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Archeological Testing and Evaluation of the Western Portion of 41CV1310, Fort Hood, Coryell County, Texas

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**ARCHEOLOGICAL TESTING AND EVALUATION
OF THE WESTERN PORTION OF 41CV1310, FORT HOOD,
CORYELL COUNTY, TEXAS**

by

Gemma Mehalchick

Principal Investigator: Douglas K. Boyd

LETTER REPORT NO. 782

submitted to

Archeological Studies Program
Environmental Affairs Division
Texas Department of Transportation
Austin, Texas

CSJ No. 0909-39-110

by

Prewitt and Associates, Inc.
Cultural Resources Services
Austin, Texas

PAI No. 207025

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CONTENTS

ABSTRACT	iv
ACKNOWLEDGMENTS	v
INTRODUCTION	1
SITE SETTING	1
PREVIOUS INVESTIGATIONS	4
WORK ACCOMPLISHED AND RESULTS	5
SEDIMENTS AND STRATIGRAPHY	7
CULTURAL MATERIALS.....	7
ASSESSMENT AND RECOMMENDATIONS	8
REFERENCES CITED	11

LIST OF FIGURES

1. General location of 41CV1310 along the upper portion of House Creek
in western Fort Hood 2

2. Site map of 41CV1310 showing excavated shovel tests and subareas
defined by TRC Mariah in 1992 3

3. Site map of 2007 PAI excavations in Subarea C, 41CV1310 6

LIST OF TABLES

1. Summary of 2007 PAI excavations in Subarea C, 41CV1310 8

2. Summary of cultural materials collected and observed from excavations
in Subarea C, 41CV1310 8

3. Collected and observed cultural materials by excavation provenience
in Subarea C, 41CV1310 9

ABSTRACT

Prewitt and Associates, Inc., completed an evaluation of the western portion of Subarea C at 41CV1310 on the Fort Hood Military Reservation in June and July 2007. The work was conducted for the Texas Department of Transportation in conjunction with the proposed Northeast Copperas Cove Bypass in southern Coryell County. Fieldwork included a resurvey of the area and hand excavation of shovel tests and test units. Maximum dimensions of the tested landform, a small segment of Holocene terrace (T¹) adjacent to House Creek, are 65x40 m, or 2,600 m². Excavations yielded only sparse prehistoric cultural remains in questionable depositional context, and the area has no potential to contain an intact and interpretable prehistoric component. It is recommended that this portion of 41CV1310 is not eligible for listing in the National Register and warrants no further work.

CURATION

The 2007 archeological investigation of the western portion of Subarea C at 41CV1310 recovered 29 artifacts (28 unmodified flakes and 1 uniface) from hand-excavated units and shovel tests. All of the recovered artifacts, along with all project records, are permanently curated at the Cultural Resources Management Program, Department of Public Works, United States Army, Fort Hood.

ACKNOWLEDGMENTS

Prewitt and Associates, Inc., conducted the archeological investigations for the Archeological Studies Program, Environmental Affairs Division, Texas Department of Transportation, in Austin, Texas. Thanks to James T. Abbott of TxDOT and Karl Kleinbach and Sunny Wood of Fort Hood's Cultural Resource Management Program for their help in coordinating this project.

Douglas K. Boyd served as principal investigator, and Gemma Mehalchick was project archeologist. The fieldwork was performed by Mehalchick, Virginia Hatfield, Chris Kugler, and Matt Taylor. Brian Wootan created the figures, and Elaine Robbins edited this report.

INTRODUCTION

Prewitt and Associates, Inc. (PAI), conducted archeological investigations on the western portion of Subarea C at 41CV1310 on Fort Hood in Coryell County in June and July 2007. The work was conducted for the Archeological Studies Program, Environmental Affairs Division, Texas Department of Transportation (TxDOT) under Contract No. 577XXSA001, Work Authorization No. 57716SA001. The work was coordinated with the Cultural Resources Management Program (FHCRMP), Department of Public Works, United States Army, Fort Hood, under authority of Excavation Permit Control No. 07-375. Because the project is on federal land, cultural resources studies are required under Section 106 of the National Historic Preservation Act (16 USC 470 et seq.; 36 CFR 800).

