CULTURAL RESOURCES REPORT
for the
NEWLAND SIERRA PROJECT,
SAN DIEGO COUNTY, CALIFORNIA
PDS2015-GPA-15-001, PDS2015-SP-15-001,
PDS2015-REZ-15-001, PDS2015-TM-5597

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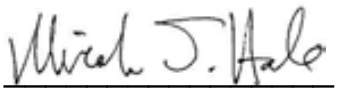

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NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION

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Type of Study: Phase I Archaeological Inventory, Phase II Archaeological Evaluation

Resources: CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H, CA-SDI-17264, CA-SDI-17265, P-37-025968

USGS Quads: San Marcos, California 1:24,000; unincorporated.

Acreage: 1,985

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LIST OF ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
BLM	U.S. Bureau of Land Management
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DPLU	County of San Diego Department of Planning and Land Use
DPR	California Department of Parks and Recreation
ESA	Environmentally Sensitive Area
GPS	Global positioning system
MFP	Multifaceted Platforms
MLD	Most Likely Descendant
MUP	Major Use Permit
NAHC	Native American Heritage Commission
NCMSCP	North County Multiple Species Conservation Program
NP	Natural/Cortical Platforms
NRHP	National Register of Historic Places
RPA	Register of Professional Archaeologists
RPO	County of San Diego Resource Protection Ordinance
SCIC	South Coastal Information Center
SDAC	San Diego Archaeological Center
SFP	Single-Facet Platforms
STP	Shovel Test Pit
STU	Shovel Test Unit
TCP	Traditional Cultural Property
USGS	U.S. Geological Survey

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MANAGEMENT SUMMARY

This report presents the results of a Phase I cultural resources inventory and a Phase II significance evaluation for the Newland Sierra Project (project) located in an unincorporated portion of the County of San Diego within the North County Metro Subregion. The project area is composed of 1,985 acres and would include 7 neighborhoods (also referred to as planning areas) with a total of 2,135 residential units. The proposed project would include a variety of housing types – some of which would be designed with grade-adaptive architecture – to meet the varied needs of the anticipated residents. Grade-adaptive architecture results in minimized site grading impacts by incorporating one or more steps in the ground floor that conform to the underlying slope of the site. Development of the project site would be focused into seven planning areas designed to promote land stewardship and avoid the most sensitive biological, cultural, and topographical resources. Taking inspiration from the property's unique landscape character and distinct landforms, the proposed project consists of a series of neighborhoods that individually respond to their unique topographical settings. This project falls in an unincorporated area depicted on the San Marcos, California, 1:24,000 USGS topographic map.

Records searches were completed at the South Coastal Information Center (SCIC) for the Project area and a surrounding 1-mile radius, identifying nine previously recorded cultural resources (CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H), one isolate (SDM-W-3880C), and one 1901 historic map depicting a structure. Additional records searches were performed for off-site improvement areas at a reduced buffer, as appropriate. A pedestrian survey resulted in the relocation of five previously recorded sites (CA-SDI-4558, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H), and the recordation of two newly discovered archaeological sites (CA-SDI-17264 and CA-SDI-17265) and one new isolate (P-37-025968). All other previously recorded resources, along with the mapped historic structure, were not relocated during pedestrian surveys; these have either been destroyed by previous development, or were originally mismapped and are not located in the project area. Ground visibility during the survey contributed to the difficulty of relocating previously recorded sites; visibility was generally poor in most areas that generally improved on hilltops and in some valley areas or earthen exposures.

Sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 have all been identified as However, the County has determined that the Deer Springs Road improvement is an essential public facility (as determined in the General Plan Update 2011) and that sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 are exempt from RPO compliance.

Direct impacts to CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 have been reduced through avoidance. The significant portion of CA-SDI-4558 has been avoided and a greenspace park

planned for its periphery. Soldier pier retaining walls have been designed to reduce grading within CA-SDI-5951 and CA-SDI-9822, preserving as much as 60% of the site deposit at each site that will be set aside in dedicated open space. Mitigation of direct impacts for site CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 (portions that may exist within Deer Springs Road and adjacent to the road) will be achieved through either the Proposed At-grade option of data recovery, or the Alternative option of index sampling and site capping with surcharged fill. If the Proposed At-grade is chosen, then the data recovery program will involve the excavation of 35 1x1-meter units at CA-SDI-4558, 45 1x1-m units at CA-SDI-5951, and 100 1x1-meter units at CA-SDI-9822, artifact analysis, special studies, and a report of finding. For either the Proposed At-grade or the Alternative, reanalysis of previously collected artifacts (Palomar Community College) will be conducted.

If the Alternative option is selected, the site will be mitigated of potential direct impacts by covering the site with surcharged fill. All road-widening construction shall occur on the fill, rather than on sites CA-SDI-4558 and CA-SDI-5951 to lessen impacts. Mitigation of direct impacts for portions of site CA-SDI-9822 south of, within, and north of Deer Springs Road will be achieved by covering these portions of the site with surcharged fill. All road-widening construction shall occur on the fill, rather than on site CA-SDI-9822 to lessen impacts. Capping should include a permeable geotextile fabric (i.e., Amoco cloth) placed over the site, followed by at least 6 inches of sterile sand, followed by 1 to 3 feet of uncompacted fine-grained soil (i.e., decomposed granite), followed by clean fill soil. It is also necessary that the clean fill soil "feather" out 10 feet beyond the defined boundary of the capping area to create a buffer. Utility and irrigation lines will be placed either outside of the archaeological sites or within fill soil. A minimum of 3 feet of fill will be placed between the archaeological site midden (surface) and the utility line(s) for water or sewer. A minimum of 1 foot of fill will be placed between the archaeological site midden (surface) and electrical and/or telephone lines. It is anticipated that through the construction of Deer Springs Road on top of surcharged fill, direct impacts will be lessened and completely avoided. All placement of utilities on top of the cap should be monitored by the Project Archaeologist to ensure that the cap is not compromised. Examples of capping archaeological sites as a means of mitigation include Moosa Canyon archaeological materials from sites CA-SDI4807, CA-SDI-4808, and CA-SDI-4556 under Interstate 15, and US Army Corps of Engineers projects as cited in "The Archaeological Sites Protection and Preservation Notebook" (1990). It should be noted that this was the preferred mitigation method recommended by Native Americans who commented on the Moosa Canyon project.

If the Alternative option is chosen, for those portions of CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 that will be impacted by development and preserved/protected through capping, an index sample will be excavated to characterize CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822.

The index sampling program will involve the excavation of six 1x1-meter units at each site, artifact analysis, special studies, and a report of finding. The index sample program, along with reanalysis of previously collected artifacts (Palomar Community College), will serve as the primary sources of materials for the preparation of technical reports for sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822.

As no comprehensive report for previous excavations at CA-SDI-9822 haas been completed, a report of findings using previous work will be prepared for CA-SDI-9822. This work will include reanalysis of previously recorded cultural material, and/or additional field and laboratory work necessary to complete a report documenting previous work for these sites. CA-SDI-5951 was not previously excavated; therefore, no additional analysis is necessary.

Protective measures will be implemented to ensure the pictograph at CA-SDI-9822 will not be impacted by construction related dust.

For the portion of site CA-SDI-4558 that will be indirectly impacted, mitigation of indirect impacts will be achieved through temporary fencing during road construction followed by permanent fencing after road construction. The avoided portion of the site surrounded by the greenspace park will be cleared of non-native vegetation; however, native vegetation will remain. Non-native trees will be cut down to level with the roots left in place. Non-native grasses and brush will be cleared by hand or by the use of a weedwacker. The cement foundation will be carefully removed and minor fill capping using clean soil will be used in this area. A one-time hydro seeding with native plant seeds will be conducted. No sprinkler system or watering system will be used to promote native vegetation. For the portion of site CA-SDI-9822 (portions within open space) that will be indirectly impacted by Deer Springs Road improvements, mitigation of impacts will be achieved through temporary fencing and minor capping using clean soil as needed. Minor capping will only cover the surface of the site; however, bedrock milling features to the extent possible will not be capped. Indirect impacts include increased accessibility and the potential for pot hunters/looters. Construction equipment will be directed away from these sites, and construction personnel will be directed to avoid entering the areas.

Through tribal consultation the County has recognized the presence of a Traditional Cultural Property (TCP) anchored locally by CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822, and eligible for listing in the California Register of Historical Resources (CRHR). Direct impacts to cultural resources have been addressed. Potential indirect impacts could occur if archaeological material is located within the roadbed of Deer Springs Road that is planned for improvements. Mitigation of these significant impacts will also be achieved through repatriation of roadbed sediments from select portions of Deer Springs Road in a permanent area set aside for

repatriation by the Applicant and County. The County, Applicant, consulting archaeologist, and consulting tribes will also enter into a pre-excavation agreement memorializing all commitments identified during tribal consultation and outlining the treatment of resources during monitoring, as well as a long term management plan for cultural resources.

The historic structure/location identified on the 1901 Escondido and San Luis Rey U.S. Geological Survey (USGS) maps was not re-located and appears to have been destroyed. Historic research identified the historic location within the Dietschy homestead. The lack of physical evidence of the structure, suggests that the site has been destroyed and it is not possible to determine whether Project implementation will or will not come into contact with cultural materials associated with this resource. However, because subsurface features may be present that can provide information on early homesteading in north San Diego County, development of the proposed project may result in potentially significant impacts. If this were to occur, and if avoidance or preservation of the resource proved infeasible, the impact can be mitigated to less than significant through implementation of a subsurface exploration plan to proactively search for potential historic structure foundations, wells, privies or other features that may relate to the 1901 historic structure.

Sites CA-SDI-9253, CA-SDI-10747H, CA-SDI-17264 and CA-SDI-17265 were tested and identified as not significant. Sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, and CA-SDI-5640 have been destroyed by development and along with isolates SDM-W- 3880C and P-37-025968, are identified as not significant. No further work is recommended for sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, CA-SDI-5640, CA- SDI-9253, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265.

Monitoring of ground disturbance of the entire project by an archaeologist and a Native American is necessary to ensure that if cultural resources (i.e., human remains, hearths) are present, they will be handled in a timely and sensitive manner. All cultural materials excavated or removed from prehistoric or historic sites during testing, index sampling, and/or data recovery programs, will be permanently repatriated to a culturally affiliated tribe, deposited in a designated area of the project site. Prior to repatriation of cultural materials, all recovered cultural material (excluding human remains) will be subject to standard non-destructive archaeological analysis and documentation, and a sample of those materials will be subject to three-dimensional (3D) laser scanning to produce a digital curation record; this record will be curated at the San Diego Archaeological Center (SDAC) or a facility that meets federal standards (36 CFR Part 79). In consultation with the County and participating tribes, some archaeological materials may be subject to radiocarbon dating, or other special studies as appropriate, excluding human remains or other items deemed inappropriate for destructive analysis.

1 INTRODUCTION

This report presents the results of a cultural resources inventory and evaluation for the Newland Sierra Project (Project) located in an unincorporated part of San Diego County, California (Figure 1-1). The project proposes construction of a planned community within a 1,985-acre area (Figure 1-2). The proposed project is generally located west and north of the intersection of Deer Springs Road and Interstate 15.

1.1 Project Description

The Newland Sierra Project (also referred herein as "Community" or "project") is a 1,985-acre mixed-use community within the unincorporated area of San Diego County designed in accordance with the County of San Diego General Plan Community Development Model. The majority of the Community is within the Twin Oaks community of the North County Metropolitan Subregional Plan area, and a portion is within the Bonsall Community Planning area. The Specific Plan includes a residential component consisting of 2,135 dwelling units, which equates to an overall density of 1.08 dwelling units per acre (du/ac) over the entire 1,985 acres. The Community Development Model influenced the design and pattern of the seven neighborhoods (also referred to as "planning areas") with the highest densities located in the Town Center. The Town Center includes a maximum of 81,000 square feet of general commercial uses, as well as educational and park uses. The Community also includes open space, parks, pocket parks, overlooks, trails, bike lanes, pathways, and a 6-acre school site.

Sustainability

The proposed project would promote sustainability through Site design that would conserve energy, water, open space, and other natural resources. The project would offer defining attributes, including a commitment to carbon neutrality by offsetting 100 percent of the project's construction and operational greenhouse gas (GHG) emissions through the life of the project. As part of this commitment, the project would implement core sustainable development features, including solar on all residential units and a network of solar-powered street lights; low-water-use landscaping throughout the Community, with restrictions on the use of turf; possible indoor pre-plumbing for grey water systems in single-family residential dwelling units, if feasible; electric vehicle chargers in single-family garages and electric vehicle charging stations in commercial areas; and integration of community gardens and vineyards throughout the Community. The project would also implement a Transportation Demand Management (TDM) program to reduce automobile trips, both internal and external to the Community. The project's carbon neutrality and energy-, water-, and transportation-efficient requirements, combined with its balance of interrelated land uses, high level of preservation, and high-quality neighborhood

design, make the project the first large-scale planned community in San Diego County to achieve a 100 percent reduction in the project's construction and operational GHG emissions.

Access Points and Internal Circulation

The project's multimodal transportation network would support pedestrian, equestrian, bicycle, shuttle service, and vehicular use throughout the Community, with connections to off-site roads supporting the same. The project Site would have two primary access roads along Deer Springs Road at Mesa Rock Road and Sarver Lane, with an additional access point at Camino Mayor off North Twin Oaks Valley Road. The Mesa Rock Road access would be built as a six-lane entry road with a median that transitions into a four-lane divided road farther into the Site, and then into a two-lane undivided roadway until it reaches the Sarver Lane access where it would transition into a three-lane undivided roadway. The loop road is primarily designed with a width of 32 feet and would include striped bike lanes and a 10-foot-wide multi-use pathway along its entire length. The bike lanes and multi-use pathway would connect to bike routes and a 10-foot-wide multi-use pathway along Deer Springs Road.

An electric bike share program would be included to further link the neighborhoods to one another and reduce internal vehicle trips. The electric bike share program would include the placement of a kiosk in close proximity to each planning area to allow electric bikes to be taken from one kiosk and left at another, encouraging sustainable transportation between planning areas within the project. The program includes the placement of eight kiosks throughout the Community, with 10 to 20 electric bikes at each kiosk. Additionally, the project would include bike lanes, an extensive trail system consisting of roadside pathways within the linear greenbelts, and pathways. With incorporation of these internal circulation features, the project would provide residents the opportunity to access employment, education, and recreational and commercial uses via multiple modes of transportation.

Off-Site Mitigation Requirements

In addition to the improvements described above, traffic impacts to off-site roadways would necessitate various off-site improvements. These improvements are identified as mitigation measures to reduce traffic impacts. They include improvements to the Deer Springs Road/I-15 Interchange, Deer Springs Road, Twin Oaks Valley Road, Buena Creek Road, Monte Vista Drive, S. Santa Fe Avenue, and various intersections, and they are necessary to improve the capacity and operations of these roadways. Several of these roadway improvements are located within the jurisdiction of another lead agency. Because these additional off-site improvements are identified as mitigation measures, the EIR discusses the environmental effects of the improvements to the extent known at this time, and as required by CEQA, in less detail than the significant effects of the proposed project (See CEQA Guidelines Section 15126.4(a)(1)(D)).

Deer Springs Road

Of the off-site mitigation requirements identified in the EIR, the improvements to Deer Springs Road (mitigation measures M-TR-8 through M-TR-10) would involve two options. Option A would improve an approximately 6,600-foot-long section of the segment of Deer Springs Road between Sarver Lane and Mesa Rock Road to a 2.1B Community Collector (two lanes of travel with a continuous center turn lane). The balance of the road southwest into the city of San Marcos and east to I-15, including its intersections with Sarver Lane and Mesa Rock Road, would be improved to a 4.1A Major Road (a four-lane road with a raised median). Consistent with these sets of improvements, Option A would reclassify Deer Springs Road in the Mobility Element of the County's General Plan from a 6.2 Prime Arterial (six-lane) to a 4.1A Major Road with Raised Median and a 2.1B Community Collector with Continuous Turn Lane classifications. The centerline of Deer Springs Road would be realigned to ensure a minimum 750-foot turning radii along the entire alignment.

Option B would construct the entire length of the road from the I-15 interchange to its intersection with Twin Oaks Valley Road as a four-lane road, with an approximately 7,600-foot-long section of the road between Sarver Lane and Mesa Rock Road as a 4.1B Major Road (four lanes of travel with a continuous center turn lane), and the balance of the road, including its intersections with Sarver Lane and Mesa Rock Road, as a 4.1A Major Road. Option B would not reclassify Deer Springs Road; the roadway would remain as a 6.2 Prime Arterial (six-lane) in the Mobility Element of the General Plan. The centerline of Deer Springs Road would be realigned to ensure a minimum 750-foot turning radii along the entire alignment.

Both Option A and Option B would provide increased capacity on Deer Springs Road relative to existing conditions, although when considering level of service, only Option B would meet the County's level-of-service standards at project buildout. As is standard, the ultimate design of the road would be subject to County final engineering review and approval, whereby the County may require minor adjustments to the design details described herein.

Off-Site Utilities Improvements

Off-site sewer and water improvements would be completed in accordance with the approved water and sewer master plans prepared for the project. These improvements would be made in conjunction with surface improvements to Sarver Lane, Deer Springs Road, and Twin Oaks Valley Road. Additional segments of sewer would be improved in Twin Oaks Valley Road to Del Roy Avenue and East of Twin Oaks Valley Road within an existing Vallecitos Water District easement. Additionally, an 800-foot-long pipeline segment would require upsizing from the existing 18-inch-diameter line to a 21-inch-diameter line. This segment is located

north of East Mission Road between Twin Oaks Valley Road and Vineyard Road within the City of San Marcos. The existing sewer is located behind a commercial/retail development. For the purposes of this analysis, it is assumed that the entire 30-foot-wide easement would be impacted to upsize the existing sewer line.

1.2 Existing Conditions

1.2.1 Environmental Setting

Natural Setting

The project Site is located within the northern portion of the Merriam Mountains, a narrow chain of low mountains generally running north/south, with a variety of east/west trending ridgelines and scattered peaks. These mountains originate near the northern end of the City of Escondido and are bordered by Gopher Canyon Road to the north, I-15 to the east, and Twin Oaks Valley Road to the west. The project Site is situated on approximately 3 miles of the northern portion of the Merriam Mountains.

The San Marcos Mountains are located northwest of the project Site. The San Marcos Mountains are largely undeveloped and have the potential to support a wide variety of native wildlife and rare and special-status plant species, such as tetracoccus, wart-stemmed Ceanothus, and southern mountain misery. Much of the northern two-thirds of the Merriam Mountains have high habitat value due to the undeveloped nature and potential to provide a major block of habitat that shall contribute to regional conservation planning. The project Site is located within the draft North County Multiple Species Conservation Program (MSCP) area, and is categorized by the draft North County MSCP regional habitat evaluation model as having mostly moderate value habitats with smaller areas of high value and very high value habitats.

Vegetation on the Site consists of large blocks of southern mixed chaparral with limited patches of Diegan coastal sage scrub, live oak woodlands, and southern willow scrub. Due to the dense nature of the chaparral covering most of the Site, wildlife movement is generally confined to existing dirt roads.

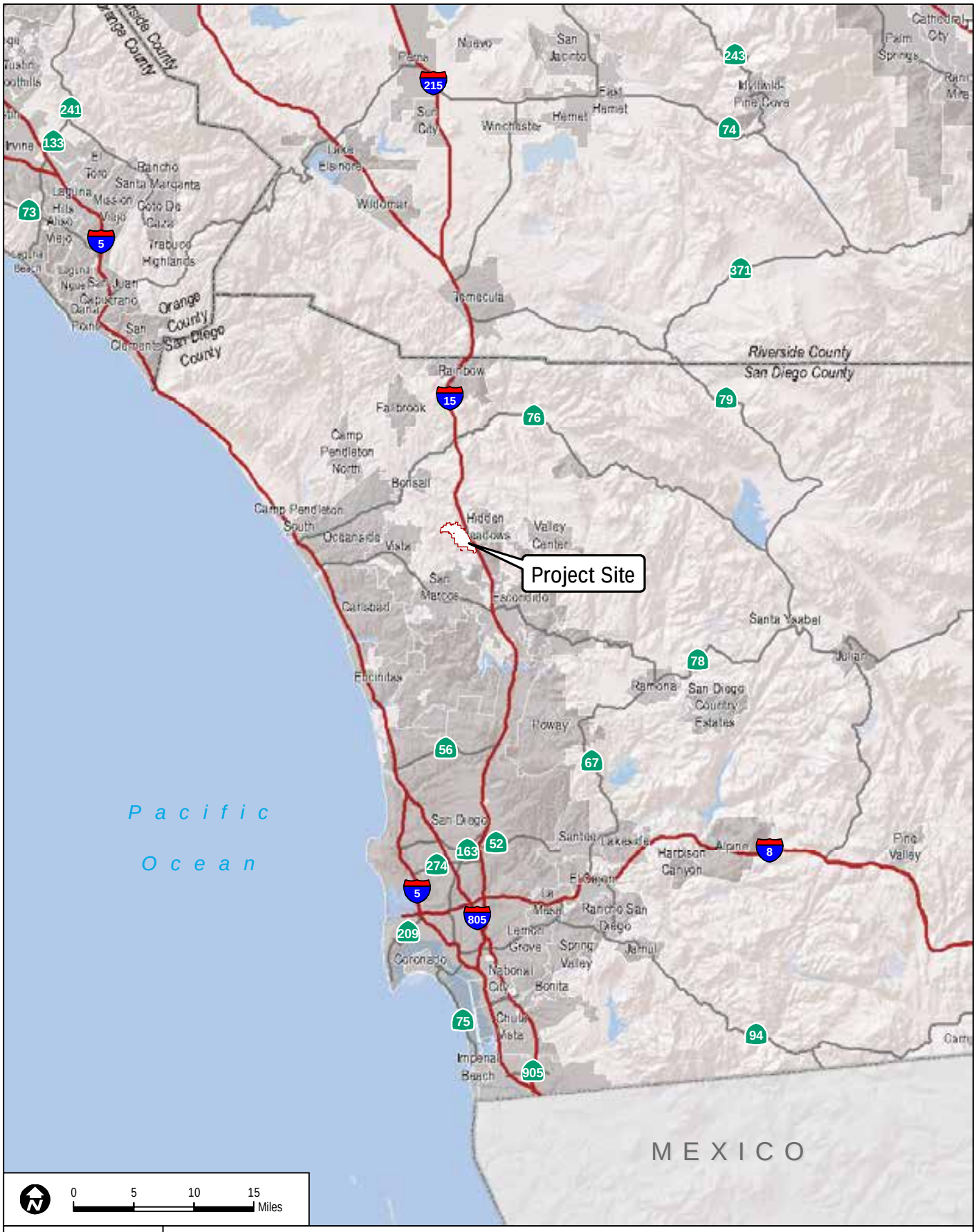

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FIGURE 1-1
Regional Map

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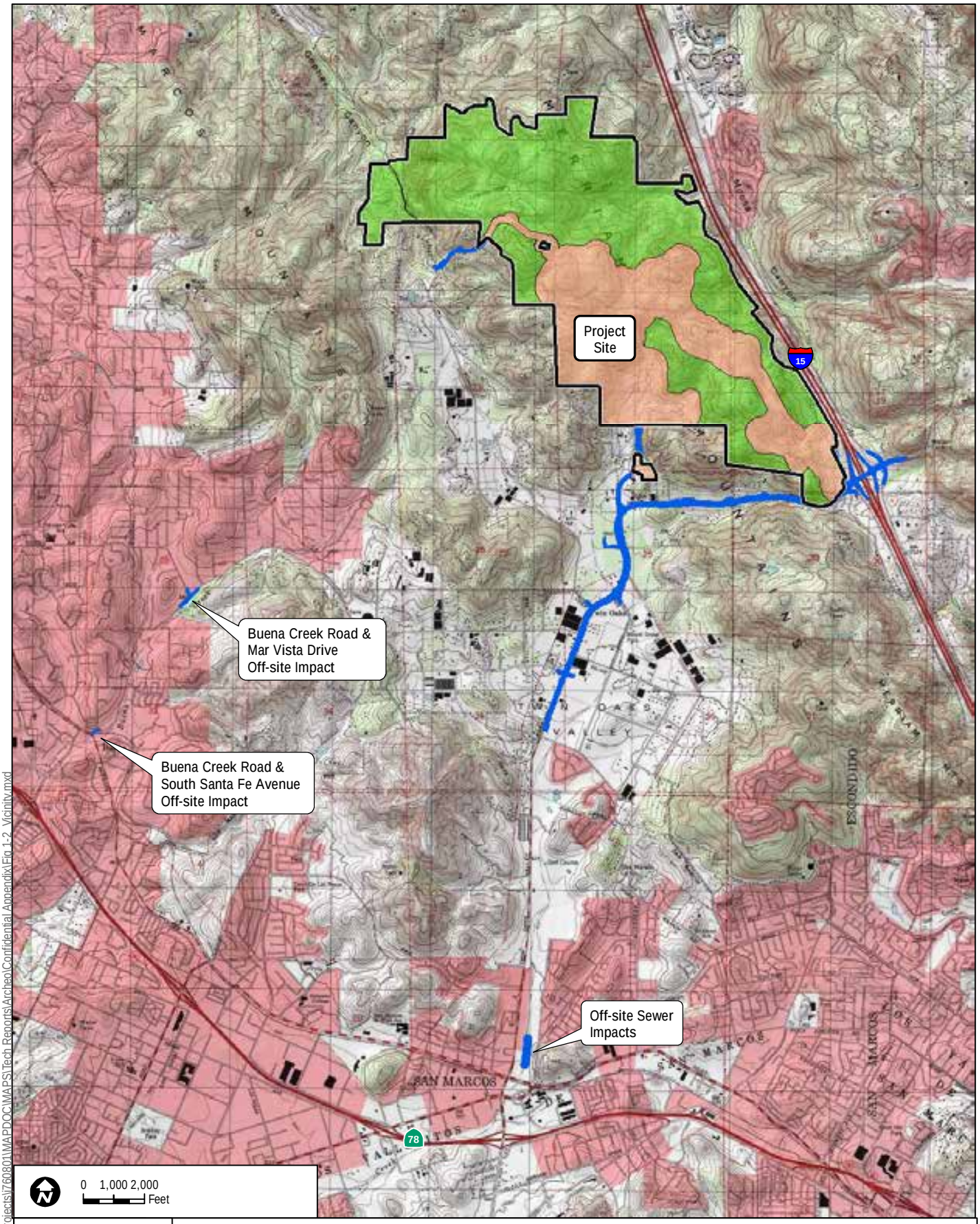

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SOURCE: USGS 7.5-Minute Series San Marcos Quadrangle.

