

**An Intensive Cultural Resources Survey of the  
610.8-acre Luckey Ranch Global Tract,  
Bexar County, Texas**

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## MANAGEMENT SUMMARY

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Starting 28 September 2009, Horizon Environmental Services, Inc. (Horizon) conducted an intensive 4-day cultural resources survey of the 610.8-acre Luckey Ranch Global tract (Project Area), located west of San Antonio in western Bexar County, Texas. Luckey Ranch Global, LP (LRG) is proposing to develop the Project Area as a residential subdivision. Although the proposed development is privately owned and privately funded, LRG is seeking to develop the Project Area in compliance with the City of San Antonio's Master Plan, which includes the protection of cultural resources. As such, LRG contracted with Horizon to perform a cultural resources survey of the Project Area. The purpose of the survey was to determine if any archeological sites were located within the boundaries of the Project Area and, if so, to determine their eligibility for inclusion on the National Register of Historic Places (NRHP).

The intensive cultural resources survey within the 610.8-acre Project Area did not identify any archeological sites within the property boundaries. The low occurrence of isolated artifacts, coupled with the thorough modification of the Project Area into agricultural fields during modern times, has prompted Horizon to recommend that archeological clearance be granted for the entire 610.8-acre tract.



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## 1.0 INTRODUCTION

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This document reports the results of an intensive cultural resources survey of the 610.8-acre Luckey Ranch Global tract (Project Area), located west of San Antonio in western Bexar County, Texas (Figures 1 and 2). Luckey Ranch Global, LP (LRG) is proposing to develop the Project Area as a residential subdivision. Although the proposed development is privately owned and privately funded, LRG is seeking to develop the Project Area in compliance with the City of San Antonio's Master Plan, which includes the protection of cultural resources. As such, LRG has contracted with Horizon Environmental Services, Inc. (Horizon) to perform a cultural resources survey of the Project Area. The purpose of the survey was to determine if any archeological sites were located within the boundaries of the Project Area and, if so, to determine their eligibility for inclusion on the National Register of Historic Places (NRHP).

The cultural resources investigations consisted of an archival review, an intensive pedestrian survey of the Project Area, and the production of a report suitable for review by the State Historic Preservation Officer (SHPO) in accordance with the Texas Historical Commission's (THC) Rules of Practice and Procedure, Chapter 26, Section 27, and the Council of Texas Archeologists' (CTA) Guidelines for Cultural Resources Management Reports. Reymundo Chapa served as the project's Principal Investigator. He and Jared Wiersema (Horizon field technician) conducted the field investigations between 28 September and 1 October 2009.

The cultural resources survey consisted of both intensive surface inspection and shovel testing efforts. Although the modern cultivation of fields on the Project Area makes it more difficult to assess the intact contexts of possible cultural resources, it also has caused a variety of subsurface artifacts to be more easily identified on the ground. Therefore, the bulk of the investigation consisted of surface inspection. The Texas State Minimum Archeological Survey Standards (TSMASS) require a minimum of 1 shovel test per 3 acres for projects of this size; therefore, a total of 204 shovel tests were required over the 610.8-acre Project Area in order to meet the minimum survey standards. Horizon met the TSMASS by producing 204 shovel tests over the Project Area.

The intensive cultural resources survey within the Project Area resulted in the location of 5 isolated artifacts that included a biface fragment, a large probable core, and 3 flakes that were

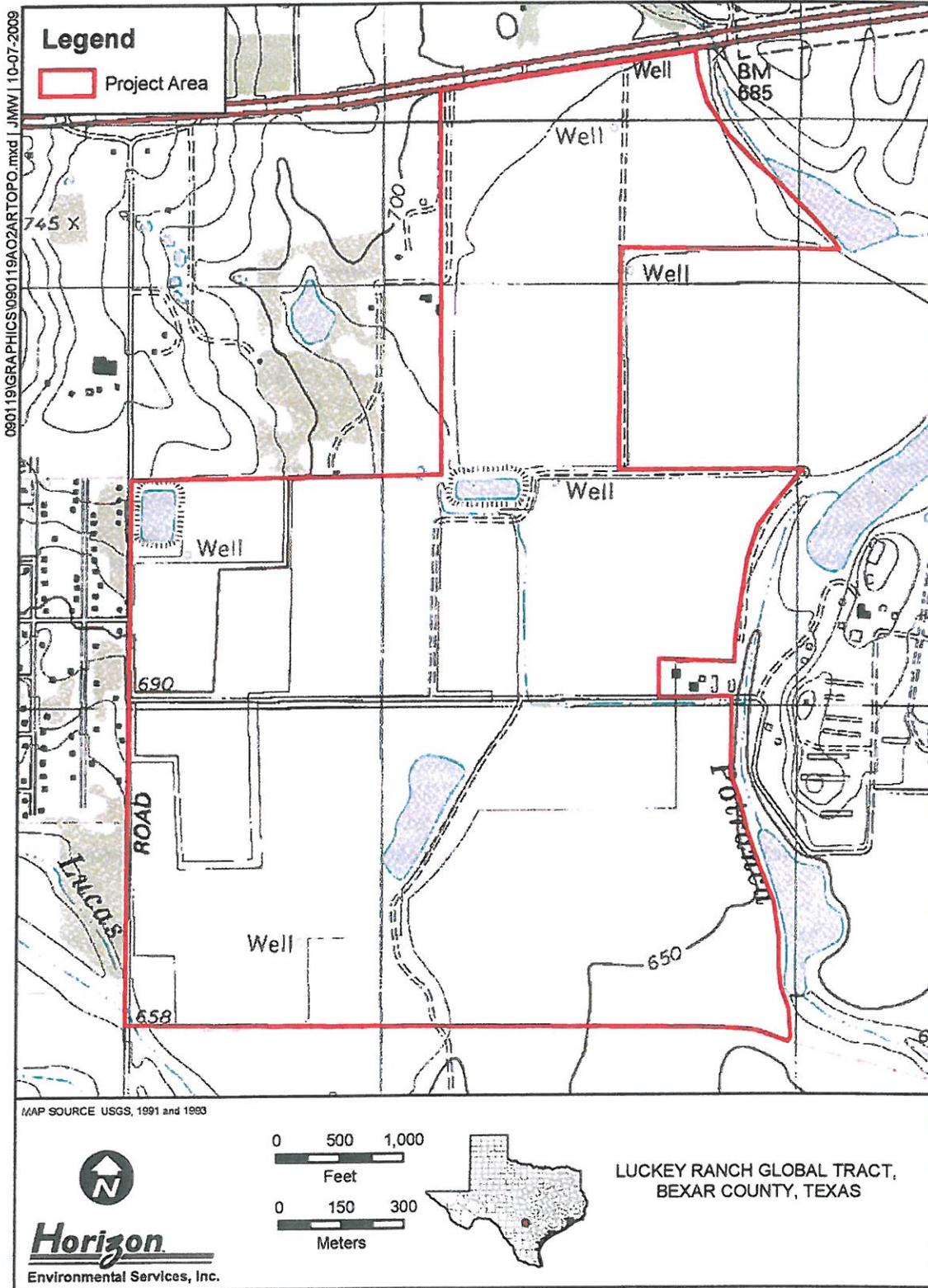


Figure 1. Topographic map of the Project Area

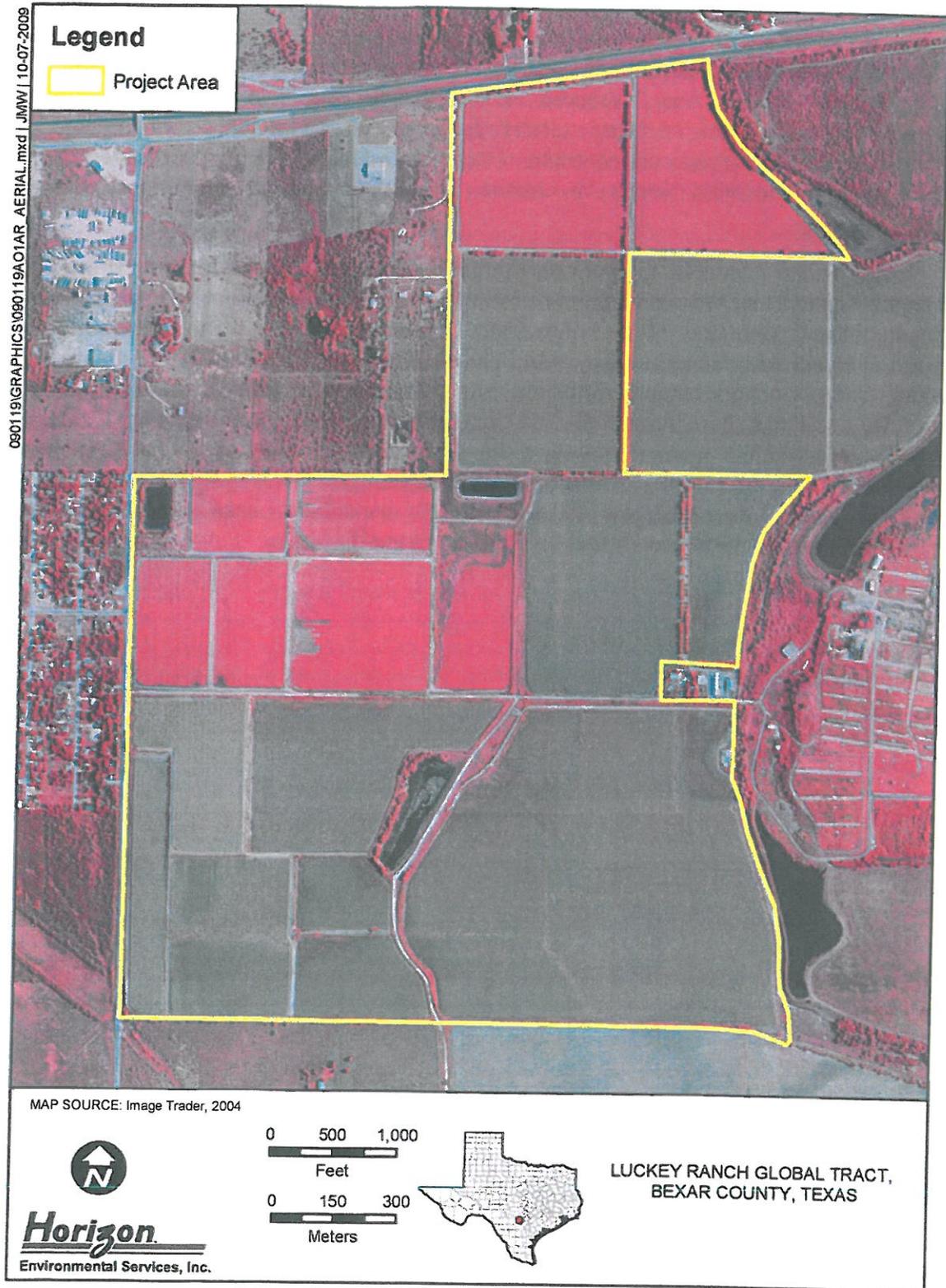


Figure 2. Aerial photograph of the Project Area

scattered across different quadrants of the Project Area, with no clusters of artifacts observed that would constitute documentation as a formal archeological site. No cultural features, burned rock, or organic remains were observed in the Project Area. Aside from the previously mentioned isolated artifacts, no other cultural resources were identified or documented within the Project Area. If a strong concentration of cultural materials had been present, they likely would have been identified strictly by chance, given the constant disturbance of soils by intensive plowing.

