

MUSEUM OF NEW MEXICO

OFFICE OF ARCHAEOLOGICAL STUDIES

DATA RECOVERY PLAN FOR LA 8112 NEAR QUEMADO, CATRON COUNTY, NEW MEXICO

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ARCHAEOLOGY NOTES 273

ADMINISTRATIVE SUMMARY

In 1998, a site visit was made by personnel from the Office of Archaeological Studies (OAS), working under the Archaeological Site Stabilization and Protection Project (ASSAPP), to LA 8112, a portion of the Hubbell Corner site—a large PIII pueblo room block partially within the highway right-of-way of NM 36 near Quemado, Catron County, New Mexico. OAS personnel noted numerous sherds and a possible hearth eroding out of a low cut-bank within the right-of-way. Permission was given by the New Mexico State Land Office to test the site for subsurface architectural remains. Testing, in December 1999, yielded a slab-lined, rectangular hearth and a possible utilized surface. Another nearby area yielded a partial St. Johns Polychrome vessel within a destroyed hearth. Because the site is within a pull-out and is a dirt acquisition area used by New Mexico State Highway and Transportation Department district personnel, this data recovery plan is proposed as the most efficient means of preventing further loss of important information from the site.

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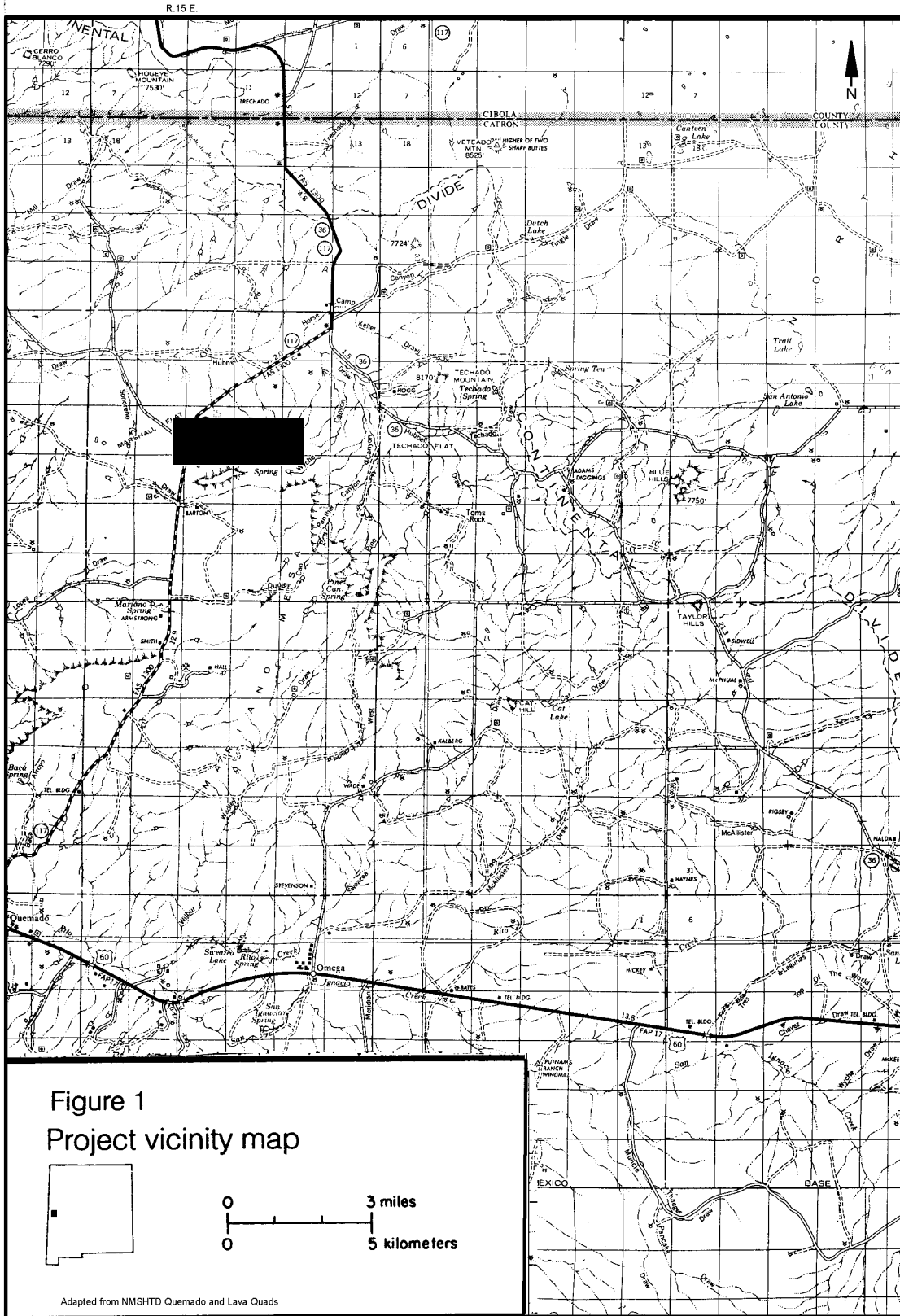
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INTRODUCTION

The OAS, Museum of New Mexico, received funding from the New Mexico State Highway and Transportation Department (NMSHTD), through the Enhancement Program of the Intermodal Surface Transportation Efficiency Act of 1991, to identify cultural properties within existing NMSHTD highway rights-of-way (NMSHTD Contract J0089; Project No. TPE-7700[14]). This undertaking is identified as the Archaeological Site Protection and Preservation Project (ASSAPP). If the preservation of any cultural property seems threatened by erosion or highway-related activities, the OAS has the responsibility under this program to propose and implement management activities for that property in consultation with the NMSHTD and the land owner. However, only those properties that are not part of planned construction or improvement projects are considered by the ASSAPP.

