

*Concho Valley Archeological Society members screening (left) during test excavations adjacent to Paint Rock pictographs (right).*

# Archeological Investigations at Campbell Ranch, Paint Rock, Texas

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## Introduction

The Paint Rock pictographs (41CC1) have been generally known for at least 125 years and have drawn the attention of archeologists for more than 70 years. They remained an isolated phenomenon, however, until archeological survey and site testing were conducted in 1999 and 2000. The first recorded visit by an archeologist took place in the early 1930s when E.B. Sayles collected a sample of artifacts from nearby surface sites. Forrest Kirkland (Kirkland and Newcomb 1967) and A.T. Jackson (1938) included the pictographs in their monumental works on Texas rock art and mentioned nearby burned-rock middens, mortar holes, and camping debris. Since then the paintings have been visited by many archeologists over the years, but no systematic study of the site context had been conducted.

The pictographs are located on the Campbell Ranch, which has been in the Sims family since 1877. Landowners Fred and Kay Sims Campbell have developed an educational program, conducted guided tours, consulted with interested Native Americans, and encouraged scientific research, but naturally most of their attention has been directed toward preservation and interpretation of the rock art. In 1999 the Campbells asked the authors to help them identify the nature of the archeological record in the vicinity of the pictographs. The survey of 650 acres on the north bank of the Concho River produced 14 additional recorded sites, ranging from prehistoric middens to a historic bridge abutment (Table 1). The Campbells have a wealth of information on the history of the ranch and were able to attribute many of the features to specific members of the Sims family.

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**Table 1. Site Characteristics, Paint Rock Survey**

Site No.	Site Type	Location	Size (m)	Age	Features	Artifacts
41CC284	open camp	riverfront	300 x 300	Late Prehistoric	shell concentration, fire-cracked rock	sherd, debitage
41CC285	burned-rock midden	tributary	20 m dia	undetermined	burned-rock midden	shell
41CC286	open camp	terrace	100 x 40	undetermined	none	fire-cracked rock, flakes, shell
41CC287	open camp	tributary	150 x 20	Late Archaic	none	Marcos, Frio dart points, flakes, fire-cracked rock
41CC288	open camp	terrace	10 x 20	Late Prehistoric?	none	fire-cracked rock, end scraper, shell
41CC289	burned-rock midden	tributary	40 x 20	Middle Archaic	burned-rock midden, hearth	Travis dart point, flakes, shell
41CC290	multicomponent	terrace	40 x 20	Late Archaic, Historic	burned-rock midden, dugout	glass, metal, flakes, end scraper
41CC291	open camp	bluff top	100 x 125	undetermined	hearths	flakes, cores, crude tools, fire-cracked rock
41CC292	multicomponent	riverfront	150 x 200	undetermined, Historic	bridge, dam, mortars	historic debris, shell, flakes, fire-cracked rock
41CC293	lithic procurement	upland	200 x 200	undetermined	none	tested cobbles, cores, flakes
41CC294	multicomponent	terrace	400 x 150	undetermined, Historic	hearth, dump, quarry	historic debris, fire-cracked rock, flakes, shell
41CC295	multicomponent	riverfront	100 x 400	Late Prehistoric, Historic	roadbed, dugout	sherds, fire-cracked rock, flakes, shell
41CC296	open camp	bluff top	75 x 75	undetermined	hearths, caims	fire-cracked rock, flakes, scrapers
41CC297	open camp	upland	25 x 25	undetermined	hearth	fire-cracked rock, debitage

The Concho Valley Archeological Society (CVAS) then carried out testing of 41CC295, a terrace site immediately adjacent to the Paint Rock pictographs. Four backhoe trenches and six excavation units produced arrowpoints, ceramics, and other cultural residues that identified a Late Prehistoric and/or Protohistoric component. Two additional backhoe trenches, placed in nearby terrace sites, also failed to produce any evidence of older cultural deposits, although Late Paleoindian and Archaic dart points had been found on the upland sites. Ten plain brown ware sherds were selected from 41CC295 for petrographic analysis by Dr. David G. Robinson. At this writing, the Texas Archeological Society Rock Art Task Force is documenting the pictographs and the Campbells are carrying on their long-term investigation of the rock art, which

includes scheduled videotaping and interaction with various Native American tribal organizations.

**Project context.** The Campbell Ranch is on the north bank of the Concho River, just north of the small town of Paint Rock, so named for the famous pictographs. The paintings are on blocky surfaces, niches, and crevices formed along a rugged limestone cliff that rises abruptly from a broad, level floodplain adjacent to a hard-rock crossing of the river. The thin rocky soils and sparse vegetation of the uplands contrast dramatically with the deep fine alluvium of the river terrace, where cultivated Bermuda grass obscures the surface. The juncture of these different ecomiches provided an abundant and varied suite of resources, enabling Native American artists

to devote considerable energy to the production of one of the largest rock-art sites in Texas.

### Archeological Site Survey

**Site 41CC284.** This prehistoric open campsite is typical of terrace sites along the banks of the Concho River. Were it not for gullies that cut through the alluvial plain, isolating the various exposures of cultural material, the entire terrace might be considered one continuous site. Site 41CC284 follows a low ridge that is bounded on the south by an old channel that trends northwest/southeast. It, like the rest of the terrace, has been terraformed, cultivated, and planted with introduced grasses.

Burned rock, mussel shell, and lithic debitage define an L-shaped site, 300 by 300 m, that is obscured by silt and Bermuda grass. A hearth eroding from a small unnamed tributary along the eastern boundary of the site indicates that cultural material is buried to a depth of at least 30 cm. One sherd of plain brown pottery identifies at least one component as Late Prehistoric in age.

**Site 41CC285.** This small open campsite is on a slope above the Concho River terrace near the head of a short intermittent drainage. A dispersed and deflated burned-rock mound, now about 10 m in diameter, has been damaged by bulldozing. Scattered burned rock and mussel shell define a site area approximately 20 m in diameter. Chert was noticeably absent from this site.

