MUSEUM OF NEW MEXICO
OFFICE OF ARCHAEOLOGICAL STUDIES

ARCHAEOLOGICAL TESTING OF AN APISHAPA PHASE STRUCTURE IN UNION COUNTY, NEW MEXICO

Lynne Drake

Submitted by
David A. Phillips, Ph.D.
Principal Investigator

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ADMINISTRATIVE SUMMARY

In 1989, the Office of Archaeological Studies (formerly the Research Section, Laboratory of Anthropology), Museum of New Mexico, conducted a testing program at LA 73996 in Union County, New Mexico, at the request of the New Mexico State Highway and Transportation Department (NMSHTD). The site is on privately owned land. Fieldwork was carried out between December 12 and 15, 1989. Testing consisted of mapping the site, excavating six 1 by 1m test units, collecting artifacts found on and near the site, and extensive recording.

The purpose of the testing program was to evaluate the potential of LA 73996 to provide information relevant to the prehistory of the area. The testing program was also conducted to determine whether important information would be lost as a result of the construction of a new bridge over Corrumpa Creek.

LA 73996 consists of a partial stone enclosure measuring 7.38 m by 4.62 m and up to 0.5 m in height. The structure is on an alluvial terrace southwest of McLaughlin Bridge, where State Highway 370 crosses Corrumpa Creek, and is fully within the proposed alignment. Artifacts found in association with the enclosure (Feature 1) were sparsely distributed and consisted predominantly of small flakes and a few stone tools.

Two additional features, a possible hunting blind (Feature 2) and a rock cairn (Feature 3), were located southeast of the stone enclosure and outside of the proposed alignment. No artifacts were found in association with these features.

From the limited data recovered, it is difficult to determine the function of LA 73996. The low density and variability of artifacts, along with the lack of features, suggest that the site was occupied for a short time. The architecture of Feature 1 is similar to that described for the Plains Woodland period and the Apishapa phase of the Panhandle Aspect. Assigning a date to Feature 1 based solely on architectural similarity is problematic. Without additional data, no definite occupation dates can be assigned to the site.

The lack of stratigraphy and limited extent of subsurface material at the site suggest that further studies would not yield important information on local prehistory.

Museum of New Mexico Project No. 41.478. (Corrumpa)
NMSHTD Project No. BR-0-2445-1.

Submitted in fulfillment of the terms of Memorandum of Agreement D04040 between the NMSHTD and the Research Section, Laboratory of Anthropology, Museum of New Mexico.

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INTRODUCTION

In 1989, the Office of Archaeological Studies, formerly the Research Section of the Laboratory of Anthropology, Museum of New Mexico conducted a testing program for the New Mexico State Highway and Transportation Department (NMSHTD) at LA 73996 in Union County, New Mexico (Fig. 1). As part of Project BR-0-2445-1, the NMSHTD proposes to replace McLaughlin Bridge where State Highway 370 crosses Corrumpa Creek.

Fieldwork was carried out between December 12 and 15, 1989 by John A. Ware, project director, and Lynne Drake and Linda Freedman, assistant archaeologists. David A. Phillips, Jr., director of the Research Section, acted as principal investigator. Permission to test LA 73996 was granted by Jack Z. Smith, property owner.

The purpose of testing LA 73996 was to determine the nature and extent of subsurface archaeological remains at the site, as well as the possible effects of the proposed bridge construction. Specific questions addressed by the testing program included (1) When was the site occupied and by which cultural groups? and (2) What type of site does LA 73996 represent (a habitation site, a hunting blind, a defense post, a ceremonial site, or a tepee ring)?

