

***AN ARCHAEOLOGICAL SURVEY
FOR THE EASTHAM STATE PRISON FARM
5-1 WELL LOCATION AND CLAY POND
IN HOUSTON COUNTY TEXAS***

Antiquities Permit 4870



By

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***Brazos Valley Research Associates
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BVRA Project Number 08-14

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ABSTRACT

An archaeological survey of a proposed natural gas well site (2.81 acres) and clay pond (3.67 acres) on the Eastham State Prison Farm Unit of the Texas Department of Criminal Justice in southwest Houston County, Texas was performed by Brazos Valley Research Associates (BVRA) on March 28, 2008 under antiquities permit 4870. The two areas were investigated through a 100% Pedestrian Survey, shovel testing, and backhoe trenching. The 5-1 well site is located on a slightly elevated area containing sandy soil 750 meters south of Negro Creek. No surface evidence of a prehistoric or historic site was observed during the Pedestrian Survey; therefore, nine shovel tests and one backhoe trench were excavated. The tests were dug through fine sandy loam, and no cultural materials were observed. The proposed clay pond is located on a flat area less than 100 meters south of Negro Creek in heavy clay soil. One backhoe trench was excavated, and no cultural materials were observed. No archaeological sites were found at either site, and no artifacts were collected. In all, 6.48 acres were evaluated. Copies of this report are on file at the Texas Historical Commission, Archeology Division, the Texas Archeological Research Laboratory, and BVRA.

ACKNOWLEDGMENTS

I am grateful to those who made the successful completion of this project possible. Dan Elbert of Cordillera Texas LP was my initial contact. He provided names and phone numbers of other persons involved with this project and project area maps and allowed us the use of a backhoe and operator. Craig Clute, Construction Foreman for Cordillera Texas LP, was present during the investigation and was very helpful. Prison personnel who provided assistance were Warden David Sweedin and Mack Currie. The field survey was performed under the supervision of the Principal Investigator who was assisted by James E. Warren, Colton Warren, and Art Romine. The records check for previously recorded sites in the project area and vicinity was carried out by Jean Hughes, Records Conservator at the Texas Archeological Research Laboratory (TARL). The cover and figures in this report were prepared Lili Lyddon. Nora Rogers edited the report.

CONTENTS

ABSTRACT	ii
ACKNOWLEDGMENTS.....	iii
INTRODUCTION.....	1
ENVIRONMENTAL SETTING.....	4
ARCHAEOLOGICAL BACKGROUND.....	7
METHODS OF INVESTIGATION.....	9
RESULTS AND CONCLUSIONS	13
RECOMMENDATIONS.....	14
REFERENCES CITED	15
Appendix I: Shovel Test Log	
Appendix II: Backhoe Trench Profiles	

FIGURES

Figure 1. General Location	2
Figure 2. Project Area.....	3
Figure 3. Project Area Soils.....	5
Figure 4. General View of Area at 5-1 Well Site	6
Figure 5. Shovel Test 1 at Drill Hole	10
Figure 6. Location of Shovel Tests.....	11
Figure 7. Backhoe Trench 2 at Proposed Clay Pond Site.....	12

INTRODUCTION

Cordillera Texas LP of Longview, Texas plans to construct an oil and gas well and a clay pond on property owned by the Texas Department of Criminal Justice in southwest Houston County, Texas (Figure 1). The footprint of the well site is 2.81 acres (350 feet x 350 feet). Construction plans call for a well in the center of the pad that will be constructed above ground. Except for the drill hole, the only subsurface disturbance will be some minimal scraping at the apex of the landform to level the site for construction of the pad. An existing access road will be used with no subsurface modifications planned. This site is approximately 750 meters from the nearest water source (Negro Creek) and is in the same general area as two well pads that were investigated by BVRA earlier this year (Moore 2008). The clay pond will be used as a containment area for soil removed from the A-1, 5-1, and 7-1 well sites. The footprint of this pond will be 3.67 acres (400 feet x 400 feet), and it will be excavated across the road from the A-1 well investigated by BVRA earlier this year (Figure 2). The setting for the 5-1 well site was viewed by BVRA as a medium to high probability area for the presence of a significant prehistoric site because of the presence of sandy soil on an elevated landform adjacent to a tributary of Negro Creek. It is the policy of the Eastham State Farm to evaluate all areas of proposed construction for their potential for significant archaeological sites, and Cordillera Texas LP retained BVRA to perform this service. The proposed 5-1 well and clay pond site are depicted on the USGS 7.5' topographic quadrangles Baker Lake (3095-343) and Sand Ridge (3195-212) (Figure 2). The original cellblock and prison facility is still standing, and it is the subject of the photograph on the cover of this report.

