

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 158849

HPD Log No(s).

Registration

Lead Agency: NM State Land Office

Performing Agency: Lone Mountain Archaeological Services

Activity ID:

Performing Agency Report No: 4736

Other Agencies:

Report Recipient (Your Client): Souder, Miller & Associates

Activity Types:

- ☐ Research Design
 ☒ Archaeological Survey/Inventory
 ☐ Architectural Survey/Inventory
 ☐ Test Excavation
 ☐ Monitoring
 ☐ Collections/Non-Field Study
 ☐ Compliance Decision
 ☐ Literature Review Overview
 ☐ Excavation
 ☐ Ethnographic Study
 ☐ Resource/Property Visit
 ☐ Historic Structures Report
 ☐ Other:

Total Survey Acreage: 530.30

Total Tribal Acreage:

Total Resources Visited: 2

Associate/Register Resources

Prefix	Number	Field Site/Other Number	In GIS	Resource Type	Collections Made?	Revisit
HCPI	55122	HCPI 55122	☒	Structure	☐	Revisit
LA	206859	4736-001	☒	Site	☐	

Report Details

Type of Report Positive

Lead Agency

Lead Agency: NM State Land Office

Lead Agency Report No.

Report Number:

Title of Report

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 158849

HPD Log No(s).

Report Details (continued)

Title of Report: Cultural Resource Inventory for the Section 36 Economic Development Lease Renewal in Sandoval County, New Mexico

Authors: Weaver, Kobi, Trevor McDermott, Douglas Boggess, and Brianna Dittmer

Publication Type: Report, Monograph, or Book

Description of Undertaking (what does the project entail?)

Description: Sandoval County is renewing its Section 36 Economic Development Lease with the State of New Mexico.

Dates of Investigation

From: 09-Jun-2025 **To:** 16-Jun-2025

Report Date

Report Date: 25-Jun-2025

Performing Agency/Consultant

Name: Lone Mountain Archaeological Services

Principal Investigator: Douglas Boggess

Field Supervisor: Jon Blackwelder

Field Personnel Names: Briana Dittmer, Trevor McDermott, and Kobi Weaver

Historian/Other

Performing Agency Report Number

Report Number: 4736

Client/Customer (project proponent)

Name: Souder, Miller & Associates

Contact: Mariah Kelly

Address: 5454 Venice Ave NE, Suite D, ABQ 87113

Phone: 505- 289-1056

Client/Customer Project Number

Project Number:

Ownership & Location

Land Ownership Status (Must be indicated on Project Map)

Owner/Manager List:

Land Owner/Manager	Protocol	Acres Surveyed	Acres in APE
NM State Land Office	Class III	530.30	530.30

Total Survey Acreage: 530.30

NMCRIS Investigation Abstract Form (NIAF)

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HPD Log No(s).

Ownership & Location (continued)

Total Tribal Acreage:

Record Search(es)

Date of HPD/ARMS File Review: 05-Jun-2025

Date of Other Agency File Review

Survey Data

Source Graphics: NAD 83

☒ USGS 7.5' (1:24,000) topo map ☐ Other Topo Map Scale:

☒ GPS Unit <1M

☐ Aerial Photos Other Source Graphic(s):

The following tables (b,c,& e) are calculated by the NMCRIS Map Service

USGS 7.5' Topographic
Map(s)

County(ies)

Legal Description

Map Name	USGS Quad Code
Arroyo de las Calabacillas, NM	35106-C7

County	FIPS
SANDOVAL	35043

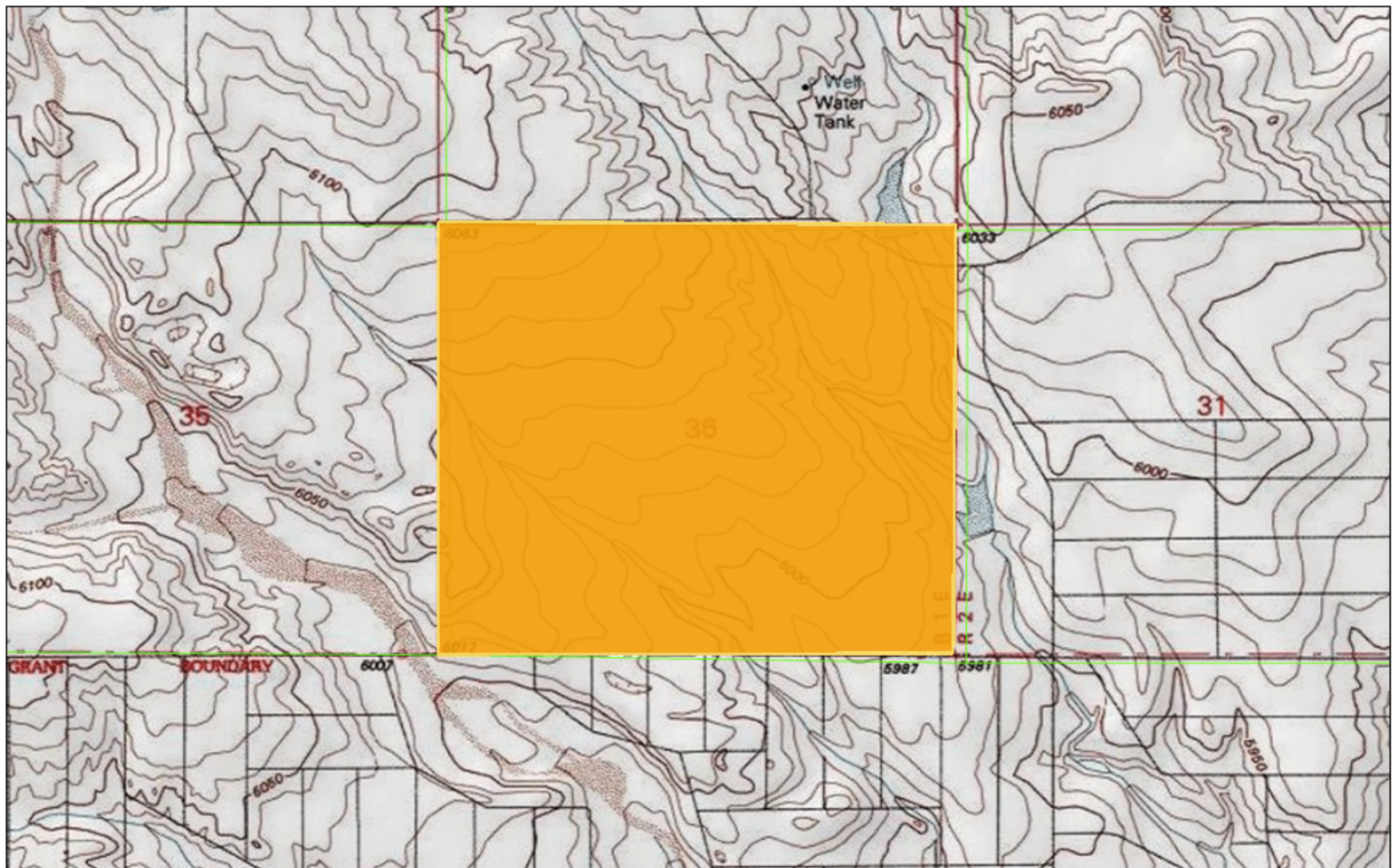
Unplatted	Township (N/S)	Range (E/W)	Section
No	T13N	R01E	25
No	T13N	R01E	36
No	T13N	R01E	26
No	T13N	R01E	35

Projected Legal Description

No

Nearest City or Town: Rio Rancho

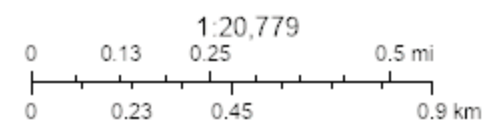
Other Description:



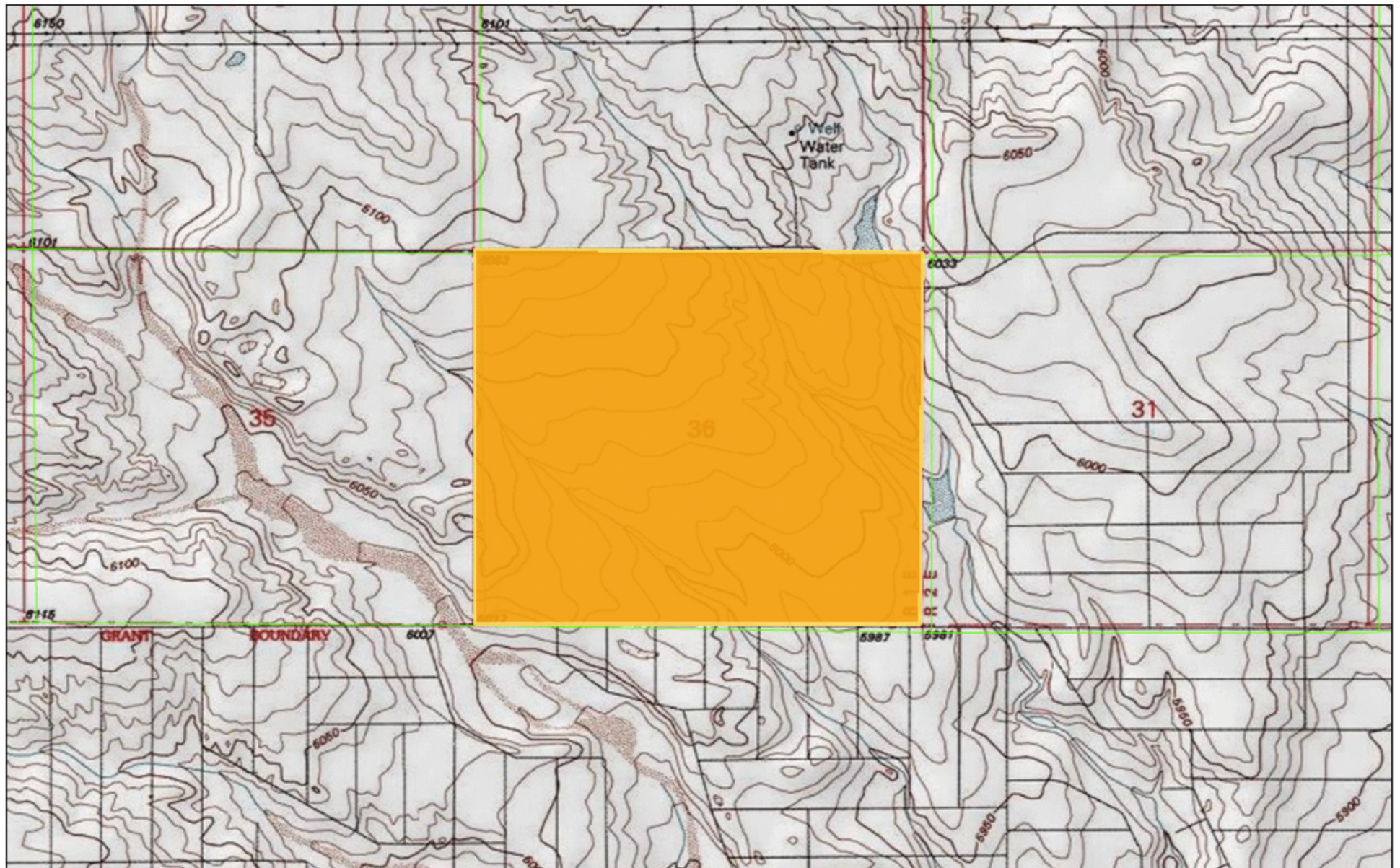
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NMCRIS No: 158849