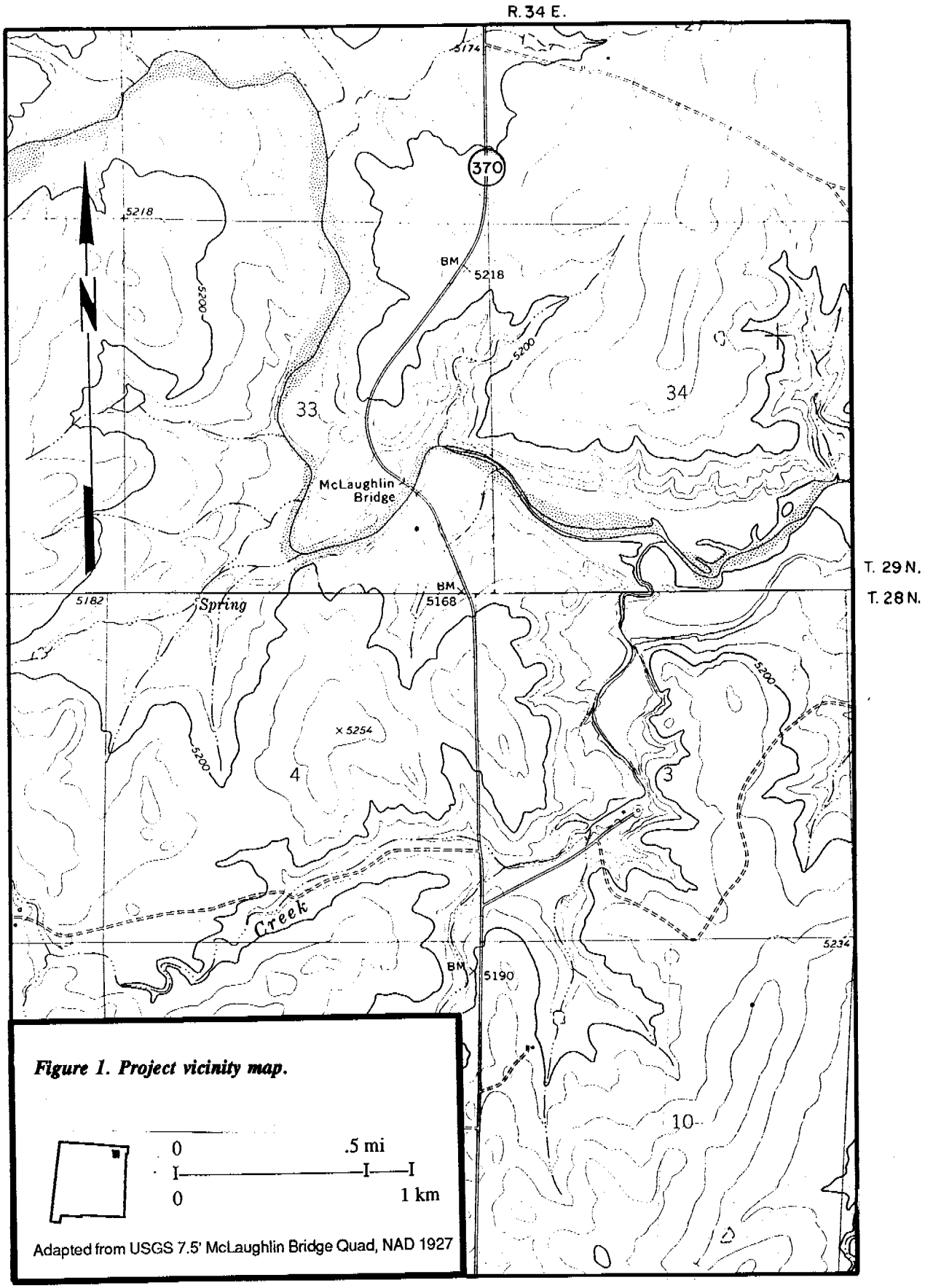

Figure 1. Project vicinity map.

ENVIRONMENTAL SETTING

Geology

LA 73996 is located in a transition zone between the Raton Section and the Southern High Plains (or Panhandle Section) of the Great Plains physiographic province (Pratt 1986; Baldwin and Muehlberger 1959). High piedmont plains interspersed with basalt-capped mesas characterize the Raton section, while the Southern High Plains are covered with alluvial and eolian deposits forming a flat to undulating surface that is capped by a resistant caliche bed (Pratt 1986). Scattered remnants of the Clayton Basalt Flow extend to the south and west of LA 73996 between Clayton and Sierra Grande, a large shield volcano (Muehlberger et al. 1965).

Geological formations exposed along Corrumpa Creek in the vicinity of LA 73996 include sandstones and shales that were deposited during the Cretaceous period. The Purgatoire Formation, which is exposed in the walls of the modern drainage, is an offshore marine shale. This formation is lithologically similar to the upper members of the Jurassic period Morrison Formation, which is exposed to the northwest of LA 73996 along the Dry Cimarron River and in parts of western New Mexico (Warren 1979). Overlying the Purgatoire is the Dakota Formation, which consists of a massive, indurated cliff-forming sandstone. Beds of Cretaceous shales are present underneath outcrops of the Dakota sandstone (Baldwin and Muehlberger 1959).

LA 73996 is located at an elevation of 1,583m (5,140 ft) on an alluvial terrace on the southeast side of Corrumpa Creek. Heavily weathered Dakota Sandstone outcrops bound the north and west edges of the terrace. An older and a younger terrace lie above and below the surface where the site is located. The surrounding landscape consists of low hills and ridges, sandstone escarpments, and a broad undulating plain.

Rounded terrace gravels, consisting of sandstone, quartzite, granite, and quartz cobbles, partially cover the terrace surface. These gravels overlie up to 50 cm of weakly developed alluvial soil. Below the soil, friable sandstones and additional gravels, coated with calcium carbonate, are present.

The soil on which LA 73996 is located belongs to the Gruver-La Brier association. These soils form in alluvial and eolian materials and consist of medium- to fine-textured silty clay loams. Gruver-La Brier soils support a fairly dense cover of grasses, and are used primarily for grazing of livestock. Today acreage used for agricultural purposes is limited, although in the past, a significant portion of the land may have been used for dry farming (Maker et al. 1973).

Climate

Union County has a semi-arid climate (Tuan et al. 1973; Gabin and Lesperance 1977). The average annual precipitation for Clayton, New Mexico, located approximately 22 miles south of LA 73996, is 380 mm (15 in) (Tuan et al. 1973). Winter is the driest season in the plains with the months of January and February receiving an average of 25 mm (1 in) of precipitation

(Tuan et al. 1973). Summer precipitation is somewhat more reliable and abundant, although it may not be able to penetrate the dry ground surface and is often lost to runoff.

Areas with semi-arid climates are characterized by significant variations in temperature and precipitation from one year to the next, which is a problem for farming. The amount of moisture available to vegetation is the primary limiting factor for growth, although the length of the growing season is also important. In Clayton, the date of the last killing frost ranged over 55 days between 1931 and 1961 (Tuan et al. 1973). Furthermore, annual precipitation in Clayton varied from 226 mm (9 in) to 652 mm (26 in) between 1951 and 1980 (Gabin and Lesperance 1977).

