

A Cultural Resources Survey of 4.7 Acres Along Panther Springs Creek, Bexar County, Texas



**Prepared for Selective Development, LLC
San Antonio, Texas**

by

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Abstract

Selective Development, LLC of San Antonio, Texas contracted with Tierras Antiguas Archaeology to conduct a cultural resources survey of 4.7 acres on a bluff above Panther Springs Creek in northern Bexar County. The tract was proposed to be developed as a multi-residential complex named The Gardens at Pinnacle. The property is privately owned, and no public funding was involved either in the proposed development of the property, nor in the archaeological survey. The need for an archaeological survey was triggered by a review of a request for re-platting of the property by the City of San Antonio Historic Preservation Office (HPO) according to the City's Historic Preservation and Design Section of the Unified Development Code (Article 6 35:630 to 6 35:634), with attention given to the possible effects on any future development of the property on archaeological resources. Although the City's HPO Development Code required an archaeological survey, and subsequent review of this archaeological report by the Texas Historical Commission's Archeology Division, no Antiquities Permit was required.

Tierras Antiguas conducted the survey on 16 and 20 September, 2008. A thorough pedestrian survey of the surface area was conducted, and 10 shovel tests were excavated. No evidence of cultural material was observed either on or below the surface, and therefore no artifacts were collected or curated.

As such, Tierras Antiguas Archaeology recommended that Selective Development, LLC be allowed to develop the tract as planned. However, Tierras Antiguas further recommended that if any previously undiscovered cultural resources were encountered during development, work should immediately be halted in the vicinity until such finds could be examined and evaluated by Tierras Antiguas, or by any qualified archaeological consultant, and by the Texas Historical Commission.

Acknowledgments

There are mainly two individuals who are greatly appreciated, and whose efforts contributed to the successful planning, organization, and completion of this project. First and foremost is Mr. Russell Ebrahimi, owner of the property, and head agent for Selective Development, LLC. From the very beginning, Mr. Ebrahimi was extremely amiable and helpful. His overall knowledge of the project and the history of the area contributed significantly to our understanding of the significance of the project's scope of work.

The expedient reply to my questions regarding the survey by Mr. Mark Denton of the Texas Historical Commission's Archeology Division is also greatly appreciated. Mark provided early-on advice, guidance and recommendations that facilitated the correct approach to the fieldwork and report preparation.

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Introduction

On 16 and 20 September 2008, Tierras Antiguas Archaeology conducted a 100% pedestrian survey of 4.7 acres on a steep slope and bluff above Panther Springs Creek in northern Bexar County (Figures 1 and 2). The tract was proposed to be developed as a multi-residential complex named The Gardens at Pinnacle. The property is privately owned, and no public funding was involved either in the proposed development of the property, nor in the archaeological survey. The need for an archaeological survey was triggered by a review of a request for re-platting of the property by the City of San Antonio Historic Preservation Office (HPO) according to the City's Historic Preservation and Design Section of the Unified Development Code (Article 6 35:630 to 6 35:634), with attention given to the possible effects on any future development of the property on archaeological resources. Although the City's HPO Development Code required an archaeological survey, and subsequent review of this archaeological report by the Texas Historical Commission's Archeology Division, no Antiquities Permit was required.

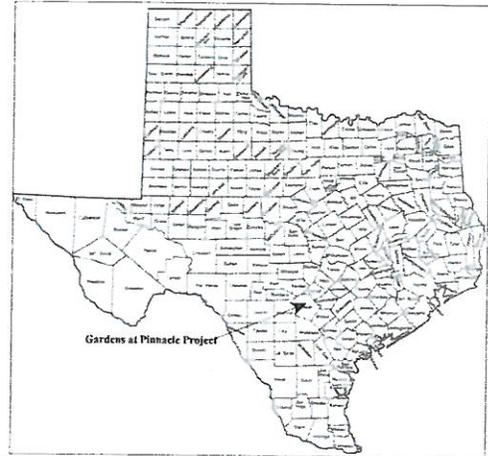


Figure 1. Location of the project area and Bexar County.

In addition to the surface survey, Tierras Antiguas excavated 10 shovel tests. The survey was conducted under the guidelines of the Texas Historical Commission (THC) and Council of Texas Archeologists (CTA), and the Texas State Historical Preservation Office (SHPO) and the City of San Antonio Historic Preservation Office and the City Platting Office reviewed a Draft Report of the survey.

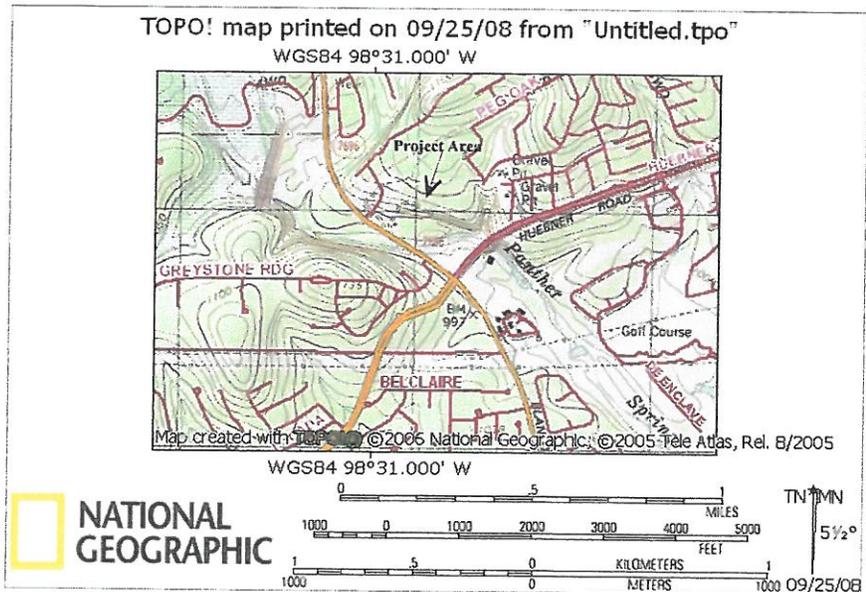


Figure 2. Location of the project area in north-central San Antonio, Bexar County.

