# Archeological Survey Report on the Mid-Plains Rural Telephone Cooperative Buried Fiber Optic Line Project in Swisher, Randall, Briscoe and Armstrong Counties, Texas 

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Briscoe, James and Zan, Jason (2010) "Archeological Survey Report on the Mid-Plains Rural Telephone Cooperative Buried Fiber Optic Line Project in Swisher, Randall, Briscoe and Armstrong Counties, Texas," Index of Texas Archaeology: Open Access Gray Literature from the Lone Star State: Vol. 2010, Article 32. ISSN: 2475-9333
Available at: https://scholarworks.sfasu.edu/ita/vol2010/iss1/32

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# Archeological Survey Report on the Mid-Plains Rural Telephone Cooperative Buried Fiber Optic Line Project in Swisher, Randall, Briscoe and Armstrong Counties, Texas 

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## BCS

Archeological Survey Report<br>on the Mid-Plains Rural Telephone Cooperative Buried Fiber Optic Line Project in Swisher, Randall, Briscoe and Armstrong Counties, Texas

TAC Permit \# 5789<br>BCS Project Number: 104-10<br>Prepared For: Mid-Plains Rural Telephone Cooperative, Inc. and N-Con, LLC.<br>Project Name: Mid-Plains Fiber Optic Line,<br>Project Location: Swisher, Randall, Briscoe, and Armstrong Counties, Texas<br>Land Status: Public roadside right of way<br>Surveyed By: James Briscoe, Jason Zan and Robert Walker<br>October 19 to 29, 2010<br>Heather Szarka, Robert Walker, and Nash Sherrod<br>November 8, 2010<br>Report By: James Briscoe and Jason Zan

November 8-15, 2010

## NOTICE

This report was prepared for agency review and is not intended for public use. Disclosure of site locations is prohibited. If information is to be released to the general public, all maps and references to site locations must first be removed. Permission must also be sought from MidPlains Rural Telephone Cooperative, Inc. and the Texas Historical Commission.


#### Abstract

Mid-Plains Rural Telephone Company (MPRT) proposes to replace existing copper telephone lines with new fiber optic technology. The telephone grid covers major portions of Briscoe, Randall, Armstrong and Swisher counties in the Texas Panhandle. Initial consultation was made with the Texas Historical Commission (THC) in October of 2010. THC recommended all segments along or adjacent to playas, creeks and canyons be given further archeological considerations.

The proposed new fiber optic line will replace an existing buried copper telephone line. The new line will be installed with a cable plow immediately adjacent to the existing line, along the edge of the existing roadway within county and state road easements. The new lines include 93 miles of buried cable. The Area of Potential Effect (APE) includes an eight foot wide (the cable-plow width) surface disturbance corridor along previously disturbed roadways. Sub-surface disturbance will include a trench 3 inches wide and less than a meter deep. A total of approximately 90 acres will be disturbed by the installation of the new cable.

All areas considered highly likely to contain cultural resources were selected for archeological investigations. A background search of the Texas Historical Commission (THC) Atlas Records (on-line) has been completed. Previous investigation records and topographic maps were examined to select approximately 35 miles of the proposed project for archeological examination. For archeological purposes, a corridor 20 feet wide will be included, totaling approximately 85 acres.

Archeological investigations were initiated at the request of Del Schipper of N-Com, Inc. Mr. Schipper can be reached at 806-866-9900, $612979^{\text {th }}$ St. Lubbock, TX 79424. These investigations were conducted on behalf of Mid-Plains Rural Telephone Cooperative, Inc. and N-Com, LLC under TAC Permit number 5789. A total of 6 segments were located along/adjacent to playas, creeks or canyon settings. All of these segments were physically walked and inspected between October 10 and 29, 2010, by James Briscoe (Senior Archeologist), Jason Zan (archeologist), and Robert Walker (archeological technician); and on November 8, 2010 by Heather Szarka (Senior Archeologist), Nash Sherrod (archeologist) and Robert Walker (archeological technician) of Briscoe/Szarka Consulting Services.




Portions of each of the six areas proposed for fiber optic installation were selected for archeological investigations. Access to undisturbed and less disturbed portions along the project corridor was primarily on private property adjacent to the road right of way. Only roadside right-of-ways within the planned project corridor were surveyed. Therefore site details are based on tests and observations made within the roadside right of way. Two historic sites, one aboriginal and AngloAmerican site, and one isolated find were located along the project corridor.

41AM19 is the town site of Wayside, Tx. This town includes about 40 modern structures as well as several historical buildings and foundations of historical buildings, two of which would qualify for inclusion to the NRHP, under Criteria C. As an important frontier settlement, the entire town should qualify for inclusion to the NRHP, under Criteria A, and could be eligible under Criteria D. Archeologically, the features and remains around the approximately 35-acre town site could provide a wealth of information about the material culture of its early inhabitants and frontier life in the Llano Estacado. Construction will be in the drainage ditch of the disturbed right-of-way of the town's main paved roads. The proposed project will not disturb the site.

41AM20 is a circa 1905 ranch house with connections to Charles Goodnight of the Goodnight/JA Ranch legacy. The house is in good condition and is currently occupied. Pending further historical research, the Adamah Ranch house may be eligible for inclusion to the NRHP, under Criteria A and C. The installation of a buried cable line in the drainage ditch along the roadside right-of-way will have no effect on the property.

41AM21 is a high density lithic scatter along Segment 2, indicating a much wider site surrounding the road. Artifacts observed include Tecovas chert flakes, boiling stones, fire cracked basalt, quartzite flakes, flint scrapers, a chalcedony flake, a flint knife fragment, and an iron arrowhead. All material culture was observed on the surface of the road, right-of-way shoulder, and cut banks along the right-of-way. Artifacts appear signify a Comanche hunting camp. The site could qualify for inclusion to the NRHP, pending site investigations on private property. The portion within the road and roadside right-of-way, however, is 100 percent impacted and destroyed. Construction will be in the drainage ditch of the disturbed right-of-way, and will not impose additional detriment upon the site.

IF-1 is a single quartzite flake discovered within a disturbed portion of Segment 1. The artifact appears to be outside of its original context, and no other artifacts were discovered along Segment 1. The area is already 100 percent disturbed, and the proposed construction will have no further impact on the area.

Selected surface artifacts and materials from shovel tests were not collected during these investigations. All areas of archeological interest were found to be heavily disturbed within the APE. Installation of a new buried cable line immediately next to existing buried line in roadside right-of-ways will have no effect on significant cultural resources and no further archeological concerns are being recommended.

This assessment is subject to review and concurrence by the Texas Historical Commission.

