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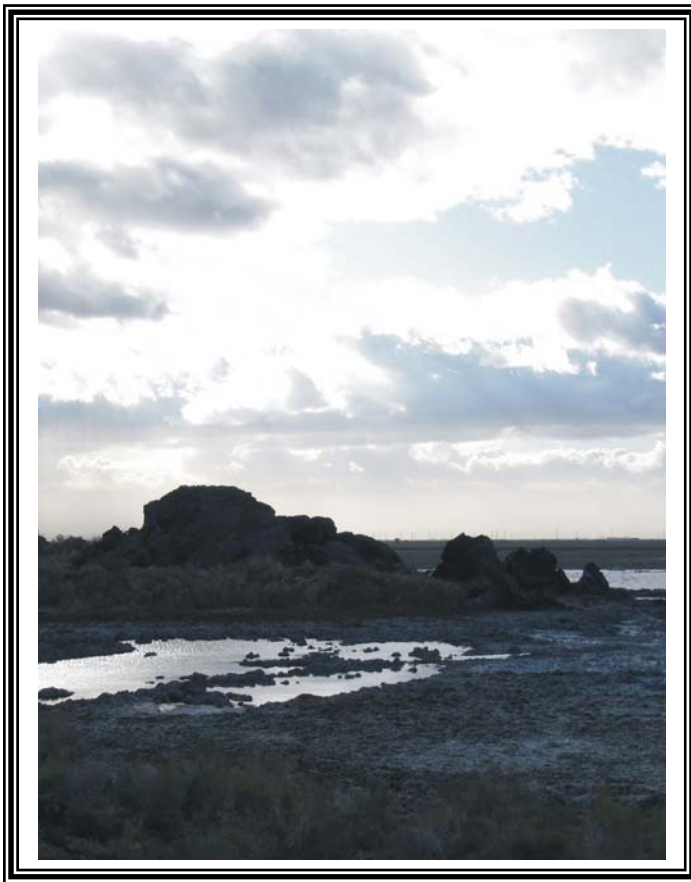
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BLACK ROCK 1, 2, 3 GEOTHERMAL POWER PLANT

PROJECT

Ethnographic Assessment of the Importance of Obsidian Butte to the Native American Community, Imperial County, California



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7.5' USGS Quadrangle:

Obsidian Butte, California (1995)
Niland, California (1994)

January 2010

NSR Project # 29411

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Appendix A

Previous and Current Outreach Efforts

Appendix B

Carmen Lucas Map Depicting Obsidian Butte Source Migrations

Black Rock 1, 2, 3 Geothermal Power Plant Project

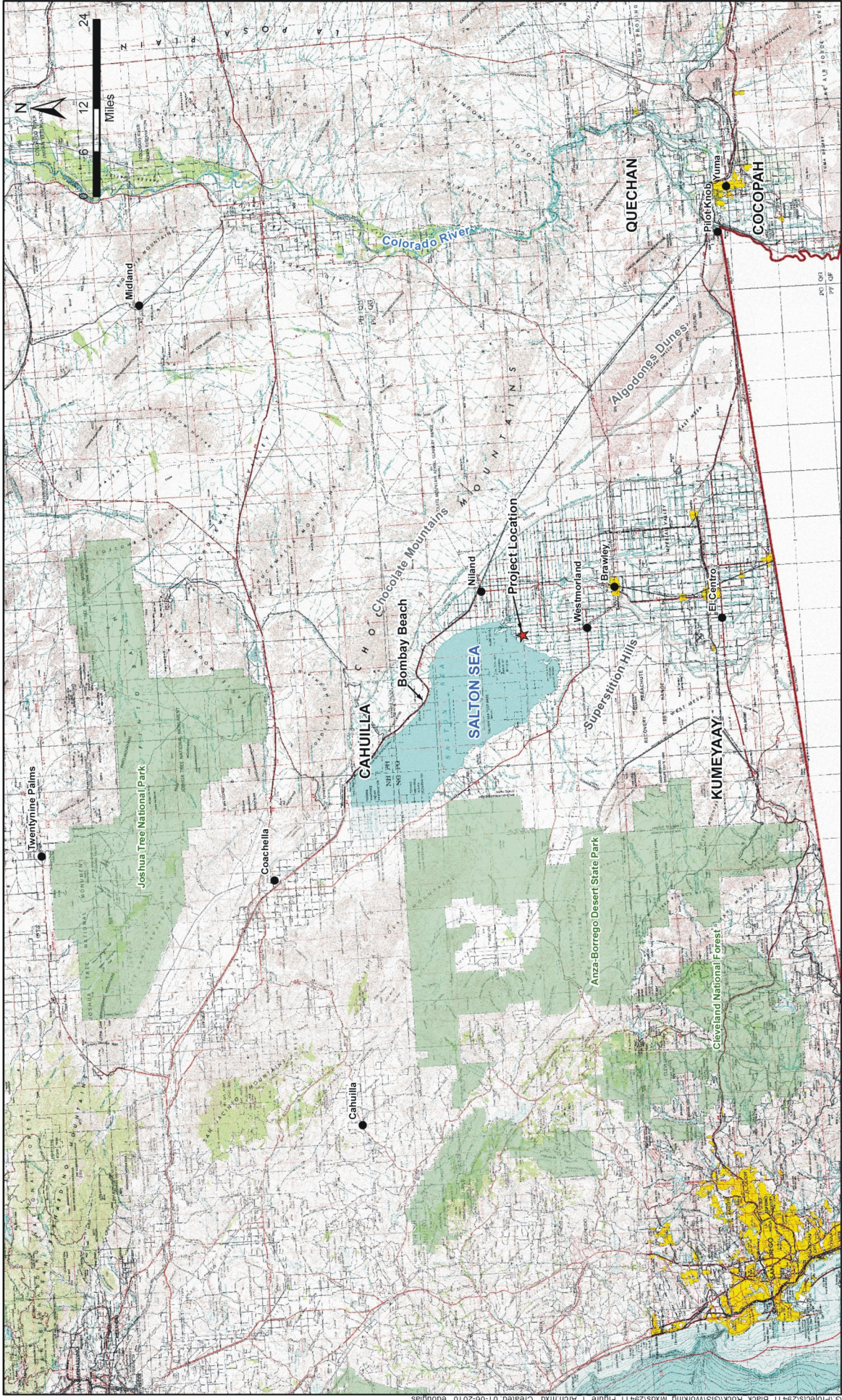
ETHNOGRAPHIC ASSESSMENT OF THE IMPORTANCE OF OBSIDIAN BUTTE TO THE NATIVE AMERICAN COMMUNITY, IMPERIAL COUNTY, CALIFORNIA

1.0 Introduction

The California Energy Commission (CEC) has requested that North State Resources Inc. (NSR), through subcontract to Aspen Environmental Group (Aspen) conduct an Ethnographic Study for the Black Rock 1, 2, 3 Geothermal Power Project Amendment. As such, NSR has been contracted to complete the following tasks:

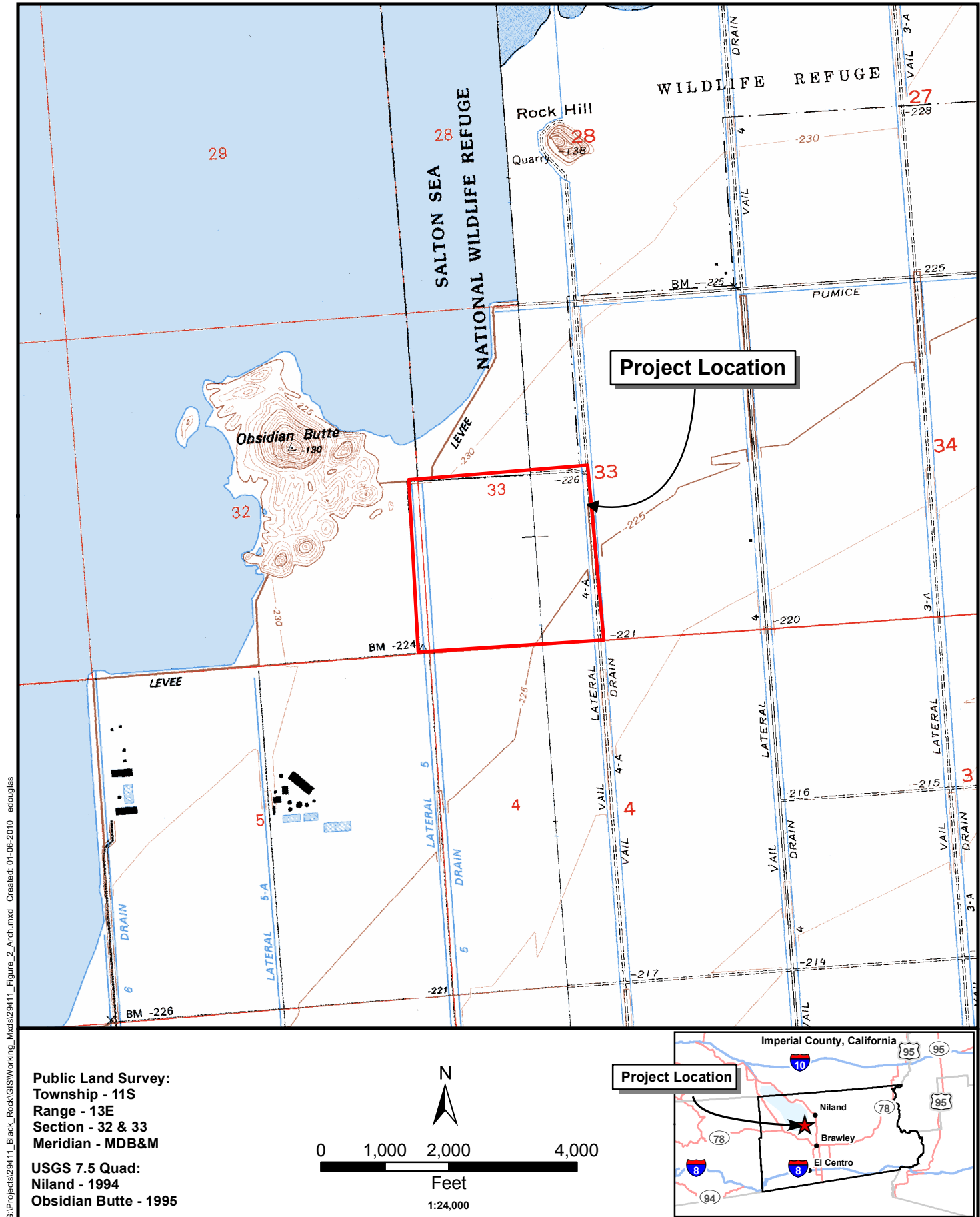
- Conduct an archival search in anthropological, ethnographic and archaeological literature to determine the extent of information available regarding Obsidian Butte and its relationship with or importance to Native Americans, in particular the use and type of use of the butte.
- Acquire ethnographic data on the importance of Obsidian Butte to the Native American community through interviews with representatives of the Cahuilla, Quechan, Cocopa and Kumeyaay tribes to learn more about significant heritage, religious, spiritual, or sacred values of the area, including the importance of Obsidian Butte to continuing cultural practices.
- Prepare and submit a report providing the results of the interviews with Native Americans, a summary of the literature review, and Native American recommendations for mitigation. Further, the report will include an explanation of Native American values that would apply to the assertion that a location is a sacred site or important to Native American heritage as well as an explanation of criteria that might be applied to identify a location as a sacred site or a location important to Native American heritage.

