AN ARCHAEOLOGICAL SURVEY OF THE MAXWELL WATER SUPPLY CORPORATION USDA I.H. 35 CORRIDOR PROJECT IN SOUTHEAST HAYS COUNTY, TEXAS

Antiquities Permit 3186

By
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BVRA Project Number 03-19

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ABSTRACT

An archaeological investigation of a proposed 1522 foot water line (2.65 acres) in southeast Hays County, Texas was performed by Brazos Valley Research Associates in July 2003 under Texas Antiquities Permit 3186 with William E. Moore the Principal Investigator. Shovel testing and surface inspection of exposed areas did not locate evidence of an archaeological site within the boundaries of the project area. Copies of the report are on file at the Texas Archaeological Research Laboratory (TARL) on The University of Texas campus in Austin, Texas, the Historical Commission, Archeology Division, and Brazos Valley Research Associates (BVRA).

ACKNOWLEDGMENTS

I am appreciative of the assistance provided by Maxwell Water Supply Corporation and Gallegos Engineering, Inc. throughout this project. Mabel Vaughn, General Manager of the Maxwell Water Supply Corporation, visited the project area with the field crew prior to the archaeological survey. At Gallegos Engineering, Inc. in San Antonio, Richard M. Gallegos, President and Steven Gonzales, Construction Manager, provided maps and other logistical support. Edward P. Baxter served as the Project Archaeologist. The reviewer for this project, representing the Texas Historical Commission, was Ed Baker. The figures appearing in this report were prepared by Lili Lyddon of LL Technical Services in North Zulch, Texas.

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INTRODUCTION

BVRA was retained by the Maxwell Water Supply Corporation (WSC) of Maxwell, Texas to conduct an archaeological survey of a proposed water line in southeast Hays County, Texas (Figure 1). Maxwell WSC proposes to provide new service to clients in the area by constructing a water line from an existing 12 inch pipeline at least 1000 feet north of the Blanco River to an existing 2 inch line 11,522 feet to the north of this point (Figure 2). Overall, construction will affect the subsurface to a depth of three feet. The width of the trench will not exceed 24 inches, and the permanent easement will be 10 feet. Overall, the project area comprises 2.65 acres. The Federal agency involved in this project is the United States Department of Agriculture, Rural Development office. Since the project area is considered a political subdivision of the State of Texas, an Antiquities Permit was required, and permit 3186 was issued to BVRA by the Texas Historical Commission, Archeology Division. The project number assigned by BVRA is 03-19. The archaeological survey was conducted on July 30, 2003. The Principal Investigator was William E. Moore, and the Project Archaeologist was Edward P. Baxter. The project area is depicted on the USGS 7.5' topographic quadrangle San Marcos North dated 1995 (map number 2997-333) (Figure 2).

