ARCHAEOLOGICAL SURVEY
OF PIPELINE ADDITIONS FOR THE
BRASHEAR WSC,
HOPKINS COUNTY, TEXAS

Jesse E. Todd
MS, MA

Prepared for:
ENVIRONMENTAL CONSULTING SERVICES
3211 Cleveland Street
Paris, Texas 75460

Prepared by:
AR CONSULTANTS, INC.
P.O. Box 820727
Dallas, Texas 75382

Cultural Resources Report 2005-06
April 4, 2005
ARCHAEOLOGICAL SURVEY

OF PIPELINE ADDITIONS FOR THE

BRASHEAR WSC,

HOPKINS COUNTY, TEXAS

Jesse E. Todd
MS, MA

Prepared for:

ENVIRONMENTAL CONSULTING SERVICES
3211 Cleveland Street
Paris, Texas 75460

Prepared by:

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

Cultural Resources Report 2005-06
April 4, 2005
ABSTRACT

An archaeological survey with shovel tests of approximately 25,000 feet of proposed additional pipeline for the Brashear Water Supply Corporation was conducted in order to determine if archaeological sites were present within route right-of-ways. Most of the proposed routes are adjacent to existing roads and were visually examined. Intensive pedestrian surveys and shovel testing was done at drainage crossings. No standing historic structures or signature plants were seen during the visual inspection and no cultural materials were found during the pedestrian survey or in the shovel tests.

Based upon the absence of cultural materials, AR Consultants, Inc. recommends that further cultural resource investigations are unwarranted. Although unlikely, if buried sites are discovered during construction, work should immediately cease in that area, and Rural Development and the Texas Historical Commission should be notified. Work should not continue until the proper investigations have been carried out after consultation with the Texas Historical Commission.
ACKNOWLEDGMENTS

AR Consultants, Inc. wishes to thank everyone involved in the project and in the preparation of this report for their assistance. While we accept responsibility for the content of the report, we were assisted by several people who demonstrated their interest in the history and prehistory of the area.

In particular, we want to thank Reeves Hayter President, PE and Laura Newsome, EIT at Hayter Engineering, Inc. and Ashley Lassiter of Environmental Consulting Services both in Paris for their involvement in this project.
TABLE OF CONTENTS

Abstract.......................................................................................... i
Acknowledgements........................................................................ ii
Table of Contents........................................................................ iii
List of Figures................................................................................ iii
List of Tables.............................................................................. iii
Introduction....................................................................................... 1
Natural Environment......................................................................... 4
Cultural Historical Background....................................................... 5
Research Design & Methodology...................................................... 7
Results.............................................................................................. 8
Recommendations............................................................................ 11
References Cited............................................................................. 12

LIST OF FIGURES

Figure 1. Proposed pipeline additions and shovel test locations along
IH 30 and within the City of Brashear plotted on reduced
(55%) portions of the Brashear, Grafford Chapel, Miller
Grove and Cumby, Texas 7.5' USGS maps................................. 2

Figure 2. Proposed pipeline additions and shovel test locations along
county roads south of Brashear plotted on portions of the
Brashear and Miller Grove, Texas 7.5'USGS maps............... 3

LIST OF TABLES

Table 1 Shovel Test Results............................................................ 10
INTRODUCTION

On March 25, 2005, AR Consultants Inc., (ARC) conducted a pedestrian survey of approximately 25,000 feet of water pipeline additions to be installed in Hopkins County, Texas by the Brashear Water Supply Corporation. The new pipelines will be placed north of IH 30, south of Loop 313, west of CRs 1155, 1157 and 1116 and south of CR 1118 (Figures 1 and 2). The scope of the project included a records review, a pedestrian survey and shovel testing areas considered to have potential for containing archaeological sites deposits, and a final report.

The survey described below serves to comply with the National Historic Preservation Act of 1966, as amended (PL-96-515), the National Environmental Policy Preservation Act of 1969 (PL-90-190), the Archeological and Historical Preservation Act of 1974, as amended (PL-93-291), and Executive Order No. 11593 “Protection and Enhancement of the Cultural Environment.” The Texas Antiquities Code is not applicable to this investigation.

