AN ARCHAEOLOGICAL SURVEY OF THE 36.32 ACRE PROPOSED SHELLEY V. PATE MEMORIAL PARK, LEON COUNTY, TEXAS

Texas Antiquities Permit Number 2120

by

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AN ARCHAEOLOGICAL SURVEY OF THE 36.32 ACRE PROPOSED SHELLEY V. PATE MEMORIAL PARK, LEON COUNTY, TEXAS

BVRA Project Number 99-02

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ABSTRACT

Brazos Valley Research Associates (BVRA) conducted a 100% pedestrian survey of a 36.32 acre tract of land in the city limits of Buffalo, in Leon County, Texas on February 12, 1999. The area investigated is the site of a proposed Shelley V. Pate Memorial Park. No Federal agency was involved in this project that was conducted under Texas Antiquities Committee permit number 2120. The project area was investigated by shovel testing and backhoe trenching, and no archaeological sites were found. It is recommended that the client be allowed to proceed with construction as planned. Copies of the final report are on file at the Division of Archeology, Texas Historical Commission and Texas Archeological Research Laboratory (TARL) in Austin, Texas, the City of Buffalo, and BVRA in Bryan, Texas.

ACKNOWLEDGMENTS

BVRA is appreciative of the assistance provided by others during this project, especially personnel from the City of Buffalo. The Honorable Byron Ryder, Mayor of Buffalo, and Roy Kingsbury, Water and Wastewater Superintendent coordinated the project and city employees Andy Ferguson, David Carmichael, and Jason Pullin helped with the shovel testing and backhoe trenching. Terry Winn of KSA Engineers, Inc. in Longview, Texas provided an engineering map of the project area and other environmental data. At the state level, Carolyn Spock, Head of Records at the Texas Archeological Research Laboratory (TARL) in Austin, Texas, and her staff checked the TARL files for previously recorded sites in the project area. Deborah L. Beene of the Texas Historical Commission was the reviewer for this project. All figures present in this report were prepared by Lili Lyddon of Lyddon Illustrations of Wellborn, Texas. Her willingness to work on short notice is greatly appreciated.

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INTRODUCTION

The City of Buffalo proposes to construct a city park on a 36.32 acre tract of land in the city limits of the town (Figure 1). The project area is bounded on the north, west, and south by private land and by Cane Branch, a tributary of Mustang Creek, on the east (Figure 2). The project area is depicted on the Buffalo topographic quadrangle, dated 1965 and photorevised in 1982 (Figure 3). Proposed construction consists of tennis courts, trails, softball field, playscape, basketball court, pavilion, picnic units, volleyball court, pond/nature study area, restrooms, parking spaces, and entrance and park road. The site of the proposed park is on a high sandy hill overlooking a regularly flowing stream. Leon County contains numerous significant archaeological sites, both prehistoric and historic, and the area has been the subject of several major cultural resources investigations. Realizing the potential for sites within the proposed park site, the Texas Historical Commission, Division of Archeology, requested a professional archaeologist examine the area. In order to satisfy this requirement, the City of Buffalo retained BVRA to conduct the cultural resources survey that was performed under antiquities permit 2120 and BVRA project number 99-02. The Principal Investigator was William E. Moore.

