

***Intensive Archeological Survey
for the North East Texas
Regional Mobility Authority
Proposed Loop 571 Extension
Between U.S. Highway 79
and U.S. Highway 259
Henderson, Rusk County, Texas***



Atkins North America, Inc.
6504 Bridge Point Parkway, Suite 200
Austin, Texas 78730

Telephone: +1.512.327.6840

Fax: +1.512.327.2453

www.atkinsglobal.com/northamerica

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**INTENSIVE ARCHEOLOGICAL SURVEY FOR THE
NORTH EAST TEXAS REGIONAL MOBILITY AUTHORITY
PROPOSED LOOP 571 EXTENSION BETWEEN
U.S. HIGHWAY 79 AND U.S. HIGHWAY 259
HENDERSON, RUSK COUNTY, TEXAS**

**TEXAS ANTIQUITIES PERMIT NO. 5689
CSJ No. 3421-01-004
TYLER DISTRICT**

Prepared for:

North East Texas Regional Mobility Authority
305 S. Broadway Avenue, Suite 100
Tyler, Texas 75702

Prepared by:

Atkins
6504 Bridge Point Parkway
Suite 200
Austin, Texas 78730

Principal Investigator:
Maynard B. Cliff, Ph.D.

Authors:
David Jackson
Maynard B. Cliff

With Contributions by:
Amy McWhorter

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Abstract

Atkins North America, Inc. (Atkins) was contracted by the North East Texas Regional Mobility Authority and the Texas Department of Transportation to undertake archeological investigations for the proposed construction of the Loop 571 Extension in Rusk County, Texas. The new highway will extend approximately 5.5 kilometers (3.4 miles) from U.S. Highway 79 to U.S. Highway 259. The project's area of potential effects (APE) averages 91.5 meters (300 feet) wide. The total APE covers approximately 53.2 hectares (131.5 acres). The archeological investigations consisted of an intensive pedestrian survey supplemented with shovel testing. This work was conducted under Antiquities Code of Texas Permit No. 5689. Trenching in high probability floodplains along Bromley Creek, Shawnee Creek, and in the area of Dutch Branch was planned, but Right of Entry was not granted for trenching, so this work could not be completed. It is anticipated that trenching will be conducted under a new Antiquities permit, following purchase of the property, and the results will be presented in another report.

The pedestrian survey was conducted between July 21 and August 20, 2010, with follow-up site visits on May 17 and May 24, 2013. In all, 340 shovel tests were excavated within the proposed APE in an effort to locate and record archeological sites, for an average of 2.59 shovel tests per acre (6.39 shovel tests per hectare). Two new archeological sites (41RK657 and 41RK658) containing early- to mid-twentieth-century and prehistoric artifacts were located and recorded, and two previously recorded sites (41RK170 and 41RK196) were found to extend into the proposed project right of way. Site 41RK170 is an Early-Middle Caddo habitation site, with a small Woodland period component. Archeological investigations conducted in 2001 and 2002 determined that the site was eligible for inclusion in the National Register of Historic Places (NRHP) and for designation as a State Antiquities Landmark (SAL), based on the presence of a small cemetery, a large midden deposit, pit features, and postholes from at least one probable Caddo house, along with a large assemblage of ceramics, lithics, and subsistence remains. Atkins believes that test excavations should be conducted to determine whether the portion of 41RK170 that falls within the Loop 571 Extension right of way has good research potential and could contribute to our knowledge of Caddo prehistory in this area, and contributes to the NRHP and SAL eligibility of the site. Site 41RK196 is an early-twentieth-century housesite with standing structure and associated low-density, shallow archeological deposit. The site was initially recorded in 1987, at which time it was judged to have no potential for inclusion in the NRHP and no potential for being designated as an SAL. Site 41RK657 contains both prehistoric and early- to mid-twentieth-century remains. The prehistoric component at 41RK657 is believed to have good research potential and a high likelihood of yielding data important for our understanding of the prehistoric period in this region. In contrast, the early- to mid-twentieth-century component at 41RK657 is believed to have little or no research potential. Thus, it is the opinion of Atkins that the early- to mid-twentieth-century component at 41RK657 requires no further investigations, but that further fieldwork should be conducted on the prehistoric component at the site to determine whether or not cultural features, organic materials, and burials are present within the current project right of way. Thus, the eligibility of the prehistoric component at 41RK657 for inclusion in the NRHP or for its designation as an SAL is currently undetermined. Site 41RK658 is a small early- to mid-twentieth-century site with a low density of subsurface material and no features. As a result, it is believed that 41RK658 has no research potential, and it is the opinion of Atkins that the site requires no further investigations.

The project had a no-collection policy in regard to artifacts, so diagnostic artifacts were photographed in the field, and then replaced in the ground, and their specific locations recorded using a hand-held GPS unit. Final project records and photographs will be curated at the Texas Archeological Research Laboratory of the University of Texas at Austin.

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Management Summary

Atkins North America, Inc. (Atkins) conducted an intensive linear archeological survey at the request of the North East Texas Regional Mobility Authority and the Texas Department of Transportation (TxDOT) for the proposed Loop 571 Extension, between U.S. Highway 79 and U.S. Highway 259 on the east, a distance of approximately 5.5 kilometers (km) (3.4 miles). This work was conducted under Antiquities Code of Texas Permit No. 5689. The project involves the construction of two lanes of an ultimate four-lane facility and includes the construction of a two-lane, rural typical section with two 12-foot (ft) (3.6-meter [m]) lanes and 10-ft (3.0-m) shoulders on each side. From west to east, bridge work will include the construction of two-lane bridges at Bromley Creek in the western portion of the project area, Shawnee Creek in the central part of the project area, and the smaller Dutch Branch and one of its tributaries in the eastern part of the project area. With the exception of existing rights of way (ROW) along County Road (CR) 407, Farm to Market Road (FM) 225, CR 313, and FM 3310, the project was on private land. The fieldwork was conducted in 2010. Dr. Maynard Cliff served as Principal Investigator for the project. The pedestrian survey was conducted by David Jackson, Randy Norris, and Christopher Barry. The proposed new ROW is approximately 5.5 km (3.4 miles) long with a typical width of 91.5 m (300 ft) for an estimated area of potential effects (APE) of 53.2 hectares (131.5 acres). Landowner access was granted for pedestrian survey for all of the proposed new ROW, and all of the proposed APE was surveyed. Trenching in high probability floodplains along Bromley Creek, Shawnee Creek, and in the area of Dutch Branch was planned, but Right of Entry was not granted for trenching, so this work could not be completed. It is anticipated that trenching will be conducted under a new Antiquities permit, following purchase of the property, and the results will be presented in another report.

The pedestrian survey was conducted between July 21 and August 20, 2010, with follow-up site visits on May 17 and May 24, 2013. In all, 340 shovel tests were excavated within the proposed APE in an effort to locate and record archeological sites, for an average of 2.59 shovel tests per acre (6.39 shovel tests per hectare). Two new archeological sites (41RK657 and 41RK658) containing early- to mid-twentieth-century and prehistoric artifacts were located and recorded, and two previously recorded sites (41RK170 and 41RK196) were found to extend into the proposed project ROW. The project had a no-collection policy in regard to artifacts, so diagnostic artifacts were photographed in the field, and then replaced in the ground, and their specific locations recorded using a hand-held GPS unit.

Site 41RK170 is an Early-Middle Caddo habitation site, with a small Woodland period component. Archeological investigations conducted in 2001 and 2002 determined that the site was eligible for inclusion in the National Register of Historic Places (NRHP) and for designation as a State Antiquities Landmark (SAL), based on the presence of a small cemetery, a large midden deposit, pit features, and postholes from at least one probable Caddo house, along with a large assemblage of ceramics, lithics, and subsistence remains. Atkins believes that test excavations should be conducted to determine whether the portion of 41RK170 that falls within the Loop 571 Extension ROW has good research potential and could contribute to our knowledge of Caddo prehistory in this area, and contributes to the NRHP and SAL eligibility of the site.

Site 41RK196 is an early-twentieth-century housesite with standing structure and associated low-density, shallow archeological deposit. The site was initially recorded in 1987, at which time it was judged to have no potential for inclusion in the NRHP and no potential for being designated as an SAL.

Site 41RK657 contains both prehistoric and early- to mid-twentieth-century remains. The prehistoric component at 41RK657 is believed to have good research potential and a high likelihood of yielding data important for our understanding of the prehistoric period in this region. In contrast, the early- to mid-twentieth-century component at 41RK657 is believed to have little or no research potential. Thus, it is the opinion of Atkins that the early- to mid-twentieth-century component at 41RK657 requires no further investigation, but that further fieldwork should be conducted on the prehistoric component at the site to determine whether or not cultural features, organic materials, and burials are present within the current project ROW. Thus, the eligibility of the prehistoric component at 41RK657 for inclusion in the NRHP or for its designation as an SAL is currently undetermined.

Site 41RK658 is a small early- to mid-twentieth-century site with a low density of subsurface material and no features. As a result, it is believed that 41RK658 has no research potential, and it is the opinion of Atkins that the site requires no further investigations.

Finally, it is also recommended that TxDOT conduct scraping of the toeslope area east of the floodplain of Shawnee Creek in search of an unmarked graveyard reported to be in this area in 1983. This scraping should include the portion of the Dowden parcel within the APE north and northeast of the oil well shown on the U.S. Geological Survey quadrangle map, and the southwestern corner of the adjacent Kangerga parcel on the possibility that the cemetery was reported to be on the wrong parcel.

In the event that unanticipated archeological deposits are encountered during construction, work should cease in the immediate vicinity of the discovery and TxDOT archeological staff should be notified to initiate accidental discovery and emergency procedures under the provisions of the First Amended Programmatic Agreement among the Federal Highway Administration, the Texas State Historic Preservation Officer, the Advisory Council on Historic Preservations, and TxDOT; and the Memorandum of Understanding between the Texas Historical Commission and TxDOT.

Acknowledgments

The authors would like to thank the many people who contributed to the successful completion of this project. Waldo Troell, of the Texas Department of Transportation (TxDOT), Environmental Affairs Division in Austin, provided aid and advice in the preparation of the project research design and submittal of the Texas Antiquities Permit application. Landowner access was obtained by TxDOT and Atkins. The pedestrian survey crew consisted of Randy Norris and Chris Barry. Amy McWhorter and David Jackson conducted the archival investigations and wrote up the results. The draft text was edited by Linda Nance and David Sherman, who also served as Quality Control Officer. Graphics were prepared by Jeremy Nobles, Candace Wallace, and Ryan Fennel. Bob Bryant provided word processing assistance. Charlie Varnell and Mike Battles provided overall project management and logistical support. David Jackson served as Project Archeologist, and Dr. Maynard Cliff was Principal Investigator.

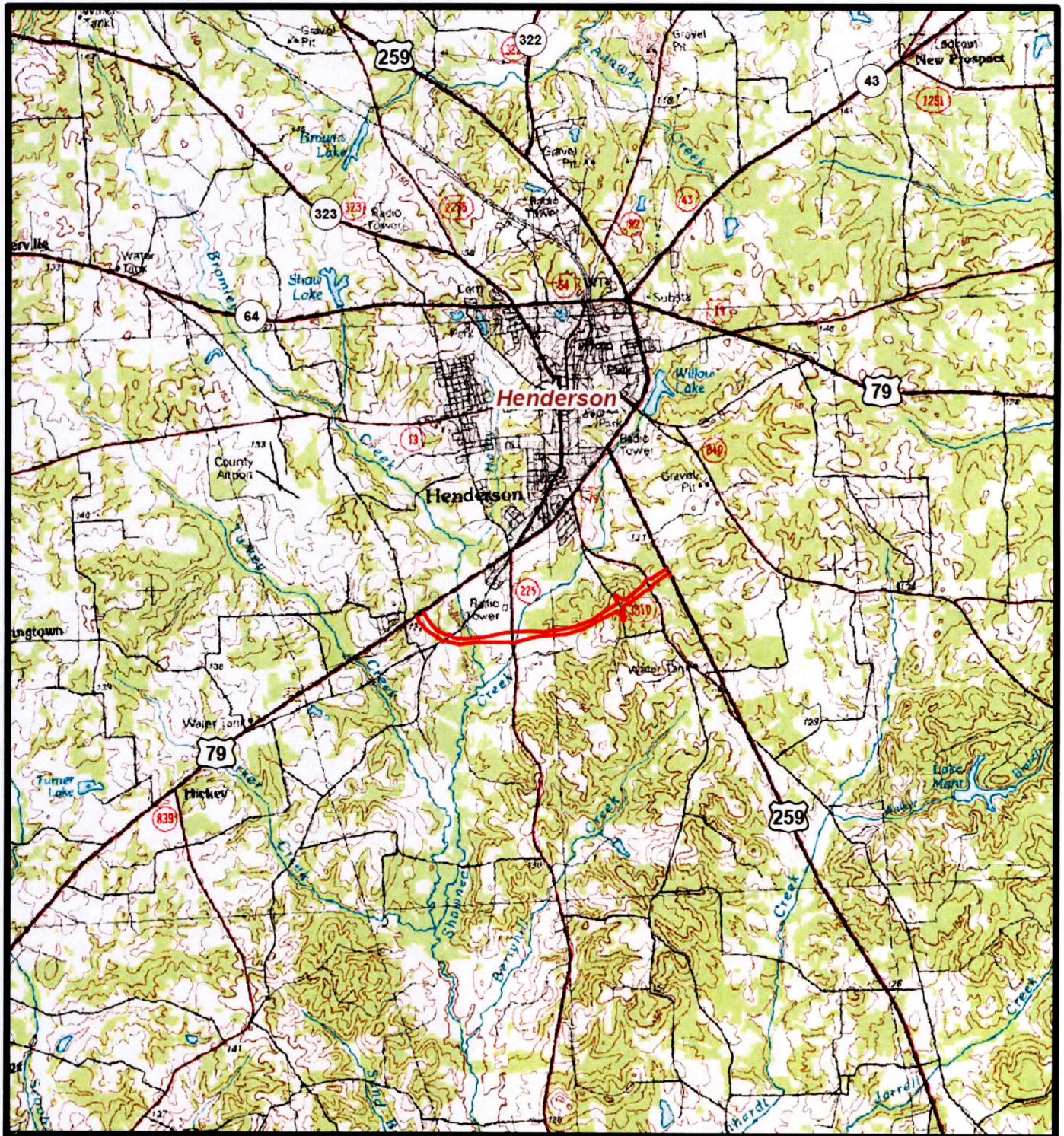
INTRODUCTION

Atkins North America, Inc. (Atkins) was contracted by the North East Texas Regional Mobility Authority (NET RMA) to conduct intensive linear archeological survey for the proposed Loop 571 Extension located south of the city of Henderson in Rusk County, Texas. A new-location two-lane highway, Loop 571 Extension, is located between U.S. Highway (US) 79 on the west and US 259 on the east (Figure 1). The project involves the construction of two lanes of an ultimate four-lane divided highway and includes the construction of a two-lane section with 3.05 meter (m) (10-foot [ft]) shoulders intended to tie in to the existing Loop 571 at US 79 and extend to US 259, a distance of approximately 5.5 kilometers (km) (3.4 miles). From west to east, bridge work will include the construction of two-lane bridges at Bromley Creek in the western portion of the project area, Shawnee Creek in the central part of the project area, and two small tributaries of Dutch Branch in the eastern part of the project area (Figure 2). With the exception of existing rights of way (ROW), all of the project was on privately owned land. Approximately 50.1 hectares (ha) (123.75 acres), or 94 percent, of the project area is currently owned by private landowners, with the remainder consisting of Texas Department of Transportation (TxDOT)-owned ROW along County Road (CR) 407, Farm to Market Road (FM) 225, CR 313, and FM 3310.

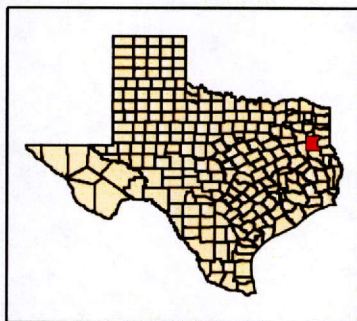
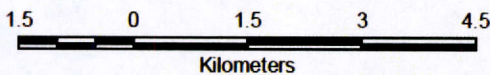
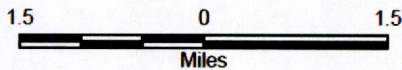
The area of potential effects (APE) consists of property within the proposed ROW and, as noted above, will extend from US 79 to US 259, a distance of approximately 5.5 km (3.4 miles). Average APE width will be approximately 91.5 m (300 ft). The project area totals approximately 53.2 ha (131.5 acres). Following standard engineering practices, bridge foundations will extend approximately 7.6 to 18.3 m (25 to 60 ft) below the existing ground surface in the areas of bridge supports, and less than 0.9 m (3 ft) below the surface elsewhere in the floodplain areas. In upland areas, the depth of the APE is expected to vary from less than 0.3 to 2.4 m (1 to 8 ft) below the existing ground surface. Allowances for the ultimate design are considered when possible.

The archeological investigations were conducted under Antiquities Code of Texas (ACT) Permit No. 5689. The archeological survey was conducted between July 21 and August 20, 2010, with follow-up site visits on May 17 and May 24, 2013. It covered the entire project area within the APE boundaries. Trenching in high probability floodplains along Bromley Creek and Shawnee Creek was planned, but Right of Entry was not granted so this work could not be completed. It is anticipated that trenching will be conducted under a new Antiquities permit, following purchase of the property, and the results will be presented in another report.

The archeological investigations were designed to (1) locate all prehistoric and historic period archeological sites in the APE, (2) establish vertical and horizontal site boundaries as appropriate with regard to the APE, and (3) provide a preliminary evaluation of the significance and eligibility of any sites recorded in the APE for listing in the National Register of Historic Places (NRHP) and for designation as a State Antiquities Landmark (SAL).



— Proposed APE Boundary



Texas Department of Transportation

**FIGURE 1
VICINITY MAP**

**LOOP 571 EXTENSION
FROM U.S. HWY. 79 TO U.S. HWY. 259
RUSK COUNTY, TEXAS**

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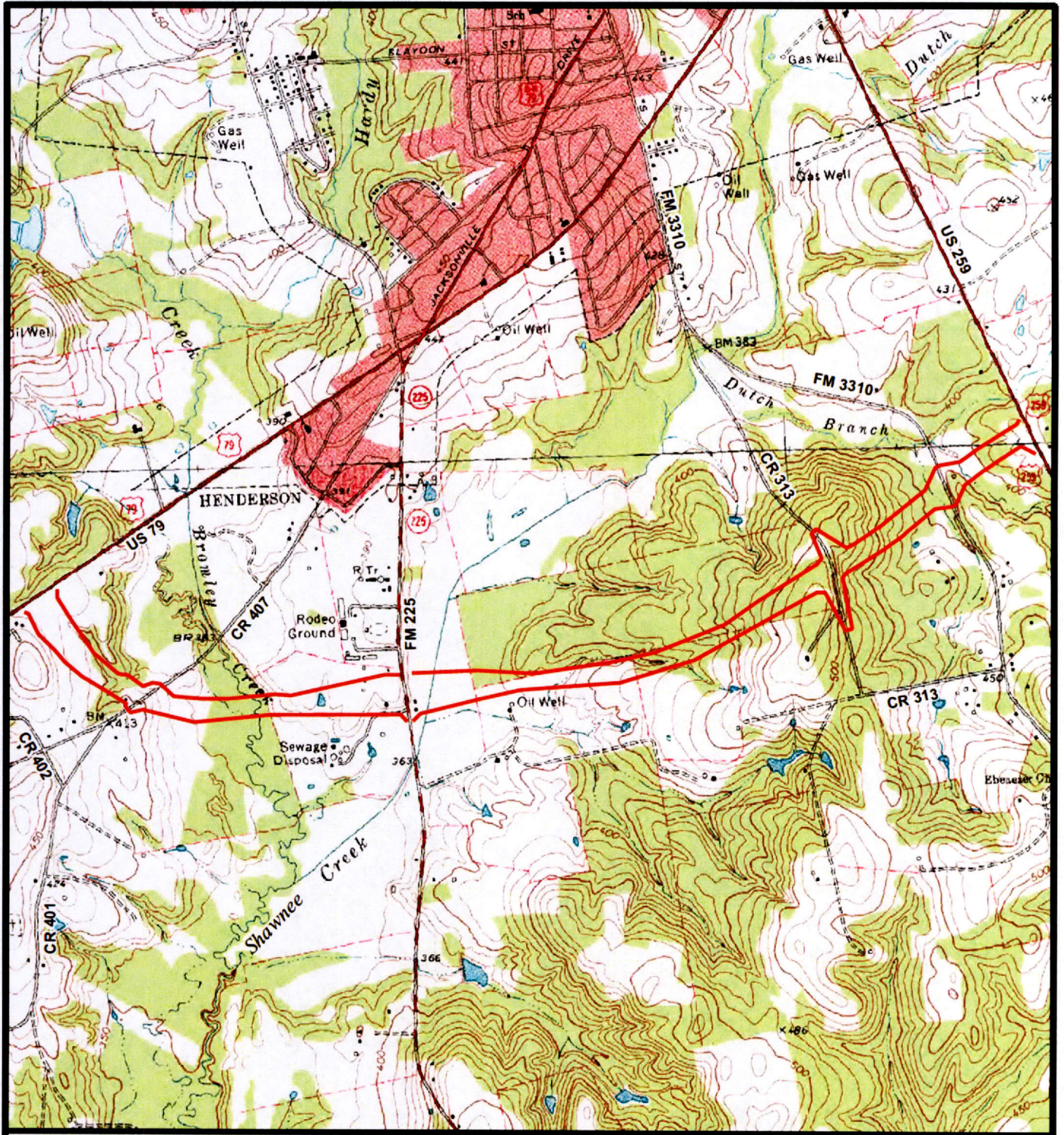
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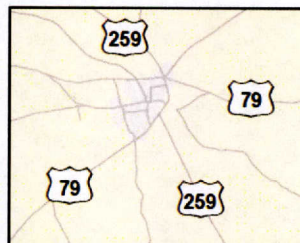
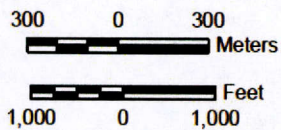
Date: 25 April 2012

BASE MAP: USGS 15' TOPOGRAPHIC MAP, HENDERSON, TEXAS

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 Proposed APE Boundary



Texas Department of Transportation

**FIGURE 2
LOCATION MAP**

**LOOP 571 EXTENSION
FROM U.S. HWY. 79 TO U.S. HWY. 259
RUSK COUNTY, TEXAS**

Job No.: 100010377

Scale: 1" = 2,000' @ 8.5"x11"

Prepared by: 19910

Date: 25 April 2012

BASE MAP: USGS 7.5' TOPOGRAPHIC MAP, BERRY HILL CREEK & HENDERSON, TEXAS

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These investigations were performed in compliance with the Texas Antiquities Code of 1977, as revised through 1995 (Texas Natural Resource: Title 9, Chapter 191), and the National Historic Preservation Act of 1966, as amended through 1992 (PL 89-665 through PL 102-575; 80 Stat. 915; 16 USC § 470 et seq.). All work was completed in accordance with the guidelines set forth by the Council of Texas Archeologists, under the supervision of TxDOT.

This report is divided into seven chapters. Following the introduction, Chapters 2 and 3 discuss the general environmental setting and cultural background of the project area. Chapter 4 presents the research design and methods for the fieldwork, and Chapter 5 provides site-specific descriptions of the sites recorded by the field crew (David Jackson, Randy Norris, and Christopher Barry) and recommendations for their treatment. Chapter 6 provides a summary of the cultural resource management recommendations. A list of references cited follows the text. An appendix presents maps of the project area showing the location of newly recorded sites. For purposes of confidentiality, these maps have been removed from copies of this report intended for public distribution.

ENVIRONMENTAL SETTING

This chapter presents information on the environmental setting of the Loop 571 Extension and its vicinity, including data on local and regional physiography, geology, soils, climate, hydrology, vegetation, and fauna, followed by a summary of food sources likely available to the prehistoric and early historic period inhabitants of the area.

The proposed Loop 571 Extension project is located in the central portion of Rusk County, Texas. Rusk County encompasses approximately 2,431 square kilometers (939 square miles) in northeast Texas. Elevations range from 91.4 m (300 ft) to 228.6 m (750 ft), with the greatest elevations along the iron-capped ridges in the northern, northeastern, and southern portions of the county. The proposed project area is rural and about evenly divided between pastureland and woodland, with a few residential complexes located along the various roadways that cross it. The project area as a whole has a humid, subtropical climate, with mild winters and warm summers (Knapp and Biesele 2006; U.S. Department of Agriculture, Natural Resources Conservation Service [USDA, NRCS] 2000).

PHYSIOGRAPHY AND GEOLOGY

The Loop 571 Extension project area is located in the central portion of Rusk County, Texas, just south of the town of Henderson. The Loop 571 Extension is in the Interior Coastal Plain of Texas (Bureau of Economic Geology [BEG] 1996) within the West Gulf Coastal Plain physiographic province (Fenneman 1938). Topography of the Loop 571 Extension area is characterized by gently rolling hills, often trending roughly north-south as reflected by the orientation of many main roads, while the hills are dissected by dendritic drainage systems, which tend to flow from the northeast to the southwest crosscutting these roads.

The surface geology of the project area consists of Eocene-aged Carrizo Sand and Wilcox Group undivided. Carrizo Sand is mostly composed of quartz sand with some feldspar and chert grains, and in the uppermost part fine-grained sand with some medium to dark gray clay, silt interbeds, and black carbonaceous partings (BEG 1965). The Wilcox Group undivided is composed of sand, clay, mudstone, sandstone, and lignite. The indurated sands are moderately well sorted and are medium to coarse grained with thin lenses of clay and mudstone. The upper portion of the Wilcox Group contains medium-to-fine-grained and moderately well-sorted sandstone, while the lower portion contains commercial deposits of lignite (BEG 1965).

The floodplains of Shawnee Creek and Bromley Creek are dominated by Holocene alluvial deposits that include "point bars, natural levees, stream channels, backswamps, and indistinct terrace deposits; clay, silt, sand, and organic matter" (BEG 1965). In Rusk County, significant deposits of clay suitable for pottery manufacture have been recorded near the project area around the city of Henderson (Ries 1908).

SOILS

The USDA, NRCS (2000) has identified four General Soil Map Units and 17 Detailed Soil Map Units within the project area (Table 1). The General Soil Map Units include Maben-Woodtell, Tenaha-Lilbert-Darco, Cuthbert-Kirvin-Bowie, and Laneville-Mattex. The Maben-Woodtell, Tenaha-Lilbert-Darco, and Cuthbert-Kirvin-Bowie units are all soils on uplands; while the Laneville-Mattex unit are soils on floodplains. Maben-Woodtell soils typically have a brown fine sandy loam surface layer underlain by yellowish red to red clay subsoil. Tenaha-Lilbert-Darco soils typically have a brown loamy fine sand surface layer underlain by a yellowish brown sandy clay loam to strong brown fine sandy loam subsoil. Cuthbert-Kirvin-Bowie soils typically have a brown fine sandy loam surface layer underlain by a red clay and a red sandy clay loam subsoil. Laneville-Mattex soils typically have a brown loam to clay loam surface layer underlain by gray clay loam subsoil.