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## Introduction

Mid-Plains Rural Telephone Cooperative proposes to install a series of new fiber-optic lines in portions of Armstrong, Briscoe, Randall, and Swisher Counties in the Texas Panhandle. The lines will replace existing buried copper telephone lines. New line will be installed immediately adjacent to existing line located along the edge of existing roadways, within county and state road easements. A total of 93 miles of buried fiber-optic cables will be installed.

The new lines will be installed by a cable plow on a track mounted vehicle. The Area of Potential Effect (APE) includes an eight foot wide (the cable-plow width) surface disturbance corridor. Actual sub-surface disturbance will include a trench 3 inches wide and less than one meter deep. A total of approximately 90 acres will be disturbed by the installation of the new cable.

During the initial consultation with the Texas Historical Commission, it was advised that all areas along playas, streams and canyons should be addressed for cultural resources. Topographic quadrangle maps of the entire project were examined and portions of the project areas near water sources were physically inspected by an archeologist for formal archeological survey. A total of 35 miles were selected for archeological survey. For archeological purposes, a corridor 20 feet wide (approximately 85 acres) was included in the archeological investigations. Much of the surveyed project area was 90 to 100 percent disturbed. Roadways in the project area typically have graded or paved surfaces with shallow to deep drainage ditches ( 30 cm to 1.3 meters) and right-of-way shoulders sloped at up to 50 degree angles. Private property restrictions prevented full site delineation, and cultural material located along survey segments in the road shoulder were surface finds in heavily disturbed or eroded areas.

## Environmental Setting

The project area is located within the Southern High Plains Physiographic Province. This region is characterized by extremely flat terrain with a gentle southeastward tilt, and is comprised of the Ogallala Formation capped by a layer of caliche. The High Plains are divided from the North Central Plains by the Eastern Caprock Escarpment, including canyons such as the Palo Duro Canyon, which abuts the north end of the project area in Segment 2. This escarpment is formed from erosion by river tributaries, such as the Red River, exposing the red shales and sandstones that make the Palo Duro Canyon so visually unique (Swanson 1995: 31). The impermeable caliche caprock, coupled with a southeastward tilt, causes area streams to drain eastward through the Caprock Escarpment (Leatherwood Nd). The Prairie Dog Town or Main Fork of the Red River dissects the Southern High Plains in this area and crosses into the North Central Plains about 30 miles to the east. The Southern High Plains is also called Llano Estacado, or "Staked Plains," reputedly because the plain was so flat and featureless that Spanish explorers had to stake the ground in order to navigate across it without unwittingly circling back (Swanson 1995: 24, 30).

The most notable characteristic of the landscape consists of thousands of small lakes or ponds pock-marking the surface. These lakes, called Playas, are shallow bowl-shaped depressions that fill with water, providing the primary water source for a region with an average of 18 inches of rainfall a year. There are over 20,000 playas on the plains, and they are each typically under 0.5 miles across, though larger examples do occur. Formed either from sinkholes or wind-eroded blowouts, playa lakes fill with water via rainfall or minor drainages and are able to hold water due to their clay bottoms. Water leaking through the clay playa bottoms accounts for most of the recharging of the area's aquifer, the Ogallala aquifer (MacLeod 2007: 22-23; Swanson 1995: 32, 48). Other water sources for the area include streams, draws, and drainages, but these are much less common than the ubiquitous playa lakes. High ground near playas or streams make ideal settings for prehistoric sites, and all portions of the project area along or across water sources were included in the archeological investigations.


Playa Example along Segment 4

Soils within the project area are primarily deep, well-drained silty clay-loams and clay-loams of the Pullman, Lofton, and Mansker association. Some Randall clay is also present along portions of the project area. Soils encountered within roadside right-of-ways were often mottled sandy or silty clays, providing evidence of disturbance. The project area is located in the High Plains Climactic Division. Mean annual air temperature is between 55 and 68 degrees Fahrenheit and mean annual rainfall is between 15 and 24 inches. Most of the area's yearly rainfall occurs between April and October (Swanson, 1995: 38-41; Natural Resources Conservation Service [NRCS] 2010).

Natural vegetation for the High Plains consists mainly of short grasses, primarily blue grama and buffalo grass, with mesquite shrubs now being common in the Southern High Plains. However, significant portions of this grassland have now become agricultural land, mainly for cotton or grain production, or cattle pastures (Diamond Nd; Johnson Nd; Swanson 1995: 30). Ploughed cotton, corn, and grain fields along the project area provided between 70 and 100 percent surface visibility, which was particularly helpful when roadside right-of-ways were too steep for shovel testing. Pasture and short grass prairie was also encountered along the project corridor, but afforded typically poor visibility. County road right-of-ways are typically graded and have cleared excavated ditches. State Highway right of way is generally reseeded grasses along well sculpted ditch lines on either side of improved roadways.


Prairie North of Segment 2


Cotton Fields along County Road Q in Segment 4

## Research Design and Methodology

The basic design for these investigations was to locate any cultural resources that exist in the proposed construction corridor by selecting potential areas and performing a pedestrian survey. Portions of the new buried fiber optic line either cross or pass beside surface water resources on the flatter caprock of the Texas Panhandle. Surface resources in this regards are playas, uplands drainages, small creeks and draws, or canyon settings. Archeological sites in the region are typically located on knolls next to playas, stream terraces, and draw or canyon rim areas. All topographic areas within the project corridor possessing these traits were selected for archeological survey. Palo Duro Canyon and Happy Canyon may have more extensive archeological deposits and are along portions of, but not included within the immediate project area. The new buried fiber optic will be installed immediately adjacent to an existing buried copper phone line running along the entire project and it was expected that much of the project corridor would be severely disturbed by prior phone line construction, other utility lines, and roadway construction. Significant portions of the segments were found to be 100 percent disturbed and lacking surface deposits or other indications of potential archeological interest. As a safeguard, all areas selected for archeological survey were physically inspected on foot. Access to private property was not granted, so archeological investigations were limited to county and state roadway right-of-ways.

Each segment was traversed in linear pedestrian transects walked in an ambling zigzag fashion. Transects followed the public right-of-way easements. Areas of good ( 50 to 100 percent) surface visibility were visually inspected. Numerous areas of exposed earth or gravels were given special attention, such as cut banks and places of erosion along the right-of-way. Shovel tests were dug every 100 m in areas of low surface visibility (less than 50 percent ground exposure) or areas deemed most likely to contain sites (high, flat areas near water). Each test was composed of a 30 x 30 cm hole dug through topsoil to clay beds, restrictive elements, or to 1.0 m where possible. Fill was hand sifted through $1 / 4$ inch hardware cloth before back-filling each hole. A handheld Garmin ETrex receiver set to the NAD 1927 datum was used to spot-locate all tests, photographs, surface finds, and areas of specific interest.

