TO: John Sanders, Aries Consultants

FROM: R. Leavitt

DATE: March 16, 2009

RE: Class III methodology, Pahrump Airport Survey (FAA Memo 3-6-09) request

XC: File

All portions of this survey will cover approximately 1,156 acres for the parcels plus the access. The two portions are as follows:

Western Alternative...............................................................571 acres with two mile access road right-of-way
Eastern Alternative................................................................585 acres with two mile access road right-of-way

In order to provide coverage to a Class III level, pedestrian transects will be accomplished. Both alternatives are about 725 meters wide. This will require a minimum of 24 transects in each parcel covering the full length of 3250' (990 meters) to meet the current BLM standard of a maximum 30 meter interval. The transects will be walked along the long axis of the parcels, with control by UTM (NAD 83) points for each termination point of the individual transect. This will entail using a Trimble GEOXT to locate survey points.

Any sites located are probed (a small exploratory excavation) to determine depth of deposit if no naturally occurring feature provides this information. Probes are needed to determine depth and character of deposit for the requirements of the IMACS form and for the register NRHP eligibility of the resource. These will be 50X50 cm. All subsurface test units and excavation units will be backfilled as soon as possible after recording the results of their excavation, and restored as closely as reasonable to the original contour. Temporary stakes and/or flagging will be removed upon completion of field work. If any evidence of human skeletal remains is encountered during the course of the project the archaeologists will cease work in that location and shall immediately notify the authorized officer according to Nevada Revised Statutes. Work will not resume until the authorized officer has given permission.
The field work will be accomplished in three days with a two person crew. It is assumed that sites will be located and that planned work time for the reports will be more than adequate. Two transects will be walked for each access road alternative. Cultural Resources will be completely recorded, and evaluated for eligibility, during the initial inventory. This will require more initial field time to record resources, but will save time in the long run by eliminating unnecessary additional field trips to further evaluate resources prior to any needed mitigation. Adequate initial recordation and evaluation will also compress the Section 106 consultation process by eliminating unnecessary submissions.

Cultural sites are evidence of human activity, that are at least 50 years in age, with some exceptions. All cultural resources located during the inventory, or relocated from site records, will be recorded, or updated, so that the following information can be extracted from the site records:

a. Location: The resource will be located in relation to the cadastral system and the Universal Transverse Mercator (UTM) coordinate system, where possible. The location will also be described in narrative.

b. Function: The resource's probable function will be determined by consideration of the nature of features, structures, artifact assemblages, and ecofacts present. The lack of sufficient data to make this determination will be noted.

c. Cultural Affiliation or Historical Theme: The resource's probable cultural affiliation (tribe, cultural unit, prehistoric population) or historic theme (exploration, ranching, transportation, etc.) will be determined using the same data as was used for predicting function. The lack of sufficient data to make this determination will be noted.

d. Chronology: The resource's probable chronology will be determined using time-sensitive artifacts, structures, or features, as available. The lack of sufficient data to make this determination will be noted.

e. Dimensions and integrity: The size, depth, density and diversity of the components of the resource will be noted to the extent possible with the data in hand. The lack of sufficient data to make these determinations will be noted. The condition of the resource in terms of integrity, intrusions, probable ongoing impact, and potential future impacts will be noted.
CONSULTATIONS PRIOR TO
A CULTURAL RESOURCE SURVEY
OF THE PROPOSED
PAHRUMP VALLEY AIRPORT LOCATION
NYE COUNTY, NEVADA

CASE FILE # N-85470

For

ARIES CONSULTANTS LTD.
AND
PAHRUMP FIELD OFFICE
BUREAU OF LAND MANAGEMENT
AND
FEDERAL AVIATION ADMINISTRATION

By

Knight & Leavitt Associates, Inc.
3133 West Post Road
Las Vegas, Nevada 89118

JUNE 2009
INTRODUCTION

Knight & Leavitt Associates, Inc. (K&LA) of Las Vegas, Nevada has been retained by the Aries Consultants Ltd. to conduct a Class III cultural resource inventory of two proposed airport locations for a planned Pahrump Valley Airport near the California Boundary covering 1438 acres.

The project area is located on moderately sloping alluvium (Cornwall 1972) at an altitude of roughly 2580 feet ASL. The project area is in the creosote/blackbrush plant zone, with creosote being the dominant vegetation in the area.

A portion of the proposed project area had been surveyed in 1987 using 60m Transects. One site, actually an isolate, was located using that methodology. In contrast, archaeologists monitoring on the current project have located a NRHP eligible property. The explanation of the lack of sites in the 1987 survey on this “CLASS II” project was geomorphic in that the surface were seen as largely active and erosional. Also, the survey was done during wet period, with clay mud being an issue.

