

# **BASELINE DATA REPORT**

## **Section 11.0**

### **Historic Places and Cultural Properties**

JANUARY 2011

Revision 1

Submitted To:

New Mexico Mining and Minerals Division  
&  
U.S. Forest Service (Cibola National Forest)  
&  
New Mexico Environment Department

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## 11.0 Historic Places and Cultural Properties

### NMAC §19.10.6.602 D.(13) (i)

*(i) A list and accompanying map indicating all sites on or eligible for listing on either the National Register of Historic Places and /or the State Register of Cultural Properties and known cemeteries and human burials within the proposed permit area. Included with this list and map shall be a description of the effects the proposed mining operations may have on these sites and any proposed mitigation measures.*

### 11.1 Introduction

Cultural resources surveys were conducted by Lone Mountain Archaeological Services, Inc. (LMASI) for the Roca Honda permit area in 2006 in advance of commencing any activity on-site. The information required by NMAC §19.10.6.602 D.(13) (i) regarding historic places and cultural resources was compiled. The information gathered, particularly the map and/or tables identifying the locations of cultural sites, is considered confidential. Therefore, in order to protect the integrity of these sites, and minimize the likelihood of their disturbance, the information is presented in the cultural resources survey reports (LMASI 1030a and 1030b). RHR also more recently performed a cultural resources survey for the access route beginning at the north bound Lee Ranch coal mine private road, west through the southern edge of Section 11, T13N R8W, into the permit area on Section 10 (LMASI 1233). These reports were submitted to the New Mexico State Historical Preservation Office (SHPO) and the USFS for their review. RHR received the USFS and SHPO determinations in early 2011. These have been incorporated into this section of the BDR. The “CONFIDENTIAL” map showing the location of the sites identified by the archaeological survey contractor will be updated to reflect the agency determinations.

### 11.2 Sites on or Eligible for Listing

#### 11.2.1 Sections 9 and 10

A cultural resources survey was conducted on Sections 9 and 10 of the permit area between April 20 and July 22, 2006. This survey was conducted under Cibola Forest Permit No. CIB71 and State Permit No. 06-073. The permit area was previously surveyed as part of a larger survey (Koczan and Doleman 1976). Prior to the field survey, a literature search was conducted of the National Register of Historic Places (NRHP), the State Register of Cultural Properties, the Archaeological Records Management Section of the State Historic Preservation Division, and the Cibola National Forest Office in Albuquerque, New Mexico.

The report indicated that 94 sites were visited during the survey, 69 of which were new sites discovered and registered and 25 of which were previously recorded sites and revisited. Review by the USFS and the SHPO determined that 22 sites were eligible for nomination to the NRHP, 61 sites were undetermined and 11 sites that are ineligible for listing. Appendix 11-A of this section contains a table listing these sites. Further details regarding these sites can be found in the report and review files located at the offices of the Cibola National Forest and at the New Mexico State Historic Preservation Office.

### 11.2.2 Section 16

A cultural resources survey was conducted on Section 16 of the permit area between April 20 and July 22, 2006. This survey was conducted under State Permit No. 06-073. Prior to the field survey, a literature search was conducted of the NRHP, the State Register of Cultural Properties, the Archaeological Records Management Section of the State Historic Preservation Division, and the Cibola National Forest Office in Albuquerque, New Mexico.

The report indicates that 54 sites were visited during the survey, 50 of which were new sites discovered and registered and 4 of which were previously recorded sites and revisited. The USFS and SHPO determined 27 sites eligible for nomination to the NRHP and 27 sites whose eligibility was undetermined. Appendix 11-A of this section contains a table listing these sites. Further details regarding these sites can be found in the report located at the offices of the Cibola National Forest and at the New Mexico State Historic Preservation Office.

### 11.2.3 Access Corridor/Haul Road

A cultural resources survey was conducted on the access corridor and haul road to the permit area on July 7, 2009. The survey was conducted under Cibola Forest Permit No. CIB 106 and State Permit No. 06-073. This survey was necessary, even though the road through Section 11 is not part of the permit area, because RHR intends to improve and maintain a portion of Forest Road 192 and an existing unnamed Forest Service Road as shown on Figure 1-1 of the Mine Operations Plan, for the purposes of accessing Section 10 of the permit area. Review of the records prior to conducting the field survey indicated that four sites had been previously recorded within the access corridor/haul road. No new sites were discovered during the course of the survey and two of the four previously recorded sites could not be relocated in the field. One of the relocated sites was identified as eligible for nomination to the National Register of Historic Places and the other site's eligibility was undetermined. The USFS and SHPO confirmed the determinations. Appendix 11-A of this section contains a table listing these sites. Further details regarding those sites can be found in these reports located at the offices of the Cibola National Forest and the New Mexico State Historic Preservation Office.

### 11.2.4 Mt. Taylor Traditional Cultural Property

In April 2008, the USFS determined that certain areas of Mt. Taylor and certain surrounding forest property, known commonly as the Mt. Taylor Traditional Cultural Property (TCP) were eligible for listing on the NRHP. Sections 9 and 10 of the permit area are within the boundary of the USFS Mt. Taylor TCP. Additionally, Section 11, through which access will be gained to Section 10, is also in the TCP. Figure 11-1 shows the USFS TCP boundary.

