



INDEX OF TEXAS ARCHAEOLOGY

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Volume 1988

Article 14

1988

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Clark, John W. Jr. (1988) "Results of Testing of Site 41GM23 Grimes County, Texas," *Index of Texas Archaeology: Open Access Gray Literature from the Lone Star State*: Vol. 1988, Article 14. <https://doi.org/10.21112/ita.1988.1.14>

ISSN: 2475-9333

Available at: <https://scholarworks.sfasu.edu/ita/vol1988/iss1/14>

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Results of Testing of Site 41GM23 Grimes County, Texas

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RESULTS OF TESTING AT SITE 41GM23
GRIMES COUNTY, TEXAS

by
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Texas State Department of Highways
and Public Transportation
Highway Design Division
July 1988

ABSTRACT

Archaeological site 41GM23 was tested by the cultural resources staff of the Texas State Department of Highways and Public Transportation (SDHPT) during the week of June 6, 1988. The test revealed that, although the site has been disturbed by clearing and bulldozing, intact cultural deposits remained. The deposits were about 60 cm thick and contained a hearth and other evidence of prehistoric occupation. The cultural material recovered suggests that the site was occupied during the Early Ceramic and Late Archaic periods. The site is eligible for inclusion on the National Register of Historic Places, and for listing as a State Archaeological Landmark.

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INTRODUCTION

The Texas State Department of Highways and Public Transportation (SDHPT) plans to construct a bridge over Rocky Creek on County Road 247 between the present low water crossing and an old bridge crossing to the west. The old bridge was removed because of structural failure. The new bridge will be 131 feet long, with a roadway width of 26 feet. The low water crossing will continue to be used while the bridge is under construction. The bridge will be built with a combination of federal and county funds. The project is in a rural setting, and both sides of the creek consist of improved pasture which is used for grazing.

A site files search indicated the presence of site 41GM23 at the proposed bridge location. The project was surveyed by a member of the Department's cultural resources staff on May 10, 1988 and the location of 41GM23 was confirmed. The site was originally recorded as part of the Millican Reservoir Project (Sorrow and Cox 1973).

ENVIRONMENTAL BACKGROUND

The project is on the south (left) bank of Rocky Creek, within the Post Oak Savanna vegetational area (Gould 1969: 11) (Fig. 1). The terrain consists of rolling hills with acidic, light colored, sandy loams. As a portion of the Texan Biotic Province (Blair 1950: 100-102), the area reflects traits of both the grasslands to the west and the Austroriparian Biotic Province to the east. Austroriparian vegetation occurs in galleria forests in lowland areas. Tree species typically include hackberries, oak, and pecan.

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There are a variety of mammals found in the area (Blair 1950, Davis 1974). These include several species of deer, rabbit, gopher, and squirrel. Numerous resident and migratory birds are found in the area as well (Peterson 1960).

PREVIOUS RESEARCH

One of the more extensive projects in Grimes County involved mining operations along Gibbons Creek, north of 41GM23. The Gibbons Creek studies spanned almost a decade (Baxter 1982; Bond 1977, 1981; Davis 1981; Fletcher 1979; Glander 1986; Ippolito 1979). Research on Gibbons Creek included excavation at several sites, and surface collection and shovel testing at numerous others.

Ippolito(1979) presented the results of excavations at sites 41GM68 and 71. Site 41GM68 was an open site with sandy paste ceramics. Projectile points included a Gary point and an Almagre-like point. At 41GM71 two points were found: one Gary and one unidentified point.

Davis(1981) conducted testing of sites 41GM57, 58, and 83 at Gibbons Creek. All other work in the county has consisted of a small number of project specific surveys with no extensive excavation. Site 41GM57 was a Late Ceramic period site with sandy paste pottery and arrowpoints of the Perdiz tradition. Three features were found which were probably hearths: two were burned rock concentrations and the other was burned soil with charcoal. An historic component was overlying the prehistoric deposits and was related to chalk mining operations from the late 1800's or early 1900's.