The archeological investigation was initiated because the western end of 41CV1310 may be impacted by construction activities associated with TxDOT's proposed Northeast Copperas Cove Bypass at the point where the bypass merges with Tank Destroyer Boulevard. Previous archeological investigations determined that Subarea C at 41CV1310 was eligible for listing in the National Register of Historic Places (National Register). The 2007 archeological investigation reported here was done to determine if significant archeological remains were present within the proposed bypass impact area, which includes only the westernmost section of Subarea C.

Three of four tasks proposed in the scope of work were completed. Task 1, the prefield planning, was completed by July 6, 2007. Task 2 consisted of the Stage 1 field investigations, conducted July 9–11, 2007, and included hand-excavated shovel tests and 100x50-cm test units. Task 3 specified that Stage 2 field investigations would include additional hand-excavated units and mechanical trenching if warranted. Because no discrete cultural deposits were encountered during the Stage 1 testing, further investigations were not warranted, and Task 3 was eliminated. Task 4 was the laboratory processing and analysis of the recovered prehistoric artifacts and the preparation of this report.

Located in southern Coryell County along the western edge of the Fort Hood military installation (Figure 1), 41CV1310 is a large prehistoric campsite situated on various terraces, slopes, and the uplands south of House Creek (Figure 2). The site was previously divided into subareas that correspond to different geomorphic landforms, and the field investigations were limited to the western portion of Subarea C, which consisted of a small section of alluvial terrace designated as a T_1 surface.

SITE SETTING

The project area encompasses the western portion of Subarea C, which is primarily composed of a northward-sloping T_1 surface along House Creek. It is located about 12 km southwest of House Creek's confluence with Cowhouse Creek, a tributary of the Leon River within the Brazos River drainage basin. In addition to the sloping T_1 surface, modern low-lying sections of floodplain (T_0) are present in the project area. The area is mapped as floodplain deposits on the Waco Sheet of the *Geologic Atlas of Texas* (Bureau of Economic Geology 1979). The Coryell County soil survey (U.S. Department of Agriculture 1985:Sheet 54, 19–20, 62, 69) shows the site area covered by Doss-Real complex soils. These alluvial soils are shallow, well-drained, gravelly clay and clay loams on gently sloping to sloping