In an effort to complete these tasks, the following steps were taken. A literature review utilizing library, academic journal databases, and internet resources was undertaken. The results of the review are included herein. A summary of previous Native American outreach efforts for information was compiled (Appendix A). An interview plan was drawn up and interview questions were proposed by NSR. The plan and questions were then submitted to and approved by the CEC. Interview efforts and results are provided herein. This report concludes with a recommendations section.



CEC Black Rock TCP Project

Figure 1
Project Location and Vicinity Map



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Figure 2
Project Location Map

2.0 Literature Review

2.1 Environment

The project area lies on the southeastern shore of the Salton Sea located within the Imperial Valley (Salton Trough) in the Colorado Desert, a subdivision of the Basin and Range geomorphic province (United States Department of Agriculture, Forest Service 1998). The Imperial Valley consists of a nearly level dry lake bed running northwest-southeast. Elevations range from about -230 feet on the shore of the Salton Sea to about sea-level along the old shore-line of Lake Cahuilla (United States Department of Agriculture, Forest Service 1998). To the south and west of the Imperial Valley lie the Superstition Hills, to the south and east lie the Algodnes dune field, to the east lie the Chocolate Mountains, and the Coachella Valley lies to the north. The Colorado River corridor, which flows towards the Gulf of Mexico, lies approximately 50 miles southeast from the project area. Periodically in the past the Colorado River would overflow and divert into the Salton Trough creating a large lake. The most recent overflow in 1906 created the Salton Sea. The average air temperatures range from July highs of 107 °F and January lows of 38 °F. Average annual precipitation is approximately 2.63 inches; most precipitation falls as rain (Western Regional Climate Center 2009).

Lake Cahuilla

Lake Cahuilla (historically known as Lake LeConte and the Blake Sea) was a huge freshwater lake covering over 2,000 square miles to a depth of more than 300 feet, extending from the Colorado River delta in present-day Mexico north to the vicinity of present-day Indio, California (Waters 1983; Laylander 2006). The lake would form when the Colorado River would flood or divert from its course to the ocean to the north through its delta. The shoreline of the old lake is visible near the base of the surrounding mountains at an average elevation of about 40 feet above mean sea level (ft msl). Early researchers thought Lake Cahuilla had been a single episode lake existing for at least five centuries, between AD 1000 and 1500 (Laylander 2006). However, recent studies have determined there were several different high stands of the lake not only during the five centuries but well before (Waters 1983).

Evidence from radiocarbon dating, stratigraphic observations, and historical observations has shown that the lake's rise and fall were cyclical events occurring perhaps every 200 to 300 years (Water 1983). During the cycle the lake would rapidly fill and gradually retreat in steps allowing for the formation of the wave cut benches and lacustrine deposits. Human occupation sites mark the ancient shorelines both above the high stand mark and along lower shores (Waters 1983, Laylander 2006). At least four cycles are posited to have occurred since AD700, and an unknown number are thought to have occurred before AD 1 (Waters 1983).

Salton Buttes

Located at the southeastern end of the Salton Sea is a series of five small rhyolite domes collectively referred to as the Salton Buttes (Robinson et al. 1976). These domes trend in a southwest to northeast direction and include Obsidian Butte (-130 ft msl) on the southwest, Rock Hill (-188 ft msl), Red Island (composed of two of the domes -137 to -127 ft msl) and Mullet Island (-190 ft msl) on the northeast (Robinson et al. 1976). The buttes are part of the larger Salton Sea geothermal field which is the northernmost manifestation of volcanism related to the spreading interaction of the North American and Pacific plates. The formation of the Buttes, using various methods, has been dated around 16 thousand years ago (Wood and Kienle 1990;

Hulen and Pulka 2001; Schmitt and Vazquez 2006). All of the buttes show signs of having been fully or partially submerged in the past by the former Lake Cahuilla. Obsidian Butte is noted to have “at least seven wave cut benches” and a concentration of rounded pumice clasts deposited by wave action on the “lee side of the volcano” (Robinson et al. 1976).

Historic accounts report the presence of active mud volcanoes in the area surrounding the Salton Buttes (USACOE 1876; Fairbanks 1904; James 1906). These are now mostly covered by the waters of the Salton Sea. As noted in the 1876 Annual Report of the Chief of Engineers, “Indians living in the vicinity and old white settlers say that at night flame is seen issuing from these volcanoes, and sometimes high columns of steam” (USACOE 1876: 336). Geologically speaking, the buttes are young, however, their formation chronologically speaking, takes place around the time of the earliest settlement of North American.

When approaching the Buttes from the south, they are first visible from the north side of the town of Westmoreland, approximately 10 miles distant. However, a line of sight is difficult to maintain as the terrain is lined and dotted with vegetation along irrigation canals, residential and commercial buildings and currently existing geothermal power plants. When approaching the Buttes from the north, because the buttes are located along the shoreline, the buttes can be identified from at least twice the distance (20 miles) as compared to the approach from the south. This is because the buttes protrude above the otherwise uniform band of color representing the shoreline.

Flora and Fauna

The predominant vegetation communities in the Imperial Valley include the creosote bush - white bursage series, allscale and mixed salt bush series, and mesquite series in the drier areas, and the black willow, Fremont cottonwood, mixed willow series, and saltgrass, sedge, and bulrush - cattail series in riparian areas (United States Department of Agriculture, Forest Service 1998). A variety of fauna adapted to desert conditions can be found throughout the area. The mammals include desert bighorn sheep, desert kit fox, coyote, spotted bat, black-tailed jackrabbit, ground squirrels, kangaroo rats and white footed mice. Birds include burrowing owls, cactus wrens, eagles, hawks, quail, and roadrunners among others. Several species of reptiles adapted for desert conditions including desert tortoise, chuckwalla, fringe-toed lizards, flat-tailed horned lizards, desert iguana, rosy boa, banded sandsnake, sidewinders, and rattlesnakes. In addition to the desert adapted fauna, a wide variety of waterfowl, shorebirds and fish can be found in the Salton Sea. Fish species include native desert pupfish, razorback sucker, and flannelmouth sucker, and non-native sport fish species including tilapia, corvina, croaker, and sargo. An estimated 400 species of migratory and resident birds including Canada geese, snow geese, American avocets, black-necked stilts, pintails, green-winged teal, eared grebes, black skimmers, gull-billed terns, white-faced ibis, mountain plovers, black terns, burrowing owls, fulvous whistling ducks, least bitterns, wood storks, black rails, snowy plovers Yuma clapper rail, peregrine falcon, and brown pelicans (Salton Sea Authority 2000).

2.2 Prehistory

The Colorado Desert has been explored archaeologically for 80 years. Researchers have found the region to hold a distinctive and rich archaeological record that is closely tied to the larger surrounding region of coastal southern and Baja California and the Mojave and Sonoran Deserts

(Schaefer and Laylander 2007). Regional prehistory has been defined in three broad chronological periods Early, Archaic, and Late Prehistoric (Tennyson and Apple 2009). Although southern California has extensive evidence of occupation during the Early Period, solid evidence for the Colorado Desert is sparse. The Archaic Period was thought to have been a time of abandonment of the region with occupation taking place primarily along the Colorado River corridor (Tennyson and Apple 2009). However, new research has revealed deeply buried archaeological deposits with hearths, living surfaces, clay-lined features and midden well above the Lake Cahuilla shoreline dating to around 1000 B.C. to A.D. 700 indicating extended settlement (Schaefer and Laylander 2007). Other archaeological sites dating between A.D. 135 and A.D. 645 have been located buried under 50 centimeters of lake sediments below the old shoreline and deeply buried in dunes above the old shoreline (Schaefer and Laylander 2007). These discoveries indicate an ever changing landscape of dune formation, sedimentation, and lake recession and growth was present during the Archaic Period that may have buried, obscured, or removed archaeological evidence.

The best known period of prehistoric occupation of the Colorado Desert occurs during the Late Prehistoric period with the Patayan cultural pattern (also referred to as the Yuman complex) (Schaefer 1994). This complex cultural pattern first developed around A.D. 500 and continuing through to the Historic Era is defined by a desert and riparian oriented seasonally mobile group strategy. It includes a wide range of subsistence and settlement strategies including shifts dependent upon local environmental conditions from a seasonal practice of agriculture to a hunting-gathering system and back again, with neither system being mutually exclusive (Schaefer 1994). Settlement patterns around Lake Cahuilla have been found to be complex with archaeological sites unevenly distributed throughout the landscape. The sites tend to cluster around areas that would have sustained marshy environments or were conducive to the growth of mesquite groves, and around washes or alluvial fans that may have contained larger concentrations of fish (Schaefer 1994). Evidence of long range travel for resource collecting, between summer and winter habitation locations and trading is seen in the extensive trail system marked by trail side shrines, rock art, and ceramic “pot-drops” among other things. Further evidence of exchange networks and cultural interaction includes the presence of obsidian from Obsidian Butte found throughout southern California from coastal sites to well inland (Schaefer and Laylander 2007). For a more in depth discussion of the prehistory of the Colorado Desert, see Schaefer (1994) and Schaefer and Laylander (2007).

2.3 Ethnography

Two indigenous language families are present within the San Diego and Imperial County region, consisting of the Yuman branch of Hokan speakers and Luiseño-Cahuilla branch of Uto-Aztecan speakers (Kroeber 1925). Yuman branch of Hokan speakers are represented by contemporary members of Quechan, Kumeyaay, Cocopah, Maricopa, Mohave, Ipai and Tipai groups. The Luiseño-Cahuilla branch of Uto-Aztecan is represented by contemporary Luiseño, Cupeño, and Cahuilla peoples. It has been noted that several issues arise with the identification of the numerous native populations in Southern California, especially in respect to various conditions caused initially by the Colonial Spanish *reducción* policies, a type of forced relocation practice removing Native Peoples to centrally organized missions. After Spanish emancipation, native populations were subjected to heavy taxation, forced indentured servitude, and extreme levels of

poverty. These situations combined with rapidly declining populations created a climate of blurred tribal affinities and intertribal marriage. The complexity of identification of indigenous populations in Southern California ethnographic materials collected in the last 150 years reflect the shifting methods of placing cultural consultants within their corresponding indigenous groups. For example, Shackley notes in his introduction of a collection of early ethnographic materials that “Other cognates for Kumeyaay include, but are not limited to: Kamya, Comeya, Comaiyah, Comedás, Comoyatz, Comoyeé, Quemaya, Camillares, Comoyalis, and Kamia [Hedges 1975; Henshaw and Hodge 1907; Hohenthal 2001; Langdon 1975; Kroeber 1925; Gifford 1931]” (Shackley 2004:2). Similarly, those who had once been identified as simply “Yuma” populations have likewise been separated into contemporary Quechan, Cocopah, Maricopa, Mohave, and “Kamia” populations. Likewise, the term “Diegueño” refers to those Native Peoples connected to the San Diego order of Spanish missions, combining Ipai, Tipai, Luiseño, Cupeño, and Kumeyaay populations. For the purposes of clarity the following Native identifications in respect to ethnographic investigations will be used in this report: Kumeyaay, Quechan, and Cahuilla.