Within the NM 36 highway right-of-way, north of Quemado in Catron County, one property managed by the State Land Office has been included in a listing of potentially endangered sites (Fig. 1). In 1998, OAS personnel visited the site of LA 8112 and determined that cultural features were present within a disturbed area of the site on the east side of the highway. A testing program in December 1999 revealed that two hearths, a partial vessel, and a possible utilized surface were eroding out of a low cut-bank and were also being adversely affected by dirt-removing operations. The site is part of a larger PIII room block located just west of the highway. Ceramics indicate an A.D. 1200-1325 date for the endangered portion of the site.

A data recovery plan is proposed to obviate further data loss due to erosion and ongoing highway maintenance activities. The recovery plan is limited to only those portions of LA 8112 within the right-of-way that are being affected by these processes. The site is not listed on the *National Register of Historic Places* or on the *New Mexico State Register of Cultural Properties*.



ENVIRONMENTAL SETTING

(Information in this section is derived mainly from the reports of Eck [1982], Hogan [1985], and Kayser and Carroll [1988]. Primary sources were used for localized environmental data as related to LA 8112.)

LA 8112 is physiographically located on the southern part of the Colorado Plateau within the Datil section (Fenneman 1931). It is within a subunit known as the Mogollon Slope, a structural unit of sedimentary rock (Fitzsimmons 1959:114) that trends east-west across eastern Arizona and west-central New Mexico. Elevation of the site is 7,109 ft (2,166.8 m).

The land is dotted with large, lava-topped mesas of basalt derived from volcanic origin. Other landforms include buttes, benches, ridges, and knolls interspersed with wide alluvial valleys. The higher landforms are the result of periods of degradation, which continue today. However, the valleys are aggrading from moisture flows during periods of precipitation. Areal deposits are sedimentary and belong to the Mancos Shale or Mesa Verde Group (Lockman-Balk 1959). Dakota Sandstone outcrops to the west of the study area and some Gallup Sandstone is also present. Within the Mancos Shale, coal deposits are evident. The surrounding Baca Formation yields graveled sediments with quartzites, petrified wood, and jaspers, among others. Other raw material sources include occasional obsidian, probably from Red Hill to the southwest (McGimsey 1980) and plentiful fine-grained to vesicular basalt from the surrounding mesas. Clay deposits suitable for prehistoric pottery making is available in the Baca Formation northwest of Mesa Tinaja (Camilli et al. 1988). Fossil mammal bones have been found in the sandstone layers of the upper Baca Formation (Guilinger 1982:47).

LA 8112 lies on the basal, western slopes of Mariana Mesa, which rises to 7,800 ft (2,350 m). The mesa is about 15 miles (24 km) by 7 miles (11 km) wide with the southern end sloping more gradually downward. It is flat and topped with a thin lava cap. The edges of the mesa are very irregular because of erosional processes and the heading of ephemeral streams (McGimsey 1980:1). To the northwest is the prominent Cerro Prieta while Tejana Mesa and Mesa Tinaja are to the southwest. There are no permanent streams and only a few springs in the area. One of them, Cottonwood Spring, is located approximately 1 mile east of the site. Kayser and Carroll (1988:2-3) note that there is, however, a well-developed dendritic system of ephemeral streams, which trend westward within the Little Colorado drainage system. The presence of two probable prehistoric wells on Mariana Mesa and in Tejana Draw is reported by Kayser and Carroll (1988:2-7).

Soils surrounding LA 8112 associate with the slopes of Mariana Mesa to the east and the broad alluvial valley to the northwest. The Rock Land-Hagerman-Penistaja Association is related to the mesa slopes and is found in rough, broken topography that ranges from nearly level to strongly sloping and undulating lands to very steep hills, ridges, and mesa escarpments. Soils on lower slopes are deep and are alluvial and eolian. The soil supports a fair to good cover of vegetation. At higher elevations, the cover consists of oak brush, piñon, juniper, and a few ponderosa pines on north-facing slopes at the upper limits. Common grasses include blue grama, sideoats grama, hairy grama, needle grass, and muhly. Browse is suitable for grazing (Maker et al. 1972:11).

The other soil association, Lohmiller-San Mateo, is found in the nearby valley bottom and on the floodplains and terraces along intermittent drainages. Some low hummocks and ridges also occur in the area. Soils here are developing from sedimentary formations, mostly of sandstone and shale. They are usually deep and support moderate to good stands of native grasses and shrubs such as blue grama, western wheatgrass, vine mesquite, alkali sacaton, chamisa, rabbitbrush, and snakeweed. The

land is typically used today for grazing by livestock and wildlife. It can be utilized also for cropland, under irrigation, but suitable areas are widely distributed and often occur in small, irregular patches (Maker et al. 1972:18). Prehistoric farming was feasible if dry farming was practiced with some minimal runoff control.

The climate of the area is classified as semiarid by Tuan et al. (1973) based on records from 1849-1954; however, later records seem to indicate an arid regimen (Maker et al. 1972). Recent data show 10.91 inches of precipitation annually in the Quemado area and 9.51 inches in the Salt Lake area to the west, both indicative of low moisture regimens (Eck 1982:12). Most rainfall derives from summer thunderstorms originating in the Gulf of Mexico. Half of the yearly precipitation occurs between July and September, while winter months are the driest. The mean maximum temperature for Quemado is 66 degrees F and the mean minimum temperature is 29 degrees F. There is an average growing season of 109 days.

