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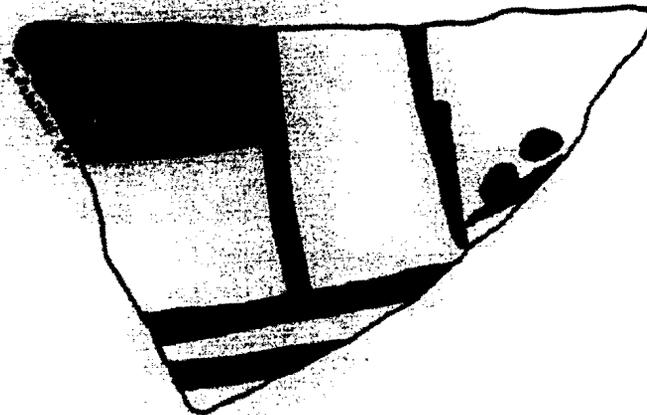
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**Environmental Restoration Program
Operable Units (OUs) 1129 and 1147**

Cultural Resource Survey Report

**Los Alamos National Laboratory
Cultural Resource Management Team
Report No. 72**

**June 1994
Survey Nos. 534 and 535**



prepared by Archaeologists

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Submitted by
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ABSTRACT

In March and April 1992, and May 1993 approximately 252.52 hectares (624 acres) were surveyed and evaluated at Technical Areas (TAs) 4, 5, 35, 42, 48, 50, 52, 55, 63, and 66 Los Alamos National Laboratory, New Mexico. This is the proposed location for the Environmental Restoration (ER) Program's site characterization of Operable Units (OUs) 1129 and 1147.

A total of twenty-three cultural resources have been located in the project area.

Fourteen of these are eligible or potentially eligible under Criterion "D" for nomination to the National Register of Historic Places: Laboratory of Anthropology (LA) site numbers (LAs) 12705 and 86695, one to three-room structures; 16801, 86697, 86698, and 86699, caves; 64872, a trail/step; 71160, a historic roadway; 21150B, 22766 and 86696, artifact scatters; 16806B (feature 5), 16806B (feature 6), and 86694, historic structures.

The remaining nine sites are not eligible for the National Register of Historic Places. The research potential of three of these ineligible sites has been exhausted through recordation: LAs 21150A, a one to three-room structure; 64874, historic General Land Office Survey markers and 89788, an historic artifact scatter. The other six sites are no longer eligible since they have been excavated and/or collected: LAs 4511, a single room block pueblo; 4637 and 4638, one to three-room structures; 16806A, 16806B (feature 4), historic structures, and temporary site number L-43, artifact scatters.

The proposed Environmental Restoration activities at OUs 1129 and 1147, will not affect the attributes which make these sites eligible for the National Register. All sites located in the survey area will be avoided and will not be impacted by any sampling activities. The New Mexico State Historic Preservation Officer (SHPO) is requested to concur in a "Determination of No Effect."

As a result of this survey, this project complies with the National Historic Preservation Act of 1966 (as amended) and with Executive Order 11593.

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PROVENIENCE AND ENVIRONMENTAL SETTING

LOCATION: TA 4, 5, 35, 42, 48, 50, 52, 55, 63, and 66
Los Alamos National Laboratory (LANL) (Map 1)

LANDOWNER: The Department of Energy (DOE)

LEGAL DESCRIPTION: Township 19 North Range 6 East
Section 21

SE 1/4, NW 1/4, NW 1/4
SE 1/4, NE 1/4, NW 1/4
NW 1/4, SE 1/4, NW 1/4
NE 1/4, SE 1/4, NW 1/4
SE 1/4, SE 1/4, NW 1/4
SW 1/4, NW 1/4, NE 1/4
SW 1/4, NE 1/4, NE 1/4
SW 1/4, NE 1/4
SE 1/4, NE 1/4
NW 1/4, NE 1/4, SE 1/4
NE 1/4, NE 1/4, SE 1/4
SW 1/4, NE 1/4, SE 1/4
SE 1/4, NE 1/4, SE 1/4
NE 1/4, SW 1/4, SE 1/4
NE 1/4, SE 1/4, SE 1/4

Section 22

SW 1/4, NW 1/4
SW 1/4, SE 1/4, NW 1/4
SE 1/4, SE 1/4, NW 1/4
NW 1/4, SW 1/4
NE 1/4, SW 1/4
NW 1/4, SW 1/4, SW 1/4
NE 1/4, SW 1/4, SW 1/4
NW 1/4, SE 1/4, SW 1/4
NE 1/4, SE 1/4, SW 1/4
SE 1/4, SE 1/4, SW 1/4

Section 23

SW 1/4, SW 1/4, NW 1/4
NW 1/4, NW 1/4, SW 1/4
NE 1/4, NW 1/4, SW 1/4
NW 1/4, NE 1/4, SW 1/4
SW 1/4, NE 1/4, SW 1/4
SW 1/4, SW 1/4
NW 1/4, SE 1/4, SW 1/4
SW 1/4, SE 1/4, SW 1/4

Section 26 (from the NW corner)

