AN ARCHAEOLOGICAL SURVEY
WITHIN THE
CRANDALL DEVELOPMENT SITE,
KAUFMAN COUNTY, TEXAS

Jesse Todd, MS, MA

Submitted to:

CARTER & BURGESS, INC.
777 Main Street
Fort Worth, Texas

Prepared by:

AR CONSULTANTS, INC.
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Cultural Resources Report 2004-03
February 3, 2004
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ABSTRACT

In January, 2004, AR Consultants, Inc. conducted an archaeological survey of an unnamed intermittent drainage north of CR 175, east of CR 741 and on the northwestern edge of Crandall in Kaufman County, Texas. The stream drains a proposed 600 acre development. In addition, the area east of CR 741 and west of Blackland Road was investigated for historical residences shown on the 1936 General Highway Map for Kaufman County and the 1973 USGS map. No traces of the residences were found. The survey was done for Carter & Burgess, Inc. acting as an agent for Centex Corporation.

No cultural materials were discovered during the pedestrian survey or shovel testing. Consequently, AR Consultants Inc. recommends that further cultural resource investigations are unwarranted in conjunction with this project.
TABLE OF CONTENTS

Abstract...................................................................................................... i
Table of Contents..................................................................... ii
List of Figures.............................................................................................. .. ii
List of Tables......................................................................... ii
Introduction.................................................................................................. . 1
Natural Environment................................................................................... 4
Culture History............................................................................................. 5
Research Design and Methodology............................................................ .10
Results..................................................................................................... . ...... . 11
Recommendations.......................................................................................... .16
References Cited........................................................................................... . 17

LIST OF FIGURES

Figure 1. The study area (the unnamed drainage) and its location within the Crandall Development Site shown on a portion of the Forney South, TX 7.5’ USGS map.................. 2
Figure 2. Shovel test locations adjacent to the unnamed drainage shown on an enlarged (300%) portion of the Forney South, TX 7.5’ USGS map............................................. 12
Figure 3. Aerial photograph made in the mid-1990s showing the two channels in the southeastern portion of the study area.... 13

LIST OF TABLES

Table 1. Shovel test descriptions............................................ 15
INTRODUCTION

On January 21, 2004 AR Consultants, Inc. (ARC) conducted a pedestrian archaeological survey of an unnamed intermittent drainage within the proposed 600 acre Crandall Development Site which is in Kaufman County, Texas. In addition, areas near the vicinity of residences shown on the USGS map were examined for historic sites. The development site is located at the northwestern edge of Crandall, north of SH 175 and east of CR 741 (Figure 1). The purpose of the survey was to locate any cultural resources that are present within 100 meters of either bank of the unnamed drainage and make recommendations about their significance and how they might be impacted by construction. The survey was conducted for Carter & Burgess, Inc. acting as an agent for the Centex Corporation.

The survey of 100 meters on each side of the unnamed drainage area was done at the request of the Texas Historical Commission after a project review. Since a drainage is involved, possibly relevant federal legislation includes the National Historic Preservation Act of 1966, as amended (PL-96-515), the National Environmental Policy Act of 1969, as amended (PL-90-190), the Archaeological 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). The Texas Historical Commission, Archeology Division, will review this report, but the Texas Antiquities Code is not applicable.

This report has been written in accordance with the guidelines for short reports prepared by the Council of Texas Archeologists (ND) and adopted by the Archeology Division of the Texas Historical Commission. The following report presents a brief description of the natural and cultural environment of the area. 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. The study area (the unnamed drainage) and its location within the Crandall Development Site is shown on a portion of the Forney South, TX 7.5' USGS map.
Administrative Information:

Sponsor: Centex Corporation with Carter & Burgess, Inc. acting as agent
Review Agency: The Texas Historical Commission, Archeology Division
Principal Investigator: Jesse Todd, MS, MA
Field Crew: Lance Trask and Todd
Date: January 21, 2004
ACRes Evaluated: 66
Sites Recorded: None
NATURAL ENVIRONMENT

Kaufman County consists of predominantly level to gently undulating terrain. It is on the divide between East Fork of the Trinity and Sabine Rivers. Nearly all of the county is drained by the Trinity River, but the eastern half is drained by Cedar Creek which also drains into the Trinity River. A small portion of the north central part of the county drains into the Sabine River. The slightly acidic soils consist of loams with clayey subsoils (Hart 2004:1).

