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## Significance Testing at Sites 41FY170 and 41FY509, Fayette County, Texas

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## Significance Testing at Sites 41FY170 and 41FY509, Fayette County, Texas

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**SIGNIFICANCE TESTING  
AT SITES 41FY170 AND 41FY509,  
FAYETTE COUNTY, TEXAS**

**ADDENDUM:  
ARCHAEOLOGICAL INVESTIGATIONS  
OF THE EASTERN PORTION OF  
41FY509, FAYETTE COUNTY, TEXAS**

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AUSTIN, TEXAS  
DECEMBER 1993

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## ABSTRACT

Site 41FY509 was originally tested by Texas Department of Transportation (TxDOT) archaeologists in April 1991. Based on the findings of the initial testing, the site was determined ineligible for inclusion in the National Register of Historic Places. Because cultural deposits were discovered during construction, additional archaeological investigations were conducted by TxDOT archaeologists on the eastern portions of 41FY509, Plum, Fayette County, Texas. The recent investigations were conducted in the right-of-way of Highway 71 between centerline stations 395+00 and 390+00 of the Plum Bypass. These investigations were conducted between June 3 and July 5, 1993, and consisted of mechanical trenching, removal of the topsoil over approximately 50 percent of the area with a road grader, and hand excavation.

The results of this investigation revealed two distinct cultural deposits within shallow strata containing a total of 12 burned rock features. The first cultural deposit was confined to a single burned rock feature which produced extensive carbon deposits. This feature was provenienced directly above a substrate burned rock feature of a lower cultural deposit, and likely dates to the Late Prehistoric period or more recent. The lower cultural deposit consisted of 11 burned rock features averaging 1.5 to two m in diameter evenly distributed across the exposed area. The features of this occupation likely date to the Early or Middle Archaic periods. The base of the lower cultural deposit lies directly on or two to four centimeters above substrate clays. Both cultural deposits were confined to shallow soils ranging in depth from 20-50 cm below the surface. Since the artifact density in this portion of 41FY509 is comparatively low and no clearly diagnostic artifacts were found in direct association with any of the features, the cultural affiliations and temporal placement of the two occupational strata remain enigmatic. Due to the shallow nature of the deposits and the relative lack of associated diagnostic artifacts, the eastern portion of 41FY509 is not considered eligible for inclusion in the National Register of Historic Places.

## ACKNOWLEDGEMENTS

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## INTRODUCTION

On June 6, 1993, contractors working on the Highway 71 Plum Bypass in Plum, Fayette County, Texas, cut through a cultural deposit at 41FY509 along the north right-of-way at centerline station 407+00 (Fig. 1). Although site 41FY509 had been previously tested by Texas Highway Department (TxDOT) archaeologists (Price 1991) and determined by the Texas Antiquities Committee to be ineligible for inclusion in The National Register of Historic Places or for designation as a State Archaeological Landmark, the site was revisited by TxDOT archaeologists in order to assess the cultural deposit exposed by the contractors. The cultural deposit exposed was found to consist of a shallow but dense deposit of large amounts of burned rock and lithic debitage within an area approximately 30 m in diameter. The cultural deposit was situated on a rise above a north-flowing drainage along the north right-of-way of the highway. Approximately the northern 50 percent of the deposit lies on private land and has been disturbed by a borrow pit on the eastern edge and by the movement of heavy machinery on the remainder of the northern area; however, the majority of the area remains intact. Approximately the southern 48 percent of the cultural deposit within the right-of-way was destroyed by highway construction with the exception of a five-foot-wide strip along the edge of the right-of-way which remains mostly intact. Since this deposit had been destroyed within the right-of-way, clearance was given for contractors to continue their work in the area.

Since the relatively large cultural deposit was encountered during construction of the highway, TxDOT archaeologists decided to further investigate the remaining undisturbed area within the Highway 71 Plum Bypass corridor. The area investigated was a shallow rise located approximately 430 m east of the deposit exposed by the contractors in the southeastern portion of 41FY509 between centerline stations 395+00 and 390+00 (Fig. 2). The investigations in that area consisted of the excavation of three mechanical test trenches and 10 shallow scrapes across the rise, which exposed approximately 50 percent of the subsurface in that area. This report is the result of that investigation and is intended to be an addendum to Price's 1991 report entitled: Significance Testing at Sites 41FY170 and 41FY509, Fayette County, Texas.

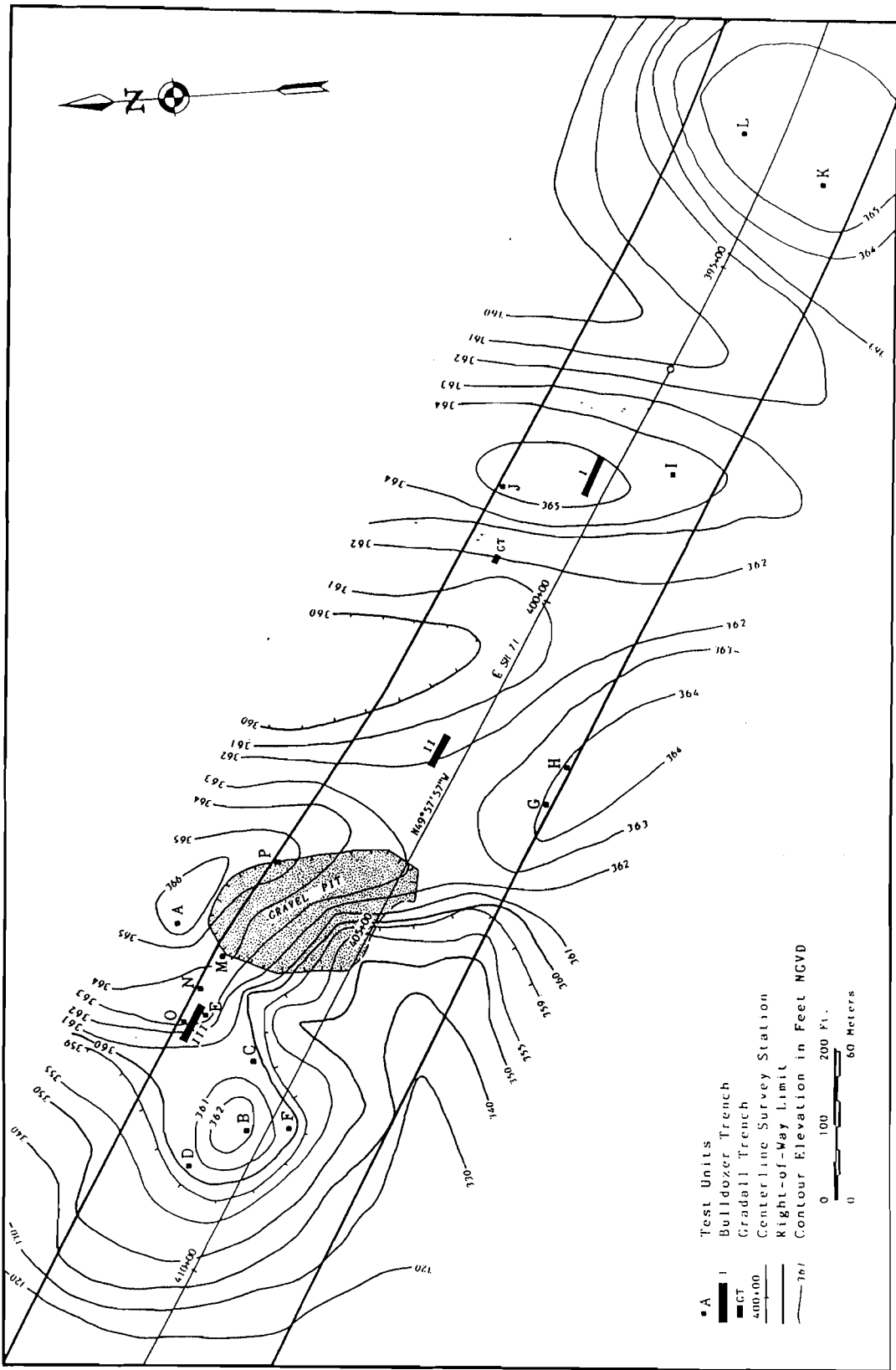


FIGURE 1. Site 41FY509 contour map showing locations of test units excavated in 1991. Current fieldwork occurred in the eastern portions in the area of test units K and L.

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## METHODOLOGY

To begin our investigations at the eastern portions of 41FY509, three trenches were excavated with a Gradall along the western slopes and the center of the shallow rise which occupies the area. The trenches were located with a transit, soil descriptions were written, and the profiles of each trench were photographed.

Subsequently, a series of 10 scrapes were made with a road grader in an east-west direction removing the topsoil from approximately 50 percent of the area across the rise (Fig. 3). The average depth of the road grader scrapes was 25-30 cm below the ground surface. The road grader scrapes were walked in search of features and any cultural materials evident in the backdirt. At least one burned rock feature was partially exposed within each of the road grader scrapes with the exception of scrape "E." All of the partially exposed features were then further exposed by hand. This procedure consisted of cutting back the profiles and overburden around the features with shovels and trowels and screening the backdirt through ¼-in. hardware cloth. Once exposed, the burned rock features were cleaned with trowels and brushes and the surrounding matrix screened. All artifactual materials found during the exposure of the features were collected. All artifacts found in situ were left in place for photography. Each feature was swept clean, photographed, and videotaped. Plan views were made of Features 1, 2, 3, 5, 8, and 12. Features 1, 2, 3, 5, and 8 were bisected with trowels and the cross sections were drawn, photographed, and videotaped. All of the matrix removed during the cross-sectioning of these features was screened and all artifacts were collected. The surrounding areas of features 4, 6, 7, and 8-11 were troweled down to sterile soil in search of associated diagnostic artifacts. Artifacts collected during this phase were either plotted on the feature plan or located on the site map.

Soil and carbon samples were extracted from the matrix of Feature 5 for further analysis. In addition, stones were extracted from Feature 3 by Paul Takac of the Texas Archeological Research Laboratory Department, Balcones Research Center, University of Texas at Austin, for geomagnetic analysis.

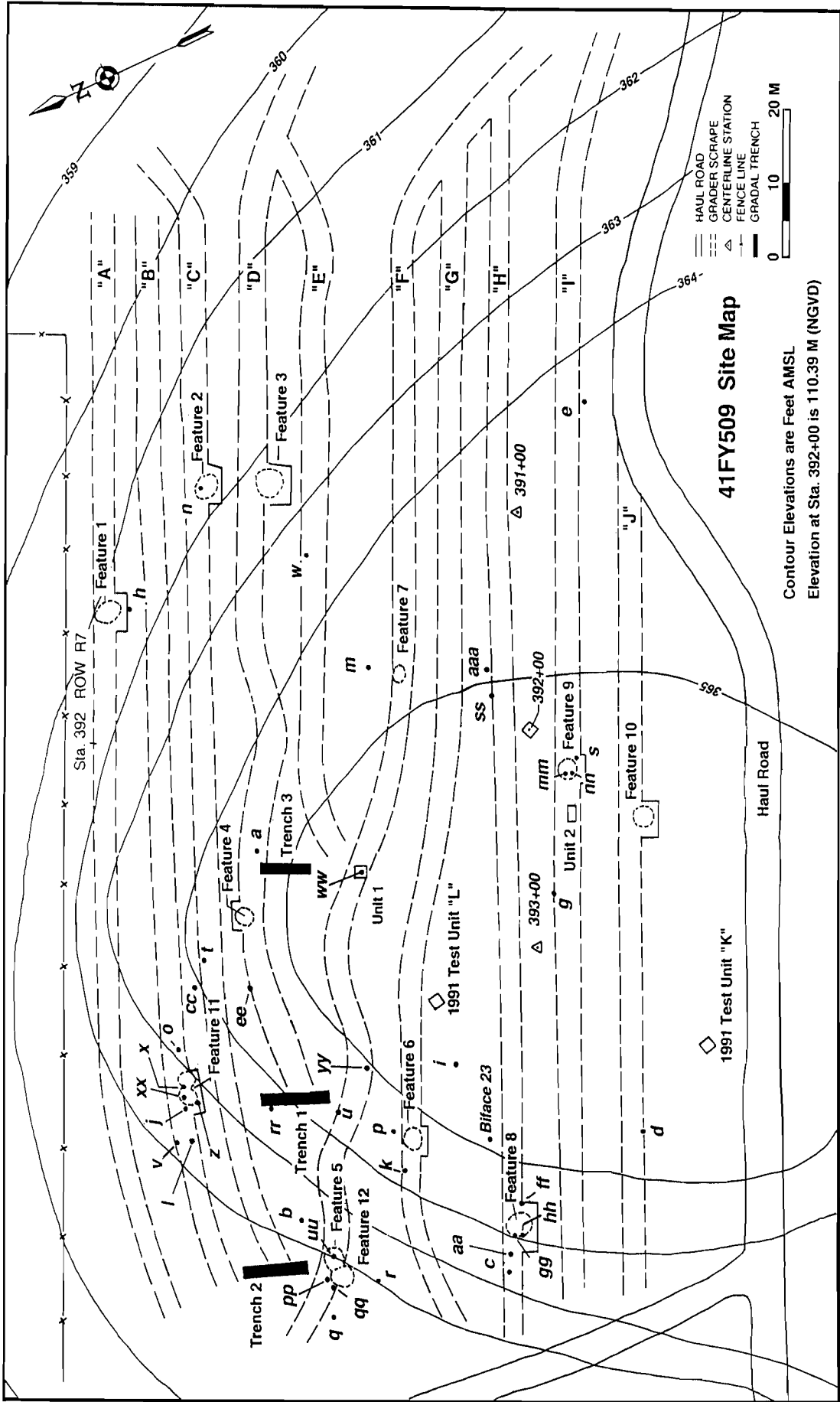


FIGURE 3. 41FY509 site map.

# INVESTIGATIONS

## SURFACE DESCRIPTION

The surface of the site was covered with dense coastal grasses which provided for a less than 10 percent visibility of the area. Aerial photographs from the 1940s indicate that the area was heavily treed. An anonymous local collector reported that the land had been cleared and the trees burned circa 1951.

## TRENCH DESCRIPTIONS

### TRENCH 1

Trench 1 was placed near the center of the rise 30 m northeast of centerline station 394+00. Trench 1 was a north-south oriented trench 10 m in length, 1 m in width, which reached a depth of 65 cm below the surface (Fig. 4). The natural stratigraphy within Trench 1 consisted of three distinct soil zones. The uppermost zone consisted of a 42 cm thick deposit of light brownish-yellow sandy loam (Munsell 10YR6/6 brownish yellow, dry) with a high concentration of river cobbles and gravel. The second soil zone consisted of a 23 cm thick deposit of dark orange-red clay (Munsell 2.5YR4/8 red, moist) between 42 and 65 cm below the surface. The third soil zone consisted of a deposit of mottled yellow-brown to orange-red clay (Munsell 2.5YR4/8 red and 10YR7/8 yellow, moist) which occupied the bottom of the trench at 65 cm below the surface.

The cultural materials observed in Trench 1 were limited to a small amount of lithic debitage confined in the upper two soil zones. No features or clearly stratified cultural deposits were found in Trench 1.

### TRENCH 2

Trench 2 was placed along the western slope of the rise at 36 m northwest of centerline station 395+00. Trench 2 was a north-south oriented trench 10 m in length, one m in width, which reached a depth of 60 cm below the surface (Fig. 3). The natural stratigraphy within Trench 2 consisted of three distinct soil zones. The uppermost zone consisted of a 16 cm thick deposit of dark brown sandy loam (Munsell 10YR4/4 yellow brown, moist) with a high concentration of gravel. The second soil zone consisted of a 20 cm thick deposit of lighter brown sandy loam (Munsell 10YR6/6 brownish yellow, moist) between 16 and 36 cm below the surface. The third soil zone consisted of a deposit of dark red-brown clay (Munsell 2.5YR4/8 red, moist) from 36 cm below the surface to the bottom of the trench.