**Site 41CC286.** This open campsite is on the sloping surface of the right bank of an intermittent drainage to the Concho River. It, like 41CC284, is part of the terrace occupation that lines the river from one end of the ranch to the other. Burned rock and lithic debitage are variably exposed over an area 100 m north-south by 40 m east-west. Bermuda grass and silt intermittently obscure the surface. Cultural materials exposed in erosional cuts suggest the possibility of buried deposits. The only formal tool noted was a utilized flake side scraper.

**Site 41CC287.** Site 41CC287 is an open campsite on the fringe of an intermittent arroyo between two small drainways that cut through the river terrace. Dense Bermuda grass obscures much of the surface, but some exposures are provided by brush clearing, feeders, and oil-pad construction. A scatter of burned rock intermixed with river gravel is visible along the terrace margin in an area estimated to be 150 m north-south by 20 m east-west. Two dart points — a Frio and a Marcos — found on the eroded slope adjacent to a ranch road indicate at least two Late Archaic occupations of the site.

**Site 41CC288.** This prehistoric open camp is southeast of the pictographs on the alluvial plain in an area that was covered with Bermuda grass. Burned rock, mussel shell, and one

snub-nosed end scraper were noted in small erosional exposures along the terrace edge. The scraper is consistent with the presumed Toyah phase occupation of the terrace. Although the site area was estimated on the basis of the erosional windows to be 10 m north-south by 20 m east-west, occupation probably lined the entire bank of the river and is now obscured by silt and the dense cultivated grasses.

**Site 41CC289.** Site 41CC289 consists of three burned-rock features and a surface scatter on the fringes of an arroyo 400 m west of the pictographs. A deflated burned-rock mound near the northern boundary of the site is almost completely obscured by discarded tree branches and roots. A hearth 1 m in diameter is eroding from a ranch road near the center of the site, and a deflated burned-rock midden, 10 m in diameter and 1 m high, marks the southern boundary of the site. Scattered burned rock, mussel shell, and lithic debitage define a site area 125 m north-south by 50 m east-west. The base of a Travis dart point is indicative of a Middle Archaic occupation. A backhoe trench (BHT-6) bisected part of the burned-rock mound, thus exposing the subsurface of the alluvial terrace east of an arroyo that feeds into the river. The surficial cultural material — fire-cracked rock, flakes, scrapers, mussel shell, and a dart point — extended to a depth of 25 cm below the surface where it terminated at a layer of sterile gravel. A second cultural level, consisting of about 10 cm of fire-cracked rock and flint flakes, began at about 46 cm below the surface. The trench was dug to a depth of 2.1 m without encountering any more buried material. The profile shows two episodes of midden construction that were interrupted by a flood event that deposited sterile gravels on the older occupational level. However, the similarity in materials and the slope of the cultural levels suggest that the two episodes were not separated by a long period of time.

**Site 41CC290.** Site 41CC290 is a multicomponent site west of the pictographs and separated from them by an arroyo cut by a permanent spring that flows from the base of the bluff. The dominant feature of the prehistoric component is a deflated burned-rock midden, 15 m in diameter, on the western boundary of the site. A scatter of burned rock, flint debitage, and mussel shell defines a site area 20 m north-south by 100 m east-west, following the base of the bluff. A steeply beveled end scraper typical of Toyah phase occupations was found on the surface in this scatter. A backhoe trench (BHT-5) placed between the deflated midden and the bluff face achieved a depth of 2.4 m without exposing any evidence of cultural material beneath the surface scatter that marks the site.

On the eastern end of the site, the historic component consists of a rectangle of large rocks surrounding a central depression and a surface scatter of glass, ceramics, and metal artifacts. This feature is very like the rock rectangle at 41CC295 that produced some early historic artifacts, but

this possible dugout was not further investigated. This site has suffered considerable disturbance from brush clearing, agricultural use, and traffic on the ranch road that parallels the bluff.

**Site 41CC291.** Site 41CC291 is an upland prehistoric open campsite extending to the bluff above the unnamed spring that flows into the Concho River a short distance to the south. The pictograph panels start just east of this spring and 41CC291. Three hearths are surrounded by a very sparse scatter of burned rock, lithic debitage, cores, and several crude but expedient tools, exposed over an area 125 m north-south by 100 m east-west. One small hearth, 1 m in diameter, was seen eroding from a ranch road within the eastern boundaries of the site. A deflated hearth, also about 1 m in diameter, was noted near the northern perimeter. The third hearth, which was slightly larger at 1.5 m in diameter, is above the spring close to the southern edge of the site. Soils here are very sparse and shallow, thus prone to disturbances from agricultural activities and the ranch road that passes through the site. Nevertheless, the location offered several advantages, not the least of which were proximity to the spring and a sweeping view of the river valley and uplands.

**Site 41CC292.** Site 41CC292 is a large multicomponent site located on the first and second terraces along the north bank of the Concho River between Highway 83 and the Paint Rock pictographs, across from the town of Paint Rock. Four areas were defined within the larger site, whose estimated dimensions are 200 m north-south by 150 m east-west.

**Area 1:** All that remains of the historic steel bridge that once spanned the Concho River at this point are the bridge pilings. The north pillar side is pyramidal and is constructed of large rectangular limestone blocks, measuring 18 by 48, 18 by 24, and 18 by 18 inches, that were quarried north of the site. The blocks were cemented together with mortar. From water level to the top, the pillar is 32 feet high, 24 feet long, and 6 feet wide at the base. The top measures 20 feet long by 6 feet wide. The top two courses on the pile are missing blocks on the western side. Old photographs of the bridge show an ornate steel superstructure, plank flooring, and wooden guard rails. In 1934 the bridge was moved to a crossing on the Concho River between Lowake and Eola (Fred Campbell, personal communication).

**Area 2:** Parts of an earthen dam that once formed a roadbed crossing of an unnamed draw provided the ranchers living to the east access to the old Paint Rock highway. The original dam was 125 feet long by 15 feet wide and was constructed of earth fill and rock rip rap. Over the years, flooding has excised the center of the dam, leaving only the ends that were anchored by the creek banks.