The faunal species of the region are diverse because of the elevational differences within the area. Species include rabbits, chipmunks, squirrels, prairie dogs, pocket gophers, rodents, lizards, coyotes, gray foxes, badgers, skunks, mountain lions, bobcats, mule deer, antelope, golden eagles, red-tailed hawks, turkey vultures, crows, ravens, and jays, among other birds. The black bear was once found in the higher mountain areas to the north and south.

CULTURE HISTORY

LA 8112 lies within a little understood archaeological area located north of Quemado and stretching to Acoma and Laguna pueblos. This region is considered to be an interface between the Anasazi culture to the north and the Mogollon to the south (Tainter 1984). However, architectural styles mostly follow that of the Anasazi tradition, while ceramics often display affinities to both cultures. This section employs the Anasazi classification system because it appears to be the one most used by archaeologists working in this area. However, sociopolitical issues are an unresolved issue and will be somewhat addressed in the following data recovery plan.

Paleoindian Period

There are few Paleoindian sites located in the Quemado area, although several types of projectile points belonging to the period between about 10,000 and 6000 B.C. have been found. Most are isolates but a few are associated with later Archaic lithic scatters and may represent curated items. Two possible Paleoindian sites have been recorded—one on the nearby Hubbell Ranch survey (Eck 1982) and one to the north by Honea and Benham (1963). To the southeast, on the Plains of San Agustín, Beckett (1980) excavated the AKE site, which yielded Folsom, Midland, and Cody complex points of Scottsbluff and Eden types. Occasionally, Paleoindian points continue to be recovered as surface artifacts on the Plains. The area contained the Pleistocene Lake San Agustín whose shores may have supported dependable large game resources. Another Paleoindian site is reportedly located near Quemado Lake to the south, although no information is currently available.

Paleoindian subsistence adaptations mostly involved large-game hunting, although the increasing recovery of ground stone implements indicates reliance on wild vegetal foods as well. However, by the end of the Pleistocene, changing environmental conditions saw large mammals gradually disappear and be replaced by modern-day species of bison, deer, elk, bear, etc. Paleoindian peoples apparently shifted to a broad-spectrum subsistence adaptation and the Paleoindian period gave way to the Archaic.

Archaic Period

Archaic peoples may be defined as migratory hunting and gathering populations who follow a seasonal pattern of efficient exploitation of a limited number of selected plant and animal species within a number of different ecozones (Schroedl 1976:11). Archaic manifestations are generally present by about 6000 B.C., while ending dates may vary from A.D. 1 to 400 because of difficulty in defining the transition to succeeding periods.

The Quemado area lies within a posited Archaic interface between the Cochise tradition in the south and the Oshara in the north. Both are mostly characterized by specific projectile point styles found within their respective regions. However, in the Quemado area, as well as in many others, there is considerable mixing of the two traditions (Hogan 1985; Chadderdon 1990). Some suggest boundaries between the two may not actually exist (Elyea and Hogan 1983). It is possible that the concept of Archaic territorial boundaries based on differences in projectile point morphologies may not be appropriate to distinguish cultural entities. Further study is needed on this issue.

Archaic sites are primarily dated by projectile point styles because datable wood or organic matter is rarely recovered. Cochise-type sites dating to the later Chiricahua and San Pedro stages have been fairly frequently recorded in the Quemado area. On the nearby Fence Lake Project, Eck (1982) recorded four Archaic sites and Hogan (1983) noted six. Bat Cave, Tularosa Cave, Cordova Cave, and O Block Cave, in the Reserve-Aragon area, are all Archaic but have been dated by uncorrected solid carbon techniques and likely have yielded dates that are too young, often ranging around 4000 B.C. or earlier. Archaic sites have been recorded in the Gallo Mountains (Kayser 1972) and in Largo Creek Canyon (Kayser and Dart 1977). A possible Early Archaic site was found in disturbed soils just west of Datil (Hayden et al. 1998). Hannaford (1985) excavated the Quemado site near Red Hill and recovered Jay and Bajada points of the Oshara tradition. He proposes a date of ca. 5500-3200 B.C. for the site. Some Early Archaic points of the Pinto-Gypsum complex have been recovered on the Plains of San Agustín (Hurt and McKnight 1949), while numerous Late Archaic San Pedro points of the Cochise tradition are found throughout the region. Four Archaic sites were radiocarbon-dated on the Luna Project between 1000 B.C. and A.D. 100 (Oakes 1999).

Archaic sites in the region consist mostly of lithic artifact scatters; however, several hearths and roasting pits have been documented on the Luna Project. One site, Raven's Roost, near Reserve, contained several small pit structures dating ca. A.D. 1 (Oakes 1999).

Pueblo Period

The Pueblo period dates about A.D. 400 to 1350 within the project area. Sites are usually categorized according to the Pecos Classification, which has a decidedly Anasazi orientation. However, as stated earlier, the Quemado area exhibits characteristics of Mogollon derivation also, particularly ceramics.

Danson (1957) was perhaps the first to define pueblo sites in the region located along Largo Creek and the nearby Hubbell Draw, followed by excavation of an early pithouse village along the flanks of Mesa Tinaja by Bullard (1962). A major investigation of the northern portion of Mariana Mesa was undertaken by McGimsey (1980) who excavated 7 of the 638 sites recorded by Danson in 1957. No very early sites were found on Mariana Mesa but there are some to the south near Quemado (Hogan 1985:10) and to the northeast at Fischer Ranch (Berman 1979:32).

