THE EL SAUZ PROJECT: ARCHAEOLOGICAL TESTING OF SELECTED SITES IN THE ARROYO LOS OLMOS WATERSHED, STARR COUNTY, TEXAS

Thomas C. Kelly and Carol Graves

Center for Archaeological Research The University of Texas at San Antonio Archaeological Survey Report, No. 88

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INTRODUCTION

In August 1979, the Center for Archaeological Research (CAR), The University of Texas at San Antonio (UTSA), conducted an archaeological survey of selected sites in the Los Olmos Creek watershed in Starr County, Texas. The field work was carried out under Purchase Order No. 53-7442-9-713 between the Soil Conservation Service, United States Department of Agriculture, Temple, Texas, and UTSA. The purpose of the survey was to determine the eligibility of these sites for nomination to the National Register of Historic Places. Subsurface testing, controlled surface collections and laboratory analysis of cultural data were to be utilized to determine if the selected sites met the criteria for nomination.

PREVIOUS ARCHAEOLOGICAL WORK

Previous archaeological research in Starr County has been carried out by Evans (1941), Krieger and Hughes (1950), Hartle and Stephenson (1951), Cason (1952), Weir (1956), Newton (1968), Nunley and Hester (1975), Fox (1979), Cole (1979) and Mokry (1979). The CAR has also conducted surveys in the area for the Tennessee Valley Authority.

A total of 261 historic and prehistoric sites has been recorded for Starr County at the Texas Archeological Research Laboratory (TARL) in Austin. However, no firm chronological sequence or synthesis of subsistence or settlement patterns is available for the county.

Surveys prior to 1956 were concentrated in the Falcon Reservoir area in conjunction with the construction of Falcon Dam. Along the Arroyo Los Olmos, research has been conducted by Weir (1956), Newton (1968), Nunley and Hester (1975), Fox (1979), Cole (1979) and Mokry (1979). The vast majority of the sites were found downstream from the village of El Sauz to the Rio Grande. Starr County sites plotted on the TARL site location maps show two concentrated archaeological areas about 50 miles apart with the rest of the county mostly unknown archaeologically.

Despite the considerable number of sites recorded in the Arroyo Los Olmos watershed, there have been no carefully excavated sites (Fox [1979] excavated a number of 50-cm² shovel tests without conclusive results), no radiocarbon dates, and virtually no excavated diagnostic artifacts which could provide an identifiable stratigraphic sequence for comparison with other south Texas period markers. Most sites consist of deflated or widely dispersed lithic scatters with few or no diagnostic artifacts. Comparatively few sites have been deemed important enough for recommendation to the National Register of Historic Places.

THE EL SAUZ PROJECT SITES

The title "El Sauz Project" is used to differentiate this particular survey from the several other surveys conducted in the Arroyo Los Olmos watershed in the past. Three of the sites tested were in the vicinity of the small village of El Sauz (see Fig. 1). The other is located near Rio Grande City.

Previous reports (Nunley 1971; Soil Conservation Service 1972) have adequately described the flora, fauna, geography and, to a limited degree, geomorphology of the area and are not repeated here.

41 SR 75

This site lies on the west bank of El Sauz Creek, a distance of 970 m upstream from the proposed center line for Dam Site 1-B. The east end of the dam site is 1280 m north of the village of El Sauz (USGS El Chapote Creek and El Sauz quadrangles). A large corner post in the southeast corner of a field cultivated by Benito Perez is the established datum point, located at 511500 E, 2941500 N on the El Chapote Creek quadrangle. This point has a USGS elevation marker of 285 feet msl (see Figs. 2,3).

Nunley and Hester (1975:24-25) indicated that the site "occupies most of the NE portion of a high hill overlooking Arroyo los Olmos from the west at an elevation of 290 ft. Occupational debris is eroding from an area of 200-250 square meters on the northeast portion of the hill. Material is exposed primarily in severely eroded areas where grass cover is absent. Burnt rock, snail shells and chipped lithic material are characteristic." One Langtry point was recovered from the three areas collected. Further survey and testing were recommended.