The underlying geology of the study area is the undivided Upper Cretaceous-aged Neylandville Formation and Marlbrook Marl which consists of calcareous clay with both sand and silt inclusions (Bureau of Economic Geology 1972). No Quaternary alluvium is mapped as being present in the study area.

The association is Houston Black-Heiden which are deep, nearly level to strongly sloping prairie soils (Pringle 1977:General Soil Map). The specific soil in the study area is Houston Black clay with 0 to 1 and 1 to 3 percent slopes (Pringle 1977:Sheet 35). These upland clayey soils are calcareous and formed from marine clays and shales (Pringle 1977:14).

The unnamed drainage is shown as intermittent on both the Forney South 7.5’ USGS map and the Soil Conservation Service map.

The study area is located in the Blackland Prairie vegetative area of Texas. Kuchler (1966) classified the prairie as being dominated by Andropogon-Sipa grasses. Various other grasses are present as well. The prairie environment is one of low biotic diversity. The Texan biotic zone (Blair 1950:Figure 1) also includes the study area. This prairie savannah zone contains 47 species of mammals, 41 reptiles, and 35 amphibians. The area averages 38.67 inches of rainfall per year; ranging from an average of 2.11 inches in July to 4.99 inches in April.

Paleoenvironmental change is not well documented, but it is summarized by Prikryl (1993:192-193). Prior to 12,000 BC, the climate of north central Texas was cooler and moister than at present. Between 12,000 and 8,000 BC, the climate became warmer and this continued to the present, but with brief mesic periods. It is suggested that the presence of high grass pollen and low arboreal pollen between 5550-1050 BC CRow a drying with a return of arboreal pollen after 1050 BC. The later change is similar to today’s environment. High grass pollen also occurs at approximately AD 450 and from AD 1550 to 1650, and this also indicates drier periods. The presence of paleosols between AD 1 and 1000 suggest an increase in moisture during this period with a return to drier conditions after AD 1000.
CULTURE HISTORY

Introduction

The prairie lands of North Central Texas have been occupied for many thousands of years and the history of the prehistoric peoples who have left behind evidence of their occupation is known to many of the residents who inhabit the area today. At the same time, a thorough understanding of these people and their use of the land during this lengthy occupation is lacking due to the vastness of the area, the ephemeral evidence of some of this occupation, and the limited and scattered studies that have been carried out. Virtually no major cultural resources studies have been conducted in Kaufman County and the following discussion draws on information presented by Smith (1969), Skinner (1972), Peter and McGregor (1988), Prikryl (1990 and 1993), and other sources. The Prehistoric period spans a long time period and for convenience has been divided into three major periods, Paleo-Indian, Archaic, and Late Prehistoric.

Culture History

There has been no conclusive evidence of pre-Paleo-Indian occupation in the State of Texas. Two discoveries have been attributed to this period. The first was the report of stone boulders found near the community of Malakoff in Henderson County that had been carved with a likeness of human heads and have been reported as the Malakoff Heads or Malakoff Man (Sellards 1941). The three boulders are late Pliocene or early Pleistocene age gravels which are considered to be more than a million years old (Menzer and Slaughter 1971) and this is well outside the recognized time period of human occupation in the Americas. In addition, no independent evidence in the form of artifacts, fauna or features was found with the heads and the discovery of the heads was not adequately documented. Later examination of two of the heads by Guderjan (1991) determined that one head was made at the site using metal tools and the other was an ecofact.

The Paleo-Indian culture (11,000 to 8,000 BP) had been described as relying on an economy of hunting and gathering, with primary emphasis being on the hunting and processing of megafauna (mammoth and bison). The Lewisville site (Crook and Harris 1957) and the Aubrey site (Ferring 1989) are good examples of sites dated to this period. Both sites are campsites and both were deeply buried, and thus preserved, under the sediments of the present floodplains of the Elm Fork of the Trinity River. Surface artifacts dating to this period have been reported from the Kaufman County area (Meltzer and Bever 1995:Table 1), but no Paleo-Indian sites have been investigated.

