AR Consultants, Inc.

Archaeological and Environmental Consulting
P.O. Box 820727, Dallas, Texas 75382-0727
Phone: (214) 368-0478
Fax: (214) 361-6762

E-mail: arcdigs@aol.com

AN ARCHAEOLOGICAL SURVEY OF THE PROPOSED JONAH PLANT NO. 8 STORAGE TANK SITE, WILLIAMSON COUNTY, TEXAS

Texas Antiquities Permit Number 4009

Jesse Todd, MS, MA

Prepared for

DUFF CONSULTING ENGINEERS, INC.
4201 North Nineteenth Street
Waco, Texas 76708

Prepared by

AR CONSULTANTS, INC.
P. O. Box 820727
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Cultural Resources Letter Report 2006-03
February 6, 2006

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ABSTRACT

An intensive cultural resources survey was conducted of approximately 10 acres upon which the Plant No. 8 Elevated Storage Tank and related pipelines will be constructed. The survey was conducted for Duff Consulting Engineers, Inc. which is doing the engineering and environmental work for Jonah Water Special Utility District. The proposed storage tank site is located approximately 4.2 miles northeast of Round Rock in Williamson County, Texas. The 10 acre tract is located in the uplands adjacent to CR 110 just northeast of its intersection with CR 109. The soil is classified as eroded and had been farmed and terraced in the past. No prehistoric or historic sites were found during the pedestrian survey or in the 20 shovel tests. A thin soil is present overlying limestone bedrock. No chert was found in the limestone boulders exposed on the surface.

AR Consultants recommends that further archaeological investigations are unwarranted within the proposed ten acre tract based upon the absence of archaeological sites. We further recommend that if buried archaeological materials are uncovered during construction, work should immediately cease in that area and the Archeology Division of the Texas Historical Commission should be notified.

INTRODUCTION

On February 2, 2006, AR Consultants, Inc. conducted an intensive pedestrian archaeological survey of 10 acres upon which Plant No. 8 Storage Tank and related pipelines will be constructed. The survey was done for Duff Consulting Engineers, Inc. which is designing and doing the environmental analysis for Jonah Water Special Utility District. The survey was necessitated because Jonah Water Special Utility District is receiving funds from the Texas Water Development Board which is a political entity of the State of Texas. The Texas Historical Commission issued Texas Antiquities Permit Number 4009 for this project and the Archeology Division will review this report. The report has been formatted as per the guidelines used by the Texas Historical Commission.

The 10 acre tract is located approximately 4.2 miles northeast of Round Rock in Williamson County, Texas. The proposed elevated tank site and related pipelines are to be constructed northeast of and adjacent to CR 110 shortly northeast of its intersection with CR 109.

NATURAL SETTING

Williamson County is located in the Coastal Plain of South Central Texas and is crossed by the Balcones Escarpment. The only principal waterway in the county is the San Gabriel River but it has several tributaries. However, the northern portion is drained by creeks that run into the Lampasas and Little rivers north of the county. The terrain is flat to gently rolling. Soils in the eastern portion of the county are mostly "Blackland" clays and loams whereas those of the west are loams with limey subsoils. The southeastern part of the county contains sands with clay subsoils (Odintz 2006:1).

The county is located within the Balconian biotic province (Blair 1950:Figure 1) and the characteristic vegetation includes Mexican cedar, Texas oak and stunted live oak. Fifty-seven species of animals are found within the biotic province (Blair 1950:113).

The soil association is Austin-Houston Black-Castephen which consists of upland calcareous clays formed in marine chalk, marl, shale and clay Werchan and Coker 1983:General Soils Map). Specific soils located within the proposed development site are Austin-Whitewright complex with 1 to 5 percent slopes with Austin silty clay with 1 to 3 percent slopes in a portion of the northwest corner (Werchan and Coker 1983:Sheet 66). The B horizon is listed as being 13 inches below the ground surface (Werchan and Coker 1983:78).

No drainages are present in the study area but the headwaters of the intermittent McNutt Creek is located approximately a mile to the southeast.

