

CULTURAL RESOURCES ASSESSMENT

Helendale Community Services District Well Field Project

Unincorporated San Bernardino County, California

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National Archaeological Data Base Information:

Type of Study: Intensive Survey

Resources Recorded: COL2002-H-2, COL2002-H-3, COL2002-I-1, COL2002-I-2,

Keywords: Helendale, Historic-Period Well, Historic-Period Water Basin, Prehistoric Isolates

USGS Quadrangle: 7.5-minute *Helendale, California* (1993)



BCRCONSULTING LLC

February 15, 2021

MANAGEMENT SUMMARY

BCR Consulting LLC (BCR Consulting) is under contract to Altec Land Planning to conduct a Cultural Resources Assessment of the Helendale Community Services District Well Field Project (the project) located in the unincorporated Helendale, San Bernardino County, California. A cultural resources records search, intensive-level pedestrian cultural resources survey, shovel test pit excavation, a Sacred Lands File search with the Native American Heritage Commission, and a Paleontological Overview were conducted for the project in partial fulfillment of the California Environmental Quality Act (CEQA).

The cultural resources records search completed revealed that eight cultural resource studies have taken place resulting in the recording of two cultural resources within the one-mile research radius.

During the field survey, BCR Consulting personnel identified two prehistoric isolates temporarily designated COL2002-I-1 and COL2002 I-2, and two historic-age sites temporarily designated COL2002-H-1 and COL2002-H-3. Isolated finds are not considered “historical resources” under CEQA and as such the isolated artifacts do not require further evaluation. COL2002-H-1 and COL2002-H-3 have been evaluated and are recommended not eligible for listing on the California Register of Historical Resources (California Register). As such they are not recommended “historical resources” (i.e. are not significant) under CEQA. They do not warrant further consideration. No other cultural resources (including other architectural historical resources, prehistoric archaeological resources, or historic archaeological resources) were identified. Furthermore, excavations for previous wells and past agricultural uses on the project site have disturbed soils throughout the property beyond depths at which buried resources are likely. Finally, findings were negative during the Sacred Lands File search with the Native American Heritage Commission (NAHC). Due to a lack of historical resources located within the project site combined with low sensitivity for buried resources, BCR Consulting recommends that no additional cultural resources work or monitoring is necessary for any proposed project activities. No cultural resource mitigations are recommended. Although not expected to occur, if previously undocumented cultural resources are identified during earthmoving activities, it is recommended that a qualified archaeologist should be contacted to assess the nature and significance of the find, diverting construction excavation if necessary.

According to CEQA Guidelines, projects subject to CEQA must determine whether the project would “directly or indirectly destroy a unique paleontological resource”. The appended Paleontological Overview provided in Appendix B has recommended that:

The geologic units underlying this project are mapped entirely as alluvial silt, sand and gravel or channel sand deposits dating from the Holocene period (Dibblee, 2008). While Holocene alluvial and sedimentary units are considered to be of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Pleistocene alluvial sediments would increase. The Western Science Center does not have localities within the project area or within a 1 mile radius.

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the project area is unlikely to be paleontologically sensitive, but caution during development should be observed.

If human remains are encountered during the undertaking, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

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INTRODUCTION

BCR Consulting LLC (BCR Consulting) is under contract to Altec Land Planning to conduct a Cultural Resources Assessment of the proposed Helendale Community Services District Well Field Project (the project) located in the community of Helendale, unincorporated San Bernardino County, California. The project site is located in Section 6 of Township 7 North, Range 4 West, San Bernardino Baseline and Meridian, in unincorporated San Bernardino County. It is depicted on the United States Geological Survey (USGS) *Helendale, California* (1993) 7.5-minute topographic quadrangle (Figure 1).

Regulatory Setting

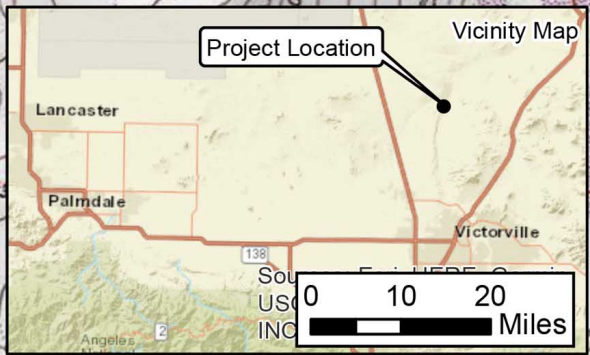
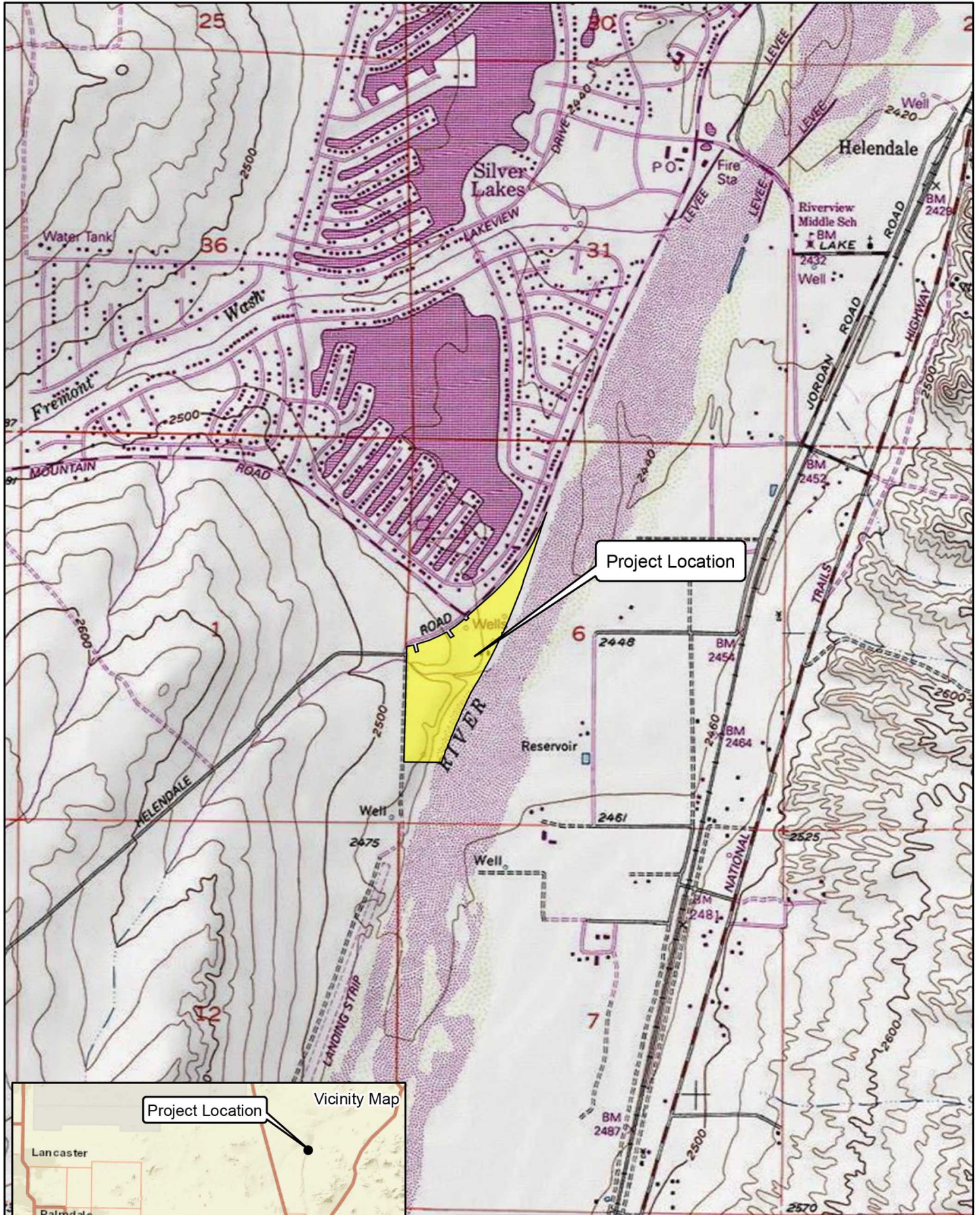
The California Environmental Quality Act. CEQA applies to all discretionary projects undertaken or subject to approval by the state's public agencies (California Code of Regulations 14(3), § 15002(i)). Under CEQA, "A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (Cal. Code Regs. tit. 14(3), § 15064.5(b)). State CEQA Guidelines section 15064.5(a) defines a "historical resource" as a resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register of Historical Resources (California Register)
- Listed in a local register of historical resources (as defined at Cal. Public Res. Code § 5020.1(k))
- Identified as significant in a historical resource survey meeting the requirements of § 5024.1(g) of the Cal. Public Res. Code
- Determined to be a historical resource by a project's lead agency (Cal. Code Regs. tit. 14(3), § 15064.5(a))

A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California...Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing in the California Register of Historical Resources" (Cal. Code Regs. tit. 14(3), § 15064.5(a)(3)).

The significance of a historical resource is impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for the California Register. If an impact on a historical or archaeological resource is significant, CEQA requires feasible measures to minimize the impact (State CEQA Guidelines § 15126.4 (a)(1)). Mitigation of significant impacts must lessen or eliminate the physical impact that the project will have on the resource.

Section 5024.1 of the Cal. Public Res. Code established the California Register. Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register (Cal. Code Regs. tit. 14(3), §



15064.5(a)(3)). The eligibility criteria for the California Register are similar to those of the National Register of Historic Places (National Register), and a resource that meets one of more of the eligibility criteria of the National Register will be eligible for the California Register.

The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under CEQA. Criteria for Designation:

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

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource's period of significance to "obtain a scholarly perspective on the events or individuals associated with the resources." (CCR 4852 [d][2]). Fifty years is normally considered sufficient time for a potential historical resource, and in order that the evaluation remain valid for a minimum of five years after the date of this report, all resources older than 45 years (i.e. resources from the "historic-period") will be evaluated for California Register listing eligibility, or CEQA significance. The California Register also requires that a resource possess integrity. This is defined as the ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association.

Assembly Bill 52. California Assembly Bill 52 was approved on September 25, 2014. As stated in Section 11 of AB 52, the act applies only to projects that have a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015.

AB 52 establishes "tribal cultural resources" (TCRs) as a new category of resources under CEQA. As defined under Public Resources Code Section 21074, TCRs are "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe" that are either: (1) included or determined to be eligible for inclusion in the CRHR; included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or (2) determined by the lead agency to be significant pursuant to the criteria for inclusion in the CRHR set forth in Public Resources Code Section 5024.1(c), if supported by substantial evidence and taking into account the significance of the resource to a California Native American tribe. A "historical resource" as defined in Public Resources Code Section 21084.1, a "unique archaeological resource" as defined in

Public Resources Code Section 21083.2(g), or a “nonunique archaeological resource” as defined in Public Resources Code Section 21083.2(h) may also be TCRs.