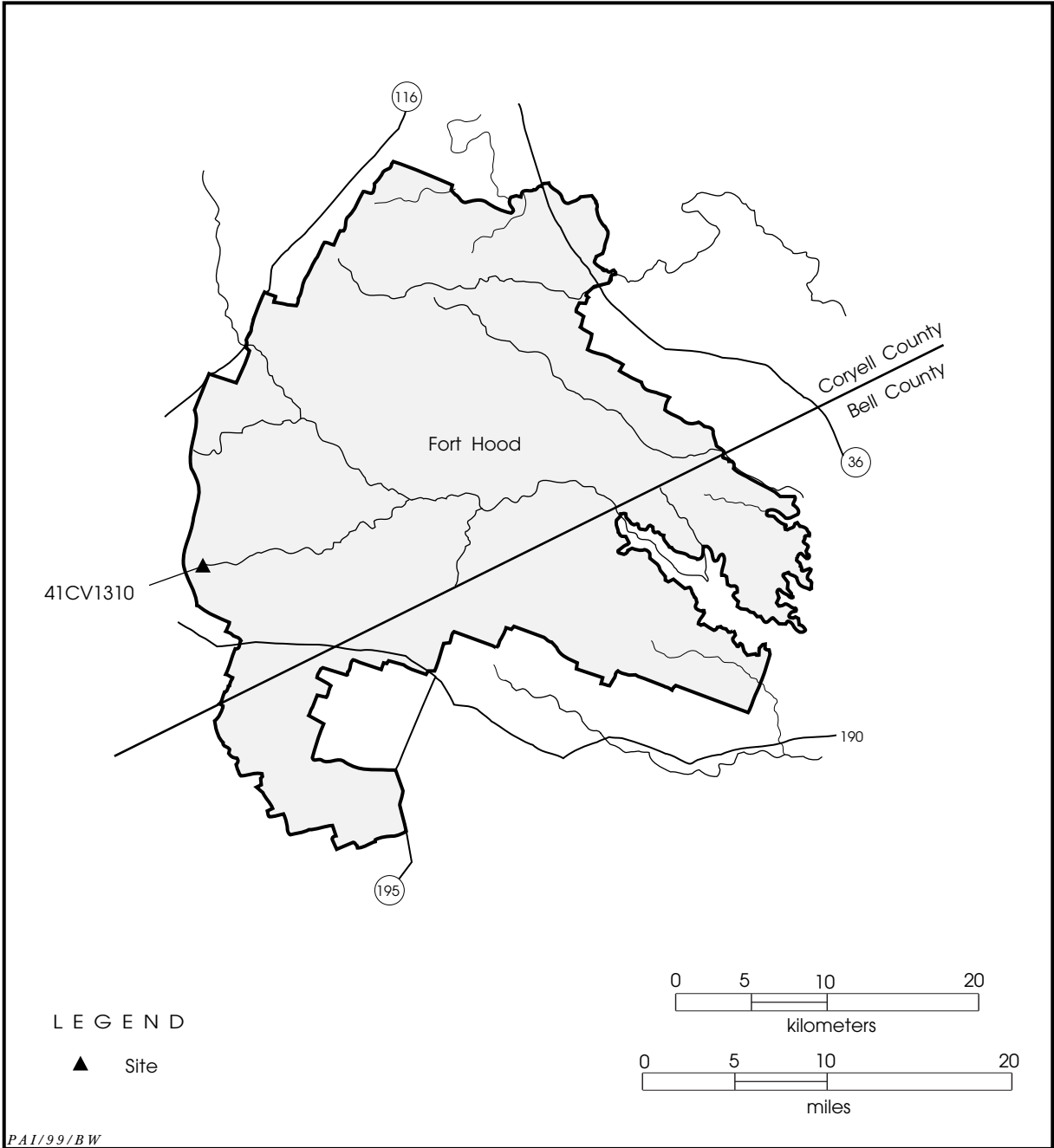


Figure 1. General location of 41CV1310 along the upper portion of House Creek in western Fort Hood.

