

**MUSEUM OF NEW MEXICO**

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**OFFICE OF ARCHAEOLOGICAL STUDIES**

**NM 150-NM 522 INTERSECTION: ARCHAEOLOGICAL TESTING AND A DATA  
RECOVERY PLAN FOR LA 53678, TAOS COUNTY, NEW MEXICO**

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**ARCHAEOLOGY NOTES 174**

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## ADMINISTRATIVE SUMMARY

Between March 20 and 24, 1995, the Office of Archaeological Studies, Museum of New Mexico, conducted archaeological test investigations at LA 53678. The site is located at the northwest corner of the intersection of NM 150, NM 522, and U.S. 64, northwest of Taos, Taos County, New Mexico. Test excavations were conducted at the request of William L. Taylor, New Mexico State Highway and Transportation Department, in preparation for planned realignment of the intersection, and authorized by State of New Mexico Archaeological Excavation Permit No. SE-106.

Site mapping revealed the presence of an abandoned two-track road, a small gravel mound, a concentration of prehistoric artifacts, and two concentrations of historic artifacts. The four features are within project limits. Auger testing at the gravel mound showed that it has little actual depth. Although several artifacts were found along its north and west margins, the mound is probably the remains of a gravel pile associated with highway construction, perhaps in 1938. Consequently, no additional work is recommended at this feature. Auger testing and test excavations in the prehistoric artifact concentration revealed buried artifact-bearing deposits and a possible feature. The two historic artifact concentrations appear to represent a domestic trash dump and a possible shepherding camp. Diagnostic artifacts suggest that both concentrations date between 1920 and 1930. We recommend a program of data recovery investigations at LA 53678 focusing on the prehistoric artifact concentrations and the historic artifact concentrations.

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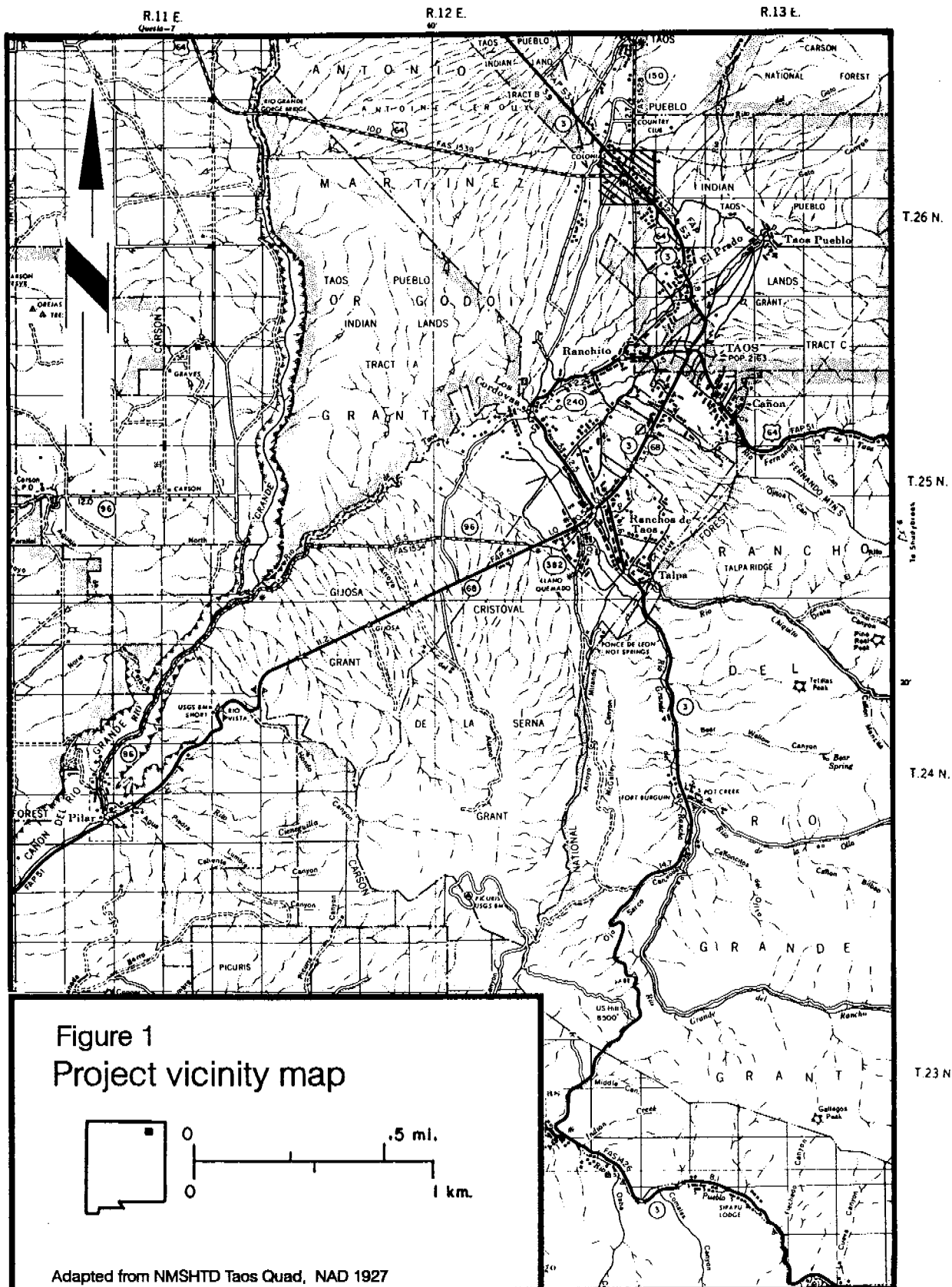
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## INTRODUCTION

Between March 20 and 24, 1995, the Office of Archaeological Studies (OAS), Museum of New Mexico, conducted archaeological test investigations at LA 53678. The site is located at the northwest corner of the intersection of NM 150, NM 522, and U.S. 64, northwest of Taos, Taos County, New Mexico (Fig. 1). Test excavations were conducted at the request of William L. Taylor, New Mexico State Highway and Transportation Department, in preparation for planned realignment of the intersection, and authorized by State of New Mexico Archaeological Excavation Permit No. SE-106. Jeffrey L. Boyer acted as project director and was assisted in the field by Marcy Snow and John Zackman. Timothy D. Maxwell, OAS director, served as principal investigator.

The location of LA 53678 is given in Appendix 1, which has been removed from copies intended for public distribution.



## THE NATURAL ENVIRONMENT

### Geomorphology

The project area lies on the eastern side of the Taos Plateau, a broad region bounded on the west by the San Juan Uplift (the San Juan and Tusas Mountains) and on the east by the Sangre de Cristo Mountains. The plateau is formed by block-faulting along the Río Grande Rift that resulted in the wide Río Grande Depression, or Trough. Accumulation of volcanic and sedimentary materials in the trough produced the Santa Fe formation, consisting of a variety of gravels, sandstones, volcanic rocks, breccias, cherts, and clays. Much of the area is capped by volcanic rock, primarily basaltic flows, which are a major and obvious feature of the region (Heffern n.d.). In New Mexico, the plateau is known as the Taos Valley, while in Colorado it is called the San Luis Valley. The rolling terrain of the plateau is bisected by the Río Grande, which has cut a gorge up to 198 m (650 ft) deep through the accumulated material. To the west of the gorge, the area is dotted by volcanoes. To the east, it is characterized by broad alluvial fans and terraces from the Sangre de Cristo Mountains, although volcanic features such as Ute Mountain, Guadalupe Mountain, the Questa caldera, Cerro Negro, and associated basalt flows are present where they have not been covered by alluvial material.

The Sangre de Cristos are the southernmost extension of the southern Rocky Mountains and are made up largely of granites, schists, and quartzites. Ranging in elevation from 2,133 m (7,000 ft) in the southern Taos Valley near Taos to 3,997 m (13,120 ft) at Wheeler Peak, the Sangre de Cristos in the vicinity of this project are the source of the Río Hondo, the Arroyo Seco, the Río Lucero, the Río Pueblo, and the Río Fernando de Taos. These rivers and numerous intermittent drainages that cut the alluvial fans are tributaries of the Río Grande, which flows south through the central valley about 12.9 km (8 mi) west of the project area. Subsequent to the vulcanism of the early Pleistocene, geologic processes in the region shifted to a period of extensive erosion during the late Pleistocene. The erosion resulted in the formation of the large alluvial fans extending into the valley along the margins of the mountains. LA 53678 is on one of these fans, extending southwest from the mouth of the Río Lucero Canyon. The site is on a low ridge between the Arroyo Seco floodplain and the vegas along the west side of the Río Lucero floodplain.

The major geological features--the Santa Fe formation, the volcanoes, and the basalt flows--are important culturally because they have provided raw lithic materials for the region's prehistoric and historic inhabitants. Of specific importance are sandstone, chert, and quartzite from the Santa Fe formation gravels and basalt and obsidian from the volcanic features. The basalt flows from Cerro Negro and other cones were important sources of basalt, while No Agua Mountain, on the western side of the valley, provided a poor-quality obsidian (see Michels 1985). Soil accumulation along drainages has provided an important source of clay used for pottery manufacture and building material. However, little study has been focused on clay sources. Hill (1994) identified clay sources used for manufacture of both painted and "plain" gray pottery in the Río Grande del Rancho Valley. Boyer et al. (1994) studied the use of on-site soils for adobe manufacture at two Valdez-phase pithouses in the Río Grande del Rancho Valley. M. Boyer (1992) studied the adobe from a late nineteenth- to early twentieth-century house and root cellar in Talpa, south of Taos.

## Climate

The Taos Valley is semiarid. Cordell (1978:89, Map 6) shows the mean annual rainfall to be 310 mm (12.24 in) at Taos. This agrees with Maker et al. (1974:7), who list the annual rainfall in Taos as 320 mm (12.55 in) and Gabin and Lesperance (1977:390), who record mean annual precipitation as 316.5 mm (12.5 in), with about 29 percent coming from winter snows and 28 percent from the July-August rainy season. Variability from these figures is high, however, ranging from < 30 percent to > 50 percent in any given year (Cordell 1978:Map 6).

Maker et al. (1974:7) record the mean maximum temperature in Taos as 15.5 degrees C (60 degrees F), while the mean minimum is -0.5 degrees C (31 degrees F). Mean annual temperature is 8.5 degrees C (47.3 degrees F), with monthly means ranging from 3.9 degrees C (25 degrees F) in January to 20 degrees C (68.1 degrees F) in July. Cordell (1978:Map 2) shows the effective temperature in the region as 11.7 degrees C, making it one of the coolest areas in the state. Taos has about 140-145 days of growing season, with recorded annual variability ranging from < 15 to > 20 days (Cordell 1978:71; Maker et al. 1974:7). This figure is generally more than adequate for subsistence agriculture, supporting the contention of Greiser et al. (1990:5) that length of growing season is not and was not a significant limiting factor in prehistoric or historic agriculture. Rather, they point to a study conducted at Picuris Pueblo (Ford 1977) that suggests that corn needs about 533 mm (21 in) of water during its growing season, while the local precipitation is just over half that amount, and conclude that water availability is the primary limiting factor (see also Boyer et al. 1994a; Boyer 1993a).

## Soil and Plant Communities

The soil at LA 53678 is Silva loam (Hacker and Carleton 1982:52). This deep, well-drained soil is formed in mixed alluvium and eolian sediments on upland ridges and fans. The upper 12 to 13 cm (5 in) is a brown loam, while the subsoil is brown clay loam, typically about 63 cm (25 in) thick. The pink clay substratum reaches to a depth of 1.5 m (5 ft) or more. When well managed, these soils will support a grassland community of western wheatgrass, blue grama, and galleta. When poorly managed, the grassland is replaced by a brush community of big sagebrush, snakeweed, rabbitbrush, and cacti, which characterizes the area today.

## THE CULTURAL ENVIRONMENT

The following discussion is intended to provide a general background of the prehistory of the project area and the results of archaeological projects in the area. Because LA 53678 has Anasazi and historic components, this discussion is limited to the Puebloan and Historic periods. The reader is referred to Cordell (1978), Stuart and Gauthier (1981), and Young and Lawrence (1988) for more detailed regional syntheses that include the prehistoric periods. Syntheses that place Taos within the historic context of the Southwest are provided by Weber (1979, 1982) for the Spanish Colonial (1540-1821) and Mexican (1821-1846) periods and Lamar (1970) for the American Territorial period (1846-1912).

### Puebloan Period (ca. A.D. 1100-1500)

Most discussions of the Puebloan period in the Taos region stress the paucity of Basketmaker and early Puebloan sites (see Cordell 1978). Remains from Basketmaker and early Puebloan periods (Basketmaker II and III, Pueblo I in the Pecos classification; late Preceramic and early Developmental in the Río Grande classification) are identified only by isolated projectile points or projectile points on nonstructural sites. While Woosley (1980, 1986) discusses the Developmental period in Taos prehistory, no structural/habitation sites have been chronometrically dated to the first three-quarters of the period (A.D. 600-1050).

The earliest phase of the Puebloan period identified in the Taos area is called the Valdez phase. This phase is commonly dated to ca. A.D. 1000-1200 by the presence of Taos Black-on-white pottery, which has been dendrochronologically cross-dated to A.D. 900-1200 (Wetherington 1968; Green 1976). Crown (1990) suggests that the phase may date between A.D. 1050 and 1200, although only five Valdez-phase sites have chronometric dates before A.D. 1100. Boyer (1994a) summarizes chronometric dates from Valdez-phase sites and offers dates of A.D. 1100 to 1225 for the phase. A recent, as yet unpublished archaeomagnetic date of A.D. 1040-1080 has been obtained from a Valdez-phase site near Lobo Creek north of this project area (Daniel Wolfman, personal communication, 1994). This represents the earliest securely dated Anasazi site in the Taos Valley and supports Crown's dates.

Most sites from this phase consist of pithouses, sometimes with associated surface work areas and/or surface rooms of jacal construction (Luebben 1968; Loose 1974; Green 1976; Cordell 1978:36; Woosley 1980:8; Boyer 1994a). However, several apparently small pueblo sites have been assigned to the Valdez phase because of the predominance of Taos Black-on-white pottery (Nelson 1986; Boyer 1991, 1994b), and Boyer and Mick-O'Hara (1991) found that Taos Black-on-white was dominant at the very large El Pueblito site (LA 12741) in Arroyo Hondo. In the southern portion of the Taos area, pithouses are predominantly round (Luebben 1968; Green 1976), while those in the northern Arroyo Seco-Arroyo Hondo area are predominantly square or rectangular (Loose 1974). Greiser et al. (1990) suggest a possible correlation between this pattern and Taos Pueblo traditions that tell of different groups of people inhabiting the northern and southern parts of the valley prior to the aggregation that resulted in the formation of Taos Pueblo. Boyer (1994a, 1994c) has studied Valdez-phase site structure and artifact assemblages and defined two large "communities" of Valdez-phase sites corresponding to the different distributions of round and square pithouses in the valley. The organizational structure(s) of these communities are as yet undefined. They appear to consist of scattered farmsteads. The significance of Valdez-phase pueblos in community structure is unknown, because only two have been excavated (Loose



1974; Green 1976). Associated ceramic types include Taos Black-on-White, and a plain, incised, or neck-banded gray or brownware known as Taos Gray. Differences in relative frequencies of Taos Black-on-white and Taos Gray sherds from sites in the north and south communities, as well as differing frequencies of ground and chipped stone tools, support Boyer's (1994a, 1994c) community definitions.

The next phase in the Taos area is the Pot Creek phase, commonly dated to A.D. 1200-1250 by the presence of Santa Fe Black-on-White, a carbon-painted ware. Crown (1990) suggests dates between 1225 and 1260 or 1270, based on tree-ring dates from Pot Creek Pueblo. The beginning date for this phase is supported by chronometric dates from Valdez-phase sites (Boyer 1994c). The Pot Creek phase was characterized by population aggregation in numerous small "unit pueblos." If Boyer's definition of Valdez-phase communities is accurate, then the Pot Creek phase represents a significant change in Anasazi community structure in the region rather than a simple evolutionary scenario. The nature of this change has not yet been examined. Examples of Pot Creek-phase pueblos have been recorded in the Arroyo Seco, Arroyo Hondo, Arroyo Miranda, and Pot Creek-Río Grande del Rancho areas, although only two sites and part of a Pot Creek-phase component at Pot Creek Pueblo have been excavated (Jeançon 1929; Vickery 1969; Ottaway 1975; Wetherington 1968). In this phase, kivas are perhaps first present at some sites, although Adler (1993) suggests that some pithouses served as domestic and "religious" structures during the Valdez phase. During the Pot Creek phase, Taos Black-on-white was partially replaced by Santa Fe Black-on-white as the characteristic painted ware of the ceramic assemblage. Incised and neck-banded Taos Gray was replaced by a corrugated variety.

The Talpa phase is dated to A.D. 1250-1350 by the presence of Talpa Black-on-white, perhaps a local variety of Santa Fe Black-on-white. Crown (1990) suggests beginning dates of 1260 or 1270. During this phase, population aggregation continued, apparently at the expense of the earlier small pueblos. The phase is known only from excavations at Pot Creek Pueblo, a large site first occupied in the Valdez phase that grew to perhaps 300 ground-floor rooms during the Talpa phase (Wetherington 1968). This trend of population aggregation and site growth may have set the stage for the establishment of the large pueblos at Cornfield Taos and Old Picuris. The end of the phase is established by the abandonment of Pot Creek Pueblo, which Wetherington (1968) assumes to have occurred by 1350 because neither biscuit nor glaze ceramics are present at the site. Crown (1990) places the abandonment of Pot Creek Pueblo in the early 1320s on the basis of tree-ring dates.