There is little evidence of Paleo-Indian occupation in the area of the proposed project although projectile points such as Clovis, Folsom, Meserve, Plainview, San Patrice, Scottsbluff, and Eden have been found on the surface of sites throughout the region. A
Folsom point was found at 41KF47. Fragments of Folsom and Scottsbluff or Eden points were found at the Wild Bull site at Cedar Creek Lake (Story 1965:188-190), but they were not in a primary context and were associated with later age Archaic materials. Little is known about the lifeways of these early peoples who are believed to have populated eastern Texas (CRAfer 1977).

The Archaic culture period follows the Paleo-Indian and lasts from 6,000 BC to possibly as late as AD 600. Hunting and gathering continued to be the means by which the people supported their groups. This adaptation was more diversified than that of the earlier period and there is limited evidence that the population increased in size during the course of this period of time. Archaic sites are more common, although there is little evidence of Early Archaic occupation in the area. The Middle Archaic period has been termed the La Harpe Aspect in East Texas (Johnson 1962:269), while the term Trinity Aspect (CROok and Harris 1952) has been used in the Trinity River Basin. PRIkryl (1990:73) has questioned the value of the Trinity Aspect and prefers the use of time period terminology since there are questions about the primary contexts of the assemblages from the sites used to define the Aspect.

By the Late Archaic, there is sufficient information to describe the presence of several site types. These include midden sites, shell lens sites, artifact scatters, and upland edge scatters (Richner and Bagot 1978:146). The majority of these sites are known to occur along the major drainages where studies have been conducted, but the few upland surveys have demonstrated that scattered occupation sites are present away from the main drainages in such areas as the Big Rock area in north-central Henderson County north of Athens (Guderjan 1981).

A transition to the Late Prehistoric/Caddoan period is signaled by the presence of a crude form of generally plain brown pottery known as Williams Plain that occurs at sites where dart points dominate the assemblages. This pottery type was found at the Gossett Bottoms, Lacy, and Wild Bull sites at Cedar Creek Lake (Story 1965). Very little is known about this transition period.

The beginning of the Late Prehistoric is signaled by the appearance of ceramics and arrowpoints in the first millennium AD. The Late Prehistoric I period (ca. AD 600-1200) is also signaled by the appearance of houses and corn horticulture. Locally made pottery appears to be copies of Caddoan Alto and Sanders phase types. Evidence for corn horticulture was noted at the Cobb-Pool site at Lake Joe Pool (Peter and McGregor 1988). Late Prehistoric II dates from AD 1200-1600 and is characterized by the appearance of a Plains Village-like artifact assemblage. Harahay knives, thumbnail scrapers, and flake drills are frequently found with triangular-shaped and Perdiz arrow points. In some cases, these artifacts have been found with bison kills and in other cases bison scapulas had been used to make hoe blades. Nocona Plain, a shell-tempered pottery, occurs during this prehistoric period and is believed to be locally made.
The protohistoric period of North Central Texas begins with the entrance of the Spanish about AD 1541. At about this same time, immigrant Native American groups moved into the same area and either displaced the prehistoric inhabitants or moved into areas that had previously been abandoned. The beginning of this period was marked by limited and sporadic contact between European explorers and the native occupants. The introduction and adoption of the horse, and ultimately firearms, resulted in a shift from a more sedentary seasonal round to emphasis on bison hunting.

A wide variety of historic Indian groups inhabited this part of Texas. There are very few sites attributed to historic Indians in this region (Skinner 1988), but sites are known in surrounding areas where historic Wichita sites are reported from near Waco, Mexia, Emory, and Spanish Fort.

The historic period (Fox 1983) overlaps with the protohistoric, but is best known in the area for the period from the Civil War to the present. During this period, the indigenous population was eliminated or removed from the area. The invading Europeans focused on farming and ranching.

The Anglo-American history of the Upper Trinity River Basin has been divided into the Frontier, Initial cash crop, Tenant Farming, and Agribusiness periods by Richner and Lee (1976:125-133). The Frontier period lasted from about 1820 to 1850 and was followed by the Initial Cash Crop period which lasted until 1870. Tenant Farming began at 1870 and continued to about 1940. Agribusiness began after the Great Depression and continues to this date.

