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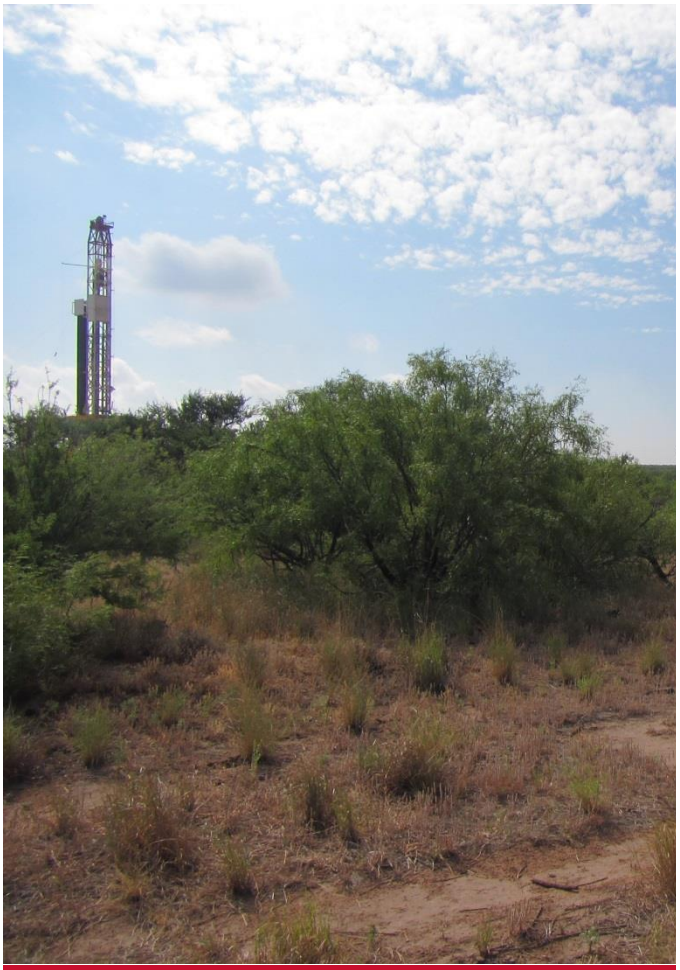

Intensive Cultural Resources Survey for the Shell Connection Project

Loving County, Texas

July 2017

By: Ben Fullerton
Principal Investigator: Melanie Johnson

Intensive Cultural Resources Survey for the Shell Connection Project, Loving County, Texas

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Texas Antiquities Permit Number 8039

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Management Summary

EnLink Midstream contracted with HDR Engineering, Inc. (HDR) to conduct an intensive cultural resources survey for the Shell Connection Project. The proposed project consists of the construction of approximately nine miles (14.5 kilometers [km]) of pipeline within a 150-foot (ft) (45.7-meter [m]) wide right-of-way (ROW), extending from the Shell University Compressor Station to the Lobo II Plant, in Loving County, Texas. The southern approximate 4.3 miles (6.9 km) of the proposed pipeline falls within Texas public university lands (University Lands) owned by the State of Texas. Therefore, the proposed developments on University Lands are required to be in compliance with Chapter 191 of the Texas Natural Resources Code, also known as the Antiquities Code of Texas (13 *Texas Administrative Code* [TAC] 26.12).

The purpose of the cultural resources investigation is to determine the presence/absence of cultural resources within the Area of Potential Effects (APE), defined as the 4.3-mile (14.5-km) long, 150-ft (45.7-m) wide portion on University Lands, and to evaluate identified resources for their eligibility for inclusion in the National Register of Historic Places (NRHP) or as a designated State Antiquities Landmark (SAL) under the Antiquities Code of Texas (13 TAC 26.12). The cultural resources survey was conducted under Texas Antiquities Permit Number 8039. The field effort was led by Archaeology Project Director Ben Fullerton on June 1, 2017.

HDR conducted an intensive survey with pedestrian walkover and shovel testing within the entire 4.3-mile (6.9-km) APE. Due to the high ground surface visibility (averaging approximately 80 percent) and shallow soils within the APE, judgmental shovel testing was employed. A total of six shovel tests were excavated during the survey. The soils encountered were shallow overlying dense calcium carbonate concretions and caliche. No cultural materials were identified within the APE during the investigation.

In accordance with 13 TAC 26.12, no further archaeological investigations are recommended and construction may proceed. In the event that any archaeological deposits are encountered during construction, work should cease and the Texas Historical Commission (THC) should be notified.

All records and materials generated by this project will be permanently curated at the Center for Archaeological Studies (CAS) at Texas State University in San Marcos, Texas.