Project Setting

Geology and Soils

The project area where the new development is to be located is illustrated in Figures 3 and 4. It is located on Lower Cretaceous aged Edwards Limestone (Ked). Medium gray to grayish brown, fine to coarse-grained chert can be found in abundance in the Edwards formation, formed over 66 million years ago, and ranging from 300 to 500 feet in thickness (Barnes 1982; Judson and Kauffman 1990; Spearing 1991).

As shown in Figure 4, soils on the lower extreme southwestern portion of the project area consists of Crawford and Bexar stony soils (Cb). Typical Crawford surface soils are very dark gray to dark reddish-brown fine, subangular, stony clay approximately 20-23 cm thick, with chert and limestone fragments as much as 40 percent by volume. The limestone fragments may range from 1 cm to 60 cm in size. The darker brown or reddish subsurface layer consists of dense, angular blocky, stony clay about 65 cm thick, and overlies either yellowish limy clay or bedrock.

A typical Bexar soil pedon consists of a surface layer of dark reddish-brown, fine, subangular blocky, clay loam approximately 45 cm thick, with chert fragments approximately 30 percent by volume. The subsoil is reddish brown, moderately fine, blocky, cherty clay approximately 30 cm thick, with coarse fragments ranging from 15-60 percent by volume. Weakly fractured, partly weathered, white or pinkish-white limestone is the underlying parent material (Taylor et al. 1991).

Over 95 percent of the project area is covered with a thin surface layer of Tarrant association,

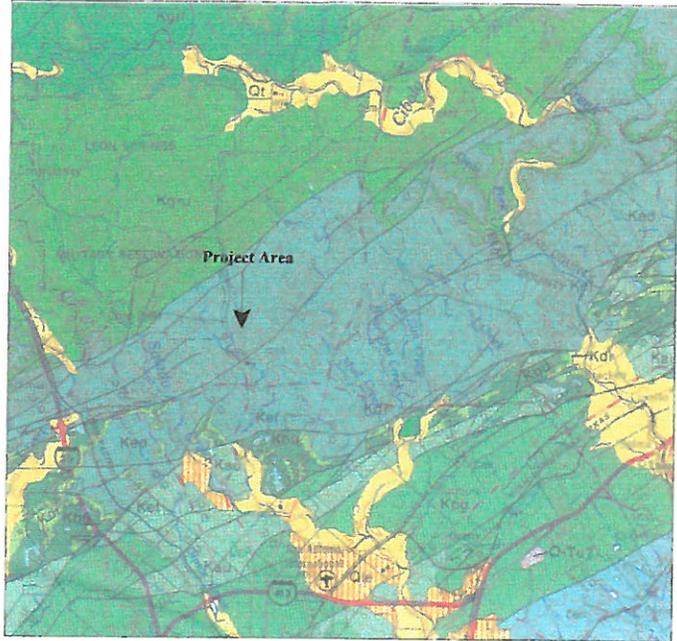


Figure 3. Geologic map of the project area.

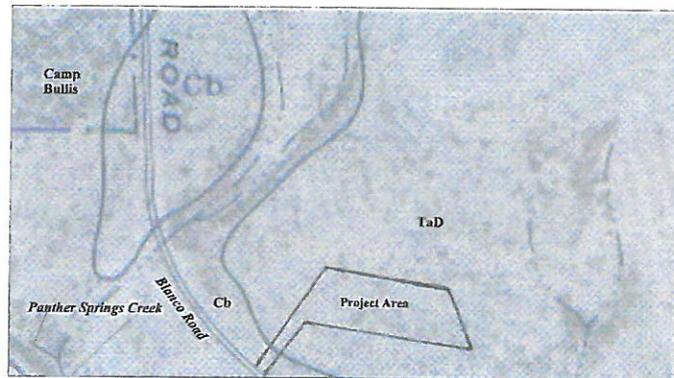


Figure 4. Soils in the project area.

hilly (TaD) very dark grayish-brown, calcareous clay loam, frequently interrupted by large limestone cobbles, fractured bedrock, and solid bedrock exposures. When surface soil is present, it has a moderate, fine, subangular, blocky, friable, and crumbly structure about 25 cm thick. Limestone fragments ranging in size from 1 cm to 60 cm in size comprise approximately 35 percent of the surface, and overall approximately 20 percent of the layer by volume. The subsurface layer is about 20 cm thick, with dark grayish-brown clay loam filling the interstices between hard chunks of fractured limestone that by volume comprise 90 percent of the subsurface layer. These overlie hard limestone bedrock. Heavily eroded Tarrant association, hilly soils are commonly found on 15-30 percent slopes, as is the case with the project area in the current study (Taylor et al. 1991). Figures 5-10 illustrate typical surface exposures within the project area.



Figure 5. Disturbed, fractured bedrock surface. Figure 6. Fractured bedrock surface.



Figure 7. Tabular and boulder-strewn surface. Figure 8. Sloping surface with fractured bedrock.



Figure 9. Boulders along bluff on the southern edge of the project area.



Figure 10. Bluff edge along the southern edge of the project area.