NE 1/4, NW 1/4, NW 1/4
NW 1/4, NE 1/4, NW 1/4
NE 1/4, NE 1/4, NW 1/4

Section 27 (from the NW corner)
NE 1/4, NE 1/4, NW 1/4
NW 1/4, NW 1/4, NE 1/4

and unplatted land

SURVEY DIMENSION: area surveyed 1992/1993: 118.98 hectares
(294 acres)

previously surveyed area: 104.00 hectares
(257 acres)

visually inspected area: 29.54 hectares
(developed) 73 acres

Total Area Evaluated for OUs 1129 & 1147: 252.52 hectares
(624 acres)

MAP: USGS Frijoles Quad 7.5 Minute Series

TOPOGRAPHY: Mesa tops, cliffs, canyon slopes and bottoms

NEAREST DRAINAGE: Upper Mortandad Canyon, Ten Site Canyon,
Two mile Canyon, Pajarito Canyon, and Upper
Cañada del Buey

ELEVATION: 2118.36 to 2240.28 meters (6950 to 7350 feet)

VEGETATION: Ponderosa Pine Forest/Piñon, Juniper Woodland
vegetation zone is primarily located on canyon
slopes with some in canyon bottoms

Pine, Fir vegetation zone is located in canyon
bottoms

Piñon-Juniper Woodland and Shrub, Grass, Forb
vegetation zones are located on mesa tops
(Foxy and Tierney 1985, Dunham 1993)

SOIL TYPE: Carjo loam; Tocal very fine sandy loam; Hyjack
loam; Totavi gravelly loamy sand; and Seaby loam
soils are located on the mesa tops and upper
canyon slopes.

Rock outcrop, steep; Hackroy-Rock outcrop
complex; Rock outcrop, frigid; and Hackroy sandy
loam soils are located in canyon bottoms, and on
canyon slopes, and cliffs.
(Nyhan et al. 1978)

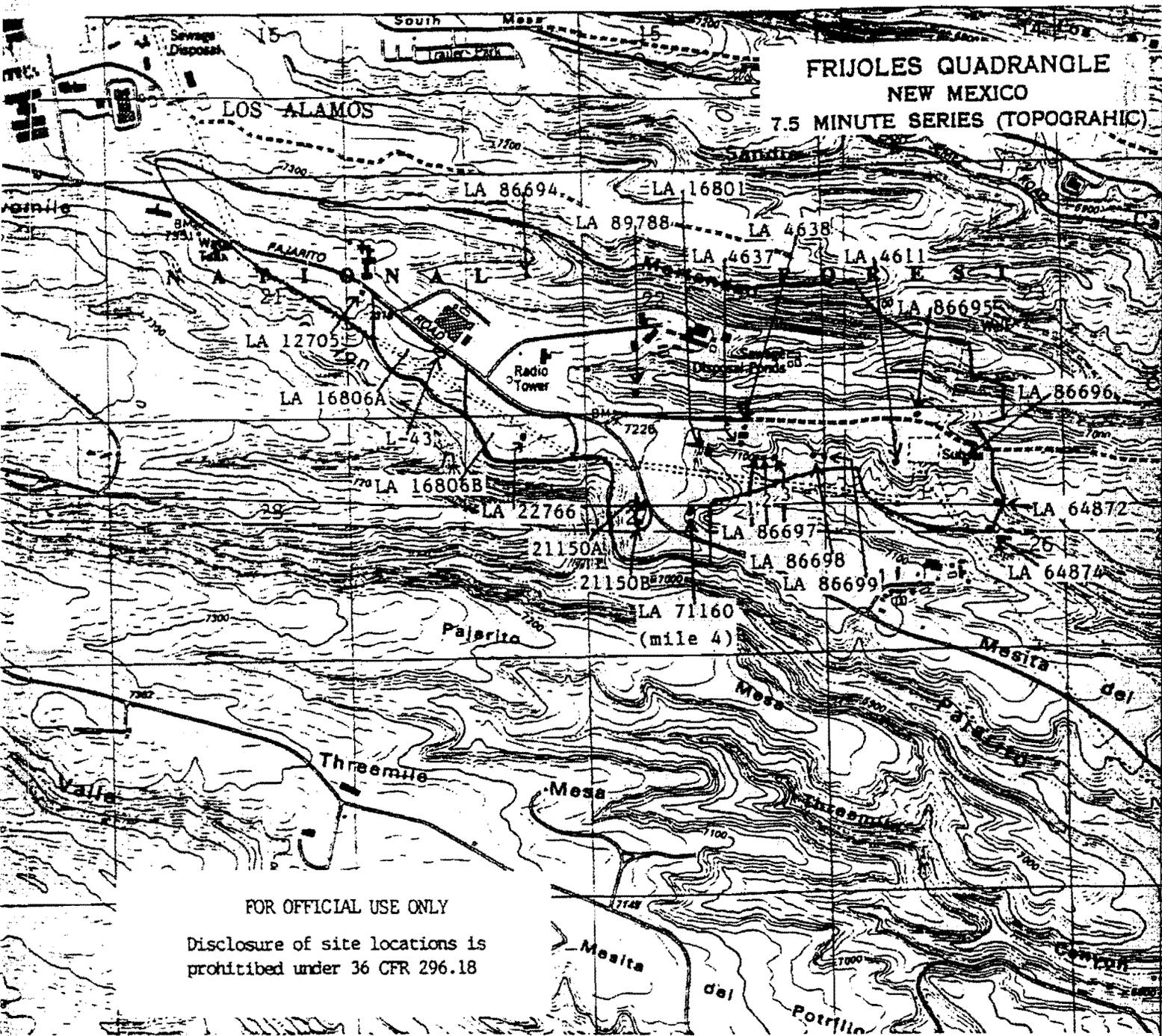
BEDROCK: Tshirege member of the Bandelier Tuff
(Los Alamos National Laboratory 1982)

