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CULTURAL RESOURCES SURVEY

OF THE LINDALE INDUSTRIAL PARK

SMITH COUNTY, TEXAS

By
Sylvain Rey, BA
and
Rebecca Shelton, MA
Principal Investigator

Prepared for:

ADAMS ENGINEERING
6320 Copeland Road
Tyler, Texas 75703

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Cultural Resources Report 2009-36
September 2, 2009

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ABSTRACT

The Lindale Economic Development Corporation is proposing to build an industrial park immediately south of I-20 just northwest of Tyler, Texas. The project area includes a knoll and level uplands between two drainages. Prehistoric sites are known to exist in similar natural settings in Smith County. However, two days of intensive pedestrian survey found that no prehistoric site was present. This may be due to the location of the area in a zone where permanent water sources might have been scarce. Also, due to the continuous agricultural activity that has been taking place in the area since the middle of the 19th century, potential for historic sites existed. Such sites, consisting of artifact scatter, were indeed found nearby but none were found in the present study area. Also, the terracing and agricultural activity lowered the potential to find significant remains. Only a modern trash scatter consisting of broken and intact glass bottles was found, but the cultural material was younger than 50 years in age. As a result ARC recommends no further cultural resource investigations are warranted prior to the development of the Lindale Industrial Park.

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INTRODUCTION

The Lindale Economic Development Corporation (Lindale EDC) is proposing to build an industrial park three miles south of the City of Lindale in Smith County, Texas (Figure 1). The proposed construction site is a 115-acre land used as grazing pasture. The area boundaries follow the fence line enclosing the pasture. It is bounded to the north by Interstate Highway 20, to the east by CR 433 (Harvey Road), and to the south by a dirt road. The southwest and northeast corners of the project area are adjacent to two tributaries.

