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Legacy U47-2Aer and U22-19Aer Pipeline ROWs University Lands, Crockett and Reagan Counties, Texas

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NEGATIVE FINDINGS
CULTURAL RESOURCE SURVEY OF
Legacy U47-2Aer and U22-19Aer
Pipeline ROWs

UNIVERSITY LANDS, Crockett and Reagan Counties, Texas

Report prepared for:

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TAC Permit 7120

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**TAS Inc.
Technical Report 283
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ABSTRACT

In January 2015, TAS Inc. conducted a pedestrian survey of two proposed pipelines in northern Crockett and southern Reagan counties. The U22-19Aer pipeline right-of-way (ROW) would run in a generally SE-NW direction for .714 miles (1.149 km), covering 6.49 acres, and the U47-2Aer ROW generally SW-NE for 2.34 miles (3.83 km), covering 21.27 acres. These pipelines would converge at a facility in SE Reagan County. The proposed ROWs cross University Lands Block 48, Sections 22, 23, and 24, and Block 47, Section 2. The proposed pipelines are approximately 10 mi (16 km) southeast of the town of Big Lake. The survey was sponsored by Big Lake Gas Plant, L.P. as part of their permitting process to install two pipelines across University Lands and was authorized by Texas Antiquities Permit 7120, Jeff Turpin, Principal Investigator. The survey area consists of upland mesquite and scrub flats crossing the upper stretches of Howard Draw, and just touching the "headwaters" of Tepee Draw. No evidence of significant historic or prehistoric occupation or use was found by thorough examination of the 75-ft wide ROWs. Therefore, cultural resources do not present an obstacle to the installation of the proposed pipelines.

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INTRODUCTION

In January of 2015, TAS Inc. archeologists Terry Burgess and Kathleen Burgess conducted a pedestrian survey of the .714 mile (1.149 km, 6.49 acres) Legacy U22-19Aer, and the 2.34 mile (3.83 km, 21.27 acres) Legacy U47-2Aer pipeline ROWs for Big Lake Gas Plant, L.P., which intends to install two pipelines within 75-ft-wide ROWs. The project area is located approximately 10 mi (16 km) southeast of the town of Big Lake (Figure 1, Figure 2).

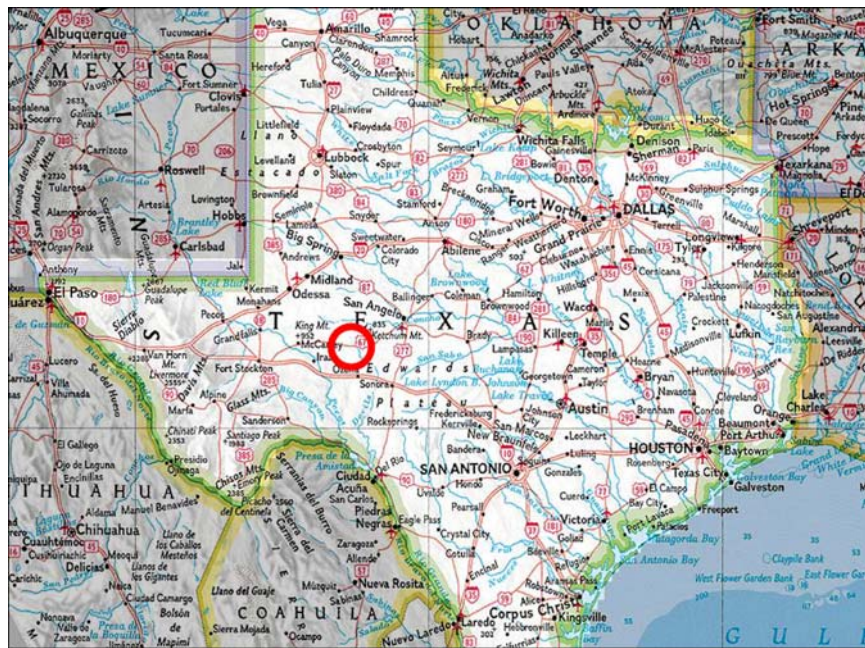


Figure 1. General location of surveyed areas (source: National Geographic Topo!)