Soil contamination from reactor operations
 Leaking PCB transformers
 Incinerator complex
 Radioactive decontamination facility
 Canyon disposal area
 Air exhaust system
 Waste lines
 Soil contamination from air compressor operations
 Decommissioned tanks and waste lines
 Radioactive waste treatment facility
 Nonradioactive waste treatment plant
 Size reduction facility
 UHTREX waste treatment
 Treatment facility
 Outfall from the Mechanical Assembly (hammer mill) building
 Cement plant
 Radioactive waste container storage areas
 Containment area
 Evaporator
 Filtration unit
 Glass breaker
 Incinerators
 Solvent spills
 Active and inactive hazardous waste container storage areas

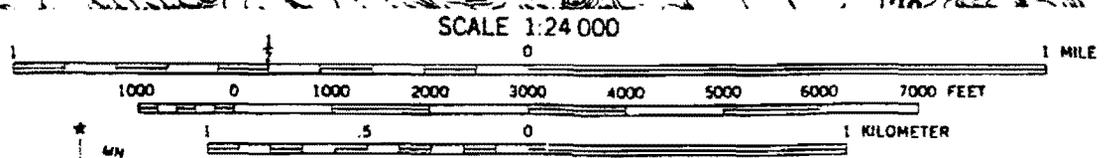
OU 1129 AND 1147 PROJECT ACTIVITIES

Throughout OU 1129 project activities will include non-intrusive engineering, radiological and geophysical field surveys as well as liquid/sludge samples, surface, near surface and subsurface sampling. The surface sampling phase of the project will sample soil/rock generally within the top 6 inches of the ground surface. Near surface sampling will include trenching across channels to a depth of 18 inches, liquid/sludge samples collected at a depth of 1 and 3 feet below the liquid surface, and shallow boreholes drilled to a depth of 3 feet. The subsurface sampling phase will consist of boreholes generally drilled to a maximum depth of 30 feet. However, boreholes drilled at "lagoons" will be to a minimum depth of 50 feet and at "seepage pits" to a depth of 60 feet. Samples are to be collected from seven intervals throughout the borehole length (Los Alamos National Laboratory, 1992). Also samples will be taken at the total depth of plumes which modeling data indicates might be to 650 feet. Access to the project areas, at OU 1129 will be by dirt and paved roads.

OU 1147 project activities will include non-intrusive engineering, radiological and geophysical field surveys, surface, near surface and subsurface sampling. The surface sampling phase of the project will sample soil/rock generally within the top 6 inches of the ground surface. Near surface sampling will obtain samples from depths up to 30 inches. The subsurface sampling phase will consist of shallow boreholes and deep coreholes up to 200 feet. If contaminants are still detected at 200 feet, drilling will continue. Rock samples, taken from the lower reaches of the boreholes, and trenching, to a maximum depth of 15 feet may also be utilized. Access to the project areas, at OU 1147, will be by dirt and paved roads.



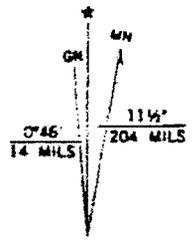
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CONTOUR INTERVAL 20 FEET

Map 2

Area Cleared for
OUs 1129 and 1147
and
Site Locations



UTM GRID AND 1984 MAGNETIC NORTH DECLINATION AT CENTER OF MAP DIAGRAM IS APPROXIMATE



QUADRANGLE LOCATION

For the purposes of this report a "site" is defined as a location where a human activity has occurred. The visible indications of such behavior may include (but not be limited to) bedrock mortars, game traps, petroglyphs, steps and roads, water-catching devices as well as habitations, terraces, shrines, and artifact scatters. For an artifact scatter to be defined as a site, the artifacts present must be indicative of purposeful human use of the area, that is, they must be present in either variety, quantity, or integrity of location to show that the area in which they are located is a loci of cultural activity. In general, all artifact scatters are considered as sites unless they, by their topographical situation, have obviously been transported by natural environmental forces away from clearly defined sites. Artifact scatters that are associated with clearly defined sites will be included in descriptions of the parent site. Artifacts located during survey which do not meet these criteria will be noted and described as isolated occurrences. Lone projectile points, artifacts washed downslope from obvious nearby sites, and pot drops (potsherds obviously derived from the same vessel) have not been recorded as sites but as "isolated artifacts" and have been reported as such in this report. Historic cultural resources dating prior to 1944 have been included as sites in this report. Evidence of human activity, for example old Laboratory roads and recent trash, have been noted in this report when present but have not been considered cultural resources.

