

AN ARCHAEOLOGICAL SURVEY FOR THE EASTHAM STATE PRISON FARM UNIT PROJECT IN HOUSTON COUNTY TEXAS

Antiquities Permit 5693



By

William E. Moore and Edward P. Baxter

Brazos Valley Research Associates
Contract Report Number 242

2010

AN ARCHAEOLOGICAL SURVEY FOR
THE EASTHAM STATE PRISON FARM UNIT PROJECT
IN HOUSTON COUNTY, TEXAS

Antiquities Permit 5693

BVRA Project Number 10-19

Principal Investigator

William E. Moore

Prepared for

Navidad Resources, LLC
218 North College Avenue
Tyler, Texas 75702

Prepared by

Brazos Valley Research Associates
813 Beck Street
Bryan, Texas 77803

2010

ABSTRACT

An archaeological survey of four proposed well pad sites, one riser station tract, an access road, and a proposed pipeline on the Eastham Unit of the Texas State Prison Farm in southwest Houston County, Texas was performed by Brazos Valley Research Associates (BVRA) on July 15-16, 2010 under Antiquities Permit 5693 for Navidad Resources, LLC of Tyler, Texas. The total area investigated consisted of nine acres. No prehistoric or historic sites were found, and no artifacts were collected. Copies of the report are on file at the Texas Historical Commission, Texas Archeological Research Laboratory, the Texas State Library, Navidad Resources, LLC, the Eastham Unit, and BVRA.

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DEFINITION OF STUDY AREA

Navidad Resources, LLC plans to construct four well pads for gas and oil extraction, an access road, one riser station, and a gas pipeline in southwest Houston County (Figure 1). When constructed, the well pads will be 250 feet by 250 feet in size, the access road will be 703 feet in length, the riser station will occupy a two-acre tract, and the pipeline will be 9100 feet in length (four inches in diameter and placed in a trench three feet deep and less than two feet wide). The project area is depicted on the USGS 7.5' topographic quadrangles Baker Lake (3095-343), Weldon (3195-211), and Wyser Bottom (3095-344). Due to the size of the project area, it is depicted on two maps. Figure 2 depicts the eastern portion of the project area on the Baker Lake, Weldon, and Wyser Bottom maps, and Figure 3 depicts the western portion of the project area on the Baker Lake map.

