

## Report Citation

Document No. : 1125490

Unpublished Report

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- 1991 Appendix F Cultural Resources Draft Environmental Impact Report for Jacumba Valley Ranch Specific Plan Volume I. Brian Mooney and Associates. Submitted to Jacumba Valley Partnership. Unpublished Report on file at South Coastal Information Center, San Diego State University.

**Last Update:**

Cataloged by: WRO-CA-06 on: 3/10/03

**Federal Agency:** PRIVATE (PRI)

**On File:** South Coastal Information Center, San Diego State University

SHPO-ID: MLA 54 Source: Report

**Location:** SAN DIEGO (CA)

**Worktypes:** Cultural Resources Management Plan  
Archeological Evaluation Study

<b>Keywords:</b>	Bedrock Slicks	CA-SDI-11675
	CA-SDI-11676	CA-SDI-11677
	CA-SDI-11678	CA-SDI-11679
	CA-SDI-11681	CA-SDI-11682
	CA-SDI-11683	CA-SDI-11684
	CA-SDI-11685	CA-SDI-11686
	CA-SDI-11688	CA-SDI-11689
	CA-SDI-11690	CA-SDI-11691
	CA-SDI-11692	CA-SDI-11693
	CA-SDI-11694	CA-SDI-4455
	CA-SDI-6741	CA-SDI-7056
	CA-SDI-8072	CA-SDI-8430
	Ceramics	Chipping Station
	Chopper	Cores
	Debitage	Flaked Lithics
	Ground Stone	Hammerstone
	Jacumba Quad 7.5'	Kumeyaay
	Mano	Mountain Meadow Dairy
	Olivella Shell Bead	Pot Drop
	Prehistoric	Prehistoric Habitation Site
	Round Mountain	Tizon
	Village Hakum	Volcanic Flake

**APPENDIX F  
CULTURAL RESOURCES  
DRAFT ENVIRONMENTAL IMPACT REPORT  
FOR  
JACUMBA VALLEY RANCH SPECIFIC PLAN  
(SP91- , TM , P91-012, P91- , Log#91- - )  
VOLUME I**

**Prepared for:**

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April 1991

**JACUMBA VALLEY RANCH  
CULTURAL RESOURCES INVENTORY  
AND EVALUATION**

**VOLUME I**

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February 1991

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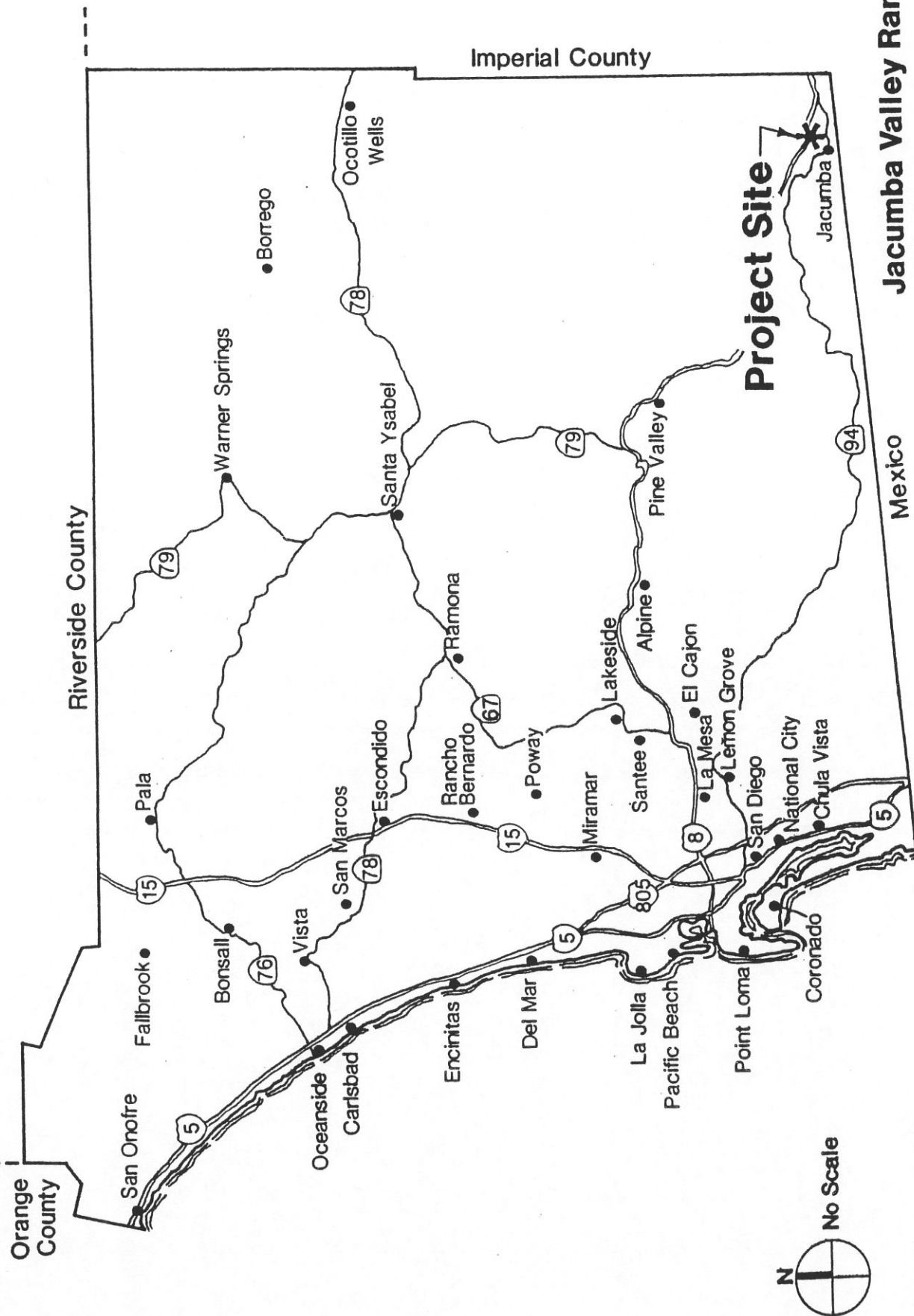
## **I. EXECUTIVE SUMMARY**

