AN ARCHAEOLOGICAL SURVEY FOR THE ZAPATA COUNTY WASTEWATER TREATMENT PLANT EXPANSION PROJECT IN WEST-CENTRAL ZAPATA COUNTY, TEXAS

Antiquities Permit 7336

By

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Contract Report Number 272

2015

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BVRA Project Number 15-06

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ABSTRACT

An archaeological survey of the site of the proposed wastewater treatment plant expansion in west-central Zapata County, Texas was performed by Brazos Valley Research Associates (BVRA) on July 10, 2015 (Antiquities Permit 7336). The size of the area examined is 4.58 ac. The field methods included a 100% pedestrian survey and backhoe trenching. Virtulaly the entire area was littered with historic trash and there were sparse scatters of prehistoric lithic debris as well. This area was recorded as multi-component site 41ZP965. Due to the extent of disturbance over the entire APE, it was not possible to identify the source area of the cultural materials. The prehistoric scatter probably represents a limited use area that included limited activities and a possible camp. A probable metate fragment and unifacial scraper suggests plant procurement and preparation. An exausted core, and flakes representing all reduction stages are indicators of tool and blade manufacture. The scraper may have been used to process Agave and other similar plants.

The historic trash scatter covers most of the entire tract. Types observed are bottles and bottle fragments, ceramics, colored glass, window glass, and a coffee tin lid. The historic component could represent a dump that was pushed when the area was cleared of vegetation. The area could also be the site of a former house, line shack, or store. The research potential of this site is limited to an analysis of the artifacts described in this report, on the site, and archival research that may identify what was present at the time. It is recommended that the county be allowed to proceed with construction of the new plant as planned. Copies of the report will be housed at the Texas Historical Commission (THC), Texas Archeological Research Laboratory (TARL), the Texas State Library, the County of Zapata, Premier Civil Engineering, LLC, regional libraries, and BVRA.

ACKNOWLEDGMENTS

I am appreciative of the assistance provided by others during this project. Armando Guerra of Premier Engineering & Surveying, LLC provided project area maps and served as my link with the client. Carlos Trevino, Utilities Director for Zapata County, signed the permit application and provide a backhoe and operator and workers to help in the field. The county employees who assisted in the field were Eloy Chapman (Supervisor), Jr., Mike Bonoan, Kiko Valadez, and Tino Zapata. Shawn Bonath Carlson and Roger G. Moore helped identify the historic artifacts, and William A. Dickens helped me discussed the prehistoric specimens. Rhonda K. Holley assisted with the backhoe trenching and helped with the record keeping and photography. Lili G. Lyddon prepared the figures that appear in this report and edited the manuscript.

CONTENTS

INTRODUCTION

The County of Zapata plans to expand the size of an existing wastewater treatment plant in west-central Zapata, Texas (Figure 1). The Area of Potential Effect (APE) is 4.58 ac. The entire tract is located in an upland setting of about 330 ft. above mean sea level. The nearest source of water that may have been utilized in prehistoric times is Arroyo Veleno, 1830 m to the northeast. This arroyo drains into Arroyo Indio that is 2140 m, also to the northeast. The major source of water in the area is the Rio Grande River and the main channel is about 4.7 km to the south. There is another channel or arroyo about 370 m to the southwest. There are no cemeteries in the APE and the only existing structures are those related to the existing wastewater treatment plant (Figure 2). The project area is depicted on the USGS 7.5' topographic quadrangle Zapata (2699-434) (Figure 3).

The purpose of this permit amendment is to increase flow from 0.8 million gallons per day (MGD) to 1.6 MGD as part of a proposed plant expansion project. Currently, the wastewater treatment facility is operating at about 90% of its capacity and is struggling to meet the discharge parameters set forth by Texas Commission on Environmental Quality (TCEQ) 5/15 discharge permit. The current permit (WQ0010462001) issued by the Texas Pollutant Discharge Elimination System (TPDES) dictates that whenever the flow reaches 90%, the Permittee (Zapata County) shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. The Permittee has taken all the proper steps to secure funding from the United States Department of Agriculture to expand the existing facility and is ready to commence the required permit amendment process.

In addition to the plant having reached 90% of its capacity, the life expectancy of the 0.8 MGD wastewater plant has expired. Both existing oxidation ditches have major structural damage present that prevents Zapata County Personnel from operating the facility properly. Additionally, most of the mechanical components throughout the plant are worn out and need total replacement. For these reasons, the proposed 1.6 MGD wastewater treatment plant improvement project shall consist of constructing a new headworks facility, two new aeration basins, two new clarifiers, one chlorination basin, and a new office with TCEQ compliant laboratory. These new plant improvements will be designed and constructed in strict accordance with the rules and regulations set forth by TCEQ. In addition, the planned improvements will be designed to meet the existing 5/15 discharge permit requirement. The design flow of 1.6 MGD and 2-hr peak flow of 6.0 MGD were carefully calculated from existing plant data as required by Rule §217.34 (Re-Rating, Expanding, or Materially Altering an Existing Facility)."

