

AN ARCHAEOLOGICAL SURVEY FOR THE COLEMAN COUNTY SPECIAL UTILITY DISTRICT PHASE 7 WATER LINE PROJECT IN COLEMAN COUNTY TEXAS

Antiquities Permit 5057



By

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AN ARCHAEOLOGICAL SURVEY FOR THE COLEMAN COUNTY
SPECIAL UTILITY DISTRICT PHASE 7 WATER LINE PROJECT
IN COLEMAN COUNTY, TEXAS

BVRA Project 08-24

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ABSTRACT

An archaeological survey of three segments of a proposed 26.1 mile water line and a 60 foot x 60 foot tract that will be the site of proposed expansion to an existing water storage tank in central County County, Texas was performed on October 14, 2008 by Brazos Valley Research Associates (BVRA) for the Coleman County Special Utility District (SUD) under Antiquities Permit 5057. In all, the area comprises 1.18 acres. The areas investigated included two creek crossings, one high hill, and a proposed water storage tank expansion site. No sites were found, and no artifacts were collected. Therefore, it is recommended that the Coleman County SUD be allowed to proceed with their project with no further consultation from the Texas Historical Commission (THC). Copies of the report are on file at the THC, Texas Archeological Research Laboratory (TARL); Coleman County SUD; and BVRA.

ACKNOWLEDGMENTS

I am appreciative of the assistance provided by others during this project. Kelly Warren and Kelly Rosenbaum at Jacob & Martin, Ltd, provided me with the necessary maps and other information regarding this project. Travis Rhoads of the Coleman County SUD signed the permit application as the representative of the owner and sponsor and provided a backhoe and operator. Lili G. Lyddon prepared the figures that appear in this report.

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INTRODUCTION

The Coleman County SUD plans to install 26.1 miles of six-inch, eight-inch, ten-inch, and twelve-inch water line as well as the construction of two pump stations and an expansion of an existing water storage tank in rural Coleman County (Figure 1). This project is being funded by the United States Department of Agriculture, Rural Development with Patricia Butler the agency representative. The water line will be placed in a trench with three feet of cover, and the width of the trench will be eighteen inches. The water line and other proposed improvements will be on private property within an existing easement owned by the Coleman County SUD or on land owned by the Coleman County SUD. The four areas investigated are depicted on USGS topographic maps Coleman (399-4342) (Figure 2), Fisk (3199-423) (Figure 3), and Lake San Tana (399-431) (Figure 4). Coleman County is located in a part of Texas that contains numerous prehistoric and historic sites, many of which have been considered to possess significant research potential. The THC requested an archaeological survey prior to allowing the construction of the proposed water line. BVRA conducted a pre-survey assessment and identified three areas of where an archaeological site might be present. The THC concurred with the findings of the pre-survey assessment and agreed that these areas (plus the site of the proposed expansion to the existing water storage tank) be investigated. In order to comply with this request, the Coleman County SUD retained BVRA to conduct this investigation.