Table 1. Detailed Soil Map Units in the Project Area (USDA, NRCS 2000, 2013)

Soil Symbol	Soil Name	Location
Btb	Betis loamy fine sand, 1 to 5 percent slopes	convex interstream divides on uplands
BwB	Bowie very fine sandy loam, 1 to 4 percent slopes	convex interstream divides on uplands
CbE	Cuthbert fine sandy loam, 5 to 15 percent slopes	convex sideslopes on uplands
DaE	Darco loamy fine sand, 8 to 15 percent slopes	convex sideslopes on uplands
GaA	Gallime-Alazan complex, 0 to 2 percent slopes	convex mounds and concave intermounds on terraces
Iu	Iulus fine sandy loam, occasionally flooded	alluvial flats on floodplains
KfE	Kirvin fine sandy loam, 5 to 15 percent slopes	convex sideslopes on uplands
La	Laneville loam, occasionally flooded	alluvial flats on floodplains
Lf	Laneville loam, frequently flooded	alluvial flats on floodplains
LtB	Latex very fine sandy loam, 1 to 3 percent slopes	convex interstream divides on uplands
MaE	Maben fine sandy loam, 5 to 15 percent slopes	convex sideslopes on uplands
RzB	Rentzel loamy fine sand, 0 to 4 percent slopes	toeslopes on uplands
SaB	Sacul fine sandy loam, 1 to 3 percent slopes	convex ridgetops on uplands
StB	Sawlit loam, 0 to 2 percent slopes	heads of drains on uplands
SwA	Sawlit-Sawtown complex, 0 to 2 percent slopes	concave intermounds and convex mounds on terraces
TeE	Tenaha loamy fine sand, 5 to 15 percent slopes	convex sideslopes on uplands
WtB	Woodtell loam, 1 to 3 percent slopes	convex heads of drains and interstream divides on uplands

The alluvial soils along Bromley Creek and Shawnee Creek are recorded as Laneville loam, frequently flooded. The small unnamed upland tributary of Shawnee Creek is not associated with any alluvial soil. Instead, this area is mapped as being Rentzel loamy fine sand, 0 to 4 percent slopes. The alluvial soil along the unnamed tributary of Dutch Branch, to the west of FM 3310, is mapped as being Iulus fine sandy loam, occasionally flooded; while the alluvial soil along Dutch Branch itself, on the far eastern end of the project APE, is mapped as being Laneville loam, occasionally flooded (USDA, NRCS 2000, 2013).

Based on the tabulated soil information, site integrity within the proposed Loop 571 Extension project area is expected to be fair to good in areas where the slopes are less than 20 percent and soils extend below the plow zone (deeper than 30 centimeters below surface [cmbs], or 12 inches). Contexts containing preserved organic materials are most likely to be limited to cultural features or middens, where culturally deposited calcium (in the form of bone) serves to ameliorate the highly acid nature of the soils.

CLIMATE

The environment of central Rusk County and the proposed Loop 571 Extension is characterized by a humid subtropical climate, averaging 243 frost-free days per year, typically extending from March 17 to November 15. Temperatures average 8 degrees Celsius (°C) in winter, 16°C in spring, 25°C in summer, and 17°C in autumn. The average annual rainfall for the area is approximately 116.8 centimeters (cm), ranging from a low of 59.7 cm to a high of 172.2 cm. Summer is typically the driest season of the year, and spring is usually the wettest; monthly rainfall averages range from a low of 7 cm in August to a high of 12.2 cm in May (USDA, NRCS 2000).

This climatic regime is likely to have been as attractive to late prehistoric occupation as it was to early-nineteenth-century Anglo-American settlers, since both the indigenous Caddo inhabitants and later immigrants relied upon the agricultural productivity of the land as well as the floral and faunal resources of the native forests. Fluctuations in the regional climate did occur during early periods of human occupation in northeast Texas, with a cooler climate postulated for the period prior to 10,000 years before present (B.P.) (Bryant and Holloway 1985:53), followed by a warmer and drier regime by circa 4,000 years B.P. (Collins and Bousman 1990:62), and then a period of climatic fluctuation culminating in today's conditions, with possible droughts around A.D. 450 and 1400 (Holloway et al. 1987).

HYDROLOGY

The proposed Loop 571 Extension lies within the Angelina River drainage basin that is bounded on the north and east by the Sabine basin and on the west and south by the Neches basin. Surface drainage within the Angelina basin is provided by a network of perennial, seasonal, and ephemeral drainages (BEG 1965). The Angelina River itself flows in a northwest to southeast direction below its confluence with Shawnee and Barnhardt creeks, south of Rusk County. Berryhill Creek enters Shawnee Creek upstream from its confluence with Barnhardt Creek and considerably south of the survey area, and is fed by numerous springs and seeps. These springs were probably utilized in both historic and prehistoric times as water sources, medicinally in some cases, for agriculture, and for industry.

According to Brune (1981:390) the majority of the springs in Rusk County originate in the Tertiary Eocene sands of the Wilcox, Carrizo, Reklaw, and Queens City units, which dip towards the west. Over 43 springs have been identified in Rusk County. Known springs within and around the city of Henderson include Crim Springs, the High School Springs, Yates Springs, and Morris Spring (Brune 1981:391). Crim Springs are located in west Henderson at the intersection of Crim and Hodge streets and flow from the Carrizo sand. The High School Springs, which flow from the Wilcox sand, are located just north of the high school and south of the cemetery along Hardy Branch. According to Brune, the High School Springs were located about a kilometer north of Shawnee Town, where Indians were reported to have lived along a spring-fed creek until 1839 when they were driven out by Anglo-

American settlers. Yates Springs are located in east Henderson in Yates Park and flow from the Carrizo sand. Morris Spring is located in north Henderson at the Henderson Clay Products Plant and flows from the Carrizo sand.

VEGETATION

The proposed Loop 571 Extension is located in Gould's (1975) Pineywoods vegetational region and within the western portion of the Austroriparian biotic province as described and delineated by Dice (1943) and Blair (1950). As noted by Blair (1950), the Austroriparian province in Texas is similar in terms of fauna and vegetation to the rest of the province, which extends eastward to the Atlantic coast. Extensive forests of pines and hardwoods, along with scattered swamps, marshes, and other hydric habitats, are characteristic of the Austroriparian province. Two potential ecological communities are present that could have been exploited by prehistoric inhabitants and early historic settlers in the region: Upland Pine/Oak-Hickory forests and floodplain communities.

Upland Pine/Oak-Hickory Forests

The most common upland tree species in the Upland Pine/Oak-Hickory forest are loblolly pine (*Pinus taeda*), shortleaf pine (*P. echinata*), post oak (*Quercus stellata*), blackjack oak (*Q. marilandica*), southern red oak (*Q. falcata*), sweetgum (*Liquidambar styraciflua*), and various species of hickories (*Carya ovata*, *C. tomentosa*, and *C. cordiformis*). Common lowland trees are water oak (*Q. nigra*), willow oak (*Q. phellos*), Shumard oak (*Q. shumardii*), sugar hackberry (*Celtis laevigata*), overcup oak (*Q. lyrata*), and several species of elms (*Ulmus americana*, *U. rubra*, and *U. crassifolia*) (Braun 1950; Tharp 1926).

Upland Pine/Oak-Hickory forests support a variety of herbs, shrubs, and grasses, many of which provide forage for native and domesticated animals. These are predominantly species of Andropogon, Sporobolus, Panicum, Paspalum, Muhlenbergia, Eragrostis, Chasmanthium, indiagrass (*Sorghastrum nutans*), native legumes, and occasional shrubs. Many other grasses as well as a large variety of forbs are represented to form an extremely complex association of herbs and brush species. Common invader species include broomsedge bluestem (*Andropogon virginicus*), smutgrass (*Sporobolus indicus*), yankeeweed (*Eupatorium compositifolium*), red lovegrass (*Eragrostis oxylepis*), greenbriar (*Smilax* sp.), and yaupon (*Ilex vomitoria*) (Thomas 1975).

Where the forest has been cleared for pasturelands, such as the slopes containing the survey area, modern hayfields and improved pastures are planted in coastal and common bermudagrass (*Cynodon dactylon*), bahiagrass (*Paspalum notatum*), or dallisgrass (*Paspalum dilatatum*). Weedy species include heartwing sorrel (*Rumex hastatulus*), yankeeweed (*Eupatorium compositifolium*), bitterweed (*Helenium amarum*), soft goldaster (*Heterotheca* sp.), western ragweed (*Ambrosia psilostachya*), asters (*Aster* spp.), partridge pea (*Cassia fasciculata*), and woolly croton (*Croton capitatus*).

Floodplain Communities

Floodplain communities in the Shawnee Creek, Bromley Creek, and Dutch Branch drainages today consist of occasionally inundated bottomland hardwood forests where not cleared for pastures. Important overstory species present in the seasonally inundated bottomlands include sweetgum, river birch (*Betula nigra*), red maple (*Acer rubrum*), Florida maple (*A. floridanum*), black tupelo (*Nyssa sylvatica*), and American hornbeam (*Carpinus*

caroliniana). Water oak, willow oak, and loblolly pine occur less commonly. Common buttonbush (*Cephalanthus occidentalis*) is a common understory species, while seedlings of various overstory species in association with various sedges and other herbs comprise a usually sparse ground cover. Understory species are typically underdeveloped, supporting green ash (*Fraxinus pennsylvanica*) and scattered shrub species including common buttonwood (*Platanus occidentalis*), Virginia sweetspire (*Itea virginica*), and hazel alder (*Alnus serrulata*) (Espey, Huston & Associates, Inc. 1994).

FAUNA

The vertebrate fauna of the proposed Loop 571 Extension is generally typical of that occurring over most of the rest of the Austroriparian province. Principal wildlife species within the region generally coincide in distribution with the principal vegetation communities, i.e., upland forests, bottomland forests, and aquatic areas.

The vertebrate fauna of northeast Texas is diverse, and there are numerous species that are common to the survey area and may have been important to the prehistoric inhabitants. Significant mammals include the fox squirrel (*Sciurus niger*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), white-tailed deer (*Odocoileus virginianus*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), mink (*Mustela vison*), and cottontail rabbit (*Sylvilagus floridanus*) (Schmidly 1983). Black bear (*Ursus americanus*) may also have been present in northeast Texas prior to the latter part of the nineteenth century (House 1978). At least 49 species of mammals are known to have inhabited the Austroriparian biotic province in Texas in recent times (Blair 1950), and most of these were probably available for utilization by early historic settlers.

In addition, at least 29 snake species, 10 lizard species, 2 land turtle species, and 25 amphibian species are known from the area (Blair 1950), and may also have been exploited (Butzer 1971:149). A large number of fish and macroinvertebrate species may have been of particular value to aboriginal inhabitants due to the relative ease of exploiting the resource. Major fish taxa include minnows, sunfish, topminnows, darters, and pirate perch, and principal macroinvertebrates of the area include terrestrial and freshwater pelecypods and gastropods.

PREHISTORIC FOOD RESOURCES

Ethnohistoric accounts of Caddo subsistence practices and organic remains recovered from prehistoric archeological sites in the northeast Texas region afford a view of the large array of plant foods that were likely exploited in the area of the proposed Loop 571 Extension, both wild and cultivated (Crane 1982; Perttula and Bruseth 1983; Swanton 1942). The vast array of wild plants eaten by indigenous inhabitants of the region included nuts, such as hickory (*Carya* sp.), pecan (*Carya illinoensis*), chinkapin (*Castanea pumila*), acorns (*Quercus* spp.), and black walnut (*Juglens nigra*); plums (*Prunus* spp.); persimmons (*Diospyros* spp.); grapes (*Vitis* spp.); strawberries (*Fragaria virginiana*); edible roots; and a variety of herbs and seeds from annuals, such as knotweed (*Polygonum* sp.), goosefoot (*Chenopodium* sp.), marshelder (*Iva* sp.), and wild lettuce (*Lactuca* sp.). It is also reasonable to assume that early Anglo-American and historic Indian settlers in the area made use of many of the same wild plant resources they had become familiar with elsewhere in the southeastern U.S., bringing with them domestic plants such as corn, beans, sunflowers, and pumpkins, which were already cultivated by the Caddo inhabitants of the region.

Animal foods were equally important and varied. Again using ethnohistoric data derived from early contacts with the Caddo (Crane 1982; Perttula and Bruseth 1983; Swanton 1942), these resources included white-tailed deer, black bear, cottontail rabbit, opossum, squirrel, raccoon, dog (*Canis familiaris*), various species of ducks and geese (Anatidae), turkey (*Meleagris gallopavo*), quail (*Colinus virginianus*), and prairie chicken (*Tympanuchus cupido*). Anglo-American and early historic Indian settlers in northeast Texas also brought with them cattle and pigs, which were allowed to roam the forests and prairies in small herds near early-nineteenth-century settlements (Jordan 1977, 1981; Jordan and Weir 1976).

Bison (*Bos bison*) may have existed in very limited numbers in east Texas during prehistoric times, as their remains have been encountered at a number of archeological sites in adjacent areas (Neuman 1984). Early historic accounts, however, indicate bison were not found in the forests of northeast Texas, but were hunted in the plains to the west. In 1691, Casañas located bison herds about 4 days' travel from the Nabadache village located south of the project area, and Hasinai hunting parties established a well-defined path between the Brazos and the Trinity rivers in their forays to and from the bison range (Casañas de Jesús María 1927; Griffith 1954:113).

In addition to mammals, fish, such as gar (*Lepisosteus* sp.), bowfin (*Amia calva*), pickerel (*Esox* sp.), catfish (Ictaluridae), and bass (Centrarchidae), and reptiles and amphibians, including snapping turtle (*Chelydra serpentina*), lizards (Iguanidae), snakes (Colubridae), and frogs (*Rana* sp.), were also exploited by the Caddo inhabitants of the region (Perttula and Bruseth 1983; Swanton 1942), and there is no reason to believe that Anglo-American and early historic Indian settlers in the region did not exploit the same species.

ARCHEOLOGICAL AND HISTORICAL BACKGROUND

EAST TEXAS CULTURAL HISTORY

The APE lies within the Northeast Texas Archeological Region, as defined by the Texas Historical Commission (THC) (Kenmotsu and Perttula 1993). The general cultural history of this area, based on previous research, can be divided into five primary chronological and developmental periods—Paleoindian, Archaic, Woodland, Caddo, and Historic (Table 2). These divisions are believed to reflect changes in subsistence and cultural development as reflected by material remains and settlement patterns. The following discussion of these periods draws on previous summaries by Perttula (1988, 1995), Story (1981, 1985, 1990), and Thurmond (1985, 1988, 1990).

Table 2. Cultural Sequence for Northeast Texas
(after Perttula and Kenmotsu 1993; Story 1990)

Period	Approximate Dates
Paleoindian	9500–7000 B.C.
Archaic	7000–200 B.C.
Woodland	200 B.C.–A.D. 800
Caddo	
Formative	A.D. 800–1000
Early	A.D. 1000–1200
Middle	A.D. 1200–1400
Late	A.D. 1400–1680
Historic	post–A.D. 1680

Paleoindian Period (ca. 9500–7000 B.C.)

The Paleoindian period is the earliest generally accepted cultural period in the Americas and includes prehistoric populations that inhabited North America from the end of the Pleistocene until the early Holocene. This period is alternatively referred to as the time of the “Big Game Hunting” tradition, due to a presumed heavy reliance upon now-extinct species of Pleistocene megafauna as a food source during the early part of the period (Willey 1966:37). It should be noted, however, that such megafaunal remains are often not found in association with Paleoindian cultural remains, and this presumed heavy reliance on megafauna is probably overemphasized.

During this period, social organization probably consisted of loosely structured, highly mobile social groups composed of several nuclear families, collectively referred to as bands. Most known Paleoindian sites are representative of transient camps along small streams, probably occupied by band-sized or smaller groups. Larger,

more intensively occupied sites, termed base camps, are relatively rare and usually associated with large kill sites or lithic procurement activities. The population density is thought to have been rather low during this period.

Clovis and Folsom point types are generally thought to be representative of the earlier part of the Paleoindian period, while point types such as Dalton, San Patrice, Scottsbluff, and Plainview are thought to be representative of the latter part of the period. Although a Paleoindian presence is clearly evident in east Texas, many of the remains from this period are out of context, limited generally to surface finds or to sites where Paleoindian materials are mixed with later Archaic remains (Davis and Davis 1960; Duffield 1963; Johnson 1962; Jones 1957; Northern and Skiles 1981:28; Perttula 1988; Voellinger 1984).

Only a few early Paleoindian sites are known in east Texas. In Van Zandt County, two Clovis point bases were recovered, possibly in context, from the Yarbrough site (41VN6) during excavation (Suhm et al. 1954:147). In Gregg County, Angostura, Scottsbluff, and Plainview points were found at the Grace Creek sites in a somewhat disturbed context (Jones 1957:219–220). More recently, two sites in Upshur and one site in Wood County have been reported to have Paleoindian components in a stratigraphic context (Perttula et al. 1986:46).

During the late Paleoindian period, population appears to have increased in Texas, probably as a result of the development of localized cultural patterns (Hester 1976:49). Projectile point styles suggest that some Plains populations may have entered the eastern woodlands during this time. Johnson (1989) has suggested that these peoples were migrating as a result of drought and its subsequent effect on plains fauna.

Story (1990:177) summarized the lifeways and organization of the Paleoindian inhabitants of the Gulf Coastal Plain as being characterized by a high degree of mobility with only brief stays at any one location. The ecological diversity of the Gulf Coastal Plain, particularly with regard to the variety of plants and animals that could be exploited, could have optimized movement over a relatively large geographical area.

Archaic Period (ca. 7000–200 B.C.)

In northeast Texas, the Archaic period is represented by three divisions, the Early, Middle, and Late Archaic. The Early Archaic (ca. 7000–4000 B.C.) is seen as a transition from late Paleoindian to fully Archaic lifeways (Duffield 1963). Story (1990) has identified selected characteristic dart points for each of the Archaic divisions in northeast Texas. She identifies Keithville, Palmer, Kirk, and Cossatot points as indicators of the Early Archaic; Big Sandy, Calf Creek, Johnson, Carrollton, and Morrill points as characteristic of the Middle Archaic (ca. 4000–2000 B.C.); and Lange, Castroville, Palmillas, Ellis, Edgewood, and Yarbrough dart points as chronological indicators for the Late Archaic (ca. 2000–200 B.C.) (Story 1990:Figure 32).

Thurmond (1990:214–218) suggests that there is an increase in the frequency of Early Archaic sites in comparison to the Paleoindian period, and that this increase in site frequency or density continues at least until the later Woodland period. Along Big Sandy Creek in Upshur County, Early Archaic sites appear to be distributed on terraces and upland projections within major drainage basins (Perttula et al. 1986:50). Similar patterns have been found elsewhere (Bruseh and Perttula 1981; Jones 1957; Perttula and Skiles 1987).

In terms of excavated components, Middle Archaic sites are better represented in the archeological record than are components of the Early Archaic (Bruseeth and Perttula 1980, 1981; Johnson 1962; Voellinger 1984). Settlement patterns appear to have changed little, although site density appears to be greater (Perttula et al. 1986:51; Thurmond 1990:216).

During the Late Archaic, there appears to have been a continued increase in site density, especially along tributaries of major drainages (Perttula et al. 1986:52; Thurmond 1990:215–219). Perttula et al. (1986:52) suggest that the more widely dispersed settlement pattern in the region is indicative of an economy based upon the hunting and gathering of local food resources. Numerous sites with Late Archaic components have been excavated in the region (Bruseeth and Perttula 1980, 1981; Bruseeth et al. 1977; Duffield 1961; Johnson 1962; Jones 1957; Voellinger 1984).

Woodland Period (200 B.C.–A.D. 800)

Three cultural expressions have been proposed to characterize the Woodland period in east Texas—Fourche Maline, centering on the Great Bend of the Red River in Arkansas and extending into adjacent Oklahoma, Louisiana, and northeast Texas to include the Lower and Middle Sulphur River basin; Mossy Grove, centered in southeast Texas and extending up the Angelina-Neches and Trinity River basins; and, most recently, Mill Creek, centering on the Upper Sabine River basin (Black and Story 2003).

Fourche Maline sites in northeast Texas are generally characterized by coarse plainware ceramics, tempered with either clay/grog or bone, known as Williams Plain; Gary dart points; and, subsequently, corner-notched arrow points (Perttula 1995:335; Thurmond 1990). Despite similarities to Fourche Maline in Arkansas, Woodland period burial mounds do not appear to be present in northeast Texas.

The Mossy Grove tradition is characterized by sandy paste ceramics (cf. Bear Creek Plain and Goose Creek Plain) that are common on Woodland period sites from the Sabine River south to the Gulf Coast (Story 1981:146). Characteristic projectile points include small Gary and Kent dart points and, after A.D. 500–600, expanding-stem arrow points such as Friley and Scallorn (Black and Story 2003). The few burial mounds that are known from east Texas occur in the Sabine and Neches River basins around the Toledo Bend and Sam Rayburn areas, respectively, and are probably related to Mossy Grove (see Story 1990:Figure 42).

The Mill Creek culture has been identified west and south of the Red and Sulphur River basins (Black and Story 2003). Mill Creek sites appear to be smaller than the Arkansas Fourche Maline sites and contain less pottery. The pottery that is present is thinner than typical Williams Plain and is more often decorated with incised lines, punctations, and other techniques. Mill Creek sites lack burial mounds, and the lithic assemblages are characterized by small Gary and Kent dart points that are replaced by expanding-stem arrow points after about A.D. 600–700 (Black and Story 2003). The best-known Mill Creek site is the Herman Ballew site (41RK222), excavated by Atkins archeologists in 1993–1994 (Rogers et al. 2001).

In addition to local ceramics, Lower Mississippi Valley ceramic types, such as Tchefuncte Stamped, Churupa Incised, Marksville Incised, Troyville Stamped, and Marksville Stamped, have been recovered from Woodland period contexts at a number of sites, especially in the Sabine River basin (Perttula 1995:335–336; Story 1990:246).

This, together with the occurrence of burial mounds in this same general area, suggests a long tradition of contact between east Texas and the Lower Mississippi Valley, by way of central Louisiana.

By the end of the Woodland period, Coles Creek ceramics are present in the Sabine River drainage, along with expanding-stem arrow points similar to the Colbert and Friley types (Perttula 1995:336). Coles Creek ceramics and expanding-stem arrow points have been dated to between about 1,000 and 1,300 years ago at the James Pace site (16DS268) at Toledo Bend Reservoir in DeSoto Parish, Louisiana (Girard 1994; Perttula 1995:336). Material of equivalent age from Lake Fork Reservoir, in the Upper Sabine River basin, consists of "ceramic assemblages dominated by horizontally incised decorative motifs, and Friley arrow points" (Perttula 1995:336; see also Bruseth and Perttula 1981).

Woodland components have also been identified at the Resch site (41HS16) in southern Harrison County (Webb et al. 1969), the Folley site (41RK26) in northeastern Rusk County (Jarvis 1972), and the Yarborough site in Van Zandt County (Bruseth and Perttula 1981; Johnson 1962). Generally, these sites can be dated to the Woodland period on the basis of the presence of Lower Mississippi Valley ceramics such as the Tchefuncte, Marksville, and Coles Creek types.

Caddo Period (A.D. 800–1680)

The Caddo period in east Texas in general has been subdivided into Formative (A.D. 800–1000), Early (A.D. 1000–1200), Middle (A.D. 1200–1400), and Late (A.D. 1400–1680) subperiods. The chronology used here is based on the work of Perttula (1995) and Thurmond (1990) in the Sabine River and Cypress Creek basins, north of the APE. Both the Formative and Early Caddo periods include components related to the more traditional Alto and Sanders foci in eastern Texas. The ceramic types characteristic of the Formative Caddo are Holly Fine Engraved, Hickory Fine Engraved, Spiro Engraved, Kiam Incised, Weches Fingernail Impressed, and Coles Creek Incised, with Williams Plain also being present (Thurmond 1990). Ceramic types characteristic of the Early Caddo period include Sanders Engraved, Hickory Fine Engraved, Sanders Plain, and Canton Incised, with Williams Plain making up a smaller part of the assemblage than previously (Thurmond 1990:226–227). Arrow points for the Formative to Early Caddo periods include Alba, Bonham, Catahoula, and Scallorn types (Thurmond 1990:226–227).

The Formative Caddo period is suggested to be the earliest true Caddo cultural configuration (Story 1972). The George C. Davis site (41CE19) on the Neches River is probably the most important site for this period. Small Formative Caddo sites are generally located on terraces adjacent to water resources. Major Formative Caddo mound centers are located in major river valleys such as the South Sulphur River.

Sites of the Early Caddo period are more widespread and are typically found on terraces and on knolls near water resources. Subsistence during both the Formative and Early Caddo periods was probably based primarily on the hunting of deer and small mammals, supplemented by horticulture. Maize has been recovered from Early Caddo occupations, and settlement patterns are thought to reflect a wide population dispersal into sedentary hamlets and farmsteads (Perttula et al. 1986:54–55).

Judging from radiocarbon dates, Middle Caddo period occupations are more common throughout much of northeast Texas in comparison to Formative and Early Caddo occupations. Middle Caddo period sites continue to be located

on elevated landforms adjacent to major streams, as well as along minor tributaries and spring-fed drainages (Perttula 2004:378–379). Ceramic types identified for the Middle Caddo period include Ripley Engraved, Avery Engraved, Canton Incised, Maydelle Incised, Bullard Brushed, Pease Brushed-Incised, and La Rue Neck Banded (Thurmond 1990:227–228). In the Sabine River and Cypress Creek basins, the brushing of utility ware vessels became common after A.D. 1300 (Perttula 1995:338). Projectile points identified as being characteristic of the period include Bonham, Catahoula, Alba, Perdiz, and Clifton (Thurmond 1990:227–228). In the Sabine River basin, the Middle Caddo component at the Oak Hill Village site (41RK214) is estimated to date between about A.D. 1200/1300 and 1450 (Rogers and Perttula 2004). Middle Caddo sites in Smith County include the Bryan Hardy site (41SM55), the Redwine site (41SM193), and the Langford site (41SM197) (Middlebrook and Perttula 1997; Walters 1997; Walters and Haskins 2000).

Thurmond (1990) observes that ca. A.D. 1400, the elements of Caddo material culture, manifested archeologically in ceramic and projectile point assemblages, differentiate along a line drawn roughly north to south somewhat west of Caddo Lake in Harrison County, Texas. The observed differences west to east are hypothesized by Thurmond (1990) to represent probable social groups.

The Late Caddo period appears to be notable for an increase in regional variants (see Perttula 2004:Figure 13.26). The western portion of the Cypress Creek basin and the middle Sabine basin, north of the APE, were characterized by the Whelan and Titus phases. The Whelan phase (ca. A.D. 1350–1450) is the earlier of these two and is largely confined to the Cypress Creek drainage basin (Thurmond 1985:Figure 4). Ceramics from Whelan phase sites include Ripley Engraved, Taylor Engraved, Wilder Engraved, Bullard Brushed, Pease Brushed-Incised, Maydelle Incised, and La Rue Neck Banded. Perdiz and Scallorn arrow points are generally associated with the Whelan phase (Thurmond 1990:228).

The succeeding Titus phase (ca. A.D. 1450–1650) represents the final prehistoric occupation of the upper Cypress Creek basin. Perttula (1995:338) describes the Titus phase as representing “the archeological remains of a number of Caddo groups who lived between the Sabine and Sulphur rivers.” Ceramics characteristic of the Titus phase include Ripley Engraved, Taylor Engraved, Wilder Engraved, Bailey Engraved, Johns Engraved, Bullard Brushed, Harleton Appliqué, Maydelle Incised, La Rue Neck-Banded, McKinney Plain, and Killough Pinched. Arrow points are primarily Bassett, Maud, Reed, and Talco (Thurmond 1990:228–229).

Another Late Caddo grouping, identified as the Frankston phase (ca. A.D. 1400–1650), is located in the Neches and Angelina River basins in Smith, Henderson, Cherokee, and Van Zandt Counties (Perttula 2004:395). Frankston phase sites include farmsteads, hamlets, and small villages. One Frankston phase mound is known, at the A.C. Saunders site (41AN19) in Anderson County (Jackson 1936; Kleinschmidt 1982). Small scattered hamlets with one to three houses have been identified in the upper Neches River basin (Anderson et al. 1974:178–180). The ceramic inventory of the Frankston phase includes Poynor Engraved, Bullard Brushed, Maydelle Incised, and La Rue Neck-Banded. Elbow pipes and Perdiz arrow points are also present.