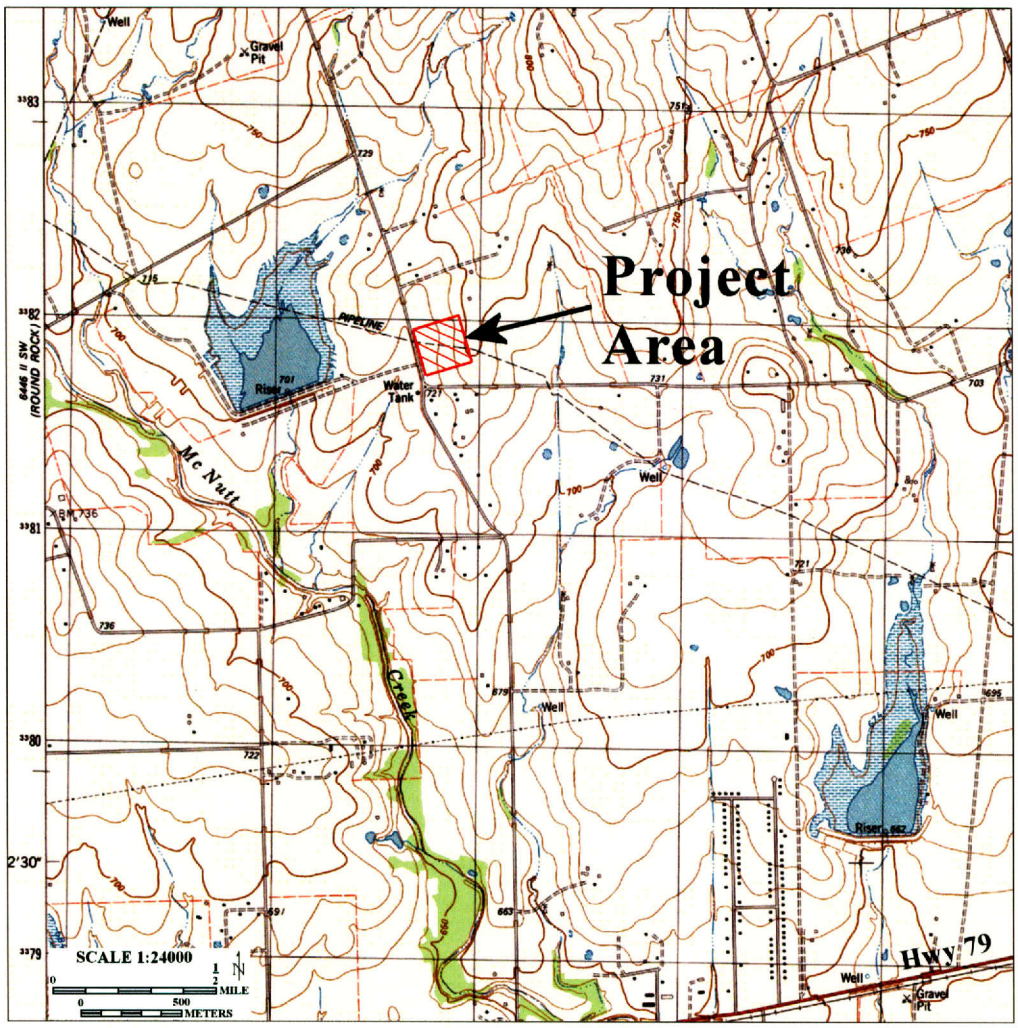

Figure 1. The 10 acre proposed Jonah Plant No. 8 Storage Tank Site location plotted on a section of the Hutto, Texas 7.5' USGS map.

PREVIOUS INVESTIGATIONS

Prior to the survey, the Texas Archeological Sites Atlas (2006) was consulted for sites listed that were in the proposed study area. None were found. However, sites have been found located to the west during surveys of parks and related structures in the town of Round Rock. Surveys conducted in the town of Hutto which is located southeast of the study area recorded only one chert core in four surveys.