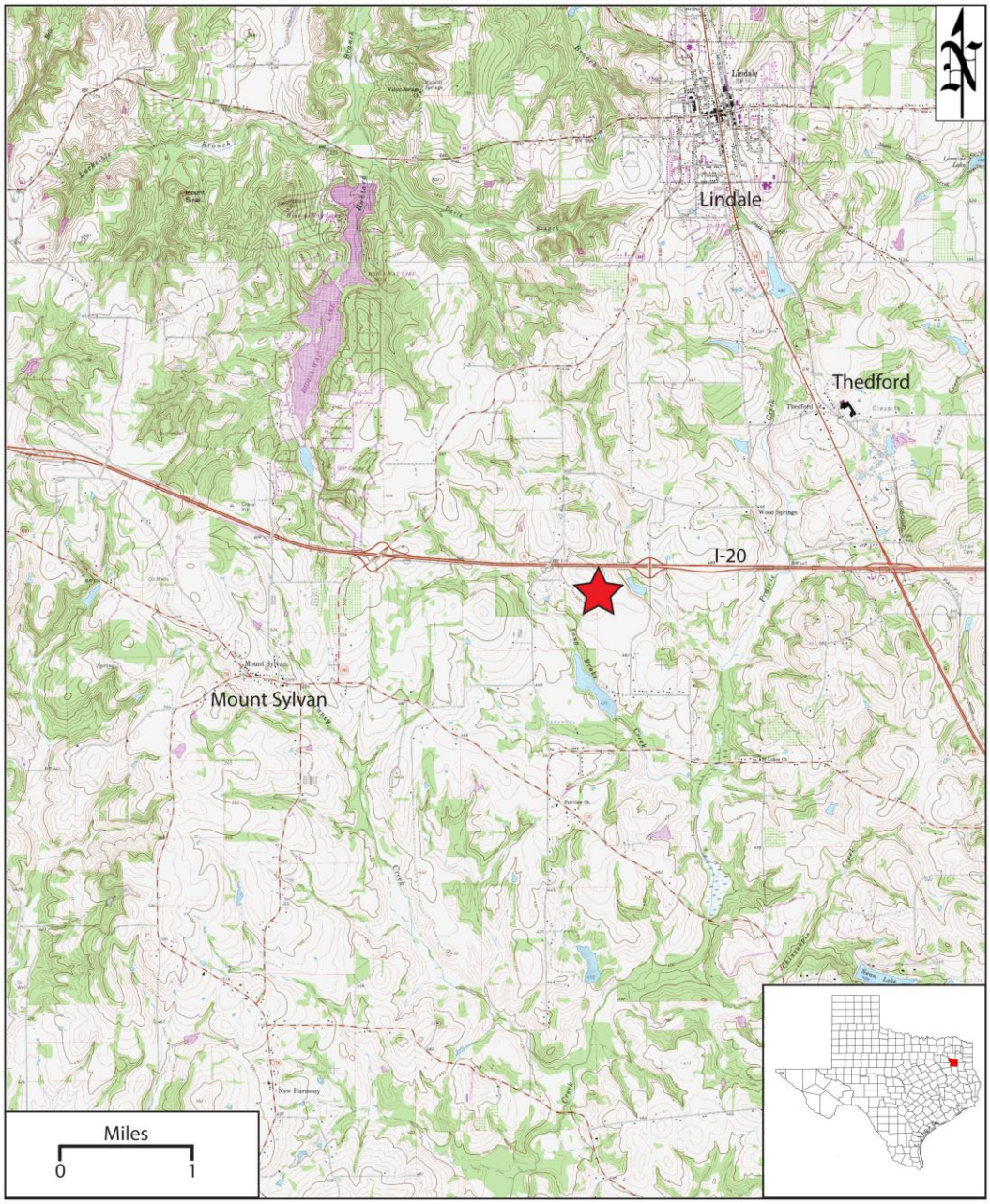

Figure 1. Project area shown on a portion of the Mount Sylvan, Texas 7.5' USGS map.

During August 2009, AR Consultants, Inc. (ARC) conducted a cultural resources survey of the proposed project area. Adams Engineering is handling the environmental permitting for the Lindale EDC and contracted with ARC to conduct the archaeological survey. The purpose of this investigation was to assess the potential of encountering significant historic or prehistoric archaeological sites if decision is made to construct the project. Previous investigations of land areas and tracts have indicated that there is a moderate potential for finding sites. The project falls under Section 106 of the National Historic Preservation Act of 1966.

This report was written in accordance with report guidelines adopted by the Archeology Division of the Texas Historical Commission and developed by the Council of Texas Archeologists. The following report contains a brief description of the natural environment as it relates to the archaeological potential of this area, and this is followed by a review of the culture history and relevant previous investigations of this part of Smith County. The next section is the research design and methodology, and results follow immediately after. Recommendations, References Cited and an Appendix conclude the report.

Administrative Information

Sponsor:	Adams Engineering
Review Agency:	Texas Historical Commission, Archeology Division
Principal Investigator:	Rebecca Shelton, MA
Field Crew:	Sylvain Rey, Rebecca Shelton, Nick Coleman, and Gonzalo Pleitez
Survey Days:	8
Acres Surveyed:	115
Sites Recorded or revisited:	
Historic:	None
Prehistoric:	None

R-arc Lindale Industrial Park 90804

NATURAL ENVIRONMENT

The project area is located in the Piney Woods region of East Texas northwest of Tyler in Smith County. It is bound to the north by IH-20 and is located between two intermittent creeks, Long Brake Creek to the west and an unnamed tributary of Prairie Creek to the east. The western and central portions of the project area are situated on slightly wooded, terraced knolls that overlook the drainages. Aerial photographs show that the southwestern corner of the area is more densely wooded and a plowed field currently occupies the southern portion. The highest elevation is about 520' msl on top of the knoll and decreases to 470' toward CR 433. The general topography surrounding the site consists of similar rolling hills and relatively level pastures.

The underlying geology consists of two types of bedrocks (Bureau of Economic Geology 1965). The area between the water drainages, including the terraced hill, consists of Sparta Sand, which is also quartz sand and clay, but varies from light gray to brownish gray. Both formations are Eocene deposits. Weches Formation bedrocks are found along the two drainages and are generally known to have many small springs (Brune 1981: 407). This formation typically contains glauconite and quartz sand as well as clay, and varies from grayish green to grayish olive green. The closest mapped Quaternary deposits, which consist of fluviatile terrace deposits and alluvium, occur in the Prairie Creek valley downstream from the site (Bureau of Economic Geology 1965).