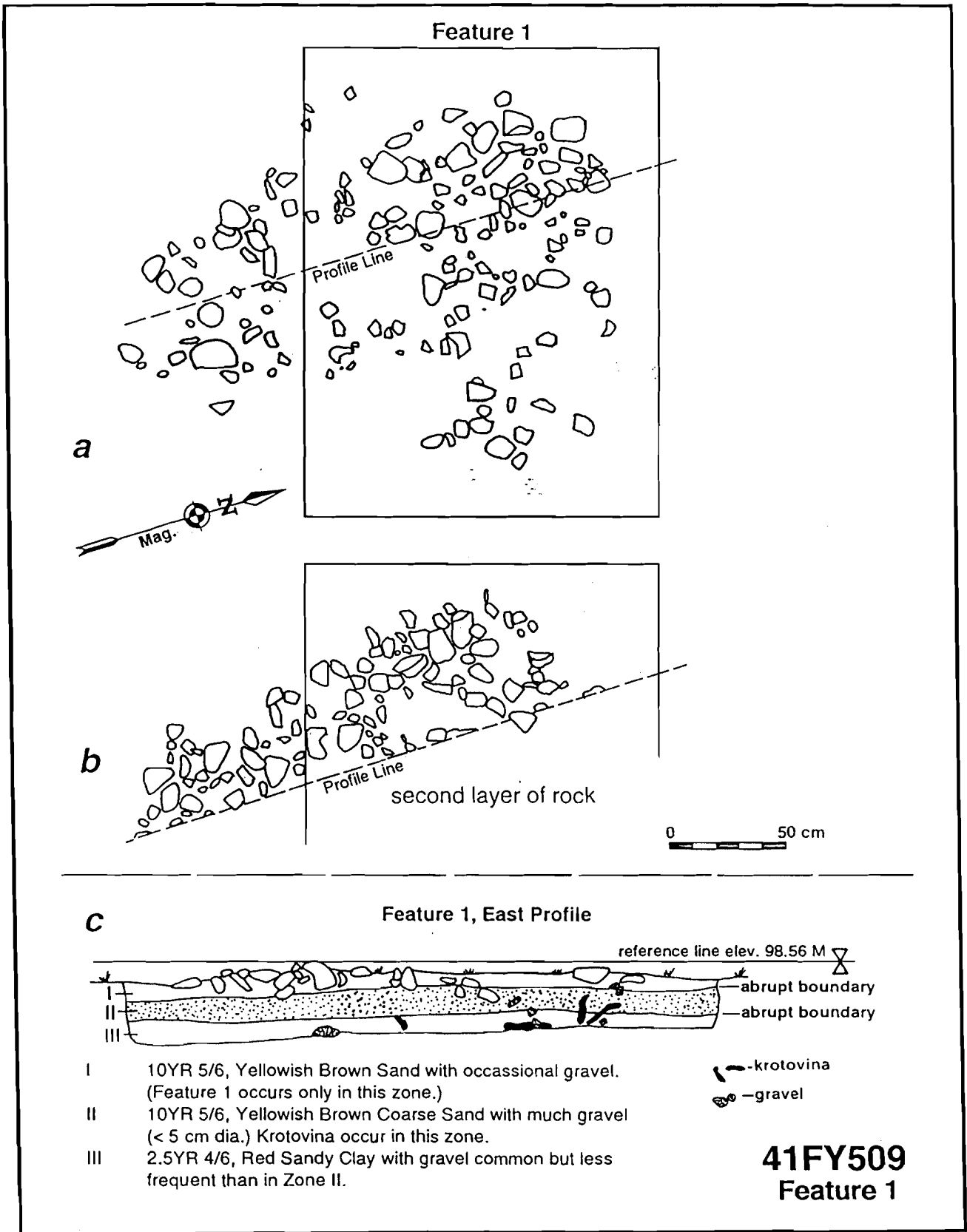


FIGURE 4. Feature 1.



The cultural materials observed in Trench 2 were limited to a small amount of lithic debitage confined in the upper two soil zones. No features or clearly stratified cultural deposits were found in Trench 2.

### TRENCH 3

Trench 3 was placed along the west edge of the rise 33 m northeast of centerline station 393+00. Trench 3 was a north-south oriented trench 8 m in length, one m in width, which reached a depth of 75 cm below the surface (Fig. 3). The natural stratigraphy within Trench 3 consisted of five distinct soil zones. The uppermost zone consisted of a 23 cm thick deposit of dark yellow-brown sandy loam (Munsell 10YR4/4 dark yellow brown, moist) with a high concentration of river cobbles and gravel. The second soil zone consisted of a 37 cm thick deposit of lighter brown sandy loam (Munsell 10YR6/6 brownish yellow, moist) with a high concentration of river cobbles and gravel between 23 and 60 cm below the surface. The third soil zone consisted of a 14 cm thick deposit of mottled yellow-brown sandy loam with yellow-red clay (Munsell 2.5YR7/6 yellow and 10YR4/8 red, moist) with a high concentration of gravel between 60 and 74 cm below the surface. The fourth soil zone consisted of a 10 cm thick deposit of light grey-brown sandy loam (Munsell 2.5YR7/3 pale yellow, moist) with a higher concentration of fine gravel between 74 and 84 cm below the surface. The fifth zone consisted of a deposit of mottled yellow-brown and yellow-red clay (Munsell 2.5YR7/6 yellow and 10YR4/8 red, moist) which occupied the bottom of the trench.

Cultural materials observed in Trench 3 were limited to a small amount of lithic debitage confined in the upper two soil zones. No features or clearly stratified cultural deposits were found in Trench 3.

### EXCAVATION UNITS

Two controlled units were excavated during the investigations at the eastern portion of 41FY509 (Fig. 3). Unit 1 was a 1 x 1 m square located 5.6 m south of Trench 1 in road grader scrape "F." Unit 1 was established around a quartzite mano and fragmented pieces of sandstone that may have been a metate. The objective of Unit 1 was to expose the original occupation surface on which the mano and possible metate were resting and to recover any associated artifacts or features. The top level of Unit 1 was 21 cm below the ground surface. Unit 1 was excavated following the natural stratigraphy. Level 1 was shallow. A layer of mottled undulating clay was encountered at 23 cm below the surface, sloping in the southwest corner to a depth of 36 cm below the surface. Unit 1 was terminated after a few cm of clay had been excavated. The clay zone proved to be sterile. The mano and sandstone fragments were found to be resting on a small clump of sandstone fragments on the clay. Other cultural materials recovered

from Unit 1 consisted of four pieces of lithic debitage. The soils within Unit 1 were consistent with soil zones two and three in Trench 3 (Munsell 10YR6/6 brownish yellow, moist and 2.5YR4/8 red, moist).

**Unit 2** was a 2 x 2 m square unit located 11.5 m southeast of centerline station 392+00, four m west of the center of Feature 9 in road grader scrape "I". The objective of Unit 2 was to recover any diagnostic artifacts or features associated with Feature 9. The top of Unit 2 was 22 cm below the ground surface. Unit 2 was excavated following the natural stratigraphy. Level 1 of Unit 2 was shallow. An undulating layer of mottled clay was exposed within the first few cm of excavation at a depth ranging from 25-37 cm below the surface. Level 2, between 37 and 45 cm, was excavated in the clay. Unit 2 was terminated at a depth of 45 cm below the surface, a few cm into the clay zone. The clay zone proved to be sterile. The cultural materials recovered from Unit 2 consisted of five pieces of lithic debitage. The natural stratigraphy within Unit 2 was consistent with that of Unit 1. The soil zone above the clay in Unit 2 consisted of a light brown sandy loam with a high concentration of fine gravel (Munsell 10YR6/6 brownish yellow, moist). Some of the gravel was found in loose concentrated pockets. The clay zone consisted of a dense layer of dark orange-red clay with a small amount of gravel (Munsell 2.5YR4/8 red, moist).

TABLE 1. Artifacts from test units.

UNIT	LEVEL	LOT #	PRIMARY FLAKE	SECOND. FLAKE	TERT. FLAKE	TOOLS
TU-1	1 11-17cm BELOW SURFACE	87	—			1 MANO 1 METATE
		88				
		89	—	1	3	
	2 13-17cm	90	—	—	—	—
TU-2	1 25-37cm	112	1	1	1	—
	2 37-45cm	1	1	—	—	—

## FEATURE DESCRIPTIONS

Road grader scrapes "A" through "J" exposed 11 burned rock features over a 90 x 150 m area (Fig. 3). The features averaged 2 m in diameter and appeared to be randomly distributed across the site. Since approximately 50 percent of the site within the right-of-way was not exposed, the possibility of organization among the features did exist. No such organization was observed among the features that were exposed. An additional feature, Feature 12, was uncovered during the excavation of Feature 5. The following are descriptions of each feature.

### FEATURE 1

Feature 1 was located 62 m northeast of centerline station 392+00 east of the center of road grader scrape "A" (Fig. 4a-c). Feature 1 consisted of a 1 x 2 m, north-south oriented, 18 cm thick, ovate concentration of burned rock, two courses thick, with a light scatter of burned rock extending approximately 70 cm to the west of the feature. The highest preserved elevation of the feature was 33 cm below the original ground surface. The majority of the stones composing the feature were burned river cobbles averaging 10-12 cm in diameter. The remainder of the feature was composed of thermal shattered chert. One 8 x 5 x 5 cm cube of petrified wood was also contained within the burned rock concentration.

TABLE 2. Artifacts from Feature 1.

DESCRIPTION	LOT #	AMOUNT
PRIMARY FLAKE	92	1
SECONDARY FLAKE	92	2
	93	2
TERTIARY FLAKE	92	2
	93	1
TOTAL	—	8

The soil matrix surrounding Feature 1 consisted of a light brown sandy loam with a low amount of gravel (Munsell 10YR5/6 yellow brown, dry). The

western half of Feature 1 was removed during cross-sectioning of the feature which exposed a lower course of burned river cobbles (Fig. 4b). The highest preserved elevation of the lower course of Feature 1 was 51 cm below the ground surface. The lower course of Feature 1 was contained within the same soil matrix as the upper course, however, with a much higher concentration of gravel and the presence of krotovinae. The bottom elevation of Feature 1 was 49 cm below the ground surface, which was resting 4-5 cm above a layer of undulating mottled orange-red clay containing natural river cobbles and gravel (Munsell 2.5YR4/6 red, moist).

While cleaning Feature 1, one exhausted core, one secondary flake, and a thick biface fragment were exposed in situ. The excavation of the western half of the feature revealed one tertiary flake from the upper course, two secondary flakes from the base level of the feature, and three pieces of thermo-shatter. The eastern profile of the western half of Feature 1 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 1 served as a hearth of an undetermined cultural and temporal affiliation.

## FEATURE 2

Feature 2 was located 50 m northeast of centerline station 392+00 in the east end of road grader scrape "C." Feature 2 consisted of a 1 x 2 m north-south oriented, 16 cm thick, ovate area of sparsely distributed burned rock with a light scatter of burned rock extending approximately 70 cm to the west of the feature (Fig. 5a-b). The highest preserved elevation of the feature was 18 cm below the original ground surface. The majority of the stones composing the feature were burned river cobbles averaging 5-12 cm in diameter. The remainder of the feature was composed of thermal shattered chert.

The soil matrix surrounding Feature 2 consisted of a light brown sandy loam with a low amount of gravel (Munsell 10YR6/3 pale brown, moist). The western half of Feature 2 was removed during cross-sectioning of the feature. The bottom elevation of Feature 2 was 23 cm below the ground surface. A soil change occurred at an elevation between 20 and 25 cm below the ground surface and consisted of a mottled light yellow-brown sandy clay loam with natural river gravel (Munsell 10YR6/6 brownish yellow, moist). Another soil change occurred at an elevation between 25 and 30 cm below the ground surface and consisted of a mottled orange-brown clay containing natural river cobbles and gravel (Munsell 7.5YR5/6 strong brown, moist).

When the overburden from the south end of Feature 2 was removed, a light orange ceramic marble, one cm in diameter, was recovered from the screen. This marble was found just below the ground surface between 0 and 10 cm and is the only historic artifact recovered from the site. A Clear Fork Gouge was found

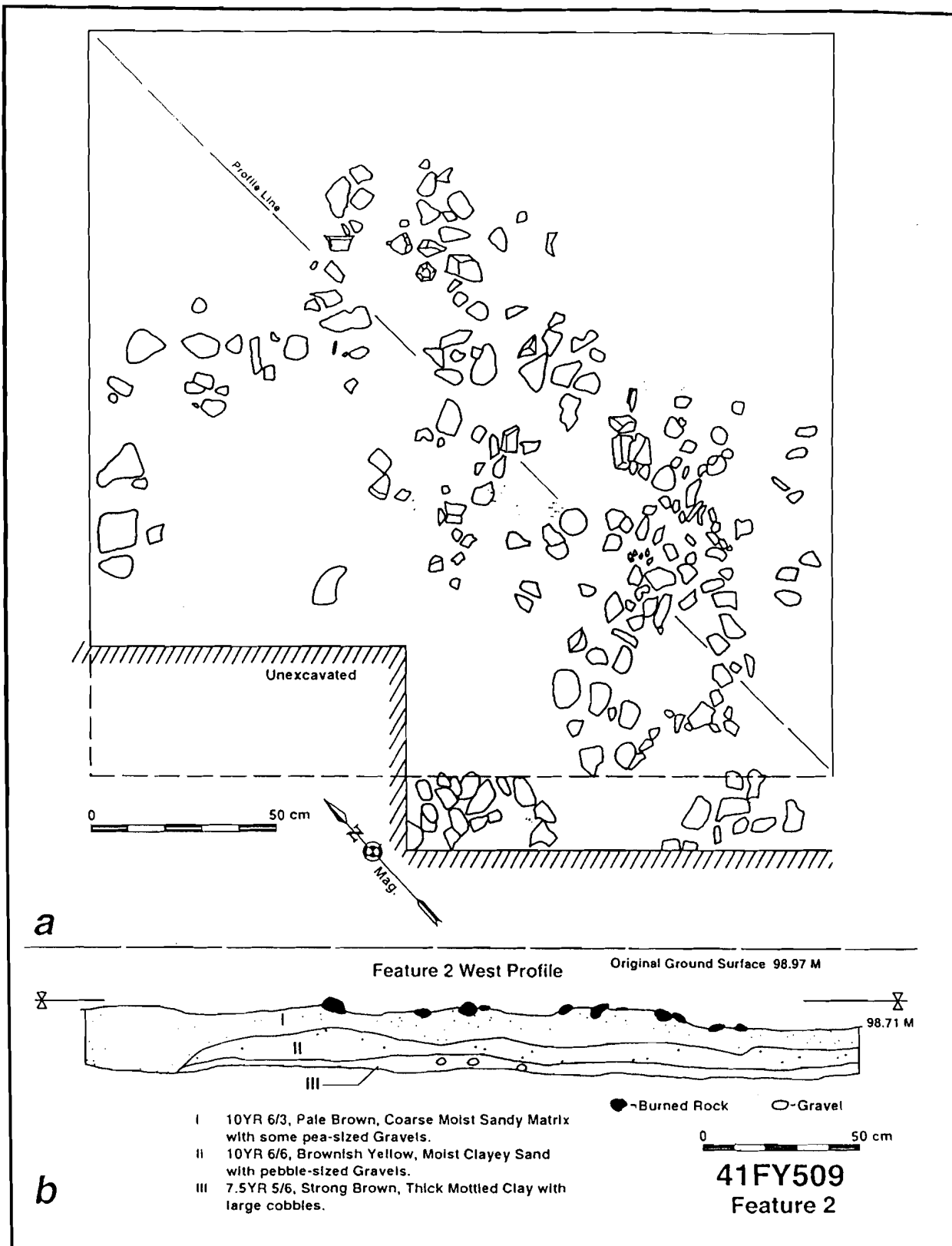


FIGURE 5. Feature 2.

TABLE 3. Artifacts from Feature 2.

DESCRIPTION	LOT #	AMOUNT
CLEAR FORK GOUGE	95	1
TERTIARY FLAKE	96	3
CLAY MARBLE	97	1
TOTAL	—	5

in situ along the eastern edge of the feature during the cleaning of Feature 2. The remaining artifacts recovered from Feature 2 during the excavation of half the feature consisted of three tertiary flakes. In cross section, Feature 2 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 2 served as a hearth of an undetermined cultural and temporal affiliation. It is not clear whether Feature 2 was a larger hearth that was deflated or a series of smaller hearths. The base elevation of Feature 2, which was an average of 20 cm above the underlying clays, may be indicative of a temporal distinction from other features at the site, which generally rest on or just above the clays.