Site 41GM58 was very similar to 41GM57, with sandy paste pottery and Perdiz arrowpoints. This site was of interest because of the presence of human burials. The burials were encountered in backhoe trenches, and the site was not fully excavated. However, at least two individuals are represented in the

skeletal material: A young male aged 17-18 years old, and a very robust male aged 50-60 years. As at 41GM57, there was an historic component dating from the late 1800's or early 1900's.

Additional research involving the Millican Project (Sorrow and Cox 1973, Kotter 1982) has been conducted in Grimes and several of the surrounding counties. Site 41GM23 is within the floodpool for this project. Kotter reported surveys along several transects which cross-cut the Navasota River Basin and the Millican Transect (Kotter 1982:49-76) includes much of the Rocky Creek Valley. A total of 30 sites and isolated finds are described for the Grimes County portion of the Millican Transect (Kotter 1982:320-340). Few sites from any of the transects produced pottery (Kotter 1982: 267-273).

Except for the Millican Project and a report by Hesse (1943), research in Brazos and Madison Counties has consisted mainly of small cultural resources surveys. These include surveys by the SDHPT on FM 2818 and SH 30 locating two sites. There have been no major excavations reported in the county.

Work in Montgomery County has included the testing of sites 41MQ70 and 73 (Greiner Engineering 1981), and a small number of surveys. Archaeological research in Waller County has been confined to surveys on FM 1998 and SH 6, and testing of site 41WL19.

In Washington County, except for historic sites, the major archaeological research was done by Hasskari (1959: 287-300). Hasskari excavated site 41WT12 which contained mussel shell and deer bone. Arrowpoints included Perdiz and

Scallorn. Dart points included Gary, Morrill, Palmillas, Kent, Pedernales,
Edgewood, Ellis, Ensor, and Yarbrough.

SITE DESCRIPTION

Site 41GM23 is located on the south side of Rocky Creek, a southwestward flowing tributary of the Navasota River, south and west of the County Road 247 crossing. The site is situated on a sandy ridge parallel to the creek and extends onto the terrace below the ridge. The affected portion of the site is restricted to the terrace, so that test excavations focused only on the terrace area. County Road 247 follows the north edge of the ridge which is mainly in open pasture. Hackberries, elm and oak trees are numerous along the road, the west end of the ridge and the north bank of the creek. The area around the proposed bridge location has been bulldozed, so the vegetation in this portion of the site consists of plants which are adapted to disturbed habitats such as ragweed, sunflowers, cockleburr, black-eyed Susans, baby blue eyes, and small hackberry sprouts. Mustang grapes are found along the right-of-way (ROW) fence.

In addition to man-made disturbances around the bridge location, krotovina were visible in some of the test units. Animal disturbance was confirmed by the artifact distributions observed in the excavation units.

Cultural debris recovered from the site includes sandy paste pottery, dart points, an arrowpoint, flakes, cores, bifaces, and burned pieces of sandstone. Historic debris was found in limited amounts and includes one staple, one piece of wire and one fragment of glass. Surface visibility was very good in the bulldozed portions of the site, but was poorer in the central part of the ridge where there was less disturbance.

TESTING PROCEDURES

Testing was confined to the project ROW. Centerline PT Station 3+31.42 was used as the base for the site map (Fig. 2). The highway centerline, a north-south line, was used as the base line. An east-west line was established through the base point, the PT Station, perpendicular to the base line. In the descriptions that follow, directions are given relative to the site grid.

Three 1 meter by 2 meter test units were excavated. Test Unit 1 was oriented north to south on its long axis, and the southeast corner of the unit was 3 meters south and 1 meter east of the PT station marker. Test Unit 2 was oriented north to south on its long axis, and its southeast corner was on the north-south line 4 meters north of the PT station marker. Test Unit 3 was oriented east to west on its long axis, and its southeast corner was on the east-west line 4 meters west of the PT station marker.