A third Late Caddo group, identified as the Angelina phase (ca. A.D. 1450–1650), is centered between the Angelina and Sabine rivers, in the vicinity of Lake Sam Rayburn (Perttula 2004:395). The Walter Bell site (41SB50) is an Angelina phase site that contained small midden deposits, circular structures, and a small cemetery with extended

and flexed burials (Perttula and Black 2003). Artifacts at the site included Perdiz arrow points, conch shell beads, bone tools, mussel shells, and incised bird bone flutes (Perttula and Black 2003). Ceramics associated with Angelina phase sites largely consist of Pineland Punctated-Incised and Broaddus Brushed (Jelks 1965:214; Wyckoff 1974:206).

Historic Caddo Period (A.D. 1680–1860)

The first direct contact between Caddo people and Europeans was through the De Soto-Moscoso Expedition of 1541–1542, when a number of tribes were discovered living near the Great Bend of the Red River (Swanton 1942). During the late seventeenth and early eighteenth centuries, the Caddo in east Texas primarily formed two confederated groups. The Kadohadacho confederation was located upstream from the Great Bend of the Red River. The Hasinai, the larger confederation, was located to the south on the middle Neches and Angelina rivers, near the first Catholic mission located west of modern-day Nacogdoches in 1690 (Perttula 1992). The Caddo groups that apparently were closest to the project area by the time of sustained European contact were the Nadaco and the Nasoni, reported by the Spanish to be on the upper Angelina River in 1716 (Bolton 1987). According to ethnohistoric accounts (Casañas de Jesús María 1927; Griffith 1954; Manzanet 1916; Swanton 1942; Wedel 1978), the Hasinai were typified by the existence of loose villages and scattered dwellings.

Archeologically, Jones (1968) and Clark and Ivey (1974:137) report that several Hasinai tribal groups were in the vicinity of the project area at the time of contact, with village sites and adjacent cemeteries generally found along small streams (Taylor and Tate 1997). Several contact period sites in Rusk and Gregg counties are attributed to the Nadaco group, including 41RK3, 41RK36, 41RK132, and 41GG3 (Clark and Ivey 1974:137; Jones 1968). Site 41RK132 is located north of the confluence of Mill and Tiawichi creeks. Site 41RK3 is located on the east bank of Martin Lake, and site 41GG3 is located near present-day Kilgore, north of Henderson. All three of these sites contained historic period burials in which European trade goods were interred in association with native-made objects (Jones 1968). Ceramic types include Patton Engraved, Hume Engraved, Henderson Plain, Simms Engraved, Nocona Plain, Natchitoches Engraved, Womack Engraved, and Emory Punctated-Incised (Clark and Ivey 1974; Jones 1968). Diagnostic projectile points such as Cuney and Turney are often found in association with various European trade goods (Taylor and Tate 1997). Other diagnostic arrow points may include Fresno, Alba, Bassett, Bonham, Catahoula, Finley, and Perdiz. However, Taylor and Tate (1997) caution that these points may merely reflect the multicomponent nature of the particular sites analyzed.

In the 1780s, a group of Koasati (or Coushatta), former members of the Creek Confederacy, settled in northeast Texas after moving from above present-day Shreveport on the Red River (Gadus and Howard 1989; Hook 1997; Martin 2006; Swanton 1946). Another immigrant group north of the project area was the Choctaw, various bands of which had moved into northeast Texas by 1830 (Carlisle 2012; McKee 1989). Cherokee were first reported in northeast Texas in 1807 (Lipscomb 2006a; Perdue 1989), and by 1830 nearly 400 Cherokee were settled in the region north of Nacogdoches (Cliff and Sills 2004), some bringing with them African slaves from their previous homeland in the southeast U.S. (Abel 1992, 1993). They were followed by Delawares around 1820 (Lipscomb 2006b), Shawnees in 1822 (Lipscomb 2006c), and later the Kickapoos (Nunley 2006). After the signing of the Caddo Treaty of 1835, many Caddo groups in central and western Louisiana also agreed to enter Texas (Flores 1984; Lange 1974; Neuman 1974; Smith 1995; Swanton 1946; Williams 1974).

3. Archeological and Historical Background

Up until the very early nineteenth century, therefore, the area that now comprises much of Rusk County was still populated largely by members of the Caddo, Cherokee, and Shawnee tribes, but remained generally unsettled by Europeans. The Cherokee were first documented occupying a large section of the southern Appalachian region in the late seventeenth century. European intrusions gradually forced them to the southwest into the Tennessee River Valley by the late eighteenth century. In 1810, following some hostile interaction with white settlers, a portion of the Cherokee under a military leader, Duwali or Bowl, migrated westward, eventually settling in northern Arkansas. During the winter of 1820–1821, Duwali led his band into Texas, initially settling at the Three Forks of the Trinity River, presumably near the modern site of Dallas. However, due to hostilities with other Indian groups, they relocated to the upper Angelina and Neches drainages in late 1821 or early 1822, primarily settling in present-day Smith, Cherokee, Rusk, and Van Zandt counties (Everett 1990; Skokan et al. 1997).

The Shawnee moved into Texas from the Ohio and Cumberland valleys of what is now Kentucky and Ohio (Lipscomb 2006c). The Shawnee occupied the western part of Rusk County during the 1820s and 1830s (Knapp and Biesele 2006). Brune (1981) notes that the site of Shawnee Town was located approximately 0.6 mile south of the High School Springs northwest of present-day Henderson. However, according to the 1932 Texas General Land Office (GLO) map of Rusk County, Shawnee Town was located approximately 2 miles south of Henderson along the Jonesboro Road (GLO 1932). A Rusk County deed record suggests that Shawnee Town was located in the James Smith headright southwest of the Franklin J. Starrs labor (RootsWeb.com 2006) at approximately the same location as shown on the 1932 GLO map. A THC Centennial Marker for the “Site of Shawnee Town” is located approximately 0.8 km (0.5 mile) southwest of Henderson along US 79. The marker reads

AN INDIAN VILLAGE OCCUPIED SUCCESSIVELY BY SEVERAL INDIAN TRIBES BEFORE THE CHEROKEES AND THEIR ASSOCIATES WERE DRIVEN FROM EAST TEXAS IN 1839. THE MOUNDS, SUGGESTIVE OF THEIR BURIAL PLACES, AND BITS OF POTTERY REMAIN MUTE EVIDENCES OF THE CIVILIZATION OF THE RED MEN (Commission of Control for Texas Centennial Celebrations 1938).

Most of the Shawnee and Cherokee were removed from this part of Texas after the Cherokee War of 1839, which opened the way for white settlement into the project area (Knapp and Biesele 2006). However, the First United Methodist Church of Henderson, created in 1842, was part of the Shawnee mission (THC 2010). The congregation was organized by Rev. Preston W. Hobbs approximately 1 year before the creation of Rusk County (THC 2010). This information seems to suggest that some of the Shawnee remained in the area following the Cherokee War.

After Texas achieved statehood, the remaining Caddos and members of the Cherokee and Shawnee tribes were removed to a reservation on the upper Brazos River in 1857 (Arnold 2007), and most members of these tribes were forcibly moved to the Indian Territory by 1860 (Lipscomb 2006a, 2006b, 2006c). The rapid spread of slaveholdings in areas where cotton could be profitably grown in large quantities encouraged the final removal of Indians from their traditional or recently adopted lands in east Texas.

HISTORIC SETTLEMENT AND LAND USE

The early period of European and Anglo-American settlement in northeast Texas overlaps with the Historic Caddo period, between the first Spanish contact with Caddo peoples in the 1680s and the eventual forced removal of almost all native Americans to Indian Territory in 1860, as discussed above. This period also encompasses the forced migration of African and African American slaves into northeast Texas, and contact between Indians and slaves, while discouraged by American settlers, likely occurred on a regular basis (Katz 1986).

The historic era can also be subdivided into Spanish, Mexican, Republic of Texas, and U.S. Statehood periods (Table 3) to provide a background for understanding the sociopolitical development of the area. Given the “melting pot” that northeast Texas was during much of this time, the following presentation of significant individuals and events for each ethnic group is somewhat overlapping in time and historic era.

Table 3. Historical Cultural Sequence
for Northeast Texas

Period	Approximate Dates
Spanish	A.D. 1680–1821
Mexican	A.D. 1821–1836
Republic of Texas	A.D. 1836–1846
U.S. Statehood	A.D. 1846 to the present

Spanish Period (A.D. 1680–1821)

The reports of survivors from La Salle’s ill-fated French expedition, which passed through east Texas in 1686, and of subsequent French explorations by Sieur Henri de Tonti, Bienville, and St. Denis in the upper Red River Valley during the closing decades of the seventeenth century (Chipman 1992; Gilmore 1992), provided the impetus for the government of New Spain to send the first mission to the Hasinai Caddo tribe of northeast Texas in 1690, in large part to counter the growing influence of the French in Louisiana (La Vere 2004). This mission was located west of what is today Nacogdoches, on the route that Spanish explorer Alonso de León took to the Angelina River, which later became known as La Bahia Road. This Camino Real, one of several King’s Highways created by order of the King of Spain (Yoakum 1935), ran from Goliad into northwestern Louisiana. In the year that followed, a second mission to the Hasinai tribe named Santísimo Nombre de María was founded nearby, but these initial east Texas missions soon proved unsuccessful for the Spanish and they were abandoned in 1693 (Richardson 1958).

In response to renewed French interest in the area, however, Domingo Ramón returned to east Texas in 1716 and 1717 to establish six Spanish missions and one presidio within the Caddo nation. The missions included Nuestro Padre San Francisco de los Tejas to the Nabadeche tribe, Nuestra Señora de la Purísima Concepción de los Ha’inai to the Hasinai tribe, Nuestra Señora de Guadalupe to the Nacogdoche tribe, San José de los Nazonis to the Nasoni and Nadaco tribes, Nuestra Señora de los Dolores de los Ais to the Ais tribe, and San Miguel de Linares de los Adaes to the Adaes tribe in western Louisiana. The new presidio was Nuestra Señora de los Dolores de los Tejas, located near the Concepción mission to the Hasinai tribe. Under the perceived threat of a French invasion of the area in 1719, however, the Spanish again abandoned the east Texas missions and withdrew to San Antonio (Faulk 1965).

The Spanish military then returned to northeast Texas in 1721 with an expedition led by the Marqués de Aguayo (Chipman 1992), reestablishing six missions—San Francisco de los Tejas (renamed San Francisco de los Neches), San José de los Nazonis, Nuestra Señora de la Purísima Concepción de los Ha'inai, Nuestra Señora de Guadalupe de los Nacogdoches, Nuestra Señora de los Dolores de los Ais, and San Miguel de Linares de los Adaes. The presidio of Nuestra Señora de los Dolores de los Tejas was also reestablished, and Aguayo built and garrisoned the new presidio of Nuestra Señora del Pilar de los Adaes, near present-day Robeline, Louisiana. By 1731, Los Adaes had become the capital of the Spanish province of Tejas and, with the exception of Mission Concepción on the Angelina River, was the only mission remaining in operation at that date (Pertulla 1992).

The Spanish military once again decided to cut expenses by pulling back from east Texas to San Antonio and Goliad in the late 1760s. Some settlers remained in the region, however, and while trade between the Spanish at Los Adaes and the French at the town of Natchitoches to the east was prohibited (Gilmore 1992), “. . . it was an openly conducted and common part of everyday frontier life” (Loren 2000:89). The east Texas missions were abandoned for the final time in 1773, and Spanish settlers were ordered to abandon their homes and move behind the new frontier line (Chipman 1992). The east Texas settlers went only as far as the Trinity River before founding the settlement of Bucareli. Four years later, in 1779, the settlers returned to east Texas and rebuilt the settlement of Nacogdoches (Carlson and Corbin 1999).

As a result of the rather porous nature of the frontier, many settlers in the border region of New Spain were a mix of Spanish, French, Indian, and African slave ancestry by the end of the War of 1812 and the subsequent establishment of the U.S. State of Louisiana (Loren 2000). Added to this equation were Anglo-American immigrants from Missouri and Arkansas who began fleeing the negative economic effects of the Panic of 1819 into Texas during Mexico's War of Independence with Spain. By early 1821, Stephen F. Austin observed settlers living illegally on the Spanish side of the border when he crossed the Sabine River for the first time to pursue his father's claim for land with Spanish authorities in San Antonio (Cantrell 1999). Austin's father Moses died in Missouri before beginning the first settlement of Texas, but his contract was to introduce 300 individuals of Catholic faith, with each family awarded 320 acres of farmland fronting a river and 640 acres of grazing land inland.

Implicit in this colonization agreement was the introduction of African slaves by immigrants (Williams 1992), as slavery was legal in New Spain and a total of 33 slaves were already reported in Nacogdoches in an 1809 census (Campbell 1989). Slaves were also being introduced to the U.S. illegally along the coast by privateers such as the Lafitte brothers, who captured Spanish slave ships and then sold the slaves to agents such as the Bowie brothers in Galveston (Silverthorne 1986), who turned in the slaves to a customs house in Louisiana and were rewarded half their value for confiscating smuggled property. The Bowie brothers then bought the slaves legally and resold them to buyers in the U.S., sometimes for as much as \$1,000 per slave (Campbell 1989), thereby avoiding a U.S. law prohibiting the international slave trade.

Mexican Period (A.D. 1821–1836)

After Mexican independence from Spain in 1821 and the abolition of the slave trade in Mexico, Stephen F. Austin spent almost an entire year in Mexico City, renegotiating his father's contract with politicians of the short-lived constitutional monarchy under General and self-proclaimed Emperor Agustín de Iturbide. Not until 1823, and the

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eventual establishment of a federal republic in Mexico after Iturbide's demise, did Austin gain approval for implementing the first program of colonization in Texas. This newly negotiated contract made it possible for 300 settlers to obtain one *sitio*, or full league of land (4,428 acres), for the sum of \$553, with rights to one *labor* (177 acres) if they intended to farm and raise livestock, payable without taxes over 6 years if improvements were made to the land (Cantrell 1999). Settlers were also awarded 80 acres for each slave they introduced to the land grant, after presenting a document to Austin certifying that each slave was in fact (or fiction) an indentured servant (Campbell 1989).

In addition to these conditions, Austin charged the colonists fees for the survey and title of their land, payable in cash or goods over 3 years. Due in part to complaints of unfair business practices by Austin's early colonists, the terms of his agreement were annulled in 1824 by the provincial Mexican government, instituting a price of only \$192 per league of land (Cantrell 1999). In comparison, the price of land on the American frontier at that time was approximately \$100 for 80 acres, plus registry fees (Moncure 1984:14). *Empresarios*, or speculators such as Austin who were granted large tracts of lands for colonization in Mexico, were awarded land for themselves in proportion to the number of colonists they could bring to their grants, initially, 15 square leagues and two *labores* of land for each 200 settlers.

Such generous terms attracted other would be *empresarios* who petitioned the government of Mexico for colonies in Texas by 1825, including Robert Leftwich, Green DeWitt, Frost Thorn, and Haden Edwards. Leftwich's colony was to be located northwest of Austin's, DeWitt's to the southwest, and Edwards's and Thorn's to the northeast. The Edwards colony, located south of the project area and including the old Spanish village of Nacogdoches, became the scene of an internal struggle between previous landholders and recently arrived settlers. In December of 1826, after the Mexican president annulled Edwards's contract and expelled him from the country, his supporters declared the establishment of the Republic of Fredonia, with support from at least one faction of Cherokee Indians. Duplicity by clandestine agents of the British foreign office in Texas, who were charged with checking the spread of American influence and slavery to the Pacific coast, is also suspected (Reid 2007). The revolt was short lived; after Mexican troops with the aid of Austin's militia arrived in Nacogdoches in January of 1827, most of the rebels escaped to Louisiana, while the Cherokee tribe administered justice to the chiefs involved in the revolt (McDonald 2006).

With the reputation of Anglo-American immigration temporarily improved in the eyes of a Mexican government grateful for Austin's help, he applied for additional contracts for colonization in 1825, 1827, 1828, and 1831 (Cantrell 1999). Many of these settlers traveled south from Arkansas or northern Louisiana along Trammel's Trace (Pirtle 2006), which parallels the eastern boundary of present-day Rusk County east of Martin Lake. Named for Nicholas Trammel, who reportedly used the trail to run stolen horses and slaves as early as 1813 (Pinkerton 2007), the Trace was one of the major conduits from U.S. territories into northern Mexico, and extended from Pecan Point on the banks of the Red River to Nacogdoches. Most immigrants were heading for the fertile prairies of south-central and southeastern Texas where Green DeWitt had established a successful colony alongside Austin's new colonies on the lower Brazos, Colorado, and Trinity rivers.

Renewed dissatisfaction with this growing tide of Anglo-American immigration prompted Mexico to pass a law on April 6, 1830, prohibiting settlement in the so-called Neutral Ground bordering the state of Louisiana, a strip 20 leagues wide situated between the Neches and Sabine rivers. "For a brief period in the 1820s and 1830s, that part

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of Texas east of the *empresario* colonies in the vicinity of the old Spanish town of Nacogdoches was the focus of unorganized (in the *empresario* colonization sense) and sometimes illegal immigration” (Jordan 1979:212). After the law was repealed 3 years later, an Anglo-American land rush once again began to east Texas and beyond.

Mixing with these Anglo-American immigrants were members of the “Five Civilized Tribes” of Choctaws, Creeks, Cherokees, Chickasaws, and Seminoles, some of whom brought with them African slaves from their previous landholdings in southern states (Abel 1992; LaGrone 2006). Slaves were also openly bought and sold by Anglo-American settlers once in Texas (Silverthorne 1986). According to the Federalist Constitution of 1824, which contained a vague anti-slavery clause, existing slaves in Texas were required to be treated the same as freedmen under Mexican law (Cantrell 1999). In 1827, the state of Coahuila y Texas ratified a law allowing the importation of slaves into Texas for 1 year, but children of slaves were to be freed at birth. In 1828, the state enacted another law, which enabled residents of Texas to continue to import and maintain their slaves, later granting residents an exemption from anti-slavery legislation in 1830.

While in Mexico City to negotiate legislation favorable for the continued importation of slaves to Texas in 1834, Austin was arrested under charges of sedition for a letter he wrote to his colonists and colleagues in San Antonio concerning the growing movement to petition the government for separate Mexican statehood for Texas. By the time of his acquittal and return to Texas almost 1 year later in the summer of 1835, independence and “Americanization” was a very real possibility in Austin’s mind (Cantrell 1999). Armed conflict with Mexican troops in San Antonio soon ensued, sparking the Texans’ revolt, which incurred early defeats at Goliad and the Alamo, but culminated in a final victory by Sam Houston at the battle of San Jacinto on April 22, 1836, and the capture of General and President Antonio Lopez de Santa Anna (Sowell 1991). After an unsuccessful bid for the Texas presidency that year, Austin was appointed secretary of state by elected president Sam Houston, and he then drafted the arrangements for Santa Anna to be repatriated to Mexico via Washington, D.C., and a meeting with U.S. President Andrew Jackson, an event Austin never lived to see.

During the 15-year period in which Austin attempted to maintain Texas as part of the Republic of Mexico, a shift in the regional economy occurred, from a previous dependency on goods made in New Spain/central Mexico, to a new focus on manufactured goods from other countries through trade across the American frontier (Williams 1992). Many Tejano residents, early Anglo-American settlers, immigrant Indian tribes (Perttula 1994), and “. . . an untold number of squatters in the region bordering Louisiana” (Cantrell 1999:225) were likely involved in this trade, not all of which was legal (Loren 2000). While Mexico and the U.S. minted their own coinage during this period, Colonial Spanish silver “bust or portrait dollars,” minted in Mexico until its independence in 1821, remained legal currency in Texas and the U.S. until 1857 (New World Treasures 2003–2006). The value of the Spanish *real*, the American dollar, and the Mexican *peso* fluctuated constantly on the Texas frontier during this period, especially given that furs and skins were often exchanged by rural settlers and immigrant Indians for goods with local merchants (Jackson and Wheat 2000).

Indian immigrants to Texas were from tribes formerly residing in southern and eastern U.S. states who were being driven ever westward by Anglo-American settlers and official Jacksonian government policy. By 1830, such immigrant tribes residing in or passing through northeast Texas included the Choctaw (Carlisle 2012; McKee 1989), the Cherokee (Cliff and Sills 2004; Lipscomb 2006a; Perdue 1989), the Delaware (Lipscomb 2006b), the Shawnee

(Lipscomb 2006c), the Alabama and Coushatta (Hook 1997), the Wichita (Smith 2000), the Kickapoo (Nunley 2006), and the Seminole (Guinn 2002; Nunley 2006). This region was already the recognized homeland of the Caddo nation (Smith 1995; Swanton 1942, 1946), but the signing of the Caddo Treaty of 1835 forced remaining Caddo groups from central and western Louisiana to cross the Sabine River into Mexico (Flores 1984; Lange 1974), by which time Anglo-American immigration to Texas was a flood.

Republic of Texas Period (A.D. 1836–1846)

In recognition of problems inherent with large-scale immigration across this new frontier after the founding of the Republic of Texas in 1836, the first president, Sam Houston, signed a treaty with 12 Indian tribes guaranteeing them land for a reservation on the upper Brazos drainage. The Republic's legislature refused to ratify Sam Houston's treaty, however, and the resulting "Cherokee War" of 1839 drove most tribes (including the Cherokee and Shawnee residing near Henderson) north into Indian Territory across the Red River or west of the Brazos. Some small bands of Cherokees and Delawares continued to live in east Texas and fight against the army of the Republic when threatened, until peace treaties were finally negotiated with the remaining members of these two Texas tribes in 1843 and 1844 (Lipscomb 2006a, 2006b).

With the removal of most Indians as an impediment to Anglo-American settlement in the region (cf. Nelson and Perttula [2003] in Camp County; Walters [2004a, 2004b] in Smith County) came the need for more-efficient local governance of land apportionment. This was made obvious by land disputes and the lawless activities of vigilante groups and outlaws in the former Neutral Ground, situated west of the State of Louisiana and north of the intersection of the 32nd parallel with the Sabine River (approximately where State Highway [SH] 31 crosses the Texas-Louisiana border today). The feud between two factions supporting opposing borders eventually became known as the Regulator-Moderator War (LaGrone 2006). This feud only ended when President Sam Houston called out the militia in 1844.

By the cessation of hostilities, a system of "headright" land grants was established by the Republic, allowing for each head of family (excepting Africans and Indians) to be awarded "first class" headrights to 1 league of land if resident in Texas since 1836, and $\frac{1}{3}$ of a league to single men under 17. Later laws awarded "second class" headrights of 1,280 and 640 acres to residents before 1837, "third class" headrights of 640 and 320 acres to residents before 1840, and "fourth class" headrights of 640 and 320 acres extending the "third class" headrights to residents after 1840. In 1845, homesteaders were allowed to settle up to 320 acres of vacant public land with a required residence period of 3 years. Land was also rewarded by the Republic to veterans of the war of independence with Mexico (Carlson 1986). By this time, developed land from previous headrights in nearby Harrison and Panola counties was being sold at roughly \$1 per acre (Jordan and Weir 1976:18–24).

The first land grant issued in present-day Rusk County was to William Elliot on March 22, 1829 (Knapp and Biesele 2006), but after the Texas Revolution, settlement in the area accelerated. New colonists typically came from Tennessee, Georgia, North Carolina, and South Carolina. With this rapidly growing local population, the Congress of the Republic created Rusk County from the larger Nacogdoches County in 1843 (Knapp and Biesele 2006), named after President Sam Houston's secretary of war Thomas Jefferson Rusk. The county seat was established at the center of the county on donated land, and the town was named Henderson after the friend of one of the donors.

Far more valuable than land were slaves, who could now be legally imported from the U.S. and sold on the open market (Exley 1985; Gates et al. 2002), although most slaves were introduced by Anglo-American immigrants from the Old South. The African slave trade also continued from ports in Cuba and the Caribbean (Everett 2006), in violation of international and U.S. law, although the percentage of the total slave population in Texas thus introduced was small in comparison to those imported as property. In 1836, U.S. President Andrew Jackson's envoy to study conditions in Texas following the revolution reported a total of 5,000 blacks (mostly slaves) in the Republic, and by 1845 as the Republic came to a close, a total of 27,555 blacks were reported in the last census (Campbell 1989).

Statehood Period (A.D. 1846 to the Present)

After statehood and the influx of settlers from other southern states, Rusk County had the second largest population in Texas and boasted at least 17 plantations of 10,000 acres or more. To run the larger plantations, the owners frequently had more than 50 slaves (Anderson et al. 2012), such that by 1850 more than one-fourth of the county's inhabitants were slaves (Knapp and Biesele 2006). In Rusk County, the larger plantations "were patterned after the ones their owners had left behind in the old South. They were large in size, had many slaves and were, to a degree, self sustaining, having their own cotton gins, grist mills, tanneries, spinning and weaving houses, smokehouses and 'sick' rooms" (Taylor Publishing Co. 1982:24). Most plantations in the county, however, consisted of small farms with limited acreage and only a few slaves, or none whatsoever.

Prior to the Civil War, Rusk County had become quite prosperous. Local farmers and their slaves had cleared much of the fertile land and grew a variety of marketable crops, from corn to cotton. In fact, at the beginning of the war, Rusk County contributed 12 companies of soldiers to the Confederacy, made possible by a rapid increase in population from the Deep South during the preceding decades (cf. Carlson 1990; Carter 1994; Jordan and Weir 1976). Although some areas of east Texas experienced a brief period of economic prosperity during the Civil War years, Rusk County, given its dependence on plantation/slave agriculture, fared worse than many other counties.

After the Civil War, many former slaves from Rusk County settled in growing urban centers of Texas such as Houston (Adele 1989; Maxwell 1997). Blacks moving to urban areas may have benefited more economically during the Reconstruction era than their rural counterparts, since efforts to provide former slaves with land and education through the Freedmen's Bureau were often met with violent resistance from the white population in northeast Texas and the cotton belt to the south (Crouch 1992). This political divisiveness between 1864 and 1869 even led some newly seated Republicans in the state legislature to propose the division of Texas into two states (Moneyhon 2004), thus enabling the western half of the state to reenter the Union while the eastern half remained unrepentant.

This proposal was never enacted, of course, in part because resistance to postwar policies in some places like Rusk County was not well organized, due to political support of the moderate wing of the Republican Party by influential members of local society (Knapp and Biesele 2006). Nevertheless, personal wealth and real estate values in the county plummeted during the Reconstruction period (Campbell and Lowe 1977; Moneyhon 2004), with many former slaves and landless whites seeking employment as sharecroppers and tenant farmers, agreeing to provide the landowner (often a former plantation owner) with a share of the season's cotton or produce in return for the right to farm a plot of land.

Most sharecroppers raised cotton for export to local markets as a cash crop, while corn could be sold locally as animal fodder or consumed as a food staple. Other principal agricultural cash crops included wheat, sugar cane, livestock, and tobacco. Statistically, cotton and timber were the main crops in Rusk County from early times until the 1930s when the cotton market had collapsed, after which time many farmers turned to smaller crop production (vegetables, fruit, or grains) and cattle raising. The picture of Rusk County agriculture thus formed from the 1850s until the 1930s remained one principally of many small farmers and livestock raisers.

PREVIOUS INVESTIGATIONS

Rusk County attracted little interest from archeologists until the early 1930s when J.E. Pearce, the founder of the Department of Anthropology at the University of Texas, arranged for expanded archeological work in Texas, much of which was centered in east Texas. A.T. Jackson supervised archeological investigations at a number of sites, including at least three sites in Rusk County — 41RK1, 41RK2, and 41RK6 (Jackson 1935). Site 41RK6 was reportedly tested by Jackson. Another site in Rusk County, 41RK4, was investigated by Jackson and Woosley at about the same time (Woosley 1939). In 1935, Goldschmidt (1935) prepared a synthesis of archeological sites in Titus County and their relationship to other sites in east Texas. The importance of this early work is that it was one of the first attempts at defining a chronological framework for the region.

