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AN ARCHAEOLOGICAL SURVEY

OF THE PROPOSED

WYATT EARP FEDERAL GAS WELL #1 SITE

AND

ASSOCIATED PIPELINE ROUTE,

WISE COUNTY, TEXAS

Jesse Todd, MS, MA

Prepared for

KBA ENVIROSCIENCES, LTD
359 Lake Park Road, Suite 110
Lewisville, Texas 75057

Prepared by

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11020 Audelia Road, Suite C105
Dallas, Texas 75243-9085

Cultural Resources Report 2007-30
July 18, 2007

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ABSTRACT

AR Consultants, Inc. conducted an archaeological survey of the proposed Wyatt Earp Federal #1H Well Pad Site and approximately 1,500 feet of associated pipeline route located on United States Department of Agriculture (USDA) Forest Service land, LBJ National Grasslands approximately 6 miles northeast of Alvord in Wise County, Texas. The proposed pipeline route begins at CR 900a and runs southwest and terminates at the proposed well pad site. The survey was conducted for KBA EnviroSciences, Ltd. which is doing the environmental permitting for Aspen Operating Company, LLC. No cultural materials were seen on the ground surface during a comprehensive pedestrian archaeological survey or encountered in ten shovel tests.

Based upon the absence of archaeological sites, AR Consultants, Inc. recommends that further archaeological investigations are unwarranted within the proposed pipeline route and well pad site. We further recommend that if buried archaeological materials are uncovered during construction, work should immediately cease in that area and the Texas Historical Commission and the USDA Forest Service should be notified. Work should not continue until discussions with the above agencies have been completed.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

In early July 2007, AR Consultants, Inc. conducted an intensive pedestrian archaeological survey of the proposed Wyatt Earp Federal Gas Well #1 and associated pipeline route which is located approximately 6.34 miles slightly northeast of Alvord in Wise County, Texas. The proposed well pad site's dimensions are 230x175 feet and the pipeline route is approximately 1,500 feet long with a 50 feet right-of-way. The proposed well pad site is located approximately 1.49 miles northwest of CR 2461 and about 2.4 miles southwest of CR 2560 LBJ Grasslands (Figure 1). The survey was conducted for KBA EnviroSciences, Ltd. which is doing the environmental permitting for Aspen Operating Company, LLC.

The archaeological survey was done at the request of the United States Department of Agriculture Forest Service in a letter dated May 23, 2007. The purpose of the survey was to determine if cultural materials were present, make recommendations about their significance and how they might be impacted by the construction. Since the United States Department of Agriculture, Forest Service is the land owner, 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), and the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291). This report has been prepared following the guideline outlined by the Council of Texas Archeologists (ND).

NATURAL SETTING

The proposed pipeline route is included in the Western Cross Timbers vegetative area which runs through the northern portion of Wise County. Water from the study area drains into Denton Creek (Ressel 1989:1). The well pad site and pipeline route lie within the Texan Biotic Province which contains at least 49 mammal species, 39 snake species and 17 species of reptiles and amphibians. Common forms of fauna include deer, raccoon, opossum, rabbit, lizards and turtles (Blair 1950:101-102).

The soil association is Duffau-Keefer-Weatherford which consist of gently sloping to sloping upland sands and loams (Ressel 1989:General Soils Map). The Lower Cretaceous-aged Paluxy Formation is the source bed for the soils (Ressel 1989:123). The specific soil that the well pad site and pipeline route are to be constructed on is the Weatherford-Duffau complex with 3 to 8 percent slopes (Ressel 1989:Sheet 12). The deepest subsoil is the Duffau which is listed as 16 inches (40 cm) below the ground surface (Ressel 1989:97).

