



INDEX OF TEXAS ARCHAEOLOGY

Open Access Gray Literature from the Lone Star State

Volume 2019

Article 87


2019

Intensive Archaeological Survey of Calaveras Power Station, Bexar County, Texas

Nesta Anderson

Sheldon Smith

Follow this and additional works at: <https://scholarworks.sfasu.edu/ita>

 Part of the [American Material Culture Commons](#), [Archaeological Anthropology Commons](#), [Environmental Studies Commons](#), [Other American Studies Commons](#), [Other Arts and Humanities Commons](#), [Other History of Art, Architecture, and Archaeology Commons](#), and the [United States History Commons](#)

[Tell us how this article helped you.](#)

Cite this Record

Anderson, Nesta and Smith, Sheldon (2019) "Intensive Archaeological Survey of Calaveras Power Station, Bexar County, Texas," *Index of Texas Archaeology: Open Access Gray Literature from the Lone Star State*: Vol. 2019, Article 87. ISSN: 2475-9333

Available at: <https://scholarworks.sfasu.edu/ita/vol2019/iss1/87>

This Article is brought to you for free and open access by the Center for Regional Heritage Research at SFA ScholarWorks. It has been accepted for inclusion in Index of Texas Archaeology: Open Access Gray Literature from the Lone Star State by an authorized editor of SFA ScholarWorks. For more information, please contact cdsscholarworks@sfasu.edu.

Intensive Archaeological Survey of Calaveras Power Station, Bexar County, Texas

Creative Commons License



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

Intensive Archaeological Survey of Calaveras Power Station, Bexar County, Texas

Texas Antiquities Permit #8846

Principal Investigator: Nesta Anderson, PhD

**Prepared for:
CPS Energy
145 Navarro Street
San Antonio, TX 78205**

Report Authors: Nesta Anderson, Ph.D., Sheldon Smith, B.A

**Pape-Dawson
10801 N MoPac Expy
Bldg. 3, Suite 200
Austin, TX 78759**

November 2019

Abstract

On behalf of CPS Energy, Pape-Dawson Engineers (Pape-Dawson) conducted an intensive archaeological survey of the Calaveras Power Station proposed improvement areas in east San Antonio, Bexar County, Texas. The property improvements will consist of a series of evaporation ponds, the location of which has not yet been determined. Vertical depths of impacts are anticipated to extend up to 20 feet (ft) (6 meters [m]) below the ground surface. The current project area comprises two tracts of land totaling approximately 228 acres (92 hectares [ha]).

As CPS Energy is a political subdivision of the state of Texas, compliance with the Antiquities Code of Texas (ACT) will be necessary. No federal funding or permitting is anticipated, so compliance with Section 106 of the National Historic Preservation Act (NHPA) will not be required.

Pape-Dawson archaeologists conducted field investigations within the project area intermittently from April 1 through August 15, 2019. A total of 164 shovel tests was excavated, 28 of which were positive for cultural resources. One isolated find was recorded, and nine sites were revisited (Sites 41BX722, 41BX723, 41BX725, 41BX728, 41BX739, 41BX740, 41BX741, 41BX742, and 41BX745). No new archaeological sites were recorded. The isolated find consisted of a single secondary flake. All revisited sites were prehistoric with an undetermined temporal affiliation, although site 41BX722 also has an unknown historic component.

Sites 41BX722, 41BX723, and 41BX741 consist of primarily surficial lithic scatters of indeterminate temporal affiliation. Site 41BX722 also contains historic rock alignments on either side of a road, and site recorders observed a flake and three pieces of fire cracked rock (FCR) from 0-10 centimeters below ground surface (cmbs). No artifacts or features were observed at any of these sites during the current revisit.

Site 41BX725 is a prehistoric lithic scatter of undetermined temporal affiliation. Current investigations documented lithic shatter, a few flakes, and FCR from 0-60 cmbs. Cultural materials extended deeper than 20 cmbs in only two shovel tests. Nearly half of the artifacts recovered from shovel tests were from the upper 10 cm of soil. No diagnostic artifacts or features were observed at this site.

Site 41BX728 is a lithic scatter and possible lithic procurement site of undetermined temporal affiliation. During the current investigations, a single chert scraper was found at approximately 50 cmbs. No

diagnostic artifacts or features were observed at this site. Only a small section of this previously recorded site extends into the current project area.

Originally recorded as a lithic scatter from an unknown time period, site 41BX739 was combined with site 41BX740 (also a lithic scatter) during the current revisit due to the presence of artifacts between the two site boundaries. Surface artifacts included two bifaces, two tested cobbles, 4 primary flakes, twelve secondary flakes, three tertiary flakes, 3 cores, two core fragments, and a piece of chert shatter. Subsurface artifacts were found between 0-50 cmbs, but these deeper deposits were observed in areas of colluvial deposition.

Site 41BX742 is a campsite of indeterminate temporal affiliation. The current survey found subsurface deposits that included two primary flakes, charcoal, shatter, and FCR from 0-40 cmbs. An informal end scraper and three pieces of FCR were also observed on surface.

Site 41BX745 is a lithic scatter and campsite that is a State Antiquities Landmark (SAL) and potentially eligible for listing in the National Register of Historic Places (NRHP). The original work revealed cultural deposits were present deeper than 90 cmbs, and noted lithic debitage and FCR at the site. As only a sliver of the site extended into the current project area, a single shovel test was excavated and found to be negative for cultural materials. No artifacts were observed on surface.

Due to the lack of artifacts and features at 41BX722, 41BX723, and 41BX741, the portions of these sites that are within the current project area are recommended ineligible for SAL designation. In addition, for the portion of 41BX728 within the project area and for site 41BX742, the paucity of artifacts and lack of features suggest they are not eligible for SAL designation. Although slightly more deeply buried deposits exist at sites 41BX725 and 41BX740, the deeper deposits were in colluvial settings, and the lack of diagnostic artifacts and features suggest neither site is eligible for listing as a SAL. Site 41BX745 is listed as a SAL. Archaeologists recommend the portion of 41BX745 within the project area to be eligible as a SAL and recommend avoidance for the part of this site that extends into the current project area.

Although the sites (or portions of sites) within the current project area do not appear to meet the criteria to be listed as SALs (with the exception of site 41BX745), several of these sites extend outside the current

project area. As a result, while Pape-Dawson archaeologists recommend no further work for these sites within the project area, they also recommend that if impacts will occur outside current project area boundaries, these sites be revisited. Site 41BX745 should be avoided by construction due to its SAL status. Within the current project area, if evidence of cultural material is encountered during construction, it is recommended that all work in the vicinity should cease and the CPS archaeologist be contacted.

No artifacts were collected , but records and photographs will be curated at the Center for Archaeological Research (CAR) in San Antonio, Texas.

Table of Contents

Abstract.....	ii
Table of Contents.....	v
List of Figures.....	vi
List of Tables.....	viii
Management Summary.....	9
Introduction.....	10
Project Setting.....	13
Cultural Chronology.....	16
Paleoindian (11,500 b.p. – 8,800 b.p.).....	16
Archaic (8,800 b.p. – 1,200 b.p.).....	17
Late Prehistoric (1,200 b.p. – 250 b.p.).....	17
Historic (1600s – 1950).....	18
Methods.....	20
Records Review.....	20
Fieldwork.....	20
Results.....	21
Records Review.....	21
Fieldwork.....	25
Summary and Conclusions.....	60
References Cited.....	63
Appendix A.....	67
Shovel Test Results Maps.....	67
Appendix B.....	72
Shovel Test Logs.....	72

List of Figures

Figure 1: Project Location Map	11
Figure 2: Project Area Map	12
Figure 3: Soils Mapped within the Project Area	15
Figure 4 Previously Recorded Archaeological Sites within 1 km of the Project Area	24
Figure 5 Results Map.....	26
Figure 6 Project Area overview, camera facing north	27
Figure 7 Ground surface visibility within Project Area, camera facing east	28
Figure 8 Artificial Disturbances Map.....	29
Figure 9 Push pile within the project area, camera facing southwest.....	30
Figure 10 transmission line corridor within the project area, camera facing south.....	30
Figure 11 Non-historic age bottle within the project area	31
Figure 12 Indeterminate age ironstone within project area	31
Figure 13 Soils within SS 52, camera facing south	32
Figure 14 Disturbed soils in JS 07, camera facing west.....	32
Figure 15 Overview of Site 41BX722, camera facing east-southeast	34
Figure 16 Site map 41BX722	35
Figure 17 Overview of Site 41BX723, camera facing south	36
Figure 18 Site Map 41BX723	38
Figure 19 Site overview of 41BX725	39
Figure 20 Site Map 41BX725	40
Figure 21 FCR and flakes from ST02.....	42
Figure 22 Chert scraper from ST 01, Level 5, Site 41BX728.....	44
Figure 23 Site map 41BX728	45
Figure 24 Soils within ST 02, site 41BX728, camera facing north	46
Figure 25 Overview of Site 41BX740, camera facing south	47
Figure 26 Site Map 41BX740.....	49
Figure 27 Artifacts from ST 03, Level 2, Site 41BX740	50
Figure 28 Biface from surface, site 41BX740	50
Figure 29 Overview of site 41BX741, camera facing south	52
Figure 30 Site map 41BX741	53

Figure 31 Overview of site 41BX742, camera facing west 54
Figure 32 Site map 41BX742 56
Figure 33 FCR recovered from ST 10, site 41BX742..... 57
Figure 34 Overview of site 41BX475, camera facing west 58
Figure 35 Site map 41BX745 59

List of Tables

Table 1 Soil Series Within the Project Area	14
Table 2 Previously Recorded Archaeological Sites within 1 km of the Project Area	21
Table 3 Subsurface Artifacts at 41BX725	41
Table 4 Subsurface artifacts recovered from site 41BX740.....	48
Table 5 Subsurface Artifacts at 41BX742	55

Management Summary

Pape-Dawson Engineers (Pape-Dawson) conducted an intensive archaeological survey of CPS Energy's Calaveras Power Station proposed improvement areas in east San Antonio, Bexar County, Texas. The project entails construction of proposed evaporation ponds within the existing power station property. As the pond location has not yet been determined, the current fieldwork sought to provide additional information about cultural resources located within the project area. Vertical depths of impacts are anticipated to extend up to 20 feet (ft) (6 meters [m]) below the ground surface. The current project area comprises two tracts of land totaling approximately 228 acres (92 hectares [ha]).

As CPS Energy is a political subdivision of the state of Texas and the project is situated on property entirely owned by the City of San Antonio compliance with the Antiquities Code of Texas (ACT) will be necessary. No federal funding or permitting is anticipated, so compliance with Section 106 of the National Historic Preservation Act (NHPA) will not be required.

Pape-Dawson archaeologists conducted a pedestrian survey of the 228-acre project area supplemented with judgmental shovel testing from April 1-2, April 10, April 16-18, April 22-23, April 30, May 2, May 29, June 13, June 21, July 1, and August 15, 2019. All work was performed under Texas Antiquities Permit #8846. Nesta Anderson served as the principal investigator, and Sheldon Smith, Lily Camara, Jake Sullivan, Heath Bentley assisted in the field. As a result of the field effort, one isolated find was recorded and nine sites were revisited (41BX722, 41BX723, 41BX725, 41BX728, 41BX739, 41BX740, 41BX741, 41BX742, and 41BX745). The isolated find consisted of a single flake, and the sites were lithic scatters and campsites with the exception of 41BX722, which contained a historic-age rock alignment in addition to the prehistoric component. All prehistoric sites have an unknown temporal affiliation.

Based on the lack of artifacts and features, sites 41BX722, 41BX723, and 41BX741 are recommended not eligible as SALs. In addition, the paucity of artifacts and lack of features suggest sites 41BX728 and 41BX742 are not eligible for SAL status. Sites 41BX725 and 41BX740 (which now includes 41BX739) lack diagnostic artifacts and features and not recommended to become SALs. Site 41BX745 is currently a SAL that extends slightly into the project area. The portion of the site within the project area is recommended eligible for SAL status. Avoidance is recommended for the portion of this site located within the project area. Within the entire project area, if evidence of cultural material is encountered during construction, it is recommended that all work in the vicinity should cease and the CPS archaeologist be contacted.

Introduction

On behalf of CPS Energy, Pape-Dawson Engineers (Pape-Dawson) conducted an intensive archaeological survey of the Calaveras Power Station proposed improvement areas in east San Antonio, Bexar County, Texas. The property improvements will consist of a series of evaporation ponds, the location of which have not yet been determined. Vertical depths of impacts are anticipated to extend up to 20 feet (ft) (6 meters [m]) below the ground surface. The current project area comprises two tracts of land totaling approximately 228 acres (92 hectares [ha]) (Figures 1 and 2).

As CPS Energy is a political subdivision of the state of Texas, compliance with the Antiquities Code of Texas (ACT) will be necessary. No federal funding or permitting is anticipated, so compliance with Section 106 of the National Historic Preservation Act (NHPA) will not be required.

Pape-Dawson's investigations included intensive pedestrian survey and shovel testing of the 228-acre project area. Principal Investigator Nesta Anderson and archaeologists Sheldon Smith, Lily Camara, and Jake Sullivan conducted this work from April 1-2, April 10, April 16-18, April 22-23, April 30, May 2, May 29, June 13, June 21, July 1, and August 15, 2019. CPS archaeologist Heath Bentley also participated in fieldwork on August 15, 2019. The goals of the investigation were to: (1) locate all prehistoric and historic cultural resources, if present, within the development area; (2) establish vertical and horizontal site boundaries, as appropriate with respect to the project area; (3) evaluate the significance of recorded cultural resources with regard to National Register of Historic Places (NRHP) and State Antiquities Landmark (SAL) eligibility, in compliance with the UDC.