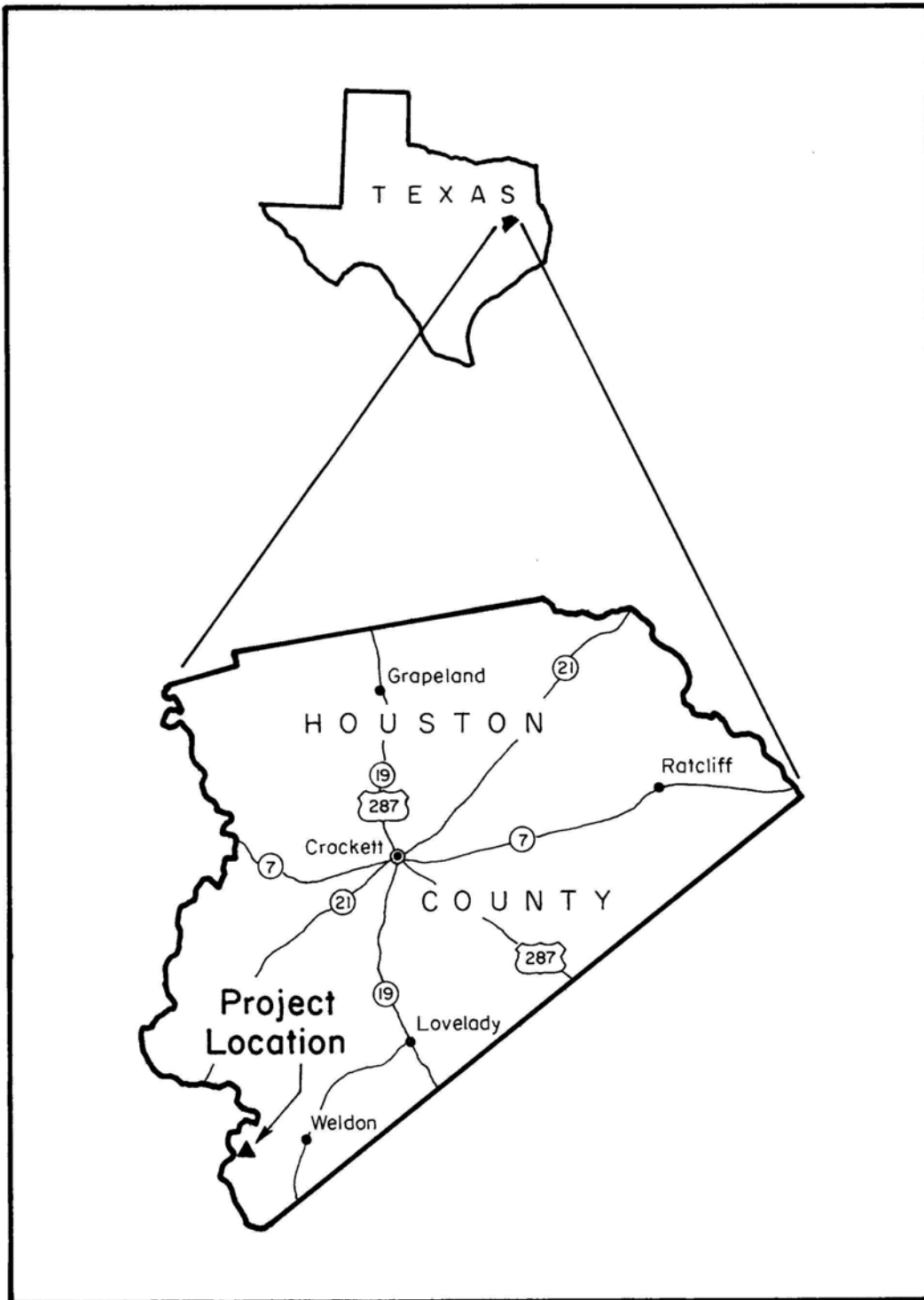


Figure 1. General Location

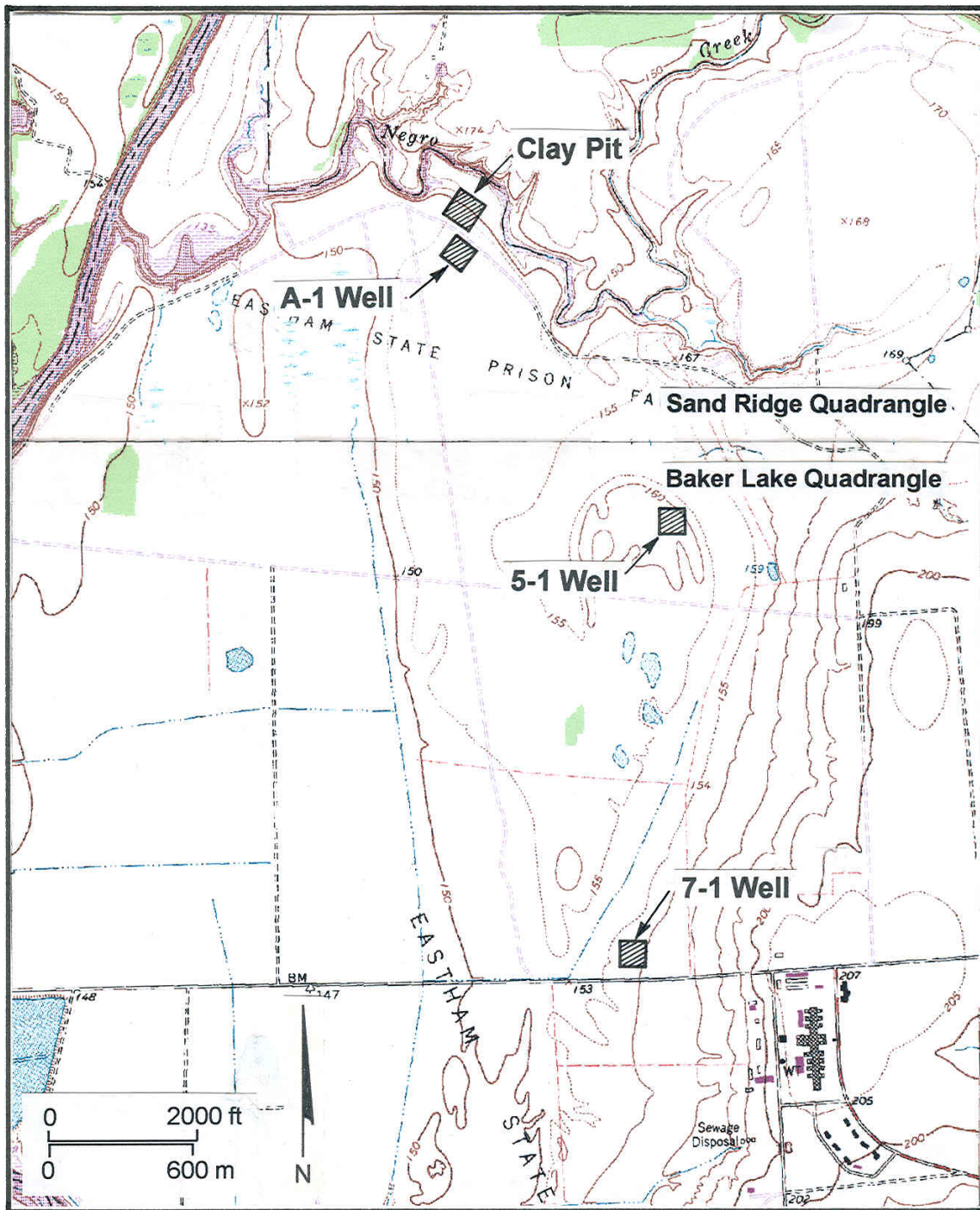


Figure 2. Project Area

ENVIRONMENTAL SETTING

The project area is located within the West Gulf Coastal Plain section of the Coastal Plain physiographic province as defined by Fenneman (1938:100-120). Fenneman subdivides this province according to the age of the geological formations (Gulf series) that roughly parallel the Texas coastline. The area is hilly and situated within the East Texas timber belt. Gould (1969) describes it as an area characterized by gently rolling to hilly topography with light colored soils that are acid sandy loams or sands. The climate is subhumid to humid, and the weather is considered to be predominately warm. Annual rainfall for Brazos County is 39.21 inches. A January minimum temperature of 42 degrees Fahrenheit and a July maximum temperature of 95 degrees Fahrenheit combine to produce a growing season of 274 days (Kingston and Harris 1983:180). The altitude varies from 200-400 feet.

The soil survey for Houston County was consulted prior to conducting the field survey. According to this document (Steptoe 2002:Sheet 65), the 5-1 well site is located within two soil types. They are Fuller fine sandy loam, 0 to 1 percent slopes (FuA) and Hainesville fine sand, 0 to 2 percent slopes (HaA). FuA soils are found on toeslopes and footslopes of uplands, while HaA soils are found on toeslopes of stream terraces. FuA soils contain sandy and loamy soils to a depth of 36 inches where a clay loam is encountered. At 44 inches, sandstone occurs. HaA soils contain fine sand to 70 inches where the sand is mixed with iron accumulations.

The proposed clay pond well site is located within soils defined by Steptoe (2002:Sheet 65) as the Freestone-Derly complex, 0 to 2 percent slopes. These soils are found on stream terraces and are nearly level to gently sloping. In a typical profile, Freestone soils consist of sandy loam from the surface to a depth of 21 inches where they change to a clay loam. In a typical profile, Derly soils consist of sandy loam from the surface to a depth of 12 inches where it changes to clay loam. At 23 inches, gray clay is present. The water table for the Freestone soils is perched at 2 feet to 3.5 feet from December through May, and the water table for the Derly soils is perched at +. 5 foot to 1 foot from October through May. Permeability in the Freestone soils is slow, and it is very slow in the Derly soils. Figure 2 depicts the soils in the project area.