What today is Kaufman County was settled in 1840 when Missippian immigrants constructed King's Fort and named it after their leader, William P. King. When the territory was organized, Kaufman County was a part of Henderson County, but the county was organized in February, 1848. From its inception, Kaufman County was a rural and agricultural county. Corn was the major crop and both dairy and beef cattle were raised in the county. The construction of the Texas and Pacific Railway in 1873 and the Texas-Midland Railroad in mid-1890s provided a much needed impetus to the growth of the county. Industry came to the county in 1892 which resulted in growth until the 1930s. During the 1930s and 1940s, the Great Depression and World War II, the number of farms decreased, but governmental agencies provided stable employment during the hard times. From the 1950s to the 1970s agriculture continued to dominate the economy although manufacturing companies existed. Numerous economic pursuits continued to increase in number and further commercial development grew with the construction of Interstate Highway 20. Today, besides agriculture and manufacturing, Cedar Creek Reservoir and Lake Ray Hubbard provide recreational opportunities for a growing tourist trade (Hart 2004:1–4).

The City of Crandall was a result of the decision of Texas Trunk Line Railway to lay tracks through the area in 1880. A post office was opened in the community in 1881, and by 1884, the town had a gristmill, a cotton gin, a church, a school and a population of 50 people. By the mid-1920s, Crandall contained 750 residents, 50 businesses and 2
churches. The population declined somewhat during the Great Depression and World War II when people moved to cities to find work. Today, Crandall has approximately 1,652 residents and 15 businesses (Minor 2004:1).

Previous Investigations

Investigations in the Cedar Creek Lake/Big Rock area have been mentioned above. An archaeological survey of the Cedar Creek Lake area was conducted for the National Park Service in 1961 (Davis 1961). Several sites were recorded, and in 1964, the Texas Archeological Salvage Project from The University of Texas at Austin excavated at three sites that are now under the lake (Story 1965). The area from Cedar Creek Lake west is included in Prikryl’s (1993) Prairie-Savannah Region of Texas.

Investigations in the Forest Grove/Big Rock area began in 1974 with a literature search (Bagot and Skinner 1974), and continued with a survey of the Forest Grove Lake area which recorded five prehistoric and two historic sites as well as the community of Forest Grove (Richner and Lee 1974). Additional survey was done in 1978 by Richner (1978). Further site survey work was done in the mine area in 1980 (Guderjan 1981), and this resulted in the recording of twelve previously unrecorded prehistoric and fifty previously unrecorded historic sites. The Big Rock Shelter was tested as part of this investigation.

Since the 1970s, numerous small-scale cultural resources surveys were conducted of transmission corridors, pipelines, and Soil Conservation Service floodwater retarding structures throughout Kaufman County (Ferring 1975; Lynott and Banks 1977). The overall impression from these studies is that historic and prehistoric cultural resources are present, but are widely scattered and sites are small in size and frequently are surface deposits in the upland. Using Lynott’s (1977) model for prehistoric occupation, only three of his site types were recorded in the Upper Cedar Creek Watershed (Lynott and Banks 1975:45). Of note is the fact that lithic procurement sites are found in upland areas where metaquartzite gravels occur. Habitation sites are reported to be near available water sources. A similar pattern is noted by Richner (1978:6) in the Forest Grove Lake area north of Athens.

Upstream and along the East Fork valley, archaeological surveys and excavations were conducted at Lake Lavon and Lake Ray Hubbard [formerly Forney Reservoir]. The surveys were not systematic or comprehensive as would be required by the Corps of Engineers and the Texas Historical Commission (2002) today, as they focused on prehistoric sites and on areas which had high probability for containing preserved site deposits. Nevertheless, 25 sites were recorded at Lake Lavon (Stephenson 1949b and c) and subsequent excavation defined the Wylie Focus (Stephenson 1949a and 1952). This work built on earlier investigations by members of the Dallas Archeological Society (Harris 1948 and 1960; Wilson 1946). In the 1960s and 1970s, further survey and excavation was done which added to our understanding of the local archaeology (Lorrain 1965; Lynott 1977). In 1963, the Dallas Archeological Society (DAS) surveyed the area of Lake Ray Hubbard and recorded 33 archaeological sites (Harris and Suhm 1963). This survey described 20 sites already known to the DAS membership (Hannah 1941;
Hannah and Harris 1948), and located 13 previously unrecorded sites. Only limited excavations were subsequently conducted (Ross 1966; Lorrain and Hoffrichter 1968), but along with the previous DAS excavations, they did provide evidence of the way of life practiced by the prehistoric peoples who occupied this part of the East Fork valley.