Before beginning discussion of territory and the ethnographically recorded groups associated with the Colorado Desert, it should be noted that boundaries were and are fluid, permeable, and indistinct. Trade, marriage, warfare and other forms of contact make boundaries open in many aspects, changing environmental regimes move boundaries with the movement of key resources, and periphery area boundaries are almost never exact. That being said, the Kumeyaay, Quechan, Cocopah and Cahuilla occupied the area known as the Colorado Desert which includes the Salton Sea and the project area. The Kumeyaay occupied an area extending from the Pacific coast in Baja California, east to New River, north through the Algodones dunefield (Sand Dunes) to near Niland, California, west across the Salton Sea and along the north bank of San Felipe Creek to the Pacific coast near the mouth of the San Luis Rey River (Luomala 1978). Obsidian Butte is located within this ethnographically recorded territory. The Cahuilla occupied an inland territory from the San Bernardino Mountains on the north, west to modern-day Riverside, California, southeast along the Palomar Mountains, east across the Salton Sea through Niland California and across the Chocolate Mountains to an indistinct eastern boundary (Bean 1978). The Quechan occupied an area along the Colorado River from near the modern-day Laguna Dam west to the Cargo Mountains, and south to the International border of the United States and Mexico (Bee 1983). For a more in depth discussion of the ethnography of the peoples of the Colorado Desert, see Hooper (1920), Gifford (1931), Forde (1931), Drucker (1937), Bean (1972, 1975, 1978), Luomala (1978), Bee (1983), and Shackley (2004).

In general, the Cahuilla and Kumeyaay had similar village and constructed structure patterns. Villages and campsites were situated near water and abundant resources, and also in areas of natural protection from weather and raids (Bean 1978; Luomala 1978). These villages and campsites were occupied for limited periods. Structures include domed or rectangular thatched residential buildings, brush sun and wind shelters, granaries and storage structures, and communal ritual structures and men’s sweathouses (Bean 1978; Luomala 1978). The Quechan lived in more substantially occupied settlements. This is an effect of a more intensive horticulture-nascent agriculture system than practiced by the Cahuilla and Kumeyaay. Quechan villages aggregated on high ground away from the annual flooding of the Colorado River during the winter, and dispersed into smaller settlements near their planted fields in the summer (Bee 1983). Quechan buildings included ramadas and domed arrowweed shelters, and large earth

covered structures usually occupied by the leader of the village and his family, but used by all as shelter in times of cold weather, (Bee 1983).

Subsistence patterns of the three groups were similar with an emphasis on gathering and horticulture supplemented by hunting. Crops of maize, melons, teparies (a desert growing bean), and beans were grown in areas along major waterways such as the Colorado, New, and Alamo Rivers (Luomala 1978; Bee 1983). Mesquite pods, acorns, piñon nuts, screw beans, agave, yucca, and barrel, prickly, and cholla cactus were a few of the primary wild plant food sources. Deer, rabbits, various birds, rodents, reptiles, fish, and insects were hunted (Drucker 1937; Luomala 1978; Bean 1978; Bee 1983). Baskets and pottery were made and used for cooking and storage of food and water. Granaries and food preservation techniques allowed for the storage of large quantities of food (Bean 1978; Luomala 1978). Mortars, pestles, and metates were used by all groups for processing seeds, beans, and other vegetal materials. The bow and arrow was used for fishing and hunting along with many other techniques such as nets, snares, traps, weirs, hooks, clubs, throwing sticks, and drive fences for capturing mammals, fish, reptiles, and birds (Drucker 1937; Bean 1972; Luomala 1978; Bee 1983). Tule balsas, tule or rush bundles, and log rafts were used as boats or swimming aids (Forde 1931; Drucker 1937; Gifford 1931). The rafts were often propelled by swimmers pushing, and were used to move materials and people across water (Drucker 1937). Salt was gathered from several sources including the ocean, mineral salt deposits, salt springs, and salt lakes. The most notable source of salt in the Colorado Desert is the Salton Sea area including many saline hot springs and floodplains (Bailey 1902). The floodplains were commercially mined in the late 19th century until the creation of the Salton Sea flooded the mining operations. The largest of the mining operations, the New Liverpool Salt Company employed many Cahuilla men in the harvesting and scraping of the salt deposits (Bailey 1902). Gifford (1931) mentions an important salt source located in close proximity to a mud volcano, south of Indian Wells (southwest of present-day El Centro) and north of Black Butte (possibly Mount Signal). This source was utilized by both the Kumeyaay and Cocopa. Salt was and is important for the maintenance of health in individuals, was and is used for preservation of foods. Salt is also mentioned by Dubois (1908) as a component of the Diegueno (Kumeyaay) girls' puberty ceremony in which a lump of "rabbit-meat and salt were put into the girl's mouth" (DuBois 1908: 234).

Obsidian

Obsidian is one of the best known stones used for tools by native Californian peoples. Of the 60 geochemically identified sources of obsidian in California, at minimum 24 of them, including Obsidian Butte, were widely used prehistorically (Heizer and Treganza 1944; Northwest Research Obsidian Studies Laboratory 2009). Obsidian had not only a practical use for tools such as projectile points, knives, and scrapers, but was imbued with socio-cultural meaning, reflected in rituals, traditions, and myths. In general, obsidian sources were not considered to be the private property of an individual. The larger group held a shared ownership and controlled access to the source, but this was not a rigid monopoly over the obsidian (Hodgson 2005). Sometimes outside groups would be allowed entry to the location; sometimes trade for other resources would create movement of the obsidian to great distances. Procurement of obsidian was often accompanied by specific observances such as fasting, ritual cleansing, offerings, or removal of limited quantities of the material out of respect for the rock (Hodgson 2005). If the proscribed rituals were not observed, the "poisonous" nature of obsidian would possibly manifest causing the individual harm (Hodgson 2005).

Many Native Californians considered obsidian to be extremely poisonous or potentially harmful spiritually and physically, and this toxic nature imbued the obsidian with power. An example of the power in obsidian is referred to by Ruby Modesto, a Martinez Cahuilla Indian, in her explanation of medicine bundles (*maiswat*) used by the *net* (male leader of a clan lineage, ceremonial leader, economic executive, and judiciary executive) in various ceremonies (Modesto and Mount 1980; Bean 1972). These bundles were traditionally made of an ocean plant until contact with the Spanish made travel to the ocean difficult. After contact the bundles were made of tule and contained “beadmoney, wooden images, *obsidian arrow points* (emphasis added), and many feathers” (Modesto and Mount 1980: 39). This ceremonial medicine bundle contained not only tangible objects, but was the representation of the “supernatural power suggestive of the creator” with which the *net* would communicate for many reasons and on many occasions (Bean 1972: 88). It served as a symbolic representation of all aspects of Cahuilla lifeways, the religious, political, social, and economic (Bean 1972: 89). The obsidian included in the *maiswat* therefore represents many facets of use of and beliefs surrounding obsidian by the Cahuilla.



Obsidian Butte obsidian

Obsidian from the Obsidian Butte source is found in archaeological contexts throughout southern and Baja California. Obsidian in general is a minor component found in these sites, comprising at most 10 percent of the total debitage (waste flakes). However, of this 10 percent, Obsidian Butte obsidian is the predominant source, particularly in more recent archaeological deposits (Laylander 2006). Obsidian Butte is the only source in southern California, aside from a minor source located near San Felipe, Baja California. At times the butte would have been submerged under the waters of Lake Cahuilla, emerging only when the lake levels fell from the high water mark to below -130 ft msl. At this point, Obsidian Butte would be exposed as a small island approximately 10 miles from the receding shoreline and accessible by boat. As noted in the previous section, the Kumeyaay, Quechan, Cocopah and Desert Cahuilla were familiar with several types of

watercraft including tule balsas, log rafts, and tule bundles used as floats and swimming aids, and these may have been used to access Obsidian Butte when exposed (Forde 1931; Drucker 1937; Gifford 1931). In a December 2009 telephone conversation with Karen Collins, retired coordinator of the Southeast Information Center of the California Historical Resources Information System, it was mentioned that one area of obsidian procurement, located on Red Island, has an unusual debitage pattern suggesting that only the last stage of arrowhead reduction left the island; and it is surmised that this was due to the need to be efficient in transporting obsidian from the island back to the mainland with limited water transport capability.

Trails

When Euro-Americans reached California, they found an extensive network of trails used for trade, resource access, movement of people, and ceremonial purposes. Many of these trails were

used by the Spanish during exploration of California and by the Hudson's Bay Company and other fur companies during trapping expeditions. Later the trails became the network of wagon trails used by overland emigrants moving into California in the mid-nineteenth century. Today many of these trails have been incorporated into the modern road system of California (Heizer 1978).

Several important prehistoric trails had routes around and through the Colorado Desert. These trails provided channels for the movement of resources from the Pacific Ocean to east of the Colorado River and back again. Evidence of long distance trade includes decorated pottery of Southwestern manufacture found in southern California archaeological sites, Olivella shell beads from the Pacific Ocean found in central Nevada, and obsidian artifacts from large and important sources such as Casa Diablo in Mono County found over 150 miles from the source (Heizer 1978). In the Colorado Desert, many of these trails are still visible on the landscape, their paths marked by cairns, rock art, and accumulations of pottery shards or "pot-drops" (Heizer 1978; Schaefer 1994). At least four major routes crossed through the desert. Two of these routes are east- west trails extending from the Colorado River to the coast near Los Angeles in the north roughly estimated by present-day Interstate 10, and from the Colorado River to the San Jacinto Mountains roughly estimated by present-day State Routes 78 and 79 (Johnston 1980). Gifford records another important trail running from Campo in southeastern San Diego County, "northeasterly across Imperial Valley to the Colorado River" (Gifford 1931: 8). Along all these trails are noted many springs and stopping points, and it is likely the Obsidian Butte was one stopping point on these trails.

Many of these trails were first documented through ethnographic research. The movement of people and resources facilitates the exchange of more intangible elements of culture such as stories and ceremonies. Bean (1972) notes Cahuilla would often travel great distances over established trails and trade routes to trade and gather resources from the ocean. Ruby Modesto notes the use of an ocean plant in the construction of medicine bundles used for specific ceremonies (Modesto and Mount 1980).

A larger geographical and cognitive landscape is incorporated into the culture and becomes an important part of the belief system. Most of the ethnographic sources discuss the similarities in certain elements of cosmology and ceremonialism between the different groups in southern California. Of particular interest is the *Xam Kwatcan* trail system which is a series of trails, ceremonial sites, and landscape features closely tied to tribal history and identity and cultural continuity (Cleland 2008). The *Xam Kwatcan* trail system is a 160 mile long landscape feature including petroglyphs, geoglyphs, Intaglios, and landscape features such as mountains roughly paralleling the Colorado River in California, Arizona, and Nevada that is important in the origin accounts and religious practices of the Yuman groups in the area including the Quechan (Cleland 2008). For a full account of the trail system see Cleland (2008).