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Abbreviations and Acronyms

APE	Area of Potential Effects
Atlas	Texas Archeological Sites Atlas
CAS	Center for Archaeological Research
CFR	Code of Federal Regulations
cm	centimeters
cmbs	centimeters below surface
ft	foot/feet
GPS	Global Positioning System
in	inch(es)
inbs	inches below surface
km	kilometers
m	meter(s)
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
ROW	Right-of-Way
SAL	State Antiquities Landmark
TAC	Texas Administrative Code
TARL	Texas Archeological Research Laboratory
THC	Texas Historical Commission
WOTUS	Waters of the U.S.

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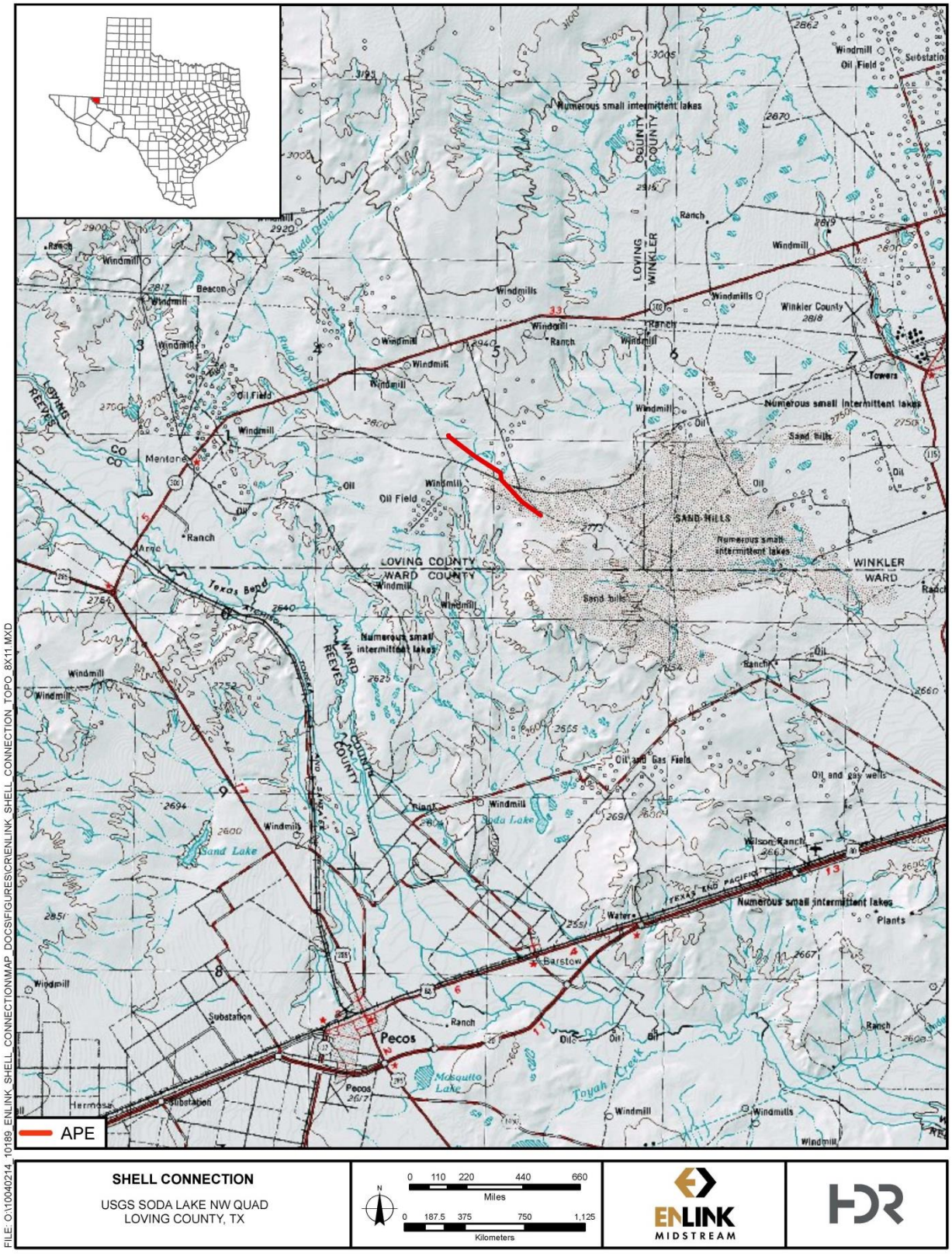
1 Introduction

EnLink Midstream contracted with HDR to conduct an intensive cultural resources survey for the Shell Connection project. The proposed project consists of the construction of approximately nine miles (14.5 km) of pipeline within a 150-ft (45.7-m) wide ROW, extending from the Shell University Compressor Station to the Lobo II Plant, in Loving County, Texas. The southern approximate 4.3 miles (6.9 km) of the proposed pipeline fall within Texas public university lands (University Lands) owned by the State of Texas (Figure 1-1). Therefore, the proposed developments on University Lands are required to be in compliance with Chapter 191 of the Texas Natural Resources Code, also known as the Antiquities Code of Texas (13 TAC 26.12).

