

***AN ARCHAEOLOGICAL SURVEY FOR THE
BASTILLE PIPELINE AND GULAG WELL SITE
IN FORT BEND COUNTY TEXAS***

Antiquities Permit 4364



***By
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***Brazos Valley Research Associates
Contract Report Number 175***

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AN ARCHAEOLOGICAL SURVEY FOR THE BASTILLE PIPELINE
AND GULAG WELL SITE IN FORT BEND COUNTY, TEXAS

BVRA Project Number 06-25

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ABSTRACT

An archaeological survey of a proposed natural gas pipeline (2500 feet) and well site (three acres) on the Central Unit of the Texas Department of Criminal Justice in Fort Bend County, Texas was performed by Brazos Valley Research Associates (BVRA) on December 22, 2006 and February 5, 2007 under antiquities permit 4364. The area was investigated through a 100% Pedestrian Survey, shovel testing, and backhoe trenching. The area was found to be disturbed through agricultural practices, particularly due to sugar cane production, and recent crops grown by the prison. No archaeological sites were found, and no artifacts were collected. Further work is not warranted.

ACKNOWLEDGMENTS

The authors are grateful to those who made the successful completion of this project possible. Wayne J. Crouch was our initial contact. He provided names and phone numbers of other persons involved with this project. Project area maps were provided by Allen Rogers at Louisiana Gas Development Corporation and Jacki Schimdt of OGM Land Company. Prison personnel who provided assistance were Mike Corley, Larry Kent, and Alton Clark. The permit application was signed by Mike Corley and Larry Kent for the prison and Robert Hatter for the General Land Office. We are grateful to Bob Skiles, archaeologist at the General Land Office, for discussing previous work in the area. The field survey was performed by Edward P. Baxter who also prepared some of the maps and co-authored the report. Jean Hughes, Records Conservator at the Texas Archeological Research Laboratory (TARL), performed the records check for previously recorded sites in the project area and vicinity. Technical support was provided by Jennifer McMillan, and Nora Rogers served as editor and proofreader.

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INTRODUCTION

Louisiana Gas Development Corporation of Shreveport, Louisiana has plans to construct a natural gas pipeline and two well sites on property owned by the General Land Office and the Texas Department of Criminal Justice in Fort Bend County, Texas (Figure 1). The length of the pipeline is 5937 feet, and the size of the well site is three acres. A three-inch pipe will be placed in a trench two feet wide. The pipe will be placed beneath 36 inches of cover. The easement for the pipeline will be five feet. The pipeline will connect with another pipeline at the north end of the project area at the Sugar Land airport and the Bastille well 5566 feet to the south and west. A second pipeline is planned and will connect the Bastille well to the Gulag well. The project area is in close proximity to Oyster Creek, a former channel of the Brazos River. This is a very high probability area for the presence of significant prehistoric sites. Therefore, an archaeological survey was recommended by the Texas Historical Commission (THC) Archeology Division. A survey of the Bastille well was not required by the THC. It was decided, based on a conversation with Debra L. Beene of the THC, that the Gulag well and approximately 2500 feet of the pipeline should be investigated. The need for a survey of the pipeline that will eventually connect the Bastille well and the Gulag will be determined at a later date. The project area is depicted on the USGS 7.5' topographic quadrangle Lake Jackson (2995-312) (Figure 2).