AB 52 further establishes a new consultation process with California Native American tribes for proposed projects in geographic areas that are traditionally and culturally affiliated with that tribe. Per Public Resources Code Section 21073, “California Native American tribe” includes federally and non-federally recognized tribes on the NAHC contact list. Subject to certain prerequisites, AB 52 requires, among other things, that a lead agency consult with the geographically affiliated tribe before the release of an environmental review document for a proposed project regarding project alternatives, recommended mitigation measures, or potential significant effects, if the tribe so requests in writing. If the tribe and the lead agency agree upon mitigation measures during their consultation, these mitigation measures must be recommended for inclusion in the environmental document (Public Resources Code Sections 21080.3.1, 21080.3.2, 21082.3, 21084.2, and 21084.3).

Paleontological Resources. CEQA provides guidance relative to significant impacts on paleontological resources, indicating that a project would have a significant impact on paleontological resources if it disturbs or destroys a unique paleontological resource or site, or unique geologic feature. Section 5097.5 of the California Public Resources Code specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, California Penal Code Section 622.5 sets the penalties for damage or removal of paleontological resources. CEQA documentation prepared for projects would be required to analyze paleontological resources as a condition of the CEQA process to disclose potential impacts. Please note that as of January 2018 paleontological resources are considered in the geological rather than cultural category. Therefore, paleontological resources are not summarized in the body of this report. A paleontological overview completed by professional paleontologists from the Western Science Center is provided as Appendix C.

NATURAL SETTING

Geology

The subject property is located in the southwestern portion of the Mojave Desert. Sediments within the subject property boundaries include “unconsolidated stream-laid sand deposited in former flood plain of Mojave River” (Dibblee 1960). Field observations during the current study are basically consistent with these descriptions, although modern excavation and grading have resulted in severe disturbances throughout the project site.

Hydrology

The subject property elevation ranges from approximately 2,455 to 2,490 feet above mean sea level (AMSL). Sheetwashing occurs generally from west to east across the subject property, and local runoff drains into the Mojave River, adjacent to the east. To the south, the peaks of the San Bernardino Mountains rise above 10,000 feet and are often capped with snow until late spring or early summer. The area currently exhibits a relatively arid climate, with dry, hot summers and cool winters. Rainfall ranges from five to 15 inches annually (Jaeger and Smith 1971:36-37). Precipitation usually occurs in the form of winter and spring rain or snow at high elevations, with occasional warm monsoonal showers in late summer.

Biology

The mild climate of the late Pleistocene allowed piñon-juniper woodland to thrive throughout most of the Mojave (Van Devender et al. 1987). The vegetation and climate during this epoch attracted significant numbers of Rancho labrean fauna, including dire wolf, saber-toothed cat, short-faced bear, horse, camel, antelope, mammoth, as well as birds which included pelican, goose, duck, cormorant, and eagle (Reynolds 1988). The drier climate of the middle Holocene resulted in the local development of complementary flora and fauna, which remain largely intact to this day. Common native plants include creosote, cacti, rabbit bush, interior golden bush, cheesebush, species of sage, buckwheat at higher elevations and near drainages, Joshua tree, and various grasses. Common native animals include coyotes, cottontail and jackrabbits, rats, mice, desert tortoises, roadrunners, raptors, turkey vultures, and other bird species (see Williams et al. 2008).

CULTURAL SETTING

Prehistory

The prehistoric cultural setting of the Mojave Desert has been organized into many chronological frameworks (see Warren and Crabtree 1986; Bettinger and Taylor 1974; Lanning 1963; Hunt 1960; Wallace 1958, 1962, 1977; Wallace and Taylor 1978; Campbell and Campbell 1935), although there is no definitive sequence for the region. The difficulties in establishing cultural chronologies for the Mojave are a function of its enormous size and the small amount of archaeological excavations conducted there. Moreover, throughout prehistory many groups have occupied the Mojave and their territories often overlap spatially and chronologically resulting in mixed artifact deposits. Due to dry climate and capricious geological processes, these artifacts rarely become integrated in-situ. Lacking a milieu hospitable to the preservation of cultural midden, Mojave chronologies have relied upon temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone. Such methods are instructive, but can be limited by prehistoric occupants' concurrent use of different artifact styles, or by artifact re-use or re-sharpening, as well as researchers' mistaken diagnosis, and other factors (see Flenniken 1985; Flenniken and Raymond 1986; Flenniken and Wilke 1989). Recognizing the shortcomings of comparative temporal indicators, this study synthesizes Warren and Crabtree (1986), who have drawn upon this method to produce a commonly cited and relatively comprehensive chronology.

Paleoindian (12,000 to 10,000 BP) and Lake Mojave (10,000 to 7,000 BP) Periods. Climatic warming characterizes the transition from the Paleoindian Period to the Lake Mojave Period. This transition also marks the end of Pleistocene Epoch and ushers in the Holocene. The Paleoindian Period has been loosely defined by isolated fluted (such as Clovis) projectile points, dated by their association with similar artifacts discovered in-situ in the Great Plains (Sutton 1996:227-228). Some fluted bifaces have been associated with fossil remains of Rancho labrean mammals approximately dated to ca. 13,300-10,800 BP near China Lake in the northern Mojave Desert. The Lake Mojave Period has been associated with cultural adaptations to moist conditions, and resource allocation pointing to more lacustrine environments than previously (Bedwell 1973; Hester 1973). Artifacts that characterize this period include stemmed points, flake and core scrapers, choppers, hammerstones, and crescentics (Warren and Crabtree 1986:184). Projectile points

associated with the period include the Silver Lake and Lake Mojave styles. Lake Mojave sites commonly occur on shorelines of Pleistocene lakes and streams, where geological surfaces of that epoch have been identified (Basgall and Hall 1994:69).

Pinto Period (7,000 to 4,000 BP). The Pinto Period has been largely characterized by desiccation of the Mojave. As formerly rich lacustrine environments began to disappear, the artifact record reveals more sporadic occupation of the Mojave, indicating occupants' recession to the more hospitable fringes (Warren 1984). Pinto Period sites are rare, and are characterized by surface manifestations that usually lack significant in-situ remains. Artifacts from this era include Pinto projectile points and a flake industry similar to the Lake Mojave tool complex (Warren 1984), though use of Pinto projectile points as an index artifact for the era has been disputed (see Schroth 1994). Milling stones have also occasionally been associated with sites of this period (Warren 1984).

Gypsum Period. (4,000 to 1,500 BP). A temporary return to moister conditions during the Gypsum Period is postulated to have encouraged technological diversification afforded by the relative abundance of resources (Warren 1984:419-420; Warren and Crabtree 1986:189). Lacustrine environments reappear and begin to be exploited during this era (Shutler 1961, 1968). Concurrently a more diverse artifact assemblage reflects intensified reliance on plant resources. The new artifacts include milling stones, mortars, pestles, and a proliferation of Humboldt Concave Base, Gypsum Cave, Elko Eared, and Elko Corner-notched dart points (Warren 1984; Warren and Crabtree 1986). Other artifacts include leaf-shaped projectile points, rectangular-based knives, drills, large scraper planes, choppers, hammer stones, shaft straighteners, incised stone pendants, and drilled slate tubes. The bow and arrow appears around 2,000 BP, evidenced by the presence of a smaller type of projectile point, the Rose Spring point (Rogers 1939; Shutler 1961; Yohe 1992).

Saratoga Springs Period (1,500 to 800 BP). During the Saratoga Springs Period regional cultural diversifications of Gypsum Period developments are evident within the Mojave. Basketmaker III (Anasazi) pottery appears during this period, and has been associated with turquoise mining in the eastern Mojave Desert (Warren and Crabtree 1986:191). Influences from Patayan/Yuman assemblages are apparent in the southern Mojave, and include buff and brown wares often associated with Cottonwood and Desert Side-notched projectile points (Warren 1984:423). Obsidian becomes more commonly used throughout the Mojave and characteristic artifacts of the period include milling stones, mortars, pestles, ceramics, and ornamental and ritual objects. More structured settlement patterns are evidenced by the presence of large villages, and three types of identifiable archaeological sites (major habitation, temporary camps, and processing stations) emerge (McGuire and Hall 1988). Diversity of resource exploitation continues to expand, indicating a much more generalized, somewhat less mobile subsistence strategy.

Shoshonean Period (800 BP to Contact). The Shoshonean period is the first to benefit from contact-era ethnography –as well as be subject to its inherent biases. Interviews of living informants allowed anthropologists to match artifact assemblages and particular traditions with linguistic groups, and plot them geographically (see Kroeber 1925; Gifford 1918; Strong 1929). During the Shoshonean Period continued diversification of site assemblages, and reduced Anasazi influence both coincide with the expansion of Numic

(Uto-Aztecan language family) speakers across the Great Basin, Takic (Uto-Aztecan language family) speakers into southern California, and the Hopi across the Southwest (Sutton 1996). Hunting and gathering continued to diversify, and the diagnostic arrow points include desert side-notch and cottonwood triangular. Ceramics continue to proliferate, though are more common in the southern Mojave during this period (Warren and Crabtree 1986). Trade routes have become well established across the Mojave, particularly the Mojave Trail, which transported goods and news across the desert via the Mojave River, to the west of the subject property. Trade in the western Mojave was more closely related to coastal groups than others.

Ethnography

The Uto-Aztecan “Serrano” people occupied the western Mojave Desert periphery. Kroeber (1925) applied the generic term “Serrano” to four groups, each with distinct territories: the Kitanemuk, Tataviam, Vanyume, and Serrano. Only one group, in the San Bernardino Mountains and West-Central Mojave Desert, ethnically claims the term Serrano. Bean and Smith (1978) indicate that the Vanyume, an obscure Takic population, was found along the Mojave River near Apple Valley at the time of Spanish contact. The Kitanemuk lived to the north and west, while the Tataviam lived to the west. The Serrano lived mainly to the south (Bean and Smith 1978). All may have used the western Mojave area seasonally. Historical records are unclear concerning precise Serrano territory, although archaeologists have recorded evidence of a number of prehistoric sites (including some villages), particularly along the Mojave River. It is doubtful that any group, except the Vanyume, actually lived in the region for several seasons yearly.

History

Historic California is divided into three periods: the Spanish/Mission Period (1769 to 1821), the Mexican/Rancho Period (1821 to 1848), and the American Period (1848 to present).

Spanish Period. The first European to pass through the area is thought to be a Spaniard called Father Francisco Garces. Having become familiar with the area, Garces acted as a guide to Juan Bautista de Anza, who had been commissioned to lead a group across the desert from a Spanish outpost in Arizona to set up quarters at the Mission San Gabriel in 1771 near what today is Pasadena (Beck and Haase 1974). This is the first recorded group crossing of the Mojave Desert and, according to Father Garces’ journal, they camped at the headwaters of the Mojave River, one night less than a day’s march from the mountains. Today, this is estimated to have been approximately 11 miles southeast of Victorville (Marenczuk 1962). Garces was followed by Alta California Governor Pedro Fages, who briefly explored the western Mojave region in 1772. Searching for San Diego Presidio deserters, Fages had traveled north through Riverside to San Bernardino, crossed the mountains into the Mojave, then west to the San Joaquin Valley (Beck and Haase 1974).