The purpose of the cultural resources investigation is to determine the presence/absence of cultural resources within the APE, defined as the 4.3-mile (14.5-km) long, 150-ft (45.7-m) wide portion on University Lands, and to evaluate identified resources for their eligibility for inclusion in the NRHP or as a designated SAL under the Antiquities Code of Texas (13 TAC 26.12). The cultural resources survey was conducted under Texas Antiquities Permit Number 8039. The field effort was led by Archaeology Project Director Ben Fullerton on June 1, 2017.

All records and materials generated by this project will be permanently curated at the CAS at Texas State University in San Marcos, Texas.

Figure 1-1. Topographic Map of the Area of Potential Effects.



2 Background

2.1 Geology and Soils

The underlying geology for the APE consists of Caliche of Holocene and Pleistocene age and Playa deposits of Pleistocene age (United States Geological Survey 2007).

According to data from the Natural Resources Conservation Service (NRCS; Soil Survey Staff 2017), the APE consists of five soil map units: Wickett-Sharvana complex, gently undulating; Blakeney-Conger complex, gently undulating; Sharvana fine sandy loam, nearly level; Turney loam, nearly level; and Kinco-Blakeney complex, nearly level.

Of the five total soil map units within the APE, the Blakeney-Conger complex, gently undulating and the Wickett-Sharvana complex, gently undulating account for approximately 90 percent of the APE. The Blakeney series consists of very shallow to shallow soils overlying a petrocalcic horizon that typically occupy nearly level to gently sloping fan terraces, ridges, divides, and footslopes. The Wickett series consists of moderately rapidly permeable soils that are moderately deep to a petrocalcic horizon. Wickett soils formed in sandy and loamy eolian materials and are mapped on nearly level to very gently sloping uplands (NRCS; Soil Survey Staff 2017). Sterile subsoil (mainly Bt and Bkm horizons) are typically encountered at approximately 40 centimeters below surface (cmbs) (16 inches below surface [inbs]), or shallower.

2.2 Cultural History

The prehistory of western Texas can be divided into three major periods: Paleoindian, Archaic (both periods subdivided into Early, Middle, and Late), and Late Prehistoric (or Formative) period in the western Trans-Pecos (Table 2-1). These periods are primarily defined by diagnostic cultural artifacts found in the archaeological record which are indicative of major shifts or changes in socio-cultural practices.

Table 2-1. Prehistoric Chronology of the Trans-Pecos Region (Miller and Kenmotsu 2004).

Period	Sub-period	Western Trans-Pecos/Jornada		Eastern Trans-Pecos/La Junta	
		Regional Phase	Date Range	Regional Phase	Date Range
Paleoindian*	Early Paleoindian	Clovis	10,000–6000 B.C.*	Clovis	10,000–6000 B.C.
	Middle Paleoindian	Folsom		Folsom	
	Late Paleoindian	Plano/Cody		Plano/Cody	
Archaic	Early Archaic	Early Archaic	6000–4000 B.C.	Early Archaic	6500–3000 B.C.
	Middle Archaic	Middle Archaic	4000–1200 B.C.	Middle Archaic	3000–1200 B.C.
	Late Archaic	Late Archaic	1200 B.C.–A.D. 200	Late Archaic	1200 B.C.–A.D. 900
Late Prehistoric / Formative**		Mesilla/Pithouse	A.D. 200–1100	Livermore	A.D. 900–1200
		Dona Ana/Traditional	A.D. 1100–1200	La Junta	A.D. 1200–1400
		El Paso/Pueblo	A.D. 1200–1400	Conception	A.D. 1400–1683
		Post-Pueblo	A.D. 1400–1500		

* The Paleoindian phases are marked by functional and stylistic differences in tool kits, but the lack of chronometric dates precludes any attempt to provide date ranges for each phase (Miller and Kenmotsu 2004)

**The Late Prehistoric Period in the western Trans-Pecos is referred to as the Formative Period (Miller and Kenmotsu 2004)

2.2.1 Paleoindian Period

The Paleoindian period is traditionally characterized by small, highly mobile bands reliant on big-game hunting, including large megafauna such as mammoths (Judge 1973). While no chronometric dates have been obtained for a Paleoindian occupation of the Trans-Pecos region, evidence in the form of various artifacts and features confirm their presence (Miller and Kenmotsu 2004). Based on the stylistic differences in tool kits, the Paleoindian period is divided into three phases—the Clovis, Folsom, and Plano/Cody phases. Fluted lanceolate projectile points, characteristic of the Clovis phase, have been discovered in the Trans-Pecos region, providing evidence of a Clovis occupation. In

addition, two Clovis habitation sites have been found in the western segment of the Trans-Pecos region (Miller and Kenmotsu 2004).