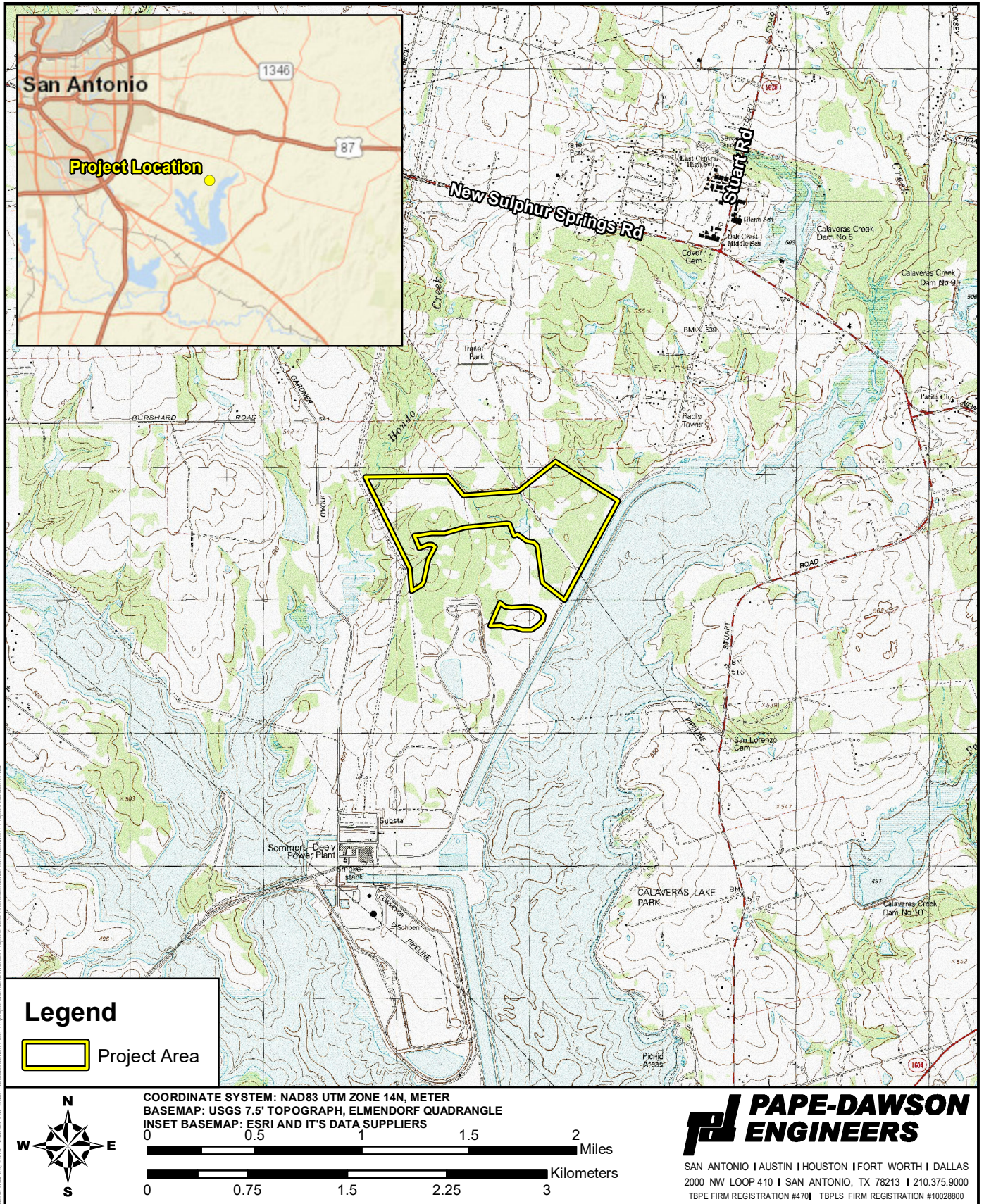


Figure 1. Project Location Map

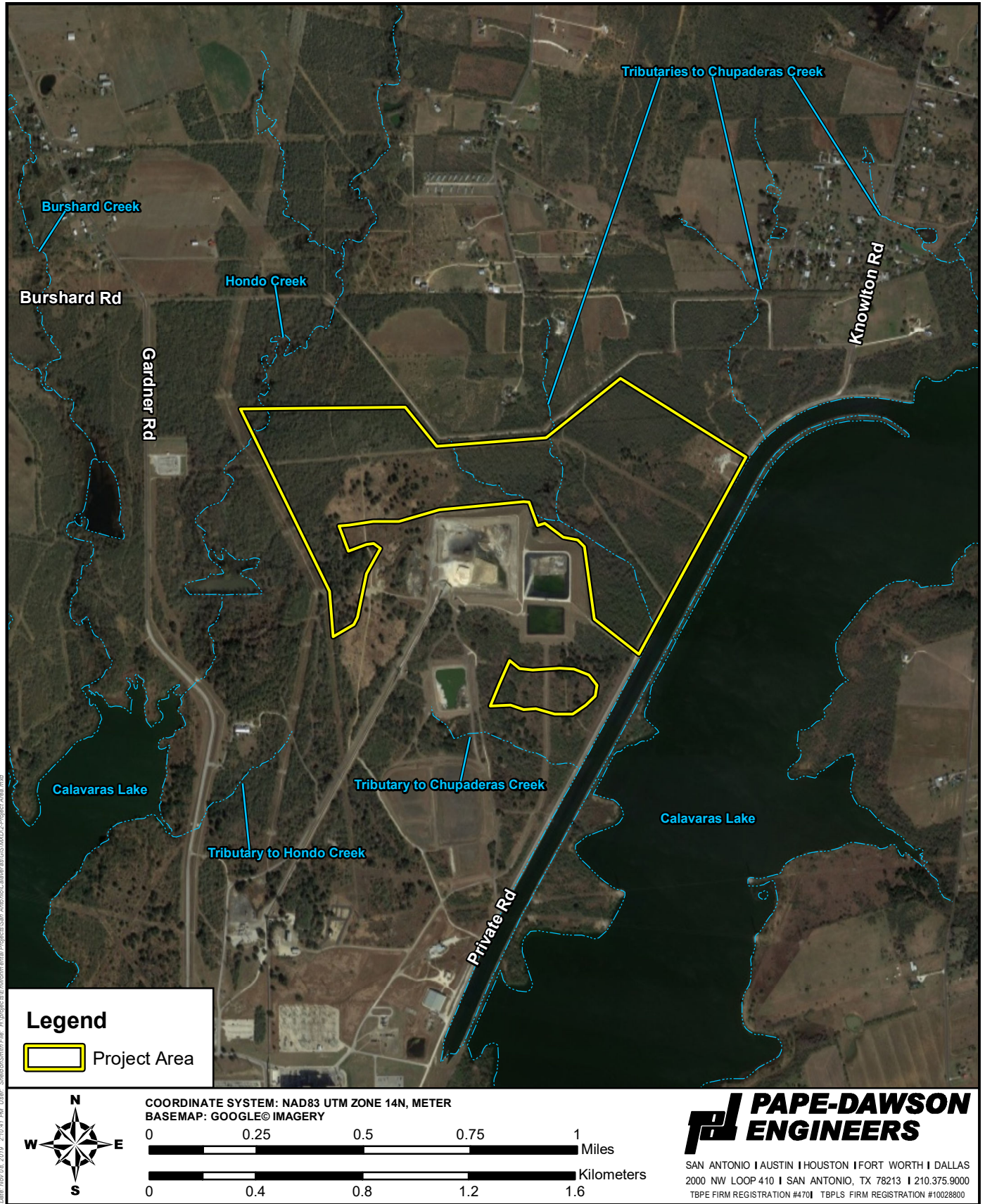


Figure 2. Project Area Map

Project Setting

The 228-acre project area is located approximately 0.33 miles southeast of the intersection of Burshard Road and Gardner Road in east San Antonio. The project area consists of two tracts of land situated on a peninsula that extends into Calaveras Lake. Scattered residential development surrounds the lake, but the project area itself is comprised of open rangeland surrounding the existing CPS Calaveras facility that is just south of the project area. A tributary to Chupaderas Creek traverses the larger tract of land from the middle of the project area to the southeast corner, and Hondo Creek crosses the northwestern corner of the larger tract.

Located on the margins of the Blackland Prairies and the Interior Coastal Plains regions of central Texas (Wermund 1996), the project landscape is characterized by gently sloping uplands and stream valleys. The underlying geology of the project area is mapped as Eocene-age Wilcox Formation (Bureau of Economic Geology [BEG] 1983). Seven soil series (eleven soil units) are mapped within the project area, (Table 1, Figure 3) including Aluf sand, Floresville fine sandy loam, Gowen clay loam, San Antonio clay loam, Tinn and Frio soils, and Wilco loamy fine sand (Natural Resources Conservation Service, United States Department of Agriculture [NRCS-USDA] 2019).

Table 1 Soil Series Within the Project Area

Soil Series	Characteristics	Parent Material	Landform	Thickness of A-horizon
Aluf (EuC)	Very deep, somewhat excessively drained, rapidly permeable, sandy	Sandy sediments of the Tertiary-age Carizzo Sand Formation.	Nearly level to gently undulating uplands.	38 centimeters (cm)
Floresville (WbB, WeC2)	Very deep, well drained, slowly permeable	Loamy alluvium and/or residuum of derived from sandstone of Tertiary age.	Broad interfluves or ridges.	25 cm
Frio (Tf) (mapped with Tinn soils)	Very deep, well drained, moderately slowly permeable.	Calcareous loamy and clayey alluvium.	Floodplains	102 cm
Gowen (Go)	Very deep, well drained, moderately permeable.	Loamy Holocene alluvium.	Nearly level floodplains.	76 cm
San Antonio (SaB, SaC, SaC2)	Deep, well drained, slowly permeable.	Ancient alluvium	Nearly level to gently sloping uplands and stream terraces.	20 cm
Tinn (Tf) (mapped with Frio soils)	Very deep, moderately well drained, very slowly permeable.	Calcareous clayey alluvium	Floodplains on dissected plains that drain the Blackland Prairies.	46 cm
Wilco (HkB, HkC, HkC2)	Very deep, well drained, slowly permeable.	Sandy alluvium and eolian deposits over clayey residuum weathered from sandstone and shale.	Nearly level to sloping paleoterraces.	41cm

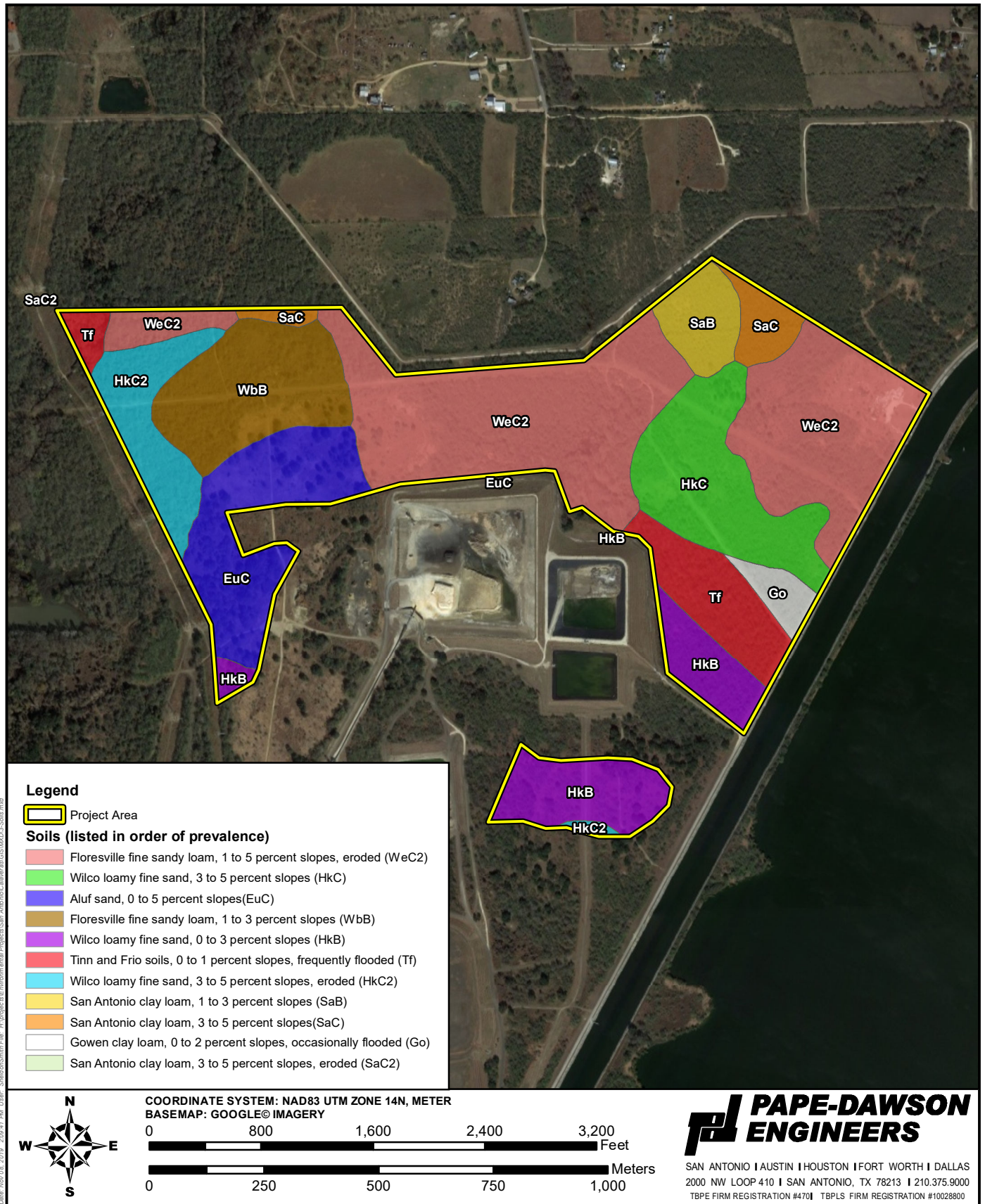


Figure 3. Soils Map

Cultural Chronology

Bexar County falls within the Central Texas archaeological region of the Central and Southern Planning Region as delineated by the Texas Historical Commission (THC) (Mercado-Allinger et al. 1996). Cultural developments in this region are typically classified by archaeologists according to four primary chronological time periods: Paleoindian, Archaic, Late Prehistoric, and Historic. These classifications have been defined primarily by changes in material culture and subsistence strategies over time as evidenced through information and artifacts recovered from archaeological sites. This cultural chronology provides a brief summary of each major prehistoric cultural period with reference to significant archaeological work that has occurred within the region.

