A CULTURAL RESOURCES INVESTIGATION AND PALEONTOLOGICAL OVERVIEW: THE PROPOSED EXPANSION OF THE CEMEX USA OPERATIONS AT THE BLACK AND WHITE MOUNTAIN QUARRY & ALVIC QUARRY SITES NEAR SIDEWINDER MOUNTAIN, SAN BERNARDINO COUNTY, CALIFORNIA

(Data presented in this report is confidential and not for public review)

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MANAGEMENT SUMMARY

McKenna et al. initiated these studies in March, 2020, and completed this draft report in November, 2020. Personnel involved in this investigation included Jeanette A. McKenna, M.A./RPA and Principal Investigator for McKenna et al.; Breidy Quispe (MA); Ashley Conner (BA); Crystal Ayala (B.A.); Cynthia Ayala (BA in prep.); and Stephen Rodela (BA in prep.).

In conducting this investigation, McKenna et al. addressed paleontological sensitivity, prehistoric archaeological sensitivity, historic archaeological sensitivity, and the potential for a built environment, historical landscape, and/or ethnic resources. The following conclusions were reached.

Paleontological Resources Sensitivity

Those portions of the project area outside the existing quarry locations and comprising the lower elevations and more even terrain (not the prominent hills) have been determined to be sensitive for paleontological resources, although no surficial evidence of paleontological specimens have been identified. Based on the research and findings, McKenna et al. concurs with the recommendations presented by McLeod (2020) and recommends a paleontological monitoring program for any earthmoving activities in areas below 3600 feet AMSL or any area where older Quaternary alluvium (or older deposits) are identified. The program should be conducted in accordance with the policies and guidelines of the San Bernardino County Museum, Redlands, California, and include the preparation of a Paleontological Resources Impact Mitigation Program (PRIMP), supplemental fieldwork, sampling, analysis, and curation.

Native American Archaeological Resources Sensitivity

McKenna et al. contacted the Native American Heritage Commission and received a response noting negative findings for sacred or religious sites in the area. Letters were sent to the local Native American representatives, including maps and other graphics, noting the County as Lead Agency and requesting consultation for SB-18/AB-52 compliance. The County generally conducts their own government-to-government consultation and, therefore, McKenna et al. defers to the County for this level of consultation.

Two prehistoric archaeological resources were identified over the course of the recent survey – one lithic scatter and one isolated core. These resources were left in situ and

McKenna et al. is recommending a Phase II study if the reported locations are to be impacted by some later activities. There is a relative level of sensitivity for additional resources to be present in the area and, as yet, unidentified. McKenna et al. is recommending a prehistoric archaeological monitoring program be conducted in undisturbed areas that may be impacted by mining-related activities. Based on the results of consultation between the local Native American representative and the County representatives, Native American participation in the monitoring program can be decided.

Historic Archaeological Resources Sensitivity

Historic archaeological resources have been identified and recorded as the "Black/White Mountain Quarry Site." This resource/site consists of the existing compilation of claims/ placers; open quarries; shallow mining test pits; roads; mining equipment and facilities; railroad alignments; structural remains; and sparce scatters of historic refuse. Also present are numerous posts and/or markers identifying claim boundaries and/or USGS landmarks.

An assessment of these remains resulted in a conclusion the site is eligible for listing in the California Register of Historical Resources under Criteria 2 (association with persons important in history) and 4 (potential to yield scientific data). In this case, the qualifying individuals are Carl Leonardt and Frank Henry Powell. Both were owners of the Southwestern Portland Cement Company (Leonardt founding the company and Powell taking over after Leonardt's death). This qualification is based on a local/regional association and not a state or federal level of recognition.

While Criterion 2 has been used to identify the Black/White Mountain Quarry Site as a historical resource, it is also noted the site is represented primarily by modern improvements. The late period improvements are limited to the main road, rail alignment(s), and the conveyor complex. The proposed mining expansion is not designed to impact any of these earlier components. McKenna et al. has recorded this mining site on the appropriate DPR-523 forms, noting the association with Leonardt and Powell and the McKenna et al. conclusion that any subsequent changes or use of the area (as a quarry or otherwise) will not result in any adverse environmental impacts.

With respect to Criterion 4, the project area has yielded evidence of prehistoric archaeological resources and a relatively level of sensitivity for paleontological resources. McKenna et al. is recommending monitoring programs to address both sets of resources but notes the extent of the monitoring (or testing) would be dependent upon the nature of the expansion activities and specific areas of impact.

Recommendations

Based on the findings presented above, McKenna et al. has prepared the following recommendations for consideration by the Lead Agency. The Lead Agency may accept these recommendations a presented, amend the recommendations, and/or negate all or part of these recommendations, pending comments resulting from Native American consultation and/or project description changes.

MM-1: Paleontological Monitoring: McKenna et al. is recommending a paleontological monitoring program for those areas below 3,600 feet and/or in any areas where older Quaternary alluvium (or older) deposits are identified. This program should be conducted in a manner consistent with the policies and guidelines of the San Bernardino County Museum, Redlands, and include the following:

- Preparation of a PRIMP (methodological approach);
- On site paleontological monitoring in areas of identified sensitivity;
- Adjustment to the monitoring locations as additional data becomes available;
- Conduct periodic sampling of the soils for small flora and fauna specimens;
- Complete the analysis of any collected specimens;
- Prepare a technical report summarizing the findings;
- Arrange for the curation of any collected specimens.

MM-2: Prehistoric Archaeological Testing: McKenna et al. is recommending an archaeological (Phase II) testing program at the site of the identified lithic scatter. This program should consist of:

- A systematic surface collection (including all locational data);
- Inventorying of the artifact assemblage;
- Analysis of the spatial and identifying data;
- Subsurface testing via a series of shovel scrapes (screened);
- If Subsurface deposits are identified, a series of control units Should be excavation to determine depth and content;
- Recovery of the isolate core (downslope);
- A secondary surface examination between the site and isolate To determine whether additional artifacts are present;
- Preparation of a technical report documenting the approach, findings, and other recommendations.

MM-3: **Prehistoric Archaeological Monitoring:** Pending receipt of comments from the local Native American representatives through the SB-18/AB-52 consultation process, the County should consider the McKenna et al. recommendation for a prehistoric archaeological monitoring program in undisturbed areas that will be subjected to direct impacts. The prehistoric archaeological monitoring program must be overseen by a professional meeting the Secretary of the Interior's standards for archaeological proficiency and have knowledge of the prehistory of the western Mojave Desert region.

If deemed appropriate by the Lead Agency, the monitoring program can include the presence of a Native American representative(s), working with the archaeological consultant to insure professional and respectful treatment of any identified resources.

The extent of the prehistoric archaeological monitoring program will be determined by the schedule and extent of earthmoving related to the proposed mining expansion.

MM-4: **Historic Archaeological Monitoring:** At this time, McKenna et al. is not recommending a historic archaeological monitoring program. However, at the discretion of the Lead Agency, historic archaeological monitoring can be added to the prehistoric archaeological monitoring program to insure previously unidentified historic-period resources with a potential to yield undocumented activities is accurately and professionally addressed. Any historic archaeological monitoring program should include the presence of a professional archaeologist trained in historic archaeology and, if possible, knowledge of mining sites.

MM-5: **Human Remains:** If, at any time, evidence of human remains (or potentially human remains) is uncovered, the County Coroner must be notified immediately and permitted to examine the find(s) *in situ*. A buffer of 50+ feet around the finds must be defined to prevent adverse impacts to the remains.

If the remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission and the Commission will name the Most Likely Descendent (MLD). In consultation between the MLD, County, Project Proponent, and consulting archaeologist, the disposition of the remains will be determined. Any costs associated with managing these remains will be borne by the property owner.

If the remains are determined to be of archaeological value, but not Native American, the archaeological consultant, in consultation with the County and property owner, will remove the remains, complete the required analysis, and prepare the remains for reburial. The reburial costs will be borne by the property owner.

If the remains are determined to be of forensic value, the Coroner will oversee the removal of the remains and the County will take jurisdiction of the remains and cover all required tasks.

As noted above, these recommendations may be amended, as deemed appropriate and in compliance with CEQA, by the Lead Agency.

CERTIFICATION

I hereby certified that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: Nov. 9, 2020 Signed: Jeanette A. McKenna

Jeanette A. McKenna, Principal Investigator

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by,

Jeanette A. McKenna, Principal
McKenna et al., Whittier, California

INTRODUCTION

McKenna et al. (Appendix A) initiated the cultural resources investigation and paleontological overview for the CEMEX USA Black and White Mountain Quarries expansion project near Sidewinder Mountain, San Bernardino County, California, at the request of Lilburn Corporation, San Bernardino, California. This project site consists of privately owned land under the jurisdiction of the County of San Bernardino and, as such, this study has been completed for compliance with the California Environmental Quality Act, as amended, and the County policies and guidelines for compliance. Access to the property is afforded via open roadways and, within the facility, private roads.

PROJECT DESCRIPTION

The CEMEX USA Black and White Mountain Quarries project site involves an area of approximately 2700 acres comprised of 25 Assessor Parcels (specifically, 2702.07 acres; Table 1). Within this 2700+ acres, approximately 1257+/- acres have been impacted by prior mining activities and/or were inaccessible for pedestrian surveying. At the time of the survey, CEMEX was doing blasting in some areas and designated other area unstable for surveying (exceeding 45^{o} in slope), resulting in approximately 1445 acres of relatively

undisturbed or potentially accessible for surveying. Upon accessing the acreage and assessing the possible survey areas, McKenna et al. concluded less than 1200 acres were available for the completion of a pedestrian survey – nearer 1000 acres.

Table 1. Assessor Parcels Comprising the Black/White Mountain Quarries Project Site (Red = Not Surveyed).

APN	Acres	Description	Owner 1982+	Owner 2004+
0463-131-02	53.28	Min Sur No. 5367 Pat Mining Claims Gold Drop Keyhole and Sidewinder in SE ¼ Sec 5 and SW ¼ Sec 4 TP 6N R2W 57.28 ac.	SWPCCo.; T. Tucker; B. Conrad	CEMEX
0463-131-03	6.48	Min Sur 5367 that ptn of Last Chance Min Claim located in SE ¼ Sec 5 TP 6N R 2W desc as com at pt designated as Cor No. 1 of Last Chance Mining Claim sd Cor being S 59 deg 49 min W 2585 ft from NE Cor SE ¼ sd Sec 5 th S 7 deg 15 min E 605 ft to Cor No. 2 th N 89 deg 29 min W 508 ft to pt on W Li Sd SE ¼ th alg sd W Li N 0 deg 3 min W 601 ft th S 89 deg 29 min E 432 ft to POB 6.481 ac M/L.	SWPCCo.	SWPCCo.
0463-131-04	20.9	Lots 19 and 23 Sec 5 TP 6N R 2W Rimrock Nos. 1 2 3 Placer Mining Claims Pat No. 1160583 20.90 ac.	SWPCCo.	CEMEX
0463-131-05	12.01	Min Sur 5367 Last Chance Mining Claim in Sections 4 and 5 TP 6N R 2W ex that ptn located in SE ¼ Sec 5 TP 6N R 2W desc as com at pt designated as Cor No. 1 of Last Chance Mining Claim sd Cor being S 59 deg 49 min W 2585 ft from NE Cor sd SE ¼ th S 7 deg 17 min E 605 ft to Cor No. 2 th N 89 deg 29 min W 508 ft to pt on W Li sd SE ¼ th alg sd W Li N 0 deg 03 min W 601 ft th S 89 deg 29 min E 432 ft to POB 12.019 ac M/L.	SWPCCo.	SWPCCo.
0463-131-06	26.76	Cement Age Placer Patented Mining Claim located in fractl Sec 5 TP 6N R 2W Gov Lots 18 and 24 in sd SW ¼ 26.76 ac.	R, Tryon & M. Pluth; Gov't Land	CEMEX
0463-131-07	120.26	Cement Age No. 6 Placer Mining Claim em-bracing Lots 10 11 12 and 13 SW ¼ Lot 14 Sec 5 TP 6N R 2W 120.26 ac.	SWPCCo.	CEMEX
0463-131-08	160	Min Sur No. 4830 Cement Age No. 3 in SE ¼ Sec 6 TP 6N R 2W 160 ac.	SWPCCo.	CEMEX
0463-131-09	159.59	Cement Age No. 2 in Lots 6 7 and E ½ SW ¼ Sec 6 TP 6N R 2W 159.59 ac.	SWPCCo.	CEMEX
0463-141-01	440	Astra No. 1 Placer Claim embracing SW ¼ Astra No. 2 Placer Claim embracing S ½ N ½ and Astra No. 3 Placer Claim embracing W ½ SE ¼ and N ½ NE ¼ and W ½ SE ¼ SE ¼ all in Sec 7 T 6N R 2W Pat no. 1162267 440 ac.	SWPCCo.	CEMEX
0463-141-02	164.91	Min Sur No. 4830 Cement Age No. 4 in Lots 3 4 5 and 6 Sec 7 TP 6N R 2W 164.91 ac.	SWPCCo.	CEMEX

Table 1. Assessor Parcels Comprising the Black/White Mountain Quarries Project Site (Cont'd.; Red = Not Surveyed).				
APN	Acres	Description	Owner 1982+	Owner 2004+
0463-141-03	120	Cement Age No. 8 Placer Mining Claim embracing S ½ E ½ Lot 14 and SW ¼ SE ¼ Sec 5 TP 6N R 2W and E ½ Lot 1 E ½ Lot 6 W ½ W ½ NE ¼ and E ½ NW ¼ NE ¼ Sec 8 TP 6N R 2W 120 ac.	SWPCCo.	CEMEX
0463-141-04	50	Calmer No. 1 embracing NE ¼ SE ¼ NE ¼ Calmer No. 2 embracing S ½ NE ¼ NE ¼ Calmer No. 3 embracing N ½ NE ¼ NE ¼ all in Sec 8 TP 6N R 2W 50 ac.	SWPCCo.	CEMEX
0463-141-07	152.08	Cement Age No. 9 Placer Mining Claim embracing Lots 11 23 NE ¼ SE ¼ and E ½ SW ¼ NE ¼ and W ½ SE ¼ NE ¼ and SE ¼ SE ¼ NE ¼ Sec 8 TP 6N R 2W 152.08 ac.	SWPCCo.	CEMEX
0463-141-08	40	Cement Age No. 10 Placer Mining Claim Lot 16 Sec 8 TP 6N R 2W 40 ac.	SWPCCo.	CEMEX
0463-141-09	22.26	S ½ S ½ Lot 22 and all Lots 21 23 and 25 Sec 8 TP 8N R 2W Reserve No. 7 Placer Claim Pat 1147612.	SWPCCo.	CEMEX
0463-141-10	116.16	Reserve No. 1 comprising N ½ Lot 22 and N ½ S ½ Lot 22 and Lot 24 Reserve No. 2 comprising S ½ Lot 17 and Lot 19 Reserve No. 3 comprising N ½ Lot 17 and 18 Sec 8 TP 6N R 2W Reserve No. 5 comprising E ½ SE ¼ SE ¼ Reserve No. 6 comprising S ½ NE ¼ SE ¼ Sec 7 TP 6N R 2W 116.16 ac.	SWPCCo.	CEMEX
0463-141-11	35.14	Lot 14 and S ½ Lot 15 Sec 8 TP 6N R 2W Reserve Nos. 8 9 10 Placer Mining Claims Pat No. 1148071.	SWPCCo.	CEMEX
0463-141-12	115.17	Cement Age No. 7 Placer Mining Claim embracing Lots 2 3 W ½ Lot 1 W q/2 Lot 6 and N ½ Lot 15 Sec 8 TP 6N R 2W 115.17 ac.	SWPCCo.	CEMEX
0463-151-01	346.55	Lots 1 to 8 incl OR N ½ Sec 17 TP 6N R 2W Sovic Nos. 1 and 2 Placer Mining Claims Lots 3 4 5 and 6 Sovic No. 1 Lots 1 2 7 and 8 Sovic No. 2 Pat No. 1146915 346.55 ac M/L	SWPCCo.	CEMEX
0463-151-03	157.57	NE ¼ Sec 18 TP 6N R 2W ex S 40 ft Co Rd 157.57 ac.	SWPCCo.	CEMEX
0463-151-04	p/o 140	E 140 ac Gov Lots 1 and 2 NW ¼ Sec 18 Tp 6N R 2W 140 ac.	SWPCCo.	CEMEX
0464-051-11	172	All NW ¼ and that ptn of SW ¼ Sec 9 TP 6N R 2W desc as com at iron pipe that is W ¼ cor sd Sec th S 0 deg 27 min W 750 ft alg W Li sd SW ¼ th S 89 deg 23 min E 700 ft th N 0 deg 37 min E 750 ft th N 89 deg 23 min W 700.24 ft M/L to pt on W Li sd Sec to POB 172 ac.	SWPCCo.	CEMEX

Table 1. Assessor Parcels Comprising the Black/White Mountain Quarries Project Site (Cont'd.; Red = Not Surveyed).				
APN	Acres	Description	Owner 1982+	Owner 2004+
0464-051-12	p/o 339.76	NE ¼ and N ½ SE ¼ and Gov lots 1 and 2 of SE ¼ and Gov Lot 3 of SW ¼ Sec 9 TP 6N R 2W 339.76 ac.	Sons of Cadeceus; Texaco Prod,; Getty Oil	SWPCCo.
0464-051-24	p/o 234.43	Alvic No. 1 SE ¼ Sec 4 Alvic No. 3 Lot 5 of SW ¼ Sec 4 Alvic No 4 S ½ S ½ NE ¼ Sec 4 all in TP 6N R 2W Pat No. 1172247.	SWPCCo.	CEMEX
0464-051-25	200	Alvic No 2 SW ¼ Sec 3 Alvic No. 5 S q/2 S ½ NW 1`/4 Sec 3 TP 6N R 2W Pat No. 1172247.	SWPCCo.	CEMEX

At present, CEMEX USA is proposing to expand their mining activities into all identified parcels. If mining material is present, extraction will be undertaken. If material is not present, those areas will be used for staging, storage, or left intact. Immediate areas of material recovery are proposed for the following parcels:

APN	Acreage	APN	Acreage	APN	Acreage
0463-131-02	53.28	0463-141-04	50	0463-151-03	157.57
0463-131-06	26.76	0463-141-07	152.08	0463-151-04	140
0463-131-07	120.26	0463-141-08	40	0463-151-11	172
0463-131-08	160	0463-141-10	116.16	0463-151-12	339.76
0463-141-01	440	0463-141-11	35.14	0463-151-24	234.43
0463-141-02	164.91	0463-141-12	115.17	0463-151-25	200
0463-141-03	120	0463-151-01	346.55		

The acreage counts **highlighted in red** reflect areas not surveyed – either because of excessive slopes, unstable surfaces, or limited access per CEMEX USA mining activities. Figure 1 illustrates the project area and those areas recently surveyed by McKenna et al. The few parcels along the northern boundary of the project site were not readily accessible and were not surveyed during this undertaking. Most of these parcels involved excessive terrain that was not conducive to surveying, despite access issues.

