

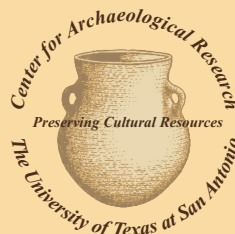
An Intensive Archaeological Investigation at the University of the Incarnate Word Republic Golf Course, San Antonio, Bexar County, Texas

by
Sarah Wigley



Principal Investigator
Raymond P. Mauldin

Prepared for:
University of the Incarnate Word
4301 Broadway CPO #319
San Antonio, Texas 78209



Prepared by:
Center for Archaeological Research
The University of Texas at San Antonio
One UTSA Circle
San Antonio, Texas 78249-1644
Archaeological Report, No. 442

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Abstract:

In November-December 2014, the Center for Archaeological Research (CAR) at the University of Texas at San Antonio (UTSA) conducted an archaeological survey of 4.3 acres of private property owned by the University of the Incarnate Word (UIW). The survey was required by the City of San Antonio (COSA) in compliance with the COSA Unified Development Code (UDC) Chapter 35.

A pedestrian survey with shovel testing and backhoe trenching was conducted in order to identify potential archaeological resources within the project area. A small prehistoric site (41BX2065) was located in the southern portion of the project area. Deposits at the site were of low density, and no cultural features or temporal diagnostics were recorded. Therefore, the CAR recommends that the site is ineligible for inclusion on the National Register of Historic places (NRHP) and that future development on the project area proceed as planned.

Artifacts collected and records generated during this project were prepared for curation according to Texas Historical Commission (THC) guidelines and are permanently curated at the CAR at UTSA.

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Chapter 1: Introduction and Project Summary

The Center for Archaeological Research (CAR) of the University of Texas at San Antonio (UTSA) was contracted by the University of the Incarnate Word (UIW) to provide archaeological services required by the City of San Antonio (COSA) on 4.3 acres privately owned by UIW at the Republic Golf Club. The work was coordinated through the COSA Office of Historic Preservation (OHP) to be in compliance with the COSA Unified Development Code (UDC) Chapter 35. The CAR completed a 100 percent pedestrian survey with shovel testing and backhoe trenching to identify and record archaeological resources within the project area that could be impacted by future development. Dr. Raymond P. Mauldin, CAR Acting Director, served as Principal Investigator, Cynthia Moore Munoz served as Project Manager, and Sarah Wigley served as Project Archaeologist.

No artifacts were observed on the ground surface during the course of this survey; however, thick vegetation obscured much of the ground surface. To explore subsurface deposits within the project area, 17 shovel tests and three backhoe trenches were excavated. A small amount of prehistoric cultural material was recovered from two shovel tests in the southern portion of the project area.

This document presents the results of these investigations. Following this introduction, Chapter 2 provides an overview of the environmental setting and reviews the previous archaeological investigations in the area. Chapter 3 outlines the field and laboratory methods used by the CAR personnel during the completion of this project. Chapter 4 provides the results of field investigations. Chapter 5 summarizes the project and offers recommendations based on the results.

Chapter 2: Project Setting

This chapter presents a brief discussion of the environment and culture history of the project area. A summary of previous archaeological work completed near the project area concludes the chapter.

Environmental Setting

The project area, located in southeast San Antonio in Bexar County, Texas, encompasses 4.3 acres of undeveloped land owned by the UIW Republic Golf Club (Figure 2-1). It is bounded by SE Military Drive to the north, Republic Parkway to the east, and the Republic Golf Club to the south and west. An overhead power easement lies to the north. The property is located on a stream terrace approximately 400 meters (m) east of Salado Creek (Figure 2-2). Bexar County is located between the southern limits of the Edwards Plateau and the northern edge of the South Texas Plain. The landscape ranges from limestone uplifts and thin soil to gently rolling hills and deep loam. The major streams include Cibolo Creek, Leon Creek, Medina River, San Antonio River, and Salado Creek (Snively 1984). The Salado Creek originates in northern Bexar County and runs for 61 kilometers (km) to the San Antonio River (Texas State Historical Association [TSHA] 2010).

The project area is dominated by Lewisville silty clay (LvA) soils, with slopes of 0-1 percent. These well-drained soils are located on stream terraces and generally extend to a depth of more than 200 centimeters (cm). They are very deep and moderately permeable (National Cooperative Soil Survey [NCSS] 2014b) and are mainly located on nearly level stream terraces of the major rivers within the county (United States Department of Agriculture, Soil Conservation Service [USDA, SCS] 1991). The depth of the soil and the close proximity to water resources, in addition to numerous recorded archaeological sites located along Salado Creek, suggest a possibility of buried archaeological sites on the project area.