PALEOINDIAN (11,500 B.P. – 8,800 B.P.)

Although there is some debate about whether pre-Clovis Paleoindian peoples lived in Texas, there is evidence of Paleoindian occupation within Texas by 11,500 B.P. Collins (1995:376, 381) has proposed dividing this period into early and late phases, with Dalton, San Patrice, and Plainview possibly providing the transition between them. Research has shown Paleoindians were gathering wild plants and hunting large mammals (mammoth, bison, etc.) as well as smaller terrestrial and aquatic animals (Collins 1995:381; Bousman et al. 2004:75). Projectile points characteristic of the Paleoindian period in Central Texas are lanceolate-shaped and include Clovis, Plainview, and Folsom (Turner and Hester 1999). In Texas, most Paleoindian sites are classified as procurement or consumption sites (Bousman et al. 2004:76-78), but a few, such as the Wilson-Leonard site in Williamson County (Collins 1995) and the Pavo Real site in Bexar County (Henderson 1980; Collins et al. 2003; Figueroa and Frederick 2008), have produced burials in context (Collins 1995:383). Other Paleoindian sites discovered within Bexar County include site 41BX47 on Leon Creek (Tennis 1996), the Richard Beene site (41BX831) (Thoms et al. 2005; Thoms and Mandel 2007), and the St. Mary's Hall site (41BX229), which has provided insight into a more diverse diet for Paleoindian groups (Hester 1978).

As the climate warmed, the Paleoindian people began to shift away from hunting large animals. The changing environment, which led to extinction of the megafauna, likely influenced their decision to focus more on hunting small game animals, including deer and rabbit, as well as gathering edible roots, nuts, and fruits (Black 1989). This change in food supply, as well as a different set of stone tools, marks the transition into the Archaic Period.

ARCHAIC (8,800 B.P. – 1,200 B.P.)

Usually divided into early, middle, late, and sometimes transitional sub-periods, the Archaic marks a gradual shift from hunting Megafauna and some smaller animals supplemented with wild plants to a focus on hunting and gathering medium and small animals and wild plants, and an eventual transition to agriculture. Beginning with Clear Fork gouges and Guadalupe bifaces in the Early Archaic (8500 B.P. – 6000 B.P.) (Turner and Hester 1999; Collins 1995), Early Archaic people produced a variety of point types. The variety of points and their scattered distribution over a large area in the Early Archaic may indicate smaller groups of people moving over larger territories (Prewitt 1981). Point types transition to Bell-Andice-Calf Creek, Taylor, and Nolan-Travis points in the Middle Archaic (6000 B.P. – 4000 B.P.) (Turner and Hester 1999; Collins 1995), and burned rock middens become an important characteristic. The Middle Archaic focus on constructing burned rock ovens to cook a diverse array of plant food (Black 1989) suggests a slightly more sedentary focus. The Bulverde, Pedernales, Ensor, Frio, and Marcos points in the Late Archaic (4000 B.P. – 1300 B.P.) (Turner and Hester 1999; Collins 1995) mirror the diversity of point types found in the Early Archaic. During the Late Archaic, cemeteries, especially associated with rock shelters, become common in central Texas (Dockall et al. 2006). In Bexar County, sites with Early Archaic components include the Housman Road site (41BX47), the Richard Beene site (41BX831) (Thoms et al. 2005; Thoms and Mandel 2007), the Higgins site (41BX184) (Black et al. 1998), and the Panther Springs site (41BX228) (Black and McGraw 1985). While the Elm Waterhole site (41BX300) is representative of a Middle Archaic site within Bexar County (McNatt et al. 2000), the Granberg site (41BX17\41BX271) in San Antonio is a multi-component site with occupations from both the Middle and Late Archaic sub-periods.

LATE PREHISTORIC (1,200 B.P. – 250 B.P.)

As the Archaic transitioned into the Late Prehistoric period, several technological changes become apparent. The most notable change is the use of the bow and arrow rather than the spear and atlatl, evidenced by smaller dart points. Another significant innovation is the creation and use of ceramic vessels. Some groups began to practice consistent agriculture during this time as well; there is some evidence that peoples in Central Texas may have incorporated agriculture into their lives, but primarily remained hunter gatherers (Collins 1995). Also during this period, there are possible indications of major population movements, changes in settlement patterns and perhaps lower population densities (Black 1989). Archaeologists divide the Late Prehistoric into two phases: the Austin phase, followed by the Toyah phase.

HISTORIC (1600s – 1950)

While there is an overlap between the prehistoric and historic periods (sometimes called the protohistoric), Europeans did not begin exploration in the area until the seventeenth century. Alonso de Leon's 1689 and 1690 expeditions and de los Rios' 1691 expedition were likely the some of the first interactions between Europeans and Native groups (de la Teja 1995: 6). According to historical accounts of the expeditions, these early Spanish explorers encountered numerous indigenous groups residing in and near Central Texas (Mercado-Allinger et al, 1996). These indigenous groups likely included the Payaya and the Pamaya who resided in the southern plains of Texas as well as the Tonkawa, Karankawa, Lipan Apache, and Comanche, who entered the area from the northern plains in pursuit of food and stopped at the area's springs (Long 2017). In 1691, Spanish explorers traveling through Bexar County began creating what would become the El Camino Real de los Tejas (The King's Highway, also known as the Old San Antonio Road in portions) (United States Department of the Interior (DOI), 2011). This network of roadways at least in part likely followed existing trails already well established by the numerous highly mobile indigenous groups within the area.

These explorations helped the Spanish choose locations to establish five missions in and around what would later become San Antonio. Don Martín de Alarcón established the first mission, San Antonio de Valero, in 1718, on the west bank of the San Pedro Creek, followed by the Presidio San Antonio de Béxar and the Villa Béxar (de la Teja 1995). However, by 1722 the Marqués de San Miguel de Aguayo had moved the presidio and villa to the west side of the San Antonio River (Clark et al. 1975). Other missions, including Mission San José y San Miguel de Aguayo, Nuestra Señora de la Purísima Concepción, San Juan Capistrano, and San Francisco de la Espada were established in the area from 1718 to 1731 (Wright 2016). Most of the Native American groups recruited to live at these missions comprised many different groups (Campbell 1977), but it is difficult to know all the groups that were present due to the variations in spelling and phonetic complexity. The missions used this Native labor force to construct acequias, or irrigation ditches, which helped them to develop self-sustaining communities bordered by farmland (Long 2017).

In 1731, Spain sent 16 families from the Canary Islands to the villa de Bexar to establish the secular village. With the arrival of these families, surveyors set out the city's main plaza, or Plaza de las Islas, next to the church, designated a spot for the Casas Reales, and began to establish residential lots (Spell 1962). This began San Antonio's gradual secularization. In 1773, San Antonio de Bexar Presidio was named the capital of Spanish Texas, and the settlement including mission Indians had a population of about 2,000 by 1778 (Fehrenbach 2017).

During the 1820s and early 1830s, American settlers began moving to San Antonio in increasing numbers, though the population remained predominately Mexican. In 1824, Texas and Coahuila were united into a single state with the capital at Saltillo. San Antonio fought for Mexican Independence in 1813, then for its own sovereignty during the Texas Revolution. The Siege of Bexar and the Battle of the Alamo, in 1835 and 1836, were both located within San Antonio, showing its importance in the region. After Texas gained its independence from Mexico in 1836, Bexar County was created, and San Antonio was chartered as its seat (Long 2017). However, this was not the end of conflict in the city; a dispute with Comanche Indians resulted in the Council House Fight in 1840, and Woll's invasion in 1842 precipitated Texas' entrance into the United States as the 28th state. By 1846, San Antonio's population had decreased to approximately 800 people (Fehrenbach 2017).

After the Civil War, Bexar County continued to grow larger, spurred on by the arrival of the railroad in 1877 (Fehrenbach 2017). Industries such as cattle, distribution, ranching, mercantile, gas, oil, and military centers in San Antonio prospered. The city served as the distribution point for the Mexico-United States border as well as the rest of the southwest. At the turn of the twentieth century, San Antonio was the largest city in Texas with a population of more than 53,000. Much of the city's growth after the Civil War was a result of an influx of southerners fleeing the decimated, reconstruction-era south. An additional population increase came after 1910, when large numbers of Mexicans began moving into Texas to escape the Mexican Revolution (Fehrenbach 2017).

Modernization in San Antonio increased dramatically between the 1880s and the 1890s, compared to the rest of the United States. Civic government, utilities, electric lights and street railways, street paving and maintenance, water supply, telephones, hospitals, and a city power plant were all built or planned around this time (Fehrenbach 2017). The First United States Volunteer Cavalry was organized in San Antonio during the Spanish-American War, and San Antonio was an important military center for the army and air forces during both world wars. Its five military bases provided an important economic base and contributed to the evolution of the city's medical research industry.

Methods

RECORDS REVIEW

Pape-Dawson archaeologists conducted a background literature review and records search of the proposed project area in order to identify previously recorded cultural resources that exist within a 1-kilometer (km) radius of the project area. This research included searching the Texas Historical Commission's online Archeological Sites Atlas (Atlas) for National Register of Historic Places (NRHP)-listed properties and districts, State Antiquities Landmarks (SAL), Official Texas Historical Markers (OTHM), Recorded Texas Historic Landmarks (RTHL), cemeteries, previously recorded archaeological surveys and historic or prehistoric archaeological sites. In addition, archaeologists consulted the City of San Antonio's geodatabase for City of San Antonio (COSA) Historic Landmarks and COSA Historic Districts within this area.

FIELDWORK

Prior to fieldwork, Pape-Dawson archaeologists coordinated with the CPS Archaeologist to determine the appropriate level of effort for the project area. Following the receipt of Texas Antiquities Permit #8846, Pape-Dawson personnel conducted an intensive archaeological survey of the proposed project area. Archaeologists performed a 100% pedestrian survey supplemented by judgmental shovel testing in areas where intact soils appeared to be present within the project area. Survey methods followed the Council of Texas Archeologists' Archeological Survey Standards for Texas. Archaeologists examined the entire ground surface along transects spaced 30 m apart and any erosional exposures for cultural resources. A total of 164 shovel tests were excavated to investigate the 228-acre project area. Of these, 28 shovel tests were positive for cultural material.

Shovel tests were approximately 30 cm in diameter and were excavated to sterile substrate, bedrock, or to a maximum of 80 cm below the ground surface when intact soils were encountered. Soils were screened through ¼-inch hardware mesh unless they were dominated by clay. Clay soils were finely divided and hand sorted. Shovel tests were visually described, mapped using a handheld Trimble GPS unit, and backfilled upon completion.

Archaeological site boundaries located on the property were defined within the project area. Sites were then recorded on TexSite forms in the field, and revisit forms were submitted to the Texas Archeological Research Laboratory (TARL) in order to update site records. No artifacts were collected as part of this

survey. A representative sample of non-diagnostic artifacts observed during the survey was photographed and documented in the field, but not collected.

Results

RECORDS REVIEW

The background review revealed that no NRHP-listed properties or districts, OTHMs, RTHLs, cemeteries, COSA Historic Districts, or COSA Historic Landmarks were identified within the 1-km buffer. However, the project area was previously surveyed for archaeological resources, resulting in the recording of seven archaeological sites (Table 2, Figure 4). In addition, another 21 archaeological sites have been recorded within 1 km of the project area; four of these are SALs (Atlas 2019).