Very limited work has been done in the East Fork of the Trinity River downstream from the Lake Ray Hubbard dam. R.K. Harris surveyed the area in 1930 and recorded a number of sites (TASA 2004). A survey of the river channel was done as part of planning for channelization (Richner 1976). This survey was limited in scope due to reliance on surface exposure of sites in areas where recent flooding, plowing, and erosion had removed vegetation or sediment. No shovel tests were excavated and it is likely that sites along the banks of the East Fork of the Trinity River and within its floodplain were overlooked. Several surveys have been done in conjunction with electric transmission and distribution lines for Kaufman County Electric Cooperative, Inc. One of these surveys recorded a shell lens site in the channel of the East Fork, and a historic house site on a low ridge at the eastern edge of the East Fork valley (Skinner 1992). A survey of 1.75 miles was conducted also by AR Consultants (Skinner 1995) for Kaufman County Electric Cooperative that crossed the eastern floodplain of Kings Creek and ran into the uplands. No cultural materials were discovered.

In addition to R. King Harris's 1930 survey of the area, Forrest Kirkland recorded site 41KF8 which is southwest of the survey area and adjacent to the Trinity River. The site consisted of flakes, shells, potsherds and arrow points. Site 41KF129 is listed east of the study area, but no information was provided (TASA 2004). AR Consultants conducted an archaeological survey for Kaufman County Electric Cooperative of a transmission line from its Talty Substation to the Combine Substation. The route ran east of Crandall, and Civilian Conservation Corp flood control structure was discovered (Skinner 1993).
RESEARCH DESIGN AND METHODOLOGY

Research Design

The following research design was created so that it might provide information about not only the study area, but Kaufman County and the State of Texas generally.

The first hypothesis was,

It was doubtful that prehistoric archaeological site deposits would be found based upon the absence of perennial water, low biotic diversity and presumed absence of Uvalde gravels.

The second hypothesis was that archaeological evidence of historic occupation(s) might be found because the study area is adjacent to transportation routes.

The more basic to every study in archaeology is simply stated,

How did the people utilize the area, what affect did they have on the area and what record of their presence did they leave behind?

Small scale surveys, such as the one described in this report, can provide information to the above questions.

Methodology

The surveyors armed with USGS maps, walked for approximately a mile within 100 meters of both banks of the unnamed drainage. Since this is an upland setting, and a degrading environment, shovel tests were placed on a judgmental basis as suggested by the Council of Texas Archeologists (2002) and adopted by the Texas Historical Commission. The surveyors walked approximately 30 meters apart and 30 meters from the drainage bank in meandering transects such that the drainage bank walls were examined. The clay matrices were not screened but inspected manually and the shovel test pit walls were visually examined for cultural materials. In addition, notes on the terrain and vegetation were taken as were photographs.

No backhoe trenching was done because the proposed impact was within shovel depth.
RESULTS

This chapter is divided into various parts. The survey area is described which is followed by a discussion of the survey. The results of the study based on the survey are presented last. Shovel tests are discussed generally in the text and specific information may be found in Table 1. Shovel test locations are shown in Figure 2.

The survey area

The terrain in the Crandall Development Site is level except for a small hill in the south central portion adjacent to SH 175. The unnamed drainage’s valley is 12+ meters wide and 4+ meters deep adjacent to SH 175 but narrows to less than 5 meters wide and two meters deep in the northwestern portion of the survey area. The channel is 3+ meters wide and 2 meters deep, but the channel narrows to 2 meters wide at the northwest end. The water was clear and ponded after a recent rain. The drainage is 0.5 meters deep near CR 175 but less than 0.3 meters deep in the northwestern portion of the study area. The substrate is clay and decayed limestone gravel/cobbles are present in the channel bottom. North of CR 175, there were two channels instead of one as shown on the USGS and soil maps. At first, the western channel was thought to be a slough, but after closer investigation, it was determined to be the old drainage channel while the easternmost drainage appears to be a result of channelization. At some time since 1973 when the USGS map was made, a new channel was created adjacent to the old drainage channel as shown in Figure 3. The length of the new channel is approximately 650 meters which is the length of the shared bank between the two channels investigated by the surveyors. The new drainage is 8 meters wide and 3 meters deep. It did not contain any water. A forest consisting of saplings and some two-foot diameter trees is located between the two drainages. Trees consist mainly of evergreens but other trees include hackberry, elm, oak, black thorn and bois d’arc. Understory vegetation consists of grape vine, saw greenbriar, prickly pear, berry vine and native grasses. Recently plowed fields are on the west bank of the western drainage and the east bank of the eastern drainage. Again, there is a shared bank between the two drainages for 650 meters. After this, there is only one drainage with plowed fields on both sides. Eye-height visibility in the forested area was 5 meters and the ground visibility varied from less than 10 percent to 100 percent. Ground visibility in the plowed fields was 100 percent.