On June 5, 2009 the New Mexico Cultural Properties Review Committee (CPRC) placed a certain area of Mt. Taylor and surrounding property on the State Register of Cultural Properties and recommended it for nomination on the NRHP. Sections 9 and 10 of the permit area are located within the boundary of the property identified as the Mt. Taylor TCP. However, the CPRC exempted private property from the designation as "non-contributing" properties. RHR



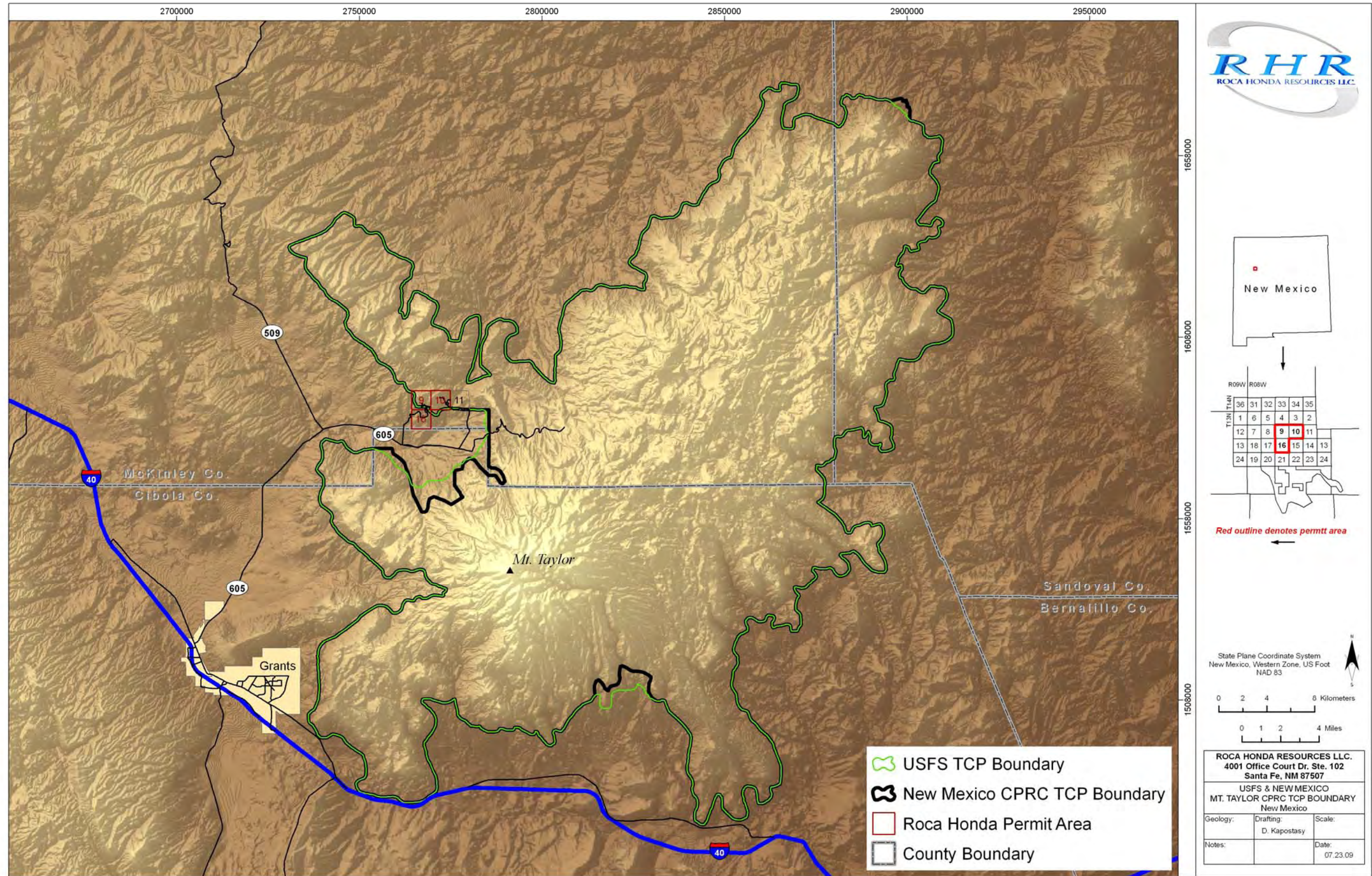


Figure 11-1. USFS TCP and New Mexico CPRC TCP Boundaries



views its mineral estate as private property. Inasmuch as RHR holds the claims to the minerals beneath the surface of Sections 9 and 10, the status of these sections with respect to the TCP with regard to the state designation remains unclear. Figure 11-1 shows the State of New Mexico TCP boundary.

#### 11.2.5 Known Cemeteries and Human Burials

No known cemeteries or human burials exist within the proposed permit area.

### 11.3 Effects and Proposed Mitigation Measures

#### 11.3.1 Archeological Resources

The archeological and cultural surveys performed identified a total of 150 archeological sites, 94 in Sections 9 and 10, 54 in Section 16, and 2 in Section 11. Fifty (50) of these sites have been determined to be eligible for listing on the NRHP and/or the State Register of Cultural Properties. Eighty nine (89) are of undetermined status and the remainder, eleven (11) are ineligible for listing.

The surveys were performed prior to conducting any invasive activities on the permit area. The purpose of the survey was to identify cultural resources in the field so that appropriate mitigation measures could be implemented in advance of any construction and operations, therefore, minimizing any potential effects.