FIGURE 1-2
Vicinity Map

Cultural Resources Report for the Newland Sierra Project

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Large granodiorite outcroppings and pinnacles commonly occur throughout this region and are a common occurrence on the project Site. The project Site contains undeveloped steep slopes and rock outcroppings that are visually prominent from the I-15 corridor. The south fork of Moosa Canyon Creek runs from the northern to northeastern vicinity of the Site. In addition, the area is a tributary to the San Luis Rey River (to the north) through the south fork of Gopher Canyon Creek. The San Luis Rey River is an important riparian corridor containing extensive woodland vegetation and rare and protected species. Tributaries to the San Marcos Creek are also located in the vicinity and flow southwest towards Batiquitos Lagoon.

The project Site is located in two separate watersheds: the San Luis Rey and Carlsbad watersheds. The eastern and northern portions of the Site are located within the San Luis Rey watershed. The southern portion is located in the Carlsbad watershed. The project Site lies in the Moosa Hydrologic, Bonsall Hydrologic, and Twin Oaks Hydrologic Subareas. Natural topography of the Site is composed of hills and valleys dominated by rock outcroppings with moderate to steeply sloping terrain. Elevation ranges from approximately 660 feet above mean sea level (AMSL) near the northwestern limits at Twin Oaks Valley Road to approximately 1,750 feet AMSL in the west-central portion of the Site. Approximately 52 percent of the Site contains Resource Protection Ordinance (RPO) defined steep slope lands. Prominent, generally east–to-west trending ridgelines divide the Site into five separate drainage basins, which are tributaries to Moosa Canyon, Gopher Canyon, and San Marcos Creeks. Gopher Canyon Creek is located north of the project Site, and a small portion of the south fork of Gopher Canyon Creek runs southeast to northwest through the northwestern area, eventually meeting the San Luis Rey River. Both Gopher Canyon Creek and the San Marcos Mountains show favorable attributes as habitat and corridors for larger wildlife.

Cultural Setting

Evidence for continuous human occupation in the San Diego region spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. This research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1750), and Ethnohistoric (post-AD 1769).

Paleoindian (pre-5500 BC)

Evidence for Paleoindian occupation in coastal Southern California is tenuous, especially considering the fact that the oldest dated archaeological assemblages look nothing like the Paleoindian artifacts from the Great Basin. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from SDI-4669/W-12, in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2007). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of groundstone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of groundstone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on China Lake Naval Air Weapons Station near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multicomponent fluted point site, and MNO-680—a single component Great Basined Stemmed point site (Basgall et al. 2000). At MNO-679 and MNO-680, groundstone tools were rare while finely made projectile points were common.

Turning back to coastal Southern California, the fact that some of the earliest dated assemblages are dominated by processing tools runs counter to traditional notions of mobile hunter–gatherers traversing the landscape for highly valued prey. Evidence for the latter—that is, typical Paleoindian assemblages—may have been located along the coastal margin at one time, prior to glacial desiccation and a rapid rise in sea level during the early Holocene (pre-7500 BP) that submerged as much as 1.8 kilometer of the San Diego coastline. If this were true, however, it would also be expected that such sites would be located on older landforms near the current coastline. Some sites, such as SDI-210 along Agua Hedionda Lagoon, contained stemmed points similar in form to Silver Lake and Lake Mojave projectile points (pre-8000 BP) that are commonly found at sites in California's high desert (Basgall and Hall 1990). SDI-210 yielded one corrected radiocarbon date of 8520–9520 BP (Warren et al. 2004). However, sites of this nature are extremely rare and cannot be separated from large numbers of milling tools that intermingle with old projectile point forms.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between 10,365 and 8200 BC (Warren et al. 2004:26). Termed San Dieguito (Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile

points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos' interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the San Diego region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early-Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, wherein hunting-related tools are replaced by processing tools during the early Holocene (Basgall and Hall 1993).

Archaic (8000 BC–AD 500)

The more than 1500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in the San Diego region. If San Dieguito is the only recognized Paleoindian component in the San Diego region, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the San Diego region (Hale 2001, 2009).

The Archaic pattern is relatively easy to define with assemblages that consist primarily of processing tools: millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the San Diego region, with little variability in tool composition. Low assemblage

variability over time and space among Archaic sites has been equated with cultural conservatism (Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurs until the bow and arrow is adopted at around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remains low. After the bow is adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decrease in proportion relative to expedient, unshaped groundstone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complimented only by the addition of the bow and ceramics.

Late Prehistoric (AD 500–1769)

The period of time following the Archaic and prior to Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (M. Rogers 1945; Wallace 1955; Warren et al. 2004). However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. In northern San Diego County, the post-AD 1450 period is called the San Luis Rey Complex (True 1958), while the same period in southern San Diego County is called the Cuyamaca Complex and is thought to extend from AD 500 until Ethnohistoric times (Meighan 1959). Rogers (1929) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics. Despite these regional complexes, each is defined by the addition of arrow points and ceramics, and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of the San Luis Rey and Cuyamaca complexes difficult. For this reason, the term Late Prehistoric is well-suited to describe the last 1,500 years of prehistory in the San Diego region.

Temporal trends in socioeconomic adaptations during the Late Prehistoric period are poorly understood. This is partly due to the fact that the fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces; bowl mortars are actually rare in the San Diego region. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred prior to AD 1400. True (1980) argued that acorn processing and ceramic use in the northern San Diego region did not occur until the San Luis Rey pattern emerged after approximately AD 1450. For southern San Diego County, the picture is less clear. The

Cuyamaca Complex is the southern counterpart to the San Luis Rey pattern, however, and is most recognizable after AD 1450 (Hector 1984). Similar to True (1980), Hale (2009) argued that an acorn economy did not appear in the southern San Diego region until just prior to Ethnohistoric times, and that when it did occur, a major shift in social organization followed.

Ethnohistoric (post-AD 1769)

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the San Diego region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the San Diego region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Fages 1937; Geiger and Meighan 1976; Harrington 1934; Laylander 2000; Philip S. Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005:32) by recording languages and oral histories within the San Diego region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities. These accounts supported, and were supported by, previous governmental decisions that made San Diego County the location of more federally recognized tribes than anywhere else in the United States: 18 tribes on 18 reservations that cover more than 116,000 acres (CSP 2009).

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of precontact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California.

The traditional cultural boundaries between the Luiseño and Kumeyaay Native American tribal groups have been well defined by anthropologist Florence C. Shipek:

> In 1769, the Kumeyaay national territory started at the coast about 100 miles south of the Mexican border (below Santo Tomas), thence north to the coast at the drainage divide south of the San Luis Rey River including its tributaries. Using the U.S. Geological Survey topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240 contour line and then north across the divide between Valley Center and Woods Valley up to the 1880-foot peak, then curving around east along the divide above Woods Valley. [1993 summarized by the San Diego County Board of Supervisors 2007:6]

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006:34). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007:71). As the project area is in Valley Center, the Native American inhabitants of the region would have generally spoken a Luiseno variety of Takic, though would have had likely come into regular contact with the Ipai speaking northern Kumeyaay.

Victor Golla has contended that one can interpret the amount of variability within specific language groups as being associated with the relative "time depth" of the speaking populations (Golla 2007:80) A large amount of variation within the language of a group represents a greater time depth then a group's language with less internal diversity. One method that he has employed is by drawing comparisons with historically documented changes in Germanic and Romantic language groups. Golla has observed that the "absolute chronology of the internal diversification within a language family" can be correlated with archaeological dates (2007:71). This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

Golla suggests that there are two language families associated with Native American groups who traditionally lived throughout the San Diego County region. The northern San Diego tribes have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007:74). These groups include the Luiseño, Cupeño, and Cahuilla. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was later followed by the diversification within the Takic speaking San Diego tribes, occurring approximately 1500 BC–AD 1000

(Laylander 2010). The Luiseño are linguistically and culturally related to the Gabrielino, Cupeño, and Cahuilla, and represent the descendants of local Late Prehistoric populations. They are generally considered to have migrated into the area from the Mojave Desert, possibly displacing the prehistoric ancestors of the Yuman-speaking Kumeyaay (Ipai-Tipai) that lived directly to the south during Ethnohistoric times. Luiseño territory encompassed an area from roughly Agua Hedionda Creek on the coast, east to Lake Henshaw, north to Lake Elsinore, and west through San Juan Capistrano to the coast (Bean and Shipek 1978; Kroeber 1925). The Luiseño shared boundaries with the Gabrielino and Serrano to the west and northwest, the Cahuilla from the deserts to the east, the Cupeño to the southeast, and the Kumeyaay to the south. Southern Native American tribal groups of the San Diego region have traditionally spoken Yuman languages, a subgroup of the Hokan Phylum. Golla has suggested that the time depth of Hokan is approximately 8,000 years (Golla 2007:74). The Kumeyaay tribal communities share a common language group with the Cocopa, Quechan, Maricopa, Mojave, and others to east, and the Kiliwa to the south. The time depth for both the Ipai (north of the San Diego River, from Escondido to Lake Henshaw) and the Tipai (south of the San Diego River, the Laguna Mountains through Ensenada) is approximated to be 2,000 years at the most. Laylander has contended that previous research indicates a divergence between Ipai and Tipai to have occurred approximately AD 600–1200 (Laylander 1985). Despite the distinct linguistic differences between the Takic-speaking tribes to the north, the Ipai-speaking communities in central San Diego, and the Tipai southern Kumeyaay, attempts to illustrate the distinctions between these groups based solely on cultural material alone have had only limited success (Pigniolo 2004; True 1966).

The Uto–Aztecan inhabitants of northern San Diego County were called Luiseños by Franciscan friars, who named the San Luis Rey River and established the San Luis Rey Mission in the heart of Luiseño territory. Luiseño population estimates at the time of Spanish contact range from 3,000–4,000 (Kroeber 1925) to upwards of 10,000 (White 1963). In either case, the arrival of the Spanish undoubtedly decimated Native peoples through disease and changed living conditions (Bean and Shipek 1978).

The Luiseño were organized into patrilineal clans or bands centered on a chief, comprised of 25–30 people (Kroeber 1925), each of which had their own territorial land or range where food and other resources were collected at different locations throughout the year (Sparkman 1908). The title of chief was heritable along family lines. Inter-band conflict was most common over trespassing. Sparkman observed that "when questioned as to when or how the land was divided and sub-divided, the Indians say they cannot tell, that their fathers told them that it had always been thus" (1908). Place names were assigned to each territory, often reflecting common animals, plants, physical landmarks, or cosmological elements that were understood as being

related to that location. Marriages were generally arranged by parents or guardians. Free and widowed women had the option to choose their partner. Polygamy occurred though was not common, often with a single man marrying a number of sisters and wives. Shamanism was a major component in tribal life. The physical body and its components was thought to be related to the power of an individual, and wastes such as fluids, hair, and nails were discarded with intent. Hair, once cut, was often carefully collected and buried to avoid being affected negatively or controlled by someone who wishes them harm. Some locations and natural resources were of cultural significance. Springs and other water-related features were thought to be related with spirits. These resources, often a component of origin stories, had power that came with a variety of risks and properties to those who became affected. Puberty ceremonies for both boys and girls were complex and rigorous. Mourning ceremonies were similar throughout the region, generally involving cutting of the hair, burning of the deceased's clothes a year after death, and redistribution of personal items to individuals outside of the immediate tribal group (Sparkman 1908; Kroeber 1925).

The staple food of the Luiseños during the ethnohistoric period was acorns (Sparkman 1908). Of the at least six oak species within this tribal groups traditional territory, the most desirable of these was the black oak (*Quercus kelloggii*) due to its ease of processing, protein content, and digestibility. Acorns were stored in granaries to be removed and used as needed. The acorns were generally processed into flour using a mortar and pestle. The meal was most commonly leached with hot water and the use of a rush basket, however, there are also accounts of placing meal into excavated sand and gravel pits to allow the water to drain naturally. The acorn was then prepared in a variety of ways, though often with the use of an earthen vessel (Sparkman 1908). Other edible and medicinal plants of common use included wild plums, choke cherries, Christmas berry, gooseberry, elderberry, willow, *Juncus*, buckwheat, lemonade berry, sugar bush, sage scrub, currents, wild grapes, prickly pear, watercress, wild oats and other plants. More arid plants such as *Yucca, Agave*, mesquite, chia, bird-claw fern, *Datura*, yerba santa, *Ephedra*, and cholla were also of common use by some Luiseño populations. A number of mammals were commonly eaten. Game animals included back-tailed deer, antelope, rabbits, hares, birds, ground squirrels, woodrats, bears, mountain lions, bobcats, coyotes, and others. In lesser numbers, reptiles and amphibians may have been consumed. Fish and marine resources provided some portion of many tribal communities, though most notably those nearest the coast. Shellfish would have been procured and transported inland from three primary environments, including the sandy open coast, bay and lagoon, and rocky open coast. The availability of these marine resources changed with the rising sea levels, siltation of lagoon and bay environments, changing climatic conditions, and intensity of use by humans and animals.

The Historic Period (post-AD 1542)

Francisco Ulloa, exploring the Pacific coast under orders from Hernán Cortes, is reported to have stopped at the San Luis Rey River in 1540, marking the first contact between Europeans and the Luiseño, although the accuracy of his exploration is disputed (Garrahy and Weber 1971). Juan Rodriguez Cabrillo, who is widely considered the first European to explore Alta California, sailed the coast through Luiseno territory in 1542, but is not reported to have landed. Epidemic diseases may also have been introduced into the region at an early date, either by direct contacts with the infrequent European visitors or through waves of diffusion emanating from native peoples farther to the east or south (Preston 2002). It is possible, but as yet unproven, that the precipitous demographic decline of native peoples had already begun prior to the arrival of Gaspar de Portolá and Junípero Serra in 1769.

In 1798, Mission San Luis Rey, named for the King of France, was established four miles up along the San Luis Rey River. At its height San Luis Rey became one of the most populous and successful of the missions. In 1824, it had an Indian neophyte population of 3,000 and the extensive mission lands supported 1,500 horses, 2,800 sheep and 22,000 cattle (Pourade 1961:139). Under Spanish control, the missions set out to convert local populations to Christianity and to expand the influence of the Spanish empire. To support intensified missionization, asistencias (sub-missions) and ranchos were established throughout the territory in the vicinity of Native American villages. Eighteen years after the establishment of Mission San Luis Rey, the mission asistencia of Pala was established 20 miles upriver.

Throughout this period the Spanish established multiple missions and allowed only baptized Native Americans to legally own property. These disturbances to Native American communities only increased through Mexican Independence in 1821 and the succeeding secularization of the missions. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger Land Grants to affluent Mexican citizens and rancheros. In 1835 the missions took on the role of parish churches (Carrico 2008:41). While some rancherias and pueblos such as Las Flores (Uchme), San Pasqual, and San Dieguito remained under the control of their native inhabitants following secularization, over the succeeding four and a half decades these were eventually lost to Mexican and Anglo-American owners as well (Carrico 2008:41).

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to native populations. The 1833 Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to the Indians, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent the Indians from

regaining their patrimony. By 1835, the missions, including Mission San Luis Rey, were secularized. Mission San Luis Rey lands were parceled into six ranchos: Santa Margarita, Las Flores, Buena Vista, Agua Hedionda, Monserrate, and Guajome. The remaining lands of San Luis Rey were sold in 1846 to José Cota and José A. Pico by Pío Pico, Governor of California, and the Luiseño converts who had lived around the mission were removed to nearby Pala. Some former mission neophytes were absorbed into the work forces on the ranchos, while others drifted toward the urban centers at San Diego and Los Angeles or moved to the eastern portions of the county where they were able to join still largely autonomous native communities. United States conquest and annexation, together with the gold rush in Northern California, brought many additional outsiders into the region. Development during the following decades was fitful, undergoing cycles of boom and bust. With rising populations in the nineteenth century throughout the Southern California region, there were increased demands for important commodities including agricultural goods. Land grants issued within the Valley Center area (1841–48) included the ranchos of Pauma, Rincon del Diablo, Cuca or El Potrero, and Guejito. Other land grants in the surrounding area included Bernardo, San Marcos, Buena Vista, and Monserrate. Of these, rancho Guejito is the last of these to remain in-tact (McHenry 1997).

In 1851, a group of Cahuilla and Cupeño Indians attacked American settlers in Warner's Hot Spring, hoping to unite Indian tribes and drive out the Americans (Bibb 1991). Led by Pablo Apis, the Luiseño of Temecula went to Mission San Louis Rey and remained out of the conflict (Bibb 1991). In 1852, the Treaty of Temecula (Treaty of Peace and Friendship) was signed, providing certain lands, horses, cattle, and other supplies to the Luiseño, Cahuilla, and Serrano in exchange for government control of the rest of their lands (Bibb 1991, Van Horn 1974). This treaty, and 17 others in California, was rejected by the U.S. Senate later that year.

California was officially ceded to the United States in 1848, which led to the continued appropriation of Native American Lands by ranchers, prospectors, and an increasing number of settlers. The United States Government did little to dissuade these trespasses. From 1850, with the passage of California's Indian Act, until legislative reforms in the late 1880s, state laws promoted conditions that amounted to indentured servitude for much of the Native American population in San Diego (Carrico 2008:56). These laws supported overt racism and inequitable treatment.

Valley Center, originally named Bear Valley, began to be settled by settlers during this period. This original name was granted after local ranchers killed a California Grizzly Bear reported to weigh 2,200 pounds. The Homestead Act of 1862 allowed US citizens to claim land by a number of different strategies. The most popular of these was to file a claim for 160 acres through payment of a $10 initial fee and the promise to improve the land through cultivation or ranching as well as the construction of a residence and out-buildings (McHenry 1997). While a number of the original settlers have no record of their origins, the majority of those who filed early claims

were native-born Californians. A relatively large number of individuals also came from Arkansas, Illinois, and Missouri. Farming was the primary business of these settlers. The planned community of Escondido was founded in the 1880s, increasing the demand for products produced by residents of Valley Center.

In December of 1875 President Grant issued an executive order for 52,400 acres to be set-aside as reservations for San Diego Native Americans (143). These included Mesa Grande, Santa Ysabel, Sycuan, Capitan Grande, Pala, Agua Caliente, Inaja, Cosmit, and Potrero (Carrico 2008:143; Eargle 2000). In 1889 Los Coyotes became the tenth San Diego reservation, and with 26,000 acres it was the largest yet (Carrico 2008:150). From 1891 to 1893, in response to the Act for the Relief of the Mission Indians in the State of California of 1891, six additional reservations were created (152). These included Campo, Laguna, La Posta, Manzanita, Ewiiaapaayp (Cuyapaipe), and Pauma-Yuima (Carrico 2008:153). This was followed 20 years later by the creation of the San Pasqual reservation in 1911.

Local History (by Susan Bugbee, Gallegos and Associates)

The Merriam Mountains were named after Major Gustavus French Merriam, the first settler of the Twin Oaks community in north San Diego County. He possessed an impressive heritage, as his relatives included Charles and George Merriam, publishers of the Merriam-Webster Dictionary. The Merriams of his grandfather's generation were Yale graduates and served in the Revolutionary War. His father, Ela Merriam, had fought in the War of 1812, eventually attaining the rank of brigadier general. In 1819, Ela married Lydia Sheldon and they had eleven children. Gustavus, born in 1835, was their eighth child. He grew up on the family's prosperous dairy farm in upstate New York. He was an intelligent boy and did well scholastically (Quinn 1907).

Gustavus Merriam's parents encouraged all of their children, both the boys and the girls, to attend college. Merriam chose to attend the U.S. Naval Academy at Annapolis, where he began his studies in 1854. As a result of a broken eardrum, he took a medical leave during his third year of school at the academy and ventured to Kansas, obtaining employment as a township clerk until the Civil War began.

Merriam enlisted in Syracuse and joined the Third New York Volunteers as a First Lieutenant. His first assignment included being in charge of several forts in and around Washington, D.C. In addition, he was sent to North Carolina to train twelve batteries for service in the war. In 1862, he was promoted to Major and his next tour of duty was performed at Maryland Heights, opposite Harper's Ferry where troops had been placed to defend Washington, D.C. Later, Merriam's daughter, Virginia, recalled her father's tale of displeasure with the assignment because it lacked excitement. One day, General Grant arrived at the camp and personally

expressed to Merriam that his specialized knowledge and ability with heavy artillery was needed there (Perkins 1966) (Figure 1-3). In 1908, he was still writing to some of his civil war comrades, such as Admiral Dewey, a classmate of his at the academy. Other classmates included Col. Davies, who later joined the Confederate army, and Major Beaumont, who joined the Union (The San Diego Union, 27 September 1908:20).

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SOURCE: Photo courtesy of San Marcos Historical Society

FIGURE 1-3
Photograph of Gustavus Merriam (undated)

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Near the end of the war, Merriam was transferred to the Washington, D.C. area where he met Mary Elizabeth (Nina) Scott at a party. Scott had grown up on a plantation in the Shenandoah Valley of Virginia, and was engaged in tutoring children in French. The couple was married in Washington, D.C. in July of 1863, and over the course of their marriage they had six children: Edwin, Nina Helen, Anna Teresa (who died at the age of 3), Henry Scott, Wallace Webster, and Bertha Virginia (Quinn 1907; Perkins 1966).

In the late 1860s, Merriam, his wife, and their first-born son Edwin (Edwin had been born in Washington, D.C.) moved to Topeka, Kansas, where Gustavus worked as a "dealer in dry goods (1868, 1870); a [wheat] farmer (1871); a coal dealer (1872); and as a partner in a coal, feed and lime dealership (1874)" (Kimbro n.d.). Nina Helen, Anna Teresa, and Henry Scott (Harry) were born in Kansas. Mrs. Merriam's health was fragile, and her doctor recommended the family relocate to a milder climate, such as Southern California. Merriam made his first trip to San Diego County with his 10-year old son Edwin in 1874, and identified the area where he would build a house and plant a garden and groves. Merriam planned to farm in Southern California, a trade he had learned well as a child, and had engaged in while living in Kansas. Additionally, Merriam planned on beekeeping. In August of 1875, he brought the whole family to Southern California and homesteaded 160 acres. The homestead was located eight miles northwest of Escondido, in Section 25 of Township 11 South, Range 3 West and adjacent to the Couts family's Vallecitos de San Marcos Rancho. Merriam named the area "Twin Oaks" for the prominent large double oak on his property (Figure 1-4). The two youngest children, Wallace and Bertha, were born in 1877 and 1878 respectively, at Twin Oaks (Lindenmeyer 1978a). The 160-acre homestead is located adjacent to, but outside of, the Newland Sierra Project area.