The survey

In addition to investigating the vicinity of residences shown on the USGS map for historic sites east of CR 741 and west of Blackland Road. More residences were shown on the 1936 General Highway Map of Kaufman County and these locations also were examined. To determine if the residences still existed, the archaeologists drove CR 741 and Blackland Road and walked the plowed fields which had 100 percent ground visibility. No traces of the residences were found, nor were any early twentieth century artifacts observed.
Figure 2. Shovel test locations adjacent to the unnamed drainage shown on an enlarged (300%) portion of the Forney South, TX 7.5' USGS map.
Figure 3. Aerial photograph made in the mid-1990s showing the two channels in the southeastern portion of the study area.
From SH 175, the surveyors began walking northwest on what they thought was the west bank of the drainage. What appeared to be a slough was encountered and to clarify their position on the map, the surveyors walked across the slough and encountered another drainage. The two channels bifurcate from each other approximately 50 meters north of CR 175 and then rejoin after approximately 650 meters. After determining that there were two drainages, the shared bank of the two channels was investigated first by shovel testing because it was believed to contain undisturbed sediments. Six shovel tests were placed in the shared bank and encountered clay but no cultural materials. No cultural materials were found on the ground surface either. The shared bank between the drainages, however, will not be impacted by construction.

After investigating the shared bank, the surveyors then returned to SH 175 and walked northwest adjacent to the west bank of the western channel. No cultural materials were discovered. At the northwest end, where the drainage had been channelized (Figure 1), the surveyors walked the east bank back to SH 175. At the southeastern end of the survey area the unnamed drainage encounters a very minor drainage entering it from the northeast (Figure 1). Shovel test 7 was placed at the confluence of the two streams but encountered sterile clay. No cultural materials were found adjacent to or in the unnamed drainage.

Uvalde gravel was found along with residential foundation debris on a small hill approximately 50 meters west of the western unnamed drainage. The cobbles were less than 5 centimeters in length and had not been tested. The gravel probably had eroded out and the house had been built over the gravel. The gravel then became associated with the residential debris.

Conclusions

As expected, no significant cultural materials were discovered during the pedestrian survey despite the fact that surface visibility was excellent in the fields and in the drainages. This is clearly a degrading setting that has lost topsoil as the result of possibly a hundred years of farming and associated erosion. The absence of cultural materials is attributed to the lack of or a very ephemeral prehistoric occupation of this upland prairie setting where surface water was present only after rains and the biotic diversity was low. Uvalde gravel was present, but it was too small to have been utilized. The decaying limestone gravel and cobbles in the drainage bed indicate that the limestone bedrock is probably not far beneath the stream bed.
Table 1. Shovel test descriptions.

<table>
<thead>
<tr>
<th>ST No.</th>
<th>Depth (cm)</th>
<th>Description*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0 – 39+</td>
<td>Very dark gray (10YR3/1) silty clay</td>
</tr>
<tr>
<td>2</td>
<td>0 – 37+</td>
<td>Very dark gray silty clay</td>
</tr>
<tr>
<td>3</td>
<td>0 – 39+</td>
<td>Very dark gray silty clay</td>
</tr>
<tr>
<td>4</td>
<td>0 – 42+</td>
<td>Very dark gray silty clay</td>
</tr>
<tr>
<td>5</td>
<td>0 – 37+</td>
<td>Very dark gray silty clay</td>
</tr>
<tr>
<td>6</td>
<td>0 – 35+</td>
<td>Very dark gray silty clay with marble-sized calcium carbonate gravel at 20 to 23 cm.</td>
</tr>
<tr>
<td>7</td>
<td>0 – 39+</td>
<td>Very dark gray silty clay</td>
</tr>
</tbody>
</table>

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

The purpose of this investigation was to determine if significant cultural resources were present adjacent to or in the banks of the unnamed intermittent drainage and look for historical residences in the vicinity of houses shown on the 1973 USGS map in the proposed Crandall Development Site. No cultural resources were discovered by 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.
REFERENCES CITED

Bagot, Joe T. and S. Alan Skinner

Blair, W. F.