RHR has used the survey results to plan as much of its anticipated surface activities around these known locations to avoid all sites to the extent possible. The “footprint” of proposed surface disturbances, including all mine-site construction, was located on a map and provided to LMASI for their review and field checks to determine potential impacts. Figures 11-2 thru 11-7 which are included in the “CONFIDENTIAL” package submitted separately, show the location of each site relative to the disturbance footprint. Of the 150 sites identified, only two could not be avoided, LA-162755 and LA-162769. The former is an eligible site that is located in the midst of the Section 16 mine shaft/surface facilities. The latter is an undetermined site that is within the designated stock pile area.

LMASI identified several sites that could be affected by construction or operations. Appendix 11-B contains RHR’s proposed mitigation for these sites as recommended by LMASI. The proposed mitigation measures include, first and foremost, avoidance wherever possible. RHR will implement the actions proposed by LMASI for the sites identified in Appendix 11-B and will continue to work with them to ensure that the cultural resources in the permit area are protected to the maximum extent possible. For example, prior to conducting any surface disturbance, either during the construction phase of the project, or during operations, an archeologist will be retained to monitor site activities. No disturbance activities will begin without first having the archeologist further clear the area. The archeologist will monitor surface disturbance activities. If, during conduct of the disturbance activity, previously unknown cultural resources are uncovered, the archeologist will evaluate the activity to determine appropriate mitigation measures. RHR’s proposed mitigation plan notwithstanding, the archaeological mitigation plan will be prepared for testing and mitigation consistent with appropriate agency criteria for approval before implementation.

### 11.3.2 Mt. Taylor TCP

Because the RHR permit area is located within and adjacent to the USFS and CPRC designated TCP boundary for the Mt. Taylor TCP, consultation with various Native American tribes and pueblos will be conducted. The potential effect of the proposed RHR mine and the resulting proposed mitigation measures will be identified from these consultations. RHR will work with the agencies and respective Indian communities to address this issue.

## 11.4 References

Koczan, S.A., and W.H. Doleman, 1976. "An Archaeological Inventory of a Five Section Tract Northwest of San Mateo, New Mexico, for Kerr-McGee Corporation," Museum of New Mexico Division of Anthropology, Project No. 64.15.

LMASI (Lone Mountain Archaeological Services, Inc.), 1030a, 2006. "Cultural Resource Survey for Proposed Uranium Prospecting in Township 13N, Range 8W, Sections 9 and 10, on the Cibola National Forest, McKinley County, New Mexico," prepared by S. Walley, S.D. Daras, and D.H.M. Boggess, and submitted by D.H.M. Boggess, Principal Investigator, Lone Mountain Archaeological Services, Inc., Albuquerque, New Mexico.

LMASI, 1030b, 2006. "Cultural Resource Survey for Proposed Uranium Prospecting in Township 13N, Range 8W, Section 16 near San Mateo, New Mexico," prepared by S. Walley, and submitted by D.H.M. Boggess, Principal Investigator, Lone Mountain Archaeological Services, Inc., Albuquerque, New Mexico.

LMASI, 1233, 2009. "Cultural Resources Survey for Improvements to Forest Road 192 and an Unnamed Forest Service Road In Township 13 N, Range 8 W, Section 11, On Cibola National Forest McKinley County, New Mexico", prepared by P. Allison and submitted by D.H.M. Boggess, Principal Investigator, Lone Mountain Archaeological Services, Inc., Albuquerque, New Mexico.

## Appendix 11-A

Cultural Resources Eligibility Designation  
for Inclusion in  
National Register of Historic Places or  
State Register of Cultural Properties



Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-0004	13168		18 x 35	Historic Navajo (A.D. 1600 to A.D. 1863)	Eligible	y
AR-03-03-02-0005	13169		163 x 206	Pueblo II to IV (A.D. 1000 to A.D. 1600), Historic Navajo (A.D. 1600 to A.D. 1800), and Historic Anglo-American (A.D. 1880 to A.D. 1945)	Undetermined	y
AR-03-03-02-0006	13170		210 x 220	Late Archaic to Basketmaker II (1500 B.C. to A.D. 300), Anasazi/Ancestral Pueblo/Ancestral Pueblo Pueblo I to Pueblo III (A.D. 750 to A.D. 1300), Unspecified Navajo (A.D. 1500 to A.D. 1880)	Eligible	y
AR-03-03-02-0007	13171		185 x 163	Anasazi/Ancestral Pueblo/Ancestral Pueblo Basketmaker II to Pueblo III (100 B.C. to A.D. 1200), possible Unspecified Navajo (A.D. 1500 to present)	Eligible	y
AR-03-03-02-0008	13172		78 x 59	Unspecified Anasazi/Ancestral Pueblo/Ancestral Pueblo (A.D. 600 to A.D. 1600), Unspecified Navajo (A.D. 1500 to present), Unknown Historic (A.D. 1880 to present)	Eligible	y
AR-03-03-02-0011	13175		166 x 140	Unspecified Anasazi/Ancestral Pueblo/Ancestral Pueblo (A.D. 1000 to A.D. 1300), Navajo Dinetsah phase to Gobernador phase (A.D. 1500 to A.D. 1750), Unknown Historic (A.D. 1866 to present)	Eligible	y
AR-03-03-02-0012	13176		84 x 238	Basketmaker II to Pueblo III Anasazi/Ancestral Pueblo (100 B.C. to A.D. 1150), Dinetsah phase to Pre-Reservation Navajo (A.D. 1500 to A.D. 1770)	Eligible	y
AR-03-03-02-0016	13180		58 x 41	Unspecified Anasazi/Ancestral Pueblo/Ancestral Pueblo (A.D. 600 to A.D. 1600)	Ineligible	n
AR-03-03-02-0026	13190		116 x 158	Basketmaker II to Pueblo III (100 B.C. to A.D. 1300), Unspecified Navajo (A.D. 1500 to present)	Eligible	y
AR-03-03-02-0027	13191		208 x 172	Anasazi/Ancestral Pueblo, Pueblo II to Pueblo III (A.D. 1000 to A.D. 1150), Unspecified Navajo (A.D. 1500 to present), Unknown Historic (A.D. 1880 to A.D. 1920)	Eligible	y
AR-03-03-02-0028	13192		74 x 58	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1150)	Undetermined	y

