/08	Lisa Shaddox	50411103	440'N	none	in marsh
344	7/18/08	Lisa Shaddox	50421098	660'S	none	in marsh
345	7/18/08	Lisa Shaddox	50421099	880'S	none	in marsh
346	7/18/08	Lisa Shaddox	50421100	1100'S	none	in marsh
347	7/18/08	Lisa Shaddox	50391107	440'S	none	in marsh
348	7/18/08	Lisa Shaddox	50381091	880'N	none	in marsh; already drilled
349	7/18/08	Lisa Shaddox	50421122	2640'S	none	dredge spoil



Number	Date	Recorder	Source Point	Offset Distance and Direction	Depth (cm)	Comments and Reason for Termination of Shovel Test
350	7/18/08	Lisa Shaddox	50371060	660'S	none	in marsh
351	7/18/08	Lisa Shaddox	50361051	660'S	none	in marsh
352	7/18/08	Phil Bishop	50271190	none	30	disturbed pasture; dense clay @ 20-30 cm
353	7/18/08	Phil Bishop	50221144	660'N	30	disturbed; red sandy clay @ 20-30 cm
354	7/18/08	Phil Bishop	50211135	880'N	45	pasture; silty clay hardpan 30-45 cm
355	7/18/08	Phil Bishop	50211136	660'N	47	mowed yard; silty loam; hardpan 30-45 cm
356	7/18/08	Phil Bishop	50221140	440'S	40	sandy silty loam; hardpan sandy silt
357	7/18/08	Phil Bishop	50221135	220'S	60	0-40 sandy silty loam; 40-60 hardpan sandy silt (mottled)
358	7/18/08	Phil Bishop	50221136	440'S	60	0-40 sandy silty loam; 40-60 hardpan sandy silt (mottled)
359	7/18/08	Phil Bishop	50221137	880'S	55	0-40 sandy silty loam; 40-60 hardpan sandy silt (mottled)
360	7/18/08	Phil Bishop	50181017	220'S	none	off paved drive

## APPENDIX III

### HISTORIC GRAVE

On Friday, July 18, 2008, the Project Manager of the Perry Ranch 3-D Seismic project reported to DESCO archaeologists that a grave marker had been found near source point 50181017 which had recently been drilled. The area is located in a cattle pasture and had recently been mowed prior to its discovery by one of the seismic project workers who then notified the Project Manager. Drilling activity in the area occurred before the grasses were mowed, and visibility was minimal. The drilling activity occurred outside of a designated High Probability Area and, therefore, was not investigated by an archaeologist prior to the drilling. Archaeologist Phil Bishop visited the site of the grave. His findings are presented below.

The site consists of an isolated grave marker and head stone located in a frequently mowed pasture in Brazoria County, Texas (Figure 1). The head stone of the grave marker has been displaced by agricultural activity, and it is unclear whether the feature is *in situ*.

#### Grave Stone Inscription

ALCINDA BLUITT  
809 1929  
AT REST

This cultural feature/site consists of an isolated grave marker and a head stone formed from a masonry block of caliche or dense sandstone. The structural material was not acid tested or emulsified by the observer. The head stone is a block of stone approximately 4 x 12 x 18 inches. A veneer of mortar and shell had been applied, and the inscription was then stamped into the wet coating. The grave marker base is slightly larger, and its thickness is unknown. The head stone lies ten meters north of the fence line and ten meters east of the source point. The base of the grave marker lies eight meters northwest of the fence line and is aligned parallel and perpendicular to the old fence line. The fence line is aligned roughly southwest to northeast, and both stone features are north of the fence line in a freshly mowed pasture. The head stone has been plow scarred (or nicked by the mower) and moved to the west two meters toward the drilled source point. Tailings of drill activity were observed, and all were found to be negative for bone or wood fragments. A field sketch map was made, and photographs were taken of the gravesite and immediate area.



Figure 1. Headstone of Alcinda Bluit

The surrounding area was investigated through pedestrian survey techniques which consisted of 5-10 meter transects along an adjacent fence line for more than 50 meters along an axis radiating from the site locus. Surface visibility consisted of mown pasture grass at the time of discovery. A new source point location was established and tested 220 feet south of the previous location. The source point stake was moved the next day. Drill access will be buffered in order to avoid any further disturbance in the vicinity. The old drill site containing a charge of 5 pounds of *pentolite* will be abandoned at 100 feet below the surface of the cattle pasture. The new source point location will be detonated 220 feet south of the area beyond the buffer.

#### Landowner Interview:

Mr. Brown (owner of the area at the time) said he had seen the grave, but he seemed disinterested. He claims it was "either dumped (there)," or it was a slave grave. He had seen no other markers. He said the nearest Cemetery was on the other side of the slough to the south, southeast. The early owners were French settlers and slave owners. The land was the Cox Ranch, and it is now the Poole Ranch.