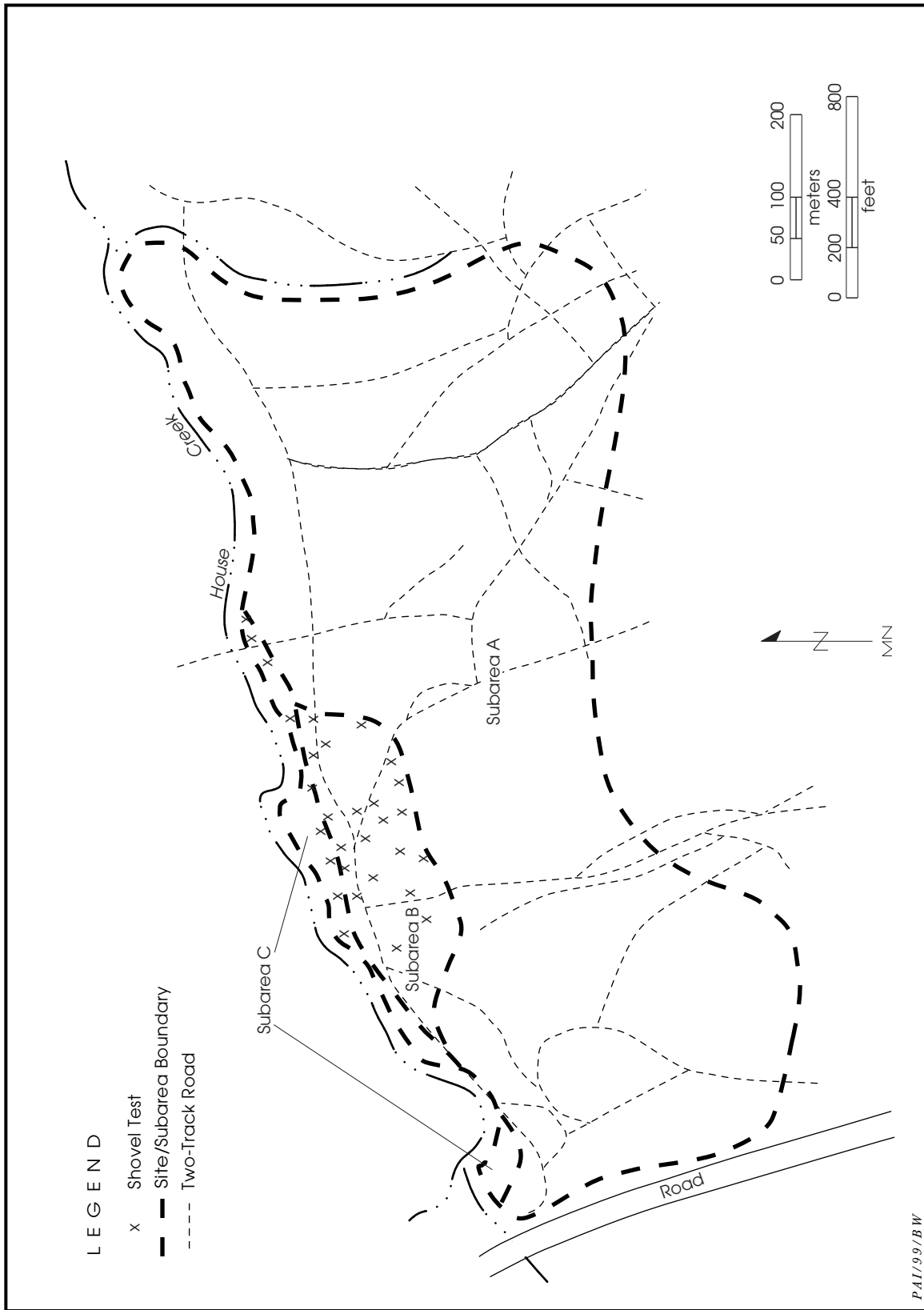


Figure 2. Site map of 41CV1310 showing excavated shovel tests and subareas defined by TRC Mariah in 1992 (Trierweiler 1994b:A1447-1451). Map is from Mehalchick et al. (2000:Figure 32) as modified from Trierweiler 1994b:A1448). The 2007 Prewitt and Associates project area is only the isolated westernmost section of Subarea C on the left.

surfaces. Doss-Real series soils are characterized by an 8-inch-thick (23 cm) A horizon underlain by 7- to 10-inch-thick (18 to 25 cm) Ak and Bk horizons above cemented limestone.

The project area has maximum dimensions of 65 m northeast-southwest by 40 m northwest-southeast, and this westernmost section of Subarea C supports a dense oak-juniper woodland. The terrace is widest along its western margin, and it pinches out to the east. The terrace is bisected by two north-flowing erosional gullies that originate on the uplands to the south. The landform is at an elevation of 919 ft (280 m) above mean sea level.

PREVIOUS INVESTIGATIONS

Information in this section was obtained from published reports on previous archeological investigations and from the original site records on file at the FHCRMP. First recorded in 1986 by Texas A&M University archeologists, 41CV1310 was noted as a series of burned rock and lithic scatters distributed across some 850,000 m² along House Creek in western Fort Hood (41CV1310 site file).

The site was revisited and reevaluated in 1992 and 1993 by TRC Mariah archeologists (Trierweiler 1994b:A1447–A1451), and its overall size was modified to 200,000 m² based on more precise observations of the extent of cultural materials. Because the site encompassed more than 75,000 m², it was designated as a lithic resource procurement area (Trierweiler 1994a:75, 101–123). The site was divided into three subareas distinguished by different geomorphic contexts and archeological potential (see Figure 2).