Fox (1979:13) noted: "Occupational debris exposed by recent rootplowing, and sheet and gully erosion." Four 50-cm^2 shovel tests were excavated and screened through 1/4-inch mesh screen along a fence line, sampling upland and lowland slopes. Shovel-tested upland margins of the site appeared to contain cultural material to a depth of at least 70 cm below the surface. Fox (ibid.:48) recommended 10 days of testing by a four-person field team because of the potential depth of the site. The site area was also extended to 380 X 550 m (264,000 m²).

Fieldwork

In order to establish the site limits, transects were walked over the entire area by three men approximately 50 m apart. The field was fallow and grass was very scattered between the field and the creek, providing the best possible ground visibility. Initially, flags were to be placed wherever five flakes could be found in a circle of 5-m radius. This criteria proved too stringent, so 100% coverage was walked east and west of the north-south fence as far north and south of the datum point as single flakes could be found. Flakes were found on the east side of the fence in a thin scatter east to the creek, north to where the creek intersects the fence line, and south for 57 m from the reference datum (Fig. 3). Triangular points similar to Matamoros and Catan were recovered from the surface in this area. An ovate preform, a Clear Fork tool, and an endof-blade scraper (cf. Hester, ed. 1979:13; Hester 1977:20) were also found (see Fig. 4). Flakes were even more scattered in the field west of the fence, extending 190 m west at the greatest width approximately 100 m north of datum. Flakes did not extend to the southern boundary fence, and none were found north of the brush line that angles northwest into the field from the gap in the north-south fence line.

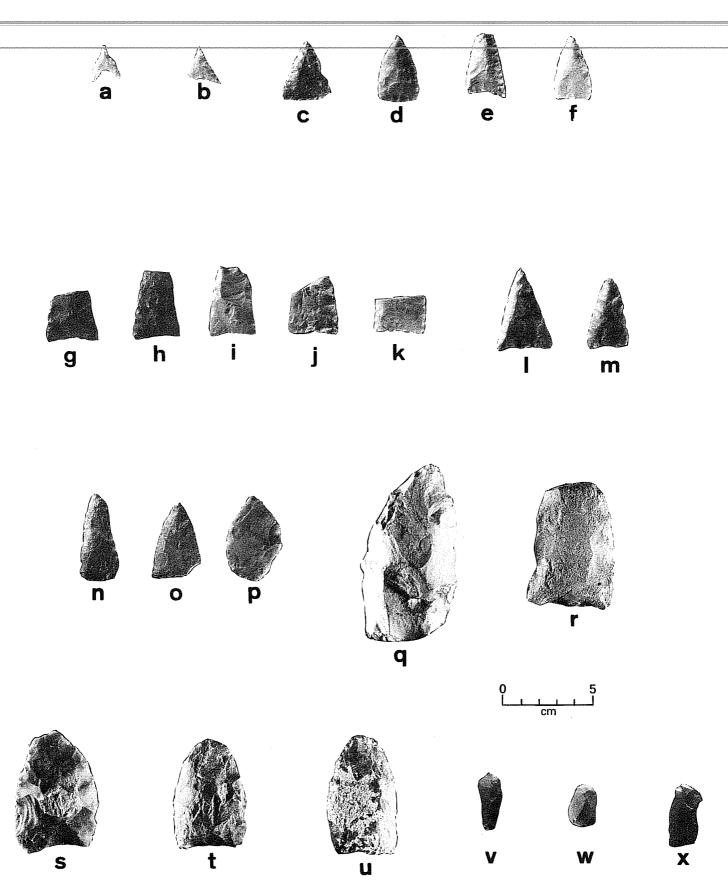


Figure 4. Artifacts from Sites 41 SR 75, 41 SR 256, and 41 SR 259. a,b, Starr arrow points; c-o, triangular dart points; p, ovate preform; q, large crude biface; r, biface preform; s-u, Clear Fork tools; v-x, end-of-blade scrapers (c,f,i,p,u,v, 41 SR 75; w, 41 SR 259; remainder from 41 SR 256).

The machine excavation of 15 backhoe trenches was the second phase of this test program. The 290-ft contour line fairly accurately defines the absolute limits of the surface scatter within the field, with the heaviest concentration of flakes (less than 10 per 5-m radius) being in the vicinity of Trench 3, which coincides with the highest elevation in the area.

The backhoe trenches were spaced evenly across the limits of flake scatter in the field (T-1 to T-6) and across the area between the fence line and the creek to the east (X-1 to X-9). The area east of X-7 and X-8 was heavily eroded and completely deflated.