Climate, Hydrology, Raw Materials, Flora, and Fauna

The project area lies within the Edwards Plateau physiographic region of Texas, and in an area of northern Bexar County where the group(s) which occupied it were advantageously able to exploit an ecotone encompassing riverine, upland, and semi-arid adapted plants and animals on the Balcones Escarpment. The Edwards Plateau, with elevations reaching 2,250 ft above mean sea level (amsl) in northern Gillespie County (Allison et al. 1975:76), is a hilly region, gradually sloping to the southeast, and ending in the escarpment running across the middle of the sub-region. The most common flora observed on the plateau include juniper (*Juniperus ashei*), plateau live oak (*Quercus fusiformis*), Texas persimmon (*Diospyros texana*), honey mesquite (*Prosopis glandulosa*), and agarita (*Berberis trifoliata*) (Blair 1950:112; Van Auken 1988:45; Simpson 1988). Due to overgrazing by livestock and restricted range fires, much of the plateau has been overtaken by juniper in modern times (Buechner 1944:703-704; Van Auken 1993:199-210).

The Balcones Escarpment is a fault zone, consisting of blocky limestone, chalk, shale, and marl. The escarpment slopes to the southeast from about 700-1,000 feet above mean sea level (Taylor et al. 1991:119). The most economically important floral species are riparian nut trees, including oak, walnut, and pecan that thrive along the rivers and creeks (Dalbey 1993:22; Van Auken 1988:55). The intertwined diversity in biotic resources existing along the escarpment provides an ecotone in which humans could exploit a wide variety of plants and animals from season to season (Collins 1995:366). The presence of prehistoric cemeteries found in areas along the escarpment where seasonally rich food resources such as nut-bearing species, particularly acorn and pecan trees, and prickly pear tunas may not be just a coincidence (Hall 1995:633-647).

More specifically, the Gardens at Pinnale project area lies at the southeastern edge of the Edwards Plateau, in central Texas's "Hill Country," so named for its rugged, stream-eroded

topography. The environmental zone can be classified as upland. The annual average rainfall is about 28 inches, with 245 growing-season days per year (Taylor et. al. 1991:118-121). The nearest extant water is Panther Springs Creek, some 100 meters to the south, although it flows only when flooded. The creek is subject to flash flooding during locally heavy thunderstorms.

Lithic resources in the form of Edwards formation chert can be observed in abundance within the creek bed, and are available in the many cutbanks and second and third order tributaries that dissect the Edwards formation. These resources and the documentation of prehistoric quarries such as 41BX68 to the east, and open campsites such as 41BX228 to the south (McGraw and Valdez 1978; Black and McGraw 1985) suggest that raw materials for making stone tools were readily available.

The predominant vegetation within the 4.7-acre project area is live oak (*Quercus virginiana*) and Texas cedar (*Juniperus ashei*) (Simpson 1988:180, 301), with native grasses, prickly pear, and yucca in the open areas. In the creek bottom to the south, tall trees such as native pecan shade the ground, with dense native grasses and a medium to heavy brush cover in the flood plain.

Cultural Context and Chronology

Introduction

The most basic chronology of the Central and South Texas regions can be divided into either: (1) prehistoric cultural groups with no specific tribal affiliation, or; (2) historically documented groups with a designated tribal or band name. Before Spanish soldiers and Catholic missionaries arrived in Texas, the cultural activities of the groups of prehistoric Native Americans who inhabited the two regions can only be surmised from what we can glean from the archaeological records at undisturbed, and well-documented sites. Historic cultural groups are those observed firsthand by the Spanish soldiers and priests beginning in the late 1600s. The Spanish then began recording in writing the names, numbers, and living conditions of the many groups of Native Americans who lived in the regions. However, as I will discuss later in this section, there is a significant transition era between the least archaeologically known prehistoric cultural groups, and the historic Native Americans that the Spanish documented; the transition era occurs in the 1500s when Spanish explorers and treasure seekers ventured through Texas.

The Prehistoric Chronology

Based on research in Texas over the past 70+ years, beginning with professionals from the University of Texas at Austin, archaeologists have been able to segregate the prehistoric period in Central and South Texas into the Paleoindian, Archaic, and Late Prehistoric periods. Although other archaeologists have made significant foundational contributions to our current understanding of how past cultures changed through time (e.g., Story 1985; Prewitt 1981), in my opinion the most current and widely recognized chronologies are those offered by Michael Collins (1995) for Central Texas, and Thomas Hester (1995) for South Texas.

Paleoindian Period (11,500-8,800 years ago)

With minor differences observed in the archaeological record across the wide expanse of Central and South Texas, this period spans the past years estimated at between ca. 11,500 and 8,800 years ago (Collins 1995:381–383; Hester 1995:433–436). Diagnostic artifacts include a unique, fluted, finely flaked, and blade-shaped spear or dart point called “Clovis”, other stone tools chipped on both sides, and unique prismatic blade-like flakes systematically knocked off from river cobbles. Archaeologists have documented Clovis-age sites in Central and South Texas such as killsites, quarries, stone tool caches, open campsites, ritual sites, and burials (Collins 1995:381–383; Hester 1995:433–436). A Folsom interval follows the Clovis. Folsom artifacts are fairly common in Central and South Texas; however, no campsites or killsites have been found south of Bexar County (Hester 1995:434–435).

During this 2,700-year Paleoindian period around the project area, the Native Americans we term as the Paleoindian culture were likely one of small bands of nomadic, big-game hunters following herds of Late Pleistocene fauna, including mammoth, mastodons, bison, camel, and horse that are now extinct in North America (Black 1989). Nevertheless, when big game was not available, we have archaeological evidence that the Paleoindian peoples supplemented their diet by eating turtles, tortoises, alligators, mice, badgers, and raccoons (Collins 1995:381).

Archaic Period (8,000-1,200 years ago)

Primarily, by studying the differences in the stone tools, the diversities in campsites or other types of sites, the locations of the sites, as well as many other measurable and analytical observations such as ethnobotanical and faunal remains found at Central and South Texas archaeological sites, archaeologists have been able to dissect about 6,000 years of our past into what we commonly term the “Archaic”. Based on these same aforementioned affinities, the Archaic has further been defined in terms of the *Early Archaic*, the *Middle Archaic*, and the *Late Archaic*.