### **INTRODUCTION**

This report documents the results of a cultural resource survey and significance evaluation for the proposed Jacumba Valley Ranch project located in southeastern San Diego County (Figure 1). The report is divided into four major sections, this executive summary and three chapters that address studies conducted for the project's prehistoric archaeological resources, historic resources, and Native American heritage resources. This executive summary provides information applicable to the overall cultural resource study including the project description and setting, and a comprehensive discussion of the results and recommendations for all three resource analyses.

Jacumba Valley Ranch is a proposed mixed-use development of the 1,347-acre Ketchum Ranch. The project site is located between Interstate 8 and the U.S./Mexico International Border near the community of Jacumba. Applications for approval of a specific plan, rezone, tentative map and major use permits are being concurrently processed to enable development of the site with approximately 1,048 dwelling units, golf course and club house, hotel, commercial area, congregate care facility, sand mining, and sewage treatment plant. The project also includes areas of natural and recreational open space, an elementary school site, and approximately 450 acres designated as "Future Planning Area".

Cultural resource studies were initiated in September 1989 with an intensive archaeological survey of the entire project property. The survey resulted in the identification and documentation of 5 previously recorded sites and 18 new sites related to prehistoric/ethnohistoric occupation and use, one historic site, 16 isolates, and a geographic feature of Native American heritage importance. In accordance with County of San Diego cultural resource guidelines, a significance evaluation program was then conducted involving limited subsurface testing and surface artifact mapping and collection. Most of the sites proved to be small lithic scatters lacking any subsurface components, but several more extensive sites were investigated including quarry/workshops, temporary camps, and a portion of the ethnohistorically occupied village of Hakum. At the direction of County staff, extended testing was then performed at four sites that lacked subsurface deposits yet consisted of moderately extensive surface scatters. Data recovered as a result of the two testing programs effectively exhausted any further research potential of all but six of the prehistoric/ethnohistoric



# **Jacumba Valley Ranch** Regional Location Map

Figure 1

archaeological sites, and no mitigation will be required. It is recommended that the remaining six sites be mitigated by preservation in dedicated open space easements.

Archival research was conducted at the San Diego Historical Society Research Archives, San Diego County Records Office, the Map Collection at San Diego State University Library, and the Survey Records Department of the San Diego County Operations Center in order to facilitate the identification of historic resources within the project property. This research indicated the potential presence of two early residences, the Lawrence House and the W. H. Purdy House, though no remains were found of either. A third site, the Mountain Meadows Dairy Complex, still exists though the majority of the structures are in a serious state of disrepair. Most of the dairy complex was built by 1928, and in 1934 it was claimed that Mountain Meadows Dairy was the largest producer and distributor of milk in San Diego County. While the entire complex is not considered significant for a variety of reasons, it is recommended that antique farm implements be donated to an appropriate museum since these items will provide information that is of public interest.

As a final component, an ethnographic study was conducted to document the potential occurrence of significant Native American resources within the boundaries of the project. This study entailed a review of archival sources and publications, input from several anthropologists, and interviews with Native Americans familiar with the Jacumba area. Although many Native American sites of cultural significance have vanished or been destroyed, a few critical resources remain of concern including Round Mountain and mitigation recommendations are provided to ensure their preservation.