This investigation was conducted for Brashear WSC through the office of Environmental Consulting Services of Paris, Texas. The survey and testing was done because funding for this project is to be provided by Rural Development, a division of the US Department of Agriculture (USDA). This report was written in accordance with the guidelines for reports adopted by the Texas Historical Commission, Archeology Division, and developed by the Council of Texas Archeologists (ND).
Figure 1. Proposed pipeline additions and shovel test locations along IH 30 and within the City of Brashear plotted on reduced (55%) portions of the Brashear, Grafford Chapel, Miller Grove and Cumby, Texas 7.5' USGS maps.
Figure 2. Proposed pipeline additions and shovel test locations along county roads south of Brashear plotted on portions of the Brashear and Miller Grove, Texas 7.5'USGS maps.
NATURAL ENVIRONMENT

The Brashear Service Area is located in the central part of Hopkins County, west of Sulphur Springs. The study area is located in the Blackland prairies/Post oak savannah vegetational areas of Texas (Diggs et al 1999: Figure 2). The topography is characterized by low relief with elevation ranging from 550’ msl in the central part of the county to 250’ msl in the southeastern part. In the study area, drainage is divided between White Oak Creek north of IH 30 and Lake Fork Creek generally south of IH 30.

The underlying bedrock consists of Tertiary age geologic formations. West of Sulphur Springs the Kincaid and Wills Point Formations are ill-defined (Lane 1977:54; Bureau of Economic Geology 1966). These formations consist of clays, silts, glauconitic sand, and thin beds of limestone and sandstone. Quaternary age alluvial deposits are mapped in a tributary to White Oak Creek west of Brashear and a tributary to Big Oak Creek south of Brashear.

Data from the Soil Conservation Services mapping of Hopkins County, particularly in the service area, was used in evaluating the potential for the presence of preserved site deposits. In general, soils in the service area are part of the Crockett association. Crockett association soils form in upland settings and generally consist of a loamy surface layer about nine inches thick. Below that are clays, clay loams, and shales (Lane 1977:General Soil Map). Specific soils crossed by the proposed pipeline additions include Annona-Raino Complex, Crockett loam with 0 to 3 percent slopes and eroded Crockett loam with 2 to 5 percent slopes. The Bt horizon is listed as being 9 inches below the surface for the soils (Lane 1977:6 and 9). Floodplain soils for this part of Hopkins County have been mapped as the Nahatche Series (Lane 1977:Sheets 32,33,39, and 40). Nahatche soils are found on nearly level floodplains and form in loamy alluvium and have a C horizon at 7 inches below the surface (Lane 1977:18-19).

Lindley Creek, Clendening Creek Webb Creek, Big Creek and their tributaries are mapped as being intermittent on the USGS maps and soil maps for Hopkins County, Texas.
CULTURE HISTORICAL BACKGROUND

The earliest occupation in Hopkins County was during the Paleo-Indian period (11,000 to 8,000 B.C.) and is expected to have been by ancient Native Americans who made very distinctive Clovis points. No Clovis points are reported to have come from the county (Meltzer and Bever 1995:49). These point styles and other early styles are probably present in artifact collections from sites in the county, but they have not been recorded at TARL and are not discussed in the literature. Even with insufficient data on Paleo-Indian occupation, there is little question that the region was occupied during that time period.

Subsequent occupation during the Archaic period (8,000 B.C. to A.D. 500) is recognized as having two temporal divisions, an Early Archaic period and a Late Archaic period. Both are characterized as a hunting and gathering way of life practiced by mobile bands who occupied recognized group territories. Dart points, grinding stones, and specific point types characterize these periods. Early Archaic point types include; Plainview, Scottsbuff, Edgewood, Meserve, Dalton, San Patrice, Kirk, Palmer, and Wells. While Late Archaic point types are Gary, and Ellis to name a few. The fauna hunted and gathered by these early people was a truly modern animal population. Habitation sites have not been reported in the county.

After the Archaic period, pottery and arrow points were added to the Indians’ set of tools. These technological changes coincided with a gradual increase in population size. The prehistoric Caddoan peoples are first recognized about A.D. 500 to 600. These early Caddoans occupied large villages which were located along the major drainages. The villages occasionally contained low earthen mounds, and usually consisted of several individual houses. Cemeteries are frequently associated with, but separate from, the villages. The economy was based on foods secured by hunting and gathering, although farming was probably practiced by A.D. 1000.

About A.D. 1300, a shift in site location away from the major drainages, and into the headwaters of smaller tributaries resulted in the rearrangement of people into small, but numerous, hamlets scattered throughout the region of northeast Texas. Major sites seem to have continued being located on the banks of the Red River in Texas and Louisiana during this period. Farming was certainly important during this period, and these people are recognized in the historic period as the Hasinai Confederacy of the Caddo.