Early Archaic (ca. 8,800-6,000 years ago)

The region surrounding the Gardens at Pinnacle survey area was most probably occupied by small groups who moved almost constantly during the Early Archaic period. Archaeologists have observed a distinctive change in projectile point styles that are unique to this period; they include Early Corner Notched and Early Basal Notched dart points. Although they were still very much hunters and gatherers, the large animals such as mammoths that their Paleoindian ancestors had hunted were by this time extinct. To survive, they capitalized on exploiting the other abundant food resources that Central Texas had to offer Texas—such as deer, fish, rodents, prickly pear tunas, and various plant bulbs and tubers. Archaeologists point to the increased numbers of ground stone, firecracked limestone used in cooking ovens larger in size than normal campfires, and specialized stone processing tools as evidence that Native Americans refocused their pursuit of foodstuffs (Weir 1976; McKinney 1981; Story 1985; Collins 1995; Hester 1995).

Middle Archaic (ca. 6,000-4,000 years ago?)

When this period actually began and ended is always debatable among archaeologists. Some (e.g., Collins 1995) see a significant pattern in the archaeological record between 6,000 and 4,000 years ago, but others (e.g., Hester 1995) don't think the same changes were prevalent until

much later in South Texas - about between 4,500 and 2,400 years ago. Nevertheless, the climate began changing in Central and South Texas beginning around 6,000 years ago, and a continuum of dry climate known as the Altithermal, is believed by some archaeologists to have caused the Native Americans to gather in larger groups. They gathered in large groups to exploit plant foods that were more dependable than larger game animals such as bison (Sollberger and Hester 1972:338; Weir 1976:125, 128; Story 1985:40). Archaeologists have found more sites that date to this period, and in Summer seasons the groups apparently took advantage of the numerous prickly pear tunas and pads that thrived in the environs of South-Central Texas, as well as deer and rabbit (Campbell and Campbell 1981:13-15; Collins 1995:383).

Later, they apparently congregated along the many creeks and rivers in the area to gather the abundant and nutritional nuts ripening in the Fall (Black 1989). On the Edwards Plateau, they may have come together to gather acorns, and then built large cooking ovens to steam the tannic acid out of them to make them edible (Weir 1976). The large cooking ovens were apparently used over and over again. Whether they were repeatedly used within just a few years or over several hundred years is still being debated, but the consensus seems to be that they were used to cook not only deer, but also a great deal of tubers and other plants (Black et al. 1997; Mauldin et al. 2003). These large cooking ovens which contain mounds of accumulated firecracked rocks are called "burned rock middens" in the archaeological community, but are sometimes referred to as "Indian mounds" by artifact collectors.

Late Archaic (4,000-1,200 years ago?)

As with my synthesis of the Middle Archaic period, differences in the traits of Native Americans inhabiting Central and South Texas during the Late Archaic period may have occurred over several hundred years. Whether it was a matter of cultural adaptation or an adaptation to the environment is questionable. In either case, the uniqueness seen in archaeological sites of the two regions imply that change may have been slower in South Texas than in Central Texas.

Collins (1995) dates the final interval of the Archaic in Central Texas to approximately 4,000-1,200 years ago, while Hester (1995) believes the Late Archaic traits seen in South Texas archaeological sites may better be defined as between 2,400-1,300 years ago. The large cooking ovens which after repeated uses coalesced into burned rock middens, intensified during the Late Archaic (Black et al. 1997; Mauldin et al. 2003). Some researchers believe populations increased throughout the Late Archaic (Prewitt 1985), while others feel populations remained the same or fell during this period (Black 1989:30). Although the Native Americans of Central Texas still sought the abundant acorns, prickly pear, and riverine plant foods such as nuts, the slightly cooler and moister climate allowed them to pursue other food goods. Even though by about 1,500 years ago the gregarious, large herds of bison no longer predominated the now-dwindling grasslands of Central and South Texas (Dillehay 1974), the Native Americans still hunted and/or gathered deer and smaller animals such as rabbits, rodents, fish, and turtles (Black 1989:30).

Although farther south, near Brownsville and Rockport, the Native Americans inhabiting those areas began making pottery about 1,800 years ago, those groups farther to the north, around the Panther Springs Creek area, either elected not to make pottery vessels, lacked the skills, or because of their generally highly nomadic lifestyle, simply elected not to use the easily breakable

vessels until 1,000± years later (Story 1985:45–47). In addition to the uniqueness of Central Texas' hunter-gatherers not adapting to the use of pottery, archaeologists have also observed a noticeable change in the styles/types of killing dart points used during the Late Archaic. Keep in mind that dart points were manufactured to be used with the atlatl, a spear-like shaft with a dart point attached to it, and thrown or launched from over the shoulder. It would not be until perhaps 1,200 years ago that the bow-and-arrow was adapted for use for hunting in the region. Late Archaic dart points tend to be much smaller than Middle Archaic points, and the most common dart points that are found within the area are what archaeologists call Ensor and Frio types (Turner and Hester 1999:114,122).

As with most spectrums of scientific research, there is ongoing speculation amongst professional archaeologists as to when, and what traits mark a transition between the Late Archaic, hunter-gatherer practices of Central Texans and the Late Prehistoric peoples who presumably began to settle down into territorial groups claiming a part of the landscape as their own.

Transitional Archaic (2,300 - 1,300 years ago?)

A clear and abrupt transition of Native Americans adapting or developing the traits that archaeologists define as being inclusive to the Late Archaic period, separate from the Late Prehistoric period, around the project area is simply not distinct in the many sites that archaeologists have been able to excavate and analyze. In effect, some of the same characteristics that archaeologists see in Late Archaic artifacts and earlier Late Prehistoric assemblages left behind are nearly identical - or at least transitional in technology and style. Therefore, some archaeologists prefer to deem this transitional period as the “Terminal, or Transitional Archaic”, spanning from approximately 1,200 to perhaps as long ago as 2,300 years ago - depending on where in South or Central Texas the groups who left behind the now-present archaeological sites were living (Weir 1976; Hester 1995). Nevertheless, the increased number of burned rock midden sites that archaeologists have documented in Central Texas, and that date to this time period, suggest that people returned time and again to the same sites to once again take advantage of cooking and eating the abundant plants available during this time (e.g., Mauldin et al. 2003).

