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**CULTURAL RESOURCES SURVEY FOR  
BURLINGTON RESOURCES OIL & GAS COMPANY'S  
WELL #1H FORT WOLTERS,  
LAKE MINERAL WELLS STATE PARK,  
PARKER COUNTY, TEXAS**

Texas Antiquities Permit Number 4076  
Bureau of Land Management Permit Number 219-2920-05-A

Jesse Todd, MS, MA

Submitted to:

**BURLINGTON RESOURCES OIL AND GAS COMPANY, LP**  
P. O Box 51810  
Midland, Texas 79710-1810

Prepared by

**AR CONSULTANTS, INC.**  
P.O. Box 820727  
Dallas, Texas 75382

Cultural Resources Report 2006-28  
March 28, 2006

HISTORIC BUILDINGS

ARCHAEOLOGY

NATURAL SCIENCES

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## ABSTRACT

An intensive cultural resources survey was conducted of approximately 300 feet of proposed pipeline route and a 375 foot square pad site to be constructed within the uplands of Lake Mineral Wells State Park. The study area is located approximately 5.5 miles northwest of Mineral Wells, Texas in Parker County. The proposed pipeline route is west of and adjacent to Little Reba Road and will be bored beneath the park road that marks the southern boundary of the pad site. The eastern boundary also is Little Reba Road. The survey was necessitated because the Texas Parks and Wildlife Department is a political entity of the State of Texas and the mineral rights are controlled by the Bureau of Land Management; therefore, both federal and state rules apply to the survey. The survey was conducted for Burlington Resources Oil and Gas Company, LP. A concrete and limestone boulder scatter and a small trash scatter were found within the proposed pipeline route and pad site on the surface during the pedestrian survey; however, no cultural materials were discovered in the twelve shovel tests. The material in the trash scatters do not add to the knowledge of the prehistory and history of Parker County and Fort Wolters; therefore, they are probably not worthy for nomination to the National Register of Historic Places.

Since no archaeological sites were found, AR Consultants, Inc. recommends that the project proceed as planned without further consultation. We request that the Texas Historical Commission concur with recommendation. However, if buried cultural materials are found during construction, work should stop in that area and the Texas Parks and Wildlife Department and the Bureau of Land Management be notified immediately.

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## INTRODUCTION

On March 22, 2006, AR Consultants, Inc. conducted an intensive pedestrian archaeological survey of approximately 300 feet of proposed pipeline route and a pad site that measures 375 feet square within the Lake Mineral Wells State Park for Burlington Resources Oil and Gas Company, LP. Subsurface disturbance during drilling will result in the excavation of a mud pit but no reserve pit will be constructed at the request of the Texas Parks and Wildlife Department. The proposed pipeline route and pad site are to be constructed approximately 5.5 miles northeast of the city limits of Mineral Wells in Parker County, Texas. The pad site and pipeline route are located west of and adjacent to Little Reba Road and south and north of and adjacent to a concrete Texas Parks and Wildlife road (Gate 5) and are shown on Figure 1.

The purpose of the survey was to determine if cultural resources were present within the study area, determine how they would be impacted by construction and to make recommendations about their significance. The survey was necessitated because the Texas Parks and Wildlife Department is a political entity of the State of Texas. Texas Antiquities Permit Number 4076 was issued for the archaeological survey. Also, the subsurface mineral rights are owned by the Bureau of Land Management; thus the study area is a split estate. The Bureau of Land Management Permit Number is 219-2920-05-A. Relevant federal legislation includes the National Historic Preservation Act of 1966, as amended (PL-96-515), the National Environmental Policy Act of 1969 (PL-90-190), the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291), Executive Order No. 11593 "Protection and Enhancement of the Cultural Environment," and Procedures for the Protection of Historic and Cultural Properties (36CFR800), Appendix C. The Archeology Division of the Texas Historical Commission will act not only as the state reviewing agency but also as the Section 106 review agency.