Anglo-American interest in Hopkins County began with land speculation before and during the time period of the Republic of Texas. Lovick Dikes was issued a land title by the Mexican government before November 13, 1835, and Thomas J. Rusk, Colonel James Reilly, and Edward P. Gains patented land in the area. The first permanent settlement was made in December of 1842 a few miles northeast of Sulphur Bluff by William and Harvey Hargrave (St. Clair 1965:12).
Hopkins County was created out of Lamar and Nacogdoches counties and was named for the pioneering Hopkins family or for Eldridge Hopkins, the owner of the land donated for the county seat of Tarrant County (St. Clair 1965:16). The original size of the county was reduced in 1870 and 1871 by the creation of Rains, Delta, and Lamar counties. The county seat was moved to Sulphur Springs in 1871.

The evolution of wagon roads from trails and the coming of the railroad fueled the economic development of the county by promoting immigration. The first settlers had come by way of Jonesborough and points northeast, and in spite of the fact that the main road from the Red River to Central Texas missed Hopkins County, there had been an important trail entering from the northeast and exiting at the southwest corner (St. Clair 1965:11). As attention was focused on the central part of the county, roads radiated to all sections.

In 1876 the first railroad line, the East Line and Red River, designed to connect Jefferson, Sulphur Springs, and Greenville, was begun. The second railroad was the St. Louis Southwestern to Texas Railroad which passed through Sulphur Springs west to Fort Worth, and is north of the Brashear WSC service area.

Previous Archaeological Investigations

The majority of work that has been carried out in Hopkins County centers around Cooper Lake (Hyatt et al 1974; Doehner and Larson 1978; Doehner, Peter, and Skinner 1978; Jurney and Bohlin 1993; Fields et al 1997). Of those reports, Fields and others found that most of the sites were located on slight elevations within the floodplain or along interfluvies. Outside of the Cooper Lake area very little archaeological work has been published about Hopkins County. There are two archaeological investigations in the uplands of Hopkins County that shed some light on prehistoric site patterns. However, three sites containing lithic debris, Gary points and fire-cracked rock have been located along Bear Creek northwest of the study area (Texas Archeological Sites Atlas 2005).

AR Consultants did an evaluation of transmission corridor alternatives (Skinner and Whorton 1993) and did not record any sites. A survey for the Soil Conservation Service (Hyatt 1974) found nine sites along intermittent drainages. All of the sites were classified as small temporary camp sites and consisted of surface lithic scatters. Also AR Consultants, Inc. (Trask and Skinner 2002) evaluated several pipeline corridors for the Brashear-Water Supply Corporation. After the evaluation, four drainage crossings were tested for cultural materials but none were found (Trask 2002).
The purpose of the research design outlined below was to insure that fieldwork makes a contribution to a better understanding of the prehistoric and historic settlement of Hopkins County, Texas. As a result, we proposed the research problems below.

One demographic research problem guided the field survey. It focused on the prehistoric utilization of the various parts of the upland and intermittent tributaries that are crossed by the pipeline routes. Survey for Cooper Lake has shown that prehistoric sites appear to be concentrated in the bottomland settings in the floodplains of major drainages (Doehner, Peter, and Skinner 1978:213-219). There is no major consensus about the function of the various sites, therefore the following was proposed as the first research problem:

Survey of intermittent drainages adjacent to major waterways should locate prehistoric sites which may represent temporary hunting, gathering camps or quarry sites [lithic procurement sites], if near lag gravel deposits.

We anticipated that these site type locations would be mutually exclusive and that recording the number and types of tools and flakes/chips, and other artifacts would allow for the recognition of different tool kits and time of occupation.

Secondly, since the proposed pipeline additions are adjacent to transportation routes, it was felt that historical sites might be encountered.

The third, and even more basic, research problem guided the survey; simply stated the question asked "How did past people use the land, and what record of this use did they leave behind?" Most frequently, small-scale surveys of this type gather information in response to this more open-minded research question, which guides almost all archaeological surveys.

The area of potential effect for these new lines will be an easement that is twenty feet [20'] wide. It is anticipated that pipes will have 36" of fill over them, and will be installed in the bottom of a trench that is 6-12" wide depending upon the availability of trenching machines. Nearly all of the line will be installed in trenches excavated by trenching machines. In some cases, a backhoe will be used to trench across drainages.