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-0029	13193		23 x 52	Pueblo I to Pueblo II Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 1000), NM Statehood to WWII Hispanic (A.D. 1941)	Undetermined	y
AR-03-03-02-0030	13194		90 x 42	Pueblo I to Pueblo III Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 1300)	Eligible	y
AR-03-03-02-0031	13239		16 x 18	Unspecified Navajo (A.D. 1500 to present)	Undetermined	y
AR-03-03-02-0033	13241		4 x 6	Unknown (9500 B.C. to present)	Undetermined	y
AR-03-03-02-0034	13242		14 x 9	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-0035	13243		4 x 9	Pueblo I to Pueblo III Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 1300)	Eligible	y
AR-03-03-02-0036	13244		56 x 66	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-0037	13245		45 x 59	Pueblo I to Pueblo III Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 1200)	Eligible	y
AR-03-03-02-0041	13249		79 x 66	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
AR-03-03-02-0043	13251		80 x 98	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	n
AR-03-03-02-0061	13269		3 x 3	Unknown (9500 B.C. to present)	Undetermined	y
AR-03-03-02-0062	13270		101 x 62	Pueblo I to Pueblo III (A.D. 750 to A.D. 1200)	Undetermined	y
AR-03-03-02-2697	154027		58 x 42	Pueblo I Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 900), possible Unspecified Navajo (A.D. 1500 to present)	Undetermined	y
AR-03-03-02-2698	154028		195 x 159	Pueblo II to Pueblo III (A.D. 1000 to A.D. 1300)	Undetermined	y
AR-03-03-02-2699	154029		92 x 98	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	n
AR-03-03-02-2700	154030		23 x 41	Pueblo II to Pueblo III Anasazi (A.D. 900 to A.D. 1300)	Ineligible	y
AR-03-03-02-2701	154031		27 x 60	Pueblo I to Pueblo II Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 1000)	Eligible	y
AR-03-03-02-2702	154032		31 x 41	Unknown Aboriginal (9500 B.C. to A.D. 1860)	Undetermined	n

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-2703	154033		103 x 120	Middle to Late Archaic (2000 B.C. to 800 B.C.), Pueblo III to Pueblo IV Anasazi/Ancestral Pueblo (A.D. 1150 to A.D. 1500), Unknown Historic (A.D. 1900 to A.D. 1920)	Undetermined	y
AR-03-03-02-2704	154034		27 x 34	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	n
AR-03-03-02-2705	154035		23 x 26	Unknown Historic (A.D. 1900 to A.D. 1940)	Ineligible	y
AR-03-03-02-2706	154036		45 x 76	Unknown Aboriginal (9500 B.C. to A.D. 1860), Recent (A.D. 1950s)	Undetermined	n
AR-03-03-02-2707	154037		75 x 120	Late Archaic to Basketmaker II (1500 B.C. to A.D. 300), Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	n
AR-03-03-02-2708	154039		140 x 55	Late Archaic to Basketmaker II (1500 B.C. to A.D. 300), Pueblo III to Pueblo V Anasazi/Ancestral Pueblo (A.D. 1175 to A.D. 1650)	Undetermined	y
AR-03-03-02-2709	154040		29 x 26	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Ineligible	n
AR-03-03-02-2710	154041		117 x 71	Unspecified Anasazi/Ancestral Pueblo (A.D. 400 to A.D. 1600), Middle Reservation Navajo (A.D. 1900 to A.D. 1920)	Eligible	y
AR-03-03-02-2711	154042		6 x 6	Unspecified Anasazi/Ancestral Pueblo (A.D. 600 to A.D. 1600)	Undetermined	y
AR-03-03-02-2712	154043		35 x 48	Unknown Aboriginal (9500 B.C. to A.D. 1860)	Undetermined	y
AR-03-03-02-2713	154044		19 x 7	Dinetah phase to Gobernador phase Navajo (A.D. 1500 to A.D. 1750)	Ineligible	y
AR-03-03-02-2714	154045		39 x 39	Middle Reservation Navajo (A.D. 1880 to A.D. 1920)	Undetermined	y
AR-03-03-02-2715	154046		7 x 9	Unspecified Navajo (A.D. 1500 to present)	Ineligible	y
AR-03-03-02-2716	154047		43 x 34	Anasazi/Ancestral Pueblo, Pueblo II to Pueblo III (A.D. 1000 to A.D. 1150), Gobernador phase Navajo (A.D. 1700 to A.D. 1730)	Undetermined	y
AR-03-03-02-2717	154048		89 x 38	Middle Reservation Navajo (A.D. 1890 to A.D. 1920)	Undetermined	y
AR-03-03-02-2718	154049		13 x 16	Unknown Aboriginal (9500 B.C. to A.D. 1860), Recent (A.D. 1950s)	Undetermined	y
AR-03-03-02-2719	154050		29 x 27	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1300), Dinetah phase to Gobernador phase Navajo (A.D. 1500 to A.D. 1750)	Undetermined	y