The soils in the project area are sandy Wolfpen-Pickton soils that formed under hardwood forests (Hatherly 1993:7). These are gently sloping to moderately steep, and have sandy soils with loamy subsoil. These soils are slightly to moderately acid. This soil unit is generally used as pasture. Except for a small portion in the southwest corner, most of the study area is underlaid by Wolfpen loamy fine sand. The topsoil is very friable and about 7 inches thick. The southwestern corner adjacent to Long Brake Creek consists of strongly sloping to moderately steep Cuthbert fine sandy loam. The presence of Cuthbert soils is explained by the fact that they are typically encountered on side slopes along water drainages (Hatherly 1993:7, 18). They are usually used as woodlands.

Smith County lies in the Mixed Pine-Hardwood Forest plant community in the East Texas Piney Woods (Diamond, Riskind, and Orzell 1987:204). It lies in the Austroriparian biotic zone according to Blair's classification (1950:98). Major timber trees in this province include loblolly pine, yellow pine, red oak, post oak and blackjack oak. Understory vegetation comprises green briar, sumac, poison ivy, yaupon, crape myrtle, dogwood, and many other species.

CULTURAL HISTORICAL BACKGROUND

Different chronologies exist to classify east Texas culture history. This report will use the simple chronological sequence used by Skinner (1981). This chronology can be divided roughly in the following way:

Paleoindian Period	10,000-3,000 B.C.
Archaic Period	3,000 B.C.-A.D. 500
Neo-American (Caddo) Period	A.D. 500-1600
Historic Indian Period	A.D. 1600-1800
Historic Anglo-American Period	A.D. 1800-present

Archaeological evidence for prehistoric occupation in Smith County essentially appears during the Archaic period as very little is known from the Paleoindian Period, a pattern which conforms to east Texas as a whole (McGuirt and Howard 1996: 11). Paleoindian presence in the east Texas area, which begun about 12,000 years ago, is hinted at by the occasional isolated finds of Scottsbluff, Plainview, Meserve, Angostura, and San Patrice points. The paucity of information available about this period is probably function of the highly mobile hunting and gathering lifestyle of these early inhabitants of east Texas (Perttula 2004: 374). The distribution of Paleoindian artifacts generally occurs along major streams and in resource-rich areas.

The Archaic period represents a period of transition between the Paleoindian and the later Caddo period. This period is generally subdivided into three sub-stages: Early, Middle, and Late Archaic. The significant event that marked the Archaic period is the shift from a mobile hunting-gathering lifestyle in the Early and Middle Archaic that continued from the Paleoindian to a more sedentary one, differentiated by a greater reliance on horticulture and the use of ceramics. The Yarbrough site (41VN6) on the upper Sabine River is considered an important site as it contains evidence of Paleoindian and Archaic occupation, and data from the site were used to bring temporal order to these periods (Perttula 2004: 374). Small-game hunting and wild plant collecting increased, and farming, probably introduced in the Late Archaic in the Neches-Angelina River basins, would in time become more important.

The Caddoan era begins around A.D. 500, during which time settlements become more numerous and ceramic as well as burial mounds appear (Perttula 2004). The Caddo area was characterized by a great prosperity, and burial mounds show the level of complexity that Caddo society had reached. It can be subdivided into three 'foci': Alto, (A.D. 500-1000), Sanders (A.D. 1000-1200) and Frankston (A.D. 1200-1600). The Alto Focus is characterized by large villages with accompanying mounds. Tool kits include Alba arrow points, Gary and Ellis dart points, Copena knives, and ground and polished stones. Burials contain exotic goods which point to the existence of long-distance trade. The most important Alto Focus site in the region is the George C. Davis site (41CE19) on the

Neches River in Cherokee County. Consisting of a large village and a mound center, it was occupied from the 9th to the 13th centuries. The Sanders Focus ends with a population shift and the end of the village-mound association, and settlements became smaller in size. The cause of this shift is not entirely understood, but environmental changes have been suggested (Skinner 1981:6). The later Frankston Focus is representative of this new paradigm, and is best recorded Lake Palestine and at Oak Hill Village (41RK214). Social organization became simpler. This focus was gradually phased out by the time of European explorations.

The first European to have visited the east Texas area were the Spanish of the DeSoto expedition (A.D. 1542) and the French led by LaSalle (A.D. 1686-87). The Historic Indian Period (A.D. 1600-1800) is archaeologically poorly known. This may be due to the fact that Caddo society was by that time on the decline and large areas were being abandoned, perhaps due to new climatic patterns (Perttula and Nelson 2004:162). This period is associated with the Allen Focus, referring to the Tejas (Hasinai) tribes. It typically consists of small villages depending on agriculture and some hunting, fishing, and gathering.