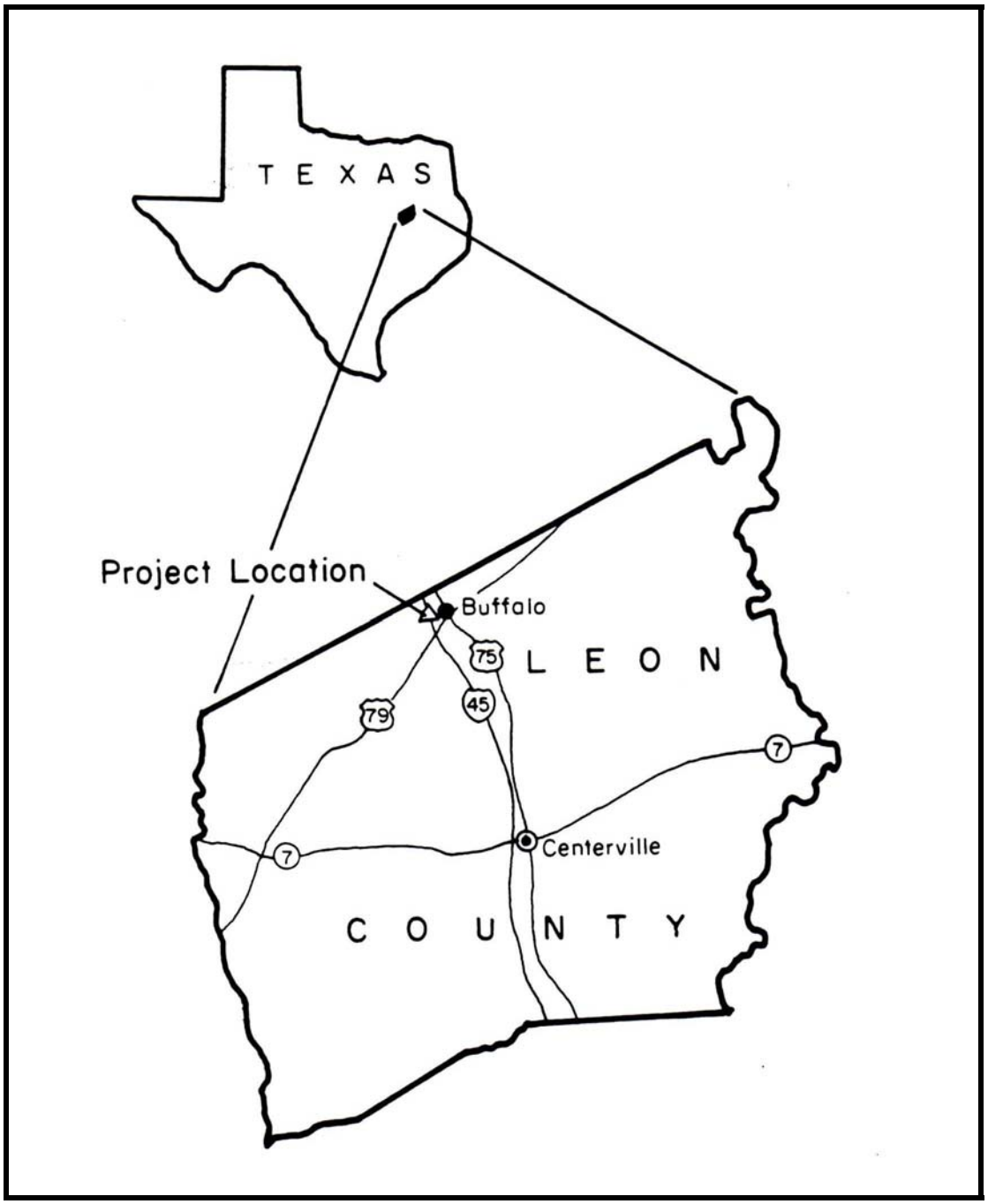

Figure 1. General Location of Project Area

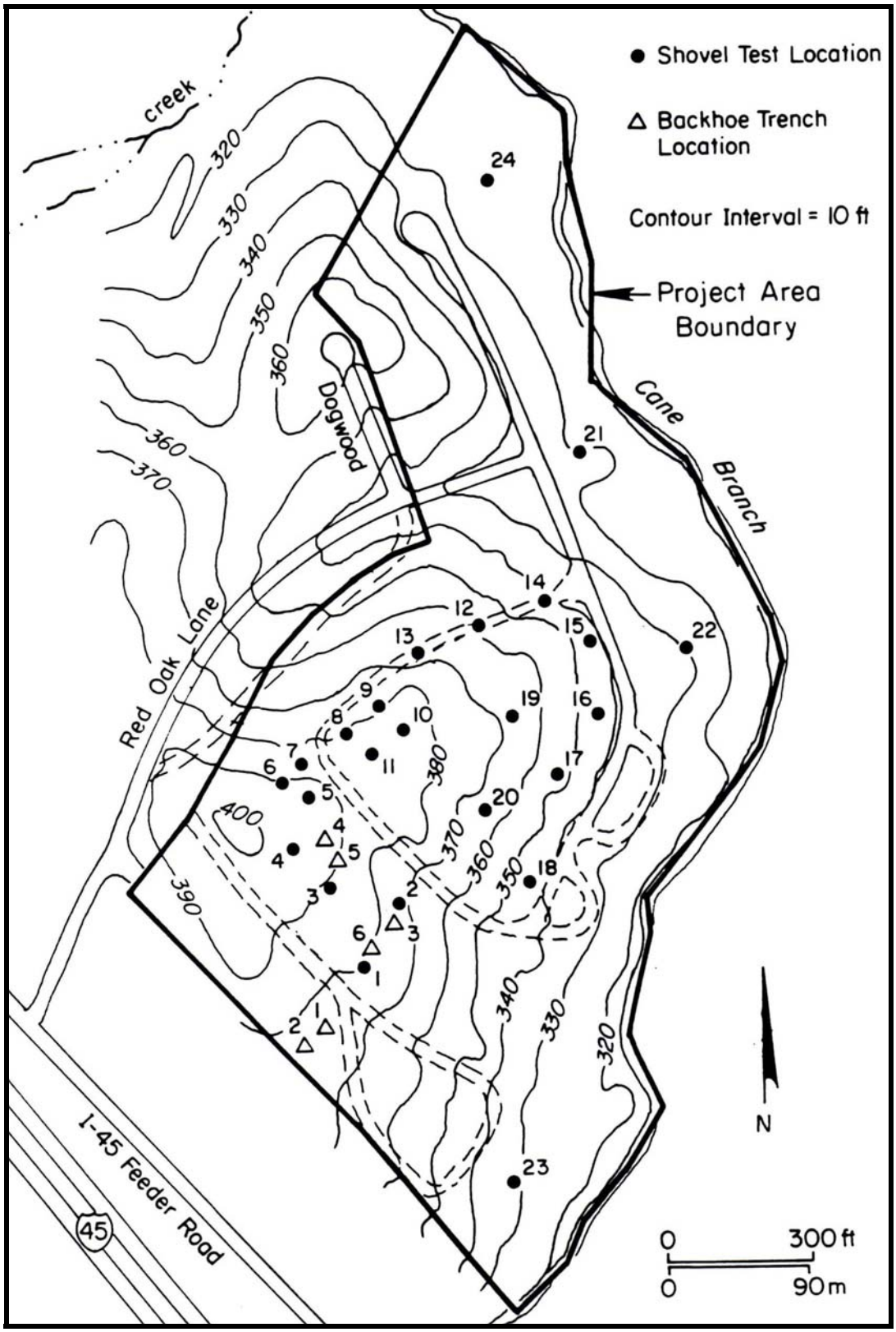

Figure 2. Project Area Map

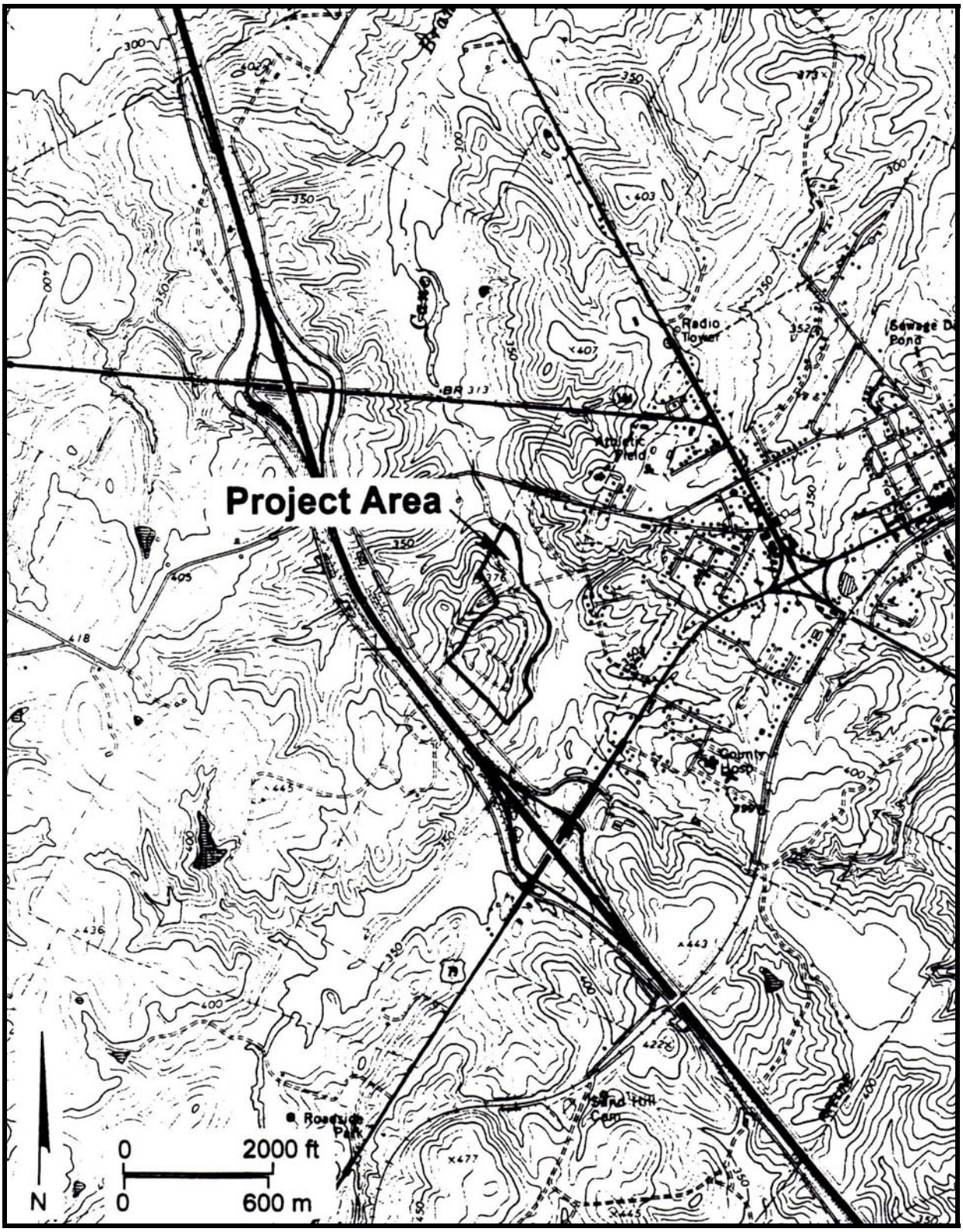

Figure 3. Project Area as Depicted on Topographic Map Buffalo

ENVIRONMENTAL SETTING

The following general discussion of Leon County is taken from the soil survey (Neitsch et al. 1989) and the 1984-1985 Texas Almanac (Kingston and Harris 1983). Leon County is situated in the eastern part of Central Texas and consists of 690,861 acres or 1079 square miles including areas under water. It has an irregular shape and is about 28 miles long by 40 miles wide. Elevation in the county varies between 630 feet above sea