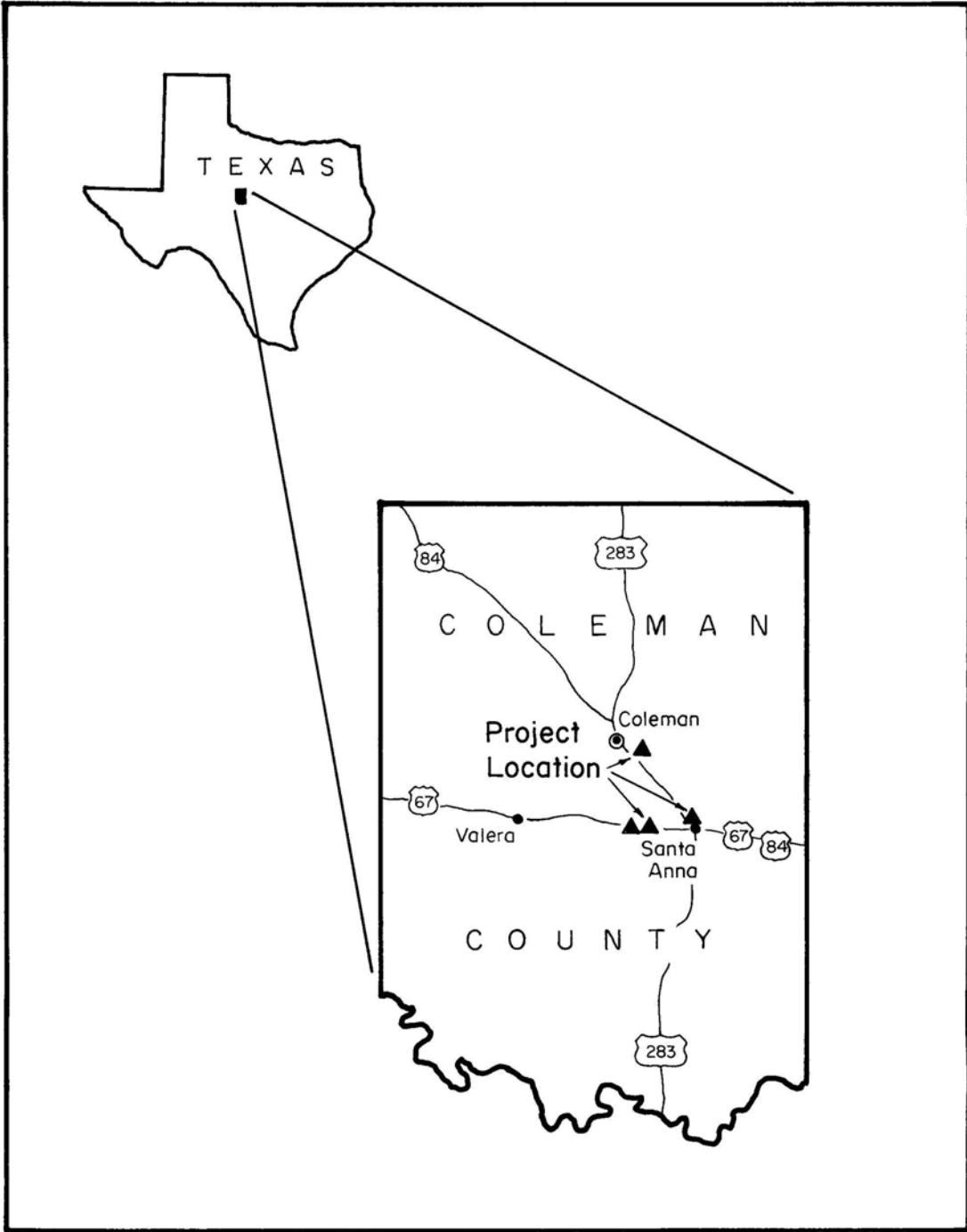


Figure 1. General Location

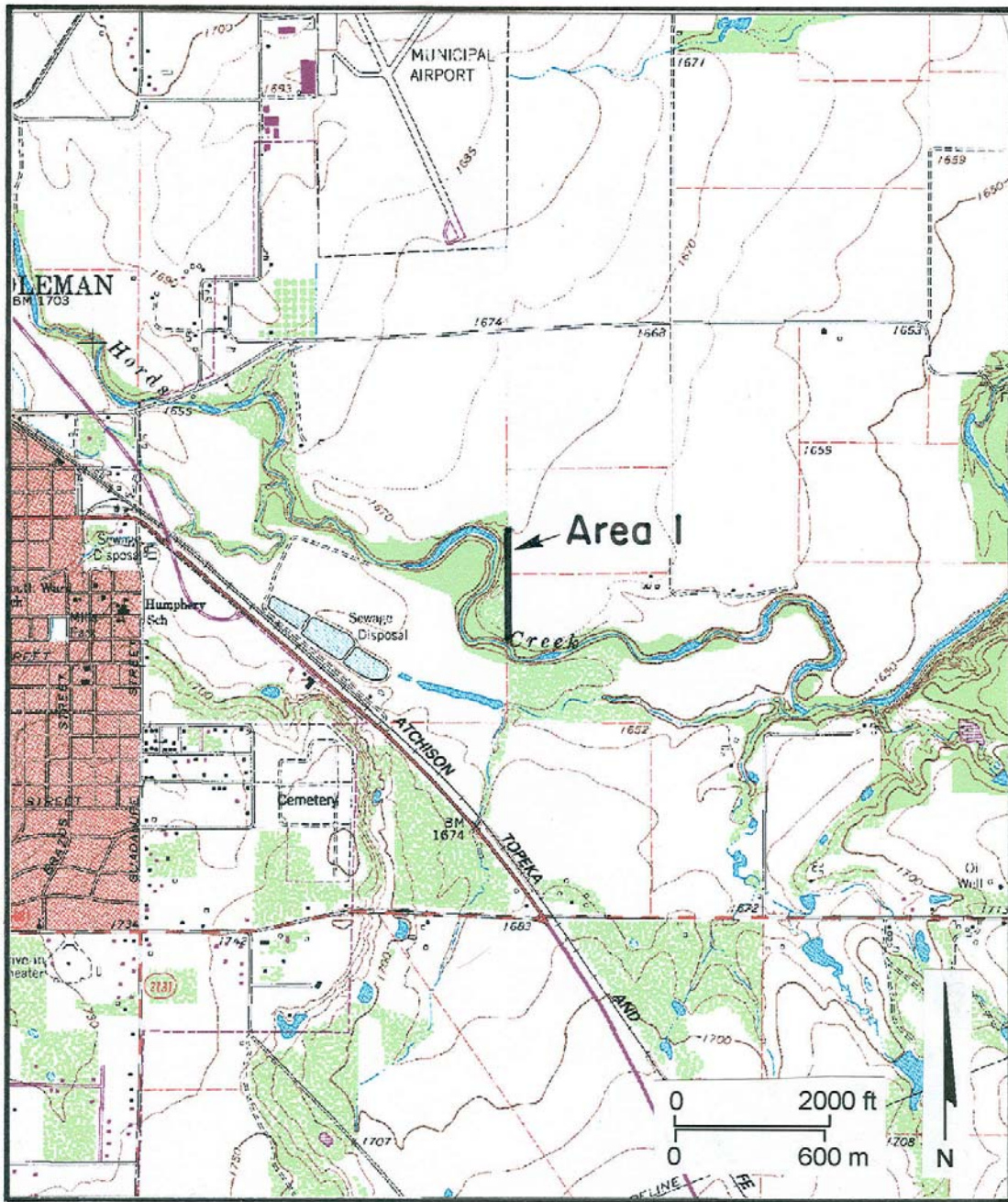


Figure 2. Area 1 on Coleman Topographic Quadrangle

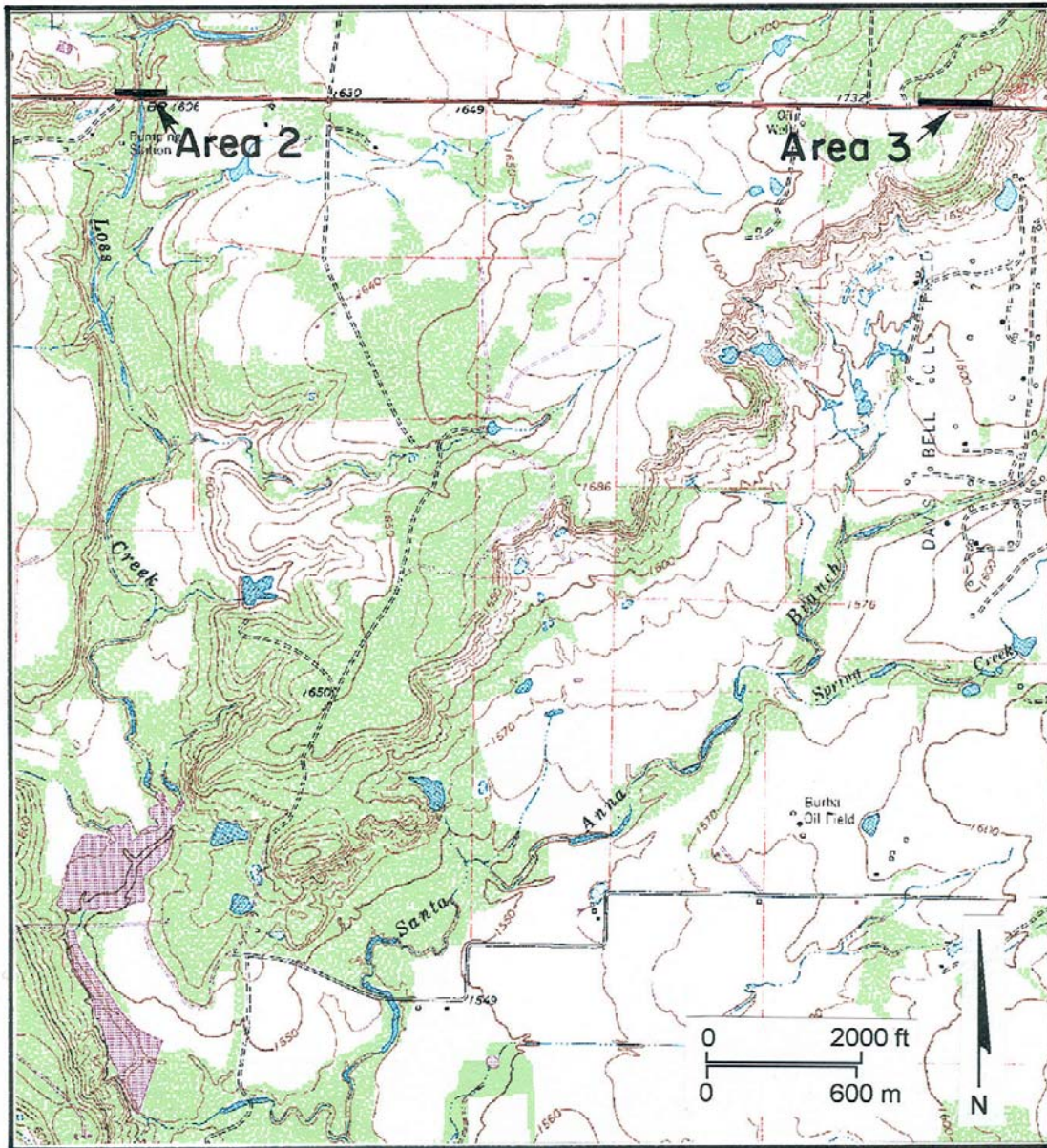


Figure 3. Areas 2 and 3 on Fisk Topographic Quadrangle

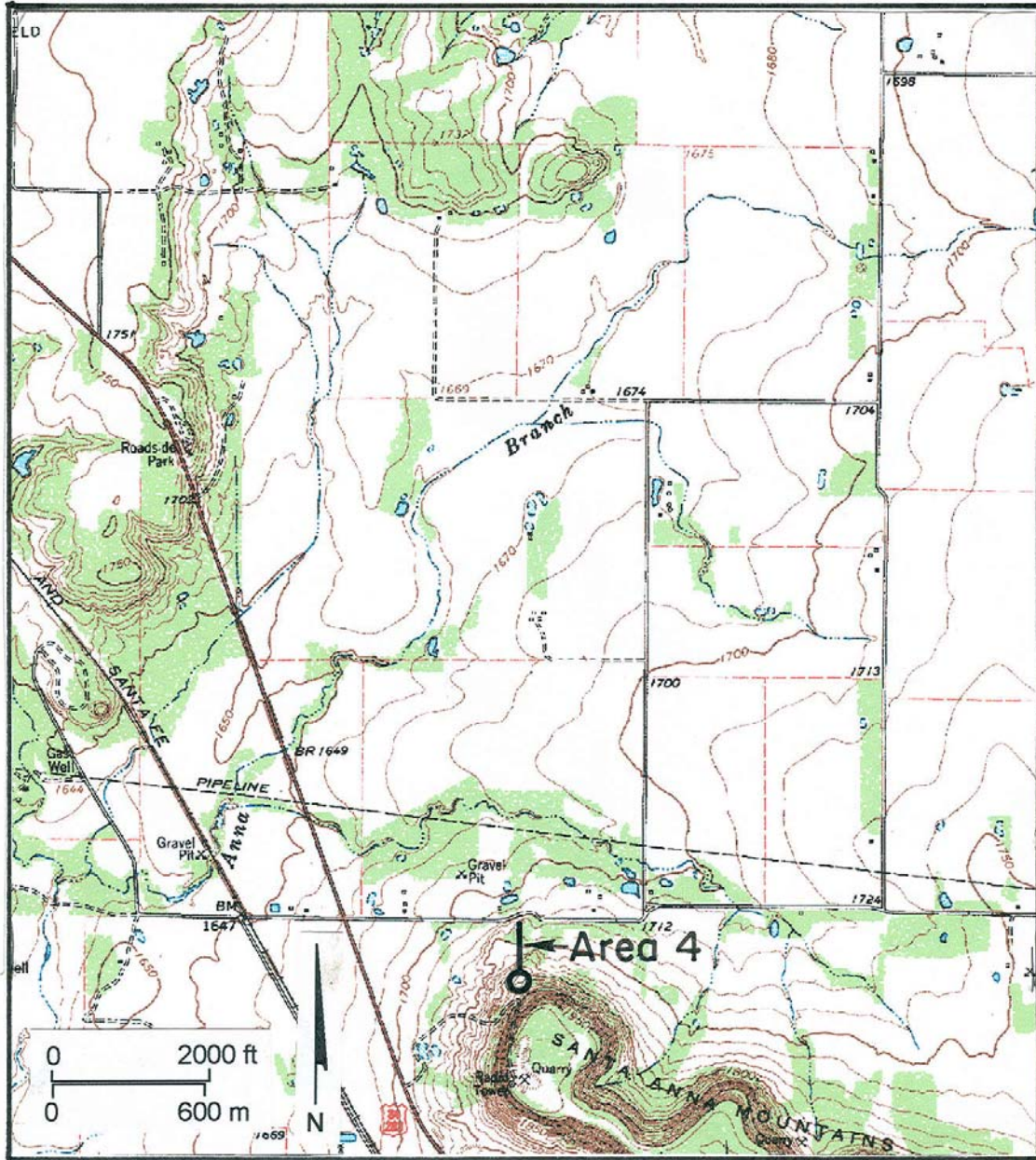


Figure 4. Area 4 on Lake San Tana Topographic Quadrangle

ENVIRONMENTAL SETTING

The project area is located within the Cross Timbers Geographic Region of Texas (Biesart et al. 1985:Figure 4) and the Austropriarian biotic province as defined by Blair (1950:98-100). Most of the county consists of gently undulating uplands with elevations that range from about 1300 feet above sea level at the Colorado River to about 2250 feet in the northwestern part of the county. The reader is referred to Volume I (Stratigraphy) of the Geology