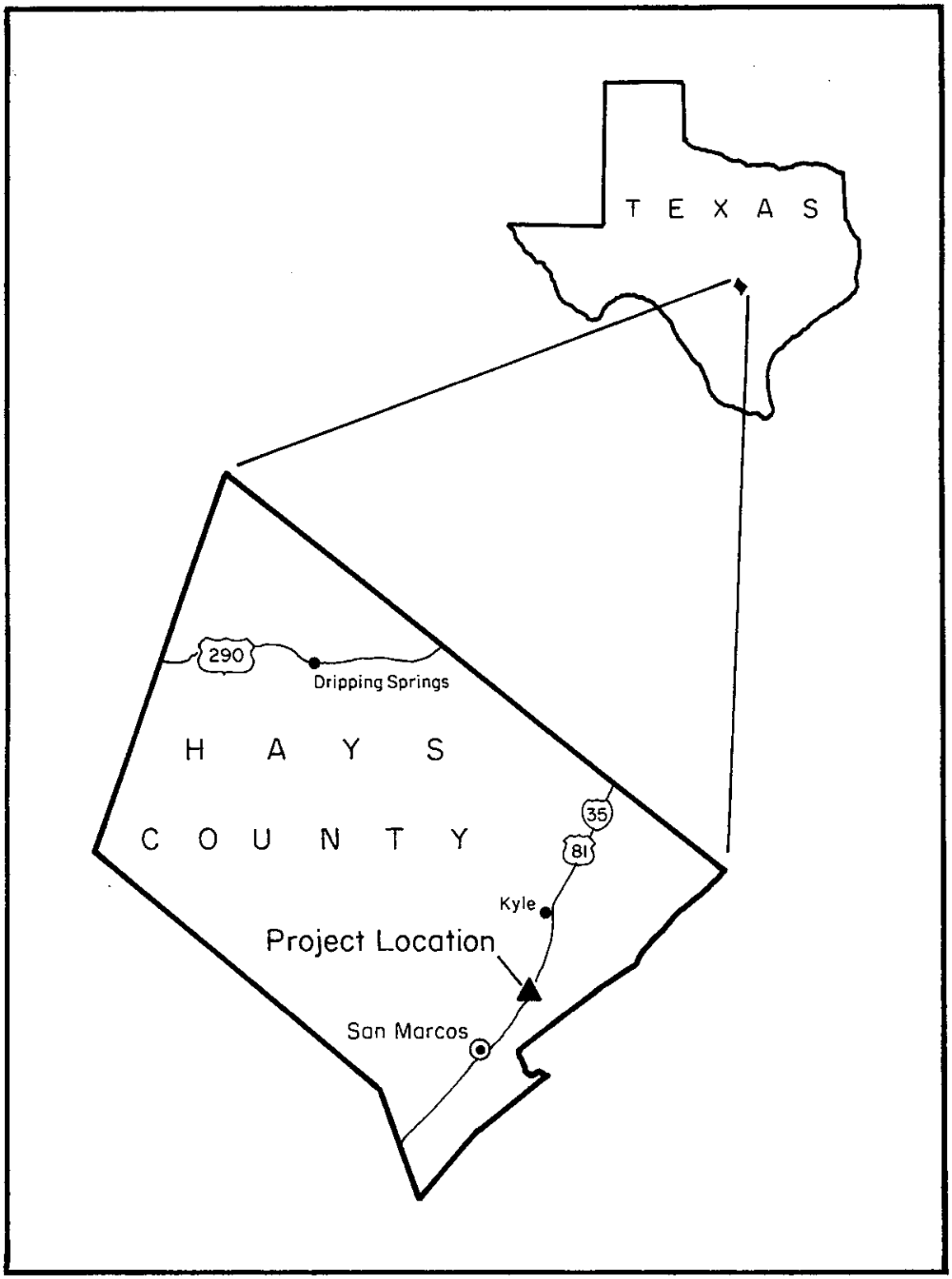

Figure 1. General Location Map.

