Appendix G: Cultural Report

- Cultural Resources Inventory of the Claudia Claims and Archaeological Reconnaissance of Pluess-Staufer Holdings (Michael K. Lerch & Associates, 1984)
- Updated Archaeological Reconnaissance Report (SBNF, 2010)
Appendix G-1: Cultural Resources Inventory of the Claudia Claims and Archaeological Reconnaissance of Pluess-Staufer Holdings

(Michael K. Lerch & Associates, 1984)
CULTURAL RESOURCES INVENTORY
OF THE CLAUDIA CLAIMS
AND ARCHAEOLOGICAL RECONNAISSANCE
OF PLUESS-STAUFER HOLDINGS,
SAN BERNARDINO COUNTY, CALIFORNIA

Prepared by: Michael K. Lerch, Project Archaeologist

MICHAEL K. LERCH & ASSOCIATES
Post Office Box 11
Redlands, California 92373

Prepared for: BIO-TECH/ENVIRONMENTAL PLANNING CONSULTANTS
Post Office Box 6154
Big Bear Lake, California 92315

October 1984
INTRODUCTION

Purpose:

This report presents the results of an intensive cultural resources inventory of five 20-acre mining claims known as the Claudia Claims and a general reconnaissance of an additional 3200+ acres proposed for mining by Pleuss-Staufer, Inc. The project involves open-pit mining for various mineral deposits, primarily limestone, at a number of locations on the north slope of the San Bernardino Mountains, where Pluess-Staufer currently operates active mines. This report has been prepared by Michael K. Lerch & Associates at the request of Tim Krantz of Bio-Tech Consultants, on behalf of the project applicant, in order to compile information regarding the potential effect the proposed project might have on cultural resources in the project area.

The purposes of this cultural resources assessment are to locate and evaluate all historic and prehistoric cultural resources within the project site and surrounding study area, to determine whether such non-renewable resources will be subject to any adverse impacts from the proposed project, and to recommend appropriate measures to mitigate any identified potential impacts to a level of non-significance.

Project:

The proposed project is an open-pit strip mining operation to extract various minerals found in the Furnace Formation (Richmond 1960:15-23) for commercial uses.

The area of potential environmental impact (APEI) for the purposes of this study is considered to include all land (100 acres) within the five Claudia Claims, and a corridor approximately 30 meters wide on each side of the centerline of the proposed right-of-way for the haul road from the claim area to the existing improved road designated as F.S. Road 3N16, a distance of about .3 miles (Fig. 1). The Claudia Claims and the associated haul road will hereinafter be called the Project Site, while the overall claimed area in the region northwest of Holcomb Valley will be referred to as the Study Area. Direct impacts at the level of use currently proposed by the applicant will be limited to the Project Site APEI as defined above,
although indirect impacts from the project may occur anywhere within the overall claimed study area. Any additional claims proposed for active mining within the study area will ultimately be subject to direct impacts. Lands within the currently approved operating areas and associated haul roads are presently also being subjected to direct adverse impacts. Cultural resources located within or immediately adjacent to the Claudia Claims project site will be subject to direct impacts from the current proposal, while those located more than 100 meters outside of the project site are not likely to be affected by mining of the Claudia Claims.

Project Site:

The Claudia Claims are located on the north slope of the San Bernardino Mountains northwest of Holcomb Valley. They are situated in the SE 1/4 of Section 26, T3N, R1W, SBBM, as shown on the USGS 7.5' series (topographic) Fawnskin quadrangle, 1981 edition modified for USDA Forest Service use. The Claudia Claims are located in the southern portion of the overall study area claimed by Pluess-Staufer, which extends from Holcomb Valley to the desert floor at the foot of the mountains.

Elevations within the study area range from below 5000 feet at the mouth of Dry Canyon to over 7900 feet above sea level in the center of the study area at the edge of the north slope. The study area topography is characterized by relatively gentle slopes in the southern portion and very steep terrain in the northern half. Water is available in a number of springs in Holcomb Valley at the south edge of the study area, and from at least five other springs or seeps dispersed throughout the area. Most of the southern portion of the study area drains into Holcomb Creek and ultimately into the Mojave River. The northern portion drains into the Mojave Desert via three steep canyons (Dry, Crystal, and Furnace), all of which lead to Lucerne Dry Lake.