Paleoclimate

Paleoclimatic research in eastern New Mexico began with E. B. Howard's work in 1933 at Blackwater Draw, located between Clovis and Portales. Since then a significant amount of paleoclimatic data has been recovered from archaeological and geological sites on the Llano Estacado in eastern New Mexico and western Texas. This information along with the cultural data recovered from archaeological sites on the Llano has led to a better understanding of the relationship between prehistoric people and their environment.

Paleoclimatologists generally agree on the sequence of climatic events affecting the southern plains, although a consensus about the timing and severity of climatic variations is lacking. Baker and Penteado-Orellana (1977) propose that a mixed forest and grassland covered northwest Texas during the late Pleistocene, while Haynes contends that between 13,000 and 11,000 B.P. desiccation, deflation, and lowered water tables characterized the landscape in western Texas and eastern New Mexico. Knox (1983) suggests that northeastern New Mexico was never forested during the late Pleistocene due to the rainshadow effect of the Rocky Mountains to the west.

Most quaternary scientists believe that the most significant changes in vegetation, based on macrobotanical and pollen evidence, occurred during the early Holocene (Knox 1983; Van Devender 1977). Knox (1983) suggests that a period of extreme drought occurred in the western plains during the early Holocene. Based on gaps in stratigraphic sequences, evidence for deflation, and the presence of prehistoric wells, Haynes (1975) suggests that the Llano Estacado experienced a period of widespread drought between 5,000-7,000 B.P. Baker and Penteado-Orellana (1977) propose a shift to more arid conditions and a decrease in forestation during the early Holocene, followed by predominantly arid conditions until approximately 6,000 B.P., when a more mesic climate developed. According to Haynes (1975), after 4,000 B.P. erosional and depositional cycles occurred, along with periods of stability and soil development, although the intensity of these cycles was not as severe as that of earlier ones.

Paleoclimatic information is sparse for those periods following the Archaic, although a limited amount of work has been undertaken for the Plains Woodland period. Based on pollen evidence from LA 15867, located to the northwest of LA 73996 along the Dry Cimarron, Tierney (1979) argues that the climate and vegetation present during Plains Woodland times was not significantly different from that of modern times. However, sites dating to the Plains Woodland

tradition contain large numbers of mussel shells (Winter 1988). In contrast to Tierney's conclusion, the presence of these shells indicates that sources of permanent fresh water existed in the Dry Cimarron Valley during prehistoric times. Today, the Dry Cimarron and its tributaries do not contain permanent water, therefore, the shells suggest that past climatic conditions may have been somewhat wetter than today (Winter 1988).

It is important to note that vegetation as well as other paleoenvironmental indicators generally reflect average climatic conditions and may not indicate short-term climatic variations, which may be relevant to interpretation of the archaeological record in northeastern New Mexico.

Vegetation

The plains surrounding LA 73996, which are covered with open grasslands interspersed with desert scrub vegetation, belong to the Plains and Great Basin Grassland Biotic Community (Brown and Lowe 1980). The upper elevations along the ridges and mesa tops support mixed juniper (*Juniperus* sp.) and oak (*Quercus* sp.). Cottonwoods (*Populus* sp.) and willows (*Salix* sp.) grow along local watercourses. Vegetation found in the immediate vicinity of the site consists primarily of various grasses and snakeweed (*Gutierrezia* sp.) interspersed with Navajo Yucca *(Yucca navajoa).* An occasional stunted juniper and cholla (*Opuntia* sp.) are also present (Elmore 1976).

Fauna

Few fauna were observed during the testing program in December. Herds of Pronghorn *(Antelocapra americana)* and several mule deer *(Odocoileus hemionus),* along with an occasional jackrabbit *(Lepus californicus)* were seen in the vicinity of the site. Although small mammals were scarce, various birds including red-tailed hawks *(Buteo jamaicensis)* and prairie falcons *(Falco mexicanus)* were spotted nearby.

ARCHAEOLOGICAL BACKGROUND

In this section, an overview of each phase is provided and specific questions about the different cultures identified in northeastern New Mexico are addressed. Additional summaries are provided by Winter (1988), Stuart and Gauthier (1984), Lent (1982), Oakes (1979), Moore et al. (1988), and Campbell (1969, 1976).

Differences of opinion are common among archaeologists who have worked in northeastern New Mexico, and there is a need for additional research. Stuart and Gauthier (1984) summarize the problems with archaeology in northeastern New Mexico into the following three categories: a lack of interest in the area due to the absence of spectacular sites; a loose chronology based primarily on cross-dating of ceramics, projectile points, and architecture; and a disagreement about the cultural identity of the prehistoric inhabitants of the area (i.e., Plains, Panhandle, or Pueblo).

Some archaeologists, including Wendorf (1960), Lintz (1976), and Eighmy (1984), feel that interpretations have overstepped the boundaries set by well-documented evidence and advise others to use caution when evaluating data from this area.

Although these problems do exist, recent research in northeastern New Mexico and southeastern Colorado by archaeologists including Moore et al. (1988) of the Research Section of the Museum of New Mexico, Winter (1988, 1983), Lent (1982), Nowak and Kingsbury (1981), Nowak and Berger (1982), Nowak and Jones (1986), Lintz (1984), and Eighmy (1984) has provided additional information including absolute dates on sites that may eventually lead to a better understanding of the prehistory of the area.

Paleoindian Period (10,000-5500 B.C.)