PROJECT LOCATION

The CEMEX USA Black and White Mountain Quarries project site is located west of Sidewinder Mountain and in unincorporated San Bernardino County, California. The core area of the quarries is approximately 3.5 miles northeast of the intersection of Central Road

and Quarry Road and north of the City of Victorville (Figure 2). More specifically, the project site is located within Township 6 North, Range 2 West, and within all or portions of Sections 3 through 6; Sections 7 through 9; and Sections 17 and 18 (Figure 3).

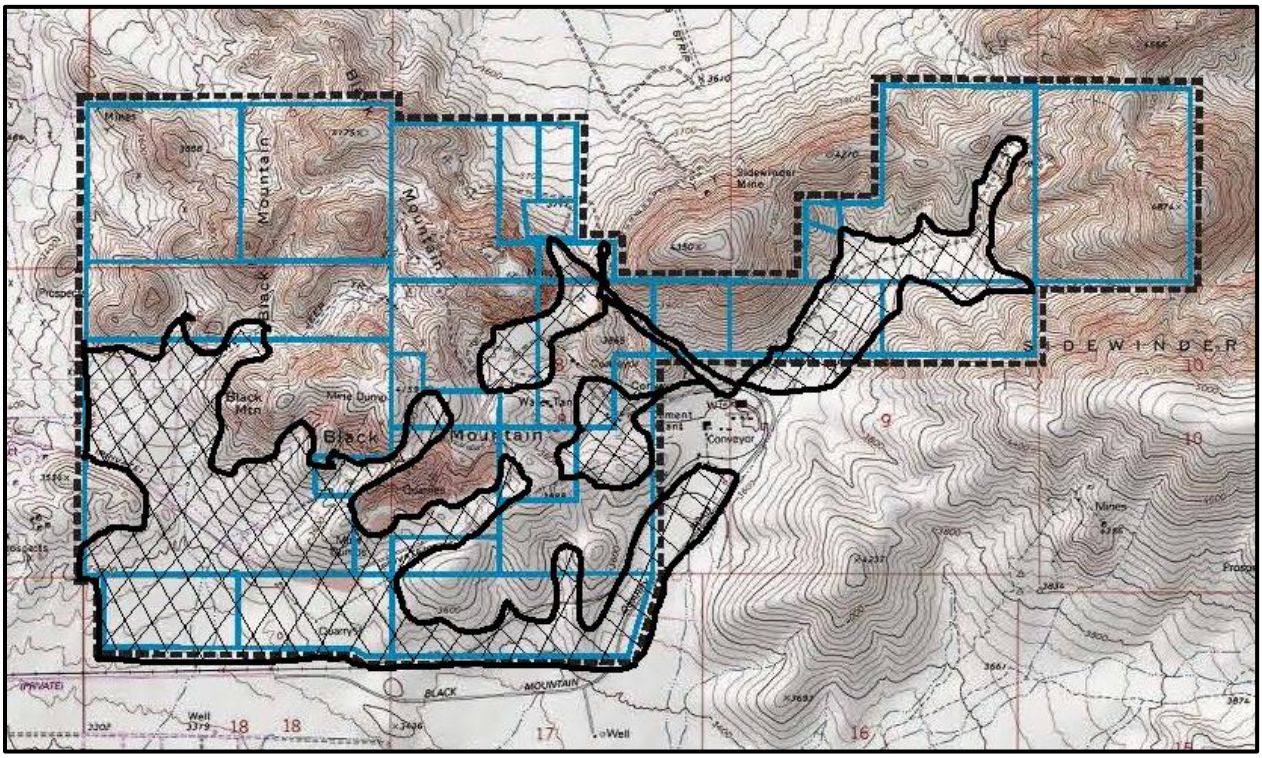

Figure 1. Surveyed Areas within the Black and White Mountain Quarries Project Site (hatched).

These Sections are illustrated on four USGS Quadrangles: Turtle Valley (NW; rev. 1993); Apple Valley North (SW; rev. 1993); Stoddard Wells (NE; rev. 1970); and Fairview Valley (SE; rev. 1993). These USGS quadrangles reflect the conditions over 27 years ago and current conditions may differ. The current aerial photograph (Figure 4) illustrates the more recent conditions within the project site and the extent of the mining activities.

The project site, as noted above, involves 25 individual Assessor Parcels illustrated on three different Assessor Parcel Maps (0463-131; 0463-141, 0463-151; and 0464-051; Figures 5 thru 8).

The legal descriptions for these properties are presented in Table 1 (above) and the UTM coordinates for the project site are listed in Table 2. The NAD 27 UTMs converted to NAD 83 UTMs are illustrated in Figure 9, superimposed on an alternative topographic map.

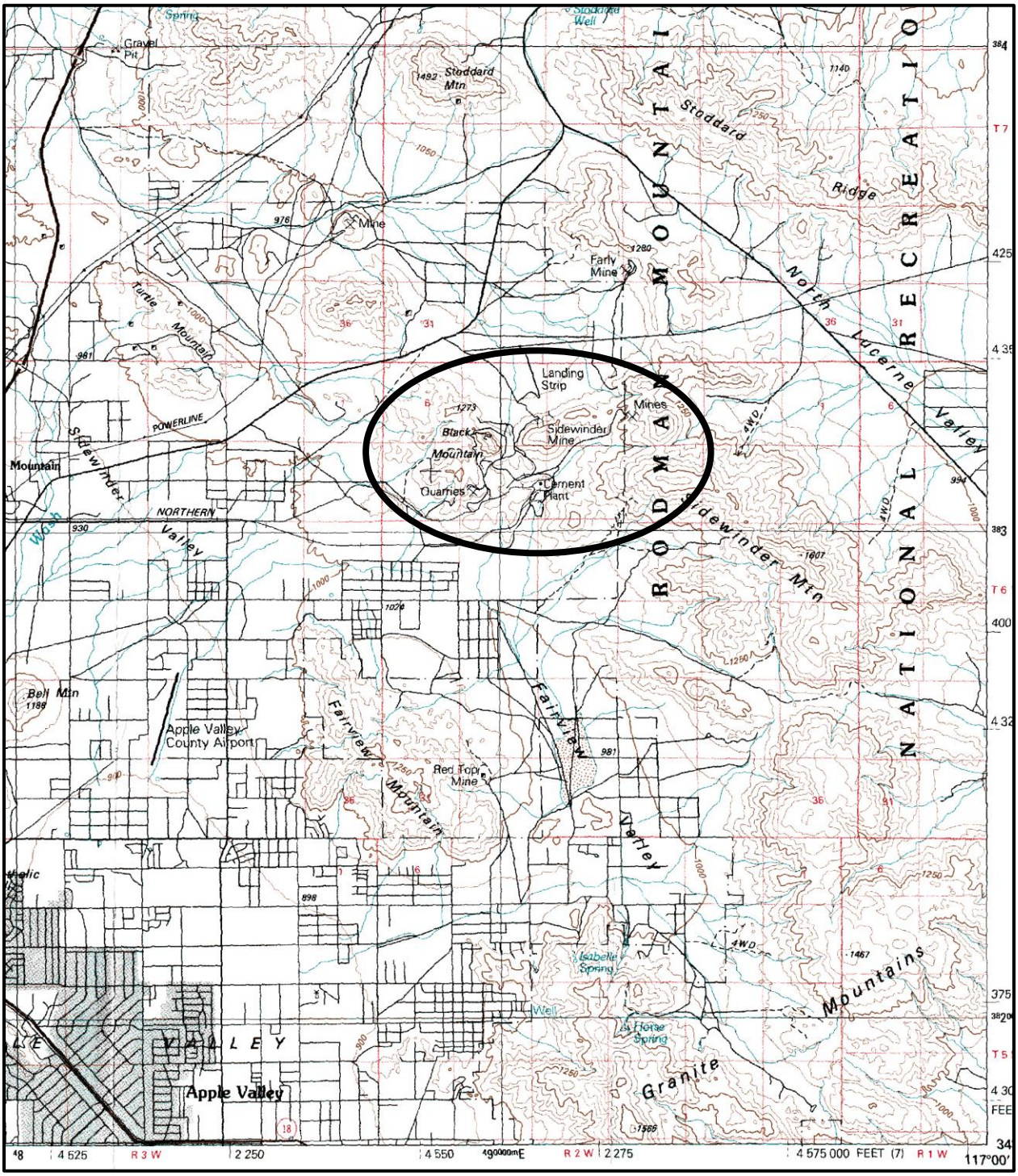

Figure 2. General Location of the Project Site
(Victorville 1:100,000 map; 1982).

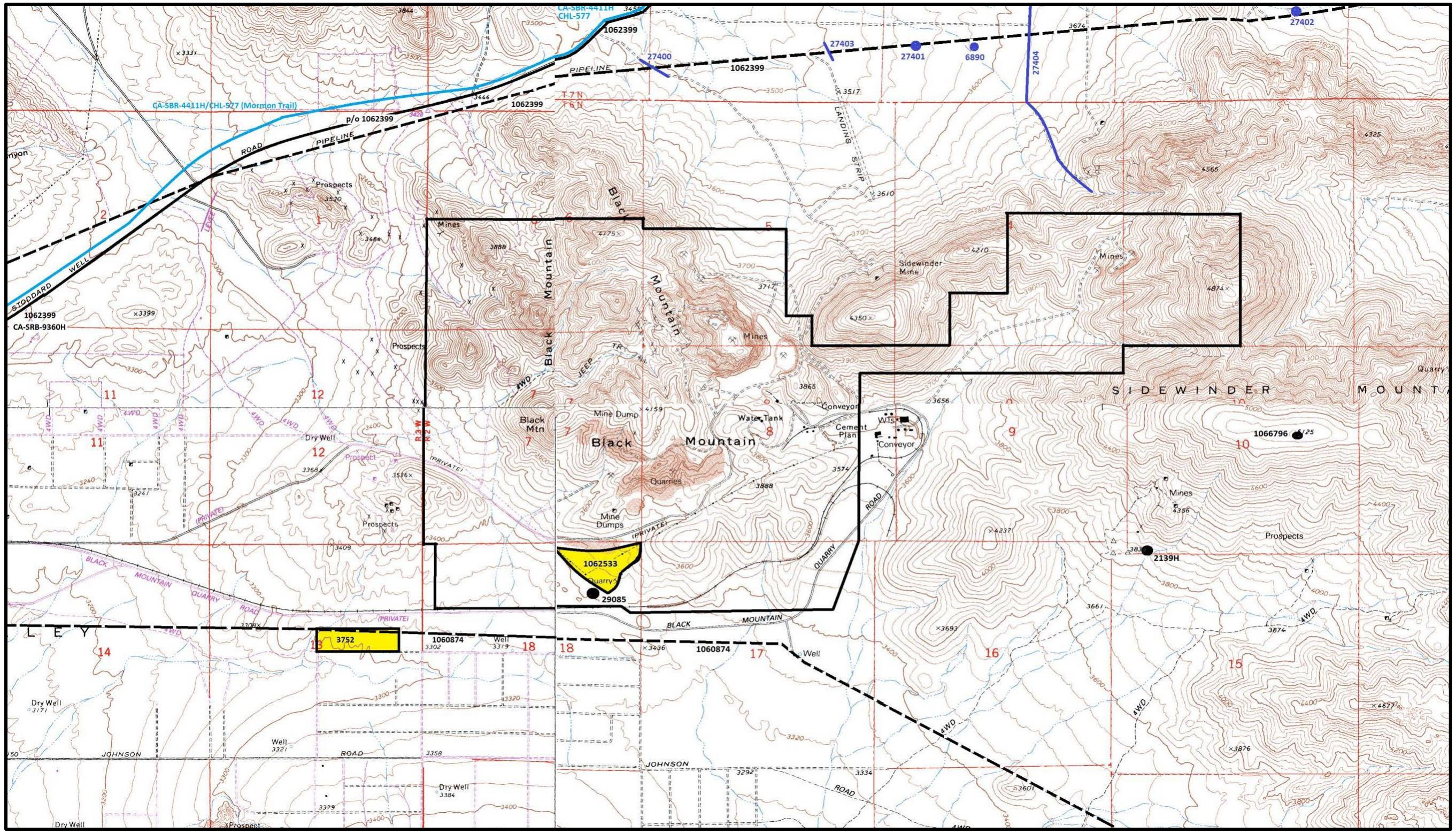

Figure 3. Specific Project Site Boundaries Illustrated on the USGS Turtle Valley (rev. 1993); Apple Valley North (rev. 1993); Stoddard Wells (rev. 1970); and Fairview Valley (rev. 1993) Quadrangles.

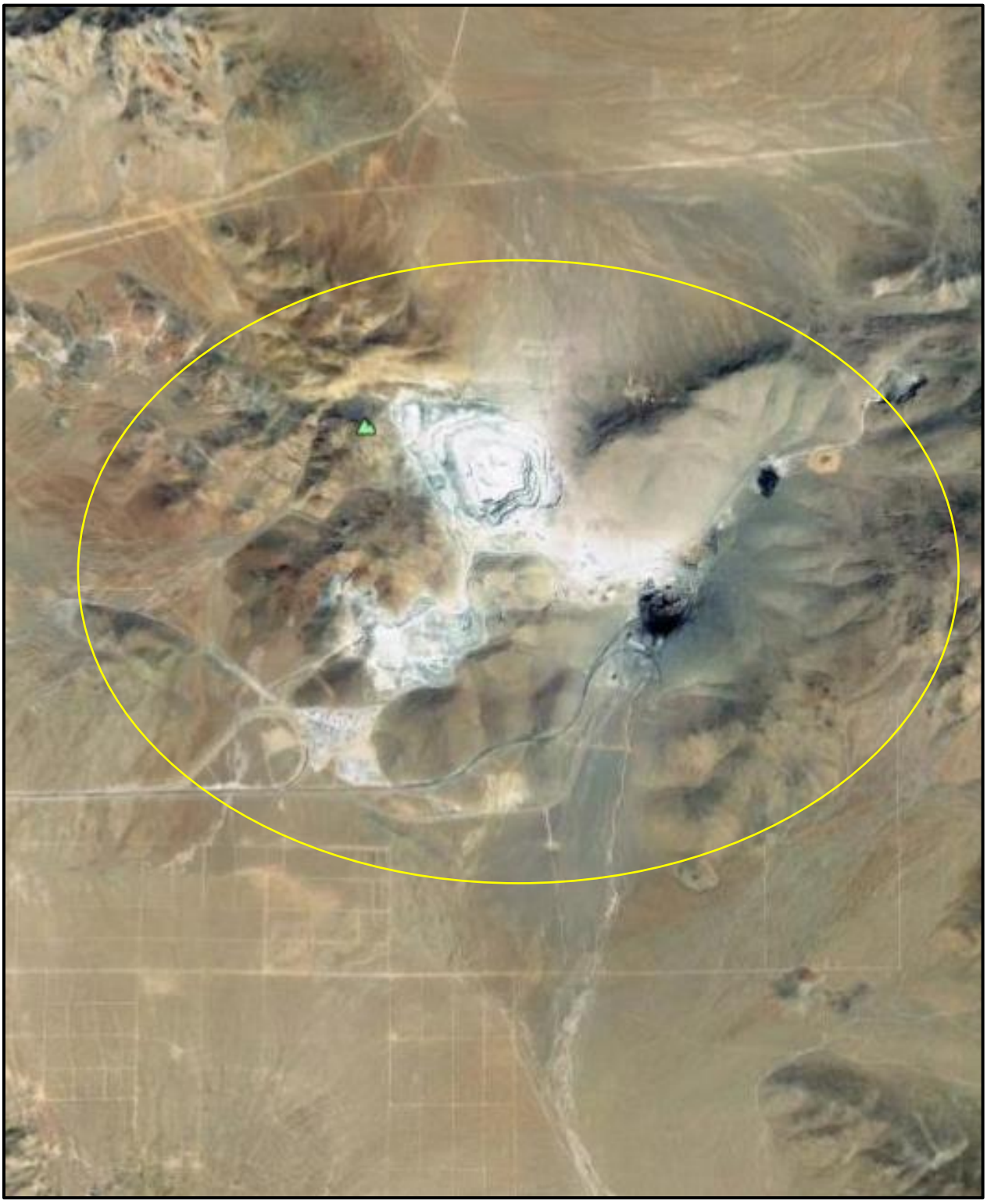

Figure 4. Current Aerial Photograph Illustrating the Project Site.