In order to measure elevations at the site, an arbitrary datum was established and assigned a value of 100 feet (30.48 meters). All the test units were excavated in 20 cm levels as measured from the southeast stake using a line level. Each of the southeast corner stakes was tied into the datum. Note that the first level of Test Units 1 and 2 each contain approximately half of the volume as the other levels, since all the levels were horizontal and did not necessarily follow the surface slope. All excavated soil matrix was passed through a 1/4-inch hardware cloth screen and all cultural material was collected and placed in appropriately labeled bags.

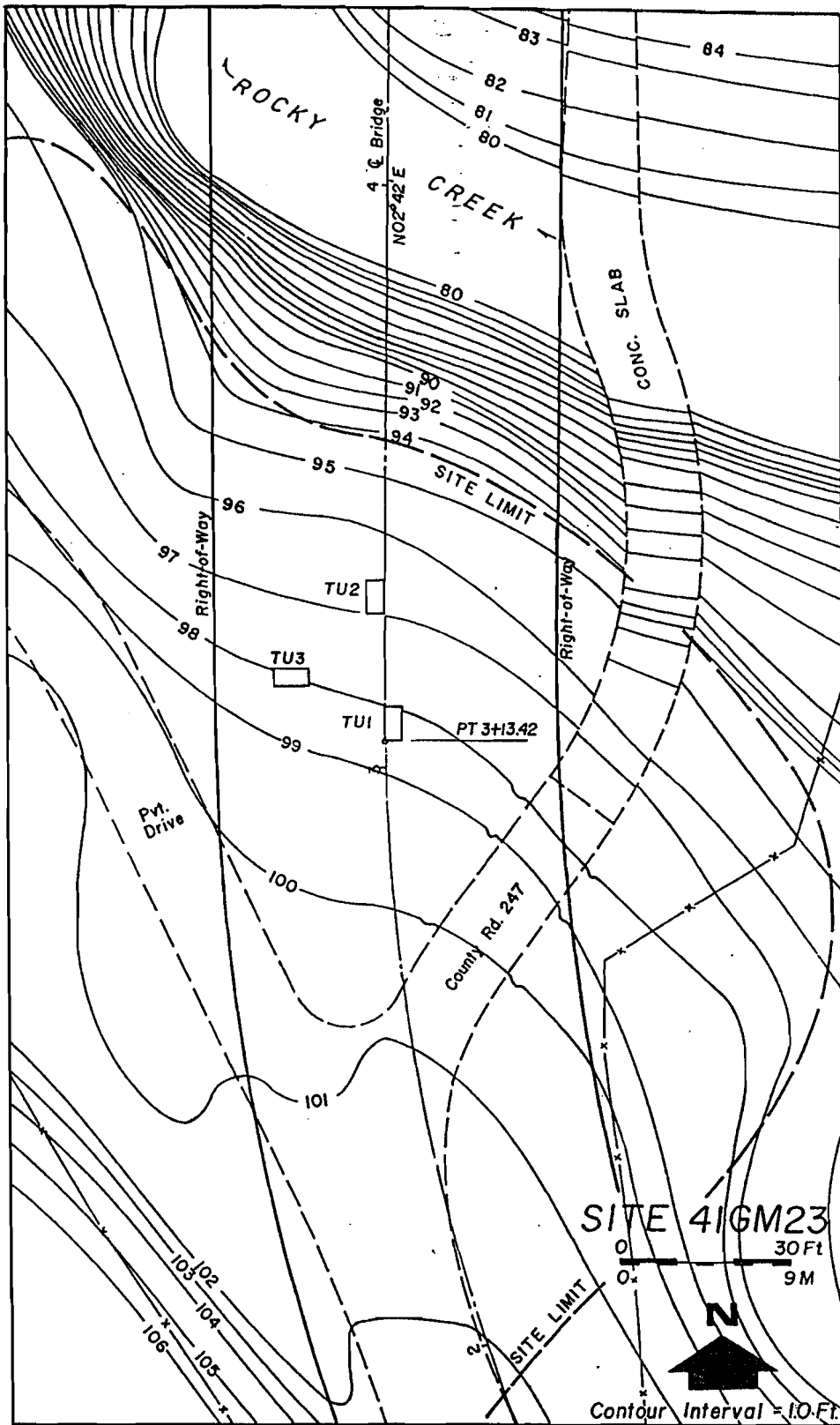


FIGURE 2. Contour map of tested portions of Site 41GM23 showing the Test Units and centerline and right-of-way of the bridge replacement.

The only feature encountered in the test units was a burned rock concentration in the east-central part of Test Unit 2. The feature was exposed using trowel and brush, and it was photographed and drawn. The top of each rock was measured using metric tapes and a line level, with elevations taken from the southeast stake of the test unit.

Other notes included a daily journal, level notes, a bag log, a photographic log, and a profile of one wall of each test unit. These will be stored with the artifacts for future reference.

No soil survey manual has been published for Grimes County, but test excavations revealed a dark brown clay extending to an undetermined depth.

Overlying the clay is a zone of alluvial sand which is very fine, light tan, and varies between 20 and 40 cm in depth. Above this is a light brown zone of sandy loam about 30 cm thick. The contact between the sandy loam and the very fine sand is marked by a dark brown band (Fig. 3).

The sandy loam grades into a medium brown sand zone which is about 40 cm deep. Most of the cultural remains were found in this upper soil zone. An undetermined amount of topsoil was removed during clearing operations by the county. Clearing consisted of bulldozing trees and filling a bulldozer access trench next to the old bridge location.