The proposed Legacy U22-19Aer pipeline lies completely within Reagan County's southeast corner and in University Lands Block 48, Section 22 to 23, terminating on the boundary of Sections 18 and 23. The associated U47-2Aer pipeline originates in northern Crockett County, runs generally northeast, and terminates at the same point as the former pipeline. It crosses University Lands Block 47 Section 2 and Block 48 Section 24 (Figure 3). Big Lake Gas Plant, LLC sponsored the survey to comply with regulations for construction of a pipeline across State Lands. The work was authorized by Texas Antiquities Permit 7120, Jeff Turpin, Principal Investigator. No significant archeological remains were found as a result of this survey.

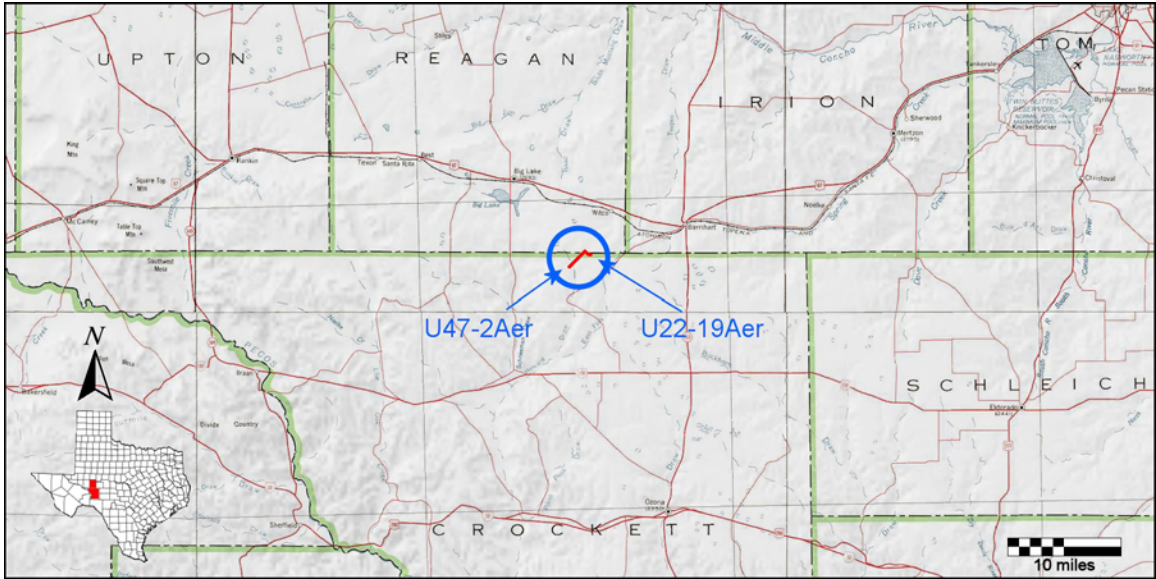


Figure 2. Big Lake Loop 2, LLC project area (source: National Geographic Topo!)