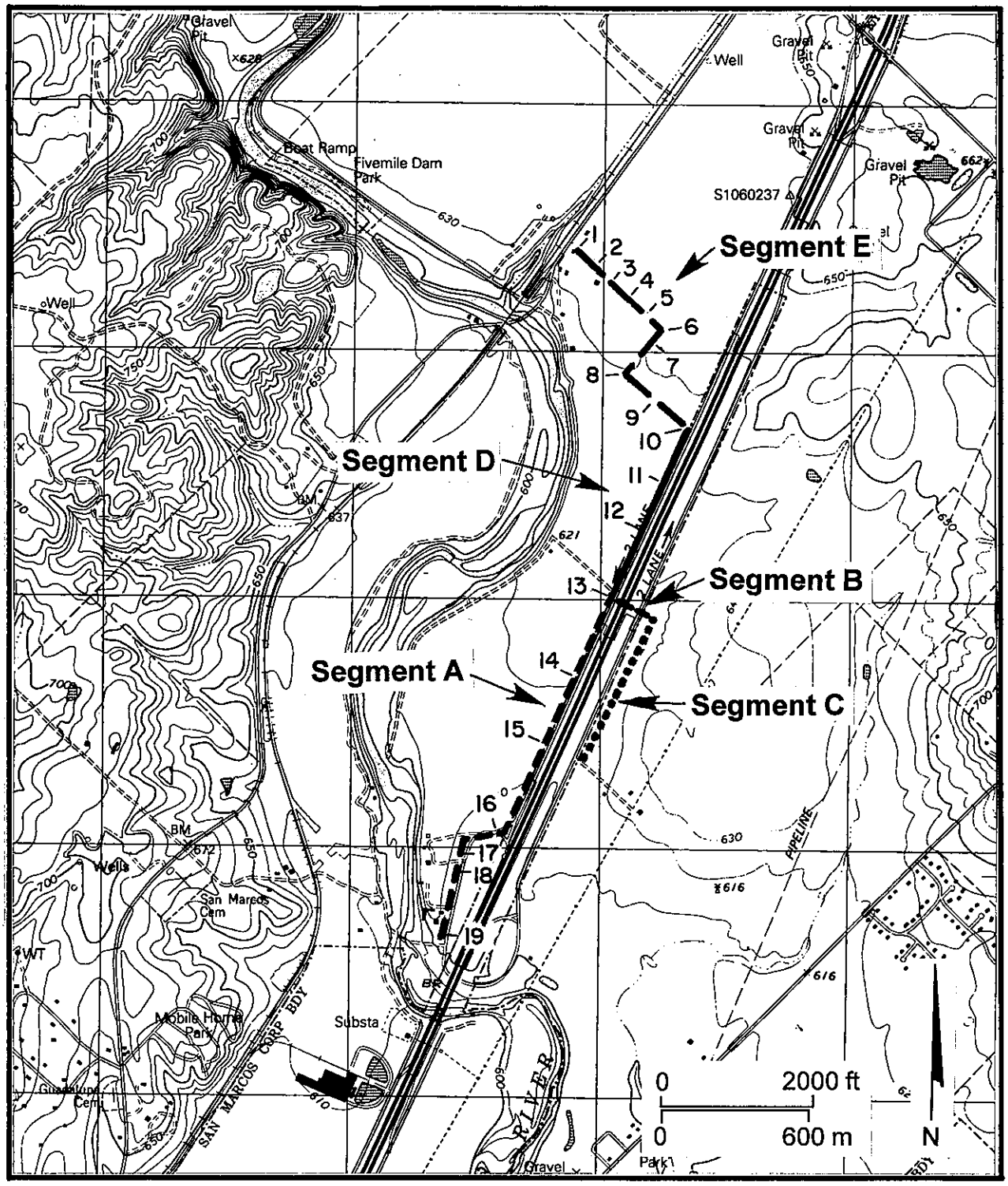

Figure 2. Project Area Map Depicting Shovel Test Locations.
(San Marcos North topographic Map)

ENVIRONMENTAL SETTING

The following statements were taken from the published *Soil Survey of Comal and Hays Counties* by Charles D. Batte (1984:1-4). Hays County is located in south-central Texas. The Balcones Escarpment extends through the eastern part of the county separating it into the Edwards Plateau Land Resource Area and the Blackland Prairie Land Resource Area. The project area is located within the Blackland Prairie portion of the county. In the Blackland Prairie, soils are mainly deep clays, and elevation ranges from about 600 to 1600 feet. There has been a significant change in land use in the Blackland Prairie since 1960. Much of the area once used for agriculture has been converted to urban use because of the expansion of nearby urban areas of Austin and San Marcos. Also, much of the formerly marginal cropland has been converted to pasture. The soils in the Blackland Prairie are well suited to improved pasture grasses, and many are used for field crops. Summers in Hays County are hot, and winters are fairly warm. Cold spells are of short duration, and snowfall is rare. Rainfall is usually the heaviest in late spring and early fall.

Seven soil types are present within the area investigated for this project. They are Boerne fine sandy loam, 1 to 3 percent slopes (BoB), Branyon clay, 0 to 1 percent slopes (ByA), Gruene clay, 1 to 5 percent slopes (GrC), Krum clay, 0 to 1 percent slopes (KrA), Lewisville silty clay, 0 to 1 percent slopes (LeA), Lewisville silty clay, 1 to 3 percent slopes (LeB), and Seawillow clay loam, 1 to 3 percent slopes (SeB). These soils are depicted on Sheet 55 of the soil survey (Batte 1984) and on Figure 3 of this report.

BoB soils are described by Batte (1984:17) as deep, gently sloping soils found on convex slopes of low stream terraces near rivers and large creeks in the Blackland Prairie Land Resource Area. Typically, the surface layer is a dark grayish-brown, moderately alkaline fine sandy loam about 17 inches thick. The subsoil extends to a depth of 41 inches and is a pale brown and very pale brown, moderately alkaline fine sandy loam. The underlying material, to a depth of 65 inches, is a very pale brown, moderately alkaline fine sandy loam. This soil is well drained, and surface runoff is slow. Permeability is moderately rapid, and the available water capacity is medium. This soil is flooded only rarely.

