

***AN ARCHAEOLOGICAL SURVEY OF TWO PROPOSED WELL SITES  
FOR THE TOM GREEN COUNTY FRESH WATER DISTRICT  
NUMBER 2 IN TOM GREEN COUNTY TEXAS***

***Antiquities Permit 4131***



***By  
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***Brazos Valley Research Associates  
Contract Report Number 164***

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AN ARCHAEOLOGICAL SURVEY OF TWO PROPOSED WELL SITES  
FOR THE TOM GREEN COUNTY FRESH WATER DISTRICT NUMBER 2  
IN TOM GREEN COUNTY, TEXAS

BVRA Project 06-06

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## **ABSTRACT**

Brazos Valley Research Associates (BVRA) conducted an archaeological survey at the locations of two proposed well sites for the Tom Green County for the Fresh Water District Number 2 in central Tom Green County on May 11, 2006 under antiquities permit 4131. No evidence of an archaeological site was found through a surface inspection of the area or during subsurface investigation with a backhoe, and no artifacts were collected. Copies of the report are on file at the Texas Historical Commission (THC); Texas Archeological Research Laboratory (TARL); and BVRA.

## **ACKNOWLEDGMENTS**

BVRA is grateful to the following individuals for their assistance and support. Joe Hewitt, General Manager at the Tom Green County Fresh Water District provided a backhoe and was present during this investigation. Kirt Harle, EIT of Jacob & Martin, Ltd. provided maps and information concerning the proposed construction. James E. Warren supervised the backhoe trenching. The background check was conducted by Jean Hughes, Records Conservator at the Texas Archeological Research Laboratory. Jennifer McMillen and Nora Rogers performed technical editing.

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## INTRODUCTION

The Tom Green County Fresh Water District Number 2 in Christoval, Texas proposes to construct water distribution system improvements to replace approximately four miles of deteriorated and undersized piping, rehabilitate existing wells, construct two new wells, and upgrade the existing Water Treatment Plant to satisfy Texas Commission on Environmental Quality regulations. The project area is located in the city limits of Christoval, Texas in central Tom Green County (Figure 1). The project area is depicted on the USGS 7.5' topographic quadrangle Christoval (Figure 2).

Each proposed well will be located within a 20 x 20 foot square area that will be scraped to a maximum depth of 12 inches. The diameter of the well casings will be about 6 to 8 inches, but the actual diameter of the drill hole will be between 16 and 18 inches. A cement slab will be placed around the casing in an area of approximately 6 feet in diameter.

Prior to the initiation of the field survey, the Texas Historical Commission, Archeology Division, reviewed this project. According to a letter from that agency, the areas recommended for survey are the well locations near the Concho River "as they have a high probability of containing significant archeological resources." The letter also recommended survey of "the portion of the water lines not placed in existing streets." Since all water lines will be placed in existing streets rights-of-way, only the sites of the proposed wells were determined to be worthy of survey.

If the Tom Green Fresh Water District Number 2 is allowed to proceed with the construction of the wells and other improvements, Rural Development, an agency of the United States Department of Agriculture, will provide funding. Since the well locations are in a city park, an antiquities permit from the THC was required. Permit 4131 was issued to BVRA for this project.

