SAMPLING AND ANALYSIS PLAN

Section 11.0

Historical Places and Cultural Properties

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11.0 Historic Places and Cultural Properties

11.1 Introduction and Background

Cultural resources surveys were conducted 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 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 2006a and 2006b).These reports were submitted to the New Mexico State Historical Preservation Office and the US Forest Service for their review. The information will also be made available to others, as necessary.

11.1.1 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.

No cemeteries or human burials were found during the survey. The field survey identified 54 sites recommended eligible for nomination to the National Register of Historic Places. The survey also identified 29 sites whose eligibility was undetermined. Further details regarding these sites can be found in the report, "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", (NMCRIS No. 101380, LMAS Report No. 1030a, September 25, 2006), located at the offices of the Cibola National Forest and at the New Mexico State Historic Preservation Office. The report recommended that the "eligible" and "undetermined" sites be avoided while conducting site activities. If avoidance is not feasible, then testing and full recording of the sites should be performed.

11.1.2 Section 16

A cultural resources survey was conducted on July 21, 2006, on Section 16 of the permit area. Prior to that, Section 16 had never been entirely surveyed for cultural resources. 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.

No cemeteries or human burials were found during the survey. The field survey conducted on Section 16 identified 24 sites recommended for nomination to the National Register of Historic Places. The survey also identified 32 sites whose eligibility was undetermined. Further details regarding these sites can be found in the report, "Class Cultural Resource Survey for Proposed Uranium Prospecting In Township 13N, Range 8W, Section 16, near San Mateo, New Mexico", (NMCRIS No. 101380, LMAS Report No. 1030b, October 25, 2006), located at the offices of the Cibola National Forest and at the New Mexico State Historic Preservation Office. The report recommended that the "eligible" and "undetermined" sites be avoided while conducting site activities. If avoidance is not feasible, then testing and full recording of the sites should be performed.

11.2 Sampling Objectives

The objectives of the cultural resources surveys are to locate all sites on or eligible for listing on either the NRHP and /or the State Register of Cultural Properties and identify known cemeteries and human burials within the proposed permit area. The surveys are intended to identify the baseline cultural resources within the permit area so that mitigation measures can be performed prior to commencing mining operations.

11.3 List of Data to be Collected

The entire permit area (1920 acres) will be surveyed for the presence of archaeological and cultural resources of significance. Cultural properties will be categorized with reference to time, cultural groups, and adaptive strategies.

11.4 Methods of Collection

An archival review 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 prior to the field surveys. The file searches were conducted using the legal descriptions of the project area and a 1.6-km radius surrounds the project area. The search areas included Sections 8, 9, 10, 15, 16, 17, 20, 21, and 22 in T13N, R8W. The results of these literature searches are summarized in the cultural resources survey reports for Sections 9 and 10, and Section 16 (LMASI 2006a and 2006b). Following the literature searches, field personnel conducted a walk-over survey of the Roca Honda permit area, evaluating existing archaeological sites identified from the literature searches and identifying and evaluating new sites not previously recorded.

When cultural remains were encountered, a determination was made as to whether they constituted a site or an isolated occurrence. A site can be variable in size and content and range from a cluster of several objects or materials to large areas including structures with associated objects and features. In lieu of State of New Mexico guidelines regarding site definition standards, LMASI used the USFS Region 3 guidelines (NMCRIS No. 101072) to identify cultural sites. Under these guidelines, sites must be greater than fifty years old and have:

- 1. One or more features
- 2. One formal tool, if associated with other cultural material, or more than one formal tool
- 3. An occurrence of cultural material that contains:
 - Three or more types of artifacts or material
 - Two types of artifacts in a density of at least 10 items per 100 square miles

• A single type of artifact in a density of at least 25 items per 100 square miles

Isolated occurrences, on the other hand, are cultural remains that do not qualify as sites and generally consist of single artifacts or artifact scatters that are of extremely low density and are widely dispersed, or represent a single activity. Redeposited material that lacks significant locational context may also be determined to be an isolated occurrence.

When sites were encountered, boundaries were defined, a Laboratory of Anthropology site form was completed, a sketch map was drawn, and photographs were taken showing the setting of the site and important or representative features. Sites were plotted on USGS quadrangle maps, and global positioning system positions were taken. A datum was placed on a tree at each site, using a nail and an aluminum tag provided by the USFS. Each datum tree was marked with white flagging, as were site boundaries. LMASI did not collect any artifacts during the surveys.

When isolated occurrences were encountered, they were recorded in the field and then plotted on the USGS quadrangle map.

11.5 Parameters to be Analyzed

The field surveys identified 94 new archaeological sites and 160 isolated occurrences in Sections 9, 10, and 50 new archaeological site and 72 isolated occurrences in Section 16.

11.6 Maps Providing Sampling Locations

The cultural resources information (e.g., type, location) related to the Roca Honda permit area is considered confidential, and therefore, no map is provided in this SAP to accompany the list of sites found in Sections 9, 10, and 16. However, this information is presented in the cultural resources surveys reports (LMASI 2006a and 2006b) and can be made available if necessary.

11.7 Sampling Frequency

Cultural resources are located and identified during walkover surveys in the field. These surveys have been completed for purposes of a pre-mining assessment.

11.8 Laboratory and Field Quality Assurance Plan

The Contractor retained to perform the work is certified by the State of New Mexico to perform the historic and cultural surveys. These experienced professionals followed the accepted field procedures to conduct the surveys, mark and map the findings, and report the results.

11.9 Brief Discussion Supporting Proposal

The objective of the cultural resources surveys are to locate all sites on or eligible for listing on either the NRHP and /or the State Register of Cultural Properties and known cemeteries and human burials within the proposed permit area. The information generated will be used to develop mitigation strategies to protect archaeological and cultural resources that could be impacted by mining operations.

11.10 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.), 2006a. "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.

———, 2006b. "Class 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.