**Area 3:** The filling station that once stood here was removed in the early 1900s after Highway 83 was built to the east (Fred Campbell, personal communication). All that

remains of this commercial enterprise is a depression, a cedar post with a cross-tie, and a scatter of historic artifacts such as bottle caps, ceramics, brick fragments, rusted tin cans, and bottle-glass fragments. According to the Campbells, the station was the entrance to the Painted Rocks and served to control access.

**Area 4:** The prehistoric component of the site includes bedrock mortars, a hearth, and a lithic scatter. Four mortars, three boat-shaped and one round, have been ground into the limestone bedrock near the river. The round mortar is 20 cm in diameter and 27 cm deep. Two of the three boat-shaped mortars are 18 by 26 cm at the lip and 25 cm deep; the third is 20 by 30 cm and 28 cm deep. Thus the dimensions of the boat-shaped mortars conform to the ratio determined by the statistical study of similar features in Crockett County (Riemenschneider and Turpin 2001). Near them are a deflated hearth and a general scatter of lithic debitage, mussel shell, and fire-cracked rock.

**Site 41CC293.** Site 41CC293, a prehistoric procurement area, is in the uplands 1,600 m north of the Concho River. The site area is estimated to be 200 by 200 m. A large depression that holds water for a short period of time after a good rain is surrounded by tested and untested flint cobbles. Two bifaces were also noted on the surface.

**Site 41CC294.** This multicomponent site, which includes the ranch headquarters, occupies an area of the first and second terrace estimated to be 150 m north-south by 400 m east-west. This large expanse was subdivided into six areas.

**Area 1:** A scatter of historic artifacts (rusted tin cans, round nails, rusted metal, and fragments of bottle glass, ceramics, brick, and crockery) on the surface are the remains of a house built in the early-20th century. A map of the D.E. Sims Ranch dated September 1911 shows that the ranch was subdivided into 21 tracts of land that were to be sold. A house had been built on each tract to make the land more attractive to potential buyers (Fred Campbell, personal communication). This scatter is the residue of a house built near the Concho River on Tract 15.

**Area 2:** Another house, built near the river on Tract 16, is now represented by a depression (15 feet north-south by 18 feet east-west), a trash dump, and a scatter of historic artifacts, including purple, blue, and clear bottle-glass shards, ceramic and crockery fragments, several pieces of brick, rusted cans, rusted metal, a piece of a cast-iron stove, and square nails. The square nails suggest that this house may have been older than the one built in Area 1. Prehistoric debris, including bifaces, fire-cracked rock, and lithic debitage, were intermingled with the historic artifacts.

**Areas 3 and 4:** Two areas of the limestone bluffs above the first terrace of the Concho River and on the west bank of a tributary east of the bluffs were quarries for the limestone rocks

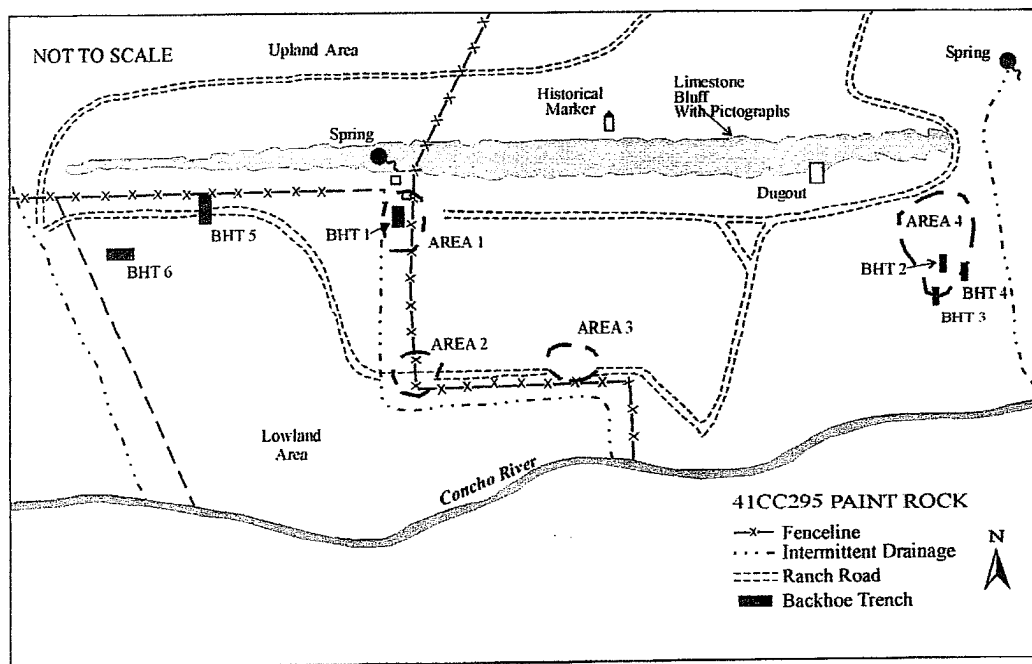


Figure 1. Site map, 41CC295, showing locations of backhoe trenches.

used in building the town of Paint Rock and for the bridge piers on 41CC292 (Fred Campbell, personal communication).

Area 5: A scatter of fire-cracked rock, mussel shell, and flint debitage on the surface between Areas 1 and 2 is part of the prehistoric component of the site. A deflated hearth 1 m in diameter and a concentration of mussel shell 1 m in diameter were noted within this area.

Area 6: Fire-cracked rock, mussel-shell fragments, scrapers, biface fragments, and lithic debitage on the first terrace below Area 2 are mixed with historic artifacts trailing downslope from that former house site. Artifacts representing the historic time period include: a cast-iron skillet (handle and part of pan missing); purple, green, and clear bottle glass; and ceramic fragments.