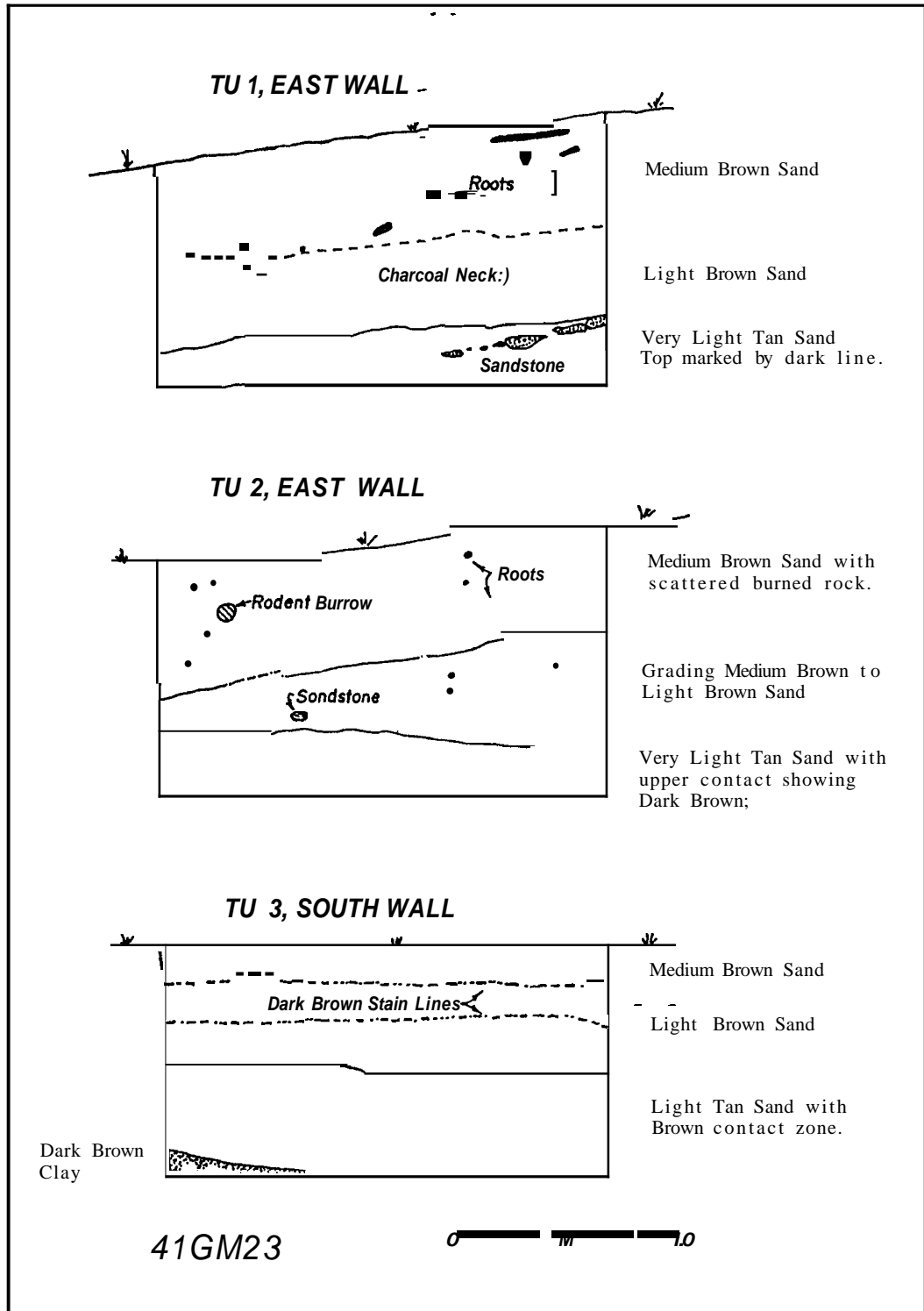


FIGURE 3. Profiles of Test Units 1-3 indicating the remaining soil zones.

FEATURE

A concentration of burned sandstone was encountered at the base of the first level and the top of the second level of Test Unit 2 (Figure 4). The rocks were arranged in a circular cluster about 35 cm in diameter. Depth below the southeast stake ranged from 20 to 32 cm. The feature was next to the east wall of the unit and was about 1 meter north of the south wall of the unit. Thirty-seven rocks with volumes averaging 90 cubic cm. were collected. No charcoal was noted among the rocks, although the rocks had been burned.

ARTIFACTS

A total of 17 levels were excavated, representing 3.4 cubic meters of matrix. The test excavations produced 326 cultural items, including three historic artifacts. Four artifacts were found on the surface.

Ceramics (5 specimens, Figure 5A)

Two of the specimens fit together. All are plain sherds with a friable, sandy paste and are homogenous in color. The sherds are more like Goose Creek Plain (Aten 1983: 231-232) than like typical Caddoan pottery. They are also similar to sherds found in Montgomery County (Shafer 1968).

Arrowpoint (1 specimen, Figure 5B)

The specimen does not conform to any defined types. It has a narrow triangular blade with moderate to strong shoulders and a bulbous stem. It is 41 mm long, 11 mm wide at the blade and 5 mm thick. The stem is 9.5 mm long and varies between 10.0 and 11.5 mm wide.