of Texas by Sellards et al. (1932) for a more in-depth discussion of the geology of this area. The following data are taken from the *Texas Almanac* for 1984-1985 (Kingston and Harris 1983) and the soil survey for Coleman County (Botts et al., 1974). The county receives 26.82 inches of annual rainfall, and a January minimum temperature of 32 degrees Fahrenheit and a July maximum temperature of 96 degrees Fahrenheit, creates a growing season of 235 days. About 62 percent of the county is used as range, and cattle and sheep are the principal livestock. The rest of the agricultural land is cultivated or in old fields that were cultivated in the past. Small grains, sorghums, and cotton are the main crops. Soils at the three high probability areas consist of Frio Clay Loam (Fo) at Area 1; Frio Clay Loam (Fo), Tarrant and Purves, undulating (TPB), and Stony land and Owens soils, moderately steep (STE) at Area 2; and Speck and Tarrant soils, undulating (SRB) at Area 3.

Frio Clay Loam belongs to the Frio series that consists of calcareous, nearly level soils on the floodplains of streams. In a representative profile, the surface layer is clay loam that is dark grayish-brown in the upper 12 inches and brown in the lower 14 inches. Below this, and extending to a depth of 60 inches, is brown clay loam. These soils are well drained, permeability is moderately slow, and available water capacity is high.

Speck and Tarrant soils belong to the Speck series that consists of shallow, loamy and clayey soils that overlie limestone. These soils are gently sloping to sloping and are found on uplands. In a representative profile, the surface layer is dark brown clay loam about 8 inches thick over a 10-inch layer of reddish-brown clay that is directly above a hard limestone. These soils are slowly permeable, well drained, and the available water capacity is low.

Stony land soils are a mixture of rock fragments and soil material. This soil is generally found on east-facing scarps that are scattered throughout most of the county. The areas are generally less stony at lower levels and between 3 and 15 percent of the surface is covered with stones. When this soil is found at the top of the slope, the soil material is mainly pockets of gravelly and cobbly clay between the rock fragments. The less stony areas on the lower slopes are mainly a mixture of clays and rock fragments that have been moved into place through gravity, soil creep, and local wash. These soils are underlain by shale and soft limestone.