Evidence from the Folsom phase of the Paleoindian period is far more common than the preceding Clovis phase in the Trans-Pecos region. Folsom tools and sites are well documented throughout the region. The reliance on big game hunting continued during the Folsom phase with an emphasis on bison hunting, specifically the large, extinct species of bison, *Bison antiquus.* However, the Tularosa/Hueco Bolsons in the Trans-Pecos region present a unique settlement pattern during this phase that seems to have been oriented toward hunting other animals (Amick 1994).

The end of the Pleistocene, climatic change, and disappearance of megafauna led to the emergence of the late Paleoindian phase and the diversification of point types (Hester and Turner 2015). The variety of tool traditions of the late Paleoindian phase is grouped into the Plano and Cody Complexes. While cultural material from this phase is more common than that of earlier Paleoindian phases, well documented occupation sites are rare in comparison to the Folsom phase (Miller and Kenmotsu 2004).

2.2.2 Archaic Period

The continuation of climatic change during the early Holocene "contributed to the large-scale changes in subsistence strategies, requiring a diversification of the Paleoindian subsistence base with a greater focus on exploitation of plant foods" (Miller and Kenmotsu 2004:218). This transition marked the beginning of the Archaic period across the continent around 6000 B.C. Like the Paleoindian period, the Archaic period is typically divided into three phases: the Early, Middle, and Late Archaic. The Archaic period generally represents locally specific adaptation to the Holocene environment. It is during the Archaic period that the eastern and western Trans-Pecos regions distinguish themselves from one another.

The Early Archaic in the Trans-Pecos is poorly represented in the archaeological record, which is mainly comprised of surface finds and only a few features or substantial settlements. Populations were still organized into small, fairly mobile groups, but changes in projectile point technology suggest a more restricted, seasonally mobile settlement system (Miller and Kenmotsu 2004). Projectile points changed from the lanceolate points to a variety of stemmed points, and coarser-grained materials were utilized. The projectile point styles began to become more regionally specific during this phase.

The Middle Archaic in the Trans-Pecos saw an increase in populations, resulting in a greater number of settlement sites in the archaeological record. The discovery of house structures within Middle Archaic settlements in the Trans-Pecos suggest longer periods of occupation. These structures in the western Trans-Pecos region are "among the earliest evidence for semi-sedentary settlements in the Southwest" (Miller and Kenmotsu 2004:224). The trend of increased regionalization of projectile point forms continued in the Middle Archaic period.

The land use during the Late Archaic was greatly intensified, and the first evidence of agricultural development emerged during this phase. Hunting and gathering remained an important aspect of the economy, but prey shifted to focus more on small game such as rabbits. As a result of a briefly wetter environment in the Trans-Pecos, Late Archaic sites

expanded into all ecological zones and promoted interaction among hunting-gathering groups (Miller and Kenmotsu 2004). The use of dry rock shelters during the Late Archaic period resulted in the better preservation of cultural materials including fiber netting, basketry, animal skins, and wooden and shell pendants. Thermal features increased in number during the Late Archaic, indicating an intensification of plant processing. Ring middens became prominent features in the Late Archaic which have been known historically to have been used to cook bulbs such as sotol. Evidence suggests that during this period, populations were increasing and becoming more sedentary with an increasing reliance on agriculture.

2.2.3 Late Prehistoric Period

In the western Trans-Pecos region, the Late Prehistoric (or Formative) period is divided into three phases: the Mesilla, Doña Ana, and El Paso. During this period, the bow and arrow was introduced, and small to medium sized game animals were the primary focus of these groups. Throughout the Formative period, settlement patterns became increasingly standardized. The Mesilla phase witnessed the beginning of the transition to a more sedentary society. While still maintaining a fair degree of mobility and primarily dependent on hunting and gathering, the emergence of pithouse architecture along with huts and the presence of some domesticated plant species laid the groundwork for the more agriculturally dependent societies that developed in later phases. El Paso plain brown ceramics are also present in the archaeological record as well as some imported wares.