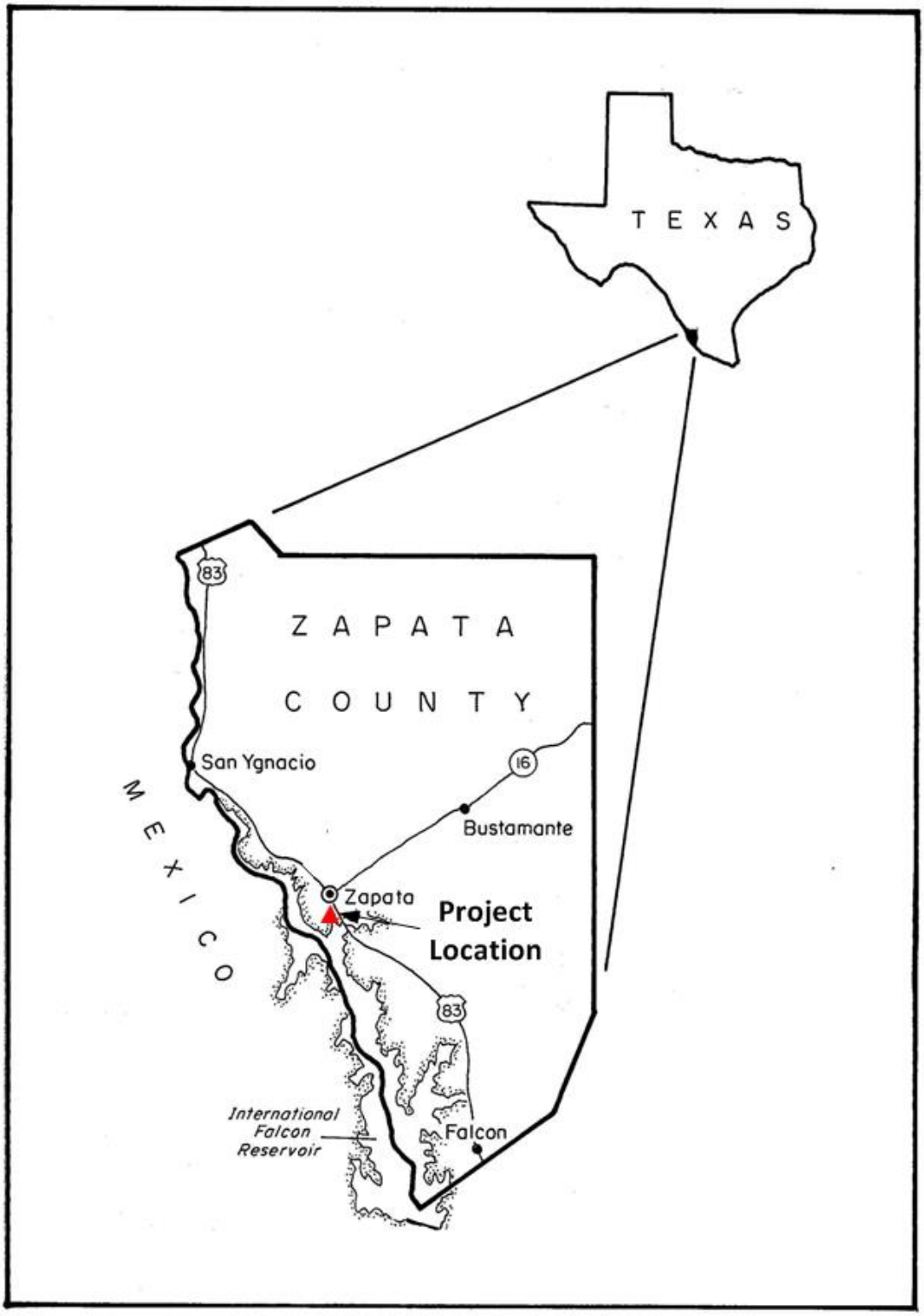

Figure 1.General Location Map.

Figure 2. Existing Wastewater Treatment Plant.

The area investigated had been cleared of all major vegetation through grading, a process that uses an excavator with a grading blade. This method disturbs at least six inches of the topsoil. The APE is on sloping terrain that drops about 20 feet from the east to west. In parts of the site, mainly towards the west, sandstone bedrock crops out at the surface. The entire site was fenced with modern chain link fencing. Other disturbance including installation of a two-inch waterline. This line was placed in a trench 24 in. wide and 26 in. deep. One pipe parallels the fence that forms the northwest boundary and the disturbance associated with this waterline extends at least 5 feet from the fence. The other waterline is a six-inch pipe that was installed to provide sufficient pressure to the existing belt press. This six-inch line comes out from the belt press towards the southwestern property/fence line and travels at an eight foot offset towards the most southwesterly corner. From here, the six-inch line changes direction and travels northeast along the same fence line for about 550 ft, before it turns to the southwest and eventually connects with another six-inch waterline at Madison Street.