LEGAL DESCRIPTION

Township 21 South, Range 53 East
Section 7
  S ½ of the SE 1/4 of the NE 1/4
  S ½ of the SE 1/4 of the NW 1/4
  E ½ of the SW 1/4
  SE 1/4
  Lots 2, 3, and 4
Section 8
  Entire Section
Section 9
  W ½ of the SW 1/4
Section 16
  W ½
Section 17
  N ½
  N ½ of the SW 1/4
  SE 1/4 of the SW 1/4
  W ½ of the SE 1/4
  Lot 1
Section 18
  N ½ of the NE 1/4
  SE 1/4 of the NE 1/4
  Lots 1, 2, and 3
Section 20  Lot 1
Township 23 North, Range 8 East
Section 1
Lot 8

Township 24 North, Range 8 East
Section 36
W ½ of the NE 1/4
NE 1/4 of the NW 1/4 Lots 2, 3, 6, 7, 9, 10, 11, 13, 16, and 18

EXISTING DATA REVIEW AND LITERATURE SEARCH

Prior to the field inventory, an archaeologist from K&LA conducted archival research at the State Repository located at the Harry Reid Center, University of Nevada at Las Vegas, on December 10, 2008. The purpose of a record search is to identify any previously recorded sites or cultural resource surveys either within the project boundaries or within a one-mile radius of the proposed project area. Archival research places the project area within an archaeological context prior to field work. A request has been made for a records review of the adjacent area in Inyo County, California with the California archives at the University of California, Riverside. The results from California are pending.

Literature searches indicate the current project area has been partially included in previous surveys, and monitoring programs. Prehistoric lithic activity areas have been located in the project area, but only in the recent monitoring activities. The following is a list of reports noted during the record search.

CRM REPORTS IN THE CURRENT PROJECT AREA

<table>
<thead>
<tr>
<th>BLM Report Number</th>
<th>Title/Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-1043(P)</td>
<td>Las Vegas-Reno ORV Race, 82-3 (Frontier 500), involving 300 miles of off-road vehicle activity within the Las Vegas District, 1982 by Kevin Rafferty, Ph.D.</td>
<td>Resource located, not near this project area.</td>
</tr>
<tr>
<td>5-1723(P)</td>
<td>A Cultural Resource Investigation for Proposed Pahrump Valley Airport, Nye County, Nevada, 1987 by Keith Mhyrer</td>
<td>This survey was accomplished using 60m Transects. One site, actually an isolate, was located using that methodology.</td>
</tr>
</tbody>
</table>

A site was located is in the western parcel of the project area. See below for a discription.

CRM REPORTS NEAR THE PROJECT AREA - CONFIDENTIAL SITE INFORMATION

SITES IN THE PROJECT AREA

REVIEW OF CULTURAL CONTEXT
Prehistoric Culture History

Previous research shows that human beings have lived in Southern Nevada for at least the last 13,000 years but did not use every area of the region equally. The occupations have been divided into the following periods modified from a standard reference (Warren and Crabtree 1986).

PaleoIndian/Tule Springs Period (ca. 13,000-10,000 B.P.)

The PaleoIndian/Tule Springs period is the big game hunting period of North American prehistory. Hallmarks of the period, fluted Clovis and/or Folsom points, have been found in Clark County as isolated specimens.

Lake Mojave Period (ca. 10,000-7000 B.P.)

Representing the terminal portion of the PaleoIndian era throughout the Great Basin and eastern Mojave Desert, the Lake Mojave Period was a time of increasing aridity and decreasing rainfall, leading to the eventual extinction of the Pleistocene megafauna. Material culture of the period generally consists of small sites on the terraces of Pleistocene lakes or along extinct or reduced watercourses. Sites attributed to the Lake Mojave period have been found around playa and dry lake beds to the west of the current project area in Death Valley (Hunt 1960).

Pinto-Gypsum Period (ca.7000-1500 B.P.)

Generally considered the Desert Culture or Archaic period of Great Basin Prehistory, the Pinto-Gypsum Period is defined by a lifestyle dependent on the intensive exploitation of wild fauna and flora using generalized hunting and gathering tools and methods. During the period there was an increased reliance on seeds, nuts, berries, and other hard to process foods as evidenced by the presence of milling stones on many Pinto-Gypsum sites. Diagnostic artifacts for the period are the Humboldt, Pinto, and Gypsum series of points, each of which has temporal overlaps with the others. Many resource zones were exploited by Archaic peoples using a seasonally transhumant pattern that exploited resource zones when the flora and fauna became available. There are Archaic sites in the Spring Mountains to the east of the survey area and in the Bird Springs Range to the south.