Based on the documentation of only a handful of isolated artifacts on the Project Area, it is Horizon's opinion that the development of the Project Area will have no adverse impact on significant cultural resources. Furthermore, plow zone disturbance over the shallow rocky soils within the Project Area diminishes any real potential of finding intact buried, stratified cultural deposits. Thus, Horizon recommends that no further investigations are warranted on the Project Area and that cultural resources clearance be granted for the undertaking. However, in the unlikely event that cultural materials (including human remains or burial features) are inadvertently discovered at any point during construction, use, or ongoing maintenance of the Project Area, even in previously surveyed areas, all work should cease immediately and the THC and the City of San Antonio should be notified of the discovery.

## **2.0 ENVIRONMENTAL SETTING**

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### **2.1 GENERAL DESCRIPTION**

The Project Area is located just outside San Antonio, approximately 2.4 kilometers (km) (1.5 miles) west of the Loop 1604/US Highway 90 interchange (see Figures 1 and 2). It can be found on the US Geological Survey (USGS) 7.5-minute Macdona and Culebra Hill, Texas, topographic quadrangles (USGS 1991, 1993) (see Figure 1). Silva (2009) reports that the area is known as the Donut Hole—a phrase coined by Dallas-based developer Chip Field, who has been a developer in this area of the city since 2004. Field calls it the Donut Hole because there is a large demographic demand but limited supply of available land. In other words, all the desirable land is boxed in by various barriers to development on all sides. Plans for the Project Area call for upwards of 2,000 single-family homes, as well as commercial development (Silva 2009). On-site photographs are provided in Figures 3 through 7.

### **2.2 CURRENT LAND USE**

LRG has indicated that the entire Project Area once functioned as an extensive cattle feed lot. To facilitate this, the entire area has been heavily terraced, providing steeply stair-stepped plateaus over an area that was likely once a hillside that sloped down to Potranco Creek to the east (Figure 3). In addition to the surface modifications, it appears that considerable amounts of soil were also placed across the resulting terraces. Currently, the entire Project Area is divided into 17 terraced agricultural fields (see Figure 2) on which corn and cotton are being cultivated. Apart from the terraced fields, developments on the Project Area include 3 large holding ponds—that seem to provide water for field irrigation (Figure 7)—and a series of roads that lead to the compartmented fields. In the northeastern sector of the Project Area, roads are lined on both sides by rows of pecan trees (Figure 6). The Project Area is a working farm that includes farming equipment and non-portable structures (barns and living quarters). Although these structures are associated with the Project Area's present function, they all fall outside the of the current property boundaries.

### **2.3 PHYSIOGRAPHY AND HYDROLOGY**

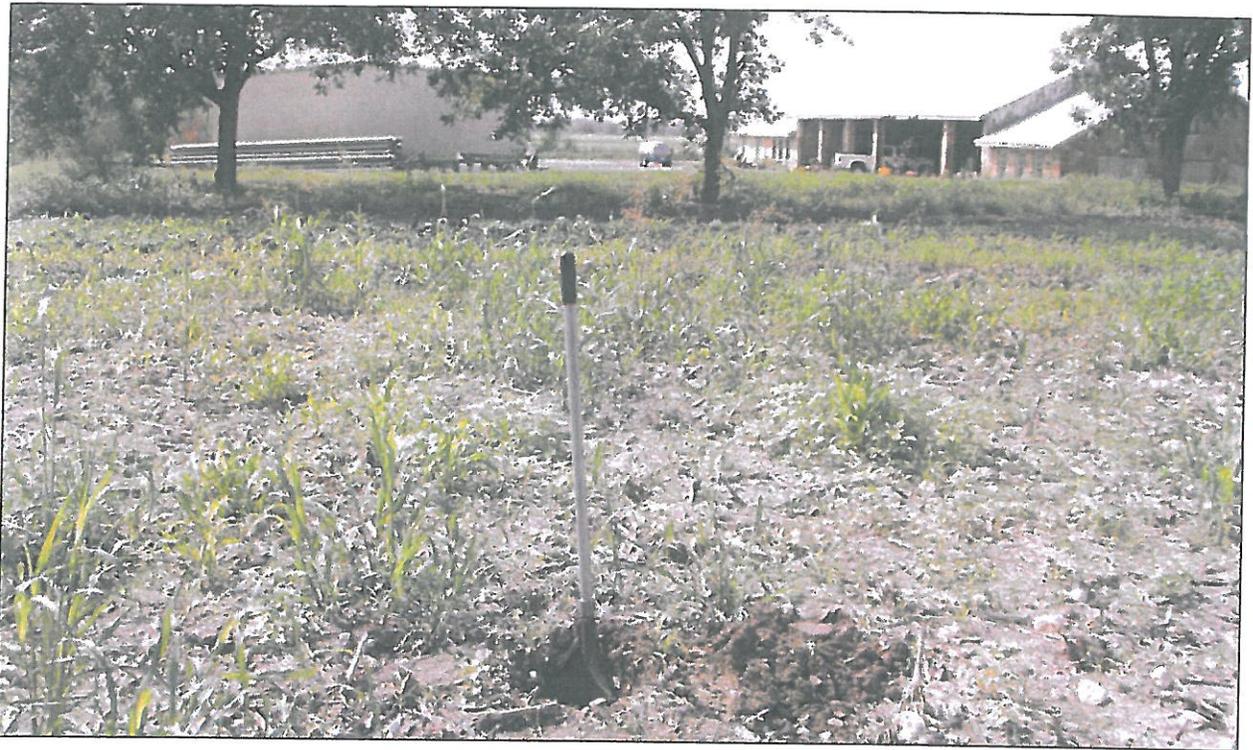
The Project Area is situated between 2 hills to the west and east. Surface elevation ranges from approximately 700 feet above mean sea level (amsl) in the west to 650 feet amsl



**Figure 3. Typical physiography of the Project Area**



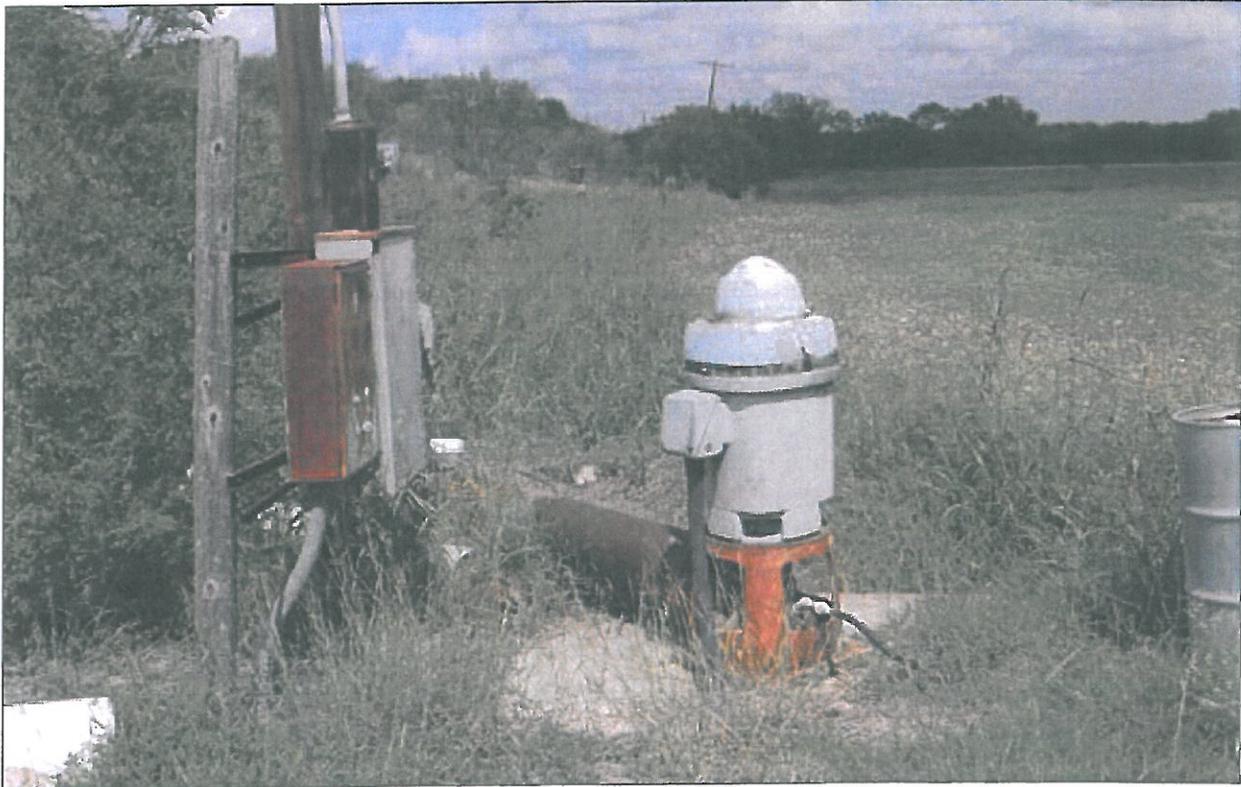
**Figure 4. Typical vegetation on the Project Area**



**Figure 5. Shovel test in foreground and farm buildings and equipment in background**



**Figure 6. Field in northeastern sector of Project Area with pecan trees in the background**



**Figure 7. Water pump located at base of westernmost holding pond on Project Area**

along the eastern perimeter of the Project Area (USGS 1991, 1993), which also is defined by Potranco Creek. Although the natural terrain within the Project Area would normally slope gently from west to east, the changes in elevation within the Project Area seem more abrupt given the artificial terracing of fields (see Figure 3), an alteration that purportedly took place during the 1940s. The fields seem to have been constructed so as to take advantage of the down-flow of water from higher fields onto lower ones.

## **2.4 SOILS**

Field investigation of the Project Area revealed a richer, non-native, organic top-soil. This dark brown clay loam constitutes the most superficial layer of every field within the Project Area. During the course of the survey, farmers working the Project Area indicated that the terraced fields were constructed in the 1940s, so soil was probably imported during the same period. Depths for this superficial layer range from 15 to 65 centimeters below surface (cmbs), but they generally average between 20 and 30 cmbs over most of the Project Area. The non-native soil contains a variety of stones (Figure 8) including chert, limestone, and a variety of shell fossils (Figure 9).

Apart from the soil described above, a total of 10 naturally occurring soils are mapped within the Project Area and are presented in Table 1 and on the map in Figure 10 (NRCS 2009).



**Figure 8. Typical assortment of stones found in and around agricultural fields in the Project Area**



**Figure 9. Typical fossil found in and around agricultural fields in the Project Area**

Table 1. Mapped Soils within the Project Area

| SOIL NAME  | SOIL TYPE              | SOIL DEPTH (INCHES)  | UNDERLYING MATERIAL |
|--|------------------------|----------------------|---------------------|
| Rock outcrop-Olmos complex, 5 to 25% slopes (HgD)            | rock outcrop           | 0 to 80              | bedrock             |
| Houston Black clay, 0 to 1% slopes (HsA)                     | clay                   | 0 to 62              | bedrock             |
| Houston Black clay, 1 to 3% slopes (HsB)                     | clay                   | 0 to 62              | bedrock             |
| Branyon clay, 0 to 1% slopes (HtA)                           | clay                   | 0 to 62              | bedrock             |
| Houston Black gravelly clay, 1 to 3% slopes (HuB)            | gravelly clay;<br>clay | 0 to 8;<br>8 to 62   | bedrock             |
| Houston Black gravelly clay, 3 to 5% slopes (HuC)            | gravelly clay;<br>clay | 0 to 8;<br>8 to 62   | bedrock             |
| Lewisville silty clay, 0 to 1% slopes (LvA)                  | silty clay             | 0 to 62              | bedrock             |
| Lewisville silty clay, 1 to 3% slopes (LvB)                  | silty clay             | 0 to 62              | bedrock             |
| Tinn and Frio soils, 0 to 1% slopes, frequently flooded (Tf) | clay                   | 0 to 80              | bedrock             |
| Sunev clay loam, 1 to 3% slopes (VcB)                        | clay loam;<br>loam     | 0 to 34;<br>34 to 62 | bedrock             |

## 2.5 VEGETATION

Vegetation on the Project Area is sparse due to the agricultural function of the land. Trees and shrubs are limited to the area in and around the 3 artificial holding ponds. Pecan trees grow liberally around the farm buildings and seem to have been deliberately planted along the roads in the northeastern sector of the Project Area (see Figure 6). Vegetation along fence lines and around the 3 holding ponds is typical of the Texas Hill County, consisting primarily of scattered mesquite, cedar, yaupon, agarita, prickly pear, and short grasses (see Figure 4).