DESCRIPTION OF CULTURAL RESOURCES IN SURVEYED AREA

Of the twenty-three total sites, seventeen are still located *in situ* in the project area: LAs 12705, 16801, 16806B (feature 5), 16806B (feature 6), 21150A, 21150B, 22766, 64872, 64874, 71160 (mile 4), 86694 thru 86699, and 89788) (Map 2).

The remaining six sites have been excavated and/or collected and are no longer *in situ* in the project area: LAs 4611, 4637, 4638, 16806A, 16806B (feature 4), and temporary site number L-43) (Map 2).

Site descriptions for all twenty-three sites follow in numerical order. Table 1 is a listing of all twenty-three sites by number, site type, cultural/temporal affiliation, UTM's, and eligibility.

LA 4611

LA 4611 was a five room pueblo structure located on Mesita del Buey at the location of the present substation in TA-5. This site, dating to the Coalition Period, A.D. 1100 to A.D. 1325, was excavated by Frederick Worman, on April 16-17, 1968 (Steen 1977:44). It is not visible today. Notes from the excavation follow. One of the rooms

was remodeled to make a narrow room with a rounded end. A fireplace was found in only one room; it consisted of four large stones placed on the floor in the northwest quadrant of the room. Except for the remodeled room, the walls were of adobe. The later wall was of masonry that contained both shaped and unshaped stones, as though they had been gathered from two or more earlier sites. An ash lens lay under the east wall of Room 1. Pottery [from the site included] Santa Fe Black-on-white and Abiquiu Black-on-Gray [and] stone artifacts [included] broken manos and metates, [and a] floor anvil (Steen 1977:44).

Because this site was excavated, it no longer exists *in situ*. Therefore, it is not eligible for the National Register.

distinct from known shrines in that they do not possess an opening to the east and are constructed of coursed masonry. These sites may have functioned as storage structures" (Preucel 1990:125).

Further investigation at LA 12705 may better define the structure type as well as its possible function. With the potential to yield additional information this site is considered eligible for the National Register of Historic Places under Criterion "D", research potential.

The proposed Environmental Restoration sampling activities at OUs 1129 and 1147 will avoid this site and not affect the attributes which make it eligible for inclusion on the National Register of Historic Places.

LA 16801

LA 16801 is a small, well preserved cavate. It is located at the head of Cañada del Buey on the north side of the canyon in a vegetation zone of ponderosa pine, piñon, and juniper at an elevation of 2170.18 meters (7120 feet).

Charlie Steen recorded this site in 1978 on a LANL site form:

A well preserved small cave "kiva". Masonry front wall intact with stone lintel. Interior circular, less than 2 m[eters] diameter, domed ceiling, walls blackened but no rock art. 2 small niches in the walls. Hand and toe trail to mesa top. One other, smaller, "kiva" adjacent on west side but destroyed by erosion. 2 or 3 probable storage rooms but no sign of masonry houses. Ca. 150 m[eters] SW of UHTREX building at head of Cañada del Buey.

In 1992, this site was recorded as a cavate complex of one well preserved cavate (#1) with a masonry front wall, and two other possible cavates (#2 and #3) to the west. Cavate #1, the masonry front walled cavate, is located 3.1 meters above the ground surface. It has interior measurements of 2 meters deep by 2.1 meters wide by 1.7 meters high. The interior is smoke blackened but there are no petroglyphs or plaster on the walls.

The masonry front wall is chinked with small stones and has adobe mortar. Wall measurements are 2.1 meters wide at the base and .6 meters wide at the top. The "doorway"/opening has a stone lintel and fragments of timber(s) are present in the mortar at the top of the opening. The opening measures 40 centimeters wide at the base and 37 centimeters wide at the top and both sides are 77 centimeters high. Plaster was observed on the inside of the opening. There is a narrow ledge directly in front of the cavate which is 28 cm below the lintel. The floor of the cavate is 40 cm below the lintel.

There is a vent hole 70 centimeters above the top of the door opening. A small piece of wood is in the mortar that is around the hole. Two niches are located in the east wall of the cavate. They measure 22 centimeters deep by 35 centimeters wide and 15 centimeters deep by 20 centimeters wide. Both are approximately 20 to 40 centimeters above the floor surface.

In the cliff face above the cavate there is an opening which could have possibly been used for storage. Two meters to the east of the cavate is a small, partially masonry-walled niche. It measures 60 centimeters deep by 40 centimeters high by 27 centimeters wide. This masonry is the same as at the cavate.

Cavate #2 is located approximately 1.5 meters to the west of cavate #1. It measures 1.2 meters deep by 1.4 meters wide by 1.0 meters high. In the northwest wall there is a natural opening which appears to have been enlarged. Immediately inside the cavate opening on the east

LA 16806A the [Victor] Romero Cabin site (circa 1913-1942) was located at TA-55. In 1985 an excavation was conducted of the cabin, the south log structure, and the privy. Additionally subsurface testing was conducted at trash accumulation areas. Artifacts from these discrete trash areas as well as from the field areas were collected. After the completion of the excavation, the cabin was reconstructed and relocated near the Los Alamos County Historical Museum and is now the property of Los Alamos County. Restoration work was also completed at this time.