Survey conditions were warm, sunny, and clear. There were no impediments to the survey.

## Prefield Background Research

Prehistoric cultural resources have been recorded throughout the region, primarily spanning the Archaic, Woodland, and later prehistoric periods. Earlier and later prehistoric remains are also well documented throughout the region.

A search of the older aerial photographs that accompany the USDA Soil Surveys for each county (circa 1950s aerials) show numerous homesteads along roadways but no such sites that would be impacted by the project.

According to the most recently available listings of the National Register of Historic Places, four properties have been listed on the Register in Randall County, two in Briscoe County and three in Armstrong County. The properties in Randall County are located in and around the city of Amarillo and the town of Canyon, well outside of the project area. One property in Briscoe County is located around the town of Quitaque, well outside of the project area. The second registered property, the Mayfield Dugout site (41BI52), is located 7 miles northwest of Silverton, and 3.6 miles outside of the project area (Segment 3). The exact location of two properties in Armstrong County are restricted, but they are noted as being located within the town of Claude, which is approximately 3.5 miles east of the project area in Segment 1. The third property, JA Ranch or Goodnight Ranch (41AM4), is located in Palo Duro Canyon. However this property is over 20 miles east of the project area (Segment 2) near Palo Duro Canyon. None of these properties or sites will be affected by the project.

The Texas Historical Commission Atlas was searched online for sensitive features (archeological sites, historical markers, or cemeteries) within 1 mile of the project area. Segments 3, and 4 were the only project areas with sensitive features located nearby, but all features are over 1 mile from the project area and will not be affected by the project.

## Segment 3

An unknown cemetery, BI-C002, is located east of the town of Silverton and several historical markers and neighborhood surveys are located within the town, however each of these features are located over 1 mile east of the project area (Segment 3).

## Segment 4

Two archeological sites are located north of the project area is Segment 4. The Herring Ranch burial site, 41SW39, is located 1.02 miles from the proposed project area. This burial is single, unmarked human burial. Burial remains were uncovered by erosion, after which they were discovered by a friend of the landowner. The burial remains were requested exhumed, analyzed, and reinterred as of April, 2010.

The Mackenzie Horse Kill Site, 41SW30, is located 0.78 miles from the project area. During the Battle of Palo Duro Canyon (also known as the Second Battle of Palo Duro Canyon), Colonel R.S. Mackenzie captured a large number of horses from Comanche, Cheyenne, and Kiowa warriors. He ordered these horses to be killed at this location in order to keep them from being retaken by
the Indians for use on their return to the reservations. A historical marker memorializing this event is located south of Highway 86. See additional information on this site below, under Previous Investigations and Cultural Background.

Both of the above sites are located outside of the immediate project area and will not be disturbed by the proposed project. The historical marker is also outside of the project corridor, on the opposite side of the highway, and will not be disturbed by the proposed project.

## Previous Investigations and Cultural Setting

The Panhandle Plains Historical Museum (PPHM), under Jack Hughes and Billy Harrison, conducted the majority of regional research over the past four decades and most of what is known about the cultures of this region comes from the papers, monographs and contract studies conducted through PPHM. The Texas Historical Commission Atlas was searched online once more for relevant sites located in the general vicinity of the project area, generally within 5 miles.

The primary prehistoric periods relevant to the Southern High Plains are the Paleo Indian, Archaic, and Neo Indian stages. The Historic Period overlaps the Neo Indian stage. The following is a simplified summary of the stages for the Prehistoric and Historical Periods in the Llano Estacado, with specific notes of interest concerning the proposed project area, where relevant. The reader is referred to the sources in the Bibliography for more detailed information about the region.

## Prehistoric Period

## Paleo-Indian Period

The Llano Estacado is particularly well-known for its number of Paleo-Indian sites. However, the nomadic nature of Paleo-Indian people has left relatively large sites with proportionally few material finds. More is understood about hunting and butchering methods and implements than any other aspect of Paleo-Indian life (Hughes and Willey 1978: 24). However, the type of structural remains and the focus on mammal hunting show that Paleo-Indian peoples were nomadic hunter-gatherers (Hofman 1989: 25). The Clovis, Folsom, and Portales cultures are accounted within the Southern High Plains, and span from about 12000 BCE to 8000 BCE. The Paleo-Indian period has been extensively studied in the Texas Panhandle, and sites representing one or more of these cultures include Lake Theo, Lipscomb, Lubbock Lake, Miami, Midland, and Plainview (Hofman 1989: 25; Hughes and Willey 1978:25). One Paleo-Indian animal kill and processing site (41SW28) is located near the town of Tulia, but is over five miles outside of the proposed project area. The site, recorded by a Texas State Highway Department archeologist, exhibits both bone and lithic material indicative of this period.

## Archaic (Meso-Indian) Period

The Archaic period is marked by a wider variety of tools and material culture assemblages together with an increased reliance on smaller game and wild plant foraging beginning around 5000 BCE . These changes would also indicate a decrease in the nomadic range which was before more necessary for following herds of big game, evidenced in part by continual reoccupation of some sites. Although known to have been present in the Southern High Plains, Archaic cultures have not been as intensively investigated within this region (Hofman 1989: 45; Hughes and Willey 1978: 26). The best example of an Archaic site in the Llano Estacado is the Little Sunday Complex in Randall County. The site was analyzed by Jack Hughes in 1955 and approximately 160 artifacts were collected, most of which were surface finds. This complex is on the far eastern edge of the Staked Plains and more likely was a base camp for Archaic peoples utilizing the Rolling Plains further east (Hofman 1989: 59, Rathjeen 1973: 31).

## Neo-Indian Period

This period encompasses the advent of both pottery and bow and arrow technologies. Characterized by an increased reliance on horticulture in addition to hunting and gathering, this period eventually saw the creation of permanent settlements. The Neo-Indian period can be further subdivided into the Plains Woodland and Plains Village periods, dating from about 1 CE to 1500 CE (Hughes and Willey 1978: 28; Rathjen 1973: 33-34).

While the earlier period is called "Plains Woodland," people groups living on the Llano Estacado received more direct influence from southwestern cultures rather than eastern woodland cultures (Hofman and Brooks 1989: 61). In West-Central and Central Texas, the technological earmarks of the Neo-Indian Period mark the Woodland Period as well, but the social changes mentioned above are not yet present. There is a general decrease in frequency of bison hunting, which is considered due to climatic changes and a decrease in bison population (Hofman and Brooks 1989: 69). In the Llano Estacado, the Neo-Indian period has been the subject of much attention and numerous sites from that period are known. However, not until the extensive work undertaken by J. Hughes and P. Willey during the Mackenzie Reservoir construction in 1978, was a Neo-Indian complex identified and delineated. Of the several important sites investigated during this project, one particular site, the Dead Man's Shelter, has proven to be a significant Woodland site dating between 100 and 800 CE (Hughes and Willey 1978: 29, 148-190; Hofman and Brooks 1989: 69). The woodland material culture assemblage identified at the Dead Man's Shelter site is now known as the Palo Duro Complex. The Mackenzie Reservoir and lake are located 7.6 miles from the project area in Segment 3. Other relevant sites on the Llano Estacado include the Lake Creek Focus on a tributary of the Canadian River, and the Chalk Hollow site near the Palo Duro Canyon (Hofman and Brooks 1989: 69).