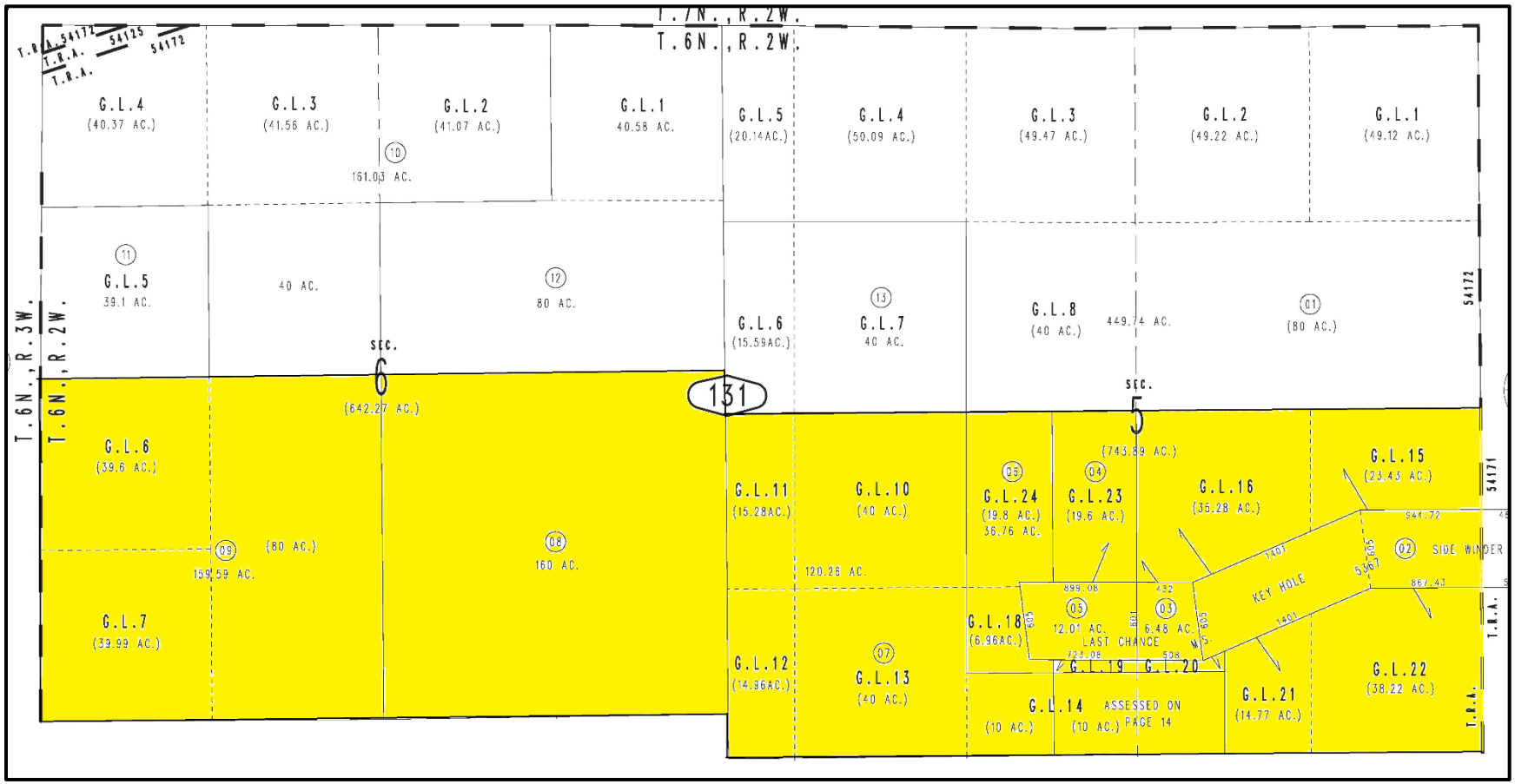

Figure 5. Assessor Parcel Map 0463-131, Illustrating a Portion of the Current Project Site.

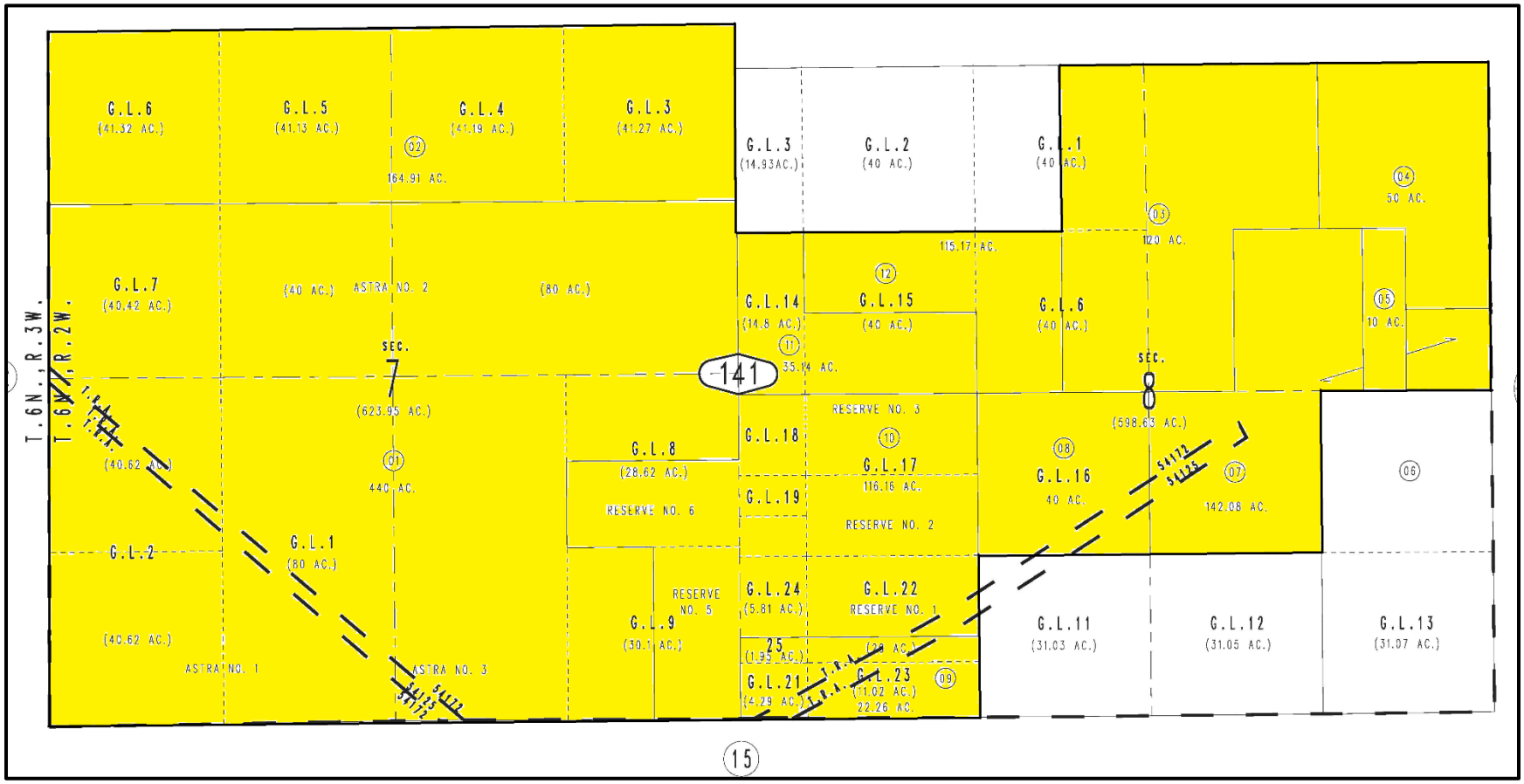

Figure 6. Assessor Parcel Map 0463-141, Illustrating a Portion of the Current Project Site.

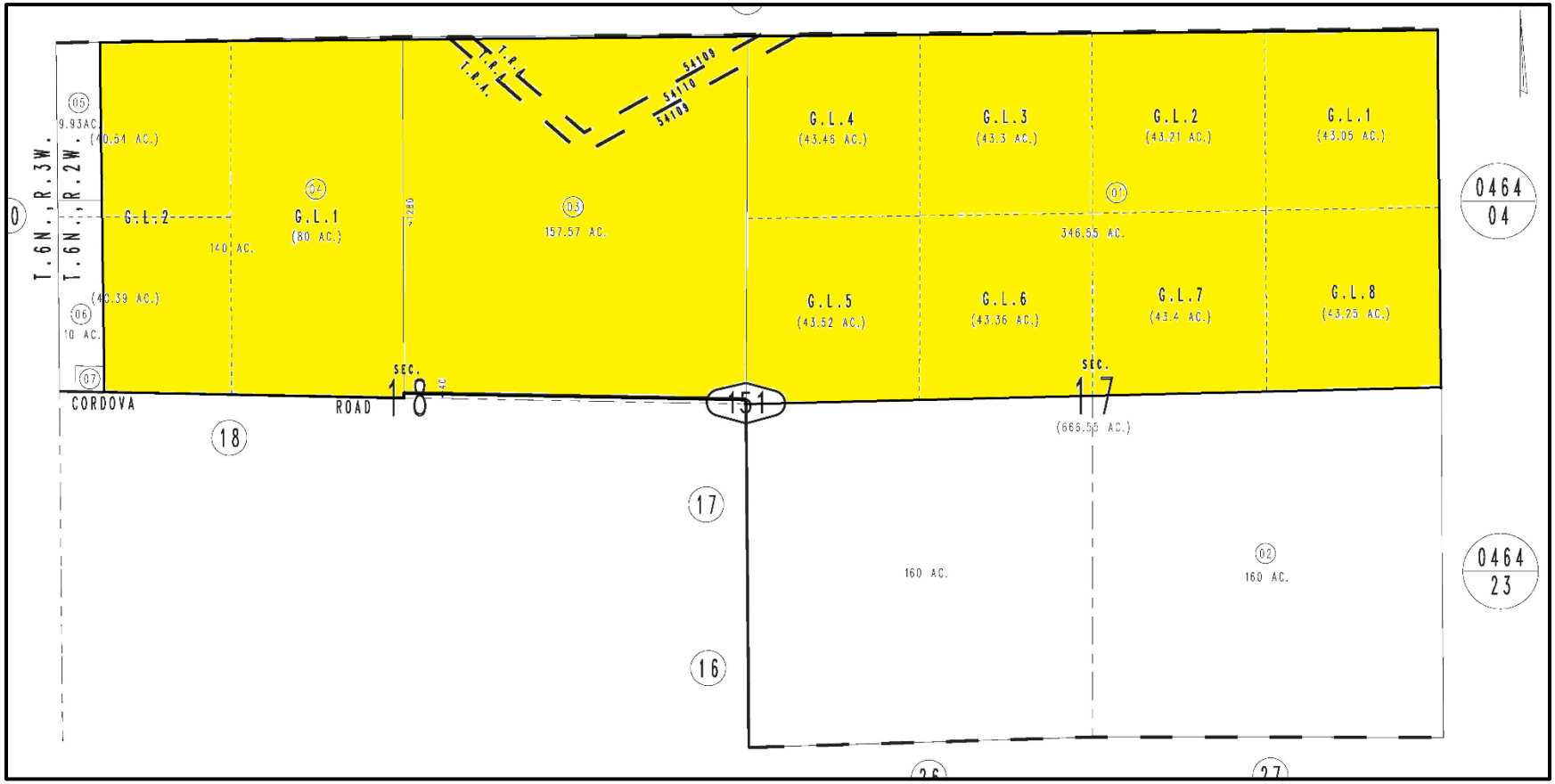

Figure 7. Assessor Parcel Map 0463-151, Illustrating a Portion of the Current Project Site.

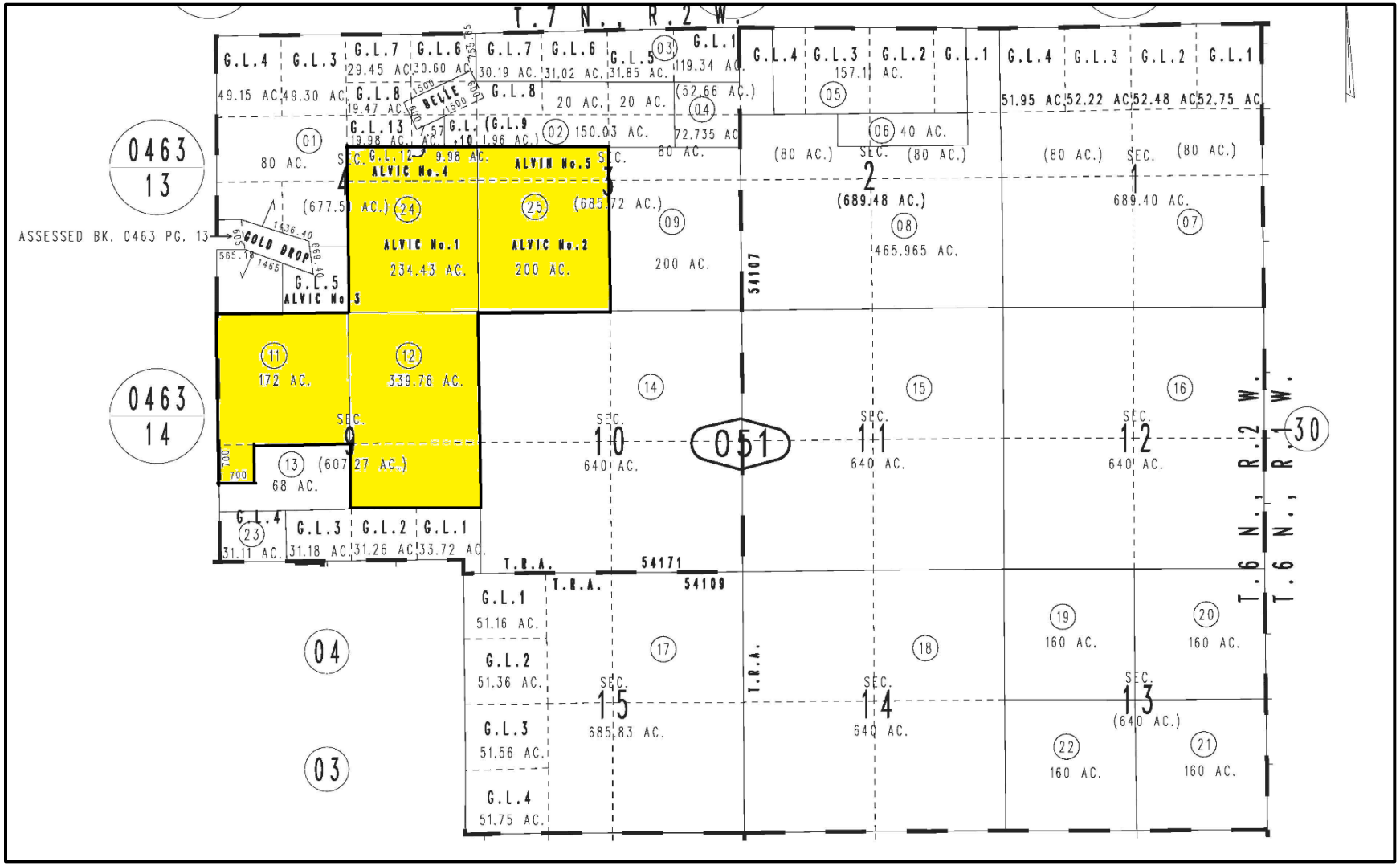

Figure 8. Assessor Parcel Map 0464-051, Illustrating a Portion of the Current Project Site.

Table 2. Coordinates for the Boundaries of the Black and White Quarries Project Site.				
Location/ Point	NAD 27		NAD 83	
	Easting	Northing	Easting	Northing
A	487574	3832672	487494	3832867
B	489178	3832675	489098	3832870
C	489175	3832583	489095	3832778
D	490132	3832610	490052	3832805
E	490137	3832029	490057	3832224
F	490335	3832025	490255	3832220
G	490338	3831770	490338	3831770
H	491395	3831831	491315	3832026
I	491395	3832207	491315	3832402
J	491732	3832211	491652	3832406
K	491747	3832784	491667	3832979
L	493354	3832792	493274	3832987
M	193362	3831762	493282	3831762
N	492541	3831770	492461	3831965
O	492557	3831359	492477	3831554
P	490532	3831371	490452	3831566
Q	490552	3830239	490472	3830424
R	490401	3829745	490321	3829940
S	489058	3829724	488978	3829919
T	488993	3829752	488913	3829947
U	497635	3829870	487555	3830065
V	487634	3830249	487554	3830444
W	487535	3830242	487455	3830437

Main access to the project site is from Interstate 15 at Stoddard Wells Road; Stoddard Wells Road to Quarry Road; east to the CEMEX USA property (security gate). The core area and headquarters for the CEMEX USA is approximately 5 miles from the security gate and accessed along the private, paved, Black Mountain Quarry Road, which parallels the main railroad alignment extending from the quarry to the facilities in Victorville (E Street). Additional railroad tracks were noted within the property, established after the 1993 USGS mapping, and, therefore, not illustrated on the currently available maps.

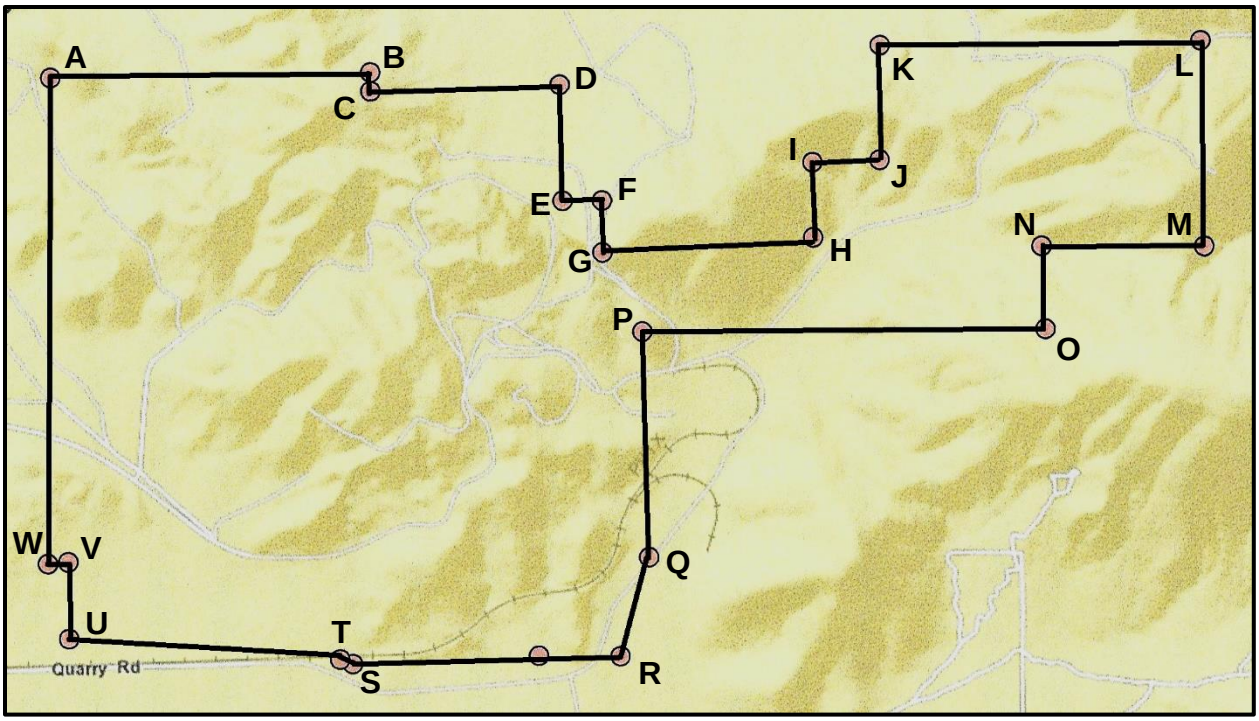

Figure 9. UTM Coordinates Superimposed on an Alternative Topographic Map.