Virgin Anasazi /Saratoga Springs (Patayan) Period (ca.2000-850 B.P.)

The Patayan period marks the appearance of the Virgin Anasazi in the Southern Nevada Region. The cultural pattern was similar to Anasazi groups in Arizona. Living along the Muddy and Virgin River Valleys, the Anasazi employed pithouse architecture and used limited horticulture. They also hunted and gathered, although agriculture eventually became the dominant mode of subsistence. Sites attributed to the Patayan period are located in Ash Meadows, and in the Las Vegas Valley north and east of the survey area (Warren and Crabtree 1986, Hunt 1960).

Shoshonean Period ( ca. 850-100 B.P.)

Archaeologically, the Paiute become visible in the cultural record about 850 years ago. The
Paiute material assemblage was generally simple, oriented toward food procurement rather than production. They employed Elko points or desert side-notched (DSN) points with juniper wood bows; they created rabbit snares and nets and wooden crooks for killing small game. The Paiute had a generalized stone tool kit but specific perishable materials including yucca cord headbands and sandals as well as woven baskets that they used as headgear or storage containers. Paiute ceramic types include brownwares, plainwares and corrugated sherds. Site types include rockshelters, open camps, brush wickiups, and roasting (mescal) pits.

The following chart presents the prehistoric culture history of the region by time period using previous field and synthetic works. The artifact classes are indicative of the cultural periods listed.

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>Gypsum</td>
<td>1950±100 B.P.</td>
<td>Gypsum Point</td>
</tr>
<tr>
<td></td>
<td>2000 B.C.- 500 A.D.</td>
<td>Amargosa Point</td>
</tr>
<tr>
<td>Saratoga Springs</td>
<td>1280±110 B.P.</td>
<td>Mortars</td>
</tr>
<tr>
<td></td>
<td>500-1200 A.D.</td>
<td>Portable Metate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moapa Gray Ware</td>
</tr>
<tr>
<td>Non Ceramic Paiute</td>
<td>1010±150 B.P.</td>
<td>Tizon Brown Ware</td>
</tr>
<tr>
<td></td>
<td>1200 A.D.-</td>
<td>Tsegí Orange Ware</td>
</tr>
<tr>
<td>Ceramic Paiute</td>
<td>220±100 B.P.</td>
<td>Desert Side Notch</td>
</tr>
<tr>
<td>Ceramic Yuman</td>
<td>1200 A.D.-</td>
<td>Slab Metate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paiute Brown Ware</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower Colorado Buff Ware</td>
</tr>
</tbody>
</table>

**PREHISTORIC LAND USE**

After contact with Europeans and the expansion of European territory, many Native American tribes entered into treaties with the newly formed American government; the Paiute, however, were not among those negotiating with the dominant power and thus have had extreme difficulties in getting federally recognized tribal status ever since. Nonetheless, the Paiutes were eventually assigned nine reservations within southern Nevada, including the Las Vegas, Moapa, Shivwits and Kaibab Reservations. Unlike most Native American tribes, the Paiutes were not forcibly marched miles from their traditional regions and left to live on tracts of land very different from their homeland (Knack 2001). Instead, Paiutes were given reservations in and
around land they had always occupied but that “realistically could not, and some were clearly not
designed to, provide a livelihood for the resident natives” (Knack 2001:3). The reservations
were either too small or had too many people living on them or both. None of the reservations
had any raw materials (i.e. timber, minerals) that could be exploited for Paiute gain.

Given the way most Native American/European interacts went, there was very little armed
conflict between Europeans and Paiutes (ironically contributing to the lack of treaties between
the two groups and the Paiutes’ later lack of federal recognition). However, given the
unworkable nature of the reservations, many Paiutes remained in the southern Nevada area but
did not live on the designated land; instead they lived near the white settlers who had taken over
the better springs and land. The two cultures became enmeshed, towns were created and grew,
and yet the Paiutes retained their distinctive culture and were never completely subsumed by
Europeans (Knack 2001).

Southern Paiutes never had a strict overarching political structure that could muster the troops at
a moment’s notice, leading many anthropologists to subdivide the Paiutes into “bands” based on
geographical location (Kelly and Fowler 1986; Knack 2001). Subdivisions included the
Chemehuevi, Las Vegas, Moapa, Pahranagat, Cedar and Beaver Bands to name a few. This
report will follow the “band” distinction convention in order to more eloquently place the project
area into a Southern Paiute context.