Little professional archeological work was done in Rusk County in the years following World War II, until the rise in contract archeology in the 1960s. In 1968, a reconnaissance survey was conducted for the then-proposed Ponta Reservoir, located on the Angelina River in Cherokee, Nacogdoches, and Rusk counties, by archeologists from Southern Methodist University (SMU). In all, 10 prehistoric sites, including three in Rusk County, were recorded by SMU (Skinner 1971). In the 1970s, archeologists from the Texas Archeological Survey (TAS) conducted a survey of the Martin Lake area in Rusk and Panola counties (McDonald 1972). Forty-one sites were recorded, of which 20 were recommended for testing. As a result of these recommendations, additional work was conducted at sites 41RK19, 41RK21, 41RK32, 41RK36, and 41RK39 (Clark and Ivey 1974). Based on this work, 41RK39 was determined to be a multicomponent site with Late Archaic and Late Caddo components (Clark and Ivey 1974:84). A Late Caddo occupation was also documented for sites 41RK19, 41RK21, and 41RK32. A single-component contact period occupation, postdating A.D. 1600, was identified at 41RK36 (Clark and Ivey 1974:70; Skokan et al. 1997).

In the 1980s, the University of North Texas conducted initial assessments of Caddo mound sites in the Sabine River valley in east Texas and adjacent portions of northwestern Louisiana (Pertulla 1989). Thirty-seven possible mound sites were identified, two of which (41RK3 and 41RK4) were located in Rusk County (Skokan et al. 1997).

Subsequent to 1980, numerous extensive cultural resource investigations have been undertaken in association with surface coal-mining projects in and around Rusk County. These include the Martin Lake Mine, in northeastern Rusk and northwestern Panola counties, and the Oak Hill Mine, in north central Rusk County. In the early 1980s, TAS archeologists conducted a reconnaissance survey of 2,630 ha (6,499 acres) in Rusk County for the Martin Lake Area D, First Five-Year Plan. Three prehistoric sites were recorded (Jackson 1982). Early in 1982, TAS archeologists conducted a cultural resource survey of the railroad and transmission line corridor for the Martin Lake Mine-Area D (Moncure and Jackson 1982). Three sites were documented (41RK10, 41RK104, and 41RK105). Site 41RK10 was a prehistoric site that was originally recorded by the TAS in 1972 and was found to be destroyed (McDonald 1972).

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Site 41RK104, the Thomas Walling Cabin, dates from the 1840s and was determined eligible for the NRHP in 1982 (Moncure 1984; Moncure and Jackson 1982:24-34). The cabin was mitigated and eventually relocated to the Depot Museum grounds in Henderson (Moncure 1984).

Throughout the mid-1980s and into the 1990s, Atkins conducted multiple investigations within the Martin Lake Mine area and recorded numerous sites in Panola County, but none in Rusk County (Glander 1984a, 1984b, 1989; Glander and Bearden 1986; Glander and Brandimarte 1983; Glander and Victor 1984; Glander et al. 1986; Kotter and Moore 1990). Finally, in the mid-1990s, Atkins conducted an archeological survey of additional areas at the Martin Lake Mine in Rusk and Panola counties resulting in the recording of 27 prehistoric sites and 17 historic period sites (Taylor and Tate 1997).

In 1980, a TAS document (Moncure and Jackson 1980) was one of the first cultural resource investigations within the Oak Hill Mine area. This survey investigated 9,510 ha (23,500 acres), with most attention focusing on the Mill Creek area's eastern drainage. The purpose of this survey was to generate a predictive model of archeological sensitivity for use as a planning tool in the development of the Oak Hill Mine. Only four prehistoric sites (41RK65, 41RK82, 41RK83, and 41RK106) and six historic period sites (41RK64, 41RK85, 41RK86, and 41RK87; the other two historic period sites were not given trinomial numbers) were recorded. Site 41RK64, known as the Taylor Brown Kiln, was originally reported by G. Greer in 1973 as part of her ongoing kiln studies in Texas (site form on file at TARL). In addition to the kiln remains, examination by TAS archeologists revealed evidence of a grist mill, remains of an antebellum dwelling, and a cemetery over an approximately 2-ha area (4.9 acres). The site appears to date from the 1850s and avoidance was recommended by TAS archeologists.

Site 41RK87 was recorded by TAS archeologists and identified as the ruins of a former antebellum plantation of Anglo affiliation dating from ca. 1854 (Moncure and Jackson 1980:37). Archeologists from TAS recommended that selective excavation be conducted to determine the existence of outbuilding remains and obtain a sample of representative artifacts (Moncure and Jackson 1980:40). The site was revisited by TAS personnel in 1982 (Jackson 1982) and was found to have been destroyed by bulldozing. As a result, the original recommendation referenced above was retracted, and no further investigation of the site was recommended (Jackson 1982:23).

Later in 1982, TAS conducted an intensive survey of 200 ha (494 acres) in the area west of FM 1716 (Jackson 1982). The stated goal of this investigation was to test the reliability of the Moncure and Jackson (1980:49) settlement model (few prehistoric sites were expected because of a lack of water) by locating and evaluating all cultural resources within the TAS permit area (Jackson 1982:1). Four prehistoric sites were recorded (41RK106, 41RK109, 41RK110, and 41RK111), all adjacent to Mill Creek.

Atkins also conducted numerous cultural resource investigations within the Oak Hill Mine. In 1985, a cultural resource investigation was requested by Texas Utilities Mining Company (TUMCO) and the THC to survey around five known springs within the permit area. An intensive pedestrian survey of 170 ha (420 acres) was conducted, but no cultural resources were located. The same year, at the request of TUMCO, Atkins archeologists conducted a field check of sites 41RK106, 41RK109, 41RK110, and 41RK111, all previously recorded by TAS archeologists (Jackson 1982; Moncure and Jackson 1980). This survey was undertaken to determine whether any of these known sites would be impacted by the land clearing for the then-proposed electric transmission line corridor to be built by

3. Archeological and Historical Background

Southwestern Electric Power Company. One site, 41RK106, was found to be extensively eroded due to natural runoff. All of the other sites were found to not be impacted by the then-proposed transmission line.

In 1987, Atkins archeologists conducted a 100 percent cultural resources survey of all unsurveyed lands (140 ha [346 acres]) then within the Oak Hill Mine (Glander et al. 1987). In addition, the study sought to reassess all previously recorded sites within the entire mine. Forty-one of the previously recorded sites were relocated and their status assessed. Two previously unrecorded sites were also located. In 1989, Atkins conducted a cultural resource survey of 923 ha (2,281 acres) for the Oak Hill Mine northeast of Henderson (Rogers et al. 1992). Twenty-three archeological sites were located, eight of which were recommended by the THC for further investigations to determine NRHP eligibility. One of these, 41RK214, known as the Oak Hill Village, was tested and subsequently mitigated in 1994 and 1995 (Rogers et al. 1994; Rogers and Perttula 2004). These excavations resulted in the identification of 36 Caddo houses, 6 smaller structures, 3 burials, 2 trash middens, and 165 other cultural features; and the recovery of approximately 25,000 ceramic artifacts and more than 6,000 lithic artifacts. Sites 41RK222 and 41RK223 (the Millville Mill site) were also tested for NRHP eligibility and were subsequently mitigated (Foster and Jurney 2000; Rogers et al. 1994). Site 41RK222 was identified as a Late Archaic and Woodland period site. The excavations recovered more than 6,000 lithic and 200 ceramic artifacts and identified 16 cultural features, including rock hearths and trash and storage pits. Site 41RK223 consisted of the fragmentary remains of a mid-nineteenth-century water-powered mill, submerged within the waters of Boggy Branch.

In 1994 and 1996, a cultural resources survey was conducted for the proposed Oak Hill Mine D-III permit area (Skokan et al. 1997). This survey recorded a total of 213 archeological sites, including 126 with prehistoric components. Additional research was recommended for 61 sites. During 1997, Atkins conducted NRHP eligibility testing on five sites located within the D-III permit area (Sherman and Nash 1998). Of the five sites tested, only one (41RK342), a Middle Caddo hamlet, was considered eligible for the NRHP. Charcoal from a possible hearth feature returned a 2-sigma calibrated radiocarbon date of A.D. 1297-1421. Six more sites (41RK107, 41RK240, 41RK242, 41RK243, 41RK276, and 41RK286) were tested for NRHP eligibility in 1999 and 2000, with additional testing at 41RK243 (Sherman 2000). Of the six sites, only 41RK240 was considered eligible for the NRHP. During 2002, three more sites (41RK247, 41RK248, and 41RK379) were tested for NRHP eligibility, and extended testing was completed on site 41RK247 historic period component II, and shovel testing on site 41RK331 (an NRHP-eligible site) (Sherman et al. 2002). These testing investigations deemed all four sites, excluding 41RK311, ineligible for inclusion in the NRHP. More recently, in fall 2003, site 41RK328 was tested and was considered ineligible for inclusion in the NRHP (Cliff et al. 2004).

In 2001 and 2002, Archeological & Environmental Consultants (AEC) completed a recovery and investigation projects at the City of Henderson's Southside Wastewater Treatment Plant. This project directly abuts the current project ROW to the south. Site 41RK170, or the *Nawi Hain Ina* site, was recorded as a multicomponent prehistoric site. Multiple cultural features including burials, habitation features, and a midden were documented. A Woodland component was also noted (Perttula and Nelson 2003).

In 2008, a cultural resources survey was conducted for the proposed First Five-Year Area of the South Henderson Deposit. This area is less than a mile south of the current project area. This survey recorded a total of 42 newly recorded archeological sites and 13 isolated finds. Fifteen of the sites had prehistoric components. Additional testing

3. Archeological and Historical Background

was recommended for 6 sites (41RK517, 41RK520, 41RK528, 41RK542, 41RK543, and 41RK544) (Dixon et al. 2009).

Elsewhere in Rusk County, the Archeological Planning and Review Department of the THC conducted test excavations at the Hudnall-Pirtle site (41RK4) during 1989 and 1990 (Bruseh 1991). These excavations included the mapping of seven of the eight mounds and the excavation of two block areas placed in a portion of the site disturbed by oil-drilling activities. Limited work was also conducted in two of the mounds, revealing the presence of a burned and probably dismantled structure on a pre-mound surface. Radiometric assays obtained from charred timbers were calibrated at A.D. 1158 \pm 70 and A.D. 1174 \pm 70. Ceramics of the types Pennington Punctated-Incised, Crockett Curvilinear Incised, Holly Fine Engraved, Weches Fingernail Impressed, Davis Incised, and Dunkin Incised confirmed an Early Caddo occupation. A few sherds of Coles Creek, var. Coles Creek, attested to an earlier occupation. Projectile point types Alba, Bassett, Colbert, and Homan were also recovered (Bruseh 1991:14).

In the larger region of east Texas, major recent reservoir projects have been conducted at Lake Gilmer, in Upshur County (Horizon Environmental Services, Inc. 1992; Nichols et al. 1997) and at Lake Naconiche, in Nacogdoches County (Perttula, ed. 2000, 2002). National Register testing has been conducted at five prehistoric sites in Malden Lake Park, at Lake Wright Patman in Bowie County (Owens and Hunt 1999); at 41PN175 on Murvaul Creek in Panola County (Cliff and Perttula 2002a); and at 41WD632, north of the Sabine River in Wood County (Cliff and Perttula 2002b). Finally, data recovery has been conducted at the Hurricane Hill site (41HP106) at Cooper Lake in Hopkins County (Perttula, ed. 1999); at the Murphy Branch site (41MX5), north of White Oak Creek in Morris County (Brewington et al. 1995); at the Mockingbird site (41TT550), a Titus phase domestic occupation and cemetery (Perttula et al. 1998); at the Ear Spool site (41TT653), a Titus phase domestic occupation (Perttula and Sherman 2009); at the Alex Justiss site (41TT13), a Titus phase cemetery (Rogers et al. 2003); at the Rookery Ridge site (41UR133), a Late Caddo hamlet at Lake Gilmer (Parsons 1998); and at the Pilgrim's Pride site (41CP304), an Archaic and Titus phase site in Camp County (Perttula 1999; Perttula, ed. 2005).

RESEARCH DESIGN AND FIELD METHODS

BACKGROUND AND RECORDS CHECK

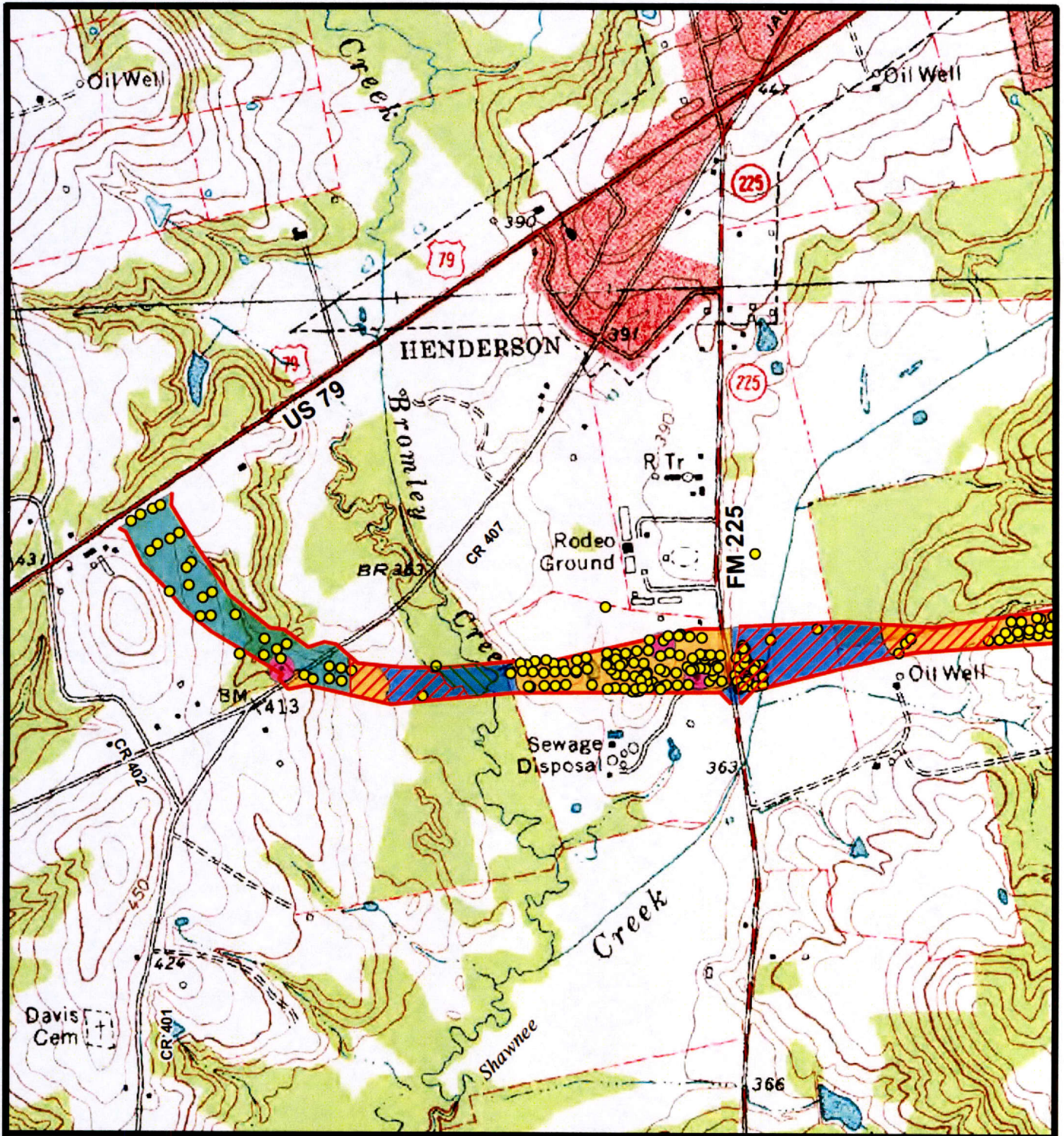
Prior to the initiation of fieldwork, Atkins conducted a site file and records review at the Texas Archeological Research Laboratory (TARL) and at the THC in order to identify known or potential archeological sites within or close to the proposed APE. The files at TARL were examined for the locations of previously recorded archeological sites on the U.S. Geological Survey (USGS) 7.5-minute Henderson and Berryhill Creek quadrangle maps. The online Texas Archeological Sites Atlas of the THC was reviewed for locations of properties that are listed in or determined eligible for listing in the NRHP, sites designated as SALs, and Official Texas Historical Markers. Soil, road, satellite imagery, and topographical maps were also consulted to locate historic period structures.

PEDESTRIAN SURVEY

After obtaining an Antiquities Permit, three Atkins archeologists conducted an intensive pedestrian survey, augmented by shovel testing, of the proposed APE between US 79 and US 259. Prior to the initiation of fieldwork, the proposed ROW was divided into high probability areas (HPAs), moderate probability areas (MPAs), and low probability areas (LPAs), based on examination of topographic maps (Figure 3). Figure 3 does not show all of the shovel tests excavated by the pedestrian survey, since not all of the Universal Transverse Mercator (UTM) data were available. Those areas lacking UTM data are indicated in the map key (see Figure 3). HPAs were defined as those areas possessing the greatest potential for containing archeological sites. Potential site integrity was also presumed to be highest in the HPAs. MPAs were those that might contain archeological remains but in which their presence was considered to be less likely, for reasons of distance to water, topography, slope, or soils. LPAs were those in which archeological sites were unlikely to be present, or in which they would be greatly disturbed. In general, LPAs included areas characterized by steep slopes, deflated or eroded surfaces, or modern construction. Historic period high probability areas (HHPAs) were identified based on the historic period map research described above and were defined based on the presence of historic period structures or features on the maps.

Prehistoric site types in this area include villages, mounds, campsites, and lithic procurement sites. They generally have a low surface visibility due to heavy vegetation cover and sediment deposition. Buried or partially buried sites may occur in alluvial settings in river and stream valleys, and in upland settings subjected to colluvial deposition. Prehistoric sites in this region are most frequent in the following locations:

- along the margins of river and stream valleys;
- on alluvial terraces;



- HHPA
- HPA
- MPA
- Alluvial Soils
- Shovel Test
- Proposed APE Boundary
- 30m Interval Shovel Testing
- Wet and Marshy, not Shovel Tested

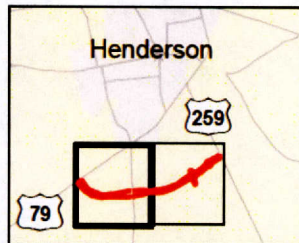
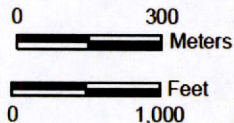
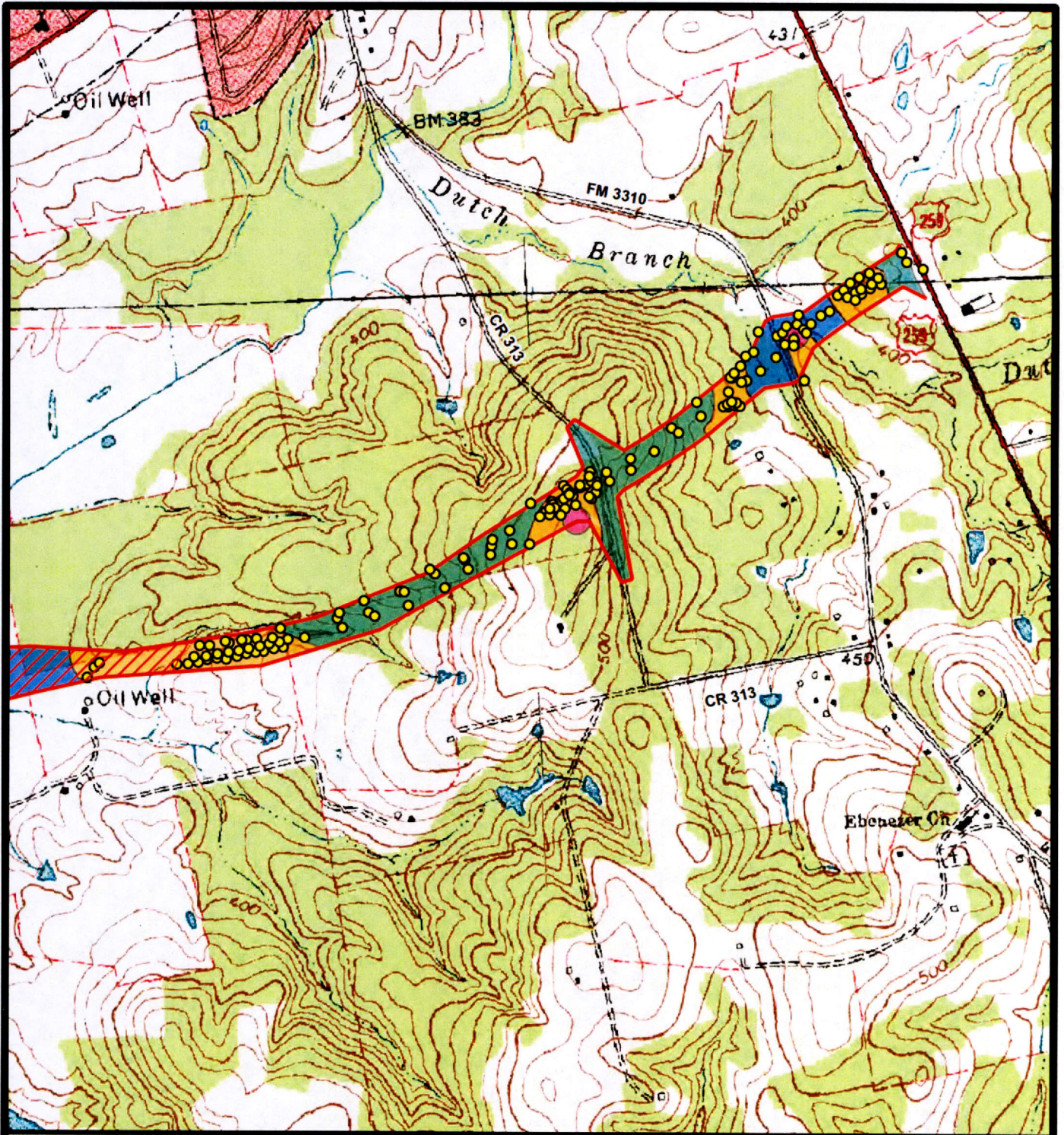


FIGURE 3a
PROBABILITY AREAS
 LOOP 571 EXTENSION
 FROM U.S. HWY. 79 TO U.S. HWY. 259
 RUSK COUNTY, TEXAS

Job No. 100010377	Scale: 1" = 2,000' @ 8.5"x11"
Prepared by: 19910	Date: 2 May 2012

BASE MAP: USGS 7.5' TOPOGRAPHIC MAP, BERRY HILL CREEK & HENDERSON, TEXAS

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- HHPA
- HPA
- MPA
- Alluvial Soils
- Shovel Test
- Proposed APE Boundary
- 30m Interval Shovel Testing
- Wet and Marshy, not Shovel Tested

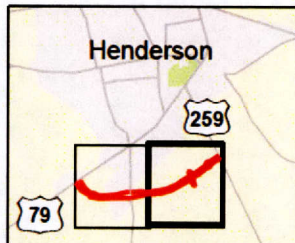
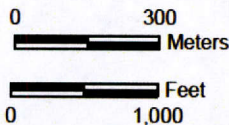


FIGURE 3b
PROBABILITY AREAS
 LOOP 571 EXTENSION
 FROM U.S. HWY. 79 TO U.S. HWY. 259
 RUSK COUNTY, TEXAS

Job No.: 100010377	Scale: 1" = 2,000' @ 8.5"x11"
Prepared by: 19910	Date: 10 June 2013

BASE MAP: USGS 7.5' TOPOGRAPHIC MAP, BERRY HILL CREEK & HENDERSON, TEXAS

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- on alluvial or colluvial aprons and fans;
- on upland edges overlooking river valleys;
- on upland projections extending into floodplains;
- on rises within floodplains, including both erosional remnants and depositional features, such as levees;
- at stream or river confluences; and
- near springs.

Prehistoric sites are least frequent in flat upland settings at some distance from water sources, and on steep slopes.

Historic period sites in this region have a greater visibility because they are usually not buried as deeply as prehistoric sites, or are not buried at all. They are also often associated with surface features, such as wells and buildings; sometimes contain remnant domestic vegetation, such as lilies and very large shade trees; and, as a rule, contain a much higher density of artifacts. Sites abandoned in the middle nineteenth century are an exception to this, as they are usually not associated with any structural features and are often characterized by a low artifact density. Historic period sites often occur along old roads, and are more common in the uplands than on floodplains.

HPAs were initially identified prior to fieldwork, based on contour maps and aerial photographs, as areas with suitable topography generally within about 305 m (1,000 ft) of natural water sources. HPAs were modified during the subsequent field survey based on conditions on the ground. HPAs included the following locations:

- interfluvial summits and shoulderslopes;
- lower slope components, such as interfluvial toeslopes and footslopes;
- natural levees or levee remnants;
- relict alluvial terraces;
- rises within floodplains; and
- upland edges adjacent to alluvial valleys and stream confluences.

MPAs were also initially identified prior to fieldwork as upland areas generally greater than 305 m (1,000 ft) from natural water sources and areas with slopes of greater than 20 percent within 305 m (1,000 ft) of water sources. MPAs were also modified during the subsequent field survey. LPAs were identified as areas with extensive natural ground disturbance, such as mass wasting or sheet erosion, areas disturbed by modern development, or areas with slopes of greater than 50 percent. With the exception of areas of steep slopes, LPAs were generally identified in the field, during the survey. LPAs were documented during the field survey, but were not subjected to any further archeological examination.

The proposed APE was surveyed with three transects spaced about 30 m (98 ft) apart. Shovel testing within the floodplains of the creeks was conducted at the discretion of the project archeologist in the field. Shovel tests within HPAs were spaced no farther than 30 m (98 ft) apart. Shovel tests in MPAs were judgmentally placed in locations determined at the discretion of the project archeologist in the field, but were no farther than 100 m (328 ft) apart.

In all, 340 shovel tests were excavated in an effort to locate and record archeological sites, for an average density of 2.59 shovel tests per acre (6.39 shovel tests per hectare). Most of these shovel tests were localized within the areas defined as HPAs.

All shovel tests were approximately 30 cm (12 inches) in diameter and were excavated in 10-cm (4-inch) levels. All shovel tests were excavated to a depth where pre-Holocene sterile substrates were encountered, if possible. In deeper soils or if the stratum was indeterminate, the shovel test was excavated to a maximum depth of 80 cm (32 inches).

The excavated fill from each shovel test was sifted through 6.4-millimeter (¼-inch) hardware cloth unless the matrix was dominated by clay, in which case it was visually inspected. General shovel test location, maximum depth, soil characteristics, reason for termination, and artifact contents (if any) were recorded on Atkins field forms for each shovel test. Specific shovel test locations were recorded using a hand-held geographic positioning system (GPS) unit. All shovel tests were backfilled upon completion.

GEOARCHEOLOGICAL INVESTIGATIONS

Geoarcheological investigations of the project area were originally intended to consist of mechanical trenching to be conducted within the APE in several floodplain locations along the proposed ROW in order to evaluate the floodplain deposits in regard to their likelihood of containing buried archeological properties and, if possible, to locate such properties.

As part of the preparation of the research design for the ACT permit, the maps of the project APE were examined in order to identify floodplain areas with the potential for containing buried archeological properties which would require backhoe trenching. Moving from west to east, the project APE crosses Bromley Creek, Shawnee Creek, an unnamed upland tributary of Shawnee Creek, an unnamed tributary of Dutch Branch, and Dutch Branch itself. The Tyler Sheet of the Geologic Atlas of Texas (BEG 1965) identifies the floodplains of Bromley Creek and Shawnee Creek as consisting of Recent Alluvium. In contrast, the unnamed upland tributary of Shawnee Creek, the unnamed tributary of Dutch Branch, and Dutch Branch itself are all mapped as being on Eocene-aged Wilcox Group undivided, with no alluvium.