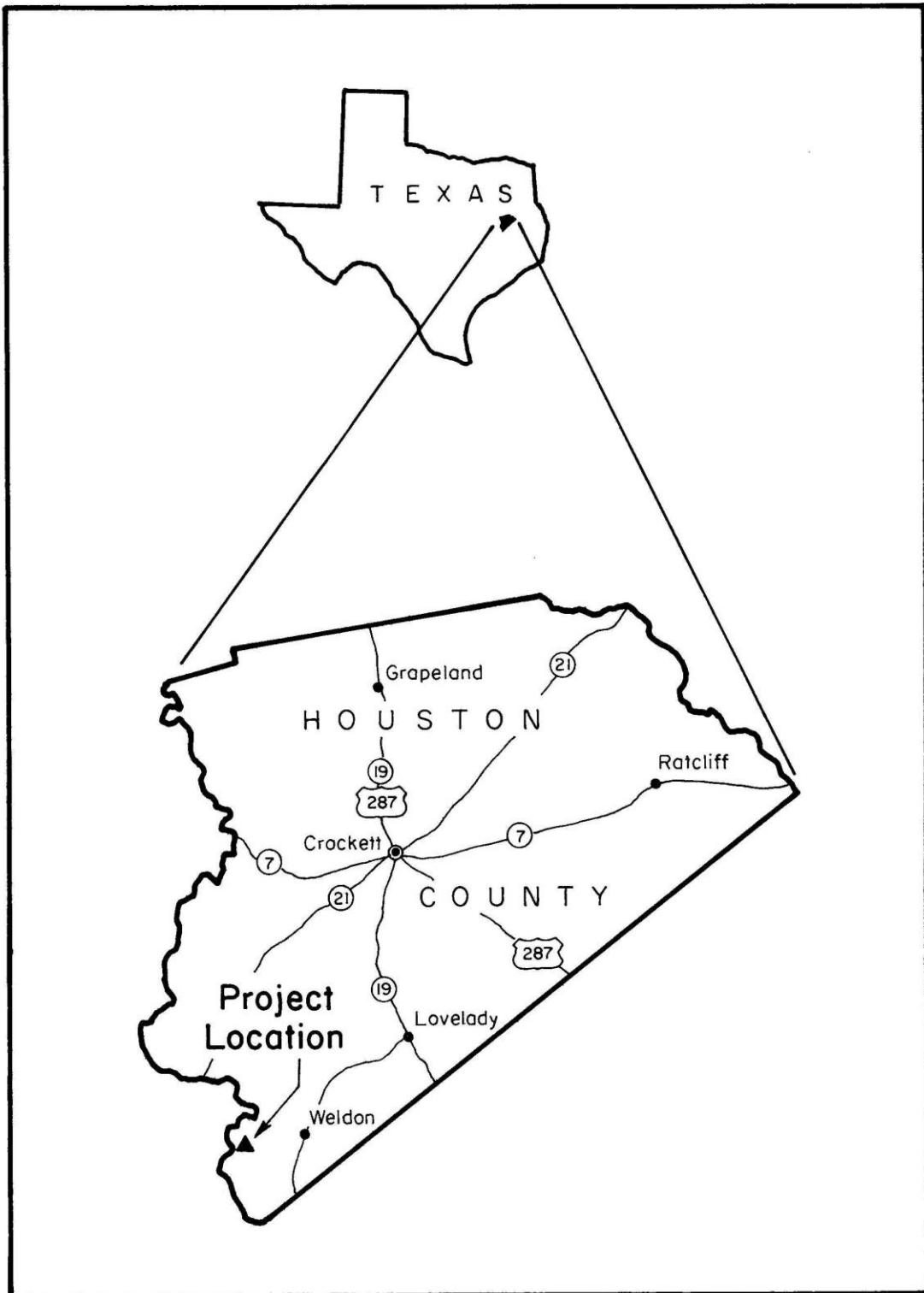


Figure 1. General Location

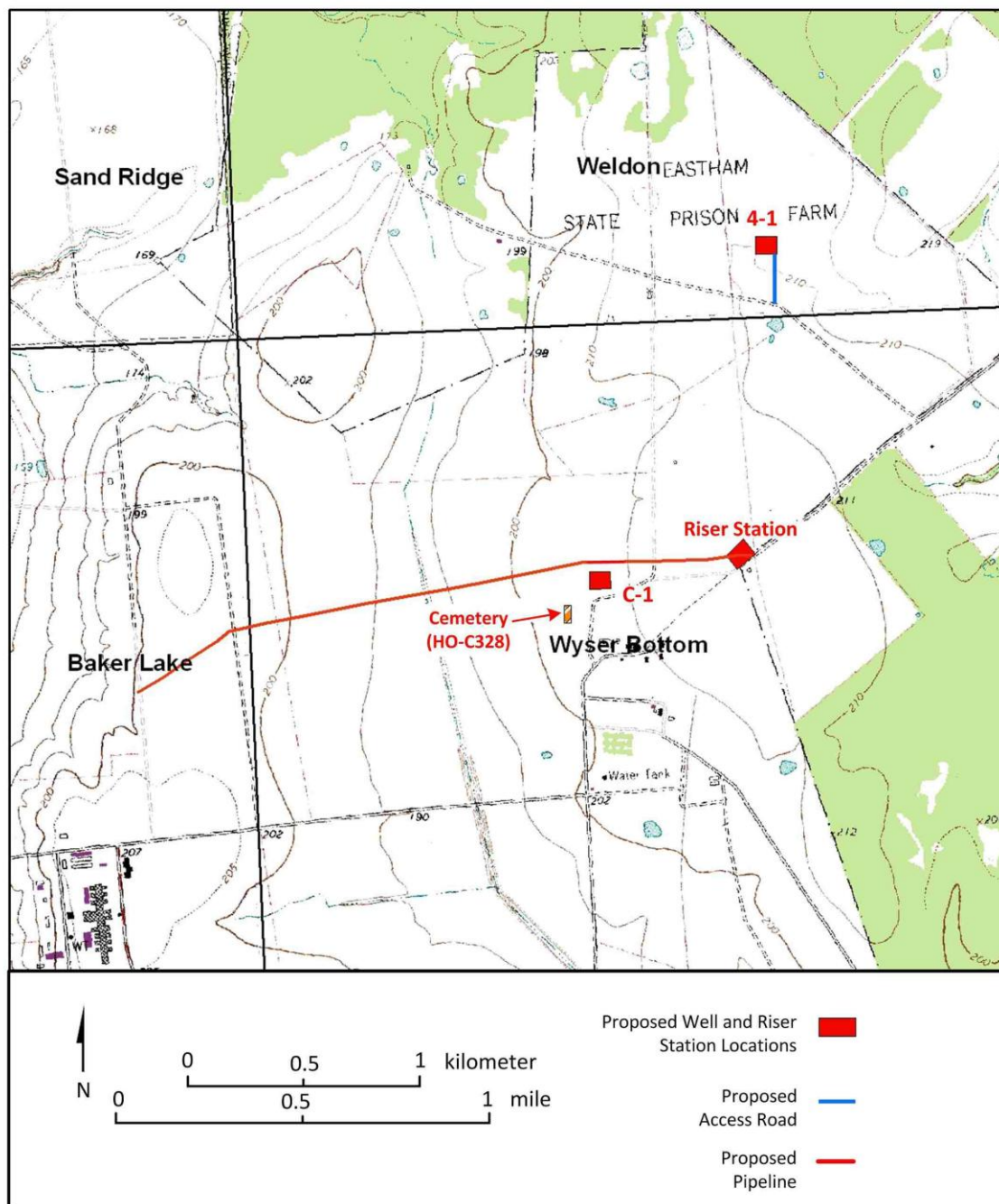


Figure 2. Project Area on Topographic Quadrangles
(eastern portion of project area)

