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Archeological Significance Testing at Site 41TE452, Terrell County, Texas

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ARCHEOLOGICAL SIGNIFICANCE TESTING AT SITE 41TE452, TERRELL COUNTY, TEXAS

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DIVISION OF HIGHWAY DESIGN
AUSTIN, TEXAS

ABSTRACT/MANAGEMENT SUMMARY

The Texas Department of Transportation conducted archeological significance testing at site 41TE452 which is within the right-of-way of RM 2886 in Terrell County, Texas. The testing was undertaken in compliance with the Texas Antiquities Code as highway construction which will impact the site will be undertaken with state funds.

Testing involved the excavation of 27 shovel tests (each about 50 x 50 cm in plan), 3 backhoe trenches (each approximately 1 meter in width, and between 14 and 23 meters in length), and 3 test units (each 1 x 1 meter in plan). All of the excavations extended in depth to bedrock, which was encountered at depths of between 9 and 90 cm below the surface. Fill from the shovel tests and test units was screened through 1/4-inch hardware cloth. The surface was also closely inspected for surface artifacts and features. The locations of all excavated units and surface artifacts were mapped.

Only one prehistoric artifact was recovered from the excavations, and a further 18 were found on the surface, within a four hundred foot length of the right-of-way. None of the artifacts was temporally or culturally diagnostic. No cultural stratigraphy or features were identified.

Based on the results of the testing, the site is considered not eligible for designation as a state archeological landmark, and no further archeological research is recommended for the site.

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INTRODUCTION

The Texas Department of Transportation conducted archeological significance testing at site 41TE452 which is within the right-of-way of RM 2886 in Terrell County, Texas (Figure 1). The testing was undertaken in compliance with the Texas Antiquities Code as highway construction which will impact the site will be undertaken with state funds.

The site, consisting of a sparse, surface scatter of lithic flakes at the base of a scree-covered slope, was found during an archeological survey of the project area conducted by the Texas Department of Transportation in April of 1993. A shovel test (survey shovel test #48) in the vicinity revealed dark soil, but no artifacts, and bedrock was reached at a depth of about 15 cm. Because of the dark soil, it was thought that a midden-like deposit may be buried under the fallen rock.

The testing was conducted on June 22, 23 and 24, 1993, under the supervision of G. R. Dennis Price, after the Department of Antiquities Protection had approved the general testing strategy. Approximately 46 work-hours were expended at the site.

ENVIRONMENTAL SETTING

The aite is located on the toe of a steep slope at the end of an east trending promontory of upland, forming the canyon wall west of the confluence of Big Canyon and an un-named tributary (Figure 1). The summit of the promontory is at an elevation of about 2920-feet NGVD, while the right-of-way and site area at the foot of the promontory is at an elevation of about 2850 feet NGVD (USGS 1969).

Geologic deposits exposed on the summit and in the walls of the promontory belong to the Lower Cretaceous Segovia Member of the Edwards Limestone (Bureau of Economic Geology 1982). The Segovia Member, with a total thickness of between 200 and 300 feet, consists of cherty limestone and dolomite; though no chert exposures were observed in the project area.

Soils in the site vicinity have been mapped as Ector-Rock outcrop complex on the summit and side walls of the promontory, with Sanderson-Upton association on the adjacent canyon floor (Soil Conservation Service 1974: map sheet 17). Ector soils have a friable dark grayish-brown stony loam surface layer, about 20 cm thick, overlying limestone bedrock. Sanderson soils have a light brownish-gray gravelly loam surface layer about 5 cm thick; overlying a very friable light brownish-gray gravelly loam, about 18 cm thick. The next layer, about 50 cm thick, is very friable light brownish-gray gravelly loam that conta'ins about 1% of calcium carbonate films and threads. The final layer consists of very friable, very pale brown gravelly loam, extending to a depth of about 150 cm. Upton soils have a surface layer, about 5 cm thick, of light brownish-gray gravelly loam. This overlies about 25 cm of friable, light brownish-gray gravelly loam; which in turn overlies broken and indurated whitish caliche.

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Water resources in the area are presently sparse. The main channel of Big Canyon, an intermittent stream, is located about 1 kilometer south of the site. The main drainage of the tributary canyon, also intermittent, is located about 700 meters east of the site. Intermittent distributory-like drainages from the canyon walls are located about 200 meters north and south of the site, but these do not extend to the main channels.