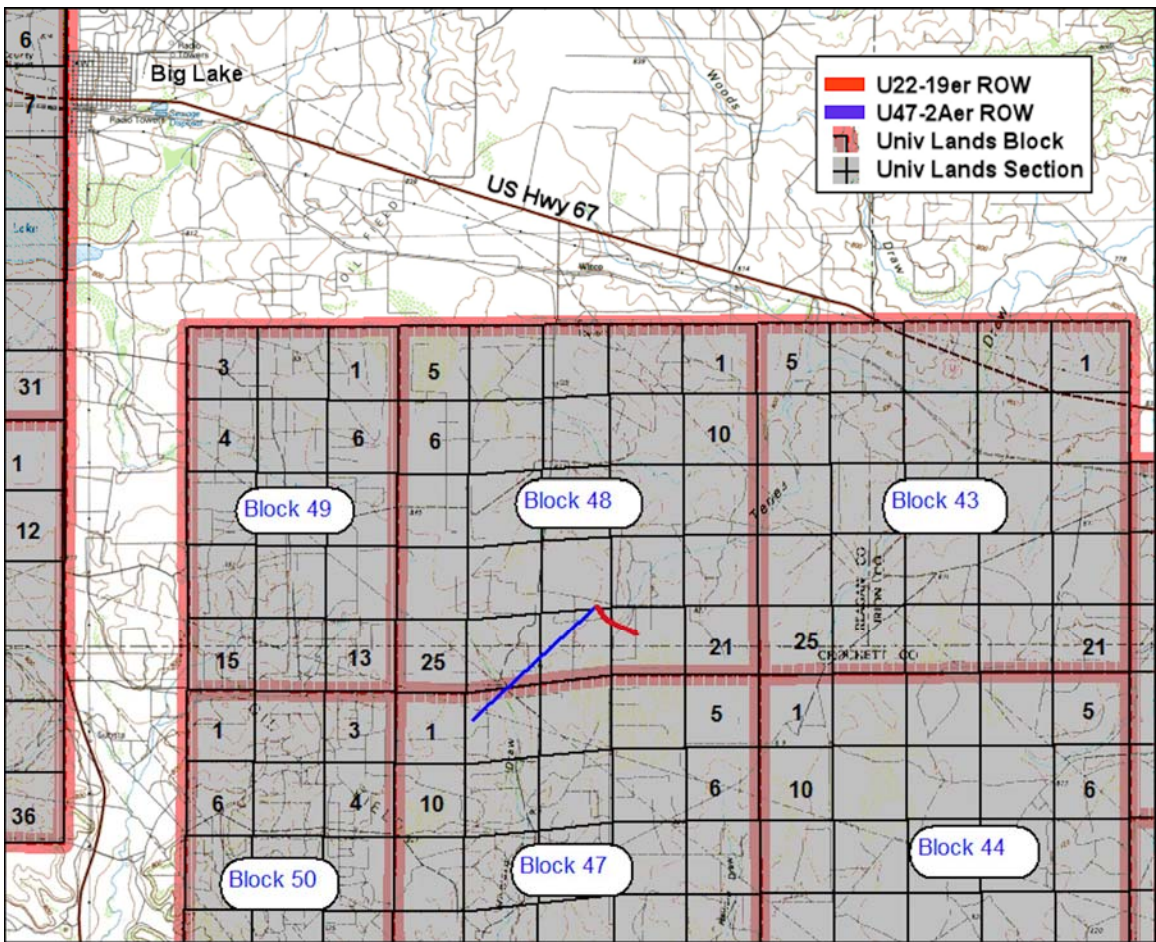


Figure 3. Proposed location of pipelines on University Lands (source: Terrain Navigator)

This cultural resource assessment consisted of an archival search, an intensive pedestrian survey, and preparation of a report of negative findings suitable for review in accordance with the Texas Historical Commission's Archeological Survey Standards for Texas.

ENVIRONMENTAL CONTEXT

Technically, the project area is in the western section of the Edwards Plateau Section of the Great Plains Province of the Interior Plains (Figure 4). The Edwards Plateau is an uplifted and elevated region originally formed from marine deposits of sandstone, limestone, shales, and dolomites 100 million years ago during the Cretaceous Period when this region was covered by an ocean (TPWD). Mesas, plateaus, and limestone ridges and hills with deep canyons and nearly level to gently sloping valley floors characterize this region. This classification fails to provide a context for prehistoric adaptations in this specific study area since the landscape bears little resemblance to the Texas Hill Country as the more easterly Edwards Plateau is known in the vernacular. Here, the terrain is generally flat, the climate arid, the vegetation sparse and water scarce.

Specifically, the proposed ROW crosses upland flats with shallow drainages and scant diversity of vegetation. The elevation range spans only 65 feet, with both the highest and lowest points occurring along the U47-2Aer ROW. The low point is at the Howard Draw crossing, and the highest is on the broad divide between the watersheds of Howard Draw and Tepee Draw.

