

***AN ARCHAEOLOGICAL SURVEY  
FOR THE EASTHAM STATE PRISON FARM  
A-1 and 7-1 WELL LOCATIONS  
IN HOUSTON COUNTY TEXAS***

***Antiquities Permit 4813***



***By***

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***Brazos Valley Research Associates  
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A-1 and 7-1 WELL LOCATIONS IN HOUSTON COUNTY, TEXAS

BVRA Project Number 08-02

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## **ABSTRACT**

An archaeological survey of two proposed natural gas well sites (2.5 acres each) 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 February 18, 2008 under antiquities permit 4813. The areas were investigated through a 100% Pedestrian Survey and backhoe trenching. The 7-1 well site was very far from a water source and is a very unlikely setting for a prehistoric site. One backhoe trench was dug to two meters through heavy clay, and the results were negative. No surface evidence of a prehistoric or historic site was observed at either well location during the Pedestrian Survey that was hampered because of standing water from recent thunderstorms. At the A-1 well site, five backhoe trenches were dug to depths of 1.5 meters to 2 meters below the ground surface at which point they were terminated when standing water was encountered. Although the project area at the A-1 well site is on an elevated landform above a fairly large creek, no evidence of prehistoric occupation was found. BVRA believes the reason for this is the shallow loamy soils overlying very firm clay. In this area of Texas, prehistoric camps are typically found on sandy hills and terraces. The entire area had been plowed by inmates housed at the prison. Therefore, should any cultural materials be present in the shallow sandy mantle they would have been disturbed by this activity. No archaeological sites were found, and no artifacts were collected. Further work is not warranted.

## **ACKNOWLEDGMENTS**

I am grateful to those who made the successful completion of this project possible. James McNeese 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 Sweetin and Mack Currie. The field survey was performed under the supervision of the Principal Investigator who was assisted by Tanner Singleton. 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.

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## INTRODUCTION

Cordillera Texas LP of Longview, Texas plans to construct two oil and gas well sites on property owned by the Texas Department of Criminal Justice in southwest Houston County, Texas (Figure 1). The size of the well sites is 330 feet x 330 feet (2.5 acres). Construction plans call for a well in the center of the each site and a pad that will be constructed above ground. At the 7-1 well site, a reserve pit will be excavated as a repository for residue from the drill hole. This site is 3560 meters from the nearest water source (Negro Creek). At the A-1 well site, the original plans called for two areas of deep disturbance, a 20-foot reserve pit and cut (4-6 feet) to level the pad surface. Since the reserve pit is so close to the creek and has a shallow water table, the depth has been changed from 20 feet to about eight feet. Since the project area is nearly level the cut will not be necessary. Instead, a bulldozer will be used to remove the high areas, about one foot or less. The A-1 site is located on the high ground (150-foot contour) overlooking Negro Creek 120 meters to the northeast. This setting was viewed as a high probability area for the presence of significant prehistoric sites by the Texas Historical Commission, and a survey by a professional archaeologist was recommended. Cordillera Texas LP retained BVRA to perform this service. The proposed well 7-1 is depicted on the USGS 7.5' topographic quadrangle Baker Lake (3095-343), and the proposed well A-1 is depicted on the USGS 7.5' topographic quadrangle Sand Ridge (3195-212) (Figure 2). The original cell block and prison facility is still standing, and it is the subject of the photograph on the cover of this report.