In the 1870s, the Vallecitos de San Marcos Rancho was owned by the Couts family living at Rancho Guajome. The property was constantly in a state of legal upheaval with various factions challenging ownership. In 1886 "the California State Supreme Court reach[ed] a decision in Burroughs vs Ysidora Couts which allowed the Couts estate to dispose of the property" (Bollinger 1976). Additionally, "Ysidora also had to wage a constant battle against the encroachment of her property by squatters. This problem continued for many years after the settlement of the lawsuit" (Bollinger 1976). Within the Couts family, feuding over land rights and inheritance also occurred.

Upon arriving to the valley, Major Merriam had his share of difficulties with the Couts family over his right to settle on the land. Henry Merriam recalled that:

> …about four days after our family settled on the Twin Oaks homestead four vaqueros rode up, all with Winchesters across their saddles, and gave us four hours to get out of the country. Father had had some field engineering experience

> and replied that he was not on their land; he had surveyed it and knew where his lines were. They rode off and did not try to molest us in that manner (The San Diego Sun 7 August 1926; Carroll 1975).

However, the Merriam family had the occasional herd of cattle trample through their fields and groves.

In 1880, the Goodwin family moved in "next door" to the Merriam Ranch in Twin Oaks. Richmond Goodwin was one year old when his family arrived to live at Twin Oaks for the next seven years. Goodwin recalls, "Father had one hundred forty-five acres there and he raised wheat, corn and hogs mostly. We had no vineyard or orchard and we just had milk cows for the family" (Hastings 1960).

About the same time, John and Mary Harrison homesteaded 160 acres in the north Twin Oaks valley. John raised bees, as did Merriam, because this industry did not require irrigation and water was scarce. Four of the six Harrison children were born in Iowa prior to the family's move to Twin Oaks. The fifth child, Hiram, was reputedly born in 1885 in the bee house, which served as the family's home until a house could be built. A sixth child died at birth and is buried on the Harrison ranch. The Harrison estate eventually grew to 320 acres (Lindenmeyer 1978b).

In 1881, the local residents met and formed a school district and elected a board of trustees. By 1883 or 1884, Merriam built a schoolhouse on his land and the first schoolteacher arrived from Tustin. Until this time, the children had been schooled at home. In the early 1890s, a larger school building was constructed on Deer Springs Road. This edifice served both as school and community center until 1943 when it closed (San Diego Historical Society n.d.; Perkins 1966).

In 1887, over a decade after Merriam settled at Twin Oaks, "the lands of Los Vallecitos de San Marcos were opened for settlement…and the town of San Marcos was established on the Escondido branch of the Santa Fe railroad" (Brackett 1960). Four small communities sprang up in the San Marcos valley during the next 15 years. Barham, a 640-acre townsite located just south of San Marcos proper, was established in 1883 under the direction of J.H. Barham. Within 1 year, the town consisted of a store, a blacksmith shop, and a newspaper.

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SOURCE: Photo courtesy of San Marcos Historical Society

FIGURE 1-4

Merriam Homestead, North Twin Oaks Valley, *Circa* 1880s

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A second area of development occurred 3 miles west of the current center of San Marcos, under the direction of banker Jacob Gruendyke and his associate W.G. Jacobs, who sold parcels of land for the San Marcos Land Company (Carroll 1975). To the north and east respectively, the neighborhoods of Twin Oaks and Richland grew. During the "boom" of the mid-1880s, a great influx of settlers to the area created a swell in the north San Diego County population.

Merriam had already established himself as a beekeeper when he ventured into the vineyard business. The growing of grapes had become the new agricultural interest in the Escondido area, and Merriam planted vines in hopes of producing raisins. He received his first cuttings from France. Discouraged by the difficulty of drying the grapes, Merriam decided to try producing wine and began his own winery. As one of the area's early vintners, he produced wine and brandy (Enges-Maas n.d.; Carroll 1975). In addition, he maintained his apiary business with 600 stands of bees sent from Topeka, Kansas. Merriam's honey was shipped to Australia and San Francisco in 25-gallon pine barrels and the wine was sent around the Horn and sold on the East coast (Lindenmeyer 1978a). He also had stands in Fallon, Nevada (Perkins 1966). He was a meticulous man and kept copious notes on weather and rainfall, information he provided to government agencies. Merriam hired both Native Americans and German immigrants that had migrated to Olivenhain from Chicago. Jacob Uhland and George Oden worked for Merriam prior to taking up homesteads in the Twin Oaks valley (Lindenmeyer 1978a; San Diego Historical Society n.d.). On January 17, 1888, Merriam's wife, Nina, died of consumption at Twin Oaks. She was 42 years old. Mrs. Oden had taken care of Nina when she became bedridden (Escondido Times-Advocate 19 January 1888, p.3).

Merriam had a long and close relationship with his older brother, Clinton, who was Merriam's senior by eleven years. Clinton had been a financial support to his younger brother and the two men kept in touch through numerous letters. Clinton owned a dry goods importing business in New York City and contributed much to the city's political arena. He eventually ran for congress on the Republican ticket, won, and was then re-elected for a second term. Clinton Merriam knew many prominent people. In 1889, on a trip to visit his friend John Muir in Northern California, Clinton visited his brother's place at Twin Oaks with his daughter Florence. Impressed with the location, Clinton purchased land adjacent to his brother's homestead and gave Gustavus the charge to build a house that endearingly became known as "La Mesita." Clinton and Florence returned to Twin Oaks in 1894. Clinton stayed only a few months, returning to Washington, D.C. take care of business. Florence, a young lady of 25, stayed longer and authored books on the natural surroundings of Twin Oaks and her experiences there. As a graduate of Smith College, Florence intended to become a writer. She was influenced greatly by her older brother, C. Hart Merriam, an ornithologist and later the first Chief of the U.S. Biological Survey. Together with her naturalist's interest in birds and her talent for writing, Florence produced her observations at

Twin Oaks in *A-Birding on a Bronco*. "Her notes were detailed and precise, and they form one of the earliest records of live western birds" (Kimbro n.d.).

Gustavus Merriam remarried to Mrs. Augusta M. Koch in 1892. Koch had one grown son, a graduate of the University of California at Berkeley, and a high school teacher in the San Francisco area (Quinn 1907). They continued to live at the Merriam Ranch for the next 20 years. When a team of state surveyors mapped the area in 1898, they named the chain of mountains to the north of his ranch the Merriam Mountains (San Diego Historical Society n.d.).

In the early 1900s, when the county of San Diego experienced growth in population, it was popular for writers and columnists to showcase the outlying communities. The following vignette appeared in a 1908 article of the Escondido Times-Advocate:

> One of the prettiest of valley drives is out to Twin Oaks, eight miles away (from Escondido). The landscape is enchanting – all along the way. Viewed from every angle the groves and hills, the fields and homes are good for sickness and death to the blues. Away at the head of a little valley which God must have taken pains in making and where man has helped made every prospect to please, stand two giant live oaks that were hundreds of years old when Columbus first beheld the shores of the new world. They stand on the beautiful possession of Major G. F. Merriam, a New York veteran of the civil war, who nearly thirty-five years ago left his store at Topeka, Kansas and erected here his family altar. He was sixteen miles from a post office, forty miles from the San Diego seaport and hundreds of miles from a railroad. He came to increase the years of so afflicted helpmeet, and has been blessed in happiness and in store. His vineyards, his groves, his fields and his herds have flourished as the old veteran has grown with the years in the love and confidence of those who have occupied this and kindred valleys (Escondido Times-Advocate 6 March 1908, p.3).

Meanwhile, Merriam's children grew up. Edwin, at the age of 21, homesteaded 160 acres adjacent to his father's ranch and later married Katherine Keyes. Helen graduated from Columbia University in New York. Harry attended business college in Los Angeles and San Diego. The two youngest children, Wallace and Virginia, attended Coronado High School after completing 9th grade in Twin Oaks. They both graduated high school in 1896, and attended the University of California at Berkeley (Perkins 1966).

In 1905, Merriam's daughter, Virginia, started a boarding school for boys. The "Twin Oaks Ranch School" catered to the wealthy and was in business for about 10 years. The Escondido Times-Advocate wrote about the school in 1908:

> Under the monster oaks on his farm is a school so unique as to deserve passing mention. It is for boys under fifteen years of age. Its curriculum includes camping trips, pony riding, safe and sane out-of-door life generally, wholesome diet, expurgated moral atmosphere and genial home influences. One hundred dollars a month is the tuition, with fifty dollars per quarter additional for saddle horse. The School has wrought wonders in the lives of city boys denied a fair start in physical capital. The teachers are Miss Virginia Merriam, daughter of the pioneer and Miss Margaret Marsh-Parker, of an honored New York family. Both are highly educated, but as unaffected and natural as possible, devoted to their work and in love with their life near to Nature's heart (Escondido Times-Advocate 6 March 1908, p.3).

A young man, Thomas Colby, who came from Detroit to attend the school in 1910, returned 30 years later to take up residency in north San Diego County (Perkins 1966).

In 1913, the 78-year-old Merriam and his second wife retired to Los Angeles. In January 1914, he was struck by a car and died within a short time, never having regained consciousness. It is thought that the elderly Merriam, who was at the time quite deaf, did not hear the car coming (Escondido Times-Advocate 26 January 1914, p.1).

Merriam's son Wallace became a mining engineer and moved to Mexico (Quinn 1907). In 1918, Henry Scott (Harry) Merriam, along with his wife and two sons, moved to their ranch in Holtville for a couple of years, leasing the Twin Oaks ranch to Otto Groschopp (Escondido Times-Advocate 25 October 1918, p.1). Upon returning to the Twin Oaks ranch, he was active in community affairs. In 1923, the Vista Irrigation District was formed and Harry became the first president of the group.

Merriam's grandson, Sheldon, built a large adobe house on the Twin Oaks property in the 1940s, where Sheldon's two children grew up. Sheldon continued to acquire additional acreage until the ranch totaled over 500 acres. On the land, he cultivated hay, grain, grapes and oranges. In 1975, Sheldon died at his adobe home. Sheldon's son, Richard, had joined his father in the agriculture business and continued to grow proteas, oranges, lemons and avocados after Sheldon's death (Enges-Maas n.d.; Weiss 1978). The historic redwood home that was built by Gustavus Merriam in 1889 was inherited by his great-grandson, Robert Merriam, a free-lance writer and citrus farmer. In 1982, Robert restored the 1,700-square-foot home after many years of being used as a rental (Schlesinger 1982).

In 1880, the Kimball brothers of National City purchased Rancho Encinitas consisting of over 4,000 acres. They advertised the property throughout the East and Midwestern United States, drawing a large German population from Denver and Chicago to north San Diego County. These settlers arrived in 1884 and 1885, and did not find the rich farmland promised, but rather property covered with dry brush and a scarcity of water. For income, the settlers sought work at the outlying ranches. From Olivenhain, the new German community, several settlers were directed to seek work from Gustavus Merriam. Jacob Uhland walked 16 miles to the Merriam ranch and was immediately hired. George Oden did the same, leaving his family in an old adobe barn shared with other families. Oden, who arrived in north San Diego County in 1884, was encouraged by Merriam to homestead 160 acres in Twin Oaks with an old shack on it that had not been "proved up" (Lindenmeyer 1978a). Uhland came to Olivenhain in 1885, and settled on land to the east of Merriam, which later became known as Uhland Canyon, until a deer was shot there and the local folks started calling it Deer Springs.

Another early settler to the area, Peter Cochems, arrived at Olivenhain in 1885 and then moved to Twin Oaks in 1887. Initially, Cochems built a small house and barn, but in 1902 had a large two-story farmhome erected on his 40-acre homestead (Figure 1-5). Cochems was a skilled baker and cigar manufacturer from Kochem, Germany. He had met and married his German-born wife Anna in Chicago, where their five children were born (Figure 1-6). Because of labor troubles in Chicago, Cochems gave up his cigar business and moved the family to a "Socialist community, called Olivenhaim" (San Marcos Historical Society n.d.). Becoming disgruntled with the community, the Cochems moved to Twin Oaks. Cochems and his two sons, Edgar and Oscar, dry-farmed the land and raised hay and oats. His ranch was the furthest north in the Twin Oaks valley at the time. Cochems died in 1912 at the age of 67 and is buried at the San Marcos cemetery. One of his sons sold the property shortly after his death.

In 1893, after heavy rains, George Oden died when the well he was cleaning out collapsed on him. He was 45 years old, and the family buried him on the property near the home he had built. Oden's widow was left to care for their six children. She later remarried a Mr. Alwin Frohberg from the German community at Olivenhain, who moved to the Oden homestead. Emma Einer, a longtime resident of Twin Oaks, remembered, "We had picnics down in the grove beyond the old Oden place above the Merriam place. That was a lovely picnic area under those nice big oaks" (Einer 1976).

Peter Cochems' First House (undated)

Anna and Peter Cochems (undated)

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SOURCE: Photos courtesy of San Marcos Historical Society

FIGURE 1-5
Historical Photographs: Cochems

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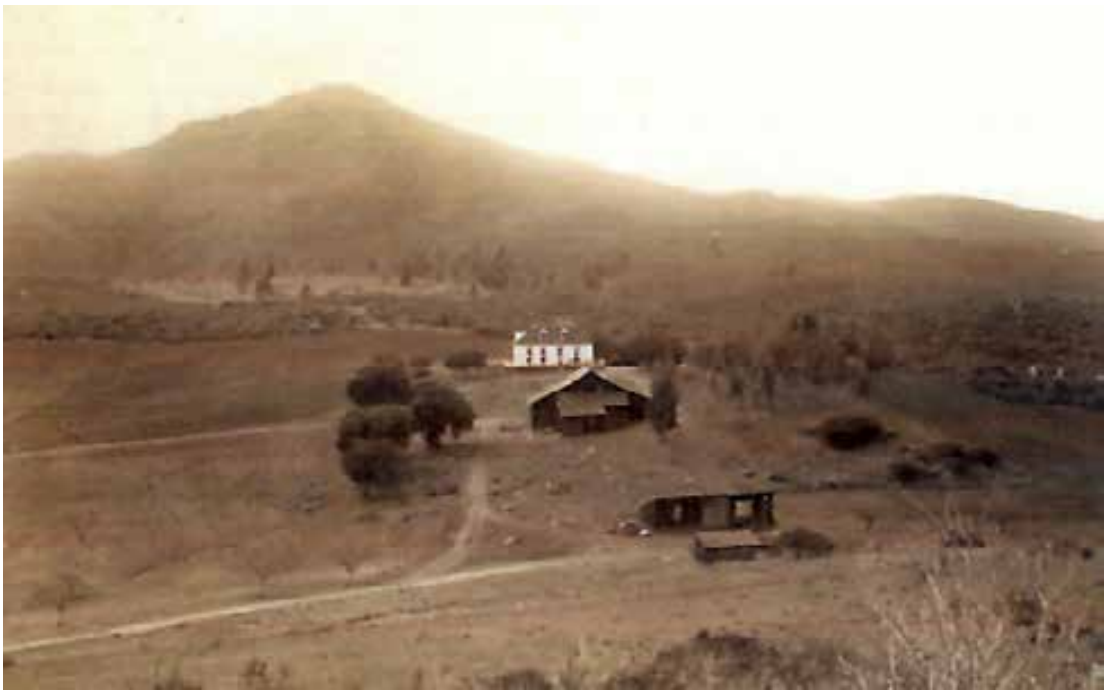

Cochems House with “Bee Mountain in Background, *Circa* 1902

Cochems House; Peter and Anna Cochems (seated) in Foreground, *Circa* 1902

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SOURCE: Photo courtesy of San Marcos Historical Society

FIGURE 1-6
Historical Photographs: Cochems

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John H. Dietschy filed a homestead claim for 120 acres in Twin Oaks, and he received title in 1891. Mr. Dietschy does not appear in any of the County directories for the Twin Oaks or San Marcos areas between the years 1895 and 1913, however he is shown as an owner on the 1913 Alexander Plat map. There appears to be a structure at the edge of his property as portrayed on the 1901 Escondido and San Luis Rey USGS maps, but the nature of the edifice, whether home, barn, shed or other out-building, is unknown (Figure 1-7). This may actually be the Oden/Frohberg house.

In the 1950s, F. Brock Gist purchased 360 acres of land in Sections 13 and 24 of Township 11 South, Range 3 West. There is a road that follows the approximate boundary lines for his property, which appears as Gist Road on current maps.

1.2.2 Records Search Results

A records search was completed at the South Coastal Information Center (SCIC) for the project area (including the off-site improvement areas) and surrounding one-mile radius in 2004. A supplemental search of the California Historical Resources Information System (CHRIS) at the SCIC was conducted on November 11, 2014, and again on June 1, 2017 for minor off site improvement areas. The updated CHRIS search sought to identify any new findings, and included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list.

Previous Studies

The SCIC records indicate that 164 previous cultural resources studies have been performed within the records search area (AA 1988; Affinis 2003; 2005; APRA 1978; ARU 1990; ASI 1991; ASM 1978, 1980, 1984, 2012; Banks 1980; Beddow 2007; BFSA 2007; Berryman 1977, 1988, 1992; Bonner and Williams 2009; Bonner 2011; Bowden-Renna 2012; Brown 2001; Browne and Vogt 1985; Carrico 1976, 1977, 1978, 1982, n.d.; Carrico et al. 1995; Carrico and Rhodes 1979; CDF 2000;Cheever 1988; Clevenger et al. 1992; Clifford and Smith 2004; Cook (J.) 1988; Cook (R.)1978; Cook et al. 1977; Cooley and Jordan 2003; County of San Diego 1979; Crawford 2011; Crull 1989, 1990a; Cupples 1976, 1977; Davison and Robbins-Wade 2013; De Barros 1999b, 2000, 2005; Duke 2001a, 2001b; Eckhardt 1978; EDAW 2003; Engineering-Science 1981; ERC 1990; Flower et al. 1979; Freeman 1988; Fulton 2013; Gallegos 1983; Gallegos and Associates 1999a, 1999b, 1999c, 2001a 2001b, 2007; Gallegos and Carrico 1985; Gallegos and Cheever 1986; Gallegos and Kyle 1989; Gallegos and Strudwick 1992; Gallegos et al. 2007; Gardner 2009; Glenn 1993a, 1993b; Gross and Jacobsen 1990; Guerrero et

al. 2001; Guerrero and Gallegos 2005; Gunderman and Ghabhlain 2010; Hatley 1979; HCH & Associates 1978, 1984; Hector 2006; Jones 1989, 2013; Jones and Stokes 2000; Kirkish 1996; Kwiatkowski 2008; Kyle 2007; Kyle et al. 1998; Kyle and Gallegos 1987a, 1987b; Kyle consulting 2001; Loftus 2013a, 2013b, n.d.; Marben-Laird Associates 1987; MBA Inc. 1989a, 1989b, 2008; McCoy 1979; McHenry 1989; Mooney 1992; NHPC 1982, 1984; Ogden 1992a, 1992b, 1992c; Olsen et al. 1991; Peak 1991; Pierson 2001; Pigniolo 2006; Polan 1978; Polan and Berryman 1977; PRC Toups Corporation 1978, 1981; P.S. Preservation Services; 1990 Recon 1978; Recon 1989; RMW 1986, 1991; Robbins-Wade 1999, 2001, 2003; Rosen 2011; Rosenberg 2009; Rosenberg et al. 2007; Roth and Associates 1991a, 1991b; Roy 2013; SDCED 1972; Schroth 1991; SDCAS 1975; Smith 1987, 1991; Smith and Clowery-Moreno 2008; Smith and Gilbert 2003; Smith and Lorenzen 2006; Spelts 2013; SRS 1982, 1990; Strudwick and Gallego 1994; TMI 1989a, 1989b; Unknown 1972, 2009, 2012, 2014a, 2014b, 2016; VanHorn 1989; Wade 2001; WESTEC 1983a, 1983b, 1983c; White 1990; White and Corum 1980; White and White n.d.; White el al. 2008; Wilson 2013; Winterrowd and Cardenas 1987; Wright 2003, 2004a, 2004b, 2004c, 2004d, 2006, 2007; Xinos 1984; and Zepeda-Herman 2012. Of these, 23 have covered at least a portion of the project area (ASI 1991; ASM 1984; City of Escondido 1980; Cook et al. 1977; Cupples 1976, 1977; de Barros 2000; Duke 2001a, 2001b; Gallegos et al. 2007; Gross and Jacobsen 1990; Guerrero et al. 2001; Hector 2006; Kyle and Gallegos 1987a, 1987b; NHPC 1982, 1984; Olsen et al. 1991; Recon 1978; Robbins-Wade 2001, 2003; SDCAS 1975; and White and White n.d.). Confidential Appendix A provides the complete bibliography of all prior cultural resources studies occurring within one-mile of the project area.

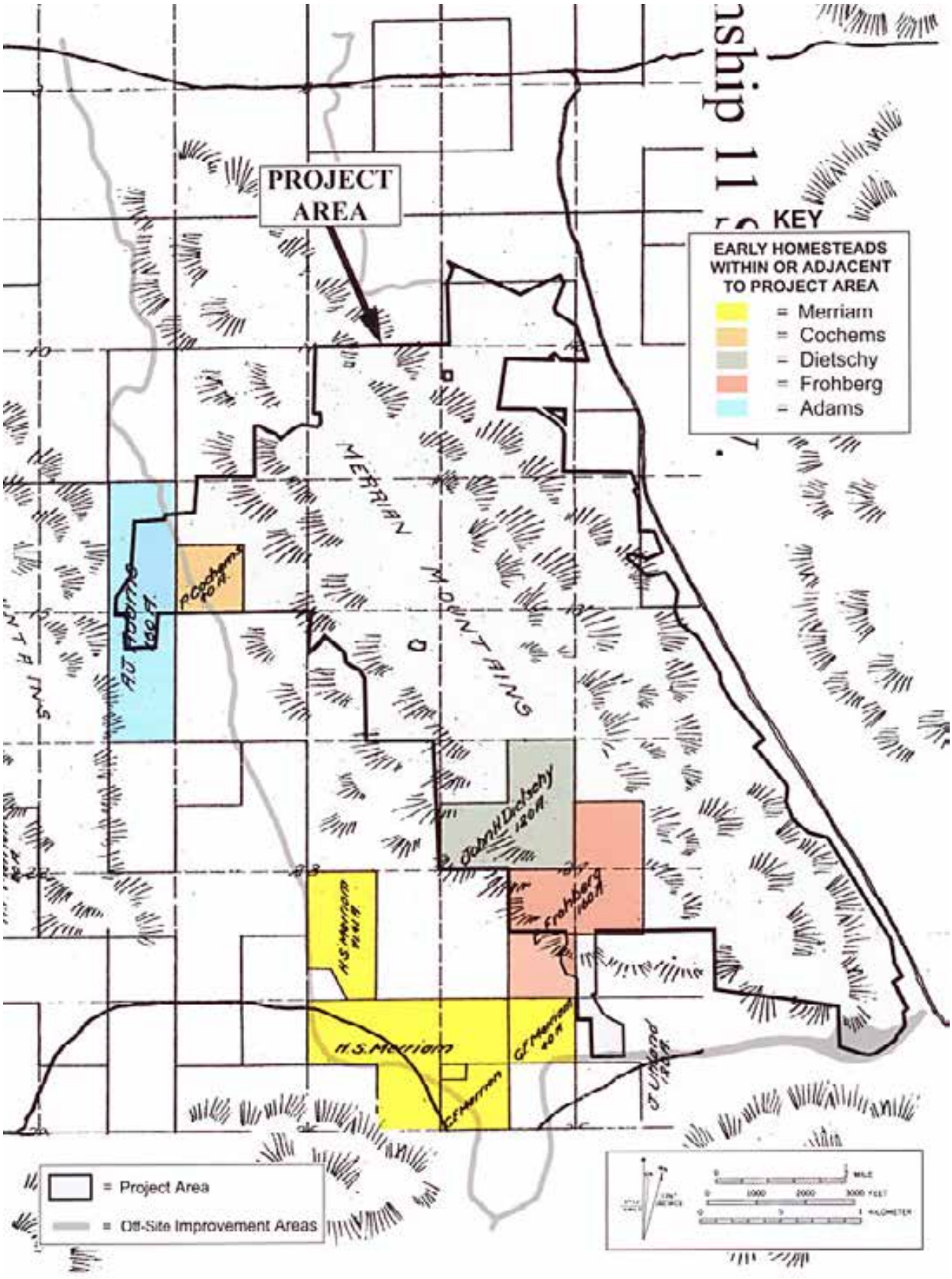

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FIGURE 1-7

Project Area and Historic Homesteads Shown on 1913 Alexander Plat Map

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Seventy-five cultural resources were identified in the records search area, including 59 sites, 4 isolates, 11 extant historic structures, and a historic structure noted on early USGS maps (Figure 1-8, Confidential Appendix A). Of these, 14 resources have been recorded wholly or partially in the project area (Table 1.1). Three of these are located within the project off-site-improvement area: CA-SDI-5640, CA-SDI-5951, and P-37-025968. The records search results are included in the report as Confidential Appendix A.

Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
Sites within a one-mile radius of the Project Area					
P-37-019199	—	Historic: Three standing structures	64 x 64	Hilton, S. 2000	Recommended Not Eligible
P-37-025780	—	Historic: Standing privy	2 x 1.5	Van Horn, D. 2003	Recommended Not Eligible
P-37-014965	CA-SDI-(I)267	Prehistoric: Isolate ceramic sherd	—	Gross et al. 1990	Not Eligible
P-37-000561	CA-SDI-561	Prehistoric: Lithic scatter	—	True, n.d.	No Determination
—	CA-SDI-662	No Information	—	—	—
P-37-004367	CA-SDI-4367	Prehistoric: Bedrock milling	—	May et al. 1975a	No Determination
P-37-004368	CA-SDI-4368	Prehistoric: Temporary camp / Bedrock milling	23 x 15	May et al. 1975b	No Determination
P-37-004369	CA-SDI-4369	Prehistoric: Habitation / Bedrock milling	46 x 67	May et al. 1975c	No Determination
P-37-004372	CA-SDI-4372	Prehistoric: Lithic scatter	18 x 30	Brock, T. et al. 1975a	No Determination
P-37-004373	CA-SDI-4373	Prehistoric: Temporary camp	5 x 122	Brock, T. et al. 1975b	No Determination
P-37-004374	CA-SDI-4374	Prehistoric: Bedrock milling / Ceramic scatter	—	Baksh, M. 1975a	No Determination
P-37-004375	CA-SDI-4375	Prehistoric: Habitation / Bedrock milling	30 x 15	Baksh, M. 1975b	No Determination
—	CA-SDI-4377	No Information	—	—	—
—	CA-SDI-4378	No Information	—	—	—
—	CA-SDI-4379	No Information	—	—	—
—	CA-SDI-4542	No Information	—	—	—
P-37-004559	CA-SDI-4559	Prehistoric: Pictographs	—	Kearns, T. 1971b	No Determination
P-37-004560	CA-SDI-4560	Prehistoric: Habitation debris / Lithic scatter	50 x 50	Kearns, T. 1971c	No Determination
P-37-004562	CA-SDI-4562	Prehistoric: Lithic scatter	50 x 50	Kearns, T. 1971d	No Determination
P-37-004573	CA-SDI-4573	Prehistoric: Bedrock milling	5 x 5	Carrico, R. 1975	No Determination
—	CA-SDI-5071	No Information	—	—	—
—	CA-SDI-5072	No Information	—	—	—

Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
P-37-005187	CA-SDI-5187	Prehistoric: Bedrock milling	4 x 3	Berryman, S. n.d.	No Determination
—	CA-SDI-5190	No Information	—	—	—
P-37-005357	CA-SDI-5357	Prehistoric: Habitation / Bedrock milling	40 x 60	Norwood, R.H. 1977	No Determination
P-37-005638	CA-SDI-5638	Prehistoric: Habitation	—	Ricard, R. 1977a	Destroyed
P-37-005950	CA-SDI-5950	Prehistoric: Habitation debris / Bedrock milling	46 x 15	Aasved et al. 1978a	No Determination
P-37-008095	CA-SDI-8095	Prehistoric: Lithic scatter	—	Rhodes, K. 1978	No Determination
—	CA-SDI-8250	No Information	—	—	—
P-37-008327	CA-SDI-8327	Prehistoric: Lithic scatter	40 x 40	Cardenas, D. S. 1980	No Determination
P-37-009252	CA-SDI-9252	Prehistoric: Bedrock milling	30 x 30	Heuett, M. L. 1982a	No Determination
—	CA-SDI-10150	No Information	—	—	—
—	CA-SDI-11060	No Information	—	—	—
—	CA-SDI-11066	No Information	—	—	—
—	CA-SDI-11067	No Information	—	—	—
—	CA-SDI-11068	No Information	—	—	—
—	CA-SDI-11618	No Information	—	—	—
—	CA-SDI-12520	No Information	—	—	—
—	CA-SDI-12521	No Information	—	—	—
—	CA-SDI-12522	No Information	—	—	—
—	CA-SDI-13009	No Information	—	—	—
P-37-018797	CA-SDI-15671	Historic: Pit mine	8.5 x 6.5	de Barros, P. 1999a	No Determination
P-37-018824	CA-SDI-15689	Prehistoric: Bedrock milling	3 x 6	James and Briggs 2000	No Determination
P-37-027196	CA-SDI-17787	Prehistoric: Bedrock milling / Lithic scatter	50 x 80	Aguilar, J. 2006	No Determination
P-37-027197	CA-SDI-17788	Prehistoric: Bedrock milling / Lithic scatter	2.5 x 2	Aguilar, J. 2006	No Determination
P-37-027456	CA-SDI-17910	Prehistoric / Historic: Bedrock milling / Lithic scatter / four structures of the Circle P Ranch	120 x 30	Wise, M. et al. 2006	No Determination
P-37-012098	CA-SDI-12098	Prehistoric: Lithic Scatter	30 x 30	ERC Environmental 1991	No Determination
P-37-012210	CA-SDI-12210	Prehistoric: Lithic Scatter	10 x 4	Joyner 1990	No Determination
P-37-014081	-	Historic: Structure		Thornton 1994	No Determination
P-37-015578		Prehistoric Isolate	-	Ogden 1996	No Determination

Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
P-37-018186	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018202	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018203	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018204	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018205	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018206	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018207	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018208	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018209	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018224	-	Historic: Structure		Tsunoda 2010; P.S. Preservation Services 1999	No Determination
P-37-033844	CA-SDI-21254	Historic: Structure ruins		Quach 2014	No Determination
Sites within the Project Area					
1901 Historic Structure	—	—	—	—	—
P-37-025968	—	Prehistoric: Isolate debitage	—	Guerrero 2004a	Not Eligible
SDM-W-3880C	—	Prehistoric: Isolate lithic tool	—	Winterrowd 1986	Not Eligible / Destroyed
P-37-004370	CA-SDI-4370	Prehistoric: Bedrock milling	—	Guerrero 2007a May et al. 1975d	Destroyed
P-37-004371	CA-SDI-4371	Prehistoric: Bedrock milling	5 x 5	May et al. 1975e	Destroyed
P-37-004558	CA-SDI-4558	Prehistoric: Habitation / Bedrock milling	110 x 100	Guerrero 2007b Cook 1977 Kearns, T. 1971a Rogers, M. n.d.	Recommended Eligible
P-37-005639	CA-SDI-5639	Prehistoric: Bedrock milling / Ceramic scatter	170	Guerrero 2007c Ricard, R. 1977b	Destroyed
P-37-005640	CA-SDI-5640	Prehistoric: Bedrock milling	30 acres	Guerrero 2007d Ricard, R. 1977c	Destroyed
P-37-005951	CA-SDI-5951	Prehistoric: Temporary Camp / Bedrock milling	61 x 46	Aasved et al. 1978b	No Determination

Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
P-37-009253	CA-SDI-9253	Prehistoric: Temporary Camp / Rock shelter / Bedrock milling	159 x 55	Guerrero 2005 Cardenas, D. S. 1986a Heuett, M. L. 1983b	Recommended Not Eligible
P-37-009822	CA-SDI-9822	Prehistoric: Habitation / Human remains / Pictograph / Bedrock milling	80 x 60	Guerrero 2007e Crull, S. 1990b Diehl and Brown 1986 Hedges, K. 1977 Rogers, M. n.d.	Significant
P-37-010747	CA-SDI-10747H	Historic: 1930's homestead	213 x 73	Guerrero 2007f White and White n.d. Cardenas, D. S. 1986b	Recommended Not Eligible
P-37-025966	CA-SDI-17264	Prehistoric: Lithic scatter	160 x 10	Guerrero 2004b	Recommended Not Eligible
P-37-025967	CA-SDI-17265	Prehistoric: Bedrock milling	15 x 15	Guerrero 2004c	Recommended Not Eligible

Previously Recorded Sites Within or Straddling the Project APE (with Gallegos and Associates)

CA-SDI-4370

Site CA-SDI-4370 was originally recorded by May et al. (1975a) as a single milling slick. A survey report for site CA-SDI-4370 was not on file at the South Coastal Information Center. Also, there is no record of site testing to determine site significance for CA-SDI-4370.

CA-SDI-4371

Site CA-SDI-4371 was originally recorded by May et al. (1975b) as a single milling slick. It should be noted that the majority of CA-SDI-4371 is located outside of the project area. Therefore, the milling feature may be present, but located adjacent to and outside of the project area.

CA-SDI-4558

Site CA-SDI-4558 was originally recorded by Kearns (1971) for the Interstate 15 project (Cupples 1977). Kearns (1971) described the site as an occupation site consisting of millingstones, handstones, flakes, and core and cobble tools. Cook (1977) updated the site during

the test program for CA-SDI-4558 (Cook et al. 1977). A total of thirty-five 1x1-m units were excavated, producing large bifaces (San Dieguito and Elko), handstones, battered implements, debitage, and marine shell. In addition, two possible hearth features were exposed during the test program. Site CA-SDI-4558 was identified as significant and recommended as potentially eligible to the National Register of Historic Places in 1977 (White 2005). Given this previous determination, site CA-SDI-4558 is identified as significant under CEQA and the County Resource Protection Ordinance (RPO). It should be noted that the structures were not recommended as significant resources, as these structures are less than 50 years old.

CA-SDI-5639

Site CA-SDI-5639 was originally recorded by Gouveia and Ricard (1977a) as a milling site bisected by Twin Oaks Valley Road. Two milling features and associated ceramic sherds were noted. Smith (1982) later updated the site for the South Coast Asphalt Products Twin Oaks Quarry project. Site CA-SDI-5639 was not relocated and Smith (1982) stated that the site had been destroyed as a result of construction improvements for Twin Oaks Valley Road and the San Diego Aqueduct (New Horizon Planning Consultants 1982).

CA-SDI-5640

Site CA-SDI-5640 was originally recorded by Gouveia and Ricard (1977b) as a single milling site adjacent to two driveways, Twin Oaks Valley Road and a trailer. No artifacts were reported. Continued plowing was noted at the site.

CA-SDI-5951

Site CA-SDI-5951 was originally recorded by Aasved et al. (1978b) as a temporary camp and milling site north of Deer Springs Road. A single milling feature with a scatter of ceramics, lithics, and vertebrate and invertebrate faunal remains was noted. Aasved and Murray stated a large area immediately east of the site had been cleared and that the location of CA-SDI-5951 would be developed.

CA-SDI-9253

Site CA-SDI-9253 was originally recorded by Heuett (1982) as multiple bedrock milling features consisting of several slicks. Cardenas (1986a) updated the site for the Sycamore Ridge project and extended the site boundary to approximately 159 x 55 m in area. The 1986 update described site CA-SDI-9253 as a temporary camp consisting of rock shelters, bedrock milling features, debitage, and a midden deposit. The west portion of the site has been impacted by the construction of a 1930s homestead (see site CA-SDI-10747H).

CA-SDI-9822

Site CA-SDI-9822 (W-223-A) was originally recorded by Rogers (n.d.) as a habitation site, consisting of a dark midden, flakes, handstone fragments, a large amount of shell, and bedrock milling features. Site CA-SDI-9822 was updated by Hedges (1977), and a heavily weathered and exfoliated red pictograph feature was identified on a rock face situated in the northwest portion of the site. In 1990, site CA-SDI-9822 was again updated by Crull (1990b). Palomar Community College conducted a field school from 1980 to 1989 that was under the direction of Dennis O'Neil, Ph.D. Approximately 40 1x2-meter units, with an average depth of 120 centimeters, were excavated and as a result, an extensive collection of over 80,000 primarily Late Period artifacts, including arrow points, pottery, ceramic pipe fragments, bone tools, milling tools, beads (bone, shell, stone, and glass), arrow shaft straighteners, stone tools for cutting, chopping, and scraping, obsidian, shell, bone, and cremations were recovered. It should be noted that the only written report on this site is the M.A. thesis on the faunal assemblage by Quintero (1987). The southern portion of the site has been impacted by the construction of Deer Springs Road and a trailer park south of Deer Springs Road. Crull (1990b) reported that the habitation area and milling features are protected by a chain-link fence, however, additional milling features, surface artifacts, and the pictograph feature are located outside of the fence. On the basis of previous work, site CA-SDI-9822 is identified as significant under CEQA and County Resource Protection Ordinance criteria.

CA-SDI-10747H

Site CA-SDI-10747H was originally recorded by Cardenas (1986b) for the Sycamore Ridge Project. Site CA-SDI-10747H is located adjacent to the west edge of site CA-SDI-9253 (see above for site description of CA-SDI-9253). Site CA-SDI-10747H represents the remnants of a 1930s homestead, consisting of a three-room house, a rock and mortar hearth/chimney structure, a stone and concrete one-room foundation, and a partially collapsed wood structure (Cardenas 1986b). White and White (n.d.) conducted a patents record search for Stonegate Development and identified one homestead patent issued in the same section (Section 13, Township 11 South, Range 3 West). White and White (n.d.) stated that site CA-SDI-10747H is most likely associated with homestead patent #0046358 issued to Orland Arthur Rush in 1931.

SDM-W-3880C

Isolate SDM-W-3880C is a single lithic tool fragment that was recorded by Winterrowd (1986) for the Sycamore Ridge project (Winterrowd and Cardenas 1987). The isolate was identified within a highly disturbed graded dirt road. No additional cultural materials were located.

Historic Structures

Early USGS maps (1901 Escondido 15'; 1901 San Luis Rey 15'; 1942 Escondido 15'; 1948 San Marcos 7.5') were reviewed for early historic structures. One structure was identified on the 1901 Escondido USGS map and the 1901 San Luis Rey USGS map (Figure 1-9). This structure may be related to the parcels identified as Dietschy or Frohberg (see Figure 1-7). No structures were identified on the 1942 Escondido or 1948 San Marcos USGS maps.

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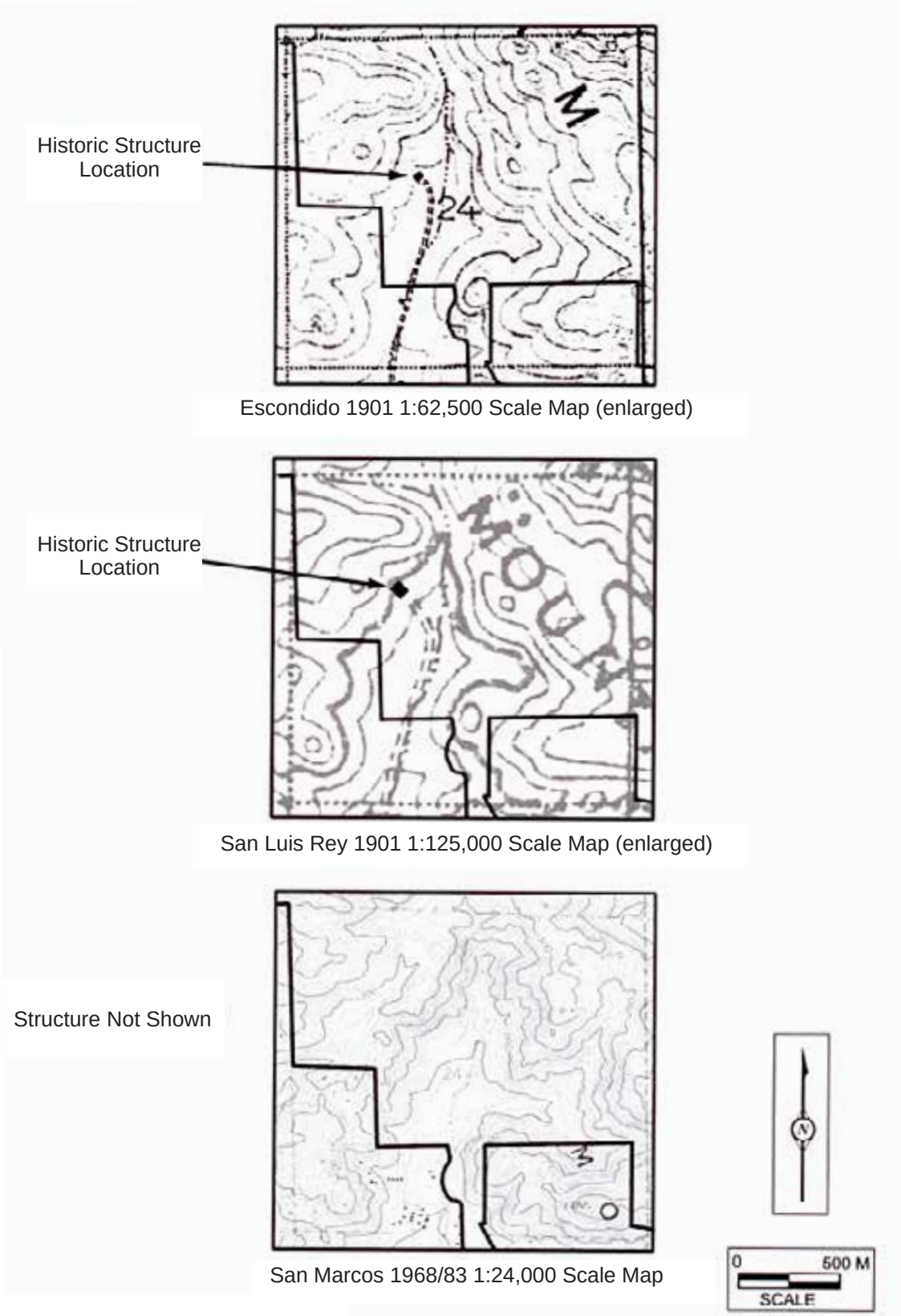

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FIGURE 1-9

Historic and Modern USGS Maps Showing Historic Structure Location

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1.3 Applicable Regulations

Cultural resource regulations that apply to the project area are the County of San Diego RPO, the Local Register, CEQA, and provisions for the CRHR.

Historic and archaeological districts, sites, buildings, structures, and objects are assigned significance based on their exceptional value or quality in illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance.

State Level Regulations

The California Register of Historic Resources (Public Resources Code section 5020 et seq.)

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code section 5020.1(j)). In 1992, the California legislature established CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following National Register of Historic Places (NRHP) criteria:

1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

(California Public Resources Code section 5024.1(c).) Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR, section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and

properties listed or formally designated as eligible for listing on the NRHP are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

Native American Historic Cultural Sites (California Public Resources Code section 5097 et seq.)

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NRHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, required all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological and historic resources:

1. California Public Resources Code section 21083.2(g): Defines "unique archaeological resource."
2. California Public Resources Code section 21084.1 and CEQA Guidelines section 15064.5(a): Define historical resources. In addition, CEQA Guidelines section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource;" it also defines the circumstances when a project would materially impair the significance of a historical resource.
3. California Public Resources Code section 5097.98 and CEQA Guidelines section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.

4. California Public Resources Code sections 21083.2(b)-(c) and CEQA Guidelines section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(b)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines section 15064.5(b)(1); California Public Resources Code section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its

eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

See Section 2, below for a discussion of the CEQA guidelines for determining significance and mitigating impacts to unique archaeological resources.

California Health and Safety Code section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (section 7050.5b). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (section 7050.5c). The NAHC will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 24 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

County

San Diego County Local Register of Historical Resources

The County maintains a Local Register that was modeled after the CRHR. Significance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, or culture. Any resource that is significant at the national or state level is by definition also significant at the local level. The criteria for eligibility for the Local Register are comparable to the criteria for eligibility for the CRHR and NRHP, but significance is evaluated at the local level. Included are:

- Resources associated with events that have made a significant contribution to the broad patterns of California or San Diego County's history and cultural heritage;
- Resources associated with the lives of persons important to our past, including the history of San Diego and our communities;

- Resources that embody the distinctive characteristics of a type, period, region (San Diego County), or method of construction, or represent the work of an important creative individual, or possesses high artistic values; and
- Resources that have yielded or are likely to yield, information important in prehistory or history.

Districts are significant resources if they are composed of integral parts of the environment that collectively (but not necessarily as individual elements) are exceptional or outstanding examples of prehistory or history.

The County also treats human remains as "highly sensitive." They are considered significant if interred outside a formal cemetery. Avoidance is the preferred treatment.

Under County guidelines for determining significance of cultural and historical resources, any site that yields information or has the potential to yield information is considered a significant site (County of San Diego 2007a: 16). Unless a resource is determined to be "not significant" based on the criteria for eligibility described above, it will be considered a significant resource. If it is agreed to forego significance testing on cultural sites, the sites will be treated as significant resources and must be preserved through project design (County of San Diego 2007a:19).

County Of San Diego Resource Protection Ordinance (RPO)

The County uses the CRHR criteria to evaluate the significance of cultural resources. In addition, other regulations must be considered during the evaluation of cultural resources. Specifically, the County of San Diego's RPO defines significant prehistoric and historic sites.

The County defines a significant prehistoric or historic site under its RPO as follows:

a. Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
    a) Formally determined eligible or listed in the NRHP by the Keeper of the National Register; or
    b) To which the Historic Resource (H designator) Special Area Regulations have been applied; or
b. One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data or materials; and

c. Any location of past or current sacred religious or ceremonial observances which is either:

   a) Protected under Public Law 95-341, the American Religious Freedom Act, or Public Resources Code Section 5097.9, such as burials, pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, or

   b) Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

Traditional Cultural Properties

Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Also potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties in discussions of cultural resource management (CRM) performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include:

a. A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;

b. A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;

c. An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;

d. A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and

e. A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

A Traditional Cultural Property, then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

Federal Regulations

No federal nexus has been identified for this project as of the date of this report. However, in the event that a federal nexus is identified in the future, a memo has been prepared that summarizes the methods and results of this cultural resources study and evaluates identified resources under Section 106 of the National Historic Preservation Act (NHPA). This Section 106 memo is located in Confidential Appendix H.

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2 GUIDELINES FOR DETERMINING SIGNIFICANCE

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change:

> Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

The significance of an historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

- When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
- If a lead agency determines that the archaeological site is a historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section

21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

- If an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

When an initial study identifies the existence of, or the probable likelihood of, Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5); and
- The requirement of CEQA and the Coastal Act.

Under CEQA, an EIR is required to evaluate any impacts on unique archaeological resources (California Public Resources Code section 21083.2.) A "unique archaeological resource" is defined as:

> [A]n archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> 1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> 2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
> 3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

(California Public Resources Code section 21083.2(g)). An impact to a non-unique archaeological resource is not considered a significant environmental impact and such non-unique resources need not be further addressed in the EIR (Public Resources Code section 21083.2(a); CEQA Guidelines section 15064.5(c)(4)).

As stated above, CEQA contains rules for mitigation of "unique archeological resources." For example, "[i]f it can be demonstrated that a project will cause damage to a unique archeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:"

1. "Planning construction to avoid archeological sites."
2. "Deeding archeological sites into permanent conservation easements."
3. "Capping or covering archeological sites with a layer of soil before building on the sites."
4. "Planning parks, greenspace, or other open space to incorporate archeological sites." (Pub. Resources Code section 21083.2(b)(1)-(4).)

Public Resources Code section 21083.2(d) states that "[e]xcavation as mitigation shall be restricted to those parts of the unique archeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report."

The rules for mitigating impacts to archeological resources to qualify as "historic resources" are slightly different. According to CEQA Guidelines section 15126.4(b), "[p]ublic agencies should, whenever feasible, seek to avoid damaging effects on any historic resource of an archeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archeological site:

(A) Preservation in place is the preferred manner of mitigating impacts to archeological sites. Preservation in place maintains the relationship between artifacts and the archeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

(B) Preservation in place may be accomplished by, but is not limited to, the following:

    1. Planning construction to avoid archeological sites;

2. Incorporation of sites within parks, greenspace, or other open space;
3. Covering the archeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site[; and]
4. Deeding the site into a permanent conservation easement.

Thus, although section 21083.2 of the Public Resources Code, in addressing "unique archeological sites," provides for specific mitigation options "in no order of preference," CEQA Guidelines section 15126.4(b), in addressing "historical resources of an archeological nature," provides that "[p]reservation in place is the preferred manner of mitigating impacts to archeological sites."