In order to address these questions, the proposed pipeline routes were visually examined and creek crossings were surveyed for evidence of prehistoric occupation. Besides a pedestrian survey (Texas Historical Commission 1998), limited shovel testing was done within the present or new easements, but outside the center of the previously disturbed easements. The loamy matrix was screened through 1/4" hardware cloth screens. Shovel tests were dug to approximately 50 centimeters below the surface or to the subsoil. Since the recorded sites in the area were found on the surface along Bear Creek, it was felt that artifacts would be encountered within the upper 50 centimeters of the soil. Based on the geology and the soils present along the various routes, no backhoe trenching was needed.
RESULTS

This chapter is divided into various parts. The survey area is described and is followed by a description of the survey. Conclusions derived from information gathered during the survey ends the chapter. Shovel tests are discussed generally in the text, but specific information is provided in Table 1. Shovel test locations can be found on Figures 1 and 2.

The Survey Area

The survey area's terrain ranges from gently sloping, undulating hills to generally level. Most of the land is unimproved pasture, but trees are located along drainages. Trees include red bud, hackberry, oak, blackthorn and eastern red cedar. Understory vegetation includes coastal Bermuda grass, Johnson grass, rabbit grass, native grasses, prickly pear, saw greenbriar, grape vine, berry vine, hog brush and native bushes. Ground visibility averaged 20 percent throughout and eye-height visibility was excellent except for south of County Road 1118 where the eye-height visibility was limited to 10 meters.

The Survey

As previously mentioned, most of the survey was conducted visually from the vehicle since the proposed additions are adjacent to the road. Drainage crossings were inspected by either shovel testing or pedestrian survey or both. The pedestrian survey was approximately 100 meters long and on both sides of the drainage.

Survey began south of IH 30 at Loop 313 and proceeded north and west along the frontage road for IH 30. After IH 30 had been examined, the proposed route in Brashear was investigated and followed by the inspection of the pipeline additions along county roads south of Brashear.

The area south of Loop 313 was partially in unimproved pasture and partially forested. Approximately 1000 feet of 4 inch pipeline is to be added here. The area where the pipeline addition is to be placed was extensively disturbed. Lindley Creek used to flow through the area, but due to road construction, no channel existed but the channel could be seen approximately 15 meters south of the road. Due to the disturbed nature of the soil, no shovel tests were excavated and no standing historic structures or signature plants were seen.

The surveyors then went north and turned onto the frontage road for IH 30 and headed west. Approximately 3.56 miles of 4 inch pipeline is to be laid from FM 3389 to slightly west of CR 4719. Shovel tests 1 and 2 were placed a meter east and west of Clendening Creek. Both shovel tests uncovered sterile loamy clay to 52 and 54 centimeters below the surface, respectively. Clendening Creek is approximately 3 meters wide and deep. The substrate is clay and water was flowing at the time of the visit. The water is less than 0.1 meters deep.
From Clendening Creek, the surveyors continued westward. Shovel tests 3 and 4 were placed a meter from the banks of an unnamed tributary to Webb Creek. The unnamed drainage is east of Brashear. The shovel tests contained the same sterile soil as shovel tests 1 and 2 and were terminated at 49 and 52 centimeters below the surface, respectively. The tributary is approximately 5 meters wide and 2.5 meters deep. The substrate is clay and the water was ponded and stagnant.

Continuing westward, shovel tests 5 and 6 were placed on an intermittent tributary west of Brashear that flows into Webb Creek. Shovel test 5 was placed a meter from the east bank and uncovered 24 centimeters of sterile brown clay overlying sterile yellowish-brown subsoil. Shovel test 6 was placed a meter from the west bank and encountered 46+ centimeters of sterile yellowish-brown clay. The drainage is 6+ meters wide and 2.5 meters deep. Water was ponded, clear and approximately a meter deep. The substrate is clay.

No shovel tests were placed on the banks of Webb Creek because of the ground visibility, (75%), caused by erosion from the disturbance from the construction of the Louisiana and Arkansas Railroad and the frontage road for IH 30. In addition to the eroded banks, channels extended for about 50 meters on both sides of the creek that were 3+ meters wide and deep. No cultural materials were found on or in the banks of the creek and the channels.

No cultural materials were found during the shovel tests or pedestrian survey of the various creeks and tributaries along the frontage road north of IH 30. In addition, no standing historic structures or signature plants were seen.

The proposed pipeline addition within the city limits of Brashear and west and north of CR 1119 was then examined. About 750 feet of 2 inch pipeline is to be placed along this portion of the route. The land is in unimproved pasture and no standing historic structures or signature plants were noted.