Late Prehistoric Period (ca. 1,250-300 Years Ago)

Although artifacts commonly associated with earlier Late Archaic occupations are also found on some Late Prehistoric-in-age archaeological sites, archaeologists have documented a distinct change in projectile point styles that Native Americans began manufacturing about 1,250 years ago. These stone points suggest that Native Americans in the Central and South Texas regions surrounding the Gardens at Pinnacle project area adapted the bow-and-arrow as a weapon rather than the shoulder-thrown atlatl with a dart point attached. As such, the stone points devised for killing became much smaller and streamlined. In layman terminology, the smaller, sleeker shafts arrow shafts carried an “arrowhead”, instead of a dart point. Archaeologists have found Edwards and Scallorn arrow points dating to the earliest 600+ years of the period (e.g., Goode 1991:71). Concurrently, excavations by professional archaeologists have provided evidence that Native Americans began using crude clay pottery vessels made from local clays, as well as perhaps trading vessels from the South, Southeast Coastal, and Northeast Texas regions. As with any successful venture, the making of pottery was refined so that vessels were used more, and the

technique of firing became perhaps an art (e.g., Story 1985:45-47; Black 1989:32; Hester 1995; Nickels 2000).

Archaeologists probably know more about the Native Americans who lived in Texas during this time than any other time in prehistory (Hester 1995). They continued to build large cooking ovens that we commonly call “Indian Mounds”, or burned rock middens in which they roasted tubers nuts, and some game animals (see for example, Mauldin et al. 2003). During this same period, the inhabitants may have increased their dependence upon bison (Steele and Assad-Hunter 1986:468). Huebner (1991) suggests that the sudden return of bison to South and Central Texas resulted from a more xeric climate in the plains north of Texas, and increased grassiness in the Cross-Timbers and Post Oak Savannah in north Central Texas, forming a “bison corridor” into the South Texas Plain along the eastern edge of the Edwards Plateau (Huebner 1991:354–355).

One theory is that perhaps there were not as many people occupying Central Texas and the area around the Gardens at Pinnacle during the Late Prehistoric period (Black 1989:32). We do know that they began occupying the limestone overhangs and rockshelters created by the many creeks and rivers cutting into the Balcones Escarpment limestone cliffs. Examples of rockshelters occupied by Native Americans along the escarpment include Scorpion Cave beside the Medina River in Medina County (Highley et al. 1978), Classen Rockshelter along Cibolo Creek in northern Bexar County (Fox and Fox 1967), and Timmeron Rockshelter in Hays County (Harris 1985).

Historic

Primarily beginning slightly over 300 years ago, European explorers, entrepreneurs, Catholic missionaries, and government officials encroached into what is today South and Central Texas in ever-increasing numbers. This transitional end of the Late Prehistoric and beginning of the Historic period in both Central and South Texas is characterized by a continuum of written accounts of European contact with the numerous indigenous, Native American groups encountered in the two regions. In Central Texas, we can be ever grateful to the meticulous writings of the Spanish priests and government officials for their recording of the names, numbers, and lifeways of the indigenous groups. However, South Texas at the time was largely bypassed by early Euro-Americans seeking permanent settlement. As such, the technology and lifestyles of the indigenous groups in South Texas may have been affected by transient European influence, but today we can only observe these changes in the archaeological record because the written accounts simply are not available. Dr. Thomas Hester (1995) is most often credited with recognizing this transitional period between the Late Prehistoric and the Historic, and labels this largely unknown period as the “Protohistoric.”

Traveling northward from present-day central Mexico in the 1500s and 1600s, the Spanish encountered numerous small groups of Coahuiltecan (Campbell 1983; Campbell and Campbell 1985; Hester 1989; John 1975; Newcomb 1961; Swanton 1952). In later years, intrusive groups such as the Tonkawa, Lipan Apache, and Comanche took over the lands roamed by the Coahuiltecan (Ewers 1969; Hester 1989; Jones 1969; Kelley 1971; Newcomb 1961, 1993; Sjoberg 1953a, 1953b).

For example, around A.D. 1700, many south Texas Indian groups were being pushed northward by continual Spanish expansion. But by about 1750, the Apache, adapting to a more Southern Plains-lifeway style of bison hunting, entered what is today's Texas from the northwest. Their incursion was especially rapid because they had acquired horses from the Spaniards (Campbell and Campbell 1985:27). As if the indigenous groups were not effectively dispersed and disrupted by the Apaches, the remnants of native American cohesion that previously existed in Central Texas were even further disrupted by the nomadic, bison-hunting Comanche from the High Plains of Texas (Campbell 1991:111).

Thus ensued over a century of turmoil for those numerous, but splintered Native American groups who had established a semi-permanent foothold in Central Texas before the arrival of the Apache and Comanche. They must have been heavily traumatized and significantly demoralized over the constant conflicts resulting in death, and the mysterious diseases caused by the forced continual mixing and remixing among ethnicities from around the regions and the world (Bolton 1915; Campbell 1991:345; León et al. 1961). Supposedly, there were dozens if not hundreds of language dialects that were spoken by the earlier inhabitants, but nearly all have been lost (e.g. Johnson 1994; Johnson and Campbell 1992).