Pedogenic carbonate accumulation is significant in arid, semiarid, and subhumid environments, and is closely associated with soil age (Shoenberger et al. 2012:2-28). Carbonate accumulation is described in stages (I-IV), with older soils displaying increased stages of carbonate accumulation. Carbonate accumulation within soil horizons is affected by both precipitation and temperature as CaCO_3 is deposited through water accumulation in the soil. Carbonates accumulate more rapidly in gravel because gravel contains

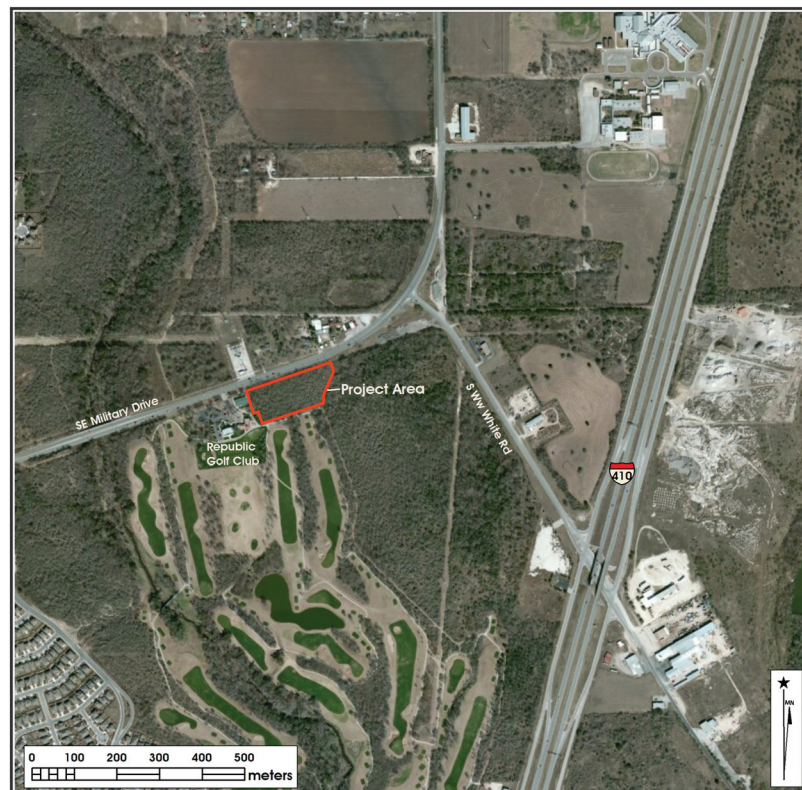


Figure 2-1. Location of project area.

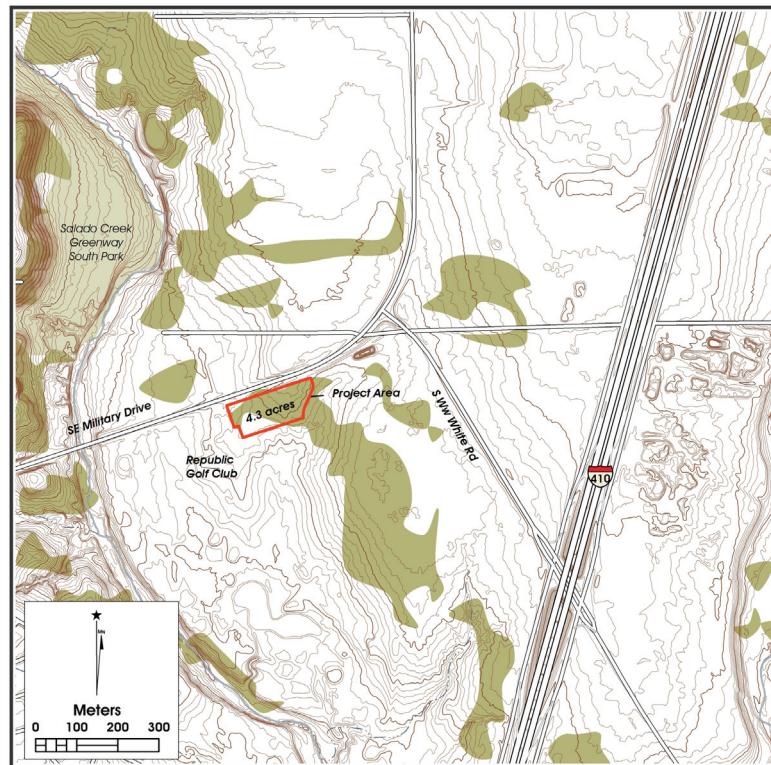


Figure 2-2. Location of project area on Longhorn 7.5-minute series USGS quadrangle map.

less pore space. Therefore, carbonate heavy horizons in gravel may be younger than similar horizons in low gravel soils (Birkeland 1984:141). Heavy carbonate accumulation in the Southwest is associated with soils formed prior to and during the late Pleistocene (Gile et al. 1981; Machette 1985).

Climate in Bexar County is classified as subtropical-subhumid, with an average rainfall of 79 cm per year. It has mild winters, with an average low temperature of 3.9°C, and hot summers, with an average high temperature of 35°C (Long 2010).