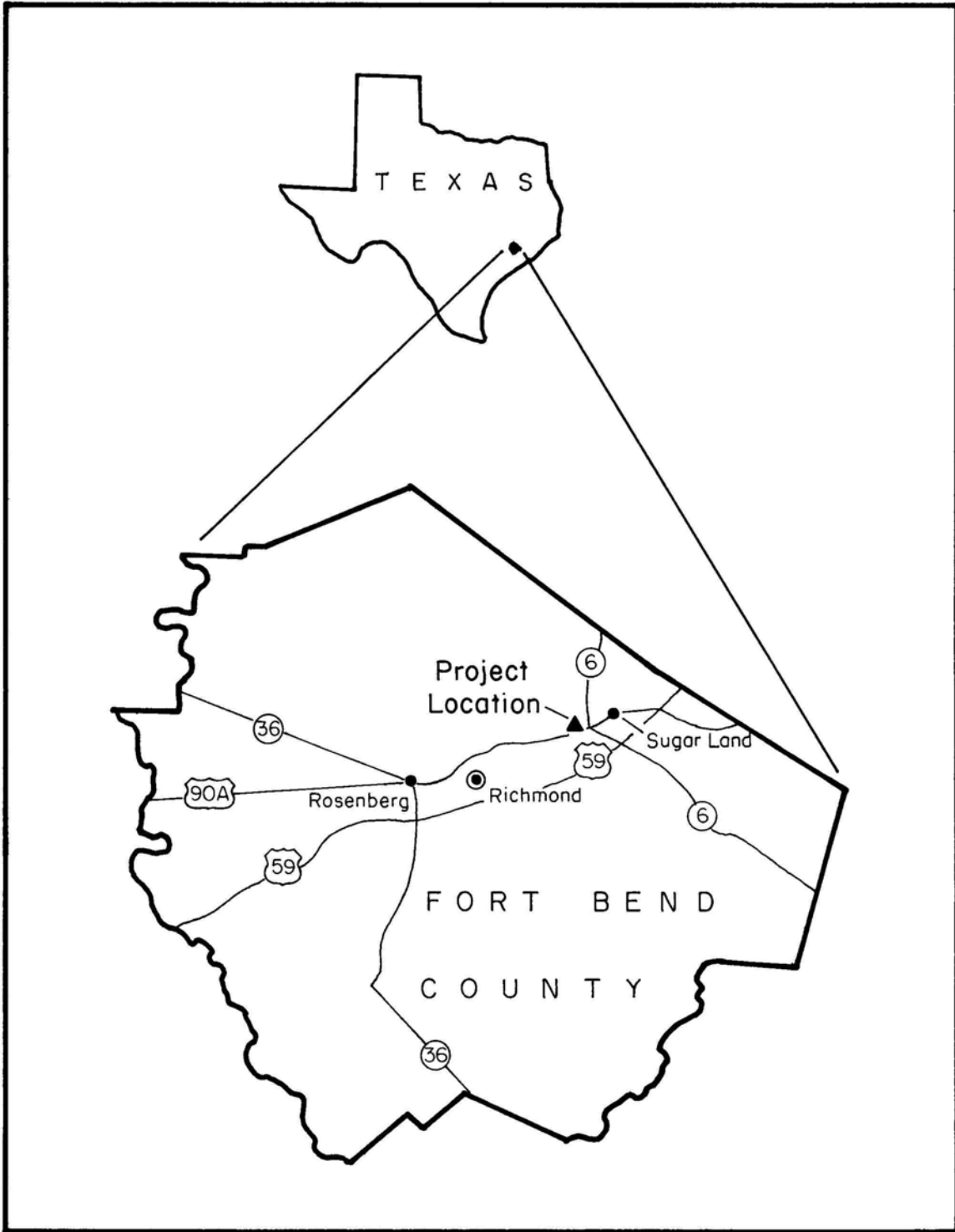
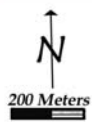
