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Cultural Resources Surveys Conducted During December 2014 South Eagle Ford Zone Atascosa, La Salle, And Mcmullen Counties

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CULTURAL RESOURCES SURVEYS CONDUCTED DURING DECEMBER 2014
SOUTH EAGLE FORD ZONE
ATASCOSA, LA SALLE, AND MCMULLEN COUNTIES

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MANAGEMENT SUMMARY

During the month of December 2014, Goshawk Environmental Consulting, Inc. (Goshawk) conducted seven cultural resources surveys within the Eagle Ford Play, South Eagle Ford Zone, at the request of EOG Resources, Inc. (EOG). The seven project areas subjected to cultural resources investigations included the proposed Cashen to Pena-Butts Gathering Pipeline, Quail to Quail A Gathering Pipeline, Dall to Warthog Gathering Pipeline, Tangerine Unit Gathering Pipeline, Cuellar Unit #7H and #8H Access Road, Galaxy Unit #1H Access Road, and Quail Unit #11 Flowline. Except where noted, each Area of Potential Effect (APE) was a 75-foot (23-meter [m]) wide Right-of-Way (ROW) consisting of a 50-foot (15-m) wide permanent easement and a 25-foot (8-m) wide temporary construction easement. Investigations were conducted by Goshawk archeologists Scott Justen and Reign Clark with assistance from Bear Aspra and Mitch Juenke. Scott Justen served as primary author and Reign Clark and Ron Ralph served as contributing authors for this report of investigations.

The cultural resources surveys were performed according to Council of Texas Archeologists survey standards, in compliance with the Texas Historical Commission's (THC) Rules of Practice and Procedure, Chapter 26, Section 27, and under the general guidelines of the Register of Professional Archaeologists. Site files on the THC's Archeological Sites Atlas (Atlas) website database were consulted prior to the commencement of the field effort for previously recorded site locations, references to previous archeological surveys undertaken, and place names of interest in the vicinity of the proposed projects.

Streams potentially under United States Corps of Engineers (USACE) jurisdiction which cross the APEs were assessed by an ecologist via desktop and field reviews prior to commencement of the cultural resources survey. As per the established procedure of due diligence, any segment of an APE that falls within an area potentially under federal jurisdiction or any portion of an APE that falls within a 328-foot (100-m) radius of a known cultural site would be subjected to a cultural resources survey. Any segment of an APE to be surveyed under this protocol was labeled as a "review area" and was subjected to cultural resources survey.

During the survey of each project, shovel tests were placed within each review area. Shovel testing and surface inspection resulted in no significant cultural deposits documented within the survey areas. Based on these results, it is Goshawk's opinion that no significant cultural resources will be impacted by construction within the surveyed ROWs. Goshawk recommends that the projects be allowed to proceed as planned with the caveat that construction be limited to the surveyed ROWs. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be immediately halted and both the USACE and an archeologist should be notified.

CONTENTS

1.0 INTRODUCTION

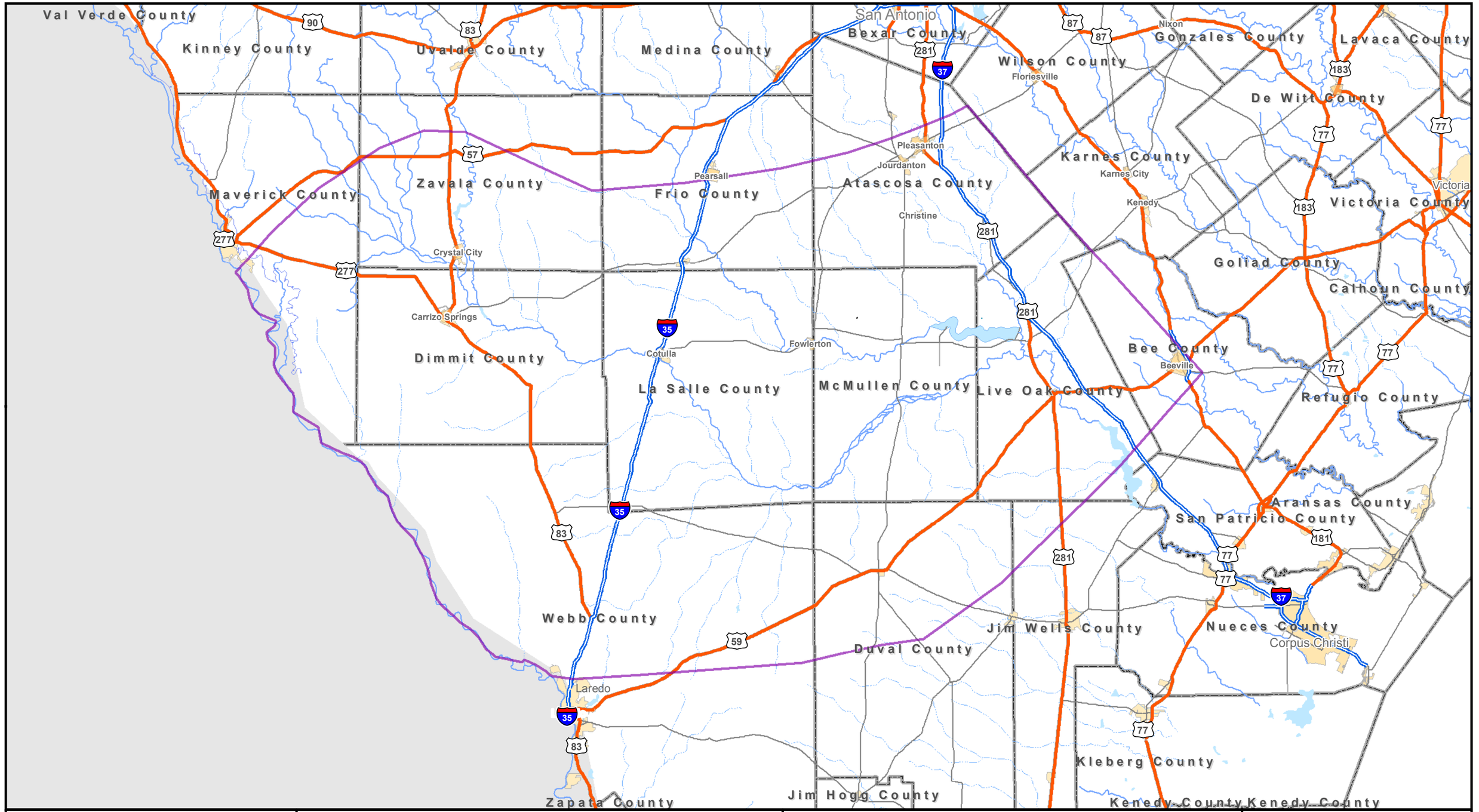
During the month of December 2014, Goshawk Environmental Consulting, Inc. (Goshawk) conducted seven cultural resources surveys within the Eagle Ford Play, South Eagle Ford Zone, at the request of EOG Resources, Inc. (EOG). The South Eagle Ford Zone includes portions of La Salle, McMullen, Live Oak, Frio, Webb, and Atascosa Counties (Figure 1-1). The seven project areas subjected to cultural resources investigations during the month of December included the proposed Cashen to Pena Butts Gathering Pipeline, Quail to Quail A Gathering Pipeline, Dall to Warthog Gathering Pipeline, Tangerine Unit Gathering Pipeline, Cuellar Unit #7H and #8H Access Road, Galaxy Unit #1H Access Road, and Quail Unit #11 Flowline (Figure 1-2). Except where otherwise noted, each Area of Potential Effect (APE) was a 75-foot (23-meter [m]) wide Right-of-Way (ROW) consisting of a 50-foot (15-m) wide permanent easement and a 25-foot (8-m) wide temporary construction easement. The results from the survey of each project are presented below.

2.0 ENVIRONMENTAL CONTEXT OF THE SOUTH EAGLE FORD ZONE

The Eagle Ford Shale Region covers a large portion of south and southeast Texas totaling approximately 22,000 square miles. This region of Texas can be broken down into zones reflecting biologic, geologic, physiographic, and cultural diversity within the Eagle Ford Shale. The South Eagle Ford Zone is an area characteristic of the Tamaulipan Biotic Province (Blair 1950). The area is semi-arid brush land, extending north from Laredo, Texas into Zavala County, eastward across La Salle, McMullen, and Live Oak Counties, and continuing to the northeast to the central portion of Atascosa County (Figure 1-1). The area is a series of level to gently rolling uplands supporting mixed thorny trees, shrubs, cacti, and grasses. Streams within the South Eagle Ford Zone drain generally southwest toward the Rio Grande River or to the east and northeast toward the Frio and Nueces Rivers. The northern boundary of the South Eagle Ford Zone corresponds with Blair's division between the Tamaulipan and Texas Biotic Provinces. Coincidentally, the division falls directly along where Atascosa County meets Wilson and Karnes Counties.

2.1 LAND USE

At current, the most common uses for land falling within the South Eagle Ford Zone includes cattle ranching, oil and gas development, lease hunting, and limited agriculture. Many of the common land uses result in the clearing of the omnipresent invasive thorn brush so that development can proceed. The persistent problem of invading brush and cacti is often addressed by "chaining," whereby a heavy chain is dragged across the landscape by bulldozers, uprooting unwanted brush. Additionally, large senderos are often cut through the vegetation to facilitate wildlife management and seismic surveys. Root plowing, using a large tracked bulldozer and a dragging blade is also used to clear brush. All clearing methods are disruptive to archeological sites. Poor soil conservation practices have resulted in the depletion of top soil, exposing clay pans across much of the area. Many of the soils originally mapped by the Natural Resources Conservation Service (NRCS) had pronounced A-horizons over distinct clays. It is thus particularly noteworthy that A-horizons across much of the survey areas are virtually non-existent, indicating disturbances and erosion of topsoil. Thin gravel outcrops with sand over clay are common across the uplands while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Uvalde County
Medina County
San Antonio
Bexar County
Wilson County
Floriesville
Nixon
Gonzales County
Lavaca County
De Witt County
Karnes County
Karnes City
Kenedy
Victoria
Victoria County
Pleasanton
Jourdanton
Atascosa County
Christine
Pearsall
Frio County
Zavala County
Maverick County
Crystal City
Carrizo Springs
Dimmit County
Cotulla
La Salle County
Fowlerton
McMullen County
Live Oak County
Bee County
Beeville
Goliad County
Calhoun County
Refugio County
Aransas County
San Patricio County
Nueces County
Corpus Christi
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Webb County
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Source: ESRI, Maps & Data 10.2, 2013, EIA, 2011
Projection: NAD 1983 UTM 14N
0 5 10 20 30 40 50 Kilometers
0 2.5 5 10 15 20 25 30 Miles
GOSHAWK
ENVIRONMENTAL CONSULTING, INC.
Figure 1-1
Vicinity Map
South Eagle Ford Zone
South Eagle Ford Zone Perimeter
Date: 9 February 2015
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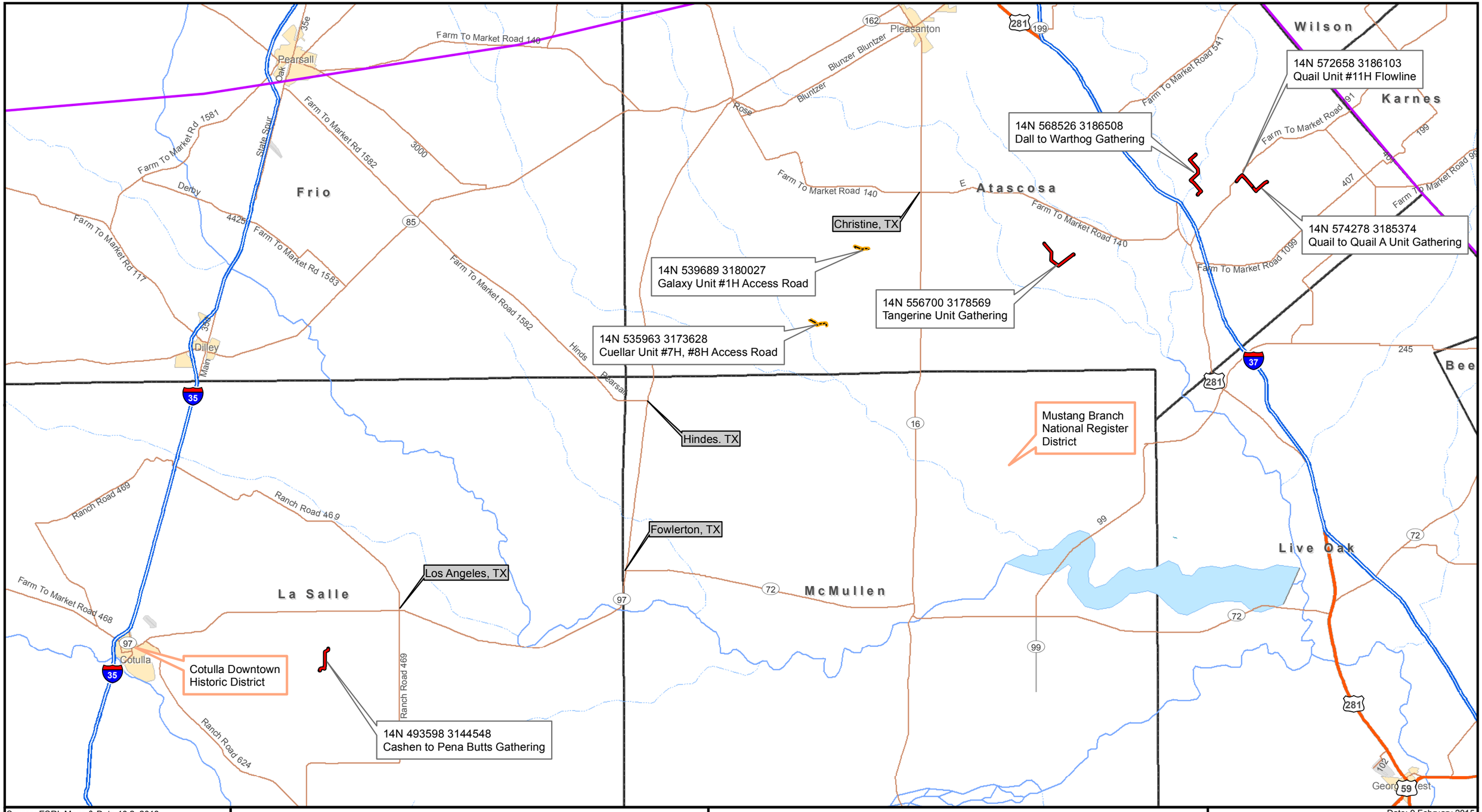


Source: ESRI, Maps & Data 10.2, 2013
Projection: NAD 1983 UTM 14N

0 2 4 8 Kilometers

0 1.25 2.5 5 Miles

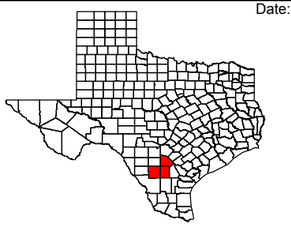
GOSHAWK ENVIRONMENTAL CONSULTING, INC.

