

The Jackpump Project

AN ARCHAEOLOGICAL SURVEY OF PORTIONS OF
KARNES AND GONZALES COUNTIES, TEXAS

Thomas C. Kelly and Lynn Highley

With an Appendix
by Cristi Assad

Center for Archaeological Research
The University of Texas at San Antonio
Archaeological Survey Report, No. 65

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We are deeply indebted to Mr. Rudolph T. Blaschke and his son, Lamar Blaschke, both of Yorktown, for their assistance in researching the local history. The elder Blaschke owns survey Unit D, in which all the historic sites and the lone prehistoric site were found. He was most interested in the excavation of 41 KA 52 and brought cold drinks daily to the thirsty excavators. More importantly, he has indicated his willingness to permit access to the land for future investigations.

INTRODUCTION

The Center for Archaeological Research, The University of Texas at San Antonio, conducted an archaeological and historical survey of approximately 2000 acres of Chevron Resources Company leases in Karnes and Gonzales Counties during April 1978 (Fig. 1).

The Jackpump survey was accomplished under terms of a contract between VTN Consolidated (Irvine, California) and the Center for Archaeological Research as part of an environmental study of a potential mining region. The objective of the survey was to determine if cultural and historical resources are present within the area and to make any recommendations for avoidance, protection or recovery of potentially significant features.

The field work was administered by Dr. Thomas R. Hester, Director of the Center, and Mr. Jack D. Eaton, Assistant Director. Thomas C. Kelly, Research Associate, directed field operations, laboratory work and write up for the project. The field team included Roger Hemion, Rebekah Halpern and Wayne Cox. Lynn Highley did historical research and cataloged the archaeological specimens.

THE SURVEY AREA

The survey area, in northeastern Karnes County and with a few acres in Gonzales County, is delineated in Fig. 1. The major topographic features are its water courses. These include Mound Creek (a tributary of Elm Creek which flows into the Guadalupe River) and a branch of Brushy Creek. These intermittent creeks with their potholes and seeps currently provide an uncertain water supply. People versed in the local history report that the only permanent natural water source in the area was a high volume flowing spring near the junction of three branches of Mound Creek, just north of the northern boundary road of the survey area. The spring silted up about 1900 because of intensive farming with inadequate erosion control measures (Mr. Rudolph Blaschke, personal communication). The entire survey area, excepting the creek bottoms, has been extensively farmed. However, in recent years, much of it has been allowed to revert to pasture land and a secondary growth of elm, oak and mesquite.

Geologically, the survey area falls into the Kisatchie-Oakville Cuesta, an outcrop of the Catahoula and Cironelle formations which are continental and marine Tertiary sediments from Eocene to Miocene in age. The soils are various combinations of sands, clays and loams. The high iron content of these soils causes the chert and silicified wood (from which the aboriginal people made their tools and weapons) to have bright red, yellow and orange colors (Fenneman 1938:100-111). An important factor in the archaeological picture of the area is the rate of recent sediment deposits which vary from 0.5 to 6 feet, with as much as 2 feet being deposited in a single flood (Crawford 1971:2). Even fairly recent sites may be deeply buried.

Biologically, the area is on the boundary line between the Texas and Tamaulipan Biotic Provinces; 61 species of animals were recorded in the Tamaulipan province (Blair 1950:100-105). White-tailed deer, skunk, cottontail rabbit, jackrabbit, fox squirrel, raccoon and armadillo were observed during the survey. Blackjack

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oak, live oak, post oak, elm, pecan, mesquite, huisache, grama grass, bermuda grass, coastal bermuda, bullnettle, prickly pear, corn and various feed grains were also noted.

PREVIOUS ARCHAEOLOGY IN KARNES COUNTY

Systematic archaeological site recording using the Smithsonian trinomial system, with the Texas Archeological Research Laboratory, Austin, as the repository, began in Karnes County in 1966. Calhoun (1966) recorded a Late Prehistoric campsite, 41 KA 1, south of Kenedy near the Goliad County border. Two almost completely restorable pottery ollas were found.

Bishop (1971) recorded sites 41 KA 2-5 and 41 KA 23-25 from which his father had surface collected between 1945 and 1970. Sites 41 KA 5 and 41 KA 25 were located on the west bank of Cibolo Creek on and near Farm Road 881. The rest were in or near Falls City overlooking either Marcellina Creek or the San Antonio River. 41 KA 25 contained a Late Paleo-Indian point (*Angostura*), a Pre-Archaic point (*Martindale*) and several Late Archaic points. Four sites had Late Archaic and Late Prehistoric points together, and the remaining sites were knapping stations of lithic resource procurement areas of unknown time periods.

Birmingham (1970) reported a Late Archaic/Late Prehistoric site (41 KA 6) on the west bank of the San Antonio River near Choate. Pottery sherds were recovered. Birmingham, Schmiedlin and Hester (1973) reported the Tessman site (41 KA 7), located on a hilltop in western Karnes County. Late Paleo-Indian points (*Golondrina* and *Angostura*), as well as Middle and Late Archaic points (*Pedernales*, *Enson*, *Refugio* and *Tortugas*), were reported.

Sites 41 KA 8-22 were reported by Crawford (1971) as the result of the first professional survey in the county. It covered the Ecletto Creek watershed which runs through the northeast part of Karnes County. This professional survey located only three diagnostic dart points, two *Tortugas* and one *Morhiss*, which emphasizes the problem generated by decades of relic collecting. Only one site, 41 KA 10, had significant undisturbed cultural deposits warranting a recommendation for major testing. Two sites were recommended for minor testing while the rest were deflated lithic scatters of lithic resource procurement areas not worth further action.

41 KA 26, the only reported historic site in Karnes County prior to the Jackpump Project, was reported by Dan Scurlock (1972) as the site of a Spanish presidio on the west bank of Cibolo Creek north of State Road 887. Majolica and glass fragments of the early 19th century were found.

41 KA 27-34, 41 KA 36 and 41 KA 43-48 were reported as the result of Panna Maria and Panna Maria II surveys by Kelly and Roemer (1976) and Kelly, Roemer and Black (1977). These surveys covered 5000 acres between the San Antonio River at Hobson and Cibolo Creek near Panna Maria. This area is now the processing plant of Chevron Resources and the site of several of their uranium mines.

A Late Paleo-Indian site with *Angostura* points, 41 KA 30, was found on a ridge west of Highway 80 overlooking the Cibolo Creek drainage. Another, 41 KA 36, yielded *Golondrina* dart points and was found along the San Antonio River drainage two miles east of Falls City. A third, and most extensive of the three Paleo-Indian sites, 41 KA 46, was located on the Cleo Urbanczk farm on an eroding ridge west of Cibolo Creek. This site was tested (Kelly, Roemer and Black 1977), and *Golondrina* and *Bell* points as well as *Clear Fork* and *Guadalupe* tools were recovered. 41 KA 28 and 41 KA 31-33 were Late Archaic/Late Prehistoric campsites overlooking Marcellina Creek or the San Antonio River. *Matamoros*, *Enson* and *Fairland* dart points and *Perdiz* arrow points were recovered. Over 100 scrapers have been collected from 41 KA 32 by the farm owner, Rudy Haiduk of Hobson. This prolific site overlooks what was once a permanent lake, formed in an oxbow of Marcellina Creek, until it was destroyed in the 1930s. Mr. Haiduk also has an exceptionally fine collection of points and corner-tang knives from this farm. 41 KA 31 was on a bluff overlooking the oxbow and was tested by the Center for Archaeological Research (Kelly, Roemer and Black 1977). No diagnostics were found.

41 KA 27, 29, 43, 44, 45, 47 and 48 are all lithic resource procurement areas not attributable to any specific time period. All have abundant chert and silicified wood exposed on eroding slopes and are littered with knapping debitage.

Another professional survey in Karnes County, prior to Jackpump, was a portion of the multi-county Conquista Project, part of an Environmental Impact Statement prepared in advance of Continental Oil Company's uranium strip mining operation. The Center for Archaeological Research (Black and Kelly 1977) found sites 41 KA 35 and 41 KA 37-42.

41 KA 35 is a site on Brushy Creek in northeastern Karnes County near the Jackpump area. It was a lithic resource procurement area of undetermined time period, with chert and exotic silicified wood.

Sites 41 KA 37-42 are on Conquista Creek and the Neischweitz Ranch roughly six miles west of Falls City. 41 KA 37 is the largest combination lithic resource procurement area and campsite so far identified in Karnes County, covering over 50 acres on the west slope of a ridge with eroding chert, silicified wood and knapping debitage. Its use by Late Paleo-Indian, Archaic and Late Prehistoric groups is indicated by *Golondrina* and *Perdiz* points, and *Clear Fork* tools.

41 KA 38, in a flat area west of 41 KA 37, was tested with controlled excavations. Late Prehistoric artifacts, including *Perdiz* arrow points, were recovered. 41 KA 40 was an eroding ridge top Late Paleo-Indian site on the western edge of the same ranch with *Plainview* points and debitage from a typical high overlook campsite above Conquista Creek. 41 KA 39, 41 and 42 were isolated lithic resource procurement areas on high eroding ridges with plentiful chert and silicified and opalized wood, but no diagnostic artifacts.

A recent additional Conquista Project survey of 2000 acres around Tordillo Hill in southwestern Karnes County has been conducted by the Center for Archaeological Research (Smith 1978). Heavy outcroppings of silicified wood

from the Tordilla Sandstone were observed, but no archaeological sites were found. Smith was of the opinion that the lack of any reliable water sources in the area accounted for the absence of sites.

A summary of the 47 previously reported prehistoric sites in Karnes County by time periods follows:

		TOTAL
PALEO-INDIAN	41 KA 7, 25, 30, 36, 37, 40, 46	7
EARLY ARCHAIC	41 KA 34	1
MIDDLE ARCHAIC	41 KA 14, 21	2
LATE PREHISTORIC	41 KA 1, 2, 38	3
LATE ARCHAIC/ LATE PREHISTORIC	41 KA 5, 6, 23, 24, 28, 31, 32, 33	8
LITHIC RESOURCE PROCUREMENT AREA (various time periods)	41 KA 8, 10, 13, 16, 17, 18, 19, 20, 22, 27, 35, 39, 41, 42	14
UNKNOWN TIME PERIODS	41 KA 3, 4, 9, 11, 12, 15, 29, 43, 44, 45, 47, 48	<u>12</u>
		47

Late Paleo-Indian sites 41 KA 7, 25, 37, and 46 also had Archaic points associated with them, but stratigraphic separation was not discernible. All the Paleo-Indian sites were eroding hill or ridge top overlook sites (or possibly were never covered). All are comparatively far removed from their water sources. The Late Archaic and Late Prehistoric diagnostic artifacts were more often found together than separately, and always close to water sources.