**Site 41CC295.** Site 41CC295 is a multicomponent site on the first terrace (active flood plain) between the pictograph bluff and the river. The site is bordered on the west by a small tributary headed by an active spring, and on the east by an intermittent drainage. Estimated dimensions are 100 m north-south by 400 m east-west (Figure 1).

Approximately 100 m east of the pictographs (41CC1), large limestone rocks were removed along the bluff to form a cut for a roadbed that led south from the uplands to the natural ford provided by the hard-rock crossing of the Concho River. A cut also leveled the roadbed to the river on the north bank. This road predates the construction of the Concho River bridge in the early 1900s.

Between the roadbed and the pictographs, limestone rocks outline a rectangle 4.8 m east-west by 8.5 m north-south. The age of this feature could not be determined from surface artifacts, but construction techniques suggested that the

rocks were laid in place during historic times. A metal-detector survey followed by shovel testing produced one square nail, the bottom of a lead-soldered tin can, a soft drink bottle cap, a 12-gauge shotgun shell base imprinted "Peters Referee" and a 45-caliber center-fire pistol cartridge whose maker's mark had worn away. The lead solder (pre-World War I) and square nail suggest that this feature predates the turn of the century.

The prehistoric component of the site is much more widespread and consists of fire-cracked rock, flint debitage, mussel shell, biface tools, scrapers, and four areas where a large sample of plain brown pottery, generally classified as Leon Plain, has been

collected by the landowner. This site was later tested by the CVAS and a sample of the sherds was selected for petrographic analysis (see below).

**Site 41CC296.** Site 41CC296 occupies an area 75 m east-west by 100 m north-south on two different levels above the broad flood plain of the Concho River. The shallow upland soils have been disrupted by brush control and agricultural use. The lower area contains a prehistoric open campsite with three dispersed hearths, a scatter of fire-cracked rock, lithic debitage, flint tools, and scrapers. On the bench above the camp, three cairns line the edge of the terrace overlooking the Concho River to the south. One of these unprepossessing rock piles was disassembled and partially excavated. No structural consistency or interior features suggest purposeful construction, and they may just be accidental accumulations of rock left over from brush clearing.

**Site 41CC297.** Site 41CC297 is located 1.5 miles north of the Concho River at the head of an unnamed tributary that flows into the river. The small site was defined by a hearth eroding from a ranch road that parallels the tributary. This feature and a scatter of fire-cracked rock and flint debitage cover an area estimated to be about 25 m square. The area has been heavily disturbed by historic quarrying, dam construction, and ranch roads as well as by the normal toll from animal traffic.

### Test Excavations

The survey clearly indicated that the sites recorded along the banks of the Concho River (see Table 1) were merely small exposures of what was probably a continuous buried occupational zone that extended from bluff face to river bank. The

**Table 2. Results of Test Excavations, 41CC295**

Unit	Level*	Artifacts	Comments
2S1E (1 x 1 m)	1	none	dense rock spall at base of bluff
	2	none	dense rock spall, dry loamy sediments
	3	none	dense rock spall, dry loamy sediments
	4	3 primary flakes	small rock spall, snails
	5	3 primary flakes, mussel frags	small rock spall, dry loam, snails
	6	none	dense small rock spall, dry loam
	7	none	dense small rock spall, dry loam
3S1E (20 x 100 cm)	1	none	rock spall, very dry loam on edge of arroyo
	2	none	rock spalls, dry loam
	3	none	small rock spalls, very dry loam
	4	none	small rock spalls, very dry loam
	5	1 large uniface	small rock spalls, very dry loam
	6	none	small rock spalls, very dry loam
	7	none	small rock spalls, very dry loam
10S6E (40 x 100 cm)	1	none	dry loam, on edge of arroyo
(40 x 100 cm)	2	none	dry loam
(45 x 100 cm)	3	Perdiz point, mussel shell, flakes	dense zone of artifacts, bison bone, snails
(50 x 100 cm)	4	fire-cracked rock, bone fragments	dry loam, cultural zone ended at 35 cmbs
(60 x 100 cm)	5	mussel shell fragment	very dry loam, snails
(60 x 100 cm)	6	none	very dry loam, snails
10S7E (40 x 100 cm)	1	none	very dry loam, on edge of arroyo
(40 x 100 cm)	2	mussel shell and bone frags	very dry loam
(45 x 100 cm)	3	mussel shell and bone frags, 6 tertiary flakes, fire-cracked rock, scattered charcoal	very dry loam, snails, artifacts concentrated below 26 cmbs
(50 x 100 cm)	4	2 flakes, mussel shell and bone frags, burned flint, charcoal sample	very dry loam, snails, scattered charcoal, cultural material ended at 36 cmbs
(55 x 100 cm)	5	mussel shell frags	very dry loam, dense rock spall, snails
(55 x 100 cm)	6	none	very dry loam, dense rock spall in upper part

*Table 2 continues on next page.*

Table 2 (Continued)

Unit	Level*	Artifacts	Comments
11S6E (1 x 1 m)	1	mussel shell, blue bottle glass, glazed white ceramic sherd	organic material, dead vegetation, very dry loam soil
	2	square nail	very dry loam
	3	plain brown sherd, ground stone, biface, 15 flakes, bone and shell frags	very dry loam, prehistoric artifacts start 25 cmbs, snails
	4	Perdiz preform, 6 flakes, bone and shell frags, large bison bone	very dry loam, density of cultural material declines at 35 cmbs, scattered charcoal
	5	mussel shell frags	very dry loam, dense rock spall, river gravel
	6	none	very dry loam, dense rock spall, river gravel
11S7E (1 x 1 m)	1	.22 short cartridge	organic matter, dry loam
	2	bone fragments	very dry loam
	3	Guerrero point, 5 flakes, fire-cracked rock, bone and shell frags, scattered charcoal	very dry loam, cultural material starts 25 cmbs, snails
	4	6 flakes, mussel shell and bone frags, fire-cracked rock, scattered charcoal	very dry loam, snails
	5	mussel shell frags	very dry loam, dense rock spall, snails
	6	none	very dry loam, rock spall, natural flint
Backhoe Trench 1	25–36 cm	Guerrero, Perdiz, Chadbourne arrowpoints, fire-cracked rock, flakes, scrapers, sherds	top 50 cm screened, cultural material concentrated between 25 and 36 cm, total depth 3.6 m

\*All levels are arbitrary 10 cm.

surface artifacts all indicated that this was a Late Prehistoric Toyah phase occupation that would accord with most estimates of the age of the Paint Rock pictographs. A limited testing program was implemented to determine if older deposits might be buried at depth and to obtain a sample of artifacts from what was presumed to be intact contexts. Site 41CC295 was selected for its proximity to the pictographs and to the nearby spring, as well as for the amount of pottery the Campbells had collected from the site surface over many decades.