The survey area for the current project falls within the territory of the Las Vegas Band of the
Southern Paiute (Kelly and Fowler 1986:368), territory that incorporated three villages: one near
Potosi Spring, one near Kingston Spring, and one within the Ivanpah Valley (Steward 1938). It
is important to note that despite current place names and boundary lines, Las Vegas Band
territory included all of present day Las Vegas, Pahrump and a small portion of southeastern
California. A limited ethnographic account and political history of the Las Vegas Band is found
in Steward (1938:182-185); nonetheless, the Las Vegas Band differed from other Paiute groups
in that it acquired traits from the Mohave people (neighbors to the west in eastern California),
including vocabulary, housing structures, and farming techniques. Specific technologies
borrowed by the Las Vegas Band consisted of squared metates, paddle and anvil pottery making,
and hair dye. Like the Mohave people, the Las Vegas and, by extension, Pahrump Paiute
populations actively traded outside the region (Kelly and Fowler 1986:370). Members of the Las
Vegas Band routinely went to the Pacific Ocean to obtain Haliotis shell, they hunted in the
Tehachapi area, and are reported to have traveled to Hopi villages. Unique material culture
found in archaeological settings includes brownware ceramics and various types of twined
basketry (Kelly and Fowler 1986).

HISTORIC PERIOD

The following chart places the project area in the context of Nevada’s history. The Pahrump
Valley is technically located in Nye and Clark Counties, Nevada and Inyo and San Bernardino
Counties, California. During the 19\textsuperscript{th} century, the bulk of the revenue generated in the Pahrump Valley came from ranching and mining. In the ranching sector people could get as much as $200 per ton of alfalfa, $200 per ton of barley and over $500 per ton of fruit and nuts. Borax mining was also a lucrative option as borax was commonly used in the chemical industry. The following events are listed to provide a context for historic cultural sites in the Parhump Valley.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Historic Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1827-29</td>
<td>Antonio Armijo expedition explored the area that would become Nevada.</td>
</tr>
<tr>
<td>1848</td>
<td>Through the Treaty of Guadeloupe Hidalgo, the United States acquired Nevada.</td>
</tr>
<tr>
<td>1860s</td>
<td>“Mormon” Charlie, a Paiute man, built a ranch at Manse Springs using livestock abandoned by miners in Potosi.</td>
</tr>
<tr>
<td>1864</td>
<td>Nevada was admitted to the Union as the 36th state.</td>
</tr>
<tr>
<td>1877</td>
<td>Joseph Yount bought Mormon Charlie’s ranch in Manse. After initial problems the Younts did quite well, harvesting barley and corn and even making room to start a vineyard.</td>
</tr>
<tr>
<td>1880s</td>
<td>The Winters family moved to a Pahrump ranch and made a nice profit by finding and then selling borax mines. The family later lost most of its money when ranching did not turn out to be as lucrative as hoped.</td>
</tr>
<tr>
<td>1882</td>
<td>Phi Lee, Harry Spiller and Billy Yount (son of Joseph) found Monte Blanco, a huge deposit of borax.</td>
</tr>
<tr>
<td>Early 1900s</td>
<td>Frank “Pop” Buol moved to the Pahrump Valley and was one of the first people to drill a well in the area. Instead of farming alfalfa or any of the other typical crops, Buol started a winery which was either the first or second licensed winery in the state of Nevada. He was quite successful, producing 1100 gallons of wine per year and selling a portion of it to the Biltmore Hotel in Los Angeles.</td>
</tr>
<tr>
<td>1905</td>
<td>The “Borax King,” Borax Smith (who was also the founder of the Tonopah and Tidewater Railroad) and railroad magnate E.H. Harriman planned to “colonize” Pahrump by moving large numbers of people into the area in an effort to increase railroad activity. However, the plan failed and Pahrump’s population remained basically the same.</td>
</tr>
<tr>
<td>1914</td>
<td>Construction began on the Arrowhead Trail, an all-weather highway between Los Angeles and Salt Lake City by way of Las Vegas. It was completed in 1924. In 1914 it went through Searchlight.</td>
</tr>
</tbody>
</table>
1919 The Volstead Act brought national federal liquor prohibition.

1921 Congress passed the Federal Highway Act (Phipps-Townsend Act), which provided financial assistance to states and helped to build interstate highway systems. The San Pedro, Los Angeles & Salt Lake Railroad was absorbed by Union Pacific Railroad.

1931 The Nevada Legislature legalized gambling in Nevada. The act was signed by Governor Fred B. Balzar. The Nevada section of the federal highway system was completed and gravel-surfaced.

