

A PAN, A SPOON, A BELL, AND A GUN:
*Limited Test Excavations for Facility Improvements at
Rancho de los Luceros (LA 37549),
Rio Arriba County, New Mexico*



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Office of Archaeological Studies



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**A Pan, a Spoon, a Bell, and a Gun: Limited Test
Excavations for Facility Improvements at Rancho de los
Luceros (LA 37549), Rio Arriba County, New Mexico**

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Administrative Summary

Between October 27 and November 12, 2010, and January 24 and January 31, 2011, the Office of Archaeological Studies (OAS), Department of Cultural Affairs, State of New Mexico, conducted test excavations at the Rancho de los Luceros (LA 37549) to determine the extent of subsurface cultural deposits in areas proposed for renovations as part of facility improvements on the property. Archaeological investigations were undertaken at the request of the Department of Cultural Affairs, State of New Mexico, in advance of proposed facility remodeling, construction, and renovation of the property by Lloyd's and Associates (architects), Santa Fe. Because of administrative decisions which included relocating the area of proposed effect (APE), fieldwork was undertaken in two phases, Phases 1 and 2.

During Phase 1 (October 27 through November 12, 2010), three locales were investigated: the Bath House 1 area, the Storage Shed 2 area, and the Welcome Center. During this phase a total of 12 sq m were tested, and a major irrigation ditch (LA 122393, Acequia de los Luceros) was recorded. Findings include mixed redeposited artifacts at the Bath House 1 location, shallow deposition with virtually no cultural materials at the shed location, and, with the exception of an ephemeral oxidized feature, culturally sterile and disturbed deposition at the Welcome Center. Since significant quantities of mixed artifacts and a lateral feature (Acequia 5) associated with the Los Luceros acequia were present at Bath House 1, monitoring during construction was recommended. However, the recommendation was not approved by Historic Preservation Division (HPD). The proposed area of the Bath House and leach field was then moved to an area less likely to contain cultural deposits of the degree seen at the first Bath House location. Archaeological work at this area was designated Phase 2 (January 24 through January 31, 2011). During these supplementary undertakings, alternative areas to Bath House 2 and its associated leach field were investigated. Since cultural deposits were again encountered in the second alternative leach field location, two more test

pits than originally proposed were excavated in a third leach field location. No cultural materials were encountered in the final location.

In addition to the additional test pits, two backhoe trenches were excavated to further evaluate subsurface characteristics and ensure that no undetected cultural materials remained. These were BHT 1 and BHT 2. BHT 1 was excavated between Test Pits 17 and 18, and BHT 2 was excavated between Test Pits 13 and 14. No cultural materials were encountered.

At the conclusion of the project, all test pits and trenches were lined with GeoTech© fabric and backfilled. Artifacts recovered from all test pits were analyzed by OAS ceramic, lithic, faunal, and historic artifact specialists. The results of the test excavations at Los Luceros revealed two separate and temporally discrete components, one late Territorial/historic (ca. AD 1800-1880, with a light horizon of modern trash), and the other Rio Grande Classic AD 1325-1450, dominated by Biscuit A. These were located in two areas: behind the Lucero House Administrative Center, and in a proposed leach field area north of the Visitor's Center. In both instances, historic artifacts were located near the surface, and the prehistoric artifacts were confined to the lower elevations.

This project complies with the provisions set forth in Section 106 of the National Historic Preservation Act (36 CFR 800), Executive Order 11593 (1972), the National Environmental Policy Act of 1969 (91 Stat 852), and the State Cultural Properties Act of 1969 (as amended). It also complies with the provisions of Section 18-6-5 (NMSA 1978) of the Cultural Properties Act (4.10.16.13 NMAC-N, January 1, 2006).

Archaeological testing by the OAS at the Rancho de los Luceros has been completed under the existing agreement. The current strategy, in accordance with the most recent amended testing phase, is for the layout and potential areas of disturbance to remain unchanged from its original design, except for the new locations for Bathhouse 1 and the associated leach field. Since no intact archaeological remains were encountered in the Bathhouse 1 and leach field location, the Visitor's

Center, or the storage shed, the OAS recommends that the HPD allow the client to proceed with its activities within the tested areas.

Testing was conducted under General Permit NM-10-027-T.
NMCRIS No. 119224.
OAS Project No. 41.881 (Los Luceros Testing).

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Introduction

At the request of Elena Sweeney, deputy secretary, Department of Cultural Affairs, the Office of Archaeological Studies (OAS) conducted test excavations at the Rancho de los Luceros (LA 37549) prior to proposed construction activities. The archaeological investigations were undertaken to assess the potential of encountering in situ buried cultural deposits during Phase 1 facility improvements at the property (Rancho de los Luceros, LA 37549; *National Register of Historic Places*, October 20, 1983; *State Register of Cultural Properties* No. 143, January 9, 1970) in Rio Arriba County, New Mexico (Figs. 1, 2, and Appendix 4). Because of administrative decisions, the principal area of investigation was relocated, and the project was divided into two field phases, Phase 1 and Phase 2.

In a letter to Jan Biella (HPD) on December 22, 2011, Stephen Post provided a brief outline of the testing results that served as a preliminary report on the Phase 1 field effort. In a second letter by Post on December 29, 2010, the testing results were updated and an amended testing program including additional testing was proposed. This amended testing plan provided for added hand and mechanical excavation within the planned footprints of Bath House 1 and associated leach field. As described in prior correspondence, numerous prehistoric and historic artifacts were recovered from Test Pits 1-4 at the Bath House 1 and associated leach field. Test excavations did not determine the source of the cultural materials. Rather than in situ deposition within the immediate area, they were determined to be intrusions from outside of the area of potential effect (APE). Based on these findings, archaeological monitoring was recommended during construction activities.

These recommendations were not approved by the HPD. As a result, the Department of Cultural Affairs opted to move the location of the Bath House 1 and its leach field, rather than further disturbing the buried cultural deposits and materials. This resulted in a second round of testing, which began on January 24, 2011. The proposed location of the Bath House 1 and associated leach field in Phase 1 and the new

Phase 2 locations are shown in Figure 3.

In the testing plan (Barbour and Montoya 2010:2), it was proposed that two 1 by 2 m test units would be used to specifically examine Acequia 5, a lateral irrigation ditch documented during 2008 utility trench monitoring (Montoya in prep.). Although this feature is associated with LA 122393, the historic Los Luceros Acequia Madre, which runs east of the property, it was recorded only as it occurred within the LA 37549 project area.

Visual inspection of the area in consultation with staff personnel revealed that Acequia 5 would not be disturbed during the construction of Bath House 1 and the associated leach field. On November 5, 2010, this observation was reported to Michelle Ensey of the HPD, who concurred with the evaluation but requested that a New Mexico Historic Water Delivery Systems Inventory Form (HWDSIF) be completed (Appendix 1), with the recording confined to the water control system within the LA 37549 project area.

During Phase 2 (January 24 and January 31, 2011), six hand units and two backhoe trenches were excavated and mapped with a total station within the preexisting coordinate system. Test Pits 15 and 16 were placed in the proposed area of the relocated leach field (Fig. 3). Artifacts were encountered within both these units, which could potentially be disturbed during construction activities. In view of these findings, excavations were halted, and HPD was notified. On January 26, 2011, Stephen Lentz consulted with Michelle Ensey to formulate an alternative management strategy. She recommended consulting with Patrick Salazar, facility manager for Los Luceros; and Gregory Waits, architect for Lloyd's & Associates, to select an alternate location for the leach field. Once it was agreed that this would be done the following day, Lentz contacted Ms. Ensey to inform her of the new leach field location and was given verbal permission to continue using two more test pits. On January 27, Pat Salazar and the architect staked the outline of the leach field foundation south of the bath house in an agricultural field (Fig. 3).

Within the newly defined leach field area,

the OAS excavated two 1 by 1 m test pits (TP 17 and TP 18). No artifacts were encountered in either of these pits. In accordance with the testing plan, two backhoe trenches (BHT 1 and BHT 2) were excavated to further evaluate subsurface characteristics and to ensure that there were no remaining cultural materials. BHT 1 was excavated between Test Pits 17 and 18, and BHT 2 was excavated between Test Pits 13 and 14 (Fig. 3). No cultural materials were encountered. At the conclusion of the project, all test pits and trenches were lined with GeoTech© fabric and backfilled.

ACKNOWLEDGMENTS

Fieldwork was conducted by Stephen Lentz, Richard Montoya, Mary Weahkee, Vernon Foster, and Isaiah Coan. Stephen Post served as principal investigator. Jessica Badner generated maps and other GIS-related data. Our thanks to Julian Serrano, manager of the Los Luceros property, and to Pat Salazar, Museum Resources Division, Historic Los Luceros, for their assistance during the course of the project.

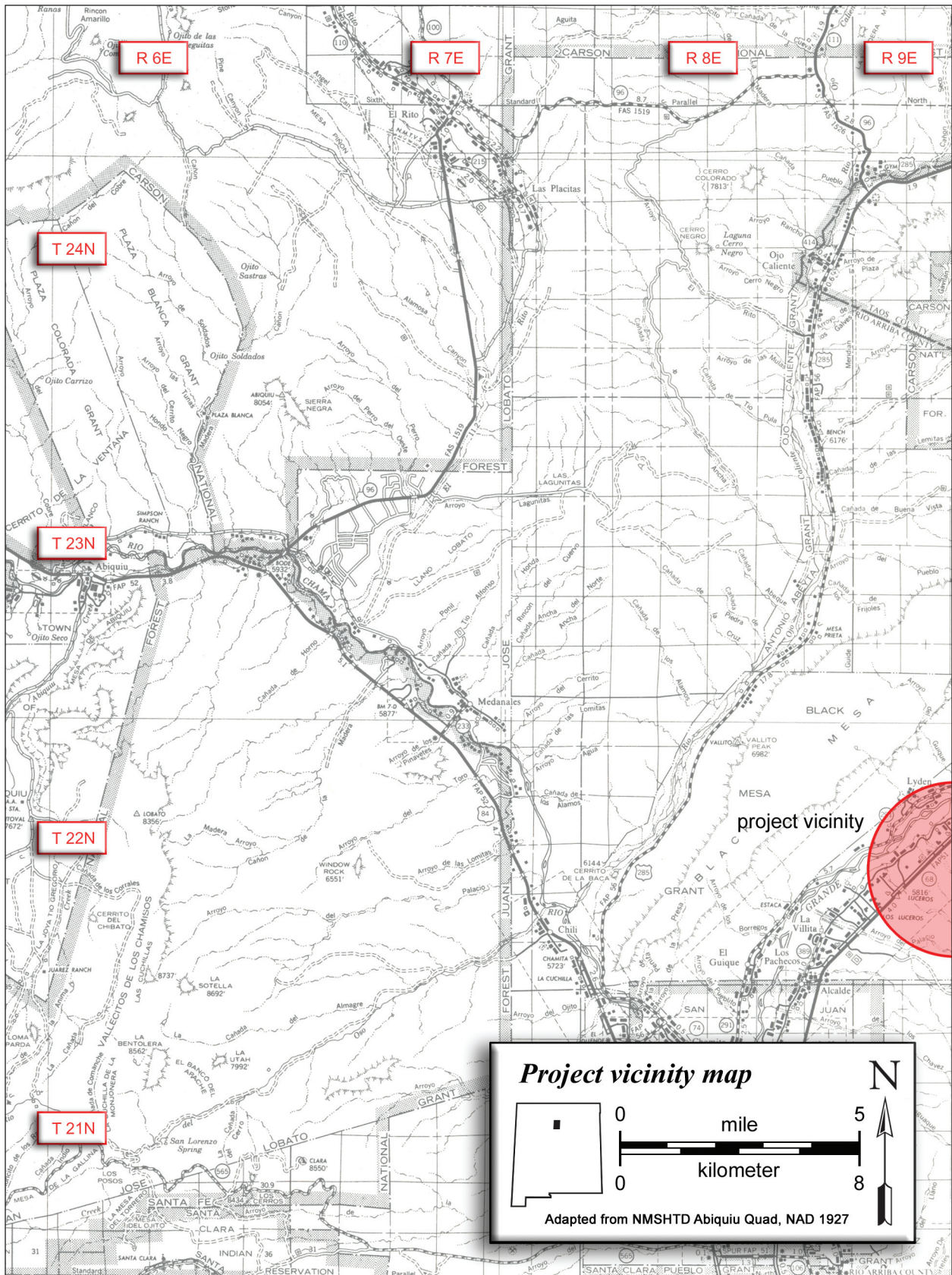


Figure 1. Project vicinity.

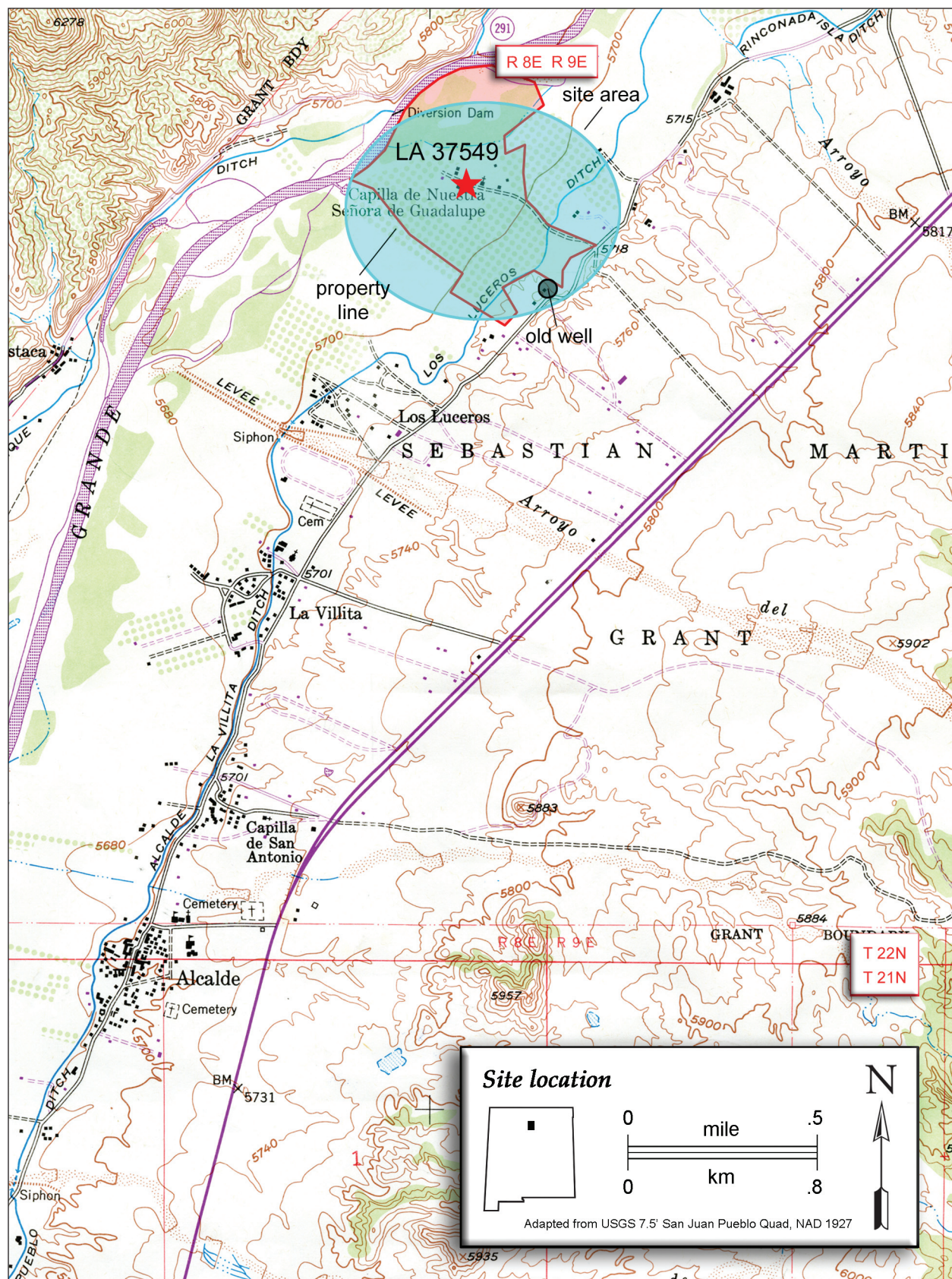


Figure 2. Site location.

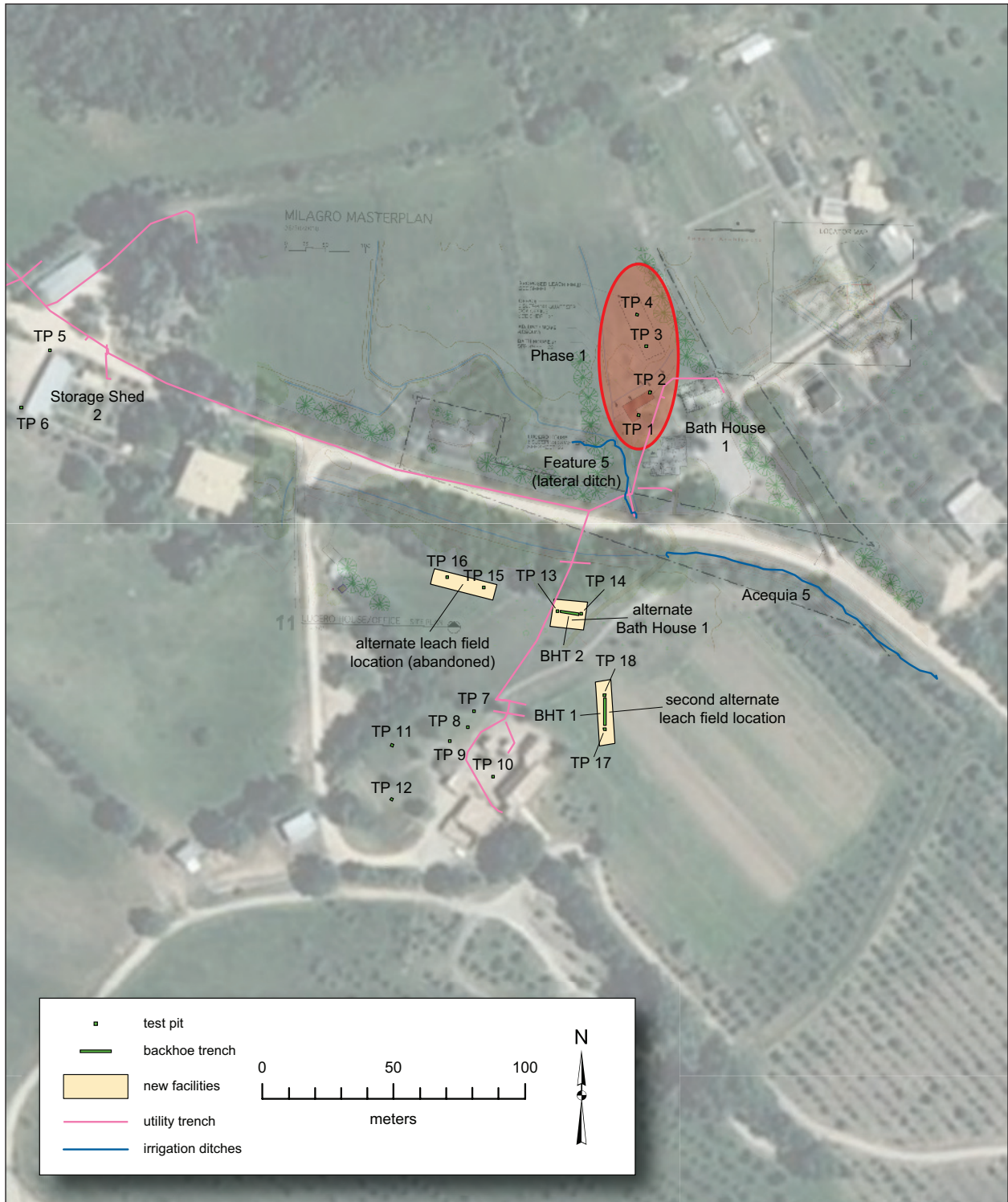


Figure 3. The original location of Phase 1 testing and the relocated area, Phase 2, LA 37549.

Environment

Rancho de los Luceros (LA 37549) lies on the east bank of the Rio Grande and is surrounded mostly by private landowners. It is in Alcalde, New Mexico, which lies in the valley with the Jemez Mountains to the west and the Sangre de Cristo Mountains to the east at an elevation of 5,700 ft (1,737 m).

Los Luceros is in the Abiquiu-Peralta complex of soils in the Rio Grande and Chama River floodplains and contains stream alluvium

derived from sandstone. The typical profile of the Abiquiu Complex contains 0 to 4 inches of silty loam, 4 to 8 inches of fine sandy loam, and 8 to 60 inches of stratified, extremely cobbly, extremely gravelly coarse sand to extremely gravelly sand. The typical profile of the Peralta Complex contains 0 to 18 inches of loamy fine sand and 18 to 65 inches of stratified loamy sand to clay loam (NRCS 2008:18-23). The average annual precipitation is 10.1 inches (Tuan et al. 1973:18).

Previous Archaeological Work at Los Luceros

Very little archaeological work had been conducted at Los Luceros until fairly recently. In 1981 the Historic Preservation Division undertook a surface survey (HPD 1981). During the same year, Feliz Colibri (1981) of A.C.S. Corporation conducted some relocation recording activities. Then in 1988 and in 1999, David Snow (1988) of Cross Cultural Research Systems recovered and analyzed ceramics from several test excavations, including more than 1,000 artifacts from backhoe trench monitoring during drainage improvements in 1999 (Table 1).

From December 2008 to January 2009, the Office of Archaeological Studies monitored 867 linear meters of trenches excavated for utility and gas lines (Fig. 4; Montoya in prep.). These trenches were excavated to maximum depth of 70–90 cm and width of 25–30 cm. The main trench was excavated along the main road and almost the entire length of the property from the River House to the Office. Several other trenches branched off of the main trench to connect outlying buildings into the new electrical and gas utility network.

Trench excavations revealed 11 strata, of which 3 were cultural. The cultural strata were at or near the residential areas on the property (Fig. 4). Three separate artifact locations were also observed and recorded. Artifact Locations 1 and 2 were close together. Artifacts from these locations came from in situ cultural strata beginning 20 cm below the ground surface and continuing to an unknown depth below the base of the excavated trench. Artifacts consisted of 23 nonhuman bones, 14 metal artifacts, 4 Euroamerican ceramic sherds, 7 glass shards, 41 historic Native ceramics, a pestle, a piece of ivory, and a brick. Based upon temporally diagnostic Native ceramic sherds and historic artifacts, it is believed that these deposits dated to the mid to late nineteenth century.

