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PREPARED FOR

Whistler Pipeline, LLC.

PREPARED BY

SWCA Environmental Consultants

Redacted

INTENSIVE ARCHAEOLOGICAL SURVEY FOR THE WHISTLER PIPELINE PROJECT ON UNIVERSITY OF TEXAS LANDS IN UPTON, REAGAN, AND CROCKETT COUNTIES, TEXAS

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ABSTRACT

On behalf of Whistler Pipeline, LLC. (Whistler), SWCA Environmental Consultants (SWCA) conducted an intensive cultural resources survey on a portion of the proposed 515.2-mile-long Whistler Pipeline, which traverses 17 counties in Texas. Whistler proposes to construct, install, and maintain a buried natural gas pipeline extending from the Waha Gas Hub in Pecos County to a delivery point near Agua Dulce in Nueces County, Texas. In addition to this mainline, a 45.7-mile-long lateral pipeline (Midland Lateral) will extend south from Midland County and connect to the mainline in Upton County. This report presents the results of the survey of University of Texas (UT) Lands in Upton, Reagan, and Crockett counties; this covers approximately 28.65 miles of the mainline, 10.9 miles on the Midland Lateral, and 0.18 mile for an undeveloped access road. SWCA surveyed approximately 1,082 acres, including 809.0 acres of mainline, 259.0 acres of lateral pipeline, and 2.2 acres of access road, typically within a 200-foot-wide corridor, as well as the 7.4-acre Rankin Compressor Station in Upton County. Access roads, which were built in 2018 for a previously constructed pipeline (Gulf Coast Express Pipeline), were not surveyed at the request of UT Lands, with the exception of one new, undeveloped access road on the Midland Lateral, totaling 0.18 mile. These previously constructed roads are all established gravel roads which run parallel to the current pipeline and the area has been previously surveyed. No alterations to existing access roads are anticipated. The report details the findings of investigations conducted between September and October 2019, and on January 10, 2020, on the alignment version dated January 15, 2020.

All work was conducted in support of Whistler's potential application requirements for a U.S. Army Corps of Engineers (USACE) Section 404 Permit in accordance with 33 Code of Federal Regulations (CFR) 325, Appendix C (Processing Department of Army Permits: Procedures for the Protection of Historic Properties; Final Rule 1990; with current Interim Guidance Documents dated April 25, 2005, and January 31, 2007), and Section 106 of the National Historic Preservation Act (NHPA) (54 United States Code 306108) and its implementing regulations (36 CFR 800). Portions of the project are located on lands owned/managed by UT, a political subdivision of the State of Texas; therefore, work was conducted in compliance with the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191) and accompanying Rules of Practice and Procedure (Texas Administrative Code, Title 13, Chapter 26) under Texas Antiquities Permit No. 9052. The portions of the project on UT Lands are within the Albuquerque and Fort Worth USACE Districts.

Investigations included a cultural resources background review and literature search and an intensive pedestrian survey augmented with shovel testing. SWCA's background review indicated 19 surveys have been previously conducted within 1 mile of the project alignment, of which 15 are intersected by or collocated with the project alignment. The review also indicates that 77 previously recorded archaeological sites are within 1 mile of the alignment; 14 of which are intersected by or are within 300 feet of the proposed alignment. Of these 14 sites, six have been recommended or determined not eligible for the National Register of Historic Places (NRHP) or for designation as State Antiquities Landmarks (SALs), and eight sites have undetermined eligibility for the NRHP or as an SAL. Of the eight sites with undetermined eligibility, seven sites (i.e., 41CX1051, 41RG117, 41RG158, 41RG239, 41RG282, 41RG323, and 41UT147) intersect the current proposed alignment.

During the course of the survey, SWCA revisited 10 previously recorded sites (i.e., 41CX1051, 41RG117, 41RG158, 41RG239, 41RG282, 41RG323, 41UT135, 41UT136, 41UT138, and 41UT147). Site 41UT147 has undetermined NRHP and SAL eligibility. As the site features within site 41UT147 will not be impacted by the proposed project, no further work is recommended; however, due to the proximity of the site to the project workspace, the placement of high visibility avoidance fencing around the northern edge of site boundary is recommended prior to construction activities. In addition, SWCA newly recorded four archaeological sites (i.e., 41RG402, 41RG403, 41RG404, and 41UT158) and identified 11 isolated finds. Aside from previously mentioned site 41UT147, all the sites and isolated finds are

recommended not eligible for the NRHP or as an SAL within the Project corridor. Seven sites (i.e., 41CX1051, 41RG117, 41RG158, 41RG239, 41RG282, 41UT138, and 41UT147) extend outside of the project area and if the alignment were to shift, additional survey and/or archival research would be needed to assess the portions of the site not surveyed during the current alignment.

In accordance with the Antiquities Code of Texas, 33 CFR 325, Appendix C, and Section 106 of the NHPA, SWCA has made a reasonable and good faith effort to identify cultural resources within the investigated project area. Of the 14 revisited and newly recorded sites within the project, one site (i.e., 41UT147) has undetermined NRHP and SAL eligibility and will be avoided by the project via high visibility fencing; Whistler has committed to this avoidance plan. The remaining 13 sites are recommended not eligible for the NRHP or as SALs within the Project corridor. Based on the results of these investigations, SWCA recommends a finding of NO HISTORIC PROPERTIES AFFECTED (per 36 CFR 800.4[d][1]) within UT Lands along the Whistler Project. Per requirements of the Antiquities Code of Texas, project documentation will be curated with the Center for Archaeological Research at the University of Texas at San Antonio.

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CHAPTER 1. INTRODUCTION

On behalf of Whistler Pipeline, LLC. (Whistler), SWCA Environmental Consultants (SWCA) conducted an intensive cultural resources survey on portions of the proposed 515.2-mile-long Whistler Pipeline, which traverses 17 counties in Texas. Whistler proposes to construct, install, and maintain a buried natural gas pipeline extending from the Waha Gas Hub in Pecos County to a delivery point near Agua Dulce in Nueces County, Texas. In addition to this mainline, a 45.7-mile-long lateral pipeline (Midland Lateral) will extend south from Midland County and connect to the mainline in Upton County. This report presents the results of the survey of University of Texas (UT) Lands in Upton, Reagan, and Crockett counties; this covers approximately 28.65 miles of the mainline, 10.9 miles on the Midland Lateral, and 0.18 mile for an undeveloped access road. SWCA surveyed approximately 1,082 acres, including 809.0 acres of mainline, 259.0 acres of lateral pipeline, and 2.2 acres of access road, typically within a 200-foot-wide corridor, as well as the 7.4-acre Rankin Compressor Station in Upton County. Only new, undeveloped access roads were surveyed; established access roads were not surveyed at the request of UT Lands. The report details the findings of investigations conducted between September and October 2019, and on January 10, 2020, on the alignment version dated January 15, 2020.

All work was conducted in support of Whistler's potential application requirements for a U.S. Army Corps of Engineers (USACE) Section 404 Permit in accordance with 33 Code of Federal Regulations (CFR) 325, Appendix C (Processing Department of Army Permits: Procedures for the Protection of Historic Properties; Final Rule 1990; with current Interim Guidance Documents dated April 25, 2005, and January 31, 2007), and Section 106 of the National Historic Preservation Act (NHPA) (54 United States Code 306108) and its implementing regulations (36 CFR 800). Portions of the project are located on land owned/managed by UT, a political subdivision of the State of Texas; therefore, work was conducted in compliance with the Antiquities Code of Texas (Texas Natural Resource Code, Title 9, Chapter 191) and accompanying Rules of Practice and Procedure (Texas Administrative Code [TAC], Title 13, Chapter 26) under Texas Antiquities Permit No. 9052.

The goal of the investigation was to locate cultural resources within the survey corridor, establish vertical and horizontal site boundaries as appropriate, and evaluate the significance and eligibility of all recorded sites for designation as State Antiquities Landmarks (SALs) and for the National Register of Historic Places (NRHP).

Project Description

Whistler proposes to construct, install, and maintain a buried natural gas pipeline extending from the Waha Gas Hub in Pecos County to a delivery point near Agua Dulce in Nueces County, Texas. In addition to this mainline, a 45.7-mile-long lateral pipeline (the Midland Lateral) will extend south from Midland County and connect to the mainline in Upton County. The mainline traverses 28.47 miles of UT Lands located in Upton, Reagan, and Crockett counties, while the lateral traverses 10.9 miles of UT Lands in Upton County (Figure 1).

The pipeline will generally be constructed within a 150-foot-wide corridor. With the exception of horizontal directional drilling (HDD) and bores at roads, rivers, and some other locations, the pipeline will be installed using the conventional open-cut construction method with the pipeline installed approximately 6.5 feet below surface. Construction impacts will be confined to the 150-foot-wide corridor and include clearing vegetation, grading, and stockpiling soil. Additional temporary workspaces, including ancillary facilities and access roads, will be constructed, as needed. To accommodate minor deviations and additional temporary work spaces, SWCA investigated a 200-foot-wide corridor, which was expanded to 300 feet where archaeological sites were identified.

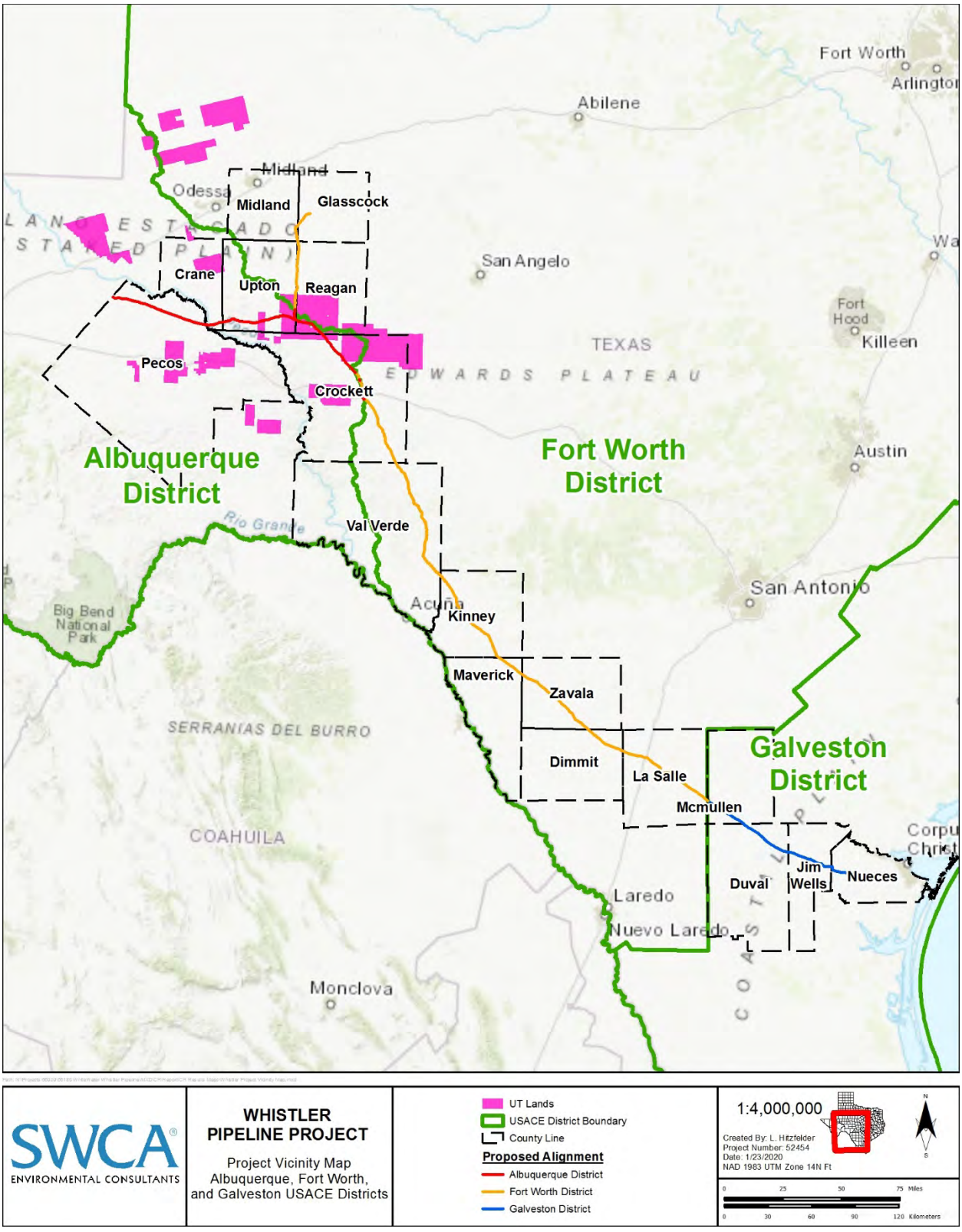

Figure 1. Project vicinity map.

Project Personnel

Josh Perry served as project manager and Ken Lawrence, M.A. served as Principal Investigator. Ken Lawrence, M.A., Tina Nielsen, M.A., Michael Retter, M.A., and Collin Rucker coordinated fieldwork and data analysis. Chris Shelton, M.A., Stefan Barker, John Hedges, Jessica Ulmer, Delise Torres-Ortiz, Michelle Poteet, Jay King, M.A., Rachel Jenson, Phylicia Way, and Jose Garcia served as crew chiefs, while Michael Golden, John Stuurmans, Robert Brush, Katie Atwood, Ed Arevalo, Sean Deryck, Jeromey Franklin, Janaka Greene, Autumn McGaha, Hannah Moore, Alex Smith, Paola Lopez, Liane Linehan, and Heather Lyon provided field support. Jayme Fontenot and Liz Hitzfelder processed the geographic information system (GIS) data. Lauri Logan conducted the technical edit and formatted the report.

CHAPTER 2. ENVIRONMENTAL SETTING

The survey area is located in Upton, Reagan, and Crockett counties near the intersection of three ecoregions: the Chihuahuan Deserts and Playas, the Arid Llano Estacado, and the Semiarid Edwards Plateau (Griffith et al. 2006). The proposed project alignment is within the Semiarid Edwards Plateau, except at its most northern extent where the region intersects with the Chihuahuan Desert and Playas region and the Arid Llano Estacado region. Although each of these ecoregions is unique in a variety of ways, one major point of commonality is their overall lack of moisture.

The Edwards Plateau is a large uplifted landform consisting of Cretaceous-aged limestone. The landscape within the western portion of the plateau is somewhat different than farther east where precipitation is relatively more abundant. Topography tends to be steeper, with changes in relief being more dramatic; most streams are intermittent to seasonal in flow. Vegetative cover is semidesert grassland and arid shrubland and is dominated by honey mesquite (*Prosopis glandulosa*) but also includes various cacti, lechuguilla (*Agave lechuguilla*), sotol (*Dasylirion wheeleri*), and other low-moisture plants. More well-watered areas are suitable habitats for live oak (*Quercus virginiana*) and ashe juniper (*Juniperus ashei*). Short grasses, buffalograss (*Bouteloua dactyloides*), tobosagrass (*Pleuraphis mutica*), and black grama (*Bouteloua eriopoda*) become more common in the western and northwestern portions of the landform. The extent of desert shrubland increases across lowlands and mountain foothills due to gradual desertification caused in part by historical grazing pressure (Griffith et al. 2006).

Geology

Geology in the project area is limited to four formations (U.S. Geological Survey [USGS] 2019). These include Quaternary deposits, Early Cretaceous Edwards Group limestone (Kft and Ks), Early Cretaceous Buda Limestone (Kbu), and a small area with Early Cretaceous Antlers Sand (Ka). Most relevant to prehistoric settlement and the integrity of archaeological sites are the late Quaternary deposits. These deposits consist primarily of undivided Quaternary deposits of sand, silt, clay, and gravel (Barnes 1974). The undivided Quaternary deposits are characterized as mixed deposits derived from local alluvial fans, colluvium, caliche, and alluvium (Barnes 1974). To an extent, the late Quaternary deposits have the potential to be archaeologically significant, because they have the potential to have capped and buried intact, undisturbed cultural deposits in stratigraphic sequence, creating archaeological sites with excellent time-depth and the potential to provide significant information about the deep past.

Soils

The potential for buried deposits in these geological formations is also dependent on the types of soils found, which can range from very shallow to very deep in areas. According to the Natural Resources Conservation Services (2019) Web Soil Survey, there are several soil series along the project alignment (Table 1). Most of the areas contain gravelly loam or clay loam and much of the area is currently used for agriculture/ranching and oil and gas development.

Table 1. Mapped Soils in the Survey Area

Soils Series	Texture	Location	Description
Angelo	Clay loam	Terraces on dissected plateaus	The Angelo series consists of deep or very deep, well drained, moderately slowly permeable soils formed in calcareous loamy and clayey alluvium derived from limestone. Slope ranges from 0 to 3 percent.
Conger	Loam	Plains	The Conger series consists of soils that are very shallow and shallow to a petrocalcic horizon. These well-drained soils are moderately permeable above and below a very slowly permeable petrocalcic horizon. They formed in calcareous loamy eolian deposits over alluvium derived from limestone. These soils are on nearly level to gently sloping ridges and divides on dissected plateaus. Slope ranges from 0 to 5 percent.
Ector	Gravelly loam	Ridges on dissected plateaus	The Ector series consists of very shallow to shallow, well drained soils that are moderately permeable above a moderately slowly permeable limestone bedrock. These soils formed in calcareous loamy residuum derived from limestone. Slope ranges from 1 to 60 percent.
Iraan	Silty clay loam	Floodplains	The Iraan series consists of very deep, well drained, moderately slowly permeable soils formed in calcareous loamy alluvium derived from limestone. These nearly level soils occur on floodplains along streams on dissected plateaus and river valleys. Slope ranges from 0 to 2 percent.
Lozier	Gravelly loam	Ridges	The Lozier series consists of very shallow or shallow, well drained, moderate permeable soils over very slowly permeable bedrock. The soils formed in loamy residuum and colluvium derived from limestone bedrock. These nearly level to very steep soils have slopes ranging from 0 to 60 percent.
Mereta	Clay loam	Terraces, fans and knolls	The Mereta series consists of soils that are well drained, moderately slowly permeable and shallow to a petrocalcic horizon. These soils formed in clayey calcareous alluvium and colluvium derived from limestone. Slopes range from 0 to 5 percent.
Noelke	Silty clay loam	Uplands	The Noelke series consists of very shallow and shallow to a petrocalcic horizon. These are well drained, moderately permeable soils that formed in residuum over limestone. Slopes range from 0 to about 8 percent.
Pandale	Gravelly loam	Uplands	The Pandale series consists of very deep, well drained, moderately permeable soils formed in calcareous loamy alluvium with reworked eolian sediments of Pleistocene and Holocene age. Slopes range from 0 to 5 percent.
Reagan	Loam	Flats, valleys, fans	The Reagan series consists of very deep, well drained, moderately or moderately slowly permeable calcareous soils that formed in alluvium and/or eolian deposits derived from limestone. Slopes range from 0 to 3 percent.
Rio Diablo	Silty clay	Valleys, stream terraces	The Rio Diablo series consists of very deep, well drained, moderately slowly permeable soils that formed in calcareous alluvium from limestone hills. Slopes range from 0 to 3 percent.
Sanderson	Gravelly loam	Fans and footslopes on dissected plateaus	The Sanderson series consists of very deep, well drained, moderately permeable soils formed in gravelly, calcareous loamy alluvium, or colluvium derived from limestone. Slopes range from 0 to 8 percent.
Tencee	Gravelly loam	Fan remnants	The Tencee series consists of shallow to petrocalcic, well drained, moderately permeable soils that formed in gravelly alluvium derived from mixed sources on terrace remnants and sides of ridges. Slopes range from 0 to 40 percent.
Tobosa	Clay	Dissected plateaus	The Tobosa series consists of soils that are very deep, well drained, and very slowly permeable. These soils formed in calcareous clayey alluvium derived from limestone. Slopes range from 0 to 3 percent.
Upton	Loam	Valleys	The Upton series consists of soils that are shallow to a petrocalcic horizon, well drained, and moderately permeable. These soils formed in gravelly, calcareous loamy slope alluvium and/or colluvium derived from limestone and marl. These soils are on nearly level to moderately sloping footslopes or fans of ridges on dissected plateaus. Slopes range from 0 to 8 percent.

CHAPTER 3. CULTURAL SETTING

This portion of the report provides a cultural background for the project area. This cultural background is presented to provide context and for use in interpreting any cultural resources encountered during the cultural resources survey.

Prehistoric Background

The prehistoric portion of the archaeological record in the New World consists of the period between when humans first entered the New World to the time of widespread European settlement and colonization of North America. The end of the prehistoric period may therefore change from region to region.

Pre-Clovis Period

The timing of initial human occupation in the Americas has been the subject of numerous debates in American archaeology. In simplified terms, the debate has been between so-called "Clovis First" proponents, who maintained that Clovis represents the earliest culture in the Americas, and a "pre-Clovis" faction that maintained that humans had resided in the Americas prior to the development of Clovis culture. This issue has been debated since at least the middle of the twentieth century. Throughout the debate, several sites, including Meadowcroft Rockshelter in Pennsylvania (Adovasio et al. 1983:163–189) and the Shriver Site in Missouri (Regan and Evans 1976; Regan et al. 1978), have been put forth as early human occupations based on an association with human-made artifacts. However, issues with these and other sites have prevented their widespread acceptance.

Cracks in the Clovis First model became more visible in the 1980s and 1990s with the publication of work from Monte Verde in Chile (Dillehay 1984; Quivira and Dillehay 1988) and the Big Eddy Site in southwestern Missouri (Lopinot et al. 1998, 2000), among others. In the last two decades evidence from both genetics (Gilbert et al. 2008; Tamm et al. 2007) and archaeology (Halligan et al. 2016; Jenkins et al. 2012; Waters et al. 2011) for pre-Clovis occupation has become overwhelming.

Little is known about the technology of these pre-Clovis peoples. Waters et al. (2011:1602) note that "in general, the Buttermilk Creek Complex tools and cores are small and lightweight." The tool kit is described as containing "bifaces made through core reduction including end thinning, a lanceolate-like preform, a discoidal core, bladelets, radially broken tools, a variety of edge-modified tools (notches, gravers, and scrapers), and ground hematite" (Waters et al. 2011:1602).

Paleoindian Period

The Paleoindian period covers the end of the Pleistocene and early part of the Holocene. An emerging consensus places the cutoff between the two geological periods around 11,700 years ago (International Commission on Stratigraphy 2019). One of the unique aspects of the period is the association with extinct species that died off at the end of the last Ice Age. Horse, camel-like animals, mammoth, mastodon, a large species of bison (e.g., *Bison antiquus*) have been found associated in early sites. Based on faunal assemblages, the early Paleoindian period had more equitable climates with cool summers, mild winters, and abundant precipitation (Johnson and Holliday 2004:285). Toward the end of the Paleoindian period, the moist, mild summers and winters gradually became warmer and drier with increased aridity that resulted in noticeable changes in the flora and fauna (Quigg et al. 1993). With the changes in climate, the groups adapted to these changes by increasing their reliance on small game and wild plant resources (Quigg et al. 1993; Johnson and Holliday 2004).

Early Paleoindian is typically defined as the Pleistocene-era patterns marked by the Clovis and Folsom assemblages. The Late Paleoindian period is constituted by the Holocene cultures that gradually developed into Archaic patterns. Besides these basic partitions, the Paleoindian period is generally further divided into subperiods based on stylistic intervals and toolkits, often called techno-complexes, rather than social constructs as is common in later parts of the cultural chronology. In part the convention stems from the relative lack of substantial assemblages from the earliest inhabitants. Accordingly, the chronology of point styles forms the basis that has gradually been fleshed out with other assemblage data.

These technocomplexes are: Clovis (11,500 to 11,000 B.P.), Folsom (10,800 to 10,300 B.P.), Plainview (ca. 10,000 B.P.), and Firstview periods (ca. 8600 B.P.) (Bousman et al. 2004; Johnson and Holliday 2004). The Plainview and Firstview complexes are sometimes grouped under the Plano period (10,200 to 7500 B.P.) along with Agate Basin, Hell Gap, Milnesand, Cody, and Frederick Complexes (Hofman 1989; Quigg et al. 1993). The long-held notion of a clean sequence, particularly the Clovis-Folsom-Plainview model, is currently viewed as overly simplistic.

Archaic Period

Although the project area is just east of the Pecos River, the trajectory of the culture history closely mirrors developments farther west; as such, the discussion of the Archaic is drawn primarily from Miller and Kenmotsu (2004). The Archaic coincides with the spread of rugged Chihuahuan Desert scrub, although the micro-environmental diversity ranged from alpine settings to barren flats.

Variously called the Chihuahua Archaic tradition, the Cochise tradition, or the Desert Archaic, the period is an 8,000-year cultural trajectory of very gradually increasing population density coinciding with increased social and technical complexity. Several chronological sequences have been developed for the regional Archaic period, but different areas have variations in cultural developments that impose difficulties in devising a unified scheme. Nevertheless, while acknowledging regional variation, the Archaic from 9000 to 1000 B.P. is divided into Early, Middle, and Late Archaic subperiods. MacNeish (1993) subdivides the Archaic into phases, including the Gardner Springs (8000 to 6300 B.P.), Keystone (6300 to 4600 B.P.), Fresnal (4600 to 2900 B.P.), and Hueco (2900 to 2000 B.P.) phases. These generally correlate with the tripartite division of Early, Middle, and Late Archaic: the Gardner Springs phase correlates with the Early Archaic, Keystone phase with the Middle Archaic, and the final two are divisions of the Late Archaic.

The Early Archaic spanned roughly two to three millennia from 8000/9000 B.P. to 6000 B.P., although there are different chronological schemes within the region. Miller and Kenmotsu (2004:220) begin the period between 8000 and 8500 B.P., whereas MacNeish (1993) begins the period at 8,000 years ago, while still other regional chronologies begin the Archaic by 9000 B.P. Researchers, however, acknowledge the current lack of data to refine the sequence. Although the radiocarbon database from the area is relatively robust, Miller and Kenmotsu (2004:220) note that, from the Western Trans-Pecos, only 11 dates fall within the Early Archaic, and of these 11, only a single date was clearly associated with cultural materials. This paucity of dates indicates the lack of archaeological components attributable to the period.

Given these shortcomings, most of what is known of the period is a sequence of projectile point styles, many of which are cross-dated from better known sequences in adjacent areas. Stemmed points also found in the Lower Pecos and Central Texas, such as the Uvalde point, are diagnostic artifacts of the period, as well as styles such as Jay and Bajada that are not found in adjacent areas of Texas. Miller and Kenmotsu (2004:221) describe a change in raw material use patterns during the Early Archaic in which coarser-grained materials are used for points, a distinctive shift from the use of only high-quality siliceous material in Paleoindian assemblages. Small hearths with burned rock or caliche indicate the growing use of thermal-retaining elements.

The Middle Archaic, from 6000 to 4000 B.P., is only slightly better represented in the archaeological record, and coincides with the peak of arid conditions and landform stabilization. Early Archaic sites are often buried; however, Middle Archaic sites are frequently exposed on landform surfaces (Miller and Kenmotsu 2004:223). During the period, indications of semi-permanent settlements begin to emerge. The Keystone Dam site in El Paso County contains over 20 residential structures dating from approximately 4500 to 3800 B.P. (O'Laughlin 1980). Ashy areas probably represented interior hearths, and daub that was found around the structures indicate a jacal-type superstructure. Although no clear evidence of agriculture has been discovered, the increased presence of ground stone artifacts suggests an increased use of plant resources. While site distribution patterns of the period need substantial refinement, the advent of semi-permanent settlements perhaps marks a shift toward a more intensive exploitation of localized resources as the overall carrying capacity of the landscape declined during the hot, dry period. The proliferation of projectile point styles during the period observed by some researchers indicates either increased mobility or interaction (e.g., Mallouf 1985).

The Late Archaic, from 4000 to 1000 B.P. marks the advent of new lifeways, a notable departure from preceding patterns and a transition to full agricultural, sedentary societies in the subsequent Late Prehistoric times. Beginning around 4500 B.P. but increasing dramatically shortly after 4000 B.P., the record shows an increase in radiocarbon data from rockshelters, structures, and open sites, reaching maximum between 3200 B.P. and the onset of Puebloan times around 1000 B.P. (Miller and Kenmotsu 2004:Figure 7.16, Figure 7.22). In some areas within the Trans-Pecos, the Late Archaic terminates earlier than others. While in some areas Archaic hunter-gatherer traditions continued throughout the period, in the El Paso area and other areas in the western Trans-Pecos, the transition to sedentary agriculturalists occurred over a long period, beginning in the preceding Middle Archaic, as previously noted. Accordingly, the end of the Archaic can be variously defined at around 2000 B.P. in some areas, or 1000 B.P. in others. Radiocarbon data from the western Tran-Pecos reveal a dramatic increase in dates from structures around 2000 B.P. (Miller and Kenmotsu 2004:Figure 7.16), marking a fitting demarcation between Archaic and Late Prehistoric patterns in that area.

The Late Archaic is divided into the Fresnal and Hueco phases. The Fresnal phase (4000 to 3200 B.P, a revision of MacNeish's dates of 4600 to 2900 B.P.) is identified by an increase in the quantity and stylistic variation of stone tools, larger occupational areas suggestive of longer occupations by larger populations, and more intensive subsistence patterns, among other traits. MacNeish (1993) claims that the rise of horticulture or agriculture marks the start of the Fresnal phase; however, a more recent compilation of direct dates on cultigens contradicts this assertion. Miller and Kenmotsu (2004:Figure 7.16) show that cultigens appear in the archaeological record just after 3000 B.P. but did not show up in substantial quantities until 2200 to 1800 B.P., coinciding with the previously noted terminus for the Late Archaic in the western Trans-Pecos. Projectile points diagnostic of the period include expanding stemmed, corner- and side-notched points ranging from small specimens resembling arrow points to larger broad-bladed styles (Miller and Kenmotsu 2004:Figure 7.11). As this phase progressed, variation of point types and technology increased, suggesting to some researchers expanded trade and contact with other groups.

In the Hueco phase, from 3200 to 2000 B.P. (Miller and Kenmotsu 2004:Figure 7.16), site distribution patterns indicate that populations spread into more diverse ecological settings, both moisture-rich and arid areas (Miller and Kenmotsu 2004:226). The Hueco phase coincides with a prominent increase in dated components in both rockshelters and open areas (Miller and Kenmotsu 2004:Figure 7.16). Dated cultigens such as maize, beans, and squash occur during the phase, but the data does not support agricultural dependence, or at least such an inference is equivocal (Miller and Kenmotsu 2004:226-228). Not until the succeeding Late Prehistoric, beginning roughly 2000 B.P. in the western Trans-Pecos, does a spike in dated cultigens suggest a more substantive role of cultigens in subsistence. This spike corresponds with the advent of pit houses. There is a marked increase in the amount of perishable goods that have been uncovered by archaeologists from this phase, including basketry, twined and twilled matting, sandals,

gourd vessels, and even human hair (Lynn 1976:16). Lithic tools include projectile points (i.e., Hueco, San Pedro, Hatch, and Armijo points), drills, flake knives, core scrapers, manos, and metates. Expanding contact with other areas can be seen in the elaborate shell ornaments found from this period.

Formative Period

Archaic lifeway patterns of highly mobile hunter-gatherers dominate the remaining prehistory of central Texas. The formative period culture history presented below is perhaps better suited to areas just west of the current survey but is provided to present the reader with a sense of some of the more important trends occurring in that area.

"Formative" is a term commonly applied by archaeologists to the ceramic periods of the Jornada Mogollon region (Miller and Kenmotsu 2004:236–237). The well-dated sequence of sites in the Hondo Valley, northwest of the region, suggests that ceramics appeared there around A.D. 500 (Campbell and Railey 2008), and this date is used here for the beginning of the Formative tradition. The addition of ceramics to the inventory of artifacts provides a tremendous advantage in recognizing Formative period site components as compared to pre-ceramic ones. Ceramics also enhance temporal resolution and age estimates of site components, especially for the more distinctive, painted wares that can cross-date between different regions.

For this discussion, the Formative tradition is simply divided into two periods: Early (ca. A.D. 500–1100) and Late Formative (ca. A.D. 1100–1450), with the appearance of Chupadero Black-on-white being the most prominent marker separating the two. Phase divisions within these periods can certainly be suggested based in part on the appearance of certain key marker traits, such as early black-on-white ceramics toward the end of the Early Formative, and a variety of distinctive glaze ware and polychromes after ca. A.D. 1300. But the development of well-established phase sequences will depend on excavation data from more sites with securely dated, single-component contexts. The early centuries of the Formative time frame witnessed little change in subsistence and mobility from the Late Archaic. But significant changes did occur in the Late Formative period, although for the general region some of the more important Late Formative developments are inferred from surrounding regions, and further research will hopefully clarify the specifics of these in the project region.

Two prominent changes in artifact assemblages mark the beginning of the Early Formative period. One is the appearance of ceramics, which in the beginning consist of undecorated brown wares. These are variously classified according to paste characteristics as Jornada Brown, McKenzie Brown, Middle Pecos Micaceous Brown, South Pecos Brown, and Alma Plain (Hill 1996, 2000, 2001; Hogan 2006; Jelinek 1967; Katz and Katz 1985, 1993, 2001; Kelley 1984; Leslie 1979; Mera 1943; Reed et al. 2002:550–551; Runyan and Hedrick 1987; Whalen 1981; Wilson 2000a, 2000b, 2003; Wiseman 1996, 2002), and which persist well into the Late Formative time frame. Early black-on-white ceramics (e.g., Cebolleta, Red Mesa, Mimbres) appear in the region after ca. A.D. 750 (Katz and Katz 1993), but do not occur at all sites in the later centuries of the Early Formative, and undecorated brown wares continue to dominate ceramic assemblages throughout the period.

The introduction of the bow and arrow is inferred from a sharp reduction in the size of projectile points, which occurs across most of sub-boreal North America around A.D. 500–600 (Bettinger and Eerkens 1999; Bettinger and Taylor 1974; Blitz 1988:130–132; Cordell 1979:134, 1997; Guernsey 1931:71–72, 99, 107; Huckell 1998; Justice 2002:44; Lipe 1978:369; Nassaney and Pyle 1999; Railey 2010; Seeman 1992; Shott 1993; Torres 2000:227; VanPool 2006:433; Yerkes and Pecora 1991). In the Southwest and Southern Plains, the earliest arrow points are strongly shouldered, corner-notched or stemmed forms. At the well-dated series of sites in the Hondo Valley of the Sierra Blanca highlands (Campbell and Railey 2008; Railey 2010), the earliest arrow points have shouldered, recurved blades similar to the Bonham and

Homan types in northeast Texas (Turner and Hester 1993:202, 219), and these are quickly followed by straight-bladed points with tanged shoulders and corner notching. The latter forms, similar to the Scallorn type of the Plains (Turner and Hester 1993:230) and the Trujillo and Dolores types in northern New Mexico (Justice 2002; Turnbow 1997:202–205), persist throughout the remainder of the Early Formative period and continue into the early portion of the Late Formative.

Except for the addition of ceramics and arrow points, Early Formative artifact assemblages remain similar to those of the Late Archaic, with a variety of flaked stone tools and ground stone milling implements. Other aspects of the Early Formative archaeological record also persist from Late Archaic times. There is still a notable dearth of preserved house remains; the few dating from the Early Formative period in the region come from just four sites (Jones et al. 2010; Railey 2011; Zamora 2000), and their characteristics suggest rather expedient, wickiup-like brush huts set in shallow basins. The lack of evidence for substantially constructed houses prior to the Late Formative suggests that people across most of the region did not invest heavily in residential architecture, and this is typical of highly mobile hunter-gatherers (Binford 1990; Kelly 1995:139–140).

Botanical remains of various wild plants, including cheno-ams (*Chenopodiaceae/Amaranthaceae*), wild barley (*Hordeum spontaneum*), and others are common occurrences (e.g., Acklen and Railey 2001; Brown 2011; Condon et al. 2008; Lord and Reynolds 1985; Railey 2011), along with succulents processed in burned rock middens in the western portion of the region (Jones et al. 2010). Unlike the Late Archaic, in the region there is one instance of charred maize associated with a radiocarbon date for the Early Formative, at a site in the Guadalupe Mountains (Kemrer 1998). Otherwise, at present there is a complete lack of domesticates in macrobotanical assemblages in securely dated, pre-Late Formative contexts, and this indicates that farming was not an important part of the subsistence economy (or was not practiced at all) across most of the region during Early Formative times.

The onset of the Medieval Climatic Anomaly (A.D. 800/900–1350) reportedly ushered in a dry period that heavily impacted people across much of western North America (Jones et al. 1999). The data suggest that people responded to this drastic climatic change by withdrawing to areas where reliable sources of surface water could still be found, which includes the Pecos River and, apparently, playas, areas below escarpment edges (most notably along the base of the Mescalero Escarpment, where freshwater springs probably continued to issue forth), and in the Mountain Slope area. In the latter area, most of the dates are from burned rock middens, so the numbers may also indicate an upswing in the use of these sites and exploitation of low-rank, high-cost food resources processed at them (see Dering 1999). Although precipitation levels apparently increased again toward the end of the Early Formative, the damage apparently was already done, and the response to the period of severe drought may have helped prompt some fundamental changes in cultural adaptations that took hold during the subsequent Late Formative period.

The Late Formative period indeed witnessed some of the most profound changes in the prehistory of the region. In terms of artifacts, the most prominent temporal indices of this period are a variety of distinct and relatively well-dated decorated ceramic types. Chupadero Black-on-white and El Paso painted (bichrome and early polychromes, and later just El Paso Polychrome) are present by the beginning of this period, or soon after, eventually edge out undecorated brown wares, and persist as common types throughout the Late Formative time frame (Miller and Kenmotsu 2004:252–253; Speth and Newlander 2012; Wilson 2000b). Three Rivers Red-on-terracotta is another distinctive type that appears in the region around the beginning of the Late Formative period but is less common than the Chupadero and El Paso painted wares (Runyan and Hedrick 1987). Chupadero wares were manufactured in the Sierra Blanca highlands (Clark 2006; Creel et al. 2002; Reed et al. 2002). Also, from this region is Corona Corrugated, a utilitarian ware that appears around or soon after A.D. 1200 (Kelley 1984; Wiseman 2002). St. Johns Polychrome appears at about this same time (Miller 1995; Runyan and Hedrick 1987). After A.D. 1300,

exotic ceramic types from a variety of areas in the Southwest appear in west Texas and southeastern New Mexico, including Rio Grande glaze wares, Lincoln Black-on-red from the Sierra Blanca highlands in New Mexico, Ramos Polychrome from the Casas Grandes area, and Gila Polychrome from the Salado region (Katz and Katz 1993; Miller 1995). Another post-A.D. 1300 ceramic type is Ochoa Indented, a Southern Plains type that appears to be restricted to areas east of the Pecos River (Katz and Katz 1993).

Also occurring in the Late Formative period is a widely documented shift in arrow point morphology during the thirteenth century. The earlier, corner-notched arrow point styles with strong shoulders are replaced by side-notched arrow points with wide, squared, or concave bases. These late forms are usually referred to as Harrell, Desert Side-notched, Washita, or Pueblo Side-notched (Justice 2002; Speth 2004; Turnbow 1997; Turner and Hester 1993). Un-notched triangular points are rare in the Southwest but do occur in the Plains (and are especially common in eastern North America) and spill over in small numbers into the project vicinity. In Texas these are usually referred to as Fresno points, and their reported time span (ca. A.D. 800–1700) is not as restricted as those for the other arrow point types discussed above. There is evidence to suggest that these un-notched triangular points are actually preforms that were intended to be finished and notched, and they were widely transported as they were less fragile and susceptible to breakage than finished points (cf. Chesier and Kelly 2006; Dawe 1987; Newlander and Speth 2009).

By A.D. 1300, if not earlier, substantially occupied "villages" were established across much of the larger region. This was part of a widespread pattern of greater sedentism and village formation across the southern Great Plains and Jornada Mogollon region in the early to mid-second millennium A.D. (Brooks 2004; Campbell 1976; Drass 1998; Drass and Flynn 1990; Jelinek 1967; Kalasz et al. 1999:195–198; Kelley 1984; Lintz 1984, 1986, 1991; Lutes 1959; Miller and Kenmotsu 2004; Speth 2004, 2005; Speth and Newlander 2012; Wendorf 1960; Wiseman 1981, 1985, 2002; Zamora and Oakes 2000).

Most of what we know about Late Formative "village" sites in the region comes from excavations carried out decades ago, using pre-modern methods. A cluster of villages were occupied in the project vicinity at the Andrews Lake site, several of which have been excavated (Collins 1966, 1968). Jennings (1940) excavations at Rio Peñasco and two neighboring sites provide a glimpse of Late Formative village life in the Mountain Slope area. Decades ago, the Lea County Archaeological Society (LCAS) excavated several village sites, including Boot Hill (Corley and Leslie 1960) and Laguna Plata (LCAS 1971). Eastern New Mexico University's subsequent excavations at Laguna Plata (Haskell 1977) and TRC's recent investigations at Laguna Plata (Brown 2010) and Boot Hill (Brown 2011) added additional information about these two important sites. In addition, as part of the Bureau of Land Management Carlsbad Field Office Permian Basin Mitigation Program in New Mexico, recent investigations were carried out at the Maroon Cliffs, a sprawling site complex west of the project area that includes substantial remains of Late Formation occupations (Stowe and Condon 2012).

Survey-level investigations have also documented sites with intensive Late Formative occupations in the Mescalero Plain and Escarpment Base areas. These include Indian Hill (LA 32228, also known as Taylor Peak), where a burial, a pit house, and charred maize were found (Hunt 1989), and a sprawling site complex in the vicinity of the Merchant site (Lone Mountain Archaeological Services [LMAS] 2001). Late Formative village sites tend to occur in areas where springs, precipitation runoff, or playa lakes offered reliable sources of surface water, and at least limited riparian environments and associated resources. The base of the Mescalero Escarpment was an especially favored zone for these sites.

As far as detailed information pertaining to the role of maize in Late Formative subsistence economies of west Texas and southeastern New Mexico, the closest comparative evidence we have to date comes from two settlements west of Roswell, New Mexico: Henderson and Bloom Mound (Kelley 1984; Powell 2001; Speth 2004, 2005). For these sites, the evidence points to farming as a modest contributor to the

diet throughout, with little or no indication of significant intensification in the later part of the sequence (e.g., small numbers of recovered maize remains; ubiquity and abundance of wild seeds; carbon isotope values indicating modest overall intake of C4 plants; low incidence of [dental] caries; small numbers of metates, mostly basin-shaped; and wholly unstandardized one- and two-hand manos) (Speth and LeDuc 2007:46).

Another important subsistence trend that inhabitants of these Late Formative villages were caught up in was an increased emphasis on bison hunting across the region and elsewhere in the southern Plains after ca. A.D. 1250, following a regional hiatus in bison hunting that began in A.D. 500 (Baugh 1986; Bozell 1995; Brooks 2004; Collins 1968, 1971; Creel 1991; Dillehay 1984; Drass and Flynn 1990; Greer 1976; Hughes 1989; Jelinek 1967; Speth 1979, 1983, 1984, 2004; Speth and Parry 1978, 1980; Spielmann 1991; Staley 1996). At some point during the Formative time frame, people on the Plains began killing bison beyond what was required for their own subsistence and other resource needs, and traded hides, dried meat, and perhaps other products to the more settled farmers to the west (Creel 1991; Speth 2004, 2005; Speth and Newlander 2012; Spielmann 1991). Creel (1991) argues that this regional exchange system was underway around or soon after A.D. 1300, with the key archaeological indicators being the appearance in the southern Plains of numerous beveled knives and end scrapers that were used to process bison hides.

As for far west Texas and southeastern New Mexico, at present we have mostly indirect evidence as to the role of Late Formative peoples in the Pueblo-Plains interaction sphere. Creel (1991:41) reports that this exchange system extended all the way down to present-day Chihuahua. Occasional bison remains also appear in Late Formative sites in the western Jornada Mogollon (Miller and Kenmotsu 2004:250), and it seems likely that bison hides (which would not show up in the faunal record) were probably traded to the people of the El Paso phase (A.D. 1250/1300–1450). Late Formative villagers in west Texas and far southeastern New Mexico would have been well positioned as the most likely suppliers of bison products to the western Jornada Mogollon and settled groups farther to the south. But it still remains an open question whether, and if so to what extent, Late Formative villagers developed an export economy fueled by bison products. Further research is needed to elucidate the details pertaining to this question.

Post-Formative Period

The Post-Formative begins with the widespread abandonment of late prehistoric villages in the southern Plains around A.D. 1450, as groups throughout the region shifted to a more nomadic lifeway centered more squarely on bison hunting (Baugh 1986; Bozell 1995; Brooks 2004; Collins 1968, 1971; Creel 1991; Dillehay 1974; Drass and Flynn 1990; Greer 1976; Hughes 1989; Jelinek 1967; Speth 1979, 1983, 1984, 2004; Speth and Parry 1978, 1980; Spielmann 1991). Archaeologically, this period is somewhat of a phantom, as many of the diagnostic ceramic types largely disappeared along with village sites. Ceramics are either absent in the region at this time or, to the extent they were still in use, consist of types that are largely unknown (Katz and Katz 1993). Side-notched arrow points, similar to those that appeared after A.D. 1200 (see above), continued into this period until an unknown date and were eventually replaced by metal arrow points and firearms.

As part of the shift to nomadism during post-Formative times, it is reasonable to expect that tipis became a more common dwelling form. Seymour (2002, 2004; LMAS 2001) has identified tipi rings in both the western Jornada Mogollon and far southeastern New Mexico. She argues that tipi rings in the region are very late in time, postdating other types of structures, and even concludes that at least some are late nineteenth century Apache or Comanche dwellings. Such conclusions lack supporting evidence, however (see Kenmotsu et al. 2009:96–97). Tipi rings date back several thousand years on the Plains, and it is entirely possible that at least some tipi rings in the project vicinity predate the post-Formative time frame.

By A.D. 1500, if not earlier, people on the southern Plains had given up their attempts at village life, with its mixed focus on farming and bison hunting, and had become nomadic, tipi-dwelling bison hunters. This probably occurred at least in part due to increased demand from the pueblos for bison products and other resources from the southern Plains (such as Alibates and Edwards chert). One intriguing trend that may characterize post-Formative occupations in the region of project area is the increased use of obsidian, most of which appears to derive from sources in northern Chihuahua and southwestern New Mexico (Kenmotsu et al. 2009:92). This apparent trend was also noted in the Middle Pecos River valley (northwest of the region) by Jelinek (1967). Within the project region, however, Jemez Mountain obsidians are also found in apparent protohistoric contexts, although the source of these could actually be Rio Grande gravels in the western Jornada Mogollon region (Stein 2011).

Historic Chronology

The Historic period began with the first Spanish expeditions through the region in the sixteenth through eighteenth centuries. In 1582–1583, Antonio de Espejo led an expedition to the upper reaches of the Rio Grande and Pecos River before returning southward along the latter (Bolton 1908:189–190; Snow 1992:235–236).

From 1589 to 1590, Gaspar de Sosa, the lieutenant-governor of Nuevo Leon, led a large, but unauthorized, colonizing party through west Texas, evidently following the Pecos River (Chipman 1992:58). For violating settlement policies, a viceroy agent captured and returned de Sosa to Mexico. After being convicted, he was exiled to the Philippines, where he died in a slave revolt.

In 1683, Dominguez de Mendoza, with a mandate to look for pearls, trade possibilities, and instilling respect for friars among the Native people, led a group of soldiers from La Junta to the Pecos River (Chipman 1992:70), probably following Espejo's route. After arriving at the Pecos River, the expedition traveled "downstream for nine leagues to a point near Horsehead Crossing" (Chipman 1992:70), where they turned eastward.

In 1787, Juan de Ugalde led an extensive expedition through the region in an effort to subdue the Apache threat. Ugalde's expedition was part of a new Spanish policy for securing the northern frontier. The Spaniards threatened military force, but also offered the Apaches protection from the Comanche as an inducement for peace. The Comanche, however, as well as Apache groups, dominated the area well into the late nineteenth century.

Upton, Reagan, and Crockett Counties

As with most of west Texas, substantial Euro-American occupation did not begin in the areas of what is now Reagan and Crockett counties until the 1870s or later, with the counties being founded in 1903 and 1875, respectively. Initially, economic pursuits were centered around agricultural products; however, ranching (particularly cattle) soon took precedence in the region. The development of ranching infrastructure also helped establish the sheep, goat, and cattle industries in the area. Systems of markets and warehouses with specific architectural features designed to package, store, and sell wool and mohair were created.

Farms and ranches suffered during the depression. A severe drought in the early 1930s left many farms and ranches in decline. The number of unemployed residents in the area also jumped, more than doubling between 1930 and 1936 (Thompson 2019). Smaller towns and less populated counties also saw a dramatic population decrease and people moved to larger towns in the area to look for work (Smyrl 2019). Despite the difficulties of the depression, many ranches and farms survived with lands and

livestock intact. This is partly due to the push for smaller, more diversified practices which began in the early years of the twentieth century.

New commercial opportunities rose in the oil and gas businesses throughout the region while road and electrical infrastructure steadily improved. The years of 1941 and early 1942 saw a boom period for highway construction. While World War II hampered efforts due to a decrease in supplies, manpower, and revenue from automobile registration, plans were made for the future. As a result, delegates from the Texas Good Road Association asked the federal government for $768 million for road repair due to neglect during the years of the war. Congress responded with a $1.5 billion post-war highway bill. Texas received the largest percentage of these funds. Due to this, by the late 1940s, most of the roads in the region were paved and new construction projects were completed in record time (Wallace 2008).

CHAPTER 4. BACKGROUND REVIEW AND SURVEY METHODS

Background Review

An SWCA archaeologist searched the Texas Archeological Sites Atlas (Atlas), a restricted, online database maintained by the Texas Historical Commission (THC) and the Texas Archeological Research Laboratory, for any previously recorded surveys and historic or prehistoric archaeological sites located in or within 1 mile of the project area. In addition to identifying previously recorded archaeological sites, the Atlas review includes information on NRHP properties, SALs, Official Texas Historical Markers, Registered Texas Historic Landmarks, cemeteries, and local neighborhood surveys. Additional sources of information utilized included historical aerial photographs and topographic maps, and the Texas Historic Overlay. Listings in Atlas are limited to projects under purview of the Antiquities Code of Texas or the NHPA of 1966; therefore, previous work conducted in an area may not be available on Atlas. The background data provided below were updated from TARL files on October 15, 2019.

Previous Investigations

The background review revealed that several portions of the proposed alignment have been previously surveyed for cultural resources between 1988 and 2019 (Table 2). Specifically, a total of 19 previously conducted surveys are documented within 1 mile of the project alignment; of which, 15 intersect or are collocated with the project alignment (THC 2019).

Previously Identified Cultural Resources

A total of 77 previously recorded archaeological sites are within a 1-mile radius of the proposed alignment within UT Lands (Table 3). Additionally, two historical markers are within 1 mile of the alignment (Table 4). No cemeteries, NRHP properties or districts, or historical trails or roads are within 1 mile of the alignment.

Of the 77 previously recorded archaeological sites noted above, 14 are intersected by or are within 300 feet of the proposed alignment (THC 2019). Of these 14 sites, six have been recommended or determined not eligible for the NRHP or for designation as SALs, and eight sites have undetermined eligibility for the NRHP or as an SAL. Of the eight sites with undetermined eligibility, seven sites (i.e., 41CX1051, 41RG117, 41RG158, 41RG239, 41RG282, 41RG323, and 41UT147) intersect the current proposed alignment (THC 2019).

Table 2. Previously Conducted Cultural Resource Investigations within 1 Mile of the Whistler Pipeline within University of Texas Lands

Atlas No.	District	County	Quadrangle	Distance	Project	Year	Investigator	Agency/Sponsor
8400004622	Albuquerque	Upton	Square Top Mountain	**Intersects**	No Information	1988	No Information	BLM/AAPL
8400004623	Fort Worth	Upton	Rankin	**Intersects**	No Information	1988	No Information	BLM/AAPL
8400004672	Albuquerque	Upton	McCamey North	**Intersects**	No Information	1988	No Information	BLM/AAPL
8500020678	Albuquerque	Reagan	Texon SE	**Intersects**	Reconnaissance Survey	2011	TAS, Inc.	THC/ University Lands
8500025724	Albuquerque	Upton	Rankin	**Intersects**	Global Geophysical Services Grubline Survey	2012	TAS, Inc.	THC/ University Lands
8500036558	Albuquerque	Upton	Sevenmile Corner SE	**Intersects**	Dawson Geophysical Seismic Ex/Pioneer	2012	TAS, Inc.	THC/ University Lands
8500060965	Fort Worth	Upton	Sevenmile Corner SE	**Intersects**	Dawson Geophysical Reagan NW 3D Seismic Blocks	2012	TAS, Inc.	THC/ University Lands
8500061417	Fort Worth	Upton	Sevenmile Corner SE	**Intersects**	Pioneer Block 2 Pipeline Reroute	2014	AR Consultants	THC/ University Lands
8500062606	Albuquerque	Reagan	Texon	**Intersects**	Lucid's U1-110 flowline	2014	TAS, Inc.	THC/ University Lands
8500076694	Fort Worth	Reagan	Rankin NE	**Intersects**	Grierson Springs System Pipeline	2015	SWCA	University Lands
8500076722	Albuquerque	Reagan	Texon SE	**Intersects**	Canyon Midstream Trunk	2016	TAS, Inc.	THC/ University Lands
8500080287	Fort Worth	Reagan	Rankin NE	**Intersects**	EP Energy Waterline	2017	TAS, Inc.	THC/ University Lands
8500080356	Fort Worth	Upton	Rankin NE	**Intersects**	American Midstream Hunt Extension	2017	TAS, Inc.	THC/ University Lands
8100020569	Albuquerque	Upton	Rankin NE	**Within 300 feet**	Gulf Coast Express Pipeline on UT Lands	2018	SWCA Environmental Consultants	THC/ University Lands
8500080911	Fort Worth	Upton	Rankin NE	**Within 300 feet**	Cogent AFE 327	2019	TAS, Inc.	THC/ University Lands
8400009955	Albuquerque	Crockett	Schneeman Draw NW	Within 1-mile	San Antonio to El Paso Fiber Optic Survey	2001	TRC	TXDOT
8500016135	Albuquerque	Crockett	Texon SE	Within 1-mile	UT Letter Report	2009	TAS, Inc.	THC/ University Lands
8500020388	Albuquerque	Crockett	Schneeman Draw NW	Within 1-mile	Transmission Line	2012	TAS, Inc.	THC/ University Lands
8500080288	Albuquerque	Reagan	Texon SE	Within 1-mile	Canyon Midstream Trunk	2017	TAS, Inc.	THC/ University Lands

Table 3. Previously Recorded Cultural Resources within 1 Mile of the Whistler Pipeline within University of Texas Lands

Trinomial	USACE District	County	Quadrangle	Distance	Relative Age	Type	Time Period	NRHP / Other Status
41CX1039	Albuquerque	Crockett	Schneeman Draw NW	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 1/13/12)
41CX1051	Albuquerque	Crockett	Schneeman Draw NW	**Intersects**	Prehistoric	Open Campsite	Undefined	Undetermined (THC 1/13/12)
41CX1061	Albuquerque	Crockett	Texon SE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 1/13/12)
41CX1062	Albuquerque	Crockett	Texon SE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 1/13/12)
41CX1065	Albuquerque	Crockett	Schneeman Draw NW	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 1/13/12)
41CX1069	Albuquerque	Crockett	Texon SE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 1/13/12)
41CX1070	Albuquerque	Crockett	Schneeman Draw NW	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 1/13/12)
41CX1071	Albuquerque	Crockett	Schneeman Draw NW	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 1/13/12)
41CX1171	Albuquerque	Crockett	Texon SE	Within 1 mile	Historic	Farmstead	Undefined	Undetermined (THC 12/21/12)
41RG91	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41RG92	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Middle-Late Archaic	Undetermined (THC 7/5/13)
41RG93	Albuquerque	Reagan	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41RG94	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Undetermined (THC 7/5/13)
41RG100	Albuquerque	Reagan	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Early-Late Archaic	Undetermined (THC 7/5/13)
41RG103	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Transitional Archaic	Undetermined
41RG117	Albuquerque	Reagan	Texon	**Intersects**	Prehistoric	Open Campsite	Late Archaic	Undetermined (THC 7/5/13)

Trinomial	USACE District	County	Quadrangle	Distance	Relative Age	Type	Time Period	NRHP / Other Status
41RG133	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41RG140	Albuquerque	Reagan	Rankin NE	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Undetermined
41RG142	Albuquerque	Reagan	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41RG144	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41RG146	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41RG147	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Undetermined (THC 7/5/13)
41RG155	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined; Recommended Avoidance (THC 5/1/19)
41RG157	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41RG158	Albuquerque	Reagan	Texon	**Intersects**	Prehistoric	Open Campsite	Late Archaic	Undetermined (THC 7/5/13)
41RG159	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Undetermined (THC 7/5/13)
41RG168	Albuquerque	Reagan	Rankin NE	Within 1 mile	Prehistoric	Lithic Procurement	Undefined	Not Eligible w/n ROW (THC 5/1/19)
41RG202	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41RG204	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41RG205	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41RG207	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41RG208	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41RG210	Albuquerque	Reagan	Texon	**Within 300 feet**	Prehistoric	Hearth Field	Undefined	Not Eligible (THC 5/1/19)
41RG216	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41RG238	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41RG239	Albuquerque	Reagan	Texon	**Intersects**	Prehistoric	Lithic Scatter	Undefined	Undetermined (THC 7/5/13)

Trinomial	USACE District	County	Quadrangle	Distance	Relative Age	Type	Time Period	NRHP / Other Status
41RG268	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 12/21/12; 7/5/2013)
41RG277	Fort Worth	Reagan	Texon	Within 1 mile	Prehistoric	Lithic Scatter	Late Archaic	Undetermined (THC 12/21/12)
41RG282	Albuquerque	Reagan	Texon	**Intersects**	Prehistoric	Open Campsite	Undefined	Undetermined (THC 12/21/12)
41RG295	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric/ Historic	Open Campsite/ Historic Features and Structures	Undefined Prehistoric/ 1901–present	Undetermined (THC 12/21/12; 5/1/2019)
41RG323	Albuquerque	Reagan	Texon	**Intersects**	Prehistoric	Burned Rock Midden	Undefined	Undetermined (THC 7/5/13)
41RG333	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 7/5/13)
41RG383	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Not Eligible (THC 10/8/14)
41RG391	Albuquerque	Reagan	Rankin NE	**Within 300 feet**	Prehistoric	Open Campsite	Undefined	Undetermined
41RG392	Albuquerque	Reagan	Texon	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 5/2/19)
41RG397	Albuquerque	Reagan	Rankin NE	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Not Eligible (THC 5/2/19)
41RG398	Fort Worth	Reagan	Texon	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Undetermined
41RG399	Fort Worth	Reagan	Texon	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Undetermined
41UT50	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Lithic Procurement	Undefined	Undetermined
41UT52	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41UT54	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Lithic Procurement/ Quarry	Undefined	Recommended Not Eligible
41UT58	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Undetermined
41UT59	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41UT63	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)

Trinomial	USACE District	County	Quadrangle	Distance	Relative Age	Type	Time Period	NRHP / Other Status
41UT71	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41UT72	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41UT75	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41UT79	Fort Worth	Upton	Sevenmile Corner SE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Recommended Not Eligible
41UT80	Fort Worth	Upton	Sevenmile Corner SE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41UT81	Fort Worth	Upton	Sevenmile Corner SE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41UT86	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41UT89	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined
41UT94	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41UT102	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined
41UT106	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 7/5/13)
41UT107	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Open Campsite	Undefined	Undetermined (THC 7/5/13)
41UT108	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 12/21/12)
41UT121	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Hearth Field	Undefined	Undetermined (THC 12/21/12)
41UT134	Albuquerque	Upton	Rankin NE	**Within 300 feet**	Prehistoric	Lithic Scatter	Undefined	Not Eligible (THC 6/12/18)
41UT135	Albuquerque	Upton	Rankin NE	**Intersects**	Prehistoric	Lithic Scatter	Undefined	Recommended Not Eligible
41UT136	Albuquerque	Upton	Rankin NE	**Intersects**	Prehistoric	Lithic Scatter	Undefined	Recommended Not Eligible
41UT137	Albuquerque	Upton	Rankin NE	**Within 300 feet**	Prehistoric	Lithic Scatter	Undefined	Not Eligible (THC 6/12/18)
41UT138	Albuquerque	Upton	Square Top Mountain	**Intersects**	Prehistoric	Open Campsite	Undefined	Not Eligible (THC 5/1/19)
41UT146	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Not Eligible (THC 4/29/19)

Trinomial	USACE District	County	Quadrangle	Distance	Relative Age	Type	Time Period	NRHP / Other Status
41UT147	Albuquerque	Upton	Rankin NE	**Intersects**	Historic	Ranching Complex	Undefined	Undetermined
41UT148	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Not Eligible (THC 4/29/19)
41UT149	Albuquerque	Upton	Rankin NE	Within 1 mile	Prehistoric	Lithic Scatter	Undefined	Not Eligible (THC 4/29/19)

Table 4. Historical Markers within 1 Mile of the Whistler Pipeline within University of Texas Lands

Marker No.	Marker Name	County	USACE District	Quadrangle	Distance	Atlas Text
4200	Rankin	Upton	Albuquerque	Rankin NE	Within 1 mile	Made Upton County Seat in 1921. Named for F. E. Rankin, who gave site for railway station-- the center of community life over and above its business dealings; was scene of cowboy dances on Saturday nights, church services on Sundays. Home of Rankin Museum and of world champion rodeo stars Toots Mansfield and Allen Holder. Erected by Upton County Historical Survey Committee.
5613	Upton County	Upton	Albuquerque	Rankin NE	Within 1 mile	Formed from Tom Green County. Created February 26, 1887, organized May 7, 1910. Named in honor of John Cunningham Upton 1828-1862, a distinguished Confederate officer killed at Manassas, August 30, 1862. County Seat, Upland, 1910-1921, Rankin, since. A cattle and sheep raising county. Oil wells dot the county.