### FEATURE 3

Feature 3 was located 46 m east-northeast of centerline station 392+00 in the east end of road grader scrape "D." Feature 3 consisted of a 3.5 x 3.5 m in diameter, 10 cm thick, circular area of concentrated burned rock with a light scatter of burned rock extending approximately 70 cm in all directions from the feature (Fig. 6a-b). The highest preserved elevation of the feature was 19 cm below the original ground surface. The majority of the stones composing the feature were burned river cobbles averaging 5-15 cm in diameter.

The remainder of the feature was composed of quartzite cobbles, a limited amount of sandstone, and thermal shattered chert. The soil matrix surrounding Feature 3 consisted of a light brown sandy clay loam with a low amount of gravel (Munsell 7.5YR6/3 light brown, moist). A 30-cm wide trench was cut through the western center of the feature during cross-sectioning of Feature 3. The bottom elevation of Feature 3 was 24 cm below the ground surface. The underlying clays were encountered at an elevation of 77 cm below the ground surface and consisted

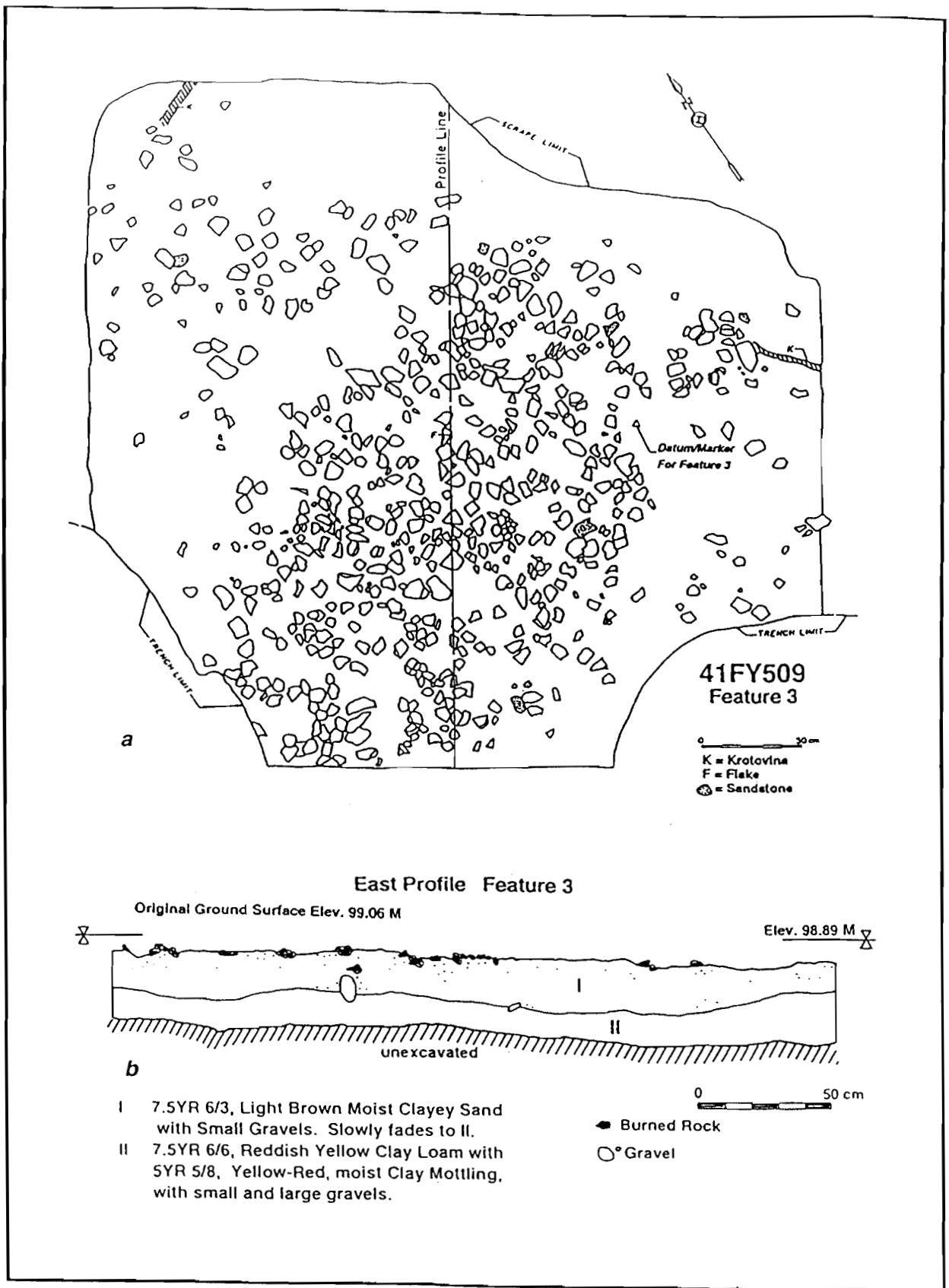


FIGURE 6. Feature 3.

of a mottled light yellow-red clay loam with natural river gravel (Munsell 7.5YR6/6 reddish yellow and 5YR5/8 yellow red, moist).

TABLE 4. Artifacts from Feature 3.

DESCRIPTION	LOT #	AMOUNT
TERTIARY FLAKE	98	1
TOTAL	98	1

A single piece of lithic debitage, a tertiary flake, was collected during cleaning Feature 3. No artifacts were recovered from Feature 3 during cleaning or excavation of the profile trench. The eastern profile of the trench through Feature 3 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 3 served as a hearth of an undetermined cultural and temporal affiliation. The base elevation of Feature 3 was within a mottled clay/sandy loam soil matrix an average of 12 cm above the dense underlying clays.

#### FEATURE 4

Feature 4 was located 30 m north of centerline station 392+00 in the west end of road grader scrape "D" and consisted of a 1.8 m in diameter circular, dense concentration of burned rocks. The average size of the rocks composing the feature was 10 cm in diameter. The rocks were typically chert and quartzite cobbles. The top elevation of Feature 4 was 22 cm below the original ground surface. Feature 4 was found to be two courses thick. The base elevation of Feature 4 was 37 cm below the ground surface resting 1-2 cm above the underlying clay. A 1 x 2 m area on all sides of Feature 4 was troweled to sterile soil 3-5 cm below the base elevation of the feature. In addition, a 2 x 5 m area was troweled extending west of the feature to clay.

No diagnostic artifacts were found in association with Feature 4; however, a gouge was collected from the road grader backdirt near the southwestern edge of the feature. Like the features described above, Feature 4 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 4 served as a hearth of an undetermined cultural and temporal affiliation.



## FEATURE 5

Feature 5 was located 66 m northwest of centerline station 392+00 in the west end of road grader scrape "F" and consisted of a 1.8 m in diameter circular, dense concentration of burned rocks (Fig. 7a-c). The average size of the rocks composing the feature was 10 cm in diameter and consisted of chert, quartzite cobbles, and sandstone (approximately 40 percent). Feature 5 was composed of two distinct regions. A burned rock concentration within a dark brown-black semicircular stain characterized the northern end of the feature. The southern end of the feature consisted of a deposit of burned rocks extending 50-60 cm south around the southern edge of the stained area. The western half of Feature 5 was removed during cross-sectioning. The eastern profile of the cross section showed a well-defined, one meter in diameter, basin-shaped hearth in the north end of the feature and a burned rock scatter on the southern end of the feature.

The hearth consisted of three distinct regions: 1) a 15 cm thick, 60 cm in diameter concentration of burned rock in a dark ashy soil which occupied the center of the basin; 2) a dark ashy soil matrix which occupied the northern end of the basin; and 3) a grey ashy soil matrix which occupied the southern end of the basin and underrode the entire hearth. The soil matrix surrounding the central hearth stones and the dark ashy area to the north consisted of a dark black sandy loam with dark ash and charcoal (Munsell 5YR2.5/1 black, moist). The ashy soil on the north side of the hearth was 17 cm thick and extended to a depth 2-3 cm below the base of the northern half of the central hearth stones. This dark ashy soil was the same color and consistency as the soil within the central rock area, but was distinguished by a lack of burned rock. The hearth stones and dark ashy soil to the north were at an elevation between 19 cm and 37 cm below the ground surface. The grey ashy soil to the south of and below the central burned rocks black soil consisted of a dark grey sandy loam with ash (Munsell 5YR4/4 dark grey, moist). The grey ash was between 20 and 42 cm below the ground surface on the south, 38 and 44 cm in the center, and 29 and 39 cm on the north. The soil matrix surrounding the top elevation of Feature 5 consisted of light brown sandy loam with gravel (Munsell 2.5YR4/4 reddish yellow, moist) between 21 and 27 cm below the ground surface. Between 27 and 43 cm below the surface and below the hearth, the soil consisted of a reddish brown sandy loam with gravel (Munsell 2.5YR4/6 red, moist). During the removal of the western half of Feature 5 another burned rock feature was discovered. This new feature, Feature 12, was located below and west of Feature 5 at an elevation between 46 and 55 cm below the ground surface as discussed below (Fig. 9).

No diagnostic artifacts were found in association with Feature 5; however, a gouge was collected from the road grader backdirt five m west of the southwestern edge of the feature. Other cultural materials recovered from Feature 5 include a uniface scraper, one thick biface, two secondary flakes, and eight tertiary flakes collected from the cleaning of the top of the feature, and four secondary flakes and five tertiary flakes recovered from the screen during the

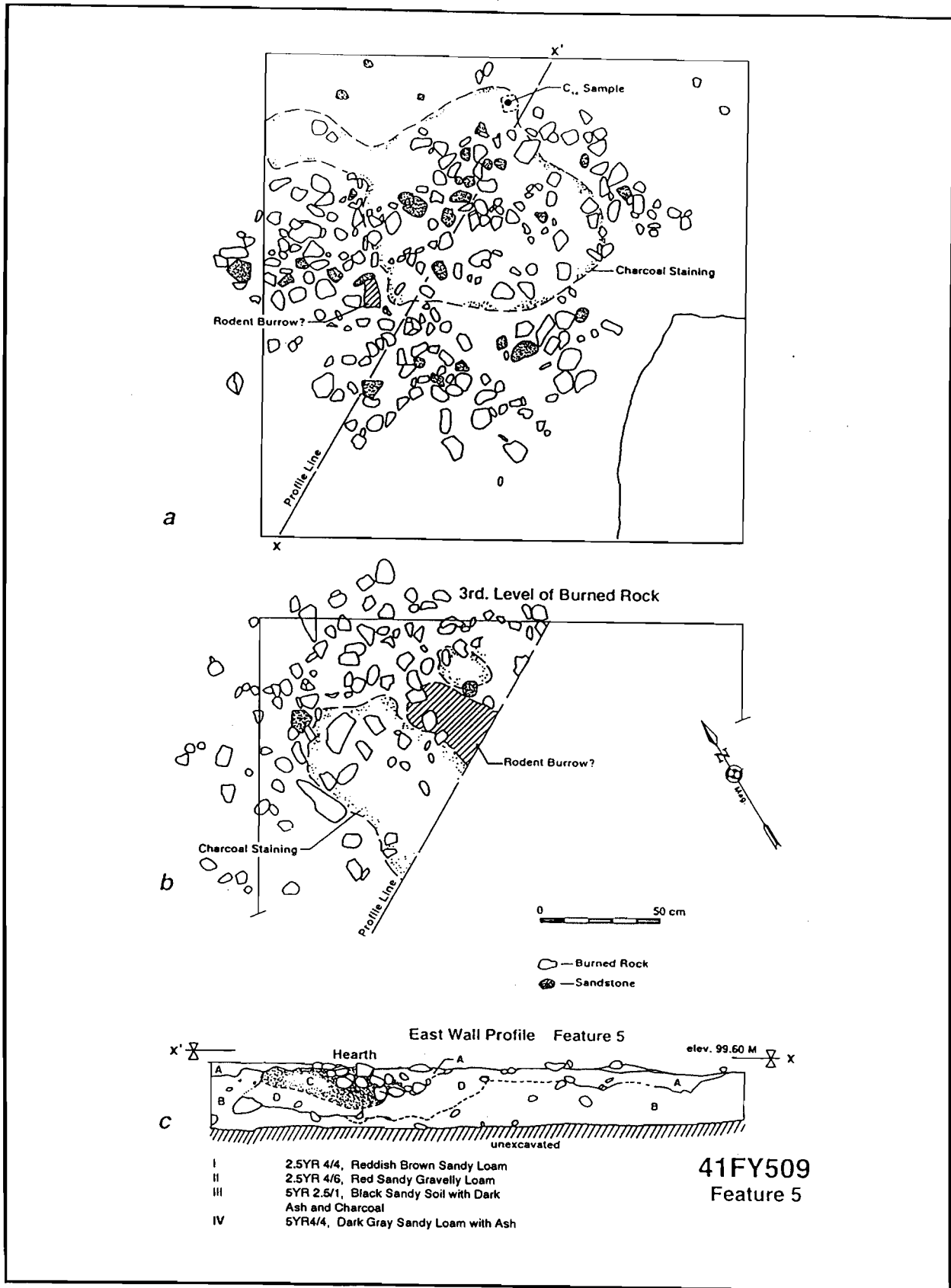


FIGURE 7. Feature 5.

cross-sectioning of the feature. The distinct basin shape, ash, and carbon deposits indicate that Feature 5 served as a hearth. The location of Feature 5 with respect to Feature 12 clearly indicates that Feature 5 is temporally more recent than Feature 12 below. This is further substantiated by the amount of carbon and ash preserved within Feature 5 when compared to the lack of organic materials present in Feature 12 and the remaining features. Several carbon and soil samples were taken from different proveniences within the hearth for radiocarbon and further analysis. Two of these samples were submitted to Beta Analytic Inc., Miami, Florida, for dating. Of the two radiocarbon samples submitted for analysis, sample number 2 (Beta-65380) was of sufficient quantity to obtain a reliable date. Sample number 1 proved to be an insufficient quantity for conventional radiometric analysis (Tamers 1993). The date obtained through analysis of sample number 2 is 910 +/- 60 BP. The contextual evidence is confirmed by this date, which places Feature 5 in the Late Prehistoric Period (Turner and Hester 1993:45-63).

TABLE 5. Artifacts from Feature 5.

DESCRIPTION	LOT #	AMOUNT
THICK BIFACE	100	1
UNIFACE SCRAPER	100	1
SECONDARY FLAKES	100 102	2 4
TERTIARY FLAKE	100 102	8 5
CARBON SAMPLES	99	195 g
SOIL SAMPLE	99	3.051 kg
TOTAL	—	21

### FEATURE 6

Feature 6 was located 49 m northeast of centerline station 392+00 in the west end of road grader scrape "G" and consisted of a 2 m in diameter area of

loosely scattered burned rocks with no apparent configuration. The burned rocks consisted of chert and quartzite river cobbles averaging 5-10 cm in diameter. The top elevation of Feature 6 was 21 cm below the original ground surface. The base elevation of Feature 6 was 28 cm below the ground surface; 1 x 2 m areas on the north, south, and east sides of Feature 6 were troweled to sterile soil below the base elevation of the feature. The base of the feature was found to be resting 1-2 cm above the underlying clay. In addition, a 2 x 5 m area was troweled extending west of the feature to clay. The soil matrix surrounding Feature 6 consisted of a light yellow-brown sandy loam with a high concentration of natural river gravel (Munsell 10YR6/6 brownish yellow, moist). The underlying clay consisted of an orange-red clay loam with a low amount of natural gravel (Munsell 2.5YR4/8 red, moist).

Two bifacial gouges were found in association with Feature 6. One gouge was found 1 m north of the northwest edge of the feature at an elevation of 28 cm below the ground surface during the troweling of that area of the feature. The other gouge was found 3 m northwest of the west edge of the feature at an elevation of 29 cm below the surface resting on clay. This gouge was found during the troweling of the 2 x 5 m area west of Feature 6. No other cultural materials were found during the cleaning of Feature 6 or during the troweling of the surrounding areas. Feature 6 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 6 served as a hearth of an undetermined cultural and temporal affiliation.

TABLE 6. Artifacts from Feature 6.

DESCRIPTION	LOT #	AMOUNT
CLEAR FORK GOUGE	106	1
	107	1
TOTAL	—	2

#### FEATURE 7

Feature 7 consisted of approximately 10 burned chert and quartzite cobbles in the backdirt on the north edge of road grader scrape "F" located 15.2 m northeast of centerline point 392+00. A 2 x 2 m area was removed around the burned rocks in an attempt to locate a burned rock concentration. No such burned rock feature was located, and it was determined that Feature 7 consisted of only a

few scattered rocks that were displaced by the road grader. No further work was conducted on Feature 7.