Documented evidence for human occupation in the Dry Cimarron Valley dating to the Clovis, Folsom, and Plainview phases of the Paleoindian period (10,000-7500 B.C.) is rather limited, although projectile points have been found as isolated occurrences and have been observed in private collections. No sites or points dating to the Plano phase (7500-5500 B.C.) have been recorded. Winter (1988) suggests that Paleoindian sites do exist but have been buried beneath several feet of alluvium. For example, the Folsom site (LA 8121), a bison kill site containing Folsom projectile points in direct association with an extinct species of bison, was exposed by floodwaters in 1908 (Winter 1988).

Stuart and Gauthier (1984) argue that Paleoindian site location was dependent on elevation and topography. Furthermore, as indicated by Winter (1988), low visibility of archaeological sites may bias theories about Paleoindian settlement patterns. Specific data on the subsistence practices of the early inhabitants of the area is lacking, but archaeological evidence from surrounding areas indicates that Paleoindian people hunted large species of bison and other fauna, and also depended on small mammals and plants for food (Stuart and Gauthier 1984).

Archaic Period (5500 B.C.-A.D. 250)

Little evidence for the early Archaic exists in northeastern New Mexico, although an early Archaic occupation level containing a reworked Clovis point associated with ground stone was found at the Pigeon Cliffs site, located near Clayton (Steen 1955, 1976). No documented sites or isolated occurrences dating to approximately 5000-2000 B.C. have been recorded in the Dry Cimarron Valley, although a few Early and Middle Archaic points have been observed in local collections (Winter 1988). Winter suggests that, based on this scarcity of evidence, the area was sparsely occupied during this time.

Campbell (1976) divides the Archaic into the Early Archaic (5500-500 B.C.) and the Late Archaic (500 B.C.-A.D. 200) and has documented sites dated to both of these time periods on the Chaquaqua Plateau in southeastern Colorado. Tool assemblages associated with Early Archaic sites include Abasolo, Trinity, Pandale, and Travis projectile points; scrapers; knives; and other flake tools. The presence of ground stone, along with evidence for increased habitation of rock shelters in canyons, where a greater variety of vegetation is available, suggests an increased reliance on plant materials for subsistence during the early Archaic.

Archaeological materials from sites dated to the Late Archaic include Yarbrough, Ellis, Edgewood, Palmillas, Shumla, and Marcos projectile points; scrapers; shell beads; ground stone; and botanical and faunal evidence. Bones of both large and small mammals are present; however, remains of smaller mammals comprise a larger percentage of the faunal assemblages. This suggests that small mammals were heavily relied on for subsistence. Other data indicates that edible plants were also being heavily exploited (Campbell 1969).

Data from archaeological excavations have indicated that a Late Archaic occupation was present in the Dry Cimarron Valley (Winter 1988). Radiocarbon-dated artifact assemblages consisting of projectile points, stone tools, fire-cracked rock, and ground stone document the presence of nomadic hunter-gatherer groups in the valley (Winter 1988).

Both Winter (1988) and Campbell (1969, 1976) believe that the Archaic occupants of northeastern New Mexico belonged to a Plains rather than a Southwest tradition. According to Winter (1988), the Archaic and later Plains Woodland inhabitants of the Dry Cimarron Valley migrated to the area from the headwaters of the Arkansas-Mississippi drainages. Campbell (1976) argues that no major migrations to northeastern New Mexico occurred. He interprets the apparent continuity of strata and similarity of artifacts from sites containing both late Archaic and Plains Woodland materials as evidence that changes occurred gradually within the cultures already present in the area (Campbell 1976).

Plains Woodland Period (A.D. 200-1100)

According to Campbell (1976), new traits including the introduction of horticulture, the invention of the bow and arrow, the presence of corner-notched points, and the production of cord-marked pottery developed independently between A.D. 250 and 450, when the Plains Woodland tradition emerged. The Plains Woodland tradition continued its existence in

northeastern New Mexico until approximately A.D. 950-1000 (Campbell 1969; Winter 1988).

Campbell (1969, 1976) suggests that architecture dating to the Plains Woodland tradition consisted predominantly of circular stone masonry enclosures, which served as braces for brush and pole structures. These enclosures were constructed using local materials beginning around A.D. 450. Furthermore, Campbell proposes that vertical slab masonry was not common until approximately A.D. 1000, and that horizontal slabs were used both prior to and after this time.

Eighmy and Wood (1984) question the Plains Woodland dates assigned by Campbell to structures in southeast Colorado, which are based on cross-dating of projectile points and cord-marked ceramics. Eighmy feels that the time spans assigned to these artifacts are too broad to provide accurate dates. Based on radiocarbon dates from sites with circular stone enclosures, he concludes that a large number of structures with slab foundations were occupied after A.D. 1000. He does not dismiss the existence of earlier use of slab foundations, although he argues that vertical slabs were not used prior to A.D. 600 (Eighmy and Wood 1984).

Most radiocarbon-dated structural sites in the Dry Cimarron Valley have been assigned to the Plains Woodland tradition. Although the sample may be somewhat biased due to the high visibility of structural sites, it appears that a large population occupied the area during this time (Winter 1988).

Perhaps the most important development that occurred during the transition to the Plains Woodland is the adoption of maize, which may have encouraged people to adopt a semisedentary lifestyle. There is also evidence that new resources, including freshwater mussels, were being exploited. Although additional resources were available, hunting small mammals and gathering wild plants continued to be the more important means of subsistence (Winter 1988).