In homestead entry papers filed in 1916, Victor stated that he had built his house (cabin) in 1913 and that he also had a corral and three sides of his claim were fenced. From homestead research notes and LASL Community Affairs News (1959) it was determined that the cabin was rebuilt in 1934. Informants have mentioned the presence of a sleeping porch and an additional small building to sleep in. Also they recall a chicken pen and a shed. This homestead was occupied until 1942 or 1943 when the land was appropriated for the Manhattan Project (McGehee 1988).

LA 16806B, known as the David Romero (Victor's father) homestead (circa 1893-1942) is located to the east of the cabin site. Two remaining features of this homestead are a large, rock-lined cistern, and a large *souterano* or underground storage area.

The LA 16806B site area was also designated for collection and documentation in the mitigation plan approved for the [Victor] Romero Cabin site (Advisory Council on Historic Preservation 1985). At LA 16806B, a log corral (Feature 4), scattered surface trash, and several discrete trash accumulations were collected and documented in accordance with the above plan. Preliminary results are reported in an appendix to *Excavations at the Romero Cabin, A Hispanic Homestead on the Pajarito Plateau 1913-1942* (McGehee et al. n.d.). This collection and documentation has exhausted the research potential of the corral and the trash areas (McGehee et al. 1991:8).

The corral was mapped, systematically dismantled and cross-sectioned for dendrochronological analysis.

David Romero filed homestead application papers in 1893 and was granted a patent for the homestead in 1901. He stated that he built a house in 1893 and that he also had corrals, a reservoir, a stable, and fence lines. Family members recalled that a *souterano* or subterranean storage area was located on his land (McGehee et al. 1991:Appendix A, pg 1).

There are three main features of the David Romero homestead (LA 16806B), a log corral (feature 4) a stone lined cistern (feature 5), and a dugout (feature 6), actually lie slightly south of the southern border of his claim. This land, designated as the Robert McDougall Homestead, was first settled by the McDougall's in 1907. There are, however, indications that part of the McDougall Homestead was occupied earlier than 1907, presumably by the David Romero family (McGehee et al. 1991:Appendix A, pg 2).

The entire LA 16806 site area was declared eligible for the National Register of Historic Places on August 1, 1984 in correspondence from the SHPO. Since 16806A and 16806B (feature 4) have been excavated/collected, they are no longer eligible for the National Register; however, LA 16806B (features 5 and 6) remain eligible.

The proposed Environmental Restoration sampling activities at OUs 1129 and 1147 will avoid the remaining portions of this site and not affect the attributes which make them eligible for inclusion on the National Register of Historic Places.

LA 22766

This site was originally recorded by Charlie Steen on a LANL site form, in 1980, as site LA 22766, a "sparse lithic scatter of obsidian and Pedernal chert. No sub-surface artifacts. Three corrugated sherds and one Santa Fe Black-on-white sherd." This site was declared eligible for the National Register on August 1, 1984 in correspondence from the SHPO.

The entire LA 22766 site area is located within the boundaries of LA 16806B, the David Romero/Robert McDougall homesteads. The data recovery plan entitled "Proposal for the Mitigation of Adverse Impact: LA 16806 and LA 22766 Los Alamos National Laboratory, Los Alamos, NM" by David H. Snow, dated January 1984, as supplemented by "Data Recovery Proposal: LA 16806: The 'Romero' Cabin" (no date) was approved in the "Memorandum of Agreement" with the Advisory Council on Historic Preservation (1985). As LA 22766 is situated within the "agricultural" field area of the Romero Cabin site, historic artifacts along with prehistoric artifacts were observed, scattered over the entire field area. In 1985 during the Romero Cabin, LA 16806A, mitigation, seven prehistoric artifacts were collected in the vicinity of the site location designated by Charlie Steen. These artifacts are 3 lithics and 4 sherds. Many other prehistoric artifacts, including obsidian flakes and more prehistoric sherds were collected from the entire LA 16806B field area during the mitigation of LA 16806 but were not catalogued as specifically associated to the lithic and artifact scatter.

Based on the Black-on-white sherds the site dates to the Coalition Period, A.D. 1100 to A.D. 1325.

This site is still considered eligible since subsurface testing, of this site, was not conducted during the Romero Cabin mitigation as detailed in (Snow 1984:7) and stipulated in the "Memorandum of Agreement" with the Advisory Council on Historic Preservation (1985). In a April 1994 field check of the site area no new artifacts were located on the surface. subsurface artifacts may still be present.

The proposed Environmental Restoration sampling activities at OUs 1129 and 1147 will avoid this site area and not affect the attributes which make it eligible for inclusion on the National Register of Historic Places.

A description of the collected artifacts follows.

- Item 1 - A white Pedernal chert decortication flake, proximal end, cortical platform, step termination, 4 dorsal flake scars, displays approximately 5% cortex, and measures 5.3 cm x 3.9 cm x 1.5 cm.
- Item 2 - A complete basalt decortication flake, single facet platform, feather termination, 4 dorsal flake scars, displays approximately 8% cortex, and measures 7.6 cm x 10.0 cm x 2.6 cm.
- Item 3 - A white Pedernal chert interior flake, lateral portion, single facet platform, feather termination, 4 dorsal flake scars, and measures 1.2 cm x 1.6 cm x 0.4 cm.
- Item 4 - Smearred indented corrugated body sherd, 4 mm thick, grey paste with sand temper.
- Item 5 - Santa Fe/Wiyo Black-on-white body sherd, 5 mm thick, fine light grey paste, fine temper with dark specks, thin white to grey slip, bluish carbon paint, design element - solid with pendant tick marks.