Even if East Texas, including Smith County, became a part of the Spanish empire and was a zone of contention between French and Spanish, the area was at the time only loosely settled by the Europeans. Anglo-Americans started to migrate into the region starting 1812-1821, after which the Republic of Mexico encouraged the Anglo settlers to come. A new wave of immigration to east Texas occurred after 1937 when prospect of free lands in the Texas Republic attracted many from the Southern states. Two years later all native populations had been displaced from the region.

Records show that around the middle of the nineteenth century, the study area was divided between five landowners, perhaps a result of the influx of Lowland South farmers (Boyd 2008: Map 16; Skinner 1984). In the 1870s, the railroad allowed the timber industry to thrive, and oil further diversified east Texas' economy. Since the 1950s, cattle has become one of the most important cash crops throughout the area.

Several small communities were established around the project area (Handbook of Texas Online 2009). The largest, Mount Sylvan, was founded in 1852 and has always been a small community. At the turn of the 20th century, residents mainly produced subsistence crops. There are less than 200 inhabitants today. Fairview was known for its black elementary school until the 1950s. The school was also used by black children from Mount Sylvan. The community was certainly abandoned by the late 1970s. Wood Springs is also a small community of about 200 residents. The community was named after the abundant springs that are located in this wooded area, in a setting alike to that found in the study area and consisting of Weches sand.

Previous Investigations

Major archaeological studies have been done in Smith County around the proposed study area, many of which were carried out around Lake Palestine during the lake's construction and enlargement. The Archaeology Research Program at Southern Methodist University surveyed the edges of the lake in 1969-70 as part of planning for enlarging the lake. A total of 98 sites were then recorded along the upper Neches River in the lake area (Anderson 1971). A small number of those sites were found to be Middle Archaic, probably used as intermittent hunting camps. The remaining eighty-five sites are Caddoan, based on ceramics. Most sites yielded Frankston Focus (A.D. 1200-1600) ceramics and are supposed to be associated with permanent hamlets or villages. A site cluster yielded Alto Focus (A.D. 500-1000) pottery, and is probably Early Caddoan in age.

Southern Methodist University also conducted excavations in 1974 in or near Lake Palestine, resulting in the recording of ten more sites, all Caddoan but two, which were Archaic/ Caddoan in age (Anderson, Gilmore, McCormick, and Morenon 1974). More recently, excavations conducted by T. Perttula and B. Nelson in the Lake Palestine area have resulted in the discovery of more Archaic/ Caddoan sites (41SM273), as well as historic sites (2000, 2001, 2004). The earliest deposits at the Broadway Site (41SM273) for instance, were radiocarbon dated to A.D. 300, and the latest to the 13th and 14th centuries. A nineteenth century salt factory, known as the Neches Saline, is among the historic sites (Skinner 1971).

Sites listed on the Texas Archeological Site Atlas in the immediate vicinity of the project area are historic and include a number of farmstead and artifact scatters as well as a cemetery. Prehistoric sites occur further from the area and are near water drainages. The closest prehistoric sites listed, 41SM149 and 41SM388, consist of artifact and lithic scatters and are three miles away from the study area. Site 41SM388 is located on a hilltop near Davis Branch and the soil in the area consists of Wolfpen sand. Burial mounds are known to exist in the proximity of Jamestown (41SM54 and 41SM246).

In 1997, AR Consultants, Inc. conducted a survey on the Tyler Target site across from CR 433 which is directly adjacent to the present study area. The conclusion was that no prehistoric site was present due to "the location near the upper end of the watershed where water might have been scarce due to the dissected nature of the terrain" (Skinner 1997: i). Likewise, no evidence of pre-World War II historic occupation was found.

RESEARCH DESIGN & METHODOLOGY

The Lindale Industrial Park is located in an upland area between two intermittent drainages. Despite modern agricultural practices that have included terracing of the land the area had potential for both prehistoric and historic cultural resources. Two research questions below were developed to examine the potential of the study area.

Several prehistoric sites are known to exist in an environmental setting similar to that in which the study project is located. Such sites are usually recorded near or around freshwater springs or on knolls above drainages. The presence of both elements in the study area indicates that there is potential to find prehistoric sites. Due to the small size of the water drainages, such sites are more likely to be temporary hunting camps and would consist in artifact or lithic scatters, as is the case for sites surrounding the area. Because of the continuous farming activity that has taken place in the area since the 19th century, artifacts are most likely out of context.

