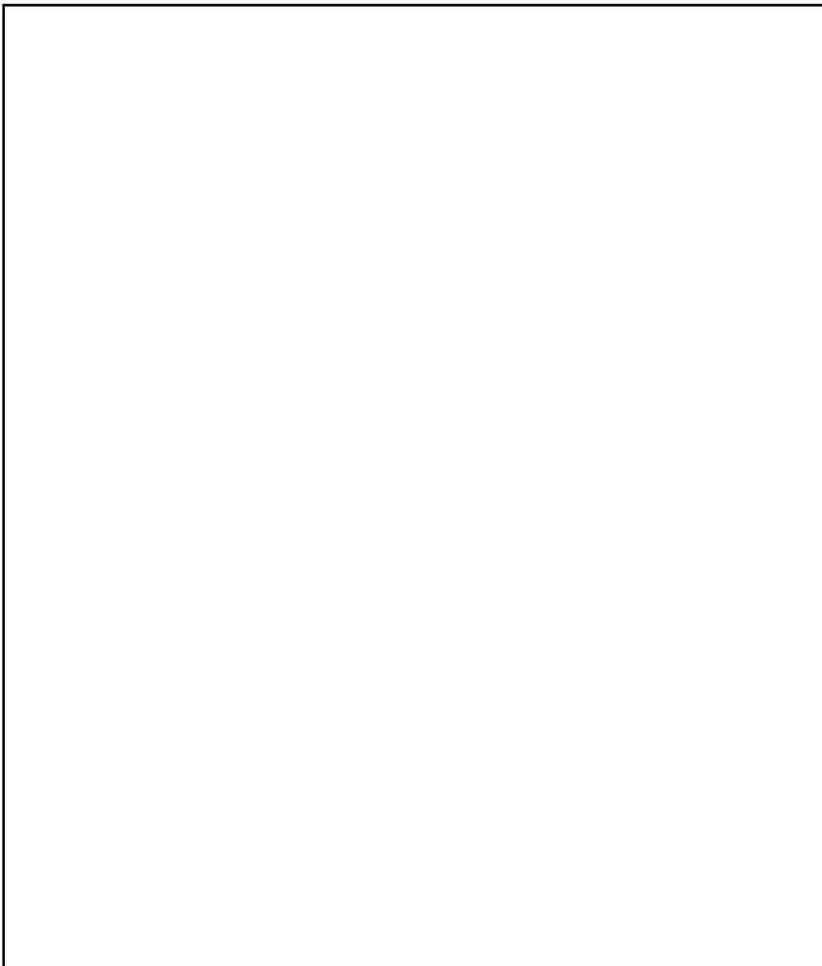


**Evaluation of Archaeological Sites  
CA-PLA-1870, CA-PLA-1871 & CA-PLA-1873  
Rancho del Oro Development  
Placer County, California**



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## **MANAGEMENT SUMMARY**

In April, 2006, Sean Michael Jensen completed an archaeological resources inventory of the proposed residential development, Rancho del Oro. The planned 160 acre development is located in the Granite Bay area of south Placer County.

The inventory identified three Native American archaeological sites described as “developed middens”: field number RDO#1 (CA-PLA-1870), RDO#2 (CA-PLA-1871) and RDO#4 (CA-PLA-1873). Jensen concluded that all three of the sites were potentially significant under both state and federal criteria of importance. Jensen recommended archaeological test excavations at each of the three sites to assess more fully the eligibility of each for the California Register of Historical Resources and the National Register of Historic Places.

In February, 2009, archaeological test excavations were conducted at the sites by Ric Windmiller, Consulting Archaeologist. Based on surface observations, Jensen described CA-PLA-1870 (field number RDO#1) as a prehistoric habitation site consisting of a group of 27 bedrock mortars on nine separate granite boulders, a surface scatter of chipped stone debitage and an underlying midden deposit. Jensen estimated the site’s size as 120 meters long (north-south) and 45 meters wide (east-west). However, results of the test excavations indicated that the cultural deposit was encompassed by a smaller area: 80m north-south and 41m east-west at its widest point. The north-south measurement was taken from an east-west fence line to the south boundary of the site. The cultural deposit was found to vary between 30cm and an average maximum depth of 90cm. The excavations yielded artifacts indicative of a small prehistoric encampment eligible for the California Register of Historical Resources and the National Register of Historic Places for its potential to yield information important in reconstructing local prehistory. However, due to evidence of disturbances across the site, the information potential appears limited.

On the basis of surface evidence, Jensen estimated the size of CA-PLA-1871 (RDO#2) as 70m long (north-south) and 100m wide (east-west)—the width encompassing what the present consultant subsequently identified as four separate sites RDO#2a, RDO#2b, RDO#2c and RDO#2d. Therefore, CA-PLA-1871 was redefined as a relatively small cultural deposit and bedrock mortars designated “RDO#2a” and located on a hill top overlooking Miner’s Ravine. Results of the test excavations indicated that the cultural deposits of RDO#2a extend 55m in length (south from the east-west fence) and 45m east-west at its widest point. Depth of the cultural deposit ranges from 15cm to an average maximum depth of 60cm. At the apex of the hill near the geographic center of the site is an approximately 12m diameter depression. There was evidence of former vandalism at the site, which may explain the depression. The excavations yielded artifacts indicative of a small prehistoric or proto-historic encampment eligible for the California Register and the National Register for its potential to yield information

important in reconstructing local pre- or proto-history. Due to disturbances across the site, the information potential appears limited.

Site RDO#2b is one of the four separate sites encompassed by Jensen's boundary for RDO#2. Jensen described what we now identify as "RDO#2b as a vertical outcrop of granitic boulders with an overhanging lip forming a broad shelter in front of which is a relatively flat talus where cultural material has accumulated. As a result of subsequent test excavations, the present consultant identified a cultural deposit with a maximum depth varying between 45 and 90cm in sandy sediment. The cultural deposit was found to extend 20m northeast-southwest and 12m northwest-southeast. A shallow depression on the flat in front of the rock "shelter" measures 7.5m diameter. A test excavation within the depression failed to identify any features indicative of a house pit. Other pits along Miners Ravine are identified as mine prospects. This may be one of the prospects. Artifacts recovered from the excavations indicate that the site may represent a very small prehistoric encampment eligible for the California Register and the National Register for its potential to yield information important in reconstruction local prehistory.

Sites RDO#2c, RDO#2d and CA-PLA-1873 (RDO#4) are isolated bedrock milling stations. RDO#2c and RDO#2d were located within Jensen's original boundary for CA-PLA-1871 (RDO#2). Soil scrapes around RDO#2c did not yield any evidence of a cultural deposit. Test excavations around the RDO#2d and CA-PLA-1873 (RDO#4) yielded a few stone artifacts mixed with modern debris including clay pigeon fragments, .22 cartridge cases and rusted can fragments. The soil color and texture around all three bedrock milling features is undifferentiated from the surrounding soil. The consultant concluded that none of the three bedrock milling features is eligible for the California Register or the National Register of Historic Places.

As three of the Native American archaeological sites meet criteria of eligibility for the California Register of Historical Resources and the National Register of Historic Places (CA-PLA-1870/RDO#1; CA-PLA-1871/RDO#2a and; RDO#2b), the proposed undertaking, Rancho del Oro, could potentially have an effect on those archaeological resources and the effect could be adverse.

California Environmental Quality Act and federal guidelines and advisories suggest a number of options for the treatment of archaeological sites eligible for one or both registers. The preferred treatment is preserving such sites intact. This can be accomplished by planning construction to avoid the sites, incorporating the sites within parks, greenspace or other open space, covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar hardscape on the sites, or deeding sites into permanent conservation easements. These are just a few suggestions. If the lots are large enough, it may be possible to place a deed restriction on the lot so that the affected archaeological site is capped with soil and planted in grass or other hardscape. Data recovery, which involves intensive

archaeological excavation of a site, may be required for that portion of a site that cannot be avoided by construction.

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## **INTRODUCTION**

In April, 2006, Sean Michael Jensen, Genesis Society, completed an archaeological resources inventory of the proposed residential development, Rancho Del Oro. This 160 acre planned development is located between Olive Ranch Road and Miner's Ravine in the Granite Bay area of south Placer County, California (Figure 1).

As a result of Jensen's study, three Native American archaeological sites were observed to include surface lithic scatters and subsurface components recognized as "developed" middens: field number RDO#1 (CA-PLA-1870), RDO#2 (CA-PLA-1871) and RDO#4 (CA-PLA-1873). Jensen concluded that all three sites had the potential to yield information important in reconstructing local prehistory and therefore, the sites were potentially eligible for the California Register of Historical Resources under Criterion 4 and National Register of Historic Places Criterion D. Both criteria used in these examples are thresholds for evaluating the information potential of archaeological sites.

Jensen recommended archaeological test excavations at each of the three sites to assess more fully the information potential and therefore the eligibility of each site for the California and National registers (Jensen 2006:15-17).

The present consultant revisited the three archaeological sites on January 15 and February 12, 2009. During the visits, the consultant observed that cultural deposits at each of the three sites may occupy less ground than originally estimated by Jensen. The consultant also noted irregularities on the ground surface at and around the three sites, which could indicate the presence of subsurface features or post-occupational disturbances associated with mining, farming or other ground-disturbing activities. To address these observations, the consultant put together a field team to excavate 1x1 meter square test units to help determine the nature and significance of the archaeological deposits and series of shovel tests along transects across the archaeological sites to determine the depth and areal extent of cultural deposits.

The purpose of the present study is to complete the process of identifying the three archaeological sites by determining the extent and nature of their cultural deposits and re-evaluate their eligibility for the California Register of Historical Resources and the National Register of Historic Places.

The consultant, Ric Windmiller, has 38 years experience directing archaeological surveys and excavations to identify and evaluate prehistoric and historic archaeological sites, as well as directing archaeological projects designed to recover the scientifically important information contained in sites that cannot be avoided by construction, mining or inundation (see Appendix A: Statement of Qualifications).

## **REGULATORY BACKGROUND**

An Environmental Impact Report (EIR) and Clean Water Act, Section 404 permit from the U.S. Army Corps of Engineers are anticipated for the proposed Rancho del Oro development project. Therefore, a formal evaluation of archaeological resources under CEQA as well as for National Register of Historic Places eligibility will assist the agencies in determining appropriate means of mitigating any potential adverse effects.

### **CEQA Regulatory Background**

The California Environmental Quality Act (CEQA) statutes [Public Resources Code §21001(b) *et seq.*] require planning agencies to carefully consider the potential effects of a project on historical resources. Under the revised and adopted CEQA guidelines in §15064.5, a "historical resource" includes: a resource listed in or eligible for the California Register of Historical Resources; or listed in a local register of historical resources; or identified in a historical resource survey and meeting requirements in §5024.1(g) of the Public Resources Code; or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines historically significant, provided the determination is supported by substantial evidence in light of the whole record; or a resource so determined by a lead agency as defined in Public Resources Code §5020.1(j) or §5024.1.

Under CEQA Guidelines, "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 [Public Resources Code §15064.5(b)]. "Substantial adverse change" is ". . . 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 [Public Resources Code §15064.5(b)(2)].

While alteration of the setting of an archaeological site that is eligible only for its information potential may not affect the site's significant characteristics, alteration of a property's location (*viz.*, removing or damaging all or part of the site) may have a significant adverse effect. CEQA's Guidelines §15126.4(b)(3) state, "Public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature." The guidelines further state that preservation in place is the preferred manner of mitigating impacts, and that preservation ". . . may be accomplished by, but is not limited to, the following":

1. Planning construction to avoid archaeological sites;
2. Incorporation of sites within parks, greenspace, or other open space;
3. Covering the archaeological sites with a layer of chemically stable soil before

building tennis courts, parking lots, or similar facilities on the site.

4. Deeding the site into a permanent conservation easement.

CEQA guidelines state, "when data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken" [CEQA Guidelines §15126.4(b)(3)(C)]. However, "data recovery shall not be required for a historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource . . ." [CEQA Guidelines §15126.4(b)(3)(D)].

CEQA also requires agencies to consider the effects of a project on "unique archaeological resources." If an archaeological site meets the definition of a unique archaeological resource (Public Resources Code §21083.2), then the site must be treated in accordance with the special provisions for such resources, which include time and cost limitations for implementing mitigation.

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 §7050.5, Public Resources Code §5097.94 *et seq.*).

### **Federal Regulatory Background**

The second purpose of the present study is to provide the "evaluation" element of a National Historic Preservation Act, Section 106 consultation. The information provided by the present study is designed to assist the U.S. Army Corps of Engineers in meeting its responsibilities under Section 106 of the National Historic Preservation Act, as amended. A Section 106 consultation is a federal review, separate from any environmental or planning reviews required by state and local laws and ordinances. The purpose of Section 106 is to avoid unnecessary harm to historic properties, which include any National Register of Historic Places listed or eligible prehistoric or historic objects, sites, buildings, structures or districts (National Park Service 1991: Appendix IV-2). Under federal regulations at 36 CFR Part 800, effective January 11, 2001, the basic steps in a Section 106 review include:

- **Initiating the Section 106 process** (This step was added in 1999 to encourage early consideration of the potential effects of the federal permitting or other action, to coordinate with other reviews, to identify consulting parties such as the State Historic Preservation Officer and Federally recognized Indian tribes, and to make plans for other public involvement);

- **Identifying historic properties** (the federal agency is responsible for defining the Area or Areas of Potential Effects; also included in this step is the identification of cultural resources, evaluating the eligibility of those resources for the National Register, including sites to which Indian tribes attach religious and cultural significance, determining the eligibility of those resources for the National Register and determining whether or not historic properties will be affected);
- **Assessing Adverse Effects** (the federal agency must consider both direct and indirect effects, reasonably foreseeable effects that are cumulative, later in time or at a distance, and with respect to all qualifying characteristics of a historic property--*e.g.*, if an archaeological site is important for its scientific information potential and for its cultural or religious importance to an Indian tribe, then the adverse effects on both must be considered).
- **Resolving Adverse Effects** (the process of negotiating a Memorandum of Agreement between the consulting parties was streamlined in 1999 and now may involve only the federal agency and the State Historic Preservation Officer as signatories. However, the Advisory Council recommends that the federal agency should invite federally-recognized Indian tribes that attach religious and cultural significance to properties off tribal lands to concur with the findings in the MOA).