Artifact Location 3 contained prehistoric and historic ceramics dating from the Classic period

to the mid to late nineteenth century. These artifacts were recovered from an alluvial deposit characterized by gravels, cobbles, and sand that may be part of an old arroyo. However, none of the proposed construction will affect these cultural deposits.

Utility Trench 3 was excavated near the Lucero House and the Rancho de los Luceros Office Building. It contained an array of artifacts consisting of 3 Native ceramics, 10 Euroamerican ceramics, 3 metal artifacts, 4 glass artifacts, 2 nonhuman bones, and 1 flaked stone artifact. These artifacts were recovered from a mix of silty loam and silty clay sediments. However, the depth at which the artifacts occur is unknown, since they were recovered in a backdirt pile.

Archaeological monitoring also revealed seven features within the three excavated trenches. Two of these features consisted of charcoal stains near the area of Artifact Locations 1 and 2, but they did not appear to be affected by Phase 1 construction. The remaining features consisted of several modern acequias that were bisected by the trenches (Fig. 4).

Table 1 shows archaeological resources within 1 mile of the project area.

Also in the vicinity is LA 158132 (see NMCRIS map, Appendix 4). Discovered by Townsend Archaeological Consultants, the site was never registered at ARMS. However, Townsend (personal communication, November 17, 2010) said the site was “across the arroyo from Pioge” (to the northeast) and consists of a large prehistoric and historic artifact scatter. According to local informants, there once was a large rubble mound at that location, since bulldozed. The site covers 10 acres and contains a stratified midden with human remains, abundant Classic-period ceramics (biscuit wares), ground stone, and lithic artifacts.

Table 1. Cultural resources in the vicinity of Los Luceros

Site	Site type	Name	Period	Size
LA 144	Pueblo roomblock	Pioge	Coalition and Classic (AD 1200–1600).	large, exact size unknown
LA 32387	artifact scatter	–	AD 1300–1600.	7,500 sq m
LA 83156	artifact scatter	NA	Multicomponent 20th century, Pueblo III petroglyphs, rock alignment, age unknown.	30,000 sq m
LA 83551	historic four-room structure	Cactus Bluff	17th century/early post-Pueblo Revolt period.	900 sq m
LA 122393	irrigation ditch (Acequia Madre)	Los Luceros Ditch	Probably installed shortly after the Reconquest, e.g., late seventeenth, early eighteenth centuries.	8 mi long, 14 ft wide

Table 1 (continued)

Site	Recorded By	Artifacts	Owner	Comments
LA 144	Mera (1953), Townsend (1992), OAS (1993, 1994)	>1000 chipped stone, ceramic, ground stone, bone, human remains.	San Juan Pueblo/private	Further documentation recommended.
LA 32387	University of Nebraska (1964)	Ceramic, lithic, ground stone.	private	–
LA 83156	OAS (1991)	20th-century trash, light prehistoric artifact scatter, ceramic and lithic artifacts, and petroglyphs.	private	Petroglyphs: spirals, snakes, water symbols, anthropomorphic "feather heads" and "shield figures."
LA 83551	American Studies Foundation (1991); Feliz Colibri, A.C.S. Corp. (1998)	Gun flints, Native historic pottery, local lithic debitage.	private	May be related to Sebastian Martín 1703 grant
LA 122393	Feliz Colibri, A.C.S. Corp (1998)	Historical records.	private	Still in use.

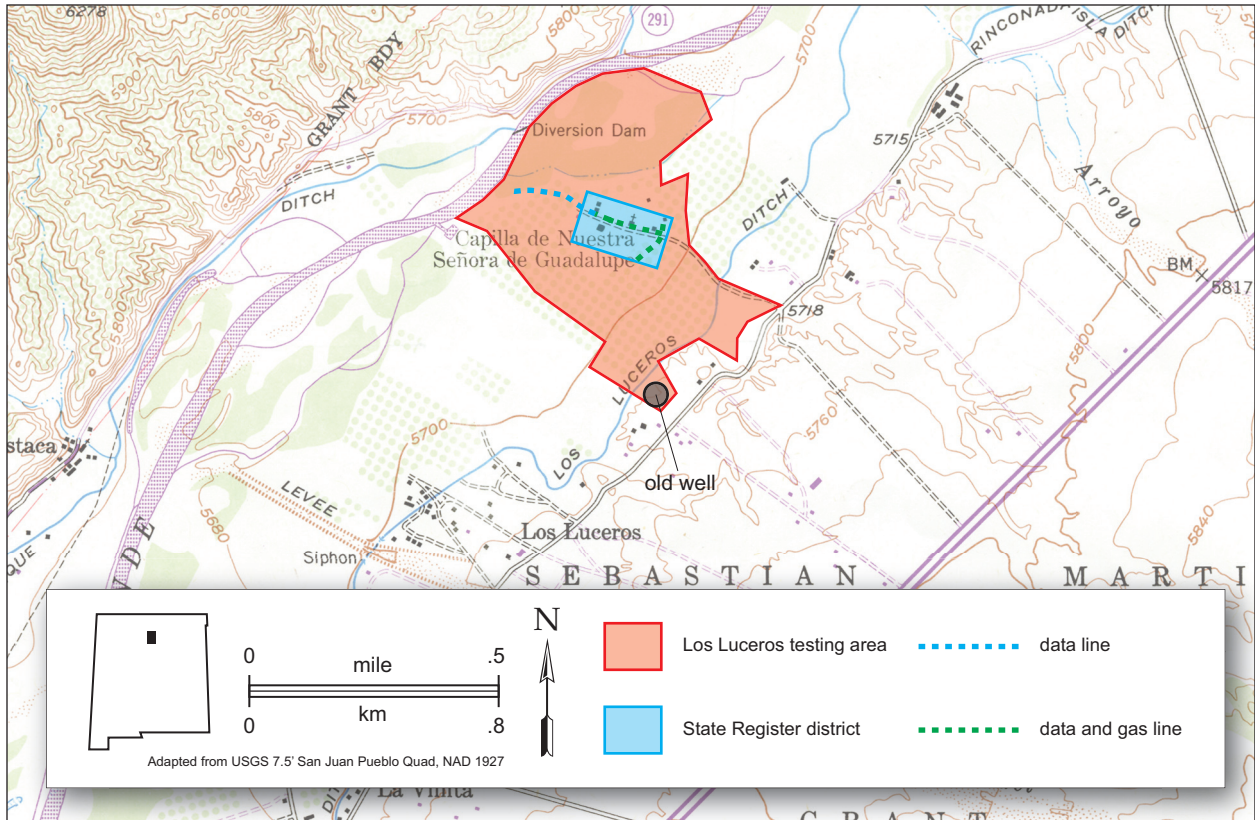


Figure 4. The location of archaeological monitoring at Rancho de los Luceros, LA 37549.

Historical Background

(abstracted from the NRHP nomination form completed by Betsy Swanson, architectural historian with the New Mexico Historic Preservation Bureau in 1982)

Rancho de los Luceros (LA 37549) is listed on the *State Register of Cultural Properties* (No. 143, January 9, 1970) and the *National Register of Historic Places* (October 20, 1983). It is on the ancestral floodplain of the Rio Grande in Rio Arriba County, New Mexico, just north of Ohkay Owingeh Pueblo. This section is a brief historical overview of the property based on historical and archaeological data documenting a 700-year occupation span (Historic Los Luceros 2009).

The earliest occupation of the site is related to the ancestral pueblo of Pioge, LA 144. Pioge is believed to one of the ancestral sites of the Pueblo of Ohkay Owingeh. It is comprised of five roomblocks with a possible central plaza. Ceramics found on the site provide a date range from AD 1300 to 1600. Ceramics recovered from unsystematic excavations (Mera 1953) suggest that the remains of one or more fieldhouses or even small pueblos may exist within the property of Rancho de los Luceros. On the first terrace above the floodplain, there are several pueblos dating to the Coalition and Classic periods (Table 1). However, these fieldhouses and villages are obscured by cultivation, construction, and historic land use. The exact locations of these early seasonal residences are currently unknown.

Pioge was still inhabited when the Spanish established their first settlement at Ohkay Owingeh (Yunque Owingeh) in 1598. During the first ten years of Spanish settlement, an outpost was at Rancho de los Luceros took advantage of farmlands and labor afforded by Pioge residents. Periodic use of the property until 1680 is suggested by the pottery types found on the property. However, the extent and nature of this early use is undocumented. Ethnographic investigations at San Juan Pueblo (Lentz and Goodman 1992:87-91) suggest that a Hispanic male who had intermarried into the pueblo was allowed to remain on the property during the 12-year Pueblo Revolt period. He may have been the only non-Native individual to do so. However, his name and the authenticity of this account are

uncorroborated (Lentz and Goodman 1992)

The residential and farming and ranching Spanish Colonial settlement of the property coincided with the conveyance of a grant to Sebastián Martín and his brothers in 1703 and again in 1712. The original grant contained more than 50,000 acres and extended five miles upriver from San Juan Pueblo on the south to Picuris Pueblo on the north.

The Martín brothers actually acquired the grant in joint ownership with Felipe Antonio Sisneros. However, at the time of “revalidation” (coincidentally in 1712, when Sisneros died), Sebastián Martín bought out the widow. However, in 1727 the Sisneros children brought Martín to trial in Santa Fe before Governor Juan Domingo de Bustamante to petition for return of their half of the grant. The governor decreed that the Sisneros heirs be given a portion of the grant on the south by San Juan Pueblo. However, discrepancies in the ownership claims and vague boundary descriptions make it impossible to determine the exact location of the Sisneros’s land. They were one of many families who acquired land early in Martín’s colony, and subsequently, many ranchos were established there.

Sebastián Martín was one of the most prominent men of his day. Scion of a notable family of early colonists, he was a leader in Don Diego de Vargas’s 1692 reconquest of New Mexico following the Pueblo Revolt of 1680. Later, he achieved high renown as an “Indian fighter.” In 1698, when he was 27 years old, he and his wife, María Luján, were living in Santa Fe. María Luján was related to the Luján family who were founding colonizers of Santa Fe. The Lujáns, with Lucero de Godoy, jointly owned the property one block north of the plaza. This location was on an old Tewa village (El Pueblo de Santa Fe, LA 1051; Lentz and Barbour in prep). Soon after 1698 the Martíns moved upriver to their ancestral country of Rio Arriba, where Sebastián’s parents had lived before the Pueblo Revolt. He and his wife first lived in the Villa de Santa Cruz de la Cañada,

which had been refounded. Then Sebastián and his brothers established themselves on their grant a few miles to the north in the fertile bottomlands of the river. Martín named the settlement Puesto de Nuestra Señora de la Soledad del Río del Norte Arriba (Outpost of Our Lady of Solitude of the Upper River of the North) for a chapel he built there. By 1717 Martín was *alcalde* (the head of the local government, who served as a combination mayor, judge, council, and sheriff) of Santa Cruz de la Cañada, the political jurisdiction of the area.

Around 1717 Sebastián Martín gave the Indians of San Juan Pueblo a piece of land in the valley to pay for their services in digging the first great irrigation ditch (there is a certain irony in paying the San Juans with their own land). The present "Los Luceros Ditch," which runs for about 8 miles and is 14 feet wide, is said to be Sebastián Martín's ditch. On the irrigated land he planted an orchard of a few hundred apple trees, a cornfield, and a small garden of chile and onions. On the rest of his extensive grant he grazed cattle, horses, and a flock of about 150 sheep.

In the 1700s Río Arriba was on the northern frontier of Spanish settlement. Life there was difficult and dangerous, with frequent Navajo, Ute, Apache, and Comanche raids, in addition to droughts, storms, and epidemics. In 1747 the settlement El Puesto de Nuestra Señora de la Soledad del Río del Norte Arriba and other northern frontier settlements were abandoned due to frequent attacks by Utes. The area was not resettled until 1750, when the Utes were at peace and a guard had been assigned to the residents.

The northern frontier had limited contact with Mexico. It was therefore necessary for the colonists to be self-sufficient in providing the necessities for survival, raising all their own food and making their clothing from homespun wool and buckskin. Manufactured items transported from Mexico were valued possessions. The only articles Martín's widow listed in her will were two painted chests, one loom, one flat iron pan, one chocolate pot, one iron spoon, the chapel bell, and one bronze *esmeril* (a small gun).

By 1750 Sebastián Martín's frontier outpost had become sizable: a census from that time listed 44 families living at El Puesto de Nuestra Señora de la Soledad del Río del Norte Arriba, with a population of 364. The settlement appears

on Bernardo de Miera y Pacheco's map of 1758 and 1776 as "Soledad" and on his 1778 map as "Río Arriba." Other settlements on the Martín grant also had a number of residents. When Fray Atanasio Domínguez visited the area in 1776, he counted 51 families, with 299 living at Río Arriba or Soledad. He described the settlement as having a little adobe chapel resembling a small *bodega*, facing west, 14 to 16 varas long (41 to 44 ft), 5 varas wide (14 ft), and 6 varas (16.5 ft) high. There was no choir loft, but it had a small belfry with a bell (presumably the same item Martín's widow listed in her will).

Archaeological, architectural, archival, and cartographic evidence, as well as oral and written tradition, strongly point to the Los Luceros Hacienda (Casa Grande) as the site of Sebastián Martín's rancho (Figs. 5, 6). The register nomination describes the original Martín house as having four rooms and two strong towers. The original rooms and the tower were incorporated into the first floor of the Casa Grande. Sebastián Martín died in 1763 at the age of 92, followed by his wife, who died in 1765. Apart from the items listed in her will, she left a 24-room house and a stable, all encompassed within one structure. The hacienda accommodated a large family, numerous servants, animals, and storage space for farm products and equipment. The couple had 10 children: Marcial, Margarita, Rosa, Manuel, Angela, Joséf, Antonio, Josefa, Juan, and Francisco. The census of 1750 also lists 21 servants. At her death, María willed 16 varas (44 ft) of the house, 17 varas (47 ft) of land, and 14 apple trees to each heir. The register nomination suggests that the current Casa Grande is equivalent to one of the shares in size. Regardless, the documents suggest that in the vicinity of the Casa Grande there is potential for substantial eighteenth-century architectural remains and associated cultural deposits. The register nomination also suggests that some portion of the chapel could date to the eighteenth century and that it is at the site of the eighteenth-century chapel described by Domínguez in 1776, since the present chapel at Los Luceros faces west and has dimensions similar to those described by Domínguez (Fig. 7). The building could have been reconstructed on the foundations of the older chapel, but its present appearance is typical of New Mexico's *capillas* at the end of the second half of the nineteenth century.



Figure 5. The path to Los Luceros Hacienda.



Figure 6. The Casa Grande.



Figure 7. The chapel at Los Luceros.

In the early 1790s, Santiago Lucero married Barbara Martín, thereby linking in marriage two founding families of northern New Mexico. Santiago Lucero was a descendant of the notable Lucero de Godoy, one of the earliest colonizers of New Mexico, who originally owned the land where the Baca-Garvisu hacienda once stood, north of the river in downtown Santa Fe (Lentz and Barbour in prep.). Following their marriage, the property began to be referred to as the Los Luceros Ranch or some derivative of Los Luceros.

At the end of Julián Lucero's ownership of Los Luceros, New Mexico became part of the United States, and in 1846 the Army of the West, commanded by General Stephen Watts Kearny, rode into Santa Fe and occupied that city, declaring it the capital of the United States Territory of New Mexico. Kearny then continued on to California, where he battled the *californios* for possession of that vast region. After the American army had gone, a group of residents in Taos plotted an uprising. On January 19, 1847, a group of locals and Taos Pueblo Indians killed the American

governor, Charles Bent, and several other officials in Bent's Taos home and sacked the homes of Anglo-American residents. Colonel Sterling Price, who had been left in command of New Mexico at Santa Fe, marched for Taos with 350 men. On the way, they met and did battle with the insurgents at Santa Cruz de la Cañada, south of Los Luceros. The revolutionaries retreated, and on January 27, 1847, Colonel Price advanced as far up the Rio Grande to Los Luceros, where he made camp. Here he was joined by additional troops, so that his forces now numbered 479 men. The following day, Colonel Price marched several miles upriver to Velarde, where the enemy awaited in the slopes of the mountains at Embudo. Another battle took place there, with severe losses to the Taos forces. The American army reached Taos on February 3, 1847, and brought an end to the revolt.

An influx of Americans followed the conquest of New Mexico by the United States. In 1850, María, a Lucero family descendant, married an Irish-born trader, Elias T. Clark, who purchased the Los Luceros house and orchard from her father, Julián. Eliza, the only child of Elias and

María, married Luís Ortiz and continued to live on the property. Elias T. Clark was a merchant dealing in general merchandise, as well as a rancher and a farmer. In 1851 he was clerk of the US District Court for the Second Judicial District of the territory of New Mexico. In 1853 he was secretary of the council of the legislative assembly in Santa Fe. He served as judge of Rio Arriba County, and for a time the ranch house at Los Luceros served as a county courthouse.

Elias Clark died of consumption in 1860 at the age of 45. His brother, Louis Clark, took over his dry goods store in the nearby village of Plaza Alcalde. Louis was shot and killed in 1876 at his store in Alcalde by a man to whom Clark had denied credit the day before.

The property of Los Luceros passed to Eliza Clark, the only offspring of Elias and María Marta Clark, who was nine years old when her father died. In the mid-1860s, at the age of about 15, Eliza married a young farmer named Luís M. Ortiz. The 1870 census lists Eliza (age 19) and Luis (age 22) living at Los Luceros with a baby daughter and a Navajo servant family. By 1880 they had four children: Teresita, Gaspar, Clotilde, and Beatrío. Luís Ortiz became sheriff of Rio Arriba County. It was while he occupied that post in the late nineteenth century that the small flat-roofed building to the west of the Casa Grande is said to have been a *calaboso* (jail) and may have featured a "hanging tree" to swiftly administer frontier-style justice. It is possible that Eliza and Luís Ortiz were responsible for some of the Territorial remodeling to the ranch house in the late 1860s or

the 1870s. Structural evidence indicates a series of renovations in the Greek Revival style, and local tradition attributes the remodeling to both Elias Clark and Luís Ortiz. Eliza and Luís Ortiz donated the chapel they called the Church of the Holy Family to the Archdiocese of Santa Fe in 1891. They are buried beneath the floor near the altar.

The late Victorian cottage could be dated stylistically from the 1880s or 1890s. It is said to have been built by Abel E. Lucero, perhaps around 1902, when he acquired the property from his parents, Lucas and María Manuela Lucero. It is also possible that the cottage was built prior to 1902, the date the property was officially donated. Abel, who was 21 that year, is said by his descendants to have built the house for his wife, Úrsula. According to family tradition, the men of the Lucero family helped him build it. The neighboring property owners were all members of related families. For example, Juan Manuel Lucero was the grandson of Santiago Lucero and his wife Barbara, who was the granddaughter of Sebastián Martín. Lucas Lucero also owned a large ranch nearby, was the uncle of Luís Ortiz, and was related to Ortiz's wife, Eliza, through her mother, María Marta Clark. Abel Lucero was a well-known folk weaver.

By 1923 the property had fallen into disrepair when it was purchased by Mary Cabot Wheelwright. The property has been in and out of Wheelwright family hands until it was purchased by the New Mexico Department of Cultural Affairs in early 2008.

Test Pits, Stratigraphy, and Results

FIELD METHODS, PHASE 1

(from Barbour and Montoya 2010:5-7)

Archaeological test excavations will be used to determine the nature and extent of archaeological deposits within the areas impacted by construction. OAS proposes to place 12 1 by 1 m test units to examine the area likely to be impacted by Phase 1 renovation activities, about a 1-percent sample.

The proposed location of the test units includes two inside the area impacted by Bath House 1, two in the leach field behind Bath House 1, two inside the area impacted by the multipurpose room to be constructed at the Welcome Center, two in the expanded Welcome Center leach field, two in the Welcome Center courtyard, where landscaping is planned, and single test units south and west of Storage Shed 2 (Fig. 3).

Test units will be established within areas impacted by Phase 1 renovations using a hand-held Trimble GeoXT and oriented towards magnetic north. Each 1 by 1 m test unit will be hand excavated in 10 cm levels measured down from the current ground surface. Cultural fill removed from the test unit will be screened through 1/4-inch mesh to collect artifacts. These excavation methods will continue until all cultural deposits are removed or until the test unit reached 1.4 m in depth.

If architectural or other feature remains are encountered, the feature will be defined and excavated within the 1 by 1 m test unit to determine the nature and extent of the archaeological manifestation. While the excavation of features during testing is strongly discouraged, information gained through these excavations may prove beneficial in guiding future data recovery efforts, if necessary. A feature number will be assigned and the artifact content, stratigraphy, morphology, construction methods, and age recorded. A profile of the feature will be drawn and photographed. Feature fill will be screened through 1/8-inch mesh to systematically recover artifacts for dating and functional analysis.

After excavation, the archaeologist will

generate a stratigraphic profile of each 1 by 1 m test unit. Strata will be described according to color, texture, composition, origin, and artifact content or cultural inclusions, such as charcoal, coal, or fragments of building materials.

All field recording will be conducted on standard OAS feature and excavation forms under the provisions of NM-10-027-T. Recovered artifacts and samples from each arbitrary level or stratum within an excavation unit will be assigned a field specimen (FS) number, which will be recorded on related excavation forms and bags and listed in a catalogue.

If burned or charred deposits are encountered, chronometric and flotation samples will be collected to help date and characterize the nature of the deposit. If appropriate, flotation samples will be collected in a 1 or 3 liter quantity and brought to the laboratory for fine-screen or flotation processing and archaeobotanical analysis.

Human Remains

If human remains are encountered, OAS will follow the state burial law (4.10.11 NMAC), notify the appropriate authorities, and immediately activate its annual unmarked burial excavation permit. The location of human remains will be recorded on the site map, a profile drawing will document stratigraphic relationships, and field observations will be made regarding era of interment and probable cultural or ethnic affiliation. Human remains will not be excavated.

Backfilling

The test units used to examine archaeological deposits at Rancho de los Luceros will be backfilled after each test unit has been excavated, profiled, recorded, and lined with GeoTec fabric to indicate where excavations stopped. The test unit will be backfilled by hand with the sediments previously screened during test excavation to the level of the current ground surface.

Laboratory Analysis

Laboratory analysis will be conducted by OAS staff in accordance with previously established laboratory procedures developed by the OAS and on file with HPD. Artifacts from the field will be cleaned, inventoried, and catalogued. Any remains that appear to be unstable will be treated in consultation with the Museum of New Mexico's conservation unit.