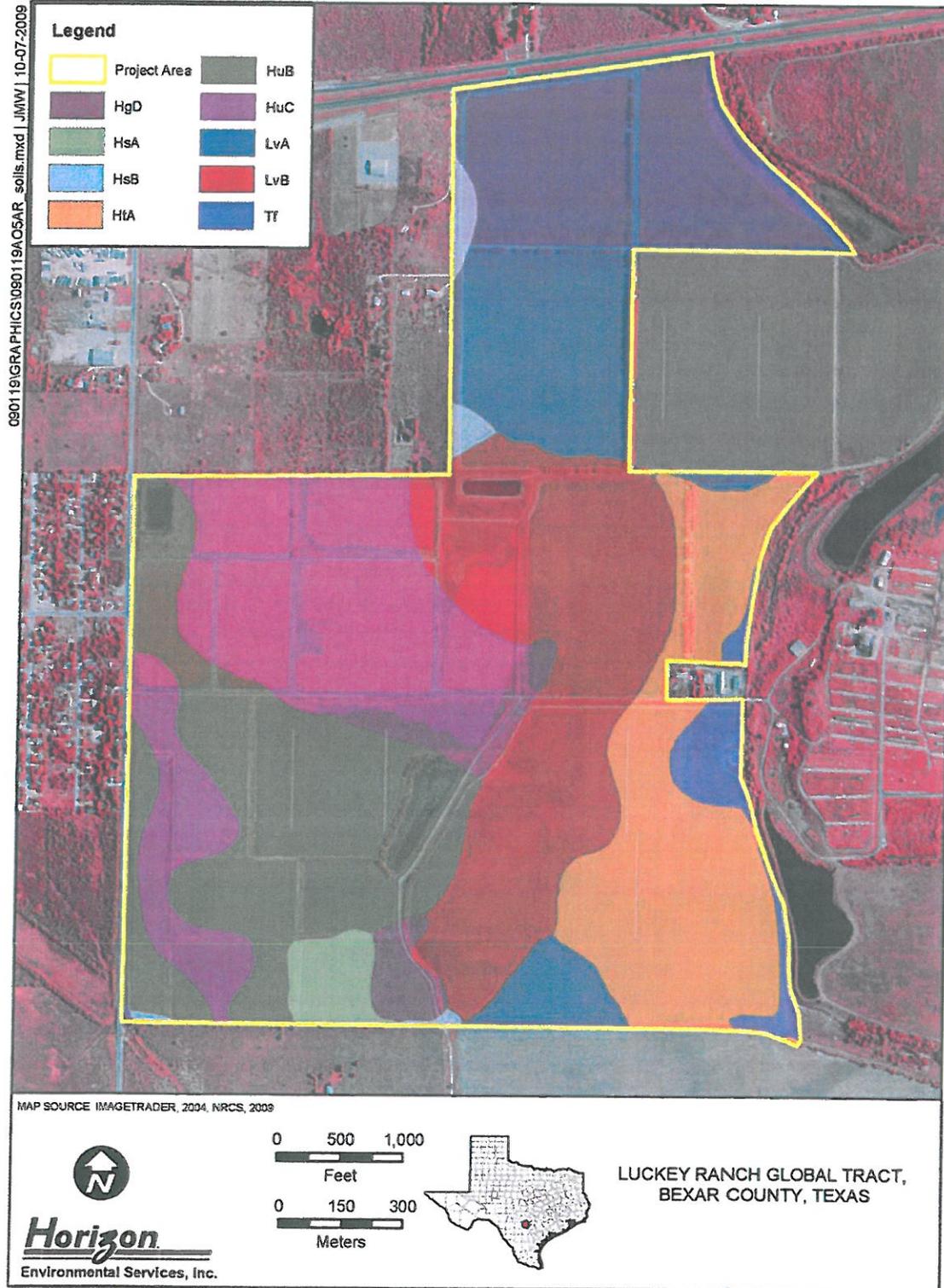


Figure 10. Map of naturally occurring soils within the Project Area



## **3.0 CULTURAL BACKGROUND**

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The Project Area is located near the southern boundary of Prewitt's (1981, 1985) Central Texas Archeological Region. The indigenous human inhabitants of Central Texas generally practiced a nomadic hunting and gathering lifestyle throughout prehistory. In contrast to much of North America, mobility and settlement patterns in this region do not appear to have changed much through time.

### **3.1 PALEOINDIAN PERIOD (CA. 12,000 TO 8500 B.P.)**

The initial human occupations in the New World now can be confidently extended to at least 12,000 B.P. (Dincauze 1984; Haynes et al. 1984; Kelly and Todd 1988; Lynch 1990; Meltzer 1989), and evidence from Meadowcroft Rockshelter in Pennsylvania suggests that humans were present in Eastern North America as early as 16,000 years ago (Adovasio et al. 1990). More recent discoveries at Monte Verde, Chile, provide unequivocal evidence for human occupation in South America by at least 12,500 years ago (Dillehay 1989, 1997; Meltzer et al. 1997). However, most archeologists discount claims of human occupation earlier than the Pleistocene glacial period (cf. Butzer 1988).

Generally, the PaleoIndian period (12,000 to 8500 B.P.) constitutes the earliest evidence for human activities in Central Texas (Collins 1995). This period coincided with ameliorating climatic conditions that followed the Pleistocene epoch, a period that saw the extinction of mammoth, camel, and some types of bison and horse. Distinctive projectile points, which are relatively large, often fluted, and lanceolate in shape, characterize different cultures within this long period. The points are usually distinguished by a certain type of tool set, which includes spurred end scrapers, graters, and bone foreshafts. PaleoIndians likely were organized into egalitarian bands that consisted of a few dozen individuals who lived a nomadic lifestyle, and their subsistence patterns in Central Texas are known primarily through the study of faunal remains because floral materials do not preserve well. PaleoIndians exploited plants, small animals, fish, and shellfish; there is little evidence that they hunted the now extinct megafauna, as is documented elsewhere in North America. Rather, PaleoIndians practiced a broad-based subsistence throughout prehistory. In Central Texas, the PaleoIndian period is divided into 2 separate periods that are based on the recognizable differences between distinctive projectile point styles. The Early PaleoIndian period is characterized by large, fluted projectile points (i.e., Clovis, Folsom, Dalton, San Patrice, and Big Sandy), and the Late PaleoIndian period is

characterized by unfluted lanceolate points (i.e., Plainview, Scottsbluff, Meserve, and Angostura).

### **3.2 ARCHAIC PERIOD (CA. 8500 TO 1200 B.P.)**

The onset of the Hypsithermal drying trend marks the beginning of the Archaic period (8500 to 1200 B.P.) (Collins 1995). Although this climatic trend marks the beginning of a significant reorientation of lifestyles throughout most of North America, the change was far less pronounced in Central Texas. Elsewhere, the changing climatic conditions and corresponding decrease in the big game populations forced people to rely more heavily on a diversified resource base composed of smaller game and wild plants. However, generalized hunting and gathering characterize most of prehistory, and the appearance of a more diversified tool kit, the development of an expanded groundstone assemblage, and a general decrease in the size of projectile points are hallmarks of this cultural period. Material culture shows greater diversity during this time, especially in the application of groundstone technology.

Traditionally, the Archaic period is subdivided into Early, Middle, and Late, with changes in projectile point morphology holding as the differentiating factor. Other changes in material culture occurred. For instance, burned rock middens appear during the Middle Archaic and continue into the Late Archaic, and large cemeteries begin to be used during the Late Archaic. Prehistoric sites become more plentiful through time, which often is considered evidence of population growth. However, differential preservation accounts (at least in part) for the lower number registered older sites.

### **3.3 LATE PREHISTORIC PERIOD (CA. 1200 TO 350 B.P.)**

The appearance of the bow and arrow defines the onset of the Late Prehistoric period (1200 to 350 B.P.) (Collins 1995). Pottery also appears in Central Texas during the Late Prehistoric period (though ceramics appear earlier in Southeast Texas). Although the atlatl (i.e., spearthrower) and spear continue to be used in the inland subregion of Southeast Texas along with the bow and arrow, the rest of Texas stops using it during the Late Prehistoric period (Patterson 1980, 1995; Wheat 1953). In Texas, small prismatic blade technology appear to be associated with unifacial arrow points. The Late Prehistoric period is divided into the Austin and Toyah phases. Austin phase sites first occur in the north, which leads some researchers (e.g., Prewitt 1985) to suggest that Central Texas, Austin-phase populations migrated from the north into southern areas. Finally, Indians of the Toyah developed a ceramic industry.

### **3.4 HISTORIC PERIOD (CA. 350 B.P. TO PRESENT)**

Álvarez de Pineda explored the northern Gulf of Mexico in 1519, which marks the first incursion of Europeans in to what is now Texas. In 1528, Cabeza de Vaca crossed South Texas after being shipwrecked on the Texas Coast near Galveston Bay. However, European settlements did not disturb native populations until after 1700. During the first half of the 18th century, the fur trade and the mission system, along with epidemic diseases, began to seriously disrupt native cultures. The effects of contact are clearly evidenced at the Mitchell Ridge site. Burial data suggest that populations declined and groups merged (Ricklis 1994),

and Native American populations began to participate more heavily in the fur trade. By the time Anglo-Americans increased their settlement of Texas in the early 1800s, indigenous Indian populations were in sharp decline.

In 1691, Domingo Terán de los Ríos and Fray Damián Massanet led the first European expedition that explored the Bexar County region; evidently, they reached the San Antonio River, near where the San Juan Capistrano Mission was later founded.<sup>1</sup> Nearby, they found a group of Payaya Indians living on the riverbank. Massanet recorded in his diary that the Indians called the place Yanaguana. He later renamed the site San Antonio de Padua to celebrate the memorial day of St. Anthony, which occurs on June 13. Franciscan fathers Antonio de San Buenaventura y Olivares and Isidro Félix de Espinosa and a military officer named Pedro de Aguirre led the next Spanish expedition, but they did not reach the area until April, 1709. They were impressed by the setting and the availability of water, and they noted that the area might make a promising site for future settlement. In 1714, Louis Juchereau de St. Denis crossed the region on his way to San Juan Bautista. Espinosa, who first visited the region in 1709, revisited San Antonio in 1716 while traveling to East Texas with the Domingo Ramón expedition. This time he recommended San Pedro Springs as a mission site. Near that spot, Martín de Alarcón led the expedition that founded the San Antonio de Valero Mission and San Antonio de Béjar (or Béjar) Presidio in May 1718, which he named for Viceroy Balthasar Manuel de Zúñiga y Guzmán Sotomayor y Sarmiento, who was the second son of the duke of Bexar. By winter's end in 1718, numerous Indians of the Jamrame, Payaya, and Pamaya groups had joined the mission. In 1720, Fray Antonio Margil de Jesús founded the San José y San Miguel de Aguayo Mission, a short distance to the south. The San Francisco Xavier de Naxara Mission was established in 1722, but it proved unsuccessful and was merged with San Antonio de Valero in 1726. In 1724, the San Antonio de Valero mission compound, which had originally been located at the site of the present-day Chapel of Miracles south of San Pedro Springs, was moved to Alamo Plaza. In 1731, after the removal of the missions from East Texas, 3 additional missions—Nuestra Señora de la Purísima Concepción de Acuña, San Francisco de la Espada, and San Juan Capistrano—were founded along the San Antonio River.