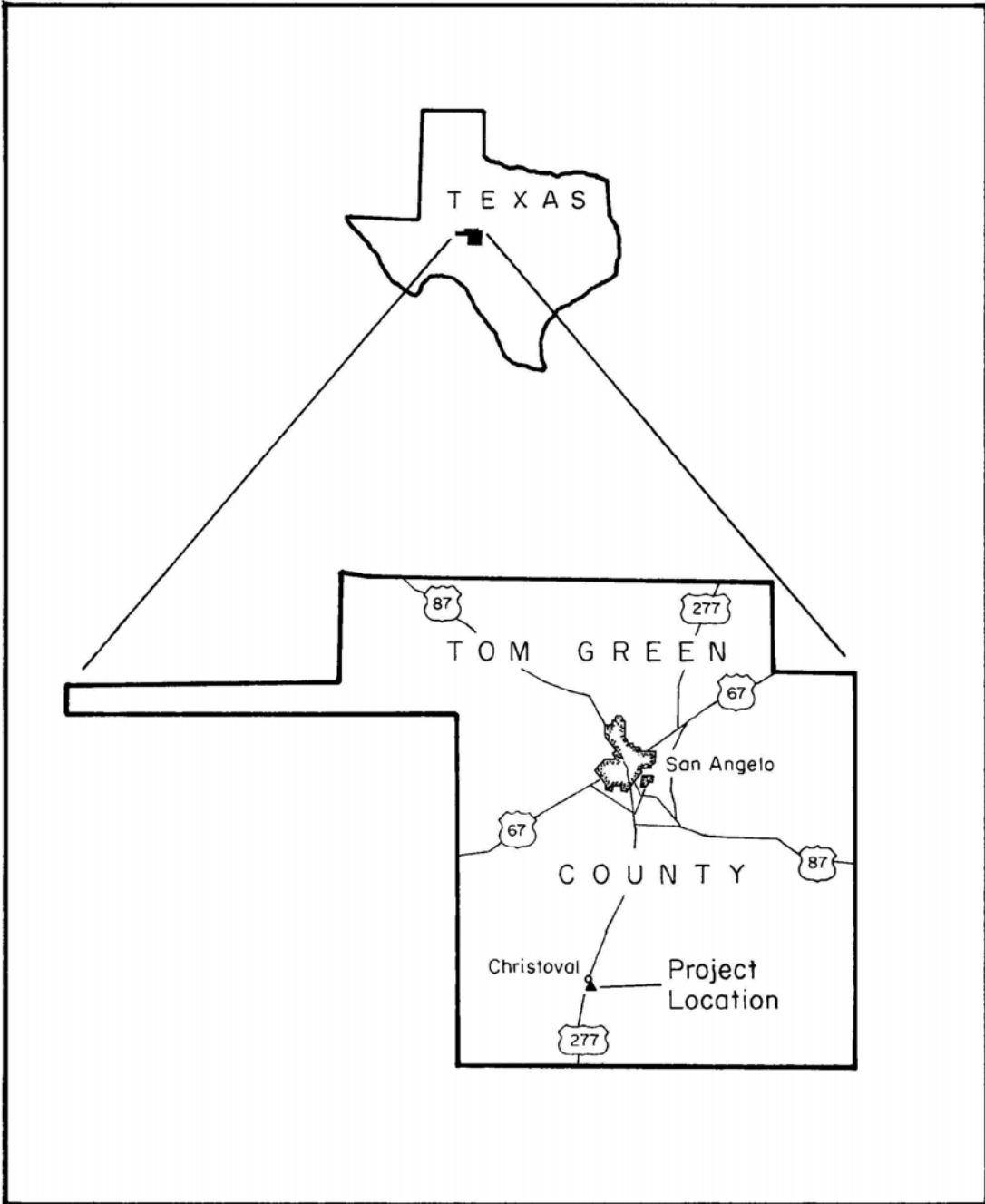
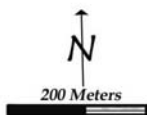
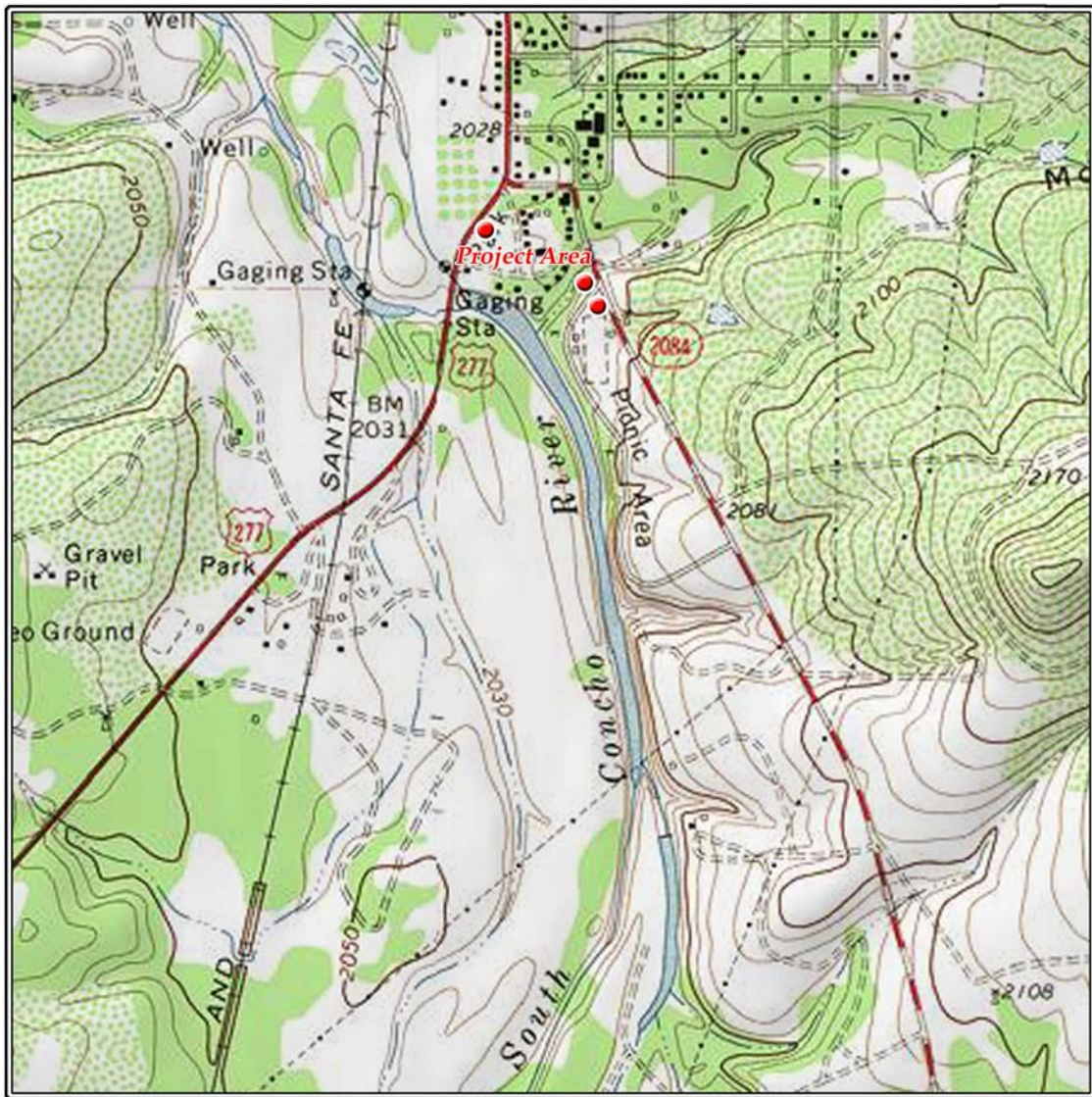