However, many archaeological surveys and excavations have been conducted prior to the construction of Lake Granger and along Brushy Creek. The results of the these surveys and excavations yielded archaeological material ranging from the Archaic to historic times (Texas Archeological Sites Atlas 2006).

METHODOLOGY

The proposed elevated storage tank area is in an upland setting and shovel testing usually is done on judgmental basis as recommended by the Council of Texas Archeologist (2002). However, since the study area is 10 acres, the Council of Texas Archeologists also recommend 20 shovel tests and this was followed. Transects oriented northwest-southeast spaced approximately 50 m apart were walked by the surveyor. Shovel tests were excavated to approximately 35 cm due to the upland setting and the terracing that had occurred. Notes on the terrain, vegetation, the shovel tests were taken as were photographs. No backhoe trenching was done due to the shallow depth to the subsoil (13 inches).

No archaeological sites were expected to be found during the archaeological survey due to the low biotic diversity, absence of perennial water and the presumed absence of knappable lithic materials. Historic sites might be present since the study area is adjacent to a transportation route.

RESULTS

This chapter is broken into various parts. The survey area is discussed and this is followed by a description of the survey. Shovel test descriptions are described generally within the text and specific information can be found in Table 1. All of the soil described is wet from the previous day's rain. Shovel test locations are shown on Figure 3.

The Survey Area

The survey area is located on the southwest slope of a north-south oriented ridge. The area has been farmed and terraced in the past as shown in Figure 2. Vegetation includes bunch grass, tickle grass and other native grasses. Trees include mesquite along an old fence line and an occasional eastern red cedar and are probably less than 25 years old. A portion of the northwestern corner of the tract contains a recently plowed field. Limestone gravel was scattered throughout the survey area and occasional limestone cobbles and boulders were seen lying on the surface. An existing pipeline crosses the 10 acre tract and an existing well site along with construction material is located in the southwest corner of the survey area. The disturbed area is approximately 104 m northwest-southeast and 73 m northeast-southwest. Ground visibility ranged from 20 to 100 percent and eye height visibility was excellent.

Figure 2. View along a terrace of the proposed Jonah No. 8 Elevated Storage Tank. View is to the northwest.

The Survey

Survey began in the southwest corner and proceeded northeast and back. Shovel test locations were chosen based upon the presence of the disturbed area, the terraces and the pipeline route that crosses the study area. Twenty shovel tests were excavated. Limestone bedrock was encountered in six shovel tests (1, 2, 5, 10, 12, 15 and 19) at depths that ranged from 7 to 33 cm below the surface. Only two shovel tests (6 and 1) did not contain any limestone pea gravel and shovel test 20 contained limestone pea gravel below 27 cm. Shovel tests 6 and 14 were located on the ridge and a nose that jutted into the survey area. Shovel test 20 was placed in the recently plowed pasture. According to the Williamson County Soils book (Werchan and Coker 1983:79), the subsoil contains from 40 to 70 percent calcium carbonate which fits most of the shovel tests excavated during the survey.