Under federal regulations, where there is a federal undertaking on non-federal land (*e.g.*, issue of a permit), a consultant may gather information necessary for the federal agency to meet its responsibilities under Section 106, but the agency official remains legally responsible for all required findings and determinations [36 CFR Part 800.2(a)(3)]. In accordance with 36 CFR Part 800.2(c)(ii)(A), (B) and (C), it is the agency official who has the responsibility to make a reasonable and good faith effort to identify Indian tribes that shall be consulted in the Section 106 process. The federal government has a unique legal relationship with Indian tribes set forth in the Constitution of the United States, treaties, statutes and court decisions, and, therefore, consultations must recognize this government-to-government relationship.

## **PHYSICAL SETTING**

The three archaeological sites, RDO#1 (CA-PLA-1870), RDO#2 (CA-PLA-1871) and RDO#4 (CA-PLA-1873), are located on undulating alluvial deposits at an elevation of 260 feet within the foothill oak woodland plant community in the lower foothills of the Sierra Nevada. All three sites are situated at the edge of open meadow. The surface soil, probably Caperton gravelly coarse sandy loam, is underlain by decomposing granite and granitic rock. Granite boulders lie exposed on the archaeological sites and along Miner's Ravine immediately north of the sites (*cf.* Wallace-Kuhl & Associates, Inc. 2002:12).

The prominent ridge one-half mile northwest of the three archaeological sites offers an example of the Mehrten Formation, the result of a volcanic mud flow down what was once the floor of a river valley. This particular Mehrten rock unit was formed by very hot volcanic ash flows that rushed down the valley. The ash flows swept up many different kinds of rocks including petrified wood, large pieces of which have been recovered from a similar Mehrten rock unit on Boulder Ridge six miles to the north (Lipps 2005; Wagner *et al.* 1981).

## **HISTORIC CONTEXT**

Miner's Ravine attracted a relatively dense Native American population for a seasonal drainage in the low foothills of the Sierra. In 1976, archaeologist Jerald Johnson produced a technical report of his field survey that encompassed 2.5 miles along both banks of Miner's Ravine, as well as similar investigations in Strap Ravine and the Linda Creek drainage. Included in the report is a brief synthesis of the area's archaeology and ethnography. Johnson indicated that the drainages (including Miner's Ravine) ". . . have numerous Native American village and camp sites on their banks" (Johnson 1976:5).

Previous archaeological excavations in the region produced evidence of Native American occupation dating between 500 B.C. and A.D. 1850. Johnson observed that the Nisenan, a Maiduan-speaking people who inhabited the area for at least the last 1,000 years occupied Miner's Ravine and the surrounding region. The historic pattern of Nisenan settlement is similar to that of other Indian groups in northern and central California. The Nisenan "were organized into tribelets, which consisted of one principal village and several allied smaller camps," according to Johnson. Johnson also reported that each of the clusters of archaeological sites found in Strap and Miner's ravines probably represented a tribelet center, which would consist of a principal village and satellite camps. Johnson explained that tribelets seldom supported over 300 individuals and that major villages probably had a population of 30 to 60 individuals (Johnson 1976:2-5).

The ancestors of the Maiduan people who lived in the foothills around Miners Ravine probably came to northern California from northwestern Nevada during the period A.D. 1-A.D. 200, occupying the Sierra foothills by A.D. 600-700. Another wave of immigrants, Wintuan-speaking peoples, came south from Oregon and settled the middle of the Sacramento Valley and western hills by A.D. 900-A.D. 1000. The Wintuan expansion probably assimilated some existing groups by intermarriage or warfare and displaced others who moved southward.

Prior to Nisenan settlement in the region, archaeologists believe that the area may have been inhabited by a proto-Yokutsan-speaking people who left behind traits of the earlier "Windmill Pattern" in the local archaeological record before penetrating farther south into the San Joaquin Valley and Sierra foothills around 1000-500 B.C.

People of this stock probably immigrated to northern California because of increased aridity in their homeland of the southern Columbia Plateau and northwestern Great Basin (Moratto 1984:555; Windmiller2007:7).

The Windmiller Pattern dates back as early as 2400 B.C. in the Central Valley. Its origins are also tentatively traced to the Altithermal cultures of the Northwest Great Basin and southern Columbia Plateau, as archaeologists have speculated that people of the same language group occupied the juncture between the Great Basin and Plateau provinces before 2500 B.C. (Moratto 1984:552)..

It is also possible that other Great Basin peoples occupied the area in place of the proto-Yokutsan speaking people of the Windmiller Pattern. The so-called “Martis Complex” with its characteristic dart points made of basalt originally identified by archaeologists at sites in the high Sierra is also represented in the Sierra foothills and may reflect local settlement by an entirely different language group. Such sites may date to the period, 2000 B.C. to A.D. 500 (*cf.* Elston *et al.* 1977). Moratto speculated on a Hokan language association with the Sierra foothills expression of Martis (Moratto 184:562).

Earlier still are occasional finds—both sites and isolated artifacts—representing the Western Pluvial Lakes tradition and its regional variant, the Farmington Complex. Stone tools of this prehistoric “tradition” have been unearthed periodically along the Sacramento Valley-Sierra foothills edge and probably date between 10,000 and 5000 B.C. (Moratto 1984:62, Ritter *et al.* 1976). The development of the Western Pluvial Lakes Tradition and its regional variants such as the Farmington complex may, as Moratto suggested, correspond to the emergence and initial differentiation of Hokan languages (Moratto 1984:544).

California prehistory, although poorly understood, reflects a long period of immigration and internal population shifts driven in part by changes in climate affecting broad areas of the American West.

To better understand the local prehistory, the consultant ordered a records search from the North Central Information Center, California Historical Resources Information System. The February, 2009 records search identified 20 Native American archaeological sites along a five mile reach of Miners Ravine. This five mile reach of the ravine includes the location of the three sites evaluated in the current study (see Figure 2).

The settlement pattern revealed by the records search includes small camp or village sites and isolated bedrock mortars on outcrops of granite. Ten camp or small villages sites and 10 isolated sites of bedrock mortars have been identified along this five mile reach of the ravine. The camp or small village sites range from small surface scatters of chipped stone waste from the manufacture of stone tools (rare) to middens with 2-3 saucer-shaped housepits. Test excavations documented the depths of middens up to 1.5

meters.

Artifacts diagnostic of specific time periods reported in the record forms are rare. However, one small village or camp site yielded a Desert Side-Notched arrowhead and shell ornaments characteristic of the late prehistoric Maidu (Nisenan) occupation from about A.D. 1200-1800 or later. The presence of housepits at several sites along the ravine also suggests a predominantly late period of occupation for the locality, as surface indications of such structures from earlier times rarely survive. There are no documented reports of glass beads or other historic artifacts in direct and positive association with Indian occupation to confirm a historic Native American presence in this reach of Miners Ravine. Therefore, the present evidence suggests that Miners Ravine was abandoned by the Nisenan before the Gold Rush but possibly as late as the 1833 epidemic brought south from Oregon by early trappers (see Appendix B for a copy of the records search results).

## **RESEARCH DOMAINS**

The three basic aims of archaeological research are: identifying the time period(s) during which an archaeological site was used or occupied; understanding the ways in which people once lived and; explaining the social events or trends, as well as the cultural and natural processes that account for archaeological remains.

Jensen outlined three research domains that he believed were relevant to evaluating the significance of the three archaeological sites on Rancho del Oro: *Site Function* (determine the potential of each of the three sites to yield information important in reconstructing the activities that took place on the sites, as well as relationships with other sites nearby); *Temporal Patterns* (determine the potential to yield information on the time periods and duration of occupation at each of the three sites) and; *Settlement, Land Use and Subsistence Patterns* (determine the potential of each of the three sites to yield information on the nature and intensity of occupation to contribute significantly to our understanding of the settlement pattern in the local region)—if I am correct in summarizing Jensen's approach (*cf.* Jensen 2006:15-16).

“Research domains” were described years ago by Schiffer and Gumerman as an “incipient research design” commonly used by archaeologists during the early stages of research (Schiffer and Gumerman 1977:131). In 1994, Far Western Anthropological Research Group, Inc., Helen McCarthy, Ph.D., Cultural Resource Research & Consulting and JRP Historical Consulting Services produced a research design for prehistoric and other sites at nearby Folsom Reservoir. This study has served successfully as a regional research design for the greater Folsom-Granite Bay area. In that study, the archaeologists defined five meaningful research domains: chronology; settlement patterning; subsistence and technology, trade and ethnicity/group boundaries. To maintain continuity, the research domains used in the Folsom Reservoir study, which incorporate some of Johnson's earlier observations, as well as Jensen's

concerns, will be applied here (*cf.* Jensen 2006, Johnson 1976 and Waechter *et al.* 1994:54-65).

**Chronology.** To address the chronology research domain, each archaeological site would need to be evaluated with respect to its potential to date the period of occupation or use of the site. The evaluation would be based on the presence and nature of the contexts of datable objects including obsidian tools and debris from manufacturing obsidian tools, charcoal, ash or carbonized plant and animal remains, or time-sensitive artifacts such as certain projectile point styles, beads, ornaments or historic items.

**Subsistence/technology.** To evaluate each archaeological site with respect to this research domain, emphasis would be on the presence or absence of various types of artifacts that help identify particular adaptations to the local environment and ratios between raw materials.

**Trade.** The presence of obsidian, marine shell and possibly basalt that can be analyzed as to its source would suggest trade or other connections with peoples outside the local region.

**Settlement Patterning.** The identification of a particular type of site, its period of occupation or use and its location can be significant in reconstructing the pattern of settlement in a particular locality or region during a specific period of time.

**Ethnicity/Boundaries.** The presence in a site of specific artifact types, obsidian source ratios and even DNA from human remains can be significant in determining an association or disparity with other archaeological sites and therefore a key to reconstructing boundaries between prehistoric Indian groups.

## **TEST EXCAVATIONS AT CA-PLA-1870 (RDO#1)**

Based on surface observations, Jensen described CA-PLA-1870 (field number RDO#1) as a prehistoric habitation site consisting of a group of 27 bedrock mortars on nine separate granite boulders, a surface scatter of chipped stone debitage and an underlying midden deposit. Jensen estimated the site's size as 120 meters long (north-south) and 45 meters wide (east-west). Jensen described the density of chipped stone debitage on the surface as varying between one and five items per square meter (Jensen 2006:9).

Upon revisiting the site during the present study, the consultant observed considerable historic disturbance of the ground surface. Miner's Ravine was placer mined during the Gold Rush and significant placer mining was conducted during the "second gold rush" of the 1930s, as dry land dredge tailings piles occur in the low lying terrain immediately east of the site. The site's surface is deeply scarred from either farming or crossings made by drag-line dredging equipment or other heavy equipment.

On February 3, 2009, the consultant established a datum near the north edge of the midden next to the cluster of granite boulders and bedrock mortars. Several transects radiating from the datum were laid out—along which shovel tests would be conducted at intervals to determine the extent of cultural deposits. Shovel tests are small holes, the diameter of which matches the width of a shovel blade. The holes are excavated in a series of 15 centimeter vertical levels. The sediments from each level are sifted through quarter inch hardware cloth and the midden's macro-constituents are documented. Typically, when the cultural deposit wanes, the midden's macro-constituents are low or non-existent. Hence, the site boundary is established as a reasonable estimate of a cultural deposit's depth and horizontal extent (see Figure 3).

The consultant also laid out two 1x1 meter excavation units. Dug by hand, also in arbitrary 15 centimeter levels (unless cultural or natural stratigraphy is present), these larger excavations offer a means of evaluating the nature of the cultural deposit. Every shovel full of sediment is sifted through quarter inch hardware cloth and the midden constituents are documented. Excavations at the site were conducted on February 12 and 19, 2009.

### **Extent of the Cultural Deposits**

Nine transects were laid out across the archaeological site. Recent rains resulted in wet sediments, the color of which was expressed by comparison with the Munsell Soil Color Chart. Generally, the cultural deposit corresponds to a very dark gray to black friable midden, which in itself suggests a late period of occupation. On the basis of surface evidence, Jensen estimated the site size as 125m long (north-south) and 60m wide (east-west) at its widest point if we use the scale provided with his sketch map of the archaeological site (see Appendix D: Confidential Record Forms) .

Based on the shovel testing results and considering the evidence of previous disturbances, it is the consultant's opinion that the archaeological site's cultural deposits extend 80m north-south and 41m east-west at its widest point. From the N25 E transect clockwise to the N45 W transect, the following shovel test pit designations are considered boundary points of the archaeological site along those transects (see also Table 1, Appendix C for results of shovel tests at the site).

Transect N25 E: Shovel Test Pit 40m+ (may be beyond east-west fenceline marking property boundary).

Transect N90 E: Shovel Test Pit 35m+1m to edge of erosion gully.

Transect S90 E: Shovel Test Pit 25m.

Transect S2 E: Shovel Test Pit 30m

Transect S25 W: Shovel Test Pit 45m

Transect N90 W from 30m point on S25 W transect: Shovel Test Pit 15m

Transect S55 W: Shovel Test Pit 15m

Transect N90 W: Shovel Test Pit 15m

Transect N45 W: Shovel Test Pit 25m

The difference in site size estimated by Jensen on the basis of surface observations and the extent of the cultural deposit reckoned through test excavations can be explained by several factors. First, the boundaries of Native American habitation sites are best described not as a specific line, but as a zone where the depth of cultural deposits gradually diminishes until there is no depth, only a few scattered surface artifacts that also diminish in frequency as one moves farther away from the site.