Creation or Origin Accounts

Origin accounts shared by the Kumeyaay, Quechan, Cocopa and Cahuilla all contain similar elements in that creation of their peoples originated at a specified loci, which was followed by movements of the various peoples around the general region. Their accounts indicate that there was an inland sea, possibly Lake Cahuilla, and that communication between the various local groups was constant.

Quechan: John Harrington's article (1908), "A Yuma Account of Origins," documents an account told by the respected *sumátc* (Dreamer), Tsuyukweráu (A.K.A., Joe Homer), which indicates that people were created on the sacred mountain, *Avikwamé* (known also by the names "Spirit Mountain," "Dead Mountain," and "Newberry Peak," a peak in the Newberry Mountains, AZ), by the Creator Kwikumat. Kwikumat and another deity, Blind Old Man, emerge from water then begin creating the Moon and a star. This is followed by shaping the progenitor male and female of the Yuma, Diegueño, Cocopa, and Maricopa from mud and "swinging" them into life. Blind Old Man also makes people who later become Duck, Beaver, Turtle, and Wild Goose after being kicked into the water by Kwikumat because he thought them deformed. Floods and transformations into animals are used to punish people for transgressions. Kwikumat creates new people, some of who he changes into still more animals and birds. He sets aside a man, named Marxokuvek, and a woman, who bears him a son, Kumastamxo. Kumastamxo, given the power to create, creates more stars and the sun, and more people, and gives them seed-bearing plants to gather and to grow. After more creations, several floods, and many lessons, Kwikumat's daughter, *Xanye* (Frog), consumes his excrement, which causes him to become ill. Kwikumat dies leaving his creations to mourn him. (Harrington 1908:328-347) In another account, after Kwikumat dies, and the first *keruk* (mourning) ceremony was held, a war ensues with invaders from the east (Forbes 1965:22). The Quechan *keruk* ceremony thus "includes a mock war between the people and the invaders" (Forbes 1965:22).

Cahuilla: One account of the Cahuilla creation tradition, as told by Perfecto Segundo, is summarized in the prologue of *The Heart is Fire* by Deborah Dozier (1998:19-22). Mukat and Témayawet born together from darkness and night, create the sky, earth, and the ocean. Using mud, each of the twins begins to create people; Témayawet creating his quickly and carelessly, Mukat creating his slowly and carefully. In order to see their creations, they work together to create light, first in the form of stars, then as the sun. The twins argue about the people that they have created. Témayawet, in his anger, recedes underground, taking his people with him and causing earthquakes. Mukat, staying above ground, is joined by Ménill, the moon, who takes care of and teaches his people. Mukat begins to exercise his will and brings death, danger and warfare to his people. Their souls wander until they are taught the mourning ceremony and given instructions of how to reach Telmíkish, the land of the dead. Mukat's people become angry with him and set about to find ways of bringing about his demise. In another account, taken with Ruby Modesto of the Desert Cahuilla, "The Creator" becomes ill after Frog, a sorcerer, consumes his excrement (Modesto and Mount 1980:32-33). As Mukat began to die, he sings of his creations and "teaches the people the sacred traditions that they are to live by" (Dozier 1998:22). William Strong's telling of the Palm Springs Cahuilla Creation Myth (1929:130-143) indicates that Coyote also was present during Mukat's death. Mukat sent Coyote away to the east, for "coyote will try to eat me [Mukat] When he is gone . . . gather all kinds of wood, dig a hole, and prepare to burn my body" (Strong 1929:140). "The people burn Mukat's abandoned body. From Mukat's ashes, all the food plants grow – acorns, squash, chia, sage, all the food of the Cahuilla. In his death, Mukat has given his people their way of life, their laws, their customs and ceremonies, and their food" (Dozier 1998:22).

Creation is a cycle consisting of initial genesis, action, punishment, and back to genesis. Punishment often is meted to the transgressors in the form of floods or transformations. Present throughout the story is the notion that transformation is inevitable. Death of a deity transforms him or her into another form, or at least, into another reality of existence. Blind Old Man sinks

and rises from his watery origins (blinded by opening his eyes before he had emerged from the water). Kwikumut emerges and dies, is transformed into his son, who creates the sun. Floods transform land into mountains. Fire also is utilized as a transformative process in the creation account. It figures into the transformation of a god or a person into his or her spiritual component, leaving ash. Souls (*metrao*) are then too seen as being like embers carried into the wind or as cinders slowly burning into ash, as on a funeral pyre (see Forde 1931:176-7). DuBois, working with translators in the early 1900s, recorded a “Mission” (in this case, referring to Western Diegueño Indians) creation account which follows the exploits of twin brothers (Du Bois 1906). This version details the origins of animals and action – some of which include subsistence and funerary rituals. In her conclusion, she indicates that the remains of these mythological figures can be seen in their manifestations as rocks, stones, and other geographic features (1906:164). Basso, in his discussion of the role of places in Apache storytelling (1988), indicates that often physical geographic features can hold a great deal of cultural memory, conveying complex sets of ideological mores and ethics. It could be said that a unique geographic feature, especially one that may be used for economic and subsistence oriented raw materials, holds not only the physical manifestation of culturally relevant mythology, but also the accompanying practical application as a locus for mundane traditional transference of practice.

Cocopah: In a Cocopah account of creation, primordial twins are born underneath the sea and through parturition, one is blinded by the salt water. The two proceed to create the world, mold humans and place them in their proper place in the world. A dispute arises between the twins and the blind twin moves away to reside below the surface of the land. The underground twin is the source of earthquakes, and underground eruptions including mud pots and steam emissions. In at least one account (Kelly 1977), the above ground twin attempts to step over the hole left by the subsurface twin’s departure and while he staves off most of the hole, eleven forms of sickness ooze out between his toes. The above ground twin lives on to instruct people. On his deathbed and as the people go about preparing for his funeral, the twin provides the people with the knowledge of their lands. This knowledge is encased in hundreds of songs commemorating a travel circuit and generally referred to as bird songs. Some of the bird songs reference Lake Cahuilla (Salton Sea) and, ostensibly, Obsidian Butte.

Bird Songs

Those who sing the Bird songs refer to them as being in a language so old that no one remembers what the words exactly mean. Some hypothesize that the language could be the old Yuman language. While most of the bird singers cannot translate the words, they do learn the supporting stories, or contexts, of the songs. Often these contexts are centered on the Bird Songs telling the stories of migrating birds, perhaps as an explanation for why the birds themselves search for their seasonal homes, or perhaps more accurately serve as allegories for the migrations of peoples throughout the creation epoch, which seems supported by the archaeological record of the Colorado Desert region. The bird songs may also serve as reminders for various forms of cultural traditions, from religious rituals to subsistence practices. Often sung at *fiestas*, and taught to members who show interest, the bird songs reflect an important connection for contemporary Native peoples not only to their respective ancestors, but also to the other local groups, a theme that is reflected in nearly every creation account in the Kumeyaay, Quechan, Cocopah and Cahuilla traditions. (For more on Bird Songs and Singers see Dozier 1998:85-107; Herzog 1928 and Bean 1972:149:150). Within the Desert Cahuilla, clan and moiety songs were sung

identifying the location and movements of the various ancestral bird totems (Strong 1929:70-72). Mourners do not sing the Bird Songs for the first years of their mourning cycle.

Dream Stories

Quechan: “The Liots Kwestamuts, ‘was a very religious clan and its members had very powerful dreams.” (Forbes 1965:37)

“Experience manifested itself in two dimensions. . . ordinary sense perception . . and . . . mystical perception Virtually all things known to the Quechans participated in both the material level and the mystical level of reality, and many individual Quechans were able to have direct contact with the latter by means of an *icama* (dream) experience” Forbes 1965:62-3

Supernatural beings in Quechan origin accounts also experience this confluence of material and mystical reality, often changing between mystical and material forms. Animals, plants, and geographic features (including but not limited to rocks, hills, mountains, valleys, rivers, etc.) are understood as material incarnations, manifestations, of the supernatural beings as they continue to exist in the supernatural/mystical realm.

“The people are basically concerned with the acquisition of spiritual power by means of an *icama* wherein they establish direct contact with *Kumastamxo* or a spirit.” (64) “Every kind of power needed by the Quechans could be acquired through the *icama* experience. Successful activity in any field of endeavor was dependent upon ‘right dreaming,’ that is, having learned the appropriate things by means of an *icama*” (65).

Dreaming was a state of consciousness that has received some attention by ethnographers in the past with relationship to the local Native California Indian Populations. Essentially, various states of “dreaming”, altered or otherwise, were considered essential for spiritual (and therefore physical) strength and health. Obvious sleep type dreaming was seen as critically important especially for sucking doctors/shamans, who obtained their healing powers directly from encounters with supernatural beings while in dream states. Reference is made to “Dream Doctors” traveling in dreams to the main ceremonial house on *Avikwamé* where they receive the training that they need to perform whatever function that is needed of them. Additionally, another dream-state might occur during one’s waking hours, perhaps best understood as a type of daydream (but with directed intention and interpretation – maybe more like “visualization”). During these dream states a person’s mystical or metaphysical form may travel to many places on the landscape, either to obtain specific information or to obtain general information, which, in any case will help the success of the individual who dreams. Ethnographic material suggest that dreaming was an important aspect of nearly all actions performed in the material state by an individual such as food procurement (whether hunting/fishing, gathering, or raising crops), ritual activities, or even such things as socio-political relations with other individuals. Important landscape confluences like the region of Obsidian Butte, with its butte, sea, mud pots, and salt procurement, may have been a locus to which individuals traveled via dreams in order to ensure their own personal success.

Warfare

Quechan: “Success in war ‘was the concrete expression of spiritual strength’ because ‘warfare to the Yuma possessed a strong mystical value as the means whereby the spiritual power of the entire tribe was enhanced and at the same time demonstrated” (Forbes 1965:74). “There were

two types of war parties, *axwé hayáig* (seeking major battle) and the *axwé omán* (seeking to rekindle hostility or acquire captives)” (Ibid: 75). War parties would be lead by two war chiefs, one carrying a white feathered stave, the other carrying a black feathered stave. Shields clubs, spears, bows and arrows were the most common types of weapons used. Bows were often made of willow, with arrows either being whittled on the shaft or having flint or “glass” arrowheads attached. (Ibid: 75, 79) Additionally, “Quechan warriors were never without their knives, eighteen-inch long weapons” (Ibid: 79).

Cocopah: Arrows for hunting were fashioned from willow or arrow weed sticks by straightening the shafts, whittling a point at the wider end of the stem and then hardening the pointed end of the stick by careful application of fire. No arrowhead was used. However, when conducting warfare, arrowheads made of obsidian were preferred partially because of the poisonous nature of obsidian. The poison was accentuated by placing other poisonous plant and animal fluids on the arrowhead (Kelly 1977: 52).