METHODOLOGY

To complete these studies in compliance with the data requirements defined by CEQA and San Bernardino County, McKenna et al. completed the following tasks:

1. **Archaeological Records Search**: McKenna et al. completed an archaeological records search through the California State University, Fullerton, South Central Coastal Information Center (Appendix B). This research was completed as an in-house search conducted by Jeanette A. McKenna, Principal Investigator for McKenna et al., on February 13, 2020. The research was designed to compile data on previously completed studies within one mile of the project site APE. This level of investigation required a review of data on the USGS Turtle Valley Quadrangle (1993), Stoddard Wells Quadrangle (1970); Apple Valley North Quadrangle (1993); and Fairview Valley Quadrangle (1993). McKenna et al. obtained copies of all recorded site forms and the historic maps covering the area. In addition, McKenna et al. reviewed the listing of properties in the National Register of Historic Places, California Register of Historical Resources, California Historical Landmarks, and California Points of Historical Interest. Locally recognized resources were also investigated. McKenna et al. obtained copies of all technical re-

ports listed for the area and reviewed each. The locations of the earlier studies were mapped and compared to the data presented in the technical report(s).

2. **Project Description and Understanding**: McKenna et al. was provided a preliminary project description by Lilburn Corporation, along with various maps and other graphics. These data included project-related maps, an aerial photograph with the project boundaries, and a brief written description. Although more specific data was not immediately available nor needed to complete this investigation, ample data was provided to delineate the Area of Potential Effects (APE)/project site.

3. **Native American Consultation**: McKenna et al. contacted the Native American Heritage Commission and inquired into the presence or absence of known religious or sacred Native American sites within or near the project site (Appendix C). On February 20, 2020, McKenna et al. obtained response and a listing of local Native American representatives wishing to consult with respect to projects in the area associated with the project site. Letter were sent to these individuals (also on February 20, 2020) requesting comments or issues they would want addressed in this technical study. AB-52 requires government-to-government consultation with local Native American representatives and, based on the responses from the initial letters, representatives were invited to consult directly with San Bernardino County, should more formal consultation be needed.

4. **Paleontological Overview**: McKenna et al. obtained a paleontological overview for the area through the Natural History Museum of Los Angeles County (Appendix D). This overview was designed to place the project site in a context for the preliminary assessment of the relative sensitivity for the area to yield evidence of fossil specimens. The paleontological issues and results have been presented under separate cover.

5. **Historic Background Research**: Background research and land use history was researched through the Bureau of Land Management General Land Office files; the San Bernardino County Archives; the San Bernardino County Recorder's Office; the San Bernardino County Museum; and the in-house library at McKenna et al. Local histories were perused and articles relating to the area were researched on-line. Some generally research areas were not available, given closures due to COVID-19, but McKenna et al. made all attempts to fill in the data gaps with secondary sources. All pertinent data was compiled and assessed for application to the current research needs.

6. **Field Studies**: McKenna et al. completed the field survey for this project site over the course of six field days (June 10 and July 8, 9, 10, 17 and 18,

2020). This pedestrian survey was completed by a crew of six, including Jeanette A. McKenna, MA/RPA and Principal Investigator for McKenna et al., with the assistance of Breidy Quispe (MA); Ashley Conner (BA); Crystal Ayala (B.A.); Cynthia Ayala (BA in prep.); and Stephen Rodela (BA in prep.). The survey was completed by walking paralleling transects (15 meters intervals) in open areas conducive to intensive surveying and via subjective surveying in areas where terrain or other impediments prevented a systematic approach (e.g. in areas of steep hillsides and/or open pit mining areas). Areas of previous disturbance were noted, along with inaccessible areas. Having covered approximately 1200+/- acres of accessible land, the crew averaged 200 acres per surveyor, or an average of 33 acres per person/per day. The field crew also complete certifications in "mine safety" through "360 Training" and attended on on-site safety program conducted by CEMEX USA personnel prior to conducting the field survey. Field notes are on file at McKenna et al. and the project photographic record is presented in Appendix E. All data required to complete the DPR-523 resource forms were compiled and these forms are presented in Appendix G.

7. **Analysis and Report Preparation**: McKenna et al. complete the analysis for this project in compliance with the criteria for significance presented in both the NHPA/NEPA and CEQA guidelines and as required by San Bernardino County. This report was prepared in a format requested by the Office of Historic Preservation, Sacramento; and South Central Coastal Information Center, Fullerton. McKenna et al. included all required data and formatted this report in a manner conducive to understanding the proposed project and potential impacts to cultural resources. All supplemental and supporting data deemed important to this study has been presented in the attached appendices. Additional supporting data is on file at McKenna et al.

ENVIRONMENTAL SETTING

As noted, the project site is located north of Victorville and in the vicinity of Sidewinder Mountain; with Turtle Valley to the northwest and Apple Valley to the southwest. Stoddard Wells is to the northeast and Fairview Valley is to the southeast. The current project site is located northeast of the Mojave River (the river crossing Interstate 15 north of D Street, Victorville) and northeast of the Victorville Upper Narrows (at the Mojave River). With respect to the natural environment of the project site, McCorkle-Apple and Lilburn (1992:1) characterize the western Mojave Desert as:

> ... Formed by late Tertiary and Quaternary extensional faulting, these mountains are comprised of crystalline rocks of pre-Tertiary age; sedimentary and volcanic rocks of Tertiary age; and sediments and local basalt flows of Quaternary age (Dibblee 1967). Most of these mountain ranges are separated

> by basins or valleys that lack external drainages resulting in the formation of dry lakes or playas. Seasonal precipitation drains toward the alluvial basins, but is usually absorbed into the ground prior to reaching them (Wright and Frey 1965:289) …

Citing Swope (2016:2.1):

> "The project area … is located in the southwestern Mojave Desert … between the Mojave River and Interstate 15 (I-15), in San Bernardino County. The Mojave River, the major physical feature in the area, ranges 3.5-6.0 miles west of the project area. It originates in the San Bernardino Mountains and flows generally northeasterly to its sink in the former freshwater Lake Mojave (now the Soda Lake and Silver Lake playas). The closest natural water source in the project area is the river, which supplied water for historical-period ore mills. The river flows underground for most of its course, except after storms and at a few locales where natural; underground barriers force water to the surface. The noncontiguous project area lies north of the "V" formed by the river on the west and the I-15 corridor on the east … The topography of the project area is characterized by "isolated hills and mountains or mountain groups partly buried in their own debris (Bowen 1954:11). The Silver Mountains constitute one of the major topographic features in the area and are composed of mineral deposits of the Sidewinder Volcanic Series – primarily dacite, ryolite, latite, and andesite flows, tuffs, agglomerates, and mudflows (Bowen 1954:14, 42, Plate 1). The project area features an arid climate in which evaporation exceeds precipitation. Temperatures commonly rise above 100^{o} F (38^{o} C) during the summer and drop to below freezing in the winter. Precipitation is generally 4-6 inches (10-15 CM) annually, and rains occur from November through March (Bailey 1966)."

The Mojave Desert region is geologically a great wedge-shaped fault block bounded by the San Andreas and Garlock fault zones on the southwest and north, respectively, but has no definite natural eastern limits. Mountain ranges separate the Mojave Desert from the coastal areas to the southwest and from the Basin and Range province to the north. Duke and Shattuck note this area as being associated with deposits of "… well sorted metamorphic and granitic gravels and cobbles that are eroding from the San Bernardino Mountains to the south ..." (2003:4-5).

The desert itself is characterized by north-south trending mountain ranges which enclose expanses of arid valleys and low-lying basins or sinks (Harry 1992). Lithic resources are restricted to the buttes and ridges which rise above the unconsolidated alluvium.

Because few systematic archaeological surveys have been conducted in the area, it is unknown how widespread are lithic materials suitable for prehistoric tool production (Harry 1992). Geologic maps for the project site identified four main deposits in the area" Older Quaternary Alluvium (Qoa); Metasedimentary Limestone (ml); Metasedimentary Quartzite (mq); and Quartz Diorite (qd). Norris and Webb (1990:220-249) define this area as the "Mojave Desert Province" characterized as a "Cenozoic feature" and related to the Basin and Range, stating:

> "Today the region is dominated by broad alluviated basins that are mostly aggrading Surfaces receiving nonmarine continental deposits from adjacent uplands. The deposits are burying the old topography, which was previously more mountainous."

McLeod (2018 and 2020, respectively) described the project site as consisting of "… exposures of intrusive igneous rocks and metamorphic rocks …" He notes:

> "In the more elevated terrain occupying most of the proposed project area, on Black Mountain in the west and Sidewinder Mountain in the east, there area exposures of various intrusive igneous rocks and metamorphic rocks that will not contain recognizable fossils. In less elevated terrain on the more gentle slopes mostly around the margins of the proposed project area, the surface deposits consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the more elevated terrain in the central portion and northern portions of the proposed project area. In the very southwestern portion of the proposed project area, on the more gentle slopes on the southwestern side of the Helendale Fault, there are surface deposits of older Quaternary Alluvium. These deposits are probably coarse being so close to the igneous and metamorphic rock source areas, and are unlikely to contain significant vertebrate fossils in the uppermost layers. At modest depth, however, there may [be] pockets of finer-grained deposits that do contain significant fossil vertebrate remains …
>
> "Excavation in the igneous and metamorphic rocks exposed in the more elevated terrain in most of the proposed project site will not uncover any recognizable fossils. Shallow excavations in the Quaternary Alluvium exposed in the less elevated terrain in portions of the proposed project site are unlikely to produce significant fossil vertebrate remains. Deeper excavations in the latter portions [of the] proposed project site that extend down into older and finer-grained Quaternary deposits, however, may well encounter significant vertebrate fossils."

The climate of the area is described as sub-arid, transitional between the relatively colder climate of the nearby Great Basin and the subtropical climate of the Sonoran Desert (McCorkle-Apple and Lilburn 1992:2; Axelrod 1979). Seasonal temperatures vary, as do levels of rain, general humidity, and wind. Temperatures can range from below 60º Fahrenheit to over 100º Fahrenheit. Sparse precipitation and high temperatures create a situation where evaporation exceeds precipitation, particularly in those areas lying below 5,000 feet above mean sea level (AMSL) in elevation (Warren and Crabtree 1986:183). Reliable water sources are currently available along major rivers, intermittent streams and springs, and seasonal claypans.

During the early Holocene (10,500 to 8,000 B.P.) climatic fluctuations have been recorded. At this time, there was a trend towards warming and drying characterized by the disappearance of lakes and a reduction in the number of springs. The area became wetter in the middle Holocene (ca. 5,100 B.P.) and warmer and drier again post-2,000 B.P. Citing Weide (1982), the last 2,000 years have been characterized by considerable "climatic oscillations" ranging from extreme droughts and massive flooding.

The effects of changing paleoclimatic conditions on the hydrological, floral and faunal patterns of the western Mojave Desert and adjacent mountain areas are only partially understood. The flora and fauna of this area adjusted to the changing conditions and sparse fresh water sources. Flora is dominated by the presence of creosote bush scrub *(Larrea divaricata*) and salt bush (*Atriplex confertifolia*). Citing Barbour and Major (1977), creosote is drought-tolerant and salt bush is often found near dry playas. Blackbrush (*Coleogyne ramosissima*) and various species of cacti are also common. Local fauna includes a variety of reptiles, rodents, small carnivores, and birds. Species of reptiles include the desert tortoise (*Gopherus Agassizi*), chuckawalla (*Sauromalus obesus*), rattlesnakes (*Crotalus*), shovelnose snake (*Chionactis occupitalis*) and several species of lizards. Carnivores include coyotes (*Canis latrans*), badger (*Taxidea taxus*), desert kit fox (*Vulpes macrotis*), and bobcat (*Felis rufus*). The small mammals include blacktailed jackrabbits (*Lepus californicus*), woodrat (*Neotoms* sp.), ground squirrels (*Spermophjilus* sp.), and cottontail jackrabbits (*Sylvilagus audobonii*). Large herbivores, though not common, include the desert bighorn sheep (*Ovis canadensis*) and mule deer (*Odocoileus hemionus*) - at higher elevations. Avifauna include the LeConte thrasher (*Toxostoma lecontei*), sage thrasher (*Oreoscoptes montanus*), cactus wren (*Heleodytes brunneicapillus*), raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensi*) turkey vulture (*Cathartes aura*), various ducks (*Anas*), and the American coot (*Fulica americana*).

CULTURE HISTORY BACKGROUND

McCorkle and Lilburn (1992:6) provided a relatively detailed discussion on the prehistory of the western Mojave Desert:

"While much is known about the prehistory of the Mojave Desert, relatively few formal archaeological investigations have been conducted in the southern portion of the central Mojave. As a result, little specific regional information on prehistory is known. General summaries can be found in Stickel and Weinman-Roberts (1980), Warren (1980, 1984), and Warren and Crabtree (1986).

Chronological Framework

"The earliest generally accepted evidence for human occupation of the Mojave Desert dates from around 12,000 B.P. [although more recent studies have cited the presence of Paleo-Indian resources, including Clovis Points]. Claims have been made for much earlier dates (e.g. Simpson 1958), but as Warren and Crabtree (1986:184) note, these are controversial and bear little relationship to later cultural developments in the region.

"Sites dating to the Lake Mojave period (12,000 to 7,000 B.P.) serve as the basis for our understanding of the earliest undisputed occupation of the Mojave Desert. Sometimes considered a Paleo-Indian assemblage, the Lake Mojave complex is thought by some researchers to be directly ancestral to the subsequent early Archaic cultures (Warren and Crabtree 1986). Lake Mojave period sites are usually open air sites and are limited to the surface, although sites with substantial subsurface deposits have been recently identified in the central Mojave (Jenkins 1985).

"Since sites of the Lake Mojave period are often found in association with Late Pleistocene/Early Holocene lake stands and outwash drainages, some researchers have suggested that lacustrine resources were a subsistence focus. Others argue that grasslands suitable for the grazing of Late Pleistocene mega-fauna would have surrounded the terminal Pleistocene lakes, and that this was the main subsistence focus of the Lake Mojave cultural groups (Warren and Crabtree 1986). Regrettably, few sites dating to the early part of the Lake Mojave period have been excavated and little direct evidence of subsistence practices has been reported.

"Recent excavations of sites dated to the latter part of the period have revealed an unexpectedly high incidence of small mammal bone relative to large mammal bone. This suggests that we may need to refine our ideas about the subsistence focus of Lake Mojave cultures, or at least grant that substantial subsistence change occurred during the period.

"Artifacts typical of the period include leaf-shaped points and long-stemmed, narrow-shouldered points of the Lake Mojave series and the short-bladed, shouldered points of the Silver Lake series. A variety of large scrapers and flaked stone crescents are also considered diagnostic of the period. Milling equipment is thought to be rare or absent (Amsden 1937). Fluted points are sometimes found impossible association with Lake Mojave sites, but their cultural and chronological relationship to the stemmed point series remains questionable.

"Relatively little material from the Lake Mojave period has been documented in the southern Mojave. Some of the earliest widely accepted finds come from the Black Butte site (CA-SBR-1554). This site is located on the south side of Black Butte, a volcanic plug approximately 6km west of the Troy Lake portion of Lake Manix. The site assemblage is dominated by later period Pinto points but also contains a Lake Mojave point, a Silver Lake point and two items tentatively identified as crescents (Lord 1987).

"The next identifiable period in the Mojave Desert is that associated with Pinto series points (Warren and Crabtree 1986). Although period markers, some questions remain concerning their placement in time. Two scenarios exist, both of which are tied to the transition to arid conditions in the middle Holocene. Some archaeologists (Donnan 1964; Kowta 1969; Wallace 1962) have proposed by the desert was essentially abandoned between 7,000 and 5,000 B.P. Other researchers (Susia 1964; Tuohy 1974; Warren 1980) argue that no evidence of an occupational hiatus of any great magnitude exists within the archaeological record. Central to this debate are the definition and dating of Pinto points (Warren and Crabtree 1986). The problem is complicated by the fact that points morphologically similar to Pinto points occur generally later in time in the central and eastern Great Basin than do true Pinto points in the Mojave (Thomas 1981; Vaughan and Warren 1986).

"Like sites of the preceding period, Pinto sites are typically found in open settings in relatively well-watered locales. Early Pinto sites have been found in close association with late Lake Mojave sites, lending support to Warren and Crabtree's suggestion that the Pinto cultures developed directly from the preceding Lake Mojave ones. The Pinto period signals the beginning of cultural adaption to the desert, an adaptation to the more arid conditions. Grinding tools were incorporated into the artifact assemblage, suggesting that the processing of hard seeds became more important in the subsistence system. It is, however, generally thought that Pinto peoples maintained a mobile subsistence strategy, focused primarily on hunting large mammals.

"A time of greater effective moisture in the Mojave dates to approximately 4,000 B.P. This time period, sometimes referred to as the Little Pluvial (Warren 1980), also corresponds to a new era in Mojave Desert prehistory. It was during this time, the Gypsum Period (4,000 to 1,500 B.P.), that more favorable environmental conditions allowed an increase in the population (Elston 1982). Ritual items such as zoomorphic rock art and split-twig figures are thought to indicate a continued emphasis on hunting, while the increased importance of processing of plant foods is indicated by an increase in the frequency and diversity of groundstone implements (Warren and Crabtree 1986). Open sites are in evidence, along with rock shelters and caves. Such sites have yielded perishable goods including basketry and atlatls from the Gypsum period. Habitation sites with well developed middens are found in association with water and near resource areas. During this period shell beads from coastal California are found in the desert for the first time. Trade activity appears to have been greater in many parts of the Great Basin during the Gypsum period (Bennyhoff and Hughes 1987) … Eastgate and Rose Spring points began to dominate artifact assemblages in the Mojave sometime after 2,000 B.P. (Lyneis 1982:176). In the chronology presented by Warren and Crabtree (1986) these are assigned to the Saratoga Springs period (1,500 B.P. to 750 B.P.). This time period was marked by an increase in regional differences, except in the northwestern Mojave where sociocultural continuity seems to have occurred (Whitley 1988).