The final phase in the prehistoric Puebloan period is unnamed but corresponds to Dick's (1965) Vadito phase, which he dated to A.D. 1375-1500 from excavations at Old Picuris. These years are approximately those given by Ellis and Brody (1964) for the occupation of Cornfield Taos. Several other sites in the Taos area apparently date to this phase on the basis of polychrome and glazed ceramics. Like the preceding phase, the sites are generally large, although some smaller sites are known. Cornfield Taos is considered to be directly ancestral to Taos Pueblo. On the basis of ceramics, Ellis and Brody (1964) feel that Cornfield Taos was first occupied about A.D. 1300 or 1350 and abandoned about A.D. 1450, when Taos Pueblo was perhaps first occupied. Taos Pueblo is still occupied (see Boyer 1986; Greiser et al. 1990).

#### Historic Period (A.D. 1500-present)

The presence of historic Plains Indian groups in the area is recorded in early historic Spanish documents as well as in the archaeological record. Spielmann's (1983) research indicates that economic

interactions between Plains and Pueblo Indians were relatively minor prior to the late fifteenth century, but increased considerably after this time. Archaeologically, this is reflected in a relative paucity of materials indicative of Puebloan use of plains resources at Pot Creek Pueblo (Girard 1986:11). Bison bones are present from the site, and John Speth has told me that chemical analyses may demonstrate that they were obtained from the Taos Plateau. Certainly by the time of Spanish contact in 1540, the Indians of Taos Pueblo had established relations with Jicarilla Apaches, Kiowas, Utes, and other groups, facilitated by annual trade fairs at the pueblo. Girard (1986:11) notes:

Apachean groups from the Plains (Querechos, Vaqueros) regularly visited Taos Pueblo at the time of initial Spanish contact and there is some indication that some Apachean groups (Quinia Apaches, Apaches del Acho) may have resided permanently in the Taos area during the 17th century. Comanche attacks drove the Jicarilla Apaches eastward from the Cimarron area into the Sangre de Cristo Mountains during the 1720's. Some Jicarillas settled in the mountain valleys between Taos and Picuris.

Cordell (1978:121-129) suggests that the important late historic research questions in the region are concerned with four issues: the development of Hispanic settlement, the use of the region for subsistence and commercial pastoralism, the introduction and development of logging and logging railroads, and late nineteenth- and early twentieth-century mining activities.

The increasing presence of Spanish culture in northern New Mexico produced dramatic changes in land use and the cultural and economic fabric of the region (see Cordell 1978:103; Cordell 1979:150-151). The Spaniards brought to the region a different religion, social organization, and economy, including domestic animals and new plant foods, as well as preconceptions about the lives of the native inhabitants. First seen by the Spaniards in 1540, the pueblo of Taos became the location of a Franciscan mission in the early 1600s, and a community of Spanish settlers began to grow. The settlers first lived just outside the pueblo walls for security, but soon moved out into the valley (Jenkins 1966). Pratt and Snow (1988:220) contend that prior to the late 1700s, the dominant Hispanic settlement pattern in northern New Mexico was one of scattered ranches. This pattern changed to plaza-centered communities in the late eighteenth century, resulting in formal plazas at Taos, Los Cordovas, and Las Trampas de Taos, a community now known as Ranchos de Taos. In 1778, Fray Juan Agustín de Morfi observed that the settlers still preferred to live in isolation, a situation which he deplored and contrasted unfavorably with the "well-ordered" pueblos (Simmons 1977:14). Simmons (1969) states that in 1778, Teodoro de Croix ordered Governor Anza to force the settlers into compact settlements, and that progress toward that end was being made by the following year. However, Pratt and Snow argue that the pattern observed by Fray Morfi continued to be the norm. Detailed studies of Colonial-period Spanish sites in the Taos area have not been carried out, and so there is no local body of data to contrast with Spanish sites in the Río Chama, Cochiti Reservoir, and Santa Fe areas. While recent reviews of historic structures in Taos (Boyer 1992, 1993b) have illuminated patterns of growth of that community in the late nineteenth and twentieth centuries, there are no studies of late historic rural sites to provide contrasting information on the expansion of homesteads, farms, and ranches in the region. Archaeological and ethnohistoric investigations at the Vigil-Torres site (LA 77861) near Talpa may provide some perspective on rural sites (Boyer and Goodman n.d.).

"Anglos" began moving into the area in the early 1800s, and Taos became a central location for a group of independent mountain men and trappers known as the "Taos Trappers" (Weber 1968). Because of the presence of the trappers, Taos was also an important center for merchants and traders and an important port for merchandise in the Santa Fe trail trade.

Archaeological remains apparently associated with pastoral activities have been recorded on the floor of the Taos plateau, in the mountains west of the valley between Tres Piedras and Tierra Amarilla, and in the Tres Ritos Hills. On the plateau floor, sheepherding camps tend to be seen as scatters of artifacts, primarily steel food and tobacco cans, occasionally with small clearings in the sagebrush and rock structures that may have been pens (Boyer 1983, 1984, 1985a, 1988, 1994d). Since the herders used wagons and/or tents, habitation structures are not known. Warm-weather camps in the mountains are marked by carved aspen trees near large meadows (DeKorne 1970). The carvings usually consist of Hispanic personal and place names and dates in the warm months (May through September) of the 1900s through the 1930s. The recurrence of names with dates from succeeding years indicates the continuing use of areas, and differential distribution of names indicates territoriality in pastoral land use (Boyer 1987; McGraw and Curry 1994a, 1994b).

## PREVIOUS RESEARCH IN THE AREA

In 1978, archaeologists with the New Mexico State Highway and Transportation Department and the Museum of New Mexico recorded a Valdez-phase pithouse site, LA 16829, near the Jaramillo gravel pit in Las Colonias, 0.7 km (0.4 mi) west of NM 150. The site was located at the edge of the western terrace overlooking Arroyo Seco. In 1982, Boyer (1982) recorded a small Pot Creek-phase pueblo, LA 37627, at the edge of the eastern terrace overlooking Arroyo Seco. Three years later, Boyer (1985b) recorded a Valdez-phase site, LA 52243, at the Tarleton gravel pit. The site was on the edge of the western terrace above Arroyo Seco. A radiocarbon sample from the site yielded a date of A.D. 1200  $\pm$  80 years (Moore 1986).

In 1986, the New Mexico State Highway and Transportation Department undertook a survey for the proposed Taos Relief Route following Blueberry Hill Road (Nelson 1986). Thirteen sites were recorded on the proposed route between NM 240 in Lower Ranchitos and the intersection of U.S. 64, NM 522, and NM 150. They included one prehistoric artifact scatter (LA 53679), one Valdez-phase artifact scatter (LA 53680), five Valdez-phase structural sites (pithouses: LA 53683, 53687; pueblos: LA 53681, 53684, 53686), one Pot Creek-phase pueblo (LA 53682), one Valdez/Pot Creek-phase structural site (LA 53685), one possible Apachean artifact scatter (LA 53679), and three historic structural sites (Spanish Colonial: LA 53688; Territorial: LA 53690; Territorial/Statehood: LA 53689). In addition to these sites, LA 53678 was recorded at the northwest corner of the intersection of U.S. 64, NM 522, and NM 150. In 1992, a survey was conducted for the planned Las Sierras de Taos development (Heuett 1992). The survey area included two parcels within the Arroyo Seco floodplain as well as portions of Blueberry Hill Road and Las Colonias Road. Along Blueberry Hill Road, the surveyors relocated sites LA 53684 through LA 53689 and recorded one other site, LA 87853, described as a Valdez-phase artifact scatter. Along Las Colonias Road, they recorded two sites. LA 84675 is described as a Valdez-phase artifact scatter. LA 84957 is a scatter of late nineteenth to early twentieth-century artifacts. The Las Sierras survey did not record any sites within the Arroyo Seco floodplain. In 1993, Boyer (1994b) conducted a second survey of Blueberry Hill Road. In addition to the sites recorded by Nelson and Heuett, Boyer recorded four Valdez-phase structural sites (LA 102303, LA 102304, LA 102306, LA 102307), three Valdez-phase artifact scatters (LA 102300, LA 102302, LA 102305), one Valdez/Pot Creek-phase artifact scatter (LA 102299), one undated prehistoric artifact scatter (LA 102301), one prehistoric-historic structural site (LA 102308), and a long segment of the Acequia de Juan Manuel (LA 102681).

In 1991, Boyer (1991) surveyed 0.3 km (0.2 mile) of NM 150 north of its intersection with NM 522. He recorded the location of a Valdez-phase artifact scatter (LA 87504). He also relocated LA 53678, recorded by Nelson. In 1993, Bertram (1993a) surveyed the proposed reconstructions of the intersections of NM 150, NM 522, U.S. 64, and Millicent Rogers Road. He attempted to relocate LA 53678 but was able only to find a few sherds. He concluded that artifact collection may have removed much of the surface evidence of the site since it was recorded in 1986. In 1994, Levine (1994) surveyed NM 150 from its intersection with NM 522 to the village of Arroyo Seco. Like Bertram, she was not able to relocate LA 53678 but did record a portion of Acequia de Juan Manuel north of the highway intersection (LA 105097).

Heuett's (1992) Las Sierras survey also included a parcel of land bounded on the west by Blueberry Hill Road and on the east by Millicent Rogers Road. Within that parcel, the surveyors relocated LA 53679, recorded by Nelson (1986) as a possible Apachean site. In addition to the micaceous

sherds observed by Nelson, the Las Sierras surveyors recorded prehistoric sherds and a possible pithouse depression that had recently been vandalized. Three other sites were recorded in the area. Two, LA 84672 and LA 84674, are described as sites of "cyclical domestic dumping" during the early to mid twentieth century. The third site is a Valdez/Pot Creek-phase structural site (LA 84673). Bertram's (1993a) survey of the proposed Millicent Rogers Road realignment did not record any sites. However, after that realignment was redesigned, Marshall (1994) recorded a Valdez-phase artifact scatter (LA 103055) at the edge of a gravel pit. The pit, which dates to 1938, may have removed the structural portion of the site if such existed. Test excavations at LA 103055 failed to record any prehistoric features or deposits within the realignment project limits, although two possible prehistoric rock piles were recorded. Several historic features and two historic houses were also recorded as part of the site (Boyer in prep.)

In 1988, the Taos Archaeological Society recorded two petroglyph sites along the lower Arroyo Seco and several others in the vicinity of Los Cordovas.

Clearly, the surveys conducted in the vicinity of this project area have recorded numerous sites of a variety of types and time periods. Most are Valdez-phase Anasazi sites, both structural and nonstructural. Some later prehistoric sites and several historic sites are also known. Site distributions suggest that most sites are along the edges of the terraces above floodplains and vega areas. Site density along Blueberry Hill Road overlooking the Arroyo Seco floodplain is remarkable, and the locations of sites near Millicent Rogers Road suggest that site density along the terrace overlooking the Río Lucero vegas may also be high.

## PREVIOUS RESEARCH AT LA 53678

Nelson (1986) recorded LA 53678 as a 74 by 78 m scatter of prehistoric and early historic artifacts. He noted the presence, through the approximate center of the site, of a "linear" arrangement of prehistoric artifacts some 50 by 10 m running roughly southeast to northwest. At the southeast end of this linear area was a small concentration of artifacts, which Nelson did not describe further. He observed Santa Fe and Talpa Black-on-white sherds, Taos Gray incised sherds, and two basalt flakes, one of which was apparently utilized. On the south side of the site along the NM 522 (formerly NM 3) right-of-way boundary, Nelson recorded a "pot drop" of 30 to 35 Peñasco Micaceous sherds. He also observed the presence of several "single-sequence dumps" from the A.D. 1950s or 1960s and a few scattered fragments of amethyst glass. Nelson speculated that the lack of features, the linear arrangement of most of the artifacts, and the time depth represented (he estimated ca. A.D. 1200 to 1600+) could be used as evidence that the site was the location of a trail.

In 1993, Bertram resurveyed the site area for the planned realignment of the NM 150-NM 522-U.S. 64 intersection. In his report (Bertram 1993a:12), he states:

Within the area of Site LA 53678, only three plain white-ware sherds were found, probably either Santa Fe or Talpa Black-on-white, based on their crackled slip. Also noted within the site area were two large concentrations of cans and glass. These had some examples of technology used both before and after A.D. 1945 but no definite diagnostics for pre-war production; they were therefore not recorded in detail. A sparse, generalized scatter of similar recent trash extends over the entire reported area of the site. No collections were made.

He concluded that most of the artifacts observed by Nelson had probably been collected in the intervening years (Bertram 1993a:13). In his proposed testing plan for the site (Bertram 1993b), however, Bertram ascribed the lineal arrangement observed by Nelson to a possible trail or acequia, presumably abandoned in either case.

As noted above, Levine (1994) was not able to relocate LA 53678 during her survey of the existing NM 150 right-of-way. She speculated that this had to do with thick vegetative cover (Levine 1994:4), although she told me that her survey area was restricted to the existing right-of-way and did not include the proposed realignment area.

## TESTING PROCEDURES

### Field Procedures

Bertram (1993b) prepared a testing plan for LA 53678 based on the need for site definition, since he did not relocate the artifacts or features observed by Nelson (1986). His testing plan included up to six hand-excavated test units, up to 91 auger tests, and three backhoe test trenches to search for subsurface remains. In applying for our testing permit, we also submitted a testing plan patterned after a plan entitled *Testing and Site Evaluation Proposal* (HPD Log No 43648), prepared for the New Mexico State Highway and Transportation Department by the Office of Archaeological Studies. Alterations were made to the plan as appropriate for this project. Following are the procedures employed in archaeological testing at LA 53678.

Test excavations at LA 53678 focused on (1) determining whether artifacts and possible features originally recorded at the site are still present and (2), if they are still present, searching for subsurface deposits or features within the realignment project limits. The locations of surface artifacts were identified using pinflags. This activity revealed the presence of a prehistoric artifact concentration and two historic artifact concentrations, as well as an abandoned road and a gravel mound with artifacts on its west and north sides. The site was mapped with transit and stadia rod. All features, including artifact concentrations, were located on the site map.

A primary site datum, Datum A, was placed outside project limits north of the proposed realignment of NM 150. Designated 150N/100E, this datum was used to establish a grid network across the site. Subdatum B (100N/100E) was placed within project limits on the west side of the prehistoric artifact concentration. Subdatum C (60N/112E) was placed on the west side of the gravel mound.

Testing began with two perpendicular lines of auger tests within the prehistoric artifact concentration and two perpendicular lines of auger tests at the gravel mound to search for evidence of subsurface remains. In the prehistoric artifact concentration, 10 auger tests were placed at 4 m intervals along the 100N and the 112E grid lines. Based on the results of these tests, eight additional auger tests were placed at 1 and 2 m intervals in the west half of the concentration. All fill from the auger tests was examined for artifacts, charcoal, and other possible cultural or culturally related materials. Based on the results of auger testing, three 1 m by 1 m test units were excavated by hand in the prehistoric artifact concentration. The units were excavated in 10 cm levels until sterile soil was reached. All fill was screened, and all artifacts were collected. Profiles of the excavation units were drawn. Samples of charcoal were collected for species identification and possible radiocarbon dating. Soil samples from a possible hearth were collected for flotation analysis.

Ten auger tests were also placed at 4 m intervals along the 60N and 128E grid lines at the gravel mound. Based on the results of these auger tests, no additional testing was conducted at the gravel mound. Surface artifacts on and near the gravel mound were piece-plotted.

No mechanical equipment was used during testing at LA 53678.

## Laboratory Procedures

Because we are recommending additional data recovery investigations at LA 53678, the artifacts and other materials collected during testing have not been subjected to intensive analysis. Artifacts were returned to the laboratory, cleaned, and repackaged for later analyses. Sherds were sorted by established type descriptions and counted. Lithic artifacts were identified by material and artifact types and counted. They will be examined more intensively during the analysis phase of the data recovery investigations. Charcoal and soil samples will not be examined until the analysis phase of the data recovery investigations.



## TESTING RESULTS

LA 53678 is a large site measuring about 148 m northwest-southeast by 103 m northeast-southwest (Fig. 2). The proposed realignment of NM 150 bisects the site from northeast to southwest. The site has a prehistoric component represented by a concentration of sherds and chipped stone flakes surrounded by a very light scatter of similar artifacts. The concentration, whose location corresponds to that recorded by Nelson, is in the south-central portion of the site within proposed project limits and measures about 18 by 15 m (approximately 214 sq m). Taos Black-on-white and Taos Gray plain and incised sherds are present and make up most of the assemblage. These types suggest an occupation during the Valdez phase of the Río Grande Developmental period, ca. A.D. 1050/1100 to 1225. No sherds identifiable as Santa Fe or Talpa Black-on-white were observed or collected. A few basalt flakes are present but make up a much smaller part of the assemblage. Prior to testing within the concentration, a count of surface artifacts marked by pinflags was made. A total of 158 pinflags were counted in the concentration. Since some pinflags actually marked the locations of more than one artifact, and since we observed many more surface artifacts after completing the count, the surface artifact count came to well over 200. Most of the artifacts within project limits are associated with this component. While we were able to verify the location of Nelson's artifact concentration, we could not verify his description of a linear arrangement of artifacts northwest of the concentration. Our site investigation suggests that artifacts are randomly scattered north and west of the concentration.