Historic sites exist in the near vicinity of the project area. These consist of a farmstead and historic trash scatter. The setting in which these sites were found is essentially farmland and pasture, which is also the case in the study area. The small, rural nature of the communities and the fact that the area has been used for agricultural activities since the 19th century makes it unlikely to find intact historic sites. If sites are found, they are likely to be historic artifact scatter associated with farming activity.

Methodology

The 115-acre industrial tract is roughly rectangular in shape and is approximately 1,000 meters east west by 650 meters north south. A crew of four walked parallel transects 20-30 meters apart and placed shovel tests throughout the study area following the Council of Texas Archeologists guidelines (2002). In addition, shovel tests were concentrated along the drainages. Shovel tests averaged 30 cm in diameter, and were excavated to the sandy clay subsoil or to a depth of 50 cm in the upland soils. The field crew made notes about the ground exposure, vegetation, and the terrain and took photographs using a Canon Digital Elph 2.0 mega pixel digital camera. Fill from each shovel tests was screened with a ¼ screen hardware screen. Shovel tests matrices were described on the basis of texture and color. Shovel tests locations were recorded with a handheld Garmin GPSmap76 receiver. Artifacts were recorded and photographed yet were not collected for curation.

RESULTS

The following section first describes the terrain and natural setting of the study area, followed by the results of the survey. The conclusions derived from these observations follow in the third section.

Survey Area

The survey area is a 115-acre property that is currently used as horse pasture. Two intermittent tributaries flank the property, and the terrain rises significantly in the middle from these drainages by about 60 feet. Over fifty percent of this area, concentrated in the western half, comprises a terraced area with trees and 30 cm-tall vegetation (Figure 2). A man-made pond is located at the southwestern notch in a heavily wooded area.