Testing of 41CC295 was conducted by the CVAS in 1999 and 2000. The first of several backhoe trenches (BHT-1) was dug as a guide to excavation and to provide a perspective for the subsurface deposits in the area that was targeted for testing (Figure 2). Although the trench was dug to a depth of 3.6 m, cultural material was confined to the upper 40 cm. The CVAS volunteers screened the matrix from the upper 50 cm of the trench and recovered a wide variety of artifacts, including three arrowpoints, ceramic fragments, tools, mussel shell, bison bone, and abundant fire-cracked rock. The trench

excavation clearly defined a shallowly buried Late Prehistoric/Protohistoric occupational level between 25 and 36 cm below the surface that ended abruptly and that was not underlain by older cultural material. At a later date, three more backhoe trenches were placed in Area 4 of 41CC295 in search of older buried components (see below), but none produced the slightest evidence of subsurface cultural deposits.

Six controlled test units were then placed along an arroyo formed by runoff from the uplands and a spring that originates in the bluff. The cutbank of the arroyo provided a profile that helped guide the course of excavation. A CVAS datum was established, and units 2S1E and 3S1E were established near the base of the limestone bluff. Units 10S6E, 10S7E, 11S6E, and 11S7E were placed across the arroyo. The units were excavated in 10 cm levels and the matrix was screened through 1/8 and 1/4 inch mesh. The materials were bagged by provenience and later processed in the CVAS laboratory. After inventory, the artifacts were returned to the Campbells where they will be available for future study.

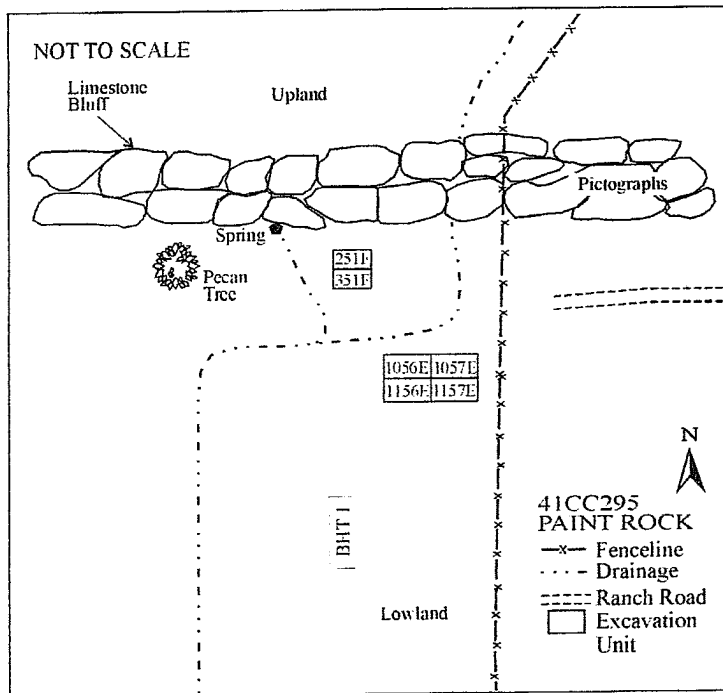


Figure 2. Locations of test-excavation units.

The test excavations demonstrated a shallowly buried cultural zone between 25 and 36 cm below the surface (Table 2). Backhoe trenching found no deeply buried cultural deposits or any evidence of an earlier occupation of this locale. The temporally diagnostic artifacts are all Late Prehistoric to Protohistoric, in keeping with the generally accepted age of the pictographs (Jackson 1938, Kirkland and Newcomb 1967) and the impression gained from surface collections (Figure 3). Two specimens that can be attributed to the Perdiz point type, bison bone, and plain pottery are typical of Toyah phase occupation. A somewhat later component is suggested by the Guerrero points, and possibly an earlier one by the Chadbourne specimen (Turner and Hester 1999). Thus it is likely that the artists who left their imprint on the nearby cliffs were at least temporally related to the occupants of 41CC295.

### Further Backhoe Prospecting

Although the limited testing of 41CC295 produced evidence of only a Late Prehistoric to Protohistoric occupation, the potential for older buried deposits in the deep and extensive terrace sediments had to be explored. Garland Richards of Fort Chadbourne donated the use of a backhoe and operator so that six trenches could be placed at selected locations along the river and bluff. Four of the trenches were placed within the mapped boundaries of 41CC295, which as noted above encompasses some 40,000 square meters.