The historic climax plant community in the area is a midgrass savannah, dominated by grasses including false and multiflower Rhodesgrass, little bluestem, and Arizona cottontop. It has less than five percent canopy of shrubby wooden plants and essentially no bare soil. This is a fire climax plant community. The current vegetation is dense and brushy with woody seedlings due to the lack of brush control (Figures 2-3 and 2-4; NCSS 2014a). A barbed wire fence runs along the northern boundary of the project area. A number of heritage trees have been identified within the project area by the City of San Antonio. Heritage trees are defined as a protected class of native species with a certain trunk diameter (COSA UDC, Chapter 35, Section 523). These trees were avoided during the course of fieldwork.

Culture History

San Antonio is located near the intersection of the Central Texas and the South Texas archaeological areas. Depending on where the boundary is placed, Central Texas is either bisected or bounded by the Balcones Escarpment (Collins 2004; Hester 2004) while South Texas includes the South Texas Plains (Hester 2004). This discussion follows Central Texas chronology with some comments from Hester's (2004) discussion of South Texas chronology.

The prehistory of Central and South Texas is generally discussed in terms of three broad periods: the Paleoindian period, the Archaic period, and the Late Prehistoric period. These periods are further distinguished through differences in material culture and subsistence. While no cultural material was recovered diagnostic of a specific time period, a general culture history of South and Central Texas is provided.

Paleoindian Period

The Paleoindian period (11,500-8,800 BP) represents the earliest evidence of human activity in the region. The period begins at the close of the Pleistocene just prior to a significant environmental shift from cooler, wetter woodlands to drier



Figure 2-3. *Project area environment overview (western portion).*



Figure 2-4. *Project area environment overview (eastern portion).*

open grasslands with some fluctuation (Bousman and Oksanen 2012; Nickels and Mauldin 2001). Paleoindian subsistence is traditionally viewed as focused on big game hunting; however, more recent investigation shows a more diversified strategy including game of all sizes. Poor floral preservation has led to a lack of data on the use of plants by Paleoindian people (Bousman and Oksanen 2012; Waguespack and Surovell 2003). Groups were dispersed and highly mobile in comparison to later periods (Bousman and Oksanen 2012). Due to the shifting landscape in the region, archaeological sites are not often found in good stratigraphic context. Because contexts are often mixed or eroded out, Paleoindian sites are often found on the surface (Bousman and Oksanen 2012; Collins 2004; Hester 2004). Projectile point typologies play a significant role in identification and interpretation of Paleoindian sites in Texas. Folsom and Clovis points, characterized by fluting, are diagnostic of early Paleoindian cultural material, with Folsom occurring slightly later than Clovis. Greater diversity in point forms occurs later in the Paleoindian period. Golondrina, St. Mary's Hall, Wilson, St. Patrice, Berclair, and Big Sandy point types all date to this period (Bousman et al. 2004; Collins 2004). Archaeological sites within Bexar County with Paleoindian components include 41BX452 (Pavo Real) and 41BX229 (St. Mary's Hall; Collins et al. 2003; Figueroa and Frederick 2008; Hester 1977).

Archaic Period

The Archaic period (8800-1200 BP) is characterized by a more xeric, grassland climate (Nickels and Mauldin 2001) although a certain amount of climate oscillation has been suggested (see Collins 2004). A greater diversity in cultural material suggests a heightened intensity in hunting and gathering. There is a notable increase in the use of heated rocks in the form of hearths, middens, and other cultural features and in the use of groundstone technology (Black et al. 1997; Collins 2004). This has been attributed to an increase in the use of plant resources; however, the use of burned rock may also suggest greater organization necessary to feed larger groups of people. In addition to increased population, groups may have consolidated and solidified boundaries (Bousman and Oksanen 2012). There is also evidence of greater diversity in lithic tools. The early part of the Archaic is characterized by Angostura, early splitstem, and Martindale/Uvalde projectile point styles and Guadalupe tools. The Middle Archaic subperiod is defined by Nolan-Travis projectile points and Bell-Andice-Calf Creek and Taylor bifaces. During the Late Archaic, a wide variety of dart point styles were present, including Bulverde, Pedernales, Montell, Castroville, Frio, and Ensor. Corner-tanged knives and cylindrical stone pipes were common. Large cemeteries, such as site 41BX1, also became more prevalent (Collins 2004; Lukowski et al. 1988).

Many Archaic sites have been recorded in Bexar County, including 41BX1888 on the San Antonio River (Munoz and DiVito 2012).

Late Prehistoric Period

The Late Prehistoric period in Texas (1200-350 BP) is characterized by a shift towards the use of bow and arrow technology. The initial interval of this period, the Austin phase, is distinguished by Scallorn and Edwards points. The latter subperiod, the Toyah phase, is characterized by Perdiz dart points, the use of pottery, large thin bifaces, and prismatic blades. Material culture associated with this period suggests increasing complexity in technology and subsistence strategies. It is unclear whether the spread of material culture associated with this phase is the result of the spread of a particular group of people or the use of technologies passing between groups (Collins 2004; Hester 2004).