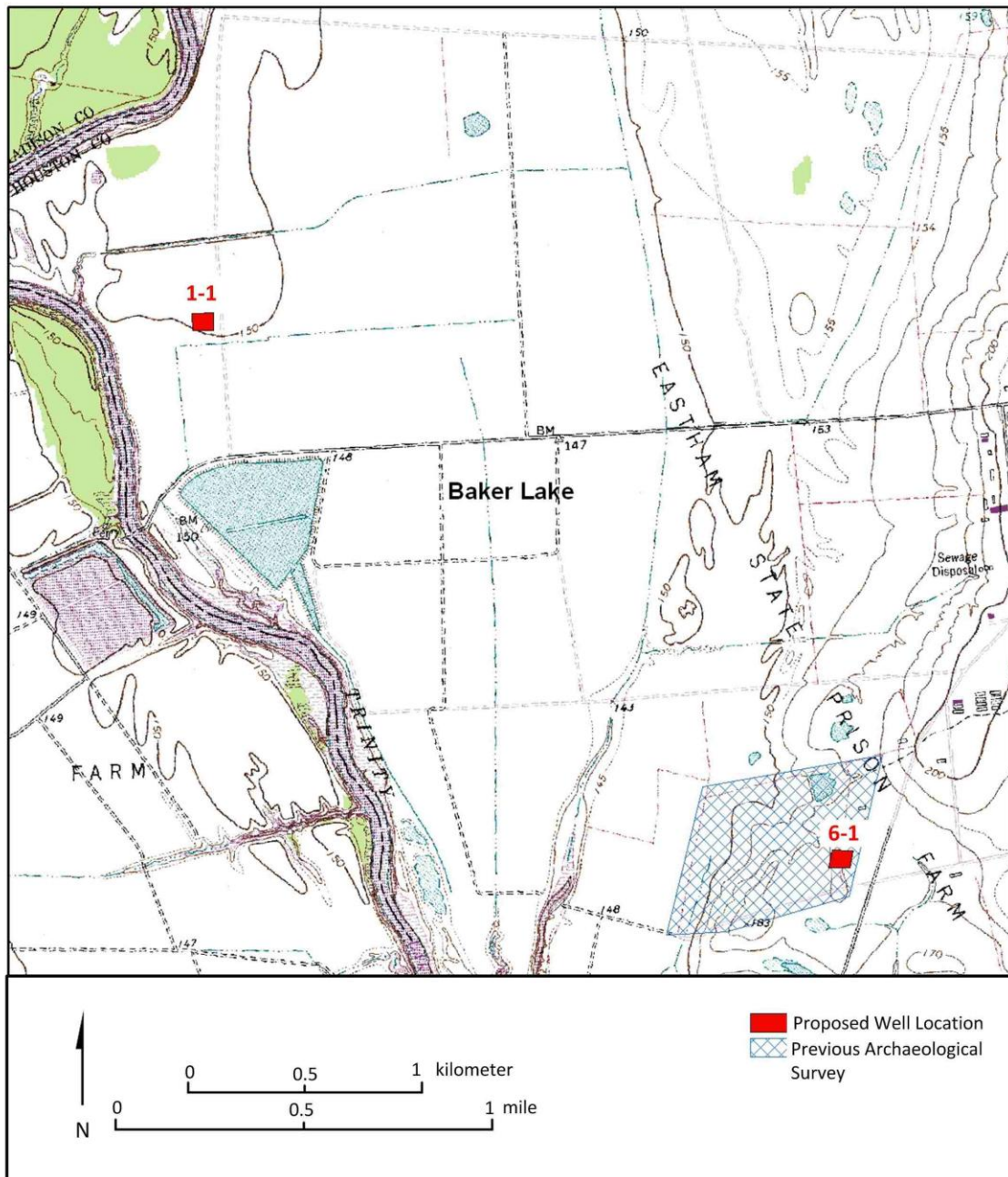


Figure 3. Project Area on Topographic Quadrangle Baker Lake
(western portion of project area)

MANAGEMENT SUMMARY

This project was performed in order to identify any cultural resources that might be present within the project area. The client is Navidad Resources, LLC. of Tyler, Texas. BVRA was retained by the client to perform an archaeological survey as requested by the Texas Historical Commission in a letter dated July 9, 2010 to Daniel E. George of Navidad Resources, LLC. The Principal Investigator was William E. Moore. Edward P. Baxter was the Project Archaeologist, and he was assisted by Phillip C. Bishop. The field survey involved 32 person hours and was performed on July 15-16 2010. The reviewing agency is the Texas Historical Commission, Archeology Division.

METHODS

Prior to entering the field, the site records at the Texas Archeological Research Laboratory (TARL) and the Texas Archeological Sites Atlas were checked for the presence of previously recorded sites and other archaeological surveys 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. The most relevant source for this project is a report by Archeological and Environmental Consultants of Austin (Perttula and Prikryl 1997) that documents work done in the immediate area. Their findings are discussed in the *Results* section below. Other reports reviewed include two projects conducted at the Eastham Unit by BVRA (Moore 2008a, 2008b).

The current project area was investigated by a surface inspection, twenty-six shovel tests, and three backhoe trenches. Shovel tests were dug to sterile clay when possible. The majority of shovel tests were excavated in areas where clay was present at or near the surface. Twenty-three of the tests were terminated at depths of 20 cm or less. The remainder were dug to 25, 30, and 45 cm before clay was encountered. Areas shovel tested include three well pad locations and the two-acre tract. The route of the proposed pipeline was examined through a surface inspection. Excavated earth from the tests was screened using ¼ inch hardware cloth, and the results documented on a shovel test log (Appendix I). Backhoe trenches were excavated at all three well pads. They are described in Appendix II (Backhoe Trench Descriptions). Details of work at each well location are provided below.