Vegetation at the site consists mainly of scattered cedar with an understory of sparse grasses, cactus, and other thorny plants. The area is used as rangeland, primarily for sheep, but also for a few cattle. Natural fauna observed in the area included deer, turkey, jack rabbit, and ground squirrels.

TESTING METHODOLOGY AND OBSERVATIONS

Testing utilized a combination of shovel tests, backhoe trenches, and test units. The surface was also closely inspected for surface artifacts and featureo. Finally, the locations of all excavated units and surface artifacts were mapped.

Shovel Testing

Twenty-seven shovel tests were excavated in a grid pattern with spacing at intervals of approximately 10 meters. Locations are depicted in Figure 2. Each was approximately 50 x 50 cm in plan, and extended in depth to bedrock. Fill was screened through 114-inch hardware cloth.

Fill from the shovel testa consisted largely of rock fragments with dry powdery loamy soil filling the interstices. Soil color ranged from very dark gray (10YR 3/1) to light brownish gray (10YR 6/2), and bedrock was reached at depths of between 9 and 50 cm. No cultural materials were recovered from the fill of the shovel tests. Table 1 briefly lists the soil color encountered in each shovel test (and the original survey shovel test), and the depth of the bedrock.

Table 1. Shovel Test Data

#	color of fill	Depth	#	Color	Depth
1	lOYR 4/1	19 cm	15	lOYR 4/2, 5/2	16 cm
2	10YR 5/2	24 cm	16	10YR 4/2, 5/2	15 cm
3	10YR 6/2	14 cm	17	10YR 4/2	30 cm
4	lOYR 5/2	23 cm	18	10YR 5/2	13 cm
5	10YR 5/2	20 cm	19	10YR 5/2	22 cm
6	lOYR 4/1	15 cm	20	lOYR 5/2	15 cm
7	lOYR 311, 4/1	24 cm	21	10YR 5/2	13 cm
8	10YR 3/1	25 cm	22	10YR 4/1	17 cm
9	10YR 4/1	15 cm	23	10YR 5/2	17 cm
10	10YR 4/1	34 cm	24	10YR 4/1 5/2	16 cm
11	10YR 4/2	36 cm	25	10YR 6/2	09 cm
12	10YR 4/2	30 cm	26	10YR 6/2	23 cm
13	10YR 4/2 5/2	50 cm	27	10YR 6/2	15 cm
14	10YR 4/2	10 cm	48	10YR 4/1 5/1	15 cm