Bureau of Economic Geology
1988 *Geologic Atlas of Texas, Dallas Sheet.* The University of Texas, Austin.

Council of Texas Archeologists

Crook, W.W., Jr. and R. K. Harris


Davis, W.A.

Ferring, C. Reid
1975 *Archaeological Survey of Parts of the Cedar Creek Watershed, Kaufman County, Texas.* Southern Methodist University, Archaeology Research Program, Research Report 55.


Fox, Daniel E.

Guderjan, Thomas H.
1981 *Archaeological Investigations in the Forest Grove/Big Rock Areas, North-Central Texas.* Southern Methodist University, Archaeology Research Program.


Hannah, Henry, Jr.
1941 Two Rockwall County Indian Campsites. *The Record* 3(3):37-38.

Hannah, Henry, Jr. and R.K. Harris

Harris, R. K.

1960 Burial 1, Site 27B1-2 Rockwall County and Burial 5, Site 18D4-1 Collin County. *The Record* 15(2):8-10.

Harris, R. K. and Dee Ann Suhm
1963 An Appraisal of Archeological Resources of Forney Reservoir, Collin, Dallas, Kaufman, and Rockwall Counties, Texas. Report submitted to the National Park Service by the Texas Archeological Salvage Project, The University of Texas.

Hart, Brian

Johnson, LeRoy, Jr.
Kuchler, A.W.

Lorrain, Dessamae
1965 An Appraisal of the Archeological Resources of Lavon Reservoir Enlargement, Collin County, Texas. Report submitted to the National Park Service by the Texas Archeological Salvage Project, The University of Texas.

Lorraine, D. and N. Hoffrichter
1968 *The Lower Rockwall Site, Rockwall County, Texas.* Report submitted to the National Park Service by the Salvage Project, Southern Methodist University, Dallas.

Lynott, Mark J.

Lynott, Mark J. and Kimball M. Banks
1975 *An Archaeological Evaluation of Selected Parts of the Cedar Creek Watershed.* Southern Methodist University, Archaeology Research Program, Research Report 105.

Meltzer, David J. and Michael R. Bever

Menzer, F.J., Jr. and B.H. Slaughter

Minor, David
2004 Crandall, TX. *The Handbook of Texas Online.* Texas State Historical Association internet site.

Peter, Duane E. and Daniel E. McGregor, editors
1988 *Late Holocene Prehistory of the Mountain Creek Drainage,* Southern Methodist University, Archaeology Research Program, Joe Pool Lake Archaeological Project, Volume I

Prikryl, Daniel J.


Pringle, Fred B.
1977 *Soil Survey of Kaufman and Rockwall Counties, Texas.* USDA, Soil Conservation Service in cooperation with the Texas Agricultural Experiment Station.

Richner, Jeffrey J.
1976 *An Archaeological Survey of Areas to be Affected by the East Fork Channel and Levee Improvement Project - Dallas and Kaufman Counties, Texas.* Southern Methodist University, Archaeology Research Program, Research Report 91.

1978 *A Resurvey of Forest Grove Lake.* Southern Methodist University, Archaeology Research Program, Research Report 112.

Richner, Jeffrey J. and Joe T. Bagot

Richner, Jeffrey J. and T. Reed Lee
1976 *Cultural Resources at Tennessee Colony Lake.* Southern Methodist University, Archaeology Research Program, Research Report 85.

Ross, R.E.
1966 *The Upper Rockwall and Glen Hill Sites, Forney Reservoir, Texas.* The University of Texas at Austin, Papers of the Texas Archeological Salvage Project No. 9.

Sellards, E.H.

Shafer, Harry J.
Skinner, S. Alan


Smith, C.A.

Stephenson, Robert L.

1949b A Note on Some Pits in Certain Sites near Dallas, Texas. American Antiquity 15:53-55.


Story, Dee Ann

Texas Historical Commission
2002 Survey Guidelines
Texas Archeological Sites Atlas
2004 Search for sites listed on the Forney South, TX 7.5’ USGS map. Texas Historical Commission internet site.

Wilson, Lester