Well Location 1-1

The size of this well as proposed by the client is 250 feet by 250 feet. At the time of this survey, the surface was in pasture. The surface was visually inspected, and the subsurface was examined by five shovel tests and one backhoe trench. The shovel tests were dug at the drill hole and each corner of the proposed well site, and the backhoe trench was dug along the eastern boundary approximately equidistant from shovel tests 18 and 19 (Figure 4).

Well Location 4-1

The size of this well as proposed by the client is 250 feet by 250 feet. At the time of this survey, the surface was in pasture. The surface was visually inspected, and the subsurface was examined by six shovel tests and one backhoe trench. The shovel tests were dug at the drill hole, each corner of the proposed well site, and between shovel tests 1 and 5. The backhoe trench was dug in the northeast corner and southwest of Shovel Test 4 (Figure 5).

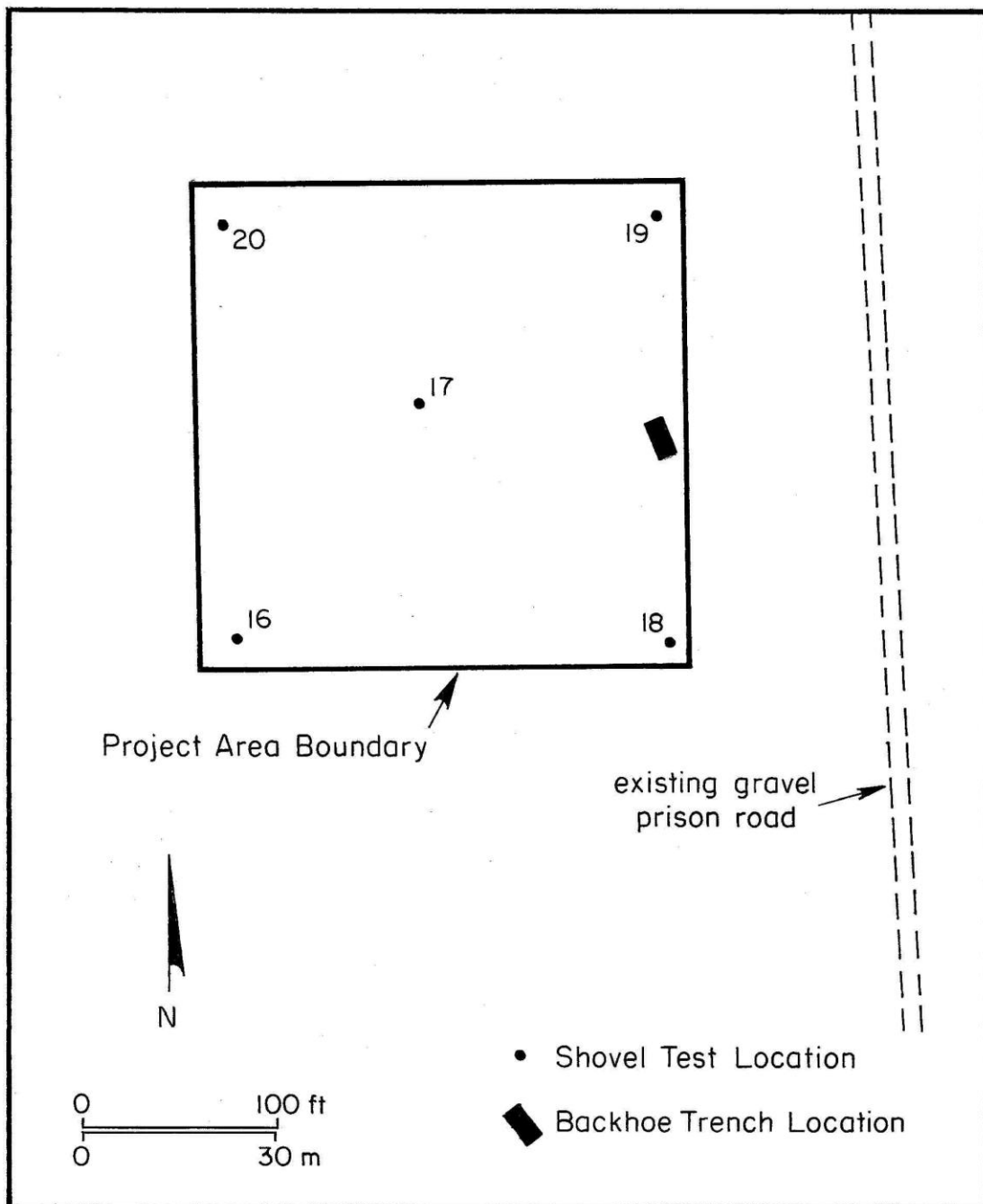


Figure 4. Well 1-1

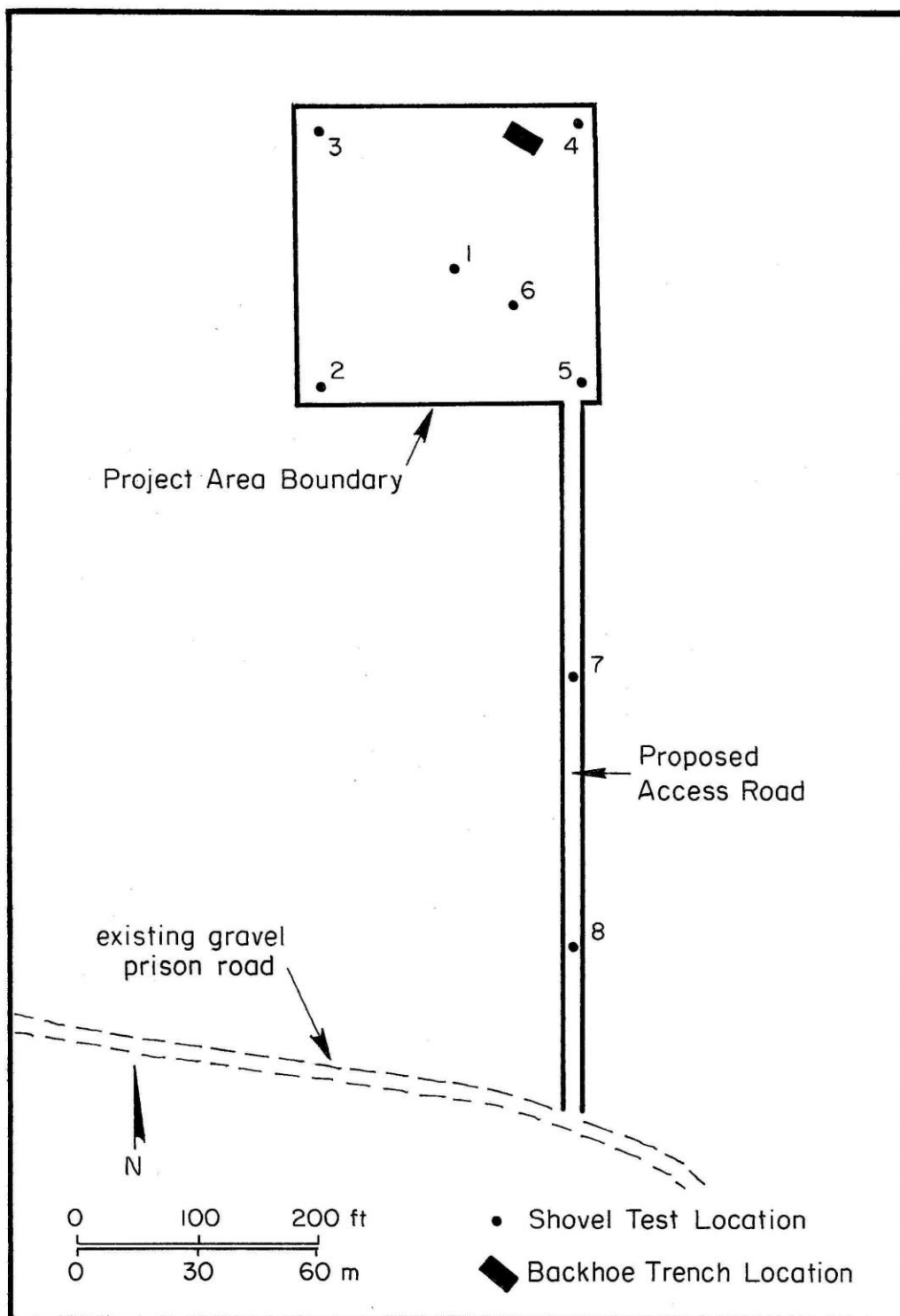


Figure 5. Well 4-1 and Access Road

Well Location 6-1

The size of this well as proposed by the client is 250 x 250 feet. At the time of this survey, the area was in pasture. The proposed location for this well was very near previously recorded prehistoric site 41HO183. In order to avoid this site, the well location was moved 1700 feet to the north-northwest to be placed in an area where the sandy soil had been removed in order to mine for clay to be used elsewhere on the prison grounds such as road construction (Figure 6). According to Jimmy Estridge (personal communication), who works for Navidad