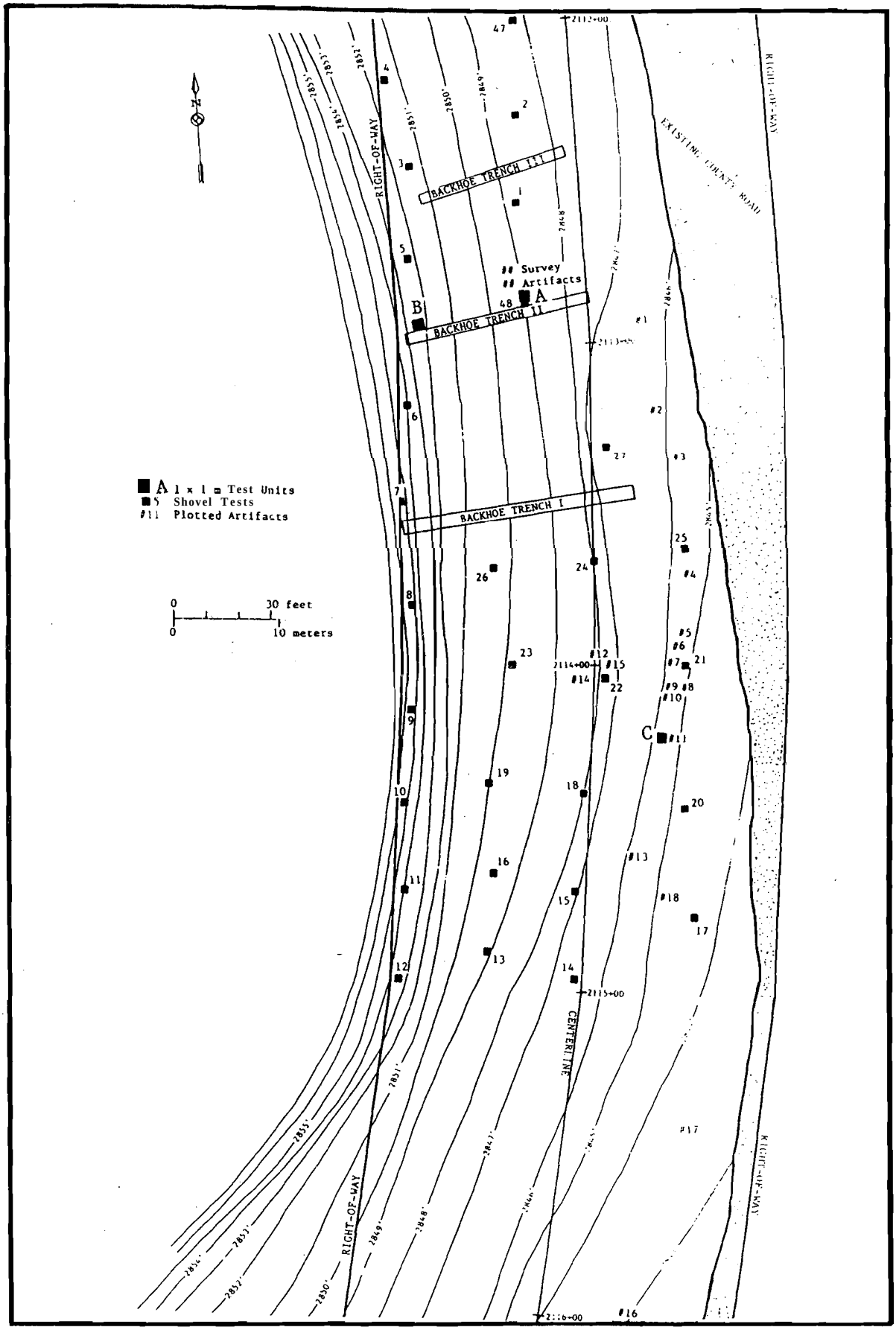


Figure 2. 41TE452 site map with locations of test units and collected artifacts.

Backhoe Trenches

Three backhoe trenches, each approximately 1 meter in width, were excavated to bedrock. Backhoe Trench I, was placed between shovel tests 7 and 8, where the darkest soil was observed; Backhoe Trench II was placed just south of original survey shovel test #48; and Backhoe Trench III was placed about 10 meters to the north. Locations are depicted in Figure 2.

No cultural materials were observed in the fill removed from the backhoe trenches. Fill consisted largely of rock fragments, with solid, hard lime-stone bedrock being reached at relatively shallow depths, generally no deeper than 30 cm. A band of softer rock, possibly re-precipitated from solution, was encountered in Backhoe Trenches I and II. In Backhoe Trench II, an intrusion into the softer rock was noted in the north profile; it did not extend to the southern wall of the trench. Profiles of the backhoe trenches are depicted in Figure 3.

Test Units

Three 1 x 1 meter test units were excavated. Test Unit A was placed adjacent to original survey shovel test #48, Test Unit B was placed adjacent to the intrusion observed in the north wall of Backhoe Trench II, and Test Unit C was centered on the location of a dart point found on the surface. Locations are depicted on Figure 2. Fill from the units was screened through 114-inch hardware cloth. Test Units A and B were excavated to bedrock in a single level, while Test Unit C was excavated in six 15-cm levels.

No cultural materials were recovered from Test Units A or C (other than the dart point on the surface of Test Unit C). A single, large chert f-lake was recovered from a depth of 45 to 60 cm in Test Unit B, but there was no other evidence to suggest that the intrusion into the softer rock was of human origin. Fill from each of the units was similar, consisting largely of rock fragments with dry, powdery, loamy soil. Soil color varied between the units, much as it did in the shovel tests. Profiles from each of the test units are depicted in Figure 4.

Surface Collection

An intensive inspection of the surface was undertaken in an attempt to locate cultural materials. As an artifact was found, the location was marked, and later mapped. Locations of individual artifacts are depicted on Figure 2, and brief descriptions are provided in Table 2. Descriptions and approximate locations of artifacts found during the survey are also included.