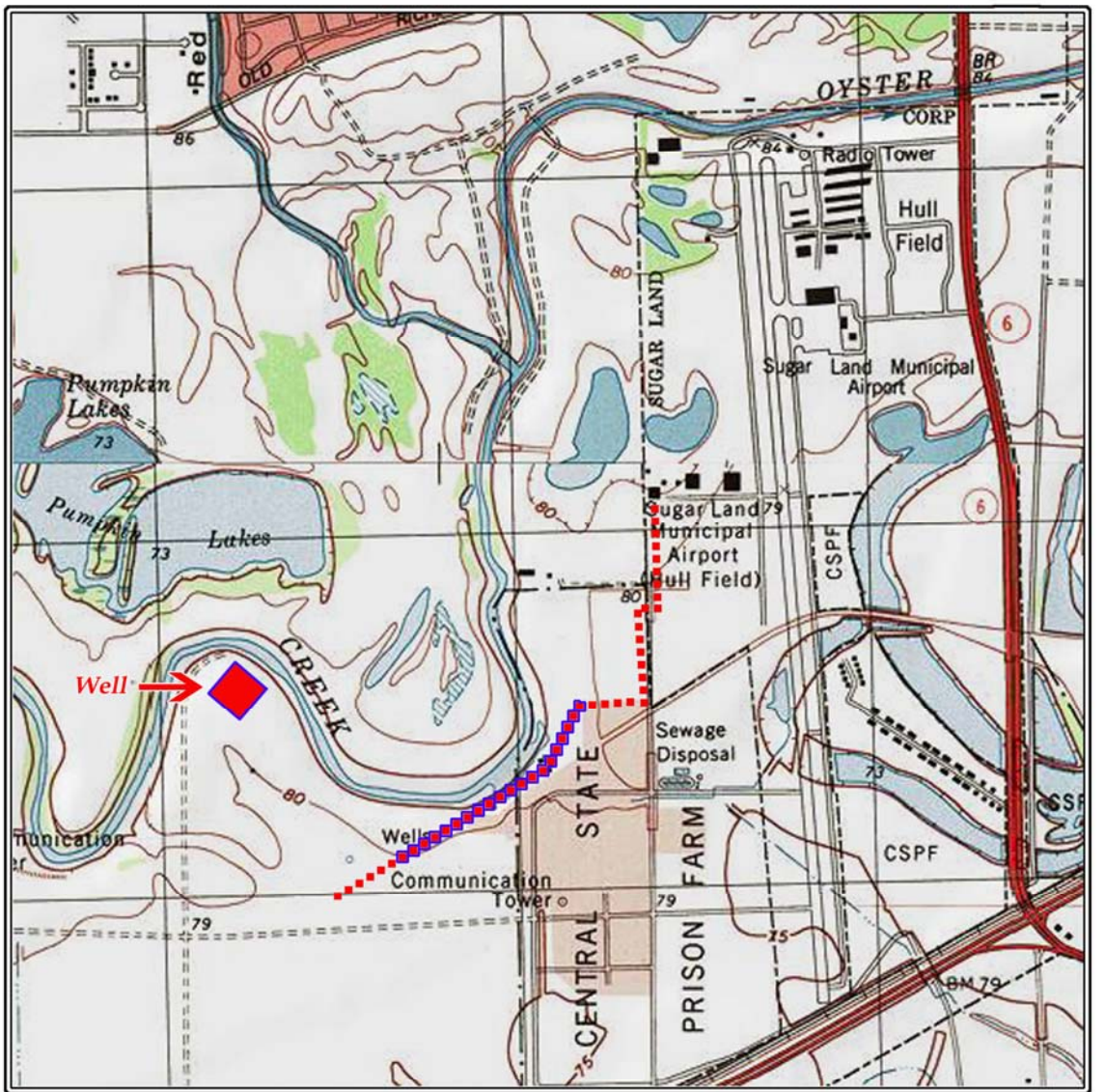