Table 2 Previously Recorded Archaeological Sites within 1 km of the Project Area

Archaeological Site	Site Name/Type	Landform	Depth of Deposits	Distance from Project Area	NRHP/SAL Designation
41BX715	Multicomponent (Historic wall/lithic scatter)	Upland	20 cm minimum	0.77 km northeast	Unknown
41BX716	Unknown prehistoric occupation	On slope above tributary to Chupaderas Creek.	10 cm	0.81 km northeast	Unknown
41BX717	Prehistoric lithic scatter and recent component	Lower edge of an upland hill	Surface	0.53 km northeast	Unknown
41BX718	Historic house site	Below the edge of a broad flat on a gently sloping ridge.	20 cm	0.43 km northeast	Unknown
41BX719	Prehistoric lithic scatter	Basal slope of a large hill.	30 cm	0.21 km northeast	Unknown
41BX720	Prehistoric campsite and lithic reduction area	Hilltop near stream confluence.	30 cm	0.21 km northeast	NRHP Eligible/SAL
41BX721	Prehistoric lithic scatter	Terraces above an intermittent drainage.	30 cm	0.39 km northeast	Unknown
41BX722	Prehistoric lithic scatter and	Broad, flat upland	10 cm	Within project area	Unknown

Archaeological Site	Site Name/Type	Landform	Depth of Deposits	Distance from Project Area	NRHP/SAL Designation
	historic rock alignments				
41BX723	Prehistoric lithic scatter	Rise above drainage (plowed field)	Surface	Within project area	Unknown
41BX724	Prehistoric lithic scatter	East side of a small drainage.	20 cm	0.13 km northeast	Unknown
41BX725	Prehistoric lithic scatter	Upland	30 cm	Within project area	Unknown
41BX727	Prehistoric open and lithic scatter	Terrace above stream confluence	50 cm	0.24 km north	NRHP eligible/SAL
41BX728	Prehistoric lithic scatter and possible procurement site	Stream terrace, side slope, and upland	40 cm	Adjacent to project area	Unknown
41BX729	Prehistoric lithic scatter	Toe ridge	30 cm	0.28 km west	Unknown
41BX730	Prehistoric lithic scatter with FCR	Gentle slope near low ridge by creek	80 cm	0.40 west	Unknown
41BX731	Prehistoric lithic scatter and possible open campsite	Upland	Surface	0.98 km southwest	Unknown
41BX732/Horse Ranch Site	Historic Ranch	Upland	Unknown	0.70 km south	NRHP Eligible/SAL
41BX733	Prehistoric lithic scatter	Side of hill/edge of cutbank	Surface	0.62 km southwest	Unknown
41BX734	Prehistoric lithic scatter and possible campsite/historic unknown	Crest of ridge overlooking Hondo Creek	10 cm	0.30 km southwest	Unknown
41BX735	Prehistoric lithic scatter/historic unknown	Edge of hill overlooking Hondo Creek	80 cm	Adjacent to project area	Unknown
41BX738	Prehistoric lithic scatter and possible campsite	Ridge on floodplain of intermittent creek	40 cm	0.23 km south	Unknown

Archaeological Site	Site Name/Type	Landform	Depth of Deposits	Distance from Project Area	NRHP/SAL Designation
41BX739	Prehistoric lithic scatter and open campsite	Hillside between drainages of Hondo Creek	70 cm	Within project area	Unknown
41BX740	Prehistoric lithic scatter and possible open campsite	Hillslopes and uplands	60 cm	Within project area	Unknown
41BX741	Prehistoric lithic scatter	Edge of hill overlooking intermittent drainage	Surface	Within project area	Unknown
41BX742	Prehistoric open campsite	Terrace above confluence of two small drainages.	20-30 cm	Within project area	Unknown
41BX743	Prehistoric lithic scatter and open campsite	Ridge overlooking Chupaderas Creek	30 cm	0.38 km south	Unknown
41BX745	Prehistoric lithic scatter and possible campsite	Terrace and floodplain of Hondo Creek	Deeper than 90 cm	Adjacent to project area	NRHP Eligible/SAL
41BX1311	Prehistoric lithic scatter	Sandy Terrace	20 cm	0.69 km southeast	Undetermined

**This page has been redacted as
it contains restricted
information**

The sites within the project area (41BX722, 41BX723, 41BX725, 41BX739, 41BX740, 41BX741, and 41BX742) consist of prehistoric lithic scatters and campsites. Most of these sites are in upland settings with surficial and shallow deposits, but 41BX739 and 41BX740 contain more deeply buried deposits. All the sites recorded within the current project area have an unknown eligibility. However, three of the four SAL sites are within 0.25 km of the project area, suggesting that significant deposits could be within the sites that have been previously recorded within the current project area.

Map and Aerial Photograph Review

In addition to the cultural resources records review, Pape-Dawson examined recent and historic-age topographic maps (2016, 2013, 1993, 1975, 1969, and 1959) and aerial photographs (2014, 2012, 2010, 2008, 2004, 1995, 1986, 1973, 1966, 1963 and 1955) to identify historic high probability areas (HHPAs) where historic-age archaeological resources may exist within or directly adjacent to the project area. In addition, archaeologists sought to identify previous impacts that may have occurred within the project area.

The aerial photograph and topographic map research did not identify any HHPAs within the project area, although there were several structures just outside the northeastern portion of the project area on the 1959 topographic map. Many of these structures appear to have been impacted by canal construction. The lake and canal were created sometime between 1966 and 1969, and the power plant appears to have been constructed sometime between 1986 and 1995. The project area itself has remained undeveloped, although aerials indicate the eastern portion was used for agricultural purposes as early as the 1960s, while the western portion appears to have remained undeveloped rangeland. The 1973 aerial also suggests a small section of the project area in the northwest corner was terraced or cleared at that time, although subsequent aerials and maps do not show any development in that area (National Environmental Title Research [NETR] 2019).

FIELDWORK

Pape-Dawson archaeologists conducted an intensive archaeological survey of the 228-acre project area on various dates between April 1, 2019 – August 15, 2019. Archaeologists walked the entire project area at transects spaced 98 ft (30 m) apart visually inspecting the ground surface for artifacts and features. The pedestrian survey was augmented with judgmentally placed shovel tests. During the survey, a total of 164 shovel tests was excavated (Figure 5, Appendix A). Of these, 28 were positive for cultural materials. The survey effort resulted in the recording of one isolated find and revisit to nine archaeological sites.

**This page has been redacted as
it contains restricted
information**

The project area landscape consisted of gently to moderately sloping uplands and stream valleys. Vegetation across the project area consists of medium to tall grasses, dense brambles, oak, mesquite, cactus, and green briar, with occasional patches of poison ivy (Figure 6). Ground surface visibility across the project area was poor, ranging from zero to thirty percent. Within most of the project area, the ground surface visibility hovered around 10 percent due to dense ground cover (Figure 7).



Figure 6 Project Area overview, camera facing north



Figure 7 Ground surface visibility within Project Area, camera facing east

Disturbances were observed throughout the project area, but were prevalent within the eastern half of the project area (Figure 8). These disturbances included both natural and artificial impacts. Natural impacts included bioturbation and erosion due to hog wallows, animal burrows, and tree fall. Artificial impacts observed within the project area include clearing, push piles, transmission lines, construction (concrete pads, pipes), gravel piles, and groundwater monitoring wells (Figures 9 and 10). In addition, there were several areas where potentially historic-age trash was observed, such as ferrous metal bands, late twentieth century soda bottles, and undecorated ironstone (Figures 11 and 12). These materials were scattered throughout the project area.

Soils within the project area were typically sandy loam over clay or sandy clay loam. Typical shovel tests revealed soil color varied from dark brown/brown (Figure 13) to very dark or dark grayish brown. Some shovel tests showed signs of disturbance (Figure 14). Shovel tests ranged in depth from 15-80 cmbs and were most often terminated due to the presence of compact clay or pre-Holocene-age clay (Appendix B).

**This page has been redacted as
it contains restricted
information**



Figure 9 Push pile within the project area, camera facing southwest



Figure 10 transmission line corridor within the project area, camera facing south



Figure 11 Non-historic age bottle within the project area



Figure 12 Indeterminate age ironstone within project area



Figure 13 Soils within SS 52, camera facing south



Figure 14 Disturbed soils in JS 07, camera facing west

Recorded Cultural Resources

The current pedestrian survey and shovel testing resulted in the recording of one isolated find and revisits to nine archaeological sites (41BX722, 41BX723, 41BX725, 41BX728, 41BX739, 41BX740, 41BX741, 41BX742, and 41BX745). The isolated find consisted of a single chert flake. The revisits were to sites that were originally recorded by Espey Huston and Associates (EH&A) during a previous survey of the Calaveras Power Plant in 1987. Site 41BX722 is a multicomponent prehistoric and historic site, while the remainder of the sites were prehistoric. Detailed descriptions of the isolated find and the site revisits are presented below.

Isolated Finds

Archaeologists located one isolated find during the survey of the 228-acre project area. Isolated Find 1 (IF 1) was noted on the ground surface within the northern portion of the project area (see Figure 5). IF 1 consists of a single secondary flake; no other artifacts were observed on surface, and a shovel test (LC19) placed next to the artifact was negative for cultural resources (Appendix A). Due to the lack of additional artifacts within the vicinity, this artifact was recorded as an isolated find.

Site 41BX722

Setting and Description

Site 41BX722 consists of a temporally undetermined prehistoric lithic scatter and historic rock alignments. The site spans a 2.1-acre (0.85 ha) area and measures roughly 361 ft (110 m) north-south by 328 ft (100 m) east-west. The site is situated on a broad, flat upland landform that has been heavily altered by clearing and construction of a well pad adjacent to the southern portion of the site (Figure 15). Tributary B to Chupaderas Creek is located approximately 354 ft (108 m) northeast of the site. Based on the site dimensions described in the original site form, a little less than half of the site extends outside the current project area to the north. This portion of the site was not revisited.

Vegetation at the site consists of tall grasses and weeds as well as scattered oak trees and mesquite. Ground surface visibility in vegetated areas was zero percent. Up to a third of the area revisited was covered in a layer of gravel which completely obscured the ground surface. Other evidence of disturbance included a concrete well pad.



Figure 15 Overview of Site 41BX722, camera facing east-southeast

Work Performed and Recommendations

At the time of initial recording, archaeologists observed flakes, a core, lithic debitage, fire cracked rock (FCR), and two pieces of stoneware on surface. A single piece of lithic debitage and three FCR were recovered from the upper 10 cm of a shovel test. The historic rock alignments were described lining either side of a road and as containing remnants of barbed wire and fence posts. Recorders estimated approximately 15% of the site to be intact at that time.

Upon revisit, Pape-Dawson archaeologists walked the portion of the site that falls within the project area in transects spaced 98 ft (30 m) apart. No evidence of the rock walls or surface artifacts were observed. In addition, Pape-Dawson archaeologists excavated six shovel tests, which were negative for cultural materials (Figure 16). Soils within the site typically consisted of black gravelly loam over a brownish yellow gravelly loam. Shovel tests were shallow, typically terminating between 10-15 cmbs. Due to the lack of artifacts and features, as well as disturbances, site 41BX722 is recommended ineligible for SAL designation within the project area.

**This page has been redacted as
it contains restricted
information**

Site 41BX723

Setting and Description

Site 41BX723 is a previously recorded lithic scatter of unknown age situated on a slight rise 45 m northeast of Tributary A to Chupaderas Creek. The site spans a 1.5-acre (0.6 ha) area, measuring 328 ft (100 m) north-south by 246 ft (75 m) east-west. Vegetation at the site includes hackberry and honey locust trees as well as prickly pear, tall grasses and brambles (Figure 17). Ground surface visibility during the current survey was poor, varying from zero to five percent due to the dense undergrowth. Natural impacts to the site include ground disturbance from hog wallows and rodent burrows. Artificial impacts include a push pile immediately east of the site and a gravel road adjacent to the southwest site boundary.



Figure 17 Overview of Site 41BX723, camera facing south

Work Performed and Recommendations

When site 41BX723 was initially recorded in 1987, archaeologists observed three cortical flakes, one secondary flake, one noncortical flake, and seven FCR on the ground surface. Two shovel tests were excavated, but were negative for cultural material. At the time of recording, investigators noted the site had been previously cultivated.

Upon revisit in 2019, Pape-Dawson archaeologists conducted a pedestrian survey of the site in transects spaced 98 ft (30 m) apart. No artifacts were observed on the ground surface. Seven shovel tests were excavated, but all were negative for cultural material (Figure 18). Soils typically consisted of a dark yellowish brown or brown sandy loam that gradually transitioned into the same color subsoil at an average of 41 cmbs. As the revisit did not locate any cultural material, archaeologists did not expand the original site boundaries. Due to the lack of artifacts and features, site 41BX723 is recommended ineligible for SAL designation.

Site 41BX725

Setting and Description

Site 41BX725 is a previously recorded lithic scatter of an unspecified age situated on an upland landform that gradually slopes to the east and south. A Tributary to Chupaderas Creek intersects with the site boundary at its westernmost point before continuing south of the site. At the time of initial recording, the site measured 2,625 ft (800 m) in diameter, covering approximately 14.7 acres (5.9 ha).

Vegetation at the site includes hackberry trees, oak trees, pencil cactus, tall grasses, and dense brambles (Figure 19). At the time of the current survey, ground surface visibility varied between zero and ten percent due to dense undergrowth. Natural disturbances within the site consist primarily of rodent burrows. Artificial impacts within the site include modern trash and push piles, as well as a network of dirt roads that traverse the southwest corner of the site and form much of the site's southern boundary.

**This page has been redacted as
it contains restricted
information**



Figure 19 Site overview of 41BX725

Work Performed and Recommendations

Espey, Huston and Associates recorded this site in 1987 as a dispersed lithic scatter that was mostly on surface. Fifteen shovel tests were excavated at the site, two of which were positive for cultural materials to a depth of 30 cmbs. While the site form does not provide a list of subsurface artifacts, within a 2-x-2 m surface area, investigators observed 2 crude bifaces, 3 primary flakes, 7 secondary flakes, 4 tertiary flakes, 15 corticate chips, 7 decorticate chips, and 38 pieces of FCR. They noted that a large percentage of the site contained FCR, but also that the site had been disturbed through agricultural contouring and cultivation.

The current revisit resulted in an expansion of the site boundary to include an additional 12.8 acres to the south and east. The site now covers 32.6 acres (13.2 ha), measuring 1,516 ft (462 m) north-south by 1,752 ft (534 m) east-west. Work at the site included pedestrian survey and excavation of 23 shovel tests, 11 of which were positive for cultural materials (Figure 20). Artifacts observed on surface include 18 FCR (12 chert, 6 sandstone), 3 chert shatter, 2 possible chert unifaces, 2 chert primary flakes, 1 possible tested chert cobble, 1 quartzite primary flake, 1 quartzite secondary flake, and a quartzite tested cobble. Two artifact concentrations were identified near ST02 and ST07. The concentration near ST02 was located on

**This page has been redacted as
it contains restricted
information**

a fire ant pile and spanned a 2-3 m area. This concentration contained a total of 11 artifacts (FCR and lithic debitage). The second concentration, located near ST07, included 13 artifacts (FCR, lithic debitage, a possible uniface, and a tested cobble) scattered over an area measuring roughly 8 m north-south by 15 m east-west. Beer bottles and barbed wire were also observed near this concentration.