Vegetation in the study area is composed primarily of species belonging to the Pinyon-Juniper Woodland plant community. Plants in this community with important uses in aboriginal economy include the staple foods of pinyon nuts (*Pinus monophylla*), acorns (*Quercus kelloggii* and *Quercus chrysolepis*), and manzanita berries (*Arctostaphylos glauca* and *A. patula*), as well as seed-producing plants such as the sages (*Salvia* spp.) and a large number
Figure 1. Project Location Map

Adapted from USGS 7.5' Fawnskin Quadrangle, 1981. Scale: 1"=2000'
buckwheats (*Eriogonum* sp.). Members of the *Yucca* genus provided food in the form of both flowers and stalks, and were a source of fibers, as were the *Apoecynum* species, particularly *A. cannabinum*, and nettles (*Urtica holoseraea*). Basket-making material is present in the form of rushes (*Juncus* spp.) and willow shoots (*Salix* spp.). Medicinal plants are also abundant in the study area, represented by Yerba Santa (*Eriodictyon trichocalyx*) and several *Artemisia* species, among others (Lerch 1981, Krantz 1984).

Available lithic materials include both granitic cobbles suitable for manufacture of groundstone tools and cryptocrystalline materials such as jasper and chalcedony suitable for making flaked stone implements such as knives, scrapers and projectile points, as well as quartz and quartzite.

Previous disturbance in the project area includes roads, logging activities, and off-road vehicle use. Historic mining in the project region has also probably had a negative effect on area archaeological sites.

Scope of Study:

This assessment is based on an archaeological records check for previously recorded cultural resources within or immediately adjacent to the project APEI, a review of relevant literature, and field survey. All portions of the proposed project site received 100% intensive inventory for cultural resources, and an intuitive general reconnaissance was conducted throughout the study area. All prehistoric archaeological resources are considered herein, and historic cultural resources which are believed to be more than fifty years of age are also addressed.

Methods of Data Collection:

Prior to the fieldwork portion of the study, an archaeological records check for previously recorded sites and surveyed areas was conducted at the San Bernardino Information Center of the California Archaeological Inventory maintained by the San Bernardino County Museum Association. Available archaeological, ethnographic and historical literature was reviewed in order that known or expected site types for the region could be anticipated and accurately identified during the field survey. Other sources consulted included the *National Register of Historic Places* (USDI 1979, *et seq.*), *California Inventory of Historic Resources* (DPR 1976), and *California Historical*
Landmarks (DPR 1982), as well as Historical Landmarks of San Bernardino County (Quinn 1980).

The field survey of the 100-acre project site was conducted by the author on 21 and 23 September, 1984. All portions of the project APEI as defined above and areas immediately adjacent extending up to 30 meters from the haul road centerline were surveyed intensively. Parallel transects no more than 30 meters apart were walked generally according to topographic contours. In addition to the intensive inventory of the Claudia Claims, a field day (30 September 1984) was also spent in an effort to inspect areas throughout the study area that were thought to exhibit cultural resource sensitivity, subject to limitations in both time and access. Areas surveyed are illustrated in Figure 2.

Field position was determined with reference to the USGS 7.5' topographic quadrangle for the area. Archaeological loci which were observed within and immediately adjacent to the APEI were plotted on the field map and notes were taken regarding environmental associations, site integrity, and types of artifacts and materials represented. Fieldwork was limited to surface observations only—no subsurface testing was attempted. The fieldwork was conducted under verbal authorization by the United States Forest Service Archaeologist pending issuance of a Special Use Permit.

Field notes, photographs, maps and other project data are on file with the author. Archaeological site records and a copy of this report have been filed with the California Archaeological Inventory, San Bernardino Information Center and with the USDA Forest Service, San Bernardino National Forest.

This study was conducted by Michael K. Lerch, Project Archaeologist, who conducted background research, field survey, and authored this report. He is currently a graduate in Anthropology at the University of California, Riverside, and has six years of archaeological and ethnographic field experience in the southern California study area.
Figure 2. Areas Surveyed and/or Fieldchecked.
                 ////////////// Area Surveyed
CURRENT STATUS

Cultural Background:

Archaeological investigations in the Mojave Desert, the southwestern portion of the Great Basin, have recovered evidence of prehistoric cultural development which spans over 12,000 years. The earliest known cultural assemblages are purported to date to the Pleistocene age and are characterized by lithic industries which lack projectile point forms and contain large bifaces and a variety of scraping tools. Some controversy surrounds the early assemblages and sites such as the Calico Early Man site; many archaeologists feel that the presumed ages of these earliest cultural assemblages remain hypothetical (cf. Warren and Crabtree n.d.:4; Meighan 1978:235; Moratto 1984:39-73).

The earliest well accepted prehistoric period in the desert is known as the Lake Mojave period, after the site complex where it was first described (Campbell and Campbell 1937). The Lake Mojave period is dated from 12,000 to 7,000 years ago, and is characterized by leaf-shaped points and knives, crescents, and domed scrapers of several types. The assemblage is believed to represent a well-developed technology for hunting and an apparent adaptation to lakeside environments (Warren and Crabtree n.d.; Moratto 1984:93-97).