Second, the nature and extent of disturbances of an archaeological site since its last use by native people can explain disposition of the cultural deposit's micro- and macro-constituents both vertically and horizontally through the deposits. Surface disturbances at CA-PLA-1870 (RDO#1) probably scattered at least a portion of the surface and shallow buried artifacts across a wider area than was the case when the site was occupied. It is also likely that extensive burrowing by small animals carried artifacts and other midden constituents beyond the site's original area of focused use.

### **Depth and Nature of the Cultural Deposits**

The friable, black midden surrounds an outcropping of granitic boulders of various sizes. The outcropping lies at the apex and on the north slope of a small finger of land that juts north to the edge of Miners Ravine. Mortar holes are evident in some of the boulders. The largest and deepest mortar holes are in a flat boulder facing the ravine, which is a broad swale. Shovel tests revealed that the black, friable midden on this north side of the site between the bedrock mortars and the creek within this low-lying, broad portion of the ravine averages 30cm deep with underlying rock, but may be deeper in untested areas. This north portion of the site appears within the creek flood plain and may be subject to periodic flooding, which would have adversely affected the provenience of heavier artifacts, which tend to sink in over-saturated soils according to a national reservoir inundation study (*cf.* Lenihan *et al.* 1981a:39-75; 1981b:1.34-1.44).

The majority of the midden lies on the south side of the outcropping of granitic boulders. The surface of this portion of the archaeological site is severely disturbed with arc-shaped gouges and shallow depressions not inconsistent with the effects of agricultural cultivation where tractor and disk or other types of cultivator turn at the edge of a field. Shovel test pits across this portion of the archaeological site yield evidence of a black gravelly midden averaging 30cm deep near the cluster of boulders with mortar holes, to a black midden of loam consistency averaging 90cm deep, 20-30m south, southwest of the boulder outcrops (see Table 1, Appendix C).

Two 1x1m units were excavated in addition to the shovel test pits. Unit 1 was placed near the site datum. As expected from the results of shovel testing in this area immediately south of the boulder outcroppings, the black midden was gravelly and shallow, grading abruptly to a decomposed granite and rock base. There was no other

indication of natural or cultural stratigraphy. As no stratigraphy was evident in the excavation's sidewalls, no illustrations are included in the present report.

Unit 2 was dug at the inside edge of an arc-shaped surface disturbance at first thought to be the remnants of a housepit. Here the black midden was described as friable, grading to decomposed granite from 60-90cm below the surface. Again, there was no evidence of cultural or natural stratigraphy within the midden. At the 90cm level, krotovena were evident in an otherwise decomposed granite matrix. During the excavations, large pieces of an old porcelain coated, cast iron sink or wash tray were encountered to a depth of 40cm below the surface, which provided additional data on compromised site integrity besides the existing surface evidence (see Figure 4, above).

Based on the results from the shovel test pits and the two 1x1m excavation units, as well as observations of the site's surface, it is reasonable to conclude that a significant portion of the cultural deposits are disturbed. In that portion of the archaeological site where the midden is deepest, the historic or modern disturbances involve nearly the upper half of the deposit. Extensive disturbance by small burrowing animals is evident in the lower portion of the cultural deposit, as seen in the churned, mottled sediments along the midden-decomposed granite interface. While this latter type of disturbance is typical for foothills archaeological sites, it nonetheless tends to destroy the original provenience of the midden's macro-constituents.

### **Macro-constituents**

Macro-constituents identified in the sediments during the test excavations include waste materials from stone tool manufacture, animal bone fragments, charcoal and other cultural debris that can be seen without magnification.

The macro-constituents from CA-PLA-1870 (RDO#1) include chipped stone debris (hard hammer percussion flakes from the interior of cores, cortical flakes and shatter), splinters of bone from large and small animals (rare), pea-size lumps of charcoal (occasional), an antler tine fragment, a Gunther Barbed projectile point of a gray chert material, mid-section fragments of projectile points of a white petrified wood; fire broken rock (occasional), mano fragments apparently used as cooking stones and historic and modern artifacts (rare) (see tables 2 and 3, Appendix C).

### **Summary**

The integrity of the surface and upper 40cm of this site has been severely compromised by historic and modern ground-disturbing activities. At the base of the cultural deposit, which varies between 90cm and 105cm at its deepest points, a great deal of disturbance is apparent where krotovena can be observed in the zone of mottled sediment between the overlying black midden and the underlying decomposed granite. Technically, the site's base is a Cr horizon, which is defined as a layer of soft weathered bedrock

between the soil or top sediment and the underlying unweathered bedrock (*cf.* Waters 1992:47).

Other than the bedrock mortars, no cultural features were identified at the site, either on the surface or as a result of the test excavations. Nearly all of the chipped stone debris appears to be the result of reducing local stream-worn cobbles probably by hard-hammer percussion methods. The rare presence of waste flakes from white petrified wood suggests occasional use of that particular toolstone from the volcanic scabland on the unnamed ridge immediately north of the archaeological site.

Small fragments of bone from both large and small animals were recovered from the excavations. Although several projectile points and fragments were recovered from the excavations, only one datable type, Gunther Barbed, was identified. Bone awl points were recovered. Mano fragments appear to reflect the stone-boiling process, rather than use as manos with milling stones, as each appears to have been fire-broken. Conspicuous by its absence was obsidian in any form, beads, abalone shell ornaments, decorated bone tubes, scrapers, retouched flakes and other similar chipped stone tools.

### **TEST EXCAVATIONS AT CA-PLA-1871 (RDO#2a)**

Upon first revisiting the site during the present study, the consultant observed that Jensen encompassed several small sites by a relatively large boundary. It was also apparent that the area both inside and outside the boundary had been considerably disturbed by mining activity, water erosion from the creek in Miners Ravine and at least along the western edge of the site possibly by agriculture. Miners Ravine was placer mined during the Gold Rush and significant placer mining was conducted during the “second gold rush” of the 1930s, as dry land dredge tailings piles occur in the low lying terrain immediately west of the site. In addition, the consultant discovered a “pot hunter’s” box screen hidden in a nearby granite outcrop. Pot hunting may explain the large housepit like depression in the center of the midden on the knoll (now designated CA-PLA-1871 and RDO#2a).

The consultant’s conclusion after initial inspection of the site, which was borne out by subsequent test excavations, was the identification of four separate “sites”: CA-PLA-1871 (RDO#2a), a small midden on a knoll with bedrock mortars overlooking a falls in the granite boulder choked Miners Ravine; a small sandy “flat” with surface and buried artifacts sheltered by a high outcrop of granite (RDO#2b); an isolated cluster of two bedrock milling stations (RDO#2c) and; an isolated boulder with a single bedrock mortar hole adjacent to site CA-PLA-1871 (RDO#2d) (see Appendix D: Confidential Record Forms for revised archaeological site records).

On February 3, 2009, the consultant established two data: one datum near the geographic center of the midden on the knoll (RDO#2a) and one datum next to the rock outcrop on the sandy flat (RDO#2b). Several transects radiating from the two data were

laid out—along which shovel tests would be conducted at intervals to determine the depth and extent of cultural deposit.

The consultant also laid out two 1x1 meter excavation units at RDO#2a and one 1x1m excavation unit at RDO#2b . Dug by hand, also in 15 centimeter levels (unless cultural or natural stratigraphy is present), these larger excavations offer a means of evaluating the nature of the cultural deposits. Every shovel full of sediment is sifted through quarter inch hardware cloth and the midden constituents are documented. Excavations at RDO #2a were conducted on February 19 and 20, 2009. Excavations at RDO#2b were completed on February 27, 2009.

### **Extent of the Cultural Deposits**

Six transects were laid out across the archaeological site. Recent rains resulting in wet sediments hampered accurate observations of sediment color expressed by comparison with the Munsell Soil Color Chart. Generally, the cultural deposit corresponds to a very dark gray to black friable midden, which suggests a late period of occupation. On the basis of surface evidence, Jensen estimated the site size as 70m long (north-south) and 100m wide (east-west)—the width encompassing what are now defined as sites RDO#2a, RDO#2b, RDO#2c and RDO#2d (see Appendix D: Confidential Record Forms).

Based on the shovel testing results and considering the evidence of previous disturbances—some from mining activities and possibly agriculture and pot hunting , it is the consultant’s opinion that the cultural deposits of CA-PLA-1871 (RDO#2a) extend 55m in length (south of the east-west fence) and 45m east-west at its widest point. From the N60 E transect clockwise to the N90 W transect, the following shovel test pit designations are considered boundary points of the archaeological site along those transects (see also Table 4, Appendix C for results of shovel tests at the site).

Transect N60 E: Shovel Test Pit 25m.  
Transect N90 E: Shovel Test Pit 20m  
Transect S35 E: Shovel Test Pit 20m.  
Transect S5 W: Shovel Test Pit 20m.  
Transect S45 W: Shovel Test Pit 27.5m  
Transect N90 W: Shovel Test Pit 25m

The difference in site size estimated by Jensen on the basis of surface observations and the extent of the cultural deposit reckoned through test excavations can be explained by historic mining and/or agricultural disturbances, extensive bioturbation, erosion and the repeated observation at such sites that stone tool debitage and other artifacts can occur on the surface far beyond the boundary of cultural deposits where they were originally deposited by the site’s inhabitants.

## **Depth and Nature of the Cultural Deposits**

The northwest corner of the first 1x1 unit excavated at the site was placed four meters east of the datum along the east-west baseline. Unit 2 was placed adjacent to the east side of the first unit. The location of these two side-by-side units was near the geographic center of the site and at the eastern edge of a large 12m diameter shallow depression. Although uneven in appearance, the size and shape of the depression suggested that of a housepit. If the depression was a housepit, the excavation would yield post-molds and a hard floor surface, or remnants thereof in view of extensive disturbance from small burrowing animals over the centuries.

The shovel test pits along transects radiating from the site's datum revealed a range of depth of black midden from 30-60cm. Typically, the black midden graded into a dark grayish brown or dark yellowish brown sandy or clayey matrix to a decomposed granite base or Cr horizon from 45-70cm below the surface (see Table 4, Appendix C).

The two side-by-side 1x1m units placed at the east edge of the saucer-shaped depression revealed a black friable midden to a depth of 15cm on the west side of Unit 1 and a depth of 55cm on the east side of Unit 2. The difference in depths is explained by the relatively high east rim of the depression on the east side of Unit 2, while the west side of Unit 1 was situated at the bottom of the depression. The site base was recognized by severely disturbed patches of decomposed granite surrounded by midden-filled krotovena. A sloping relatively hard surface was encountered in the southeastern quarter of Unit 2, which could be interpreted as a sloping floor surface at the rim of the depression. However, there were no post molds or other evidence that would support a conclusion that the relatively hard remnant surface was a floor remnant. No similar surfaces were encountered in any other location within the two excavation units. As no stratigraphy was clearly evident in the excavation's sidewalls, no unit sidewall illustrations are included in the present document (see Figure 5 and tables 5 and 6, Appendix C).

Based on the find of a pot hunter's screen, and results from the shovel test pits and the two 1x1m excavation units, as well as observations of the site's surface, it is reasonable to conclude that some vandalism has occurred and that the site has seen extensive disturbance by small burrowing animals apparent from the mottled sediments along the midden-decomposed granite interface. While this latter type of disturbance is typical for foothills archaeological sites, it nonetheless tends to disturb and destroy the original provenience of the midden's macro-constituents.

## **Macro-constituents**

The macro-constituents from CA-PLA-1871 (RDO#2a) include chipped stone debris (hard hammer percussion flakes from the interior of cores, cortical flakes and shatter), splinters of bone from large and small animals (rare), pea-size lumps of charcoal

(occasional), a small Desert Side-notched projectile point, fire broken rock (occasional), mano fragments apparently used as cooking stones (rare) and historic and modern artifacts.

### **Summary**

The integrity of the surface and near surface of the site has probably been impacted to a certain extent by vandalism. Clear evidence of bioturbation is seen at the interface between the black, friable midden and the underlying decomposed granite Cr horizon. A relatively large, shallow depression occupies the geographic center of this site, which occupies the apex of a small knoll. At the north side of the archaeological site—beyond an east-west fence line—lies a flat granite outcrop overlooking a waterfall in a boulder choked reach of Miners Ravine. Excavations within the 12m wide depression were inconclusive. The depression may represent a housepit or post occupation disturbances. At the base of the cultural deposit, which varies between 15cm in the middle of the depression and 60cm elsewhere, a great deal of disturbance is apparent where krotovena (filled tunnels of burrowing animals) can be observed in the zone of mottled sediment between the overlying black midden and the underlying decomposed granite. Any evidence of a subsurface house floor or post molds may have been destroyed as a result of this bioturbation. This is a common and unfortunate natural effect found in foothill archaeological sites.

The bedrock mortars and the depression were the only cultural features identified at the site. Nearly all the chipped stone debris appears to be the result of reducing local stream-worn cobbles probably by hard-hammer percussion methods. The rare presence of waste flakes from white opalized wood suggests occasional use of petrified wood from the volcanic scabland on the unnamed ridge immediately north of the archaeological site.

Small fragments of bone from both large and small animals, as well as shell from fresh water bivalves, were recovered from the excavations. However, there was an absence of salt water shell. A bone awl tip fragment was recovered. Mano fragments appear to reflect the stone-boiling process, rather than use as manos with milling stones, as each appears to have been fire-broken. A complete cobble pestle was recovered from the 1x1m excavation of Unit 2. The sole complete projectile point recovered from the excavations is a small Desert Side-Notched type fashioned from yellowish chalcedony.

### **TEST EXCAVATIONS AT SITE RDO#2b**

Jensen originally described this site as a feature of CA-PLA-1871 (RDO#2). However, the cultural deposit at this “feature” is separate and some distance from the midden of what is now designated CA-PLA-1871 (RDO#2a). As the feature is deemed to have separate site status, for purposes of the present study, it is redesignated with the field number “RDO#2b.”