"Basketmaker III and Anasazi developments occurred along the tributaries of the Colorado River. Anasazi "influence" in the form of painted ceramics extended well into the eastern Mojave. Although the exact nature of this influence is not completely understood (Lyneis 1982), it seems probable that the increased distribution of these painted ceramics resulted from exchange rather than by Anasazi attempts to greatly expand their territory. Different influences were felt in the southern Mojave. Here Hakatayan (or Yuman) ceramics similar to those originating in the lower Colorado River occur, along with Cottonwood points. This interaction is most evident along the Mojave River, supporting the widely held conclusion that the Mojave River served as a major trade corridor connecting the coastal portion of California with regions to the east (Warren and Crabtree 1986).

"The Oro Grande site in the western Mojave [near Victorville] may be a key site in understanding varying cultural influences during the Saratoga Springs period. Situated on the Mojave River near Victorville, this site contains a midden deposit dated to the period between 1,100 and 650 B.P. (Rector 1979). Cottonwood series points dominate the point assemblage.

> "Significantly, no ceramics were recovered. Other materials at the site, however, were similar to those found in other sites along the river. The more gradual development of Lower Colorado River influences may account for the lack of pottery at Oro Grande although Warren (1984) considers the absence of ceramics to be strong evidence for the presence of Rogers' (1945) "nonceramic Yuman" pattern. The Oro Grande complex would then be the "initial phase" of the Hakataya influence in the upper Mojave. Warren (1984:403) proposes that the complex may not have developed in the Mojave Sinks, because the Anasazi influence may have persisted there until it was replaced by fully developed Hakatayan cultures.
>
> "The next period, the Protohistoric period (750 B.P. to contact), was marked by the presence of Desert Side-notched projectile points. The Numic influence during this period is identified with the presence of brownware, considered typical of the Paiute and Shoshone. Based on the distribution of this brownware, the contact between the Numic and the Lower Colorado (Patayan or Hakatayan) traditions was located north of Soda Lake and Cronise Lake basins (Warren 1984:425). Recent work in the region appears to support this conclusion (Schneider 1988; Jenkins 1986; York 1989). Protohistoric period sites include habitation sites with developed middens, located near reliable water sources. Temporary camps and a variety of resource procurement and processing stations also occur."

This area is also associated with the Serrano. The Serrano are a relatively small ethnic group of Native Americans occupying the area now known as the San Gabriel/San Bernardino Mountains and foothills (Bean and Smith 1978:570). Citing Kroeber (1976: 611), the term "Serrano" is derived from the Spanish word for "mountaineer" or "those of the Sierras"; an appellation assigned by the early Spanish explorers (McKenna 1991:3). The Serrano are culturally associated with their surrounding neighbors (the Gabrielino, Luiseno, Cahuilla, and Cupeno), but distinguished by their linguistic associations with Takic speakers of the eastern desert regions - of Shoshonean stock (e.g. the Kitanemuk and Vanyume; see Bright 1975; Kroeber 1907 and 1925). Known as hunters and gatherers, there are no definitive boundaries for Serrano territory. Kroeber (1976:615) states:

> "Their territory was, first the long San Bernardino Range culmination in the Peak of that name, and in Mount San Gorgonio, more than 11,000 feet high. Next, they held a track of unknown extent northward. In the east this was pure desert, with an occasional water hole and two or three flowing springs. In the west it was a region of timbered valleys between rugged mountains. Such was the district of Bear Lake and Creek. In the third place they

> occupied the San Gabriel Mountains or Sierra Madre west to Mount San Antonio. This range is almost a continuation of the San Bernardino Range ..."

Although their exact territorial boundaries were undefined, the Serrano are known to have identified definitive or favored territories for the exploitation of Native resources (Strong 1929). Bean and Smith suggest that the Serrano territory was somewhat restricted to the San Bernardino Mountains, east of the Cajon Pass and between Yucaipa and Victorville (1978:570). Today, with subsequent research completed by Love (n.d.), the Serrano have identified their traditional tribal territory as extending down the Mojave River to points east of Barstow.

The Serrano developed a sophisticated social scheme interpreted as a semi-sedentary lifestyle. Serrano villages were generally small and located in the foothills of the Upper Sonoran life zone - where potable water was available - or in the mountains (Benedict 1924:368). Implements identified within such habitation sites include metates and manos, mortars and pestles, knives, scrapers, ceramic bowls and trays, baskets, and bone implements (e.g. spoons or stirrers). Technologically, the implements used by the Serrano were quite similar to surrounding populations.

Dwellings were constructed of natural resources and are described as circular, domed structures built of willow frames and tule thatching. The structures were substantial enough to facilitate occupation of high altitudes during winter months in the San Gabriel Mountains. They also constructed ceremonial structures.

The Serrano were patrilocal and small encampments generally consisted of a nuclear family and the married sons' families. The dwelling was used primarily for sleeping and included a central hearth for heat. Most cooking and other residential chores were conducted outside in the open or under a ramada-like structure. If the encampment was large enough to be considered a village, a ceremonial house may also be present. The ceremonial house (the religious center of the community) housed the community leader for each lineage.

Secondary structures included storage houses (granaries) and sweat lodges (Strong 1929; Bean 1962). The Serrano recognized totemic moieties and a series of band or local subdivisions - though not necessarily associated with clan systems. The Serrano acknowledged the power of Shamanism. Citing Bean and Smith (1978: 573):

> "The Serrano shaman *h^{w}öm_*, like most southern California shamans, was "psychically" predisposed for his possessions and acquired his various

> power through dreaming, assisted in the process by the ingestion of datura (Strong 1929; Bean 1962-1972). Shamans were mainly curers, healing their patients through a combination of sucking out the disease-causing agents and administering herbal remedies (Benedict 1924).
>
> "Serrano cosmogony and cosmography closely parallel that of the Cahuilla. There are twin creator gods, a creation myth told in "epic poem: style, each local group having its own origin story, water babies whose crying foretells death, supernatural beings of various kinds and on various hierarchically arranged power-access levels, and Orpheus-like myth, mythical deer that no one can kill, and tales relating the adventures (and misadventures) of Coyote, a tragicomic trickster-transformer culture hero (Bean 1962-1972; Benedict 1924)."

Fauna exploited by the Serrano include mountain sheep, antelope (suggesting exploitation further north), deer, rabbits, small rodents, birds, and occasionally fish (Bean 1962 and 1972). Meats were generally prepared in earthen ovens and watertight baskets, although hot coals and trays were also used (Bean and Smith 1978:571). Surplus meats were dried for future use.

Serrano women were responsible for the greater amount of gathering. Flora utilized by the Serrano include: acorns, seeds, pinon nuts, bulbs, tubers, shoots, roots, berries, and mesquite (Strong 1929; Kroeber 1925). Other primary resources included yucca roots, cacti fruits, and chia (Strong 1929; Kroeber 1925; Drucker 1937; and Benedict 1924).

European contact with the Serrano dates to 1771, with the founding of the Mission San Gabriel de Arcangel, and 1772 (Pedro Fages' California expedition). Contact was minimal until ca. 1819, when the Redlands *Asistencia* were established. Between 1819 and 1824, the majority of Serrano were physically relocated to the Mission properties (Beattie and Beattie 1939:336). With Secularization (beginning in 1824), the remaining Serrano returned to their traditional territories. The recognized Serrano of today are associated with the San Manuel and Morongo Reservations in San Bernardino and Riverside Counties, respectively. It is estimated that fewer than 3,000 Serrano remain in Southern California (Banning; see Robinson 1990:16-17).

The contact period with Native American populations was initiated with Spanish explorations of the Mojave Desert and the coastal regions of Southern California. Historically, the San Bernardino Mountains have been explored by Spanish and Mexican populations prior to the early 1850s exploitation by U.S. citizens looking for lumber, gold, and/or recreational purposes (Lawton 1965 - reprinted from 1883).

Prior to 1883, a minimum of four roads were established in the San Bernardino Mountains - all associated with the lumber industry (Lawton 1965:94). The first road was built by Mormon settlers of the Mormon fort at San Bernardino. The City Creek Road was completed in 1892, one year before the inception of the San Bernardino Forest Reserve (Jones 1948:14). Citing Duke and Shattuck (2003:6-7):

> "Although the Spanish explorer Francisco Garces visited the Mojave Desert and took note of its native inhabitants during the 1700s, the area remained largely unsettled by European descendents [sic] until the American Period of 1848. The first European settlers arrived in … 1873 when Peter Davidson recorded the first local claim and built a way station at Rabbit Springs (Lucerne Valley Web site 2003)."

With respect to the Apple Valley area (northeastern area now associated with Victorville), Gudde (1998:15) states:

> **"Apple Valley.** [San Bernardino Co.]. The post office established on Apr. 16, 1949, at the resort city developed by Newt Bass bears the name applied at the turn of the century by Mrs. Ursula M. Poates, a long-time resident of the Mojave Desert. To convince buyers that fruit could be grown in the desert, Mrs. Poates planted three apple trees in her greasewood-covered yard."

Sidewinder Mountain Gudde 1998:361) is described:

> **"Sidewinder: Mountain, Road.** [San Bernardino Co.] The peak was named after the Sidewinder Mine northwest of it, which in turn was probably named because of the presence of the rattlesnake called a sidewinder (Crotalus cerastes), so called from its lateral looping movement."

Research suggests Apple Valley was established relatively late, with the post office dating to 1949. However, available references attest to the earlier settlers of the area. O'Rourke (2004) published the history of Apple Valley, noting the extent of homesteads and ranches, including, but not limited to, those of William E. Hitchcock, Newton Brown, Ursula Poates, Arthur Hull, Elmore Corwin, the Garcelon (Jess) Ranch, William Bronson, and Max Ihmsen. Guest ranches included those of Rancho Yucca Loma, McCarthy

Ranch, Mensdel Ranch, Lone Wolf Colony, Murray's Dude Ranch, and the Pearl Bailey/ Murray Ranch. In addition, there is the general history of the Roy Rogers and Dale Evans association with Apple Valley. O'Rourke (2004:36-38) states:

> "As World War II ended, chorus after chorus of "Happy Days Are Here Again" could be heard from town to town across these triumphant United States. The building of the new air base and soldiers returning home from the war would have a significant impact on the growth of Apple Valley and the entire Victor Valley. Housing would be needed for the influx of service-men and their families.
>
> "Apple Valley was still relatively undeveloped and rural. The apples were gone, but mining, poultry and field crops like alfalfa flourished to provide a livelihood for the hearty residents who lived here. A few of the picturesque guest ranches that dotted the landscape were still active and attracting guests from all over, including a young man named Newt Bass, who liked to stay at the Yucca Loma Ranch …
>
> "In 1945, Bass negotiated a deal with the Southern Pacific Railroad for some 6,300 acres of land, which the railroad had originally acquired as part of a federal land grant awarded for laying track in the state in the late 1880s. The price he paid was $2.50 per acre.
>
> "Over the years the company would acquire a total of 25,000 acres in the Apple Valley area, creating thousands of home sites and commercial properties from their holdings. The Bass/Westlund venture became the Apple Valley Ranchos, later renamed Apple Valley Building and Development Company, which also developed approximately 5,000 acres of land in joint ventures with other local property owners … 1946, the first Apple Valley Ranchos lot was sold out of a temporary sales office at the southwest corner of Highway 19 and Central Road. The original sales, parcels ranging from two-and on-half acres to 10 acres were sold to friends and associated."

With respect to mining in the site and surrounding area, Swope (2016:2.3) states:

> "The first confirmed discovery of gold in the area that was to become San Bernardino County was in 1849 at Salt Spring (about 90 miles [145 km] northeast of the project area). It was not until the California Gold Rush was in decline, however, that a "horde of prospectors swarmed over southern

> Nevada and southeastern California" (Hewett 1954:iii) in search of precious metal. An increase in gold prices and the desperation for new sources of income during the Great Depression led to some small-scale reopening of old mines and the dry placering of free gold deposits in the California deserts (Boericke 1933:103; Merrill et al. 1937:xi-xii; Vredenburgh [sic] et al. 1981:58-59). In 1941, U.S. War Production Board Limitation Order L-208 put a temporary stop to the domestic mining of precious metals (Puckett 2006:452). After the order was rescinded at the end of the war, precious-metals mining remained sporadic in the county for the remainder of the twentieth century; small operators prospected and worked on a minor scale. Since about the late 1980s, advancements in mining technologies have resulted in the profitable operation of a few large-scale gold mines in the region (cf. Swope and Hall 2000:23)."

The current project site is located within the Silver Mountain Mining District, per Bureau of Land Management documentation. However, to distinguish the area from the "Silver Mountain District" in northern California, the district in Southern California was later referenced as the "Oro Grande District. The Diggings (2020; https://thediggings.com/mining-districts/ca826) described the Oro Grande-Silver Mountain Mining District :

> "This district is in southwestern San Bernardino County, in the vicinity of the town of Oro Grande, about five miles north of Victorville and 45 miles north of San Bernardino. The gold mines were active during the 1880s, early 1900s and again in the 1930s. Large amounts of cement are produced here now.
>
> "Most of the deposits are in the hills northeast of Oro Grande. According to Bowen (1954), the area is underlain by schist, quartzite and limestone of the Oro Grande series (Carboniferous); dacite, rhyolite, and latite of the Sidewinder volcanic Series; and quartz monzonite. The quartz veins are narrow, and the ore bodies usually are small and irregular. Most of the ore has come from the oxidized zone near the surface, but a few high-grade pockets have been found in the veins. The ore contains free gold and often abundant sulfides, including pyrite, chalcopyrite, sphalerite, and bornite. The Carbonate mine has yielded appreciable amounts of gold and silver-bearing lead carbonate."

In discussing the Oro Grande Mining District, Swope also (2016:3.4) states:

"After gold and silver ores were discovered near Oro Grande in 1872, a mining district was formed that encompassed a large part of the Mojave Desert, ranging from the approximate location of today's Hesperia to Barstow and east to the Rodman Mountains. The district was initially known as the McKinzie Mining District and, later, the Silver Mountain Mining District (Vredenbergh et al. 1981:144-145). Promising silver discoveries in 1880 attracted new attention to the district, and a contract mill was built on the Mojave River to process local ore (Cloudman et al. 1919:811). Later that decade, the scarcity of water for the mill and the high cost of transportation led to the closure of the Oro Grande Mine, and interest focused some 30 miles (48 km) northeast, at Calico (Vrendenbergh et al. 1981:145-146).

"The Oro Grande Mining District apparently included the portion of the former McKinzie Mining District around the town of Oro Grande (Clark 1970:162; Cloudman et al. 1919:810). District mines included the Apex, Branch, Carbonate, Dents Grandview Lode, Gold Bullion, Gold King, Oro Grande I, Oro Grande II, **Sidewinder** [emphasis added], and Western State Mines (Clark 1970:162), and possibly also the Althea (Embody), Hoganson, King Tut, Ozark, and Yankee Maid Mines (Bowen 1954:124-128); Vrendenbergh et al. 1981:147; Wright et al. 1953).

"Gold mining in the district began in the 1880s and continued through the early 1900s, and for a time, the district was "the largest and richest in San Bernardino County" (Cloudman et al. 1919:810). Rail sidings at Victorville, Oro Grande, and Bryman served as supply and distribution points for Oro Grande Mining District mines (Bowen 1954:130; Cloudman et al 1919:810). Some district mines were reactivated on a small scale during the 1930s (Vredenbergh et al. 1981:279), but overall, district production was "intermittent and not large…" (Bowen 19854:123).

"No details were found regarding closures in response to U.S. War Production Board Limitation Order L-208 … but it is almost certain that no work was performed in the district during World War II. Later, the focus of local mineral-extraction activities turned to cement production (Clark 1970:162; Wright et al. 1953:167, 175-176).

"Oro Grande Mining District quartz veins were reportedly "narrow, and the ore bodies usually … small and irregular. Most of the ore has come from the oxidized zone near the surface, but a few high-grade pockets have been found in the veins. The ore contains free gold and often abundant sulfides, including pyrite, chalcopyrite, sphalerite, and bornite" (Clark 1970:162)."

The specific project site is a compilation of various mining claims (Figure 10) that have eventually become the CEMEX USA Black and White Mountain quarries of today (some marked; some not). These claims include:

Alvic (No. 1)
Alvic (No. 2)
Alvic (No. 3)
Alvic (No. 4)
Alvic (No. 5)
Astra Placer (No. 1)
Astra Placer (No. 2)
Astra Placer (No. 3)
Calmer Placer (No. 1)
Calmer Placer (No. 2)
Calmer Placer (No. 3)
Cement Age Placer (no No.)
Cement Age Placer (No. 1)
Cement Age Placer (No. 2)
Cement Age Placer (No. 3)
Cement Age Placer (No. 4)
Cement Age Placer (No. 6)
Cement Age Placer (No. 7)
Cement Age Placer (No. 8)
Cement Age Placer (No. 9)
Cement Age Placer (No. 10)
Gold Drop Placer
Keyhole Placer
Last Change Placer
Maxwell Placer (No. 1)
Maxwell Placer (No. 2)
Maxwell Placer (No. 3
Maxwell Placer (No. 4)
Reserve Placer (No. 1)
Reserve Placer (No. 2)
Reserve Placer (No. 3)
Reserve Placer (No. 5)
Reserve Placer (No. 6)
Reserve Placer (No. 7)
Reserve Placer (No. 8)
Reserve Placer (No. 9)
Reserve Placer (No. 10)
Sidewinder Placer
Sovic Placer (No. 1)
Sovic Placer (No. 2)

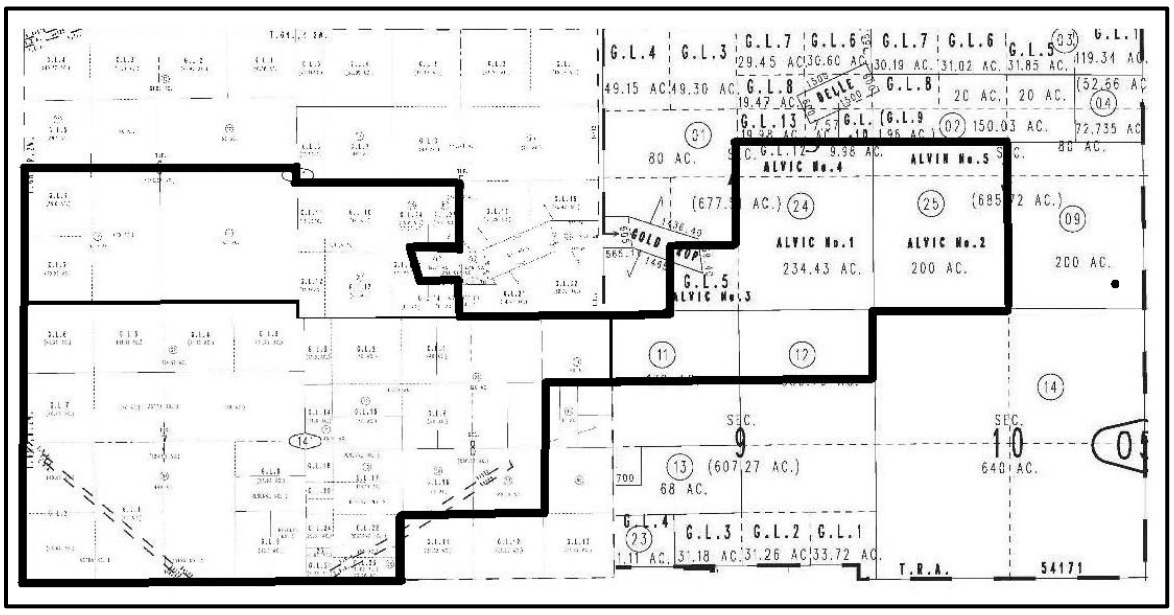

Figure 10. Compilation of Placers within the Project Site.