This summary points up a glaring archaeological deficiency in that there have only been three comparatively minor excavations in Karnes County, and none of them made any significant contribution to either absolute or relative chronology of the archaeological picture of the county.

HISTORICAL BACKGROUND

The first ranch in Texas, according to Thonhoff (1964), was located between the San Antonio River and Cibolo Creek. Land grants to Andres Hernandez and Luis Menchaca were recorded in 1758. Spanish soldiers had, in 1737, abandoned a fort on the west bank of Cibolo Creek at an ox cart crossing. Because of Indian attacks the fort was called variously *Fuerte del Santa Cruz*, *Cruz de Cibolo* and *Fuerte del Santa Cruz de Cibolo*. A peaceful band of Lipan Apaches

is reported to have lived up the creek on the east bank, until they had to flee the Comanches.

The fort was finally abandoned in 1782 and bulldozed in the 1930s to keep relic hunters away. Scurlock (1972) reported traces of the old fort.

Karnes County was created from Goliad, De Witt and Bexar Counties on February 4, 1854 and named for Henry W. Karnes, a Texas Revolutionary War hero. Helena was the county seat until it was bypassed by the San Antonio and Aransas Pass Railway. In 1894 the county seat was moved to Karnes City, which was located near the railroad (Didear 1969).

In 1857 Helena was the center of the "Cart War." The Cart Road was the main transportation route for supplies to settlers and Army outposts in west Texas and New Mexico. Helena was the midpoint between Indianola and San Antonio. In 1857 fighting erupted between American freighters and Mexican cart drivers who were willing to carry supplies at a lower rate than the Americans. Eventually, the Americans prevailed, but their services were soon replaced by the railroad in 1866.

Panna Maria, in Karnes County, was the first Polish settlement in the United States. Father Leopold Moczygemba arrived with the first immigrants in 1854 and in 1855 established the first Polish Catholic church in America.

Gillett is located in northeast Karnes County. Originally named Riddleville, its name was changed to Gillett in the early part of this century. E. G. Gillett was a teacher, surveyor and publisher of *The Karnes County News*; he encouraged the development of the small town (Webb 1952; Didear 1969).

The grave of Jane Hardin, wife of John Wesley Hardin, is located in the Asher Cemetery (Fig. 2). She died in 1892 while Hardin, a noted Texas outlaw, was in prison. After his release from prison in 1894, Hardin lived for a short time with a friend, Fred Duderstadt (McGubbin, in Hardin 1977:xiii). The old Duderstadt homestead is located on the northern boundary road of the Jackpump survey area, one mile east of Mound Creek. Prior to his imprisonment, and for a short time afterward, Hardin frequented the Jim Clements Ranch near the town of Gonzales (Askins 1970).

SURVEY PROCEDURES

For the purpose of horizontal control, the survey area was divided into eleven units, designated A through K, of approximately 180 acres each (Fig. 1). Both banks of all creeks were walked out wherever possible. Cultivated fields were walked on compass transects spaced 200 meters apart. The wooded areas were transected at 100-meter intervals. Dense vegetation and brush completely obscured approximately 25% of the area, and portions along the southern part of Mound Creek were so densely covered that they could not be adequately examined at the time of the survey. High probability areas such as creek banks, terraces and ridges were given approximately 80% coverage.



a



b

Figure 2. The Asher Cemetery (41 KA 53). a, general view looking west. The graves in the foreground have a mantle of sea shells; b, tombstone of Jane Hardin, wife of John Wesley Hardin.

SURVEY RESULTS BY UNITS

Unit A

This field was formerly cultivated but has now reverted to pasture and second growth oak and mesquite. Nothing was found.

Unit B

Second growth oak and mesquite cover the unit. A branch of Brushy Creek penetrated the area south to north. Two chert flakes were found near a pond at the north end.

Unit C

Part of the unit is second growth woodland and the rest is cultivated feed grain fields. A branch of Mound Creek originates in, and crosses, the north-east corner. Nothing was found.

Unit D

The main course of Mound Creek runs south to north through the middle of the unit with a branch running through the eastern edge. The area was once farmed but has reverted to second growth timber and open pasture. All of the recorded sites, four historic and one prehistoric, were found in this unit. Just north of this unit, Mound Creek and two of its branches come together, forming a choke point that impounds water after heavy rains. This has resulted in the formation of a flat and very fertile flood plain between the creek branches over most of the unit. The sites are described in the following section of this report.

Unit E

This formerly cultivated area has reverted to recent growth mesquite and oak. The small creek on the west side has an abundant exposure of Uvalde Gravels and silicified wood near the northwest edge of the unit, but no sites were found.

Unit F

Four-fifths of this unit consists of cultivated fields, with the remainder being second growth oak and mesquite. Nothing was found.

Unit G

The unit consists of fields with various feed grains. Nothing was found.

Unit H

An outcrop of chert and silicified wood was found at 630430 E, 3223610 N, but there was no evidence of aboriginal usage. Mound Creek is extremely brushy and nearly impenetrable in this unit. Nothing was found.

Unit I

The entire unit is a cultivated field now in feed grain. Nothing was found.

Unit J

The unit is covered with second growth trees. A branch of Mound Creek originated in the south end of this unit. A source of silicified wood and chert nodules was found at 631200 E, 3224150 N on the east bank, but with no evidence of aboriginal use. Nothing was found.

Unit K

The unit is a large, freshly cultivated field. One chert core was found near the southeast entrance gate to the unit. Only two flakes were found in the remaining 200 acres of field.

DISCUSSION OF THE SURVEY

It was extremely frustrating to the senior author in charge of the field survey to cover 2000 acres in the Jackpump survey and to find only one prehistoric site. Considerable experience in prior Karnes County surveys and preliminary map studies suggested that Mound Creek and the tributary creeks, terraces and overlook ridges would have produced at least eight to ten sites. Finds of isolated flakes in three of the survey units certainly indicated past aboriginal presence in the area.

The following problems are posed in an effort to help guide and orient future surveys in the area:

1. Perhaps prehistoric Indian groups were not in the area in sufficient numbers or for a long enough time span to leave more evidence of their presence.
2. The silting-in of the valleys has buried all or most of the sites. Crawford (1971:2), speaking of the nearby Ecletto Creek drainage, states that 95% of present erosion is sheet erosion from the cultivated fields and only 5% is creek bank erosion. Would this account for the high percentage of sites in Karnes County that are nothing but dispersed lithic scatters? Were they derived from higher elevations? The adequacy of surface surveys should be tested by an intensive mechanical auger testing in one of these areas that is to be completely destroyed by strip mining.
3. Has man destroyed most of the sites through recent activities such as intensive farming, sand and gravel mining, road building and relic collecting? Interviews with all of the "old timers" in a given area might shed light on this.

4. Was water inadequate to support aboriginal populations in much of the area? A multi-disciplinary approach would be required to answer this question.
5. Survey bias (inadequate coverage, untrained surveyors, too much vegetation cover in the wrong places, etc.) is possible but is not believed to be a factor in this survey.

Realizing that strip mining will destroy forever sites that are not found in surveys such as this, it would seem pertinent for the professional archaeologists to find out just how good or bad these surface site surveys really are.

THE SITES

41 KA 52

Site Description

A single flake found in survey Unit D finally resulted in the discovery of the only prehistoric site found in the Jackpump survey. A county road forms the northern boundary of the area with a 125-foot buffer strip beyond it. The Odom Cemetery is south of a fence on the south side of this road between the Mound Creek bridge and its largest tributary some 300 meters east. North of the road approximately 200 meters the two creeks join together with another tributary at a steep cut bank and seep spring (Fig. 3,a). This three creek intersection forms a choke point whenever a heavy rain occurs in the watershed (Fig. 1). Water backs up covering the area between the creeks to considerable depth, depositing silt and sand (Mr. Rudolph Blaschke, personal communication). A flat, level area ideal for camping during the normal dry periods has formed between the two principal creeks. Long ago the Mound City baseball diamond was located here with no one realizing it was atop a major archaeological site.

About 65 meters east of the Odom Cemetery a large gatepost marked the end of one of the south to north survey transects, and a single chert flake was found in the soil from the post hole (Fig. 4,a). Since the initial survey was unproductive, the survey party rechecked areas where even a single flake had been found. A very large and active ant bed (Fig. 3,b) across the road north of the gatepost was shovel tested and immediately found to contain numerous flakes and a lanceolate projectile point with deeply ground basal edges.

Site Investigation

The site was given the field designation "Jackpump 1" and was subsequently registered with the Texas Archeological Research Laboratory as 41 KA 52. Its UTM coordinates are 630180 E, 3225430 N. Shovel tests in both banks of the road indicated that a buried site of considerable size had been found. The survey team attempted to determine the site limits by a minor excavation using standard archaeological procedures (Hester, Heizer and Graham 1975).