The Plains Village period represents the most well-documented prehistoric cultural period in the Great Plains region. The research emphasis on this period is due to the vast number of currently extant correlating sites. This period of time, from about 800 to 1500 CE , saw the overall cultural development and use of small-scale farming to supplement established hunting and gathering traditions. Sites are focused on major stream drainages with fertile floodplain soils conducive to this new farming development and are generally small ( 0.2 to 1.5 hectares). Bison hunting
becomes more dominant than during the Woodland Period. However, this renewed prominence of bison hunting was augmented by a wide range of other animal quarry, as well as an equal reliance on farming crops such as corn, beans, and squash (Brooks 1989: 71, 75; Rathjen 1973: 34). Plains Village sites relevant to the project area and the Southern High Plains in general would be considered part of what is known as the Antelope Creek Phase, centered on the greater part of the Texas panhandle. The Antelope Creek culture exhibits a unique characteristic different from other Plains Village cultures in that they utilize stone slabs in their dwelling construction. Multiroom, one-story dwellings constructed of both slabs and adobe serve as a testament to the more permanent nature of the culture. This may be contributed to an influence from cultures to the southwest (Brooks 1989: 72, 82; Rathjen 1973: 36).

One Neo-Indian site (41SW38) is located in the vicinity of Tulia and over 3 miles outside of the project area in Segment 5, and will not be affected by the proposed project. Chupadero black-onwhite pottery discovered at the site during a pedestrian reconnaissance survey has led the recording agency to tentatively date the site between 1100 and 1500 CE .

## The Historic Period

The Historic period can be considered to begin with the first expedition of Coronado in 1541. However, the period from this date until about 1800, when historic records become more prolific, is generally referred to as the Protohistoric period. Band-level societies, namely the Plains Apaches, inhabited the Llano Estacado until the mid 1700's CE, when the Comanches became the dominant force. Sites of this period, because they are more recent, are more likely to exist as surface remains. Therefore, such sites are more likely to have been severely impacted by modern construction (Hofman 1989: 91, 99; Hughes 1978: 30). Site 41AM21 was discovered during the present investigations on a portion of Segment 2, which is thought to be a Comanche hunting camp or work site (see Results of Field Investigations). This site, a high density surface lithic scatter, was highly disturbed within the project right-of-way due to roadway construction and traffic.

The Protohistoric period was marked by a number of changes, including the arrival of Europeans to the land, the introduction of horses, as well as developing trade relationships between hunters and farmers, and natives and Europeans. Band-level societies, namely the Apaches, Comanches, Kiowas, and Kiowa Apaches, were the primary people groups inhabiting the region until the mid 1700's. Coronado, who traveled from New Mexico through the Llano Estacado into Kansas during his expedition for Quivira, encountered both Apache and Teyas Indians. His records of these people, whom he dubbed the Querechos, are the first historic records of the Apaches and Teyas (Hofman 1989: 91, 99, 102; Hughes 1979: 30, 32; Rathjen 1973: 38-39). Spanish retaliatory attacks against Apache raids and Comanche invasions into the area sandwiched the Apaches, eventually pushing them from their place as the dominant people group in the area and allowing the Comanches to take their place (Hofman 1989: 91; Rathjen 1973: 40).

Numerous additional excursions into the Staked Plains were undertaken, usually as part of larger expeditions, by various Spanish, French, and after the Louisiana Purchase, American explorers through the 1840's. European settlements were initially sparse, due to the danger of hostile natives, and were typically of a trade or military nature (Hofman etc 1989: 106). However, by the 1830's, settlers from the Republic of Texas and America had already began pushing the Plains Indians
west. The tensions often erupted into violence, with raids by Indians against white settlements becoming common. Despite military presence in the area, the Civil War drained much of the army's resources and manpower, leaving the white settlements in the plains open to attack. During this period, frontier settlements were pushed east, and those that remained were forced to consolidate and fortify (Cruse 2008: 9-11).

After the war, the land south of the Arkansas River was officially set aside by the Federal Government as hunting grounds for Comanches, Kiowas, Cheyennes, and Arapahos in the Medicine Lodge Treaty in 1867 (Cruse 2008: 11). This area included the Llano Estacado. However, the boundaries of this land were not enforced by the United States Army, and overhunting of buffalo north of the Arkansas River caused white buffalo hunters to seek quarry further south. Fear for the decimation of their main subsistence as well as anxieties towards being pushed from their land caused a number of Indians to take violent action. 200 men, led by Chief Quanah and a medicine man named Isatai, attacked the buffalo hunter trading post at Adobe Walls on June 27,1874 . While the attack failed, it and subsequent attacks on buffalo hunters spurred US military action (12-16). Troops were sent from both Missouri and Texas to converge on the Red River and its tributaries in hopes of closing all avenues of escape. During the ensuing action, known as the Red River War, 20 battles and skirmishes were fought. Two of these battles occurred near the Palo Duro Canyon in Armstrong and Briscoe counties (4-5, 17).

In Segment 4, South of Highway 86, a historical marker erected by the State of Texas in 1936 commemorates an event from the Second Battle of Palo Duro Canyon, Sept. 28, 1874. 2 miles north of the marker, General Mackenzie of the $4^{\text {th }}$ U.S. Cavalry ordered 1450 captured horses to be shot in order to force the defeated Native Americans to return home on foot. Ranald Mackenzie commanded a column sent from Texas, comprised of the $4^{\text {th }}$ Cavalry and $10^{\text {th }}$ and $11^{\text {th }}$ Infantry (17-18). Considered the most pivotal battle of the war, this action saw Mackenzie lead his troops to a successful surprise attack on Cheyenne, Comanche, and Kiowa bands camped in Palo Duro Canyon. The destruction of their supplies and horses, along with their defeat in battle, caused a significant number of the Indians to cease hostilities and return to their reservations (6). This historical marker is located on the opposite side of the highway from the project corridor, and will not be disturbed by the proposed project.