Cultural Resources Survey Methods

During the survey, SWCA examined the ground surface and erosional profiles for cultural resources. Archaeologists used shovel testing as the main method of subsurface exploration. Shovel testing was keyed to the level of proposed disturbance and the nature of the soils, geology, and topography. Shovel tests were systematically excavated along the alignment, as per the THC and CTA survey standards. For reference, survey standards call for transects spaced no more than 30 meters (m) (100 feet) apart with a minimum of 16 shovel tests excavated per transect per mile. Additional shovel tests were excavated to define site boundaries. The survey corridor was 61 m (200 feet) wide for the mainline, requiring two transects, and 30 m (100 feet) for new, undeveloped access roads, requiring one transect.

SWCA archaeologists employ both metric (centimeters and meters) and English units of measurement (inches and feet) when conducting investigations within the project area. In compliance with archaeological standard practices, investigations such as shovel tests, auger probes, and backhoe trenches are recorded using metric units. Prehistoric archaeological resources, such as camp sites, features, and artifacts, are also recorded using metric units, while historic resources, such as farmsteads and associated historic features, are recorded using English units; no conversions for these measurements are provided.

Shovel tests measured 30 cm in diameter and minimally excavated in 20-cm arbitrary levels to 1 m in depth or to culturally sterile deposits, whichever came first. The matrix was screened through ¼-inch steel mesh. SWCA also plotted the location of each shovel test using a global positioning system (GPS) unit and recorded each test on appropriate field forms. Areas with previously recorded sites or other cultural resources revealed in the archival research required additional shovel testing to explore the nature of the cultural deposits. SWCA excavated shovel tests to the depth of proposed impacts, if possible. If it was found that shovel tests could not adequately explore proposed impacts in soils with potential to contain buried archaeological materials, backhoe trenches or other means of deep testing (i.e., hand or mechanical augering) were recommended. The need for deep testing was assessed in the field during survey in conjunction with engineering design considerations (e.g., HDD placement).

Site Documentation

If an archaeological site was encountered in the survey corridor during the investigations, it was explored as much as possible with consideration to land access constraints. SWCA assessed any discovered sites in regard to potential significance so that recommendations can be made for proper management (i.e., avoidance, non-avoidance, or further work). Historic sites were evaluated for eligibility under NRHP criteria A–D and prehistoric sites were evaluated for eligibility under NRHP criterion D. In addition, sites on UT Lands were also evaluated for eligibility as SALs. Where archaeological sites were identified, the survey corridor width was expanded to 91.5 m (300 feet). All investigations were conducted in accordance with THC and CTA standards. In addition, the West Texas Survey Methodology document provided via email on August 14, 2019 by Drew Sitters (THC) was used as a guide for recording and evaluating sites documented within the project (Sitters 2019).

Archaeologists completed the appropriate site data forms for each site discovered during the investigations. SWCA produced a detailed plan map of each site and plotted site locations on USGS 7.5-minute topographic maps and relevant project maps. SWCA utilized GPS units with sub-meter accuracy to map sites and spatially relate them to the study area. These site polygon data were provided to the client for accurate plotting and use in their planning.

SWCA conducted a non-collection survey. SWCA tabulated, analyzed, and documented, but not collected, artifacts in the field. Per CTA Archaeologist Guidelines for Professional Performance, Section

4.2.3.6, as artifacts were not collected, SWCA provided descriptions, drawings, and/or photographs to fully convey the range and types of artifacts encountered.

NRHP Criteria for Evaluation

The quality of significance in American archaeology, architecture, and history is present in sites, districts, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet the following criteria for evaluation (36 CFR 60.4 [a–d]):

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

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

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

D. that have yielded or may be likely to yield, information important in prehistory or history.

NRHP CRITERIA CONSIDERATIONS

Ordinarily cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years should not be considered eligible for the NRHP. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

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

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

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

d. A cemetery which derives its primary importance from graves of person of transcendent importance, from age, from distinctive design features, or from association with historic events;

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

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

g. A property achieving significance within the past 50 years if it is of exceptional importance.

SAL Criteria for Evaluation

Additional evaluations were made under the TAC Title 13 Rule 26.10 to determine SAL eligibility. The Antiquities Code of Texas criteria are:

> The commission shall use one or more of the following criteria when assessing the appropriateness of official landmark designation, and/or the need for further investigations under the permit process:
>
> A. the site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information;
>
> B. the site's archeological deposits and the artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interests of the site;
>
> C. the site possesses unique or rare attributes concerning Texas prehistory and/or history;
>
> D. the study of the site offers the opportunity to test theories and methods of preservation, thereby contributing to new scientific knowledge; and
>
> E. there is a high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to ensure maximum legal protection, or alternatively, further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected.

Curation

Per Antiquities Code of Texas guidelines, any documents and any artifacts recovered from the permitted portion of the project will be curated at an approved curatorial facility. In this case, a non-collection survey was conducted; therefore, no artifacts will be curated, and the project documentation will be curated at the Center for Archaeological Research at the University of Texas at San Antonio (CAR-UTSA). Records, files, field notes, forms, documentation of artifacts, and other required documentation will be archived and included in the curation package, according to CAR-UTSA guidelines. The Antiquities Code of Texas also requires that electronic copies of the report in “tagged pdf” format, a project abstract, and shapefiles of the surveyed areas be submitted to THC once the project is completed.

Unanticipated Discoveries

In the unlikely event that unanticipated human remains or burials are encountered during subsequent construction activities, Whistler or their designated representative will immediately cease work within 100 feet (30.5 m) of the discovery, as all human burials in the state of Texas are protected by law, as per the Texas Health and Safety Code Section 711 General Provisions Relating to Cemeteries (herein referred to as Section 711) and the TAC Title 13, Texas Historical Commission, Chapter 22 Cemeteries (13 TAC 22.1–22.6). Immediately upon discovery, Whistler or their designated representative, should cover the burial with impermeable plastic sheeting and mark it with lathing stakes or fencing. Whistler or their designated representative, should immediately notify both local law enforcement and the THC. The local County Sheriff’s office should be contacted to determine if the remains represent a modern crime scene. If the sheriff and/or local County Coroner determine that the human remains represent a crime scene, then they will assume control of the discovery. If the human skeletal remains appear to be from an unregistered grave that does not represent a crime scene, then the coroner shall notify the THC within 24 hours. Under Section 711 and the Texas Antiquities Code (13 TAC 22.1–22.6), the county clerk shall be notified within

10 days of the discovery of the grave or graves. Finally, if the human remains are determined to be Native American, they will be handled in accordance with procedures established through coordination with the THC. Work in the affected area could only resume per THC authorization. A detailed Unanticipated Discovery Plan has been submitted to Whistler and will be distributed to appropriate project personnel prior to construction activities.

CHAPTER 5. CULTURAL RESOURCES SURVEY RESULTS

From September to October 2019, and on January 10, 2020, SWCA archaeologists conducted an intensive cultural resources survey along approximately 28.47 miles of proposed mainline and 10.9 miles of lateral pipeline alignment that crosses UT Lands (Appendix A). In addition, 0.18 mile for an undeveloped access road in Reagan County and a 7.4-acre facility (Rankin Compressor Station) in Upton County were surveyed. The general setting of the project area is rural with no residential areas and extensive industrial development within the surrounding oil and gas fields. Disturbances across the survey area vary in extent and severity. The most prominent disturbance is the oil and gas development associated with petroleum exploration and expansion, which includes well pads; crude oil, hydrogen sulfide, and holding tanks; surface and buried pipelines; and other disturbances, including overhead and buried utilities and transmission line corridors with associated vegetation clearing, earth moving, and gravel access roads.

Surface investigations involved carefully examining the ground surface throughout the survey corridor looking for cultural materials. Subsurface investigations involved the excavation of 1,505 shovel tests (1,343 for the survey and 162 to delineate sites) during the course of the project on UT Lands. Shovel tests excavated in the delineation of sites are presented in their respective site description, while Appendix B presents a comprehensive list of all subsurface tests performed during the project. Although investigations involved two transects within the 200-foot survey corridor, field conditions—such as exposed bedrock, broad deflated areas, and existing disturbances (i.e., previously cleared pipeline corridor)—limited where shovel testing occurred, resulting in shovel testing locations which were simply observed and recorded as "observation points". In addition, where archaeological sites were identified, the survey corridor width was expanded up to 300 feet. Shovel testing typically terminated at compact soil, although several shovel tests revealed shallow bedrock approximately 30 cm below surface (cmbs).

Upton County

The pipeline crosses 20.6 miles on UT lands in Upton County. This includes 9.69 miles of mainline on parcels WHL-TX-UPT-144.00000 through WHL-TX-UPT-147.00000 and parcels WHL-TX-UPT-156.00000 through WHL-TX-UP-163.00000 and 10.9 miles of lateral on parcels MID-TX-UPT-058.00000 through MID-TX-UPT-067.00000 and WHL-TX-UPT-163.00000. Vegetation is dominated by mesquite, but also includes juniper, grasses, and cacti.

SWCA excavated a total of 732 shovel tests (686 shovel tests for survey and 46 to delineate sites) on UT Lands in Upton County (Appendices A and B). Primary anthropogenic disturbances within the parcels include previous construction from existing oil and gas field infrastructure (e.g., access roads and pipelines). Natural disturbances include wind erosion/scouring.

Subsurface investigations for the 7.4-acre Rankin Compressor Station on parcel WHL-TX-UPT-0163.00000 involved the excavation of seven shovel tests within the proposed compressor station (Appendix A: Page 11). Shovel testing typically revealed grayish brown (10YR 5/2) to light brownish gray (10YR 6/2) silt loam to silty clay loam and terminated at compact soil between 25–62 cmbs (Appendix B). Ground surface visibility was very high across the compressor station area, averaging approximately 90 percent. Disturbances across the survey area include vegetation clearing and ground surface disturbances associated with two-track roads. No cultural materials were identified on the ground surface or within any of the shovel tests excavated within the compressor station.

SWCA revisited four previously recorded sites (i.e., 41UT135, 41UT136, 41UT138, and 41UT147), newly recorded one archaeological site (i.e., 41UT158), and recorded seven isolated finds (IFs) within the project area on UT Lands in Upton County (Figure 2).

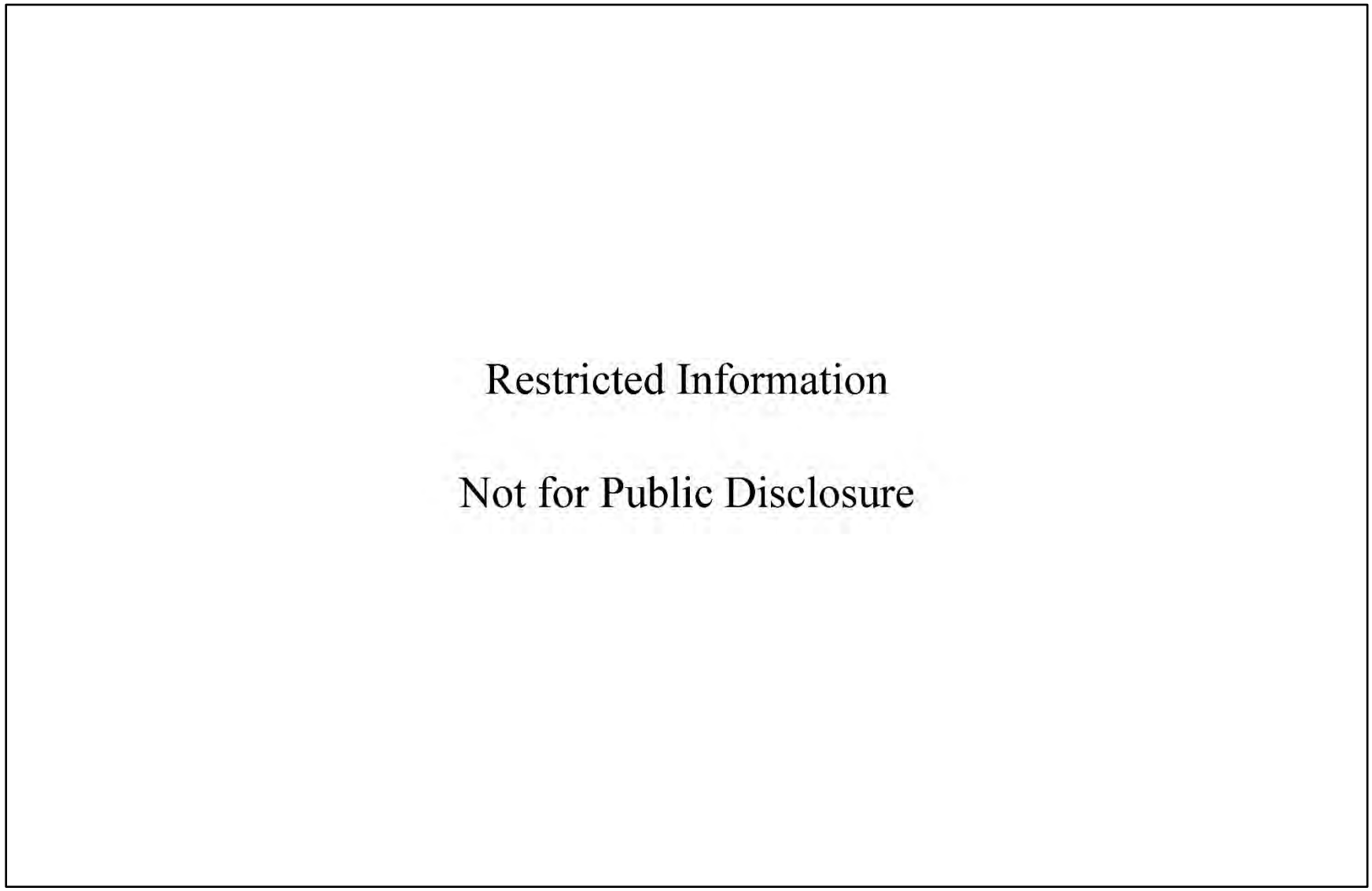

Figure 2. Location of identified sites and IFs within the project area on UT Lands in Upton County.

Site 41UT135 (Revisit)

County: Upton
Elevation: 847 m (2,780 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Artifact scatter
NRHP Eligibility Recommendation: Not eligible
Management Recommendations: None

PREVIOUS INVESTIGATION

Site 41UT135 was originally recorded by SWCA in 2018 for the Gulf Coast Express project, as part of Antiquities Permit No. 8324 (Cohen 2018). It was recorded as a low density, surficial lithic scatter consisting of three flakes (tertiary and secondary), one modified flake, one tested cobble, and one biface. All material was tan chert. No cultural features or buried cultural deposits were encountered within the site boundary or project corridor. The site was recommended as not eligible for the NRHP or as an SAL; the THC concurred with this recommendation on July 20, 2018.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41UT135 on September 9, 2019. Site 41UT135 is a prehistoric lithic scatter of unknown cultural or temporal affiliation. The site is located 4.4 miles (7.1 km) south of Highway 67 and is situated at the foot of the northern upland slope, approximately 17.4 miles (28.0 km) northeast of the Pecos River. The site measures approximately 27 m east-west by 18 m north-south (Figure 3; Appendix A: Page A-11).

Vegetation throughout the site consisted of juniper, desert scrub brush, and short grasses. Ground surface visibility was very high across the site, averaging approximately 75 percent (Figure 4). SWCA did not identify any artifacts within the site boundary. No cultural features or buried cultural deposits were identified. The site is highly disturbed and significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include land-clearing activities associated with the construction of an existing pipeline corridor, transmission line, and gravel road for access to the active construction areas adjacent to the site (Figure 5). The site may be destroyed due to pipeline construction.

Features

No features were encountered on the site.

Material Identified

No cultural materials were observed during the current investigations.

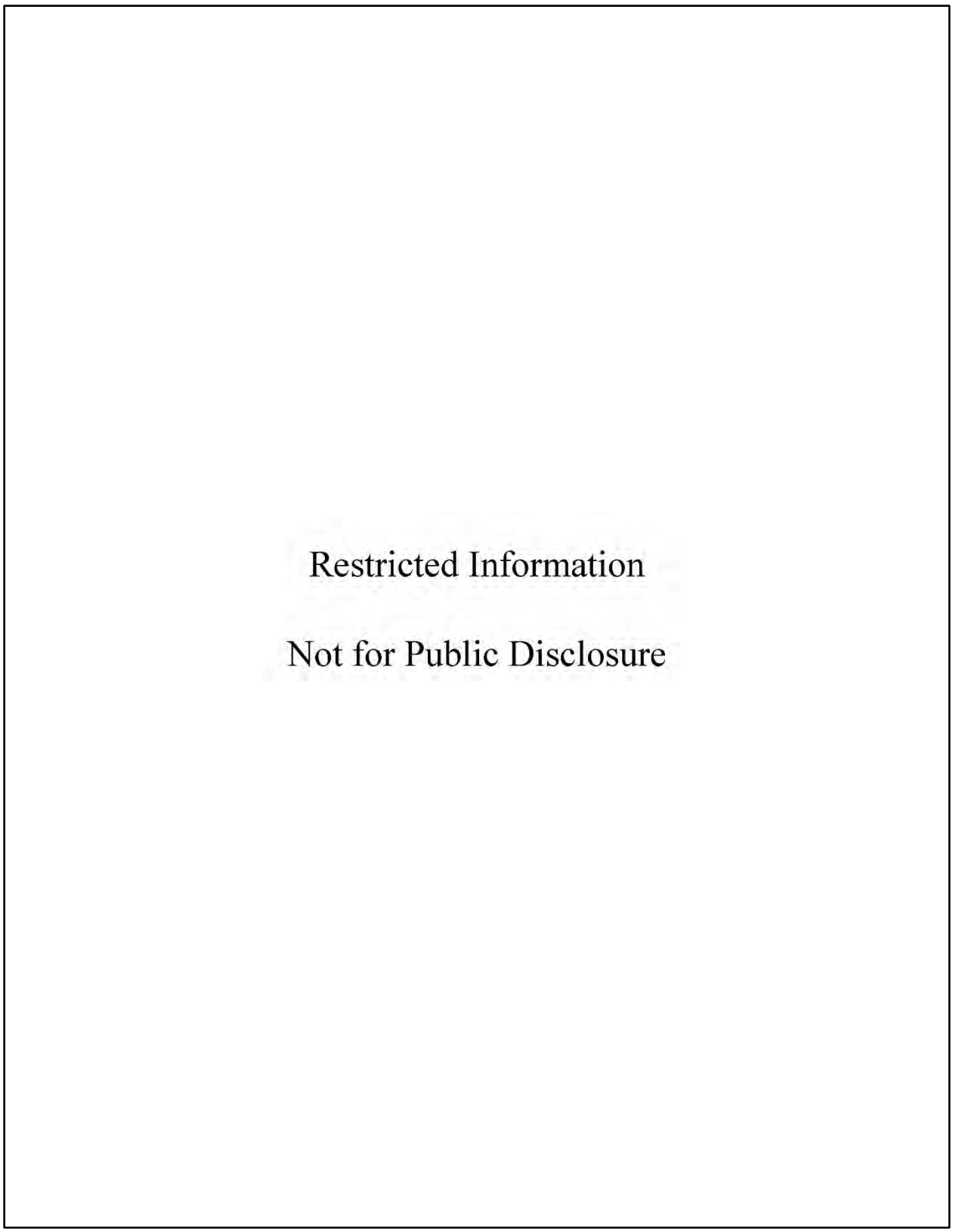

Figure 3. Map of site 41UT135.

Figure 4. Site overview 41UT135, facing north.

Figure 5. Site 41UT135 disturbance, facing east.

Subsurface Investigations

SWCA excavated nine shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests SKD005, SKD007–SKD008, NMG048–NMG049, EMA044–EMA045, CMS016, and PMW004). These shovel tests generally revealed the presence of a single stratum of dark yellowish brown (10YR 4/4) silt, or loose loamy sand to depths of approximately 20 cmbs, terminating at bedrock (Table 5). All shovel tests were negative for buried cultural materials.

Table 5. Shovel Tests at Site 41UT135

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
SKD005	1	0-5	N	10YR 6/2	Silt	None	Bedrock
SKD007	1	0-10	N	10YR 6/2	Silt	None	Bedrock
SKD008	1	0-15	N	10YR 6/2	Silt	None	Bedrock
EMA044	1	0-20	N	7.5YR 6/2	Silt loam	None	Bedrock
EMA045	1	0-10	N	7.5YR 6/2	Silt loam	None	Bedrock
NMG048	1	0-15	N	10YR 4/4	Loamy sand	None	Bedrock
NMG049	1	0-15	N	10YR 4/4	Loamy sand	Gravels 50%	Bedrock
CMS016	1	0-25	N	10YR 5/2	Silt loam	Gravels 20%	Bedrock
PMW004	1	0-15	N	10YR 5/2	Sandy clay loam	None	Bedrock

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of temporally diagnostic artifacts.

Site Interpretation and Summary

Site 41UT135 was originally recorded as a low-density lithic scatter. The site has been completely destroyed due to prior pipeline construction.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features and is unlikely to yield information that will refine our understanding of past lifeways in this region. Therefore, SWCA recommends the site not eligible for the NRHP under Criterion D. Site 41UT135 is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work or avoidance is recommended.

Site 41UT136 (Revisit)

County: Upton
Elevation: 877 m (2,880 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Lithic scatter
NRHP Eligibility Recommendation: Not eligible
Management Recommendations: None

PREVIOUS INVESTIGATION

Site 41UT136 was originally recorded by SWCA in 2018 for the Gulf Coast Express project, as part of Antiquities Permit No. 8324 (Cohen 2018). It was initially recorded as a surficial and shallowly buried lithic scatter with depths of cultural material to 5 cmbs consisting of one secondary flake and 10 to 15 tertiary flakes. All material was light brown chert and no cultural features or diagnostics were encountered. The site was recommended as not eligible for the NRHP or as an SAL; the THC concurred with this recommendation on July 20, 2018.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41UT136 on September 9, 2019. Site 41UT136 is a prehistoric site of unknown cultural or temporal affiliation located 4.2 miles (6.8 km) south of Highway 67 and 0.1 mile (161 m) northwest of site 41UT135. The site is situated on an upland plain, approximately 17.9 miles (28.8 km) northeast of the Pecos River. The site measures approximately 8.5 m north-south by 15 m east-west (Figure 6; Appendix A: Page A-10,11). Vegetation throughout the site consisted of juniper, desert scrub brush, and short grasses. Ground surface visibility was very high across the site, averaging approximately 75 percent (Figure 7).

Site 41UT136 is highly disturbed and significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline, transmission line, and gravel roads to reach active construction areas (Figure 8). No cultural materials were encountered during the site revisit and the site has been destroyed by pipeline construction.

Features

No features were encountered on the site.

Material Identified

No cultural materials were encountered during the current investigation.

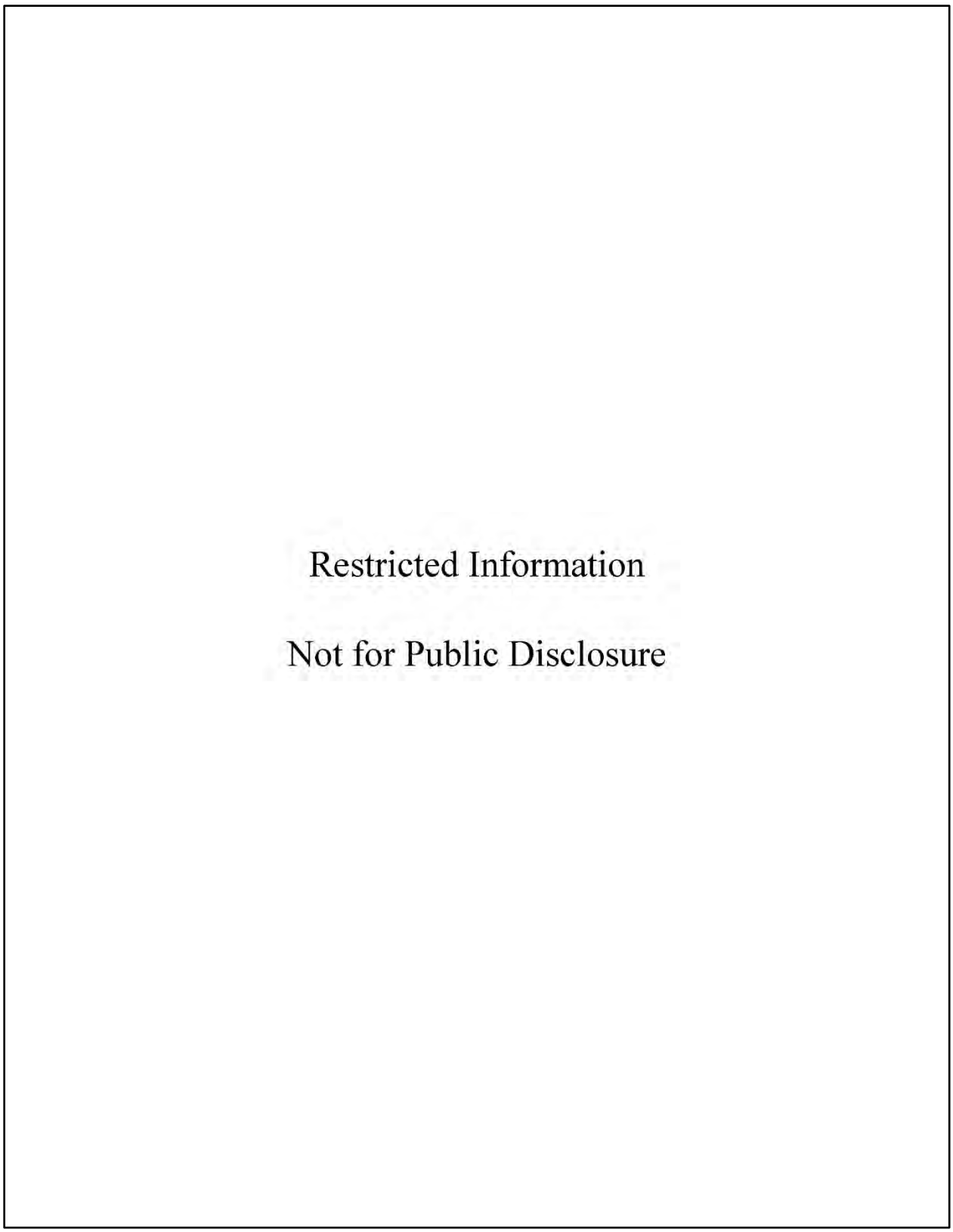

Figure 6. Map of site 41UT136 (Revisit).

Figure 7. Site 41UT136 overview, facing south.

Figure 8. Site 41UT136 disturbance, facing west.

Subsurface Investigations

SWCA excavated five shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests PMW005–PMW006, EM043, NMG047 and CMS015). These shovel tests generally revealed the presence of a single stratum of grayish brown (10YR 5/2) sandy clay loam to depths of approximately 20 cmbs, terminating at bedrock (Table 6). All shovel tests were negative for buried cultural materials.

Table 6. Shovel Tests at Site 41UT136

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
PMW005	1	0-15	N	10YR 5/2	Sandy clay loam	None	Bedrock
PMW006	1	0-20	N	10YR 5/2	Sandy clay loam	None	Compact soil
NMG047	1	0-25	N	10YR 4/4	Loamy sand	None	Bedrock
EMA043	1	0-15	N	7.5YR 6/2	Silt	None	Bedrock
CMS015	1	0-20	N	10YR 5/2	Loamy sand	None	Bedrock

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

Site Interpretation and Summary

Site 41UT136 was originally recorded as a low-density lithic scatter. The site has been completely destroyed by pipeline construction.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features and is unlikely to yield information that will refine our understanding of past lifeways in this region. Therefore, SWCA recommends the site not eligible for the NRHP under Criterion D. Site 41UT136 is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work or avoidance is recommended.

Site 41UT138 (Revisit)

County: Upton
Elevation: 727 m (2,385 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Lithic scatter
NRHP Eligibility Recommendation: Not eligible within ROW; Undetermined outside ROW
Management Recommendations: None, additional survey if the current alignment changes

PREVIOUS INVESTIGATION

Site 41UT138 was originally recorded by SWCA in 2018 for the Gulf Coast Express project, as part of Antiquities Permit No. 8324 (Cohen 2018). At that time, the site was recorded as an open campsite of 30 to 40 secondary and tertiary flakes, four biface fragments, and one possible projectile point fragment with two hearth features. Material consisted of brown quartzite and white, banded white, brown, tan and pink chert. The features were composed of limestone cobbles that were deflated and eroded. The site was recommended not eligible for the NRHP or as an SAL; the THC concurred with this recommendation on July 20, 2018.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41UT138 on September 11, 2019. The site is a small lithic scatter consisting of five flakes located on an upland plain gently sloping toward Five-Mile Creek approximately 0.4 miles (0.6 km) east of the site. The site is located 3.8 miles (6.1 km) southwest of the intersection of Highway 67 and Farm-to-Market Road 349. The site measures approximately 78 m east-west by 49 m north-south (Figure 9; Appendix A: Page A-1). Vegetation is typical for the area and includes mesquite, juniper, prickly pear, desert scrub, and short rangeland grasses (Figure 10). Ground surface visibility was very high across the site, averaging approximately 85 percent. The site has been affected by a variety of natural processes including erosion, as well as bioturbation in the form of burrowing and grazing animals. The site is estimated at being less than 25 percent intact due to a significant decrease in the number of artifacts observed, the previously recorded features not being relocated, and pipeline construction.

Features

SWCA was unable to locate the hearth features recorded in 2018. No additional features were encountered on the site.

Material Identified

The artifact assemblage consisted of five chert secondary flakes (Figure 11). Artifacts were only identified within the existing boundary, so the site boundary has remained the same as the initial investigation.

Subsurface Investigations

SWCA excavated 14 shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests HBM005–HBM010, JWF004–JWF006, KCA004–KCA007 and JDH004). These shovel tests generally revealed the presence of a stratum of strong brown (7.5YR 5/6) silt loam over a stratum of light yellowish brown (10YR 6/4) silt loam to depths of approximately 80 cmbs, terminating at compact soils (Table 7). All shovel tests were negative for buried cultural materials.

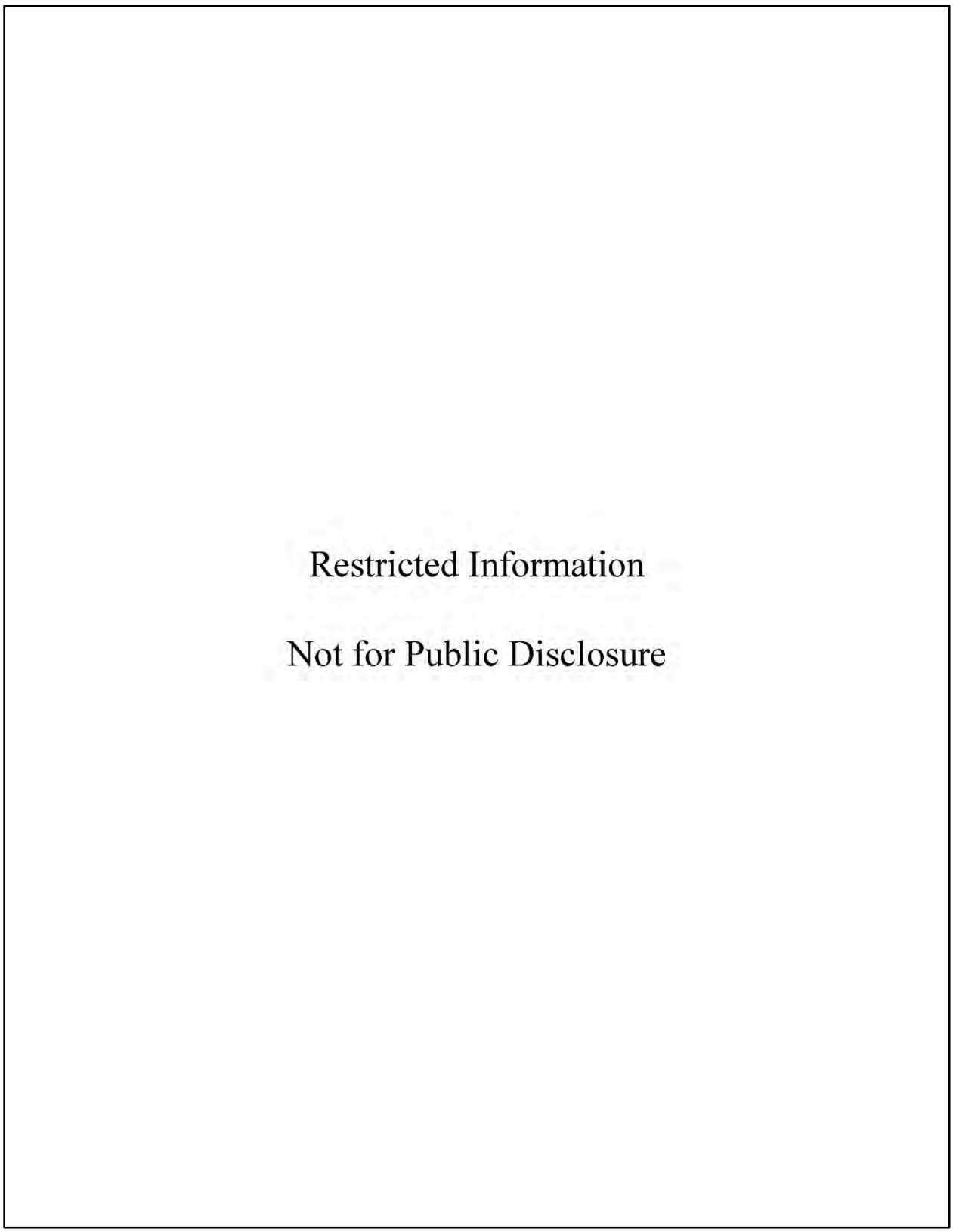

Figure 9. Map of site 41UT138 (Revisit).

Figure 10. Site 41UT138 overview, facing south.

Figure 11. Site 41UT138 surface artifacts.

Table 7. Shovel Tests at Site 41UT138

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
HBM005	1	0-5	N	7.5YR 5/6	Silt loam	None	Bedrock
HBM006	1	0-50	N	7.5YR 5/6	Silt loam	None	Compact soil
HBM007	1	0-40	N	7.5YR 5/6	Silt loam	None	Compact soil
HBM008	1	0-40	N	7.5YR 5/6	Silt loam	None	Compact soil
HBM009	1	0-70	N	7.5YR 5/6	Silt loam	None	Compact soil
HBM010	1	0-100	N	7.5YR 5/6	Silt loam	None	Depth
JWF004	1	0-10	N	10YR 4/4	Silt	None	Compact soil
	2	10-60	N	10YR 6/4	Silt loam	1-5% Gravels	
JWF005	1	0-10	N	10YR 5/4	Silt	None	Compact soil
	2	10-70	N	7.5YR 6/4	Silt	1-5% Gravels	
JWF006	1	0-30	N	10YR 6/4	Silt	None	Compact soil
	2	30-80	N	10YR 6/6	Silt loam	None	
KCA004	1	0-35	N	10YR 7/4	Silt	None	Compact soil
KCA005	1	0-60	N	10YR 7/4	Silt	None	Compact soil
KCA006	1	0-55	N	10YR 7/4	Silt	None	Compact soil
KCA007	1	0-70	N	10YR 7/4	Silt	None	Compact soil
JDH004	1	0-80	N	7.5YR 5/4	Silt loam	None	Compact soil

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

Site Interpretation and Summary

Site 41UT138 consists of a low-density lithic scatter. The site may have been a temporary campsite where on-site activities were limited to lithic reduction and tool manufacture and maintenance. Due to the features not being located during current investigations, as well as the decrease in lithic material, the site appears to be approximately 75 percent destroyed.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features and is unlikely to yield information that will refine our understanding of past lifeways in this region. The site has been extensively shovel tested and no subsurface deposits have been encountered. Therefore, SWCA recommends the portions of the site within the project ROW as not eligible for the NRHP under Criterion D. The portion of site 41UT138 within the ROW is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work or avoidance is recommended; however, portions of the site outside the current ROW remained UNDETERMINED for the NRHP or as an SAL.

Site 41UT147 (Revisit)

County: Upton

Landowner: University of Texas

Cultural Affiliation and Age: Anglo–Euro-American (A.D. 1920–present)

Site Type: Ranching complex

NRHP Eligibility Recommendation: Undetermined

Management Recommendations: Fencing around northern edge of site boundary near project workspace and avoidance recommended. Additional survey and archival research if the project alignment shifts.

PREVIOUS INVESTIGATION

Site 41UT147 was originally recorded by SWCA in 2019 for the Permian Highway Pipeline (PHP) project, as part of Antiquities Permit No. 8644 (Cohen 2019). Site 41UT147 is a historic-age ranching facility that is still in use with seven associated features including several water catchment devices, a concrete storage building, and a mobile home (Figure 12). Site 41UT147 was located outside of the PHP workspace and was not fully investigated. As such, the site had undetermined NRHP and SAL eligibility.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41UT147 on September 6, 2019. The historic-age ranching site is situated on a flat upland plain, overlooking an incised unnamed drainage to the west. The site is located approximately 0.1 miles (0.2 km) southeast of an unnamed gravel access road and CR 225. Vegetation is typical for the area and includes mesquite and short rangeland grasses (Figure 13). Ground surface visibility was very high across the site, averaging approximately 85 percent (Figure 14). The site measures approximately 70 m (230 feet) east-west by 80 m (262 feet) north-south (see Figure 12; Appendix A: Page A-9). The site appears intact aside from natural erosion and the ranching complex is still in use.

Features

A total of seven features were recorded on the site during the PHP project in March 2019 (Table 8, see Figure 12) (Cohen 2019). The site feature data below were primarily taken from the PHP report (Cohen 2019). Features 1, 4, and 5 are rectangular pipe-fed water troughs (Figure 15). Feature 2 is a large earthen depression that was interpreted to be an old stock tank (Figure 16). Feature 3 is a large concrete stock tank (Figure 17). Feature 6 is a concrete storage structure or well house (Figures 18 and 19). Feature 7 is a mobile home (Figure 20). The revisit by SWCA in September 2019 did not identify any additional features.

Material Identified

A low density (less than 10 artifacts per m^2) of non-diagnostic historic-age ranching debris (e.g., miscellaneous metal, concrete, and wood fragments), as well as modern metal were identified at the site in March 2019 (Cohen 2019). The revisit by SWCA in September 2019 did not identify any temporally diagnostic artifacts.

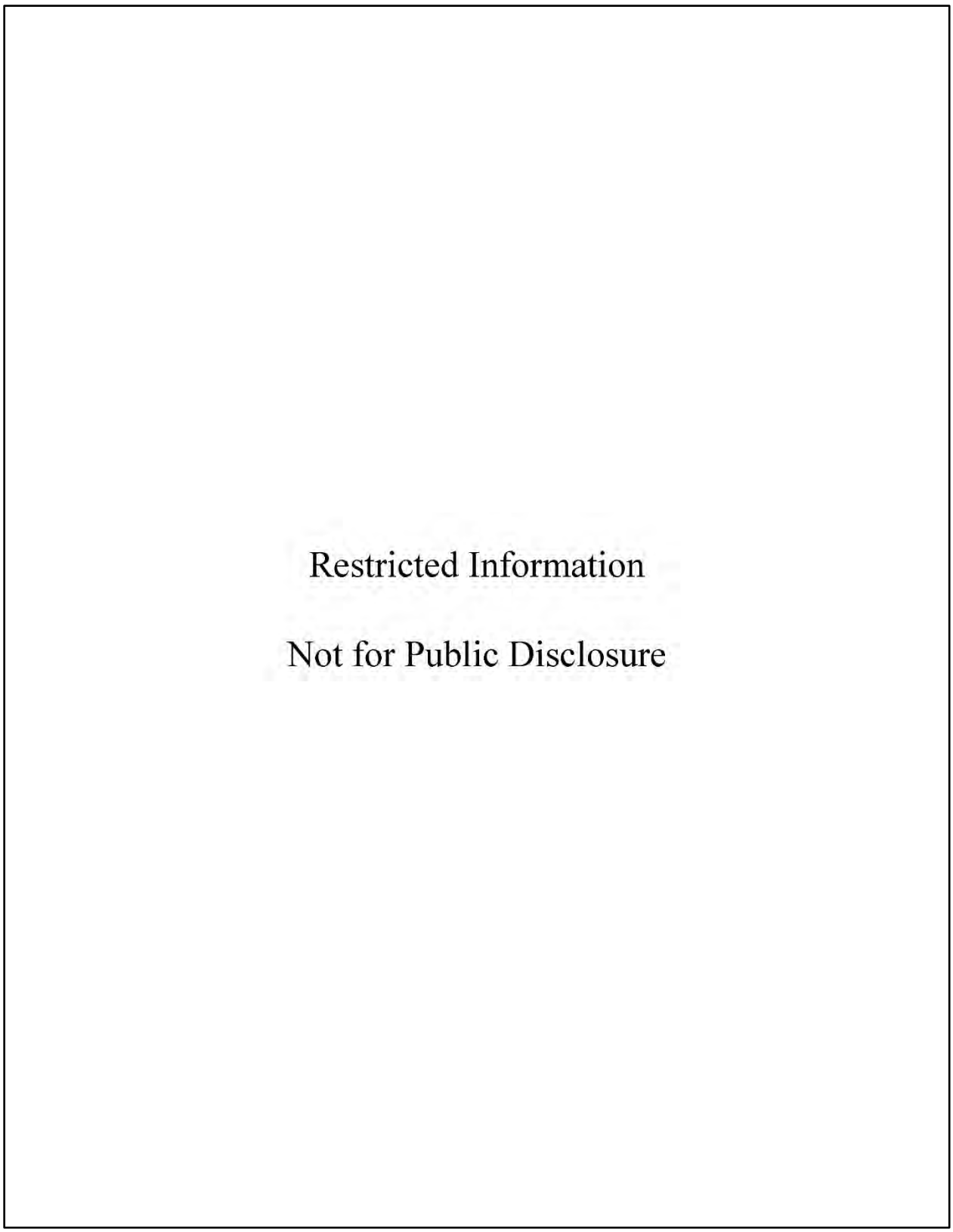

Figure 12. Map of site 41UT147 (Revisit).

Figure 13. Site 41UT147 overview, facing northwest.

Figure 14. Site 41UT147 overview, facing west.

Table 8. Features at site 41UT147.

Feature No.	Dimensions	Description	Associated Artifacts
1	7.5 × 17 feet	Rectangular concrete trough with a poured concrete foundation	Concrete
2	180 feet (diameter)	Earthen stock tank	Miscellaneous concrete
3	40 feet (diameter)	Concrete stock tank, extends approximately 4 feet above the ground surface	Barbed wire; miscellaneous metal
4	1.5 × 15 feet	Rectangular concrete trough	N/A
5	3.5 × 16 feet	Rectangular concrete trough with a poured concrete foundation	Concrete
6	6 × 6 × 16 feet	Cinderblock/concrete storage structure/well head	Miscellaneous wood, metal, electrical components
7	20 × 20 feet	Mobile home	N/A

Table adapted from Cohen (2019).

Figure 15. Feature 1 at 41UT147, facing southwest.

Figure 16. Feature 2 at 41UT147, facing north.

Figure 17. Feature 3 at 41UT147, facing east-northeast.

Figure 18. Feature 6 at 41UT147, facing north.

Figure 19. Feature 6 at 41UT147, facing southeast.

Figure 20. Feature 7 at 41UT147, facing northwest.

Subsurface Investigations

SWCA excavated four shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests JDH021, JDH022, RLJ018, and RLJ019). These shovel tests generally revealed the presence of a single stratum of dark or light yellowish brown (10YR 4/4 or 10YR 6/4) silt, or silt loam. Within the site, shovel tests terminated at bedrock at 5 cmbs; outside the site boundary, shovel tests extended as deep as 60 cmbs and terminated at compacted soils (Table 9). All shovel tests were negative for buried cultural materials.

Table 9. Shovel Tests at Site 41UT147

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
JDH021	1	0-5	N	10YR 6/4	Silt	None	Bedrock
JDH022	1	0-5	N	10YR 6/4	Silt	None	Bedrock
RLJ018	1	0-24	N	10YR 4/4	silty clay	None	Compact soil
	2	24-60	N	10YR 4/4	silt loam	None	Compact soil
RLJ019	1	0-12	N	10YR 4/4	silt loam	Disturbed under transmission line	Compact soil

* P=Positive / N=Negative

Site Chronology

No temporally diagnostic artifacts were encountered, so the site chronology (Anglo–Euro-American [A.D. 1920–present]) was based on a review of historical topographic and aerial maps, Texas General Land Office (GLO) data, and style of structures immediately south of the site (Cohen 2019; Figures 21 and 22). Earth Explorer single frame aerials from 1954 show structures in the vicinity of site 41UT147 (Earth Explorer 2019). One of the structures lies immediately south (approximately 0.03 mile) of the site and appears to be a hipped box/hipped cottage, with a four-square form, including a central passage, ribbon windows, and a hipped roof (Wallace 2012); this style dates to ca. A.D. 1920.

Site Interpretation and Summary

Site 41UT147 is a historic-age ranching complex with a sparse scatter of historical ranching debris and modern metal along with seven cultural features, most of which appear to be related to the watering of livestock. The site appears to still be in use and additional residential and ranching structures possibly associated with the site are located to the east and south of the site. A search of the GLO page did not provide any information about possible previous lessees (GLO 2019).

Eligibility and Management Recommendations

All features within site 41UT147 are currently located outside of the project workspace and the site has not been fully investigated. Therefore, SWCA recommends the site as UNDETERMINED for NRHP and SAL eligibility. As the site features will not be impacted by the proposed project, no further work is recommended; however, due to the proximity of the site to the project workspace, the placement of high visibility avoidance fencing around the northern edge of site boundary (especially near Feature 4) is recommended. In addition, if the project corridor were to shift further south, further work including archival research would be recommended.

Figure 21. Structure off-site, note ribbon window and hipped roof, facing southwest.

Figure 22. Structures off-site, including house with central passage, facing southeast.

Site 41UT158

County: Upton
Elevation: 833 m (2,732 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Lithic scatter with features
NRHP Eligibility Recommendation: Not eligible within ROW; Undetermined outside ROW
Management Recommendations: None, additional survey if the current alignment changes

SITE DESCRIPTION

Site 41UT158 is a prehistoric lithic scatter with two thermal features located 0.4 mile (0.6 km) west of the Upton/Reagan County lines and 0.2 mile (0.3 km) south of Highway 67 in Upton County. The site is situated on an upland plain with a railroad located 164 feet (50 m) south of the site. The site measures approximately 40 m north-south by 18 m east-west (Figure 23; Appendix A: Page A-15). Vegetation throughout the site consisted of patchy desert scrub vegetation, including mesquite and Ashe juniper (Figure 24). Ground surface visibility was very high across the site, averaging approximately 75 percent. Site 41UT158 has been impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline, railroad, and Highway 67. The site is estimated at being 50 percent intact.

Features

Two deflated thermal features (i.e., Features 1 and 2) were encountered at the site (see Figure 23). Feature 1 consists of approximately 12 fragments of burned limestone scattered over a 50-cm^2 area (Figure 25). The limestone fragments consist of small (<5 cm) gravels. Feature 2 consists of approximately 16 fragments of burned limestone scattered over a 50-cm^2 area (Figure 26). The majority of fragments consist of small (<5 cm) gravels with three to four medium (5–10 cm) gravels. Archaeologists scraped the center of each feature with a trowel to investigate for potential charcoal, organic materials, and/or soil staining. No subsurface deposits, staining, or charcoal were encountered.

Material Identified

The artifact assemblage consisted of one primary flake, two to five secondary flakes, seven to 12 tertiary flakes, one modified flake, one core, and 29 burned rock, in addition to the two thermal features (Figures 27 and 28). Material consisted of tan and brown chert and brown quartzite.

Subsurface Investigations

SWCA excavated 14 shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests RDB028–RDB033, MDP021–MDP023, and RLJ024–RLJ028). These shovel tests generally revealed the presence of a single stratum of strong brown (7.5YR 4/6) silty clay or silt loam to depths of approximately 55 cmbs, terminating at caliche (Table 10). All shovel tests were negative for buried cultural materials.

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

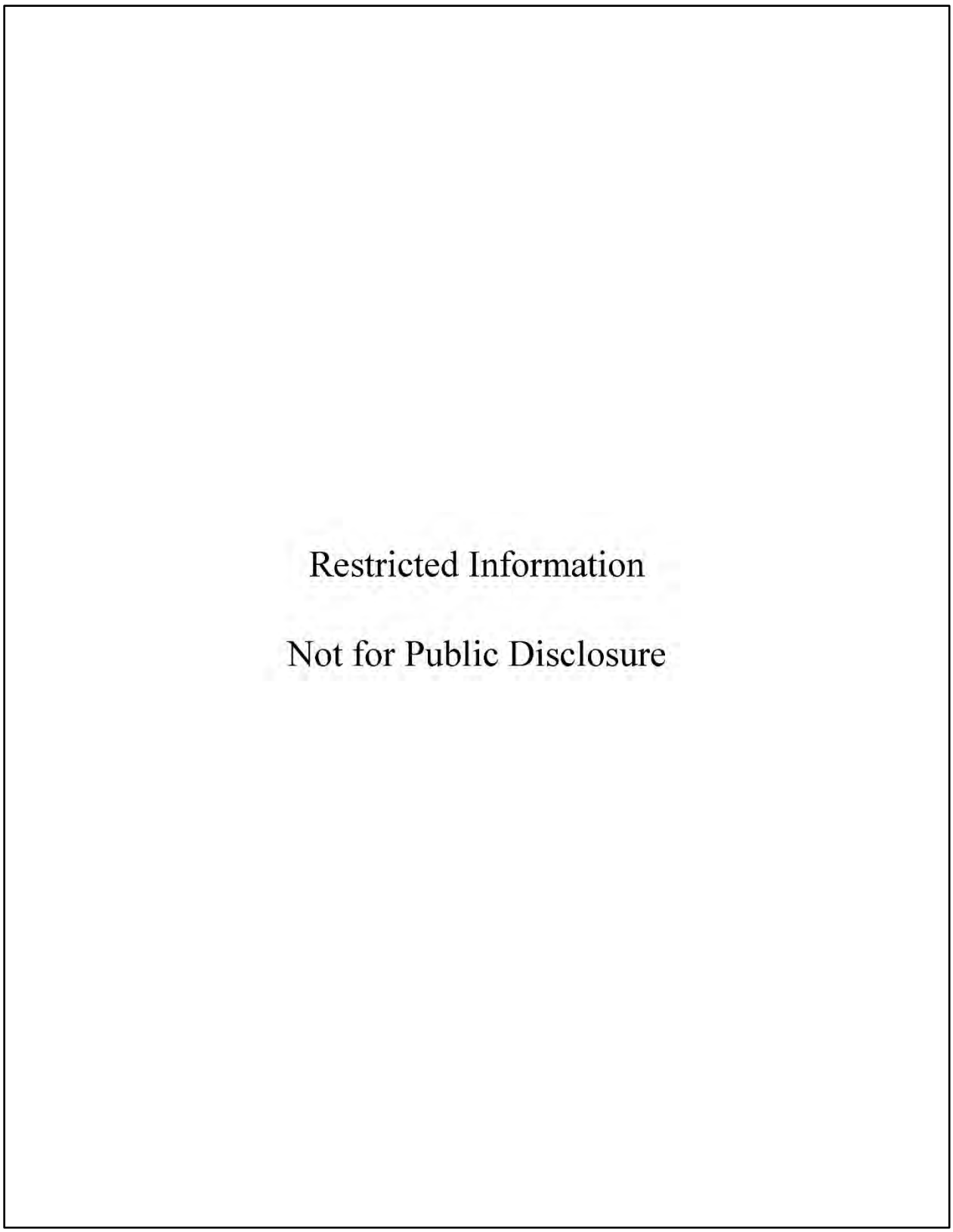

Figure 23. Map of site 41UT158 (Revisit).

Figure 24. Site 41UT158 overview, facing east.

Figure 25. Feature 1 at site 41UT158, facing south.

Figure 26. Feature 2 at site 41UT158 overview, facing west.

Figure 27. Surficial artifact assemblage.

Figure 28. Core found on the ground surface at site 41UT158.

Table 10. Shovel Tests at Site 41UT158

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
RDB028	1	0-50	N	7.5YR 4/6	Silty clay	None	Compact soil
RDB029	1	0-50	N	7.5YR 4/6	Silty clay	None	Bedrock
RDB030	1	0-55	N	7.5YR 4/6	Silty clay	None	Bedrock
RDB031	1	0-45	N	7.5YR 4/6	Silty clay	None	Bedrock
RDB032	1	0-45	N	7.5YR 4/6	Silty clay	None	Compact soil
RDB033	1	0-50	N	7.5YR 4/6	Silty clay	None	Bedrock
MDP021	1	0-30	N	10YR 6/3	Silt	None	Compact soil
MDP022	1	0-60	N	10YR 5/3	Silt	None	Caliche
MDP023	1	0-55	N	10YR 6/3	Silt	None	Caliche
RLJ024	1	0-60	N	7.5YR 5/4	Silt loam	None	Caliche
RLJ025	1	0-60	N	7.5YR 5/4	Silt loam	None	Compact soil
RLJ026	1	0-60	N	10YR 6/2	Silty clay loam	None	Caliche
RLJ027	1	0-50	N	10YR 5/4	Silt loam	None	Compact soil
RLJ028	1	0-50	N	7.5YR 5/4	Silt loam	None	Compact soil

* P=Positive / N=Negative

Site Interpretation and Summary

Site 41UT158 consists of a low-density lithic scatter with two deflated thermal features. The site was most likely a temporary campsite where on-site activities were limited to lithic reduction and tool manufacture and maintenance. The majority of the debitage seems to be the result of late-stage lithic reduction and the presence of the core is the result of early-stage lithic reduction. The thermal features also indicate that resource processing/extraction could have taken place on site.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and both features are deflated and are unlikely to yield information that will refine our understanding of past lifeways in this region. The site has been extensively shovel tested and no subsurface deposits have been encountered; additionally, the features are deflated, and the site lacks datable materials. Therefore, SWCA recommends the site as not eligible for the NRHP under Criterion D. The portion of site 41UT158 within the ROW is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work or avoidance is recommended; however, portions of the site outside the current ROW remained UNDETERMINED for the NRHP or as an SAL.