As previously noted, the soil survey for Rusk County (USDA, NRCS 2000, 2013) shows both Bromley Creek and Shawnee Creek as having relatively broad floodplains identified as Laneville loam, frequently flooded. The unnamed upland tributary of Shawnee Creek does not appear to be associated with any alluvial deposition at all. The unnamed tributary of Dutch Branch, located west of FM 3310, is characterized by a relatively narrow floodplain mapped as Iulus fine sandy loam, occasionally flooded; while Dutch Branch itself also has a relatively narrow floodplain in this area, mapped as Laneville loam, occasionally flooded.

Backhoe trenching was originally to be conducted in the floodplains of Bromley Creek and Shawnee Creek, located in the western portion of the project APE (see Figure 2). The other floodplain areas (i.e., Dutch Branch and its tributary) were believed to have a low potential for containing buried prehistoric sites, given their size and location near the upper end of their respective drainage basins. As a result, it was decided that these latter areas would be evaluated in the field for their suitability for trenching and would be subjected to intensive shovel testing if it was

determined that they were not suitable for mechanical trenching. Unfortunately, trenching in the high probability floodplains along Bromley and Shawnee Creeks, and in the area of Dutch Branch, could not be carried out because Right of Entry was not granted for trenching, so this work could not be completed. It is anticipated that trenching will be conducted under a new Antiquities permit, following purchase of the property, and the results will be presented in another report.

SITE RECORDING AND EVALUATION

All archeological sites identified by the survey were documented on State of Texas Archeological Site Data Forms and Atkins field forms. Approximate site centers were recorded using UTM coordinates obtained from hand-held GPS units. The site's location was noted on a USGS 7.5-minute quadrangle map. A pace-and-compass map was made of each site showing the location of the shovel tests, topography, site features, and any other characteristics of the area. Each site area was photographed. The project had a no-collection policy in regard to artifacts, so diagnostic artifacts were photographed in the field, and then replaced in the ground, and their specific locations recorded using a hand-held GPS unit. A temporary field designation was assigned to each site, and a TexSite form was completed and submitted to TARL for assignment of a permanent trinomial designation. All archeological sites identified by the pedestrian survey were fully defined within the project APE.

Sites encountered during the archeological investigations were evaluated according to criteria set forth in 36 CFR §60.4. Regarding National Register criteria for evaluation, 36 CFR §60.4 states:

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

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

In addition to National Register criteria, sites were also evaluated in regard to their eligibility for listing as SALs. According to 13 TAC 16.8:

The THC uses 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:

- (1) 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;

- (2) 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;
- (3) the site possesses unique or rare attributes concerning Texas prehistory and/or history;
- (4) the study of the site offers the opportunity to test theories and methods of preservation, thereby contributing to new scientific knowledge; and
- (5) the high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to insure maximum legal protection, or alternatively further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected.

RESULTS

RECORDS CHECK

A site file and records review of the Texas Archeological Sites Atlas Online, as well as information received from TxDOT, revealed that four archeological projects and three archeological sites have been previously recorded within 1,000 m (3,280 ft) of the proposed Loop 571 Extension (THC 2010). Archeological projects in the vicinity of the proposed Loop 571 Extension include a TxDOT survey along US 79 conducted on the western edge of the project area in 1985 (State Department of Highways and Public Transportation [SDHPT] 1985); a TxDOT survey for FM 454 (the old Henderson Bypass) conducted in 1987 (SDHPT 1987); a TxDOT survey of a bridge replacement at Shawnee Creek on FM 225 conducted in 2000 (Ahr 2000a); and National Register testing conducted at the Southside Wastewater Treatment Plant conducted in 2003 for the City of Henderson (Pertula and Nelson 2003). The three recorded sites identified in the vicinity of the project area are 41RK170, 41RK172, and 41RK196 (Table 4).

Table 4. Previously Recorded Archeological Sites Within 1,000 m (3,280 ft) of Proposed Loop 571 Extension APE

Site Number	Approximate Distance from APE	Approximate Age	NRHP and SAL Eligibility	Artifacts and Comments
41RK170	Abuts ROW on the south	Early Woodland, Early to Middle Caddo	Eligible	Burials, midden, pits, postholes, ceramics, lithics, good faunal and floral preservation
41RK172	680 m (2,231 ft) northwest	Unknown (probably prehistoric)	Unknown	Unknown
41RK196	Abuts ROW on the south	Historic	Not Recommended	Early-20th-century board-and-batten house, recent trash (ca. 1937–1967)

Site 41RK170 was recorded by Jack Hughes in 1939 and 1940. It is mapped immediately adjacent to the southern edge of the proposed ROW, on the upland ridge between Bromley Creek to the west and Shawnee Creek to the east (see Appendix). The site area is today occupied by the Southside Wastewater Treatment Plant. The site was investigated in 2001 and 2002 and determined to have a significant Caddo domestic occupation (Pertula and Nelson 2003). According to Ahr (2000a), the site is located approximately 700 m (2,296.6 ft) northeast of the early-nineteenth-century Shawnee Village, as shown on the 1838 James Smith Patent Survey at the Government Land Office NI-445 ptd. On the 1932 Government Land Office county index map, the latter location is referred to as

Shawneetown, reportedly situated near Jonesboro Road, which was an alternative segment of the early-nineteenth-century Trammel's Trace according to Bob Skiles (cited in Ahr 2000b:7).

Site 41RK172 was also recorded by Jack Hughes in 1939 and 1940, but no other information is available on the site; although in light of when it was recorded, it is probably primarily a prehistoric site. It is mapped, based on Hughes's notes, as being approximately 680 m (2,231 ft) northwest of the proposed ROW extension, on both sides of FM 3310 (see Appendix).

Site 41RK196 was recorded by Glen Goode in March of 1987 while conducting an archeological survey for the proposed SH 454 for SDHPT (SDHPT 1987). The site is mapped as being immediately adjacent to the southern edge of the present ROW, on the toeslope west of an unnamed tributary of Dutch Branch (see Appendix). It reportedly consisted of the remains of an early-twentieth-century house located on the west side of FM 3310, approximately 1.3 km (0.8 mile) north of Ebenezer Church. The description given in the THC Archeological Sites Atlas online states:

On FM 3310 1mi N of its intersection with US 259 [*sic*] is entrance to H. Tenaha (?) Girl Scout Camp. This was entrance to board/batten house-visible on S side of the lane. House is 550 ft W of FM 3310, located at sta.450-00 [*sic*] of proposed FM 454.

House located on wide bench at base of hills, 300 ft NW of small branch, 550 ft W of FM 3310. An oil covered driveway runs from house to a lane (paved road entrance to Girl Scout Camp) (THC 2013).

The site reportedly covers about 1 acre (4046.8 m²). Shovel testing reportedly produced no prehistoric material and very little historic material. Artifactual material observed on the site consisted of

Late junk (20–50 years) widely scattered. Recent dump [*sic*] in gully motor oil cans, Folger's coffee cans (THC 2013).

When it was initially recorded, site 41RK196 was deemed to have no potential for inclusion in the NRHP, and no potential for being an SAL.

A standing structure, identified by TxDOT personnel in 2010 within the proposed ROW between CR 313 and FM 3310, is believed to be 41RK196. At that time, it was believed to be an old house that was being reused as a barn for hay storage. A set of undated project plans for the Henderson Bypass (presumably SH 454) shows an "Abandoned House/Barn" located near the center of the old ROW, between stations 449+00 and 450+00.

In addition to these three sites, the files at TxDOT reported the presence of five other possible, and apparently unrecorded, cultural resource sites possibly within the proposed ROW or within 1,000 m (3,280 ft) of the proposed ROW (Table 5). Two of these were reported to possibly be within the proposed ROW, while the other three were reported to be north of the eastern end of the proposed ROW.

Table 5. Unidentified Cultural Resources Reported Within 1,000 m (3,280 ft) of Proposed Loop 571 Extension

Site Number	Approximate Distance from APE	Approximate Age	NRHP Eligibility	Artifacts and Comments
None	Possibly within ROW	Unknown	Unknown	Reported unmarked graveyard
None	Approximately 30 m north of the ROW	Twentieth century	Unknown	Camp Fire Lodge (aka Camp Heoki Maraha)
None	Possibly within ROW	Woodland or Caddo	Unknown	Reported prehistoric ceramic between Shawnee Creek and CR 313
None	Est. between 240 and 800 m northwest of ROW	Unknown	Unknown	Reported Indian village
None	Est. between 980 and 1,540 m northwest of ROW	Unknown	Unknown	Reported Indian village called "Shawneetown"

An unmarked graveyard was reported to TxDOT by a local landowner in 1983, in connection with the planning for FM 454 (the old Henderson Bypass). The proposed route for the old Henderson Bypass in 1983 generally ran within the limits of the existing APE today, usually on the southern edge of today's APE. It actually ran south of the existing APE between FM 3310 and US 259. An interoffice memo, dated August 18, 1983 reported:

Royce Dunlap of the Longview Residency called me today. He told me that Talmadge Dowden called him to say that an unmarked graveyard may be located on his land near our proposed location south of Henderson about 1500 feet [ca. 457 m] east of F.M. 225. Mr. Dowden said that some local people had told him that the old graveyard was located on a knoll near an existing oil well and south of an existing fenceline. The well and fence show on the Berryhill Creek, Texas, U.S.C.S. [*sic*] quadrangle map. This location will be investigated during the archaeological survey for this project (Aylor 1983).

A search of online resources revealed that no cemetery is shown on the USGS quadrangle map at this location; no cemetery is listed at this location in the THC's Texas Archeological Sites Atlas online nor in the THC's Historic Sites Atlas online; and no cemetery is listed at this location among the 196 cemeteries listed on the TXGenWeb Project site for Rusk County.

A possible Girl Scout camp has been reported north of the proposed ROW, between CR 313 and FM 3310. An undated sketch map of the location recovered from TxDOT files shows a complex of features located north of what appears to be an older ROW. Unlike the current ROW, this ROW runs straight between what is labeled CR 313 and another road to the east that is presumed to be FM 3310. The station markers appear to match closely with the current proposed ROW, and the possible Girl Scout Camp is marked as being northwest of Station 449 on the centerline of the old ROW. The camp features on this map are only partially labeled, but appear to include a rectangle marked "Camp"; another rectangle marked "Tennis Court"; four small circles labeled "A," "B," "C," and "D" to which the additional label "Hut" may apply; and two unlabeled squares of different sizes. The distance from putative "Hut" A (one of the southernmost features on the map) to Station 449 is given as "Approx. 400' "

(122.9 m). Another set of undated plans for the Henderson Bypass shows a set of buildings in this same location, approximately 123 m (400 ft) from Station 449, labeled “Heoki Maraha Lodge Buildings.” The map shows a circular driveway (presumed linked to FM 313) in front of a large building (presumably the main lodge), with two smaller buildings to the north, and two smaller buildings to the south. An internet search revealed that these buildings were not a Girl Scout camp, but a Campfire Girls of America camp. Originally called the Camp Fire Lodge, it was renovated and rejuvenated at an unknown date, and renamed Camp Heoki Maraha. It apparently served as a summer camp for 1 week every summer (Crawford – A. Crim Funeral Home 2013). The camp apparently had disappeared by 1973, based on the USGS map of that date. The most recent plans for the current project, dated January 28, 2011, show the same five buildings present north of the current ROW, but not labeled.

An unrecorded prehistoric archeological site with ceramics was reported to TxDOT in 2010 by a landowner within the proposed ROW. The site was apparently identified when the land was clearcut and is reportedly in deep sand, based on the presence of bull nettles throughout this parcel. The parcel on which the site was reported runs from CR 313 west almost to Shawnee Creek, although only a few small parcels on the southern edge fall within the proposed ROW.

The final two unrecorded archeological sites were reported to be between FM 3310 and US 259, north of the project area, by TxDOT, after “a search of available literature in the District Office files” in 1983 (Evans 1983). Neither of these sites was located exactly and neither will be impacted by the present proposed project. Both sites were only generally located to within about 0.25 km² (ca. 62 acres). The first site was located between about 240 and 800 m (ca. 787 and 2,625 ft) northwest of Station 466+00 on the eastern end of the proposed ROW. This site was referred to only as an “Indian village,” and no other information is presently available. It may be located on an upland edge overlooking the floodplain of Dutch Branch to the south, but there is presently no recorded site located in that area.

The second site was located between about 980 and 1,540 m (3,215–5,553 ft) northwest of Station 453+00 between CR 313 and FM 3310. This site is located west of Shawnee Creek and is also described as an “Indian Village” with the added information that it is called “Shawneetown.” This suggests that the site may have been the location of a historic Shawnee village known to be located near Henderson in 1838 (Moore 2006:98–99). This Shawnee village appears on an 1838 map of the James Smith Patent Survey, east of what is labeled the “Jonesborough Road” and west of what is presumably Shawnee Creek (Ahr 2000b). Ahr places this location below the confluence of Shawnee and Bromley creeks, south of the present ROW, but this location has not been ground-truthed, and it is not impossible that the Shawnee village was farther up Shawnee Creek.

PEDESTRIAN SURVEY

The pedestrian survey was conducted between July 21 and August 20, 2010, with follow-up site visits on May 17 and May 24, 2013. Approximately 5.5 km (3.4 miles) of new ROW was surveyed, covering an area of about 131.5 acres (53.2 ha). A total of 340 shovel tests were excavated within the APE, for an average density of 2.59 shovel tests per acre or 6.39 per hectare (see Figure 3).

Two new archeological sites (41RK657 and 41RK658) containing early- to middle-twentieth-century and prehistoric artifacts were located and recorded by the pedestrian survey, and two previously recorded sites (41RK170 and

41RK196) were found to extend into the proposed project ROW. The two sites with prehistoric components (41RK170 and 41RK657) were both located on the cleared upland ridge between Bromley Creek and Shawnee Creek, both within 305 m (1,000 ft) of the creeks. The three sites with twentieth-century components were all located within 305 m (1,000 ft) of one of the highways that cross the proposed APE. No archeological sites were located in the remainder of the proposed APE, most of which consists of rolling uplands with moderate to moderately steep slopes, covered with young growth pine and hardwood forest. The exceptions include an area of cropland on the western end of the ROW, adjacent to US 79; small areas of pasture between US 79 and CR 401 and between CR 401 and the floodplain of Bromley Creek; a relatively large area of upland pasture on the ridge between Bromley Creek and Shawnee Creek; another relatively large area of pasture on the floodplain and toeslope east of Shawnee Creek; and a few small areas of pasture between FM 3310 and US 259, on the eastern end of the proposed APE. Most of the proposed APE appears to be too far from water for intensive prehistoric occupation, and too far from highways for historic occupation.

Attempts were also made to locate or relocate the two cultural resources previously reported within the APE (see above). As previously noted, a graveyard was reported to be located about 457 m (ca. 1,500 ft) east of FM 225. The landowner in 1983, Talmadge Dowden, stated that some local people had informed him that the old graveyard was located on a knoll near an existing oil well and south of an existing fenceline. The Berryhill Creek, Texas, USGS quadrangle map shows an oil well in the floodplain of Shawnee Creek, north of a tributary that flows into Shawnee Creek from the east. A fenceline that marks the western boundary of the Dowden parcel is located about 150 m west of the well and another fenceline that marks the northern boundary of the Dowden parcel is located about 125 m north of the well. The well is about 450 m east of FM 225. The knoll referred to by the informant may be the upland toeslope located to the northeast of the well, just south of the fenceline (see Figure 2). The Project Archeologist spoke with the landowner, Talmadge Dowden, during the field survey and was told at that time that the latter had worked the property since the late 1930s and was not aware of any cemetery located on his property. The toeslope location, which seems to best fit the description of the putative cemetery location was shovel tested by the survey crew with negative results and no surface evidence of a historic cemetery was located. Despite the failure to confirm the existence of the reported cemetery, it is believed prudent to recommend that TxDOT conduct scraping of the portion of the Dowden parcel within the APE north and northeast of the oil well shown on the USGS quadrangle map. It is also recommended that additional scraping be conducted in the southwestern corner of the adjacent Kangerga parcel on the possibility that the cemetery was reported to be on the wrong parcel.

The pedestrian survey between CR 313 and FM 3310 showed that the Camp Fire Lodge 9 (aka Camp Heoki Maraha) is still partially present, but it is north of the current proposed ROW and will not be impacted by the proposed project, as is shown by the current project plans. The tennis pad is still visible, and the main building is in a ruined state. If the current ROW is moved to the north more than about 30 m (100 ft), part of the camp area may be included in the ROW.

Further discussions with the landowner who had reported the unrecorded prehistoric ceramic site located on the large wooded parcel in the central portion of the ROW between Shawnee Creek and CR 313 confirmed that there was a prehistoric site along an unnamed creek flowing through this parcel, but that it was well to the north of the current ROW. Nevertheless, the area along the unnamed creek that is within the ROW between Shawnee Creek and CR 313 was intensively shovel tested, as was the slope to the east, without locating any prehistoric material. The

final two prehistoric sites mentioned in the TxDOT letter of 1983 were outside of the current ROW and were not investigated.

SITE DESCRIPTIONS

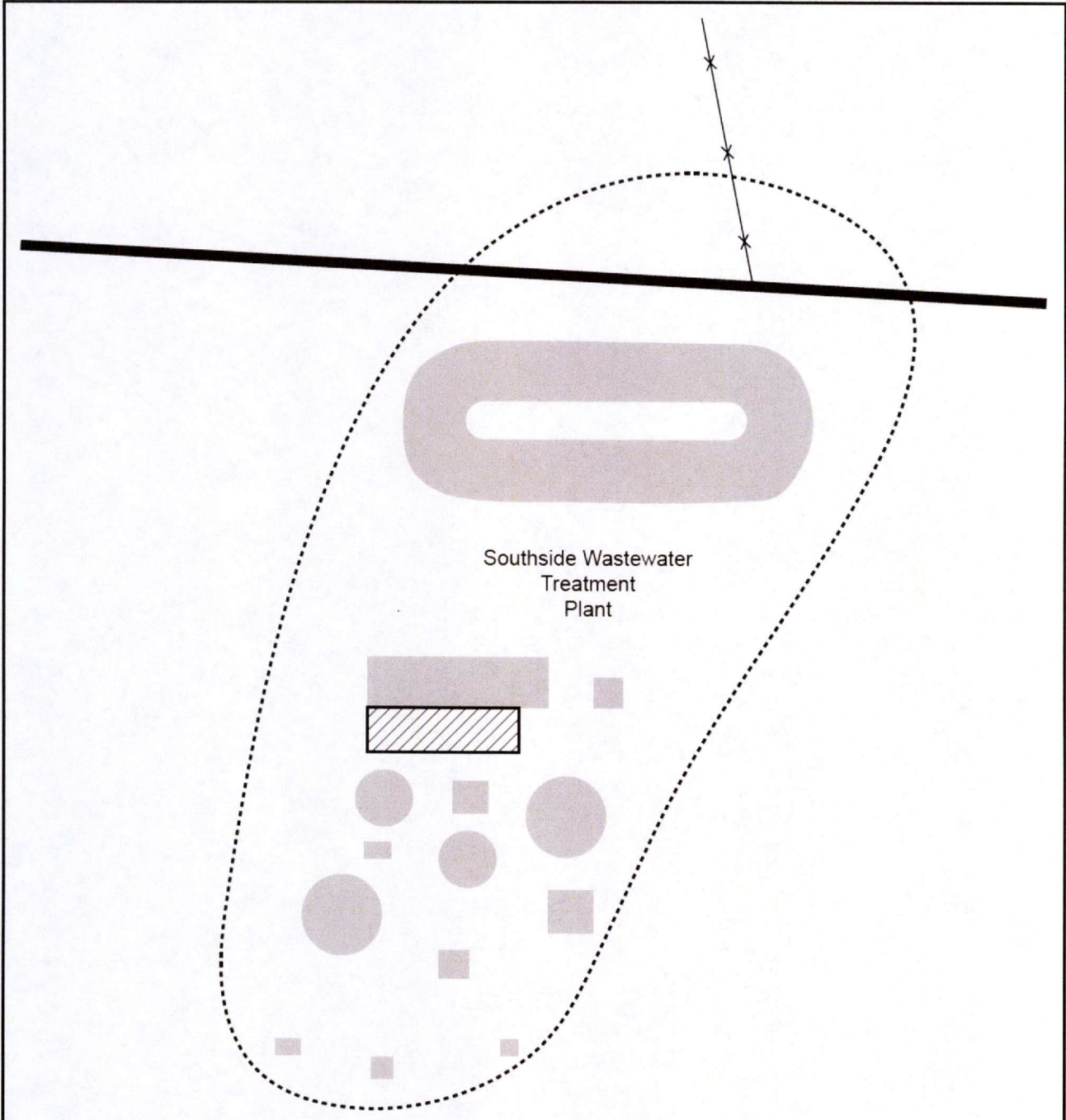
41RK170 (*Nawi haia ina*)

Site 41RK170 (aka, the *Nawi haia ina* site) is a prehistoric Caddo site located immediately adjacent to the southern edge of the proposed ROW, on the upland ridge between Bromley Creek to the west and Shawnee Creek to the east, at an elevation of between 109.7 and 115.8 m (360–380 ft) above mean sea level (amsl) (see Appendix). The site measures about 270 m (885.8 ft) long by 170 m (557.7 ft) wide, and is oriented roughly northeast to southwest. It appears to be generally oval in shape and covers about 3.48 ha (8.6 acres) (Figure 4). The survey for the current project indicates that the site extends into the southern portion of the ROW by approximately 30 m (98.4 ft) (Figure 5).






As previously noted, 41RK170 was recorded by Jack Hughes in 1939 and 1940, but little information is available on the condition of the site at that time. The site area is today occupied by the City of Henderson Southside Wastewater Treatment Plant (see Figure 4). As a result of the discovery of human remains during construction activities at the treatment plant in 2001, the site was investigated in 2001 and 2002 (Perttula and Nelson 2003). These investigations determined that 41RK170 contained:

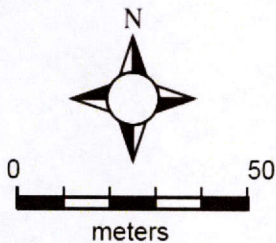
habitation features and midden deposits from a residential occupation, as well as a small and spatially discrete cemetery, all dating, based on 11 C14 dates and 18 OCR dates, between A.D. 1150–1400. The small cemetery appears to postdate the habitation deposits, and [the] excavations identified the extended burials of two adult Caddo women in reasonably good health. The *Nawi haia ina* site also has a small Woodland period occupation dating prior to A.D. 200.

The excavations in the residential areas at the site documented a large midden deposit, pit features, and post holes from at least one probable Caddo house, along with a large assemblage of utility ware and fine ware ceramics, stemmed arrow points and preforms, as well as expedient flake tools, and a smattering of lithic debris from tool manufacture. Faunal and floral remains indicate that the Caddo people here had a diverse diet that relied on deer, turtle, and small animals and birds, as well as maize, hickory, and walnut nuts. There was a heavy reliance on forest mast products, but the stable isotope analyses of the two adult burials indicates that maize comprised about 40–50% of the diet (Perttula and Nelson 2003:xii).



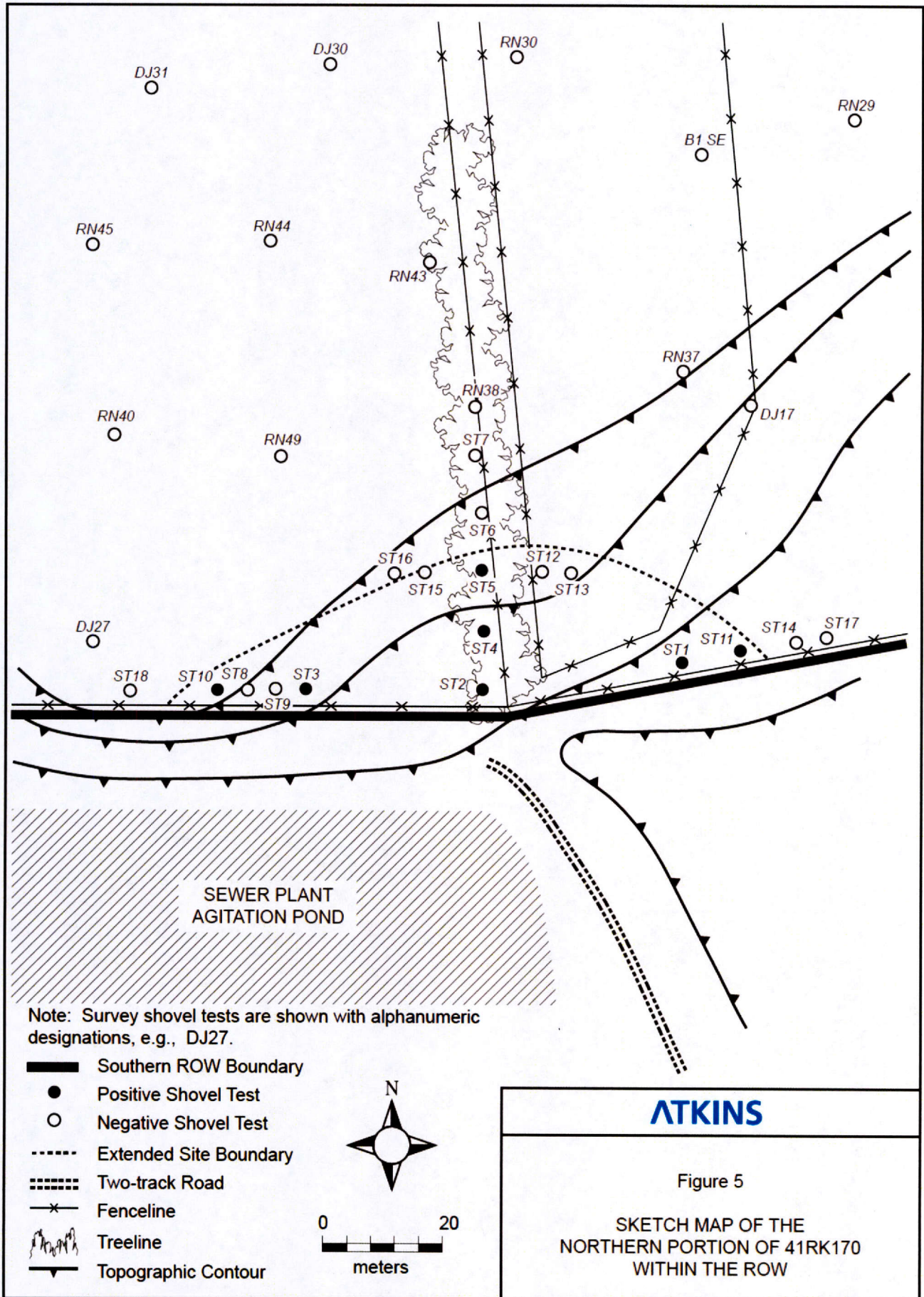
Southside Wastewater
Treatment
Plant

-  Southern Edge of Proposed ROW
-  Treatment Plant Structure
-  Area of Previous Testing
-  Revised Site Boundary
-  Fenceline



ATKINS

Figure 4
SITE 41RK170 SKETCH MAP



As a result of these investigations, it was concluded that site 41RK170 meets the criteria for designation as an SAL and warrants SAL designation “because it contains intact features and archeological deposits of early to Middle Caddoan age (ca. A.D. 1150–1450),” having the capacity to make important contributions to the understanding of the Caddo prehistory of the upper Angelina River basin (Perttula and Nelson 2003:167).