The Doña Ana phase began constructing surface rooms in addition to pithouses. These changes in architecture and settlement patterns are believed to represent an increasing dependence on agriculture during the Formative period (Binford 1990). Beginning around A.D. 1000, decoration of local ceramics became more prevalent. This phase also saw an increase in interregional interaction, as evidenced by the increase in nonlocal ceramics.

The El Paso phase represents the apex of the transition from the mobile hunter-gatherers in the Mesilla phase to an increasingly sedentary population. Architecture is seen in the form of pueblos (square or rectangular, multi-roomed structures with caliche plastered walls and floors) (Miller and Kenmotsu 2004). Settlement distribution became markedly more restricted, focusing around well-watered landscapes. The development of water control features during the El Paso phase corresponded with the pronounced agricultural development at this time in comparison to the earlier phases. Thermal and storage features along with the changes in groundstone technologies point to an increase in plant processing. Ceramic decoration continued to be more frequent and more elaborate.

The Late Prehistoric period in the eastern Trans-Pecos region is usually undivided, though two poorly-defined phases have been assigned the eastern Trans-Pecos/La Junta district. These phases are the Livermore and La Junta phases. Throughout most of the eastern Trans-Pecos, few changes took place during the Late Prehistoric in terms of subsistence and mobility aside from the introduction of the bow and arrow (Miller and Kenmotsu 2004). Hunting and gathering continued to be the primary means of subsistence in the region. While small groups across the eastern Trans-Pecos maintained their traditional subsistence patterns from the Late Archaic, they were still

knowledgeable of the changes taking place in other regions and even adapted some of the new technologies, such as pottery, to fit their way of life.

However, two distinct regions in the eastern Trans-Pecos, the La Junta district and the Salt Flat Basin, adopted a more agriculturally-dependent subsistence pattern during the Late Prehistoric period. These groups were semi-sedentary to sedentary, living in small pithouse villages, growing crops. In general, the changes visible in the archaeological record taking place during the Late Prehistoric in the La Junta district followed a similar, though less pronounced, pattern to those in the western Trans-Pecos (Miller and Kenmotsu 2004).

2.2.4 Historic European and Euro-American Cultural Period (1725–1950)

Loving County

Prior to the establishment of Loving County in 1887, the landscape was studded by numerous natural springs and occupied by nomadic hunter-gatherers. Historic presence within the county was initiated with surveys for a railroad route by Captain John Pope in 1854. He believed he could drill artesian wells in the area. After years of failed attempts, he and his men abandoned the camp they had established fifteen miles east of Delaware Creek in northwestern Loving County. In early 1893, a small group of men from Colorado established the Loving Canal and Irrigation Company of Mentone, Texas with the goal of constructing an irrigation canal from the Pecos River to surrounding farmland (Smith 2010).

Loving County is the only county in Texas to be organized twice. In 1887, the area occupied by Loving County was separated from Tom Green County but remained attached to Reeves County for judicial purposes. The area was separated from Reeves County in 1893, and Loving County was officially organized. The town of Mentone was designated the county seat. County offices were filled with irrigation company organizers and several nonresidents (Smith 2010).

Initial construction of the courthouse in Mentone was destroyed by a Pecos River flood in 1893. The few settlers present at the time subsequently left the area. The following several years in Loving County were dominated by legal investigations into reports of illegal county organization. These efforts ultimately resulted in county officials fleeing the area by 1897 and deorganization of Loving County, reattaching it to Reeves County (Smith 2010).

Following the abandonment of Mentone in 1897, there were no towns present in Loving County and according to the 1900 census, the county population consisted of eleven females and twenty-two males. By 1910, this number increased to 249 after land and irrigation promotion established the settlement Juanita (renamed Porterville shortly thereafter), in the southwestern corner of the county. By 1914, the combination of failing irrigation systems and a drought reduced the population in Loving County to sixty (Smith 2010).

Although attempts at irrigation continued into the first two decades of the twentieth century, ranching became the only successful agribusiness. Between 1897 and 1900, the total value of livestock was reported to have increased from $96,800 to $568,406

respectively. The census of 1920 reported fifty-one men and thirty-one women living in the county (Smith 2010).

Early in 1921, J.J. Wheat and Bladen Ramsey created the Toyah-Bell Oil Company and began leasing acreage for drilling. Production from the initial well (Russell No.1) was short-lived, but major commercial production was found in the Pecos Valley Petroleum Company Wheat No.1 in 1925. The oilfield developed in association with this well produced 1,233,801 barrels at maximum production in 1931. Increases in the county's population due to the successful drilling produced the town of Ramsey and led to the second organization of Loving County in 1931. Ramsey was renamed Mentone and became the county seat. The population reached a record of 600 in 1933, and has steadily decreased since that time. The population of the county in 2014 was 86. Although petroleum provided Loving County with the highest-per capita income of all United States counties, the isolated and undeveloped nature of the county has limited population growth (Smith 2010).