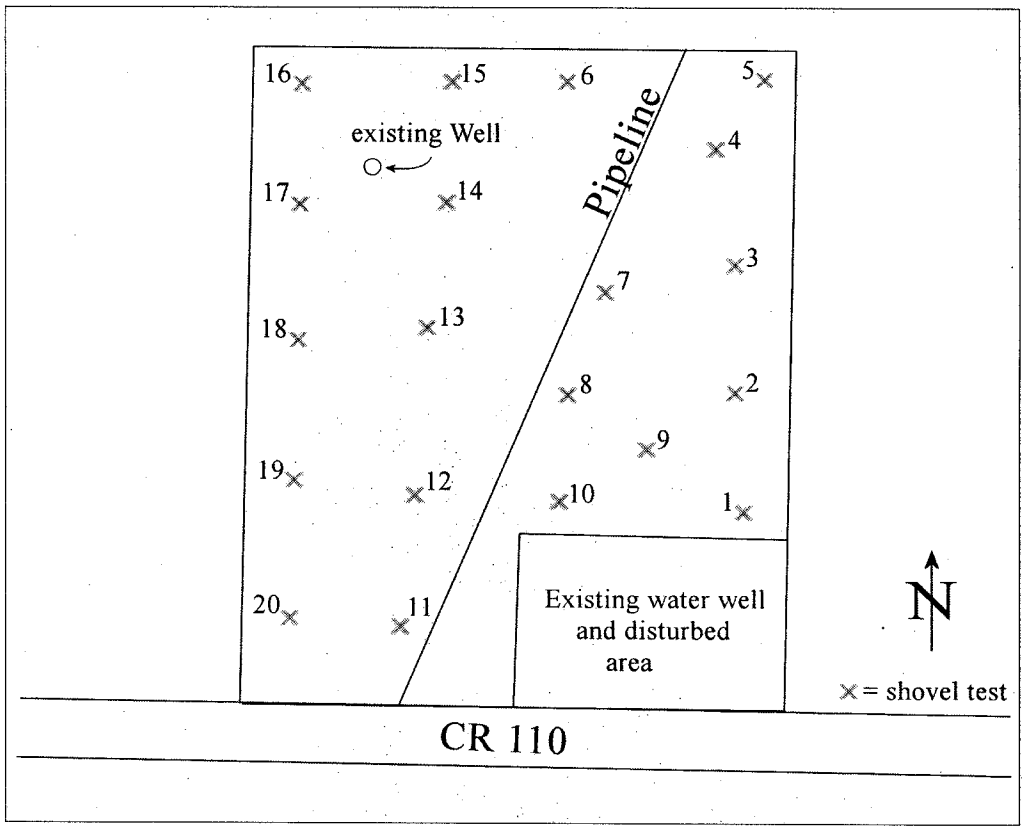

Figure 3. Shovel test locations and disturbed areas within the proposed 10 acre storage tank development site.

Table 1. Shovel test descriptions. Munsell color chart numbers are listed only the first time used.

ST No.	Depth (cm.)	Description*
1	0-28 28+	Grayish-brown (10YR5/2) gravelly clay Limestone bedrock
2	0-33 33+	Grayish-brown gravelly clay Limestone bedrock
3	0-36+	Grayish-brown gravelly clay
4	0-35+	Grayish-brown gravelly clay
5	0-36 36+	Dark gray (7.5YR4/1) clay Decayed limestone bedrock
6	0-37+	Dark gray clay
7	0-39+	Grayish-brown gravelly clay
8	0-35+	Grayish-brown gravelly clay
9	0-33+	Grayish-brown gravelly clay
10	0-27 27+	Brown (7.5YR4/1) gravelly clay Limestone bedrock
11	0-32+	Brown clay, limestone pea gravel below 27 cm

Table 1. Continued

ST No.	Depth (cm.)	Description*
12	0-29 29+	Grayish-brown gravelly clay Limestone bedrock
13	0-35+	Grayish-brown gravelly clay
14	0-39+	Grayish-brown clay
15	0-7 7+	Grayish-brown gravelly clay Limestone bedrock
16	0-38+	Grayish-brown gravelly clay
17	0-37+	Grayish-brown gravelly clay
18	0-34+	Grayish-brown gravelly clay
19	0-25 25+	Dark gray gravelly clay Limestone bedrock
20	0-39+	Grayish-brown clay containing limestone pea gravel below 27 cm

* Munsell color chart numbers listed only first time used.

CONCLUSIONS AND RECOMMENDATIONS

No prehistoric or historic sites were located within the survey area. The lack of prehistoric occupation is attributed to the absence of nearby perennial water, the low biotic diversity and the lack of knappable lithic material. Historic residences probably were not found due to the sloping topography of the area.

Based upon the above information, AR Consultants, Inc. recommends that further cultural resource investigations are unwarranted within the proposed development site. However, although unlikely, buried cultural resources may be uncovered during the construction of the elevated storage tank and related pipelines. If this happens, work should stop in that area and the Archeology Division of the Texas Historical Commission Work should be consulted.

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