Trenches T-1 to T-6 and X-1 to X-8 averaged 25 m long and 50 cm wide. Trenches T-1 to T-6 were 3 m deep; trenches X-1 to X-8 were 2 m deep. Trench X-9 was a 5-m² unit, 1 m deep. The backhoe operator spread the contents of each bucket thinly, so that one man could continuously monitor the digging. The other two team members moved a 1/4-inch mesh screen along the soil obtaining a well-distributed sample. The profile was carefully examined on both walls of the trench. A few flakes were found in the trench walls, entirely in the top meter, and generally only in the upper 20 cm. No occupational lenses, hearths or diagnostic artifacts were found. Caliche has formed 2.6 m below the surface.

Table 1 summarizes the lithics recovered. A great number of burned rocks were found and saved, along with a number of *Rabdotus* sp. land snails. During laboratory analysis, it was concluded that the burned rocks, which had a rather uniform distribution over the area and were of small size, were more the result of the land-clearing process than of aboriginal campfires (this will be discussed further in the section on site 41 SR 256). The *Rabdotus* were homogeneously scattered, with occasional pockets of concentration that had no relationship to lithic distribution.

As Table 1 indicates, only a total of 46 artifacts, including all flakes, was found from the surface survey.

Summary

Three surface surveys, four 50-cm² shovel tests and 375 m of backhoe testing have produced three diagnostic projectile points (*Langtry*, Nunley and Hester 1975; triangular points, this survey) and a small end-of-blade scraper. Late Archaic and possibly Late Prehistoric occupations can be postulated for the site; Historic period occupations also cannot be ruled out (Suhm, Krieger and Jelks 1954). Nothing was found indicating occupations during other time periods unless the artifact identified as a *Clear Fork* tool (Fig. 4,u) belongs to an earlier era (see p. 10).

41 SR 75 is not a single discrete site but rather a series of scattered small sites. The geomorphology of El Sauz Creek, with its alternating wet and dry seasons, is such that the sandy soils are constantly disturbed, now aided by man's cultivation. A site originally in the area of T-2 and T-3 in the cultivated field has almost certainly been scattered downhill over a wide area. Similarly, X-4 east of the fence was probably a discrete site (this is the

TABLE 1. ARTIFACT PROVENIENCE, 41 SR 75

	Projectile Points	Distal Fragments	Preforms	Primary	ه Secondary	e Interior	Fragments	Clean Fonk Tool	End-of-Blade Scraper	Core	Hammerstones	Altered Cobble Tools	Grooved Rock	Total
Surface	3	-	3	-	1	_	_	1	_	_	_	2	_	10
T-1*	-	-			-	-	_		_	-	-	-	-	
T-2	-	***	1	-	-	_	_	1000	***	-		1	-	2
T-3	-	-	1	2	1	-	1	-	-	-	1	_	-	6
T-4	-	_	-	-	-	***	_	-	_	-	•••	_	-	***
T-5	_	-	-		2		-	-	_	***	1	-	-	3
T-6	-	-	-	_		-	-	-	-	-		-	-	-
X-1**	-	-	_	-	_	_	_	_	-	-	-	_	-	-
X-2	-	-	_	-	-	1	-	-	_	-		-	-	1
X-3	-	_	****	_	-	-	-	_	-	-	-	1	1	2
X-4	-	-	-	1	-	3	1	_	-	1	-	_	-	6
X-5	-	-	***		-	-	-	-	_	_	_	-	-	-
X-6	_	-	_	_	_	-	-		-	_	***		-	-
X-7	-	1	-	1	1	-	-	_		-	-	-	•••	3
X-8	-	1	-	_	2	1	-	-	-	-	-	-	-	4
X-9			_	1	5	1	1	-	1		-	-	_	9
TOTAL	3	2	5	5	12	6	3	1	1	1	2	4	1	46

^{* &}quot;T" designates backhoe trenches ca. 3 m in depth

^{** &}quot;X" designates backhoe trenches ca. 2 m in depth

same area in which Fox [1979] had his most productive unit, #2, with 10 flakes), as X-3 and X-5 on either side yielded few artifacts. X-7 is separated from X-8 by a depression or gully which may be of recent origin; there is no way of knowing whether X-7 and X-8 are two discrete sites or one large divided site. X-9 appears to be a discrete small site as there are no surface flakes for a considerable distance around it. As an example of rapid erosion in the area, Nunley and Hester (1975) reported deeply buried Historic period bovid bones at 41 SR 74 just across the creek; Fox (1979) found the entire site had been washed away.