The locations of these placers are illustrated on the current Assessor Parcel Maps (see Figure 5, 6, and 7). Government Lots are located between some of the identified placer claims. The identified placers are described by the Bureau of Land Management General Land Office as follows:

Alvic Placers

The Alvic Placers (Nos. 1-5) are located in portions of Sections 3 and 4. More specifically, these holdings consist of 434.43 acres of land patented to George E. Warren, Frank H. Powell, William C. Brophy, O.C. Halstead, W.D. Hege, Robert H. Fielding, T.K. Partridge, and Felix S. McGinnis in 1957 (Accession No. 1172247). Signed by Rose M. Beall of the Bureau of Land Management, these Placers have been identified as follows:

Alvic (No. 1) - SE ¼, Section 4
Alvic (No. 2) - SW ¼, Section 3
Alvic (No. 3) - SW ¼ of Lot 5, Section 4
Alvic (No. 4) - S ½ of S ½ of NE ¼, Section 4
Alvic (No. 5) - S ½ of S ½ of NW ¼, Section 3

Astra Placers

The Astra Placers (Nos. 1-3) are all located in Section 7. These three properties account for 441.56 acres of land patented to George E. Warren, Frank H. Powell, William C. Brophy, Olin C. Halstead, Walter D. Hege, Robert H. Fielding, Theodore K. Partridge, and Felix S. McGinnis in 1956. The patent was signed by Rose M. Beall of the Bureau of Land Management (Accession No. 1162267) and consists of:

Astra Placer (No. 1) - SW ¼, Section 7
Astra Placer (No. 2) - S ½ of N ½, Section 7
Astra Placer (No. 3) - W ½ of SE ¼ and
W ½ of NE ¼ of SE ¼, Section 7

Calmer Placers

The three Calmer Placers (Nos. 1-3), totaling 50 acres, were patented to the Southwestern Portland Cement Company in 1954 (Accession No. 1148471), by S.C. Nichols of the Bureau of Land Management. All three properties are located in Section 8 and described as follows:

Calmer Placer (No. 1) - NE ¼ if SE ¼ of NE ¼, Section 8
Calmer Placer (No. 2) - S ½ of NE ¼ of NE ¼, Section 8
Calmer Placer (No. 3) - N ½ of NE ¼ of NE ¼ of Section 8

Cement Age Placers

Cement Age Placers, within the project site, consist of ten separate patents totaling 1199.56 acres extending through Section 5, 6, 7, and 8. The un-numbered Cement Age Placer consist of 26.76 acres patented to Raymond G. Tryon, Marcus Pluth, Henry D. Meyer, Austin D. Mulvane, Virgiline I. Ehrsam, and Gertrude M. Torrey in 1935 by Franklin D. Roosevelt (Accession No. 1074232). Cement Age Placers Nos. 1 through 4 total 645.53 acres were patented to the same consortium in 1933, also by Roosevelt.

Cement Age Placer No. 6 was patented to Tryon, Pluth, Meyer, and Mulvane in 1926. Consisting of 120.26 acres, this patent was signed by Calvin Coolidge (Accession No. 982604). Cement Age Placer No. 7 was also patented to Tryon, Pluth, Meyer, and Mulvane (aka A.D. Mulvane) in 1926 and consisting of 114.93 acres (Accession No. 982323). Likewise, Cement Age Placer 8 (Accession No. 982605; 120 acres), Cement Age Placer No. 9 (Accession No. 982603; 152.08 acres), and Cement Age Placer No. 10 (Accession No. 982606; 40 acres) were patented to the same.

Cement Age Placer - Lot 18; SE ¼ of SW ¼; Section 5
Lot 24; NW ¼ of SW ¼; Section 5

Cement Age Placer (No. 1) - Lot 2; NW ¼ of NE ¼ Section 6
Lot 3; NE ¼ of NW ¼; Section 6
Lot 4; NW ¼ of NW ¼; Section 6
SE /4 of NW ¼, Section 6

Cement Age Placer (No. 2) - Lot 6; NW ¼ od SW ¼; Section 6
Lot 7; SW ¼ of SW ¼; Section 6
E ½ of SW ¼; Section 6

Cement Age Placer (No. 3) - SE ¼; Section 6

Cement Age Placer (No. 4) - Lot 3; NE ¼ of NE ¼; Section 7
Lot 4; NW ¼ of NE ¼; Section 7
Lot 5; NE ¼ of NW ¼; Section 7
Lot 6; NW ¼ of NW ¼; Section 7

Cement Age Placer (No. 6) - SE ¼ of SW ¼; Section 5
Lot 10 – NW ¼ of SW ¼; Section 5
Lot 11 – NW ¼ of SW ¼; Section 5
Lot 12 – SW ¼ of SW ¼; Section 5
Lot 13 – SW !/4 of SW ¼; Section 5

Cement Age Placer (No. 7) - Lot 1; W ½; Section 8
Lot 2; Section 8
Lot 3; Section 8
Lot 6; W ½; Section 8
Lot 15; N ½; Section 8

Cement Age Placer (No. 8) - SE ¼ of SE ¼ of SW ¼; Section 5
SW ¼ of SW ¼ of SE ¼; Section 5
W ½ of W ½ of NE ¼; Section 8
E ½ of NW ¼ of NE ¼; Section 8
Lot 1; E ½; Section 8

Cement Age Placer (No. 9) - Lot 11; Section 8
Lot 12; Section 8
W ¼ of SE ¼; Section 8
E ½ of SW ¼ of NE ¼; Section 8
W ½ of SE ¼ of NE ¼; Section 8
SE ¼ of SE ¼ of NE ¼ of Section 8

Cement Age Placer (No. 10) - Lot 16; Section 8

Gold Drop/Keyhole/Last Change/Sidewinder Placers

The Gold Drop, Keyhole, Last Chance, and Sidewinder Placers were all patented to Charles Weir and Hattie L. Weidler in 1920 (Accession No. 734339) and consisted of a combined 75.79 acres under the collective name of the “Last Chance Lode.” This irregularly shaped placer claim extended into Sections 4 and 5 and is only partially within the current project site (involving the Gold Drop Placer; Section 4). The patent was signed by President Woodrow Wilson.

Maxwell Placers

Maxwell Placers No. 1 through 4 are all located within Section 8. Totaling 71.07 acres, these patents include the area now identified as the CEMEX USA headquarters and the area dominated by the cement plant. The placers include:

Maxwell Placer (No. 1) - S ½ of Lot 13
Maxwell Placer (No. 2) - N ½ of Lot 13
Maxwell Placer (No. 3) - S ½ of NE ¼ of SE ¼; Section 8
Maxwell Placer (No. 4) – N ½ of NE ¼ of SE ¼; Section 8

Referenced as Accession No. 1147270, these patents were issued to the Southwestern Portland Cement Company in 1951 and signed by S.C. Nichols of the Bureau of Land Management.

Reserve Placers

Reserve Placers No. 1 through 10 (with the exception of Placer No. 4) are associated with Section 7 and 8. Their descriptions are as follows:

Reserve Placer (No. 1) - N ½ and N ½ of S ½ of Lot 22 and lot 24; Section 8
Reserve Placer (No. 2) - S ½ Lot 17 and Lot 19; Section 8
Reserve Placer (No. 3) - N ½ Lot 17 and Lot 18; Section 8
Reserve Placer (No. 5) - E ½ of se of se dec 7
Reserve Placer (No. 6) - S ½ od NE ¼ of SE ¼; Section 7
Reserve Placer (No. 7) - Lot 21, S ½ of S ½ Lot 22; Lot 23, and Lot 25; Section 8
Reserve Placer (No. 8) - SE ¼ Lot 15; Section 8
Reserve Placer (No. 9) - SW ¼ of Lot 15; Section 8
Reserve Placer (No. 10) - Lot 14; Section 8

Reserve Placers Nos. 1, 2, 3, 5, and 6 total 116.16 acres, patented in 1925 to Charles C. Merrill, representing the Southwestern Portland Cement Company (22.26 acres; Accession No., 967702; signed by Calvin Coolidge). Reserve Placers Nos. 8, 9, and 10, a total of 35.14 acres, and were patented to the Southwestern Portland Cement Company in 1954 (signed by S.C. Nichols of the Bureau of Land Management).

Sovic Placers

The Sovic Placers were patented to George E. Warren, Frank H. Powell, Jr., Robert H. Fielding, Olin C. Halstead, Theodore K. Partridge, Felix S. McGinnis, Jr., William C. Brophy, and Walter D. Hege in 1954. Signed by S.C. Nichols of the Bureau of Land Management, Sovic Placers Nos. 1 and 2 covered an area of 346.55 acres and involved:

Sovic Placer (No. 1) - Lots 3, 4, 5, and 6; Section 17
Sovic Placer (No. 2) - Lots 1, 2, 7, and 8; Section 17

Identified as Accession No. 114915, it is noted the identified “owners” are all associated with the Southwestern Portland Cement Company. The Southwestern Portland Cement Co. also owned the Rimrock Placer No. 1, Lot 19 in Section 5; Rimrock No. 2, the S ½ of Lot 23, Section 5; and Rimrock No. 3, N ½ of Lot 23, Section 5 – all dating to 1954.

Other Owners

Other property owners in the immediate vicinity of the current project site include, but not necessarily limited to:

Walter Brown	160 acre Homestead in the SE ¼ of Section 18 1916 (Accession No. 550520)
Thomas Taylor	320.93 acre Homestead in the NE ¼ of Section 18; E ½ of NW ¼ of Section 18; NW ¼ of NW ¼ of Section 18 1917 (Accession No. 595646)
Horace D. Thurman	320.31 acre Homestead; Lot 1 in SE ¼ od Section 13; Lot 2 in SE ¼ of Section 18; and NW ¼ of SW ¼ of Section 18 1937 (Accession No. 1092491)
Southern Pacific RR	N ½; N ½ of S ½; Lots 1-3; Section 9 1923 (Accession No. 9211982)

Summary

Of the eight collective patents summarized above, the majority were patented to the Southwestern Portland Cement Company and/or representatives of the company. There were also some non-Southwestern Portland Cement Company related holdings. Names associated with these various patents include:

Alvic/Astra/Sovic:	George E. Warren
	Frank H. Powell
	[Wm.] C. Brophy
	Olin C. Halstead
	Walter DeForest Hege
	Robert H. Fielding
	T.K. Partridge
	Felix S. McGinnis

Calmer/Reserve/Maxwell: Southwestern Portland Cement Co.

Cement Age:	Raymond G. Tryon Marcus Pluth Henry D. Meyer David A. Mulvane Virgiline I. Ehrsam Gertrude M. Torrey
Gold Drop (+):	Charles Weir Hattie L. Weidler

The Southwestern Portland Cement Company has been around since the early 1910s and has had numerous holding in the desert areas north of Victorville, including the "Old Quarries" at Quartzite Mountain (west of I-15) and the current study area at the Black and White Mountain quarries (east of I-15). The Southwestern Portland Cement Company was established in 1913 by Carl Leonardt, a native of Germany, with additional holdings in Texas. Leonardt (1955-1927) immigrated in 1883 and, in 1913, his biography in "Who's Who in the Pacific Coast" (p. 343) read:

> "**LEONARDT, Carl**. Contractor; born, Ludenscheld, Westphalia, Germany, 1885. Edu.: schools of Germany; grad, Cement Chemistry; Anchen, Germany. Married. Came to U.S., 1883; Moved to Los Angeles, 1887; Engaged in cement and concrete construction. Built and is dir. and stockholder, Portland Cement factory, El Paso, Texas; dir. And stockholder in a number of oil cos. Of Cal. Built: L.A. Hall of Records, Orpheum Theatre, L.A. Co. Hosp., Pac. Elec. Bldg., H.W. Hellman Bldg., Chino Beet Sugar Co. plant; American Beet Sugar Co. plant, Cudahy Packing Co. plant, Hamburger Bldg. (Los Angeles), swimming pools at Redondo and Santa Monica Beaches, Cal., etc. Res. 2 Chester Place. Office: 710 H.W. Hellman Bldg., Los Angeles, Cal."

A second brief biography of Carl Leonardt (Johnson 2014) reads:

> "President of Southwestern Portland Cement Company of Los Angeles. Arriving in the late 1880's from Germany his company was responsible for the construction of many of the prominent buildings in the city. He graduated in cement chemistry in Germany. He built private mansions, public buildings

> and factories including the Los Angeles Hall of Records, the Orpheum Theater (which is considered a perfect example of artistic concrete construction), the Los Angeles County Hospital, concrete reservoirs, vats, warehouses, sewers, large basements, sidewalks, public swimming pools, jails, the Hotel Grant in San Diego. He also built the Portland Cement Co. in El Paso, TX and was an investor in oil developments. Until his wife died, he resided at 2 Chester Place, in the Doheny compound off W. Adams Blvd."

At the time of his passing, Leonardt had two surviving children: Amy Leonardt Powell (1882-1965) married Frank H. Powell and Clara Leonardt McGinnis (1887-1984) married Felix S. McGinnis. His son, Carl Adolph Leonardt preceded him (1991-1910). Following his death in 1927, his one-in-law, Frank H. Powell, took the lead with the company, assisted by Charles Merrill, two of the names associated with the Alvic Placers, Astra Placers, Sovic Placers, and Reserve Placers, among others.

In general, the Southwestern Portland Cement Company is/was a family-owned business. Geocaching (https://www.geocaching.com) describes the Company:

> "Near the turn of the century, large deposits of limestone and granite were discovered. Since then the cement manufacturing industry has emerged as the single most important industry if the Victor Valley. Construction of the Southwestern Portland [facilities] began in 1913 and [were] to be completed in 1917 with a one kiln stack. Owner-manager Carl Leonardt was confident in his company's product and technological advances that there was talk of building ships of concrete during World War I. In the 20s, advanced sales demanded that the plant be expanded. With a large new kiln, additional milling equipment, and slurry tanks, it was expected that the factory would produce 2,200 barrels of cement a day. Two years later, a third kiln was added, with more technological improvements that helped the factory product 5,000 barrels a day. To this day, the factory can still be seen in operation."

Following the death of Leonardt in 1927, and with no living son(s) to inherit the company, Frank H. Powell, his son-in-law, became the president of the company. Charles C. Merrill became vice-president. Under Powell, the company acquired additional claims, including claims to the east, in the Black and White Mountain areas. Both Powell and Merrill died in 1949, resulting in new management for the company. Names associated with later investments or operations included: George E. Warren, William C. Brophy, Olin C. Halstead, Walter D. Hege, Robert H. Fielding, T.K. Partridge, and Felix S. McGinnis.

Frank Henry Powell and Charles Calvin Merrill

Frank Henry Powell was an employee of the Southwestern Portland Cement Company when he registered for the draft during World War II. His registration card identified him as a 59 year-old man (born in 1883-1884) and living in Los Angeles. The 1940 U.S. Census also identified Powell as a married man living in Los Angeles. He was married to Carl Leonardt's daughter, Amy (1982-1965), and they resided in Los Angeles. He was a college graduate and listed as the President of a cement manufacturing company (SW Portland Cement Company). Powell died in 1949, at the age of 66.

Charles Calvin Merrill was born in 1875 and had a high school education. As a young man, he began working in the cement industry and by the 1940s, was the Vice President of the Southwestern Portland Cement Company and married Alice DeForest in 1999. They had two children: Dorothy (b. 1901) and Alice L. (b. 1903). They lived in Los Angeles and, eventually, Beverly Hills. Charles C. Merrill also died in 1949, at the age of 74.

Following Powell's death, Powell and Merrill were President and Vice President of the Southwestern Portland Cement Company, respectively. They purchased claims in their own names and transferred the holdings to the Company at later dates.

Felix S. McGinnis, Sr.

Leondart's daughter, Clara, married Felix Signoret McGinnis, Sr. (1883-1945) in 1916. Felix McGinnis, Sr. was living with his uncle and aunt (and cousins) in San Francisco at 17 (1900). John W. Rooch owned a dental laboratory and both Felix and his cousin, Albert Sorenson) worked for Rooch. Felix, Sr.'s parents, Edward F. and Rose Signoret McGinnis were residing in Los Angeles, where Edward worked for the local railroad, as did his brother, John McGinnis. Felix, Sr. and Clara Leonardt had a son, Felix, Jr. (1918-2011) who married Barbara J. Brophy (some records read "Barbara J. Kinney") in 1949. Felix, Jr. was identified as a college graduate with degrees in chemistry, assaying, and metallurgy, following in the family's interest in mining. Barbara is identified as a UC Berkeley graduate with a background in advertising. Being related to the Carl Leonardt family, the participation of Felix McGinnis, Jr. in the Southwestern Portland Cement Company activities is not unexpected.