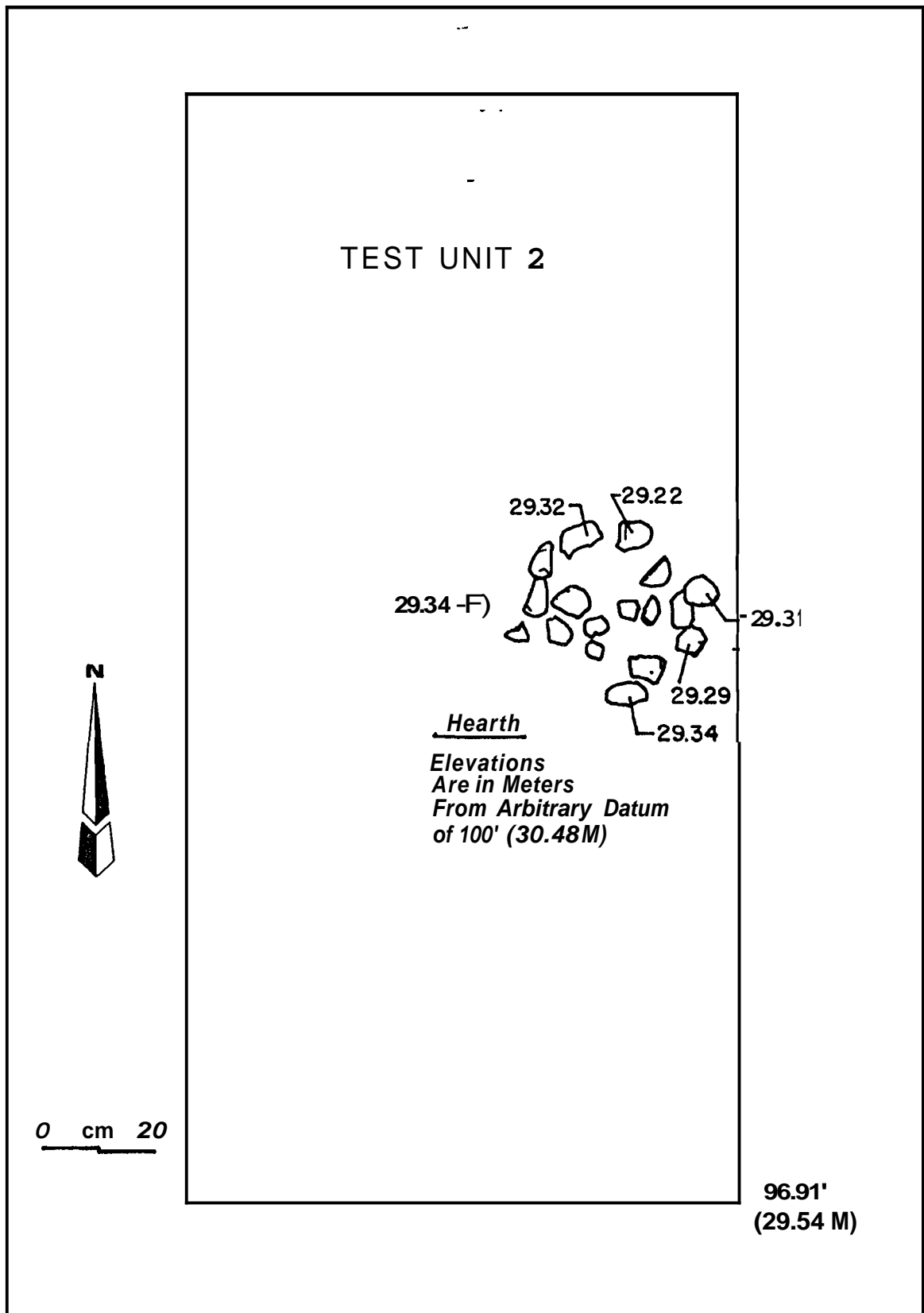


FIGURE 4. Plan of the burned rock feature in the upper portions of the second level of Test Unit 2.