 Proposed



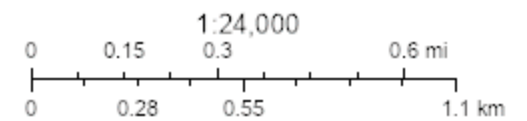
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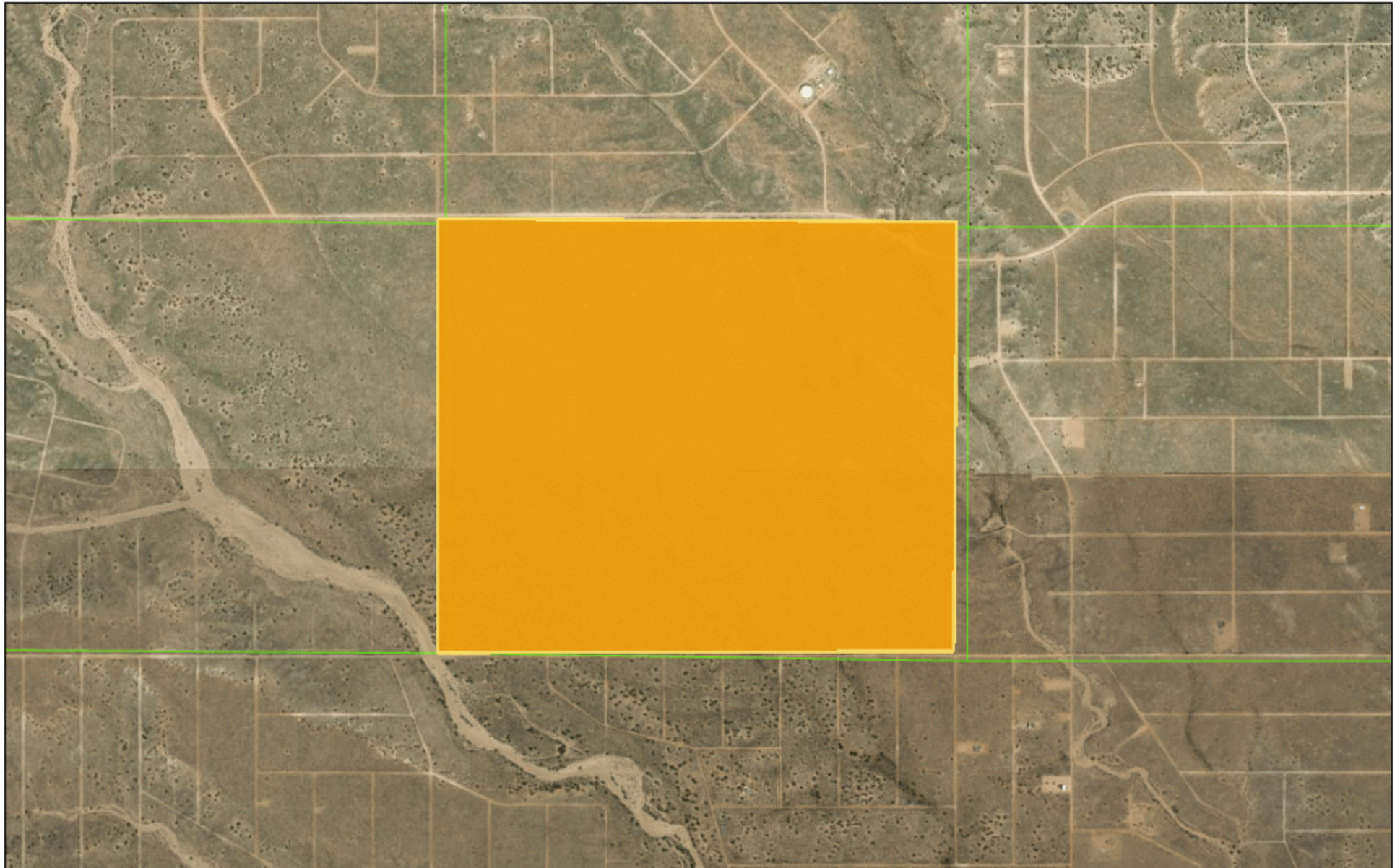
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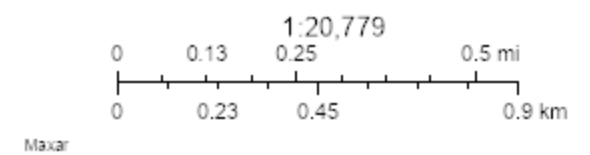


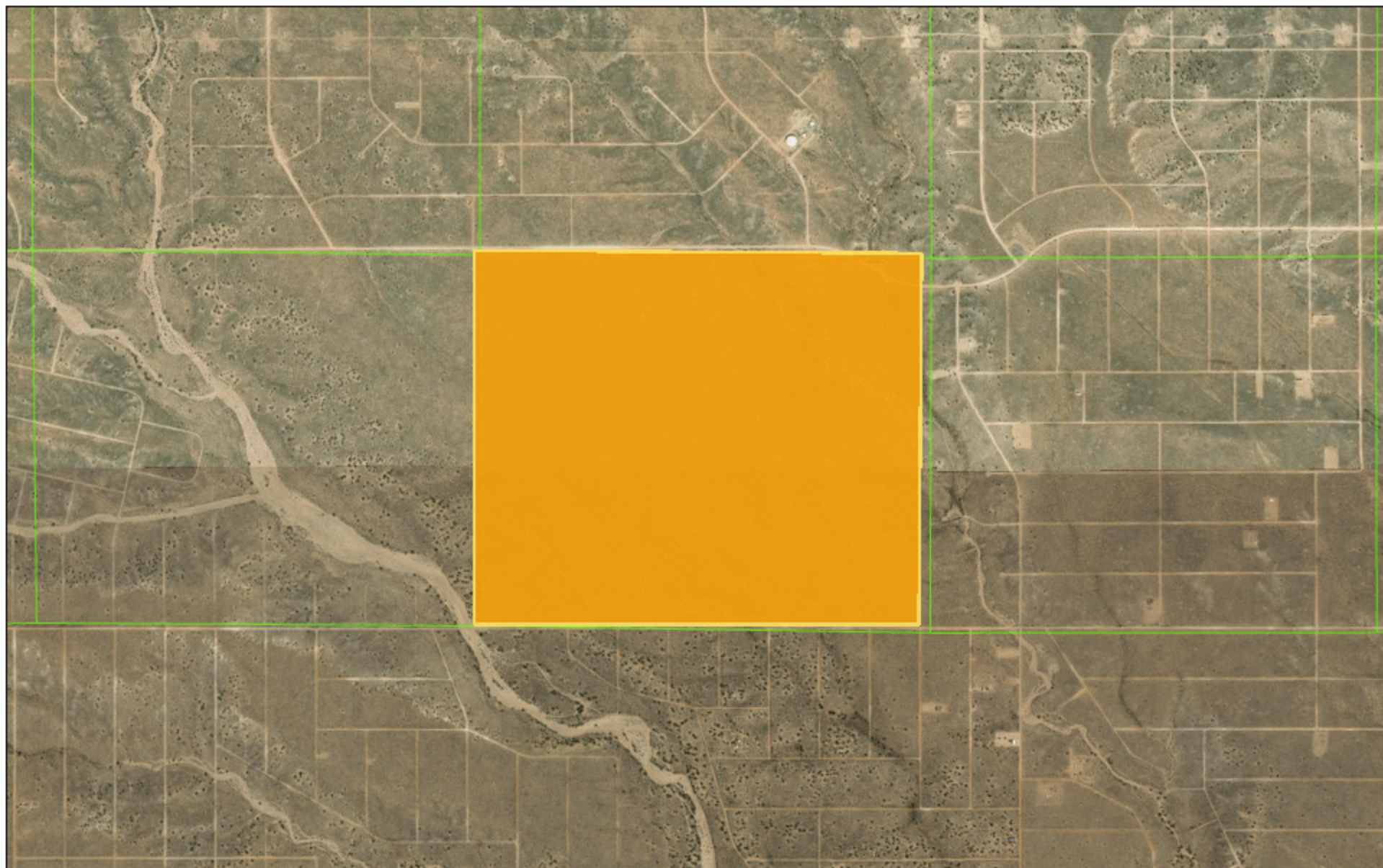
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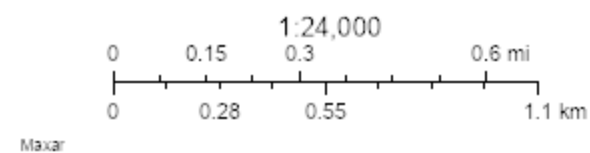




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 Proposed



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Methodology

Survey Field Methods

Intensity: 100% coverage

Configuration: ☒ Block Survey Units ☐ Linear Survey Units (l x y)

Other Survey Units

Scope: All Resources

Coverage Method: ☒ Systematic Pedestrian Coverage **Other Method:**

Survey Interval (m): 15 **Crew Size** 4

Fieldwork Dates **From** 09-Jun-2025 **To** 16-Jun-2025

Survey Person Hours: 142.00 **Recording Person Hours** 2.00

Additional Narrative: Lone Mountain conducted a block survey.

Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.)

Environmental Setting: The proposed lease renewal falls on a relatively level desert landscape with small hummocks, bordered at the north and south edges by graded roads. The survey area is located on piedmont alluvial deposits (includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans of the Holocene to lower Pleistocene) and the Upper Santa Fe Group (includes Camp Rice, Fort Hancock, Palomas, Sierra Ladrones, Arroyo Ojito, Ancha, Puye, and Alamosa Formations of the Middle Pleistocene to uppermost Miocene). Elevation ranges between 5,970 ft and 6,090 ft amsl.