This report has been written in accordance with the guidelines for reports prepared by the Council of Texas Archeologists (ND). The following report presents a brief description of the natural environment and cultural history of the vicinity. This is followed by a description of the research design and methodology. The results of the investigation follow and constitute the body of the report. The last chapter presents recommendations that arise from the study. A list of references cited concludes the report.



Figure 1. Burlington Resources' proposed pipeline route and pad site plotted on a portion of the Mineral Wells East, Texas 7.5' USGS map.

Administrative Information:

Sponsor:	Burlington Resources Oil and Gas Company, LP
Review Agency:	Archeology Division, Texas Historical Commission
Principal Investigator:	Jesse Todd, MS, MA
Field Crew:	Lance K. Trask and Todd
Survey Date:	March 22, 2006
Acres Surveyed:	approximately 3.6
Sites Recorded:	
Prehistoric:	None
Historic:	None

## NATURAL ENVIRONMENT

The study area in Parker County is included in the Western Cross Timbers as described by Dyksterhuis (1948:Figure 1). The main belt of the Western Cross Timbers, is comprised of a sparse overstory of post oak (*Quercus stellata*) and blackjack oak (*Quercus marilandica*). The remainder of this region, as mapped by Dyksterhuis, was open grassland prairie which since has been invaded by mesquite and juniper thickets (Diamond, Riskind and Orzell 1986).

The geology of the county is primarily Pennsylvanian in age (Bureau of Economic Geology 1972; Plummer and Hornberger 1935), and it is upon these sandstone formations and overlying soils that the fringe of the Western Cross Timbers is found. Recent Quaternary alluvium is mapped within the floodplain of Rock Creek.

The study area is included in the Truce-Bonti soil association includes gently sloping to steep loams over sandstones or clay loam (Greenwade et al. 1977:General Soil Map). Specific soils within the study area consists of Truce fine sandy loam with 1 to 3 percent slopes, eroded Truce fine sandy loam with 2 to 5 percent slopes and Truce stone soils with 5 to 20 percent slopes (Greenwade et al. 1977:Sheet 21). The subsoil for the Truce series is described as being 8 inches below the ground surface and is described as being reddish-brown whereas the A horizon is brown to dark brown (Greenwade et al. 1977:36).

The area is inhabited by a variety of mammals, birds, reptiles and other animals. This region is included in Blair's Texan biotic region (1950). The Texan is described as being transitional between the forests of eastern Texas and the grasslands of western Texas. There is no evidence of permanent water sources in the survey area and rainfall is the major source of water in Rock Creek when it is flowing. Fortunately, Lake Mineral Wells State Park contains some of the only remaining old growth oaks in the entire Cross Timbers area.



## CULTURAL HISTORY

The prehistory of the general region is thoroughly reviewed in the South Bend Reservoir survey report (Saunders et al. 1992:Chapter 4) and in the survey report on the Texas Army National Guard's Fort Wolters Facility (Brownlow, Prikryl, Gustavson, Garner and Collins 1999) and is not repeated here. Suffice it to say that the North-Central Texas region, and more specifically the Central Brazos River Watershed (Skinner 1981), has been continuously inhabited by Native Americans since as early as 7,000 B.C. and probably even earlier based on the finding of older dart points in eroded areas and in mixed contexts (Meltzer and Bever 1995:Table 1). Prehistoric sites have been described at numerous locations within the river and creek valleys as well as on the bluffs that overlook these valleys. Sites include deeply buried and vertically stratified deposits such as the Harrell site in Young County (Krieger 1946), as well as mounds of burned rock, midden deposits that contain an abundance of freshwater mussels, lithic workshops and rock overhangs that were inhabited. There appears to have been a heavy occupation during the Late Archaic period, but occupation was continuous by the prehistoric residents who apparently practiced a seasonal round supported by a hunting and gathering economy. It appears likely that about eight hundred years ago the local economy shifted to a more "Plains"-oriented subsistence pattern that is reflected by an increase in Plains-adapted animals, particularly the buffalo, and in a tool kit that included specialized scrapers, arrow points and pottery.