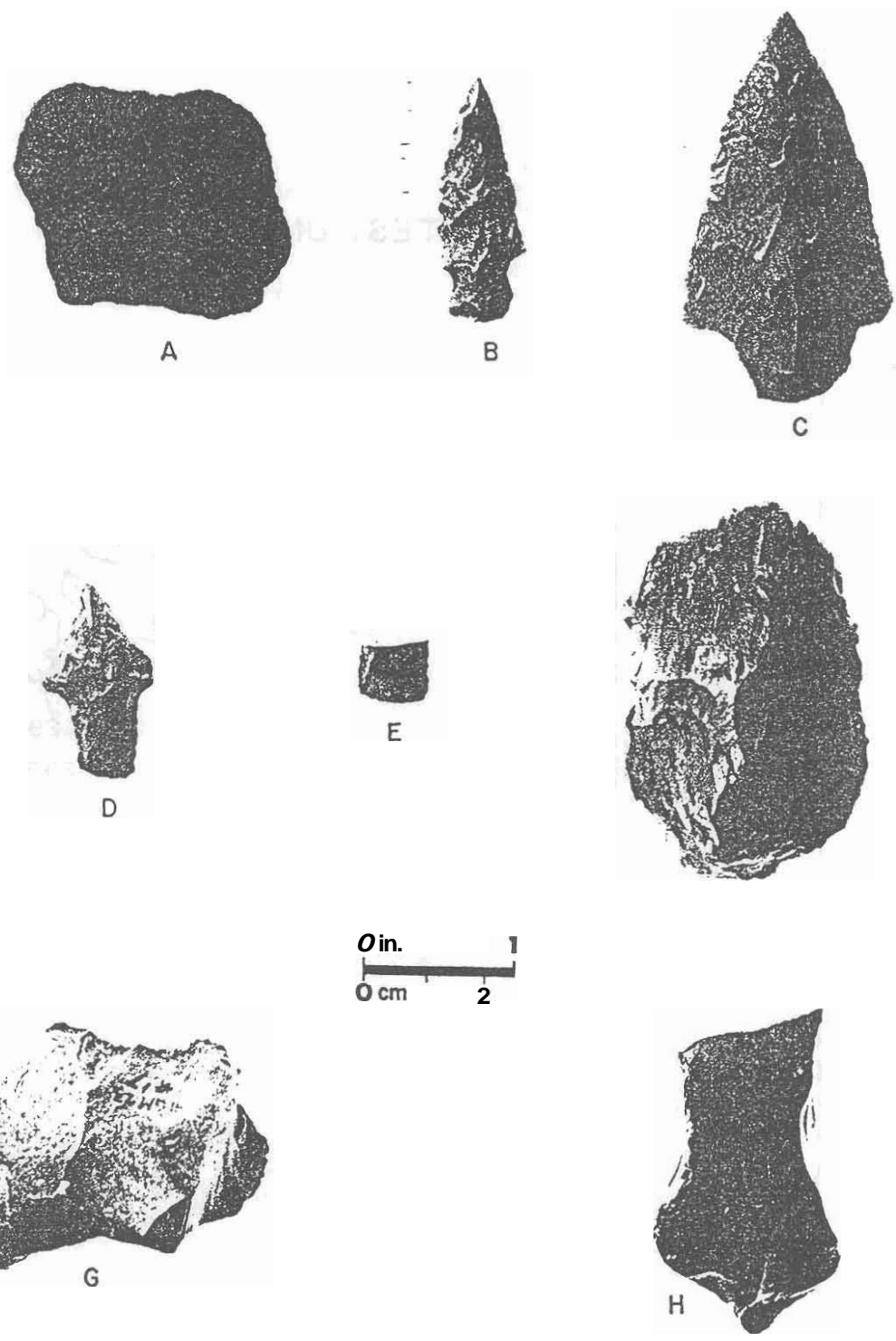


FIGURE 5. Artifacts from Site 41GM23. A, Potsherd, possible Goose Creek Plain; B, Untyped arrowpoint; C, Gary dart point; D, Dawson dart point; E, rectangular dart point stem; F, fossil palmwood biface; G, H, cores.

Dart Point (1 specimen, Figure 5C)

This specimen is a Gary or Dawson point (Duffield 1963; Prewitt 1974, 1975; Turner and Hester 1985:85) with a distinct twist to the blade caused by thinning opposite faces of opposite edges. -The blade is triangular with slightly convex edges and strong shoulders.- The stem contracts to a rounded base. It is 64 mm long, 36 mm wide at the shoulders and 9.5 mm thick. The stem has a maximum thickness of 21 mm.