This site was previously declared not eligible for the National Register of Historic Places in correspondence from the SHPO to the DOE dated September 9, 1987.

LA 71160 (mile 4) (Temporary site Number M-27)

LA 71160 (mile 4) is a segment of a homestead era (circa 1890-1943) wagon road. This road roughly paralleled present-day Pajarito Road and allowed the homesteaders access to their summer cabins. LA 71160, also known as the Pajarito Wagon Road, probably connected with other roads leading to the Los Alamos Ranch School and Anchor Ranch. The wagon roads in the Los Alamos area were documented in 1904 by Edgar Hewett (1906) and in 1935 by Jim Fulton [map on file at Bandelier National Monument]. Mile 4 contains two short sections of wagon ruts (McGehee and Larson 1988:5).

[Segment] mileage is determined from the road's point of origin near the intersection of Pajarito Canyon and State Road 4, near White Rock, New Mexico (McGehee and Larson 1988:4). This segment (mile 4) of LA 71160 is at an elevation of 2164.08 meters (7100 feet) in a zone of sparse vegetation with a few piñon and junipers.

LA 71160, (mile 4) was declared eligible for the National Register of Historic Places on November 3, 1988 in correspondence from the SHPO to the DOE.

The proposed Environmental Restoration sampling activities at OUs 1129 and 1147 will avoid this site and not affect the attributes which make it eligible for inclusion on the National Register of Historic Places.

LA 86694 (Temporary Site Number K-12)

Site LA 86694 is a one room historic structure located in a southwestern finger of Mortandad Canyon. The site is at an elevation of 2176.2 meters (7140 feet) in a ponderosa pine vegetation zone in TA-48.

The structure is constructed of young juniper logs and unshaped tuff blocks. Two courses of timbers are present on the east and west sides, whereas, the north and south sides are represented by only 1 course, making a rectangular structure measuring 3.5 meters north/south by 3 meters east/west. Around the outside of the southwest corner of the structure there is an arc of roughly shaped tuff blocks three courses high. Charred wood was observed in the area between the timbers and the arc of tuff blocks.

Artifacts present include 1 lard pail with handle and one evaporated milk can. Based on these historic artifacts the site was occupied during the Late Homesteading Period, A.D. 1900 to A.D. 1943.

This site is within the area patented by David Romero, but not within the boundaries defined by site LA 16806B, the "Romero Homestead" mentioned above. Informants stated that the Romero family's water source was in the canyon located to the north of their cabin (McGehee et al. n.d.). This site is located in Mortandad Canyon which is to the north of where the cabin was located. These timbers could be the remains of a structure (possible shed) located at the Romero's water source. However, whether this structure was used for storage, a shelter, or as a pen has not been determined. Based on the few artifacts present the site dates to the fifty year span of the Homesteading Period. Dendrochronological samples could be taken to give a more precise date to the structure and floral analysis might better define the sites function. Therefore,

Even though the site area is somewhat disturbed by erosion, and the access roads to the water tank 65 meters to the northwest, there is still the potential for buried deposits at this site. Subsurface testing would be needed to determine eligibility status. Therefore, this site is potentially eligible for inclusion on the National Register under Criterion "D" as possible buried deposits exist and its research potential has not been exhausted.

The proposed Environmental Restoration sampling activities at OUs 1129 and 1147 will not affect the attributes which make this site potentially eligible for inclusion on the National Register of Historic Places.

LA 86697 (Temporary Site Number K-26)

Site LA 86697 consists of three proveniences. Provenience 1 is a cavate; Provenience 2, located thirty meters east of provenience 1, is a boulder with viga holes; and Provenience 3, fifty meters east of Provenience 2, is a small enclosure of tuff rocks. A total of forty-two artifacts were observed at this site. The three proveniences of this site are situated in an area 20 meters north/south by 80 meters east/west in upper Cañada del Buey at an elevation between 2164.08-2176.27 meters (7100-7140 feet) in a mixed ponderosa pine, piñon-juniper vegetation zone.

Provenience 1, a cavate with talus house rubble, is situated 17 meters above the base of the canyon slope. One definite hand and toe hole and possibly two additional holes have been pecked into a boulder leading up to the cavate. Three viga holes are present on the bedrock boulder face above the entrance to the cavate. The amount of shaped tuff block rubble present, indicates that there was a one room talus house structure in front of the cavate.

Possible viga beams are located on the rubble piles on both sides of the cavate entrance. The underneath side of the three beams is smoke blackened. A large rhyolite block was noted in the tuff block rubble. Its surface is somewhat smoothed as it may have served as a work surface.

The cavate interior is pecked and shaped into a rectangular room with rounded corners. The floor also appears to have been partially shaped by pecking. There are digging stick marks on the north wall (rear wall). Other features inside the cavate include a vent hole 40 centimeters above the floor in the west wall and two small depressions pecked into the north wall and east wall.