level in the west-central part of the county to about 140 feet in the southeast area. Overall, the topography is characterized as undulating to gently rolling and generally sloping to the southeast.

Leon County is located in the West Gulf Coastal Plain, Texas Claypan Area, and Texas Blackland Prairie Major Land Resource Areas. The soils in the county formed under timber, post oak savannah, and prairie vegetation. Those formed under timber or post oak savannah are light-colored fine sandy loam to fine sand while soils that formed under grass consist of dark colored fine sandy loam to clay. The county is drained by numerous creeks and streams that flow into the Trinity and Navasota rivers which form the east and west boundaries of the county, respectively. Annual rainfall varies from 39 to 46 inches. The January minimum temperature is 38 degrees and the July maximum temperature is 95 degrees. These climatic conditions create a growing season of 270 days.

According to the *Soil Survey of Leon County, Texas* (Neitsch et al. 1989:Sheet 12), the project area is composed mainly of two soil types (Figure 4); the Tenaha-Cuthbert complex, 8 to 20 percent slopes (TcE) and Hatliff fine sandy loam, frequently flooded (Ha). Three other soils are also present; Flo loamy fine sand, 1 to 8 percent slopes (FoC), Nugent loamy fine sand, occasionally flooded (Nu), and Wolfpen loamy fine sand, 1 to 8 percent slopes (WoC).