Jensen described two “rock shelters” consisting of “vertical outcrops ranging in height between one and four meters, with the overhanging lip forming a broad shelter in front of which is a relatively flat talus on which cultural material has accumulated” (Jensen 2006:10).

Both features were revisited by the present consultant on February 3, 2009. The smaller of the two is a relatively small granitic outcrop within a large cluster of outcrops on a north-facing hillslope overlooking Miners Ravine. The outcrop in question has a large backdirt pile (described by Jensen as “talus”) on its downhill side and an animal’s large burrow excavated under its rock face. Re-inspection and surface scrapes in the locality failed to yield any artifacts or what could be considered cultural deposits. It is the consultant’s opinion that this particular locality is part of the naturally-occurring landscape. However, due to its proximity to nearby sites, it is likely that chipped stone debitage may have been spotted earlier in and around the locality. Two separate boulders, each with a mortar hole are found nearby (designated RDO#2c for purposes of the present study). However, surface inspection and scrapes around the mortars failed to yield any artifacts or evidence of a cultural deposit associated with the mortars.

The larger of the two “shelters” consists of a tight cluster of granitic boulders rising about three meters above the ground surface and a “flat” of very sandy loam stretching from the vertical face of the outcrops in a northwest direction towards the south cutbank of Miners Ravine. Here, a sparse scatter of chipped stone debitage was noted on the surface of the small flat. Surface scrapes failed to identify any cultural deposit on the southeast and southwest sides of the cluster of outcrops. A datum was established on the north side of the cluster of outcrops and three transects were laid out from the datum.

### **Extent of the Cultural Deposits**

Recent rains resulted in wet sediments, the color of which was expressed by comparison with the Munsell Soil Color Chart. Generally, the cultural deposit corresponded to a dark brown sandy to clayey loam.

Tree roots were a common encounter during the excavations. Krotovena were not apparent. However, it is likely that extensive bioturbation has occurred in these very loose sediments. The mottled appearance of sediments between the artifact-bearing upper deposit and the decomposed granite base is certainly a suggestion that bioturbation is an issue.

Based on the shovel testing results, it is the consultant’s opinion that the cultural deposit measures 20m long (northeast-southwest) and 12m wide (northwest-southeast). The cultural deposit measures approximately 20m north-south and 12m east-west. From the N30 E transect clockwise to the N45 W transect, the following shovel test pit designations are considered boundary points of the archaeological site along those

transects (see also Table 7, Appendix C for results of shovel tests at the site).

Transect N30 E: Shovel Test Pit 10m.

Transect S74 W: Shovel Test Pit 10m

Transect N45 W: Shovel Test Pit 10m.

### **Depth and Nature of the Cultural Deposits**

The southwest corner of the 1x1 excavation unit (Unit 1) was placed three meters north of the datum along the north-south baseline. The unit was placed near the east rim of a shallow 7.5 m diameter, saucer-shaped depression for the purpose of not only gaining information on the cultural deposit but also possibly identifying the nature of the depression itself (see Figure 6).

The shovel test pits along transects radiating from the site's datum across the small flat yielded a sparse collection of artifacts occurring at depths up to 45-90cm below the surface. Typically, the brown to dark brown sandy loam graded into a brown to dark yellowish brown mottled matrix in a transition to decomposed granite, which appeared at 92cm in at least one of the tests (see Table 7, Appendix C).

The single 1x1 excavation unit was dug to a depth of 60cm through numerous roots, which were not unexpected, as a small oak grows nearby within the same depression. The dark brown sandy loam removed from the excavation unit was undifferentiated level to level. As no stratigraphy was apparent, no illustration of the units sidewalls are reproduced in this report.

### **Macro-constituents**

The macro-constituents from shovel tests along the transects at site RDO#2b can best be described as very sparse percussion flakes from a variety of stone, mainly basalt or quartzite-like materials to cherts. The cortical flakes appear to be from water worn cobbles. A small fragment of turtle carapace was recovered from the testing. Small pea-sized pieces of charcoal were also noted sparsely scattered through the deposit (tables 7 and 8, Appendix C).

Excavation of Unit 1 yielded a mano fragment, apparently fire-broken. Flakes and shatter from a variety of water-worn, fist-size and smaller cobbles were also recovered from the excavation. Small lumps of charcoal (rare) and fire broken rocks in addition to the mano fragment were also noted. A single, small projectile point of basalt was recovered from the 30-45cm level in the excavation. The projectile point is best described as a side-notched point with convex base similar in some respects to Heizer's point type "SCa1" for the Central Valley's Early Horizon (Windmiller Pattern) illustrated in his Figure 14e (Heizer 1949). The RDO#2b example weighs 2.25gms, which seems light for a dart point—the technology of the time. Therefore, the projectile

point may date to a later period after the bow and arrow were introduced to northern California.

### **Summary**

The very small size of this site, yet consisting of a relatively deep cultural deposit, may reflect prehistoric use as a temporary camp. Excavation in the shallow saucer-shaped depression did not yield any evidence to conclude that it represents the ruins of a dwelling or ceremonial structure. Placer mining in the locality provides an alternate explanation as a prospect pit. The description of the site as a “rock shelter” is a misnomer. It is a small open site sheltered on the southeast by a high outcropping of granitic boulders. It is neither an exogene or endogene cave. Rockshelters are usually one or the other. The very sandy nature of much of the cultural deposit suggests that sand was either transported to the site to build a flat “bench” of an area along side Miner’s Ravine, or that flooding repeatedly deposited coarse sandy material at the site—though there is no stratigraphic evidence of such episodes of deposition. However, the flattened nature of this bench appears almost artificial, as if it were man-made.

### **TEST EXCAVATIONS AT CA-PLA-1873 (RDO#4)**

Jensen described this minor archaeological resource as a “prehistoric habitation area” consisting of bedrock mortars, petroglyphs, a surface lithic scatter and a subsurface component characterized by a dark brown-black “midden.” Jensen described the site’s size as 2m north-south and 3m east-west (Jensen 2006:10).

Upon revisiting the site, the present consultant observed that the resource consisted of two granitic boulders with shallow mortar holes. The “petroglyphs” are in fact shallow mortar holes and not the “cupules” often found on “rain rocks” at open archaeological sites in the foothills or in limestone caves in the middle elevations of the Sierra Nevada’s western slopes. No midden was observed at the site. Artifacts consisted of a few pieces of chipped stone mixed with modern glass and other refuse around the base of the two boulders.

### **Extent of Cultural Deposits**

Shovel test excavations conducted on February 20, 2008 were placed along two intersecting transects between the boulders and at the periphery of the boulders, as well as beyond the “site boundary” proposed by Jensen. The soil was relatively consistent in color and texture, varying only between a dark brown sandy loam and a dark yellowish brown clayey loam (see Table 9, Appendix C).

It is not uncommon to find a few artifacts surrounding bedrock mortars. In the opinion of this consultant, the artifacts recovered from the disturbed brown loam

undifferentiated from the surrounding open field does not constitute a cultural deposit.

### **Depth and Nature of the Sediments**

Shovel test excavations around the two granitic boulders yielded a sparse mix of modern and Native American artifacts: eleven modern artifacts including spent .22 long rifle cartridges, bottle glass and a rusted beverage can bottom and; six pieces of chipped stone debitage and one large core. The modern items were found mixed with the Native American artifacts to a depth of 45cm below the surface. The provenience of these finds is not inconsistent with what one would find in the plow zone of an agricultural field or in an area disturbed by mining.

### **Macro-constituents**

The bottle glass and metal can fragments all appear modern. The excavations also yielded several pea-size pieces of charcoal, as well as several percussion flakes, shatter and a fist-size core.

### **Summary**

This minor archaeological resource is an isolated bedrock milling feature. The presence of a minor amount of waste from chipped stone tool manufacture mixed with modern bottle glass and other modern artifacts in a matrix undifferentiated from the surrounding soils does not constitute a cultural deposit in this consultant's opinion.

## **REVISED SITE DESCRIPTIONS**

As a result of the test excavations, the description of the three archaeological sites revisited with this study has changed significantly. It is an old axiom in the practice of archaeology that what one finds on the ground surface may not represent what is buried. This is especially true of the Native American archaeological sites identified on Rancho del Oro.

### **CA-PLA-1870 (RDO#1)**

Jensen described CA-PLA-1870 as a prehistoric habitation site consisting of a group of 27 bedrock mortars on nine separate granite boulders, a surface scatter of chipped stone debitage and an underlying midden deposit. Jensen estimated the site's size as 120 meters long (north-south) and 45 meters wide (east-west). Jensen described the density of chipped stone debitage on the surface as varying between one and five items per square meter (Jensen 2006:9).

Archaeological test excavations corroborated Jensen's conclusion of an underlying midden (very dark gray to black friable sediment). The excavations yielded split animal bone, shell and some charcoal in addition to formed artifacts such as mano and projectile point fragments, bone awl tips, chipped stone debitage and expended cores. The excavations also yielded historic and modern artifacts including square nails, fragments of a porcelain lined wash tray or sink and modern bottle glass fragments. The surface of the archaeological site showed considerable disturbance, quite possibly from cultivation. Historic and modern artifacts were recovered from depths up to 40cm. In the deepest portion of the midden (90-105cm below the surface), bioturbation was most noticeable with the mottled appearance of midden mixed with decomposed granite from the site's base.

As a result of the excavations, the site's size was revised to an area, 80m north-south and 41m east-west at its widest point. While surface artifacts were noted by Jensen beyond this revised area, it is very likely that they were spread around by cultivation or other disturbances that left behind the irregularities in the present-day surface of the archaeological site.

#### **CA-PLA-1871 (RDO#2a)**

Jensen originally described this site as a prehistoric habitation area encompassing an area 70 meters north-south and 100 meters east-west. Subsequent archaeological test excavations redefined the site as several distinct and separate archaeological resources. For management purposes, these distinct resources are described below, separately. The first of these resources described by Jensen will retain the trinomial, "CA-PLA-1871." However, its field number is changed from RDO#2 to RDO#2a to logically separate this site from three others, all of which were originally identified by Jensen as one archaeological site.

Jensen described what we are now designating "RDO#2a" as bedrock mortars, a surface lithic scatter and a subsurface midden. Jensen's boundary for RDO#2a included the bedrock mortars located north of the east-west property line fence and overlooking the granite boulder choked Miners Ravine.

Archaeological test excavations at RDO#2a defined a boundary for the midden within an area 55m north-south (south of the east-west fence line) and 45m east-west. The excavations yielded some fresh water clam shell, split animal bone fragments, bone awl tips, a variety of chipped stone debitage, a Desert Side-Notched projectile point, fire-broken rock including mano fragments and charcoal. Site depth varied between 15cm and about 60cm. Below these depths, mottled midden and decomposed granite was often encountered as a transition between the black midden and the decomposed granite site base. Krotovena were quite evident in this transition.

At the apex of the knoll on which this small site is located is a roughly circular depression approximately 12m diameter. A pot hunter's box screen was found wedged in rocks nearby. The initial impression of the depression was that of a disturbed housepit. The limited test excavations could not confirm this speculation.

#### **Site RDO#2b**

Jensen described this feature as an overhanging rock shelter with a flat "talus" on which cultural material has accumulated. Jensen provided no dimensions or other description, except a sketch of the feature on the CA-PLA-1871 record form.

As a result of test excavations into the "talus," the consultant discovered a sparse distribution of chipped stone debitage and small pea-size pieces of charcoal scattered through 90cm of very sandy brown loam. The extent of this deposit can be described as an arc-shaped flat on the northwest side of a dense cluster of high granitic boulders.

A shallow depression approximately 7.5m diameter lies on the northeast side of the small flat. However, excavation of a 1x1m unit within the depression failed to identify any floor or other feature that would assist in an interpretation. The site is situated about 10m south of the Miners Ravine cutbank. Ditch remnants and prospect pits from mining occur in the vicinity. The cultural deposit measures approximately 20m northeast-southwest and 12m northwest-southeast.

#### **Site RDO#2c**

This minor archaeological resource consists of two granitic boulders with one eroded mortar hole each within a larger cluster of boulders on the north-facing slope above (south) of Site RDO#2b. Surface inspection and scrapes of the ground surface failed to identify any cultural deposit around the bedrock mortars.

#### **Site RDO#2d**

This minor archaeological resource consists of a large granitic boulder located near the southwest side of archaeological site CA-PLA-1871 (RDO#2a). This large boulder has a single deep and eroded mortar hole at its apex. Shovel test excavations extended southwest from site CA-PLA-1871 did not yield any midden deposit around the boulder. However, in a shovel test pit between the boulder and the nearby archaeological site, chipped stone debitage was recovered in non-midden soil. It is likely that such buried artifacts are the result of slope wash from the knoll on which the archaeological site, CA-PLA-1871, rests.

## **Site RDO#4**

Jensen described this minor archaeological resource as a “prehistoric habitation area” consisting of bedrock mortars, petroglyphs, a surface lithic scatter and a subsurface component characterized by a dark brown-black “midden.” Test excavations at the site revealed sparse chipped stone debitage and a core mixed with a greater number of modern artifacts including bottle glass, spent .22 long rifle cartridges and rusted iron fragments. A revised description of the site as an isolated bedrock milling feature is more appropriate. The “cupules” identified by Jensen are not similar to cupules found on “rain rocks” associated with open village sites along the Sierra Foothills, nor are they similar to cupules found in rock shelters and caves used by native people in the higher elevations of the Sierra Nevada’s western slope. However, Jensen’s “cupules” do fit the description of shallow mortar holes that are ubiquitous in the foothills of Placer County.

## **EVALUATION**

Under the California Environmental Quality Act (CEQA), historical resources are recognized as a part of the environment [Public Resource Code 21001(b), 21083.2, 21084(e), 21084.1]. A "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or important in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California (Public Resources Code 5021.1).

