

- CULTURAL RESOURCES  
(SECTION 5.7 FROM 99-AFC-7)
- SUMMARY OF CONSTRUCTION COMPLIANCE  
RELATED CULTURAL RESOURCES INFORMATION

**ATTACHMENT F**

**CULTURAL RESOURCES MATERIALS**

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CULTURAL RESOURCES  
(SECTION 5.7 FROM 99-AFC-7)

## 5.7 CULTURAL RESOURCES

Cultural resources include archaeological and historical objects, sites and districts, historic buildings and structures, cultural landscapes, and sites and resources of concern to local Native Americans and other ethnic groups.

The purpose of this cultural resources study is to inventory and tentatively assess the significance of cultural resources that the proposed project could potentially affect. Included in this report are archaeological site descriptions and records of correspondence with local Native Americans. These records, including site locational data, are included in the confidential Technical Report (Appendix J) but should only be made available, on a need-to-know basis, to qualified cultural resource specialists and project managers.

As part of the field inventory, archaeological field investigations and historic evaluations were undertaken to assess the presence/absence and/or the extent and significance of specific sites and features. All cultural resources work for this project was carried out under the direct supervision of an archaeologist who meets the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (National Park Service, 1983), and is consistent with the procedures for compliance with Section 106 of the National Historic Preservation Act (NHPA), set forth at 36 CFR 800.

The cultural resources personnel who supervised the field survey and prepared the Technical Report and AFC are:

- Mr. Brian Hatoff (URS Greiner Woodward Clyde, Principal Investigator) and
- Dr. Bryon Bass (URS Greiner Woodward Clyde, Archaeologist).

Mr. Hatoff meets the professional standards of the Secretary of the Interior for this work (Standards and Guidelines for Archaeology and Historic Preservation, National Park Service, 1983) and is certified by the Register of Professional Archaeologists. Mr. Vance Bente provided peer review of the final report. Refer to the Technical Report, Appendix A, for resumes of project personnel.

With few exceptions, the potential effects of any project upon cultural resources are always evaluated under the California Environmental Quality Act (CEQA) and/or the National Environmental Policy Act (NEPA). The PEF project currently does not require an assessment with respect to the requirements of NEPA because the proposed facilities do not cross Federal lands. If this scenario prevails, this AFC will serve as CEQA environmental documentation.

Portions of the project may require a U.S. Army Corps of Engineers (USACE) 404 permit and would thus require compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, set forth at 36 CFR 800. In either case, the California State and Federal criteria for evaluating cultural resources are consistent and

generally interchangeable, and therefore application of one set of evaluation criteria essentially conforms with the other.

Cultural resources work was conducted in compliance with CEC "Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification" (CEC, 1992) and "Rules of Practice and Procedure and Power Plant Site Certification Regulations (CEC, February 1997). Cultural resources field work protocols were prepared in consultation with the CEC. All work was performed to standards comparable to BLM Class 1 (literature review) and Class 3 (complete intensive survey) standards.

## **5.7.1 Affected Environment**

### **5.7.1.1 Study Area**

The study area was evaluated via systematic bibliographic review and pedestrian field surveys. Both the bibliographic review and the field survey encompassed all areas within 0.5-mile radius of the proposed plant site and its various linear components. This area is identified as the project Area of Potential Effect (APE). The bibliographic survey also extended into areas immediately adjacent to the project area (i.e. Tejon Ranch/ southeast San Joaquin Valley). Field survey included documentation of previously undiscovered sites and inspections at previously known sites within—and directly adjacent to—the project area.

### **5.7.1.2 Site Description**

The PEF plant site is located at the south end of the San Joaquin Valley, at the foot of the Tehachapi Mountains, on property owned by the Tejon Ranch Company. The proposed Pastoria Energy Facility consists of the following major components that were individually surveyed for cultural resources:

- 30-acre power plant site
- 25-acre construction laydown area
- Route 1 – 230 kV Transmission Line
- Route 2 – Water Supply
- Route 3/3A/3B – Fuel Gas Pipeline
- Route 4 – Wastewater Discharge
- Route 5 – Plant Site Access Road.

Minor elements included in the PEF project description, but not singled out as individual major components, include various proposed flood retention berms and the stream crossing for the plant site access road. Due to the immediate proximity of the plant site and laydown area, Route 1, Route 2, and Route 5, the entire area was surveyed as a block.

### **5.7.1.3 Natural History**

The project is confined to the environments of the southeast margin of the southern San Joaquin Valley. Throughout the last 15,000 years (i.e. Late Pleistocene through Holocene), natural and anthropogenic changes to the southern San Joaquin Valley environment have produced a complex picture that is not easily characterized, either environmentally or archaeologically. These changes, including the development of agricultural water control, cattle ranching and petroleum exploitation, have significantly altered local environments. The brief description below of the southern San Joaquin Valley has been partially synthesized from Schiffman and Garfinkel (1981).

"The arid southern third of the San Joaquin Valley...can be characterized as a combination of alluvial fan surfaces and intervening shallow basins of the playa type: the Tulare and Buena Vista drainage systems [Hinds, 1952: 152, in Schiffman and Garfinkel, 1981]. [The southern portion of the Valley]... is completely circumscribed by a U-shaped arch of mountains and has no access to the sea. On the west the Coast Ranges, which together with intervening valleys are some 50 miles wide, effectively block coastal influences. Completing the isolation of the San Joaquin Valley are the Mt. Pinos and the San Emigdio Ranges on the south, the southern Sierra Nevada on the north and northeast (Parkevitch-Tammer, 1981: 1-4), and the Tehachapi Range to the southeast.

"Topographically, the valley is an expansive flatland comprised of alluvial floodplains, river and creek channels, dried lakebed, marshes, sloughs, and various other riparian environments. It is also characterized by uplands of low and gradual relief. During prehistoric times (i.e. Late Pleistocene, Early Holocene), the wetlands covered more than 5000 km<sup>2</sup> of the San Joaquin Valley area (Moratto, 1984: 169)."

### **5.7.1.4 Soils and Geology**

Please refer to Section 5.3 for detailed descriptions of regional soil conditions and geology.

### **5.7.1.5 Disturbance within the Study Area**

The primary sources of historic surface and subsurface disturbances within the project area are related to construction of the California Aqueduct, power stations and related constructions, agriculture, cattle ranching, and oil production. Oil production is confined to the northwestern portion of the project area, agriculture mainly to the north and east sections, power plant and sub-station constructions to the southern sections, while cattle ranching occurs throughout most of the eastern and southern sections.

### **5.7.1.6 Prehistory**

The project area is strictly localized within the extreme southeastern end of the San Joaquin Valley. Specifically, the proposed PEF components are limited to the geomorphologic

transition zone extending from the flat floor of the San Joaquin Valley through the rolling hills and drainage valleys into the Tehachapi Mountain Range. The prehistoric cultural descriptions outlined below cannot be isolated specifically within the project area, primarily due to a distinct lack of archaeological research in the southeastern San Joaquin Valley and the abutting foothills. This can be partially attributed to the fact that the area falls within the private property of the Tejon Ranch Company, and only limited archaeological research has been conducted on the expansive property.

Therefore, a more regional view, encompassing the prehistory of both Central California and the Southern San Joaquin Valleys, has been synthesized for this report. Primarily, this discussion has been extracted from Moratto (1984: 79-88, 178-193) and Chartkoff (1984: 51-69).

**Chronological Overview.** In general, the now-desiccated wetlands of Buena Vista Lake and its sister to the north, Tulare Lake, have been the focus of most archaeological research in the Southern San Joaquin Valley. It is from this key locality that numerous local chronologies have been constructed.

W.R. Wedel, during the 1930s, conducted archaeological excavations at a complex of midden and burial sites along the southwestern perimeter of Buena Vista Lake (Wedel, 1941), in particular at the ethnohistoric Yokuts village of Tulamniu. The results of his archaeological program at Ker-39 and Ker-60 (Tulamniu, now Ker-116) and adjacent hilltop cemeteries, Ker-40 and Ker-41, led Wedel to conclude tentatively that there were typological relationships between these Central Valley sites and other archaeological assemblages outside of the region.

On the basis of milling artifact and burial types and other traits, Wedel speculated that there were similarities between the taxonomies applicable to lower deposits at Ker-39 and Ker-60, the Oak Grove culture found along the Santa Barbara coast and the Early Horizon of the San Joaquin delta. Moratto (1984) also notes similarities between archaeological manifestations at the Buena Vista and Oak Grove localities which include extended burials, milling stones, and stemmed and leaf shaped projectile points. Wedel also described patterns in the upper deposits of the Southern San Joaquin sites that suggest ties to the Middle Delta and Late Horizon and even stronger associations with southern California groups.

Excavations in the 1950s at Tulare Lake, to the north of Buena Vista Lake, led archaeologists Warren and McKusick to propose the following tripartite chronology for the Southern San Joaquin Valley region (1959: 20). As indicated below, these were identified and defined, in part, by the apparent prevailing burial practices.

1. Early (? to 2000 B.C.): The predominant burial position is extended, supine or prone, and with no burial goods.

2. Middle (1500 B.C. - A.D. 500): The predominant burial position is supine semi-flexed, and with few burial goods.
3. Late (A.D. 500 to ethnographic present): The predominant burial position was tightly flexed on the side or in a supine position. There were usually moderate amounts of burial goods, and the individuals were often interred with artifacts of European origin.

These were essentially based on variations of the older three horizon 'Delta Sequence' (i.e. river deltas at the confluence of the San Joaquin and Sacramento Rivers, east of San Francisco Bay), which categorized the chronology into an *Early Period*, a *Transitional Period*, and a *Late Period*.

**Early Evidence.** The Warren and McKusick tripartite chronology was then supplanted by a much longer chronology in the 1960s, when new archaeological excavations by Fredrickson (1964) at the previously excavated Ker-116 resulted in the discovery of a deeper stratum. This work essentially began to fill in the '?' of the Early period proposed by Warren and McKusick.

Evidence of Early Holocene PaleoIndian (~12, 000-8000 B.P) cultural activities within the southern San Joaquin Valley have been firmly substantiated, although the sites do not necessarily span the region in great quantity. The paleo-shoreline sites of Tulare Lake have provided nearly all of the diagnostic materials including fluted projectile points (described as Clovis-like), scrapers, and chipped crescents (Moratto, 1984: 81). The fluted projectile points of the San Joaquin Valley associate with sites to the east, in the Mohave Desert, and can be loosely classified into a 'Far Western Fluted Point Tradition' (*ibid.*). These sites appear along paleo-shorelines, piedmont zones of former grasslands, and in mountain passes associated with fossil lakes. The lithic assemblage typically contains chipped stone crescents, graters, scrapers, choppers, perforators, and various fluted points.

The oft-cited Witt site, situated along the paleo-shores of Lake Tulare in the San Joaquin Valley, has produced numerous fluted chert points, scrapers, chipped crescents, Lake Mojave-type points and other artifacts associated with the so-called Fluted-Point Tradition. The Witt site (surface dimensions measuring 2.4 km long and 0.8 km wide) has also yielded numerous specimens of extinct Early Holocene fauna in similar contexts as the cultural materials. If these finds are generally contemporaneous, the area could have fluted point cultural connections earlier than 11, 000 B.P. (Moratto 1984: 82). It is of interest to note a fluted point found in the Tehachapi Mountains (Glennan n.d., in Moratto 1984: 87), given its proximity to the project area.

Fredrickson (1964), while working on the paleo-shoreline of Buena Vista Lake at site Ker-116, discovered a stratum deeper than those previously excavated. Artifacts and apparently associated freshwater shell were discovered below the strata excavated in the 1930s. Results of radiocarbon dating on the shell suggest that the site, and hence region, were initially

occupied at least 8000 years before present. If the Buena Vista Lake dates on shell and their association with cultural materials are valid, the site may be a manifestation of the Western Pluvial Lakes Tradition (WPLT). Although the WPLT was originally described by Bedwell (1970) as a subsistence-settlement pattern singularly adapted and focused on post-Pleistocene pluvial lakes, Great Basin investigations suggest a more complex response to changing environmental conditions.

#### **5.7.1.7 Ethnography**

The project area is located primarily within the ethnographic boundaries of the Southern Valley Yokuts. However, the San Emigdio and Tehachapi ranges were also occupied in ethno-historic times by the Emigdio and Cuyac branches of the Interior Chumash (see Figure 5.7-1). The two ethnic groups engaged in trade and at various times probably coexisted along the southernmost margins of the San Joaquin Valley. Discussions presented below are primarily drawn from Wallace (1978: 448-461) and Grant (1978: 505-508 and 530-534). A more complete overview is given in the confidential PEF Cultural Resources Technical Report.

**Yokuts.** Yokuts is a term applied to the indigenous peoples inhabiting the San Joaquin Valley and Sierra Nevada foothills of central California. The ‘Southern’ Yokuts tribes inhabited the southern or lower end of the San Joaquin Valley, from the lower Kings River to the Tehachapi Mountains, and formed the nucleus of a culture that differed in significant respects from that of the northern and foothill Yokuts tribes. The Southern Yokuts homeland included Tulare, Buena Vista and Kern lakes, their connecting sloughs, and the lower portions of the Kings, Kaweah, Tule, and Kern rivers (Wallace, 1978: 448). Ethnohistoric Yokuts tribes occupying the Buena Vista Lake Area were known as the Tulamni, while the Chuxoxi inhabited the channels and slough areas of the Kern River delta.

The Southern Valley Yokuts were encountered by the Spaniards soon after they settled in California. In the fall of 1772, Pedro Fages led a small band of soldiers through Tejon Pass and down into the southernmost part of the San Joaquin valley. He visited a native village on the shores of Buena Vista Lake before continuing his westward journey to San Luis Obispo. After a visit by the Friar-explorer, Francisco Garces in 1776, there was infrequent contact between the Spanish and the Yokuts for some three decades.

A new series of Spanish expeditions into the interior began in 1806. No ranchos were established in the lake country and the Mexican influence on the tribes appears to have been slight. However, in 1833 an epidemic (possibly malaria) of unusual severity devastated the native population, with an estimated mortality rate of 75 percent.

The influx of Europeans shortly after the 1848 annexation of California by the United States rapidly led to cultural breakdown and the near-total disappearance of Yokuts from the lower San Joaquin valley. Settlers seeking farm and ranch lands soon occupied the countryside and

either drove out or suppressed the remaining Yokuts. Survivors went to the Tejon reservation, established at the base of the Tehachapi Range, or to the Fresno Reservation near Madera. Tejon Rancheria was abandoned in 1859 and the Indians were taken to Tule River. In 1873, this reservation was specifically set apart for them. By 1905, the reservation population, mostly members of the Southern Valley Yokuts tribes with a few foothill natives, numbered only 154.

**Yokuts in the Project Area.** The area to the southeast of the Buena Vista and Kern Lake micro-regions was occupied by the Yauelmani (Kroeber, 1925: 482-84). This group was settled at—and locally associated with—a village situated on the Paseo Creek known as Tinliu. This was near the Tejon Ranch House. Kroeber noted that this was probably the most southerly of all Yokuts village settlements (1925: 482). Natives from the area were referred to as Tinlinin—a term locally synonymous with Tejoneños and Yauelmani (*ibid.*). The exploited catchment would have included the Tejon Creek and the many smaller drainage creeks that flow from the Tehachapi Mountains into the San Joaquin Valley.

**Interior Chumash.** The Interior Chumash were divided ethnographically into three subgroups: the Cuyama, of the region between the Coast and Temblor ranges; the Emigdiano, of the San Emigdio Range; and the Castaic, of the Tejon area. The Chumash territory is probably marginal to the project area, mainly because the cultural boundaries are not well defined in the literature. However, cultural interchange and joint land use with the Southern Valley Yokuts, specifically in the Tehachapi foothills, suggests that the Chumash probably frequented the project area.

The Interior Chumash of the northern territory are virtually unknown, since there were no missions in this area, and few ethnohistoric contacts. Ten small villages were noted in the Cuyama area during several Spanish expeditions, and there is evidence that neophytes may have gone to the Santa Barbara Mission from these villages before 1806. This area may also have served as a first refuge for neophytes fleeing the mission after a revolt in 1824. The fact that some of these people were subsequently apprehended at a Yokuts village at Buena Vista Lake is suggestive of on-going Chumash cultural ties with the southern San Joaquin Valley.