3 Methods

3.1 Previous Investigations near the APE

A review of the THC's Archeological Sites Atlas (Atlas) indicated that there have been no archaeological surveys conducted, and no archaeological sites have been recorded within the APE or within a one-mile (1.6-km) radius of the APE. Additionally, no Recorded Texas Historic Landmarks, previous structure inventories, cemeteries, or other cultural resources have been identified within one mile of the APE.

3.2 Survey Methods

HDR conducted an intensive survey with pedestrian walkover and judgmental shovel testing within the entire 4.3-miles (6.9-km) of proposed pipeline located on University Lands. The pedestrian survey employed two transects within the 150-ft (45.7-m) wide ROW. Shovel tests were excavated in areas exhibiting less than 30 percent ground visibility and where the potential for intact soils existed. High ground surface visibility and caliche exposure precluded shovel testing within the majority of the APE on University Lands.

Each shovel test was approximately 30 cm (12 in) in diameter and was excavated in 20-cm (8-in) arbitrary levels to a depth of 80 cm (32 in) below surface or until sterile subsoil was encountered. The soil removed was screened through 0.635-cm (0.25-in) mesh screen, and soil descriptions followed the guidelines and terminology established by the National Soil Survey Center (Schoeneberger et al. 2002). Soil colors were recorded using a Munsell Soil Color Chart. All excavated shovel tests were recorded on shovel test forms which note depth, soil matrix descriptions, and cultural materials recovered. Digital photographs were used to document the survey conditions, disturbances, and any cultural features observed; and details of each photograph were recorded on standardized forms. All shovel test locations were recorded using a Global Positioning System (GPS) unit.

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4 Results

HDR conducted an intensive survey with pedestrian walkover and judgmental shovel testing within the 4.3-mile (6.9-km) long, 150-ft (45.7-m) wide APE located on University Lands (Figure 4-1). The survey confirmed the presence of a thin layer of eolian (windblown) deposits and high ground surface visibility (approximately 80 percent) throughout the vast majority of the APE (Figure 4-2 and Figure 4-3). As a result, this portion of the APE was pedestrian surveyed with a full walkover and surface inspection. Of the six total shovel tests excavated within the APE, several were placed in areas with high ground surface visibility to document the shallow nature of soil deposition within the majority of the APE. These shovel tests were each terminated upon encounter with dense caliche at depths of 20 cmbs (7.9 inbs) or less (Figure 4-4).

During the course of the walkover, several additional shovel tests were also excavated in small, isolated swales that exhibited lower ground surface visibility and the potential for the accumulation of eolian deposits (Figure 4-5). The soil profiles in these areas each exhibited dark brown (10YR 4/3) sandy loam between approximately 0 and 30 cmbs (0 and 12 inbs) underlain by brown (10YR 5/3) sandy loam with many calcium carbonate fragments between 30 and 40 cmbs (12 and 15.7 inbs) (Figure 4-6). No cultural materials were found during the survey.

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Figure 4-1. Aerial Photographic Map of the APE Showing the Survey Results