LA 53678 also has a historic component represented by two small concentrations of historic artifacts, an abandoned two-track road, and a gravel mound. These features are also within proposed project limits. The two artifact concentrations probably correspond to those observed by Bertram. Both are along the east side of the site. One, at the southeastern edge of the site, measures 7.5 by 4 m. Several hundred artifacts are present. They include condensed milk cans in sizes suggesting they date before 1932 (Fontana and Greenleaf 1962:75), premodern, nonribbed food cans, lard cans, sardine cans, one spice (pepper?) can, beverage cans, liquor bottle fragments, one soda bottle, undecorated Euroamerican whiteware plate and cup sherds, a kitchen strainer handle, oil or kerosene lamp parts, fragments of a white glass vessel, and aqua-green window glass fragments. The diversity of items from household contexts suggests that the concentration represents domestic trash deposition. None of the cans, including the milk cans, have soldered seams, showing that they date to the twentieth century. I observed no amethyst glass, suggesting a date after about 1920. I also observed little or no post-1930 clear glass. However, I observed several "clear" bottle fragments that seem to have a slight yellowish color and may be "honey" glass, dating between about 1918 and 1930. The beverage cans, including at least one opened with a triangular punch, date between 1935 and about 1960. Taken together, the artifacts seem to date to the early to mid 1930s and perhaps later. No subsurface testing or in-field artifact analysis was undertaken at this concentration.

The second historic artifact concentration is at the northeast corner of the site. It measures about 5 by 3.5 m and has a much smaller assemblage, including lard cans, sardine cans, a ham can, a solder-seam meat can, a 1 lb. coffee can, a tobacco can, a baking powder can lid, a few nonribbed food cans, liquor bottle fragments, an enameled pan, a rubber shoe heel, two stove pipe joints, a fuel can, and an undecorated Euroamerican whiteware sherd. The smaller assemblage, with less diversity than that of the larger concentration, suggests that this concentration was not a domestic trash dump. The assemblage resembles those of sites in the Taos Valley tentatively identified as sheepherding camps dating to the early twentieth century (Boyer 1983, 1984, 1985a, 1988, 1994d). At this level of investigation, dates for this assemblage are more difficult to estimate than those of the larger concentration. However, the nonribbed

food cans and the solder-seam meat can suggest a date in the early twentieth century, perhaps before 1930. No subsurface testing or in-field artifact analysis was undertaken at this concentration.

The abandoned road bisects the southern half of the site, running from southeast to northwest. It disappears near the center of the site. Interestingly, Nelson (1986) recorded an abandoned road running southwest to northeast through the northern part of the site. We did not observe that road during our investigations. If it was present, it would have intersected the road we observed near the northern side of the site. Although we cannot say with certainty, it is possible that the two roads represented northern extensions of Blueberry Hill Road (the old Los Cordovas-Arroyo Seco road) and Millicent Rogers Road (formerly known as La Cuchilla Road). Ethnohistoric interviews with long-time landowners in the area, such as Mr. J. J. Montoya, whose family has owned adjacent land for well over 100 years (see Boyer n.d.), might confirm or deny this tentative identification of the abandoned roads. The location of the abandoned road recorded during testing mirrors that of the linear artifact scatter observed by Nelson; we could not confirm that artifact locations followed the road.

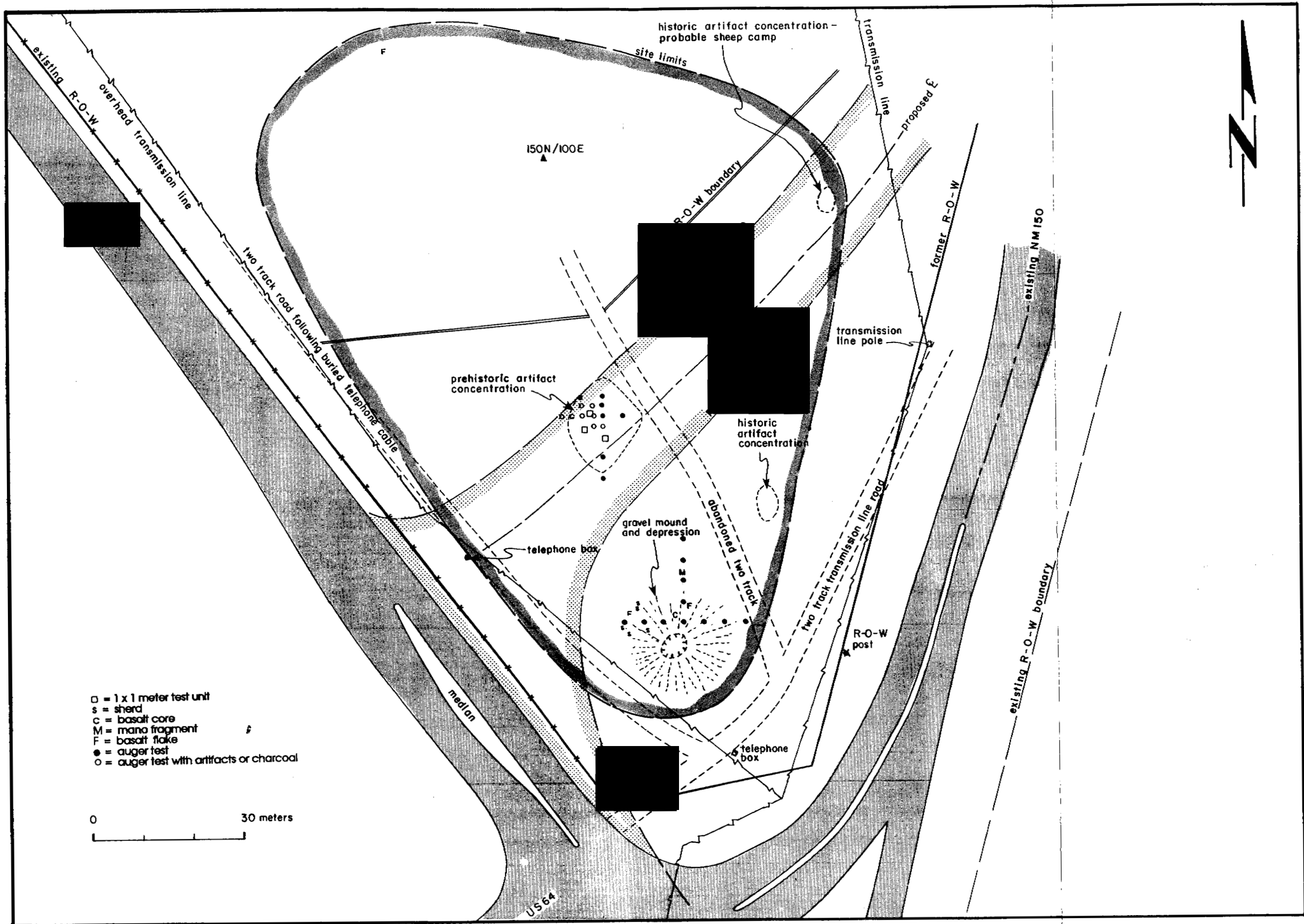
At the southern end of the site is a low gravel mound 19 to 20 m in diameter and 0.5 m high. A hole 5 to 6 m in diameter and 0.5 m deep is present in the top of the mound. On the north and west sides of the mound, several artifacts were piece-plotted. They include five sherds, two basalt flakes, one basalt core, and a possible mano fragment. Of the sherds, only one is prehistoric. The others are polished brown sherds, probably from the lower portion of a historic Tewa vessel.

Like Bertram, we were unable to relocate the Peñasco Micaceous sherds thought by Nelson to represent a "pot drop."

North of the prehistoric artifact scatter are several late historic-early modern (ca. 1930-1960) trash dump locations. They are not included within the site boundaries as seen in Figure 2 but may correspond to the "handful of single-sequence dumps, mostly from the 1950s and 1960s" observed by Nelson (1986). Figure 2 shows that they are well outside the proposed project limits.

#### Prehistoric Artifact Concentration

As discussed above, 10 auger tests were placed at 4 m intervals in two perpendicular lines through the prehistoric artifact concentration. Based on the results of those tests, eight additional auger tests were placed in the west half of the concentration. Table 1 shows the results of these auger tests. Of the 18 tests, one yielded a single sherd, and seven yielded combinations of charcoal, possible ash-stained soil, and possible burned soil. These materials were collected at the base of and below the loamy topsoil at depths ranging from 10 to 92 cm below modern ground surface. Most of the charcoal and other indications of burning were found at depths of about 20 to 70 cm. The auger tests yielding these materials were clustered in the west half of the concentration between the 98N and 102N lines and between the 104E and 112E lines (Fig. 2). With one exception (98N/112E), deep charcoal and other indications of burning came from three auger tests 1 m apart along the 100N line: 100N/108E, 100N/109E, and 100N/110E. In these tests, charcoal and possible ash-stained and burned soil was found below 40 cm. At the other four tests, charcoal and ash-stained and burned soil and the single sherd were found between about 20 and 30 cm, below which the soil appeared to be culturally sterile. These results suggested that the deepest cultural and possible cultural materials would be found within 2 m of the 100N line between 108E and 111E. Consequently, two 1 by 1 m test excavation units were placed in this area. A third 1 by



- = 1 x 1 meter test unit
- s = sherd
- c = basalt core
- M = mano fragment
- F = basalt flake
- = auger test
- = auger test with artifacts or charcoal

0 30 meters

Figure 2. LA 53678, site map.

1 m test excavation unit was placed east of this area, where surface artifact density appeared to be high, but auger testing revealed no evidence of subsurface remains.

**Table 1. Results of auger testing at the prehistoric artifact concentration**

Auger Test	Depth (reason for stopping)	Cultural Material	Comments
112N/112E	50 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-14 cm; red-brown clay loam: 14-28 cm; red-brown sandy loam: 28-34 cm; gravels in loam: 34-44 cm; increased gravels: 44-50 cm
108N/112E	48 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-15 cm; red-brown sandy loam: 15-23 cm; red-brown clay: 23-27 cm; dark brown sandy loam: 27-38 cm; increased sand: 38-48 cm
104N/112E	50 cm (presence of caliche)	none	light brown sandy loam topsoil changing to red-brown clay: 0-14 cm; light brown sandy loam with clay inclusions: 14-26 cm; clay with caliche: 26-50 cm
100N/112E	50 cm (presence of caliche)	none	high small gravel and sand content because of anthill: 0-5 cm; light brown sandy loam topsoil with clay: 5-15 cm; changing to red-brown clay loam: 15-24 cm; gradual change to light brown sandy loam with caliche: 24-50 cm
98N/110E	89 cm (presence of caliche)	1 sherd: 18-28 cm	light brown sandy loam topsoil: 0-28 cm; brown loam: 28-80 cm; gravels and caliche: 80-89 cm
98N/112E	1.04 m (presence of caliche)	2 very small "specks" of charcoal at 92 cm	light brown sandy loam topsoil: 0-15 cm; sandy loam, no clay or caliche: 13-72 cm; sandy loam: 72 cm-1.04 m; caliche encountered: 1.04 m
96N/112E	50 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-13 cm; changing to red-brown clay loam: 13-23 cm; red-brown clay loam with increasing caliche: 23-50 cm
92N/112E	62 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-13 cm; changing to red-brown clay loam: 13-26 cm; red-brown clay loam: 25-56 cm; increasing caliche: 56-62 cm
88N/112E	55 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-13 cm; changing to red-brown clay loam: 13-30 cm; red-brown clay loam: 30-46 cm; sandy loam: 46-55 cm
102N/108E	50 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-10 cm; red-brown to brown sandy loam with gravels: 10-50 cm
102N/110E	49 cm (presence of caliche)	possible ash-stained soil: 20 cm	light brown sandy loam topsoil: 0-10 cm; brown to red-brown loam with increasing clay: 10-49 cm

Auger Test	Depth (reason for stopping)	Cultural Material	Comments
100N/104E	40 cm (rock)	possible ash-stained soil: 20 cm; inclusions of red/yellow (burned?) clay: 30 cm	light brown sandy loam topsoil: 0-23 cm; brown sandy loam: 23-40 cm
100N/106E	55 cm (presence of caliche)	inclusions of red/yellow (burned?) clay: 20-30 cm	light brown sandy loam topsoil: 0-23 cm; brown sandy loam: 20-30 cm; red-brown sandy loam: 30-40 cm; red-brown sandy loam with increased gravels and caliche: 40-55 cm
100N/108E	60 cm (presence of caliche)	inclusions of dark gray (burned?) clay: 20-30 cm; charcoal: about 30 cm; possible ash-stained soil: 45 cm; staining associated with bright red (burned?) clay loam: 45-47 cm	light brown sandy loam topsoil: 0-14 cm; dark brown loam: 14-30 cm; brown loam continues: 30-50 cm; increased gravels and caliche: 50-60 cm
100N/109E	70 cm (presence of caliche)	charcoal flecks: 10-12 cm; charcoal increases: 12-20 cm; red (burned?) clay: 55 cm; very small charcoal flecks: 60-70 cm	light brown sandy loam topsoil: 0-12 cm; brown clay loam: 12-45 cm; red-brown clay loam: 45-60 cm; dry, sandy red-yellow clay: 60-70 cm
100N/110E	60 cm (presence of caliche)	charcoal fleck: 20 cm; charcoal flecks numerous, associated with possible ash-stained soil: 25-35 cm; charcoal decreases: 45-53 cm	light brown sandy loam topsoil: 0-15 cm; changing to red-brown clay: 15-35 cm; red sandy clay loam: 35-45 cm; increased gravels and caliche: 45-53 cm; dry sandy loam with caliche: 53-60 cm
100N/116E	43 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-12 cm; sandy loam: 12-36 cm; dry sandy loam: 36-43 cm
100N/120E	62 cm (presence of caliche)	none	light brown sandy loam topsoil: 0-13 cm; light brown clay: 13-38 cm; darker brown clay: 38-62 cm

The two 1 by 1 m units placed in the area of deepest material were 97N/108E and 100N/109E. Tables 2, 3, and 4 list the artifacts and other materials collected from these units by level. They show that sherds, lithic artifacts, and charcoal were collected from Levels 2 through 5 in both units. This is consistent with the results of auger testing. In unit 97N/108E, a piece of burned clay was collected from Level 6.

**Table 2. Ceramic artifacts from test excavation units**

Grid Unit	Level	Ceramic Type	Number of Sherds
95N/112E	surface	Taos Gray plain	7
		Taos Gray incised	1
		total	8
	1	Taos Black-on-white	1

Grid Unit	Level	Ceramic Type	Number of Sherds
		unknown black-on-white	1
		Taos Gray plain	26
		Taos Gray incised	3
		Taos Gray punctate	2
		total	33
		2	Taos Gray plain
		Taos Gray incised	1
		total	5
	3		0
	grid unit total		46
	97N/107E	surface	Taos Gray plain
97N/108E	surface	Taos Gray plain	3
	1	Taos Gray plain	9
	2	Taos Gray plain	17
		Taos Gray plain, exposed coils	1
		Taos Gray incised	1
		total	19
	3	Taos Gray plain	3
		Taos Gray plain, exposed coils	1
		Taos Gray incised	7
		Taos Gray punctate	1
		total	12
	4	Taos Gray plain	4
		Taos Gray incised	1
		total	5
	5	Taos Gray plain	6
		Taos Gray plain, exposed coils	1
		Taos Gray incised	2
		total	5
	6		0

Grid Unit	Level	Ceramic Type	Number of Sherds
	grid unit total		54
98N/110E (auger test)	18-28 cm	Taos Gray plain	1
100N/108E	surface	Taos Gray plain	1
100N/109E	surface		0
	1	Taos Gray plain	8
		Taos Gray plain, exposed coils	1
		total	9
	2	unknown black-on-white	1
		Taos Gray plain	7
		Taos Gray incised	1
		total	9
	3	Taos Gray plain	1
	4	Taos Gray plain	2
		Taos Gray incised	1
		total	3
	5	Taos Gray plain	1
		Taos Gray incised	3
		total	4
6		0	
grid unit total		26	
101N/109E	surface	unknown black-on-white	2
		Taos Gray plain	2
	grid unit total		4

**Table 3. Lithic artifacts from test excavation units**

Grid Unit	Level	Material and Artifact Type	Number of Artifacts
97N/108E	1	Pedernal chert angular debris	1
	2	quartzite core flake fragment	1

Grid Unit	Level	Material and Artifact Type	Number of Artifacts
100N/109E	1	basalt core flake fragment	1
	2	quartzite core flake fragment	1
		quartzite core flake, possible spokeshave	1
	4	quartzitic sandstone mano fragment	1
Surface collection		chert Pueblo-side-notched projectile point	1

**Table 4. Charcoal and burned clay collected from test excavation units**

Grid Unit	Level	Material
95N/112E	1	charcoal
	2	charcoal
97N/108E	2	charcoal
	3	charcoal
	4	charcoal
	6	burned clay
100N/109E	2	charcoal
	3	charcoal
	4	charcoal
	5	charcoal

The stratigraphy of unit 97N/108E showed considerable variation across the unit. Only three strata were present in the southern half of the unit: a thin (10 to 12 cm) loamy topsoil, an equally thin clay-loam horizon, and a thick stratum of jumbled clay-loam with small chunks of clay, gravels, artifacts, and charcoal. The northern half of the unit, on the other hand, was characterized by relatively complex stratigraphy. Beneath the topsoil was a confusing array of five strata that included the clay-loam horizon, which was truncated near the west side, the jumbled clay-loam stratum, a stratum of alluvial sandy clay-loam containing artifacts and charcoal, a stratum of hard, compact clay below the alluvium, and a small stratum of loose sandy loam with small gravels and caliche fragments. What seemed to separate these two parts of the unit was a vertical deposit of hard clay running diagonally across the unit from northwest to southeast. In the east wall of the unit, it was 9 to 12 cm thick and about 30 cm high above the bottom of Level 6. Its north side had a thin layer of vertically laminar clay. In the west wall of the unit, it was 5 to 12 cm thick, growing thicker at the base, and 22 cm high above the bottom of Level 6. It lacked the vertically laminar clay on the north side. As this clay deposit crossed the unit, its north side was relatively well defined, while its south side was less so, particularly by Level 6. While we cannot identify this hard



clay deposit with certainty, it is tempting to see it as a short, narrow adobe wall. Certainly, it seemed to be the boundary between the relatively more and less complex stratigraphy within the unit. However, it is not clear why this should be the case, why the simpler strata south of the vertical clay contained artifacts and charcoal through level 5, or what the vertical clay deposit actually was. Consequently, we cannot know whether the vertical clay and the strata north of it represent subsurface structural remains and fill or some other depositional situation.