Dart Point (1 specimen, Figure 5D)

This specimen conforms to the Gary or Dawson point type (Duffield 1963; Prewitt 1974, 1975; Turner and Hester 1985:85). The blade is triangular and resharpened, with steeply beveled edges and moderately well-developed shoulders. The stem is slightly contracting with a nearly flat base. It is 33.0 mm long and 8.0 mm thick. The stem is 14.0 mm long and stem width varies from 9.5 to 12.0 mm.

Dart Point Stem Fragment (1 specimen, Figure 5E)

This specimen is the proximal portion of a straight to slightly contracting stem. It is similar to the specimen in Figure 5D, but is too incomplete to be assigned to any particular point type. No measurements are given because of the fragmentary nature of the item.

Dart Point Distal Fragment (2 specimens, not illustrated)

These two specimens appear to be distal tips of dart points or knives. They are triangular, bifacially worked and somewhat thicker than one would expect for an arrowpoint. One specimen is very well shaped and thinned. The workmanship is reminiscent of Scottsbluff and other typical Paleoindian

projectile points. However, such an assignment cannot be made with such an incomplete specimen.

Biface(1 specimen, Figure 5F)

This specimen is oval with a plano-convex cross-section and is made of fossil palmwood. The dorsal(convex) face is chipped 3/4 of the way around the edge. On the ventral face, flake scars are broad and flat. Fine retouch is not evident on either face. The specimen is 62.0 mm long, 40.0 mm wide and 23.0 mm thick.

Biface Fragment(3 specimens, not illustrated)

These appear to be small lateral fragments broken off larger specimens. One is a bifacially worked fragment of fossil wood.

Modified Flakes (4 specimens)

Four flakes exhibit small scale retouch or use-wear along the flake edges.

Core(3 specimens, Figures 5G, 5H)

One of the specimens(Figure 5G) is a small cobble with two flakes removed through hard hammer percussion. The flakes were removed from opposite ends of the cobble. The second specimen(Figure 5H) is a small blocky cobble with flakes removed by hard hammer percussion from two surfaces. The remaining specimen is a small fragment broken from a larger core.

Debitage (301 specimens)

The flakes encountered during excavation were, almost without exception, small secondary and interior flakes. The highest-concentrations of flakes were in the upper 3 levels.

Table 1: Provenience of recovered artifacts from 41GM23.

Provenience	Prehistoric							Historic		
	Ceramics	Arrow	Dart	Biface	Mod. Flake	Core	Flake	Staple	Wire	Glass
Surface	2		1			1				
Test Unit 1										
Level 1			1				23			
Level 2	2						36			
Level 3			1				19			
Level 4							7			1
Level 5					1		4			
Level 6						1	2			
Test Unit 2										
Level 1				2	2		31	1	1	
Level 2			1	1			62			
Level 3				1			17			
Level 4	1		1				20			
Level 5							7			
Level 6							7			
Test Unit 3										
Level 1							39			
Level 2		1					8			
Level 3					1		11			
Level 4						1	5			
Level 5							3			
Totals	5	1	5	4	4	3	301	1	1	1

CONCLUSIONS

A portion of the site within the proposed ROW for the new bridge has been damaged by clearing and bulldozing. Burrowing activities by small animals have also disturbed the site. Even so, at least 60 cm of deposit remain intact and contain artifacts, debitage and burned rock concentrations. The site has components dating from the Early Ceramic and Late Archaic periods. Relatively undisturbed deposits and features are present, and the site is likely to yield important archaeological information. Therefore, 41GM23 is believed eligible for listing on the National Register of Historic Places under criterion D, and for listing as a State Archaeological Landmark. Pursuant to 36 CFR, part 800, a data recovery plan will be developed in consultation with the office of the State Historic Preservation Officer.

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