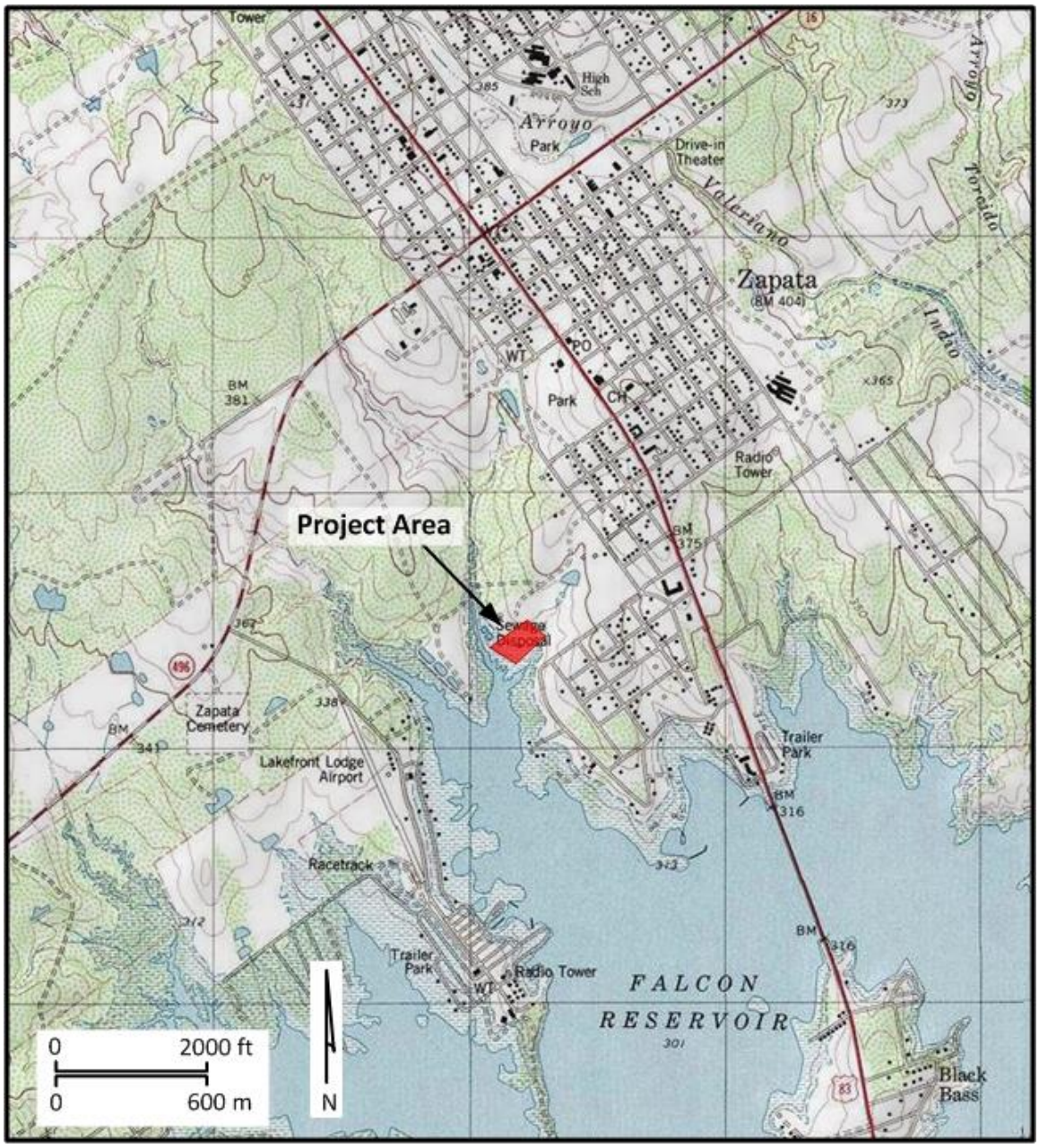

Figure 3. Project Area on Topographic Quadrangle Zapata.

Before the Rio Grande became an international boundary, the citizens of Mexico lived on both sides of the river. Settlement began as early as 1765 when the town of Roma was founded. Any cultural resources survey on or near the north bank of the Rio Grande must consider the possibility of Spanish Colonial activity in the area.

ENVIRONMENT

Thomas R. Hester (2004:217-259) presents an excellent discussion of South Texas prehistory and he cites numerous sources that support his statements. Regarding changes to the environment, Hester (2004:217) states "The difficulty in describing, in any detail, the hydrology, fauna, and vegetation of the region is results from wholesale modification of the south Texas environment during the Historic period." Today, this area is referred to by different names, and South Texas Brush Country is one example. This is a large region that covers about 20.5 million ac. It extends from Del Rio to San Antonio and southeast to Rockport. The current vegetation consists mainly of mesquite, blackbrush, brasil, cactus, and other thorny plants. There are ecoregions in the area that affect the diversity of vegetation communities along the fringes of this area (e. g. Inglis 1964; Taylor et al. 1999). Today's plants are quite different from the prehistoric past. The plant communities in south Texas were created by types of soil, amount of rainfall, temperature, growing seasons, and grazing by livestock. The diversity of plants and vegetation determine the species of fauna that inhabit the area. Mesquite and many of the thorny plants that are currently dominant spread or increased in density in historic times (e.g. Inglis 1964; Taylor 1999). Research by Richard G. Holloway (1986) identified wood species found preserved as hearth charcoal and he deduced that that mesquite was clearly present in riverine zones as early as 6000 B.C. Christopher J. Jurgens (1980), believes that the typical riverine environmental pattern that exists today was established by 300 B.C. The dominant vegetation in the area is in dispute. Some believe that the landscape was mainly covered with native grasess while others think that mesquite was widely distributed (Inglis 1964; Weniger 1984). The climate in the area is defined as subtropical-subhumid. Temperatures vary from an average of 44° F to 69 ° in January and 75° to 100° in July. The averge annual temperature is 74°. Rainfall averages 19 inches annually and the growing season is long at 295 days (Alvarez 2004).

Spanish explorers were in South Texas in the1600s. They reported large areas of grasslands that apparently dominated the landscape; they also observed woody plants (trees and shrubs) in thickets, upland areas, major drainages and river bottoms. Mesquite was present throughout the region but at a much lower density than today. Natural fires helped to maintain the region as a savannah, and control woody plant densities on the prairie (e.g. Inglis 1964; Taylor et al. 1999). South Texas was settled circa 1820-1870 and significant changes to the landscape ensued. Concentrations of livestock near towns resulted in an intensification of brush more rapidly than elsewhere in the rural areas. Overgrazing on the larger cattle ranches was not a major problem as long as open range was available.

The introduction of barbed wire changed land use drastically. The lack of grass due to grazing and decreased occurrence of natural fires allowed brush to invade the open country. Brush distribution was no longer restricted to river bottoms, upland areas, or in thickets on the prairie. Other contributing factors were soil compaction and droughts. The spread of brush was regarded by ranchers as detrimental to livestock operations and attempts to control it were intensive and widespread attempts at brush control including cabling, chaining. root plowing, roller chopping, disking, and chemicals. These practices affected the types of vegetation in the area and they were very destructive in terms of turning over the soil to depths of one foot or more in some areas.

The soils in the county are generally light in color and loamy in texture over reddish or mottled clayey subsoils. Limestone and sandstone often occur on the surface or within 40 inches of the surface (Molina and Guerra 2011). The Natural Resources Conservation Service website describes the soils in the APE as Brennan fine sandy loam with 0 to 3 percent slopes (BeB). The A horizon is sandy loam and the B horizon is sandy, clayey loam. A typical B horizon is only 10 in. below the ground surface. Another soil that may be present in this area is Copita fine sandy loam with 1 to 5 percent slopes (CpC). The A and B horizons are similar to the Brennan soils but the B horizon is about 11 in. below the surface. Rock outcrops associated with the Copita soils are exposed sandstone.