Earliest pueblo sites in the Quemado region are classified as Basketmaker III (BMIII) dating approximately A.D. 400 to 700. They consist of pit structures arranged individually or in pithouse villages widely dispersed over the landscape. Populations are thought to be low; hunting and gathering accompanied by marginal agriculture was the primary subsistence adaptation. Ceramics utilized at this time include Lino Gray, Alma Brown Wares, Mogollon Red-on-brown, and San Francisco Red.

By Pueblo I (PI) times, at A.D. 700-900, populations are still small and sites continue to be dispersed. However, above-ground masonry pueblos appear, along with pithouses and associated jacal structures; some pueblos had up to 10 rooms or more (Danson 1957). The sites are typically found on high ridges but some are located on low benches above the flat plains (Hogan 1985:11). PI sites have been found on Carrizo Wash (Wilson 1972) and near Frenches Arroyo (Honea and Benham (1963). Danson (1957) recorded 31 PI sites on Mariana Mesa. Ceramics for the period include Kana'a Neckbanded, White Mound Black-on-white, La Plata Black-on-white, plain gray, Alma Brown Ware series, San Francisco Red, Mogollon Red-on-brown, and Three Circle Red-on-white.

Sites increase greatly in size in the Quemado area by A.D. 900-1100 (PII period). Pueblos range up to units with 20 rooms, but most contain 2 to 6 rooms (Hogan 1985:11). Danson (1957) documents 138 sites on Mariana Mesa. Bullard (1962) notes that PII sites are particularly dense at the foot of the mesa, along Largo Creek, Frenches Draw, and Nations Draw. Ceramic assemblages exhibit an increasing variety of trade wares, including Red Mesa Black-on-white, Escavada Black-on-white, Reserve Black-on-white, Puerco Black-on-white, Gallup Black-on-white, Wingate Black-on-red, Puerco Black-on-red, and both gray and brown corrugated wares.

PIII sites (A.D.1100-1300) are located generally on the ridges and benches surrounding mid-sized to large valleys. Danson (1957:70) notes that ". . . every one of the ridges fingering down from Mariana Mesa has at least one and often more sites." Important at this time is the fact that site densities decrease while site size increases, an indication of population aggregation. Twenty or more rooms per site is usual, constructed in an L-shaped or U-shaped room block. Bullard (1962) hypothesizes that populations are moving to better-watered, higher lands to the east toward the Continental Divide, perhaps because of droughts. However, if site sizes increase, there may not actually be a population movement out of the area at this time. Ceramics for the period include late Red Mesa Black-on-white, Gallup Black-on-white, Puerco Black-on-white, Reserve Black-on-white, Tularosa Black-on-white, Puerco Black-on-red, Wingate Black-on-red, St. Johns Polychrome, and smudged wares.

By the late PIII-early PIV period (A.D. 1300-1600), only a few large pueblos remain in the Quemado area, but some contain over 500 rooms. Late pottery types include Klagetoh Black-on-white, late Tularosa Black-on-white, Pinedale Polychrome, Fourmile Polychrome, Glaze A series, and obliterated corrugated. By A.D. 1350, the area is abandoned. However, Zuni Salt Lake, to the west of the project area, was continuously used by the Zuni and noted by Coronado in 1540. Also, Ladd (1983) lists three sacred places of the Zuni today in the Quemado area, one of which is Zuni Salt Lake.

Historic Period

After pueblo abandonment, numerous Athabaskan occupations of the area are recorded (Thomas 1932; Espinosa 1940; Schroeder 1963). A probable Navajo site (LA 8063) has been examined to the west of Quemado (Oakes 1986) and a hearth with an uncorrected date of A.D. 1560 ± 90 was excavated and yielded 16 Navajo sherds and numerous faunal fragments.

Today, the open plains and valleys are used primarily for the grazing of livestock, mostly cattle, and as browse for wild game. Large ranches dot the landscape. Quemado and Pietown are the only viable communities present.

RESULTS OF TESTING PROGRAM

LA 8112 is shown on earlier maps as a possible extension of nearby Site 143 recorded on Danson's 1957 survey of the area. Today, it is referred to as the Hubbell Corner site. LA 8112 consists of buried cultural features lying within NM 36 (formerly SR 117) highway right-of-way. There is a pull-out present that is associated with heavy mechanical blading of the low embankment on which the site sits. Only a 2-3-m-wide strip of site remains undisturbed along this right-of-way corridor because of the blading activity.

In 1998, when OAS personnel first examined LA 8112 for its potential qualification as an endangered site and eligible for ASSAPP funds, most of a slab-lined hearth lying within the pull-out and containing St. Johns Polychrome sherds had been mechanically bladed. OAS contacted the land owner (New Mexico State Land Office) and discussed the disturbance and possible protective measures, including fencing the remaining portion of the site. On a subsequent visit to the site, another vertical stone alignment was seen eroding out of the upper limits of the cut-bank. Concerned that other cultural features may be in danger from erosion, OAS received permission from the State Land Office to test the site area.