Mexican Period. In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Beattie and Beattie 1974).

American Period. The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers lost their ranchos through foreclosure. A series of disastrous floods in 1861–1862, followed by a significant drought diminished the economic impact of local ranching. This decline combined with ubiquitous agricultural and real estate developments of the late 19th century, set the stage for diversified economic pursuits that have continued to proliferate to this day (Beattie and Beattie 1974; Cleland 1941).

Local Sequence. Prior to the 20th century, greater Victor Valley’s main industries included cattle ranching, and mining. In 1893, Ursula M. Poates named the community of Apple Valley in an effort to convince settlers that fruit could be grown in the desert. The charismatic Poates had resided in the Mojave most of her life, and attempted to substantiate the claim by planting three apple trees in her wind-blown, greasewood-covered yard (Bright 1998). By 1910, locals had followed suit and soon 17 apple orchards occupied 1,000 acres within the valley. The success of Apple Valley prompted Arthur E. Hull, founder of Beaumont, California, to invest in the agricultural potential of the area. Hull was instrumental in publicizing Victor Valley’s development, and successfully lobbied for the construction of the first paved Cajon Pass road. He also procured water rights to accommodate the area’s growing agricultural endeavors (O’Rourke 2004).

Contemporaneous with the agricultural boom, large federal grants were made available and the government encouraged homesteaders to occupy and improve thousands of additional acres. The homestead and agricultural era was locally short-lived, however, and as a result of the United States’ 1917 entry into World War I, mining (specifically limestone) and cattle ranching became the region’s driving economic force. During the decades after World War I, the few remaining apple orchards became increasingly unprofitable and died out due to fungus, bad weather, and stiff competition from fruit growers in Central California and the American Northwest. The limestone mining industry continued to grow, and was primarily concentrated in the Victorville-Oro Grand district (Wright et al. 1953). By the 1950s more than half the mineral production (by value) in San Bernardino County came from limestone operations, the bulk of which was used by Portland cement plants.

In spite of limited diversification of local industries during the early 20th century, improvements to local infrastructure allowed more varied economic growth. In 1926, U.S. Route 66 was constructed to connect the American Midwest with California. The route commenced in Chicago, winding south through the Midwest and Southwest, through the Mojave Desert and the Cajon Pass to the Los Angeles Basin, before terminating at the Pacific Ocean in Santa Monica. Within Victor Valley, the route promoted some economic growth as an artery used to transport limestone, which fed the growing demand for concrete throughout southern California’s growing municipalities. It would also promote businesses along its corridor and eventually provide a commuter route for the burgeoning bedroom

communities that sprang up across the Victor Valley during the latter half of the 20th century (O'Rourke 2004). By 1949, petroleum magnate Newton T. Bass saw potential for significant land speculation in the area based upon the discovery deep aquifers in Apple Valley. During the ensuing decades, Bass and his partner Bernard Westlund acquired approximately 25,000 acres of land in Apple Valley. Through a series of promotional campaigns, the partners proceeded transform the sparsely-populated strip of desert into the thriving residential and commercial community that continues to expand to this day (O'Rourke 2004:41-43).

PERSONNEL

David Brunzell, M.A., RPA acted as the Project Manager and Principal Investigator for the current study. Staff from the South Central Coastal Information Center (SCCIC) completed the cultural resources records search. BCR Consulting Archaeological Field Director Joseph Orozco, M.A., RPA and BCR Consulting Archaeological Crew Chief Nicholas Shepetuk, B.A. completed the field assessment. Additional research was performed by BCR Consulting Staff Historian Dylan Williams. Mr. Brunzell compiled the technical report with contributions from Mr. Orozco.

METHODS

This work was completed pursuant to the CEQA, Public Resources Code (PRC) Chapter 2.6, Section 21083.2, and California Code of Regulations (CCR) Title 14, Chapter 3, Article 5, Section 15064.5. The pedestrian cultural resources survey is intended to locate and document previously recorded or new cultural resources, including archaeological sites, features, isolates, and historic buildings, that exceed 45 years in age within defined project boundaries. The subject property was examined using 10 to 15 meter transect intervals. Shovel test pits were also excavated to assess the potential for any buried resources or geoarchaeological context immediately below the surface. This testing was not warranted by research or field conditions, but was completed based on informal consultation between Altec Land Planning and local tribal entities. The study is intended to determine whether cultural resources are located within the subject property boundaries, whether any cultural resources are significant pursuant to the above-referenced regulations and standards, and to develop specific mitigation measures that will address potential impacts to existing or potential resources. Tasks pursued to achieve that end include:

- Sacred Lands File Search through the Native American Heritage Commission
- Vertebrate paleontology resources report through the Los Angeles County Natural History Museum
- Cultural resources records search to review any studies conducted and the resulting cultural resources recorded within a one-mile radius of the subject property
- Additional land-use history research through local archives and repositories
- Systematic pedestrian survey of the entire subject property
- Evaluation of California Register of Historical Resources (California Register) eligibility for any cultural resources discovered
- Development of recommendations for any cultural resources documented within the subject property, following CEQA guidelines
- Completion of DPR 523 forms for any discovered cultural resources.

METHODS

Research

Prior to fieldwork, a cultural resources records search was conducted by the SCCIC. This included a review of all prerecorded historic and prehistoric cultural resources, as well as a review of known cultural resource surveys and excavation reports generated from projects located within one mile of the subject property. In addition, a review was conducted of the National Register of Historic Places (National Register), the California Register, and documents and inventories from the California Office of Historic Preservation (OHP) including the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and the Inventory of Historic Structures. Additional land use research was conducted through the General Land Office records of the Bureau of Land Management, the San Bernardino County Assessor's office, and various Internet resources.

Field Survey

An intensive-level cultural resources field survey of the subject property was conducted on December 10, 2020. The survey was conducted by walking parallel transects spaced approximately 10-15 meters apart across 100 percent of the subject property. Digital photographs were taken at various points within the subject property boundaries, including overviews as well as detail photographs of all cultural resources. Cultural resources were recorded per the California OHP *Instructions for Recording Historical Resources* in the field using:

- Detailed note taking for entry on DPR Forms (Appendix A)
- Hand-held Garmin Global Positioning systems for mapping purposes
- Digital photography of all cultural resources (Appendix D).

Subsurface Test Excavations

After completing the field survey, BCR Consulting completed subsurface test excavations in the subject property to assess the potential for any buried resources or geoarchaeological context. A total of 24 shovel test pits (STPs) were excavated to apprehend data from immediately below the surface. STPs were approximately 35 centimeters in diameter and were excavated at 10-centimeter intervals. During STP excavation, each discrete interval was screened to identify the presence/absence of cultural remains. Sediment was screened through 1/8-inch hardware mesh, and the screens were carefully inspected for evidence of cultural remains.

Per the scope of work, STPs were considered negative and were terminated after three sterile 10-centimeter intervals are complete. If intact cultural remains had been identified during the field survey or test excavations, an archaeological site would have been considered present in the area of the STP. STP locations were recorded on a hand-held Global Positioning System (GPS) unit and coordinates are provided in Table A.

RESULTS

Research

The records search revealed that eight cultural resources studies have taken place resulting in the recording of two cultural resources within one-mile of the subject property. Of the eight cultural resources studies, one has previously assessed a portion of the subject property and no cultural resources have been previously identified within its boundaries. A summary of the records search is included below.

Table A. Cultural Resources Located Within One Mile of the Project Site

USGS 7.5 Min Quad	Cultural Resources Within One Mile	Reports Within One Mile
<i>Helendale, California</i> (1993)	P-36-2074 Prehistoric Lithic Scatter (1/2 Mile SW) P-26-6793 Historic Railroad (3/4 Mile SE)	SB-106-330, 680, 1758, 2055, 2257, 5435, 6504*, 7283

*Previously assessed a portion of the project

Additional Research. (Please note that references for this section are provided in Appendix A.) The project site comprises two vacant parcels along the northwest bank of the Mojave River. It is located immediately south of the Silver Lakes residential development in Helendale. The project site was originally part of two separate 160-acre parcels patented to William H. Robinson and Ephraim D. Boren in 1889 and 1891, respectively. Robinson owned the southern parcel and Boren owned the northern parcel. Historic aerial photographs demonstrate that the lot was vacant in 1929. A small agricultural operation which extended off the property to the north was present on the northwest portion of the project site in the 1950s. This agricultural plot encompassed the well site, but no buildings or structures were visible in the aerial photos. Construction of the South Lake portion of the Silver Lakes residential development replaced the agricultural operation in 1970, although no houses extended onto the project site. The USGS map indicates that three wells were constructed on the northern parcel after 1956. The parcels were both owned by Standard Properties Inc. prior to 1978. Robert T. and Barbara Older acquired the parcels in 1987, and Carl Ross Living Trust acquired them in 2005 before selling to the Helendale Community Services District in 2020.

Field Survey

During the field survey BCR Consulting staff carefully inspected the subject property for evidence of cultural resources. Vegetation was dominated by non-native scrub affording approximately 65 percent surface visibility. Sediments included silty sand interspersed with some granitic and quartz pebbles and cobbles. Ground disturbances within the project site have included excavations for road grading, recreational off-road vehicle use, modern refuse dumping, rilling and sheet washing, and disturbances from former agricultural irrigation. One historic-period well site, the remnants of one historic-period water basin, and two prehistoric isolates were identified during the field survey. These are described in detail below. The required DPR 523 forms have been completed for these resources and are provided in Appendix A.

COL2002-I-1. This isolate consists of one mustard-colored chert core fragment measuring 4 cm in length and 2.5 cm in width.

COL2002-I-2. This isolate consists of one basalt core fragment measuring 7 cm in length and 5.5 cm in width.

COL2002-H-2. The site consists of two concrete standpipes, one capped steel well, two concrete footings, and a standpipe opening. The concrete standpipes are approximately 16 feet in height and two feet in diameter. A steel well pipe, measuring 2.5 feet in height and 1.5 feet in diameter, appears to have been cut and welded shut. Two concrete footings (probably well pump stands) are present measuring five feet in length and two feet in width. A 16-inch-deep standpipe hole is also present. The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels. Aerial photographs and methods of construction indicate that the site was in use concurrent with the agricultural operation from the 1950s until the early 1970s (see Additional Research above and Appendix A).