Under CEQA, "[w]hen data recovery through excavation is the only feasible mitigation," the lead agency may cause to be prepared and adopt a "data recovery plan," prior to any excavation being undertaken. The data recovery plan must make "provision for adequately recovering the scientifically consequential information from and about the historic resource." (CEQA Guidelines section 15126.4(b)(3)(C).) The data recovery plan also "must be deposited with the California Historical Resources Regional Information Center." (*Ibid*.) Further, "[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation." (*Ibid*.)

However, "[d]ata recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archeological or historic resource, provided that determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center." (CEQA Guidelines section 15126.4(b)(3)(D).)

3 RESEARCH DESIGN (WITH GALLEGOS AND ASSOCIATES)

The objective of this project was to identify cultural resources within the project area and off-site improvement areas and to obtain archaeological assemblage data that could be used to evaluate those resources for historical significance under CEQA and County guidelines. The research orientation developed for the test program employed regionally and locally specific questions and identified data needs to approach these questions. A wide range of research questions or topics was possible for the sites; however, five research domains were selected on the basis of overall contribution to the archaeological record. Specific research questions focused on chronology, lithic technology, subsistence and settlement, and trade and travel. These questions were used to guide the study to determine if materials were available to address the research questions given a sufficient excavation sample (i.e., data recovery).

3.1 Chronology

Study Topics

- What was the period of use and/or occupation for sites CA-SDI-4370, CA- SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA- SDI-9822, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265?

Data Needs

Materials (i.e., shell, charcoal, and bone) recovered from the sites for radiocarbon dating can be used to determine age and period of site occupation. Diagnostic artifacts such as small arrow points and pottery can also be used for relative site dating to the Late Period.

3.2 Lithic Technology

Several flake-tool reduction strategies have been identified for the Southern California coastal region. These include nodule core reduction, bipolar core reduction, and biface reduction using two types of cores. The decision to use one type of core instead of another depends on at least two factors: 1) the form of the material to be reduced (small nodule, large nodule, layered); and, 2) the intended product (i.e., biface tool, scraper, hammerstone). In this region, expedient use of locally available nodules is expected to dominate the assemblage for flake tools, battered implement tools, and some ground stone tools. This assumption was tested and several study topics were formulated for the retrieval of data needed to address this topic.

Study Topics

Which technological reduction strategies were present based on the debitage at the sites?

- Which reduction strategies were used to produce which tools? Were these strategies the same or different?
- If ground stone tools were present, were the nodule materials local or non-local?
- Was there evidence that ground stone tools were produced at the site, or were they produced elsewhere prior to being carried to the sites?
- How do technologies and stages of tool reduction relate to site function and tools found on the sites?

Data Needs

- Collection of a statistically valid sample of formed artifacts and debitage
- Detailed analysis of formed artifacts and debitage for technological attributes and reduction sequence classification
- Identification of the technological attributes and reduction sequences used to produce tools.

3.3 Subsistence

Study Topics

- Do the sites represent specialized food-processing localities or, conversely, do they represent campsites wherein a wide range of foods were gathered and processed?

Data Needs

Data necessary to address the question of economic strategy include floral and faunal remains, which permit the reconstruction of diet, or dietary practices, and preferences of the site occupants. The presence of particular species of plants, animals, and shellfish allows for a more complete appraisal of the various environmental niches exploited by the site occupants.

Methods for interpreting the data include: 1) protein residue analysis of selected artifacts to identify floral and faunal material processed; 2) speciation of the recovered faunal assemblage, with special attention to evidence of butchering or cooking; and, 3) identification of species within preferred habitats, and the placement of speciated remains within the ecological model for the purpose of reconstructing the habitat(s) exploited by the site occupants.

Artifacts recovered from the site can also provide inferential information regarding subsistence exploitation. For example, if plant material was not found, the presence of mortars, handstones, and millingstones provides evidence that floral and faunal materials were processed at the site. Immunological studies of residues on tools from the site may provide data relating to both tool use and resources exploited.

3.4 Settlement

In California, ethnographic sources have been used to develop models for prehistoric hunter–gatherer settlement and subsistence patterns. Shipek's model for the Luiseño (Shipek 1977) is one of sedentary villages located between the coast and the mountains in various ecological zones north of the San Dieguito River. True and Waugh (1982) propose a settlement configuration of foraging patterns, with several residential shifts occurring throughout the year. This settlement/subsistence model has been correlated to river drainage systems during the San Luis Rey I period, shifting to a bipolar system of permanent winter camps or villages in the western foothills and permanent summer camps in the mountains during the San Luis Rey II period. Graham's settlement/subsistence model (1981) is a fusion-fission pattern in which residential bases were occupied during the summer and fall months in the mountains for exploitation of acorns and grass seeds, with small groups migrating into the desert during the winter months to exploit legume and cacti resources.

Study Topics

- Temporally, how do these sites fit into the overall pattern for San Diego County? Can the group or culture be identified in the presently understood context of the cultural prehistory for San Diego County?
- What was the function of the sites (i.e., base camp, village, special-use site, or extractive site), and how did these sites relate to other sites?
- What form of settlement pattern was practiced?
- In general, how did occupation and use of these sites contribute to seasonal or year-round occupation of the region?

Data Needs

- Recovery of temporally-sensitive and diagnostic materials, such as organic material for radiometric dating, obsidian for hydration analysis, and time-sensitive artifacts such as pottery, projectile points, and beads

- Recovery of an adequate artifact sample and cultural material from the sites to determine site functions
- Recovery of ecofacts representing seasonal exploitation (i.e., bird bone, otoliths).

3.5 Trade and Travel

To what extent are trade and travel evidenced at the sites? Early travelers and ethnographers noted the presence of Native American trails and trade activities among different cultural groups in the Southern California region. The procurement of lithic resources, such as serpentine, chalcedony, chert, jasper, obsidian, and steatite, may identify contact with other cultural groups, as these materials were not available in the local area. Although many other trade items were often perishable, what sustaining archaeological evidence can be used to demonstrate trade and/or travel?

Study Topics

- Is there evidence of trading contact or travel?
- What was the nature of cultural contact — continuous, sporadic, or limited?
- What were the inferred routes of trade?
- What economic needs, if any, were met through contact and trade?

Data Needs

- Recovery and analysis of an adequate sample of cultural material, including trade goods such as serpentine, steatite, obsidian, desert lithic material, and beads
- Identification of the source of trade items.

4 ANALYSIS OF PROJECT EFFECTS

4.1 Methods (with Gallegos and Associates)

This section describes the techniques employed to identify and evaluate archaeological resources within the project area. All methods exceed the Secretary of Interior's guidelines, as do all project personnel for their respective roles. Additionally, all methods were preapproved by the County archaeologist prior to implementation.

Prior to initiating fieldwork, pre-field research was completed consisting of a records search at the SCIC to obtain records for previously recorded cultural resources and any other relevant documentation including but not limited to previous cultural resources investigation reports and GIS data.

Minimally, all identified resources were recorded with a real-time corrected Trimble GeoXT Global Positioning System (GPS) receiver with sub-meter accuracy. An Apple 3rd Generation iPad equipped with the ESRI ArcGIS application was also used for mapping and navigation. Standard Department of Parks and Recreation (DPR) 523 series resource forms were used to document all resources, including updating previously recorded sites. Overall, documentation of cultural resources complied with the Office of Historic Preservation (OHP) and Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-44740) and the California Office of Historic Preservation Planning Bulletin Number 4(a).

4.1.1 Survey Methods

A Phase I inventory and Phase II significance evaluations for the project were completed by Gallegos and Associates personnel in 2006-2007. Dudek completed supplemental reconnaissance and intensive pedestrian surveys as needed from 2013 to 2016, a resurvey of the APE in 2017, and the evaluation of CA-SDI-5951 in 2017. During the 2017 field season, off-site sewer improvement areas were surveyed, as was the Interstate 15 interchange area (excluding Caltrans ROW that consisted entirely of engineered fill). The objectives of the cultural resource study were to survey the entire project APE, including the project site and off-site improvement areas, to determine site significance under County of San Diego and CEQA criteria for cultural resources identified within the project area. Testing and field methods included collection of surface artifacts, site mapping, and excavation of shovel test pits (STPs) and 1x1-meter units to determine site size, depth, content, integrity, and significance. Gallegos and Associates project field personnel included Larry Tift, Monica Guerrero, Karen Hovland, Nick Doose, Lucas Piek, Ryan Anderson, Carmen Lucas, and Jo Huval. Mark Mojado (San Luis Rey Band of Luiseño Indians) and Manuel Masiel (Pechanga

Band of Luiseño Indians) provided Native American monitoring services. Dudek personnel included Dr. Micah Hale, Dr. Mark Basgall, Brad Comeau, Nicholas Hanten, Adam Giacinto, Angela Pham, Matthew DeCarlo, Scott Wolf, Chay Morrissey, Javier Hernandez, Patrick Hadel, Makayla Murillo, Kent Smolik, Thomas Stanley, Victor Herrera, Zach Lefevre, Allana Griffith, and Joshua Cullen; Mr. PJ Stoneburner and Banning Taylor from Saving Sacred Site (San Luis Rey) acted as a tribal monitors for Dudek's supplemental fieldwork.

A total of 2,300 acres was subject to intensive pedestrian survey using transects spaced at 10 m where feasible, prior to the design changes that reduced the project acreage to 1,985 acres. Transects were oriented according to terrain. Excessively steep, densely vegetated slopes were surveyed using targeted methods where surveyors traversed the slope to inspect areas of earthen exposure. The off-site improvement APE was also surveyed intensively with transects oriented according to the alignment.

Ground surface visibility varied from poor to fair throughout the project area, with at least minimal vegetation cover throughout the APE. Disturbances noted during the survey was moderate to substantial, due to historic and modern land uses including farming, clearing/grubbing, bioturbation, erosion and deposition, and construction of roads, buildings, and other such features.

Surveying efforts focused on the identification and recording of historic- and prehistoric-period artifacts, features, and sites. The GPS receiver was uploaded with data that included Project area boundaries, previously identified cultural resources, background aerial photographs, and a data dictionary designed to note attributes necessary for completion of DPR forms 523A through L (DPR 523), as appropriate. Photographs were taken for each site area, artifact concentrations, and features.

DPR records for all newly encountered and revisited sites were filled out and submitted to the SCIC.

A supplemental survey was attempted on January 16 and 17, 2017 at the request of Cami Mojado and Merri Lopez-Keifer from San Luis Rey. The intent of this survey was to update the previous survey conducted by Gallegos and Associates. Less than 300 acres were intensively surveyed due to extremely dense ground cover that created a physical barrier to pedestrian surveyors.

An unmanned aerial vehicle (UAV) was retained to provide 100-percent coverage with a high-resolution camera to identify specific areas of interest to tribal members. The UAV produced coverage with resolution down to 1 cm of the entire project area. No specific areas were identified from the UAV imagery that could be targeted for additional pedestrian survey.

4.1.2 Test Methods

Shovel Test Pit Excavation

Shovel test pits (STPs), 30 centimeters in diameter, were used to assess site size and depth based on buried deposits. STPs were excavated in 10-centimeter levels, with all soil dry-screened using 1/8-inch hardware mesh. The artifacts and/or ecofacts removed were bagged by STP and by level. Intervals for STPs are 10 to 20 meters across each site. Additional STPs were placed near bedrock milling features and surface artifacts. STPs excavated at site CA-SDI-5951 were 25 x 50 centimeter rectangular units excavated in 20 cm levels.

Unit Excavation

When a subsurface component was identified, one 1x1-meter test unit or one 1 x 0.5 meter shovel test unit (STU) was excavated to determine site content, integrity, and potential to address important research questions. Placement of the unit was determined by either the highest amount of subsurface material or the most likely area to possess subsurface material (based on surface remains, natural features, and STP results). Units were excavated in 10-centimeter levels to sterile; STUs were excavated in 20 centimeter levels. Sterile defines 1 of 3 scenarios: 1) when bedrock is encountered; 2) when excavation of 1 level produces no cultural material; and, 3) when excavation of 2 consecutive levels produces a significant decline in cultural materials. All soil was dry-screened using 1/8-inch hardware mesh screens.

All cultural material collected from each 10-centimeter level was sorted and bagged for laboratory analysis and cataloging. Each bag was marked with the site number, unit number, level, and date of recovery. Field forms were kept on a daily basis and provide information identifying excavator(s), date, location, unit number, level, types and quantities of materials collected, and changes in soil. At least one photograph and one hand-drawn sketch of each unit were provided to show the north sidewall profile, or a profile of the unit wall that offered the best stratigraphic detail.

If features (i.e., fire hearths, rock platforms, artifact caches, rock cairns) were encountered, additional excavation expansion units may have been necessary to expose the feature. Features would be photographed and illustrated, and associated artifacts labeled.

4.1.3 Laboratory Methods

An industry standard system of cleaning, cataloging, and analyzing cultural remains was used for artifacts recovered during this study. These procedures include cleaning and separating artifacts and ecofacts by material class for each unit level prior to cataloging. Each item, or group of

items, was counted, weighed and/or measured, and given a consecutive catalogue number marked directly on the artifact or on an attached label. Additionally, each item was analyzed for specific characteristics particular to each material class. All cataloged items were divided into typological categories and placed within appropriately labeled boxes prepared for permanent curation at the San Diego Archaeological Center (SDAC).

All artifacts and ecofacts collected were treated using accepted and appropriate archaeological procedures. Initial laboratory work included washing and/or brushing artifacts and cataloging. Artifacts were sorted into classes, such as bifaces, cores, bone tools, beads, milling tools, and flakes. Cataloging provides basic data such as count, measurement, weight, material, condition, and provenience. The catalogue also offers information as to horizontal and vertical distribution of cultural material. Specialized studies were conducted after the initial sorting and cataloging. The number and type of specialized studies completed for this report depends on the materials recovered and the level of research. Studies completed include lithic technological analysis, ceramic analysis, groundstone analysis, and vertebrate and invertebrate faunal analysis.

4.1.4 Disposition of Cultural Materials

All cultural materials excavated or removed from prehistoric or historic sites during testing and/or data recovery programs, along with associated project data, will be permanently curated at a San Diego curation facility or culturally affiliated Tribal curation facility meeting federal standards (36 CFR Part 79). In lieu of curation, the cultural materials may be repatriated to a culturally affiliated tribe. If curation is selected as the method for the disposition of artifacts, then any burial related cultural materials and unless otherwise required by law will be repatriated. Curation includes, but is not limited to, field notes, photographs, catalogues, and final reports. Collections from previous excavations at sites CA-SDI-4558 and CA-SDI-9822 shall be combined with the collections recovered as a result of the current study and any future extended testing and/or data recovery programs. These artifacts and associated documentation are necessary to produce a comprehensive report of finding for sites CA-SDI-4558 and CA-SDI-9822. Additionally, the owner agrees to execute a release of title form and to pay the required curation fees in effect at the time of curation.

4.1.5 Native American Consultation

The County of San Diego contacted the Native American Heritage Commission (NAHC) to request information and/or input regarding Native American concerns either directly or indirectly associated with the Newland Sierra project, as well as names of individuals in the area who should be contacted prior to completion of this study. Those individuals identified by the NAHC have been contacted by letter, and information as to cultural resources within the project area

was requested. Additional project notification was conducted through general public distribution of the environmental report. Mark Mojado (San Luis Rey Band of Luiseño Indians) and Manuel Masiel (Pechanga Band of Luiseño Indians) provided monitoring services for survey and test excavation fieldwork conducted. The Newland Sierra project design and development impacts including the widening of Deer Springs Road were discussed. All Open Space planning, including use of cultural resources for public interpretation, and/or capping and protection of the resources was discussed with local Native Americans. Several meetings were held with consulting tribes. These included meetings between the County and tribes, and meetings among tribal representatives, the applicant, and Dudek. During these meetings, tribal representatives provided information on the importance of local resources, such as archaeological sites CA-SDI-4558, CA-SDI-9822, which were visited in person with participating tribes (i.e., Pechanga, Rincon, and San Luis Rey), the applicant, Dudek staff, and County staff. Pechanga also provided a region-specific ethnography to the Applicant and County in February 2017. The ethnography provided specific tribal information on the project APE and overall landscape. Records of Tribal correspondence are on file with the County of San Diego and are included in Confidential Appendix E. Both San Luis Rey and Pechanga have been informed that the CEQA statutes that pertain to tribal cultural resources and tribal cultural landscapes (Pub.Res. Code §§ 21074, 21080.3.1, 21080.3.2, 21082.3, and 21084.3) post-date the NOP for this Project and therefore do not apply. Banning Taylor and PJ Stoneburner, representing Saving Sacred Sites, Inc., provided monitoring services during the additional survey and evaluation fieldwork performed by Dudek in 2016 and 2017.

Documentation regarding human remains is included in Confidential Appendix F and the ethnography is included in Confidential Appendix G.

4.2 Results

4.2.1 Survey Results

A pedestrian survey was completed for the entire APE, including approximately 2,300 acres of the initially designed project site, and off-site improvement areas. A total of nine cultural resources (CA-SDI-4370, -4371, -4558, -5639, -5640, -5951, -9253, -9822, and -10747H), one isolate (SDM-W-3880C), and a 1901 historic structure location have been previously identified within the project APE and off-site improvement areas.

The field surveys resulted in the relocation of five previously recorded sites CA-SDI-4558, -5951, -9253, -9822, and -10747H, and the identification of two new sites (CA-SDI-17264 and CA-SDI-17265), and one isolate (P-37-025968) (Figure 4-1, Confidential Appendix B). Four previously recorded sites (CA-SDI-4370, CA-SDI-4371, CA-SDI-5639 and CA-SDI-5640) and the isolate (SDM-W-3880C) were not relocated and are believed to have been destroyed, or are located adjacent to but outside of the project area (i.e., CA-SDI-4371). The historic 1901 structure/location was not relocated and appears to have been destroyed; however, there may still be remaining buried foundations and associated features, as historic research identified the historic location within the Dietschy homestead. Two foundations, that appear to date to the 1960s, were identified within and adjacent to site CA-SDI-4558, and one dilapidated structure, believed to be less than 50 years old, was identified at site CA-SDI-10747H.

No additional discoveries were made during the 2017 re-survey attempt, or through the high resolution UAV survey imagery.

Previously Recorded Sites

CA-SDI-4370

Site CA-SDI-4370 was not relocated and appears to have been destroyed by previous grading for housing and ranch development.

CA-SDI-4371

Site CA-SDI-4371 was not relocated within the project area. The site may have been located off-project and to the west; however, it was likely destroyed by construction of a road that now occupies the center of the recorded site area.

CA-SDI-4558

Site CA-SDI-4558 was relocated during the current study, and two additional bedrock milling features were identified. This site appears to be in the same condition as previously reported by Cook et al. (1977). One foundation was identified in the central portion of site CA-SDI-4558 and another foundation was identified adjacent to and north of the site. Both foundations appear to be the remains of residential structures that were previously described by Cook et al. (1977). Disturbance noted includes the construction of Deer Springs Road, construction of houses, paved access roads, grading, agricultural use, bioturbation, and trash dumping.

CA-SDI-5369

Site CA-SDI-5639 was not relocated and appears to have been destroyed as a result of construction of Twin Oaks Valley Road and the San Diego Aqueduct.

CA-SDI-5640

Site CA-SDI-5640 was not relocated, as it has been destroyed by the development of Twin Oaks Valley Road.

CA-SDI-5951

Site CA-SDI-5951 was not relocated during the original survey, but was subsequently relocated during the re-survey of Deer Springs Road. The site's location was correctly mapped in the site record, but was translocated at some point in the information center's records. CA-SDI-5951 is a habitation site with bedrock milling, midden soil, and a variety of artifact classes situated on a series of ridges/knolls dissected by narrow, steep drainages. It is currently in the same general condition as described in the original site record. Notable disturbances include Deer Springs road to the south, rodent burrows, the cleared area to the east of the site, which involved pushing boulders into the eastern portion of the site, and vegetation clearing/excavation related to installation of a utility pole in the center of the site.

CA-SDI-9253

Site CA-SDI-9253 was relocated during the current survey. Four bedrock milling features and debitage were noted. A portion of the site has been impacted by the construction of a post-1930s homestead (see site CA-SDI-10747H); however the majority of the site appears to be in good condition.

CA-SDI-9822

Site CA-SDI-9822 was relocated during the current survey. Bedrock milling features and the rock with the pictograph were relocated. Surface artifacts noted included debitage, pottery, a ceramic pipe fragment, and burned bone. No artifacts were collected. Rodent disturbance, modern trash dumping, and foot traffic were also noted. A protective fence installed by Palomar Community College is still in place around most of the site area; however, the fence has been partially torn down along Deer Springs Road. The southern portion of site CA-SDI-9822, north of Deer Springs Road, is currently eroding into the road.

CA-SDI-10747H

Site CA-SDI-10747H is located adjacent to site CA-SDI-9253, and includes the remains of a house, a collapsed wood structure, and a rock and mortar hearth/chimney structure. Disturbance at the site includes foot traffic on the adjacent trail, minor trash dumping, and some off-road vehicle activity.

1901 Historic Structure Location

The historic structure/location identified on the 1901 Escondido and San Luis Rey USGS maps was not relocated and appears to have been destroyed; however, buried foundations and associated features may still be present. Historic research identified the historic location within the Dietschy homestead. Disturbance at the historic location includes foot traffic on the adjacent trail, minor modern trash dumping, and some off-road vehicle activity.

Newly Recorded Sites

CA-SDI-17264

Site CA-SDI-17264 consists of a light lithic scatter located in the southwest portion of the project area. This site consists of a single bifacial handstone and debitage within a dirt road. Because of the dense vegetation the site boundary is unknown.

CA-SDI-17265

Site CA-SDI-17265 consists of a single bedrock milling feature located in the west portion of the project area, within a flat valley. The single milling feature consists of a large slick, approximately 60x30 centimeters in area. No surface artifacts were noted. Disturbance noted included off-road vehicle activity adjacent to the site.

P-37-025968

Isolate P-37-025968 was located within the northeast off-site improvement area. This isolate is a single piece of debitage, which was collected. No features or additional artifacts were noted.

Reconnaissance Survey

A reconnaissance survey was conducted in 2013 and 2014 to revisit the locations of previously recorded archaeological sites, including those relocated by the initial survey, and those that were not relocated. The reconnaissance survey did not result in the identification of newly discovered resources and generally confirmed the location and condition of archaeological sites relocated by

the initial survey. However, the reconnaissance survey resulted in the observation that illicit artifact prospecting is occurring at CA-SDI-4558 and CA-SDI-9822, based on recent excavation holes. Additionally, cultural materials at both of these resources are currently eroding into the public road right of way.

4.2.2 Archaeological Evaluation Results

4.2.2.1 CA-SDI-4558 (Caltrans Site)

Site CA-SDI-4558 was originally recorded by Malcolm Rogers and was updated by Kearns in 1971 for the Interstate 15 project. Kearns described the site as an occupation site consisting of millingstones, handstones, flakes, and core and cobble tools. In 1977, a test program was conducted for site CA-SDI-4558 for the Department of Transportation (Cook et al. 1977). A total of thirty-five 1x1-meter units were excavated, producing large points, handstones, battered implements, debitage, and marine shell (Figure 4-2, Confidential Appendix B; Table 4-1). In addition, two possible hearth features were exposed during the test program. Disturbances noted at the time of the original test program included the destruction of the southern portion of the site by the construction of Deer Springs Road; the construction of a paved access road and horse corrals across the eastern portion of the site; removal of top soil at the far east portion of the site; the construction of two houses; and previous agriculture use. Cook et al. (1977) stated that even with this amount of disturbance, a substantial cultural deposit (130-centimeter depth) was present at the site. In 1977, site CA-SDI-4558 was recommended and accepted as eligible for placement on the National Register of Historic Places (White 2005).

Site CA-SDI-4558 has not been updated since 1971, and a formal report of finding for the test program for CA-SDI-4558 was never submitted to the South Coastal Information Center. As the 1977 (Cook et al. 1977) test program did not fully address site size, supplemental testing of site CA-SDI-4558 was necessary. The purpose of the current test program was to define the primary site area, and to determine site depth, content, integrity, and site boundary.