ARTIFACT DESCRIPTIONS

Artifacts recovered from the field were returned to the laboratory where they were cleaned, labelled, sorted into categories, and compared with previ-ously defined artifact types. Each of the artifacts, including those found during the initial survey, has been described briefly and individually in Table 2. In this section categories of artifacts are described, and, where considered appropriate, individual artifacts are further described.

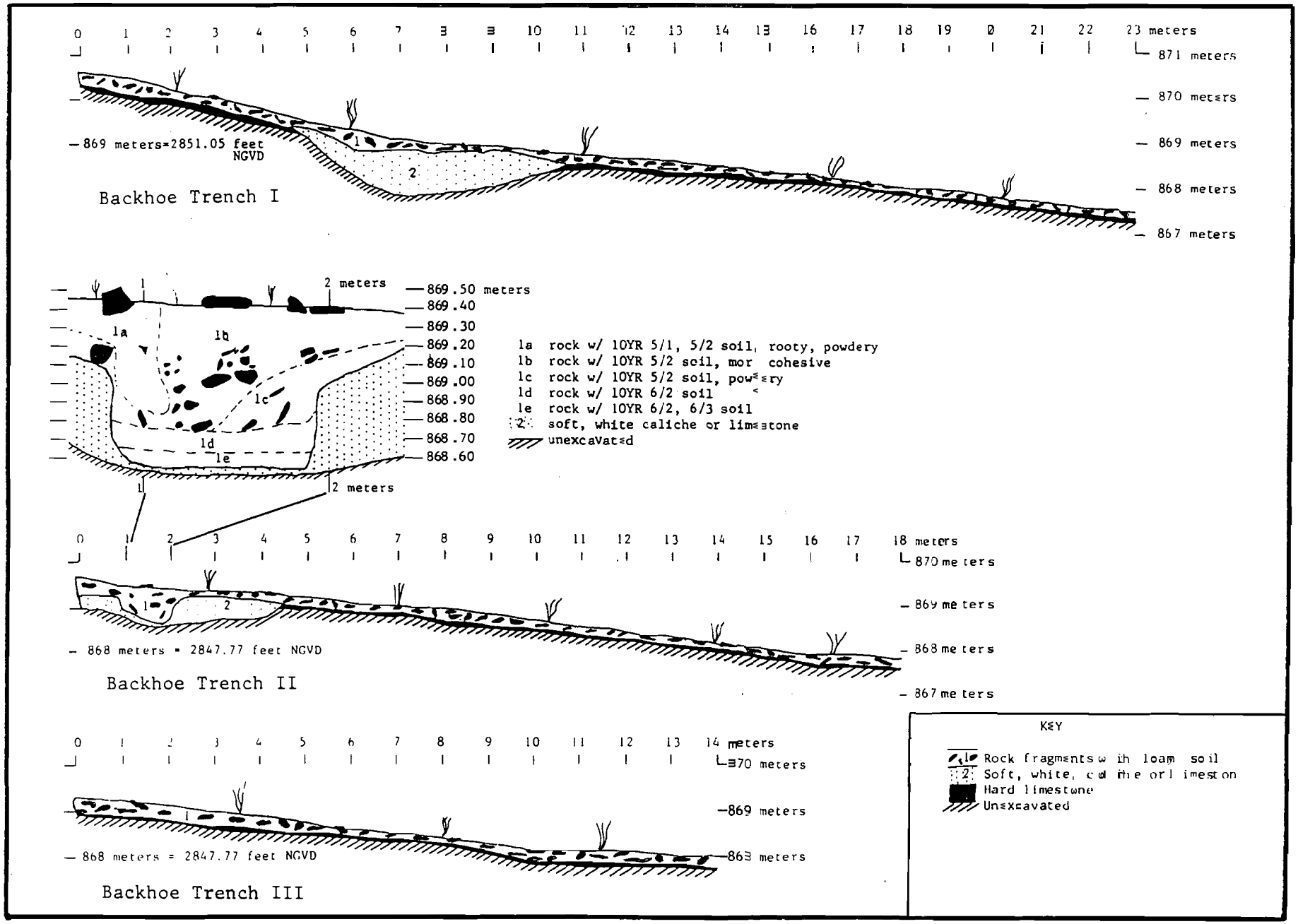
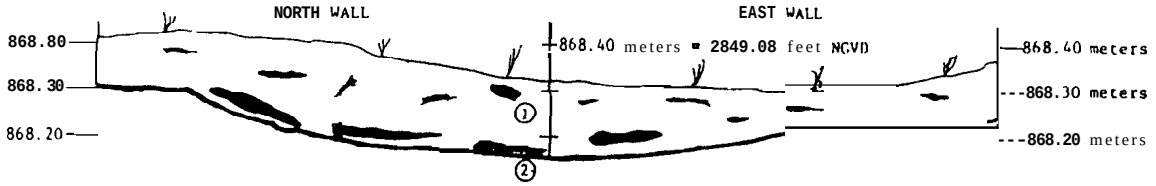