The pivotal shift in power in the Southern High Plains due to the Red River Wars meant the area was now open to Euro-American settlement. Charles Goodnight and John Adair were responsible for bringing the ranching industry to the Staked Plains. In a partnership that formed the JA Ranch, the two entrepreneurs held over 1,335,000 acres of land by the 1880 's, including parts of Armstong, Briscoe, Randall, and Swisher counties (Abbe ND; Abbe and Anderson ND). The JA Ranch is on the National Register (41AM4). The Adamah Ranch (41AM20) and a Spanish-style homestead surrounded by a proto-historic site (41AM21), discovered during these investigations, are both located along Segment 2 and are both associated with Charles Goodnight.

Because of these and other early ventures, ranching became the major industry in Armstrong, Briscoe, Randall, and Swisher counties. The arrival of railways to these counties around the same time allowed ease of travel and transportation of goods and supplies, causing ranching and agricultural pursuits in the region to flourish. The Fort Worth and Denver City Railroad, which runs along portions of Segment 1, was founded in 1887 and extends into New Mexico and

Colorado. This railway is north of Highway 287, and is currently still in use. The railway is located on the opposite side of the highway from the project corridor, and will not be affected by the proposed project.

During this time, Silverton, 1 mile east of the project area in Segment 3, was founded and became the official seat of the newly formed Briscoe County in 1892. Swisher County was officially formed in 1890, with its county seat at the settlement of Tulia, west of the project area in Segment 5. Randall County was officially formed in 1889, with Canyon as its seat (Abbe ND; Abbe and Anderson ND; Abbe and Leffler ND; Anderson and Odintz ND).

After 1900, ranch monopolies were broken up and farming was encouraged, with cotton and wheat becoming the primary crops in the area. The Great Depression in the 1930's caused a severe decline in the area. Farms, production, and population all decreased as many farms and ranches were abandoned, and revitalization was not seen until after the 1940 's. The stimulus caused by the Second World War, coupled with irrigation on a large scale, caused Swisher County to rebound more quickly than others in the area. In addition, Randall County began a trend of urbanization in the 1940's due to its proximity to Amarillo, though wheat and cattle remained a major industry. In the 1950's and 1960's, several feed lot operations were established in Swisher County, utilizing the area's prominent grain production. Feed lots, such as the Tulia Feed Lot along the project area in Segment 5, are still in service today (Abbe ND; Abbe and Anderson ND; Abbe and Leffler ND; Anderson and Odintz ND).

## Segment Descriptions

The project was split into six segments, portions of which were selected for formal archeological investigations. All segments included portions with 100 percent disturbance and little likelihood of containing archeological potential. Disturbance was mainly attributed to road construction and included grading and sculpting of associated right-of-ways and drainage ditches. A portion of Segment 5 was also highly disturbed by industrial construction. All segments were subjected to pedestrian inspection and subsurface testing. Shovel test location and frequency was based on surface visibility, disturbance, landform, and the presence of surface artifacts.

## Segment 1 (Washburn Area)

This segment follows Highway 287 between County Roads 2373 and 3330, approximately 2 miles east of Washburn, TX. This segment includes approximately 6.2 miles of archeological survey. One leg of the segment extends south from Highway 287, along County Road 3330. Numerous playa lakes are located along this segment, one of which is bisected by Highway 287. While the right-of-way for Highway 287 is broad and flat, and mostly in line with undisturbed landforms to the south, what portions of the right-of-way which were not disturbed by highway construction are portions of a pre-existing blacktop road currently in disuse. Numerous areas along the right-ofway exhibited blacktop ruins in various degrees of condition. Some portions are largely intact, while other portions are now dirt road with blacktop chunks included among the road gravels. The blacktop is comprised of asphalt, quartzite, and local chert gravels. Soils were primarily mottled silt-clay and sand.

Visibility along Segment 1 was variable, but averaged between 40 and 80 percent. A total of 17 shovel tests were excavated along Segment 1 . Survey conditions were sunny, clear and warm. There were no impediments to the survey of Segment 1.


Remains of Old Blacktop Road along Highway 287 Right-of-Way

One isolated surface find, a quartzite blade, was located among the road gravels and asphalt remains. Two shovel tests were attempted in order to locate any possible associated buried material culture, but both tests yielded negative results. No other cultural remains were observed on the surface. If a site had existed within the Highway 289 right-of-way, any remains have been 100 percent disturbed by highway construction. However, due to the high proportion of quartzite and chert gravels within the blacktop mixture, it seems highly likely that the isolated find came from a quarry from which road gravels were gathered for roadway construction. This artifact is further discussed below under Results of Field Investigations, IF-1 (pages 31-32).


## Segment 1 (USGS Washburn and Conway)

## Segment 2 (Wayside Area)

The surveyed area of Segment 2 consists of approximately 11 miles of county roadway right-ofway and private property within Armstrong County, near Wayside, TX, over low, rolling terrain. Portions of this segment abut Palo Duro Canyon and Happy Canyon. Three playas are along the project corridor, all but one of which is dry. This segment consists of both paved and dirt roads, including Road 285, Road 2301, Road 5, and Uniform Road. The northernmost portion of this segment is located within Hidden Falls Ranch, and has been significantly disturbed by construction associated with the related campground. Ranch construction includes graded gravel roads, graded and elevated gravel parking lots, cabins, and utility buildings. The project area north of Wayside consists of dirt roads yielding 70 to 100 percent surface visibility, often with cut-banks along the right-of-ways. This area has more in-tact soils, mainly silty or sandy clay-loams grading to clay. The project area south of Wayside is mostly highly disturbed by road construction and typically includes right-of-ways that are obviously sculpted and typically steep ( 20 to 50 degree angles) up to the fence line. Visibility was variable, ranging from 20 to 100 percent. Several agricultural fields and pastures along the roadside provided up to 100 percent visibility.

A total of 6 shovel tests were excavated along Segment 2. Survey conditions were sunny to overcast, cool, and breezy. There were no impediments to the survey of Segment 2.


Segment 2 Roadside Right-of-Way


Flooded Playa converted into a Stock Pond Along Elevated Roadway

Project portions through the town of Wayside are highly disturbed by road construction and town development. However, the town of Wayside has some historical significance, and there are several standing structures and evidence of building foundations relating to historic Wayside. These are discussed below under Results of Field Investigations, 41AM19 - Wayside Townsite (pages 29-31).

A historic ranch house was located along Segment 2, dating to circa 1905. Courthouse research indicates the ranch property likely has ties to Charles Goodnight of the Goodnight/JA Ranch. Additional information on this site is discussed below under Results of Field Investigations, 41AM20 - Adamah Ranch (pages 28-29).