During the 1720s, the area's Spanish population numbered about 200. It included 53 soldiers and their families and 4 civilians with their families. On 9 March 1731, 55 Canary Islanders arrived at Bexar, and the villa of San Fernando de Béjar became the first municipality in the Spanish province of Texas. Together with the presidio and the villa of San Fernando the 5 missions constituted the most important Spanish concentration in Texas. By the mid-1730s the total population of the area was approximately 900, including 300 Spanish and 600 Indian converts. An epidemic in 1738 and 1739 devastated the missions, killing perhaps three-fourths of the Indian population. Only 182 of 837 baptized Indians survived at Mission San Antonio de Valero. By 1740, however, populations at the missions began to recover. Converts living in the

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<sup>1</sup> The following discussion of Bexar County history derives from Chabot (1937), De la Teja and Wheat (1985), Johnston (1947), Poyo and Hinojosa (1991), and Ramsdell (1959), as presented in *The Handbook of Texas Online* (2009).

5 missions reached more than 500, many of whom were indigenous Coahuiltecan peoples fleeing the Apaches and Comanches.

The missions developed as self-supporting communities, each ringed with farmland irrigated by a comprehensive system of acequias, or irrigation ditches. Crops included grain, cotton, flax, beans, sugarcane, and vegetables. Each of the missions also maintained sizable herds of cattle, sheep, and goats, which were located on extensive ranchlands located around Bexar. In 1809 Governor Manuel M. de Salcedo wrote that Mission Concepción's ranch consisted of some 38 square miles and extended east and northeast from the mission to Cibolo Creek. An inventory in 1756 recorded that the Concepción ranch had 700 cattle, 1,800 sheep, and large herds of goats and horses.

Both the missions and the villa of Bexar were subject to sporadic attacks by Apaches and Comanches, and nearly a quarter of the Spanish who died between 1718 and 1731 were reportedly victims of Apache attacks. A truce was signed with the Apaches in August 1749, but occasional attacks by Comanches and Apaches continued well into the 19th century.

In 1772, the government offices of Spanish Texas were moved from Los Adaes to Bexar, and some east Texas settlers also moved. Nevertheless, Bexar remained a small frontier outpost. In the late 1770s Father Juan A. Morfi reported "fifty-nine houses of stone and mud, seventy-nine of wood, all poorly built without a preconceived plan. The whole town," he continued, "resembles a poor village rather than the capital of a province."

After the secularization of the missions in 1793 and 1794, the communities around Bexar gradually became satellite civilian communities under Bexar's authority. Mission lands were distributed to the few remaining Indians and the increasing number of Spanish settlers. Most of the coveted land close to settled areas was controlled by the town's elite, which was made up of the descendants of the original Canary Islanders and presidial soldiers. The complex network of irrigation systems that had been operated by the missions was partially abandoned, and, by 1815, the amount of irrigated farmland had declined markedly.

Despite the downturn brought on by the secularization of the Spanish missions, San Antonio de Béxar continued to be an overwhelmingly agricultural community. Subsistence farming was the rule. The largest number of cultivators worked small family plots, though many farms were also worked by tenant farmers or day laborers. The elite landowners increased the size of their holdings after the secularization of the missions, and some of the largest ranchers exported horses and cattle to Coahuila or Louisiana.

During the late Colonial period, Bexar continued to serve as the capital of the province of Texas and as the main shipping point for supplies heading from Mexico to Nacogdoches and La Bahía. Between 1811 and 1813, the city was the center of revolutionary activity against Spanish rule. In 1811, a former militia captain, Juan Bautista de Las Casas, who was following the lead of Miguel Hidalgo y Costilla in Mexico, mounted an insurrection in Bexar that quickly spread throughout the province of Texas. Las Casas led a band of poor, disgruntled soldiers and civilians who resented Spanish elite rule. They scored early successes, arresting the governor and his military staff and seizing the property of the most ardent royalists. But on 1

March 1811, conservative military officers and clergy supported by the *isleños* (aristocratic decedents of the original Canary Island settlers) staged a counterrevolution. Las Casas was captured in Chihuahua and executed. In an attempt to dissuade others from taking up his cause, his head was salted and shipped in a box to Bexar for display in the Military Plaza.

Leadership of the insurrectionists fell to Bernardo Gutiérrez de Lara after Las Casas was executed. He led an army of Mexican revolutionaries and sympathetic Americans from Louisiana who seized San Antonio in the spring of 1813 and proclaimed Texas an independent state. In August, however, royalist forces commanded by José Joaquín Arredondo succeeded in routing the insurrectionists and restoring order. Arredondo's victory was followed by a period of reprisals that included confiscation, detentions, and executions; in San Antonio alone, 327 supporters of the rebellion were shot by royalists.

In the wake of the rebellion, the population of Bexar and the surrounding region fell markedly and did not begin to grow again until the end of the decade. By 1820, however, Bexar had some 2,000 inhabitants, with slightly more females (1,021) than males (973); several hundred more lived on ranches in the outlying countryside. During the 1830s, the population again increased slightly, although the number of inhabitants in Bexar declined as more town dwellers moved to adjoining farms and ranches.

Soon after the first Anglo-American colonists came to Texas in 1821, San Antonio became the western outpost of settlement. In 1824, Texas and Coahuila were united into 1 state with the capital at Saltillo; a Department of Bexar was created with a political chief overseeing the portion of the state that would become Texas. During the late 1820s and early 1830s, an increased number of North American settlers began to move to San Antonio, though the city remained predominantly Mexican at the beginning of the Texas Revolution.

In late October 1835, Texas volunteers laid siege to the city, which was garrisoned by the Mexican army under Martín Perfecto de Cos. On 10 December, after fierce hand-to-hand fighting, it was occupied by Texan forces. Antonio López de Santa Anna led government forces that retook San Antonio during the battle of the Alamo (23 February to 6 March 1836). After Santa Anna's forces were defeated in the battle of San Jacinto, San Antonio was re-occupied by Texan forces. But the area, which was claimed by both sides, continued to be fought over. In March 1842, 6 years after Texas independence, Mexican general Rafael Vásquez briefly occupied San Antonio, and, in September of the same year, Adrián Woll led another Mexican invasion force that seized the city.

Because of the uncertainty posed by frequent invasions, San Antonio and its surrounding areas became largely depopulated. Many settlers fled during the Runaway Scrape of 1836 or during subsequent attacks. They did not return in large numbers until after Texas joined the Union. As late as 1844, San Antonio only had 1,000 residents, nine-tenths of whom were Mexican descents.

The newly formed Bexar County covered much of the western edge of settlement in Texas. During the late Mexican period, Texas was divided into 4 departments, with the department of Bexar stretching from the Rio Grande to the Panhandle, as far west as El Paso.

Once Texas won its independence, the departments became counties, and on December 20, 1836, Bexar County was established, with San Antonio as county seat. Since 1860, when the partitioning of Bexar County began, the original county has been subdivided into 128 counties.

Due in part to the large number of immigrants from the Old South and from Germany, Bexar County's population increased in the late 1840s. Despite this steady growth the county remained a sparsely populated region during the state's early years. In 1850, the county had a total population of 5,633; 3,488 of these people lived in San Antonio. The economy was still based on ranching and subsistence agriculture during this time, much like subsistence patterns during the Spanish and Mexican periods, and farms remained small. On the eve of the Civil War only 1 farm in the county was larger than 1,000 acres and most were smaller than 50 acres. Trade between San Antonio and Mexico and New Orleans was the main source of revenue for the county, and a number of German and Anglo immigrant merchants opened businesses in the city. But there was little in the way of industry. In 1860, the county had only 28 manufacturing establishments that collectively employed 135 employees.

In contrast to other parts of Texas, slaves played only a minor role in the Bexar County economy. In 1850, there were only 419 African Americans living in the county, 30 of whom were free. By 1860, the slave population had grown to 1,395, slightly less than 10% of the county's total population. Most of the county's 294 slaveholders owned 5 or fewer slaves, and only 2 owned more than 40.

Because of its large German population, Bexar County was a center for antislavery sentiment. Even so, county residents voted 827 to 709 for secession (54% for, 46% against). On 16 February 1861, General David E. Twiggs, who commanded the federal Department of Texas headquartered in San Antonio, surrendered all United States forces, arms, and equipment to a committee of local secessionists backed by a large force of Texas Rangers under the command of Major Benjamin McCulloch. Although Bexar County escaped destruction that ravaged other parts of the South, the war years were difficult for the county's citizens, who were forced to deal with the decrease in markets and wild fluctuations in Confederate currency. With many of the men away fighting, the county and the surrounding region experienced an upsurge of cattle rustling and other crimes. "Necktie parties" were organized by vigilante committees to handle bandits, cattle thieves, and Union sympathizers.

San Antonio was occupied by Union soldiers after the war, but the county was spared much of the political violence that consumed other parts of Texas. However, the war and its aftermath seriously affected the county's economy. Land prices fell significantly—by as much as half—and most of the county's businesses suffered. Many of the county's farms also fell idle. Improved farmland declined by more than 60% (from 13,697 to 5,546 acres) between 1860 and 1870. With little tax money coming in, San Antonio and county officials were unable to fund many services, including public sanitation. As a result, the county experienced a serious cholera outbreak in 1866.

San Antonio continued to be a commercial and military center, but the rest of the county remained sparsely settled and undeveloped. Most of the population continued to be concentrated in the San Antonio River valley with a few small settlements in the northern,

eastern, and western parts of the county. Economic recovery began in the late 1860s and early 1870s with the start of the great cattle drives. Bexar County became an important center for the ranching industry because it was located at the northern apex of the diamond-shaped area considered the Texas cattle kingdom. By 1870, the number of beef cattle in the county reached 55,325, nearly doubling the figures from 1860. A sharp increase in the price of wool, along with the large amount of free rangeland to the west and south of the city, spurred the development of sheep ranching, particularly between 1870 and 1880.

However, the economic recovery found its most important stimulus when the first railroad—the Galveston, Harrisburg and San Antonio Railway—arrived in San Antonio in February 1877. The completion of the rail link with the coast made the shipment of local products easier and helped fuel a rapid growth in population. The number of inhabitants in the county, which grew less than 2,000 between 1860 and 1870, nearly doubled over the next decade; it increased from 16,043 in 1870 to 30,470 in 1880. Many of the new residents were recent immigrants from Europe and Mexico. Of the total population in 1880, 7,912 were foreign-born, with the largest numbers coming from Mexico (3,498), Germany (2,621), Ireland (471), England (334), and France (293). After the Civil War, the county's black population also grew dramatically as many freed slaves settled in and around San Antonio. By 1880, the number of African-Americans in San Antonio reached 3,867, nearly 3 times what it had been in 1860.

In 1881, a second railroad called the International-Great Northern reached the city from the northeast. The completion of the 2 railroads brought prosperity and changed the physical face of the county. Before the 1870s, most visitors had been struck by San Antonio environs. Despite relatively large numbers of English, Irish, and Germans, San Antonio resembled a Mexican community more than an American one. The influx of new settlers and manufactured building products gradually transformed the city and county into one that more closely resembled other communities in Texas. By 1890 San Antonio's German population outnumbered Mexicans who were born in Mexico (4,039 to 3,561, respectively).

The construction of the railroads also contributed in the founding of new communities, including Macdona, Von Ormy, Cassin, Atascosa, Thelma, Beckman, Luxello, Converse, and Kirby, though the overwhelming majority of county inhabitants still lived in San Antonio.