Figure 1-2
Project Locations
Atascosa, La Salle and McMullen Counties, Texas

South Eagle Ford Zone

Boundary of South Eagle Ford Zone
Proposed Pipeline Alignment
Proposed Access Road Alignment

Date: 9 February 2015



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shallow alluvial clay and clay loams blanket most areas along the creeks. The areas most likely to contain intact, stratified soil deposits and significant archeological sites are located along the rivers and larger creeks including Cibolo and Esperanza Creeks, the Frio River, and the Dull Flats Stream Complex.

2.2 GEOLOGY AND PHYSIOGRAPHY

Geology within the South Eagle Ford Zone encompasses the recent alluvium and fluviatile terrace deposits overlying older Eocene Yegua Formations (Barnes 1976). Alluvium or floodplain deposits consist of gravels, sand, clay, silt, and organic materials along with a variety of igneous and sedimentary rock washed down from the Rocky Mountains to the northwest and deposited as lag gravels on low terraces. Recent alluviums were deposited during the Pleistocene flanking streams. The surrounding fluviatile terrace deposits consist of the same clay and clay loam soils, but often contain discontinuous sheets or pavements of let-down gravels. These concentrations of stone have been of great interest to prehistoric populations as source material for tools.

Other major geological formations underlying the South Eagle Ford Zone are Quaternary alluvium and the undivided Manning/Wellborn Sandstone/Caddell Formations of the Jackson Group. These formations are composed of sandstones, clay, tuff, and siltstone; some fossiliferous and one with fossil wood. To the southeast of the project area laid remnants of Uvalde Gravels, a source of lithic material much prized by prehistoric peoples (Barnes 1976, Harshbarger, et al 2010). Uvalde Gravel occurs as deposits up to 30 feet (9 m) thick or as lag gravels on rounded hills. Within the South Eagle Ford Zone, much of the Holocene age alluvial deposits have eroded away due to land clearing and maintenance practices.

2.3 PROJECT AREA SOILS

The Web Soil Survey of the Natural Resources Conservation Service (NRCS 2014), the Atascosa County Soil Survey (Dittmar, et al., 1980), the La Salle County Soil Survey (Gabriel, et al., 1994), and the McMullen County Soils Survey (Harshbarger, et al., 2010) were consulted for each project within the South Eagle Ford Zone. Generally, soils encountered consist of clay, clay loam, and sandy loam along benches and terraces adjacent to smaller streams. In situ clay soils are commonly found on the wider floodplains of named creeks. Occasionally, expansive outcrops of chert gravels and cobbles are found on eroded uplands and shoulder slopes which prehistoric native groups used as raw material quarries for tool making.

2.4 FLORA AND FAUNA

Within the South Eagle Ford Zone, native tree species include mesquite, huisache, pecan, live oak, Texas wild olive, and Texas persimmon. Common shrubs and succulents in the region include prickly pear, fiddlewood, desert yaupon, agave, yucca, and autumn sage. Native grass species include sideoats grama, slender grama, buffalograss, inland sea-oats, plains lovegrass, and little bluestem (Gould 1978; TPWD 2014a). The Tamaulipan Biotic Province is characterized by semi-arid, megathermal conditions. Although moisture levels are low, temperatures allow for certain plant growth to occur year-round (Blair 1950).

There are at least 61 mammal species, 57 reptile species, and 22 amphibian species within the South Eagle Ford Zone (Schmidly 2004). Common small mammals in the region include several species of rats, mice, and bats; the Texas pocket gopher; the eastern mole; the eastern cottontail rabbit; and the Mexican ground squirrel (Blair 1950). Medium to large mammals include white-tailed deer, American hog-nosed skunk, and armadillo. Another of the mammalian species located in the ecoregion is the Mexican opossum, also the only marsupial in the ecoregion. Rare or extinct mammalian species in the area include ocelot, jaguar, javelina, bison, and jaguarondi (TPWD 2014b). Reptile species within the region include the western box turtle, Texas banded gecko, Texas spiny lizard, red racer, western diamondback rattlesnake, and diamond-backed water snake (Blair 1950, TPWD 2014a). Rare reptilian species include the Texas tortoise, indigo snake, and Texas horned lizard (TPWD 2014b). Despite the drier climate within the Tamaulipan Biotic Province, the region is host to several water-loving urodeles (salamanders and newts) and anurans (frogs and toads) (Blair 1950; Davis 1978). There are three species of urodeles and 18 species of anurans. Raptors, songbirds, doves, gulls, and terns are the dominant birds near the APE (Bryan, et al. 2006). The rare Cactus Ferruginous pygmy-owl is also occasionally found within the ecoregion (TPWD 2014a, TPWD 2014b).

2.5 CLIMATE

The South Eagle Ford Zone exhibits a tropical, sub-humid climate with average high temperatures of 98 degrees Fahrenheit in July and an average yearly high of 83 degrees. The average low of 42 degrees occurs in January with an average yearly low of 60 degrees. The yearly average rainfall is 22 inches (56 centimeters [cm]). Rainfall is bimodal with early summer and late summer accounting for 65 percent of the yearly average. The growing season averages over 250 days with only one year in two having a yearly low below 28 degrees (Gabrial, et al., 1994).

3.0 CULTURAL CONTEXT OF THE SOUTH EAGLE FORD ZONE

The South Eagle Ford Zone is located in the South Texas Archeological Region where nomadic hunter-gatherer groups migrated seasonally, following resources and sharing cultural traits with other groups. This is evidenced in the dispersal of point types and ceramic styles across the region (Prewitt 1995). Open camps are the most common type of archeological site found in the South Texas Archeological Region. Open camps can be shallow or deeply buried and are often adjacent to streams and usually contain clustered archeological material such as burned rocks, lithic debris, hearths, or middens. Bone and shell are less common in the assemblages, as organics rarely survive due to the alkaline nature of the soils.

Notable work in South Texas archeological research has been conducted by Fox et al. (1974), Mallouf et al. (1977), Mercado et al. (1996), Hall et al. (1986), Black (1989), and Hester (1980). However, the lack of intensive investigations, high rate of looting, and levels of erosion that occur throughout South Texas have left barriers to fully understanding and dating the periods of occupation in the area (Perttula 2004).

The following cultural background is divided into several periods in this portion of the state: Paleoindian (9,500 to 6,000 B.C.), Early Archaic (6,000 to 2,500 B.C.), Middle Archaic (2,500 B.C. to A.D. 400), Late Archaic (A.D. 400 to 700), Late Prehistoric (A.D. 700 to 1750), and Historic (A.D.

1750 to present) (Aten 1983; Perttula 2004; Turner and Hester 1999). Some scholars include another period, the Protohistoric, but it will not be included here due to the lack of a useful definition and contextual information available in this region.

3.1 PREHISTORY

3.1.1 Paleoindian Period (ca. 9,500 to 6,000 B.C.)

Recent archeological evidence indicates prehistoric people may have occupied this area prior to the Paleoindian Period. However, the controversial sites that show evidence of an earlier period of habitation have not yet been widely accepted by the archeological community. For this reason, the prehistoric period will begin with Paleoindians.

Beginning around 9,500 B.C., the Paleoindian is the earliest identified cultural period in the vicinity of the South Eagle Ford Zone. It spans over 3,000 years to about 6,000 B.C. (Ensor and Ricklis 1998). According to some authors, the Paleoindian period begins approximately 1,200 years earlier (11,500 B.C.) further to the south in the South Texas region. It has been postulated that this is most likely due to the earlier habitation of the Paleoindian Clovis peoples coming north from central Mexico (Perttula 2004).

Coinciding with the decline of the Wisconsin glaciation, the Paleoindian period is characterized by a relatively cool, moist climate that encouraged the development of now-extinct species of Pleistocene megafauna, such as bison. This period is sometimes called the Big Game Hunting tradition (Willey 1966), due to a presumed heavy reliance by Paleoindian peoples on megafauna as a food source during the earlier portion of the period. Environmental changes that brought about the extinction or dislocation of megafauna precipitated a shift toward smaller game, creating the transition into the Archaic (Aten 1983:146-148; Willey and Phillips 1958:107).

Temporally diagnostic tool types attributed to this period include a variety of finely chipped, sometimes fluted, lanceolate projectile point styles, such as Clovis, Folsom, Plainview, and Scottsbluff (Meltzer and Bever 1995; Prikryl 1990; Willey 1966). The Paleoindian projectile point types show a transitional change between the earlier Paleoindian points and the Early Archaic. By the late Paleoindian period, unfluted lanceolate projectile points such as Plainview, Golondrina, and Angostura were more common (Story, et al. 1990).

3.1.2 Archaic Period (6,000 B.C. to A.D. 400)

Following the close of the Pleistocene, the South Texas region experienced a trend toward a warmer and drier climate. It has been postulated that this climate shift was at least partially responsible for the extinction of megafaunal species. The archeological record of this period exhibits evidence of a gradual diversification in subsistence patterns. This is the beginning of the Archaic, which lasts from about 6,000 B.C. to A.D. 400 (Aten 1983:152-157). The Archaic period is divided into three time periods: the Early Archaic (6,050 to 2,500 B.C.), the Middle Archaic (2,500 B.C. to 1,000 B.C.), and the Late Archaic (1,000 B.C. to A.D. 400) (Perttula 2004; Turner and Hester 1999). Few Archaic sites are recorded on the Upper Texas Coast (Aten 1983:153; Story 1985:28-29). Story (1985:31–34) suggests site density was low on the coastal plain during this period. Archaic sites tested or excavated near the modern shoreline generally consist of shell-

bearing sites with varying degrees of lithic tools and debitage, shell or bone tools, and the bones of fish, mammals, and reptiles (Ambler 1967, 1970, 1973; Aten 1979, 1983; Ensor 1998; Howard et al. 1991). Inland sites tend to contain more lithic artifacts and debitage with terrestrial mammal bones comprising the bulk of the inland faunal assemblages. Archaic patterns in tool-making for the South Texas region are centered on corner-notching technology and triangular points, moving away from the basal-notching technology.

3.1.2.1 Early Archaic Period (6,000 to 2,500 B.C.)

Late Paleoindian unfluted lanceolate projectile points such as Plainview, Golondrina, and Angostura were replaced by un-stemmed triangular points and basal or corner notched points in the Early Archaic. The Early Archaic in the South Texas region is significantly shorter than in other regions due to the onset of specific regional cultural patterns occurring around 2,500 B.C., which emphasized un-stemmed dart points and smaller bifacial and unifacial beveled tools (Perttula 2004). In addition to these cultural patterns, the archeological record shows the diet of the people in this area consisted of turtles, snails, and freshwater mussels. Land snails (*Rabdotus* sp.) are often present at prehistoric sites, but there is debate regarding whether the prehistoric peoples were consuming them or if the snails were merely "cleaning up" after the group moved out of the area.

3.1.2.2 Middle Archaic Period (2,500 to 1,000 B.C.)

For the South Texas region, the Middle Archaic is more thoroughly represented in the archeological record than the Early Archaic. It is during this time period that the triangular Tortugas and Abasolo points were developed. In addition, the archeological record shows the development of smaller, unifacial, distally beveled tools that show a high amount of reworking and resharpening. Evidence supports that these common tools were used in wood-working (Perttula 2004). During this period, most open campsites were placed in flood-prone zones along low terraces, and while information concerning their diet is scant, numerous types of fuel materials have been identified including mesquite, acacia, oak, and hackberry (Perttula 2004). There is also significant data concerning treatment of the dead in this area and time frame (Patterson et al. 1998). Especially later in the period, cemeteries were commonly used, most of which contained grave goods such as points, flakes, cores, and sandstone pieces (Perttula 2004; Hall et al. 1986). One such cemetery, Loma Sandia, is dated to the late Middle Archaic and is located in Live Oak County (Taylor and Highley 1995). With its hundreds of burials and thousands of artifacts, it remains one of the most studied archeological sites in South Texas.

3.1.2.3 Late Archaic Period (1,000 B.C. to A.D. 400)

In general, Late Archaic sites in the South Texas Region show a marked increase in site utilization and heavy dependence on seasonal base camps, where various maintenance, extractive, and processing tasks were used in exploiting local resources. Assemblages characterizing these technological activities include a variety of dart point styles, a suite of ground and polished stone tools, and the beginning use of ceramics.

3.1.3 Late Prehistoric Period (A.D. 400 to 1750)

The Late Prehistoric period in the South Texas Region saw a continuation of many of the same cultural and subsistence patterns in place during the Late Archaic (e.g. cemeteries and burned rock features) with two very significant technological adaptations: a heavier reliance on ceramics by certain groups and the introduction of the bow and arrow (Ensor 1998).

3.2 HISTORIC PERIOD (A.D. 1750 TO PRESENT)

3.2.1 Historic Native Groups in the Area

Early Spanish expeditions in Texas afford the primary evidence of the relevant historic Indian tribes in the South Texas Region during the late sixteenth through early eighteenth-centuries. Initial exploration of the Gulf of Mexico and the American Southwest was accomplished by Spanish explorers Alonso Alvarez Piñeda (1519) and Alvar Nunez Cabeza de Vaca (1528). Following Piñeda's initial maritime effort to map the Gulf Coast, the earliest exploration of the South Texas Region was accomplished by de Vaca, who shipwrecked in the Gulf of Mexico in 1528 along with other members of an expedition led by Pánfilo de Narváez (Weddle 1985).

De Vaca's account served as the basis upon which subsequent explorations of the region were conducted by Hernando de Soto (1539) and Luis de Moscoso (1542). By 1561, Spain was facing increasing difficulties in maintaining its few colonies in Florida. The relatively poor economic prospects for these colonies and increasing competition from other colonial powers quelled the Spanish Crown's interest in colonizing their Florida territories which included Texas. As a result, the Texas Gulf Coast remained relatively uninhabited by Europeans for the next two centuries until the threat of increased French exploration in the territory stimulated the Spanish government to establish more permanent settlements in the area (Weddle 1991). In 1685, René Robert Cavelier and Sieur de la Salle established Fort St. Louis along the Gulf Coast (Gilmore 1984, Tunnel and Ambler 1967). Plagued by disease, starvation, and Indian attacks, Fort St. Louis was no longer in use by late 1688 or early 1689 (Bruseth and Turner 2005).