Although no Spanish Missions were established in the project area, the Interior Chumash experienced the same indirect effects of missionization as their Yokuts neighbors. Soldiers and missionaries in pursuit of runaways and of new converts passed through the area in increasing numbers in the first decades of the nineteenth century. Indirect effects of introduced diseases, as well as the direct effects of cultural intrusions and possibly military activity, were undoubtedly realized. The revolt of Indian neophytes in 1824 may have had repercussions among the Interior Chumash, through whose territory coastal people seeking a refuge, and the soldiers pursuing them, would have had to pass. Disease continued to decimate the Chumash throughout the 1830s and 1840s.

The intention of the secularization of the missions in 1834 was to transform the missions into Pueblos, wherein the Indians would be full Mexican citizens. During this period, many Chumash fled the missions, some refused to work for the rancheros, and others were enslaved. Few Chumash ever received any of the mission lands as property, and those who did held it for only a short time.

In 1855, a 120-acre parcel was set aside near the coastal Santa Inez Mission and 109 Chumash were settled there. Other remnant Chumash may have settled inland, even perhaps at the Yokut's Tule River Reservation. In 1972, about 40 mixed-blood Chumash resided at Santa Inez.

**Interior Chumash in or Near the Project Area.** Although the Southern San Joaquin Valley was predominated by Yokuts, there was significant overlap in certain areas with various Chumash groups. Regarding Native American groups on Tejon Ranch, sources often refer simply to 'Tejon Indians' (e.g. Crowe, 1957: 4). 'Tejon Indians' were the Yokuts and Chumash groups in – and immediately adjacent to – the Rancho El Tejon property. Most of the references to 'Chumash' in the immediate area (Tehachapi/Southern San Joaquin Valley) refer to either the Alliklik Chumash (a name given by the Ventureño Chumash [Swanton, 1984: 480]), or the Kitanemuk Chumash (a name meaning 'long bows', given by the Yokuts [Crowe, 1957: 6]). The Kitanemuk (or Gitanemuk) lived in the higher elevations of the Tehachapi range, above the San Joaquin Valley plains, and covered the higher grounds of the Tejon and El Paso Creeks. The Spanish also called this group 'Serrano' – a generic term meaning 'mountaineers'.

Crowe has placed the Kitanemuk at the village of Tinliu near the Tejon Ranch in the lower El Paso and Tejon Creek drainage, but both Kroeber (1925) and Swanton (1984: 525) indicate that this village was Yokuts, not Chumash. In any case, the 'Serrano' label would imply that the lower elevations were not the primary Kitanemuk area. Crowe also states that a Chumash village was situated at the foot of the Grapevine Canyon (Cañada de las Uvas), on the left side of U.S. Highway 99 northbound. Generally, it can be assumed that the Chumash probably ranged across most of the Tejon Ranch property – from Castaic Lake (opposite the town of Lebec), throughout the upper elevations of Pastoria and Tunas (Tunis) Creeks, and down the eastern side of the Cañada de las Uvas (Crowe, 1957: 7).

#### **5.7.1.8 Historic Setting**

The Tejon Ranch lies in Kern County. The county was organized in 1866 from portions of Los Angeles and Tulare counties, and is the third largest in California with 8,172 square miles of desert and mountainous terrain. Mineral commodities of the county, including petroleum, natural gas and natural gas liquids, boron, clay, gold, gypsum, limestone, silver and tungsten, are valued at about 5.4 billion dollars. Mining, particularly petroleum development, cattle and sheep ranching, and agriculture, are the county's primary industries.

**Spanish and Mexican Periods.** The first European explorers accompanied Spanish Captain Pedro Fages through the southern San Joaquin Valley in 1772. Fages, at that time acting governor of Alta California, was in pursuit of deserters from the Spanish army (Hoover, Rensch and Rensch, 1966:123). At the foot of the hills on the southwestern shore of Buena Vista Lake, Fages found an Indian village, the existence of which is still attested by vast kitchen middens. Fages named the lake and surrounding country Buena Vista – the oldest Spanish place name in the San Joaquin Valley (*op cit.*: 124).

The Spanish focused their settlements on the coast and in nearby valleys, leaving the interior largely to its original inhabitants. Although the Spanish entered and explored the Central Valley in 1775, they established no permanent settlement in the interior. After successfully throwing off Spanish rule in 1820-24, the Mexicans continued the general pattern of settlement in California established by their former government. Late in the 1830s, the Mexican government began to grant ranchos to Mexican and foreign settlers. Although the ranchos tended to be clustered in the vicinity of formerly Spanish coastal settlements, a few were located in the interior. Ranches were established along the San Joaquin River and its tributaries. Mexican land grants in the Kern County area, besides Rancho El Tejon, included Rancho de los Alamos y Agua Caliente, Rancho de Castaic, Rancho San Emigdio, and Rancho de la Liebre. Settlements established under Spanish and Mexican rule as ranchos formed the basis for many towns and cities (Hoover, Rensch and Rensch, 1966: 76-82).

**Rancho El Tejon and Fort Tejon.** In 1772, Captain Fages was the first European to pass through the Pass of Cortez, now known as Tejon Pass. Later, in 1776, Father Francisco Garcés passed through the Tehachapi pass. Jedediah Smith (1827) later followed this route, and shortly thereafter, was followed by the trappers and traders Ewing Young and Kit Carson, Hudson's Bay traders, the French trapper Peter Lebec, the explorer John Frémont, and eventually, General Edward Fitzgerald Beale.

Rancho El Tejon (Spanish for 'badger') was established by a Mexican land grant in 1843 with 97,616 acres. The ranch was the largest Mexican land grant in the San Joaquin Valley, and is still one of the most important historic sites in the valley.

In 1853, General Beale, while Superintendent of Indian Affairs, established a government Indian reservation on Rancho Tejon. This site, known as the 'Sebastian Indian Reservation' (sometimes referred to as the Tejon Indian Reservation), quartered between 500 and 2000 Native Americans. The reservation closed in 1865, and the Native Americans were sent to other reservations. Beale then purchased the ranch from its original grantees, Ignacio del Valle and Juan Temple.

Fort Tejon, established in the Grapevine Canyon adjacent to Interstate 5, was established to protect and control the Indians who were living on the Sebastian Indian Reservation. The fort was also built to protect these Indians, and local European settlers, from raiding parties of the

Paiutes, Mojave, and other warlike groups from the east. The fort was first garrisoned by the US Army on 10 August 1854, and was abandoned on 11 September 1864.

Beale's original stone and adobe buildings, situated on Arroyo del Paso, were later used as the rancho headquarters. After the Tehachapi earthquake of 1852, new ranch headquarters were built on the east side of Interstate 5, on a portion of the old Fort Tejon site. In 1936, Rancho El Tejon was incorporated in the holdings of the Tejon Ranch Company. This company, traded publicly, now covers nearly 270,000 acres and generates operating revenues from its real estate, livestock, farming, and resource management divisions.

#### **5.7.1.9 Native American Consultation**

The PEF Native American correspondences discussed below – including archaeological site descriptions and locations, consultation letter, Native American mailing list, telecommunication notes, follow-up letters, and responses – are confidential. Copies are appended to the confidential Cultural Resources Technical Report (Appendix J) as Sub-Appendix D.

Concurrent with the records search at the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS), and prior to the beginning of fieldwork, Ms. Gail McNulty of the California Native American Heritage Commission (NAHC) was contacted for a list of local Native American groups and/or individuals with direct or indirect knowledge of cultural resources within or near the project area. These consultations also sought to identify any sacred lands within the proposed project area (including a one-mile radius study area) that are identified in the NAHC's Sacred Lands File. An initial record search of the Sacred Lands File of the NAHC failed to indicate the presence of Native American cultural resources in the immediate project area.

The letters describing the project and a map of proposed plant site and various components were sent by certified mail to 10 groups or individuals identified by the NAHC. The letter inquired whether the groups/individuals had any concerns regarding the project, or wished to provide input regarding cultural resources in the project area. Two responses were received, one concerning the location of an abandoned Native American reservation and the other regarding a possible Native American cemetery. Both individuals were mailed 7.5-Minute Series (1: 24,000) USGS maps of the project area and asked to plot the suspected locations.

Based on a review of the requested maps, the individual who had earlier commented on the abandoned reservation (Old Sebastian Reservation) responded that the subject site is outside of the project area. In this same response the individual identified three other areas of possible concern and depicted these on maps. These three areas were the ethnographic village of "Pahbe" or "Checot", the area of "Lake Misjamin" which the respondent noted was occupied by the Tulamni, and the general location of a site visited by early Spanish explorers known as "Mitochea".

The ethnographic village of “Pahbe” or “Checot” is outside the project area. The area of Lake Misjamin, as depicted on the respondent’s map, is also outside of the project area. The general location of “Mitochea” may correspond to previous and newly recorded sites. The previously recorded sites are P-15-002185 and -002186 and the newly recorded sites, described in this AFC, have been assigned the temporary numbers TR1, TR2 and TR3.

As the project was subsequently modified prior to the initial mailing, the NAHC was once again contacted and letters were sent to the same groups/individuals described above. These letters detailed the revised project and solicited comments from concerned groups/individuals.

#### **5.7.1.10 Pre-field Record Search**

Prior to initiation of the cultural resources inventory, pre-field research was conducted to identify the extent of prior archaeological surveys and known cultural resources within the project corridor. Bibliographic references and pertinent data compilation were conducted via multiple record searches at the SSJVIC of the CHRIS, at California State University, Bakersfield. Record searches at the Information Center (26 February 1999, RS# 99-062; 12 July 1999, RS# 99-268; 30 July 1999, RS# 99-297; and supplemental on 19 August 1999) were made for a one-half mile-wide study area (one-half mile each side of the ROW) for proposed transmission line and pipeline routes, access road, and the power plant and laydown sites.

The Southern San Joaquin Valley CHRIS search included a review within 1/2 mile of project facilities of all recorded sites, surveys, historical listings, and historical maps. Review of the existing archaeological survey information indicated that only limited portions of the project area had previously undergone archaeological survey. Since these undertakings must be systematic from the outset, the entire project area was subjected to an intensive field inventory.

Data relating to all previous archaeological surveys and previously recorded archaeological sites were compiled. All sites were checked against the National Register (National Association of State Historic Preservation Officers *et al.* 1988 and annual updates in the National Register), California Historical Landmarks (Office of Historic Preservation 1990), Points of Historic Interest (Office of Historic Preservation 1992), for any listed and eligible properties and locally listed historic properties and structures within 0.5-mile of the proposed plant/laydown site, transmission corridors, and pipeline routes. None of the previously recorded sites identified during the CHRIS record search had been formally evaluated for National Register eligibility. One site had been previously recommended ineligible in a cultural resources report (P-15-003544), but no formal lead-agency determinations or concurrence with the SHPO have been conducted (A. Baldwin, 1999).

**Previous Survey within or Adjacent to the 0.5-Mile Study Area.** Twelve cultural resource studies on file with the Southern San Joaquin Valley CHRIS have been conducted within the

project APE and/or a 0.5-mile radius of the proposed project area. The text *Men of El Tejon* by Earle Crowe (1957) was also consulted prior to the fieldwork and during the preparation of the technical report for historical nuances particular to the Tejon Ranch. References and brief overviews of the previous surveys are given in Table 5.7-1.

**Previously Recorded Sites within 0.5-mile of the Study Area.** A total of 9 archaeological sites have been documented with a 0.5-mile radius of the project APE (Table 5.7-2). The specific details concerning these sites, including locational information, can be found in Appendix B of the PEF Technical Report. Although not within the study area, it is of interest to note the presence of the aforementioned historical Sebastian Indian Reservation due east of the project area *circa* 3.0 kms. Similarly, the numerous milling stations discovered during the PEF fieldwork and detailed later in this report were surely associated-at least during the later prehistoric and protohistoric periods-with the inhabitants of the nearby Yokuts village at Tinliu (see Kroeber, 1925: plate 47).

#### **P-15-002185**

This site consists of a significant granite boulder/bedrock milling complex with 117 milling features on 41 individual boulders. A light scatter of quartzite flakes and cores was noted, and one granite boulder with 37 cupules was documented. A low rock alignment (probably historic) was also recorded. Most of the archaeological features were in the floodplain of Pastoria Creek, although some were noted in small tributaries and on the eastern slopes of the Pastoria Creek valley. Elements of this site (i.e. bedrock milling with an associated cupule rock) are very similar to the TR3 site, documented during preparation for this report. A Kern County Fire Department member also supplemented the main site report.

#### **P-15-002186**

This site was recorded during the same survey for P-15-002185. The site is located north of the aforementioned, down in the Pastoria Creek floodplain. The locus consists of a small outcrop containing three bedrock mortar depressions, associated with a light scatter of quartzite flakes and tools (one large flake tool, one hammerstone, one core). This site report was also supplemented by members of the Kern County Fire Department.

#### **P-15-001095**

This site consists of a Native American midden deposit. The deposit is situated adjacent to, and immediately below, Comanche Spring (due east of Comanche Point). Artifacts observed included chert cores, flakes, and one steatite bowl fragment. The recorder of the site noted that Latta identified this location as the ethnographic village of “Cheut (Che-oot) Pahbe” (1949: 40).

**P-15-000288**

P-15-000288 through 00291, and 293, were all recorded by the same investigator in 1969. The site is described by the recorder as a large area interspersed with mortars [presumably these are bedrock milling features, although this was not clear in the record form], metates, cores, chert, chalcedony, and burned granite [fire affected granite]. Irregularities in the soils around the site were noted and were preliminarily interpreted as house pits.

**P-15-000289**

Site was described as a burial area that had been impacted by pot hunting. Recorder noted two possible episodes in the illegal potholes across the site. Artifacts noted (some collected) included mortars, sandstone and steatite bowl fragments, scrapers, bead (s?), shell fragments. Soils were not described as midden.

**P-15-000290**

The locality was described as a cluster of seven burial cairns. One had been impacted by pot hunting, and all were located within a 70 feet radius. Chert and basalt scrapers were collected from the site. Also of note was a large sage concentration at the southern end of the site.

**P-15-000291**

The locus was described as an area of darkened soils with irregularities that were not consistent with the peripheral pedological appearance. It is not clear if this was a midden.

**P-15-000293**

The site consists of a series of bedrock mortars and metates. The recorder noted a large quantity of metates [presumably in proportion to the bedrock milling features and the size of the site]. Quantities of artifacts were not mentioned in the site report.

**Previously Recorded Sites within the Project Footprint.** Only one site, an historic road, has been recorded directly within the proposed project footprint. Although the feature bisects the survey corridor, this part of the road has been incorporated into the contemporary infrastructure. Fire, numerous recent fence and gate constructions, and use by all-terrain and service vehicles have compromised localized road integrity.

**P-15-003544**

The site is an historic dirt road (Macko *et al.*, 1993) used in the mid to late 1800s for herding sheep between winter grazing/spring lambing pastures in the San Joaquin Valley and the summer pastures in the Tehachapi, Brite, Cummings and Bear Valleys. Most of the road is unmodified, although a few small sections have been paved. The road also connects through

Jack's Camp. The location is named after a Basque shepherd named Jacques Rodinette who worked livestock in the area between 1873 and 1904.

**Field Survey.** Preparation for the cultural resources field survey consisted of an inventory and overview of all known cultural resources within the study area. This study provided the basis for evaluating project impacts and assessing current survey requirements and cultural resources likely to be present in the project area. Review of the existing archaeological survey information indicated that only limited portions of the project area had previously undergone archaeological survey, so the entire project area was subjected to an intensive systematic field inventory. Essentially, the bibliographic survey, coupled with the project field survey, facilitates an accurate assessment of the cultural resources possibly affected by project implementation.

