

AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED ARCO BLACKSTONE  
MINERAL A-977 #1 GAS PIPELINE IN JASPER COUNTY, TEXAS

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AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED ARCO BLACKSTONE  
MINERAL A-977 #1 GAS PIPELINE IN JASPER COUNTY, TEXAS

BVRA Project Number 01-14

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## **ABSTRACT**

An archaeological investigation of an 1884 foot pipeline (1.3 acres) in western Jasper County, Texas was performed by Brazos Valley Research Associates (BVRA) of Bryan, Texas in July 2001. No archaeological sites were found to exist within the project area, and it is recommended that construction be allowed to proceed as planned.

## **ACKNOWLEDGMENTS**

I am appreciative of the assistance provided by the following individuals. Ron Fossett of Environmental and Safety Professionals, Inc. in Kinder, Louisiana provided maps and were on site during the survey. The Principal Investigator is grateful to the Project Archaeologist (James E. Warren) and the field crew (Arthur Romine and Bobby Jemison) for their assistance during the survey. William A. Martin at the Texas Historical Commission, Archeology Division, served as the reviewer for this project, and his input was valuable to the successful outcome of this investigation. Adrienne Mraz, Research Assistant, at the Texas Archeological Research Laboratory, assisted the Principal Investigator in the records check of the site records for previously recorded sites in and near the project area. The figures were prepared by Lili Lyddon and Ron Fossett.

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## INTRODUCTION

Duke Energy Field Services, Inc. plans to install a 4" gas pipeline along an 1884 foot route (1.3 acres) in western Jasper County, Texas (Figure 1). The proposed pipeline will connect a gas well that is currently under construction (Station 18+84) to an existing pipeline riser (Station 0+00). The maximum width of the pipeline route will be 30 feet; however, the actual ground disturbance or permanent easement will only affect 10 feet; the remaining 20 feet is a temporary work area. The projected depth along the pipeline route is four feet. The project area is depicted on the 7.5' United States Geological Survey topographical map Jasper East (dated 1984 [Provisional Edition]) (Figure 2).

Adrinne Mraz, Research Assistant at the Texas Archeological Research Laboratory (TARL) in Austin, Texas was contacted regarding the presence of previously recorded sites in the project area. After reviewing the Jasper East topographic quadrangle, she stated that no archaeological sites have been recorded at TARL in the project area. There is no evidence that a previous archaeological investigation was done around the well site and along the pipeline route. No sites have been recorded within a 1000 meter parameter of the project area.

Overall, the project area is located in a region known to contain significant archaeological sites. Because of this archaeological potential, a survey by professional archaeologists was requested by the Texas Historical Commission. BVRA was retained by Environmental and Safety Professionals, Inc. of Kinder, Louisiana to examine the proposed pipeline route for the presence of significant archaeological sites. The project number assigned by BVRA is 01-14. The field survey was conducted on July 24, 2001.