Research Results and Curation

A final report will be published in the OAS Archaeology Notes series. The report will describe the results of the testing activity and provide analysis results, interpretive summaries, and recommendations. The report will include illustrations including but not limited to a site map, soil profiles, and photographs of the excavation. All original field recording forms, maps, and photographs will be deposited with the Archaeological Records Management Section of the HPD. Artifacts will be curated at the Archaeological Research Collection in Santa Fe, New Mexico. A project activity and site update form will be completed and submitted to the Archeological Records Management Section.

FIELD METHODS, PHASE 2

As stated in the amended testing plan (letter, Stephen Post to Jan Biella, December 29, 2010), all test units were established within areas of proposed impact using a hand-held Trimble GeoXT and GeoXH GPS units. One important change occurred during the Phase 2 fieldwork: the additional six hand units and two backhoe trenches were located and mapped with a total station within the preexisting coordinate system. This allowed the work to be integrated into the existing GIS database. Later, major features of the project area (building corners, fence lines) and the southwest and northwest corners of Test Pits 1–12 were recorded with the total station.

Backhoe Trenches

Phase 2 testing also required the mechanical excavation of two backhoe trenches to further

evaluate subsurface characteristics and ensure that no undetected cultural materials remained. The trench dimensions were 0.9 m wide and between 9 and 13 m long. The trenches were terminated when culturally sterile soils were encountered. Backhoe trench walls were scraped, and the stratigraphic sequence was described, mapped, and photographed (see description below).

Total Percentage of Project Area Tested

It was estimated that Phase 1 construction activities would impact an area of 12,505 sq ft, or 1,162 sq m. Twelve 1 by 1 m test pits were excavated, a 1.4-percent sample (Barbour and Montoya 2010:2). With the Phase 2 supplementary program, an additional six test pits and two backhoe trenches were excavated, resulting in 3,999 sq ft, or 371 sq m of additional tested area, bringing the total area of proposed effect to 16,504 sq ft, or 1,535 sq m. The fraction tested during both phases amounts to 2.46 percent of the total project area.

TEST PIT DESCRIPTIONS

To summarize the applied field strategies, the testing plan proposed by Barbour and Montoya (2010:5–6) and the revised testing plan (letter, Stephen Post to Jan Biella, December 29, 2010) resulted in a two-phase testing effort. Phase 1 included 12 1 by 1 m units placed selectively in areas chosen for construction or ground-disturbing activities. Test Pits 1 and 2 were used to investigate the area around Bath House 1, and Test Pits 3 and 4 the associated leach field (Fig. 8). Test Pits 5 and 6 were used to test the area in the vicinity of Storage Shed 2, and Test Pits 7 through 12 were used to investigate subsurface deposits near the current Welcome Center and associated leach field. The location and results of excavations are presented in Table 2. Feature Acequia 5, believed to be modern, appeared to be in the path of the Bath House 1 and leach field construction. However, as described above, this area will not be affected, and treatment will consist of documentation (Appendix 1).

Phase 2 supplementary test excavations called for an evaluation of an alternative location for Bath House 1 and its associated leach field. Originally, four test pits were intended for this



Figure 8. Test Pit 1.

task; however, cultural materials located in the alternative leach field location required the OAS and HPD to consider a second alternative location, and six test pits and two backhoe trenches were eventually used.

PHASE 1

Phase 1 included the excavation of 12 test pits. Excavation of four units (Test Pits 1–4) within the proposed Bath House 1 and leach field yielded artifacts in undifferentiated alluvial soils to a depth of 150 cm. The upper 50 to 80 cm was a mixed cultural deposit of prehistoric and historic materials. From 80 to 130 cm deep, the cultural material was primarily prehistoric, dating to the Classic period (AD 1350 to 1550 or 1600) and typified by biscuit ware pottery and smeared indented corrugated. Chipped and ground stone artifacts were recovered in lower numbers. An English-style gun flint and strike-a-light were recovered from the upper levels. A projectile point was recovered from Level 12 of Test Pit 4. About 950 artifacts were recovered from Test Pits 1 through 4. Excavation suggests gross stratification

of historic upper and prehistoric deposits within a thick, alluvial layer. No stratified deposits or features were encountered.

The upper deposits consisted of short-term Territorial-period materials dating to between AD 1800 and 1880. Artifacts from the nineteenth and twentieth centuries (with a light twentieth-century horizon) could be contemporaneous with the Lucero House. Separated by a 350-year hiatus (represented by a break in the stratigraphy of Test Pits 3 and 4) were the lower prehistoric deposits. These reflected a relatively short-term use of the area by Native American populations (Pioge ruin or associated Pueblo aggregations or fieldhouses) represented principally by Biscuit A ceramics (AD 1375–1450; Wilson and Montoya, this volume).

Test Pits 5 and 6 were placed at Storage Shed 2, near the Chabot House. Low numbers of temporally and functionally mixed artifacts were recovered from both test pits at depths ranging from 40 to 70 cm. The fill was typical floodplain alluvium designated Stratum 2 during testing. Test Pit 6 clipped the edge of a water line, which contributed to artifacts occurring below a 40 cm depth. Considerable rodent activity resulted

Table 2. Test pit data

Test Pit	Location	End Depth (elevation above sea level; cm below datum)	No. of Artifacts	Features	Comments
1	Bath House No. 1	1739.19 m; 81 cm bd	323; mixed	none	Auger blocked by cobble at 81 cm bd.
2	Bath House No. 1	1749.40 m; 90 cm bd	395; mixed	none	Auger blocked by cobble at 90 cm bd.
3	leach field	1735.80 m; 132 cm bd	385; mixed	none	Stone ornament; struck water at base.
4	leach field	1737.39 m; 160 cm bd	177; mixed	none	Water at base of pit.
5	Storage Shed No. 2	1741.23 m; 51 cm bd	67; mixed	none	Excavated inside roofed shed.
6	Storage Shed No. 3	1744.31 m; 90 cm bd	41; mixed	none	
7	Welcome Center structure	1739.34 m; 20 cm bd	0	none	No cultural materials or deposits present.
8	Welcome Center structure	1739.04 m; 40 cm bd	0	none	No cultural materials or deposits present.
9	Welcome Center courtyard	1739.70 m; 51 cm bd	0	none	No cultural materials or deposits present.
10	Welcome Center courtyard	1737.40 m; 41 cm bd	0	none	No cultural materials or deposits present.
11	Welcome Center leach field	1737.07 m; 70 cm bd	5; mixed	oxidized area	Feature was ephemeral.
12	Welcome Center leach field	1738.90 m; 50 cm bd	3 mixed	none	Testing constitutes adequate treatment.
13	alternative bath house location	1737.00 m; 80 cm bd	1 (modern glass, Level 1)	none	Water at bottom of auger test.
14	alternative bath house location	1737.24 m; 74 cm bd	0	none	-
15	alternative leach field location	1736.74 m; 54 cm bd	11	none	Excavations terminated because of cultural materials.
16	alternative leach field location No. 2	1736.74 m; 50 cm bd	6	none	Excavations terminated because of cultural materials.
17	2nd alternative leach field location	1737.21 m; 91 cm bd	0	none	Alluvial sands just above water table.
18	2nd alternative leach field location	1737.17 m; 90 cm bd	0	none	Alluvial sands just above water table.

mixed = prehistoric and historic

in the mixing of artifacts from prehistoric and historic periods in all levels. No intact cultural deposits were encountered within the Storage Shed 2 area.

Test Pits 7 through 12 were placed within the proposed expansion of the Welcome Center multipurpose room, courtyard, and leach field. Excavations reached depths of up to 70 cm with auger testing reaching a 125 cm depth. Within the test pits, OAS archaeologists encountered previously disturbed alluvial deposits with low frequencies of mixed prehistoric and historic artifacts (including plastic) within the upper 40 cm of Stratum 2. Field observations and the presence of mixed-age artifacts indicate that Stratum 2 was disturbed by previous Welcome Center construction and landscaping. Excavations yielded no evidence of intact cultural deposits in this area.

PHASE 2

Phase 2 supplementary testing at Los Luceros included excavating six hand units and two backhoe trenches in relocated (proposed) construction areas. As described above, the presence of cultural materials in the proposed leach field area required that another area be selected to allow for construction while minimizing impact to cultural materials. This meant that two more test pits than originally proposed (six rather than four) needed to be excavated. Test Pits 13 and 14 were placed in the proposed area of Bath House 2. Initially, Test Pits 13 and 14, within the new Bath House location, were dug in 10 cm arbitrary levels until culturally sterile soils were reached at 80 cm bd (soil characteristics are described below). At 50 to 60 cm beneath this stratum was the alluvial floodplain overlying a shallow water table, first documented in the Bath House/leach field 1 location behind the Lucero House/Administrative building. Neither unit produced any artifacts. However, this was not the case for Test Pits 15 and 16, within the relocated leach field, which yielded artifacts. Test Pit 14 had a European ceramic artifact at Level 2 (34–44 cm bd) and charcoal flecking in the southwest corner of Level 3 (54–64 cm bd). Test Pit 15 produced one ceramic and two lithic artifacts in Level 2 (34–44 cm bd), and seven historic ceramic artifacts and

an unidentified nonhuman bone in Level 3 (44–54 cm bd). Test Pit 16 yielded one ceramic artifact in Level 2, and Level 3 contained three ceramic artifact, one glass shard, and one lithic artifact. The stratigraphy of these units is described below. Test Pits 17 and 18 (in the alternative leach field area) were excavated in arbitrary levels until culturally sterile soils were encountered. The subsurface characteristics of TP 18 were isomorphic to TP 17, except that the alluvial sand/gravel stratum was 10 cm lower. No cultural materials were encountered in either of these units.

STRATIGRAPHY: TEST PITS AND BACKHOE TRENCHES

Observations on the stratigraphy include the rather startling fact that the water table at several of the proposed locations (the Lucero House, the Welcome Center) tested by the OAS is no more than three feet below the surface, despite lying at some distance from the Rio Grande. This may have implications for construction; however, this a subject on which archaeologists have little to contribute except to note that, despite the high water table, intact buildings have been standing on this property for several centuries. There is some anecdotal evidence that part of the Casa Grande foundation did collapse; however, the cause was never established. The relocated Bath House and leach field locations, however, farther to the south, tend to have a more stable subsurface, although the alluvial floodplain tends to be omnipresent. This is probably due to the intermittent flooding episodes characterizing the Rio Grande, which redeposit sediments every several decades or so. Following are descriptions of the subsurface encountered during the excavation of the test pits and the backhoe trenches.

Stratum 1 (Test Pits 1–4, 0–30 cm bd)

Primarily in the Bath House 1/leach field and the Welcome Center/leach field areas, Stratum 1 consisted of a highly compacted 10YR 3/2 dark gray-brown clayey sandy loam with 20 percent small gravels and a mix of prehistoric and historic artifacts, mottled with 1 percent charcoal inclusions (Fig. 9).

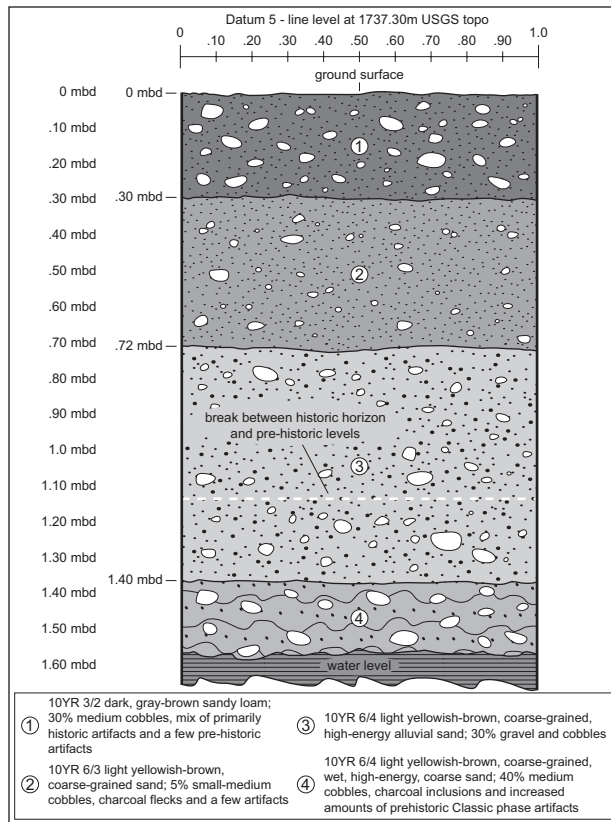


Figure 9. Strata, TP 1-4.

Stratum 2 (30-140 cm bd)

Stratum 2 was primarily in the Bath House 1/leach field and the Welcome Center/leach field areas, Test Pits 1-4, and underlying Stratum 3 in Test Pits 5 and 6, where it was culturally sterile. It consisted of 10YR 6/4 light yellowish brown coarse-grained high-energy alluvial sand with 30 percent medium cobbles, charcoal inclusions, and artifacts continuing to the base, at the water table (Fig. 9).

Stratum 3 (Test Pits 5 and 6, surface to 20 cm bd)

Confined to the Storage Shed 2 area, the upper levels of Stratum 3 consisted of medium compacted semi to very fine-grained silty loam with 5 percent small cobbles. The matrix was 10YR 6/4 light yellowish brown. There were a few charcoal inclusions and some very light artifact content. The top 10 cm was disturbed with modern artifacts (Fig. 10).

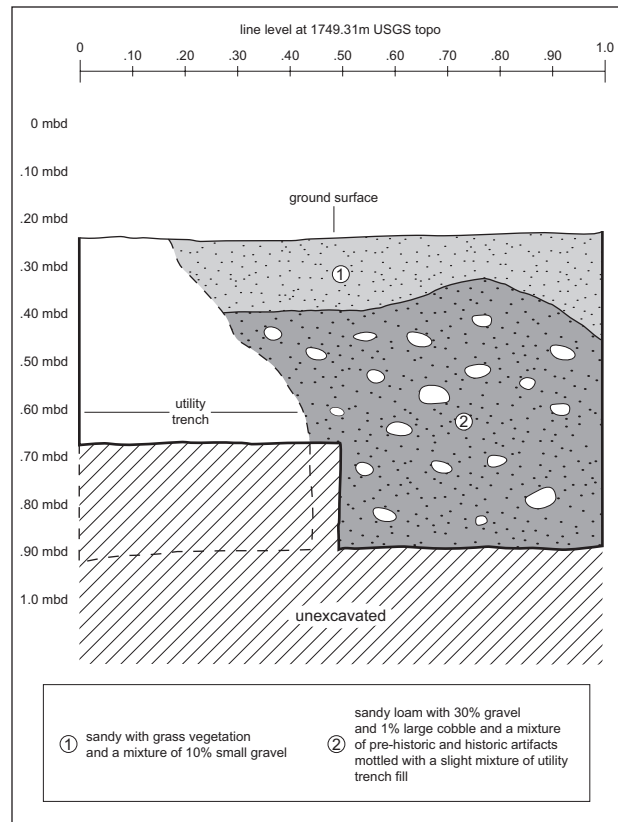


Figure 10. Strata, TP 5-6.

Stratum 4

Overlain by Stratum 3 in the Bath House 1 was Stratum 4, a 10YR 6/4 light yellowish brown alluvial deposit of coarse sand, gravels, and cobbles. It was nearly identical to Stratum 2 except it was void of artifacts (Fig. 10). This was the “break” between the prehistoric and Colonial artifact deposits.

Stratum 5 (Test Pits 7-12, 0-30 cm bd)

Stratum 5 was prevalent in the Welcome Center area. It consisted of 10YR 4/3 brown very hard compacted clayey sandy loam with 1 percent gravel inclusions. There were no artifacts or charcoal flecks. This level had all the characteristics of having been disturbed or compacted by vehicular traffic, as if used as a parking lot (Fig. 11).

Stratum 6 (30-60 cm bd)

Stratum 6 was ubiquitous throughout the Welcome Center area and was similar to Strata 2 and 4 elsewhere throughout the project area. A

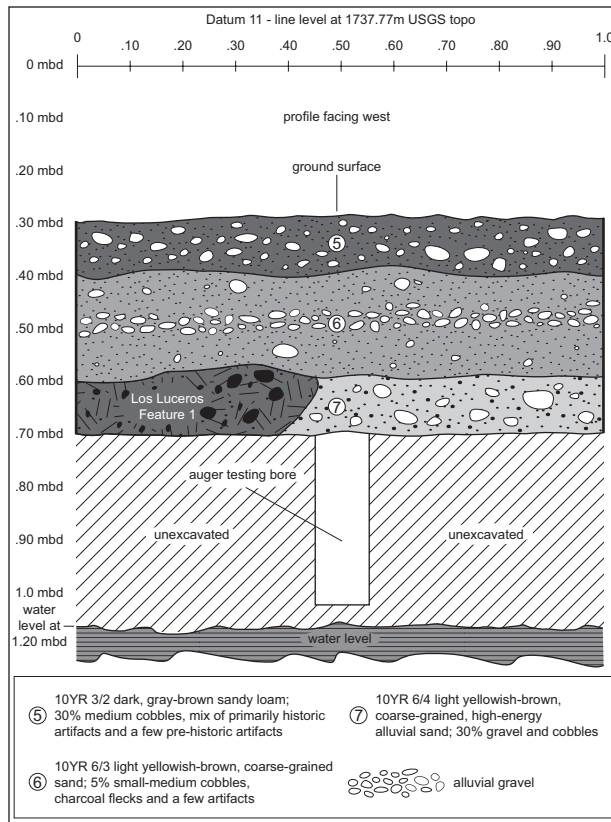


Figure 11. Strata, TP 7-12.

little darker than the other alluvial sand deposits (7.5YR 4/3 brown), it contained medium and small cobbles and gravels, and was devoid of cultural materials.

Stratum 7 (30 cm bd to base of unit)

Stratum 7 was encountered at the base of Test Pits 1-4 in the Bath House 1/leach field area. This stratum was similar to the preceding stratum except it was slightly darker (7.5 3/4 dark brown), moister, and contained more clay. There were no charcoal or artifact inclusions, and it ended with the water level (Fig. 11).

Stratum 7 (Test Pits 13 and 14)

Stratum 7, in the relocated Phase 2 Bath House 1 area, was composed of grassy disturbed ranch soil, probably trampled and grazed over many years. It was 7.5YR 4/3 brown. It contained small gravels and cobbles, and rootlets. No artifacts were present (Fig. 12).

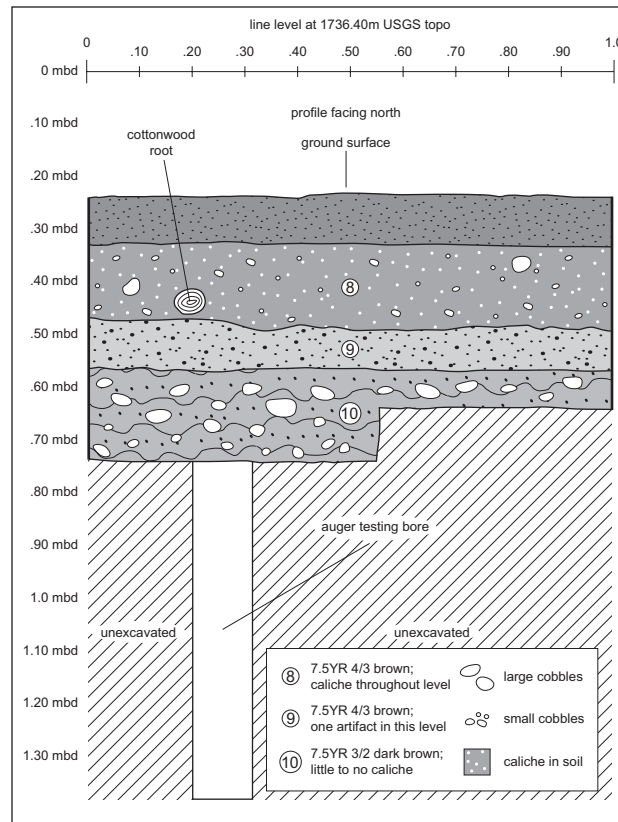


Figure 12. Strata, TP 13-14.

Stratum 8 (Test Pits 13 and 14)

Stratum 8 was encountered in Level 2 in the relocated Bath House 1 area and consisted of a 7.5YR 4/3 brown very compact clayey moist soil with 2-3 percent small cobbles, 1 percent calcium carbonate, and rootlets. No artifacts were found (Fig. 12).

Stratum 9 (Test Pits 13 and 14)

Stratum 9 was encountered in Level 3 in the relocated Bath House 1 location. It was composed of 7.5YR 4/3 brown silty sand with clay mix and old decomposed cottonwood tree roots. There were clay and medium to small cobble inclusions. No artifacts were found (Fig. 12).

Stratum 10 (Test Pits 13 and 14)

Stratum 10 was encountered at the base of the unit in the relocated Bath House 1 location. It was composed of 7.5YR 3/2 dark brown damp sandy clayey soil with 3 percent 1/2-inch cobbles and

appeared nearly black. No artifacts were found (Fig. 12).

Stratum 11 (Test Pits 15 and 16)

Stratum 11 was encountered in Level 1 (the uppermost level) in the relocated leach field area. It consisted of thick grass, decomposed leaves, and donkey dung (this area was once a corral). The soil was a Munsell 7/5YR 5/3 brown a highly compact silty clay mix with a few calcium carbonate inclusions and rootlets. No artifacts were found (Fig. 13).

Stratum 12 (Test Pits 15 and 16)

Stratum 12 was encountered in Level 2 of the relocated leach field area. This layer consisted of 7.5YR 4/3 brown very compact silty clay with rootlets and small cobbles. Two lithic artifacts and one historic ceramic were recovered from this level in Test Pit 15, and one ceramic artifact in Test Pit 16 (Fig. 13).

Stratum 13 (Test Pits 15 and 16)

Stratum 13 was encountered in Level 3 of the relocated leach field area. This stratum consisted of a 7.5YR N/2 very dark brown (nearly black) highly compacted clayey loam containing 1 percent small cobbles rootlets and occasional caliche inclusions. Seven historic-period ceramic artifacts and one bone were found in Test Pit 15; and three historic ceramic artifacts, one lithic artifact, and one piece of glass in Test Pit 16 (Fig. 13).

Stratum 14 (Test Pits 17 and 18)

Stratum 14 was encountered in Level 1 of the second, relocated leach field location. The surface layer was composed of loosely compacted disked garden soil, 7.5YR 3/3 dark brown silty clay loam with 30 percent <2-inch gravels. No artifacts were found (Fig. 14).