Soils at site 41BX725 typically consisted of a dark brown or dark grayish brown sandy loam yielding to a brown clay at about 30-40 cmbs (Appendix A). A total of 35 artifacts were recovered during shovel testing (Table 3, Figure 21), nearly half of which were found between 0-10 cmbs. While 12 artifacts were observed between 30-60 cmbs, they were recovered from two shovel tests that are situated in areas of colluvial deposition. No diagnostics were observed at the site.

Table 3 Subsurface Artifacts at 41BX725

Site ST #	Temp ST #	Artifacts	Depth (cmbs)
ST01	SS43	1 chert tertiary flake and 1 FCR	0-10
ST02	SS42	1 chert shatter	0-10
		1 quartzite primary flake and 2 sandstone FCR	10-20
ST03	SS45	1 chert primary flake	0-10
ST05	LC37	2 chert shatter, 1 chert FCR	0-10
		1 limestone FCR	10-20
ST06	LC39	1 tertiary chert flake and 1 sandstone FCR	10-20
ST08	NA04	1 chert FCR and 4 limestone FCR	0-10
ST09	NA05	1 limestone FCR	0-10
ST12	SS41	1 sandstone FCR	0-10
ST13	LC38	1 quartzite shatter	0-10
		1 limestone FCR	10-20
ST15	SS66	1 chert tertiary flake and 2 sandstone FCR	30-40
		2 chert shatter, 1 chert FCR, and 2 quartzite FCR	40-50
ST18	SS44	1 chert shatter	0-10
		2 sandstone FCR	30-40
		1 quartzite tertiary flake	40-50
		1 quartzite shatter	50-60



Figure 21 FCR and flakes from ST02

While 41BX725 contains an extensive artifact scatter, the majority of cultural materials observed are located on the ground surface or within the upper 20 cm of soil. Two shovel tests contained deposits that extended to 50 and 60 cmbs respectively, but deposits at depths between 30-60 cmbs contained fewer than 10 artifacts. Due to the lack of diagnostic artifacts, previous ground disturbance, and lack of features, the portion of site 41BX725 within the project area is not recommended for SAL designation. However, if future development is anticipated outside of the current project area, more work may be required to determine the nature and extent of cultural deposits outside of the existing project area boundary.

Site 41BX728

Setting and Description

Site 41BX728 is a previously recorded prehistoric lithic scatter and possible lithic procurement site with an unknown temporal affiliation. The site is situated on a gradually sloping side slope of a rise west of Hondo Creek. It extends over a 41.1-acre (16.6 ha) area and measures roughly 1,509 ft (460 m) north-south by 1,411 ft (430 m) east-west.

Vegetation observed at the portion of the site located within the current project area included mesquite and oak trees, green briar, prickly pear cactus, and tall forbes and grasses. The dense undergrowth resulted in a ground surface visibility of close to zero percent. Hondo Creek touches the eastern site boundary at a point north of the current project area. The site has been disturbed by a transmission line corridor that cuts roughly north-south through the site's eastern half. Gardner Road and its associated right-of-way intrude into the site along its western boundary and a two-track borders the site to the north. In addition to these artificial disturbances, natural impacts noted within the site consisted of bioturbation from root and insect activity.

Work Performed and Recommendations

EH&A originally recorded 41BX728 in 1987. They excavated shovel tests at the site, documenting cultural material from 0-40 cmbs. They noted that flakes, cores, and various debitage as well as several concentrations of FCR were present at the site, although they did not indicate which materials were recovered from subsurface contexts. They did not identify any features during their survey.

During the current survey, Pape-Dawson archaeologists excavated a shovel test within the northwest corner of the project area. A single chert scraper was recovered in this shovel test between 40-50 cmbs (Figure 22). Archaeologists excavated two additional shovel tests near this area, but both were negative for cultural materials (Figure 23). No cultural material was observed on surface. Although the scraper initially appeared to be an isolated find, due to its proximity to site 41BX728, the site boundary was extended an additional 1.25 acres to the southeast to encompass this shovel test.



Figure 22 Chert scraper from ST 01, Level 5, Site 41BX728

**This page has been redacted as
it contains restricted
information**

Soils within this portion of the site consisted of 50-80 cm of dark yellowish-brown sandy loam overlying compact very dark grayish brown clay (Appendix A, Figure 24). Due to the paucity of artifacts and lack of diagnostic features, the portion of the site that falls within the current project boundary is recommended not eligible for SAL status. However, if archaeological deposits are discovered during construction, the CPS archaeologist should be contacted to determine whether additional work may be required.



Figure 24 Soils within ST 02, site 41BX728, camera facing north

Site 41BX740

Site 41BX740 is a lithic scatter and open campsite situated on an upland rise and slope above drainages of Hondo Creek. Initially recorded in 1987 by EH&A, the site covers 44.5 acres (18.1 ha), and measures 2,149 ft (655 m) north-south by 902 ft (275 m) east-west. This sprawling site once included site 41BX745, but appears to have been separated during the 1987 fieldwork (Atlas 2019). Approximately 19.2 acres (7.8 ha) extend into the current project area; this was the only part of the site revisited during the current investigations.

The portion of the site originally recorded as 41BX739 by EH&A in 1987 is situated on a west-facing hillside between drainages of Hondo Creek. This site extends over approximately 11.4 acres (4.5 ha), and

measures 984 ft (300 m) northeast-southwest by 492 ft (150 m) northwest-southeast. Approximately 8.4 acres (3.4 ha) of the site extends into the current project area, and this was the only portion of the site revisited during the current investigations.

Vegetation at this site consists of oak, honey locust, persimmon, mesquite, pencil cactus, prickly pear, and medium to tall grasses. Ground surface visibility varied between 0-30% (Figure 25). Drainages from Hondo Creek traverse east-west across the site. Natural disturbances within the site include erosion and rodent and insect burrows with the occasional hog wallow. Artificial impacts include push piles adjacent to the site, a transmission line that traverses the southwestern edge of the site, two tracks crossing the site, and a groundwater well monitoring station.



Figure 25 Overview of Site 41BX740, camera facing south

Work Performed and Recommendations

During EH&A's 1987 fieldwork, archaeologists observed a variety of artifacts at the site including a partial dart point fragment, FCR, primary, secondary, and tertiary flakes, a tested cobble, scrapers, and corticate and decorticate shatter. While site forms indicate that deposits extended up to 70 cmbs, investigators

noted that the majority of artifacts at the site were surficial or shallowly buried, and that the site was badly eroded.

During the current revisit, Pape-Dawson archaeologists excavated 33 shovel tests, twelve of which were positive for cultural materials (Table 4, Figures 26 and 27). Archaeologists also noted two bifaces, two tested cobbles, four primary flakes, twelve secondary flakes, three tertiary flakes, three cores, two core fragments, and a piece of chert shatter on the ground surface (Figure 28). Soils typically ranged from yellowish brown to brown to dark grayish brown sandy loam. As surficial artifacts were found within the narrow gap between sites 41BX740 and 41BX739, these sites have been combined into a single site extending over 49.5 acres (20 ha) and measuring 1,983 ft (586 m) north south by 1,575 ft (480 m) east-west.

Table 4 Subsurface artifacts recovered from site 41BX740

Site ST #	Temp Site ST #	Artifacts	Depth
3	LC 06	1 secondary chert flake, 1 chert shatter, 1 chert FCR	0-10 cmbs
		2 primary chert flakes, 4 sandstone FCR, 1 limestone FCR, 3 chert shatter	10-20 cmbs
		1 chert shatter, 3 sandstone FCR	20-30 cmbs
		1 quartzite shatter, 1 chert FCR	30-40 cmbs
5	NA 03	2 chert shatter, 1 limestone FCR	0-10 cmbs
7	SS 05	1 secondary quartzite flake, 1 chert FCR, 3 quartzite FCR, 1 limestone FCR, 1 chert core fragment	0-10 cmbs
		2 secondary chert flakes, 1 tertiary chert flake, 1 tertiary quartzite flake, 2 chert FCR, 1 limestone FCR	10-20 cmbs
17	NA 02	1 chert shatter	20-30 cmbs
		1 chert FCR	30-40 cmbs
		2 chert FCR, 1 red ochre	40-50 cmbs
22	JS13	2 secondary chert flakes, 1 chert shatter, 3 limestone FCR	10-20 cmbs
23	HB01	3 FCR	0-10 cmbs
24	SS70	6 chert FCR	0-10 cmbs
		2 chert FCR	10-20 cmbs
		1 chert FCR	20-30 cmbs
25	JS14	1 secondary chert flake, 3 chert FCR	0-10 cmbs
26	HB02	16 hematite FCR, 2 primary chert flakes	0-10 cmbs
27	HB03	1 chert flake, 4 chert FCR	0-10 cmbs
29	JS15	1 primary chert flake, 1 secondary chert flake, 1 chert FCR	0-10 cmbs
33	SS71	1 primary chert flake	0-10 cmbs
		2 chert FCR	10-20 cmbs

**This page has been redacted as
it contains restricted
information**



Figure 27 Artifacts from ST 03, Level 2, Site 41BX740

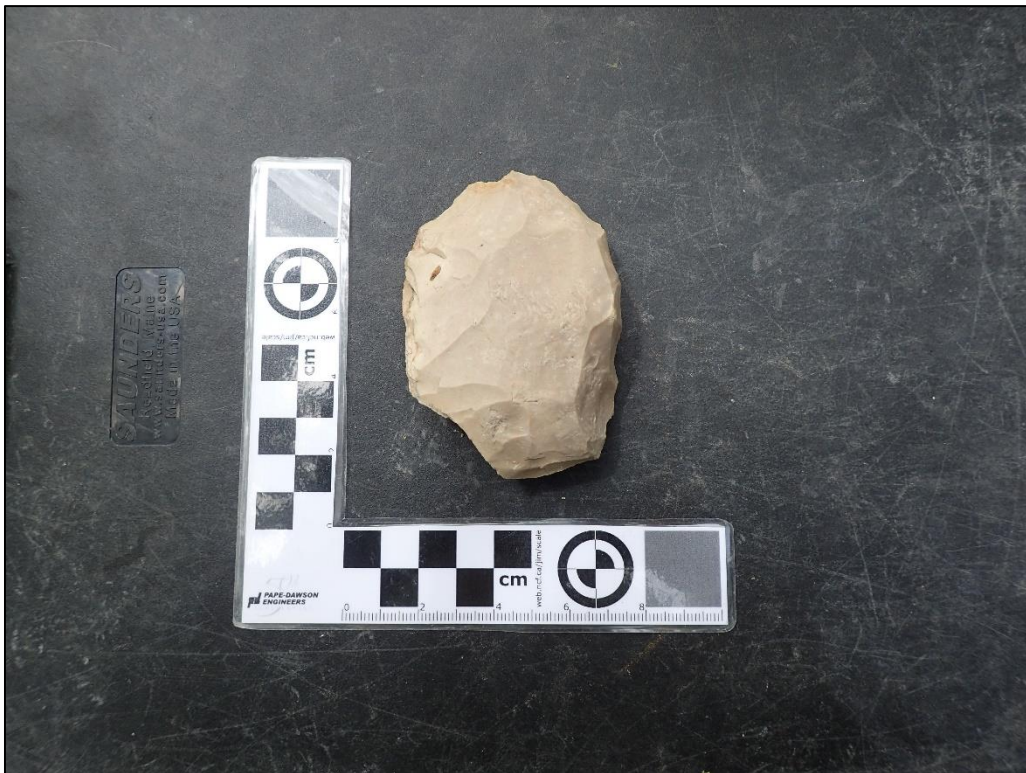


Figure 28 Biface from surface, site 41BX740

Although a potential diagnostic point fragment was recovered from the site in 1987, the current investigations reveal that much of the landform is eroded and disturbed, and that deposits at the site remain primarily shallow or surficial. Due to the lack of diagnostic artifacts and features as well as ground disturbance within the portion of 41BX740 located within the current project area, this section of the site is recommended not eligible for SAL designation. However, if archaeological materials are discovered during construction, the CPS archaeologist should be contacted to determine whether additional work may be required.

Site 41BX741

Setting and Description

Site 41BX741 is a previously recorded prehistoric lithic scatter with an unknown temporal affiliation. The site spans a 9.2-acre (3.75 ha) area and measures roughly 820 ft (250 m) north-south by 492 ft (150 m) east-west. It is located on a gradually sloping upland rise southwest of an unnamed tributary to Chupaderas Creek.

Within the current project area, the site is characterized by dense woods consisting of mesquite and oak trees, brambles, and tall forbes and grasses. Ground surface visibility in this area varied between zero and thirty percent. Natural disturbances within the portion of the site within the project area include rodent burrows and erosion from an intermittent drainage that cuts through the site in a northwest-southeast orientation. Artificial disturbances include clearing and road and water tank construction within the portion of the site south of the current project area (Figure 29).



Figure 29 Overview of site 41BX741, camera facing south

Work Performed and Recommendations

EH&A recorded site 41BX741 in 1987. At that time, archaeologists noted that no subsurface deposits had been identified at the site, and that many of the artifacts on surface were observed in areas of slope wash. Artifacts observed at the site include an unidentified dart point fragment, a single primary flake, one secondary flake, a tertiary flake, a corticate flake, a tested core, and one piece of quartzite FCR.