Subarea A comprised the majority of the site and included the Killeen surface (Nordt 1992:4–6, Figure 3) characterized by uplands and stepped erosional slopes. Several burned rock and lithic scatters were observed, and two burned rock features (concentrations) were recorded. This area is highly eroded and characterized by exposed limestone regolith or a thin mantle of residual soil. Cultural materials were observed, but they lacked contextual integrity. Subarea A was also evaluated for its potential to contain evidence useful for addressing research questions pertaining to lithic procurement and reduction strategies. It was determined that the artifact assemblage was too thinly distributed and would not provide useful data for lithic procurement issues. Therefore, no further work was recommended for Subarea A, and it was recommended as not eligible for listing in the National Register.

Subarea B subsumed a thick wedge of colluvial deposits accumulated along the lower slopes of the Killeen surface at the interface with the House Creek alluvial terraces. Artifacts and features similar to those found in Subarea A were also observed in Subarea B. Shovel tests excavated across Subarea B indicated that intact cultural deposits might be present, and formal testing was recommended.

Subarea C was characterized as narrow, discontinuous segments of the T₁ surface along House Creek. The terrace surface was 3 to 5 m above the modern channel, and cutbank exposures revealed grayish brown to dark grayish brown stony clay loam interpreted as West Range and Ford fills (Nordt 1992:18–22, Figure 6). Although shovel tests dug in Subarea C yielded no cultural materials, formal testing was recommended because the

Holocene-age alluvial deposits extended below the depth of shovel testing, which was generally only 40 cm.

In 1997, PAI archeologists conducted formal testing of Subareas B and C at 41CV1310 to determine their eligibility for listing in the National Register (Mehalchick et al. 2000:102–116). At that time, a lower T_0 surface was identified and designated Subarea D, and it also was formally tested. Mechanical and hand excavations indicated that Subareas B and C contained discrete archeological deposits, but none were present in Subarea D. Based on the results, Subareas B and C were recommended as eligible for listing in the National Register, and Subarea D was recommended as not eligible. Although no excavations were done in the small section of Subarea C at the northwestern site margin, it was considered National Register eligible because it was an extension of the same alluvial terrace.

On May 17, personnel from TxDOT's Archeological Studies Program (Abbott) and the FHCRMP (Kleinbach) conducted a field visit to the small section of Subarea C that would be impacted by the proposed road project. The area was heavily wooded, and they confirmed that the deposits appeared to be shallow and composed of a mixture of colluvium and alluvium. Because the archeological potential of this terrace section was unknown, they agreed that testing was needed. They developed a two-stage testing strategy, with the Stage 1 field investigation consisting of up to 25 shovel tests and 2 m³ of hand-excavated units to determine if National Register–eligible archeological remains were present in this portion of Subarea C. Additional testing could be done in a second stage of work if needed.

WORK ACCOMPLISHED AND RESULTS

In May 2007, PAI was issued Work Authorization No. 57716SA001 by TxDOT to begin archeological investigations at 41CV1310 in conjunction with the proposed Northeast Copperas Cove Bypass. The work authorization stipulated a two-stage approach for the field investigation, and the testing effort was focused on determining the potential for intact buried prehistoric cultural remains in the western end of Subarea C.

Prefield planning was done in June and early July 2007. This work included reviewing the results of previous investigations conducted at 41CV1310, acquiring a Fort Hood excavation permit, obtaining necessary vehicle and personnel passes to get on base, and arranging site access and crew housing.

Stage 1 fieldwork was conducted from July 9 to 11, 2007, in the section of Subarea C at the westernmost end of 41CV1310. First, the site area was reinspected for archeological remains and to evaluate the alluvial deposits. Particular attention was paid to the vertical cutbank exposures and erosional gullies along House Creek. Ground surface visibility was limited due to the dense vegetation caused by an unusually wet spring and summer. Next, shovel tests were excavated to provide horizontal coverage of the alluvial landform, followed by excavation of test units near particularly productive shovel tests. The excavations consisted of 21 shovel tests, each measuring approximately 40x30 cm, and 3 test units, each measuring 100x50 cm and oriented to magnetic north (Figure 3). Shovel tests were dug in arbitrary 20-cm levels, and the units proceeded in arbitrary 10-cm levels with the ground surface at the unit's highest corner used as the starting point for elevation control.