**Survey Methodology and Coverage.** Figure 5.7-2 illustrates the project components and the areas surveyed for cultural resources, and Table 5.7-3 gives the specific coverage details and field conditions encountered at each project component. The plant site and linear facilities were surveyed on foot using maximum 20 meter (approximately 66 feet) wide transects. Pursuant to concurrence by CEC staff, a 200 foot-wide survey corridor (100 feet each side of centerline) was employed on all linear facilities such as the proposed transmission lines, wastewater discharge line, fuel gas lines, and fuel gas tie-in points. Only Route 1 (230 kV transmission line from the plant to the Pastoria substation) parallels an existing component of similar function. Most of Fuel Gas Pipeline Routes 3, 3A, and 3B either parallels—or is within the same track as—an existing dirt road (paved in limited sections). In these areas, either the centerline of the road or a geographically practical centerline was used as the survey transect centerline.

In some instances, the survey corridors were expanded beyond the 200-foot corridor to cover localized geographic nuances that could potentially affect cultural resources in or adjacent to the APE. This technique was employed in drainage and erosional areas that could potentially transport artifacts into the APE, or in areas where recent landform modifications might facilitate cultural resource transportation into the APE.

Newly recorded sites have been submitted to the Southern San Joaquin Valley CHRIS for permanent number assignments. A California Department of Parks and Recreation (DPR) site form was completed for each site (primary forms only for isolates) and, where appropriate, a site map was drawn and photographs were taken. No previously recorded sites were updated during the PEF cultural resources survey.

**Newly Recorded Sites and Isolates.** Ten isolates and ten cultural resource sites, described below, were newly recorded during the project survey. Nine previously recorded sites were within 0.5-mile radius of the study area or adjacent to the project area. The following discussion provides the results of the survey of the plant site and adjacent laydown areas, and proposed routes 1, 2, 3/3A/3B, 4, and 5. Overviews of the sites, isolates, survey conditions,

cultural resources present, and the associated PEF project component can be consulted in Tables 5.7-4 and 5.7-5, while Figure 5.7-2 illustrates the survey coverage.

Due to the immediate proximity of the plant site and laydown area, Route 1 (230 kV transmission line), Route 2 (water supply line), Route 5 (access road), and various proposed flood retention berms, the entire area, as illustrated on Figure 5.7-2, was block surveyed utilizing pedestrian transects spaced at 20 meter intervals.

The site record forms and all associated documentation are compiled in Appendix C of the confidential PEF Cultural Resources Technical Report. Temporary site numbers were assigned during the field survey via a basic alphanumeric sequential system, but the final site numbers will be assigned by the Southern San Joaquin Valley Information Center, California State University, Bakersfield. Sites have the designation 'TR' followed by a number, and isolated cultural resource finds have the designation 'ISO' followed by a number.

### **Sites.**

- **TR1** - This site was documented during survey for the Edmonston Substation 230 kV Transmission line route. This linear has been dropped from the project and therefore, the site is now outside the project area. The site is located east of Pastoria Creek in the drainage extending from the base of the Tehachapi to the floor of the San Joaquin Valley. The locus is arranged roughly parallel with Pastoria Creek. The cultural finds consist of a series of bedrock and boulder milling features (14 features were documented). Five of the features contain multiple milling surfaces. No surface artifacts were detected during the survey.
- **TR2** - This site was also documented during survey for the Edmonston Substation 230 kV Transmission line route. Since this linear has been dropped from the project, the site is just outside the project area. The site is located along the eastern edge of Pastoria Creek, and generally parallels the current perennial course of the creek. The cultural finds consist of a series of six bedrock and boulder milling features. No surface artifacts were detected during the survey.
- **TR3** - This site was documented within the survey corridor for Route 1, the Pastoria Substation 230 kV Transmission line route. The site is located along the western edge of Pastoria Creek, in a semi-circular arrangement of granite boulders and bedrock outcrops. This arrangement does not appear to have been cultural. The finds consist of seven bedrock and boulder milling features, and one cupule rock. The latter, arranged on a flat boulder at a 45° angle to the ground, appears to have been decorative rather than functional. One quartzite flake was found on the surface of the site.
- **TR4** – Located along Route 3/3A/3B, the cultural locus is situated east of Tunis Creek, at the intersection of Tunis Creek and the Tejon Ranch dirt access road. One granite

boulder, with a height exceeding 2 m, contained nine distinct milling surfaces. A nearby bedrock outcrop contained one milling feature. No surface finds were detected during the survey.

- **TR5** - Located along Route 3/3A/3B, site TR5 is an extensive bedrock and granite boulder milling complex. The expansive nature of the site warranted an expanded survey corridor. Due to time considerations, the eastern and western limits of the site, well outside the project area, were not documented. Milling features were observed outside the expanded survey corridor. Given the ideal setting and preponderance of creekside granite boulders, the site probably extends much farther to the east and west. Sixty-one boulders with 1-8 milling surfaces each were documented over nearly a 1-km strip. Only two surface artifacts were detected (one chert flake and one probable obsidian tool fragment). A series of seven shovel tests at three separate foci along the axis of the complex (i.e. east/west) produced one chert flake and one Olivella shell bead. Cattle ranching, some grading activities, and extensive bioturbation due to ground squirrels heavily disturb most of the surface area of the site.
- **TR6** - Located along Route 3/3A/3B, the site is near a drainage *ca.* 0.5 km south of Caparell Creek and *ca.* 0.5 km east of the Tejon Ranch Property line. The landscape is gradually trending towards the west, and tarweed and grasses prevail on the surface. The site consists of a small bedrock milling locus with four features, each with one milling surface. No surface artifacts were observed during the survey, and ground visibility due to grass cover was poor.
- **TR7** - Located along Route 3A/3B, site TR7 is situated southeast of the Tejon Ranch property line and the end of David Road. The site consists of a remnant oil wellhead and an abandoned drill/core bit. The well head has been haphazardly blocked with wood, fragments of iron, and dirt. There is no evidence of an associated concrete pad, so this might have been a prospect that was never exploited for some reason. Small fragments of iron, wood, and wire were noted near the wellhead. The drill/core bit is lodged into the ground a few meters south of the wellhead. The bit appears to have become stuck, and consequently abandoned. Overall, the site is in a poor state of preservation.
- **TR8** - Located along Route 3A/3B, site TR8 is situated north of TR7 and consists of a remnant oil wellhead, a concrete wellhead foundation structure (wellbox?), an associated concrete pad, and wooden planks. A dirt berm is located *ca.* 15 m east of the wellhead, although it is not clear whether this feature is associated with the wellhead. The *ca.* 6-inch diameter iron pipe well head has been welded shut with an iron cap. One small sludge deposit was documented near the concrete pad. Overall, the site preservation is poor.
- **TR9** – Located along Route 3B, the site is situated on a bluff above the Tejon Creek floodplain. The site is *ca.* 25-30 meters from the Tejon Ranch dirt access road, and within

the survey corridor. Artifacts documented on the bluff and the slope trending towards the floodplain include fire affected rock, one depleted chert core, mano fragments, metate fragments, and one granite pestle fragment. The area is covered in grass and appears to have been graded in the past. Surface visibility of the topsoil is less than 15 percent.

- **TR10** - Located along Route 3A, site TR10 is situated at the intersection of David Road and Rancho Road. The site consists of four abandoned and dilapidated ranch houses that appear to have been built within the last 60-80 years. One structure was probably used as a garage or storage shed. Some of the structures have fittings for electricity (i.e. external meters) and external plumbing. In some places, corrugated tin has been used for repair. The structures are in a poor state of preservation and all have some evidence of roof/wall collapse. The area has been used for recent trash dumping, so the association of surface artifacts with the structures is probably not coeval with the structures.

### **Isolates.**

- **ISO1** – Located along Route 3B, the find consists of a small chert flake detected in the Tejon Ranch dirt access road. Search in the general area revealed no other artifacts.
- **ISO2** – Located along Route 3B, the find is a granite metate fragment found near the Tejon Ranch Property. The artifact is located *ca.* 15 meters from the dirt access road, on the slope leading down to the floodplain of Tejon Creek. Measurements of the find are: 33 cm x 22 cm x 10 cm (height). No other artifacts were detected in the area.
- **ISO3** – An isolate mano that was found near the Edmonston Substation. This option for the Route 1 linear has been dropped, so the find is no longer within the PEF project area.
- **ISO4** - An expanded survey corridor near the Construction Laydown Area and Route 5 detected one isolated bedrock milling feature on a granite boulder in the perennial Pastoria Creek. The milling surface is currently at a *ca.* 60° angle to the horizon, indicating that the boulder has been transported within the creek.
- **ISO5** - The isolate is listed in this technical report, but this was detected on an eastern option of Route 3A. The linear has been dropped from the final project description and it is no longer within the project area. The find consists of an historic green glass insulator, possibly associated with a telegraph route, found in a surface context. The find is marked with “Brookfield”, and is similar to those manufactured from 1880-1910 (see Munsey 1970: 296). No other vestiges of a telegraph or other linear system were detected in the area (i.e. wire, postholes, wooden poles, or fragments thereof).
- **ISO6** - Located along Route 3A/3B, the isolate find consists of two historic green glass insulators, possibly associated with a telegraph route, found in a surface context. A five-pointed star appears on one side, although no manufacturer name is present. No other

vestiges of a telegraph or other linear system were detected in the area (i.e. wire, postholes, wooden poles, or fragments thereof). The landscape has been graded in sections, and active cattle ranching occurs on this part of Tejon Ranch.

- **ISO7** - Located along Route 3A/3B, the isolate find consists of two historic green glass insulators, possibly associated with a telegraph route, found in a surface context. One artifact is marked with “Brookfield”, and is similar to those manufactured from 1880-1910 (see Munsey 1970: 296). No other vestiges of a telegraph or other linear system were detected in the area (i.e. wire, postholes, wooden poles, or fragments thereof). The landscape has been graded in sections, and active cattle ranching occurs on this part of Tejon Ranch.
- **ISO8** – Located outside the survey corridor for Route 3, the isolate find consists of a whole pierced Olivella shell found in the alluvial sands east of El Paso Creek. The ground visibility in the area was 100%. Brief survey of the area detected no further artifacts.
- **ISO9** - An expanded survey corridor near the Construction Laydown Area and Route 5 detected one isolated bedrock milling feature (milling slick) on a small granite boulder near the perennial Pastoria Creek. No other cultural materials were found in association with this isolated feature.
- **ISO10** - An expanded survey corridor near the Construction Laydown Area and Route 5 detected one isolated milling feature (cupule) on a partially exposed granite outcrop near the eastern edge of the perennial Pastoria Creek. No other cultural materials were found in association with this isolated feature.

As noted, only one previously recorded site (P-15-003544) was within the project footprint along Route 3B. This historic dirt road was used in the mid to late 1800s for herding sheep between winter grazing/spring lambing pastures in the San Joaquin Valley and the summer pastures in the Tehachapi, Brite, Cummings and Bear Valleys. The road connects through a location known as ‘Jack’s Camp’ – named after a Basque shepherd named Jacques Rodinette who worked livestock in the area between 1873 and 1904. Although the road bisects the survey corridor, this section has been incorporated into the contemporary infrastructure and is heavily used by all-terrain and service vehicles. Fire and numerous recent fence and gate constructions have also compromised the localized integrity of the road.

#### **5.7.1.11 Plant Site and Construction Laydown Area**

**Topography, Soils, and Existing Conditions.** The plant site is located on an approximate 30-acre area of land, while the adjacent laydown area is proposed on an approximate 25-acre area. Nearly all of the proposed laydown and plant site area has a grass cover, and only in a few locations were there exposures providing significant observation of the soils or substrata. Ground visibility was generally less than 15 percent. Areas in or immediately adjacent to the

Pastoria Creek drainage provided slightly better ground visibility. The terrain is generally flat with a slight northwesterly slope, and soils appear to be podsols and sandy Pleistocene alluvium associated with the Pastoria Creek drainage.

**Previous Work.** No prior cultural resource surveys have been conducted on the subject lands and no previously recorded sites are located on the subject lands. Survey KE-00319 (Chavez, 1977) was conducted *ca.* 100 meters north of the subject area.

**Current Survey Results.** The proposed plant site and laydown area were surveyed utilizing pedestrian transects. No sites were detected within the plant site or laydown area. An expanded survey corridor did detect one isolated bedrock milling feature (ISO4) on a granite boulder within the perennial Pastoria Creek, outside the project footprint.

#### **5.7.1.12 Route 1-Proposed 230 kV Transmission Line**

**Topography, Soils, and Existing Conditions.** Nearly all of the proposed 230 kV transmission line route (from the plant site to the Pastoria Substation) has a grass cover. Limited geomorphologic windows occur near Edmonston Pumping Plant Road, along the dirt access road for the Pastoria Substation, and in open areas. These isolated exposures are principally due to bioturbation, cattle grazing, and drainage from Pastoria Creek. The component was surveyed by pedestrian transects, and surface visibility rarely exceeded 10 percent within the survey corridor. Ground visibility was generally less than 10 percent. Areas in or immediately adjacent to the Pastoria Creek drainage provided slightly better ground visibility, but on the section south of Edmonston Pumping Plant Road. The terrain is generally gradual with a slight northward trending slope from the base of the Tehachapi Mountains. Soils appear to be mainly sandy Pleistocene alluvium associated with the Pastoria Creek drainage.

**Previous Work.** No prior cultural resource surveys have been conducted on the subject lands and no previously recorded sites are located on the subject lands. Survey KE-00319 (Chavez 1977) was conducted north of this linear component.

The BiCEP Transmission Line report (York *et al.*, 1987) did survey due south of the Pastoria Substation. Two sites (P-15-002185, P-15-002186) were documented during this survey and supplemented later by members of the Kern County Fire Department. The recorders also noted other bedrock milling, albeit not recorded, further north in the Pastoria Creek valley that extends from the base of the Tehachapi into the San Joaquin Valley. Presumably, some of the milling features recorded during the current PEF survey are the same features noted but unrecorded during the BiCEP survey.

**Current Survey Results.** Survey along the proposed 230 kV transmission line (Route 1) detected one archaeological site, TR3. TR3 is located on the western side of Pastoria Creek, just within the limits of the survey corridor. Isolate ISO3 and site TR1 were detected along

the existing transmission line connection between the Pastoria Substation and the Edmonston Substation (due east of Pastoria Creek). This route was surveyed, but it is not part of the currently proposed project. The TR1 site bisects the eastern access road to the Pastoria Substation. TR2 is also located on the eastern side of Pastoria Creek, and hence adjacent to the existing line between the Pastoria Substation and the Edmonston Pumping Plant (i.e., not part of the proposed project).

### **5.7.1.13 Offsite Pipelines**

#### **5.7.1.13.1 Route 2-Proposed Water Supply.**

**Topography, Soils, and Existing Conditions.** Most of the proposed cooling water supply route has a grass cover. Some geomorphologic windows appear near the Pastoria Creek drainage. The component was surveyed by pedestrian transects, and surface visibility never exceeded 10 percent. Overall ground visibility was usually less than 10 percent, excluding the sandy alluvium associated with the creek drainage. The terrain is gradual with a slight northward slope trending from the base of the Tehachapi Mountains. Soils appear to be mainly podsoles and sandy Pleistocene/ Holocene alluvium.

**Previous Work.** No prior cultural resource surveys have been conducted on the subject lands and no previously recorded sites are located on the subject lands.

**Current Survey Results.** The proposed cooling water supply was surveyed by pedestrian transects. No sites were detected within the survey corridor.

#### **5.7.1.13.2 Route 3-Proposed Fuel Gas Pipeline.**

**Topography, Soils, and Existing Conditions.** All of the Route 3 variations (Route 3/3A/3B) cross over varied terrain, and the component was surveyed entirely by pedestrian transects. From R3 MP 0.0 to 5.3, Route 3 is covered in grasslands with less than 10 percent ground visibility. Ground visibility increased near creek beds and drainage areas. The topography consisted entirely of rolling hills.

From R3 MP 5.2 to 6.4, the survey covered active orchard areas, and the topography was flat. Visibility was up to 15 percent, but grass and leave coverage constrained the ground visibility.