### FEATURE 8

Feature 8 was located 65 m east-northeast of centerline station 392+00 in the west end of road grader scrape "H" and consisted of a 2 m in diameter area of concentrated burned rock composed of chert cobbles, quartzite cobbles, and sandstone (approximately 40 percent; Fig. 8a-b). Feature 8 was composed of two distinct regions. The rough outline of a 1 m in diameter sandstone ovate circle occupied the west end of the feature. The sandstone circle was filled with roughly equal proportions of sandstone and burned cobbles. The average size of the sandstone and cobbles was 8 cm in diameter, although four pieces of sandstone were 18 cm in diameter. The eastern portion of Feature 8 consisted of smaller pieces of burned cobbles and thermo-shatter averaging 5 cm in diameter. These burned rocks were densely distributed around the eastern edge of the sandstone ring and became progressively more sparse to a distance of 4 m east of the sandstone. The western half of the sandstone ring of Feature 8 was removed for cross-sectioning. The eastern profile of the cross section revealed that Feature 8 was a single course thick and rested an average of 6-8 cm above the underlying clays. The top elevation of the feature was 10 cm below the ground surface. The bottom elevation of the feature was 12-15 cm below the ground surface. The soil matrix surrounding Feature 8 consisted of a light yellow-brown sandy loam with numerous natural gravel (Munsell 10YR6/6 brownish yellow, moist). The underlying clays were at a depth of 15-20 cm below the ground surface and consisted of a dark red clay with a low amount of natural gravel (Munsell 2.5YR4/8 red, moist).

A 1 x 2 m area was troweled down to 2-3 cm below the base elevation of the feature on the north and south sides of the feature. In addition, a 2.5 x 5 m area west from the western edge of the feature and a 2.5 x 3 m area east of the feature were troweled down to a depth of 2-5 cm below the base elevation of Feature 8. These efforts revealed seven bifacial corticate cobbles, one unifacial corticate cobble, one core, two thick bifaces, one piece of perforated sandstone, two pieces of petrified wood, and 12 pieces of lithic debitage in association with Feature 8. Of particular interest are the unifacial and bifacial corticate cobbles. Seven of these artifacts were randomly distributed in an area up to 2 m west of the feature, and two others were found 2 m east of the feature resting at an elevation equal to the base of the feature. All of these implements exhibit some form of impact scars on the distal end; however, it is unclear whether these scars resulted from usage or edge preparation. It is likely that all of these tools served as some sort of chopping implements. Although some other bifaces were found in association with the feature, not enough evidence was discovered to explain the function of the bifacial cobbles or their relationship to the feature. Feature 8 did

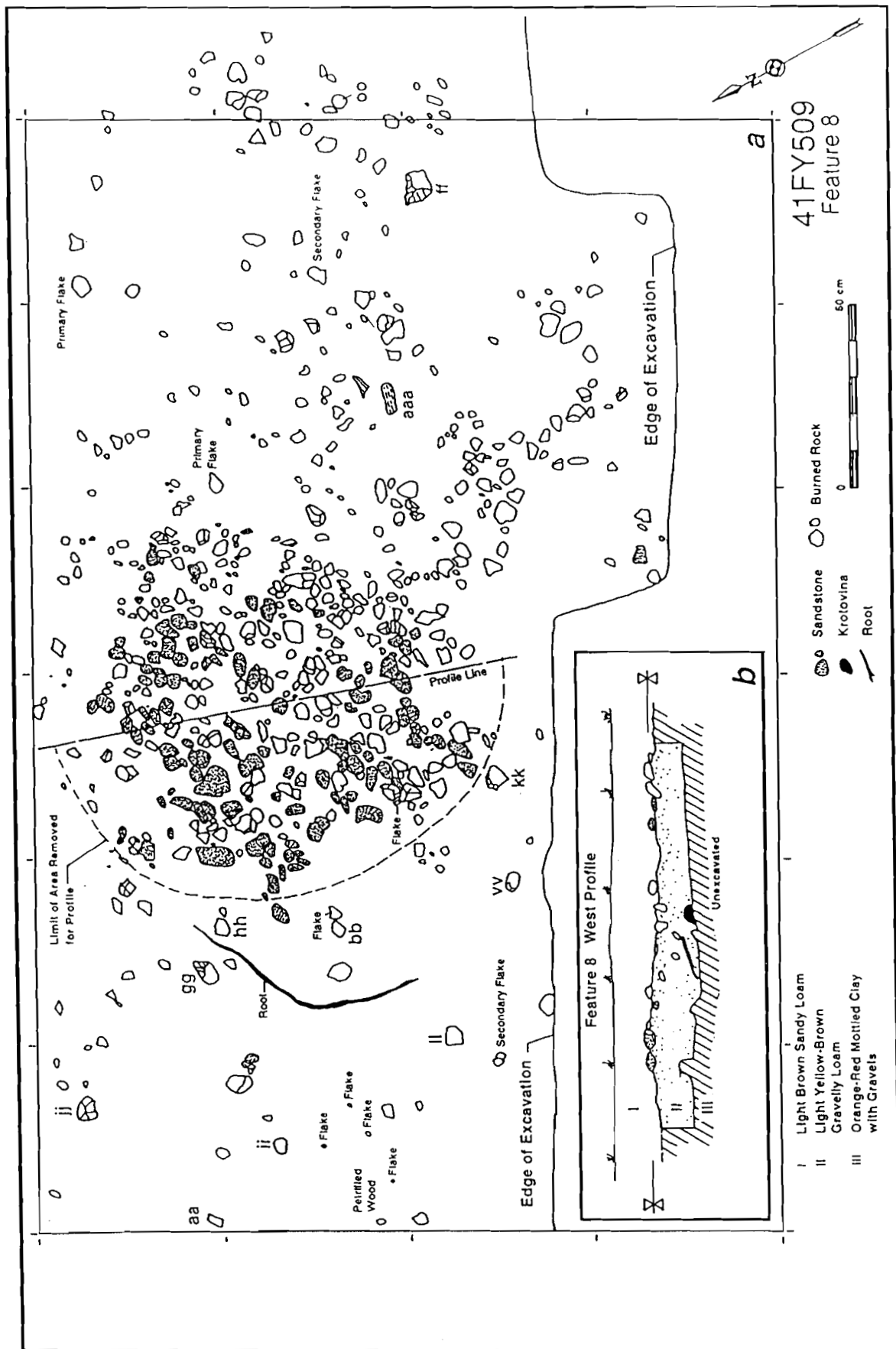


FIGURE 8. Feature 8.

not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 8 served as a hearth of an undetermined cultural and temporal affiliation.

TABLE 7. Artifacts from Feature 8.

DESCRIPTION	LOT #	AMOUNT
BIFACIAL COBBLES	110	7
UNIFACIAL COBBLE	110	1
THICK BIFACES	110	2
PRIMARY FLAKES	110	3
SECONDARY FLAKE	108 109 110	2 1 1
TERTIARY FLAKE	108 109	2 7
CORE	110	1
PETRIFIED WOOD	110	2
TOTAL	—	29

### FEATURE 9

Feature 9 was located 5.6 m west of centerline station 392+00 in the center of road grader scrape "I" and consisted of a 1.8 x 2 m in diameter semicircular area of concentrated burned rock composed of chert and quartzite cobbles. The feature was two courses thick with a top elevation of 17 cm below the ground surface. The base elevation of Feature 9 was an average of 29 cm below the ground surface and was resting directly on substrate clays. The soil matrix surrounding Feature 9 consisted of a light yellow-brown sandy loam with numerous natural gravel (Munsell 10YR6/6 brownish yellow, moist). The underlying clays were at a depth of 25-29 cm below the ground surface and

consisted of a dark red clay with a low amount of natural gravel (Munsell 2.5YR4/8 red, moist).

A 1 x 2 m area on all sides of Feature 9 was troweled to sterile soil below the base elevation of the feature. During the troweling, the distal end of a bifacial gouge and two bifacial corticate cobbles were found in close association with Feature 9. The gouge fragment was found adjacent to the southwestern edge of the feature at 29 cm below the ground surface. The two bifacial cobbles were found adjacent to the western edge of Feature 9 at a depth of 23 cm below the ground surface. In addition, a 1 x 2 m area (Unit 2) located 4 m west of the feature was troweled to clay. Unit 2 was shallow and yielded five pieces of lithic debitage. No other cultural materials were found during the cleaning of Feature 9 or during the troweling of the surrounding areas. Feature 9 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 9 served as a hearth of an undetermined cultural and temporal affiliation.

TABLE 8. Artifacts from Feature 9.

DESCRIPTION	LOT #	AMOUNT
CLEAR FORK GOUGE	111	1
BIFACIAL COBBLES	111	2
TOTAL	—	3

### FEATURE 10

Feature 10 was located 19 m west of centerline station 392+00 in the center of road grader scrape "J" and consisted of a 1.5 m in diameter area of concentrated burned rock composed of chert and quartzite cobbles. The southern portion of the feature was three courses thick with a top elevation of 12 cm below the ground surface. The northern portion of the feature was two courses thick around the perimeter and one course thick within a 60 cm in diameter depression. The top elevation of the two course perimeter was 18 cm below the ground surface and the elevation within the depression was 24 cm below the ground surface. The base elevation of Feature 10 was an average of 29 cm below the surface and was resting directly on substrate clays. The soil matrix surrounding Feature 10 consisted of a light yellow-brown sandy loam with numerous natural gravel (Munsell 10YR6/6 brownish yellow, moist). The underlying clays were at



a depth of 27-29 cm below the ground surface and consisted of a dark red clay with a low amount of natural gravel (Munsell 2.5YR4/8 red, moist).

A 1 x 2 m area on all sides of Feature 10 was troweled to sterile clay 3-5 cm below the base elevation of the feature. No artifactual materials were found in association with Feature 10. Feature 10 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 10 served as a hearth of an undetermined cultural and temporal affiliation.

### FEATURE 11

Feature 11 was located 71 m north-northwest of centerline station 392+00 in the west end of road grader scrape "B" and consisted of two 60 cm areas of sparse burned chert and quartzite cobbles in a light burned rock scatter. The burned rock scatter extended approximately 1 m in all directions around the small concentrations. The feature was two courses thick with a top elevation of 15 cm

TABLE 9. Artifacts from Feature 11.

DESCRIPTION	LOT #	AMOUNT
CLEAR FORK GOUGE	114	1
THICK BIFACE	114	2
EDGE MODIFIED FLAKE	114	1
PRIMARY FLAKE	114	1
SECONDARY FLAKES	114	4
TERTIARY FLAKES	114	2
TOTAL	—	11

below the ground surface. The base elevation of Feature 11 was an average of 22 cm below the ground surface and was resting directly on substrate clays. The soil matrix surrounding Feature 11 consisted of a light yellow-brown sandy loam with

numerous natural gravel (Munsell 10YR6/6 brownish yellow, moist). The underlying clays were at a depth of 22–25 cm below the ground surface and consisted of a dark red clay with a low amount of natural gravel (Munsell 2.5YR4/8 red, moist).

On all sides of Feature 11, 1 x 2 m areas were troweled to sterile soil below the base elevation of the feature to clay. A bifacial gouge, two thick bifaces, and light lithic scatter were found in association with Feature 11. The lithic scatter consisted of nine pieces of debitage and was the second highest concentration of lithic debitage recovered from the site. Feature 11 did not reveal any clear organization, type of basin shape, or soil stains apart from the surrounding soil matrix. The function of Feature 11 remains unclear. Although comparatively larger amounts of lithic debitage were recovered from Feature 11, not enough was present to indicate that the feature was a procurement area. The presence of the burned rock is suggestive, however, that Feature 11 was two smaller, deflated, hearths of an undetermined cultural and temporal affiliation.

### FEATURE 12

Feature 12 was located 67 m northwest of centerline station 392+00 in the west end of road grader scrape “F” and consisted of a 1.8 m in diameter semicircular sparse concentration of burned rocks. The average size of the rocks composing the feature was 10 cm in diameter and consisted of chert and quartzite cobbles. Feature 12 was found below and adjacent to the western edge of Feature 5 at an average elevation of 50 cm below the ground surface. The soils surrounding Feature 12 consisted of a reddish brown sandy loam with gravel (Munsell 2.5YR4/6 red, moist).

TABLE 10. Artifacts from Feature 12.

DESCRIPTION	LOT #	AMOUNT
BIFACIAL COBBLES	99	2
TOTAL	—	2

Feature 12 was contained within a 2 x 2 m excavation area which was expanded from the removal of the west face of Feature 5 (Fig. 9). Two bifacial corticate cobbles were found adjacent to the northwest edge of the feature. No other artifactual materials were found in association with Feature 12. In addition

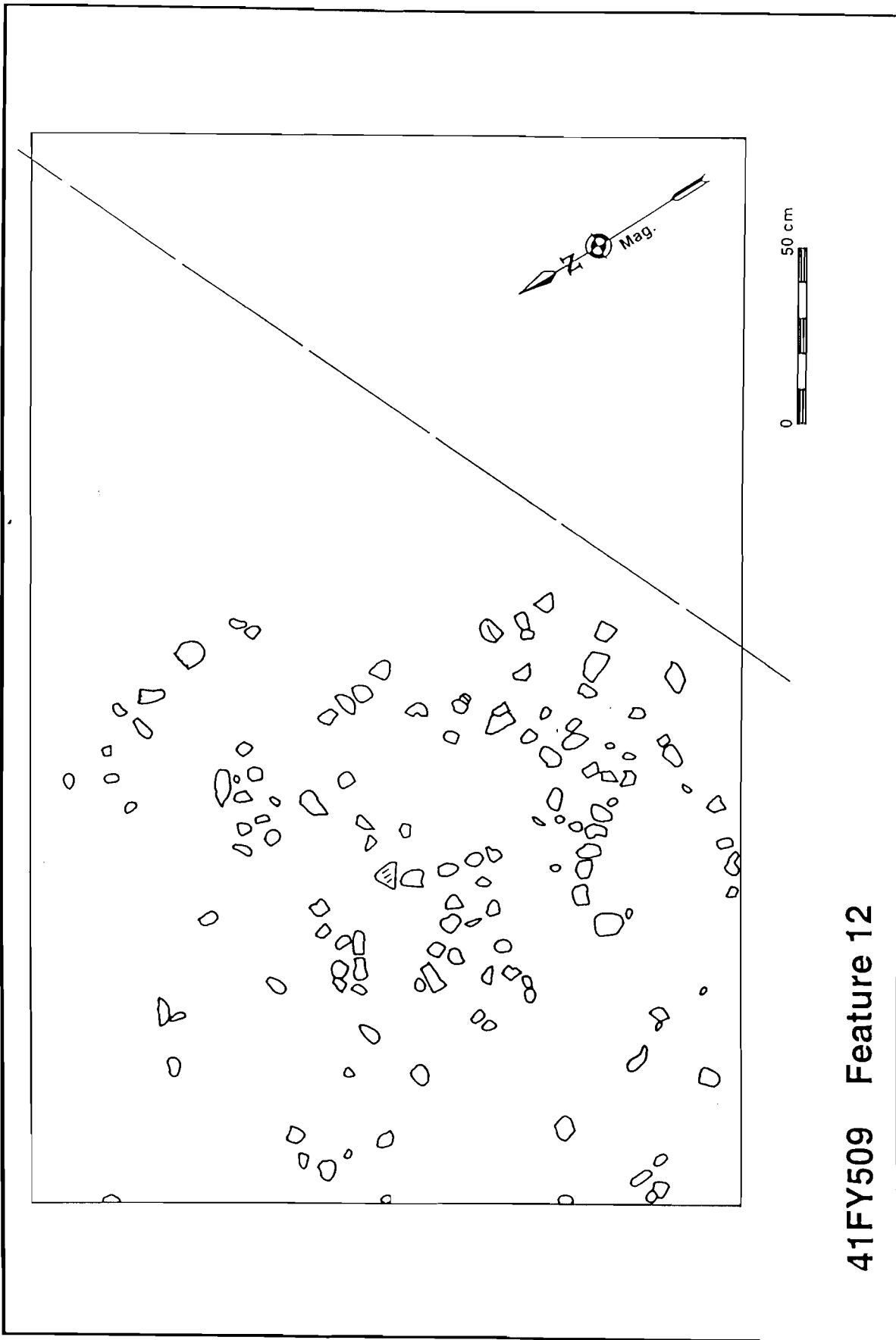


FIGURE 9. Feature 12.

to being photographed, Feature 12 was also drawn. Feature 12 did not reveal any type of basin shape or soil stains apart from the surrounding soil matrix. Although no carbon was preserved, it appears as though Feature 12 served as a hearth of an undetermined cultural and temporal affiliation. Due to its provenience below Feature 5, it can be determined that Feature 12 clearly belongs to a period predating Feature 5. Feature 12 is the only feature from the site that can be clearly attributed to Stratum II

## ARTIFACT DESCRIPTIONS

A total of 97 artifacts were recovered from the investigations of the eastern portion of 41FY509. In general, the relative artifact density from this area of the site was low when compared with the other areas excavated by Dennis Price in 1991 (Price 1991). The majority of these artifacts, 54, were recovered from backdirt contexts after being exposed by the road grader. All of the tools collected from the site were either located with the transit with respect to centerline station 392+00 and/or drawn on feature plans. During analysis, each plotted tool was assigned a consecutive lower case letter (a,b,c, etc.) whose locational information is presented in Table 11. In addition, each tool recovered from the site is plotted on the site map with its assigned letter (Fig. 3).