Tarrant soils, undulating consist of undulating soils that are mainly on uplands. Slopes range from about 1 to 8 percent but are mainly about 2 percent. The landscape formed by these soils has contour strips 50 to 150 feet wide that has 25 to 50 percent of their surface covered with stones and boulders. These strips typically make up 5 to 15 percent of the area. Between the strips, the amount of surface covered by limestone pebbles and cobbles ranges from 1 to 25 percent. In a representative profile, the surface layer is dark grayish-brown clay in the upper 6 inches. The lower eight inches consists of about 80 percent limestone fragments. Below this is limestone bedrock.

ARCHAEOLOGICAL BACKGROUND

According to a planning document published by the THC (Biesart et al. 1985:Figure 4), Coleman County is part of the North Central Texas Cultural-Geographical Region of Texas. In 1985, Coleman County had 151 recorded sites, and was fifth in the region that consists of 39 counties. Of the 151 recorded sites in 1985, 2 are Paleo-Indian, 84 are Archaic, and 13 are Late Prehistoric. Disturbance to sites in the county is listed by Biesart et al. (1985:122) as erosion (n=121), construction (n=18), and disturbed and artificially capped (n=14), deflated (n=25), dispersed (n=54), and vandalized (n=15). Only one site was listed as pristine. Investigation at sites in the county in 1985 consisted of those tested (n=49) and surface collected (n=71). Sites with hearths numbered 115, sites with burned rock middens numbered 38, and sites with a burned rock feature numbered 6. One site was reported to have midden soil, and one site was reported to have a bone bed. One stone quarry, two stone tool manufacturing areas, and one burial was known to be present. The planning document does not provide site numbers that can be associated with the above statements.

The only major archaeological survey that has been conducted within the boundaries of Coleman County was for the proposed Stacy (O. H. Ivie) Reservoir that was projected to flood portions of Coleman, Concho, and Runnels counties over 19,200 acres. The first survey was conducted by archaeologists from Espey, Huston & Associates, and the report was written in 1980 (Wooldridge and Nichols 1980). According to the abstract for this report, a 100% pedestrian survey recorded 431 sites in the three counties. Types of prehistoric sites recorded include burned rock middens, campsites, lithic scatters, quarry sites, lithic procurement sites, lithic workshops, base camps with middens, small camps, and rock cairns. These sites date to the Paleoindian, Archaic, and Late Prehistoric periods of Texas prehistory. Historic Indian sites include possible tipi rings. Of the total number of prehistoric sites, 327 contained only prehistoric cultural materials, and 42 contained prehistoric and historic components. The 62 historic sites include cemeteries, farmsteads, industrial sites, house sites, lime kilns, and ranch complexes. Standing structures include a cotton gin, house, outbuildings, cellars, cisterns, foundations, corrals, and cattle pens. These sites are discussed in the second volume of the Stacy Reservoir report (Freeman and Freeman 1981). Additional work at the site of the proposed reservoir include survey at the dam construction zone (Bailey et al. 1989), an inventory of cultural resources above the 1,551.5 contour line (Bryan and Collins 1988), data recovery at sites 41CN74 (Batterman 1991), and an investigation of historic cemeteries (Earls et al. 1991).

The remainder of cultural resource surveys in Coleman County consists of small area and linear projects performed for various federal agencies such as Farmer's Home Administration (FMHA), Lower Colorado River Authority (LCRA), Rural Electrification Agency (REA), and Soil Conservation Service (SCA). Of the seven surveys conducted in the general area, six were performed in the 1980s, and the remaining survey was performed in 2004. There has been no activity in the area since that time. Only one of these surveys found and recorded an archaeological site. During a survey for a proposed transmission line south and east of the town of Coleman, a single historic site (41CN269) was observed and classified as a farmstead dating to the early part of the 20th century. This is the nearest recorded site to any of the three areas surveyed for this project.

METHODS

Prior to entering the field, the Archeological Site Atlas was checked for previously recorded sites and past surveys in the area. Several documents were reviewed during the planning stages of this project. These are a planning document by the Texas Historical Commission (Biesart et al. 1985), an archeological bibliography for the Central Region of Texas (Simons and Moore 1997), and all volumes of the *Abstracts in Texas Contract Archeology* published by the THC. The interested reader is referred to these sources for additional information regarding the prehistory of this area. The soil survey for Coleman County (Botts, et al. 1974) was reviewed in order to identify the soils present in the Area of Potential Effect (APE). The Principal Investigator and Travis Rhoads (General Manager for the Coleman County SUD) conducted a pre-survey assessment of the entire APE. The route of the water line was driven, and three high probability areas were identified. These are the north bank of Hoards Creek (Figure 2), both banks of Loss Creek (Figure 3), and a high hill on the north side of Farm-to-Market Road 2131 where numerous rocks were observed in the highway cut bank (Figure 3). The site of the proposed expansion to the existing water storage tank was originally depicted on top of a high mesa on the USGS topographic map Lake San Tana. Later, it was learned that the water storage tank is actually on the slope of the mesa in an area that had been altered to accommodate this facility (Figure 4). The THC requested that this area be visited as well as the three high probability areas identified during the pre-survey visit.