R3 MP 6.4 to 8.4 was across the gradual sloping flood plain of El Paso Creek. Grass and tar weed coverage usually permitted only about 15 percent ground visibility. The survey also crossed through active oil fields and ranch lands.

Survey from R3 MP 8.4 to 11.65 was along Sebastian Road (except for the last 0.4 mile). The dirt shoulders on the road provided good ground visibility, but in random sections, either due to recent spraying of pesticides, dense crops, or agricultural row configurations

perpendicular to the direction of survey, corridor coverage was constrained. Areas not currently under cultivation allowed 100 percent ground visibility.

**Previous Work.** Two prior cultural resource surveys (KE-00320, KE-01459) were conducted on sections of the subject lands. No previously recorded sites are located on the subject lands as a result of these surveys.

**Current Survey Results.** Three sites (TR4, TR5, TR6) and one isolate (ISO8) were detected during survey for Route 3. ISO8 was a whole pierced Olivella shell found in the alluvial sands east of El Paso Creek. Site TR4 consists of two granite boulders with milling features. Site TR5 is an extensive bedrock and granite boulder milling complex. The site was surveyed with an expanded corridor. Due to time considerations, the eastern and western limits of the site, well outside the project area, were not recorded. However, it should be noted that other milling areas were observed outside the expanded survey corridor. Given the ideal setting and preponderance of creek-side granite boulders, the site probably extends much farther to the east and west.

Only two surface artifacts were detected (one chert flake and one obsidian tool fragment). Sixty-one boulders with 1-8 milling features each were documented over nearly a 1-km strip. A series of seven shovel tests at three separate foci along the axis of the complex (i.e. east/west) produced one chert flake and one Olivella shell bead. Cattle ranching, some grading activities, and extensive bioturbation due to ground squirrels have all contributed to heavily disturb most of the surface area of the site.

Site TR6 consists of a small bedrock milling locus with four features, each with one milling surface. No surface artifacts were observed during the survey. The site is located near an intermittent drainage, and the landscape is gradually sloping towards the west. Tarweed and grasses dominate the surface.

**5.7.1.13.3 Route 3A-Fuel Gas Pipeline Alternate.** Note: Route 3A includes the route for Route 3 discussed above, but excludes the segment along Sebastian Road (R3 MP 8.4 to 13.85). Topographic descriptions and archaeological sites discussed above, except for the Sebastian Road isolate, are also pertinent to Route 3A. The discussion below will only provide details specific to Route 3A that were not mentioned above.

**Topography, Soils, and Existing Conditions.** From R3A MP 8.27 to R3A 12.0, the topography is primarily low rolling hills and gradual slopes trending to the west. Tarweed and grass dominate the surface, and the ground visibility was never more than 10-15 percent. From R3A MP 12.0 to 13.8 (i.e. the segment that parallels David Road), dirt shoulders on the road provided good ground visibility, but in random sections, either due to recent spraying of pesticides, dense crops, or agricultural row configurations perpendicular to the direction of survey, corridor coverage was constrained. Limited areas not currently under cultivation

allowed 100 percent ground visibility. Some sections of David Road are not paved, and ground visibility in these areas was 100 percent.

**Previous Work.** Survey KE-00641 (McGuire, 1990a) bisected the current survey corridor near the Rancho Road-David Road intersection. No cultural resources were documented within the subject area during this survey.

**Current Survey Results.** Sections of this linear facility pass active oil fields. Therefore, Mr. Chris Hall, the Tejon Ranch oil consultant, was contacted for information regarding the age of specific above-ground oil extraction equipment (Hall, 1999). Mr. Hall indicated that the subject wells and associated pumping equipment were between 30 and 40 years old. Since these are not older than 50 years, and hence cannot yet be considered historically significant, no further research or recordation was required at the subject wells.

Three historic sites (TR7, TR8, TR10) and two historic isolate find spots (ISO6, ISO7) were detected in the survey corridor for Route 3A (sections of Route 3A that are also within Route 3 are described above).

ISO6 and ISO7 consist of historic green glass insulators found in a surface context. These are possibly associated with a telegraph route. No other vestiges of a telegraph or other linear system were detected in the area (i.e. wire, postholes, wooden poles, or fragments thereof). The landscape has been graded in sections, and active cattle ranching occurs on this part of Tejon Ranch.

Site consists of a remnant oil wellhead and an abandoned drill/core bit. Small fragments of iron, wood, and wire were noted near the wellhead. Overall, the site is in a poor state of preservation. There is no clear evidence of an associated concrete pad. The area is covered in tarweed and grass.

Site TR8 consists of a remnant oil wellhead, a concrete wellhead foundation structure, an associated concrete pad, and wooden planks. A dirt berm is located ca. 15 meters east of the wellhead, although it is not clear whether this feature is associated with the wellhead. Overall, site preservation is poor. The general area is covered in tarweed and grass

Site TR10 is at the intersection of David Road and Rancho Road. The site consists of four abandoned and dilapidated ranch houses. One structure was also used as a garage or storage shed. Some of the structures have fittings for electricity (i.e. external meters) and external plumbing.

**5.7.1.13.4 Route 3B-Fuel Gas Pipeline Alternate.** Note: Route 3B includes the route for Route 3 and Route 3A, as discussed above, but excludes the segments that branch west along Sebastian Road (R3 MP 8.4 to 11.65) and David Road (R3A MP 12.0 to 13.8). Topographic descriptions and archaeological sites discussed above, except for the Sebastian Road and

David Road sites, also pertain to Route 3B. The discussion below will only detail the areas specific to Route 3B (i.e. R3B MP 11.9 to 18.5) that are not mentioned above.

**Topography, Soils, and Existing Conditions.** From R3B MP 11.9 to 14.5, the topography is primarily flat along the rim above the Tejon Creek floodplain. Route 3B, in most places, follows the route of the dirt access road along the floodplain rim. Grass dominates the surface, and in most areas the visibility was not more than 10 percent. Scattered tarweed was also present across this area of the survey corridor. Visibility on the dirt road and along the immediate shoulder was 90-100 percent. Pedestrian transect survey was conducted at 20 meter maximum intervals.

The linear crosses topography of low rolling hills and water drainage channels from Tejon Creek and Comanche Point. Most of the soils in this area, especially in the Tejon Creek floodplain and from MP17.3 to 18.5, are sand and sandy alluvium with small gravel. Others areas have a topsoil that is typically a dark 'A' horizon podsol.

**Previous Work.** Two previous surveys, KE-02059 (Love, 1997) and KE-00633 (Macko et al., 1993) have bisected the subject area lands. Both of these surveys were along the historic road previously discussed (P-15-003544). P-15-003544 runs almost perpendicular to the survey corridor, and therefore bisects the APE. Other sites and surveys have been conducted in the general area of the PEF, although these are all outside both the survey corridor and the project APE.

**Current Survey Results.** Two isolate sites (ISO1, ISO2) and one site (TR9) were detected within the survey corridor. ISO1, consisting of a small chert flake, was detected in the Tejon Ranch dirt access road, while ISO2, a metate fragment, was found near the access road on the slope leading down to the floodplain of Tejon Creek.

The TR9 site is situated on a bluff above the Tejon Creek floodplain. The site is *ca.* 25-30 meters from the Tejon Ranch dirt access road, and within the survey corridor. Artifacts documented on the bluff and the slope trending towards the floodplain include fire affected rock, one depleted chert core, mano fragments, metate fragments, and one granite pestle fragment. The area is covered is grass, and surface visibility of the topsoil is less than 15 percent.

Previously recorded site (P-15-003544) [limited to the section that bisects the project footprint], was examined during the PEF survey. Although the historic dirt road bisects the survey corridor, this section of P-15-003544 has been incorporated into the contemporary infrastructure and is heavily used by all-terrain and service vehicles. Fire and numerous recent fence and gate constructions have also compromised the localized integrity of the road.

#### **5.7.1.13.5 Route 4-Wastewater Discharge.**

**Topography, Soils, and Existing Conditions.** Most of the proposed wastewater discharge linear (R4 MP 0.0-1.7) has a grass cover. The component was surveyed by pedestrian transects, and surface visibility never exceeded 15%. Some geomorphological windows appear along the cut banks of the creek drainage and in the area that has been disturbed by backfill dumping. Overall ground visibility was less than 10 percent. The terrain is gradual to flat and the soils appear to be mainly podsoles and sandy Pleistocene alluvium.

**Previous Work.** Survey KE-00319 (Chavez, 1977) was conducted across most of the subject lands for this linear. No previously recorded sites are located on the subject lands.

**Current Survey Results.** The proposed wastewater discharge line was surveyed by pedestrian transects. No sites were detected within the survey corridor.

#### **5.7.1.14 Route 5-Plant Site Access Road**

**Topography, Soils, and Existing Conditions.** This component was surveyed by pedestrian transects. Due to immediate proximity of this component, the proposed plant site, and the proposed laydown area, the entire locality was block surveyed (refer to Figure 5.7-2). All of the proposed access road has a grass cover, and the area has experienced heavy bioturbation from ground squirrels. Some geomorphologic windows appear near the creek drainage. Overall ground visibility was less than 10 percent. The terrain has low to moderate relief with a slight northwesterly slope trending from Edmonston Pump Plant Road. Soils appear to be mainly podsoles and sandy Pleistocene alluvium.

**Previous Work.** No prior cultural resource surveys have been conducted on the subject lands and no previously recorded sites are located on the subject lands. Survey KE-00319 (Chavez, 1977) was conducted *ca.* 1 km north of the subject area.

**Current Survey Results.** Two isolated milling features (ISO9, ISO10) were detected on small granite boulders within an expanded block survey area. No associated cultural materials were noted in nearby soils or the creek alluvium. The expanded survey corridor also detected one isolated bedrock milling feature (ISO4) on a granite boulder in the perennial Pastoria Creek. All of these isolates are outside the project footprint.

### **5.7.2 Environmental Consequences**

**State Level Mandates.** Cultural resources include archaeological and historical objects, sites and districts, historic buildings and structures, cultural landscapes, and sites and resources of concern to local Native American and other ethnic groups. The PEF Cultural Resources Technical Report is consistent with compliance procedures set forth in the California Environmental Quality Act (CEQA), Sections 15064.5 and 15126.4, and, in the case of

Federal involvement, Section 106 of the National Historic Preservation Act (NHPA), set forth at 36 Code of Federal Regulations (CFR) 800 (Forest, 1999).

In considering impact significance under CEQA or NHPA, the significance of the resource itself must first be determined. At the State level, consideration of significance as an “...important archaeological resource” is measured by cultural resource provisions considered under CEQA Sections 15064.5 and 15126.4, and the draft criteria regarding resource eligibility to the California Register of Historic Resources (CRHR).

Generally, under CEQA an historical resource (these include built-environment historic and prehistoric archaeological resources) is considered significant if it meets the criteria for listing on the CRHR. These criteria are set forth in Section 15064.5, and defined as any resource that:

- A. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- B. Is associated with lives of persons important in our past;
- C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- D. Has yielded, or may be likely to yield, information important in prehistory or history.

Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC 5097.98.

Impacts to “unique archaeological resources” and “unique paleontological resources” are also considered under CEQA, as described under PRC 21083.2. A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that—without merely adding to the current body of knowledge—there is a high probability that it meets one of the following criteria:

1. The archaeological artifact, object, or site contains information needed to answer important scientific questions and there is a demonstrable public interest in that information;
2. The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
3. The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

A non-unique archaeological resource indicates an archaeological artifact, object, or site that does not meet the above criteria. Impacts to non-unique archaeological resources and resources which do not qualify for listing on the CRHR receive no further consideration under CEQA.

Under CEQA Section 15064.5, a project potentially would have significant impacts if it would cause substantial adverse change in the significance of:

- An historical resource (i.e. a cultural resource eligible to the CRHR)
- An archaeological resource (defined as a unique archaeological resource which does not meet CRHR criteria)
- A unique paleontological resource or unique geologic feature (i.e. would directly or indirectly destroy a site), or
- Human remains (i.e. would disturb or destroy burials).

A non-unique archaeological or paleontological resource is given no further consideration, other than the simple recording of its existence by the lead agency.

Criteria for eligibility for the CRHR are very similar to those which qualify a property for the NRHP, which is the significance assessment tool used under the NHPA. The criteria of the NRHP apply when a project has federal involvement. Note that a property that is eligible for the NRHP is also eligible to the CRHR. On projects with federal involvement, impacts to significant resources are assessed and addressed under the procedures of Section 106 of the NHPA, set forth at 36 CFR 800.

All resources encountered during the mitigation and monitoring phases of the PEF project, with the exception of isolate artifacts and isolate features that appear to lack integrity or data potential, will be evaluated for significance vis-à-vis CRHR and CEQA criteria described above. If a resource is found to be significant, then it will be subject to avoidance through alterations in project design when feasible. In the event that avoidance of cultural resources is not possible via project design modifications, appropriate mitigation data recovery, in accordance with this report and the CEC, will be conducted.

**Federal Level Mandates.** The legal frameworks for addressing cultural resources at the federal and state level are generally equivalent. The four criteria for evaluation established by the NRHP, listed below, are identified at 36 CFR 60.4 and are in accordance with the regulations outlined in 36 CFR 800 established by the Advisory Council on Historic Preservation (ACHP).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- a) Resources that are associated with events that have made a significant contribution to the broad patterns of our history;
- b) Resources that are associated with the lives of persons significant in our past;
- c) Resources that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d) Resources that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

Hence, these evaluating criteria are used to help determine what properties should be considered for protection from destruction or impairment (36 CFR 60.2).

Although the project is not considered a Federal undertaking at this time, the legal frameworks for addressing cultural resources at the Federal and State level are generally equivalent and are used somewhat interchangeably herein. If a USACE 404 permit is required, compliance with Section 106 of the NHPA may be invoked for those portions of the project subject to such a permit.

As noted above, impacts to identified cultural resources need to be considered only if the resource is an “important” or “unique archaeological resource”, under the provisions of CEQA Sections 15064.5 and 15126.4 and the eligibility criteria, or a “historic property” as defined in the NHPA and its implementing regulations. In many cases, determination of a resource’s eligibility can be made only through extensive research and archaeological testing. To avoid these costly and time-consuming methods, it is recommended that whenever possible, all cultural resources be avoided to the maximum extent feasible.

#### **5.7.2.1 Plant Site and Construction Laydown Areas**

Only one isolate, ISO4, was documented near, but outside, the footprint of the plant site and laydown area. Normally, isolate finds do not qualify as significant under CEQA or the NRHP. In any case, this granitic milling feature is not directly within the project APE, and is not expected to be affected by the PEF construction.

### **5.7.2.2 Route 1-Proposed 230 kV Transmission Line**

Three archaeological sites have been recorded within the general area. TR1 and TR2 are on the eastern side of Pastoria Creek, outside of the survey corridor, and should not be affected by any activities related to the PEF construction (the proposed linear runs in a general north/south direction, *ca.* 300-400 meters west of Pastoria Creek).

TR3 is situated just within the survey corridor and directly adjacent to the Pastoria Substation dirt access road. The site consists of a series of bedrock and boulder milling features, and includes the presence of a quartzite flake and a granite boulder with numerous cupule features that appear to be decorative rather than functional. Based on the extensive nature of the above-ground elements of the site, it appears that this site meets CEQA/NHPA criteria for importance/significance. The nature and extent of potential subsurface components of this site are unknown. The use of the Pastoria Substation dirt access road during construction and unforeseen incursions onto the adjacent field could have the potential to impact portions of both the above ground components as well as potential subsurface components of this site.

### **5.7.2.3 Offsite Pipelines**

**Route 2-Proposed Water Supply Line.** Three isolates (ISO4, ISO9, ISO10), were documented outside the survey corridor for the water supply line. Normally, isolate finds do not qualify for significance under CEQA or the NRHP. In any case, these granitic milling features are not directly within the project APE, and are not expected to be affected by the PEF construction.

**Route 3-Proposed Fuel Gas Pipeline.** Only one isolate, ISO8, an Olivella shell bead, was documented outside the survey corridor of Route 3. Normally, isolate finds do not qualify as significant under CEQA.