COL2002-H-3. The site consists of a concrete foundation and severely fragmented, historic-period glass. The concrete foundation is approximately 25 feet by 12 feet and is very coarse with small to medium sized rocks embedded into the matrix. Historic aerials suggest the foundation was once part of a water basin associated with former agricultural operations. Various types and colors of broken glass and ceramic are present on the foundation. Two 1950s era soft drink bottle fragments, Pepsi and Hires Root Beer, were identified. Other bottle bases contained dates ranging from 1953 through 1956. The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels. Aerial photographs and artifact types indicate that the site was in use concurrent with the agricultural operation from the 1950s until the early 1970s (see Additional Research above and Appendix A).

Subsurface Test Excavations

Per the scope of work, STPs were considered negative and were terminated after three sterile 10-centimeter intervals are complete. If intact cultural remains had been identified during the field survey or test excavations, an archaeological site would have been considered present in the area of the STP. STP locations were recorded on a hand-held Global Positioning System (GPS) unit and coordinates are provided in Table A. Findings were negative for each STP.

Table B. Shovel Test Pit Locations

STP No.	Zone and Easting	Northing	Elevation
001	11S 468179mE	3842526mN	2498ft.
002	11S 468180mE	3842449mN	2498ft.
003	11S 468193mE	3842343mN	2490ft.
004	11S 468201mE	3842230mN	2490ft.
005	11S 468223mE	3842147mN	2485ft.
006	11S 468251mE	3842229mN	2486ft.
007	11S 468287mE	3842334mN	2491ft.
008	11S 468271mE	3842382mN	2494ft.
009	11S 468374mE	3842448mN	2487ft.
010	11S 468360mE	3842474mN	2488ft.

STP No.	Zone and Easting	Northing	Elevation
011	11S 468276mE	3842471mN	2494ft.
012	11S 468198mE	3842508mN	2497ft.
013	11S 468264mE	3842536mN	2490ft.
014	11S 468348mE	3842568mN	2489ft.
015	11S 468385mE	3842549mN	2485ft.
016	11S 468360mE	3842661mN	2490ft.
017	11S 468426mE	3842614mN	2487ft.
018	11S 468427mE	3842633mN	2486ft.
019	11S 468413mE	3842667mN	2485ft.
020	11S 468504mE	3842746mN	2468ft.
021	11S 468521mE	3842793mN	2467ft.
022	11S 468547mE	3842731mN	2466ft.
023	11S 468602mE	3842863mN	2464ft.
024	11S 468650mE	3842964mN	2463ft.

SIGNIFICANCE EVALUATIONS

During the field survey, two prehistoric isolates and two historic-age resources were identified. CEQA (PRC Chapter 2.6, Section 21083.2 and CCR Title 145, Chapter 3, Article 5, Section 15064.5) calls for the evaluation and recordation of historic-age and archaeological resources. The criteria for determining the significance of impacts to cultural resources are based on Section 15064.5 of the *CEQA Guidelines* and Guidelines for the Nomination of Properties to the California Register. Properties eligible for listing in the California Register and subject to review under CEQA are those meeting the criteria for listing in the California Register, National Register, or designation under a local ordinance. Please note that isolated finds are not considered “historical resources” under CEQA and as such the isolated artifacts do not require further evaluation.

Significance Criteria

California Register of Historical Resources. The California Register criteria are based on National Register criteria. For a property to be eligible for inclusion on the California Register, one or more of the following criteria must be met:

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

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time has passed since a resource’s period of significance to “obtain a scholarly perspective on the events or individuals associated with the resources.” (CCR 4852 [d][2]). The California Register also requires that a resource possess integrity. This is defined as the

ability for the resource to convey its significance through seven aspects: location, setting, design, materials, workmanship, feeling, and association.

Evaluations

COL2002-H-2. Criterion 1: The concrete wells and ancillary irrigation equipment is characteristic of past agricultural development of the local area; however, it is not associated with important events related to this context. It is therefore not eligible for the California Register under Criterion 1. Criterion 2: Substantial research has not linked the subject property with individuals who have been notable in local, state, or national history. Criterion 3: The concrete well and irrigation features are a common design. Therefore, they do not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual or possess high artistic values. Criterion 4: Extensive research, field recording, and shovel test pit excavations have exhausted this resource's data potential. This resource has not and is not likely to yield information important in prehistory or history. This historic-age site is therefore recommended not eligible under any of the four criteria for listing on the California Register, and as such is not recommended a historical resource under the California Environmental Quality Act (CEQA).

COL2002-H-3. Criterion 1: This feature was once part of a concrete water basin. It is characteristic of past agricultural development in the local area; however it is not associated with important events related to this context. It is therefore not eligible for the California Register under Criterion 1. Criterion 2: Substantial research has not linked the subject property with individuals who have been notable in local, state, or national history. Criterion 3: The basin is a common design and there is nothing remarkable about the bottle fragments identified. Therefore, it does not embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual or possess high artistic values. Criterion 4: Extensive research, field recording, and shovel test pit excavations have exhausted this resource's data potential. This resource has not and is not likely to yield information important in prehistory or history. This historic-age site is therefore recommended not eligible under any of the four criteria for listing on the California Register, and as such is not recommended a historical resource under the California Environmental Quality Act (CEQA).

RECOMMENDATIONS

The two historic-age sites and isolated artifacts are recommended not eligible for the California Register. As such, they are not considered "historical resources" and do not warrant further consideration under CEQA. Furthermore, subsurface test excavation has not identified any significant geoarchaeological context or sensitivity for buried resources. Therefore, no significant impacts related to archaeological or historical resources is anticipated and no further investigations are recommended for the proposed project unless:

- the proposed project is changed to include areas not subject to this study.
- the proposed project is changed to include the construction of additional facilities.
- cultural materials are encountered during project activities.

Although the current study has not indicated sensitivity for cultural resources within the project boundaries, ground disturbing activities always have the potential to reveal buried deposits not observed on the surface during previous surveys. Prior to the initiation of ground-disturbing activities, field personnel should be alerted to the possibility of buried prehistoric or historic cultural deposits. In the event that field personnel encounter buried cultural materials, work in the immediate vicinity of the find should cease and a qualified archaeologist should be retained to assess the significance of the find. The qualified archaeologist shall have the authority to stop or divert construction excavation as necessary. If the qualified archaeologist finds that any cultural resources present meet eligibility requirements for listing on the California Register or the National Register, plans for the treatment, evaluation, and mitigation of impacts to the find will need to be developed. Prehistoric or historic cultural materials that may be encountered during ground-disturbing activities include:

- historic artifacts such as glass bottles and fragments, cans, nails, ceramic and pottery fragments, and other metal objects;
- historic structural or building foundations, walkways, cisterns, pipes, privies, and other structural elements;
- prehistoric flaked-stone artifacts and debitage (waste material), consisting of obsidian, basalt, and or cryptocrystalline silicates;
- groundstone artifacts, including mortars, pestles, and grinding slabs;
- dark, greasy soil that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire affected rocks.

According to CEQA Guidelines, projects subject to CEQA must determine whether the project would “directly or indirectly destroy a unique paleontological resource”. The Paleontological Overview provided in Appendix B has recommended that:

The geologic units underlying this project are mapped entirely as alluvial silt, sand and gravel or channel sand deposits dating from the Holocene period (Dibblee, 2008). While Holocene alluvial and sedimentary units are considered to be of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Pleistocene alluvial sediments would increase. The Western Science Center does not have localities within the project area or within a 1 mile radius.

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the project area is unlikely to be paleontologically sensitive, but caution during development should be observed.

If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will

determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC.

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APPENDIX A
DPR 523 FORMS

Other Listings
Review Code

Reviewer

Date

Page 1 of 4

*Resource Name or #: COL2002-H-2

P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*a. County: San Bernardino

*b. USGS 7.5' Quad: *Helendale, California* Date: 1993 T 7N; R 4W; Section 6; SBBM
c. Address: City: Unincorporated Helendale Zip:
d. UTM: Zone: 11; 468350 mE/ 3842614 mN (NAD83) at site datum (see Sketch Map, page 3); Elevation: 2490' AMSL
e. Other Locational Data: Located 500' southwest of the intersection at Helendale Road and Shadow Mountain Road in the unincorporated community of Helendale, San Bernardino County.

*P3a. Description: (Describe resource and its major elements: design, materials, condition, alterations, size, setting, boundaries)
The site consists of two concrete standpipes, one capped steel well, two concrete footings, and a standpipe opening. The concrete standpipes are approximately 16 feet in height and two feet in diameter. A steel well pipe, measuring 2.5 feet in height and 1.5 feet in diameter, appears to have been cut and welded shut. Two concrete footings (probably well pump stands) are present measuring five feet in length and two feet in width. A 16-inch-deep standpipe hole is also present. The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels.

*P3b. Resource Attributes: AH5. Wells/Cisterns

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
Photo 17: Site Overview
12/17/20 (View North)

***P6. Date Built; Age and Source:**
 Historic
 Prehistoric Both

***P7. Owner:**
Helendale Community
Services District

***P8. Recorded by:**
J. Orozco, N Shepetuk
BCR Consulting LLC
Claremont, CA 91711

P9. Date: 12/17/20

10. Survey Type: Intensive

***P11. Report Citation:**
*Cultural Resources
Assessment Helendale
Community Services District
Well Field Project, San
Bernardino County,
California*

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

*A1. **Dimensions:** 380 x 25 feet

Method of Measurement: Paced Taped Visual estimate Other: GPS Extrapolation

Method of Determination (Check any that apply): Artifacts Features Soil Vegetation Topography
 Cut bank Animal burrow Excavation Property boundary Other (Explain):

Reliability of Determination: High Medium Low Explain: Off-road vehicular activity.

Limitations (Check any that apply): Restricted access Paved/built over Site limits incompletely defined
 Disturbances Vegetation Other (Explain):

A2. Depth: None Unknown Method of Determination: Surface Survey

*A3. **Human Remains:** Present Absent Possible Unknown (Explain):

*A4. **Features:** The site consists of two concrete stand pipes, one capped steel well, two concrete footings, and a standpipe opening. The concrete standpipes are approximately 16 feet in height and two feet in diameter. A steel well pipe, measuring 2.5 feet in height and 1.5 feet in diameter, appears to have been cut and welded shut. Two concrete five by two foot footings are present. A 16-inch-deep standpipe hole is also present.

*A5. **Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.): N/A

*A6. **Were Specimens Collected?** No Yes (If yes, attach Artifact Record or catalog and identify curation location.)

*A7. **Site Condition:** Good Fair Poor (Describe disturbances.): Alterations to the site include well capping, removal of a standpipe(s), off-road vehicular activity, and past mechanical clearing

*A8. **Nearest Water** (Type, distance, and direction.): The site is 385 feet west of the Mojave River which flows seasonally.

*A9. **Elevation:** 2490 Feet Above Mean Sea Level

A10. **Environmental Setting:** The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels.