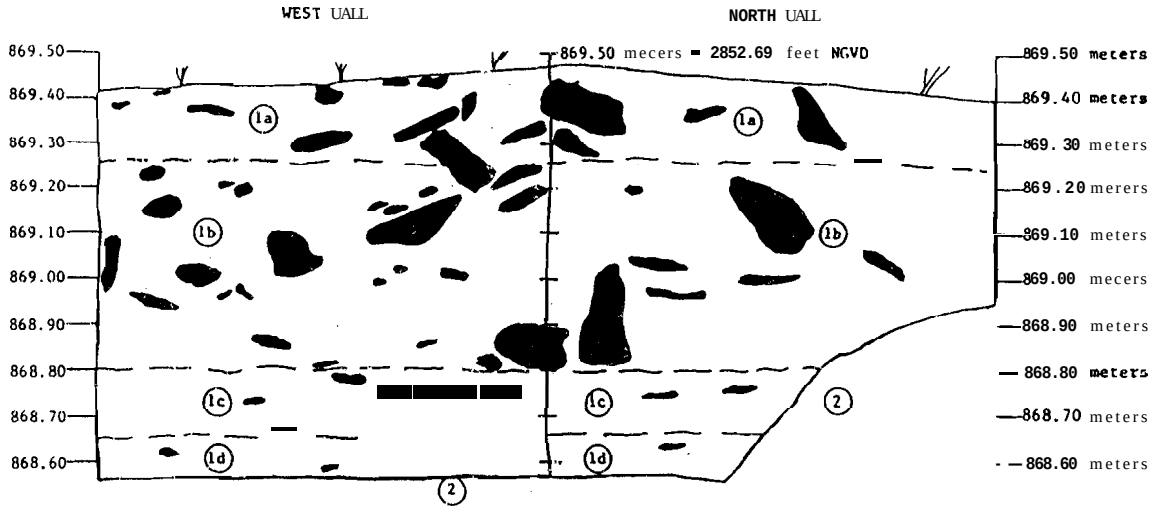
Figure 3. Profiles of North walls of Backhoe Trenches.

TEST UNIT A



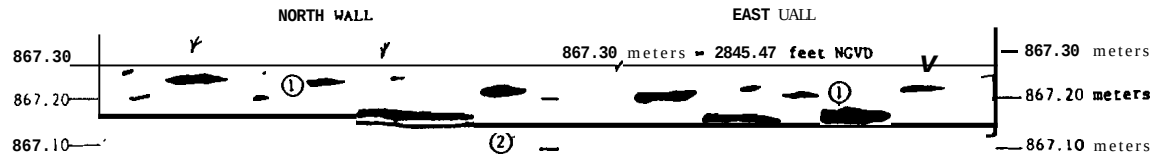
8 Limestone fragments with 10YR 4/1, 412 dry. powdery. friable loam.
Solid limestone bedrock. hard

TEST UNIT B



1a Limestone rock fragments with 10YR 5/1, 5/2 loamy soil, dry. friable
1b Limestone rock fragments with LOYR 5/2 loamy soil, dry, friable
1c Limestone rock fragments with 10YR 612 soil. smaller rocks. more lime
1d Limestone rock fragments vith LOYR 6/2, 613 soil. lots of lime
2 Soft (relatively) caliche or limestone

TEST UNIT C



1 Limestone fragments with 10YR 512 loamy soil. dry. powdery. friable
2 Solid limescone bedrock, hard

Figure 4. Test Unit Profiles.