Amidst the turmoil, the Spanish Catholic missions became a refuge for many of the otherwise dispersed bands and tribes within Texas. By the early 1700s, several missions had been established, and reestablished within the Nacogdoches and San Antonio areas (Campbell and Campbell 1985; Chipman 1992; de la Teja 1995; Habig 1968a, 1968b; Hard et al. 1995). Those that entered the missions did so usually voluntarily, seeking refuge from more powerful, warring bands or tribes. Others did so because they were starved for food that the protective missions could offer in seasons of natural destitution. Regardless, the Spanish government saw the Catholic religious zeal as a means of peaceful conquest in an otherwise untenable, unsettled, and hostile environment. At the same time, each and every Native American who relied upon support from the Spanish missions became less of a threat to eventual Spanish domination of the region, and infiltration by France or other countries (Campbell 1975:2; 1991:346–347).

Although a treaty with the Apaches in 1749 brought peace for a while, Apaches continued to range over the area between San Antonio and Laredo until the early 1800s, pushed southward by the invading Comanche who had moved into the Hill Country of Central Texas (Campbell and Campbell 1985:27; de la Teja 1995:100). In 1785, a peace treaty was agreed to in Santa Fe, New Mexico between the Spanish Crown and the Comanches. Although the ceremony of this treaty took place hundreds of miles to the west, its signing signaled the opening of a period of peaceful coexistence in what is today Bexar County, in which Comanches brought hides, meat, and tallow to San Antonio to trade for goods and services not available elsewhere, such as blacksmithing and gun repair (Fehrenbach 1983:221-224; Poyo and Hinojosa 1991:125-126).

In 1821, after a hard-fought rebellion, Mexico gained its national sovereignty from Spain; including the vast expanse that was to become the Republic of Texas. After only 15 years, the combined Tejano and Euro-American compatriots rebelled against Mexican rule, and defeated the Mexican army to declare an independent Republic of Texas in 1836. By the 1840s, the city of San Antonio was well-established as the most progressive and most populated city in the

newly formed Republic. The image of San Antonio as a metropolitan magnet has been enhanced in a continuum ever since, from Texas' evolution into statehood in 1846, through today.

Prehistoric Archaeological Site Types That Could be Expected Within the Gardens at Pinnacle Project Area

Five types of prehistoric sites normally found in Central Texas are: (1) open camp sites, with either single or multiple temporary occupations; (2) burned rock midden sites, with or without associated camp sites; (3) rock shelters; (4) chert quarry sites; and (5) burial sites.

Open campsites are defined by the presence of firecracked rock (occurring in varying quantities), rare finished tools, and few thinning flakes or other advanced reduction stage debitage. They consist of thin lithic scatters representing a single occupation, or deeply stratified, multi-component sites to which groups repeatedly returned for thousands of years (Black and McGraw 1985; Guderjan et al. 1992).

Burned rock middens are common over central and west Texas, and are commonly referred to as "Indian Mounds". They consist of piles of heat-fractured limestone, usually in a conical pile but occasionally in rings or U-shapes. These piles can measure tens of meters in diameter with a meter or more depth. Although they are usually near water sources, the exact nature of the activities at these sites is still a matter of debate. Nevertheless, most researchers agree that they are probably the result of intensive use of some resource in a logistically oriented subsistence strategy (Creel 1986; Black et al. 1997; Mauldin et al. 2003).

Rockshelters are found in solution cavities along creeks where water has cut into limestone bedrock. Repeated use of these shelters by prehistoric and historic populations is documented throughout Texas. Rockshelters are common along creeks cutting through the Balcones Escarpment.

Chert quarry and procurement sites can occur at outcroppings of limestone containing numerous chert nodules, while other areas have large numbers of chert nodules that have been washed into stream beds. Within the project area, extensive chert gravels are visible along Culebra Creek. Lithic quarries and procurement sites (gravel outcrops) are always set in exposed gravel sheets of varying sizes, and contain related artifacts - such as tested cobbles, cores, exterior and interior flakes, and rarely finished tools. When firecracked rock is present on quarry/workshops the site is considered a camp and procurement location. Quarry/procurement sites usually have a great deal of primary and secondary flakes, cores, tested cobbles, and large numbers of roughed-out bifaces or quarry blanks, many broken during manufacture (Potter et al. 1992).

Burials may be found in Bexar County and are not that uncommon. Usually, single burials occur at occupation sites, but the Native Americans began burying their dead in prehistoric cemeteries in the Late Archaic, and archaeologists have discovered more of them in the Late Prehistoric (e.g., Prewitt 1981). Although associated grave goods are rare, they certainly are present (e.g., Taylor and Highley 1995), and suggest a ceremonial respect for beliefs in the hereafter.

Occasionally, especially during the Austin phase of the Late Prehistoric period cemeteries, evidence of conflict appears with apparent arrow wound fatalities (e.g., Prewitt 1974).

Previous Archaeological Work in the Area

The first officially recognized local (Bexar County) institution organized to promote an interest in Texas archaeology was the Witte Memorial Museum, established in 1926 (Fehrenbach 1978:195; Martin 1933). The Witte continues to this day to promote to citizens of all ages the need to preserve our cultural resources. Almost 30 years ago, in the early 1970s, two other organizations were formed. The Center for Archaeological Research (CAR) at the University of Texas at San Antonio was born in 1973. As the Center's first director, Dr. Tom Hester sought to foster a hand-in-hand relationship among amateur collectors, landowners, and professional archaeologists. As such, he was instrumental in establishing the Southern Texas Archaeological Association (STAA) in 1973, a dedicated bunch of individuals who were (and still are) committed to documenting and preserving archaeological sites throughout Bexar County and South Texas.

The archaeological sites that have been documented in the area around the Gardens at Pinnacle, along the many creeks and their tributaries are both diverse and interesting. Types of sites include open campsites, burned rock middens, small lithic scatters, large lithic workshops, caves, and rockshelters. Large-scale surveys covering thousands of acres along the Balcones escarpment and the eastern Edwards Plateau have been highly effective in discovering archaeological sites. Seventy-two sites were recorded on 5,600 acres at Camp Bullis in northern Bexar County (Gerstle et al. 1978). The survey covered the watersheds of upper Cibolo Creek, Ranger Creek, and upper Salado Creek. Thirty-four of those sites were associated with diagnostic lithic tools from the Paleoindian through Late Prehistoric periods. Thirty-four sites containing Paleoindian through Late Archaic components were recorded during a 2,500-acre survey of the East and West Elm Creek branches of the upper Salado Creek in the Encino Park area of northern Bexar County (McGraw 1977:10-29).