## F. CULTURAL RESOURCES

Cultural resource studies were conducted to document and evaluate the significance of archaeological resources, ethnohistoric and Native American heritage resources, and historic resources in the proposed Jacumba Valley Ranch project area. The significance or uniqueness of the Jacumba Valley Ranch cultural resources is based on analyses of data collected by these studies and a consideration of whether the resources possess value for scientific, historical, public educational, or ethnic heritage reasons. The relative importance that each resource represents as a contribution to these values is expressed in terms of its level of significance. The complete Cultural Resources report, consisting of Archaeological and Ethnographic reports prepared by Brian F. Mooney Associates, and a Historical Resources report prepared by Stephen R. Van Wormer, are attached as Appendix F.

The effort to identify all potentially significant archaeological resources included records searches, an intensive survey of the entire project property (beginning in September 1989), and subsequent testing programs. An ethnographic/ethnohistoric study was also conducted to document the potential occurrence of significant Native American resources within the boundaries of the project; this study entailed a review of archival sources and publications, input from several anthropologists, and interviews with Native Americans familiar with the Jacumba area. Finally, the identification of historic resources in the project area was conducted by a field survey and archival research at the San Diego Historical Society Research Archives, San Diego County Records Office, the Map Collection at the San Diego State University Library, and the Survey Records Department of the San Diego County Operations Center.

### Existing Conditions

The archaeological survey resulted in the location of five previously recorded and 18 new archaeological sites, one historic site, and two locations of Native American heritage importance. In accordance with the County of San Diego cultural resource guidelines, an archaeological significance evaluation program involving limited subsurface testing and surface artifact mapping and collection was conducted. Most archaeological sites proved to be small lithic scatters lacking subsurface components, but other more extensive sites included quarry/workshops, temporary camps, and a portion of the ethnohistoric village of Hakum. The data recovered by the testing programs effectively exhausted the research potential for all but six prehistoric/ethnohistoric archaeological sites. It is recommended that three of these sites be preserved in dedicated open space easements, and that any impacts to the other three be mitigated by data recovery.

Many Native American sites of heritage importance have vanished or been destroyed, but a few critical resources including Round Mountain remain of concern; mitigation recommendations are provided to ensure their preservation.

The historic research indicated the potential presence of two early residences but no remains were found of either. A third site, the Mountain Meadows Dairy Complex, was built by 1928 and



in 1934 was the largest producer and distributor of milk in San Diego County. This site still exists but the majority of the structures are dilapidated.

### Archaeological Resources

The Jacumba area provides a unique array of archaeological resources because of its special geographical situation and relationship to varied natural resources. Central to human activities throughout Jacumba's history was the hot springs. In prehistoric times the springs provided a reliable source of drinking water, supported wild plants and animals that were exploited by the inhabitants, and was a focus of ritual activities associated with spiritual purification, health and bathing (Wirth 1980:6.0). The springs were also used to irrigate domestic crops, possibly extending back into the pre-contact period (Gifford 1931:23). This would make Jacumba the westernmost location in the United States where irrigation agriculture may have been practiced by aboriginals before European contact.

The biotic habitat, characterized as transitional mountain chaparral desert scrub, provided a great variety of animal and vegetal resources. Jacumba served as an excellent base from which to conduct seasonal expeditions: hunters and gatherers operating from this area enjoyed a much greater variety of staple resources available to them than groups based exclusively in the desert or mountains. Among the most important desert plant resources were mesquite beans and agave; invaluable resources in the mountains included acorns and pinion nuts. Important game animals included big-horn sheep, pronghorn antelope, mule deer, and rabbits. Cattail, tule, waterfowl and other wetland species would also have been important resources in the marsh habitat located in the valley bottom. Additionally, the surrounding geological resources provided a varied source for the manufacture of groundstone tools, flaked stone tools, and other lithic items.

Jacumba's geographical setting made it a natural stopping point for peoples traveling between the desert and the Pacific Coast Mountains. Mountain Springs Grade provided a natural route through the Peninsular Range, and it is through this route that the San Dieguito peoples are hypothesized to have migrated to the Pacific Coast. This route also facilitated migration of the Late Prehistoric Yuman speaking groups from the Colorado River to the southern California coast, and was a major trade route throughout late prehistoric and historic times.

Prior to the current study, archaeological investigations of small portions of the project property identified five sites. The systematic survey conducted for this study relocated these sites and identified 18 additional sites. With the exception of three sites (SDI-6741, SDI-8072, and SDI-11,689), all others occur on terrain elevated above the valley floor on the low knolls and hillsides that encircle Jacumba Valley. Most of these sites consist primarily of scattered flaked lithic debitage with small quantities of tools, groundstone, and ceramics, whereas those on the valley floor are considerably more complex and variable. Subsurface testing indicates that all sites except SDI-4455 are essentially surface deposits.

Most archaeological sites in the project area are presumed to be from the Late Prehistoric or ethnohistoric periods. They range from small temporary camps to lithic and pottery scatters. Located west of the project area, the ethnohistorically occupied village of "Hakum" (Site SDI-

4455) includes a large array of Late Prehistoric material centered near the hot springs. Most of this site has been obliterated by modern Jacumba but portions of it (including cremation burials) were found southeast of the present town and on the Mexican side of the border. Presumably, most sites in the project area represent outlying residences and specialized activity areas associated with this base camp.