Soils include Grieta fine sandy loam, 1 to 4 percent slopes; Clovis fine sandy loam, 1 to 4 percent slopes; Sheppard loamy fine sand, 3 to 8 percent slopes; and Zia-Clovis association, 2 to 10 percent slopes. These are fine sandy loam, sandy loam, sandy clay loam, loamy sand, and loamy fine sand comprised of eolian deposits over fan alluvium derived from sandstone, eolian deposits derived from sandstone, and eolian deposits over slope alluvium derived from sandstone and shale. They are found on fan remnants, plains mesas, plateaus, and ridges.

Brown (1994) characterizes the vegetation community as Plains and Great Basin Grassland. Local vegetation includes broom snakeweed, juniper, Mormon tea, prickly pear, sand sage, tarbush, walking stick cholla, yucca, four-wing saltbush, and various forbs and grasses.

Percent Ground Visibility

Ground Visibility: 76-99%

Condition of Survey Area: Man-made disturbances include the graded roads that border the survey area to the north and south, as well as very recent trash dumping. Wind and water erosion, livestock grazing, and burrowing rodents are the main disturbances.

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HPD Log No(s).

Methodology

Attachments (check all appropriate boxes)

- ☒ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)
- ☒ Copy of NMCRIS Map Check (required)
- ☒ LA Site Forms - new sites (with sketch map & topographic map) if applicable
- ☐ LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)
- ☒ Historic Cultural Property Inventory Forms, if applicable
- ☒ List and Description of Isolates, if applicable
- ☐ List and Description of Collections, if applicable

Other Attachments

- ☐ Photographs and Log
- ☐ Other attachments **Describe:**

Cultural Resource Findings

Investigation Results

Archaeological Sites Discovered and Registered:	1
Archaeological Sites Discovered and NOT Registered:	0
Previously Recorded Archaeological Sites Revisited (site update form required):	0
Previously Recorded Archaeological Sites Not Relocated (site update form required):	0
Total Archaeological Sites (visited & recorded):	1
Total Isolates Recorded:	9
HCPI Properties Discovered and Registered:	0
HCPI Properties Discovered And NOT Registered:	0
Previously Recorded HCPI Properties Revisited:	1
Previously Recorded HCPI Properties NOT Relocated:	0
Total HCPI Properties (visited & recorded, including acequias):	1

**If No Cultural
Resources Found,
Discuss Why:**

Management Summary

Summary: Lone Mountain recorded nine isolated manifestations, updated HCPI 55122, and documented the newly recorded site LA 206859. HCPI 55122 is an earthen water tank built between A.D.1930 and 1952 and recommended ineligible for nomination to the NRHP under

NMCRIS Investigation Abstract Form (NIAF)

NMCRIS Activity Number: 158849**HPD Log No(s).****Cultural Resource Findings (continued)**

any of the four criteria. LA 206859 has an undated lithic artifact scatter, suggesting an Unknown Aboriginal (9500 B.C. to A.D. 1600) temporal and cultural affiliation and is recommended unevaluated for nomination to the NRHP. No additional treatment is recommended for the isolated manifestations, or for HCPI 55122. Any construction or development should be designed to avoid LA 206859 by at least 100 ft. If any buried cultural deposits are found or if any other form of discovery takes place during any construction, work should cease in that location and the NMSLO archaeologist should be notified.

Attachments

Attachment Type	Description	Name	File Type	Upload Date	Upload By
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CULTURAL RESOURCE INVENTORY FOR THE SECTION 36 ECONOMIC DEVELOPMENT LEASE RENEWAL IN SANDOVAL COUNTY, NEW MEXICO



*Prepared by Kobi Weaver, Trevor
McDermott, Douglas Boggess, and
Brianna Dittmer*

*Submitted by
Douglas Boggess*

*Lone Mountain Archaeological
Services, Inc.
1717 Louisiana Blvd NE Suite 116,
Albuquerque, NM 87110*

*Sandoval County
NMCRIS No. 158849
State Permit No. State NM-25-073-S
Lone Mountain Report No. 4736
June 25, 2025*

ABSTRACT

Sandoval County is renewing its Section 36 Economic Development Lease with the State of New Mexico. On June 6, 9 to 12, and 16, 2025, Lone Mountain Archaeologists Jon Blackwelder, Briana Dittmer, Trevor McDermott, and Kobi Weaver conducted a pedestrian survey of the 530.3 acre block.

The surveyed area comprised a total of 530.3 acres on State Trust lands within Township 13 North, Range 1 East, and Section 36 in Sandoval County, New Mexico and can be found on the Arroyo de las Calabacillas NM USGS quadrangle. The SLO is serving as lead agency. The project was undertaken under NM State Permit No. NM-25-073-S and NMCRIS 158849.

Lone Mountain recorded nine isolated manifestations, updated HCPI 55122, and documented the newly recorded site LA 206859. HCPI 55122 is an earthen water tank built between A.D.1930 and 1952 and recommended ineligible for nomination to the NRHP under any of the four criteria. LA 206859 has an undated lithic artifact scatter, suggesting an Unknown Aboriginal (9500 B.C. to A.D. 1600) temporal and cultural affiliation and is recommended unevaluated for nomination to the NRHP. No additional treatment is recommended for the isolated manifestations, or for HCPI 55122. Any construction or development should be designed to avoid LA 206859 by at least 100 ft. If any buried cultural deposits are found or if any other form of discovery takes place during any construction, work should cease in that location and the NMSLO archaeologist should be notified.

All work was completed in compliance with applicable federal and state legislation and procedures designed to protect nonrenewable cultural resources, including the New Mexico Cultural Properties Act of 1978, Section 106 of the National Historic Preservation Act of 1966 as amended (PL 89-665), the National Environmental Policy Act of 1969 (PL 91-852), the Archaeological Resource Protection Act of 1979 (PL 96-95), and Executive Order 11593.

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CHAPTER 1

PROJECT DESCRIPTION

Description of Undertaking

Sandoval County is renewing its Section 36 Economic Development Lease with the State of New Mexico. On June 6, 9 to 12, and 16, 2025, Lone Mountain Archaeologists Jon Blackwelder, Briana Dittmer, Trevor McDermott, and Kobi Weaver conducted a pedestrian survey of the 530.3 acre block.

Project Location

The surveyed area comprised a total of 530.3 acres on State Trust lands within Township 13 North, Range 1 East, and Section 36 in Sandoval County, New Mexico and can be found on the Arroyo de las Calabacillas NM USGS quadrangle. The SLO is serving as lead agency. The project was undertaken under NM State Permit No. NM-25-073-S and NMCRIS 158849 (Figures 1.1-1.6 and Appendix A).

ENVIRONMENTAL SETTING

The proposed lease renewal falls on a relatively level desert landscape with small hummocks, bordered at the north and south edges by graded roads. The survey area is located on piedmont alluvial deposits (includes deposits of higher gradient tributaries bordering major stream valleys, alluvial veneers of the piedmont slope, and alluvial fans of the Holocene to lower Pleistocene) and the Upper Santa Fe Group (includes Camp Rice, Fort Hancock, Palomas, Sierra Ladrones, Arroyo Ojito, Ancha, Puye, and Alamosa Formations of the Middle Pleistocene to uppermost Miocene). Elevation ranges between 5,970 ft and 6,090 ft amsl.

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Man-made disturbances include the graded roads that border the survey area to the north and south, as well as very recent trash dumping. Wind and water erosion, livestock grazing, and burrowing rodents are the main disturbances.

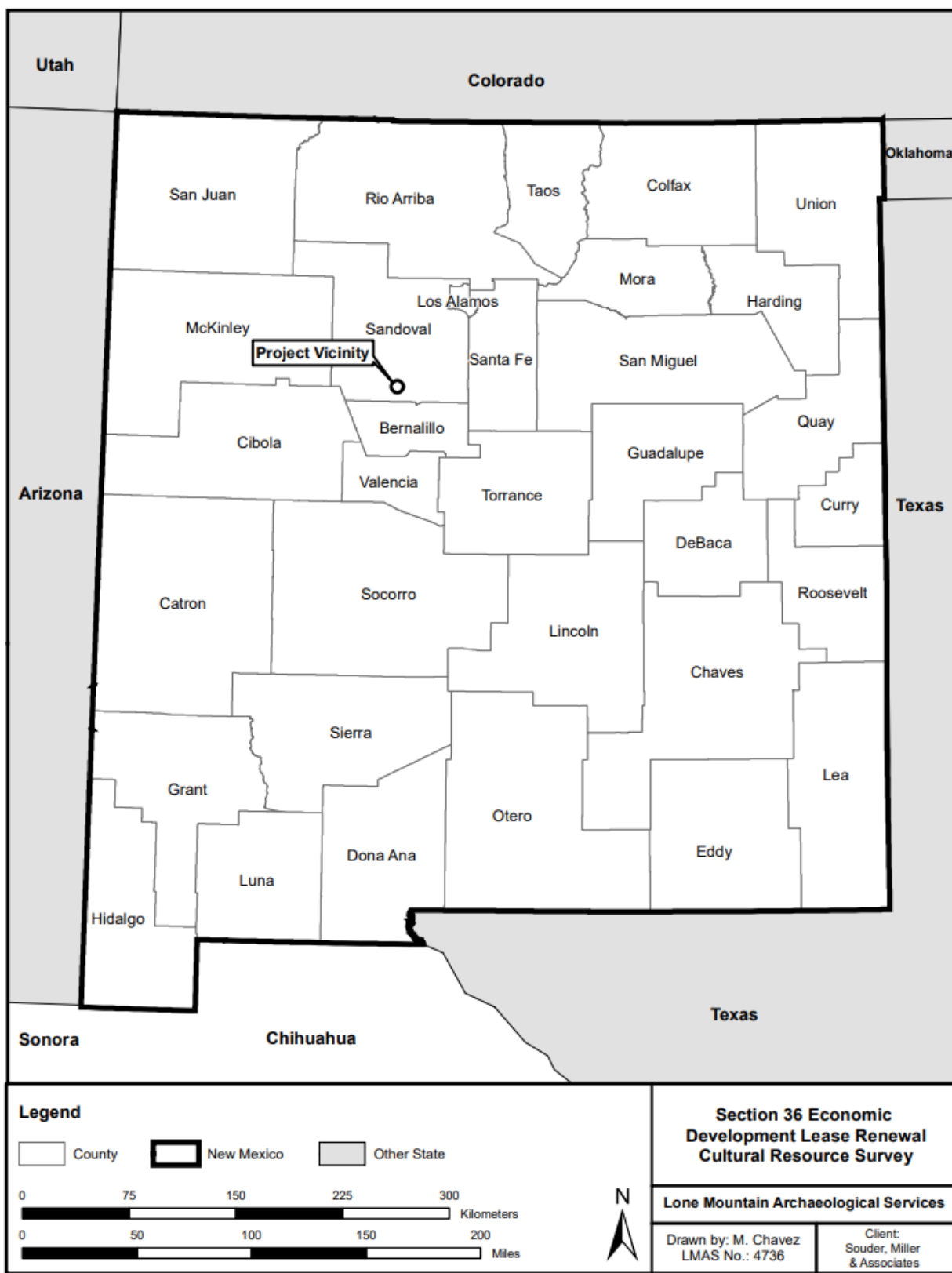


Figure 1.1: Project Vicinity Map.