Table 2. Artifact Descriptions

#	Descript.	Material	Color	Dimensions (mm)		
Surv.	flake, with cortex	siliceous sandstone	banded, 10YR 4/1 & 5/3	117	27	13
Surv.	flake, with cortex	siliceous sandstone	banded, 10YR 4/1 & 5/3	75	35	17
Surv.	flake, with cortex	siliceous sandstone	banded 10YR 4/1 & 5/3	37	27	09
Surv.	rod-like fragment	sandstone	5YR 5/4	53	20	16
TU.B	utilized flake, with cortex	chert	10YR 6/2-7/1	53	113	21
1a	Clear Fork fragment	chert	5YR 6/1-7.5YR 8/0 patinated	32	50	11
1b	utilized chip, no cortex	chert	5YR 6/1-7/1 heat treated	19	26	08
2	chip, no cortex	chert	5YR 6/2-8/2 heat treated	19	20	08
3	flake, no cortex	chert	5YR 6/1-8/1 heat treated?	23	17	04
4	WCC 72 cartridge-2 off	brass	0.44 inch diameter			
5	chip, no cortex	chert	5YR 7/1-7/2 heat treated?	36	18	04
6	pebble, chipped (natural?)	chert	7.5YR 5/0	29	20	06
7	chip, with cortex	chert	10YR 4/1	13	13	04
8	pebble fragment, with cortex	chert	7.5YR 8/0	19	29	09
9	flake, no cortex	chert	7.5YR 5/2-8/2 patinated	34	39	17
10	chip, no cortex	chert	7.5YR 8/0	26	17	08
11	dart point preform	chert	5YR 2.5/2	46	24	07
12	chunk, with cortex	chert	5YR 6/3-10YR 8/2 heat treated?	38	24	17
13	flake, no cortex	chert	5YR 6/2-7.5YR 7/2 heat treated?	18	25	08
14	biface fragment, no cortex	chert	5YR 6/2-7.5YR 6/2 heat treated	24	46	19
15	chunk, with cortex	chert	2.5YR 5/2-6/3 heat treated?	46	18	15
16	chip, no cortex	chert	N 2, N 3 patinated	37	26	09
17	flake, no cortex	chert	N 3, N 4	23	30	06
18	chunk, no cortex	chert	2.5YR 6/2-7.5YR 6/2 heat treated?	42	45	17

Dart Point Prefom

The dart point preform (surface find #11) is made on a flake. The blade edges are slightly convex, the stem has parallel edges, only slightly narrower than the maximum blade width, and the base is concave (Figure 5:a). The distal end shows a slight thickening, and is either unthinned, or the extreme tip is missing. The right dorsal edge exhibits relatively shallow, parallel flaking, while the left dorsal edge exhibits deeper flaking with step fractures. Neither of the dorsal blade edges exhibits fine retouch, but fine