The stratigraphy of unit 100N/109E was similarly complex, although not as clearly defined. The northern two-thirds of the unit was characterized by a relatively simple series of four strata. It included the loamy topsoil; a stratum of harder clay-loam with clay inclusions, charcoal, and charcoal or ash stains; a stratum of hard, compact, red-brown clay; and a lower stratum of hard, compact red-brown to dark brown clay. In the southern third of the unit, however, a stratum of looser, jumbled clay-loam cut through the hard clay strata. While not definite, most of the artifacts and charcoal may have come from this area. Thus, these two test units may have defined the northern and southern sides of the area in which auger testing revealed subsurface artifacts and indications of burning. Strata and artifacts collected seem to confirm the depth of deposits revealed by auger testing.

In contrast to these two units, the stratigraphy of unit 95N/112E was remarkable simple, consisting of the loose loamy topsoil, a thin (3 to 14 cm) layer of dark brown clay-loam, and a stratum of hard brown clay. The topsoil and the top of the brown clay-loam contained artifacts and charcoal, while the lower part of the clay-loam and the hard brown clay were culturally sterile. The artifact-bearing deposit in this unit was about 10 to 15 cm thick. Tables 2, 3, and 4 list the artifacts and other materials collected from this unit.

At the top of the clay-loam stratum was an ash stain that covered all but the northeast corner of the unit. The stained soil was generally about 2 cm thick, although the stain's thickness and density were not consistent across the unit. In the approximate center was an area about 20 by 40 cm in which the stain was thicker and contained more charcoal than surrounding parts of the stain. Two flotation samples were collected from this area. Our interpretation of these remains is that the top of the clay-loam stratum represented the ground surface at the time of site occupation. The stain, then, represented a burned ground surface. Although accurate definition was not possible, the thicker, denser stained area may have been a simple, shallow basin hearth.

Test excavations in unit 95N/112E confirm the auger tests east of the 112E line, showing a fairly simple natural stratigraphy with no evidence of deep subsurface remains. This contrasts with auger testing and hand excavations west of the 112E line, where artifact- and charcoal-bearing deposits were 60 cm deep. Also, the apparent burned surface and possible hearth at about 8 to 12 cm below modern surface contrasts with the lack of evidence of shallow features in the other two test units and the evidence of a possible feature at 30 to 60 cm in unit 97N/108E.

#### Gravel Mound

As discussed above, 11 auger tests were placed at 4 m intervals in two perpendicular lines across the gravel mound. Table 5 lists the results of those tests. No cultural or possible cultural materials were recovered from the auger tests. Generally, depths of the auger tests, which were conditioned in each case by rocks that stopped the auger, were greater beyond the actual edges of the mound and less across the

top of the mound. Nonetheless, the gravel observed in the surface appeared to be a relatively thin mantle over natural stratigraphy resembling that defined near the prehistoric artifact concentration. Although not universally true, it seems that the clay underlying the topsoil was closer to the surface at and beyond the edge of the mound than beneath the mound. This is expectable if the clay layer is essentially a horizontal layer unrelated to surface features. Our observations of the sides of the depression in the top of the mound match the results of auger testing. The lack of subsurface remains and the shallow depth of the gravel show that the gravel mound is not a prehistoric feature. We speculate that the mound may be the remains of a gravel pile associated with construction of NM 522, beginning in 1938. The artifacts at the mound are scattered along the west and northwest margins of the mound and may not be associated with it. If so, they may have been associated with the broken micaceous vessel observed by Nelson. They may, then, point to the site's historic component. Alternatively, since several of them are historic polished sherds, they may have come from the original quarry location and were redeposited at LA 53678 with the gravel. If so, then they have no further data potential. One possible quarry location is the nearby gravel pit at LA 103055, southeast of the NM 150-NM 522-U.S. 64 intersection (Boyer n.d.). However, while LA 103055 has a historic component, polished sherds like those at LA 53678 were not observed there. The depression on top of the mound was probably a more recent quarry pit. Based on the results of auger testing, no additional testing was conducted at the gravel mound.

**Table 5. Results of auger testing at the gravel mound**

Auger Test	Depth (reason for stopping)	Cultural or Possible Cultural Material	Comments
60N/116E	54 cm (rock)	none	Clay: 40 cm
60N/120E	20 cm (rock)	none	
60N/124E	35 cm (rock)	none	More small gravels near surface than below.
60N/128E	20 cm (rock)	none	
60N/132E	10 cm (rock)	none	This location tested twice; both tests stopped by rocks at 10 cm.
60N/136E	42 cm (rock)	none	Clay: 26 cm
60N/140E	40 cm (rock)	none	Clay: 15 cm
64N/128E	57 cm (rock)	none	No clay observed.
68N/128E	31 cm (rock)	none	Clay: 28 cm
72N/128E	36 cm (rock)	none	Clay: 18 cm
76N/128E	49 cm (rock)	none	Clay: 24 cm

## RECOMMENDATIONS

Archaeological test investigations at LA 53678 identified the presence of one prehistoric feature, an artifact concentration, and several historic features, including two artifact concentrations, an abandoned road, and a gravel mound. Auger testing and hand excavations in the prehistoric artifact concentration revealed a burned surface, a possible hearth, 50 to 60 cm of artifact-bearing strata, and a possible buried structural feature.

In-field artifact identification suggests that one of the two historic artifact concentrations was a 1930s domestic trash dump, while the other was a shepherding camp, perhaps dating before 1930. The abandoned road may have been the northern extension of Millicent Rogers (La Cuchilla) Road, leading toward an intersection with the old Los Cordovas-Arroyo Seco road. Auger testing at the gravel mound showed no evidence of subsurface remains and suggests that the mound may have been a gravel pile associated with highway construction in the late 1930s.

Based on the results of archaeological testing, we recommend that a program of data recovery investigations be undertaken at LA 53678. We recommend that these investigations focus on the prehistoric artifact concentration and the two historic artifact concentrations.

## LA 53678: A PLAN FOR DATA RECOVERY INVESTIGATIONS

Since archaeological test investigations at LA 53678 revealed the presence of both prehistoric and historic features, planning for data recovery at the site requires a two-fold approach, focusing separately on the two components. In this section, the prehistoric component is considered in light of a frontier perspective, while the historic component is considered in light of a comparative perspective, intended to identify component features.

### Prehistoric Component

The prehistoric component at LA 53678 consists of the artifact concentration, where test excavations revealed a burned surface, a possible hearth, subsurface deposits, and a possible subsurface feature. Ceramic artifacts suggest that the component dates to the Valdez phase, ca. A.D. 1050/1100-1225. In the research design for OAS's Pot Creek data recovery project, Boyer (1994e:62) argued that previous descriptions of the Anasazi occupation of the Taos Valley, disparate though they may seem, actually centered on whether the valley was an Anasazi frontier:

Each model has different preconceptions, assumptions, and interpretations of what are in essence the same data. The question, then, remains whether the Taos area was a frontier and whether the local archaeology represents the development of adaptations to the frontier. What is lacking thus far is a consideration of the nature of frontiers and frontier adaptations and a consistent evaluation of archaeological remains in that light.

Boyer (1994e:62-72) then developed a preliminary model of frontier characteristics, including archaeological expectations and data requirements for assessing whether Taos-area Anasazi archaeology represents frontier adaptations. After summarizing site-structural and artifact assemblage data from excavated Valdez-phase sites, including the sites examined during the Pot Creek project, Boyer (1994c:492) concluded:

Comparisons of our data and that gathered by other projects in the Taos district with the conditions of a sociocultural frontier as described by historians and geographers indicates that the Taos district was an Anasazi frontier. This is seen in the relatively "sudden" appearance of Anasazi communities in the district and in evidence for spatial and temporal impermanence; the presence of settlement patterns resembling a colonization gradient; the loss of sociocultural complexity; and continued but changing contact with the core area, probably the middle Rio Grande Valley.

He went on to say, "The frontier model provides a framework within which local developments and regional integration can be studied and related" (Boyer 1994e:493).

It is important to note that the Valdez-phase data summarized by Boyer are from habitation sites. With one exception, the sites included pithouses and, in some cases, small surface structures. Using differences in pithouse construction and shape and types of surface structures, as well as differing frequencies of ceramic types and chipped and ground stone tools, Boyer (1994a, 1994c) identified two "communities" of Valdez-phase habitation sites, one in the Arroyo Hondo-Arroyo Seco area north of

Taos, and the other in the Pot Creek-Río Grande del Rancho area south of Taos. Boyer (1994c:477) went on to state, "Although we are currently unable to specify the internal structure of the two communities or the nature of interaction between them, we can say that they appear to have more internal cohesion than would be expected of scattered, unrelated households. Therefore, they appear to fit the description of 'dispersed settlement' on the Anasazi frontier."

Two excavated Valdez-phase sites do not include pithouses. One, LA 9205, was included by Boyer in his summary because it was described as a structural site. The other, LA 14868, was not included because it was clearly not a habitation site. Loose's (1974:15) description of LA 9205 included a structure of three contiguous rooms, a trash mound, several hearths, and an isolated rock wall. She stated that the three-room structure had cobble-based walls. In 1993 and 1994, I visited LA 9205 while reexcavating nearby pithouses first excavated by the University of New Mexico field school in 1965 and 1967. The cobble-based walls appear to be cobble alignments; there is no actual evidence of walls above the cobbles. My discussions with Regge Wiseman (personal communication, 1993), who was a student during the field school excavations, suggest that the "walls" were only cobble alignments when excavated and that their designation as walls may have relied on presumptions of feature function rather than empirical evidence. Loose (1974:15) notes that two storage cists were found between two walls and that a possible cist lined with upright slabs was present west of the "rooms." Storage cists are not common features of Valdez-phase sites. Boyer's (1994a) analysis showed that, at excavated sites, storage features are more common within surface-structure rooms than in pithouses or in outdoor activity areas. However, even in surface room contexts, storage features are not numerous. These data may reflect excavational bias, but the patterns are present. Consequently, the presence of two or three storage cists at LA 9205, two near the cobble alignments and one isolated cist, may indicate that LA 9205 was not a habitation site. For instance, the cobble alignments may represent cobble-lined garden areas (see Moore 1994 for a discussion of such farming features in the Taos district). If so, the cists may be on-site storage features.

If LA 9205 represents different site functions from those of obvious habitation sites, we might expect the differences to be represented in the artifact assemblage as well as in architecture and site structure. While Loose (1974:34, Table 4) did not show significant differences between the overall ceramic assemblages of LA 9205 and the other UNM field school Lobo Creek sites, her breakdown of "utility ware" assemblages (Loose 1974:30-32, Table 3) showed that the LA 9205 assemblage had the least diversity in varieties of Taos Gray of the eight Lobo Creek sites. Concerning lithic artifacts, LA 9205 yielded the highest frequencies and percentages of scrapers, knives, and polishing stones of the Lobo Creek sites. Although the Lobo Creek sites yielded relatively few ground stone artifacts compared to the southern community sites, LA 9205 had among the lowest number of manos and metate fragments. The significance of these differences in the ceramic and lithic artifact assemblages is not immediately evident. Clearly, without reexamination of LA 9205 and reanalysis of previously collected materials, we cannot securely state that it was not a habitation site. However, the differences discussed here may indicate that LA 9205 feature functions and on-site activities were not consistent with Valdez-phase habitation sites.

They may, on the other hand, be consistent with at least one Valdez-phase agricultural site. LA 14868 consists of seven widely separated concentrations of artifacts associated with rock alignments on a wide alluvial fan south of the Río Fernando. The ceramic assemblages consist of Taos Black-on-white and Taos Gray plain, incised, and "corrugated" (actually exposed coils). While the ceramic assemblage is relatively diverse compared to that of LA 9205, Steen (1976:20) noted that lithic tools found at the seven concentrations included only one projectile point, a metate fragment, and three other ground stone items. The concentrations range from 25 to 60 m wide by 50 to 150 m long. Six of the seven include

rock alignments. Steen (1976) did not number them or provide individual maps or descriptions except to say that one alignment was 15 m long with a 2 m arm forming a right angle at one end. Test excavations in several alignments showed them to have no depth and not to be natural features or associated with natural features. Steen (1976:4, 7) identified them as agricultural field borders:

The evidence indicates that in the period during which Taos Black on White was made the Taos Plain was dotted with small garden plots. These would have been places between drainage channels where the ground cover was removed and crops planted. Within the somewhat irregular clearings, low stone and earth dikes were built to retain precipitation within small garden plots. (Steen 1976:25)

Moore (1994) summarized recorded agricultural features and sites in the Taos district. He noted that several grid garden and other rock-alignment features have been recorded in the Picuris Valley, many dating to the Picuris-district equivalent of the Valdez phase. In the Pot Creek area, surveys have recorded similar sites, also dating to the Valdez phase. Moore (1994:436) stated that such features were ubiquitous near Pot Creek Pueblo and have been recorded near pithouses and other habitation structures.

Thus, we see that Valdez-phase, nonhabitation, agricultural sites are not uncommon in the Taos area. However, only LA 14868 and, perhaps, LA 9205 have been investigated. Valdez-phase artifact scatter sites having no obvious surface evidence of habitation structures are also common in the area. No such sites have been investigated. These sites represent nonhabitation or impermanent habitation use of the frontier landscape. How they relate to the characteristics of frontiers is correlated with site function. An understanding of such sites is vital for accurately defining the Anasazi frontier since our present model of the frontier is built on settlement and habitation sites. However, habitation locations represent only one facet of frontier settlement, while agricultural sites and other nonhabitation sites represent economic, population mobility, and other land-use facets.

LA 53678 is one such site. The prehistoric component is a small artifact concentration consisting primarily of sherds but also containing some lithic artifacts. Test excavations point to a small area within the concentration where artifacts and charcoal are present 50 to 60 cm below modern ground surface. While a possible feature was found in one test unit, a nearby test unit revealed a burned surface and a possible hearth, both near modern ground surface. A variety of site features are indicated, but testing revealed no clear evidence of structural remains. Consequently, LA 53678 offers an opportunity to investigate a Valdez-phase site with no obvious evidence of structural habitation features or agricultural features.

Because we know so little about nonhabitation Valdez-phase sites, data recovery investigations of the prehistoric component at LA 53678 will focus on identification issues. Addressing these issues is vital for establishing baseline data for such sites. These data are, in turn, critical if we are to understand the contexts of these sites in frontier settlement. In this case, baseline data include chronological control, on-site activities, and distribution of site types.

### *Chronological Control*

Boyer (1994a) has shown that Valdez-phase chronometric data are at odds with several accepted time frames for the phase that were developed through ceramic cross-dating. His review of chronometric dates suggested that the phase dated between A.D. 1100 and 1225 (see also Boyer and Wolfman 1992).

A recent, as yet unpublished archaeomagnetic date from LA 9208, one of the Lobo Creek sites, pushes the initial date for the phase back to about 1050 (Daniel Wolfman, personal communication, 1994), supporting Crown's (1990) proposed dates for the phase.

Within this time frame, it is important to be able to determine, with as much precision as possible, the dates for individual sites. Precise dates are critical for assessing site use-life, site contemporaneity, population mobility, and changing settlement patterns and community organizations in the Valdez-phase Anasazi frontier (see Hudson 1967, cited in Green and Perlman 1985:5).

*Data Requirements.* Ceramic artifacts observed and collected from LA 53678 show that the site dates to the Valdez phase. Establishing more precise chronological control will require collection and analysis of chronometric samples. Charcoal was collected from the test excavation units. However, because it was collected from excavation levels rather than strata and was found scattered in fill context, its potential to provide dates associated with specific site features and activities is expected to be minimal. Consequently, when we collected the charcoal, we did so for the purposes of burned-species identification rather than radiocarbon dating. An exception to this statement may be charcoal collected from the burned surface deposit and the possible hearth. This material will be assessed for its potential dating integrity and may be submitted for radiocarbon dating.

#### *On-Site Activities*

Defining the roles played by various types of sites during the occupation of the Anasazi frontier requires that we determine what activities took place at these sites. As we have seen, one site, LA 14868, was apparently an agricultural site containing several rock-alignment features. Steen's (1976) investigations also showed that rock cairns at the site were the locations of human burials. Steen (1976:25) stated, "Why burials were made at the fields is not known. . . ." Nonetheless, his work showed that nonhabitation sites could be the scenes of a variety of activities. Investigations of such sites must include attempts to define the various activities that occurred there so that we can acquire a more complete understanding of the patterns of frontier land-use.

*Data Requirements.* Test excavations at LA 53678 revealed the presence of features (the burned surface and the possible hearth) near the modern ground surface and others (deep deposits and a possible clay "wall") well below the ground surface. The latter seem to be localized, while the former appear to be more widespread. Defining on-site activities will necessitate more accurate definition of site structure, including the locations and functions of site features. Feature functions can best be addressed by describing the features and analyzing associated artifacts and other cultural materials.

#### *Distribution of Site Types*

The distribution of site types is critical for defining land-use patterns representing the ways in which the frontier was occupied. For instance, Green and Perlman (1985:5) summarize Hudson's (1967) agricultural colonization model as follows. The initial settlement of a region involves "unpredictable placement of settlers resulting in a random pattern of farms." The initial growth period, in which the earliest farms spawn new generations of farms, results in a "clustered pattern of settlement." Finally, the process of population growth fills a region, leading to competition for resources and abandonment of some areas. "The end result of this process is a systematic or regular pattern of farms in a region."