At the time of this survey the project area was devoid of all natural vegetation. The ground cover along the pipeline consisted of pasture planted in Coastal Bermuda. Figure 3 is a general view of the project area at the site of the 5-1 well site.

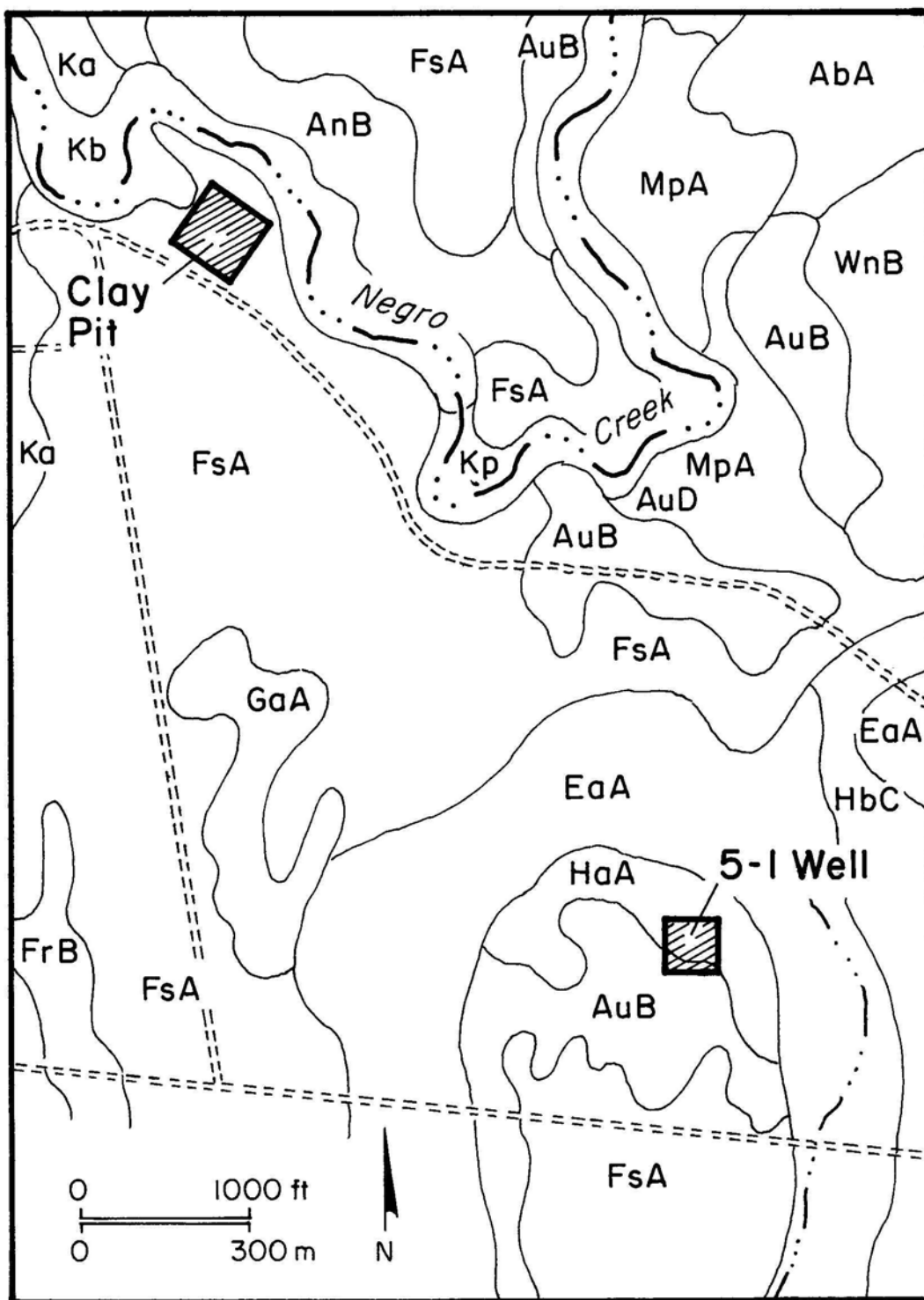


Figure 3. Project Area Soils



Figure 4. General View of Area at 5-1 Well Site

ARCHAEOLOGICAL BACKGROUND

According to a published planning document for the Eastern Planning Region of Texas (Kenmotsu and Perttula 1993:Figure 1.1.2), Houston County is situated within the Southeast Texas archeological study region. In 1985, according to a statistical overview published by the Texas Historical Commission (Biesart et al. 1985:114), there were nine documented prehistoric sites in the county. The archaeological potential of Houston County is reflected in part by the increasing number of recorded sites found as a result of numerous cultural resource management studies. As a result of these investigations, the number of recorded sites now stands at over 260 (TARL site files). Small and large area surveys have been conducted in Houston County, and the majority of these did not locate archaeological sites. According to the TARL site records, 87 archaeological surveys and related projects have been carried out in Houston County, and only 24 discuss archaeological sites or resulted in the identification of previously unrecorded sites. Most of the areas investigated in the county were associated with oil and gas projects (n=60), and the majority of these studies were performed by James E. Corbin. Other projects include two field schools sponsored by the University of Texas at Austin in 1977 and 1982, water distribution lines, transmission lines, a fiber optic cable project, the proposed Bédias Reservoir, the Tennessee Colony Reservoir, a city park, inventories and survey of the Davy Crockett National Forest and Mission Tejas State Park. These studies date to the 1970s (n=5), 1980s (n=36), 1990s (n=39), and 2000s (n=3). Most of the early recorded sites were documented by landowners and amateur archaeologists, and some of these are potentially significant such as 41HO1 which was recorded by Edward B. Jelks in 1954 as a site containing glass beads, lead bullets, gun parts, arrow points, and sherds. A second interesting site is 41HO6. It was documented by Alex D. Krieger in 1944 as a location where a small cannon was uncovered in 1940 during plowing of a field by the landowner.

Several investigations have been conducted in Southeast Texas that are relevant to interpreting the archaeology of the project area. In fact, the project area is in the center of a region that has been the recipient of several major reservoir construction projects. Other, smaller projects have been conducted by private archaeological contract firms, state agencies such as the Texas Department of Transportation and the Texas Water Development Board, and amateur archaeologists. Reservoirs in the area that have been examined by archaeologists include Addicks and Barker (Wheat 1953), Lake Livingston (Nunley 1963), Wallisville (Shafer 1966; Ambler 1970), and Lake Creek (Boyd and Button 1985).

Works which have sought to synthesize prehistoric data relevant to the project area include an early contribution by Sayles (1935) and the writings of Hole (1974), Shafer (1975), Shafer and Stearns (1975), Shafer et al. (1975), Patterson (1979, 1983), Ambler (1973), Story (1981), Story et al. (1990), and Aten (1983). The latest work, an expansion of Aten's (1979) doctoral dissertation, is a particularly ambitious and useful attempt to integrate ethno-historical, archaeological, and geo-morphological data for the Upper Texas Coast.