The two predominant types of prehistoric artifactual materials recovered from our current efforts at 41FY509 consist of large bifacial corticate cobbles and Clear Fork Gouges. Additional artifactual materials recovered from the site consist of projectiles, thin and thick bifaces, unifaces, a single core, ground stone, lithic debitage, petrified wood, bone, and carbon deposits.

## HISTORICAL

The historical artifacts recovered from 41FY509 consist of a single one cm in diameter light orange (Munsell 2.5YR7/6 reddish, yellow), grog tempered, ceramic marble (not illustrated). The marble was recovered from 5 cm below the ground surface while screening the overburden above Feature 2.

## PROJECTILES

A total of four projectiles and fragments were recovered and consist of the following: 1) A Plainview/Dalton (Johnson, 1989) proximal end (a) with a concave base, straight, slightly contracting stem, ground base and stem, reworked lateral edges which are alternately beveled and slightly serrated. Material consists

of a light grey mottled chert (Munsell 5Y6/1), 5.0 cm in length, 2.0 cm in width, and 0.6 cm thickness (Fig. 10A); 2) A thin lanceolate projectile of an undetermined type (b) with a concave base, slightly contracting stem, and heavily reworked base and lateral edges. Material consists of a light yellow-brown mottled chert (Munsell 10YR4/2), 6.6 cm in length, 2.3 cm in width, 0.5 cm thickness (Fig. 10B); 3) A thick lanceolate stemmed Hoxie/Uvalde-like projectile (c) with a concave base, short slightly expanding stem, and reworked lateral edges. Material consists of a dark brown mottled chert (Munsell 10YR4/2), 5.5 cm in length, 1.9 cm in width, 0.7 cm thickness (Fig. 10C); 4) A thin medial section of a small stemmed dart point of an undetermined type (d) with a slightly expanding stem and straight, slightly serrated lateral edges. Material consists of a light yellow-brown mottled chert (Munsell 10YR6/2), 3.4 cm in length, 2.1 cm in width, 0.7 cm thickness (Fig. 10D).

### THIN BIFACES

A total of four thin biface fragments were recovered from our efforts at 41FY509 (e-h). These artifacts are arbitrarily classified as thin, based on their relative thickness of 1 cm or less. The first of these examples of thin bifaces (e) is a 7.55 cm long, 3.75 cm wide, and 1 cm thick triangular distal end (Fig. 11A). This biface is made of a light grey-brown mottled chert (Munsell 10YR7/1) and has several stack scars along the lateral edges indicative of manufacturing difficulties. Both lateral edges of this example exhibit considerable micro flaking indicating possible use wear. The function of this implement remains unclear.

The second of these examples (f) is a 5.7 cm long, 3.5 cm wide, and .075 cm thick triangular distal end made of a light brown mottled chert (Munsell 10YR7/1; Fig. 11B). The texture of this example is suggestive of heat treating. The lateral edges of this example are straight to slightly convex. The function of this implement remains unclear; however, it is likely that it is a fragment of an unidentifiable projectile point.

The third of these examples (g) is a 6.2 cm long, 4.8 cm wide, and .09 cm thick distal end (Fig. 11C) made of a dark brown mottled chert (Munsell 7.5YR4/1). The lateral edges of this example are convex and one edge has been smoothed. The other lateral edge has considerable bashing. It is not apparent whether the wear along the lateral edges is the result of edge preparation or usage. The function of this biface remains unclear.

The last of these examples (h) is a 4.3 cm long, 2.95 cm wide, and .08 cm thick medial section (Fig. 11D) made of a yellow-brown mottled chert (Munsell 10YR7/4). The lateral edges of this example are straight to slightly convex. The function of this biface remains unclear.

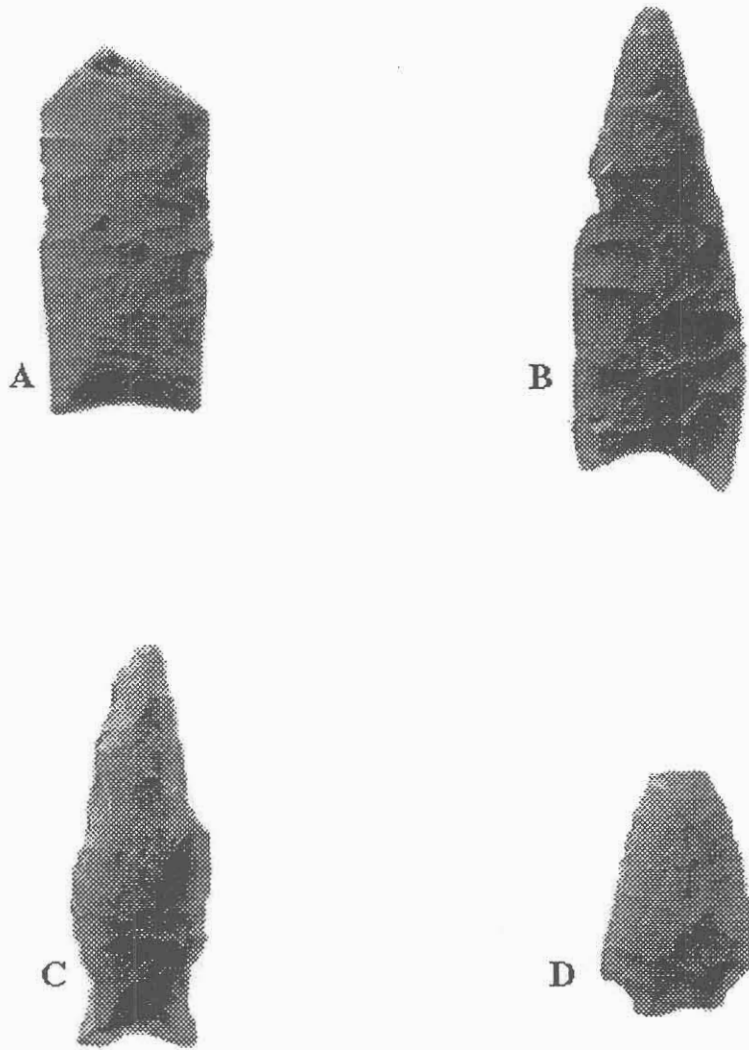


FIGURE 10. Projectiles (a-d).

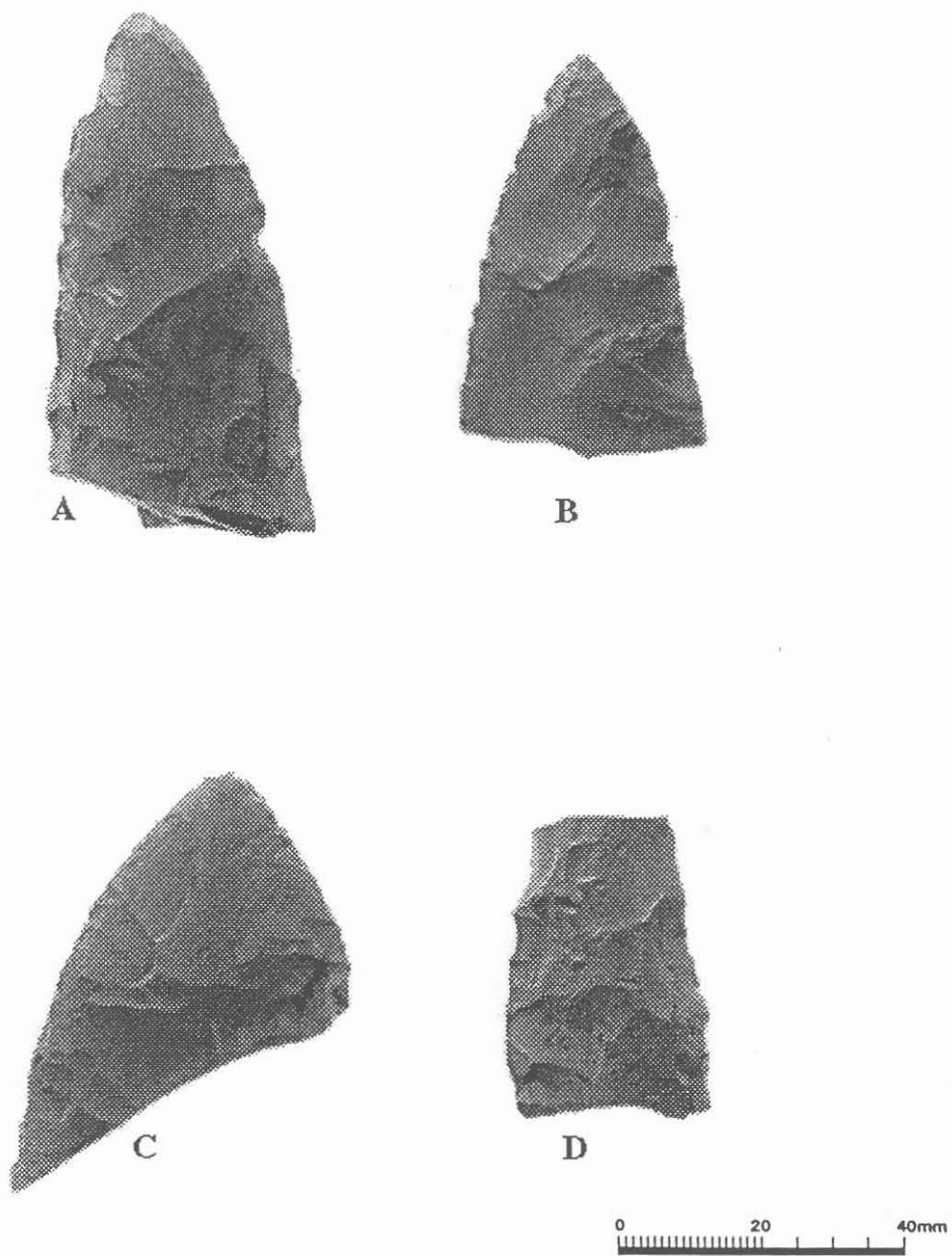


FIGURE 11. Thin Bifaces (e-h).

## CLEAR FORK GOUGES

A total of 12 Clear Fork Gouges and fragments were recovered. These consist of five intact examples, six proximal ends, and one medial section. Eleven of the gouges are lenticular in form with less rounded dorsal surfaces and slightly ridged ventral surfaces. One example is symmetrically lenticular with a symmetrical bifacial bit. All of the gouges recovered have smoothed lateral edges. The five intact examples are all triangular in form with well rounded to slightly pointed proximal ends.

The five intact examples can be further subdivided into three categories based on bit types. The first type of gouge consists of three examples that are characterized by a straight to slightly concave bit edge, a steep to shallow bit angle, and a flat to concave bit facet (i-m). The most prominent member of this type is made of a dark brown opaque chert (Munsell 10YR4/6) with dark brown speckled inclusions (i). The bit exhibits considerable use wear in the form of hinge fractures in the facet and micro flaking along the ventral edge. This gouge has a length of 7.3 cm, a bit width of 4.3 cm, and a thickness of 1.6 cm. The bit angle is 32° and the bit facet is 0.52 cm deep (Fig. 12A).

The next member of this type of gouge (j) is made of a light grey chert (Munsell 10YR7/2). The bit of this gouge exhibits considerable use wear in the form of micro flaking along the ventral edge. This gouge has a length of 7.5 cm, a bit width of 3.5 cm, and a thickness of 1.5 cm. The bit angle is 56° and the bit facet is 0.35 cm deep (Fig. 12B). In comparison to the previous example, the bit of this gouge is narrower, more sharply angled, and not as deeply faceted. This gouge was found in direct association with Feature 11.

The last member of this type of gouge (k) is made of a light grey chert (Munsell 10YR7/3). The bit of this gouge exhibits considerable use wear in the form of hinge and micro flaking along the ventral edge. This gouge has a length of 7.8 cm, a bit width of 3.85 cm, and a thickness of 1.85 cm. The bit angle is 44° and the bit facet is 0.25 cm deep (Fig. 12C). Cortex is present along the proximal end of one lateral of this gouge. In comparison to the previous examples, the bit facet of this gouge is slightly concave to nearly flat. This gouge was found in direct association with Feature 6.

The second type of gouge consists of a single example (l) characterized by a thick, flat, asymmetrical bit (Fig. 12D). This gouge is made of a dark brown chert (Munsell 10YR4/2). The bit of this gouge exhibits considerable use wear in the form of hinge and micro flaking along the dorsal and ventral edges. This gouge has a length of 8.25 cm, a bit width of 3.6 cm, and a thickness of 2.65 cm. The bit angle is 38° and the bit facet is flat. In comparison to the previous examples, the bit facet of this gouge is flat. In addition, during manufacture, several attempts were made to remove a thick bulbous protrusion in the center of the dorsal surface. The attempts to remove this protrusion are evidenced by two heavily bashed areas and several stacks along the dorsal surface of one lateral edge. This failed attempt resulted in the dorsal surface being thicker than the



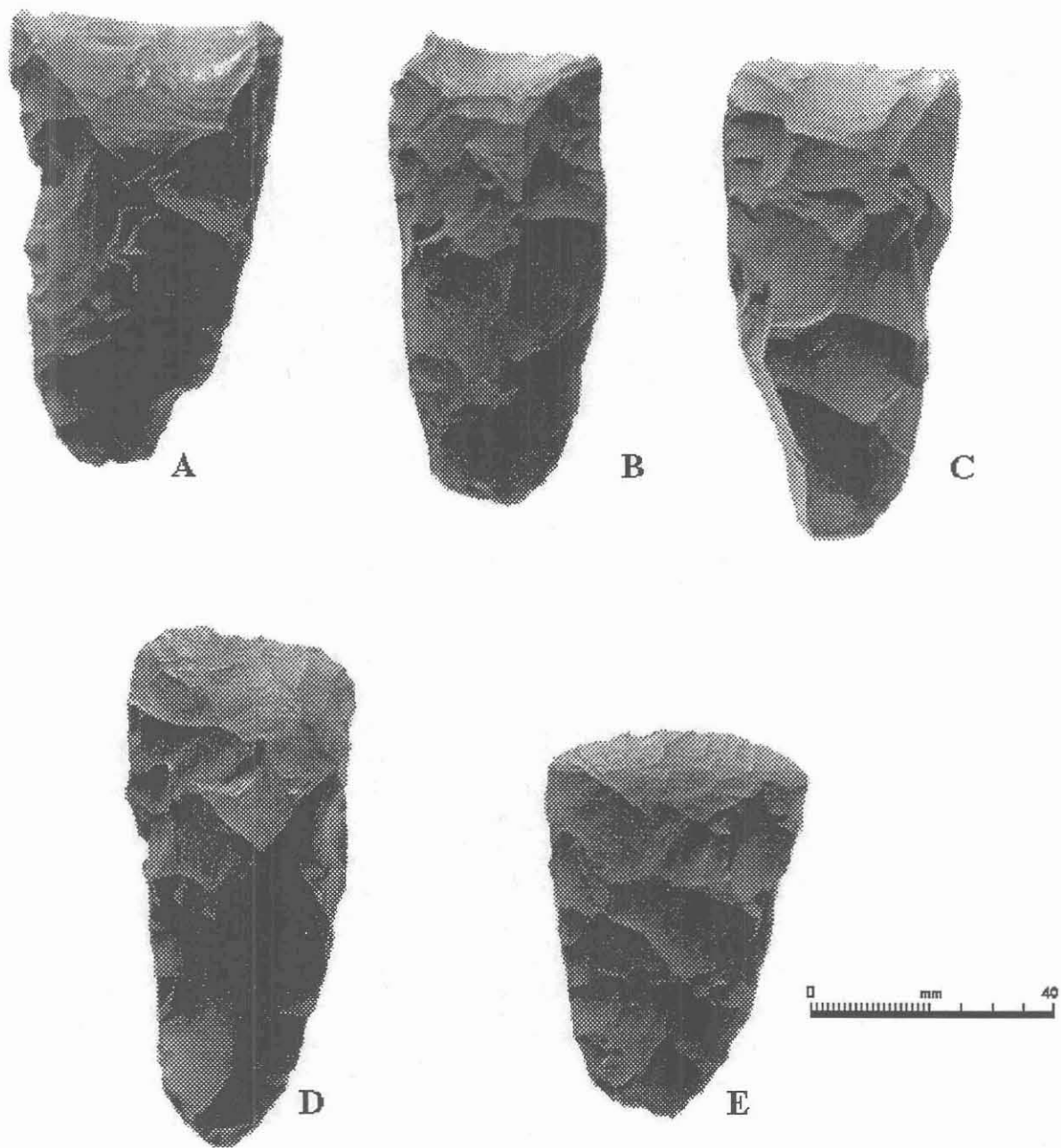


FIGURE 12. Clear Fork Gouges (i-m).

ventral surface, giving the gouge an inverted appearance. Because of the problems encountered during manufacture, this gouge was not reduced to the same degree of fineness achieved with the other examples. This lack of overall fineness and gouge can clearly be attributed to the Clear Fork type based upon its smoothed lateral edges and bit form when compared to the other Clear Fork Gouges from this site. The proximal end of another Clear Fork example with a Guadalupe-like appearance (n) was recovered from Feature 2 At 41FY509 (Fig. 13A). Like example (l), this gouge fragment also has smoothed lateral edges.