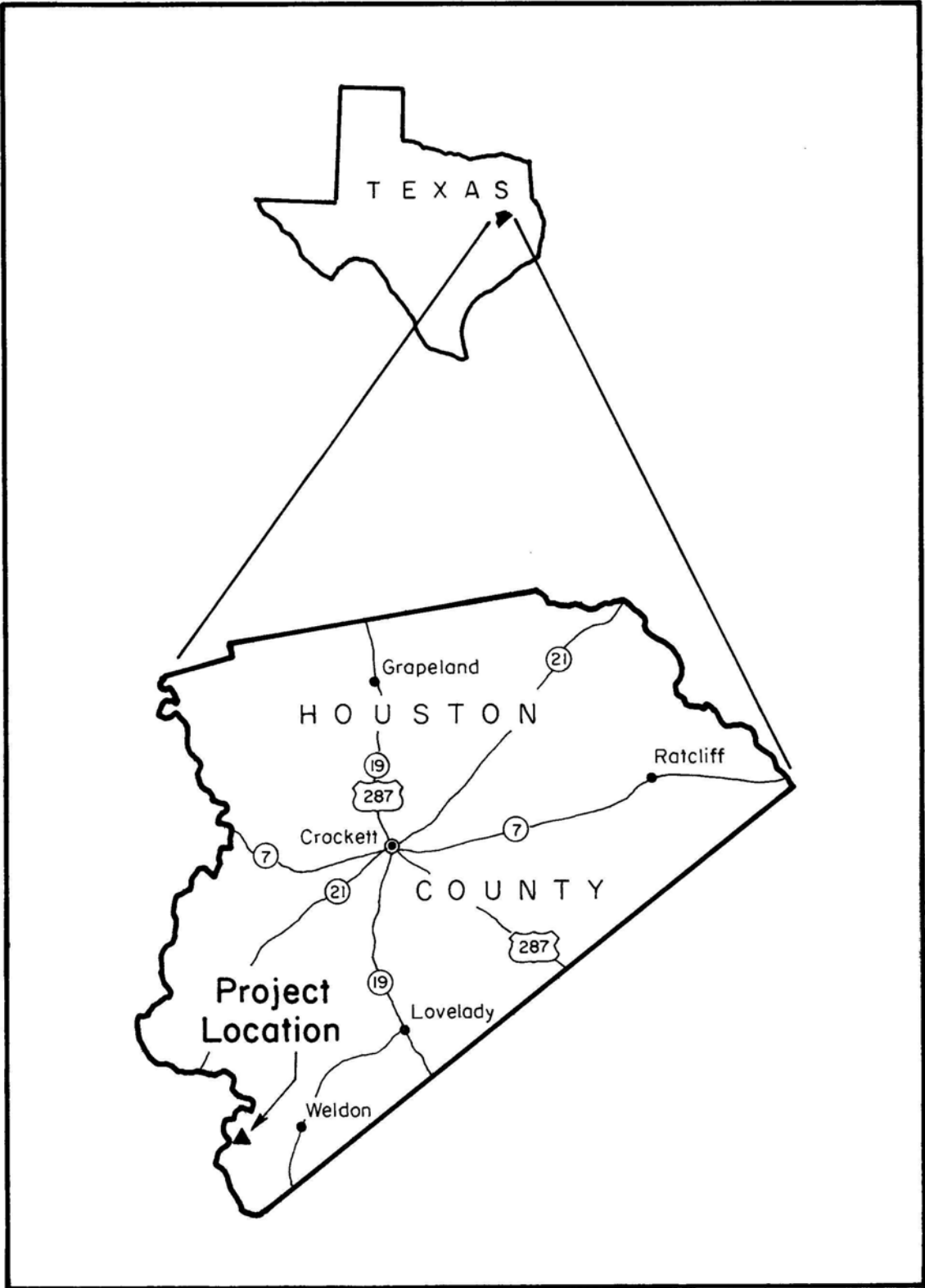


Figure 1. General Location

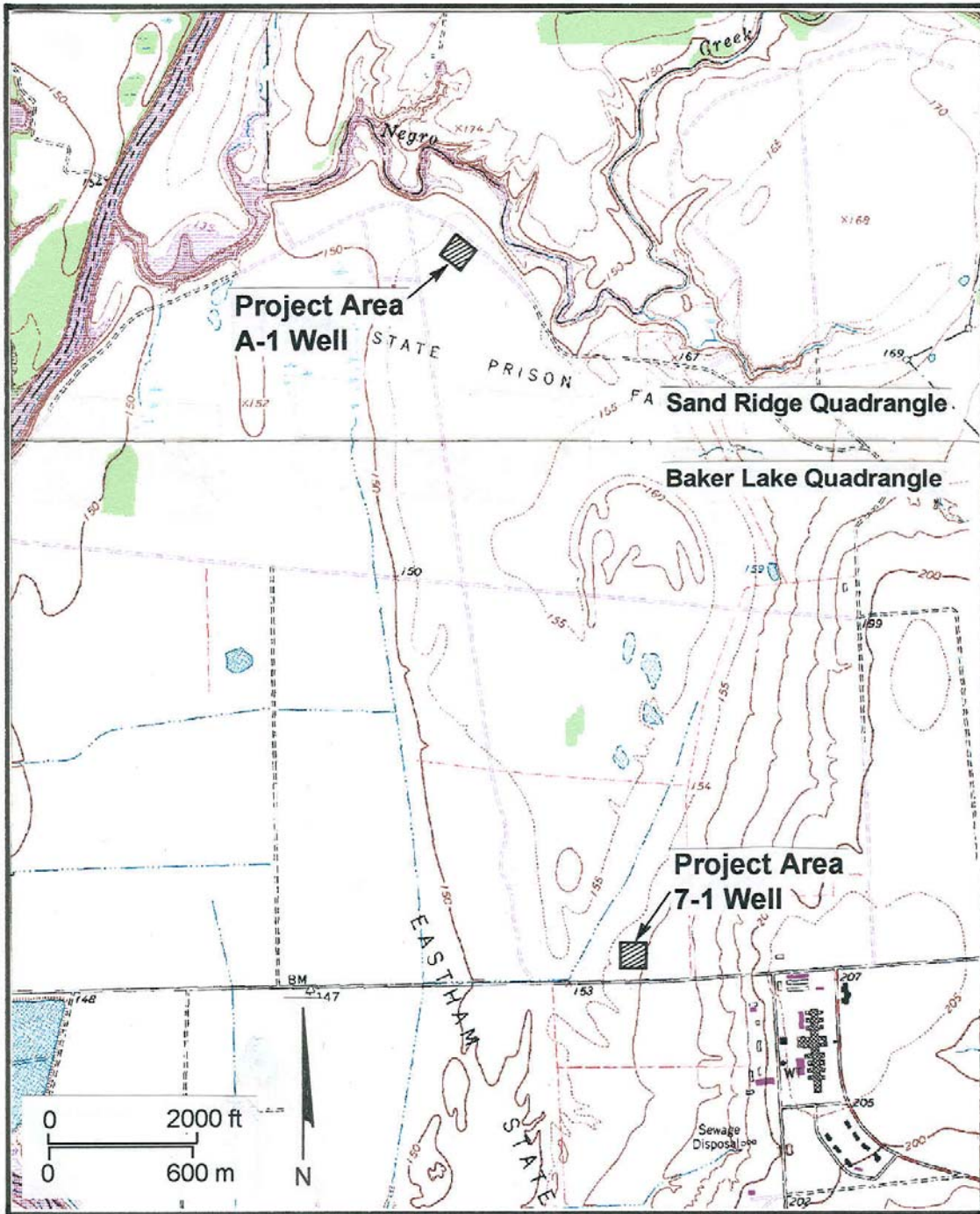


Figure 2. Project Area



## 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.

Both well sites are located within soils defined by Steptoe (2002:57-58) as the Freestone-Derly Complex, 0 to 2 percent slopes (Steptoe 2002:Sheet 65). 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, a 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 October through May. Permeability in the Freestone soils is slow, and it is very slow in the Derly soils. 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, and Figure 4 is a view of the general terrain looking north towards Negro Creek.



Figure 3. General View of Area at A-1 Well Site



Figure 4. View of Project Area (looking north towards Negro Creek)

## 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 Bedias Reservoir, the Tennessee Colony Reservoir, a city park, inventories and survey of the Davy Crocket 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 Santissima Trinidad de Salcedo (1806-1813). Artifacts recovered include chips, flakes, bone, burned clay, and a possible hearth that were exposed by a deep erosional 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 flint-lock rifle with flint in place was found in a plowed field.