The field survey was conducted on October 14, 2008. The first area to be examined was the north bank of Hoards Creek (Area 1). Approximately 500 meters of the waterline route was walked and visually inspected. Two backhoe trenches were excavated to depths of 150 cm and 180 below the existing ground surface. The trenches were 36 inches wide and three meters long. A digital camera was used to illustrate the field conditions at Area 1 at the time of this survey, and the photographs of this area are presented in Appendix I.

The second area visited was the east and west banks of Loss Creek on the north side of Farm-to-Market Road 2131 (Area 2). Each bank was walked and visually inspected, as was the creek bank. Segments of approximately 100 meters were walked on the east bank and 130 meters were walked on the west bank. Two shovel tests were dug on the east bank, which is the floodplain side of the creek. The depth of these tests varied from 30 cm to 100 cm, and they were 50 cm in diameter. The soil was not screened due to the presence of firm clay at Shovel Test 1 and creek gravels at Shovel Test 2. The west bank contains a terrace and a high hill with bedrock at or near the surface. Therefore, no shovel tests were excavated in this area. A digital camera was used to illustrate the field conditions at Area 2 at the time of this survey, and the photographs of this area are presented in Appendix I.

The third area visited was a very high hill along the north side of Farm-to-Market Road 2131 where numerous cobbles were observed on the slope of the cut bank (Area 3). Since lithic procurement sites and lithic quarries are very common in Coleman County, this hill was walked for a distance of approximately 300 meters and visually inspected for evidence of tested cobbles. This hill contains bedrock at or near the surface. Therefore, no shovel tests were dug. A digital camera was used to illustrate the field conditions at Area 3 at the time of this survey, and the photographs of this area are presented in Appendix I.

The fourth area visited was the site of the proposed expansion to the existing water storage tank (Area 4). This 60' x 60' tract is on the north slope of a high mesa identified on the topographic map as Santa Anna Mountains. The area was altered by heavy equipment to create a platform for the existing water storage tank and a road to the top of the mesa. The entire tract was visually inspected. Since the surface is bedrock, no shovel tests were excavated. A digital camera was used to illustrate the field conditions at Area 4 at the time of this survey, and the photographs of this area are presented in Appendix I.

RESULTS AND CONCLUSIONS

According to the Archeological Sites Atlas, no portions of the APE have been examined by a professional archaeologist. No previously recorded sites are present within the APE, and the current survey did not observe any evidence of a prehistoric or historic site. Previous work at Stacy Reservoir demonstrated that prehistoric sites dating from Paleoindian through Late Prehistoric times are present in the county and a variety of historic sites that are evidence of early settlement, farming and ranching, and the industrial development of Coleman County are also present.

Area 1

This is the high ground on the north bank of Hoards Creek. It is flat and featureless. At the time of this investigation, it was in cultivation for a variety of maize, and the soil was saturated due to recent rains. Very few rocks were observed on the surface, and not one was large enough to be used in the manufacture of stone tools. Two backhoe trenches revealed a uniform dark gray clay loam from the surface to depths of 150 cm and 180 cm. No rocks or features were present in the walls or back dirt of the two trenches. The soil in this area is described by the United States Department of Agriculture, Soil Conservation Service (Botts et al. 1974:Sheet 28) as Frio Clay Loam (Fo), and it is considered to be prime farmland. It is not known why prehistoric groups did not select this area as a desirable location for a campsite or activity area, but the absence of raw materials and tendency of the soil to become saturated in wet weather are two possibilities.