GrC soils are described by Batte (1984:24), as shallow to very shallow soils on stream terraces. Slopes are convex. The areas are long and narrow in shape and range from 5 to 650 acres in size. Typically, the surface layer is very dark grayish-brown clay about 13 inches thick. The underlying material, to a depth of 22 inches, is a strongly cemented, massive caliche containing embedded gravel. The underlying material, to a depth of about 80 inches, is a very gravelly loam. This soil is well drained, and surface runoff is medium. Permeability is moderately slow in the surface layer and very slow in the cemented layer. The available water capacity is very slow. Water erosion is a moderate hazard.

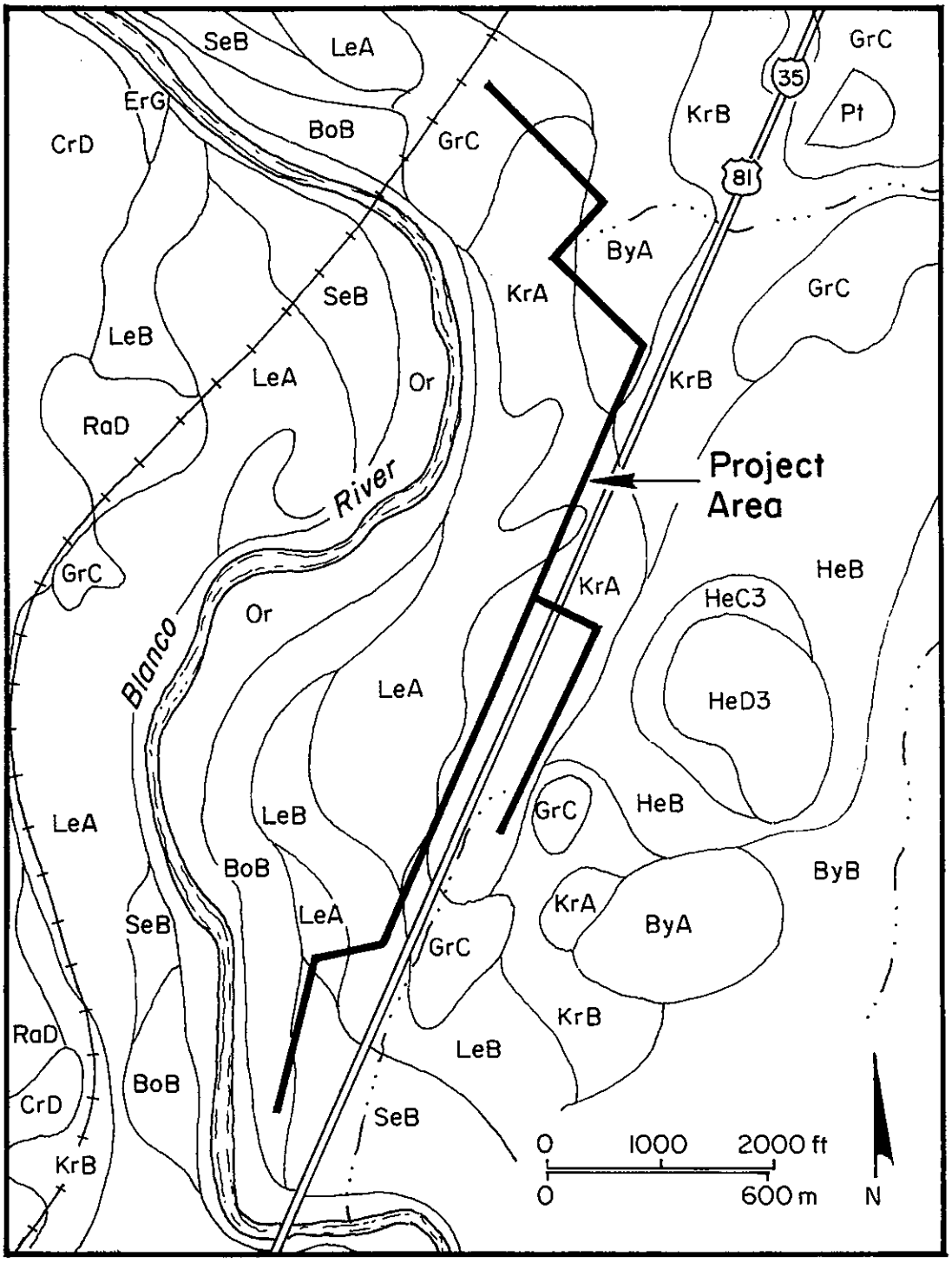

Figure 3. Project Area on Soils Map.