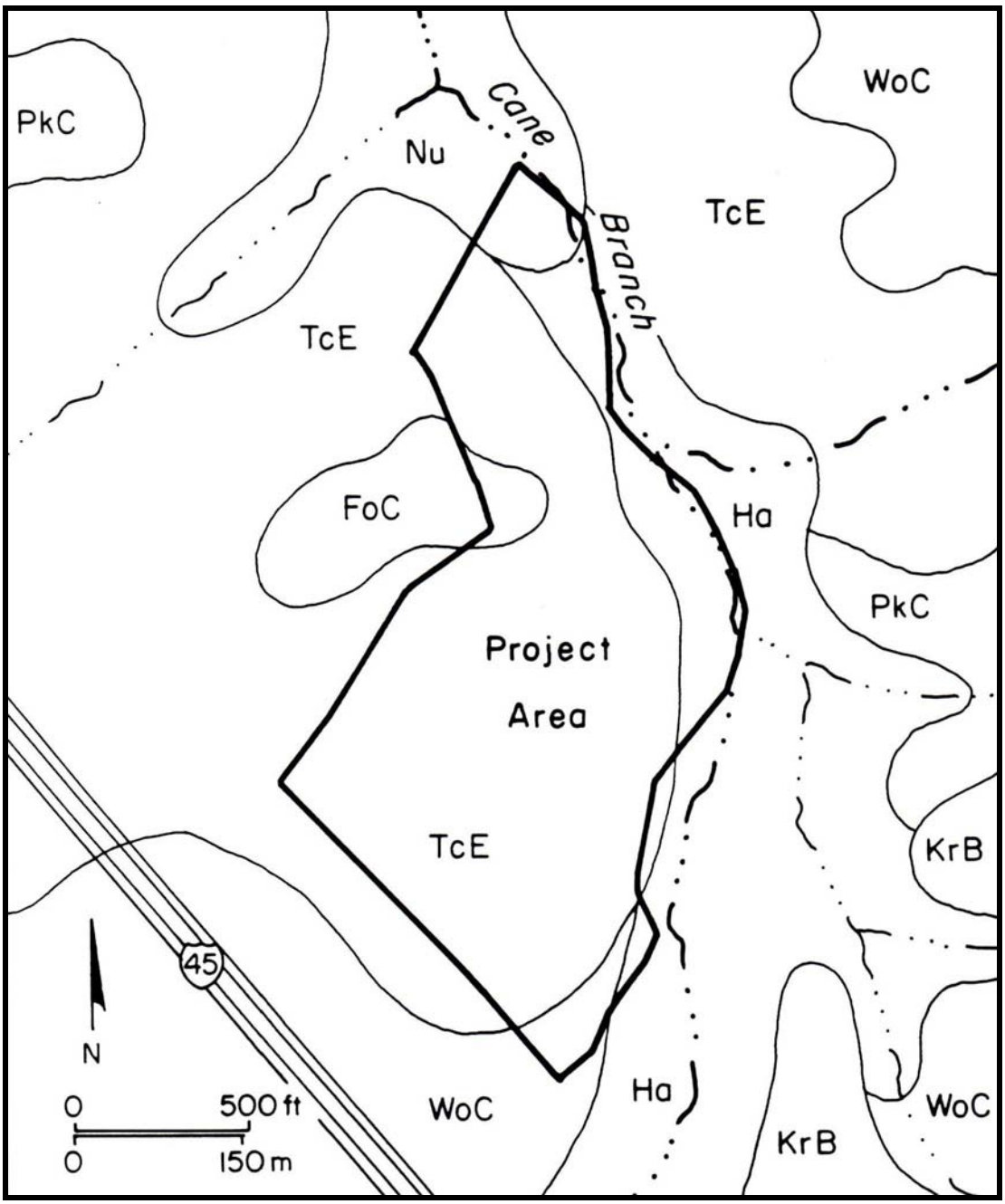

Figure 4. Soils in the Project Area

The Tenaha-Cuthbert complex soils (TcE) comprise all of the project area except for the narrow strip of Hatlilff fine sandy loam (Ha) along Cane Branch. The TcE soils are deep, strongly sloping to moderately steep and well drained. They are found on broad hills and side slopes above drainageways on uplands. The main limitations of these soils are steepness of slope, erosion, and drought. The Ha soils are deep, nearly level, and moderately well drained. This soil type is found on bottomlands, and slopes or 0 to 1 percent. This soil is subject to flooding more than once every two years. Permeability is moderately rapid. The available water capacity is low, but the soil is saturated with water for periods of a few days to a few weeks in winter and early in spring in most years. Runoff is slow, and a high water table is within two feet of the surface during the winter.

ARCHAEOLOGICAL BACKGROUND

According to a recently published planning document for the Eastern Planning Region of Texas (Kenmotsu and Perttula 1993:Figure 1.1.2), Leon County is situated within the Prairie-Savanna archeological study region. Although over 400 sites have been recorded at TARL prior to this survey, the site density in the county is low in terms of sites per square mile. Figure 1.1.3 in the planning document indicates that in 1993 Leon County had only 0.001 - 0.1 sites per square mile. This makes Leon County one of the counties with the lowest site density in the state. In 1985, according to a statistical overview prepared by the Texas Historical Commission (Biesaart et al. 1985:83), Leon County contained 115 recorded sites. It is beyond the scope of this report to discuss in detail the archaeological background of Leon County, especially when several recent in-depth studies are available. Therefore, the following discussion is taken from the planning document for the Eastern Planning Region and several of the more recent contract reports.