Figure 1. General Location



USGS Sugar Land, Texas
 Quadrangle 2995-312

- - - - - Proposed Pipeline
- - - - - Pipeline Surveyed
- Proposed Well *BVRA*

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 sub-humid 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 entire project area is located within soils belonging to the Norwood series (Mowery et al. 1960). The map unit name for the specific soil type in the project area is Norwood silt loam (Nc). Norwood series soils consist of very deep, well-drained, moderately permeable soils on flood plains. They developed from reddish calcareous, loamy alluvial sediments. Slopes are mainly 0 to 1 percent, but range to 8 percent. Flooding ranges from rare to frequent except where protected by levees. A typical profile of the Norwood silt loam is reddish-brown silt loam from 0 to 18 inches followed by light reddish-brown silty loam from 18 to 44 inches. Some areas are underlain by strata of clay at depths of 30 to 40 inches.

Norwood series soils are used mainly for cropland. Typical crops are cotton, soybeans, alfalfa, sorghum, and oats. Some areas are in improved Bermuda grass pasture. Native vegetation includes pecan, cottonwood, elm, oak and hackberry trees and mid and tall grasses.

At the time of this survey the project area was devoid of all natural vegetation. The ground cover along the pipeline consisted of pasture and plowed fields, while the ground cover at the well site consisted of dense weeds and scattered small trees. Figure 3 depicts the area along the pipeline, and Figure 4 depicts the area at the Gulag Well site.



Figure 3. View of Area Along Bastille Pipeline



Figure 4. View of Area at Gulag 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), Fort Bend County is situated within the Southeast Texas archeological study region. In 1985, according to a statistical overview published by the Texas Historical Commission (Biesaart et al. 1985:114), Fort Bend County contained 22 sites. The archaeological potential of Fort Bend County is reflected in part by the increasing number of recorded sites found as a result of cultural resource management studies. As a result of these investigations, the number of recorded sites now stands at over 300 sites (Texas Archeological Sites Atlas).

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 archaeological sites to the current project area were identified during a survey of the proposed 750 acre Joseph S. and Lucie H. Cullinan Park by Moore Archeological Consulting (Moore and Moore 1991) under the field supervision of William E. Moore. This area is on the north side of Oyster Creek opposite the current project area. This study found the project area to contain numerous prehistoric and historic sites indicating intense utilization from the Archaic period of Texas prehistory through the early twentieth century with limited use to the present. In all, 23 sites were recorded. Of this number 7 were prehistoric, 12 were historic, and 3 contained prehistoric and historic components. One site (41FB210) produced only bone fragments and could not be assigned to either the prehistoric or historic period. When added to sites 41FB196 and 41FB197, recorded during a previous study (Moore 1991), 25 archaeological sites are known to exist in the project area. Prehistoric occupation was found primarily on landforms containing sandy soils, while historic sites were present in various topographic settings including areas of clayey soils. The homestead of Alexander Hodge, an Austin "Old Three Hundred" colonist, was believed to be in the area. No evidence of this site was found, but sites 41FB199 and 41FB200 yielded historic artifacts that may date to this period.

Moore Archeological Consulting conducted data recovery at sites 41FB199 and 41FB200 at Joseph S. and Lucie H. Cullinan Park in Fort Bend County in 1993 (Moore et al. 1996). Both sites were dated to the Late Prehistoric period of Texas prehistory based on the presence of ceramics and an arrow point at 41FB199 and ceramics at 41FB200. Both sites have received the designation of State Archeological Landmark because of their significant research potential regarding prehistoric and historic settlement patterns of the area. The unexcavated portions of each site are to be protected. Additional archaeological work will be required if future construction becomes a threat to these important resources.

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 Fort Bend County were reviewed in order to become familiar with the types of prehistoric and historic sites found in the area. The project was discussed with two archaeologists with intimate knowledge of this area – Bob Skiles, staff archaeologist at the General Land Office and Roger G. Moore of Moore Archeological Consulting.