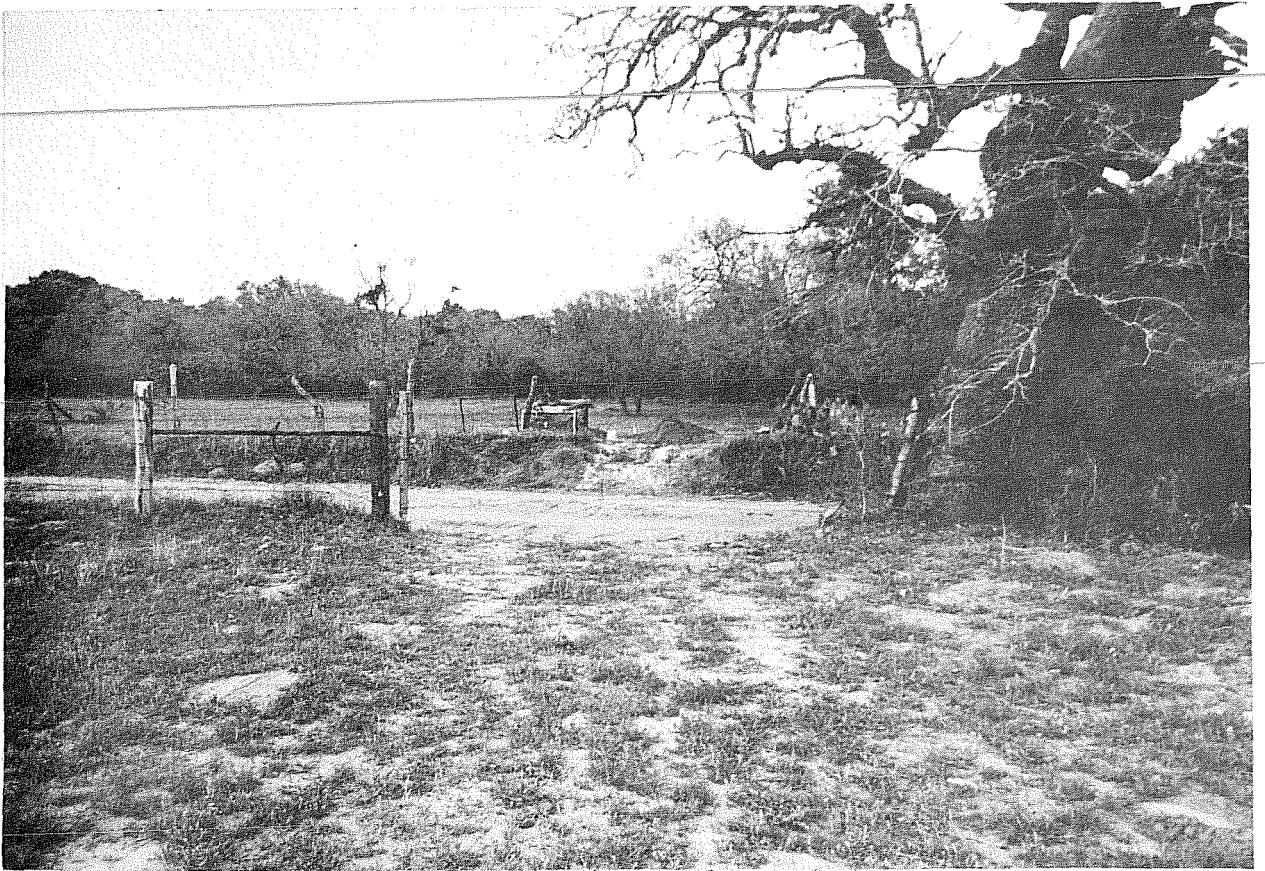


a

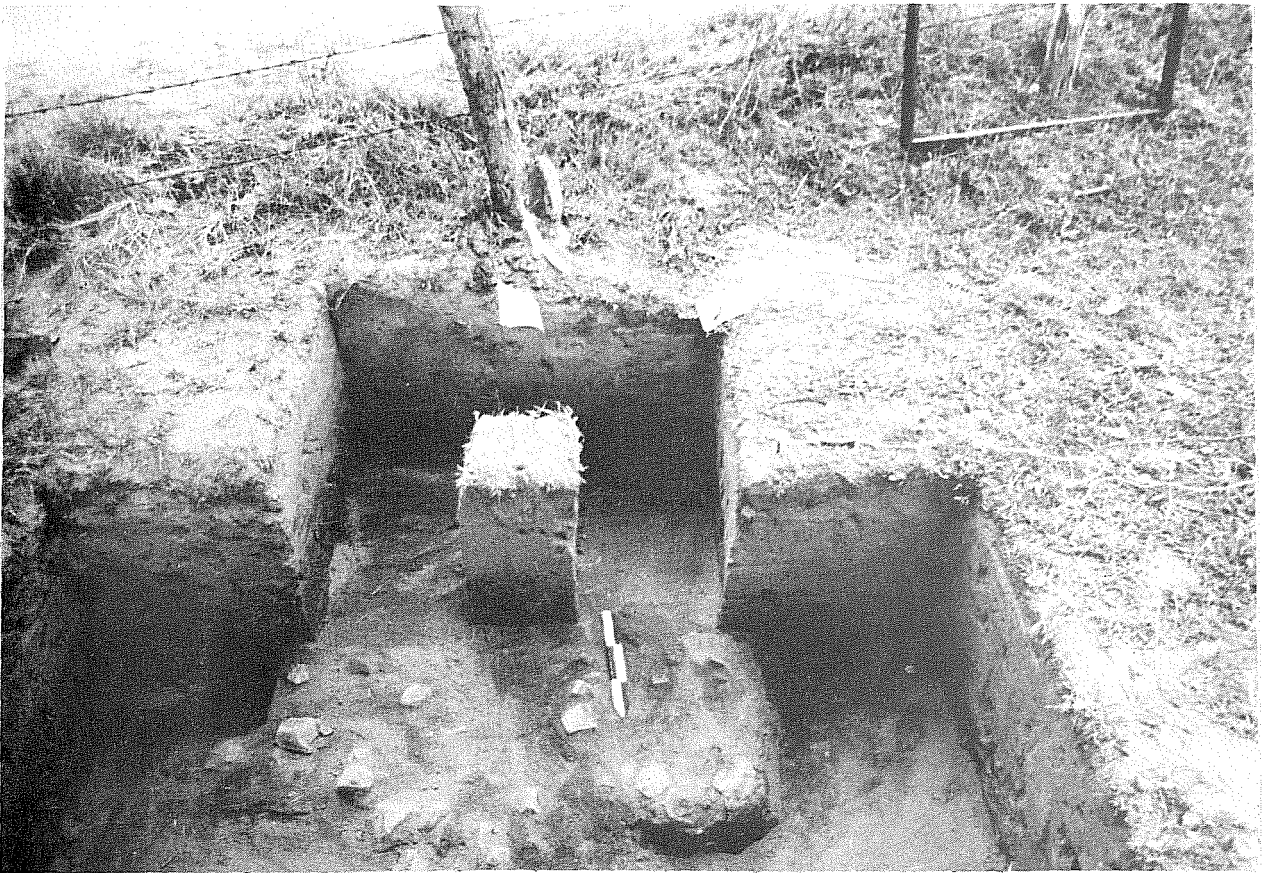


b

Figure 3. Views of Site 41 KA 52 and Area. a, seep spring north of 41 KA 52; b, view of site 41 KA 52 (road cut in foreground).



a



b

Figure 4. Views of Site 41 KA 52. a, looking north. Site extends on both sides of the road; b, hearth #1 exposed at 55 cm (Units A and B, looking south).

The fence post immediately west of the ant bed, and directly in line with the discovery gatepost across the road, was used as a survey point (Fig. 3,b). A grid line was extended from a nail on this post, on a magnetic north heading, to a large and distinctively marked mesquite tree 65 meters away. The east-west grid line was established at right angles to this line from the third fence post to the east. A stake was driven at the intersection of the two grids and designated 1000 E, 1000 N, and all horizontal measurements were from this site datum. Vertical measurements were made with line level and tape using the southeast corner for establishing vertical control. The field coordinates of the test pits have been replaced with alphabetical designations for easier reference (Fig. 5) as follows:

Excavation Unit	Grid Coordinates (SW corner stake)	
	East	North
A	999	996
B	1000	996
C	999.5	995.3 (100 x 70 cm unit)
C'	1000.5	995.3 (70 x 50 cm unit)
D	1001	995
E	1005	999
F	997	1006
G	996	1020
H	998	1000
I	1007	1007
J	1020	979

The Excavations

The initial 1-m² test pit, Unit B, was excavated in arbitrary 10-cm levels using 1/8-inch mesh screens for maximum recovery. A lanceolate preform similar to the lanceolate point found in the discovery shovel test was found at a depth of 18 cm. Flakes of chert and exotic silicified wood were found in all levels down to an underlying sterile clay at 90 cm. The flakes reveal heavy emphasis on bifacing activity in all levels. As an example, the 0 to 10 cm level contained two primary cortex flakes, 24 secondary flakes and 125 interior flakes. Of these 151 flakes, 32 flakes were lipped. The low primary flake count indicates initial decortification away from the site, probably at a lithic resource procurement area.

Lipped flakes are usually an indication of bifacing activities with soft hammer percussion, primarily in the manufacturing of preforms for projectile points. The flake count decreases with each succeeding level (95, 59, 51) but increases to 80 in the 50 to 60 cm level where a well-preserved *in situ* hearth was found between 55 and 60 cm (Fig. 4,b). The flake count decreases with each level below the hearth to an underlying clay at 90 cm. The clay was tested for another 20 cm but contained no cultural materials.

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Excavation of the First Hearth

Units A, B, C, C' and D were excavated to expose and record the hearth (Figs. 6, 7,a) with Units C and C' being 70 x 100 cm and 70 x 50 cm, respectively, to avoid undermining the fence post that was the key grid system reference. A small portion of the hearth is still *in situ* below this post (Fig. 6). The hearth is made up of burned sandstone brought to the site from the nearby stream bottoms. Not one unburned or unknapped rock was found in the entire excavation above the underlying clay layer which contained unaltered chert and sandstone. The hearth rocks are irregular, approximating 7 x 8 x 5 cm, with the thickness rather uniform between two flat faces. The hearth was composed of a single level of stones. It was 2.2 meters northwest to southeast and 1.8 meters north-south, and had an irregular, oval shape. Phytolith and constant volume soil samples were taken from every level and every pit, but special attention was given to the interior of the hearth. So far, the flotation samples in the laboratory have yielded only flecks of charcoal.

Once exposed and recorded, excavation proceeded through the hearth. A *Fairland* point (transitional Late Archaic) was found in Unit B below the hearth at 62 cm, associated with burned clay lumps which are perhaps by-products of the hearth. The rather skimpy evidence indicates that the hearth belongs to the Late Archaic horizon and that older artifacts near the surface were either deposited during one of the periodic floods that occur here or through rodent disturbance. There is probably some mixing of artifacts smaller than the hearthstones because of the intensive activities of rodents (presently the area is heavily mole-infested), whose burrows are found in all levels down to the clay.

Unit A contained no diagnostics, but there was an abundance of flakes and blades.

Unit C contained a lanceolate dart point with heavily ground "fishtail" base. It was found at 28 cm and we attribute it to the Late Paleo-Indian time period (see artifact descriptions).

Unit C' had a *Fairland* (transitional Late Archaic) point in the 50 to 60 cm level, adding a bit to the evidence for the hearth belonging to a Late Archaic occupation.

Unit D extended under the fence line into the previously mentioned ant bed. The lanceolate point (also attributed to the Late Paleo-Indian period) found in the discovery shovel test was found at approximately 15 cm. A *Scallorn* (Late Pre-historic) point was recovered in the 0 to 10 cm level. A gouge-like tool and a long lanceolate preform were also found, but not in a meaningful context. This square was even more mixed up than usual because of the proximity of the road, with grading material adding to the other elements.