As the result of a 1974 surface survey, Mokry (1979) reported five sites on the Arroyo Los Olmos in a 900-acre pasture 1 km upstream from 41 SR 75. He found Abasolo, Tortugas, Matamoros, Catan, Starr, and two varieties of side- and corner-notched projectile points, as well as a single Angostura basal fragment. He noted the similarity between upland and floodplain sites and the displacement of artifacts from original context by erosion in most cases.

Recommendations

The approximately 20 person-days spent in exploring this site indicate it to be of low potential. 41 SR 75 is not recommended for nomination to the National Register of Historic Places, and no further work is necessary.

41 SR 256

Cole (1979) indicates that 41 SR 255 and 41 SR 256, in the vicinity of the El Sauz Cemetery, may be one site. Our survey began at the El Sauz Cemetery, and as we could find no break between the two sites, we consolidated them and used the 41 SR 256 designation. Cole (ibid) found flakes, cores, scrapers and a Kinney dart point fragment. She also states that both sites will be destroyed by construction of the El Sauz Dike. The excellent aerial photograph (Area 1A, Site 1B, Los Olmos Creek watershed, October 1978) provided by the Soil Conservation Service (SCS) shows the north end of the dike as being due west of the cemetery. A check with SCS since the field work was completed indicates that approximately 30 m of the dike will intrude into the site area and that it could be altered so as not to damage the site (Nancy Cole, personal communication).

Fieldwork

The site is in El Sauz, with the village cemetery located on the southeastern edge (Fig. 1). A fence line immediately north of the cemetery is oriented east-west and separates two properties that contain the site. Cole's 41 SR 256 lies south of the fence with 41 SR 255 to the north. The El Sauz Cemetery (established about 1925) has been bulldozed into a pedestal, leaving it higher than the surrounding ground surface. Lithic material is visible in all the bulldozed area surrounding it. A heavy wood post at the northwest corner of the cemetery fence was used as our datum. Metric coordinates of this post are 512670 E, 2939280 N; elevation is approximately 265 feet msl (USGS El Sauz quadrangle). A marker on the fence 10 m north of datum was designated 0 N-S and 0 E-W. A string

Tine was placed N-S from the 0/0 marker on the fence and was marked with flagging tape at 10-m intervals to form the east-west base line; the fence was marked off in 10-m segments with flagging tape for the north-south base line. With these two references, a map (Fig. 5) was made using a Suunto compass and 50 m tape. Objects could thus be located to an accuracy of approximately 30 cm.

Transects were walked at 5-m intervals east-west across the area. Isolated artifacts were numbered and recorded (Fig. 5). As at site 41 SR 75, we considered five flakes visible from one spot or in a circle of 5-m radius as a concentration. Flags were also placed at the last flake located on the perimeter of the site. These flake concentrations were assigned a letter, and a controlled "dog-leash" (circle with 5-m radius) collection was made of everything within the circle. Locations are plotted in Fig. 5. Those circles containing 25 or more flakes are hachured, and those containing less than 25 are open. Table 2 is a summary of these collections.

Two 50-cm^2 pits (T-1, T-3) and two 1-m^2 pits (T-2, T-4) were excavated where the lithics appeared to be most concentrated. Finally, eight backhoe trenches (T-5 to T-12) were excavated following the procedures used in 41 SR 75. Artifacts recovered are summarized in Table 4.

Controlled Collection

Artifacts recovered during the controlled collection are listed in Tables 2 and 3 and are plotted in Figure 5. Triangular points resembling Matamoros and Tontugas were the most common projectile points; a Start arrow point was also present (Fig. 4). Late Archaic and Late Prehistoric, or even Historic, occupations are indicated. The only other potential diagnostics are three Clear Fork tools. According to Birmingham and Hester (1976:20), "The Clear Fork tool form apparently has a wide temporal span in southern Texas (Hester, White and White 1969) although Epstein (1969:42) firmly believes that these tools originated in terminal Pleistocene times."