The nearest recorded site to the current project area is 41HO83. This site was recorded by archaeologists from Southern Methodist University in 1976 as a prehistoric site on a high bluff overlooking the Trinity River to the north on the Eastham State Prison Farm. The site form contains very little information, but it does state that the site is on or very near the location that William M. Sorrow (1973) gives for the town of Santisima Trinidad de Salcedo (1806-1813). Artifacts recovered include chips, flakes, bone, burned clay, and a possible hearth that were exposed by a deep erosion cut. The site was determined to be not significant, and no further work was recommended. This research only found one other survey conducted on Eastham State Prison Farm land. This study was carried out by Timothy K. Perttula (1997) in 1997, when he surveyed two pastures and recorded sites 41HO183 – 41HO190. The eight sites recorded consist of seven prehistoric campsites and one historic cemetery containing two graves dating to 1843 and 1852. Six of the prehistoric campsites are located on the first terrace above the Trinity River, and the seventh site is located on a pimple mound. Three of the prehistoric campsites date to the Late Prehistoric period of Texas prehistory based on the presence of ceramics and arrow points. Each of these sites is described on the site form as having potential for being designated as a State Archeological Landmark. No statement regarding their eligibility for listing in the National Register of Historic Places appears on the site forms. Four of the prehistoric campsites lacked diagnostic artifacts and could not be assigned to a temporal period. These sites were considered to be not significant, and no further work was recommended. All of the prehistoric campsites were found in sandy soils and were examined through shovel testing and/or backhoe trenching. This investigation was performed south of the current project area and is depicted on the 7.5' USGS Baker Lake topographic quadrangle. Also on prison property is 41HO5. This site was recorded by Dr. and Mrs. Sam Barnes in 1967 based on information provided by prison guard Lee Runner. Arrow points and pottery were reportedly found in the area. At this site, a flintlock rifle with flint in place was found in a plowed field.

The nearest investigation to the current project area was conducted by BVRA at the location of two proposed well sites in the general area (Moore 2008). Well site A-1 (located approximately 1200 meters to the northwest) and well site 7-1 (located approximately 1500 meters to the south) were investigated by BVRA in February of 2008. These two areas were in clay soil, and a backhoe was used to examine the subsurface. It was determined that the A-1 well site was a very unlikely location for a prehistoric site because of the clay soils and distance to water (2400 meters). The 7-1 well site was much closer to the creek (150 meters), but it was also in a low area containing clay soils. The only evidence of utilization of these areas was some abandoned agricultural equipment at the A-1 well site and pasture that was being used by cattle for grazing. In the past, the prison used the area for agricultural purposes, mainly cotton.