The third type of gouge consists of a single example (m) characterized by a nearly symmetrical bifacial bit with a convex working edge (Fig. 12E). This gouge is made of a mottled light grey-brown and red chert (Munsell 10R6/6 and 7.5YR7/2). The bit of this gouge exhibits considerable use wear in the form of hinge and micro flaking along the dorsal and ventral edges. It is clear that the bit angle on the ventral surface ( $22^\circ$ ) was created as the result of use wear. This gouge has a length of 6.35 cm, a bit width of 4.3 cm, and a thickness of 1.25 cm. The bit angle is  $39^\circ$ . In comparison to the previous examples, this gouge is distinguished by a bit that is convex on the dorsal side and made of multiple facets.

The remaining examples of Clear Fork Gouges from 41FY509 consist of seven proximal fragments (n-t). All of these fragments are ovate triangular and exhibit the same attributes as the complete examples described above (Fig. 13). One example (n) has the overall appearance of a Guadalupe tool. This gouge fragment, however, has smoothed edges and is similar to example (m) from the site. This gouge (n) was found in direct association with Feature 2 within the matrix of the feature. Gouge (p) was found in direct association with Feature 6.

### THICK BIFACES

A total of 11 bifaces and fragments were recovered of from the current efforts at 41FY509 (u-ee). These artifacts are arbitrarily classified as thick, based on their relative thickness of 1 cm or more. The majority of these bifaces were found in backdirt contexts. The thick bifaces collected from the current efforts at 41FY509 consist of three decorticate ovate bifaces, two corticate ovate bifaces, three corticate semicircular bifaces, and three decorticate biface fragments.

Two of the three decorticate ovate bifaces have relatively flat ventral surfaces. The first of these bifaces (u) measures 6.55 cm in length, 4.2 cm in width, and 1.4 cm in thickness, and is made of a dark brown chert (Munsell 10YR5/2). The lateral edges of this biface (Fig. 14A) are somewhat smoothed and the preserved portion of one end exhibits possible edge wear. These attributes indicate that this biface may have served as some type of gouge. The second of these two bifaces (v) is similar in form to the previous example. This biface measures 7.4 cm in length, 3.9 cm in width, and 1.5 cm in thickness, and is made of a dark brown chert (Munsell 10YR5/3). The lateral edges of this biface (Fig.

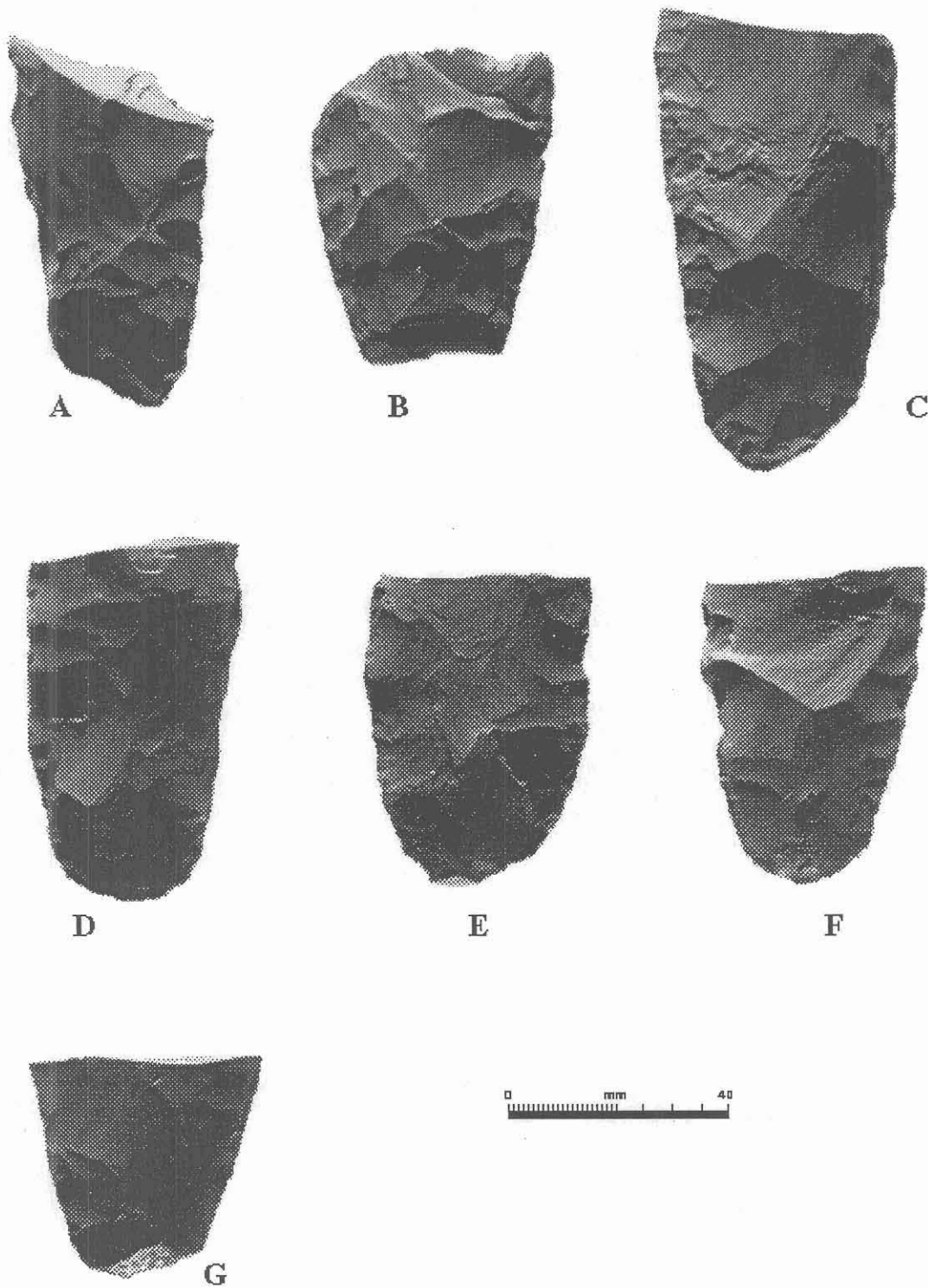


FIGURE 13. Clear Fork Gouges (n-t).

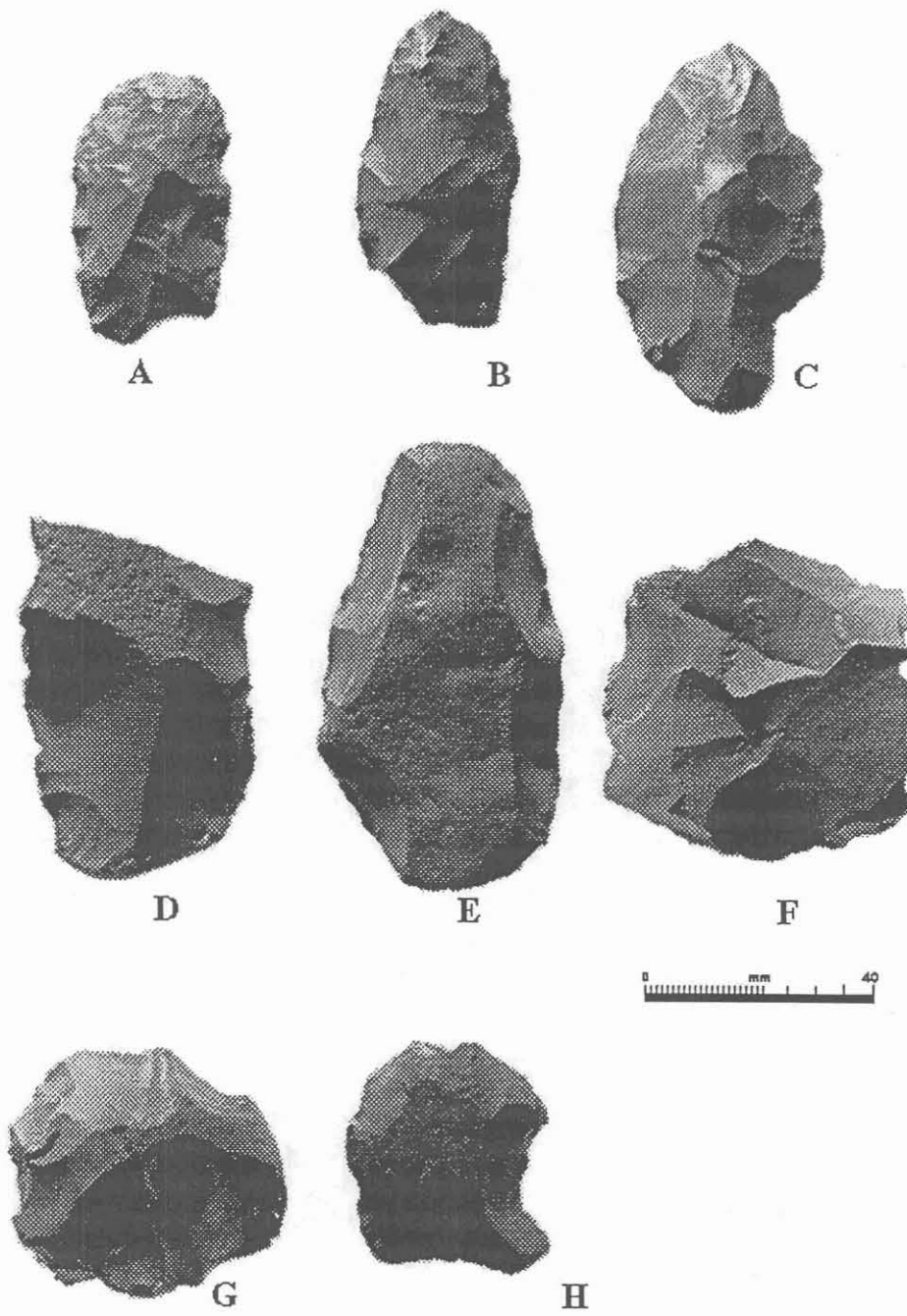


FIGURE 14. Thick Bifaces (u-bb).

14B) exhibit some evidence of edge wear along the lateral edges. The possible edge wear indicates that this biface may have served as some type of scraping or cutting implement. The third of these ovate bifaces (w) is unlike the previous two examples. This biface is much thicker with larger flake scars (Fig. 14C). Biface (w) measures 8.9 cm in length, 5.1 cm in width, and 2.7 cm in thickness, and is made of a dark brown chert (Munsell 10YR5/3). One lateral edge of this biface exhibits some evidence of edge wear. The possible edge wear indicates that this biface may have served as some type of scraping or cutting implement.

The two corticate ovate thick bifaces are apparently blanks, with no evidence of use wear. The first of these bifaces (x) contains cortex on both the dorsal and ventral surfaces and measures 10.6 cm in length, 5.9 cm in width, and 2.35 cm in thickness. This biface (Fig. 14D) is made of a light brown mottled chert (Munsell 2.5YR6/3) and was found in association with Feature 11. The second of the corticate ovate bifaces (y) is a fragment that contains cortex on one end and one surface (Fig. 14E). This biface measures 8.3 cm in length, 5.6 cm in width, and 2.75 cm in thickness. It is made of a light brown mottled chert (Munsell 2.5YR6/3) and was found in association with Feature 8.

The three corticate semicircular thick bifaces are also apparently blanks, with no evidence of use wear. The first of these bifaces (z) contains cortex on the dorsal surface and measures 8.7 cm in length, 7.65 cm in width, and 2.35 cm in thickness. This biface (Fig. 14F) is made of a light grey-brown mottled chert (Munsell 10YR76/2) and was found in association with Feature 11. The second of the semicircular bifaces (aa) is a fragment that contains cortex on both surfaces and one end (Fig. 14G). This biface measures 6.9 cm in length, 6.1 cm in width, and 2.7 cm in thickness. It is made of a dark grey-brown mottled chert (Munsell 10YR5/2) and was found in association with Feature 8. The third of the semicircular bifaces (bb) is a fragment that contains cortex on the dorsal surface (Fig. 14H). This biface measures 6.0 cm in length, 5.5 cm in width, and 1.65 cm in thickness. It is made of a dark grey-brown mottled chert (Munsell 10YR5/2) and was found in association with Feature 8.

The three decorticate biface fragments found (cc-ee) each exhibit evidence of possible edge wear. The first of these fragments (cc) measures 2.9 cm in length, 3.6 cm in width, and 1.25 cm in thickness (Fig. 15A), and is made of a dark brown chert (Munsell 7.5YR4/2). The second of these fragments (dd) measures 3.9 cm in length, 3.1 cm in width, and 1.2 cm in thickness (Fig. 15B), and is made of a dark brown chert (Munsell 7.5YR4/2). The last of these fragments (ee) measures 5.9 cm in length, 3.2 cm in width, and 1.0 cm in thickness (Fig. 15C), and is made of a dark brown chert (Munsell 7.5YR4/2).

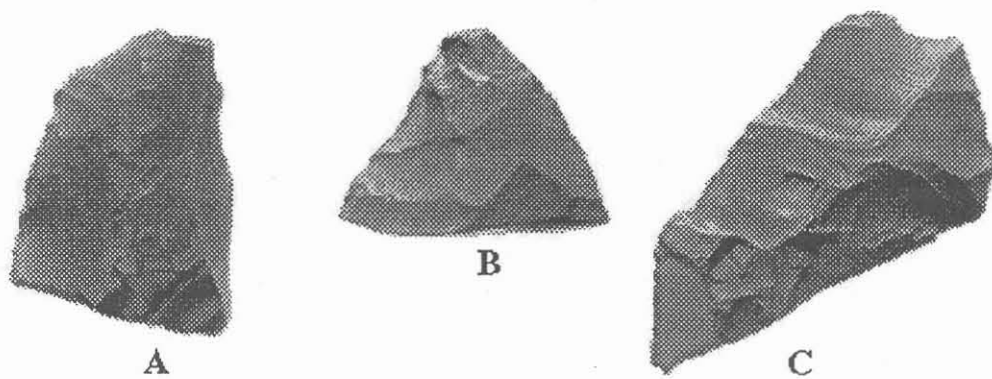


FIGURE 15. Thick Bifaces (cc-ee).