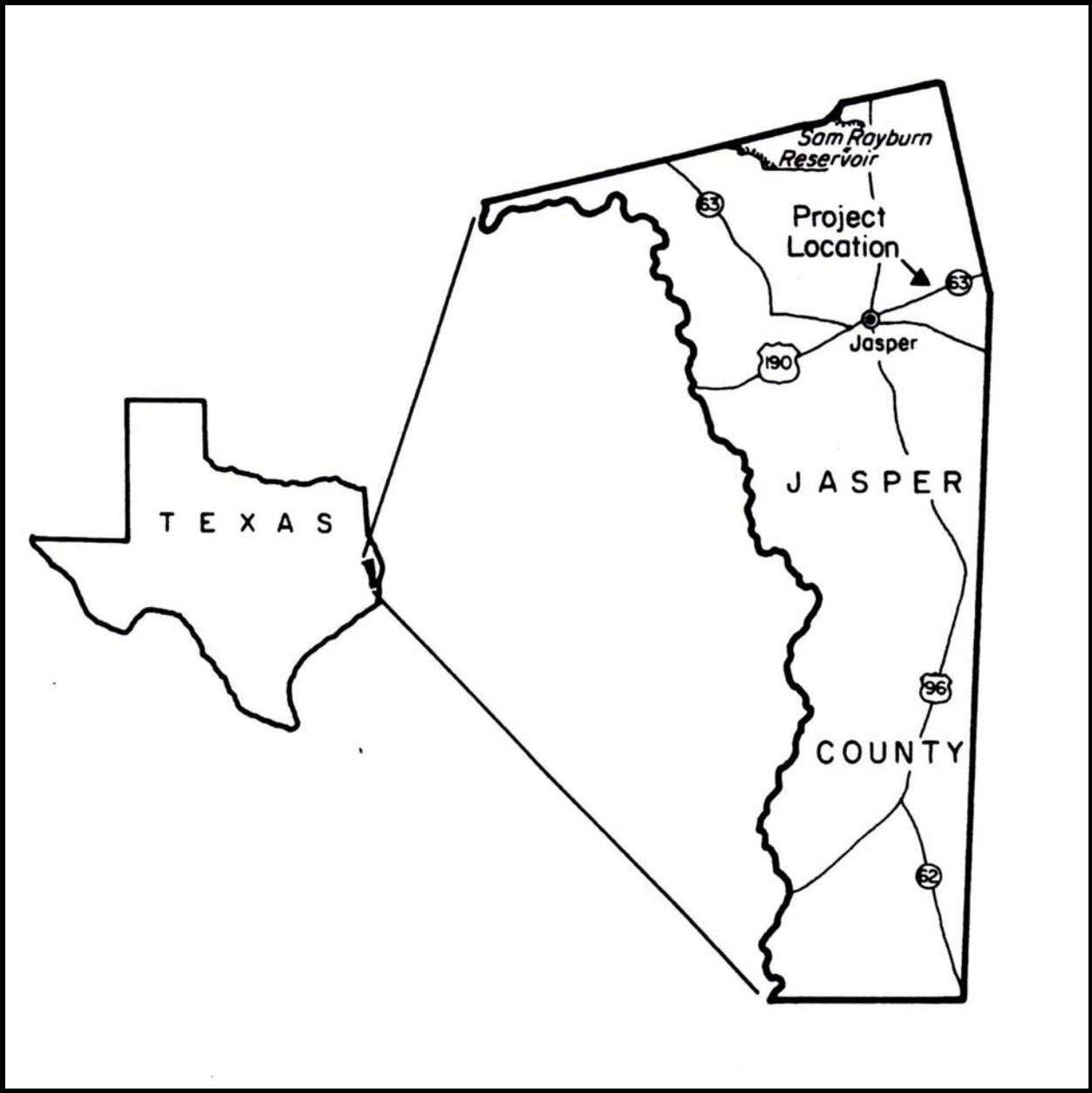


Figure 1. General Location Map

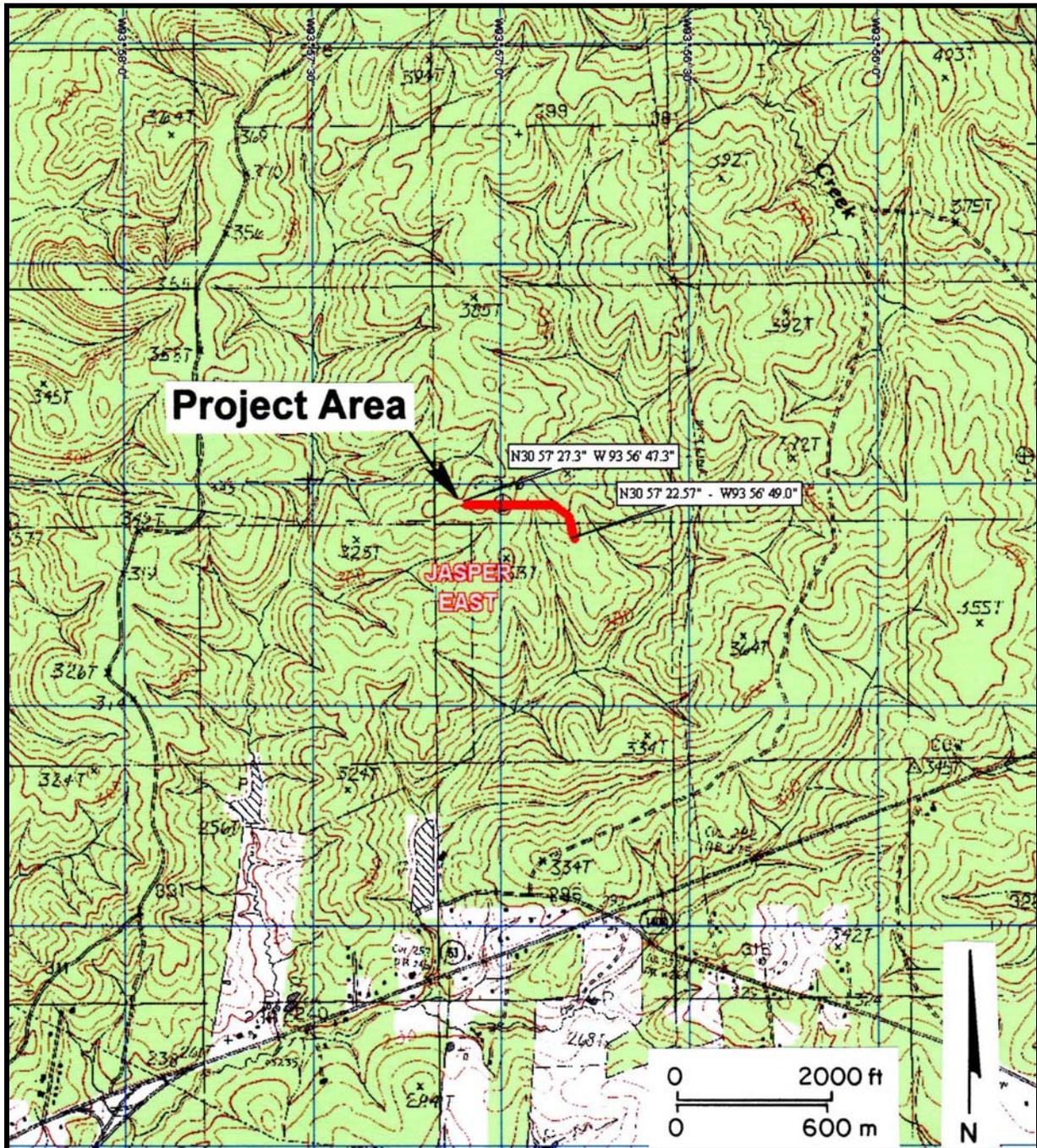


Figure 2. Project Area on Topographic Map Jasper East

## PROJECT SETTING

In general, the project area is located in the lower Gulf Coastal Plain (Fenneman 1938) along the Angelina River valley north of the confluence of that river with the Neches River. This area is within the Austroriparian biotic province (Blair 1950). Specifically, the area consists of mature and second growth upland forests composed of loblolly pine, yellow pine, and hardwoods that include various oaks.

There are two soil types in the project area according to the soil survey for Jasper County (Neitsch 1982:Sheet 7). These are the Letney-Tehran association, undulating (LTC) (Neitsch 1982:30) and the Tehran-Letney association, hilly (TLE) (Neitsch 1982:43-44). The project area depicted on the soils map appears as Figure 3.

LTC soils are deep sandy soils on uplands on broad ridges and side slopes above drainageways. They occupy most of the highest landforms in the survey area. Slopes range from 1 to 8 percent. Letney soils are well drained, and Tehran soils are somewhat excessively drained. Permeability of the soils is moderately rapid, and runoff is slow. The available water capacity is medium for Letney soils and low for Tehran soils. These soils are typically used as woodland.

TLE soils are deep sandy soils on ridge tops and side slopes above drainageways on uplands. Slopes range from 8 to 20 percent. Tehran soils are somewhat excessively drained, and Letney soils are well drained. Permeability of Tehran and Letney soils is moderately rapid, and runoff is slow. The available water capacity is low for Tehran soils and medium for Letney soils.

The project area is situated in an upland setting at the 356 foot contour (gas riser) and 340 feet (well site). The nearest water outside of the project area consists of a tributary of Sandy Creek approximately 580 meters west of the project area. The nearest permanent streams are Bishop Creek, 2500 meters to the east and Sandy Creek, 2100 meters to the west.