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-2720	154051		38 x 22	Pueblo I Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 900), Dinetsah phase to Gobernador phase Navajo (A.D. 1500 to A.D. 1750)	Undetermined	y
AR-03-03-02-2721	154052		6 x 5	Unspecified Anasazi/Ancestral Pueblo (A.D. 600 to A.D. 1600)	Undetermined	y
AR-03-03-02-2722	154053		149 x 83	Unspecified Anasazi/Ancestral Pueblo (A.D. 600 to A.D. 1600), Pre-Reservation Navajo (A.D. 1760 to A.D. 1850), Unknown Historic (A.D. 1890 to A.D. 1920)	Undetermined	y
AR-03-03-02-2723	154054		128 x 50	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Ineligible	n
AR-03-03-02-2724	154055		117 x 239	Possible Paleoindian (8150 B.C. to 8000 B.C.), Early Archaic through Basketmaker II (ca. 3500 B.C. to A.D. 300), Pueblo I to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-2725	154056		69 x 114	Pueblo II Anasazi/Ancestral Pueblo (A.D. 950 to A.D. 1000)	Eligible	n
AR-03-03-02-2726	154057		51 x 39	Unknown Aboriginal (9500 B.C. to A.D. 1860), Middle Reservation Navajo (A.D. 1880 to A.D. 1920)	Undetermined	y
AR-03-03-02-2727	154058		14 x 8	Unspecified Navajo (A.D. 1500 to present)	Undetermined	y
AR-03-03-02-2728	154059		38 x 57	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Dinetsah phase to Gobernador phase Navajo (A.D. 1500 to A.D. 1750)	Undetermined	y
AR-03-03-02-2729	154060		27 x 37	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Unknown Historic (A.D. 1880 to A.D. 1920)	Undetermined	n
AR-03-03-02-2730	154061		53 x 82	Basketmaker II to Pueblo III Anasazi/Ancestral Pueblo (100 B.C. to A.D. 1150)	Eligible	y
AR-03-03-02-2731	154062		21 x 22	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
AR-03-03-02-2732	154063		30 x 54	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
AR-03-03-02-2733	154064		33 x 31	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
AR-03-03-02-2734	154065		36 x 41	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Unspecified Navajo (A.D. 1500 to present)	Undetermined	y



Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-2735	154066		45 x 35	Pueblo II Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1000)	Undetermined	n
AR-03-03-02-2736	154067		22 x 34	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
AR-03-03-02-2737	154068		260 x 178	Middle Archaic (2600 B.C. to 1850 B.C.), Late Archaic to Basketmaker II (1500 B.C. to A.D. 300), Pueblo II to Pueblo IV Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1350)	Eligible	y
AR-03-03-02-2738	154069		236 x 221	Paleoindian (8150 B.C. to 8000 B.C.), Late Archaic to Basketmaker II (1500 B.C. to A.D. 300), Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1300), Unspecified Navajo (A.D. 1500 to present), Unknown Historic (A.D. 1887 to A.D. 1930)	Eligible	y
AR-03-03-02-2739	154070		55 x 36	Late Archaic to Basketmaker II (1600 B.C. to A.D. 300), Pueblo III to Pueblo IV Anasazi/Ancestral Pueblo (A.D. 1150 to A.D. 1500), possible Unspecified Navajo (A.D. 1500 to present), Unknown Historic (A.D. 1890 to present)	Undetermined	y
AR-03-03-02-2740	154071		36 x 34	Unknown Aboriginal (9500 B.C. to A.D. 1860)	Undetermined	y
AR-03-03-02-2741	154072		24 x 18	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-2742	154073		79 x 36	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1300)	Undetermined	y
AR-03-03-02-2743	154074		24 x 27	Unspecified Anasazi/Ancestral Pueblo (A.D. 600 to A.D. 1600)	Undetermined	y
AR-03-03-02-2744	154075		25 x 44	Unknown Aboriginal (9500 B.C. to A.D. 1860)	Undetermined	n
AR-03-03-02-2745	154076		28 x 33	Unspecified Anasazi/Ancestral Pueblo (A.D. 600 to A.D. 1600)	Undetermined	y
AR-03-03-02-2746	154077		40 x 42	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300), Unknown Aboriginal (A.D. 1250 to A.D. 1860)	Undetermined	n
AR-03-03-02-2747	154078		14 x 17	Basketmaker II to Pueblo I Anasazi/Ancestral Pueblo (100 B.C. to A.D. 900)	Undetermined	n
AR-03-03-02-2748	154079		59 x 90	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300), Unknown Historic (A.D. 1930 to present)	Undetermined	y
AR-03-03-02-2749	154080		25 x 18	Pueblo I Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 900)	Ineligible	n