Artifacts are eroding down slope, to the south. However, most of the artifacts are located within 20 meters of the cavate. Ceramics include sherds of a red exterior slipped polychrome glazeware jar that displays matte cream and glassy black paints. One of these sherds is a Glaze C rim. This rim sherd and two body sherds were collected. These three sherds all have hornblende latite temper and are from the Galesio Basin area, probably Tonque Wash. A bowl rim sherd, not collected, also has a red slip and cream and black paints. This indeterminate glazeware sherd could also possibly be a Glaze C sherd. A glazeware jar sherd with cream/white exterior slip and brown and black glaze paint was also collected. This sherd has augite latite temper and could possibly be a Glaze D sherd from the Galesio Basin. Another glazeware sherd collected, a bowl sherd, has a red exterior slip with a cream interior slip and black glassy paint. This sherd has basalt temper and could be any of the Glazewares, A-F, but with the association of the other sherds it is probably either a Glaze C or a Glaze D sherd. Several other possible glazeware sherds were noted.

Biscuit A, Biscuit B, and Biscuit C, sherds were also observed and collected along with one sherd of Sankawi Black-on-cream and one sherd of possibly Santa Fe Black-on-white. One Biscuit rim sherd observed appears to be intermediate between Biscuit B and C. Other ceramics noted but not collected include plain sherds from black-on-white vessels, micaceous and non-

LA 86697. It is situated at an elevation of 2164.08 meters (7100 feet) in a vegetation zone of mixed ponderosa pine, piñon, juniper, and scrub oak. The shelter is "U" shaped and the entrance faces south. The enclosed area of the shelter is .75 meters deep by 1.5 meters wide by 1.5 meters high. The interior west wall appears to have been modified by a pecking or carving technique where as the remaining walls have a natural appearance. A carved out niche is located in the back (north) wall. The ceiling of the shelter is smoke blackened. An eroded tuff rock wall, one coarse high, measuring 3.5 to 4 meters long (east/west) is located 1 meter to the south of the shelter opening.

One grey chert core was the only artifact observed on the site. Although only one artifact was observed the potential for subsurface deposits is fair in the area between the shelter and the rock wall. Subsurface testing would be needed to determine eligibility status. Therefore no date can be assigned to this site of Anasazi origin due to the lack of diagnostic artifacts. However an assumption is made that the site was probably utilized during the Classic Period (A.D. 1325 to A.D. 1600) as was the nearby cavate site LA 86697. This site's function, possibly a temporary shelter or pen might be better defined with further testing in the shelter itself and the area between it and the rock wall. LA 86698 is potentially eligible for inclusion on the National Register under Criterion "D" as its research potential has not been exhausted.

The proposed Environmental Restoration sampling activities at OUs 1129 and 1147 will not affect the attributes which make this site potentially eligible for inclusion on the National Register of Historic Places.

LA 86699 (Temporary site Number K-28)

Site LA 86699 is a cavate which is connected to a shallow blown out depression in the white tuff cliff face in upper Cañada del Buey approximately 45 meters east of LA 86698. The site located at an elevation of 2161.032 meters (7090 feet) in a mixed vegetation zone of ponderosa pine, piñon, and juniper.

The cavate measures 2.5 meters deep by 2 meters wide by 1.75 meters high. The ceiling of the cavate is smoke blackened near the entrance. A second entrance has been formed from the blowout area 50 cm to the north along the cliff face. In the northeastern corner approximately 50 centimeters above the top of the fill there is a small hole/depression in the wall.

No artifacts were found in association with this site. Therefore, no date can be assigned to this site of probable Anasazi origin. However, disregarding packrat nests, the potential for subsurface deposits inside the cavate is still good. Subsurface testing would be needed to determine eligibility status. As with LA 86698 this site was probably occupied/utilized at the same time as LA 86697, during the Classic Period, A.D. 1325 to A.D. 1600. Again, as with the previous site, testing will better define this site's function and possibly support the hypothesized site utilization period. LA 86699 is potentially eligible for inclusion on the National Register under Criterion "D" as its research potential has not been exhausted.

The proposed Environmental Restoration sampling activities at OUs 1129 and 1147 will not affect the attributes which make this site potentially eligible for inclusion on the National Register of Historic Places.

Because this site was collected and tested, it no longer exists *in situ*. Therefore, it is not eligible for the National Register.

ISOLATED OCCURRENCES (IOs) LOCATED WITHIN THE SURVEY AREA

All isolated occurrences were noted within the survey area and marked on survey maps unless the artifacts were part of a scatter or use area associated with a nearby ruin or ruin complex. Descriptions and UTM coordinates of IOs follow.

IO#	ARTIFACT DESCRIPTION	UTM COORDINATES
4/5-1	1 Santa Fe/Wiyo Black-on-white sherd	Z 13 E 383850 N 3969380
4/5-2	Natural unmodified "steps"	Z 13 E 384570 N 3968985
4/5-3	1 Chert decortication flake	Z 13 E 383990 N 3968860
4/5-4	Mano fragment - unifacial ground	Z 13 E 383840 N 3968860
4/5-5	Metate - Rhyolite	Z 13 E 384020 N 3968850

IO #4/5-1

Isolated occurrence #4/5-1, a Santa Fe/Wiyo Black-on-white sherd, is located on the north facing slope of Mortandad Canyon. The nearest site is over 450 meters (~3/10's mile) away.