A11. **Historical Information:** The project site comprises two vacant parcels along the northwest bank of the Mojave River. It is located immediately south of the Silver Lakes residential development in Helendale. The project site was originally part of two separate 160-acre parcels patented to William H. Robinson and Ephraim D. Boren in 1889 and 1891, respectively. Robinson owned the southern parcel and Boren owned the northern parcel. Historic aerial photographs demonstrate that the lot was vacant in 1929. A small agricultural operation which extended off the property to the north was present on the northwest portion of the project site in the 1950s. This agricultural plot encompassed the well site, but no buildings or structures were visible in the aerial photos. Construction of the South Lake portion of the Silver Lakes residential development in 1970 replaced the agricultural operation, although no houses extended onto the project site. The USGS map indicates that three wells were constructed on the northern parcel after 1956 (USGS 1956/1993). The parcels were both owned by Standard Properties Inc. prior to 1978. Robert T. and Barbara Older acquired the parcels in 1987, and Carl Ross Living Trust acquired them in 2005 before selling to the Helendale Community Services District in 2020 (San Bernardino County Assessor; USDA 1929, 1952, 1959, 1969, 1973, 1994, 2005, 2010; USDI 1889, 1891).

*A12. **Age:** Prehistoric Protohistoric 1542-1769 1769-1848 1848-1880 1880-1914 1914-1945
 Post 1945 Undetermined

A13. **Interpretations** (Discuss data potential, function[s], ethnic affiliation, and other interpretations): The well sites were constructed between 1956 and the early 1970s.

A14. **Remarks:** Mechanical clearing/discing from past agricultural farming near the site have resulted in high surface visibility and indicate low potential for buried resources not related to the well sites.

A15. **References** (Documents, informants, maps, and other references):

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A16. **Photographs:** See Primary Form, Page 1 and report appendix. Original Media/Negatives Kept at: BCR Consulting

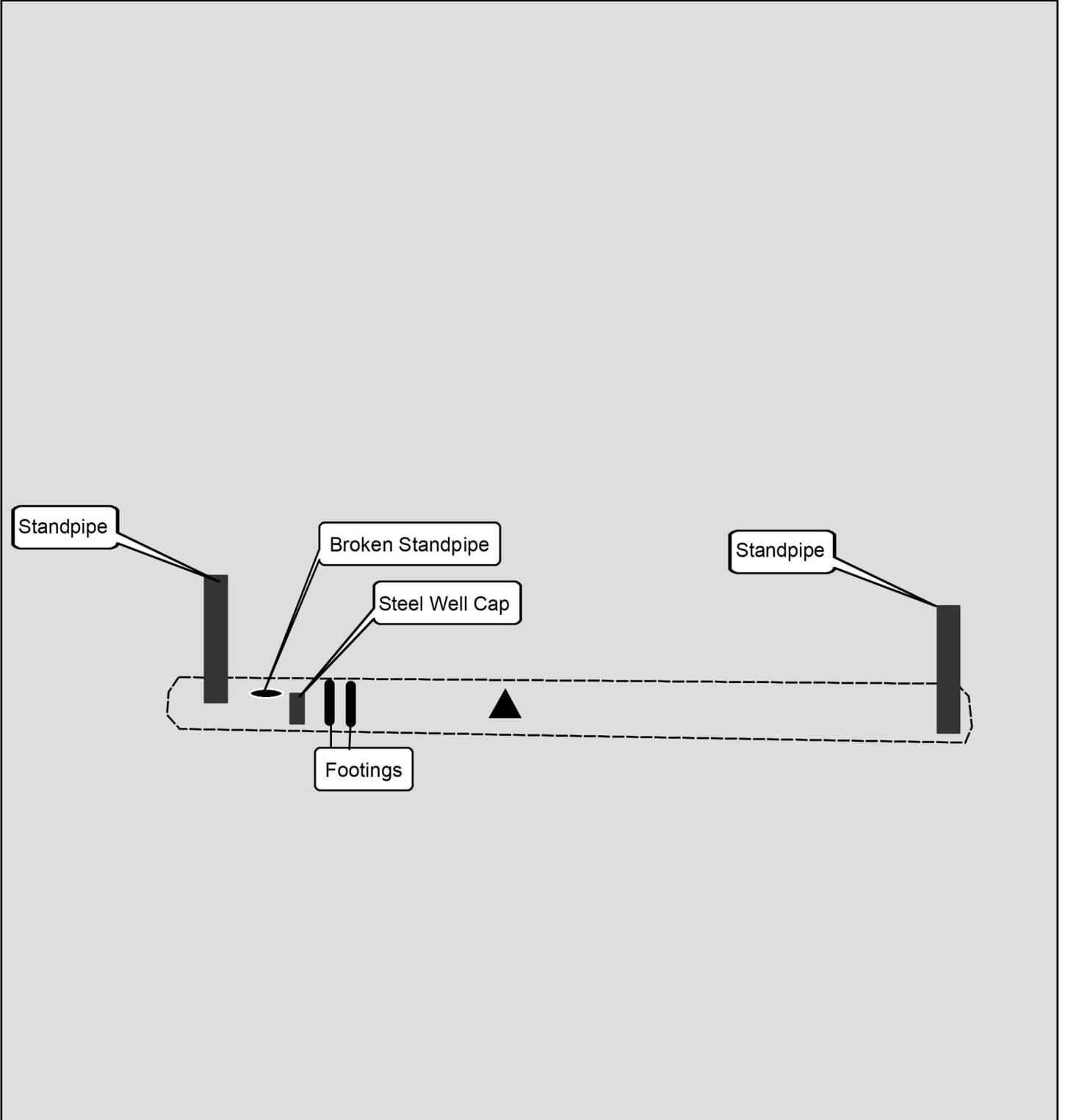
*A17. **Form Prepared by:** Joseph Orozco

Date: February 13, 2021

Affiliation and Address: BCR Consulting, Claremont, CA 91711

*Drawn By: Joseph Orozco

*Date: 12/18/20



Legend

- H-2 Site Boundary
- Site Datum
11; 468350 mE/ 3842614 mN (G.P.S.; NAD83)

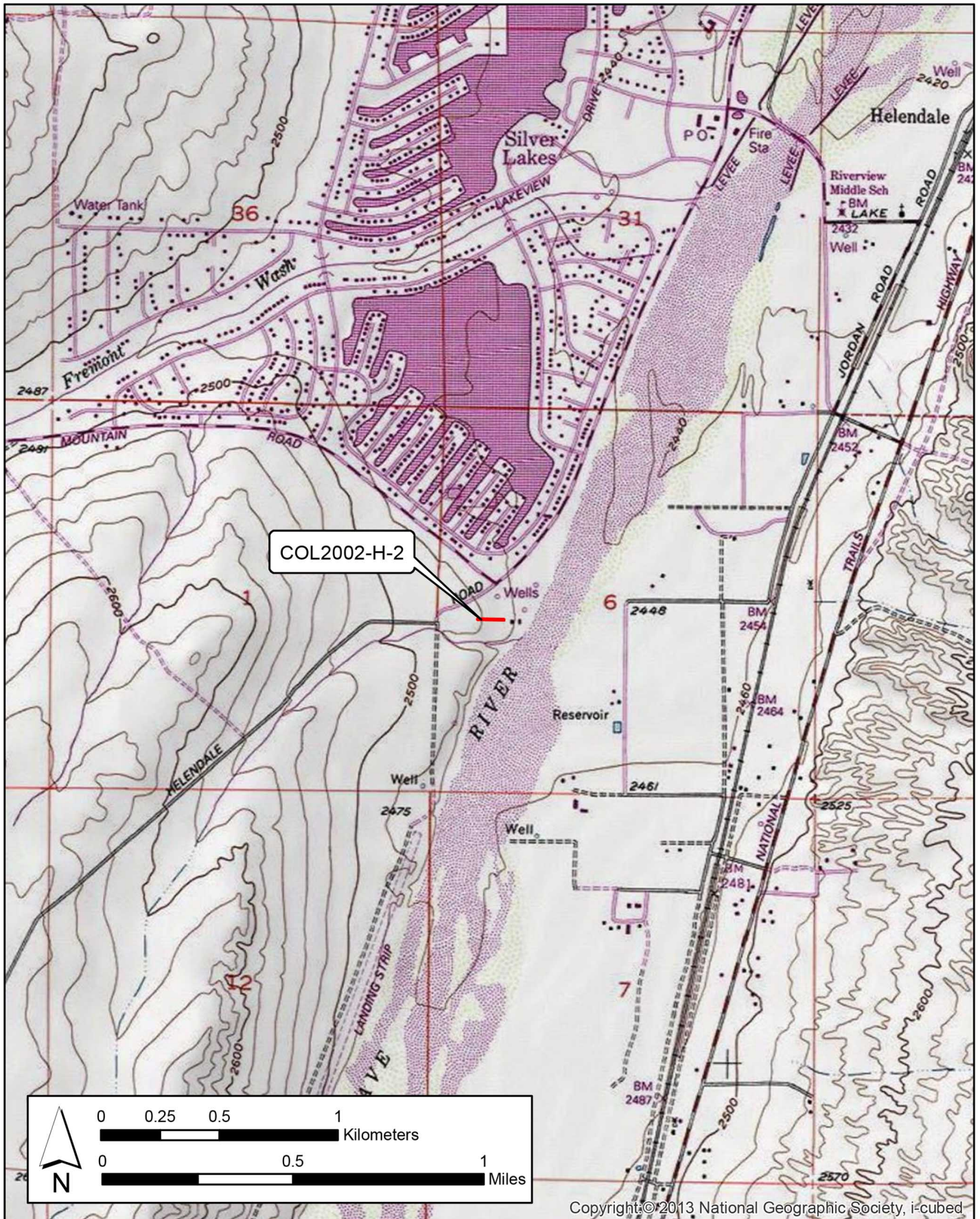
N

0 5 10 20
Meters

0 25 50 100
Feet

*Map Name: Helendale, CA

*Scale: 1:24,000 *Date of Map: 1993



P1. Other Identifier:

*P2. Location: Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*a. County: San Bernardino

*b. USGS 7.5' Quad: *Helendale, California* Date: 1993 T 7N; R 4W; Section 6; SBBM
c. Address: City: Unincorporated Helendale Zip: 92342
d. UTM: Zone: 11; 468259 mE/ 3842593 mN (NAD83) at site datum; Elevation: 2498' AMSL
e. Other Locational Data: Located 730 feet southwest of the intersection at Helendale Road and Shadow Mountain Road.

*P3a. Description: (Describe resource and its major elements: design, materials, condition, alterations, size, setting, boundaries)
The site consists of a concrete foundation and severely fragmented, historic-period glass. The concrete foundation is approximately 25 feet by 12 feet and is very coarse with small to medium sized rocks embedded into the matrix. Historic aerials suggest the foundation was once part of a water basin associated with former agricultural operations. Various types and colors of broken glass and ceramic are present on the foundation. Two 1950s era soft drink bottle fragments, Pepsi and Hires Root Beer, were identified. Other bottle bases contained dates ranging from 1953 through 1956. The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels.