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-2750	154081		43 x 33	Unknown Historic (A.D. 1900 to A.D. 1920s)	Ineligible	n
AR-03-03-02-2751	154082		74 x 103	Basketmaker II to Pueblo III Anasazi/Ancestral Pueblo (100 B.C. to A.D. 1300)	Undetermined	y
AR-03-03-02-2752	154083		6 x 50	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-2753	154084		23 x 33	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	n
AR-03-03-02-2754	154085		14 x 21	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1000)	Undetermined	n
AR-03-03-02-2755	154086		39 x 36	Unknown (9500 B.C. to present)	Undetermined	y
AR-03-03-02-2756	154087		29 x 60	Unspecified Archaic (5500 B.C. to A.D. 200), Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Ineligible	n
AR-03-03-02-2758	154088		50 x 48	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-2759	154089		38 x 32	NM Statehood to Recent Hispanic/Anglo/Euroamerican (A.D. 1917 to A.D. 1957)	Ineligible	y
AR-03-03-02-2760	154090		31 x 21	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300), Recent Anglo/Euroamerican (A.D. 1957)	Undetermined	y
AR-03-03-02-2761	154091		31 x 38	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1300), Territorial to Recent Hispanic (A.D. 1908 to present)	Eligible	y
AR-03-03-02-2762	154092		42 x 71	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), possible Dineta phase to Gobernador phase (A.D. 1500 to A.D. 1750), NM Statehood to Recent Hispanic/Anglo/Euroamerican (A.D. 1924 to A.D. 1979)	Eligible	y
AR-03-03-02-2763	154093		46 x 72	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-2764	154094		39 x 45	Pueblo I to Pueblo III Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 1150)	Undetermined	n
AR-03-03-02-2765	154095		34 x 26	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Eligible	y

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-2766	154096		36 x 113	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
AR-03-03-02-0003,-0009	13167, 13173		218 x 278	Unspecified Archaic (5500 B.C. to A.D. 200), Anasazi/Ancstral Pueblo/Ancstral Pueblo, Pueblo I through Pueblo III (A.D. 750 to A.D. 1150), possible Navajo Gobernador Phase (A.D. 1620 to A.D. 1750), Historic Euroamerican or Navajo (A.D. 1880 to A.D. 1890)	Eligible	y
AR-03-03-02-0038,-0039,-0040	13246, 13247, 13248		120 x 133	Pueblo I to Pueblo III Anasazi/Ancstral Pueblo (A.D. 750 to A.D. 1200)	Eligible	y
1030-100	162732		67 x 43	Pueblo I to Pueblo III Anasazi/Ancstral Pueblo (A.D. 750 to A.D. 1300)	Undetermined	n
1030-101	162733		11 x 7	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
1030-102	162734		35 x 36	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 900 to A.D. 1300)	Eligible	y
1030-103	162735		20 x 23	Pueblo II Anasazi/Ancstral Pueblo (A.D. 900 to A.D. 1000)	Undetermined	y
1030-104	162736		29 x 14	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 1000 to AD. 1150)	Undetermined	n
1030-105	162737		38 x 37	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	n
1030-106	162738		65 x 95	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 1000 to A.D. 1150), Unspecified Navajo (A.D. 1500 to present), Recent Anglo/Euroamerican (A.D. 1945 to A.D. 1996)	Undetermined	y
1030-107	162739		253 x 70	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 1000 to A.D. 1150), NM Statehood to World War II to Recent Hispanic (A.D. 1921 to A.D. 1971)	Undetermined	y
1030-108	162740		40 x 60	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	n
1030-109	162741		55 x 43	Pueblo II to Pueblo III Anasazi/Ancstral Pueblo (A.D. 1000 to A.D. 1150), NM Statehood to World War II Hispanic (A.D. 1934)	Undetermined	y
1030-110	162742		12 x 8	Unknown (9500 B.C. to present)	Undetermined	y

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
1030-111	162743		43 x 86	Basketmaker II to Pueblo III Anasazi/Ancestral Pueblo (100 B.C. to A.D. 1300) and Statehood to World War II Hispanic (A.D. 1923 to A.D. 1924)	Eligible	y
1030-112	162744		105 x 140	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)) and US Territorial to Recent Hispanic (A.D. 1910 to A.D. 1940s)	Undetermined	y
1030-113	162745		290 x 300	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Dinétah Phase to Gobernador Phase Navajo (A.D. 1500 to A.D. 1750)	Eligible	y
1030-114	162746		54 x 62	Pueblo II Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1000)	Undetermined	y
1030-115	162747		280 x 345	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Dinétah Phase to Gobernador Phase Navajo (A.D. 1500 to A.D. 1750)	Eligible	y
1030-116	162748		21 x 17	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
1030-117	162749		114 x 50	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
1030-118	162750		18 x 15	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1150)	Undetermined	y
1030-119	162751		10 x 10	Dinétah Phase to Gobernador Phase Navajo (A.D. 1500 to A.D. 1750)	Undetermined	y
1030-120	162752		46 x 49	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Eligible	n
1030-121	162753		295 x 250	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Dinétah Phase to Gobernador Phase Navajo (A.D. 1500 to A.D. 1750)	Eligible	y
1030-122	162754		92 x 69	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1150)	Eligible	y
1030-123	162755		31 x 56	Unspecified Navajo (A.D. 1500 to A.D. 1860)	Eligible	y
1030-124	162756		87 x 45	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Eligible	y



Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
1030-125	162757		113 x 53	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Hispanic US Territorial to Recent (ca. A.D. 1903 to A.D. 1992)	Eligible	y
1030-126	162758		258 x 59	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), Post-Pueblo Revolt to NM Statehood Hispanic (A.D. 1812 to A.D. 1939)	Eligible	y
1030-200	162759		22 x 45	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300), possible Unspecified Navajo (A.D. 1500 to A.D. 1860)	Eligible	y
1030-201	162760		80 x 79	Early to Late Archaic (4500 B.C. to 1500 B.C.), Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Eligible	n
1030-202	162761		146 x 192	Late Archaic to Pueblo I (1500 B.C. to A.D. 900), Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Eligible	y
1030-203	162762		108 x 106	Basketmaker II to Pueblo III Anasazi/Ancestral Pueblo (100 B.C. to A.D. 1150)	Eligible	y
1030-205	162763		36 x 62	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Eligible	n
1030-206	162764		121 x 119	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Eligible	y
1030-207	162765		42 x 39	Late Archaic to Basketmaker II (1500 B.C. to A.D. 300)	Undetermined	n
1030-208	162766		120 x 115	Late Archaic to Basketmaker II (1600 B.C. to A.D. 300), Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 and A.D. 1300)	Undetermined	y
1030-209	162767		27 x 24	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	y
1030-210	162768		37 x 24	Unknown Aboriginal (9500 B.C. to A.D. 1860)	Eligible	y
1030-211	162769		53 x 44	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	n
1030-212	162770		15 x 35	Unknown Aboriginal (9500 B.C. to A.D. 1860)	Undetermined	y
1030-213	162771		62 x 98	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Eligible	y

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
1030-214	162772		1 x 1	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1300)	Undetermined	y
1030-215	162773		35 x 18	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), NM Statehood to World War II Hispanic (A.D. 1923 to A.D. 1944)	Eligible	y
1030-216	162774		392 x 115	Basketmaker II to Pueblo III Anasazi (100 B.C. to A.D. 1300)	Eligible	y
1030-217	162775		203 x 50	Basketmaker III to Pueblo III Anasazi/Ancestral Pueblo (A.D. 600 to A.D. 1150), Unspecified Hispanic (A.D. 1800 to present)	Undetermined	y
1030-218	162776		117 x 56	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150)	Undetermined	n
1030-219	162777		92 x 53	Basketmaker II to Pueblo III Anasazi/Ancestral Pueblo (100 B.C. to A.D. 1150)	Eligible	y
1030-220	162778		1 x 1	Unspecified Hispanic (A.D. 1539 to present)	Undetermined	y
1030-221	162779		157 x 182	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 900 to A.D. 1150)	Eligible	y
1030-222	162780		18 x 38	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1300)	Undetermined	y
1030-223	162781		38 x 48	Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1000 to A.D. 1150), possible unspecified Navajo (A.D. 1500 to A.D. 1860), NM Statehood to Recent Hispanic (A.D. 1919 to present)	Undetermined	y
N/A	78871		112 x 110	Basketmaker III to Pueblo III Anasazi/Ancestral Pueblo (A.D. 600 to A.D. 1300)	Eligible	y
N/A	78872		255 x 172	Basketmaker II through Pueblo III Anasazi/Ancestral Pueblo (A.D. 400 to A.D. 1300), Dinetah phase through Gobernador phase Navajo (A.D. 1500 to A.D. 1750)	Eligible	y
N/A	78873		191 x 182	Middle to Late Archaic (2000 B.C. to 800 B.C.), Basketmaker II to Pueblo III Anasazi/Ancestral Pueblo (100 B.C. to A.D. 1300)	Eligible	y
N/A	78874		395 x 350	Possible Paleoindian (8700 B.C. to 8500 B.C.) Early to Late Archaic (4500 B.C. to 1500 B.C.), Pueblo I to Pueblo III Anasazi/Ancestral Pueblo (A.D. 750 to A.D. 1150)	Eligible	y

Forest Service No./Field No.	LA No.	Legal Description (Redacted)	Dimensions N/S m x E/W m or Length m	Temporal/Cultural Affiliation	Eligibility/ Criterion D	Structural (y/n)
AR-03-03-02-0449	16870		76 x 101	Pueblo II to Pueblo III Anasazi (A.D. 900 to A.D. 1300)	Eligible	y
AR-03-03-02-0450	16871		60 x 48	Late Archaic to Pueblo I Anasazi/Ancestral Pueblo (100 B.C. and A.D. 900); Pueblo II to Pueblo III Anasazi/Ancestral Pueblo (A.D. 1050 to A.D. 1300); US Territorial to NM Statehood -WWII Hispanic (A.D. 1900 to 1930)	Undetermined	y

## Appendix 11-B

LMASI Cultural Resources Mitigation Plan





July 23, 2009

Juan R. Velasquez  
Strathmore Minerals  
4001 Office Court Dr., Suite 102  
Santa Fe, NM 87507

Dear Mr. Velasquez:

Below is a list of the methods Lone Mountain proposes to manage the archaeological sites in the Roca Honda project area near Grants, New Mexico. These proposed methods are based on Strathmore's planned construction activities as of July 22, 2009, as well as Lone Mountain's National Register of Historic Places (NRHP) eligibility recommendations, which still require concurrence by various agencies before they can be finalized.