Kumeyaay: Warfare does not appear to be as salient of an occupation for the western Yuman tribes as for example when compared with the Colorado River Yuman Tribes. However there does appear to be alliances and enemies among the various groups. A Kwaaymii story recounted in 1914, tells of a young man from the Colorado River who travels into the Mountain Kumeyaay (Kwaaymii) territory. He is described as tall slender, muscular and with a long mane of hair. He is particularly described as equipped with bow and a quiver of arrows “...whose heads were carved from the hyacinth and other precious stones found on the edge of the desert” (Cline 1984: 90). He is taken to a viewing spot where both Lake Cahuilla and the Pacific Ocean can both be seen and then ridiculed for being from a place where the sea is so much smaller than the Great Ocean to the West. This conversation escalates to a tussle and the resultant killing of the Yuma from the Colorado River.

2.4 Present-day Peoples

Quechan Indian Nation: Located along both sides of the Colorado River near Yuma, Arizona is the Fort Yuma-Quechan Reservation on which the Quechan Indian Nation is based. The reservation was established in 1884 and encompasses 45,000 acres. The tribe leases 700 acres of farmland; operates a sand and gravel lease; manages 5 trailer and RV parks, grocery store, museum, utility company, and fish and game department; and recently opened two casinos (Inter Tribal Council of Arizona, Inc. 2003).

Cocopah Indian Tribe: The Cocopah Tribe, have lived along the lower Colorado River and delta for centuries, maintaining their traditional and cultural beliefs throughout many political and environmental changes. Descended from the greater Yuman-speaking people who occupied lands along the Colorado River, the Cocopah had no written language. Established in 1917, the Cocopah Reservation comprises approximately 6,500 acres. There are about 1000 tribal members. The Tribe founded its first Constitution and established a Tribal Council in 1964.

The Ewiiapaayp Band of Kumeyaay Indians: The Ewiiapaayp Indian Reservation was established in 1893 and the Ewiiapaayp Tribe is a federally recognized Indian tribe listed in the Federal Register as "The Cuyapaipe Community of Diegueño Mission Indians of the Cuyapaipe Reservation, California" and is one of the twelve Kumeyaay bands located in San Diego County

(Ewiiapaayp Band of Kumeyaay Indians 2004). The tribe is currently in the planning and development stages of a casino and wind energy facilities.

Campo Kumeyaay Nation: The Campo Indian Reservation was established in 1893, and currently has a population of 351 people. The tribe operates health, education, fire protection, and environmental protection services, as well as economic development branch which operates a casino, construction materials facility, and a wind energy facility (Campo Kumeyaay Nation 2009).

The Torres-Martinez Band of Cahuilla Indians: The Torres-Martinez Desert Cahuilla Indians Reservation was established in 1876. The reservation is located in the lower Coachella Valley and encompasses approximately 24,000 acres of which approximately 11,000 acres covered by the waters of the Salton Sea. The Tribal Offices are in Thermal, California, and 140 people are affiliated with the tribe. The tribe currently operates a casino, and plans to create a truck stop, nature center, to operate a sand and gravel venture and a gold mine in the future (The Torres-Martinez Tribal Council n.d.).

Manzanita Band of Kumeyaay Nation: The Manzanita Band of Kumeyaay Nation reservation, with a population of 69 people, encompasses 3,580 acres in the Carrizo Desert located approximately 20 miles west of the northwestern shore of the Salton Sea (Kumeyaay Information Village Website n.d.).

La Posta Tribe of Kumeyaay Indians: The La Posta Tribe is a small tribal government with lands adjacent to the Manzanita and Campo Tribes located in the Jacaumba Mountains near the Mexico – Californian border. It recently opened its new Casino and also occupies new tribal headquarters on the reservation near the town of Boulevard California.

Kwaaymii Laguna Band of Mission Indians: Carmen Lucas, Kwaaymii Laguna Band of Mission Indians elder has been the caretaker of this ancestral land and the property at Lucas Ranch including the historic Tom Lucas cabin for over twenty years. She currently serves on many



Obsidian Butte obsidian outcrop

cultural preservation boards and has fought for the protection of Native sacred places. (Kwaaymii Cultural Center n.d.)

Kumeyaay Culture and Repatriation Committee (KCRC): The committee represents 12 Kumeyaay bands in issues related to cultural preservation and repatriation. It was formed in 1997.

3.0 Interview Results

3.1 Past Efforts

Several previous efforts have been conducted to acquire information regarding Native American use of or beliefs regarding Obsidian Butte. In 2003, CE Obsidian Energy, LLC (CEOC) conducted a series of telephone calls to the contacts provide by the Native American Heritage Commission (NAHC) to gain insight into the importance of Obsidian Butte to local Native American peoples (Memorandum letter July 3, 2003). After discussion with Bureau of Land Management personnel, CEOC expanded its list to include all parties listed by the NAHC as contacts for Imperial County. A summary of the effort and the results is attached in Appendix A. In 2008, EDAW conducted a series of letters and telephone calls to contacts provide by the NAHC in an effort to identify possible cultural resources of importance in the immediate area of the project (Tennyson and Apple 2009). A summary of the effort and the results is attached in Appendix A. In September 2009, LSA conducted a series of telephone calls to the same contacts as EDAW in 2008 in an effort to obtain information regarding the potential continuity of use of Obsidian Butte and the surrounding landforms. A series of five questions was asked when possible and include:

- Do you know of any written sources about Native American use of the butte?
- Do you know of any oral sources?
- Have you been to Obsidian Butte, and if so, what was the context?
- Is the butte part of a ritual pattern or simply a location of historical interest?
- Do you have any general comments about Obsidian Butte and the other landforms in the surrounding area?

A summary of the contact effort and the results is attached in Appendix A.

3.2 Present Efforts

NSR approached the same contacts as EDAW and LSA asking for a chance to interview the individuals about the importance of Obsidian Butte and the surrounding landscape. Those tribes or individuals that had previously stated that they were not interested or not culturally affiliated with the site were not bothered again. Several contacts responded agreeing to an interview. The results of the contact effort and interviews are attached in Appendix A. A preliminary interview plan with a list of questions to be asked was forwarded to the CEC for approval. This plan, attached in Appendix B, was followed for all interviews conducted.

Interview methods involved general questions about the individual (getting to know you questions), more focused questions concerning the individual's relationship, history or practices concerning Obsidian Butte, and questions involving the larger community and the cultural practices that may focus on Obsidian Butte. The interviews were transcribed during the course of the conversation, the iterative process was used in which the questioner repeats the response in an effort to confirm the information, and any corrections were made on the spot. The interviews

were not recorded or filmed because of time and budget constraints. The handwritten notes were immediately typed within a period not exceeding 24 hours and for those interviewees that were willing, opportunity was provided for them to read and correct the typed interview transcripts. The interviews were conducted in a variety of locations: Obsidian Butte, local coffee shops, tribal offices and by phone. The following questions were asked in an effort to understand the importance of Obsidian Butte:

- State your name, cultural affiliation and genealogy for the last one to three generations.
- Discuss how you first became aware of Obsidian Butte as a place.
- Discuss how you became aware of Obsidian Butte as a sacred site.
- Discuss what you have heard other Native Americans say about Obsidian Butte
- Have you in the past or do you currently practice any cultural traditions in relation to Obsidian Butte?
- Please describe these practices?
- If you cannot speak about any sacred practices that you conduct in relation to Obsidian Butte can you please explain why you cannot speak of such practices and knowledge that you hold?
- Does Obsidian Butte fit within your peoples' creation stories or songs? If so how?
- Are there any particular plants or animals that are culturally associated with Obsidian Butte?
- How does Obsidian Butte relate to other features of the surrounding landscape?
- Has or is Obsidian Butte (or the rights to use, gather or take the obsidian resources at obsidian butte) considered traditionally owned by you, your family or the tribe that you belong to?
- What is the nature of the rights to own or use?
- Are there any taboos that traditional people observe when approaching or using the place or its resources?
- What was the obsidian used for? Tools? Wealth? Medicine?
- Do you or your people consider Obsidian Butte to emanate any power or will towards the world including people in proximity to the Butte?

The following interview transcripts are presented in chronological order of date of interview.

Carmen Lucas, Kwaaymii of the Laguna Mountains.

December 22, 2009, Obsidian Butte and Brawley, California.

Carmen Lucas is 74 years of age and the daughter of Thomas Lucas. Born Tomus Lugo in 1903 at the Laguna Indian Reservation Ranch which would later become the Lucas Ranch, Tomus' name was changed to Thomas Lucas when he went to school at Descanso, at which time the school officials changed his name.

When Thomas was still young, several elders, including Juan Bautista, foretold that he would be the last full blooded Kwaaymii as they had witnessed a sign borne by a bird that confirmed that he would be the last of his people. Therefore they advised that he should prepare for change.

The Laguna Indian Reservation, created to accommodate the Laguna band of Mission Indians Lucas family was established in 1891 and 1910. The reservation was converted back to fee status

in 1949, to the surviving members of the Laguna Band of Indians; Thomas Lucas and his four minor children.

Ms. Lucas emphasized throughout the interview that it is important to maintain the continuity of culture, including passing on the location, activities and sense of culture that is found in the landscape, sites and including Obsidian Butte. Ms. Lucas feels that there is a certain decorum of modesty in carrying on traditions, particularly in teaching these traditions because one's culture is what one is and does. The culture, in order to be authentic is simply done and it is not bragged about. Excess talk, including interviews, beyond practice often times leads people to talk without action. This is one reason why Obsidian Butte and other Kumeyaay and Quechan sites are not documented and Indian people are reluctant to talk about them.

Continuity requires, at a minimum, two people interested in participating in a tradition, a teacher and a learner. Ms. Lucas has brought numerous people (Indian and non-Indian) to Obsidian Butte to educate them on the existence, identification of its source material, so that others can know what the obsidian looks like and recognize its existence in other sites distant from Obsidian Butte.

Ms. Lucas took Thomas Gates to Obsidian Butte. She pointed out several features of the site and impacts that the site has undergone: gravel extraction, nearby water holding ponds, roads, antennae tower and the nearby geothermal energy plant. She also pointed out areas where the obsidian source is still intact and evidence of its use shows in the various obsidian debitage surrounding the intact area. She pointed out a grove of dead trees located on the north side of the intact obsidian source that have died from possible inundation of the Salton Sea. She pointed this out to show that the Sea levels have risen and fallen over the centuries. When archaeologists say that they cannot find local habitation sites or other contributing site locations it is perhaps because of the dynamic nature of the sea. They have said this to conclude that the site is not important. She suggested that the camp area could be underwater and if archaeologists need more evidence to what is self-evident to her then maybe they can conduct some underwater (Marine) archaeology. Likewise perhaps previous users of the source material knew of the obsidian location after it had been covered over by water and dove down into the sea to gather obsidian. Therefore it had not been used only since the last time it was revealed as the lake dried up. Additionally it is not common for Indians to establish villages at such sacred places. Indians only take what is needed, pay homage and visit with reverence.