In 1992, the Public Resources Code was amended as it affects historical resources. The amendments included creation of the California Register of Historical Resources (Public Resources Code 5020.4, 5024.1 and 5024.6). While the amendments became effective in 1993, it was not until January 1, 1998, that the implementing regulations for the California Register were officially adopted (Public Resources Code 4850 *et seq.*).

The California Register is an authoritative listing and guide for state and local agencies and private groups and citizens in identifying historical resources. This listing and guide indicates which resources should be protected from substantial adverse change. The California Register includes historical resources that are listed automatically by virtue of their appearance on or eligibility for certain other lists of important resources. The Register includes historical resources that have been nominated by application and listed after public hearing. Also included are historical resources listed as a result of an evaluation by specific criteria and procedures adopted by the State Historical Resource Commission.

The criteria used for determining the eligibility of a cultural resource for the California Register are similar to those developed by the National Park Service for

the National Register of Historic Places. However, criteria of eligibility for the California Register were reworded to better reflect California history.

Any building, site, structure, object or historic district meeting one or more of the following criteria may be eligible for listing in the California Register:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2. It is associated with the lives of persons important to local, California, or national history;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Eligibility for the California Register also depends on the integrity, or the survival of characteristics of the resource that existed during its period of significance. Eligible historic resources must not only meet one of the above criteria, but also they must retain enough of their historic character or appearance to convey the reasons for their importance, or retain the potential to yield significant scientific or historical information or specific data.

Like the process of evaluating historical resources for National Register eligibility, California Register evaluations include the consideration of seven aspects of integrity: location, design, setting, materials, workmanship, feeling and association. The evaluation of integrity must be judged with reference to the particular criterion or criteria under which a resource may be eligible for the California Register. However, the implementing regulations specifically caution that alterations of a historic resource over time may themselves have historical, cultural or architectural significance.

Most often, historical resources eligible for the California Register will be 50 years old or older. However, the new implementing regulations stipulate that "a resource less than fifty (50) years old may be considered for listing in the California Register if it can be demonstrated that sufficient time has passed to understand its historical importance." If an archaeological resource does not meet the definition of a "historical resource," it may meet the definition of a "unique archaeological resource" under Public Resource Code 21083.2. An archaeological resource is "unique" if it:

1. Is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory;
2. Can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;
3. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
4. Is at least 100 years old and possesses substantial stratigraphic integrity;
5. Involves important research questions that can be answered only with archaeological methods.

Generally, a historic site, object, building, structure or district is eligible for listing on the National Register of Historic Places if it is 50 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling and association, and meets at least one of the following criteria (National Park Service 1991):

- A. Association with events that have made significant contributions to the broad patterns of United States history.
- B. Association with the lives of people important in United States history.
- C. Embodies the distinctive characteristics of a type, period, or method of construction; or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components may lack individual distinction;
- D. Has yielded or is likely to yield information important in prehistory or history.

National Register eligibility is equally dependent on the condition or integrity of the cultural resource. Integrity, in this sense, is the authenticity of the cultural resource's historic identity, meaning the survival of those physical characteristics that existed during the historic or prehistoric period from which it dates. The integrity of archaeological resources is generally based on the degree to which the remaining cultural deposit, artifacts or features can provide information important to our understanding of history or prehistory. Integrity is a composite of seven qualities, some of which are more germane than others, depending on the type of cultural resource under evaluation and the criterion of National Register eligibility for which the evaluation is made. The aspects of integrity are: location, design,

setting, materials, workman-ship, feeling and association (National Park Service 1991:4).

### **CA-PLA-1870 (RDO#1)**

The relatively small size of this archaeological site, the friable midden, the presence of bedrock mortars, apparent reuse of manos or handstones in the stone boiling process, Gunther-barbed projectile point and fragments of other relatively small projectile points point to occupation of this archaeological site during a relatively late period in local prehistory. The presence of charcoal and a recognizable projectile point style indicate that the site has the potential to yield information important to addressing the chronology research domain.

The presence of animal bone, shell and chipped stone debitage from various rocks, as well as bedrock mortars, projectile points and bone awl fragments indicate that the site has the potential to yield information on subsistence and technology.

However, all of the macro-constituents recovered from the test excavations reflect what was locally available. No obsidian, Pacific Ocean shells or other materials from apparent non-local sources were identified as a result of the excavations. Therefore, it cannot be asserted with assurance that the site could yield information important in reconstructing trade with groups outside the local region.

The identification of a particular type of site, its period of occupation or use and its location is important to understanding the Native American settlement pattern during any particular period in prehistory or history. Results of the test excavations indicate that the site has the potential to yield information as to what activities were carried out there and during which particular time period(s). Therefore, the site has the potential to yield information important to understanding settlement patterns.

The presence in a site of specific artifact types, obsidian source ratios and even DNA from human remains can be significant in determining an association or disparity with other archaeological sites and therefore a key to reconstructing boundaries between prehistoric Indian groups. While this particular site has yielded specific artifact types, it has not yielded obsidian or evidence of human remains. Therefore, the site would likely not play a key role in future research with respect to reconstructing ethnic boundaries.

From a perspective of integrity, it is apparent from the excavations that disturbances obvious on the ground surface extend to at least 40cm below the surface, which is nearly half of the archaeological site's depth at its deepest point. Severe bioturbation is only evident at the site's base, because the black midden stands in obvious contrast to the yellowish brown decomposed granite Cr horizon. It is not unreasonable to assume that extensive bioturbation is present throughout the black

midden, although not readily visible due to the uniformity in color and texture of the midden. The iron sink fragments, square nails and modern bottle glass all appear intrusive at this Native American site of an earlier age.

The results of the test excavations show that the site can yield information relevant to the chronology, subsistence/technology, settlement patterning and perhaps ethnicity/boundaries research domains. However, integrity of the archaeological site has been severely compromised by historic and modern ground disturbance, as well as by small burrowing animals. With these considerations in mind, it is the consultant's opinion that the site would still be eligible for the California Register of Historic Resources under Criterion 4 and the National Register of Historic Places under Criterion D for its information potential—even though that potential is limited.

Under National Register Criterion A (California Register Criterion 1), the site would have to be associated with one or more events important in the defined historic context. However, this particular site would not be eligible under Criterion A/Criterion 1, as any associations are still speculative.

Under National Register Criterion B (California Register Criterion 2), the archaeological site would have to be associated with individual(s) whose specific contributions to history can be identified and documented. Such is not the case with CA-PLA-1870.

Under National Register Criterion C (California Register Criterion 3), the site would need to be significant for its physical design or planning. Prehistoric sites would have to illustrate important concepts in community design and planning. The disturbed nature of this particular site and the unlikelihood that it has in its cultural deposits intact house floors or other structure elements precludes its eligibility under Criterion C/Criterion 3.

#### **CA-PLA-1871 (RDO#2a)**

The relatively small size of this archaeological site, the friable midden, the presence of bedrock mortars, apparent reuse of manos or handstones in the stone boiling process, Desert Side-Notched projectile point and a possible housepit suggest a relatively late period of occupation (post- A.D. 1200) for this archaeological site. The presence of charcoal and a recognizable projectile point style indicate that the site has the potential to yield information important to addressing the chronology research domain.

The presence of animal bone, chipped stone debitage from various rocks, as well as bedrock mortars, projectile points and bone awl fragment indicate that the site has the potential to yield information on subsistence and technology.

However, all of the macro-constituents recovered from the test excavations reflect what was locally available. No obsidian, Pacific Ocean shells or other materials from apparent non-local sources were identified as a result of the excavations. Therefore, it cannot be asserted with assurance that the site could yield information important in reconstructing trade with groups outside the local region.

The identification of a particular type of site, its period of occupation or use and its location is important to understanding the Native American settlement pattern during any particular period in prehistory or history. Results of the test excavations indicate that the site has the potential to yield information as to what activities were carried out there and during which particular time period(s). Therefore, the site has the potential to yield information important to understanding settlement patterns.

The presence in a site of specific artifact types, obsidian source ratios and even DNA from human remains can be significant in determining an association or disparity with other archaeological sites and therefore a key to reconstructing boundaries between prehistoric Indian groups. While this particular site has yielded specific artifact types, it has not yielded obsidian or evidence of human remains. Therefore, it remains an open question as to whether or not the “information potential” of the site could illuminate ethnic boundaries.

From a perspective of integrity, severe bioturbation is only evident at the site’s base, because the black midden stands in obvious contrast to the yellowish brown decomposed granite Cr horizon. It is not unreasonable to assume that extensive bioturbation is present throughout the black midden, although not readily visible due to the uniformity in color and texture of the midden. Baling wire and .22 cartridge casings are probably intrusive items left at the site after its abandonment. The results of the test excavations show that the site can yield information relevant to the chronology, subsistence/technology, settlement patterning and perhaps ethnicity/boundaries research domains. Integrity of the archaeological site has been compromised by small burrowing animals. Nonetheless, it is the consultant’s opinion that the site is eligible for the California Register of Historic Resources under Criterion 4 and the National Register of Historic Places under Criterion D for its information potential—though the potential is limited.

Under National Register Criterion A (California Register Criterion 1), the site would have to be associated with one or more events important in the defined historic context. However, this particular site would not be eligible under Criterion A/Criterion 1, as any associations are still speculative.

Under National Register Criterion B (California Register Criterion 2), the archaeological site would have to be associated with individual(s) whose specific contributions to history can be identified and documented. Such is not the case with CA-PLA-1871.

Under National Register Criterion C (California Register Criterion 3), the site would need to be significant for its physical design or planning. Prehistoric sites would have to illustrate important concepts in community design and planning. The only potential design elements in addition to the bedrock mortars would be the presence of a housepit. However, the test excavations uncovered evidence of extensive disturbances from burrowing small animals, which appears to have destroyed subsurface evidence of a house floor. Therefore, it is unlikely that the site would be eligible under Criterion C/Criterion 3.

#### **CA-PLA-1871 (RDO#2b)**

This small archaeological deposit on the northwest side of a large outcrop of granite boulders was described by Jensen as “talus” at a rockshelter. The outcrop, though approximately three meters high, would provide a sheltered area only from southeast windy weather. There is virtually no overhang. Shovel testing along three transects and a 1x1m excavation yielded chipped stone debris, a few small pieces of charcoal, a mano fragment and a small basalt projectile point weighing 2.25gms. The artifacts appear scattered through a non-midden, coarse sandy matrix to a depth of 90cm below the surface.

The areal extent of the cultural deposit (approximately 12x20m) coincides with a flattened area on the northwest side of the rock outcrop facing Miners Ravine. The cutbank on the south side of the ravine lies only 10m north of this small deposit. A roughly circular depression about 7.5m diameter was noted by the consultant prior to the test excavations. The 1x1 meter excavation unit was placed within this depression. However, no evidence of post molds or floor surface was detected during the excavation. It is possible that the depression may be related to Gold Rush and later placer mining along the ravine, as other depressions of differing sizes and depths occur within the area of mining.

The small basalt projectile point with its side notches and convex base is reminiscent of styles that pre-date A.D. 1200. The presence of charcoal and a recognizable projectile point style indicate that the site has the potential to yield information important to addressing the chronology research domain.

The presence of turtle carapace, chipped stone debitage from various rocks, as well as a projectile point indicate that the site has the potential to yield information on subsistence and technology.

However, all of the macro-constituents recovered from the test excavations reflect what was locally available. No obsidian, Pacific Ocean shells or other materials from apparent non-local sources were identified as a result of the excavations. Therefore, it cannot be asserted with assurance that the site could yield information important in reconstructing trade with groups outside the local region.

The identification of a particular type of site, its period of occupation or use and its location is important to understanding the Native American settlement pattern during any particular period in prehistory or history. Results of the test excavations indicate that the site has the potential to yield information as to what activities were carried out there and during which particular time period(s). Therefore, the site has the potential to yield information important to understanding settlement patterns.

The presence in a site of specific artifact types, obsidian source ratios and even DNA from human remains can be significant in determining an association or disparity with other archaeological sites and therefore a key to reconstructing boundaries between prehistoric Indian groups. While this particular site has yielded specific artifact types, such as a mano fragment and a side-notched projectile point, it has not yielded obsidian or evidence of human remains. Therefore, it remains an open question as to whether or not the “information potential” of the site could illuminate ethnic boundaries.

From a perspective of integrity, bioturbation is only evident at the site’s base, because the brown sandy matrix in which artifacts were found stands in obvious contrast to the yellowish brown decomposed granite Cr horizon. It is not unreasonable to assume that extensive bioturbation is present throughout the artifact-bearing matrix, although not readily visible due to the uniformity in color and texture of the midden.

The results of the test excavations show that the site can yield information relevant to the chronology, subsistence/technology, settlement patterning and perhaps ethnicity/boundaries research domains. Integrity of the archaeological site has been compromised by small burrowing animals. Nonetheless, it is the consultant’s opinion that the site is eligible for the California Register of Historic Resources under Criterion 4 and the National Register of Historic Places under Criterion D for its information potential—though the potential is very limited due to size, the sparseness of artifacts and potential disturbance from Gold Rush and later placer mining.

Under National Register Criterion A (California Register Criterion 1), the site would have to be associated with one or more events important in the defined historic context. However, this particular site would not be eligible under Criterion A/Criterion 1, as any associations are still speculative.

Under National Register Criterion B (California Register Criterion 2), the archaeological site would have to be associated with individual(s) whose specific contributions to history can be identified and documented. Such is not the case with this archaeological site.

Under National Register Criterion C (California Register Criterion 3), the site would need to be significant for its physical design or planning. Prehistoric sites would have to illustrate important concepts in community design and planning. The only potential design element would be the adjacent rock outcrop, which may have prompted native people to select the site, but was not an artifact itself. Therefore, it is unlikely that the site would be eligible under Criterion C/Criterion 3.

### **Site RDO#2c**

This minor archaeological resource consists of two adjacent granitic boulders each with a well-formed mortar hole. The site lies uphill and southeast of site RDO#2b. There is no evidence that the two sites were used and/or occupied during the same period. Shovel scrapes around the two boulders did not reveal any cultural deposit. Isolated bedrock milling stations such as these are ubiquitous in the foothills of the western slope, Sierra Nevada.