Figure 1. General Location





USGS Christoval, Texas  
Quadrangle 3100-123

BVRA

Figure 2. Project Area



## ENVIRONMENTAL SETTING

### General

The following information was taken from the Tom Green County soil survey (Wiedenfeld and Flores 1976), The Handbook of Texas (Webb 1952), and the Texas Almanac (Alvarez 2004). Tom Green County is located on the northern edge of the Edwards Plateau in west-central Texas in an area consisting of plains and rolling hills broken by the Concho forks. The major drainage in the county is the Concho River that is formed by the confluence of the north, middle, and south Concho rivers near the center of the county. These rivers have cut through the limestone to divide the county into two physiographic regions. These are the Concho basin, which has productive loams and grazing lands and the steeper slopes along the edges of the Edwards Plateau which have not permitted the accumulation of soil and are classified as rough, stony land.

The county is 1540.5 square miles in size, and San Angelo is the county seat. When areas under water are subtracted from the size of the county, the land area is 1522.10 square miles. Altitude varies from 1700 to 2600 feet. Annual rainfall is 20.5 inches. The January mean minimum temperature is 31 degrees Fahrenheit, while the July mean maximum temperature is 96 degrees Fahrenheit.

### Soils

The entire project area is located within one soil type, Dev and Rio Concho (Dr) soils. These soils are nearly level to gently sloping soils located in floodplains of streams that drain limestone areas. A representative profile consists of gravelly clay loam (0-24") and brown clay loam (24" to 86") with gravels. The depth to bedrock varies in the area between 48" and 100". This is a well-drained soil with slow to medium surface runoff. Permeability is moderately rapid.