The next period is known as the Pinto period, after the type site first described by the Campbells (1935) at Pinto Basin, approximately 75 miles east of the project site in Joshua Tree National Monument. Archaeological assemblages from the Pinto period contain hunting tools such as notched and leaf-shaped projectile points and knives, a variety of scraper types, and the earliest known seed grinding implements such as the mano and metate, thus suggesting a shift in subsistence strategies to a greater reliance on plant seeds for food. Although the Pinto period remains one of the least well understood periods of Mojave Desert prehistory, it is believed to date from 7,000 to 4,000 years ago (Warren and Crabtree n.d.; Warren 1984). Pinto style projectile points have been recovered from several sites on the north slopes of the San Bernardininos, including Cactus Flat just east of the study area and Rock Camp, several miles west of the study area, thus suggesting that prehistoric use of the mountains extends back to Pinto times.
Following the Pinto period is the Gypsum period, dated from 4,000 years ago to A.D. 500. During this period, hunting continues to be important and evidence of ritual behavior related to hunting bighorn sheep is found at sites in the desert and towards the Southwest (Warren and Crabtree n.d.; Davis and Smith 1981). Toward the end of the Gypsum period, the size of projectile points begins to diminish, suggesting a shift from the earlier atlatl and dart to the bow and arrow as hunting weapons. Milling tools continue to be present throughout the period, although not in great numbers.

Between A.D. 500 and A.D. 1200, the Saratoga Springs period, there is evidence of Pueblo influence in the eastern Mojave Desert; however, in the study area there is a continued development from the preceding period. The final period of prehistory in the project region dates from A.D. 1200 to the time of historic contact and is called by Warren and Crabtree (n.d.) the Shoshonean period, although Warren (1984:424) later rejects that term in favor of Protohistoric, a name which has no ethnic or linguistic connotations. During this latest period, the material culture described for the ethnographic inhabitants of the study area was fully elaborated, with some of the more diagnostic items being Cottonwood Triangular and Desert Side-notched projectile points, and brownware pottery. Evidence of trade with coastal areas is present in the form of shell beads and artifacts such as arrowshaft straighteners made of steatite.

The ethnographic inhabitants of the study area were the Serrano Indians, so named by the Spanish because they lived in and around the San Bernardino Mountains. Serrano territory extended from Cucamonga to Yucaipa on the south side of the mountains, and northward through Cajon Pass on the west and through Morongo Valley on the east. In the desert, they ranged out along the Mojave River as far as Soda Lake, and eastward past Twentynine Palms (Kroeber 1925:615).

The Serranos were hunters and gatherers who utilized both large and small game, as well as numerous plant resources for food. Large game such as deer, mountain sheep and pronghorn were hunted with bow and arrows, and smaller animals such as rabbits and various rodents were taken with throwing sticks, nets and snares. Acorns, pinyon nuts, and mesquite beans were among the staple foods, supplemented by seeds such as chia and roots, tubers and greens (Bean and Smith 1978; Lerch n.d., 1981).
The settlement pattern of the Serranos consisted of permanent village sites which were located in proximity to a reliable source of water, and within range of a variety of floral and faunal food resources. The main villages were usually located at the mouth of a canyon near the base of the mountains. In the fall, several village groups would travel together up to the mountain oak groves and pinyon woodlands to collect the acorns and pinyon nuts, which were then stored for use throughout the next year.

The Serrano division that utilized the study area was known as the Kaiwem Tahktam (Harrington n.d.). This group is believed to be the same as the desert Serranos usually referred to as the Vanyume, after the Mojave name for them. Very little specific ethnographic information is available regarding the Kaiwem, although some placename data are recorded in the notes of J. P. Harrington (Harrington n.d., see also Bean and Vane 1981). The Serrano name for Holcomb Valley, for instance, was pats rawnka, which translates as "blue/green water" (Harrington n.d., Lerch n.d.).

When it was time for the fall pinyon harvest, the three eastern Serrano clans would gather in the Pipes Canyon area and travel together up Pipes Canyon to the Baldwin Lake area where their pinyon camp known as Achava't was located. Other groups from surrounding regions also converged on the pinyon groves during the harvest season. During this time, great feasts and ceremonies were held (Benedict 1924, Kroeber 1925, Harrington n.d., Lerch n.d.).

Historic development in study area began in the 1860s following the discovery of gold in Holcomb Valley by William F. Holcomb. An intense but relatively short-lived goldrush ensued, and for a few years Holcomb Valley was one of the more populous places in the region. In a special election shortly after its founding, Belleville came within two votes of becoming the San Bernardino County seat. Mining in the area has continued intermittently throughout the past century, along with cattle grazing in the Holcomb Valley area. Holcomb Valley is a California Historical Landmark.