Historic Period

The Historic period is defined by the first documented arrival of Europeans to Texas. Even prior to extensive interaction with the Europeans, indigenous groups were being displaced due to the movement of other Native American groups displaced by the Spanish. Cultural patterns were also altered by the introduction of previously unknown resources such as horses. European-introduced diseases resulted in massive mortality rates among indigenous populations. In later periods, Native Americans sought refuge within the Spanish mission system. Displacement and disease due to the movement of the Spanish into the area brought massive change to the indigenous way of life in the region (Collins 2004).

Previous Archaeological Investigations

No previously recorded sites are located within the project area. However, four prehistoric sites are located within a kilometer of the site (Figure 2-5). Site 41BX361 is located on the east bank of the Salado Creek, approximately 350 m west of the project area. Site 41BX362 is also located along the Salado Creek, approximately 500 m southwest of the project area. These two sites were recorded during a 1974 survey conducted by the CAR (Fox 1977). Site 41BX596 lies about 550 m south of the project area on the northeast side of Salado Creek. This site was recorded in 1983 during another survey conducted by the CAR (Snively et al. 1984). Site 41BX176 is located about 600 m south of the project area. This site was recorded in 1972 by Anne Fox after reports of digging by local artifact hunters within the site (Texas Historical Commission [THC] 2014).



Figure 2-5. Location of archaeological sites near the project area.

Prehistoric material was observed on the surface of 41BX361 following topsoil stripping that removed a portion of site. Surface material was recorded but not collected. Lithic debitage, bifaces, and projectile point fragments were recorded within the 20-x-200 m site (Fox 1977; THC 2014). Site 41BX361 also contained historic glass bottles. Further testing was recommended.

Site 41BX362 is located on a terrace of the Salado Creek. The site is defined by a surface scatter of lithic debitage, cores, bifaces, burned rock, snail, and mussel shell within a linear area spanning 30-x-80 m. Testing was recommended to determine the extent of the deposits (Fox 1977; THC 2014).

Site 41BX596 was recorded during the course of another survey by the CAR in 1983 (Snively et al. 1984). The site

is located on the northeast side of the Salado Creek on a hillside. A thin lithic scatter, mussel shell, burned rock, and snail were recorded on the surface. Shovel testing was conducted in order to determine the depth of the deposits. The site was determined to have no subsurface deposits within the project area, and no further testing was recommended (Snively et al. 1984).

Site 41BX176 was recorded in 1972 by Anne Fox following reports of human remains excavated by local artifact collectors (THC 2014). The remains of at least three individuals, a shell pendant, two Scallorn projectile points, lithic debitage, and mussel shell were reported. The site had been disturbed by the collectors' activities and commercial stripping of topsoil. Further testing was recommended due to the site's vulnerability and the possibility of more burials in the area, but the private landowner was resistant (THC 2014).

Chapter 3: Field and Laboratory Methods

Field Methods

Seventeen shovel tests (STs) were excavated. Ten were initially excavated to fulfill the THC minimum survey standards of a density of two STs per acre. Seven additional shovel tests were excavated to delineate one shovel test (Shovel Test 4) that was positive for cultural material. Shovel test locations were evenly distributed within the project area. Shovel tests were 30 cm in diameter, and when possible, extended to a depth of 60 cm below the surface (cmbs). Shovel test excavations below 60 cm increase the chances of wall fall mixing with deep deposits, thus decreasing confidence that anything found is in context. Each shovel test was excavated in 10-cm increments, and all soil from each level was screened through ¼-inch hardware cloth. A soil sample was collected from each level. All encountered artifacts were recovered with appropriate provenience for laboratory processing, analysis, and curation. A shovel test form was completed for every excavated shovel test. Data collected from each shovel test included the final excavation depth, a tally of all materials recovered from each 10-cm level, and a brief soil description (texture, consistency, Munsell color, inclusions). A profile sketch was included, if warranted. The location of every shovel test was recorded with Trimble Geo XT GPS units. Shovel test locations were sketched onto topographic maps or aerial photographs as a backup to GPS provenience information. Any additional observations considered pertinent were included as comments on the standard shovel test excavation form.

Three backhoe trenches were excavated. The locations of the trenches were at the discretion of the Principal Investigator and Project Archaeologist. Trenches were excavated where deep soils were anticipated. Backhoe trenches were excavated to the interstice of Pleistocene and Holocene deposits, unless this terminus extended 3 m or more in depth. Per Occupational Safety and Health Administration (OSHA) regulations (OSHA 2014), CAR archaeologists did not enter trenches exceeding 1.5 m in depth. Therefore, trenches were

excavated to a depth of 1.5 m below the surface (mbs), cleaned, profiled, and photographed, and excavation then continued to the stated terminus. All observations by CAR archaeologists of cultural material or stratigraphy below 1.5 mbs were made from the surface. Backhoe trenches did not exceed 5 m in length. Trench walls that revealed unique stratigraphy were profiled to record soil stratigraphy and any cultural material. All trench walls were photographed. Trench locations were recorded with a GPS unit and hand-plotted on aerial maps.