Evidence of historic Native American occupation at the South Bend Reservoir and at Fort Wolters is absent. This pattern has been reported through much of North-Central Texas (Skinner 1988), even though historic documents refer to the presence of historic Native American groups in the region during the 1700s and 1800s.

Historical archaeology of the region has focused on residential sites such as the George Jowell Ranch house which was moved from central Palo Pinto County to Lubbock in 1973 (Jackson 1975). The ranch house is a two-story building. The building is now part of the Texas Tech University Ranch Museum. Another family fort has been described at the Coho and Mary Jane Smith site in Parker County (Skinner and Whorton 1993; Whorton and Skinner 1994), and the Black Springs Fort has been described in Palo Pinto County (Ubil 1994a). Ubil (1994b) has also described a rural farm site at the William Morgan Farm site in Palo Pinto County.

Although Palo Pinto County was created by the state Legislature in 1856 and organized in 1857, it remained predominantly Indian country and open range, settled by only a few, hardy Anglo ranchers and their families for two decades. The coming of the railroad and the fencing movement in 1880 considerably changed the county's demography and economic base.

What today is Mineral Wells was settled by J. A. Lynch in 1877. He laid the town out in 1881 and by 1882 a stage line operated between Mineral Wells and Millsap which was the terminus for the Texas and Pacific Railway. Lynch dug the first well in the city and cured his rheumatism with the foul-tasting water. After 1885, the town became known as a health resort. By 1891, a railroad reached the town and the first resort hotel, the Hexagon House, was built in 1897. By 1920, the town had 400 mineral wells. The population boom between 1940 and 1970 can be attributed to the military presence of Camp/Fort Wolters. After 1975, the rise in population can be attributed to the many manufacturing businesses within the city (Hunt 2006:1).

Lake Mineral Wells State Park which consists of approximately 2,905 acres was originally part of Camp Wolters which was established in 1926. The lake and area surrounding the lake was given to the Texas Parks and Wildlife Department by the City of Mineral Wells which built the lake for water supply. The terrain in the park ranges from steep hills and deep ravines to generally level areas. Some open savannah is present and oaks are scattered throughout the flat areas while the ravines contain trees of cedar, elm, pecan, cottonwood and red oak (Long 2006:1). Structures dating from the Civilian Conservation Corp (CCC) and Works Progress Administration (WPA) along with the original Camp Wolters and the Viet Nam era aged structures are present in the park as well and are protected by the Texas Parks and Wildlife Department.

### **Previous Investigations**

Survey of the Texas Army National Guard's Fort Wolters Facility (Brownlow, Prikryl, Gustavson, Garner and Collins 1999; Brownlow 2001) and at Lake Mineral Wells State Park demonstrated the presence of prehistoric occupation ranging from the Late Archaic to the Late Prehistoric as well historic sites, many related to the construction of Fort Walters. Testing at four sites revealed buried deposits containing stone-lined hearth features, dateable charcoal, and faunal remains from the Late Archaic and Late Prehistoric periods. The historic structures dating from World War II to the Viet Nam era found in the park occur during some of the most significant times in the history of the United States. Two wars and the aftermath of World War II, the creation of the WPA/CCC, are documented by the presence of the structures

According to the Texas Archeological Sites Atlas (2006), three sites, 41PR8, 41PR47 and 41PR70 are in close proximity to the study area. Site 41PR47 is approximately one-fourth mile almost due east of the study area. The site consists of lithic scatter of unknown age (Brownlow et al. 1999:40). Site 41PR70 is a dirt airstrip dating possibly between 1951 and 1973 (Brownlow et al. 1999:41). Site 41PR8 north of the study area is an artillery impact zone with craters (Texas Archeological Sites Atlas 2006).