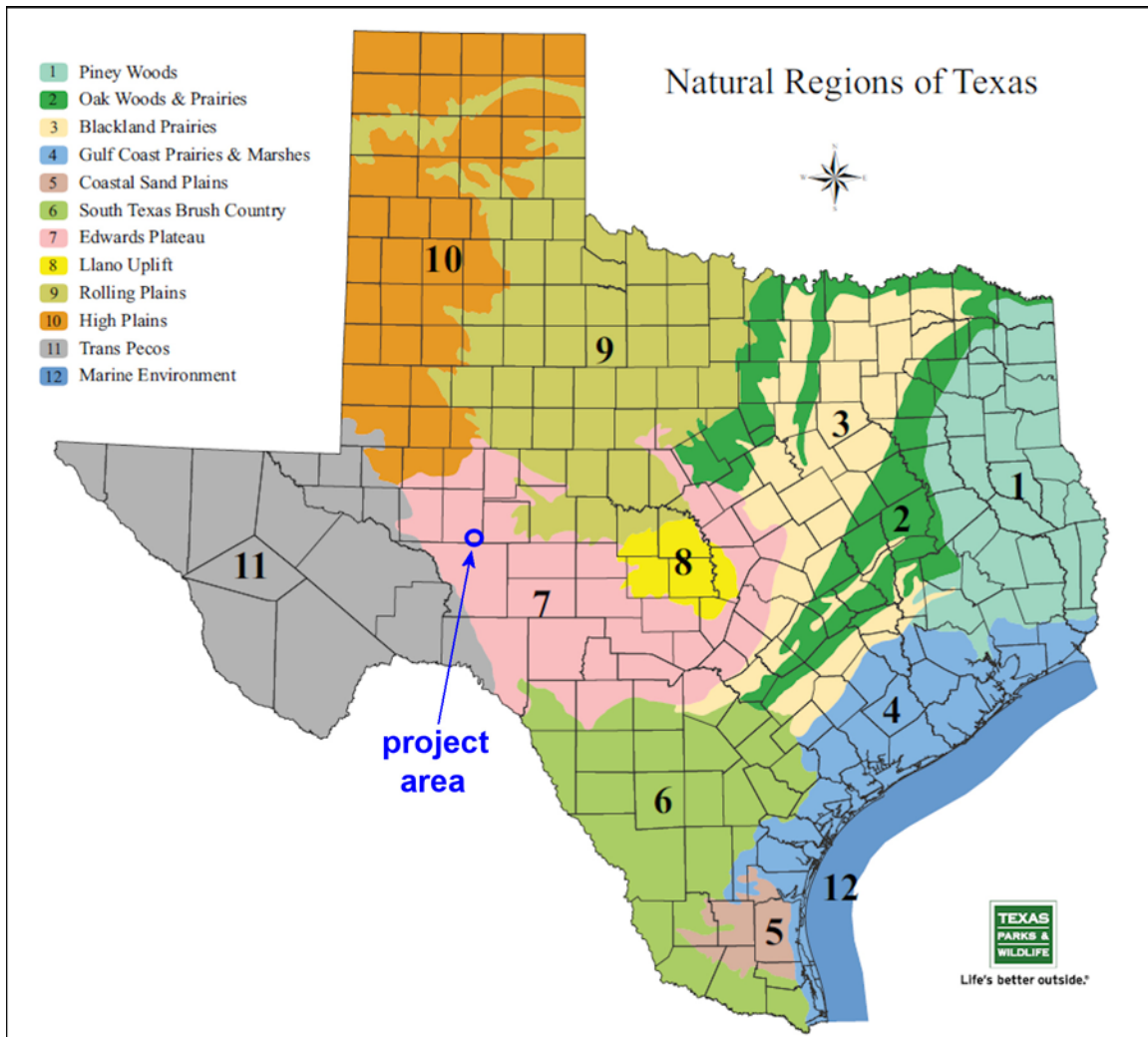


Figure 4. Natural Regions of Texas (source: Texas Parks & Wildlife)

Hydrology

Ferguson (1986) more aptly called this arid crest of the Edwards Plateau the Eldorado Divide since water sheds north to the Concho system, south and west into the Pecos and Devils rivers, and east to the Llano and San Saba drainage. The proposed ROW crosses only a single drainage, an ephemeral tributary of Tepee Draw, which flows north to the Concho River.

When the region was originally settled by Europeans in the mid-1800s, the area was a grassland savannah inhabited by bison and antelope. The land supported a rich diversity of forbs and grasses with an occasional mesquite tree. By 1900, continuous overgrazing and fire suppression had taken a toll. The land began to change from a grassland to a brushland with many woody species such

as mesquite (*Prosopis*) displacing the overgrazed grasses. In much of the Edwards Plateau, mesquite has become the dominant plant species causing a once diverse and healthy landscape to become a "mesquite brushland" in many areas with very little plant diversity on the landscape (TPWD). The current project area is representative of this brushland with mesquite being the predominant plant species (Figure 5). Other flora representing different microniches dot the landscape and include grasses, tasajillo, agarita, yucca, prickly pear, and some ephedra and juniper.



Figure 5. General environment.