For the purposes of this survey, the CAR defines an archaeological site as containing cultural materials or features that are at least 50 years old with (1) five or more surface artifacts within a 15-m radius (ca. 706.9 m²), or (2) a single cultural feature, such as a hearth, observed on surface or exposed in shovel testing or backhoe trenching, or (3) a positive shovel test or backhoe trench containing at least three artifacts within a given 10-cm level, or (4) a positive shovel test or backhoe trench containing at least five total artifacts, or (5) two positive shovel tests or backhoe trenches located within 30 m of each other.

Laboratory Methods

All cultural materials and records obtained and/or generated during the project were prepared in accordance with 36 CFR part 79, and THC requirements for State Held-in-Trust collections. Artifacts processed in the CAR laboratory were washed, air-dried, and stored in 4-mm zip locking archival-quality bags. Acid-free labels were placed in all artifact bags. Each label contains provenience information and a corresponding lot number written in archival ink, pencil, or produced by a laser printer. Artifacts were separated by class and stored in acid-free boxes. Digital photographs were printed on acid-free paper, labeled with archivally appropriate materials, and placed in archival-quality sleeves. All field forms were completed with pencil. All collected materials are permanently housed at the CAR.

Chapter 4: Results of Field Investigations

In November-December 2014, an intensive pedestrian survey was conducted at the UIW Republic Golf Club. Seventeen shovel tests and three backhoe trenches were excavated within the 4.3-acre project area. One small, low-density, prehistoric site (41BX2065) was recorded. This chapter discusses the results of these investigations.

Shovel Testing

No artifacts were observed on the ground surface during the course of the survey. However, dense vegetation and, in some areas, wood mulch obscured ground surface visibility throughout the project area.

Seventeen shovel tests (STs) were excavated within the project area (Figure 4-1). All shovel tests reached the intended termination depth of 60 cmbs. Ten shovel tests were

initially excavated. One of the ten (ST 4) was positive with lithic debitage (n=1). Seven additional shovel tests were excavated to explore the extent of the material. One of the seven (ST 11) contained burned rock (n=1). Twelve percent of the shovel tests contained archaeological material (Table 4-1). No temporally diagnostic artifacts or cultural features were recorded during the course of shovel testing.

Shovel tests sediments consisted of deep deposits of silty clay. Sediments in the western portion of the project area ranged from black (10YR 2/1) to very dark brown (10YR 2/2) moist silty clay in the upper layers to dark yellowish brown silty clay (10YR 3/4) with some carbonates at the shovel test termination depth of 60 cmbs. Soils in the eastern portion of the project area ranged from very dark grayish brown (10YR 3/2) to dark yellowish brown (10YR 3/4) silty clay in upper layers to dark yellowish (10YR 4/4) to yellowish brown (10YR 5/4) mottled sandy clay with roots and pebbles at 60 cmbs.



Figure 4-1. Location of shovel tests within the project area (positive tests are in red).

Table 4-1. Summary of Shovel Tests Excavated

ST	Cultural Material Present	Termination Depth
1	No	60 cmbs
2	No	60 cmbs
3	No	60 cmbs
4	Yes (lithic debitage)	60 cmbs
5	No	60 cmbs
6	No	60 cmbs
7	No	60 cmbs
8	No	60 cmbs
9	No	60 cmbs
10	No	60 cmbs
11	Yes (burned rock)	60 cmbs
12	No	60 cmbs
13	No	60 cmbs
14	No	60 cmbs
15	No	60 cmbs
16	No	60 cmbs
17	No	60 cmbs

Backhoe Trenching

Three backhoe trenches (BHTs) were excavated within the project area (Figure 4-2). To avoid damaging heritage trees, following consultation with the COSA Assistant City Arborist and Tree and Landscape Inspector, the trenches were located within previously cleared pathways through the project area. BHT 1 was placed on the northern side of the project area near SE Military Drive. BHT 2 was located on the southern side within the boundaries of 41BX2065. BHT 3 was located in the western portion of the project area near the Republic Golf Club building. No cultural material was observed in the backhoe trenches.

As discussed previously, carbonate accumulation is closely associated with soil age (Gile et al 1981, Machette 1985). In this region, soils which are light in color and contain heavy amounts of carbonates due to advanced (Phase II and above) carbonate accumulation are associated with the Pleistocene, indicating that the soils are unlikely to contain cultural material. All three backhoe trenches terminated in this horizon.

BHT 1 (Figure 4-3) consisted of four depositional zones. Because CAR personnel did not enter trenches deeper than 150 cmbs (OSHA 2014), excavations deeper than 150 cm were not profiled. Layer 1(0-36 cmbs) contained very dark grayish brown (10YR 3/2) soft silty

clay with roots. Layer 2 (36-77 cmbs) was a very dark grayish brown (10YR 3/2) more compact silty clay with small flecks of carbonates. Layer 3 (77-138 cmbs) consisted of a brown (10YR 4/3) clay with carbonates. Layer 4 (138-150 cmbs) was a dark yellowish brown (10YR 4/6) clay with a large amount of carbonates. The trench terminated at 200 cmbs.