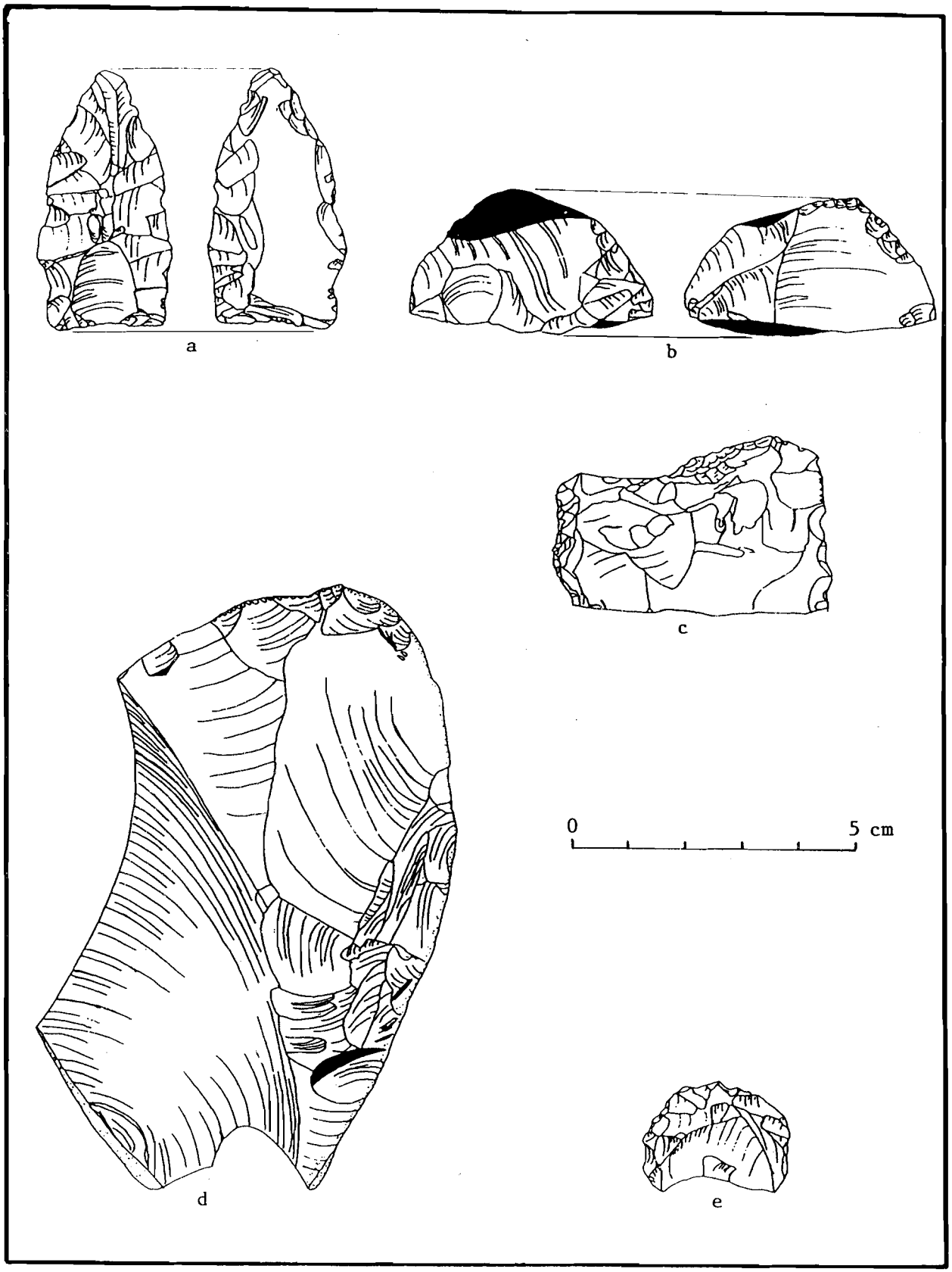


Figure 5. Artifacts: a) dart point preform; b) biface fragment; c) Clear Fork tool; d-e) utilized flakes.

retouch is present along the stem edges, which have not been ground. A large basal thinning flake, somewhat flute-like, exhibits fine retouch on the dorsal face, after the flake was removed. The ventral face exhibits some shallow flaking along the edges, with considerable amounts of fine retouch flaking. However, the artifact appears to be incomplete. Material is a dark reddish-brown (5YR 2.5/2) chert. Dimensions are: length, 46 mm; width, 24 mm; and thickness, 7 mm.

Biface Fragment

The biface fragment (surface find #14) appears to be a medial section, though one portion of the apparently broken distal end exhibits fine flaking which may be the result of use rather than accidental damage (Figure 5:b). Both edge fragments also exhibit what appears to be edge wear. Material is an apparently heat treated chert, pinkish gray (5YR 6/2 to 7.5YR 6/2) in color. Dimensions are: length, 34 mm; width, 46 mm; and thickness, 19 mm.

Clear Fork. Fragment

The Clear Fork fragment (surface find #1a) is the distal, or working, end, which is asymmetric to the remaining edge fragments (Figure 5:c). The artifact is unifacial, with a somewhat rounded bit angle of approximately 60 degrees to the unifacial side. The artifact exhibits considerable patination on the surfaces, allowing for easy identification of recent accidental. damage. Material is a light gray to white (5YR 6/1 to 7.5YR 8/0) chert. Dimensions are: bit width, 50 mm; length, 32 mm; thickness, 11 mm.

Utilized Flakes

Two utilized flakes were recognized from the collection. The flake from Test Unit B exhibits fine scarring on the dorsal face along one curved portion of edge (Figure 5:d). Material is a light brownish-gray to light gray (10YR 6/2 to 7/1) chert, with white cortex remaining along much of the edge. Dimensions are: length, 53 mm; width 113 mm; thickness, 21 mm.