Apishapa Phase of the Panhandle Culture (A.D. 1100-1350)

During the mid-1960s, Campbell observed similarities between archaeological sites in southeastern Colorado and northeastern New Mexico, and Antelope Creek Focus Panhandle sites in Oklahoma and Texas. He attributes variations in artifactual and architectural characteristics between the two areas to differences in geography and time. The Panhandle manifestation in Colorado and New Mexico is referred to as the Apishapa Focus, which dates to A.D. 1000-1300. The Antelope Creek Focus, which Krieger described as a combination of Plains Indian and Southwestern cultures, dates to A.D. 1300-1450 (Campbell 1969; Krieger 1946).

Lintz (1984) disagrees with Campbell's interpretation and argues that the Antelope Creek Focus and Apishapa Focus represent two distinct groups. Furthermore, Lintz (1984) and Eighmy and Wood (1984) reject Campbell's date of A.D. 1000-1300 and propose a date of A.D. 1100-1350 for the Apishapa Focus.

Other disagreements among archaeologists lie in the types of architecture built during the Apishapa phase. According to Campbell (1969, 1976), stone masonry enclosures, similar to those constructed during the Plains Woodland period, were built on promontories above drainages and land suitable for agriculture. He also suggests that multiroom defensive villages located on

mesa tops appeared and increased in number between A.D. 1000 and 1300. Winter (1988) argues that fortified sites appeared during the late Plains Woodland, and considers the Apishapa Focus to be a continuum of the Plains Woodland tradition.

During the Apishapa, small, triangular, side-notched projectile points became the predominant point type, although corner-notched and dart points continued to be used. Apishapa cord-marked ceramics are distinguished from earlier types by the deeper incisions found on the later style (Campbell 1969).

Botanical and faunal remains indicate that hunting and gathering remained the most important means of subsistence. Although no corn has been reported from Apishapa Focus sites in the Dry Cimarron Valley, it is probable that small-scale agriculture was being practiced during this time (Winter 1988).

Few Apishapa sites have been identified in northeastern New Mexico, with the exception of nine radiocarbon-dated sites in the Dry Cimarron Valley and several sites near Las Vegas, New Mexico (Stuart and Gauthier 1984; Winter 1988). This may be partly due to the fact that confusion over identification of Apishapa architecture and artifact assemblages still exists. Excavations by Colorado College in southeastern Colorado have led to the identification and absolute dating of a number of Apishapa sites. These sites consist of C-shaped or circular stone structures, outlined by vertical and horizontal sandstone slabs (Nowak and Kingsbury 1981; Nowak and Berger 1982; and Nowak and Jones 1986).

Around A.D. 1300-1350, a widespread drought affected the area and forced the Panhandle people to leave the area and move to the southeastern Canadian Valley in New Mexico and the Texas-Oklahoma panhandle where there was sufficient precipitation for farming (Campbell 1976).

Protohistoric and Historic Apache Occupation

Archaeologists often argue about when and by what route the Apaches migrated to the Southwest. According to D. A. Gunnerson (1979), the Apaches arrived in the Southwest around A.D. 1525, while Opler (1983) argues for an earlier date of A.D. 1400. In 1541, Francisco Vasquez de Coronado reportedly encountered a group of "Querechos," who are generally accepted as early Apaches, on the Plains beyond Pecos (Gunnerson 1979).

Archaeologists also differ in their opinions as to whether the Apaches were influenced to a greater extent by the Plains Indians or by southwestern cultures. Opler places emphasis on Southwestern cultures, although he interprets the Apaches as ultimately belonging to neither the Pueblo or Plains cultures, but as being unique (Opler 1983). Plains archaeologists generally believe that the Apaches migrated south along the eastern side of the Rockies and were consequently influenced by Plains Indians (Opler 1983).

Most Apache sites in northeastern New Mexico date to the late 1600s and early 1700s and are attributed to the Jicarilla Apaches, with the exception of a few sites that may be traced to the Faraon or Mescalero Apaches (Gunnerson 1979, 1987).

Gunnerson (1979) excavated several Apache sites including the Glasscock site and the Sammis site, both located near Cimarron, New Mexico, and the Ojo Perdido site, located to the northeast of Las Vegas, New Mexico. The sites contained a variety of structures including multiroom adobe structures, pit structures, tepee rings, and surface structures. Often sites were located at the mouths of canyons where both arable land and the mountains could be exploited. The presence of projectile points, scrapers, polishing stones, and other hunting tools, along with manos and metates suggests that hunting continued to be an important means of subsistence in addition to the production of corn (Gunnerson 1979). Tepee rings have generally been found on the Plains and are assumed to have been occupied for short periods, based on the scarcity of artifacts found at these sites (Gunnerson 1979).

Ceramics found on Apache sites include Ocate Micaceous, Perdido Plain, and Pueblo trade wares. Gunnerson (1979) dates sites with Ocate Micaceous between A.D. 1550 and 1750, and sites with Perdido Plain between A.D. 1650 and 1750. Levine (1984) is skeptical of these dates, which Gunnerson obtained through ceramic cross-dating.

Historic evidence for the Apache occupation consists of reports by early Spanish explorers. Accounts of expeditions led by Ulibarri in 1706 and Valverde in 1719 mention the presence of small Apache villages and agricultural fields along the eastern side of the Sangre de Cristos (Gunnerson 1979).

During the mid-1700s, pressure by Comanche and Ute Indians forced the Apaches to move into the Rio Grande Valley, although Apache hunting parties periodically revisited the area (Gunnerson 1987).

Post-Apache/Anglo Occupation

By 1726, the Apache Indians had been driven from the Plains of northeastern New Mexico by the Utes and the Comanches, who subsequently dominated the region. The Utes and the Comanches maintained friendly relations with each other until the mid-1700s, when warfare broke out between the two groups. Hunting and raiding parties from neighboring tribes, including the Apaches, continued to visit the plains during the eighteenth and the first half of the nineteenth centuries (Winter 1988).