Resources, the clay is being removed by scraping, and this process is still in progress. The new well location had been previously surveyed by Perttula and Prikryl (1997) and may be within the boundaries of site 41HO187. This site was recorded on the basis of five pieces of debitage identified as chert, silicified wood, and quartzite. It is a low-density site, especially when quartzite and silicified wood are often incorrectly identified as cultural. In addition, the depth of soil over clay in this area was found to be shallow at 40 cm during the survey by Perttula and Prikryl, and the recorders referred to this site as having little research potential. If the 6-1 well location is placed in this area, no cultural resources will be affected. Due to the disturbed nature of this new location, it was not necessary to excavate shovel tests or backhoe trenches. The location was visually inspected, and the surface was found to consist of hard orange clay.

Well Location C-1

The size of this well as proposed by the client is 250 feet by 250 feet. At the time of this survey, the surface was in pasture. The surface was visually inspected, and the subsurface was examined by seven shovel tests and one backhoe trench. The shovel tests were dug at the drill hole, each corner of the proposed well, between shovel tests 10 and 12, and between shovel tests 9 and 14. The backhoe trench was dug along the southern boundary between shovel tests 14 and 15 (Figure 7). This location is in the vicinity of a historic cemetery (41HO213) that contains the remains of convicts. The northeast corner of the cemetery is 350 feet from the southwest corner of the well location.