As noted above, during the current survey it was found that the northern edge of 41RK170 extends approximately 30 m (98.5 ft) into the ROW of the proposed Loop 571 Extension (figures 6, 7, 8, and 9). In addition to the many survey shovel tests excavated north of 41RK170, Atkins excavated 18 shovel tests along the southern margin of the ROW to determine the degree to which 41RK170 extended into the ROW, and the depth of archeological deposits in the area (see Figure 5). While most of the site is mapped as being on Cuthbert fine sandy loam, 5 to 15 percent slopes, the northern portion that falls within the ROW is mapped as being on Gallime-Alazan complex soils, 0 to 2 percent slopes in the east and Cuthbert fine sandy loam, 5 to 15 percent slopes in the west (USDA, NRCS 2012). The shovel tests showed that the northern margin of 41RK170 generally consisted of 60 to 80 cm (23.6–31.5 inches) of yellowish brown sandy loam or silt loam over strong brown sandy clay. Fourteen artifacts were recovered from seven positive shovel tests (Table 6). The majority of the cultural material (n = 11) was present between 0 and 40 cmbs (0 and 15.7 inches), with the deepest material at 50 to 60 cmbs (19.7 to 23.6 inches). Twelve shovel tests fall within the site area within the ROW, for an average subsurface artifact density of 1.2 artifacts per on-site shovel test.

A total of 13 prehistoric artifacts and 1 historic artifact were recorded in the shovel tests in the area of 41RK170 within the ROW (figures 10–18). Based on the photographs taken in the field, the prehistoric artifacts appear to consist of six chert interior flakes, one metaquartzite interior flake, two chert interior chips (i.e., flake fragments lacking a platform), three metaquartzite chips, and one lithic that was not photographed and cannot be described. Of this debitage, one metaquartzite interior chip and one chert interior chip seemed to exhibit evidence of thermal alteration in the form of a change in color. The one historic artifact recorded in this portion of 41RK170 consisted of a single shard of colorless glass, recovered from Shovel Test 4, Level 4 (30–40 cmbs). This falls within the depth range of the prehistoric material, possibly indicating some degree of disturbance in this area of the site.

Site 41RK170 is an Early-Middle Caddo habitation site, with a small Woodland period component, located on the upland ridge between Bromley Creek to the west and Shawnee Creek to the east. Archeological investigations were conducted at the site in 2001 and 2002 and determined that the site was eligible for designation as an SAL, based on the presence of a small cemetery, a large midden deposit, pit features, and postholes from at least one probable Caddo house, along with a large assemblage of ceramics, lithics, and subsistence remains (Perttula and Nelson 2003). The results of the present survey indicate that the northern portion of 41RK170 intrudes into the southern portion of the Loop 571 Extension ROW. It remains to be determined whether the portion of the site that falls within the Loop 571 Extension ROW has significant archeological remains that contribute to the eligibility of 41RK170 for designation as an SAL, or not. For this reason, Atkins believes that test excavations should be conducted to determine whether the portion of 41RK170 that falls within the Loop 571 Extension ROW has good research potential and could contribute to our knowledge of Caddo prehistory in this area, and whether it contributes to the eligibility of the site as an SAL.



Figure 6. View of northern part of 41RK170 from ST 2, facing north.



Figure 7. View of northern part of 41SM170 from ST 2, facing east.



Figure 8. View of northern part of 41RK170 from ST 2, facing west.



Figure 9. View of main area of 41RK170 from ST 2, facing south.

Table 6. Summary of Shovel Test Data from the Northern Part of Site 41RK170

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts		
1	40	0-10	Dark yellowish brown sandy loam	1 chert interior flake		
		10-20	Yellowish brown compact sandy loam	None		
		20-40	Brown compact sandy clay	None		
2	80	0-10	Dark yellowish brown sandy loam	None		
		10-20	Yellowish brown compact sandy loam	1 chert interior flake		
		20-60	Yellowish brown compact sandy loam	None		
		60-80	Strong brown compact sandy clay	None		
3	80	0-10	Dark yellowish brown sandy loam	None		
		10-20	Yellowish brown sandy loam	1 chert interior flake, 1 metaquartzite interior chip		
		20-40	Yellowish brown sandy loam	None		
		40-70	Light yellowish brown very compact silt loam	None		
		70-80	Brownish yellow very compact sandy clay	None		
		4	60	0-10	Dark yellowish brown silt loam	None
				10-30	Yellowish brown silt loam	None
30-40	Yellowish brown silt loam			1 metaquartzite interior chip, 1 colorless glass		
40-50	Yellowish brown silt loam			None		
50-60	Yellowish brown silt loam, with impenetrable hematite layer at the base			1 chert interior chip, 1 metaquartzite interior chip		
5	80			0-20	Strong brown sandy loam	None
		20-30	Strong brown sandy loam	1 chert interior flake		
		30-80	Strong brown sandy loam	None		
6	30	0-20	Dark yellowish brown silt loam	None		
		20-30	Strong brown sandy clay	None		
7	80	0-80	Strong brown sandy loam, with root obstruction at bottom	None		
8	80	0-10	Dark yellowish brown silt loam	None		
		10-70	Yellowish brown silt loam	None		
		70-80	Strong brown compact sandy clay	None		
9	50	0-40	Dark yellowish brown silt loam	None		
		40-50	Strong brown sandy clay	None		

Table 6, cont'd

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
10	80	0-10	Dark yellowish brown silt loam	None
		10-30	Yellowish brown silt loam	None
		30-40	Yellowish brown silt loam	1 chert interior chip, 1 chert interior flake
		40-70	Yellowish brown silt loam	None
		70-80	Strong brown compact sandy clay	None
11	80	0-10	Dark yellowish brown silt loam	None
		10-20	Yellowish brown silt loam	None
		20-30	Yellowish brown silt loam	1 metaquartzite interior flake, 1 lithic
		30-40	Yellowish brown silt loam	None
		40-50	Yellowish brown silt loam	1 chert interior flake
		50-70	Yellowish brown silt loam	None
		70-80	Strong brown sandy clay	None
12	80	0-40	Dark yellowish brown silt loam	None
		40-80	Strong brown silt loam with concretions	None
13	80	0-40	Dark yellowish brown silt loam	None
		40-80	Strong brown silt loam with concretions	None
14	50	0-40	Brown sandy clay loam	None
		40-50	Brown sandy clay loam mottled with reddish brown clay	None
15	40	0-40	Strong brown sand and gravel with hard, dry compact soil at bottom	None
16	30	0-30	Brown sand and gravel with hard, dry compact soil at bottom	None
17	30	0-15	Dark yellowish brown sandy loam	None
		15-20	Yellowish brown silt loam	None
		20-30	Light yellowish brown sandy clay	None
18	80	0-10	Yellowish brown sandy loam	None
		10-60	Light yellowish brown very compact silt loam	None
		60-80	Brownish yellow compact sandy clay	None



Figure 10. Chert interior flake from ST 1, 010 cmbs, 41RK170



Figure 11. Chert interior flake from ST 2, 10-20 cmbs, 41RK170.



Figure 12. Chert interior flake (left) and metaquartzite interior chip (right) from ST 3, 10-20 cmbs, 41RK170.



Figure 13. Colorless glass shard (left) and metaquartzite interior chip (right) from ST 4, 30-40 cmbs, 41RK170.



Figure 14. Chert interior chip (left) and metaquartzite interior chip (right) from ST 4, 50-60 cmbs, 41RK170.



Figure 15. Chert interior flake from ST 5, 20-30 cmbs, 41RK170.



Figure 16. Chert interior chip (left) and chert interior flake (right) from ST 10, 30–40 cmbs, 41RK170.



Figure 17. Metaquartzite interior flake from ST 11, 20–30 cmbs, 41RK170.

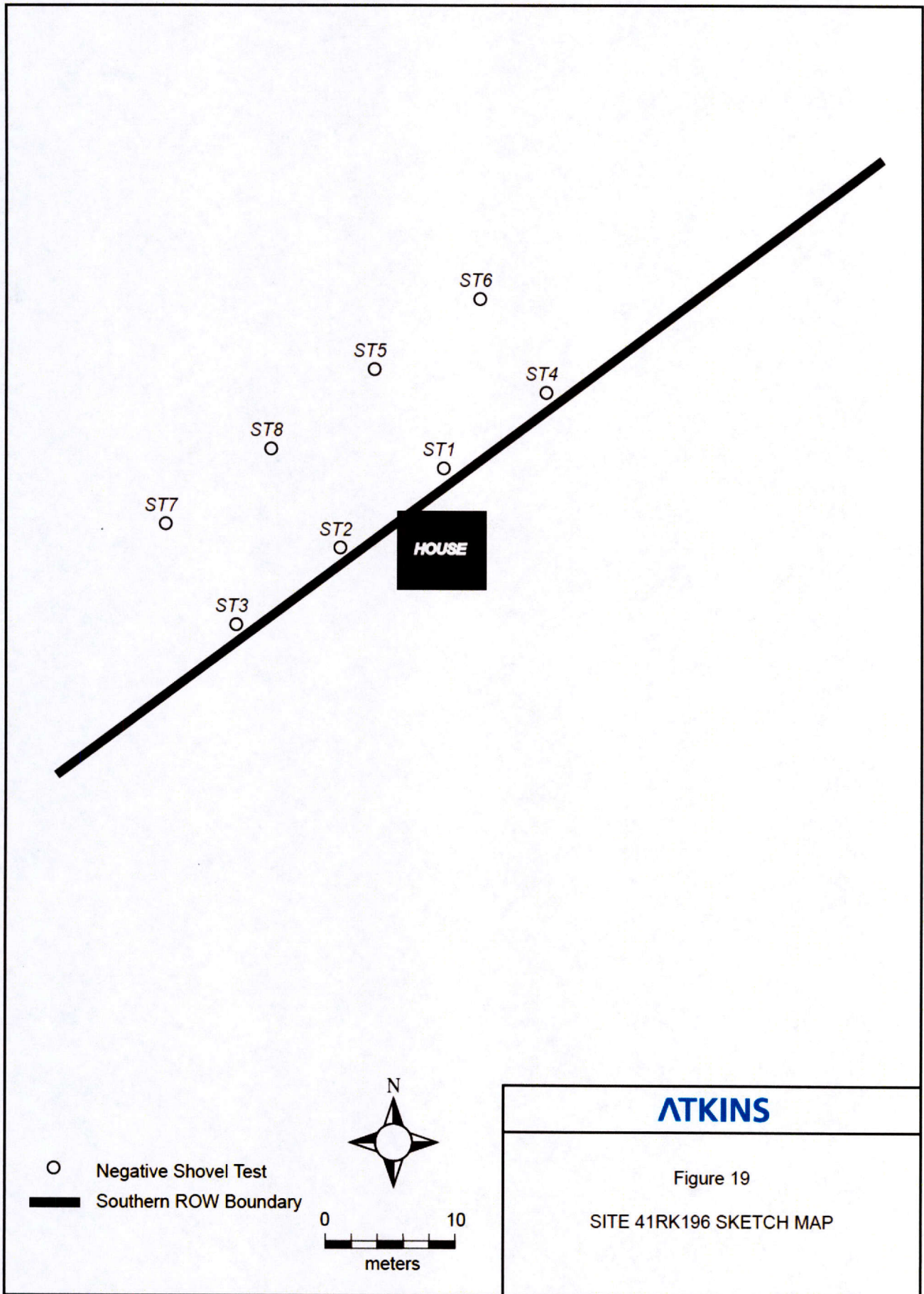


Figure 18. Chert interior flake from ST 11, 40–50 cmbs, 41RK170.

41RK196

Site 41RK196 is apparently an early-twentieth-century housesite located on the southern edge of the proposed Loop 571 Extension ROW, on the upland slope west of an unnamed tributary of Dutch Branch, at an elevation of between 121.9 and 124.9 m (400–410 ft) amsl (see Appendix). Based on the survey for the current project, site 41RK196 consists of only a single standing structure, with no archeological deposits. The structure appears to be located on the southern edge of the proposed ROW, with most of it falling outside of the APE (Figure 19). The site area is heavily overgrown with pines, evergreens, creepers, and forbs (figures 20 and 21).

As previously noted, 41RK196 was recorded by Glen Goode in March of 1987 while conducting an archeological survey for the proposed SH 454 for SDHPT (SDHPT 1987). Prior to the current survey, the site was mapped as being immediately adjacent to the southern edge of the present ROW. At that time, the site was estimated to cover about 1 acre (4046.8 m²), but no dimensions were given. The site was reported to consist of the remains of an early-twentieth-century board-and-batten house located on the west side of FM 3310, approximately 1.3 km (0.8 mile) north of Ebenezer Church. Shovel testing at the time reportedly produced no prehistoric material and very little historic material. The structure was associated with a large scatter of late material, dating to the last 20 to 50 years. In addition, an apparently recent dump consisting of motor oil cans and Folgers coffee cans was reported in a gully (THC 2013). When it was initially recorded, site 41RK196 was deemed to have no potential for inclusion in the NRHP, and no potential for being an SAL. The site was subsequently revisited by TxDOT personnel in 2010. The structure was photographed at that time, but the site was not recognized as being the previously recorded 41RK196.



ATKINS

Figure 19
SITE 41RK196 SKETCH MAP

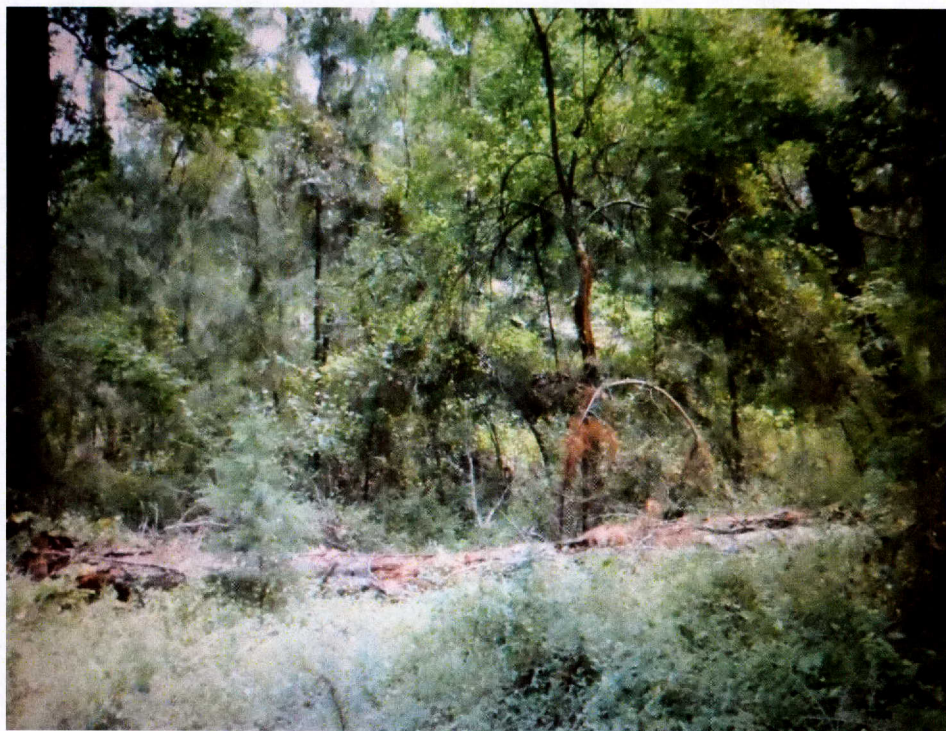


Figure 20. Site 41RK196, north side of house can be seen in background, facing south.

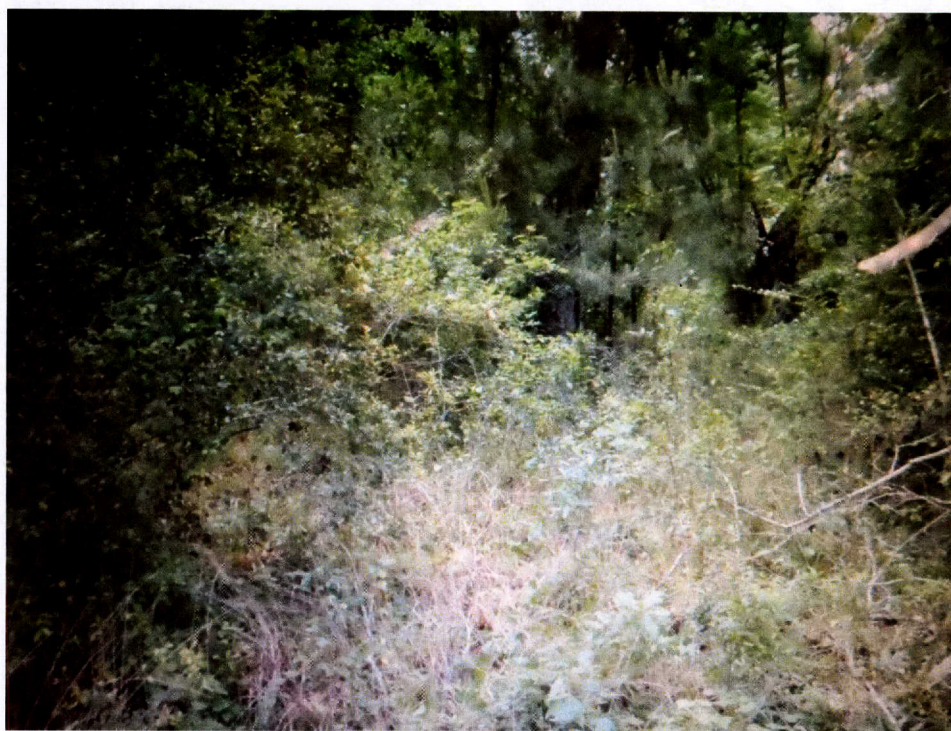


Figure 21. Site 41RK196, south side of house can be seen in background, facing north.

During the current survey Atkins excavated eight shovel tests to determine the horizontal and vertical extent of the site (see Figure 19). The site is mapped as being on Maben fine sandy loam, 5 to 15 percent slopes (USDA, NRCS 2011). Tested soils typically consisted of 50 to 60 cm (20 to 24 inches) of yellowish brown sandy loam over 20 to 30 cm (8 to 12 inches) of reddish yellow sandy clay. No artifacts were recovered from any of the eight shovel tests (Table 7).

Table 7. Summary of Shovel Test Data from Site 41RK196

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
1	80	0-50	Yellowish brown sandy loam	None
		50-80	Reddish yellow sandy clay	None
2	80	0-50	Yellowish brown sandy loam	None
		50-80	Reddish yellow sandy clay	None
3	80	0-50	Yellowish brown sandy loam	None
		50-80	Reddish yellow sandy clay	None
4	80	0-60	Yellowish brown sandy loam	None
		60-80	Reddish yellow sandy clay	None
5	80	0-40	Yellowish brown sandy loam	None
		40-80	Reddish yellow sandy clay	None
6	80	0-60	Yellowish brown sandy loam	None
		60-80	Reddish yellow sandy clay	None
7	80	0-50	Yellowish brown sandy loam	None
		50-80	Reddish yellow sandy clay	None
8	80	0-50	Yellowish brown sandy loam	None
		50-80	Reddish yellow sandy clay	None

The standing structure on 41RK196 is an abandoned one-story, wood-framed, dwelling situated on a pier-and-beam foundation with a saltbox roof that is clad in corrugated metal (figures 22 and 23). The house is oriented north to south, with the front facing east. It is approximately 6.1 m (20 ft) wide across the front, and 4.6 m (15 ft) deep, with a 2.4-m (8-ft) deep attached shed across the entire rear of the house (figures 24 and 25). The dwelling is clad in saw-cut, vertical board and batten with horizontal shiplap siding on the gable ends. It is punctuated by several door and window openings; however, none of these units are intact. The structure appears to be divided into two rooms, with the larger room fully contained within the gabled portion (Russell 2013).

According to archival research, site 41RK196 is located on a 183-³/₄-acre parcel within the original James Smith Headright Grant (Rusk County Abstract 709) in Rusk County, Texas. The James Smith survey consists of one league and one labor for a total of 4,605.50 acres and is classified as a Nacogdoches First Class Headright Grant. This designation indicates that Smith was a Texas resident prior to Texas's independence on March 2, 1836. Smith was a veteran of the Texas Revolution and served in numerous other military campaigns. According to secondary sources, Smith had a large plantation in Nacogdoches and died in Rusk County in 1855. Smith County is named in his honor (Stevens 2010). Although Smith died in Rusk County and owned land in the area, it is unknown whether he resided on the 183-³/₄-acre parcel west of FM 3310.



Figure 22. North side of house at 41RK196, facing southwest.



Figure 23. East side of house at 41RK196, facing west.



Figure 24. Northwest corner of house at 41RK196, facing southeast.



Figure 25. North side of house at 41RK196, facing south-southeast.

James Smith is enumerated in the 1850 Smith County census records as a 56-year-old farmer. Included in his household was his wife Hannah (47), and children William Jasper (22), Marian (17), and Burt (13). This record does not indicate the household's location within the county, and it is unknown whether they ever resided on the associated 183-³/₄-acre subject parcel. Smith died in 1855, and his probate was not available at the Rusk County Courthouse. It is unknown whether his estate was probated in another county, or if the record has been destroyed or misfiled, or if his estate may not have been probated.

No conveyance for the 183-³/₄-acre parcel was found until 1931, at which time it was transferred from G.E. Ellis to Ben Davis Glower (Rusk County Deed Records 191:408). In 1939, title for the property passed from Ben Glower to Bess Alford Glower (Rusk County Deed Records 362:116). Finally, on June 25, 1963, title for the property passed from Bess Glower to Jo Ann Alford, who is the current owner of the property (Rusk County Deed Records 776:278).

G.E. Ellis appears in the 1920 Dallas County census records as a bakery manager heading a household containing his wife Louise (35), his daughter Janette (11), and son Don (7). Records indicate Ellis rented his property. Although he may appear in other Texas census records, a search did not produce other entries for G.E. Ellis. His residence in Dallas County suggests he may not have occupied the subject parcel, and that the occupation may be associated with tenants.

Benjamin Clower first appears in the 1910 Dallas County census as an 8-year-old boy living in his father's household. Headed by Benjamin Clower, Sr. (60), the household also included Ben, Sr.'s wife Francis (36), and other children Francis (5), Olga (3), Margarita (2), and Passie (1 month). Benjamin, Sr. was listed as a house painter who rented his property.

Although he does not appear in the 1920 Texas Census records, by 1930, a Ben Clower (35) appears in the Delta County Census as a resident of Cooper. He is listed as the head of the household living with his wife Ethel (29), and daughter Carrie (7). Ben was listed as a lawyer and World War veteran, and the census indicates Clower owned the property where he was living.

By 1940, the Clowers seem to have relocated to Smith County, where they are recorded as living in Tyler. Interestingly, there are two entries for Ben D. Clower; both are similar, but show different addresses. One record shows Ben D. Clower (49), his wife Mara Sue (52), and daughter Carra Jean (17) as renting a property on S. Robertson Street. Clower is listed as an attorney. The other record shows Ben D. Clower (50) heading a household containing his wife Bessie Lou (54), and daughter Carra Jeane (18) on Hilltop Drive. This entry also indicates the family rented their property and that Clower was a lawyer. These dual entries suggest the family moved while the census was occurring, and that different census takers collected their information at different times.

These records indicate the Clower family likely never lived on the subject parcel of land. It is possible occupations during their ownership of the property containing the site were associated with tenants.

In summary, site 41RK196 is a previously recorded early-twentieth-century housesite, located on an upland slope landform on the west side of FM 3310. The house appears to be largely outside of the proposed Loop 571 Extension ROW and is in primary-growth pine woodland with a dense understory. Based on the estimate of the previous

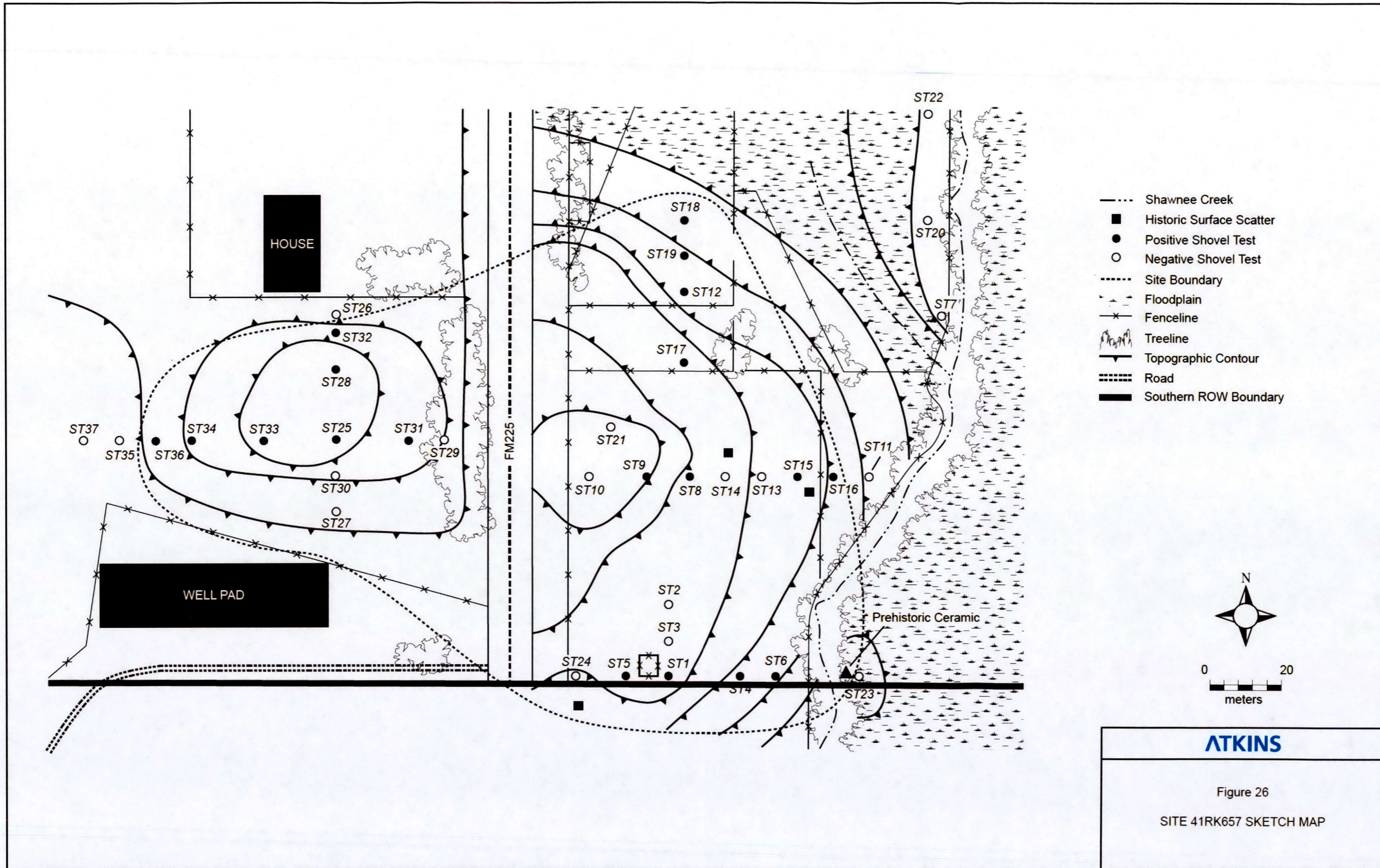
recorder, site 41RK196 supposedly covers about 1 acre (ca. 4,068.8 m²), but this could not be confirmed by the present survey. It seems likely that the house is associated with a tenant occupation. The site appears to contain no subsurface material within the APE. As previously noted, when site 41RK196 was initially recorded it was deemed to have no potential for inclusion in the NRHP, and no potential for being an SAL. The results of the current investigations do not change that initial evaluation. Site 41RK196 is believed to have no archeological research potential, and it is the opinion of Atkins that the site requires no further investigations. As for the standing structure still extant on the site, it is believed to lack integrity of materials, workmanship, and feeling, due to the loss of all windows and doors. The structure does not appear to meet the requirements for NRHP eligibility under any of the applicable criteria due to lack of integrity and associative significance.

41RK657

Site 41RK657 is a newly recorded multicomponent prehistoric and early- to mid-twentieth-century site, located on an upland landform on the east and west sides of FM 225 near the confluence of Bromley and Shawnee creeks (see Appendix). The site is approximately 170 m (558 ft) east to west and approximately 70 m (230 ft) north to south, and is estimated to cover about 1.28 ha, or 3.18 acres (Figure 26). It is bounded on the east by Shawnee Creek and may extend outside of the current ROW to the south. Site 41RK657 was originally recorded as two separate areas that were subsequently combined since they were likely both originally part of the same site, before FM 225 was constructed through the middle of the landform (figures 27, 28, 29, and 30).