In December 1999, three 1-by-1-m test pits were placed within the undisturbed portion of LA 8112 (Fig. 2). The test pits revealed the presence of a rectangular, slab-lined hearth with badly crumbling sandstone slabs in Test Pit 1 (Figs. 3 and 4). Sherds and lithic artifacts were also present (Table 1). The bottom of the feature was 30 cm below ground surface with a very sandy matrix. The interior fill of the hearth was not excavated. Three sherds were recovered from the test pit and included Reserve smudged, plain gray ware, and plain gray corrugated. Test Pit 2 produced a charcoal-stained surface at 15 cm in depth. Numerous large sherds were found in association, including indented corrugated and Tularosa Black-on-white. In Test Pit 3, similar charcoal-flecked fill was also present at a depth of 15 cm where a possible surface depression was uncovered. This may represent a shallow pit structure or a ramada area. A radiocarbon sample was recovered from the charcoal-flecked soil and produced what appears to be an aberrant, corrected and calibrated 2-sigma date between A.D. 1680 and the present. However, sherds on the site indicate a ca. A.D. 1150-1300 date (PIII). This conforms to the suggested date for the large Hubbell Corner room blocks immediately to the northwest and implies a possible temporal relationship.

In summary, the low bank, approximately 1 m high, has been cut by mechanical blading in all test pit areas. Cultural materials are eroding out of the bank into the previously bladed pull-out, and the hearth and utilized surfaces are being destroyed by erosion and blading. During testing, another bladed area, approximately 100 m south of the slab-lined hearth, was visually inspected and another possible hearth was seen eroding out of the bank. This is probably part of the same site. Therefore, we recommend that the remaining, highly unstable, portions of LA 8112 be excavated in order to retrieve what is left of existing cultural features within the highway right-of-way. The site contains potentially important data that may relate to activities at the little-known Hubbell Corner site where only a large kiva has been excavated (McGimsey 1980). A data recovery plan is provided in the following section.

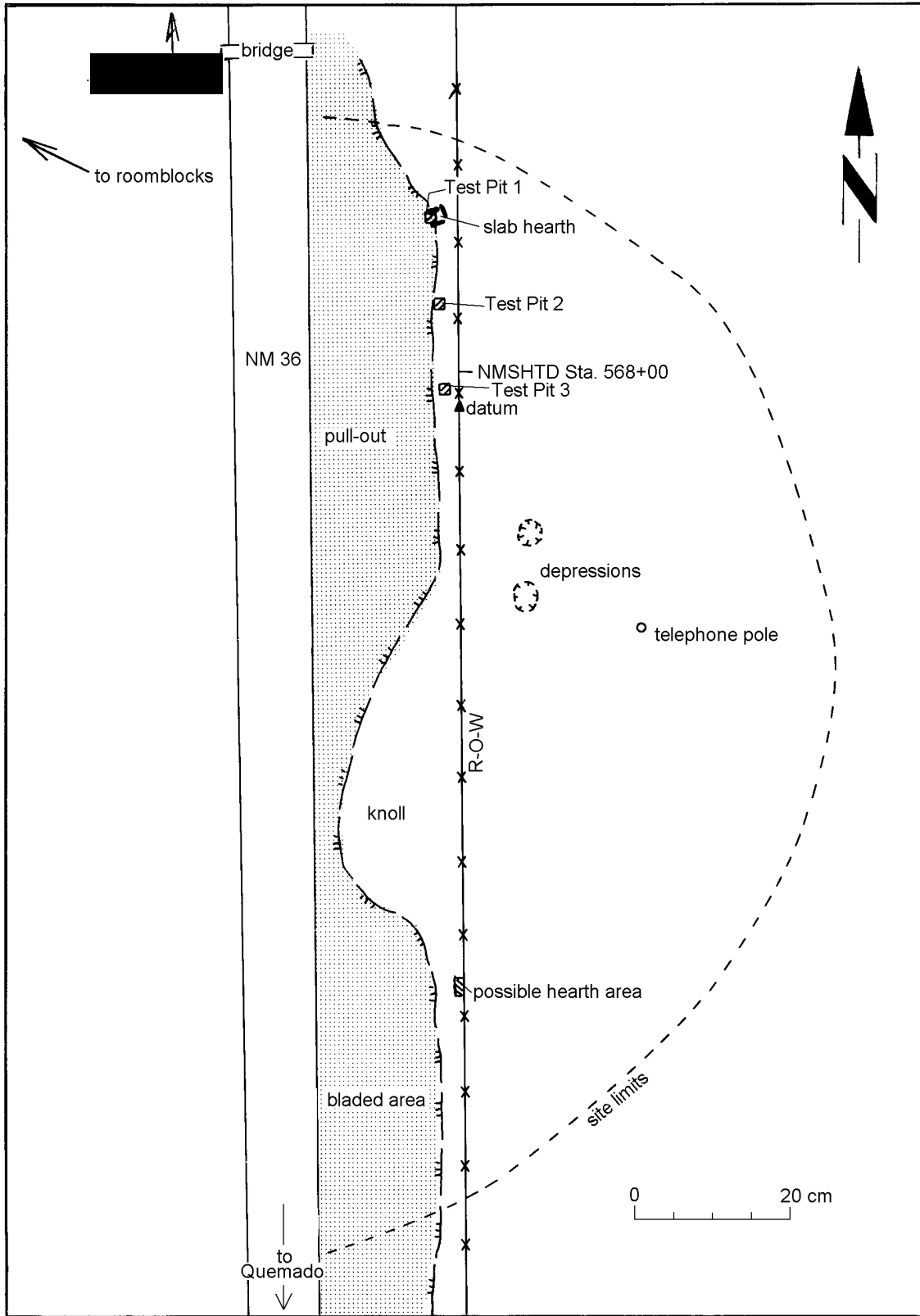


Figure 2. Site plan of LA 8112.