KrA soils are described by Batte (1984:29) as deep, nearly level soils on stream terraces and valley fills. Slopes are plane or slightly concave. These areas are mostly long and narrow or oblong in shape and range from 10 to 360 acres is size. Typically, the surface layer is a dark brown clay about 19 inches thick. The subsoil, to a depth of 49 inches, is brown clay, and to a depth of 69 inches is yellowish-brown clay. The underlying material, to a depth of 80 inches, is yellowish-brown clay. The soil is moderately alkaline and calcareous throughout. This soil is well drained, and surface runoff is slow. Permeability is moderately slow. The available water capacity is medium.

LeA soils are described by Batte (1984:30-31) as deep, nearly level soils on plane to slightly convex slopes on stream terraces. These areas are irregular in shape and range from 5 to 400 acres in size. Typically, the surface layer is dark grayish-brown, silty clay about 17 inches thick. The subsoil, to a depth of 36 inches, is brown silty clay, and to a depth of 54 inches is yellowish-brown silty clay. The underlying material, to a depth of 61 inches, is brown silty clay. The soils are moderately alkaline and calcareous throughout. This soil is well drained, and surface runoff is slow. Permeability is moderate, and available water capacity is high.

LeB soils are described by Batte (1984:31) as deep, gently sloping soils on stream terraces. Slopes are convex. These areas are irregular in shape and range from 5 to 200 acres in size. Typically, the surface layer is dark grayish-brown, silty clay about 15 inches thick. The subsoil, to a depth of 33 inches, is light brown silty clay, and to a depth of 63 inches is reddish-yellow silty clay. The soils are moderately alkaline and calcareous throughout. This soil is well drained, and surface runoff is medium. Permeability is moderate, and available water capacity is high.

SeB soils are described by Batte (1984:39) as deep, gently sloping soils on low ridges on stream terraces. Slopes are convex. The areas are mostly long and narrow in shape and range from 5 to 100 acres in size. Typically, the surface layer is a grayish-brown clay loam about 11 inches thick. The subsoil, to a depth of 26 inches, is a very pale brown clay loam. About 70 percent of this layer is calcium carbonate (lime). The underlying material, to a depth of 60 inches, is a very pale brown clay loam. It is moderately alkaline and limy throughout. This soil is well drained, and surface runoff is medium. Permeability is moderate, and the available water capacity is medium. Water erosion is a slight hazard.

PREVIOUS INVESTIGATIONS

Hays County is located in the Central Texas Archeological Study Region of the Eastern Planning Region as defined by the Department of Antiquities Protection in *Archeology in the Eastern Planning Region, Texas: A Planning Document* (Kenmotsu and Perttula 1993). The county is located in the Central Texas cultural-geographical region (Region 10) as defined by Biesaart et al. (1985:96-98) in a statistical overview. At the time the overview was published, Hays County was 5th in the region with 130 recorded archeological sites. The 130 sites comprised 3.71% of the region and .64% of the state. As of July 24, 2003, there were 374 recorded prehistoric and historic sites in Hays County (TARL site files). The *Archeological Bibliography for the Central Region of Texas* (Simons and Moore 1997) cites 97 references for the county. Although many of these investigations have been small area surveys, often resulting in no sites being recorded, several projects involving larger areas have been conducted. A review of the Abstracts in Texas Contract Archeology series authored by William E. Moore and published by the Texas Historical Commission from 1988 through 1992 revealed sporadic small area surveys, many resulting in negative findings.