## BIFACIAL COBBLES

Nine bifacially reduced cobbles were found in the eastern portion of 41FY509. These bifacial cobbles form the second largest tool group from the site. They are typically characterized by a pointed to straight edged bifacially reduced distal end and rounded natural cortex proximal end. The flake scars on these tools are relatively large. All of these bifaces were found in direct association with features. The largest collection of these tools was found in the area immediately surrounding Feature 8 and consists of the following: (ff) a pointed bifacial cobble measuring 15.3 cm in length, 12.2 cm in width, and 5.1 cm in thickness (Fig. 16), made of a light grey-brown chert (Munsell 10YR7/2); (gg) a pointed bifacial cobble measuring 14.0 cm in length, 8.9 cm in width, and 4.35 cm in thickness (Fig. 17), made of a light grey-brown chert (Munsell 10YR6/2); (hh) a smaller pointed bifacial cobble measuring 9.9 cm in length, 7.9 cm in width, and 4.0 cm in thickness (Fig. 18A), made of a light grey-brown chert (Munsell 10YR6/2); (ii) a pointed bifacial cobble measuring 11.5 cm in length, 8.95 cm in width, and 5.85 cm in thickness (Fig. 18B), made of a light grey-brown chert (Munsell 10YR6/3); (jj) a partially pointed bifacial cobble measuring 12.4 cm in length, 12.1 cm in width, and 5.85 cm in thickness (Fig. 19A), made of a light grey-brown chert (Munsell 10YR6/3); (kk) a round ended bifacial cobble measuring 9.82 cm in length, 9.1 cm in width, and 3.9 cm in thickness (Fig. 19B), made of a light grey-brown chert (Munsell 10YR6/4); and (ll) a round ended, semipointed, bifacial cobble measuring 8.9 cm in length, 7.6 cm in width, and 5.4 cm in thickness (Fig. 20A), made of a light grey-brown chert (Munsell 10YR6/3).

Two bifacially reduced corticate cobbles were found in direct association with Feature 9 and consist of the following: (mm) a round ended, semipointed, bifacial cobble measuring 8.2 cm in length, 11.3 cm in width, and 4.35 cm in thickness (Fig. 20B), made of a light grey-brown chert (Munsell 10YR6/3); and (nn) a small semipointed bifacial cobble measuring 6.5 cm in length, 7.6 cm in width, and 4.15 cm in thickness (Fig. 20C), made of a light grey-brown chert (Munsell 10YR6/3).

## UNIFACIAL COBBLES

Three unifacially reduced cobbles were found in the eastern portion of 41FY509. These unifacial cobbles are of the same general tool group as the bifacially reduced examples listed above. These tools are typically characterized by a pointed to straight edged unifacially reduced distal end and rounded natural cortex proximal end. The ventral surface on each of these tools consists of a single large facet produced when the cobbles were split. The flake scars on these tools are relatively large. All of these unifacial cobbles were found in direct association with features. One of these tools was found in association with

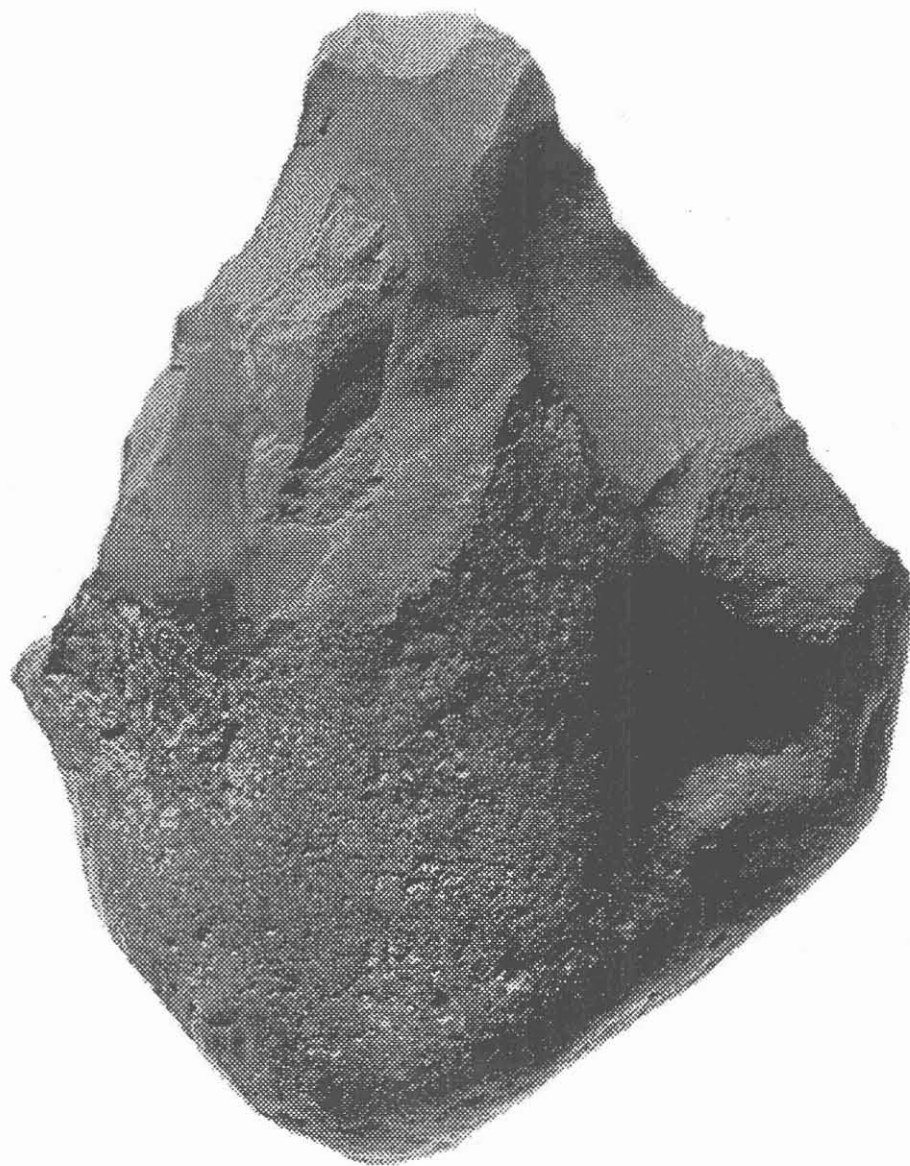
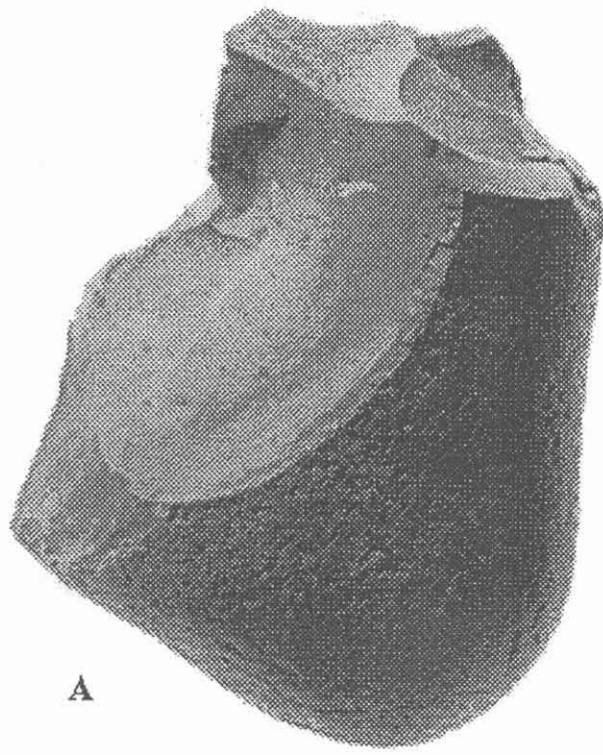


FIGURE 16. Bifacial Cobble (ff).

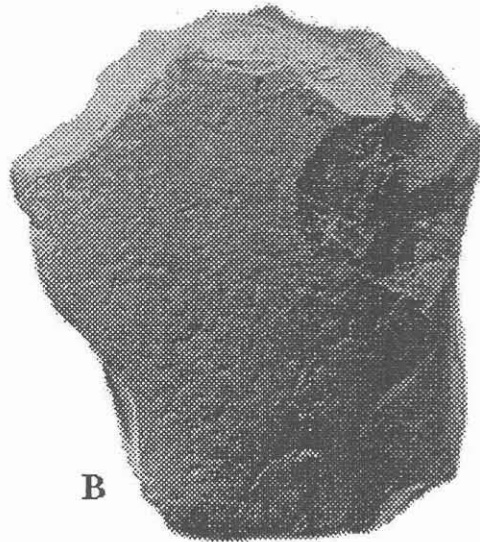




FIGURE 17. Bifacial Cobble (gg).



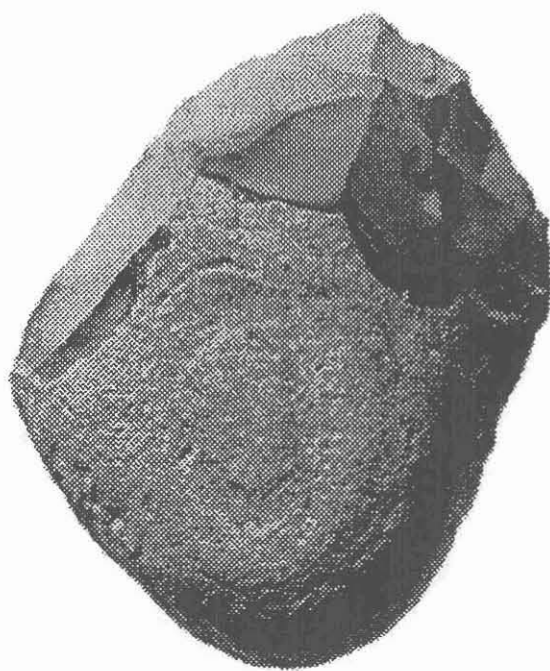
A



B



FIGURE 18. Bifacial Cobbles (hh-ii).



A



B



FIGURE 19. Bifacial Cobbles (jj-kk).

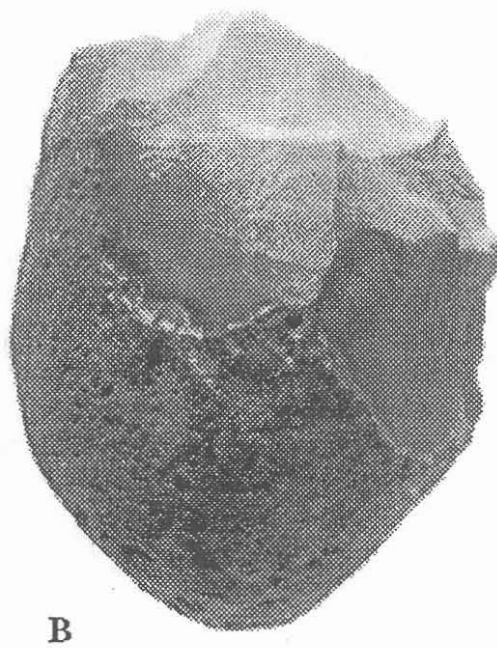


FIGURE 20. Bifacial Cobbles (ll-nn).

Feature 8 (oo) and the bifacial cobbles listed above. This tool has a rounded distal, is made of a light grey-brown chert (Munsell 10YR7/2), and measures 10.1 cm in length, 8.8 cm in width, and 4.5 cm in thickness (Fig. 21A). Two unifacially reduced cobbles were found in direct association with Feature 12 and below Feature 5 and consist of the following: (pp) a round ended unifacial cobble measuring 10.1 cm in length, 9.05 cm in width, and 6.95 cm in thickness (Fig. 21B), made of a light grey-brown chert (Munsell 10YR7/3); and (qq) a round ended unifacial cobble measuring 11.2 cm in length, 8.15 cm in width, and 6.6 cm in thickness (Fig. 21C), made of a light grey-brown chert (Munsell 10YR7/3). The dorsal ridge of this tool has several impact scars which indicate that it may have also served as a hammer stone.

### UNIFACES

The uniface assemblage from the eastern portion of 41FY509 consists of four side and/or end scrapers. Three of these scrapers were found in backdirt and consist of the following: (rr) a primary flake with the working surface along one lateral edge measuring 8.2 cm in length, 4.7 cm in width, and 1.45 cm in thickness (Fig. 22A), made of a mottled brown chert (Munsell 10YR7/3); (ss) a secondary flake with a single facet ventral side and a working surface along one lateral edge and the distal end. This scraper measures 7.2 cm in length, 2.8 cm in width, and 1.8 cm in thickness (Fig. 22B), made of a mottled brown chert (Munsell 10YR6/3); and (tt) a primary flake fragment with the working surface along one lateral edge and end. This scraper fragment measures 5.4 cm in length, 2.8 cm in width, and 1.25 cm in thickness (Fig. 22C), made of a dark brown chert (Munsell 10YR3/1). One uniface was found during the removal of the cross section of Feature 5 near the base of the feature. Although a thin layer of soil separated Feature 5 from Feature 12 below, there is a possibility that this scraper is associated with Feature 12. The possible association with Feature 12 is suspected because of the large flake scars and general overall appearance of the uniface. This uniface is smaller, but similar to the unifacially reduced cobbles from Feature 12. This uniface (uu) is a tertiary flake with the working surface along the distal edge and measures 5.9 cm in length, 5.7 cm in width, and 1.9 cm in thickness (Fig. 22D), made of a mottled brown chert (Munsell 10YR6/3).

### CORES

A single core was found in the eastern area of 41FY509. This core (vv), found in association with Feature 8, is made of a grey-brown chert (Munsell 10YR6/4) and measures 10.4 cm in length, 6.45 cm in width, and 6.2 cm in thickness (Fig. 23A).

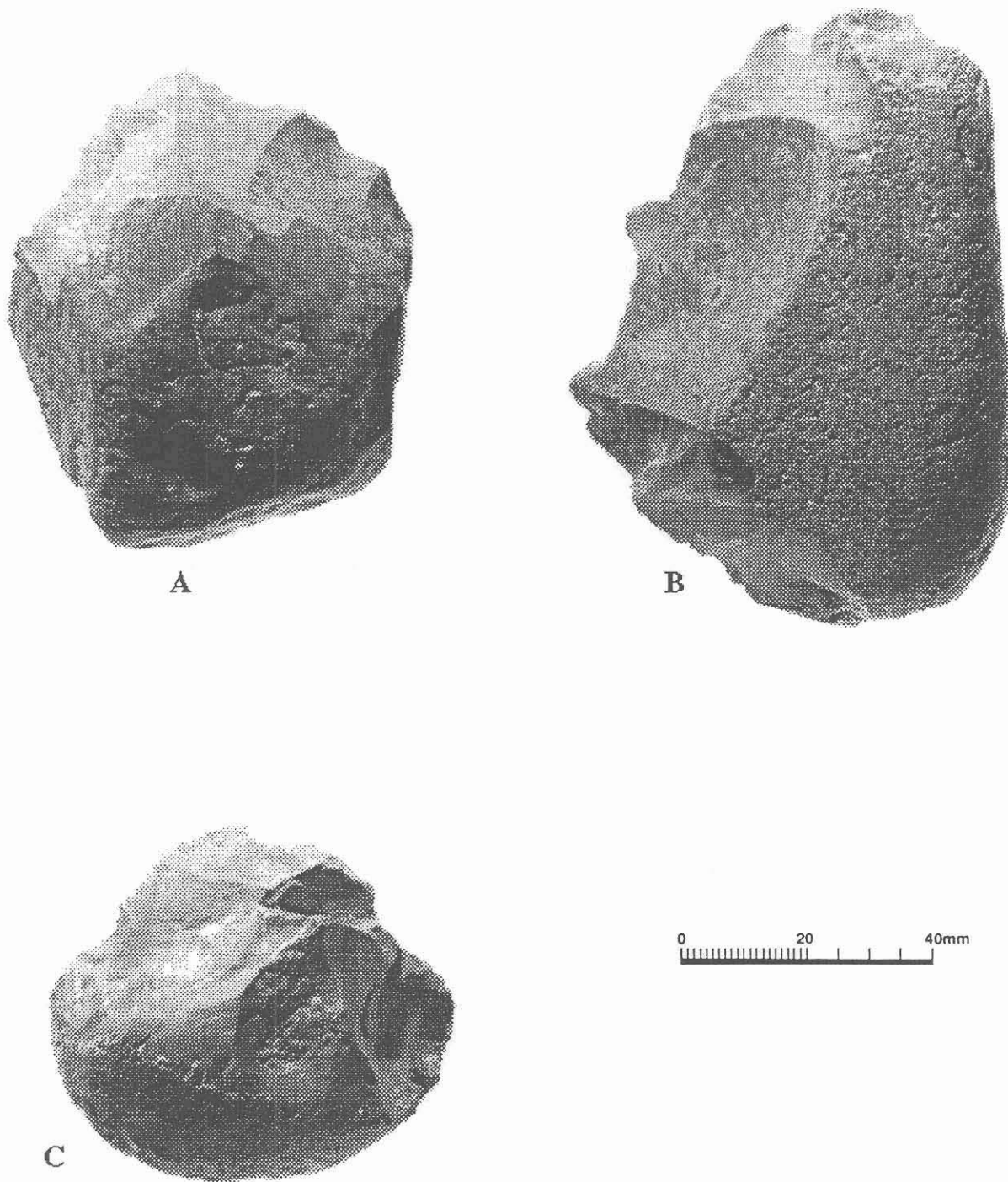


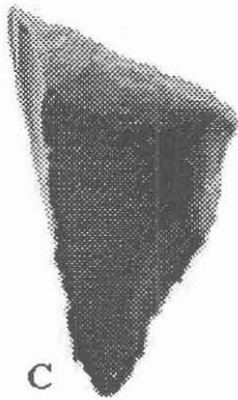
FIGURE 21. Unifacial Cobbles (00-qq).