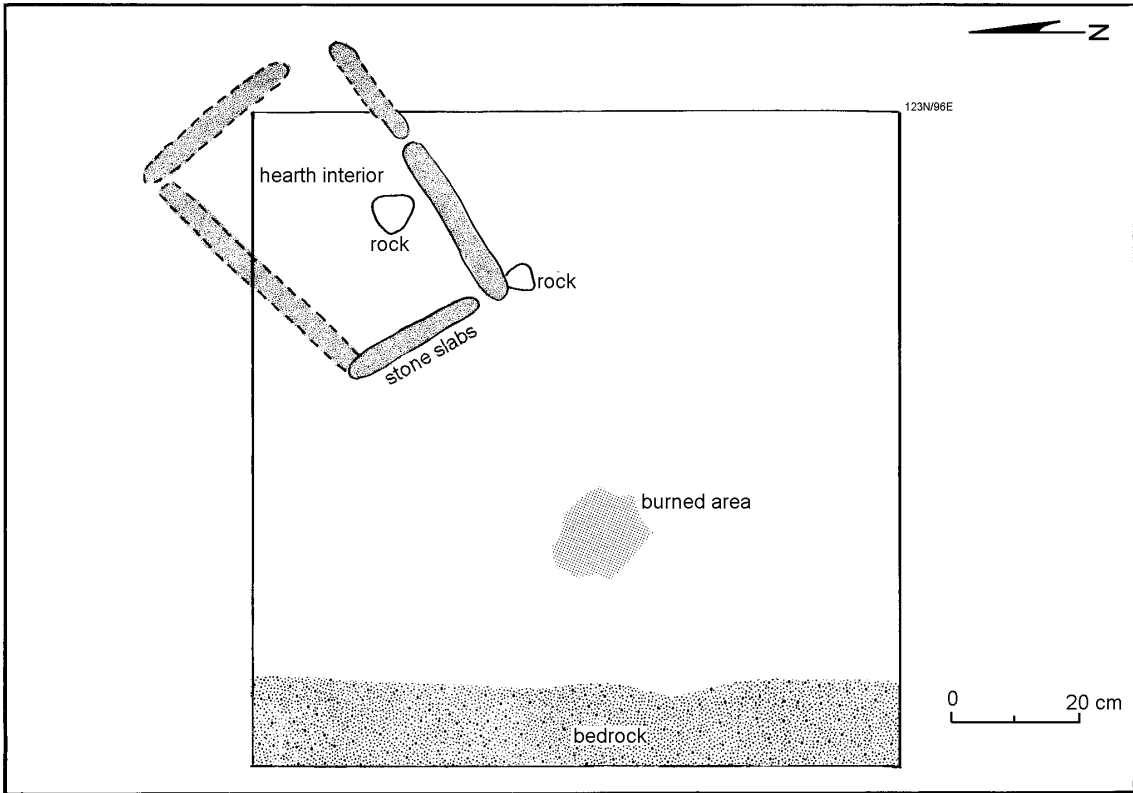


Figure 3. Test Pit 1, sandstone slab hearth at 30 cm in depth.

Table 1. Artifacts Recovered from LA 8112

Ceramics

<u>Test Pit 1</u>	White Mountain Redware	1
	Plain gray ware	2
	Indented corrugated	3
	Smudged corrugated	6
	Total	12
<u>Test Pit 2</u>	Tularosa Black-on-white	3
	Indeterminate Black-on-white	1
	Plain corrugated	2
	Indented corrugated	25
	Indeterminate white ware	3
	Reserve smudged	1
	Total	35
<u>Test Pit 3</u>	Reserve smudged	1
	Plain corrugated	1
	Smudged corrugated	1
	Total	3



Figure 4. Slab hearth eroding out of cut-bank. More slabs lie under unexcavated soil.

<u>Pull-out</u>	Tularosa Black-on-white ladle	1
	White Mountain Redware	1
	Total	2
	GRAND TOTAL	52

Lithic and Miscellaneous Artifacts

<u>Test Pit 1</u>	Quartzite angular debris	2
	Polishing stone	1
<u>Test Pit 2</u>	Chert core flake	1
	Siltstone angular debris	1
<u>Test Pit 3</u>	Chalcedony core flake	1

DATA RECOVERY PLAN

Theoretical Perspective

LA 8112 lies geographically within the core area of the little understood Mogollon-Anasazi contact zone. Archaeological sites located south of U.S. 60 have generally been classified as Mogollon, while to the north they are Anasazi. However, there is much mixing of gray and brown ware ceramic assemblages associated with each and there is some stylistic architectural overlap. The problem of which cultural group occupied this interface is ongoing. Several provocative explanations have been put forth regarding the problem.

Ruppé (1953) defines this culturally mixed zone as the Acoma Culture Province. Dittert (1959) ~~later divides it into six subregions, the south edge of which delineates the southern boundary of the~~ Acoma Culture Province. He believes most sites in the area to be Anasazi because of the presence of gray wares. Any brown wares are thought to be intrusive, even though brown wares sometimes outnumber gray wares. He concludes that the brown wares were brought to the area by actual migrations of Mogollon populations from the south. Others say that Anasazi populations moved south into this area as well. However, as Stuart and Gauthier (1981) indicate, it would be highly improbable for migration to have occurred simultaneously from both north and south. Tainter and Gillio (1980) present another scenario where these populations may be local groups participating in an economic interaction sphere that includes areas to the north and south. His study of burial data to the north in the Puerco area found populations to be homogeneous beginning at about A.D. 750, thus suggesting no migrations of Mogollon people into the area. More burial data are needed before this

study can be verified.

Theoretical questions that could be asked are numerable. Are there separate Mogollon and Anasazi sites within the Quemado area? How are they distinguished? Are the distinctions valid? Could both cultures be represented as adaptations by local populations? Is the blending of cultural characteristics evident only in specific time periods? What are the possible causes of such an amalgamation?