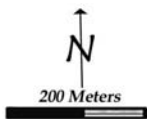
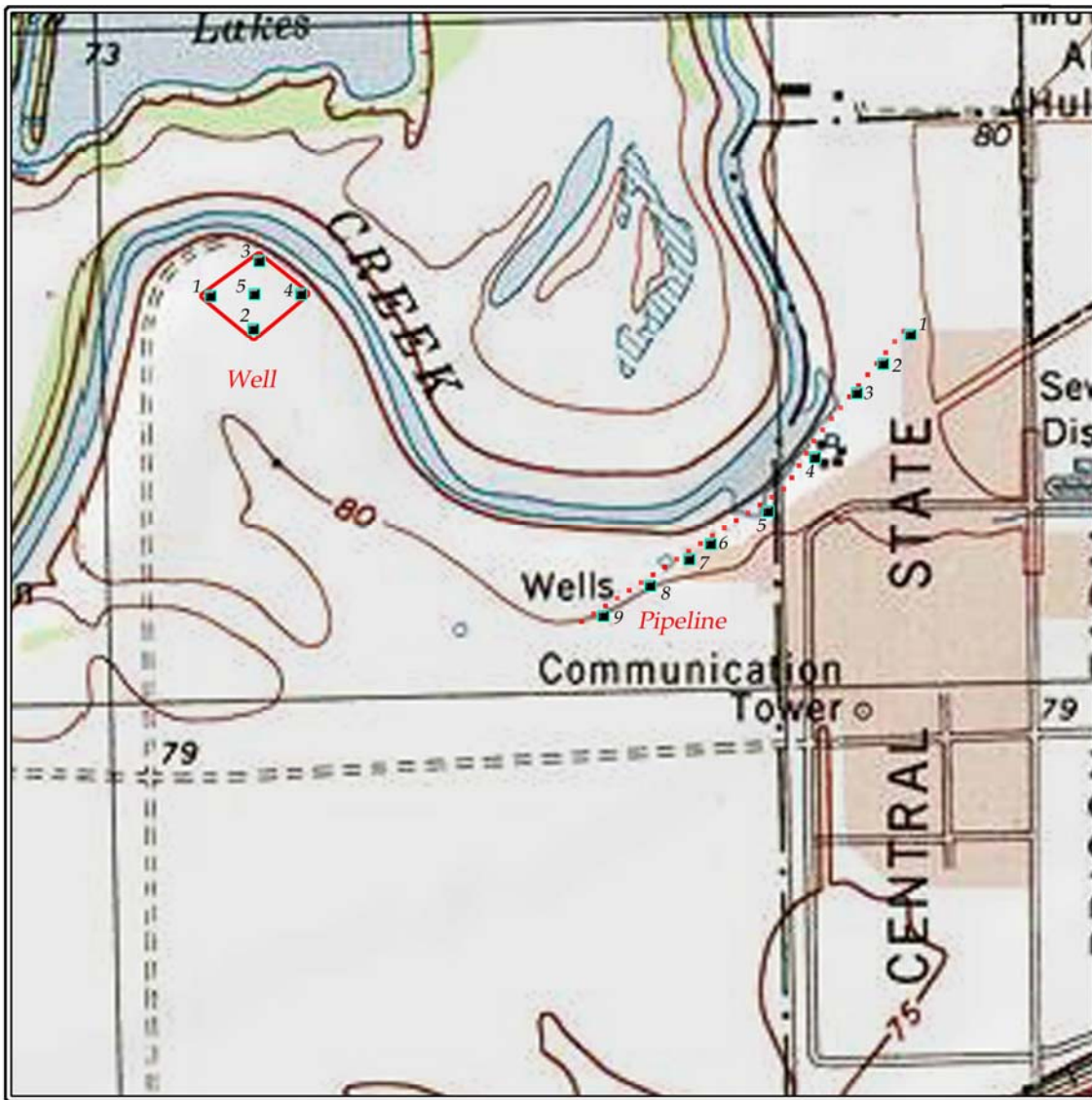
Field Survey

The Principal Investigator was William E. Moore, and the Project Archaeologist was Edward P. Baxter. The entire project area was investigated by a 100% Pedestrian Survey, shovel testing, and backhoe trenches. Although the proposed Bastille pipeline consists of 5937 feet, this survey only investigated 2500 feet, which was defined as an “Area of Interest” by the client based on instructions from the THC reviewer for this project. The work performed followed the Research Design that was submitted to the THC as part of the permit application process (Appendix I). The field survey was divided into two phases. First, the area was walked and shovel tests were excavated. This allowed the Project Archaeologist to better determine where the backhoe trenches should be placed. Later, after a delay by bad weather, four backhoe trenches were excavated.

All excavated earth from the shovel tests was screened through quarter-inch hardware cloth. Data obtained these tests were recorded on a shovel test log (Appendix II). All shovel tests were backfilled after evaluation and mapping, and the location of each test was plotted on the topographic map (Figure 5). The depth of the shovel tests along the pipeline varied from 10 cm in areas of clay soils to 100 cm where deep sandy soils were present. The depth of the shovel tests at the well site varied from 10 cm where water and mud was encountered to 100 cm where deep sandy soils were present. Nine tests were excavated along the pipeline, and five tests were excavated at the well site.

Four backhoe trenches were excavated – two along the pipeline route and two at the well site. Each trench was 10 meters long and 24 inches wide. The depth of the four trenches reached the bottom depth of the Area of Potential Effect (APE), which was determined by the client to be four feet. Standing water was a problem in some of the trenches, causing the walls to collapse. Profiles of each trench were drawn in the field. Figure 6 depicts the two backhoe trenches excavated along the Bastille pipeline. The two backhoe trenches excavated at the Gulag Well site are depicted in Figure 7.