BHT-1 served as a guide for hand excavations at 41CC295. This trench was excavated to a depth of 3.6 m west of an arroyo created by a spring which originates in the bluff on the western edge of the pictographs. Cultural material

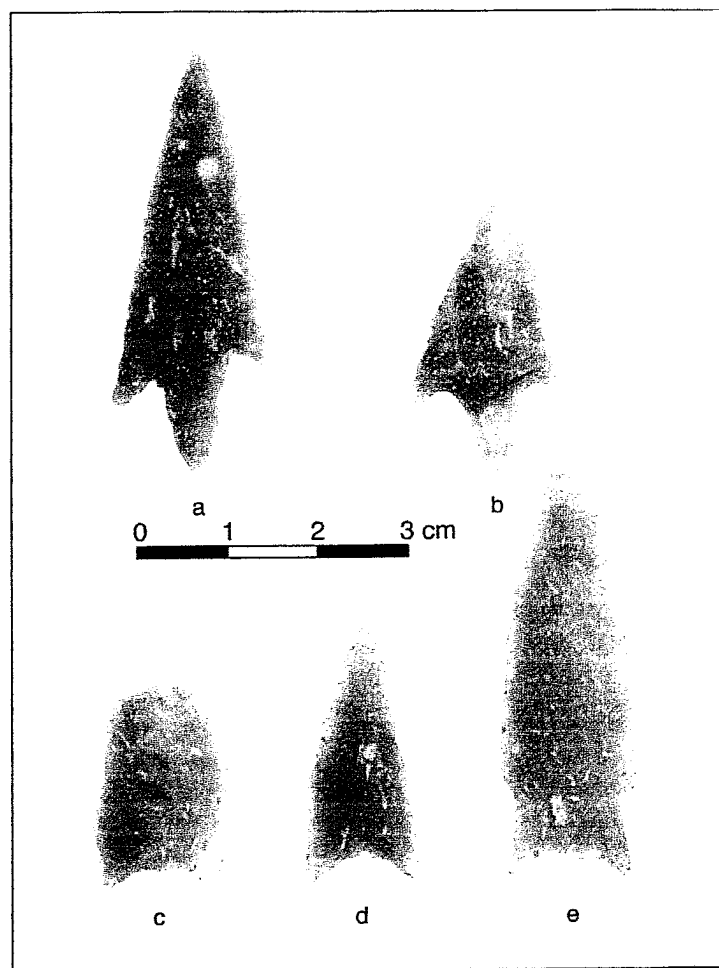


Figure 3. Points from Test Area 1, site 41CC295: (a, b) Perdiz, (c, d) Guerrero, and (e) Chadbourne.

was present in the profile from 25 to 36 cm below the surface. None was observed below this zone.

BHT-2, BHT-3, and BHT-4 were placed in Area 4 of site 41CC295, amidst a surface scatter of fire-cracked rock, scrapers, flint flakes (primary, secondary, and tertiary), pottery sherds, modified tools, mussel shell, and bone fragments. Many of the sherds in the Campbells' collection were found on the surface of this area. The three trenches were .75, 1.9, and 1.25 m deep, respectively. No cultural material was encountered below the obviously surficial scatter.

BHT-5 was placed to test the alluvial terrace between the bluff and the burned-rock midden recorded as 41CC290. Fire-cracked rock, flint flakes (primary, secondary and tertiary), modified tools, and mussel shell were noted on the surface. The trench was excavated to a depth of 2.4 m without encountering any cultural deposits below the surface scatter.

BHT-6 was placed on the alluvial terrace east of an arroyo that feeds into the Concho River to the south, and cuts through a burned-rock midden at 41CC289. Again, fire-cracked rock, flint flakes (primary, secondary, and tertiary), modified tools, scrapers, dart points, and mussel shell littered the surface. The trench was excavated to a depth of 2.1 m.

Cultural material was exposed in the profile from the surface to 25 cm below the surface. A level of culturally sterile gravel more than 20 cm thick overlay another exposure of fire-cracked rock and flint 46 cm to 56 cm below the surface. The lower cultural level was almost identical to the midden above it, suggesting the same locale was used for the same purpose at two different times, separated by episodes of flooding that deposited the sterile gravel. The rest of the trench profile was devoid of cultural material.

Backhoe prospecting therefore supported the findings of the test excavation. Occupation of the terrace in front of and beside the pictograph cliff seemed consistent with the general assumptions about the age and origin of the paintings. However, the overall attribution of the site to the Late Prehistoric and Protohistoric periods still left some ambiguity since the combination of various arrowpoint types and the obvious variability within the overall category of plain pottery suggested a multiplicity of occupations by people from various lithic and ceramic traditions.

### Petrographic Analysis of a Sample of Plain Pottery from 41CC295

Paint Rock is a famous site, and it has been visited by many archeologists, some of whom made observations about the nature of the Campbells' pottery collection, generalizing that the sherds were typical of the vaguely defined Leon Plain ware. The variability in surface treatment and temper, however, suggested that considerably more information could be derived from a detailed analysis of a sample of sherds. The following is the third author's discussion of his analysis of 10 sherds from 41CC295.

In August 2001, a petrographic analysis was conducted on a collection of thinsections prepared from a diverse set of ceramics that macroscopically included Toyah/Leon Plain sherds, sand-tempered and micaceous wares with western (High Plains) affinities, Caddoan (East Texas) sherds, and at least one sherd of historic pottery. This diversity (also evident elsewhere in the artifact assemblage) implied that people occupied and reoccupied this specific location over a time period of several hundred years. Accordingly, the goal of the petrographic analysis was to assess the diversity and variety in the ceramic assemblage and to offer the best possible determination of the sources of the ceramic materials and technology.

**Methodology.** The crux of the analysis was identification and point counting of minerals and ceramic structures following the method of Chayes (1949) and the approach to mineralogical analysis pioneered in archeology by Shepard (1942, 1954). The thinsections were prepared by Spectrum Petrographics of Bend, Oregon. Special preparations included impregnation with a setting resin to support relatively soft ceramic material and feldspar staining to aid identification. The microscopic analysis was performed on an Olympus stereographic micro-

scope in the microscopy lab at the Texas Archeological Research Laboratory, University of Texas at Austin.

Point counting is a standard procedure that offers replicable results; it amounts to counting a set number (200 in this case) of ceramic attributes observed in the viewing field during systematic microscopic traverses of each thinsection. Counting the same number of ceramic attributes in each thinsection allows reliable statistical comparisons. Counted attributes included the ceramic fabric "matrix," pore space, and discrete inclusions such as sand and crushed bone and minerals. Additional information such as grain size and shape was recorded on the counting sheet for potential future reference. Any mineral species that was observed in the viewing field but did not fall into the count was recorded as "tr" for trace, so information on rare but potentially significant bodies would not be lost.