Site TR4 is adjacent to the dirt access road for Tejon Ranch and within the survey corridor. The site consists of two boulders with milling features. Although the site does not appear to be extensive, it has not been formally tested to ascertain the nature and extent of potential associated subsurface cultural deposits. As currently configured, it does not appear the surficial features of the site would be directly affected by the PEF construction.

Site TR5 is an extensive milling complex. Based on the areal extent and number of surficial manifestations of milling features, it appears that this site may be eligible for listing on the CRHR/NRHP and thus, meet CEQA/NHPA criteria for significance. The site was subject to a systematic shovel probing program during the field survey in an effort to preliminarily characterize the subsurface component of the site within the survey corridor. The shovel test probes yielded one exposure that contained one Olivella shell bead and one chert flake. The other probes were negative. The project linear follows the dirt access road that cuts directly

through the site. Thus, it appears the current PEF construction plans could impact surface and subsurface elements of the site.

Site TR6 is a small bedrock milling complex recorded within the survey corridor. Although the site does not appear to be extensive, it has not been formally tested to ascertain the nature and extent of potential associated subsurface cultural deposits. As currently configured, it appears the linear for Route 3 would bisect the site.

**Route 3A-Fuel Gas Pipeline Alternate.** In addition to the sites noted above for Route 3 that also pertain to Route 3A, three additional historic sites (TR7, TR8, TR10) and two historic isolates (ISO6, ISO7) were recorded in the survey corridor for Route 3A.

ISO 6 and 7 isolate findspots consist of green glass telegraph insulators. As noted above, typically isolates do not qualify as significant under CEQA or the NRHP.

Site TR7 consists of a remnant oil wellhead and an abandoned drill/core bit. Small fragments of iron, wood, and wire were noted near the wellhead. Overall, the site is in a poor state of preservation, and there is no clear evidence of an associated concrete pad.

The derelict finds may be older than 50 years. However, the site lacks integrity and does not appear to possess those qualities that would make it eligible for listing on the CRHR/NRHP as defined under CEQA Sections 15064.5 and 15126.4 and/or 36 CFR Part 60. The site was formally recorded during the field survey. As currently configured, project construction could affect this site.

Site TR8 consists of a remnant oil wellhead, a concrete wellhead foundation box, an associated concrete pad, and wooden planks. A dirt berm is located *ca.* 15 meters east of the wellhead, although it is not clear whether this feature is associated with the wellhead. Overall site preservation is poor. The site lacks integrity and does not appear to possess those qualities that would make it eligible for listing on the CRHR under CEQA Sections 15064.5 and 15126.4 and/or 36 CFR Part 60. The site was formally recorded during the field survey. As currently configured, project construction could affect this site.

Site TR10 is located at the intersection of David Road and Rancho Road. The site consists of four abandoned and dilapidated ranch houses. One structure appears to have been used as a garage or storage shed. As currently configured, Route 3A will be positioned underground within, or immediately adjacent to, the current paved road and would not affect the structures which would be outside the project APE.

**Route 3B-Fuel Gas Pipeline Alternate.** The sites noted above for Route 3 and Route 3A also apply to Route 3B, excluding the sites and isolates on the Sebastian Road and David Road segments (site TR10 and isolate ISO8). Two isolate sites (ISO1, ISO2) and two sites

(TR9 and previously recorded site P-15-003544) were found within the survey corridor for Route 3B.

ISO1 is a chert flake recorded and ISO2 is a metate fragment. As isolates, these finds do not qualify as significant under CEQA or the NRHP.

Site TR9 site is situated on a bluff above the Tejon Creek floodplain. The site is *ca.* 25-30 meters east of the Tejon Ranch dirt access road, and is located within the survey corridor. Artifacts documented include fire affected rock, one depleted chert core, mano fragments, metate fragments, and one granite pestle fragment. The site has not been subjected to subsurface testing to ascertain the nature and extent of any potential cultural subsurface deposits. Use of the dirt access road during construction, unforeseen incursions onto the adjacent bluff, and the subsurface excavations for the pipeline, could have the potential to impact portions of the site.

Site P-15-003544, an historic road, bisects the survey corridor. The road was used in the mid to late 1800s for herding sheep between winter grazing/spring lambing pastures in the San Joaquin Valley and the summer pastures in the Tehachapi, Brite, Cummings and Bear Valleys. Most of the road is unmodified, although a few small sections have been paved. The road also connects through to Jack's Camp – named after a Basque shepherd named Jacques Rodinette who worked livestock in the area between 1873 and 1904. This section of the road has been incorporated into the contemporary infrastructure and is heavily used by all-terrain and ranch service vehicles. Fire and numerous recent fence and gate constructions have also compromised the localized integrity of the road.

**Route 4-Proposed Wastewater Discharge Line.** No archaeological resources were observed along the survey corridor. It does not appear any known cultural resources would be affected by construction of this project component.

**Route 5-Plant Site Access Road.** Three isolates (ISO4, ISO9 and ISO10) were documented near, but outside, the survey corridor for the plant site access road. Normally, isolate finds do not qualify as significant under CEQA or the NRHP. In any case, these granitic milling features do not appear to be directly within the project APE, and should not be affected by the PEF construction.

#### **5.7.2.4 Indirect and Cumulative Impacts**

The construction, operation and maintenance of the Pastoria Energy Facility are not expected to result in significant new indirect impacts to the cultural resource base. As described above construction-related activities could result in impacts to some cultural resource sites. Mitigation for such impacts is detailed below in Section 5.7.3. Previously undiscovered cultural resources could also be affected by construction-related activities. Provisions for such an occurrence are provided in Section 5.7.3.2. A program of workforce education prior

to project construction and archaeological monitoring/sensitive area demarcation during construction will ensure that indirect impacts from looting or inadvertent disturbance by construction equipment will be avoided. These programs are described below in Section 5.7.3 and will also be detailed in a forthcoming mitigation and monitoring plan and workforce education plan.

The operation and maintenance phases of the Pastoria Energy Facility would be confined to those project areas already subject to mitigation measures described in Section 5.7.3. These phases of the project will not require new disturbance outside the footprint already addressed. The workforce education program will also apply to crews responsible for the operation and maintenance phases of the project. Key points in the program will include the strict prohibition against collection or disturbance of any cultural resource site, and protocols set forth for the notification of appropriate personnel in the event of a discovery of a previously unidentified cultural resource locus.

Section 5.18 describes past, present and reasonably foreseeable projects that could affect the same resources as the Pastoria Energy Facility. Cumulative impacts from the Pastoria Energy Facility on the regional cultural resource base are limited because implementation of the mitigation measures proposed below for cultural resources will reduce project-related impacts to a less than significant level. The cultural resource sites identified for this project appear to derive their potential significance from their potential to yield information important in prehistory. Data recovery at significant sites and/or site avoidance ensures that the information content of significant cultural resource sites will be retained, and thus, limits the contribution of cumulative impacts of the Pastoria Energy Facility on the regional cultural resources base for this project.

### **5.7.3 Mitigation**

#### **5.7.3.1 Mitigation of Construction Related Impacts**

Mitigation under CEQA Sections 15064.5 and 15126.4 must address impacts *to the values* for which a cultural resource is considered important. To mitigate adequately, it must therefore be determined what elements make a site eligible for the CRHR and/or NRHP. As noted previously and detailed below, the first line of mitigation is complete avoidance of all cultural resources when feasible.

Measures to ensure avoidance of sites within the corridors, and measures to avoid indirect impacts to nearby sites are described below.

The mitigation measures and procedures described below would apply to any cultural resources in the project corridor, other than isolates, or sites recommended as not significant and concurred with by the CEC, regardless of facility component.

**CULT-1. Avoidance.** Transmission towers and ancillary facilities will be located at the greatest possible distance from any recorded cultural resource not previously found to be ineligible for inclusion on the CRHR. As needed, an archaeologist will accompany the project engineer to the field to demarcate site boundaries on the ground and to ensure that proposed facility placement will not impinge on a site. Routes of any roads that must be built or graded outside areas not already surveyed for cultural resources will be subjected to archaeological survey prior to construction. If a potentially significant cultural resource is discovered, the road route will be modified to avoid it. If there is no feasible means to avoid the resource, the site will be tested and if found to be significant, the measures for mitigation described below will be applied. These will be done in consultation with the California Energy Commission, which is the lead regulatory agency.

**CULT-2. Physical Demarcation and Protection.** In instances where a tower, road or ancillary facility must be placed within 100 feet of a known site not previously found to be ineligible for inclusion on the CRHR, the site will be temporarily fenced or otherwise demarcated on the ground, and the area will be designated environmentally sensitive. Construction equipment will be directed away from the site, and construction personnel will be directed to avoid entering the area. Where site boundaries are unknown, the protected area will include a buffer zone with a 100-foot radius. In some cases, additional archaeological work may be required to demarcate the boundaries of the site, in order to ascertain whether the site can be avoided.

**CULT-3. Crew Education.** Prior to the beginning of construction of any increment of work near any sensitive cultural resource, the construction crew will be informed of the resource values involved and of the regulatory protections afforded those resources. The crew will also be informed of procedures relating to designated culturally sensitive areas, and cautioned not to drive into these areas or to park or operate construction equipment in these areas. The crew will be cautioned not to collect artifacts, and asked to inform a construction supervisor in the event that cultural remains are uncovered.

**CULT-4. Archaeological Monitoring.** All initial grading or excavation within 100 feet of any potentially significant resource that may have a subsurface component will be monitored by an archaeologist. If subsurface materials are uncovered, construction work in the immediate vicinity will be halted and the emergency discovery procedures described below will be implemented.

**CULT-5. Native American Monitoring.** In order to ensure participation by interested members of the Native American community, it is recommended that a Native American monitor be present during archaeological site testing and/or data recovery operations at archaeological sites that appear to have a prehistoric or ethnographic component. The monitor will be retained either directly by the project applicant, or through the subconsultant conducting the actual fieldwork.

**CULT-6. Formal Compliance with CEQA Sections 15064.5 and 15126.4.** In the event that a resource cannot be avoided during the placement of a transmission tower, pipeline, or other facility, further archaeological work will be undertaken as appropriate to assess the significance/importance of the resource prior to project implementation.

#### **5.7.3.2 Mitigation For Resources Discovered During Construction**

If unanticipated resources are discovered during construction, they will be addressed under the procedures set forth at CEQA Section 15064.5.

**CULT-7.** If possible, the resource will be avoided through design modification, or protective measures as described above. If the resource cannot be avoided, the project archaeologist will consult with the California Energy Commission and the lead federal agency (if there is Federal involvement) with regard to resource significance. If it is determined that the resource is significant, measures to mitigate impacts will be devised in consultation with the CEC (and possibly the lead federal agency and SHPO), and will be carried out by the Applicant.

#### **5.7.3.3 Protection of Resources During PEF Operation and Maintenance**

Emergency maintenance and repair, and routine inspection (if the transmission line or fuel gas pipeline corridors are driven) have the potential to cause impacts to cultural resources within the corridor.

**CULT-8.** In devising specific mitigation measures to address impacts for any site which cannot be avoided during construction, it will be considered that there is a potential for on-going impacts to any resource which could not be avoided through project design. Any mitigative data recovery shall be adequately scoped, in conjunction with the regulatory agency(s), to address potential long-term on-going impacts. In addition, crews and vehicles engaged in operation and maintenance will, as project policy, confine activities to the greatest possible extent to existing roads, or will perform inspections by air or on foot.

#### **5.7.4 Specific Mitigation Measures**

General mitigation measures have been described above. Specific actions recommended at each project facility are described below.

##### **5.7.4.1 Plant Site and Construction Laydown Areas**

It is recommended that an archaeological monitor be present to periodically inspect initial grading and excavation activity. No additional mitigation measures are required in these locations unless previously undiscovered cultural resources are detected during construction.

#### **5.7.4.2 Route 1-Proposed 230 kV Transmission Line**

It appears that site TR3 is the only known site that could be potentially affected by construction activities associated with this project component. It is assumed careful tower placement and use of the existing access road can avoid the surface manifestations of TR3. The project applicant will work closely with the archaeologists to avoid tower placement on known manifestations of the site features. It is unknown whether TR3 harbors a subsurface component. It is recommended that:

1. A focused archaeological testing program be undertaken to determine the nature and extent of subsurface cultural deposits within the project APE (tower locations and areas of new road construction).
2. If subsurface deposits are present within the APE, found to be significant and cannot be avoided, then the site should be subject to a targeted data recovery program developed in concert with the CEC and implemented to reduce significant impacts to a less than significant level.
3. A Native American monitor should be present during the testing and possible data recovery program.
4. During construction an archaeological monitor should be present between MP 0.9 and 1.1 to ensure surface manifestations of TR3 are not disturbed.

#### **5.7.4.3 Offsite Pipelines**

**Route 2-Proposed Water Supply Line.** It is recommended that an archaeological monitor be present to periodically inspect initial grading and excavation activity. No additional mitigation measures are required along this linear component unless previously undiscovered cultural resources are detected during construction.

**Route 3-Fuel Gas Pipeline.** Only one isolate, ISO8, an Olivella shell bead, was documented near the survey corridor of Route 3 near MP 11.5. Normally, isolate finds do not qualify as significant under CEQA. It is recommended that an archaeological monitor be present during construction between MP 11.4 and 11.6 in the event that subsurface cultural deposits are encountered.

Site TR4 consists of two granite boulders with milling features. As currently configured, it does not appear the surface features of this site would be impacted by the construction activities. It is unknown whether TR4 harbors a subsurface component. The following mitigation measures are recommended if the pipeline cannot be re-routed to clearly avoid the site:

1. It is recommended that a focused archaeological testing program be undertaken to determine the nature and extent of subsurface cultural deposits within the project APE.
2. If subsurface deposits are present within the APE, found to be significant and cannot be avoided, then the site should be subject to a targeted data recovery program developed in concert with the CEC (and other agencies as appropriate) and implemented to reduce significant impacts to a less than significant level.
3. A Native American monitor should be present during the testing and possible data recovery program.
4. During construction an archaeological monitor should be present between MP 4.0 and 4.3 to ensure surface manifestations of TR4 are not disturbed.

Site TR5 is an extensive milling complex manifesting numerous bedrock and boulder mortars. A systematic shovel probe program suggests that there is subsurface deposition in at least some portion of the site. Based on the current project configuration which has the fuel gas pipeline bisecting the site (via the existing dirt road), the following mitigation measures are recommended.

If the project linear cannot be re-routed around this site (note: this does not appear possible, as the site axis is perpendicular to the route and is more than 1 km in length), then:

1. A series of test units should be excavated along the exact route of the pipeline to determine if any cultural resources along this course are significant.
2. If the subsurface evidence indicates that this portion of the site contains culturally significant deposits, and the project cannot be re-routed, a data recovery program should be developed in concert with the CEC (and other agencies as appropriate) and implemented to reduce significant impacts to a less than significant level.
3. A Native American monitor should be present during the testing and data recovery program (if required).
4. If sub-surface testing reveals that the route of the pipeline will not impact significant subsurface cultural resources, it still appears that, examined as a whole, site TR5 may be eligible for the CRHR and/or NRHP. For this reason, continuous archaeological monitoring between MP 6.4 and 6.7 is recommended during construction.

Site TR6 is a small milling area. As currently envisioned, the fuel gas pipeline route runs through or immediately adjacent to the site. If the project linear cannot be re-routed to clearly avoid this site, then the mitigation measures described below are recommended:

1. A series of test units should be excavated along the exact route of the pipeline to determine if any subsurface cultural resources along this course are significant.
2. If the subsurface evidence indicates that this portion of the site is significant, and the project cannot be re-routed, then a data recovery program should be developed in concert with the CEC (and other agencies as appropriate) and implemented to reduce significant impacts to a less than significant level.
3. A Native American monitor should be present during the testing and data recovery program (if required).
4. Regardless of the outcome of the testing and possible data recovery program it is recommended that an archaeological monitor be present between MP 7.75 and 8.05 during construction to ensure that no surface manifestations of the site are disturbed during construction and/or appropriate treatment in the event of discovery of previously unknown subsurface deposits.