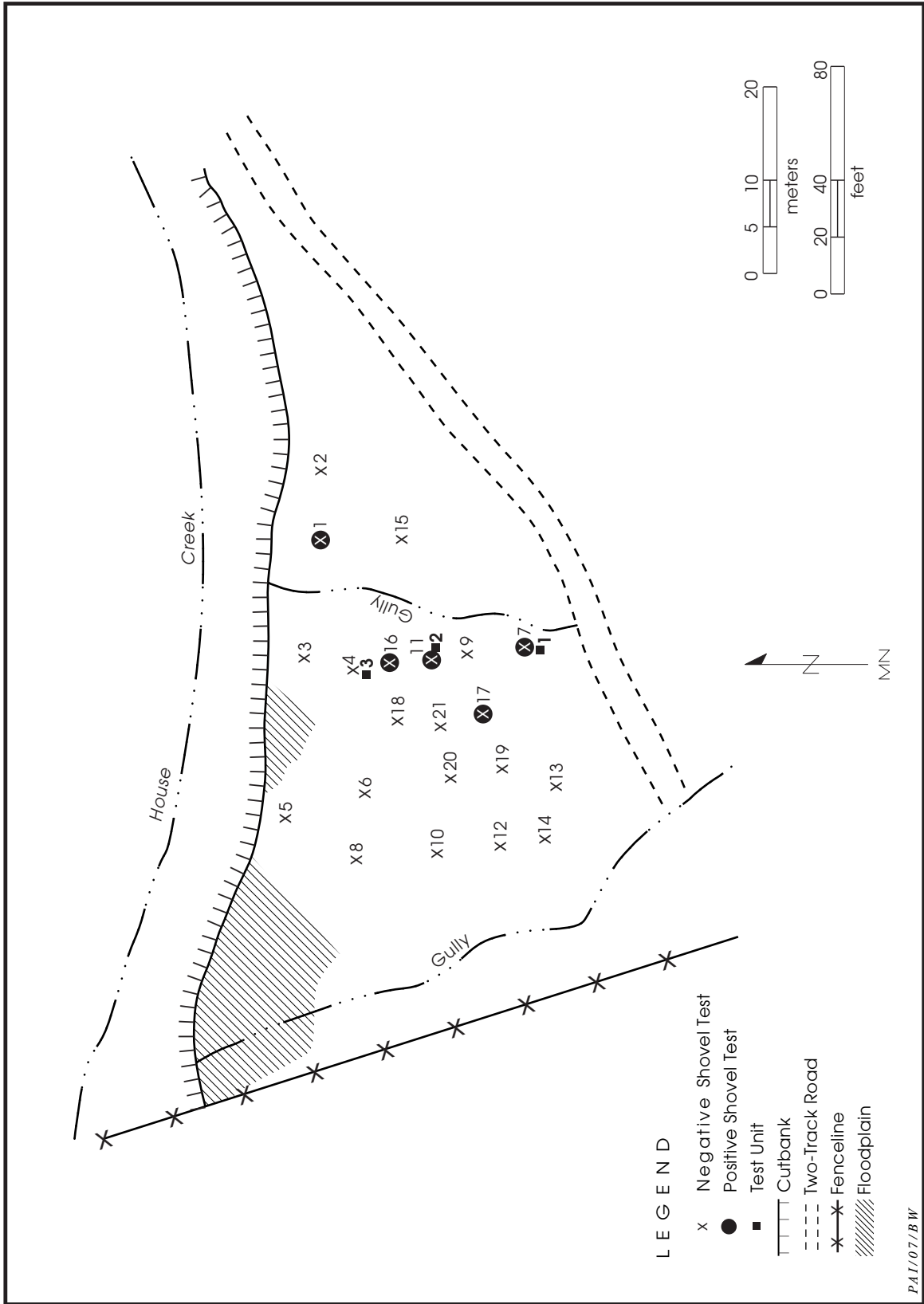


Figure 3. Site map of 2007 PAI excavations in Subarea C, 41CV1310.