During the current revisit, Pape-Dawson archaeologists revisited the northernmost portion of the site, which was the only section of 41BX741 located within the current project area. Archaeologists walked the site in transects spaced 98 ft (30 m) apart, and excavated a total of twelve shovel tests, all of which were negative for cultural material (Figure 30). Soils consisted of brown or dark brown sandy loam. No cultural materials were observed on the ground surface. As a result of the lack of artifacts and features at the site, the portion of site 41BX741 located within the project area is recommended not eligible for SAL designation.

**This page has been redacted as
it contains restricted
information**

Site 41BX742

Setting and Description

Site 41BX742 is a previously recorded prehistoric campsite of unknown temporal affiliation. It is situated on a gently sloping upland ridge bordered by an unnamed tributary to Chupaderas Creek on the east. Another unnamed tributary to Chupaderas Creek is 207 ft (63 m) southwest of the site, and a small pond overlaps the site's southern boundary. At the time of recording, the site encompassed approximately 2 acres (0.81 ha) of land; the site was described as being 295 ft (90 m) in diameter.

Vegetation within the site includes mesquite and oak trees, brambles, and tall grasses (Figure 31). Ground surface visibility at the site averaged zero percent. While the original recorders noted agricultural terracing in the northern portion of the site in 1987, current investigations did not document artificial disturbances within the site. Natural disturbances included hog wallows, rodent activity, and tree root bioturbation.



Figure 31 Overview of site 41BX742, camera facing west

Work Performed and Recommendations

EH&A initially recorded site 41BX742 in 1987. During their survey, archaeologists noted two utilized secondary flakes, a single secondary quartzite flake, two corticated chips, one quartzite decorticate flake, a core, one chert chunk, seven FCR and five biface fragments. Shovel testing yielded charcoal and a single flake between 20-30 cmbs.

The current investigations included intensive pedestrian survey and shovel testing within the site. Artifacts observed on surface were limited to an informal end scraper and three pieces of chert FCR. Archaeologists excavated 21 shovel tests, four of which were positive for cultural materials (Table 5, Figure 32). Soils within the site typically consisted of brown or very dark grayish brown sandy loam over a brown sandy loam or silt. The site now encompasses a 4.7-acre (1.9 ha) area, measuring 472 ft (144 m) north-south by 580 ft (177 m) east-west.

Table 5 Subsurface Artifacts at 41BX742

Site ST #T #	Temp ST #	Artifacts	Depth (cmbs)
3	LC53	1 primary flake and 3 sandstone FCR	0-10
4	LC22	1 chert FCR and 3 charcoal fragments	0-10
		1 chert shatter and 5 charcoal fragments	10-20
		3 chert FCR, 1 sandstone FCR	20-30
10	SS27	2 sandstone FCR	0-40
19	HB07	1 primary flake	0-10

Roughly half of the artifacts observed at site 41BX742 consisted of FCR (Figure 33). No diagnostic artifacts were observed, and no features were observed. Due to the paucity of artifacts as well as the lack of diagnostic artifacts and features, the site is recommended as not eligible for SAL designation.

**This page has been redacted as
it contains restricted
information**



Figure 33 FCR recovered from ST 10, site 41BX742

Site 41BX745

Setting and Description

Site 41BX745 is a previously recorded prehistoric lithic scatter and possible campsite of an unknown temporal affiliation. At the time of recording, the site extended approximately 16.7 acres (6.7 ha), measuring 902 ft (275 m) northeast-southwest by 804 ft (245 m) northwest-southeast. The site is situated within the Hondo Creek floodplain and the upper terraces above the creek. Hondo Creek weaves in and out of the site along its northern and western boundaries.

Vegetation within the portion of the site located within the project area consists of clusters of oak and mesquite, greenbriar and medium grasses (Figure 34). Dense leaf litter obscured much of the ground surface, creating ground surface visibility that hovered near zero percent. The only disturbances noted within the portion of the site within the project area were fence construction and bioturbation due to root and insect activity.



Figure 34 Overview of site 41BX475, camera facing west

Work Performed and Recommendations

Site 41BX745 was originally recorded in 1987 by EH&A, and appears to have been separated from 41BX740 into its own site around that time. At the time of recording, archaeologists noted surficial artifacts on the slope, and deeply buried artifacts (over 90 cmbs) within the floodplain. While a detailed list of artifacts is not provided in the site form, it does note lithics and FCR were observed, and that a potential hearth feature was present within several shovel tests. The site is a SAL and NRHP-eligible.

During the current revisit, Pape-Dawson archaeologists noted only a sliver of the site extended into the project area (Figure 35). Archaeologists inspected the ground surface between 41BX745 and site 41BX740,

**This page has been redacted as
it contains restricted
information**

but did not observe cultural material. A single shovel test was excavated within the site boundary, and was negative for cultural materials. Soils consisted of a dark grayish brown sandy clay with dark yellowish brown and yellowish-brown sandy clay mottles. This shovel test was terminated 60 cmbs due to large roots.

While only a small portion of site 41BX745 extends into the current project area, and no cultural materials were observed in the portion of the site situated within the current project area, the site is recommended eligible as a SAL and should be avoided. Deeply buried deposits could exist below the shovel test depth, and trenching could be warranted. Given the site's SAL status, Pape-Dawson recommends this site be avoided by current project construction. If avoidance is not possible, the CPS archaeologist and THC should be contacted about required further work.

Summary and Conclusions

On behalf of CPS Energy, Pape-Dawson Engineers (Pape-Dawson) conducted an intensive archaeological survey of the Calaveras Power Station proposed improvement areas in east San Antonio, Bexar County, Texas. The property improvements will consist of a series of evaporation ponds, the location of which has not yet been determined. Vertical depths of impacts are anticipated to extend up to 20 feet (ft) (6 meters [m]) below the ground surface. The current project area comprises two tracts of land totaling approximately 228 acres (92 hectares [ha]).

As CPS Energy is a political subdivision of the state of Texas, compliance with the Antiquities Code of Texas (ACT) will be necessary. No federal funding or permitting is anticipated, so compliance with Section 106 of the National Historic Preservation Act (NHPA) will not be required.

Pape-Dawson archaeologists conducted field investigations within the project area intermittently from April 1 through August 15, 2019. A total of 164 shovel tests were excavated, one isolated find was recorded, and nine sites were revisited (Sites 41BX722, 41BX723, 41BX725, 41BX728, 41BX739, 41BX740, 41BX741, 41BX742, and 41BX745). Ground disturbance due to natural and artificial causes was present throughout the project area, especially within the eastern portion.

The isolated find and sites are temporally undetermined prehistoric lithic scatters and campsites. Only site 41BX722 has a historic component, which consists of two stoneware sherds and historic rock walls along a road; these were not observed within the current project area. No artifacts or features were

observed at this site during the current revisit. Sites 41BX723 and 41BX741 also consist of surficial lithic scatters of indeterminate temporal affiliation. Current investigations resulted in no artifacts or features being observed at either of these sites.

Site 41BX725 is a prehistoric lithic scatter of undetermined temporal affiliation. Current investigations documented lithic shatter, a few flakes, and FCR from 0-60 cmbs. Cultural materials extended deeper than 20 cmbs in only two shovel tests, both of which were placed in areas with colluvial deposition. No diagnostic artifacts or features were observed at this site.

Site 41BX728 is a lithic scatter and possible lithic procurement site of undetermined temporal affiliation. During the current investigations, a single chert scraper was found at approximately 50 cmbs. No diagnostic artifacts or features were observed at this site. Only a small section of this previously recorded site extends into the current project area.

Originally recorded as a lithic scatter from an unknown time period, site 41BX739 was combined with site 41BX740 (also a lithic scatter) during the current revisit due to the presence of artifacts between the two site boundaries. Most of the artifacts were surficial, and the landform was eroded. Subsurface artifacts were found between 0-50 cmbs, but these deeper deposits were observed in areas of colluvial deposition. No diagnostic artifacts or features were observed at this site.

Site 41BX742 is a campsite of indeterminate temporal affiliation. The current survey found subsurface deposits that included two flakes, charcoal, shatter, and FCR from 0-40 cmbs. An informal end scraper and three pieces of FCR were also observed on surface. No diagnostic artifacts or features were observed at this site.

Site 41BX745 is a lithic scatter and campsite that is a State Antiquities Landmark (SAL) and potentially eligible for listing in the National Register of Historic Places (NRHP). The original work revealed cultural deposits were present deeper than 90 cmbs, and noted lithic debitage and FCR at the site. As only a sliver of the site extended into the current project area, a single shovel test was excavated and found to be negative for cultural materials. No artifacts were observed on surface.

Due to the lack of artifacts and features at 41BX722, 41BX723, and 41BX741, the portions of these sites that are within the current project area are recommended ineligible for SAL designation. In addition, for the portion of 41BX728 within the project area and for site 41BX742, the paucity of artifacts and lack of features suggest they are not eligible for SAL designation. Although slightly more deeply buried deposits exist at sites 41BX725 and 41BX740, the deeper deposits were in colluvial settings, and the lack of diagnostic artifacts and features suggest neither site is eligible for listing as a SAL. Site 41BX745 is listed as a SAL. Archaeologists recommend the portion of the site within the current project area as eligible for SAL status and recommend avoidance for the small part of this site that extends into the current project area.

Although the sites (or portions of sites) within the current project area do not appear to meet the criteria to be listed as SALs (with the exception of site 41BX745), several of these sites extend outside the current project area. As a result, while Pape-Dawson archaeologists recommend no further work for these sites within the project area, they also recommend that if impacts will occur outside current project area boundaries, these sites be revisited. Site 41BX745 should be avoided by construction due to its SAL status. Within the current project area, if evidence of cultural material is encountered during construction, it is recommended that all work in the vicinity should cease and the CPS archaeologist be contacted.

References Cited

- Black, Steve L.
1989 South Texas Plains. In *From the Gulf to the Rio Grande: Human Adaptation in Central, South, and Lower Pecos Texas*, edited by T.R. Hester, S.L. Black, D.G. Steele, B.W. Olive, A.A. Fox, J. Reinhard, and L.C. Bement, pp. 38-62. Center for Archeological Research, The University of Texas at San Antonio and the Arkansas Archeological Survey, Fayetteville.
- Black, Steve and Al J. McGraw
1985 Panther Springs Creek Site: Cultural Change and Continuity Within the Upper Salado Creek Watershed, South-Central Texas. Archaeological Survey Report, No. 100. Center for Archeological Research, The University of Texas at San Antonio.
- Black, Steve, Kevin Jolly, Charles D. Frederick, Jason R. Lucas, James W. Karbula, Paul T. Takac, and Daniel R. Potter
1998 Archeology Along the Wurzbach Parkway, Module 3: Investigation and Experimentation at the Higgins Site (41BX184). Vol 2. Studies in Archeology 27. Texas Archeological Research Laboratory, The University of Texas at Austin.
- Bousman, C.B., B.W. Baker, and A.C. Kerr
2004 Paleoindian Archeology in Texas. In *The Prehistory of Texas*, edited by T.K. Perttula, pp 15-99.
- Bureau of Economic Geology
1983 Geologic Atlas of Texas, San Antonio Sheet.
- Campbell, Thomas N.
1977 *Ethnic Identities of Extinct Coahuiltecan Populations: Case of the Juanca Indians*. The Pearce-Sellards Series 26. Texas Memorial Museum, Austin.
- Clark, John, A. Benavides, S. Scurlock, D. Isham
1975 National Register of historic Places Inventory Nomination Form, Mission Parkway, Prepared by Texas Historical Commission, State Archaeologist's Office.
- Collins, Michael .B.
1995 Forty Years of Archeology in Central Texas. In *Bulletin of the Texas Archeological Society* 66:361-400.
- Collins, Michael B., Dale B. Hudler, and Stephen L. Black
2003 *Pavo Real: A Paleoindian and Archaic Camp and Workshop on the Balcones Escarpment, South-Central Texas*. Antiquities Permit No. 249. TxDOT Archeological Studies Program,

Texas Archeological Research Laboratory, The University of Texas, Austin.

de la Teja, J.F.

1995 San Antonio De Bexar: A Community on New Spain's Northern Frontier. University of New Mexico Press.

Dockall, J.E., D.K. Boyd, and L.E. Kittrell

2006 Geoaarcheological and Historical Investigations in the Comal Springs Area, LCRA Clear Springs Autotransformer Project, Comal County, Texas. Investigation No. 149. Antiquities Permit No. 3850. Prewitt & Associates, Inc., Austin.

Fehrenbach, T.R.

2010 Handbook of Texas Online, "San Antonio," accessed April 12, 2019, <http://www.tshaonline.org/handbook/online/articles/hds02>. Uploaded on June 15, 2010. Modified on June 30, 2016. Published by the Texas State Historical Association.

Figueroa, Antonia L. and Charles D. Frederick

2008 Archeological Testing of the Pavo Real Site (41BX52), San Antonio, Bexar County, Texas. Archaeological Report Number 382. Center for Archaeological Research, The University of Texas at San Antonio.

Henderson, J.

1980 A Preliminary Report of the Texas Highway Department Excavations at 41BX52-the Paleo Component. *Texas Archeology* 24(2):14-15.

Hester, T.R.

1978 *Early Human Occupation in South Central and Southwestern Texas: Preliminary Papers on the Baker Cave and St. Mary's Hall sites*. Center for Archaeological Research, The University of Texas at San Antonio.

Long, Christopher

2010 Handbook of Texas Online, "Bexar County," accessed April 12, 2019, <http://www.tshaonline.org/handbook/online/articles/hcb07>. Uploaded on June 12, 2010. Modified on February 17, 2016. Published by the Texas State Historical Association.