Spanish expeditions to the South Texas Region include the 1689 expedition of Governor Alonso de León, the 1691 to 1692 expedition of Governor Domingo Terán de los Ríos, the Espinosa-Olivares-Aguirre expedition of 1709, Ramón's expedition of 1716, Alarcón's expedition of 1718, and Rivera's inspection tour of 1727 (Campbell 1983; Foster 1995). The Indians encountered during those journeys included indigenous Sanan speakers and displaced and migrating tribes from well outside the region such as the Jumano of west Texas, the Wichita-speaking Yojuane of north central Oklahoma, and the Simaomo and Tusonibi of northeastern Mexico (Campbell 1979). Many other tribes, not so fortunate, had been decimated by European disease in Coahuila and Nueva Leon according to Chapa, an early historian who documented over 160 groups annihilated during the 1600s (Foster 2008:108).

3.2.2 European Settlement (ca. 1750)

Although there were no permanent Spanish settlements established in the area now known as La Salle and McMullen Counties, Spaniards did traverse the area at various times. Alonso De León passed through the area in 1689 and 1690, as did Diego Ortiz Parrilla in 1766. In the early 1800s, the Old Laredo-San Antonio road passed to the east of the survey area. Even earlier, a large

waterhole on Esperanza Creek was the meeting place where presidio soldier escorts passed off their charges before returning to their posts in Laredo and San Antonio (Leffler 2014).

3.2.3 La Salle and McMullen Counties

After Mexican independence in 1810, the Mexican government issued land grants to citizens for settlement. In 1834, Jesús Cárdenas received 31,500 acres of land along the Nueces River, including about 10,000 acres in what became La Salle County. After the Texas revolution, La Salle County became disputed land lying between the Rio Grande and the Nueces River. Lacking an established government, it became a haven for outlaws (Leffler 2014). The Treaty of Guadalupe Hidalgo on 2 February, 1848 ended the Mexican War and recognized the 1845 annexation of Texas to the United States (Russell 2010:210).

The area now known as McMullen County was originally granted to Benjamin Drake Lovell and John G. Purnell by the Mexican state of Coahuila in 1825, but it was never developed. In 1828, the same land was assigned to John McMullen and James McGloin who intended to settle 200 families. None of the families ever occupied the area, and by the time of the Texas Revolution, the area was still inhabited predominantly by native people.

La Salle County was formed from the Bexar District in 1858, with early villages established along the San Antonio to Laredo road – the old El Camino Real. In the same year, McMullen County was officially established from parts of Bexar, Atascosa, and Live Oak counties. The United States Army established an outpost, Fort Ewell, in 1852 at the road crossing on the Nueces River, but abandoned it in 1854. Guajoco grew up near the outpost and grew larger when the army deserted the post. By 1871, Guajoco had a post office, a saloon, a general store, a stagecoach stop and roughly 60 inhabitants.

From cattle to cotton to oil and gas, the boom and bust cycle has repeated itself in south Texas. It has never been an easy place to live. During the early years, more than 25 ranches were established with the ranch headquarters often becoming a stopping point for cattle buyers, and then growing into small communities. One such was Waugh's Rancho established in 1861 and granted a post office in 1879. Another was Iuka, a small settlement just west of present day Cotulla, the county seat. The 1870 census showed 69 inhabitants in La Salle County, growing to 789 in 1880. La Salle County, named for René Robert Cavelier, Sieur de La Salle, now covers over 1,517 square miles of south Texas (Leffler 2014)

Formal organization of La Salle County occurred in 1880 with Stuart's Rancho, near Guajoco, designated its first seat of government. The last Indian raid occurred in 1878 as the railroad began building south to the winter garden on the Rio Grande. About the same time, James J. and Andrew J. Dull, two steel-magnet brothers from Harrisburg, Pennsylvania, purchased La Salle County land, including much of W. A. Waugh's property, to put together a vast ranch.

3.2.4 Fowlerton History

The history of eastern La Salle County and western McMullen County is steeped in actors and actions larger than life. At the turn of the 20th century, a couple of shrewd businessmen, the Fowler brothers, decided to form a land company and promote the dry cactus and mesquite covered

country along the Frio River in La Salle and McMullen Counties as the "Wintergarten." They attracted more than 2,000 buyers, many of whom migrated from the east coast for the chance to own a plot of fertile farmland for as little as $25 down and $10 a month. Many have called the brothers "swindlers," but some historians maintain that they did have a vision of the area as a farming utopia. The Fowler brothers happened to tour the county just prior to one of the "wet" cycles when almost any crop could grow (Troesser 2014).

Two other brothers with the name of Dull, who had made their fortunes in Pittsburg, Pennsylvania, once owned the vast 400,000-acre (161,874-ha) Dull Ranch. The Dull brothers later sold 240,000 acres (97,125 ha) to B. L. Naylor and Judge A. H. Jones. Naylor died in 1910 and Jones in 1912. Before Jones died, he had contracted with the Fowler brothers to develop 100,000 acres (40,469 ha) around what would eventually become the town of Fowlerton, Texas. After the railroad was constructed in 1912, growth of the town increased, supporting several lumber yards.

The Fowler brothers, in conjunction with the Naylor & Jones Land Co., laid out the town on a grid system and over 200 miles (322 km) of roads were built. Lots were divided up, some as small as 1/16 acre (0.4 Hectares [ha]) in the town site, as well as numerous farm plots of anywhere from 1 to 100 acres (1 to 40 ha) or more. When a 10 to 160-acre (4 to 65-ha) tract of farmland was purchased, the buyer automatically received a lot in Fowlerton. Between 1913 and 1915 a cotton gin, large rail depot, hotels, two banks, department stores, and schools were all built.

There was a seafood restaurant with fresh oysters and shrimp brought in from the coast. There were many free flowing artesian wells (some containing salt). The "Artesian Route" as described on the San Antonio Uvalde and Gulf Railroad (SAU&G Railroad) advertisements referred to the new farming center with crops of cotton and Egyptian wheat to faraway markets. At the height of the Fowlerton heyday, some 2,000 to 4,000 people called the vicinity home. Over the years a series of droughts, plus using saline artesian well water, forced all the farmers to leave the county (Troesser 2014).

3.3 CULTURAL RESOURCES OF THE SOUTH EAGLE FORD ZONE

Atascosa County lists more than 272 archeological sites, many of which are associated with the development of the San Miguel Mine in the 1980s. According to the Texas Historical Commission's (THC) Archeological Sites Atlas (Atlas), only one site has been designated as a State Antiquities Landmark (SAL) in Atascosa County, the Atascosa County Courthouse in Jourdanton, Texas. The county courthouse is also listed on the National Register of Historic Places (NRHP), along with the Korus Farmstead and the Frederick and Sallie Lyons House. The county courthouse was completed in 1912 and represents the Mission Revival style architecture. There are 80 recorded historic cemeteries and 49 historical markers in the county (THC 2014b).

La Salle County lists more than 285 recorded archeological sites. According to the Atlas, only one site has been designated as a SAL in La Salle County, the La Salle County Courthouse in Cotulla, Texas. The county courthouse is also listed on the NRHP, along with the Cotulla Downtown Historic District. There are 12 recorded historic cemeteries and 19 historical markers in the county (THC 2014b).

McMullen County lists over 640 recorded archeological sites, many of which are associated with work for the Choke Canyon Reservoir. According to the Atlas, no sites have been designated as a SAL. The Mustang Branch National Register District (NRD) site (41MC163) is the only listed prehistoric NRHP site in McMullen County, based mainly on an ephemeral Paleoindian component. Designated in 1978, the Mustang Branch Site NRD encompasses 24.7 square acres (10 sq. ha) of agricultural lands along the confluence of San Miguel Creek and Mustang Branch close to, and within, the Choke Canyon Reservoir in eastern McMullen County. The NRD includes campsites, chipping-quarrying areas, middens, and lithic scatters; all of which contributed to its NRD designation. There are 6 recorded historic cemeteries and 23 historical markers in the county (THC 2014b).

4.0 METHODOLOGY

The cultural resources surveys were performed in compliance with the National Historic Preservation Act of 1966 (NHPA), as amended (16 U.S.C. 470 et seq., P.L. 89-665, 80 Stat. 915), and the implementing regulations 36CFR800. The surveys complied with the National Environmental Policy Act (NEPA) of 1969; the National Environmental Policy Act of 1974 (PL 81-190, 83 Stat. 915, 41 USC 4321, 1970); the Archeological and Historic Preservation Act of 1974 (PL 93-291); the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 Fed. Reg. 44716-42, Sept. 29, 1983); the National Register Bulletin Series of the National Park Service; and the Archaeological Resources Protection Act of 1979. The surveys conformed to standards of the United States Department of the Interior (1977) and the guidelines set forth by the Council of Texas Archeologists (1995) and the Register of Professional Archeologists (2014). Cultural resources investigations consisted of archival research, pedestrian survey, shovel testing, and preparation of a report suitable for review by the United States Army Corps of Engineers (USACE), the regulatory agency responsible for oversight in most situations.

Streams potentially under USACE jurisdiction which crossed project alignments were assessed by an ecologist via desktop and field reviews prior to commencement of the cultural resources survey. As per the established procedure of due diligence, any segment of an alignment that falls within an area potentially under federal jurisdiction or any portion of a project alignment that falls within a 328-foot (100-m) radius of a known cultural site would be subjected to a cultural resources survey. Any segment of a project alignment to be surveyed under this protocol would be labeled as a "review area" and subjected to cultural resources survey. Except where specified in descriptions below, project alignments consisted of a 75-foot (23-m) wide ROW. ROWs consisted of a 50-foot (15-m) wide permanent easement and a 25-foot temporary construction easement.

During each survey effort, the ground surface of the proposed project alignment was visually inspected on foot within the established review areas. Shovel tests were administered in the portions of the review areas which harbored the greatest potential for temporally stratified soil deposits. Shovel tests, typically 12-inches (30-cm) in diameter, were excavated to sterile substratum. The shovel probe matrix was sifted through ¼-inch (0.6-cm) hardware cloth. If soils of high clay constituency were encountered, the matrix was hand sorted. Shovel test locations were recorded with hand-held Global Positioning System (GPS) units and transferred to topographic

maps. If present, newly discovered or revisited sites were documented using standard State of Texas site recording forms and plotted by GPS coordinates for entry into the Atlas database. Shovel testing was conducted to ascertain the horizontal and vertical limits of any cultural manifestation discovered within the areas of review. Hand-drawn sketch maps were produced for each cultural site recorded or revisited. The field efforts reported herein were performed on private property and were funded by a private source. No artifacts were collected during the survey. If present, artifact assemblages were photographed in the field and left where found.

5.0 CASHEN TO PENA BUTTS GATHERING PIPELINE

Goshawk conducted a cultural resources survey of the proposed ±8,377-foot (2,553-m) Cashen to Pena Butts Gathering Pipeline ROW in La Salle County, Texas. A single review area was identified within the proposed ROW containing two third-order tributary streams of the Dull Flats stream complex. The proposed ROW contained a short east-to-west section that was previously subjected to survey during the Cashen Unit #1H Access Road ROW project. The area of review contained two streams, potentially under federal jurisdiction. The cultural resources survey, including shovel testing and surface inspection, was conducted within the area of review which totaled approximately 2.7 acres (1.1 ha). The review area encompassed two separate segments of a third-order tributary of The Dull Flats stream complex. The field investigation was conducted by Goshawk archeologist Scott Justen with Mitch Juenke on 15 December 2014.

The Cashen to Pena Butts Gathering Pipeline APE was located approximately 4.3 miles (7.0 km) to the southwest of Los Angeles, Texas and paralleled Brown Road along the north-to-south portion of the proposed ROW and Altito Road along the east-to-west section. The APE crossed gently undulating clayey soils, vegetated with assorted grasses, sage, mesquite, acacia, and forbs. The APE was located on the Los Angeles, Texas, United States Geological Survey (USGS) topographic quadrangle (Figure 5-1). The dominant local land use was for rangeland, and oil and gas development.

5.1 ARCHIVAL RESEARCH

Archival research conducted using the THC's Atlas online database did not identify any previously recorded archeological sites situated within a 1.2-miles (2.0-km) radius from the APE. The nearest site (41LS202) is located 2.8 miles (4.5 km) east of the APE and will be discussed in detail below. The Cotulla Downtown Historic District NRD is located approximately 10.5 miles (16.9 km) west of the APE. According to the Atlas, the nearest NRHP-listed property is the La Salle County Courthouse, located within the Cotulla Downtown Historic District.

5.1.1 Site 41LS202

Site 41LS202 was recorded in 2012 by Goshawk archeologists as part of the Martindale Orndoff Gathering Pipeline project (THC 2014b). The site was documented as an undated prehistoric to mid-twentieth century historic site. The site was located on an upper terrace south of an unnamed tributary of the Dull Flats stream complex. The site measured 696 feet (212 m) north-to-south by 72 feet (22 m) east-to-west. The site featured an early to mid-twentieth century rear-facing T plan residence that was occupied at the time of the survey. The prehistoric artifact assemblage observed included two tertiary flakes and one perforator. The historic artifacts observed included screw top bottles, glass fragments (brown shards, clear shards, solarized shards, cobalt shards, blue shards, light green shards, pale yellow shards, and milk glass shards), one Winchester shotgun shell, metal fragments, and historic ceramics. It was noted that the historic artifacts were more than likely associated with a refuse pile. The site was not eligible for listing on the NRHP or designation as a SAL.

5.2 SURVEY RESULTS

One review area was identified within the proposed Cashen to Pena Butts Gathering Pipeline ROW containing segments of two third-order tributaries of the Dull Flats stream Complex. The streams were identified as "Waters of the US" by desktop review and ecological field survey conducted prior to the commencement of the cultural resources survey. No other potentially jurisdictional streams were identified during the field effort.

5.2.1 Review Area

The review area consisted of a southern stream and a northern stream, each containing a separate channel of the same third-order tributary of the Dull Flats stream complex. The southern stream was fed buy a small stock tank that was located northwest of the review area and just west of the APE. The northern stream channel connected with the stream farther to the west bypassing the stock tank. Both channels then merged at a location east of the proposed ROW and east of Brown Road.