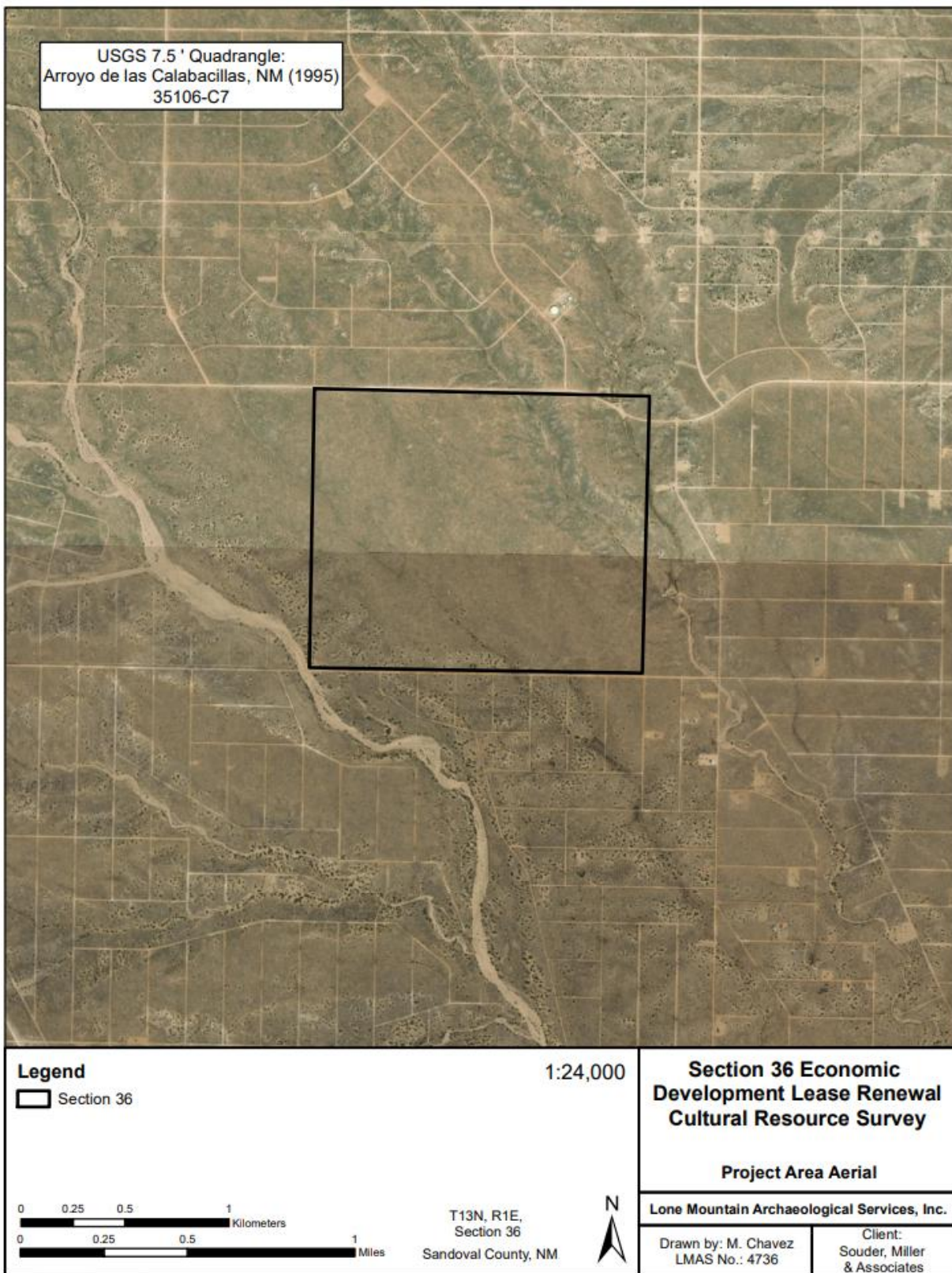


Figure 1.2: Project Area Map (aerial).



Figure 1.3: Project Overview, Northeast Corner Facing South



Figure 1.4: Project Overview, Southeast Corner Facing North



Figure 1.5: Project Overview, North End Facing South



Figure 1.6: Project Overview, Southwest Corner Facing North

ARCHIVAL RESEARCH

Prior to entering the field, a site files review was conducted to determine if previously recorded cultural resources and previously conducted surveys are located in or within 0.25 mi of the project area. The review included records at the Archeological Records Management Section (ARMS) of the Museum of New Mexico and at the BLM - CFO. The BLM-General Land Office records were searched for any land patents (records available online at <http://www.glorerecords.blm.gov>).

Four sites or historic structures were found within the search parameters (Table 1.1) (please note that affiliations and determinations presented in this table are from previous documentation). One site, HCPI 55122, was listed as being in the survey area and updated during this investigation. Two previous surveys were also conducted within the search parameters (Table1.2).

Table 1.1: Previously Recorded Sites Within the Search Radius.

LA/HCPI No.	Temporal and Cultural Affiliation	Eligibility
LA 54634	Basketmaker II Anasazi (A.D. 1 to 500); Basketmaker IV Anasazi (A.D. 1300 to 1600)	Not Entered
LA 121438	Not Entered	Not Entered
LA 206047	NM Statehood - WWII Anglo American (A.D. 1912 to 1945)	Not Eligible
HCPI 55122	Not Entered	Not Eligible

Table 2.2: Previously Recorded Sites Within the Search Radius.

NMCRIS	Acres	Agency	Authors	Citation
145598	5.4	Okun Consulting Solutions	Okun, Adam	2020. Cultural Resource Survey for New Water Infrastructure at Reservoir 9, City of Rio Rancho, Sandoval County, New Mexico
157812	40.93	Aspen CRM Solutions	Brown, Emily J.	2025. Archaeological Survey of a Proposed Waterline Extension, Rio Rancho, Sandoval County, New Mexico

CULTURE HISTORY

Culture histories provide a context in which cultural resource studies in particular regions can be implemented and evaluated. Because the sequence of cultural developments and events may be spatially distinctive and temporally restricted, it is possible to categorize archaeological finds with reference to specific time periods, culture groups, and adaptive strategies. Research questions are usually tailored to these categories and are often called “periods” or “phases” when they refer to time and are called “culture groups” when they refer to differing assemblages of material culture thought to reflect distinctive adaptations.

For central New Mexico, Berman (1979), Marshall and Walt (1990), and Stuart and Gauthier (1984) have prepared comprehensive cultural overviews. These authors provide a detailed analytical synthesis of the prehistory of the region and a discussion of many of the region-specific research themes. Their work provides the basis for much of the following cultural overview. In addition, synthetic treatments of the history of this region, completed by Spicer (1962), Tainter and Gillio (1980), Pratt et al. (1988), and Wozniak (1987), serve as a basis for the historic and protohistoric portions of this overview. The purposes of this overview are to outline the prehistory and history of the area and to provide an understanding of changes in settlement patterns and adaptations through time.

Paleoindian Period (Ca. 21,000 To 5500 B.C.)

The Paleoindian Period represents the earliest demonstrated human occupation in the New World and New Mexico. There is growing evidence of a human presence in the New World earlier than 10,500 B.C., but these claims have been controversial. Sites that are claimed to predate 10,500 B.C. near the middle and upper Rio Grande include Sandia Cave (Hibben 1941) at the north end of the Sandia Mountains, the Lucy Site (Roosa 1956) in the Estancia Basin, and other sites in the Estancia Basin recorded by Lyons (1969) for his doctoral dissertation. Lyons argued that lithic scatters made up of expedient flakes lacking diagnostic artifacts were pre-Sandia (ca. 19,000 B.C.), based on the relationship of the sites to former lakeshores in the Estancia Basin. Anderson and Faught (2000) argue that current evidence is insufficient to describe any cultural trends prior to the appearance of the Clovis people, although Hayden's (1976) arguments for the Malpais pre-San Dieguito/San Dieguito material presented a cultural trend of sorts for northern Mexico (Heilen 2004). An archaeological site in southern Chile, Monte Verde, has been identified as having an accepted occupation dating to 12,500 BP as well as a possible occupation of 33,000 BP (Meltzer et al. 1997). If humans had only just arrived in the western Hemisphere around 12,500 BP, how did they make their way to the southern end of South America so quickly? Finally the radiocarbon dating of plant remains in and around both buried and exposed human footprints associated with Pleistocene megafauna at White Sands in southern New Mexico has produced dates between 23,000 and 21,000 BP (Bennett et al. 2021).

Paleoindian peoples are characterized as small, nomadic bands of hunter-gatherers who relied, at least in part, on hunting now-extinct Pleistocene megafauna, including *Bison antiquus* and mammoth (*Mammutus primigenus*) (Cordell 1979). Diagnostic stone tools associated with this period include end scrapers and large, unstemmed lanceolate projectile points that are often fluted (Irwin-Williams 1979). During the Paleoindian Period, projectile points were attached to spears that were thrust or to darts that were propelled by atlatls (throwing sticks). A reliance on big game hunting has been established (Judge 1982), but it is unclear to what extent these people exploited other available resources such as plants and smaller game. Little evidence has been found to suggest the use of structures during this period.