The oldest material in the project area may be a quarry on the slopes north of the airport. Recorded as SDI-8430, this site includes hundreds of volcanic cores, flakes, chopping tools, blades, scrapers and "pushplanes," some of which may be of San Dieguito II origin (McCoy and Thesken 1979; Whitney-Desautels 1982). Most of this material is heavily patinated, but the presence of unpatinated flakes suggests continued quarry use throughout the prehistoric period. Other lithic scatters in the region may also be from this period but precise dates are impossible to determine.

The 23 archaeological sites identified and evaluated are as follows:

- SDI-4455 This site represents a portion of the ethnohistoric Kumeyaay village complex of Hakum which originally covered much of the present town of Jacumba and extended into Mexico. Only a small eastern portion of the site lies within the project property, adjacent to the valley floor. This area contains 10 milling features and a surface scatter of over 100 flakes, 50+ shards and various flaked tools and groundstone implements. Testing indicated a fairly rich and deep (70cm) subsurface deposit.
- SDI-6741 The widely dispersed (300 by 380m) scatter of 59 flaked lithic, groundstone, and ceramic artifacts recovered from the surface of this site indicates a Late Prehistoric temporary resource procurement and processing camp existed in this portion of the valley floor. Subsurface deposits were minimal and probably due to agricultural discing of the upper 40cm of soil.
- SDI-7056 This site appears to be primarily a Late Prehistoric lithic procurement and reductionsite comprised of over 1600 cores and flakes with a few associated flaked lithic tools and a limited amount of ceramics and groundstone, suggesting some resource processing occurred within the 180 by 330 meter site area as well. Subsurface recovery was very minimal and did not exceed five centimeters in depth.
- SDI-8072 Situated on the western side of the valley floor, this site appears to be a Late Prehistoric temporary camp similar to SDI-6741 and SDI-11,689 based on the surface recovery of over 500 shards, an Olivella shell bead, groundstone tools, projectile points, point preforms, other flaked lithic tools, cores, and over 300 flakes. Only the northern portion of the site extends inside the project boundary. The artifacts have been dispersed over a 200 by 250 meter area and mixed, along with historic debris, into the upper 40cm of soil through cultivation of the floodplain.
- SDI-8430 This site is a lithic procurement quarry/workshop encompassing the slopes of a mountain located on the eastern side of Jacumba Valley. Only the western half of the



site is within the project. Four loci were collected mostly comprised of cores and waste debitage. One locus, adjacent to the valley floor, contained a greater variety and count of tools indicating other activities besides quarrying. No subsurface components were detected during testing.

SDI-11,675 This is a small, 18 by 22 meter, limited activity site consisting of a chipping station, a pot drop, and a scatter of tools, cores, and debitage located 45 meters southwest of Carrizo Gorge Road. Sixty one artifacts were collected from the surface, and 4 sherds and a flake were recovered from the upper 5 centimeters during testing.

SDI-11,676 This site is a 100 by 180 meter lithic procurement and reduction quarry/workshop similar to SDI-7056, located near the base of a knoll immediately south of Interstate 8. Surface artifacts include 3 retouched flakes, a scraper, cores, and an estimated 160 flakes. Subsurface testing yielded only 8 flakes in the upper 10 centimeters of two units.

SDI-11,677 Located southwest of SDI-11,676, on the top and slopes of the same knoll, this widely dispersed 250 by 260 meter lithic scatter is comprised of two areas of concentration with a low density intervening lithic scatter. Locus A, at the top, contains bedrock slicks and a mano along with over 20 flaked lithics. Locus B, on the northern slope, is a work area consisting of a core and over 20 pieces of debitage. No subsurface component was detected during testing.

SDI-11,678 The site is situated on a ridge slope overlooking Boundary Creek, and is primarily a quarry/workshop with limited evidence of resource extraction. A surface inventory of the 120 by 260 meter area included unifaces, a hammerstone, 90+ cores, and over 400 flakes (no collection was made). Subsurface testing resulted in the recovery of a core and 2 flakes from the upper 5 cm of one unit.

SDI-11,679 Located across an intermittent drainage from SDI-11,678, this is also a quarry/workshop related to expedient tool production and undoubtedly limited onsite use as indicated by the presence of 3 utilized flaked lithics. The majority of cultural debris, however, consists of cores and over 70 flakes based on a surface inventory of the 60 by 160 meter area. Limited subsurface testing proved negative.

SDI-11,681 This widely dispersed, low density quarry/workshop is located at the northern base of the knoll containing SDI-11,676 and SDI-11,677, and is bisected by a small intermittent drainage. Cores and waste debitage made up the majority of the 106 surface artifacts. Six flaked lithic tools were also recovered from the 150 by 250 meter site. Subsurface testing was negative.