- Avoidance – In any case in which an undetermined or eligible archaeological site can be avoided, avoidance is recommended. Avoidance means no disturbance activities of any kind may occur within 100 ft (30 m) of the site, including vehicle traffic.
- Fencing – If work is to take place within 100 ft (30 m) of the site, but will not impact the site directly, fencing is recommended. Fencing will involve the installation of a temporary or permanent fence within the area that risks damage from nearby construction. The permanency and complexity of the fencing will be determined by the lead agency (i.e. the Forest Service or State).
- Testing – Testing of a site normally occurs when a site's eligibility status has not been determined through pedestrian archaeological survey. It may also occur when only a small portion of a site is to be impacted and full mitigation is deemed unnecessary by the lead agency. When testing a site, Lone Mountain will place small test units in areas most likely to contain buried cultural deposits, as well as in a few randomly chosen sample areas. The goal is to determine whether or not significant buried cultural material is present or absent on the site and, if present, to re-designate the site as eligible. If no buried cultural materials are found, the site is declared ineligible and no further work is required.
- Mitigation – Mitigation of the adverse effects to a site, also referred to as data recovery, is the final and most intensive stage in treating an eligible site. This is recommended only in cases where an eligible site cannot be avoided. Mitigation involves the retrieval of data from the site by the excavation and removal of data in the form of artifacts and other cultural materials such as carbon, pollen, and various samples that can be scientifically tested to reveal information that may relate to chronology, subsistence, and cultural affiliation. Lone Mountain will then analyze artifacts and submit any samples collected for laboratory testing (i.e., radiocarbon dating, etc.). Later, all artifacts will be sent to the Museum of Indian Arts and Culture/Laboratory of Anthropology in Santa Fe for permanent curation. Data collected from the various analyses will be incorporated into the technical report that documents the data collected. The goal of mitigation is to extract meaningful data from a site so that the proposed undertaking can move forward without losing significant information.

Attached is a table that breaks down all potentially impacted sites by their current eligibility status and the proposed actions for dealing with each site. Please feel free to contact me or Thor Dye with any questions or concerns regarding these recommendations.

Sincerely,

Peggy Allison  
Project Manager

# STRATHMORE Minerals Corporation

Summary of Archaeological Sites on the Roca Honda Project, which may need additional protective measures and/or testing.

**Table of Sites for Western Area**

<b>LA Number</b>	<b>Field Number</b>	<b>Legal Description (Redacted)</b>	<b>Eligibility Determination</b>	<b>LMAS Proposed Actions</b>
162734	1030-102		Eligible	Fence
78873	78873		Eligible	Fence
162763	1030-205		Eligible	Fence/Testing**
162768	1030-210		Eligible	Fencing/Mitigation**
162769	1030-211		Undetermined	Testing
162770	1030-212		Undetermined	Fence
162777	1030-219		Eligible	Fence
162758	1030-126		Eligible	Fence
162757	1030-125		Eligible	Fence
162755	1030-123		Eligible	Testing
162756	1030-124		Eligible	Fence
162753	1030-121		Eligible	Fence/Mitigation**
162747	1030-115		Eligible	Fence/Mitigation**
162775	1030-217		Undetermined	Fence/Road Closed***
78871	78871		Eligible	Fence/Mitigation**
162752	1030-120		Eligible	Fence/Testing**
162750	1030-118		Undetermined	Fence
162773	1030-215		Eligible	Fence
78872	78872		Eligible	Fence/Mitigation**
162759	1030-200		Eligible	Fence
162766	1030-208		Undetermined	Fence
13244	FS-0036		Undetermined	Fence
154096	FS-2766		Undetermined	Fence
154095	FS-2765		Undetermined	Fence

\*\*Possible testing or mitigation on road upgrade.

\*\*\*Road will be closed by Strathmore Minerals Corporation. Southern end may require fencing.

# STRATHMORE Minerals Corporation

Summary of Archaeological Sites on the Roca Honda Project, which may need additional protective measures and/or testing.

**Table of Sites for Eastern Area**

<b>LA Number</b>	<b>Field Number</b>	<b>Legal Description (Redacted)</b>	<b>Eligibility Determination</b>	<b>LMAS Proposed Actions</b>
13169	FS-0005		Undetermined	Fence
154028	FS-2698		Undetermined	Fence
154027	FS-2697		Undetermined	Fence/Testing*
13170	FS-0006		Eligible	Fence/Mitigation **
154059	FS-2728		Undetermined	Fence
154055	FS-2724		Undetermined	Fence
154056	FS-2725		Eligible	Fence

\*Only if newly proposed road will not work.

\*\*Mitigation for drainage run-off control.

**Table of Sites for Eastern Area Haul Road  
(LMAS Project # 1233; NMCRIS 114409; FS 2006-03-107C)**

<b>LA Number</b>	<b>Field Number</b>	<b>Legal Description (Redacted)</b>	<b>Eligibility Determination</b>	<b>LMAS Proposed Actions</b>
16870	FS-0449		Eligible	Fence*
16871	FS-0450		Undetermined	Fence*

\*Proposed haul road will be located to the north of LA 16870 (FS-0449), and to the south of LA 168710 (FS-0450). Forest Service will make a determination of mitigation efforts for both sites once a decision has been made by Strathmore as to the width of the haul road.