From a lack of evidence, it has generally been assumed that people lived a nomadic lifestyle, with the use of structures apparently uncommon. Three complexes have been identified for the Paleoindian Period: Clovis, Folsom, and Plano. In general, archaeological sites are assigned to particular complexes of the Paleoindian Period based on the presence of distinctive diagnostic projectile points. The first known occupants of the New World are referred to as the Clovis people (9,500 to 9000 B.C.), named after a modern settlement located in eastern New Mexico where the first evidence of this occupation was identified (Irwin-Williams 1973a). The tool assemblage is characterized by Clovis points (bifacially worked and fluted lanceolate projectile points with a concave base), transverse end scrapers, side scrapers, bifacial knives, graters, perforators, and hammerstones (Cordell 1997). Although the tool assemblage diagnostic of this complex is generally related to big game hunting and processing, the rare occurrence of manos on Clovis sites suggests some plant foods were also utilized. The premier study of Paleoindian remains in this region was conducted by Judge (1973) and his associates (Judge and Dawson 1972). Judge found only two occupational loci in the Middle Rio Grande that could be ascribed to the Clovis Period (ca. 9500 to 9000 B.C.). In the Albuquerque area, Clovis points are generally found in surface contexts (Crollett et al. 1995:20). The following Paleoindian complex is referred to as the Folsom complex (9000 to 8200 B.C.). The first conclusive evidence of early humans in North America was uncovered at, and named for a type site found at Folsom, New Mexico, in the 1920s. Most Folsom sites in this region have been found west of the Rio Grande in close association with locations near playas, lakes, and dunal ridge overlooks that may have been conducive to grazing game (Judge and Dawson 1972). The Folsom complex exhibits technological distinctions from the Clovis complex. Diagnostic projectile points include fluted Folsom and unfluted Midland points, which are similar in outline. In addition to these points, Folsom tool assemblages include spokeshaves, end scrapers, perforators, knives, denticulates, drills, choppers, awls, and abrading stones. These artifacts are often found in association with extinct bison (Cordell 1997). The Plano complexes are generally thought of as the terminus of the Paleoindian Period. Plano is known for a number of artifact complexes (Irwin-Williams 1973b). Each complex is distinguished by a series of large, lanceolate and unfluted projectile points, including Plainview, Midland, Frederick, Agate Basin, Hell Gap, Firstview, Alberta, and Cody.

Archaic Period (ca. 5500 B.C. to A.D. 1)

It is traditionally thought that in the Archaic period, the Paleoindian big game hunting focal economy was replaced by a foraging economy that was much more diversified. Although Paleoindian groups likely relied on small game and plant foods in addition to the large game species, Archaic peoples differ in their full reliance on these broader-spectrum food sources. Large-scale climatic changes and the extinction of the megafauna may have contributed to this

development of a more diverse subsistence base reflected in a wider reliance on localized plant and animal resources and a less mobile way of life (Irwin-Williams 1973a). Mobility became cyclical and more restricted in extent. Once productive site locations were established, they were reused on a seasonal basis.

It has been suggested that after the last Cody hunters withdrew east to the Plains, western New Mexico was unoccupied for approximately 500 years. By 5500 B.C. western New Mexico had been repopulated by groups of people who moved into the area from the west (Irwin-Williams 1979). These interpretations rest upon the notion that Paleoindian economy specialized on big game and that hunters moved between eastern and western New Mexico. An alternative interpretation is that, if Paleoindians did use the many other plant and animal resources that western New Mexico had to offer, then the transition to the Archaic economy would have been less drastic than previously thought. There would be no need to postulate a replacement of population at this transition (Tainter and Levine 1987:26-27).

Archaic tool assemblages reflect the greater diversity of resource procurement strategies when compared with Paleoindian tool assemblages. While Paleoindian assemblages consist mainly of projectile points and meat processing tools, a growing number of groundstone implements and smaller projectile points are characteristic of the Archaic assemblage as a whole. Together these items signal a more visible reliance on plant foods and a shift to the use of dart points and the atlatl. Archaic points are generally stemmed or corner-notched and exhibit more extensive morphological variability and less precision in the quality of manufacture than those of the Paleoindian period (Sebastian and Larralde 1989). Archaic artifact assemblages become tremendously varied and Archaic sites are found in an ever-increasing number of environmental and topographic settings.

In this region, Archaic sites are generally found well above the floodplain overlooking lakes and playas. These areas are frequently characterized by erosion, and the sites are exposed in deflated areas and blowouts. Archaic sites are also frequently located adjacent to springs and along arroyo banks (Reinhart 1967). Flaked-stone scatters with groundstone and/or fire-cracked rock are common Archaic remains, as are isolated diagnostic artifacts.

The absence of ceramics is key to identifying sites from this period, although care must be taken to distinguish preceramic sites of the Archaic period from Ceramic period sites without ceramic artifacts. Often characteristics of the flaked-stone and groundstone assemblages can be used to make these distinctions. For example, Archaic flaked-stone assemblages may include a greater percentage of fine-grained and nonlocal material types, biface-thinning flakes, and evidence of tool retouch. This is in contrast to later Ceramic period assemblages that are likely to be more expedient and use a higher percentage of locally available, readily obtained material types (Irwin-Williams 1979).

Archaic phases are named for their diagnostic projectile points: Jay, Bajada, San Jose, and Armijo (Irwin-Williams 1973a). These time periods were synthesized by Irwin-Williams during her studies of the Arroyo Cuervo district and are defined in terms of the Oshara tradition-type sequence. The Oshara tradition extended from ca. 5500 B.C. to about A.D. 600.

Jay Phase (ca. 5500 to 4800 B.C.)

Most sites of this phase are located in sheet sand deposits on cliff tops at canyon heads. The sites are located near several resource zones and evidence suggests a full range of seasonal activities. Special-use sites are found at other locations. This phase was characterized by a diverse subsistence pattern in which resources were exploited year-round from sites near water sources.

Bajada Phase (ca. 4800 to 3200 B.C.)

The settlement pattern in this phase was similar to that of the Jay phase. There are slightly more sites and the population may have grown. There is an increase in large chopping tools, cobble-filled hearths, and earth ovens associated with base camps.

San Jose Phase (ca. 3200 to 1800 B.C.)

In this phase, there is a noticeable increase in both the number and size of sites, especially at canyon heads. Specialized sites continued to be used. The artifact scatters at base camps are denser and more extensive and some sites have posthole patterns, suggesting temporary structures. There were important additions to the tool kit in this phase, including shallow basin grinding slabs and simple cobble manos. This implies an expansion of the subsistence system to more reliance on seeds and nuts.

Armijo Phase (ca. 1800 to 800 B.C.)

In this phase, there were significant changes in technology, land use, and seasonality. Sites continued to be occupied at the canyon heads, but a new settlement type was also found. Armijo Shelter, a rock shelter habitation site, appears to have been occupied during fall and/or winter and may have been a site of seasonal aggregation (Irwin-Williams 1967). Artifacts suggesting ritual activities are found for the first time. Armijo phase societies were likely more complex than those found in the area previously. The Armijo phase is significant also for the expansion of the settlement system and the introduction of *Zea mays*. Maize was cultivated in limited quantities in the narrow floodplains near canyon-head springs.

In the Albuquerque area, late Archaic period sites often have grinding implements associated with late Archaic projectile points (Reinhart 1967; Schmader 1988).

Puebloan Period (ca. A.D. 100 to 1600)

Two cultural sequences have been used to discuss the Puebloan (or Anasazi) culture in the middle Rio Grande region. The first to be developed was the Pecos classification (Kidder 1927) which includes Basketmaker III, Pueblo I, Pueblo II, Pueblo III, and Pueblo IV. The Pecos classification was designed to provide a general framework for organizing data pertaining to Southwestern prehistory. Wendorf and Reed (1955) formulated the next sequence specifically for the Rio Grande Valley. The Rio Grande sequence includes the Developmental, Coalition, Classic, and Historic periods.

With the development of Puebloan culture, people adopted ceramics, pithouse and aboveground architecture, a greater reliance on agriculture, and an increasingly sedentary way of life (Schmader 1994). This lifestyle differs from that of the Archaic period when people depended on a relatively mobile hunting and gathering economy.

Early Developmental/Basketmaker III-Pueblo I (A.D. 1 to 900)

The Developmental period in the Middle Rio Grande marks a major change in subsistence strategies: a shift from emphasis on hunting and gathering to agriculture. Although maize was introduced during the middle to late Archaic, it was not until the Developmental phase that a major commitment to agriculture was noted in the archaeological record (Cordell 1978). Maize, beans, and squash were being cultivated by this time, and this reliance on agriculture is also evident in a shift in the settlement patterns and changes in the artifact assemblages (Clark and Haswell 1966).

Widespread use of ceramic vessels occurs during this time and includes Lino Gray, Lino Black-on-gray, San Marcial Black-on-white, and Mogollon brownwares and polished redwares. These later two ceramic types may suggest trade or a Mogollon influence in the area. Berman (1979) contends that the mountainous areas and the margins along the Rio Grande were occupied by Mogollon peoples.

In addition to ceramics, a variety of material goods appear in the archaeological record during this time, including basketry, matting, sandals, shell and turquoise beads and pendants, basin and slab metates, and one-hand manos. Projectile points became smaller and the use of the bow and arrow as a hunting implement was common. The flaked-stone tool kit became more generalized, dominated by a utilized flake technology. Raw material sources appear to be more localized, with fewer exotic materials being used.

Early Developmental sites are characterized as small villages consisting of one to three shallow pithouses with associated interior and exterior storage cists. In addition, interior features include a compact clay or plastered floor, a centralized hearth(s) and deflector shield, ventilator shafts, and roof support posts. These sites are located near intermittent tributaries of the Rio Grande, the Rio Puerco, and other major drainages; on low terraces and sandy hills overlooking floodplain; and on the floodplains themselves. Sites also tend to be located on elevated terrain in uplands which provided access to hunting and gathering areas and an overlook where game could be observed (Cordell 1978). These communities suggest the beginnings of sedentary village life and although not all are located near arable land, Frisbie (1967) attributes the increase of sites in and near floodplains as being related to a greater reliance on agriculture.

Irwin-Williams (1973a) named the early Puebloan period in the Arroyo Cuervo area the En Medio/Trujillo (ca. 800 B.C. to A.D. 400/ca. A.D. 400 to 600), the Sky Village (ca. A.D. 600 to 700), and Loma Alta (ca. A.D. 700 to 850) phases. These likely descended from the Archaic Oshara and Cochise complexes and are characterized by the predominately traditional hunting and gathering lifestyle of the Archaic period gradually giving way to an agricultural adaptive strategy with an increased reliance on corn and other cultigens. This increased commitment to agriculture resulted in a major settlement transformation after ca. A.D. 700. As expected in a now-agricultural economy, the new land-use patterns focused on the wider valley bottoms that contained fertile soil and were less affected by erosion.

Late Developmental/Pueblo II (A.D. 900 to 1100)

Although there was much technological continuity from earlier periods, architecture changed substantially during the later part of the Developmental period. There is evidence of the continued use of pithouses; in fact, several earlier pithouse sites continued to be occupied into

the Pueblo II period, but excavations revealed those built during Pueblo II times are better defined and less variable than their earlier counterparts (Cordell 1978). Features include slab-lined ventilators, four-post roof supports, ladder rests, ash pits, and sipapus (Wetherington 1968). In addition, there is evidence for the transition to aboveground structures toward the end of the period. These surface structures consisted of linear roomblocks constructed of adobe masonry and jacal. Sites cluster in raised settings along the Rio Grande and Rio Puerco Valleys that would have been favorable for agriculture.