The Mogollon-Anasazi relationship would seem to be critical to an understanding of the Quemado area archaeology. However, our research focus allows for only a limited contribution to the issue because of the nature of the site remains within the highway right-of-way.

Research Orientation

Research goals for the small portions of LA 8112 that are eroding within the highway right-of-way can be stated in simple propositions, as not much of the site remains nor will much be intensively investigated. Our primary purpose, under the ASSAPP program, is to preserve whatever data are left, through excavating the eroding portions of the site. The other principal research goal of the data recovery plan is to determine the nature of the possible relationship of the site to the room blocks at Hubbell Corner. To accomplish this task, we will concentrate on three basic avenues of inquiry: chronological and cultural placement of LA 8112 (the Hubbell Corner site), comparative ceramic analyses of LA 8112 and data from McGimsey's (1980) report on Hubbell Corner, and determine potential architectural correlates between the two sites through research and excavation data. These goals will be addressed below and field methods presented that will allow for implementation of the research goals.

Avenues of Inquiry

Chronological and Cultural Context

Determining the dates of occupation for the project area is critical to establish possible cultural continuity between this area and the Hubbell Corner site. Several chronometric indices will be employed to provide a temporal context for the site. For example, dendrochronological and radiocarbon samples can produce absolute dates of site use. Hearths or buried surfaces can potentially yield archaeomagnetic dates. Diagnostic artifacts, such as projectile points and sherds, may also be used to provide relative dates for the site.

Charcoal, wood, and organic samples will be taken from burned features and surfaces in order to obtain datable material. If hearths or features exhibit intense burning, archaeomagnetic samples will be taken. The dating of corn and faunal specimens may also be employed, if appropriate.

In order to establish cultural identity, diagnostic traits are often examined. There are certain characteristics that show up in this area that are usually considered to be Mogollon in nature. Broadly, these include the use of brown ware ceramics, square kivas, and masonry structures. Anasazi characteristics are identified by gray ware pottery, round kivas, and adobe structures. The greater the number of traits present on a site that matches one of the cultural groups, then supposedly the site is placed within that group. This is a simplistic approach; it virtually ignores the less

dominant assemblage and offers no explanation for the mixture.

In this region of Mogollon-Anasazi blending, we must look for explication of this existing duality of cultural diagnostics. We need to ask what it signifies and be open to several possibilities: (1) that there were migrations of people from both areas meeting at the same time in this frontier zone; (2) that the people were of one group but adopted traits of the other for political or socio-economic reasons; (3) that a local population selectively adapted cultural characteristics of areas to both the north and south.

Comparative Ceramic Analyses

A goal of the data recovery plan is to determine if LA 8112 is a part of the much larger PIII Hubbell Corner site. Because no absolute dates are available for the Hubbell site, associations must be primarily based upon a comparison of the ceramic assemblages and architectural features. All sherds from LA 8112 will be typed and numerous attributes monitored (see below). In addition to standard OAS analytical procedures, we will also document whether the ceramics present are Mogollon or Anasazi-derived in order to provide data for an examination of the relationship between the two cultural entities. Petrographic analysis of several sherd samples will aid in determining sources of the ceramics. Other excavated sites in the region that date to this same time period will also be used for comparative ceramic data.

Architectural Correlates

Site structure on the remaining portion of LA 8112 may be limited to external hearths and ramada areas, based on the results of the testing program. This will make comparisons with the Hubbell Corner site difficult but not impossible. Type of building material used, style of hearths or any manually constructed features, placement of features within the site, and any stylistic anomalies will be documented. A literature search of extant reports will also be conducted for comparative site structure data.

Important to an understanding of why a site is located where it is and for how long is an examination of the subsistence adaptations of the site occupants. Were resources expediently exploited and did food processing occur on the site? While such a study is not proposed as part of the data recovery plan, it is important for a comprehensive interpretation of the site and its function. Macrobotanical, palynological, and faunal material will be collected wherever possible, including from ground stone, hearths, storage pits, and structural fill. Samples will be submitted to professional analysts. The balance between utilized floral and faunal resources will also be examined as a key to understanding subsistence practices.

Length of site occupation may be determined from an examination of site structure, presence of seasonal resources, and from artifact analysis. A seasonal occupation might be evidenced by presence or absence of interior hearths, storage facilities, labor investment in structures, and types of resources recovered from the site. Repeated use of the site may be evidenced by ample storage facilities, overlapping features, reconstruction of hearths, and varying occupation levels.

As a result of excavation and analysis of LA 8112, it is possible that the site may prove to not be associated with the Hubbell Corner site. If this is the case, the data collected can also be used to define the site as a separate cultural entity.

EXCAVATION AND ANALYSIS PROCEDURES

Field Methods

Prior to excavation of LA 8112, the site will be mapped with an optical transit. A main datum will be reestablished from that used during the testing program. A 1-by-1-m grid system will be established. The main datum will be placed at the intersection of north-south and east-west baselines. Grids will be designated by north and east coordinates of their northwest corners. Elevation of the ground surface at each grid corner will be recorded with the transit in order to produce a topographic map of the site.

Hand tools, such as trowels, shovels, picks, brushes, dental picks, and soil augers, will be used during excavation. All excavation will take place within 1-by-1-m grids taken down in 10-cm arbitrary levels measured from below main datum, unless natural stratigraphy is encountered. If natural levels occur, these will be then be used. Excavation units will be placed initially within observed cultural features and those found by surface stripping. Grids will be expanded out from initial units to determine the full extent of any cultural features that might be encountered. Soil augers will be systematically placed every meter within the grid layout to investigate areas of the site where cultural features are not visible after surface stripping.