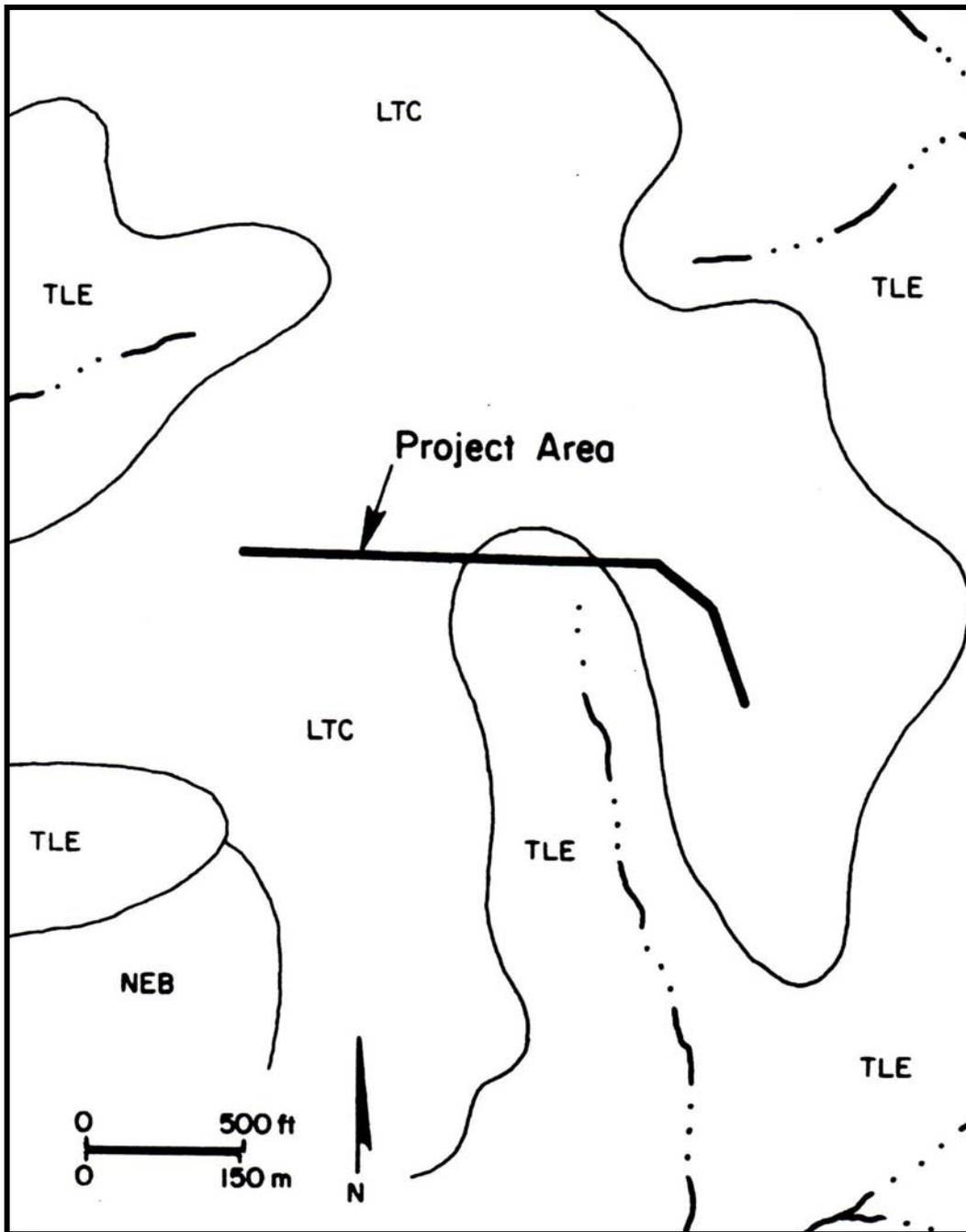


Figure 3. Project Area on Soils Map

## ARCHAEOLOGICAL BACKGROUND

According to a recently published planning document for the Eastern Planning Region of Texas (Kenmotsu and Perttula 1993:Figure 1.1.2), Jasper County is situated within the Southeast Texas archeological study region. In 1985, according to a statistical overview prepared by the Texas Historical Commission (Biesaart et al. 1985:151), Jasper County contained 86 recorded sites. The site files at TARL revealed 149 recorded sites at the time of this survey. In 1985, 0 sites in the county had been excavated, 10 had been tested by hand, 1 had been tested by machine, and 73 had been surface collected. Twenty-three recorded prehistoric sites in the county were listed as Archaic and 54 sites were listed as Late Prehistoric (Biesaart et al. 1985:151). One site contained burials.