Riser Station

The size of this tract as proposed by the client is two acres, and it is the future location for a riser station. At the time of this survey, the surface was in pasture. Riser stations are areas that will eventually contain gas-processing equipment such as inlet risers; outlet risers; and a series of valves, pipes and other types of equipment placed strategically about the tract that will contain produced natural gas from the prison wells. The surface was visually inspected, and the subsurface was examined by six shovel tests (Figure 8). The shovel tests were dug at the center of the tract, each corner of the proposed well, and in the approximate middle of the southern boundary. No backhoe trenches were dug because the area was clay at the surface.



Figure 6. New Location of Well 6-1

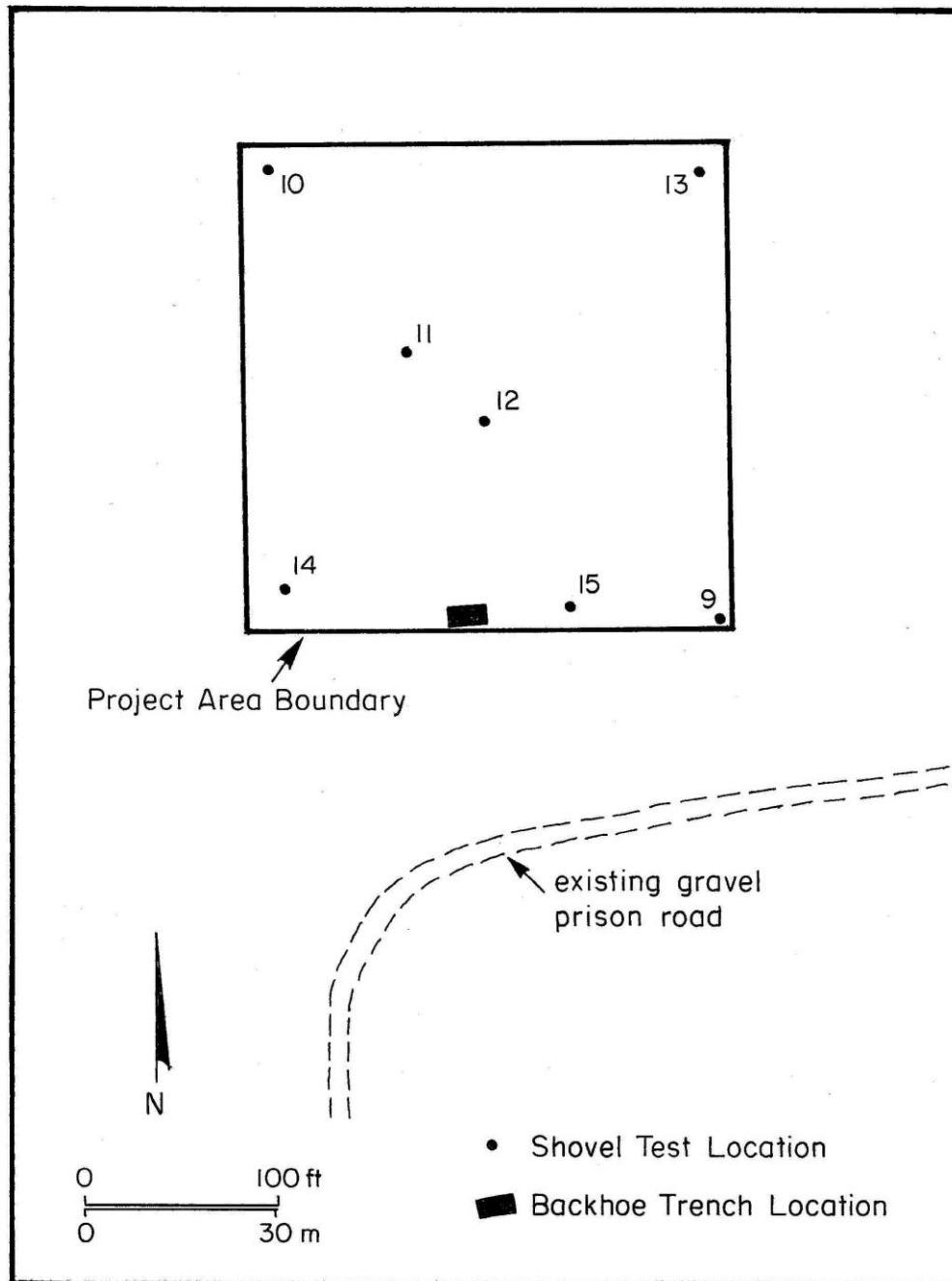


Figure 7. Well C-1

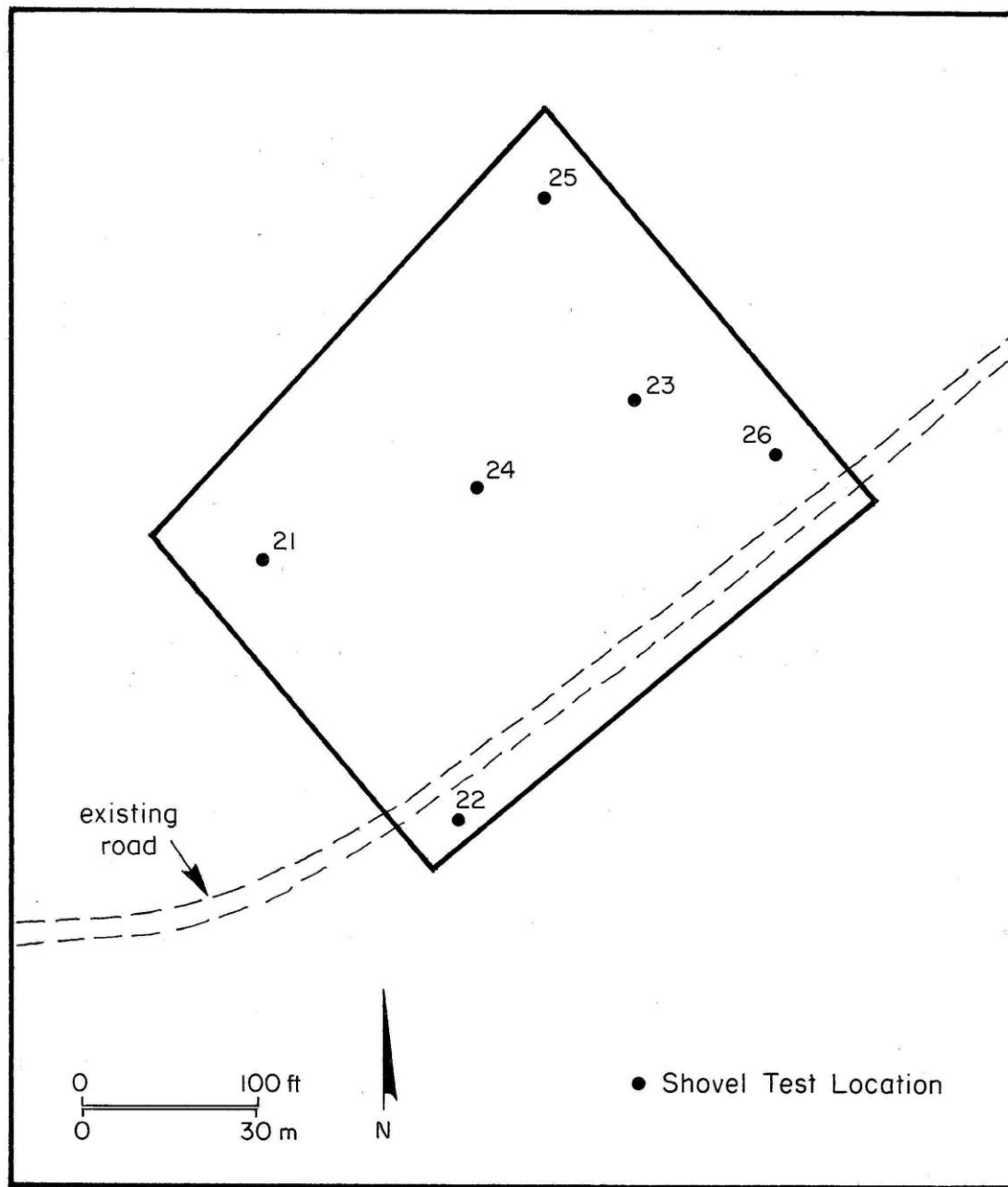


Figure 8. Riser Station

Access Road

One access road will be constructed from a gravel prison road (not named) to well location 4-1. The length of the proposed road is 703 feet, and it will be about 50 feet wide. This road will be constructed by adding gravel to the existing surface. Two shovel tests were dug along this road (Figure 5). No backhoe trenches were dug because of clay at the surface and there will be no disturbance below the ground surface.

Pipeline

The length of the pipeline as currently proposed is 9100 feet. It will be placed in a trench approximately three feet deep and less than two feet wide. It was investigated by a surface inspection and numerous shovel probes that revealed clay at the surface. The ground cover at the time consisted of pasture and had been plowed.

RESULTS