The majority of Hays County is located in the Edwards Plateau geographic region of Texas. In the eastern part of the county, the geographic region changes to the Blackland Prairie, and this is the locus of the current project area. Although a county wide review of previous work was not conducted, it appears that many of the larger, more significant archaeological sites in Hays County are located along the Blanco and San Marcos rivers.

No surveys have been conducted within the project area as currently presented by the Maxwell WSC. The first archaeological sites recorded in the general area (41HY13 and 41HY14) were documented by Johnny Greer in 1962 that was a student in the Department of Anthropology at The University of Texas in Austin at the time. All of the information regarding theses sites is found on the key site cards at TARL as no site forms are on file. Greer recorded additional sites in 1962, but they are south of the river. Discussion of these sites can be found in the contract report authored by David O. Brown (1989). The location of these sites is depicted on the topographic map as Appendix I.

41HY13: This prehistoric site is located on the north side of the Blanco River south of the current project area. Cultural materials at this site were found in river gravel on a gravel bar. According to Greer, there was very little material, and most of it was "water worn and banged up."

41HY14: This prehistoric site is located on a high terrace on the north side of the Blanco River west of the current project area. It is described by Greer as a "probable multi-component" site containing dart points, knives, bifaces, scrapers, a chopper, possible arrow point preform, lithic debitage, prehistoric ceramics, bone, and historic debris.

The next investigation in the vicinity was a survey of the proposed San Marcos Municipal Utility District Number 1 site by Espey, Huston & Associates, Inc. (1985) in 1985. This investigation located and recorded eight prehistoric sites and one historic homestead. Two of the prehistoric sites (41HY175 and 41HY176) are on the east side of the Blanco River to the west of the current project area. The remaining sites are on the west side of the river. They are discussed in the contract report by Espey, Huston & Associates, Inc.

41HY175: This is a light scatter of lithic debitage in a level, plowed field approximately 40 meters east of the bank of the Blanco River. Soils at the site consist of a brown sandy loam over a fairly deep deposit of brown, gravelly fine sandy clay loam. Artifacts observed include lithic debitage (n=20) utilized flakes (n=2), and numerous pieces of burned limestone rock, chert, and quartzite spread over an area of about 120 x 180 meters.

41HY176: This is a light scatter of lithic debitage and tools in a plowed field at the edge of the first terrace southeast of the Blanco River. Soils at the site consist of a shallow sandy loam over a brown gravelly sandy clay loam. Artifacts observed include 150 pieces of lithic debitage and tools spread over an area of about 100 x 350 meters.

The most comprehensive overview of Hays County archaeology is present in a report by Ricklis and Collins (1994). Although this study was carried out in the Edwards Plateau region of the county, it is the most definitive discussion of Hays County prehistory found by the Principal Investigator during the literature search. A general overview of Hays County archaeology was written by Dee Ann Story (1993) for the younger audience.

METHODS

Prior to entering the field, a records check for previously recorded sites in or near the project area was conducted by Allegra Azulay at TARL. The Project Archaeologist and Principal Investigator visited the project area with Steven Gonzales, Construction Manager of Gallegos Engineering, Inc. and Mabel Vaughn, General Manager of Maxwell WSC, before conducting the field survey to make sure that all shovel tests would be excavated within the construction corridor and not outside the project area right-of-way.

Edward P. Baxter, Project Archaeologist, performed this study on July 30, 2003. In general, the surface visibility was estimated in the field as nearly 0% with three areas, a goat pen, plowed field, and garden, as high as 100%. The entire project area was examined by a 100 percent pedestrian survey accompanied by shovel testing. The Project Archaeologist worked from north to south and numbered the shovel tests consecutively from 1-19. A digital camera was used to document the field conditions present during the survey. Only one area had been originally considered for backhoe trenching, that portion nearest the southern end of the pipeline route closest to the river. This area was found to be at least 1000 feet from the river and in an already disturbed context due to the presence of a concrete plant. The rest of the line is located in an upland setting above the floodplain of the Blanco River. Therefore, shovel testing and surface inspection was considered adequate.

According to a letter from F. Lawrence Oaks, Executive Director at the Texas Historical Commission, signed by William A. Martin and dated March 30, 2003, two areas were recommended for survey. These are the southern half of Segment A and the northwestern half of Segment E. After a review of TARL maps it was learned that two archaeological sites exist to the west of Segment A and the northern half of Segment A. The Field Archaeologist shovel tested these areas to make sure that these sites do not extend to the project area. No tests were dug in Segment B or Segment C. The five segments (A-E) are depicted on the project area map (Figure 2).