The first major archaeological project to affect Leon County was the Lake Limestone study (formerly Upper Navasota Reservoir). The lake is located in Leon, Limestone, and Robertson counties with the majority of the project area in Limestone County. This work was conducted by the Texas Archeological Survey in 1974 under contract with the Brazos River Authority (Prewitt 1974; Prewitt and Dibble 1974). Only areas of high site probability such as floodplains and valley margins along the Navasota River and its major tributaries were surveyed. Fifty-two prehistoric sites were recorded within the reservoir area. Of this number, 37 were found to be situated on the crests or slopes of eroded valley margins. Fifteen historical localities were noted but not recorded as sites. National Register eligibility testing was conducted in 1975 (Prewitt 1975) and 1976 (Prewitt and Mallouf 1977). Mitigation was conducted at four of the Lake Limestone sites in late 1977 under the direction of David S. Dibble and Elton R. Prewitt (Mallouf 1979). One site (41LN21) is in Leon County.

Following the Lake Limestone project, the next major study in Leon County was conducted at Jewett Mine where work was performed from 1980 to 1991 and is still ongoing. The majority of sites in the county are on Jewett Mine property, and most of our current knowledge of the prehistoric and early historic sites of the area has been obtained from these studies. Archaeological firms who have worked at the mine include Espey, Huston & Associates, Inc. (1980), Geo-Marine, Inc., Prewitt and Associates, Inc., and the Archeological Research Laboratory at Texas A&M University.

One of the more significant studies in the county was a 1981 survey by Espey, Huston & Associates, Inc. (Freeman and Voellinger 1982) of the first five-year Texas Railroad Commission Permit area. The prehistoric sites appear to represent a hunting and gathering economy that spanned the Archaic and Neo-American periods. A central based wandering exploitation system with base camps along the major creeks and specialized activity areas along tributary streams is suggested. The historic sites date to the late 19th and early 20th centuries and are related to the domestic, commercial, and industrial development, and/or settlement of the area. Fifty-seven prehistoric sites were found during this survey. Diagnostic artifacts recovered during this survey indicate a prehistoric occupation that spanned the early, middle, and late Archaic and the Neo-American stages. Additionally, they are viewed as an indication of the area's culturally peripheral location providing evidence of culture contact with areas to the north, east, and west.

A scarcity of sites in areas of shallow soils was noted by this and previous surveys. Soil probes on the terraces and upland breaks along the lower expanses of Mine Creek, for example, repeatedly indicated less than 20 centimeters of soils over a clay base. In these areas sites were absent. Beginning with the first deep sand hill upstream, however, an abundance of prehistoric sites was found (Freeman and Voellinger 1982:2-62). One suggestion for the preference of deep sandy soils is the possibility that certain plants that prefer these deep soils were desired and exploited by prehistoric populations. Prewitt and Grombacher (1974:7) found a scarcity of sites along the major tributaries. They attribute this to the possibility that desirable or needed resources were more readily available along the mainstream valley than along the tributaries.

Freeman and Voellinger (1982:2-63) suggest that sites located on higher terraces and upland margins are smaller in area extent and contain less material cultural remains than those along the major creeks. The latter should represent habitation sites with artifact assemblages reflecting the area's major occupations. Features such as hearths, storage pits, and structural remains might be found in sites along the major creeks while the smaller sites at higher elevations should contain activity specific tool assemblages.

The authors (Freeman and Voellinger 1982:2-64) comment on the difficulty of assessing site depth and size in the project area. Most sites consisted of a single flake in shovel tests. According to them, "the general lack of surface evidence indicating the presence of cultural manifestations will require testing far beyond the scope of an archaeological survey to adequately address real site dimensions." The intensive shovel testing during this survey sometimes failed to disclose a site's integrity. Many sites, for example, have no obvious stratigraphy beyond the gradual change from humic sand to sand to clayey sand. In all, 46 historic sites were recorded. These sites include the following types: mine, house sites, industrial features, commercial buildings, outbuildings, and a cemetery.

Prewitt and Associates, Inc. also conducted a large-scale survey of 10,000 acres at Jewett Mine in 1987 (Fields 1988). This investigation is the first cultural resources work to be done in this portion of the mine. This study consisted of three major areas: the field survey, an intensive geomorphological evaluation, and integrating the data with previous surveys to create a management plan utilizing information from 180 prehistoric sites and 126 historic sites. In all, 51 prehistoric sites were recorded in Leon County as a result of this project. Of the historic sites, 34 are in Leon County. A major part of this project was the synthesis of data from the area that resulted in the resource management plan. The authors present their data in a format that allows the reader to understand how they arrived at decisions concerning eligibility of prehistoric and historic sites. Certain terms are defined and recommendations are made for future work in the area.