Paul McGuff recorded 28 prehistoric sites along Leon Creek in northern Bexar County in 1970 and 1971. Al McGraw conducted one of the first systematic surveys in Bexar County in 1977 when he documented 15 sites along the Medio Creek drainage. They were identified as open campsites and lithic workshops (McGraw 1977). Temporally diagnostic artifacts found during the survey included pottery dating to the Late Prehistoric period, as well as projectile points dating to the Archaic period. One of the most recent and comprehensive surveys, as well as subsequent excavation projects conducted in Bexar County took place along the Medio and Leon Creek valleys, within the confines of Lackland Air Force Base and its Medina Base Annex. During this survey, Dave Nickels and others (Nickels et al. 1997) recorded 68 prehistoric sites. These recent and on-going projects discussed above have direct implications for prehistoric cultural resources within the area of the proposed Gardens at Pinnacle.

Perhaps one of the most significant archaeological investigations relative to the potential for archaeological sites within the project area took place on the eastern bank of Culebra Creek,

approximately 8 miles west-southwest of the project area. The site (41BX126) consists of a campsite that had been repeatedly occupied for about 4,500 years. During that time, the occupants had made numerous campfires, built an immense burned rock midden, and exploited the riparian environment for its rich diversity in both plant and animals. Of equal importance, the project geomorphologist was able to reconstruct four episodes of terrace building (T-1 through T-4) and subsequent downcutting along Culebra Creek over the past 30,000 years (Nickels et al. 2001).

Why So Many Archaeological Sites in Bexar County?

While we will never know for sure how many archaeological sites have been destroyed, or how many still remain in Bexar County, we do know that professional and avocational archaeologists have managed to document nearly 2,500 over the past 35+ years.. Although it may seem odd that there have been more sites recorded in Bexar County than in all its surrounding counties, and the reader could presume that there are simply a whole lot more sites in Bexar, there are other factors that influence the documentation of sites. For example, the largest city in the area is San Antonio, and as such the city has many historic structures that qualify as archaeological sites that skew the numbers in favor of Bexar County. Thanks to the city's historic preservation office and codes enacted by the city, many have been recorded over the years.

It also makes sense that the more pieces of property that archaeologists are able to examine, the more sites are likely to be found. Most archaeological projects are undertaken because of Federal and State Antiquity codes that require cultural resource surveys be conducted when public money (tax dollars) are used for construction, such as highways, schools, prisons, etc. In addition, military installations and the National Park Service (NPS) are required by federal law to evaluate any cultural resources within their lands. Because of Bexar County's explosive population growth, many military installations, and the Spanish missions administered by NPS, it seems reasonable that Bexar County should have more archaeological sites documented than in the surrounding counties. In addition, professional and avocational archaeologists and historians have been actively involved for many years in the county.

Project Goals and Methods

Goals

The project goals focused on archaeological issues that could be addressed by the types of data obtained through pedestrian survey, along with limited shovel testing. The topics addressed were site type, distribution, density, size, depth, and stratigraphy. The theoretical framework is structured around patterns of settlement, mobility, subsistence, and social systems for the Central Texas region.

The goals of the project were to:

- 1) locate and record cultural locations and sites in the project area using a systematic survey methodology;
- 2) quantify site size, as well as depth, and stratigraphy; and,
- 3) place any diagnostic artifacts within the regional time frame.

Methods and Levels of Effort

Prefield Preparation

Before the official survey began, the Principal Investigator inspected the project area with the landowner and developer, Mr. Russell Ebrahimi, to better understand the topography, surface visibility, and site potential. The 4.7-acre parcel was clearly marked with surveyor's stakes so that there was no question as to the boundaries of the project area. The Principal Investigator had worked on many surveys in Bexar County over the past 16 years, and was thus familiar with what types of archaeological sites and artifacts were likely to be encountered within this setting. Nevertheless, a thorough review of the literature pertaining to the area was conducted. Site and survey reports from the area were examined. USGS 7.5 quadrangle maps, a Bexar County soils survey book, and a geological atlas sheet were consulted. Finally, the Texas Archaeological Site ATLAS was queried to check for any previously recorded sites in the area .

The Survey

In accordance with Texas Historical Commission (THC) and Council of Texas Archeologists (CTA) Archaeology Survey Standards, a systematic, 100% pedestrian survey of the tract was conducted. Surface visibility ranged from 50 to 100 percent across the area. Particular attention was given to the exposed eroded slopes and the extremely rare small rodent burrows. The southern portion of the project area was along a steep limestone bluff, with the potential for mortar holes, crevice burials, and small overhang and occupied rock shelters, to exist.

A total of 10 shovel tests were placed in areas that had not been heavily disturbed, and appeared to have at least a few centimeters of accumulated soil remaining. Shovel tests were dug in 10-cm levels, and all sediments were screened through 1/4-inch wire mesh. Following our designed research plan, any artifacts recovered from shovel tests were not to be collected, but were to be placed in the upper 10 cm of the backfilled shovel test. However, in the end, no artifacts were observed either on the surface or within any of the shovel tests. Nevertheless, the results of shovel testing were fully documented on Shovel Test forms.