Examination of the files at TARL in Austin, Texas and the Atlas revealed two previously recorded prehistoric sites (41HO183 and 41HO213) had been recorded in close proximity to the original project area. Site 41HO183 is a Late Prehistoric site that yielded numerous artifacts including a *Catahoula* arrow point, ceramics that were tempered with sand and bone and grog, debitage, bone, and mussel shell. The site will be designated as a State Archeological Landmark. Because of the proximity of the proposed well location 6-1 to this site, the well location was moved to the north-northwest to an area that had been disturbed by the removal of sand and clay by the prison and in an area that had been subjected to a previous survey by professional archaeologists. As stated above, the new location may be within the boundaries of prehistoric site 41HO187, a site that was determined to have little or no research potential. This new location, however, has been disturbed to the point that no cultural significance remains. Historic site 41HO213 is a cemetery that contains the remains of convicts, and it is located in the vicinity of well location C-1. The northeast corner of the cemetery is 350 feet from the southwest corner of the well location. There are two plottings on the Archeological Sites Atlas for this site. One is a large rectangle that bears the TARL trinomial 41HO213, and just to the north is a smaller area marking the location of a historic cemetery. According to the official website of the Texas Historical Commission, this cemetery is known as the Eastham Convicts Cemetery, and it has their cemetery number (HO-C328). The cemetery is fenced. The survey crew took GPS readings at each corner, and used these readings to plot the location of the cemetery on the map in this report. The footprint of the pipeline as currently proposed is north of the cemetery, and the closest portion is 545 feet distant. Therefore, construction of the pipeline and C-1 well should not affect this historic cemetery. The field survey did not locate any cultural resources, prehistoric or historic. Most of the project area was in pasture or short grass. Soils in the project area consist mainly of clay at or near the surface. No sandy loam or fine sandy loam was encountered, and the soil just above the clay is sandy clay loam.