This minor resource lacks any associations that would indicate a potential to yield information important to addressing the chronology research domain. However, the identity of the resource as a bedrock milling station does in itself yield information on subsistence and technology. As there is no association with cultural deposits yielding materials from other regions, it is unlikely that this resource would be important in reconstructing trade with groups outside the local area. Although the type of site and location are known, the site's period of use is not and probably is not knowable. Therefore, its contribution to understanding settlement patterns is limited. Also, use of the site to determine ethnic boundaries is very limited due in part to a lack of association with any specific time period.

Under National Register Criterion A (California Register Criterion 1), the site would have to be associated with one or more events important in the defined historic context. However, this particular site would not be eligible under Criterion A/Criterion 1, as any associations would be speculative.

Under National Register Criterion B (California Register Criterion 2), the archaeological site would have to be associated with individual(s) whose specific contributions to history can be identified and documented. Such is not the case with this archaeological site.

Under National Register Criterion C (California Register Criterion 3), the site would need to be significant for its physical design or planning. Design or planning is not apparent in the location of the milling stations themselves or in placement of the mortar holes.

Eligibility for the California Register of Historic Resources under Criterion 4 and the National Register of Historic Places under Criterion D for its information

potential would require that a site satisfy a need in testing a hypothesis about events, groups or processes that bear on important research questions, corroborate currently available information that a hypothesis is either true or false, or reconstruct a cultural sequence to identify and explain aspects of the archaeological record for a particular area. It is the consultant's opinion that none of the above apply to site RDO#2c. Therefore, it is the consultant's opinion that the site is not eligible for the California Register or the National Register, nor does the site qualify as a "unique archaeological resource" under CEQA.

### **Site RDO#2d**

This minor archaeological resource is a granitic boulder with a single, eroded mortar hole on its surface. This bedrock milling station is located near archaeological site, CA-PLA-1871 (RDO#2a). However, the mortar hole appears much more eroded than the other bedrock milling stations located on the RDO#2a site proper. Lacking an associated midden cultural deposit, which is sometimes found around bedrock milling stations and that usually indicate processing of acorns at the location where they are pulverized, there is no direct association with a particular time period. Therefore, the site lacks potential to yield information important to addressing the chronology research domain. However, the identity of the resource as a bedrock milling station does in itself yield information on subsistence and technology. As there is no association with cultural deposits yielding materials from other regions, it is unlikely that this resource would be important in reconstructing trade with groups outside the local area. Although the type of site and location are known, the site's period of use is not and probably is not knowable. Therefore, its contribution to understanding settlement patterns is limited. Also, use of the site to determine ethnic boundaries is very limited due in part to a lack of association with any specific time period

Under National Register Criterion A (California Register Criterion 1), the site would have to be associated with one or more events important in the defined historic context. However, this particular site would not be eligible under Criterion A/Criterion 1, as any associations would be speculative.

Under National Register Criterion B (California Register Criterion 2), the archaeological site would have to be associated with individual(s) whose specific contributions to history can be identified and documented. Such is not the case with this minor resource.

Under National Register Criterion C (California Register Criterion 3), the site would need to be significant for its physical design or planning. Design or planning is not apparent in the location of the milling station itself or in placement of the mortar hole. Although adjacent to CA-PLA-1871 (RDO#2a), the mortar hole appears much more eroded than mortars directly associated with the midden at

RDO#2a.

Eligibility for the California Register of Historic Resources under Criterion 4 and the National Register of Historic Places under Criterion D for its information potential would require that a site satisfy a need in testing a hypothesis about events, groups or processes that bear on important research questions, corroborate currently available information that a hypothesis is either true or false, or reconstruct a cultural sequence to identify and explain aspects of the archaeological record for a particular area. It is the consultant's opinion that none of the above apply to site RDO#2d. Therefore, it is the consultant's opinion that the site is not eligible for the California Register or the National Register, nor does the site qualify as a "unique archaeological resource" under CEQA.

#### **CA-PLA-1873 (RDO#4)**

This minor archaeological resource is a cluster of two granitic boulders with bedrock mortar holes on their surface. There is no midden associated with the bedrock mortars. The ground surrounding the bedrock milling stations is undifferentiated in color and texture from the surrounding soil. The site, located in the middle of an open field, is situated near Miners Ravine and evidence of Depression-era dry land dredging. The field itself shows signs of ground disturbances from cultivation or other sources. While some chipped stone artifacts occurred at depth around the mortars, the "deposit" was mixed with modern artifacts. Lacking an associated, undisturbed and obvious cultural deposit, which is sometimes found around bedrock milling stations and that usually indicate processing of acorns at the location where they are pulverized, there is no direct association with a particular time period. Therefore, the site lacks potential to yield information important to addressing the chronology research domain.

However, the identity of the resource as a bedrock milling station does in itself yield information on subsistence and technology. As there is no association with cultural deposits yielding materials from other regions, it is unlikely that this resource would be important in reconstructing trade with groups outside the local area. Although the type of site and location are known, the site's period of use is not and probably is not knowable. Therefore, its contribution to understanding settlement patterns is limited. Also, use of the site to determine ethnic boundaries is very limited due in part to a lack of association with any specific time period

Under National Register Criterion A (California Register Criterion 1), the site would have to be associated with one or more events important in the defined historic context. However, this particular site would not be eligible under Criterion A/Criterion 1, as any associations would be speculative.

Under National Register Criterion B (California Register Criterion 2), the archaeological site would have to be associated with individual(s) whose specific contributions to history can be identified and documented. Such is not the case with this minor resource.

Under National Register Criterion C (California Register Criterion 3), the site would need to be significant for its physical design or planning. Design or planning is not apparent in the location of the milling station itself or in placement of the mortar hole. Although adjacent to CA-PLA-1871 (RDO#2a), the mortar hole appears much more eroded than mortars directly associated with the midden at RDO#2a.

Eligibility for the California Register of Historic Resources under Criterion 4 and the National Register of Historic Places under Criterion D for its information potential would require that a site satisfy a need in testing a hypothesis about events, groups or processes that bear on important research questions, corroborate currently available information that a hypothesis is either true or false, or reconstruct a cultural sequence to identify and explain aspects of the archaeological record for a particular area. It is the consultant's opinion that none of the above apply to site RDO#2d. Therefore, it is the consultant's opinion that the site is not eligible for the California Register or the National Register, nor does the site qualify as a "unique archaeological resource" under CEQA.

## **POTENTIAL EFFECTS**

Under CEQA, "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" [Public Resources Code §15064.5(b)]. The significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resources that convey its historical significance, unless the evidence demonstrates that the resource is not historically or culturally significant [Public Resources Code §15064.5(b)(2)(A-C)].

If a cultural resource does not meet the definition of a "historical resource," *viz.*, eligible under one or more criteria for listing in the California Register of Historical Resources, or qualifies as a "unique archaeological resource" under Public Resources Code §21083.2, then any effects of the project on that resource shall not be considered a significant effect on the environment [Public Resources Code §15064.5(c)(4)].

For purposes of a National Historic Preservation Act, Section 106 consultation, "effect" is defined as "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register" [36 CFR Part

800.16(i)].

While alteration of the setting of an archaeological site eligible for the National Register only for its information potential may not affect the site's significant characteristics, alteration of a property's location (*e.g.*, removing or damaging all or part of the site) may have a significant adverse effect. Adverse effects may include reasonably foreseeable effects caused by an undertaking that may occur later in time or removed by distance or cumulative. Adverse effects are found when an undertaking "... may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (36 CFR Part 800.5(a)(1)).

As three of the archaeological sites identified in the present study meet criteria of eligibility for the California Register of Historical Resources and the National Register of Historic Places (CA-PLA-1870/RDO#1; CA-PLA-1871/RDO#2a and; RDO#2b), the proposed undertaking, Rancho del Oro, could potentially have an effect on those archaeological resources and the effect could be adverse. In this consultant's opinion, the remaining Native American sites (RDO#2c, RDO#2d and CA-PLA-1873/RDO#4) are not eligible for the California Register or the National Register and do not warrant further consideration.

## **MITIGATION PROPOSALS**

Each of the Native American archaeological sites deemed eligible for the California Register of Historical Resources and the National Register of Historic Places may be preserved in place, depending upon the size and location of the planned development's residential lots and roads in relation to site size as redefined in the present study. To accommodate such planning, the consultant marked the revised boundaries of the eligible sites with orange stakes so that a surveyor can revisit the project site and accurately plot the location of the boundary stakes onto the development plan. Near the geographic center of each of the three sites is also a stake marking the site datum. It is important to enter the location of this stake in the surveyor's notes, as all bearings and measurements used by the archaeologist for his test excavations originate at each site's datum stake.

California Environmental Policy Act (CEQA) Guidelines suggest several acceptable mitigation measures with respect to archaeological resources eligible for the California Register or that qualify as "unique archaeological resources" under CEQA. These include but are not limited to the following:

1. Planning construction to avoid archaeological sites;
2. Incorporation of sites within parks, greenspace, or other open space;

3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site.
4. Deeding the site into a permanent conservation easement.

According to the Guidelines, acceptable mitigation measures are not necessarily limited to the above four alternatives. It is the consultant's understanding that deed restrictions prohibiting the disturbance of an archaeological site located within a residential lot has been an effective means of preserving significant sites in several northern California localities including Placer County. Depending on the size of the lot, one part may be built, while the portion with the archaeological site may be capped with chemically compatible soil and planted in lawn or surfaced for a tennis court or other hard surface.

As a last resort, if those sites that are eligible for the California Register or National Register cannot be avoided, data recovery, or scientific excavation of the affected site(s) is an option.

The U.S. Department of the Interior, National Park Service publication, *Protecting Archeological Sites on Private Lands* recommends two popular methods of stabilizing a significant archaeological site, if it can be preserved in place: intentional site burial and re-vegetation. Burying an archaeological site with a chemically compatible soil can protect the site against vandalism and the effects of other human activity. It can also protect the site from development activities such as compression of heavy earthmoving equipment. Planting the site in shallow-rooted grasses can also help to stabilize the cultural deposits and preserve their integrity (Henry 1993:79).

While the results of archaeological test excavations conducted at CA-PLA-1870 (RDO#1), CA-PLA-1871 (RDO#2a) and field number RDO#2b show that the three sites are eligible for the California Register of Historical Resources and National Register of Historic Places for their information potential, the results also indicated that the information potential of each is limited. If data recovery is the only viable option for portion(s) of a site that cannot be avoided by construction and is eligible for the California or National Register, then a data recovery plan designed by a qualified archaeologist should rest in part on conclusions drawn from the present study.

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## **APPENDIX A: STATEMENT OF QUALIFICATIONS**

## **APPENDIX B: RECORDS SEARCH RESULTS**

This appendix may contain information on the specific locations of cultural resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the locations of prehistoric and historic sites are exempted from the California Freedom of Information Act, as specified in Government Code §6254.10.

## **APPENDIX C: TABLES**



Table 1. Results of shovel test excavations (STPs) along designated transects to help determine the boundary of archaeological site CA-PLA-1870 (field number RDO#1). Note that each transect is identified by its true bearing. STP# or “Shovel Test Pit number” is designated by the number of meters from the site datum. Level is the range in centimeters below the surface. “Cultural Material” is a summary of the culturally derived macro constituents such as artifacts, charcoal, animal bone and other objects. “Soil” includes notes on the color (Munsell colors) and nature of sediments. Light gray shading indicates estimated site boundary.

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
N45 W	20m	0-15cm	1-square nail 1-cortical percussion flake	10YR3/4 dark yellowish brown
		15-30cm	Void	10YR3/4 dark yellowish brown clayey loam
		30-45cm	Void	10YR3/4 dark yellowish brown clayey loam
	25m	0-15cm	Void	10YR3/4 dark yellowish brown clayey loam
		15-30cm	Void	10YR3/4 dark yellowish brown clayey loam
		30-45cm	Void	10YR3/4 dark yellowish brown clayey loam. Hit tree root at 32 cm; quit excavation.
	30m	0-15cm	1-small piece charcoal	10YR4/6 dark yellowish brown clayey loam
		15-30cm	Void	10YR4/6 dark yellowish brown clayey loam
		30-45cm	Void	10YR5/6 dark yellowish brown clayey loam.
N25 E	25m	0-15cm	Void	10YR2/1 (wet) black friable midden.
		15-30cm	1-Fire broken rock	10YR2/1 (wet) black friable midden. Struck rock at 30cm quit excavation.