**Route 3A-Fuel Gas Pipeline Alternate.** The remnant wellheads, sites TR7 and TR8, appear to lack integrity and do not appear to qualify for the CRHR or NRHP. However, if it appears that either of these sites will be physically impacted by project construction it is recommended that additional archival research be conducted on these two sites and the site records augmented as appropriate. If it is found that either of the sites, based on this research, appears to be eligible to the CRHR and/or NRHP – and the CEC (and other agencies as appropriate) concurs with this finding – it is recommended that the pipeline be adjusted to avoid the site(s).

Site TR10 consists of four structures possibly related to an historic ranch. The houses are set back at least five meters from both David Road and Rancho Road. The structures are built environment features within the survey corridor, but as currently configured they will not be affected by project construction and are considered outside the project APE. It is anticipated that there will be no impacts to the structures. However, archaeological monitoring is recommended in the vicinity of these structures to avoid any impacts to significant, or potentially significant, elements of the site. If project requirements will result in physically impacting the structures or altering their setting, the site should be subject to formal evaluation by a qualified architectural historian. If the site is found to be significant, a program of mitigation should be developed in concert with the CEC (and other agencies as appropriate) and implemented prior to project construction.

Intermittent archaeological monitoring is recommended along the remainder of the route during initial excavation and grading activity.

**Route 3B-Fuel Gas Pipeline Alternate.** Site TR9 has surface evidence of milling and other specialized cultural activities. As currently configured it appears the fuel gas pipeline route

will pass within a few meters of the site (via the existing dirt road). If the line cannot be re-routed to clearly avoid the site, the following mitigation measures are recommended:

1. A series of test units should be excavated along the route of the pipeline in the vicinity of the site to determine if any significant subsurface cultural resources are present.
2. If the subsurface evidence indicates that this site is significant, and the project cannot be re-routed, then a data recovery program should be developed in concert with the CEC and implemented to reduce significant impacts to a less than significant level.
3. A Native American monitor should be present during the testing and data recovery program (if required).
4. Regardless of the outcome of the testing and possible data recovery program, it is recommended that an archaeological monitor be present between MP 13.3 and 13.55 during construction to ensure that surface manifestations of the site not included in the testing/data recovery program are not disturbed during construction and/or appropriate treatment in the event of a discovery of previously unknown subsurface deposits.

Previously recorded site P-15-003544, an historic road that bisects Alternate 1B, does not appear to require any mitigation. Although the feature bisects the survey corridor, this section has been incorporated into the contemporary infrastructure and is heavily used by all-terrain and service vehicles. Fire and numerous recent fence and gate constructions have also compromised the localized integrity of the road.

Intermittent archaeological monitoring it is recommended along the remainder of the route during initial excavation and grading activity.

**Route 4-Proposed Wastewater Discharge.** It is recommended that an archaeological monitor be present to periodically inspect initial grading and excavation activity. No additional mitigation measures are required in this location unless previously undiscovered cultural resources are detected during construction.

#### **5.7.4.4 Route 5-Plant Site Access Road**

It is recommended that an archaeological monitor be present to periodically inspect initial grading and excavation activity, and should specifically be present during activities near the ISO9 or ISO10 findspots. No additional mitigation measures are required in this location, unless previously undiscovered cultural resources are detected during construction.

With implementation of the mitigation measures specified above, no significant unavoidable adverse impacts to cultural resources would be expected to occur. Implementation of the specific mitigation measures described above in Section 5.7.4 will reduce potential significant adverse impacts to a less than significant level.

### **5.7.5 LORS Compliance**

The archaeological survey described above served to identify cultural resources present within the areas subject to survey. Any site potentially affected by the project will be subject to compliance with the provisions outlined in CEQA/CRHR and/or the implementing regulations of Section 106 of the NHPA as appropriate. If a site is found to occur within the project APE, a program of site evaluation will be undertaken to ascertain site significance under Section 106 of the NHPA and/or CEQA/CRHR as appropriate. If a site is determined to be significant and cannot be avoided, mitigation measures will be developed in concert with the CEC and other agencies as appropriate

The applicant is committed to site avoidance where feasible, thus alleviating the need for data recovery programs. Specific mitigation measures have been outlined in Section 5.7.4. It is estimated the initial testing/evaluation program can be accomplished in a four month period. If avoidance of a site found to be significant is not possible, formal compliance with Section 106 of the NHPA and/or CEQA/CRHR could require an additional six to twelve months to complete formal determinations of eligibility and effect (for sites subject to Federal review) and for formalizing mitigation agreements. Such actions will be completed to ensure compliance with cultural resources LORS prior to construction. Compliance with applicable LORS is also discussed in Section 7.0

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**TABLE 5.7-1****PREVIOUS SURVEYS WITHIN 0.5 MILE OF THE STUDY AREA**

<b>Reference/Survey Number</b>	<b>Reference Summary</b>
McGuire (1990a) [KE-00641]	The report details the results of an extensive cultural resources inventory and initial evaluation of a 387-mile proposed natural gas pipeline corridor traversing Kern, San Bernardino, and Mojave Counties. No sites were documented within the project study area.
Schiffman (1995) [KE-01459]	The report documents an archaeological field survey conducted for the Tehachapi-Cummings County Water District, for a natural gas pipeline for a water importation project. No sites were documented within the project study area.
Strudwick <i>et al.</i> (1995) [KE-00949] Uli (1988) [KE-01722]	A cursory ‘windshield’ survey to determine the presence of cultural resources and the extent of previous archaeological survey. No cultural resources were documented during this project. A cultural resources inventory of a proposed 55 acre compost project. No cultural resources were documented during this project.
Fleagle (1995) [KE-00391]	An archaeological assessment for the Mojave Pipeline Operating Company for the Tehachapi Cummings Meter Station and access easement (south of Arvin, Kern County). No archaeological sites or isolated artifacts were documented during this survey.
Chavez (1977) [KE-00319]	A cultural resources assessment for the Department of Navy for the development of petroleum tank sites at Coalinga, Elk Hills, Port Hueneme, and Redlands, including the installation of a 6’’ pipeline. Although this survey inspected some of the terrain near and possibly within the PEF APE (i.e. northwest of the Edmonston Pumping Station), no archaeological resources were reported (Chavez 1977: 5, 7-9).
Chavez (1978) [KE-00320]	The project consisted of a tank farm facility at the Naval Petroleum Reserve No. 1 (Elk Hills) in Kern Count, CA, with a 186 mile long pipeline running from Elk hills to the proposed Rialto Tank Farm. This pedestrian survey was associated with KE-00319. Transects from this survey passed through the PEF project area, no archaeological resources were detected within the APE or adjacent areas.
Clay and Haus (1990) [KE-00254]	A cancelled project to construct natural gas pipelines for PG&E. The survey did not cross over any of the proposed PEF project area.
Love (1997) [KE-02059]	A cultural resources study on the proposed right-of-way for a fiberoptic line from Bakersfield, Kern County, to Rialto, San Bernardino County, CA. The project included intensive survey and general field reconnaissance. No sites were detected within or adjacent to the PEF project area.
Macko <i>et al.</i> (1993) [KE-00633]	A field survey and National Register eligibility recommendations for sites within the project APE. Site P-15-003544 was preliminarily recommended for non-eligibility on the National Register. This site consists of an historic road that traverses the Tehachapis and leads in the San Joaquin Valley. The road (site) bisects Alternate 2 of the PEF.
York <i>et al.</i> (1987) [FR-00824]	A field survey for the BICEP transmission Project. The report includes archaeological, ethnological, historical, and paleontological investigations, results, and summaries.
McGuire (1990b) [KE-00643]	A field survey associated with the proposed Mojave Pipeline Corridor, primary route El Dorado, in Kern County. Pedestrian survey.

**TABLE 5.7-2**

**PREVIOUSLY RECORDED SITES WITHIN 0.5 MILE RADIUS OF THE STUDY AREA**

<b>Survey No.</b>	<b>Site No.</b>	<b>USGS 7.5' Quad/ Project Segment</b>	<b>Site Type</b>	<b>Primary Reference</b>	<b>Type of Investigation</b>	<b>Status</b>
FR-00824	P-15-002185	Pastoria Creek/ Route 1	prehistoric	1987 Wirth Environmental Services	survey	5
FR-00824	P-15-002186	Pastoria Creek/ Route 1	prehistoric	1987 Wirth Environmental Services	survey	5
KE-00633	P-15-003544	Arvin, Calif./ Route 3B	historic	1993 Macko, M. <i>et al.</i>	survey	1
-	P-15-001095	Arvin, Calif./ Route 3B	prehistoric	G. L. Fenega (1977) [site recorder]	survey	5
na	P-15-000288	Arvin, Calif./ Route 3B	prehistoric	J. Jones (1969) [site recorder]	survey	5
na	P-15-000289	Arvin, Calif./ Route 3B	prehistoric	J. Jones (1969) [site recorder]	survey	5
na	P-15-000290	Arvin, Calif./ Route 3B	prehistoric	J. Jones (1969) [site recorder]	survey	5
na	P-15-000291	Arvin, Calif./ Route 3B	prehistoric	J. Jones (1969) [site recorder]	survey	5
na	P-15-000293	Arvin, Calif./ Route 3B	prehistoric	J. Jones (1969) [site recorder]	survey	5

- 1) recommended ineligible in report, no formal determination
- 2) formally determined eligible
- 3) formally determined ineligible
- 4) unknown
- 5) not evaluated.

**TABLE 5.7-3**

**SURVEY COVERAGE BY PROJECT COMPONENT AND FIELD CONDITIONS**

<b>Project Component</b>	<b>Mile Post</b>	<b>Field Conditions</b>	<b>Comments</b>
Route 1 (from Plant Site to Pastoria Substation)	0.0 to 1.38	0-10 percent ground visibility; grass coverage throughout most of the survey corridor	20 m wide spacing between survey transects
Plant Site and Construction Laydown Area	55 +/- acres	0-10 percent ground visibility; grass coverage throughout most of the survey corridor	20 m wide spacing between survey transects
Route 2	0.0 to 0.85	0-15 percent ground visibility; grass coverage throughout most of the survey corridor, southern section had some areas with topsoil exposure	20 m wide spacing between survey transects
Route 4	0.0 to 1.7	0-15 percent ground visibility; grass coverage throughout most of the survey corridor, scattered sections had some topsoil exposure, creek bed area had good visibility.	20 m wide spacing between survey transects
Route 5	0.0 to 0.85	0-10 percent ground visibility; grass coverage throughout most of the survey corridor	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3	R3 0.0 to 5.2	0-15 percent ground visibility; grass coverage throughout most of the survey corridor, scattered sections had some topsoil exposure, creek bed areas had better visibility, some areas immediately adjacent to the existing dirt road had ground exposure.	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3	R3 5.2 to 6.4	0-15 percent ground visibility; soil exposure on the shoulder of the paved road, between pistachio trees in the orchards, and in limited fallow areas.	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3	R3 6.4 to 8.4	0-15 percent ground visibility; grass and tarweed coverage throughout most of the survey corridor, scattered sections had topsoil exposure, drainage areas had better visibility, some areas immediately adjacent to the existing dirt road had ground exposure.	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3	R3 8.4 to 11.2	Sebastian Road segment had soil exposure on the shoulder of the paved road, between orchard/ vineyard rows, and in fallow fields. Some sections of vineyard areas not surveyed due to fresh pesticide warnings and crop density.	20 m wide spacing between survey transects

**TABLE 5.7-3****(Continued)**

<b>Project Component</b>	<b>Mile Post</b>	<b>Field Conditions</b>	<b>Comments</b>
Fuel Gas Pipeline: Route 3	R3 11.2 to 11.65	95-100% visibility on north segment, from Sebastian Road to Fuel Gas Tie-in Point. Area is mostly sandy alluvium and fallow/recently plowed fields.	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3A (Route 3, as discussed above excluding Sebastian Road, with 'A' extension to David Road)	R3A 8.27 to 12.0	0-10 percent ground visibility; grass coverage throughout most of the survey corridor, some areas immediately adjacent to the existing dirt road had ground exposure.	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3A	R3A 12.0 to 13.8	David Road segment had soil exposures on the shoulder of the paved road, between orchard/ vineyard rows, and in fallow fields. Good visibility on unpaved sections of David Road. Survey constrained by active agriculture in limited areas adjacent to David Road.	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3B (excluding Sebastian Road and David Road segments)	R3B 12.0 to 15.0	0-15 % ground visibility in most areas due to grass surface cover, 0-40 % in the northern areas of Tejon Creek floodplain and areas adjacent to the existing dirt road.	20 m wide spacing between survey transects
Fuel Gas Pipeline: Route 3B	R3B 15.0 to 18.5	0-35 % ground visibility due to recent grass fire, presence of sandy alluvium, dispersed surface vegetation, or exposures from slope wash.	20 m wide spacing between survey transects

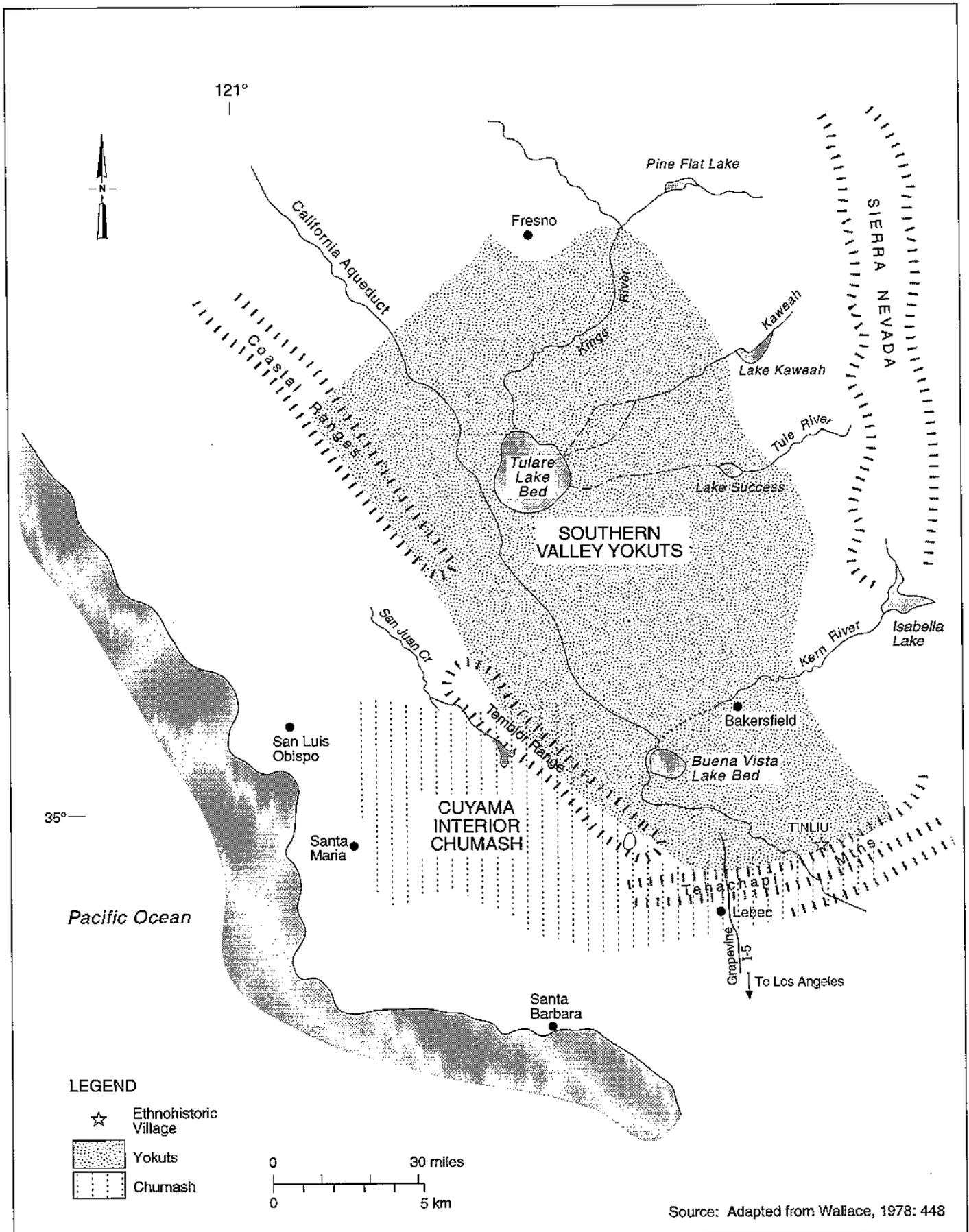
**TABLE 5.7-4****NEWLY RECORDED ISOLATES WITHIN 0.5 MILE RADIUS OF THE STUDY AREA**

<b>Site No.</b>	<b>USGS 7.5' Quad</b>	<b>Project Component</b>	<b>Site Type</b>	<b>Resources Present</b>	<b>Status</b>
ISO1	Arvin	Route 3B	prehistoric	Chert flake	Within survey corridor
ISO2	Tejon Hills	Route 3B	prehistoric	Metate fragment	Within survey corridor
ISO3 <sup>1</sup>	Tejon Hills	Route 1	prehistoric	Mano	Segment dropped from final project description
ISO4	Pastoria Creek	Route 2	prehistoric	Isolated BRM feature in Pastoria Creek bed	Within block survey corridor
ISO5 <sup>1</sup>	Tejon Hills	Route 3A	historic	Glass telegraph insulator	Segment dropped from final project description
ISO6	Tejon Hills	Route3A	historic	Glass telegraph insulators	Within survey corridor
ISO7	Tejon Hills	Route 3A	historic	Glass telegraph insulators	Within survey corridor
ISO8	Tejon Hills	Route 3	prehistoric	Pierced, whole Olivella shell	Within survey corridor
ISO9	Pastoria Creek	Route 5	prehistoric	Isolated milling feature (slick) on small granite boulder	Within block survey corridor
ISO10	Pastoria Creek	Route 5	prehistoric	Isolated milling feature (cupule) on granite outcrop	Within block survey corridor

<sup>1</sup> Find was recorded within or near a project component that has been dropped from the final project description.