BHT 2 (Figure 4-4) consisted of six depositional zones. Layer 1 (0-25 cmbs) contained black (10YR 2/1) soft silty clay with roots. Layer 2 (25-56 cmbs) was very dark gray (10YR 3/1) silty clay that was slightly mottled and contained gravel. Layer 3 (56-90 cmbs) was brown (10YR 4/3) silty clay containing carbonate flecks. Layer 4 (90-110 cmbs) consisted of dark yellowish brown (10YR 4/6) silty clay, with more carbonates than the previous layer. Layer 5 (110-145 cmbs) contained light yellowish brown (10YR 6/4) clay with carbonates nodules. Layer 6 (110-145 cmbs) was an area of yellowish brown (10YR 5/6) clay with heavy gravel located in the eastern portion of the profile. The trench terminated at 200 cm.

BHT 3 (Figure 4-5) consisted of four depositional zones. Layer 1 (0-30 cmbs) contained very dark grayish brown (10YR 3/2) loose silty clay containing small roots. Layer 2 (30-60 cmbs) was very dark grayish brown (10YR 3/2) compact silty clay containing larger roots. Layer 3 (60-98 cmbs) consisted of dark grayish brown (10YR 4/2) silty clay containing flecks of carbonates. Layer 4 (98-148 cmbs) was dark yellowish brown (10YR 4/4) silty clay with increased carbonates from the previous layer. The trench terminated at 170 cm.



Figure 4-2. Backhoe trenches excavated in the project area.

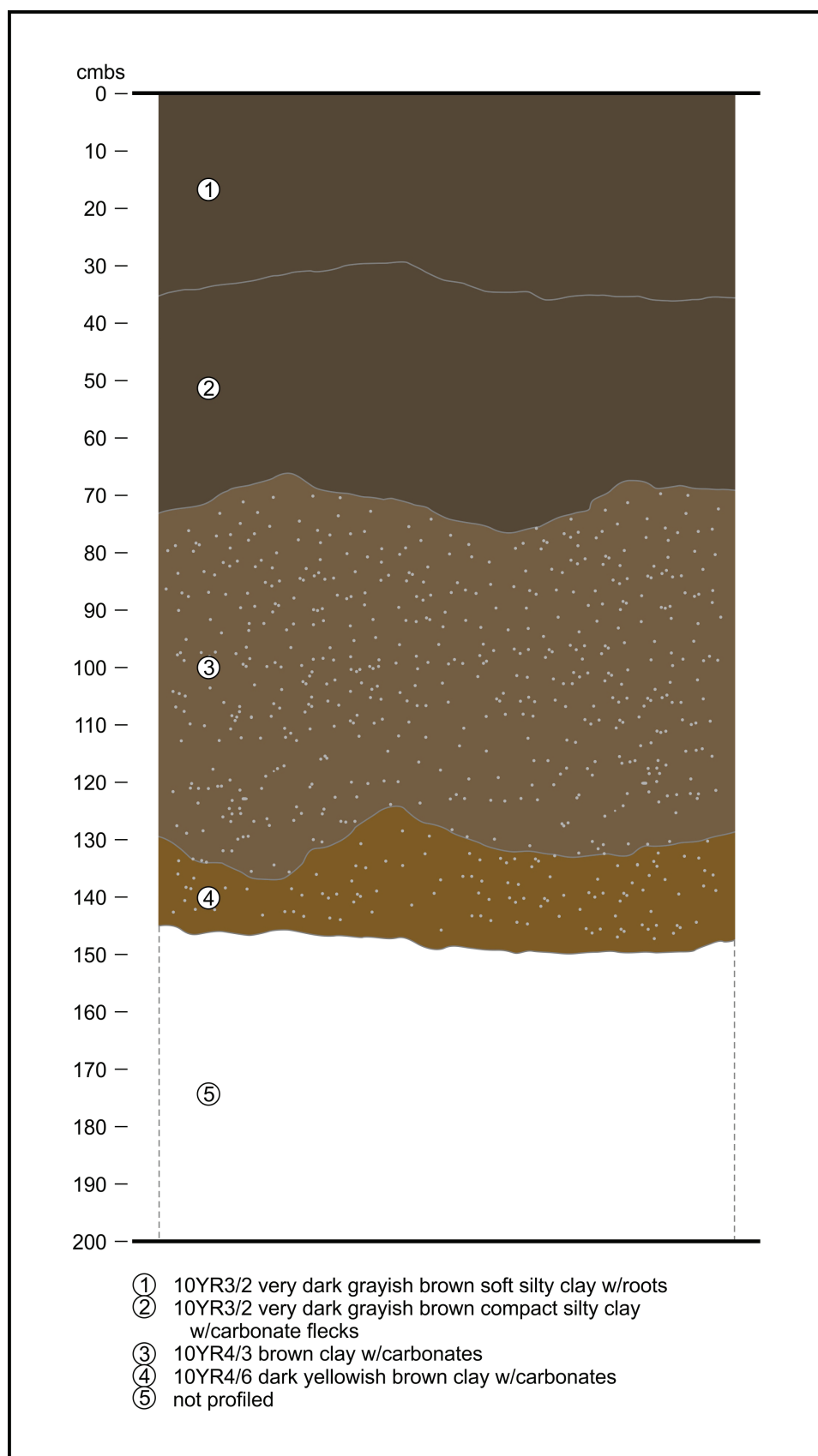


Figure 4-3. East profile of BHT 1.