The first road that could be traveled by wheeled vehicles was built into the mountains from the desert side by Jed Van Dusen in 1861 and is variously known as Van Dusen Road or Coxey Road. The road is still in use, now designated as 3NO8, and passes through the southern end of the study area (WESTEC 1982). Coxey Road is a County Point of Historical Interest.
Description of Resources:

The archaeological records check conducted prior to the fieldwork portion of this study indicated that no previously recorded archaeological sites were located in the Claudia Claims project site or anywhere else in the study area. However, there was no indication on file at the San Bernardino Information Center that any previous investigation had ever taken place in the study area. Because numerous archaeological sites are known to be present in similar environmental contexts in the general project region, it was anticipated that sites were likely to be present in the study area, but had simply never been recorded.

The results of the fieldwork confirmed that archaeological sites are in fact located within the study area, and a total of six sites and two isolated artifacts were recorded as a result of this study. Although no archaeological sites were located on the current Claudia Claims project site, the occurrence of two isolated, very lightly utilized metates along the ridge top provides evidence that the area was used for collecting and processing pinyon nuts. Both metates were found in disturbed contexts along the recently constructed access road at the north edge of the project site. One of them has such slight evidence of modification through use that it is somewhat questionable whether it is truly artifactual. For this reason, and because of the disturbed context and lack of any other artifacts, the ridge area at the north edge of the Claudia Claims has not been formally recorded as an archaeological site.

The six sites that were recorded were found during the general intuitive reconnaissance of the balance of the study area. Efforts were made to inspect level spots near water sources and topographic features such as saddles, contexts known to be archaeologically sensitive in other nearby areas of similar vegetation and elevation. It must be noted that other sites may very likely be present, and that the six recorded only reflect the results of a short overview of the area, limited by both time and access to areas in proximity to existing roads. A thorough pedestrian survey of the entire study area would undoubtedly result in the location of additional archaeological sites.

The sites recorded are discussed as follows, with reference to locations shown in Figure 3:
Figure 3. Archaeological Site Locations. Confidential - Not for Public Distribution.
SBr-5344

This site is a sparse scatter of lithic waste flakes located on a small bench overlooking a spring. No temporally or functionally diagnostic artifacts were noted here, but the site is believed to be part of a complex of sites in the vicinity of the spring. These sites collectively appear to be temporary camps used during hunting and collecting activities in the surrounding area.

SBr-5345

This site is the largest of the three located in the Cloudy Claims in the southern portion of the study area. Artifacts noted at the site include a metate fragment, a non-diagnostic biface edge fragment, and a large but sparse lithic scatter. Among the lithic materials present is obsidian, the closest source of which is in the Coso region, some 150 miles north. The presence of obsidian, an exotic material in the San Bernardino Mountains, makes this site potentially significant for understanding regional prehistoric procurement and exchange networks. Obsidian can be positively identified as to source, and can also provide age data through the use of obsidian hydration measurements.

SBr-5346

This site is similar to the two discussed above, and is considered part of the same complex. It also contains obsidian among other materials in a sparse lithic scatter. No metates or other tools or implements were noted here. All three of the above sites are in an area undergoing deposition and the possibility for subsurface deposits should be considered if this area is ever proposed for mining. No obvious midden areas were noted during the reconnaissance of these three sites.

SBr-5347

This site consists of an area of very dark soil and a sparse flake scatter located at the junction of four roads. It is believed to be a pinyon roasting area, based on the scarcity of artifacts in combination with the very dark soil. The site is highly disturbed by roads, but appears to still contain intact subsurface deposits. Its location near the edge
of the rim overlooking the desert suggests that the site might also have been at the head of a trail from the desert floor to the pinyon area.

SBr-5348

This site is also believed to be a pinyon roasting area, based on the same criteria noted above. The site has also been disturbed by a road and by wood-cutting in the area, and appears to be located in an area that will some be mined. A currently active mine pit is located just east of the site, although the limits and current status of that claim are unknown to the author.

SBr-5349

This site is located adjacent to the main haul road between the Pluess-Staufer mines and the processing plant, but is outside of the claim area and outside of the National Forest. The site is a camp on a bench adjacent to a spring feed stream. Artifacts noted included a leaf-shaped projectile point of basalt, two metates, and a sparse flake scatter. It is likely that cultural materials extend to the opposite side of the creek where a more protected possible site area is located, although this was not verified during the fieldcheck for this project.

Based on the preliminary findings of the brief archaeological reconnaissance of the study area reported above, it is clear that the area functioned as a pinyon collecting and hunting area. Temporary campsites are present on the south edge of the study area in proximity to reliable water sources in Holcomb Valley, and on the north edge of the study area at the mouths of canyons. Within the main portion of the study area, the predominant site type appears to be the pinyon roasting area, where green cones were roasted to make them open up so the nuts could be extracted. In addition to the two such sites located, others may have been present in similar areas that have already been developed as mines.