New industries also were established during the 1880s. By 1887, San Antonio listed 3 bookbinderies, 4 breweries, 3 carriage factories, 4 ice factories, 3 tanneries, 1 wool-scouring plant, and an iron foundry among its businesses. Between 1880 and 1890, manufacturing employees in the county grew from 362 to 2,518. After the turn of the century, the manufacturing sector continued to show impressive growth. By 1920, the county had 328 factories employing 6,860 persons.

The depression hit Bexar County hard, even with its relatively diverse economy. By the mid-1930s, many people were out of work. They were glad when New Deal programs gave them work paving streets and building bridges, sewers, and parks. Among the largest projects of the period were the renovation of La Villita and the San Antonio missions, and the construction of the Paseo del Rio along the San Antonio River in the center of the city.

During World War II, Bexar County's large military presence grew even larger as the area's bases became an important center for the US Army, which trained air corps cadets under the auspices of the San Antonio Aviation Cadet Center. During the height of the war more than 21,000 civilian war workers were employed at Kelly Field alone. The presence of military personnel continued to bring changes to the county, even after the war. Thousands of returning soldiers enrolled in local colleges and universities, and many others, attracted by the area during their service years, moved to the city. San Antonio became a major retirement center for military families, who were drawn by the relatively low cost of living and access to the premier medical care offered by Wilford Hall and Brooke Army Medical Center. Since the end of the Second World War, San Antonio's economy has depended strongly on federal payrolls that come from various military bases and research facilities, and from the large number of retired military residents.

San Antonio became an important military center beginning in the second half of the 19th century. The San Antonio Arsenal was opened in 1858, and, in 1878, the city deeded 90 acres to the federal government for what eventually became Fort Sam Houston. During World War I, Kelly Field and Brooks Field, which later became Kelly Air Force Base and Brooks Air Force Base, were developed as centers for training pilots. The US Army also opened Camp Bullis and Camp Travis to train soldiers. At the end of the war, a part of Kelly Field became Duncan Field, and in 1931, Randolph Field was established as a primary flight training base. During World War II, Kelly Air Force Base integrated Duncan Field, and Camp Normoyle, a motor base, was added.

## 4.0 ARCHIVAL RESEARCH

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Archival research conducted online via the Texas Historical Commission's (THC) *Texas Archeological Sites Atlas* indicates the presence of 5 previously recorded archeological sites within a 1.6-km (1.0-mile) radius of the Project Area (THC 2009). Three of these sites are located along the bluff immediately to the east of the Project Area (Figure 11). Site 41BX1633 is a prehistoric lithic scatter situated east of Potranca Creek with an approximated area of 60 by 75 meters. Cultural material found at the site consisted of a sparse scatter of debitage, 3 early stage bifaces, and multiple tested cobbles and cores. Site 41BX1634 is a sparse prehistoric lithic scatter of lithic debitage, 2 early stage bifaces, and multiple tested cobbles. And site 41BX1272 is a light-density surface lithic scatter. The 2 remaining sites are situated northeast of the Project Area, just north of US Highway 90 (Figure 12). Both sites (41BX774 and 41BX1711) are Early to Late Archaic lithic procurement sites that produced chert nodules, flakes, cobbles, cores, and initial stage bifaces.

Prehistoric archeological sites are commonly found in upland areas and alluvial terraces near stream/river channels or drainages. Based on the presence of the Potranco Creek along the eastern boundary of the Project Area, and in conjunction with the number of previously recorded sites in the general vicinity, it was considered probable that prehistoric cultural resources existed within the Project Area. However, because of the heavy terracing that happened during the 1940s, much of those resources and their contexts may never be recovered. Additionally, in the unlikely event that some cultural resources are identified, it would be difficult to distinguish between which artifacts and activities are native to the area and which were recently relocated as a result of intensive field modification by recent farming practices.

**ITEM INTENTIONALLY OMITTED**

**Figure 11. Previously recorded archeological sites along bluff east of Potranco Creek**

# ITEM INTENTIONALLY OMITTED

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**Figure 12. Previously recorded archeological sites northeast of Project Area and north of US Highway 90**



## 5.0 METHODOLOGY

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Horizon's 2-person archeological field crew was able to recognize the unique topography of the Project Area during its initial investigation, which took place 28 September 2009. The topographical aspects greatly affected the way the crew conducted its study within the Project Area. First, the entire Project Area has been heavily terraced to create steeply stair-stepped plateaus across the tract to facilitate its use as a cattle feed lot. Considerable amounts of non-native soil have also been placed over the Project Area to aid in the creation of the leveled terraces. The western portion of the Project Area, which also is the highest point in elevation, holds a large artificial pond that is used to irrigate the series of descending terraced fields. Two additional ponds (aligned roughly north-south) are constructed towards the middle of the Project Area. Presumably, these second-tier ponds are used to irrigate the lower elevation fields—those closest to the western boundary of the Project Area. Second, these fields have been continuously cultivated subsequent to the use of the area as a feed lot, so very little is left of the landscape that may have once played host to prehistoric activities. Much of that landscape now has been buried under non-native soils that typify the entire surface area of the Project Area. Taken together, these factors obviated a strict full-coverage survey. Instead, the crew opted for an opportunistic approach that took into consideration land use from historical to current times, as well as the probable erosion and taphonomic processes that moved cultural resources within and between existing fields.

The crew concluded that if artifacts were to be found, then they likely would follow general rules established by precedence governing sites in other parts of North America. For instance, prehistoric archeological sites are commonly found in upland areas and alluvial terraces near stream/river channels or drainages. Given such postulates, Horizon concentrated its efforts along the western boundary of the Project Area (which constitutes the area of highest elevation), and along the eastern limits of the Project Area (which essentially is the west bank of Potranco Creek). Horizon surmised that if concentrated cultural resources were present they would be identified with a high probability in these specific areas.

With these considerations in mind, Horizon's crew divided the Project Area into manageable sectors. Because the entire Project Area is already separated into agricultural fields, the crew used these as fundamental units to begin a methodological and systematic study of the area. Fields were labeled using letters that ultimately correspond to shovel tests (Figure 13). The survey took place from 29 September to 1 October 2009, and was accomplished by walking expedient transects over the extent of the Project Area. The main

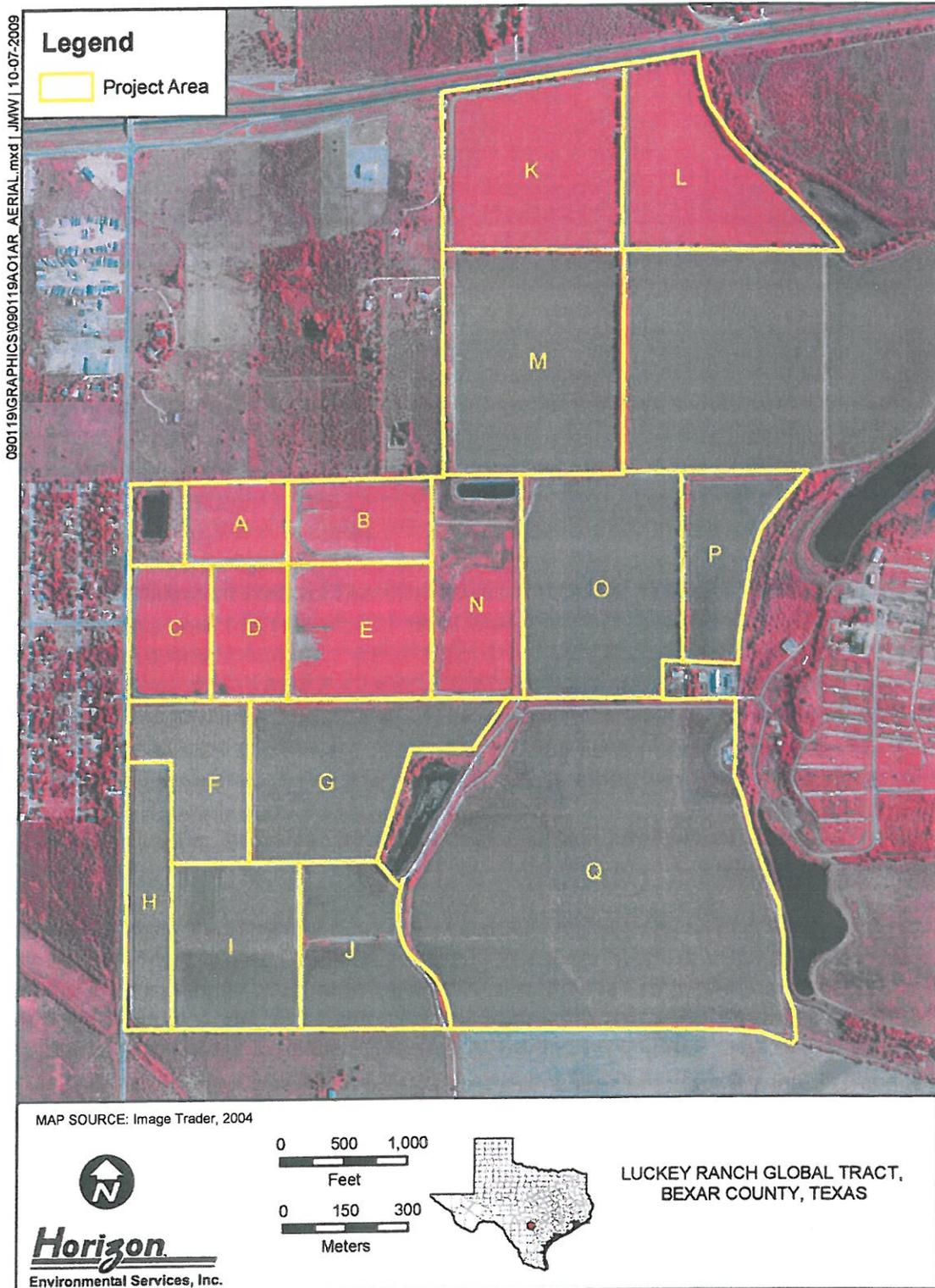


Figure 13. Systematic grid developed to survey high probability areas for cultural resources

objective was the intensive inspection of the surface, with shovel tests serving to confirm the depth and makeup of non-native soils. Thus, in order to maximize the possibility of finding cultural resources, the fields that lie in the middle of the Project Area were not shovel tested. Although the surface of every field was visually surveyed, only areas along the eastern and western portions of the tract were shovel tested. The TSMASS require a minimum of 1 shovel test per 3 acres for projects greater than 200 acres. As such, a total of 204 shovel tests were necessary to meet the TSMASS. Horizon met these by producing 204 shovel tests over the Project Area.

A selective-collection strategy was employed during the survey efforts. Any non-diagnostic cultural materials (e.g., burned rock, lithic debitage, etc.) observed on the surface or within shovel tests were tabulated, described, and photographed in the field and then subsequently returned to where they were found. Diagnostic cultural materials (e.g., lithic tools, projectile points, charcoal, etc.) were collected for analysis and further documentation. Field notes were maintained on terrain, vegetation, soils, land forms, shovel tests, cultural material observed (if any), etc. Standardized shovel test forms were completed for every shovel test, including location data, depth, soil type, and notations on any artifacts encountered. Digital photographs, along with a photo log describing the context of each photograph were also completed. A handheld GPS unit that utilizes the UTM coordinate system and the NAD 83 map datum was used to record pertinent location data. Shovel test locations are presented in Figure 14, and shovel test data are provided in Appendix A.