SDI-11,682 This site is a small, 12 by 25 meter, lithic scatter consisting of 2 cores and 5 flakes with no subsurface component located near the eastern boundary of the project.

SDI-11,683 This is a low density lithic procurement/reduction scatter with 4 distinct reduction stations. Seven cores, 66 pieces of waste debitage and one cobble hammerstone were collected from the 60 by 80 meter surface area. Subsurface testing yielded 6 pieces of debitage in the upper 5 cm of one unit. A larger scatter, SDI-7055, lies 40 meters to the southeast which Dames and Moore mitigated in 1982.

SDI-11,684 This small, 6 by 8 meter, lithic scatter consists of 2 cores and 3 flakes with no subsurface component.

SDI-11,685 This site consists of a chopper and 2 flakes in a 12 by 25 meter area located immediately west of Carrizo Gorge Road. Subsurface testing proved negative.

SDI-11,686 This site is a moderately extensive combined quarry/workshop and resource extraction locale covering an 80 by 280 meter area situated on a narrow terrace north of Carrizo Creek. Surface collection recovered 464 flaked lithic artifacts (17 tools) and one Tizon Brown Ware sherd. The subsurface yield was very minimal.

SDI-11,688 This is a low density scatter consisting of cores, flakes, and 2 Tizon Brown Ware sherds with no subsurface component. The scatter, dispersed over a 2,000 square meter area near the eastern edge of the valley floor, is probably associated with SDI-7056.

SDI-11,689 Located on the valley floor north of the International Border, this 190 by 210 meter site appears to represent a Late Prehistoric temporary camp similar to SDI-8072 (which may be an extension) and SDI-6741. A partial surface collection yielded over 1,400 artifacts including 10 different types of flaked lithic tools, plus cores, debitage, groundstone, over 400 ceramics, an Olivella bead, faunal remains, and a few historic artifacts. Subsurface testing proved marginally positive, probably due to agricultural plowing. The site may extend into Mexico.

SDI-11,690 This site is a small, 40 by 75 meter quarry/workshop situated on a ridge along the western edge of the valley. A total of 134 artifacts were recovered from the surface including a chopper, utilized flake, cores and waste flakes. A bedrock feature (rub) is associated with the scatter. Subsurface testing yielded one flake.

SDI-11,691 This site is a low density lithic scatter consisting of cores and flakes. The 10 artifacts occurred within a 570 square meter area at the base of ridge slope at the western edge of the valley. Subsurface testing proved negative.

SDI-11,692 This site is an isolated bedrock milling feature with two moderately worn slicks; no artifacts were found in association nor was any subsurface cultural debris detected. The slicks occur on a small boulder near the base of a ridge slope, north of SDI-11,691.



- SDI-11,693 This 5 by 22 meter area contains one unidirectional core and 2 secondary flakes located on a ridge slope at the western edge of the valley. Subsurface testing proved negative.
- SDI-11,694 This site is a low density lithic scatter located at the base of a ridge slope adjacent to a large cobble filled wash. Three cores and 7 pieces of debitage were collected from a 16 by 8 meter area. No subsurface material was recovered.

Sixteen isolates were also located:

- I-1 One grey-green porphyritic volcanic flake.
- I-2 One grey-green porphyritic volcanic flake, possibly retouched.
- I-3 One black porphyritic volcanic flake.
- I-4 Three grey-green porphyritic volcanic flakes (dispersed over 20 meter area)
- I-5 Three grey-green porphyritic volcanic flakes (dispersed over 20 meter area)
- I-6 Two black porphyritic volcanic flakes.
- I-7 One Tizon Brown Ware sherd.
- I-8 One grey-green porphyritic volcanic flake.
- I-9 One Tizon Brown Ware sherd.
- I-10 Three grey-green porphyritic volcanic flakes and 1 chert flake (dispersed over 20 meter area)
- I-11 One grey-green porphyritic volcanic flake and two pieces of angular debris.
- I-12 One grey-green porphyritic volcanic flake.
- I-13 One metate fragment.
- I-14 One grey-green porphyritic volcanic flake.
- I-15 One grey-green porphyritic volcanic core.
- I-16 One grey-green porphyritic volcanic flake.

#### Ethnohistoric and Native American Heritage Resources

The Yuman speaking Kumeyaay (Diegueño) experienced culture change more slowly in the Jacumba area than on the Pacific Coast or Colorado River because they were relatively far from the influence of the Spanish Missions and Anglo urbanization. At contact, the main occupants of Jacumba were eastern lineages of the Kumeyaay and the desert-adapted Kamia who travelled regularly between Imperial Valley and Jacumba (Gifford 1931). The Kamia, now generally recognized as a desert-oriented Kumeyaay group (Hedges 1975; Langdon 1975; Gifford 1931:2; Luomala 1978), maintained particularly close ties with the Quechan on the Colorado River and acted as trade intermediaries between coastal and Colorado River tribes.