## ARCHAEOLOGICAL BACKGROUND

According to a statistical overview published by the THC (Biesart et al. 1985:76), Tom Green County is located in the Central Texas Cultural-Geographical Region of Texas. It is in the Central Texas Archeological Region as defined by Mercado-Allinger et al. (1996). In 1985, when the overview was published, the number of archaeological sites in the region was 3507 or 17.34% of the state. In 1985, there were 116 recorded sites in the county. This accounted for 3.31% of the region and .57% of the state. No Paleoindian sites were known in 1985. The vast majority (n=34) sites were described as Archaic, with 20 sites referred to as General Archaic. The number of Late Prehistoric sites in 1985 was six. Seven sites had been designated as a State Archeological Landmark. Site disturbance is common in the area. Biesart et al. (1985:189) mention erosion disturbance (109 sites), construction disturbance (41 sites), disturbed and artificially capped (6 sites), deflated (2 sites), dispersed (15 sites), and potted and/or surface collected (6 sites). No sites were described as destroyed. Other forms of disturbance in the county include oil and gas development, reservoir construction, and agriculture. Sites with subsistence related features have been recorded with hearths present at 12 sites, burned rock middens present at 19 sites, burned rock features (not specified) present at 46 sites, midden soil present at 1 site, pits present at 1 site, and stone work present at 6 sites. Burials were reported at 4 sites and rock art was present at 2 sites. Twenty-five stone quarries and five stone tool manufacturing areas were recorded in 1985.

No professional archaeological survey has been performed in the project area. The Concho Valley Archeological Society has recorded sites nearby and throughout the county. Above the floodplain where the backhoe trenches were excavated is a ridge that runs parallel to the South Concho River. Along this ridge are bedrock mortars in limestone boulders. According to local informants, chipped stone tools and debitage were once common in the area. The Principal Investigator observed two bedrock mortars and one flake on the ridge. South of this area, and on the same ridge overlooking the river, is prehistoric site 41TG229. It is difficult to ascertain if this site extends along the ridge above the project area, especially since there are several gullies that bisect this landform. The prehistoric component at site 41TG229 contains burned rock middens, hearths, a lithic scatter, and several bedrock mortars.

In addition, there are two small rock shelters that have not been recorded. These shelters are at the edge of the river but well outside the project area. The Principal Investigator visited these sites and found them to be disturbed. At one shelter, part of the roof has collapsed. At the second shelter, traces of rock art were observed, but vandals have defaced much of the rear wall. One informant stated that there is a large spring to the south on a private ranch where numerous sites have been documented. The location of these sites and areas surveyed may be found on the maps at TARL and the Texas Archeological Sites Atlas.

The two areas in the county where archaeological work has been concentrated are the Twin Buttes Reservoir, and Fort Concho. Most of the surveys in the area have been small and typically associated with highway construction projects, transmission lines, pipelines, and water improvement projects. For more information regarding other work in the area researchers are advised to consult the site files at TARL and the THC. There are 86 references to previous work in Tom Green in a bibliography of Central Texas compiled by Helen Simons and William E. Moore (1997) and published by the Texas Historical Commission. Thirteen of these references are related to work at Fort Concho. Other sources for previous work include a published series entitled *Abstracts in Texas Contract Archeology* (published by the THC and compiled by William E. Moore) that documents all works in Texas from 1988 through 1992 and *Archeology in the Central and Southern Planning Region, Texas: A Planning Document* (Mercado-Allinger 1996), also published by the Texas Historical Commission.

## METHODS OF INVESTIGATION

Prior to the field survey, the Principal Investigator conducted a review of previous work in the general area and talked with other archaeologists. The Texas Historic Sites Atlas was checked for previously recorded sites and areas surveyed, and a records check by Jean Hughes at TARL was performed.

The project area was examined by a 100% Pedestrian Survey of the three possible locations for the two well and three backhoe trenches. Each backhoe trench was excavated in the area where the bore hole for the well will be drilled. The trenches were terminated when river gravels were encountered. The trenches were 4 meters long, and the varied in width from 140 to 200 cm and in depth to the gravel lens varied from 290 to 340 cm. Profiles of the trenches were sketched in the field and appear as Appendix I to this report. The project was documented through field notes and digital photography. Figure 3 depicts Backhoe Trench 2.



Figure 3. Backhoe Trench 2

## RESULTS AND CONCLUSIONS

### Pre-Field

A search of the site records at TARL revealed no previously recorded sites in the project area. Several archaeological sites have been recorded in the area (see *Archaeological Background* above).

### Field Survey

At the time of this survey, the three well site locations were in disturbed areas and covered with grass. The surface of the areas investigated had been scraped for roads and a now-abandoned football field. The area is now a city park and contains roads and picnic areas. Beginning in the late 1800s this part of the river was used by Baptists as a site for revivals and baptisms. Virtually the entire surface of the park has been disturbed, and collectors have picked up artifacts for many years.