In all, 19 shovel tests were excavated along the construction corridor, and all tests were negative in terms of yielding cultural materials. The tests were dug through clay and gravels. The depth of the tests varied between 20 and 40 cm. All earth excavated through shovel testing was screened using 1/4" hardware cloth, and a shovel test log was kept (Appendix II). Most of the soil consisted of a very hard clay that had to be broken apart by hand in the screen. The approximate location of each test is depicted on the topographic map San Marcos North, Texas (Figure 2).

RESULTS AND CONCLUSIONS

Literature Review

A review of previous work conducted in the area revealed no previously recorded sites in the project area. It was also learned that no professional survey involving any part of the current project area had been conducted. Several archaeological sites had been recorded by archaeologists in the area prior to this study. The four nearest sites (41HY13, 41HY14, 41HY175, and 41HY176) are depicted on the topographic map and appear as Appendix I to this report.

Field Survey

The archaeological survey examined a proposed water pipeline route of 1522 feet with a 10 foot easement which traversed an upland setting overlooking the floodplain of the Blanco River. The area was examined through shovel testing and a careful inspection of areas with good surface visibility. Overall, the ground surface had poor surface visibility as it passed through a pasture and a cornfield. Three areas had near 100% surface visibility. These are the goat pen, plowed garden, and disturbed tie-in location at the southern end of the project area. Although seven soil types are mentioned by the soil survey (Figure 3), only two discernable areas were observed by the Project Archaeologist. These are an area of dark gray or black clay and an area of clay that appeared to have a brown tint. The clay soils throughout the project area were very firm and difficult to screen. No natural chert cobbles were observed. It is believed that the route of the water pipeline as currently planned avoids any localities that would have been favored by prehistoric groups for lithic procurement or as a campsite. The presence of numerous sites nearer the river (i.e., 41HY175 and 41HY176) supports this statement. It should be pointed out that no sandy loam soils or sandy clay were found in the project area. Sites 41HY175 and 41HY176 were found to contain a stratum of sandy loam overlying sandy clay loam. Should any cultural materials be present in the clay soils of the project area they would most likely be out of their original context due to plowing. It is also unlikely that cultural materials are present in the heavy clays below the plow zone.

RECOMMENDATIONS

No archaeological sites were found as a result of this survey. It is recommended that the Maxwell WSC be allowed to proceed with construction as planned. Should, however, evidence of an archaeological site be uncovered during construction all work in the area of the find must be temporarily suspended until the situation is evaluated by the Texas Historical Commission in consultation with BVRA and the Maxwell Water Supply Corporation. Artifacts that are considered significant in this area consist of concentrations of burned rock with associated shell and lithic debris.