Scattered Testing

Units E and F (1 m²) and Units G, H, I and J (50 cm²) were excavated in a scattered pattern in an effort to determine the extent of the site. Unfortunately, the pattern was not large enough to define the site limits, as every unit yielded cultural debris.

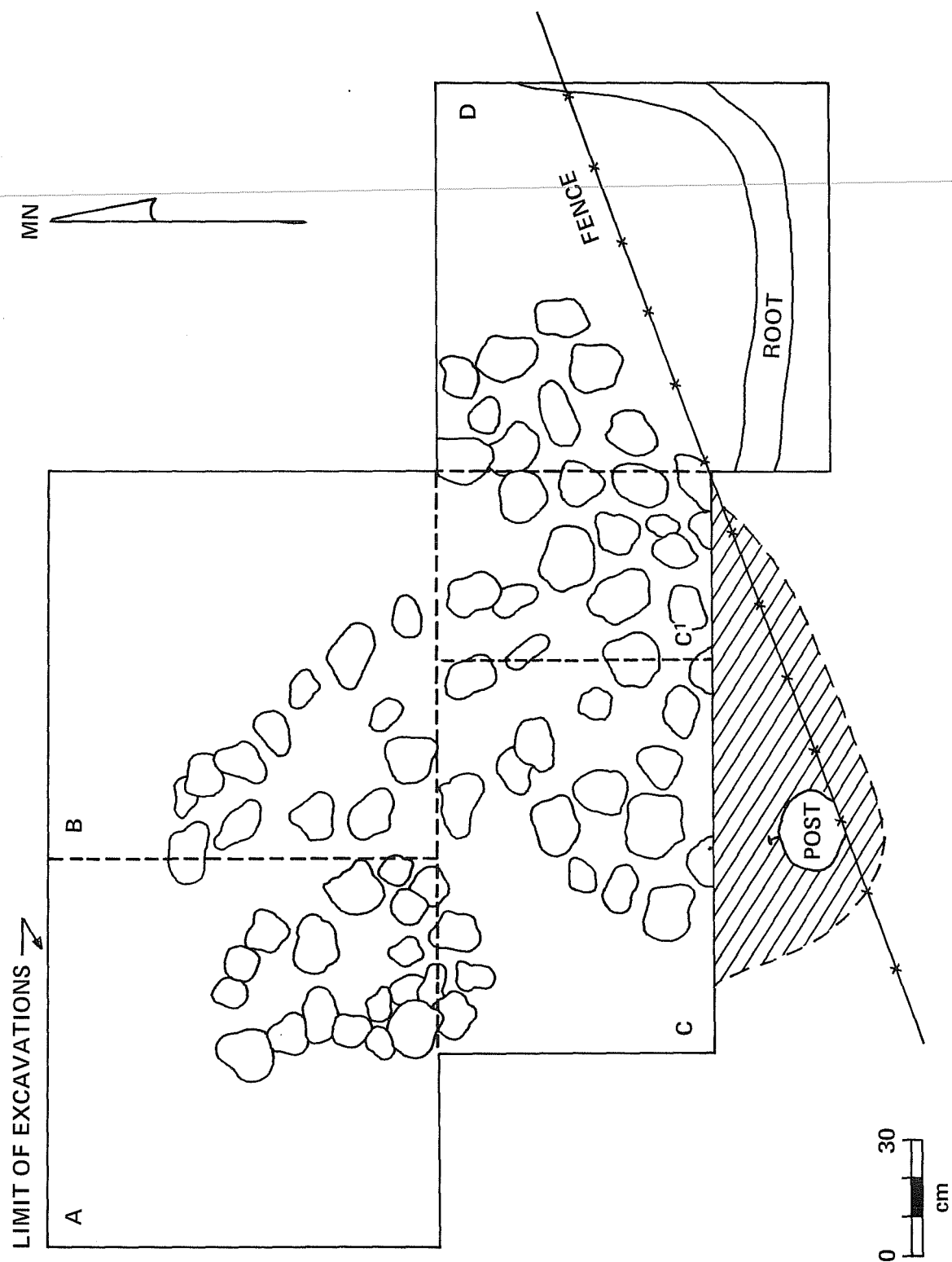


Figure 6. Plan of Hearth #1 at Site 41 KA 52.



a



b

Figure 7. *Hearths at Site 41 KA 52.* a, Hearth # 1, looking southeast; b, Hearth #2 partly exposed in Unit E.

Unit E yielded a *Golondrina* (Paleo-Indian) point fragment at 19 cm and a thick triangular dart point (Archaic) in the 30 to 40 cm level, again indicating earlier artifacts being washed in, or in some other way redeposited, over artifacts from a more recent period.

Excavation of a Second Hearth

A hearth was encountered in Unit E at 40 cm (Fig. 7,b). It was too large for a 1 m² to fully uncover it, and no time remained to clear it. At least two more units would be required to delineate this hearth. This hearth probably belongs somewhere in the Archaic time period, but only more complete excavation would tell where.

Unit F (Fig. 5) was the last 1 m² that time allowed; it was placed three meters east and six meters north of the basic datum. An *Angostura* dart point (Late Paleo-Indian) was recovered at 15 cm, and a *Perdiz* arrow point (Late Prehistoric) was found at 40 cm, just above the sterile clay subsoil. This is yet another example of much earlier artifacts being superimposed over more recent material, a consistent problem at 41 KA 52.

Shovel Tests

These units (50 cm²) were excavated with shovels and screened through 1/4-inch mesh screens. They were located with reference to the site datum: Unit G, 4 m east, 20 m north; Unit H, 12 m east, 0 m north; Unit I, 7 m east, 7 m north; and Unit J, 20 m east, 21 m south (Fig. 5). No diagnostic artifacts were recovered, but in each unit there was abundant knapping debitage and several projectile point fragments, down to the underlying clay. The sandy soil varied from 45 to 120 cm in depth, with a clearly defined clay stratum below.

Artifact Descriptions

Bone, wood and seeds (excepting a few beans of recent origin) were not preserved in the site. A few mussel shell fragments were found, but none showed any alteration by man. No unaltered rock was found, excepting a few pieces of Uvalde Gravel (chert) in or on top of the clay below the sandy artifact-bearing stratum.

The artifact assemblage from the site includes arrow points, dart points, bifaces, unifaces, a gouge-like tool, preform, cores, flakes, blades, flake tool and miscellaneous knapping debitage.

The following abbreviations are used in the artifact descriptions: L - length; MW - maximum width; T - maximum thickness. All measurements are in millimeters.

Nine complete or identifiable projectile points were excavated, as compared with none found in the surface survey of 2000 acres. The approximate average of one point per .63 m³ might not look too impressive, but it is three times the total number of points recovered in all three of the previous Karnes County

excavations. The points are listed in chronological order based on cross-dating with types from dated sites. No radiocarbon dates were obtained because of a lack of charcoal, nor was there any stratigraphic separation of points in the rodent-mixed homogeneous sand. It is possible that, with the combination of occasional heavy flooding and continuous rodent action, there has been considerable movement of all artifacts, with the exception of the comparatively large and heavy hearthstones which remain *in situ*.

Arrow Points

Perdiz (Fig. 8,i): The point is made on a flake with fine chipping on both faces. The material is opaque buff-colored chert with fine hair-like inclusions noted under the microscope. The type is a key marker of the Late Prehistoric period Toyah Phase, with site distribution over central and southern Texas. It has been radiocarbon dated between A.D. 1440-1760 in Zavala County (Hester and Hill 1975), in Jim Wells County at A.D. 1370 (Hester *et al.* 1977) and in Bexar County at A.D. 1500 (Gerstle, Kelly and Assad 1978). The Zavala County dates indicate survival of the type into the Protohistoric period. L: 31.3; W: 14.3; T: 3.8; Provenience: Unit F, 30-40 cm. The stratigraphic sequence in this unit is confused, as an *Angostura* Late Paleo-Indian point was found at 12 cm.

Scallorn (Fig. 8,h): The specimen is made on a translucent yellow-tan silicified wood flake with fine homogeneous grain. This type has been dated at the Kyle site in Hill County between A.D. 557-971 (Jelks 1962). There was no stratigraphic separation between *Scallorn* and *Perdiz* points in Zavala County (Hester and Hill 1975), indicating possible later survival of the type in southern Texas. L: 31.3; MW: 14.3; T: 3.8; Provenience: Unit D, 0-10 cm. The point type has wide distribution and is the Austin Phase marker of the Late Prehistoric period in central Texas.

Dart Points

Fairland (Fig. 8,e,f): Two specimens were found. Both fall within the classification of Suhm and Jelks (1962) and are made of opaque buff-colored fine grained chert. The *Fairland* type was assigned to the period A.D. 1-500 in the Stillhouse Hollow sequence (Sorrow, Shafer and Ross 1967). No radiocarbon dates are available, but morphologically the type is a transitional Late Archaic point, and it is debatable as to whether it is an arrow or dart point.

The first specimen (Fig. 8,f) is a triangular point with convex edges, weak shoulders side notched to form a flaring stem and expanded concave base. The material is opaque buff chert. L: 28; MW: 19.2; T: 6.2; Provenience: Unit B, 75 cm.

The second specimen (Fig. 8,e) is also triangular with weak shoulders, expanding stem and slightly concave base. The material is opaque buff fine grained chert. L: 32; MW: 21.5; T: 5.3; Provenience: Unit C', 50-60 cm.