The study area was known to have been used by the ethnographic inhabitants of the region, the Serrano Indians, and most or all of the sites located appear consistent with ethnographically described patterns, although earlier usage cannot be ruled out until more data are obtained. Some or
all of the sites could predate Serrano usage of the area, and it is noted that no temporally diagnostic late period artifacts such as pottery or Desert Side-notched projectile points were observed. Some inferences regarding the prehistoric periods when the study area was utilized could be made if further studies are conducted which obtain obsidian hydration data or radiocarbon dates, both of which should be possible to obtain with materials present in sites of the study area.

No historic cultural resources were observed in the Claudia Claims project site, and historic accounts reviewed during the literature search and summarized by WESTEC (1982) do not mention any known settlements or historic developments within the boundaries of the study area. A gravesite marked with a six-foot steel cross and mapped on the Fawnskin 7.5' USGS topographic quadrangle is located near the western edge of the study area. The cross is welded of channel steel and has the initials "MRA" brazed on the front. No information regarding the age or significance of this gravesite was found during the literature search, although it is possible that with further research more could be learned.

ASSESSMENT OF POTENTIAL IMPACTS

Development of the Claudia Claims for mining is not expected to have any significant direct adverse impacts to cultural resources. The two isolated metates will be displaced by the haul road, but this is not considered to be a significant impact. No archaeological sites were found to be located within or immediately adjacent to the Claudia Claims or the proposed haul road to 3N16.

The Cloudy Claims at the southern edge of the study area were found to be archaeologically sensitive during the reconnaissance. The three sites now recorded and others that may be present but yet unrecorded will be subject to direct adverse impacts if the Cloudy Claims are ever developed for mining.

The two pinyon roasting sites, SBr-5347 and SBr-5348, are presently subject to ongoing impacts, primarily from vehicular traffic. These impacts can be expected to increase as time goes on. Site SBr-5358 appears to be subject to imminent adverse impact as current mining in that area proceeds westward.
It is possible that some sites in the study area have already been destroyed by current mining areas that were apparently approved for operation without prior archaeological survey. Finally, on the basis of the number and distribution of sites now known to be present in the study area, it appears likely that others are also present but yet unrecorded. Any unrecorded sites that may be located within the study area are presently subject to indirect impacts, and will be potentially subject to direct impacts if they are located in areas proposed for mining.

Due to the fact that it is located at the very edge of the study area and away from any major roads, the historic gravesite does not appear to be subject to any potential adverse impacts at this time.

MITIGATION OF POTENTIAL IMPACTS

Potential impacts to the two isolated metates at the north edge of the Claudia Claims have been mitigated to the extent possible by recording their locations and other pertinent data and filing that information with the California Archaeological Inventory. No further archaeological investigation is recommended for the Claudia Claims.

Prior to development or expansion of any other claims within the study area, it is recommended that intensive archaeological surveys and any necessary subsurface testing be accomplished. Potential impacts and appropriate mitigation measures should be developed as specific claim areas are proposed for mining. To the extent that long-range planning will allow, it is likely to be more cost efficient to conduct additional survey and testing of all claimed areas projected for future development, in order that any mitigation measures that might be necessary can be accomplished without project delays. This approach is also preferable from a research point-of-view, rather than a piecemeal approach which attempts to deal with small claim blocks individually.

The archaeological resources of the northern slopes of the San Bernardinos remain poorly documented because of a lack of previous investigation. However, initial indications suggest that important cultural resources are present in the region, and that these resources warrant further study before the regional significance of individual sites can be adequately characterized.
BIBLIOGRAPHY

Bean, Lowell J., and Charles R. Smith

Bean, Lowell J., and Sylvia B. Vane, eds.

Benedict, Ruth F.

Campbell, Elizabeth W. C., and William H. Campbell
1935 The Pinto Basin Site. Southwest Museum Papers, Number 7.

Davis, C. Alan, and Gerald A. Smith

Department of Parks & Recreation (State of California)
1976 California Inventory of Historic Resources. Sacramento: The Resources Agency, Department of Parks & Recreation.

Harrington, John P.

Krantz, Tim

Kroeber, A. L.

Lerch, Michael K.

N.d. Ethnographic Field Notes, Serrano.
Meighan, Clement W.  

Moratto, Michael J.  

Quinn, Ann (compiler)  
1980 Historical Landmarks of San Bernardino County. San Bernardino County Museum Association Quarterly 28(1&2).

Richmond, James Frank  

United States Department of the Interior, National Park Service  
1979, National Register of Historic Places, Annual Listing of Historic et seq. Properties. Federal Register 44(26), 45(54), 46(22), 47(22), 48(41), and 49(26).