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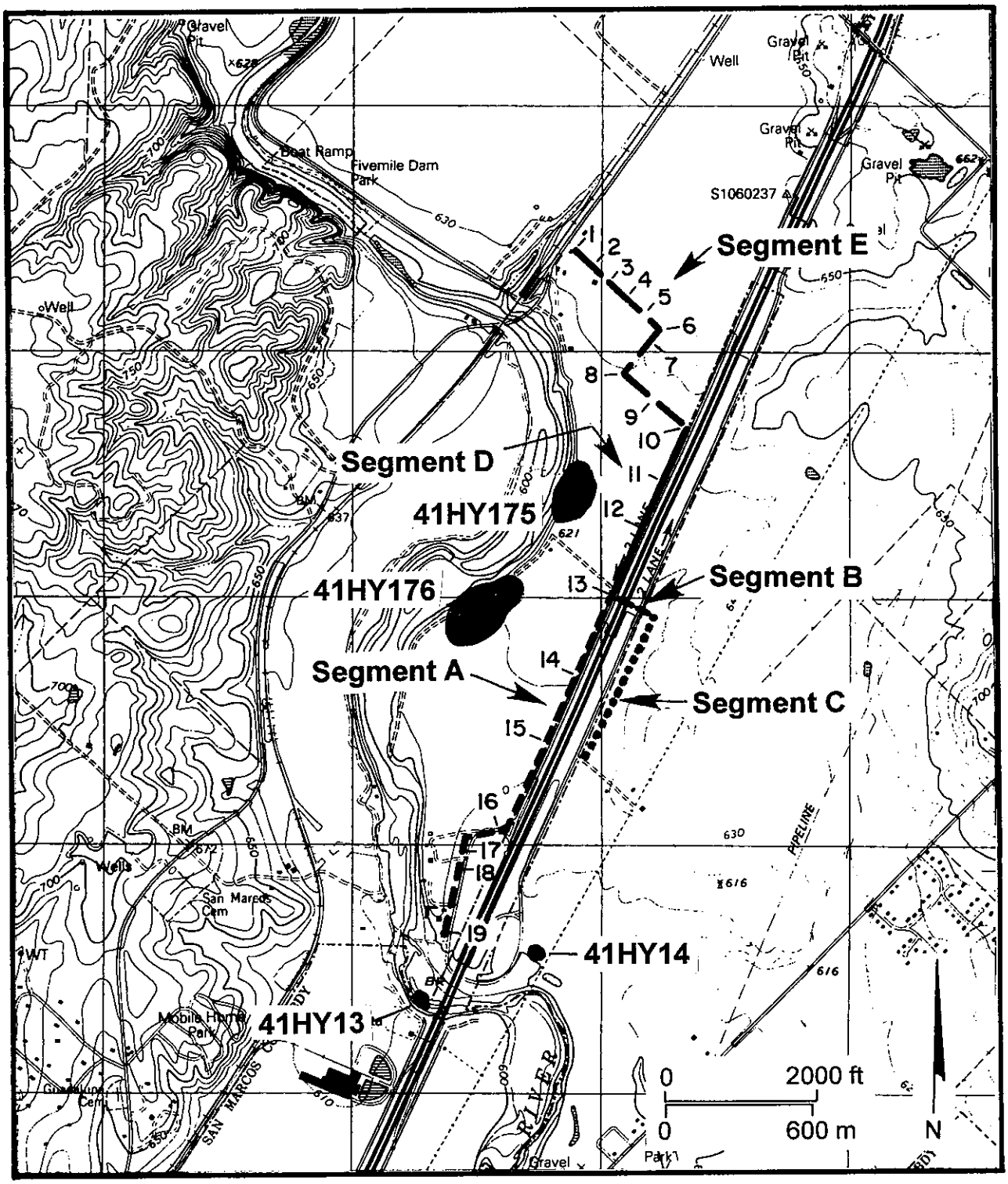
APPENDIX I

ARCHAEOLOGICAL SITES IN THE VICINITY OF THE PROJECT AREA


Segment E
Segment D
41HY175
41HY176
Segment B
Segment A
Segment C
41HY14
41HY13
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
Gravel Pit
Well
Boat Ramp
Fivemile Dam Park
S1060237
BM
San Marcos Cem
Mobile Home Park
PIPELINE
SAN MARCOS RIVER
0
2000 ft
0
600 m
N

APPENDIX II: SHOVEL TEST LOG

Test	Depth	Location (Segment)	Results
01	40 cm	Segment E - private yard (clay)	sterile
02	40 cm	Segment E - private yard (clay)	sterile
03	30 cm	Segment E - goat pen (clay)	sterile
04	30 cm	Segment E - pasture (clay)	sterile
05	30 cm	Segment E - pasture (clay)	sterile
06	30 cm	Segment E - pasture (clay)	sterile
07	20 cm	Segment E - corn field (clay)	sterile
08	20 cm	Segment E - corn field (clay)	sterile
09	20 cm	Segment E - corn field (clay)	sterile
10	20 cm	Segment E - corn field (clay)	sterile
11	20 cm	Segment D - corn field (clay)	sterile
12	30 cm	Segment D - corn field (clay)	sterile
13	30 cm	Segment D - corn field (clay)	sterile
14	30 cm	Segment A - corn field (clay)	sterile
15	30 cm	Segment A - corn field (clay)	sterile
16	40 cm	Segment A - corn field (clay)	sterile
17	40 cm	Segment A - private garden (clay)	sterile
18	40 cm	Segment A - private yard (clay)	sterile
19	20 cm	Segment A - disturbed tie-in location (clay)	sterile