Results of the Investigations

Surface Examination and Shovel Testing

During the survey it became readily apparent that approximately 80 percent of the project's surface area was either disturbed by modern construction activities, or was exposed to the

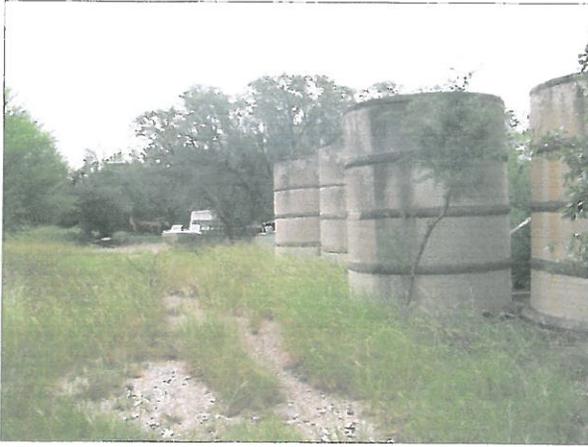


Figure 11. Four concrete water catchment cisterns on the upper, northwestern portion of the property.



Figure 12. Old paved road/trail leading to the 1970s house on the property.

underlying fractured or solid limestone bedrock. For example, concrete water catchment tanks, along with a house, paved drive, and concrete and paved patio area were constructed in the 1970s (Figures 11 and 12).

Based upon soil surveys, the area with the greatest potential for buried deposits would have been in the extreme southwestern portion of the project area, where an access road is to be constructed (see Figure 4). However, a concrete foundation and slab had already been constructed there, along with a paved drive. In addition, the immediate area was heavily eroded down to bedrock (Figures 13 and 14).



Figure 13. Area of proposed entryway from Blanco Road, north to the upper elevation, and the front of the Gardens at Pinnacle development; facing north.



Figure 14. Proposed linear driveway from the western edge of the Gardens at Pinnacle, downslope toward Blanco Road; slope is steep and heavily eroded; facing south.

No artifacts or cultural features were observed either on the surface or within any of the 10 shovel tests excavated. Shovel tests were placed in those few selective areas where there appeared to be at least some soil depth remaining. The results of shovel testing are shown in Table 1. Locations of the shovel tests within the project area are shown in Figure 15.

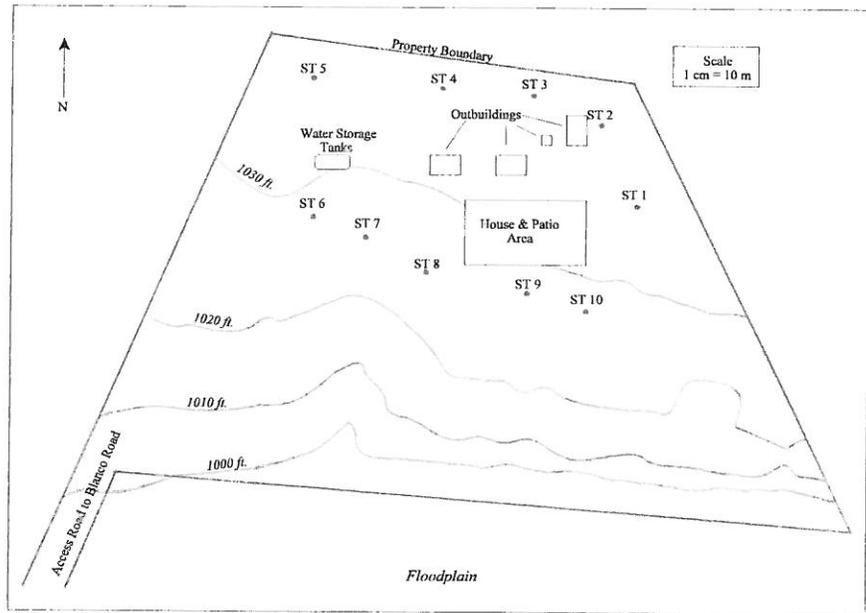


Figure 15. Sketch map of the project area showing Shovel Test (ST) locations.

Table 1. Results of shovel testing.

ST	Depth (cm)	Description/Remarks
1	0-12	Dark brown, moderate, clods to 5 cm in size, clay loam, softball sized limestone cobbles, limestone bedrock at 12 cm
2	0-6	Dark brown, moderate, clods to 5 cm in size, clay loam, fractured and crumbly bedrock 90 percent by volume, limestone bedrock at 6 cm
3	0-2	Pale brown coarse sandy loam; limestone bedrock at 2 cm
4	0-2	Dark gray sandy loam; limestone bedrock at 2 cm
5	0-5	Reddish-brown sandy loam; baseball-sized limestone gravels 90 percent by volume; limestone bedrock at 5 cm
6	0-5	Reddish-brown sandy loam; baseball-sized limestone gravels 90 percent by volume; limestone bedrock at 5 cm
7	0-5	Reddish-brown sandy loam; baseball-sized limestone gravels 90 percent by volume; limestone bedrock and large cobbles at 5 cm
8	0-10	Dark brown sandy loam; angular limestone pebbles and gravels 10 percent by volume; limestone bedrock at 10 cm
9	0-2	Dark brown sandy loam; angular limestone pebbles and gravels 10 percent by volume; limestone bedrock at 2 cm
10	0-14	Dark brown sandy clay; angular limestone fragments; limestone bedrock at 14 cm

Summary, Conclusions, and Recommendations

A 100% pedestrian survey of the surface that offered up to 100% visibility within the project area was conducted, but no evidence of neither prehistoric nor historic occupation of significance was found. In addition, no cultural materials were found in any of a total of 10 shovel tests excavated.

Therefore, we recommend that the project should proceed as currently designed by the project sponsor. The project should be considered as having “no effect” on any properties considered as eligible for nomination to the National Register of Historic Places or inclusion in the State Archeological Landmarks Program. As such, the project should proceed without further archaeological work. However, if any cultural resources are encountered during construction, work should immediately be halted in the vicinity until such finds are examined and evaluated by Tierras Antiguas, or by any qualified archaeological consultant, and by the Texas Historical Commission.

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