During the current survey, Atkins excavated 37 shovel tests to determine the horizontal and vertical extent of the site (see Figure 26). The site is mapped as being on Laneville loam, frequently flooded and Cuthbert fine sandy loam, 5 to 15 percent slopes (USDA, NRCS 2011). Tested soils typically consisted of 50 to 60 cm (20–24 inches) of light yellowish brown silt loam over 10 to 20 cm (4–8 inches) of dark yellowish brown silt loam. Very compact dark yellowish brown silt loam was encountered at depths of 60 to 80 cmbs (24–32 inches). Artifacts were recovered from 19 positive shovel tests, 12 east of FM 225 and 7 west of FM 225 (Table 8). The historic component was found to be confined entirely to the eastern side of FM 225 and seemed to be densest on the eastern slope of the landform, in the areas of Shovel Tests (STs) 8, 9, and 15. A surface scatter of historic artifacts was noted south of ST 15 with a second north of ST 14 (see Figure 19). Seventy-nine historic artifacts were recovered from 10 of the 19 on-site shovel tests east of the road, for an average subsurface density of 4.2 historic artifacts per on-site shovel test. The greatest frequency of material was recovered from ST 9, which appeared to reveal a concentration of bricks, or a brick “floor” or “pavement,” at about 60 cmbs (24 inches), as well as a number of burned artifacts (figures 31 and 32). Historic material was recorded down to 60 cmbs (0–24 inches), with the majority (n = 54; 70 percent) present within 40 cm (16 inches) of the surface.

The prehistoric component at 41RK657 was largely located to the west of FM 225, although a relatively small amount of prehistoric material was also present east of the road. Twelve prehistoric artifacts were noted in seven of the shovel tests west of the road, while six more prehistoric artifacts were noted in five of the shovel tests east of the road. This gives an average density of 1.3 prehistoric artifacts per on-site shovel test west of the road and 0.5 prehistoric artifact per on-site shovel test east of the road. One prehistoric ceramic was also noted eroding out of the east bank of Shawnee Creek, but a nearby shovel test was negative. The greatest amount of prehistoric material was



ATKINS

Figure 26
SITE 41RK657 SKETCH MAP



Figure 27. Portion of 41RK657 east of FM 225, facing north toward top of landform from vicinity of ST 1 on southern edge of ROW.



Figure 28. Portion of 41RK657 east of FM 225, facing northeast from area of ST 1 toward Shawnee Creek.



Figure 29. Portion of 41RK657 west of FM 225, facing west from area of ST 25 on top of landform (41RK170 can be seen in the far left background).



Figure 30. Portion of 41RK657 west of FM 225, facing south from area of ST 25 toward floodplain of Shawnee Creek.

Table 8. Summary of Shovel Test Data from Site 41RK657

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
East of FM 225				
1	80	0-50	Light yellowish brown silt loam	None
		50-70	Dark yellowish brown silt loam	None
		70-80	Dark yellowish brown compact silt loam	1 metaquartzite interior chip
2	80	0-80	Light yellowish brown sandy loam	None
3	80	0-80	Light yellowish brown sandy loam	None
4	80	0-50	Dark yellowish brown sandy loam	None
		50-60	Light yellowish brown silt loam	1 colorless glass
		60-70	Light yellowish brown silt loam	None
		70-80	Light yellowish brown silt loam	1 prehistoric ceramic, 1 burned clay, 1 burned earth
5	80	0-50	Light yellowish brown sandy loam, 10% road gravel	None
		50-60	Light yellowish brown sandy loam	1 chert interior chip (burned)
		60-80	Light yellowish brown sandy loam	None
6	80	0-40	Dark yellowish brown sandy loam	None
		40-50	Light yellowish brown sandy loam	1 colorless glass
		50-70	Light yellowish brown sandy loam	None
		70-80	Reddish brown sandy loam	1 burned bone
7	70	0-70	Light yellowish brown sandy loam, impassible root at bottom	None
8	80	0-10	Very dark gray sandy loam	4 nails, 1 metal, 1 rubber
		10-20	Light yellowish brown sandy loam	1 colorless glass, 1 nail, 1 tooth
		20-30	Light yellowish brown sandy loam	5 metal
		30-40	Light yellowish brown sandy loam	None
		40-50	Light yellowish brown sandy loam	1 chert cortex flake
		50-80	Dark reddish brown sand (wet)	None

Table 8, cont'd

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
9	60	0-10	Light yellowish brown silt loam	None
		10-20	Light yellowish brown silt loam	1 historic ceramic, 1 aqua-tint glass, 1 green glass
		20-30	Light yellowish brown silt loam	None
		30-40	Light yellowish brown silt loam	7 historic ceramic, 8 colorless glass, 1 green-tint glass, 1 metal, 1 bone, 2 burned nut shell
		40-50	Dark reddish brown silt loam	brick, 11 mortar, 4 historic ceramic, 2 glass, 1 fossil shell
		50-60	Dark reddish brown silt loam; terminate at brick "floor"	None
10	80	0-10	Light gray sandy loam	None
		10-80	Yellowish brown silt loam	None
11	80	0-50	Yellowish brown silt loam with heavy concretions	None
		50-80	Yellowish red sandy clay with concretions	None
12	80	0-10	Light yellowish brown sandy loam	None
		10-20	Light yellowish brown sandy loam	1 colorless glass
		20-30	Light yellowish brown sandy loam	None
		30-80	Dark yellowish brown loamy sand	None
13	100	0-100	Yellowish brown sandy loam	None
14	100	0-100	Yellowish brown sandy loam	None
15	80	0-10	Yellowish brown sandy loam	1 metal, 4 colorless glass
		10-20	Yellowish brown sandy loam	1 nail, 2 colorless glass
		20-30	Yellowish brown sandy loam	1 wire nail, 1 nail, 1 colorless glass, 1 red plastic
		30-60	Yellowish brown sandy loam	None
		60-80	Strong brown compact clay loam	None

Table 8, cont'd

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
16	100	0-10	Yellowish brown sandy loam	None
		10-20	Yellowish brown sandy loam	1 colorless glass (melted)
		20-30	Yellowish brown sandy loam	1 colorless glass, 1 brown glass
		30-70	Yellowish brown sandy loam	None
		70-100	Reddish yellow silty clay loam	None
17	100	0-10	Yellowish brown sandy loam	None
		10-20	Yellowish brown sandy loam	1 colorless glass
		20-40	Yellowish brown sandy loam	None
		40-50	Yellowish brown sandy loam	1 porcelain
		50-100	Yellowish brown sandy loam	None
18	100	0-10	Yellowish brown sandy loam	None
		10-20	Yellowish brown sandy loam	1 metal, 2 nails
		20-60	Yellowish brown sandy loam	None
		60-70	Yellowish brown sandy loam	2 prehistoric ceramics
		70-100	Yellowish brown sandy loam	None
19	100	0-30	Yellowish brown sandy loam	None
		30-40	Yellowish brown sandy loam	1 fence staple
		40-100	Yellowish brown sandy loam	None
20	80	0-80	Grayish brown sandy clay loam	None
21	80	0-80	Grayish brown sandy clay loam	None
22	50	0-40	Yellowish brown silt loam	None
		40-50	Dark yellowish brown mottled silty clay	None
23	80	0-80	Yellowish brown silt loam	None
24	80	0-80	Light yellowish brown sandy loam	None
West of FM 225				
25	80	0-20	Light yellowish brown silt loam	None
		20-30	Light reddish brown silt loam	4 burned rocks
		30-50	Light reddish brown silt loam	None
		50-60	Light reddish brown silt loam	1 prehistoric ceramic, 1 chert interior flake, 4 burned rocks
		60-80	Reddish brown sandy clay	None
26	80	0-70	Yellowish brown sandy loam	None
		70-80	Strong brown sandy clay	None

Table 8, cont'd

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
27	40	0-30	Yellowish brown compact sandy loam	None
		30-40	Strong brown sandy clay	None
28	90	0-20	Light yellowish brown silt loam	None
		20-30	Light reddish brown silt loam	None
		30-40	Light reddish brown silt loam	1 metaquartzite interior chip
		40-50	Light reddish brown silt loam	1 metaquartzite interior chip
		50-60	Light reddish brown silt loam	None
		60-70	Light reddish brown silt loam	1 prehistoric ceramic, 1 burned bone
		70-80	Light reddish brown silt loam	None
29	80	80-90	Reddish brown sandy clay	None
		0-50	Light yellowish brown silt loam	None
30	40	50-80	Reddish brown mottled clay	None
		0-30	Yellowish brown sandy loam	None
31	60	30-40	Strong brown sandy clay	None
		0-40	Yellowish brown sandy loam	None
32	80	40-50	Yellowish brown sandy loam	1 chert interior chip, 2 burned hematite rocks (all between 48-50 cmbs)
		50-60	Strong brown sandy clay	None
		0-10	Light yellowish brown silt loam	None
		10-40	Light reddish brown silt loam	None
33	80	40-50	Light reddish brown silt loam	1 chert interior chip
		50-70	Light reddish brown silt loam	None
		70-80	Reddish brown sandy clay	None
		0-10	Yellowish brown sandy loam	1 chert interior flake
		10-20	Yellowish brown sandy loam	None
		20-30	Yellowish brown sandy loam	2 petrified wood interior chips
		30-60	Yellowish brown sandy loam	None
		60-80	Strong brown clay loam	None

Table 8, concluded

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
34	80	0-60	Yellowish brown sandy loam	None
		60-70	Yellowish brown sandy loam	1 badly eroded prehistoric sandy paste ceramic
		70-80	Strong brown sandy clay	None
35	30	0-20	Light yellowish brown sandy loam	None
		20-30	Strong brown sandy clay	None
36	80	0-10	Light yellowish brown silt loam	1 prehistoric ceramic
		10-20	Light yellowish brown silt loam	None
		20-60	Light reddish brown silt loam	None
		60-70	Light reddish brown silt loam	1 chert interior flake
		70-80	Reddish brown sandy clay with concretions	None
37	30	0-30	Strong brown sandy clay	None



Figure 31. Shovel Test 9 showing brick concentration at about 50 cmbs, east side of 41RK657.



Figure 32. Burned brick removed from ST 9, 40–50 cmbs, east side of 41RK657.

present on the highest part of the landform west of FM 225 (see Figure 26). Prehistoric material was recorded between 40 and 80 cmbs (15.7 and 31.5 inches) east of the road and from the surface down to 70 cmbs (27.5 inches) west of the road. Most of the prehistoric material west of the road ($n = 8$; 61.5 percent) was between 40 and 70 cmbs (15.7 and 27.5 inches), while most of the material east of the road ($n = 4$; 66.7 percent) was between 50 and 80 cmbs (19.7–31.5 inches).

The artifacts recorded in the shovel tests at 41RK657 included 19 prehistoric artifacts, 78 historic artifacts, and 19 nonartifactual remains that could be associated with either component. Based on the photographs taken in the field, the sample of prehistoric artifacts consisted of 7 ceramics (including 1 described in the notes as sandy paste) and 12 pieces of lithic debitage (see Table 8). The lithic debitage apparently included 1 chert cortex flake, 3 chert interior flakes, 3 chert interior chips (1 apparently burned), 3 metaquartzite interior chips, and 2 petrified wood interior chips (figures 33 and 34). Five of these lithics exhibited evidence of thermal alteration in the form of a change in color. With the exception of the sherd identified as “sandy paste” in the notes, all of the prehistoric ceramics observed at 41RK657 are probably of Caddo affiliation (figures 35 and 36), as the western boundary of the site is located approximately 150 m (492 ft) northeast of site 41RK170.

The sample of historic artifacts was more extensive and consisted of 13 historic ceramics, 28 pieces of glass, 1 piece of plastic, 1 piece of rubber, 4 bricks, 11 fragments of mortar, 10 nails, 1 fence staple, and 9 pieces of unidentifiable metal. The historic ceramics included 9 refined earthenware sherds, 2 terra cotta sherds, 1 porcelain sherd, and 1 unidentified sherd (figures 37 and 38). Glass artifacts included 14 shards of colorless vessel glass, 8 shards of

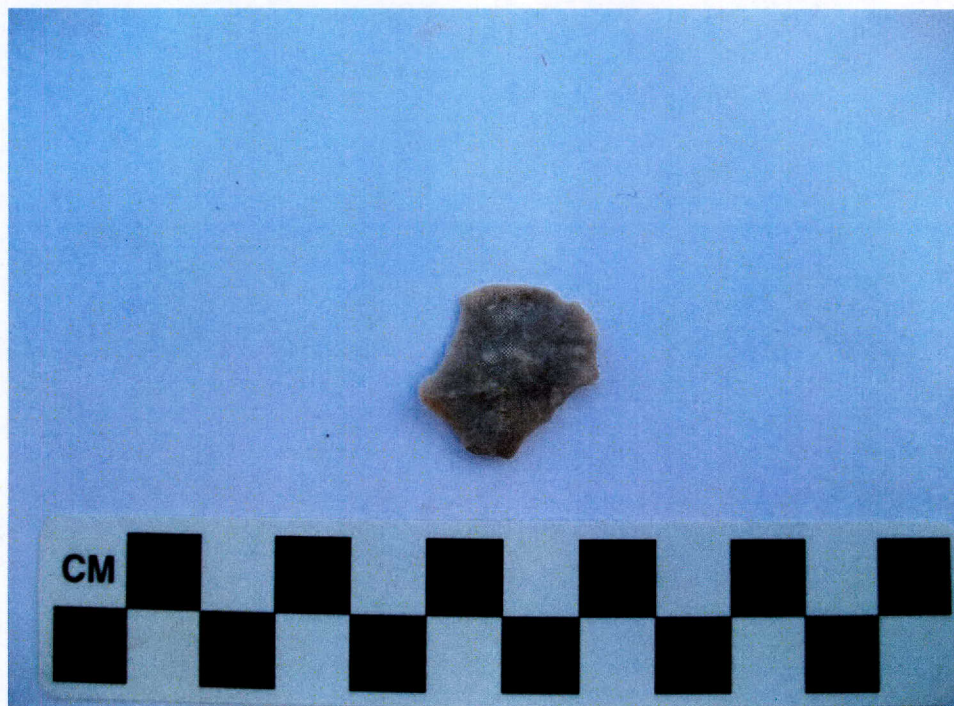


Figure 33. Chert interior flake from ST 33, 0-10 cmbs, 41RK657.



Figure 34. Petrified wood interior chips from ST 33, 20-30 cmbs, 41RK657.



Figure 35. Prehistoric ceramics from ST 18, 60-70 cmbs, 41RK657.



Figure 36. Heavily eroded sandy paste ceramic from ST 34, 60-70 cmbs, 41RK657.



Figure 37. Aqua tint glass shard (left), terra cotta ceramic sherd (center) and green glass bottle fragment (right) from ST 9, 10-20 cmbs, 41RK657.



Figure 38. Porcelain sherd from ST 17, 40-50 cmbs, 41RK657.

colorless bottle glass, 1 lump of melted colorless glass, 1 shard of amber bottle glass, 1 shard of green bottle glass, 1 shard of green-tint glass, 1 shard of aqua-tint base, and 1 shard of window glass (see figures 37 and 39). The single piece of plastic is red and may come from a covering for a red light of some kind (see Figure 39). The 1 piece of rubber observed at the site appeared to be the heel fragment of a shoe sole (Figure 40). The metal artifacts were heavily corroded and included 1 wire nail, 9 indeterminate nails, 9 indeterminate iron fragments, and 1 fence post staple (see figures 39 and 40). The bricks consisted of 3 fragments of pale brown machine-made brick and 1 fragment of yellowish red machine-made brick (see Figure 32). One machine-made brick stamped simply with the word FERRIS was noted on the surface of the site in the vicinity of ST 14. This stamp refers to the Ferris Brick Company, of Ferris, Texas (California Brick Society 2012). This company was formed in 1923 from the merger of six brick companies in Ferris (TXGenWeb 2003). The historic materials recorded on the site suggest a domestic occupation probably dating from the early to mid-twentieth century.

The nonartifactual remains included 10 burned rocks (2 identified as hematite), 1 piece of burned clay, 1 piece of burned earth, 2 bone fragments (1 burned), 1 animal tooth, 2 burned nutshells, and 1 fossil shell. All of the burned rocks and the burned bone fragment were noted in shovel tests on the west side of FM 225, arguing for their association with the prehistoric component. Everything else was recovered from the east side of FM 225 (see Table 8).

According to archival research, site 41RK657 is located within the original James Smith Headright Grant (Rusk County Abstract 709). The James Smith survey consists of one league and one labor for a total of 4,605.50 acres and is classified as a Nacogdoches First Class Headright Grant. This designation indicates that Smith was a Texas resident prior to Texas's independence on March 2, 1836. Smith was a veteran of the Texas Revolution and served in numerous other military campaigns. According to secondary sources, Smith had a large plantation in Nacogdoches and died in Rusk County in 1855. Smith County is named in his honor (Stevens 2010). Although Smith died in Rusk County and owned land in the project area, it is not known whether or not he resided in the area. James Smith is enumerated in the 1850 Smith County census records as a 56-year-old farmer. Included in his household was his wife Hannah (47), and children William Jasper (22), Marian (17), and Burt (13). This record does not indicate the household's location within the county, and it is not known if they ever resided in the vicinity of the project area.

Historians encountered several defects in the chain of title for the parcel containing site 41RK657, and were only able to trace its ownership back to the early 1900s. The 2.83-acre parcel on which the historic component of 41RK657 is located appears to have been part of a larger property that was subdivided into several parcels in 1987 (Rusk County Deed Records 1578:240). The property has been associated with the Brightwell/Gramling/Wright family since it was acquired from the heirs of J.E. Hightower in 1937.

The earliest transaction relevant to the subject parcel that could be identified was prior to 1906. Although the historians were not able to locate this transaction, later deeds reference that this parcel was included in property sold by D.P. Richardson to the firm of Boyd and Maloney prior to 1906 (Rusk County Deed Records 132:76). Census records indicate that D.P. Richardson was a physician living in Henderson in 1900 and a civil engineer living in his father's household in Henderson in 1880. No records for 1890 are available. This indicates that Richardson likely did not occupy this property.



Figure 39. Wire nail (left), red plastic (left center), colorless glass (right center), indeterminate nail fragment (right) from ST 15, 20-30 cmbs, 41RK657.



Figure 40. Indeterminate metal (upper left), rubber (lower left), four indeterminate nails from ST 8, 0-10 cmbs, 41RK657.

James Edgar Hightower purchased the subject property, and several adjacent parcels, at a sheriff's auction in 1906 for an unspecified amount (Rusk County Deed Records 132:76). Hightower, who died in 1919, is enumerated in the 1910 census as a druggist living on Johnson Street in Henderson. His household included his wife Lee, sons Lacy, Edward, and Marion, and daughters Amy and Georgie. According to the 1920 and 1930 census records for Rusk County, his heirs continued to reside in Henderson throughout the 1920s and did not occupy the subject property.

On August 1, 1937, Mrs. Oleta Brightwell Wright and her husband A.F. Wright purchased the 2.83-acre subject parcel from the heirs of J.E. Hightower for \$1.00 (Rusk County Deed Records 315:60). The historians could not find an enumeration for A.F. or Oleta Wright in the 1930 census records for Rusk County, and it is unknown whether these individuals occupied the subject property during this period. Given that none of the identified property owners resided in the area, it is likely that any archeological deposits from the late 1800s through the 1930s were associated with tenants.

In summary, site 41RK657 is a newly recorded multicomponent prehistoric and early- to mid-twentieth-century site, located on an upland landform near the confluence of Bromley and Shawnee creeks, on the east and west sides of FM 225. The site is bounded on the east by Shawnee Creek and extends westward to the top of the upland landform. The prehistoric occupation appears to be centered on the top of the landform, west of FM 225, but it does extend all the way to Shawnee Creek. The prehistoric component at 41RK657 contains both lithics and ceramics, and may be associated with the nearby Caddo habitation site of 41RK170, which is only about 150 m (492 ft) to the southwest. It is possible that 41RK657 is a similar Caddo habitation site to what has already been identified at 41RK170, with evidence of former structures, pits, and burials. Unfortunately, no diagnostic artifacts were identified during the survey, other than ceramics. Several burned rocks and a burned bone were identified on the west side of FM 225, strongly suggesting their affiliation with the prehistoric component, but no other organic remains can be associated with any degree of reliability. Nevertheless, the prehistoric component at 41RK657 is believed to have good research potential and a high likelihood of yielding data important for our understanding of the prehistoric period in this region.

The early- to mid-twentieth-century component at 41RK657 appears to be confined entirely to the eastern side of FM 225. This area of the site has a relatively high density of historic remains, but the site appears to date to the early to mid-twentieth century, or later. No structural features remain, although the identification of a possible "brick floor" or "pavement" at 60 cmbs in ST 9 is curious. Given the amount of burning on the artifacts from this shovel test, it seems more probable that this area represents the remains of a former trash-burning pit. Despite this, the historic component at 41RK657 is believed to have very little research potential given its late date and the lack of preserved structural features.

In conclusion, it is the opinion of Atkins that the historic component at 41RK657 requires no further investigations, but that further fieldwork should be conducted on the prehistoric component at the site to determine whether or not cultural features, organic material, and burials are present within the proposed APE. Thus, the eligibility of the prehistoric component at 41RK657 for inclusion in the NRHP or for its designation as an SAL is currently undetermined.

41RK658

Site 41RK658 is a newly recorded early- to mid-twentieth-century site located on an upland landform on the west side of CR 313 (see Appendix). The site is approximately 40 m (131 ft) west of CR 313 and measures approximately 100 m (328 ft) northeast to southwest and approximately 10 m (32.8 ft) northwest to southeast, covering only about 0.1 ha, or 1,000 m² (0.25 acre) (Figure 41). The site is entirely within the proposed APE and is in primary-growth pine woodland with a dense understory (figures 42, 43, 44, and 45).

During the current survey Atkins excavated 28 shovel tests to determine the horizontal and vertical extent of the site (see Figure 41). The site is mapped as being on Betis loamy fine sand, 1 to 5 percent slopes (USDA, NRCS 2011). Tested soils typically consisted of 50 to 60 cm (20–24 inches) of yellowish brown sandy loam over 40 to 50 cm (16–20 inches) of very pale brown sandy loam. Eight historic artifacts were present in six shovel tests (Table 9). All of these artifacts were found between 0 and 10 cmbs (0–4 inches). Ten shovel tests fall within the site area, for an average subsurface artifact density of 0.8 artifact per on-site shovel test.

Artifacts recorded in the six positive shovel tests at 41RK658 consisted of two ceramic sherds, two shards of glass, two fragments of brick, and two metal artifacts. Based on the photographs taken in the field, the two ceramics consisted of one whiteware sherd, with heavy crazing on both the interior and exterior surfaces (Figure 46), and what appears to be a stoneware sherd with a brown slip on one side and some sort of glazing on the other side (figures 47 and 48). Of the two glass shards, one was colorless while the other appears to be an aqua-tint vessel shard (figures 49 and 50). The two brick fragments are reported to be of reddish yellow handmade brick (figures 51 and 52), while the two metal artifacts consist of one copper rivet (see Figure 52) and one indeterminate fragment (see Figure 50). None of these artifacts are diagnostic, but the presence of handmade brick suggests a late date, possibly early to mid-twentieth century.

According to the archival research, site 41RK658 is located within the original James Smith Headright Grant (Rusk County Abstract 709) in Rusk County, Texas. Site 41RK658 appears to have been associated with the Peter B. Youngblood family from the late nineteenth through the early twentieth centuries. The 200-acre parcel on which the site is located was historically subdivided into two adjacent 80-acre parcels on the west side of present-day CR 313 and one 40-acre parcel located on the east side of CR 313.

As previously noted, the James Smith survey consists of one league and one labor for a total of 4,605.50 acres and is classified as a Nacogdoches First Class Headright Grant. This designation indicates that Smith was a Texas resident prior to Texas's independence on March 2, 1836. Smith was a veteran of the Texas Revolution and served in numerous other military campaigns. According to secondary sources, Smith had a large plantation in Nacogdoches and died in Rusk County in 1855. Smith County is named in his honor (Stevens 2010). Although Smith died in Rusk County and owned land in the area, it is unknown whether he resided on either of the two 80-acre parcels west of CR 313. James Smith is enumerated in the 1850 Smith County census records as a 56-year-old farmer. Included in his household was his wife Hannah (47), and children William Jasper (22), Marian (17), and Burt (13). This record does not indicate the household's location within the county, and it is unknown whether they ever resided on any of the parcels associated with the 200-acre subject parcel.

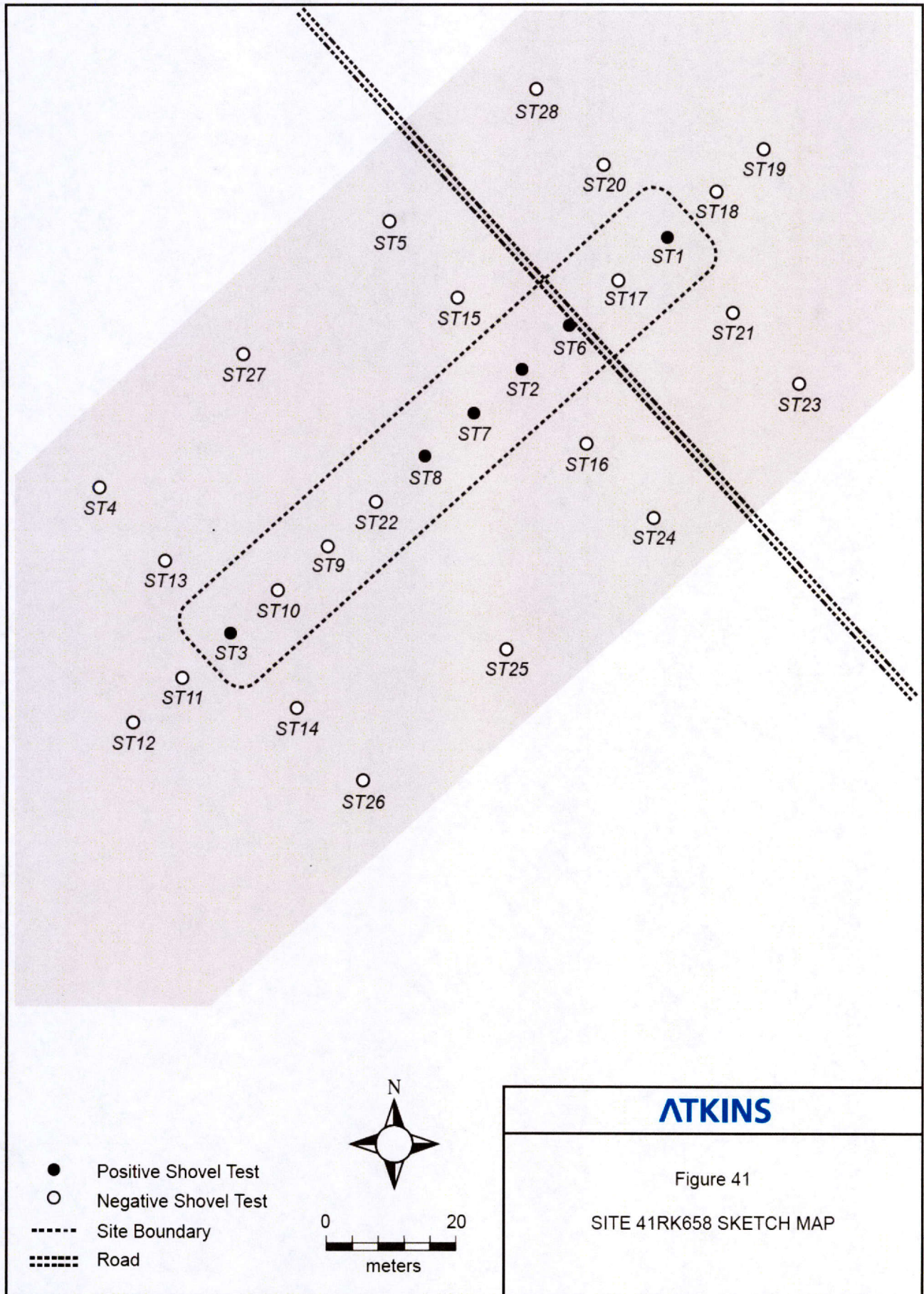




Figure 42. Site 41RK658, facing northeast from ST 6 toward ST 1.