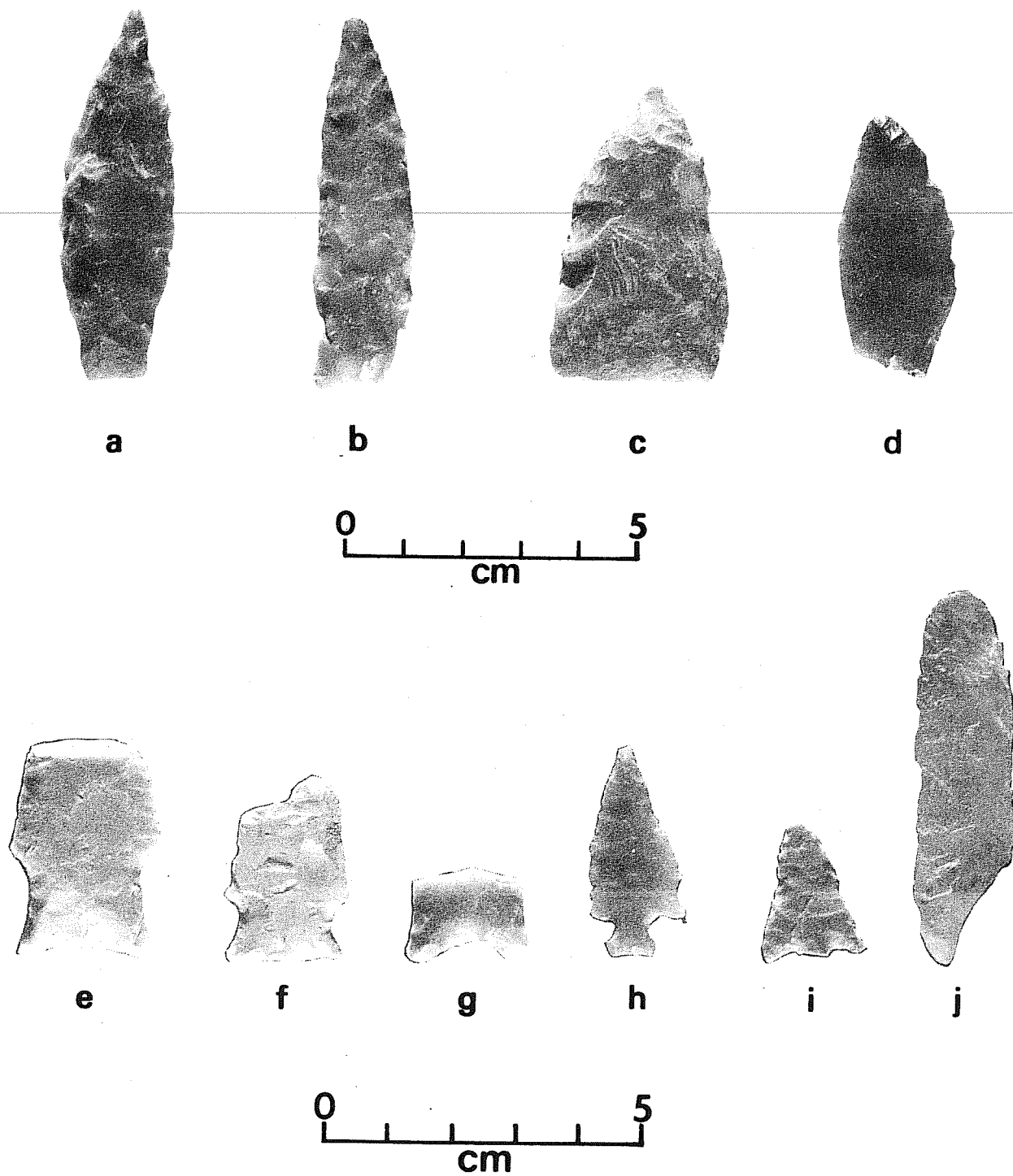


Figure 8. *Artifacts from Site 41 KA 52. a,b, lanceolate dart points; c, thick triangular point; d, Angostura; e,f, Fairland; g, Golondrina; h, Scallorn; i, Perdiz; j, blade.*

Thick Triangular Point (Fig. 8,c): The point is crudely percussion flaked with several step fractures, indicating it may never have been finished. It resembles *Tortugas* without the edge beveling. The material is opaque yellow-tan chert. L: 50.9; MW: 27.8; T: 9.3; Provenience: Unit E, 30-40 cm.

Lanceolate Dart Point (Fig. 8,a): The point is made on a long blade of translucent material with microscopic fine sand grain intrusions. The dorsal (arris) side has rough collateral flaking, but the ventral side is flaked over only 20 mm of the distal portion. The stem is slightly contracting for 15 mm and is very heavily ground. The base is slightly concave and heavily ground, resulting in a "fishtail" appearance. Similar points have recently been found in a cache near Three Rivers at site 41 KA 28 (Charles Johnson, personal communication). E. H. Schmiedlin of Victoria, Texas, reported identical points from sites in Victoria County in 1965 (tracings on file, Center for Archaeological Research). Smith (1978) reports a similar point from Sulphur Creek, Live Oak County, in a private collection. We suspect that these points are Late Paleo-Indian in age. L: 62.8; MW: 19.8; T: 6.3; Provenience: Unit C, 28 cm.

Lanceolate Dart Point (Fig. 8,b): This specimen has a slightly concave base with slightly incut contracting stem edges. Both base and stem are heavily ground for 14 mm from the proximal end. The cross section is diamond shaped, and laboratory analysis indicates it was made on a long blade. E. H. Schmiedlin (1965) has several similar points in his collection from Victoria County (tracing on file, Center for Archaeological Research). We feel these are also of the Late Paleo-Indian period. L: 62.8; MW: 16.8; T: 7.6; Provenience: approximately 15 cm in ant bed shovel test.

Angostura (Fig. 8,d): The lanceolate fragment has a contracting stem and slightly concave base, both heavily ground. The cross section is lens-shaped with very fine collateral oblique flake scars. The material is very fine grained translucent yellow silicified wood. The point is very similar to a number of *Angostura* points collected by Brom Cooper (on file at the Center for Archaeological Research) from the Jimmie Donnell Ranch in McMullen County. Radiocarbon dates of 5400 B.C. and 7350 B.C. have been obtained for the type from the Levi Rockshelter in central Texas (Alexander 1963). L: 44.1; MW: 19.5; T: 6.1; Provenience: Unit F, 12 cm.

Unit F contained a *Perdiz* point at 40 cm, which is the reverse of what one would hope for in terms of stratigraphic relationship. It is possible that the *Angostura* point was washed down slope from the area south and east of this unit where other Paleo-Indian points were found.

Golondrina (Fig. 8,g): This specimen is a basal fragment with heavily ground base and edges. The basal edges flare outward, and the base is deeply concave, measuring 4.5 mm in depth. The base is thinned with short lunate flake scars and flaking is irregular. The material is opaque tan fine-grained chert. A number of *Golondrina* points from the Brom Cooper collection (on file, Center for Archaeological Research) are quite similar to this specimen. It also fits into the parameter of *Golondrina* points in a continuing Center for Archaeological Research program differentiating *Plainview* and *Golondrina* points (T. C. Kelly, notes on file, Center for Archaeological Research). The *Golondrina*

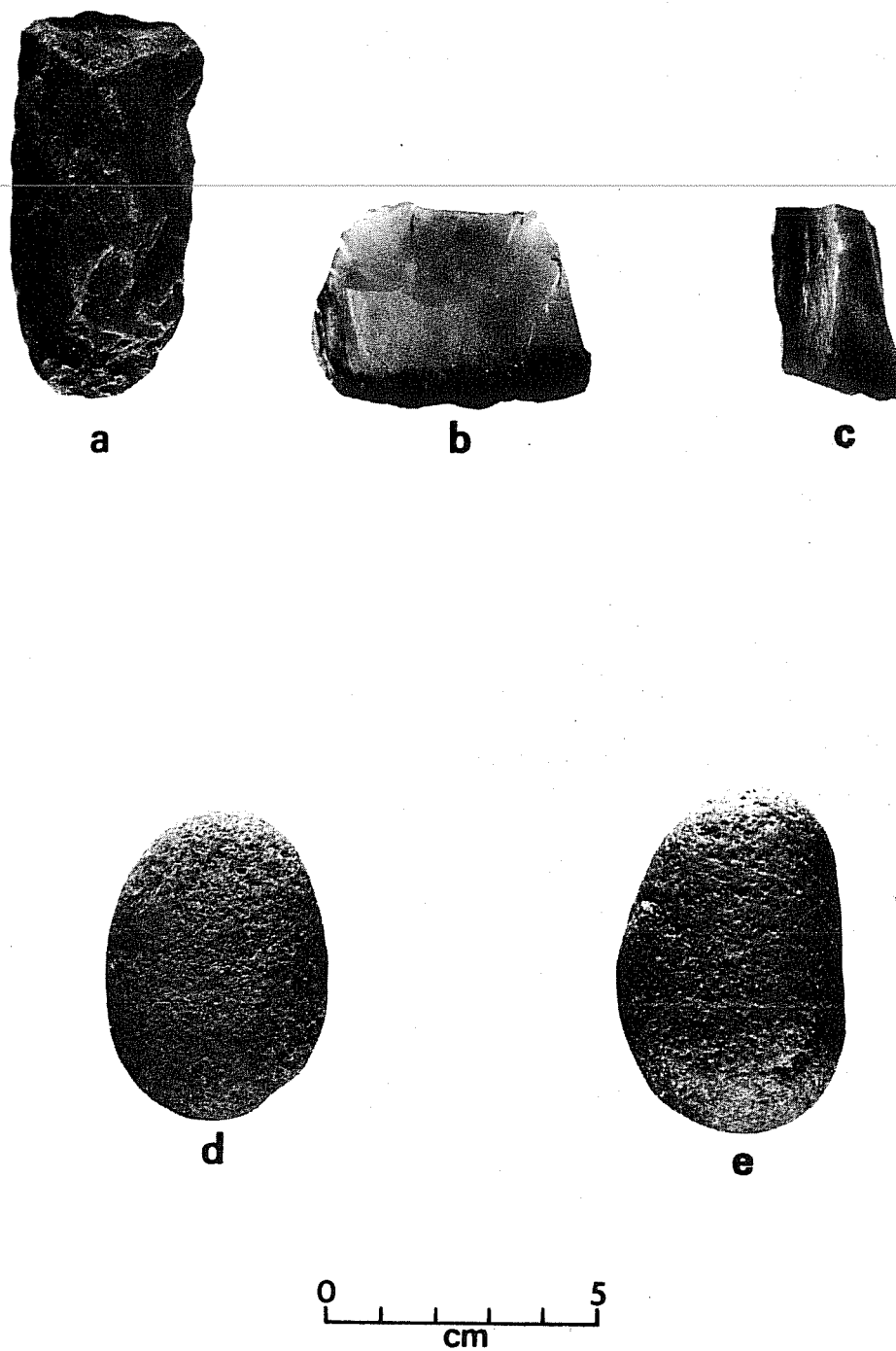


Figure 9. *Artifacts from Site 41 KA 52.* a, gouge; b, backed uniface scraper; c, exhausted core; d,e, hammerstones.

points have been radiocarbon dated from Baker Cave at 6960-7080 B.C. (Word and Douglas 1970, Hester 1978). L: 12.2; MW: 17.8; T: 7.3; Provenience: Unit E, 19 cm.

Bifaces, Unifaces and Hammerstones

Gouge (Fig. 9,a): The specimen resembles a *Clear Fork* gouge but is long and narrow rather than triangular. It could not be readily hafted so must be considered a hand-held tool. Microwear study shows nibbling and minute step fractures on the dorsal edge of the steep bit (61 degree edge angle). This pattern is identical to laboratory replicated patterns for push plane wear on hard wood. The material is yellow-grey quartzite with cortex remaining on the proximal end. L: 65.7; MW: 13.8; T: 16.8; Edge Angle: 16°; Provenience: Unit D, 30-40 cm.