Stratum 15 (Test Pits 17 and 18)

Stratum 15 was encountered in Level 2. It

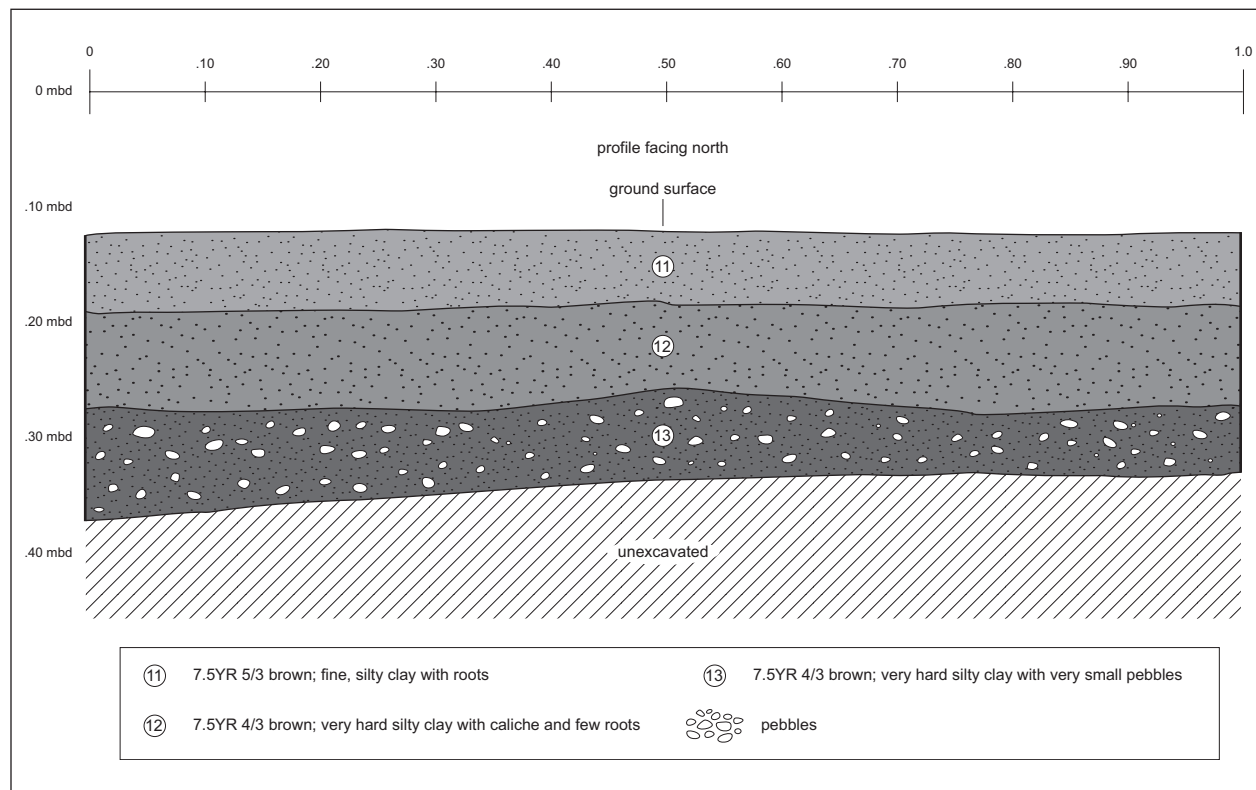


Figure 13. Strata, TP 15-16.

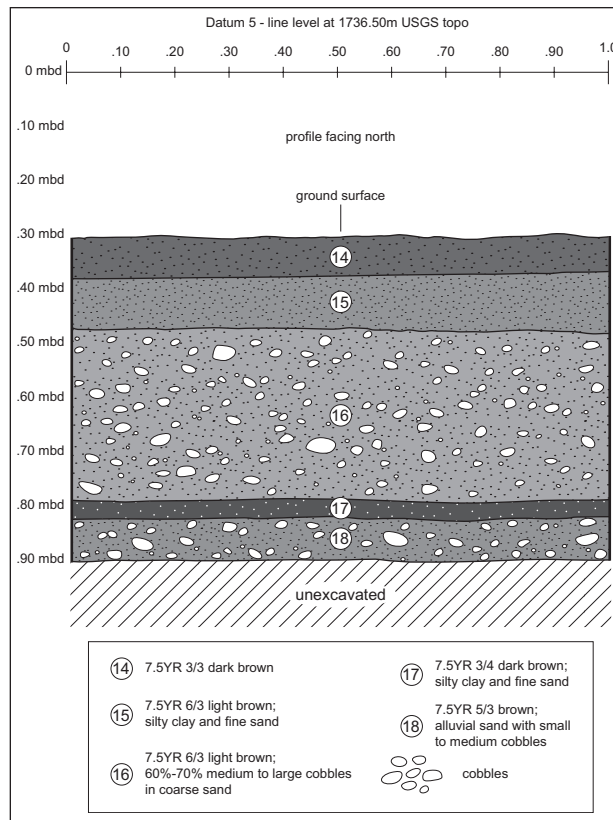


Figure 14. Strata, TP 17-18.

consisted of 7.5YR 6/3 light brown medium compacted sandy clay loam with small cobbles and rootlets. No caliche, charcoal, or artifacts were encountered (Fig. 14).

Stratum 16 (Test Pits 17 and 18)

Stratum 16 was encountered in Level 3. As the level was excavated, the 7.5YR 6/3 light brown soil became increasingly dominated by large cobbles, until the level was composed of 60-70 percent medium-to-large cobble inclusions surrounded by coarse sand. No artifacts were found (Fig. 14).

Stratum 17 (Test Pits 17 and 18)

Stratum 17 was encountered in Level 4. This stratum was more obtrusive in Test Pit 17 than in Test Pit 18. It consisted of a 7.5YR 3/4 dark brown lens of loose sand with 80 percent medium and small cobbles, and pebbles in a coarse sand context. No cultural materials were encountered (Fig. 14).

Stratum 18 (Test Pits 17 and 18)

Stratum 18 was the base level characterizing Test Pits 17 and 18. It consisted of 7.5YR 5/3 brown wet coarse sandy alluvial soils with rounded small to medium cobbles overlying the ancient alluvial floodplain (Fig. 14).

Stratum 19

Stratum 19 was encountered only in BHT 2. It consisted of 7.5YR 3/3 brown highly compacted clayey loam with caliche (calcium carbonate) inclusions and 1 percent charcoal flecks with some roots. No artifacts were found.

Stratum 20

Stratum 20 was encountered only in BHT 2. It consisted of a 7/5YR 5/3 brown very compact moist hard clay with 1 percent roots, 1 percent small gravels, and less than 1 percent charcoal flecking. No artifacts were found.

Stratum 21

Stratum 21 was encountered only in BHT 2. This 7.5YR 6/3 light brown lens was an abrupt departure from the overlying stratum—a homogeneous, loosely compacted (“soft”) sand lens. No artifacts were found.

Stratum 22

Stratum 22 was the final and lowest stratum of BHT 2, overlying the ancient alluvial floodplain. It was composed of a lens of 7.5YR 6/3 light brown homogeneous very fine sand. No cultural materials were found.

BACKHOE TRENCHES

In compliance with the amended testing plan (letter, Stephen Post to Jan Biella, January 19, 2011), two backhoe trenches were excavated to further evaluate subsurface characteristics and ensure that no undetected cultural materials remained. Backhoe trench walls were scraped, and the stratigraphic sequence was described, mapped, and photographed. Backhoe Trench 1

(BHT 1) was excavated east-west between Test Pits 17 and 18 (Fig. 3). It measured 13 m long, 0.90 m wide, and averaged 1.20 m deep. Because of friable soils and extremely unstable subsurface conditions, the trench was only excavated 100 m to 120 cm deep (Fig. 15). This was considered adequate to accurately evaluate paleosols and stratigraphy below the modern surface and verify that no cultural deposits remained. The top stratum consisted of dirt associated with a plowed field and large vegetable garden plots (Stratum 14). Following a compact clayey brown soil (Stratum 15), Stratum 16, composed almost entirely of small and medium cobbles (many of them high-quality purple quartzite) was encountered. Finally, Stratum 17, a moist, coarse-grained, cobble-filled layer overlying the water table completed the unit. No cultural materials were present.

The second backhoe trench, BHT 2, linked Test Pits 13 and 14 (Fig. 16). Its dimensions were 90 cm wide, between 120 and 140 cm deep, and 9 m long on a north-south axis. The first, upper layer consisted of tilled agricultural soils (Stratum 17). From here on, and despite the analogous stratigraphic sequence described for Test Pits 13 and 14, associated with this trench, the subsurface stratigraphy varied greatly from both the associated test pits and BHT 1 (Fig. 15). For example, the second and third levels of BHT 2 (Strata 19 and 20) were highly compacted clayey loam with caliche (calcium carbonate) inclusions and 1 percent charcoal flecks. However, the composition of Layer 4 was very different from that of the preceding strata, consisting of a layer of wet "soft" loam (Stratum 21). Finally, the base was a homogeneous very fine sand lens (Stratum 22) (Fig. 15). Although the bottom levels were wetter than the upper ones, the water table was not as obtrusive here as in other excavated areas. No cultural materials were encountered.

OBSERVATIONS ON THE TEST PIT DATA

Phase 1

Phase 1 test pits at Los Luceros yielded mixed archaeological deposits or were culturally sterile. Excavation of four units within the proposed Bath House 1 and leach field yielded artifacts in

undifferentiated alluvial soils to a depth of 150 cm. In the original Bath House 1 area, OAS recovered 395 and 352 artifacts from the upper 60 cm of Test Pits 1 and 2, respectively (Fig. 9). Ninety-nine percent of these artifacts date to the middle to late nineteenth century, reflecting domestic and maintenance activities, as well as the liberal use of historic Native American-made pottery. From west to east, there are differences in artifact class distributions; historic Native American-made ceramics and Euroamerican-made artifacts are more common in Test Pit 1, and butchered domestic animal bone more common in Test Pit 2. Since the bulk of these artifacts are more than 100 years old, they may relate to the residential occupation of the Lucero House.

During Phase 1 investigations in the leach field, OAS recovered 399 and 161 artifacts, respectively, from Test Pits 3 and 4 from 130 cm of alluvial and fluvial deposition (Fig. 9). The upper 40 cm contained mixed historic and prehistoric materials, and the lower 80 to 90 cm yielded Classic-period ceramics and chipped and ground stone artifacts. There was no internal stratification visible within these gross, temporally distinct layers, which is evident in both test pits. There is a distinct difference in artifact frequencies from south to north; the more southern Test Pit 3 yielded more than two times the artifact count of Test Pit 4. The horizontal and vertical distributions suggest that there could be differences in distance and nature of the source of the prehistoric and historic materials within the leach field area.

According to Wilson and Montoya (this volume), Test Pits 3 and 4 represented the best stratigraphic sequence between the early Classic and early Territorial periods. The first three levels of Test Pit 3 contained a mix of prehistoric and historic wares dating to the late fourteenth early fifteenth centuries and the late nineteenth century. Historic wares dominated the count, with 53 ceramics compared to 19 prehistoric ceramics. The ceramic types recovered were similar to the types recovered in the previously mentioned test pits. Starting at Level 4 and continuing to Level 12, all the ceramics recovered were prehistoric ceramics from the early Classic period. These ceramic types provide a date from the late fourteenth to middle fifteenth century. Thus, in terms of the major diagnostic ceramic distributions within the test units encountered during Phase 1 investigations,

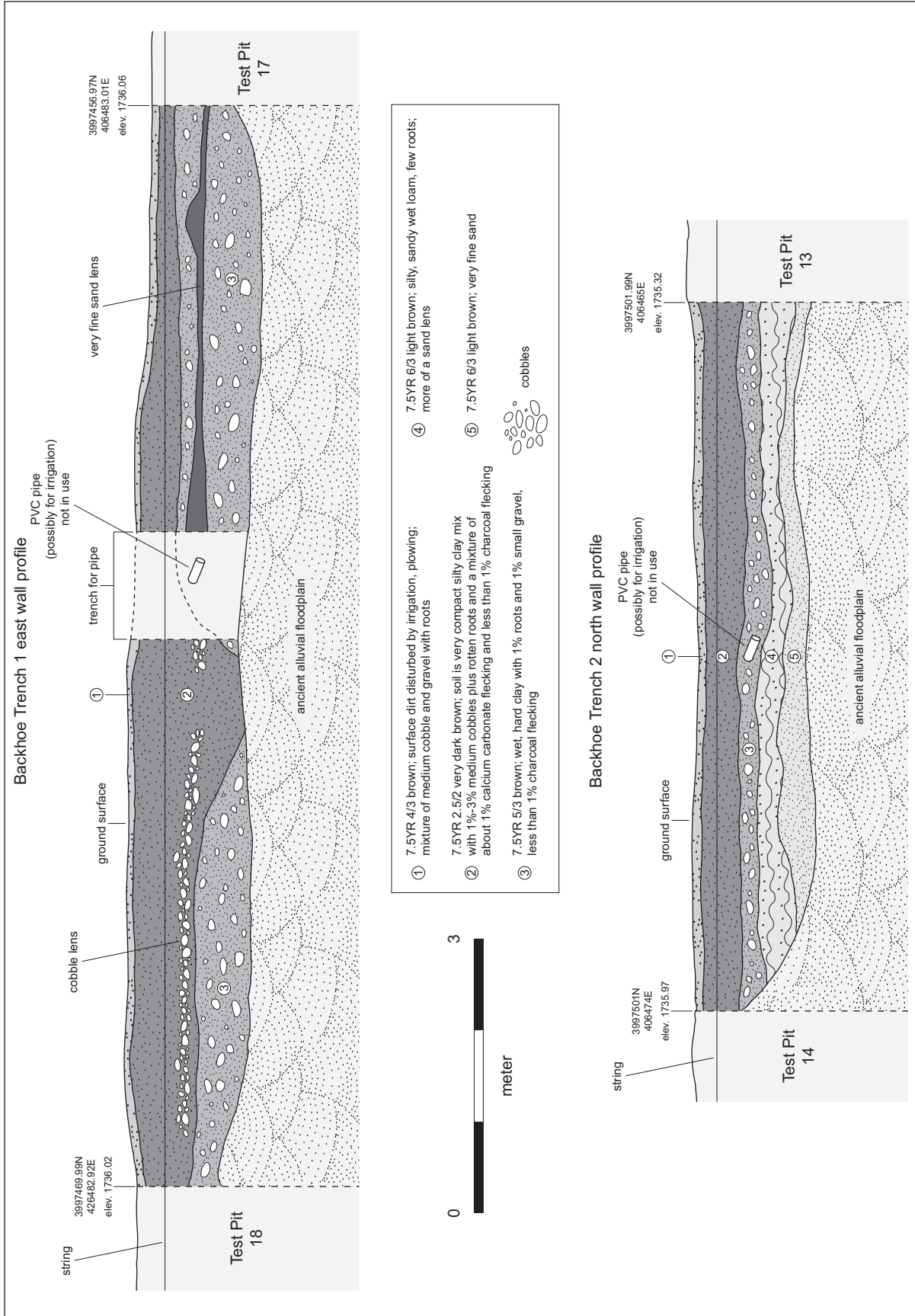


Figure 15. Strata, BHT 1-2.



Figure 16. BHT 2.

the majority of Native ceramics represent two distinct components separated by culturally sterile strata spanning a 350-year occupational history. Historic ceramics are confined to the upper layers, while prehistoric ceramics are more prevalent within the lower, sandy, alluvial contexts, separated by interoccupational deposition.

No internal stratigraphy or features were encountered. The deposits reflect the long-term use of the Los Luceros property by Native American, Spanish, and Territorial-period populations of European descent. The diffuse nature of the deposits suggests gradual and, perhaps, natural accumulation of artifacts left from occupation of the property but not necessarily of the immediate area, except for materials from the nineteenth and twentieth centuries, which could be contemporaneous with the Lucero House.

Test Pits 5 and 6 at Storage Shed 2, and Test Pits 7-12 at the Welcome Center yielded mixed prehistoric and historic deposits in shallow, homogeneous soils, very unlike the deposits overlying the ancient alluvial floodplain behind

the Administrative Center/Lucero House and Welcome Center. They were both void of significant cultural materials.

PHASE 2

The origin of the Phase 2 materials was unclear, but they were recovered from strata that were unlike those identified during the Phase 1 testing behind the Lucero House; that is, rather than the loose upper layers and sandy alluvium characterizing the subsurface of the Test Pits 1-4 (Fig. 9), the composition of Stratum 12 and 13 within Test Pits 15 and 16 were compacted clay (Fig. 13). However, the distribution of diagnostic artifacts was similar, with historic items near the surface, and prehistoric artifacts at a greater depth. Because of the presence of these artifacts, further excavations were halted, and no further information on the origin, depositional sequence, or extent of these materials is likely to be forthcoming. Nevertheless, both the Territorial/historic component and the late Classic components encountered during the

preliminary excavations at the Lucero House were also present (albeit in slightly different contexts) during the Phase 2 investigations.

The excavation of the backhoe trenches confirmed the absence of further cultural materials in the vicinity of Test Pits, 13, 14, 17,

and 18, although the difference in stratigraphy in BHT 2 between the stratigraphy of the units is puzzling and can be solved only through further investigations. However, continued excavations at this locale are unlikely.

Ceramics Recovered during Los Luceros Testing

C. Dean Wilson and Richard H. Montoya

A total of 911 sherds representing Native ceramic types recovered during archeological testing at Los Luceros were analyzed (Table 3). Almost all of them were assigned to types associated with one of two distinct occupational periods. The great majority of pottery assigned to both prehistoric and historic ceramic types displayed decorative styles, technologies, and pastes indicative of pottery types defined for the Northern Rio Grande, or Tewa pottery tradition (Habicht-Mauche 1993; Honea 1968; Kidder 1915; Kidder and Amsden 1931; Kidder and Shepard 1936; Mera 1934, 1935; Powell 2002; Stubbs and Stalling 1953; Vint 1999). Of these, 335 sherds were assigned to prehistoric types that appear to be associated with an early Classic-period component at the nearby village of Pioge (LA 144), while 576 sherds were assigned to historic Native ceramic types and are assumed to be associated with the nineteenth-century Hispanic occupation at Los Luceros (Table 3). Our evaluations appear to be similar to Snow's (1988), which resulted from his analysis of an even smaller assemblage from Los Luceros, although there are some important differences in the overall dating assignments.

Distributions of pottery associated with each of these two periods are discussed first for the prehistoric and then for the historic Native ceramic types identified. Discussions of pottery associated with each period will include brief discussions on the dating and associated trends reflected by ceramics associated with these two components. These descriptions will be followed by discussions documenting the distributions of ceramics from various stratigraphic units and will include evaluations relating to the dating and integrity of these contexts.

PREHISTORIC CERAMIC TYPES AND TRENDS

Pottery associated with the early Classic-period occupation is represented by 71 sherds (21.2 percent of the prehistoric pottery) assigned to

white ware types and 264 sherds (78.8 percent) assigned to utility or gray ware types (Table 3). Northern Rio Grande gray ware types were distinguished from white ware types by the absence of painted, polished, and slipped surfaces, the dominance of jar forms, and the presence of relatively large tempering materials (Habicht-Mauche 1993; Wendorf 1953). Gray wares tempered with various materials were assigned to descriptive types based on exterior surface and textured treatments. Northern Rio Grande gray ware types recognized during this study include plain gray rim, plain gray body, wide neckbanded, clapboarded neck, smeared indented corrugated, and Sapawe Micaceous. A single sherd containing sand temper was placed into the Cibola Gray Ware tradition and classified as plain gray body.

Most of the prehistoric decorated pottery displayed distinct pastes and fine tuff temper indicative of Northern Rio Grande, or Tewa, tradition types (Habicht-Mauche 1993; Harlow 1973; Wendorf 1953). White wares were assigned to temporally distinct types based on paint type, paste color, thickness, surface manipulation, and design styles. Unpainted white sherds that could not be placed into a distinct type were classified as unpainted white ware undifferentiated. *Santa Fe Black-white* refers to ceramics with decorations in organic paint that were distinguished from latter decorated later types based on the presence of thin and evenly shaped walls, light-gray to blue-gray dense pastes, and thin white slips. Biscuit ware types were distinguished based on a distinct paste reflecting the use of bentonite clays and fine ash tuff temper (Kidder and Amsden 1931). This paste is soft, gray to yellow, and exhibits extremely light and porous textures. Vessel walls tend to be relatively thick. Surfaces are often white, light gray, tan, or buff. Biscuit wares are sometimes assigned to temporally distinct types based on the occurrence of polish, slip, and paint on different surfaces for bowl forms. *Biscuit A (Abiquiu) Black-on-white* refers to bowls with slipped or painted manipulations on interior surfaces only and is the dominant biscuit ware type in assemblages

Table 3. Prehistoric and historic Native ceramic types

	Count	Column %
Prehistoric		
Northern Rio Grande White Ware		
Unpainted undifferentiated white	6	0.7%
Santa Fe Black-on-white	15	1.6%
Biscuit A (Abiquiu) Black-on-white	47	5.2%
Jemez Santa Fe Vallecitos	1	0.1%
Biscuit ware, slip and paint not observable	2	0.2%
Northern Rio Grande Utility Wares		
Plain gray rim	4	0.4%
Plain gray body	36	4.0%
Wide neckbanded	3	0.3%
Clapboard neck	2	0.2%
Smearred indented corrugated	217	23.8%
Sapawe Micaceous	1	0.1%
Cibola Types		
Plain gray body	1	0.1%
Total	335	36.8%
Historic		
Northern Rio Grande Painted Wares		
Tewa Polychrome (type)	1	0.1%
Ogapoge Polychrome	1	0.1%
Tewa Polychrome painted undifferentiated (two slips)	3	0.3%
Black-on-cream undifferentiated	46	5.0%
Historic organic paint undifferentiated	15	1.6%
Powhoge Polychrome	10	1.1%
Historic white\cream slipped unpainted	9	1.0%
Red-tan buff unpainted	4	0.4%
Middle Rio Grande Painted Wares		
Santa Ana Polychrome	1	0.1%
Plain Ware Types		
Tewa buff undifferentiated	75	8.2%
Tewa polished gray	139	15.3%
Tewa polished black	46	5.0%
Smudged interior buff exterior	16	1.8%
Buff utility unpolished	33	3.6%
Tewa polished red	49	5.4%
Smudged exterior buff interior	1	0.1%
Micaceous Types		
Highly micaceous paste	89	9.8%
Buff ware with mica slip	26	2.9%
Smudged interior mica slip exterior	11	1.2%
Unpolished mica slip	1	0.1%
Total	576	63.2%
Total ceramics	911	100.0%

appear to have derived from bowls. The high frequency of gray wares and the overwhelming dominance of bowls for the white wares reflect functional trends similar to those noted at sites dating to the Coalition period and the very early spans of the Classic period in villages scattered across the Northern Rio Grande region (Wilson 2008). These similarities reflect a continuation of patterns relating to the use of pottery in various activities. Such patterns changed during the later spans of the Classic period, as reflected by a significant increase in the frequency of and range of forms associated with decorated pottery (Wilson 2008).