5.2.1.1 Southern Stream

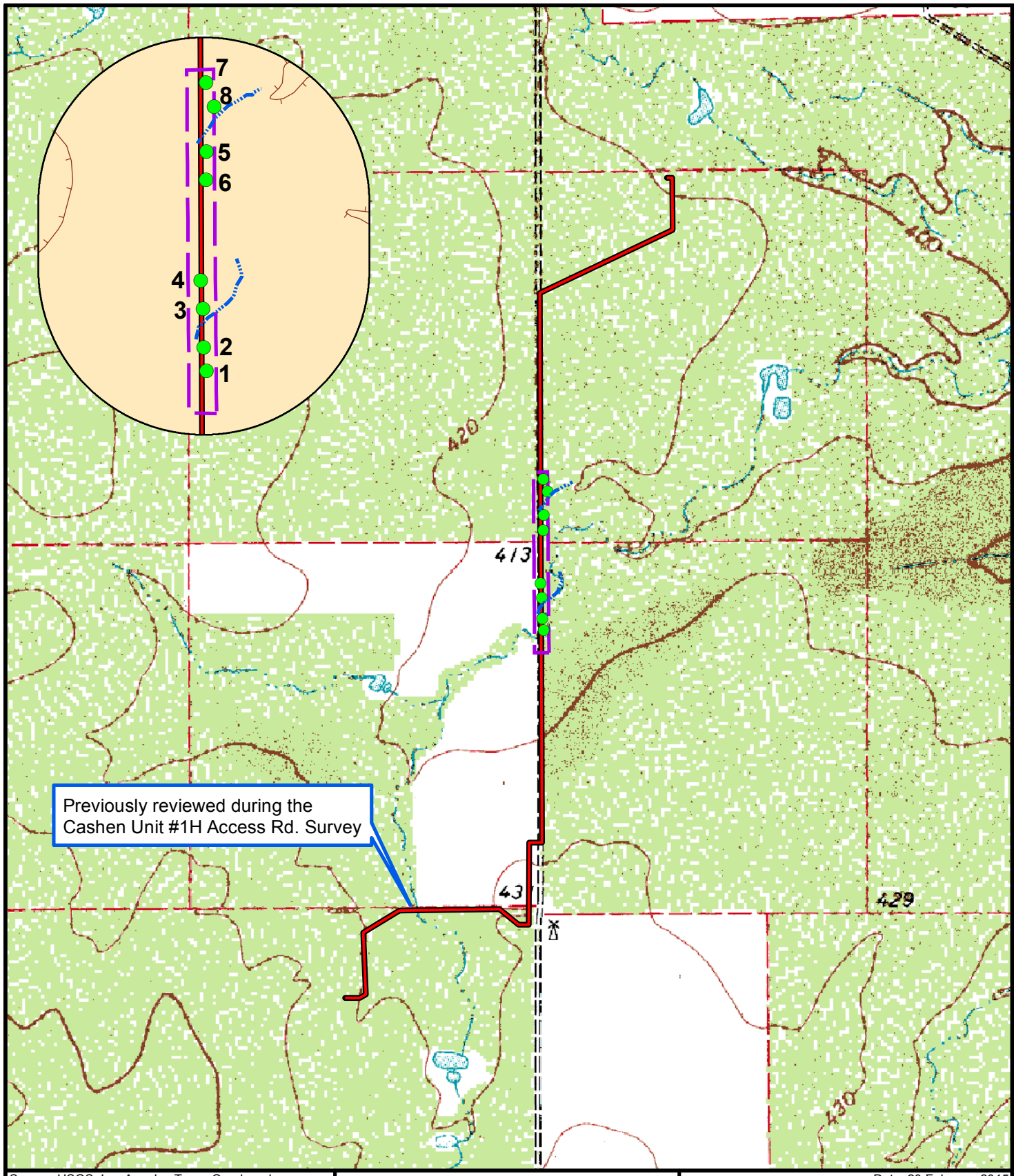
The southern stream channel was a marginally channelized third-order tributary of the Dull Flats stream complex, which exhibited better channelization northwest of the APE, closer to the stock tank. The stream had incised into the landscape approximately 10 inches (25 cm) deep and between 10 and 20 inches (25 to 50 cm) wide (Photo 5-1). The stream and the surrounding area had been disturbed by the construction of the stock tank (Photo 5-2). Ground surface visibility was considered highly variable within the review areas ranging between 40 percent near the stream and 90 percent along the slopes of the stock tank. Vegetation within the APE consisted of sage, mesquite, acacia, various grasses, and forbs. Soils in the vicinity of the stream were mapped as Cochina clay and Maverick clay. These soil series are in situ clays that exhibit a low probability for containing stratified deposits. Four shovel tests were conducted in the vicinity of the stream yielding brown or pale brown sandy soils overlying dark brown, mottled grey and yellowish red, or mottled reddish brown and black clays soils. The tests were terminated between 6 and 12 inches (15 and 30 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within this portion of the review area.

5.2.1.2 Northern Stream

The northern stream was a third-order tributary of the Dull Flats Stream complex which exhibited variable channelization. The stream had incised into the landscape approximately 10 inches (25 cm) deep and approximately 20 inches (25 to 50 cm) wide (Photo 5-3). Ground surface visibility was considered average within the review area ranging from 50 percent near the stream to 60 percent near the sendero cuts and fence line (Photo 5-4). Vegetation within the APE consisted of sage, mesquite, acacia, various grasses and forbs. Soils in the vicinity of the stream were mapped as Cotulla clay and Cochina clay. These soil series are in situ clays that exhibit a low probability for containing stratified deposits. Four shovel tests were conducted in the vicinity of the stream yielding brown sandy soils overlying dark brown clays or brown clays in a surface context. The tests were terminated between 8 and 12 inches (8 and 30 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within this portion of the review area.

5.3 RECOMMENDATIONS

Goshawk conducted a cultural resources survey consisting of an intensive surface inspection and eight shovel tests within the proposed Cashen to Pena Butts Gathering Pipeline ROW. None of the shovel tests conducted within the APE yielded positive results and no cultural materials were observed upon the ground surface. It is Goshawk's opinion that construction of the Cashen to Pena Butts Gathering Pipeline ROW, as proposed, will cause no impacts to significant cultural resources within the surveyed portion of the APE. Therefore, Goshawk recommends that construction be allowed to proceed, as planned. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be halted immediately and the USACE and an archeologist should be notified.



Source: USGS, Los Angeles,Texas Quadrangle.

Date: 20 February 2015

0 250 500 1,000 Feet

0 75 150 300 Meters

GOSHAWK ENVIRONMENTAL CONSULTING, INC.

Figure 5-1
Shovel Test Locations
La Salle County,Texas

Cashen to Pena Butts Gathering

LEGEND

- Pipeline
- Waters of the US
- Review Area
- Negative Shovel Test

N

Photo 5-1: Review Area 1, Southern Stream, Facing East

Photo 5-2: Southern Stream, General Overview toward Stock Tank, Facing Northwest

Photo 5-3: Northern Stream, Facing East

Photo 5-4: Typical Surface Visibility in Vicinity of Northern Stream

Cashen to Pena Butts Gathering (14 NAD 1983)										
Report ST#	ST#	WP#	Easting	Northing	Depth (cm)	Soil Color	Soil Composition	Artifacts	Review Area	Comments
1	MJ1	1	493595	3144473	0-10	Brown	Sandy clay	None	1	Disturbed soils, near push piles
					10+	Dark brown	Clay	None		
2	MJ2	2	493592	3144501	0-5	Brown	Sandy clay	None	1	Disturbed soils, near push piles on stock tank berm
					5-30	Dark brown	Clay	None		
3	MJ3	3	493591	3144548	0-25	Pale brown	Sandy loam	None	1	
					25+	Mottled grey and strong brown	Clay	None		
4	MJ4	4	493588	3144583	0-30	Pale brown	Sandy loam	None	1	
					30+	Mottled reddish brown and black	Clay	None	1	
5	MJ5	5	493594	3144746	0-30	Dark brown	Clay	None	2	
6	MJ6	6	493593	3144729	0--30	Dark brown	Clay	None	2	Near push piles
7	MJ7	7	493594	3144811	0-20	Brown	Sandy loam	None	2	Near senderos
					20+	Dark brown	Clay	None		
8	MJ8	8	493602	3144802	0-45	Brown	Sandy loam	None	2	
					45+	Dark brown	Clay	None		

6.0 QUAIL TO QUAIL A GATHERING PIPELINE

Goshawk conducted a cultural resources survey of the proposed ±5,430-foot (1,655-m) Quail to Quail A Gathering Pipeline ROW in Atascosa, Texas. A single review area was identified within the proposed ROW, containing two streams potentially under federal jurisdiction. The cultural resources survey, including shovel testing and surface inspection, was conducted within the area of review which totaled approximately 1.8 acre (0.7 ha). The review area encompassed a first-order tributary of Logan Creek, and a second-order tributary of Logan Creek. The field investigation was conducted by Goshawk archeologist Reign Clark with Bear Aspra on 10 December 2014.

The Quail to Quail A Gathering Pipeline APE was located approximately 4.5 miles (7.3 km) to northeast of the town of Campbellton, Texas. From its western terminus, the APE traversed in a generally southeasterly direction before turning to the northeast, crossing loamy and clayey undulating upland terrain. The vegetation within the ROW consisted of acacia, prickly pear, mesquite, tasajillo, and various grasses. The APE was located on the Fashing, Texas, USGS topographic quadrangle (Figure 6-1). The dominant local land use was for rangeland, and oil and gas development.

6.1 ARCHIVAL RESEARCH

Archival research conducted using the Atlas online database identified two previously recorded archeological sites situated within a 1.2-mile (2.0-km) radius of the APE. These sites (41AT255 and 41AT258) were located approximately 1.0 mile (1.6 km) north and northwest of the APE and will be discussed in detail below. The Panna Maria NRD is located approximately 20.4 miles (33.5 km) northeast of the APE. According to the Atlas, the nearest NRHP-listed property is the Fredrick and Sallie Lyons House, located within the town of Pleasanton, Texas approximately 18.4 miles (30.4 km) northwest of the APE.

6.1.1 Site 41AT255

Site 41AT255 was also recorded during the ETC Lonestar survey as a Late Prehistoric lithic scatter. The site was located on a hilltop southeast of Lipan Creek and measured 196 feet by 98 feet (60 by 30 m) in size (THC 2014b). The artifact assemblage observed included lithic debitage and a bifacial gouge, and chopper. It was noted that the area had been highly disturbed. The initial evaluation of the site determined the site was not eligible for inclusion on the NRHP or designation as a SAL.

6.1.2 Site 41AT258

Site 41AT258 was also recorded during the ETC Lonestar survey as a Late Prehistoric lithic scatter (THC 2014b). The site was located on a hillside east of Lipan Creek and consists of a prehistoric lithic scatter on the surface. Shovel testing did not yield additional cultural material as the soil was found to be clay at the surface. The artifact assemblage included an Edwards hafted biface fragment. All materials were observed in a surface context. The initial evaluation of the site determined the site was not eligible for inclusion on the NRHP or designation as a SAL.

6.2 SURVEY RESULTS

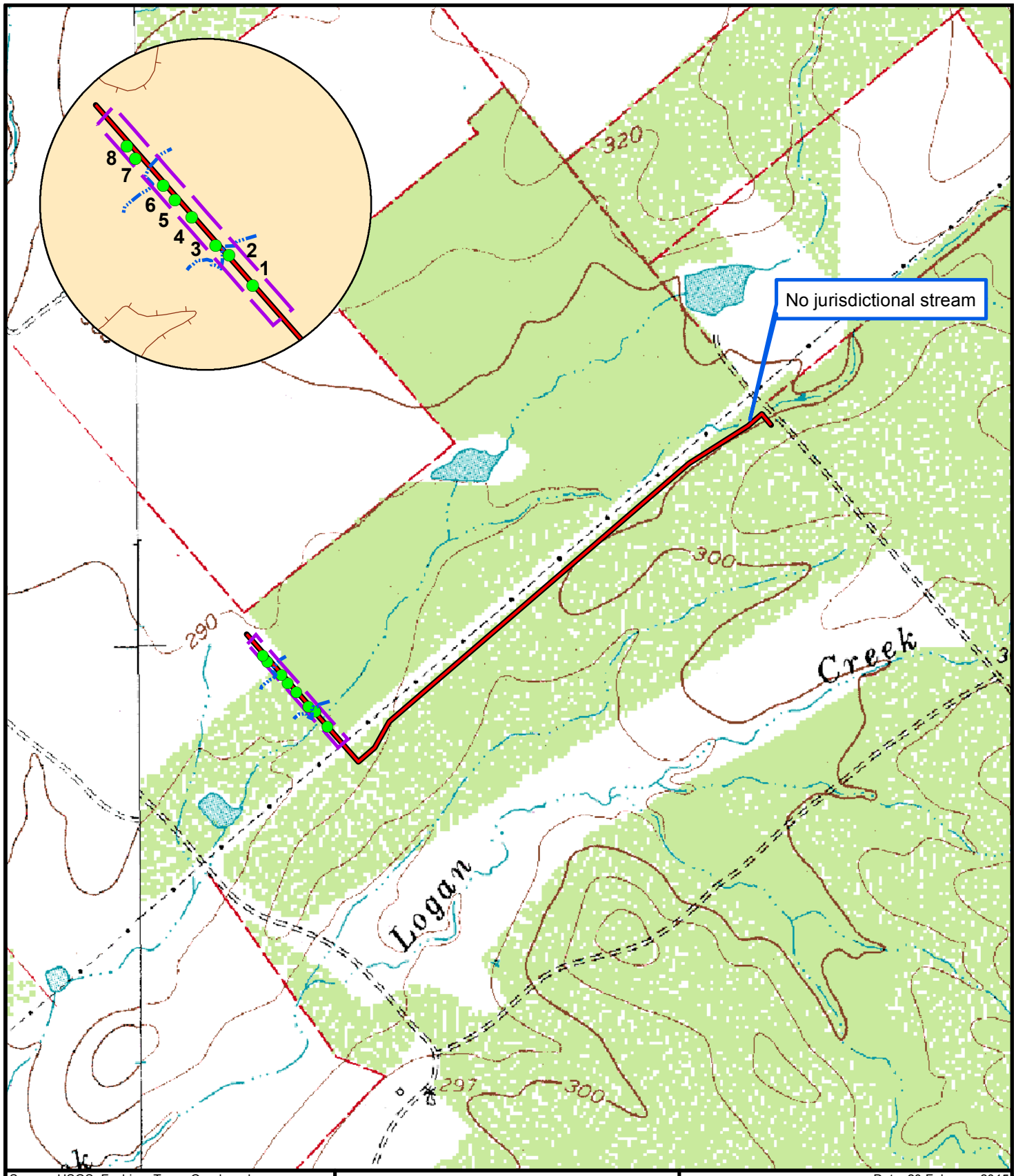
A single review area was identified within the proposed Quail to Quail A Gathering Pipeline ROW, containing a segment of an unnamed first-order tributary of Logan Creek and an unnamed second-order tributary of Logan Creek. The streams were identified as "Waters of the US" by desktop review and ecological field survey conducted prior to the commencement of the cultural resources survey. No other potentially jurisdictional streams were identified during the field effort.