Horizon's original Scope of Work included the potential for backhoe trenching along the eastern boundary of the Project Area in the event that deep alluvial soils were present along Potranco Creek. Subsequent evaluation of the area found that 4 factors made this method impractical. First, as stated above, modern farming practices have intensively modified fields along the original west bank of Potranco Creek (which also serves to delineate the eastern boundary of the Project Area). Therefore, there was little promise of yielding intact cultural deposits. Second, an elevated, packed-earth road currently runs along that same boundary (Figure 15), further reducing the likelihood of finding in situ or undamaged artifacts. Third, like the rest of the Project Area, extensive and intensive shovel tests in the area confirmed the presence of non-native soils to an average depth of approximately 20 to 30 cmbs. These non-native soils rest on a lens of dense caliche and clay (refer to Section 2.4 of this report). Previously registered archeological sites in the area (including the 5 outlined in Section 4.0 of this report) were found exclusively through surface investigation, and not in shovel tests. This suggests similar conditions for nearby sites. Finally, the San Antonio Water System (SAWS) has recently constructed a sewer line that runs the entire length of the eastern boundary of the Project Area and immediately west of the existing packed-earth road (Figures 16 and 17). This means backhoe trenching would have to be conducted at least 50 meters from the eastern boundary of the Project Area in areas where shovel testing again showed only shallow clay soils over caliche. With these factors in mind, backhoe trenching was not needed to investigate 30 cm of soils overlying the subsurface caliche. After careful consideration, Horizon decided to use its time and resources more productively.





**Figure 15. Shovel test with elevated, hard-packed road in background**



**Figure 16. SAWS sewer line ROW west of elevated road in eastern sector of Project Area**



**Figure 17. SAWS manhole cover in eastern sector of Project Area**

## 6.0 RESULTS AND RECOMMENDATIONS

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### 6.1 RESULTS

The intensive cultural resources survey within the Project Area resulted in the identification of 5 isolated chert implements consisting of 1 bifacial chert core, a second large probable chert core, and 3 chert flakes (Figures 18 through 23). All 5 were found at separate, distinct locations across the Project Area, with no obvious clusters noted that would constitute a formal archeological site. While these 5 specimens appear to be aboriginally reduced, the identification of cultural lithic technology is hard to identify on the Project Area due to agricultural processes that are currently taking place on the land that can often create similar characteristics on stone. Heavy concentrations of chert nodules, chert cobbles, and lithic flakes were identified in the agricultural fields across the Project Area, but none seem to have clear striking platforms, bulbs of percussion, or the telltale signs of deliberate and systematic reduction. Thus, they likely are products of modern-day farming. Aside from the 5 previously mentioned isolated artifacts, no other cultural resources were identified or documented on the Project Area. No cultural features, burned rock, or organic remains were observed at the site, either through pedestrian survey or shovel test.

### 6.2 RECOMMENDATIONS

Based on the documentation of only a handful of isolated artifacts on the Project Area, it is Horizon's opinion that the development of the Project Area will have no adverse impact on significant cultural resources. Furthermore, plow zone disturbance over the shallow rocky soils within the Project Area diminishes any real potential of finding intact buried, stratified cultural deposits. Thus, Horizon recommends that no further investigations are warranted on the Project Area and that cultural resources clearance be granted for the undertaking. However, in the unlikely event that cultural materials (including human remains or burial features) are inadvertently discovered at any point during construction, use, or ongoing maintenance of the Project Area, even in previously surveyed areas, all work should cease immediately and the THC and the City of San Antonio should be notified of the discovery.

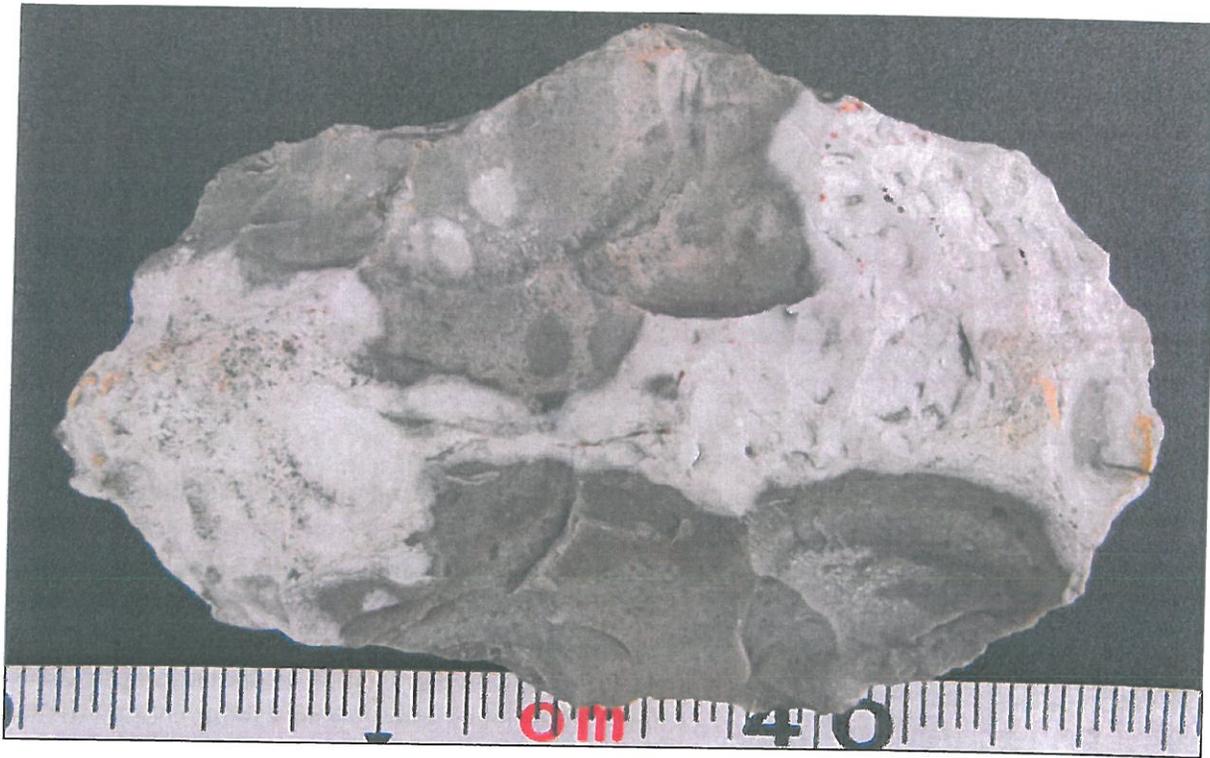
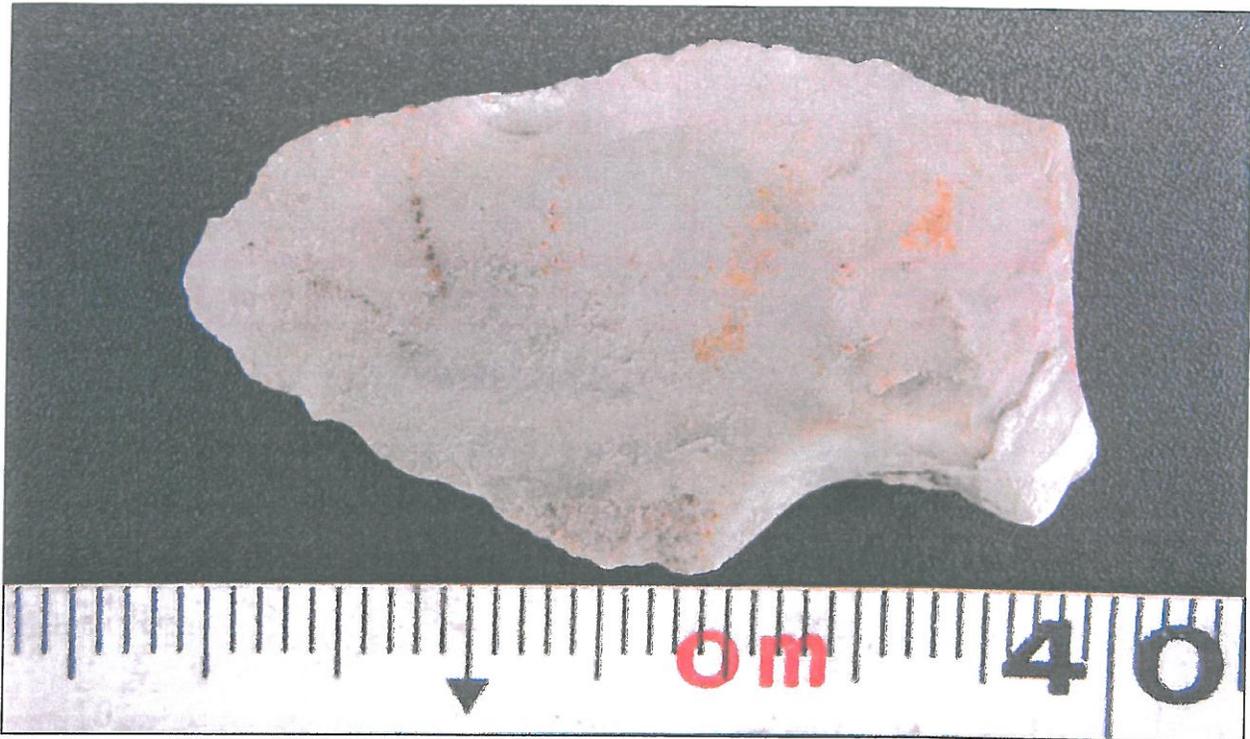


Figure 18. Bifacial lithic tool found within Project Area



Figure 19. Probable core found within Project Area



**Figure 20. Lithic artifact found within Project Area**



**Figure 21. Lithic artifact found within Project Area**



**Figure 22. Lithic artifact found within Project Area**

## 7.0 REFERENCES CITED

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- Adovasio, J.M., J. Donahue, and R. Stuckenrath  
1990 The Meadowcroft Rockshelter Chronology 1975-1990. *American Antiquity* 55:348-354.
- Butzer, K.W.  
1988 A Marginality Model to Explain Major Spatial and Temporal Gaps in the Old and New World Pleistocene Settlement Records. *Geoarcheology* 3:193-203.
- Chabot, F.C.  
1937 With the Makers of San Antonio. Yanaguana Society Publications 4, San Antonio, Texas.
- Collins, M.B.  
1995 Forty Years of Archeology in Central Texas. *Bulletin of the Texas Archeological Society*, Volume 66, pp. 361-400.
- De la Teja, J.F., and J. Wheat  
1985 Bexar: Profile of a Tejano Community, 1820-1833. *Southwestern Historical Quarterly* 89.
- Dillehay, T.D.  
1989 *Monte Verde: A Late Pleistocene Settlement in Chile—Paleoenvironment and Site Context*, Vol. 1. Smithsonian Institution Press: Washington, D.C.  
1997 *Monte Verde: A Late Pleistocene Settlement in Chile—The Archaeological Context*, Vol. 2. Smithsonian Institution Press: Washington, D.C.
- Dincauze, D.F.  
1984 An Archaeo-Logical Evaluation of the Case for Pre-Clovis Occupations. *Advances in World Archaeology* 3:275-323. Academic Press, New York.
- Handbook of Texas Online, The  
2009 "Bexar County," <<http://www.tshaonline.org/handbook/online/articles/BB/hcb7.html>>. Accessed 8 October 2009.

Haynes, C.V., Jr., D.J. Donahue, A.J.T. Hull, and T.H. Zabel

- 1984 Application of Accelerator Dating to Fluted Point Paleoindian Sites. *Archaeology of Eastern North America* 12:184-191.

Image Trader

- 2004 Digital aerial photography: Bexar County, Texas. Image Trader (GIS products), Flagstaff, Arizona.

Johnston, L.C.

- 1947 San Antonio: St. Anthony's Town. Librarians Council, San Antonio, Texas.

Kelly, R.L., and L.C. Todd

- 1988 Coming into the Country: Early Paleo-Indian Hunting and Mobility. *American Antiquity* 53:231-244.