HISTORIC CERAMIC TYPES AND TRENDS

The great majority of the Native pottery identified from Los Luceros displays a combination of characteristics indicative of pottery produced by Northern Tewa potters and commonly traded to groups in scattered Hispanic settlements during the very late eighteenth and first three-quarters of the nineteenth century (Batkin 1987; Frank and Harlow 1990; Harlow 1973; McKenna and Miles 1990; Mera 1939; Snow 1982). Native historic pottery identified during the present study was assigned to types defined for three ware groups: micaceous utility, plain utility, and decorated polychrome ware (Table 3).

Historic micaceous pottery types are distinguished by the presence of concentrations of mica over an unpolished surface and tend to be represented by utilitarian jar forms. During the historic period, this effect was usually achieved through the application of ground mica slip on the exterior surface, but similar surface effects were sometimes achieved by the use of highly micaceous residual clays. It is usually easy to distinguish historic micaceous types from prehistoric forms based on paste characteristics or the presence of intentionally polished or smudged interior surfaces. Historic micaceous pottery was assigned to a series of descriptive types based on combinations of paste and surface characteristics. One of the most distinct forms of micaceous pottery is represented by pottery exhibiting the highly micaceous residual clays classified here as highly micaceous paste utility. Pottery assigned to this category appears to be very similar to that

described from sites in Taos area thought to have been produced by Northern Tewa Pueblo and Apache potters and includes pottery that may have been previously classified as Peñasco Micaceous, Ocate Micaceous, and Petaca Micaceous (Adler and Dick 1999; Brugge 1983; Dick 1968; Eiselt 2005; Lang 1997; Woosley and Olinger 1990). Pottery exhibiting plain unpolished surfaces was assigned to an unpolished mica slip category. Utility ware sherds with evidence of slipped exterior or sooted or smudged interior were classified as smudged interior mica slip exterior or polished interior mica slip exterior. Except for evidence of interior sooting, pottery assigned to these categories appears to exhibit similar characteristics. The pottery assigned to these categories appears to be very similar to pottery previously described as Vadito Micaceous and represents a form commonly produced by Tewa potters from the seventeenth to early twentieth century (Levine 2001). A single sherd exhibiting an oxidized surface was classified as buff ware with mica slip.

Tewa plain ware refers to the dominant historic Native utility ware group, commonly occurring at many historic-period sites in northern New Mexico (Snow 1982). Plain ware types tend to exhibit polished surfaces, fine tuff temper, and a wide range of vessel forms similar to those noted in Tewa Polychrome vessels. Tewa plain ware sherds were assigned to different descriptive types based on the presence or type of slipped surface. Types assigned to plain ware forms not exhibiting a distinct slip were assigned to Tewa buff undifferentiated and buff utility unpolished. Those assigned to forms slipped with red clay were assigned to Tewa polished red. Those exhibiting evidence of gray smudged deposits over unslipped surface were assigned to Tewa polished gray. Sherds exhibiting a black sooted surface over a highly polished red slip were classified as Tewa polished black and are similar to forms previously assigned to Kapo Black (Frank and Harlow 1990; Harlow 1973). A single sherd was characterized as smudged exterior buff interior.

Tewa Polychrome refers to pottery produced in the Tewa Basin during much of the historic period. These polychrome forms developed directly out of and are similar to earlier Tewa decorated forms such as biscuit wares in that they

dating to the early Classic period. A single sherd decorated with organic paint was assigned to Jemez Black-on-white based on the presence of a thick pearly-white highly polished slip, and temper characteristic of pottery produced in the Jemez region (Mera 1935; Reiter 1938).

The combination of prehistoric ceramic types in the assemblage reflects an occupation dating to the early Classic period. Biscuit A began to replace Wiyo Black-on-white and Santa Fe Black-on-white in areas of the Northern Rio Grande around AD 1375. Sites dating to the early Classic period are characterized by Biscuit A as the dominant white ware type and the absence of Biscuit B (Lang 1997; Mera 1934; Wilson 2008). The dominance of smeared corrugated tempered with residual micaceous paste is also consistent with an occupation dating to the early Classic period (Table 4). While the common occurrence of Santa Fe Black-on-white in Classic-period assemblages has sometimes been interpreted as reflecting mixing of pottery from earlier Coalition-period assemblages or the presence of older heirloom vessels, it is likely that forms exhibiting characteristics resulting in their classification as Santa Fe Black-on-white continued to be produced well into the fifteenth century (Lang 1993; Wilson 2008). While it is possible that mixing of pottery from an earlier Coalition-period component is the source of some of the Santa Fe Black-on-white sherds identified, there is no stratigraphic evidence for the existence of this component. Thus, based on the combination of prehistoric pottery recovered, most if not all of the prehistoric sherds identified during the present study are assumed to reflect material from nearby components from Pioge Ruin or other prehistoric sites in the areas that are postulated to date between AD 1375 and 1450. The span of the prehistoric component as defined here is shorter than the time range (AD 1300–1500) given by Snow (1988) based on a smaller sample of prehistoric sherds recovered during earlier archaeological testing programs at Los Luceros.

The dominance of Biscuit A and absence of glaze ware types in these assemblages is consistent with observations made during other phases of investigations of Los Luceros by the Office of Archaeological Studies. This is also consistent with observations of ceramic artifacts from Pioge Ruin by Mera (1934), who includes this site in his Rio

Grande division in his summary of biscuit ware sites. He noted glaze wares were generally absent at Pioge and indicated that ceramic distributions from this site most closely resembled those from certain areas of the Chama division (Mera 1934). He attributed this similarity to the great distance of this site from the localities where glaze paint was produced (Futrell 1998; Mera 1934). Snow identified a single glaze-painted sherd that he classified as Glaze F and cited it as part of the very limited evidence of a component dating to the seventeenth century.

The biscuit ware sherds that dominate the prehistoric white wares recovered during the present investigations exhibit fine ash temper and pastes similar to those noted in biscuit wares from adjacent districts of the Northern Rio Grande region (Graves and Eckert 1998; Mera 1934). It is likely that at least some of the pottery assigned to Santa Fe Black-on-white was produced at the same time as that assigned to Biscuit A and may reflect a distinct and more conservative production area. More studies of pottery from contexts at Pioge Ruin, however, are required before the exact nature of the relationship of pottery assigned to these two white ware types and the span of the prehistoric occupation at this site can be determined.

Variation in pastes and temper of prehistoric gray ware types during this analysis is consistent with recent studies indicating the widespread exchange of gray ware vessels between villages in different districts of the Northern Rio Grande (Curewitz 2008; Wilson 2008). The majority of the gray wares examined display a fine micaceous temper reflecting the use of residual clays that may have been used in locally produced utility wares as well as those produced in the Chama Valley, just to the north (Table 4). Gray wares tempered with crushed granite temper may also reflect vessels produced locally or in nearby localities. Gray wares tempered with sorted tuff crystals (anthill sand) may have originated in the Pajarito Plateau, where micaceous temper and clay sources do not occur (Curewitz 2008; Wilson 2008).

The majority (78.8 percent) of the prehistoric pottery identified represents gray ware types, all of which appear to have derived from jars (Table 4). White wares represent 22.2 percent of the prehistoric sherds. All of these white wares

Table 4. Temper by pottery group

	Prehistoric White		Prehistoric Gray		Historic Polychrome		Historic Plain		Historic Micaceous		Total	
	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %
Sand	-	-	2	0.8%	1	1.1%	2	0.6%	-	-	5	0.5%
Granite with abundant mica	-	-	53	20.1%	-	-	1	0.3%	10	7.9%	64	7.0%
Granite without abundant mica	-	-	-	-	-	-	3	0.8%	21	16.5%	24	2.6%
Highly micaceous (residual) paste	-	-	-	-	-	-	-	-	89	70.1%	89	9.8%
Fine tuff or ash	7	9.9%	-	-	-	-	33	9.2%	-	-	40	4.4%
Fine tuff and sand	61	85.9%	-	-	63	70.0%	284	79.1%	7	5.5%	415	45.6%
Ant hill sand	-	-	68	25.8%	-	-	-	-	-	-	68	7.5%
Tuff, mica and sand	1	1.4%	-	-	26	28.9%	36	10.0%	-	-	63	6.9%
Oblate shale and tuff	1	1.4%	-	-	-	-	-	-	-	-	1	0.1%
Large tuff predominate with anthill sand	-	-	2	0.8%	-	-	-	-	-	-	2	0.2%
Residual micaceous temper	-	-	139	52.7%	-	-	-	-	-	-	139	15.3%
Jemez ash	1	1.4%	-	-	-	-	-	-	-	-	1	0.1%
(predominately large ash and/or tuff)												
Total	71	100.0%	264	100.0%	90	100.0%	359	100.0%	127	100.0%	911	100.0%

are tempered with fine crushed tuff and painted decorations in organic paint. They are usually easily distinguished from these earlier forms by the presence of brownish oxidized clay pastes, and combinations of cream and red slips and later decorative styles that reflect European and Mexican influences. This pottery was assigned to type categories based on differences in surface slips and painted design styles.

The earliest historic polychrome identified during this study is Tewa Polychrome, which was produced during the eighteenth century (Harlow 1973). This type is characterized by broad areas covered with red slips and no decorations, with narrow bands covered with tan or cream slip and painted decorations. Designs are executed in organic paint and are commonly represented by narrow or zigzag lines that are thin and widely spaced. Lines are often decorated with pendant dots, solid triangles, and hachured areas

Ogapoge Polychrome is distinguished from most other polychrome types of the Tewa series by the addition of red paint to design elements that tend to be distinct for this type (Batkin 1987; Harlow 1973; Mera 1939). Field of design is much wider than on earlier polychrome forms and is represented mainly by solid designs covering much of the upper areas of the jar exterior. The extent of red slip is more restricted than in earlier polychrome types.

The most common formal polychrome type identified during this study was Powhoge Polychrome. Decorations on Powhoge Polychrome were usually executed with organic paint applied over broad areas slipped with a cream-colored slip which usually covers almost all of the interior surface of shallow bowls and the upper three-quarter of the exterior of jars and deep bowls. This slip is usually thick, well polished, and may be crazed or crackled. Most of the exterior surfaces of shallow bowls and interior surfaces of jars and deep bowls are unslipped with tan to brown polished surfaces. The polychrome effect on these vessels is limited to the use of red slip, which always covers the rim and usually extends slightly below both surfaces as well as covering the very lower part of jars and deep bowls. Painted decorations are always applied over the cream slip. These designs are applied over a very wide area of the cream-slipped portion of a vessel. Designs consist of large geometric forms divided

into a series of bold patterns. Design motifs tend to be large, and execution tends to be fairly crude in terms of evenness of shape and thickness of lines and motifs. The most common designs incorporated into these geometric fields are straight and curved triangles. Other motifs include short line segments, dots, solid and half circles, elliptical circles, open circles, solid squares, stylized clouds, leaf-shaped elements, and stylized feathers. Design motifs are combined into bold medallion, floral, or shield patterns.

Most of the sherds that appeared to be derived from Tewa-tradition polychrome vessels identified during this analysis did not exhibit styles indicative of a distinct type, although it is likely most of these derived from Powhoge Polychrome vessels. Descriptive categories identified for nondiscrete polychrome sherds are Tewa Polychrome painted undifferentiated (two slips), black-on-cream undifferentiated, historic organic paint undifferentiated unpainted, and historic red-on-tan buff unpainted.

The only other historic polychrome sherd is a single sherd assigned to Santa Ana Polychrome (Batkin 1987; Harlow 1973). This type refers to forms containing sand temper, pastes, and black and red painted decorated characteristic of pottery produced at Santa Ana Pueblo. Surfaces are covered with a white slip which tend not to be very well polished and a thick red slip.

The combination of historic pottery types recovered during the testing of Los Luceros reflects an occupation dating to the nineteenth century. Possible exceptions include one sherd assigned to Tewa Polychrome and another assigned to Ogapoge Polychrome, which are typically dated to the eighteenth century. This combination of pottery is similar to that noted at Hispanic sites in Santa Fe and the Tewa Basin that appear to date from about AD 1800 to 1880 (Wilson 2007). Good examples of large assemblages that seem to be very similar to that described here and are assumed to date to the same time span and include those associated with three Hispanic farmsteads investigated during the Pojoaque Project. Similar times of occupation seem to be supported by the occurrence of Powhoge Polychrome, with characteristics similar to those of the dominant polychrome type. Also consistent with this dating is the dominance of plain utility ware types. Like other assemblages dating to this span, while a

range of plain utility ware types were noted, the majority represent Tewa polished gray or Tewa polished black.

The time span indicated by this assemblage reflects the last period involving the large-scale manufacture of serviceable decorated utility pottery used in daily activities in both Pueblo and Hispanic households prior to the shift to the production of tourist wares (Batkin 1987; Toulouse 1977). A rapid change in Pueblo pottery resulted from the establishment of a railroad system in northern New Mexico during the late nineteenth century that had profound changes on the production and distribution of Northern Tewa Pueblo pottery (Toulouse 1977). The wide-scale transportation of manufactured American goods by railroad cars resulted in the availability of affordable ceramics, china, and crockery to settlers in New Mexico as well as a market based on cash, so that Hispanic settlers in New Mexico no longer required locally made Pueblo pottery (Frank 1991; Snow 1973). The production of Pueblo pottery was only able to survive as a result of a new market created by the railroad as increasing numbers of Anglo tourists and collectors came to northern New Mexico. Demands from this new market resulted in a shift from simply decorated but highly serviceable forms suitable for use in everyday activities to highly decorated jars and knickknacks that were desirable to tourists and collectors.

The historic pottery recovered from Los Luceros appears to be most consistent with that produced during the span just prior to the coming of the railroads (AD 1800 to 1880), given the absence of forms commonly associated with the tourist trade. An association during the nineteenth century appears to be consistent with pottery descriptions from earlier investigations of this site as well as historic references relating to Los Luceros (Snow 1988). Historic pottery documented during this study is dominated by utilitarian forms including historic plain ware (62.3 percent of the historic pottery) and historic micaceous (22.0 percent). Most of the micaceous sherds appear to have been derived from cooking jars, while plain ware vessels are mainly represented by bowls, with lower frequencies of storage jars (Table 5). In contrast, only 15.6 percent of the historic pottery was derived from polychrome types, which mainly consist

of shallow bowls with very simple decorations. Distributions of wares and forms noted in these assemblages is consistent with that noted at other Hispanic sites dating to immediately before the railroad period. In addition, pottery from Los Luceros exhibits relatively thin, well-fired vessels and a wide range of expediently made and simply decorated forms. Characteristics of this pottery appear to have resulted from the mass production by Tewa potters of simple but adequately made vessels that were widely distributed to a rapidly growing Hispanic population (Frank 1991; Wilson 2007). Unlike pottery produced during earlier periods, decorations and forms seem to have little symbolic or ritual meaning or value at most of the contexts where these vessels were used. Instead these vessels seem to have simply been regarded by most Hispanic settlers as a cheap and readily available sources of containers used in a range of mundane and everyday activities including cooking, storage, and serving of food (Table 5).

Much of the pottery used at Los Luceros was probably produced at the nearby Pueblo of San Juan (Ohkay Owingeh) Pueblo. This pottery exhibits pastes and surfaces that appear to be similar if not identical to contemporaneous pottery from Hispanic sites near other Tewa villages and the Santa Fe area (Wilson 2007). This indicates that the production of distinct and specialized forms in different Tewa villages commonly described for historic and modern Tewa Pueblo pottery (Batkin 1987; Harlow 1973; Toulouse 1977) may have resulted from various influences spurred by the coming of the railroad.

EXAMINATION OF POTTERY DISTRIBUTIONS FROM DIFFERENT TEST PITS AND LEVELS

A high percentage of the pottery recovered during the testing of Los Luceros reflects combinations of types that are associated with two distinct components. The earliest pottery types reflect an early Classic-period component that probably dates from about AD 1375 to 1450 and appears to represent deposits derived from Pioge Ruin or another nearby Classic-period site. Later pottery types are assumed to reflect vessels that were traded to Hispanic settlers at Los Luceros from about AD 1800 to 1880. The general absence of pottery reflecting occupations during other spans

Table 5. Vessel form by pottery group

	Prehistoric White		Prehistoric Gray		Historic Polychrome		Historic Plain		Historic Micaceous		Total	
	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %
Indeterminate	5	7.0%	-	-	-	-	-	-	-	-	5	0.5%
Bowl rim	4	5.6%	-	-	4	4.4%	18	5.0%	1	0.8%	27	3.0%
Bowl body	62	87.3%	-	-	36	40.0%	-	-	-	-	98	10.8%
Jar neck	-	-	37	14.0%	11	12.2%	48	13.4%	22	17.3%	118	13.0%
Jar rim	-	-	13	4.9%	4	4.4%	5	1.4%	8	6.3%	30	3.3%
Jar body	-	-	214	81.1%	31	34.4%	-	-	-	-	245	26.9%
Body sherd polished interior-exterior	-	-	-	-	4	4.4%	109	30.4%	-	-	113	12.4%
Body sherd unpolished	-	-	-	-	-	-	28	7.8%	69	54.3%	97	10.6%
Body sherd unpolished interior polished exterior	-	-	-	-	-	-	82	22.8%	-	-	82	9.0%
Body sherd polished interior unpolished exterior	-	-	-	-	-	-	57	15.9%	27	21.3%	84	9.2%
Indeterminate rim	-	-	-	-	-	-	11	3.1%	-	-	11	1.2%
Soup plate	-	-	-	-	-	-	1	0.3%	-	-	1	0.1%
Total ceramics	71	100.0%	264	100.0%	90	100.0%	359	100.0%	127	100.0%	911	100.0%

is somewhat surprising given that Pioge and other pueblos in the area are known to have been occupied well into the sixteenth century and that Spanish colonists established settlements in this area as early as the late sixteenth century. Thus, the area tested during the present project appears to reflect material from two specific components rather than a wider range of components associated with the very long occupation of the general area. If this is the case, it is likely that both horizontal and vertical distributions of ceramics associated with these two components will be distinct and separated.

Ceramics were present in 10 of the 18 test pits excavated (Tables 6, 7). Of these ten test pits, only two (TP 3 and TP 4) contained a consistent stratigraphic sequence covering the early Classic and late historic periods.

Pottery from Test Pits 1, 5, 11, 12, 15, and 16 was solely represented by historic types and included both utilitarian and painted wares (Tables 6, 7). Utilitarian types consisted of buff wares, polished gray and black wares, highly micaceous wares, mica slipped wares, and variations of those types. The painted wares consisted of various black-on-creams and some Powhoge Polychrome sherds (Table 6). In Test Pit 1, ceramics were found up to 50 cm below ground surface, while the rest of the grid units yielded ceramics 20 cm below ground surface. It appears that the ceramics were not buried very deep in these areas. However, excavations stopped in Test Pits 15 and 16 after three levels, and the leach field was relocated due to the presence of artifacts, so the depth of the cultural deposits in this area is unknown.

No test pits contained only prehistoric ceramics; however, four test pits contained a mix of prehistoric and historic ceramics. Test Pits 3 and 4 contained a consistent stratigraphic sequence defining the two time periods. Test Pits 2 and 6 contained predominately historic wares with only a few prehistoric wares. Test Pit 2 contained only 2 prehistoric wares, compared to 203 historic wares (Table 7). The 2 prehistoric wares, smeared indented corrugated, were recovered 50 cm bd. Test Pit 6 also contained only 2 prehistoric wares, compared to 17 historic wares (Table 7). The prehistoric wares were recovered from 10 and 40 cm bd and consisted of a smeared indented corrugated and a Biscuit A Black-on-white. All the historic wares recovered from Test Pits 2 and

6 were similar to those recovered in test pits 1, 5, 11, 12, 15, and 16 (Tables 6, 7).

Test Pits 3 and 4 contained the best stratigraphic sequence between the early Classic and early Territorial periods. The first three levels of Test Pit 3 (30 cm bd) contained a mix of prehistoric and historic wares dating to the late fourteenth-early fifteenth century and late nineteenth century. Historic wares dominated the count with 53 ceramics, compared to 19 prehistoric ceramics. The ceramic types recovered were similar to the types recovered in the previously mentioned test pits (Table 6). Starting at Level 4 (40 cm bd) and continuing to Level 12 (120 cm bd), all the ceramics recovered were prehistoric ceramics from the early Classic period (Table 7). A total of 222 prehistoric ceramics were recovered from these levels and consisted of smeared indented corrugated, plain gray wares with some exterior manipulations, Santa Fe Black-on-white, Biscuit A, and one Jemez Black-on-white (Table 6). All these ceramic types provide a date from the late fourteenth to the middle fifteenth century.

Test Pit 4 followed a pattern similar to that of Test Pit 3. The first five levels (50 cm bd) contained a mix of prehistoric and historic wares. Historic wares dominated the count again, with 35 ceramics compared to 6 prehistoric wares. The ceramic types recovered are similar to the types recovered in previously mentioned test pits (Table 6). Starting at Level 6 (60 cm bd) and continuing to Level 13 (130 cm bd), all the ceramics recovered were prehistoric ceramics from the early Classic period, as in Test Pit 3 (Tables 6, 7). A total of 84 prehistoric ceramics were recovered from these levels and consisted of smeared indented corrugated, plain gray wares with some exterior manipulations, Santa Fe Black-on-white and Biscuit A Black-on-white (Table 6). Again, all these ceramic types provide a date from the late fourteenth to the middle fifteenth century.