*P3b. Resource Attributes: AH2. Foundations/structure Pads AH4. Privies/dumps/trash scatters

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo:
(View, date, accession #)
Photo 17: Site Overview
12/22/20 (View North)

*P6. Date Built; Age and Source:
 Historic
 Prehistoric Both

*P7. Owner and Address:
Helendale Community Services District

*P8. Recorded by:
J. Orozco, N Shepetuk
BCR Consulting LLC
Claremont, CA 91711

P9. Date: 12/22/20

P10. Survey Type: Intensive

*P11. Report Citation: *Cultural Resources Assessment Helendale Community Services District Well Field Project, San Bernardino County, California*

*Attachments: NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

*A1. **Dimensions:** 25 x 12 feet

Method of Measurement: Paced Taped Visual estimate Other: GPS Extrapolation

Method of Determination (Check any that apply): Artifacts Features Soil Vegetation Topography
 Cut bank Animal burrow Excavation Property boundary Other (Explain):

Reliability of Determination: High Medium Low Explain: Shifting sediment on/around feature

Limitations (Check any that apply): Restricted access Paved/built over Site limits incompletely defined
 Disturbances Vegetation Other (Explain):

A2. Depth: None Unknown Method of Determination: Surface Survey

*A3. **Human Remains:** Present Absent Possible Unknown (Explain):

*A4. **Features** The site consists of a concrete foundation and severely fragmented, historic-period glass. The concrete foundation is approximately 25 feet by 12 feet and is very coarse with small to medium sized rocks embedded into the matrix. Historic aeriels suggest the foundation was once part of a water basin (USDA 1968, 1969). Various types and colors of broken glass and ceramic are present on the foundation. Two 1950s era soft drink bottle fragments, Pepsi and Hires Root Beer, were identified. Other bottle bases contained dates ranging from 1953 through 1956.

*A5. **Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.): N/A

*A6. **Were Specimens Collected?** No Yes (If yes, attach Artifact Record or catalog and identify curation location.)

*A7. **Site Condition:** Good Fair Poor (Describe disturbances.): Alterations to the site include demolition of the water basin and mechanical excavation to clear the former agricultural operation.

*A8. **Nearest Water** (Type, distance, and direction.): The site is 984 feet west of the Mojave River which flows seasonally.

*A9. **Elevation:** 2498 Feet Above Mean Sea Level

A10. **Environmental Setting** (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.): The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels.

A11. **Historical Information:** The project site comprises two vacant parcels along the northwest bank of the Mojave River. It is located immediately south of the Silver Lakes residential development in Helendale. The project site was originally part of two separate 160-acre parcels patented to William H. Robinson and Ephraim D. Boren in 1889 and 1891, respectively. Robinson owned the southern parcel and Boren owned the northern parcel. Historic aerial photographs demonstrate that the lot was vacant in 1929. A small agricultural operation which extended off the property to the north was present on the northwest portion of the project site in the 1950s. This agricultural plot encompassed the well site, but no buildings or structures were visible in the aerial photos. Construction of the South Lake portion of the Silver Lakes residential development in 1970 replaced the agricultural operation, although no houses extended onto the project site. The USGS map indicates that three wells were constructed on the northern parcel after 1956 (USGS 1956/1993). The parcels were both owned by Standard Properties Inc. prior to 1978. Robert T. and Barbara Older acquired the parcels in 1987, and Carl Ross Living Trust acquired them in 2005 before selling to the Helendale Community Services District in 2020 (San Bernardino County Assessor; USDA 1929, 1952, 1959, 1969, 1973, 1994, 2005, 2010; USDI 1889, 1891).

*A12. **Age:** Prehistoric Protohistoric 1542-1769 1769-1848 1848-1880 1880-1914 1914-1945
 Post 1945 Undetermined

A13. **Interpretations** (Discuss data potential, function[s], ethnic affiliation, and other interpretations): None

A14. **Remarks:** Mechanical clearing/discing from past agricultural farming near the site have resulted in high surface visibility and indicate low potential for buried resources.

A15. **References** (Documents, informants, maps, and other references):

U.S. Department of the Interior. 1889. "Patent Details, Accession Number CA0610_292." *Bureau of Land Management – General Land Office Records*. Electronic Document. Accessed 12/3/20. [Glorecords.blm.gov](http://www.glorecords.blm.gov). 1891. "Patent Details, Accession Number CA0550_487." *Bureau of Land Management – General Land Office Records*. Electronic Document. Accessed 12/3/20. [Glorecords.blm.gov](http://www.glorecords.blm.gov).

San Bernardino County Assessor. 2020. "San Bernardino County PIMS Package Report – 467-121-28." *San Bernardino County Office of the Assessor, Property Information Management System*. Electronic Database. Accessed 12/3/20. <http://www.sbcounty.gov/assessor/pims/>.

United States Department of Agriculture. 1929-2010. Historic Aerial Photographs (taken in 1929, 1952, 1959, 1969, 1973, 1994, 2005, 2010). [Historicaerials.com](http://historicaerials.com) and [UCSB Frame Finder](http://ucsbframefinder.com) online databases.

A16. **Photographs:** See Primary Form, Page 1 and report appendix. Original Media/Negatives Kept at: BCR Consulting

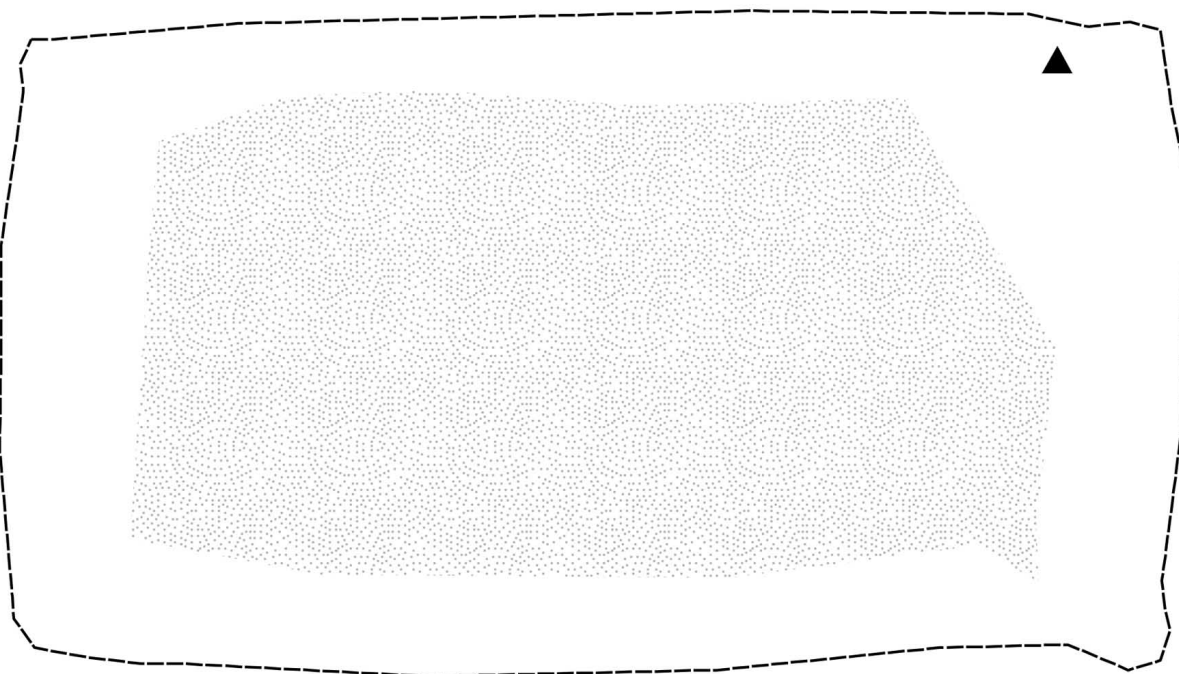
*A17. **Form Prepared by:** Joseph Orozco

Date: January 5, 2021

Affiliation and Address: BCR Consulting, Claremont, CA 91711

*Drawn By: Joseph Orozco


*Date: 12/18/20

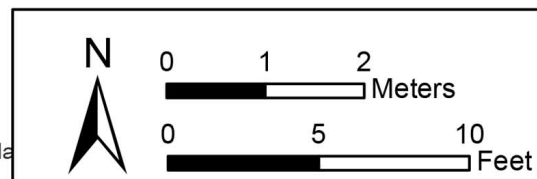


Legend

 H-3 Site Boundary

 Broken Glass

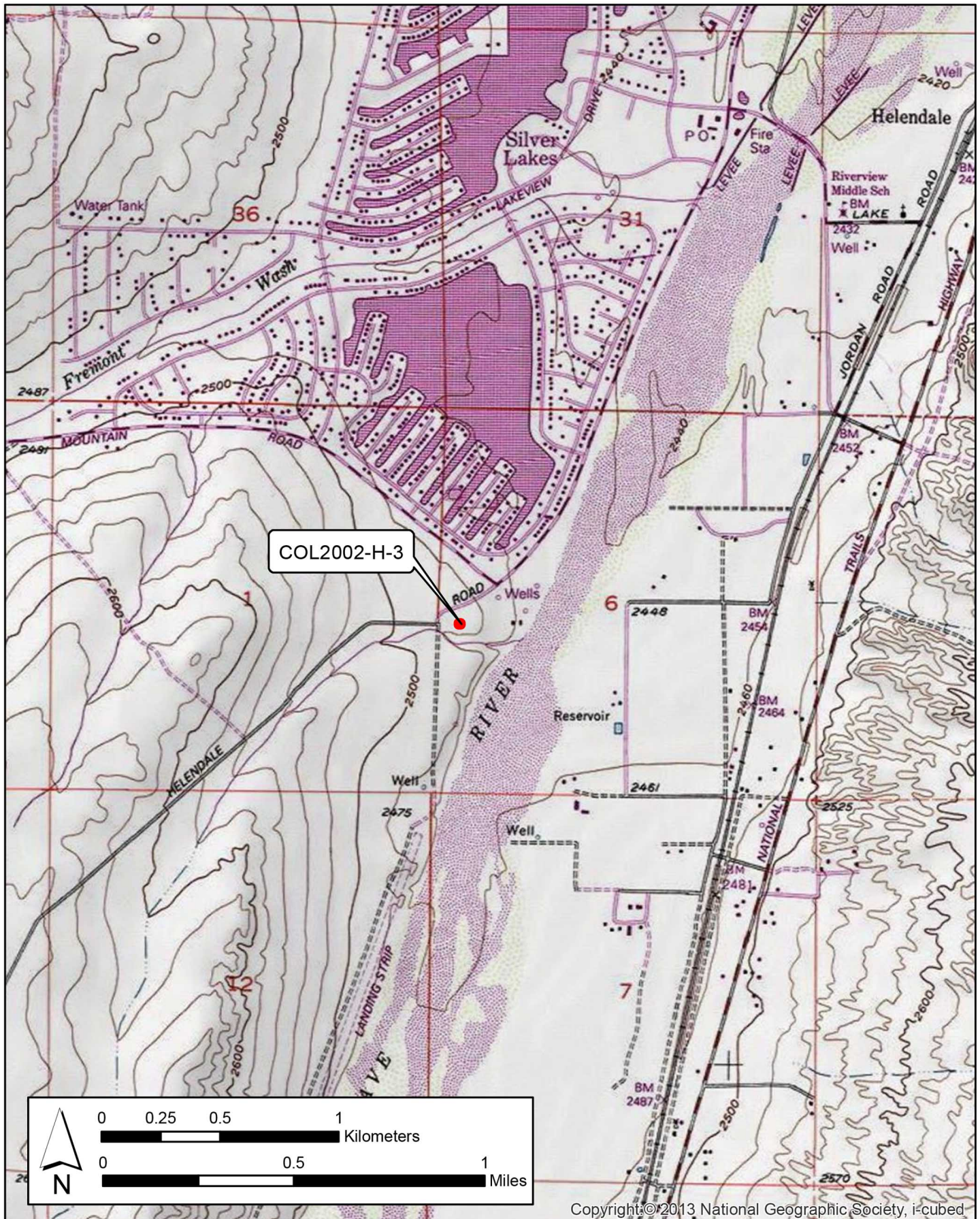
 Site Datum
11; 468259 mE/ 3842593 mN (G.P.S.; NAD83)



USGS National Map
2018.