Isolated Finds in Upton County

Seven IFs were encountered on UT Lands in Upton County (Table 11). IFs, by definition, are not eligible for the NRHP or as an SAL. All IFs underwent intensive shovel testing to determine if subsurface artifacts and deposits were present.

Table 11. Isolated Finds in Upton County

Isolated Find No.	Description	Appendix A Map Page
ALB-UT-ML-PRA-016-CR-CMS1	One primary flake	A-12
ALB-UT-PRA-018-CR-DT01	One tertiary flake	A-2
ALB-UT-PRA-018-CR-JDH1	One secondary flake	A-1
ALB-UT-PRA-023-CR-CMS5	One chert utilized flake	A-11
ALB-UT-PRA-023-CR-CMS6	Two chert secondary flakes	A-11; A-23
ALB-UT-PRA-023-CR-JDH1	One chert core	A-8
ALB-UT-ML-PRA-016-CR-MDP1	One primary flake	A-15

Reagan County

The pipeline crosses 12.14 miles of mainline and 0.18 mile of access road on UT Lands in Reagan County, this includes parcels WHL-TX-RG-164.00000 through WHL-TX-RG-179.00000. Vegetation is dominated by mesquite, but also includes juniper, grasses, and cacti. SWCA excavated a total of 558 shovel tests (451 shovel tests for survey and 107 shovel tests to delineate sites) on UT Lands in Reagan County (Appendices A and B). Primary anthropogenic disturbances within the parcels include the previous construction from existing oil and gas field infrastructure (e.g., access roads and pipelines). Natural disturbances include wind erosion/scouring.

SWCA revisited five previously recorded sites (i.e., 41RG117, 41RG158, 41RG239, 41RG282, and 41RG323), newly recorded three archaeological sites (i.e., 41RG402, 41RG403, and 41RG404), and recorded four IFs within the project area on UT Lands in Reagan County (Figure 29).

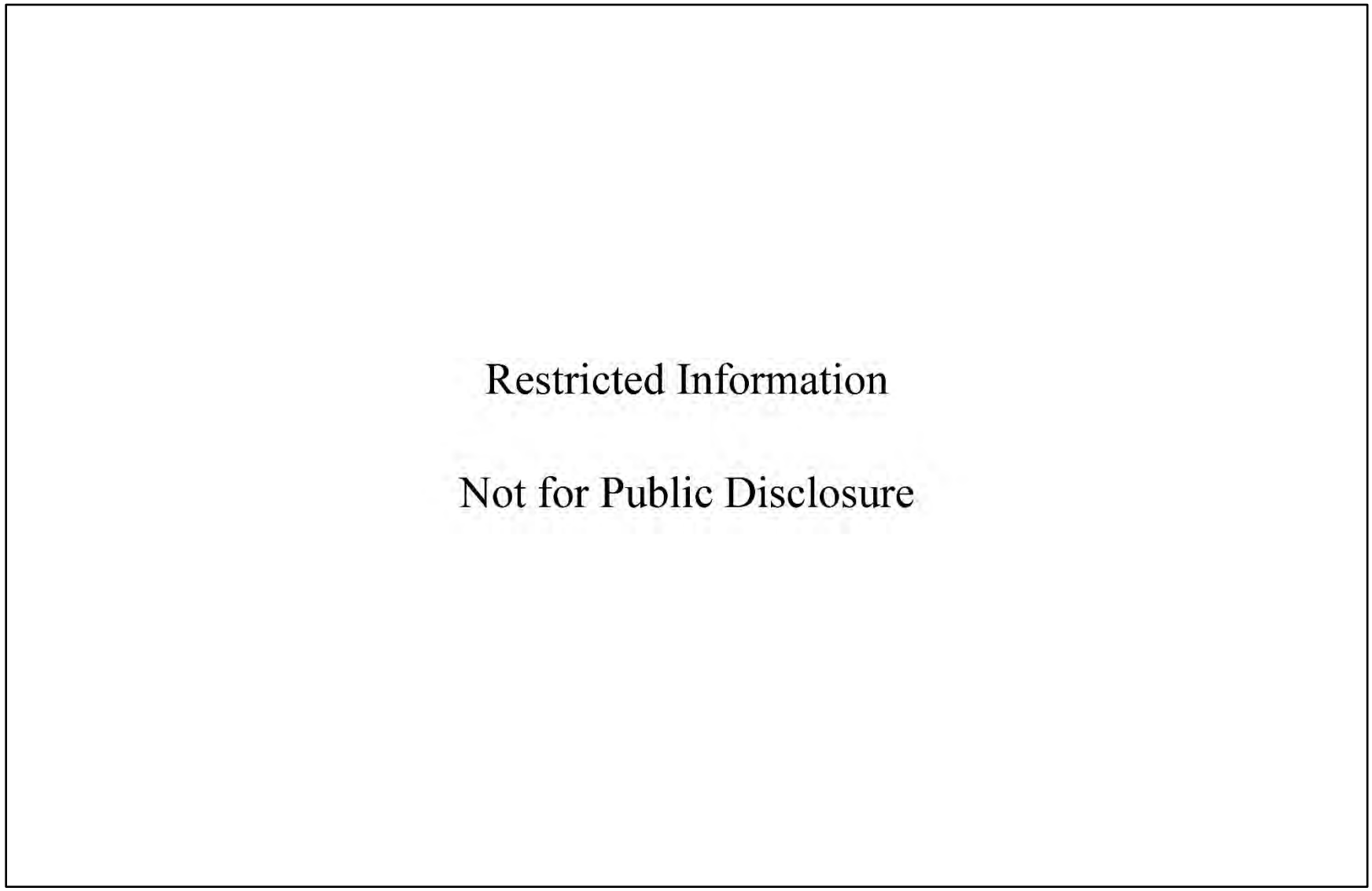

Figure 29. Location of identified sites and IFs within the project area on UT Lands in Reagan County.

Site 41RG117 (Revisit)

County: Reagan

Elevation: 890 m (2,920 feet)

Landowner: University of Texas

Cultural Affiliation and Age: Late Archaic (2500–1000 B.C.); Historic (A.D. 1870–1920)

Site Type: Prehistoric open campsite; Historic artifact scatter

NRHP Eligibility Recommendation: Not eligible within ROW; Undetermined outside ROW

Management Recommendations: None, additional survey if the current alignment changes

PREVIOUS INVESTIGATION

Site 41RG117 was originally recorded by Dawson Geophysical in 2010 for the Pioneer Seismic project, as part of Antiquities Permit No. 6098. At that time, the site was recorded as an open campsite with four hearths, one dispersed burned rock midden, one Conejo dart point, and lithic debitage. The NRHP eligibility was listed as undetermined in July of 2013 although no SAL recommendation was provided.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41RG117 on September 6, 2019. Site 41RG117 is a small prehistoric and historic-age artifact scatter located on a relatively flat upland plain. The site is located approximately 2.2 miles (3.5 km) southeast of Live Oak Creek and is 1.9 miles (3.1 km) west of the intersection of Lone Wolf Road and "W" Road. The site measures approximately 60 m north-south by 25 m east-west (Figure 30; Appendix A: Page A-28). Vegetation throughout the site consisted of typical desert scrub vegetation, including juniper, desert scrub brush, and short grasses. Ground surface visibility was very high across the site, averaging 80 percent (Figure 31). Site 41RG117 has been significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline, ranching, a corral immediately northwest of the site, and a two-track road that bisects the site (Figure 32). The site is estimated at being less than 25 percent intact.

Features

The previous recording of the site encountered four thermal features and one dispersed burned rock midden. The current revisit encountered no cultural features at the site; the features appear to have been destroyed by previous construction and ranching activities.

Material Identified

The prehistoric artifact assemblage consisted of one chert tertiary flake (bifacial thinning flake) and two burned rock fragments (Figure 33). SWCA was unable to locate the Conejo dart point that was identified during the initial site recording in 2010. The historic artifact assemblage consists of three shards of glass (one colorless, one aqua, and one solarized), one bottle fragment, and a bullet casing (Figures 34 and 35). Although the bottle is missing a maker's mark that could determine the age of the historic component, it is possible to determine an age range from the shards of solarized and aqua glass observed at the site. The light amethyst color in solarized glass occurs when the light interacts with the manganese component of the glass. The use of manganese in glass is common from A.D. 1890 to 1920 (Society for Historical Archaeology [SHA] 2019). Additionally, the aqua glass was a common color for all types of bottles from A.D. 1870 to 1920. After A.D. 1920, the use of aqua glass largely declined, with the exception of its use in soda bottles and a line of mason jars made by the Ball Company (SHA 2019).

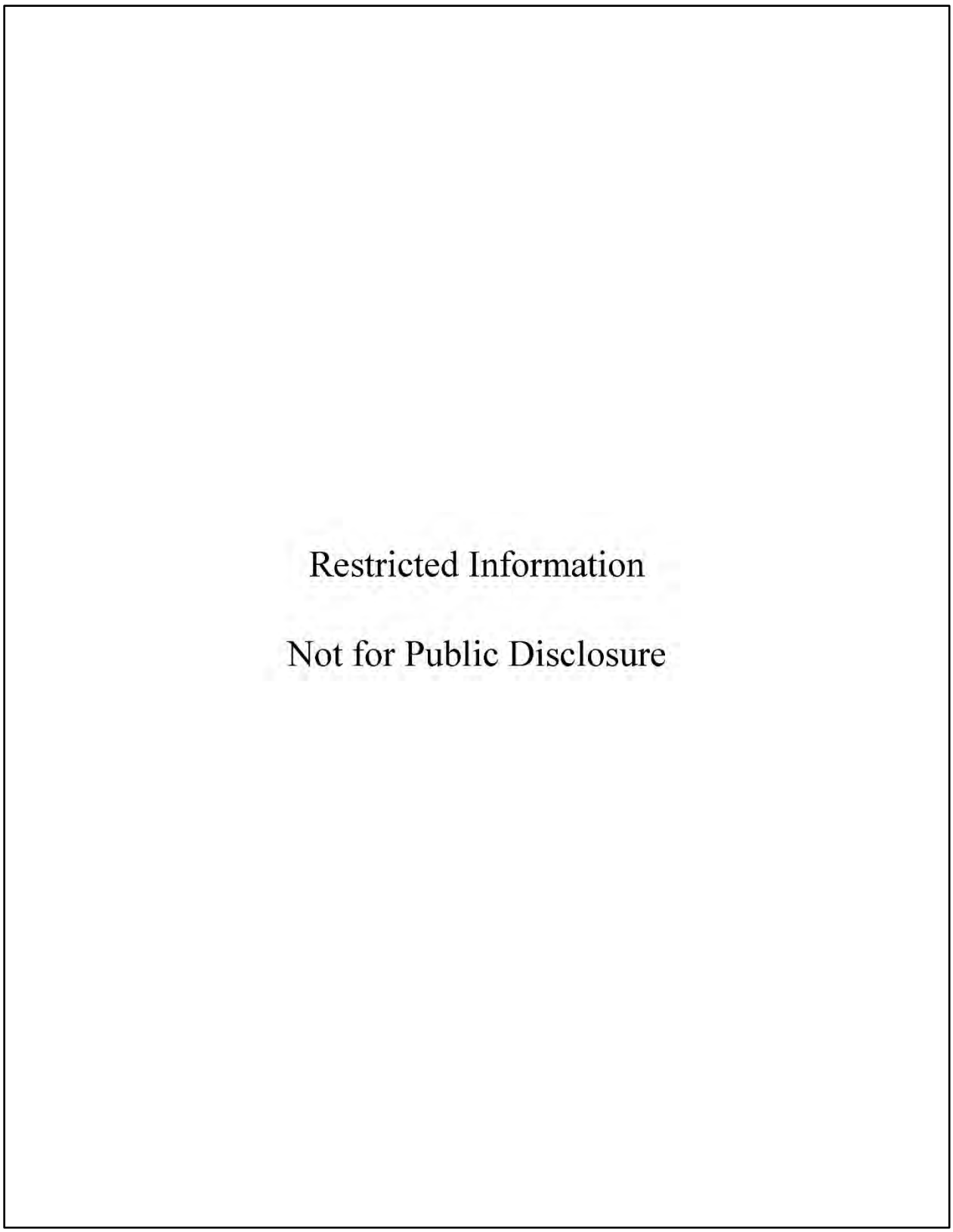

Figure 30. Map of site 41RG117 (Revisit).

Figure 31. Site 41RG117 overview and two-track road bisecting the site, facing north.

Figure 32. Corral immediately adjacent to site 41RG117, facing northwest.

Figure 33. Flake found on the ground surface at site 41RG117.

Figure 34. Bottle found on the ground surface at site 41RG117.

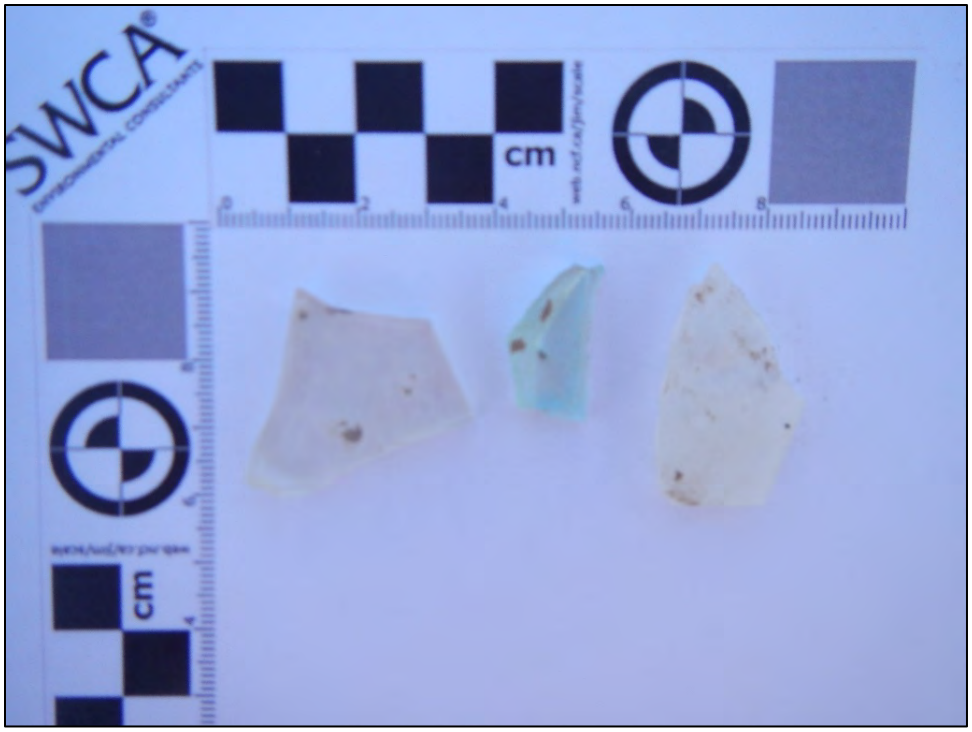

Figure 35. Left solarized, middle aqua and right colorless glass found on the ground surface at site 41RG117.

Subsurface Investigations

SWCA excavated 16 shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests CMS007–CMS008, HBM010–HBM011, HBM025–HBM027, SAB010, SAB012, JGS008–JGS009, JGS025–JGS027, JRK005, and JRK006). These shovel tests generally revealed the presence of a single stratum of brownish yellow (10YR 5/4) silt loam to depths of approximately 45 cmbs, terminating at compact soils, or bedrock (Table 12). Additionally, two of these shovel tests (i.e., JRK005, and JRK006) were excavated along the proposed access road to the east and southeast of the site. No cultural materials were identified along the proposed access road. All shovel tests were negative for buried cultural materials.

Table 12. Shovel Tests at Site 41RG117

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
CMS007	1	0-60	N	10YR 6/2	Sandy clay Loam	None	Compact soil
CMS008	1	0-35	N	10YR 6/2	Sandy clay loam	None	Compact soil
HBM010	1	0-45	N	10YR 5/4	Silt	None	Compact soil
HBM011	1	0-45	N	10YR 5/4	Silt	None	Compact soil
HBM025	1	0-45	N	10YR 5/4	Silt	None	Compact soil
HBM026	1	0-45	N	10YR 5/4	Silt	None	Compact soil
HBM027	1	0-45	N	10YR 5/4	Silt	None	Compact soil
SAB010	1	0-30	N	10YR 5/3	Silt loam	None	Compact soil

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
SAB012	1	0-20	N	10YR 5/4	Silt loam	None	Compact soil
JGS008	1	0-15	N	10YR 5/4	Silt loam	None	Compact soil
JGS009	1	0-20	N	10YR 5/4	Silt loam	None	Compact soil
JGS025	1	0-15	N	10YR 5/4	Silt loam	None	Compact soil
JGS026	1	0-60	N	10YR 5/4	Silt loam	None	Compact soil
JGS027	1	0-45	N	10YR 5/4	Silt loam	None	Compact soil
JRK005	1	0-50	N	10YR 4/3	Silt Loam	None	N/A
	2	50-65	N	10YR 7/3	Silt Loam	20% Degrading bedrock gravels	Bedrock
JRK006	1	0-40	N	10YR 4/2	Silt Loam	None	N/A
	2	40-90	N	10YR 6/2	Silt Loam	10% Gravels	Bedrock

* P=Positive / N=Negative

Site Chronology

A Late Archaic Native American affiliation (2500–1000 B.C.) was assigned to the prehistoric component of the site due to the initial recording of a Conejo dart point (Turner and Hester 1993:96). The historic component likely dates to sometime between A.D. 1870 and 1920 based on the presence of solarized and aqua glass observed at the site (SHA 2019).

Site Interpretation and Summary

Site 41RG117 consists of a multicomponent site with prehistoric and historic components. The Late Archaic component consist of an open campsite with a sparse lithic scatter, a dispersed burned rock midden, and four hearths. On-site activities likely included resource processing, as well as lithic tool manufacture and maintenance. The historic component of the site consists of a low-density artifact scatter. The site may have been associated with a farmstead and ranching activities.

Eligibility and Management Recommendations

The historic component of site 41RG117 within the ROW is not known to be associated with a locally or regionally significant event or individual and is therefore not eligible for the NRHP under Criteria A or B. The site lacks structural remains and is therefore not eligible under Criterion C. SWCA was unable to locate the diagnostic artifact and features at the site, which may have been destroyed by recent pipeline construction and ranching activities. Therefore, the site is unlikely to yield information that will refine our understanding of past lifeways in this region. The site has been extensively shovel tested and no subsurface deposits have been encountered. Therefore, SWCA recommends the site as not eligible for the NRHP under Criterion D. The portion of site 41RG117 within the ROW is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work or avoidance is recommended; however, portions of the site outside the current ROW remained UNDETERMINED for the NRHP or as an SAL.

Site 41RG158 (Revisit)

County: Reagan

Elevation: 902 m (2,958 feet)

Landowner: University of Texas

Cultural Affiliation and Age: Paleoindian (8,000 – 5,000 B.C.); Transitional Archaic (200 B.C. – A.D. 600)

Site Type: Open campsite

NRHP Eligibility Recommendation: Not eligible within ROW; Undetermined outside ROW

Management Recommendations: None, additional survey if the current alignment changes

PREVIOUS INVESTIGATION

Site 41RG158 was originally recorded by TAS Inc., in 2012 for the Pioneer Seismic project, as part of Antiquities Permit No. 6098. It was recorded as an open campsite consisting of one retouched flake, 35+ flakes, one Paleoindian Midland point, one Ensor dart point, five scrapers, and a burned rock scatter. All artifacts were observed on the surface and no subsurface testing was performed. No cultural features were encountered within the site boundary and no NRHP eligibility recommendation was noted by the investigating firm. In July of 2013, the THC listed the NRHP eligibility for site 41RG158 as undetermined..

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41RG158 on September 6, 7, and 9, 2019. Site 41RG158 is a surficial prehistoric lithic scatter. The site is bisected by Lone Wolf Road. Itis approximately 2.4 miles (3.9 km) southeast of Live Oak Creek and it is 1.6 miles (2.5 km) west of the intersection of Lone Wolf Road and "W" Road. The site is situated on an upland mesa and measures approximately 261 m east-west by 215 m north-south (Figure 36; Appendix A: Page A-28).

Vegetation throughout the site consisted of typical desert scrub vegetation, including juniper, creosote, prickly pear, desert scrub brush, and short grasses. Ground surface visibility was moderate across the site, averaging approximately 50 percent (Figure 37). The site is highly disturbed and significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include land-clearing activities associated with the construction of an existing pipeline. The previous pipeline construction appears to have truncated the north section of the site, as artifacts were observed north and south of the constructed pipeline corridor. Survey of the site was limited to the project corridor; however, the site extends to the south.

Features

No features were encountered at the site.

Material Identified

The artifact assemblage consisted of one secondary flake and four tertiary flakes on the ground surface (Figure 38). Materials were brown or tan chert.

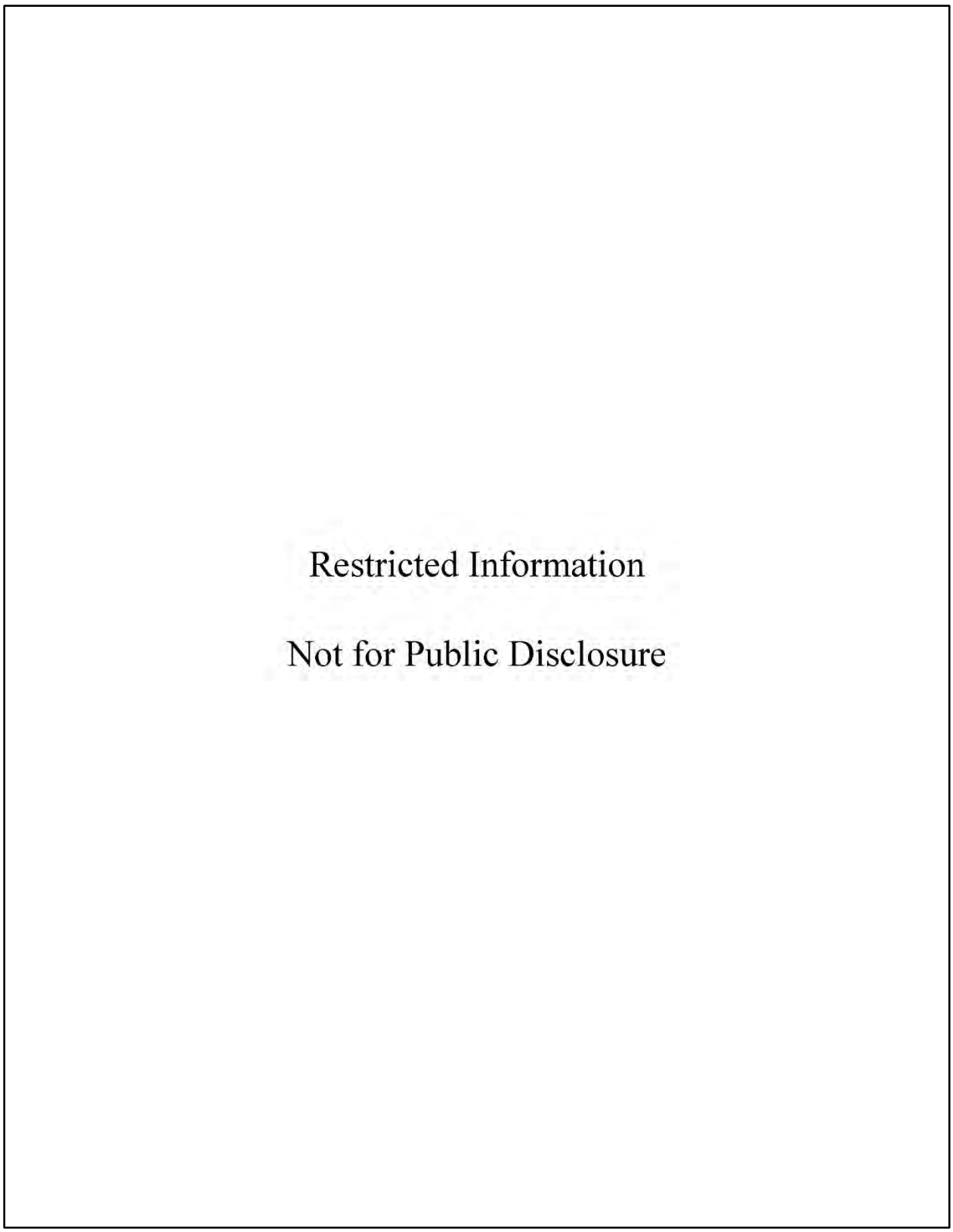

Figure 36. Map of site 41RG158 (Revisit).

Figure 37. Site overview 41RG158, facing east.

Figure 38. Surficial artifact assemblage on site 41RG158.

Subsurface Investigations

SWCA excavated 26 shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests PMW008–PMW009, SKD010–SKD012, NMG032, NMG050, EMA030, EMA047–EMA048, SAB008, CMS009–CMS012, CMS018, HBM006, HBM028–HBM031, JGS028–JGS030, MDP011, and MDP022). These shovel tests generally revealed the presence of a single stratum of yellowish brown (10YR 5/4) silt or silt loam to depths of approximately 25 cmbs, terminating at bedrock (Table 13). All shovel tests were negative for buried cultural materials.

Table 13. Shovel Tests at Site 41RG158

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
PMW008	1	0-30	N	10YR 5/2	Silt	None	Bedrock
PMW009	1	0-40	N	10YR 5/2	Sandy clay loam	None	Bedrock
SKD010	1	0-10	N	10YR 6/2	Silt	None	Bedrock
SKD011	1	0-10	N	10YR 6/2	Silt	None	Bedrock
SKD012	1	0-40	N	10YR 6/2	Silt	None	Bedrock
NMG032	1	0-20	N	10YR 4/4	Loamy sand	None	Bedrock
NMG050	1	0-20	N	10YR 4/4	Loamy sand	Gravels 25%	Bedrock
EMA030	1	0-10	N	7.5YR 6/2	Silt	None	Bedrock
EMA047	1	0-10	N	7.5YR 6/2	Silt	None	Bedrock
EMA048	1	0-5	N	7.5YR 6/2	Silt	None	Bedrock
SAB008	1	0-20	N	10YR 5/4	Silt loam	None	Compact soil
CMS009	1	0-25	N	10YR 6/2	Loamy sand	None	Bedrock
CMS010	1	0-25	N	10YR 6/2	Loamy sand	Gravels 20%	Bedrock
CMS011	1	0-15	N	10YR 6/2	Loamy sand	None	Bedrock
CMS012	1	0-35	N	10YR 6/2	Sandy clay loam	None	Bedrock
CMS018	1	0-30	N	10YR 5/3	Loamy sand	None	Bedrock
HBM006	1	0-35	N	10YR 5/4	Silt	None	Cobble impasse
HBM028	1	0-10	N	10YR 5/4	Silt	None	Bedrock
HBM029	1	0-10	N	10YR 5/4	Silt	None	Bedrock
HBM030	1	0-20	N	10YR 5/3	Silt	None	Bedrock
HBM031	1	0-25	N	10YR 5/4	Silt	None	Bedrock
JGS028	1	0-25	N	10YR 5/4	Silt	Gravels 70%	Bedrock
JGS029	1	0-10	N	10YR 5/4	Silt loam	Gravels 50%	Bedrock
JGS030	1	0-10	N	10YR 5/4	Silt loam	Gravels 80%	Bedrock
MDP011	1	0-20	N	7.5YR 6/3	Silt loam	Gravels 60%	Compact soil
MDP022	1	0-35	N	10YR 5/3	Silt loam	Gravels 50%	Compact soil

* P=Positive / N=Negative

Site Chronology

Although no temporally diagnostic artifacts were encountered during SWCA's revisit, TAS Inc., identified a Paleoindian Midland point and an Ensor dart point during the initial site recording in 2012. Based on this, the site likely has components dating to the Paleoindian (8,000 – 5,000 B.C.) and Transitional Archaic (200 B.C. – A.D. 600) (Turner and Hester 1993:114, 155).

Site Interpretation and Summary

Site 41RG158 was originally recorded as a low-density lithic scatter. The current investigations located a portion of the lithic scatter. However, survey was limited to the survey corridor and the site extends south of the corridor. The site was most likely a temporary campsite where on-site activities were limited to lithic reduction and tool manufacture. The majority of the debitage seems to be the result of mid-late stage lithic reduction.

Eligibility and Management Recommendations

Although Site 41RG158 yielded surficial diagnostic artifacts (Paleoindian and Transitional Archaic lithic points) during the initial investigation in 2012, the SWCA 2019 field investigation did not observe surface or subsurface cultural material within the project's proposed ROW and the site is unlikely to yield information that will refine our understanding of past lifeways in this region. Therefore, SWCA recommends the portion of site 41RG158 within the ROW as NOT ELIGIBLE under Criterion D for the NRHP or as an SAL. No further work or avoidance is recommended; however, portions of the site outside the current ROW remained UNDETERMINED for the NRHP or as an SAL.

Site 41RG239 (Revisit)

County: Reagan
Elevation: 835 m (2,740 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Artifact scatter
NRHP Eligibility Recommendation: Not eligible within ROW; Undetermined outside ROW
Management Recommendations: None, additional survey if the current alignment changes

PREVIOUS INVESTIGATION

Site 41RG239 was originally recorded by TAS, Inc., in 2010 for the Pioneer Seismic project, as part of Antiquities Permit No. 6098. At that time, the site was recorded as an unknown prehistoric lithic scatter consisting of non-diagnostic tools, two quartzite flakes, one quartzite core, two chert flakes, and one chert core. NRHP eligibility status was listed as undetermined in July of 2013 by the THC. . In 2018, the site was revisited by SWCA for the Gulf Coast Express project, as part of Antiquities Permit No. 8324 (Cohen 2018). During the second revisit the site was recorded as a prehistoric lithic scatter consisting of three chert flakes. The site was recommended as not eligible for the NRHP or as an SAL; the THC concurred with this recommendation on July 20, 2018.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41RG239 on September 9, 2019. Site 41RG239 is a prehistoric site of unknown cultural or temporal affiliation. The site is situated on an upland plain, approximately 0.04 mile (0.6 km) east of Live Oak Creek and 4 miles (6.4 km) west-northwest of the intersection of Lone Wolf Road and "W" Road. The site measures approximately 91 m north-south by 71 m east-west (Figure 39; Appendix A: Page A-26). Vegetation throughout the site consisted of typical desert scrub vegetation, including juniper, prickly pear, desert scrub brush, and short grasses. Ground surface visibility was high across the site, averaging approximately 75 percent (Figure 40).

Site 41RG239 is highly disturbed and significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline, vegetation clearing, fence line, a two-track road, and hunting activities (Figure 41). The site is estimated at being less than 25 percent intact.

Features

No features were encountered on the site.

Material Identified

No cultural materials were encountered during the current investigation.

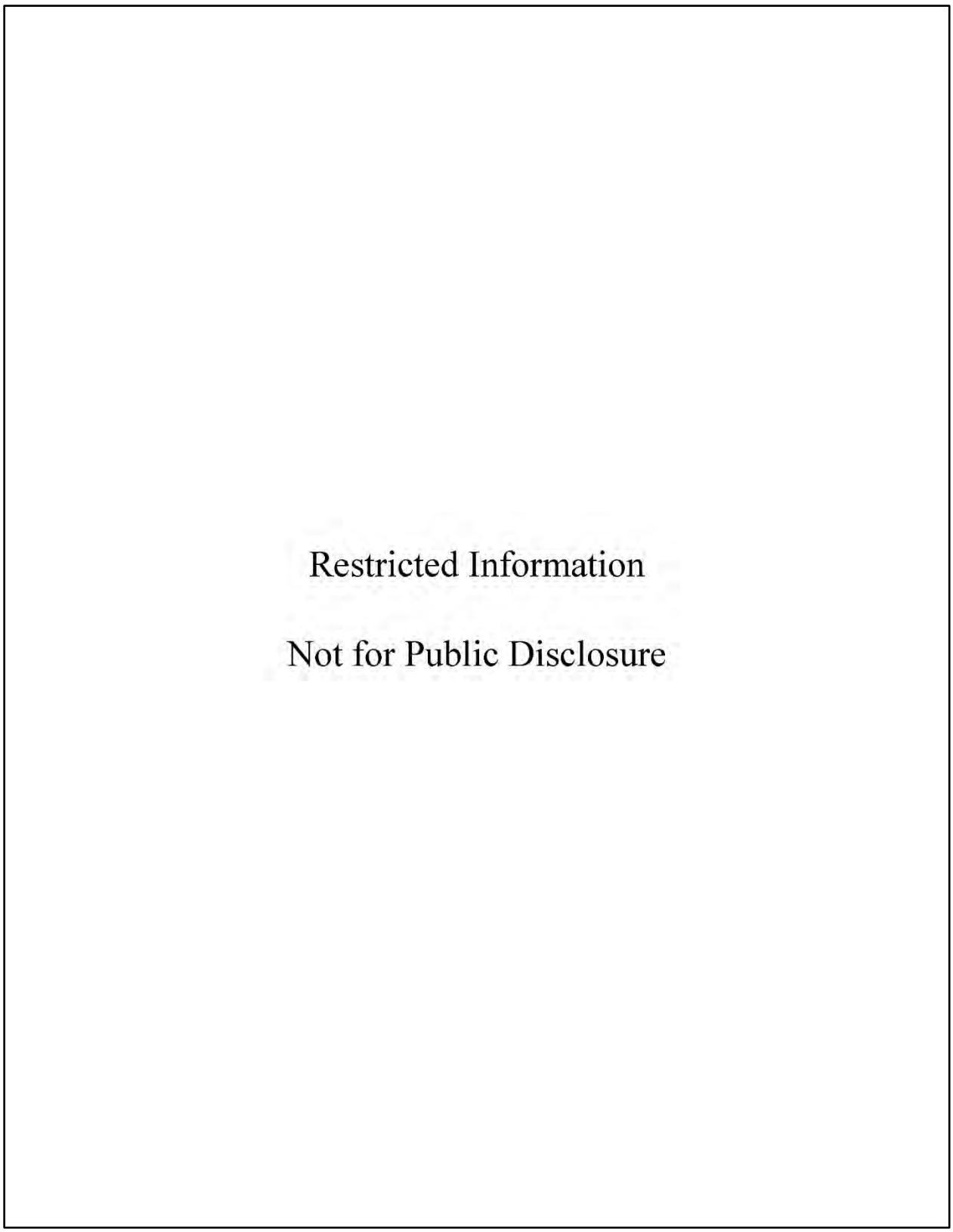

Figure 39. Map of site 41RG239 (Revisit).

Figure 40. Site 41RG239 overview, facing northwest.

Figure 41. Site 41RG239 ranching disturbance overview, facing northwest.

Subsurface Investigations

SWCA excavated nine shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests HNL050, HNL055–HNL057, JGS054, JGS060–JGS061, LCL041, and HBM054). These shovel tests generally revealed the presence of a single stratum of yellowish brown (10YR 5/4) silt or silt loam to depths of approximately 35 cmbs, terminating at compact soil (Table 14). All shovel tests were negative for buried cultural materials.

Table 14. Shovel Tests at Site 41RG239

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
HNL050	1	0-30	N	7.5YR 5/3	Silt	None	Compact soil
HNL055	1	0-25	N	7.5YR 5/2	Silt	None	Compact soil
HNL056	1	0-20	N	7.5YR 5/3	Silt	None	Compact soil
HNL057	1	0-35	N	7.5YR 5/3	Silt	None	Compact soil
JGS054	1	0-35	N	10YR 5/4	Silt loam	Gravels 80%	Compact soil
JGS060	1	0-25	N	10YR 5/4	Silt loam	Gravels 50%	Compact soil
JGS061	1	0-25	N	10YR 5/4	Silt loam	Gravels 60%	Compact soil
LCL041	1	0-46	N	10YR 4/3	Silty clay loam	Subrounded gravels 10%	Compact soil
HBM054	1	0-50	N	10YR 5/3	Silt loam	None	Compact soil

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

Site Interpretation and Summary

Site 41RG239 was originally recorded as a low-density lithic scatter. The current investigations did not identify any cultural remains within the survey corridor. However, based on the previous investigations, the site was most likely a temporary campsite where on-site activities were limited to lithic reduction and tool manufacture. Portions of the site may be extant outside of the current survey corridor.

Eligibility and Management Recommendations

The site was not relocated within the ROW. The site has been extensively surveyed and shovel tested and no surface or subsurface deposits have been encountered. Therefore, SWCA recommends the site as not eligible for the NRHP under Criterion D. The portion of site 41RG239 within the ROW is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work or avoidance is recommended; however, portions of the site outside the current ROW remain UNDETERMINED for the NRHP or as an SAL.

Site 41RG282 (Revisit)

County: Reagan
Elevation: 894 m (2,935 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Open campsite
NRHP Eligibility Recommendation: Not eligible within ROW; Undetermined outside ROW
Management Recommendations: None, additional survey if the current alignment changes

PREVIOUS INVESTIGATION

Site 41RG282 was originally recorded by TAS, Inc., in 2012 for the Global Seismic project, as part of Antiquities Permit No. 6191. At that time, the site was recorded as an open campsite consisting of one scraper and two chert flakes with five hearth features andin December of 2012, the THC listed the NRHP eligibility status as undetermined for this site.In 2018, site 41RG282 was revisited by SWCA for the Gulf Coast Express project, as part of Antiquities Permit No. 8324 (Cohen 2018). At that time, the site was recorded as an open campsite consisting of three deflated thermal features, one biface and three flakes. The site was recommended as not eligible for the NRHP or as an SAL; the THC concurred with this recommendation on July 20, 2018.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited Site 41RG282 on September 5, 2019. Site 41RG282 is a prehistoric open campsite of unknown cultural or temporal affiliation. The site is located 5.0 miles (8.0 km) south of the intersection of Lone Wolf Road and "W" Road. The site is situated on an upland plain, approximately 20.0 miles (32.2 km) northeast of the Pecos River. The site measures approximately 62 m north-south by 178 m east-west (Figure 42; Appendix A: Page A-30). Vegetation throughout the site consisted of typical desert scrub vegetation, including juniper, desert scrub brush, and short grasses. Ground surface visibility was moderate across the site, averaging approximately 50 percent (Figure 43).

Site 41RG282 is highly disturbed and significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline (Figure 44). The pipeline construction appears to have truncated the southern portion of the site. The site is estimated at being less than 25 percent intact; however, survey was limited to the survey corridor and the site continues north outside of the corridor. Additionally, the site may be associated with site 41RG404, located 50 m south of 41RG282.

Features

SWCA was unable to locate the hearth features recorded in 2012 and 2018. No additional features were encountered on the site; however, the site extends to the north of the Project corridor and survey was restricted to the ROW. The previously recorded features may have been destroyed by pipeline construction or may be in the portion of the site north of the ROW.

Material Identified

The artifact assemblage consisted of one chert tertiary flake and two burned rocks. Unfortunately, the field artifact photos were lost following field surveys.

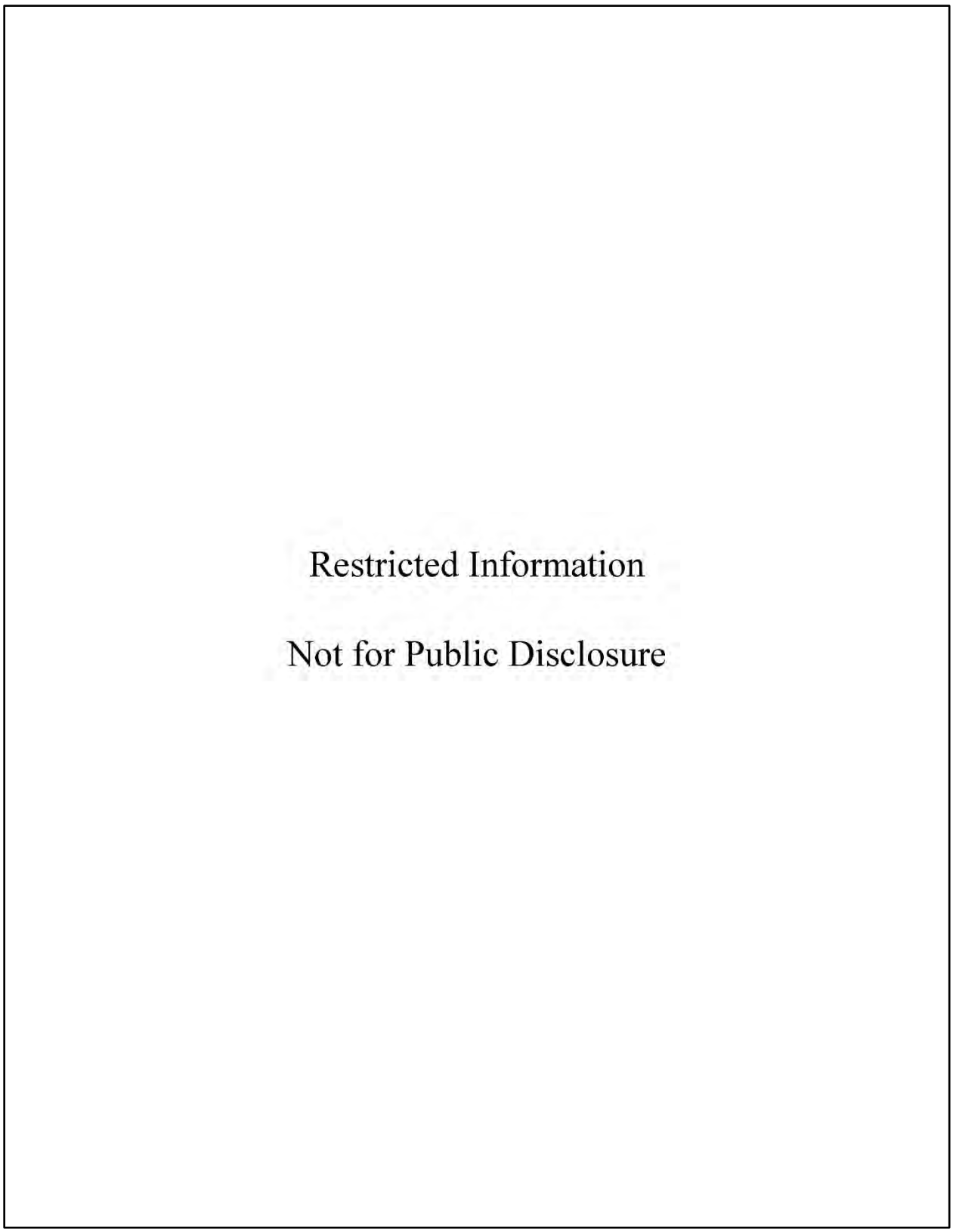

Figure 42. Map of site 41RG282 (Revisit).

Figure 43. Site 41RG282 overview, facing west.

Figure 44. Site 41RG282 previous pipeline corridor disturbance, facing northeast.

Subsurface Investigations

SWCA excavated seven shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests EMA002–EMA003, EMA005, NMG002–NMG003, CMS002, and MDP004). These shovel tests generally revealed the presence of a single stratum of pinkish gray (7.5YR 6/2) silty clay to depths of approximately 40 cmbs, terminating at compact soils (Table 15). All shovel tests were negative for buried cultural materials.

Table 15. Shovel Tests at Site 41RG282

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
EMA002	1	0-50	N	7.5YR 6/2	Silty clay	None	Bedrock
EMA003	1	0-30	N	7.5YR 6/2	Silty clay	None	Compact soil
EMA005	1	0-55	N	7.5YR 6/2	Silty clay	None	Compact soil
NMG002	1	0-40	N	7.5YR 6/3	Loamy sand	None	Compact soil
NMG003	1	0-40	N	7.5YR 6/3	Loamy sand	None	Compact soil
CMS002	1	0-25	N	10YR 6/2	Sandy clay loam	None	Compact soil
	2	25-35	N	10YR 4/3	Clay loam	None	
MDP004	1	0-40	N	7.5YR 5/3	Silt loam	None	Compact soil

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

Site Interpretation and Summary

Site 41RG282 consists of a low-density open campsite. The site may have been a resource extraction locale. On-site activities likely included resource processing, as well as lithic tool manufacture and maintenance.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features within the ROW and is unlikely to yield information that will refine our understanding of past lifeways in this region. Therefore, SWCA recommends the site not eligible for the NRHP under Criterion D. The portion of site 41RG282 within the ROW is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work or avoidance is recommended; however, portions of the site outside the current ROW remained UNDETERMINED for the NRHP or as an SAL.

Site 41RG323 (Revisit)

County: Reagan
Elevation: 902 m (2,960 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Open campsite
NRHP Eligibility Recommendation: Not eligible
Management Recommendations: None

PREVIOUS INVESTIGATION

Site 41RG323 was originally recorded by TAS, Inc., in 2012 for the CBL3D Seismic project, as part of Antiquities Permit No. 6098. At that time, the site was recorded as a burned rock midden consisting of a lithic scatter, one thermal feature, and evidence of a burned rock midden. No NRHP eligibility recommendation was provided by the investigating firm and in July of 2013, the THC listed NRHP eligibility status as undetermined.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41RG323 on September 6, 2019. Site 41RG323 is a prehistoric open campsite of unknown cultural or temporal affiliation. The site is bisected by Lone Wolf Road and is approximately 2.7 miles (4.3 km) southeast of the intersection of Live Oak Creek and the Whistler Pipeline corridor. The site is situated on a gently sloping upland plain. The site measures approximately 31 m north-south by 30 m east-west (Figure 45; Appendix A: Page A-28,29). Vegetation throughout the site consisted of typical desert scrub vegetation, including juniper, prickly pear, desert scrub brush, and short grasses. Ground surface visibility was low across the site, averaging approximately 25 percent (Figure 46).

Site 41RG323 is highly disturbed and significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline, vegetation clearing, construction of Lone Wolf Road, and ranching activities (Figure 47). The site is estimated at being less than 25 percent intact.

Features

SWCA located the thermal feature recorded in 2012. Feature 1 consists of approximately 30 to 40 fragments of burned limestone scattered over an area of 75 cm^2 (Figure 48). Approximately 50 percent of the burned rock consists of small (<5 cm) gravels, 40 percent consists of medium (5–10 cm) gravels, and 10 percent consists of large (10–15 cm) cobbles. The feature was found near the south edge of Lone Wolf Road and may have been disturbed by road construction. No charcoal, organic materials, and/or soil staining were observed in or around the feature during trowel scraping.

Material Identified

Aside from the feature burned rock mentioned above, the artifact assemblage consists of one tan chert tertiary flake and two burned rock fragments (Figure 49).

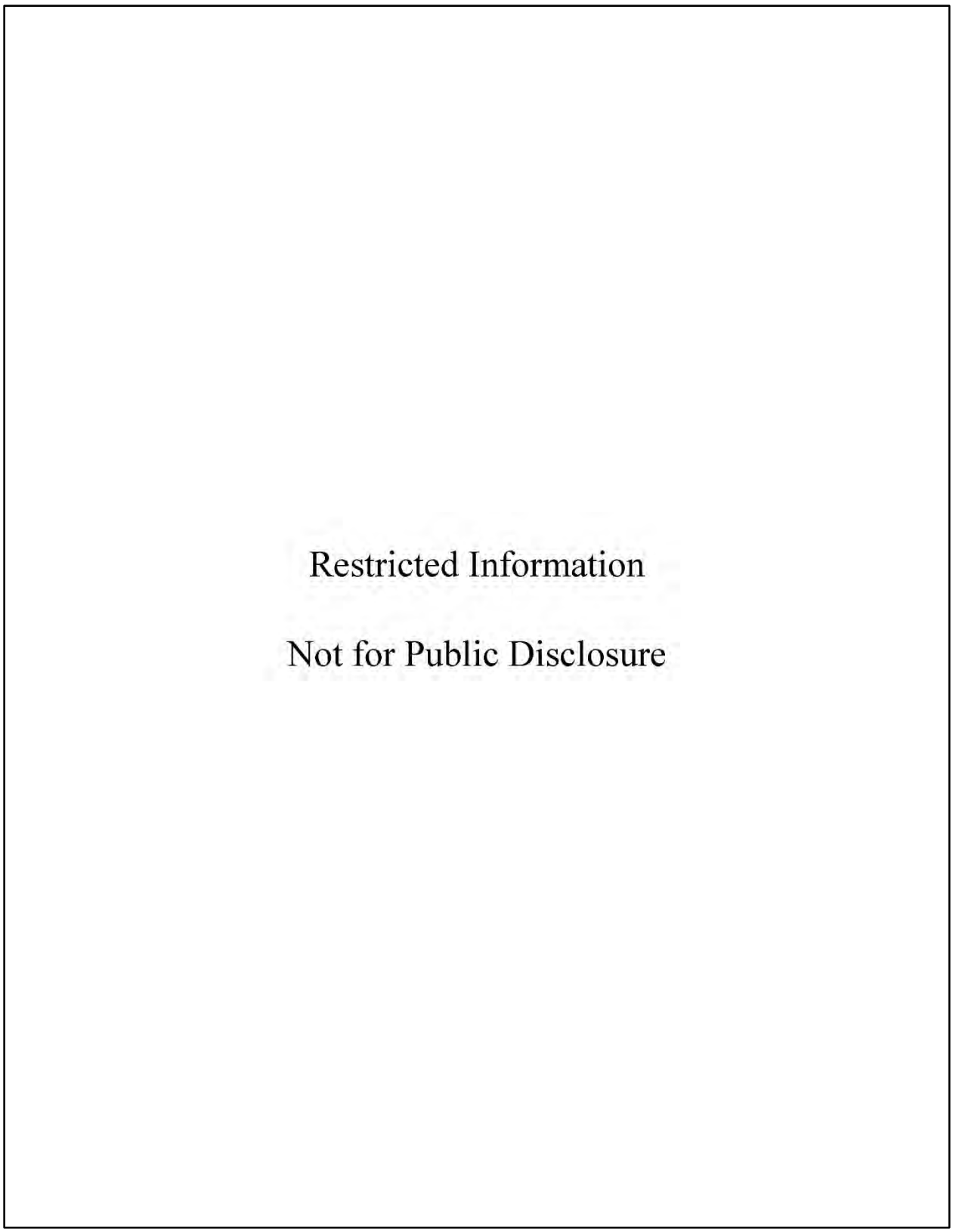

Figure 45. Map of site 41RG323 (Revisit).

Figure 46. Site 41RG323 overview, facing east.

Figure 47. Lone Wolf Road bisecting site 41RG323, facing south.

Figure 48. Feature 1 on site 41RG323, facing north.

Figure 49. Flake found on the ground surface for site 41RG323.

Subsurface Investigations

SWCA excavated 13 shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests EMA010, CMS013, JGS003, JGS031, JGS033, SAB004–SAB006, HBM003, HBM032–HBM034, and NMG010). Shovel Test HBM004 was not excavated due to the presence of a modern paved road. The test location was observed only. These shovel tests generally revealed the presence of a single stratum of brown (10YR 5/4) silt or silt loam to depths of approximately 40 cmbs, terminating at bedrock (Table 16). All shovel tests were negative for buried cultural materials.

Table 16. Shovel Tests at Site 41RG323

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
EMA010	1	0-45	N	7.5YR 6/2	Silt	None	Compact soil
CMS013	1	0-30	N	10YR 6/2	Sandy clay loam	None	Compact soil
	2	30-60	N	10YR 5/3	Sandy clay loam	None	
JGS003	1	0-15	N	10YR 5/4	Silt loam	None	Compact soil
JGS031	1	0-20	N	10YR 5/4	Silt loam	None	Bedrock
JGS033	1	0-30	N	10YR 5/4	Silt loam	None	Bedrock
SAB004	1	0-40	N	10YR 5/4	Silt loam	None	Compact soil
SAB005	1	0-40	N	10YR 5/4	Silt loam	None	Compact soil
SAB006	1	0-40	N	10YR 5/4	Silt loam	None	Compact soil
HBM003	1	0-30	N	10YR 5/4	Silt	None	Bedrock
HBM032	1	0-20	N	10YR 5/3	Silt	None	Bedrock
HBM033	1	0-25	N	10YR 5/4	Silt	None	Bedrock
HBM034	1	0-25	N	10YR 5/4	Silt	None	Bedrock
NMG010	1	0-25	N	10YR 4/4	Loamy sand	None	Bedrock

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

Site Interpretation and Summary

Site 41RG323 consists of a low-density open campsite. The site may have been a resource extraction locale. On-site activities likely included resource processing, as well as lithic tool manufacture and maintenance.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features and is unlikely to yield information that will refine our understanding of past lifeways in this region. The site has been extensively shovel tested and no subsurface deposits have been encountered. Therefore, SWCA recommends the site as not eligible for the NRHP under Criterion D. Site 41RG323 is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work is recommended.

Site 41RG402

County: Reagan
Elevation: 856 m (2,810 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Open campsite
NRHP Eligibility Recommendation: Not eligible
Management Recommendations: None

Site Description

Site 41RG402 is a prehistoric open campsite located approximately 1.6 miles (2.6 km) southeast of the intersection of Live Oak Creek and the Whistler Pipeline corridor. SWCA archaeologists recorded site 41RG402 on September 6, 2019. The site is situated on a relatively flat upland plain and measures approximately 17 m north-south by 17 m east-west (Figure 50; Appendix A: Page A-27). Vegetation throughout the site consisted of desert scrub vegetation, including mesquite, scrub-shrub, tall grasses and juniper (Figure 51). Ground surface visibility was very high across the site, averaging approximately 90 percent. Site 41RG402 has been impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include ranching activities and previous construction of two pipelines that bisect the center and northern portions of the site (Figure 52). The site is estimated at being less than 25 percent intact.

Features

No features were encountered on the site.

Material Identified

The artifact assemblage consisted of one primary flake, one secondary flake, two tertiary flakes, and two burned rock fragments observed on the ground surface. Additionally, two buried burned rock fragments were observed at 30 cmbs in shovel test NMG021. No temporally diagnostic artifacts were observed. Unfortunately, the field artifact photos were lost following field surveys.

Subsurface Investigations

SWCA excavated nine shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests NMG021–NMG025 and EMA019–EMA022). These shovel tests generally revealed the presence of a single stratum of brown (10YR 4/3) loamy sand or silt to depths of approximately 50 cmbs, terminating at bedrock or compact soil (Table 17). One shovel test (i.e., NMG021) was positive for two burned rock fragments at 30 cmbs. No charcoal or soil staining was associated with the burned rock fragments.

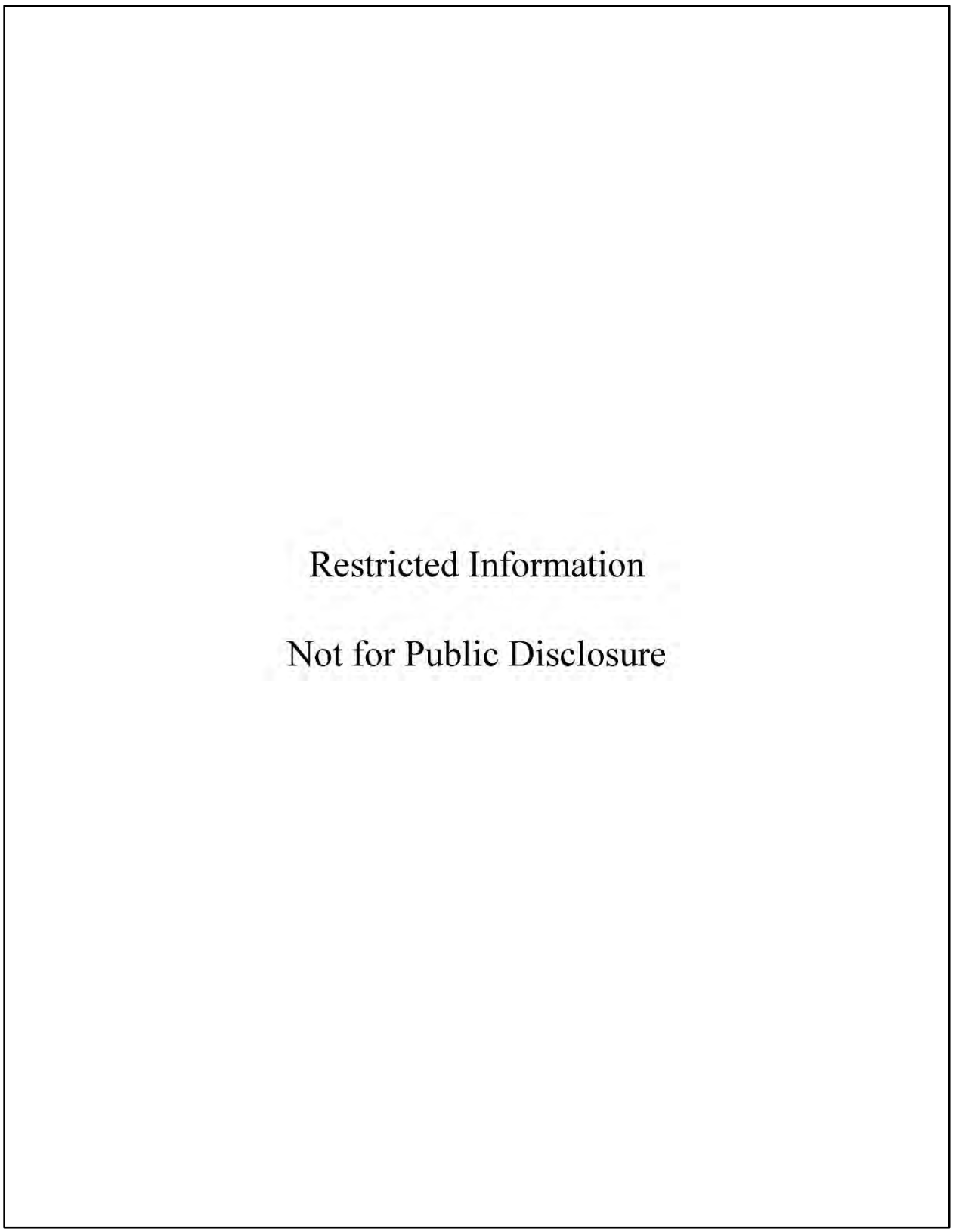

Figure 50. Map of site 41RG402.