The surface of the areas investigated with the backhoe revealed a layer of caliche road material overlying clay loam and clay. The caliche is 20 cm thick in most places, and the clay loam varies throughout the area investigated. At the bottom of each trench was a lens of gravels. No features were observed in the profiles of the backhoe trenches, and no artifacts were found. The current survey was performed according to the "Minimum Survey Standards for Project Areas of 200 Acres or Less" as defined by the Texas Historical Commission, Archeology Division.

## **RECOMMENDATIONS**

No archaeological sites were found to be within the three areas investigated. Therefore, it is recommended that the Tom Green County Fresh Water District Number 2 be allowed to proceed with construction as planned. If any prehistoric or historic sites are encountered during construction, all work must cease until the Texas Historical Commission, Archeology Division can assess the situation. Should construction plans change to include new areas that will affect undisturbed ground the THC must be notified as a return visit by a professional archaeologist may be required.

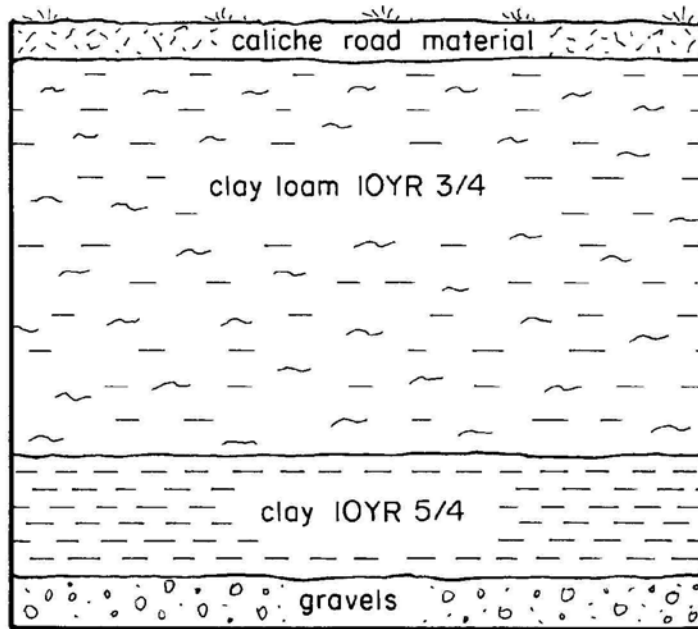
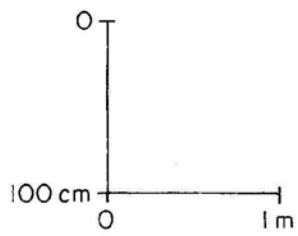
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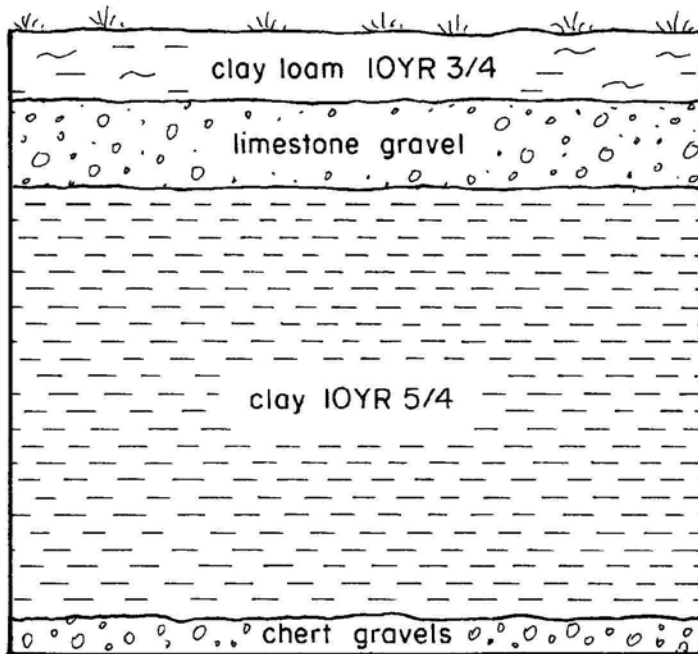
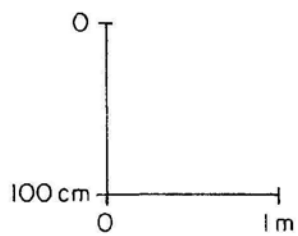


APPENDIX I  
BACKHOE TRENCH PROFILES

### Backhoe Trench 1 - East Profile



### Backhoe Trench 2 - North Profile



Backhoe Trench 3 - South Profile