6.2.1 Review Area

The review area traversed a marginally channelized, first-order tributary of Logan Creek and a marginally channelized second-order tributary of Logan Creek. The two stream channels had incised into the landscape between 16 and 24 inches (40 and 60 cm) in depth and 3.3 to 6.6 (1 to 2 m) in width (Photos 6-1 and 6-2). Ground surface visibility was highly variable within the review area ranging from 30 to 80 percent. Vegetation within the review area consisted of acacia, prickly pear, mesquite, tasajillo and various grasses. Soils within the review area were mapped as Christine soils and Imogene fine sandy loam. Both series are very shallow sandy soils that are highly eroded and disturbed within the APE. Four shovel tests were conducted in the vicinity of each stream yielding brown loamy soils overlying dark brown or black clay. Other tests yielded caliche soils or clay soils in a surface context. The tests were terminated between 2 and 16 inches (10 and 40 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within the review area.

6.3 RECOMMENDATIONS

Goshawk conducted a cultural resources survey consisting of an intensive surface inspection and eight shovel tests within the proposed Quail to Quail A Gathering Pipeline ROW. None of the shovel tests conducted within the APE yielded positive results and no cultural materials were observed upon the ground surface. It is Goshawk's opinion that construction of the Quail to Quail A Gathering Pipeline, as proposed, will cause no impacts to significant cultural resources within the surveyed portion of the APE. Therefore, Goshawk recommends that construction be allowed to proceed, as planned. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be halted immediately and the USACE and an archeologist should be notified.



Source: USGS, Fashing, Texas Quadrangle.

Date: 20 February 2015

0 250 500 1,000 Feet

0 75 150 300 Meters

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Figure 6-1
Shovel Test Locations
Atascosa County, Texas

Quail to Quail A Gathering

LEGEND

- Pipeline
- Waters of the US
- Review Areas
- Negative Shovel Test

N

Photo 6-1: Southern Stream within Review Area, Facing Northeast

Photo 6-2: Northern Stream within Review Area, Facing Southwest

Quail to Quail A Gathering ST Data (NAD 83, Zone 14)											
Report ST#	Field ST#	WP#	Easting	Northing	Depth	Soil Color	Soil Texture	RA#	Stream#	Artifacts	Comments
1	RC1	78	573606	3184972	0-10	Brown	Loamy clay	1	1	None	
					10-25	Dark brown	Clay			None	
2	RC2	79	573578	3185008	0-25	Black	Clay	1	1	None	
3	RC3	80	573562	3185019	0-30	Pale brown and dark brown	Clay w/ caliche gravels	1	1	None	Disturbed
					30-35	Black	Clay			None	
4	RC4	81	573534	3185053	0-10	Brown	Clay	1	1	None	
5	RC5	82	573514	3185073	0-30	Brown and grey	Sandy clay	1	2	None	Disturbed
					30-35	Dark brown	Clay			None	
6	RC6	83	573500	3185091	0-25	Dark brown	Clay	1	2	None	
7	RC7	84	573467	3185122	0-30	Pale brown and dark brown	Clay and caliche gravels	1	2	None	
					30-35	Dark brown	Clay			None	
8	RC8	85	573457	3185137	0-35	Brown	Clay loam	1	2		
					35-40	Dark brown	Clay				

7.0 DALL TO WARTHOG GATHERING PIPELINE

Goshawk conducted a cultural resources survey of the proposed ±8,379-foot (2,554-m) Dall to Warthog Gathering Pipeline ROW in Atascosa County, Texas. Two review areas were identified within the proposed ROW containing a single meandering stream potentially under federal jurisdiction. The cultural resources survey, including shovel testing and surface inspection, was conducted within the areas of review which totaled approximately 2.5 acres (1 ha). The review areas encompassed segments of an unnamed second-order tributary of Borrego Creek. The field investigation was conducted by Goshawk archeologist Scott Justen with Mitch Juenke on 15 December 2014.

The Dall to Warthog Gathering Pipeline APE was located approximately 2.9 miles (4.8 km) to the north-northwest of the town of Campbellton, Texas. The APE crossed loamy and clayey undulating terrain that was vegetated with forbs, grasses, mesquite, huisache, and cactus. The APE was located on the McCoy, Texas, USGS topographic quadrangle (Figure 7-1). The dominant local land use was for rangeland, and oil and gas development.

7.1 ARCHIVAL RESEARCH

Archival research conducted using the THC's Atlas online database identified two previously recorded archeological sites situated within a 1.2-mile (2.0-km) radius of the APE. These sites (41AT16 and 41AT256) were located between 0.4 and 1.2 miles (0.6 and 1.9 km) to the south and northwest of the APE and will be discussed in detail below. The Mustang Branch NRD is located approximately 16.7 miles (27.4 km) northwest of the APE. According to the Atlas, the nearest NRHP-listed property is the Fredrick and Sallie Lyons House, located in the town of Pleasanton, Texas, approximately 24.9 miles (40.1 km) north-northwest of the APE.

7.1.1 Site 41AT16

Site 41AT16 was recorded in 1970. The site was documented as an undifferentiated prehistoric campsite and was located along an erosional bank of Borrego Creek. The artifact assemblage observed included only projectile points. There was no information on the Atlas about the site's eligibility for designation as a SAL or listing on the NRHP (THC 2014b).

7.1.2 Site 41AT256

Site 41AT256 was recorded in 2012 during the ETC Lone Star Project (THC 2014b). The site was identified as an undifferentiated prehistoric lithic scatter. The site was located on an eroded ridge within pastureland and hardwood forest. The site was identified by a surface expression of artifacts. There was no information on the Atlas regarding the artifact assemblage on the site. The site was not recommended for further work to determine its eligibility for inclusion on the NRHP or designation as a SAL.

7.2 SURVEY RESULTS

Two review areas were identified within the proposed Dall to Warthog Gathering Pipeline ROW containing segments of a meandering second-order tributary of Borrego Creek. The stream crossings were identified as "Waters of the US" by desktop review and ecological field survey

conducted prior to the commencement of the cultural resources survey. No other potentially jurisdictional streams were identified during the field effort.

7.2.1 Review Area 1

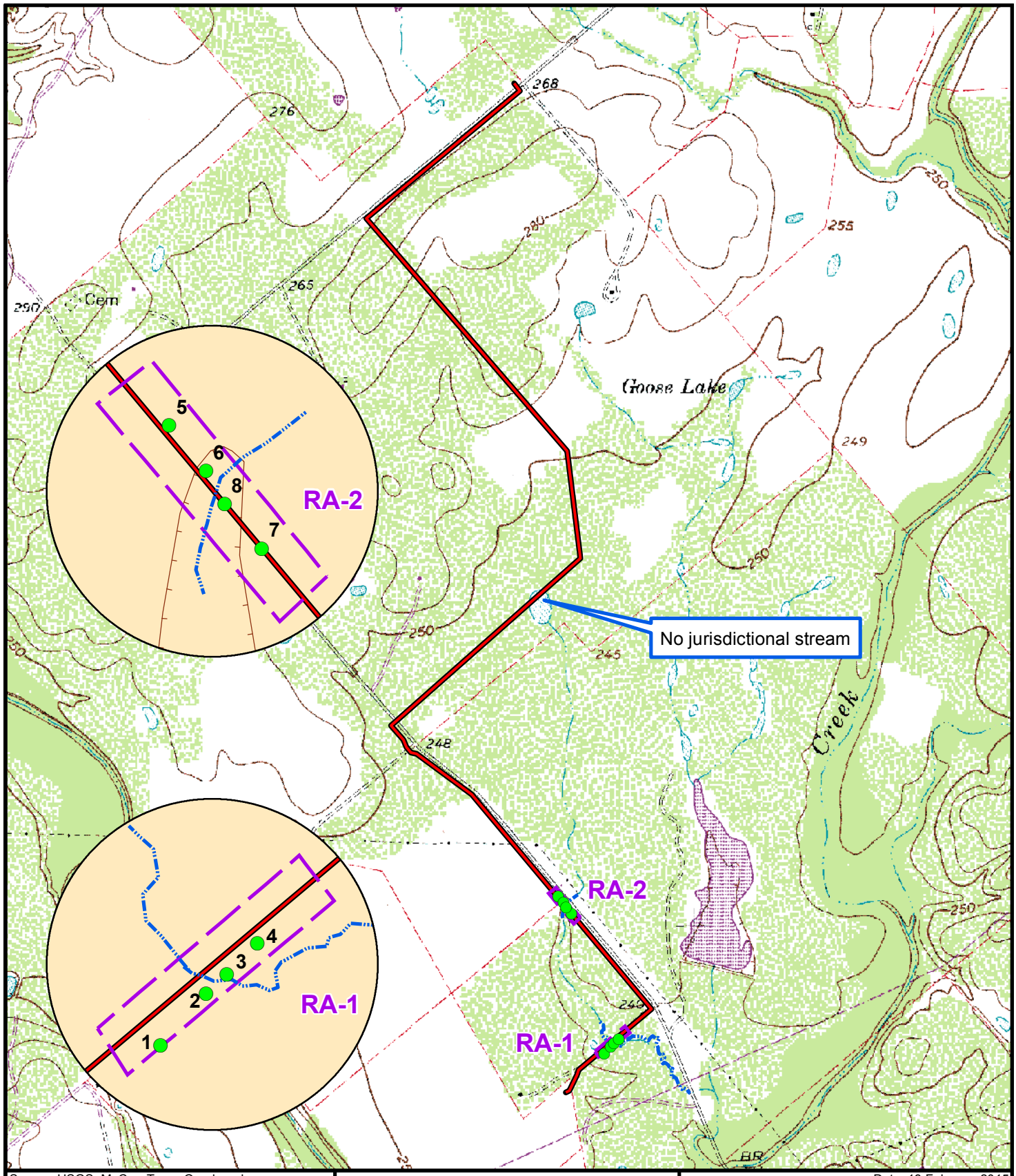
Review Area 1 traversed a segment of a well-channelized, second-order tributary of Borrego Creek (Photo 7-1). The APE paralleled an existing two track ranch road and had incised into the landscape between 3.3 to 4.9 feet (1 to 1.5 m) deep and between 6.6 to 8.2 feet (2 to 2.5 m) wide. The surrounding landscape had been heavily impacted by erosion and past land clearing leaving many erosional rivulets leading to the stream channel (Photo 7-2). The upland slopes displayed evidence of past terracing. Ground surface visibility within the APE was considered average ranging between 40 and 60 percent. Vegetation within the APE consisted of huisache, mesquite, cactus and various forbs, and grasses. Soils within the review area were mapped as Miguel fine sandy loam, Monteola clay, and Sinton soils frequently flooded. Four shovel tests were conducted in the vicinity of the stream which yielded brown sandy soils overlying very dark brown clays or very dark brown clay soils in a surface context. The tests were terminated between 12 and 14 inches (15 and 30 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within Review Area 1.

7.2.2 Review Area 2

Review Area 2 traversed a segment of a well-channelized second-order tributary of Borrego Creek (Photo 7-3). Ground surface visibility was considered good ranging between 40 and 80 percent (Photo 7-4). Vegetation within the APE consisted of huisache, mesquite, cactus, and various forbs and grasses. Soils mapped within the review area were mapped as Floresville fine sandy loam, Imogene fine sandy loam, and Sinton soils. Four shovel tests were conducted in the vicinity of the stream which yielded brown loamy soils over dark brown clays. The tests were terminated between 12 and 24 inches (20 and 60 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within Review Area 2.

7.3 RECOMMENDATIONS

Goshawk conducted a cultural resources survey consisting of an intensive surface inspection and eight shovel tests within the proposed Dall to Warthog Gathering Pipeline ROW. None of the shovel tests conducted within the APE yielded positive results and no cultural materials were observed upon the ground surface. It is Goshawk's opinion that construction of the Dall to Warthog Gathering Pipeline ROW, as proposed, will cause no impacts to significant cultural resources within the surveyed portion of the APE. Therefore, Goshawk recommends that construction be allowed to proceed, as planned. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be halted immediately and the USACE and an archeologist should be notified.



Source: USGS, McCoy, Texas Quadrangle.

Date: 18 February 2015

0 375 750 1,500 Feet

0 125 250 500 Meters

Figure 7-1
Shovel Test Locations
Atascosa County, Texas

Dall to Warthog Gathering

LEGEND

- Pipeline
- Waters of the US
- Review Areas
- Negative Shovel Test

N

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Photo 7-1: Review Area 1, Second-Order Tributary of Borrego Creek, Facing South

Photo 7-2: Review Area 1, General Overview of APE Showing Disturbances, Facing South

Photo 7-3: Review Area 2, Second-Order Tributary of Borrego Creek, Facing South

Photo 7-4: Review Area 2, Typical Surface Visibility

Dall to Warthog Gathering (14 NAD 1983)											
Report ST#	ST#	WP#	Easting	Northing	Depth (cm)	Soil Color	Soil Composition	Artifacts	Stream	Review Area	Comments
1	BA1	53	568797	3184690	0-30	Brown	Sandy loam	None	1	1	
					30-35	Pale Brown	Sand	None			
					35+	Dark brown	Clay	None			
2	BA2	54	568820	3184716	0-30	Dark brown	Clay	None	1	1	Disturbed
3	BA3	55	568831	3184726	0-30	Dark brown	Clay	None	1	1	Disturbed
4	BA4	56	568847	3184742	0-30	Dark brown	Clay	None	1	1	
5	BA5	57	568646	3185227	0-30	Dark brown	Clay	None	1	2	
6	BA6	58	568659	3185209	0-60	Brown	Clay loam	None	1	2	
					60+	Dark brown	Clay	None			
7	BA7	59	568674	3185188	0-35	Brown	Clay loam	None	1	2	
					35+	Dark brown	Clay	None			
8	BA8	60	568664	3185200	0-30	Brown	Clay loam	None	1	2	
					30+	Dark brown	Clay	None			

8.0 TANGERINE UNIT GATHERING PIPELINE

Goshawk conducted a cultural resources survey of the proposed ±13,595 foot (4,144-m) Tangerine Unit Gathering Pipeline ROW in Atascosa County, Texas. A single review area was identified within the proposed ROW, containing a single stream potentially under federal jurisdiction. The cultural resources survey, including shovel testing and surface inspection, was conducted within the area of review which totaled approximately 0.9 acre (0.4 ha). The review area encompassed a segment of a first-order tributary of the La Parita Creek stream complex which emptied into a stock tank to the south. The field investigation was conducted by Goshawk archeologist Scott Justen with Mitch Juenke on the 9 December 2014.