In the volume by (Kenmotsu and Perttula 1993:Figure 1.1.3) an evaluation was made regarding density of sites in Texas counties. At this time Jasper County was next to last with 0.001 - 0.1 sites per square mile. In 1993, Jasper County contained 99 recorded archaeological sites. Of this number, 27 were regarded as not significant, 62 were of unknown significance, 9 were probably significant, and 1 was considered to be significant according to National Register criteria (Kenmotsu and Perttula 1993:Table 2.1.1).

Unfortunately, there are major forces that continue to threaten the integrity of archaeological sites in Jasper County. These include population growth (City of Jasper and surrounding area), highway construction, Sam Rayburn Reservoir (formerly McGee Bend), and the lumbering industry.

Although private contract archaeology firms have played a part, most of the archaeological sites known to exist in Jasper County have been identified by surveys associated with reservoir construction and in-house projects by National Forest personnel. The earliest archaeological research in the area was performed in the late 1930s and early 1940s by researchers from The University of Texas at Austin. At that time prehistoric cemeteries and mound sites were considered to be of primary importance. From the late 1940s until the mid 1970s, most of the archaeological research in East Texas was carried out in connection with reservoir construction. In 1948, for example, Robert L. Stephenson published the results of his work at the proposed McGee Bend Reservoir in Angelina, Jasper, Nacogdoches, Sabine, and San Augustine counties (Stephenson 1948a, 1948b). At the time this was the only systematic professional major archaeological investigation in the county. Since that time several studies regarding reservoirs such as Dam "B" (Stephenson 1949), Big Cow Creek (Moir n.d.), and Rockland Lake (Prikrýl (1987) have been published.

It is beyond the scope of this report to discuss in detail the archaeological background of Jasper County, especially when numerous contract reports are available. The interested reader is referred to the statistical overview (Biesart et al. 1985), the planning document published by the Texas Historical Commission (Kenmotsu and Perttula 1993), other reports cited above, and the Abstracts in Contract Archaeology series also published by the Texas Historical Commission for more detailed information regarding the archaeology of Jasper County.

## METHODS

Prior to entering the field, a records check was conducted for BVRA by Adrienne Mraz, Research Assistant at TARL. Ms. Mraz checked the site files for previously recorded sites in the project area. In addition, information pertaining to previous archaeological work in the region was obtained from the library at BVRA. The field survey crew relied on the topographic map Jasper East and the soils book for Jasper County (Neitsch 1982). The method utilized to assess the pipeline consisted of shovel tests and a surface inspection of exposed areas.

The entire length of the project area follows an existing ARCO Mineral Blackstone access road that will connect an existing gas riser to a gas well that is currently under construction. That portion of the project area from the proposed gas well to the point where it turns to the west has been disturbed by road construction. Here, the soil had been pushed by heavy machinery. The rest of the project area also follows the access road, but is just off the road in a thick woods consisting of mixed hardwoods and pine trees.

The field survey crew walked the entire route excavating shovel tests along the way. Since the project area does not exceed 30 feet (9.15 meters) in width, parallel survey transects were not necessary. No tests were dug in the disturbed area. There is only one stream crossing. Approximately 85 meters west of station 13+37 there is a low area where the lower reaches of a tributary of Sandy Creek crosses the pipeline route. Shovel tests 3 and 4 were dug on either side of this tributary. In all, 5 tests were excavated between station 13+37 and 0+00. The first test was dug where the road turns to the west at station number 13+37. All earth excavated through shovel testing was screened using 1/4" hardware cloth, and a shovel test log (Appendix I) was kept. Profiles of the shovel tests were sketched in the field and the tests were drawn on a project area map. The location of all shovel tests is depicted in Figure 4.