1934 Congress passed and President Franklin Roosevelt signed the Taylor Grazing Act.

1936 Basic Refractories, Inc. began developing and producing magnesia refractories and obtained a lease hold interest in a deposit of brucite in Nevada.

1939 Lois Kellogg, of the wealthy Eastern Kellogg family, moved to the Pahrump Valley and started her own ranch.

1946 Elmer Bowman bought the Manse Ranch and became interested in community life, championing education and strongly supporting the Mormon Church.

1956 President Dwight Eisenhower signed the National Defense Highway Act, passed by Congress to provide for an interstate freeway system in the U.S.


HISTORIC LAND USE

The survey area is located in the west-central portion of Pahrump Valley. The closest 19th century cultural feature to the project is Manse, which is eight miles to the east. The settlement of Manse dates to the late 1870s and not only was it one of a number of ranches in Pahrump and Amargosa, it was also a ranch and stopover on the wagon road from Ivanpah to Amargosa. From the 1870s until the development of the modern town of Pahrump (McCraken 1990:12) Manse remained a principal settlement inhabited by the Yount family and others. During the late 19th century Pahrump was a source of feed for the Vanderbilt and Ivanpah Mining Districts. The History of Pahrump by McCraken (1990) was the principal source used in reviewing resources located during this survey.

RESEARCH DESIGN

The following propositions were developed to guide the proposed fieldwork based consultation
and review of the ethnographic and historic literature.

Prehistoric

There is a moderate density of prehistoric sites located near the survey area; however, higher densities of sites are found near the valley edges and include locations such as Mule and Potosi Springs to the south of the project area. Prehistoric sites are common near the dry lake beds in the Mesquite, Pahrump, and Ivanpah Valleys and many natural caves and overhangs in the area were used prehistorically as shelters, including Bird Springs Cave, and Mule Springs on the west side of the Spring Mountains. A high density of Archaic Period lithic artifacts have been known to exist on the Hidden Hills Ranch, which is ten miles to the southeast of the current project area (J. Santini, personal communications, 1982).

Based on the surrounding archaeology, the expectation is that at least three prehistoric sites may be in the survey area, most likely a lithic procurement and processing sites. The cultural association of sites in the project area will most likely be with the Shoshonean period sites (1200 A.D.- Contact) or Saratoga Springs period. Sites associated with the Shoshonean period are numerous near the project area and in the valleys south of the survey area. Shoshonean sites are distinguished by DSN points and small triangular points, bifaces, and corrugated brownwares. Sites associated with the Saratoga Springs Period (500-1200 A.D.) are less likely to be found, but remain a possibility nonetheless. Artifact types associated with the Saratoga Springs culture include Pueblo III pottery types and rocker-bottom side notched points. Rock art and artifacts dating to the Saratoga Springs period are common in a complex five miles north of Goodsprings.

1. Is there diagnostic evidence presented by the cultural material encountered which would indicate site use by a specific prehistoric population or time period?

   Artifacts, such as a diagnostic lithic or ceramic artifacts, that can be associated with a specific cultural period would be useful in discerning the overarching regional pattern of occupation.

2. Does the cultural material encountered reflect the type of activity pursued at the location by prehistoric populations?

   A site’s function can be discerned by the presence or absence of artifact types. For example, a reduction station would predominantly contain lithic remains from the primary reduction stage, while sites containing a large majority of groundstone or tertiary flakes could indicate specialized campsites.

Historic

The project area is located near a ranching area with considerable historic depth when compared
to other districts in the region. The project right-of-way is located near a route that was used between settlements within the district in the historic period and may also have been used in the regional transportation system. The expectation is that historic period cultural material sites may be recorded during this survey and will most likely be associated with the most active period of exploitation of the district. Archival research indicates that the time frame would be from 1911 to 1919. It is expected that metal, glass and ceramic artifacts that are date sensitive may be located. Typically, the R & Co. Marks and Busch’s AB(dyphthong) are the usual indicators of time frames; however, cans are often used to estimate dates as well. Historic sites in the Sloan area consisted partially of bottles and bottle fragments that proved to be good time markers.

1. Is an historic time frame represented by the cultural material encountered?

   Artifacts such as bottles, cans, and ceramics can be typed and dated to specific time frames.

2. Do the artifact types encountered represent characteristic regional themes such as transportation, ranching, or mining?

   Features such as corrals, metal debris, and domestic discards are indications of activities relating to ranching. Likewise, features such as piles of ore or machinery for processing can be attributed to the area’s historic mining activity.

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