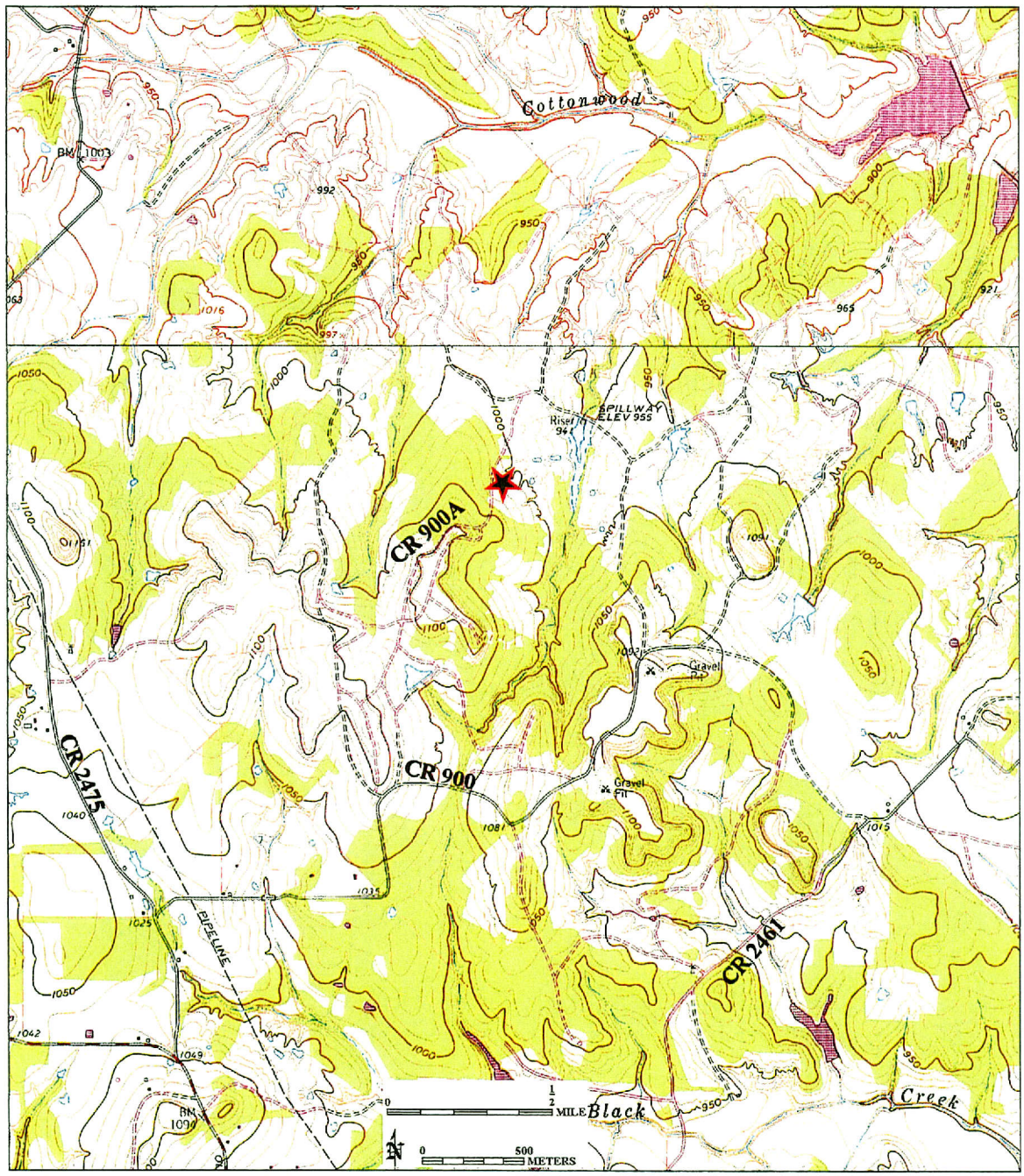

Figure 1. Proposed Wyatt Earp Federal Gas Well #1 and associated pipeline route shown by a red star portions of the Pecan Creek and New Harp, Texas 7.5' USGS maps.

PREVIOUS INVESTIGATIONS

Prior to the survey, the Texas Archeological Sites Atlas (2007) was consulted for sites listed that were in or adjacent to the proposed gas pipeline route. No upland (or Uvalde) gravels are mapped by the Bureau of Economic Geology (1967). Studies in Wise County by Jurney, Winchell and Moir (1989) within the grasslands indicate that the archaeological potential is low along intermittent drainages, but higher where perennial water is present such as major streams and springs.

RESEARCH DESIGN

Based upon the results of archaeological surveys in Wise County, it was presumed that prehistoric sites would not be found in the upland situation where no perennial water is present. Prehistoric sites have been recorded further east along Denton Creek where perennial water is present. Historic sites were not expected to be present due to the distance from roadways,

METHODOLOGY

After a discussion with Mr. John Ippilito of the USDA Forest Service, shovel tests were excavated every 100 m along the proposed pipeline route and five (5) shovel tests were excavated within the well pad site. Due to the upland setting, shovel tests were excavated to approximately 35 cm below the ground surface. The sandy loam was screened through a 1/4-inch hardwire screen and the pit walls were inspected visually for cultural materials. The proposed pipeline route was walked by the archaeologists spaced 10 m apart in a general southwest direction and the well pad site was investigated using northeast-southwest oriented transects spaced 15 m apart. Notes on the terrain, vegetation and other relevant information were taken as were photographs. Deep testing was unnecessary due to the upland nature of the terrain where no alluvium was present and the shallow depth to the subsoil.

RESULTS

In this portion of the report the survey is presented. The study area is discussed first and is followed by a description of the survey area. Shovel tests are described generally in the text and specific information can be found in Table 1. Shovel test locations plotted on Figure 4.