After the Mexican Revolution, in 1821, the Santa Fe Trail opened and provided a route through the area for trappers and traders from the East. Raids on the travelers by the local Indians became more frequent towards the late 1820s, and conflict between the various Indian tribes occupying the Plains continued (Winter 1988).

During the latter part of the nineteenth century, a railroad was built through northeastern New Mexico, providing a means of transportation for goods and people through the region. Around this time, a substantial increase in population occurred probably due to the local development of large ranches, and the fact that Clayton served as a major railroad station.

The early part of the twentieth century proved to be a difficult period for the people of northeastern New Mexico. During this time, the region was plagued by drought, disease, and

the depression. The economy of the region continues to be based on large-scale ranching, although the local population has been gradually decreasing.

SITE DESCRIPTION

LA 73996 consists of three sandstone features and measures 205 m by 13 m (Fig. 2). A semicircular stone enclosure, designated Feature 1, is the main component of the site. Feature 1 is constructed of sandstone slabs and blocks and measures 7.4 m by 4.6 m. The structure has a north-facing opening. The sandstone slabs in the wall, which stand up to 0.5 m high, may have originally been placed in a vertical position. These slabs appear to have subsequently fallen toward the north, possibly due to erosional processes, and have been partly buried by sediment. The largest rocks and slabs are found along the southern boundary of the partial enclosure. Those forming the eastern and western boundaries are smaller and also appear to have been partly buried. Artifacts found on the surface of Feature 1 include a scraper and a unifacial chipped stone tool. No surface features were present within the partial enclosure.

Two features were located to the southeast of Feature 1. Feature 2 is a pyramidal pile of sandstone blocks, measuring 1.3 m across and 0.7 m high (Fig. 3). This feature is on an east-facing slope overlooking the open plains, and appears to be an eroded sandstone rock wall that may have once served as a hunting blind. Feature 3 is on the same east-facing slope and consists of a pile of sandstone rocks that measures approximately 0.8 m in diameter (Fig. 4). Feature 3 may have once been a small cairn. No artifacts were found in association with either Feature 2 or 3.

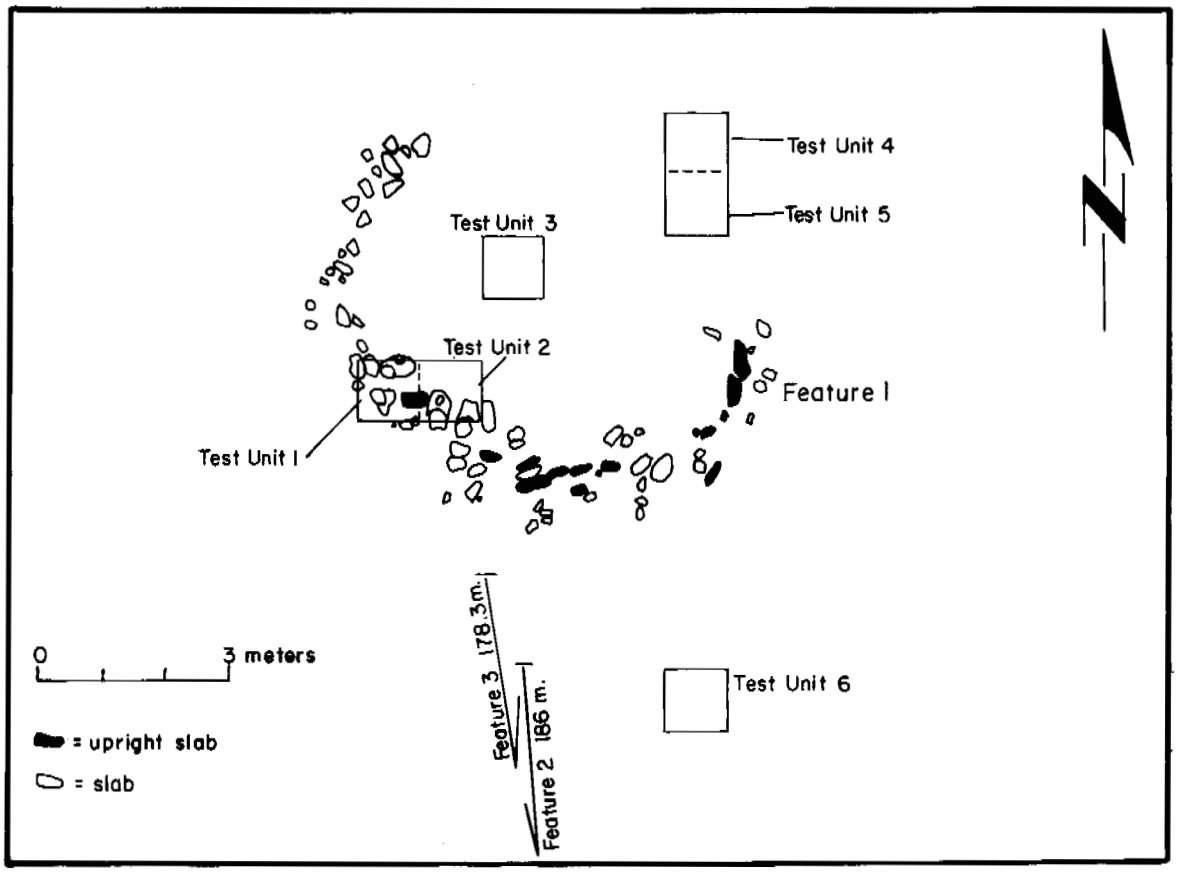

Figure 2. LA 73996 site map, Feature 1.