*Map Name: Helendale, CA

*Scale: 1:24,000 *Date of Map: 1993



P1. Other Identifier: N/A

***P2. Location:** Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County:** San Bernardino

***b. USGS 7.5' Quad:** *Helendale, California* **Date:** 1993 T 7 N; R 4 W; Section 6; SBBM

c. Address: N/A

City: Unincorporated Community of Helendale

Zip: 92342

d. UTM: Zone: 11S; 468368 mE/ 3842664 mN (G.P.S.; NAD83)

Elevation: 2485 Feet AMSL

e. Other Locational Data: From National Trails Highway, turn northwest onto Vista Road. Proceed for approximately 1.25 miles to Helendale Road. Turn south on Helendale Road and Continue south for 1.5 miles. Park and walk approximately 50 meters southeast.

***P3a. Description:** (Describe resource and its major elements: design, materials, condition, alterations, size, setting, boundaries)
This isolate consists of one mustard-colored chert core fragment measuring 4 cm in length and 2.5 cm in width. The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels.

***P3b. Resource Attributes:** AP16. Isolate

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) overview, 12/10/2020, Photo 3

***P6. Date Built; Age and Source:**

Historic
 Prehistoric Both

***P7. Owner and Address:**

Helendale Community Services District

***P8. Recorded by:**

J. Orozco, N. Shepetuk
BCR Consulting LLC
Claremont, CA 91711

***P9. Date:** 12/17/2020

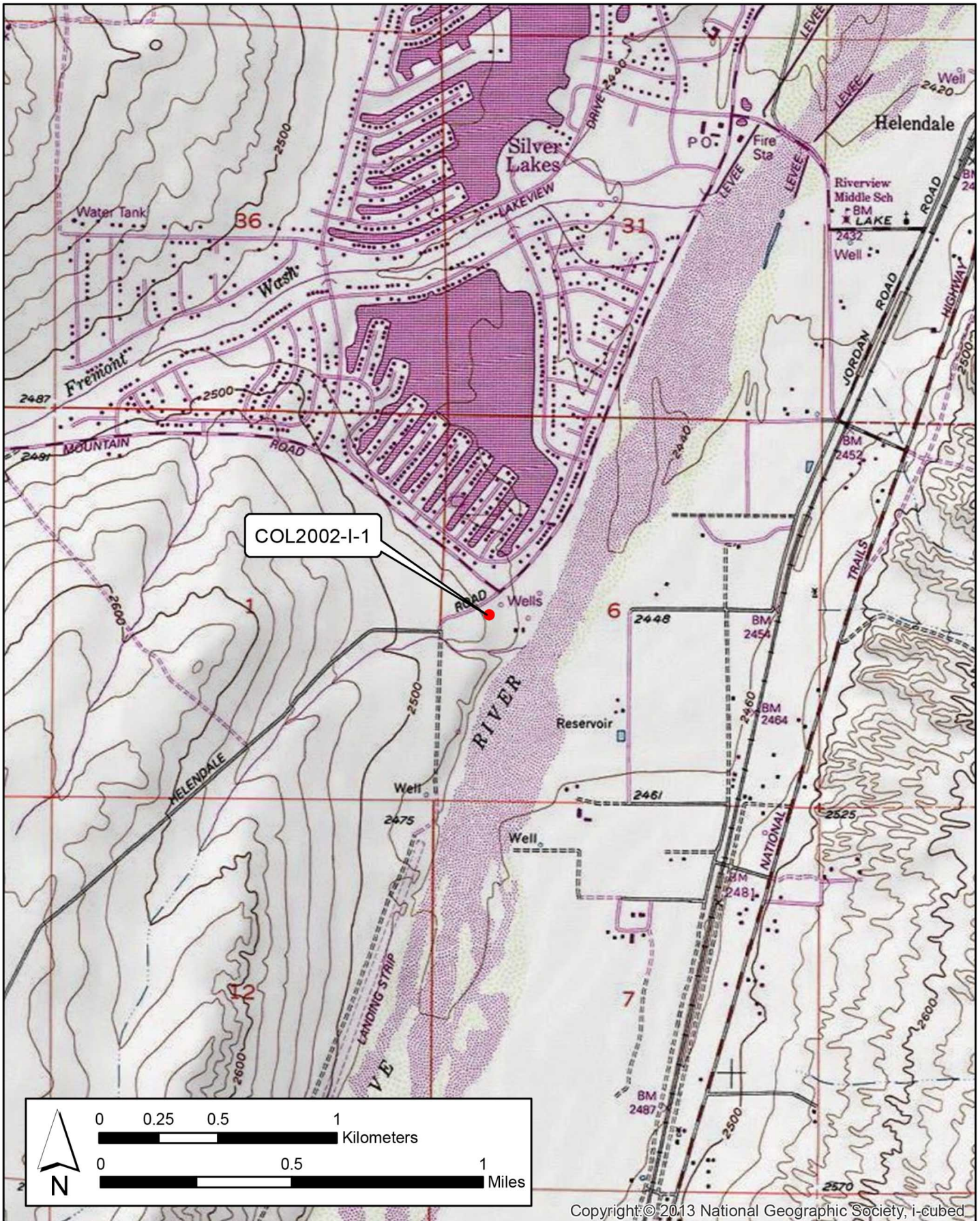
***P10. Survey Type:** Intensive.

***P11. Report Citation:** *Cultural Resources Assessment Helendale Community Services District Well Field Project, San Bernardino County, California*

***Attachments:** NONE Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List):

*Map Name: Helendale, CA

*Scale:1:24,000 *Date of Map:1993



P1. Other Identifier: N/A

***P2. Location:** Not for Publication Unrestricted
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***a. County:** San Bernardino

***b. USGS 7.5' Quad:** *Helendale, California* **Date:** 1993 T 7 N; R 4 W; Section 6; SBBM

c. Address: N/A City: Unincorporated Community of Helendale Zip: 92342

d. UTM: Zone: 11S; 468361 mE/ 3842664 mN (G.P.S.; NAD83) Elevation: 2485 Feet AMSL

e. Other Locational Data: From National Trails Highway, turn northwest onto Vista Road. Proceed for approximately 1.25 miles to Helendale Road. Turn south on Helendale Road and Continue south for 1.5 miles. Park and walk approximately 60 meters southeast.

***P3a. Description:** (Describe resource and its major elements: design, materials, condition, alterations, size, setting, boundaries)
This isolate consists of one basalt core fragment measuring 7 cm in length and 5.5 cm in width. The vegetation is creosote scrub and local sediments are dominated by silty sand interspersed with poorly sorted gravels.

***P3b. Resource Attributes:** AP16. Isolate

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) overview, 12/10/2020, Photo 6

***P6. Date Built; Age and Source:**

Historic
 Prehistoric Both

***P7. Owner and Address:**

Helendale Community Services District

***P8. Recorded by:**

J. Orozco, N. Shepetuk
BCR Consulting LLC
Claremont, CA 91711

***P9. Date:** 12/17/2020

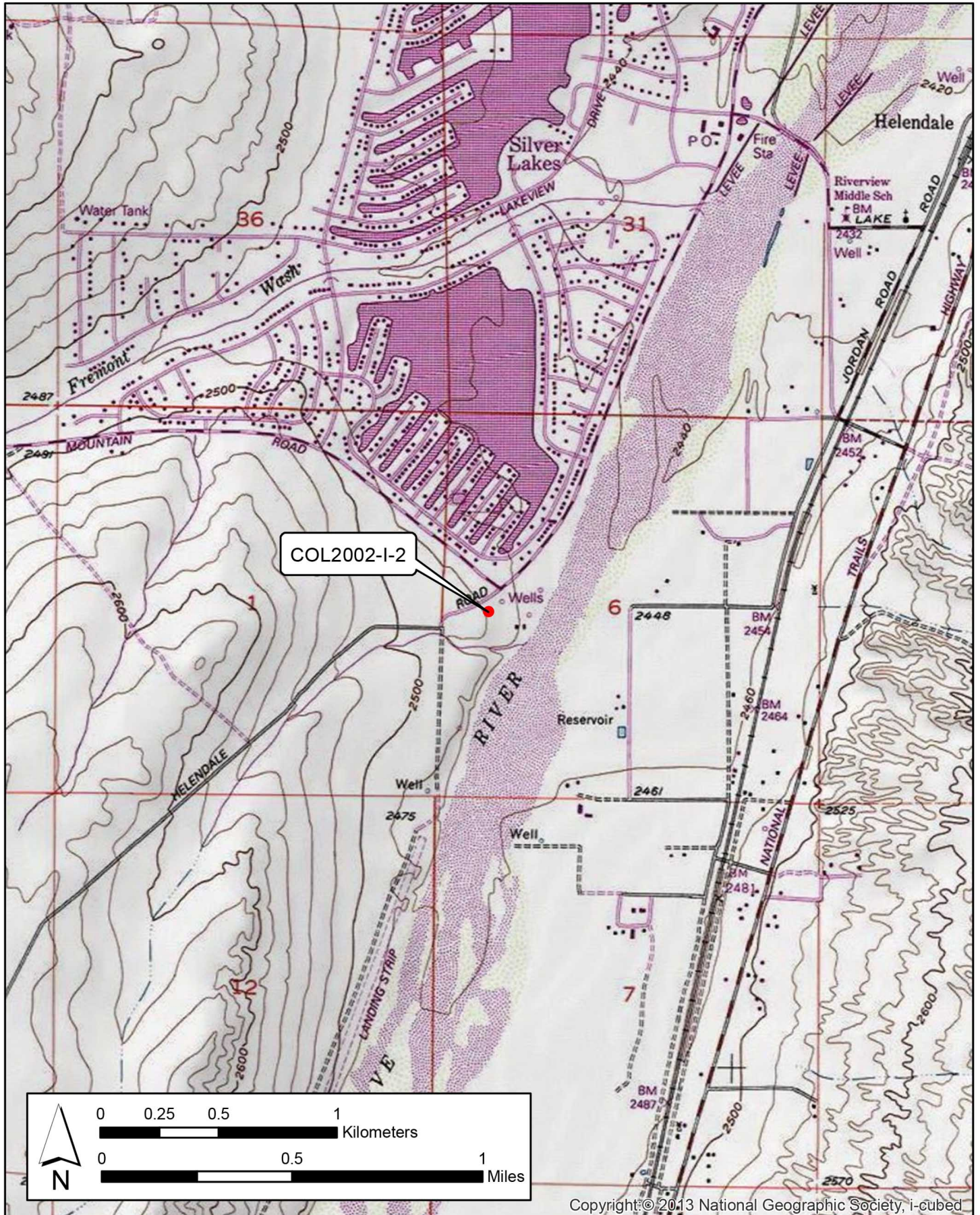
***P10. Survey Type:** Intensive.