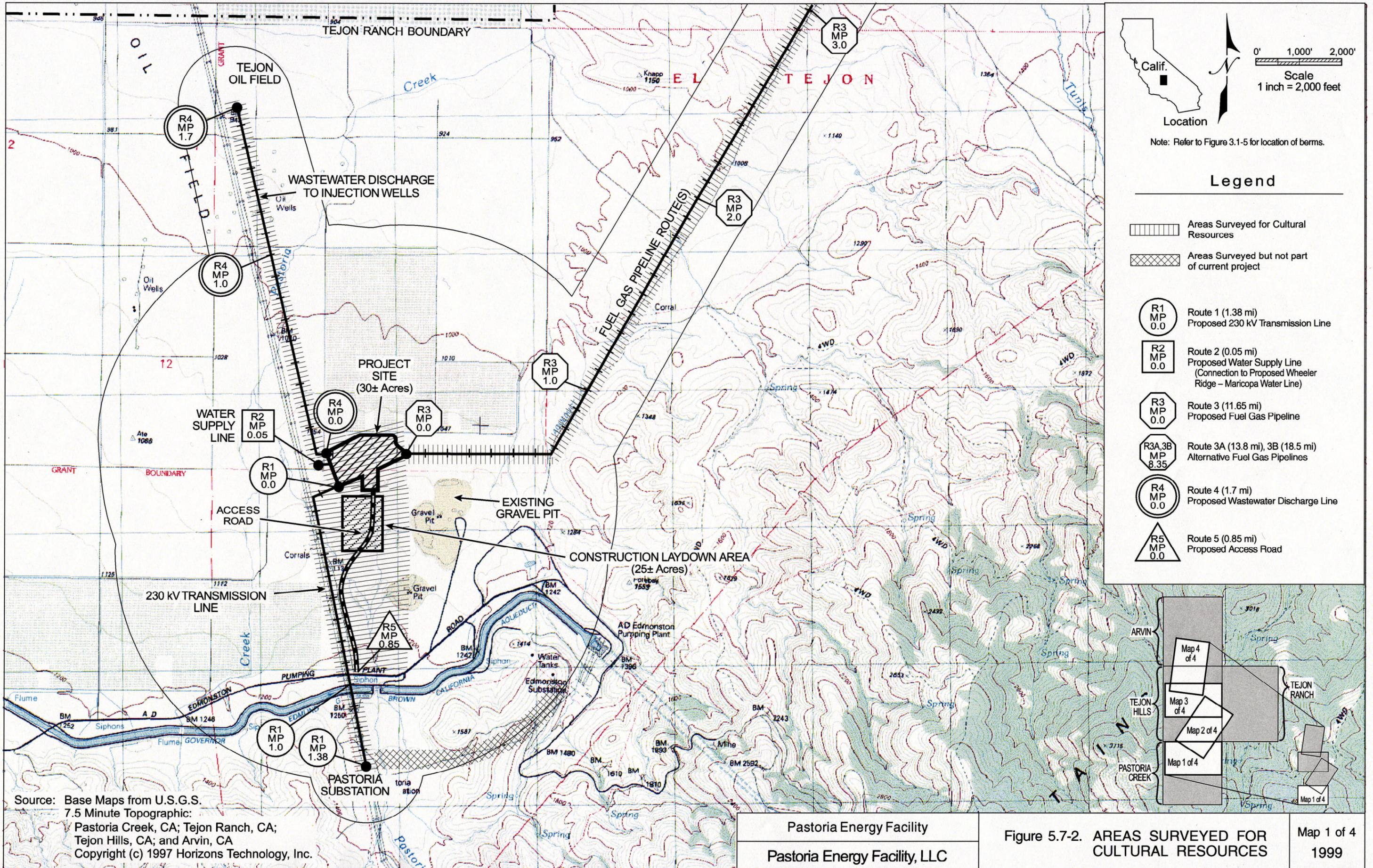
**TABLE 5.7-5****NEWLY RECORDED SITES WITHIN 0.5 MILE RADIUS OF THE STUDY AREA**

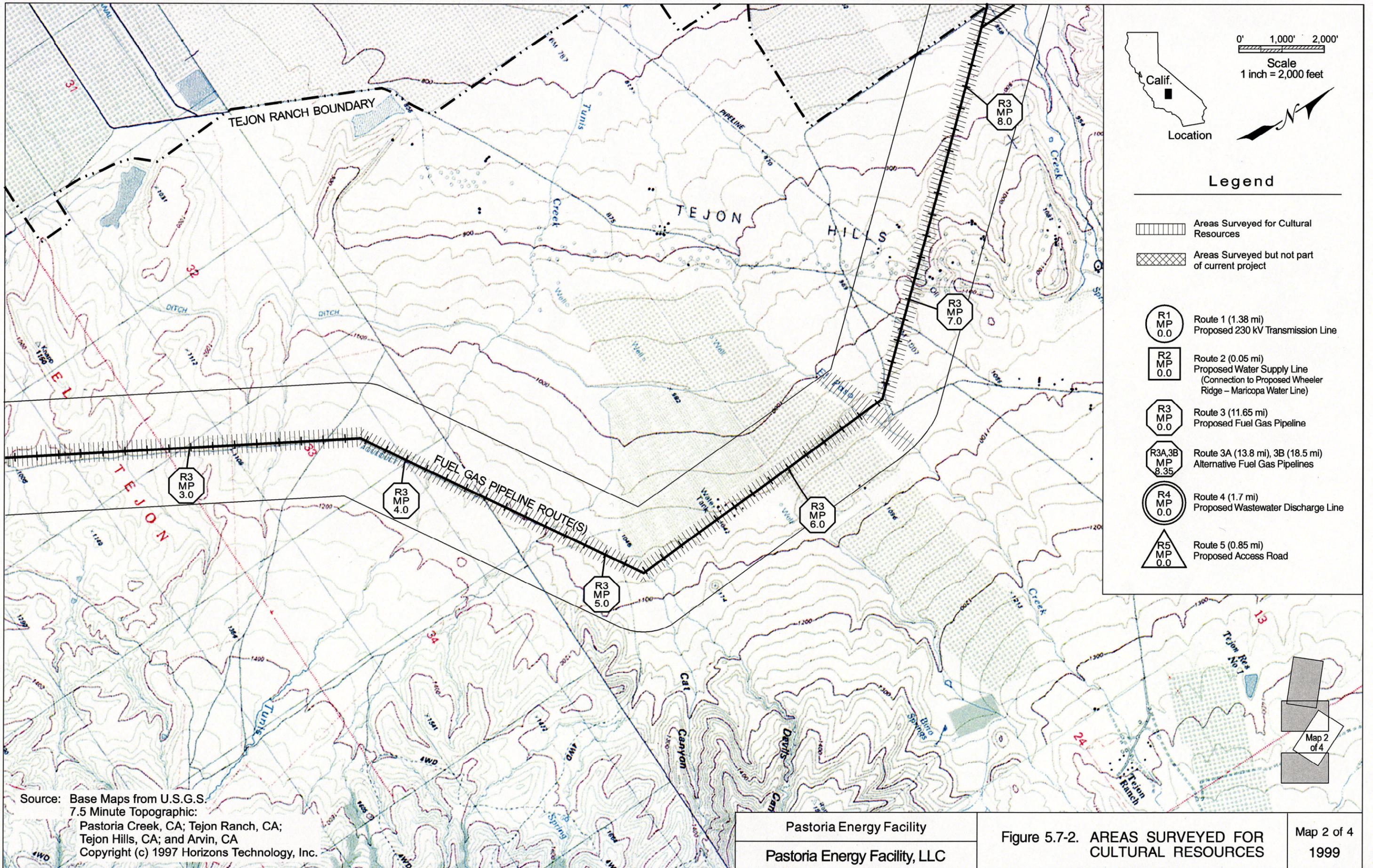
<b>Site No.</b>	<b>USGS 7.5' Quad</b>	<b>Project Component</b>	<b>Site Type</b>	<b>Resources Present</b>	<b>Status</b>
TR1	Pastoria Creek	Route 1	prehistoric	Bedrock milling locus on granite boulders and bedrock outcrops.	Segment dropped from final project description
TR2	Pastoria Creek	Route 1	prehistoric	Series of milling features on granite boulders and bedrock next to Pastoria Creek.	Outside the survey corridor
TR3	Pastoria Creek	Route 1	prehistoric	Bedrock milling complex associated with a cupule rock next to Pastoria Creek.	Within the survey corridor
TR4	Pastoria Creek	Route 3/3A/3B	prehistoric	Milling features on two granite boulders next to Tunis Creek	Within the survey corridor
TR5	Tejon Hills	Route 3/3A/3B	prehistoric	Extensive bedrock and boulder milling complex (site > 1.0 km) along El Paso Creek	Within the survey corridor
TR6	Tejon Hills	Route 3/3A/3B	prehistoric	Small milling locus near seasonal drainage.	Within survey corridor
TR7	Tejon Hills	Route 3A/3B	historic	Remnants of a capped oil well and an abandoned drilling bit.	Within survey corridor, very poor site/feature integrity
TR8	Tejon Hills	Route 3A/3B	historic	Remnants of a capped oil well, concrete pad, concrete wellhead structure, and a dirt berm.	Within survey corridor, very poor site/feature integrity
TR9	Tejon Hills	Route 3B	prehistoric	Site consists of metate, pestle, mano fragments, depleted chert cores, and fire affected rock above Tejon Creek	Within the survey corridor, adjacent to dirt access road
TR10	Tejon Hills	Route 3/3A	historic	Four abandoned historic (probable) ranch houses at the intersection of David Road and Rancho Road	Within the survey corridor, abandoned and in poor state of preservation

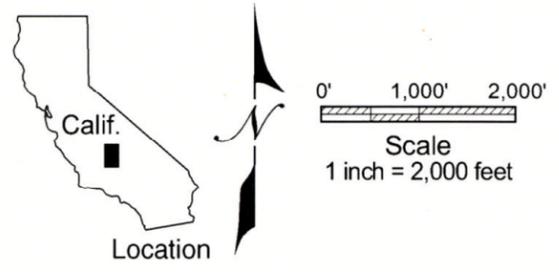
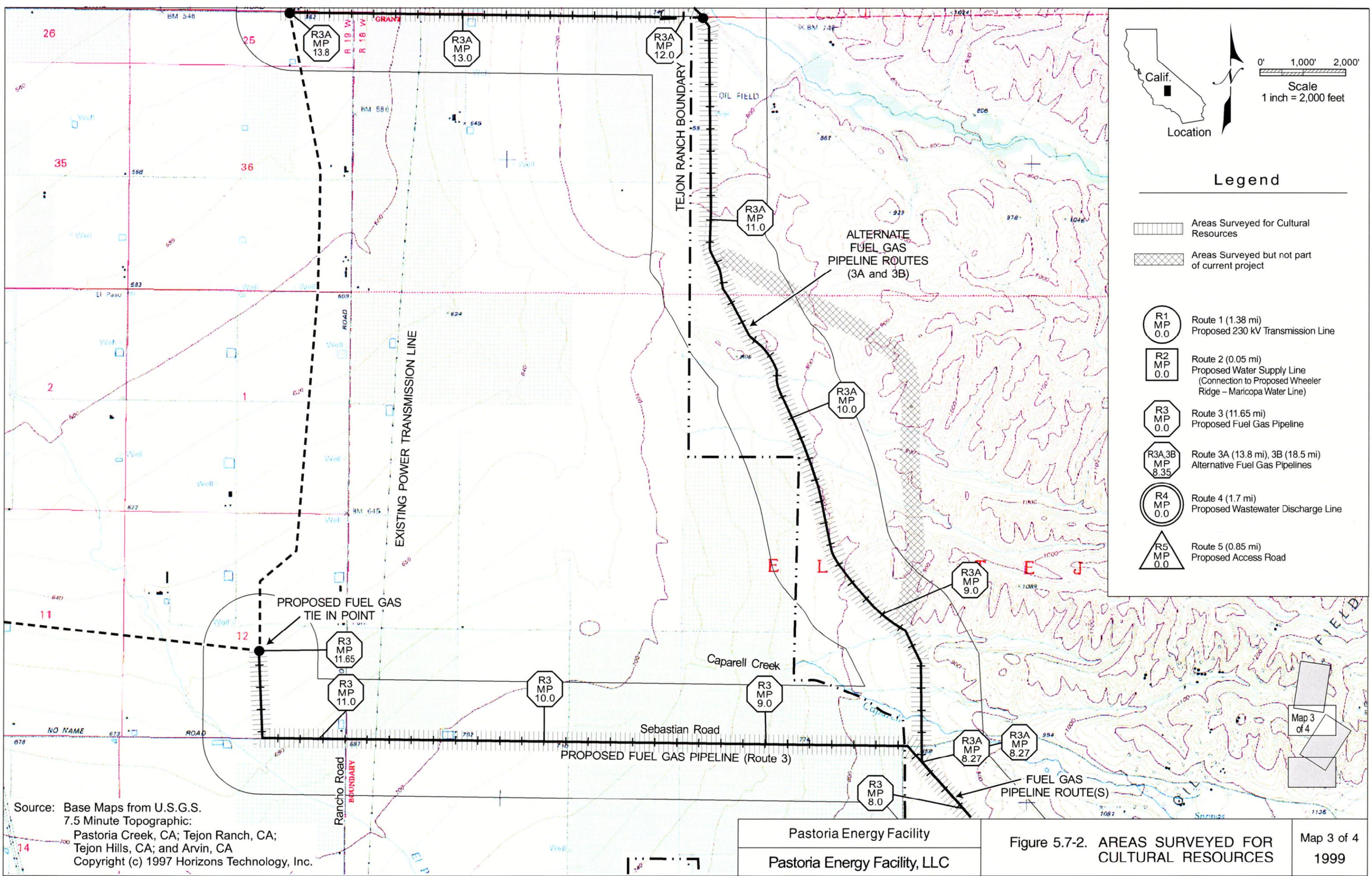


Source: Adapted from Wallace, 1978: 448

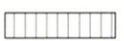
Pastoria Energy Facility	Figure 5.7-1. INTERIOR CHUMASH AND SOUTHERN VALLEY YOKUTS	1999
Pastoria-Energy Facility, LLC		