Figure 51. Site 41RG402 overview, facing west.

Figure 52. Site 41RG402 previous pipeline disturbance, facing west.

Table 17. Shovel Tests at Site 41RG402

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
NMG021	1	0-10	N	10YR 4/4	Loamy Sand	None	Compact soil
	2	10-20	N	10YR 4/3	Loamy Sand	None	
	3	20-30	P	10YR 4/3	Loamy Sand	2 fire cracked rock fragments observed at 30 cmbs	
	4	30-40	N	10YR 4/3	Loamy Sand	None	
NMG022	1	0-35	N	10YR 4/3	Loamy Sand	None	Compact soil
NMG023	1	0-35	N	10YR 4/3	Loamy Sand	None	Compact soil
NMG024	1	0-15	N	10YR 4/3	Loamy Sand	None	Bedrock
NMG025	1	0-20	N	10YR 4/3	Loamy Sand	None	Bedrock
EMA019	1	0-50	N	7.5YR 6/2	Silt	None	Compact soil
EMA020	1	0-50	N	7.5YR 6/2	Silt	None	Compact soil
EMA021	1	0-35	N	7.5YR 6/2	Silt	None	Compact soil
EMA022	1	0-30	N	7.5YR 6/2	Silt	None	Compact soil

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

Site Interpretation and Summary

Site 41RG402 consists of a surficial and buried open campsite with diffuse artifact assemblage. The site may have been a temporary campsite where on-site activities were limited to lithic reduction and tool manufacture and maintenance. Resource processing may also have occurred based on the presence of isolate burned rock fragments; however, no intact cultural features were identified on site.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features and is unlikely to yield information that will refine our understanding of past lifeways in this region. The site has been extensively shovel tested and subsurface deposits encountered were shallow; additionally, the site lacks datable materials. Therefore, SWCA recommends the site as not eligible for the NRHP under Criterion D. Site 41RG402 is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work is recommended.

Site 41RG403

County: Reagan
Elevation: 846 m (2,776 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Lithic scatter
NRHP Eligibility Recommendation: Not eligible
Management Recommendations: None

Site Description

Site 41RG403 is a prehistoric lithic scatter located approximately 0.5 mile (0.8 km) southeast of the intersection of Live Oak Creek and the Whistler Pipeline corridor. SWCA archaeologists recorded site 41RG403 on September 9, 2019. The site is situated on a relatively flat, upland plan. The site measures approximately 51 m north-south by 50 m east-west (Figure 53; Appendix A: Page A-26). Vegetation throughout the site consisted of patchy desert scrub vegetation, including mesquite, desert scrub, cacti and desert flowers. Ground surface visibility was very high across the site, averaging approximately 90 percent. Site 41RG403 has been impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline, transmission line, oil rigs, road usage, and agricultural activities (Figure 54). Additionally, the previous pipeline construction bisects the northern portion of the site. The site is estimated at being less than 25 percent intact.

Features

No features were encountered on the site.

Material Identified

The artifact assemblage consisted of one secondary flake and one core observed on the ground surface; additionally, one tertiary flake was observed subsurface in shovel test HBM044 at 30 cmbs (Figures 55–57).

Subsurface Investigations

SWCA excavated 16 shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests HNL043–HNL047, HNL052, HBM044–HBM047, JGS048–JGS050, and LCL033–LCL035). These shovel tests generally revealed the presence of a single stratum of brown (7.5YR 5/3) silt or silt loam to depths of approximately 40 cmbs, terminating at compact soil (Table 18). One shovel test (i.e., HBM044) was positive for one tertiary flake at 30 cmbs.

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

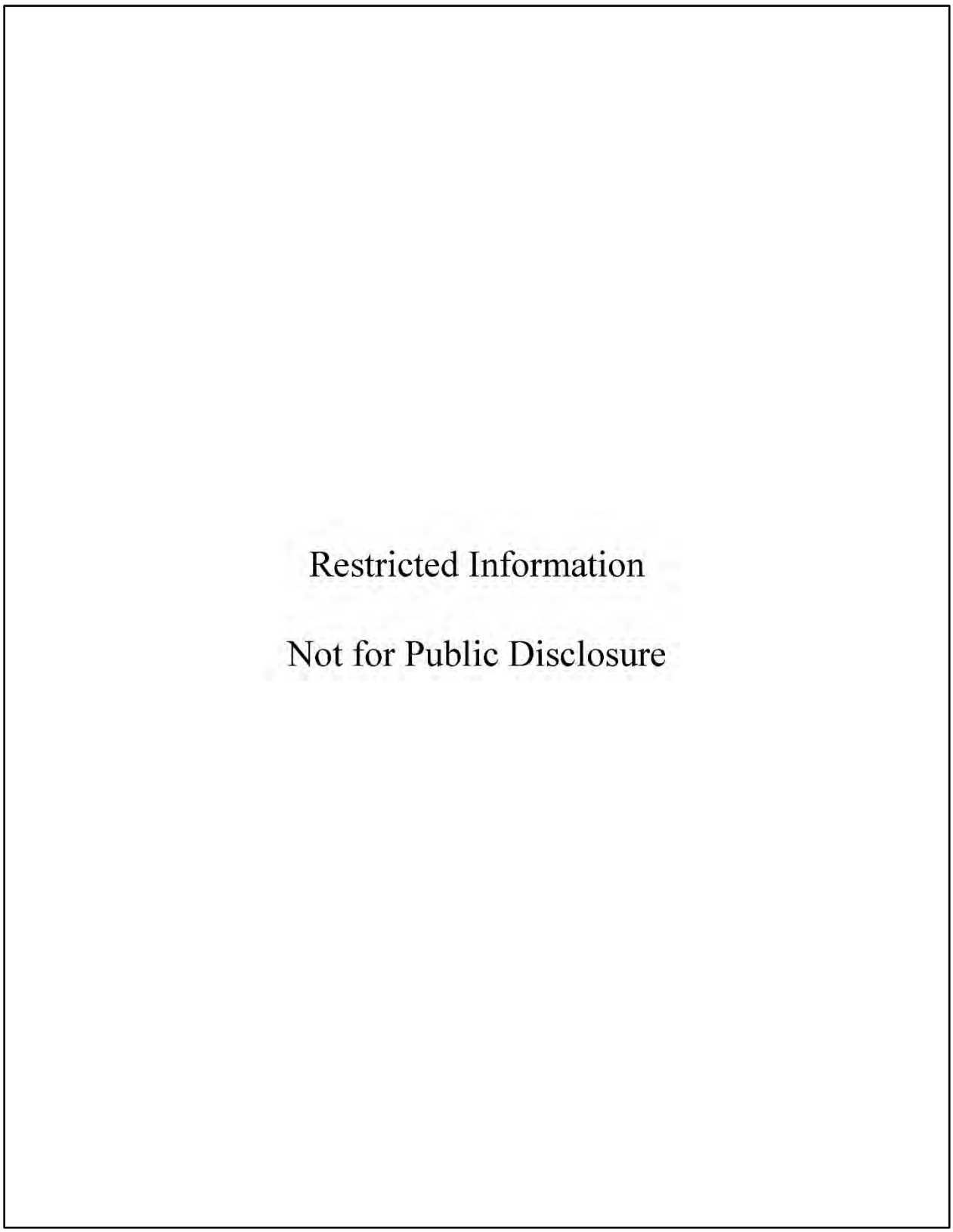

Figure 53. Map of site 41RG403.

Figure 54. Site 41RG403 overview, facing north.

Figure 55. Secondary flake observed on the ground surface at site 41RG403.

Figure 56. Core observed on the ground surface at site 41RG403.

Figure 57. Reverse side of core observed on the ground surface at site 41RG403.

Table 18. Shovel Tests at Site 41RG403

ST No.	Level	Depth (cmbs)	Result*	Munsell	Texture	Description/ Comments	Reason for Termination
HNL043	1	0-25	N	7.5YR 5/3	Silt	Pebbles 10%	Compact soil
HNL044	1	0-30	N	7.5YR 5/3	Silt	None	Compact soil
HNL045	1	0-40	N	7.5YR 5/3	Silt	None	Compact soil
HNL046	1	0-30	N	7.5YR 5/3	Silt	None	Compact soil
HNL047	1	0-30	N	7.5YR 5/3	Silt	None	Compact soil
HNL052	1	0-20	N	7.5YR 5/3	Silt	None	Compact soil
HBM044	1	0-30	N	10YR 5/4	Silt	None	Compact soil
	2	30-40	P	10YR 5/4	Silt	1 Tertiary flake observed at 30 cmbs	
HBM045	1	0-45	N	10YR 5/4	Silt loam	None	Compact soil
HBM046	1	0-45	N	10YR 5/4	Silt loam	None	Compact soil
HBM047	1	0-40	N	10YR 5/4	Silt	None	Compact soil
JGS048	1	0-30	N	10YR 5/4	Silt loam	Gravels 70%	Compact soil
JGS049	1	0-25	N	10YR 5/4	Silt loam	Gravels 75%	Compact soil
JGS050	1	0-30	N	10YR 5/4	Silt loam	Gravels 60%	Compact soil
LCL033	1	0-27	N	10YR 6/2	Silt loam	Subrounded gravels 10%	Compact soil
	2	27-54	N	7.5YR 6/4	Silty clay	Subrounded gravels 10%	
LCL034	1	0-32	N	10YR 6/2	Silt loam	Subrounded gravels 10%	Compact soil
	2	32-53	N	7.5YR 6/4	Silty clay	Subrounded gravels 10%	
LCL035	1	0-27	N	10YR 6/2	Silt loam	Subrounded gravels 10%	Compact soil
	2	27-51	N	7.5YR 6/4	Silty clay	Subrounded gravels 10%	

* P=Positive / N=Negative

Site Interpretation and Summary

Site 41RG403 consists of a low-density surficial and buried lithic scatter. On-site activities likely included limited lithic tool manufacture and maintenance.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features and is unlikely to yield information that will refine our understanding of past lifeways in this region. The site has been extensively shovel tested and subsurface deposits encountered were shallow; additionally, the site lacks datable materials. Therefore, SWCA recommends the site as not eligible for the NRHP under Criterion D. Site 41RG403 is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work is recommended.

Site 41RG404

County: Reagan
Elevation: 895 m (2,937 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Open campsite
NRHP Eligibility Recommendation: Not eligible
Management Recommendations: None

Site Description

Site 41RG404 is a prehistoric open campsite with a burned rock scatter located approximately 5.0 miles (8.0 km) south of the intersection of Lone Wolf Road and West Road and 165 feet (50 m) south of site 41RG282. The site is situated on an upland plain with no discernable slope. The site measures approximately 16 m north-south by 18 m east-west (Figure 58; Appendix A: Page A-30). Vegetation throughout the site consisted of mesquite, pencil cactus, prickly pear, althorn, creosote and other arid adapted plants (Figure 59). Ground surface visibility was moderate across the site, averaging approximately 50 percent. Site 41RG404 has been impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include machine disturbance, burning, and previous construction of a pipeline approximately 22 m north of the site. The site is estimated at being less than 25 percent intact. Additionally, the site may be associated with site 41RG282.

Features

No features were encountered on the site.

Material Identified

The artifact assemblage consisted of four burned rock fragments on the ground surface and six buried burned rock fragments observed in shovel tests (Figure 60). The buried component was observed from 15 to 36 cmbs. No charcoal, organics, or soil staining associated with the burned rock fragments were observed.

Subsurface Investigations

SWCA excavated 11 shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests CMS004, EMA006–EMA007, MDP004, MDP006–MDP009, and NMG004–NMG006). These shovel tests generally revealed the presence of a single stratum of light brown (7.5YR 6/3) silt or loamy sand to depths of approximately 50 cmbs, terminating at compact soil (Table 19). Three shovel tests (i.e., CMS004, NMG004, and NMG005) were positive for cultural materials. All cultural materials observed were burned rock fragments between 15 and 36 cmbs.

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of diagnostic artifacts.

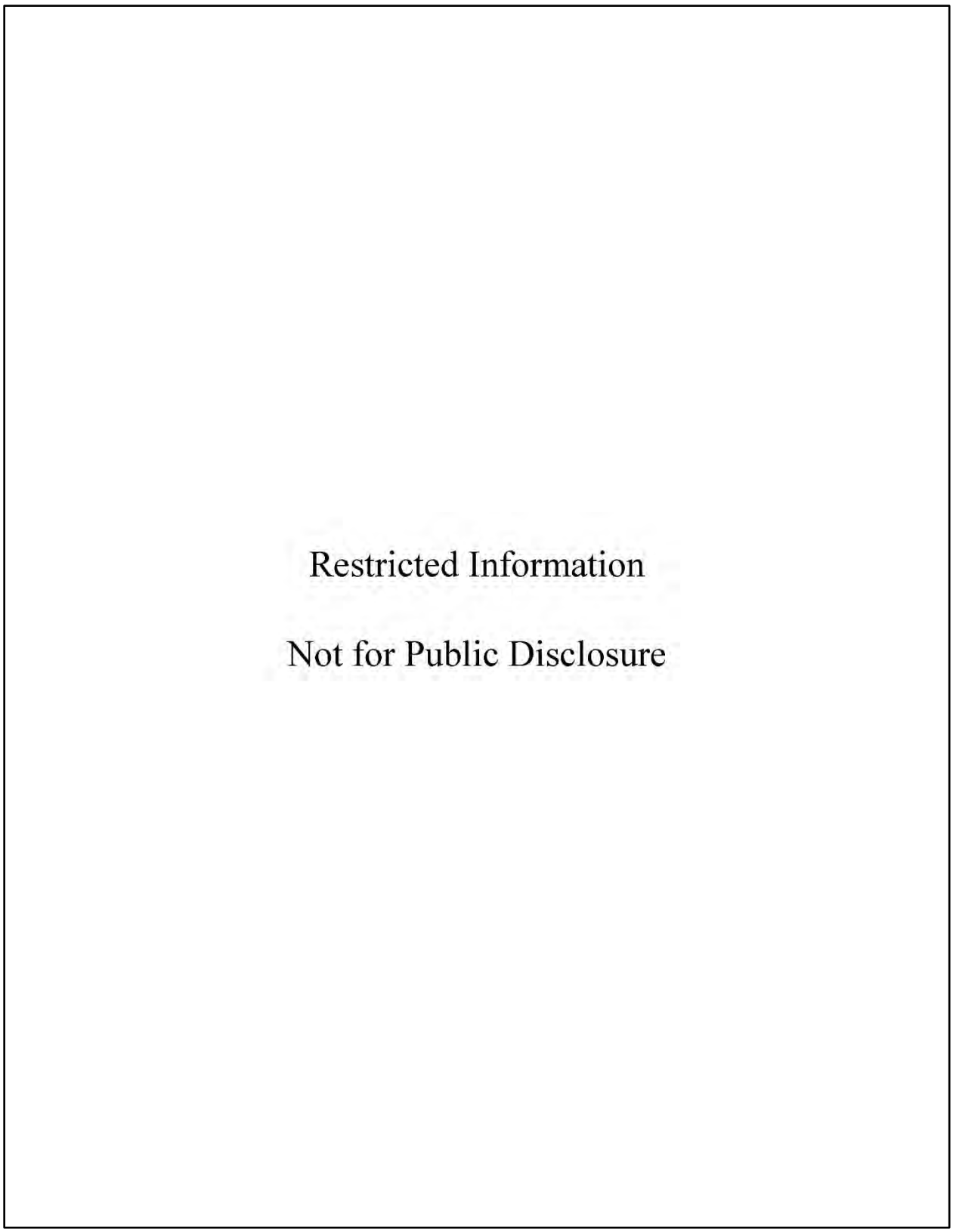

Figure 58. Map of site 41RG404.

Figure 59. Site 41RG404 overview, facing southwest.

Figure 60. Burned rock sample found on the ground surface at site 41RG404.

Table 19. Shovel Tests at Site 41RG404

ST No.	Level	Depth (cmbs)	Result*	Munsell	Texture	Description/ Comments	Reason for Termination
CMS004	1	0-10	N	10YR 6/3	Sandy clay loam	None	Compact soil
	2	10-20	P	10YR 6/3	Sandy clay loam	1 fire cracked rock fragment observed at 15 cmbs	
	3	20-30	N	10YR 6/3	Sandy clay loam	None	
	4	30-40	N	10YR 4/3	Clay loam	None	
EMA006	1	0-50	N	7.5YR 6/2	Silt	None	Compact soil
EMA007	1	0-25	N	7.5YR 6/2	Silt	None	Compact soil
	2	25-50	N	7.5YR 6/3	Silty clay	None	
MDP004	1	0-40	N	7.5YR 5/3	Silt	None	Compact soil
MDP006	1	0-40	N	7.5YR 5/3	Silt loam	None	Compact soil
MDP007	1	0-30	N	7.5YR 6/3	Silt loam	None	Compact soil
	2	30-40	N	7.5YR 5/3	Silt loam	None	
MDP008	1	0-40	N	7.5YR 5/3	Silt loam	None	Compact soil
MDP009	1	0-30	N	7.5YR 6/3	Silt loam	None	Compact soil
	2	30-45	N	7.5YR 5/3	Silt loam	None	
NMG004	1	0-10	N	7.5YR 6/3	Loamy sand	None	Compact soil
	2	10-20	N	7.5YR 6/3	Loamy sand	None	
	3	20-30	P	7.5YR 6/3	Loamy sand	1 fire cracked rock (FCR) fragment observed at 25 cmbs	
	4	30-40	P	7.5YR 6/3	Loamy sand	2 FCR fragments observed at 36 cmbs	
	5	40-50	N	7.5YR 6/3	Loamy sand	None	
NMG005	1	0-10	N	7.5YR 6/3	Loamy sand	None	Compact soil
	2	10-20	N	7.5YR 6/3	Loamy sand	None	
	3	20-30	N	7.5YR 6/3	Loamy sand	None	
	4	30-40	P	7.5YR 6/3	Loamy sand	2 FCR fragments observed at 35 cmbs	
	5	40-50	N	7.5YR 6/3	Loamy sand	None	
NMG006	1	0-45	N	7.5YR 6/3	Loamy sand	None	Compact soil

* P=Positive / N=Negative

Site Interpretation and Summary

Site 41RG404 consists of an open campsite with 10 surficial and buried burned rock fragments. The site may have been a temporary campsite. No evidence of resource processing, or lithic tool manufacture and maintenance was observed.

Eligibility and Management Recommendations

The site lacks diagnostic artifacts and features and is unlikely to yield information that will refine our understanding of past lifeways in this region. The site has been extensively shovel tested and subsurface deposits encountered were shallow; additionally, the site lacks datable materials. Therefore, SWCA recommends the site as not eligible for the NRHP under Criterion D. Site 41RG404 is recommended NOT ELIGIBLE for the NRHP or as an SAL. No further work is recommended.

Isolated Finds in Reagan County

Four IFs were encountered on UT Lands in Reagan County (Table 20). IFs, by definition, are not eligible for the NRHP or as an SAL. All IFs underwent intensive shovel testing to determine if subsurface artifacts and deposits were present.

Table 20. Isolated Finds in Reagan County

Isolated Find No.	Description	Appendix A Map Page
ALB-UT-PRA-023-CR-CMS2	One chert biface	A-27
ALB-UT-PRA-023-CR-CMS3	One chert biface	A-27
ALB-UT-PRA-023-CR-CMS4	One chert core	A-28
ALB-UT-PRA-025-CR-CMS2	One chert retouched flake	A-31

Crockett County

The pipeline crosses 6.64 miles on UT Lands in Crockett County. This includes parcels WHL-TX-CRK-180.00000 through WHL-TX-CRK-185.00000. Vegetation is dominated by mesquite, but also includes juniper, grasses, and cacti.

SWCA excavated a total of 215 shovel tests (206 shovel tests for survey and 9 shovel tests to delineate sites) on UT Lands in Crockett County (Appendices A and B). Primary anthropogenic disturbances within the parcels include the previous construction from existing oil and gas field infrastructure (e.g., access roads and pipelines). Natural disturbances include wind erosion/scouring.

SWCA revisited one previously recorded archaeological site (i.e., 41CX1051) within the project area on UT Lands in Crockett County (Figure 61). No IFs were recorded in Crockett County.

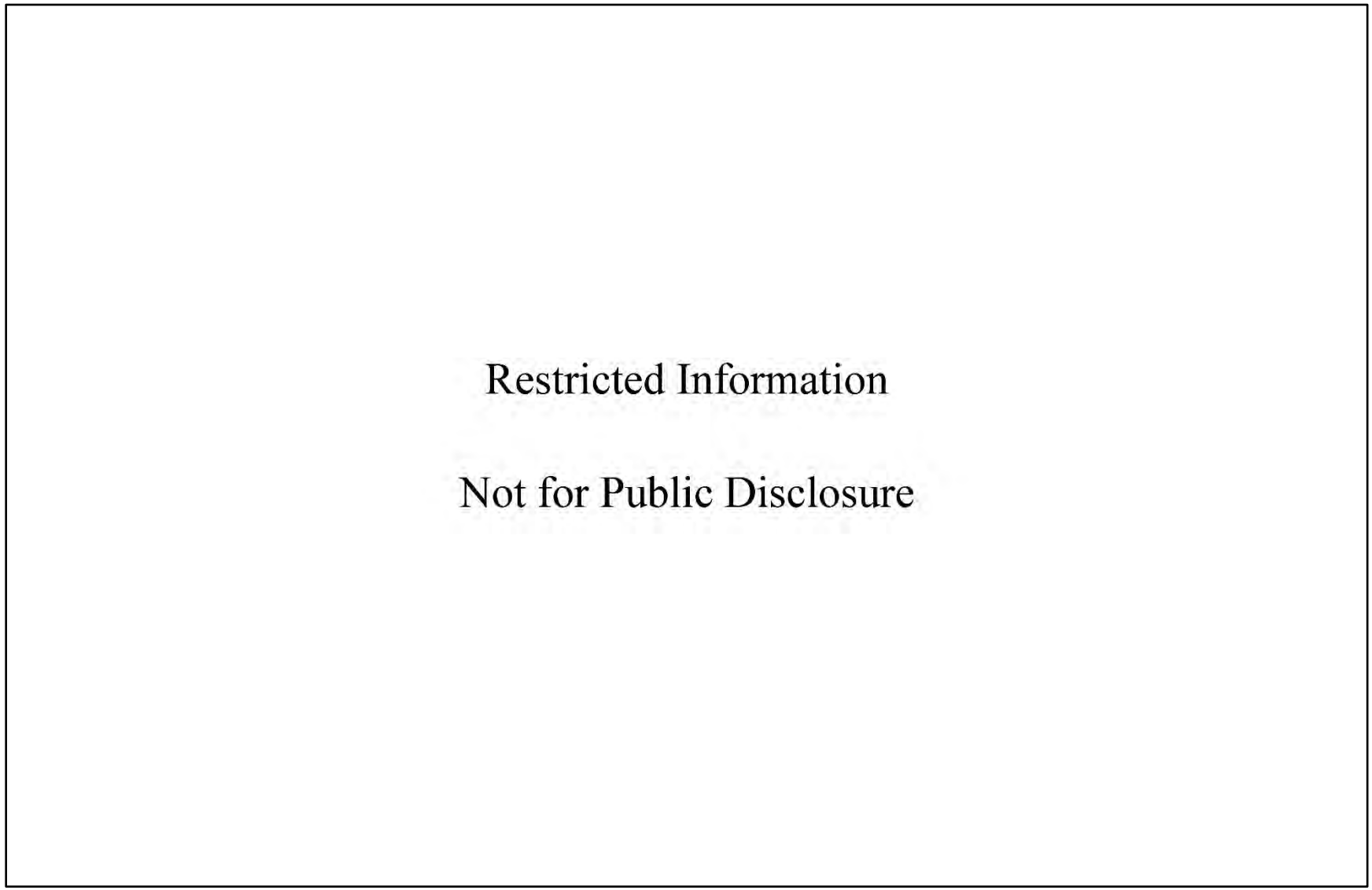

Figure 61. Location of identified site within the project area on UT Lands in Crockett County.

Site 41CX1051 (Revisit)

County: Crockett
Elevation: 753 m (2,471 feet)
Landowner: University of Texas
Cultural Affiliation and Age: Unspecified Native American (< A.D. 1850)
Site Type: Open campsite
NRHP Eligibility Recommendation: Not eligible within ROW; Undetermined outside ROW
Management Recommendations: None, additional survey if the current alignment changes

PREVIOUS INVESTIGATION

Site 41CX1051 was originally recorded by UT Lands, University of Texas in 2011 for the UT 2011 project, as part of Antiquities Permit No. 6037. It was initially recorded as a hearth field or occupation site with two cores, six tools, 10+ flakes, and six hearth features. No diagnostics were encountered and in January of 2012 the THC listed the site NRHP eligibility as undetermined. In 2018, the site was revisited by SWCA archaeologists for the Gulf Coast Express project, as part of Antiquities Permit No. 8324 (Cohen 2018). During the second revisit the site was recorded as a surface lithic scatter with four deflated thermal/hearth features. The site was recommended as not eligible for the NRHP or as an SAL due to the lack of diagnostic artifacts, intact features, or datable material; the THC concurred with this recommendation on July 20, 2018.

CURRENT INVESTIGATION

Site Description

SWCA archaeologists revisited site 41CX1051 on September 11, 2019. Site 41CX1051 is a prehistoric open campsite of unknown cultural or temporal affiliation. The site is located approximately 0.5 mile (0.9 km) northwest of the intersection of US Highway 190 and Farm-to-Market Road 865. The site is situated on an upland plain, approximately 20 m south of a tributary of Howard Draw. The site measures approximately 197 m northeast-southwest by 44 m northwest-southeast (Figure 62; Appendix A: Page A-43). Vegetation throughout the site consisted of typical desert scrub vegetation, including juniper, mesquite, and tall grasses. Ground surface visibility was low across the site, averaging approximately 30 percent (Figure 63).

Site 41CX1051 is highly disturbed and significantly impacted by both natural and artificial disturbances. Natural disturbances include soil erosion, while artificial disturbances include previous construction of a pipeline that bisects the center of the site (Figure 64). Only one feature was observed during the revisit; however, survey was limited to the Project corridor and the site extends further to the north and south of the Project corridor. The site is estimated at being approximately 50 percent intact.

Features

One feature (i.e., Feature 1) was encountered during survey. Feature 1 is a deflated burned rock concentration composed of approximately 30 burned rock fragments (Figure 65). The feature is eroding to the north toward the tributary. Feature 1 measures approximately 2.5 m north-south by 2 m east-west. SWCA excavated one shovel test (i.e., EMA011) 1 m south of the feature, which was negative for cultural materials. Archaeologists conducted a 50 × 50-cm trowel scrape in the center of the feature to investigate for potential charcoal or soil staining. No subsurface deposits, staining, or charcoal were encountered. However, one midsection biface fragment was found on the surface within the feature (Figure 66).

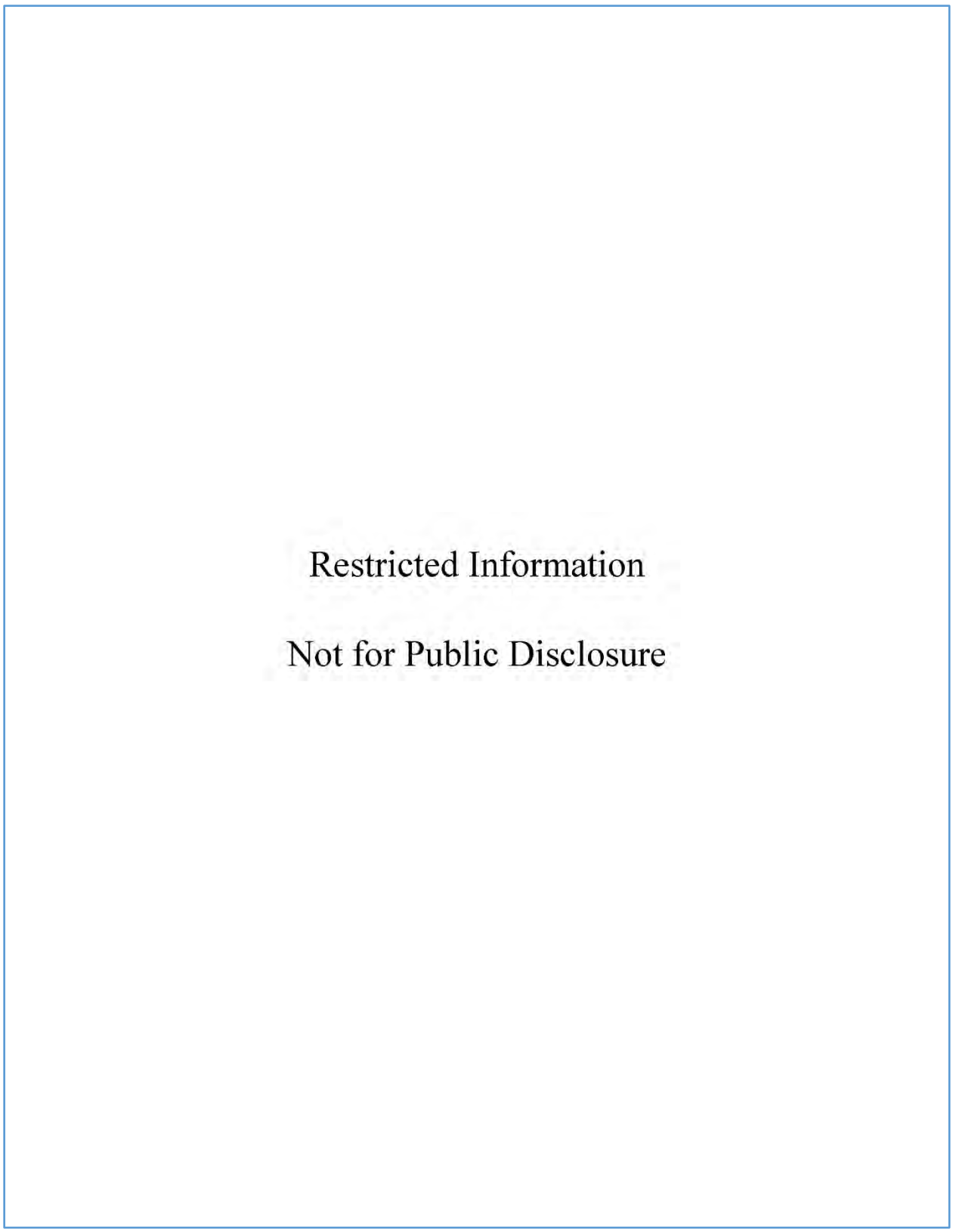

Figure 62. Map of site 41CX1051 (Revisit).

Figure 63. Site 41CX1051 overview, facing southwest.

Figure 64. Site 41CX1051 disturbance overview, facing northeast.

Figure 65. Feature 1 at site 41CX1051, facing west.

Figure 66. Biface found in Feature 1 on site 41CX1051.

Material Identified

The surficial artifact assemblage consists of two secondary flakes, 10 burned rock fragments, and one biface midsection (see Figure 66). Lithic materials consist of quartzite, white, and tan chert.

Subsurface Investigations

SWCA excavated nine shovel tests within and around the site to further delineate the vertical and horizontal boundaries of the site (i.e., shovel tests EMA009–EMA012, EMA019, JGS001, JGS003–JGS004, and CMS010). These shovel tests generally revealed the presence of a single stratum of light brown (7.5YR 6/3) silt loam to depths of approximately 60 cmbs, terminating at bedrock or compact soil (Table 21). All shovel tests were negative for buried cultural materials.

Table 21. Shovel Tests at Site 41CX1051

ST No.	Level	Depth (cmbs)	Result*	Munsell	Soil Texture	Description/ Comments	Reason for Termination
EMA009	1	0-45	N	7.5YR 6/3	Silt loam	None	Compact soil
EMA010	1	0-35	N	7.5YR 6/3	Silt loam	None	Compact soil
EMA011	1	0-35	N	7.5YR 6/3	Silt loam	None	Compact soil
EMA012	1	0-55	N	7.5YR 6/3	Silt loam	None	Compact soil
EMA019	1	0-60	N	7.5YR 6/2	Silt loam	None	Bedrock
JGS001	1	0-60	N	10YR 7/4	Silt loam	None	Bedrock
JGS003	1	0-35	N	10YR 7/4	Silt loam	Gravels 80%	Compact soil
JGS004	1	0-65	N	10YR 7/4	Silt loam	Gravels 80%	Bedrock
CMS010	1	0-50	N	10YR 6/3	Sandy clay loam	None	Compact soil
	2	50-60	N	7.5YR 6/4	Sandy clay	None	

* P=Positive / N=Negative

Site Chronology

An unspecified Native American affiliation (< A.D. 1850) was assigned to this site due to the lack of temporally diagnostic artifacts.

Site Interpretation and Summary

Site 41CX1051 consists of an open campsite with one deflated burned rock feature. The site was most likely a temporary campsite where on-site activities were limited to lithic reduction and tool manufacture and maintenance. The presence of thermal features also indicate that resource processing/extraction took place on site.

Eligibility and Management Recommendations

The site has been extensively shovel tested and no subsurface deposits have been encountered; additionally, the feature is deflated, and the site lacks datable materials. Therefore, SWCA recommends the site not eligible for the NRHP under Criterion D. Site 41CX1051 is recommended NOT ELIGIBLE for the NRHP or as an SAL within the current project corridor. However, in the event the project corridor shifts, SWCA recommends additional survey of areas not within the current alignment.

CHAPTER 6. SUMMARY AND RECOMMENDATIONS

From September to October 2019, and on January 10, 2020, SWCA conducted an intensive archaeological survey on portions of the proposed Whistler Pipeline project. This report is a summation of the results of the survey on the mainline and Midland Lateral pipeline on UT Lands in Upton, Reagan, and Crockett counties, Texas; this covers approximately 28.47 miles of the mainline, 10.9 miles on the Midland Lateral, and 0.18 mile of access road. SWCA surveyed approximately 1,082 acres, including 809.0 acres of mainline, 259.0 acres of lateral pipeline, 2.2 acres of access road, and the 7.4-acre Rankin Compressor Station, on the alignment version dated January 15, 2020.

Prior to fieldwork, SWCA's investigations included a cultural resources background review and literature search. Thirty-one previous cultural resources surveys have been conducted within 1 mile of the alignment. A total of 125 previously recorded archaeological sites and two historical markers are within 1 mile of the alignment. Of the 125 sites, 117 are prehistoric in age and are generally open campsites, six are historic in age and are generally associated with farmsteads, and two have both prehistoric and historic components. None of the 125 sites have been determined eligible for the NRHP or as an SAL by the THC.

During the course of the survey, SWCA revisited 10 previously recorded sites (i.e., 41CX1051, 41RG117, 41RG158, 41RG239, 41RG282, 41RG323, 41UT135, 41UT136, 41UT138, and 41UT147); newly recorded four archaeological sites (i.e., 41RG402, 41RG403, 41RG404 and 41UT158), and identified 11 IFs. Site 41UT147 has undetermined NRHP and SAL eligibility (Table 22). As the site features within site 41UT147 will not be impacted by the proposed project, no further work is recommended; however, due to the proximity of the site to the project workspace, the placement of high visibility avoidance fencing around the northern edge of the site boundary is recommended prior to construction activities.

Table 22. NRHP and SAL Eligibility Summary

Site	NRHP and SAL Eligibility Recommendation	Management Recommendation
41CX1051	Not eligible within ROW; Undetermined outside ROW	None; Additional survey if current alignment shifts
41RG117	Not eligible within ROW; Undetermined outside ROW	None; Additional survey if current alignment shifts
41RG158	Not eligible within ROW; Undetermined outside ROW	None; Additional survey if current alignment shifts
41RG239	Not eligible within ROW; Undetermined outside ROW	None; Additional survey if current alignment shifts
41RG282	Not eligible within ROW; Undetermined outside ROW	None; Additional survey if current alignment shifts
41RG323	Not eligible	None
41RG402	Not eligible	None
41RG403	Not eligible	None
41RG404	Not eligible	None
41UT135	Not eligible	None
41UT136	Not eligible	None
41UT138	Not eligible within ROW; Undetermined outside ROW	None; Additional survey if current alignment shifts
41UT147	Undetermined	Fencing around northern edge of site boundary and avoidance recommended; Additional survey and archival research if current alignment shifts
41UT158	Not eligible within ROW; Undetermined outside ROW	None; Additional survey if current alignment shifts

Aside from previously mentioned site 41UT147, all the remaining sites and IFs are recommended not eligible for the NRHP or as an SAL within the Project corridor. Seven sites (i.e., 41CX1051, 41RG117, 41RG158, 41RG239, 41RG282, 41UT138, and 41UT147) extend outside of the project area and if the alignment were to shift, additional survey and/or archival research would be needed to assess the portions of the site not surveyed during the current alignment (see Table 22).

In accordance with the Antiquities Code of Texas, 33 CFR 325, Appendix C, and Section 106 of the NHPA, SWCA has made a reasonable and good faith effort to identify cultural resources within the investigated project area. Of the 14 revisited and newly recorded sites within the project, one site (i.e., 41UT147) has undetermined NRHP and SAL eligibility and will be avoided by the project via high visibility fencing; Whistler has committed to this avoidance plan (Appendix C). The remaining 13 sites are recommended not eligible for the NRHP or as SALs within the Project corridor. Based on the results of these investigations, SWCA recommends a finding of NO HISTORIC PROPERTIES AFFECTED (per 36 CFR 800.4[d][1]) within UT Lands along the Whistler Project. Per requirements of the Antiquities Code of Texas, project documentation will be curated at CAR-UTSA.

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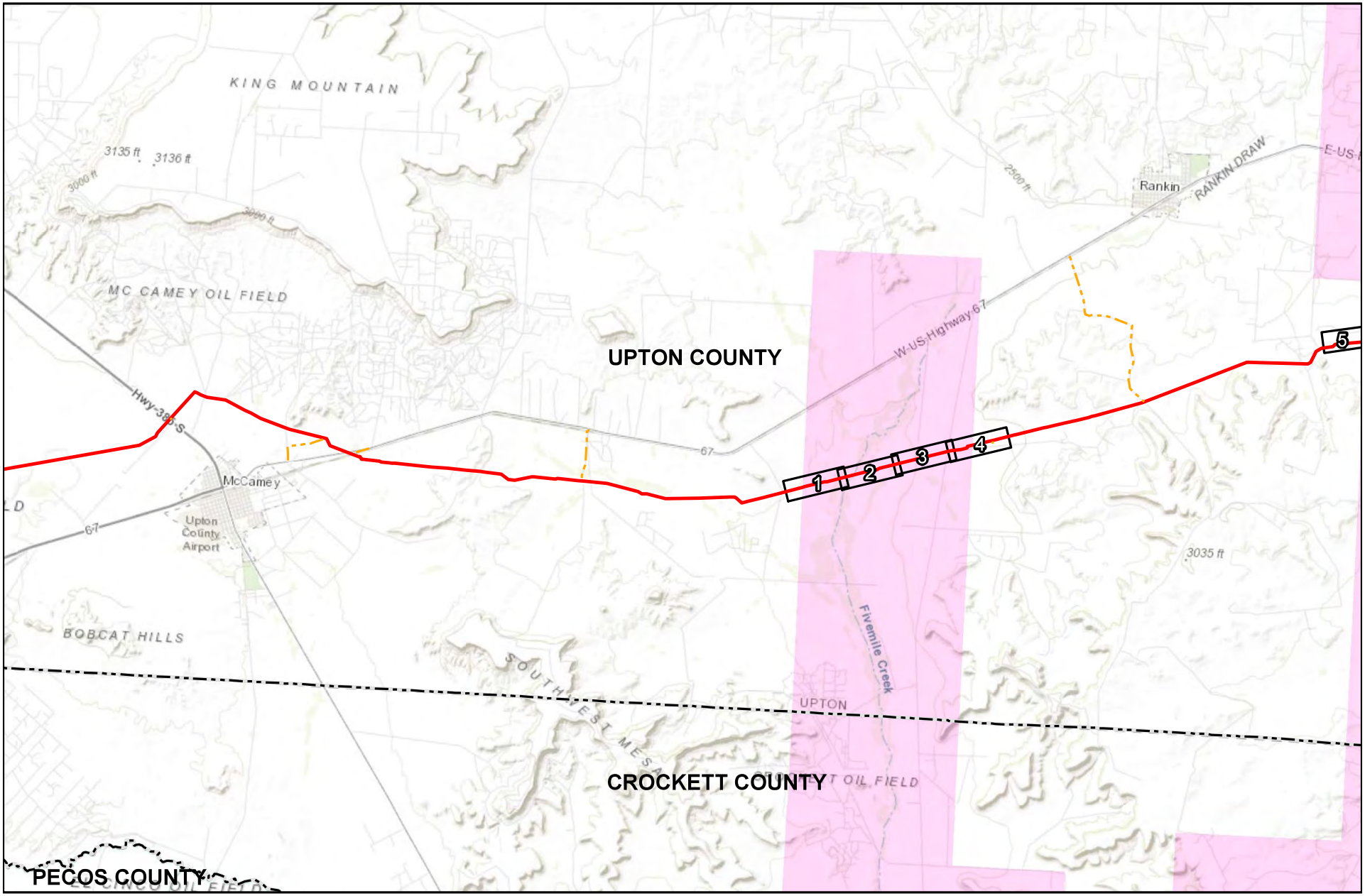
Appendix A

Project Alignment Sheets



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- Access Road
- UT Lands
- USACE District Boundary
- Figure Page

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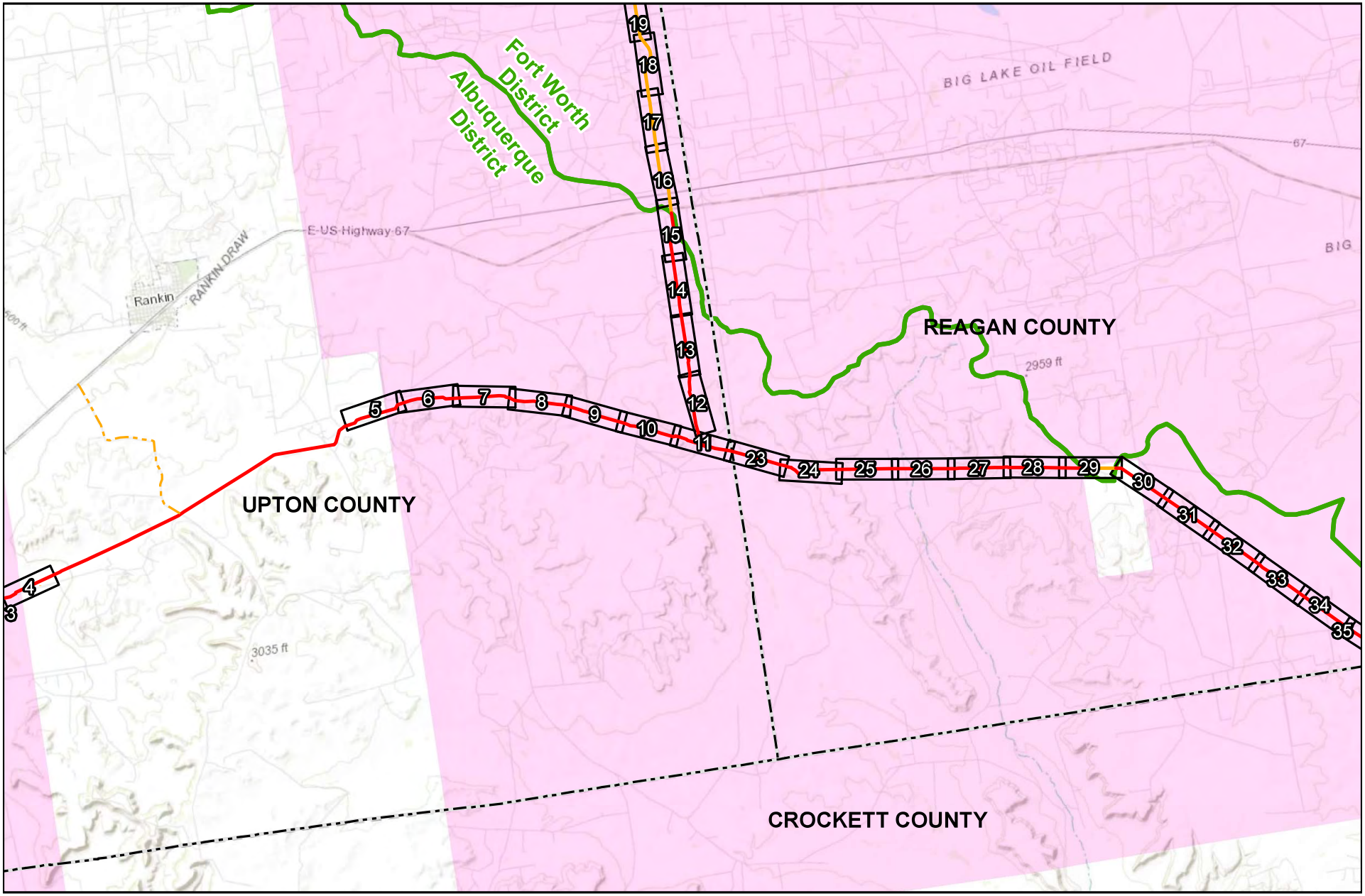

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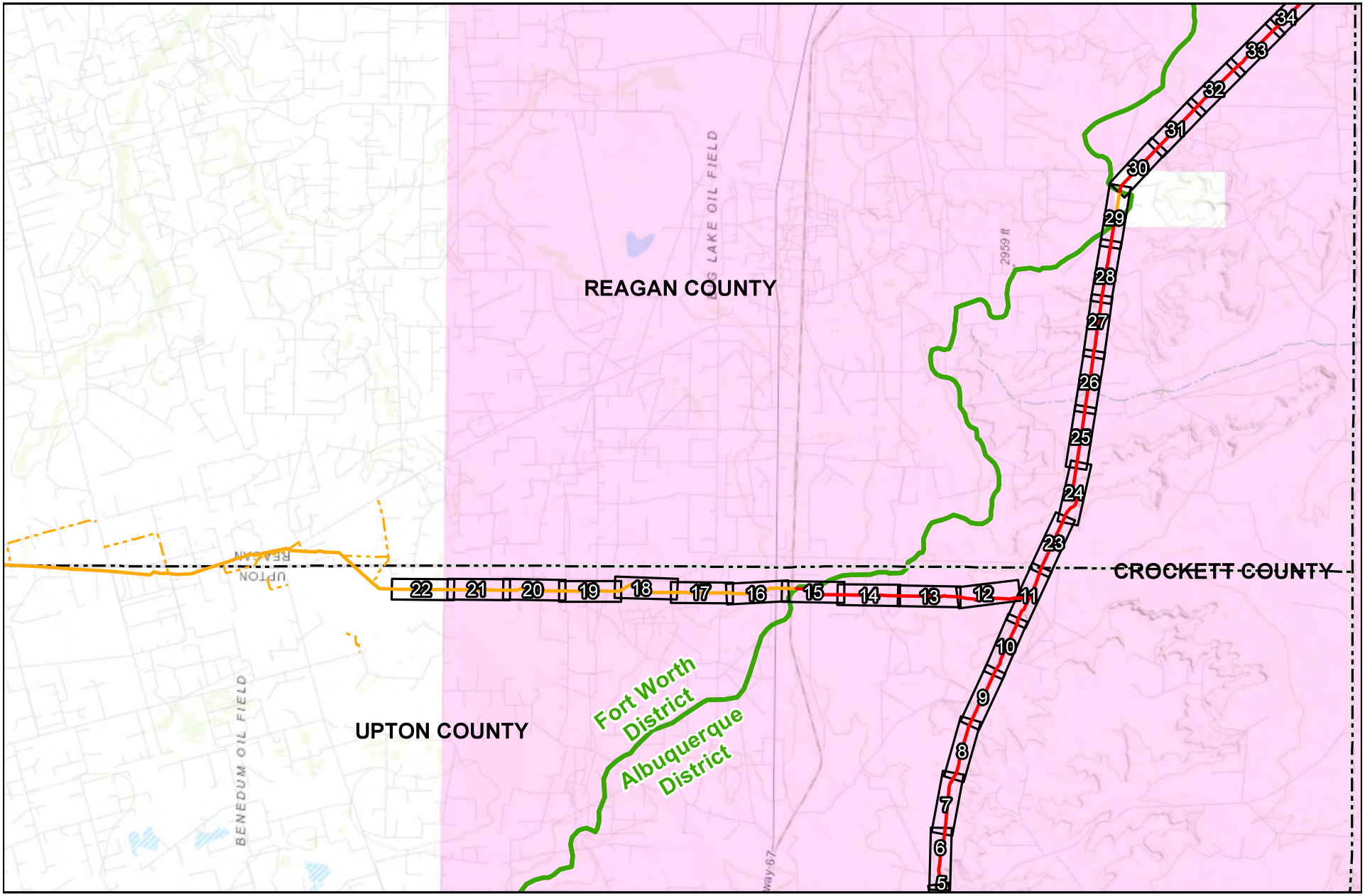

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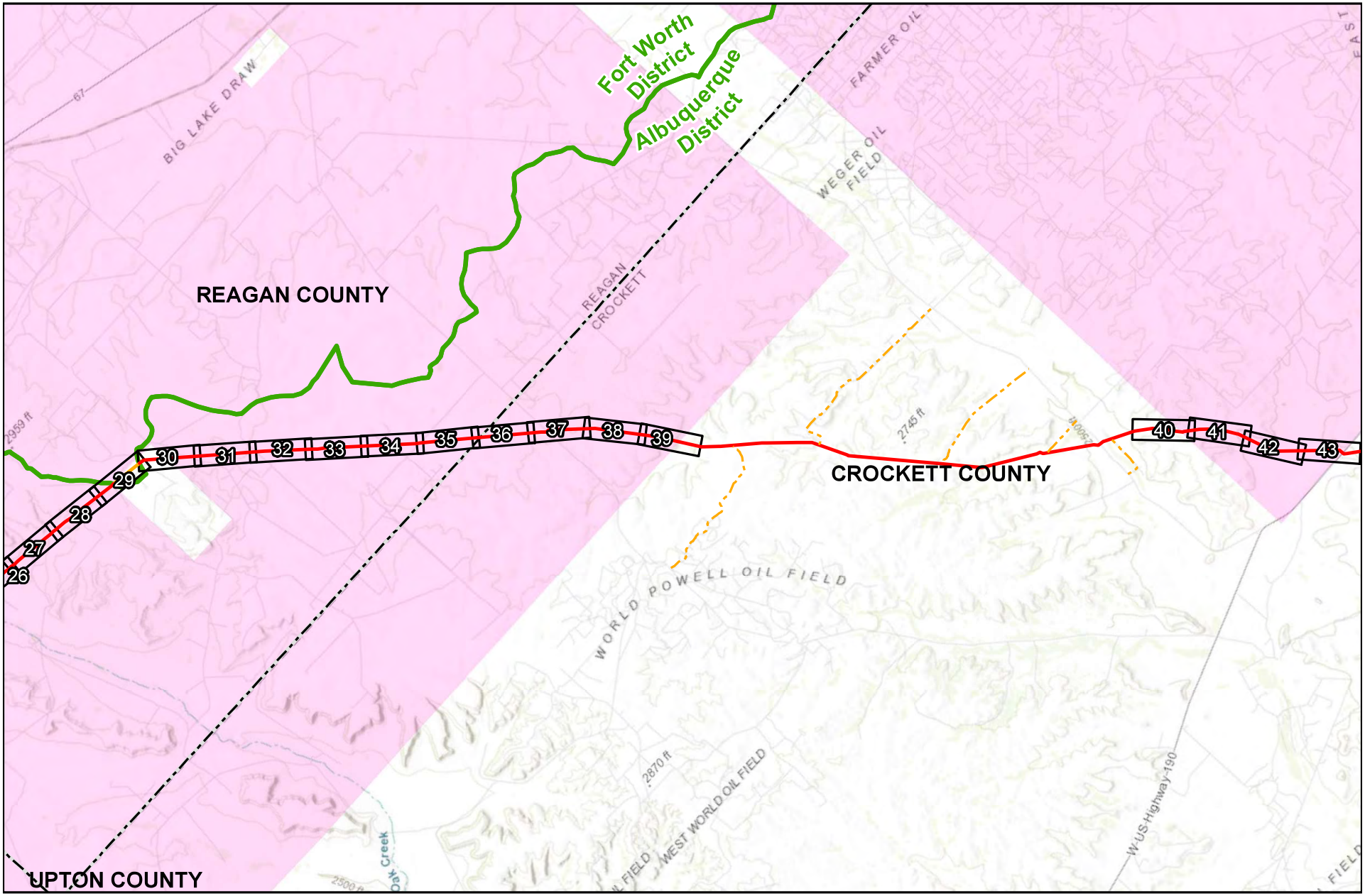

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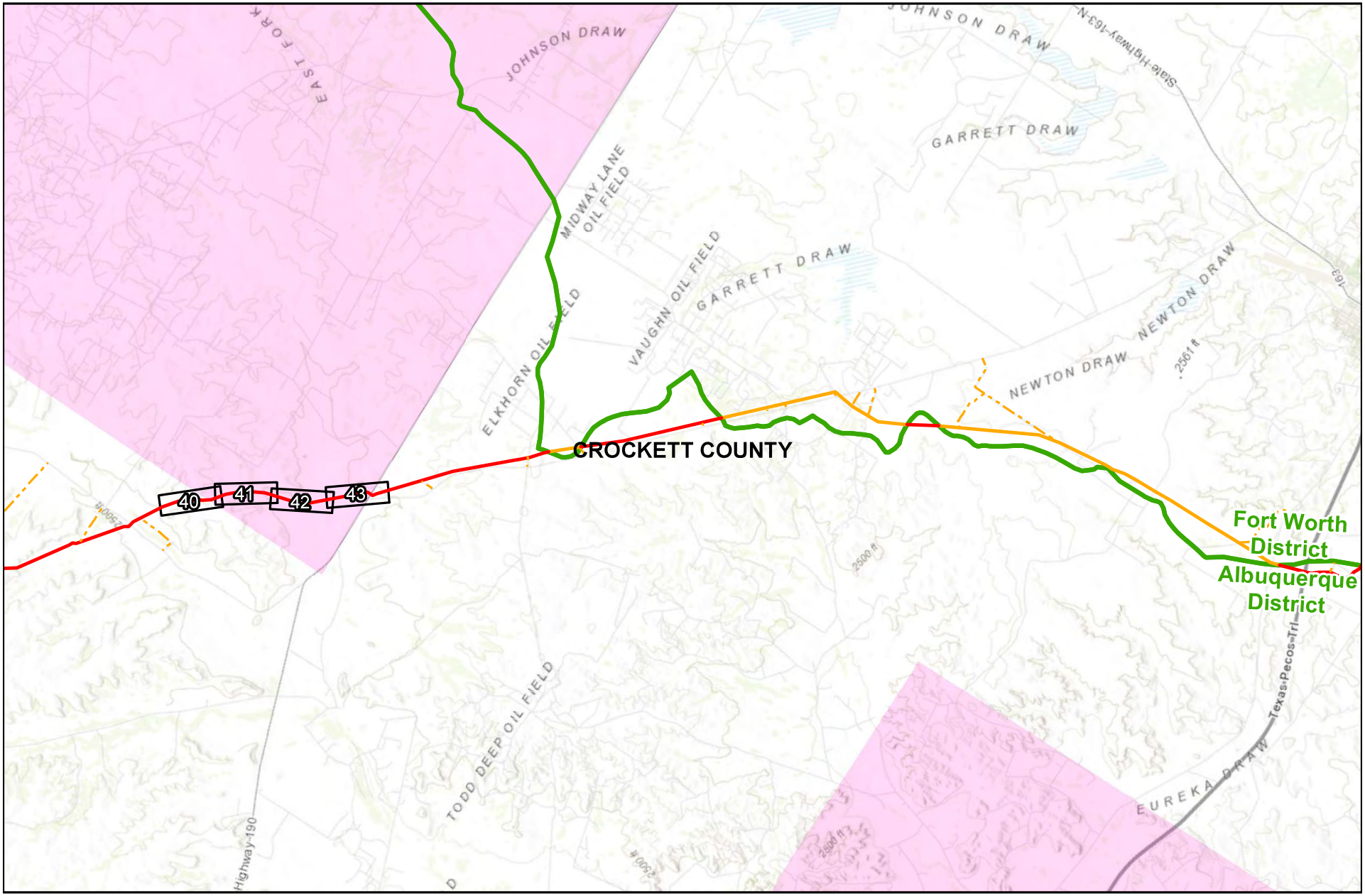