Early Spanish visits to the Jacumba area date back to 1785. The early visits often found the Kumeyaay hostile to Spanish intrusions and in alliance with other tribes against the Missions. After secularization of the Missions and departure of the San Diego Presidio contingent in the 1830's, the Jacumefios regularly raided ranches in San Diego and San Bernardino Counties (Forbes 1965:283-287). Despite early American attempts to pacify the Jacumefio and other groups, expansion of Anglo land interests and cattle grazing severely compromised the economic

base of the Kumeyaay as wild sheep and deer became scarce. Friction between the Indians and ranchers came to a head on February 17, 1880 when open confrontation lead to the death of fifteen local Kumeyaay and William McCain. This tragic "McCain Massacre" marks the end of the long Native American occupation of Jacumba.

Kamia Indians interviewed in the early 1900's described the use of irrigation in Jacumba, but Gifford (1931) concluded that these agricultural practices had been learned from the Spanish since some of the cultigens were of Old World origin. Indian cultivation of Jacumba Valley was recorded in 1851 (Lyon 1851) and the discovery of a cached ceramic vessel near Boulevard confirmed this observation. Inside the vessel were seeds of both Old World and New World domesticates that had been sorted and wrapped in textiles dating to the 1850's (Treganza 1947).

Ethnographic and ethnohistoric studies indicate that the Jacumba region contains many resources of importance to contemporary Native Americans. No fewer than 22 villages have been documented in the ethnohistoric literature, and Native American consultants have identified other sites of heritage concern such as plant gathering areas, clay and mineral sources, camps, trade areas, trails, and sacred places. For the current ethnographic study an attempt was made to inventory those resources that might be affected by the proposed project in general and specifically by development of the property itself. With regards to the latter, two sites were identified as warranting consideration.

Round Mountain. Situated in the northwestern area of the property, this topographic feature was considered sacred by the Kumeyaay/Kamia. Known as "Mat kweryur," the mountain was apparently used by religious specialists for spiritual purposes, curing, and ceremonial dances.

The Village Hakum. A portion of this site, designated SDI-4455, exists in the southwestern corner of the property. The entire site and associated hot springs in Jacumba are considered significant for a variety of reasons. In late March 1996, a portion of the Village Hakum located within the project site, was disturbed by the construction of the "Joint Task Force-Six (JTF-6) Border Road and Fence Project" being conducted under the auspices of the Department of the Army, Los Angeles District, Corps of Engineers (ACOE). According to a letter from the ACOE dated April 4, 1996: "JTF-6 is constructing a border fence/barrier, and improving the dirt road which parallels it. Work along the border is confined to the 60 foot strip north of the border which is owned by the Federal government [i.e., not within the ownership of the Jacumba Valley Ranch Partnership]. During earthmoving operations equipment strayed north of the work area and on to private land [i.e., on to a portion of the Jacumba Valley Ranch Specific Plan] ... It should be noted that the landowner was in no way responsible for this incident ... To resolve this issue, Corps archaeologist, Stephen Dibble, inspected the site on March 29, 1996. Based on this site visit it was determined that the characteristics of Site CA-SDI-4455 which might qualify for listing on the National Register of Historic Places were not affected. The ground disturbance which took place is in an area which was previously disturbed, and much of it was being used on a daily basis as a parking lot." (U.S. Department of the Army, 1996.)



## Historic Resources

Many of the same geographical and environmental factors that attracted prehistoric and ethnohistorically-known inhabitants also influenced Euro-American occupation. The first major incursion was by "Forty-Niners" who followed an existing Indian trail from Yuma to San Diego to board ships bound for the Mother Lode country (Burkenroad 1980:89-91). In 1853, the first Anglo structure, a stone fort, was built at the hot springs to protect and service mail carriers traveling between San Diego and Yuma (Woodward 1956:201). This route continued to be developed through the 1860's and in 1865 or 1866 a stone house (now destroyed) was built for Peter Larkin, the toll-house keeper at Mountain Springs.

By 1868, settlers from Texas were cultivating Jacumba Valley (Burkenroad 1980:28), and cattle ranching became a major economic pursuit in Jacumba Valley in the 1870's. These farmers and ranchers were part of a region-wide pattern of post-Civil War migration and included such prominent families as the McCains (Cook and Fulmer 1980). The "McCain Massacre" in 1880 contributed to a complete Anglo control of the area, and less than three years later Peter Larkin moved to Jacumba and built an adobe that still stands in town.

The Jacumba hot springs had attracted health-seekers and other residents by the turn of the century, and completion of the San Diego and Arizona Eastern Railway in 1919 (with a way station) provided an opportunity to develop the area as a resort. Bert L. Vaughn bought the land around the hot springs in 1919 and by 1925 had opened a hotel and spa. Among the guests were Imperial Valley farmers who came to escape the oppressive summer heat. Other Jacumba amenities included a hot and cold plunge, a lake, dance hall, café, racetrack-rodeo, cinema, stores, and numerous guest cottages and tents.