The Tangerine Unit Gathering Pipeline APE was located approximately 6 miles (9.1 km) southeast of the town of Christine, Texas. The APE traversed in a southeast direction then turned northeast traversing undulating loamy and clayey terrain. The vegetation within the ROW consisted of sage, various grasses, mesquite, and various forbs. The APE was located on the Caballos Creek, Texas, USGS topographic quadrangle (Figure 8-1). The dominant local land use was for rangeland and oil and gas development.

8.1 ARCHIVAL RESEARCH

Archival research conducted using the Atlas online database identified 19 previously recorded archeological sites situated within a 1.2-mile (2.0-km) radius of the APE. These sites are mainly situated along the main channels of La Parita Creek and Christine Creek. The nearest sites (41AT122, 41AT123, 41AT124, and 41AT135) were located between 528 and 2,113 feet (161 and 644 m) to the north and south of the APE. The four sites were documented in the early 1990's as part of the San Miguel Lignite Prospect Survey. The Downtown Cotulla Historic District NRD is located approximately 23.3 miles (37.6 km) west of the APE. According to the Atlas, the nearest NRHP-listed property is the Atascosa County Courthouse located in the town of Jourdanton, Texas, approximately 14.8 miles (24 km) northwest of the APE.

8.1.1 41AT122

Site 41AT122 was originally documented as an undated prehistoric open camp and lithic procurement site. The site was located on a rounded hill within the La Parita Creek floodplain and measured 164 feet by 246 feet (50 by 75 m) in size. The artifact assemblage included lithic debitage, five cores, secondary flakes, tertiary flakes, and some burned rock. It was noted that the site had been bulldozed and cleared so all the deposits were disturbed. The initial evaluation concluded that the site was ineligible for SAL designation or NRHP listing.

8.1.2 41AT123

Site 41AT123 was originally documented as an upland prehistoric open campsite. The site was located on a high knoll and measured 164 feet by 246 feet (50 by 75 m) in size. The artifact assemblage included lithic debitage and burned rock. The site was documented as having surface and subsurface components. The site had been bulldozed and cleared so the upper deposits had been disturbed. The initial evaluation concluded that further testing was needed to determine the site's eligibility for SAL designation or NRHP listing.

8.1.3 41AT124

Site 41AT124 was recorded as a surface and subsurface, undifferentiated Archaic open campsite. The site measured 328 feet by 328 feet (100 m by 100 m) in size and was located on the slopes of an upland landform east of an unnamed tributary of La Parita Creek (THC 2014b). The artifact assemblage included lithic debitage, burned materials, and a retouched dart point base. It was noted that the site had been heavily disturbed by land clearing. The initial evaluation concluded that the site was ineligible for SAL designation or NRHP listing.

Goshawk conducted an intensive pedestrian survey which passed within 328 feet (100 m) of the recorded northwestern boundary of site. Surface visibility was considered good ranging between 50 and 70 percent. This segment of the APE exhibited sterile clay soils in a surface context. The surface inspection resulted in the recovery of two isolated flakes approximately 164 feet (50 m) west of the APE. At total of six shovel tests were administered within the APE, all of which yielded negative results. No further work was recommended.

8.1.4 41AT135

Site 41AT135 was originally documented as a prehistoric quarry located on sloping uplands north and east of unnamed tributaries of La Parita Creek (THC 2014b). The artifact assemblage included lithic debitage, cores, and choppers. The site was documented as being very large ranging between 7.4 and 37.1 acres (3 and 15 ha). It was noted that the site contained little or no soil deposition, and exhibited many areas of exposed bedrock outcroppings. The initial evaluation of the site concluded that the site was ineligible for SAL designation or NRHP listing.

8.2 SURVEY RESULTS

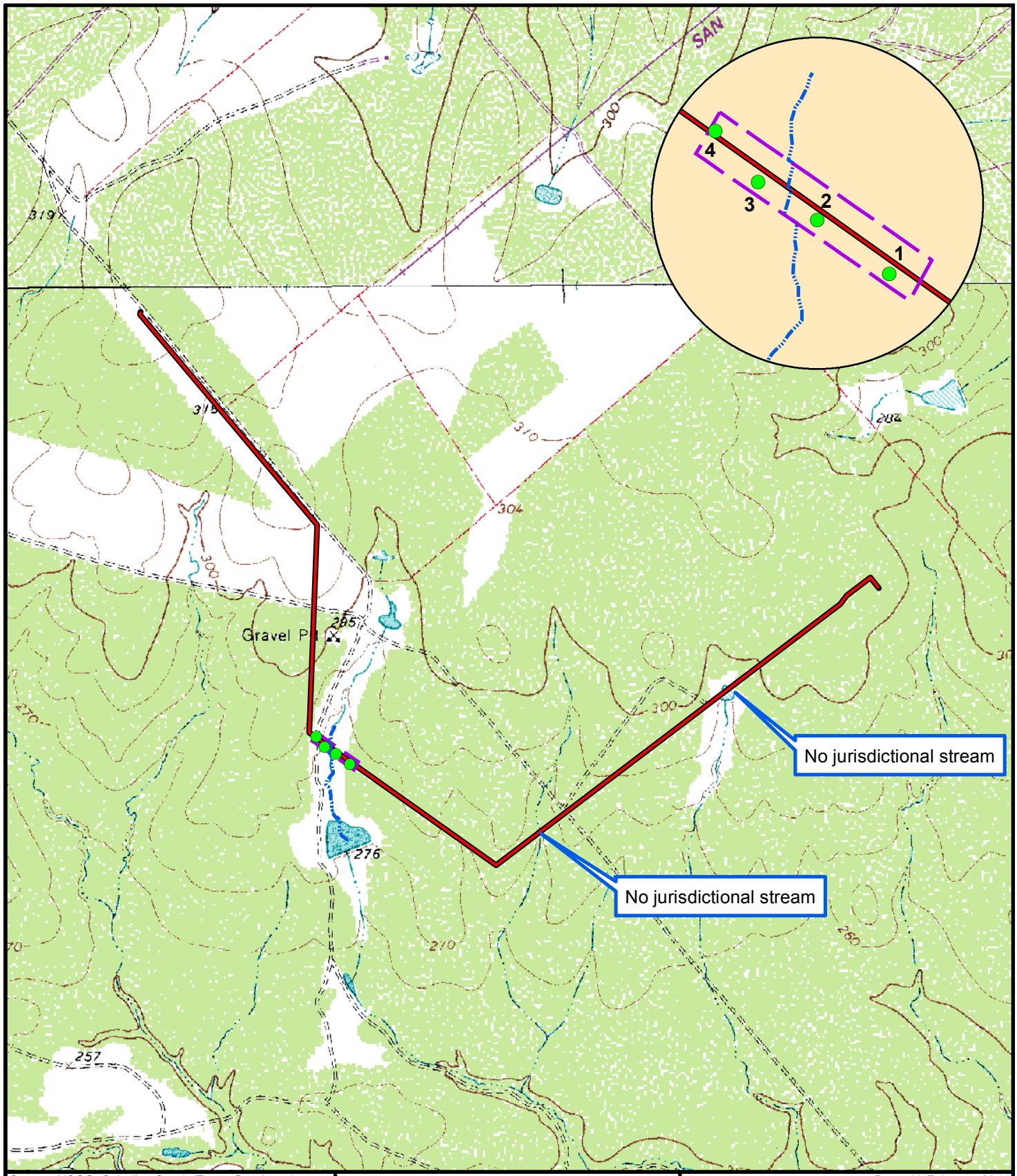
A single review area was identified within the proposed Tangerine Unit Gathering Pipeline ROW, containing a segment of an unnamed first-order tributary of La Parita Creek. The stream was identified as “Waters of the US” by desktop review and ecological field survey conducted prior to the commencement of the cultural resources survey. No other potentially jurisdictional streams were identified during the field effort.

8.2.1 Review Area

The review area traversed a segment of a marginally-channelized, first-order tributary of the La Parita Stream complex. The stream exhibited better channelization to the north and south of the APE. The stream emptied into a stock tank that was located to the south of the APE (Photo 8-1). Ground surface visibility was considered good, ranging between 60 and 80 percent (Photo 8-2). Vegetation within the APE consisted of sage, cactus, various forbs, mesquite, and grasses. Soils within the review area were mapped as Hanis sandy clay loam, Laparita loam, and Monteola clay. The soils in the Hanis and Laparita series are moderately deep loams. Monteola soils are deep in situ clays. Four shovel tests were conducted in the vicinity of the stream yielding shallow brown or grey sandy soils overlying very dark brown clays or very dark brown clays in a surface context. The tests were terminated between 4 and 12 inches (10 and 30 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within the review area.

8.3 RECOMMENDATIONS

Goshawk conducted a cultural resources survey consisting of an intensive surface inspection and four shovel tests within the proposed Tangerine Unit Gathering Pipeline ROW. None of the shovel tests conducted within the APE yielded positive results and no cultural materials were observed upon the ground surface. It is Goshawk's opinion that construction of the Tangerine Unit Gathering Pipeline, as proposed, will cause no impacts to significant cultural resources within the surveyed portion of the APE. Therefore, Goshawk recommends that construction be allowed to proceed as planned. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be halted immediately and the USACE and an archeologist should be notified.



Source: USGS, Caballos Creek, Texas Quadrangle.

Date: 18 February 2015

0 375 750 1,500 Feet

0 115 230 460 Meters

Figure 8-1
Shovel Test Locations
Atascosa County, Texas

Tangerine Unit Gathering

LEGEND

- Pipeline
- Waters of the US
- Review Area
- Negative Shovel Test

N

Photo 8-1: Stream within Review Area, Facing South

Photo 8-2: Typical Surface Visibility within Review Area

Tangerine Gathering (14 NAD 1983)										
Report ST#	ST#	WP#	Easting	Northing	Depth (cm)	Soil Color	Soil Composition	Artifacts	Review Area	Comments
1	MJ1	1	556192	3178800	0-15	Brown	Fine sandy loam	None	1	
					15+	Very dark brown	Sandy clay	None		
2	MJ2	2	556144	3178836	0-5	Grey	Sandy loam	None	1	Area disturbed push piles and caliche and gravels on surface
					5-30	Very dark brown	Clay	None		
3	MJ3	3	556104	3178861	0-10	Grey	Sandy loam	None	1	Area disturbed push piles and caliche and gravels on surface
					10+	Very dark brown	Clay	None		
4	MJ4	4	556076	3178896	0-30	Very dark brown	Clay	None	1	

9.0 CUELLAR UNIT #7H AND #8H ACCESS ROAD

Goshawk conducted a cultural resources survey of the proposed ±6,324-foot (1,928-m) Cuellar Unit #7H and #8H Access Road ROW in Atascosa County, Texas. A single review area was identified within the proposed ROW, containing a single stream potentially under federal jurisdiction. The cultural resources survey, including shovel testing and surface inspection, was conducted within the area of review which totaled approximately 1 acre (0.4 ha). The review area encompassed a segment of Live Oak Creek, proper. The field investigation was conducted by Goshawk archeologist Scott Justen with Mitch Juenke on 22 December 2014.

The Cuellar Unit #7H and #8H Access Road APE was located approximately 10.2 miles (16.2 km) to southwest of the town of Christine, Texas and 0.75 miles (1.2 km) east of County Road 343. From its western terminus, the APE traversed undulating terrain in a generally east-southeasterly direction, crossing a segment of Live Oak Creek. The vegetation within the ROW consisted of mesquite, oak, grasses, cactus, huisache, and forbs. The APE was located on the San Miguel Ranch, Texas, USGS topographic quadrangle (Figure 9-1). The dominant local land use was for rangeland and oil and gas development.

9.1 ARCHIVAL RESEARCH

Archival research conducted using the Atlas online database identified two previously recorded archeological sites situated within a 1.2-mile (2.0-km) radius of the APE. These sites (41AT21 and 41AT249) were located between 0.6 and 0.8 mile (1 and 1.3 km) north and southwest of the APE and will be discussed in detail below. The Mustang Branch NRD is located approximately 13.8 miles (22.6 km) southeast of the APE. According to the Atlas, the nearest NRHP-listed property is the Atascosa County Courthouse, located within the town of Jourdanton, Texas, approximately 16.8 miles (26.5 km) northeast of the APE.

9.1.1 Site 41AT21

Site 41AT21 was documented in 1973. The site was recorded as a Late Prehistoric open campsite (THC 2014b) mapped on terraces flanking Lagunillas Creek adjacent to an existing road. The artifact assemblage included flakes and a bone-tempered pot sherd. It was noted that the site was eroding from the banks near a road. The initial evaluation concluded that this site required further research to determine its eligibility for designation as a SAL or listing on the NRHP.

9.1.2 Site 41AT258

Site 41AT258 was documented in November 2011, as part of the Lyssy to Gardendale project and was recorded as a small, surficial undifferentiated prehistoric lithic scatter. The site measured 108 feet (33 m) north-to-south by 92 feet (28 m) east-to-west and was located along the slopes of an upland landform on the east side of Macho Creek (THC 2014b). The artifact assemblage included four bidirectional cores, one core-chopper, two choppers, and six tested cobbles. The initial evaluation concluded that this site was not eligible for designation as a SAL or listing on the NRHP.