Table 4-1
CA-SDI-4558 Cultural Material Recovered by Cook et al. (1977)

Cultural Material	Surface	Units	Features	Total
Abrader	0	1	0	1
Anvil	0	0	1	1
Blade	0	1	0	1
Chopper	0	1	1	2
Core	1	35	2	38
Core/Hammer	0	3	0	3

Table 4-1
CA-SDI-4558 Cultural Material Recovered by Cook et al. (1977)

Cultural Material	Surface	Units	Features	Total
Crystal	0	1	0	2
Debitage	1	4354	1	4356
Flake Tool	0	33	3	36
Groundstone	0	11	6	16
Hammer	0	9	3	12
Handstone	1	34	23	58
Handstone/Pestle	0	0	1	1
Millingstone	0	6	6	12
Ceramics	0	5	0	5
Ochre	0	10	0	10
Pestle	0	1	0	1
Biface	2	3	0	5
Scraper	0	7	1	8
Antler	0	3	0	3
Bone Tool	0	8	0	8
Polished Bone	0	9	0	9
Shaped bone	0	2	0	2
Total	**5**	**4537**	**48**	**4590**
Bone* (g)	**0**	**549.2**	**0**	**549.2**
Shell* (g)	**0**	**0.4**	**0**	**0.4**

NOTE: * Weight in Grams; total does not include faunal bone or shell

CA-SDI-4558 Test Results

Archaeological testing for the current project included excavation of 24 STPs; documentation of bedrock milling features; relocation of the site boundary; examination of the 1977 fieldwork notes, maps, and artifact catalogue; and artifact cataloguing and analysis for the current test program (Figure 4-3, Confidential Appendix B). The 24 STPs were placed in both north–south and east–west directions across the site and in areas tested by Cook in 1977. A total of 18 STPs were positive, producing 1 biface, 75 debitage, 2 groundstone fragments, and 3.8 grams of bone (Table 4-2 and Confidential Appendix C). Rodent disturbance and modern trash dumping were noted throughout the site. Two foundations were identified within and adjacent to site CA-SDI-4558. Both foundations appear to be the remnants of residential structures; however, based on previous work (Cook et al. 1977), the structures are dated post 1947.

Table 4-2
Results of 2007 Test Excavations at CA-SDI-4558 for the Current Project

STP	Cultural Material			Total	Bone (g)
	Biface	*Debitage*	*Groundstone*		
3	0	2	0	2	0
4	0	1	0	1	0
5	0	1	0	1	0
7	0	5	0	5	0.1
8	0	1	0	1	0
9	0	7	0	7	0.1
11	1	5	0	6	0.3
12	0	5	0	5	0.5
13	0	4	0	4	0
14	0	13	0	13	0
15	0	2	0	2	0
16	0	3	1	4	1.9
17	0	4	0	4	0.9
18	0	4	0	4	0
19	0	4	0	4	0
21	0	2	0	2	0
23	0	6	1	7	0
24	0	6	0	6	0
Total	**1**	**75**	**2**	**78**	**3.8**

Two bedrock milling features (BRM) were identified during the current study. BRM-1 is located on a flat sloping boulder in the central portion of the site, southwest of the house foundation (Figure 4-4). BRM-2 is located on a flat sloping boulder in the central portion of the site, south of the house foundation (Figure 4-5). Both bedrock milling features exhibit heavy weathering and portions of the milling elements have exfoliated.

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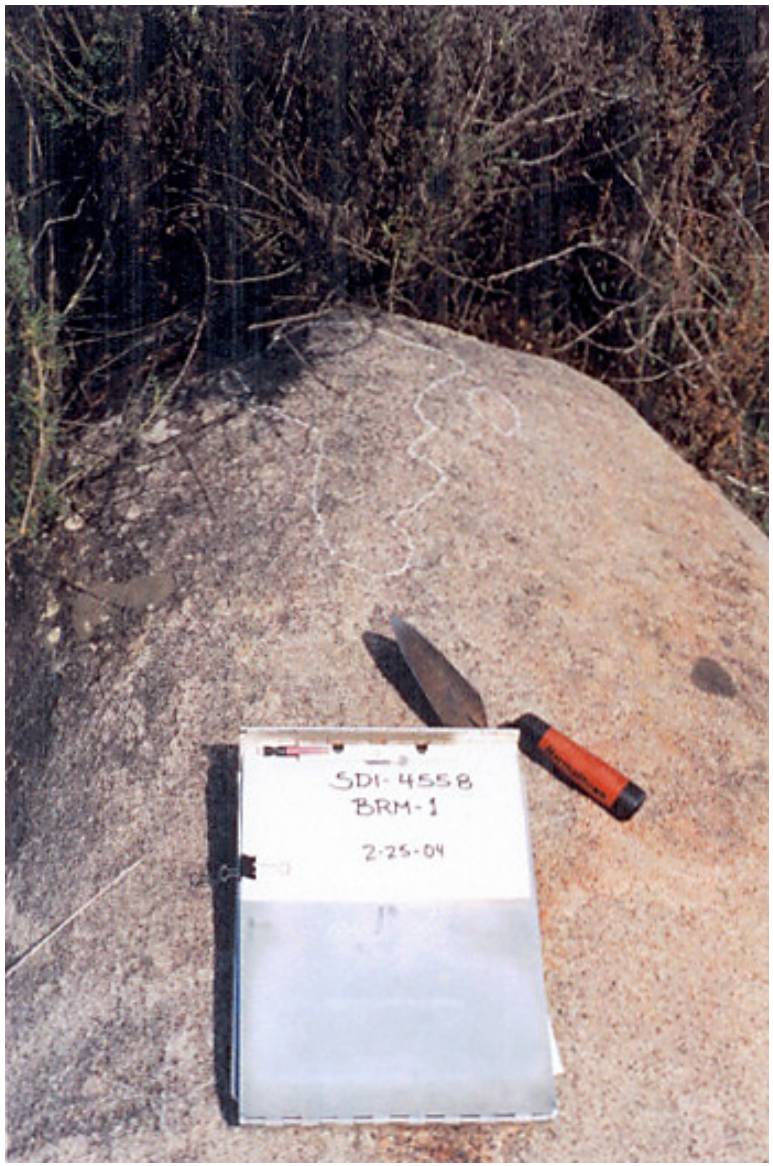

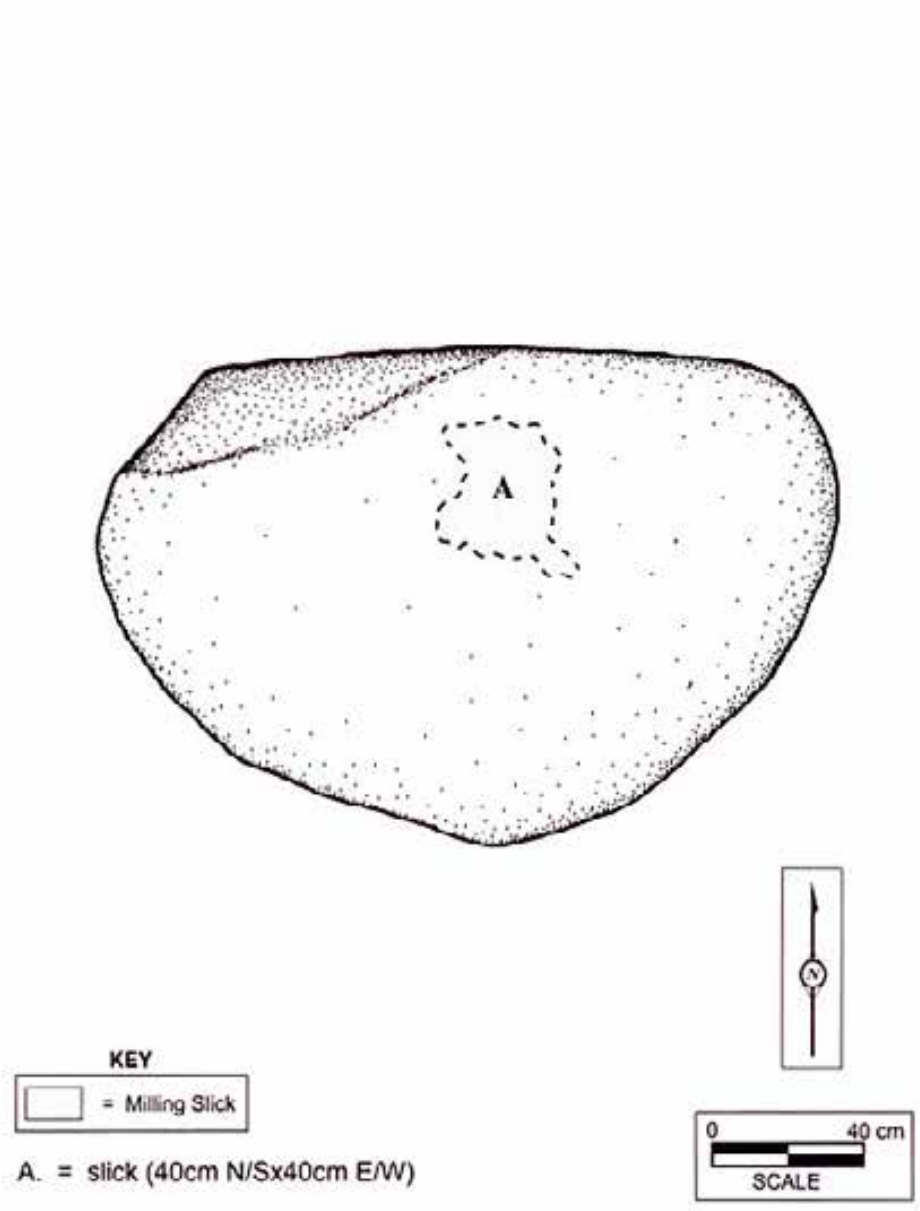

DUDEK

7608-02
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FIGURE 4-4
CA-SDI-4558: Bedrock Milling Feature 1

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Photograph of Bedrock Milling Feature 2: Facing East

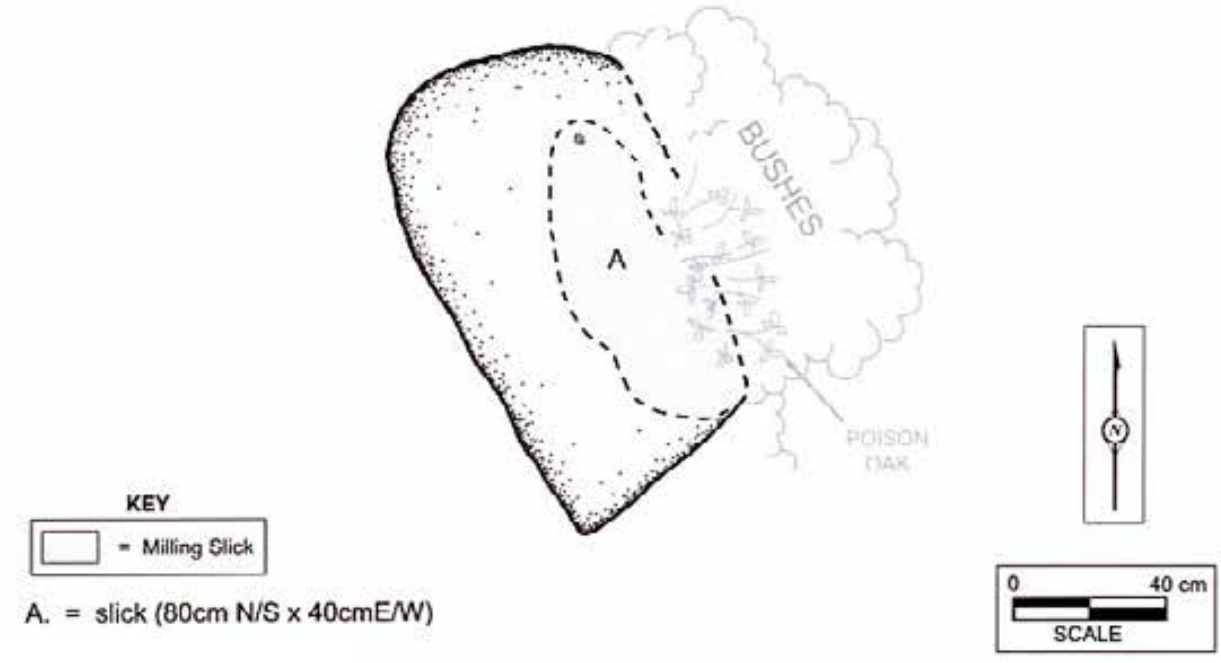

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FIGURE 4-5
CA-SDI-4558: Bedrock Milling Feature 2

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CA-SDI-4558 Lithic Analysis (with Tracy Stropes)

The technological identification of all debitage sampled was based on work by Flenniken (1981 and 1985) for analysis and interpretation. Technological lithic analysis based upon replicative data was conducted for all flaked stone artifacts recovered as a result of the subsurface site boundary assessment for CA-SDI-4558. Technological identifications were ascertained for all lithic artifacts recovered from the 18 positive STPs. All lithic artifacts were also examined on the basis of raw material types and reduction stage categories (Confidential Appendix C).

All debitage recovered from the 18 positive STPs was analyzed, identified, and assigned to specific technological categories and stages. Technologically diagnostic debitage was assigned to a specific reduction category, and served as the basis for interpretation of lithic technology. Preliminary analyses indicate that artifacts recovered from the site are intra-site similar in technological character. As such, the sample of the entire excavated assemblage is considered homogenous. As no technological change was identified either horizontally through the site or vertically across the site, all artifacts from the site were combined for the purpose of interpretation of the site's lithic technology. The assemblage is composed of primarily two reduction technologies including nodule core reduction, and, to a lesser extent, biface reduction. As stated previously, these reduction technologies may be part of the same continuum, as flakes from nodule core reduction may have been used as flake blanks for flake-based biface production.

All formed artifacts and debitage were combined for the purpose of analysis. Out of 75 debitage, 36% (n=27) were technologically diagnostic (Tables 4-3 and 4-4) of two different reduction technologies, while 64% (n=48) were technologically undiagnostic (Table 4-5). Only three lithic toolstone materials were represented in the CA-SDI-4558 assemblage (including both technologically diagnostic and undiagnostic debitage). These materials include 59 metavolcanic, 10 quartz, and 6 Piedra del Lumbre (PDL) chert.

The most common reduction technology identified in the assemblage was nodule core reduction. Fifteen (93.2%) of the technologically diagnostic debitage supported nodule core reduction (see Table 4-3). Two nodule core platform types were represented at CA-SDI-4558. Single-facet platform debitage was represented by ten flakes and multi-faceted platform debitage by five flakes. These two platform configurations suggest two different platform preparations on cores.

Table 4-3
CA-SDI-4558 Diagnostic Nodule Core Debitage by Material

Nodule Core Reduction	Material		Total
	Metavolcanic	*Quartz*	
Single Facet Platform			
SFP-10	1	0	1
SFP-11	7	2	9
Subtotal	8	2	10
%	53.3	13.3	66.7
Multi-Faceted Platform			
MFP-6	1	0	1
MFP-11	3	1	4
Subtotal	4	1	5
%	26.7	6.7	33.3
Total	**12**	**3**	**15**
% Diagnostic Debitage	**80**	**20**	**100**

The most frequently occurring single-facet platform debitage category was SFP-11 (n=7). While flakes in this category are ideal flake blanks, these specific flakes were broken or were too small for use. The most common (n=4) multi-faceted platform debitage category was MFP-11. As with single-facet platform cores, this flake category comprises ideal flake blanks, but the specific flakes from CA-SDI-4558 were broken or were too small for use and likely discarded.

Table 4-4
CA-SDI-4558 Diagnostic Biface Debitage by Material

Biface Debitage	Material			Total
	Metavolcanic	*Quartz*	*PDL*	
302.E-	1	0	0	1
303.E+	1	0	0	1
305.L+	3	0	0	3
400.E-	1	1	2	4
402.L-	0	0	3	3
Total	**6**	**1**	**5**	**12**
%	**50**	**8.3**	**41.7**	**100**

Table 4-5
CA-SDI-4558 Undiagnostic Debitage by Material

Undiagnostic Flake Fragments	Material			Total
	Metavolcanic	*Quartz*	*PDL*	
Uw/icc	1	1	0	2
Uwo/c	40	5	1	46
Total	**41**	**6**	**1**	**48**
%	85.4	12.5	2.1	100

Biface reduction debitage was divided into five reduction-oriented technological categories (as defined by Flenniken and Stropes 2002) that were, in turn, employed to define the reduction sequences used at CA-SDI-4558. These include core reduction (Category 1), edge preparation (Category 2), percussion bifacial thinning (Category 3), pressure bifacial thinning (Category 4), and undiagnostic fragments (Category 5). However, in the present assemblage no Category 1 bifacial reduction debitage was identified. The following technological definitions have been offered by Flenniken and Stropes (2002) for the previously mentioned bifacial technological categories:

1. Core reduction, that is, primary decortication debitage segregated on the basis of approximately 100% cortex on the dorsal surface and platform configuration; secondary decortication debitage separated based upon partial dorsal cortex and platform type; and interior debitage categorized by platform attributes, dorsal arris count and direction, flake cross/long-section configuration, and especially, absence of dorsal cortex;
2. Edge preparation, that is, bifacial reduction debitage classified on the basis of multi-faceted platform configuration and location, location of remnant bulb of force, dorsal arris count and direction, flake termination, flake cross/long-section orientation, and presence or absence of detachment scar;
3. Percussion bifacial thinning, that is, debitage segregated on the basis of multi-faceted platform configuration, size, lipping, and location, dorsal arris count and direction, flake termination, cross/long-section orientation, and presence or absence of detachment scar;
4. Pressure bifacial thinning, that is, debitage separated on the basis of multi-faceted platform configuration and location, dorsal arris count and direction, flake termination, platform-to-long axis geometry, cross/long-section orientation, and presence or absence of detachment scar (Confidential Appendix C); and,
5. Undiagnostic fragments, that is, potlids (995.PL), bipolar shatter (996.SH), and flake fragments, with cortex (including type [997.UP and 998.UI]) or without cortex (999.UN).

A limited number (n=12) of technologically diagnostic flakes were identified as biface reduction debitage from the present sample (see Table 4-3). Two flakes were early percussion bifacial thinning flakes (302.E-, 303.E+), while three were late stage percussion bifacial thinning flake (305.L+). In addition, four early (400.E-) and three late stage (402.L-) pressure flakes were identified within the technologically diagnostic portion of the assemblage. The presence of these technological categories suggests bifacial tools were thinned and/or resharpened by percussion and pressure at CA-SDI-4558.

A total of 48 technologically undiagnostic flake fragments were also identified from this assemblage (see Table 4-5). Only 2 fragments possessed cortex (Uw/icc), while 46 were cortex-free (Uwo/c). The cortex noted on these flakes includes only flakes with incipient cone cortex common on local lithic materials. The overall lack of cortex on debitage across the site suggests that the cores used to produce flakes at CA-SDI-4558 had been prepared (decorticated and shaped) at another location.

Excavations at CA-SDI-4558 for the current project resulted in the recovery of one biface. The single quartz biface fragment was recovered from STP 11 at the 10-20-centimeter level. The biface is an early stage bifacial preform that likely fractured during manufacture. This is evidenced by the presence of bending fracture near the medial section of the biface. Bending fractures most commonly occur when the objective piece is not supported properly during the percussion stages of bifacial shaping. As is to be expected, the biface was likely abandoned at this juncture, as no evidence of further reduction beyond the bending fracture is apparent (i.e., early/late stage pressure flaking). The specimen measures 29.1x25.5x9.2 millimeters with a weight of 7.4 grams. Although the final intended use for the specimen is unknown, the biface falls within the weight range of bifaces produced for most dart points (>3.5g).

Nodule core reduction technology is the most common technology identified in the lithic sample from CA-SDI-4558. Products of nodule core reduction are the most abundant in the site as measured by percent of technologically diagnostic flakes. This simple and expedient technology was so commonly used because of the local abundance of nodule metavolcanic materials. Furthermore, this technology provided a simple and relatively effortless method to produce useful flake blanks intended for further reduction. Variability among the analyzed assemblages can be studied at two scales, individual artifacts and artifact assemblages, and this variability is explained by several factors: the shape and size of raw material packages, stages of reduction, and site specific knapping activities.

Pebbles, cobbles, and, to a lesser extent, boulders were selected for size, shape, material quality, and platform location. Nodules with natural platforms were reduced directly by percussion in a circular manner around the natural platform. The location of dorsal cortex indicates the sequence

of flake removals (Confidential Appendix C). Cores with faceted platforms are nodules that required platform preparation prior to reduction. This occurred usually when a nodule of high quality material was selected, but the nodule did not possess a suitably shaped platform. It was, therefore, necessary to create a functional platform by percussion flaking. The desired products of nodule core reduction were flake blanks that were thin in cross-section, long and narrow in plan view, and effectively range from 4 to 10 centimeters in length.

Debitage produced from nodule core reduction (i.e., natural platform cores, single-facet cores) was classified according to the pattern of dorsal cortex present (if any), and platform attributes. Dorsal cortex attributes provide clues concerning two processes: (1) stage of reduction, and (2) patterning of flake removals. Generally, the amount of cortex will decrease through the reduction sequence. Flakes with 100% dorsal cortex (NP/SFP/MFP-1s), therefore, usually result from earlier portions of the sequence, while flakes with no dorsal cortex (NP/SFP/MFP-11s) result from the latter portions of the sequence. The abundance of flakes that lack dorsal cortex is explained by the fact that once cortex is removed from a nodule, perhaps early in the reduction sequence, all subsequent flakes will no longer have dorsal cortex. The positioning of dorsal cortex results from the patterning of flake removals (clockwise, counterclockwise, or unpatterned in relation to the platform). The analysis of the CA-SDI-4558 assemblage revealed no meaningful patterns regarding the sequence of flake removals. In other words, cores were not consistently reduced in a clockwise sequence, but instead were probably reduced in whatever manner made sense considering the shape of a given nodule.

Another aspect of variability seen in the nodule core reduction debitage assemblage relates to platform characteristics. This variability also appears to result purely from technological considerations rather than, for instance, a “mental template” to which might be attached some chronological or ethnic significance. Three types of platforms are found (unprepared/ natural/cortical, single-facet, and multi-faceted), and they vary in part according to the amount of shaping required to obtain a suitable platform configuration for successful flake removals (a uniform platform surface and adequate platform angle). Some nodules required no shaping (natural platforms) to obtain a proper platform configuration; others required more (multi-faceted platforms) or less (single-facet platforms) shaping. It is expected that these different platform types could have been produced within a single reduction sequence as a result of adjustments made in response to the changing shape of the core as it was reduced. This is supported by the highest frequencies of “late stage” debitage (NP/SFP/MFP-11s) that occur in combination with faceted platforms.

Another source of inter-site variation may result from initial nodule core reduction conducted at one site, and then transported and later reduced at a second location or site. It appears that cores were not always entirely reduced at a single location; instead, initial shaping may have been

performed at one site and subsequent core reduction performed at another. This is indicated by the minimal number of early reduction stage flakes and the higher frequency of late reduction stage flakes recovered from CA-SDI-4558. Alternatively, this pattern could be explained as a result of sampling bias resulting from incomplete or non-representative artifact collection.

Intended end products of this technology (flake blanks and flake tools) were likely transported for use or further reduction outside of the study area, since the most useful blanks (NP/SFP/MFP-11s) were absent from the analyzed collection, and, when present, were broken or too small to have served as useful tool blanks.

Biface reduction is not well represented at this site. The biface reduction debitage sample consisted of 12 flakes previously discussed in Section 4.2.2. One biface fragment was recovered from the present excavations that supports the manufacture of bifacial tools at CA-SDI-4558. This sample is small, however, and does not lend itself to a lengthy discussion concerning the employment of biface technology at the site.

Overall, nodules of primarily fined-grained metavolcanic materials were selected for direct free-hand percussion core reduction. All of these nodules were reduced with either single-facet or multi-faceted platforms. This suggests nodules were selected and prepared outside of the present site area. A single pattern of flake removal could not be identified within the present core reduction techniques. Interestingly, sizeable, useable flakes without dorsal surface cortex were not noted in this assemblage, suggesting these flakes were produced at CA-SDI-4558, but transported elsewhere. Nodule core reduction is the most commonly occurring technique noted at CA-SDI-4558. Biface reduction was poorly represented at CA-SDI-4558, as evidenced by the presence of 12 biface reduction thinning flakes. These flakes, as well as the biface fragment, suggest bifaces were at least partially thinned and possibly used at CA-SDI-4558.

CA-SDI-4558 Groundstone Analysis

All groundstone materials recovered during the current evaluation were selected for analysis and interpretation. Groundstone tools are associated with the processing/milling of plants, seeds, nuts (i.e., acorns, walnuts, holly leaf cherry), and the processing of small mammals. In addition, ethnographic evidence indicates that bone, clay, and pigments may also have been processed with the same tools (Gayton 1929; Kroeber 1925; Spier 1978). Implements of this type may be identified by the pattern of wear developed through milling stone against stone. This process often results in a smooth and/or polished surface, depending on the substance ground and the lithic material type. Often these surfaces are pecked or resharpened when ground too smooth. These implements are sometimes shaped into a desired form by pecking, grinding, or flaking. Thus, tool identification is based on the presence of ground or smooth surfaces, pecked or

resharpened surfaces, and evidence of shaping of the tool form. Groundstone tools are generally separated into five groups: handstones (handstones), millingstones (millingstones), pestles, mortar/bowls and unidentifiable groundstone fragments. Unidentifiable groundstone is defined herein as a fragment of lithic material with a minimum of a single ground surface, but with no technologically identifiable characteristics to indicate tool form. The two groundstone fragments recovered have some grinding, but lack any defining attributes that would facilitate tool identification. Each of the fragmentary pieces of granitic groundstone is thermally damaged. The lithic material used for groundstone was locally available.