Photographs of the project area were taken with a digital camera, and a hand-held GPS was used to create waypoints to help locate project area boundaries.



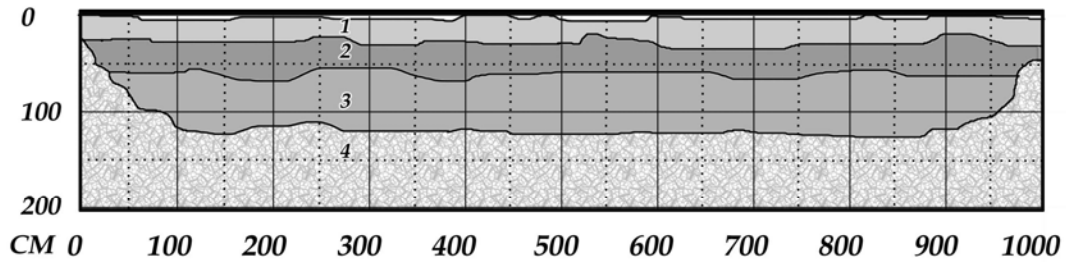
USGS Sugar Land, Texas
 Quadrangle 2995-312

- Pipeline Area Surveyed
 - Proposed Well
 - Shovel Test
- BVRA*

Figure 5. Location of Shovel Tests and Backhoe Trenches

BASTILLE PIPELINE

**Backhoe Trench 1
South Wall Profile**



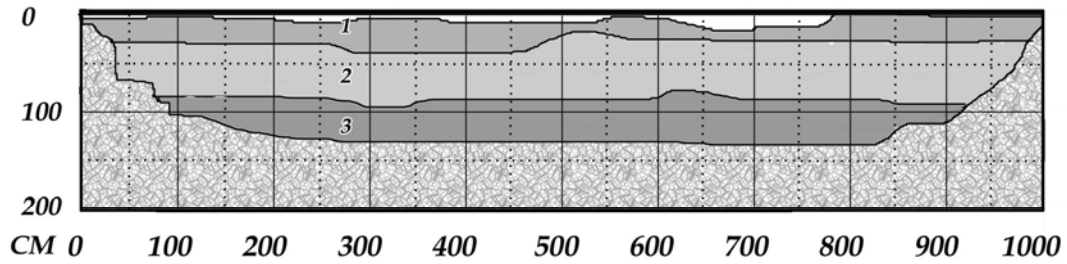
Zone 1: 10YR4/6. Plow Zone. Clay loam.

Zone 2: 2.5YR3/2. Clay loam.

Zone 3: 10YR3/6. Clay loam.

Zone 4: Unexcavated.

**Backhoe Trench 2
South Wall Profile**



Zone 1: 7.5YR3/1. Dark clay loam.

Zone 2: 7.5YR4/4. Clay loam.

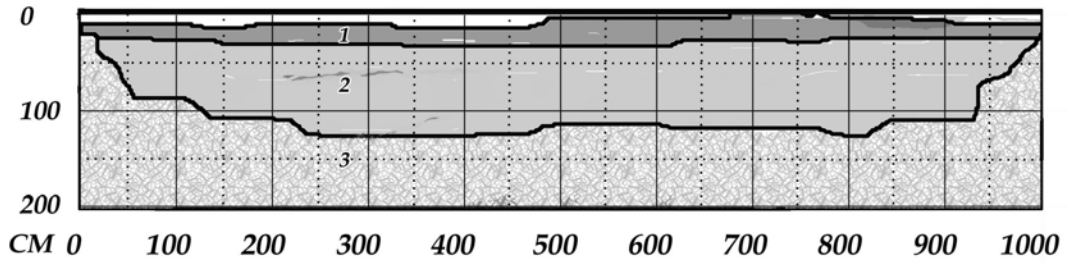
Zone 3: 7.5YR3/1. Dark clay loam.

Zone 4: Unexcavated.