9.2 SURVEY RESULTS

A single review area was identified within the proposed Cuellar Unit #7H and #8H Access Road ROW, containing a segment of Live Oak Creek, proper. The stream was identified as “Waters of

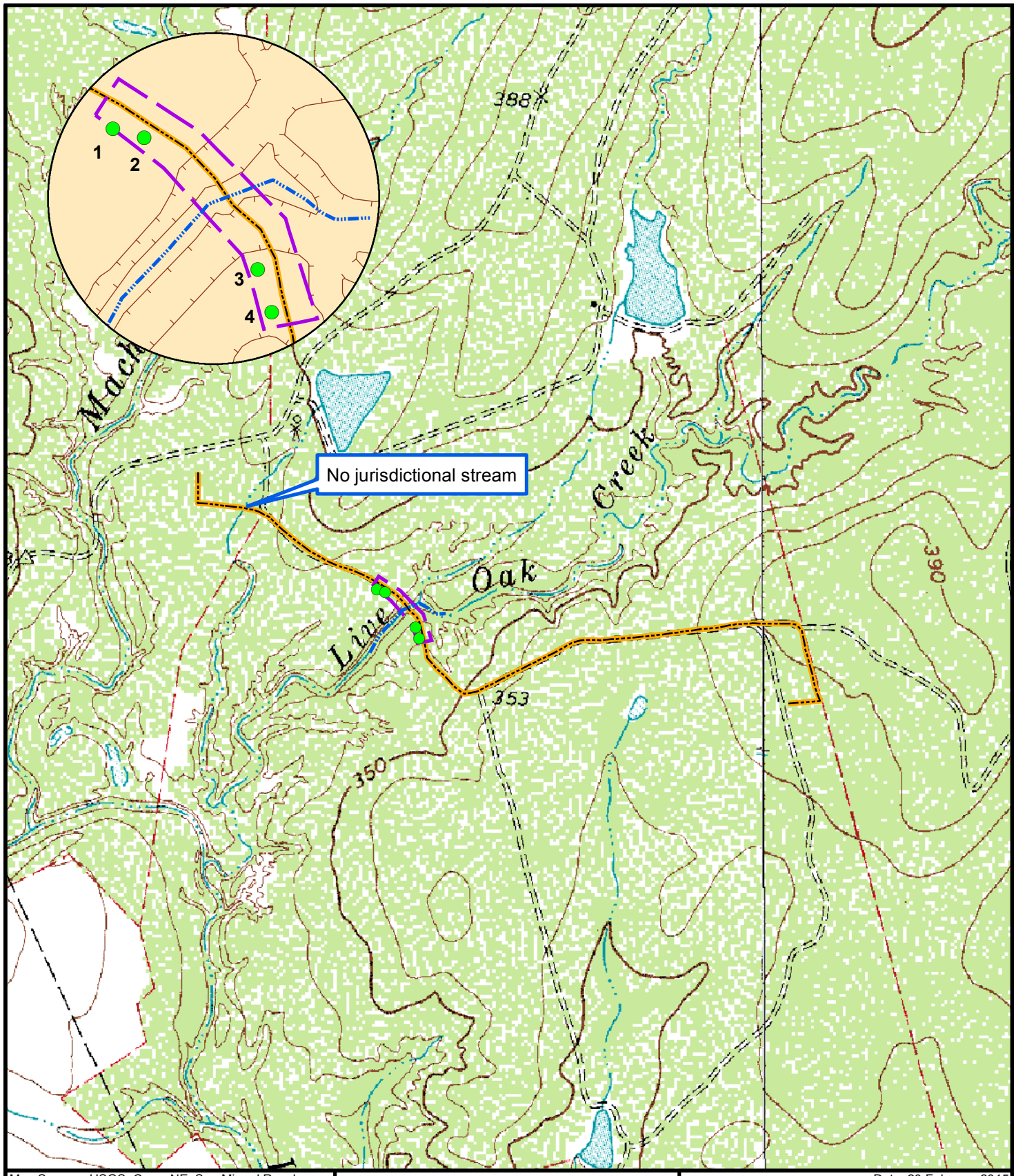
the US" by desktop review and ecological field survey conducted prior to the commencement of the cultural resources survey. No other potentially jurisdictional streams were identified during the field effort.

9.2.1 Review Area

The review area traversed a well-channelized Live Oak Creek. The stream channel had incised into the landscape between 6.5 and 8.2 feet (2 and 2.5 m) in depth and 4.9 to 8.2 (1.5 to 2.5 m) wide (Photo 9-1). Ground surface visibility was highly variable within the review area ranging from average 50 percent and very good around 80 percent. Vegetation within the review area consisted of mesquite, oaks, various grasses, cactus, huisache, and forbs. Soils within the review area were mapped as Christine soils and Floresville fine sandy loam. The Christine series are deep loamy soils. The Floresville series are shallow sandy soils that were often highly eroded down to sterile clays within the APE (Photo 9-2). Four shovel tests were conducted in the vicinity of the stream yielding brown sandy loam overlying brown or reddish brown clay. The tests were terminated between 16 and 24 inches (40 and 60 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within the review area.

9.3 RECOMMENDATIONS

Goshawk conducted a cultural resources survey consisting of an intensive surface inspection and four shovel tests within the proposed Cuellar Unit #7H and #8H Access Road ROW. None of the shovel tests conducted within the APE yielded positive results and no cultural materials were observed upon the ground surface. It is Goshawk's opinion that construction of the Cuellar Unit #7H and #8H Access Road, as proposed, will cause no impacts to significant cultural resources within the surveyed portion of the APE. Therefore, Goshawk recommends that construction be allowed to proceed, as planned. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be halted immediately and the USACE and an archeologist should be notified.



Map Source: USGS, Cross NE, San Miguel Ranch, Texas Quadrangles.

0 250 500 1,000 Feet

0 75 150 300 Meters

GOSHAWK ENVIRONMENTAL CONSULTING, INC.

Figure 9-1
Shovel Test Locations
Atascosa County, Texas

Cuellar Unit #7H
Cuellar Unit #8H

Date: 20 February 2015

LEGEND

- Proposed Access Road
- Waters of the US
- Review Areas
- Negative Shovel Test

N

Photo 9-1: Live Oak Creek within APE, Facing South

Photo 9-2: Typical Surface Visibility within ROW

Cuellar Unit #7H and #8H Access Road (14 NAD 1983)								
Report ST#	**ST#**	**WP#**	**Easting**	**Northing**	**Depth (cm)**	**Soil Color**	**Soil Composition**	**Artifacts**
1	MJ5	17	535719	3173578	0-40	Brown	Sandy loam	None
					40+	Brown	Clay	None
2	MJ6	18	535739	3173576	0-60	Brown	Sandy loam	None
					60+	Brown	Clay	None
3	MJ7	20	535809	3173495	0-45	Brown	Sandy loam	None
					45+	Dark brown	Clay	None
4	MJ8	21	535818	3173469	0-30	Brown	Sandy loam	None
					30+	Reddish brown	Clay	None

10.0 GALAXY UNIT #1H ACCESS ROAD

Goshawk conducted a cultural resources survey of the proposed ±4,912-foot (1,498-m) Galaxy Unit #1H Access Road ROW in Atascosa County, Texas. A single review area was identified within the proposed ROW, containing a single stream potentially under federal jurisdiction. The cultural resources survey, including shovel testing and surface inspection, was conducted within the area of review which totaled approximately 0.4 acre (0.2 ha). The review area encompassed a segment of an unnamed, disconnected tributary of Turkey Creek. The field investigation was conducted by Goshawk archeologist Scott Justen with Mitch Juenke on 15 December 2014.

The Galaxy Unit #1H Access Road APE was located approximately 5.7 miles (9.3 km) to southwest of the town of Christine, Texas, just north of CR 442. The APE traversed in a generally east-to-west direction across undulating terrain. The vegetation within the ROW consisted of oaks, cactus, mesquite, grasses, and forbs. The APE was located on the Cross NE, Texas, USGS topographic quadrangle (Figure 10-1). The dominant local land use was for rangeland, and oil and gas development.

10.1 ARCHIVAL RESEARCH

Archival research conducted using the Atlas online database did not identify any previously recorded archeological sites situated within a 1.2-mile (2.0-km) radius of the APE (THC 2014b). The nearest recorded site (41AT9) was located approximately 4.2 miles (6.8 km) northeast of the APE and will be discussed in detail below. The Mustang Branch NRD is located approximately 15.2 miles (24.2 km) south-southeast of the APE. According to the Atlas, the nearest NRHP-listed property is the Atascosa County Courthouse, located within the town of Jourdanton, Texas, approximately 12.3 miles (19.6 km) north-northeast of the APE.

10.1.1 Site 41AT9

Site 41AT9 is located on a flat terrace west of a first-order tributary of Turkey Creek and south of Farm-to-Market 140 and east of State Highway 16. There is no other information on the Atlas about this site. The site's eligibility for inclusion onto the NRHP or designation as a SAL is uncertain.

10.2 SURVEY RESULTS

A single review area was identified within the proposed Galaxy Unit #1H Access Road ROW containing a segment of an unnamed, disconnected tributary of Turkey Creek. The stream was identified as "Waters of the US" by desktop review and ecological field survey conducted prior to the commencement of the cultural resources survey. No other potentially jurisdictional streams were identified during the field effort.

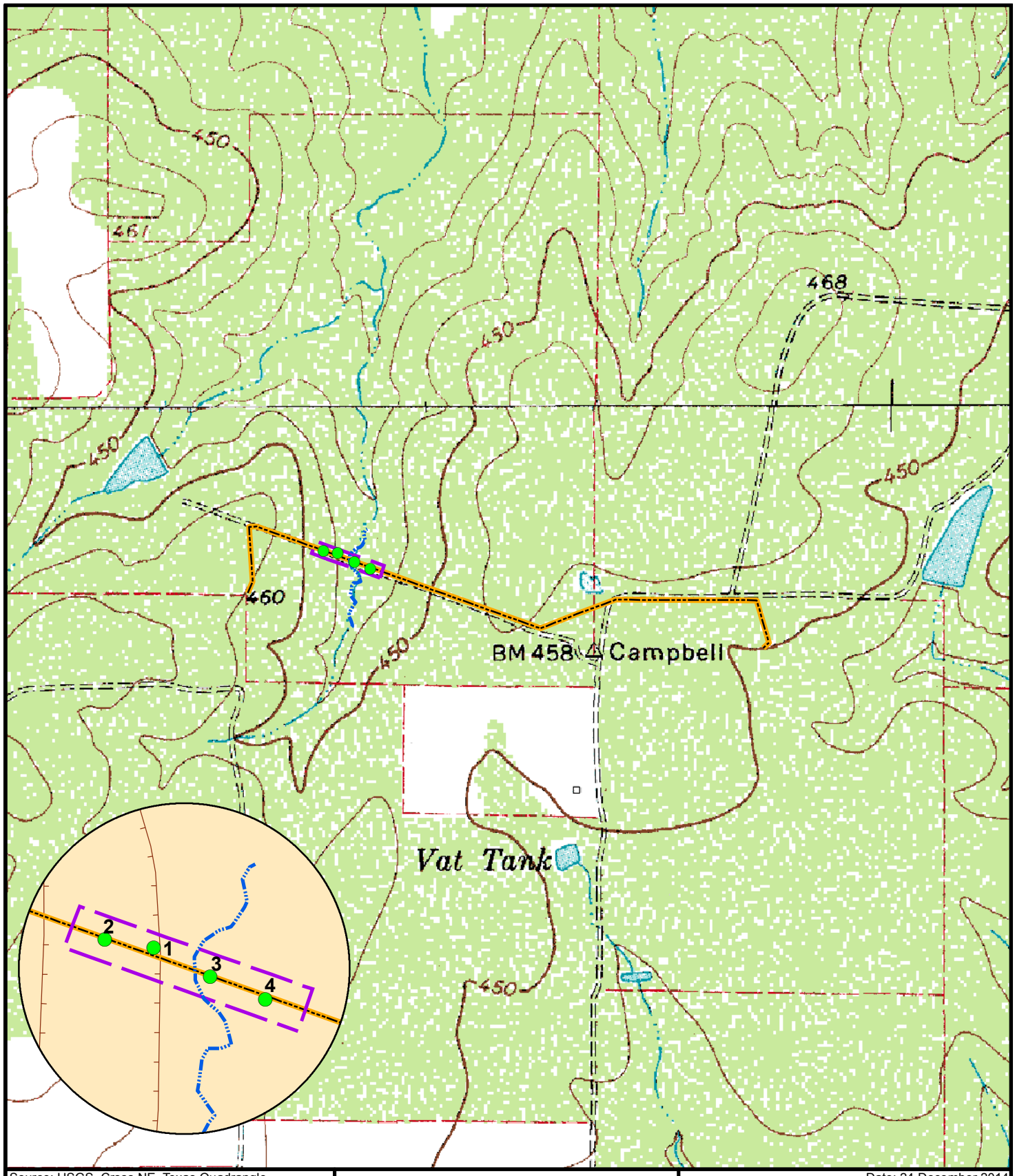
10.2.1 Review Area

The review area traversed a segment of a well-channelized, disconnected tributary of Turkey Creek. The stream had incised into the landscape between 1.6 and 2.5 feet (0.5 and 0.8 m) in depth and was approximately 9.8 feet (3 m) in width (Photo 10-1). Ground surface visibility within the review area was highly variable ranging between 40 and 80 percent. Vegetation within the APE consisted of oaks, grasses, mesquite, and forbs. Soils within the review area consisted of Amphion

sandy clay loam and Hanis sandy clay loam. Both soil series are very shallow loamy soils that are highly eroded and disturbed within the APE (Photo 10-2). Four shovel tests were conducted in the vicinity of the stream which yielded reddish brown clays in a surface context or brown sandy clays overlying brown or reddish brown homogenous or mottled clays in a surface context. The tests were terminated between 6 and 12 inches (15 and 30 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within the review area.

10.3 RECOMMENDATIONS

Goshawk conducted a cultural resources survey consisting of an intensive surface inspection and four shovel tests within the proposed Galaxy Unit #1H Access Road ROW. None of the shovel tests conducted within the APE yielded positive results and no cultural materials were observed upon the ground surface. It is Goshawk's opinion that construction of the Galaxy Unit #1H Access Road ROW, as proposed, will cause no impacts to significant cultural resources within the surveyed portion of the APE. Therefore, Goshawk recommends that construction be allowed to proceed as planned. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be halted immediately and the USACE and an archeologist should be notified.



Source: USGS, Cross NE, Texas Quadrangle.

Date: 24 December 2014

0 250 500 1,000 Feet

0 75 150 300 Meters

Figure 10-1
Shovel Test Locations
Atascosa County, Texas

Galaxy Unit #1H

LEGEND

- Proposed Access Road
- Waters of the US
- Review Area
- Negative Shovel Test

N

GOSHAWK ENVIRONMENTAL CONSULTING, INC.

Photo 10-1: Stream within Review Area, Facing South

Photo 10-2: General Overview of Review Area

Galaxy Unit #1H Access Road St Data (14 NAD 1983)								
Report ST#	ST#	WP#	Easting	Northing	Depth (cm)	Soil Color	Soil Composition	Artifacts
1	MJ1	19	539380	3180043	0-30	Reddish brown	Clay	None
2	MJ2	20	539347	3180049	0-30	Reddish brown	Clay	None
3	MJ3	21	539418	3180023	0-15	Brown	Sandy clay	None
					15+	Reddish brown	Clay	None
4	MJ4	22	539455	3180008	0-30	Brown	Clay	None

11.0 QUAIL UNIT #11H FLOWLINE

Goshawk conducted a cultural resources survey of the proposed ±6,809-foot (2,075-m) Quail Unit #11H Flowline ROW in Atascosa County, Texas. Two review areas were identified within the proposed ROW, containing two separate crossings of Lipan Creek, proper, and two crossings of unnamed tributaries of Lipan Creek, all potentially under federal jurisdiction. The cultural resources survey, including shovel testing and surface inspection, was conducted within the area of review which totaled approximately 3.4 acre (1.4 ha). Review Area 1 encompassed two separate braids of Lipan Creek, proper, and Review Area 2 encompassed a first-order and second-order tributary of Lipan Creek. The field investigation was conducted by Goshawk archeologist Reign Clark with Bear Aspra on 10 December 2014.