**Results.** The results of the analysis are condensed in Table 3. The five mineralogically defined groups correspond to the typological groups identified in the megascopic analysis, testimony to the regional diversity of the assemblage.

**Group 1.** Toyah/Leon Plain wares, four specimens: CC295-1, CC295-2, CC295-3, and CC295-4. This group is distinguished by crushed-bone tempering material; none of the other groups had any observable bone whatsoever. Additionally, the thinsections had simple quartz typical of quartz sand and probably resident in the clay used in the pottery. Other clay residents were the two identified forms of hematite, ferrous (hematite I) and ferric (hematite II). Specimens CC295-1 and CC295-3 had traces of a peculiar species termed sand balls. These looked like numerous rounded, fine sand-sized quartz grains clumped together in medium sand-sized bodies. Why quartz clumped in this manner (the particles appear to be too small to be quartzite) is unknown to this analyst. One possibility is that they are particles of weathered chert. On the whole, the thinsections of this group hold together well as representatives of bone-tempered Toyah ceramics.

**Group 2.** Micaceous ware (western affinities), three specimens: CC295-5, CC295-6, and CC295-7. This group strongly contrasted with the others in having mineral bodies with sources in volcanic rocks. Mica (muscovite in Table 3) gives the group its name, as megascopically it is highly observable in sherds; however, mica was a proportionally minor constituent relative to the quartz and various forms of sodium and potassium feldspars. The larger contributors to the ceramic bodies were the probable tempering agents, but the mica was resident in the clay or an accessory mineral in the volcanics. Micaceous wares are distinctive of the Middle Pecos valley of the High Plains of New Mexico (Jelinek 1967). However, a much closer source for some or all of the micaceous group sherds might be the Llano Uplift or "central mineral region" of Texas, where muscovite has been observed both in fine sediments and archeological ceramics (Dan Potter, personal communication).

**Table 3. Petrographic Analysis of Ceramics, 41CC295  
Percentages of 200-Point Count**

Thinsection	CC295-1	CC295-2	CC295-3	CC295-4	CC295-5	CC295-6	CC295-7	CC295-8	CC295-9	CC295-10
Typology	Toyah/Leon Plain	Toyah/Leon Plain	Toyah/Leon Plain	Toyah/Leon Plain	Sand-tempered micaceous	Sand-tempered micaceous	Sand-tempered micaceous	Sand-tempered western	Incised Caddoan	Historic glazed terra-cotta
Matrix	44.5	50	55.5	58.5	31	25	39	56	60	59
Voids	10.5	10.5	5.5	6	18	22.5	11.5	5.5	5	16
Bone	27.5	25	30	17.5						
Simple Quartz	12.5	10.5	6	6.5	16	17.5	12.5	14.5	12	10
Composite Quartz					10	7	7.5	1		
Sand Balls	tr		tr						1.5	
Hematite I <sup>1</sup>	3.5	2	1.5	9.5	0.5			tr	4	
Hematite II <sup>2</sup>	1.5	2	1.5	2						2
K-spar <sup>3</sup> (sanidine)					3.5	2	6.5	1.5		
K-spar Microcline					1	0.5	2			
K-spar Laminated Twin					1	0.5	0.5			
Na-spar <sup>4</sup> Simple Twin					8.5	14.5	13	2.5		
Na-spar Laminated Twin					5.5	3.5	4.5			
Na-spar Tartan Twin					1.5	0.5				
Muscovite					2.5	3	3.5			
Rock A <sup>5</sup>					1	3.5				
Tiny Rods								19		
Sherd Temper									13.5	
Chlorite									3.5	13
Unidentified									0.5	

<sup>1</sup> ferrous hematite  
<sup>2</sup> ferric, or specular hematite  
<sup>3</sup> potassium feldspar  
<sup>4</sup> sodium feldspar  
<sup>5</sup> aggregated quartz and potassium feldspar; possible granite, although determinative grain sizes could not be measured in the crushed state

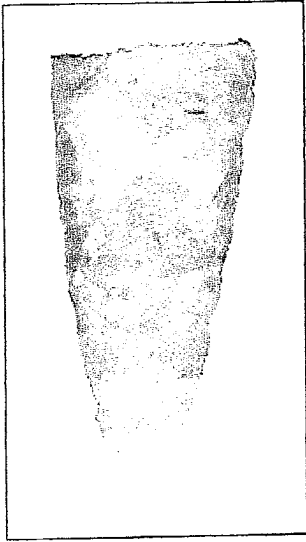


Figure 4. This 5 cm long section of an Angostura point, an isolated find in the upland zone of the Campbell Ranch, is the oldest artifact recorded during the project.

**Group 3.** Sand tempered (western affinities), one specimen: CC295-8. This single-member group stands apart from Group 2 in lacking muscovite and having much smaller proportions of volcanics. The volcanics nevertheless give the sherd its western affinities, although without the Middle Pecos stamp borne by Group 2. The significant proportions of tiny rods create problems in identification; the best guess is that they are the remains of the chance inclusion of a few grains of rutile crushed in the preparation of the mineral temper. Whatever their mineral identification, the fine sand-sized rods add to the distinctiveness of Group 3.

**Group 4.** Incised Caddoan, one specimen: CC295-9. A single sherd-tempered incised Caddoan sherd was included in the sample. The sherd-tempering particles are of the same ceramic fabric as the thinsection. Otherwise, the sherd has a ceramic fabric typical of many Caddoan wares. One unidentified particle has a hexagonal outline and interior concentric rings or layers and may possibly belong to the garnet group.

**Group 5.** Historic glazed terra-cotta, one specimen: CC295-10. This sherd has a dense matrix and a thin, vitreous glaze on its interior and exterior edges. It also has a significant proportion of voids, simple quartz, hematite, and chlorite. These discrete bodies appear not to be fused with the matrix. The ceramic fabric therefore remains an earthenware, and the glaze was probably produced with a fluxing agent. These attributes identify the thinsection's origins in time but not in space; it could have been produced in any number of regional or areal ceramic-making concerns.