CA-SDI-4558 Vertebrate Faunal Analysis

The 3.8 grams of bone fragments recovered from CA-SDI-4558 lack the morphological features that allow them to be identified to a taxonomic category greater than their class. The present specimens are representative of primarily small to medium size mammals. The category of small mammals (2.2 grams of the collection) roughly equates to all non-diagnostic vertebrate fragments, whose sizes are between a mouse and a jackrabbit. Those fragments defined as medium size mammal (1.6 grams of the collection) roughly equate to non-diagnostic vertebrate fragments, whose sizes are larger than a jackrabbit, but smaller than a deer. Evidence of burning was present on only a small portion of the collection. This may represent bone that was burned during preparation or may also be the result of having been discarded in a fire hearth (Wing and Brown 1979).

CA-SDI-4558 Summary

Testing at CA-SDI-4558 by Cook et al. (1977) and for the current project recovered a wide range of artifacts to include cobble and flake tools, bifaces, milling tools, bone tools, a crystal, ceramics, shell, and bone. Disturbances observed at CA-SDI-4558 include construction of roads and houses, grading, agriculture use, modern trash dumping, and rodent disturbance. Flake production from locally available nodules suggests flake tool use and/or biface production. Most likely, these tools were manufactured and used at the site, then transported elsewhere for use where stone tool materials may not have been as readily accessible. This site is identified as an Early Period habitation site with a light Late Period component. A wide range of activities were probably conducted including hunting and collection and processing of plants and seeds, as represented by the biface and groundstone tool fragments. The presence of bone and shell identifies the exploitation of small to medium mammals and demonstrates the variety of foods collected, hunted, and processed.

4.2.2.2 CA-SDI-9253

Site CA-SDI-9253 was originally recorded by Heuett (1982) as multiple bedrock milling features consisting of several slicks. Cardenas (1986a) updated the site for the Sycamore Ridge project and extended the site boundary to approximately 159x55-meter in area. The 1986 update described site CA-SDI-9253 as a temporary camp consisting of rock shelters, bedrock milling features, debitage, and a midden deposit. The west portion of the site has been impacted by the construction of a post-1930s homestead (see site CA-SDI-10747H).

CA-SDI-9253 Test Results

Site CA-SDI-9253 was tested for the current project to determine site significance. It should be noted that the reported rock shelter consisted of a natural rock overhang in a drainage with no evidence of occupation. Testing included collection of surface artifacts, excavation of 13 STPs and one 1x1-meter test unit, and artifact cataloguing and analysis (Figure 4-6, Confidential Appendix B and Table 4-6). Cultural material recovered from the test program included 15 debitage and 1.2 grams of bone. Disturbance at the site included some light foot traffic, off-road vehicle activity, and rodents.

Table 4-6
Cultural Material Recovered from CA-SDI-9253

Cultural Material	Surface	Unit 1	Total
Debitage	2	13	**15**
Bone (g)	0	1.2	**1.2**

Cultural material recovered from the surface of CA-SDI-9253 included two debitage (see Table 4-6).

Thirteen shovel test pits (STPs) were excavated to determine the presence or absence of subsurface materials and extent of the subsurface deposit (see Figure 4-6). STP excavation resulted in 13 negative STPs.

One 1x1-meter unit was placed in a flat area adjacent to BRM-1 and BRM-2. Soil stratigraphy included loose, brown sandy gravelly loam with a high organic content from the unit surface to approximately 5 to 10 centimeters subsurface (Figure 4-7). From approximately 10 centimeters to approximately 78 centimeters, soil was brown, lightly compacted, sandy gravelly loam, becoming increasingly rocky (sub-angular, granite clasts) from approximately 50 centimeters to depth. A number of larger roots (to 1 inch diameter) were also noted from 50 centimeters to depth. At approximately 78 to 80 centimeters, soil changed to light brown, compacted, gravelly,

decomposing granite and the unit was terminated. Cultural material recovered from Unit 1 included 13 debitage and 1.2 grams of bone (see Table 4-6).

Four bedrock milling features were identified during the current study. BRM-1 (three basins, one slick) and BRM-2 (one slick) are located on separate flat sloping boulders in the central portion of the site, southeast of the house foundation (Figures 4-8 and 4-9). BRM-3 (one slick) is located adjacent to a dirt road, between STP 2 and STP 10. BRM-4 (four basins, four slicks) is located northwest of STP 6 (Figures 4-10 and 4-11). All milling features exhibit heavy weathering and portions of the milling elements have exfoliated.

CA-SDI-9253 Lithic Analysis (with Tracy Stropes)

The artifact assemblage from CA-SDI-9253 consists of a narrow range of artifact types including 15 debitage and 1.2 grams of bone (see Table 4-6). All 15 debitage are of metavolcanic material.

Lithic analysis based on replicative data was conducted for the debitage recovered from CA-SDI-9253. The technological identification of all debitage was based on work by Flenniken (1981 and 1985) for analysis and interpretation. All materials were recovered from Unit 1 and the surface collection, and were selected for technological analysis. Eight of the specimens are non-diagnostic flake fragments. The sample of technologically diagnostic debitage comprises the remainder of the overall sample (n=5). Of the diagnostic sample, nodule core reduction comprises 100% of the sample. It is likely that because of the small size of the present sample and the small amount of cortical debitage, the collection represents the maintenance and/or minimal reduction of a prepared nodule core(s).

CA-SDI-9253 Vertebrate Faunal Analysis

A total of 1.2 grams of vertebrate faunal remains were recovered from excavations at CA-SDI-9253. The bone fragments were small, unburned, and primarily unidentifiable. The bone may represent local fauna (avian), not associated with the site occupation activities. The paucity of bone may be attributed to site type activity (i.e., non-hunting), or poor preservation conditions at CA-SDI-9253.

CA-SDI-9253 Summary

Testing at CA-SDI-9253 included the excavation of 13 STPs and one 1x1-meter unit, producing 15 debitage and 1.2 grams of bone. Disturbance from both bioturbation and organic materials was noted. A small amount of nodule core reduction activities may be apparent within the lithic assemblage. However, lithic reduction activities completed at the site were minimal. The present sample is too small to make any definitive statements concerning the past activities of the inhabitants of CA-SDI-9253, other than situational vegetal processing and related tasks.

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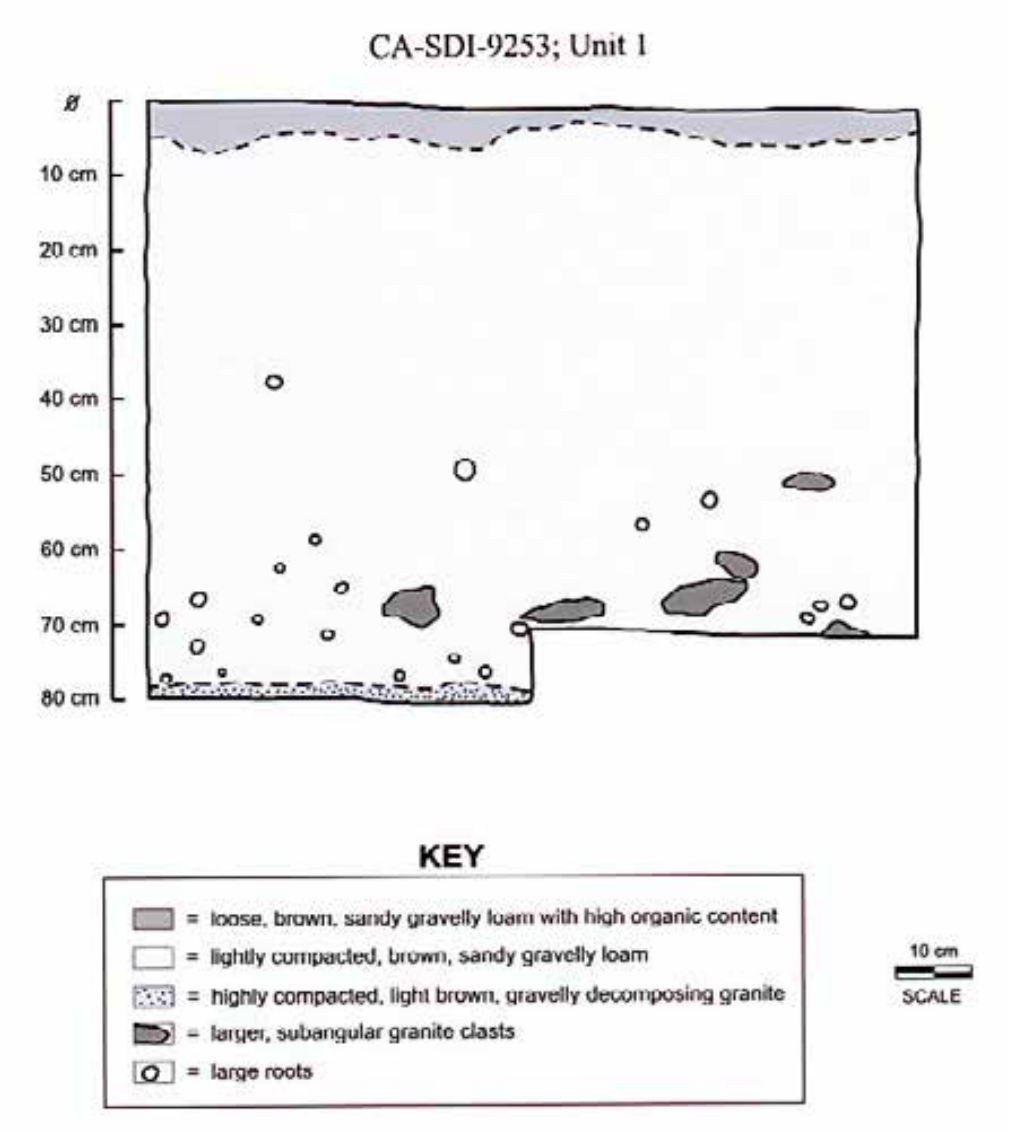
CA-SDI-9253; Unit 1
Ø
10 cm
20 cm
30 cm
40 cm
50 cm
60 cm
70 cm
80 cm
KEY
= loose, brown, sandy gravelly loam with high organic content
= lightly compacted, brown, sandy gravelly loam
= highly compacted, light brown, gravelly decomposing granite
= larger, subangular granite clasts
= large roots
10 cm
SCALE

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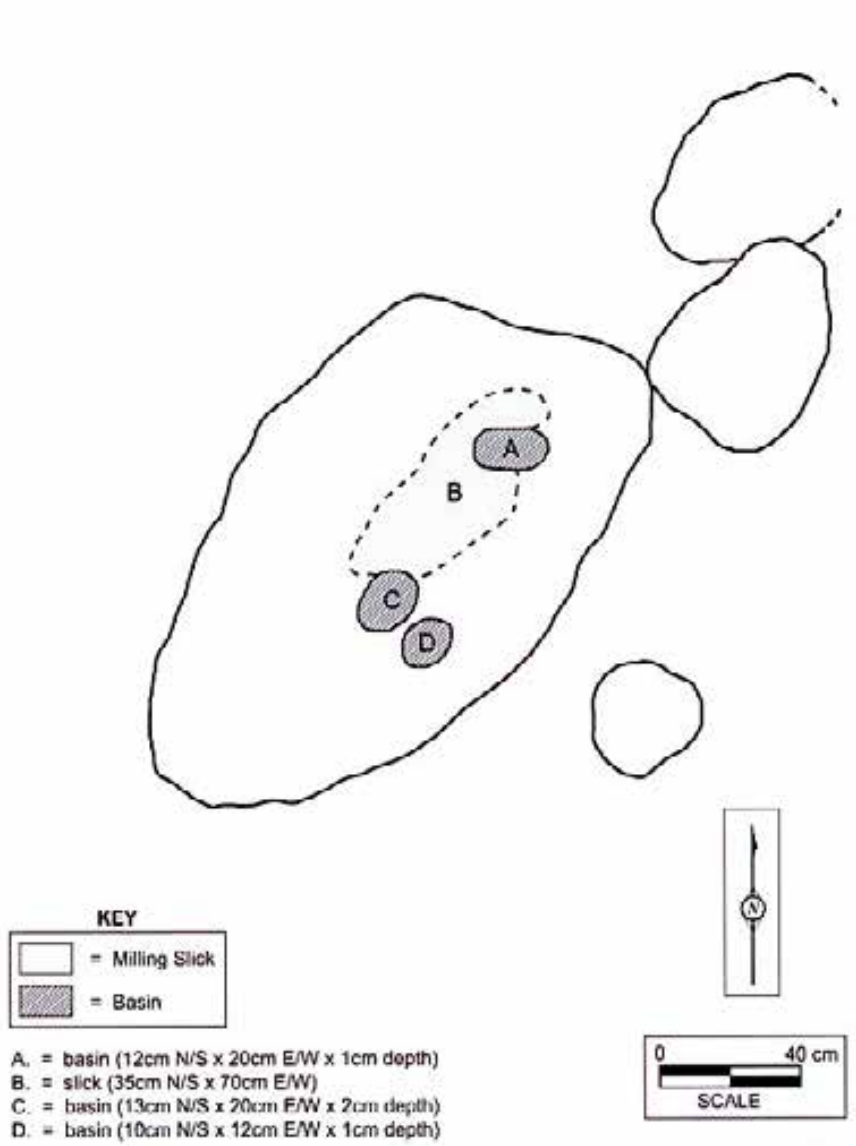
Bedrock Milling Feature 1: Facing Northeast



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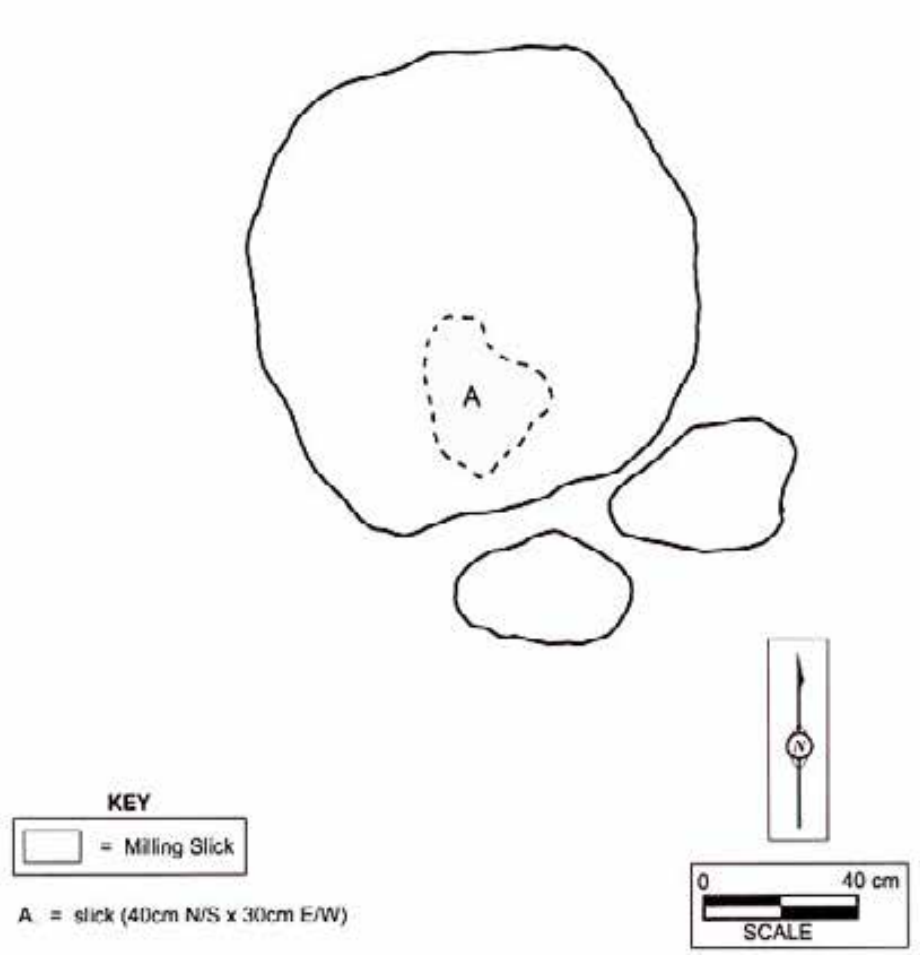
Bedrock Milling Feature 2: Facing Southwest



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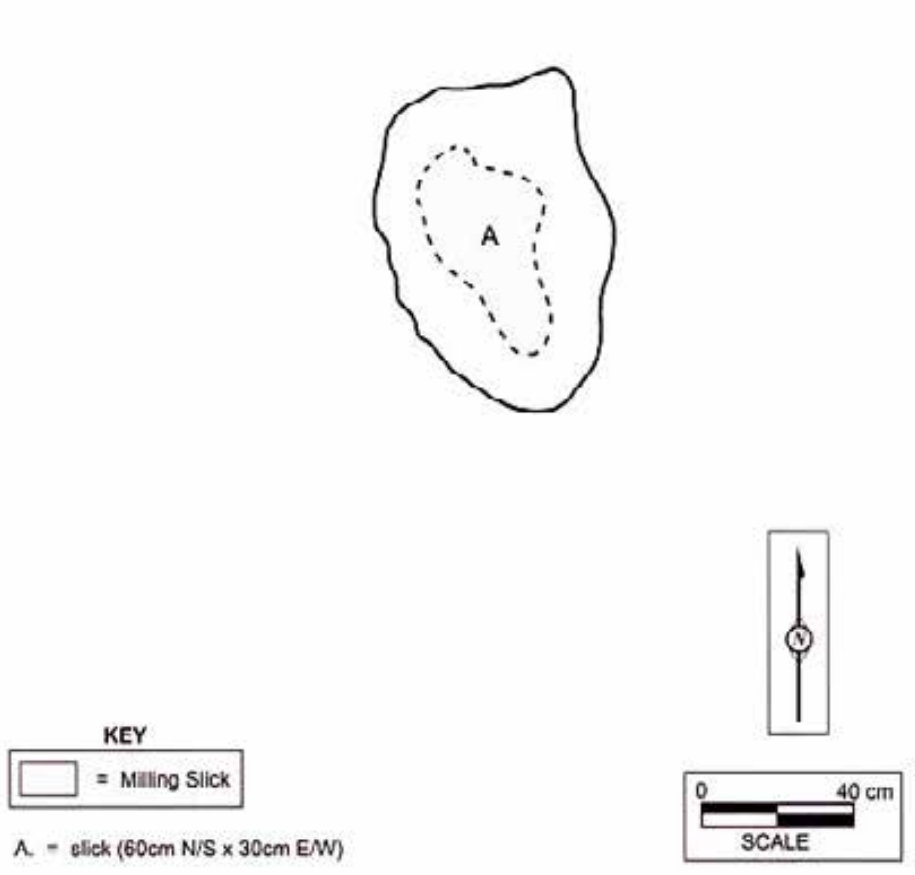
Bedrock Milling Feature 3: Facing East



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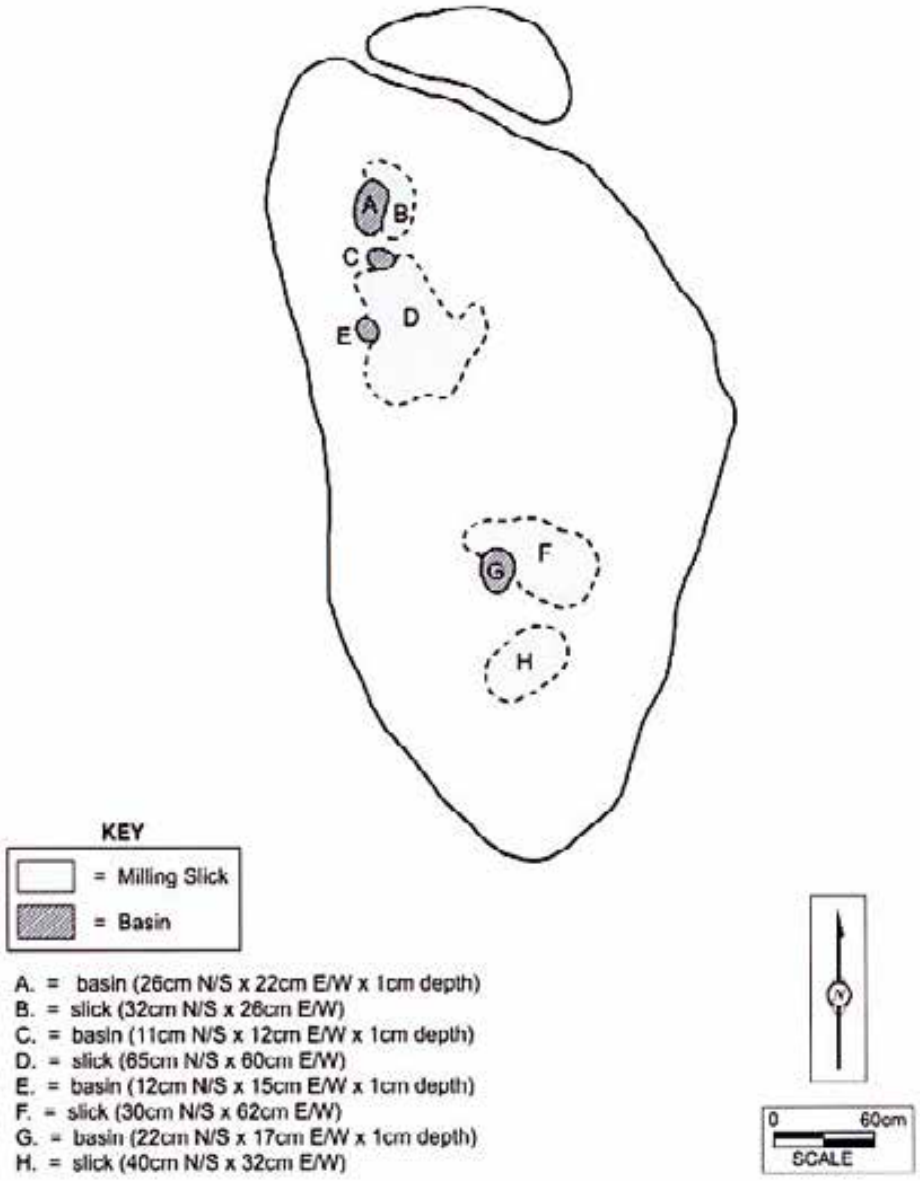
Bedrock Milling Feature 4: Facing South



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4.2.2.3 CA-SDI-9822

Site CA-SDI-9822 (SDM-W-223-A) was originally recorded by Rogers (n.d.) as a habitation site, consisting of a dark midden, flakes, handstone fragments, a large amount of shell, and bedrock milling features. The southern portion of site CA-SDI-9822 has been highly disturbed by the construction of Deer Springs Road; however, an intact cultural deposit is present south of the road. CA-SDI-9822 was updated by Hedges (1977), and a heavily weathered and exfoliated red pictograph feature was identified on a rock face, situated in the northwest portion of the site. In 1990, the site was again updated by Crull (1990b). Palomar Community College conducted a field school from 1980 to 1989 under the direction of Dennis O'Neill. Approximately forty 1x2-meter test units, with an average depth of 120 centimeters, were excavated, and as a result, an extensive collection of over 80,000 primarily Late Period artifacts, including arrow points; pottery; ceramic pipe fragments; bone tools; milling tools; beads (bone, shell, stone, and glass); arrow shaft straighteners; stone tools for cutting, chopping, and scraping; obsidian; shell; bone; and cremations were recovered (Figure 4-12 and Table 4-7). Despite these efforts, the only written report on this site is the M.A. thesis on the faunal assemblage by Quintero (1987). Also, the site is reported (White and White n.d.) to have been radiocarbon dated to 540±60 years B.P.; however, no documentation was found to confirm the radiocarbon date.