The vast amount of work in Leon County, particularly Jewett Mine and Lake Limestone, has resulted in the recording of over 400 sites in the region when adjacent counties are included. In Leon County alone, the total number of recorded sites prior to this study was 420. In addition to the numerous surveys, testing has been conducted at 56 prehistoric sites with data recovery performed at 14 sites. Despite problems with the archaeological record of the region, such as low site visibility and interpretation based on survey data, poor preservation of organic remains, a scarcity of sites with clear stratigraphy, and the prevalence of bioturbation and other disturbance factors, much has been learned about the prehistory of the area. Fields et al. (1991) integrated data from the eight excavated sites at Jewett Mine and three excavated sites at Lake Limestone to compile the most recent synthetic effort for this area. This study resulted in the isolation of 35 cultural components or analytical units. All but two of these units represent occupations during the late Archaic, Woodland, or Late Prehistoric periods (Fields et al. 1992). The interested reader is referred to these documents for more information regarding the prehistoric and historic development of Leon County and vicinity. The report by Brazos Valley Research Associates (Moore 1994) contains a list of all previous investigations in Leon County at the time of that study.

FIELD METHODS

This project was performed using the 100% pedestrian survey method supported by shovel testing and backhoe trenching. The 36.32 acre tract was examined with high site probability areas receiving the most attention. Prior to entering the field, the site records at TARL were checked for the presence of previously recorded archaeological sites in the project area and vicinity. In addition, a thorough review of the existing literature for Leon County was conducted. These tasks were completed by the Principal Investigator who conducted the field survey. All areas that appeared suitable for the presence of prehistoric sites were shovel tested. Each test was recorded on a shovel test log and discussed in the project notes. The excavated matrix was screened using 1/4 inch hardware cloth and all recovered artifacts were collected and bagged. In all, 24 shovel tests, 10 shovel probes, and 6 backhoe trenches were excavated. The probes were not screened and are not plotted on the project area map (Figure 2).

RESULTS AND CONCLUSIONS

The site records at TARL yielded no previously recorded sites in the project area. A review of the literature revealed that several major projects have been conducted in Leon County, and significant prehistoric and historic sites are present. This investigation examined 36.32 acres, and no archaeological sites were found.

It was obvious at the outset that virtually all of the project area had been subjected to various forms of disturbance. First, there are several roads that been laid out for a subdivision that was never built. As a result, the graded areas have been exposed to years of erosion creating excellent surface visibility over much of the project area. It is not known when the roads were laid out, but they are visible on the aerial photograph in the soils book dated 1989. Second, much of the surface area is hummocky and contains windthrows, an indication of logging. The presence of small saplings and briars within the understory is typical of secondary growth that occurs after an area has been cleared. Although a few large trees were present, they were few compared to the smaller saplings.

Overall, the project area appears to be devoid of archaeological sites. Should a site be present, it is likely that, unless it is deeply buried, it is in a disturbed context. It is believed that the number of shovel tests; probes; and backhoe trenches, combined with the large areas of exposed soil to clay in most cases, more than adequately sampled the 36.32 acre tract. No terraces were observed along the creek, and the area was very moist due to a shallow water table and recent rains. It is believed that the entire project area should be defined as low probability for archaeological sites.

RECOMMENDATIONS

It is recommended that construction be allowed to proceed as planned. It is always possible that archaeological sites are missed during any archaeological survey. Should evidence of a prehistoric or historic site in the project area be discovered during construction, all work should cease immediately. The Texas Historical Commission should be notified so that this find can be evaluated before continuing with this project.

REFERENCES CITED

Biesaart, Lynne A., Wayne R. Roberson, and Lisa Clinton Spotts
1985 *Prehistoric Archeological Sites in Texas: A Statistical Overview.* Office of the State Archeologist, Special Report 28. Texas Historical Commission.

Espey, Huston & Associates, Inc.
1980 *An Assessment of the Cultural Resources of the Jewett Mine Project Area.* Espey, Huston & Associates, Inc. Document Number 8011, Job Number 0607. Austin.

Fields, Ross C. (editor)
1988 *Archeological Survey of the 1989-1993 Permit Area, Jewett Mine Project, Freestone and Leon Counties, Texas.* Prewitt and Associates, Inc., Report of Investigations, Number 63.

Fields, Ross C., L. Wayne Klement, C. Britt Bousman, Steve A. Tomka, Eloise F. Gadus, and Margaret A. Howard
1991 *Excavations at the Bottoms, Rena Branch, and Moccasin Springs Sites, Jewett Mine Project, Freestone and Leon Counties, Texas.* Prewitt and Associates, Inc., Report of Investigations, Number 82.

Fields, Ross C., Stephen P. Austin, Roger W. Johnson, Karl W. Kibler, and Jerrilyn B. McLerran
1992 *National Register Assessments of Seven Prehistoric and Two Historic Sites at the Jewett Mine, Freestone & Leon Counties, Texas.* Prewitt and Associates, Inc., Report of Investigations, Number 87.