McGraw, A. J., J. W. Clark, and E. A. Robbins (editors)

1998 *A Texas Legacy The Old San Antonio Road and The Camino Reales: A Tricentennial History, 1691-1991*. Texas Department of Transportation, Austin, TX.

- McNatt, L., C. Beceiro, M.D. Freeman, S.A. Tomka, P. Schuchert, and C.G. Ward
2000 Archeological Survey and History of Government Canyon State Natural Area, Bexar County, Texas. Antiquities Permit No. 1669. Cultural Resources Program, Texas Parks and Wildlife, Austin.
- Mercado-Allinger, P.A., N.A. Kenmotsu, and T.K. Pertulla
1996 *Archeology in the Central and Southern Planning Region, Texas: A Planning Document*. Office of the State Archeologist, Special Report 35 and the Department of Antiquities Protection Cultural Resource Management Report 7. Texas Historical Commission, Austin.
- NETR Online
2019 Historic aerials and maps. <http://www.historicaerials.com/> Accessed April 12, 2019
- Prewitt, E.R.
1981 Cultural Chronology in Central Texas. *Bulletin of the Texas Archeological Society* 52:65-89.
- Spell, Lota M.
1962 The Grant and First Survey of the City of San Antonio. *The Southwestern Historical Quarterly*, Vol. LXVI, No. 1.
- Tennis, C. L.
1996 Archaic land use of upper Leon Creek terraces: Archeological testing in northern Bexar County, Texas. Archeological Survey Report No. 234. Center for Archaeological Research, The University of Texas at San Antonio.
- Texas Historical Commission (THC)
2019 *Archeological Sites Atlas*. <http://nueces.thc.state.tx.us/>, Accessed April 25, 2019
- Thoms, A.V., P.A. Claybaugh, S. Thomas, and M. Kamiya
2005 *Archaeological Survey and Monitoring in 2005 at the Richard Beene Site, South-Central Texas*. Technical Report Series No. 7. Antiquities Permit No. 3836. Texas A&M at College Station.

Thoms, A.V., and R. D. Mandel (editors)

2007 Archaeological and Paleoecological Investigations at the Richard Beene Site, South-Central Texas. Technical Report Series No. 8. 2 Vols. Center for Ecological Archaeology, Texas A&M University, College Station.

Turner, E. S. and T. R. Hester

1999 A Field Guide to Stone Artifacts of Texas Indians. Gulf Publishing Co., Lanham, MD. The University of Texas at San Antonio and the Arkansas Archeological Survey, Fayetteville.

United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS)

2019 *Soil Survey of Bexar County, Texas*. <http://websoilseries.sc.egov.usda.gov/> (Accessed April 12, 2019.)

United States Geological Survey

2019 *U.S. Geological Survey*. <https://www.usgs.gov/>. (Accessed April 12, 2019).

Wermund, E.G.

1996 *Physiographic Map of Texas*. Bureau of Economic Geology. The University of Texas at Austin.

Appendix A

SHOVEL TEST RESULTS MAPS

**This page has been redacted as
it contains restricted
information**

**This page has been redacted as
it contains restricted
information**

**This page has been redacted as
it contains restricted
information**

**This page has been redacted as
it contains restricted
information**

Appendix B

SHOVEL TEST LOGS

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
NA01			1	0-5	N	very dark gray	sandy clay loam	none	impenetrable cobbles/bedrock
			1-3	5-25		dark brown	sand		
NA02	41BX740	ST17	1-5	0-48	P	brown	silty sand	1 chert shatter (20-30cmbs); 1 FCR (30-40cmbs); 2 FCR & 1 ochre fragment (40-50cmbs)	sterile subsoils
			5	48-54		very pale brown	sandy clay loam		
NA03	41BX740	ST05	1-2	0-17	P	very dark grayish brown	silty sandy loam	2 chert shatter, 1 FCR (0-10cmbs)	compact clay
			2-3	17-31	N	very dark gray	silty sandy clay		
NA04	41BX725	ST08	1	0-10	P	dark brown	sandy clay loam	1 chert FCR, 4 Limestone FCR (0-10cmbs)	basal clay
			2-4	10-40	N	very dark brown	clay		
NA05	41BX725	ST09	1	0-10	P	dark brown	sandy clay loam	1 limestone FCR (0-10cmbs)	basal clay
			2-4	10-40	N	very dark brown	clay		
NA06	41BX725	ST10	1	0-3	N	dark brown	clay loam	none	basal clay
			1-3	3-27		very dark brown	clay		
NA07			1-4	0-40	N	dark grayish brown	sandy loam clay	none	basal clay
			5-6	40-52		dark gray with yellowish brown and black mottles			
NA08	41BX740	ST18	1-3	0-26	N	dark grayish brown	sandy loam clay	none	basal clay
			3-4	26-40		dark gray with yellowish brown and black mottles	sandy loam clay with few pebbles		

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
NA09	41BX740	ST21	1-8	0-80	N	dark grayish brown	silty sand	none	depth
JS01	41BX740	ST19	1	0-10	N	light yellowish brown	silty sand	none	sterile subsoil
			2-3	10-30		dray grayish brown			
JS02			1-4	0-40	N	brown	loamy sand	none	sterile subsoil
JS03	41BX740	ST10	1-4	0-35	N	dark grayish brown	sandy loam	biface on surface within drainage nearby	sterile subsoil
JS04	41BX740	ST04	1-2	0-20	N	brown brown	loamy sand	none	fire ants
JS05	41BX740	ST11	1-4	0-35	N	very dark gray	loamy clay	none	sterile subsoil
JS06			1-3	0-25	N	very dark gray	silty clay	none	sterile subsoil
			3-4	25-35		yellowish brown	loamy sand		
			4-8	35-80		dark brown	sand		
JS07			1-2	0-15	N	brown with strong brown	loamy clay	none	compact clay
JS08	41BX722	ST06	1-4	0-40	N	black	gravelly loam	none	setile subsoil
			5-6	40-55		dark yellowish brown	loamy clay		
JS09	41BX722	ST02	1	0-3	N	black	gravelly loam	none	cemented gravel/bedrock
			1-2	3-15		brownish yellow			
JS10	41BX722	ST03	1	0-3	N	black	gravelly loam	none	cemented gravel/bedrock
			1-2	3-15		brownish yellow			
JS11	41BX722	ST05	1	0-3	N	black	gravelly loam	none	cemented gravel/bedrock
			1	3-10		brownish yellow			
JS12	41BX722	ST04	1	0-4	N	black	gravelly loam	none	limestone bedrock
			1-2	4-15		brownish yellow			
JS13	41BX740	ST22	1-3	0-30	P	very dark gray	silty clay	2 secondary flakes, 1 chert shatter, 3 limestone FCR (10-20 cmbs).	compact clay
			4-5	30-45	N	dark grayish brown			

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
JS14	41BX740	ST25	1-3	0-30	P	very dark gray	silty clay	1 secondary flake, 3 chert FCR (0-10 cmbs)	compact clay
			4	30-35	N	dark grayish brown		none	
JS15	41BX740	ST29	1-4	0-40	P	dark grayish brown	silty clay	1 primary flake, 1 secondary flake, 1 chert FCR (0-10 cmbs).	compact clay
JS16	41BX742	ST17	1-3	0-30	N	very dark gray	silty clay	none	compact clay
JS17	41BX742	ST18	1-4	0-40	N	very dark gray	silty clay	none	compact clay
SS01			1-8	0-80	N	brown	sand	none	depth
SS02	41BX740	ST09	1-4	0-40	N	dark yellowish brown	sandy loam	none	compact sand
SS03	41BX740	ST13	1-3	0-30	N	dark brown	sandy loam	none	compact sand
SS04	41BX740	ST01	1	0-5	N	brown	sand	none	sandstone bedrock
SS05	41BX740	ST07	1-2	0-20	P	dark grayish brown	sandy loam	2 quartzite secondary flakes; 5 FCR (1 chert, 3 quartzite, 1 limestone); 1 chert core fragment (0-10cmbs). 1 quartzite tertiary flake; 3 FCR (2 chert, 1 limestone); 2 chert secondary flakes; 1 chert tertiary flake (10-20cmbs).	compact clay
			3-4	20-35	N				

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
SS06	41BX728	ST01	1-5	0-50	P	dark yellowish brown	silty loam	1 chert scraper (40-50cmbs)	compact clay
			6-8	50-80	N		clay		
SS07			1-2	0-15	N	dark yellowish brown	sandy loam	none	compact sand
			2-3	15-30		dark grayish brown			
SS08			1-2	0-20	N	brown	sandy loam	none	compact sand
			3-4	20-40		dark gray	compact sand		
SS09			1-3	0-30	N	very dark grayish brown	sandy loam	none	compact sand
SS10			1-4	0-40	N	brown	sandy loam	none	compact clay
SS11			1-3	0-30	N	dark brown	sandy loam	none	compact sand
SS12			1-3	0-30	N	dark brown	sandy loam	none	compact clay
			4	30-40		dark grayish brown	clay		
SS13			1-3	0-30	N	very dark grayish brown	sandy loam	none	compact sand
SS14	41BX741	ST01	1-4	0-35	N	dark brown	sandy loam	none	compact sand
SS15	41BX741	ST06	1-9	0-90	N	dark brown	sandy loam	none	depth
SS16	41BX741	ST05	1-4	0-40	N	dark brown	sandy loam	none	sterile subsoils
SS17	41BX741	ST02	1-4	0-35	N	dark brown	sandy loam	none	sterile subsoils
SS18	41BX741	ST03	1-4	0-40	N	very dark grayish brown	sandy loam	none	sterile subsoils
SS19	41BX741	ST11	1-3	0-30	N	dark brown	sandy loam	none	compact sand
SS20			1-4	0-40	N	dark brown	sandy loam	none	sterile subsoils
SS21			1-3	0-25	N	very dark grayish brown	sandy loam	none	impenetrable cobbles
SS22			1-3	0-30	N	dark brown	sandy loam	none	compact sand
SS23	41BX742	ST06	1-3	0-30	N	very dark grayish brown	sandy loam	none	indurated
			4	30-40		dark brown			

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
SS24	41BX742	ST05	1	0-10	N	very dark grayish brown	sandy loam	none	compact soils
			2-3	10-25		brown	gravelly silt		
SS25	41BX742	ST12	1-3	0-30	N	very dark grayish brown	sandy loam	very few possible sandstone and chert FCR (20-30cmbs)	compact soils
SS26	41BX742	ST11	1-3	0-30	N	very dark grayish brown	sandy loam	none	compact soils
			4	30-40		brown	gravelly silt		
SS27	41BX742	ST10	1-4	0-40	P	very dark grayish brown	sandy loam	very few sandstone FCR (0-40 cmbs)	compact soils
SS28	41BX742	ST09	1-3	0-30	N	very dark grayish brown	sandy loam	none	compact soils
SS29			1-4	0-40	N	very dark grayish brown	sandy loam	none	compact soils
SS30	41BX742	ST14	1-4	0-40	N	very dark grayish brown	loamy sandy	none	sterile subsoils
			5-6	40-60			sandy loam		
SS31			1	0-10	N	very dark gray	loamy sand	none	compact soils
			2-6	10-60		yellow			
SS32			1-3	0-30	N	brown	sandy loam	none	compact soils
SS33			1	0-10	N	very dark grayish brown	loamy sand	none	depth
			2	10-20		dark yellowish brown			
			3-5	20-50		yellowish red			
			6-8	50-80		light yellowish brown	sand		

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
SS34			1-3	0-30	N	yellowish brown	sandy loam	none	compact soils
			4	30-40			sand w/gray clay		
SS35			1-2	0-20	N	yellowish brown	sandy loam	none	compact clay
			3-4	20-40			sandy loam w/clay mottles		
SS36	41BX725	ST21	1-4	0-40	N	dark brown	sandy loam	none	compact soils
SS37			1-9	0-90	N	dark brown	loamy sand	none	depth
SS38			1-2	0-20	N	dark yellowish brown	loamy sand	none	compact soils
			3-4	20-40		strong brown			
			5-6	40-60		light yellowish brown	sand w/gray clay		
SS39			1-2	0-20	N	yellowish brown	sandy loam	none	compact clay
			3-5	20-45			sand w/gray clay		
SS40			1-3	0-25	N	yellowish brown	sandy loam	none	compact clay
			3	25-30		dark grayish brown	sandy clay		
			4-5	30-45		strong brown	clay		
SS41	41BX725	ST12	1-3	0-30	P	dark brown	sandy loam	1 sandstone FCR (0-10cmbs)	compact soils
SS42	41BX725	ST02	1-2	0-20	P	very dark grayish brown	sandy loam	1 chert shatter (0-10cmbs); 1 quartzite primary flake, 2 sandstone FCR (10-20cmbs)	compact soils
			3	20-30	N	brown	clay		
SS43	41BX725	ST01	1-4	0-40	P	dark grayish brown	silt	1 chert tertiary flake, 1 unknown FCR (0-10cmbs)	compact soils