CONCLUSIONS

In summary, the great majority of Native ceramics recovered during excavations at Los Luceros represent two distinct components that appear to be separated by a 350-year hiatus. This data provides for the characterization of trends associated with two very distinct but related

Table 6 (continued)

	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Level 8		Level 9		Level 10		Level 11		Level 12		
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	
Test PH3																									
Prehistoric Northern Rio Grande White Wares																									
Unpainted undifferentiated white	1	2.9%	-	-	-	-	-	-	-	1	1.2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Santa Fe Black-on-white	3	8.8%	-	-	5	14.7%	2	5.6%	1	1.2%	-	-	1	4.0%	-	-	-	-	-	-	-	-	1	14.3%	
Biscuit A (Abiquiu) Black-on-white	1	2.9%	-	-	4	11.8%	1	2.8%	19	22.1%	8	30.8%	-	-	-	-	1	5.6%	1	10.0%	-	-	-	-	
Jemez Santa Fe Vallecitos	-	-	-	-	-	-	-	-	1	1.2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Biscuit ware, slip and paint not observable	-	-	-	-	-	-	-	-	1	1.2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Prehistoric Northern Rio Grande Utility Wares																									
Plain gray rim	-	-	-	-	-	-	-	-	1	1.2%	-	-	1	4.0%	-	-	-	-	-	-	-	-	-	-	-
Plain gray body	-	-	-	-	-	-	4	11.1%	13	15.1%	4	15.4%	4	16.0%	-	-	2	11.1%	1	10.0%	3	23.1%	1	14.3%	
Wide neckbanded	-	-	-	-	-	-	1	2.8%	-	-	-	-	-	-	-	-	1	5.6%	-	-	-	-	1	14.3%	
Clapboard neck	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Smearred indented corrugated	-	-	-	-	5	14.7%	28	77.8%	48	55.8%	14	53.8%	19	76.0%	1	100.0%	14	77.8%	7	70.0%	9	69.2%	4	57.1%	
Sapawe micaceous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Prehistoric Cibola Utility Wares																									
Plain gray body	-	-	-	-	-	-	-	-	1	1.2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Historic Northern Rio Grande Painted Wares																									
Tewa Polychrome (type)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ogapoge Polychrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tewa Polychrome painted undifferentiated (two slips)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Black-on-cream undifferentiated	5	14.7%	-	-	2	5.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Historic organic paint undifferentiated	-	-	-	-	2	5.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Powhoge Polychrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Historic white/cream slipped unpainted	-	-	1	12.5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Red-tan buff unpainted	-	-	1	12.5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Puname Polychrome Santa Ana sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Historic Northern Rio Grande Utility Wares																									
Tewa buff undifferentiated	3	8.8%	1	12.5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic polished gray	6	17.6%	1	12.5%	5	14.7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tewa polished black	1	2.9%	-	-	1	2.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tewa polished red ware	1	2.9%	1	12.5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Smudged interior, buff exterior	4	11.8%	1	12.5%	2	5.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Buff utility unpainted	1	2.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Smudged exterior, buff interior	1	2.9%	2	25.0%	5	14.7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Highly micaceous	6	17.6%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Smudged interior mica slip exterior	1	2.9%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Buff ware with mica slip	1	2.9%	-	-	3	8.8%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Unpolished mica slip	34	100.0%	8	100.0%	34	100.0%	36	100.0%	86	100.0%	26	100.0%	25	100.0%	1	100.0%	18	100.0%	10	100.0%	13	100.0%	7	100.0%	

Table 6 (continued)

	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Level 8		Level 9		Level 10		Level 11		Level 12		Level 13			
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Test Pit 4																												
Prehistoric Northern Rio Grande White Wares																												
Unpainted undifferentiated white	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Santa Fe Black-on-white	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biscuit A (Abiquiu) Black-on-white	1	11.1%	-	-	1	8.3%	-	-	1	14.3%	-	-	-	-	-	-	2	50.0%	1	4.8%	3	15.8%	1	7.1%	1	20.0%	-	-
Jemez Santa Fe Vallecitos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biscuit ware, slip and paint not observable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4.8%	-	-	-	-	-	-	-	-
Prehistoric Northern Rio Grande Utility Wares																												
Plain gray rim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10.5%	-	-	-	-	-	-
Plain gray body	-	-	1	7.7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5.2%	-	-	2	40.0%	-	-
Wide neckbanded	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clapboard neck	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	25.0%	-	-	-	-	-	-	-	-	-	-
Smearred indented corrugated	2	22.2%	1	7.7%	-	-	-	-	-	-	6	85.7%	11	100.0%	2	66.7%	1	25.0%	19	90.5%	10	52.6%	11	78.6%	2	40.0%	-	-
Sapawe micaceous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	33.3%	-	-	-	-	-	-	-	-	-	-	-	-
Prehistoric Cibola Utility Wares																												
Plain gray body	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic Northern Rio Grande Painted Wares																												
Tewa Polychrome (type)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ogapoge Polychrome	-	-	-	-	1	33.3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tewa Polychrome painted undifferentiated (two slips)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black-on-cream undifferentiated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic organic paint undifferentiated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Powhoge Polychrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic white/cream slipped unpainted	-	-	1	7.7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Red-tan buff unpainted	-	-	-	-	-	-	1	8.3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Puname Polychrome Santa Ana sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic Northern Rio Grande Utility Wares																												
Tewa buff undifferentiated	2	22.2%	3	23.1%	-	-	2	16.7%	1	25.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Historic polished gray	1	11.1%	-	-	-	-	1	8.3%	1	25.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tewa polished black	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tewa polished red ware	-	-	2	15.4%	1	8.3%	1	8.3%	1	25.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smudged interior, buff exterior	2	22.2%	1	7.7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buff utility unpolished	-	-	3	23.1%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smudged exterior, buff interior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Highly micaceous	1	11.1%	-	-	1	33.3%	5	41.7%	1	25.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smudged interior mica slip exterior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buff ware with mica slip	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unpolished mica slip	9	100.0%	13	100.0%	3	100.0%	12	100.0%	4	100.0%	7	100.0%	11	100.0%	3	100.0%	4	100.0%	21	100.0%	19	100.0%	14	100.0%	5	100.0%	-	-

Table 6 (continued)

	Test Pit 5		Level 1		Test Pit 6		Level 4		Level 5		Test Pit 11		Test Pit 12		Test Pit 15		Test Pit 16		Total			
	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %	Count	Col %		
Unpainted undifferentiated white	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.7%	
Santa Fe Black-on-white	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1.6%	
Biscuit A (Abiquiu) Black-on-white	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	5.2%	
Jemez Santa Fe Vellitos	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1%	
Biscuit ware, slip and paint not observable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.2%	
Plain gray rim	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.4%	
Plain gray body	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	4.0%	
Wide neckbanded	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0.3%	
Clayboard neck	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.2%	
Smearred indented corrugated	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	217	23.8%	
Sapawee micaceous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1%	
Plain gray body	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1%	
Prehistoric Northern Rio Grande White Wares																						
Tewa Polychrome (type)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1%	
Cgapoge Polychrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1%	
Tewa Polychrome painted undifferentiated (two slips)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	0.3%	
Black-on-cream undifferentiated	-	-	-	-	-	-	-	-	2	100.0%	-	-	-	-	-	-	-	-	1	33.3%	46	5.0%
Historic organic paint undifferentiated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1.6%	
Powhoge Polychrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1.1%	
Historic white/cream slipped unpainted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	1.0%	
Red-lan buff unpainted	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.4%	
Puname Polychrome Santa Ana sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1%	
Historic Northern Rio Grande Utility Wares																						
Tewa buff undifferentiated	1	11.1%	-	-	2	66.7%	11	84.6%	-	-	-	-	1	100.0%	-	-	-	-	-	75	8.2%	
Historic polished gray	2	22.2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	139	15.3%	
Tewa polished black	-	-	3	75.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	5.0%	
Tewa polished red ware	1	11.1%	-	-	1	33.3%	1	7.7%	-	-	-	-	-	-	-	-	-	-	-	49	5.4%	
Smudged interior, buff exterior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	1.8%	
Buff utility unpainted	2	22.2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	3.6%	
Smudged exterior, buff interior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.1%	
Highly micaceous	2	22.2%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	89	9.8%	
Smudged interior mica slip exterior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	1.2%	
Buff ware with mica slip	1	11.1%	1	25.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	2.9%	
Unpolished mica slip	9	100.0%	4	100.0%	1	100.0%	3	100.0%	2	100.0%	4	100.0%	1	100.0%	1	100.0%	1	100.0%	3	100.0%	911	100.0%

Table 7. Prehistoric versus historic ceramic pottery by provenience

	Prehistoric		Historic		Count
	Count	Row %	Count	Row %	
Test Pit 1					
Level 1	–	–	9	100.0%	9
Level 2	–	–	23	100.0%	23
Level 3	–	–	142	100.0%	142
Level 4	–	–	54	100.0%	54
Level 5	–	–	1	100.0%	1
Total	–	–	229	100.0%	229
Test Pit 2					
Level 1	–	–	2	100.0%	2
Level 2	–	–	53	100.0%	53
Level 3	–	–	83	100.0%	83
Level 4	–	–	63	100.0%	63
Level 5	2	50.0%	2	50.0%	4
Total	2	1.0%	203	50.0%	205
Test Pit 3					
Level 1	5	14.7%	29	85.3%	34
Level 2	–	–	8	100.0%	8
Level 3	14	41.2%	20	58.8%	34
Level 4	36	100.0%	–	–	36
Level 5	86	100.0%	–	–	86
Level 6	26	100.0%	–	–	26
Level 7	25	100.0%	–	–	25
Level 8	1	100.0%	–	–	1
Level 9	18	100.0%	–	–	18
Level 10	10	100.0%	–	–	10
Level 11	13	100.0%	–	–	13
Level 12	7	100.0%	–	–	7
Total	241	80.9%	57	19.1	298
Test Pit 4					
Level 1	3	33.3%	6	66.7%	9
Level 2	2	15.4%	11	84.6%	13
Level 3	–	–	3	100.0%	3
Level 4	1	8.3%	11	91.7%	12
Level 5	–	–	4	100.0%	4
Level 6	7	100.0%	–	–	7
Level 7	11	100.0%	–	–	11
Level 8	3	100.0%	–	–	3
Level 9	4	100.0%	–	–	4
Level 10	21	100.0%	–	–	21
Level 11	19	100.0%	–	–	19
Level 12	14	100.0%	–	–	14
Level 13	5	100.0%	–	–	5
Total	90	72.0%	35	28.0%	125
Test Pit 5					
Level 1	–	–	9	100.0%	9
Level 2	–	–	4	100.0%	4
Total	–	–	13	100.0%	13
Test Pit 6					
Level 1	1	100.0%	–	–	1
Level 3	–	–	3	100.0%	3
Level 4	1	7.7%	12	92.3%	13
Level 5	–	–	2	100.0%	2
Total	2	10.5%	17	89.5%	19
Test Pit 11					
Level 2	–	–	4	100.0%	4
Total	–	–	4	100.0%	4
Test Pit 12					
Level 2	–	–	1	100.0%	1
Total	–	–	1	100.0%	1
Test Pit 15					
Level 2	–	–	1	100.0%	1
Level 3	–	–	7	100.0%	7
Total	–	–	8	100.0%	8
Test Pit 16					
Level 2	–	–	1	100.0%	1
Level 3	–	–	3	100.0%	3
Total	–	–	4	100.0%	4

slices of occupation that are directly linked to the long and continuous history of ceramic art and technology that is still alive and well at San Juan Pueblo.

This pottery includes prehistoric ceramic types that reflect an early Classic-period component at or near Pioge Ruin, which is considered an ancestral village by San Juan Pueblo (Harrington 1916). Ceramic data relating to this little known pueblo provides important clues concerning the nature of the early spans of the Classic occupation in the northernmost portion of the Tewa Basin by groups that may have also been closely related and linked to similar villages in the Chama Valley just to the north (Mera 1934).

The remaining pottery was assigned to historic types, almost all of which reflect forms known to have been produced by Northern Tewa potters during the nineteenth century. Almost all of this pottery is assumed to have been produced at San Juan Pueblo and nearby Northern Tewa Pueblo villages and traded to the Hispanic residents at the nearby hacienda of Los Luceros. Ceramic distributions reflect a very broad pattern of production, decoration, use, and distribution of pottery vessels by Northern Tewa potters along much of the Northern Rio Grande province spanning the very late Spanish Colonial, Mexican, and early Territorial periods and ending with the coming of the railroad in the late nineteenth century. It is hoped that future investigations in this area will provide more insights concerning the nature of these extremely important sites as well as opportunities to fill in the long temporal gap between these components.

Faunal Remains

Nancy J. Akins

A small sample of faunal bone was recovered from the 2010 test excavations at Los Luceros. The bone was analyzed using standard procedures described in most OAS faunal reports (e.g., Akins 2010). Data was entered into a computer data base that describes each piece of bone in terms of the taxon or size of animal; the element, side, portion represented; how complete the element is; the age of the animal; how the specimen was aged; whether it was environmentally altered, animal altered, or burned; and any processing that is evident.

Of the test pits, only Test Pit 2 has much of a sample of bone (Table 8). Test Pit 1 has the most variety and the only nondomestic animals (rock squirrel and deer). Most of the assemblage consists of the common domestic food animals (cattle and sheep or goat) or fragments that could not be identified beyond the size of the animal (e.g., small or large ungulate) but are probably from these same animals. Small horse or mule (phalanges) and a large dog (cranial fragment) were also found.

Sheep or goat outnumbers cattle specimens in Test Pit 2 and the assemblage as a whole. Most of the animals represented were full-sized individuals and tend to be young animals (53.3 percent of the cattle and 84.3 percent of the sheep or goat specimens were from juveniles). The only bones from immature animals were small pieces, so that the question of whether domestic animals were raised at the site cannot be addressed. Few bones could be aged more precisely. Foot bones from sheep suggest they were killed when full size but less than 30 to 36 months of age. The single aged cattle specimen was from an animal more than two years of age.

Most body parts are represented (Table 9), although the small sample of cattle has more rib fragments than any other part, while the larger sample of sheep or goat has a more varied representation. The presence of cranial and foot parts for both cattle and sheep goat suggests that the animals were raised or purchased whole and home butchered rather than acquired as commercial cuts. The processing also suggests

home butchering. Chops and cuts are more common than saw cuts, which are more typical but not necessarily the result of commercial butchering. Cattle had chops (60 percent of the cattle processing) or cuts (10.0 percent) on a mandible, vertebra, ribs, a femur, and a metatarsal. A rib has an impact break (10.0 percent) and a femur a spiral break (10.0 percent). The only saw cut (10.0 percent) removed the distal end from the femur and was not a commercial roast or chop cut. The other saw cuts were on pieces of medium to large ungulate long bones and a sheep or goat cervical vertebra. Processing on sheep or goat specimens was mainly chops on radii (16.7 percent) or cuts on three humeri, a radius, and a tibia (41.7 percent), but also include the saw cut (8.3 percent), a spiral break on a humerus (8.3 percent), defleshing on a metatarsal (8.3 percent), and snaps on a mandible and rib (16.7 percent).

Examining faunal remains from historic assemblages in central and northern New Mexico in conjunction with the Pojoaque Corridor project historic sites (Akins, in prep.) suggests that sheep or goat were generally the more common food animal. Ratios of sheep or goat specimens to cattle specimens are larger during the Santa Fe Trail period (1821-1880) (a mean of 10.53 sheep or goat for every cattle specimen from ten sites with ratios ranging from 0.95 to 41.0) followed by the Railroad period (1880-1930) (a mean of 4.75 and range of 0.50 to 7.20 for four assemblages) and late Spanish Colonial period (1680-1821) (a mean of 4.52 and range of 0.60 to 12.60 for ten assemblages). The 2010 Los Luceros ratio is 4.2 for Test Pit 2 and 3.4 for the assemblage as a whole. Given how much overlap there is in ratios for the various time periods, we can only say that it is consistent with other assemblages dating between the late Spanish Colonial and Railroad periods. The lack of commercial butchering could indicate a date on the earlier end, or it could simply reflect the distance between Los Luceros and commercial centers where animal products could be purchased.

During Phase 2, a single faunal item was recovered. This was a nonhuman bone (FS 13)

from Level 5, Test Pit 15. It was identified as a lower segment arch fragment, mature, heavily large ungulate, possibly the sacrum from the etched, with no discernible butchering.

Table 8. Summary of faunal remains

	Test Pit 1		Test Pit 2		Test Pit 3		Test Pit 4		Test Pit 5		Test Pit 6		Total	
	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %	Count	Column %
Common Name														
Small mammal or bird	–	–	1	0.9%	–	–	–	–	–	–	–	–	1	0.5%
Small-medium mammal	–	–	1	0.9%	–	–	–	–	–	–	–	–	1	0.5%
Medium mammal	1	2.4%	–	–	–	–	–	–	–	–	–	–	1	0.5%
Medium to large mammal	1	2.4%	1	0.9%	1	9.1%	–	–	1	10.0%	–	–	4	2.1%
Rock squirrel	8	19.5%	–	–	–	–	–	–	–	–	–	–	8	4.3%
Large dog	–	–	–	–	–	–	–	–	1	10.0%	–	–	1	0.5%
Ungulate	2	4.9%	3	2.6%	–	–	–	–	–	–	–	–	5	2.7%
Small ungulate	7	17.1%	22	19.0%	1	9.1%	1	25.0%	1	10.0%	2	40.0%	34	18.2%
Small-medium ungulate	9	22.0%	3	2.6%	2	18.2%	–	–	–	–	–	–	14	7.5%
Large ungulate	3	7.3%	21	18.1%	4	36.4%	1	25.0%	1	10.0%	–	–	30	16.0%
Medium to large ungulate	6	14.6%	10	8.6%	2	18.2%	–	–	–	–	1	–	19	10.2%
Deer	1	2.4%	–	–	–	–	–	–	–	–	–	–	1	0.5%
Cattle	–	–	10	8.6%	1	9.1%	1	25.0%	2	20.0%	1	20.0%	15	8.0%
Sheep or goat	3	7.3%	42	36.2%	–	–	1	25.0%	4	40.0%	1	20.0%	51	27.3%
Horse or mule	–	–	2	1.7%	–	–	–	–	–	–	–	–	2	1.1%
Total	41	100.0%	116	100.0%	11	100.0%	4	100.0%	10	100.0%	5	100.0%	187	100.0%
Age														
Immature	2	4.9%	–	–	–	–	–	–	–	–	–	–	2	1.1%
Juvenile	23	56.1%	91	78.4%	10	90.9%	3	75.0%	7	70.0%	2	40.0%	136	72.7%
Mature	16	39.0%	25	21.6%	1	9.1%	1	25.0%	3	30.0%	3	60.0%	49	26.2%
Completeness														
< 10%	34	82.9%	90	77.6%	10	90.9%	4	100.0%	7	70.0%	4	80.0%	149	79.7%
10–50%	4	9.8%	22	19.0%	1	9.1%	–	–	1	10.0%	1	20.0%	29	15.5%
50–75% complete	3	7.3%	2	1.7%	–	–	–	–	–	–	–	–	5	2.7%
75–95% complete	–	–	2	1.7%	–	–	–	–	2	20.0%	–	–	4	2.1%
Environmental Alteration														
None	14	34.1%	14	12.1%	–	–	–	–	1	10.0%	1	20.0%	30	16.0%
Pitting/corrosion	8	19.5%	49	42.2%	1	9.1%	–	–	–	–	–	–	58	31.0%
Sun bleached	–	–	1	0.9%	–	–	–	–	–	–	–	–	1	0.5%
Checked/exfoliated	11	26.8%	30	25.9%	7	63.6%	1	25.0%	2	20.0%	–	–	51	27.3%
Root etched	7	17.1%	22	19.0%	3	27.3%	3	75.0%	7	70.0%	4	80.0%	46	24.6%
Polished/rounded	1	2.4%	–	–	–	–	–	–	–	–	–	–	1	0.5%
Animal Activity														
Carnivore	1	2.4%	4	3.4%	–	–	–	–	2	20.0%	–	–	7	3.7%
Burning														
Unburned	40	97.6%	115	99.1%	11	100.0%	3	75.0%	10	100.0%	5	100.0%	184	98.4%
Discard burn	1	2.4%	–	–	–	–	1	25.0%	–	–	–	–	2	1.1%
Boiled	–	–	1	0.9%	–	–	–	–	–	–	–	–	1	0.5%
Processing														
None	40	97.6%	95	81.9%	9	81.8%	3	75.0%	7	70.0%	3	60.0%	157	84.0%
Chops	–	–	5	4.3%	–	–	1	25.0%	2	20.0%	1	20.0%	9	4.8%
Cut through	–	–	1	0.9%	–	–	–	–	–	–	–	–	1	0.5%
Substantial cut	–	–	5	4.3%	–	–	–	–	1	10.0%	–	–	6	3.2%
Saw cut	1	–	1	0.9%	2	18.2%	–	–	–	–	–	–	4	2.1%
Impact	–	–	2	1.7%	–	–	–	–	–	–	1	–	3	1.6%
Spiral break	–	–	4	3.4%	–	–	–	–	–	–	–	–	4	2.1%
Defleshing	–	–	1	0.9%	–	–	–	–	–	–	–	–	1	0.5%
Snap	–	–	2	1.7%	–	–	–	–	–	–	–	–	2	1.1%
Second Processing														
None	41	100.0%	112	96.6%	11	100.0%	4	100.0%	10	100.0%	5	100.0%	183	97.9%
Substantial cut	–	–	3	2.6%	–	–	–	–	–	–	–	–	3	1.6%
Snap	–	–	1	0.9%	–	–	–	–	–	–	–	–	1	0.5%

Table 9. Body parts: sheep or goat, cattle, and probable sheep or goat and cattle

	Unknown		Long Bone		Flat Bone		Horn		Cranial		Vertebra		Thorax		Pelvis		Front Limb		Rear Leg		Foot		Total		
	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	Count	Row %	
Test Pit 1																									
Small ungulate	-	-	7	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Large ungulate	-	-	3	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Sheep or goat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	66.7%	-	-	1	33.3%	-	3
Test Pit 2																									
Small ungulate	-	-	14	63.6%	8	36.4%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Large ungulate	1	4.8%	9	42.9%	10	47.6%	-	-	-	-	-	-	1	4.8%	-	-	-	-	-	-	-	-	-	-	21
Cattle	-	-	-	-	-	-	-	-	-	-	-	-	6	60.0%	1	10.0%	-	-	-	2	20.0%	-	-	-	10
Sheep or goat	-	-	-	-	-	-	-	-	14	33.3%	8	19.0%	5	11.9%	1	2.4%	-	-	8	19.0%	2	4.8%	4	9.5%	42
Test Pit 3																									
Small ungulate	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Large ungulate	-	-	3	75.0%	1	25.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Cattle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	100.0%	-	-	-	1
Test Pit 4																									
Small ungulate	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Large ungulate	-	-	-	-	-	-	-	-	-	-	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	1
Cattle	-	-	-	-	-	-	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Sheep or goat	-	-	-	-	-	-	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Test Pit 5																									
Small ungulate	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Large ungulate	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Cattle	-	-	-	-	-	-	1	50.0%	-	-	-	-	-	1	50.0%	-	-	-	-	-	-	-	-	-	2
Sheep or goat	-	-	-	-	-	-	-	-	1	25.0%	1	25.0%	-	-	-	-	-	-	-	1	25.0%	1	25.0%	-	4
Test Pit 6																									
Small ungulate	-	-	2	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Cattle	-	-	-	-	-	-	-	-	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	1
Sheep or goat	-	-	-	-	-	-	-	-	1	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Assemblage																									
Small ungulate	-	-	26	76.5%	8	23.5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34
Large ungulate	1	3.3%	16	53.3%	11	36.7%	-	-	-	-	-	-	2	6.7%	-	-	-	-	-	-	-	-	-	-	30
Cattle	-	-	-	-	-	-	1	6.7%	1	6.7%	1	6.7%	7	46.7%	1	6.7%	-	-	-	3	20.0%	1	6.7%	15	
Sheep or goat	-	-	-	-	-	-	-	-	17	33.3%	9	17.6%	5	9.8%	1	2.0%	-	-	10	19.6%	3	5.9%	6	11.8%	51

Chipped Stone Artifact Assemblage

Gavin B. Bird

Chipped stone artifacts were analyzed using a standardized format developed by the Office of Archaeological Studies (OAS 1994) that includes both typological and attribute-based approaches. In typological approaches, individual artifacts are classified into types that have some kind of technological or functional meaning (Andrefsky 2001:6). The supposed advantage of this type of analysis is that behavior can be immediately inferred from the identification of a single artifact (Andrefsky 2001:6). For instance, the presence of a single notching flake indicates that a notched tool was made at a certain location, even if no notched tools were found. However, this method can be problematic because there is often a lack of correspondence between artifact type and functional or technological interpretation (Andrefsky 2001:7). Attribute analysis examines the distribution of one or more characteristics through an entire population, usually of debitage (Andrefsky 2001:7). Among other things, various attributes can be used to assess the frequency of specific reduction methods in a debitage population. However, problems can also crop up when using this analytic strategy for a variety of reasons, mostly related to the small size of attributes and the number of observations (Andrefsky 2001:12). Typological and attribute analyses vary in scale; typological analysis is applied to individual artifacts, while attribute analysis is applied to entire assemblages (Andrefsky 2001:12). Andrefsky (2001) notes that there is no one “right” approach to debitage analysis and that the approach used can vary according to the types of information desired.