Silicified Wood Preform (not illustrated): The specimen is thick on the proximal end, with repeated step fractures and a knot that could not be removed for satisfactory production of a dart point. "Lithic disaster" is the laboratory term for such a happening. The wood grain is clearly visible in the remaining cortex. The material is orange silicified wood. L: 60.1; MW: 32.5; T: 17; Provenience: Unit E, 30-40 cm.

Core (not illustrated): Cortex remains over approximately 60% of this grey chert nodule, indicating either an unsuccessful knapping attempt or the intent to use the tool for a hand-held pounding or scraping function. No wear pattern is discernible. A platform was generated by simply knocking off the distal end of the nodule. Flakes were then struck off toward the proximal end. Remaining large negative bulbs of percussion indicate hard hammer knapping. L: 68.6; MW: 52.9; T: 47.3; Provenience: Unit D, 30-40 cm.

Exhausted Core (Fig. 9,c): Striking platforms have been made by knocking off both ends of a buff-colored silicified wood nodule. Only one striking platform remains, and it shows careful faceting from an overhanging flake scar. Flakes were removed alternately from the two ends until step fractures and the smallness of the remaining core prevented further removal. L: 32; MW: 22.6; T: 14.6; Provenience: Unit F, 20-30 cm.

Backed Uniface (Fig. 9,b): The specimen is a unifacially worked flake with cortex remaining on the thick side opposite the concave, unifacially flaked working edge. This cortex-backed edge would protect the hand and provide leverage for more efficient tool use. Microscopic nibbling was observed on the dorsal (worked) face on the concavity, indicating probable scraping function of medium hard material. The material is translucent yellow buff chert. L: 49.6; MW 35.1; T: 15.3; Edge Angle: 32°; Provenience: Unit D, 20-30 cm.

Flake Tool (not illustrated): This large quartzite primary flake has been finely pressure flaked along the distal edge. No wear pattern is visible. L: 103.5; MW: 57.4; T: 17.3; Provenience: Unit C, 0-10 cm.

Hammerstones (Fig. 9,d,e): Two hammerstones were found, both made of fine quartzite. Quartzite hammerstones were also found at Karnes County sites 41 KA 30,

31 and 40. The first specimen is a spheroid pecked on both ends. L: 53.5; MW: 38.4; Provenience: Unit D, 45 cm. The second specimen is egg-shaped and pecked only on the smaller end. L: 60.8; MW: 39.2; Provenience: Unit F, 30-40 cm.

Flakes and Blades

The complete analysis and publication involving over 200 flakes was not contemplated in this project. They have been sorted and cataloged, and histograms are on file at the Center for Archaeological Research, The University of Texas at San Antonio. This section will consist only of a short preliminary summary of pertinent data.

Definitions

Primary flakes generally result from the initial removal of the cortex from a nodule. The dorsal surface should consist of 90% or more cortex. Secondary flakes are the product of further reducing nodules to bifaces, unifaces or preforms, and will contain 25% or less cortex on the dorsal face. Interior flakes are removed from the interior of nodules in the later stages of tool production and have no cortex. The dorsal face may contain more than one flake scar from the previous decortication or reduction process. The histograms of these three types of flakes, when plotted together by level and percentage, establish patterns that can be utilized to indicate site function (Kelly and Hester 1975:13-20). For instance, it has been found that in a lithic resource procurement area, the primary flake percentages may run as high as 15% to 35%, and the percentages of primary and secondary flakes together will exceed the interior flakes (*ibid.*). Major campsites with their multi-functional uses of chert will have low percentages of primary and secondary flakes and 70% or more interior flakes. These histograms are particularly valuable where no diagnostic artifacts are recovered.

Lipped flakes can be of all three previously mentioned types, but have an overhanging lip on the ventral side of the striking platform and a diffuse bulb of percussion and are usually associated with biface thinning activities.

Blades are specialized flakes with the length at least twice as long as the width, with one or more lateral ridges or arris on the dorsal surface. Blades are easily converted to projectile points, cutting tools or microliths, and produce the maximum possible edge per unit of lithic material. Patterson (1973) reports arrow points made on blades at the Finis Frost site (Green and Hester 1973). Hester and Shafer (1975) have reported several Late Prehistoric sites with blade industries along the Texas coast.

Flakes

None of the 39 excavated levels contained over 6% primary flakes, with the average approximately 3%; some levels contained none. The lithic resources

were decorticated elsewhere and brought into the camp area as quarry blanks. Interior flakes made up from 55% to 95% of the total flakes.

Lipped Flakes

Lipped flakes were found in all levels and were 12% to 30% of the flakes in each unit. Little work has been done in south Texas on the statistical importance of lipped flakes, but in our experience, 12% to 30% is quite a high ratio. The interpretation is that bifacing was a major operation at this camp. This pre-occupation with bifacing is also borne out by the fact that more projectile points and fragments were found in the site than all other artifacts together.

Blades

Blades and blade fragments (Fig. 8,j) totaled 173, approximately 9% of the total flake and blade assemblage. Again we have no statistics to tell us whether this is a high figure or not, but blades either have not been reported or were very scarce in the other 47 Karnes County sites. One of the long lanceolate points (Fig. 8,a) was made on a blade, and the second one also. One of the occasional large blades found at the site is made of transparent yellow silicified wood with superior knapping quality. L: 52; MW: 14.2; T: 3.1. The majority of the blades are much smaller and probably belong to the Late Prehistoric period.

Special Studies

Phytolith Analysis

Phytoliths are the microscopic silicified remnants of plants. Ralph Robinson (Center for Archaeological Research, The University of Texas at San Antonio) is doing extensive work in this field, which we believe holds great promise to answer many paleobotanical questions. Palynology has not been very successful in south Texas because of the complete destruction of pollen at many sites (Hester *et al.* 1977; Gerstle, Kelly and Assad 1978). Phytolith samples were taken from every level, but it will be some time before results are known.

Soil Samples

Constant volume samples were taken from all levels. Results of laboratory flotation have indicated only traces of charcoal and no seeds except a few recent beans. Based on past experience, there is little or no chance for pollen recovery.

Summary and Discussion

Buried cultural material has been recovered from test pits scattered over a 33 x 41 meter area without reaching the outer limit of the site. Projectile points cover some part of the span from 7080 B.C. to possibly A.D. 1760, with

the Early and Middle Archaic as noticeably missing as in the other 47 Karnes County prehistoric sites. Two hearths, one associated with the Late Archaic and the other of an as yet undetermined period, suggest that 41 KA 52 is a series of discrete campsites rather than one large cultural unit. The site is also far more prolific than any or all of the previously excavated Karnes County sites (41 KA 31, 36 and 38 discussed in "Prior Archaeology" section).

The combination of the secure water source, plentiful subsistence and lithic resources, and the sandy, flat camping area situated between riverine resource areas undoubtedly made the site a magnet attracting many hunting and gathering groups over the millennia.

The consistency with which Paleo-Indian artifacts overlay Late Archaic and Late Prehistoric artifacts requires comment. The major excavation effort took place within three meters north of the county road, which has been graded through the site down into the underlying clay. If there were a Paleo-Indian site in this road bed, portions of it were graded onto the north side of the road. Today the area of the fence line is higher than the area north of it, with the south road bank even higher. One of the rare but intensive floods that back up from the intersection of the three creeks at the spring, and cover the road to a considerable depth, could easily have dispersed the Late Paleo-Indian materials over the more recent hearth areas. They could also have been derived before the road was built from the higher southern flats south of the road. A more complete excavation (this one only involved 21 person days) would be necessary to answer the numerous questions left unanswered. Some of the problems to solve would be to isolate and identify the discrete sites both areally and chronologically, to determine the depositional events, and to find out more about the daily lives of the nomadic people who stopped here.

The finding of *Angostura* and *Golondrina* points at 41 KA 52 establishes a Paleo-Indian presence across the entire northern edge of Karnes County. The Jackpump site is on the northeastern edge; 41 KA 30, 36, 37 and 46 are in the north central portion (Panna Maria and Conquista surveys); and 41 KA 7, the Tessman site, is on the northwestern boundary (Birmingham, Schmiedlin and Hester 1973).

41 KA 53

Asher Cemetery is located on the west bank of Mound Creek 500 meters south of an east/west road that extends across the northern boundary of the survey area (Fig. 1). The UTM coordinates are 629800 E, 3225150 N. The cemetery contains approximately 25 graves with burial dates from 1856 to 1901 (Table 1); late interments of the Evans family date between 1905 and 1926. A number of graves are unmarked or have illegible markers, and several markers are broken. An unusual mantle of concrete and seashells covered four graves (Fig. 2,a). They have markers which apparently were never engraved or the engraving has completely disappeared. Because of their association with the renowned Texas outlaw, John Wesley Hardin, the graves of Jane Hardin (his wife) and Nancy Bowen (his mother-in-law) are of particular interest.

The 1880 census of Karnes County reveals additional information about several of these early settlers of Texas. As indicated in Table 2, many emigrated from

TABLE 1. GRAVESTONE INSCRIPTIONS FROM ASHER CEMETERY

	<u>Born</u>	<u>Died</u>
Nancy Bowen	October, 1799	August 5, 1875
Jane Hardin Printed on Tombstone: Wife of John W. Hardin	1856	1892
Jake Hoggatt	February 28, 1828	February 13, 1892
Mary E. Hoggatt	March 9, 1837	April 22, 1901
Emil Evans	1875	1922
Leslie Evans	1900	1910
Lillie Evans	1898	1905
James Asher	July 4, 1818	January 16, 1891
J. P. Wofford	1840	1914
1 Wofford 2 Wofford 3 Wofford 4 Wofford 5 Wofford 6 Wofford	This is an actual gravestone inscription.	
Callie Gary		
S. L. Gary	September 9, 1808	June 3, 1887
I. Haury	October 14, 1807	March 31, 1879
(name missing)	1825	1856
A. W. Van Cleave	1848	1890
Mrs. A. J. Van Cleave	March 25, 1812 "87 YRS *MO 7 DYS	December 25, 1900 A voice we loved is stilled, a place is vacant in our home which can never be filled"
William A. J.	Son of CE & MO Hobbs June 25, 1889	August 1, 1890 "Budded on earth to bloom in heaven."