Hand-excavated matrix was dry-screened through ¼-inch-mesh hardware cloth. All cultural materials were collected except for burned rocks and small fragments of mussel shell. Burned rocks were counted, weighed, and discarded in the field, and mussel shell fragments were noted as being present. No charcoal was encountered, and no special samples were collected. All excavations were stopped when the underlying B horizon or bedrock limestone was encountered, and the excavations were then backfilled. Shovel tests accounted for approximately 1.35 m³ of excavated deposits, and 0.8 m³ of fill was excavated from the test units (Table 1). The excavations recovered 29 chipped stone artifacts, and a burned rock and a mussel shell fragment were observed (Table 2).

The investigations were documented with written field records, photography, and mapping. Excavation records included Shovel Test forms and Excavation Record forms for each level of each test unit. A digital camera was used to document the setting of Subarea C and the excavations within the area. A current aerial photograph of the site area was obtained from the FHCRMP, but plotting landform features and excavation locations was not feasible due to the extremely dense vegetation. Therefore, all relevant landform data and excavations were plotted using UTM coordinates obtained with a Garmin GPS 12 Personal Navigator.

Laboratory processing involved washing, identifying, and cataloging the collected cultural materials. Because the recovery of cultural materials was so sparse, only a cursory analysis of the archeological remains was conducted.

SEDIMENTS AND STRATIGRAPHY

Generally, the sediments encountered in the western portion of Subarea C are similar to those described during previous investigations for the larger section of the same terrace surface to the east. Mehalchick et al. (2000:107) described the terrace deposits as late Holocene colluvium and alluvium identifiable as West Range fill overlying a strath terrace composed of Glen Rose limestone. Previous work suggested that a typical profile consisted of an A horizon up to 46 cm thick and a gravelly B horizon up to 37 cm thick, with the latter resting directly on bedrock. Only the A horizon contained cultural remains.

The current investigations revealed that the A horizon ranges from 20 to 60 cm thick, but the thickest deposits are laterally restricted to a small area in the vicinity of Shovel Tests 13, 14, 17, and 19 and along the east bank of the western erosional gully (see Figure 3). The face of the limestone strath terrace extends along the House Creek cutbank from the east end of Subarea C down to the first low-lying T₀ to the west.

CULTURAL MATERIALS

The shovel tests were scattered across the Subarea C landform, and subsequent test units were dug just west of a shallow erosional gully where the positive shovel tests were concentrated. Prehistoric cultural materials were recovered only from five shovel tests and two units, and the entire assemblage consists of only 29 chipped stone artifacts (Table 3). These are classified as 28 unmodified flakes and 1 unifacial tool; 1 small burned rock and 1 unmodified mussel shell fragment also were recovered. All of the prehistoric cultural

Table 1. Summary of 2007 PAI excavations in Subarea C, 41CV1310

Excavation Type (size)	Number Excavated	Depth Range (cm)	Average Depth (cm)	Estimated Volume (m ³)
Shovel Tests (40x30 cm)	21	25–80	54	1.35
Test Units (100x50 cm)	3	40–60	53	0.8
Total	24	–	–	2.15

Table 2. Summary of cultural materials collected and observed from excavations in Subarea C, 41CV1310

Excavation Type	Collected Artifacts		Observed Cultural Materials	
	Uniface	Unmodified Flake	Burned Rock (limestone)	Mussel Shell Fragment
Shovel Tests	1	8	1	1
Test Units	–	20	–	–
Total	1	28	1	1

materials were found in the upper 40 cm, and all were from the A horizon. Three shovel tests produced .22-caliber brass cartridge cases or glass fragments in the upper 20 cm of fill.