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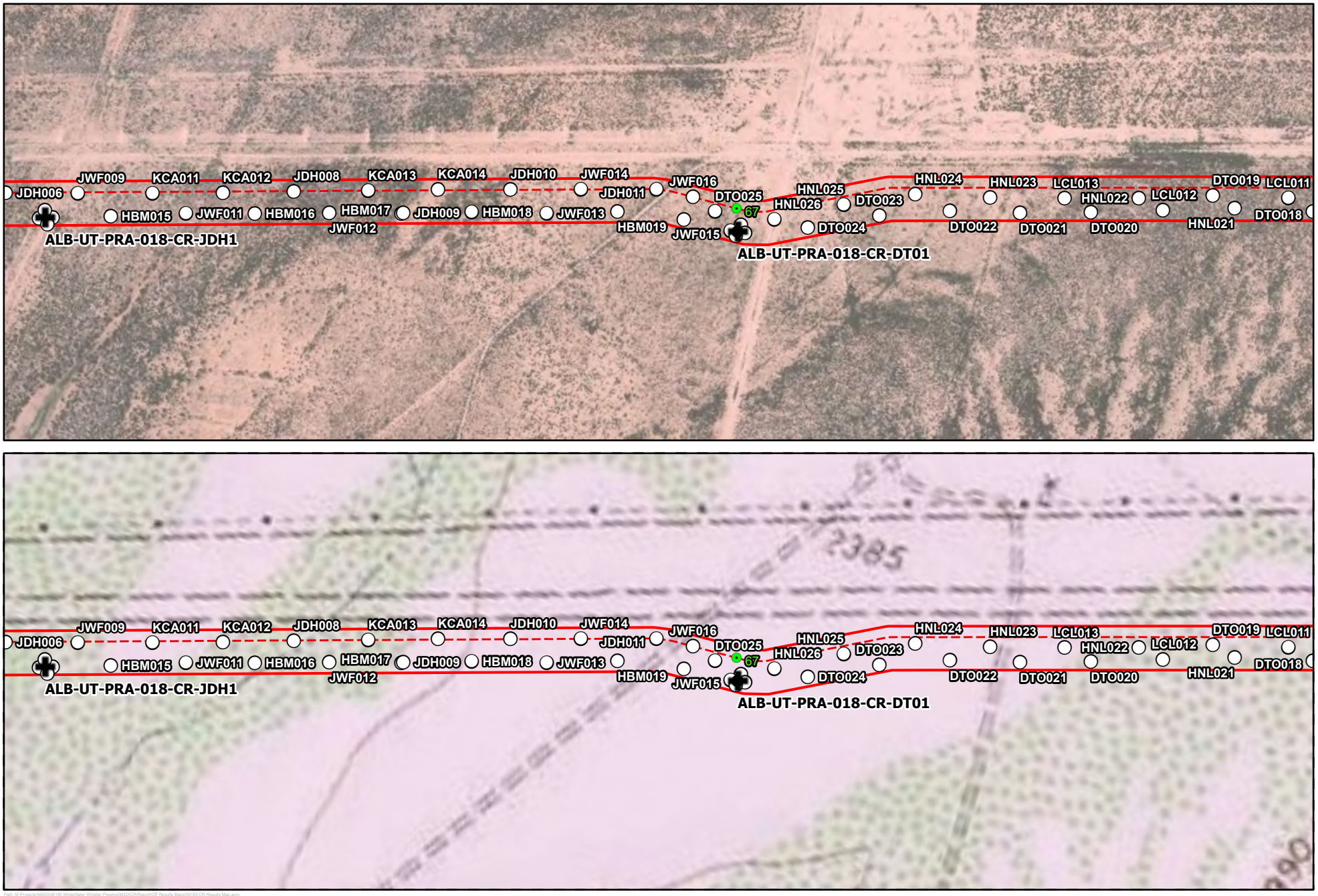

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Appendix A. Project Alignment Sheets within UT Lands

Whistler Pipeline
Survey Corridor
Negative Shovel Test
Positive Shovel Test
Isolated Find
Mile Post
UT Lands

1:7,000

Created By: L. Hitzfelder
Project Number: 56185
Date: 2/3/2020

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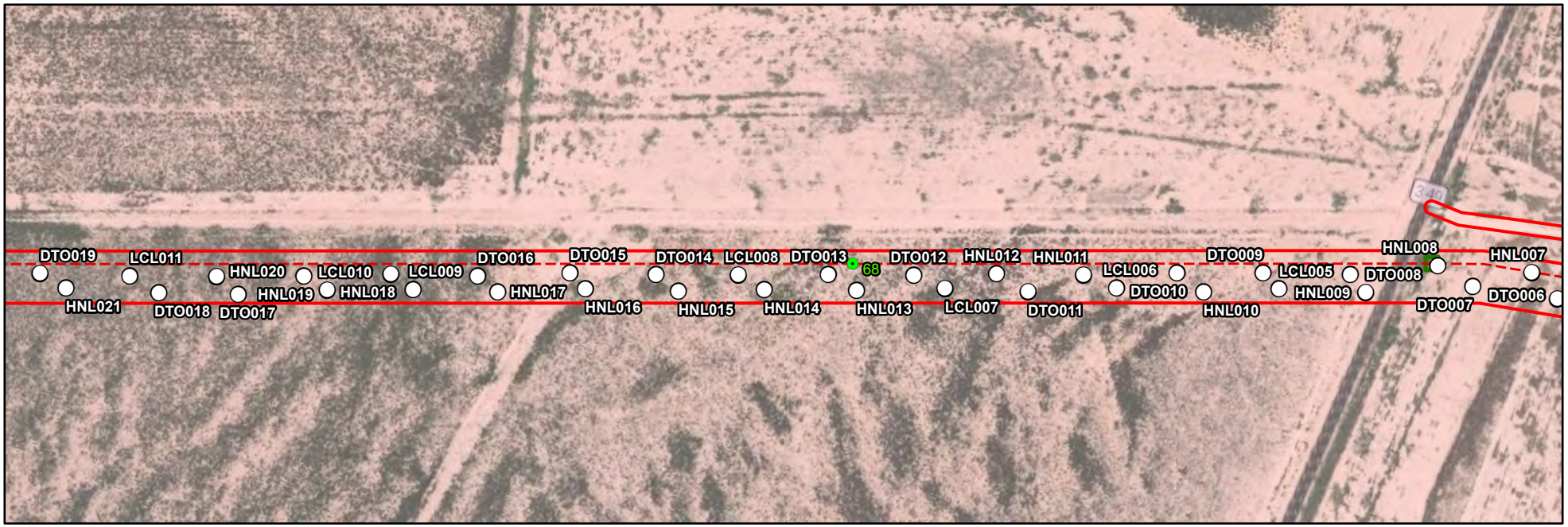
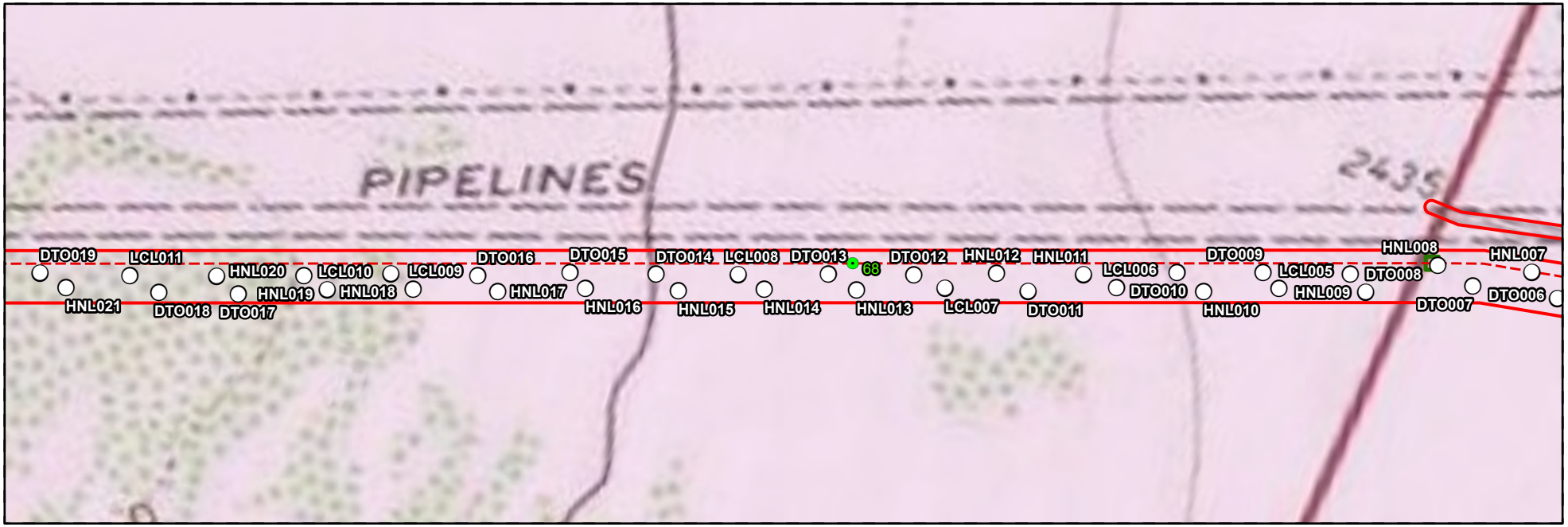
0 50 100 150 Meters





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WHISTLER PIPELINE PROJECT

Appendix A. Project Alignment Sheets within UT Lands

Whistler Pipeline
Survey Corridor
Negative Shovel Test
Mile Post
Compressor Station
UT Lands

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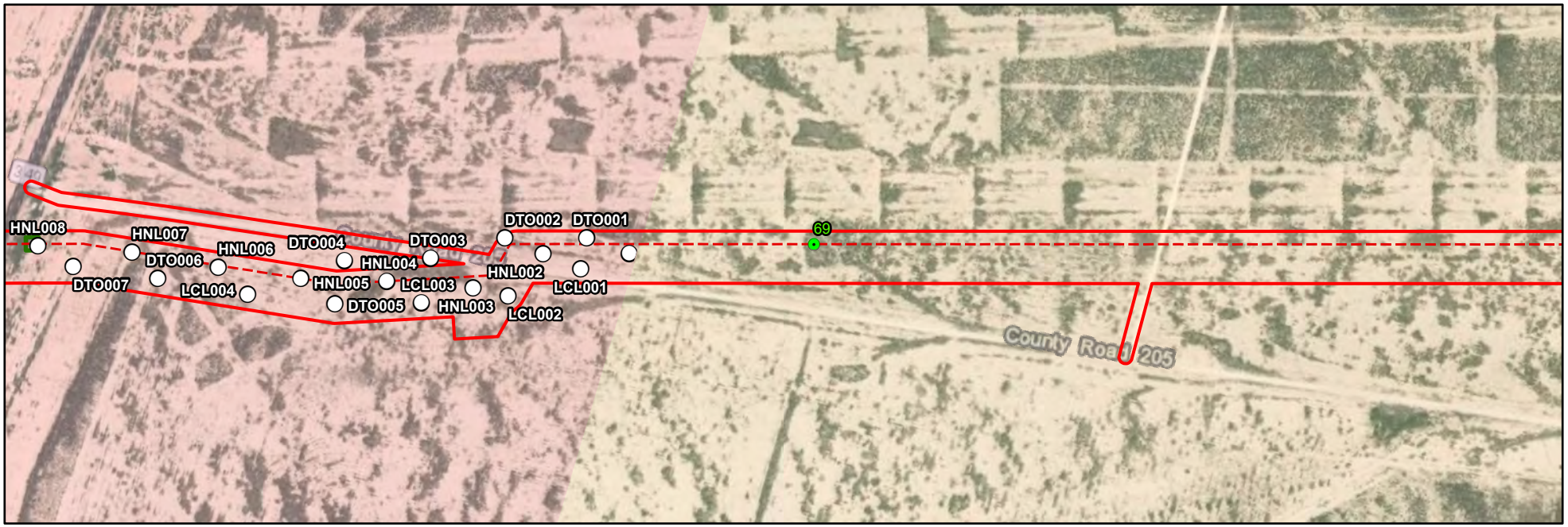

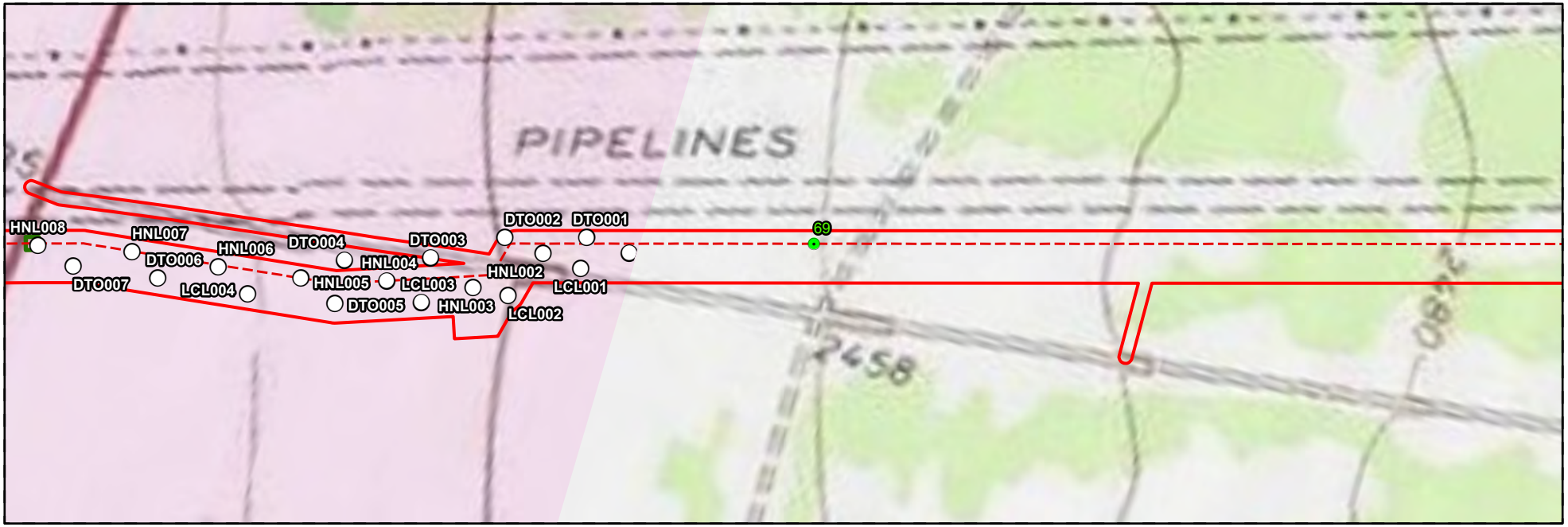

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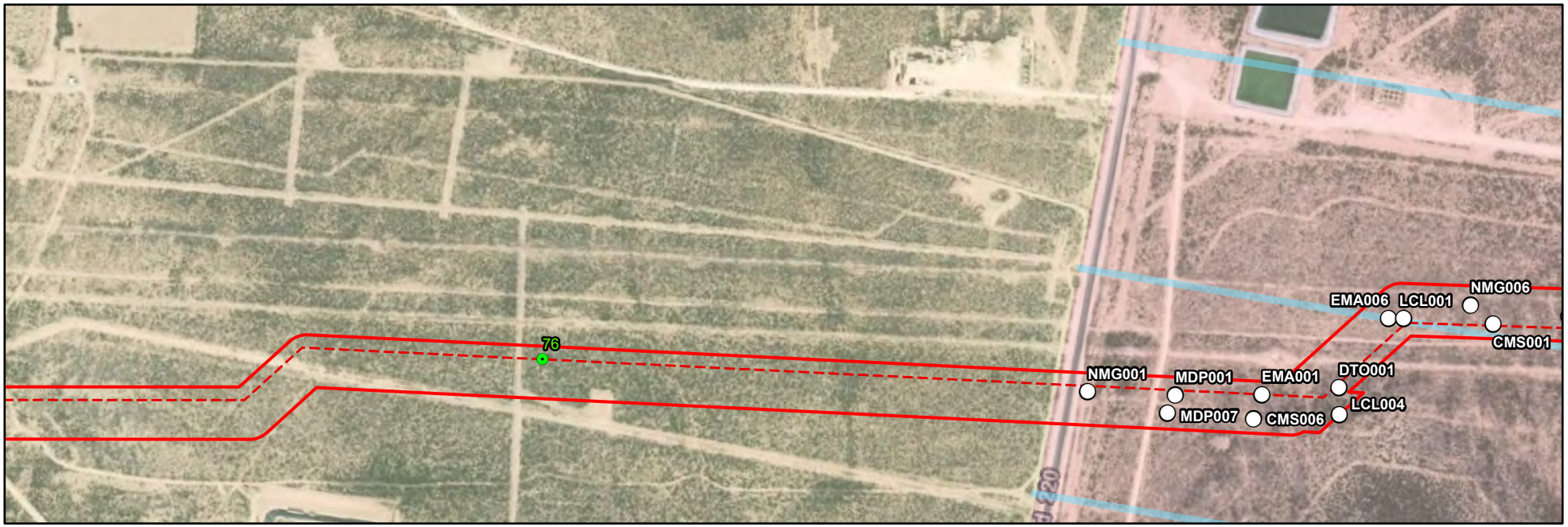

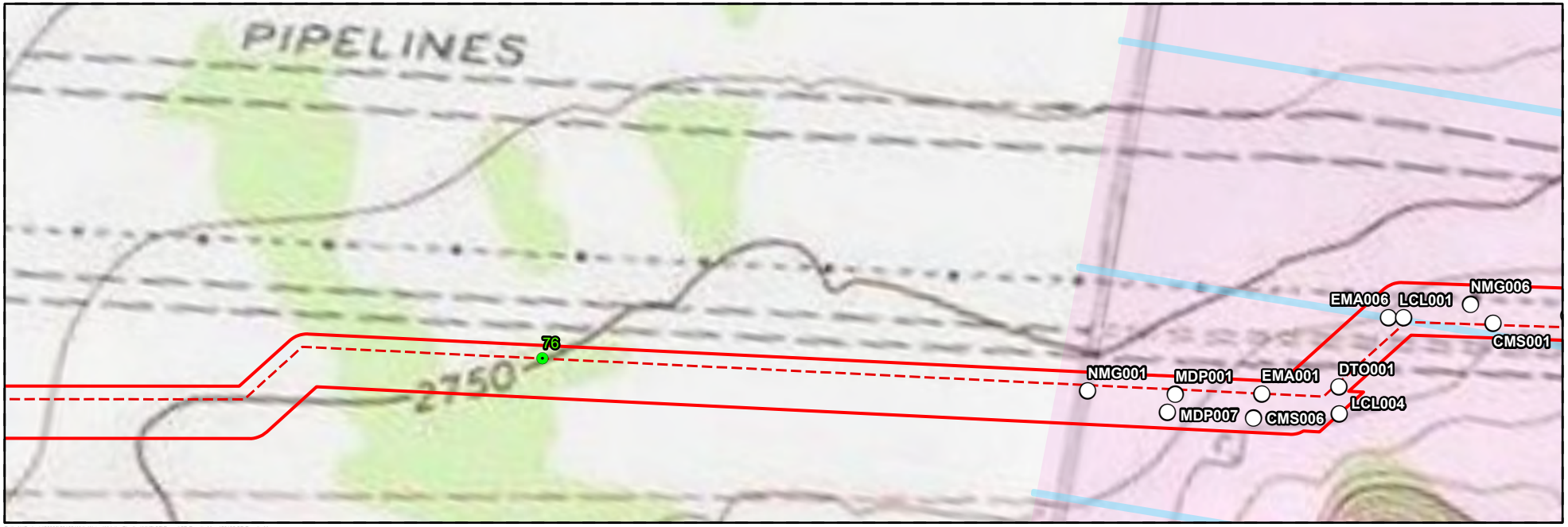

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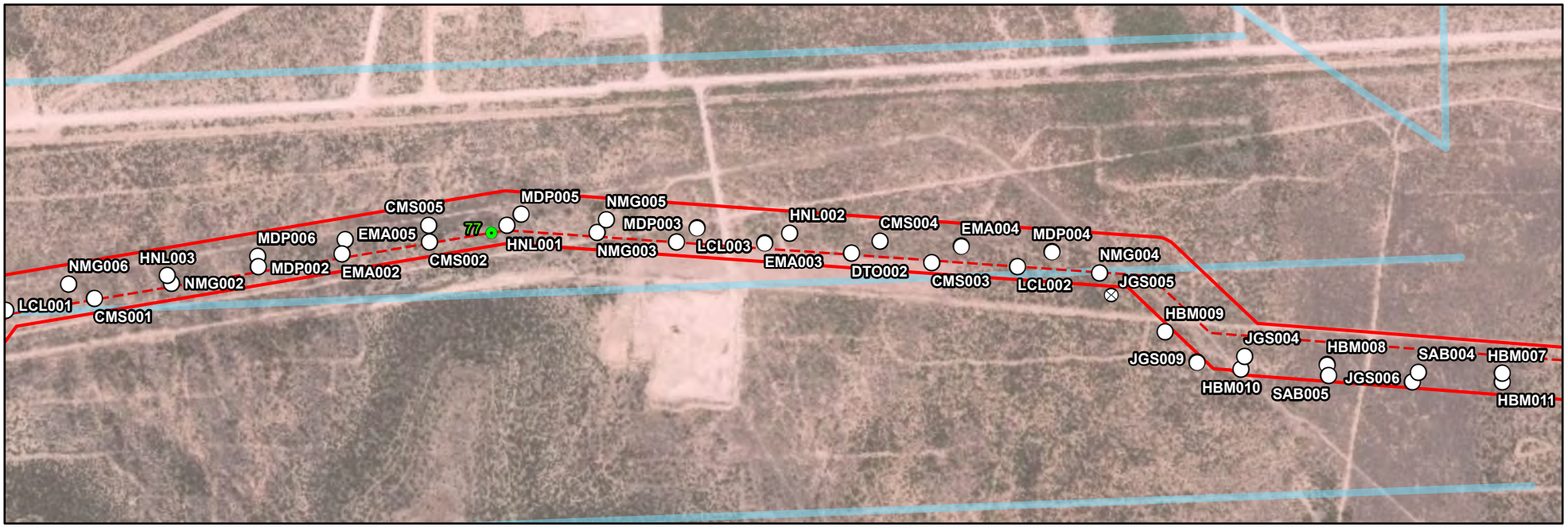

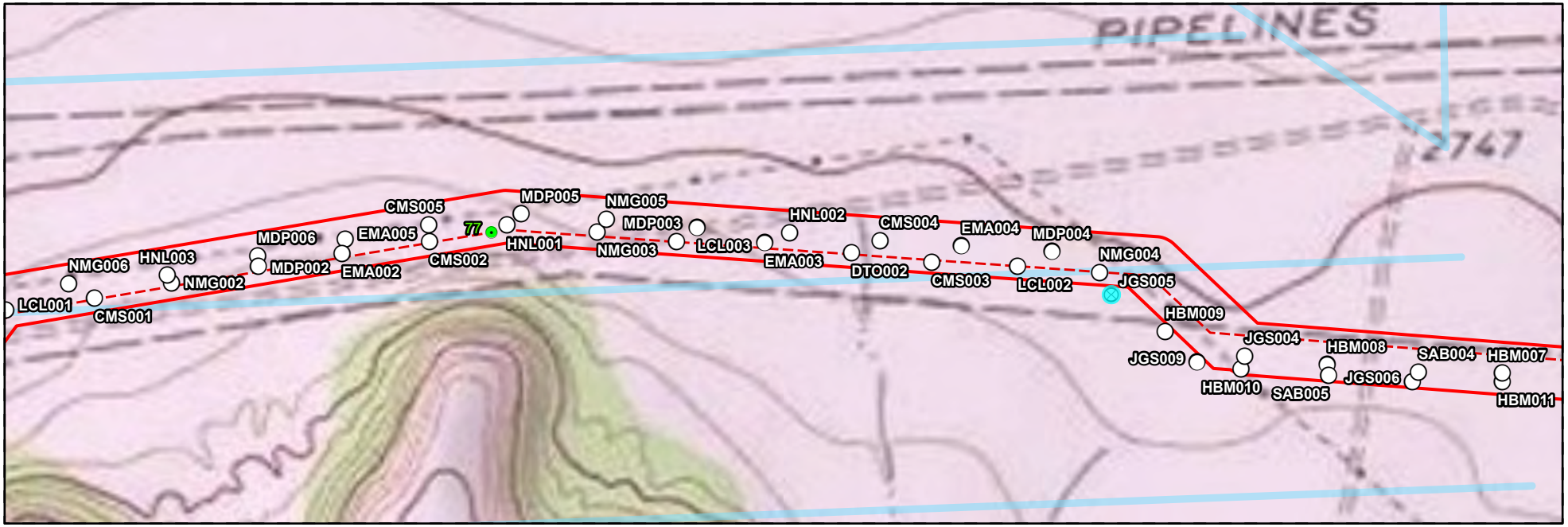

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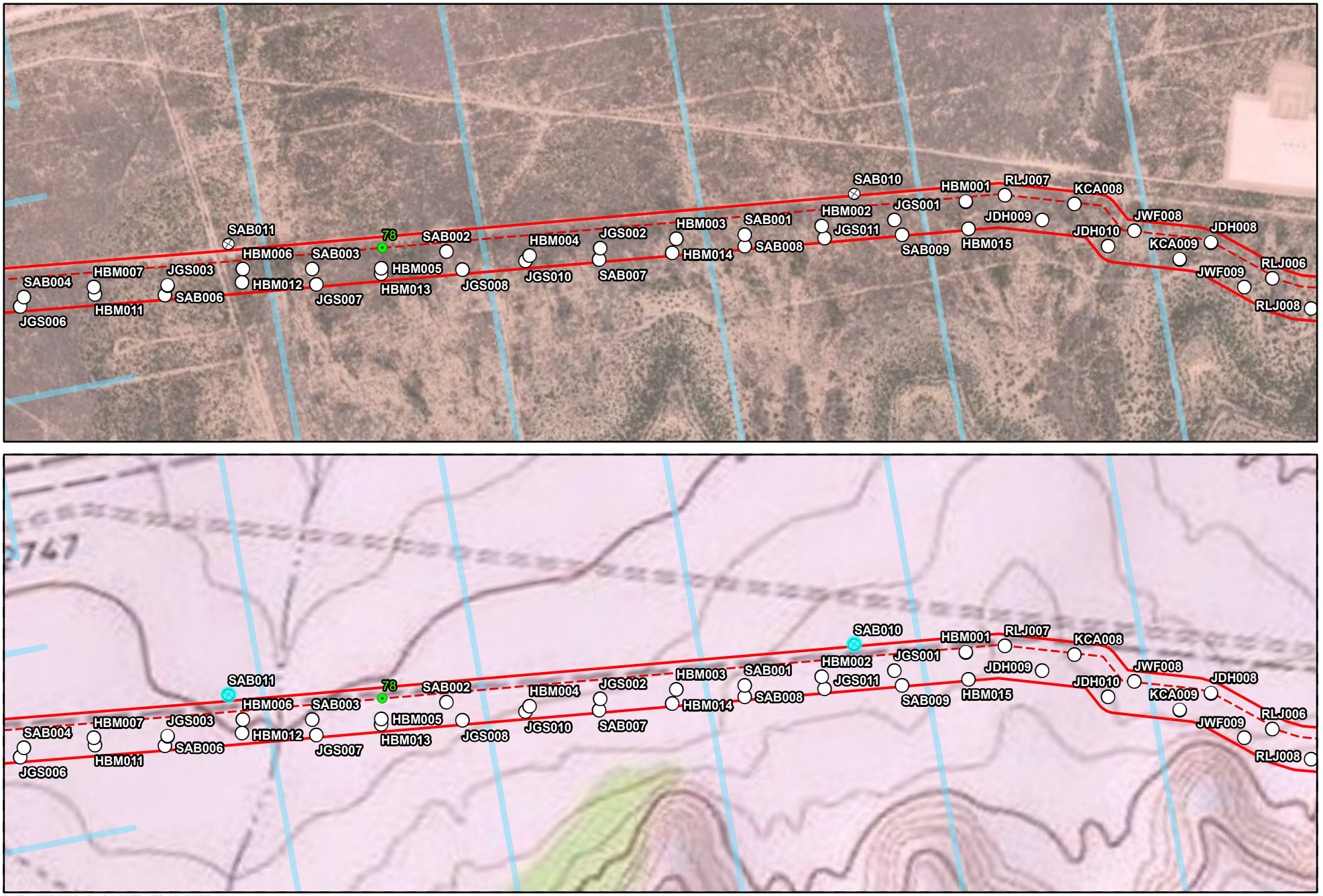

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JWF009
RLJ006
RLJ008

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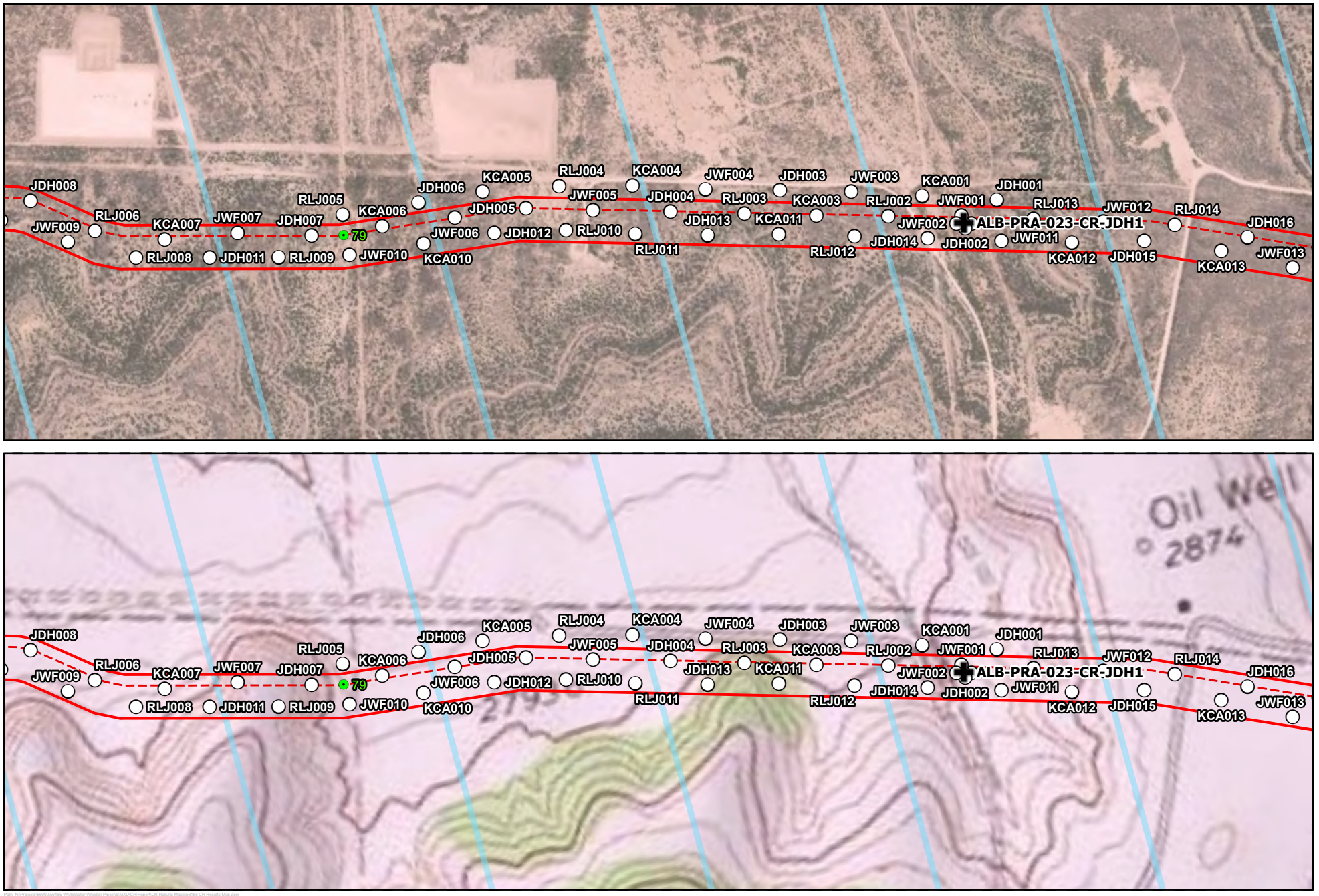

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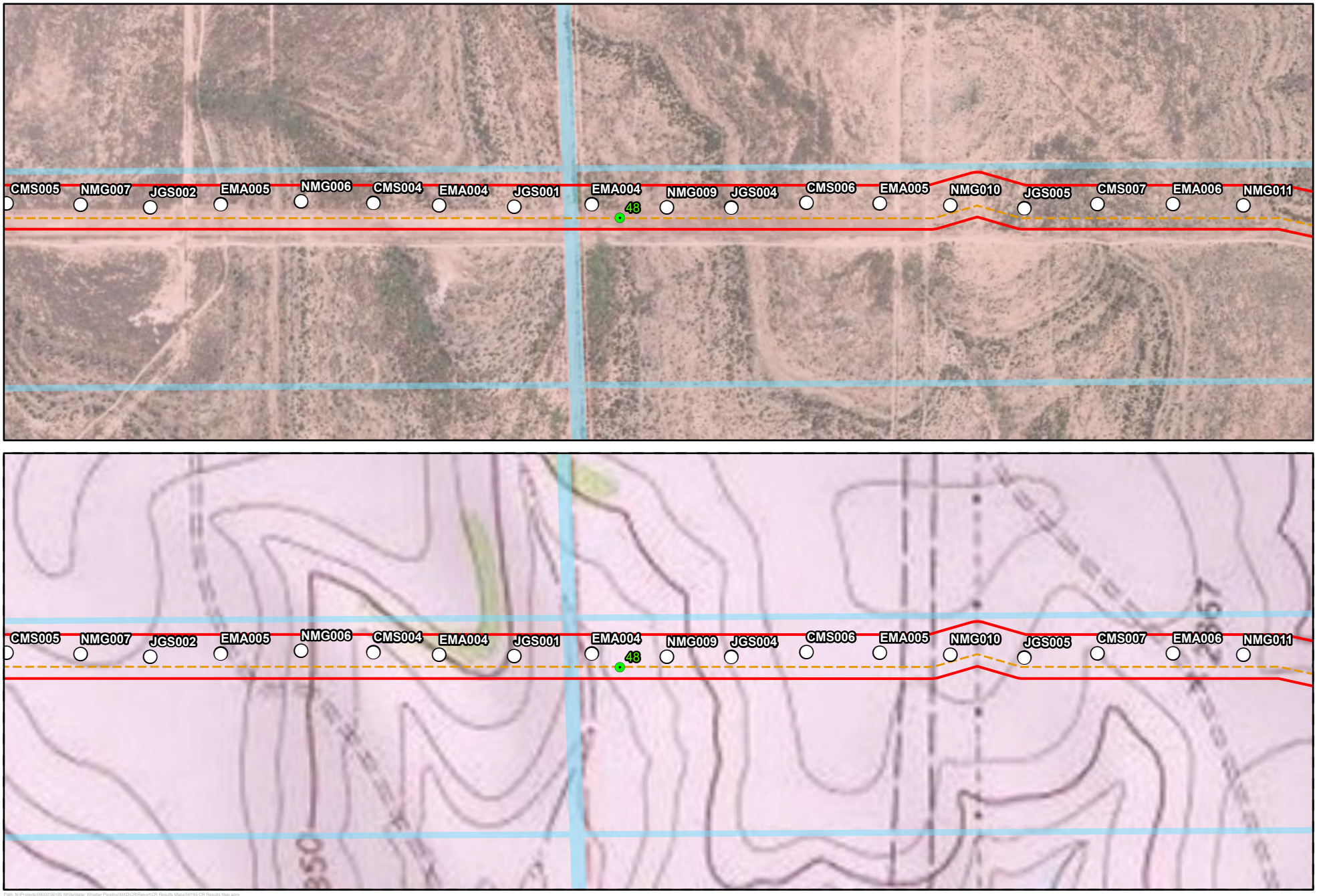

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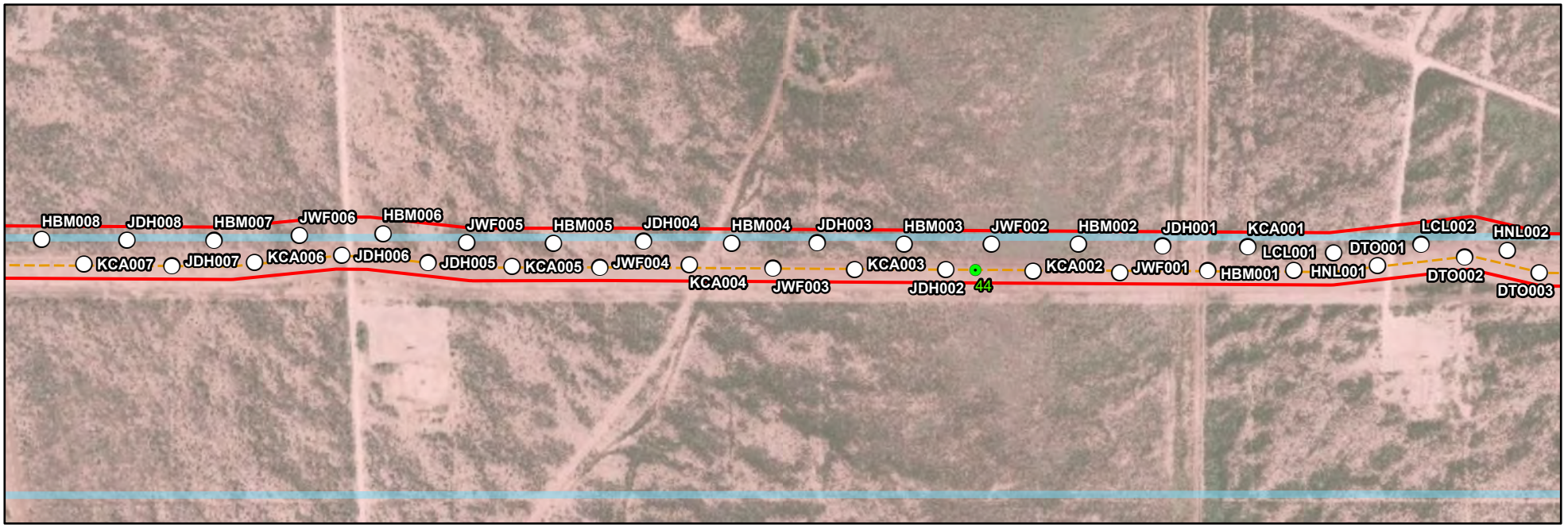

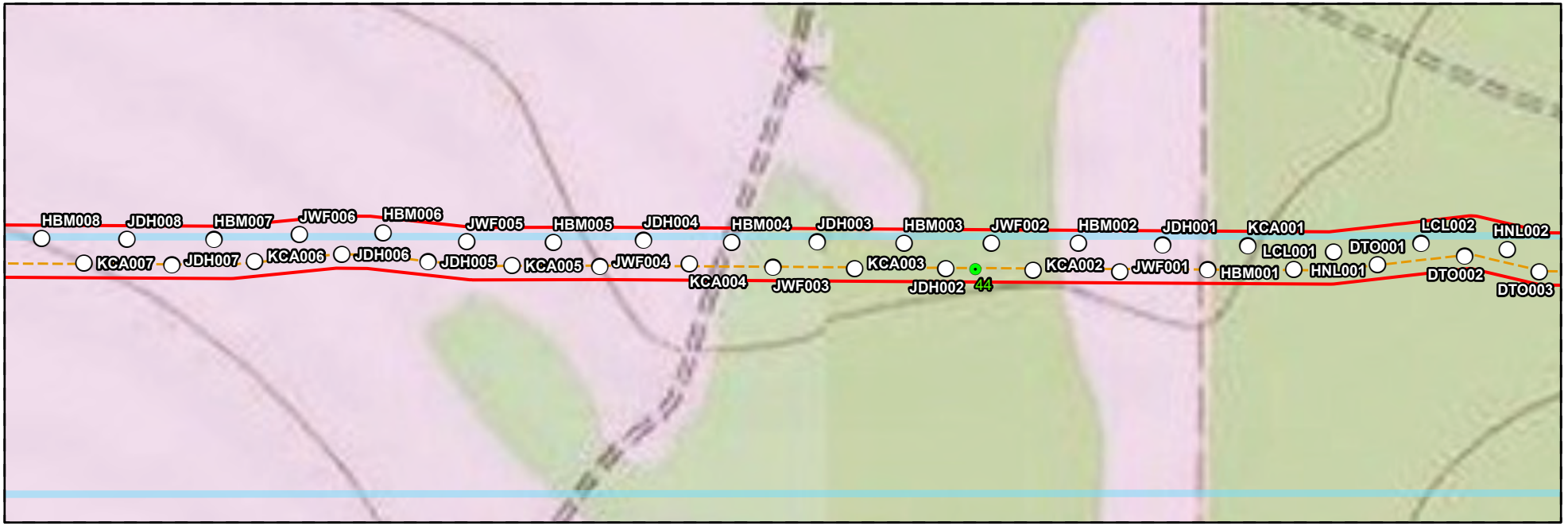

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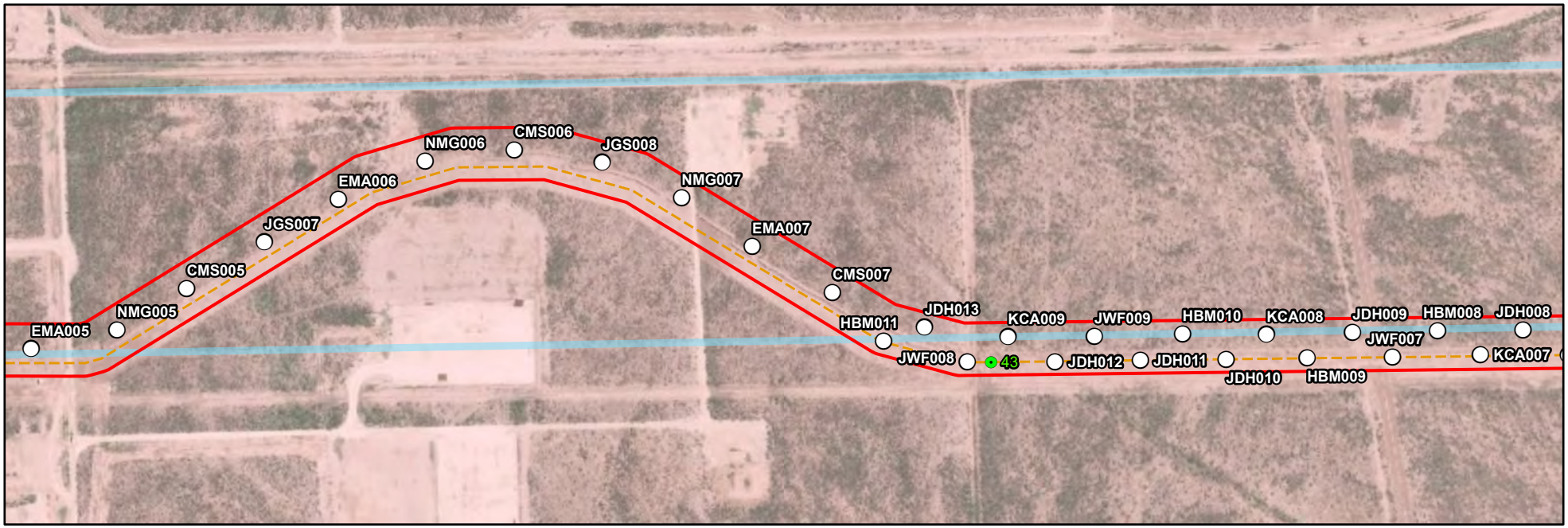

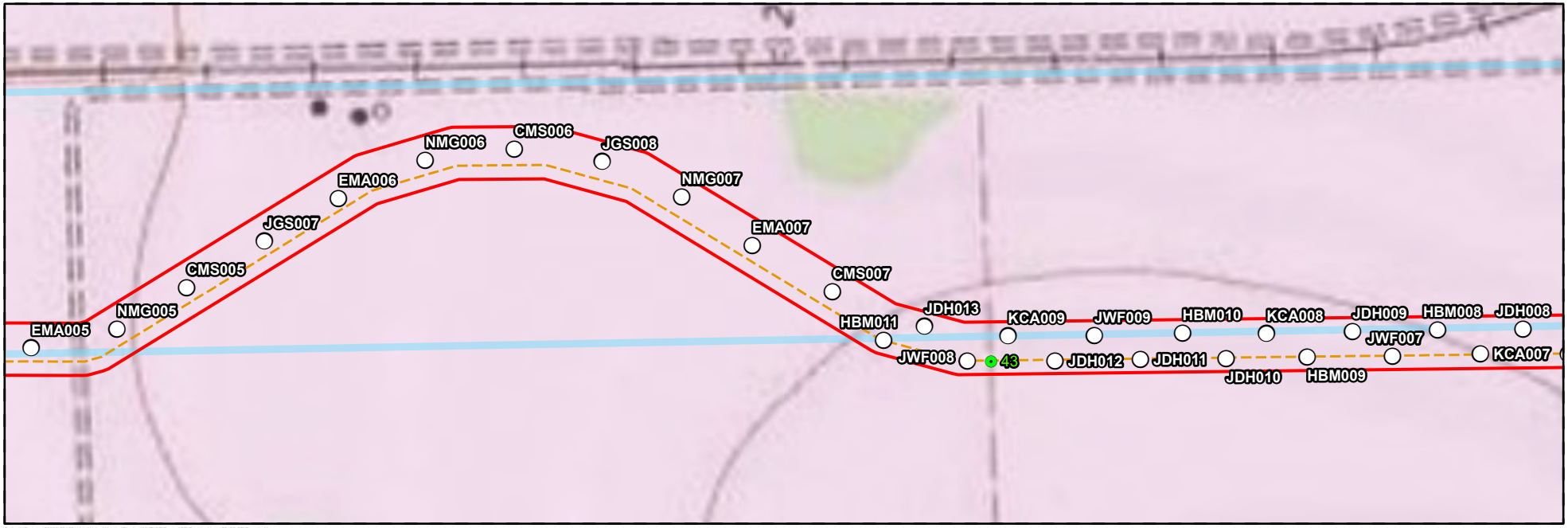

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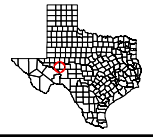

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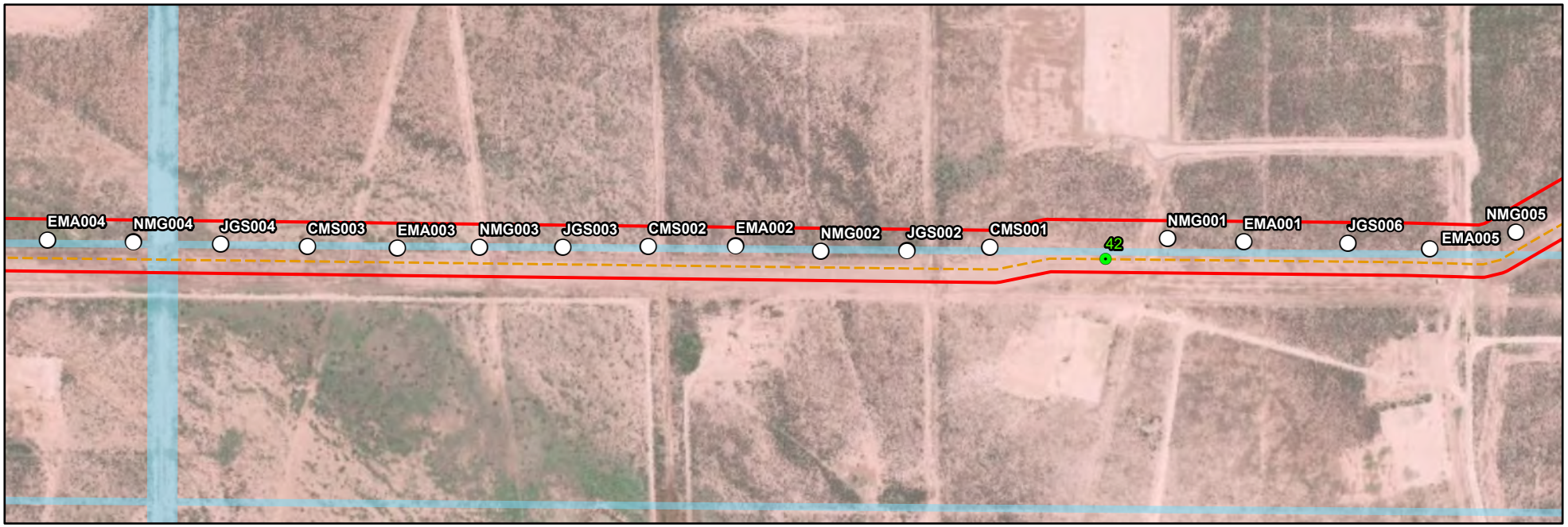

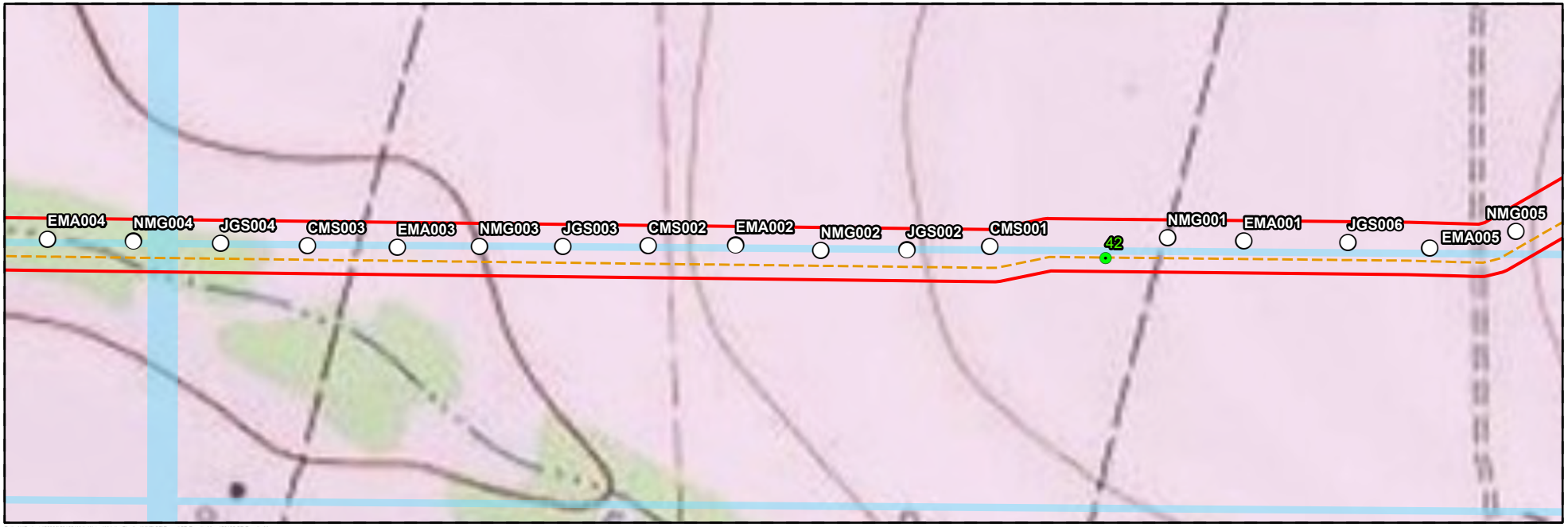

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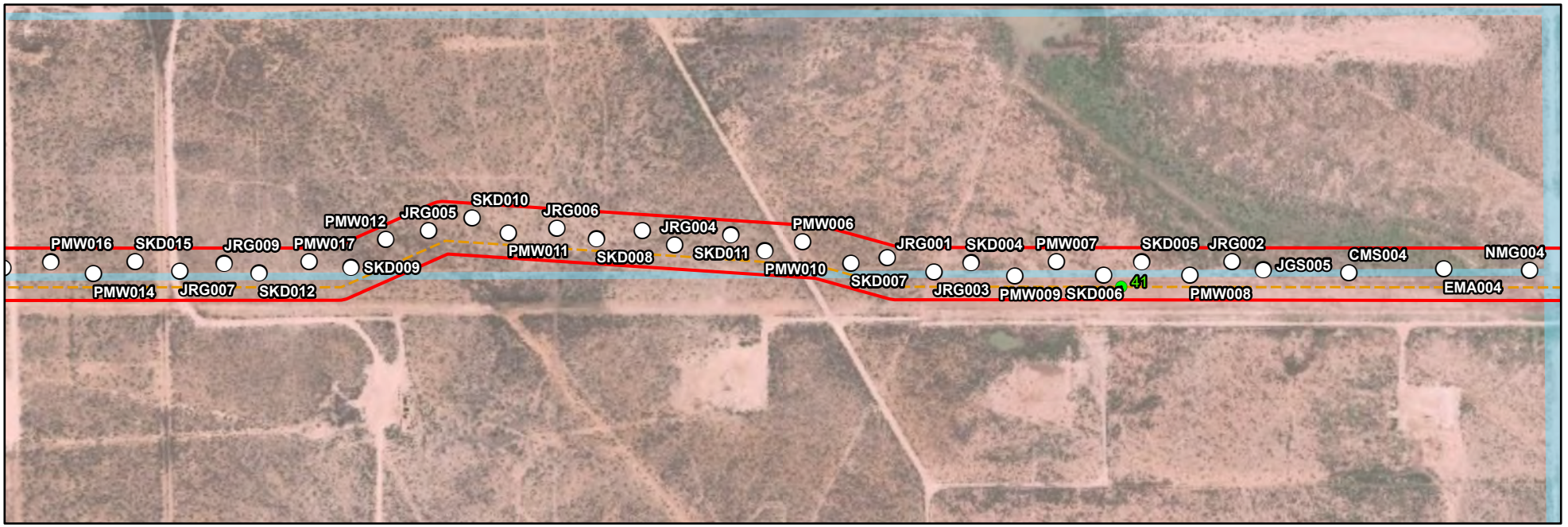

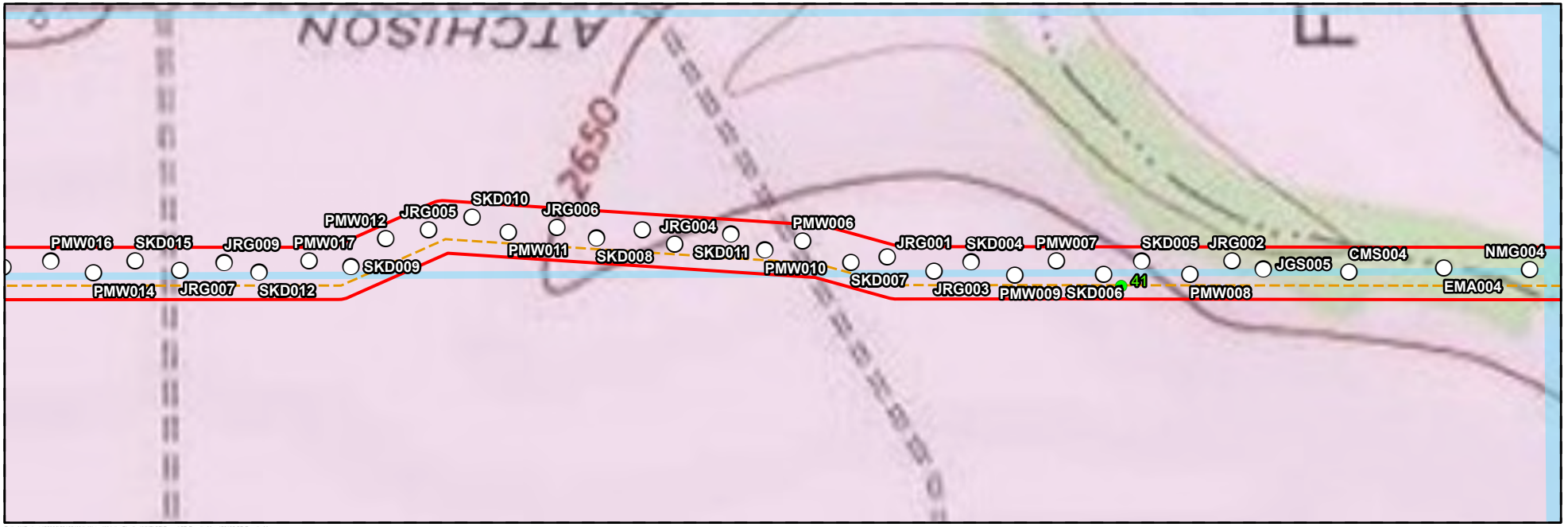

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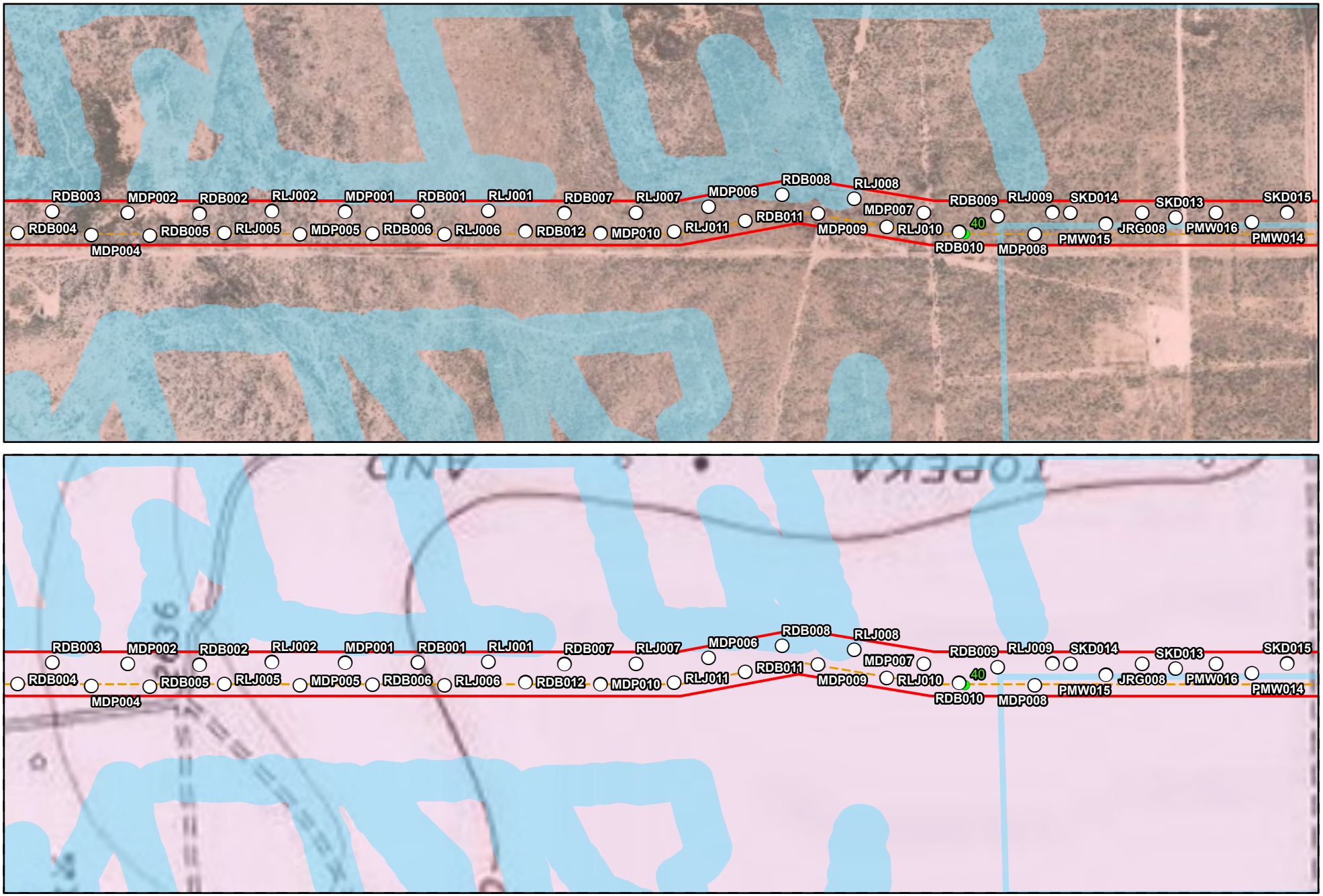