TABLE 2. INFORMATION TAKEN FROM 1880 CENSUS OF KARNES COUNTY, TEXAS

<u>Name</u>	<u>Race</u>	<u>Sex</u>	<u>Age</u>	<u>Occupation</u>	<u>Birthplace</u>	<u>Father's Birthplace</u>	<u>Mother's Birthplace</u>
Wofford, John	W	M	39	Farmer	Mississippi	Mississippi	Mississippi
Nancy	W	F	32	Housewife	Mississippi	Mississippi	Mississippi
Tom Martha	W	F	17	Daughter	Texas	Mississippi	Mississippi
Aramita	W	F	12	Daughter	Texas	Mississippi	Mississippi
Daniel	W	M	10	Son	Texas	Mississippi	Mississippi
Mattie	W	F	8	Daughter	Texas	Mississippi	Mississippi
Anedla	W	F	6	Daughter	Texas	Mississippi	Mississippi
Martin	W	M	4	Son	Texas	Mississippi	Mississippi
Lilly	W	F	2	Daughter	Texas	Mississippi	Mississippi
Asher, James	W	M	58	Farmer	Tennessee	Kentucky	Tennessee
Emily	W	F	40	Housewife	Mississippi	Alabama	Mississippi
James D.	W	M	23	Son	Texas	Tennessee	Mississippi
Mary J.	W	F	17	Daughter	Texas	Tennessee	Mississippi
A. L.	W	F	14	Daughter	Texas	Tennessee	Mississippi
John H.	W	M	12	Son	Texas	Tennessee	Mississippi
Thomas	W	M	10	Son	Texas	Tennessee	Mississippi
Lively	W	F	8	Daughter	Texas	Tennessee	Mississippi
Odom, Julsia	W	M	44	Farmer	Louisian	?	Louisiana
Louisa	W	F	27	Housewife	Texas	Tennessee	Mississippi
Jacob	W	M	8	Son	Texas	Louisiana	Texas
Lou S.	W	F	6	Daughter	Texas	Louisiana	Texas
Evalis	W	F	4	Daughter	Texas	Louisiana	Texas
Shelly	W	F	1	Daughter	Texas	Louisiana	Texas
Griffin, Merl C.	W	M	49	Doctor	Tennessee	South Carolina	?
Sarah E.	W	F	44	Housewife	Alabama	South Carolina	North Carolina
Jasper C.	W	M	19	Son-Farmer	Texas	Tennessee	Alabama
Mayfield	W	M	16	Son-Farmer	Texas	Tennessee	Alabama
L. R.	W	F	10	Daughter	Texas	Tennessee	Alabama
June	W	F	6	Daughter	Texas	Tennessee	Alabama
Jacob	W	M	4	Son	Texas	Tennessee	Alabama
Gary, S. L.	W	F	70	Mother-in-Law	North Carolina	South Carolina	North Carolina
Vancleave, A. W.	W	M	69	Farmer	Kentucky	North Carolina	?
Ann P.	W	F	68	Housewife	Kentucky	New Jersey	Kentucky
Alijah	W	M	35	Son-Farmer	Indiana	Kentucky	Kentucky
L. T.	W	F	33	Daughter	Indiana	Kentucky	Kentucky
Gaffall, Thomas	W	M	35	Stockraising	?	?	?
Louisa	W	F	34	Housewife	Texas	?	?
Franklin	W	M	11	Son	Texas	?	?
Thomas	W	M	7	Son	Texas	?	?
Emma	W	F	4	Daughter	Texas	?	?
Amil	W	F	2	Daughter	Texas	?	?

the southeastern United States, and their children were born in Texas. Asher, Odom, Griffin, Van Cleave and Gaffall families were listed on the same page of the census, indicating they lived in close proximity to each other.

Local informants report that an early road was adjacent to the cemetery. At present the cemetery is in an isolated pastoral setting above steep banks of an oxbow of Mound Creek.

41 KA 54

This site number has been given to the Odom Cemetery, located in a small grove of scrub trees just south of the northern boundary road of the survey area (Fig. 1). UTM coordinates are 630130 E, 3225150 N. The cemetery has only four graves. The three Odom graves are not dated. The fourth grave, that of the Griffin child (see below), is dated "Feb 10, 1867, Mar. 5, 1868." The 1880 census of Karnes County (see Table 2) suggests that the Odom and Griffin families lived near each other, since the information concerning them is found on the same page of the census. A larger, more recent Griffin Cemetery is shown on the USGS Bald Mound (7.5') quadrangle, approximately one-half mile farther east along the road.

The Griffin grave is located away from the Odom graves, next to a fence along the road. It has an upright marble headstone. The Odom markers, made of local sandstone, are nearly flush with the soil. The inscriptions are:

J. Odom

Lou S. Odom

Baby Odom

Sally B. Dau of M & S E Griffin
Feb 10, 1867 Mar 5, 1868

41 KA 55

According to local informants, this hand-dug well is part of the earlier Griffin homestead (Fig. 1). It is 900 meters south of the Odom Cemetery. UTM coordinates are 630450 E, 3224760 N. From the dates on the Griffin child's grave, the homestead would date in the 1860s. Griffin later built a larger house one-half mile east of the cemetery along the road. Only the chimney remains; the bricks are marked "D'HANIS" and "STANDARD." The well has been used as a rubbish heap for many years and could be expected to contain historic artifacts dating back as early as the late 1860s.

41 KA 56

This site consists of a few remaining foundation stones of an early schoolhouse located on the east bank of Mound Creek (Fig. 1). UTM coordinates are 630300 E, 322480 N. According to local informants, it was abandoned ca. 1910. Most of the foundation stones have been carried away.

RECOMMENDATIONS

1. 41 KA 52 is believed to be an important site in Karnes County, since it is completely buried and largely undisturbed. It is probably of National Register quality and could be expected to produce valuable data if properly excavated. Any increase in activity in the area, such as strip mining, would probably be deleterious, even if in the form of increased road traffic. The site is now well-known locally, as a constant stream of visitors stopped by while these test excavations were conducted. It is exposed and vulnerable to relic collectors, and there are known to be a number of them in the county. It is urgently recommended that it be further tested to determine eligibility for nomination to the National Register of Historic Places.
2. 41 KA 53, the Asher Cemetery, has been adequately researched and recorded. No further action is recommended.
3. 41 KA 54, the Odom Cemetery, has been adequately researched and recorded. No further action is recommended.
4. 41 KA 55, the hand-dug well believed to be the site of the original Griffin homestead, could be expected to produce considerable information on the 1850-60 homestead period. It may be threatened by one of the proposed mining areas; if so, it should be tested to determine its archaeological potential.
5. 41 KA 56, the early schoolhouse site, is probably too ephemeral and too badly damaged to be worth much effort. Limited testing is recommended if it is threatened.
6. The Jackpump survey forcefully points up the question as to just how useful such surface surveys are in finding and preserving our dwindling archaeological resources. There are strong indications that in the Jackpump area there may be archaeological resources so completely buried that no surface survey will find them. It is recommended that, when the ore bodies are completely delineated in the survey area, further subsurface archaeological work be done. We recommend mechanical augering, monitored by an archaeologist, in areas of high archaeological potential.

APPENDIX

JACKPUMP PROJECT: ADDITIONAL ARCHAEOLOGICAL SURVEY

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An additional survey in Gonzales County was conducted by T. C. Kelly and E. Roemer of the Center for Archaeological Research during late October and early November 1978. The survey covered 600 acres in an area adjacent or near to tracts of land surveyed earlier by the Center (see Fig. 10). The other surveys include the Conquista Project (Black and Kelly 1977; Smith 1978), the Panna Maria Projects (Kelly and Roemer 1976; Kelly, Roemer and Black 1977) and Jackpump (this report). The Jackpump Project additional survey was conducted under contract between VTN Consolidated and the Center for Archaeological Research (letter dated October 31, 1978).

The discussions of environment, geology, historical background and previous archaeology provided in earlier sections of this report also apply to the additional survey area. Information for this appendix was extracted from field notes taken by E. Roemer.

SURVEY PROCEDURES

The survey area is located approximately four miles east of Gillett, Texas on County Road 119. From the county road, the specific area is located by turning northeast through the Mound Creek drainage into Gonzales County (see Fig. 10).

The study area was divided into three sections (Areas A, B and C). A thorough reconnaissance was done of these areas, with natural drainages closely examined for archaeological sites.

Area A

The vegetation consisted of woods and brush along Mound Creek and to the west. A hill is located to the east of the creek, and the majority of this area is covered in coastal bermuda grass. A modern house and associated buildings are located near the southern boundary.

The only prehistoric site found in the survey, 41 GZ 157, is located in the northeastern corner of Area A (see Fig. 10). The site is in an open field and is described below.

Area B

As in Area A, woods and brush are prevalent along Mound Creek. The majority of this area is covered by brush with very little open grasses. In the northwestern part of Area B, another portion of 41 GZ 157 was located.