The analysis methods employed by the OAS assign typological interpretations to individual artifacts, while at the same time gathering attribute data that can be used to test and augment the typological data. For instance, a rigorous set of characteristics is used to define flakes struck from bifaces versus those struck from cores. Flakes that do not fulfill the set of characteristics used to define biface flakes are, by default, considered core flakes. However, the definition used to assign debitage to the biface

flake category models ideal examples, and all flakes struck from bifaces (especially those struck in the early stages of manufacture) do not always fit that ideal. By combining attribute analysis with a typological approach, we are able to determine which flakes were definitely struck from bifaces (typological approach), as well as those that were probably struck from bifaces but do not fit the model (attribute analysis). In essence, the two approaches can complement one another and help provide a deeper understanding of reduction technology and tool use.

Since these methods are routinely applied to chipped stone artifacts studied by the OAS, their use provides comparability for assemblages from sites of varying date and cultural affiliation excavated across New Mexico. A series of mandatory attributes is included in this format that is used in all analyses. The mandatory attributes describe materials, artifact type and condition, cortex, striking platforms on flakes, and dimensions. Optional attributes are also available that are useful for examining specific questions, and several were used in this analysis in addition to the mandated attributes.

The main questions the OAS analytic scheme was designed to explore include what types of materials were selected for reduction, where those materials were obtained, what techniques were used for chipped stone reduction, and what types of chipped stone tools occur in an assemblage. These topics can provide information about ties to other regions, mobility patterns, and site function. Material selection studies will not always reveal *how* materials were obtained, but they can usually provide information on *where* materials came from. The type of cortex present on artifacts can be used to determine whether materials were obtained at outcrops or came from secondary gravel deposits. Studies of reduction technologies can help show how different peoples solved the problem of producing the types of chipped stone tools they needed from resources at hand. Various approaches could have been used, depending upon the level of residential mobility, the types of stone available, and the range of other materials

that could be used to make tools. Examination of the types of chipped stone tools recovered from a site can help define the range of activities that occurred there, and in many cases this will also aid in defining site function. Chipped stone tools can sometimes be used to provide temporal data, but are usually less time sensitive than other artifact classes, like pottery. For this reason, the chipped stone assemblages from these sites are only used to provide relative temporal data.

Each chipped stone artifact was examined using a binocular microscope to define morphology and material type, examine flake platforms, and determine whether they were used as tools. The level of magnification used varied between 10x and 80x, with higher magnification used to identify wear patterns and platform modifications. Utilized and modified edge angles were measured with a goniometer; other dimensions were measured with a sliding caliper, and artifacts were weighed on a digital or balance beam scale.

Four general classes of chipped stone artifacts were recognized: flakes, angular debris, cores, and tools. Flakes are debitage that exhibit definable dorsal and ventral surfaces, bulbs of percussion, and/or striking platforms. Angular debris are debitage that lack all of these characteristics. Cores are nodules from which debitage were struck and on which negative flake scars originating from one or more platforms are visible. Tools are debitage or cores whose edges were damaged during use or that were modified to create specific shapes or edge angles for use in certain tasks.

RESULTS OF THE LITHIC ARTIFACT ANALYSIS

Testing excavations at Los Luceros (LA 37549) yielded a small number of lithic artifacts (n = 64). However, due to the presence of a large number of both Native and European ceramics, it is possible to split the lithic assemblage between the prehistoric and Spanish Colonial time periods.

Thus it is possible to compare the prehistoric and historic use of lithic materials.

The assemblage contained a total of 65 lithic artifacts (Table 10). Most of the artifacts in this assemblage were core flakes or angular debris. The core flakes represented 44.6 percent of the assemblage, 13 of which were Pedernal chert, 7 basalt, 5 quartzite, 3 unsourced cherts, and 1 gray rhyolite. Angular debris representing 50 percent of the assemblage was also identified, including 14 pieces of basalt, 11 Pedernal chert, 5 unsourced chert, and 1 quartzite. Two unsourced chert core flakes and one Pedernal chert were informally used as strike-a-light flints and exhibited wear on two edges and had unrelated metal adhesions on both surfaces. This type of tool is very diagnostic of historic use. A single Pedernal chert gunflint was also recovered. This gunflint appears to have been broken in manufacture and never used. It is in the style of English gunflints (Whittaker 1994). The other formal tool was a late-stage projectile point preform made out of unsourced chert.

The strike-a-lights and the gunflint all occur above 40 cm below the surface. This coincides with the break shown during the analysis of the ceramics. Below this level all artifacts are of a prehistoric nature, while above this the assemblage becomes Spanish Colonial. The single projectile point comes from the same level as the gunflint. It is possible that this was an isolated Native element. Alternatively, it could represent a Spanish effort to produce a projectile point. The gunflint itself is somewhat out of context. In its current state, the manufacturing style appears to be of English origin. This could be due to the fact that the artifact was never finished. Had the artifact not broken during manufacture, it is possible that it would have resembled a Spanish gunflint. Aside from the strike-a-lights and the gunflint, which are clear indicators of a historic occupation, there is no discernible difference between the prehistoric and historic assemblages within the test pit levels.

Ground Stone

Stephen C. Lentz

Analysis of ground stone was undertaken using the Office of Archaeological Studies "Analysis and Coding Standardization Ground Stone Variable List." A total of 13 ground stone artifacts were recovered from LA 37549. The overwhelming majority came from the Bath House 1/leach field locality, and, as the table attests, many were river cobbles resembling ground stone because of smooth waterworn cortex. Two minerals, red ocher and a fragment of selenite, were collected. Historically, these two items have cultural applications: ocher for pigment, and selenite for house windows, stove window plaques, and as panels in outdoor lights. These applications occurred during both prehistoric Pueblo and Colonial times. However, these appeared to have

been naturally modified while tumbling in the alluvial gravels characterizing the deposition in this area and are probably not cultural. As for the ground stone, little information can be derived from this small, mixed sample. The majority (15.4 percent) was composed of fragmentary ground stone, primarily manos, while the remaining artifacts included a shaft straightener and a complete grooved maul. Again, little can be inferred from the ground stone sample except that the processing of wild or domesticated foodstuffs probably occurred (as it does at most pueblos), accompanied by armament or hunting activities.

No ground stone was recovered during Phase 2.

Macrobotanical Remains

A total of 79 macrobotanical remains were recovered from the test pits. These consisted exclusively of peach pits. However, since, prior to modern times, the entire parcel was covered with orchards, it's not surprising that peach pits would be prevalent. Extensive peach orchards covered the property. A large peach orchard presently

exists south of the Welcome Center. The origin of their deposition is unknown. The pits could be household trash, for example, thrown out with the refuse behind the Lucero House/Office, or they could have been fruit fallen from the trees and left to decompose during a good harvest year.

Euroamerican Artifacts

Susan M. Moga

A total of 281 Euroamerican artifacts were analyzed from the collections recovered from Rancho de los Luceros, LA 37549. Following is the distribution of artifacts as they occurred in Test Pits 1-17.

TEST PIT 1

A total of 120 artifacts were collected and analyzed from Test Pit 1 (Table 11). The artifacts were retrieved from four excavated levels, with the highest frequency of items coming from Level 3. Most of the artifacts were unidentifiable objects (n = 32), unknown bottle types (n = 26), cans (n = 18), jars (n = 3), and an unknown metal plate fragment (n = 1). If larger portions of these artifacts were present and identifiable, they may have been associated with the domestic category rather than construction, since the domestic count was substantial in number, and Test Pit 1 appears to reveal evidence of domesticity.

Domestic items (n = 32) were present in all of the four excavated levels. These artifacts were mostly fragments of various dish types including bowls (n = 6), cups (n = 3), plates (n = 3), plate or saucer (n = 2), cup or bowl (n = 5), and indeterminate vessels (n = 11). Other domestic items were an unknown piece of glass ware (n = 1) and a spring from a wooden clothes pin (n = 1).

Construction and maintenance items (n = 7) were minor occurrences, with a few nails (n = 5) and some window glass (n = 2). A solitary piece of windshield glass from either a car or truck was also present.

TEST PIT 2

Twenty-seven artifacts were recovered from three levels in Test Pit 2, with most of the objects coming from Level 2 (Table 12). Unidentifiable objects (n = 4) and unknown bottle fragments (n = 12) were retrieved from Levels 2 and 3. One unidentifiable ceramic vessel fragment in the domestic category was present in Level 2. It was a base and body

fragment of reynware, which dates between 1725 and 1825, and was probably manufactured in Mexico (Florida Museum of Natural History 1987). Prior mechanical activities in the vicinity of Test Pit 2 must have churned up deeper deposits, which contained these earlier dated ceramics and brought them closer to the present surface.

Ten construction and maintenance artifacts, including nails, bolts, sheet metal, and window glass were dispersed between the three levels. Test Pit 2 appears to be situated near a workshop area.

TEST PIT 3

A larger category range was present at Test Pit 3, but the artifact frequency was insignificant (n = 26) (Table 13). Unidentifiable fragments (n = 5) and pieces of unknown bottles (n = 13) from three levels were available. Domestic items included a tablespoon (n = 1), bowl fragments (n = 2), and unidentifiable vessel fragments (n = 2). One of the unknown vessel fragments was a unique and colorful piece of creamware, which dates from 1765 to 1810 (Florida Museum of Natural History 1987). Originating in Europe and the eastern United States, creamware migrated to New Mexico via the Santa Fe Trail after 1821. Directly below the rim are bands of black, green, blue, and red. Below the banded area are two black leaves and a black stem on a cream-colored back round. A clear glaze covers the hand-painted sherd.

Two items were present in the construction and building category: a wire nail and a piece of window glass. One personal item, a two-hole button, was also collected. This small collection of artifacts may represent a trash scatter near the Test Pit 3 area.

TEST PIT 4

Five levels were excavated within Test Pit 4, and all the levels contained Euroamerican artifacts (n = 27) (Table 14). A few of the levels had unidentifiable objects (n = 2), unknown bottle types (n = 3), and

Table 11. Euroamerican artifacts, Test Pit 1, Levels 1–4

Category	Type	Function	Level 1	Level 2	Level 3	Level 4	Total	
Unassignable	unidentifiable	unidentifiable	3	3	19	7	32	
		bottle	1	–	25	–	26	
		can	–	–	18	–	18	
		jar	2	1	–	–	3	
		plate	–	–	–	1	1	
Domestic	dishes	bowl	–	–	4	2	6	
		cup	3	–	–	–	3	
		vessel, indeterminate	–	2	7	2	11	
		plate	–	1	1	1	3	
		plate/saucer	–	–	–	2	2	
		cup or bowl	–	–	5	–	5	
		glassware	vessel, indeterminate	–	–	1	–	1
		cleaning	clothespin	–	–	–	1	1
Construction/maintenance	hardware	nail, indeterminate wire	1	–	3	1	5	
	building materials	window glass	–	2	–	–	2	
Transportation	cars and trucks	windshield	–	1	–	–	1	
Total			10	10	83	17	120	

Table 12. Euroamerican artifacts, Test Pit 2, Levels 2–4

Category	Type	Function	Level 2	Level 3	Level 4	Total
Unassignable	unidentifiable	unidentifiable	3	1	–	4
	bottle	unidentifiable	10	2	–	12
Domestic	unidentifiable	unidentifiable	1	–	–	1
Construction/maintenance	unidentifiable	hardware	1	–	–	1
	bolt, machine	hardware	1	–	–	1
	bolt, window spring	hardware	1	–	–	1
	nail, indeterminate wire	hardware	2	–	–	2
	nail, common	hardware	–	–	1	1
	nail, double-headed scaffold	hardware	–	1	–	1
	sheet metal	building materials	–	1	–	1
	window glass	building materials	2	–	–	2
Total			21	5	1	27

Table 13. Euroamerican artifacts, Test Pit 3, Levels 1–3

Category	Type	Function	Level 1	Level 2	Level 3	Total
Unassignable	unidentifiable	unidentifiable	2	2	1	5
		bottle	5	6	2	13
Domestic	cutlery and silverware	table spoon	–	–	1	1
	dishes	bowl	–	2	–	2
		vessel, indeterminate	–	2	–	2
Construction/maintenance	hardware	nail, indeterminate wire	–	1	–	1
	building materials	window glass	1	–	–	1
Personal effects	clothing	button, two-hole	1	–	–	1
Total			9	13	4	26

Table 14. Euroamerican artifacts, Test Pit 4, Levels 1–5

Category	Type	Function	Level 1	Level 2	Level 3	Level 4	Level 5	Total
Unassignable	unidentifiable	unidentifiable	–	1	1	–	–	2
		bottle	1	1	1	–	–	3
		plate	–	1	–	–	–	1
Domestic	unidentifiable dishes	unidentifiable	–	–	1	–	–	1
		bowl	–	1	–	–	–	1
Construction/maintenance	unidentifiable	plate	–	–	–	3	–	3
		hook	–	–	–	1	–	1
		wire	–	–	–	9	–	9
	hardware	nail, indeterminate wire	1	–	–	–	–	1
		nail, finish	–	2	–	–	–	2
	building materials	window glass	1	–	1	–	1	3
Total			3	6	4	13	1	27

a piece of a metal plate (n = 1). Domestic items (n = 2) consisted of an unidentifiable vessel and a white-ware bowl fragment. The unknown vessel fragment was a piece of reynware with a clear olive green glaze, was probably manufactured in Mexico. reynware dates from 1725 to 1825 (Florida Museum of Natural History 1987).

The construction category had the highest frequency of artifacts (n = 19). Unidentifiable objects of flat metal pieces (n = 3), a hook, and strands of wire (n = 9) were present. Hardware items included three nails found in Levels 1 and 2. Window glass (n = 3) was infrequent, but it was recovered from the top level down to Level 5.

TEST PIT 5

Most of the artifacts from Test Pit 5 consisted of squared little pieces of safety glass from a vehicle broken windshield (n = 54). Safety glass was accidentally discovered by a French chemist in 1903 and eventually marketed as “Triplex” by 1910.

Unidentifiable objects (n = 5) were recovered from Level 1, as well as a fragment from a mirror (n = 1). Construction and building materials were also present. They included a screw bolt (n = 1), wire nails (n = 3), a washer (n = 1), and a piece of window glass (n = 1) (Table 15).

TEST PIT 6

A small number of artifacts (n = 13) came from Levels 1–5 in Test Pit 6. Most of the artifacts were associated with construction (Table 16). These items consisted of wire nails (n = 5), a spike, window glass (n = 2), and a fence staple. One personal items was also present, a metal

suspender buckle, recovered from Level 5.

TEST PIT 11

Only one artifact was recovered from Test Pit 11. In the indulgence category, it was a green glass wine bottle fragment dated to 1880.

TEST PIT 12

The only modern artifact in the Euroamerican assemblage was found in Level 2 of Test Pit 12. It is an electric fencepost insulator made of molded black plastic and manufactured by Red Snap'R. The artifact was worn and appears to have been run over by a vehicle.

TEST PIT 13

One fragment of patinated, aqua bottle glass was recovered from Level 1 in Test Pit 13. Aqua glass dates from 1880 to 1920.

TEST PIT 15

Level 2 of Test Pit 15 contained only one Euroamerican artifact. It was an unidentifiable, flat piece of unrefined earthenware. The edges were worn, and it was terracotta in color. It could have been from a ceramic tile, but the artifact type is unknown, and it could not be dated.

TEST PIT 16

A clear piece of patinated glass came from Level 3 of Test Pit 16. The size and curvature of the

Table 15. Euroamerican artifacts, Test Pit 5, Levels 1–2

Category	Type	Function	Level 1	Level 2	Total
Unassignable	unidentifiable	unidentifiable	5	–	5
Furnishings	furniture	mirror	1	–	1
Construction/maintenance	hardware	bolt, screw	1	–	1
		nail, indeterminate wire	1	2	3
		washer	1	–	1
		building materials	window glass	1	–
Transportation	cars and trucks	windshield	27	27	54
Total			37	29	66

Table 16. Euroamerican artifacts, Test Pit 6

Category	Type	Function	Level 1	Level 3	Level 4	Level 5	Total
Unassignable	unidentifiable	unidentifiable	1	–	–	–	1
Domestic	dishes	vessel, indeterminate	1	–	–	–	1
		plate	–	1	–	–	1
Construction/maintenance	hardware	nail, indeterminate wire	–	1	2	2	5
		spike	1	–	–	–	1
		building materials	–	1	1	–	2
		fencing	–	–	–	1	1
Personal effects	clothing	buckle, suspender	–	–	–	1	1
Total			3	3	3	4	13

artifact suggests a bottle, but the artifact type could not be identified. Clear glass bottles were molded and date from 1930 to the present.

TEST PIT 17

In Test Pit 17, two shards of clear, patinated glass were retrieved from Level 1. Both appear to be bottle fragments from separate bottles dating from 1930 to the present.

EUROAMERICAN ARTIFACT SUMMARY

Euroamerican artifacts collected from the test pits reflect activities occurring between 1725 and 1930, with one twentieth-century artifact. The reware and creamware pottery were the earliest dated artifacts from the Colonial period. Other items came from the Territorial and Statehood periods. These early artifacts could have been heirloom objects that were handed down from generation to generation, eventually broken, and discarded.

Summary, Conclusions, and Recommendations

The OAS has completed test excavations at the Rancho de los Luceros (LA 37549) in advance of proposed construction activities. These include remodeling, construction, and renovation of the property. The archaeological investigations were undertaken to assess the potential of encountering in situ buried cultural deposits in areas designated for construction and was conducted in two phases (Phases 1 and 2) at several locales within the property. These areas were Bath House 1, Storage Shed 2, the Welcome Center, the alternative Bath House 1 location, and two associated leach field alternative locations, the second of which was recommended as a likely area for the proposed construction.

SUMMARY

The cultural deposits recovered during testing reflect the long-term use of the project area by Native American, Spanish, and Euroamerican populations. The distribution of cultural materials suggests a steady accumulation of artifacts from over 600 years of occupation, spanning the early fourteenth century through the early twentieth century. The later deposits from the nineteenth and twentieth centuries are probably contemporaneous with the Lucero House, which was built and renovated between the late nineteenth century and 1902.

The analysis of prehistoric ceramic artifacts from several locations at Los Luceros (Wilson and Montoya, this volume; Snow 1988, 1999) and from large sites such as Pioge and other smaller aggregations in the vicinity suggest that the earliest occupation of the site is related to the ancestral pueblo of Pioge, LA 144, which is believed to be one of the ancestral sites of Ohkay Owingeh. Ceramic analysis suggests that the prehistoric component of this site reflects an occupation dating to the early Classic period (AD 1325-1450) primarily based on the dominance of Biscuit A and the absence of Biscuit B. Thus, we hypothesize that the prehistoric component at Los Luceros is an expression of a nearly pure early Classic ceramic industry.

To contextualize this period, it is important to note that between AD 1300 and the 1450s, almost the whole of the prehistoric Southwest experienced a dynamic redistribution and reorganization of its population as well as a period of severe climatic change, creating considerable instability within the local and regional ecosystems. Among the characteristics of the Classic period settlement pattern is the dominance of glaze wares and biscuit wares, the establishment of large communities with multiple plaza and roomblock complexes, substantial population growth, and large villages associated with small agriculturally focused structures, fieldhouses, and seasonally occupied farmsteads.

Abandonments of core areas such as the Santa Fe River and the Galisteo Basin indicate a major redistribution and reorganization of the Pueblo world during the fourteenth and fifteenth centuries. Around AD 1350, most populations from the northern Rio Grande had shifted to an aggregated pattern of settlement. This has typically been viewed as a response to subsistence stress, suggesting that abandonments may well be adaptive in nature, precipitating a series of outmigrations in search of more reliable subsistence sources. In the vicinity of Los Luceros, this was achieved by settling along the first terraces of the Rio Grande drainage and adopting a system of floodplain agriculture. In the Santa Fe area, starting at around AD 1325, only the early Classic is represented, and the area was left essentially vacant until the arrival of the Spanish. The same is true for the project area. We suggest that the prehistoric settlement of Los Luceros has all the attributes of a region on the receiving end of uprooted population groups seeking economic stability, and the postulated dates for the occupation of the area match those seen elsewhere in the Rio Grande. In later times, late Classic groups, e.g., those existing from AD 1450 to 1550 or 1600, settled among the Tanoan populations of the Galisteo Basin or the Tewa biscuit ware villages of the upper Rio Grande. They did not return to their former homes along the Rio Grande, the Santa Fe River, or Los Luceros. Many, however, joined or founded the

current Tewa villages of Pojoaque, San Ildefonso, Santa Clara, Nambe, Tesuque, Ohkay Owingeh, Yungue Owingeh, and several of the Tanoan villages in the Galisteo Basin.