During a field class survey, Palomar Community College students Diehl and Brown (1986) updated the site record for CA-SDI-9822; however, the site form update was never submitted to the SCIC. Ten bedrock milling features were recorded by Diehl and Brown (1986). One bedrock milling feature, ceramics, and shell were reported south of Deer Springs Road. The southern portion of the site has been impacted by the construction of Deer Springs Road and a trailer park south of Deer Springs Road. Crull (1990b) reported that the habitation area and milling features north of Deer Springs Road are protected by a chain-link fence; however, additional milling features, the pictograph feature, and surface artifacts are located outside of the fence.

Table 4-7
Cultural Material Recovered from CA-SDI-9822 During Previous Work

Cultural Material	Surface	1x2 m Units	Total*
Bone Awl	0	100	100
Bone Bead	0	14	14
Bone Hairpin	0	1	1
Bone Ornament	0	238	238
Bone Pipe	0	1	1
Bone Tool	1	18	19
Biface	0	16	16
Projectile Point	13	444	457

Table 4-7
Cultural Material Recovered from CA-SDI-9822 During Previous Work

Cultural Material	Surface	1x2 m Units	Total*
Knife	8	69	77
Crescent	0	1	1
Uniface	1	0	1
Chopper	1	22	23
Scraper	13	374	387
Core/Hammer	0	1	1
Core	1	342	343
Multipurpose Stone Tool	0	3	3
Stone Awl	0	2	2
Retouched Flake	0	2	2
Utilized Flake	13	523	536
Flake Tool	0	15	15
Debitage	984	62713	63697
Stone Ornament	0	3	3
Stone Bead	0	29	29
Pounder	0	1	1
Hammerstone	1	10	11
Hammer/Grinding	0	21	21
Abrader	0	6	6
Arrow Shaft Straightener	0	4	4
Handstone	10	104	114
Pestle	2	10	12
Millingstone	5	39	44
Miscellaneous Groundstone	3	34	37
Ceramic Sherds	10609	8192	18801
Ceramic Pipe	1	33	34
Shell Bead	5	3327	3332
Shell Ornament	0	23	23
Glass Bead	0	116	116
Total	**11671**	**76851**	**88522**
Faunal Bone (g)	**1120**	**270963**	**272083**
Shell (g)	**12007**	**72346**	**84353**
Historic/Modern Glass Fragments	**0**	**10031**	**10031**

NOTE: * The total is an approximation only; the original catalog is incomplete.

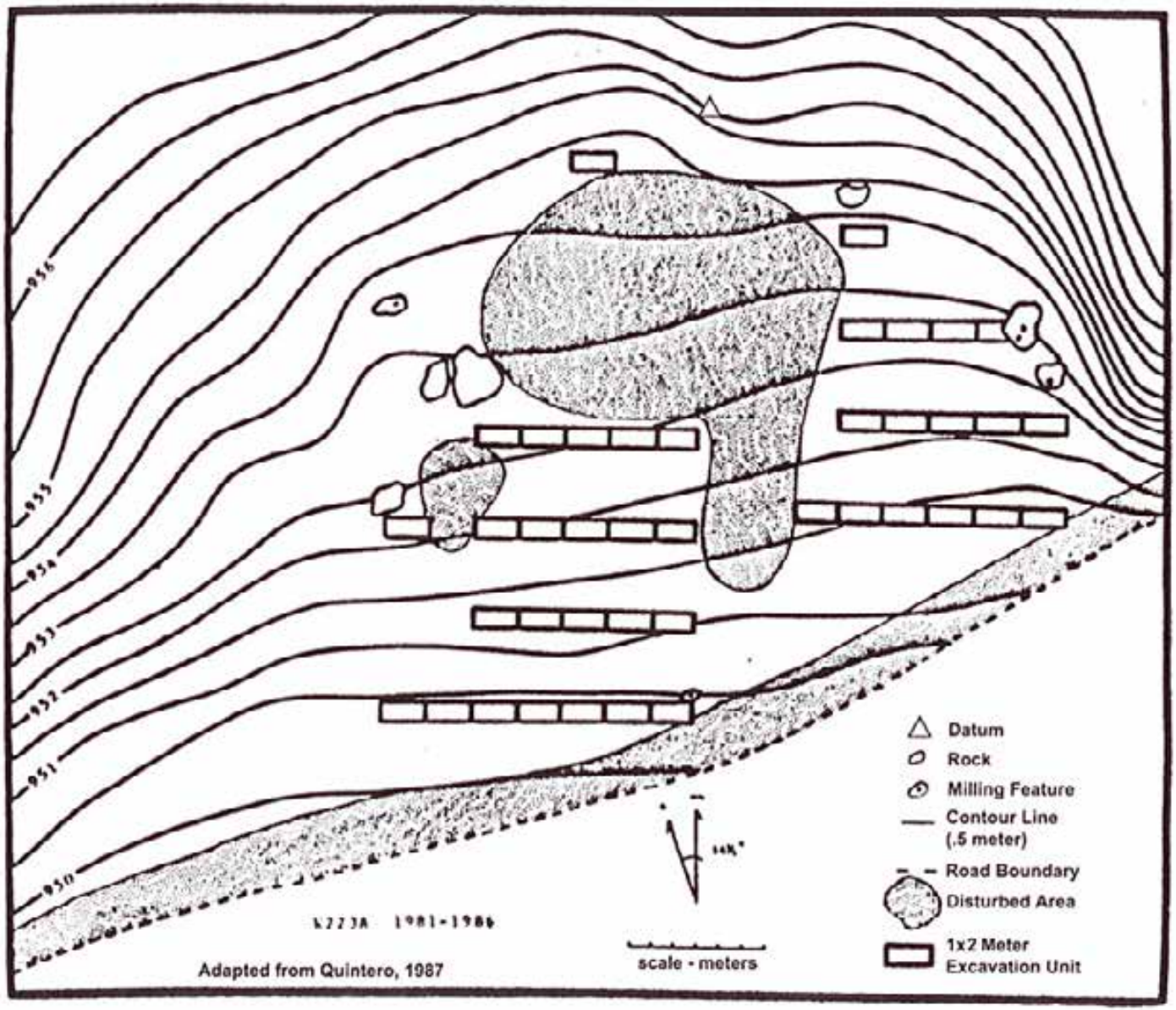

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FIGURE 4-12

CA-SDI-9822 (W-223A) Palomar College Excavation Map

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Testing of CA-SDI-9822 for the current project included a pedestrian survey of the site; recording of bedrock milling features; GPS mapping of bedrock milling features and the pictograph feature; examination of the 1980–1989 Palomar Community College field notes, maps, and artifact catalogue; and, excavation of five shovel test pits (STPs) to determine the presence or absence of subsurface materials south of Deer Springs Road. A Trimble GPS unit was used to determine the location of the bedrock milling features and pictograph feature, thereby redefining the original site boundary. The site boundary was extended west, north, and east of the fenced site area to include additional bedrock milling features and the pictograph feature, and south to include the portion of the site south of Deer Springs Road (Figure 4-13, Confidential Appendix B). Surface artifacts noted include debitage, ceramic sherds, burned bone, and a clay pipe fragment. No surface artifacts were collected. Given the extensive excavation conducted by Palomar Community College in the portion of the site north of Deer Springs Road, no additional excavation was conducted. Rodent disturbance, foot traffic, and modern trash dumping were noted within the fenced area. The portion of site CA-SDI-9822 adjacent to and north of Deer Springs Road is currently eroding into the roadway and the original protective fence has been partially torn down along Deer Springs Road.

CA-SDI-9822 Milling Features and Pictograph Feature

A total of 12 bedrock milling features were documented at site CA-SDI-9822, consisting of a drawing, a photograph, and GPS mapping. BRM-1, BRM-2, BRM-3, BRM-4, BRM-5, and BRM-12 are located outside of the fenced site area, along the west- and south-facing slopes of the adjacent hills. BRM-6, BRM-7, BRM-8, BRM-9, BRM-10, and BRM-11 are located within the fenced site area (Figures 4-14 through 4-25). All milling features exhibit heavy weathering and many portions of the milling elements have exfoliated. Additional milling features may be present along the slopes of the adjacent hills, as dense vegetation covers the slopes. One pictograph feature, previously recorded by Hedges (1977), was documented as well (Figure 4-26).

Collection Status and Catalog of Palomar Community College Collection

At present, the current condition of all of the cultural material collected previously from site CA-SDI-9822 is unknown. However, part of the site assemblage was curated at Palomar Community College and was subsequently obtained by Dudek for the purposes of this project. Other portions of the collection may reside with Leslie Quintero (past archaeologist for this site) and other site material may have been repatriated/reburied.

Gallegos & Associates consolidated a series of four portions of older catalogs created by the Palomar Community College Archaeology Lab; the latter produced catalog cards that were recorded during the multitude of previous excavations conducted at CA-SDI-9822. A one-to-one

comparison between catalog cards and the artifacts they represent was not conducted by Palomar Community College or by Gallegos & Associates. Dudek obtained Gallegos & Associates catalog and updated it by reprocessing the entire curated collection (except large groundstone items) providing curation appropriate artifact tags and bags. The present catalog has identified more than 7,000 entries (Confidential Appendix C). Updating the catalogs for CA-SDI-9822 identified a multitude of errors; not all errors could be corrected due to the fact that many artifact bags lacked provenience information, including catalog numbers. As such, a large portion of the existing assemblage can be used for comparative research only relating to the overall site deposit, rather than providing data on site structure and diachronic changes in assemblage composition. At a minimum, it is understood that forty 1x2-meter units were excavated at CA-SDI-9822, but no clear understanding of the prehistoric activities at CA-SDI-9822 has been achieved.

CA-SDI-9822 Test Results

Subsurface testing for the current project was conducted to determine the presence or absence of a subsurface cultural deposit south of Deer Springs Road. This work included the excavation of five shovel test pits (STPs), and was conducted within the County's easement. Three of the five STPs (STPs 1, 2, and 5) were positive (see Figure 4-13, Confidential Appendix B).

Analysis was conducted for materials recovered as a result of STP excavation at CA-SDI-9822. Cultural material recovered from the three positive STPs includes a range of artifacts including 68 debitage, 1 biface, 13 ceramic fragments, 1 *Olivella* sp. shell bead, 64.11 grams of shell, and 13.11 grams of bone (Tables 4-8 and 4-9). Special studies include analysis and interpretation of flaked lithic artifacts and analysis of faunal remains.

Table 4-8
Artifacts Recovered from STP Excavations at CA-SDI-9822

Cultural Material	STP			Total
	1	*2*	*5*	
Biface	1	0	0	1
Debitage	37	30	1	68
Ceramic	4	8	1	13
Olivella sp. Shell Bead	0	1	0	1
Bone*	7.98	5.13	0	13.11
Shell*	22.11	41.84	0.16	64.11
Total	**42**	**39**	**2**	**83**

* Weight in grams
** Total does not include bone or shell

Table 4-9
CA-SDI-9822: STPs by Depth

Cultural Material		Depth						Total
		0-10cm	*10-20cm*	*20-30cm*	*30-40cm*	*40-50cm*	*50-60cm*	
STP 1	Biface	0	0	1	0	0	0	1
	Ceramic	1	1	1	1	0	0	4
	Debitage	7	12	9	9	0	0	37
	Bone*	2.9	1.65	1.92	1.51	0	0	7.98
	Shell**	6.71	3.52	5.92	5.96	0	0	22.11
STP 2	Biface	0	0	0	0	0	1	1
	Ceramic	6	1	0	0	1	0	8
	Debitage	14	7	4	1	4	0	30
	Bone*	1.66	0.22	1.64	0.44	0.67	0.5	5.13
	Shell**	7.32	8.04	9.58	7.3	8.9	0.7	41.84
STP 5	Biface	1	0	0	0	0	0	1
	Debitage	1	0	0	0	0	0	1
	Faunal*	0.16	0	0	0	0	0	0.16
Total		**30**	**21**	**15**	**11**	**5**	**1**	**83**

* Weight in grams
** Total does not include bone or shell

CA-SDI-9822 Lithic Analysis (with Tracy Stropes)

The lithic analysis was based upon replicative data and was conducted for all flaked stone artifacts recovered as a result of the subsurface site boundary assessment within the proposed right-of-way for CA-SDI-9822. Technological identifications were ascertained for all lithic artifacts recovered from the three positive STPs completed for the current project. All lithic artifacts were also examined on the basis of raw material types and reduction stage categories (Confidential Appendix C). Technological reduction stage flake categories were defined by comparing technological attributes of replicated artifacts from known stone tool reduction technologies to the recovered lithic assemblage. By comparing the recovered assemblage to the replicated assemblage in terms of manufacture, reduction stages were assigned to technologically diagnostic debitage. Some debitage, however, was considered technologically undiagnostic because of its fragmented condition.

Debitage classification attributes were divided into reduction-oriented technological categories, and then these categories were segregated into stages. By segregating the technologically diagnostic debitage into technological categories that represent and identify reduction techniques, two different reduction sequences were defined as a result of this analysis (Confidential Appendix C). Both nodule core reduction and biface reduction were identified

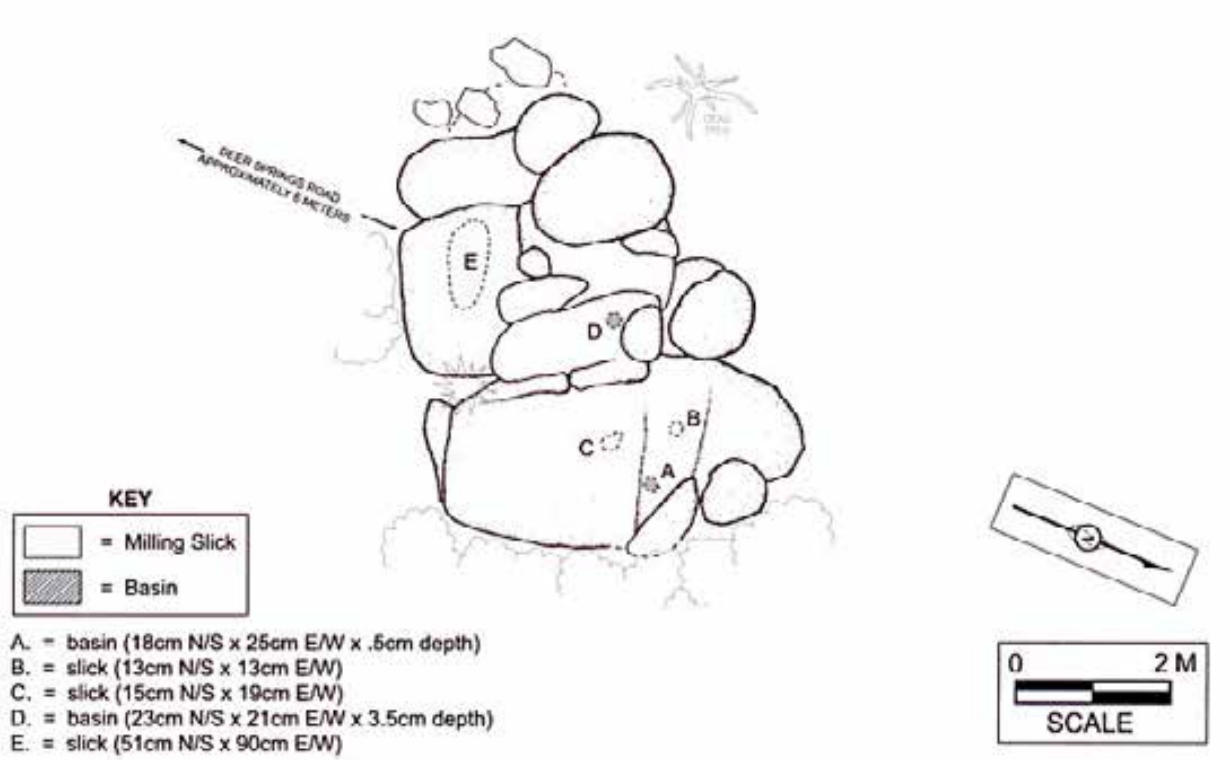
within the present assemblage. Nodule core debitage was recognized and grouped into technological categories based on the amount and location of dorsal cortex, platform attributes, dorsal arris count and direction, and flake cross/long-section shape (Confidential Appendix C). Debitage was classified according to three platform types identified among the flakes from nodule core reduction: natural/cortical platforms (NP), single-facet platforms (SFP), and multifaceted platforms (MFP). In addition, flakes were further subdivided according to the location of dorsal cortex (i.e., flake categories NP-1 through NP-11, SFP-1 through SFP-11). The reduction-oriented technological categories of diagnostic flakes were also separated out on the basis of geological material types (i.e., metavolcanic, quartzite, monocrystalline quartz, chert, obsidian, etc.). Flake fragments that lacked the necessary attributes to be placed in one of these categories were classified as undiagnostic fragments. Only raw material type and presence or absence of cortex were recorded for these artifacts. Interpretation of the reduction sequence from this site was determined using only the technologically diagnostic debitage, whereas discussions concerning lithic raw material types include all debitage and formed artifacts.

Often times it is possible that two different reduction sequences may or may not be part of a single interrelated reduction continuum. For instance, bifacial artifacts may have been manufactured from flake blanks produced from nodule cores and thus the collection may be viewed as a single continuum. For the present analysis these reduction-oriented technological categories were further segregated on the basis of geological material types such as metavolcanic, quartzite, monocrystalline quartz, chert, and obsidian. Interpretation of the reduction sequence from this site was determined using only the technologically diagnostic debitage.

All debitage recovered from the three positive STPs was analyzed, identified, and assigned to specific technological categories and stages. Technologically diagnostic debitage was assigned to a specific reduction category, and served as the basis for interpretation of lithic technology. Preliminary analyses indicate that artifacts recovered from the site are intra-site similar in technological character. As such, the sample of the entire excavated assemblage is considered homogeneous. No technological change was identified either horizontally through the site or vertically across the site. In light of this, all artifacts from the site were combined for the purpose of interpretation of the site's lithic technology.

Technological analyses of the artifact sample recovered during testing at CA-SDI-9822 identified two specific reduction technologies. The assemblage is composed of primarily two reduction technologies including nodule core reduction; and to a lesser extent, biface reduction. As stated previously, these reduction technologies may be part of the same continuum, for example, flakes from nodule core reduction may have been used as flake blanks for flake-based biface production. Nearly all of the lithic artifacts are made of local materials with just a few exceptions (i.e., Piedra de Lumbre chert and obsidian).

Drawing Oriented to Match Photo



Overview Photograph of BRM-1: Facing West-Southwest

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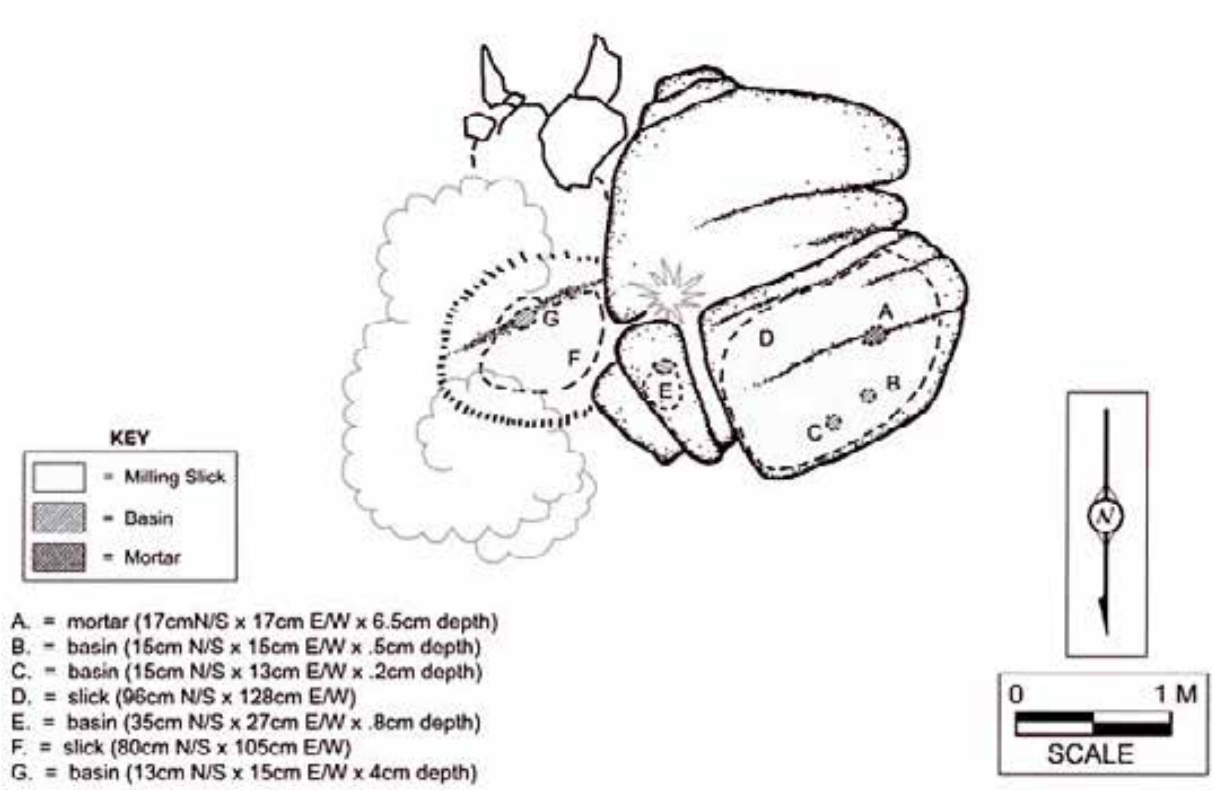
Drawing Oriented to Match Photo



Overview Photograph of BRM-2: Facing South

DUDEK

7608-02
12-4-2014

FIGURE 4-15
CA-SDI-9822: Bedrock Milling Feature 2

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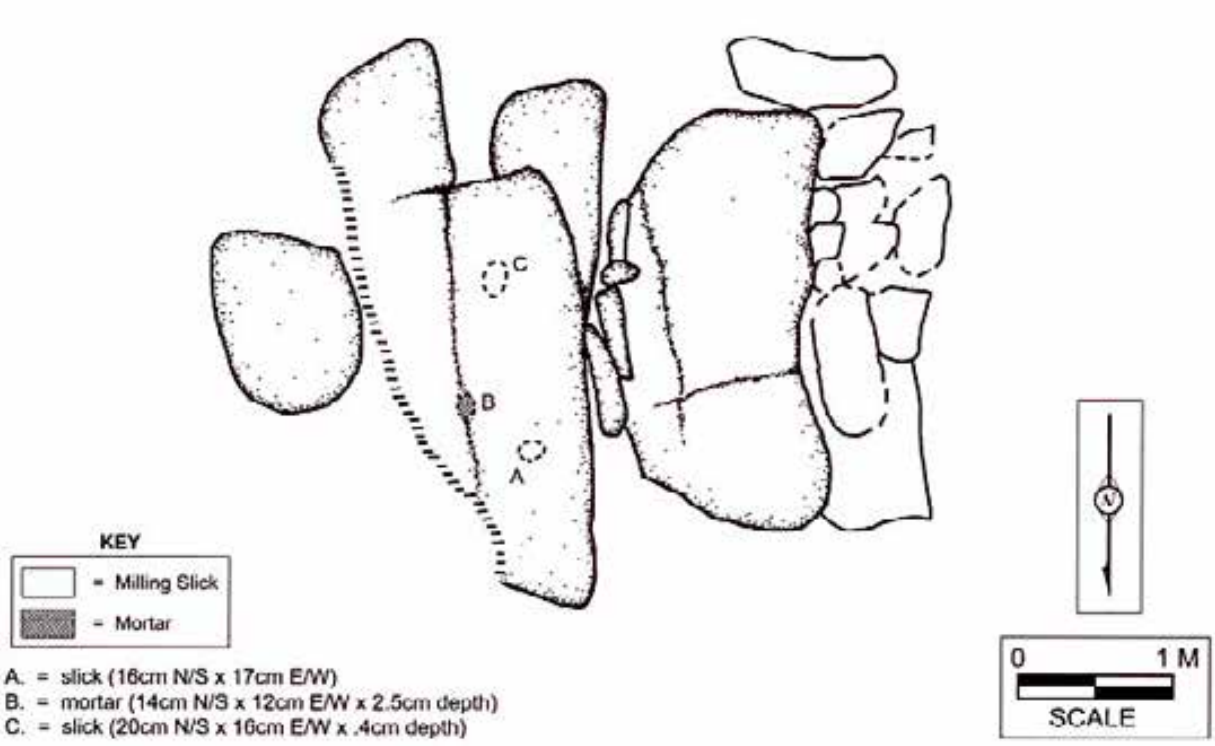
Drawing Oriented to Match Photo



Overview Photograph of BRM-3: Facing South

DUDEK

7608-02
12-4-2014

FIGURE 4-16
CA-SDI-9822: Bedrock Milling Feature 3

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