Lastly, the proposed addition of 16,000 feet of 3 inch pipeline along to CRs 1116, 1118 and 1155 were examined. The proposed route begins north of where CR 1116 turns west and terminated west of CR 1154. The land was in unimproved pasture except for approximately 200 meters of forested area south of 1118 west of the intersection of CRs 1116 and 1118 and east of the tributary to Big Creek. Shovel test 7 was placed a meter from the east bank of the tributary and uncovered 22 centimeters of sterile loamy clay overlying sterile clay subsoil that extended to 43+ centimeters below the surface. Shovel test 8 was placed a meter from the west bank of the tributary and encountered the same soils but the contact was at 32 centimeters and the sterile shovel test was terminated at 46 centimeters below the surface.

No standing historic structures or signature plants were seen along the county roads and no cultural resources were found adjacent to the drainages or in the shovel tests.
Conclusions

No cultural materials were found during the pedestrian survey or revealed by shovel testing. No historic structures or signature plants were seen during the visual inspection of the proposed pipeline additions. The prehistoric sites that have been recorded were probably along areas where water flow was more permanent north and east of the proposed study area.

Table 1.  Shovel Test Results

<table>
<thead>
<tr>
<th>ST NO.</th>
<th>DEPTH (CM)</th>
<th>DESCRIPTION*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-52+</td>
<td>Dark yellowish-brown (10YR4/4) loamy clay</td>
</tr>
<tr>
<td>2</td>
<td>0-54+</td>
<td>Dark yellowish-brown loamy clay</td>
</tr>
<tr>
<td>3</td>
<td>0-49+</td>
<td>Dark yellowish-brown loamy clay</td>
</tr>
<tr>
<td>4</td>
<td>0-52+</td>
<td>Dark yellowish-brown loamy clay</td>
</tr>
<tr>
<td>5</td>
<td>0-24</td>
<td>Dark brown (10YR3/3) clay</td>
</tr>
<tr>
<td></td>
<td>24-36+</td>
<td>Dark yellowish-brown loamy clay</td>
</tr>
<tr>
<td>6</td>
<td>0-46+</td>
<td>Dark yellowish-brown loamy clay</td>
</tr>
<tr>
<td>7</td>
<td>0-32</td>
<td>Dark yellowish-brown loamy clay</td>
</tr>
<tr>
<td></td>
<td>32-47+</td>
<td>Yellowish-red (5YR4/6) clay</td>
</tr>
<tr>
<td>8</td>
<td>0-24</td>
<td>Dark yellowish-brown loamy clay</td>
</tr>
<tr>
<td></td>
<td>24-36+</td>
<td>Yellowish-red (5YR4/6) clay</td>
</tr>
</tbody>
</table>

* Munsell color chart numbers are listed only first time used.

Note: Munsell color is based on moist soil.
It is AR Consultants' recommendation that further cultural resource investigations are unwarranted since no significant cultural resources were encountered during the archaeological survey of the proposed pipeline routes for the Brashear Water Supply Corporation. If cultural resources are encountered during the construction, work should immediately cease in that area and Rural Development and the Archeology Division of the Texas Historical Commission be advised of the discovery. Work should not continue until the proper investigations have been carried out after consultation with the Texas Historical Commission.
REFERENCES CITED

Bureau of Economic Geology
1966 Geologic Atlas of Texas, Texarkana Sheet. The University of Texas at Austin.
Council of Texas Archeologists
(ND) Guidelines for the Content of Cultural Resource Management Reports. Manuscript on file with the membership.

Diggs, George M., Jr., Barney L. Lipscomb, Robert J. O'Kennon

Doehner, Karen, Richard E. Larson

Doehner, Karen, Duane Peter, and S. Alan Skinner

Fields, Ross C., Marie E. Blake and Karl W. Kibler

Hyatt, Robert D.
1974 Lake Fork Creek Surveys. Southern Methodist University, Archaeology Research Program Research Report 49.

Hyatt, Robert D., Barbara H. Butler, Herbert P Mosca, III

Jurney, David H., and Jeffery Bohlin

Lane, Gaylon L.
1977 Soil Survey of Hopkins and Rains Counties, Texas. USDA, Soil Conservation Service in cooperation with the Texas Agricultural Experiment Station.

Meltzer, David J., Michael R. Bever

Skinner, S. Alan, and Brenda B. Whorton

St. Clair, Gladys A.

Texas Archeological Sites Atlas
2005 Search for sites listed on the Brashear, Cumby and Miller Grove, Texas 7.5' USGS maps. Texas Historical Commission internet site.

Texas Historical Commission
1998 Archeological Survey Standards for Texas.

Trask, Lance K.

Trask, Lance K., and S. Alan Skinner