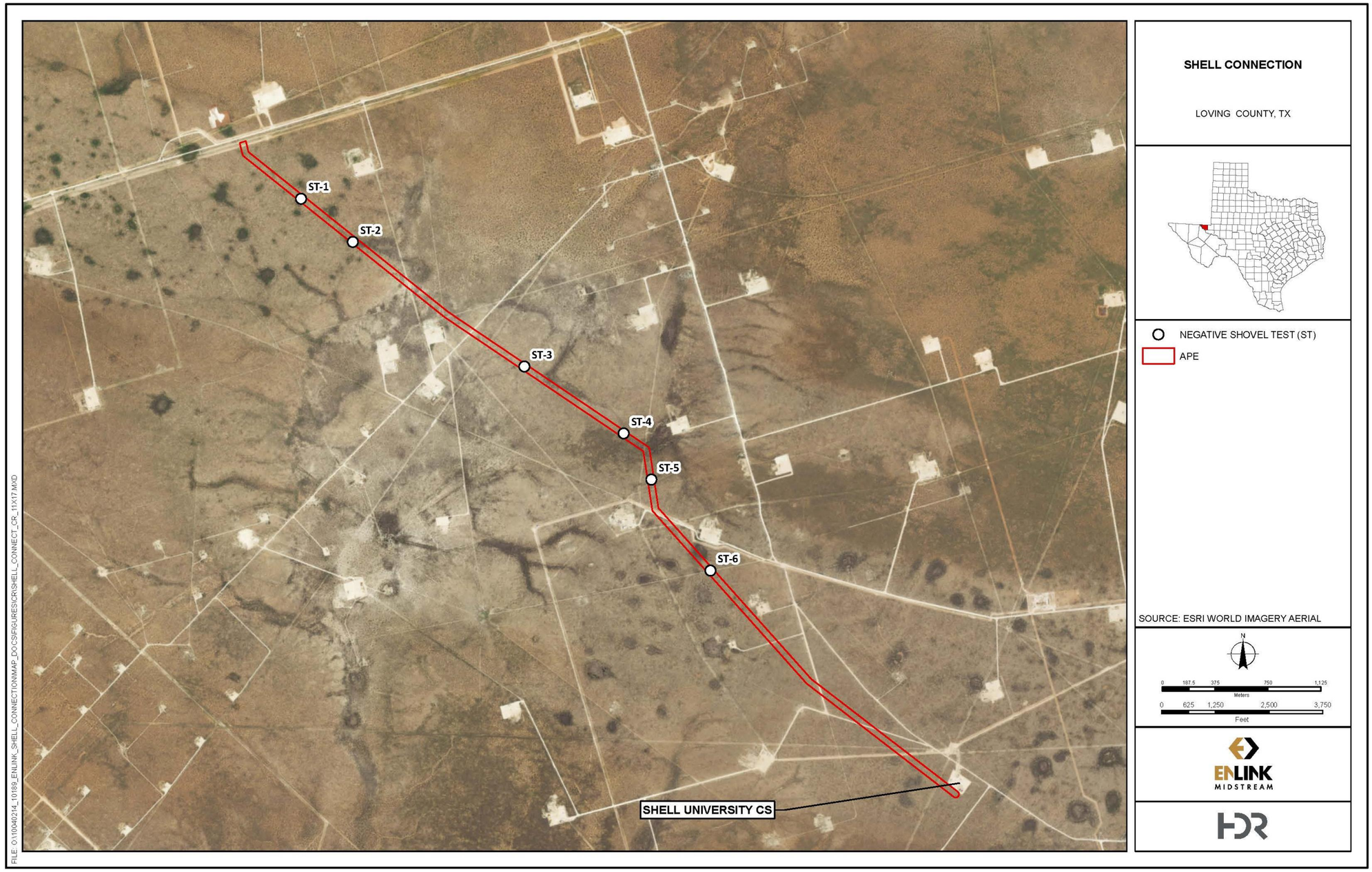

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Figure 4-2. Overview of the APE, Showing High Surface Visibility, Facing Northwest.

Figure 4-3. Overview of the APE, Showing High Ground Surface Visibility and Caliche Exposure, Facing Southeast.

Figure 4-4. Photograph of Shovel Test Profile Showing Shallow Soil Deposition over Caliche, Facing North.

Figure 4-5. Overview of an Isolated Swale Area Exhibiting Low Ground Surface Visibility, View to the Northwest.

Figure 4-6. Representative Shovel Test within the Isolated Swale Areas.

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5 Summary and Recommendations

5.1 National Register Eligibility

5.1.1 Criteria for Evaluation of Eligibility

As part of this review process, cultural resources investigations are undertaken with the purpose of identifying resources that are listed in, or eligible for listing in, the NRHP. The assessment of significance of cultural resources is based on federal guidelines and regulations. Any cultural resource that is listed in or eligible for inclusion in the NRHP is known as a "historic property," and the term "eligible for inclusion in the NRHP" includes both properties formally determined as such by the Secretary of the Interior and all other properties that meet NRHP-listing criteria. The criteria for evaluating properties for inclusion in the NRHP (36 CFR 60.4 [a–d]) are codified under the authority of the National Historic Preservation Act of 1966, as amended, and the Advisory Council on Historic Preservation has set forth guidelines to use in determining site eligibility. Subsequent to the identification of relevant historical themes and related research questions, these four criteria for eligibility are applied:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and

A. that are *associated with events* that have made a significant contribution to the broad patterns of our history; or

B. that are *associated with the lives of persons* significant in our past; or

C. that *embody the distinctive characteristics* of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. that have yielded, or may be likely to *yield, information important in prehistory or history*. Note that the application of Criterion D presupposes that the information imparted by the site is significant in history or prehistory [36 CFR 60.4, emphasis added].

The physical characteristics and historic significance of the overall property are examined when conducting NRHP evaluations. Although a property in its entirety may be considered eligible based on Criteria A, B, C, and/or D, specific data are also required for individual components therein based on date, function, history, physical characteristics, and other information. Resources that do not relate in a significant way to the overall property may contribute if they independently meet the NRHP criteria.