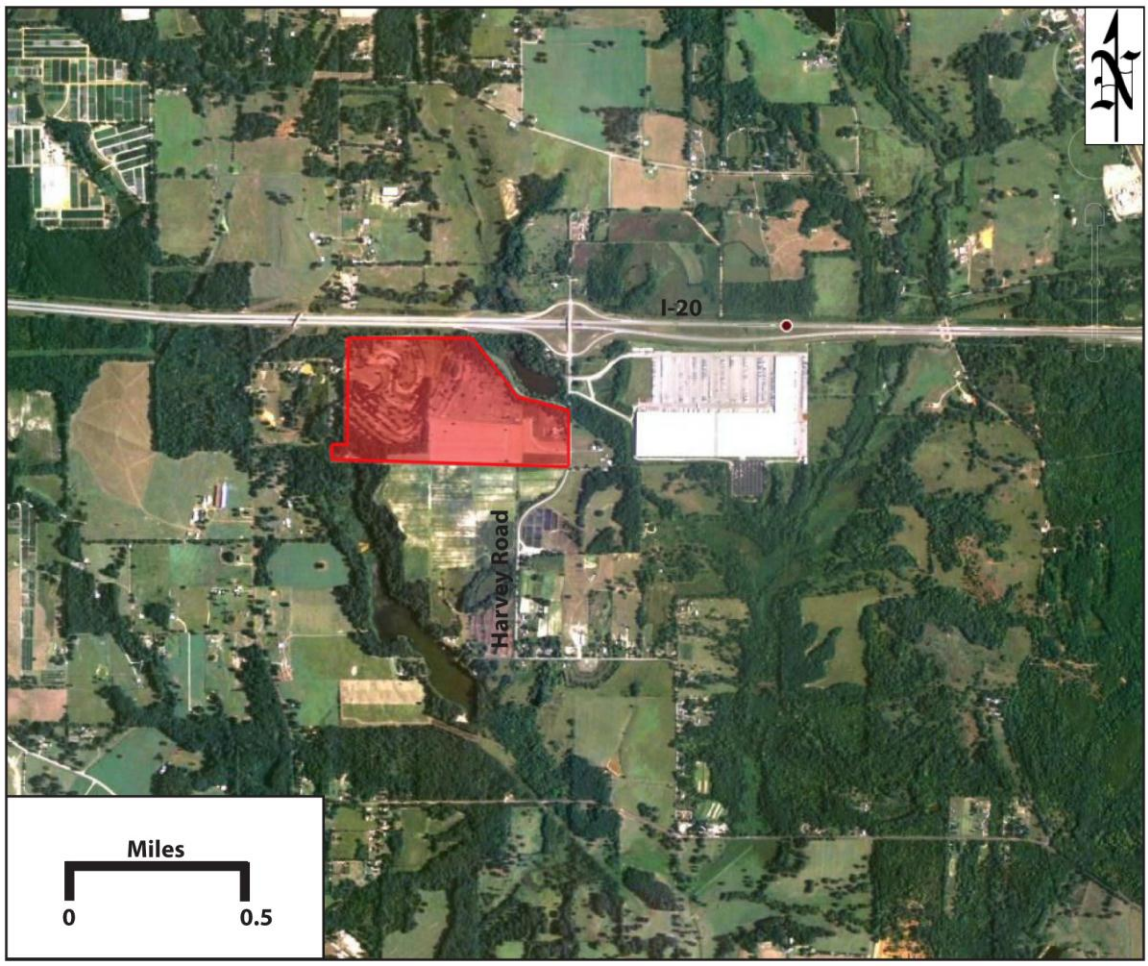

Figure 2. Aerial photo with study area shown in red.

A second heavily wooded area lies on the northeast boundary and runs along the fence line. Vegetation includes pine trees, oak, cedar and elm as well as green briars, but no drainages were encountered, as the mapped intermittent tributary was about 50 meters

outside the project boundary. Along the northern project boundary was a pipeline corridor (Figure 4) and a power line which bisected the study area in a southeasterly direction. The open field shown in the aerial photos was grown over with wild vegetation when the study was conducted. This section was grown over by knee-tall grasses, yuccas and isolated pine trees.

The Survey

Two teams of two walked in parallel transects from south to north and back throughout the study area. A total of 42 shovel tests were excavated in areas where ground visibility was less than 30 percent (Figure 3). The teams started at the notch in the southwestern corner of the study area, and 10 shovel tests, each 30 meters away from the other were excavated. Shovel tests were concentrated in this area because it is densely wooded and lies about 50 meters from Long Brake Creek. None yielded cultural resources. The majority of the tests reached a depth of 30 cm before clay subsoil was encountered, except for shovel tests 26-29, which reached 50 cmbs. Soils typically varied from pale brown and light yellowish brown sand to brown and grayish brown sand. Pea-sized hematite gravels often occurred. At the edge of the notch in the southwest corner, a natural spring was discovered that was used to feed the pond (Figure 5). The spring had an abundant growth of cottonwood and willow trees around it.