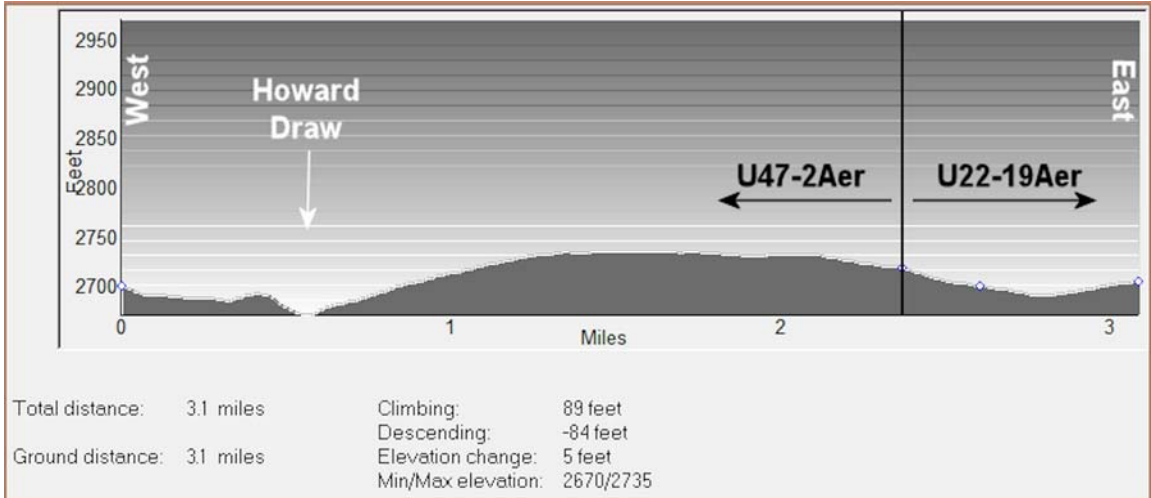


Figure 6. Elevation profile. (source Terrain Navigator)

Soils

Area soils consist primarily of the order Mollisols typical of semiarid regions and subhumid climates and characterized by a thick dark surface horizon developed from the addition of organic material derived from plant roots (NRCS). The predominant soils along the proposed ROWs in order of prevalence include: Texon-Ozona complex, Angelo silty clay loam and Noelke complex, the parent material of all three being alluvium or residuum derived from limestone (Figure 7).

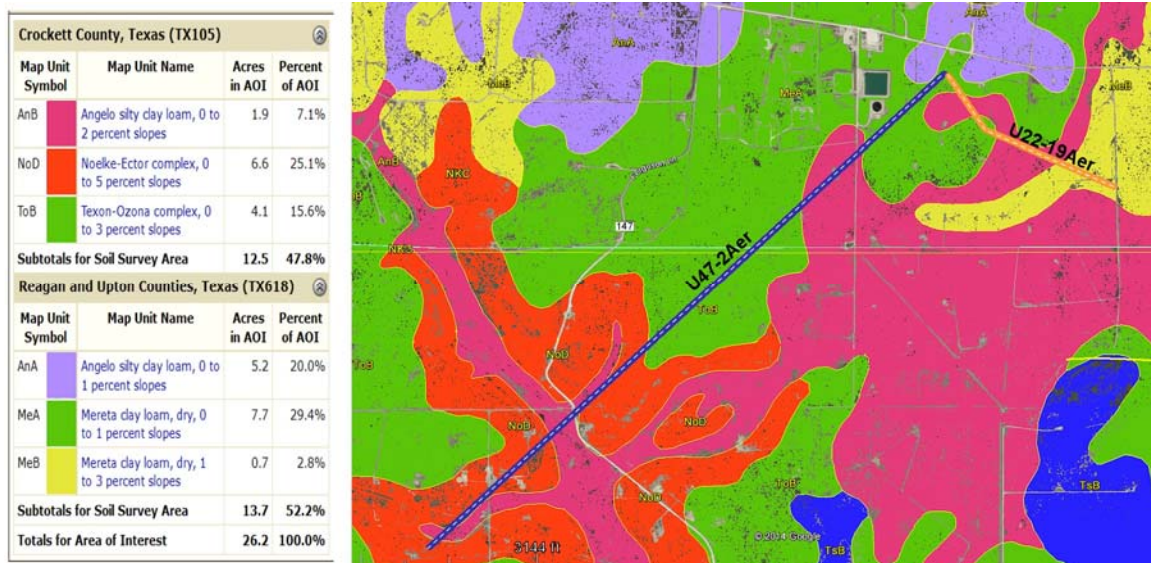


Figure 7. Soil map of proposed ROWs (source: NCSS and GoogleEarth)

PREVIOUS INVESTIGATIONS

Reagan County

Reagan County has over 360 recorded archeological sites of which two have been designated State Antiquities Landmarks (SAL). The first site recordings in Reagan County were historic stage stops and a military post, Camp Grierson, both of which were investigated by the Midland Archeological Society (41RG1-3). The two State Archeological Landmarks are an early military firing range associated with Camp Grierson (Riemenschneider and Turpin 1998; Turpin and Riemenschneider 2001) and the Old Reagan County Courthouse which has also been listed on the National Register of Historic Places (NRHP).