Figure 6. Backhoe Trench Profiles Along the Bastille Pipeline

GULUG WELL SITE

**Backhoe Trench 1
South Wall Profile**

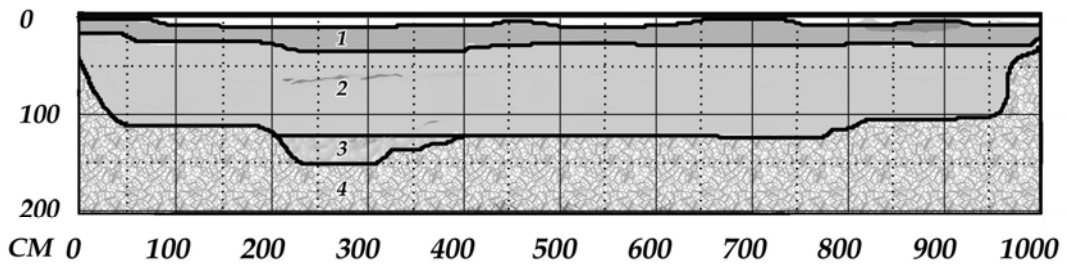


Zone 1: 10YR3/4. Sandy clay loam.

Zone 2: 10YR4/6. Clay loam.

Zone 3: Unexcavated.

**Backhoe Trench 2
South Wall Profile**



Zone 1: 7.5YR3/1. Sandy clay loam.

Zone 2: 10YR4/4. Clay loam. Intrusive feed sack.

Zone 3: Water.

Zone 4: Unexcavated.

Figure 7. Backhoe Trench Profiles at the Gulag Well Site

RESULTS AND RECOMMENDATIONS

Examination of the files at TARL in Austin, Texas revealed no sites have been recorded in the project area, and a professional archaeologist had not previously examined the tract. No archaeological sites were found as a result of this survey. This survey 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 as planned. Should evidence of an archaeological site be encountered, all work must stop until the THC can evaluate the situation. In the event the footprint of the project area changes the THC must be notified as additional survey may be necessary.

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APPENDIX I: RESEARCH DESIGN

BASTILLE PIPELINE AND GULAG WELL SITE

FORT BEND COUNTY, TEXAS

Records Check

Brazos Valley Research Associates (BVRA) has contacted the Texas Archeological Research Laboratory (TARL), the state repository for site records, to determine if previously recorded sites are present in the project area, and no sites were found. In addition, a review of relevant archaeological reports will be conducted, and local informants and professional archaeologists with knowledge of this area will be interviewed when possible concerning known sites and artifact types in the area.

Project Description

Louisiana Gas Development Corporation of Shreveport, Louisiana plans to construct two three-acre well sites (Bastille and Gulag) and 5937 feet of natural gas pipeline. Most of the pipeline is on property owned by the State of Texas. A portion of the pipeline is on the Central Unit of the Texas Department of Criminal Justice, and one of the well sites (Gulag) is on property owned by the General Land Office. The project area is depicted on the Sugar Land topographic quadrangle (2995-312). The Louisiana Gas Development Company of Shreveport, Louisiana is providing the funding for this project. No federal agency is involved.

The Texas Historical Commission reviewed the Bastille and Gulag well projects and recommended an archaeological investigation of the Gulag well site, its associated pipeline, and a portion of the pipeline associated with the Bastille prospect. The Bastille well and a portion of its pipeline are located in a low probability area and do not require any further review. Additionally, the Gulag pipeline route has yet to be identified and will require an archaeological investigation at a later date. This proposed archeological survey will investigate the Gulag well site and the portion of the Bastille pipeline located in areas with a high probability for containing significant cultural resources.

The proposed impacts consist of the Gulag well which be scraped and leveled to accommodate a 400' x 400' pad. There will be a center hole and a slush pit. The slush pit will be between three and four feet deep and will be within the three acres. The three inch Bastille pipeline will be placed in a five-foot easement. There will be 36" of cover above the pipe.