## RESEARCH DESIGN AND METHODOLOGY

Prior to conducting the field investigation, AR Consultants, Inc. reviewed previous reports and records regarding cultural resource sites in the vicinity of the study area. Several sites were found in the files at the Texas Archeological Sites Atlas (2006) and the Fort Wolters Report, but none were within or in close proximity to the proposed pipeline route and pad site. A check of the National Register of Historic Places (Steely 1984; Texas Historical Commission 1994) and the list of Texas Historical Commission markers (Awbrey and Dooley 1992) indicated that no significant sites contained in these reports are in the survey area.

### Research Design

Based on past surveys in this area and in the surrounding counties, it was predicted that prehistoric habitation was likely to be found along the upland at the edge of the floodplain where water was available nearby but where protection from flooding was possible. It was unlikely that buried prehistoric sites would be present, particularly since Rock Creek is mapped as an intermittent drainage.

The study area may have been occupied prior to World War II, but cisterns, root cellars and house remains are probably the only evidence of their existence because they were probably bulldozed during the construction of the fort. Also, structures might be present dating from World War II to the Viet Nam era.

### Methodology

Pedestrian survey of the proposed pipeline route was conducted by the two archaeologists walking about 10 meters apart forming north-south oriented transects. The proposed pipeline route is approximately 300 feet wide and the right-of-way is 45 feet wide. Since the pipeline route is in an upland setting, shovel testing was done where the potential to discover cultural materials was high. The pad site was walked using north-south oriented transects spaced approximately 30 meters apart. The Council of Texas Archeologists (2002) has recommended that two shovel tests per acre be excavated for tracts of land that contain three to ten acres. This was not followed due to the close proximity of sites to the study area and undulating nature of the terrain. Shovel tests were placed in elevated areas with ground visibility less than 30 percent. Areas with greater than 30 percent ground visibility were not tested. In addition to the pedestrian archaeological survey of the study area, a buffer of at least 50 meters was examined to the north and west of the study area. The survey of the buffer zone was to insure that no indirect impact would occur to archaeological sites found outside the survey area. No buffer zones east and west of the study area were examined due to the presence of Litte Reba Road and the concrete park road. The buffer was not shovel tested but examined visually.

Notes on the vegetation, terrain and other relevant matters were taken as were photographs. Dirt from the shovel tests was screened through a ¼ inch hardware screen and the pit walls were examined visually for cultural materials. Due to the upland setting, shovel tests were excavated to approximately 35 centimeters below the surface.

Backhoe trenching was not done due to the shallow depth to the subsoil which is described as being 8 inches below the surface according to the Soil Conservation Service soils book for Parker County, Texas.

## RESULTS

The Results section is divided into three parts. The first part describes the survey area and the second the survey. Conclusions, the third part, end the chapter. Shovel tests are described generally in the text and specific information is provided in Table 1. Shovel test locations are shown on Figure 3.

### The study area

The study area consists of undulating terrain. Trees include hackberry, eastern red cedar, bois d'arc and mesquite. Understory vegetation includes grama grasses, Johnson grass, saw greenbriar, grape vine, prickly pear and jumping cactus as well as native grasses and bushes. The typical vegetation and spacing of trees is shown in Figure 2. The unnamed, intermittent drainage that runs through the study area ranges from a meter to three meters deep and from one-half to a meter wide. The substrate consists of clay with limestone and sandstone gravel and cobbles. The creek is dry. The creek does fan out as shown on Figure 1 before encountering the concrete road that marks the southern boundary of the pad site. Ground visibility ranged from less than 10 percent to 100 percent. Eye-height visibility was good.



Figure 2. Vegetation within the pad site. Red flag marks center of pad site. View is to the northwest.

## The survey

The proposed pipeline route was examined first. Survey began where the route crossed onto the Lake Mineral Wells Park from private property. No cultural materials were seen on the surface until approximately 25 meters south of the concrete park road which marks the boundary of the pad site. A scatter of concrete and large limestone boulders was encountered. Also one of the concrete blocks had a large metal cable attached to it. The scatter is approximately 20 feet square. Shovel test 1 was placed in the center of the scatter and encountered 4 centimeters of sandy clay overlying fine sandy clay which overlaid bedrock at 39 centimeters below the ground surface. No cultural materials older than 50 years were found in the shovel test. No doubt, the scatter is a result of construction materials being deposited as trash along the concrete park road which was built probably for the original Camp Wolters. Another possibility is that they are remnants from construction during CCC/WPA activities.