METHODS OF INVESTIGATION

Pre-Field Tasks

Prior to entering the field, the site records at TARL and the Texas Archeological Sites Atlas were checked for the presence of previously recorded archaeological sites in the project area and vicinity. Relevant archaeological reports documenting work in Houston County were reviewed in order to become familiar with the types of prehistoric and historic sites found in the area.

Field Survey

The area was investigated under the supervision of the Principal Investigator with assistance from James E. Warren, Colton Warren, and Art Romine on March 28, 2008. Originally, this project was designed to investigate the site of the proposed 5-1 well site. However, when we arrived in the project area we were told that the client wanted us to investigate a proposed clay pond, which we did. The surface visibility at the 5-1 well site was excellent, as grass cover was sparse and rodent disturbance was extensive. The entire area was examined for displaced cultural materials, but no artifacts were observed. The first step was the excavation of nine shovel tests scattered across the 2.81-acre site. Shovel Test 1 was dug at the drill hole (Figure 5), and the other tests were dug randomly within the areas determined to be the most likely setting for a site (i.e., high ground). Excavated soil was screened using ¼ inch hardware cloth, and notes were taken that were used to create a shovel test log (Appendix I). The tests were terminated at 60 cm without encountering clay. Profiles of the shovel tests were drawn in the field. A backhoe trench was excavated near the drill hole to ascertain the depth of clay. This trench was dug through sandy soil to 1.52 m before being terminated when ground water was reached. The trench was profiled in the field (Appendix II). The approximate location of the nine shovel tests and backhoe trench appear in Figure 6 below. The clay pond will be created in a flat area in clay soil. Backhoe Trench 2 was excavated in the approximate center of this area. The trench was four feet in length and dug through 60 cm of sandy clay and clay to a depth of 130 cm (Figure 7). This area is viewed as a very low probability area for a prehistoric site because of the heavy clay. It should also be stated here that the A-1 well site was excavated earlier this year just to the south of the proposed clay pit with negative results (Figure 2). The project was documented through field notes and digital photography.