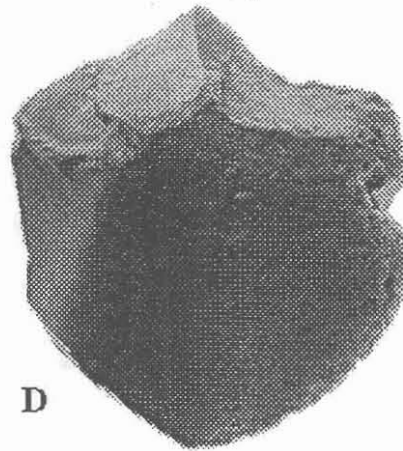
A



B



C



D



FIGURE 22. Unifaces (rr-uu).

## GROUND STONE

A single clear example of a ground stone implement was found in the eastern area of 41FY509. This implement is a mano (ww) made of a dense, coarse particle, pink-brown sandstone cobble (Munsell 10YR6/4) that measures 10.4 cm in length, 6.45 cm in width, and 6.2 cm in thickness (Fig. 23B). The sandstone composing the mano is not from a local source. Although it is possible it was collected from nearby within the Colorado River Basin, it is also possible that this sandstone was brought into the area. No other pieces of this type of sandstone were observed at the site. This mano was found in Unit 1 in road grader scrape "F" beside and directly on top of three 14 cm in diameter by 2.4 cm thick pieces of local sandstone (not illustrated). The local pieces of sandstone were very soft, crumbly, and fragmented. It is suspected that these poorly preserved local sandstone fragments are the remains of a metate. Since the material is so soft and the surfaces of the sandstone fragments are badly pitted from erosion, no physical evidence of their use as a metate was preserved.

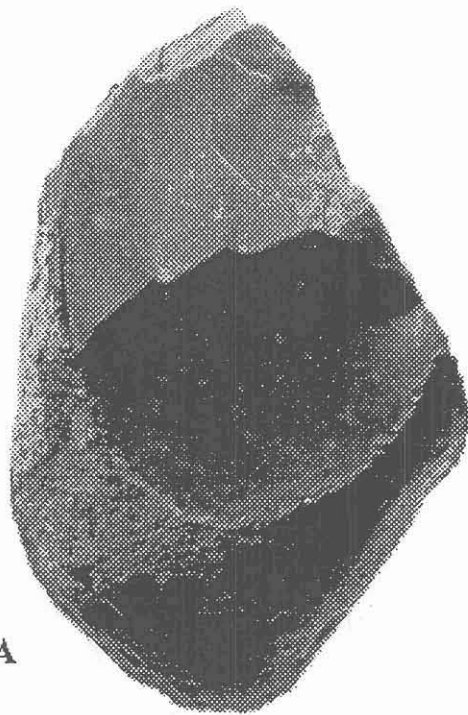
## EDGE MODIFIED FLAKES

Two flakes with clear edge modification were found in the eastern area of 41FY509. One of these flakes (xx) was found in association with Feature 11 and is a tertiary flake made of a mottled grey-brown chert (Munsell 10YR6/3) measuring 6.8 cm in length, 4.9 cm in width, and 0.6 cm in thickness (Fig. 24A). The visible edge wear on this flake is in the form of a limited amount of micro flaking along one lateral edge. The other modified flake (yy) was found in backdirt context 11 and is a tertiary flake made of a brown chert (Munsell 7.5YR4/3) measuring 4.85 cm in length, 3.75 cm in width, and 0.8 cm in thickness (Fig. 24B). The visible edge wear on this flake is in the form of an extensive amount of micro flaking along one lateral edge.

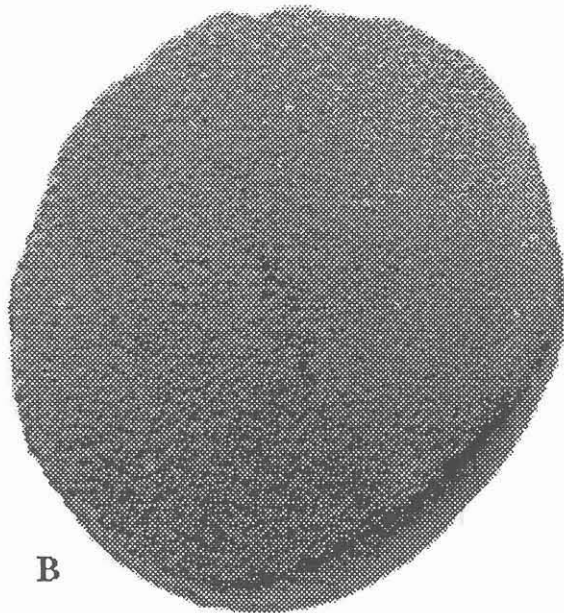
## LITHIC DEBITAGE

The lithic debitage from the eastern area of 41FY509 consists of a limited number of primary, secondary, and tertiary flakes. These consist of a total of 5 primary flakes, 28 secondary flakes, and 52 tertiary flakes (not illustrated). All of the lithic debitage was found in association with features, and is presented in Tables 1-10. It should be noted that lithic debitage was observed in the backdirt of the road grader scrapes and was a small amount in proportion to the amount of the site that had been exposed.





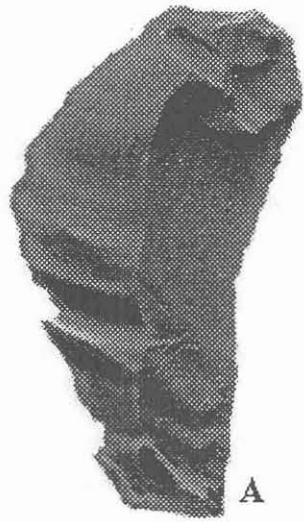
A



B



FIGURE 23. Cores and Ground Stone (vv-ww).



A



B



FIGURE 24. Edge Modified Flakes (xx-yy).

## PETRIFIED WOOD

Two pieces of petrified wood were found 50 cm east of Feature 8. The largest piece of petrified wood (zz) measures 15 cm in length, 5.75 cm in width, and 4.1 cm in thickness, and the smallest piece measures 11.2 cm in length, 5.0 cm in width, and 3.8 cm in thickness. Although these two pieces do not join, it appears as though they are fragments of the same piece. The larger of the two pieces may have been flaked and smoothed on one end (Fig. 25). However, the material of this piece is so coarse-grained that this determination cannot be made with certainty.

## FAUNAL MATERIALS

The faunal material collected from the eastern area of 41FY509 consists of a single fragment of a bovoid long bone (aaa). This bone fragment was found in the backdirt of road grader cut "H." The bone fragment appears to be slightly mineralized, but it is likely to be modern (not illustrated).

## SPECIAL SAMPLES

Two types of special samples were taken from the eastern area of 41FY509: soil and carbon samples removed from Feature 5, and geomagnetic samples taken from Feature 3 by Paul Takac. Mr. Takac does not expect to receive the results of his analysis prior to the completion of this report (Takac 1993). The carbon taken from Feature 5 consists of five samples with a total weight of 195 g. The soil samples taken from Feature 5 consist of five samples with a total weight of 3.051 kg. Two carbon samples totaling 30 g have been submitted and are currently under analysis.

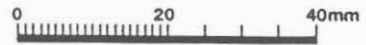
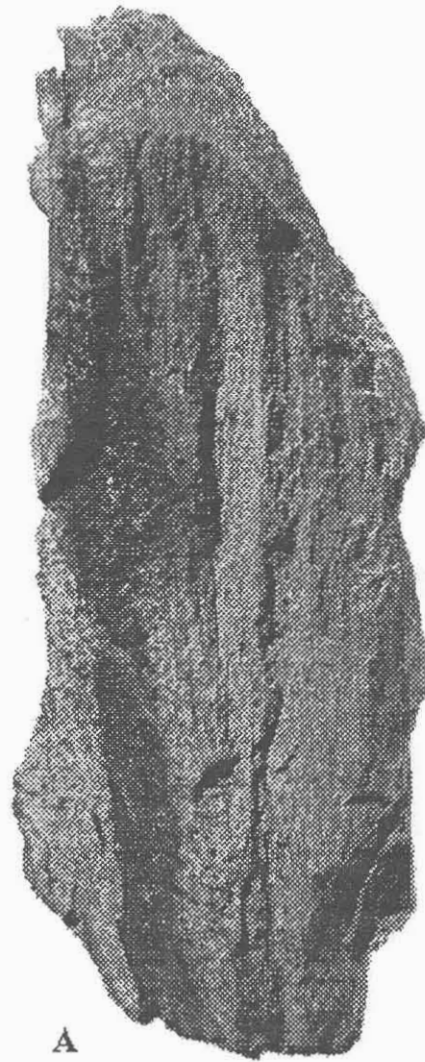


FIGURE 25. Petrified Wood (zz).

TABLE 11. Artifact locations.

ARTIFACT NO.	LOT NO.	PROVENIENCE
a	0	7.5 M SE OF FEATURE 4
b	0	5 M E OF FEATURE 5
c	0	5 M NW FEATURE 8
d	0	43 M E NE FEATURE 10
e	0	50 M E SE FEATURE 9
f	0	BACKDIRT
g	0	17.5 M W NW FEATURE 9
h	0	1 M S FEATURE 1
i	0	10 M SE FEATURE 6
j	114	1.5 M W FEATURE 11
k	107	4 M NW FEATURE 6
l	0	5 M W FEATURE 11
m	0	2.5 M E NE FEATURE 7
n	95	FEATURE 2
o	0	2.5 M E FEATURE 11
p	106	1.5 M E NE FEATURE 6
q	0	5 M NW FEATURE 12
r	0	7 M W SW FEATURE 5
s	111	S EDGE FEATURE 9
t	0	7.5 M N FEATURE 4
u	0	20 M E SE FEATURE 5
v	0	5 M NW FEATURE 11
w	0	10 M W FEATURE 3
x	114	FEATURE 11
y	110	1.2 M W FEATURE 8
z	114	SW EDGE FEATURE 11

aa	110	W EDGE FEATURE 8
bb	110	W EDGE FEATURE 8
cc	0	11 M E SE FEATURE 11
dd	0	BACKDIRT
ee	0	18 M W NW FEATURE 4
ff	110	W EDGE FEATURE 8
gg	110	0.3 M W FEATURE 8
hh	110	0.2 M W FEATURE 8
ii	110	1.0 M W FEATURE 8
jj	110	1.0 M NW FEATURE 8
kk	110	SW EDGE FEATURE 8
ll	110	1.0 M W OF S EDGE FEATURE 8
mm	111	W EDGE FEATURE 9
nn	111	W EDGE FEATURE 9
oo	110	2.2 M E FEATURE 8
pp	99	NE EDGE FEATURE 12
qq	99	NE EDGE FEATURE 12
rr	0	16 M S SW FEATURE 11
ss	0	15 M E FEATURE 9
tt	0	0.5 M W FEATURE 4
uu	100	FEATURE 5
vv	110	0.5 M SW FEATURE 8
ww	87	UNIT 1
xx	114	FEATURE 11
yy	0	10 M E FEATURE 6
zz	0	1 M E SE FEATURE 8
aaa	110	17.5 M E FEATURE 9

## SUMMARY

In 1991, G. R. Dennis Price of TxDOT conducted two 1 m square test units (Fig. 2) in the eastern portion of 41FY509 (Price 1991:3/22-23). These two test units (K and L) yielded a combined total of 25 pieces of lithic debitage. The area, therefore, was determined to contain only a light lithic scatter. When the location of these units is compared to the locations of the features found during current efforts at the site, it is easy to observe that the probability of locating the features with as many as ten such units is low.

The artifact types that compare with those collected by Price in the western portions of 41FY509 in 1991 are the Clear Fork Gouges and the bifacial cobbles (Price 1991:3/8,3/14-18). Although fewer in number, these artifacts are consistent in form with those found during the current efforts in the eastern portion of the site. Since the comparable artifacts found by Price were not found in association with any features and the stratigraphy in the two portions of the site are distinct, temporal and stratigraphic comparison of the two areas based on these limited artifacts is problematic.

In comparison with other excavated sites in the area, the site that yielded a similar collection of bifacial cobbles and thick bifaces is 41BP19, the Kennedy Bluffs Site, located on Hwy. 71 three miles east of Smithville, Fayette County, Texas. Sixty-seven examples of a similar type of bifacial cobble and 60 examples of thick ovate bifaces were found at 41BP19 (Bement 1989:31-32). These artifacts were found in contexts associated with burned rock features similar to those found at 41FY509. Although no provenience is provided for these artifact categories at 41BP19, it can be inferred that these bifacial tools were found in association with the features of the lower elevations at the site.

Private collections from 41BP19 yielded an assemblage of Clear Fork Gouges similar to those found at 41FY509. At 41BP19 the Clear Fork Gouges were found in strata and have been tentatively dated to the Early Archaic Period (Goode in Bement 1989:111-21).

Another site in Fayette county, 41FY422, yielded a collection of bifacial cobbles (Goode 1993) similar to those from 41FY509. However, these tools were not found in association with any features.

In summary, the limited number of diagnostic artifacts do not provide a clear means of determining the cultural and temporal affiliations of the two cultural strata at 41FY509. With the available information, however, a number of observations and inferences can be made. To begin, the four projectiles recovered from the site appear to range in date from the Late Paleo Period to ca. the Middle Archaic Period. Since none of these diagnostics were found in a clear stratigraphic context, it can only be inferred that some of the features at the site were in use during those periods. With the exception of Feature 5, the location of the remaining features on or ca. four cm above the substrate clays suggests that the features may represent a cultural deposit that may correspond to the dates

suggested by the projectiles. Within this cultural deposit two primary tool groups were found in association with the features: Clear Fork Gouges and bifacial cobbles. Based on the comparison with 41BP19, the gouges at 41FY509 may also date to the Early Archaic Period. This general date does accord with the date suggested by the projectiles from the site. The bifacial cobbles were in direct association with Features, 8, 9, and 12, which may indicate that these features were contemporary. Feature 9 produced a Clear Fork Gouge in association with bifacial cobbles. This association is suggestive of these primary tool groups being contemporary at the site. If this is correct, then it may be inferred that the features associated with Clear Fork Gouges are contemporary with those in association with bifacial cobbles. Based on the evidence presented above, it is likely that the lower cultural deposit in the eastern portion of 41FY509 dates to the Early Archaic Period.

It can be concluded that Feature 5 is clearly from a more recent occupation of the site. The Feature's provenience above Feature 12 leaves no question that Feature 5 belongs to a separate and more recent cultural deposit. The state of preservation of the carbon suggests a relatively recent date for this feature, Late Prehistoric or more recent. As stated above, the date obtained through analysis of sample Number 2 (Beta-65380) is 910 +/- 60 BP. This date confirms the contextual evidence and temporally places Feature 5 in the Late Prehistoric Period.