Artifacts seem to be randomly scattered over the area, confirming previous statements that the floodplain of the Arroyo Los Olmos drainage is one of constant change, with displacement and movement of artifacts a common feature. Stone working was one of the activities at the site, as indicated by cores, hammerstones and flakes. The presence of artifacts which probably served as choppers, scrapers and gouges (Fig. 4) indicates other functions were carried out at this site. No surface-exposed hearths were found.

Nine artifacts, including four triangular dart points, one *Stave* arrow point, a pebble tool, a scraper, a biface fragment, and a flake cutting tool, were also recorded in the site vicinity as miscellaneous surface finds.

Shovel Tests

T-1, a $50-cm^2$ unit with a flake count of 34, reinforces Collection Area D as a locality with buried deposits. T-3 ($50-cm^2$ unit) was excavated because

TABLE 2. ARTIFACTS FROM CONTROLLED SURFACE COLLECTION, 41 SR 256*

Collection Areas	Projectile Points (Distal Frags.)	Preforms	Primary	- Secondary	e Interior	Fragments	End-of-Blade Scraper	Cores	Hammerstone	Core Trimming Flake	Chunks (Pointed)	Concave Flake Scraper	Altered Flakes	Total
A	_	••	4	5	8	16	-	1	-	-	-	-	***	34
В	1	_	5	9	12	21	-	-	-	-	-	-	_	48
D	-	_	3	12	13	23	-	-	-	_	-	-	_	51
Ε	-	_	3	5	6	11	-	2	-	1	-	-	_	28
G	-	-	4	9	15	24	1	1	-	-	-	-	-	54
K	-		1	1	1	6				-	-	-	-	9
L	-	-	1	2	1	1	_	-	-	_	-	-	-	5
М	-	-	1	1	6		-	-	_	-	-		-	8
N	-		1	-	2	-	-	-	-	-	1	-	-	4
0		-	1	2	1	-	-	-	-	-	-	· <u>-</u>	-	4
Q		1	5	11	13	16	-	1	1	-	-			48
U	-	-	5	10	15	22	-	_	-	-	-	1	4	57
V	-	-	1	2	2	5	-	-	-	-	-	-	-	10
Х	-	-	-	3	2		-		***	-		_		5
Υ	-	-	2	6	8	-	-	2	-	-	-	-	_	18
Z 	-	-	-	1	3	-	_		-	-	1	-	-	5
Total	1	1	37	79	108	145	1	7	1	1	2	1	4	388

 $[\]star$ Collection areas are shown in Figure 5.

TABLE 3. ISOLATED ARTIFACTS FROM CONTROLLED COLLECTION*

- 1. quartzite hammerstone
- 2. distal fragment of projectile point
- 3. small thick biface
- 4. heavy chopper-like tool
- 5. preform
- 6. heavy uniface cobble tool
- 7. triangular (Matamoros) dart point
- 8. core
- 9. distal fragment of triangular projectile point
- 10. large crude biface
- 11. core trimming flake
- 12. Clear Fork tool
- 13. two triangular (Tortugas) dart points
- 14. triangular (Tortugas) dart point
- 15. Clear Fork tool
- 16. Clear Fork tool
- 17. triangular (Matamoros) dart point

^{*} Artifacts are plotted by number in Figure 5.

TABLE 4. ARTIFACTS RECOVERED FROM EXCAVATION, 41 SR 256

	Ar	0		Fla	kes	En Sc				
	Arrow Points	Dart Points	Primary	Secondary	Interior	Fragments	End-of-Blade Scrapers	Cores	Scrapers	Total
50 cm ² units										
T-1		-	1	6	6	21	_	-	-	34
T-3	-	-		_			-	_	-	
1 m ² units										
T-2										
0-20 cm	_	_	1	6	6	21	-	-	-	34
20-40 cm	_	_	3	2	6	10	-		-	21
40-60 cm	-	-	8	16	16	36	_	-	-	76
T-4										
0-20 cm	-		5	16	14	32	-	-	-	67
20-40 cm	-	-	1	5	16	14	-	_	***	36
40-60 cm	-	-	2	15	7	34	-	-	-	58
60-80 cm	-	_	-	14	8	29	-		-	51
80-100 cm		-	-		9	15		_		24
Backhoe Trenches										
T-5	•••	-	_	-	2	_	_		_	2
T-6	_	-	3	3	3	7	-	-	2	18
T-7	-	-	1	1	1	_	_	-	_	3
T-8	-	=	_	-	-	-	_	_	_	_
T-9	-	-	-	1	-	2	_	. _	_	3
T-10	-	-	_	-	-	***	. -	_	_	-
T-11	1	-	2	-	1	1	1	_	_	6
T-12	-	2	-	-	-	_	1	1	-	4
TOTAL	1	2	27	85	95	222	2	1	2	437

two triangular points were found on the surface in this area; however, the excavations revealed no additional artifacts.