For a historic resource, district, or landscape to be determined eligible for the NRHP, it must retain enough of its historic integrity to convey its significance. For the NRHP, there are seven aspects of integrity:

1. Location
2. Design
3. Setting
4. Materials
5. Workmanship
6. Feeling
7. Association

Occasionally, certain resources fall into categories in which they must be evaluated further using one or more of the following Criterion Considerations. If a resource identified during the reconnaissance-level survey falls into one of these categories, the following Criterion Considerations will be applied in conjunction with one or more of the four National Register criteria:

A. A religious property deriving primary significance from architectural or artistic distinction or historical importance, or

B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or

C. A birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his or her productive life, or

D. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events, or

E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived, or

F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance, or

G. A property achieving significance within the past 50 years if it is of exceptional importance (36 CFR 60.4).

The scientific value of archaeological sites is assessed under Criterion D. With regard specifically to this criterion, the goal of prehistoric archaeological research and management is to fill gaps in the knowledge about specific research domains. Scientific importance is driven, in part, by the research paradigms of the time and in part by the

amount of information available about a particular research topic in a specific geographic area. The most robust forms of scientific importance should honor diverse and occasionally competing schools of research interests and their attendant approaches. In order to fulfill Criterion D, a site must possess certain attributes (e.g., intact buried cultural strata with functionally and temporally diagnostic materials, datable cultural features) such that further intensive research at the site could be expected to add additional information to relevant research questions.

The research domains are addressed through testing and excavation programs; over time, data required for addressing specific questions are collected, analyzed, and compiled. Eventually, the potential importance, or significance, of sites that contain only the types of data already collected may diminish. This suggests the identification criteria of important historic properties are tied to both a specific geographic area reflecting a cultural adaptation or cultural region and a state of accumulated knowledge about a research domain topic. The criteria and priorities of important sites are apt to shift as accepted research paradigms change or as data accumulations approach redundancy. Archaeological sites that retain contextual integrity and contain artifacts and features capable of contributing information toward addressing relevant research issues are significant and should therefore be considered eligible for inclusion in the NRHP.

5.1.2 State Antiquities Landmark

At the state level, archaeological sites may be considered significant and be recognized or designated as an SAL, provided that at least one of the following conditions is met:

1. The archaeological site is situated on lands owned or controlled by the State of Texas or one of its political subdivisions; or
2. The archaeological site is situated on private land which has been specifically designated as an SAL and fits at least one of the following criteria:
    A. Preservation of materials must be sufficient to allow application of standard archaeological techniques to advantage;
    B. The majority of artifacts are in place so that a significant portion of the site's original characteristics can be defined through investigation;
    C. The site has the potential to contribute to cumulative cultural history by the addition of new information;
    D. The site offers evidence of unique or rare attributes; and/or
    E. The site offers a unique and rare opportunity to test techniques, theories, or methods of preservation, thereby contributing to scientific knowledge [Texas Natural Resources Code 1977; Title 9, Chapter 191, Texas Antiquities Committee, Section 191.094 and Chapter 41.7, Antiquities Code of Texas].

Buildings, structures, cultural landscapes, and non-archaeological sites, objects, and districts may be designated as an SAL, provided that the following conditions are met:

1. The property fits within at least one of the following criteria:
    A. The property is associated with events that have made a significant contribution to the broad patterns of our history, including importance to a particular cultural or ethnic group;
    B. The property is associated with the lives of persons significant in our past;
    C. The property embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction;
    D. The property has yielded, or may be likely to yield, information important in Texas culture or history;
2. The property retains integrity at the time of the nomination, as determined by the executive director of the commission; and
3. For buildings and structures only, the property must be listed in the NRHP, either individually, or as a contributing property within a historic district. Contributing status may be determined by the Keeper of the National Register or the executive director of the commission.

5.2 Conclusion and Recommendation Summary

HDR conducted an intensive survey with pedestrian walkover and judgmental shovel testing within the entire 4.3-miles (6.9-km) of proposed pipeline located on University Lands. Due to the high ground surface visibility (averaging approximately 80 percent) and shallow soils within the APE, judgmental shovel testing was employed. The entire APE was walked over with two survey transects, and a total of six shovel tests were excavated. The soils encountered were shallow overlying dense calcium carbonate concretions and caliche. No cultural materials were identified within the APE.

In accordance with TAC 26.12 no further archaeological investigations are recommended, and construction may proceed. In the event that any archaeological deposits are encountered during construction, work should cease, and the THC should be notified.

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