Transect	STP#	Level	Cultural Material	Soil
	30m	0-15cm	Void	10YR2/1 gravelly black midden.
	30m	15-30m	1-Chert shatter	10YR2/1 gravelly black midden.
		30-45cm	Void	10YR2/1 gravelly black midden. Excavation stopped at 35cm when decomposed granite struck.
	35m	0-15cm	Void	Excavation ceased at surface when large root struck.
	40m	0-15cm	1-Cortical shatter	10YR2/1 black sandy midden.
		15-30cm	1-Fire broken rock 1-Cortical flake	10YR2/1 black sandy midden at edge of creek flood plain. Excavation stopped at 30cm when root struck.
S30 E	20m	0-15cm	5-Clear bottle glass (modern) 1-Bone awl tip 1-Animal bone splinter 2-Small percussion flakes	10YR3/3 dark brown matrix in heavily disturbed area.
		15-30cm	2-Clear bottle glass (modern)	10YR4/4 dark yellowish brown matrix with decomposed granite surface at 30 cm.
	25m	0-15cm	1-Large cortical flake (quartzite) 1-Charcoal 1-Burned animal bone 1-leaf-shaped projectile point	10YR3/4 dark yellowish brown clayey loam.
		15-30cm	1-Red chert flake 1-Large quartz shatter	10YR3/4 dark yellowish brown clayey loam
		30-45cm	Void	10YR4/4 dark yellowish brown clayey loam. Decomposed granite at 40cm

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
	30m	0-15cm	1-Charcoal (surface) 1-Unidentified shatter	10YR4/6 dark yellowish brown (mottled) matrix (we Krotovena in evidence.
	30m	15-30cm	1-clear, thin bottle glass (modern)	10YR4/6 dark yellowish brown (mottled) matrix (we Krotovena in evidence.
		30-45cm	1-Quartz shatter	10YR4/6 dark yellowish brown (mottled) matrix (we Krotovena in evidence.
		45-60cm	Void	10YR4/4 (very wet) dark yellowish brown matrix. M struck at 60cm; quit excavation.
N90 E	20m	0-15cm	1-small chert cortical flake	10YR3/4 dark yellowish brown sandy matrix
		15-30cm	1-fire broken rock	10YR3/3 dark brown sandy matrix
		30-45cm	2-small flakes (undetermined source)	10YR3/3 dark brown sandy matrix
		45-60cm	1-small quartzite flake	10YR3/3 dark brown sandy matrix
		60-75cm	Void	10YR3/4 dark yellowish brown sandy matrix. Hit decomposed granite at 70 cm
	25m	0-15cm	1-cortical shatter (unidentified material) 1-chert shatter	10YR3/3 dark brown sandy clay
		15-30cm	Void	10YR3/3 dark brown sandy clay
		30-45cm	1-cortical flake 1-charcoal (pea-size) 1-red chert shatter	10YR3/3 dark brown sandy clay

Transect	STP#	Level	Cultural Material	Soil
		45-60cm	1-chert flake	10YR3/3 very wet dark brown sandy clay. Too wet proceed; stopped at 60cm. End of site estimated at 26m at drainage edge.
The following transect is N90 W from 30m S25 W of the site datum				
	10m	0-15m	2-small basalt flakes	10YR2/2 very dark brown wet midden-like matrix
		15-30cm	1-fire broken rock 1-cortical flake 1-rodent tooth	10YR2/2 very dark brown wet midden-like matrix
		30-45cm	2-cortical shatter 2-small split animal bone frags. (1-lg animal; 1-small animal) 1-fire broken rock	10YR3/3 mottled dark brown clayey matrix. Decomposed granite appearing with dark brown matrix in krotovena
		45-60cm	1-quartz shatter 1-piece charcoal	10YR3/3 mottled dark brown clayey matrix in krotovena with decomposed granite appearing.
		60-75cm	Void	10YR4/6 dark yellowish brown mottled clayey D.G. Ended at 75cm in D.G.
	15m	0-15cm	Void	10YR3/3 dark brown clayey matrix.
		15-30cm	1-fire broken rock	10YR3/3 dark brown clayey matrix.
		30-45cm	Void	10YR4/6 dark yellowish brown sandy clay matrix
		45-60cm	1-chert flake 1-possible fire broken rock	10YR4/6 dark yellowish brown sandy clay matrix mottled w/krotovena
		60-75cm	1-basalt flake	10YR5/6 yellowish brown sandy clay matrix mottled w/krotovena

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
S55 W	10m	0-15cm	1-white opalized wood flake	10YR2/2 very dark brown gravelly sediment as in Uni
		15-30cm	1-chert flake 1-fire broken rock 1-basalt flake	10YR2/2 very dark brown gravelly sediment as in Uni 1. Excavation ended at 30cm when decomposed granite and rock struck
	15m	0-15cm	3-chert flakes	10YR2/2 very dark brown gravelly sediment (wet)
		15-30cm	1-fire broken rock	10YR2/2 very dark brown gravelly sediment (wet)
		30-45cm	Void	10YR3/6 dark yellowish brown mottled sediment
		45-60cm	Void	10YR3/6 dark yellowish brown mottled sediment
	20m	0-15cm	1-sm burned animal bone frag	10YR3/3 dark brown sandy clay sediment
		15-30cm	1-small white opalized wood flake	10YR3/3 dark brown sandy clay sediment
		30-45cm	Void	Color change to 10YR5/8 mottled yellowish brown sediment at 40cm. Test abandoned at 45cm.
	30m	0-15cm	Void	10YR2/2 very dark brown sandy clay sediment.
		15-30cm	Void	10YR2/2 very dark brown sandy clay sediment.
		30-45cm	Void	10YR2/2 very dark brown sandy clay sediment.
	45m	0-15cm	Void	10YR3/3 dark brown clayey sediment.

Transect	STP#	Level	Cultural Material	Soil
		15-30cm	Void	10YR3/3 dark brown clayey sediment.
		30-45cm	Void	10YR3/3 dark brown clayey sediment.
S2 E	20m	0-15cm	2-chert flakes 1-basalt flake	10YR2/1black midden slightly indurated
		15-30cm	2-chert flakes 1-fire broken rock	10YR2/1black midden slightly indurated
		30-45cm	1-fire broken rock 2-sm lumps red ochre 2-chert flakes 2-small animal bones	10YR2/1black midden slightly indurated
	30m	0-15cm	1-square nail (canvas tack) 1-flat iron piece 1-chert flake	10YR3/3 wet, dark brown sandy matrix.
		15-30cm	Void	10YR3/3 wet, dark brown sandy matrix.
		30-45cm	Void	10YR3/3 wet, dark brown sandy matrix.
		45-60cm	1-sm chert flake 1-lg animal bone fragment	10YR4/4 dark yellowish brown sandy matrix.
	35m	0-15cm	Void	10YR3/3 wet, dark brown sandy matrix.
		15-30cm	Void	10YR3/3 wet, dark brown sandy matrix. Struck D.G. 30cm
N90 W	10m	0-15cm	Void	10YR3/3 dark brown gravel sediment.
		15-30cm	1-chert flake	10YR3/6 dark yellowish brown gravelly sediment mottled with D.G.

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
		30-45cm	Void	10YR5/4 yellowish brown gravelly sediment.
		45-60cm	Void	10YR5/4 yellowish brown gravelly sediment.
		60-75cm	Void	10YR5/4 yellowish brown gravelly sediment. Struck rock at 72cm.
	15m	0-15cm	1-chert cortical shatter	10YR3/3 dark brown sediment.
		15-30cm	1-chert core from cobble	10YR3/3 dark brown sediment.
		30-45cm	Void	10YR3/3 dark brown sediment.
		45-60cm	Void	10YR3/3 dark brown sediment.
		60-75cm	Void	10YR6/3 pale brown sediment.
	20m	0-15cm	1-chert flake	10YR3/3 dark brown sediment
		15-30cm	Void	10YR3/3 dark brown sediment
		30-45cm	Void	10YR4/3 brown sediment
		45-60cm	1-charcoal piece	10YR5/4 yellowish brown sediment. Excavation ceased at 60cm.
S25 W	Datum	0-15cm	Void	10YR2/1 black gravelly midden
		15-30cm	1-shatter 1-fire broken rock	10YR2/1 black gravelly midden
		30-45cm	Void	10YR2/1 black gravelly midden. Struck D.G. at 33cm

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
	10m	0-15cm	1-chert flake	10YR2/1 black gravelly midden.
		15-30cm	Void	10YR2/1 black gravelly midden.
		30-45cm	1-fire broken rock 1-quartz shatter	10YR3/4 dark yellowish brown gravelly matrix.
		45-60cm	1-basalt flake	10YR3/4 dark yellowish brown gravelly matrix.
		60-75cm	Void	Decomposed granite at 63cm
	20m	0-15cm	3-basalt flakes 1-fire broken rock	10YR2/1 black midden
		15-30cm	Void	10YR2/1 black midden
		30-45cm	1-fire broken rock 2-small chert flakes 1-large chert cortical flake 2-small basalt flakes	10YR2/1 black midden
		45-60cm	1-small calcined animal bone 2-small basalt flakes 1-chert spall 1-granite mano fragment 1-small piece charcoal	10YR2/1 black midden
		60-75cm	1-basalt flake 1-basalt shatter 2-calcined large mammal (?) bone splinters	10YR2/1 black midden
		75-90cm	1-calcined large mammal bone splinter 1-chert core (from sm cobble) 1-white opalized wood flake 1-chert flake	10YR2/1 black midden filled with krotovina encountered near 90 cm. Decomposed granite site base encountered at 92cm
	30m	0-15cm	3-basalt flakes (1-cortical)	10YR3/3 dark brown sandy loam

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
		15-30cm	1-fire broken rock 1-basalt flake	10YR3/3 dark brown sandy loam
		30-45cm	1-small white opalized wood flake	10YR3/3 dark brown sandy loam
		45-60cm	1-piece charcoal 1-small basalt flake 1-granite hammerstone fragment (fire-broken-artifact?)	10YR3/3 dark brown sandy loam
		60-75cm	4-small pieces charcoal 1-basalt flake 1-fire broken rock 1-red chert shatter 1-bone awl tip	10YR3/4 dark yellowish brown sandy loam
		75-90cm	Void	10YR4/6 dark yellowish brown loam grading into decomposed granite.
		90-105cm	Void	10YR4/6 dark yellowish brown loam grading into decomposed granite.
	35m	0-15cm	1-split animal bone fragment	10YR3/4 dark brown sandy loam
		15-30cm	2-chalcedony flakes 3-basalt flakes 1-small piece charcoal	10YR3/4 dark brown sandy loam
		30-45cm	1-white opalized wood flake 2-basalt flakes 1-small split bone fragment 1-small piece charcoal	10YR3/4 dark brown sandy loam
		45-60cm	1-small piece charcoal 1-small (rodent?) bone frag. 1-basalt flake	10YR3/4 dark brown sandy loam
		60-75cm	Void	Grading into 10YR4/6 mottled yellowish brown clayey matrix at 70cm

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
		75-90cm	Void	10YR5/6 mottled yellowish brown clayey matrix.
	37.5m	0-15cm	1-piece charcoal	10YR2/1 black midden
		15-30cm	1-chert flake	10YR2/1 black midden
		30-45cm	1-fire broken rock 1-small piece charcoal	10YR3/3 dark brown loam
		45-60cm	1-white opalized wood expended core 2-basalt flakes 3-fire broken rocks	10YR3/3 dark brown loam
		60-75cm	1-expended chert core 1-chert flake 1-fire broken rock 1-small piece charcoal	10YR3/3 dark brown loam
		75-90cm	1-quartz flake 1-small piece charcoal	10YR5/8 mottled yellowish brown sandy loam. D.G. struck at 82cm
	40m	0-15cm	1-white opalized wood flake 2-basalt flakes 1-chert flake	10YR3/3 dark brown loam
		15-30cm	Void	10YR3/3 dark brown sandy loam
		30-45cm	1-basalt flake	10YR3/3 dark brown sandy loam
		45-60cm	Void	10YR3/3 dark brown sandy loam grading into 10YR5/6 mottled yellowish brown decomposed granite
		60-75cm	Void	10YR5/6 mottled yellowish brown decomposed granite
	45m	0-15cm	1-basalt flake	10YR3/3 dark brown clayey sandy loam

Transect	STP#	Level	Cultural Material	Soil
		15-30cm	1-fire broken rock	10YR3/3 dark brown clayey sandy loam
		30-45cm	1-animal bone splinter	10YR3/3 dark brown clayey sandy loam. Struck roots at 42 cm and ended test.
	50m	0-15cm	Void	10YR4/3 brown loam
		15-30cm	Void	10YR4/3 brown loam
		30-45cm	1-chert flake	10YR4/3 brown loam
		45-60cm	Void	10YR3/4 mottled dark yellowish brown loam with decomposed granite
		60-75cm	Void	10YR5/8 mottled yellowish brown loam with decomposed granite.

Table 2. Midden macro-constituents from Unit 1. Debitage is largely percussion flakes and shatter from water-worn fist-size and smaller cobbles. Chert, quartzite and basalt seem favored.

Depth (cm)	Debitage	Fire Broken Rock	Bone	Shell	Other
0-15cm	28	2 (1-mano frag)	--	--	1-polished bone frag
15-30cm	5	--	--	--	--

Table 3. Midden macro-constituents from Unit 2. Debitage is largely percussion flakes and shatter from water-worn, fist-size and smaller cobbles. Petrified wood probably from nearby volcanic scabland. Note manos reused as cooking stones (fire broken).

Depth (cm)	Debitage	Fire Broken Rock	Bone	Shell	Other
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0-15cm	49 (10-petri-fied wood)	4 (1-mano frag)	2 frags	--	1-polished bone frag 2-pieces cast iron sink 1-Gunther Barbed-style projectile point
15-30cm	19 (5- petri-fied wood)	1	4	1	4-pieces rusted sheet iron 1-charcoal lump
30-45cm	9	--	1	3	1-charcoal lump 2-large cast iron sink frag
45-60cm	37 (6-petrified wood)	--	3	--	1-antler tine fragment 1-cobble core with polished face 1-projectile pt frag (mid-section)
60-75cm	33	1 (handstone frag)	4	--	1-projectile pt frag (mid-section)
75-90cm	--	--	--	--	--

Table 4. Results of shovel test excavations (STPs) along designated transects to help determine the boundary of archaeological site CA-PLA-1871 (field number RDO#2a). Note: As a result of test excavations, the archaeological site designated CA-PLA-1871 was reduced in size to a small hilltop midden with associated bedrock mortars (also known as field number RDO#2a). RDO#2b was subsequently discovered to be a small area of cultural deposits in very sandy loam next to several large granite boulders. RDO#2c, a group of two isolated bedrock mortars. RDO#2d, a single isolated bedrock mortar.