A portion of Segment 2 bisects part of a large Paleo-Indian site, possibly Comanche. Remains include chert flakes, flint scrapers and blades, a triangular Plains-Indian gaming piece, and an iron arrowhead. All remains observed were located on the road or right-of-way surfaces. In addition, an abandoned, Spanish-style, historic homestead is located approximately 20 m south of the road on this portion of Segment 2. Numerous historic artifacts were intermixed with lithic artifacts and include cast iron stove and pot fragments, a redware fragment, a stoneware base fragment, and china fragments. Additional information on this site is included below, under Results of Field Investigations, 41AM21 - Aboriginal and Anglo-American Historic Site (pages 24-28).


Segment 2 (USGS Wesley Point and Wayside)

## Segment 3 (Happy Area)

Segment 3 includes roughly 3.4 miles along Highway 86, County Road 9, and Ranch Road 3030. The project corridor progresses over flat, prairie landscape with four playas along the project corridor. Soils along Ranch Road 3030 were less disturbed sandy clays grading to clay. The portion of Segment 3 along Highway 86 (just over 2 miles) is highly disturbed by highway construction. The right-of-way is clearly sculpted, and quartzite and chert road gravels, as well as chunks of broken blacktop, are visible on the surface up to the fence line. Soils were mottled silty clays. Portions of the project corridor were adjacent to agricultural fields yielding 70 to 100 percent visibility. The portion of Segment 3 along County Road 9 consisted of a clay road with a narrow right-of-way. The right-of-way slopes at a 50 degree angle on both sides of the road, creating cut banks of 80 to 100 percent visibility. The clay road surface and cut banks along the right-of-way were inspected carefully for cultural remains.

A total of 6 shovel tests were excavated along Segment 3. Survey conditions were sunny, clear, and cool. There were no impediments to the survey of Segment 3.



Segment 3 (USGS Ross Canyon and Silverton)

## Segment 4 (Tulia Area)

Approximately 5.2 miles along Highway 86 and County Road Q were surveyed as part of this segment. There are 14 playas near this project corridor. Highway 86 crosses one of these playas, South Tule Draw, and a minor drainage.

The segment portion along Highway 86 was sculpted and highly disturbed by road construction. Steep right-of-ways due to road construction along the highway precluded frequent shovel testing. However, ploughed fields along this portion offered 70 to 100 percent visibility, but other areas were covered in short grasses and weeds, with intermittently high and low visibility. Numerous fragments of blacktop were observed up to the fence line, providing a further indication of disturbance. Soils were mottled clays with varying amounts of sand and silt containing road gravels to 25 cm , indicating the disturbance caused by landscape sculpting during highway construction.

South of Highway 86, a historical marker erected by the State of Texas in 1936 commemorates an event from the Battle in Palo Duro Canyon, Sept. 28, 1874. 2 miles north of the marker, General R. Mackenzie of the $4^{\text {th }}$ U.S. Cavalry ordered 1450 captured horses to be shot in order to force the defeated Native Americans to return home on foot. This marker is on the opposite side of the highway and will not be disturbed by the proposed project.


Historical Marker South of Highway 86
The segment portion along County Road Q was characterized by a clay road with a high, narrow right-of-way ( 70 to 90 degree angle of slope) creating cut banks with 100 percent visibility along the road and right-of-way. Additionally, this road was bounded by ploughed cotton fields, also exhibiting up to 90 percent visibility. This portion of the segment was visually inspected only.

A total of 10 shovel tests were excavated along Segment 3. Survey conditions were sunny, clear, and cool. There were no impediments to the survey of Segment 4.


Segment 4 along County Road 20


Segment 4 along Hwy 86

(USGS Tula Lake, Claytonville NW, Claytonville, and Rock Creek)

## Segment 5 (Tulia Area)

Approximately 4 miles of this segment were selected for archeological investigations. The project area is west and south of the town of Tulia. The surveyed portions include parts of County Road 14, Farm Road 928, County Road 17, County Road U, and County Road 18. The project area included both paved, highly-trafficked roads, as well as dirt roads. Dirt roads (County Road 18, County Road U) exhibited excellent visibility ( 60 to 100 percent) along the project corridor due to either steep cut-banks in the right-of-way or plowed fields along the roadside. Right-of-way grades were frequently steep ( 30 to 80 degree angles) and as high as 3 feet above the roadway. Road surfaces were also inspected for material culture.

The project area along Farm Road 928 was sculpted due to road construction, but the right-of-way was wide (up to 30 feet wide) and conducive to shovel testing where necessary. Soils along Farm Road 928 were mottled sandy clays, evidence of the disturbance caused by landscape sculpting. The Tulia Feed Lot stands at the intersection of Farm Road 928 and County Road 14. Approximately 1 mi along Farm Road 928 has been heavily impacted by the feed lot, including parking lot, paved access roads, structures, buried gas utilities, drainage ditches, and cattle pens. Personal communications with a Tulia Feed Lot employee in the field on 7/28/10 confirm that the right-of-way directly along the feed lot property has been heavily impacted. The employee particularly noted a buried water line for the feed lot facilities lies within the right-of-way along County Road 14. Much of the area around the feed lot has been sculpted for construction, including portions along County Road 14 which rise up to 10 feet above the road. The project area along the Tulia Feed Lot was not shovel tested, except for two safeguard tests along County Road 14.

A total of 19 shovel tests were excavated along Segment 5. Survey conditions were sunny, clear, and cool. There were no impediments to the survey of Segment 5 .



Segment 5
(USGS Tule Lake, Claytonville NW, and Edmonson)

## Segment 6 (Silverton Area)

Segment 6 includes 5.4 miles of surveyed area along Farm Road 1705, Happy West Road, and Helium Road, west and northwest of the town of Happy. There are two playas near the project area, one of which is crossed by the southwest corner of the project (Happy West and Helium Roads). The northwest corner of the project (Helium Rd. and Farm Road 1705) crosses Happy Draw. The project corridor crosses two ridges which overlook these water sources. The roadside right-of-way consisted of a steep and sculpted drainage ditch, highly disturbed by road construction. Blacktop fragments were observed within the right-of-way from the roadside to the fence line.

A total of two shovel tests were excavated in Segment 6.


Sculpted Right-of-Way along Segment 6 Facing East


Segment 6 (USGS Ogg and Tulia Lake NW)

## Results of Field Investigations

Four features of archeological interest were located along the project area. These include: 41AM21, 41AM20, 41AM19, and IF1.

## 41AM21 - Aboriginal and Anglo-American Historic Site

This is a large multi-component site located on high ground between Happy Draw and Palo Duro Canyon. The site appears to contain a proto-historic Plains encampment and a late nineteenth to early twentieth century homestead. Examination of the site was confined to the public roadway (a graded clay road) and observations are based solely on the extent of artifacts discovered on the surface. The road is oriented east-west across the southern part of the site, about 400 to 600 feet north of Happy Draw, with a 10 to 15 feet rise in elevation to the north. The roadway turns northward on the east side of the high ground. Artifacts were observed as far north as a locked gate. The high ground abuts Palo Duro Canyon to the North.