Theodore K. Partridge

Theodore Kellogue (T.K.) Partridge (1889-1958) was a native of Missouri who relocated to Oklahoma and Texas before settling in Los Angeles. Partridge began working with the Southwestern Portland Cement Company in Texas and continued his employment in

Southern California (Los Angeles), where he lived with his wife, Elizabeth (b. 1891) and children (George, b. 1919; Betty, b. 1922; and Theodore, Jr., b. 1927). In 1930, Partridge was identified as a Cement Salesman and in the 1940s as Sales Manager for the Southwestern Portland Cement Company. Partridge died in 1958, while still affiliated with the Company.

William C. Brophy

William A. Brophy (1884-1964), a native of Minnesota and his wife, Beatrice, were the parents of Barbara J. Brophy (b. 1923-1997), the wife of Felix S. McGinnis, Jr. (1918-2011). William A. Brophy was 75 in 1930 and identified in the census roles as a geologist. McGinnis (Jr.) and Barbara Brophy married in 1949 and California marriage records list Barbara J. as both “Brophy” and “Kinney” (suggesting she may have been married prior to her marriage to McGinnis). Given age and dates, it is possible she lost a spouse during WWII (not confirmed).

His son, William Carlisle Brophy was the older brother of Barbara J. Brophy (b. 1919) and identified as a carpenter living in Stockton, California (ca. 1940). During WWII, he was working for the Pollock-Stockton Shipping Company. With the association to the Southwestern Portland Cement Company (through William A. Brophy and Felix S. McGinnis, Jr.), William C. Brophy was an investor in the placers at Black and White Mountain.

Olin C. Halstead

Olin Chester Halstead (1900-1985) was a native of Kansas who, at the age of 9 (in 1910) was identified as a “boarder” of Herbert and Laura Carpenter. His father, David O. Halstead (1876-1946), was living in California prior to 1910, in Summit, San Bernardino County. He is listed as a rancher/farmer in various registers. In addition to Olin, David O. and Lela Halstead had another son, Ebert, born in ca 1907. Between 1917 and 1920, Olin attended Cal Poly San Luis Obispo. By 1920, Olin had joined the family in Hesperia – he was 19 and Harold (Ebert) was 13. By 1924, Olin Halstead was living in Oro Grande and working for the Portland Cement Company. He married before he was 23 and, by 1930, he and his wife (Florence) had two children (Rosealene, 6, and Janet, 2).

The Olin Halsteads relocated to Laramie, Wyoming, where Olin worked as a Cement Mill Packer. He returned to California (Victorville) before 1960 and continued working in the Cement industry, now with the Southwestern Portland Cement Company. He also became an investor in their Black and White Mountain placers. He died in Victorville in 1985 and is buried locally.

Walter D. Hege

Walter D. Hege (1917-1993) was an engineer who spent the majority of his professional life working for the Southwestern Portland Cement Company. His mother, Vera (1888-1963), was widowed sometime between 1920 and 1930 and, in 1930, Vera (42) and Walter (12) were living with Vera's widowed mother, Alice de Forest, in West Covina, Los Angeles County, California. In 1940, Walter D. Hege (then 23) was working as an engineer working as a Production Manager for the Southwestern Portland Cement Company in Victorville, married to Helen K. Wilke (1916-1996), and completed his draft documents for WWII induction. After WWII, he returned to Victorville and resumed his work at the Company facilities. He retired in 1957, relocated to San Marino and, by 1985, was living in Palm Desert, where is passed away in 1993. Helen Hege died in Washington State in 1996. No record of children was found.

Robert H. Fielding

Robert H. Fielding (1923-1991) was the son of Robert L. (1888-1957) and Kate E. (nee Logsdon; 1894-1985) Fielding and spent the majority of his life in Los Angeles County. Growing up in Long Beach, Robert H. Fielding (1923-1991) went to work, at the age of 19 (ca. 1942), as a shipping clerk for the California Shipbuilding Company (Long Beach), just out of high school. His father was a janitor and his mother, with a college degree, was a credentialed teacher and worked for the U.S. government during WWII. Robert H. (Hunter) Fielding registered for the draft in 1942 and enlisted in 1943. He returned to Los Angeles County in 1946 and, by 1950, married Nona C. Moore (b. 1905; another record identifies her as Nona C. Douglas). No records for children were found.

Records suggest Robert H. Fielding completed his college education in the 1950s at the University of California and, by 1959, directories identify him as the Vice President and Treasurer for the Southwestern Portland Cement Company and living in Los Angeles County (Monrovia/San Marino). Upon retirement, he relocated to Tucson, Arizona. Being included in the patent claims in San Bernardino would be more than reasonable for a V.P./Treasurer.

George E. Warren

Little was found regarding George E. Warren's early life. In 1914, he was working as a cement worker in Pleasant Grove, California, and in 1938-1940, he worked in the cement business in Santa Barbara. Records show he was working for the Southwestern Portland Cement Company in the 1950s and was on the Board for the Company in 1957. He is also listed as the President of the Southwestern Portland Cement Company before 1959.

He was then living with his wife (Helen P.) in San Marino, Los Angeles County, California. Although unconfirmed, records suggest he was born in 1909 and died in Kern County in 1971. A 1966 record connected his with Robert H. Fielding and Felix S. McGinnis, furthering his involvement with the Southwestern Portland Cement Company.

Summary

The main individuals associated with the Southwestern Portland Cement Company, as it relates to the Black and White Mountain quarries, have been identified as:

George E. Warren	President and Board Member
William C. Brophy	Brother-in-Law of Felix S. McGinnis, Jr.
Olin C. Halstead	Career Cement Plant Employee
Walter D. Hege	Career Engineer, SW Portland Cement Co.
Robert H. Fielding	V.P. and Treasurer, SW Portland Cement Co.
Theodore K. Partridge	Career Sales Manager, SW Portland Cement Co.
Felix S. McGinnis, Jr.	Chemist/Metalurgist; Son-in-Law of Carl Leonardt and Career Employee at SW Portland Cement Co.

Other owners/investors of local patents include:

Charles Weir

Little was found regarding Charles Weir. He was born in Michigan in 1883 and became the step-son of Edward Jamison in Oregon by the 1920s. His mother, Minna F. Jamison, born in New Jersey in 1863, married Jamison after being widowed (Frank Weir, owner of Weir Steamship Lines and a lumber exchange in Portland, Oregon). Minna F. Weir relocated to Los Angeles for a brief period (ca. 1917-1918) before returning to Oregon. At age 27, Charles Weir was working in a sawmill in Oregon (1917) and still living with the Jamisons. There is no evidence Charles Weir ever lived in California, but simply invested in the placers. Charles Weir died in Oregon in 1926, at age 40 (+/-). No record of any marriage was found.

Hattie L. Weidler

Hattie L. [Bacon] Weidler (1855-1927) spent her entire life in Portland, Oregon. She married George Washington Weidler and, in 1920, was listed as a widow. Her children included Mabel, Gladys, Hazel, and Clara. Research confirmed Hattie Louise [nee Bacon]

Weidler as a native of Oregon, at least second generation, and her father was a local "capitalist." She married Weidler, a partner in railroading, who entered the lumber business later in life. Her obituary reads:

NATIVE DAUGHTER OF PORTLAND DIES

> "Mrs. George W. Weidler, daughter of Portland pioneers, died this morning at her home in Green Hills after a few days illness from a heart affliction.
>
> "Mrs. Weidler, whose maiden name was Hattie Louise Bacon, was born in Portland, November 11, 1855. She was the daughter of Mr. and Mrs. Charles P. Bacon. The family home was on the corner of Third and Oak streets. Bacon was an early day business man of Portland, a member of the form of Sherlock & Bacon.
>
> "Mr. Weidler, who died some years ago, was associated with Ben Holladay in the railroad operations in Oregon. When Holladay withdrew from them, Weidler entered the lumber business.
>
> "Mrs. Wiedler is survived by four daughters: Miss Hazel Weidler, Mrs. Stanley Jewett and A.D. Norris, Portland, Mrs. E.A. de Swhweinitz of Golden, Colo."

No direct connection between Hattie Weidler and Charles Weir was found aside from living in Oregon and co-owning the placer claims. It is possible Mrs. Weidler knew Charles' mother, a dressmaker, and with Charles Weir working in the lumber business, there may have also been an association with George Weidler. Their respective deaths in 1926 and 1927 would have ended the association with the claims in San Bernardino County, California.

CEMEX USA, the current owners of the Black and White Mountain quarries, is a Portland cement company. The company traces its founded to 1906 as *Cementos Hildalgo*. In 1920, *Cementos Portland Monterey* was established and, in 1931, the two operations were merged to form *Cementos Mexicanos* (CEMEX). *Cementos Hildalgo* (1906) and *Cementos Portland Monterey* (1920) were both founded by Lorenzo Zambrano Gutuerrez in Mexico. With the legal merging of the companies, CEMEX (*Cementos Mexicanos*) was officially founded in 1931. It remained a family-owned business.

In 1985, the Company was under the management by Lorenzo Zambrano III, the grandson of the founder. A Stanford graduate, Lorenzo Zambrano III worked to expand the

Company's holdings outside of Mexico and CEMEX USA was established with headquarters in Texas. The Company's profiles notes the acquisition of facilities in the United States in 1994, with continued expansions. With respect to the Victorville holdings (plant and mining claims), the San Bernardino County Assessor lists the Southwestern Portland Cement Company holdings being transferred to CEMEX USA in ca. 2004. Bezore and Shumway (1994:16) state the Southwestern Portland Cement Company (a Division of Southdown, Inc.) note the Southwestern Portland Cement Company activities at the Black and White Mountain quarries were initiated in 1942. They specifically state:

> "About 1900, James Sheerer located limestone deposits at the eastern end of Quartzite Mountain which were purchased by the Riverside Cement Company in 1914. The deposits were subsequently sold to the Southwestern Portland Cement Company to supply its plant in Victorville which opened in 1916. By 1930, Southwestern Portland Cement Company had opened five quarries on the eastern side of Quartzite Mountain. Eventually five quarries were opened to supply the Victorville plant. In 1942, the White Mountain (Reserve) Quarry, located near Black Mountain, about 12 miles northeast of Victorville, was opened by Southwestern Portland Cement Company. Also known as the Reserve Quarry, the White Quarry was closed when the Black Mountain Quarry was opened in 1951.

This data confirmed the entire project area was held by the Southwestern Portland Cement Company, as a whole or in part, by 1942 and the majority of the Company's holdings were compiled by 1956. All land and facilities related to pre-CEMEX USA purchase of the properties in 2004 can be attributed to the Southwestern Portland Cement Company, as there is no evidence of any significant mining prior to the Southwestern Portland Cement Company acquisitions. Following the deaths of Powell and Merrill in 1949, the Company operations shifted to the next generation, including relatives (in-laws) and career employees. All improvements post-date 1942 and the majority of excavations and preliminary production can be traced to the 1950s. Operations continue to today at both Black and White Mountain quarries, under the CEMEX USA ownership. Despite ownership, no records were found to suggest any permanent or semi-permanent occupation of the properties (e.g. establishment of residences or encampments). The improvements within the project area are essentially all associated with the activities of the CEMEX USA ownership.

PREVIOUS RESEARCH

In completing research into previous research completed in and near the Black and White Mountain quarries project site. McKenna et al. completed an archaeological records search for the project site and a one-mile buffer around the site at the California State

University, Fullerton, South Central Coastal Information Center, Fullerton California. A paleontological overview through the Natural History Museum of Los Angeles County.

Archaeological Records Search

A standard archaeological records search was completed at the California State University, Fullerton, South Central Coastal Information Center (CSUF-SCCIC), Fullerton, California, on February 13, 2020 (Appendix B). This level of research was completed as an "in-house" search conducted by Jeanette A. McKenna, Principal Investigator for McKenna et al., Whittier, California. The CSUF-SCCIC is the local repository for all studies completed in San Bernardino County (and Los Angeles County, Orange County, and Ventura County), including cultural resource reports, site records, historic maps, and the listings for the National Register of Historic Places, California Landmarks, California Points of Historical Interest, California historical Resources, and/or locally recognized cultural resources.

McKenna et al. research the current project area and a buffer of one-mile (+) around the project area, including the areas of Sidewinder Mountain, Black Mountain, and portions of Apple Valley. This research confirmed a number of previous studies (11; see Table 3), with only two surveys having been completed within the project area (1060481, Hearn 1977; 1065233, McKenna 2006). The Hearn study covered a large area but resulted in an abbreviated two-page report and the historic mining activities were not addressed. In support of Hearn, early studies (e.g. 1977) were not required to address historic period resources, but emphasized prehistory. Therefore, although the Hearn survey addressed the area of the present-day CEMEX USA mining operation, these operations were still associated with the Southwestern Portland Cement Company and the "modern" improvements of post-1975 had not yet been established.

Table 3. Studies Completed with One-Mile (+) of the Current Project Area.

Report	Citation	Description	SItes
1060481	Hearn 1977	T6N; R4W; Sec. 2, 9-11, 14-15, 17, 20- 21	Yes
1060874	Barker et al. 1979	Transmission Line Corridors	Yes
1061219	Hall et al. 1981	Generaling Station and Facilities	Yes
1061220	Bean et al. 1981	Ethnographic Studies	Overview
1062399	McGuire & Glover 1991	Natural Gas Pipeline	Yes
1063679	Love et al. 2002	Go-Kart Track Project	Yes
1065232	Sander 2006	Tract No. 17252 (80 acres)	No
1065233	McKenna 2006	Apple Valley Survey (20 acres)	No
1065401	Jordan 2007	SCE Standing Rock Circuit	Yes
1065832	Bean et al. 1982	Transmission Line Ethnography	Overview
1066796	Eskanazi 2011	Sidewinder Meteorological Towers	No

As a result of the studies presented above, 20 cultural resources were reported (Table 4). None of these resources were mapped as being within the project area. The mining activities have not been formally recorded.

Table 4. Cultural Resources Identified within One Mile (+) of the Current Project Area.

Primary #	Trinomial	Citation	Description
36-02138	CA-SBR-2138	Chace & Shepard 1963	Possible cremation/Rock Shelter
36-02139	CA-SBR-2139	Shepard 1963	Historic Arrastra/Sidewinder Mt.
36-03752	CA-SBR-3752	Aschmann 1979	Extensive Lithic Scatter
36-04411	CA-SBR-4411H	Jaynes et al. 2013	Mormon Road (see CHL-577)
36-06890	CA-SBR-6890	Glover et al. 1990	Sparse Lithic Scatter
36-09360	CA-SBR-9360H	Higgins et al. 2013	Stoddard Wells Road
36-10315	CA-SBR-10315H	Denardo & Hoover 2018	Hoover Dam Trans. Line
36-10631	CA-SBR-10631:	Moreno 2002	Ext. Refuse Scatter (Sec. 11)
36-10632	CA-SBR-10632	Moreno 2002	Sparse Lithic Scatter
36-13314	---	Tsunoda 2006	Foundations and Refuse
36-20981	CA-SBR-13525H	Fulton & Fulton 2009	12 Loci - Historic Refuse (1950s)
36-20982	CA-SBR-13516H	Fulton 2009	Foundation, Refuse, 2 Flakes
36-20983	(p/o 13516H)	Fulton 2009	Well Head and Foundation
36-20984	p/o 13516H)	Fulton 2009	Concrete Footing/Form
36-26901	---	Moreno 2001	Isolated Flake
36-27400	CA-SBR-17853H	Lev-Tov et al. 2014	Dirt Access Road
36-27401	CA-SBR-17854H	Kremkau 2014	Survey Marker (1964; Sec. 33)
36-27402	CA-SBR-17855H	Duryea et al. 2014	Mining Claim Marker (Sec. 34)
36-27403	CA-SBR-17856H	Kremkau 2014	Unnamed Dirt Road (Sec. 32)
36-27404	CA-SBR-17857H	Kremkau 2014	Unnamed Dirt Road (Sec. 33)

Data compiled as a result of this investigation has shown the potential for the presence of prehistoric archaeological resources, albeit sparse evidence; historic period resources in the form of features (e.g. foundations, wells, refuse scatters); and dirt access roads. Although not recorded, there is also the high potential for the identification and reporting of historic mining operations.

Historic Maps and Aerial Photographs

A review of historic maps and photographs (NETR 2020) dating between 1957 and 2019 were readily available on-line and some additional maps are on file at McKenna et al. These resources showed the presence of the mines at Black Mountain, including the access road(s), and a much smaller mining area. As the years go by, the mining operations continue to expand, as do the improvements in the vicinity of the conveyor and sorting areas. The conveyor facility appears between 1968 and 1975, first with modest improvements and eventually infilling the areas within the rail alignments.

The maps and aerial photographs also illustrate the initial establishment of a single building in the area of the later office/headquarters (ca. 1957) with three structures by 1959. The area of the concrete pads show activity relatively early (pre-1952) with dirt access roads and the pad areas being clearly visible as late as 2016 (+). No specific structures were evident, but it is likely the structures were either trailers (resting on the pads) and not permanently established structures. The pads have no anchor bolts or scarring to suggest permanent structures. The area may also have been used for light loading and/or material storage.

The more evident activities were noted in the aerial photographs with respect to the increased mining activities. In 1952, the mining area was relatively small and limited to the area west of the railroad loop and conveyor facility. By 1969, the mining area was extended and the conveyor/sorting areas were greatly expanded. By 2005, the excavations in the main mining area were expanded to the north and went much deeper. With increased activities, addition road development was completed and work and storage areas were established southwest of the mine and to the northeast of the conveyor facility. As such, much more of the project area was impacted than suggested by the USGS quadrangles, though evident on the aerial photographs.