In addition to cultivated maize, the people also made use of local biotic communities. Archaeobotanical remains include annuals such as cheno-ams, purslane, groundcherry, winged pigweed, bugseed, mallow, mustard, and tobacco. Perennials include cholla, prickly pear, sedge, hedgehog cactus, dropseed grass, Indian ricegrass, other grasses, piñon, juniper, yucca, and members of the bean and morning glory families. Maize included four, 8, 10, 12, and 14-row types, with 12-row the most common (Brandt 1991a, 1991b). One excavated cist yielded cucurbit pollen. Cholla buds were stored in both interior and exterior features (Holloway 1991).

Excavations at Late Developmental sites on the edges of the east and west escarpments of the Rio Grande and Rio Puerco Valleys have largely focused on determining their cultural affiliations: Anasazi or Mogollon (Allen and McNutt 1955; Skinner 1965; Vivian and Clendenen 1965; Vytlačil and Brody 1958). The sites display ceramic and architectural features thought to be diagnostic of both traditions. Peckham's (1957) Basketmaker III/Pueblo I pithouses, for example, are dominated by Lino Gray ceramics but also have three to 27 percent Mogollon brownware. At least one of the pithouses displays a short-stepped lateral entrance similar to early Mogollon pithouses. The three pithouse villages excavated by Frisbie (1967) north of Corrales, ascribed roughly to the same period, show similar patterns. One pithouse had an inclined lateral entryway, floor grooves, and a groove isolating the pithouse center—all supposedly Mogollon characteristics. Mogollon potsherds at these sites ranged from 15.8 percent to 72.8 percent of the collections.

The whole of the transition zone between the Anasazi of the northern Southwest and the Mogollon shows similar mixes of characteristics thought to be diagnostic of one tradition or the other (Tainter and Plog 1994). The Middle Rio Grande area has been referred to as a “marginal” area, where fluctuating characteristics are explained as variations in the diffusion of Anasazi and Mogollon “influences” and by the repeated movement of Anasazi and Mogollon culture-bearers.

Coalition/Pueblo III (ca. A. D. 1100 to 1300)

The conventional dates for the Pueblo III period incorporate the last century of the Developmental period and most of the Coalition period (ca. A.D. 1200 to 1325). During this time, the Rio Grande and Rio Puerco Basins witnessed an increase in the number of sites, and perhaps in overall population. Surface architecture was more widely adopted, although pithouses continued to be built (Cordell 1978; Wendorf 1954; Wendorf and Reed 1955). The dominant structure types are surface roomblocks constructed of masonry and jacal. Kivas during this period were both subterranean and above ground (Wendorf and Reed 1955). Rectangular kivas appear to coexist with subterranean, circular forms. A major investment in agriculture is evidenced by the presence of agricultural features, such as terraces, rock gardens, and dams (Moore 1981).

The Pueblo III period is marked by an increase in the number of habitation sites, especially near arable land along major drainages (Condie and Smith 1992). Only a few sites continued to be occupied on the escarpment above the Rio Grande Valley. Many sites were established in the floodplain itself. Increased numbers of sites suggest a population increase in the area, although not as great an increase as in surrounding areas, such as the Pajarito Plateau or Galisteo Basin. Population pressure and climatic changes resulted in movement into areas that previously had been used only minimally (Anschuetz 1984). Frisbie (1967) suggests the shift in site locations occurred because of a decrease in the availability of agricultural land due to changes in rainfall and subsequent arroyo cutting. It is important to note that although an increasing dependence on agriculture occurred through the Pueblo period, populations throughout this time continued to rely to varying degrees upon food sources that were hunted and gathered (Anschuetz 1984).

The beginning of Pueblo III is marked by increased diversification of ceramic types. This coincides with the shift from mineral-painted wares to organic-painted wares. Santa Fe Black-on-white is considered the diagnostic ceramic type for the Pueblo III period. Other ceramic types recorded locally include St. John's Polychrome and Wingate Black-on-red. An important characteristic of this period is the great diversity of styles and varieties of locally manufactured ceramics, as well as a growing number of imported trade wares.

As noted by Cordell (1978) and others, Pueblo III sites are located in areas near permanent water and arable land adjacent to major drainages. Many of these locations are the same as during the Pueblo II period, although there are greater numbers of sites during this later period and a greater number of zones are occupied. For example, during the Pueblo III period sites clustered on the finger ridges overlooking the Rio Grande, on the floodplains, along the petroglyph escarpment of the West Mesa, and in the Cerro Colorado area east of the Rio Puerco (approximately 2 mi east of the project area). In the Atrisco area, there was substantial occupation during the Pueblo III period. In contrast to Pueblo II, the area at this time was probably occupied year-round. There are jacal and masonry villages of up to 15 rooms (Tainter 1995:373).

Although there is evidence for population increases, occupation in the Middle Rio Grande is not as substantial as in nearby areas during this period. Research issues associated with the Pueblo III period include verifying explanations concerning population increases. Frisbie (1967) and Wendorf and Reed (1955) do not view the increase in population as a result of migration from other areas, such as Chaco Canyon, but as internal population growth within the Rio Grande Valley. Schmader (1990) suggests that populations grew in the Rio Grande Valley region as a result of people moving away from the San Juan Basin. It is possible that the number of Pueblo III sites does not accurately reflect the number of people living in the area because the population may have reoccupied existing habitation sites instead of constructing new ones.

Evidence is mounting that suggests that social relations may have had a role in the development of surface architecture; or conversely, that surface architecture affected social relations. As both Cordell (1978:100-101) and Hegmon (1996:237-240) point out, in the transition from pithouse to Puebloan architecture, the strategies for storing food changed from one that was somewhat public to one that was mostly private. Hegmon shows that the latter allows for restricted sharing and is beneficial for long-term household survival. The long

retention of pithouse architecture in the Albuquerque area suggests that egalitarian social relations were maintained here longer than in other parts of the Puebloan Southwest.

Classic/Pueblo IV (ca. A.D. 1300 to 1540)

In the fourteenth century much of the upland area of the northern Southwest was suddenly abandoned. The populations that survived this crisis (Cordell 1996) concentrated thereafter in a few areas, including the Rio Grande Valley (Collins 1975; Dickson 1979; Tainter 1995; Wendorf and Reed 1955). This area came to be used intensively and large communities were established on a scale never seen before. The entire region experienced a change in the pattern of cultural evolution. Settlement patterns changed from dispersed to aggregated. Social complexity increased in response to the problems posed by large aggregations of people. Ritual systems of social integration, such as the Kachina Cult, were adopted (Schaafsma and Schaafsma 1974). Parts of the valley bottom were farmed at an intensity not seen again until the 19th century.

The Pueblo IV period is marked by social and technological changes. Agricultural practices intensified with centralized control of waterways. Changes in ceramics include the appearance of the first glaze-painted and red-slipped pottery. Pueblo IV sites reach their greatest population densities, with village inhabitants numbering in the hundreds and potentially in the thousands. These groups represent the ancestors of many present-day Puebloan communities. The dramatic population growth is attributed to both indigenous growth and an influx of people from other areas (Schutt and Chapman 1992). During this time, overpopulation and climatic factors contributed to social instability, as did internal strife and resource imbalances (Hogan and Gerow 1990). Between A.D. 1350 and 1475, the Galisteo Basin pueblos became the major production and trade centers for the Rio Grande Valley.

As stated above, the appearance of glaze-decorated pottery was one of the technological changes that occurred during the Pueblo IV period. Black-on-white pottery was replaced by glaze-painted designs on red or yellow backgrounds (Schmader 1990). The majority of glazewares were produced locally (Cordell 1978) and appear to be made in imitation of Zuni and Little Colorado ceramics. Mera (1935 and 1940) and Wendorf and Reed (1955) suggest the introduction of glazewares represents cultural diffusion, perhaps accompanied by movement of a small number of people. Glaze-decorated pottery has become the primary cultural and temporal marker for the Pueblo IV period. Later in the period, polychrome glazewares were produced. Changes in color, design, and rim form are used to chronologically order ceramics within the Pueblo IV period.

Wendorf and Reed (1955) characterize the Classic period as a time of “cultural florescence.” They describe an elaboration of material culture that includes mural paintings, decorated pipes, elaborate axes, stone effigies, and carved bone tools. In addition, an estimated 15,000 petroglyphs are known to exist on Albuquerque’s West Mesa escarpment. Approximately 90 percent of this rock art has been dated to the Classic period (Kennedy 1995). Images depicted include masks, faces, anthromorphs, animals, tracks and handprints, and geometric designs (Kennedy 1995). Over 300 boulder metates or grinding slicks have been noted along the escarpment, indicating the area was also used extensively for collecting and processing wild or domesticated plant resources (Kennedy 1995). The petroglyphs appear to have been created in ceremonial rituals as well as in the context of performing daily subsistence activities (Kennedy 1995). Schaafsma and Schaafsma (1974) studied both wall murals and rock art and observed an

emphasis on the depiction of masks in both art forms. They infer that this style was derived from the Mogollon region and was related to the introduction of the Kachina cult.

Settlement during the Pueblo IV period is characterized by a shift from the scattered villages of the Pueblo III period to large, aggregated communities or pueblos along the terraces and valley floor of the Rio Grande (Marshall 1989). Settlements in Tijeras Canyon are associated with seeps and springs that occur at various elevations. Early surveys of the Rio Grande floodplain (Fisher 1931; Mera 1940) identified numerous large pueblos constructed of adobe, some of which were several stories high. Excavations have indicated that some of these pueblos contained several hundred rooms. Both adobe and stone masonry were used for habitation construction. Aboveground rectangular kivas and subterranean circular kivas continued to coexist, and kivas at large sites contained mural paintings depicting complex religious and social organization (Dutton 1963).

Although large, multi-roomed pueblos are the best-known Pueblo IV site type, smaller sites have been located whose purpose was to support activities conducted away from the larger pueblos. Examples of these limited activity sites are flaking stations, hunting and gathering loci, and agricultural features such as terraces and field houses, which were maintained in outlying areas near arable land. Lang (1977) suggests that the use of ditch irrigation along the major river courses was common. Wozniak (1987), however, examined prehistoric agricultural systems in the Rio Grande Valley and found considerable evidence for a variety of water and/or soil conservation features, but no evidence for irrigation systems. He concluded that although Puebloan subsistence systems incorporated varying forms of floodwater agriculture, there is no evidence of formal ditch irrigation systems.