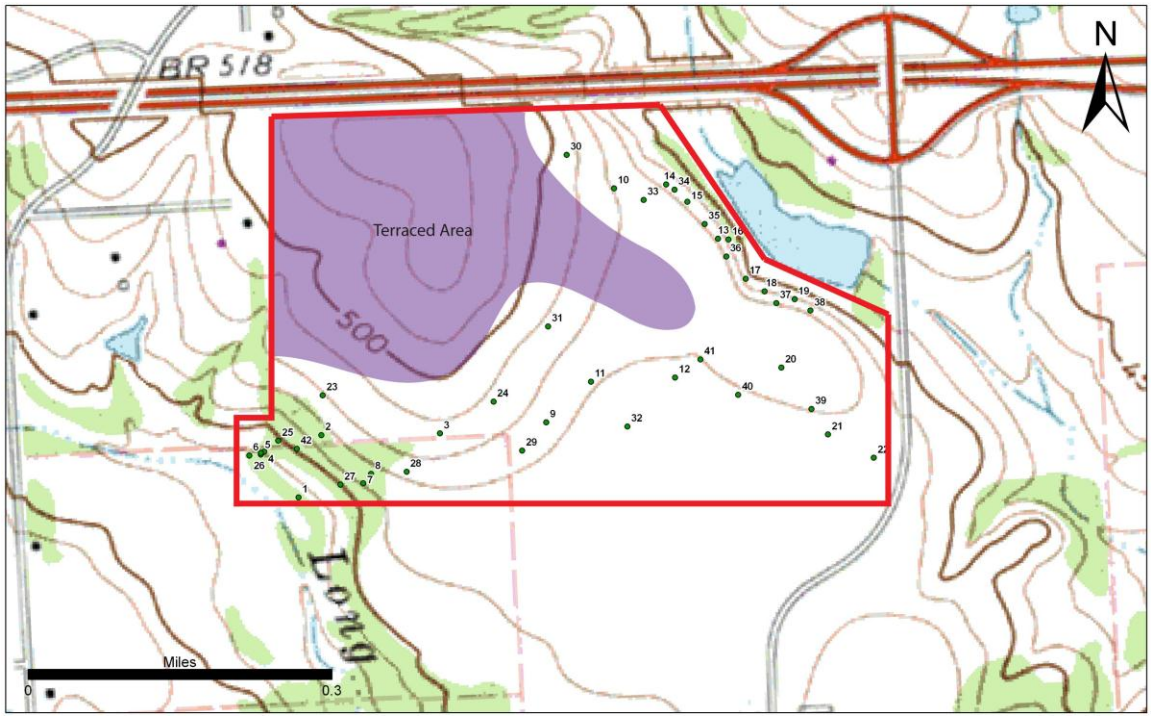

Figure 3. Shovel test locations in the project area are shown on a section of the Mount Sylvan, Texas 7.5' USGS map.

Figure 4. Pipeline corridor on the high point of the knoll near the northern boundary of the study area. View looking east.

Figure 5. Natural spring in southwest corner of study area, view is to the west.

The terraced area and pasture were walked in transects. The transects were about 30 meters apart. Due to excellent ground visibility (over 50 percent) over the area, specifically in the terraced area, one to two shovel tests were placed on each transect to cover the ground systematically. Soils consist of yellow to pale brown sand. A modern trash scatter containing industrial-blown glass bottles was found on the surface a few feet away from shovel test 2 (Figure 6). The particularity of this trash scatter was the fine and smooth cut lines of the largest bottles. The trash scatter was younger than 50 years old, and therefore was not recorded as a site.

Visibility in the non-terraced area was also above 50 percent, and so only one to two shovel test per transect were placed. Soils consisted of light yellowish brown to yellowish brown sand in all cases. Shovel tests depth was 30 cm, but 31 and 33 reached 50 cm and 60 cm respectively. Shovel test 10 yielded a few small hematite gravels. This area was covered with 30 cm-tall grasses, yuccas, and isolated pine trees. No cultural resources were found.

Figure 6. Neatly cut bottles, small glass containers and other artifacts found near shovel test 2.

The second section where more thorough study was conducted is the wooded land near the unnamed creek along the northeast boundary of the project area. More thorough study was necessary for two reasons: first because ground visibility was low (30 percent) and second because this area, lying 50 to 100 meters from the unnamed tributary mentioned above, had higher potential. A total of 13 shovel tests, spaced 30 meters apart, were placed covering a distance of about 350 m (1200 ft). Soils consisted mostly of light yellowish brown sand with presence of yellowish brown sand and hematite gravels. Two shovel tests (15 and 16) revealed pieces of charcoal, most likely evidence from grass fires.

The final two transects were walked between a barn and a modern Victorian-style house (Figure 7). Both were recently built and do not appear on the 1973 USGS map. Shovel tests (40-41) revealed light yellowish brown sand throughout and were both negative. The gravel road that appears on aerial photographs was still intact along the outside the house fence and four metered power poles were also encountered between the gravel road and the fence. Two shovel tests (21-22) were placed toward the eastern limit south of the house. Vegetation in this area was 50-60 cm tall and visibility was over 50 percent. Both tests were negative.

Figure 7. Victorian-style house and backyard, looking southeast.

Conclusions

The purpose of this study was to determine whether the project area contained significant historic or prehistoric resources. In particular, prehistoric sites were expected along drainages or near springs. Because the study area has been used and inhabited by farming communities, historic sites were also be expected. Three have been recorded in the vicinity; one is a farmstead, the others are artifact scatters including glass bottles, cans, nails, and like objects. However, no significant archaeological remains were found during the pedestrian survey.

The absence of prehistoric sites may be due to the location of the area, situated near the upper end of the watershed. Existing sites tend to occur along larger streams. Likewise, the absence of significant historic and prehistoric remains is partially attributed to the continuous pastoral and agricultural activity that has been taking place in the area for more than a century.

RECOMMENDATIONS

AR Consultants, Inc. has found that no significant historic or prehistoric remains exist in the proposed project area. We therefore recommend that the Lindale EDC proceeds with the construction of the Lindale Industrial Park without the need for further cultural resource investigations. We further recommend that an archaeologist be contacted if buried cultural resources are uncovered during the construction of the project. If cultural resources are discovered, work should cease immediately and the Archeology Division of the Texas Historical Commisison should be notified.