## 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 Tanner Singleton on February 18, 2008. The first well site (7-1) was visited after being informed that two wells were part of this project. This site is in a very unlikely setting for a prehistoric site, as it is 2560 meters from the nearest creek and 3200 meters from the Trinity River. An attempt to conduct a 100% Pedestrian Survey was made, but several areas could not be examined due to standing water from recent thunderstorms. One backhoe trench was dug at the center hole to examine the subsurface (Figure 5). This trench encountered heavy black clay with very little sandy soil in the A Horizon. No more work was done at this location since the focus of this study was the A-1 well nearer to the creek. As at the 7-1 well, a thorough pedestrian survey was not possible, and no obvious evidence of historic utilization was observed except for some abandoned agricultural equipment in the pasture outside the project area. Shovel testing was not possible due to the wet condition of the soil. Therefore, the entire area was investigated using a backhoe. Five trenches were excavated across the site with one trench next to the center hole, and the others surrounding it (Figure 6). A shallow sandy mantle of soil between six and ten inches was present above the firm black clay. Samples of this soil were placed in the screen and examined by hand. The walls of each trench were examined for buried features. Each trench was four meters long, 24 inches wide, and between 1.5 and 2 meters deep (Appendix I). The trenches were terminated when the clay became too wet. In some cases, standing water was present at the bottom of some of the trenches. BVRA believes that the water represents a "perched water table" that was created due to the recent thunderstorms. The profiles of each backhoe trench were measured, and cross-section drawings of selected trenches appear in this report as Appendix II. Figure 7 is a picture of Backhoe Trench 2.