ARCHAEOLOGICAL BACKGROUND

According to Biesaart, et al. (1985:Figure 15), the APE is located in the Southern Coastal Plains Cultural-geographical region of Texas. In 1985, there were 1516 recorded sites in the region (7.50% of the state). This region encompassed 19 counties. At the time, eleven sites were listed in the National Register of Historic Places (NRHP) and one site had been designated as a State Archeological Landmark (SAL). In Zapata County, there were 75 known prehistoric sites. Two were classified as Paleoindian, twenty-eight as Archaic, and 12 as Late Prehistoric. In 1983, four sites in Zapata County had been given SAL status (41ZP73; 41ZP99 – 41ZP101). Types of sites and features included hearths, burned rock middens, unspecified burned rock features, shell and earth middens, a bone bed, burials, and areas where stone tools were manufactured.

Disturbance was recognized as a major factor in evaluating site condition. Erosion was the major form of disturbance to 71 sites, followed by "disturbed and capped" (29 sites), and construction (16 sites). Although only two sites were described as having been impacted from digging and surface collecting by collectors, this number was probably greatly underreported. A more recent and serious form of disturbance in the area is due to the mining of coal from the Jackson-Yegua formation that is near the surface (Mercado-Allinger, et al. 1996). In the uplands, much of the soils in South Texas that comprise the A-Horzion are relatively shallow (10"-12"); therefore, this type of activity destroys those kinds of sites. Other current forms of disturance not listed above are oil and gas production, agriculture, and root plowing as a means of brush control. Reservoir construction typically affects large areas and the creation of Lake Falcon in Starr and Zapata counties covers an area of 83,654 ac. or 33,854 ha.

Most of the major sites are found along the Rio Grande; in the floodplain, on terraces, and in nearby uplands. Sites are also numerous along the many arroyos that help drain the area. An arroyo is usually defined as a dry streambed or small, deep gully or channel of an ephemeral stream. They usually have relatively flat floors and are flanked by steep sides consisting of unconsilidated sediments. Water is usually only present after heavy rains. Sites may occur on the banks or in the bed of the arroyo. William A. Dickens (personal communication) has observed hearths in arroyo beds. The nearest source of water to the APE that may have been utilized in prehistoric times is Arroyo Veleno, about 4000 m to the northwest. The probability of a site in the APE is considered to be high because of recorded sites nearby on similar landforms.

The first recorded sites in the county were as a result of the survey for the proposed Falcon Reservoir during three seasons, 1950 (Krieger and Hughes), 1951 (Hartle), and 1952 (Cason). At the time of this study, there were 995 previously recorded sites (TARL files).

The closest recorded site to the APE is 41ZP395. It was recorded by Samuel D. McCulloch and James E. Warren (1999) during a reconnaissance survey of Falcon Reservoir. It is located about 420 m to the southwest on a gravel hill along an upper terrace between two arroyos that drain into Arroyo Veleno. No features were observed, but burned chert found on the site may have been associated with hearths. Warren described this site as a lithic procurement area and possible camp. Artfacts observed consisted of a single Matamoros point; tested chert cobbles; and primary, secondary, and tertiary flakes scattered over the surface in an area estimated to be 60 m in diameter. The recorders describe this site as small and probably shallow. Its significance remains undetermined.

Site 41ZP396 was also found by Samuel D. McCulloch and James E. Warren (1999) during a reconnaissance survey of Falcon Reservoir. It was described as a lithic scatter on a gently sloping hillside along the west side of an arroyo that drains ito Arroyo Veleno. No artifact concentration was noted and the scatter was estimated at 30 m in diameter. Artifacts observed included one Matamoras point; burned chert fragments; and primary, secondary, and tertiary chert flakes. This site is about 600 m southwest of the APE and 200 m from site 41ZP395. Both sites were estimated to be Archaic in age based on the single point found at each one.

The major source of water in the area is the Rio Grande River and the main channel is at about 3.6 mi. to the south. This river has a history of meandering but it has never been close enough to the APE to be considered a factor in choosing a place for a site. Gravels are numerous throughout this area and many appear on the surface due to delation and erosion. Many upland sites were created because of the abundance of cobbles suitable for making stone tools rather than the resources of the river. These sites are usually regarded as temporary in nature, although it is likely that these areas may have been visited numerous times when more stone was needed. The APE is depicted on the USGS 7.5’ topographic quadrangle Zapata (2699-434).

ZAPATA COUNTY

Zapata County is located on U.S. Highway 83, 50 miles south of Laredo in Webb County. It is bordered on the north by Webb County and on the east by Jim Hogg and Starr counties. Mexico shares its western border. The county covers 999 square miles and the landscape varies from 200 feet to 700 feet above mean sea level. Zapata is the county's largest town and is also the county seat. It is located on the Rio Grande River at the junction of U.S. Highway 83 and State Highway 16. Contrary to popular belief, it was named for a loca rancher named Antonio Zapata – not the Emilio Zapata the revolutionary and folk hero.

Spanish explorer Miguel de la Garza Falcon is reputed to be the first European to visit the area when he led a group of fellow adventurers down the northern bank of the Rio Grande in 1747 from the present town of Eagle Pass to the mouth of the river. This route later became known as the Old Military Highway. At the time, the area was inhabited by Carrizos, Tepemaca, and Borrado Indians. The first settlement was founded in 1750 by a rancer from Coahuilla named Jose Vazquez Borrego. He was the creater of the Nuestra Senora de los Dolores Hacienda only a few miles from the current town of San Ygnacio. Another Spanish explorer, Jose de Escandon, was in the area at the same time as Borrego and he also founded new settlements. By 1755, the ferry located at the Dolores Haciendo was the most important crossing on the river. Colonists who lived on the south side of the river owned land on the other side also. They established a settlement circa 1770 and named it Carrizo. This settlement later became Zapata. Ranching was the primary industry in the early years of settlement. Hacienda Dolores was abandoned in 1818 due to constant attacks by Indians. In 1821, the area that is now Zapata County became part of the Mexican state of Tamaulipas.