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RLJ010
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RDB010
MDP008
PMW015
JRG008
PMW016
PMW014

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WHISTLER PIPELINE PROJECT

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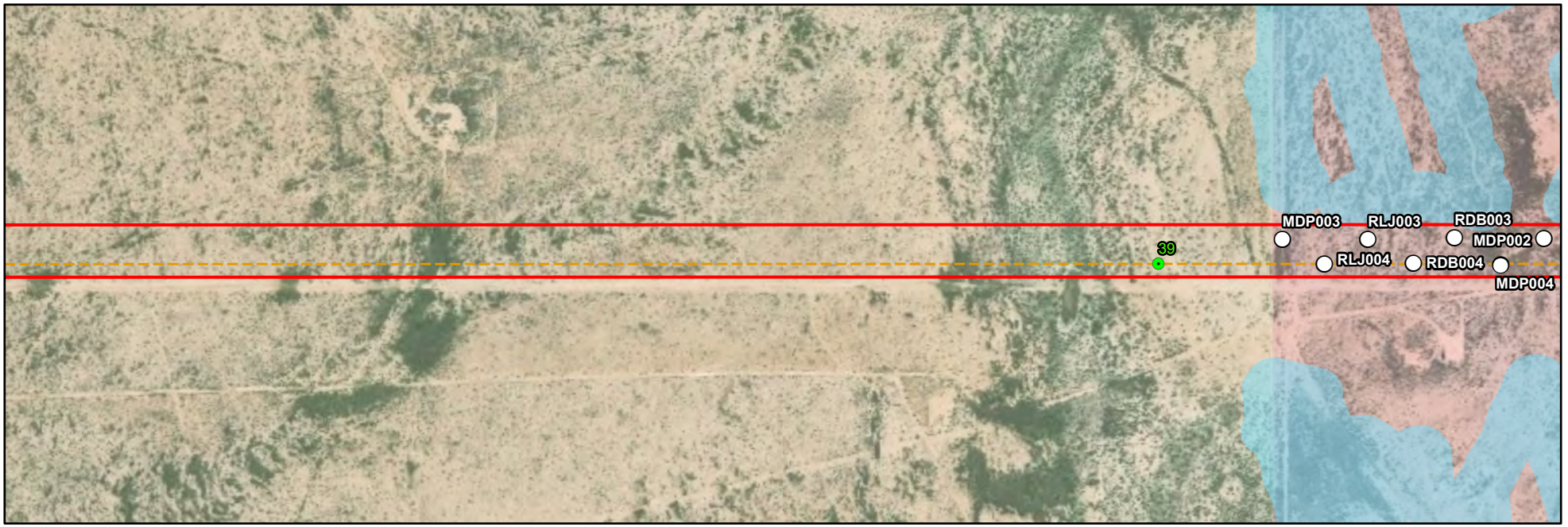

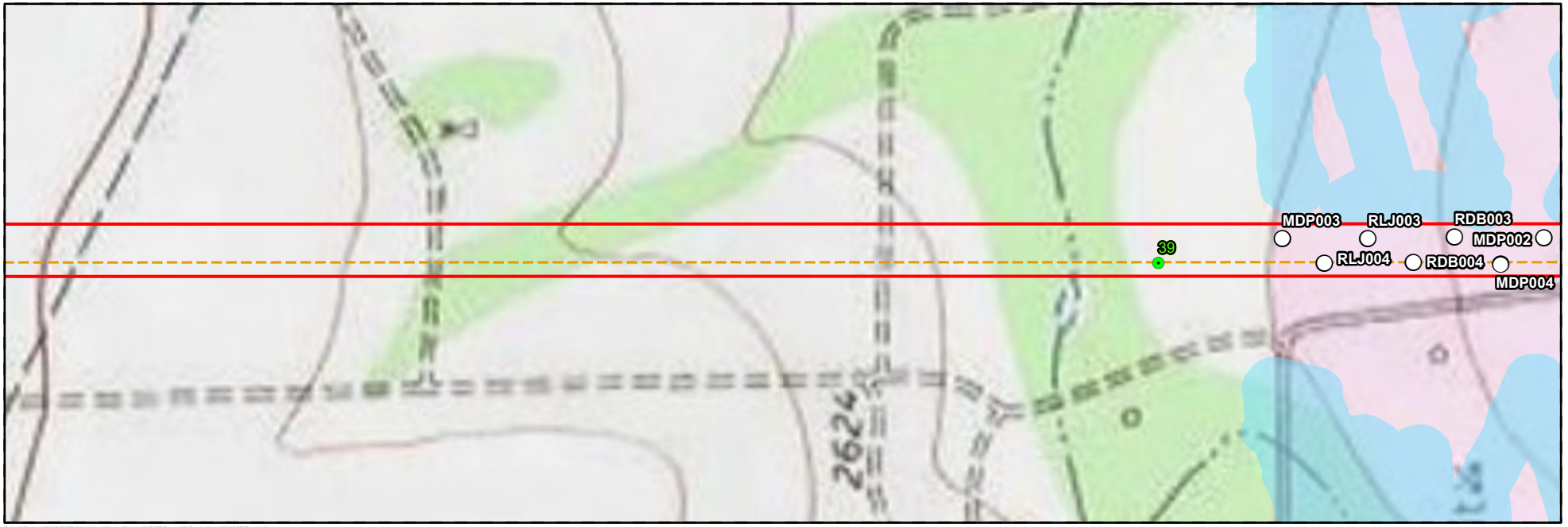

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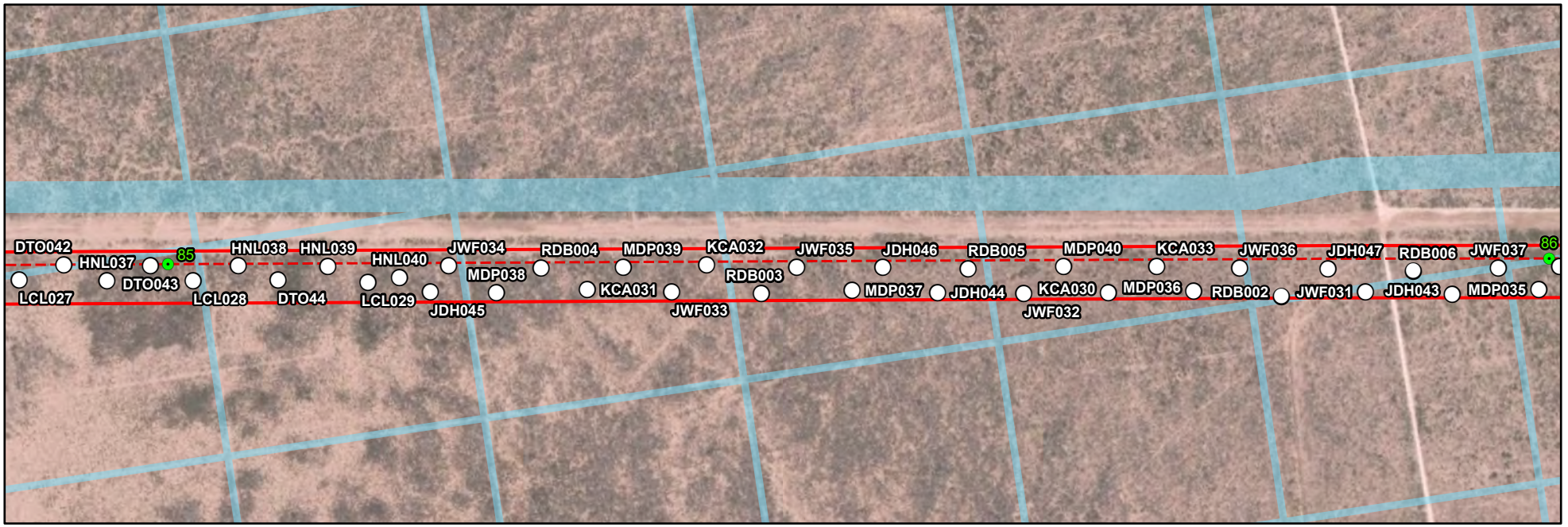

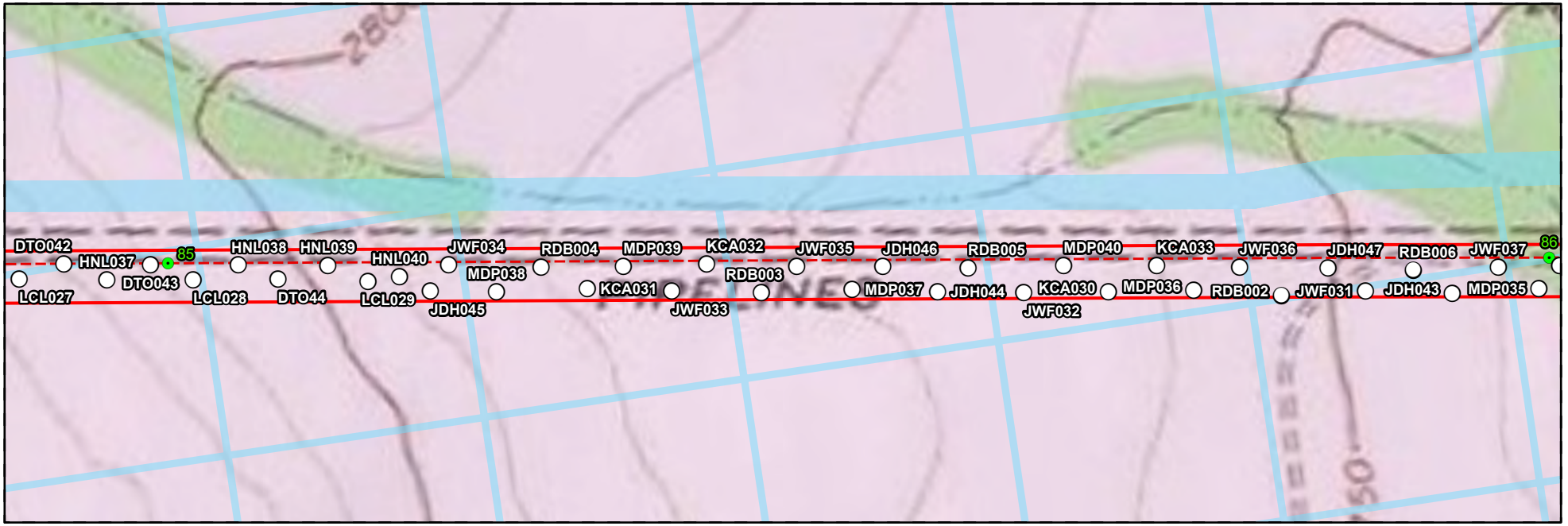

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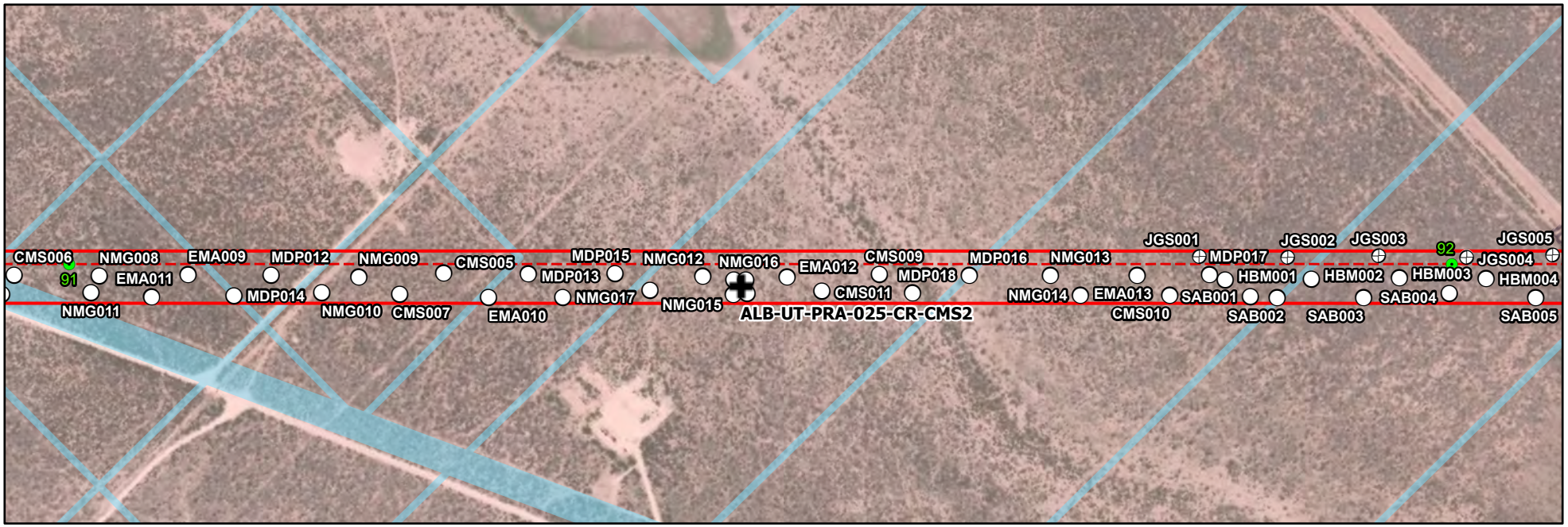

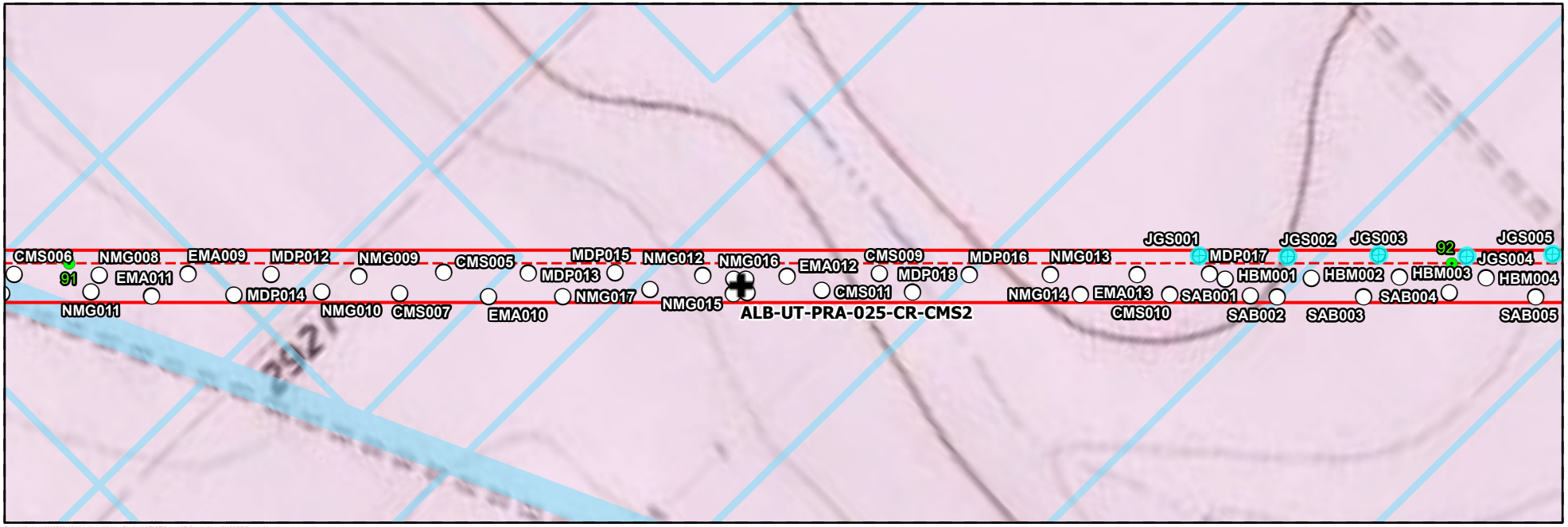

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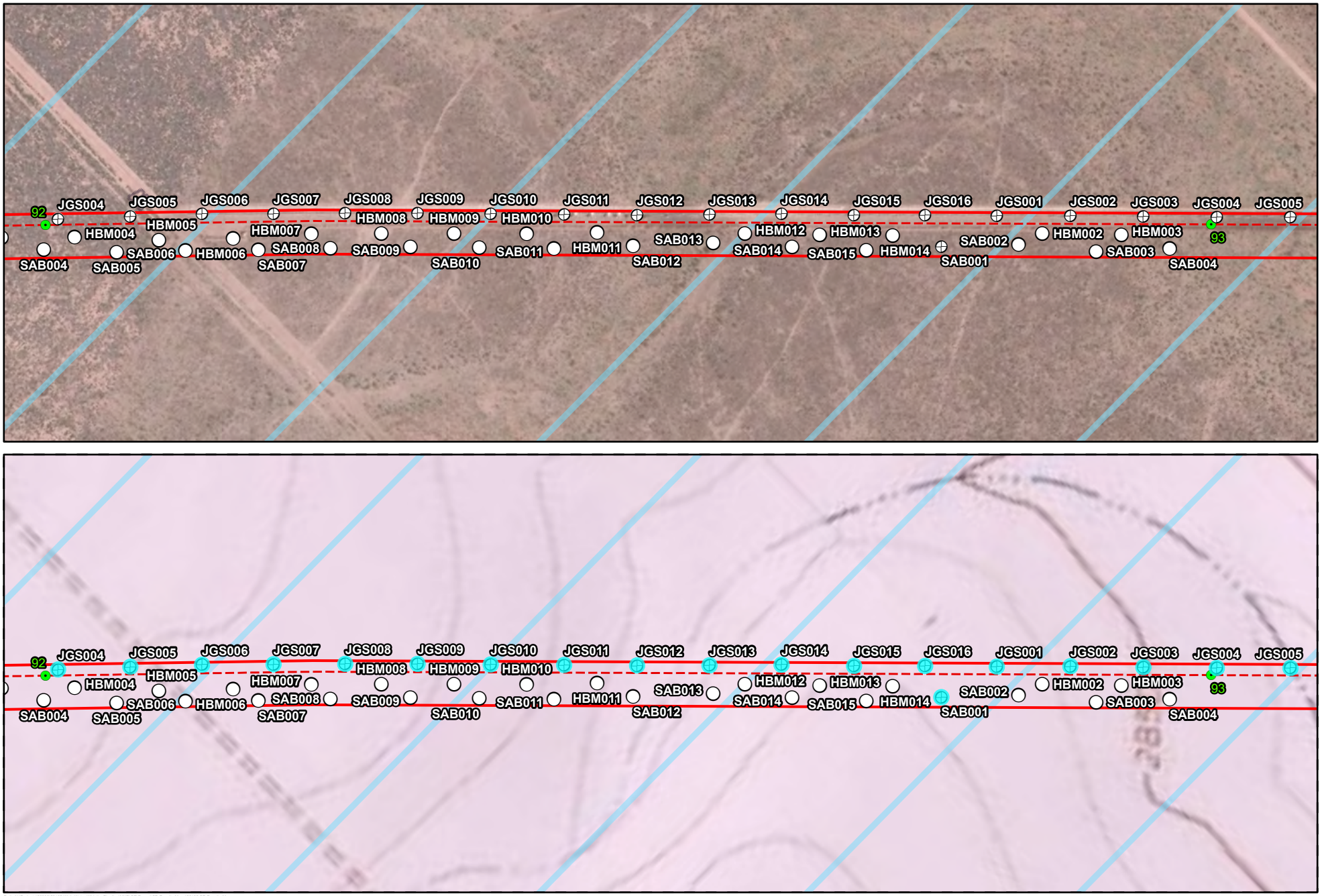

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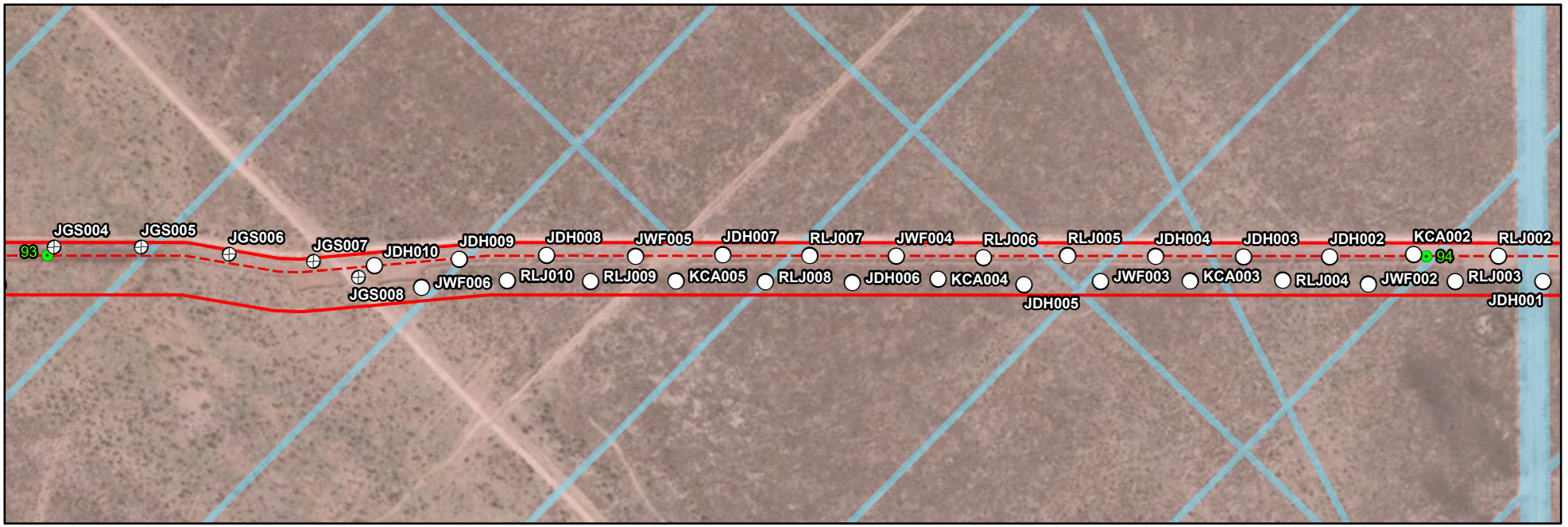

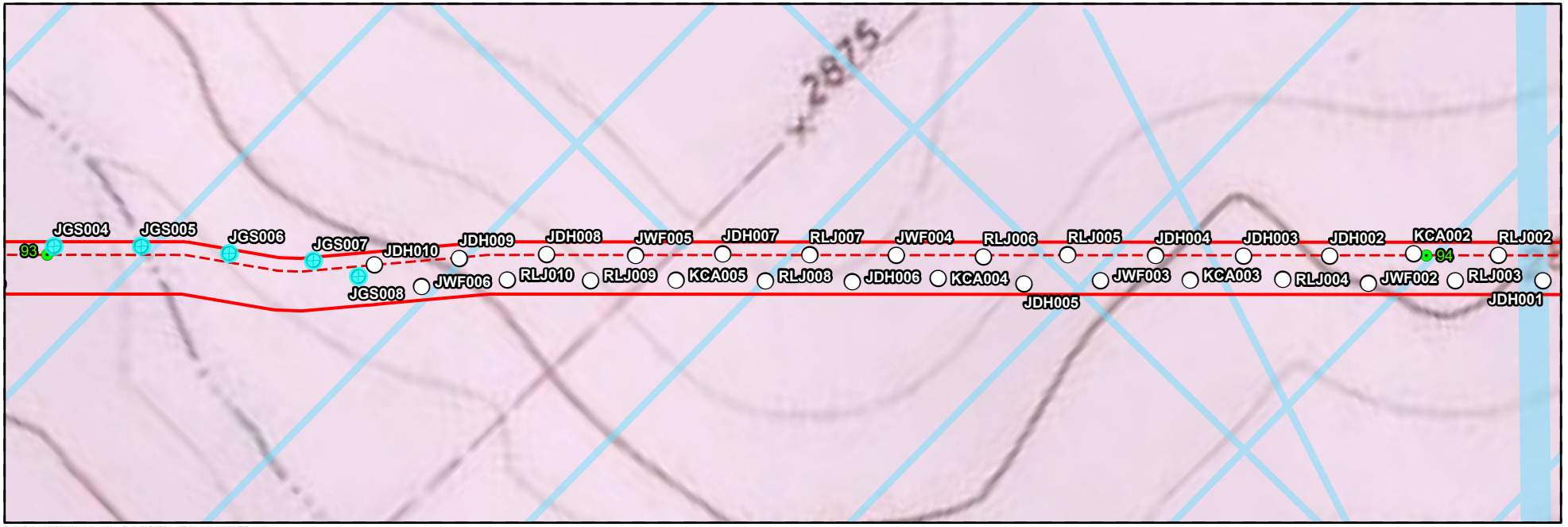

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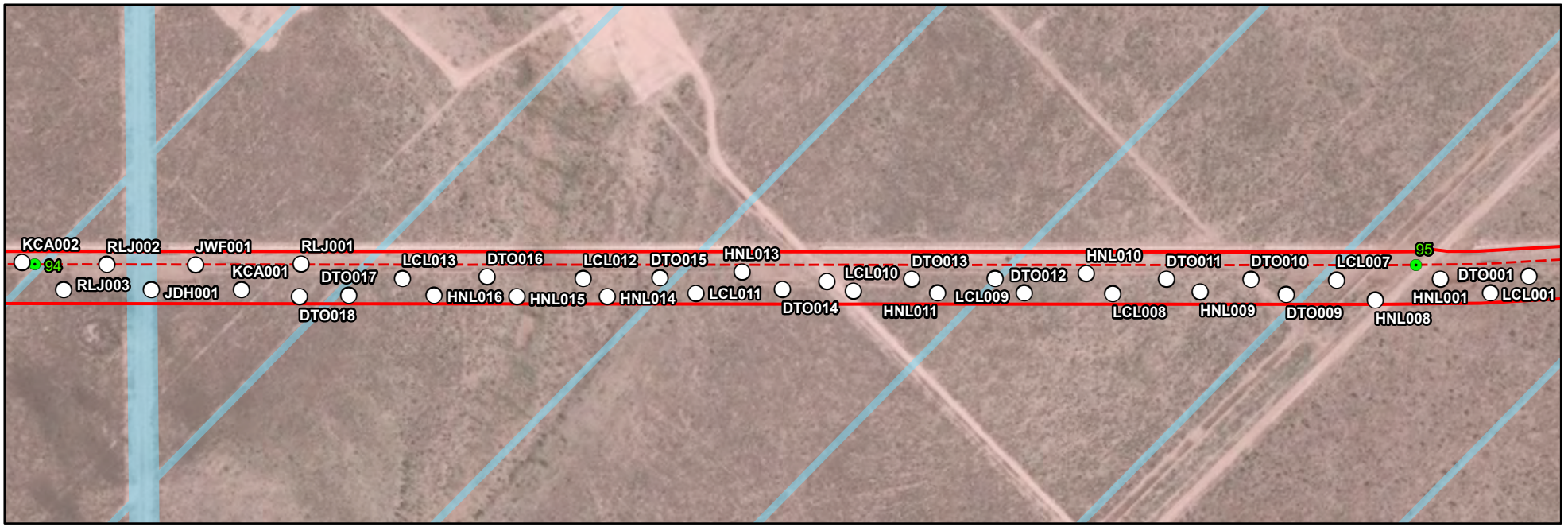

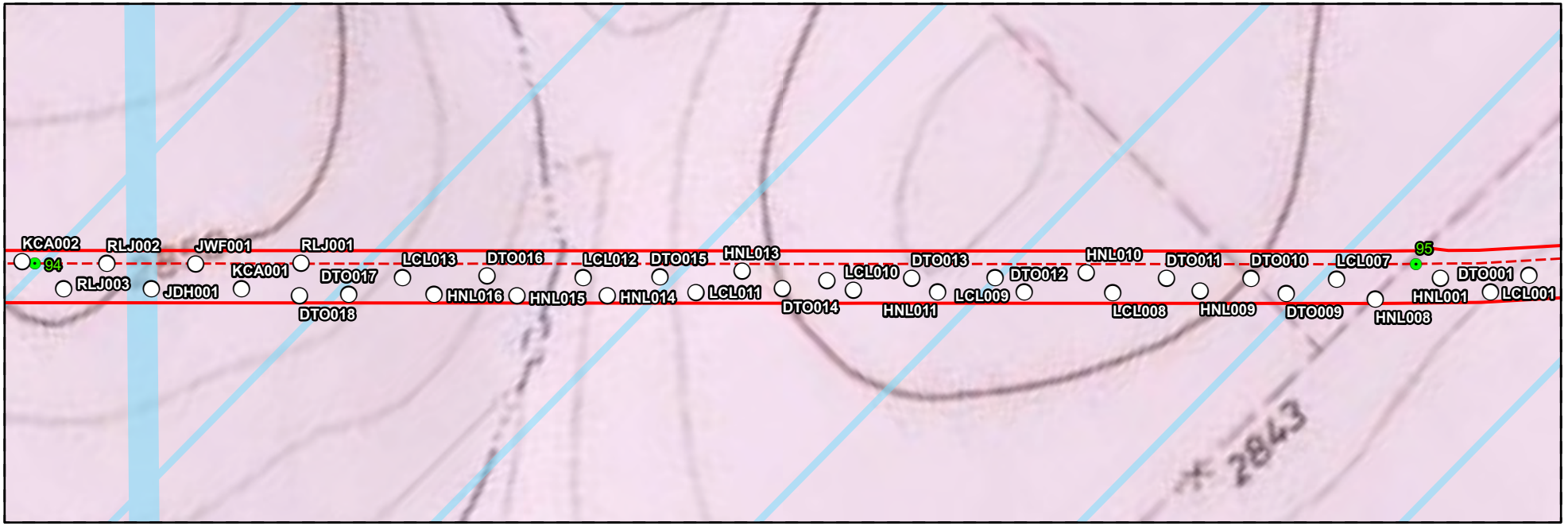

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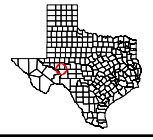

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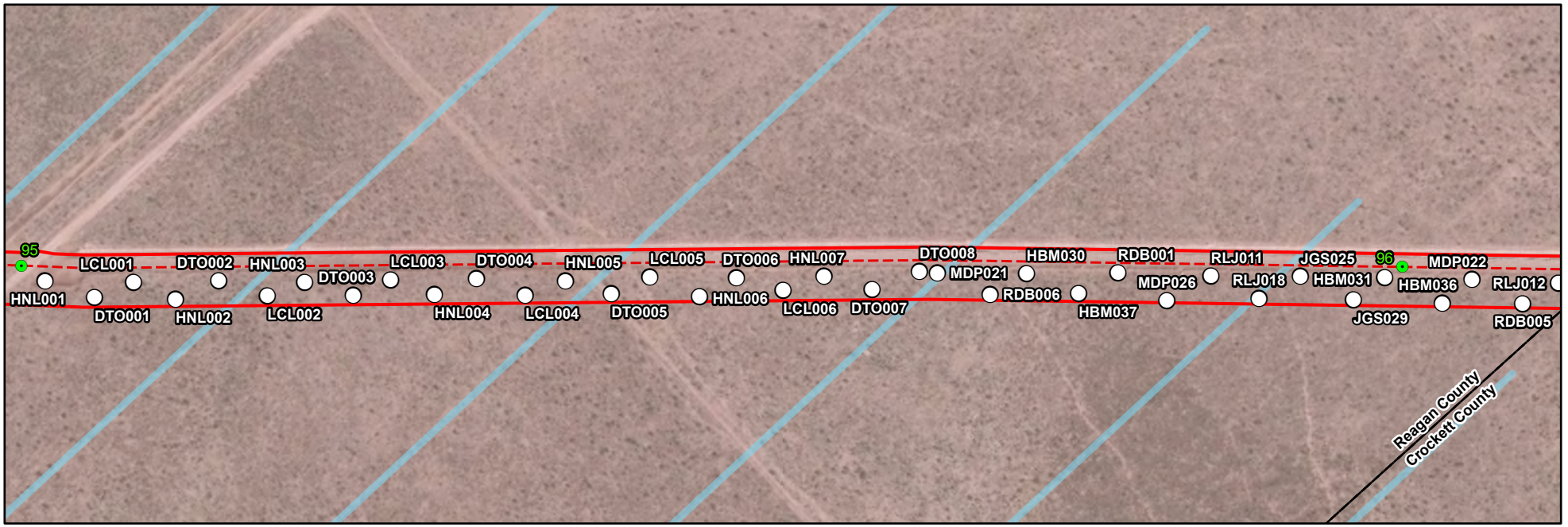

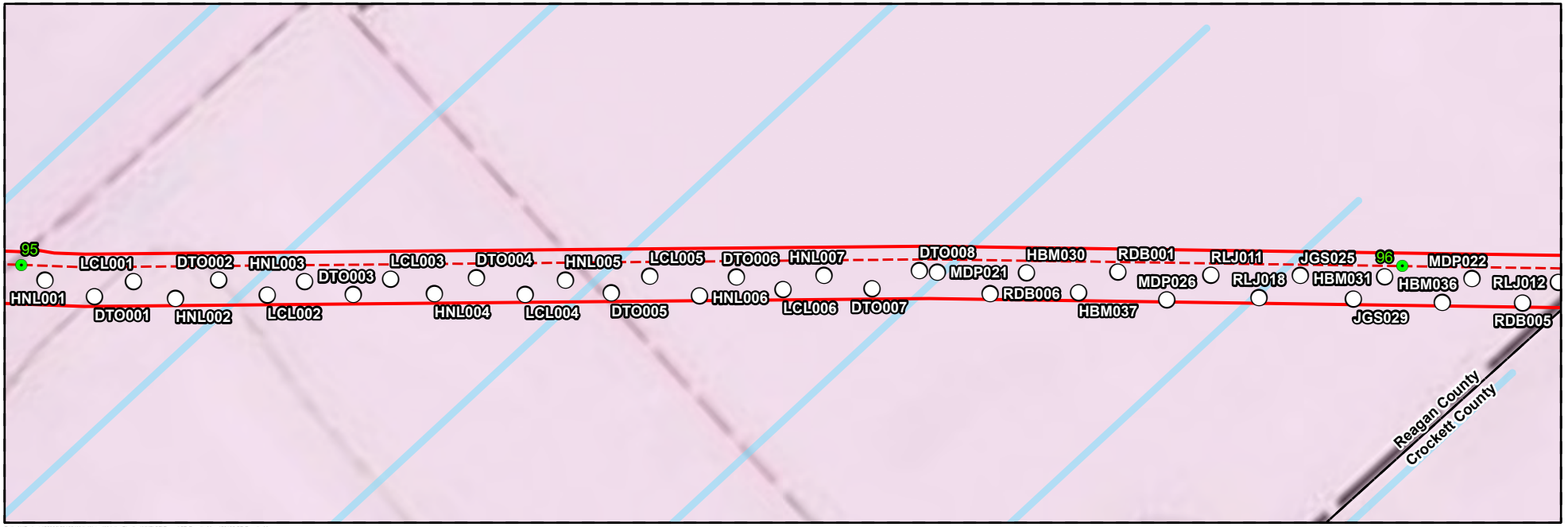

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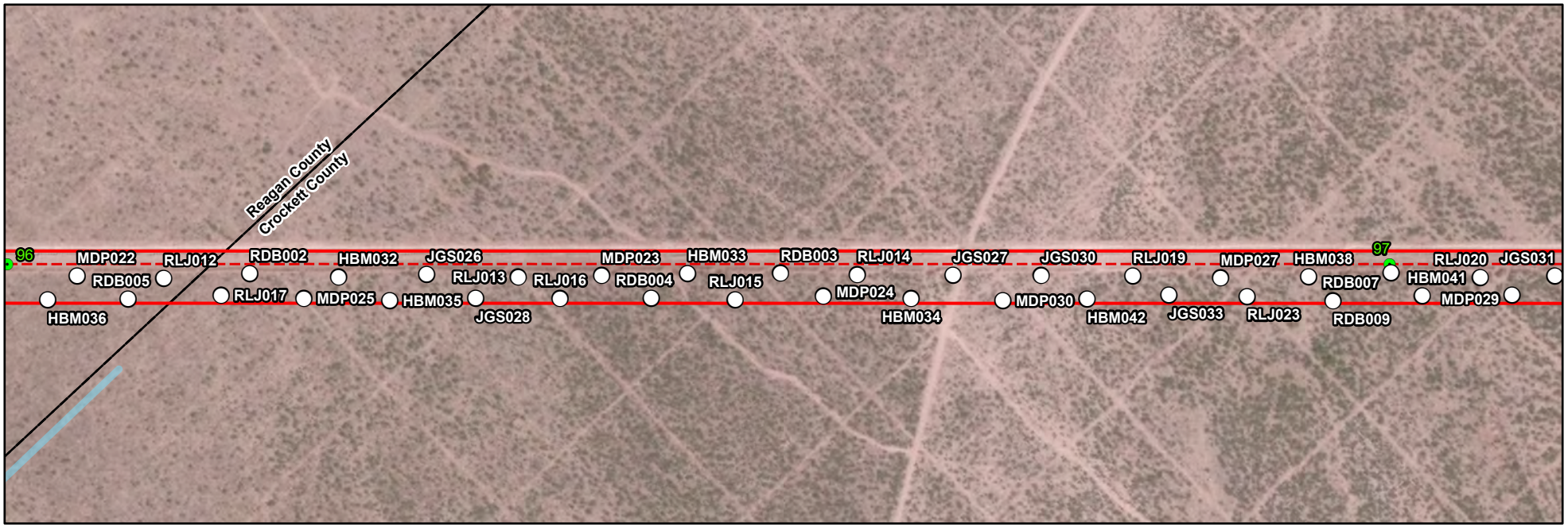

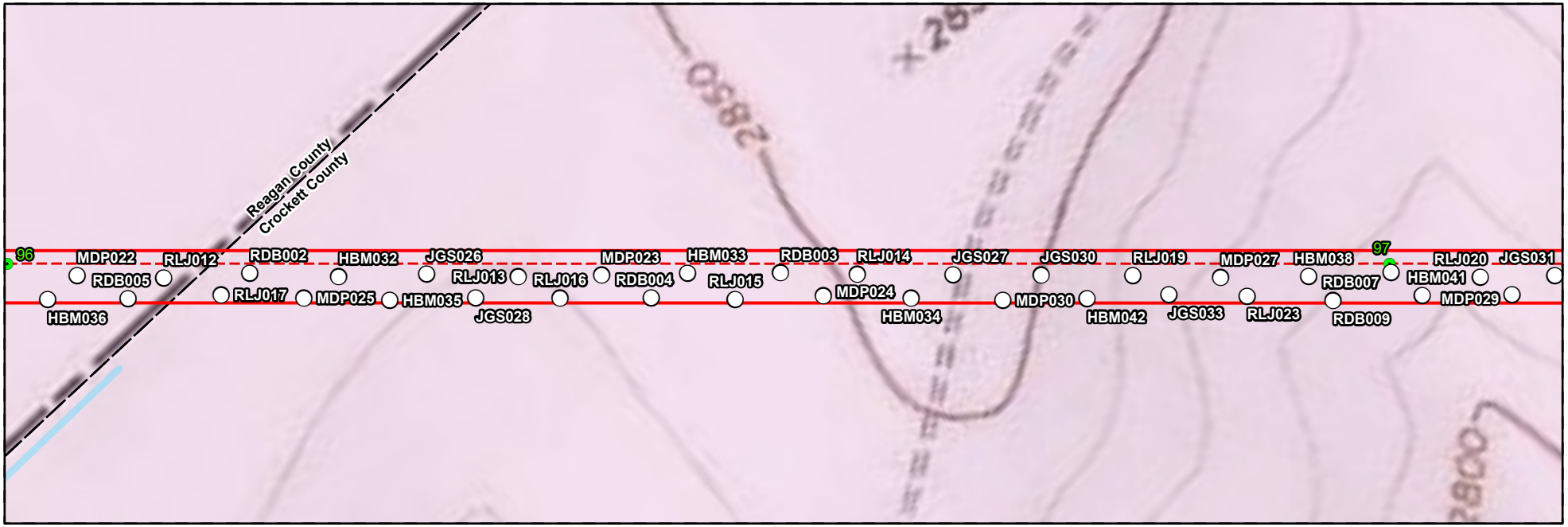

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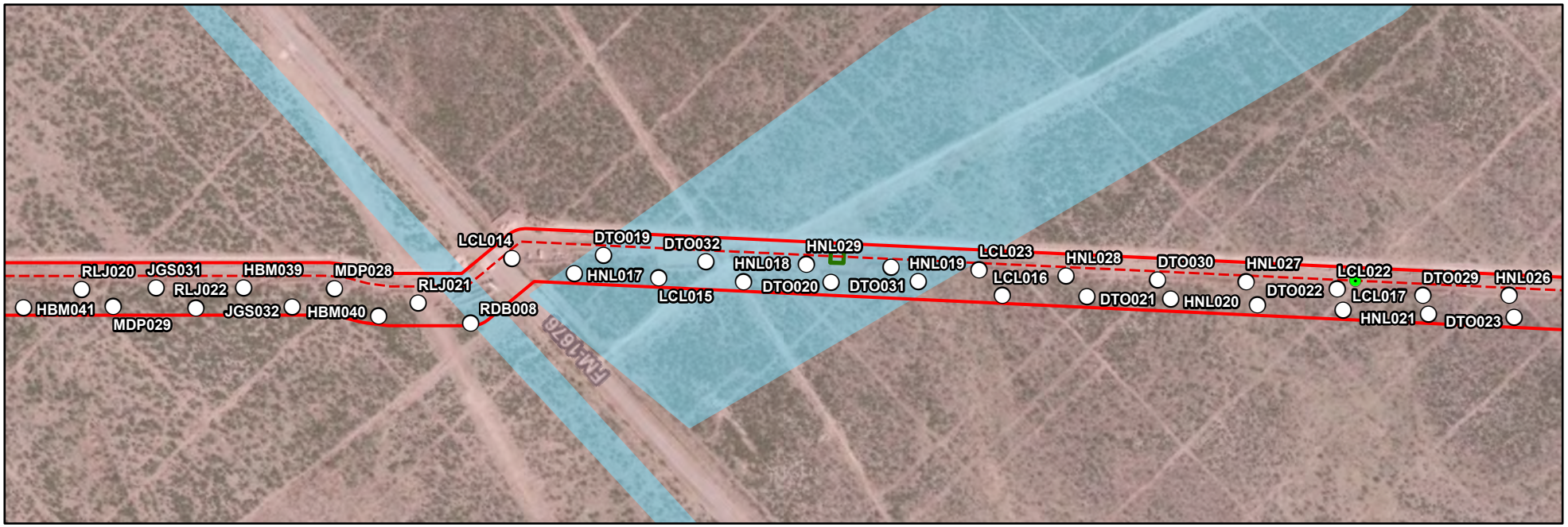
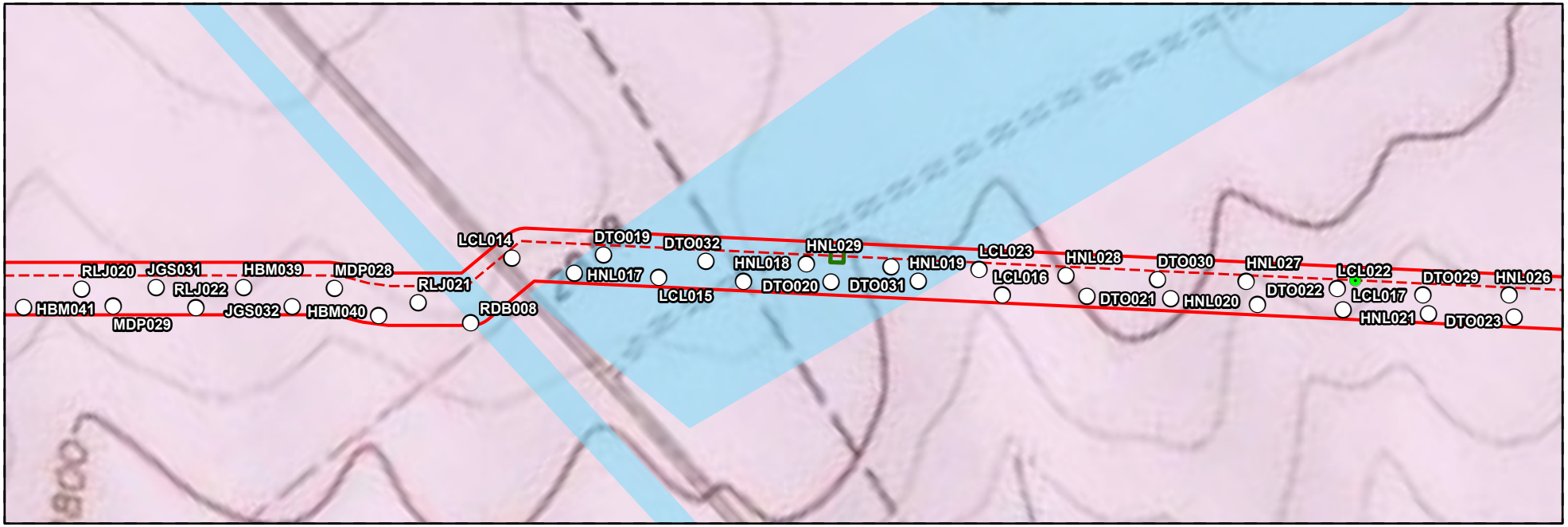
0 250 500 Feet
0 50 100 150 Meters





SWCA ENVIRONMENTAL CONSULTANTS

WHISTLER PIPELINE PROJECT

Appendix A. Project Alignment Sheets within UT Lands

Whistler Pipeline
Survey Corridor
Negative Shovel Test
Mile Post
Compressor Station
Previous Cultural Survey
UT Lands

1:7,000

Created By: L. Hitzfelder
Project Number: 56185
Date: 2/3/2020

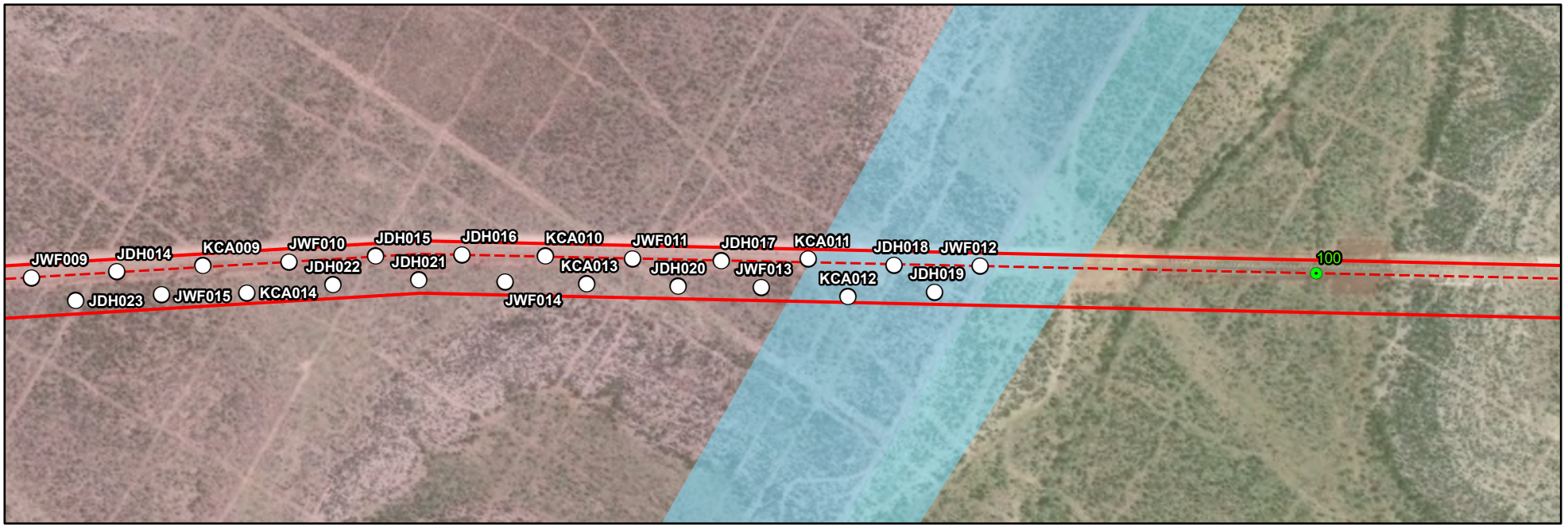
0 250 500 Feet
0 50 100 150 Meters

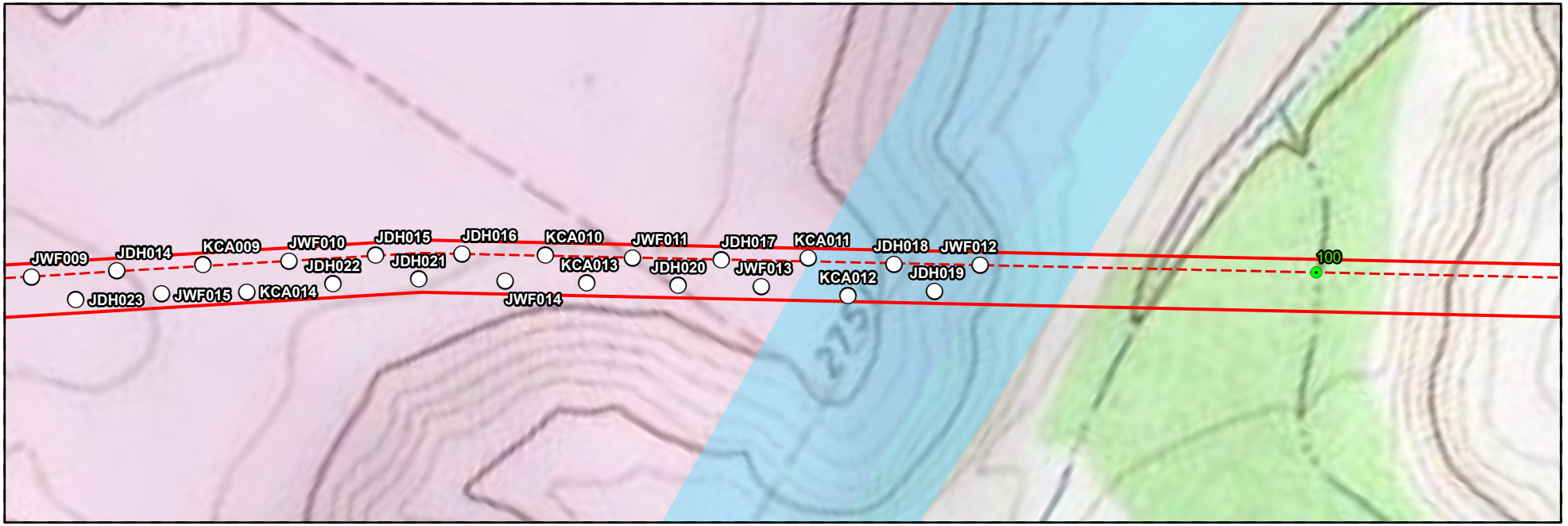
Whistler Pipeline
Survey Corridor
Negative Shovel Test
Mile Post
UT Lands

1:7,000

Created By: L. Hitzfelder
Project Number: 56185
Date: 2/3/2020

0 250 500 Feet
0 50 100 150 Meters





SWCA ENVIRONMENTAL CONSULTANTS

WHISTLER PIPELINE PROJECT

Appendix A. Project Alignment Sheets within UT Lands

Whistler Pipeline
Survey Corridor
Negative Shovel Test
Mile Post
Previous Cultural Survey
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WHISTLER PIPELINE PROJECT

Appendix A. Project Alignment Sheets within UT Lands

Whistler Pipeline
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0 250 500 Feet
0 50 100 150 Meters