Ms. Lucas said that the Creator placed this obsidian at this place and not at another place. That in itself makes it sacred. The source can be found at many sites across southern California and Southeastern Arizona. Some archaeologists and flint-knappers say that the source is of poor quality and not very good for arrowheads, yet beautiful arrowheads have been made from this source.. Ms. Lucas feels that this assessment is inconsequential. The creator placed the Obsidian Buttes where it is so that the Indian people could use it. They must continue to observe the location, learn about what was provided to them, and use the source. They must do this in order to continue their culture. Ms. Lucas provided a map (see Appendix B) that showed the location of Obsidian Butte in relation to the broader ancestral territory of the Kumeyaay. The map indicated a small sample of several other sites from the Colorado River to the Pacific Ocean where artifacts have been found that have been fashioned from the Obsidian Butte source.

All passing on of Culture is educational and the setting within which education occurs needs to be considered when attempting to determine efficacy of instruction. Obsidian Buttes is a natural classroom that has been diminished by the surrounding development including the hydrothermal

energy plant. The surrounding beauty of the Sea, distant mountains, sky, plants and animals all together create this natural classroom that surround Obsidian Buttes. The developments detract from the ecological wholeness that encompasses effective traditional educational methods.

Ms. Lucas has been aware of Obsidian Butte her entire life; she cannot recall when she first learned of the place. This is not unique to just Obsidian Butte. She cannot recall exactly when she learned of any of the other landscape features that mark her ancestral territory. By being born into a culture one goes about accumulating knowledge without being aware of how it happened.

Ms. Lucas discussed the meaning of the word “sacred”. She does not particularly care for the word when attached to places that have deep cultural meaning for her and others of her culture. She feels that the English language has great elasticity and can be used to stretch words into opposite connotations. However the word is used today in the heritage preservation and cultural resources management vocabulary and so she will use the word despite how the word can be manipulated.

Ms. Lucas made a very poignant point in that a sacred site also solicits a sacred response and the response is as sacred as the place. Not all places solicit such responses. Obsidian Butte does. When a person is young one assumes what others instruct them and they go about their practical lives often not thinking of what was instructed. It is only with age and maturity that one gains enough experience to understand the importance of a place, how it fits in with the rest of a cultural geography and provides a need within the system which a people have developed to survive in a particular environment. This realization dawns as one becomes a tribal elder. And the response to this realization is emotional and compelling. Ms. Lucas is compelled as an elder to pass this knowledge on to the next generation. This educational process is sacred because one has an obligation to speak for the ancestors

Ms. Lucas related that when she is at Obsidian Butte she is surrounded by a vast and awesome world brought about by the sweeping vistas across a large sea with the mountains as backdrop and blue sky with protruding black glistening rock. She is ecstatic when she visits other distant village sites and identifies the easily diagnosed source material from Obsidian Butte at those sites. Knowing the many miles between Obsidian Butte and the Pacific Ocean it is an awesome experience to understand that there is only one Obsidian Butte and it is found out towards the Ocean and places in between; and that the obsidian got there by foot travel. Ms. Lucas mentioned the Yucca fiber shoes and packs manufactured for carrying the fresh quarried stone away from the site and out across the territory, the further removed from the source the more whittled away the stone became.

As an outsider to Indian Culture, one must take into consideration what has happened to Indian people over the last 250 years in order to understand Indian people today, and why some of them do not apply themselves to understand their heritage. This history changed language, religion, habitation, kinship relations and more. Yet Indians are adaptive and have made the best of what they have. Obsidian Butte becomes extremely important as a marker of the past, a marker of their territory and a beacon for those who want to relearn their traditional heritage.

Ms. Lucas is not as knowledgeable about some of the religious or philosophical meanings of Obsidian Butte. She mentioned Preston Arrow weed is one person for that type of knowledge. She does know that Kwaamii culture understands that rocks can be animated. She recounted how a rock on the Lucas Ranch was interesting to her for a number of years, as she would walk by it

she would study its form. A few years before her father passed on he told her of a traditional story that also understood the rock to be a toad and the story connected the place, the rock and a piece of traditional history. Ms. Lucas did not recount the whole story or the traditional meaning behind it. She did make the point that Obsidian Butte has similar meaning.

Ms. Lucas mentioned that the salt in the sea was used as medicine and had a drawing power in that it can absorb disease.

Ms. Lucas emphasized that powerful things and places often times hold together contradictions or paradoxes. Obsidian Butte is no exception.

It is black yet it is transparent. (out of the darkest moments comes enlightenment)

It is hard yet it is fluid (obsidian can be classified as a slow moving liquid)

It is a product of fire and heat yet it emerges from water (both water and fire are sacred elements as water holds the spirits and fire purifies.)

It is periodically covered and then re-exposed making it appear and then disappear (this is magical).

Ms. Lucas observed that a direct proof to the sense of Obsidian Butte sacredness is in the fact that she mentally prepares herself when going to the place. She does not expect payment. She wants people to put this site into their memory banks with the understanding of what it is to native people. The place is unique and cannot be replicated by humans. She educates out of her obligation as an elder to pass on her culture.

In summary Ms. Lucas would like

- The place saved as a means of education for the upcoming generations
- Placed on the National Register
- A plaque erected to commemorate the place acknowledging the rocks place in history from past to present.
- Remove or mitigate the obtrusions that impact the place as an educational place
- Control access

Bridget R. Nash-Chrabascz, Quechan Tribe Historic Preservation Officer

December 29, 2009, e-mail response

Ms. Nash responded to the request for an interview with an e-mail to Dr. Gates stating that the Quechan Cultural Committee, after considering the project in a meeting held December 22, 2009 was declining to participate in the interview effort. She herself was willing to talk about general information regarding the larger area of the project, but felt that the information she was able to provide had already been provided in past iterations of this project. The Tribe is generally interested in preserving traditional cultural sites such as Obsidian Butte.

Jill McCormick, Tribal Cultural Resources Manager; Edmund Domingues, Councilman; Dave Phillips, Vice Chairman; and Paul Soto, Councilman; Cocopah Tribe

December 30, 2009, Somerton Arizona

Ms. McCormick, Mr. Domingues, Mr. Phillips, and Mr. Soto discussed the meaning of “sacred” and “sacred sites” by using the analogy of the “Holy Land” of Israel. God, through his son Jesus,

walked throughout the land performing miracles and providing teachings to the people that created a long tradition of religious understanding that has circled the world. This all originated in one place, Israel, and so millions of people around the world today reference the original place as “holy”. Likewise the creator (through the twins) made such journeys and instructed the people on how to live in this land. Therefore this is also a holy land. It is all sacred; but particular places that commemorate the journeys and related instructions are particularly special. Therefore to wipe out a particular place that held special meanings is to forfeit a land-based knowledge for future generations. To dismantle Obsidian Butte is akin to bulldozing Bethlehem or Mount Calvary.

They mentioned Cocopah territory used to come up to Lake Cahuilla. As Lake Cahuilla shrunk, the Cocopah stayed near present day Somerton and south along the lower Colorado River. In the past there was a lot of warring and migrations of all of the people living along the lower Colorado River and around Lake Cahuilla. Today, Cocopah tribal members live in the Imperial Valley up towards El Centro. The Cocopah who maintain the traditional knowledge know that their ancestors used the obsidian from Obsidian Butte; whether it was traded or directly taken by their ancestors they do not know. The obsidian was used arrow points for warfare and for knives, but obsidian use was quickly superseded by metal after contact with the Spanish. Traditional bird songs, sung by all of the Yuman speaking people and the Cahuilla, make reference to the Lake Cahuilla and maybe to Obsidian Butte. They recommend talking with Lorey Cacaora, an elder who knows some of the bird songs.

Finally, they stated the Cocopah Tribe is aware that the site is listed on the Sacred lands Inventory maintained by the State of California Native American Heritage Commission, and they support the protection and preservation of the sacred sites that represent the collective culture of the lower Colorado River area and surrounding deserts and mountains, including Obsidian Buttes. They noted, however, other tribes and individuals that Dr. Gates is currently interviewing will be more knowledgeable about Obsidian Butte.

Nick Elliot, Cultural Resources Director, Manzanita band of Kumeyaay

January 2, 2010, Boulevard, Ca

Nick Elliot reiterated throughout the interview that the Manzanita tribe is not intent on stopping development such as geothermal power plant upgrades or improvements. People need electricity to live. He does request that if any cultural items, human remains or associated funerary objects are encountered that those responsible immediately contact the Manzanita Tribe so that the proper cultural procedures can be used to respectfully handle any unearthing or subsequent reburials. He also emphasized several times that the preservation of Obsidian Buttes is extremely important to him and the Tribe. Everything possible should be done to prevent the on-going destruction of the site. He is very supportive of any concepts that include broader interpretation, education and use of the site for the furtherance of Indian traditions of the area.

“Sacredness” for Mr. Elliot is related to the pact between the creator and the people. The pact concerns the creator handing over the place and the knowledge for how to care for the place to Indian people in exchange for the peoples continuing care of the place. Those places, including Obsidian Butte are part of that sacred pact. Obsidian Butte is a Kumeyaay place. It is in Kumeyaay territory. However, Mr. Elliot understands that Obsidian Butte material was used by other neighboring tribes.

Mr. Elliot spoke of his great Grandfather Jimmy McCarty, traveling a circuit. He was a specialist with knowledge of how to make the mourning ceremony dolls that represent the deceased. He would take a year to gather up all of the materials and to make the doll or image. He would travel to the mountains to gather horse hair for use in providing hair for the doll. He traveled out towards the ocean to get certain items. He traveled to obsidian butte to get obsidian to make the eyes of the doll. In those days it took two to three days to travel to Obsidian Butte from the mountains where the Manzanita people lived. As he traveled to these places he also collected other items for trade or subsistence such as fish from the ocean, pinyon nuts from the high country and when at the Salton Sea Obsidian Buttes his great grandfather also caught fish and collected salt. There was a hot spring over to the north of Obsidian Butte that was also important. This is what is sacred about Obsidian Butte because it had a place in their travels and use. It was part of them and their culture. The doll that is manufactured represents the person but it also is made from all around the land, therefore the doll is sacred also. Mr. Elliot was specific in the route of travel that went across the Carrizo Gorge, across the Jacumba Mountains, past Painted Gorge and then up towards the Salton Sea. The main trail continued on over to Yuma and is the same route that Anza followed when he came into this area.

Mr. Elliot also stated that the Obsidian Buttes material was used by the Kumeyaay as material for arrowheads and other tools. It was also a source of trade and therefore wealth. While the place is “sacred” the material itself is “rare” or “precious” because it is the only source within a large area. The next sources are south, down in Mexico or north up near Coso. Those areas are other people’s places and so Kumeyaay used their source. It does not matter what others (archaeologist) say about the obsidians quality being less than these other sources. It is the Kumeyaay source and so it is important to Kumeyaay.