RESEARCH DESIGN (PAGE TWO)

SURVEY METHODS

The Principal Investigator for this project is William E. Moore, and the Project Archaeologist is Edward P. Baxter. No fieldwork will commence until an Antiquities Permit has been issued for this project. The subsurface at the three-acre well site will be examined by one backhoe trench that will be excavated well below the depth of impact (four feet) to insure there are no buried zones below the pit or pipeline that may be impacted by the construction. Shovel testing will supplement the backhoe trenching. BVRA has been contracted by the client to examine that portion of the pipeline that is nearest the creek (2500 feet), which is referred to by the client as the "Area of Interest." BVRA will concentrate this investigation on extant terraces. The entire area will be walked to identify any surface evidence of a site. According to Bob Skiles (archaeologist at the General Land Office) much of the land in the general area was contoured to accommodate sugar cane. This statement is based on his previous work in the vicinity. As a result, many of the terraces are no longer present. Also, the prison system has disturbed the area through building construction and agricultural activities.

The number of backhoe trenches will be determined in the field. Based on a conversation with Mark H. Denton, one backhoe trench per each 1000 feet will be adequate. Because of the high probability of this area (if terraces are present), three trenches will be excavated. The number may be greater if cultural materials are found in several areas where additional trenches are warranted. Each backhoe trench will be dug to the APE. Profiles of each trench will be drawn in the field and reproduced in the report. The various soil types will be identified using a Munsell Soil Chart.

The number of shovel tests will be based on the recommendation by the Texas Historical Commission that 16 tests per mile in high probability areas be excavated. Each shovel test will be dug to one meter unless clay or water is encountered at a lesser depth. Shovel tests will be dug in arbitrary 10 cm levels. All excavated earth will be passed through ¼ inch hardware cloth. Artifacts found in shovel tests will be collected and analyzed in the laboratory prior to curation if necessary.

When a site is found, an attempt to determine its boundaries within the project area will be conducted. A site map will be made that depicts the location of the backhoe trenches and all shovel tests. GPS plottings will be taken to more accurately plot these areas on the proper USGS topographic map. All archaeological sites will be assigned a field number. Later, an official trinomial will be assigned by TARL. Future references to these sites will use the TARL number. The entire project will be documented through digital photography, a hand-held GPS, forms, and field notes.

RESEARCH DESIGN (PAGE THREE)

Artifact Analysis

All artifacts will be collected for analysis in the laboratory. They will be described and measured. Those specimens deemed worthy of permanent curation will be processed and turned over to TARL. All artifacts not viewed as containing research potential for future researchers will be discarded following a written document authorizing this action from the Texas Historical Commission, Archeology Division.

Report Preparation

A report documenting this project will be prepared following the guidelines established by the CTA and THC. The style of this report will generally follow that adopted by *American Antiquity*. Two paper copies of the draft report will be submitted to the THC for review. A discussion of the project and recommendations for future work will be included. Once approved by the THC, twenty copies of the final report will be submitted for placement in the THC library and distribution to regional libraries. No specific site information will be included in the copies provided for the general public. One copy of the report will be copied on a computer disk and included with the hard copies.

**Appendix II
Shovel Test Log**

Pipeline Survey

Shovel Test	Depth (cm)	Artifacts	Soils	Comments
1	80	No	Clay loam/clay	Pasture, water at 80 cm
2	100	No	Clay loam/clay	Pasture
3	10	No	Clay	Low wet area, water at 10 cm
4	10	No	Clay	Low wet area, water at 10 cm
5	100	No	Disturbed fill/clay	Area filled to stop stream overbank erosion
6	100	No	Disturbed fill/clay	Area filled to stop stream overbank erosion
7	70	No	Disturbed fill/clay	Area filled to stop stream overbank erosion
8	50	No	Clay loam/clay	Plowed field, dug in furrow bottom
9	50	No	Clay loam/clay	Plowed field, dug in furrow bottom

Well Pad Survey

Shovel Test	Depth (cm)	Artifacts	Soils	Comments
1	100	No	Sandy clay loam/clay	Dense weeds
2	50	No	Sandy clay loam/clay	Dense weeds
3	10	No	Water and mud	Near Oyster Creek
4	10	No	Water and mud	Near Oyster Creek
5	100	No	Sandy clay loam/clay	Highest ground in well pad area