Restricted Information

Not for Public Disclosure

Restricted Information

Not for Public Disclosure

Restricted Information

Not for Public Disclosure

Appendix B

Survey Shovel Test Data on UT Lands

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	PMW001	1	5	negative	10YR 5/2	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	PMW002	1	10	negative	10YR 5/2	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	PMW003	1	10	negative	10YR 5/2	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	PMW004	1	15	negative	10YR 5/2	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	PMW005	1	15	negative	10YR 5/2	Sandy Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	PMW006	1	20	negative	10YR 5/2	Sandy Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	PMW007	1	8	negative	10YR 5/2	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD001	1	5	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD002	1	5	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD003	1	5	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD004	1	5	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD005	1	5	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD007	1	10	negative	10YR 6/2	Silt	Disturbed	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD008	1	15	negative	10YR 6/2	Silt	Disturbed	Bedrock
WHL-TX-UPT-0163.00000	ABL-UT-PRA-023	SKD009	1	15	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	CMS001	1	50	negative	10YR 7/2	Sand	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	CMS002	1	30	negative	10YR 7/2	Sand	Rock impasse	N/A
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	CMS003	1	40	negative	10YR 7/2	Sand	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	EMA001	1	30	negative	7.5YR 6/2	Silt Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	EMA002	1	67	positive	7.5YR 6/2	Silt Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	EMA003	1	65	negative	7.5YR 6/2	Silt Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	NMG001	1	5	negative	10YR 4/4	Sand	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	NMG002	1	30	negative	10YR 4/4	Loamy Sand	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	NMG003	1	55	negative	10YR 4/4	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	NMG004	1	65	negative	10YR 4/4	Loamy Sand	10% gravels	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	NMG005	1	25	negative	10YR 4/4	Loamy Sand	50% gravels	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	PMW001	1	35	negative	10YR 6/2	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	PMW002	1	62	negative	10YR 7/3	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	PMW003	1	55	negative	10YR 6/3	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	PMW004	1	35	negative	10YR 6/3	Sandy Clay Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	PMW005	1	50	negative	10YR 7/4	Sandy Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	SKD001	1	35	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	SKD002	1	40	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-ML-PRA-016	SKD003	1	35	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM001	1	75	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM002	1	70	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM003	1	75	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM004	1	10	negative	7.5YR 5/6	Silt	Completely disturbed	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM005	1	5	negative	7.5YR 5/6	Silt Loam	In corridor	Bedrock
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM006	1	50	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM007	1	40	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM008	1	40	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM009	1	70	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM010	1	100	negative	7.5YR 5/6	Silt Loam	None	Depth
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM012	1	30	negative	10YR 4/2	Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM013	1	60	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM014	1	60	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM015	1	40	negative	10YR 4/2	Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM016	1	60	negative	10YR 4/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	HBM017	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH001	1	35	negative	7.5YR 5/4	Silt Loam	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH001	2	55	negative	7.5YR 6/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH002	1	35	negative	7.5YR 5/4	Silt Loam	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH002	2	55	negative	10YR 6/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH003	1	15	negative	10YR 6/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH004	1	80	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH005	1	60	negative	7.5YR 6/4	Silt Loam	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH005	2	70	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH006	1	50	negative	10YR 4/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH007	1	60	negative	10YR 6/4	Silt Loam	ALB-UT-PRA-018-CR-JDH1 delineation test	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH008	1	30	negative	10YR 5/4	Silt Loam	Test moved 1m N for ephemeral drainage. Margin of existing pipeline corridor.	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH008	2	45	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH009	1	20	negative	10YR 5/4	Silt Loam	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JDH009	2	50	negative	10YR 6/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF001	1	10	negative	10YR 4/3	Silt	Disturbance, pipeline corridor, mesquite scrub, wheat grass	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF001	2	30	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF002	1	10	negative	10YR 4/4	Silt	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF002	2	20	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF003	1	10	negative	10YR 4/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF004	1	10	negative	10YR 4/4	Silt	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF004	2	60	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF005	1	10	negative	10YR 5/4	Silt	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF005	2	70	negative	7.5YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF006	1	30	negative	10YR 6/4	Silt	None	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF006	2	80	negative	10YR 6/6	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF007	1	20	negative	10YR 4/4	Silt	Gravel impasse, disturbance, pipeline corridor	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF007	2	40	negative	10YR 6/4	Silt Loam	None	Other
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF008	1	20	negative	10YR 4/4	Silt	Adjacent to overgrown pipeline corridor, mesquite scrub, cacti	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF008	2	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF009	1	60	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF010	1	65	negative	10YR 6/4	Silt Loam	ALB-UT-PRA-018-CR-JDH01 delineation	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF011	1	10	negative	10YR 4/4	Silt	Eroded, previous flooding, mesquite scrub, cacti, grasses	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF011	2	30	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF012	1	10	negative	10YR 4/4	Silt	Mesquite scrub, cacti, weeds, vegetation more dense than previous shovel test	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	JWF012	2	50	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA002	1	10	negative	10YR 4/6	Silt	Upland plain. Sparse vegetation.	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA002	2	20	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA003	1	20	negative	10YR 7/3	Silt	Upland plain, sparse, low vegetation.	Bedrock
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA004	1	35	negative	10YR 7/4	Silt	Within corridor. Upland plain.	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA005	1	60	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA006	1	55	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA007	1	70	negative	10YR 7/4	Silt	Upland plain, dirt tracks to the north east.	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA008	1	83	negative	10YR 5/6	Silt	Sparse vegetation, upland plain.	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA009	1	40	negative	10YR 4/3	Silt	Dense mesquite. Low scrub. Upland plain.	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA010	1	70	negative	10YR 7/4	Silt	ST delineation.	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA011	1	50	negative	10YR 5/3	Silt	Dense scrub, sparse mesquite and cacti. Upland plain.	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA012	1	15	negative	10YR 5/4	Silt	Dense waist- high vegetation. Sparse mesquite. Upland plain.	N/A
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA012	2	40	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0144.00000	ALB-UT-PRA-018	KCA013	1	60	negative	10YR 7/4	Silt	Dense brush, south of corridor. Sparse mesquite. Upland plain.	Compact Soil
WHL-TX-UPT-0145.00000	ALB-UT-PRA-018	HBM018	1	40	negative	10YR 5/4	Silt	Active ant colony next to hole	Bedrock
WHL-TX-UPT-0145.00000	ALB-UT-PRA-018	JWF013	1	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0145.00000	ALB-UT-PRA-018	KCA014	1	35	negative	10YR 7/4	Silt	Arid, sparse, low height scrub. South of corridor. Upland plain.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO015	1	20	negative	10YR 6/4	Silt	Open area with low bushes, spotty grasses	N/A
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO015	2	25	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO016	1	55	negative	10YR 6/4	Silty Clay Loam	Low bushes, mesquite	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO017	1	30	negative	10YR 7/3	Silt	Low bushes, cacti, grasses	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO018	1	30	negative	10YR 6/4	Silt	Low bushes, cacti, grasses.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO019	1	20	negative	10YR 6/4	Silt	Low bushes, cacti, grasses	N/A
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO019	2	30	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO020	1	15	negative	10YR 6/4	Silt	Low bushes, cacti, slope,	N/A
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO020	2	30	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO021	1	30	negative	10YR 6/4	Silt	Open area, low bushes, grasses	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO022	1	45	negative	10YR 7/3	Silt	Open area, low bushes, spotty grasses	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO023	1	35	negative	10YR 5/3	Silt	Low bushes, spotty grasses, open area, mesquite	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO024	1	20	negative	10YR 6/4	Silt	Low bushes mesquite, open area, grasses	N/A
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO024	2	50	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO025	1	20	negative	10YR 6/4	Silt	Low bushes, open area, mesquite	N/A
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	DTO025	2	50	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HBM019	1	75	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HBM020	1	80	negative	10YR 5/4	Silt	Delineation for ALB-UT-PRA-018-CR-DTO1	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL017	1	15	negative	10YR 5/2	Silt	Vegetation- shrubs and low bushes.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL018	1	20	negative	7.5YR 5/3	Silt	Vegetation- bushes, cacti.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL019	1	30	negative	7.5YR 5/3	Silt	Vegetation- shrubs, cacti, small bushes.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL020	1	20	negative	7.5YR 5/3	Silt	Vegetation- bushes and forbs.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL021	1	25	negative	7.5YR 5/3	Silt	Vegetation- cacti, low bushes, forbs.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL022	1	25	negative	7.5YR 5/3	Silt	Vegetation- shrubs, low bushes and cacti.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL023	1	40	negative	7.5YR 5/3	Silt	Vegetation- shrubs and forbs.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL024	1	25	negative	7.5YR 5/3	Silt	Vegetation- small shrubs and low bushes.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL025	1	25	negative	7.5YR 5/3	Silt	Vegetation- bushes and forbs.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL026	1	25	negative	7.5YR 5/3	Silt	Between fence line and two track. Vegetation- grass and small shrubs	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	HNL027	1	60	negative	7.5YR 5/3	Silt	Vegetation- small shrubs and low bushes. Delineation of ALB-UT-PRA-18-CR-DTO-1.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	JDH010	1	55	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	JDH011	1	40	negative	10YR 6/4	Silt Loam	Disturbed, existing pipeline corridor	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	JWF014	1	30	negative	10YR 6/4	Silt Loam	Adjacent to pipeline corridor, heavy disturbance	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	JWF015	1	40	negative	10YR 6/4	Silt Loam	ALB-UT-PRA-018-CR-DTO01 delineation	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	JWF016	1	60	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	KCA015	1	70	negative	10YR 7/4	Silt	Upland plain, low sparse scrub.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	KCA016	1	60	negative	10YR 7/4	Silt	Delineated. Open field, sparse vegetation, arid ground. Upland plain.	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	LCL009	1	24	negative	10YR 5/3	Silty Clay Loam	Thick mesquite scrub, bushes, forbs	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	LCL010	1	26	negative	10YR 5/3	Silty Clay Loam	Mesquite scrub, forbs, few prickly pear and Christmas cactus	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	LCL011	1	33	negative	10YR 5/3	Silt Loam	Mesquite scrub, forbs	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	LCL012	1	35	negative	10YR 5/3	Silty Clay Loam	Mesquite, bushes, grasses, forbs, some prickly pear	Compact Soil
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	LCL013	1	100	negative	7.5YR 7/3	Silt Loam	Mesquite, low bushes	Depth
WHL-TX-UPT-0146.00000	ALB-UT-PRA-018	LCL014	1	80	positive	7.5YR 7/2	Silt Loam	Positive ST; isolated find (ALB-UT-PRA-018-CR-DTO1); low bushes, mesquite	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO001	1	20	negative	10YR 6/4	Silt Loam	Adjacent to existing pipeline, cacti, pumpkins, spotty grasses, low bushes at distance, wildflowers.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO002	1	10	negative	10YR 6/4	Silt	Open area, wildflowers, adjacent to existing pipeline, low bushes, spotty grasses	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO003	1	20	negative	7.5YR 6/4	Silt	Close to "Lindsey house road", colonies, grasses, sunflowers, low bushes	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO004	1	10	negative	7.5YR 6/4	Silt	Cacti, open area, low bushes at distance	N/A
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO004	2	56	negative	7.5YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO005	1	15	negative	7.5YR 6/4	Sand	Grasses, low bushes, open area	N/A
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO005	2	25	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO006	1	15	negative	10YR 6/4	Silty Clay	Open area, grasses, low bushes, mesquite, cacti	N/A
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO006	2	40	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO007	1	40	negative	10YR 6/4	Silt	Open area, low bushes at distance, spotty grasses	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO008	1	10	negative	10YR 6/4	Silt Loam	Side of fence, state road, buried fiber optic cable, open area, grasses, low bushes	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO009	1	10	negative	10YR 6/4	Silt	Open area, low bushes, mesquite, spotty grasses	N/A
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO009	2	50	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO010	1	15	negative	10YR 6/4	Silty Clay	Open area, low bushes spotty, grasses, mesquite	N/A
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO010	2	30	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO011	1	30	negative	10YR 7/3	Silt	Semi open area, mesquite, low bushes, cacti	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO012	1	40	negative	10YR 6/4	Silt	Mesquite, juniper, cacti, grasses	N/A
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO012	2	45	negative	10YR 7/3	Silt	None	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO013	1	40	negative	10YR 6/4	Silty Clay Loam	Impasse-gravel	N/A
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO013	2	3	negative	10YR 7/3	Silt	None	Other
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	DTO014	1	27	negative	10YR 6/4	Silt	Low bushes, semi open area, mesquite	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL001	1	35	negative	7.5YR 5/3	Silt	Vegetation- grass and bushes.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL002	1	30	negative	10YR 6/2	Silt	Vegetation- small shrubs and grass.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL003	1	55	negative	7.5YR 5/4	Silt	Vegetation- grass	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL004	1	10	negative	7.5YR 5/3	Silt	Vegetation- grass and large bushes.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL005	1	45	negative	7.5YR 5/3	Silt	Vegetation- grass, forbs, and small shrubs.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL006	1	35	negative	7.5YR 5/3	Silt	Vegetation- grass, forbs, shrubs, small trees.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL007	1	10	negative	7.5YR 5/3	Silt	Vegetation- shrubs, bushes, grass, forbs and sunflowers.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL008	1	5	negative	7.5YR 5/2	Silt	Disturbed area. Vegetation- grass, shrubs and low bushes.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL009	1	25	negative	7.5YR 5/2	Silt	Vegetation- small bushes and grass	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL010	1	30	negative	7.5YR 5/3	Silt	Vegetation- forbs and low bushes.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL011	1	15	negative	7.5YR 5/2	Sandy Loam	Vegetation- various cacti, forbs, small bushes and shrubs.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL012	1	30	negative	10YR 6/2	Sandy Loam	Vegetation- cacti, forbs and low bushes.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL013	1	15	negative	10YR 6/2	Sandy Loam	Vegetation- cacti, forbs and low bushes.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL014	1	25	negative	5YR 4/3	Loam	Rock impasse. Vegetation- low bushes, cacti, shrubs and forbs.	Other
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL015	1	30	negative	7.5YR 6/3	Loam	Vegetation- bushes and forbs.	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	HNL016	1	40	negative	7.5YR 6/4	Loam	Vegetation- low bushes	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL001	1	42	negative	10YR 6/4	Silt Loam	Short grasses and forbs; ST N of gravel road	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL002	1	58	negative	10YR 6/3	Silt Loam	Grasses, forbs, few prickly pear and mesquite	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL003	1	72	negative	10YR 6/3	Silt Loam	Grasses, forbs, mesquite	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL004	1	100	negative	10YR 6/3	Silt Loam	Grasses, forbs, mesquite	Depth
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL005	1	51	negative	7.5YR 7/2	Silt Loam	Grassy mesquite scrub, some Christmas cactus	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL006	1	37	negative	7.5YR 6/3	Silt Loam	Mainly forbs	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL007	1	32	negative	10YR 5/3	Silty Clay Loam	Dense desert vegetation; forbs, mesquite, prickly pear	Compact Soil
WHL-TX-UPT-0147.00000	ALB-UT-PRA-018	LCL008	1	27	negative	10YR 4/3	Silty Clay Loam	Mainly forbs, some mesquite	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH036	1	30	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH036	2	55	negative	10YR 4/5	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH037	1	40	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH037	2	55	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH038	1	35	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH038	2	45	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH039	1	40	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH039	2	45	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH040	1	35	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH040	2	50	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JDH041	1	30	negative	10YR 4/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF025	1	40	negative	10YR 6/4	Silt	Mesquite scrub, cacti, grasses	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF026	1	10	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF026	2	60	negative	7.5YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF027	1	15	negative	10YR 6/4	Silt Loam	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF027	2	50	(blank)	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF028	1	10	negative	10YR 6/4	Silt Loam	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF028	2	30	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF029	1	10	negative	10YR 6/4	Silt Loam	None	N/A
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	JWF029	2	30	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	KCA025	1	50	negative	10YR 7/4	Silt	North east of fence. Dense vegetation (mesquite, cacti)	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	KCA026	1	65	negative	10YR 6/4	Silt	Dense mid-length brush, mesquite and cacti.	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	KCA027	1	60	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-RGN-0164.00000	ALB-UT-PRA-023	KCA028	1	20	negative	10YR 7/4	Silt	Oil field activity nearby. Oil rig(?) And pumps to the east of shovel test. Oil structures to the south.	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH027	1	60	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH028	1	20	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH029	1	5	negative	10YR 6/4	Silt	Test moved 2m NE for exposed bedrock	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH030	1	25	negative	10YR 6/4	Silt	Heavily degraded limestone bedrock	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH031	1	60	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH032	1	35	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH033	1	40	negative	10YR 4/5	Silt Loam	None	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH034	1	40	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JDH035	1	70	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JWF018	1	30	negative	10YR 6/4	Silt Loam	Mesquite scrub, cacti, grasses, upland, on hill w/exposed bedrock	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JWF019	1	50	negative	10YR 6/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JWF020	1	5	negative	10YR 6/4	Silt Loam	Limestone gravel & cobble surface scatter	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JWF021	1	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JWF022	1	50	negative	10YR 6/4	Silt Loam	Gravel impasse	Other
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JWF023	1	20	negative	10YR 6/4	Silt Loam	Gravel impasse	Other
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	JWF024	1	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	KCA018	1	60	negative	10YR 7/4	Silt	Hilltop overlooking a pipeline corridor. Low, sparse mesquite and brush.	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	KCA019	1	10	negative	10YR 7/4	Silt	Overlooking the slope of the hill. Sparse vegetation.	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	KCA020	1	5	negative	10YR 7/4	Silt	Slope of hill, rocky with sparse mesquite and low brush.	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	KCA021	1	5	negative	10YR 7/4	Silt	Slope of the hill. Sparse vegetation, low mesquite.	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	KCA022	1	15	negative	10YR 7/4	Silt	5 meters off of point due to bedrock.	Bedrock
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	KCA023	1	70	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-RGN-0165.00000	ALB-UT-PRA-023	KCA024	1	70	negative	10YR 7/4	Silt	Dense brush, mesquite, and cacti.	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO024	1	15	negative	10YR 5/3	Silt	Open area with some bushes, cactus, grasses	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO025	1	30	negative	10YR 4/3	Silt	Mesa, grasses, low bushes, cactus, open area	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO026	1	30	negative	10YR 4/3	Silt	Impasse-rock, mesa area, cactus, open area, low bushes at distance	Other
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO027	1	40	negative	7.5YR 6/4	Silt	Low bushes, mesa area, cactus, grasses	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO028	1	15	negative	10YR 6/3	Silt	Impasse-rocks, low bushes, close to the edge of the mesa, cactus, grasses	Other
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO029	1	25	negative	10YR 5/3	Silt	Low bushes, cactus, grasses, close to edge of mesa	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO030	1	5	negative	10YR 5/3	Silt	possible alluvial fan, grasses, low bushes, cactus	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO031	1	5	negative	10YR 5/3	Silt	Impasse rocks	Other
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO032	1	5	negative	10YR 5/3	Silt	Juniper trees, rocky area, cactus, going up mesa	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO033	1	5	negative	10YR 5/3	Silt	Impasse rock, top of mesa, low bushes, grasses	Other
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO034	1	35	negative	10YR 5/3	Silt	Mesa, low bushes, open area, grasses, cactus	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO035	1	10	negative	10YR 7/3	Silt	Side of access road, low bushes, grasses, close to fence	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO036	1	5	negative	10YR 7/3	Silt	Going up mesa, rocky area, low bushes, grasses, cactus	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO037	1	10	negative	10YR 5/3	Silt	Mesa, low bushes, grasses, cactus, wildflowers	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO038	1	40	negative	10YR 7/3	Silt	Open area, low bushes, cactus, grasses	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO039	1	5	negative	10YR 5/3	Silt	On an existing gas pipeline	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO040	1	10	negative	10YR 7/3	Silt	Low bushes, grasses, cactus, upland plain	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO041	1	10	negative	10YR 7/3	Silt	Juniper trees, low bushes, grasses, open area	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO042	1	45	negative	10YR 5/3	Silt	Low bushes, spotty grasses	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO043	1	35	negative	10YR 6/4	Silt	Juniper trees, trees are taller and bigger, grasses, other types of trees from the area,	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	DTO044	1	35	negative	7.5YR 5/3	Silty Clay Loam	At the shade of juniper trees, grasses, cactus	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL024	1	35	negative	7.5YR 6/3	Silt	Nearby vegetation- grass, cacti, small shrubs.	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL025	1	5	negative	10YR 4/3	Silt	Nearby vegetation- bushes, cacti and shrubs.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL026	1	10	negative	10YR 7/2	Silt	Nearby vegetation - grass, cacti, and bushes.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL027	1	5	negative	10YR 7/3	Silt	Nearby vegetation - bushes, shrubs and grass.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL028	1	10	negative	10YR 7/3	Silt	Nearby vegetation - grass and low bushes.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL029	1	30	negative	7.5YR 6/3	Silt	Nearby vegetation - grass and small bushes.	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL030	1	5	negative	7.5YR 6/3	Sand	Nearby vegetation - grass and low bushes.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL031	1	5	negative	10YR 6/3	Silt	Rock impasse. Vegetation - low bushes and grass.	Other
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL032	1	5	negative	10YR 6/3	Silt	Nearby vegetation - grass and low bushes.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL033	1	5	negative	7.5YR 5/2	Silt	Nearby vegetation - grass and bushes.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL034	1	10	negative	10YR 5/3	Silt	Nearby vegetation - low bushes and grass.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL035	1	10	negative	7.5YR 5/3	Silt	Nearby vegetation - grass and low bushes.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL036	1	5	negative	7.5YR 5/3	Silt	Nearby vegetation - grass and low bushes.	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL037	1	30	negative	7.5YR 5/2	Silt	Nearby vegetation - bushes and small trees.	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL038	1	30	negative	7.5YR 5/3	Silt	Nearby vegetation - large bushes, cacti and grass.	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL039	1	30	negative	7.5YR 5/2	Silt	Nearby vegetation - grass, bushes and cacti.	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	HNL040	1	20	negative	7.5YR 5/3	Silt	Nearby vegetation - grass, cacti, large bushes.	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL018	1	10	negative	10YR 6/2	Silt Loam	Cobbly terrain; atop mesa; mainly grasses, some prickly pear, yucca and juniper	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL019	1	10	negative	10YR 6/2	Silt Loam	Gravelly/cobbly hillslope; mostly grasses and forbs; mesquite-dominated scrub on hillslope below and juniper-dominated scrub on hillslope above	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL020	1	12	negative	10YR 6/2	Silt Loam	Rock impasse; rocky hillslope; grasses/forbs, juniper, agarita, and yucca	Other
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL021	1	14	negative	10YR 6/2	Silt Loam	Grassy mesquite scrub atop mesa; limestone bedrock	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL022	1	12	negative	10YR 6/2	Silt Loam	Grassy mesquite scrub atop mesa, some prickly pear	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL023	1	51	negative	10YR 6/2	Silt Loam	Grassy mesquite scrub atop mesa	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL024	1	2	negative	10YR 6/2	Silt Loam	Gravelly, grassy terrain atop mesa, some mesquite, juniper and prickly pear; shallow limestone bedrock	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL025	1	9	negative	10YR 6/2	Silt Loam	Rocky hillslope, some grasses, juniper and mesquite; degraded bedrock at 9cmbs, ST excavated to 20cmbs	Bedrock
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL026	1	17	negative	10YR 6/2	Silt Loam	Slightly sloping terrain, grassy with some mesquite and juniper	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL027	1	31	negative	10YR 6/2	Silt Loam	Grasses, forbs, mesquite, yucca	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL028	1	33	negative	10YR 6/2	Silt Loam	Thick desert scrub; mesquite, Christmas cactus, prickly pear, juniper and grasses	Compact Soil
WHL-TX-RGN-0166.00000	ALB-UT-PRA-023	LCL029	1	31	negative	10YR 6/2	Silt Loam	Thick desert scrub; mesquite, juniper, grasses, forbs, Christmas cactus and prickly pear	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH043	1	55	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH044	1	60	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH045	1	50	negative	10YR 5/4	Silt Loam	None	N/A
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH045	2	65	negative	7.5YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH046	1	55	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH047	1	55	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH048	1	50	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JDH049	1	50	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF030	1	20	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF030	2	50	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF031	1	10	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF031	2	40	negative	10YR 4/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF032	1	10	negative	10YR 6/4	Silt	None	N/A
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF032	2	40	negative	10YR 4/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF033	1	50	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF034	1	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF035	1	40	negative	10YR 6/4	Silt Loam	Desert scrub, grasses, hills	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF036	1	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF037	1	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	JWF038	1	60	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	KCA029	1	65	negative	10YR 4/4	Silt Loam	None	N/A
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	KCA029	2	45	negative	10YR 4/4	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	KCA030	1	70	negative	10YR 6/4	Silt	Sparse vegetation, located in a prairie.	Bedrock
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	KCA031	1	65	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	KCA032	1	60	negative	10YR 7/4	Silt	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	KCA033	1	65	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	KCA034	1	60	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP034	1	35	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP035	1	35	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP035	2	45	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP036	1	40	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP037	1	50	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP037	2	60	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP038	1	40	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP039	1	50	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	MDP040	1	70	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	RDB001	1	65	negative	7.5YR 7/6	Sandy Clay	None	Bedrock
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	RDB002	1	70	negative	7.5YR 7/6	Silty Clay	Desert scrub cacti and juniper	Bedrock
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	RDB003	1	75	negative	7.5YR 4/6	Sandy Clay	Desert scrub valley cacti and juniper	Bedrock
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	RDB004	1	60	negative	7.5YR 4/6	Sandy Clay	Cacti juniper short and tall grass	Compact Soil
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	RDB005	1	60	negative	7.5YR 6/7	Sandy Clay	Juniper desert scrub and cacti valley	Bedrock
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023	RDB006	1	70	negative	7.5YR 7/6	Silty Clay	Desert scrub cacti valley	Bedrock
WHL-TX-RGN-0167.00000	ALB-UT-PRA-023		2	70	negative	10YR 4/4	Silty Clay Loam	None	N/A
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO044	1	35	negative	10YR 6/4	Silt	Low bushes, juniper trees, grasses, cacti	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO045	1	45	negative	10YR 6/4	Silt	Open area, cacti, low bushes-close to ground	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO046	1	45	negative	10YR 5/3	Silt	Open area, low bushes, cacti, spotty grasses	N/A
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO047	1	35	negative	10YR 6/4	Silt	Low bushes, cacti, spotty grasses	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO048	1	30	negative	10YR 6/4	Silt	Low bushes, spotty grasses, cacti	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO049	1	15	negative	10YR 5/3	Silt	Side of fence, close to existing natural gas pipeline, cacti, low bushes	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO050	1	30	negative	10YR 6/4	Silt	Low bushes, cacti, spotty grasses, close to existing natural gas pipeline, side of fence.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	DTO051	1	35	negative	10YR 6/4	Silt	Side of fence, low bushes, grasses, close to existing natural gas pipeline	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM041	1	40	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM042	1	50	negative	10YR 5/3	Silt	Next to oil machine	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM043	1	45	negative	10YR 5/4	Silt	High concentration of rootlets	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM044	1	40	negative	10YR 5/4	Silt	Positive at delineation	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM045	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM046	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM047	1	40	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM048	1	45	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM049	1	40	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM050	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM051	1	40	negative	10YR 5/4	Silt Loam	Highly disturbed	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM052	1	45	negative	10YR 5/4	Clay Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM053	1	35	negative	10YR 5/4	Silt Loam	Highly mottled	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HBM054	1	50	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL041	1	30	negative	7.5YR 5/3	Silt	Nearby vegetation, small shrubs, cacti and bushes.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL042	1	30	negative	7.5YR 5/3	Silt	Nearby vegetation- grass, shrubs and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL043	1	25	negative	7.5YR 5/3	Silt	Nearby vegetation- small shrubs and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL044	1	30	negative	7.5YR 5/3	Silt	Nearby cactus bed. Near ALB-UT-PRA-CR-DTO1	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL045	1	40	negative	7.5YR 5/3	Silt	Nearby vegetation- small shrubs and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL046	1	30	negative	7.5YR 5/3	Silt	Nearby vegetation- small bushes, shrubs and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL047	1	30	negative	7.5YR 5/3	Silt	Nearby vegetation- small bushes and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL048	1	30	negative	7.5YR 5/3	Silt	Nearby vegetation- small bushes.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL049	1	25	negative	7.5YR 5/3	Silt	Nearby vegetation - small bushes and cacti.	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL050	1	30	negative	7.5YR 5/3	Silt	Nearby vegetation- large bushes, shrubs, grass and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL051	1	253	negative	7.5YR 5/3	Silt	Nearby vegetation- small shrubs, grass and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL052	1	20	negative	7.5YR 5/3	Silt	Nearby vegetation- cacti and bushes	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL053	1	25	negative	7.5YR 5/3	Silt	Nearby vegetation- grass, shrubs, bushes and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL054	1	40	negative	7.5YR 5/3	Silt	Nearby vegetation- grass, bushes, small trees.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL055	1	25	negative	7.5YR 5/2	Silt	Vegetation- grass, cacti and bushes.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL056	1	20	negative	7.5YR 5/3	Silt	Nearby vegetation- grass, small trees, bushes and cacti.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	HNL057	1	35	negative	7.5YR 5/3	Silt	Nearby vegetation- small shrubs and bushes.	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS042	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS043	1	25	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS044	1	25	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS045	1	30	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS046	1	30	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS047	1	20	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS049	1	25	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS050	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS051	1	25	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS052	1	35	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS054	1	35	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS055	1	35	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS056	1	25	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS057	1	35	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS058	1	35	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS060	1	25	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JGS061	1	25	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	JJG048	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL030	1	53	negative	10YR 6/2	Silt Loam	Mesquite, yucca, prickly pear	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL031	1	30	negative	10YR 6/2	Silt Loam	Thick desert scrub, tall grasses/forbs, mesquite, cholla, Christmas cactus, juniper	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL032	1	42	negative	10YR 6/2	Silt Loam	Mesquite, prickly pear, few grasses	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL033	1	27	negative	10YR 6/2	Silt Loam	ST is part of a delineation of a site (ALB-UT-PRA-023-CR-DTO1); short mesquite, yucca, prickly pear	N/A
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL033	2	54	negative	7.5YR 6/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL034	1	32	negative	10YR 6/2	Silt Loam	ST part of site delineation (ALB-UT-PRA-023-CR-DTO1); short mesquite, prickly pear	N/A
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL034	2	53	negative	7.5YR 6/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL035	1	27	negative	10YR 6/2	Silt Loam	Delineation of site (ALB-UT-PRA-023-CR-DTO1); surface flake which initiated the delineation near ST; few grasses and short bushes, prickly pear	N/A
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL035	2	51	negative	7.5YR 6/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL036	1	37	negative	10YR 6/2	Silt Loam	Mesquite, short bushes, prickly pear, few grasses	N/A
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL036	2	51	negative	7.5YR 6/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL037	1	35	negative	10YR 6/2	Silt Loam	Mesquite, prickly pear, juniper, agarita, grasses/forbs	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL038	1	21	negative	10YR 6/2	Silt Loam	ST 50cm N of fence line; short mesquite, prickly pear	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL039	1	27	negative	10YR 6/2	Silt Loam	ST 40cm N of fence line; mesquite, juniper, tall grasses, Christmas cactus, prickly pear	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL040	1	40	negative	10YR 6/2	Silt Loam	Tall forbs, mesquite, prickly pear, Christmas cactus	N/A
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL040	2	50	negative	7.5YR 6/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0168.00000	ALB-UT-PRA-023	LCL041	1	46	negative	10YR 4/3	Silty Clay Loam	ST part of site delineation (41RG239); mesquite scrub and prickly pear, few grasses	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA016	1	35	negative	7.5YR 5/2	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA017	1	10	negative	7.5YR 5/2	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA018	1	35	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA019	1	50	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA020	1	50	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA021	1	35	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA022	1	30	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA023	1	28	negative	7.5YR 6/2	Silt	Offset 5 meters due to pipeline	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA024	1	55	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA025	1	20	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA026	1	10	negative	7.5YR 5/2	Silt	Offset due to existing pipeline	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA027	1	8	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA028	1	15	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	EMA029	1	30	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM012	1	3	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM013	1	3	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM014	1	3	negative	10YR 5/4	Silt	For IF	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM015	1	5	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM016	1	5	negative	10YR 5/4	Silt	None	N/A
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM017	1	5	negative	10YR 5/4	Silt	None	N/A
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM018	1	5	negative	10YR 4/2	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM019	1	5	negative	10YR 5/3	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM020	1	10	negative	10YR 5/4	Silt	High vegetation	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM021	1	5	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM022	1	15	negative	10YR 5/4	Silt	Disturbed/big mottles	Other
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM023	1	15	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	HBM024	1	25	negative	10YR 4/3	Silt	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS012	1	5	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS013	1	5	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS014	1	5	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS015	1	5	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS016	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS017	1	5	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS018	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS019	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS020	1	15	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS021	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	JGS022	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	MDP015	1	25	negative	7.5YR 6/3	Silt Loam	LRF impasse.	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	MDP016	1	10	negative	10YR 4/2	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	MDP017	1	10	negative	7.5YR 6/3	Silt	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	MDP018	1	25	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	MDP019	1	45	negative	10YR 4/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	MDP020	1	45	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	MDP021	1	30	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG016	1	15	negative	10YR 4/4	Loamy Sand	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG017	1	15	negative	10YR 4/4	Loamy Sand	ST south of existing gas pipeline	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG018	1	20	negative	10YR 4/4	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG019	1	15	negative	10YR 4/4	Loamy Sand	Shortened interval due to drainage	N/A

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG020	1	30	negative	10YR 4/3	Loamy Sand	North of drainage and south of existing pipeline corridor	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG021	1	10	negative	10YR 4/4	Loamy Sand	None	N/A
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG021	2	20	negative	10YR 4/3	Loamy Sand	None	N/A
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG021	3	30	positive	10YR 4/3	Loamy Sand	None	N/A
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG021	4	40	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG022	1	35	negative	10YR 4/3	Loamy Sand	In between existing pipeline corridors	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG023	1	35	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG025	1	20	negative	10YR 4/3	Loamy Sand	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG026	1	20	negative	10YR 4/3	Loamy Sand	South of existing pipeline corridor	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG027	1	25	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG028	1	10	negative	10YR 4/3	Loamy Sand	Near oil pad	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG029	1	25	negative	10YR 4/3	Loamy Sand	North of gravel road	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG030	1	30	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	NMG031	1	50	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB014	1	10	negative	10YR 5/3	Silt Loam	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB015	1	5	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB016	1	35	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB017	1	5	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB018	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB020	1	35	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB021	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB022	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0169.00000	ALB-UT-PRA-023	SAB023	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS007	1	60	negative	10YR 6/2	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS008	1	35	negative	10YR 6/2	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS009	1	25	negative	10YR 6/2	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS010	1	25	negative	10YR 6/2	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS011	1	15	negative	10YR 6/2	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS012	1	35	negative	10YR 6/2	Sandy Clay Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS013	1	30	negative	10YR 6/2	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS013	2	60	negative	10YR 5/3	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	CMS018	1	30	negative	10YR 5/3	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA007	1	40	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA008	1	43	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA009	1	45	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA010	1	45	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA011	1	20	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA012	1	5	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA013	1	10	negative	7.5YR 5/2	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA014	1	40	negative	7.5YR 5/2	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA015	1	5	negative	7.5YR 5/2	Silt	Near discarded materials	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA030	1	10	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA047	1	10	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	EMA048	1	5	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM001	1	30	negative	10YR 5/4	Silt	Adjacent to road	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM002	1	15	negative	10YR 5/4	Silt	Adjacent to road	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM003	1	30	negative	10YR 5/4	Silt	Large cobbles/gravels/highly disturbed	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM005	1	35	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM006	1	35	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM007	1	15	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM008	1	45	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM009	1	10	negative	10YR 5/4	Silt	Next to corral gate/highly disturbed	Other
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM010	1	45	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM011	1	45	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM025	1	45	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM026	1	45	negative	10YR 5/4	Silt	Behind corral	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM027	1	45	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM028	1	10	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM029	1	10	negative	10YR 5/4	Silt	Adjacent to road	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM030	1	20	negative	10YR 5/3	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM031	1	25	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM032	1	20	negative	10YR 5/3	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM033	1	25	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	HBM034	1	25	negative	10YR 5/4	Silt	Concrete in hole	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS001	1	30	negative	10YR 5/4	Silt Loam	Adjacent to road	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS002	1	15	negative	10YR 5/4	Silt Loam	Adjacent to road	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS003	1	15	negative	10YR 5/4	Silt Loam	Adjacent to road	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS004	1	10	negative	10YR 5/4	Silt Loam	Adjacent to road	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS005	1	15	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS006	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS007	1	10	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS008	1	15	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS009	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS010	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS011	1	5	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS025	1	15	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS026	1	60	negative	10YR 5/4	Silt Loam	60% inclusions gravel	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS027	1	45	negative	10YR 5/4	Silt Loam	In corral	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS028	1	25	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS029	1	10	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS030	1	10	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS031	1	20	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JGS033	1	30	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK001	1	10	negative	10YR 4/2	Loam	30% gravels, cobbles, boulder	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK002	1	25	negative	10YR 5/2	Loam	5% gravels	N/A
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK002	2	35	negative	10YR 6/2	Loam	25% gravels, cobbles	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK003	1	30	negative	10YR 5/2	Silt Loam	None	N/A
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK003	2	60	negative	10YR 6/2	Silt Loam	20% degraded limestone	N/A
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK003	3	70	negative	10YR 8/2	Silt	Weak limestone, 20% cobbles	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK004	1	30	negative	10YR 5/3	Silt Loam	None	N/A
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK004	2	65	negative	10YR 6/2	Silt Loam	20% gravels, cobbles from underlying limestone. Limestone is weak (hand breakable), white to light pink	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK005	1	50	negative	10YR 4/3	Silt Loam	None	N/A
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK005	2	65	negative	10YR 7/3	Silt Loam	20% decaying bedrock gravels (bedrock is chalky)	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK006	1	40	negative	10YR 4/2	Silt Loam	None	N/A
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK006	2	90	negative	10YR 6/2	Silt Loam	10% gravels	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK007	1	30	negative	10YR 4/3	Silt Loam	None	N/A
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	JRK007	2	50	negative	10YR 7/3	Silt Loam	10% gravels	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP008	1	40	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP009	1	40	negative	7.5YR 6/3	Silt Loam	Large rock fragment impasse.	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP010	1	30	negative	7.5YR 6/3	Silt Loam	Large rock fragment impasse.	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP011	1	20	negative	7.5YR 6/3	Silt Loam	Large rock fragment impasse.	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP012	1	60	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP013	1	25	negative	7.5YR 6/3	Silt Loam	Large rock fragment impasse.	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP014	1	10	negative	7.5YR 6/3	Silt	Bedrock and bedrock gravel on surface.	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	MDP022	1	35	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG007	1	35	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG008	1	35	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG009	1	45	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG010	1	25	negative	10YR 4/4	Loamy Sand	Possibly disturbed from proximity to gravel road	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG011	1	35	negative	10YR 4/3	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG012	1	10	negative	10YR 4/4	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG013	1	25	negative	10YR 4/4	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG014	1	20	negative	10YR 4/3	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG015	1	15	negative	10YR 4/4	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG032	1	20	negative	10YR 4/4	Loamy Sand	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	NMG050	1	20	negative	10YR 4/4	Loamy Sand	Upland plain	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	PMW008	1	30	negative	10YR 5/2	Sandy Clay Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	PMW009	1	40	negative	10YR 5/2	Sandy Clay Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB001	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB002	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB003	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB004	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB005	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB006	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB007	1	20	negative	10YR 5/4	Silt Loam	shovel test is adjacent to paved road	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB008	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB009	1	10	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB010	1	30	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB011	1	30	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB012	1	20	negative	10YR 5/4	Silt Loam	Adjacent to two track4m	Compact Soil
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SAB013	1	5	negative	10YR 5/2	Silt Loam	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SKD010	1	10	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SKD011	1	10	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0170.00000	ALB-UT-PRA-023	SKD012	1	40	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	CMS001	1	40	negative	10YR 6/3	Sandy Loam	None	Bedrock
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	CMS006	1	10	negative	10YR 6/3	Sandy Loam	None	N/A
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	DTO001	1	10	negative	10YR 7/2	Sand	Open field, at the side of a pipeline, some grass, cactus and coniferous vegetation, impasse rock/gravel	Other
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	EMA001	1	65	negative	10YR 6/4	Silt Loam	None	Bedrock
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	EMA006	1	45	negative	7.5YR 7/2	Silt	None	Bedrock
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	LCL001	1	100	negative	7.5YR 7/3	Silt Loam	None	Depth
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	LCL002	1	100	negative	10YR 7/3	Silt Loam	None	Depth
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	LCL004	1	49	negative	10YR 7/2	Silt Loam	None	Bedrock
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	MDP001	1	60	negative	7.5YR 6/3	Silt Loam	Gravel impasse	Compact Soil
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	MDP007	1	50	negative	7.5YR 6/3	Silt	Gravel impasse	Compact Soil
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	NMG001	1	35	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	NMG002	1	60	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	NMG004	1	30	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0156.00000	ALB-UT-PRA-023	NMG006	1	10	negative	7.5YR 6/3	Loamy Sand	None	Bedrock
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	CMS002	1	15	negative	10YR 6/3	Sandy Loam	None	Bedrock
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	CMS003	1	50	negative	10YR 6/3	Loamy Sand	None	N/A
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	CMS003	2	70	negative	10YR 6/4	Sandy Loam	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	CMS004	1	30	negative	10YR 6/3	Sandy Loam	None	N/A
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	CMS005	1	40	negative	10YR 6/3	Sandy Loam	None	Bedrock
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	DTO002	1	35	negative	10YR 7/4	Sand	Low bushes, cactus, grass, semi open area, N of existing pipeline	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	EMA002	1	35	negative	10YR 6/4	Silt	80% gravel	Other
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	EMA003	1	50	negative	7.5YR 6/3	Silt	None	Bedrock
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	EMA004	1	95	negative	7.5YR 7/2	Silt Loam	None	Depth
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	EMA005	1	20	negative	7.5YR 7/2	Silty Clay	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	HNL001	1	5	negative	10YR 5/4	Loamy Sand	Rocks covered surface	Bedrock
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	HNL002	1	55	negative	7.5YR 7/2	Sand	Low bushes, cactus surrounding area	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	HNL003	1	76	negative	7.5YR 7/2	Sand	cactus, shrubs and low bushes. Near power line NW	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	LCL003	1	30	negative	10YR 6/3	Silt Loam	Soil is rocky and compact	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	MDP002	1	30	negative	7.5YR 6/3	Silt	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	MDP003	1	30	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	MDP004	1	60	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	MDP005	1	15	negative	7.5YR 6/3	Silt	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	MDP006	1	30	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	NMG003	1	15	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0157.00000	ALB-UT-PRA-023	NMG005	1	40	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM002	1	20	negative	10YR 5/4	Silt	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM003	1	15	negative	10YR 5/4	Silt	Disturbed soil.	Bedrock
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM004	1	15	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM005	1	10	negative	10YR 5/4	Silt	None	N/A
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM006	1	40	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM007	1	20	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM008	1	10	negative	10YR 5/4	Silt	Disturbed.	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM009	1	20	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM010	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM011	1	10	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM012	1	10	negative	10YR 5/3	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM013	1	10	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM014	1	10	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	HBM015	1	10	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS001	1	5	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS002	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS003	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS004	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS006	1	25	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS007	1	10	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS008	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS009	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS010	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	JGS011	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB001	1	5	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB002	1	5	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB003	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB004	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB005	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB006	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB007	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB008	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0158.00000	ALB-UT-PRA-023	SAB009	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	HBM001	1	5	negative	10YR 5/4	Silt	Landscape overview	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH001	1	0	negative	10YR 6/4	Silt Loam	Not excavated - existing pipeline corridor	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH002	1	50	negative	10YR 6/4	Silt Loam	ALB-PRA-023-CR-JDH1 delineation	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH003	1	0	negative	10YR 6/4	Silt Loam	Existing pipeline corridor - not excavated	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH004	1	35	negative	10YR 6/4	Silt Loam	Limestone bedrock	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH005	1	20	negative	10YR 6/4	Silt Loam	Margin of existing pipeline corridor - limestone bedrock	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH006	1	35	negative	10YR 6/4	Silt Loam	Large rock fragment impasse	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH007	1	20	negative	10YR 6/4	Silt Loam	None	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH008	1	80	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH009	1	50	negative	10YR 6/4	Silt	Limestone bedrock	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH010	1	60	negative	10YR 6/4	Silt	Limestone bedrock	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH011	1	15	negative	10YR 5/3	Silt	Limestone bedrock	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH012	1	45	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH013	1	15	negative	10YR 6/4	Silt	Limestone bedrock	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JDH014	1	20	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF001	1	0	negative	10YR 6/4	Sand	NE Existing Pipeline	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF002	1	65	negative	10YR 6/4	Silt Loam	Rock impasse	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF003	1	0	negative	10YR 6/4	Silt	None	N/A
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF004	1	0	negative	10YR 6/4	Silt	None	N/A
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF005	1	3	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF006	1	60	(blank)	10YR 6/4	Silty Clay Loam	Mesquite scrub, cacti, desert succulents	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF007	1	5	negative	10YR 4/2	Silt Loam	None	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF008	1	60	negative	10YR 6/4	Silt	Gravel impasse	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF009	1	5	negative	10YR 6/4	Silt	Desert scrub, cacti, juniper, grasses, exposed bedrock	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF010	1	25	negative	10YR 6/4	Silt	On terrace between two drainages	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	JWF011	1	5	negative	10YR 4/4	Silt	Slight slope on limestone hill, scattered cobble, exposed bedrock	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA001	1	0	negative	10YR 6/4	Silt	NE, Proximity to existing pipeline	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA002	1	50	negative	10YR 6/8	Silt	None	N/A
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA003	1	35	negative	10YR 6/3	Silt	None	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA004	1	0	negative	10YR 6/8	Silt	NE due to proximity to existing pipeline	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA005	1	0	negative	10YR 6/8	Silt	NE Proximity to pipeline	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA006	1	30	negative	10YR 6/8	Silt	None	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA007	1	30	negative	10YR 7/3	Silt	Incline of a flat top hill, mesquite, short brush, and cacti distributed sporadically	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA008	1	60	negative	10YR 6/7	Silt	Plain, near base of hilltop. Cacti, low bushes, and mesquite surrounding.	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA009	1	60	negative	10YR 7/3	Silt	Surrounded by dense mesquite	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA010	1	45	negative	10YR 6/3	Silt	South west of access road, adjacent to natural drainage ditch.	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	KCA011	1	5	negative	10R 6/8	Silt	Located on slope of a hill, rocky ground, sparse vegetation.	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ001	1	60	negative	10YR 6/4	Silt	Degrading bedrock. By ALB-PRA-023-CR-JDH1	N/A
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ001	2	85	negative	10YR 5/6	Silt	None	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ002	1	30	(blank)	10YR 5/6	Silt	10 offset by existing pipeline	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ003	1	5	negative	10YR 4/4	Silt Loam	None	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ004	1	0	negative	10YR 5/6	Silt	Not excavated due to pipeline	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ005	1	10	negative	10YR 5/6	Silt	None	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ006	1	50	negative	10R 5/6	Silt	Degrading bedrock	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ007	1	70	negative	10YR 5/6	Silt	Fossils found on nearby surface. Short dense grasses. 20 m south of pipeline corridor	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ008	1	40	negative	10R 5/6	Silt	None	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ009	1	5	negative	10YR 5/6	Silt	Bedrock visible on surface near by	Bedrock
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ010	1	10	negative	10R 5/6	Silt	Disturbed	Other
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ011	1	50	negative	10YR 5/6	Silt	None	Compact Soil
WHL-TX-UPT-0159.00000	ALB-UT-PRA-023	RLJ012	1	20	negative	10YR 5/6	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH015	1	20	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH016	1	25	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH017	1	15	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH018	1	5	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH019	1	10	negative	10YR 6/4	Silt	Limestone bedrock	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH020	1	5	negative	10YR 7/4	Silt	Limestone bedrock	N/A
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH020	2	25	negative	10YR 4/4	Silt Loam	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH021	1	5	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH022	1	5	negative	10YR 6/4	Silt	None	N/A
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH023	1	5	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH024	1	50	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH025	1	15	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH026	1	5	negative	10YR 6/4	Silt Loam	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JDH042	1	25	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JWF012	1	5	negative	10YR 4/4	Silt Loam	Exposed bedrock, desert scrub, hills, upland, plain	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JWF013	1	40	negative	10YR 6/4	Silt Loam	Grasses, mesquite scrub, cacti, limestone cobbles	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JWF014	1	10	(blank)	10YR 4/4	Silt Loam	Limestone cobble scatter	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JWF015	1	50	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JWF016	1	35	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	JWF017	1	60	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	KCA012	1	10	(blank)	10YR 5/3	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	KCA013	1	60	negative	10YR 5/3	Silt	Top of hill, cacti, low brush, sparse mesquite.	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	KCA014	1	5	positive	10YR 5/3	Silt	Non- excavated due to bedrock covering surface 5 feet in all directions of test point.	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	KCA015	1	60	negative	10YR 7/5	Silt	SA KCA014 surroundings.	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	KCA016	1	65	negative	10YR 7/5	Silt	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	KCA017	1	35	negative	10YR 7/5	Silt	None	Basal Clay
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ013	1	10	negative	10YR 4/4	Silt	On steep sloping drainage	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ014	1	10	negative	10YR 4/4	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ015	1	15	negative	10YR 5/6	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ016	1	20	negative	10YR 5/6	Silt	None	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ017	1	5	negative	10YR 5/6	Silt	Crest of hill. Bedrock visible on surface	Bedrock
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ018	1	60	negative	10YR 4/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ019	1	55	negative	10YR 4/4	Silt Loam	Disturbed under transmission line	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ020	1	50	negative	10YR 4/4	Silty Clay	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ021	1	50	negative	10YR 5/2	Silty Clay	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ022	1	65	negative	10YR 5/6	Silt	None	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ023	1	30	negative	10YR 4/4	Silty Clay	Incredibly compact	Compact Soil
WHL-TX-UPT-0160.00000	ALB-UT-PRA-023	RLJ024	1	10	negative	10YR 4/4	Silt	None	Bedrock
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	DTO003	1	5	negative	10YR 7/3	Silt	Impasse-rocks	Other
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	DTO004	1	10	negative	10YR 7/3	Silt	Impasse rocks, semi open area, low bushes, coniferous, grass	Other

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	DTO023	1	25	negative	10YR 5/3	Silt	On power line and existing pipeline corridor, low bushes, grass, wildflowers, rocky area	Compact Soil
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	HNL004	1	5	negative	7.5YR 6/3	Sand	Impasse due to rocks. Vegetation - low bushes, cactus and grass.	Other
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	HNL005	1	18	(blank)	7.5YR 6/3	Sand	Nearby vegetation - grass, small shrubs, low bushes and cactus.	Bedrock
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	HNL006	1	40	negative	7.5YR 5/4	Sand	Surrounding vegetation - grass and small bushes.	Compact Soil
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	HNL022	1	5	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass and small shrubs.	Compact Soil
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	HNL023	1	5	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass, small shrubs and low bushes.	Bedrock
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	LCL005	1	57	negative	10YR 6/3	Silt Loam	None	Bedrock
WHL-TX-UPT-0161.00000	ALB-UT-PRA-023	LCL006	1	33	negative	10YR 6/2	Silt Loam	Degraded bedrock below 33cmbs; ST excavated to 62cmbs; 60% limestone gravels; % gravel increases with depth	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO005	1	20	negative	10YR 7/4	Silt	Impasse-rocks, low coniferous bushes, grass, 50m away from power line approx.	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO006	1	30	(blank)	10YR 7/4	Silt	Semi open area, low coniferous bushes, cactus, wildflowers, upland plain,	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO007	1	10	negative	10YR 7/3	Silt	Impasse-rocks, open area, low bushes, grass	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO008	1	10	negative	10YR 5/3	Silt	Semi open area with low coniferous bushes, spotty grass, wildflowers, cactus, upland plain, 90% rocks in the area	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO009	1	10	negative	10YR 7/3	Silt	Open area with some low bushes (juniper and others), cactus, grass	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO010	1	10	negative	10YR 7/3	Silt	Juniper trees, cactus, low bushes, close to power line	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO011	1	15	negative	10YR 7/3	Silt	Upland, close to power line, cactus, low bushes, semi open area, rocky area	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO012	1	10	negative	10YR 5/3	Silt	Low bushes (junipers and others), cactus, upland, close to power line	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO013	1	5	negative	10YR 7/3	Silt	Juniper-low bushes, low bushes, cactus, spotty grass, upland-hill top	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO014	1	5	negative	10YR 5/3	Silt	Juniper trees, cactus, upland, rocky area, other low bushes, spotty grass	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO015	1	10	negative	10YR 7/3	Silt	Hilltop, juniper trees and other low bushes, open area	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO016	1	5	negative	10YR 7/3	Silt	Hill, juniper trees, grass, other low bushes, cactus	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO017	1	5	negative	10YR 7/3	Silt	Open area, in between existing pipeline corridor and power line with access road, highly disturbed, wildflowers, spotty grass, rocky area	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO018	1	10	negative	10YR 7/3	Silt	Open area, in between existing pipeline corridor and power line with access road, highly disturbed, wildflowers, spotty grass, rocky area	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO019	1	20	negative	10YR 5/3	Silt	Open area, at the side of existing pipeline corridor and closer to power line with access road, highly disturbed, wildflowers, spotty grass, rocky area, low bushes, logged trees	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO020	1	15	negative	10YR 3/5	Silt	Close access road and power line, pushed pile at side, low bushes, cactus	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO021	1	20	negative	10YR 5/3	Silt	Open area, close to power lines, low bushes at distance, spotty grass	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	DTO022	1	20	negative	10YR 7/3	Silt	Close to Distribution lines, open area, low bushes, spotty grass	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL007	1	5	negative	7.5YR 5/3	Sand	Impasse due to rocks.	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL008	1	5	negative	7.5YR 5/3	Sand	Rock impasse	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL009	1	30	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass, cactus, low bushes and small shrubs.	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL010	1	20	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass and low bushes.	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL011	1	5	negative	7.5YR 5/3	Sand	Rock impasse	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL012	1	5	negative	7.5YR 5/2	Sand	Rock impasse. Surrounding vegetation - low bushes and shrubs.	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL013	1	10	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass and low bushes.	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL014	1	10	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass, bushes and small shrubs.	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL015	1	5	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass and low bushes.	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL016	1	5	negative	7.5YR 5/3	Sand	Rock impasse. Surrounding vegetation - small shrubs and low bushes.	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL017	1	5	negative	7.5YR 5/2	Sand	Surrounding vegetation - grass and small shrubs.	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL018	1	5	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass and small shrubs.	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL019	1	20	negative	7.5YR 5/3	Sand	Surrounding vegetation - small shrubs and grass.	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL020	1	30	negative	7.5YR 5/3	Sand	Surrounding vegetation - grass and low bushes.	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	HNL021	1	5	negative	7.5YR 5/3	Sand	Surrounding vegetation - small shrub and small bushes.	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL007	1	46	negative	10YR 5/3	Silt Loam	Mesquite scrub, some yucca and juniper	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL008	1	11	negative	10YR 5/2	Silt Loam	Limestone bedrock	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL009	1	24	negative	10YR 6/2	Silt Loam	Rock impasse	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL010	1	24	negative	10YR 5/2	Silt Loam	Mesquite scrub	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL011	1	12	negative	10YR 6/2	Silt Loam	Limestone bedrock; juniper scrub	Bedrock
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL012	1	30	negative	10YR 6/3	Silt Loam	Mesquite/juniper scrub	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL013	1	16	negative	10YR 6/2	Silt Loam	Gravelly terrain; bottom of hillslope; juniper scrub	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL014	1	10	negative	10YR 6/2	Silt Loam	Area has been disturbed by powerline and pipeline construction	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL015	1	11	negative	10YR 6/2	Silt Loam	Rock impasse; overhead powerline/pipeline corridor; ST 0.8m south of two-track	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL016	1	11	negative	10YR 6/2	Silt Loam	Rock impasse; ST ~5m northwest of powerline post	Other
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023	LCL017	1	48	negative	10YR 5/3	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023		2	35	negative	7.5YR 6/3	Silty Clay Loam	None	N/A
WHL-TX-UPT-0162.00000	ALB-UT-PRA-023		2	86	negative	7.5YR 6/4	Silty Clay	None	N/A
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	CMS014	1	10	negative	10YR 6/2	Silt Loam	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	CMS015	1	20	negative	10YR 5/2	Silt Loam	Disturbed	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	CMS016	1	25	negative	10YR 5/2	Silt Loam	Disturbed	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	CMS017	1	20	negative	10YR 7/2	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA031	1	65	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA032	1	60	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA033	1	60	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA034	1	62	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA035	1	50	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA036	1	50	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA037	1	30	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA038	1	33	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA039	1	40	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA040	1	5	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA041	1	5	negative	7.5YR 5/1	Silt	None	Bedrock

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA042	1	5	negative	7.5YR 5/1	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA043	1	5	negative	7.5YR 5/1	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA043	1	15	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA044	1	20	negative	7.5YR 6/2	Silt Loam	Disturbed by cut	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA045	1	10	negative	7.5YR 6/2	Silt Loam	Disturbed by cut	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	EMA046	1	20	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	HBM035	1	45	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	HBM036	1	10	negative	10YR 5/4	Silt	Adjacent to corridor	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	HBM037	1	45	negative	10YR 5/4	Silt	Next to pipeline corridor	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	HBM038	1	20	negative	10YR 5/4	Silt	Disturbed	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	HBM039	1	40	negative	10YR 5/4	Silt Loam	Next to corridor	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	HBM040	1	35	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	JFS034	1	60	negative	10YR 3/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	JGS035	1	45	negative	10YR 3/4	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	JGS036	1	15	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	JGS037	1	25	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	JGS038	1	15	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	JGS039	1	15	negative	10YR 5/4	Silt Loam	Adjacent to pipeline corridor	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	JGS040	1	15	negative	10YR 5/4	Silt Loam	Adjacent to pipeline corridor	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP023	1	30	negative	10YR 5/3	Silt	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP024	1	30	negative	7.5YR 6/3	Silt	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP025	1	35	negative	7.5YR 6/3	Silt	None	N/A
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP026	1	40	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP027	1	50	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP028	1	65	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP029	1	32	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP030	1	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP031	1	30	negative	7.5YR 3/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP032	1	28	negative	7.5YR 6/3	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	MDP033	1	15	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG033	1	50	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG034	1	30	negative	10YR 4/3	Sandy Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG035	1	20	negative	10YR 4/4	Sandy Loam	Dry compact soil; potentially disturbed from land use	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG036	1	30	negative	10YR 4/4	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG037	1	55	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG038	1	50	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG039	1	45	negative	10YR 4/4	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG040	1	40	negative	10YR 4/4	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG041	1	40	negative	10YR 4/3	Loamy Sand	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG043	1	10	negative	10YR 4/4	Loamy Sand	None	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG044	1	10	negative	10YR 4/4	Loamy Sand	Upland slope	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG045	1	15	negative	10YR 4/4	Loamy Sand	Upland slope	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG046	1	15	negative	10YR 4/4	Loamy Sand	Upland slope	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG047	1	25	negative	10YR 4/4	Loamy Sand	Disturbed from land use	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG048	1	20	negative	10YR 4/4	Loamy Sand	Disturbed from land use	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMG049	1	15	negative	10YR 4/4	Loamy Sand	Upland slope	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	NMH042	1	10	negative	10YR 4/4	Loamy Sand	Upland/butte	Bedrock
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	PMW004	1	10	negative	10YR 6/3	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	PMW005	1	10	negative	10YR 6/3	Silty Clay Loam	None	Compact Soil
WHL-TX-UPT-0163.00000	ALB-UT-PRA-023	PMW006	1	32	negative	10YR 6/3	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	HBM030	1	60	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	HBM037	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	JGS025	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	JGS029	1	20	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	JGS029	2	30	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	MDP021	1	60	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	MDP026	1	50	negative	7.5YR 6/3	Silt Loam	LRF impasse	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	RDB001	1	40	negative	7.5YR 4/6	Silt	Juniper, cacti, mesquite and desert scrub	Bedrock
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	RDB006	1	40	negative	7.5YR 4/3	Silty Clay	Juniper, cacti, desert scrub	Bedrock
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	RLJ011	1	50	negative	10YR 5/4	Silt Loam	5 m SW of graded pipeline	Compact Soil
WHL-TX-CRK-0180.00000	ALB-UT-PRA-025	RLJ018	1	30	negative	10YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM031	1	50	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM032	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM033	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM034	1	55	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM035	1	50	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM036	1	50	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM038	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM041	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	HBM042	1	10	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS026	1	30	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS026	2	60	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS027	1	20	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS028	1	30	negative	7.5YR 5/3	Silt Loam	None	N/A
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS028	2	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS030	1	10	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS031	1	25	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	JGS033	1	65	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP022	1	35	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP023	1	20	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP023	2	30	negative	7.5YR 5/3	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP024	1	45	negative	7.5YR 6/3	Silt Loam	LRF impasse.	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP025	1	50	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP027	1	40	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP029	1	25	negative	10YR 6/3	Silt Loam	Gravel impasse	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	MDP030	1	30	negative	10YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RDB002	1	30	negative	7.5YR 4/6	Sandy Clay	Desert cacti and scrub	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RDB003	1	15	negative	7.5YR 4/6	Silt Loam	Desert scrub, cacti, juniper	N/A
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RDB003	2	30	negative	7.5YR 5/8	Silty Clay	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RDB004	1	50	negative	7.5YR 4/3	Silty Clay	Juniper, mesquite, grasses, cacti	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RDB005	1	50	negative	7.5YR 4/6	Silty Clay	Desert scrub, juniper, cacti, and mixed grasses	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RDB007	1	50	negative	10YR 4/3	Silty Clay	Desert scrub, cacti, juniper. shovel test near existing pipeline corridor	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RDB009	1	50	negative	7.5YR 4/7	Silty Clay	Juniper, cacti, desert scrub	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ012	1	50	negative	10YR 5/4	Silt	5 m SW of graded pipeline	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ013	1	45	negative	10YR 5/4	Silt Loam	5 m SW of pipeline	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ014	1	30	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ015	1	40	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ016	1	45	negative	10YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ017	1	45	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ019	1	30	negative	10YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ020	1	15	negative	10YR 4/4	Silt	None	Bedrock