Within this framework, Boyer's definition of two Valdez-phase communities might point to clustered settlement in the region. However, the locations of the communities also correspond to the areas of most intense archaeological investigation. Further, since only one or two nonhabitation sites have been investigated, patterns of site distributions representing actual patterns of settlement and land use cannot yet be securely defined. Investigations of these site types is important in this regard.

*Data Requirements.* Clearly, excavations at one site cannot define regional site distribution. However, given the paucity of excavated nonhabitation sites, each such site adds valuable information on the dates, varieties of on-site activities, and distribution of sites.

### *Field Procedures*

*Definition of the Prehistoric Component.* The prehistoric artifact concentration was defined during testing, using pinflags to mark surface artifacts. During data recovery, pinflags will once again be used to mark surface artifacts. This will be necessary to confirm the location and size of the prehistoric component. Within the area so defined, further definition of site structure will rely on excavations and artifact analysis.

*Selection of Excavation Areas.* Data recovery excavations will focus on the deposits and features discovered during testing. Additional excavation areas may be selected if other deposits or features are revealed during data recovery.

*Collection and Recording.* The primary data, Datum A (150N/100E) and Subdatum B (100N/100E), both set during testing, were left in place after testing. Subdatum B will be used to reestablish a 4 m by 4 m grid system across the prehistoric component area. Additional subdata may be set as necessary to maintain vertical control during excavation. Their elevations will be linked to that of Subdatum B so that vertical control during excavation is linked to the primary data. Surface artifacts will be collected in 1 by 1 m units within the grid. They will be recorded by grid unit. Feature locations and general characteristics of the component will be recorded on the site map using transit, stadia, and tape. Documentation of work at the component will include field specimen forms, excavation unit forms, feature forms, field notes, plans and profiles of excavation units and features, photographs, and the site map.

*Excavation Procedures.* Data recovery excavations will be performed using hand tools in 1 by 1 m grid units. Vertical control will be established using 10 cm arbitrary levels where natural or cultural stratigraphy was not revealed during testing or where testing revealed stratigraphy considered too complex to follow during excavation. Wherever possible, excavation will follow strata rather than arbitrary levels.

Soil and sediments in the excavation units will be screened and all artifacts collected by excavation unit and level or stratum, or by feature. In this way, artifacts and other materials collected during excavation will be related to the deposits and features discovered and investigated.

Chronometric samples will be collected, including, as available and appropriate, radiocarbon, tree-ring, and archaeomagnetic samples. Specific effort will be made to associate chronometric samples with features and deposits to ensure greater control of dating integrity.

As available and appropriate, pollen and flotation samples will be collected from features defined



during excavation. Flotation samples were collected from the possible hearth during testing. We expect these samples to provide information on feature function. In addition, a series of pollen samples will be collected from the area in and around the prehistoric component. During testing, we were visited by officials from Taos Pueblo, one of whom told us that ancestors of pueblo residents once used the area between Arroyo Seco and Río Lucero, which includes the site area, for farming. If prehistoric use of LA 53678 included agricultural activities, they may be represented in pollen samples from the site.

Excavations will focus on accurate identification of deposits and features and the natural or cultural events, activities, or processes that resulted in their formation. Deposits and features will be excavated to the extent necessary to accurately define their sizes, depths, relationships, and depositional histories. These data will be used to address site-structural issues. Profiles and plan views of features and deposits will be drawn and photographs taken, as appropriate.

Hand soil augers may be used to search for additional buried features or deposits. Mechanical equipment may be used to remove sterile fill or to trench subsurface deposits.

If human remains are encountered, treatment will follow procedures outlined by the laws and regulations of the State of New Mexico (Sec. 16-6-11.2 NMSA 1978; HPD Rule 89-1) and the Museum of New Mexico's "Policy on Collection, Display, and Repatriation of Culturally Sensitive Materials" (SRC Rule 11, adopted January 17, 1991 and modified February 5, 1991; see Appendix 2).

#### *Laboratory Analysis*

All collected artifacts and other materials will be returned to OAS's laboratories. Artifacts will be cleaned and sorted by material class. Artifacts within each material class will be analyzed according to standards established by OAS staff.

*Ceramic Artifacts.* Ceramic artifacts have provided and will continue to provide data relevant to chronological issues, although they cannot be expected to provide the precision of chronometric analyses. They will be important for obtaining information on feature function and processes of deposit formation. Sherds will be identified by existing type names and described using characteristics such as temper, rim form and shape, and surface finish and treatment or decoration. Analysis will also monitor the use of ceramic vessels at the site by studying attributes such as vessel form and evidence for burning, smudging, mending, and reuse. This will include monitoring frequencies of vessel forms relative to pottery types and evidence of use.

*Chipped Stone Artifacts.* Chipped stone artifacts will be analyzed using the OAS standardized chipped stone analysis format (OAS in prep.). Eight variables are recommended for all analyses: material type, material texture, artifact morphology and function, dorsal cortex, flake platform type, portion, and dimensions. We will also monitor optional variables: cortex type, platform lipping, wear patterns, distal termination, edge angle, and edge shape. These attributes will provide specific information on raw material selection, reduction, and tool manufacture and use. Relationships between these data and provenience can be expected to inform on on-site activities, feature functions, depositional processes, and site structure. In addition, obsidian artifacts may be submitted for hydration dating.

*Ground Stone Artifacts.* Ground stone artifacts will be analyzed using the OAS standardized

ground stone artifact analysis format (Bullock et al. 1994). Several variables are recommended for all analyses: material type, preform morphology, weight, mano cross section form, plan view, use number, portion, and function. We will also monitor optional variables: material texture and quality, production input, shaping, dimension, ground surface measurement, metate depth, presence of flaked surface or margin, heat alteration, ground surface cross section, ground surface sharpening, ground surface texture, primary and secondary wear, alterations, and adhesions. These attributes will provide specific information on raw material selection, labor input in tool production, extent of tool use, reuse, and circumstances of tool abandonment or discard. Relationships between these data and provenience may provide information about on-site activities, feature functions, depositional processes, and site structure.

*Floral Remains.* Floral remains recovered from pollen and flotation samples will be identified to specific level when possible. Analyses will focus on economic uses of plants for food, fuel, and possible construction. Data may be useful in assessing on-site activities, feature construction and function, depositional processes, and site structure. Determination of plant parts may also be useful in defining seasonality of site use.

*Faunal Remains.* Faunal analysis will focus on identification of species and bone elements to aid in documenting animal procurement and consumption patterns, useful in assessing on-site activities, feature construction and function, depositional processes, and site structure. Ages of individuals will be determined when possible; this will also help document procurement and consumption. Ages of individuals may also provide information on seasonality of site use.

The results of all analyses will be used to determine the age of the site, the functions of features, the structure of the site, and the range of activities undertaken at the site. Although one site cannot be used to define site distribution patterns, these data from LA 53678 will provide important baseline data with which to begin assessing the roles of other nonhabitation Anasazi sites on the Taos frontier. The three such sites investigated to date--LA 9205, LA 14868, and LA 53678--indicate that we may expect to find a great deal of variation in site features and structure, and therefore in site function, among such sites. As other sites are investigated, patterns of site distribution by function through time should be discernable.

### Historic Component

The historic component at LA 53678 consists of two artifact concentrations, an abandoned road, and the gravel mound. Test excavations at the gravel mound revealed no evidence of subsurface remains; no additional investigations are recommended for the gravel mound. Archaeological examination of the abandoned road is not recommended since excavations could not be expected to yield additional information. It is possible that ethnohistoric data recovery could confirm the history of the road. This study could be undertaken during investigations of the artifact concentrations.

Although the artifact concentrations were not investigated during testing, artifacts in each concentration were identified to initially assess similarities and differences between the two assemblages. One concentration appeared, on the basis of the types and diversity of artifacts, to represent domestic trash. The second contained artifacts found on sites often designated as sheepherding camps, temporary camping locations used by *partidario* sheep herders.

González (1967:47) provided a succinct description of the Hispanic *partido* tenant-herding system:

The owner supplied a breeding herd to his tenant. The renter agreed to return twenty lambs for every hundred ewes in the herd at the end of an agreed-upon period--usually one year. The tenant further contracted to rent rams from the owner, and stand responsible for all operating expenses and losses. The renter was also required to return upon demand a breeding herd of the same size and age as that originally handed over to him.

In exchange, the tenant was entitled to all the wool, all the lambs in excess of the twenty-per-hundred ewes, and the right to graze his own sheep on the owner's land along with the rented sheep.

González (1967:47-48) argued that the *partido* system, while perhaps in operation as early as the mid-eighteenth century, was not significant in terms of regional economic organization until the late nineteenth and early twentieth centuries. It may have reached its peak in the first decade of the twentieth century. In discussing the demise of the system, González (1967:48-55) mentions increasing Anglo presence and land acquisition, regional overgrazing, and establishment of the national forests. She does not mention the effects of the Great Depression, with dropping prices for livestock and livestock products. My father, whose father was a wool buyer for the Bond-McCarthy Co., told me that the depression was largely responsible for ending commercial pastoralism, which grew out of subsistence pastoralism with the advent of the railroads in the 1880s. Thus, we should not expect many sheepherding camps after about 1930.

Studies of Hispanic pastoral land-use patterns in north-central New Mexico, limited to high-altitude, warm-season sites, have documented territoriality in the form of grazing leases (Boyer 1987; McGraw and Curry 1994a, 1994b). Based on the characteristics of the *partido* system and the high-altitude sites, we could expect site distribution on the open valley floor to reflect control of grazing area by the *patrones* (land and herd owners). While several such sites have been recorded on the valley floor, none have been subjected to archaeological or ethnohistoric investigations beyond survey recording.

LA 53678 may present an opportunity to begin the study of open-valley sheepherding camps, if it is, indeed, a sheepherding camp. Data recovery investigations of the two artifact concentrations comprising the historic component will focus on more accurately identifying the similarities and differences between the two assemblages that were observed during testing.

Carrillo (n.d.:42-44) reviewed sheepherding camps in the Abiquiu Reservoir area, taking exception to the idea that sheepherding camps did not include dwellings: "On the contrary, archival and ethnohistoric data indicate that sheep camp site structure changed considerably from Colonial period and Mexican era practices." He summarized his interviews with Río Chama sheepherders by stating:

Sheepherders from communities that surround the Abiquiú Reservoir described their shelters as large canvases made into temporary tents. The canvas was apparently held down by stones and pegs and formed a circular structure. Opening or access to the structure was through an unstaked corner of the canvas folded over, providing an opening. Most cooking was done outside until small portable cast iron stoves were available.

He went on to say:

Equipment was often transported in *cargas* (packs) and strapped to mules and horses for transport. In later years shepherd's wagons became more available and provided cooking and sleeping accommodations. Rugged terrain made transport of these vehicles difficult and shepherds often resorted to using Army surplus tents for shelter. (Carrillo n.d.:43-44)

Note that Carrillo's descriptions of sheepherding camps are limited to shelter and equipment transport and do not include the types of items brought to the sites by the herders. Depending, therefore, on the nature of the shelter at the site, it might not be possible to identify a sheepherding camp based on Carrillo's descriptions.

Maxwell's (1981) investigations of a sheepherding camp on the Río San José between La Jara and Regina, Río Arriba County, revealed no clear evidence of a structure but did uncover eight shallow "bone pits" of varying sizes, as well as four small surface concentrations of charcoal and sheep bone fragments. Over 130 Euroamerican artifacts were collected. Maxwell came to the conclusion that the site was reoccupied, probably several times. During one of these occupations, several sheep were butchered and their unwanted remains buried in a large pit. Subsequent occupations resulted in numerous small pits containing bones and artifacts, as well as surface charcoal, bones, and artifacts. Frequencies of Euroamerican artifacts, particularly personal effects items that should have had long use-lives, also pointed to several occupations. Based on the distribution of the site features and deposits, Maxwell (1981:69-73) proposed interpretations of site structure involving the location of shelters and utility areas. Using age estimates of at least one butchered sheep, he concluded that at least one occupation was in April or May (1981:73). Maxwell (1981:61-65) also provided ethnohistoric information on pastoral transhumance, items brought to and used at sheepherding camps, pastoral economics, and land use. The results of Maxwell's investigations are a detailed and comprehensive examination of the site structure, artifactual and faunal assemblage, and regional economic context of a sheepherding camp. Interestingly, Maxwell recovered no evidence of animal pens.

In contrast, Schlanger and Goodman's (1993) investigations at a sheepherding camp near Ocate, Mora County, focused on four semicircular, dry-laid masonry features. Archaeological testing revealed little information about the features but did yield barbed-wire fragments, can fragments, two wire nails, a fence staple, and one sawn bone fragment. These artifacts, in association with the features, suggested that the features were animal pens. Ethnohistoric data tended to confirm this interpretation and added additional detail. Goodman (1993:61-62) stated:

Normally, fairly small, wooden pens were built to contain the sheep; these were later replaced by barbed-wire pens. Finding nails on the site might indicate the earlier presence of wooden pens. (Often wood was scavenged and reused; or if decaying, it might be taken for firewood during cold weather. Therefore, wood remains are not often found on abandoned sites in a remote area such as this.) The appearance of several types of barbed-wire, one piece still wrapped around a tree trunk, would imply the use of this material for pens as well. The small size of the pens, 4 to 5 m in diameter, rules out their use for holding cattle.

According to those interviewed, a temporary sheep camp during the 1880s to 1945 consisted of either a tent camp or a sheep wagon with internal living quarters for two shepherders. Archaeological investigations would not be able to verify this information unless the actual remains of these structures were abandoned on the site and

were not scavenged at a later time. The appearance of old tin cans, bottle glass, and butchered bone on the site indicates that LA 74220 had been used as a shepherders' camp as well as a place to pen the sheep. The fact that the cultural remains were sparse might imply that the site was not used regularly as a camping place or else that the shepherders took most of their garbage with them when they moved on.

LA 74220 provides an interesting contrast to Maxwell's La Jara site. The La Jara site yielded no information on sheep pens or corrals but abundant evidence of on-site activities, including site structural data, suggesting temporary shelter location and site reuse. On the other hand, the features and many of the artifacts from LA 74220 point to animal penning rather than extended human occupations, unless they were for very short periods. Informant data suggest that LA 74220 was used during periods of seasonal transhumance between higher altitude (warm-season) and low altitude (cold-season) pastures. As such, the pens may have been necessary to control the sheep for short periods (for instance, overnight) during these moves, whereas sheep were allowed to roam with less daily control in the longer-term high- and low-altitude grazing areas. The presence of barbed wire, nails, and fence staples along with the rock pens points to site reuse and feature change through time. These two sites, then, seem to provide views of two different kinds of pastoral camps. Both sites also show the importance of ethnohistoric data in reconstructing site structure, on-site activities, and regional economic contexts.

The historic component at LA 53678 provides the opportunity to investigate a possible shepherding camp on the open floor of the Taos Valley. Because we know so little about such sites, and given the variability apparently represented by Maxwell's and Schlanger and Goodman's investigations, data recovery investigations of the historic component at LA 53678 will focus on identification issues. The opportunity to compare a suspected shepherding camp assemblage with an apparent domestic trash assemblage may help to better define the unique characteristics of historic artifact scatters of differing origins. This is, in itself, potentially important in light of the common practice of recording such assemblages, particularly at the survey level of investigation, as historic trash dumps without additional consideration of the possible differences between assemblages. This has, in my experience, led to the assumption that such assemblages present little or no additional data potential. Our contention here is that the possible domestic trash assemblage has, in itself, relatively little data potential beyond that recorded during testing because it has no obvious domestic context within which to assess data gathered from the assemblage. We cannot know what household or households may have contributed to the assemblage; we have no information on household size or structure against which to assess potential data on availability of, access to, and consumption of Euroamerican items. On the other hand, the domestic trash assemblage may have some data potential for comparison with the suspected shepherding camp assemblage to better define the latter. Consequently, we propose to focus historic component data recovery investigations on the suspected shepherding camp, with secondary attention to the possible domestic assemblage except to gather comparative data.

Like the prehistoric component, we propose to focus historic component data recovery on collecting baseline data: chronological control, on-site activities, and distributions of site types. We see these as critical data because, as is true of the prehistoric component, we actually know so little about shepherding camp sites.

### *Chronological Control*

Artifacts observed at the domestic trash concentration point to a date in the mid 1930s. Few temporally diagnostic artifacts were observed at the suspected shepherding camp, but the concentration may date to before 1930, perhaps between 1920 and 1930. It is important, however, to establish with as much precision as possible the dates of individual shepherding camps. Precise dating is critical for assessing site use-life, site contemporaneity, and herder mobility patterns. It may also be used to confirm identification of shepherders.

*Data Requirements.* The suspected early twentieth-century time frame of the historic component means that use of chronometric techniques to date the site occupation(s) is not realistic. The standard deviation variability inherent in radiocarbon and archaeomagnetic dating renders such techniques too imprecise when dating sites or features less than 100 years old. However, Euroamerican artifact manufacturing dates can be used to obtain very precise and accurate dates. Consequently, establishing dates of site occupation, in the case of the shepherding camp, and of artifact consumption and disposal, in the case of the domestic trash, will rely on Euroamerican artifact dates. Ethnohistoric data may aid in establishing site occupation dates if the shepherders can be identified.