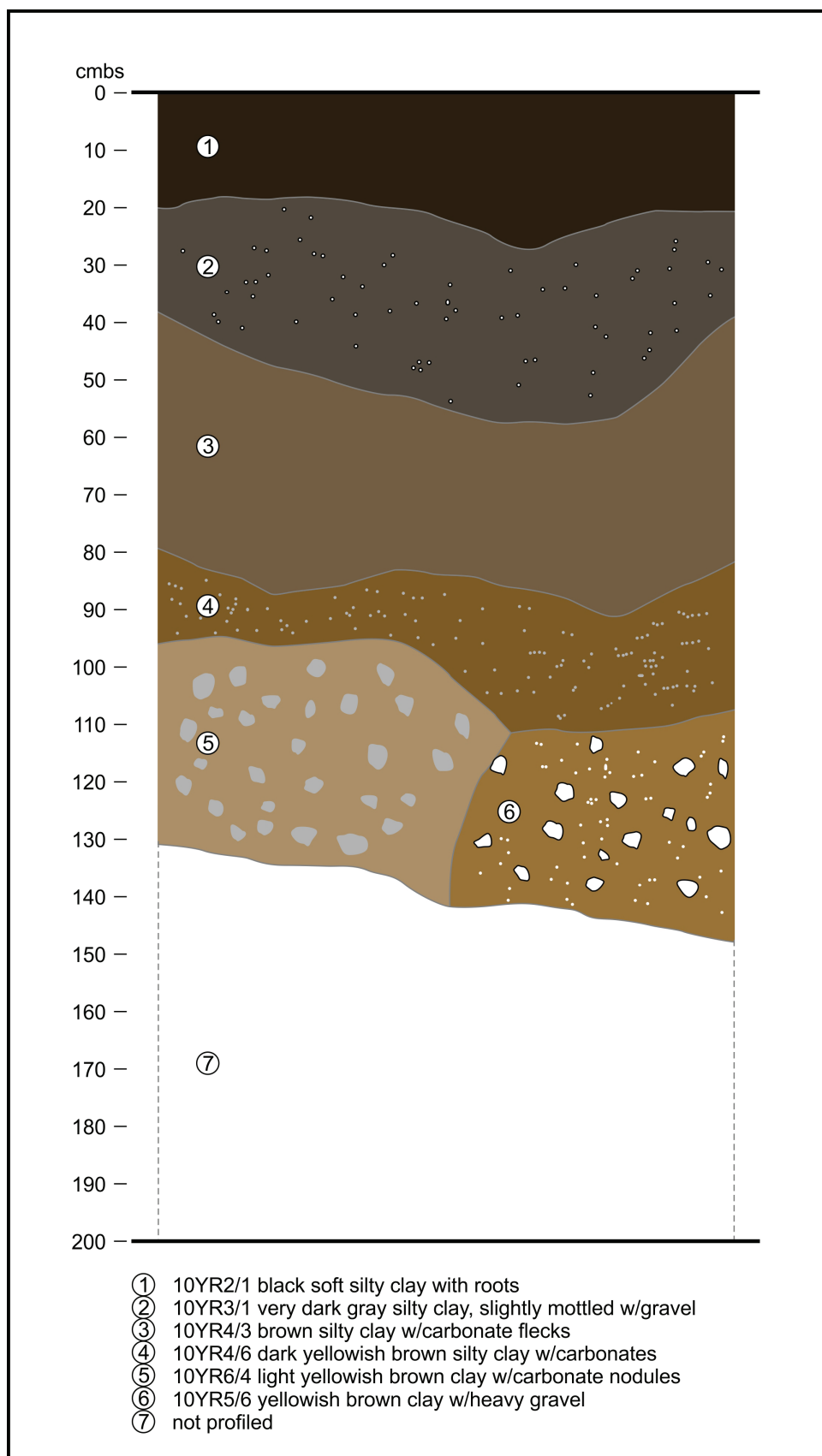


Figure 4-4. North profile of BHT 2.