Figure 5. Shovel Test 1 at Drill Hole

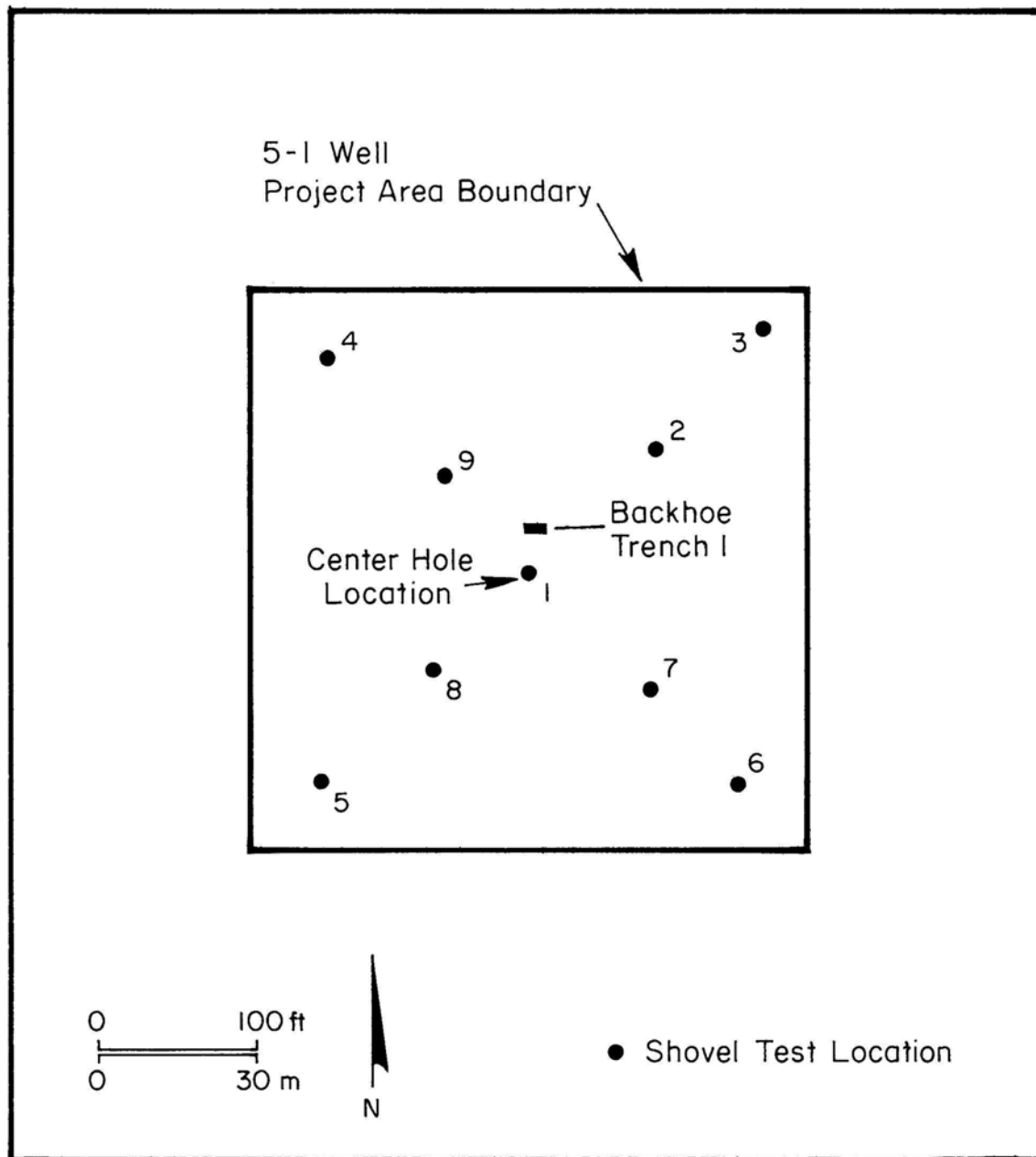


Figure 6. Location of Shovel Tests

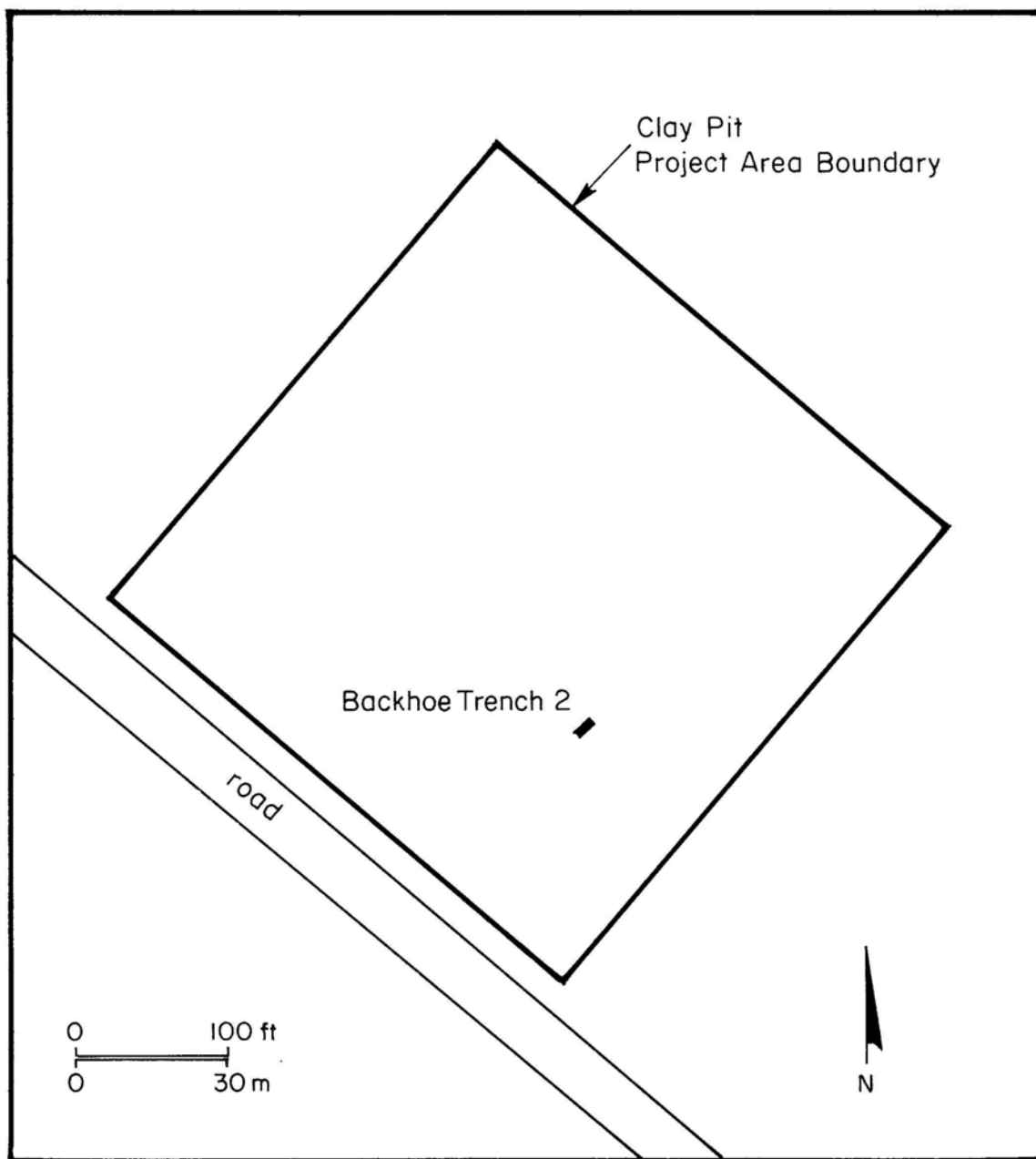


Figure 7. Backhoe Trench 2 at Proposed Clay Pond Site

RESULTS AND CONCLUSIONS

Examination of the files at TARL in Austin, Texas and the Archeological Sites Atlas revealed no sites have been recorded in the project area, and a professional archaeologist had not previously examined the proposed well site or clay pond area. The project area is located on land owned by the Eastham State Prison Farm that was established in 1917. The photograph on the cover is the original cellblock and administration building, but this study was not able to ascertain the exact date of its construction. The prison land was used primarily for agricultural purposes, and the major crops grown were cotton, corn, and milo. Prior to the acquisition of the property by the Texas prison system, the project area was part of the Eastham Plantation (Mack Currie personal communication). A search of the Internet and the *Handbook of Texas* failed to reveal any information regarding this plantation except its cemetery is located somewhere on prison property. A pedestrian survey and subsurface examination through shovel testing revealed deep sand at the 5-1 well site, and a very shall sandy mantle overlying heavy clay at the proposed clay pond. Although the 5-1 well will be constructed on an elevated landform containing sandy soil, it is believed that the reason for an absence of a prehistoric site is the distance to water (750 meters). A small tributary of Negro Creek was observed adjacent to the creek, but it may not have been a dependable source of water in prehistoric times. According to Mack Currie, the discovery of artifacts on prison property is an event that is usually common