The area now called Zapata County was claimed by Texas and Mexico. During this time, there were numerous Indian raids by Apaches and Comanches and the Dolores Hacienda was destroyed. The Spanish government continued to grant land to settlers. In 1848, the Treaty of Guadalupe Hidalgo awarded the land to Texas. Zapata County was created in 1858 and it was officially organized in January of that year with Bellville the county seat. The name was changed to Carrizo and finally Zapata.

The early economy was largely subsistence farming and ranching with cattle and sheep the primary animals for production. Later, goats played a major role with the export of mohair being a major item for export. Around the turn of the century, cotton became important and by 1920 cotton farmers were producing 2000 bales annually. Commercial oil and gas wells entered the scene in the 1920s and the creation of a toll bridge between Zapata and Mexico created new markets across the border.

Arguably, the biggest boost to the economy occurred when the International Falcon Reservoir was constructed on the Rio Grande and provided flood control and water reserves for both countries as well as recreational opportunites that brought in large scale tourism. Patsy Byfield (1966) discusses the history of the dam and its effect on the local population. Old Zapata, for example, is the original town that now lies beneath the waters of the lake. New Zapata was created in 1953 on the high ground that is not prone to flooding. By the 1960s, the influx of tourists and "snowbirds" from the north was a leading form of income. The above information was taken from "ZAPATA COUNTY," Handbook of Texas Online, written by Alicia A. Garza and Christopher Long. The link to this site is http://www.tshaonline.org/handbook/online/articles/hcz01.

METHODS

Prior to entering the field, the site records at TARL and the Texas Archeological Sites Atlas were checked for the presence of previously recorded sites and other archaeological surveys in the project area and vicinity. Relevant archaeological reports documenting work in Zapata County were reviewed in order to become familiar with the types of prehistoric and historic sites found in the area. Contract reports by Warren (1989, 1993), Moore (2010), Uecker and Warren (2005), Kotter (1980) and a book by Thomas R. Hester (1980) were among those reviewed prior to this study. In addition, William A. Dickens shared his knowledge of the area and helped formulate the Scope of Work. The project area was investigated by a 100% Pedestrian Survey and backhoe trenching. The client is concerned about being required to retain a professional archaeologist to investigate the site of the existing treatment plant. We walked over the area and found no large areas that appeared to be undisturbed. Given the nature of construction for a treatment plant and the shallow soils at the site it is my opinion that the only future work that might be needed would have to do with hazardous waste issues should the plant be dismantled.

The site of the proposed expansion of the wastewater treatment plant was the focus of this investigation. It is 4.58 ac. in size and fenced. When we arrived at the site, we were met by Carlos Trevino (Utilities Director for Zapata County), Eloy Chapman (Maintenance Supervisor), Mike Bonoan, Kiko Valadez, and Tino Zapata. The first step was to walk over the area in an attempt to identify artifacts and features that might be present on the surface. The surface survey was carried out by walking randomly over the entire area and stopping to inspect areas that were devoid of vegetation. We entered the tract in the northwest quadrant. Our first observation was sandstone cropping out at the surface. Overall, surface visibility was excellent (Figure 4).

Because the surface had been disturbed through grading, we decided a series of backhoe trenches would be the best course of action since the A horizon was not only disturbed but reported to be shallow. The first three backhoe trenches were excavated parallel to the fence that borders the southern side of the tract and each trench was oriented from west to east. The shallow depth of the A horizon was quickly confirmed, but the trenches (except for Backhoe Trench 6) were dug from 90 cm to 179 cm, well into the B horzon (Appendix I). The profiles were checked for cultural materials that might indicate a buried site or staining that might be an indication of a fire (cultural or natural). The profiles in five of the six trenches were similar.

Figure 4. Typical Surface Exposure.

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Figure 5. Profile of Backhoe Trench 2.

(looking south)

Measurements were taken of the length, width, and depth of each trench as well as the vertical extent of the A horizon. A hand held GPS was used to take coordinates at the center of each trench. The distance from the trenches to the nearest fence was measured with a tape for more accuracy in the mapping process. The location of the backhoe trenches appear in Figure 6. These data also appear on a specially designed log (Appendix II) and the entire project was documented through field notes and digital photography. The kinds of artifacts were noted and those specimens considered to be diagnostic or unusual were photographed. A random sample of historic trash and lithic debris was described in the field notes and photographed in the field. Table 1 is a summary of those identified.