Lynch, T.F.

- 1990 Glacial-Age Man in South America?: A Critical Review. *American Antiquity* 55(1):12-36.

Meltzer, D.J.

- 1989 Why Don't We Know When the First People Came to America? *American Antiquity* 54(3):471-490.

Meltzer, D.J., D.K. Grayson, G. Ardila, A.W. Barker, D.F. Dincauze, C.V. Haynes, F. Mena, L. Nuñez, and D.J. Stanford

- 1997 On the Pleistocene Antiquity of Monte Verde, Southern Chile. *American Antiquity* 62(4):659-663.

Natural Resources Conservation Service (NRCS)

- 2009 "Web Soil Survey," <<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>>. Accessed 8 October 2009.

Patterson, L.W.

- 1980 *The Owen Site, 41HR315: A Long Occupation Sequence in Harris County, Texas*. Houston Archeological Society, Report No. 3.
- 1995 The Archeology of Southeast Texas. *Bulletin of the Texas Archeological Society* 66:239-264

Poyo, G.E., and G.M. Hinojosa (editors)

- 1991 *Tejano Origins in Eighteenth-Century San Antonio*. Institute of Texan Cultures, San Antonio.

Prewitt, E.R.

- 1981 Cultural Chronology in Central Texas. *Bulletin of the Texas Archeological Society*, Volume 52, pp. 65-89.
- 1985 From Circleville to Toyah: Comments on Central Texas Chronology. *Bulletin of the Texas Archeological Society*, Volume 54, pp. 201-238.

Ramsdell, C.W.

1959 San Antonio: A Historical and Pictorial Guide. University of Texas Press, Austin.

Ricklis, R.A.

1994 Toyah Components: Evidence for Occupation in the Project Area During the Latter Part of the Late Prehistoric Period. In *Archaic and Late Prehistoric Human Ecology in the Middle Onion Creek Valley, Hays County, Texas*, by R.A. Ricklis and M.B. Collins, pp. 207-316. Studies in Archeology, No. 19. Texas Archeological Research Laboratory, The University of Texas at Austin.

Silva, T. L.

2009 Kalikow Group putting down stakes San Antonio's 'Donut Hole.' *San Antonio Business Journal*. <<http://sanantonio.bizjournals.com/sanantonio/stories/2009/06/01/daily32.html>>. Accessed 8 October 2009.

Texas Historical Commission (THC)

2009 *Texas Archeological Sites Atlas* Restricted Database. Texas Historical Commission. <<http://www.pedernales.thc.state.tx.us/>>. Accessed 8 October 2009.

US Geological Survey (USGS)

1991 7.5-minute Series Macdona, Texas, Topographic Quadrangle Map.

1993 7.5-minute Series Culebra Hill, Texas, Topographic Quadrangle Map.

Wheat, J. B.

1953 *The Addicks Dam Site*. Bulletin 154:143-252. Bureau of American Ethnology, US Government Printing Office, Washington, D.C.



**APPENDIX A**

**SHOVEL TEST DATA**



An Intensive Cultural Resources Survey of the 610.8-acre Luckey Ranch Global Tract, Bexar County, Texas

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                           |           |                              |
|--|---------|----------|--------------|---------------------------|-----------|------------------------------|
| Shovel Test No.  | Easting | Northing | Depth (cmbs) | Soil Description          | Artifacts | Comments                     |
| 1-A  | 525558  | 3248600  | 0-40         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 2-A  | 525565  | 3248705  | 0-20         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 3-A  | 525611  | 3248640  | 0-20         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 1-C  | 525492  | 3248504  | 0-25         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 2-C  | 525495  | 3248407  | 0-25         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 3-C  | 525490  | 3248300  | 0-25         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 4-C  | 525491  | 3248342  | 0-20         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 5-C  | 525539  | 3248267  | 0-20         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 6-C  | 525547  | 3248365  | 0-20         | Very dark brown clay      | None      | Very rocky plowed corn field |
| 7-C  | 525548  | 3248475  | 0-30         | Very dark brown clay      | None      | Very rocky plowed corn field |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed corn field |
| 1-Q  | 526927  | 3247437  | 0-30         | Very dark brown clay      | None      | Very rocky plowed corn field |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed corn field |
| 2-Q  | 526918  | 3247486  | 0-30         | Very dark brown clay      | None      | Very rocky plowed corn field |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed corn field |
| 3-Q  | 526914  | 3247536  | 0-30         | Very dark brown clay      | None      | Very rocky plowed corn field |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed corn field |
| 4-Q  | 526913  | 3247587  | 0-30         | Very dark brown clay      | None      | Very rocky plowed corn field |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed corn field |
| L-1  | 526782  | 3249537  | 0-20         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 20+          | Caliche                   | None      | Very rocky plowed field      |
| L-2  | 526829  | 3249486  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-3  | 526858  | 3249468  | 0-25         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 25-30        | Black clay                | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-4  | 526900  | 3249428  | 0-25         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 25-30        | Black clay                | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-5  | 526946  | 3249388  | 0-25         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 25-30        | Black clay                | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-6  | 526985  | 3249344  | 0-30         | Black clay                | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-7  | 527017  | 3249305  | 0-20         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 20+          | Caliche                   | None      | Very rocky plowed field      |

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                           |           |                              |
|--|---------|----------|--------------|---------------------------|-----------|------------------------------|
| Shovel Test No.  | Easting | Northing | Depth (cmbs) | Soil Description          | Artifacts | Comments                     |
| L-8  | 526977  | 3249321  | 0-20         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 20+          | Caliche                   | None      | Very rocky plowed field      |
| L-9  | 526945  | 3249353  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-10   | 526906  | 3249389  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-11   | 526862  | 3249418  | 0-35         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 35+          | Caliche                   | None      | Very rocky plowed field      |
| L-12   | 526816  | 3249464  | 0-20         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 20+          | Caliche                   | None      | Very rocky plowed field      |
| L-13   | 526742  | 3249479  | 0-20         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 20+          | Caliche                   | None      | Very rocky plowed field      |
| L-14   | 526672  | 3249585  | 0-40         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 40+          | Caliche                   | None      | Very rocky plowed field      |
| L-15   | 526582  | 3249596  | 0-40         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 40+          | Caliche                   | None      | Very rocky plowed field      |
| L-16   | 526615  | 3249376  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| L-17   | 526784  | 3249343  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed field      |
|  |         |          | 30+          | Caliche                   | None      | Very rocky plowed field      |
| K-1  | 526201  | 3249341  | 0-20         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 20+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| K-2  | 526406  | 3249346  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| K-3  | 526454  | 3249600  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| K-4  | 526230  | 3249581  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-1  | 526489  | 3249256  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-2  | 526229  | 3249194  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-3  | 526187  | 3249058  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |

An Intensive Cultural Resources Survey of the 610.8-acre Luckey Ranch Global Tract, Bexar County, Texas

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                           |           |                              |
|--|---------|----------|--------------|---------------------------|-----------|------------------------------|
| Shovel Test No.  | Easting | Northing | Depth (cmts) | Soil Description          | Artifacts | Comments                     |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-4  | 526298  | 3249026  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-5  | 526447  | 3249008  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-6  | 526510  | 3248789  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-7  | 526407  | 3248779  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| M-8  | 526249  | 3248780  | 0-30         | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 30-40        | Very dark brown clay loam | None      | Very rocky plowed corn field |
|  |         |          | 40+          | Very dark brown clay      | None      | Very rocky plowed corn field |
| N-1  | 526118  | 3248247  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-2  | 526119  | 3248301  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-3  | 526119  | 3248348  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-4  | 526120  | 3248397  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-5  | 526120  | 3248446  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-6  | 526121  | 3248497  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-7  | 526122  | 3248546  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-8  | 526123  | 3248599  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-9  | 526191  | 3248576  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-10   | 526197  | 3248525  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-11   | 526197  | 3248475  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-12   | 526197  | 3248427  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-13   | 526196  | 3248376  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-14   | 526195  | 3248327  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-15   | 526194  | 3248278  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-16   | 526194  | 3248234  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-17   | 526263  | 3248243  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-18   | 526263  | 3248293  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-19   | 526264  | 3248343  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-20   | 526265  | 3248396  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |
| N-21   | 526265  | 3248442  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field  |

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                           |           |                             |
|--|---------|----------|--------------|---------------------------|-----------|-----------------------------|
| Shovel Test No.  | Easting | Northing | Depth (cmbs) | Soil Description          | Artifacts | Comments                    |
| N-22   | 526266  | 3248496  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |
| N-23   | 526270  | 3248547  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |
| Q-5  | 526901  | 3247460  | 0-30         | Black clay                | None      | Rocky fallow field          |
| Q-6  | 526805  | 3247468  | 0-20         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-7  | 526702  | 3247475  | 0-20         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-8  | 526601  | 3247487  | 0-15         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-9  | 526501  | 3247514  | 0-15         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-10   | 526486  | 3247609  | 0-20         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-11   | 526514  | 3247638  | 0-20         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-12   | 526612  | 3247638  | 0-25         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-13   | 526707  | 3247637  | 0-20         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-14   | 526814  | 3247638  | 0-20         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-15   | 526808  | 3247739  | 0-15         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-16   | 526697  | 3247743  | 0-25         | Very dark brown clay      | None      | Rocky fallow field          |
| Q-17   | 526629  | 3247757  | 0-20         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 20+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-18   | 526671  | 3247778  | 0-20         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 20+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-19   | 526730  | 3247790  | 0-10         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 10+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-20   | 526792  | 3247806  | 0-25         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 25+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-21   | 526871  | 3247500  | 0-25         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 25+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-22   | 526863  | 3247556  | 0-25         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 25+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-23   | 526858  | 3247612  | 0-25         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 25+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-24   | 526864  | 3247690  | 0-25         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 25+          | Very dark brown clay      | None      | Rocky fallow field          |
| Q-25   | 526871  | 3247754  | 0-25         | Very dark brown clay loam | None      | Rocky fallow field          |
|  |         |          | 25+          | Very dark brown clay      | None      | Rocky fallow field          |
| D-1  | 525696  | 3248242  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |
| D-2  | 525714  | 3248340  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |
| D-3  | 525703  | 3248441  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |
| D-4  | 525718  | 3248534  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |
| D-5  | 525590  | 3248532  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |
| D-6  | 525629  | 3248441  | 0-10         | Very dark brown clay      | None      | Rocky/furrowed cotton field |

An Intensive Cultural Resources Survey of the 610.8-acre Luckey Ranch Global Tract, Bexar County, Texas