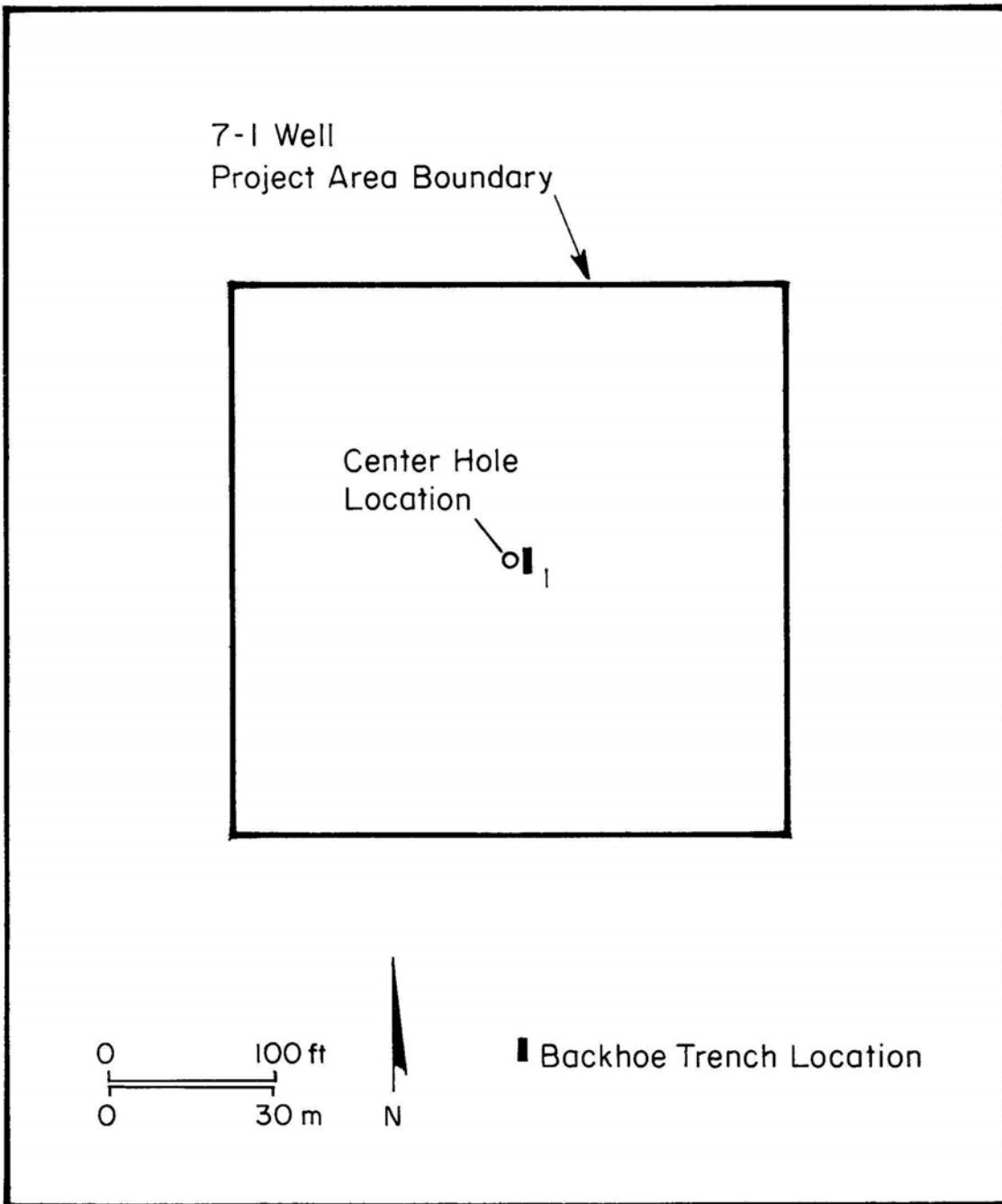


Figure 5. Location of Backhoe Trench at the 7-1 Well

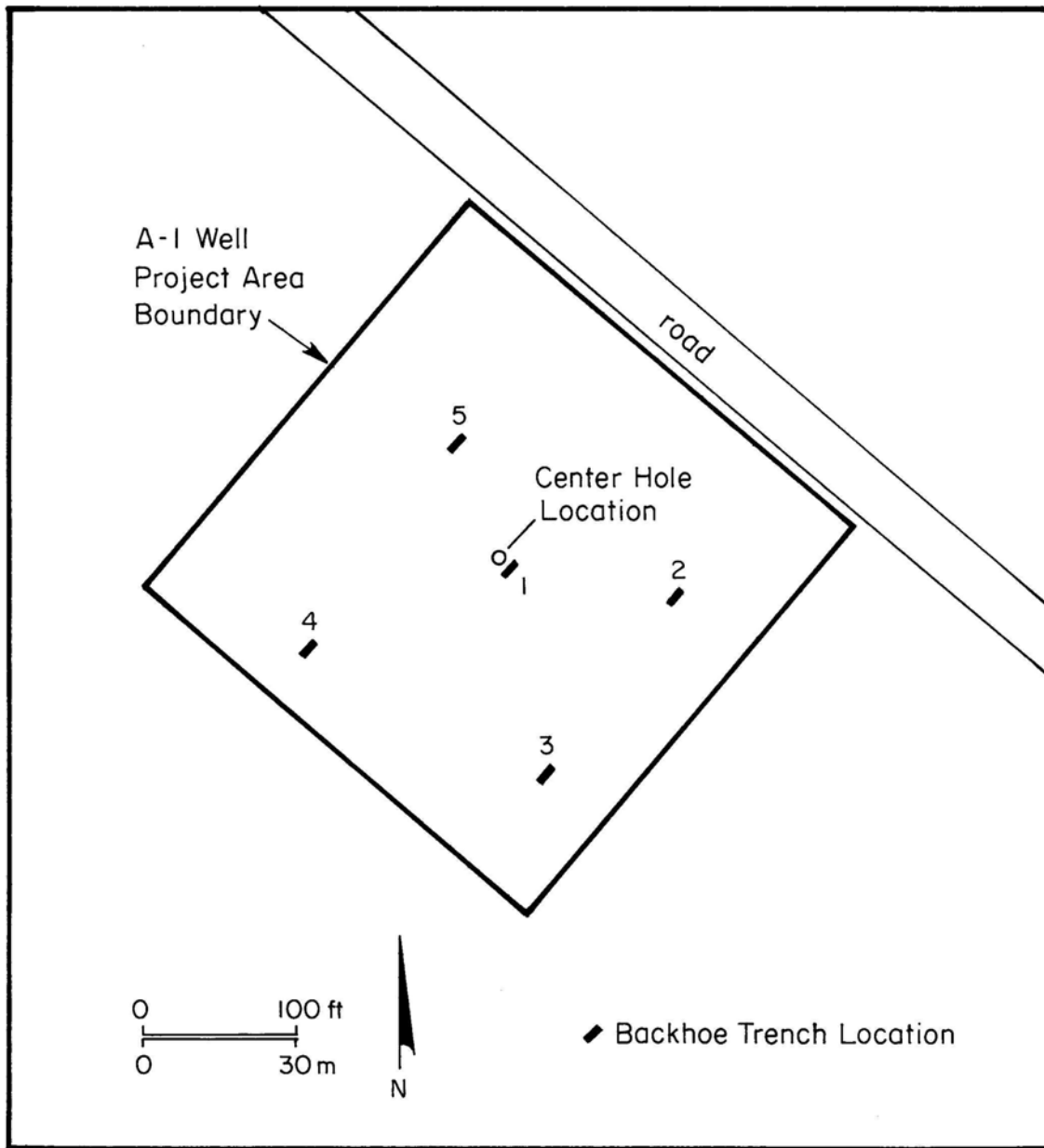


Figure 6. Location of Backhoe Trenches at the A-1 Well





Figure 7. Backhoe Trench 2 (A-1 Well)

## 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 either of the two well sites. 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 and corn. 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 using a backhoe revealed a very shallow sandy mantle overlying heavy clay at the 7-1 well site. It was determined that this location was a very low probability area for a prehistoric site. A slightly deeper sandy mantle was encountered at the A-1 well site, and it was also above heavy black clay. A perched water table was present at the bottom of most trenches, probably due to recent thunderstorms.