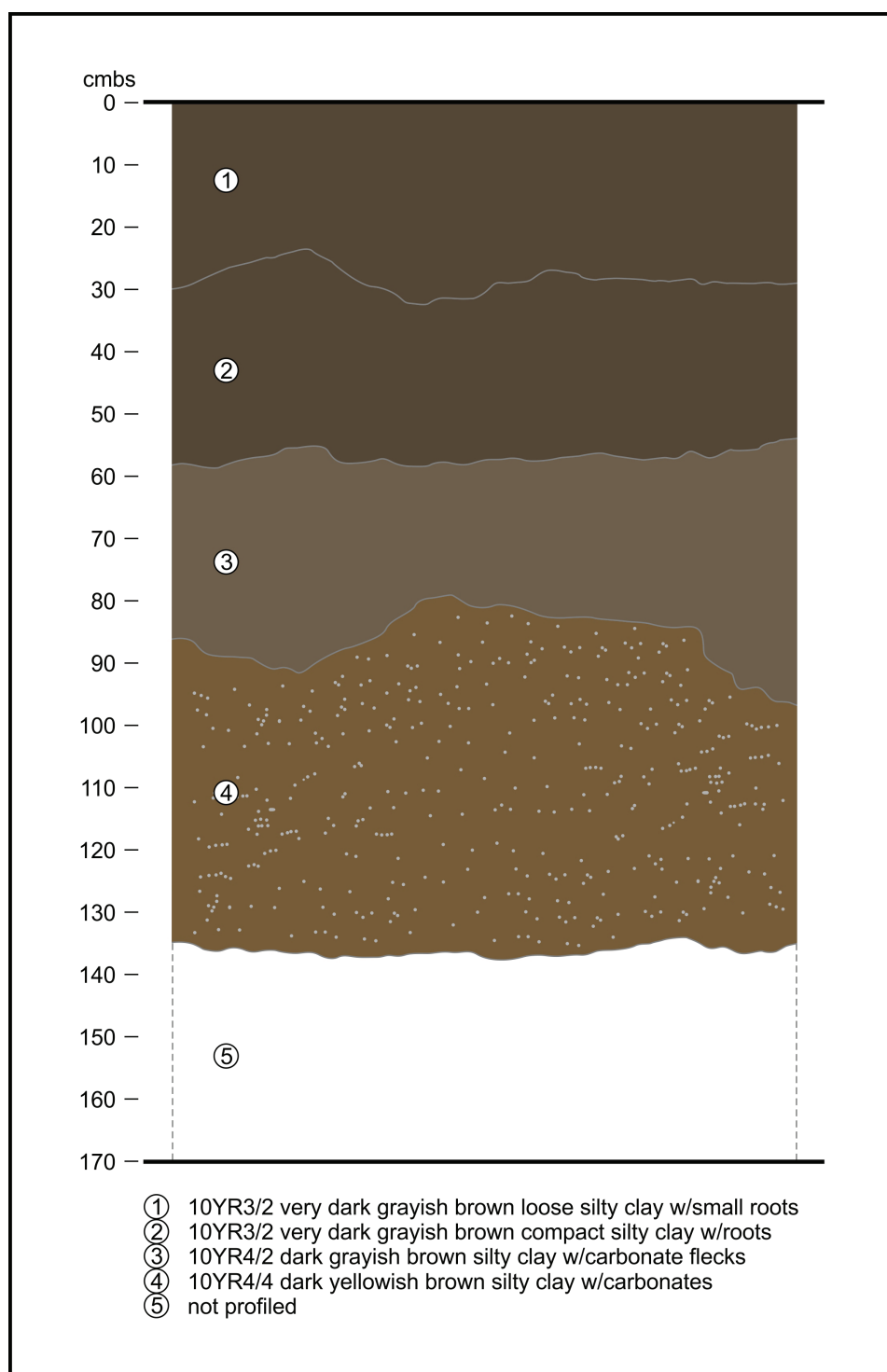


Figure 4-5. South profile of BHT 3.

41BX2065

Site 41BX2065 (596 m²) is located in the southern portion of the project area adjacent to the golf course (Figure 4-6). The site possibly extends onto the property south of the project area. The area contains dense vegetation with evidence of recent clearing (Figure 4-7). The small

prehistoric site was defined by one specimen of debitage (Level 6, 50-60 cmbs) and 6.2 g of burned rock (Level 2, 10-20 cmbs) recovered from STs 4 and 11, respectively. Backhoe trenching to a depth of 200 cmbs on the site (BHT 2) did not recover any additional cultural material. The low density of material suggests a low potential for future research.



Figure 4-6. Boundary of 41BX2065 (highlighted in yellow).



Figure 4-7. Area of 41BX2065 photographed facing northeast.

Chapter 5: Summary and Recommendations

In November-December 2014, archaeologists from the Center for Archaeological Research (CAR) at the University of Texas at San Antonio (UTSA) conducted a pedestrian survey with shovel testing and backhoe trenching of a 4.3-acre project area owned by the University of the Incarnate Word (UIW). The project was conducted to be in compliance with the City of San Antonio's Unified Development Code (UDC) Chapter 35. The project area was located at the Republic Golf Club. The goal of the survey was to locate and record any archaeological material found within the project area and to assess the impact of proposed developments on any sites that were identified.

Seventeen shovel tests and three backhoe trenches were excavated. One previously unknown archaeological site (41BX2065) was recorded. The site contained buried deposits consisting of one piece of lithic debitage and one specimen of burned rock. No temporally diagnostic artifacts or cultural features were identified on the project area. No evidence of deeper deposits was uncovered during the backhoe trenching in the project area. The low density of cultural material suggests low potential for future research. Therefore, the CAR recommends that the site be listed as ineligible for the NRHP and recommends no further testing. The CAR further recommends that development of the property proceed as planned.

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