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                      |           |                             |
|--|---------|----------|--------------|----------------------|-----------|-----------------------------|
| Shovel Test No.  | Easting | Northing | Depth (cmbs) | Soil Description     | Artifacts | Comments                    |
| D-7  | 525600  | 3248346  | 0-10         | Very dark brown clay | None      | Rocky/furrowed cotton field |
| D-8  | 525632  | 3248273  | 0-10         | Very dark brown clay | None      | Rocky/furrowed cotton field |
| D-9  | 525577  | 3248248  | 0-10         | Very dark brown clay | None      | Rocky/furrowed cotton field |
| F-1  | 525479  | 3248103  | 0-10         | Very dark brown clay | None      | Rocky fallow field          |
| F-2  | 525482  | 3248198  | 0-10         | Very dark brown clay | None      | Rocky fallow field          |
| F-3  | 525403  | 3248189  | 0-10         | Very dark brown clay | None      | Rocky fallow field          |
| F-4  | 525391  | 3248114  | 0-10         | Very dark brown clay | None      | Rocky fallow field          |
| F-5  | 525412  | 3248147  | 0-10         | Very dark brown clay | None      | Rocky fallow field          |
| F-6  | 525594  | 3248203  | 0-10         | Very dark brown clay | None      | Rocky fallow field          |
| F-7  | 525553  | 3248117  | 0-10         | Very dark brown clay | None      | Rocky fallow field          |
| A-1  | 525654  | 3248591  | 0-30         | Dark brown clay loam | None      |                             |
| A-2  | 525673  | 3248685  | 0-30         | Dark brown clay loam | None      |                             |
| A-3  | 525510  | 3248559  | 0-30         | Dark brown clay loam | None      |                             |
| C-9  | 525558  | 3248551  | 0-35         | Black clay loam      | None      |                             |
| C-1  | 525426  | 3248504  | 0-35         | Black clay loam      | None      |                             |
| C-2  | 525411  | 3248419  | 0-20         | Black clay loam      | None      |                             |
| C-3  | 525407  | 3248385  | 0-20         | Black clay loam      | None      |                             |
| C-4  | 525403  | 3248297  | 0-25         | Black clay loam      | None      |                             |
| C-5  | 525449  | 3248300  | 0-20         | Black clay loam      | None      |                             |
| C-6  | 525453  | 3248348  | 0-20         | Black clay loam      | None      |                             |
| C-7  | 525461  | 3248414  | 0-25         | Very dark brown      | None      |                             |
| C-8  | 525467  | 3248497  | 0-15         | Black clay loam      | None      |                             |
| Q-1  | 526854  | 3247790  | 0-30         | Dark brown clay loam | None      |                             |
| Q-2  | 526872  | 3247755  | 0-30         | Dark brown clay loam | None      |                             |
| Q-3  | 526894  | 3247703  | 0-30         | Dark brown clay loam | None      |                             |
| Q-4  | 526908  | 3247649  | 0-35         | Dark brown clay loam | None      |                             |
| L-1  | 526850  | 3247840  | 0-30         | Dark brown clay loam | None      |                             |
| L-2  | 526828  | 3247901  | 0-30         | Dark brown clay loam | None      |                             |
| L-3  | 526810  | 3247982  | 0-30         | Dark brown clay loam | None      |                             |
| L-4  | 526787  | 3249539  | 0-25         | Dark brown clay loam | None      |                             |
| L-5  | 526751  | 3249580  | 0-30         | Dark brown clay loam | None      |                             |
| L-6  | 526727  | 3249637  | 0-25         | Dark brown clay loam | None      |                             |
| L-7  | 526710  | 3249709  | 0-25         | Dark brown clay loam | None      |                             |
| L-8  | 526681  | 3249700  | 0-25         | Dark brown clay loam | None      |                             |
| L-9  | 526711  | 3249633  | 0-25         | Dark brown clay loam | None      |                             |
| L-10   | 526720  | 3249605  | 0-25         | Dark brown clay loam | None      |                             |
| L-11   | 526738  | 3249572  | 0-30         | Dark brown clay loam | None      |                             |
| L-12   | 526771  | 3249514  | 0-30         | Dark brown clay loam | None      |                             |

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                      |              |          |
|--|---------|----------|--------------|----------------------|--------------|----------|
| Shovel Test No.  | Easting | Northing | Depth (cmbs) | Soil Description     | Artifacts    | Comments |
| P-1  | 526930  | 3248723  | 0-30         | Dark brown clay loam | None         |          |
| P-2  | 526863  | 3248637  | 0-30         | Dark brown clay loam | None         |          |
| P-3  | 526839  | 3248584  | 0-25         | Dark brown clay loam | None         |          |
| P-4  | 526824  | 3248500  | 0-30         | Dark brown clay loam | None         |          |
| P-5  | 526816  | 3248437  | 0-30         | Dark brown clay loam | None         |          |
| P-6  | 526805  | 3248332  | 0-30         | Dark brown clay loam | None         |          |
| P-7  | 526787  | 3248400  | 0-30         | Dark brown clay loam | Worked stone |          |
| P-8  | 526795  | 3248481  | 0-40         | Dark brown clay loam | None         |          |
| P-9  | 526812  | 3248564  | 0-50         | Dark brown clay loam | None         |          |
| P-10   | 526827  | 3248620  | 0-60         | Dark brown clay loam | None         |          |
| P-11   | 526855  | 3248712  | 0-45         | Dark brown clay loam | None         |          |
| P-12   | 526710  | 3248731  | 0-35         | Dark brown clay loam | None         |          |
| P-13   | 526704  | 3248631  | 0-30         | Dark brown clay loam | None         |          |
| P-14   | 526708  | 3248499  | 0-30         | Dark brown clay loam | None         |          |
| P-15   | 526709  | 3248405  | 0-25         | Dark brown clay loam | None         |          |
| P-16   | 526710  | 3248337  | 0-30         | Dark brown clay loam | None         |          |
| P-17   | 526747  | 3248330  | 0-30         | Dark brown clay loam | None         |          |
| P-18   | 526758  | 3248400  | 0-30         | Dark brown clay loam | None         |          |
| P-19   | 526765  | 3248496  | 0-30         | Dark brown clay loam | None         |          |
| P-20   | 526779  | 3248605  | 0-25         | Dark brown clay loam | None         |          |
| P-21   | 526798  | 3248719  | 0-25         | Dark brown clay loam | None         |          |
| O-1  | 526597  | 3248721  | 0-25         | Dark brown clay loam | None         |          |
| O-2  | 526536  | 3248719  | 0-30         | Dark brown clay loam | None         |          |
| O-3  | 526444  | 3248713  | 0-30         | Dark brown clay loam | None         |          |
| O-4  | 526390  | 3248721  | 0-25         | Dark brown clay loam | None         |          |
| O-5  | 526336  | 3248628  | 0-25         | Dark brown clay loam | None         |          |
| O-6  | 526331  | 3248540  | 0-30         | Dark brown clay loam | None         |          |
| O-7  | 526336  | 3248449  | 0-25         | Dark brown clay loam | None         |          |
| O-8  | 526348  | 3248314  | 0-25         | Dark brown clay loam | None         |          |
| O-9  | 526405  | 3248239  | 0-20         | Dark brown clay loam | None         |          |
| O-10   | 526415  | 3248350  | 0-25         | Dark brown clay loam | None         |          |
| O-11   | 526404  | 3248488  | 0-25         | Dark brown clay loam | None         |          |
| O-12   | 526400  | 3248620  | 0-25         | Dark brown clay loam | None         |          |
| O-13   | 526402  | 3248720  | 0-20         | Dark brown clay loam | None         |          |
| O-14   | 526499  | 3248724  | 0-30         | Dark brown clay loam | None         |          |
| O-15   | 526502  | 3248620  | 0-30         | Dark brown clay loam | None         |          |
| O-16   | 526507  | 3248515  | 0-30         | Dark brown clay loam | None         |          |

An Intensive Cultural Resources Survey of the 610.8-acre Luckey Ranch Global Tract, Bexar County, Texas

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                      |             |                             |
|--|---------|----------|--------------|----------------------|-------------|-----------------------------|
| Shovel Test No.  | Easting | Northing | Depth (cmbs) | Soil Description     | Artifacts   | Comments                    |
| O-17   | 526508  | 3248351  | 0-25         | Dark brown clay loam | None        |                             |
| O-18   | 526500  | 3248237  | 0-25         | Dark brown clay loam | None        |                             |
| O-19   | 526619  | 3248267  | 0-30         | Dark brown clay loam | None        |                             |
| O-20   | 526652  | 3248371  | 0-30         | Dark brown clay loam | None        |                             |
| O-21   | 526650  | 3248498  | 0-30         | Dark brown clay loam | None        |                             |
| O-22   | 526670  | 3248649  | 0-30         | Dark brown clay loam | None        |                             |
| O-23   | 526661  | 3248741  | 0-30         | Dark brown clay loam | None        |                             |
| Q-5  | 526792  | 3247822  | 0-25         | Dark brown clay loam | None        |                             |
| Q-6  | 526643  | 3247824  | 0-30         | Dark brown clay loam | None        |                             |
| Q-7  | 526485  | 3247824  | 0-30         | Dark brown clay loam | None        |                             |
| Q-8  | 526481  | 3247904  | 0-35         | Dark brown clay loam | None        |                             |
| Q-9  | 526625  | 3247901  | 0-30         | Dark brown clay loam | None        |                             |
| Q-10   | 526803  | 3247902  | 0-25         | Dark brown clay loam | None        |                             |
| Q-11   | 526789  | 3248007  | 0-30         | Dark brown clay loam | None        |                             |
| Q-12   | 526668  | 3248012  | 0-35         | Dark brown clay loam | None        |                             |
| Q-13   | 526474  | 3248013  | 0-35         | Dark brown clay loam | None        |                             |
| Q-14   | 526481  | 3248097  | 0-35         | Dark brown clay loam | None        |                             |
| Q-15   | 526646  | 3248094  | 0-25         | Dark brown clay loam | None        |                             |
| Q-16   | 526772  | 3248094  | 0-30         | Dark brown clay loam | None        |                             |
| Q-17   | 526769  | 3248186  | 0-25         | Dark brown clay loam | None        |                             |
| Q-18   | 526665  | 3248184  | 0-25         | Dark brown clay loam | None        |                             |
| Q-19   | 526497  | 3248183  | 0-30         | Dark brown clay loam | None        |                             |
| H-1  | 525386  | 3247456  | 0-30         | Brown clay loam      | None        |                             |
| H-2  | 525394  | 3247559  | 0-30         | Brown clay loam      | None        |                             |
| H-3  | 525395  | 3247632  | 0-35         | Brown clay loam      | Chert flake |                             |
| H-4  | 525395  | 3247807  | 0-40         | Brown clay loam      | None        |                             |
| H-5  | 525396  | 3247959  | 0-40         | Brown clay loam      | None        |                             |
| H-6  | 525398  | 3248049  | 0-45         | Brown clay loam      | None        |                             |
| H-7  | 525432  | 3248036  | 0-30         | Brown clay loam      | None        |                             |
| H-8  | 525442  | 3247972  | 0-35         | Brown clay loam      | None        |                             |
| H-9  | 525445  | 3247783  | 0-40         | Brown clay loam      | None        |                             |
| H-10   | 525442  | 3247697  | 0-30         | Brown clay loam      | None        |                             |
| H-11   | 525452  | 3247576  | 0-35         | Brown clay loam      | None        |                             |
| H-12   | 525458  | 3247462  | 0-35         | Brown clay loam      | None        |                             |
| B-1  | 525908  | 3248651  | 0-10         | Very dark brown clay | None        | Rocky/furrowed cotton field |
| E-1  | 525908  | 3248394  | 0-10         | Very dark brown clay | None        | Rocky/furrowed cotton field |
| G-1  | 525969  | 3248126  | 0-10         | Very dark brown clay | None        | Rocky/furrowed cotton field |
| G-2  | 525755  | 3247946  | 0-10         | Very dark brown clay | None        | Rocky/furrowed cotton field |

| 610-acre Luckey Ranch Global Tract (HJN 090119 AR) (NAD 83, Zone 14) |         |          |              |                      |           |                             |
|--|---------|----------|--------------|----------------------|-----------|-----------------------------|
| Shovel Test No.  | Easting | Northing | Depth (cmbs) | Soil Description     | Artifacts | Comments                    |
| I-1  | 525629  | 3247743  | 0-10         | Very dark brown clay | None      | Rocky/furrowed cotton field |
| J-1  | 525897  | 3247751  | 0-10         | Very dark brown clay | None      | Rocky/furrowed cotton field |
| I-2  | 525636  | 3247533  | 0-10         | Very dark brown clay | None      | Rocky/furrowed cotton field |
| J-2  | 525950  | 3247540  | 0-10         | Very dark brown clay | None      | Rocky/furrowed cotton field |