Mr. Elliot said that he cannot recall any particular time when someone told him about Obsidian Butte and attached the label of “sacred” to it. Just like all of the other places in Kumeyaay territory that are important, you just grow up knowing about it and that it is special. It is just culturally assumed by growing up within the culture

Preston Arrowweed, Quechan Elder and Bird Singer

December 19, 22, 2009 and January 2, 2010, telephone conversations

Preston declined the opportunity to discuss Obsidian Butte with Dr. Gates. Instead he asserted his intent to write a letter to the Native American Heritage Commission. In such letter he would state his concerns about Obsidian Butte. Dr. Gates informed Preston that the report was due to the Energy Commission on January 6, 2010 and would be finalized no later than January 8, 2010 and that it would be timely for him to submit such a letter as soon as possible.

Bernice Paipa, Cultural Representative, Kumeyaay Culture and Repatriation Committee

January 4th, La Posta Tribal Office, Boulevard California

Bernice Paipa is a tribal member of a band of Kumeyaay (Santa Ysabel) that have ancestral ties to the Obsidian Butte area. The Kumeyaay are an ocean, mountain and desert people. Ms. Paipa is also a representative on the Kumeyaay Culture and Repatriation Committee. The committee represents 12 Kumeyaay bands, including La Posta Tribe.

When Ms. Paipa was a child approximately 10 years old her father showed her some arrowheads and said that the arrowheads were made from Obsidian Butte sources. This is when she first became aware of the place called Obsidian Buttes. She was not aware that the place was sacred until she learned from observing her father drive her great uncle, a medicine man, around. In order to for her uncle to do something related to making medicine she noticed that he had to prepare himself often times by going to certain places and sometimes those places were in the desert. One of the places her father and uncle went to was Obsidian Butte. She then realized that Obsidian Buttes was sacred because it was a type of place requiring preparation.

The obsidian is used mostly for making arrowheads. However she recalls that her great grandmother had a pestle for grinding plants that was fashioned from Obsidian Buttes material.

Ms. Paipa documented the site in 2003. It was not stated whether it was a formal documentation or for her own purposes.

Ms. Paipa also has a piece of Obsidian Butte material that she keeps to remind her of the place and how important it is to her people.

Ms. Paipa cannot talk much about ceremonial subjects, creation myths or Bird songs because those are not specific traditions that were handed down to her. She suggests talking with Paul Cuero about those aspects of Obsidian Butte. She does know that obsidian from Obsidian Buttes was traded throughout southern California and it has been found in a number of sites throughout the region. Ms. Paipa said that just because some of the traditional ceremonial knowledge has eroded away and even though some Indian people do not practice traditional ways or have adopted non-traditional ways does not make the ceremonial life-way and its significant features less important or that today's Indians are any less "Indian" than in the past.

Obsidian Buttes links up to all of the other sites that collectively constitute the main features of an ancestral homeland. She had heard that the homeland boundaries were defined in the past by what one could see when looking in 360 degrees from Mount Yisidro (just west of Borrego Springs).

In considering the project impacts on the sacred sites Ms. Paipa said that the geothermal power plants (and any expansions) are incompatible with the sacred site. Aesthetically the power plants visually contrast with the sacred site. She asserted that the noise and light that is emitted from the plant also detract from the site. The smell also makes it so that the site is less desirable to frequent. Ms. Paipa wonders if there are health problems with being near the site.

Ms. Paipa sees all kinds of people at the site and wonders what they are doing there. She sees New Age people and archeologists at the site. They often times take either worked or raw source obsidian without permission from the Kumeyaay and that is not traditionally correct.

Ms. Paipa said that the next generation of Kumeyaay need to be educated about their culture and the best method of education is to take the children to the site. However the butte's educational opportunities are diminished if the area smells bad, there is noise that makes communication difficult or there is a health risk with being near the power plants, or the power plant's presence is aesthetically incompatible with teaching traditional values that assume an intact ecosystem.

Ms. Paipa informed Dr. Gates that there is a Kumeyaay land trust that has been set up to assist in protecting these kinds of places. During the interview, Mike Connolly, a Campo tribal member with knowledge of the Obsidian Buttes area, sat in for several minutes. He mentioned that Traditional Kumeyaay villages were located on the Alamo and New Rivers near those rivers'

successive confluences with lake Cahuilla. There are no village sites near the Obsidian Buttes site because of its sacred and powerful nature. There was a time when the Cocopah pushed the Kumeyaay out and occupied those villages. Later as the Americans took possession of the land from Mexico, Quechan also displaced Kumeyaay in the same vicinity.

Roland Ferrer, Planner, Torres Martinez Band of Desert Cahuilla Indians

January 5, 2010 – Telephone Conversation

Mr. Ferrer spoke with two elders earlier in the day who said that they were aware of the Obsidian Butte site and that the Desert Cahuilla used obsidian from the area over a long period of time. They do not have a lot of information beyond that. However, the Tribe is very concerned about the protection of the site and is willing to support efforts to preserve the place.

Paul Cuero, Traditional Bird Singer and Educator, Kumeyaay.

January 5, 2010 – Telephone Conversation

The Obsidian Buttes area is within Kumeyaay territory. It was used for at least a millennium and into the present by the Indian people of the region. It was used for arrowheads, knives and spearheads. It is not mentioned in the creation stories because those stories were formulated when Lake Cahuilla submerged the site. It may be mentioned in one set of bird songs called the *Tipai* or “people’s songs.”

Kumeyaay also fished and gathered plants near the buttes.

The obsidian itself is what makes the place sacred. Obsidian is a rare substance and Obsidian Buttes is only one of several places throughout North America where obsidian is provided by the creator. It is sacred because it is rare, precious and essential to traditional native survival.

Just because Indian people today do not rely on obsidian for survival does not mean that the site is no longer important. When Dr. Gates asked if the presence of the geothermal plants have diminished its sacredness, Mr. Cuero responded with an analogy. When a baby is young it relies on its mother’s milk for survival. There comes a time when the baby becomes a child and must be weaned from the comforting liquid. The child grows into an adult and no longer needs the mother’s milk. But that does not mean that the mother or her milk has diminished in importance. In fact the mother grows in importance because she is a reminder of where the person came from; and for that the mother is revered. Likewise in the present, these are hard times with the economic downfall and there may come a time where the Indian may need to return to the sources that earlier provided sustaining nourishment. Kumeyaay children need to be educated on these sources and these sources must be protected so that they may still provide sustenance.

Mr. Cuero has taken many Kumeyaay children out to Obsidian Buttes to educate them on the past so that they may be prepared for the future. You do not destroy what you may need in the future. The traditional Indian way is to never overuse a resource.

Mr. Cuero would like to see Obsidian Buttes protected from all encroachments including the Geo-thermal power plants

4.0 Summary and Recommendations

4.1 Summary

The findings documented in this report can be summarized in the following Sequence.

- The broad Yuman and Uto-Aztecan cultures of the area have a deep history. Obsidian and the source, Obsidian Buttes, play a significant role in this cultural area.
- Obsidian is a rare and precious material and the Obsidian Buttes obsidian is considered a fine material by the local Native Americans that know of the source, despite that some archaeologists and flint knappers consider the source to be inferior.
- It was used as raw material in tool making, trade, warfare, and in religious ceremonies
- It may figure in the creation accounts and in the traditional bird songs
- The general area was also used for traditional plant and salt gathering and for fishing and several villages are located at modest distances from the site
- Obsidian Buttes and its materials are considered by local Native Americans to be spiritually endowed and powerful
- The Native Americans, and particularly the Kumeyaay, demonstrate a continuity of cultural knowledge and practice in relation to the site that endures from the past to the present and there is a will to maintain that continuity into the future.
- Education of the younger Native Americans concerning Obsidian Buttes is a consistent theme throughout all of the substantive interviews.
- The site is listed on the Sacred lands Inventory of the State of California Native American Heritage Commission.
- Despite past development that has compromised the site, the site still retains integrity because of the associated indigenous understanding that the feeling of sacredness of the place will not diminish and that living indigenous people retain an obligation to protect the place and pass on that knowledge and obligation to future generations on behalf of their ancestors despite a diminished condition.
- It is Dr. Gates' professional opinion that the site is eligible to the National and State Registers under all four criteria as follows:
 - A: as associated with events that have made contributions to broad patterns of history in that the site was part of a large trade network maintained through trails and personal relationships, and its materials were sought after for various implements of material and religious culture throughout Southern California
 - B: as associated with famous Kumeyaay medicine men who traveled to the site to procure material for use in ceremony and also with the possible association of the site with the twins responsible for creation of the world.
 - C: As associated with the work of a master, namely the creator, in placing something rare and precious in the care of the indigenous people of the area
 - D: as associated with the ability to yield knowledge on traditional pre historic and historic obsidian source procurement, flint knapping methods as such

information is contained in intact artifacts still found at the site, and the associated obsidian artifacts found in various archaeological sites throughout Southern California.

- The site qualifies as a Traditional Cultural Property as such historic property types are further defined in National Park Service Bulletin 38, as there is a clear demonstration of the cultural continuity through the millennium to the present; and it has been clearly expressed by various Indigenous people in past years and in the present that the site is vital to the ongoing traditions of the indigenous communities of the area.
- Past destruction of Obsidian Buttes by the Imperial Irrigation Commission for purpose of gravel and rock extraction for making roads and levees is considered by local native Americans to be a direct assault on their culture and affront to the passage of those cultural traditions on to the next generation.
- The presence of geothermal operations in the area contributes to the diminishing of site integrity as regards to setting and conditions.
- A proposed expansion of geothermal operations, should those expansions be approved, will further diminish the integrity of the adjacent sacred site.

4.2 Recommendations

It is recommended that a mitigation and treatment plan be developed by the CEC in close consultation with the concerned tribes, geothermal industry applicant and the property owner to determine the best means for preserving or mitigating the adjacent sacred site while simultaneously partially fulfilling the State requirements for development of renewable energy sources. Mitigation and treatments concepts may include such items as:

- Land purchase, donation or conservation easements applied to all or those parts of the site that are still relatively intact.
- Site Restoration of all or some of the site.
- Visual breaks such as the planting of vegetation to block or diminish the view of the geothermal plant from the intact portions of the sacred site.
- Controlled sacred site access by means of signage, gates and security surveillance.
- Commemorative and interpretive plaques placed near the site, perhaps within the adjacent Sonny Bono Wildlife Refuge.
- Formal determinations of eligibility or nominations to the State and National Registers.
- Seed funds for developing and implementing a tribal youth obsidian training curriculum and program.