Over 285 of Reagan County's previously recorded sites have been added within the last four years, most as a result of reconnaissance surveys preceding the clearing of grub lines to facilitate access by seismic testing vehicles. The area of the current survey is within the project boundary of one of these seismic projects, the South Big Lake 3D project (Burgess and Turpin 2012a). Reconnaissance surveys associated with eight other recent seismic projects also operated in Reagan and Crockett counties during 2011 to 2014 but in areas not overlapping the current project (Burgess and Turpin 2011, 2012b-f, 2013, 2014a-c).

Crockett County

Prior to the 2011-2014 seismic investigations carried out on University Lands, Crockett County had well over 1200 recorded sites, some attributable to the efforts of avocational archeologists such as the Iraan Archeological Society or the Texas Archeological Society's 1976 field school, some to commercial highway, transmission and pipeline surveys, and others as part of the University Lands on-going inventory (Atlas). Now, however, recent seismic surveys on University Lands have added hundreds of sites in Crockett County including over 200 sites in 2014 alone (Burgess and Turpin 2011; 2012a-b, e-f, 2013, 2014a-c).

The sites in the seismic areas of Crockett County are typically burned rock features and lithic scatters on the flats, lithic procurement sites, and rock shelters

and rock art in the canyons or under the mesa tops. Past excavations have concentrated on burned rock features, resulting in a skewed inventory of radiocarbon dates that show a time depth of only 1980 years. The sample was obviously biased toward more recent features given that much older sites are found in counties to the north and south. The current study area consists mainly of open camps with few temporally diagnostic artifacts and thermal feature sites that are mostly dispersing, deflating or disturbed so the potential for enlarging the chronology of occupation is limited.

Fifty-seven sites in Crockett County have been designated as State Antiquities Landmarks (SAL); 55 of these are in University Land's Block 13 where an intensive survey of the uplands above Cedar Canyon found a diverse array of cultural resources (Turpin 2000). The other two are Fort Lancaster, a TPWD property, and 41CX110, a petroglyph site on University Lands (Turpin 2011), both of which are also listed on the National Register of Historic Places along with another petroglyph site, 41CX233, Camp Melvin or Pontoon Crossing of the Pecos River (41CX20), the county courthouse and a home in Ozona, and the Live Oak National Register District

Nearby Sites

There are two recorded archeological sites within a mile of the project area; at 680 meters distance is 41CX1331, a hearth field of unknown prehistoric time period consisting of 11 thermal features and two modified flakes, and at almost a mile distance is 41CX1335, an unknown prehistoric time period open campsite consisting of five thermal features and two stone tools. Both sites are alongside Howard Draw and each is associated with a streambed depression that holds water after rain. These sites are not within the area of potential effects (APE) of the proposed ROWs. No site boundaries will be crossed by the current project (Figure 8).

Figure 8. Nearby sites (source: Atlas and Terrain Navigator)-deleted.

METHODS

Prior to field work, the site files and maps on the Texas Historical Commission's (THC) Archeological Site Atlas were searched for previously recorded site locations and references to archeological surveys undertaken in the vicinity of the proposed pipeline. Pedestrian survey of the 75-ft-wide ROW was conducted from the eastern to the western end of the proposed routes. Good surface visibility negated the need to dig shovel tests. No significant archeological remains were identified so no forms were filed or artifacts collected.

SURVEY RESULTS

The proposed Legacy U22-19Aer and U47-2Aer pipeline ROWs cross upland flats and upper Howard Draw. The area is characterized by patches of relatively open grassland in the upland flats and sparse mesquite scrub near the drainages. The only apparent attractive resource in the vicinity of the proposed pipelines is Howard Draw, however the proposed ROW crosses it near its source where there is only a small watershed. No significant archeological remains were identified.

CONCLUSIONS

A total of 3.054 miles (27.8 acres) of the Big Lake Gas Plant, LLC's proposed Legacy U22-19Aer and U47-2Aer pipelines lies within University Lands and was surveyed for cultural resources but no significant evidence of historic and prehistoric occupation or use was found. Therefore, cultural resources present no obstacle to the installation of this pipeline.

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