Petrographic analysis has shown that the small excavated ceramic sample from 41CC295 came from diverse source areas. There are alternative scenarios that might explain the diversity observed. One of these would be that ceramic-using Late Prehistoric groups from disparate areas occupied the site in succession, using (and breaking) ceramic vessels brought from distant locations. This scenario is consistent with the conception of Paint Rock as a specialized, ritually important site known to many groups over a wide area. Such a site might well be visited by a larger number of distinct groups, potentially from a wider area, than would be "typical" for other Late Prehistoric sites. However, as ceramics can also be traded or exchanged between groups, we cannot at present rule out the possibility that the site was occupied primarily by

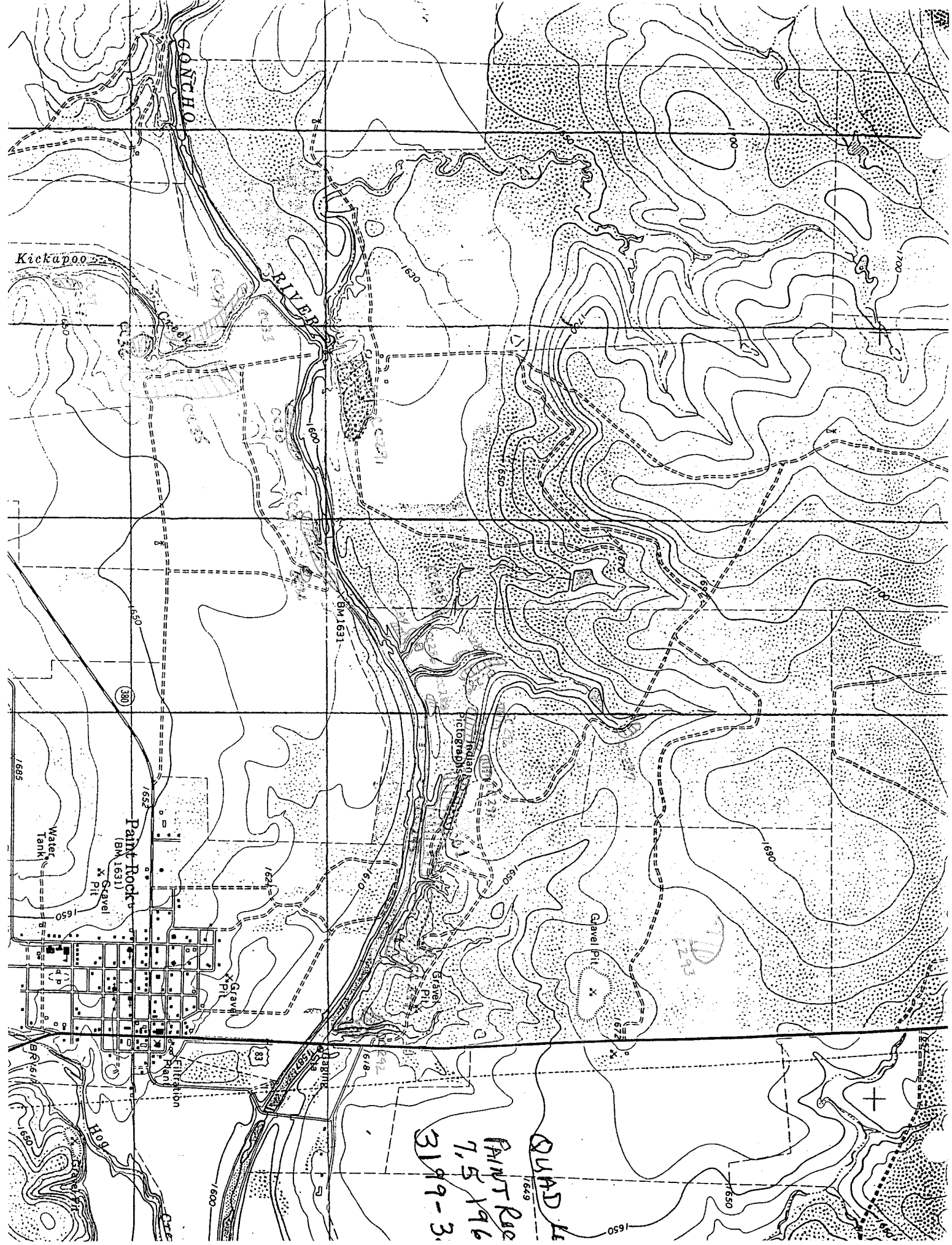
local groups, but that these had fairly widespread and diverse exchange relationships.

### General Summary of the Paint Rock Project

The Paint Rock project was undertaken at the request of the landowners, who were interested in establishing a context for the famous pictographs they so zealously protect. Toward that end, a survey of the Campbell Ranch produced 14 sites and isolated finds that demonstrated occupation of the uplands throughout prehistory and well into the historic period (Figure 4). The CVAS then carried out backhoe prospecting and test excavations on the river terrace in proximity to the pictograph bluff in an attempt to determine the time depth of occupation. The recovery of Late Prehistoric and Protohistoric artifacts is consistent with the assumed late date of the paintings. The absence of older cultural deposits within the terrace may be due to the very limited nature of our backhoe trenching, or possibly lateral cutting or erosion of earlier landforms by the Concho River over time. Earlier occupations clearly were present in the site area, as the uplands immediately adjacent to the rock-art site produced evidence of thousands of years of occupation. Regardless, it appears most reasonable to associate the paintings at 41CC1 with the Toyah and later occupation of the terrace as seen at 41CC295. Finally, a petrographic analysis of a small sample of sherds from 41CC295 confirms their varied origins. This finding supports the view that Paint Rock was both a crossroads and confluence for prehistoric groups from diverse regions. The signs and symbols painted on the blocky cliff face further testify to the important role this hard-rock crossing of the Concho River must have played in the lives of the people who met and paused at this juncture of diverse environmental zones.

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