Figure 43. Site 41RK658, facing southwest from ST 6 toward ST 2.



Figure 44. Site 41RK658, facing northeast from ST 8 toward ST 7.



Figure 45. Site 41RK658, facing northeast from ST 3 toward ST 10.

Table 9. Summary of Shovel Test Data from Site 41RK658

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
1	100	0-10	Yellowish brown silt loam	1 brick fragment
		10-50	Yellowish brown silt loam	None
		50-100	Very pale brown silt loam	None
2	100	0-10	Yellowish brown silt loam	1 aqua-tint glass, 1 indeterminate metal
		10-50	Yellowish brown silt loam	None
		50-100	Very pale brown silt loam	None
3	100	0-10	Yellowish brown silt loam	1 copper rivet, 1 brick fragment
		10-50	Yellowish brown silt loam	None
		50-100	Very pale brown silt loam	None
4	100	0-50	Yellowish brown silt loam	None
		50-100	Very pale brown silt loam	None
5	100	0-50	Yellowish brown silt loam	None
		60-100	Very pale brown silt loam	None
6	100	0-10	Yellowish brown silt loam	1 historic stoneware ceramic
		10-50	Yellowish brown silt loam	None
		50-100	Very pale brown silt loam	None
7	80	0-10	Very pale brown loamy sand	1 historic whiteware ceramic
		10-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
8	80	0-10	Very pale brown loamy sand	1 colorless glass
		10-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
9	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
10	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
11	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None

Table 9, concluded

Shovel Test	Terminal Depth (cmbs)	Strata Depth (cmbs)	Soil Description	Artifacts
12	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
13	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
14	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
15	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
16	80	0-40	Very pale brown loamy sand	None
		40-70	Light yellowish brown loamy sand	None
		70-80	Yellowish brown sand	None
17	80	0-40	Pale brown silt loam	None
		40-70	Yellowish brown silt loam	None
		70-80	Dark yellowish brown silt loam	None
18	80	0-40	Pale brown silt loam	None
		40-70	Yellowish brown silt loam	None
		70-80	Dark yellowish brown silt loam	None
19	80	0-40	Pale brown silt loam	None
		40-70	Yellowish brown silt loam	None
		70-80	Dark yellowish brown silt loam	None
20	80	0-40	Pale brown silt loam	None
		40-70	Yellowish brown silt loam	None
		70-80	Dark yellowish brown silt loam	None
21	80	0-40	Pale brown silt loam	None
		40-70	Yellowish brown silt loam	None
		70-80	Dark yellowish brown silt loam	None
22	100	0-50	Yellowish brown silt loam	None
		50-100	Very pale brown silt loam	None
23	80	0-80	Yellowish brown silt loam	None
24	80	0-80	Yellowish brown silt loam	None
25	80	0-80	Yellowish brown silt loam	None
26	80	0-80	Yellowish brown silt loam	None
27	50	0-50	Yellowish brown silt loam; terminated at root obstruction	None
28	80	0-80	Yellowish brown silt loam	None



Figure 46. Whiteware sherd with crazed surface from ST 7, 0-10 cmbs, 41RK658.



Figure 47. Stoneware sherd with brown slip on surface from ST 6, 0-10 cmbs, 41RK658.



Figure 48. Stoneware sherd showing glaze on reverse side from ST 6, 0-10 cmbs, 41RK658.

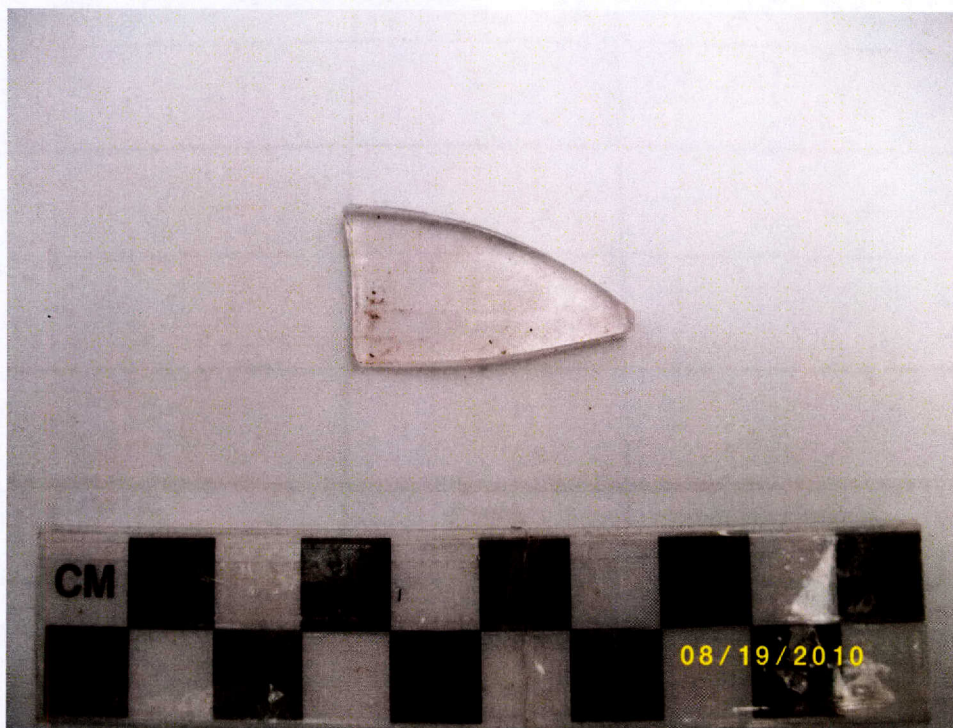


Figure 49. Colorless glass shard from ST 8, 0-10 cmbs, 41RK658.



Figure 50. Apparent aqua-tint glass shard (left) and indeterminate metal from ST 2, 0-10 cmbs, 41RK658.



Figure 51. Brick fragment from ST 1, 0-10 cmbs, 41RK658.



Figure 52. Copper rivet (left) and brick fragment (right)
from ST 3, 0–10 cmbs, 41RK658.

Smith died in 1855, and his probate was not available at the Rusk County Courthouse. It is not known if his estate was probated in another county or if the record has been destroyed or misfiled or if his estate may not have been probated. Nonetheless, in 1869, M.J. Smith, possibly an heir of James Smith, sold 637.5 acres of land in the Smith Survey, including the 200-acre subject parcel associated with the project area, to A.H. McDonough for \$1,000. The land was subsequently sold at a sheriff's auction in 1877 to pay a \$1,000 debt Smith owed to Samuel Earl (Rusk County Deed Records H:259). This conveyance includes the parcel associated with the identified archeological site.

McDonough retained the property until 1878, when the sheriff of Rusk County ordered that certain lands belonging to McDonough be struck off and sold at auction as part of a civil judgment (Rusk County Deed Records X:255). The property was subdivided into seven 80-acre lots for sale at public auction. J.H. McClarty and J.B. Sentell purchased one of the two parcels associated with the project area, Parcel 2. They also purchased Parcel 7, but historians were only able to locate the deed for Parcel 2, which was purchased for \$759. The high value of the property suggests that it was improved. J.B. Sentell is listed in the 1880 Rusk County census as a 45-year-old farmer living on Johnson Street in Henderson. His household included his wife M.F., and two children George and Preston, as well as a servant and several boarders. This source also lists J.H. McLarty [*sic*] as living in Henderson, on South Street. He was enumerated as a 45-year-old merchant whose household included his wife and children. In 1879, J.H. McClarty conveyed his interest in Parcel 2, which is part of the 200-acre parcel associated with the project area, for an unknown amount to J.B. Sentell, giving him sole ownership of the property (Rusk County Deed Records 34:602). Sentell retained the property until 1887, but any occupants of the subject property during that time period were likely tenants as both the Sentells and McClartys resided in Henderson.

In 1878, James Winwright Flanagan purchased the other 80-acre parcel associated with the project area, Parcel 6 of the H.A. McDonough subdivision, for \$201.87. Flanagan was a prominent Texas legislator and wealthy landowner who lived in Henderson (Cutrer 2011). He is listed in the 1870 Rusk County census as a 64-year-old lawyer with \$10,000 in real estate. He died in September of 1887, and his probate file was not available at the Rusk County Courthouse. However, this property appears to have been inherited by his son (David) Webster Flanagan, who owned the parcel in December of 1887 (Rusk County Deed Records 33:75–76). According to the 1880 Rusk County census, David Webster Flanagan lived in Henderson, where he was president of the Henderson and Overton Branch Railroad. It does not appear that the Flanagans ever inhabited the property, and any occupation of the property during their tenure of ownership would have been by tenants.

In 1887, P.B. Youngblood purchased both 80-acre parcels associated with the project area, giving him parcels 2 and 6 of the McDonough subdivision. Parcel 2 was acquired from J.B. Sentell for \$600 in January of 1887, and Parcel 6 from Webster Flanagan for \$500 the following December. The high value of the property suggests that both included improvements. Peter Youngblood was enumerated in the Dale County, Alabama, census records in 1870 as a 22-year-old farmer whose household included his wife and children. In 1880, he is listed in the Rusk County census records as a 32-year-old farmer residing in Precinct 5 with his wife Elizabeth, brother John, and children Ruth, Joel, Susan, Lenora, Aaron, and Hiram; however, this listing did not record land ownership information. No census information was available for 1890, but the 1900 Rusk County census data indicate that Peter Youngblood continued to reside in the vicinity of the project area and is listed as owning his property. He listed his occupation as farmer, and his household included his four sons (Aaron, Arthur, Martin, and John), one daughter (Ellie), and three domestic servants.

Youngblood purchased an additional 40 acres within the 200-acre subject parcel in 1903 from M.T. Jimmerson, but this property is located across CR 313 from the identified archeological site. As a result, further research on this 40-acre parcel was not conducted (Rusk County Deed Records 57:40). In 1910, Youngblood is listed as a farmer living on Minden Road (now CR 313) with his sons Luther and Bailey. His son Arthur was enumerated one household away and indicated that he rented his property, likely from his father. On March 18, 1918, Peter Youngblood deeded all three parcels to his sons A.H. (Arthur), M.L. (Martin), and J.B. (Bailey) in return for their having taken care of him for the past 15 years and in consideration that they continue to allow him to reside in his home and be provided a “decent Christian burial” (Rusk County Deed Records 96:191–192). Peter Youngblood died in 1919 and is buried in Ebenezer Baptist Cemetery, approximately 0.5 mile south of the property. Several other Youngbloods are buried in this cemetery as well, including Peter’s wife Elizabeth, who died in 1899, and his son Martin Luther, who died in 1935 (Find A Grave, Inc. 2011).

It appears that Peter Youngblood’s family continued to reside on the property for a period of time after his death. In 1920, his sons Arthur, Martin, and Bailey are listed in the Rusk County census records as living on Minden Road and working as farmers. In the 1930 Rusk County census records, only Martin and Bailey continued to reside in the project area, but they were enumerated as renting property on Mount Enterprise Road, suggesting they no longer resided on the 200-acre subject parcel. It is likely that site 41RK658 was associated with the occupation of the 200-acre subject parcel by the Youngblood or McDonough families and/or by a tenant occupation during the property’s association with the Flanagans, J.B. Sentell, or J.H. McClarty. No conveyance of the property from the Youngbloods or to the Kangergas (who are the current property owners) was found in the deed records.

In summary, site 41RK658 is a newly recorded early- to mid-twentieth-century site, located on an upland landform on the west side of CR 313. The site is entirely within the current ROW and is in primary-growth pine woodland with a dense understory. Site 41RK658 covers a very small area for a historic site (only about 1,000 m²), and it probably does not represent an occupation site at all. It seems to follow the contour of the gentle slope below the top of the hill to the south, and it may be that it was deposited as secondary refuse from a habitation site outside of the proposed APE. The site has a low density of subsurface material, and it may date to the early- to mid-twentieth century. As a result, site 41RK658 is believed to have no research potential, and it is the opinion of Atkins that the site requires no further investigations.

SUMMARY AND RECOMMENDATIONS

SUMMARY

Atkins conducted an intensive archeological survey at the request of NET RMA and TxDOT for the proposed Loop 571 Extension in Rusk County, Texas. The proposed project area is 5.5 km (3.4 miles) long with a typical width of 13.4 m (44 ft) and an estimated APE of 53.2 ha (131.5 acres). In total, 340 shovel tests were excavated within the proposed APE in an effort to locate and record archeological sites. The majority of shovel tests were concentrated in HPAs and HHPAs. Trenching in high probability floodplains along Bromley Creek, Shawnee Creek, and in the area of Dutch Branch was planned, but Right of Entry was not granted for trenching, so this work could not be completed. It is anticipated that trenching will be conducted under a new Antiquities permit, following purchase of the property, and the results will be presented in another report.

As a result of these investigations, two new archeological sites (41RK657 and 41RK658) were located and recorded, and two previously recorded archeological sites (41RK170 and 41RK196) were found to extend into the ROW. One of these sites lies completely within the proposed APE (41RK658), one lies largely within the APE (41RK657), and two lie only partially within the APE (41RK170 and 41RK196), but all will be adversely affected by the proposed project. Site 41RK170 is located in the west central portion of the project area, on an upland ridge between Bromley Creek and Shawnee Creek, west of FM 225. Site 41RK196 is located in the eastern portion of the project area, on an upland slope to the west of an unnamed tributary of Dutch Branch. Site 41RK657 is located in the west central portion of the project area, on either side of FM 225. The final site, 41RK658, is located in the eastern portion of the project area, immediately to the west of CR 313.

Site 41RK170 is a prehistoric Caddo site. With the northern extension of the site into the proposed ROW, it is now believed to measure approximately 270 m (885.8 ft) north to south by 170 m (557.7 ft) east to west. It appears to be generally oval in shape and covers an estimated 3.48 ha (8.6 acres). The current survey indicated that the site extends into the southern portion of the ROW about 30 m (98.4 ft). Previous investigations conducted at 41RK170 in 2001 and 2002 have shown that the site has a high potential and that it is eligible for inclusion in the NRHP and for designation as an SAL (Perttula and Nelson 2003). The portion of the site within the current project ROW yielded 14 artifacts from seven shovel tests, for an average subsurface density of 1.2 artifacts per on-site shovel test.

Site 41RK196 consists of an early-twentieth-century house with no associated artifactual remains. The standing structure on 41RK196 is an abandoned one-story, wood-framed dwelling situated on a pier-and-beam foundation with a saltbox roof that is clad in corrugated metal. The dwelling is clad in saw-cut, vertical board and batten with horizontal shiplap siding on the gable ends. It is punctuated by several door and window openings; but, none of these units are intact.

Site 41RK657 contains both prehistoric and early- to mid-twentieth-century components. It is believed to measure approximately 70 m (230 ft) north to south and 170 m (558 ft) east to west, covering a roughly triangular area of approximately 1.28 ha (3.18 acres). The early- to mid-twentieth-century component is confined entirely to the east side of FM 225, and has an average subsurface density of 4.2 artifacts per on-site shovel test. The early- to mid-twentieth-century material recorded on the site suggests a domestic occupation. The prehistoric component was found on both sides of FM 225, but appeared to be densest to the west of the road, with an average subsurface density of 1.3 prehistoric artifacts per on-site shovel test west of the road, and only 0.5 prehistoric artifact per on-site shovel test east of the road. The presence of prehistoric ceramics on 41RK657 suggests a Caddo occupation, probably related to the NRHP-eligible occupation identified at nearby 41RK170.

Site 41RK658 contains only early- to mid-twentieth-century artifacts. It measures only about 100 m (328 ft) northeast to southwest by 10 m (32.8 ft) northwest to southeast. Thus, it is very long and narrow and covers only about 0.1 ha, or 1,000 m² (0.25 acre). Eight historic artifacts were recovered from six positive shovel tests, for an average of only 0.8 artifact per on-site shovel test.

The two prehistoric components were both located on the cleared upland ridge between Bromley Creek and Shawnee Creek, both within 305 m (1,000 ft) of the creeks. The three twentieth-century components were all located within 305 m (1,000 ft) of one of the highways that cross the proposed APE. No archeological sites were located in the remainder of the proposed APE, most of which consists of rolling uplands with moderate to moderately steep slopes, covered with young growth pine and hardwood forest. The exceptions include an area of cropland on the western end of the ROW, adjacent to US 79; small areas of pasture between US 79 and CR 401 and between CR 401 and the floodplain of Bromley Creek; a relatively large area of upland pasture on the ridge between Bromley Creek and Shawnee Creek; another relatively large area of pasture on the floodplain and toeslope east of Shawnee Creek; and a few small areas of pasture between FM 3310 and US 259, on the eastern end of the proposed APE. Most of the proposed APE appears to be too far from water for intensive prehistoric occupation, and too far from highways for historic occupation.

RECOMMENDATIONS

Of the four archeological sites recorded or revisited by the current survey, it is believed that while one site (41RK170) is eligible for inclusion in the NRHP and for designation as an SAL, it is not known if the portion of the site within the proposed APE contributes to that eligibility; a second site (41RK657) is of unknown eligibility in regard to its inclusion in the NRHP and its designation as an SAL; and the final two sites (41RK196 and 41SM658) have no archeological research potential and are ineligible for listing in the NRHP or for designation as an SAL.

Site 41RK170 is an Early-Middle Caddo habitation site, with a small Woodland period component. Archeological investigations conducted here in 2001 and 2002 determined that the site was eligible for inclusion in the NRHP and for designation as an SAL, based on the presence of a small cemetery, a large midden deposit, pit features, and postholes from at least one probable Caddo house, along with a large assemblage of ceramics, lithics, and subsistence remains (Perttula and Nelson 2003). The present survey has shown that the northern portion of 41RK170 intrudes into the southern portion of the Loop 571 Extension ROW, but it remains to be determined if that portion of the site has significant archeological remains that contribute to its eligibility. For this reason, Atkins believes that

test excavations should be conducted to determine whether the portion of 41RK170 that falls within the Loop 571 Extension ROW has good research potential and could contribute to our knowledge of Caddo prehistory in this area, and contributes to the NRHP and SAL eligibility of the site.

Site 41RK196 is a previously recorded early-twentieth-century housesite. The single standing structure on the site is believed to lack integrity of materials, workmanship, and feeling, due to the loss of all windows and doors. Thus, the house is not believed to meet the requirements for NRHP eligibility under any of the applicable criteria due to lack of integrity and associative significance. Since no archeological deposits were identified associated with the house, site 41RK196 is also believed to have no archeological research potential, and it is the opinion of Atkins that the site requires no further investigations.

The prehistoric component at 41RK657 contains both lithics and ceramics, and may be associated with the nearby Caddo habitation site of 41RK170, which is only about 150 m (492 ft) to the southwest. It is possible that 41RK657 is a similar Caddo habitation site to what has already been identified at 41RK170, with evidence of former structures, pits, and burials. Several burned rocks and a burned bone were identified on the west side of FM 225, strongly suggesting their affiliation with the prehistoric component, but no other organic remains can be associated with any degree of reliability. Nevertheless, the prehistoric component at 41RK657 is believed to have good research potential and a high likelihood of yielding data important for our understanding of the prehistoric period in this region. In contrast, the early to mid-twentieth-century component at 41RK657 appears to have no structural features remaining, and it is believed to have little or no research potential. In conclusion, it is the opinion of Atkins that the early- to mid-twentieth-century component at 41RK657 requires no further investigations, but that further fieldwork should be conducted on the prehistoric component at the site to determine whether or not cultural features, organic materials, and burials are present within the current project ROW. Thus, the eligibility of the prehistoric component at 41RK657 for inclusion in the NRHP or for its designation as an SAL is currently undetermined.

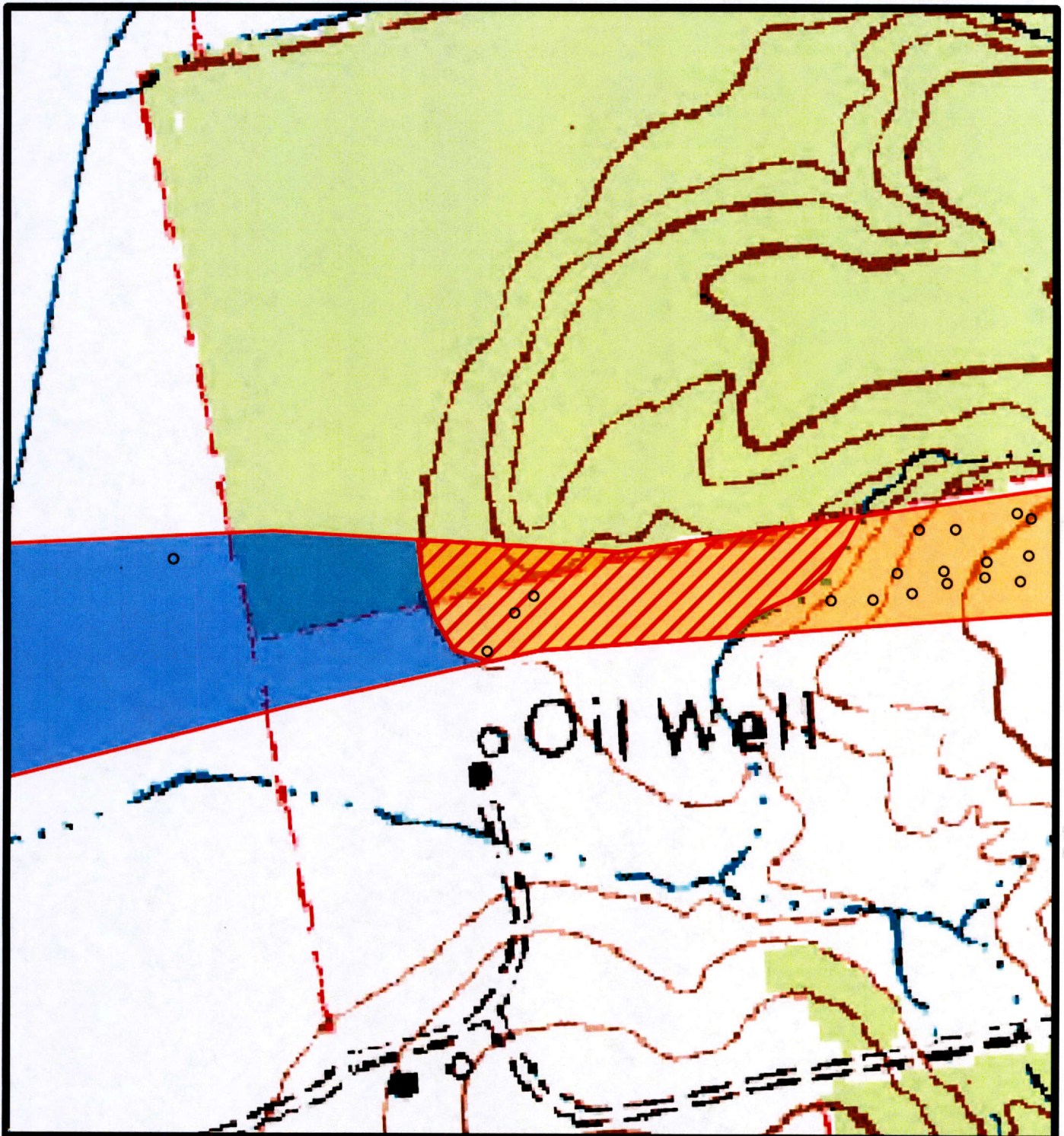
Site 41RK658 is a newly recorded early- to mid-twentieth-century site. It covers a very small area for a historic site (only about 1,000 m²), and it probably does not represent an occupation site. It seems to follow the contour of the gentle slope below the top of the hill to the south, and it may be that it was deposited as secondary refuse from a habitation site to the south, outside of the project ROW. The site has a low density of subsurface material. As a result, site 41RK658 is believed to have no research potential, and it is the opinion of Atkins that the site requires no further investigations.

Among the cultural remains reported to TxDOT prior to the present survey was an unmarked graveyard. This graveyard was reported to be located about 457 m (ca. 1,500 ft) east of FM 225. The landowner in 1983, Talmadge Dowden, stated that some local people had informed him that the old graveyard was located on a knoll near an existing oil well and south of an existing fenceline. The Berryhill Creek, Texas, USGS quadrangle map shows an oil well in the floodplain of Shawnee Creek, north of a tributary that flows into Shawnee Creek from the east. A fenceline that marks the western boundary of the Dowden parcel is located about 150 m (ca. 492 ft) west of the well, and another fenceline that marks the northern boundary of the Dowden parcel is located about 125 m (ca. 410 ft) north of the well. The well is about 450 m (ca. 1,476 ft) east of FM 225. The knoll referred to by the informant may be the upland toeslope located to the northeast of the well, just south of the fenceline. The toeslope location, which seems to best fit the description of the putative cemetery location, was shovel tested by the survey crew with

negative results, and no surface evidence of a historic cemetery was located. Despite the failure to confirm the existence of the reported cemetery, it is recommended that TxDOT conduct scraping of the portion of the Dowden parcel within the APE north and northeast of the oil well shown on the USGS quadrangle map. It is also recommended that additional scraping be conducted in the southwestern corner of the adjacent Kangerga parcel on the possibility that the cemetery was reported to be on the wrong parcel (Figure 53).

Also, as previously noted, geoarcheological investigations of the project area were originally intended to consist of mechanical trenching to be conducted within the APE in the floodplains of Bromley Creek, Shawnee Creek, an unnamed tributary of Dutch Branch, and Dutch Branch itself. Unfortunately, trenching in the high probability floodplains along Bromley and Shawnee Creeks, and in the area of Dutch Branch, could not be carried out because Right of Entry was not granted for trenching, so this work could not be completed at the time that the rest of the survey was done. It is recommended that this trenching be conducted under a new Antiquities permit, following purchase of the proposed ROW, and the results presented in a future report.

Finally, if the proposed new ROW changes in the area of the recorded cultural resource sites, then the THC should be notified and consultation should resume. In the event that unanticipated archeological deposits are encountered during construction, work would cease in the immediate vicinity of the discovery and TxDOT and their archeological staff or representative would be notified to initiate accidental discovery and emergency procedures under the provisions of the First Amended Programmatic Agreement among the Federal Highway Administration, the Texas State Historic Preservation Officer, the Advisory Council on Historic Preservation, and TxDOT; the Memorandum of Understanding between the THC and TxDOT; and the Project Development Agreement between TxDOT and NET RMA.



- HPA
- Alluvial Soils
- Proposed APE Boundary
- Recommended for Scraping
- Negative Shovel Test

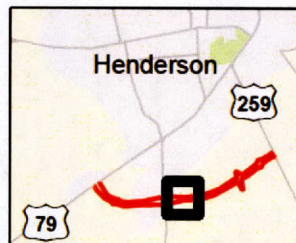
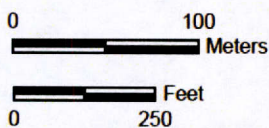


FIGURE 53
 PROJECT AREA WEST OF
 SHAWNEE CREEK SHOWING
 LOCATION RECOMMENDED FOR SCRAPING
 LOOP 571 EXTENSION
 FROM U.S. HWY. 79 TO U.S. HWY. 259
 RUSK COUNTY, TEXAS

Job No.: 100010377	Scale: 1" = 2,000' @ 8.5"x11"
Prepared by: 19910	Date: 10 June 2013

BASE MAP: USGS 7.5' TOPOGRAPHIC MAP, BERRY HILL CREEK & HENDERSON, TEXAS

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Appendix

**APE Showing Location of Recorded Sites
(Not for Public Disclosure)**

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