Figure 3. Feature 2, possible hunting blind.

Figure 4. Feature 3, rock cairn.

TESTING METHODS

Field Methods

A permanent datum was established several meters south and slightly upslope of Feature 1. Using an optical transit and a 30m tape, a magnetic north-south baseline through the center of the site was determined. A control grid was established from the baseline, and the northeast corners of three 1 by 1 m test units (Test Units 1, 3, 4, and 6) were plotted using the transit and metric tape. The locations of Test Units 2 and 5 were subsequently determined by triangulation. The elevation of the ground surface at the northeast corner of each unit was determined using the transit and stadia rod. Elevations of the remaining corners and ending elevations for each level were calculated using a line level, string, and a tape.

Test Unit 1 was excavated to expose a portion of the masonry wall of Feature 1. Unit 1 is located along the southwest section of the wall. To define the sandstone wall, Test Unit 2 was excavated immediately east of Unit 1.

Test Unit 3 was located in the center of the structure to determine the depth and nature of the cultural deposits.

Test Units 4 and 5 were excavated in an attempt to locate the northeastern boundary of Feature 1, which was not defined on the surface by sandstone rocks.

Initially, the test units were excavated in arbitrary 10 cm levels. When very few artifacts were encountered and the fill remained relatively homogeneous, this procedure was altered and excavation proceeded in natural levels or strata, defined by distinct stratigraphic characteristics of the soil. All units within Feature 1 were excavated in a single level due to the shallow depth of the cultural deposits. All fill from test units located within the structure was screened through ¼-in (0.64 cm) mesh.

Test Unit 6, located to the south of Feature 1, was dug so the subsurface stratigraphy within the feature could be compared to that found outside of the feature. A 50 percent sample of the soil was screened from Test Unit 6. Excavation of all units proceeded until a sterile deposit was encountered.

Artifacts found during excavation were collected and bagged by unit and level. Additional artifacts found on the surface of Feature 1 and within site boundaries were also collected and bagged.

A final plan view and topographic map of the site was constructed using a plane table and alidade. Extensive recording in the form of field notes and photo documentation was made of the site. All test units were backfilled upon project completion.

Laboratory Analysis

All artifacts collected in the field were cleaned and analyzed in the laboratory, and subsequently submitted to the archaeological repository of the Laboratory of Anthropology. Laboratory analysis consisted of monitoring specific attributes for each lithic, including artifact type, provenience, material type, percentage of cortex, evidence of retouch or modification, evidence of use-wear, and artifact dimensions.

RESULTS

Excavation of Test Units 1 and 2 along the southern portion of the rock wall in Feature 1, exposed a portion of the wall that had been partly buried by sediment. What initially appeared to be a subsurface continuation of the wall was exposed in Test Units 4 and 5 in the northern portion of the feature. This interpretation was rejected when the buried rocks proved to be smaller than those rocks comprising the wall above the ground surface and in Test Units 1 and 2. No hearths, prepared floors, or any other subsurface features were encountered during testing. Furthermore, datable materials or time diagnostic artifacts were not found either within the feature or nearby.

The soil encountered in Test Units 1-6 consists of a weakly developed, slightly-compacted silty clay. A sequence grading from fine to coarser soils (top to bottom) was exposed in profile along the north wall of Test Unit 6. This sequence is typical of profiles exposed in Test Units 1-5. Dark brown colors of 7.5YR 4/2 (dry) and 7.5YR 3/2 (wet) were determined for the soil with a Munsell chart.

A total of 17 lithic artifacts were recovered from LA 73996. No ceramics or ground stone were found. Thirteen artifacts were found within Feature 1, and four artifacts were recovered from the surface of the site. All lithic material found on the site is locally available.

Table 1 shows the percentages of artifact and material types for Feature 1. Quartzite or chert flakes account for 77 percent of the artifacts. Fifteen percent of the artifacts were stone tools. No angular debris was present in the assemblage.

Table 1. Lithic Material Types, Feature 1

Material	Flakes	Angular Debris	Tools	Total	Percent
Quartzite	7	0	1	8	61
Chert	4	-	-	4	31
Basalt	-	-	1	1	8
Total	11	0	2	13	
Percent	85	0	15		100

Table 2 shows the distribution of lithic artifacts in terms of artifact length and surface or subsurface provenience. Eleven artifacts were found subsurface, and a quartzite scraper and a basalt unifacial tool were the only artifacts collected from the surface of Feature 1. Eighty-five percent of the lithics were found subsurface and 70 percent of all lithics measured less than 25 mm in length. Subsurface artifacts consisted primarily of minuscule quartzite and chert minuscule flake fragments.

Table 2. Lithic Distribution, Feature 1

Material	Flakes	Angular Debris	Tools	Total	Percent
Quartzite	7	0	1	8	61
Chert	4	-	-	4	31
Basalt	-	-	1	1	8
Total	11	0	2	13	
Percent	85	0	15		100

Most artifacts lacked cortex and evidence for retouch. While use-wear on the quartzite flakes was difficult to distinguish due to the large size of the grains, all of the chert flake fragments exhibited microscopic evidence of use.

In addition to the artifacts found in Feature 1, two small cores, a broken biface, and a piece of angular debris were collected from the surface of LA 73996. All artifacts examined from the site appear to have been affected by post-depositional processes such as erosion or trampling by livestock.