RECOMMENDATIONS

No evidence of a prehistoric or historic site was found as a result of this survey. It is recommended that the client be allowed to proceed with construction as planned. Should evidence of an archaeological site be encountered during the construction of the road, all work must stop until the Texas Historical Commission can evaluate the situation. This survey was conducted in accordance with the Minimum Survey Standards as outlined by the Texas Historical Commission.

REFERENCES CITED

Moore, William E.

- 2008a An Archaeological Survey for the Eastham State Prison Farm A-1 and 7-1 Well Locations in Houston County, Texas. Brazos Valley Research Associates, Contract Report Number 193.

Moore, William E.

- 2008b An Archaeological Survey for the Eastham State Prison 5-1 Well Location and Clay Pond in Houston County, Texas. Brazos Valley Research Associates, Contract Report Number 198.

Perttula, Timothy K., and Daniel J. Prikryl

- 1997 *Archeological Survey of Pastures 145A and 147B for the Texas Department of Criminal Justice at the Eastham State Prison Farm, Houston County, Texas*. Archeological & Environmental Consultants, Report of Investigations Number 2.

APPENDIX I: SHOVEL TEST LOG

Shovel Test Number	Depth (cm)	Soil Type	Comments
1	45	sandy clay loam over clay	4-1 well (dug at drill hole) clay at 35 cm
2	20	clay	4-1 well (southwest corner)
3	20	clay	4-1 well (northwest corner)
4	20	clay	4-1 well (northeast corner)
5	30	sandy clay loam over clay	4-1 well (southeast corner) clay at 25 cm
6	25	sandy clay loam over clay	4-1 well (between ST 1 and ST 5) clay at 20 cm
7	15	clay	4-1 well (access road)
8	20	clay	4-1 well (access road)
9	20	disturbed clay	C-1 well (southeast corner)
10	15	sandy clay loam over clay	C-1 well (northwest corner) clay at 10 cm
11	20	sandy clay loam over clay	C-1 well (between ST 10 and ST 12) clay at 15 cm
12	15	sandy clay loam over clay	C-1 well (dug at drill hole) clay at 10 cm)
13	10	clay	C-1 well (northeast corner)
14	10	clay	C-1 well (southwest corner)
15	15	clay	C-1 well (east of backhoe trench)
16	<10	clay	1-1 well (southwest corner)
17	<10	clay	1-1 well (dug at drill hole)
18	<10	clay	1-1 well (southeast corner)
19	<10	clay	1-1 well (northeast corner)
20	<10	clay	1-1 well (northwest corner)
21	20	clay	riser station
22	10	clay	riser station
23	12	clay	riser station
24	20	clay	riser station
25	10	clay	riser station
26	10	clay	riser station

APPENDIX II

BACKHOE TRENCH DESCRIPTIONS

Backhoe Trench 1 was excavated at Well Location 1-1 at the edge of the proposed well pad closest to the road because the backhoe was in danger of breaking through the thin dry crust of the black gumbo bottomland clay and sinking. At the time of this investigation, the area was in pasture that had been disturbed by plowing. The size of this trench was 1 meter wide, 6 meters long, and .6 meter deep. It was oriented in a north-northwest/south-southeast direction. The trench was shallow due to the presence of dark black wet clay with water seeping into the trench bottom, and only two strata or zones were identified. Zone I (surface to 15 cm) was in the plow zone and consisted of dark brown (10YR 4/2) silty clay loam. Zone II (15 cm to 60 cm) consisted of dark (10YR 2/2) hard-packed wet clay. No cultural features were observed in the trench profiles.

Backhoe Trench 2 was excavated at Well Location 4-1 in the area where the reserve pit of the proposed well is to be placed. At the time of this investigation, this area was in pasture. The size of the trench was 1 meter in wide, 8 meters long, and 1.75 meters deep. The trench was orientated in a northwest-southeast direction. The surface in this area had been disturbed by plowing for pasture improvements. Four different strata or zones were identified. Zone I (surface to 50 cm) consisted of hard packed dark brown silty clay (10YR 4/2). Zone II (50 cm to 95 cm) consisted of mottled brown (10YR 5/2) clay. The color of the mottles were identified by the Munsell Chart as 10YR 5/6. Zone III (95 cm to 150 cm) consisted of hard dark brown (10YR 4/2) clay. Zone IV (150 cm to the bottom of the trench) consisted of hard brown (10YR 5/2) clay. No cultural features were observed in the trench profiles.

Backhoe Trench 3 was excavated at Well Location C-1 in an area near the site of the proposed reserve pit. At the time of this investigation, the area was in pasture. The size of the trench was 1 meter wide, 9 meters long, and 1.15 meters deep. It was oriented in an east-west direction. Four strata or zones were identified. Zone I (surface to 15 cm) consisted of brown (10YR 5/2) sandy clay loam. Zone II (18 cm to 30 cm) consisted of hard packed mottled brown clay (10YR 4/6). The color of the mottles were identified by the Munsell Chart as 10YR 4/4. Zone III (30 cm to 98 cm) consisted of hard light brown clay (10YR 5/3) with mottles (5YR 4/4). Zone IV (98 cm to the bottom of the trench) consisted of hard grayish-brown (10YR 5/1) clay. No cultural features were observed in the trench profiles.