The town remained stable until after World War II. The advent of air conditioning made it possible to stay in Imperial Valley through the summer and better automobiles provided easier personal access to San Diego. After Interstate 8 was built in 1967, Jacumba lost the traffic business along Old Highway 80. Several attempts to revitalize the town have failed, and recent fires at the Spa Hotel are symptomatic of further economic and demographic decline.

Historic research indicates that the project property was peripheral to the development of the community of Jacumba, and agriculture appears to have been the predominant use. Archival research identified three potential historic resources within the study property. No remains could be found for two of the potential sites, a house built in the 1870s by a settler named Lawrence and the W. H. Purdy residence dating to the 1910s. The third site is a dairy complex located in the southeastern area of the property north of Old Highway 80.

The Mountain Meadows Dairy. This resource consists of a complex of buildings relating to a major dairy farming operation that in 1934 claimed to be the largest producer and distributor of milk in San Diego County. Many of the structures were apparently built by the Taylor Milling Company in 1927, and the operation incorporated in May 1930 as Mountain Meadows Creameries Ltd. At its peak the dairy averaged about 35 employees and maintained 500 Guernsey and Holstein cows. Roughly 750 acres of the valley were cultivated for feed using

horse drawn equipment. The operation closed in 1945 when the owner retired. The present dairy complex consists of two concrete block silos, three residential dwellings, a milk barn, various wooden and corrugated tin sheds, a tank room, concrete reservoir, two trash dumps, and miscellaneous antique farm equipment. All of the buildings except for one dwelling and the milking barn are in serious disrepair.

The only other historic sites recorded in the project area are the San Diego and Arizona Eastern Railroad (SDI-7015H) and a late historic trash site. The railroad is located on fee lands, however, which are not owned or controlled by Jacumba Valley Ranch.

## Environmental Impacts

The assessment of potential direct impacts involves determining whether implementation of the proposed project would result in resource disturbance or destruction. Direct impacts would occur as a result of grading and construction activities related to the golf course, commercial center, and residential elements of the project. Indirect impacts are adverse effects that are secondary in nature but clearly brought about by project development. Most often indirect impacts result from the increased access and population density allowed by development. Examples of indirect impacts include vandalism or "pot-hunting" and gradual site degradation resulting from general recreational use. Within Jacumba Valley Ranch, this kind of adverse impact could potentially affect sites contained within open space areas, although the magnitude of any such impact would depend upon accessibility from and proximity to the population center as well as the type or nature of the site involved. For example, considerably less indirect impact should be experienced by a scatter or quarry situated on inaccessible terrain than a village with pottery and projectile points within a short walk of a residential area. Given the nature of the project and its proposed land uses, both direct and indirect impacts can be anticipated to cultural resources in the Jacumba Valley. The cultural resource significance evaluations, potential impact assessments, and recommended mitigation measures are summarized below and in Table 4, Cultural Resources Assessment, page 137.

## Archaeological Resources

Development of Jacumba Valley Ranch as proposed would directly affect eight archaeological sites, and limited portions of two others. Of these ten resources all ten are either insignificant or have been extensively tested and any impacts to them would therefore be inconsequential. Eight additional sites exist in designated open space areas and will not be directly affected by development. Seven sites and the remaining portions of the two sites mentioned above exist within future planning areas which are not proposed for development. Should these future planning areas be developed, three of the seven sites which are of low or moderate significance would be impacted.

More specifically, of the 23 archaeological sites within the property, only SDI-4455 is considered highly significant. This ethnohistoric village (Hakum) is the only archaeological site with a subsurface component, and it is considered to be of high significance based on its research



potential. The site area was disturbed due to construction of the U.S./Mexico border fence. SDI-4455 will not be directly impacted as its location has been designated as a future planning area.

Three sites are evaluated to have a moderate level of research value. The moderate significance rating is used to designate sites that possess or potentially possess research value that could contribute to a better understanding the region's prehistory, and the moderate complexity and variability exhibited by these sites places them in this category. Site SDI-8072 (a camp) would be impacted by commercial land use; SDI-11,678 (a quarry) is located in open space area and will not be directly impacted; and SDI-11,689 (a camp) is located within an area of future planning and will not be directly impacted through implementation of the current project.

Six sites are considered to be of low significance since they are capable of addressing a limited number of research domains. SDI-7056 and SDI-11,686 are quarry sites that will be impacted by development of the golf course, and SDI-8430 is a quarry that will be impacted by residential development. SDI-11,676 (a quarry) and the northern portion of SDI-11,677 (a lithic scatter) are located in areas set aside for future planning and will not be directly impacted by the current project. The southern end (Locus A) of SDI-11,677, which contains bedrock milling features in association with the lithic scatter, would be impacted by the proposed rock quarrying activities. However, this impact is not significant because of limited research value of features within the site. Finally, SDI-11,679 (a quarry) is located in designated open space that can accommodate preservation.