### *On-Site Activities*

Defining the roles played by various types of sheep camp sites requires that we determine what activities took place at these sites. Maxwell's and Schlanger and Goodman's investigations of shepherding camp sites show that such sites can be the scenes of a wide variety of activities reflected in the variety of site features and artifact assemblages. Following Maxwell (1981:6), we propose the following questions focusing on the effects of pastoral transhumance on the local archaeological record:

1. If shepherding involves site reuse and varying occupation lengths, can such occupations be determined archaeologically at this site?
2. If a site may be subject to reuse during different seasons, can different seasonal occupations be determined at this site?
3. If there are special purpose sites such as shearing, lambing, and grazing camps, can the function of this site be determined?
4. Will examination of site structure reveal evidence of site maintenance or organization and, ultimately, the shepherd's grazing strategy?

Structuring excavation, artifact analysis, and ethnohistoric data recovery around these questions proved fruitful for Maxwell's research and could prove equally fruitful in this case.

*Data Requirements.* Defining on-site activities will necessitate searching for evidence of features associated with the artifacts in the suspected shepherding camp. Nearby test excavations revealed that the natural on-site stratigraphy consists of shallow topsoil over successive strata of clay-loam and clay. Even in the 800-year-old prehistoric component, most of the artifacts and features may be limited to the upper 10 to 20 cm of soil. Consequently, we suspect that in the shepherding camp area, most artifacts and features, if there are any, will also be limited to the topsoil stratum and that finding them should not

require extensive excavations. Definition of site structure will include determining locations and functions of site features. Feature functions can best be addressed by revealing their physical descriptions and by analysis of associated artifacts and other cultural materials. As Schlanger and Goodman (1993) demonstrated, certain kinds of artifacts can suggest the presence of features that may not be archaeologically visible otherwise.

### *Distribution of Site Types*

The distribution of site types is critical for defining land-use patterns representing pastoral grazing strategies. Interaction of on-site activity and site-distribution data is necessary for using archaeological data to address a series of questions posed by Maxwell (1981:5) for regional study of sheepherding:

1. During the depositional history of the historic sheepherder's camp, what is the overall place of sheepherding in the local economy?
2. What economic conditions supported a sheepherding strategy in the (project) area, and what conditions led to its decline?
3. What specialized technological and ecological adaptations are critical to successful sheepherding in the area?
4. Are these adaptations reflected in the environmental and archaeological context of the site?

*Data Requirements.* Clearly, since few sheepherding camp sites have been investigated and since they are not located in the same regions, actual patterns of site distributions representing pastoral land-use patterns cannot yet be defined. Consequently, investigations at LA 53678 cannot provide definition of Taos Valley pastoral land-use. However, given the paucity of investigated sheep camps, each site adds valuable information on dates, on-site activities and site structures, and site type distributions.

On the other hand, ethnohistoric data focusing on one site and on placing that site in its regional economic and land-use contexts could be expected to specifically address Maxwell's questions. In this way, investigations of one site can be expected to yield significant regional information.

### *Field Procedures*

*Definition of the Historic Component.* During data recovery, pinflags will be used to mark surface artifacts. This will be necessary to confirm the locations and sizes of the two concentrations. Further definition of site structure will rely on excavations and artifact analysis.

*Selection of Excavation Areas.* As discussed above, intensive investigation of the historic component will focus on the suspected sheepherding camp. Because this area, as defined by artifact distribution, is small, it will be considered a single excavation area.

*Collection and Recording.* The primary data, Datum A (150N/100E) and Subdatum B (100N/100E), both set during testing, were left in place after testing. Subdatum B will be used to set two subdata near the two artifact concentrations so that the 4 by 4 m grid system established during testing

and reestablished during data recovery can be extended across the site to the historic artifact concentrations. Elevations of the two subdata will be linked to that of Subdatum B so that vertical control during excavation is linked to the primary data. In the sheepherding camp artifact concentration, surface artifacts will be collected in 1 by 1 m units within the grid. They will be recorded by grid unit. In the domestic trash concentration, surface artifacts will be analyzed in the field in 1 by 1 m grid units.

Feature locations and general characteristics of the historic component will be recorded on the site map using transit, stadia, and tape. Documentation of work at the component will include field specimen forms, excavation unit forms, feature forms, in-field analysis forms, field notes, plans and profiles of excavation units and features, photographs, and the site map.

*Excavation Procedures.* Data recovery excavations in the sheep camp area will be performed using hand tools in 1 by 1 m grid units. Assuming that most artifacts will be found in the topsoil and that features, if present, will be definable in or at the base of the topsoil, excavations in the sheep camp area should be limited to surface-stripping the area in the 1 by 1 m units. Soil and sediments in the excavation units will be screened, and all artifacts collected by excavation unit and level or stratum, or by feature. In this way, artifacts and other materials collected during excavation will be related to the deposits and features discovered and investigated.

As available and appropriate, pollen and flotation samples will be collected from features defined during excavation. We expect these samples to provide information on feature function. A series of soil samples may be collected from the area surrounding the artifact concentration. Analysis of the soil, particularly searching for varying presence of organic material, may point out the location of animal pens.

Excavations will focus on accurate identification of deposits and features and the natural or cultural events, activities, or processes that resulted in their formation. Deposits and features will be excavated to the extent necessary to accurately define their sizes, depths, relationships, and depositional histories. These data will be used to address site-structural issues. Profiles and plan views of features and deposits will be drawn and photographs taken, as appropriate.

Hand soil augers may be used to search for additional buried features or deposits.

Because the historic component is probably related to Hispanic sheep herders, it is unlikely that human remains will be found there. Human burial in such a context would generally be contradictory to the practices of historic Hispanic Catholics. Should human remains be discovered, treatment will follow procedures outlined by the laws and regulations of the State of New Mexico (Sec. 16-6-11.2 NMSA 1978; HPD Rule 89-1) and the Museum of New Mexico's "Policy on Collection, Display, and Repatriation of Culturally Sensitive Materials" (SRC Rule 11, adopted January 17, 1991 and modified February 5, 1991).

*Ethnohistoric Research.* As discussed above, ethnohistoric research can be expected to yield information important to placing the historic component of LA 53678 in its regional economic and land-use contexts. It can do so by collecting information relevant to the four contextual questions listed in "Distributions of Site Types," above. In this regard, ethnohistoric research will seek to identify informants who have knowledge of regional pastoral economic and land-use strategies. Additionally, it may be possible to find, in Taos County archival records, documentation of *partido* economic relationships. Such documents have been found for *partidarios* in the Talpa and Arroyo Hondo areas and may be available to aid in identifying the *patrones* and *partidos* whose pastoral land-use strategies resulted



in the suspected sheep camp at LA 53678.

Additionally, ethnohistoric research will seek to identify informants who may be able to help define site features, interpret site structure, and identify site function.

### *Laboratory Analyses*

All collected artifacts and other materials will be returned to OAS's laboratories. Artifacts will be cleaned and sorted by material class.

*Euroamerican Artifacts.* Euroamerican artifacts will be analyzed using the OAS standardized historic artifact analysis format (Boyer et al. 1994b). We will monitor artifact function as a means to defining feature and site function. We will also monitor artifact manufacturing dates to establish feature and site dates. A modified analytical format will be used for in-field analysis.

*Floral Remains.* Floral remains recovered from pollen and flotation samples will be identified to specific level when possible. Analyses will focus on economic uses of plants for food, fuel, and possible construction. Data may be useful in assessing on-site activities, feature construction and function, depositional processes, and site structure. Determination of plant parts may also be useful in defining seasonality of site use.

*Faunal Remains.* Faunal analysis will focus on identification of species and bone elements to aid in documenting animal procurement and consumption patterns, useful in assessing on-site activities, feature construction and function, depositional processes, and site structure. Ages of individuals will be determined when possible; this will also help document procurement and consumption. Ages of individuals may also provide information on seasonality of site use.

The results of all analyses will be used to determine the age of the site, the functions of features, the structure of the site, and the range of activities undertaken at the site. Although one site cannot be used to define site distribution patterns, data from LA 53678 will provide important baseline data with which to begin assessing the roles of other sheepherding camp sites in local and regional pastoral economies. The two sites discussed above, the La Jara site, and LA 74220 indicate that we may expect to find a great deal of variation in site features and structure, and therefore in site function, among such sites. As other sites are investigated, patterns of site distribution by function through time should be discernable.

### Research Results

The results of field data recovery and laboratory analyses will be used to address the research issues raised for each component by evaluating feature functions and dates, relationships between features, and the place of features and the site within the contexts of local and regional relationships. The final data recovery and analysis report, published in the Office of Archaeological Study's Archaeology Notes series, will present the excavation, analysis, and interpretive results. Included will be photographs, site and feature plans, and data summaries. Field notes, maps, analytic notes and forms, and photographs will be deposited with the Archaeological Records Management System of the State Historic Preservation

Division, located at the Laboratory of Anthropology in Santa Fe. Artifacts will be curated at the Museum of New Mexico's archaeological repository.

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Rule No. 11 POLICY ON COLLECTION, DISPLAY AND REPATRIATION OF CULTURALLY SENSITIVE MATERIALS Adopted: 01/17/91

I. INTRODUCTION

The policy of the Museum of New Mexico is to collect, care for, and interpret materials in a manner that respects the diversity of human cultures and religions.

Culturally sensitive materials include material culture as well as the broader ethical issues which surround their use, care, and interpretation by the Museum. The Museum's responsibility and obligation are to recognize and respond to ethical concerns.

II. DEFINITIONS:

- A. "Culturally sensitive materials" are objects or materials whose treatment or use is a matter of profound concern to living peoples; they may include, but are not limited to:
1. "Human remains and their associated funerary objects" shall mean objects that, as a part of the death rite or ceremony of a culture, are reasonably believed to have been placed with individual human remains either at the time of death or later;
  2. "Sacred objects" shall mean specific items which are needed by traditional religious leaders for the practice of an ongoing religion by present-day adherents;
  3. Photographs, art works, and other depictions of human remains or religious objects, and sacred or religious events; and

- 4. Museum records, including notes, books, drawings, and photographic and other images relating to such culturally sensitive materials, objects, and remains.
  
- B. "Concerned party" is a museum-recognized representative of a tribe, community, or an organization linked to culturally sensitive materials by ties of culture, descent, and/or geography. In the case of a federally recognized indian tribe, the representative shall be tribally-authorized.
  
- C. "Repatriation" is the return of culturally sensitive materials to concerned parties. Repatriation is a collaborative process that empowers people and removes the stigma of cultural paternalism which hinders museums in their attempts to interpret people and cultures with respect, dignity, and accuracy. Repatriation is a partnership created through dialogue based upon cooperation and mutual trust between the Museum and the concerned party.
  
- D. The Museum of New Mexico's Committee on Sensitive Materials is the committee, appointed by the Director of the Museum of New Mexico, that shall serve as the Museum of New Mexico's advisory body on issues relating to the care and treatment of sensitive materials.

III. IDENTIFICATION OF CONCERNED PARTIES

- A. The Museum shall initiate action to identify potentially concerned parties who may have an interest in culturally sensitive material in the museum's collections.
  
- B. The Museum encourages concerned parties to identify themselves and shall seek out those individuals or groups whom the Museum believes to be concerned parties.

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- C. The Museum's sensitive materials committee shall review all disputed individual claims of concerned-party status in consultation with the tribe, community, or organization which the individual(s) claims to represent. The Museum's sensitive materials committee shall assist, when necessary, in designating concerned parties who have an interest in culturally sensitive materials contained in the collections of the Museum of New Mexico.
- D. The Museum shall provide an inventory of pertinent culturally sensitive materials to recognized concerned parties.
- E. The Museum shall work with concerned parties to determine the appropriate use, care and procedures for culturally sensitive materials which best balance the needs of all parties involved.

IV. IDENTIFICATION AND TREATMENT OF CULTURALLY SENSITIVE MATERIALS

- A. Within five years of the date of adoption of this policy, each Museum unit shall survey to the extent possible (in consultation with concerned parties, if appropriate) its collections to determine items or material which may be culturally sensitive materials. The Museum unit shall submit to the Director of the Museum of New Mexico an inventory of all potentially culturally sensitive materials. The inventory shall include to the extent possible the object's name, date and type of accession, catalogue number, and cultural identification. Within six months of submission of its inventory to the Director of the Museum of New Mexico, each Museum unit shall then develop and submit, a plan to establish a dialogue with concerned parties to determine appropriate treatment of culturally sensitive items or materials held by the unit.

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- B. As part of its treatment plans for culturally sensitive materials, the Museum reserves the right to restrict access to, or use of, those materials to the general public. The Museum staff shall allow identified concerned parties access to culturally sensitive materials.
- C. Conservation treatment shall not be performed on identified culturally sensitive materials without consulting concerned parties.
- D. The Museum shall not place human remains on exhibition. The Museum may continue to retain culturally sensitive materials. If culturally sensitive materials, other than human remains, are exhibited, then a good-faith effort to obtain the advice and counsel of the proper concerned party shall be made.
- E. All human skeletal remains held by the Museum shall be treated as human remains and are de facto sensitive materials. The Museum shall discourage the further collection of human remains; however, it will accept human remains as part of its mandated responsibilities as the State Archaeological Repository. At its own initiation or at the request of a concerned party, the Museum may accept human remains to retrieve them from the private sector and furthermore, may accept human remains with the explicit purpose of returning them to a concerned party.

#### IV. REPATRIATION OF CULTURALLY SENSITIVE MATERIALS

- A. On a case-by-case basis, the Museum shall seek guidance from recognized, concerned parties regarding the identification, proper care, and possible disposition of culturally sensitive materials.

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- B. Negotiations concerning culturally sensitive materials shall be conducted with professional discretion. Collaboration and openness with concerned parties are the goals of these dialogues, not publicity. If concerned parties desire publicity, then it will be carried out in collaboration with them.
- C. The Museum shall have the final responsibility of making a determination of culturally sensitive materials subject to the appeal process as outlined under section VII A.
- D. The Museum of New Mexico accepts repatriation as one of several appropriate actions for culturally sensitive materials only if such a course of action results from consultation with designated concerned parties as described in Section III of this policy.
- E. The Museum may accept or hold culturally sensitive materials for inclusion in its permanent collections.
- F. The Museum may temporarily accept culturally sensitive materials to assist efforts to repatriate them to the proper concerned party.
- G. To initiate repatriation of culturally sensitive materials, the Museum of New Mexico's current deaccession policy shall be followed. The curator working with the concerned party shall complete all preparations for deaccession through the Museum Collections Committee and Director before negotiations begin.
- H. Repatriation negotiations may also result in, but are not limited to, the retention of objects with no restrictions on use, care, and/or exhibition; the retention of objects with restrictions on use, care and/or exhibition; the lending of objects either permanently or temporarily for use to a community; and the holding in trust of culturally sensitive materials for the concerned party.

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- I. When repatriation of culturally sensitive materials occurs, the Museum reserves the right to retain associated museum records but shall consider each request for such records on an individual basis.

VI. ONGOING RECOVERY OR ACCEPTANCE OF ARCHAEOLOGICAL MATERIALS

- A. In providing sponsored archaeological research or repository functions, the Museum shall work with agencies that regulate the inventory, scientific study, collection, curation, and/or disposition of archaeological materials to ensure, to the extent possible under the law, that these mandated functions are provided in a manner that respects the religious and cultural beliefs of concerned parties.
- B. When entering into agreements for the acceptance of, or continued care for, archaeological repository collections, the Museum may issue such stipulations as are necessary to ensure that the collection, treatment, and disposition of the collections include adequate consultation with concerned parties and are otherwise consistent with this Policy.
- C. In addition to the mandated treatment of research sites and remains and in those actions where treatment is not mandated, defined, or regulated by laws, regulations, or permit stipulations, the Museum shall use the following independent guidelines in recovering or accepting archaeological materials:
  1. Prior to undertaking any archaeological studies at sites with an apparent relationship to concerned parties, the Museum shall ensure that proper consultation with the concerned parties has taken place.

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2. When so requested by concerned parties, the Museum shall include an observer, chosen by the concerned party, in the crew of an archaeological study.
3. The Museum shall not remove human remains and their associated funerary objects or materials from their original context nor conduct any destructive studies on such remains, objects, and materials, except as part of procedures determined to be appropriate through consultation with concerned parties, if any.
4. The Museum reserves the right to restrict general public viewing of in situ human remains and associated funerary objects or items of a sacred nature and further shall not allow the public to take or prepare images or records of such objects, materials, or items, except as part of procedures determined to be appropriate through consultation with concerned parties. Photographic and other images of human remains shall be created and used for scientific records only.
5. The Museum reserves the absolute right to limit or deny access to archaeological remains being excavated, analyzed, or curated if access to these remains would violate religious practices.