The lithic artifacts all appear to be made of locally available Edwards cherts, and Anderson Mountain Gray, a distinctive and well-defined chert type within the Fort Hood chert taxonomy (Trierweiler 1994c:Plate 1), is present in the assemblage. Site 41CV1310 is located less than 1 km north of Anderson Mountain, which contains the northernmost known primary outcrop of Anderson Mountain Gray. Anderson Mountain Gray also occurs as secondary sources (i.e., lag gravels) across a large portion of southwestern Fort Hood and especially in the uplands along House Creek (Trierweiler 1994c:c-2).

The unifacial tool is a small fragment that is pottlidded from intensive heating and is patinated on almost all surfaces. Patination has been removed by flaking along its retouched edge, thus indicating that the artifact was resharpened or reused long after its original manufacture. The debitage is dominated by tertiary flakes, and most exhibit evidence of heat treatment and some degree of patination.

ASSESSMENT AND RECOMMENDATIONS

This section provides an assessment of the tested portion of 41CV1310 relative to the criteria for listing in the National Register of Historic Places in accordance with Section 106 of the National Historic Preservation Act (16 USC 470 et seq.; 36 CFR 800). Because the site contains prehistoric archeological remains, the site is only evaluated relative to Criterion D, which is the potential of the site’s archeological remains to yield important

Table 3. Collected and observed cultural materials by excavation provenience in Subarea C, 41CV1310

Excavation	Maximum Depth (cmbs)	Collected Artifacts	Observed Cultural Materials
Shovel Test 1	55	1 flake from 0–20 cmbs	None
Shovel Test 2	68	None	None
Shovel Test 3	55	None	3 brass cartridge cases (.22-caliber) from 0–20 cmbs
Shovel Test 4	38	None	None
Shovel Test 5	45	None	None
Shovel Test 6	25	None	None
Shovel Test 7	80	1 flake from 0–20 cmbs	1 burned rock from 0–20 cmbs
Shovel Test 8	33	None	None
Shovel Test 9	68	None	None
Shovel Test 10	40	None	None
Shovel Test 11	59	1 flake from 0–20 cmbs; 1 flake 20–40 cmbs	None
Shovel Test 12	50	None	None
Shovel Test 13	60	None	2 brass cartridge cases (.22-caliber) from 0–20 cmbs
Shovel Test 14	72	None	None
Shovel Test 15	72	None	None
Shovel Test 16	60	1 flake from 0–20 cmbs; 1 flake from 20–40 cmbs	None
Shovel Test 17	60	1 miscellaneous uniface from 0–20 cmbs; 2 flakes from 20–40 cmbs	2 modern glass fragments from 0–20 cmbs; 1 unmodified mussel shell fragment from 20–40 cmbs
Shovel Test 18	20	None	None
Shovel Test 19	55	None	None
Shovel Test 20	50	None	None
Shovel Test 21	62	None	None
Test Unit 1	60	None	None
Test Unit 2	60	5 flakes from 20–30 cmbs; 7 flakes from 30–40 cmbs	None
Test Unit 3	40	2 flakes from 0–10 cmbs; 2 flakes from 10–20 cmbs; 4 flakes from 20–30 cmbs	None

Note: cmbs = centimeters below surface.

information for interpreting prehistory. The results of the investigations show that the western portion of Subarea C at 41CV1310 has no viable archeological research potential. This is demonstrated by the dearth of artifacts found within a generally thin A horizon. No features, temporally diagnostic artifacts, or datable organic remains were encountered, and no interpretable cultural component has been recognized. Given the depositional setting and paucity of materials, it is unlikely that additional archeological work would ever yield evidence to allow a discrete cultural component to be isolated or interpreted. Consequently,

no substantive research issues can be addressed through further archeological investigation of this small section of late Holocene alluvial terrace.

The western portion of Subarea C at 41CV1310 is recommended as not eligible for listing in the National Register under Criterion D. No further archeological investigations are warranted for this portion of 41CV1310, and it is recommended that TxDOT's proposed Northeast Copperas Cove Bypass may proceed.

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