knowledge, and he has not heard of any such finds in the project area. He also mentioned that there are several sandy hills north of the 5-1 well site that is in close proximity to the creek. This may be a much higher probability area for a prehistoric site. The site of the proposed clay pond is a very low probability for a prehistoric site because of the presence of clay that predates human occupation close to the surface.

RECOMMENDATIONS

No archaeological sites were found as a result of this survey, which was conducted in accordance with the Minimum Survey Standards as outlined by the Texas Historical Commission, Archeology Division. It is recommended that the client be allowed to proceed with construction of the well pad and clay pond as planned. Should evidence of an archaeological site be encountered, all work must stop until the Texas Historical Commission (THC) can evaluate the situation. In the event the footprint of the project area of the well pad or clay pond changes, the THC must be notified, as additional survey may be necessary.

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APPENDIX I
SHOVEL TEST LOG*

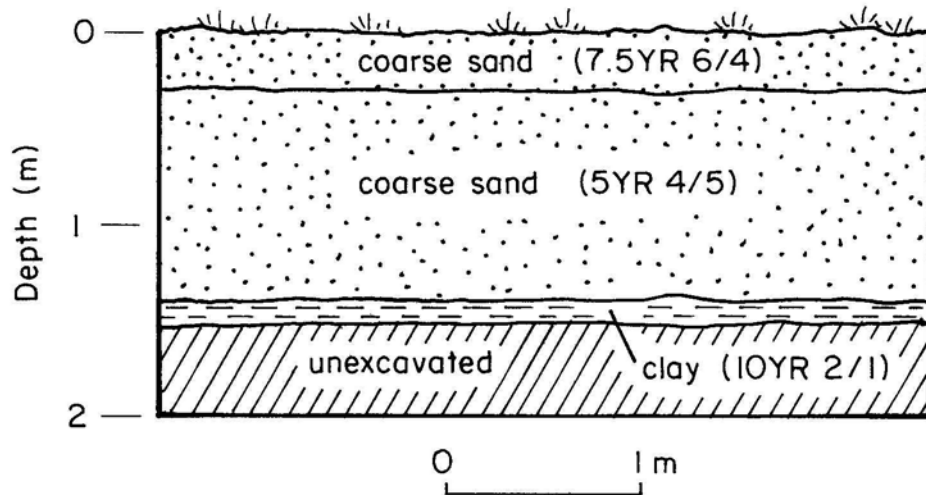
Test	Depth	Discussion
01	90 cm	dug at drill hole at apex of landform
02	60 cm	dug between shovel tests 1 and 3 on slope
03	60 cm	dug near northeast corner stake on low rise near possible tributary of Negro Creek
04	75 cm	dug on high ground northwest of drill hole near northwest corner stake
05	60 cm	dug on slope near southwest corner stake
06	60 cm	dug on slope near southeast corner stake
07	70 cm	dug between shovel tests 1 and 6 on high ground
08	70 cm	dug between shovel tests 1 and 5 on high ground
09	65 cm	dug between shovel tests 1 and 4 on high ground

* all tests were negative

APPENDIX II

BACKHOE TRENCH PROFILES

Backhoe Trench 1



Backhoe Trench 2