# JEFFREY LYNN BOYER

## CURRICULUM VITAE

### PERSONAL INFORMATION

**Birthdate:** October 20, 1955  
**Birthplace:** Albuquerque, New Mexico  
**Height:** 6'1"  
**Weight:** 150 lbs.  
**Health:** Good  
**Family:** **Wife:** Ginger Nolan Boyer  
**Birthdate:** March 8, 1955  
**Education:** B.S., Art Education,  
Texas Tech University  
**Children:** Meghann, age 16 years  
Miles, age 9 years

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### EDUCATION

#### Graduate:

**University of New Mexico**  
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**Attended:** August 1978-May 1983  
**Major:** Anthropology  
**Degree:** Master of Arts, 1983

#### Undergraduate:

**Northern Arizona University**  
**Flagstaff, Arizona**  
**Attended:** August 1973 - May 1975  
**Major:** Anthropology  
**Minor:** Fine Arts

**University of Arizona**  
**Tucson, Arizona**  
**Attended:** August 1975 - May 1977  
**Major:** Anthropology  
**Minor:** Museum Studies  
**Degree:** Bachelor of Arts, 1977

#### Field School:

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**Fort Burgwin Research Center**  
**Taos, New Mexico**  
**Attended:** June - August 1976

## EXPERIENCE

- Employer:** Museum of New Mexico  
Office of Archaeological Studies  
Santa Fe, New Mexico
- Description:** *Cultural Resource Specialist I.* Responsibilities involve acting as Project Director for Office of Archaeological Studies contract projects. Duties include budget development, development and implementation of research designs and data recovery plans, supervising personnel in field work and laboratory analyses, research, final report production, and coordination with state and federal resource managers and clients.
- Dates:** December 1987 - present
- Employer:** Self-employed
- Description:** *Consulting Archaeologist.* Proprietor of archaeological consulting business specializing in inventory survey, historic impact review, and cultural resources management in north-central New Mexico.
- Dates:** June 1987 - present
- Employer:** USDA Forest Service  
Carson National Forest  
Taos, New Mexico
- Description:** *Archeological Technician.* Responsibilities were two-fold: archaeological field work and reviewing cultural resources clearance reports from forest personnel and private consulting contractors. Fieldwork included supervising crew members in inventory survey and excavation projects and production of final reports. Report review entailed assessing clearance reports for adequacy of field work and results for meeting requirements of 36 CFR 800 and Section 106 of National Historic Preservation Act prior to consultation with State Historic Preservation Officer. Additional responsibility included assessing sites for National Register eligibility.
- Dates:** June - December 1987
- Employer:** Kit Carson Memorial Foundation  
Taos, New Mexico
- Description:** *Curator of Anthropology, Director of Contract Archaeology Program.* Principle responsibility and accomplishment was the development of a successful archaeological consulting program that allowed the Foundation to be involved in archaeological research

in northern New Mexico. Accomplishing this meant acting as Principal Investigator, Project Director, and crew member on over 30 projects, including 24 inventory surveys, 2 mitigation-data recovery projects, 5 construction monitoring projects, and a National Historic Landmark boundary study. Duties included budget development, proposal writing, hiring and supervising personnel, conducting field work and laboratory analyses, research, final report production, cooperation with state and federal resource managers and clients.

Other duties included :

- development of the Foundation's Contract Archaeology Report series;
- preparing and installing exhibits in the Ernest Blumenschein Home;
- preparing a tourist handout on the life of Padre Antonio Martinez;
- development of anthropological research library and archaeological laboratory;
- reviewing environmental documents and management plans;
- presenting testimony before Congressional subcommittee on energy development in the San Juan Basin;
- assisting in the restoration and maintenance of the Martinez Hacienda;
- preparation and installation of exhibit on the archaeology of the Martinez Hacienda;
- acting as tour guide for group tours of Foundation museums;
- delivering talks and lectures to amateur and teacher groups;
- representing the Foundation at conferences and meetings;
- editing the Foundation's newsletter;
- acting as Assistant Director in the Executive Director's absence.

**Dates:** March 1982 - June 1987

**Employer:** New Mexico Highlands University  
Taos Resident Center  
Taos, New Mexico

**Description:** *Instructor.* Responsibility involved teaching a course entitled "Development of Culture and Civilization (Introduction to Anthropology)."

**Dates:** Fall semester, 1983

**Employer:** USDA Forest Service  
Southwestern Region  
Albuquerque, New Mexico

**Description:** *Cultural Resources Laboratory Assistant*. Responsibilities included  
Survey:  
Guadalupe Box improvements, Porter Landing bridge, and Forest 376, Santa Fe N.F.

**Analyses:**  
historic artifacts, Chiefetz site, Prescott N.F. and Porter Landing townsite, Santa Fe N.F.;  
prehistoric artifacts, Apache Creek site, Gila N.F. and Sacramento Road site, Lincoln N.F.;  
human skeletal material, Carson N.F.;  
development of historic artifact analysis format, Elena Gallegos Exchange project.  
Drafted maps and figures and drew reconstructive illustrations for 2 publications on the archaeology of the Little Colorado region, Arizona.

**Dates:** June 1980 - December 1981

**Employer:** Office of Contract Archeology  
University of New Mexico  
Albuquerque, New Mexico

**Description:** *Archaeological Monitor*. Responsibilities involved monitoring construction of liquid hydrocarbon pipeline east of Aztec, New Mexico. In addition, acted as crew chief for salvage excavations at a site disturbed by pipeline.

**Dates:** September 1980

**Employer:** Office of Contract Archeology  
University of New Mexico  
Albuquerque, New Mexico

**Description:** *Laboratory Assistant*. Primary responsibility was the analysis of historic artifacts from Navajo sites on the McKinley Mine lease near Gallup, New Mexico. This included developing the analytical methodology and conducting the analysis. Results used to date and describe the Navajo occupation of the project area.

**Dates:** August 1979 - May 1980

**Employer:** Department of Anthropology  
University of New Mexico  
Albuquerque, New Mexico

**Description:** *Crew Chief, Archaeological Field School*. Responsibility was to act as crew chief for a field school survey crew in the foothills of the Manzano Mountains, New Mexico. This involved instructing and directing the

crew in survey techniques, use of maps and equipment, and recording sites. Also involved instructing students in basic lithic analysis in the lab.

**Dates:** June - August 1979

**Employer:** Office of Contract Archeology  
University of New Mexico  
Albuquerque, New Mexico

**Description:** *Laboratory Assistant*. Primary responsibility was processing (cleaning, sorting, numbering) artifacts from sites in the McKinley Mine lease.

**Dates:** September 1978 - May 1979

**Employer:** Kit Carson Memorial Foundation  
Taos, New Mexico

**Description:** *Survey Crew Member*. Responsibility was to assist in locating and recording archaeological sites in a survey of Arroyo Miranda Canyon near Taos, New Mexico.

**Dates:** June - August 1975

## PUBLICATIONS AND PAPERS

1980

Navajo Habitation Location: An Economic Model. In *Human Adaptations in a Marginal Environment: The UII Mitigation Project*, edited by J.L. Moore and J.C. Winter. Office of Contract Archaeology, University of New Mexico, Albuquerque.

*Analysis of Artifacts, Apache Creek site, Gila National Forest.* Manuscript on file, USDA Forest Service, Southwestern Region, Albuquerque.

*Archaeology at Turley's Mill and Distillery: A Preliminary Design.* Manuscript on file, Kit Carson Memorial Foundation, Taos.

1981

*Porter Landing Bridge (Forest Road 376): Cultural Resources Survey Report.* Manuscript of file, USDA Forest Service, Southwestern Region, Albuquerque.

Analysis of Lithic Artifacts: Site AR-03-08-04-51. In *Cultural Resources on the Lincoln National Forest*, by J. Betancourt, J. Boyer, P. Spoerl, and J.A. Tainter. Cultural Resources Miscellaneous Reports No. 35. USDA Forest Service, Southwestern Region, Albuquerque.

(With Klara B. Kelley, Stephen C. Lent, and John C. Acklen) Analysis of Data from the Navajo Site Reports.

(With Klara B. Kelley) Description and Analysis of Historic Artifacts.

(With David C. Eck and Klara B. Kelley) Dating Methods and Results.

In *Anasazi and Navajo Land Use in the McKinley Mine Area near Gallup, New Mexico, Volume One: Archeology*, edited by C.G. Allen and B.A. Nelson. Office of Contract Archeology, University of New Mexico, Albuquerque.

1982

*Reo Benson Property: Cultural Resources Survey Report.* Contract Archaeology Report No. 1. Kit Carson Memorial Foundation, Taos.

1983

*The Taos Municipal Airport Expansion: A Cultural Resources Survey of the Proposed Runway Extension.* Contract Archaeology Report No. 2. Kit Carson Memorial Foundation, Taos.

*Sipapu Ski Area Chairlift: Cultural Resources Clearance Report.* Contract Archaeology Report No. 3. Kit Carson Memorial Foundation, Taos.

*Up to This Line of Bluffs: Navajo Pastoralism, Wealth, and Land Tenure in the Archaeological Record.* Master's Thesis, University of New Mexico.

An Economic Model for Navajo Habitation Site Location. In *The San Juan Tomorrow*, edited by F. Plog and W. Wait. School of American Research and National Park Service, Santa Fe.

(With Dee F. Green) *Investigations at the Chiefetz Historic Site, Arizona*. Cultural Resources Document No. 2. USDA Forest Service, Southwestern Region, Albuquerque.

*Cunningham Gravel Pit: Cultural Resources Clearance Survey*. Contract Archaeology Report No. 4. Kit Carson Memorial Foundation, Taos.

1984

*Archaeological Investigations at the San Antonio Mountain Scoria Mine, Rio Arriba County, New Mexico*. Contract Archaeology Report No. 5. Kit Carson Memorial Foundation, Taos.

1985

*A Cultural Resources Inventory Survey of 25 acres near Eagle Nest, Colfax County, New Mexico*. Contract Archaeology Report No. 6. Kit Carson Memorial Foundation, Taos.

*Non-Sedentary Sites at San Antonio Mountain: The San Antonio Mountain Scoria Mine Mitigative Project*. Contract Archaeology Report No. 7. Kit Carson Memorial Foundation, Taos.

*Plains Electric Cooperative's Hernandez-Taos 115 kV Transmission Line: An Archaeological Inventory Survey*. Contract Archaeology Report No. 8. Kit Carson Memorial Foundation, Taos.

*Red River Ski Area: An Archaeological Clearance Survey of a Proposed Ski Run*. Contract Archaeology Report No. 9. Kit Carson Memorial Foundation, Taos.

*Taos Ski Valley: An Archaeological Clearance Survey of Seven Proposed Ski Run Improvements*. Contract Archaeology Report No. 10. Kit Carson Memorial Foundation, Taos.

*An Archaeological Inventory Survey in the Ranchos de Taos-Pot Creek Region, New Mexico*. Contract Archaeology Report No. 11. Kit Carson Memorial Foundation, Taos.

*Red River Ski Area: An Archaeological Clearance Survey of Seven Proposed Ski Run Improvements*. Contract Archaeology Report No. 12. Kit Carson Memorial Foundation, Taos.

*An Archaeological Inventory Survey of a Portion of the Tarleton Gravel Pit near Arroyo Seco, New Mexico*. Contract Archaeology Report No. 13. Kit Carson Memorial Foundation, Taos.

*Red River Ski Area: An Archaeological Clearance Survey of Two Planned Chairlifts and Five Ski Runs.* Contract Archaeology Report No. 14. Kit Carson Memorial Foundation, Taos.

Powerline Trail Follows Ancient Archaeological Sites. *The Taos News*, Dec. 12.

1986

*A Revised National Register Nomination for the Taos Pueblo National Historic Landmark.* Contract Archaeology Report No. 15. Kit Carson Memorial Foundation, Taos.

*An Archaeological Clearance Survey for the Planned Senior Citizens Center, Taos, New Mexico.* Contract Archaeology Report No. 16. Kit Carson Memorial Foundation, Taos.

*An Archaeological Clearance Survey in the Bitter Creek Summer Home Area, Red River, New Mexico.* Contract Archaeology Report No. 17. Kit Carson Memorial Foundation, Taos.

*Non-Sedentary Sites on the Taos Plateau and in the Rio Ojo Caliente Drainage: The Hernandez-Taos Archaeology Project.* Contract Archaeology Report No. 19. Kit Carson Memorial Foundation, Taos.

*Taos Ski Valley: An Archaeological Clearance Survey of Six Proposed Ski Run Improvements.* Contract Archaeology Report No. 20. Kit Carson Memorial Foundation, Taos.

*An Archaeological Inventory Survey of Two Proposed Transmission Line Rights-of-Way near Ancones, Rio Arriba County, New Mexico.* Contract Archaeology Report No. 21. Kit Carson Memorial Foundation, Taos.

*Leonard Minerals Oil/Gas Exploration Well: An Archaeological Inventory Survey in the Rito de la Olla Canyon, Taos County, New Mexico.* Contract Archaeology Report No. 22. Kit Carson Memorial Foundation, Taos.

*Contel's La Madera-Vallecitos Long Distance Telephone Line: An Archaeological Inventory Survey along State Highway 111 in Rio Arriba County, New Mexico.* Contract Archaeology Report No. 23. Kit Carson Memorial Foundation, Taos.

*Plains Electric Cooperative's Springer Substation: An Archaeological Clearance Survey for an Erosion Control Dike.* Contract Archaeology Report No. 24. Kit Carson Memorial Foundation, Taos.

*Baker Communication's Radio Tower: An Archaeological Clearance Survey on San Antonio Mountain, Rio Arriba County, New Mexico.* Contract Archaeology Report No. 25. Kit Carson Memorial Foundation, Taos.

*An Archaeological Clearance Survey of Two Small Parcels of Land in the Red River Canyon, Taos County, New Mexico.* Contract Archaeology Report No. 26. Kit Carson Memorial Foundation, Taos.



*Archaeological Monitoring of a Transmission Line near Ancones, Rio Arriba County, New Mexico.* Contract Archaeology Report No. 27. Kit Carson Memorial Foundation, Taos.

*Plains Electric Cooperative's Coyote Junction Switching Station: An Archaeological Clearance Survey.* Contract Archaeology Report No. 28. Kit Carson Memorial Foundation, Taos.

1987

*An Archaeological Monitoring Program for Plains Electric Cooperative's Hernandez-Taos 115 Kv Transmission Line.* Contract Archaeology Report No. 29. Kit Carson Memorial Foundation, Taos.

*An Archaeological Monitoring Program for Plains Electric Cooperative's Ojo-Taos 345 kV Transmission Line.* Contract Archaeology Report No. 30. Kit Carson Memorial Foundation, Taos.

*Plains Electric Cooperative's West Mesa-Grants 115 kV Transmission Line: Archaeological Survey and Monitoring on Encinal Creek.* Contract Archaeology Report No. 31. Kit Carson Memorial Foundation, Taos.

*Effects of Commercial Pastoralism on Navajo Wealth and Land Tenure: Lessons from Pastoral Ethnography.* Paper presented at the Second Annual Navajo Studies Conference, Flagstaff.

*An Archaeological Inventory Survey near Plains Electric Cooperative's Spills Ranch Switching Station, Rio Arriba County, New Mexico.* Contract Archaeology Report No. 32. Kit Carson Memorial Foundation, Taos.

*Contel's La Madera-Vallecitos Long Distance Telephone Line: Archaeological Monitoring along State Highway 111, Rio Arriba County, New Mexico.* Contract Archaeology Report No. 33. Kit Carson Memorial Foundation, Taos.

*Tio Grande Fisheries Project: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1987-02-031. Carson National Forest, Taos.

*Gavilan Timber Sale: Addendum. Forest Roads 1892 and 1893: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1983-02-005-B. Carson National Forest, Taos.

*Pattison Land Exchange: Archeological Assessment of the Twining Hotel Site, AR-03-02-07-41.* Cultural Resources Report No. 1986-02-103-B. Carson National Forest, Taos.

*Sawmill Timber Sale: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1987-02-071. Carson National Forest, Taos.

*Molycorp Salvage Timber Sale: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1985-02-100-B. Carson National Forest, Taos.

*Forest Road 1910 Stump/Slash Burial Pit Locations: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1986-02-049-B. Carson National Forest, Taos.

*Proposed Martin Apartment Addition: Historic Impact Review.* Report 87-01. Taos.

*Frijoles Timber Sale: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1987-02-079. Carson National Forest, Taos.

*Alamitos Timber Sale: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1977-02-042-D. Carson National Forest, Taos.

*Pattison Land Exchange: Analysis of Artifacts from AR-03-02-04-41, The Twining Hotel Site.* Cultural Resources Report No. 1986-02-103-C. Carson National Forest, Taos.

*Rio Nutritas Road: Cultural Resources Inventory Survey.* Cultural Resources Report No. 1987-02-111. Carson National Forest, Taos.

1988

*The Proposed Apple Tree Restaurant Renovation: Historical Impact Review.* Report 88-01. Taos.

*The Miller's Autoland Property: A Cultural Resources Inventory Survey for the Taos Holiday Inn Project.* Report 88-02. Taos.

*Colorado Aggregate Company's Planned Red Hill Scoria Mine: Archaeological Inventory Survey.* Report 88-03. Taos.

*A Mitigation Plan for Archaeological Sites at Colorado Aggregate Company's Planned Red Hill Scoria Mine.* Report 88-04. Taos.

*Red River Ski Area: An Archaeological Inventory Survey.* Report 88-05. Taos.

*The Poirier Property Driveway: Archaeological Survey and Testing near San Cristobal, Taos County, New Mexico.* Report 88-06. Taos.

*The Rainbow-Erier Coal Mines: Archaeological Inventory Survey near Dulce, Rio Arriba County, New Mexico.* Laboratory of Anthropology Notes 464. Museum of New Mexico, Santa Fe.

1989

*Two Proposed Borrow Pit Locations near Penasco, Taos County, New Mexico: Archaeological Inventory Survey.* Report 89-01. Taos.

*The Hopewell Gold Mines: Archaeological Inventory Survey near Hopewell Lake, Rio Arriba County, New Mexico.* Laboratory of Anthropology Notes 468. Museum of New Mexico, Santa Fe.

*The Pot Creek Project: Survey and Testing Results and a Data Recovery Plan for Sites along State Road 518, Taos County, New Mexico.* Laboratory of Anthropology Notes 478. Museum of New Mexico, Santa Fe.

*The Rock Wall Coal Mine: Archaeological Inventory Survey near Tres Ritos, Taos County, New Mexico.* Laboratory of Anthropology Notes 481. Museum of New Mexico, Santa Fe.

*The Brazos Ranch Road: Archaeological Inventory Survey, Rio Arriba County, New Mexico.* Report No. 89-02. Taos.

(With James L. Moore and Daisy F. Levine) *Archaeological Research as a Creative Process.* *El Palacio*, 95(1):75-76.