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
SS44	41BX725	ST18	1-4	0-40	P	dark brown	sandy loam	1 chert shatter (0-10cmbs); 2 sandstone FCR (30-40cmbs)	depth/compact
			5-8	40-80		brown	sand	1 quartzite tertiary flake (40-50cmbs); 1 quartzite shatter (50-60cmbs)	
SS45	41BX725	ST03	1-3	0-30	P	very dark grayish brown	sandy loam	1 chert primary flake (0-10cmbs)	compact soils
SS46	41BX725	ST07	1-4	0-35	N	brown	sandy loam	none	compact soils
SS47	41BX725	ST23	1-4	0-40	N	dark brown	sandy loam	1 possible sandstone FCR (0-10cmbs)	compact soils
SS48			1-3	0-30	N	very dark grayish brown	gravelly silt	none	impenetrable gravel
SS49			1	0-5	N	yellow	caliche road base	none	impenetrable gravel
SS50			1-3	0-30	N	yellowish brown	sandy loam	none	compact soils
SS51	41BX722	ST01	1-2	0-20	N	very dark grayish brown	sandy loam	none	compact clay
			3	20-30		brownish yellow	clay		
SS52			1-6	0-60	N	brown	fine sandy loam	none	sterile subsoils
SS53			1-4	0-40	N	brown	fine sandy loam	none	sterile subsoils
SS54			1-4	0-40	N	brown	fine sandy loam	none	sterile subsoils
SS55	41BX728	ST02	1-6	0-60	N	brown	fine sandy loam	none	sterile subsoil
			7	60-65		very dark grayish brown w/brown mottles	sandy clay		
SS56	41BX728	ST03	1-8	0-80	N	brown	fine sandy loam	none	sterile subsoil

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
SS57	41BX745	ST01	1-6	0-60	N	dark grayish brown w/dark yellowish brown & yellowish brown mottles	sandy clay	none	compact clay/large roots
SS58	41BX725	ST19	1-3	0-30	N	brown	silty loam	none	sterile subsoil/compact
			3-4	30-35		yellowish brown	silty clay		
SS59	41BX723	ST07	1-4	0-35	N	dark yellowish brown w/gray	sandy loam	none	compact subsoil
SS60	41BX723	ST06	1-4	0-40	N	dark yellowish brown w/gray & red	sandy loam	none	compact subsoil
			5	40-45		gray			
SS61	41BX723	ST02	1-5	0-45	N	brownish yellow	sandy loam	none	sterile subsoil
SS62	41BX723	ST03	1-4	0-35	N	dark yellowish brown w/gray & red	sandy loam	none	sterile subsoil
SS63	41BX742	ST13	1-3	0-30	N	very dark brown	fine sandy loam	none	sterile subsoil
SS64	41BX742	ST01	1-3	0-25	N	very dark grayish brown	silty loam	none	compact clay
			3	25-30		black	clay		
SS65	41BX725	ST14	1-3	0-25	N	dark yellowish brown	sandy clay loam	none	compact clay
			3	25-30		brownish yellow with very dark gray brown mottles	clay		

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
SS66	41BX725	ST15	1-3	0-25	N	brown	sandy clay loam	none	compact clay
			3-5	25-50	P	dark brown	fine sandy loam	1 chert tertiary flack, 2 sandstone FCR (30-40cmts); 2 chert shatter, 1 chert FCR, 2 quartzite FCR (40-50cmts)	
			6	50-60	N	dark brown	sandy clay	none	
SS67	41BX725	ST16	1-2	0-20	N	brown	sandy clay loam	none	compacy clay
			3-4	20-40		dark brown	sandy loam		
SS68	41BX740	ST20	1-4	0-35	N	very dark grayish brown	sandy loam	none	compact clay
SS69	41BX740	ST16	1-3	0-25	N	very dark grayish brown	sandy loam	none	compact clay
			3	25-30		light yellowish brown	clay		
SS70	41BX740	ST24	1-3	0-30	P	very dark grayish brown	silty sand	6 chert FCR (0-10 cmts); 2 chert FCR (10-20 cmts); 1 chert FCR (20-30 cmts)	subsoil
			4	30-35	N	dark grayish brown	sandy loam	none	
SS71	41BX740	ST33	1-3	0-30	P	very dark grayish brown	silty sand	1 primary flake, (0-10 cmts); 2 chert FCR (10-20 cmts)	sterile subsoil
SS72	41BX740	ST31	1-2	0-20	N	very dark grayish brown	silty sand	none	subsoil

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
SS73	41BX742	ST15	1-3	0-30	N	very dark grayish brown	sandy loam	none	subsoil
SS74	41BX742	ST16	1-4	0-35	N	very dark grayish brown	sandy loam	none	subsoil
LC01			1-5	0-50	N	dark yellowish brown	fine silty sand	possible slag (50cmbs)	sterile subsoils/disturbed
LC02	41BX740	ST14	1-3	0-30	N	dark yellowish brown	silty sand	possibly very few slag (0-30cmbs)	sterile subsoils
LC03	41BX740	ST02	1-3	0-30	N	dark grayish brown	loamy clay	none	compact sand
LC04	41BX740	ST15	1-2	0-20	N	very dark grayish brown	loamy clay	none	compact sand
LC05	41BX740	ST08	1-2	0-20	N	dark grayish brown	silty/sandy loam	none	sterile subsoils
			3	20-30		very dark gray	silty clay		
LC06	41BX740	ST03	1	0-10	P	brown	fine silty sand	1 secondary flake, 1 shatter, 1 chert FCR (0-10cmbs); 2 primary flakes, 4 sandstone FCR, 1 limestone FCR, 3 chert shatter (10-20cmbs); 1 chert shatter, 3 sandstone FCR (20-30cmbs); 1 quartzite shatter, 1 chert FCR, (30-40cmbs)	sterile subsoils
			2	10-20					
			3	20-30					
			4	30-40					
			5	40-50	N	yellowish brown	silty sand	none	
			6	50-60					

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
LC07	41BX740	ST06	1-3	0-30	N	dark grayish brown	compact silty clay	none	compact clay
LC08			1-3	0-30	N	dark brown	loamy clay	none	sterile subsoils
LC09			1-3	0-30	N	very dark brown	loamy clay	none	sterile subsoils
LC10			1-3	0-30	N	very dark grayish brown	loamy clay	none	sterile subsoils
LC11			1-4	0-35	N	dark brown	loamy sand	none	sterile subsoils
LC12			1-3	0-30	N	dark yellowish brown	gravelly loam	possibly 3 chert shatter (0-10cmbs)	impenetrable gravel
LC13			1-3	0-30	N	very dark grayish brown	loamy clay	3 large flat limestone slabs, 3 possible sandstone FCR (20-30cmbs)	compact clay
LC14	41BX741	ST04	1-4	0-40	N	brown	silty sand	none	sterile subsoils
LC15	41BX741	ST10	1-3	0-30	N	very dark grayish brown	silty sand	none	sterile subsoils
LC16	41BX741	ST09	1-3	0-30	N	brown	silty sand	none	sterile subsoils
LC17	41BX741	ST08	1-3	0-30	N	brown	silt	none	compact sand
LC18	41BX741	ST07	1-6	0-60	N	brown	silt	possible flake	sterile subsoils
LC19			1-4	0-35	N	very dark grayish brown	silty clay	6 possible sandstone FCR (10-20cmbs); 12 possible sandstone FCR, 1 chert shatter (20-35cmbs)	impenetrable sandstone
LC20	41BX741	ST12	1-6	0-60	N	brown	fine silt	none	sterile subsoils
LC21			1-3	0-30	N	brown	silt	none	sterile subsoils

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
LC22	41BX742	ST04	1-4	0-35	P	very dark grayish brown	silt	1 chert FCR, 3 sandstone FCR, 3 charcoal nodules (0-10cmbs); 1 chert shatter, 5 charcoal nodules (10-20cmbs); 4 chert FCR, 1 sandstone FCR (20-30cmbs)	compact clay
LC23	41BX742	ST08	1-3	0-25	N	very dark grayish brown	silty loam	none	compact silty clay
			3-4	24-35		brown	silty clay		
LC24	41BX742	ST07	1-3	0-30	N	very dark grayish brown	silty loam	few sandstone gravels (0-30cmbs)	compact silty clay
LC25			1	0-10	N	very dark grayish brown	silt	none	sterile subsoils
			2-5	10-50		yellowish brown	sand		
LC26			1-2	0-20	N	dark brown	sandy clay loam	none	sterile subsoils
			3-4	20-38		yellowish brown	sandy loam		
			5-6	38-52		dark brown w/very dark brown	silty clay mix; fine gravel		
			6	52-66		strong brown	sand		
LC27			1	0-5	N	very dark grayish brown	silty clay loam	none	sterile subsoils
			1-2	5-15		dark grayish brown	silty clay		

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
LC28			1-2	0-15	N	very dark grayish brown	clay	none	sterile subsoils
			2-3	15-25		dark brown			
			3	25-30		strong brown			
LC29			1	0-10	N	brown	loamy clay	none	compact soils
			2-3	10-30		yellowish brown	silty clay		
LC30			1	1-10	N	brown	loamy clay	none	compact silty clay
			2	10-20		yellowish brown	sandy clay		
			3-5	20-45					
LC31	41BX725	ST17	1-3	0-25	N	dark grayish brown	silty clay	possible 6 slag fragments, 7 sandstone FCR (0-10cmbs); 2 possible sandstone FCR (20-30cmbs)	compact clay
			3-4	25-40		yellowish brown	clay/sandstone		
LC32	41BX725	ST22	1-3	0-30	N	brown	sandy loam	none	compact clay
			4	30-40		red	dense clay		
LC33	41BX723	ST01	1-4	0-40	N	brown	sandy loam	possible 5 sandstone FCR (30-40cmbs)	compact clay
LC34			1	0-5	N	brown	clay loam	none	compact clay
			1-2	5-15		yellowish brown			
			2-5	15-45		red w/grayish brown	clay		
LC35	41BX725	ST11	1-3	0-30	N	dark brown	clay loam	none	compact soils

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
LC36	41BX725	ST04	1-3	0-30	N	very dark grayish brown	clayey loam	none	compact soils
LC37	41BX725	ST05	1-4	0-40	P	very dark grayish brown	silty clay loam	2 chert shatter, 1 chert FCR (0-10cmbs); 1 limestone FCR (10-20cmbs)	compact clay
LC38	41BX725	ST13	1-3	0-30	P	dark brown	fine sandy loam	1 quartzite/chert secondary shatter (0-10cmbs); 1 limestone FCR (10-20cmbs);	compact clay
LC39	41BX725	ST06	1-5	0-45	P	brown	sandy loam	1 sandstone FCR, 1 chert tertiary flake (10-20cmbs)	compact soils
LC40	41BX725	ST20	1-4	0-40	N	red	clay	possibly 15 sandstone FCR (0-10cmbs); 10 sandstone FCR (10-20cmbs); 10 sandstone FCR (20-30cmbs); 4 sandstone FCR (30-40cmbs)	compact clay
LC41			1-2	0-15	N	dark grayish brown	sandy loam	none	sterile subsoils
			2-3	15-30		brown			
			4-5	30-45		mixed very dark gray, yellowish brown	sandy clay		

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
LC42			1	0-5	N	very dark grayish brown	clay loam	none	sterile subsoils
			1-4	5-35		yellowish brown			
LC43			1-4	0-35	N	dark yellowish brown w/reddish brown	silty sand	none	sterile subsoils
LC44			1-6	0-60	N	dark yellowish brown	silty sand	none	sterile subsoils
LC45			1-2	0-20	N	brown	silty sand	none	sterile subsoils
			3	20-30		dark yellowish brown w/reddish brown	clay		
LC46			1-3	0-30	N	brown	compact silty clay	none	sterile subsoils
LC47	41BX740	ST12	1-3	0-30	N	grayish brown	compact silty clay	none	sterile subsoils
LC48			1-3	0-30	N	dark yellowish brown w/reddish brown	silty sand	none	sterile subsoils
LC49			1	0-10	N	very dark grayish brown	loamy clay	none	compact clay
			2	10-20		yellowish red	loamy sandy clay	none	
			3-7	20-65		light yellowish brown	clay	possible 1 chert/quartzite FCR (40-50cmbs)	
LC50			1	0-10	N	dark brown	silty loam	none	sterile subsoils
			2-5	10-50		light yellowish brown w/yellowish brown			
LC51	41BX723	ST05	1-5	0-50	N	brown	silty loam	none	sterile subsoils
LC52	41BX723	ST04	1-4	0-35	N	brown	silty clay	none	ants

ST #	Site	Site ST #	Level	Depth	Positive/Negative	Soil Color	Soil Texture	Cultural Material	Comments/Reason for Termination
LC53	41BX742	ST03	1-2	0-20	P	brown	silt	1 primary flake, 3 hematitic sandstone FCR (0-10cmbs)	impenetrable bedrock
LC54	41BX742	ST02	1-3	0-25	N	brown	silty clay loam	none	gravelly clay/sterile subsoils
HB01	41BX740	ST23	0-3	0-30	P	dark brown	loamy clay	3 FCR (0-10 cmbs)	subsoil
			4	30-35	N	brown	sandy clay	none	
HB02	41BX740	ST26	0-2	0-15	P	dark brown	loamy clay	16 hematite FCR, 2 cortical chert flakes (0-15 cmbs)	subsoil
HB03	41BX740	ST27	0-2	0-20	P	dark brown	loamy clay	1 flake, 4 FCR (0-20 cmbs)	subsoil
HB04	41BX740	ST28	0-2	0-15	N	dark brown	loamy clay	possibly FCR and 3 interior chert flakes on surface	subsoil
HB05	41BX740	ST30	0-2	0-15	N	dark brown	loamy clay	possibly FCR & chert flakes on surface	subsoil
HB06	41BX740	ST32	0-3	0-25	N	dark brown	loamy clay	none	bedrock
HB07	41BX742	ST19	0-3	0-21	P	dark brown	loamy clay	1 cortical flake (0-20cmbs)	compact clay
HB08	41BX742	ST21	0-2	0-19	N	dark brown	sandy clay	none	compact clay
HB09	41BX742	ST20	0-2	0-16	N	dark brown	sandy clay	none	compact clay
HB10	41BX742		0-2	0-14	N	dark brown	sandy clay	none	compact clay