The Quail Unit #11H Flowline APE was located approximately 4.5 miles (7.3 km) to northeast of the town of Campbellton, Texas. From its southeastern terminus the APE traversed in a generally northwesterly direction before turning to the southwest. The proposed ROW crossed a gently undulating upland landform of loamy soils. The vegetation within the proposed ROW consisted of huisache, acacia, mesquite, various cacti, hackberry, and assorted grasses. The APE was located on the Fashing and McCoy, Texas, USGS topographic quadrangle (Figure 11-1). The dominant local land use was for rangeland and oil and gas development.

11.1 ARCHIVAL RESEARCH

Archival research conducted using the Atlas online database identified two previously recorded archeological sites situated within a 1.2-mile (2.0-km) radius of the APE. These sites (41AT256 and 41AT258) were located between 1.0 and 1.5 miles (1.6 and 1.8 km) northwest and northeast of the APE and will be discussed in detail below. The Panna Maria NRD is located approximately 21.4 miles (34.5 km) northeast of the APE. According to the Atlas, the nearest NRHP-listed property is the Fredrick and Sallie Lyons House, located within the town of Pleasanton, Texas, approximately 18.5 miles (29.8 km) northwest of the APE.

11.1.2 Site 41AT256

Site 41AT256 was recorded in 2012 during the ETC Lone Star Survey. The site was identified as an undifferentiated lithic scatter. The site is located on an eroded ridge within a pasture and hardwood forest. The site was identified by surface artifacts. There was no information regarding the artifact assemblage observed on the Atlas (THC 2014b). The site was not recommended for further work to determine its eligibility for inclusion on the NRHP or designation as a SAL.

11.1.2 Site 41AT258

Site 41AT258 was also recorded during the ETC Lone Star Survey as a Late Prehistoric lithic scatter. The site was located on a hillside east of Lipan Creek and consists of a prehistoric lithic scatter on the surface. Shovel testing did not yield additional cultural material as the soil was found to be clay at the surface. The artifact assemblage included lithic debitage and an Edwards hafted biface fragment. All materials were observed in a surface context (THC 2014b). The evaluation concluded that the site was not eligible for inclusion on the NRHP or designation as a SAL.

11.2 SURVEY RESULTS

Two review areas were identified within the proposed Quail Unit #11H Flowline ROW, containing two segments of a braided Lipan Creek, a first-order tributary of Lipan Creek and a second-order tributary of Lipan Creek. The streams were identified as "Waters of the US" by desktop review and ecological field survey conducted prior to the commencement of the cultural resources survey. No other potentially jurisdictional streams were identified during the field effort.

11.2.1 Review Area 1

Review Area 1 traversed two well-channelized, branches of Lipan Creek. The two streams had incised into the landscape between 3.3 and 3.9 feet (1 and 1.2 m) in depth and 6.6 to 13.1 feet (2 to 4 m) in width (Photos 11-1 and 11-2). The streams contained standing and flowing water at the time of survey. Ground surface visibility was highly variable within the review area ranging from 50 to 80 percent. Vegetation within the review area consisted of huisache, acacia, prickly pear, and assorted grasses. Soils within the review area were mapped as Christine soils and Laparita loam. The Christine series are deep loamy soils and the Laparita series are shallow loamy soils overlying deep clay deposits, both with some potential to contain temporally stratified deposits. A total of seven shovel tests were conducted in the vicinity of the two Lipan Creek channels. Shovel tests yielded dark brown, very dark brown, grey, or pale brown sandy or loamy soils overlying black or dark brown clays. The tests were terminated between 4 and 14 inches (10 and 35 cm) below surface. No cultural materials were observed during surface inspection or shovel testing conducted within the review area.

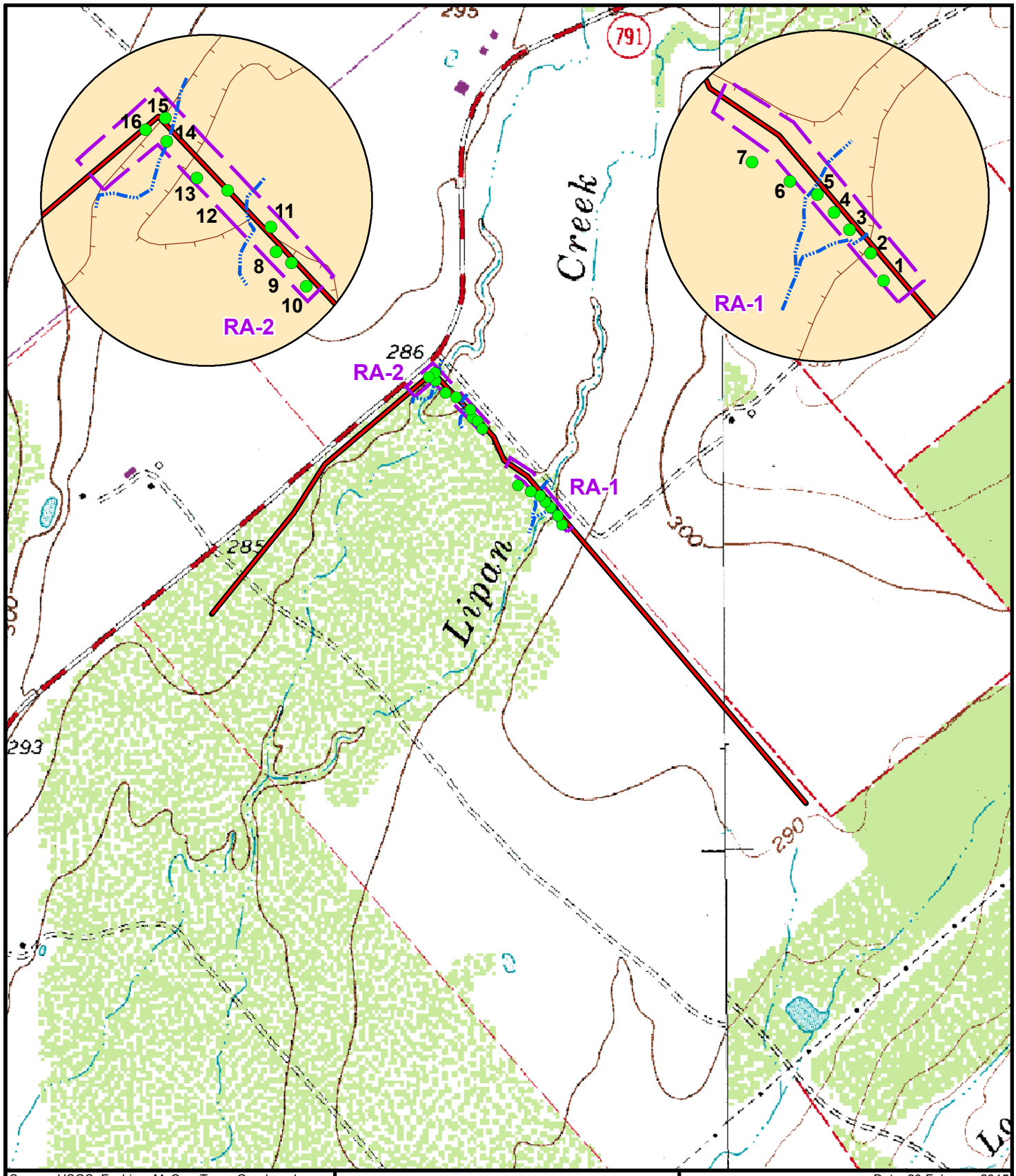
11.2.2 Review Area 2

Review Area 2 traversed marginally channelized first-order and second-order tributaries of Lipan Creek. The two streams had incised into the landscape between 1.9 and 2.6 feet (0.6 and 0.8 m) in depth and between 16.4 to 26.2 feet (5 to 8 m) in width (Photos 11-3 and 11-4). Ground surface visibility was considered poor within the review area ranging from 20 to 40 percent due to dense ground cover and cacti. Vegetation within the review area consisted of mesquite, hackberry, dense and large cacti, and assorted grasses. Soils within the review area were mapped as Christine soils and Imogene fine sandy loam. The Christine series are deep loamy soils and the Imogene series are shallow loamy soils overlying deep sandy clay deposits. The Christine series has some potential to contain temporally stratified deposits. A total of nine shovel tests were conducted in the vicinity of the two streams yielding dark brown or very dark brown loamy clay soils overlying black or very dark brown clays. The tests were terminated between 12 and 16 inches (30 and 40 cm) below surface. A single unidentified arrow point was observed upon the surface just south of the second-order tributary of Lipan Creek in an area of disturbed soils. This artifact was considered an isolated occurrence since no other materials were observed on the surface or in the matrix of shovel tests conducted in the vicinity.

11.3 RECOMMENDATIONS

Goshawk conducted a cultural resources survey consisting of an intensive surface inspection and sixteen shovel tests within the proposed Quail Unit #11H Flowline ROW. None of the shovel tests conducted within the APE yielded positive results and only a single artifact was noticed upon the ground surface within an area of heavy disturbance. It is Goshawk's opinion that construction of

the Quail Unit #11H Flowline, as proposed, will cause no impacts to significant cultural resources within the surveyed portions of the APE. Therefore, Goshawk recommends that construction be allowed to proceed, as planned. In the unlikely event that cultural resources (including human remains) are discovered, all construction or maintenance activities should be halted immediately and the USACE and an archeologist should be notified.



Source: USGS, Fashing, McCoy, Texas Quadrangles.

Date: 20 February 2015

0 250 500 1,000 Feet

0 75 150 300 Meters

GOSHAWK ENVIRONMENTAL CONSULTING, INC.

Figure 11-1
Shovel Test Locations
Atascosa County, Texas

Quail Unit #11H

LEGEND

- Flowline(s)
- Waters of the US
- Review Areas
- Negative Shovel Test

N

Photo 11-1: Southern Channel of Lipan Creek, Review Area 1, Facing Southwest

Photo 11-2: Northern Channel of Lipan Creek, Review Area 1, Facing Northeast

Photo 11-3: First-Order Tributary of Lipan Creek, Review Area 2, Facing South

Photo 11-4: Second-Order Tributary of Lipan Creek, Review Area 2, Facing North

Quail #11H Flowline ST Data (NAD 83, Zone 14)									
Report ST#	Field ST#	WP#	Easting	Northing	Depth	Soil Color	Soil Texture	RA#	Comments
1	BA1	62	572795	3185908	0-15	Dark brown	Clay loam	1	
					15-30	Black	Clay		
2	BA2	63	572785	3185929	0-10	Brown	Sandy clay loam	1	
					10-20	Black	Clay		
3	BA3	64	572769	3185947	0-30	Dark brown	Clay loam	1	
					30-35	Very dark brown	Clay		
4	BA4	65	572757	3185960	0-20	Very dark brown	Clay loam	1	
					20-30	Black	Clay		
5	BA5	66	572744	3185974	0-20	Very dark brown	Clay loam	1	
					20-30	Black	Clay		
6	BA6	67	572723	3185984	0-30	Mottled pale brown and dark brown	Clay loam	1	Disturbed
					30-40	Black	Clay		
7	BA7	68	572694	3185999	0-20	Very dark brown	Clay loam	1	Disturbed
					20-30	Black	Clay		
8	BA8	69	572588	3186154	0-20	Very dark brown	Sandy loam	2	Surface arrow point
					20-30	Black	Clay		Disturbed
9	BA9	70	572600	3186146	0-10	Grey brown	Sandy clay loam	2	Disturbed
					10-15	Dark brown	Clay loam		
					15-20	Black	Clay		
10	BA10	71	572611	3186128	0-25	Mottled pale brown and black	Clay	2	Disturbed
					25-35	Black	Clay		
11	BA11	72	572584	3186173	0-10	Pale Brown and brown	Sand and loamy clay	2	Disturbed
					10-30	very dark brown	Clay		
12	BA12	73	572551	3186201	0-15	Dark brown	Clay loam	2	Disturbed
					15-30	Black	Clay		
13	BA13	74	572527	3186211	0-10	Pale Brown and brown	Sand and loamy clay	2	Disturbed
					10-30	Very dark brown	Clay		
14	BA14	75	572504	3186239	0-10	Pale Brown	Caliche	2	
					10+	Very dark brown	Clay		
15	BA15	76	572503	3186257	0-15	Brown	Clay loam	2	
					15-30	Dark brown	Clay		
16	BA16	77	572488	3186248	0-15	Brown	Clay loam	2	
					15-25	Dark brown	Clay		

12.0 DISCUSSION

The goal of the cultural resource surveys was not only to locate and record sites, but to provide conclusions and site recommendations, based on NRHP criteria of significance (36 CFR 60.4), and the requirements of Section 106 and 36 CFR 800. According to the NRHP "The quality of significance in American history, architecture, archeology, engineering, and culture is present in district, sites, materials, workmanship, feeling, and association that:

a. are associated with events that have made a significant contribution to the broad patterns of our history;
b. are associated with the lives of persons significant in our past;
c. embody distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
d. have yielded, or may be likely to yield, information important in prehistory or history."

13.0 CONCLUSIONS AND RECOMMENDATIONS

During the month of December 2014, Goshawk conducted seven cultural resources surveys within the Eagle Ford Play, South Eagle Ford Zone. The seven project areas subjected to cultural resources investigations included the proposed Cashen to Pena Butts Gathering Pipeline, Quail to Quail A Gathering Pipeline, Dall to Warthog Gathering Pipeline, Tangerine Unit Gathering Pipeline, Cuellar Unit #7H and #8H Access Road, Galaxy Unit #1H Access Road, and Quail Unit #11 Flowline. During the survey of each project, shovel tests were placed within each review area near the streams and upon the adjacent slopes or within the review radius of previously recorded archeological sites according to due diligence protocol. Shovel testing and surface survey resulted in the documentation of no significant cultural deposits within the survey areas.

Based on the results of investigations, it is Goshawk's opinion that no significant cultural resources will be impacted by construction within the surveyed portions of the proposed ROWs. Goshawk recommends that the projects be allowed to proceed as planned with the caveat that construction be limited to the surveyed ROWs. In the unlikely event cultural resources (including human remains) are discovered, all construction or maintenance activities should be immediately halted and both the USACE and an archeologist should be notified.

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