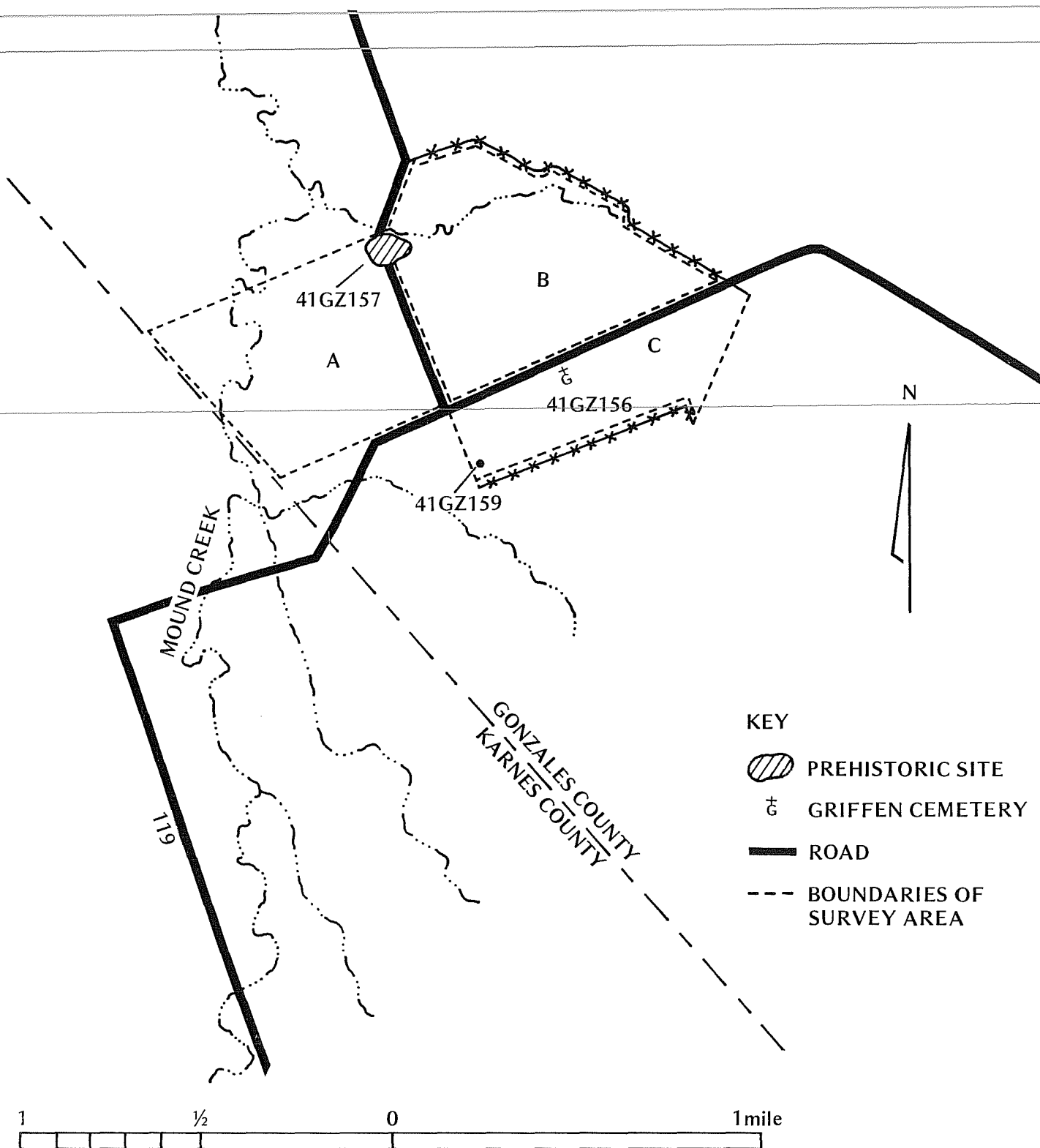


Figure 10. Additional Archaeological Survey Area.

Area C

This area, located south of Area B, is covered predominantly with coastal bermuda grass. The presence of this grass made archaeological survey difficult. At the western end of the area, there has been erosion and regrowth of brush. An isolated prehistoric hearth, 41 GZ 159, was located in the southwestern portion of Area C.

One historic site, 41 GZ 156, is located in this area. The site is referred to as the "Griffin" cemetery and is mentioned in earlier sections of this report.

A brief summary of the three areas reveals that one prehistoric site (41 GZ 157), one historic site (41 GZ 156) and one isolated hearth (41 GZ 159) were located. The survey area was inspected as thoroughly as possible; however, those portions of the survey area which were covered by the coastal bermuda grass proved difficult to examine. Isolated and scattered prehistoric lithic debris was noted throughout the survey area, and the surveyors observed that some form of recent historic land modification affects nearly all of the study area.

THE SITES

41 GZ 157

This prehistoric site was initially discovered when lithic debris was noted in an unimproved road that bisects the site. The site is approximately 50 m by 50 m in dimension with Mound Creek forming the northern boundary. The site lies between 360-375 feet in elevation and is composed of sandy soil overlying a sandstone formation. The UTM coordinates for the site are 3226940 m North, 630840 m East.

The majority of the site surface has been altered by modern activities. In addition to the road which bisects it, 41 GZ 157 has been altered by bulldozing which has created a very uneven surface in Area B and by modern terracing resulting in a grassy field in Area A. Rodent activity has been another factor that has led to the damaged condition of the site.

A variety of lithic artifacts, including bifaces and flakes, were collected from the surface of 41 GZ 157. Some secondary and interior flakes were noted in rodent backdirt piles but few of these were collected. Definitions of the artifact categories are provided in a previous section of this report.

One utilized or trimmed flake made from petrified wood was collected (Fig. 11,b). This artifact is a flake which has edge alteration caused either by intentional edge sharpening or through use.

Bifaces collected included one artifact of a quartzite-like material (Fig. 11,d) and a crudely-worked chert specimen (Fig. 11,e). A possible gouge is bifacial and similar to a *Clear Fork* tool; it is long and narrow rather than triangular (Fig. 11,f,f¹). The edge angle of the bit is 57°. A core specimen

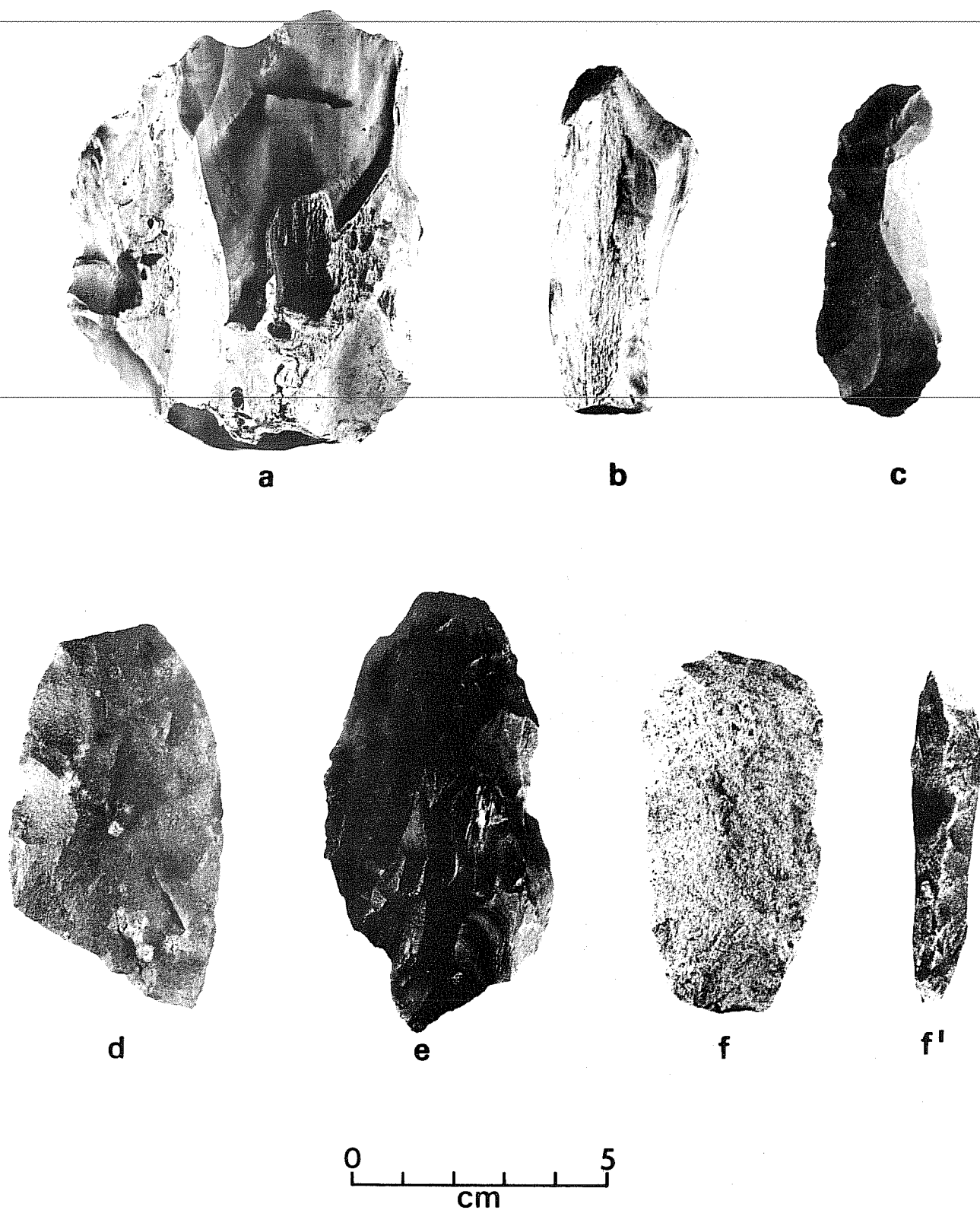


Figure 11. *Lithic Artifacts from the Surface of 41 GZ 157.* a, core; b, utilized flake; c, flake blade; d,e, bifaces; f,f', gouge.

is partially knapped, with cortex present on approximately 1/4 of its surface (Fig. 11,a); it is made of petrified wood.

The last artifact illustrated is a chert flake blade (Fig. 11,c) with edge alteration on several sides. None of these artifacts are diagnostic of a known chronological time period.

41 GZ 156 - The Griffin Cemetery

This Anglo-European cemetery is located on the USGS Bald Mound, Texas, topographic sheet of 1963 (Fig. 10). The site is east of Mound Creek on the south side of a gravel road that runs west to County Road 119 towards Gillett, Texas. The UTM coordinates for the site are 3226390 m North, 631460 m East. The site is rectangular in shape, being approximately 100 m long, east-west and 50 m wide, north-south. There is a fence around the cemetery; however, some burials were noted outside of the fence. Vegetation consists of grasses and scattered trees, and the site sits upon a rise at 438 feet in elevation.

The Griffin cemetery contains roughly 45 historic graves and may still be in use. Dates in the cemetery, at time of death, range from 1900 through 1973. The cemetery contains burials of several people belonging to the Griffin family, at least one Odom family member, and several other family names.

41 GZ 159 - Isolated Hearth

An isolated hearth, exposed in the side of a gully, was noted in the extreme southwestern corner of Area C. The southern portion of the feature had been removed by erosion. About 25 to 30 reddish cobbles of quartzite, petrified wood and chert, averaging 6 cm in diameter, are visible in the feature. The hearth profile is shallow, flat and ca. 15 cm in thickness; no charcoal was visible. The original size of the hearth is estimated to be one meter in diameter. A few flakes were noted in the eroded drainage, but no artifacts other than the reddened cobbles were directly associated with the hearth.

SUMMARY AND RECOMMENDATIONS

Of the three sites found in the study area, one is a highly disturbed prehistoric site, another is an Anglo-European cemetery, and the third is an isolated hearth of unknown date. Several small lithic scatters were also observed.

No further archaeological examination is recommended for site 41 GZ 157. Although archaeological remains are still present, it is doubtful that there are any remaining undisturbed features or deposits of significance.

The Griffin cemetery, 41 GZ 156, is already protected by a fence; however, there are some graves located outside of the fenced area that need protection. It is suggested that a radius of 75 m or more be left around the present fence to protect any undetected graves from modern encroachment.

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