The pad site was examined next. Eleven shovel tests were excavated within the pad site, eight on the east side of the intermittent drainage and three on the west side. As previously mentioned, shovel tests were excavated on elevations and where ground visibility was less than 30 percent. All of the shovel tests were sterile and the subsoil appears to be on the ground surface. All of the soil was moist except for the lower zone in shovel test 11. Shovel tests 2 and 3 encountered the same sandy clay found in the upper 4 centimeters of shovel test 1 and were terminated at 37 and 38 cm below the ground surface, respectively. Shovel test 4 uncovered the same sandy clay but a fine sandy clay at 25 centimeters that extended to 35+ centimeters below the surface. Shovel test 5 had the same results as shovel test 4 but the horizon boundary was at 24 centimeters and the shovel test was terminated at 42 centimeters below the ground surface.

Shovel tests 6 through 8 encountered fine sandy clay. The shovel tests were terminated at 35, 42 and 37 centimeters below the ground surface, respectively. Shovel tests 9 and 10 uncovered the same soils as in shovel test 1 but the contact was at 38 and 33 centimeters below the surface, respectively and the shovel tests were terminated at 44 and 39 centimeters, respectively. However, shovel test 10 encountered sandstone bedrock at 39 centimeters below the surface before being terminated.

Shovel test 11 was unusual in that the dry soil was encountered at 47 centimeters below the surface. The upper 47 centimeters was a reddish-brown sandy clay and the dry soil was reddish-yellow sandy loam. Shovel test 12 uncovered the same soils as shovel test 1, 10 and 11 but the contact was at 33 centimeters and the shovel test was terminated at 37 centimeters below the ground surface. The fine sandy clay appears to overlie the sandstone bedrock which was encountered in shovel tests 1 and 10.

During the pedestrian survey a culvert and culvert wall was found north of and beside the concrete park road that the intermittent drainage flows under. The culvert wall has wings on both ends and is made of cemented native sandstone. The walls' wing tips are about 18 inches long and the straight portion of the wall top is approximately 148 inches long. The wall's overall length is about 174 inches and is 44 inches deep. The drainage pipe is

approximately 27.5 inches in diameter and made of concrete. The culvert and wall are shown in Figure 4. Another culvert and culvert wall are on the south side of the road, but since it is out of the survey area, it was only photographed and not described. The culvert was probably constructed during the CCC/WPA era.