Freeman, Martha Doty, and Leonard R. Voellinger
1982 *A Cultural Resources Survey of the First Five-Year Permit Area, Jewett Mine Project.* Appendix D to An Assessment of the Cultural Resources of the Jewett Mine Project Area. Prewitt and Associates, Inc. Document Number 81233, Job Number 1401.

Kenmotsu, Nancy Adele and Timothy K. Perttula
1993 *Archeology in the Eastern Planning Region, Texas: A Planning Document.* Department of Antiquities Protection, Cultural Resource Management Report 3. Texas Historical Commission.

Kingston, Michael T., and Ruth Harris (editors)
1983 *The Texas Almanac and State Industrial Guide 1984-1985.* Dallas Morning News.

Mallouf, Michael G.
1979 *Archeological Investigations at Lake Limestone.* Texas Archeological Survey, Research Report 71. The University of Texas at Austin.

Moore, William E.
1994 *An Archeological Survey of the Concord Robbins WSC Project in Leon County, Texas.* Brazos Valley Research Associates, Contract Report 29.

Neitsch, Conrad L., Joseph L. Castille, and Maurice R. Jurena
1989 *Soil Survey of Leon County, Texas.* United States Department of Agriculture, Soil Conservation Service. Washington, D.C.

Prewitt, Elton R.
1974 *Upper Navasota Reservoir: An Archeological Assessment.* Texas Archeological Survey, Research Report 47. The University of Texas at Austin.

1975 *Upper Navasota Reservoir: Archeological Test Excavations at the Barkley and Louie Sadler Sites.* Texas Archeological Survey, Research Report 53. The University of Texas at Austin.

Prewitt, Elton R., and David S. Dibble
1974 *Letter Report, Survey of Archeological and Historical Resources to be Affected by Construction of Proposed Upper Navasota Reservoir.* On file at the Department of Antiquities Protection, Texas Historical Commission. Austin.

Prewitt, Elton R., and Kerry A. Grombacher
1974 *An Archeological and Historical Assessment of the Areas to be Affected by the Proposed Twin Oak and Oak Knoll Projects, East Central Texas.* Texas Archeological Survey, Research Report 43. The University of Texas at Austin.

Prewitt, Elton R., and Michael G. Mallouf
1977 *Upper Navasota Reservoir: Test Excavations at Lake Limestone, Spring 1976.* Texas Archeological Survey, Research Report 66. The University of Texas at Austin.

Appendix I: Shovel Test Log

Shovel Test	Depth	Results
01	70 cm	sterile (did not reach clay)
02	24 cm	sterile (next to Backhoe Trench 3; reddish clay)
03	20 cm	sterile (next to Backhoe Trench 5; reddish clay)
04	16 cm	sterile (next to Backhoe Trench 4; reddish clay)
05	40 cm	sterile (dug to reddish-yellow clay)
06	30 cm	sterile (dug to reddish clay)
07	48 cm	sterile (dug to reddish clay)
08	38 cm	sterile (dug to reddish clay)
09	40 cm	sterile (dug to reddish-yellow clay)
10	64 cm	sterile (dug to brownish clay)
11	60 cm	sterile (dug to reddish clay)
12	05 cm	sterile (reddish clay at surface)
13	10 cm	sterile (reddish clay at surface)
14	05 cm	sterile (reddish clay at surface)
15	50 cm	sterile (dug to reddish clay)
16	70 cm	sterile (did not reach clay)
17	10 cm	sterile (dug to reddish clay)
18	10 cm	sterile (dug to reddish clay)
19	10 cm	sterile (dug to reddish clay)

Shovel Test	Depth	Results
20	10 cm	sterile (dug to reddish clay)
21	30 cm	sterile (dug to water table)
22	35 cm	sterile (dug to water table)
23	15 cm	sterile (dug to reddish clay)
24	25 cm	sterile (dug to reddish clay)

Appendix II: Backhoe Trench Log

Trench	Length	Width	Depth	Results
01	8 feet	24 inches	2 m	sterile (dug to reddish clay)
02	8 feet	24 inches	1.7 m	sterile (dug to reddish clay)
03	8 feet	24 inches	50 cm	sterile (dug to reddish clay)
04	4 feet	24 inches	40 cm	sterile (dug to reddish clay)
05	4 feet	24 inches	30 cm	sterile (dug to reddish clay)
06	6 feet	24 inches	1 m	sterile (dug to reddish clay)