## **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 two well pads 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 either well pad changes, the THC must be notified as additional survey may be necessary.

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APPENDIX I

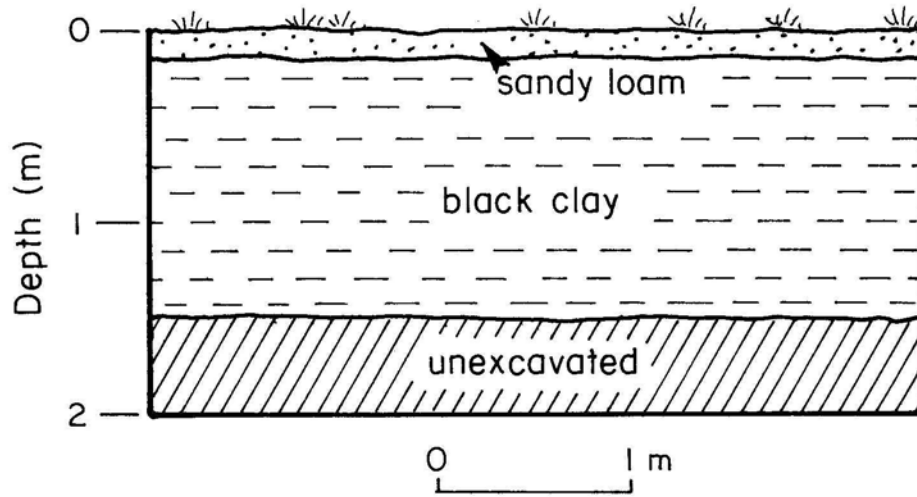
BACKHOE TRENCH LOG

Backhoe Trench	Length	Width	Depth	Comments
7-1 Well				
01	4 m	24"	2 m	thin sandy mantle over a heavy black clay
A-1 Well				
01	4 m	24"	1.5 m	thin sandy mantle over a heavy black clay
02	4 m	24"	1.5 m	thin sandy mantle over a heavy black clay
03	4 m	24"	1.5 m	thin sandy mantle over a heavy black clay
04	4 m	24"	2 m	thin sandy mantle over a heavy black clay
05	4 m	24"	2 m	thin sandy mantle over a heavy black clay

APPENDIX II  
BACKHOE TRENCH PROFILES



### Backhoe Trench 1



### Backhoe Trench 5