The study area

From CR 900A, the land slopes rather steeply for about 150 m and then becomes undulating. The proposed pipeline route is to be constructed across unimproved pasture and the well pad site is in forest/grassland savannah. Understory vegetation includes broomweed, black-eyed susans, beggar's lice, puffweed, blood bush and native grasses and bushes. Trees consist of hackberry, oak and eastern red cedar. Ground visibility was

less than 10 percent for the first 125 m of the proposed pipeline route (Figure 2) and then was at least 70 percent for the rest of the route (Figure 3). Ground visibility in the savannah area for the well pad site was at least 30 percent. Eye-height visibility was excellent along the proposed trail and at least 50 m in the savannah portion of the study area.

The survey

Shovel tests 1 through 5 were placed along the proposed pipeline route which is adjacent to a fence line. Shovel test (hereafter ST) 1 was placed approximately 20 m southwest of CR 900A and uncovered 9 cm of sandy loam overlying sandy clay subsoil that extended to 33 cm below the ground surface. Shovel test 2 encountered 10 cm of sandy loam overlying 20 cm of sandy clay subsoil which overlaid a different sandy clay to 35 cm below the ground surface. Sandy loam was encountered in STs 3, 4 and 5 at 33, 35 and 36, respectively. The shovel tests were culturally sterile and no cultural materials older than 50 years were seen on the ground surface during the archaeological survey of the proposed pipeline route.

Shovel test 6 was placed at the northeast corner of the well pad site and uncovered 36 cm of sand whereas ST 7, which was placed in the southeast corner, encountered 38 cm of sandy clay subsoil. Shovel test 8 was placed where the well bore is to be and uncovered 15 cm of sandy loam overlying very fine sand subsoil. Shovel test 9 was placed in the northwest corner of the proposed well pad site and encountered 15 cm of sandy loam overlying sand subsoil. The last shovel test, ST 10, was excavated in the southwest corner and uncovered 36 cm of sandy clay subsoil. Note that STs 7 and 10 encountered subsoil on the ground surface. No cultural materials older than fifty years were seen on the ground surface or uncovered in the five shovel tests within the proposed well pad site.

Table 1. Shovel test descriptions.

ST No.	Depth (cm)	Description*
1	0-9	Very dark grayish-brown (10YR3/2) sandy loam
	9-33+	Brown (7.5YR4/4) sandy clay
2	0-10	Very dark grayish-brown sandy loam
	10-30	Brown sandy clay
	30-35+	Yellowish-red (5YR4/6) sandy clay
3	0-33+	Yellowish-brown (10YR5/4) very fine sandy loam
4	0-35+	Yellowish-brown very fine sandy loam
5	0-36+	Yellowish-brown very fine sandy loam
6	0-36+	Very pale brown (10YR6/3) very fine sand
7	0-38+	Strong brown (7.5YR4/6) sandy clay
8	0-15	Brown sandy loam
	15-37+	Pale brown very fine sand
9	0-7	Forest duff
	7-34+	Very pale brown very fine sand
10	0-36+	Strong brown sandy clay

* Note: Munsell Color Chart Numbers are listed only the first time they are used.

Figure 2. Where the pipeline route is to be constructed just southwest of CR 900A. The gate in the background is where the road is located. View is to the northeast.

Figure 3. Proposed pipeline route along the fence and southwest of Figure 2. Note the good ground visibility. View is to the southwest.