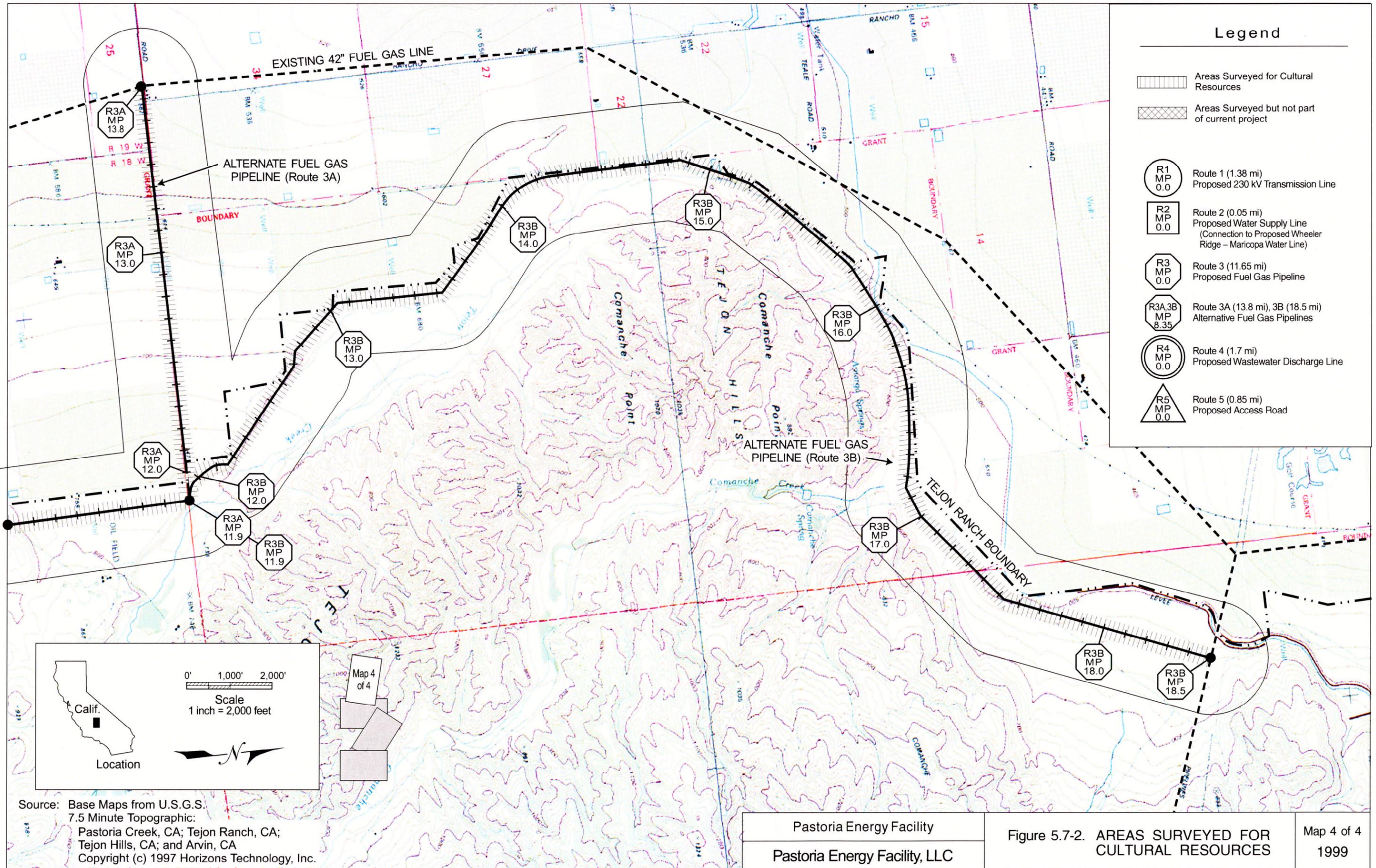
**Legend**

-  Areas Surveyed for Cultural Resources
-  Areas Surveyed but not part of current project
-  Route 1 (1.38 mi)  
Proposed 230 kV Transmission Line
-  Route 2 (0.05 mi)  
Proposed Water Supply Line  
(Connection to Proposed Wheeler Ridge - Maricopa Water Line)
-  Route 3 (11.65 mi)  
Proposed Fuel Gas Pipeline
-  Route 3A (13.8 mi), 3B (18.5 mi)  
Alternative Fuel Gas Pipelines
-  Route 4 (1.7 mi)  
Proposed Wastewater Discharge Line
-  Route 5 (0.85 mi)  
Proposed Access Road

Source: Base Maps from U.S.G.S.  
7.5 Minute Topographic:  
Pastoria Creek, CA; Tejon Ranch, CA;  
Tejon Hills, CA; and Arvin, CA  
Copyright (c) 1997 Horizons Technology, Inc.

Pastoria Energy Facility  
Pastoria Energy Facility, LLC

Figure 5.7-2. AREAS SURVEYED FOR CULTURAL RESOURCES



**Legend**

-  Areas Surveyed for Cultural Resources
-  Areas Surveyed but not part of current project
-  R1 MP 0.0 Route 1 (1.38 mi) Proposed 230 kV Transmission Line
-  R2 MP 0.0 Route 2 (0.05 mi) Proposed Water Supply Line (Connection to Proposed Wheeler Ridge – Maricopa Water Line)
-  R3 MP 0.0 Route 3 (11.65 mi) Proposed Fuel Gas Pipeline
-  R3A,3B MP 8.35 Route 3A (13.8 mi), 3B (18.5 mi) Alternative Fuel Gas Pipelines
-  R4 MP 0.0 Route 4 (1.7 mi) Proposed Wastewater Discharge Line
-  R5 MP 0.0 Route 5 (0.85 mi) Proposed Access Road



0' 1,000' 2,000'  
 Scale  
 1 inch = 2,000 feet



Map 4  
 of 4

Source: Base Maps from U.S.G.S.  
 7.5 Minute Topographic:  
 Pastoria Creek, CA; Tejon Ranch, CA;  
 Tejon Hills, CA; and Arvin, CA  
 Copyright (c) 1997 Horizons Technology, Inc.

Pastoria Energy Facility	Figure 5.7-2. AREAS SURVEYED FOR CULTURAL RESOURCES	Map 4 of 4 1999
Pastoria Energy Facility, LLC		

**ATTACHMENT F**

**CULTURAL RESOURCES MATERIALS**

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SUMMARY OF CONSTRUCTION COMPLIANCE  
RELATED CULTURAL RESOURCES INFORMATION

## **ATTACHMENT F – SUMMARY OF CONSTRUCTION COMPLIANCE RELATED CULTURAL RESOURCES INFORMATION**

### **1.0 PURPOSE**

This Attachment provides a summary of cultural resources materials submitted as part of 99-AFC-7, as well as, construction compliance proceedings regarding cultural resources for the existing PEF. This summary has been provided to describe the extensive documentation and compliance activities that have occurred as part of the processing of 99-AFC-7, as well as to comply with construction-related requirements. Copies of the reports summarized below are on file at the CEC as part of the compliance proceedings for the existing PEF (99-AFC-7C).

### **2.0 OVERVIEW**

Construction compliance-related activities passed through two owners, Enron Corporation and, later, Calpine Corporation. Consequently, work for this project was conducted in multiple phases. As originally configured the PEF comprised a 30-acre power plant site, 25-acre construction laydown area, a 1.38-mile long 230 kV transmission line, a 0.5-mile long water supply line, a 11.65-mile long fuel gas pipeline, or alternate fuel gas pipelines of either 13.8 miles or 18.5 miles, a 1.7-mile long wastewater discharge line, and a 0.85-mile long access road. The final project was reconfigured to include a modified 14.01-mile gas pipeline that by-passed part of the original gas pipeline, an expanded construction laydown area, and a modified 0.05-mile water supply pipeline. Construction and operation of the existing PEF is conducted under a license granted by the California Energy Commission (CEC). CEC staff developed Conditions of Certification (COC) to ensure that construction of the project would not create significant direct, indirect, or cumulative adverse impacts to cultural resources. This summary describes compliance activities completed to date at the existing PEF.

Brian W. Hatoff, M.A., registered with the Register of Professional Archaeologists (RPA), is the CEC-approved Cultural Resources Specialist (CRS) for the PEF. Bryon Bass, Ph.D., RPA is the designated alternate CRS for the project. The multiple cultural resource surveys conducted for the PEF resulted in the recordation of 15 new cultural resource sites. Additionally, 22 isolates were also recorded, during both field survey and construction monitoring. A Cultural Resources Monitoring and Mitigation Plan (CRMMP) was prepared and approved by the CEC prior to the start of construction. The purpose of the CRMMP was to ensure measures were in place to avoid known significant cultural resources and to address any cultural resources identified during construction of the PEF. Testing programs were conducted at seven cultural resource sites. The results of these testing programs (with the exception of two sites, which are described herein) were reported in technical reports that were previously approved by the CEC. The previous technical reports reporting on the various phases of survey and testing programs are on file with the South San Joaquin Valley

Information Center (SSJVIC). The survey references at the SSJVIC are: KE-02395, -02963, -02964, and -02965.

The CRS and alternate CRS prepared an employee cultural resources training program that was presented by CEC-approved trainers to all personnel involved with on-the-ground construction activities. The purpose of the program was to inform all construction personnel of the types of cultural resources that could be encountered during construction; areas already demarcated as sensitive, appropriate protocols for stopping work and notification procedures in the event of a discovery. Cultural resource monitors and Native American monitors were present at ground disturbing activities at the plant site and along the linear facilities. Full-time monitoring was employed at areas considered particularly sensitive for cultural resources. The designated cultural resource monitor prepared daily monitoring logs. Weekly summaries were then provided to the project owner for inclusion in the project owner's monthly report to the CEC.

### **3.0 GENERAL REGULATORY SETTING**

Construction and operation of the PEF project is conducted under a license granted by the CEC. Cultural resources compliance during the PEF has been guided by CEC COCs. CEC COC CUL-13 specifies the requirements for preparation of a Final Cultural Resources Report (CRR). A Draft CRR was submitted to the CEC for review in March 2005. This summary was excerpted from the Draft CRR. Following receipt of CEC comments on the Draft CRR, the CRR will be finalized. Other applicable law, ordinances, regulations and standards that pertain to this project include the California Environmental Quality Act (CEQA) at the state level and the National Historic Preservation Act (NHPA) at the federal level for those project areas subject to a U.S. Army Corps of Engineers (Corps) 404 permit.

### **4.0 SUMMARY OF TECHNICAL REPORTS**

#### **4.1 Cultural Resources Technical Report (Appendix J) (KE-02965)**

This report was prepared by URS Greiner Woodward Clyde in 1999 (Hatoff and Bass 1999) as a confidential technical appendix (Appendix J) to the Application for Certification (AFC) for the PEF AFC filed in November 1999. The 1999 Technical Report addressed the following PEF components:

- 30-acre power plant site
- 25-acre construction laydown area
- Route 1 – 230 kV electrical transmission interconnection

- Route 2 – Water supply and discharge facilities
- Route 3/3A/3B – Fuel Gas Pipeline
- Route 4 – Wastewater Discharge
- Route 5 – Plant Site Access Road

Minor additional project components covered in the 1999 Technical Report included various proposed flood retention berms and a stream crossing for the plant site access road. The initial archaeological survey (Hatoff and Bass 1999) resulted in the recordation of 10 previously unrecorded isolates and 10 previously unrecorded cultural resource sites.

#### **4.2 Cultural Resources Test Plan**

The Cultural Resources Test Plan for the PEF was prepared by URS Corporation (URS) in 2000 (Hatoff and Bass 2000) to provide an assessment of four cultural resource sites potentially affected by the construction, operation, or maintenance of the PEF. The CEC-approved Test Plan addressed prehistoric and historic cultural resources and served as a management tool for site testing, Native American consultation, curation of recovered artifacts and ecofacts (i.e., bone, shell), and preliminary scientific tests on recovered materials. The Test Plan also detailed cultural resources significance criteria consistent with State and Federal regulations and guidelines, and mitigation measures required which meet the aforementioned protocols. At that time, the previously documented sites within the PEF Area of Potential Effect (APE) required testing to determine site significance and eligibility to the National Register of Historic Places (NRHP) and/or the California Register of Historic Resources (CRHR).

#### **4.3 Preliminary Results: Cultural Resources Testing for the Pastoria Energy Facility**

The Preliminary Results of the Cultural Resources Testing for the PEF was prepared by URS Greiner Woodward Clyde in 2000 (URS Greiner Woodward Clyde 2000a) immediately upon completion of the archaeological testing of the four sites for the presence/absence of significant archaeological materials. The preliminary results were prepared and submitted to the CEC.

#### **4.4 Final Results: Cultural Resources Testing for the Pastoria Energy Facility (KE-02395)**

The Final Results of the Cultural Resources Testing for the PEF was prepared by URS in 2000 (URS Greiner Woodward Clyde 2000b). The report was finished upon completion of the archaeological testing of the four sites, which assessed the presence/absence of significant

archaeological materials and any potential adverse effects to cultural resources located within and/or immediately adjacent to the proposed construction and operational areas of the PEF. The testing program was conducted in accordance with procedures previously outlined in the PEF Cultural Resources Test Plan (Hatoff and Bass 2000).

#### **4.5 Cultural Resources Mitigation and Monitoring Plan (CRMMP)**

The purpose of the CRMMP prepared by URS (2001) was to provide for the identification, evaluation, treatment and protection of cultural resources that had the potential to be affected during construction of the PEF, including the associated linear facilities, as well as setting up procedures and methods for a construction monitoring program. The general cultural resources mitigation and monitoring procedures discussed in this Plan were outlined in 99-AFC-7, and concurred with in the CEC's Final Decision.

#### **4.6 Cultural Resources Mitigation and Monitoring Plan (Addendum)**

The purpose of this CRMMP addendum prepared by URS (2003a) was to update the previously prepared CRMMP in light of an archaeological site detected during re-routing a segment of the Fuel Gas Pipeline (R3).

#### **4.7 Appendix J, Addendum 1 (KE-02963)**

This brief technical report was prepared by URS in 2003 (URS 2003b). The report was an addendum to Appendix J of 99-AFC-7 and reports the results of an archaeological survey that was completed subsequent to submission of Appendix J. The addendum specifically addressed a re-route proposed for Fuel Gas Pipeline (R3) to avoid a blunt-nosed lizard habitat. One cultural resource was noted and recorded although it was found to be located outside of the re-route APE. The project owner subsequently dropped this re-route.

#### **4.8 Cultural Resources Mitigation and Monitoring Plan (Amendment)**

The purpose of the amended CRMMP prepared by URS (2004a) was to update the previously prepared CRMMP in light of archaeological sites (CA-KER-6620 and CA-KER-6621) detected during extensive rerouting of segments of the Fuel Gas Pipeline (R3).

#### **4.9 Appendix J, Addendum 2 (KE-02964)**

Addendum 2 to Appendix J of 99-AFC-7 (URS 2004b) reports on the results of archaeological surveys and site testing that were completed subsequent to submission of Appendix J. This addendum specifically addressed two re-routes proposed for the Fuel Gas Pipeline (R3). The re-routes were in two separate locations along R3, and were referred to as

Route 2A and 2B, respectively. Newly recorded site CA-KER-6620 was avoided through project engineering modifications made to the proposed pipeline route. Newly recorded site CA-KER-6621 could not be avoided through project engineering modifications. Therefore, the centerline of the proposed 2A route, where it bisects the southeastern fringe of site CA-KER-6621, was subjected to a subsurface testing program. The purpose of the testing was to assess the presence, nature, and extent of any potential *in situ* cultural resources within the project APE.

## **5.0 CONCLUSION**

The Draft Final Cultural Resources Report has been filed with the CEC to complete cultural resource compliance requirements for the PEF. The protocols set forth in the CEC COCs have been satisfied. Recovered cultural resource finds have been documented and prepared for curation at an approved curatorial facility. All LORS applicable to cultural resources on this project have been satisfied.