The end of the Pueblo IV period is marked by a series of drought years. After A.D. 1400 most of the pueblos were abandoned. The remaining populations were probably concentrated in Tesuque, Pecos, Cieneguilla, the Galisteo Basin, and along the Rio Grande. These areas are characterized by the presence of permanent water sources. In the Galisteo Basin, populations were centralized, and large-scale community water control systems were being employed. These pueblos were occupied when the first European explorers arrived in the area in A.D. 1540 and continued to be the primary residences for local populations until colonization began in earnest around A.D. 1600.

During the Pueblo IV period, the historic Puebloan pattern of large, aggregated communities was established. The characteristic that most identifies this period is the formation of large, multiplaza pueblos. These formed from the aggregation of local people who previously had occupied dispersed communities, and perhaps also from the immigration of people from the abandoned lands to the west. It is important to understand the social consequences involved in the formation of large communities, the economic transformations that would have accompanied aggregation, and the changes in land use required to support larger populations and more complex societies.

There was undoubtedly intensification in subsistence production near large communities. Aggregated pueblos would have required greater production per unit of land, although this may have come at the expense of diminished production per unit of labor (Clark and Haswell 1966). The fact that an area like Las Huertas was used intensively and permanently for the first time in

the Pueblo IV period suggests that it was necessary to expand the area under intensive cultivation and permanent settlement (Tainter 1995). Some fields may have been placed at the mouths of drainages, yet much of the cultivated land must have been maintained with pot irrigation. Ditch irrigation would have been feasible in an area like Las Huertas or along Tijeras Arroyo, but we do not know if it was practiced from the Rio Grande and Rio Puerco. Certainly, if it was, the intakes would have had to be rebuilt each year. At the very least, the riverine areas became increasingly important over time.

Historic Period (A.D. 1540 to 1945)

Spanish influence on Pueblo Indians in the Albuquerque area began in 1540 with the arrival of Francisco Vásquez de Coronado. Arriving at the Zuni village of Hawikuh, Coronado sent Captain Hernando de Alvarado east to find a place the Spaniards could spend the winter. Kua'ua (Alcanfor Pueblo), located north of Albuquerque along the west bank of the Rio Grande, has been named as one possible site where Coronado's group may have spent the winter of 1540 to 1541. Spanish demands on the local Pueblo Indians, under harsh winter conditions, caused the Pueblo people to resent the Spanish long after they left the valley in 1542 (Jenkins and Schroeder 1974; Mathews-Lamb 1995; Simmons 1982).

Don Juan de Oñate acquired government authorization in 1595 to mount a proprietary expedition in New Mexico. He entered the Tiguex villages along the Middle Rio Grande Valley in June of 1598. Oñate continued on, not believing that the middle river area would be a suitable site for his administration. But Oñate's venture to make New Mexico profitable would not succeed and by 1609 he was replaced as governor. New Mexico became a missionary colony and churches were built throughout the province. The Albuquerque area continued to be inhabited primarily by Tiwas throughout the 1600s, but their populations declined due to measles, smallpox, and other diseases introduced by Europeans. Survivors from the southern Tiwa pueblos nearly deserted their outlying villages and gathered in the four pueblos of Sandia, Isleta, Alameda, and Puaray (Simmons 1982). Little is known of this era, because during the Pueblo Revolt of 1680 most Spanish documents were destroyed (Mathews-Lamb 1995).

During this period the Franciscan Superior ordered his friars to eliminate traditional ceremonies, kivas, and ceremonial items and to replace traditional native beliefs with the doctrines of the Christian religion. Spanish colonists also abused the Puebloans by periodically overstepping their legal boundaries. Historical evidence shows that Indians were enslaved by the Spanish to work in the turquoise mines north of the town of Cerrillos and that property was illegally seized. These policies eventually led to the Pueblo Revolt in 1680 and the expulsion of the Spanish from their New Mexican colony.

In 1692, Don Diego de Vargas led the reconquest of New Mexico. By 1696, the revolt was over, paving the way for rapid Spanish recolonization. The Rio Grande Valley began to experience a demographic shift, the native population coming to be replaced by Spanish colonists. Apache raids and the smallpox epidemics of 1780 to 1781 and 1788 to 1789 had disastrous effects on the Indian population of the Rio Grande Valley, leading to the abandonment of many settlements. However, throughout the eighteenth century, the Spanish population had quadrupled, expanding from 5,000 to 20,000. By the end of the eighteenth century, there were four Spanish towns with more than 2,000 inhabitants in the Rio Grande Valley. These were Santa Fe, La Cañada, El Paso, and Albuquerque (Spicer 1962).

By 1821, Mexico had gained its independence from Spain. Although little change was initially experienced in New Mexico, trade restrictions with the United States and the rest of Mexico were soon lifted (Simmons 1982). In 1835 Governor Albino Pérez was sent by President Santa Ana of Mexico to collect taxes and to administer provincial affairs. Governor Pérez was killed in an uprising two years later and was succeeded by José González. González would later face an uprising himself, during which former governor Manuel Armijo regained control (Matthews-Lamb 1995).

In 1846, at the beginning of the Mexican War, the Kearny Expedition occupied New Mexico for the American government. General Stephen Watt Kearny led his United States army into Santa Fe, taking the territory without firing a shot. Kearny continued to the south, having heard rumors that Governor Armijo had put together an army from Chihuahua and was in the vicinity of Albuquerque. The United States troops met with little resistance and were greeted enthusiastically by the Mexican population, who were eager for trade. Kearny then moved on to Tomé before going back to Santa Fe, where the army stayed in the “extensive barracks adjacent to Manuel Armijo’s home” (Simmons 1982:141). The change of sovereignty was formalized by the Treaty of Guadalupe Hidalgo of 1848, which ended hostilities between the United States and the Republic of Mexico.

In 1861, Confederate troops invaded New Mexico from Fort Bliss, located in El Paso, Texas. General H.H. Sibley led troops up the Rio Grande and defeated Union troops led by Colonel Canby at the Battle of Valverde, later moving on to occupy Santa Fe on March 23, 1862. By March 26, Union reinforcements from Fort Stanton met up with and defeated Sibley's troops at Glorieta Pass, 20 miles east of Santa Fe. The battle consisted of a series of skirmishes lasting only for a few days. The destruction of Sibley’s supply wagons near Cañoncito is what ultimately led to the Confederates’ defeat and subsequent withdrawal from the New Mexican Territory.

Many of the first Euro-American settlers came to the area as a result of the Homestead Act of 1862, and the construction of the Atlantic-Pacific Railroad. By the mid-nineteenth century, Euro-Americans had begun moving into the Southwest to farm, ranch, and mine. These pursuits were largely incompatible with the land-use patterns of the native populations that lived in much of the Southwest. The subsequent era of warfare between the Native Americans and the Euro-Americans was motivated in large part by these conflicting interests. In the late nineteenth century, the resolution of these conflicts consistently took the form of settling Native American populations on reservations and encouraging them to practice sedentary, agrarian lifestyles, based on a Euro-American model.

The project area is located in the Atrisco Grant, made by King Charles II of Spain to Fernando Durán y Chávez in 1692 (Julyan 1996). Atrisco was at one point a separate farming community established in the early eighteenth century and located a short distance from the original settlement of Albuquerque, but has now been absorbed.

CHAPTER 2

METHODS

Lone Mountain conducted a block survey of the 530.3 acre survey space.

For this survey, sites were defined in accordance with the guidelines established by the State of New Mexico. Sites are defined as “a location where there exists material evidence of the past life and culture of human beings in the state. A significant archaeological site typically is 50 or more years old. Examples of archaeological sites include, without limitation, campsites, pueblos, homesteads, artifact scatters, resource procurement or processing areas, agricultural fields, locales with one or more features in association with other cultural materials, and locales that have the potential for subsurface features or cultural deposits” (New Mexico Historic Preservation Division 2005).

When cultural remains are encountered, a determination is made as to whether they are an isolated occurrence or a site. Isolated occurrences are isolated cultural remains that do not qualify as sites and generally consist of single artifacts or artifact scatters that are of extremely low density, are widely dispersed, or represent a single or unintentional activity.

RECORDING METHODS

Sites are recorded using a Laboratory of Anthropology Site Record form. A map is drawn and digital photographs are taken showing the setting of the site and any unique features or artifacts. Artifact forms are used to record samples of flaked stone, ceramics, groundstone, and historic artifacts. Any artifacts with diagnostic properties are illustrated. An aluminum datum tag and spike are placed within the site boundary and noted on the site sketch map. Site boundaries may be flagged with flagging tape if requested by the proponent. The location of the cultural property is then plotted on the appropriate USGS quadrangle and GPS readings are taken to verify the accuracy of the field plot. When single artifacts or low-density artifact scatters are encountered, they are recorded in the field as an isolated occurrence and their locations are plotted on the USGS quadrangle.

In-field artifact analyses were conducted to evaluate the chronological, technological, and functional properties of artifacts represented at the sites and to accurately summarize data. Supplemental analysis forms were used to document these attributes and to provide quantitative data for analyses. If flaked-stone and groundstone tools were identified, they were observed for type, raw material, size, the number of worked or used edges, the presence and distribution of retouch, and wear characteristics. Flaked-stone debitage attributes that may be documented by the analysis included raw material, flake type, cortex, and flake size. Historic materials were analyzed according to class and artifact function, with special attention given to temporally diagnostic manufacturing technology and makers' marks.

If at all possible, a reroute avoiding any encountered site may be surveyed. This makes it possible for a site to be avoided if determined eligible or unevaluated for nomination to the NRHP.

EVALUATION AND ELIGIBILITY

Sites were further evaluated as to their NRHP eligibility status. The key criterion was the potential of the site to contain additional data relevant to future research. In the case of prehistoric sites, the potential for important additional data was often dependent on the

presence or absence of buried cultural deposits. On each site, the possibility of buried cultural deposits was assessed by a variety of means. Observations were noted regarding the likelihood of buried cultural deposits based on several characteristics. For example, indications of potential site depth include stratigraphic soil profiles exposed along road cuts and arroyos or cultural materials in the back-dirt piles of rodent burrows. Historic sites are evaluated for Criteria A, B, C, as well as Criterion D.

LOCATED RESOURCES

Lone Mountain recorded nine isolated manifestations, updated HCPI 55122, and documented the newly recorded site LA 206859. These resources are described below and locations are plotted and listed in Appendix A.

Isolated Manifestation

Lone Mountain recorded nine isolated manifestations. They are described in the table below and shown in Figures 2.1 and 2.2.