Excavation Units

T-2, a 1-m^2 unit excavated in 20-cm arbitrary levels, was located between Areas B and D. It confirmed the presence of deposits at least 60 cm deep. A total of 131 flakes was excavated from this square. T-4, also a 1-m^2 unit with 236 flakes, indicates that Area Q,U,V has potentially important buried deposits. The decline in artifact count in the 20 to 40 cm level and the subsequent increase in lower levels can be explained. This mounded area in the center of the field was used for the burning of all the mesquite when the field was cleared. This second level consists mostly of abundant recent mesquite wood charcoal (Fig. 5). It was probably covered by the farmer to provide more arable area, producing the "mound." Even so, there are still 40 cm or more of undisturbed site below this level. That no diagnostic artifacts were found is probably attributable to the limited sample provided by a 1-m^2 unit.

Backhoe Trenches T-5 to T-12

These backhoe trenches were basically employed to look for significant buried deposits. T-6 was the most prolific unit with 16 flakes and two scrapers. This would indicate that Collection Area B has buried deposits, while T-5, with only two flakes, might indicate that Area A has no such deposits. T-11, with four flakes, a point, and a scraper, would indicate the approximate northeast limit of the "central mound" locality Q,U,V. T-7, T-8 and T-9, with their meager artifact counts of three, zero and three flakes, respectively, suggest that Area G has only surface or shallow deposits.

Summary

As a surface site, 41 SR 256 occupies a roughly circular area 200 m in diameter or 152,053 m². Controlled surface collections have reduced it to three or four much smaller localities. The subsurface testing enables us to rank these localities in order of their potential productivity: (1) the "mound" in the center of the northern field, Area Q,U,V; (2) Area B, T-2 and T-6 along the eastwest baseline fence; the exposed lithic scatter surrounding the cemetery may be part of this locality; (3) D,E, T-1 area, could be a part of number 2 above, but it is not believed that any of these localities is that large; (4) Area A, T-5, is probably a small discrete locality at the west end of the area.

The area south and west of the cemetery contained a lithic scatter and artifacts, but the backhoe trench T-12 failed to locate any subsurface occupational traces. The probability, based on the exposed area surrounding the cemetery and the direction of runoff water flow, is that a discrete site existed in the cemetery and has been scattered by the pedestaling of the cemetery and subsequent erosion.

Recommendations

41 SR 256 has deposits of low potential by our evaluative standards. Our field work permitted the definition of the site limits and an examination of the distribution of surface and subsurface archaeological remains. We do not intend to nominate the site to the National Register. No further research is necessary.

41 SR 257

Cole (1979) found late 19th and 20th century artifacts (including English ironstone and blue transfer pottery), a triangular (Matamoros) projectile point, and other indications of both historic and prehistoric occupation. She described differential erosion which has produced earth pedestals at the site.

The site is located in an open field downstream from El Sauz within the city limits. Long-time El Sauz residents stated that there had never been, to their knowledge, anything "historical" in that area, and that in the past it had been used as a garbage dump.

Two separate surface searches were made at the site, resulting in the following small surface collection:

Prehistoric. One secondary flake; one interior flake blade; five flake fragments.

Historic. Nine sherds of wheel-thrown ware, well-fired and reddish buff in color (might be European-influenced Indian ceramics, but this is highly speculative); two brass centerfire cartridge cases; one rimfire .32 cal. rifle case; four soda glass sherds; one transfer pseudo-Chinese sherd; one pottery plate fragment with "...UNG ...TTERY CO."; one blue glass sherd with "...OMPANY .NOIS [Illinois]"; one sherd of pottery with reddish brown interior slip and light brown unglazed outer surface; one fragment of a child's school slate with etched guide lines.