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
S5 W	15m	0-15cm	1-quartz shatter 3-small flakes	10YR2/1 black midden

Transect	STP#	Level	Cultural Material	Soil
		15-30cm	1-fire broken rock	10YR2/1 black midden
		30-45cm	1-shatter 1-quartz flake	10YR3/2 very dark grayish brown sandy midden
		45-60cm	1-shatter from small cobble 1-small piece charcoal	10YR3/2 very dark grayish brown sandy midden
		60-75cm	Void	10YR4/3 mottled brown loam mixed with D.G. D.G. struck at 70cm
	20m	0-15cm	1-quartz shatter from cobble	10YR3/3 dark brown loam
		15-30cm	Void	10YR3/3 dark brown loam
		30-45cm	Void	10YR4/4 dark yellowish brown loam
		45-60cm	Void	10YR4/4 mottled dark yellowish brown loam with decomposed granite D.G. struck at 52cm
	25m	0-15cm	Void	10YR4/2 dark grayish brown sandy loam
		15-30cm	Void	10YR4/3 brown sandy loam.
		30-45cm	1-fire broken rock(?)	10YR4/3 brown sandy loam.
		45-60cm	Void	10YR4/3 brown sandy loam.
		60-75cm	Void	10YR5/4 yellowish brown sandy loam
	30m	0-15cm	Void	10YR3/4 dark yellowish brown sandy loam

Transect	STP#	Level	Cultural Material	Soil
		15-30cm	1-quartz shatter 1-small piece charcoal	10YR3/4 dark yellowish brown sandy loam
		30-45cm	1-large flake 1-small piece charcoal	10YR4/6 dark yellowish brown sandy loam
		45-60cm	1-small piece charcoal	10YR4/6 dark yellowish brown sandy loam (saturated)
		60-75cm	Void	10YR6/4 light yellowish brown sandy loam. Struck D.G. at 72cm
S35 E	15m	0-15cm	1-projectile point tip (DSN?) of white opalized wood	10YR3/2 very dark grayish brown loam
	20m	0-15cm	Void	10YR3/3 dark brown loam
		15-30cm	1-chert flake 1-fist size broken quartzite cobble	10YR3/3 dark brown loam
		30-45cm	Void	10YR3/4 dark yellowish brown loam grading to 10YR4/4 clayey D.G. at 45cm
N90 E	10m	0-15cm	1-quartz shatter 1-small animal bone splinter 1-flake	10YR2/1 black friable midden
		15-30cm	1-quartz flake 2-unidentified flakes	10YR2/1 black friable midden. D.G. struck at 27cm.
	15m	0-15cm	1-cortical shatter 1-unidentified flake	10YR2/1 black friable midden
		15-30cm	1-fire broken rock 1-red chert chatter 1-calcined small animal bone 1-quartz shatter	10YR2/1 black friable midden

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
		30-45cm	1-unidentified shatter	10YR2/1 black friable midden
		45-60cm	1-unidentified shatter	10YR2/1 black friable midden. D.G. struck at 60cm
	20m	0-15cm	Void	10YR3/3 dark brown sandy loam
		15-30cm	1-unidentified flake	10YR3/3 dark brown sandy loam. Excavation halted at 30cm due to roots.
N88 E	25m	0-15cm	1-unidentified flake	10YR3/4 dark yellowish brown clayey loam
		15-30cm	1-chert cortical shatter	10YR3/4 dark yellowish brown clayey loam. Excavation halted at 22cm due to roots.
	30m	0-15cm	Void	10YR3/4 dark yellowish brown clayey loam
		15-30cm	Void	10YR3/4 dark yellowish brown clayey loam
		30-45cm	Void	10YR3/4 dark yellowish brown clayey loam
		45-60cm	Void	10YR3/4 dark yellowish brown clayey loam
		60-75cm	Void	10YR3/4 dark yellowish brown clayey loam
N90 W	20m	0-15cm	2-fire broken rocks	10YR2/1 black midden
		15-30cm	1-quartz shatter	10YR2/1 black midden
		30-45cm	2-basalt flakes	10YR2/1 black midden

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
		45-60cm	1-large cortical flake 1-bifacial mano fragment (granitic rock)	10YR2/1 black midden
		60-75cm	Void	10YR4/4 dark yellowish brown clayey loam. Excavation ended at D.G. at 62cm.
	22.5m	0-15cm	1-large unidentified flake 1-modern green bottle glass frag.	10YR3/2 dark grayish brown clayey loam
		15-30cm	1-unidentified flake	10YR3/2 dark grayish brown clayey loam
		30-45cm	Void	10YR3/2 dark grayish brown clayey loam. Excavation stopped at 37cm due to roots.
	25m	0-15cm	Void	10YR4/2 dark grayish brown sandy loam
		15-30cm	2-small pieces charcoal	10YR4/2 dark grayish brown sandy loam
		30-45cm	Void	10YR4/4 dark yellowish brown clayey loam
		45-60cm	Void	10YR4.4 mottled dark yellowish brown clayey loam. D.G. struck at 60cm.
S45 W	20m	0-15cm	1-unidentified large flake	10YR3/2 very dark grayish brown sandy loam
		15-30cm	1-fire broken rock 1-burned glass fragment(?) 1-small flake	10YR3/2 very dark grayish brown sandy loam
	25m	0-15cm	Void	10YR3/3 dark brown sandy loam

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
		15-30cm	1-fire broken rock (granitic mano fragment (?)) 1-small unidentified flake	10YR3/3 dark brown sandy loam
		30-45cm	1-small chert shatter 1-small animal bone splinter	10YR3/3 dark brown sandy loam
		45-60cm	1-chert shatter	10YR3/3 dark brown very sandy loam
		60-75cm	Void	10YR3/3 dark brown sandy loam. Rock structure at 68cm
	27.5m	0-15cm	1-shatter 1-small piece charcoal	10YR3/3 dark brown sandy loam.
		15-30cm	Void	10YR3/3 dark brown sandy loam
		30-45cm	1-slate projectile point fragment(?)	10YR3/3 dark brown sandy loam
		45-60cm	Void	10YR3/3 dark brown sandy loam
		60-75cm	Void	10YR3/3 dark brown sandy loam
	29m	0-15cm	Void	10YR3/2 very dark grayish brown sandy loam
		15-30 cm	Void	10YR3/3 dark brown sandy loam
		30-45cm	1-small piece charcoal	10YR3/3 dark brown sandy loam
		45-60cm	Void	10YR3/3 dark brown sandy loam
		60-75cm	Void	10YR3/3 dark brown sandy loam

Transect	STP#	Level	Cultural Material	Soil
	35m	0-15cm	1-modern "clay pigeon" fragment	10YR3/3 dark brown sandy loam
		15-30cm	Void	10YR3/3 dark brown sandy loam
		30-45cm	1-modern "clay pigeon" fragment	10YR3/3 dark brown sandy loam
		45-60cm	Void	10YR4.4 dark yellowish brown clayey loam. Excavation ended at 60cm when rock struck

Table 5. Midden macro-constituents from Unit 1, site CA-PLA-1871 (field number RDO#2a).

Depth (cm)	Debitage	Fire Broken Rock	Bone	Shell	Other
0-15cm	92 (9-opalized wood flakes)	4	17	4	1-bone awl tip frag 1-Desert Side-Notched projectile point 1-projectile point mid-section 3-pieces baling wire 3-.22 cartridge casings with "U" headstamp

Table 6. Midden macro-constituents from Unit 2, site CA-PLA-1871 (field number RDO#2a).

Depth (cm)	Debitage	Fire Broken Rock	Bone	Shell	Other
0-15cm	49 (2-petrified wood flakes)	4 (2 mano frags)	6	--	1-.22 cartridge casing with "U" headstamp
15-30cm	88 (3-petrified wood)	--	9	5	1-projectile point tip frag 1-cobble pestle
30-45cm	45 (4-petrified wood)	2 (mano frags)	2	2	1-lump charcoal

Table 7. Results of shovel test excavations (STPs) along designated transects to help determine the boundary of archaeological site field number RDO#2b (new permanent designation for this archaeological site has been requested of the North Central Information Center).

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
S74 W	Datum	0-15cm	Void	10YR4/3 brown sandy loam
		15-30cm	Void	10YR4/3 brown sandy loam
		30-45cm	1-small piece charcoal 1-small basalt flake	10YR4/3 brown very sandy loam
		45-60cm	1-small piece charcoal	10YR4/3 brown very sandy loam
		60-75cm	Void	10YR4/3 brown very sandy loam
		75-90cm	1-small piece charcoal	10YR4/3 brown very sandy loam. Struck D.C at 80cm
	5m	0-15cm	1-chert percussion flake	10YR4/4 dark yellowish brown sandy loam
		15-30cm	1-small piece charcoal	10YR4/4 dark yellowish brown sandy loam
		30-45cm	1-chert flake 2-basalt flakes	10YR4/4 dark yellowish brown sandy loam
		45-60cm	Void	10YR4/4 dark yellowish brown sandy loam
		60-75cm	1-small unidentified flake 1-small piece charcoal	10YR4/4 dark yellowish brown sandy loam
		75-90cm	1-small piece charcoal 1-cortical shatter 2-chert flakes	10YR4/4 dark yellowish brown sandy loam. D.C struck at 92cm

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
	10m	0-15cm	Void	10YR4/3 brown sandy loam
		15-30cm	Void	10YR4/3 brown sandy loam. Struck root at 24cm.
	15m	0-15cm	3-small pieces charcoal	10YR3/3 dark brown sandy loam
		15-30cm	1-cortical shatter	10YR3/3 dark brown sandy loam. Struck root at 30cm. Excavation ceased.
N30 E	5m	0-15cm	Void	10YR3/3 dark brown sandy loam
		15-30cm	Void	10YR3/3 dark brown sandy loam
		30-45cm	Void	10YR4/3 brown sandy loam
		45-60cm	1-cortical flake	10YR3/3 dark brown sandy loam
		60-75cm	Void	10YR3/3 dark brown very sandy loam
		75-90cm	Void	10YR3/3 dark brown very sandy loam. Excavation ceased at 76cm due to rock
	10m	0-15cm	1-small flake	10YR3/3 brown sandy loam
		15-30cm	Void	10YR3/3 brown sandy loam
		30-45cm	Void	10YR3/3 brown sandy loam

Transect	STP#	Level	Cultural Material	Soil
		45-60cm	Void	10YR3/3 brown sandy loam
		60-75cm	Void	10YR3/3 brown sandy loam. Struck roots at 70cm; excavation ceased
N45 W	5m	0-15cm	Void	10YR3/3 brown sandy loam
		15-30cm	Void	10YR3/3 brown sandy loam
		30-45cm	Void	10YR3/3 brown sandy loam
		45-60cm	1-piece turtle carapace	10YR3/3 brown sandy loam. Excavation ceased at 50cm due to roots.
	10m	0-15cm	1-basalt(?) flake	10YR4/3 brown sandy clayey loam
		15-30cm	Void	10YR4/3 brown sandy clayey loam
		30-45cm	1-small piece charcoal 1-small unidentified flake	10YR4/3 brown sandy clayey loam
		45-60cm	1-chert flake	10YR4/3 brown sandy clayey loam. Root struck at 59cm; excavation ceased.
	15m	0-15cm	4-small pieces charcoal	10YR3/3 dark brown sandy loam
		15-30cm	Void	10YR3/3 dark brown sandy loam. Hit root at 30cm. Transect discontinued due to heavy timber and roots 10m distance to creek bank.

Table 8. Macro-constituents from Unit 1, site field number RDO#2b.

Depth (cm)	Debitage	Fire Broken Rock	Bone	Shell	Other
0-15cm	11	4 (1-mano frag)	--	--	--
15-30cm	31	6	--	--	3- lumps charcoal
30-45cm	16	--	--	--	1-Side Notched Convex Base projectile point
45-60cm	20	1	--	--	--

Table 9. Results of shovel test excavations (STPs) along designated transects to help determine the boundary of archaeological site CA-PLA-1873 (field number RDO#4).

Transect	STP#	Level	Cultural Material	Soil
S55 W	#1	0-15cm	1-rusted iron fragment 1-rusted beverage can bottom	10YR3/3 dark brown loam
		15-30cm	Void	10YR3/3 dark brown loam
		30-45cm	1-.22 cartridge case with "U" headstamp 2-unidentified flakes	10YR3/3 dark brown loam
		45-60cm	Void	10YR3/3 dark brown sandy loam

Transect	STP#	Level	Cultural Material	Soil
	#2	0-15cm	1-modern brown bottle glass 1-modern clear bottle glass 3-.22 cartridge cases with "Super-X" headstamp 1-.22 cartridge case with "U" headstamp	10YR3/3 dark brown loam
		15-30cm	1-fist-size core 1-unidentified flake	10YR3/3 dark brown clayey loam. Struck soil rock at 33cm.
	#3	0-15cm	1-.22 cartridge case with "HP" headstamp.	10YR3/4 dark yellowish brown loam
		15-30cm	Void	10YR3/4 dark yellowish brown loam
		30-45	Void	10YR3/4 dark yellowish brown loam. Struck soil rock at 35cm.
N40 W	#1	0-15cm	Void	10YR3/3 dark brown clayey loam
		15-30cm	1-small piece charcoal 1-small piece shatter (?) 1-fractured cobble	10YR3/3 dark brown clayey loam
		30-45cm	1-small piece charcoal	10YR3/3 dark brown clayey loam
		45-60cm	Void	10YR3/3 dark brown clayey loam. Soil saturated; quit at 60cm
	#2	0-15cm	Void	10YR3/3 dark brown clayey loam
		15-30cm	1-modern brown bottle glass	10YR3/3 dark brown clayey loam. Struck soil rock at 19cm.
	#3	0-15cm	Void	10YR3/3 dark brown clayey loam

<b>Transect</b>	<b>STP#</b>	<b>Level</b>	<b>Cultural Material</b>	<b>Soil</b>
		15-30cm	1-large cortical shatter	10YR3/3 dark brown clayey loam
		30-45cm	Void	10YR3/3 dark brown clayey loam
		45-60cm	Void	10YR3/3 dark brown clayey loam

## **APPENDIX D: CONFIDENTIAL RECORD FORMS**

This appendix contains information on the specific locations of archaeological resources. This information is not for publication or release to the general public. It is for planning, management and research purposes only. Information on the locations of prehistoric and historic sites are exempted from the California Freedom of Information Act, as specified in Government Code §6254.10.