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APPENDIX
SHOVEL TEST DESCRIPTIONS

Table 1. Shovel test description

ST#	Depth (cm)	Description *	Comments
1	0-10 10-30	Reddish yellow (7.5YR7/6) sand Light yellowish brown (10YR6/4) sand	Negative
2	0-6 6-30	Pale brown (10YR6/3) sand Reddish yellow sand	A small glass sherd
3	0-30	Yellow (10YR7/6) sand	Negative
4	0-8 8-30	Dark grayish brown (10YR4/2) sand Dark yellowish brown (10YR4/6) sand	Negative
5	0-20	Fifty percent dark yellowish brown sand and 50 percent dark grayish brown sand	Negative
6	0-9 9-15 15-25	Yellowish brown (10YR5/8) mottled with 30 percent light brownish gray (10YR6/2) sand Light brownish gray sand Very dark grayish brown (10YR3/2) mottled with 20 percent light brownish gray sand	Negative
7	0-25	Brownish yellow (10YR6/8) sand with hematite gravels of various sizes	Negative
8	0-40	Very dark grayish brown sand mottled with 30 percent gray (10YR5/1) sand	Negative
9	0-30	Light yellowish brown sand	Negative
10	0-25 25-30	Light yellowish brown sand Yellowish brown sand with small hematite gravels	Negative
11	0-30	Light yellowish brown sand	Negative
12	0-30	Light yellowish brown sand	Negative
13	0-35	Yellowish brown sand with small hematite gravels; small quartzite gravels at bottom	Negative
14	0-40	Light yellowish brown sand with small hematite gravels; two black (10YR2/1) clay pebbles at 40 cm	Negative
15	0-40	Light yellowish brown sand	Negative
16	0-30	Yellowish brown (10YR5/4) sand with 30 percent light yellowish brown sand	Negative
17	0-35	Light yellowish brown sand	Negative
18	0-30	Light yellowish brown sand	Negative
19	0-30	Light yellowish brown sand	Negative
20	0-30	Brownish yellow (10YR6/6) sand	Negative
21	0-30	Light yellowish brown sand	Negative
22	0-30	Light yellowish brown sand	Negative
23	0-27 27+	Pale brown (10YR6/3) sand Light yellowish brown (10YR6/4) sand	Negative
24	0-30 30+	Pale brown sand Light yellowish brown sand	Negative
25	0-30 30+	Grayish brown (10YR5/2) sand Brown (10YR5/3) sandy loam	Negative
26	0-3 3-10 10-50	Duff Pale brown sand Light yellowish brown sand with decomposing sandstone	Negative
27	0-2 2-50	Grayish brown (10YR5/2) sand Pale brown sand with small hematite sandstone gravels	Negative
28	0-50	Pale brown sand	Negative
29	0-45	Pale brown sand	Negative

	45+	Dark yellowish brown mottled sand with gravels	
30	0-25 25+	Light yellowish brown sand Yellowish brown (10YR5/6) sandy clay	Negative
31	0-25 25-50	Light yellowish brown sand Yellowish brown sand	Negative
32	0-25 25-30	Light yellowish brown sand Yellowish brown sandy clay	Negative
33	0-30 30-60	Light yellowish brown sand Yellowish brown sand	Negative
34	0-50	Light yellowish brown sand	Negative
35	0-40 40-50+	Light yellowish brown sand Yellowish brown clayey sand	Negative
36	0-20 20-55+	Light yellowish brown sand Light yellowish brown moist sand with hematite gravels	Negative
37	0-50 50+	Light yellowish brown sand Light yellowish brown sand with gravels	Negative
38	0-20 20-35	Light yellowish brown sand Light yellowish brown sand with gravels	Negative
39	0-30 30-45	Light yellowish brown sand Yellowish brown clayey sand	Negative
40	0-30 30-40	Light yellowish brown sand Light yellowish brown clayey sand	Negative
41	0-30 30-50	Light yellowish brown sand Light yellowish brown sand with gravels	Negative
42	0-30 30-35	Very pale brown (10YR7/3) sandy loam Light yellowish brown sand	Negative

*Munsell color chart numbers listed only first time used.