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Appendix A

Previous and Current Outreach Efforts

California Energy Commission Letter July 2003

Contact	Date	Type of Contact	Results
Keith Adkins Manzanita Band of Mission Indians	2-2003	Telephone	Mr. Adkins stated "if it was a place where the Indians got obsidian, then it had significant value to the Band."
Steve Banegas Barona Band	2-2003	Telephone	Mr. Banegas stated "Obsidian Butte is important."
Paul Cuero Kumeyaay Cultural Heritage Preservation	5-2003	Telephone	Mr. Cuero stated "Obsidian Butte is significant to the Kumeyaay and obsidian from this source is still used by them."
Desi Velas Ewiiapaayp	5-2003	Telephone	Mr. Velas stated "Obsidian Butte is out of their area and not of concern to them."
Cabazon Band of Mission Indians	6/11/2003	Letter, telephone	Outside traditional area, no comments, No further contact necessary.
Ron Christman, Kumeyaay	6/11/2003	Letter, telephone	Outside traditional area, no comments, No further contact necessary.
Inaja Band of Mission Indians	6/11/2003	Letter, telephone	Outside traditional area, no comments, No further contact necessary.
Anthony Andreas, Jr.	6/11/2003	Letter, telephone	Outside traditional area, no comments, No further contact necessary.
Jumal Indian Village	6/11/2003	Letter, telephone	Outside traditional area, no comments, No further contact necessary.
Morango Band of Mission Indians	6/11/2003	Letter, telephone	Outside traditional area, no comments, No further contact necessary.
Fort Mojave Indian Tribe	6-2003	Telephone	Several attempts at contact, no return calls
Jonell John Cahuilla Band of Indians	6-2003	Telephone	Message left. Ms. John responded on July 1, 2003. Stated her interest in attending the field trip slated for July 3. She would be able to provide better comment sat that time.
Steve Banegas Barona Band of the Capitan Grande	6-2003	Telephone	Referred to Mr. Banegas. Several attempts at contact, Calls not returned
Darrell Langley Mesa Grande Band of Mission Indians	6-2003	Telephone	Left a message. Mr. Langley returned the phone call and left a message. Attempts at contact continued.
Ramona Band of Mission Indians	6-2003	Telephone	Stated the project is not within their historical area. Referred staff to Torres-Martinez Desert Cahuilla Indians. If attempts to reach them failed, then recontact them for comments. Provided written comments stating they are unaware of "any Native American religious or sacred sites"

Mary Maxine Ray Torres Torres-Martinez Desert Cahuilla Indians	6-2003	Telephone	Staff left message. Attempts at contact continued.
Alvino Siva	6-2003	Telephone	Unfamiliar with the project area, would go look.
Katherine Saubel, Tribal administrator Los Coyotes Band of Mission Indians	6-2003	Telephone	Notified by office staff if Ms. Saubel did not return call, Then there are no issues or question. Call was not returned.
Fort Yuma Indian Reservation-Quechan Tribe	6-2003	Telephone	Interested in the project and willing to attend field trip to provide comments
Chad Smith Fort Mojave Tribe, Ahamakav Cultural Society	6-2003	Telephone	Unfamiliar with the area, very interested in the project. He stated he would contact the BLM archaeologist for specific information about resources in the area.
Cocopah Tribe	6-2003	Telephone	No comments at the time. Wished to be informed about all meetings and workshops to better able provide comments.
Carmen Lucas	6-2003	Telephone	Very interested in visiting the site. Indicated Obsidian Butte was very important, used by people for more than a thousand years. Very concerned about the destruction of the butte would like to see it protected. "She feels the distribution of obsidian from this butte helps support the oral history of the travels of the Indians that occupied this part of the desert."
Augustine Band of Cahuilla Indians			Sent a letter indicating they were unaware of any Native American resources or sacred sites in the project area. Wished to be notified of any discoveries. Recommended a monitor be on site for project activities.

EDAW, Inc. Jan 2009 Amended Salton Sea Unit 6 Project Cultural Resources Survey Report, Imperial County, California.

Contact	Date	Type of Contact	Results
Leroy J. Elliot, Chairperson,	9/23/2008	Letter	No Response
Manzanitia Band of the Kumeyaay Nation	12/10/2008	Telephone	Left Message
Monique LaChappa, Chairperson	9/23/2008	Letter	
Campo Kumeyaay Nation	10/22/2008	Response Form	No Comments. Asked that the NAHC list be updated.
Joseph Hamilton, Chairperson	9/23/2008	Letter	No Response
Ramona Band of Cahuilla Mission Indians	12/10/2008	Telephone	Left Message
Raymond Torres, Chairperson	9/23/2008	Letter	No Response
Torres-Martinez Desert Cahuilla Indians	12/10/2008	Telephone	Left Message
Paul Cuero	9/23/2008	Letter	No Response
Kumeyaay Cultural Heritage Preservation			
Carmen Lucas	9/23/2008	Letter	
Kwaaymii Laguna Band of Mission Indians	12/10/2008	Telephone	Identified Obsidian Butte as an area of concern. Requested a Native American Monitor be present for all ground disturbing activities (Quechan or Kumeyaay). Asked that the cultural landscape be taken into account when considering traditional cultural resources related to the project. Would like to see Obsidian Butte nominated to the National Register.
Michael Garcia, Vice-Chairman/EPA Director	9/23/2008	Letter	No Response
Ewilaapaayp Tribal Office	12/10/2008	Telephone	Left Message
Nick Elliot, Cultural Resources Coordinator	9/23/2008	Letter	No Response
Manzanitia Band of the Kumeyaay Nation	12/10/2008	Telephone	Mr. Elliot Unavailable. Asked to be called back.
Bridget Nash-Chrabascz, Tribal Historic Preservation Officer	9/23/2008	Letter	Ms. Nash-Chrabascz requested a telephone call and Tribal Monitor.
Quechan Indian Nation	10/29/2008	Telephone	Left Message
	10/30/2008	Telephone	Left Message
	11/3/2008	Telephone	Indicated the Tribe would like a monitor on the survey.
	11/4/2008	Telephone	Monitor not available, She asked to be notified of the results of the survey
	11/6/2008	Telephone	Notified that no prehistoric sites were identified by the survey

Preston Arrowweed	11/24/2008	Telephone	Indicated the Quechan Tribe should be the contact for the project and that no further consultation with him was necessary
Identified as MLD by the NAHC			

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Contact	Date	Type of Contact	Results
Leroy J. Elliot, Chairperson, and Keith Atkins, Environmental Manager Manzanitia Band of the Kumeyaay Nation	9/28/2009	Telephone	Detailed voicemails left for Mr. Elliot and Mr. Atkins
Monique LaChappa, Chairperson, and Lisa Gover, Tribal Administrator, Tribal EPA Office Campo Kumeyaay Nation	9/28/2009	Telephone	Detailed voicemail left for Ms. LaChappa. A message was left for Ms. Gover with an administrator at the Tribal EPA office.
Joseph Hamilton, Chairperson, and John Gomez, Jr., Cultural Resources Coordinator Ramona Band of Cahuilla Mission Indians	9/28/2009	Telephone	Detailed voicemail left for Ms. Chihuahua.
Mary L. Resvaloso, Chairwoman, and Diana Chihuahua, Cultural Resources Coordinator Torres-Martinez Desert Cahuilla Indians	9/28/2009	Telephone	
Bernice Paipa Kumeyaay Cultural Repatriation Committee	9/28/2009	Telephone	Detailed voicemail left for Ms. Paipa. She returned the call on 10-2-1009. Stated the Obsidian Butte is very significant to the Tribe. Recommended preservation of the butte. Recommended Carmen Lucas be contacted due to her extensive knowledge of the history and significance of the butte and surrounding area. She asked that the tribe be informed of any developments.
Carmen Lucas Kwaaymii Laguna Band of Mission Indians	9/28/2009	Telephone	Detailed voicemail left for Ms. Lucas. She returned the call on 9-29-2009. "She provided very specific details about Obsidian Butte and its significance to Tribes in the area, as well as throughout Southern California as a resource that appears regularly in the archaeological record. She is very concerned about the level of destruction that is currently taking place to Obsidian Butte, and recommends that the butte be nominated to the National Register of Historic Places so that it can be preserved and protected. She will help with this process in any way she can. She is also requested a future meeting with LSA on site so that she can expand on her comments."

Michael Garcia, Vice-Chairman/EPA Director Ewiiapaayp Tribal Office	9/28/2009 Telephone	"Stated the Tribe is very concerned about the impacts that are currently taking place to Obsidian Butte. He requested an e-mail detailing the type of information the tribe can provide be sent to him." He would then share the e-mail with Elders and others who may have information to share.
Bridget Nash-Chrabascz, Tribal Historic Preservation Officer Quechan Indian Nation	9/28/2009	"Stated the Tribe considers Obsidian Butte to be a significant and sacred area and is very concerned about the impacts currently taking place there." She stated the Cultural Committee was to meet on 9-29-2009, at which point she would bring this issue to the attention of the committee. On 9-29-2009, she e-mailed the committee response. "They are more than willing to assist with any information they have. They too would like to see it listed on the NHRP and are devastated by the destruction that continues to occur. The committee requested a site visit or meeting with them to collect the information. They also offered to compile a short narrative and send it at their earliest convenience."
Preston Arrowood, Identified as MLD by the NAHC		Was not contacted "because during the previous study conducted by EDAW, he stated that the Quechan Indian Nation should be contacted for the project and that no further consultation with him was necessary."

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Contact	Date	Type of Contact	Results
Leroy J. Elliot, Chairperson, Manzanitia Band of the Kumeyaay Nation	12/18/2009	Telephone	Left Message, No response.
Monique LaChappa, Chairperson Campo Kumeyaay Nation	12/18/2009	Telephone	Left Message, No response.
Raymond Torres, Chairperson	12/18/2009	Telephone	Left Message, No response.
Roland Ferrero, Planner Torres-Martinez Desert Cahuilla Indians	1/5/2010	Telephone	Mr. Ferrero discussed the importance of Obsidian Butte and is supportive of preservation. He also mentioned the Elders of the Tribe are knowledgeable about site.
Paul Cuero Kumeyaay Cultural Heritage Preservation	1/5/2010	Telephone	Mr. Cuero stated Obsidian Butte is important and sacred particularly because it is unique to Kumeyaay. He also stated the butte has education potential. He stressed that regardless of the severity of damage, the butte is still sacred.
Carmen Lucas Kwaaymii Laguna Band of Mission Indians	12/22/2009	Interview	Participated in an interview with Dr. Gates. The full transcription is in the report.
Michael Garcia, Vice-Chairman/EPA Director Ewiiapaayp Tribal Office	12/18/2009 12/22/2009	Telephone	Left Message, No response.
Nick Elliot, Cultural Resources Coordinator Manzanitia Band of the Kumeyaay Nation	1/2/2010	Interview	Participated in an interview with Dr. Gates. The full transcription is in the report.
Bridget Nash-Chrabascz, Tribal Historic Preservation Officer Quechan Indian Nation	12/29/2009	E-mail	Quechan Tribe Cultural Committee declined to be interviewed. Ms. Nash-Chrabascz was willing to discuss general information, but felt she was unable to adequately address specific issues regarding Obsidian Butte.
Preston Arrowweed, Identified as MLD by the NAHC	12-20 and 24, 2009; 1-2-2010	Telephone	Declined to be interviewed
Jill McCormick, Tribal Cultural Resources Director Edmund Dominques, Councilperson Dave Phillips, Vice Chairperson Paul Soto, Council Person Cocopah Tribe	12/30/2009	Interview	Participated in an interview with Dr. Gates. The full transcription is in the report.
Bernice Paipa Kumeyaay Cultural and Repatriation Committee	1/4/2010	Interview	Participated in an interview with Dr. Gates. The full transcription is in the report.

Appendix B

Carmen Lucas Map Depicting Obsidian Butte Source Migrations

provided by Carmen Lucas to Thomas Gates on 12-22-09