DISCUSSION

The limited amount of data recovered during testing from LA 73996 makes interpretation of the site difficult. Absolute or relative temporal definition of the site is essentially impossible due to the absence of datable materials for radiocarbon or archaeomagnetic dating and the lack of time-diagnostic projectile points or ceramics. However, the style of architecture, the lack of interior features, and the scarcity of artifacts provide some useful information. Architecture similar to that of Feature 1 has been dated from the Late Archaic to the Historic period and may include functions such as defense posts, hunting blinds, ceremonial structures, tepee rings, and habitation units. LA 73996 can be considered in terms of the characteristic traits exhibited by each of these functions.

If Feature 1 had been a fortification, it would be expected to have been built in a higher, more defensible location, and to have walls higher than 0.5 m. Additional features typically associated with defensive sites, such as rock walls outside the structure, are not found in the vicinity of the site.

The orientation of LA 73996 negates the possibility that Feature 1 was a hunting blind. The open side of Feature 1 faces towards Corrumpa Creek, which may have provided animals with water during prehistoric times, and the highest portion of the wall faces upslope. This orientation would not conceal hunters from their prey in the drainage, or on the open plains to the east.

Evidence such as ceremonial artifacts, which that would support the theory that Feature 1 was used for ritual activities, was not recovered from the site. The tepee ring explanation could also be eliminated from consideration because the rocks do not form a complete circle and the use of vertical slabs is not typical of Plains Indian tepee sites.

The architecture of Feature 1, which is similar to that found at the Cross L Ranch site (LA 15867), to the C-shaped stone enclosures on sites in southeastern Colorado, and Apache sites in northeastern New Mexico, indicates that Feature 1 may have been used as a habitation structure (Gunnerson 1979; Oakes 1979; Nowak and Kingsbury 1981; Nowak and Berger 1982; Nowak and Jones 1986).

Vertical slab architecture, similar to that found at LA 73996, has typically been associated with the Plains Woodland tradition and the subsequent Apishapa phase (Campbell 1969, 1976; Winter 1988; Nowak and Kingsbury 1981; Nowak and Berger 1982; Nowak and Jones 1986). Although Campbell argues that foundations constructed solely with vertical slabs were not commonly used until post-A.D. 1000, radiocarbon-dated Middle Plains Woodland structures in the Dry Cimarron Valley also have vertical slab foundations (Winter 1988). The C-shaped and circular stone enclosures found in southeastern Colorado have produced radiocarbon dates that fall within the Apishapa phase (Nowak and Kingsbury 1981; Nowak and Berger 1982; Nowak and Jones 1986). Excavation of the masonry enclosures in Colorado has not provided sufficient information to determine what the structures were used for.

The overall scarcity of definite hearths, prepared floors, and artifacts is a common

characteristic of these stone enclosures. Oakes (1979) attributes the limited number of features and minimal amount of lithic material in the six structures at LA 15867 to erosional events, which may have erased most of the archaeological remains from the site (Oakes 1979). Lacking absolute dates, Oakes interprets the structures as Plains Woodland habitation units based on the size, construction, and ridge-top location of the structures, along with evidence for horticulture.

Stone-slab architecture has also been associated with the Apache occupation of northeastern New Mexico (Gunnerson 1979). Although most stone enclosures have been found in clusters, such as at the Cross L Ranch site, the horizontal and vertical slab masonry used at sites with both single and multiple enclosures may represent an architectural temporal marker. However, identification of architecture styles belonging to certain cultural periods remains problematic for reasons discussed previously in this report.

Campbell (1969) describes conical piles of stones similar to Features 2 and 3. He assumes that these rock features were associated with the stone enclosures based on the close proximity of the stone piles to the structures. Lacking additional evidence that the stone enclosures and piles were contemporaneous and related, it seems premature to infer that any association definitely existed.

CONCLUSIONS

LA 73996 consists of a single, partial stone enclosure located on an alluvial terrace overlooking Corrumpa Creek. The site does not appear to have been used for defensive or ceremonial purposes, and its orientation does not support an interpretation of a hunting blind for the site. Based on the architecture, it may be concluded that Feature 1 was used as a habitation structure. The lack of hearths, prepared floors, and artifacts suggests that Feature 1 was not used on a long-term basis. An evaluation of all available data indicates that LA 73996 was occupied for short periods of time, perhaps as a campsite or windbreak. We cannot determine whether Features 2 and 3 were associated with Feature 1.

Based on the architecture at the site, Feature 1 could possibly date to somewhere from the Middle Plains Woodland period to the Apache occupation (about A.D. 600-1750). The similarity and homogeneity of the soil, found within Feature 1 and outside the structure in Test Unit 6, suggests that no subsurface cultural deposits exist. The small size and fragmentary condition of the flakes found below the ground surface in Test Units 1-5 indicates that the flakes were transported downwards by post-depositional erosion processes. Although artifacts found on the surface of the site and in the immediate vicinity of the site also exhibit evidence of weathering, it is uncertain whether erosional episodes were severe enough to obliterate hearths and prepared surfaces.

RECOMMENDATIONS

The archaeological testing program at LA 73996 has determined that further work would not provide information about the site that would be important to local or regional prehistory. We recommend that no further archaeological studies be conducted at or near LA 73996.

Recent listings of the *National Register of Historic Places* and the *New Mexico State Register of Cultural Properties* have been consulted, and no listed sites are located at or near LA 73996.

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