Warren, Claude N.  

Warren, Claude N., and Robert H. Crabtree  

WESTEC Services, Inc.  
Appendix G-2: Archaeological Reconnaissance Report
(SBNF, 1998)
SAN BERNARDINO NATIONAL FOREST
ARCHAEOLOGICAL RECONNAISSANCE REPORT
(SHORT FORM)

INSTRUCTIONS: For use only by Forest CRM personnel specifically authorized by the Forest Archaeologist. Use to document only reconnaissances of 80 acres or less where complete/intensive survey methodology was used and no cultural resources encountered. Attach both Project Vicinity and Survey Coverage maps (U.S.G.S. 7.5' Topographic or previously approved alternate).

NAME OF UNDERTAKING: Sentinel Quarry Overburden Site TOTAL ACRES: 30.7

NAME(S) OF ARR REPORTER(S): Marilyn Mlazovsky

CREW MEMBER(S): Marilyn Mlazovsky

PERSON DAYS SPENT ON: PRE-FIELD RESEARCH 1/2 FIELDWORK 1 REPORT 2

DATE OF FIELD WORK: 8/12/98

LOCATION OF UNDERTAKING: T 3N; R 1W; SW 1/2 of SW 1/4 of Sec. 24

U.S.G.S. TOPOGRAPHIC MAP: Fawnskin Quad, 7.5 Min. Series, Scale 1:24000


DESCRIPTION OF LOCATION AND NATURE OF UNDERTAKING: In Range 1 West, Township 3 North, parts of sections 13, 22, 23, 24, 24, 25, and 26 have previously had a cultural resource survey conducted of them in connection with Pleuss-Staufer mining activity. Surveys were conducted in 1972 by Forest Service personnel in connection with 5 open pit limestone quarries Pleuss-Staufer proposed to open. Surveys were also conducted in 1984 by Michael Lerch, a contract archaeologist, in connection mainly with the Claudia Claim that Pleuss-Staufer proposed to open plus the construction of a new haul road connecting the claim with Forest Road 3N16. In neither report were historic or prehistoric cultural remains mentioned as being found in the project areas.

A new overburden site is proposed for the Sentinel Quarry area. This includes the existing B-5 Pad overburden site which will be progressively enlarged along with an existing quarry which will also be enlarged. This area had not been covered by previous cultural resource surveys. Access is from Forest Road 3N16.

ENVIRONMENTAL DESCRIPTION:

ELEVATION: approx. 7,500 to 7,560 ft. above sea level
GEOLOGY: Project area is located in the San Bernardino Mtns. just northwest of Holcomb Valley. Terrain is mountainous and can get extremely steep at times. Rocks and soils are mainly limestone.

SOIL: Soils are of the Lizzant family and Lithic Xerorthents, calcareous. The Lizzant family consists of moderately deep to deep, well drained soils formed in material weathered from limestone. Soils are brown very cobbly fine sandy loam. Lithic Xerorthents in general consist of shallow, somewhat excessively or excessively drained soils that formed in material weathered from granitic rock, metamorphic rock, or limestone. Lithic Xerorthents, calcareous were formed in material weathered from limestone with the depth to hard limestone being 10 to 20 inches. Soils consist of loam or sandy loam with rock fragments comprising 5 to 50% of the soil. Areas of rock outcrops are common.

VEGETATION: Pinyon, juniper, ceonothus, flannel bush, misc. grasses weeds, mtn. flowers.

NEAREST PERMANENT WATER: unnamed spring approx. 1 mile NW

SLOPE: 15% AVERAGE; 15% TO 30% RANGE  ASPECT: NW

DATA SOURCES CONSULTED: San Bernardino NF cultural resource files and maps, San Bernardino NF Soil Inventory Atlas

SENSITIVE AREAS: (CONSULTATION WITH ARCHAEOLOGIST) None

DESCRIPTION OF FIELD PROCEDURES: An intuitive complete cultural resource survey was conducted of the entire project area. Transects were meandering in nature as terrain would allow. No historic or prehistoric cultural remains were found on the ground surface. No subsurface excavations were done.

PROBLEMS ENCOUNTERED: The project area in general has been highly disturbed by previous overburden activity, use of a portion of the existing overburden site surface for drillers parts storage and explosive magazines, and as a storage site. The currently undeveloped portion of the site contains several prospect pits and prospecting roads from earlier mining activities. Also, the area has been utilized by wood cutters and OHVers. This may help explain why no historic or prehistoric cultural remains were found.