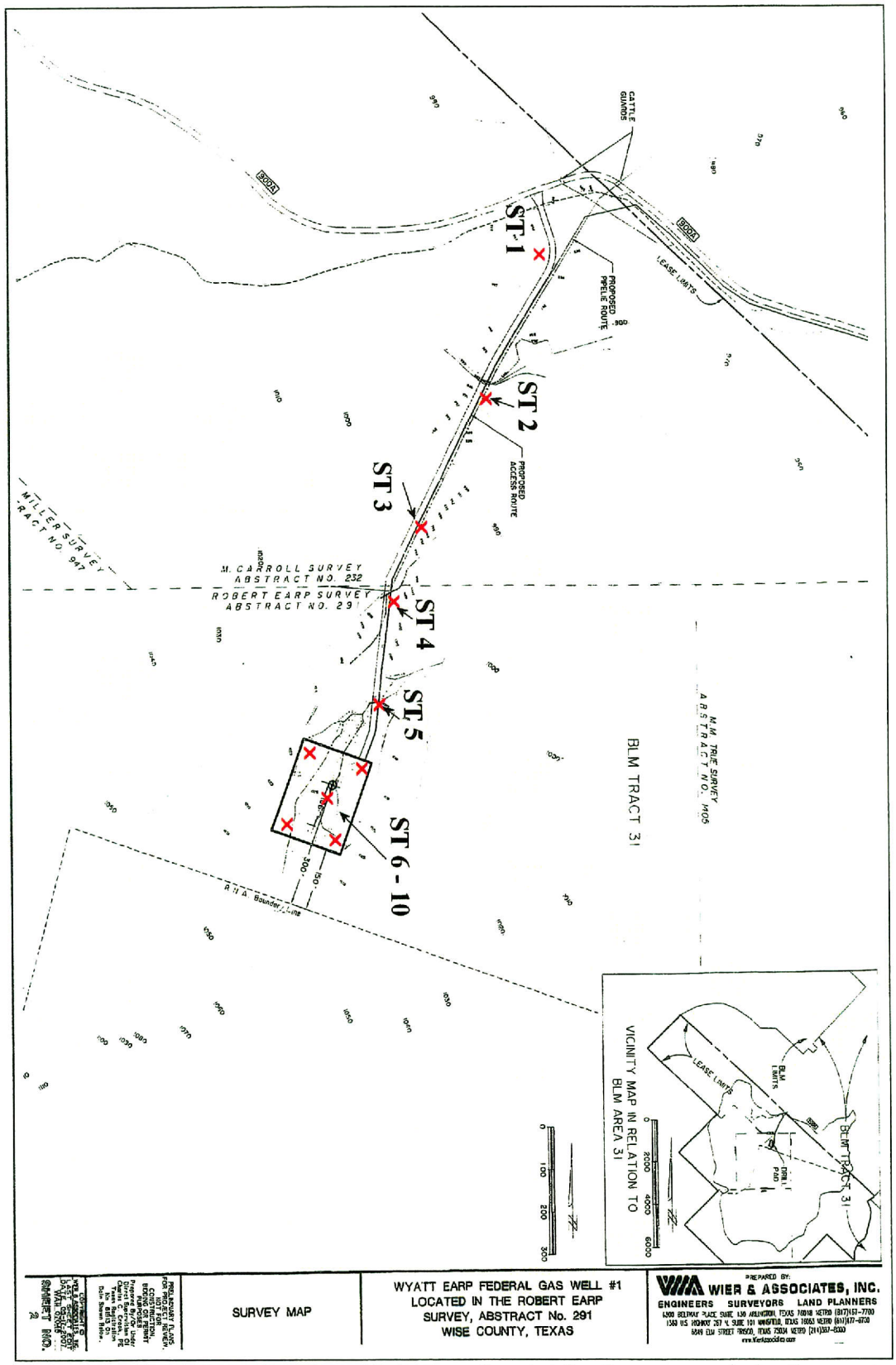

Figure 4. Shovel test locations plotted on the plat for the proposed pipeline route and well pad site. Plat provided by Aspen Operating Company, LLC.

CONCLUSIONS AND RECOMMENDATIONS

No cultural materials older than fifty years were seen on the ground surface despite the good ground visibility or uncovered in the 10 shovel tests excavated within the study area. The absence of prehistoric sites is probably due to the lack of perennial water. The fact that no knappable lithic materials were present also may have played a role in the absence of prehistoric sites. No historic sites were expected to be present and none were found, probably due to the distance of the well pad site from a roadway.

Based upon the absence of archaeological sites, AR Consultants, Inc. recommends that further archaeological investigations are unwarranted within the proposed pipeline route and well pad site. We further recommend that if buried archaeological materials are uncovered during construction, work should immediately cease in that area and the Texas Historical Commission and the United States Department of Agriculture Forest Service should be notified. Work should not continue until discussions with the above agencies have been completed.

REFERENCES CITED

Blair, Frank W.
1950 The Biotic Provinces of Texas. *The Texas Journal of Science* 2(1):93-117.

Bureau of Economic Geology
1967 *Geologic Atlas of Texas: Sherman Sheet.* University of Texas, Austin, Revised 1991.

Council of Texas Archeologists
N.D. Guidelines for the Content of Cultural Resource Management Reports. Distributed by the Archeology Division of the Texas Historical Commission.

Jurney, David H., Frank Winchell and Randall W. Moir
1989 *Cultural Resources Overview of the National Grasslands in North Texas.* Archaeology Research Program, Institute for the Study of Earth and Man, Southern Methodist University, Dallas.

Ressel, Dennis D.
1989 *Soil Survey of Wise County, Texas.* USDA, Soil Conservation Service in cooperation with the Texas Agricultural Experiment Station and the Texas State Soil and Water Conservation Board.

Texas Archeological Sites Atlas
2007 Search for sites listed on the Pecan Creek and New Harp, Texas 7.5' USGS maps. Texas Historical Commission internet site.