Table 2.1: Description of Isolated Manifestations

IM Number	Description
IM 001	Black obsidian biface, broken base, 30 x 29 x 4 mm
IM 002	Complete white chalcedony secondary flake, < 50% cortex, 35 x 25 x 3 mm
IM 003	Complete brown tertiary flake, 75 x 40 x 5 mm
IM 004	Complete brown tertiary flake, 60 x 20 x 5 mm
IM 005	Broken translucent chalcedony secondary flake, < 50% cortex, 50 x 25 x 7 mm, Broken gray chert tertiary flake, 26 x 21 x 3 mm
IM 006	Complete yellow chert secondary flake, < 50% cortex, 50 x 44 x 10 mm, White chalcedony core, multidirectional, not exhausted, 80 x 80 x 70 mm
IM 007	Broken translucent chalcedony tertiary flake, 54 x 38 x 12 mm, Broken white chert tertiary flake, 50 x 38 x 7 mm
IM 008	Broken brown chert tertiary flake, 83 x 35 x 20 mm
IM 009	Rusted brown brass benchmark, "1915 U.S. General Land Office benchmark Section 36"



Figure 2.1: IM 001 Black obsidian biface, side 1



Figure 2.2: IM 001 Black obsidian biface, side 2

HCPI 55122

Affiliation: Unknown Historic (A.D. 1930 to 1996)

Eligibility: Ineligible

Site Type: Ranching

Description

HCPI 55122 (Figures 2.3-2.5), located along a small, unnamed arroyo, in a desert scrubland was first recorded in 2025 by ACS as an earthen tank (Brown 2025). During the current update, Lone Mountain has found the site to have remained much the same. Vegetation includes juniper, sage, cholla, prickly pear, Russian thistle, and various forbs and grasses. Surface visibility ranges between 51 percent and 75 percent.

Assemblage

No artifacts were observed.

Features and Site Structure

The out-of-use earthen tank is described by ACS as a large depression that was able to retain water by means of a larger earthen berm. The depression, being rectangular in shape, measures 80 m by 40 m with the berm measuring 75 m long, 4 m high, 30+ m wide at the base, and 2 m wide at the top. A galvanized metal culvert was reported at the west end that likely served as an overflow outlet. A large breach has formed in the eastern half of the berm (Brown 2025). Lone Mountain found this to remain unchanged since the ACS recording.

Alluvial and eolian sands are estimated to be up to 1 m thick, based on road and drainage cuts. . Buried cultural deposits of any significance are unlikely.

Disturbances and Potential Impacts

Water flow has caused a breach and the structure has been eroded by sheetwash and wind erosion. The west end of the tank appears to have been cut short or destroyed by the construction of King Blvd. prior to 1981. These processes have left the tank between 26 percent and 50 percent intact.

Conclusion

HCPI 55122 has been reported to have been built between A.D. 1930 and 1952 (Brown 2025), and aerial photographs indicate the feature was retaining a good-sized pond, though at least 1996 <https://www.historicaerials.com/viewer>, accessed June 24, 2025). HCPI 55122 has no previous determination of NRHP eligibility listed, but was previously recommended not eligible for nomination to the NRHP (Brown 2025). The feature is not associated with any specific historic trend or event, or historically important individual (Criteria A and B). The site does not have any features that retain any characteristic historic workmanship or that might contribute to a historic district, and is unlikely to produce any additional important information concerning the mid to late 20th century in Sandoval County (Criteria C and D). Lone Mountain also recommends HCPI 55122 ineligible for nomination to the NRHP under any of the four criteria.



Figure 2.3: HCPI 55122 Site Overview Map



Figure 2.4: HCPI 55122 Overview Eastern Edge, Facing West



Figure 2.5: HCPI 55122 Overview Western Edge, Facing East

LA 206859

Field No.: 4736-001

Affiliation: Unknown Aboriginal (9500 B.C. to A.D. 1600)

Eligibility: Undetermined

Site Type: Campsite

Description

LA 206859 (Figures 2.6 and 2.7) is a low-density prehistoric lithic scatter with no features located on a low rise within a desert scrubland. Vegetation includes four-wing saltbush, cholla, yucca, and various forbs and grasses. Surface visibility ranges between 51 percent and 75 percent.

Assemblage

All observed artifacts were recorded. The assemblage is comprised of 13 pieces of flaked-stone debitage (two secondary reduction flakes, 9 tertiary reduction flakes, and two pieces of angular debris) and two multidirectional cores. Lithic raw materials include chalcedony and chert.

Feature and Site Structure

No features were observed.

Alluvial and eolian sands are up to 10 cm thick, as seen within rodent burrows. It is unknown whether any subsurface cultural remains are present on this site.

Lone Mountain conducted no testing on this site because the site is located on State lands and can be avoided by the proposed undertaking.

Disturbances and Potential Impacts

Wind erosion and sheetwash are the most evident causes of disturbance to this site, with rodent burrowing and wildlife activity also apparent.

This site remains between 26 percent and 50 percent intact.

Conclusion

LA 206859 has an undated lithic artifact assemblage indicating an Unknown Aboriginal (9500 B.C. to A.D. 1600) temporal and cultural affiliation. LA 206859 lies on sediments that may contain buried cultural deposits. Because the site is located on State lands and may be avoided by any proposed work in its vicinity, no testing has been performed, and the presence or absence of additional significant data is unevaluated. LA 206859 is recommended to have an undetermined eligibility for nomination to the NRHP.

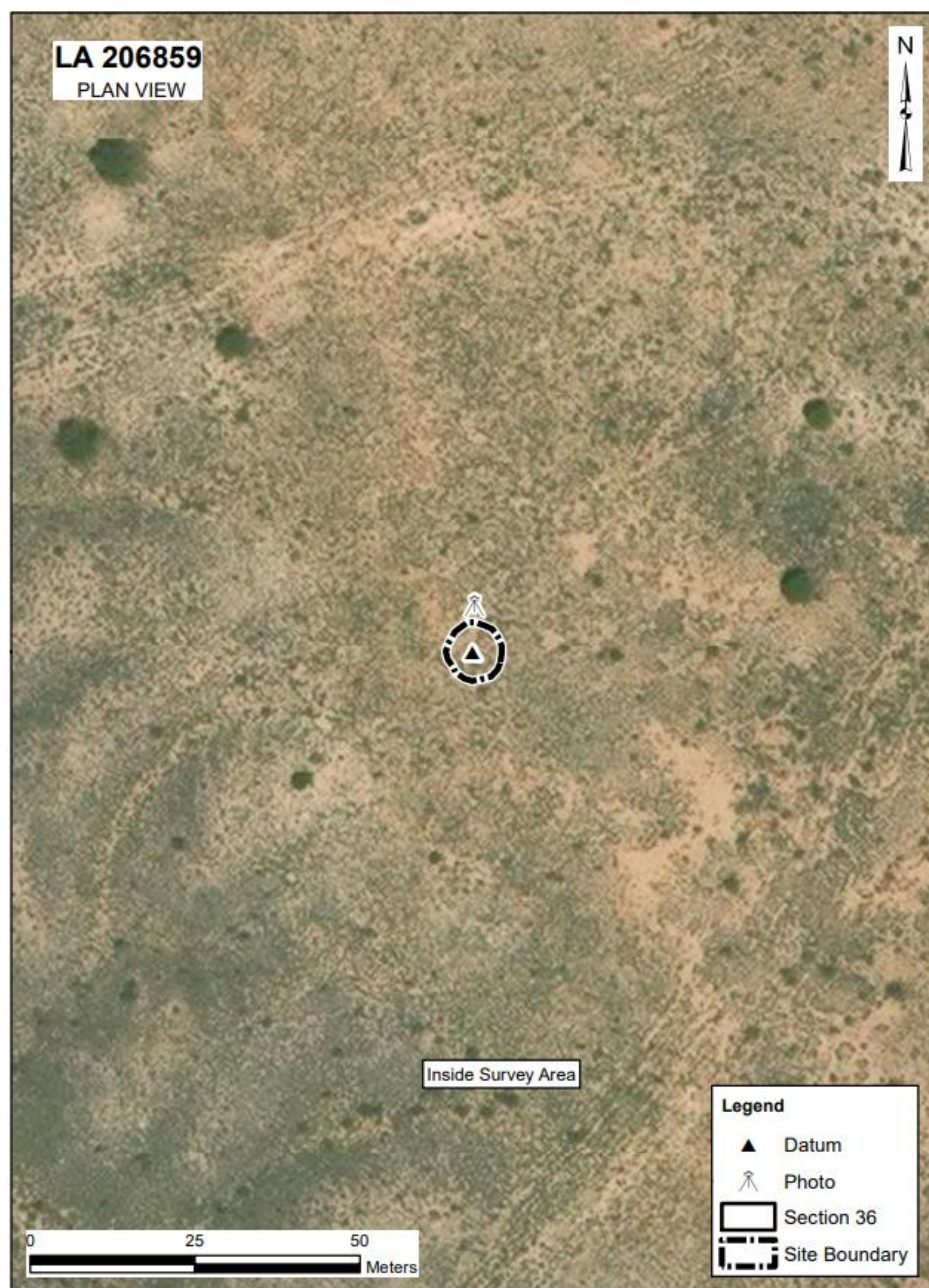


Figure 2.6: LA 206859 Site Overview Map



Figure 2.7: LA 206859 Site Overview, Facing South

EVALUATION OF PROPERTIES AND RECOMMENDATIONS

Lone Mountain recorded nine isolated manifestations, updated HCPI 55122, and documented the newly recorded site LA 206859. HCPI 55122 is an earthen water tank built between A.D.1930 and 1952 and recommended ineligible for nomination to the NRHP under any of the four criteria. LA 206859 has an undated lithic artifact scatter, suggesting an Unknown Aboriginal (9500 B.C. to A.D. 1600) temporal and cultural affiliation and is recommended unevaluated for nomination to the NRHP. No additional treatment is recommended for the isolated manifestations, or for HCPI 55122. Any construction or development should be designed to avoid LA 206859 by at least 100 ft. If any buried cultural deposits are found or if any other form of discovery takes place during any construction, work should cease in that location and the NMSLO archaeologist should be notified.

This cultural resources inventory was conducted in order to ensure compliance with applicable federal and state legislation and procedures designed to protect nonrenewable cultural resources, including the New Mexico Cultural Properties Act of 1978, Section 106 of the National Historic Preservation Act of 1966 as amended (PL 89-665), the National Environmental Policy Act of 1969 (PL 91-852), the Archaeological Resource Protection Act of 1979 (PL 96-95), and Executive Order 11593.

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