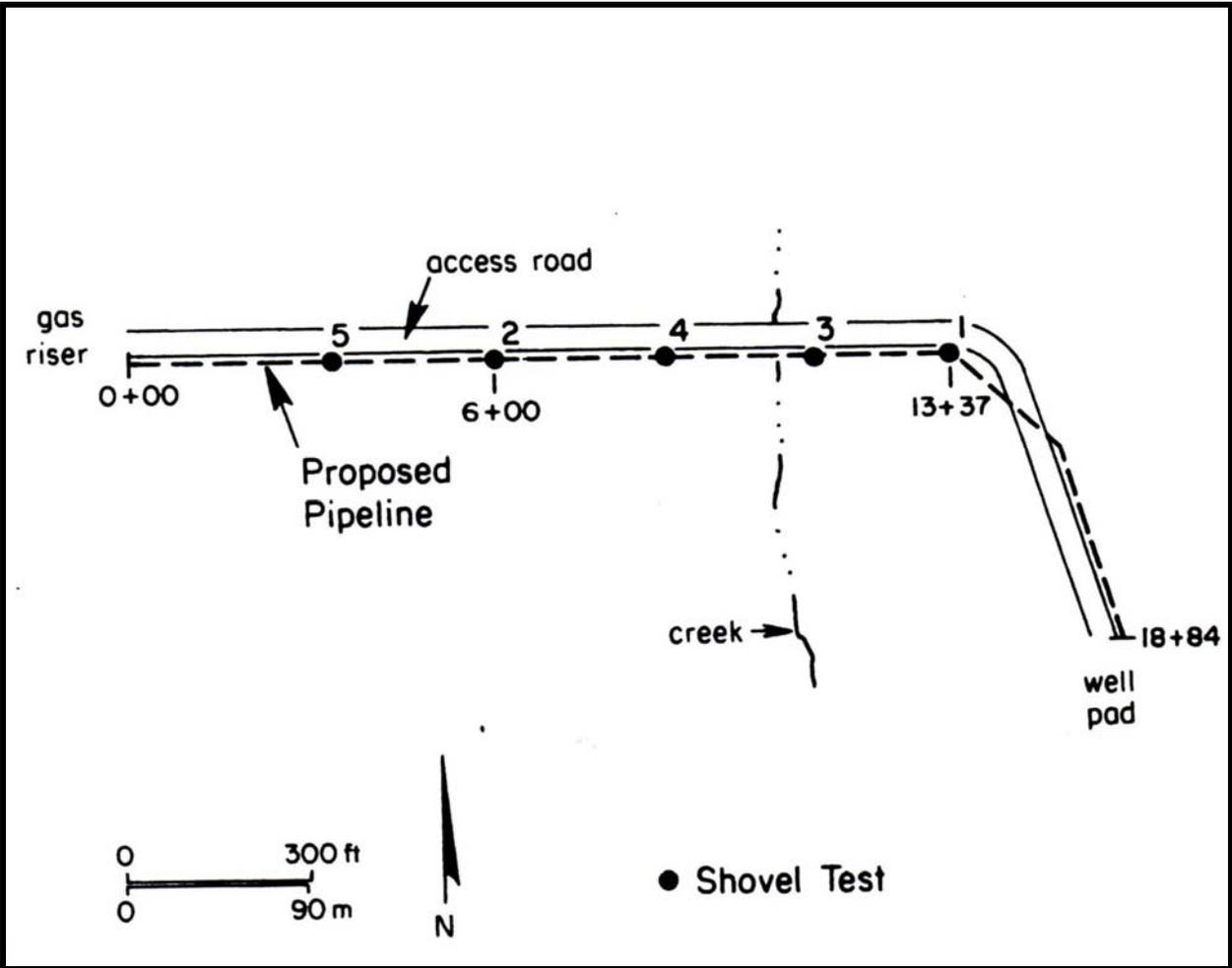


Figure 4. Project Area Map Depicting Shovel Test Locations

## **RESULTS AND RECOMMENDATIONS**

The records check at TARL revealed no previously recorded archaeological site in the project area. Significant sites in the county have been documented by professional studies such as those at McGee Bend. No archaeological sites were found along the 1884 foot project area route. It is suggested here that the entire pipeline right-of-way should be regarded as a low probability for prehistoric sites. BVRA recommends that Duke Energy be allowed to proceed with construction as planned.

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1949 Archeological Survey of Dam "B" Reservoir, Jasper and Tyler Counties, Texas: A Preliminary Report. Unpublished report on file at the Texas Archeological Research Laboratory. Austin.

## APPENDIX I: SHOVEL TEST LOG

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Test	Depth	Description	Results
01	30 cm	loamy sand over red clay	sterile
02	60 cm	loamy sand (not dug to clay)	sterile
03	60 cm	loamy sand (not dug to clay)	sterile
04	70 cm	loamy sand (not dug to clay)	sterile
05	70 cm	loamy sand (not dug to clay)	sterile

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\* Not dug to clay