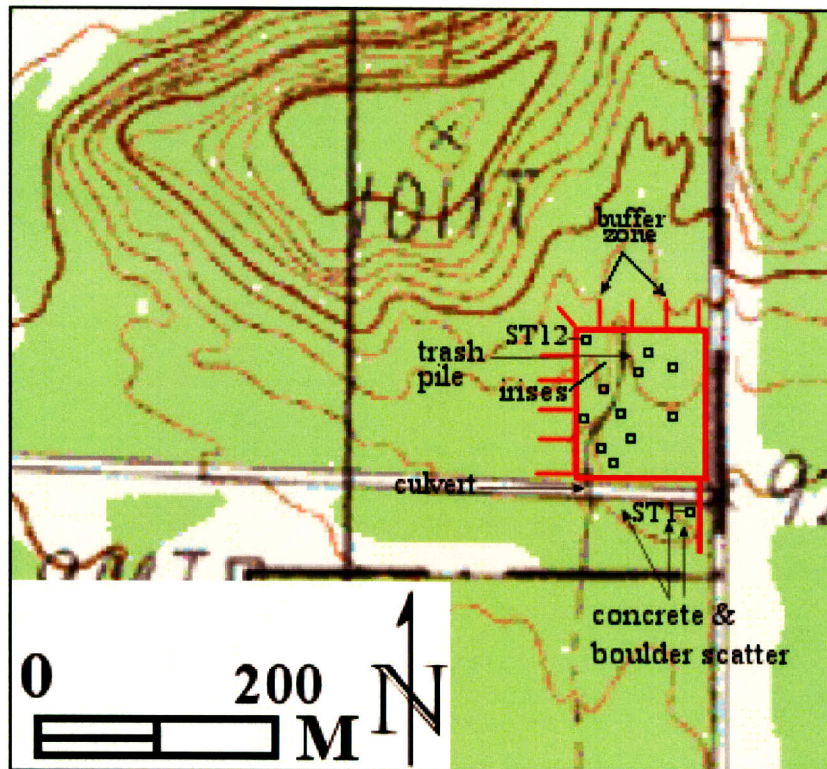


Figure 3. Shovel test locations for the Lake Mineral Wells State Park proposed pipeline route and pad site plotted on an enlarged portion of the Mineral Wells East, Texas 7.5' USGS map.

A small historic trash pile was found approximately 6 meters north northeast of shovel test 11. The trash pile consists of a few metal cans, a metal wash basin, a metal tea kettle and a screw-top glass bottle. One of the metal cans had a large opening in the top that was surrounded by a rim. The can looked as if it had a plastic top or some other form of top that covered it. Irises were found approximately 5 meters southwest of the trash pile. A fence with three rocks aligned beneath it was adjacent to the irises. Despite an intense investigation within a 50+ meter radius around the irises, no cistern, root cellar, storm cellar or house foundation was found. The tail fin of a small exploded bomb was found within the north buffer zone.



Figure 4. Lance Trask standing next to the culvert and culvert wall on the north of the concrete park road that marks the southern boundary of the pad site. View is to the southwest.

### Conclusions

The culvert should not be impacted by construction within the pad site. The irises and trash pile are within the buffer zone and neither should be impacted by construction. This is discussed further in the Recommendations section of the report. The absence of prehistoric archaeological sites may be due to the distance to water. Site 41PR47 is closer, approximately one-fourth mile to Rippy Branch and water than the study area which is slightly more than one-half mile to Rock Creek. The failure to find any structure associated with the irises is frustrating; therefore, great care should be taken to prevent any impact to the area because the presence of the irises may indicate a small cemetery where the markers were removed, if they were present to begin with.



Table 1. Shovel test descriptions. All soil is moist except for soil below 47 cm in ST 11.

ST No	Depth (cm)	Description*
1	0-4 4-39 39+	Reddish-brown (5YR4/4) slightly sandy clay Yellowish-red (5YR4/6) fine sandy clay Sandstone bedrock
2	0-37+	Reddish-brown slightly sandy clay
3	0-38+	Reddish-brown slightly sandy clay
4	0-25 25-35+	Reddish-brown slightly sandy clay Brown (7.5YR4/4) fine sandy clay
5	0-24 24-42+	Reddish-brown slightly sandy clay Brown fine sandy clay
6	0-35+	Brown fine sandy clay
7	0-42+	Brown fine sandy clay
8	0-37+	Brown fine sandy clay
9	0-38 38-44+	Reddish-brown slightly sandy clay Yellowish-red fine sandy clay
10	0-33 33-39 39+	Reddish-brown slightly sandy clay Yellowish-red fine sandy clay Sandstone bedrock
11	0-47 47-49	Reddish-brown slightly sandy clay Reddish-yellow (7.5YR6/6) sandy loam
12	0-33 33-37+	Reddish-brown slightly sandy clay Yellowish-red fine sandy clay

- Munsell color numbers are presented the first time used in the table and are not repeated

## **RECOMMENDATIONS**

No archaeological sites were discovered during the intensive pedestrian archaeological survey or in the shovel tests; therefore, the project will not have an effect on historic properties. We request the Texas Historical Commission's concurrence on our findings and recommendation that the project proceed without further cultural resource coordination. However, if buried cultural resources are discovered during development, work should immediately cease in that area, and the Texas Parks and Wildlife Department be notified as should the Bureau of Land Management.

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