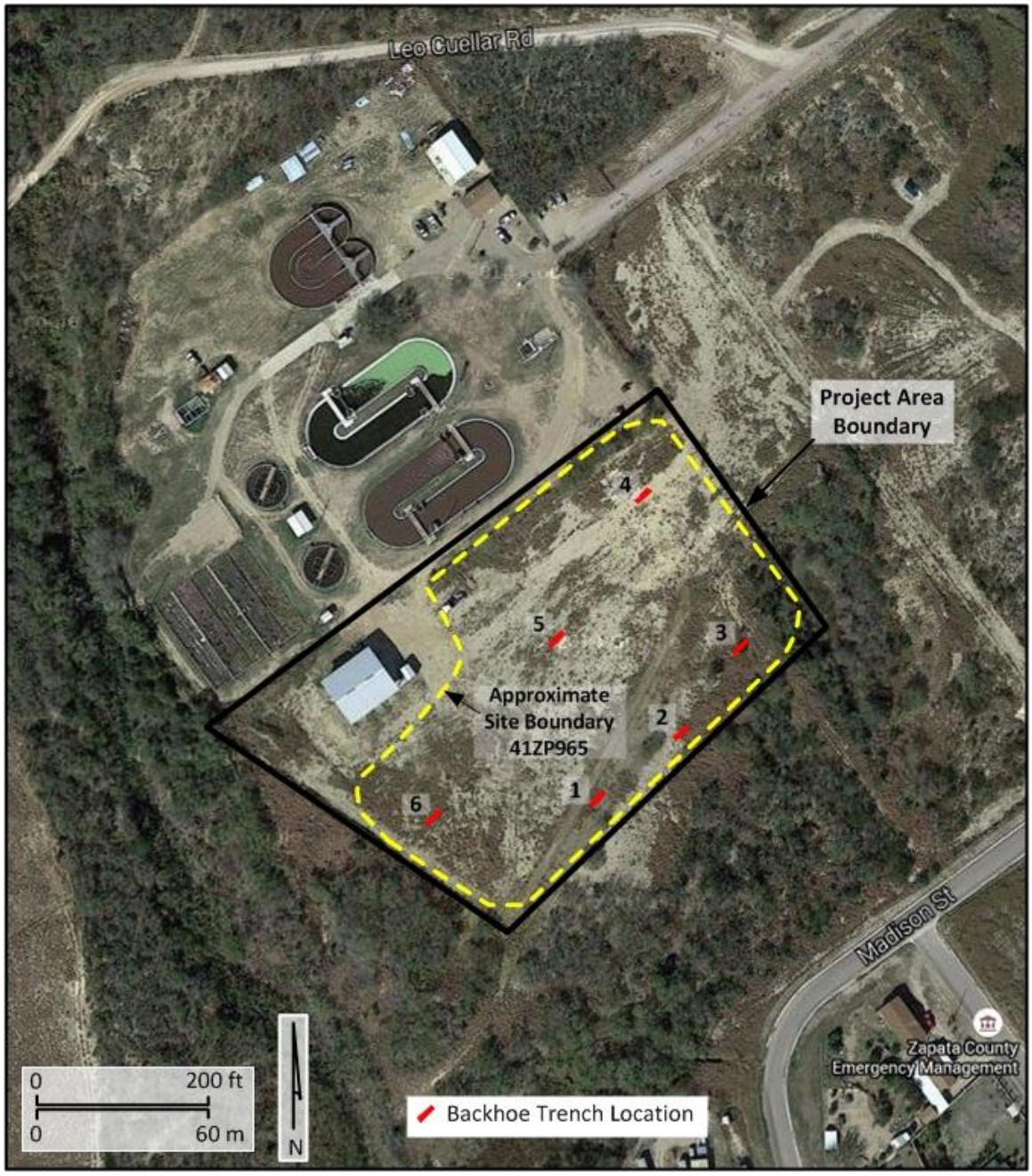

Figure 6. Location of Backhoe Trenches

Table 1. Artifacts Observed in the Field

Prehistoric
Tested Cobbles
Unifacial Scraper
Metate Fragment
Exhausted core
Blade core
Flakes (primary, secondary, and tertiary
Historic
Bottles (clear and brown)
Bottlenecks (clear and brown)
Bottle bases (clear, brown, and cobalt blue)
Window glass fragments
Ceramics Fragments (bases, lips, and body sherds)
Sponge ware
Whiteware
Porcelin
Possible ceramic roof tile
Unidentified
Milkglass
Metal lids
Coffee tin
Unidentified
Miscellaneous metal fragments
Fragment of concrete

RESULTS AND CONCLUSIONS

Examination of the files at TARL in Austin, Texas and the Atlas revealed no previously recorded sites had been recorded within the boundaries of the current APE. The two nearest prehistoric sites (41ZP395 and 41ZP396) are between 400 and 600 m from the current APE. They are described on the site forms as lithic procurement areas and/or possible campsites next to arroyos. At both sites, cultural materials were described as probably restricted to the surface. The presence of tested cobbles; primary, secondary, and tertiary flakes; some burned chert; and a Matamoros point at each site suggests that there was a good probability that a similar site might be present within the project area.

The entire APE had been cleared of vegetation by chaining. This method disturbs the soil to a depth of at least 6 inches. Other disturbed areas include the installation of water line. The pipe was placed in a trench 24 in. wide and 36 in. deep. The soil around the trench was compacted from the weight of the heavy equipment used in the installation of the waterline.

One multi-component site was recorded at TARL as 41ZP965. The artifacts at this site are all surface finds. No evidence of human activity was seen in any of the six backhoe trenches. The prehistoric component is described here as a very sparse scatter of flakes, tools, and tested cobbles over an undetermined area. Identifiable specimens include one probable metate fragment, at least ten flakes representing all reduction stages, three tested cobbles, and a unifacial scraper that was created by splitting a cobble. An exhausted core and a core showing the scar from blade removal were also found. No burned rock or chert was observed. Because of the disturbance caused by chaining, the original location of these artifacts could not be determined. Therefore, no attempt was made to estimate the size of this component. The absence of diagnostic artifacts precluded any attempt at dating the site. Not many cobbles were seen but it was noted that they appeared to be most numerous near a small arroyo to the south and outside the APE. Two of the tested cobbles have enough sharp edges that they could have been used as tools. Very little can be said about the prehistoric component except the most obvious activities were probably lithic procurement, plant processing, some tool maintenance, and/or a campsite near the arroyo.

The trash scatter was large and the artifacts were numerous (See Table 1). The kinds of artifacts noted include glass bottles and bottle fragments, ceramics, coffee tin lid, milkglass, and unidentified metal fragments. The size of the original site could not be determined due to chaining with an excavator to remove the brush. One possibility of site type could be that of a trash dump that was scattered during the brush eradication process. This could explain any mixture of types of artifacts and those that were manufactured at different times. The span of time represented by the artifacts is from the latter part of the 19th century through the early years of the 20th century.