Area 2

This is the crossing of Loss Creek by Farm-to-Market Road 2131. The east bank is the low side and is the area that would flood when the creek leaves its banks. Although the creek does not appear to be large enough to create a deep floodplain, two shovel tests were excavated in this area to identify the types and depth of soils present. According to the soil survey for Coleman County (Botts et al. 1974:Sheet 28), the soil in the floodplain is Frio Clay Loam (Fo). This segment was walked, and no cultural materials were observed on the surface. Two shovel tests were excavated to determine the probability of buried cultural materials. Shovel Test 1 was dug on the first terrace in TPB soils to a depth of 100 cm, and firm clay was observed throughout with no rocks or features present. Shovel Test 2 was dug in the floodplain in Fo soils to a depth of 30 cm. The test was terminated due to the presence of stream gravels and large fragments of limestone. No cultural materials or features were observed. BVRA believes that the first terrace was not a suitable area for a campsite due to the presence of firm clay, and the floodplain was probably not selected for a campsite or activity area because of the shallow soils and lack of raw materials suitable for stone tool manufacture.

The west bank of Loss Creek consists of a terrace above the creek and a high mesa overlooking the valley to the east. Both areas were walked, and the surface was inspected for cultural materials. According to the soil survey for Coleman County (Botts et al. 1974:Sheet 40), the soils on the first terrace above the creek are Stony land and Owens soils, moderately steep (STE). These are moderately steep areas of generally east-facing scarps that consist of broken layers of hard rock that resists erosion and forms a scarp. The top of the mesa contains soils identified by the soil survey for Coleman County (Botts et al. 1974:Sheet 40) as Tarrant and Purves soils, undulating (TPB). These soils have a shallow layer of clay that is about 80 percent limestone fragments that range in size from pebbles to boulders. The underlying material is limestone. Most of the area adjacent to the fence had been scraped and pushed. Since this disturbance is within the path of the proposed water line, any site restricted to the surface would have been destroyed. The scraped area and the back dirt areas were examined for cultural materials, but no artifacts were found. No shovel tests were excavated, as the soil present is too shallow and rocky. BVRA believes that the terrace and west bank were not selected for permanent campsites due to the shallow soils, and the absence of chert cobbles precluded these areas from being selected for quarrying or lithic procurement.

Area 3

This area is the top of a high mesa overlooking a broad valley to the west. During the pre-survey assessment, numerous cobbles were observed along the slope of the cut bank. This area was selected for survey because lithic quarry and procurement sites have been found in similar settings. Approximately 300 meters along the top of this landform were walked and visually inspected for any evidence that might suggest the presence of a prehistoric activity area. The soils in this area are described in the Coleman County soil survey (Botts et al. 1974:Sheet 40) as Speck and Tarrant soils, undulating (SRB). These soils are shallow, loamy, and clayey soils that overlie limestone, and they are found in the uplands. No evidence of a prehistoric site or activity area was observed, and it is concluded that this area was not utilized due to a lack of chert cobbles that could have been used in stone tool manufacture.

Area 4

This area is the 60' x 60' site that has been selected by the Coleman SUD for an expansion of an existing water storage tank. It is located on the slope of the Santa Anna Mountains. The platform for the existing water storage tank and the road that leads to this facility and eventually to the top of the mesa has been cut from the slope of the mesa, and the area where the storage tank and site for proposed expansion is located has been created by cutting into the mesa with heavy equipment. The entire site was walked and visually inspected, and no evidence of a prehistoric site was observed. This was not unexpected, as sites are not commonly found on steep slopes.

RECOMMENDATIONS

No archaeological sites were found as a result of this project. It is, therefore, recommended that construction be allowed to proceed as planned by the Coleman County SUD without further consultation with the THC. Should construction plans change to include additional water line in an area that can be viewed as a likely setting for an archaeological site, the THC must be notified in case additional survey by a professional archaeologist is warranted. Should evidence of a prehistoric or historic site be unearthed during construction, all work in the area of the find must stop until the THC can evaluate the situation. This study conformed to the Minimum Survey Standards as defined by the Archaeology Division of the THC.

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APPENDIX I

PHOTOGRAPHS OF AREAS 1 – 4



Area 1. View of Field on North Side of Hoards Creek (looking north)



Area 1. Backhoe Trench 1 (during excavation)



Area 2. View from Loss Creek (looking west)



Area 2. Top of Mesa (looking east)



Area 3. View along Fence (looking west)



Area 4. View of Existing Water Storage Tank on Slope of Mesa



Area 4. Site of Proposed Expansion Depicting Disturbance and Slope