The other utilized flake (surface find #1b) exhibits retouch and apparent use flake-scars on the dorsal surface of a convex edge (Figure 5:e). The opposite end, an apparent snap fracture with a concave edge, exhibits battering or blunting along the dorsal edge. Material is a light pinkish gray (5YR 6/1, 7/1), apparently heat-treated chert. Dimensions are: length, 19 mm; width, 26 mm; thickness, 8 mm.

Flakes

The three flakes found during the survey are distinct from those recovered during the testing. The flakes found during the survey appeared to be from a single cobble of a banded, cherty, siliceous sandstone. All retained cortex and none had been heat-treated.

The four flakes found during the testing (all from the surface) were of chert. None retained cortex. Two appeared to have been heat-treated, while two did not.

Chips and Chunks

Of the eight chert chips and chunks found on the surface during the testing, five were without cortex (three heat-treated, two not heat-treated) and three still retained cortex (two heat-treated, one not heat-treated).

Pebble Fragments

Two chipped chert pebble fragments were found on the surface during the testing. One appeared to be naturally chipped, while the other appeared to have been the result of deliberate human action.

Sandstone Rod

A rod-like fragment of sandstone was found during the survey.

Historic Artifacts

Historic artifacts collected from the surface during the testing consisted of two 0.45 cartridge cases, each stamped "WCC 72", a mark used by the Winchester Western Division of Olin Mathieson Chemical Corporation, probably dating to 1972 (White and Munhall 1963:206).

Also observed hut not collected were fragments of an auto battery case, and one or two fragments of clearly modern brick.

DISCUSSION

Age of Deposits

None of the artifacts recovered from the site can be discretely dated or identified with a particular cultural group. The dart point preform may have been intended as a Paisano dart point, a type common to the area (Frank Weir and Glen Goode, personnel communication). Suhm and Jelks (1962:227) associated the type with the Chisos Focus in the Big Bend area, with an estimated time span of 800-1200 AD, while Turner and Hester (1985:133) suggest a transitional archaic span of 200 BC to AD 600, or later. The Clear Fork uniface fragment could date from as early as the Paleoindian period to as late as the Middle Archaic (Ibid.:205).

Depth of Deposits and Stratigraphy

With the exception of the flake found at a depth of between 45 and 60 cm in Test Unit B, all cultural materials were found on the surface. In general, solid bedrock was encountered at very shallow depths, 30 cm or less below the surface, with the median depth of bedrock in the shovel tests being 17 cm and the average depth being slightly less than 21 cm. No cultural stratigraphy was observed within the profiles of the shovel tests, or the profiles of Test Units A and C, or in the profiles of Bachkhoe Trenches I and III.

The intrusion observed in the profile of Backhoe Trench II, and further investigated by Test Unit B, was filled with jumbled rock fragments and soil similar to that observed in other units, and with the exception of a single

large flake did not contain any cultural materials. The profiles did not reveal any cultural stratigraphy, and the soils (10YR 5/1 to 5/2 at the surface, 10YR 6/2 to 6/3 at the base) appear to represent a naturally developed profile.

Features

No cultural features were identified as a result of the testing. The intrusion observed in the wall of Backhoe Trench II, although containing a single large flake, is believed to be of natural origin, with fill also occurring naturally.

Activities

Artifacts collected from the site are not indicative of any specific activities; nor were any discrete horizontal areas of artifact concentration, perhaps identifying activity areas, observed.

SIGNIFICANCE

As the project is being constructed with state financing, the criteria for significance are those for determining eligibility and designation as a State Archeological Landmark. Section **191.092** of the Antiquities Code of Texas states:

> a) Sites objects, buildings, artifacts, implements and locations of historical, archeological, scientific, or educational interest, including those pertaining to prehistoric and historical American Indians or aboriginal campsites, dwellings, and habitation sites, their artifacts and implements of culture, as well as archeological sites of every character that are located in, on, or under the surface of any land belonging to the State of Texas or to any county, city, or political subdivision of the state are state archeological landmarks and are eligible for designation

Although prehistoric Indian artifacts are clearly present at the location, there does not appear to be the potential for scientific research. As noted in the preceding section, none of the artifacts is distinctly culturally or temporally diagnostic, all but one of the artifacts were found on the surface, and no cultural stratigraphy or features were identified. Thus, the site is considered not eligible for designation as a state archeological landmark.

RECOMMENDATIONS

As the site is considered not eligible for designation as a state archeological landmark, it is recommended that construction be allowed to proceed with no further archeological research.

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