All fill will be screened through $\frac{1}{4}$ or $\frac{1}{8}$ -inch mesh. If small lithic flakes, debitage, or biface thinning flakes are observed during excavation at LA 8112, the $\frac{1}{8}$ -inch screen will be used; otherwise, standard $\frac{1}{4}$ -inch screen will be employed. Fill removed will be categorized in general descriptive terms, such as surface soil, general fill, feature fill, floor, and outside cultural surface. Each grid will be taken down until culturally sterile soil is encountered and no further cultural material is recovered. Soil augers will be used in each grid to ensure that sterile soil has been reached. A Munsell scale will be used to record soil color for each excavation unit.

All artifacts will be collected by grid provenience and level. Artifacts recovered from floors or other use surfaces will be mapped in place and bagged separately. Any features found will be photographed and plans and profiles drawn. A new transit map will be produced at the conclusion of excavations showing locations of all cultural features and extent of excavations. Samples for radiocarbon, macrobotanical, palynological, and dendrochronological analyses will be taken from all appropriate features and cultural strata.

The discovery of human remains during excavation is a possibility. Should they be uncovered, standard archaeological excavation techniques will be employed. These include the description of the burial locale, the use of small hand tools to expose skeletal materials, mapping and photographing of the skeleton and any associated grave goods, and retrieval of soil for pollen and coprolite analysis.

The field treatment of any human remains found and other sensitive cultural discoveries will be based on the Museum of New Mexico policy adopted March 20, 1986, "Collection and Display of Sensitive Materials" (SRC Rule 11; see Appendix 1). If human remains or other sensitive materials are uncovered, no person will be allowed to handle or photograph the remains except as part of scientific data recovery efforts. Photographs of sensitive materials will not be released to the media or general public.

Laboratory Analyses

Laboratory analyses will be conducted by the staff of the Office of Archaeological Studies and specialized professional consultants. When brought in from the field, artifacts will first be washed, sorted, and catalogued. Any remains that do not appear to be stable, will be treated in consultation with a conservator.

Ceramic Artifacts

To assign dates, function, and cultural affinity to the ceramic artifacts, a detailed analysis of the morphological attributes will be undertaken. Artifacts will be identified by existing type name, vessel and rim form, vessel diameter, paste texture and color, temper material, surface color and finish, slip, design type, thickness, presumed function, and presence of attributes such as burning, smudging, mending, or reworking. A binocular microscope will be used to facilitate the analysis. A sample of sherds of the major types will be submitted for petrographic analysis to determine general origins of the sherds.

Lithic Artifacts

Attributes that will be studied on the lithic artifacts include material type and texture, artifact type, breakage type, use, and presence of thermal treatment. Attributes that will be monitored on formal and informal tools include edge angle and shape, type of modification or wear. A binocular microscope will be used to identify retouch and wear patterns. Debitage will be examined for evidence of reduction strategy, reduction stage, platform type, percentage of dorsal cortex, platform lipping, and artifact portion. These studies should allow for an evaluation of reduction technology, tool production and use, and raw material procurement strategies. Comparison of lithic artifact data with sites in the nearby region may assist in the identification of specific manufacturing techniques and use patterns that may inform on varying subsistence strategies of the different cultural groups in the project area.

Faunal Remains

The faunal analysis will focus on the identification of species, age, and bone elements to assist in determining species used as food resources and portions used by the site population. Season of death for faunal remains will be determined for young species, if possible. Butchering and processing methods will be examined. We will also investigate the use of faunal materials as tools. Information from the faunal analysis will be used to aid in the determination of season of occupation on the site, hunting patterns and dependency, and subsistence strategies pursued.

Floral Remains

Floral remains will be identified by specific species when possible and compared with plant data from other sites to determine floral resources used by areal populations and site occupants in particular. It will also be used to help determine the season of use and subsistence strategy employed at the site. Plant types will identify whether domestication of cultigens was pursued.

Human Remains

The main goal of the skeletal analysis will be to add to the small database of prehistoric burials recovered from this area. The analysis will include standard metric studies, aging and sexing of the remains, and documentation of pathologies, particularly those related to food stress. If allowed, bone tissue samples will be submitted for DNA analysis to help delineate possible Mogollon or Anasazi lineage; however, no destructive analysis will take place without prior consultation with the proper parties.

Analytical Results

The final report will be published in the Museum of New Mexico's Office of Archaeological Studies *Archaeology Notes* series. The report will present the results of the excavations, analysis, and interpretation of the data. It will include photographs, site and feature maps, and data summaries. Field notes and maps, analytical data sheets, and all photographs will be deposited with the Archaeological Records Management Section of the State Historic Preservation Division located at the Laboratory of Anthropology in Santa Fe.

If human remains (including any associated burial goods) are recovered, their disposition will be based on consultation carried out in accordance with federal regulations. No disposition of the remains will be completed until the wishes of the nearest Indian community, Zuni, are known. If no disposition is established through the consultation process, the remains will be submitted to the Museum of New Mexico Repository for physical storage at the Department of Anthropology, University of New Mexico. Remaining artifacts will be submitted to the Archaeological Repository for physical storage.

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APPENDIX 1. REGULATIONS FOR THE ISSUANCE OF PERMITS TO EXCAVATE
UNMARKED HUMAN BURIALS IN THE STATE OF NEW MEXICO.

APPENDIX 3. CURRICULUM VITAE