Although it may be premature to infer widespread economic and demographic changes from a limited testing program, the Classic component at LA 37549 is entirely consistent with the characteristics of a migrant population settling a newly found area. Thus, prehistoric adaptation within the project environs conforms well to the dynamics of the period, that is, a relatively new occupation of short duration, with a bimodal settlement pattern of large pueblos and smaller farming settlements with associated logistical sites. Apart from a scattering of Santa Fe Black-on-white pottery (which may have been produced relatively late and overlaps with Biscuit A), there is no substantive evidence of an earlier Coalition occupation or a transitional Coalition-to-Classic transition. Only the early Classic occupation is evident, and, as at many other sites in the northern Rio Grande, there is no evidence of a later Classic-period occupation.

A PAN, A SPOON, A BELL, AND A GUN

The historic materials recovered during the LA 37549 excavations represent a Territorial-period component dating from 1800s to statehood (1912) with a light overlay of modern trash. As Wilson and Montoya suggest in this volume, the historic Native pottery used by the families at Los Luceros is most consistent with that produced during the span just prior to the coming of the railroads (AD 1800 to 1880). The majority of the diagnostic Native pottery displays a combination of characteristics indicative of ceramic wares produced by Northern Tewa potters and commonly traded to groups in scattered Hispanic settlements during the very late eighteenth and first three-quarters of the nineteenth century. Notably, the assemblage is temporally consistent with the gunflint and strike-a-lights recorded during the lithic artifact analysis.

Historic accounts and the results of the Euroamerican artifact analysis vividly illustrate the hardships of frontier life in the northern Rio Grande from early contact through Territorial times. Rio Arriba in the 1700s was on the northern

frontier of Spanish settlement, and life there was difficult and dangerous, with frequent Navajo, Ute, Apache, and Comanche raids. There were also droughts, storms, revolts, and epidemics. At the time, Rio Arriba was a fairly long distance from the major trade centers of Santa Fe, Taos, and Albuquerque, so access to manufactured goods was difficult. Initially, the northern frontier had limited contact with Mexico. In the early days, manufactured items transported from Mexico were valued possessions, and only a few items, such as the reynware and creamware ceramics found during data recovery, undoubtedly arrived via the Camino Real. With the opening of the Santa Fe Trail in 1821, other items, such as tableware, nails, and glass entered the inventory, but in very small quantities. It was therefore necessary for the colonists and their descendants to remain almost entirely self-sufficient. Over the years, the residents of this isolated outpost in Rio Arriba made their own clothes, wove textiles, used Native pottery from nearby Ohkay Owingeh, and, as the will of María Martín attests, left very little commercial goods to their heirs. The only articles listed were two painted chests, one loom, one flat iron pan, one chocolate pot, one iron spoon, the chapel bell, and one bronze esmeril. However, life at Los Luceros was far from dull. Livestock was raised, fields and orchards planted, elaborate irrigation systems installed, and from behind the walls of two torreones, the ranchers and farmers of Los Luceros fought off hostile tribes. In 1747 Sebastián Martín and his neighbors were forced to abandon the area because of Ute raiding. They returned three years later, determined to never be dislodged again. Throughout the centuries, the men and women of the Martín, Sisneros, Lucero, and Clark families continued to demonstrate remarkable degrees of resourcefulness, tenacity, and courage. In many ways, the existence of the residents of Los Luceros is a stirring example of the endurance of these remote communities throughout northern New Mexico.

CONCLUSIONS AND RECOMMENDATIONS

Test excavations at Rancho de los Luceros produced a fascinating glimpse into the Native American, Colonial, and Territorial history of northern New Mexico. Adjacent to Oñate's

first capital of Ohkay Owingeh, this historical property has endured relatively unchanged since the seventeenth century. The recent OAS investigations have shown that, apart from its historical aspects, there exists a substantial prehistoric component. Now, through the Milagro Program, Los Luceros is entering a more contemporary phase while still retaining many of its traditional characteristics.

The OAS testing plan, designed to minimize disturbance to cultural resources, proved to be a successful avoidance strategy. Since the Phase 2 proposed construction areas did not yield intact cultural deposits, the relocated Bath House 1 and leach field appear to meet the necessary criteria for the proposed undertaking.

Archaeological testing by the OAS at the Rancho de los Luceros has been completed under the existing agreement. The current strategy, in

accordance with the most recent amended testing phase, is for the layout and potential areas of disturbance to remain unchanged from its original design. Since no intact archaeological remains were encountered in the proposed locations designated for construction or renovation, the OAS recommends that the client proceed with its activities within the tested areas.

ELIGIBILITY STATUS

Rancho de los Luceros (LA 37549) is currently listed in the *National Register of Historic Places* (October 20, 1983) and the *State Register of Cultural Properties* (No. 143, January 9, 1970) in Rio Arriba County, New Mexico. The recent testing by the OAS did not alter the eligibility status of this historic property.

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Appendix 1: New Mexico Historic Water Delivery Systems Inventory Form

Historic Water Delivery System Inventory Form (HWDSIF) – Base Information Form (1a)

Historic Preservation Division (HPD); New Mexico Department of Cultural Affairs			
For HPD Office Use Only: HWDSIF No. <input type="text"/>	District No. <input type="text"/>	NRHP <input type="checkbox"/>	SRCP <input type="checkbox"/> Criteria: A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/>
Other Agency Number (for State or Federal Agency Use Only): <input type="text"/>			

Minimum Required Information for Determination of Eligibility (Items 1 – 28)

1. Name of Acequia, Irrigation Ditch or Water Diversion System (Historic and/or current name) <u>Sub lateral of Los Luceros Acequia (Historic and current)</u>	2. County <u>Rio Arriba</u>	3. USGS Quad(s) <u>San Juan Pueblo</u>
4. Name of Associated Acequia Association or Irrigation District <u>Acequia de Alcalde</u>		5. NMCRIIS Number <u>118836</u>
6. Ownership of the Water Delivery System (check all that apply) <input type="checkbox"/> Private <input checked="" type="checkbox"/> State <input type="checkbox"/> Acequia Assn. <input type="checkbox"/> Federal <input type="checkbox"/> Tribal		7. Town/City <u>Alcalde, New Mexico</u> vicinity <input type="checkbox"/>
8. Land grant/Reservation (if applicable) _____		
9. Date of Survey (mm/dd/yyyy) <u>11/15/2010</u>		10. Previous Survey Date(s) (mm/dd/yyyy) ____/____/____
11. Name of Project <u>Milargo/Los Luceros Testing</u>	12. Type of Project; e.g. utility, road, etc. (if not apparent from name of project) <u>Building Construction</u>	
13. Project Sponsor; e.g. NRCS, COE		
14a. Intersection UTM (point at which project intersects water delivery system) (Use NAD27) Zone _____ Easting _____ Northing _____	15. Construction date (if available) Date: _____ <input type="checkbox"/> Known <input type="checkbox"/> Estimated Source: _____	
14b. Intake UTM (approximate point of the intake/headgate for the water delivery system) (Use NAD27)(Used NAD 83) Zone <u>1/3</u> Easting <u>4/0/6/4/9/2</u> Northing <u>3/9/9/7/5/2/3</u>	16. Adjudication Filing Date (if available) Date: _____ <input type="checkbox"/> Known <input type="checkbox"/> Estimated Source: _____	
17. Physical characteristics of the water delivery system (portion surveyed): Type: <input type="checkbox"/> Main Type: <input checked="" type="checkbox"/> Lateral Type: <input type="checkbox"/> Other: _____ Type: Type of Lining, if lined: _____	18. Setting <input type="checkbox"/> suburban <input checked="" type="checkbox"/> rural <input type="checkbox"/> urban	
19. National and/or State Register (see eligibility criteria) Is this water delivery system individually listed on a historic register? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown If yes: <input type="checkbox"/> State Register <input type="checkbox"/> National Register HPD # SR _____ Is this water delivery system in a registered historic district? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown If yes, <input checked="" type="checkbox"/> Contributing resource <input type="checkbox"/> Non-contributing resource <input type="checkbox"/> Unknown If yes, what is the name of the district? <u>Los Luceros Hacienda</u> District is listed on: <input checked="" type="checkbox"/> State Register <input checked="" type="checkbox"/> National Register HPD # SR <u>143</u>		

Historic Water Delivery System Inventory Form (HWDSIF) – Base Information Form (1b)

<p>20. Brief description of Area of Potential Effect; e.g. length of the portion of the water delivery system that will be impacted, distance on the project from the outer berm or maintenance road for this water delivery system. <u>None of the water delivery system will be impacted.</u></p>	
<p>21. Assessment of project impact on the Water Delivery System <u>None</u></p>	
<p>22. Integrity of the Water Delivery System; note your observations and state whether the resource retains sufficient integrity to qualify it for listing on the State or National registers. <u>The acequia is already on the State and National Registers The acequia is located in the Los Luceros Historic district and exhibits alignments that have remained unchanged from earlier times. The acequia contains a head gate and a lateral gate near the project area that will not be impacted. The setting for the acequia still provides water to agricultural lands that have been cultivated for long periods of time and still remains critical to local agricultural activities.</u></p>	
<p>23. Surveyor Your name: <u>Richard Montoya</u> Name of your firm (if applicable): <u>Office of Archaeological Studies</u> Telephone number: <u>505-827-6414</u></p>	
<p>24. General photograph of the system at the point where it is intersected by the project (paste photo in place or digitally size to fit and insert below – max. width = 5 inches)</p>	
	<p>25. Photo description and/or notes: _____</p>
	<p>26. Photo Information (if applicable) Neg. location _____ Roll # _____ Frame # _____</p>
<p>27. Supplemental forms: <input type="checkbox"/> None <input type="checkbox"/> Detail Form (Form 2) <input type="checkbox"/> Continuation sheets; number of pages: _____</p>	

Historic Water Delivery System Inventory Form (HWDSIF) – Detail Information Form (2a)

Historic Preservation Division (HPD); New Mexico Department of Cultural Affairs

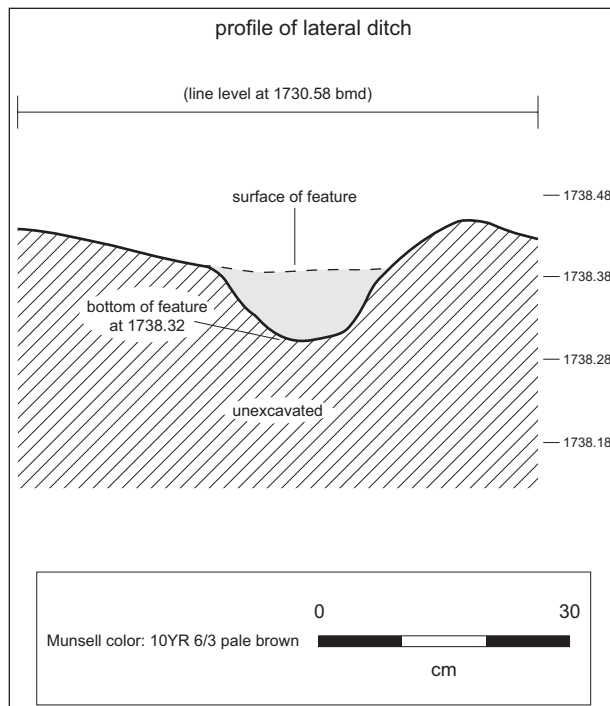
Supplemental Information – Please complete in accordance with survey plan developed with HPD staff for current project

29. Name of Acequia, Irrigation Ditch or Water Diversion System (Historic and/or current name) <u>Los Luceros Acequia</u>	30. County <u>Rio Arriba</u>	31. USGS Quad(s) <u>San Juan Pueblo</u>
		32. NMCRIS Number _____
33. Who Currently Uses the Water Delivery System? Association or District <u>Acequia de Alcalde</u> Mayordomo <u>Joe Gallegos</u> Commissioners <u>Bob Garcia</u> <u>Lucia Sanchez</u> <u>Alfredo Montoya</u>	34. Association of Irrigation District Mailing Address <u>Acequia de Alcalde</u> <u>P.O. Box 99</u> <u>Alcalde, NM 87511</u>	
35. Location Details This water delivery system diverts from: <u>Rio Grande to Acequia de Alcalde to Los Luceros Acequia.</u>		
36. Site plan (paste or digitally insert sketch below or use continuation sheet)		If applicable include: <ul style="list-style-type: none"> ● Footprint of portion of water delivery system surveyed ● Gates ● Bridges ● Flumes ● Checks ● Drops ● Tapboxes ● Culverts ● Significant vegetation and landscape features ● Fences, roads, gates, etc.
		37. Site plan notes _____

Historic Water Delivery System Inventory Form (HWDSIF) – Detail Information Form (2b)

Construction Details							
38. Lining <input checked="" type="checkbox"/> Earth <input type="checkbox"/> Concrete <input type="checkbox"/> Pipe Comments: _____							
39. Headgate <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"> Material: <input checked="" type="checkbox"/> Wood <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete </td> <td style="width: 33%; border: none;"> Type: <input checked="" type="checkbox"/> Vertical Lift <input type="checkbox"/> Radial </td> <td style="width: 33%; border: none;"> Operating Mechanism: <input checked="" type="checkbox"/> Manual Lift <input type="checkbox"/> Cable Hoist <input type="checkbox"/> Screw Lift <input type="checkbox"/> Ratchet Lift </td> <td style="width: 33%; border: none; vertical-align: top;"> Comments: _____ </td> </tr> </table>				Material: <input checked="" type="checkbox"/> Wood <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete	Type: <input checked="" type="checkbox"/> Vertical Lift <input type="checkbox"/> Radial	Operating Mechanism: <input checked="" type="checkbox"/> Manual Lift <input type="checkbox"/> Cable Hoist <input type="checkbox"/> Screw Lift <input type="checkbox"/> Ratchet Lift	Comments: _____
Material: <input checked="" type="checkbox"/> Wood <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete	Type: <input checked="" type="checkbox"/> Vertical Lift <input type="checkbox"/> Radial	Operating Mechanism: <input checked="" type="checkbox"/> Manual Lift <input type="checkbox"/> Cable Hoist <input type="checkbox"/> Screw Lift <input type="checkbox"/> Ratchet Lift	Comments: _____				
40. Lateral Gates <table style="width: 100%; border: none;"> <tr> <td style="width: 25%; border: none;"> Vertical Lifts Wood, number: _____ Metal, number: <u>1</u> Total: <u>1</u> </td> <td style="width: 25%; border: none;"> Tapboxes Wood, number: _____ Metal, number: _____ Concrete, number: _____ Total: _____ </td> <td style="width: 25%; border: none;"> Operating Mechanism: Manual Lift, number: _____ Cable Hoist, number: _____ Screw Lift, number: <u>1</u> Ratchet Lift, number: _____ </td> <td style="width: 25%; border: none; vertical-align: top;"> Comments: _____ </td> </tr> </table>				Vertical Lifts Wood, number: _____ Metal, number: <u>1</u> Total: <u>1</u>	Tapboxes Wood, number: _____ Metal, number: _____ Concrete, number: _____ Total: _____	Operating Mechanism: Manual Lift, number: _____ Cable Hoist, number: _____ Screw Lift, number: <u>1</u> Ratchet Lift, number: _____	Comments: _____
Vertical Lifts Wood, number: _____ Metal, number: <u>1</u> Total: <u>1</u>	Tapboxes Wood, number: _____ Metal, number: _____ Concrete, number: _____ Total: _____	Operating Mechanism: Manual Lift, number: _____ Cable Hoist, number: _____ Screw Lift, number: <u>1</u> Ratchet Lift, number: _____	Comments: _____				
41. Bridges Wood, number: _____ Comments: _____ Metal, number: _____ _____ Concrete, number: _____	42. Drops Wood, number: _____ Comments: _____ Metal, number: _____ _____ Concrete, number: _____ Rock, number: _____						
43. Checks Wood, number: _____ Comments: _____ Metal, number: _____ _____ Other, number: _____ Other: specify: _____	44. Tapboxes (from Lateral to Fields) Comments: Wood, number: _____ _____ Metal, number: _____ Concrete, number: _____						
45a. Flume(s) Material Wood, number: _____ Metal, number: _____ Concrete, number: _____	45b. Flume(s) Form Half-round; number: _____ Boxed; number: _____ Pipe; number: _____	46. Diversion Structures (diversion dams) Brush and rock, number: _____ Wood, number: _____ Concrete, number: _____ Metal piling, number: _____ Direct (i.e. no dam or diversion); number: _____					
Landscape Details							
47. Headgate topography and vegetation (describe): <u>Grass</u>	48. Bank vegetation (describe): <u>Grass and trees</u>	49. Field crops (describe): <u>Corn, chile, tomatoes, cucumbers, apple, peach, apricot, pear trees and alfalfa.</u>	50. Paths, roads, gates, fences, etc. (describe): <u>Acequia crosses main road into Los Luceros.</u>				
Additional Information Sources							
51. Additional information sources; e.g. SEO, SRAC, Acequia Book _____							

Acequia 5 (Feature 8), a lateral irrigation ditch documented during 2008 utility trench monitoring. Although this feature is associated with LA 122393, the historic Los Luceros Acequia Madre, which runs east of the property, it was recorded only as it occurred within the LA 37549 project area.



Profile of Acequia 5 (Feature 8).

Appendix 2: Unexpected Discovery at the Welcome Center Excavation

On March 15, 2011, the Office of Archaeological Studies (OAS), Department of Cultural Affairs, was contacted by Patrick Salazar, the facility manager for Los Luceros (DCA-ASD) regarding the unexpected discovery of a cultural deposit in the northeast corner of the Welcome Center addition. Mr. Salazar was notified by the contractor that bones, possibly human, were encountered during backhoe excavation. OAS responded to the request with a field visit and an examination of the location, context, and deposits. Examination of the bones revealed that they were juvenile cow and that the bones were associated with eighteenth-century Native American-made ceramics and charcoal and ash, indicating the presence of an isolated refuse-filled pit. The field visit was carried out by Stephen Post, OAS deputy director; and Susan Moga, OAS archaeologist. Work was conducted under the testing permit.

Construction work northwest of the Los Luceros Visitors Center involved the over excavation of a 15 m northwest to southeast by 8 m northeast to southwest footprint. The area was excavated to 90 cm below the existing ground surface, removing fill that was replaced with compactable fill into which the footings for the new building could be excavated. Between 70 and 90 cm below the existing ground surface, the contractor encountered a charcoal- and ash-infused deposit. The deposit was not noticed within the footing excavation, but the backhoe operator noticed bones in the backdirt pile, which he reported to the construction foreman. Work stopped, and the contractor notified Patrick Salazar and OAS.

As stated above, the bones were determined to be those of a juvenile cow. We troweled through the backdirt, which was piled along the west edge of the excavation, looking for additional faunal remains, pottery, and further evidence of the deposit. This troweling uncovered a laminated clay/sand infused with charcoal and ash containing six Native American-made ceramics, five animal bones, a mica sheet fragment, and a piece of metal. The laminated soil suggested that the deposits had once filled a pit of unknown size, which was left exposed to the elements, resulting in puddling and the accumulation of a small number of artifacts. Scraping of the excavation wall did not reveal a pit cross section, indicating that the pit had been backfilled before our arrival.

The 13 artifacts as described above included Native American-made pottery, animal bone, and metal. The six Native American-made sherds were red polished jar sherds, probably from undecorated storage jars typical of historic Tewa-series pottery of the eighteenth and nineteenth century. Two sherds were plain utility jar body fragments, one of which was polished on the interior. One sherd was a polished red ware soup plate rim. The five animal bones included a cow calcaneus, three indeterminate sheep/goat long-bone fragments, and a sheep/goat horn core. Three of the bones exhibit evidence of ax or knife butchering. The horn core is from an adult male. The metal artifact is a rusty 3-inch wire nail with a large head. It probably dates to the middle 1850s or early 1900s, suggesting a Territorial-period age for the deposit. Based on the artifact manufacture dates, OAS suggests that this deposit corresponds with the latter portion of the Lucero family ownership of the property.

The artifacts will be submitted for curation with the testing-phase assemblage recovered during the Los Luceros facilities renovation project. The artifacts will be curated at the Archaeological Research Collection, Museum of Indian Arts & Culture, in Santa Fe.

Based on the results of the unexpected discovery, OAS recommends that all contractors working on the Los Luceros facility improvement project continue to report all unexpected discoveries to DCA-ASD. In that case, all work in the immediate area of the discovery should halt. DCA-ASD should inform HPD and OAS about the discovery so an action plan can be submitted by OAS to HPD. OAS will implement the plan. OAS will report to HPD on the findings, and if HPD determines that sufficient information has been recovered and that continued work will not significantly impact the find, then the contractor may go back to work in the area. If it is determined that the work will impact significant deposits or features, then an expanded testing or treatment plan and investigation may be required by HPD. In this case, the required archaeological investigation will be carried out as expeditiously as possible to allow the contractor to return to work with minimum delay.



Area of the unexpected discovery at Los Luceros.



Bones, charcoal, and ash associated with eighteenth-century Native American-made ceramics.

Appendix 3: Additional Backhoe Trench and Test Pit Photos



LA 37549, Backhoe Trench 1, facing east



LA 37549, Backhoe Trench 2, facing northeast



LA 37549, Backhoe Trench 1, facing east



LA 37549, Backhoe Trench 2, facing east



LA 37549, Test Pit 2, facing north



LA 37549, Test Pit 4, facing east



LA 37549, Test Pit 1, facing south



LA 37549, Test Pit 3, facing west



LA 37549, Test Pit 6, facing north



LA 37549, Test Pit 7, facing south



LA 37549, Test Pit 5, facing east



LA 37549, Test Pit 6, facing northwest



LA 37549, Test Pit 9, facing west



LA 37549, Test Pit 11, facing west



LA 37549, Test Pit 8, facing north



LA 37549, Test Pit 10, facing north



LA 37549, Test Pit 11, Feature 1, facing south, close-up



LA 37549, Test Pit 12, facing north



LA 37549, Test Pit 11, Feature 1, facing south



LA 37549, Test Pit 11, Feature 1, facing west