Various Lithic Remains at 41AM21

Aboriginal material was found for a distance over 2400 feet along the roadway and includes a wide variety of flakes, utilized flakes, distal blade scrapers, bifaces fragments, fire cracked boiling stones, a game piece, bovid bone, and a probable cone-shaped iron arrowhead.
Stratigraphy along the cutbanks on the right-of-way shows up to 60 cm of brown loam over caliche clay (along the cut through the higher portion of the site) with in-situ material showing in the upper 20 to 30 cm of these deposits. Metal artifacts which may or may not be aboriginally related include a base foot from a larger iron cooking pot, numerous keg or barrel bands, a fragment of aqua bottle glass (heavily patinated) with scraper-like wear and chipping on one edge, and a sherd of gray salt-glazed stoneware (which appears to pre-date the Anglo-American component). The game piece is a carefully made triangular piece of quartzite $(2.7 \mathrm{~cm}$ wide and 0.8 cm thick) with a red stripe on one side. This item is believed to be from a basket dice set typical of Plains Indian gaming.

It was also observed that the chipped stone included a wide variety of materials: Dakota quartzite from the Colorado-Oklahoma border region, local Tecovas, Alibates, petrified wood, gray Edwards chert, a flake of Knife River flint from northeastern Nebraska, Niobrara chert from the southern Nebraska-northern Kansas area, local Potter chert, milky chalcedony, speckled chalcedony from the Jemez region, and various unidentified materials. The range of materials suggests a possible Comanche occupation and the absence of Flint Hills chert (also known as Kay County flint) suggests that the site was not a Wichita occupation.

While surveying the roadway nearby, one of the local farmers (name not given) recalled visiting the property years ago as a Boy Scout on a camping trip. He described seeing a number of teepee rings along Happy Draw in the general area. The majority of the distal scrapers (all are broken) are larger in size, typical of the late Protohistoric and Historic eras.


A


Flint Scraper (A)

B


Plains-Indian Dice (B)

Assorted Artifacts

The Anglo-American component includes the original Ferris homestead on the south side of the road. An abandoned Spanish-style house with thick adobe walls and stucco overcoat remains relatively intact but is missing all doors and windows. Homestead trash was observed for about 800 feet along the roadway in front of the house and includes the range of domestic material associated with a circa 1880's to 1920's occupation. These materials include: Bristol crockery, redware, plain white ironstone, miscellaneous scrap iron, a Phoenix horse shoe, wire nails, solarized purple glass, aqua and brown beer bottles, clear patent medicine bottle fragments, iron stove parts, brass tinker's scrap, enamelware fragments, fence staples, decorated porcelain, and farm machinery parts. A visit to the Armstrong County Courthouse shows the property to have been sold by Charles Goodnight to the Ferris Family in 1881, who continue to own the land south of the road today. Records at the courthouse are poorly indexed, incomplete, and of little use beyond ascertaining the original patents.


The main portion of the site (north of the road) has been cleared, terraced, and farmed at some point in the past and has been allowed to revert to open pasture. The portion south of the roadway remains relatively intact and has not been cleared or farmed in the past. As an archeological deposit in general, the site deserves further archeological attention and could e eligible for inclusion to the NRHP, under Criteria D. The portion of the site located in the roadway, however, has been extensively disturbed as deep as the caliche clay beds and does not appear to hold much additional archeological importance. Installation of the new buried cable line along the ditch line will not impact the site further.

Image shows site location and was removed from public copy

## Sketch Map of Site JB1

## 41AM20 - Adamah Ranch

The Adamah Ranch was deeded to the family by Charles Goodnight in the 1890's. The ranch house is a French Colonial style, American four-square, balloon-frame house with a wrap-around porch and a pyramid roof (circa 1905). The Building sits on a cement slab. The roof has a fairly new asphalt shingle cover and the walls appear to be original clapboard siding. Windows are $1 / 1$ wood sash with modern aluminum frame storm window covers. The front door is a panel woodframe with upper glass lookout, covered by a $1 / 4$ wood frame screen door. Modernization does not appear to detract from the historical appearance of the structure which retains its overall structural integrity. The walking gate is sided by two period house ties with iron rein rings attached to cement pillars. Other elements and features were not visible from the roadside right-of-way.


Adamah Ranch is typical of the properties that once made up the million-acre Goodnight Ranch. The ranch is somewhat noted for winning chuck wagon cook-offs, particularly for its recipe for Peach Cobbler. Pending further historical research, the Adamah Ranch house may be eligible for inclusion to the NRHP, under Criteria A and C. The installation of a buried cable line along the drainage ditch in the roadside right-of-way will have no effect on the property.

A map with the location of Adamah Ranch can be found in Appendix I.

## 41AM19 - Wayside Townsite

The Wayside town site started in the 1870 's where a number of cowhands aggregated from line camps along the soth rim of Palo Duro Canyon. The town site was originally known as Beulah, and changed to Wayside in 1897 by the postal service (Anderson, ND). In 1891, a road was surveyed through the town site to service ranches across the canyon. A rural school district was founded for the area in 1893 and shortly after the turn of the century, the town boasted a population of 40 , two businesses, a school, a community church, and a cemetery (Armstrong County Historical Association, 1965). Birtie Broadshaw was the first citizen to be buried in the cemetery in 1887.

Today the town site has one business, a church, a cemetery, an abandoned school, about 40 modern structures, and surface indications of 20 older house and business sites. Several of the modern structures appear to be located atop older building sites, but private property was not trespassed to confirm or examine older remains.

The grain elevator was the westernmost structure at Wayside. The concrete base for the storage tower has been reused as the floor of a large barn, but the scales building remains intact. The scales building is a two room masonry block structure with stucco plaster exterior walls and a flat roof. Doors are panel-type, and the two visible windows (from the road) are a 6-pane side window and a large bay window facing east towards the scales pit (now filled). The elevator was wood frame with galvanized tin siding, as evidenced by the elevator cowling lying next to the barn.


Scales Building, looking North (note elevator cowling next to modern barn)

One of the earlier houses remains occupied and relatively intact. The structure is a modified hall and parlor style structure with stucco siding. The roof has been replaced with modern asphalt shingles. The house also has modern windows and doors. The other standing house is an abandoned American four-square balloon frame building in a small grove of trees northeast of the town site. There is visible evidence of several other building locations between the county road and the abandoned house.

The school is a single story brick structure with an abbreviated art deco façade. The structure appears to be intact and is used as a community building today.