Another plausible explanation for the presence of this large scatter of historic trash could be the site of a former homestead. Conversations with local informants suggest that this area was very rural during the early to middle part of the 20th century. Although the vast majority of artifacts observed were items that would have been purchased and used by a normal family of that time. However, the only items that suggest building materials were some flat clear glass fragments that may be the remains of broken window panes and a thick ceramic that has a reddish-orange glaze on both sides. This specimen could be a fragment of very old tile used on a roof or floor. It is very similar to some of the early terracotta tiles that originated in Spain. In Roma and San Ygnacio, similar tiles were observed on the roofs of some of the older buildings. No bricks or other building materials typically found at a more recent house site were seen. If a structure was present, it probably rested on piers. Wood seems the most likely candidate since no bricks or rocks large enough to serve that purpose were present. It is, however, possible that such materials could have been borrowed to be used elsewhere at a later date. Again, site size could not be determined.

It was possible to identify some of the artifacts by their markings or other recognizable features. For example, some of the brown glass was obviously fragments of a snuff bottle. One bottle top bears the name “Sauza” and I was able to determine that Sauza is a company in Mexico that began making Tequila in 1873 and is still in business. One small brown bottle bears the name “Whitehall.” Both bottles have a screw top that indicates they were probably manufactured sometime after 1920. One very small clear glass bottle (2 in. tall and ½ in. in diameter) was identified by images on the Internet as a medicine bottle but purpose is not known. It has numbers on the base but only two are readable. It has no seams and a crimped lid. This dates it to sometime before the change to screw top bottles but an estimated on the age of this bottle is not possible at this time. One brown bottle was also molded and it appears that it conforms to a type manufactured circa 1910. Its purpose is also not known. Two manufacturer’s marks represent the Owens Glass Company. One mark identifies bottles that were manufactured in 1954 and the same logo is still in use. The other mark was only used from circa 1929 to 1960, The artifacts bearing these logos are a clear bottle base, a brown bottle base, and a the brown Whitehall medicine bottle. The age of manufacture of the historic artifacts ranges from sometime in the 19th century through the middle of the 20th century. The thick ceramic tile could date to Spanish Colonial times.

RECOMMENDATIONS

The prehistoric and historic components at site 41ZP965 are not considered to be eligible for nomination to the National Register of Historic Places or for designation as a State Archeological Landmark. This assessment is based on a lack of association with the following criteria for evaluation and only applies to that portion of the site within the APE.

- Site not known to be associated with events that have made a significant contribution to the broad patterns of prehistory or history.
- Site not known to be associated with the lives of significant persons in the past.
- Site not believed to embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction.
- Site not likely to yield information important in prehistory or history.

Although some information can be obtained from artifacts, this site has been virtually destroyed through land clearing operatons. Also, there is no evidence that any portion of this site exists except on the surface.

It is, therefore, recommended that the client be allowed to proceed with construction as planned. Should evidence of an archaeological site be encountered during the excavation of the trench at any of the areas investigated, all work must stop until the THC can evaluate the situation. This survey was conducted in accordance with the Minimum Survey Standards as outlined by the THC.