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-CRK-0181.00000	ALB-UT-PRA-025	RLJ023	1	20	negative	10YR 5/6	Silt Loam	None	Compact Soil
WHL-TX-CRK-0182.00000	ALB-UT-PRA-025	HBM039	1	10	negative	10YR 5/3	Silt	Ascending up a hill	Bedrock
WHL-TX-CRK-0182.00000	ALB-UT-PRA-025	HBM040	1	10	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-CRK-0182.00000	ALB-UT-PRA-025	JGS032	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0182.00000	ALB-UT-PRA-025	MDP028	1	25	negative	10YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0182.00000	ALB-UT-PRA-025	RDB008	1	15	negative	7.5YR 4/6	Sand	None	Bedrock
WHL-TX-CRK-0182.00000	ALB-UT-PRA-025	RLJ021	1	5	negative	10YR 5/6	Silt	Under transmission line	Bedrock
WHL-TX-CRK-0182.00000	ALB-UT-PRA-025	RLJ022	1	20	negative	10YR 5/6	Silt	Large limestone cobbles on surrounding surface	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO019	1	15	negative	10YR 5/3	Silt	Juniper trees, grasses, close to existing pipeline, logged trees	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO020	1	40	negative	10YR 5/3	Silt	Semi open area, juniper trees, grasses, low bushes, close to existing pipeline	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO021	1	10	negative	10YR 6/4	Silt	Impasse rocks, juniper trees, mesquite, low bushes, rocky area, spotty grasses	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO022	1	5	negative	10YR 6/3	Silt	Low bushes, grasses, mesquite, cacti	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO023	1	5	negative	10YR 5/3	Silt	Impasse rocks	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO024	1	20	negative	10YR 5/3	Silt	Impasse rocks	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO025	1	20	negative	10YR 5/3	Silt	Semi open area, low bushes, cacti, mesquite, grasses, logged trees	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO026	1	10	negative	10YR 5/3	Silt	Logged trees, low bushes, open area, bird stand-hunting area, grasses	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO027	1	20	negative	10YR 5/3	Silt	At the side of an existing pipeline, close to a bird stand-hunting area, low bushes, spotty grasses, open area, mesquite, cacti	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO028	1	5	negative	10YR 5/3	Silt	Impasse rock, juniper trees, mesquite, grasses, side of and existing pipeline	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO029	1	10	negative	10YR 5/3	Silt	Side of existing pipeline, low bushes, grasses, mesquite, juniper	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO030	1	10	negative	10YR 5/3	Silt	Low bushes, adjacent to existing pipeline, juniper trees, grasses	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO031	1	5	negative	10YR 5/3	Silt	Logged trees, juniper, cacti, open area, grasses	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	DTO032	1	10	negative	10YR 5/3	Silt	Open field, mesquite, logged trees, cacti, spotty grasses	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL017	1	30	negative	10YR 5/2	Silt	Nearby vegetation- bushes and grass.	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL018	1	5	negative	7.5YR 5/2	Silt	Vegetation- grass and bushes.	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL019	1	10	negative	7.5YR 5/3	Silt	Vegetation- grass, bushes and small trees.	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL020	1	5	negative	7.5YR 5/3	Silt	Rock impasse. Vegetation- grass and large bushes.	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL021	1	10	negative	7.5YR 5/2	Silt	Rock impasse, vegetation- grass and large bushes.	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL022	1	5	negative	7.5YR 5/3	Silt	Vegetation- bushes and grass.	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL023	1	15	negative	7.5YR 5/3	Silt	Vegetation- grass, large bushes and cacti.	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL024	1	10	negative	7.5YR 5/2	Silt	Vegetation- shrubs and bushes.	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL025	1	40	negative	10YR 7/2	Silt	Rock impasse	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL026	1	10	negative	7.5YR 5/3	Silt	Rock impasse	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL027	1	10	negative	7.5YR 5/3	Silt	Vegetation- grass, bushes and small trees	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL028	1	5	negative	7.5YR 5/2	Silt	Vegetation- bushes and grass	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	HNL029	1	5	negative	7.5YR 5/3	Silt	Vegetation- grass and bushes	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL014	1	35	negative	10YR 6/2	Silt Loam	ST ~1m E from fence line; forbs	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL015	1	27	negative	10YR 6/2	Silt Loam	Juniper scrub, forbs, some mesquite; limestone bedrock	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL016	1	37	negative	10YR 6/2	Silt Loam	Various grasses, juniper/mesquite scrub	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL017	1	14	negative	10YR 6/2	Silt Loam	Rock impasse; rocky juniper scrub, various grasses, few mesquite	Other
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL018	1	20	negative	10YR 6/2	Silt Loam	Juniper/mesquite scrub, various grasses/forbs, prickly pear	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL019	1	30	negative	10YR 6/2	Silt Loam	Juniper scrub, various grasses/forbs, agarita, mesquite, prickly pear	N/A
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL019	2	43	negative	7.5YR 6/3	Silty Clay	None	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL020	1	20	negative	10YR 6/2	Silt Loam	Dead juniper (in slash piles), mesquite, grasses/forbs, some agarita	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL021	1	14	negative	10YR 6/1	Silt Loam	Grassy mesquite scrub, slash piles of juniper	Compact Soil
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL022	1	14	negative	10YR 6/2	Silt Loam	Edge of cleared ROW which is mostly barren and cobbly, few forbs; uncleared scrub nearby consists of mainly tall grasses with juniper and agarita	Bedrock
WHL-TX-CRK-0183.00000	ALB-UT-PRA-025	LCL023	1	27	negative	10YR 6/2	Silt Loam	ST near edge of cleared ROW; mainly tall grasses with juniper and mesquite	Compact Soil
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	JDH011	1	10	negative	10YR 5/4	Silty Clay Loam	Shredded wood and blasted bedrock indicate disturbance from previous pipeline construction	Compact Soil
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	JDH012	1	15	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	JDH025	1	40	negative	10YR 5/5	Silt Loam	None	N/A
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	JDH025	2	60	negative	7.5YR 5/6	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	JDH026	1	35	negative	10YR 5/4	Silt Loam	Degraded limestone	Bedrock
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	JWF007	1	5	negative	10YR 5/4	Silt Loam	Heavy disturbance, pipeline corridor	Compact Soil
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	JWF017	1	50	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	KCA006	1	5	negative	10YR 5/2	Silt	Disturbed found within corridor. Possible backfill from construction. Vegetation to the north and south.	Bedrock
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	KCA007	1	10	negative	10YR 5/2	Silt	Disturbed found within corridor. Possible backfill from construction. Vegetation to the north and south.	Bedrock
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	KCA016	1	30	negative	10YR 5/2	Silt	None	Bedrock
WHL-TX-CRK-0184.00000	ALB-UT-PRA-025	KCA017	1	50	negative	10YR 5/2	Silt	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH013	1	15	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH014	1	20	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH015	1	10	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH016	1	15	negative	10YR 5/4	Silty Clay Loam	Compaction and large rock frag impasse	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH017	1	15	negative	10YR 5/4	Silty Clay Loam	Compaction and large rock frag impasse	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH018	1	15	negative	10YR 5/4	Silty Clay Loam	Compaction and large rock frags	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH019	1	15	negative	10YR 4/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH020	1	10	negative	10YR 4/4	Silt Loam	Highly degraded limestone	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH021	1	10	negative	10YR 4/3	Silt Loam	Highly degraded bedrock	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH022	1	15	negative	10YR 5/4	Silt Loam	Degrading limestone	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH023	1	40	negative	10YR 5/4	Silt Loam	None	N/A
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH023	2	60	negative	10YR 5/5	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JDH024	1	20	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF008	1	5	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF009	1	10	negative	10YR 5/4	Silt Loam	Mesquite scrub, cacti in surrounding area, heavy disturbance pipeline corridor	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF010	1	5	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF011	1	10	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF012	1	10	negative	10YR 5/4	Silt Loam	Gravel impasse, on slope	Other
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF013	1	15	negative	10YR 6/4	Silt Loam	Exposed bedrock, mesquite scrub, cacti, grasses	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF014	1	10	negative	10YR 6/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF015	1	20	negative	10YR 6/4	Silt	None	N/A

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF015	2	60	negative	10YR 6/5	Silt Loam	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	JWF016	1	5	negative	10YR 6/4	Silt	None	Compact Soil
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA008	1	5	negative	10YR 5/2	Silt	Disturbed found within corridor. Possible backfill from construction. Vegetation to the north and south.	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA009	1	10	negative	10YR 5/3	Silt	Disturbed found within corridor. Possible backfill from construction. Vegetation to the north and south.	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA010	1	10	negative	10YR 5/2	Silt	Disturbed found within corridor. Possible backfill from construction. Vegetation to the north and south.	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA011	1	5	negative	10YR 5/2	Silt	Disturbed found within corridor. Possible backfill from construction. Vegetation to the north and south.	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA012	1	5	negative	10YR 5/2	Silt	Disturbed found within corridor. Possible backfill from construction. Vegetation to the north and south.	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA013	1	15	negative	10YR 5/2	Silt	None	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA014	1	30	negative	10YR 6/2	Silt	None	Bedrock
WHL-TX-CRK-0185.00000	ALB-UT-PRA-025	KCA015	1	5	negative	10YR 5/2	Silt	Slightly dense mesquite, Low vegetation. Scattered bedrock visible on surface.	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS002	1	25	negative	10YR 6/2	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS002	2	35	negative	10YR 4/3	Clay Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS003	1	30	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS003	2	40	negative	10YR 4/3	Sandy Clay	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS004	1	10	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS004	2	20	positive	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS004	3	30	negative	10YR 6/3	Clay Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS004	4	40	negative	10YR 4/3	Clay Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS005	1	25	negative	10YR 6/3	Sandy Clay Loam	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS006	1	20	negative	10YR 6/2	Sandy Clay	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS007	1	15	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS007	2	30	negative	10R 4/3	Clay Loam	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS008	1	20	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	CMS008	2	25	negative	10YR 5/3	Sandy Clay	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA001	1	50	negative	7.5YR 6/2	Silty Clay	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA002	1	50	negative	7.5YR 6/2	Silty Clay	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA003	1	30	negative	7.5YR 6/2	Silty Clay	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA004	1	58	negative	7.5YR 6/2	Silty Clay	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA005	1	55	negative	7.5YR 6/2	Silty Clay	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA006	1	50	negative	7.5YR 6/2	Silt	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA007	1	25	negative	7.5YR 6/2	Silt	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA007	2	50	negative	7.5YR 6/3	Silty Clay	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA008	1	25	negative	7.5YR 6/2	Silt	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA008	2	45	negative	7.5YR 6/3	Silt	None	Bedrock
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA009	1	30	negative	7.5YR 6/2	Silt	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA009	2	45	negative	7.5YR 6/3	Silt	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA011	1	30	negative	7.5YR 6/3	Silt	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	EMA011	2	58	negative	5YR 6/3	Silt	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP001	1	15	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP002	1	40	negative	7.5YR 5/3	Silty Clay Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP003	1	50	negative	7.5YR 4/3	Silt Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP003	2	60	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP004	1	40	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP005	1	40	negative	7.5YR 5/3	Silt Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP006	1	40	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP007	1	30	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP007	2	40	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP008	1	40	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP009	1	30	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP009	2	45	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP010	1	30	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP011	1	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP012	1	20	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP012	2	30	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP014	1	15	negative	7.5YR 4/3	Silt Loam	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	MDP014	2	25	negative	7.5YR 4/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG001	1	70	negative	7.5YR 6/3	Loamy Sand	Decaying bedrock @ 70 cmbs	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG002	1	40	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG003	1	40	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG004	1	10	negative	7.5YR 6/3	Loamy Sand	2 FCR frags found on surface within 5 m of ST	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG004	2	20	negative	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG004	3	30	positive	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG004	4	40	positive	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG004	5	50	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG005	1	10	negative	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG005	2	20	negative	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG005	3	30	negative	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG005	4	40	positive	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG005	5	55	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG006	1	45	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG007	1	40	negative	10YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG008	1	35	negative	10YR 4/4	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG009	1	35	negative	10YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG009	2	35	negative	10YR 4/4	Sandy Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG010	1	35	negative	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG010	2	40	negative	10YR 4/4	Sandy Loam	None	Compact Soil
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG011	1	35	negative	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0173.00000	ALB-UT-PRA-025	NMG011	2	40	negative	10YR 4/4	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	CMS009	1	40	negative	10YR 6/3	Sandy Clay Loam	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	CMS010	1	30	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	CMS010	2	40	negative	10YR 4/3	Sandy Clay	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	CMS011	1	30	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	CMS011	2	40	negative	10YR 4/3	Sandy Clay	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	EMA010	1	40	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	EMA012	1	32	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	EMA013	1	55	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	EMA014	1	32	negative	7.5YR 6/2	Silt	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP013	1	20	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP013	2	30	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP015	1	10	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP015	2	30	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP016	1	28	negative	7.5YR 6/3	Silt Loam	Large rock fragment impasse	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP017	1	30	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP017	2	40	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP018	1	20	negative	7.5YR 6/3	Silt Loam	None	N/A
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP018	2	30	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP019	1	40	negative	7.5YR 6/3	Silt	None	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	MDP020	1	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	NMG012	1	40	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	NMG013	1	20	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	NMG014	1	25	negative	7.5YR 6/3	Loamy Sand	Decaying bedrock @ 20 cmbs	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	NMG015	1	25	negative	7.5YR 6/3	Loamy Sand	Decaying bedrock @ 25 cmbs	Bedrock
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	NMG016	1	25	negative	7.5YR 6/3	Loamy Sand	None	Compact Soil
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	NMG017	1	35	negative	7.5YR 6/3	Loamy Sand	None	N/A
WHL-TX-RGN-0174.00000	ALB-UT-PRA-025	NMG017	2	40	negative	10YR 4/4	Sandy Clay Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM001	1	15	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM002	1	25	negative	10YR 5/3	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM003	1	25	negative	10YR 5/3	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM004	1	30	negative	10YR 5/3	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM005	1	30	negative	10YR 5/3	Silt	Large impassable rock/bedrock?	Bedrock
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM006	1	30	negative	10YR 5/3	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM007	1	30	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM008	1	30	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM009	1	15	negative	10YR 5/3	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM010	1	15	negative	10YR 5/4	Silt	Disturbed/large rocks	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM011	1	20	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM012	1	20	negative	10YR 4/2	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM013	1	5	negative	10YR 5/4	Silt	Disturbed/large amount of rocks	Bedrock
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	HBM014	1	25	negative	10YR 5/4	Silt	Disturbed	Other
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB001	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB002	1	30	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB003	1	25	negative	10YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB004	1	30	negative	10YR 5/	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB005	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB006	1	20	negative	10YR 5/4	Silt Loam	Adjacent to two track, 5m	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB007	1	30	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB008	1	20	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB009	1	20	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB010	1	30	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB011	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB012	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB013	1	5	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB014	1	10	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0175.00000	ALB-UT-PRA-025	SAB015	1	10	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0176.00000	ALB-UT-PRA-025	HBM002	1	15	negative	10YR 5/4	Silt	None	Bedrock
WHL-TX-RGN-0176.00000	ALB-UT-PRA-025	HBM003	1	15	negative	10YR 5/3	Silt	None	Bedrock
WHL-TX-RGN-0176.00000	ALB-UT-PRA-025	SAB002	1	20	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0176.00000	ALB-UT-PRA-025	SAB003	1	10	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0176.00000	ALB-UT-PRA-025	SAB004	1	20	negative	10YR 5/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH001	1	40	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH002	1	20	negative	10YR 5/3	Silty Clay Loam	Disturbed-existing pipeline ROW	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH003	1	30	negative	10YR 5/3	Silty Clay Loam	Disturbed-existing pipeline ROW	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH004	1	30	negative	10YR 5/3	Silty Clay Loam	Disturbed-existing pipeline ROW	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH005	1	20	negative	10YR 6/4	Silt	Limestone bedrock	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH006	1	30	negative	10YR 6/4	Silt	None	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH007	1	20	negative	10YR 5/3	Silty Clay Loam	Disturbed-existing pipeline ROW	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH008	1	20	negative	10YR 5/3	Silty Clay Loam	Disturbed-existing pipeline ROW	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH009	1	20	negative	10YR 5/3	Clay Loam	Disturbed-existing pipeline ROW	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JDH010	1	20	negative	10YR 5/3	Clay Loam	Disturbed-existing pipeline ROW	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JWF001	1	20	negative	10YR 6/4	Silt Loam	Disturbed, pipeline corridor	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JWF002	1	40	negative	10YR 6/4	Silt Loam	Mesquite scrub, cacti, grass	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JWF003	1	30	negative	10YR 6/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JWF004	1	5	negative	10YR 4/4	Silt Loam	Compact at surface, heavy disturbance pipeline corridor, desert scrub	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JWF005	1	10	negative	10YR 4/4	Silt Loam	On pipeline corridor	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	JWF006	1	75	negative	10YR 6/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	KCA001	1	45	negative	10YR 7/4	Silt	south west of pipeline corridor. Low brush, sporadic. Sparse mesquite.	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	KCA002	1	10	negative	10YR 5/2	Silt	Terminated due to compact soil and proximity to existing pipeline.	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	KCA003	1	30	negative	10YR 7/4	Silt	None	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	KCA004	1	45	negative	10YR 5/3	Silt	Low brush, mesquite.	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	KCA005	1	60	negative	10YR 5/3	Silt	East of gate, south of pipeline corridor. SA ST KCA004.	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ001	1	10	negative	10YR 4/4	Silt	Disturbed	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ002	1	20	negative	10YR 4/4	Silt	Disturbed	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ003	1	45	negative	10YR 4/4	Silty Clay Loam	None	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ004	1	55	negative	10YR 4/4	Sandy Clay Loam	Degrading bedrock	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ005	1	10	negative	10YR 4/4	Silt Loam	Highly disturbed	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ006	1	10	negative	10YR 4/4	Silt Loam	Existing pipeline corridor	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ007	1	20	negative	10YR 4/4	Silty Clay Loam	On a graded pipeline corridor	Other
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ008	1	20	negative	10YR 4/4	Silt Loam	None	Compact Soil
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ009	1	10	negative	10YR 4/4	Silt	Undisturbed section down the corridor	Bedrock
WHL-TX-RGN-0177.00000	ALB-UT-PRA-025	RLJ010	1	20	negative	10YR 4/4	Silt Loam	None	Bedrock
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	DTO014	1	20	negative	10YR 5/3	Silt	Impasse-rocks, open field with some low bushes, grass, and cactus	Other
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	DTO015	1	20	negative	10YR 7/3	Silt	Impasse-rocks, low bushes semi open area, grass, coniferous vegetation	Other
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	DTO016	1	30	negative	10YR 6/3	Silt	Cactus, low bushes	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	DTO017	1	15	negative	10YR 7/3	Silt	Coniferous vegetation, cactus, low bushes, grass	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	DTO018	1	57	negative	10YR 5/3	Silt	Low bushes, open field, coniferous, grass	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	HNL012	1	5	negative	7.5YR 7/2	Sand	Small shrubs, grass and roadway.	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	HNL013	1	30	(blank)	7.5YR 7/2	Sand	Grass and low bushes.	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	HNL014	1	10	negative	7.5YR 7/2	Sand	Grass throughout surroundings.	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	HNL015	1	20	negative	7.5YR 5/2	Silt	Surrounding vegetation includes grass and low bushes.	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	HNL016	1	30	negative	7.5YR 5/2	Silt	Surrounding vegetation includes grass, small shrubs and low bushes.	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	LCL010	1	16	negative	10YR 6/2	Silt Loam	Limestone bedrock	Bedrock
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	LCL011	1	12	negative	10YR 5/3	Silty Clay Loam	Rock impasse; large rock exposed on surface continues into ground at an angle and intersects shovel test	Other
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	LCL012	1	34	negative	10YR 6/2	Silt Loam	Mesquite scrub, some agarita and juniper	Compact Soil
WHL-TX-RGN-0178.00000	ALB-UT-PRA-025	LCL013	1	28	negative	10YR 6/2	Silt Loam	Limestone bedrock	Bedrock

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO001	1	40	negative	10YR 5/3	Silt	Low bushes, grass, close to edge of corridor, cactus, coniferous vegetation	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO002	1	40	negative	10YR 6/3	Silt	Impasse-roots 50%, low bushes and cactus, close to existing pipeline corridor, grass is spotty	Other
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO003	1	40	negative	10YR 5/3	Silt	Cattle (cows) present, low bushes, low grass, cactus, semi open area	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO004	1	45	negative	10YR 6/3	Silt	Low bushes, semi open area, cactus, coniferous vegetation	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO005	1	35	negative	10YR 5/3	Silt	Close to fence and two track road, open area, low bushes, coniferous vegetation, cows present, cactus, spotty grass	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO006	1	35	negative	10YR 7/3	Silt	Semi open area, low bushes, coniferous vegetation, grass	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO007	1	30	negative	10YR 6/4	Silt	Semi open area, low bushes-coniferous, grass, cactus	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO008	1	30	negative	10YR 5/3	Silt	Low bushes, grass, logged trees close by, coniferous vegetation	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO009	1	30	negative	10YR 6/4	Silt	Coniferous vegetation, spotty grass, cactus, low bushes	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO010	1	30	negative	10YR 4/6	Silt	Semi open area, coniferous vegetation, spotty grass	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO011	1	30	negative	10YR 7/3	Silt	Coniferous, cactus, low bushes	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO012	1	25	negative	10YR 6/3	Silt	Low bushes, grass, coniferous, cactus, more open area, impasse rocks	Other
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	DTO013	1	15	negative	10YR 7/3	Silt	Impasse-rocks, open field with some low bushes, coniferous vegetation	Other
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL001	1	10	negative	7.5YR 5/2	Sand	Impassable due to large rock. Low bushes and grass.	Other
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL002	1	35	positive	7.5YR 5/2	Sand	Grass, small shrubs, low bushes and cactus.	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL003	1	35	negative	7.5YR 6/3	Sand	Surroundings include grass, cactus and small shrubs.	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL004	1	38	negative	7.5YR 5/4	Silt	Surrounding area of grass, low bushes, cactus and small shrubs	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL005	1	30	negative	7.5YR 5/3	Silt	Grass and low bushes. Fence line approximately 30m away.	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL006	1	30	negative	7.5YR 5/2	Sand	Impasse at root system.	Other
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL007	1	40	negative	7.5YR 5/2	Silt	Small shrubs, low bushes, and grass.	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL008	1	30	negative	7.5YR 5/2	Sand	Grass and low bush.	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL009	1	25	negative	7.5YR 5/2	Sand	Grass and small shrubs.	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL010	1	5	negative	7.5YR 5/2	Sand	Grass, shrubs and low bushes surrounding area.	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	HNL011	1	10	negative	7.5YR 5/2	Sand	Impassable due to rocks. Area contained grass, small shrubs and low bushes.	Other
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL001	1	28	negative	10YR 4/3	Silty Clay Loam	None	N/A
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL001	2	54	negative	7.5YR 6/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL002	1	25	negative	10YR 5/2	Silty Clay Loam	None	N/A
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL002	2	40	negative	10YR 6/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL003	1	38	negative	7.5YR 5/3	Silty Clay	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL004	1	27	negative	7.5YR 4/3	Silty Clay Loam	None	N/A
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL004	2	40	negative	7.5YR 5/4	Silty Clay	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL005	1	30	negative	7.5YR 4/3	Silty Clay Loam	None	N/A
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL005	2	43	negative	7.5YR 5/3	Silty Clay	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL006	1	43	negative	7.5YR 5/3	Silty Clay	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL007	1	10	negative	7.5YR 5/2	Silty Clay Loam	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL008	1	37	negative	7.5YR 6/2	Silty Clay Loam	None	Compact Soil
WHL-TX-RGN-0179.00000	ALB-UT-PRA-025	LCL009	1	36	negative	10YR 4/3	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	AVM001	1	5	negative	10YR 8/1	Sandy Loam	Two track disturbance five meters from shovel test	Bedrock
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	AVM002	1	45	negative	10YR 7/2	Sandy Loam	Surrounded by herbaceous upland scrub vegetation	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	JRG006	1	15	negative	7.5YR 4/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	PMW001	1	25	negative	10YR 6/3	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	PMW002	1	30	negative	10YR 6/3	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	PMW003	1	30	negative	10YR 6/3	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	SKD001	1	40	negative	10YR 5/2	Silt Loam	None	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	SKD002	1	25	negative	10YR 5/2	Silt Loam	Compact throughout	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	SKD003	1	30	negative	10YR 5/2	Silt Loam	Compact throughout	Compact Soil
WHL-TX-CRK-0201.00000	ALB-UT-PRA-033	SKD004	1	25	negative	10YR 5/2	Silt Loam	Compact throughout	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	CMS007	1	30	negative	10YR 6/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	CMS007	2	40	negative	7.5YR 5/4	Sandy Clay	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	CMS008	1	30	negative	10YR 6/2	Sandy Clay Loam	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	CMS009	1	60	negative	10YR 4/2	Sandy Clay Loam	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	EMA007	1	10	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	EMA008	1	50	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	JRG005	1	10	negative	7.5YR 4/4	Silty Clay	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	JRG007	1	45	negative	10YR 4/	Silt Loam	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	NMG007	1	10	negative	10YR 4/4	Loamy Sand	Upland slope	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	NMG008	1	15	negative	10YR 4/4	Loamy Sand	Potentially disturbed from existing pipeline corridor	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	NMG009	1	55	negative	10YR 4/4	Loamy Sand	None	N/A
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	PMW007	1	45	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	PMW008	1	5	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	PMW009	1	10	negative	10YR 4/2	Silty Clay Loam	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	PMW010	1	20	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	SKD009	1	5	negative	10YR 5/2	Sandy Loam	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	SKD010	1	45	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	SKD011	1	8	negative	10YR 5/2	Sandy Loam	None	Bedrock
WHL-TX-CRK-0202.00000	ALB-UT-PRA-033	SKD012	1	50	negative	10YR 5/2	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS001	1	35	negative	10YR 4/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS001	2	45	negative	10YR 5/4	Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS002	1	40	negative	10YR 6/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS002	2	50	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS003	1	35	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS003	2	45	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS004	1	30	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS004	2	40	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS005	1	35	negative	10YR 6/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS005	2	45	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS006	1	40	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS006	2	50	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS021	1	20	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	CMS021	2	30	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA001	1	40	negative	7.5YR 5/3	Silt Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA001	2	45	negative	7.5YR 5/4	Silty Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA002	1	40	negative	7.5YR 5/3	Silt	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA003	1	35	negative	7.5YR 5/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA004	1	30	negative	7.5YR 5/2	Silt Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA005	1	35	negative	7.5YR 5/2	Silt Loam	None	N/A

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA005	2	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA006	1	20	negative	7.5YR 5/2	Silt Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	EMA006	2	50	negative	7.5YR 5/3	Silty Clay	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	JRG001	1	45	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	JRG002	1	25	negative	10YR 4/2	Silty Clay Loam	Adjacent to cleared ROW	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	JRG003	1	50	negative	10YR 4/2	Silt Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	JRG004	1	25	negative	10YR 4/2	Silt Loam	None	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	NMG001	1	35	negative	10YR 4/3	Silty Clay Loam	Alluvium deposits in lowland setting, thick vegetation	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	NMG002	1	30	negative	10YR 4/3	Silty Clay Loam	Alluvium deposits in lowland setting	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	NMG003	1	40	negative	10YR 4/2	Silty Clay Loam	Alluvium deposits in lowland setting, ST near 2 track road	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	NMG004	1	40	negative	10YR 4/2	Silty Clay Loam	Potentially disturbed due to existing pipeline corridor	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	NMG005	1	40	negative	10YR 4/3	Silty Clay Loam	Potentially disturbed due to existing pipeline corridor	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	NMG006	1	40	negative	10YR 4/3	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	PMW001	1	30	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	PMW002	1	40	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	PMW003	1	45	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	PMW004	1	45	negative	10YR 4/2	Silty Clay Loam	120	N/A
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	PMW005	1	40	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	PMW006	1	30	negative	10YR 4/2	Silty Clay Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD001	1	55	negative	10YR 5/2	Silt	None	Bedrock
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD002	1	70	negative	10YR 5/2	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD003	1	15	negative	7.5YR 3/4	Sandy Loam	None	Bedrock
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD004	1	35	negative	10YR 5/2	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD005	1	15	negative	10YR 5/2	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD006	1	35	negative	7.5YR 3/4	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD007	1	40	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0203.00000	ALB-UT-PRA-033	SKD008	1	60	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	CMS020	1	20	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	CMS020	2	30	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	CMS022	1	20	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	CMS022	2	30	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	EMA021	1	45	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	EMA022	1	35	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	EMA023	1	40	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-CRK-0204.00000	ALB-UT-PRA-033	JGS013	1	45	negative	10YR 7/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS010	1	50	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS010	2	60	negative	7.5YR 6/4	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS011	1	25	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS011	2	35	negative	7.5YR 6/4	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS012	1	35	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS012	2	50	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS013	1	35	negative	10YR 6/3	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS013	2	45	negative	7.5YR 5/4	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS014	1	50	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS014	2	60	negative	7.5YR 4/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS015	1	20	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS015	2	30	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS016	1	20	negative	10YR 5/3	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS016	2	30	negative	7.5YR 4/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS017	1	15	negative	10YR 5/3	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS017	2	25	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS018	1	80	negative	10YR 6/2	Sandy Clay Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS019	1	30	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS019	2	40	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS023	1	20	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS023	2	30	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS024	1	10	negative	10YR 5/2	Sandy Clay Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	CMS024	2	20	negative	7.5YR 5/3	Sandy Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA009	1	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA010	1	35	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA011	1	35	negative	7.5YR 6/3	Silt Loam	Meter away from FCR pile	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA012	1	55	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA013	1	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA014	1	32	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA015	1	40	negative	7.5YR 6/2	Silt Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA015	2	50	negative	7.5YR 6/3	Silty Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA016	1	50	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA017	1	40	negative	7.5YR 6/2	Silt Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA017	2	50	negative	7.5YR 6/3	Silty Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA018	1	30	negative	7.5YR 6/2	Silt Loam	None	N/A
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA018	2	40	negative	7.5YR 6/3	Silty Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA019	1	60	negative	7.5YR 6/2	Silt Loam	None	Bedrock
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA020	1	40	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	EMA024	1	25	negative	7.5YR 6/3	Silty Clay	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS001	1	60	negative	10YR 7/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS003	1	35	negative	10YR 7/4	Silt Loam	Located inside artifact cluster	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS004	1	65	negative	10YR 7/4	Silt Loam	None	Bedrock
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS005	1	65	negative	10YR 7/4	Silt Loam	Adjacent to pipeline	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS007	1	45	negative	10YR 7/4	Silt Loam	Adjacent to pipeline	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS008	1	35	negative	10YR 7/4	Silt Loam	Adjacent to pipeline	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS009	1	40	negative	10YR 7/4	Silt Loam	Adjacent to pipeline	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS010	1	40	negative	10YR 7/4	Silt Loam	Adjacent to pipeline	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS011	1	50	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS012	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS014	1	20	negative	10YR 5/4	Silt Loam	Adjacent to pipeline	Compact Soil
WHL-TX-CRK-0205.00000	ALB-UT-PRA-033	JGS015	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP001	1	35	negative	10YR 4/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP002	1	50	negative	10YR 4/4	Silt	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP002	2	60	negative	10YR 4/4	Silt	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP003	1	35	negative	10YR 4/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP004	1	30	negative	10YR 4/3	Silt Loam	Existing pipeline corridor.	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP005	1	30	negative	10YR 4/3	Silt Loam	Disturbed	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP006	1	40	negative	10YR 4/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP007	1	30	negative	7.5YR 4/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP007	2	40	negative	7.5YR 6/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP008	1	30	negative	10YR 4/3	Silt Loam	Disturbed	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP009	1	30	negative	10YR 4/3	Silt Loam	Disturbed	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	MDP010	1	30	negative	10YR 4/3	Silt Loam	Disturbed	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB001	1	50	negative	7.5YR 4/6	Silty Clay	Desert scrub	Bedrock
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB002	1	40	negative	7.5YR 4/6	Silt	Desert scrub juniper, low area slight depression in land	Bedrock
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB003	1	30	negative	7.5YR 4/6	Silt	None	Bedrock

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB004	1	20	negative	7.5YR 4/2	Silty Clay	On existing pipeline disturbed	Other
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB005	1	30	negative	7.5YR 4/6	Silty Clay	Disturbed	Other
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB006	1	20	negative	7.5YR 4/6	Silty Clay	Soil also disturbed	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB007	1	40	negative	7.5YR 4/6	Silty Clay	Cacti, desert scrub	Bedrock
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB008	1	60	negative	7.5YR 4/6	Silty Clay	Juniper, and desert scrub	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB009	1	40	negative	7.5YR 4/6	Silty Clay	Juniper, mesquite, desert scrub brush	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB010	1	40	negative	7.5YR 4/6	Silty Clay	Near existing pipeline	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB011	1	30	negative	7.5YR 4/3	Silty Clay	Near existing pipeline area is disturbed	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RDB012	1	40	negative	7.5YR 4/6	Silty Clay	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ001	1	30	negative	10YR 4/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ001	2	50	negative	10YR 5/6	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ002	1	50	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ003	1	50	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ004	1	10	negative	10YR 5/4	Silty Clay Loam	Disturbed	Other
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ005	1	30	negative	4/3	Silty Clay Loam	Disturbance	Other
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ006	1	30	negative	10YR 4/3	Silty Clay Loam	Disturbance	Other
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ007	1	40	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ008	1	20	negative	10YR 4/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ008	2	50	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ009	1	50	negative	10YR 4/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ010	1	30	negative	10YR 4/3	Silty Clay Loam	Disturbance	Compact Soil
MID-TX-UPT-0058.00000	FTW-UT-ML-PRA-016	RLJ011	1	20	negative	10YR 4/4	Silty Clay Loam	Disturbance	Other
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG001	1	65	negative	7.5YR 5/6	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG002	1	25	negative	7.5YR 4/6	Clay Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG003	1	45	negative	7.5YR 4/6	Clay Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG004	1	35	negative	7.5YR 4/4	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG005	1	75	negative	7.5YR 4/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG006	1	45	negative	7.5YR 4/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG007	1	25	negative	7.5YR 4/6	Clay Loam	Adjacent to access road	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG008	1	55	negative	7.5YR 4/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	JRG009	1	80	negative	7.5YR 4/6	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW006	1	30	negative	10YR 4/3	Clay Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW007	1	45	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW008	1	25	negative	10YR 4/3	Clay Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW009	1	32	negative	10YR 4/3	Clay Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW010	1	30	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW011	1	50	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW012	1	30	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW013	1	35	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW014	1	35	negative	10YR 5/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW015	1	45	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW016	1	32	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	PMW017	1	30	negative	10YR 5/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD004	1	35	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD005	1	45	negative	7.5YR 4/3	Sandy Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD006	1	45	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD007	1	55	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD008	1	55	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD009	1	10	negative	7.5YR 4/3	Sandy Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD010	1	35	negative	7.5YR 4/3	Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD011	1	40	negative	7.5YR 4/3	Sandy Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD012	1	20	negative	7.5YR 4/3	Sandy Loam	None	Bedrock
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD013	1	50	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD014	1	65	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0059.00000	FTW-UT-ML-PRA-016	SKD015	1	35	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	CMS001	1	40	negative	7.5YR 3/4	Loamy Sand	None	Bedrock
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	CMS002	1	50	negative	10YR 5/2	Sandy Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	CMS002	2	70	negative	10YR 5/3	Sandy Clay Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	CMS003	1	40	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	CMS003	2	50	negative	7.5YR 5/3	Sandy Clay Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	CMS004	1	40	negative	7.5YR 4/3	Sandy Clay Loam	None	Bedrock
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	EMA001	1	85	negative	7.5YR 6/2	Silt Loam	None	Bedrock
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	EMA002	1	60	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	EMA003	1	35	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	EMA004	1	50	negative	7.5YR 6/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	JGS002	1	75	negative	10YR 4/4	Silt Loam	Adjacent to pipeline disturbance	Bedrock
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	JGS003	1	45	negative	10YR 4/4	Silt Loam	Adjacent to pipeline disturbance	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	JGS004	1	25	negative	10YR 5/4	Silt Loam	Adjacent to pipeline corridor	Bedrock
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	JGS005	1	25	negative	10YR 5/4	Silt Loam	Adjacent to pipeline disturbance	Bedrock
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	NMG001	1	25	negative	10YR 4/3	Loamy Sand	Potentially disturbed from proximity to several existing pipeline corridors	N/A
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	NMG001	2	35	negative	10YR 4/4	Loamy Sand	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	NMG002	1	25	negative	10YR 4/3	Loamy Sand	None	N/A
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	NMG002	2	45	negative	10YR 4/4	Loamy Sand	None	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	NMG003	1	10	negative	10YR 4/4	Loamy Sand	Heavily disturbed existing pipeline corridors	Compact Soil
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	NMG004	1	30	negative	10YR 4/3	Loamy Sand	Potentially disturbed from proximity to several existing pipeline corridors	N/A
MID-TX-UPT-0060.00000	FTW-UT-ML-PRA-016	NMG004	2	40	negative	10YR 4/4	Loamy Sand	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	CMS005	1	50	negative	10YR 5/2	Sandy Loam	None	N/A
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	CMS005	2	60	negative	7.5YR 5/3	Sandy Clay Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	CMS006	1	50	negative	7.5YR 4/3	Sandy Loam	None	N/A
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	CMS006	2	80	negative	7.5YR 5/4	Sandy Clay Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	CMS007	1	50	negative	7.5YR 4/3	Sandy Loam	None	N/A
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	CMS007	2	80	negative	7.5YR 5/4	Sandy Clay Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	EMA005	1	38	negative	7.5YR 6/2	Silt Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	EMA006	1	55	negative	7.5YR 6/3	Silt Loam	None	Bedrock
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	EMA007	1	45	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	HBM010	1	100	negative	10YR 5/4	Silt	None	Depth
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	HBM011	1	5	negative	10YR 5/3	Silt	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JDH010	1	30	negative	10YR 4/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JDH011	1	30	negative	10YR 4/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JDH012	1	25	negative	10YR 4/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JDH013	1	80	negative	10YR 5/4	Silt Loam	None	N/A
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JDH013	2	90	negative	10YR 5/6	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JGS006	1	35	negative	10YR 5/4	Silt Loam	Adjacent to pipeline corridor	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JGS007	1	40	negative	10YR 5/4	Silt Loam	Adjacent to pipeline disturbance	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JGS008	1	45	negative	10YR 5/4	Silt Loam	Adjacent to pipeline corridor	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JWF008	1	30	negative	10YR 4/4	Silt Loam	Pipeline corridor	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	JWF009	1	60	negative	10YR 6/4	Silt Loam	Mesquite scrub, cacti	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	KCA009	1	80	negative	10YR 7/4	Silt	Upland plain. Sparse vegetation.	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	NMG005	1	50	negative	10YR 4/4	Loamy Sand	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	NMG006	1	45	negative	10YR 4/4	Loamy Sand	None	Compact Soil
MID-TX-UPT-0061.00000	FTW-UT-ML-PRA-016	NMG007	1	75	negative	10YR 4/4	Loamy Sand	Potentially disturbed from multiple pipeline corridors	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM001	1	10	negative	10YR 5/3	Silt	Compact corridor	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM002	1	45	negative	10YR 4/3	Silt Loam	Adjacent to corridor	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM003	1	70	negative	10YR 5/4	Silt	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM004	1	60	negative	10YR 5/4	Silt	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM005	1	80	negative	10YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM006	1	70	negative	10YR 5/3	Silt	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM007	1	70	negative	10YR 5/4	Silt	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM008	1	45	negative	10YR 4/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	HBM009	1	45	negative	10YR 4/3	Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH001	1	60	negative	10YR 6/4	Silt Loam	None	N/A
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH001	2	80	negative	10YR 6/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH002	1	35	negative	10YR 4/3	Silty Clay	Disturbed pipeline corridor	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH003	1	50	negative	10YR 4/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH004	1	40	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH005	1	20	negative	10YR 4/3	Silty Clay Loam	Disturbed pipeline corridor	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH006	1	20	negative	10YR 3/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH007	1	25	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH008	1	50	negative	10YR 4/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH009	1	50	negative	10YR 5/4	Silt Loam	None	N/A
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH009	2	65	negative	10YR 5/4	Silt Loam	None	N/A
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JDH009	3	75	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF001	1	10	negative	10YR 4/4	Silt Loam	Heavy disturbance, pipeline corridor	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF002	1	10	negative	7.5YR 6/4	Silt	Desert scrub, cleared mesquite ~30m from corridor	N/A
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF002	2	40	negative	10YR 6/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF003	1	30	negative	10YR 4/4	Silt	Pipeline corridor, heavy disturbance	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF004	1	30	negative	10YR 4/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF005	1	40	negative	7.5YR 6/4	Silt	Desert scrub	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF006	1	60	negative	10YR 6/4	Silt Loam	Mesquite scrub, cacti, grasses	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF007	1	20	negative	10YR 7/2	Silt Loam	Heavy disturbance, pipeline corridor	N/A
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	JWF007	2	65	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA001	1	50	negative	10YR 6/4	Silt	East of corridor. Upland plain. Low scrub, sparse mesquite. Possibly disturbed soil from pipeline construction.	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA002	1	30	negative	10YR 6/3	Silt Loam	Within existing corridor. Sterile soil from construction.	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA003	1	30	negative	10YR 6/3	Silt Loam	Within corridor, disturbed sterile soil from construction.	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA004	1	20	negative	10YR 6/3	Silt Loam	Within corridor, disturbed, sterile soil from construction.	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA005	1	20	negative	10YR 6/4	Silt Loam	Within corridor. Disturbed, sterile soil from construction.	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA006	1	25	negative	10YR 4/3	Silt Loam	Within corridor, disturbed soil from construction. Sparse waist high vegetation.	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA007	1	55	negative	10YR 4/3	Silt Loam	Within corridor, disturbed soil, four foot high, sparse vegetation.	Compact Soil
MID-TX-UPT-0062.00000	FTW-UT-ML-PRA-016	KCA008	1	70	negative	7.5YR 6/4	Silt	Sparse mesquite, upland plain. Low grasses.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO001	1	20	negative	10YR 6/4	Silt	Close to pipeline (side and ahead) and access road, in the corridor, disturbed, open area. At distance: low bushes, spotty grasses	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO002	1	30	negative	10YR 4/3	Silt Loam	Spotty grasses, low bushes at distance, side of existing gas pipeline, a power line crossed the PRA	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO003	1	25	negative	10YR 4/3	Silt Loam	Side of existing gas pipeline, cattle present, open area, disturbed, spotty grasses, at distance low bushes and mesquite	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO004	1	40	negative	10YR 7/3	Silt	Cacti, low bushes juniper, mesquite	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO005	1	40	negative	10YR 6/4	Silt	Low bushes, open area, mesquite.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO006	1	20	negative	10YR 6/4	Silt Loam	Adjacent to existing pipeline, spotty grasses, at distance low bushes, open area	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO007	1	25	negative	10YR 6/4	Silt	Open area, spotty grasses, at distance low bushes mesquite and junipers	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO008	1	30	negative	10YR 5/3	Silt	Open area, adjacent to existing gas pipeline, mesquite, spotty grasses, cattle (cows) in property.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO009	1	25	negative	10YR 3/4	Silty Clay	Wildflowers, spotty grasses, adjacent to existing gas pipeline, side of access road, low bushes at distance, cattle present	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO010	1	20	negative	10YR 3/4	Silt Loam	Cattle present, open area, spotty bushes, low bushes	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO011	1	20	negative	10YR 6/4	Silty Clay Loam	Open are, spotty vegetation, low bushes at distance, close to pipeline intersecting the PRA.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO012	1	25	negative	10YR 6/4	Silt Loam	Mesquite, close to access road	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO013	1	20	negative	10YR 6/4	Silt Loam	Low bushes, dense vegetation	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	DTO014	1	35	negative	10YR 6/4	Silt	At the side of the gate, close to Hwy 65, low bushes mesquite, wildflower, junipers, modern debris	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL001	1	40	negative	7.5YR 5/3	Silt	Vegetation- small bushes	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL002	1	20	negative	10YR 7/2	Silt	Edge of corridor. Vegetation- small bushes, shrubs.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL003	1	45	negative	10YR 6/2	Silt	Vegetation- bushes and grass.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL004	1	15	negative	10YR 5/2	Silt	Disturbed area. Inside pipeline corridor. Vegetation- grass and forbs	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL005	1	50	negative	10YR 5/3	Sandy Loam	Vegetation- small and large bushes, shrubs.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL006	1	50	negative	10YR 6/3	Sandy Loam	Vegetation- shrubs, low bushes and forbs.	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL007	1	40	negative	10YR 6/3	Sandy Loam	Vegetation- bushes and shrubs	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL008	1	60	negative	10YR 5/2	Silt	Vegetation- low bushes and shrubs	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	HNL009	1	40	negative	7.5YR 6/4	Silt Loam	Vegetation- shrubs and low bushes	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL001	1	14	negative	10YR 4/3	Silty Clay Loam	ST in existing pipeline corridor	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL002	1	50	negative	10YR 5/3	Silty Clay Loam	Edge of pipeline corridor; bushes, forbs, mesquite	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL003	1	22	negative	10YR 5/3	Silty Clay Loam	Existing pipeline corridor	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL004	1	17	negative	10YR 5/3	Silty Clay Loam	Existing pipeline corridor	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL005	1	40	negative	10YR 6/3	Silt Loam	Low bushes and mesquite	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL006	1	39	negative	10YR 6/4	Silt Loam	Low bushes, mesquite	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL007	1	45	negative	7.5YR 6/4	Silt Loam	Low bushes, mesquite, forbs	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL008	1	43	negative	7.5YR 6/3	Silt Loam	Clear path bounded by dense desert vegetation; bushes, mesquite, forbs	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL009	1	50	negative	7.5YR 6/3	Silt Loam	Low bushes, mesquite, some yucca	Compact Soil
MID-TX-UPT-0063.00000	FTW-UT-ML-PRA-016	LCL010	1	10	negative	10YR 5/4	Silty Clay Loam	Rock impasse; ditch; grasses	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP011	1	80	negative	10YR 6/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP012	1	45	negative	10YR 6/3	Silt	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP013	1	50	negative	10YR 6/3	Silt Loam	None	N/A
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP014	1	60	negative	10YR 6/3	Silt Loam	Caliche gravel impasse	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP015	1	60	negative	10YR 6/3	Silt	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP016	1	80	negative	10YR 6/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP017	1	30	negative	10YR 5/3	Silt	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP018	1	30	negative	10YR 6/3	Silt	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP019	1	45	negative	10YR 6/3	Silt	Compact caliche horizon.	Compact Soil

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP020	1	40	negative	10YR 6/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP021	1	30	negative	10YR 6/3	Silt	Compact caliche horizon.	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP022	1	60	negative	10YR 5/3	Silt	Compact caliche horizon. FTP-ML-UT-PRA-016-CR-MDP2 delineation.	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	MDP023	1	55	negative	10YR 6/3	Silt	Compact caliche horizon. FTP-ML-UT-PRA-016-CR-MDP2 site shovel test	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB013	1	50	negative	7.5YR 4/6	Silty Clay	Rangeland with desert scrub brush	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB014	1	45	negative	7.5YR 4/6	Silty Clay	1 meter away from existing pipeline corridor, soil is disturbed due recent construction.	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB015	1	40	negative	7.5YR 4/6	Silty Clay	1 meter away from existing pipeline corridor	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB016	1	50	negative	7.5YR 4/6	Silty Clay	Desert rangeland, with juniper, cacti, desert scrub brush, and mesquite	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB017	1	65	negative	7.5YR 4/6	Silty Clay	Juniper and desert scrub brush	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB018	1	55	negative	7.5YR 4/6	Silty Clay	Delineation for IF 10 meters to the east of IF	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB019	1	60	negative	7.5YR 4/6	Silty Clay	IF01-FTW-ML-UT-PRA-016	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB020	1	45	negative	7.5YR 4/6	Silty Clay	Desert rangeland, with mesquite, cacti, and desert scrub brush	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB021	1	50	negative	7.5YR 4/6	Silty Clay	Rangeland with cacti, mesquite and desert scrub brush	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB022	1	50	negative	7.5YR 4/6	Silt Loam	None	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB023	1	60	negative	7.5YR 4/6	Silty Clay	Desert rangeland with mesquite and desert scrub brush	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB024	1	50	negative	7.5YR 4/6	Silty Clay	Juniper and mesquite	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB025	1	50	negative	7.5YR 4/4	Silt Loam	Juniper	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB026	1	50	negative	7.5YR 4/6	Silty Clay	Juniper, mesquite	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB027	1	50	negative	7.5YR 4/6	Silty Clay	Juniper, mesquite	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB028	1	50	negative	7.5YR 4/6	Silty Clay	FTW-ML-UT-PRA-016-CR-MDP02	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB029	1	50	negative	7.5YR 4/6	Silty Clay	FTW-ML-UT-PRA-016-CR-MDP02	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB030	1	55	negative	7.5YR 4/6	Silty Clay	FTW-ML-UT-PRA-016-CR-MDP02	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB031	1	45	negative	7.5YR 4/6	Silty Clay	FTW-ML-UT-PRA-016-CR-MDP02	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB032	1	45	negative	7.5YR 4/6	Silty Clay	FTW-ML-UT-PRA-016-CR-MDP02	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB033	1	50	negative	7.5YR 4/6	Silty Clay	FTW-ML-UT-PRA-016-CR-MDP02	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RDB34	1	45	negative	7.5YR 4/6	Silty Clay	None	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ012	1	45	negative	10YR 5/4	Silt Loam	Gravel impasse. Short scrub and mesquite. Loose fine soil	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ013	1	20	negative	10YR 4/4	Silty Clay Loam	None	N/A
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ013	2	60	negative	10YR 5/4	Silt Loam	None	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ014	1	60	negative	10YR 5/6	Silt Loam	Gravel impasse	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ015	1	50	negative	10YR 5/4	Silt	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ016	1	65	negative	7.5YR 5/4	Silt	At crest of slight slope	Bedrock
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ017	1	55	(blank)	7.5YR 5/4	Loam	Southern delineation off of FTW-ML-UT-PRA-016-CR-MDP1	N/A
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ018	1	55	negative	7.5YR 5/4	Loam	Gravel impasse	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ019	1	50	negative	7.5YR 5/4	Loam	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ020	1	50	negative	10YR 5/6	Silty Clay Loam	Caliche layer	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ021	1	55	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ022	1	50	negative	7.5YR 5/4	Silt	Increasingly compact, short brush, tall acacia,	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ023	1	10	negative	10YR 6/2	Silt	Disturbed	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ024	1	60	negative	7.5YR 5/4	Silt Loam	Caliche bed. Site delineation from FTW-ML-UT-PRA-016-CR-MDP2	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ025	1	60	negative	7.5YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ026	1	60	negative	10YR 6/2	Silty Clay Loam	Caliche layer. FTW-ML-UT-PRA-016-CR-MDP2	Other
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ027	1	50	negative	10YR 5/4	Silt Loam	FTW-ML-UT-PRA-016-CR-MDP2	Compact Soil
MID-TX-UPT-0064.00000	FTW-UT-ML-PRA-016	RLJ028	1	50	negative	7.5YR 5/4	Silt Loam	FTW-ML-UT-PRA-016-CR-MDP2	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG010	1	15	negative	7.5YR 8/3	Silty Clay	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG011	1	20	negative	10YR 8/3	Clay Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG012	1	85	negative	10YR 8/3	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG013	1	45	negative	7.5YR 5/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG014	1	35	negative	7.5YR 4/5	Silty Clay	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG015	1	100	negative	7.5YR 4/4	Silty Clay Loam	None	Depth
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG016	1	65	negative	7.5YR 4/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG017	1	35	negative	7.5YR 4/3	Silt Loam	None	N/A
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	JRG018	1	5	negative	7.5YR 4/3	Silty Clay	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW018	1	30	negative	10YR 5/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW019	1	15	negative	10YR 4/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW020	1	30	negative	10YR 4/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW021	1	80	negative	10YR 5/3	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW022	1	40	negative	10YR 5/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW023	1	50	negative	10YR 5/3	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW024	1	45	negative	10YR 5/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW025	1	35	negative	10YR 5/3	Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW026	1	60	negative	10YR 5/4	Silty Clay Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW027	1	7	negative	10YR 4/3	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW028	1	10	negative	10YR 4/3	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	PMW029	1	5	negative	10YR 4/3	Silty Clay Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD016	1	15	negative	7.5YR 4/3	Sandy Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD017	1	5	negative	7.5YR 4/3	Sandy Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD018	1	20	negative	7.5YR 4/3	Sandy Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD019	1	85	negative	10YR 5/4	Sandy Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD020	1	50	negative	10YR 5/4	Sandy Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD021	1	35	negative	10YR 5/4	Sandy Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD022	1	35	negative	10YR 4/4	Sandy Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD023	1	55	negative	10YR 4/4	Sandy Loam	None	Compact Soil
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD024	1	85	negative	10YR 5/4	Sandy Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD025	1	55	negative	10YR 5/4	Sandy Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD026	1	35	negative	10YR 4/4	Sandy Loam	None	Bedrock
MID-TX-UPT-0065.00000	FTW-UT-ML-PRA-016	SKD027	1	10	negative	10YR 5/4	Sandy Loam	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	CMS004	1	65	negative	10YR 5/3	Loamy Sand	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	CMS005	1	100	negative	10YR 6/3	Loamy Sand	None	Depth
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	CMS006	1	65	negative	10YR 5/3	Loamy Sand	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	EMA003	1	45	negative	7.5YR 6/2	Silt Loam	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	EMA004	1	5	negative	7.5YR 6/2	Silt Loam	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	EMA004	1	55	negative	7.5YR 6/3	Silt Loam	None	Compact Soil
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	EMA005	1	15	negative	7.5YR 6/2	Silt Loam	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	EMA005	1	30	negative	7.5YR 6/2	Silt Loam	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	JGS001	1	5	negative	10YR 4/4	Silt Loam	Adjacent to pipeline disturbance	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	JGS002	1	55	negative	10YR 6/3	Silt Loam	Adjacent to pipeline disturbance	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	JGS003	1	60	negative	10YR 6/3	Silt Loam	Adjacent to pipeline disturbance	Compact Soil
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	JGS004	1	5	negative	10YR 5/4	Silt Loam	Adjacent to pipeline disturbance	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	NMG006	1	15	negative	10YR 4/4	Loamy Sand	Upland slope	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	NMG007	1	35	negative	10YR 4/4	Loamy Sand	None	Bedrock
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	NMG008	1	70	negative	10YR 4/4	Loamy Sand	Potentially disturbed from multiple pipeline corridors	Compact Soil
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	NMG009	1	20	negative	10YR 4/4	Loamy Sand	None	Bedrock

Tract	PRA Number	Shovel Test No.	Level	Bottom Depth (cmbs)	Result (P/N)	Munsell	Soil Texture	Description/ Comments	Termination
MID-TX-UPT-0066.00000	FTW-UT-ML-PRA-016	NMG010	1	20	negative	10YR 4/4	Loamy Sand	None	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	CMS007	1	35	negative	10YR 5/2	Sandy Loam	None	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	CMS008	1	20	negative	7.5YR 5/3	Sandy Loam	None	N/A
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	EMA006	1	33	negative	7.5YR 6/2	Silt Loam	None	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	HBM001	1	70	negative	10YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	HBM002	1	40	negative	10YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	HBM003	1	45	negative	10YR 5/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	HBM004	1	45	negative	10YR 5/4	Silt Loam	None	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	HBM005	1	5	negative	10YR 5/4	Silt	Adjacent to corridor	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JDH001	1	55	negative	10YR 5/4	Silt Loam	None	N/A
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JDH001	2	65	negative	10YR 6/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JDH002	1	60	negative	10YR 6/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JDH003	1	55	negative	7.5YR 5/6	Silt Loam	None	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JDH004	1	50	negative	10YR 6/4	Silt Loam	None	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JDH006	1	5	negative	10YR 6/4	Silt Loam	None	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JGS005	1	75	negative	10YR 5/4	Silt Loam	Adjacent to pipeline disturbance	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	JGS006	1	10	negative	10YR 5/4	Silt Loam	Adjacent to pipeline disturbance	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	KCA001	1	60	negative	10YR 7/4	Silt	Dense vegetation, mesquite cacti and low scrub. Upland plain. North east of pipeline corridor.	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	KCA002	1	60	negative	10YR 7/4	Silt	Upland plain, dense mesquite to the east.	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	KCA003	1	60	negative	10YR 7/4	Silt	Dense vegetation. Upland plain.	Compact Soil
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	KCA004	1	35	negative	10YR 7/4	Silt	Base of a hill, corridor to the west. Sparse mesquite and scrub.	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	KCA005	1	15	negative	10YR 7/4	Silt	None	Bedrock
MID-TX-UPT-0067.00000	FTW-UT-ML-PRA-016	NMG011	1	15	negative	10YR 4/4	Loamy Sand	None	Bedrock

Appendix C

Site Avoidance Plan Commitment Letter

WHITEWATER MIDSTREAM
100 Congress | Suite 2200 | Austin, TX 78701

February 14, 2020

Chris M. Parrish, Cultural Resources Specialist
Regulatory Division
U.S. Army Corps of Engineers, Albuquerque District
4101 Jefferson Plaza NE
Albuquerque, NM 87109

Re: Letter of Commitment – Construction of the Proposed Whistler Pipeline LLC Project within the U.S. Army Corps of Engineers Albuquerque District.
Whistler Pipeline LLC

Dear Mr. Parrish:

SWCA Environmental Consultants (SWCA) has provided Whistler Pipeline LLC (Whistler) with avoidance recommendations for one archaeological sites (i.e., 41UT147) investigated during the Whistler Pipeline project within the USACE Albuquerque District; these avoidance recommendations take into account the correspondence from Mr. Drew Sitters (Texas Historical Commission – Section 106 Reviewer) on December 31st, 2019 and February 7th, 2020.

Site 41UT147 is considered UNDETERMINED with regard to NRHP and SAL eligibility and further work or avoidance is recommended. As the site features within site 41UT147 will not be impacted by the proposed project, no further work is recommended; however, due to the proximity of the site to the project workspace, the placement of high visibility avoidance fencing around the northern edge of site boundary is recommended prior to construction activities. With these proposed measures, the project is recommended to have NO ADVERSE AFFECT to this site.

Whistler is committed to the protection of the aforementioned archaeological sites and will fulfill the SWCA and USACE recommendations prior to project construction. To ensure adherence to the proposed avoidance measures listed above, Whistler intends to employ Third Party Inspectors to monitor activities in these sensitive areas. Additionally, Whistler will provide a post-construction report documenting the status of the above site locations after construction activities have concluded in these areas.

If you have any questions regarding this matter, please contact me at (720) 425-6181 or Steven@wwm-llc.com.

Respectfully Submitted,

Steve Nelson, P.E.
Vice President of Major Projects
WhiteWater Midstream, LLC

cc: Drew Sitters, Texas Historical Commission
Martin Handly, SWCA Environmental Consultants
Josh Perry, SWCA Environmental Consultants

Encl: 41UT147 - Site Map with Avoidance Measures

Restricted Information

Not for Public Disclosure