Last Older Building Still Occupied facing North


Wayside School, Facing North

The Community Church remains in use. The structure is a single gabled one-story frame with stucco walls and modern asphalt shingles. A small restroom addition has been added to the east side. The addition was done in the style of the church, with the exception of modern aluminum storm windows and a solid core door.


Community Church
Facing Southwest


Community Church
Facing South

In general, the Community Church and school probably would qualify for inclusion to the NRHP, under Criteria C. As an important frontier settlement, the entire town should qualify for inclusion to the NRHP, under Criteria A, and could be eligible under Criteria D.
Archeologically, the features and remains around the approximately 35- acre town site could provide a wealth of information about the material culture of its early inhabitants and frontier life in the Llano Estacado.

The Wayside Townsite sketch map is included in Appendix I.

## IF 1

A quartzite flake was located on the surface along Segment 1, among the road gravels and asphalt remains. The flake made up of ogalalla quartz. Two shovel tests were attempted in order to locate any possible associated buried material culture, but both tests yielded negative results. No other cultural remains were observed on the surface. The flake was found directly on asphalt remains of an old, partially destroyed blacktop road that runs along the right-of-way south of Highway 289. If a site had existed within the Highway 289 right-of-way, any remains have been 100 percent disturbed during construction of this roadway and later highway construction. However, due to the high proportion of quartzite and chert gravels within the blacktop mixture, it seems highly likely that the isolated find came from a quarry from which road gravels were gathered for roadway construction. Gravel quarrying has been known to take place on or around important sites in the past. One recorded instance is the heavy disturbance of the Miami Clovis site in Texas, due to gravel quarrying within the site vicinity (Hughes and Willey 1978: 25).


Quartzite Flake IF-1

## Native American Concerns

Numerous prehistoric sites throughout the region are known to contain graves of concern to the Native American communities of the Southern Plains.

The Southern High Plains region is an important location in Cheyenne, Kiowa, Plains Apache and Comanche history as the last place where the tribes and the buffalo ran free. Specific village sites, battle grounds and other localities where important events occurred are known to tribal historians throughout the region. Any activity that impacts these areas would be a concern to the Southern Plains Tribes.

There are no known localities in the immediate project area that would be of particular concern to the Cheyenne, Comanche, Plains Apache or Kiowa tribes in the immediate project area. Little information is available about areas of concern to the sixty or so other Plains tribes that have an association with the region.

## Synthesis and Assessment

Three areas of archeological interest were identified during the course of these investigations, including one substantial proto-historic Plains-Indian campsite. Trespass issues did not allow an adequate examination of these sites outside of the public right of way and details are pending future research in the area. The portion of each of these archeological localities within the public right of way proved to be extensively disturbed and of little additional archeological value, beyond pointing out specific areas that merit future research.

The proposed installation of a new buried cable next to an existing line through these localities will have no significant impact on the cultural resources.

## Recommendations

All areas of archeological interest were found to be heavily disturbed within the APE. Installation of a new buried cable line immediately next to an existing buried line in the road right of way will have no effect on significant cultural resources and no further archeological concerns are being recommended.

This assessment is subject to review and concurrence by the Texas Historical Commission.

## Professional Estimations

In the professional opinion of James Briscoe, Principal Investigator, these investigations and recommendations comply with federal guidelines and standards for archeological performance in the State of Texas as detailed by the Council of Texas Archeologists.

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## Bibliography

Abbe, Donald
Nd. Armstrong County. Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/hca06, accessed November 11, 2010.

Abbe, Donald and John Leffler
Nd. Swisher County. Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/hcs18, accessed November 11, 2010.

Abbe, Donald and Allen Anderson
Nd. Briscoe County. Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/hcb15, accessed November 11, 2010.

Anderson, Allen
Nd. Wayside, TX (Armstrong County). Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/hnw26, accessed November 11, 2010.

Anderson, Allen and Mark Odintz
Nd. Randall County. Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/hcr02, accessed November 11, 2010.

Armstrong County Historical Association
1965 A Collection of Memories: A History of Armstrong County, 1876-1965. Pioneer, Hereford.

Briscoe, James
1989 Chronology and Distribution of the Lake Creek Focus/Complex: Information from the Swift Horse Site, in: In the Light of Past Experience, papers in honor of Jack Hughes. Panhandle Archeological Society Publication Number 5.

1990 Archeological Reconnaissance Report on USFS Lake Marvin Recreation Area Trail Development Projects, Hemphill County, Texas. BCS Report Tx-2-Hp. Butler, Oklahoma.

## BCS

2008 Phase I Cultural Resources Inventory on the Mid-Plains Buried Fiber Optic Line Project - Palo Duro State Park, Randall County, Texas. BCS Contract Report 115-08, Norman.

2008 Archeological Survey Report on the Mid-Plains Buried Optic Line Project in Randall, Briscoe, and Armstrong Counties, Texas. BCS Contract Report 117-08, Norman.

Cruse, Bret
2008 Battles of the Red River War Archeological Perspectives on the Indian Campaign of 1874. Texas A\&M University Press, College Station.

Diamond, David.
2010 Grasslands. Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/gqg01, accessed November 07, 2010.

Hofman, Jack
1989 Prehistoric Culture History- Hunters and Gatherers in the Southern Great Plains. Chapter 5, in: From Clovis to Comanchero: Archeological Overview of the Southern Great Plains. Arkansas Archeological Survey Research Series, Number 35, pp. 61- 70. Fayetteville, Arkansas.

Hughes, Jack
1955 Little Sunday: An Archaic Site in the Texas Panhandle. Bulletin of the Texas Archaeological and Paleontological Society, Volume 26, pp. 55-74.

Hughes J. and P. Wiley (editors)
1978 Archeology at Mackenzie Reservoir. OSA Survey Report 24. Texas Historical Commission, Austin.

Johnson, E.H.
Nd. High Plains. Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/ryh01, accessed November 08, 2010

Leatherwood, Art
Nd. Llano Estacado. Handbook of Texas Online. Electronic Document, http://www.tshaonline.org/handbook/online/articles/ryl02, accessed November 08, 2010.

MacLeod, William
2007 Palo Duro Vistas, A Journey Through Palo Duro Canyon. Texas Geological Press, Alpine.

Rathjen, Frederick
1973 The Texas Panhandle Frontier. University of Texas Press, Austin.

Swanson, Eric
1995 Geo-Texas, A Guide to the Earth Sciences. Texas A\&M Press, College Station.

## Appendices:

The following Appendices entitled
"Appendix I: Site and Feature Locations,"
"Appendix II: Shovel Test Data,"
and "Appendix III: Site Forms (Attached)" are not intended for public use and MUST be removed before distribution of this report to the general public