***P11. Report Citation:** *Cultural Resources Assessment Helendale Community Services District Well Field Project, San Bernardino County, California*

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 Artifact Record Photograph Record Other (List):

*Map Name: Helendale, CA

*Scale: 1:24,000 *Date of Map: 1993



APPENDIX B

NATIVE AMERICAN HERITAGE COMMISSION SACRED LANDS FILE SEARCH

NATIVE AMERICAN HERITAGE COMMISSION

December 1, 2020

Joseph Orozco
BCR Consulting LLCVia Email to: josephorozco513@gmail.com**Re: Helendale Community Services District Well Field Project, San Bernardino County**

Dear Mr. Orozco:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

Attachment

CHAIRPERSON
Laura Miranda
LuiseñoVICE CHAIRPERSON
Reginald Pagaling
ChumashSECRETARY
Merri Lopez-Keifer
LuiseñoPARLIAMENTARIAN
Russell Attebery
KarukCOMMISSIONER
Marshall McKay
WintunCOMMISSIONER
William Mungary
Paiute/White Mountain
ApacheCOMMISSIONER
**Julie Tumamait-
Stenslie**
ChumashCOMMISSIONER
[Vacant]COMMISSIONER
[Vacant]EXECUTIVE SECRETARY
Christina Snider
Pomo**NAHC HEADQUARTERS**
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

**Native American Heritage Commission
Native American Contact List
San Bernardino County
12/1/2020**

Kern Valley Indian Community

Robert Robinson, Chairperson
P.O. Box 1010
Lake Isabella, CA, 93283
Phone: (760) 378 - 2915
bbutterbredt@gmail.com

Kawaiisu
Tubatulabal
Koso

**Quechan Tribe of the Fort Yuma
Reservation**

Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Quechan

Kern Valley Indian Community

Brandy Kendricks,
30741 Foxridge Court
Tehachapi, CA, 93561
Phone: (661) 821 - 1733
krazykendricks@hotmail.com

Kawaiisu
Tubatulabal
Koso

**San Fernando Band of Mission
Indians**

Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net

Kitanemuk
Vanyume
Tataviam

Kern Valley Indian Community

Julie Turner, Secretary
P.O. Box 1010
Lake Isabella, CA, 93240
Phone: (661) 340 - 0032

Kawaiisu
Tubatulabal
Koso

**San Manuel Band of Mission
Indians**

Jessica Mauck, Director of
Cultural Resources
26569 Community Center Drive
Highland, CA, 92346
Phone: (909) 864 - 8933
jmauck@sanmanuel-nsn.gov

Serrano

**Morongo Band of Mission
Indians**

Robert Martin, Chairperson
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Cahuilla
Serrano

**Serrano Nation of Mission
Indians**

Mark Cochrane, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano

**Morongo Band of Mission
Indians**

Denisa Torres, Cultural Resources
Manager
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Cahuilla
Serrano

**Serrano Nation of Mission
Indians**

Wayne Walker, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Serrano

**Quechan Tribe of the Fort Yuma
Reservation**

Jill McCormick, Historic
Preservation Officer
P.O. Box 1899
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Quechan

Tubatulabals of Kern Valley

Robert L. Gomez, Chairperson
P.O. Box 226
Lake Isabella, CA, 93240
Phone: (760) 379 - 4590
Fax: (760) 379-4592

Tubatulabal

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Helendale Community Services District Well Field Project, San Bernardino County.

**Native American Heritage Commission
Native American Contact List
San Bernardino County
12/1/2020**

***Twenty-Nine Palms Band of
Mission Indians***

Darrell Mike, Chairperson
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-
nsn.gov

***Twenty-Nine Palms Band of
Mission Indians***

Anthony Madrigal, Tribal Historic
Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Helendale Community Services District Well Field Project, San Bernardino County.

APPENDIX C

PALEONTOLOGICAL RESOURCES ASSESSMENT



BCR Consulting LLC
Joseph Orozco
505 West 8th Street
Claremont, CA 91711

December 1, 2020

Dear Mr. Orozco,

This letter presents the results of a record search conducted for the Helendale Community Services District Well Field Project in San Bernardino County, California. The project site is located east of the intersection of Shadow Mountain Road and Helendale Road in Township 7 North, Range 4 West in Section 6 of the Helendale CA USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped entirely as alluvial silt, sand and gravel or channel sand deposits dating from the Holocene period (Dibblee, 2008). While Holocene alluvial and sedimentary units are considered to be of high preservation value, material found is unlikely to be fossil material due to the relatively modern associated dates of the deposits. However, if development requires any substantial depth of disturbance, the likelihood of reaching Pleistocene alluvial sediments would increase. The Western Science Center does not have localities within the project area or within a 1 mile radius.

While the presence of any fossil material is unlikely, if excavation activity disturbs deeper sediment dating to the earliest parts of the Holocene or Late Pleistocene periods, the material would be scientifically significant. Excavation activity associated with the development of the project area is unlikely to be paleontologically sensitive, but caution during development should be observed.

If you have any questions or would like further information, please feel free to contact me at dradford@westerncentermuseum.org

Sincerely,




A handwritten signature in black ink, appearing to read 'Darla Radford', written in a cursive style.

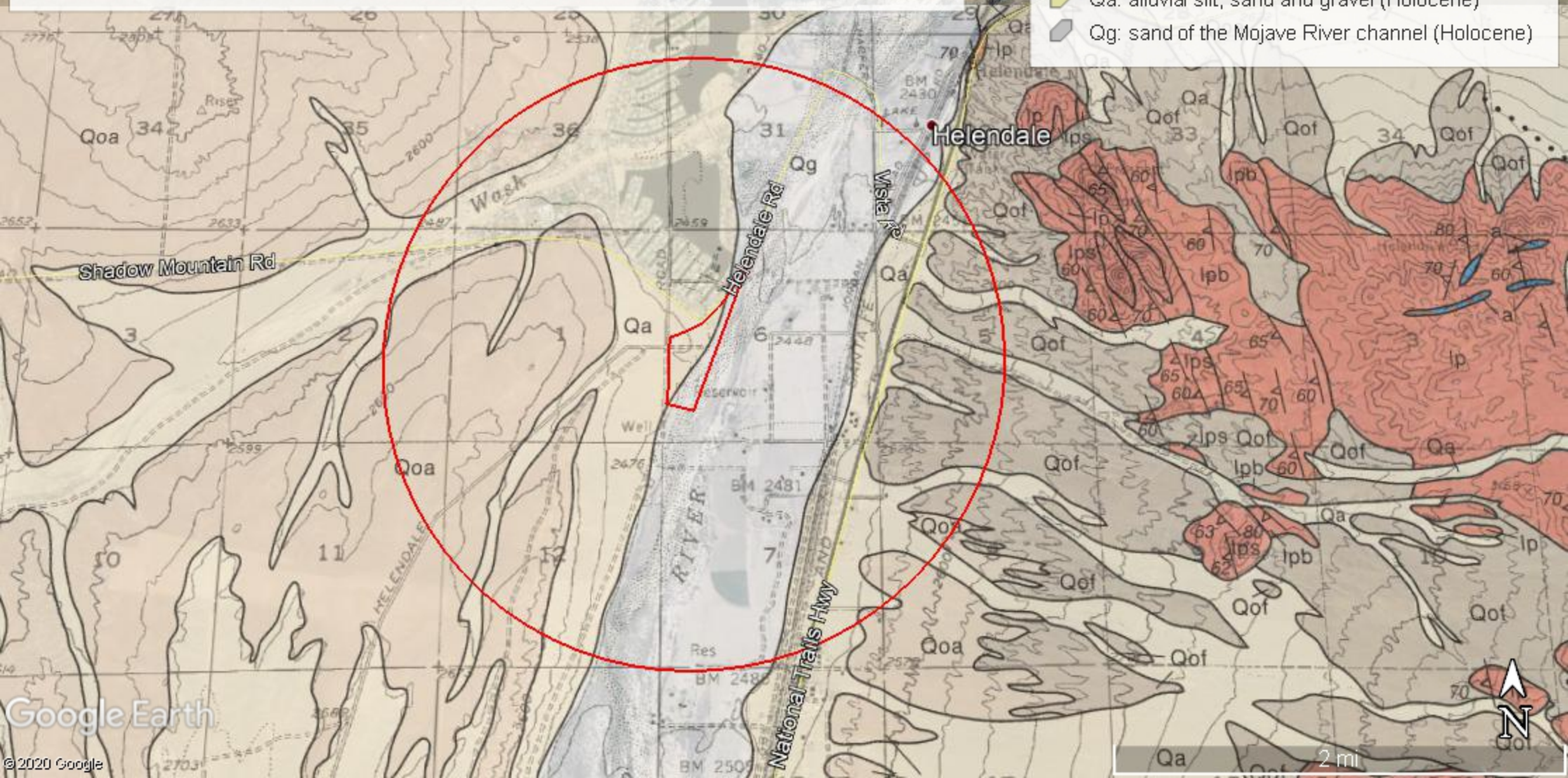
Darla Radford
Collections Manager

Helendale Community Services District Well Field Project

Project area, one mile radius, geologic mapping, and any WSC fossil localities.

Legend

-  Project area and one mile radius
-  Qa: alluvial silt, sand and gravel (Holocene)
-  Qg: sand of the Mojave River channel (Holocene)



APPENDIX D
PROJECT PHOTOGRAPHS



Photo 1: Project Overview (View South)



Photo 2: Project Overview (View NE)



Photo 3: Project Site Overview (View West)



Photo 4: Concrete Footings and Associated Well (View SE)