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APPENDIX I

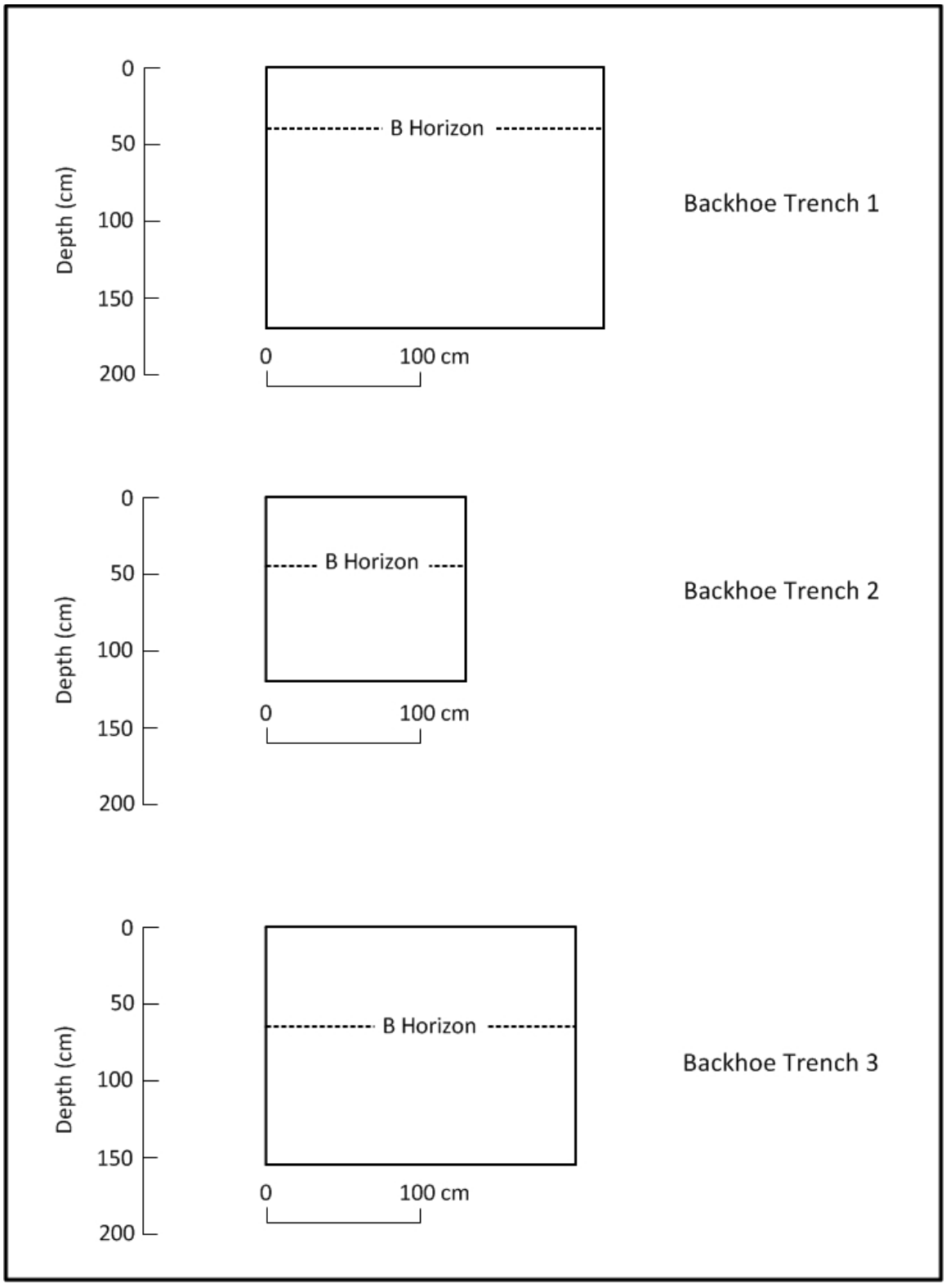
BACKHOE TRENCH LOG *

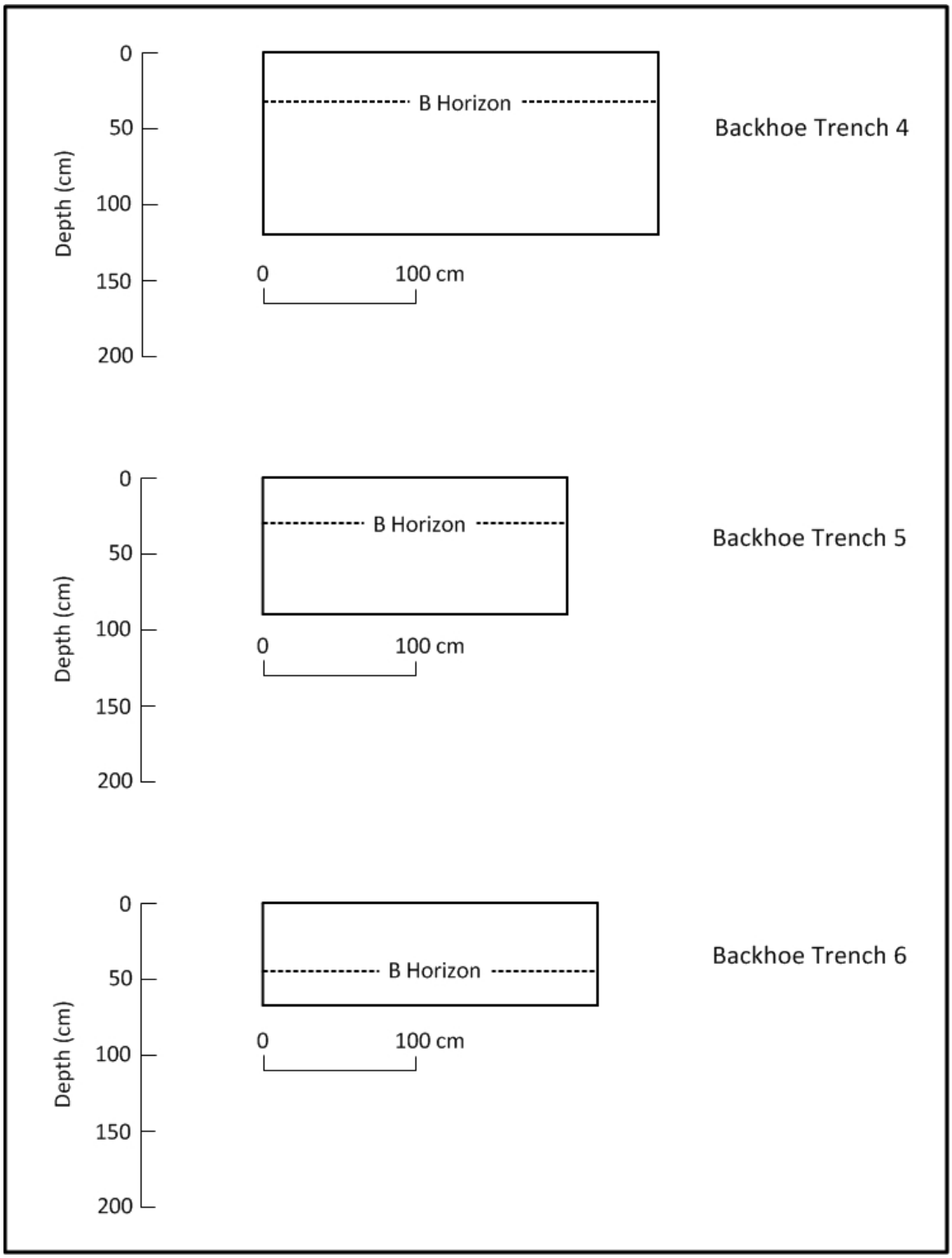
BT NO.	DEPTH OF TRENCH	DEPTH TO B HORIZON	COMMENTS
1	1.70 m	40 cm	sandy loam over clayey subsoil
2	1.20 m	45 cm	sandy loam over clayey subsoil
3	1.55 m	65 cm	sandy loam over clayey subsoil
4	1.20 m	33 cm	sandy loam over clayey subsoil
5	0.90 m	25 cm	sandy loam over clayey subsoil
6	0.67 m	57 cm	sandstone at the surface

* No cultural materials in any of the trenches.

APPENDIX II

BACKHOE TRENCH PROFILES


0
50
100
150
200
Depth (cm)
B Horizon
0
100 cm
Backhoe Trench 1
0
50
100
150
200
Depth (cm)
B Horizon
0
100 cm
Backhoe Trench 2
0
50
100
150
200
Depth (cm)
B Horizon
0
100 cm
Backhoe Trench 3


0
50
100
150
200
Depth (cm)
B Horizon
0
100 cm
Backhoe Trench 4
0
50
100
150
200
Depth (cm)
B Horizon
0
100 cm
Backhoe Trench 5
0
50
100
150
200
Depth (cm)
B Horizon
0
100 cm
Backhoe Trench 6