IO #4/5-2

Isolated occurrence #4/5-2, an unmodified "natural" stairway-like feature, is located on the end and slope of Mesita del Buey, approximately 250 meters east of LA 86695. Even though no cultural modification of the area, ("steps") was observed this passage provides easy access to the canyon below and was probably used by the Anasazi for this purpose. Due to the proximity of this IO to LA 86695 this stairway-like feature is probably associated with this site as well as other sites in the vicinity.

IO #4/5-3

Isolated occurrence #4/5-3, a chert decortication flake, is located on the south facing slope of upper Cañada del Buey. It is approximately 50 meters above LA 86699. Due to the proximity of this isolated occurrence to LA 86699 it is probably associated with this site.

IO #4/5-4

Isolated occurrence #4/5-4, a unifacially ground mano fragment, is located in upper Cañada del Buey, in the approximate 175 meters between sites LA 86697 and LA 86698. Due to this

and faunal remains of these sites and comparing them to sites from the Coalition Period it might indicate whether environmental conditions and/or resource depletions or surpluses lead to the aggregation of Classic Period communities.

LAs 86698 and 86699 are cavate sites which, based on their spatial relationship to LA 86697, probably date to the Classic Periods. With further study, questions relating to the temporal and functional aspects of these two sites could be addressed.

EVALUATION OF HOMESTEADING PERIOD SITES

LA 64874, two brass Government Land Office Survey markers, were previously recorded in 1987 and declared not eligible for the National Register in correspondence from the SHPO to the DOE dated September 9, 1987.

LAs 16806A, 16806B (feature 4), 16806B (feature 5), 16806B (feature 6), and 71160 (mile 4), historic era sites, have previously been declared eligible for inclusion on the National Register of Historic Places in correspondence from the SHPO: all portions of LA 16806 A&B on August 1, 1984 and LA 71160 on November 3, 1988. However, since LA 16806A and 16806B (feature 4) have been excavated/collected they are no longer eligible for the National Register.

LA 86694, a historic wooden structure, dates to the Homesteading Period. With further study of this site, determination of its function and a more precise date of utilization can be defined which will indicate whether this site is an out building associated with the Romero homesteads (LA 16806 A&B) as assumed.

LA 89788, a historic can scatter, probably associated with the Romero homesteads (LA 16806 A&B) is deemed not eligible for the National register based on the extremely limited variation of can sizes, shapes, and types. There is thought to be very little, if any, additional potentially significant information available from the partially buried and buried cans. The recordation of this historic can scatter has exhausted its research potential.

EVALUATION OF SITES WITH UNKNOWN TEMPORAL ASSOCIATIONS

LA 64872, two trail segments, are presumed to be of Anasazi origin. By delineating the location trails in relationship to various sites our understanding of the prehistoric land use and spatial organization on the Pajarito Plateau may better be defined. This site was previously declared eligible for the National Register in correspondence from the SHOP to the DOE dated September 9, 1987.

Temporary site number L-43, a lithic scatter, was collected and subsurface testing conducted during the Romero Cabin excavation in 1985. No buried artifacts or remains were discovered during the subsurface testing of this site. Since this site was collected and tested, it no longer exists *in situ*, therefore, it is not eligible for the National Register.

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TABLE 1
OU 1129 and 1147 Site Summary Information

SITE NUMBER	TYPE	CULTURAL/ TEMPORAL AFFILIATION	UTMs	ELIGIBLE
LA 4611	SP	Coalition	Z 13 E 384279 N 3968811	No
LA 4637	FH	Coalition?	Z 13 E 383646 N 3968910	No
LA 4638	FH	Coalition?	Z 13 E 383684 N 3968968	No
LA 12705	FH	Coalition	Z 13 E 382086 N 3969515	Yes - "D"
LA 16801	CP	Classic	Z 13 E 383530 N 3968835	Yes - "C" & "D"
LA 16806A	HS	Homesteading Hispanic	Z 13 E 382465 N 3969210	No
LA 16806B (Feature 4)	HS	Homesteading Hispanic	Z 13 E 382670 N 3968925	No
LA 16806B (Feature 5)	HS	Homesteading Hispanic	Z 13 E 382700 N 3968995	Yes - "D"
LA 16806B (Feature 6)	HS	Homesteading Hispanic	Z 13 E 382710 N 3968985	Yes - "D"
LA 21150A	FH	Coalition	Z 13 E 383250 N 3968570	No
LA 21150B	AS	Archaic	Z 13 E 383225 N 3968560	Yes - "D"
LA 22766	AS	Coalition	Z 13 E 383264 N 3968855	Yes - "D"
LA 64872	TS	Unknown Anasazi	Z 13 E 384720 N 3968590	Yes - "D"
LA 64874	OH	Homesteading	Z 13 E 384695 N 3968485	No
LA 71160 (mile 4)	RD	Homesteading	Z 13 E 383455 N 3968615	Yes - "D"
LA 86694	OH	Homesteading Hispanic	Z 13 E 382778 N 3969562	Yes - "D"
LA 86695	FH	Early Classic	Z 13 E 384377 N 3968971	Yes - "D"