RESOURCES NOTED BUT NOT FORMALLY RECORDED (INCLUDE RATIONALE FOR NOT RECORDING): None

OTHER COMMENTS/OBSERVATIONS: Since no historic or prehistoric cultural remains were found, a determination of "No Effect" is recommended for this project. If during project activity any cultural remains are found, work must stop immediately in the area and the Forest Archaeologist contacted to evaluate the site plus make appropriate mitigation measures.
CERTIFICATION: I certify that I conducted the Archaeological Reconnaissance reported here, that my observations and methods are fully reported, and that this ARR is complete and accurate to the best of my knowledge:

NAME OF AR REPORTER: [Signature]  DATE: 2/26/98

PROFESSIONAL REVIEW: I have reviewed this ARR and find it acceptable according to professional standards with the following exceptions:

F  NONE   F  REFER TO SECS. ____________________ on attached Evaluation of Completeness Form (R5-2700-38):

NAME: [Signature]  DATE: 2/26/98

TITLE: [Signature]  INSTITUTION OR DUTY STATION: F-50

VICINITY MAP ATTACHED  YES  NO
PROJECT LOCATION MAP ATTACHED  YES  NO
SURVEY COVERAGE MAP ATTACHED  YES  NO
CONTINUATION SHEET ATTACHED  YES  NO
PROJECT MAP
San Bernardino NF, Big Bear RD
Sentinel Quarry Overburden Site
USGS Topographic Map, Fawnskin Quad
7.5 Min. Series, Scale 1:24000
Range 1 West, Township 3 North,
Section 24, SBBM
SURVEY MAP
San Bernardino NF, Big Bear Rd
Sentinel Quarry Overburden Site
USGS Topographic Map, Fawnskin Quad
7.5 Min. Series, Scale 1:24000
Range 1 West, Township 3 North,
Section 24, SBBM
Appendix G-3: Updated Archaeological Reconnaissance Report
(SBNF, 2010)
1. TITLE OF UNDERTAKING: Omya Butterfield 3 Quarry Expansion

2. NAME OF REPORTER: Bill Sapp
   TITLE: Forest Archaeologist
   STATION: Supervisor’s Office, San Bernardino National Forest
   ADDRESS: 602 S. Tippecanoe Avenue, San Bernardino, CA 92408

   NO. OF ASSISTANTS: 0
   NO. OF PERSON DAYS/HRS SPENT ON HRR: 2
   ACREAGE OR MILEAGE SURVEYED: 32 acres

3. LOCATION OF UNDERTAKING: T3N, R1W, N ½ of SE ¼ of Section 23; USGS 7.5’ map,
   Fawnskin Quadrangle, 1996

4. GENERAL DESCRIPTION OF UNDERTAKING (describe areas which may be potentially
   impacted and how this impact may occur): Omya California, Inc., proposes to develop an
   open pit limestone quarry on claims it currently owns. The claims are located within the
   SBNF boundary. Portions of the survey area were previously surveyed for ARR 05-12-BB-010 (1978) and ARR 05-12-BB-226 (1984). The entire Area of Potential Effect was not
   surveyed for this project because roughly half of the APE is currently an operating limestone
   quarry. The quarry portion of the APE was not surveyed.

5. GENERAL ENVIRONMENTAL DESCRIPTION (consider geology, hydrology, flora, fauna,
   and recent alterations): Climate in the San Bernardino Mountains ranges from warm to hot
   and dry in the spring through early fall, and cool to cold during the late fall and winter. The
   area receives about 12 inches of annual precipitation primarily in the form of rain, although
   snow falls in the higher elevations during winter storms.

   Flora consists of an over-story of Jeffrey Coulter, and Ponderosa pine, and California black
   oak with an occasional sugar pine, white fir, incense cedar and bigcone Douglas fir. Brush
   species include manzanita, flamebush, and buckthorn. Ground cover is thick, made up of
   vetch, iris, dandelion, lupine, sunflowers, thistle, and annual grasses.

   Common animals adapted to this high mountain regime include black bear, black-tailed deer,
   bighorn sheep, mountain lion, coyote, bobcat, gray squirrel, raccoon, a host of smaller
   mammals, and a variety of birds, amphibians, and reptiles.

   Within the APE the vegetation consists primarily of Piñon Pine, most of which was
   destroyed by wildfire. The balance of the survey area is highly disturbed by prior surface and
   open pit mining activities.
6. PRE-FIELD RESEARCH:
Prior to conducting fieldwork, a records search was conducted at the San Bernardino National Forest Supervisor’s Office, Heritage Resources, to determine if any historic properties or significant properties were within the area of potential effect (APE) or immediate vicinity.