None of these artifacts predates the late 19th century (Anne Fox, personal communication).

Testing of the eroding pedestals indicated a clay base harder than the surrounding sandy soil. Hard clay was encountered within 2 to 4 cm, and the conclusion was that the site was completely deflated.

Recommendations

41 SR 257 is not recommended for nomination to the National Register of Historic Places. No further work is necessary.

41 SR 259

Cole (1979) describes the site as being 320 m north of Eisenhower Road and 38 m west of the proposed Rio Grande City dike in the northwest edge of the city. She found flakes, hammerstones, cores and a *Matamoros* projectile point and postulated a possible occupation site 30 X 30 m in area.

The area assumed to be 41 SR 259 was located and mapped using an existing permanent datum marker placed by SCS on the southernmost power line pole on the west edge of the access road that goes north from Eisenhower Road 350 m east of the Eisenhower Road electric substation. The pole is 600 m from Eisenhower Road; it can be located on the Rio Grande City USGS quadrangle map at 518450 E, 291933 N, with an elevation approximately 175 feet msl. A flagged wooden survey peg was found south of the power line on the fence along the east side of the area. This was assumed to be the center line marker for the proposed dike, and, using Cole's (1979:14) measurement of "38 meters west," a lithic scatter was found (Fig. 6).

A casual surface collection was made while searching for the limits of the site. The access road has cut through the site, which continues west of the road and north without a break. This is probably Cole's (1979) 41 SR 258. Fourteen 50-cm² shovel tests (Fig. 7) were placed wherever two or three flakes were visible (density was less than five flakes per 5-m circle). Table 5 summarizes the artifact recovery from the shovel tests.

The surface collection yielded an end-of-blade scraper (of possible Late Prehistoric age; Fig. 4,w), a crude biface, a crude scraper made on a large cobble and a scraper made on a flake. No diagnostic projectile points were found.

Summary

The shovel tests yielded few flakes (see Table 5). Five of these tests contained no artifacts. The site may be derived by erosion from somewhere upslope (north) and is too scattered to be worth further effort. 41 SR 258 is included in this assessment.

Recommendations

41 SR 259 is not recommended for nomination to the National Register of Historic Places. No further work is necessary.

TABLE 5. ARTIFACT PROVENIENCE FROM THE SHOVEL TESTS AT 41 SR 259

Shovel Test No.	Primary	F 1 a Secondary	k e s <u>Interior</u>	Fragments	Chunks	Trench Totals
	rimary	occonduty	111001101	r ragilierros	Olding	100013
T-1	-	-		-	-	-
T-2	-	-	-	~	-	-
T-3	-	-	-	-	-	-
T-4	-	-	-	—	. –	-
T-5	-	-	1	1	-	2
T-6	3	-	2	3	-	8
T-7	-	-	-	-	-	-
T-8	-	-	-	-	-	-
T-9	-	-	-	3	2	5
T-10	-	2	. 5	7	-	14
T-11	1	-	-	2	-	3
T-12	2	-	3	5	1	11
T-13	-	-	3	-	-	3
T-14	2	1	2	9	-	14
Artifact Totals	8	3	16	30	3	60

SUMMARY AND CONCLUSIONS

All surveys in the Arroyo Los Olmos drainage reveal a consistent pattern of site distribution. Lifeways appear to have displayed little or no change through Archaic and Late Prehistoric times. The bow and arrow, small end-of-blade scrapers and pottery are the only indications of technological change, but the transient hunting-gathering pattern does not change. Earlier Paleo-Indian presence is indicated only by a very few projectile points, principally at the site of La Perdida (Weir 1956) on the Arroyo Los Olmos.

The geomorphology of the Arroyo Los Olmos is such that erosion and deposition are constantly shifting the fragile traces of prehistoric peoples (cf. Newton 1968). This makes difficult the task of locating in situ buried deposits. Along the Arroyo Los Olmos, only site 41 SR 256 has been extensively tested and found to have at least some depth to the deposits. Even here, the subsurface materials are highly scattered and no diagnostic artifacts were recovered.

The sites investigated during the El Sauz project--41 SR 75, 256 (incorporating 255), 257 and 259--have little, if any, potential for future research. We do not recommend any for nomination to the National Register. Additionally, none of them will be significantly impacted by the proposed Soil Conservation Service construction activities.

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