## 1990

*Up to This Line of Bluffs: Navajo Pastoralism, Wealth, and Land Tenure in the Archaeological Record.* Laboratory of Anthropology Notes 504. Museum of New Mexico, Santa Fe.

*The Talpa Project: Archaeological Survey along State Road 518, Taos County, New Mexico.* Laboratory of Anthropology Notes 510. Museum of New Mexico, Santa Fe.

*The Petaca Driveway: Archaeological Survey near the Arroyo Aguaje de la Petaca, Taos County, New Mexico.* Report No. 90-01. Taos.

*The Latir Creek Pipeline: Archaeological Survey near Questa, Taos County, New Mexico.* Report No. 90-02. Taos.

(with Laurie G. Evans) *Archaeological Survey of Coal Mine Features at Van Houten, Colfax County, New Mexico.* Laboratory of Anthropology Notes 516. Museum of New Mexico, Santa Fe.

*The Garrapata Ridge Driveways: Archaeological Survey near Lama, Taos County, New Mexico.* Report No. 90-04. Taos.

*Archaeological Testing at LA 79099 (AR-03-02-07-317) near Lama, Taos County, New Mexico.* Report No. 90-04B. Taos.

*The House that Juan Built: An Archaeological Perspective on Adobe Analysis.* Paper presented at Adobe 90: the Sixth International Conference on the Conservation of Earthen Architecture, October 14-19. Las Cruces.

*El Torreón del Arroyo Seco: Archaeological Test Excavations at LA 80301 near Arroyo Seco, Taos County, New Mexico (Preliminary Report).* Report 90-05. Taos.

*El Torreón del Arroyo Seco: Archaeological Test Excavations at LA 80301 near Arroyo Seco, Taos County, New Mexico.* Report 90-05B. Taos.

## 1991

*The Tres Piedras Project: Archaeological Testing at LA 71740, Taos County, New Mexico.* Archaeology Notes 19. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

*The Taos Watertank Project: Archaeological Survey along the US 64 Bypass (Paseo del Cañon), Taos County, New Mexico.* Report 90-06. Taos.

*Salazar Road Right-of-Way Acquisition: Archaeological Survey in Taos, Taos County, New Mexico.* Report 91-01. Taos.

*Weimer Road: Archaeological Survey in Taos, Taos County, New Mexico.* Report 91-02. Taos.

*Carrizo Creek Transmission Line Relocation: Archaeological Survey in Union County, New Mexico.* Report 91-03. Taos.

(with Daisy F. Levine) *The Talpa Testing Project: Archaeological Test Excavations along State Road 518 and a Data Recovery Plan for LA 77861, Taos County, New Mexico.* Archaeology Notes 27. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

*The Taos Watertank Project, Phase II: Archaeological Survey and Testing at Two Sites along State Road 585 (Paséo del Cañon), Taos County, New Mexico.* Report 90-06B. Taos.

(with Linda Mick-O'Hara) *Excavation of a Human Burial at the El Pueblito site, LA 12741, Taos County, New Mexico.* Archaeology Notes 29. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

*An Archaeological Survey of Two Slide Areas along State Road 518, Taos County, New Mexico.* Archaeology Notes 30. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

*The Black Copper Gold Mine: Archaeological Survey near Red River, Taos County, New Mexico.* Archaeology Notes 40. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

*The Summer Life Coal Mine: Archaeological Survey near Tres Ritos, Taos County, New Mexico.* Archaeology Notes 41. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

*An Archaeological Survey along State Road 150 in Taos County, New Mexico.* Report 91-05. Taos.

## 1992

*Taos County Hospital: Archaeological Survey in Taos, Taos County, New Mexico.* Report 92-01. Taos.

*Kit Carson Electric Cooperative's Taos Pueblo Underground Line: Archaeological Survey in Taos County, New Mexico.* Report 92-05. Taos.

*The Webb Driveway: Archaeological Inspection in San Cristobal, Taos County, New Mexico.* Report 92-06. Taos.

*Ojitos Canyon Road: Archaeological Survey in Taos County, New Mexico.* Report 92-07. Taos.

*La Puente: Eighteenth Century Hispanic Village Life on the Rio Chama Frontier.* In *Current Research on the Late Prehistory and Early History of New Mexico*, edited by B. J. Vierra. Special Publication No. 1. New Mexico Archaeological Council, Albuquerque.

*Defining the Anasazi Frontier: The Valdez Phase in the Taos District.* Paper presented at the 65<sup>th</sup> Pecos Conference, Pecos.

*Climatic Overview of the Rio Grande del Rancho Valley: Background for Irrigation.* Paper presented at the New Mexico Archaeological Council Agricultural Symposium, Santa Fe.

*The Mesa Vibora Driveway: Archaeological Survey near Ojo Caliente, Taos County, New Mexico.* Report 92-04. Taos.

*Archaeological Survey at El Duende and Los Luceros, Rio Arriba County, New Mexico.* Report 92-08. Taos.

(With Daniel Wolfman) *Dating the Valdez Phase: Chronometric Re-Evaluation of the Initial Anasazi Occupation of North-Central New Mexico, Research Design.* Archaeology Notes 164. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

1993

*Placitas Road: Historic Structure Review and Archaeological Survey in Taos, Taos County, New Mexico.* Report 93-01. Taos.

*The TCEDC Property: Archaeological Survey in Taos, Taos County, New Mexico.* Report 93-02. Taos.

*Blueberry Hill Road: Archaeological Survey in Taos County, New Mexico.* Report No. 93-03. Taos.

*The Terrace Towers Lodge Driveway: Archaeological Survey in Red River, Taos County, New Mexico.* Report 93-04. Taos.

*Archaeological Survey along State Road 230, Taos County, New Mexico.* Report 93-08. Taos.

## 1994

*Forest Road 70B and Howell Property Access Road: Archaeological Survey on the Camino Real District, Carson National Forest, New Mexico.* Report 93-06. Taos.

*An Archaeological Survey along NM 150 near Red River, Taos County, New Mexico.* Report 94-01. Taos.

*Blueberry Hill Road: Archaeological Survey in Taos County, New Mexico.* Report 93-03. Taos.

*Archaeological Survey along US 64 in Taos County, New Mexico.* Report 93-05. Taos.

*Valle Vista Subdivision: Archaeological Survey in Taos County, New Mexico.* Report 94-02. Taos.

*The Proposed Grassie Road: Archaeological Survey near Ribera, San Miguel County, New Mexico.* Report 93-07. Taos.

*The Ranchos de Taos Post Office: Archaeological Survey in Ranchos de Taos, Taos County, New Mexico.* Report 94-03. Taos.

*The Taos County Agricultural Center: Archaeological Survey in Taos County, New Mexico.* Report 94-05. Taos.

(With James L. Moore, Daisy F. Levine, Linda Mick-O'Hara, and Mollie S. Toll) *Studying the Taos Frontier: The Pot Creek Data Recovery Project.* Archaeology Notes 68. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

(With Charles Hannaford, Guadalupe Martinez, and Adisa Willmer) *Historic Artifact Analysis: Standardized Variable and Attribute Codes.* Archaeology Notes 24D. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

*Blueberry Hill Road Archaeological Testing: A Plan for Test Excavations at Nineteen Sites in Taos County, New Mexico.* Archaeology Notes 163. Office of Archaeological Studies, Museum of New Mexico, Santa Fe.

## 1995

*Archaeological Survey for a Proposed Electric Transmission Line near San Miguel, San Miguel County, New Mexico.* Report 94-04. Taos.

*Taos Public Library: Archaeological Survey in Taos, Taos County, New Mexico.* Report 94-06. Taos.

## FIELD EXPERIENCE

ORGANIZATION	POSITION	PROJECT NAME, COUNTY	TIME IN FIELD		
			Days	Weeks	Months
1975					
SURVEY					
KCMP <sup>1</sup>	Crew member	Arroyo Miranda Survey, Taos			3
1979					
SURVEY					
UNM <sup>2</sup> -Field School	Teaching Assistant	Manzano Pothills Survey, Valencia and Torrance			2
1980					
MONITORING					
OCA <sup>3</sup>	Monitor	MAPCO Pipeline, San Juan		2	
DATA RECOVERY EXCAVATIONS					
OCA	Crew Chief	MAPCO Pipeline, San Juan		1	
1981					
SURVEY					
USFS-Region 3 <sup>4</sup>	Crew member	Guadalupe Box, PR 376, Porter Landing, Sandoval	1		
TEST EXCAVATIONS					
USFS-Region 3	Crew member	Elena Gallegos Exchange, Bernalillo and Torrance		2	
1982					
SURVEY					
KCMP	PI/PD <sup>5</sup>	Reo Benson Property, Taos	3		
1983					
SURVEY					
KCMP	PI/PD	Taos Municipal Airport, Taos	2		
KCMP	PI/PD	Sipapu Ski Area, Taos	1		
KCMP	PI/PD	Cunyngham Gravel Pit, Taos	1		

1983 (cont.)					
MONITORING					
KCMP	PI/PD	Springer-Rosebud Transmission Line, Colfax, Union, and Harding			4
1984					
SURVEY					
KCMP	PI/PD	San Antonio Mtn. Scoria Mine, Rio Arriba		1	
DATA RECOVERY EXCAVATIONS					
KCMP	PI/PD	San Antonio Mtn. Scoria Mine, Rio Arriba		1	
1985					
SURVEY					
KCMP	PI/PD	Eagle Nest Condos, Colfax	1		
KCMP	PI/PD	Hernandez-Taos Transmission Line, Taos and Rio Arriba		1	
KCMP	PI/PD	Red River Ski Area, Taos	3		
KCMP	PI/PD	Taos Ski Valley, Taos	1		
KCMP	PI/PD	Ranchos-Pot Creek, Taos	3		
KCMP	PI/PD	Tarleton Gravel Pit, Taos	2		
DATA RECOVERY EXCAVATIONS					
KCMP	PI/PD	Hernandez-Taos Transmission Line, Taos and Rio Arriba		1	
1986					
SURVEY					
KCMP	PI/PD	Taos Senior Citizens Center, Taos	1		
KCMP	PI/PD	Bitter Creek, Taos	1		
KCMP	PI/PD	Taos Ski Valley, Taos	1		
KCMP	PI/PD	Ancones Transmission Line, Rio Arriba	1		
KCMP	PI/PD	Rito de la Olla, Taos	2		
KCMP	PI/PD	La Madera-Vallecitos, Rio Arriba	2		
KCMP	PI/PD	Springer Substation, Colfax	1		



1986 SURVEY (cont.)					
KCMP	PI/PD	Baker Communications Tower, Rio Arriba	1		
KCMP	PI/PD	Red River Canyon, Taos	1		
KCMP	PI/PD	Coyote Junction Station, Rio Arriba	1		
MONITORING					
KCMP	PI/PD	Hernandez-Taos Transmission Line, Taos and Rio Arriba			4
KCMP	PI/PD	Ojo-Taos Transmission Line, Rio Arriba			1
KCMP	PI/PD	Ancones Transmission Line, Rio Arriba	2		
DATA RECOVERY EXCAVATIONS					
KCMP	PI/PD	Hernandez-Taos Transmission Line, Taos and Rio Arriba			1
NATIONAL HISTORIC LANDMARK BOUNDARY STUDY					
KCMP	PI/PD	Taos Pueblo	1		
1987					
SURVEY					
KCMP	PI/PD	Spills Ranch Tower, Rio Arriba	1		
Carson N.F.	PD*	Tio Grande Fisheries, Rio Arriba	1		
Carson N.F.	PD	Gavilan Timber Sale, Rio Arriba		2	
Carson N.F.	PD	Sawmill Timber Sale, Taos		1	
Carson N.F.	PD	Molycorp Salvage Timber Sale, Taos	2		
Carson N.F.	PD	PR 1910 Stump/Slash, Taos	1		
Carson N.F.	PD	Prijoles Timber Sale, Taos		3	
Carson N.F.	PD	Alamitos Timber Sale, Taos		3	
Carson N.F.	PD	Rio Nutritas Road, Rio Arriba	3		
MONITORING					
KCMP	PI/PD	Encinal Creek, Valencia	3		
KCMP	PI/PD	La Madera-Vallecitos, Rio Arriba	1		

1987 (cont.)					
TEST EXCAVATIONS					
Carson N.F.	PD	Twining Hotel, Taos		2	
HISTORIC IMPACT REVIEW					
PC <sup>7</sup>	PI/PD	Martin Apartments, Taos	1		
1988					
SURVEY					
MNH-OAS <sup>8</sup>	PD	Rainbow-Erler Coal Mines, Rio Arriba	1		
PC	PI/PD	Miller's Autoland, Taos	1		
PC	PI/PD	Red Hill Scoria Mine, Rio Arriba	9		
PC	PI/PD	Red River Ski Area, Taos	3		
PC	PI/PD	Poirier Driveway, Taos	1		
DATA RECOVERY EXCAVATIONS					
MNH-OAS	Project Co-Director	Abiquiu, Rio Arriba			4
HISTORIC IMPACT REVIEW					
PC	PI/PD	Apple Tree Restaurant, Taos	1		
1989					
SURVEY					
MNH-OAS	PD	Hopewell Gold Mines, Rio Arriba		1	
MNH-OAS	PD	Rock Wall Coal Mine, Taos	1		
MNH-OAS	PD	Pot Creek, Taos	1		
PC	PI/PD	Peñasco Borrow Pits, Taos	2		
PC	PI/PD	Brazos Ranch Road, Rio Arriba	1		
TEST EXCAVATIONS					
MNH-OAS	PD	Pot Creek, Taos			1
1990					
SURVEY					
MNH-OAS	PD	Talpa, Taos	6		
MNH-OAS	PD	Van Houten, Colfax	2		

1990 SURVEY (cont.)					
PC	PI/PD	Petaca Driveway, Taos	2		
PC	PI/PD	Latir Creek Pipeline, Taos	1		
PC	PI/PD	Garrapata Ridge Driveways, Taos	1		
TEST EXCAVATIONS					
MNH-OAS	PD	Talpa, Taos			2
PC	PI/PD	Garrapata Ridge Driveway, Taos	1		
1990 TEST EXCAVATIONS (cont.)					
PC	PI/PD	Acequia Association, Taos			1
1991					
SURVEY					
MNH-OAS	PD	NH 518 Slide Areas, Taos	1		
MNH-OAS	PD	Black Copper Gold Mine, Taos	2		
MNH-OAS	PD	Summer Life Coal Mine, Taos	1		
PC	PI/PD	Taos Watertank, Taos	4		
PC	PI/PD	Salazar Road, Taos	1		
PC	PI/PD	Weimer Road, Taos	1		
PC	PI/PD	Carrizo Creek, Union	1		
PC	PI/PD	State Road 150, Taos	1		
TEST EXCAVATIONS					
MNH-OAS	PD	Tres Piedras, Taos	1		
PC	PI/PD	Taos Watertank, Taos	2		
DATA RECOVERY EXCAVATIONS					
MNH-OAS	PD	El Pueblito Burial, Taos	3		
MNH-OAS	PD	Talpa, Taos		6	
1992					
SURVEY					
PC	PI/PD	Taos County Hospital, Taos	2		
PC	PI/PD	Taos Pueblo Underground Line, Taos	1		
PC	PI/PD	Webb Driveway, Taos	1		

1992 SURVEY (cont.)					
PC	PI/PD	Ojitos Canyon Road, Taos	1		
PC	PI/PD	Mesa Vibora Road, Taos	1		
PC	PI/PD	El Duende/Los Luceros, Rio Arriba	1		
TEST EXCAVATIONS					
MNN-OAS	PD	Loco Hills, Eddy		1	
1993					
SURVEY					
PC	PI/PD	Grassie Road, San Miguel	2		
PC	PI/PD	US 64, Taos	1		
PC	PI/PD	TCEDC Property, Taos	1		
PC	PI/PD	Terrace Towers Lodge, Taos	1		
PC	PI/PD	State Road 230, Taos	1		
PC	PI/PD	Blueberry Hill Road, Taos			1
PC	PI/PD	Placitas Road, Taos	1		
PC	PI/PD	Ranchitos Road, Taos	2		
TEST EXCAVATIONS					
MNN-OAS	PD	Loco Hills, Eddy		1	
MNN-OAS	PD	Bull Well Draw, Rio Arriba		2	
DATA RECOVERY EXCAVATIONS					
MNN-OAS	Project Co-Director	Roswell Relief Route, Chaves		5	
MNN-OAS	Project Co-Director	Ojo (US 285), Rio Arriba			2
1994					
SURVEY					
MNN-OAS	PD	Roswell Relief Route, Chaves		1	
PC	PI/PD	FR 70-B, Taos	1		
PC	PI/PD	NH 150, Taos	1		
PC	PI/PD	Ranchos de Taos Post Office, Taos	1		
PC	PI/PD	Taos County Agricultural Center, Taos	1		
PC	PI/PD	Valle Vista Subdivision, Taos		1	

1994 SURVEY (cont.)					
PC	PI/PD	San Jose Transmission Line, San Miguel	1		
TEST EXCAVATIONS					
MNM-OAS	PD	Millicent Rogers Road, Taos		1	
DATA RECOVERY EXCAVATIONS					
MNM-OAS	Project Co-Director	Roswell Relief Route, Chaves		3	
1995					
SURVEY					
PC	PI/PD	Taos Public Library, Taos	1		

- 1 KCMF: Kit Carson Memorial Foundation, Taos.
- 2 UNM: University of New Mexico, Albuquerque.
- 3 OCA: Office of Contract Archaeology, University of New Mexico, Albuquerque.
- 4 USFS: United States Forest Service, Region 3, Albuquerque.
- 5 PI/PD: Principal Investigator/Project Director.
- 6 PD: Project Director.
- 7 PC: Private Consultant.
- 8 MNM-OAS: Office of Archaeological Studies, Museum of New Mexico.