SOURCES OF DATA:

a. X FOREST HERITAGE RESOURCE FILES
b. DISTRICT HERITAGE RESOURCE FILES
c. OTHER USFS FILES (Specify): 
d. OTHER RECORDS (Specify): 
e. STATE HISTORIC PRESERVATION OFFICER (attach correspondence)
f. NATIVE AMERICAN CONSULTATION
g. INFORMANTS:
   NAME:
   ADDRESS:
   TIME SPENT IN AREA:
h. X PUBLISHED OR UNPUBLISHED DOCUMENTS:
   AUTHOR: Bean, Lowell John, Sylvia Brakke Vane, Michael Lerch, and Jackson Young
   TITLE: Native American Places in the San Bernardino National Forest, San Bernardino and Riverside Counties, California.
   PUBLISHER/LOCATION: One file at the Supervisor’s Office, SBNF, San Bernardino.
   DATE: 1981.

7. OBSERVATIONAL EXPECTATIONS (cite appropriate references listed under 6f and 6g):

a. Expected Prehistoric Land-Use: Predicted land use includes seasonal occupation sites, coinciding with hunting, gathering, and food processing areas. Expected site types under these conditions are seasonal habitations, lithic deposits, quarry sites, bedrock mortar processing locations and ceremonial activities related to rock art.

b. Ethnographic Group: The project areas are located within the traditional home of the Serrano Band of Mission Indians (Bean et al. 1981).

c. Prehistoric Complexes: Archaic groups (ca. 8,000-1,500 BP) probably exploited the general area for thousands of years, hunting deer, bighorn sheep, and other fauna, and harvesting acorns and other floral resources that occur in this mountain regime. Towards the end of the archaic period, a weapons-system shift from the atlatl to bow and arrow use occurred. Concurrent with the adaptation of the bow and arrow came a host of technological and cultural changes including the manufacture of ceramics, decreased nomadism, regional differentiation, and extensive trade networks. At the time of Euro-American contact, native people called Serrano (Spanish for “mountain people”) inhabited the San Bernardino Mountains.
d. Expected Historic Land Use: Documented historic land use includes, but is not limited to, lumbering, mining, ranching and livestock grazing, homesteading, transportation and irrigation systems, Civilian Conservation Corps activities during the 1930s, tourism, and recreation.

e. Expected Areas of Archaeological Sensitivity (if not adequately explained above): Areas of archaeological sensitivity include terraces above water courses, springs and creeks, landforms containing saddles, high points on ridges, rock outcrops, and slopes with less than 22% gradient. Archaeologically sensitive areas are anticipated near oaks and pines, near sources of water, near lithic sources suitable for tool use and manufacture, along crests of ridges that might provide access for hunting, trade, and communication, and near ridges and outcrops that might provide shelter.

f. Special Problems Encountered in Pre-field Research: None.

8. FIELD RESEARCH:
   a. Type of Reconnaissance (single or mixed strategy):
      - Cursory
      - Complete
      - Intuitive Controlled
      - General
      - Intuitive Uncontrolled
      - Controlled Sample

   b. Rationale for Selection of Various Reconnaissance Types: N/A

   c. Coverage (describe the way the area was examined and attach coverage map showing extent and intensity of coverage): Complete survey consisted of zigzag pedestrian transects at 5 to 15 meter intervals throughout the Areas of Potential Effect.

   d. Portions of Affected Property Not Inspected (key to coverage map):
      1. Location: N/A
      2. Reason Not Inspected: N/A

   e. Portions of Affected Property Receiving Less Than A Complete Reconnaissance (key to coverage map):
      1. Location: N/A
      2. Reasons Not Completely Inspected: N/A

9. RESULTS
   a. HERITAGE RESOURCES RECORDED (Historic and/or Prehistoric Properties or Sites; Attach archaeological or other appropriate site records and key to coverage map; List FS No., state trinomial, name, and brief description of the site):
      No new heritage resources were recorded during this field investigation.
b. Heritage Resources noted but not Formally Recorded (key to coverage map; List Field no., general description, and reason for not recording):
   None

c. Special Problems Encountered in Field Research (examples; brush, duff, slope, time...):
   None

d. Comments: A single site, SBR-5348 was previously recorded in the APE and noted in ARR 05-12-BB-226. During the current survey the site was not relocated. The area is now highly disturbed by wildfire, wood cutting, and mining activities. No cultural resources were found to be located within the APE.

RECOMMENDATIONS
Will the undertaking have any impact on Heritage Resources? (See 36 CFR 800.8 and .9):

[ ] YES [X] NO

If yes, what do you recommend to avoid impact?

10. PERSONNEL CONDUCTING RECONNAISSANCE (List name, title and duty station):
    Bill Sapp, Forest Archaeologist, Supervisor’s Office, San Bernardino National Forest

11. CERTIFICATION: I certify that I reported the Heritage Resource reconnaissance reported here, that my observations and methods are fully reported, and that this HRR is complete and accurate to the best of my knowledge.

    /s/ William Sapp  11 June 10
    NAME  DATE
Figure 1. Map of survey area (APE)