The remaining 13 sites are evaluated as insignificant. This group includes sites characterized by minimal quantities of surface artifacts and assemblages of limited typological variability. Included in this category are a milling station, a heavily impacted temporary camp, 3 quarry/workshops, and 8 low density lithic scatters. Additionally, the 16 isolates are considered categorically insignificant.

Ethnohistoric and Native American Heritage Resources

Ethnographic research indicates that Round Mountain is highly significant to contemporary Native Americans for religious and heritage reasons. Direct or indirect impact to this location would constitute desecration of a Native American sacred site. Additionally, the village site of Hakum is a highly significant cultural resource of ethnohistoric and contemporary importance to Native Americans. These two resources are located in areas designated as open space and so will not be directly impacted by project implementation.

Historic Resources

The Mountain Meadows Dairy complex is the only historic resource identified within the project property. The complex is situated on land designated for residential development. Given this resource's poor integrity and negligible interpretative value, however, the complex is considered to be of rather low overall significance and so no impacts of an adverse nature will occur due to project implementation.

Thresholds of Significance

The project will have a significant effect on cultural resources if it disrupts or adversely affects a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.

Summary of Impact Significance

Impacts. The Jacumba Valley Ranch project will have the potential to impact cultural resources by damaging the following significant cultural resource sites which are located within the project boundaries:

- F1. A Native American religious site, Round Mountain.
- F2. Two significant prehistoric quarry sites (SDI-11,678 and SDI-11,679).
- F3. Sites SDI -11,686, SDI-7056, SDI-8072, and SDI-8430. Potential Impacts may occur to sites depending on design of future implementing permits.

Mitigation Measures

Mitigation. The above impacts will be mitigated to below a level of significance by implementation of the following mitigation measures:

Cultural Resource impacts are mitigated to below a level of significance by the project design which designates these areas within Land Use Area "N," Natural Open Space. Implementation of this designation shall be accomplished by the following mitigation measures:

- F.1 Jacumba Valley Ranch shall cause an open space easement to be recorded over Area "N" encompassing the onsite portion of Round Mountain. This easement shall be dedicated when the first implementing process for Phase 1 of the project comes forward.
- F.2 Jacumba Valley Ranch shall cause an open space easement to be recorded over Area "N" encompassing the onsite portion of SDI-11,678 and SDI-11,679. This easement shall be dedicated when the first implementing process for Phase 2 of the project comes forward.
- F.3 The Specific Plan will be conditioned to require extended testing for cultural resources for Sites SDI -11,686, SDI-7056, SDI-8072, and SDI-8430.

Summary of Impacts After Mitigation

The project site has been evaluated by a qualified cultural resources specialist. The evaluation isolated seven specific project impacts due to grading for the golf course, commercial center, and residential elements of the project. Three of the resources will be preserved in open space and four of the sites will be tested for cultural resources. These measures will reduce impacts to



below a level of significance by preserving sites in protected open space where they will not be disturbed, and by conducting site testing that will result in recovery and preservation of any valuable resources.

**Table No. 4**  
**Cultural Resource Assessment**

Resource	Type	Significance	Land Use	Mitigation
SDI-4455	Village	High	Future Planning	*
SDI-6741	Camp	None	Water Plant/Future Planning	None/ *
SDI-7056	Quarry	Low	Golf Course	Extended Test
SDI-8072	Camp	Moderate	Commercial	Extended Test
SDI-8430	Quarry	Low	Residential	Extended Test
SDI-11,675	Scatter	None	Golf Course	None
SDI-11,676	Quarry	Low	Future Planning	*
SDI-11,677	Scatter/Milling	None	Future Planning/Quarry	None /*
SDI-11,678	Quarry	Moderate	Open Space	Preservation
SDI-11,679	Quarry	Low	Open Space	Preservation
SDI-11,681	Quarry	None	Future Planning	*
SDI-11,682	Scatter	None	Future Planning	*
SDI-11,683	Quarry	None	Future Planning	*
SDI-11,684	Scatter	None	School Site	None
SDI-11,685	Scatter	None	Future Planning	*
SDI-11,686	Quarry	Low	Golf Course	Extended Test
SDI-11,688	Scatter	None	Golf Course	None
SDI-11,689	Camp	Moderate	Future Planning	*
SDI-11,690	Quarry	None	Open Space	None
SDI-11,691	Scatter	None	Open Space	None
SDI-11,692	Milling	None	Open Space	None
SDI-11,693	Scatter	None	Open Space	None
SDI-11,694	Scatter	None	Open Space	None
Dairy Complex	Historic	Low	Residential	Curation
Round Mtn.	Native American	High	Open Space	Preservation

\*Future planning area - mitigation measures to be determined when development plans are proposed during processing of the Specific Plan Amendment for the areas.

Source: Mooney and Associates