Paleontological Overview

The paleontological overview for this project was completed by the Natural History Museum of Los Angeles County (Appendix D). McLeod (2020:1-2) states:

> "We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities nearby that occur in sedimentary deposits similar to those that may occur at depth in portions of the proposed project area … In the more elevated terrain occupying most of the proposed project area, on Black Mountain in the west and Sidewinder Mountain in the east, there are exposures of various intrusive igneous rocks and metamorphic rocks that will not contain recognizable fossils. In the less elevated terrain on the more gentle slopes mostly around the margins of the proposed project area, the surface deposits consist of younger Quaternary Alluvium, derived as alluvial fan deposits from the more elevated terrain in the central portion and northern portions of the proposed project area. In the very southwestern portion of the proposed project area, on the more gentle slopes on the southwestern side of the Helendale Fault, there are surface deposits of older Quaternary Alluvium. These Quaternary deposits are probably coarse being so close to the igneous and metamorphic rock source areas, and are unlikely to contain significant vertebrate fossils in the uppermost layers. At modest depth, however, there may [be]

pockets of finer-grained deposits that do contain significant fossil vertebrate remains. Out closest fossil vertebrate localities in older Quaternary deposits are LACM 3352-3353 and 3498, all situated near the bluffs on the west side of the Mojave River drainage centered around Interstate 15 southwest of the proposed project area, that produced fossil specimens of extinct horse, *Equus occidentalis*, and extinct bison, *Bison larifrons.* Our next closest fossil vertebrate locality in these older Quaternary deposits is LACM 7786, west-southwest of the proposed project area between Adelanto and the former George Air Force Base, that produced a fossil specimen of meadow vole, *Microtus*, at 10-11 feet below grade. Another nearby locality rom these deposits is LACM 1224, situated farther south-southwest of the proposed project area west of Spring Valley Lake, that produced a specimen of fossil camel, *Camelops*.

"Excavations in the igneous and metamorphic rocks exposed in the more elevated terrain in most of the proposed project areas will not uncover any recognizable fossils. Shallow excavations in the Quaternary Alluvium exposed in the less elevated terrain in portions of the proposed project area ate unlikely to produce significant fossil vertebrate remains. Deeper excavations in the latter portion [of the] proposed project area that extend down into older and finer-grained Quaternary deposits, however, may well encounter significant vertebrate fossils. Any substantial excavations in the sedimentary deposits in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Also, sediment samples should be collected and processed to determine the small fossil potential in the proposed project area. Any fossils recovered during mitigation should d be deposits in an accredited and permanent scientific institution for the benefit of current and future generations."

McLeod also emphasized the overview he prepared was based solely on data available through the Natural History Museum of Los Angeles County and the presence/absence of vertebrate fossils in the Musuem's files. Additional documentation may be available through the San Bernardino County Museum, further attesting to the relative sensitivity of the area to yield fossil specimens, including vertebrate and invertebrate specimens.

RESULTS OF THE RECENT FIELD INVESTIGATIONS

The project area was readily identifiable as an area dominated by late historic and modern period mining operations. Nonetheless, research into paleontological sensitivity and/or

the potential for evidence of prehistoric archaeological resources was also investigated. In addition, the various sub-categories of historic period resources were addressed. The results of the field investigations are as follows.

Paleontological Findings

The project area has a relatively low to moderate level of sensitivity for yielding evidence of paleontological specimens. This sensitivity is not applicable to the entire project area, but primarily along the southern and southwestern portions of the project area, where the terrain is gentler and more conducive to the presence of older Quaternary alluvial deposits, below the current mining operations and exposed bedrock.

Despite intensive surveying of the sensitive areas, no surficial evidence of paleontological resources was identified, no specimens were identified, and no specific areas of exposed Older Quaternary alluvial deposits were identified. There is still a potential for buried resources and, therefore, McKenna et al. has concluded the area is still sensitive for the presence of paleontological specimens. Depending on the nature of the proposed land uses in the sensitive areas, the Lead Agency may conclude a paleontological monitoring program is justified.

Prehistoric Archaeological Resources

The recent survey of the Black and White Mountain aggregate quarries resulted in the identification of a single prehistoric archaeological resource. This resource has been defined as a lithic scatter consisting of chert, quartz, basalt, and rhyolite materials in the form of waste flakes (debitage) and a single formal tool (drill). This scatter was identified at NAD 27 UTMs 488106 Easting/3830400 Northing (Figures 11 and 12) and on a gentle slope in the southwestern portion of the project area. Not far from this scatter, an isolated rhyolite core was identified (NAD 27 UTM 487880 Easting/3830138 Northing; Figure 13).

As mapped, the lithic scatter is within the southwest quarter of Section 7 and the core was identified to the southwest, downslope and within the northwest quarter of Section 12 (Township 6 North, Range 2 West). There was no evidence of depth to the scatter/deposit, but the identification of the core downslope from the main scatter suggests materials may be washing down from the northeast and along one of both of the blue line streams illustrated on the USGS quadrangle. As such, there is still a potential for artifacts to be present in a buried context (likely shallow context).

McKenna et al. did not recover any of the identified artifacts, but flagged the respective locations. Prior to any impacts to these two areas, McKenna et al. is recommending a modest Phase II investigation designed to recover the artifacts in a manner consistent

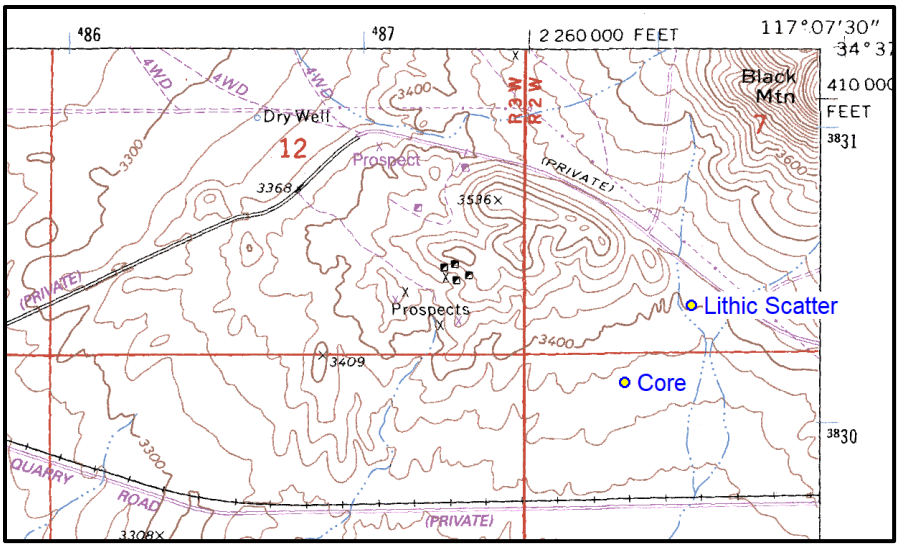

Figure 11. Northeastern Corner of the USGS Apple Valley North Quadrangle Illustrating the Locations of Prehistoric Resources.

Figure 12. Overview of Area Associated with Lithic Scatter (S; Black Mountain Quarry Road in background).

with current archaeological protocols and to assess the presence/absence of subsurface deposits. The DPR-523 forms for these resources are presented in Appendix G.

Figure 13. Large Core Identified at NAD 27 UTMs 487704 Easting/3830126 Northing.

Historic Period Cultural Resources

Historic period cultural resources were identified in two forms: archaeological resources and standing structures (built environments). For reference, the State (and County) define resources as being at least 50 years old. For planning purposes, resources older than 45 years of age are assessed. As such, resources pre-dating 1975 are considered "historic" but not necessarily significant and those post-dating 1975 are considered modern and not historically significant.

As noted in the discussion on the history of the quarries, there was relatively early ownership of many claims in the area, but not necessarily any actual mining activities. The majority of the claims were acquired by the Southwestern Portland Cement Company (or its representatives) beginning in the 1920s. The Company filed their own claims and also purchased other smaller claims.

Despite the relatively early ownership, activities at the Black and White Mountain quarries were not initiated until 1942. The early improvements included the establishment of access roads; the headquarters complex; the material sorting areas; preliminary processing areas; loading facilities; and rail lines to carry the materials to the more substantial facility in Victorville. Mining Southwestern Portland Cement Company activities continued until 2004, when the operations were sold to CEMEX USA (and continue today).

Since the purchase by CEMEX USA, addition rail lines have been established; additional road have been established; the headquarters area was relocated from a point along the southern access road to the current location west of the conveyor and sorting complex. In addition, the extent or the mining areas has been expanded – exceeding the limits indicated on the earlier USGS quadrangles. Earlier improvements (e.g. the original rail lines) have been maintained and improved and drainage features have been added in the form of culverts, earthen diversion berms, and small catchment areas.

Components of the quarries that were determined to be historic (by age) include portions of the original mining areas (Figure 14), the main (paved) access road – Black Mountain Quarry Road (Figure 15); a series of the unpaved roads within the quarrying areas (Figure 16); the conveyor/sorting work area (Figure 17); the original rail lines (Figure 18); and an

Figure 14. Ongoing Mining Activities at the CEMEX USA Quarries at Black and White Mountains.

Figure 15. A Portion of the Main Access Road, Quarry Road/Black Mountain Quarry Road (SSW).

Figure 16. Example of Unpaved Roads with the Quarry Complex (NNE from current HQ).

Figure 17. Overview of the Conveyor/Sorting Complex, Black and White Mountain Quarries.

Figure 18. Segment of the Original Rail Line, North of Quarry Road/Black Mountain Quarry Road (ENE).

area along Black Mountain Quarry Road with a series of four concrete pads tentatively identified as the original office/headquarters for the Southwestern Portland Cement Company operations (Figure 19).

Figure 19. Two of Four Concrete Pads Located North of Black Mountain Quarry Road (ESE).

Illustrated in Figure 20, the four pads are of various sizes and form a circular pattern. Their respective sizes, locations and orientations are as follows:

A	23’ x 54’	489999E 3832974N	ENE
B	12’ x 53’	490019E 3839749N	ESE
C	12’ x 57’	490040E 3839739N	SSE
D	25’ x 57’	490050E 3839700N	ESE

These pads are smooth pours with reinforcing rebar. Pad D exhibits a mid-line running the length of the pad, providing additional stability. As noted, there are no anchor bolts, no scarring to suggest there were permanent structures, and no evidence of flooring. The exact nature of their use(s) has not been determined, but they appear to have been used to temporarily work/office support trailers.

Figure 20. Aerial Photograph Illustrating the Concrete Pad Locations and Orientations.

Access to the pads and the surrounding work area is afforded directly off Black Mountain Quarry Road (to the south). The railroad alignment is located to the north, on the rise above the work area. McKenna et al. has recorded the large quarry area as a single cultural resource with various features. The site forms are presented in Appendix G of this document.

Historical Landscapes

Tishler (1982) defines a historical landscape as a landscape that embraces a broad and complex assemblage of interrelated natural and cultural features that establish the essential fabric for many historic sites, districts, neighborhoods, communities, and even entire regions. In this case, the Black Mountain/White Mountain Aggregate Quarries mining site constitutes a historical landscape because it is comprised of the natural geological deposits necessary to provide for the mining operations and includes the applicable features and infrastructure that allows the quarrying to be successful. The man-made amenities are the defining attributes of the historic landscape: the railroad system; roads; equipment, work areas, storage facilities, and the large conveyor facility.

The historic landscape is a part of the overall site description and is included in the discussion presented in the applicable site forms.

Ethnic Resources

Ethnic resources are cultural resources that can be identified as being representative of a specific ethnic population. In this case, the Black Mountain/White Mountain Aggregate quarries fail to represent any physical evidence identifying the operations as being of ethnic origin. Therefore, the site is not eligible for recognition as an ethnic resource.

EVALUATION CRITERIA

The County of San Bernardino relies on the California Environmental Quality Act (CEQA), as amended, for policies and guidelines in addressing and evaluating cultural resources and any environmental impacts that may result from the approval of a proposed project. In general, cultural resources are identified when a resource meets one or more of the following criteria:

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.

If a resource is deemed important or significant (eligible for listing in the California Register of Historic Resources), per CEQA, guidelines and policies require an assessment of the resource and a determination as to whether or not a specific project will adversely impact the resource. Adverse impacts should be avoided or mitigated to a level of insignificance. In this case, the recent research and field investigations have reached the following conclusions:

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?

   NO. The Southwestern Portland Cement Company was the primary owner of the various claims defining the current project area. This company was, for all intents and purposes, a family owned company that operated for two generations – the original owner (Carl Leonardt; 1955-1927) and his son-in-law (Frank Henry Powell; 1883-1949). Operations were halted in 1951 and the claims eventually sold to CEMEX. Although these two men (and another partner) were successful in the mining and cement production, their operations fail to meet the minimum intent of Criterion 1. The events associated with the mine were generic and, in relation to some much larger holdings by other companies, were relatively small. In addition, the mining activities currently lack the historic integrity to reflect the operations during the early years of operation. This mine is essentially a modern facility.

2. Associated with the lives of persons important to local, California or national history?

   YES. The Black and White Quarries mining site(s) can be directly associated with Carl Leonardt and Frank Henry Powell. Both men were successful businessmen operating the firm from Los Angeles. They were not local residents of Victorville, Apple Valley, or San Bernardino County, but their operations were important to the local work force. Leonardt is also recognized and a successful businessman on a regional level, given his association with the Old Quarries site (but not statewide or national). Therefore, McKenna et al. would consider the mining site minimally significant for its association with Leonardt (and Powell) and their ability to provide work and revenue for this area of San Bernardino County (local significance).

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?

   NO. The mining site is only distinctive as a mining site, but not a site associated with precious metals. It was always a limestone/silicate source area and these materials were shipped to the facility in Victorville for processing.

The infrastructure at the mining site is and always was minimal. Most of the facilities are modern with only the early railroad alignments, main access road, and loading facilities being associated with the late historic period. Much of the other equipment and infrastructure are modern, including the new headquarters (with temporary structures), access roads, upgrades rail lines, and expanded mining areas. There was very little refuse in the area and what was identified was dominated by modern debris. The area fails to exhibit demonstrative artistic values and/or design elements. Overall, the site fails to meet the minimum intent of this criterion.

5. Has yielded, or has the potential to yield information important to the prehistory or history of the local area, California, or the nation?

   YES. At this time, the project area has failed some sparce evidence of prehistoric use and has the potential to yield paleontological specimens. As such, some standard mitigation measures will be required to insure any potentially adverse impacts are mitigated to a level of insignificance.

CONCLUSIONS

In conducting this investigation, McKenna et al. addressed paleontological sensitivity, prehistoric archaeological sensitivity, historic archaeological sensitivity, and the potential for a built environment, historical landscape, and/or ethnic resources. The following conclusions were reached.

Paleontological Resources Sensitivity

Those portions of the project area outside the existing excavations and use areas and primarily comprising the lower elevations and more even terrain (not the prominent hills) have been determined to be sensitive for paleontological resources. While no physical evidence of vertebrate paleontological specimens was identified, the sensitivity remains for buried resources.

Based on this finding, McKenna et al. concurs with the recommendations presented by McLeod (2020) for a paleontological monitoring program involving any earthmoving activities in areas below 3,600 feet AMSL (+/-) should be conducted. These areas are primarily located south of the existing mine and facilities, but north of Black Mountain Quarry Road. The program should be conducted in accordance with the policies and guidelines of the San Bernardino County Museum, Redlands, California, and include the preparation of a Paleontological Resources Impact Mitigation Program (PRIMP), fieldwork, sampling, analysis and curation.

Native American Archaeological Resources Sensitivity

McKenna et al. contacted the Native American Heritage Commission and received a response noting negative findings for sacred or religious sites in the area. Letters were sent to the local Native American representatives, including maps and other graphics, noting the County as Lead Agency and requesting consultation for SB-18/AB-52 compliance. The County generally conducts their own government-to-government consultation and, therefore, McKenna et al. defers to the County for this level of consultation.

A single prehistoric archaeological site and a spatially associated core were identified during the recent survey. The site consists of a lithic scatter and the isolated core was located downslope from the site. There is a relative level of sensitivity for additional resources to be present in the area but, as yet, unidentified. These two prehistoric resources have been recorded on the applicable DPR-523 forms (Appendix G). Based on these findings, McKenna et al. is recommending recovery of the isolated core and a Phase II cultural resources investigation of the lithic scatter. This Phase II should include, but not necessarily be limited to, a systematic recovery of the surface scatter and a series of screened shovel scrapes to determine whether or not the site includes buried deposits. All materials recovered must be analyzed and inventoried for curation.

If, as a result of consultation between the local Native American representative and the County representatives, it is determined to be applicable, a Native American observer may be added to the Phase II testing program. If the results of the Phase II warrant additional research and archaeological data recovery, the Phase II technical report will detail the necessary tasks for CEQA compliance.

Historic Archaeological Resources Sensitivity

Historic archaeological resources have been identified and recorded as the CEMEX USA Black and White Mountain [Aggregate] Quarry as a single site containing multiple features (Appendix G). In this case, the quarry site includes both early and late components including, but not limited to: refuse scatters; equipment storage areas; stockpiles of excavated materials; open it mining areas; paved and unpaved roads; railroad alignments; drainage and diversions systems; conveyor facility (loading) and docks; and the headquarters. In addition, there is one area with concrete pads indicative of any earlier office complex (trailers) along the main access road. Here is some modest fencing and various transmission lines. The open pit mine dominates the landscape and the majority of the features are located south, east, southeast, and southwest of the pit. There is no specific evidence of mining activities on the north side of the open pit, but this area has been included in the overall site area – the site being defined by the boundaries of the CEMEX USA project area property (see Figure 8).

As assessment of this resource resulted in a conclusion the site is eligible for listing in the California Register of Historical Resources under Criterion 2 – association with persons important in history and Criterion 4 – the potential to add significant information in prehistoric (and paleontology). The qualifying individuals include Carl Leonardt and Frank Henry Powell. Both were owners of the Southwestern Portland Cement Company (Leonardt founding the company and Powell taking over after Leonardt's death). This qualification is based more on a local/regional association and not a state or federal level of recognition.

With respect to Criterion 4, the project area yielded scant evidence of prehistoric occupation and/or use in the form of a lithic scatter and isolated core. Additional resources may also be present but, as yet, unidentified. In addition, the southern and southeastern portions of the project area (below 3,600 feet AMSL) have been associated with deposits known to the sensitivity for yielding paleontological specimens. Recommendations for managing these resources are presented below.

Built Environments

The project area, specifically the open pit mine and associated work areas, would qualify as a built environment primarily because some areas exhibit permanent improvements or use areas – such as the roads, railroad alignments, the open pit mine, the conveyor system, and some semi-permanent structures. Only the main railroad alignment; the main access road (Black Mountain Quarry Road); and the conveyor system are elements of the mining site that can be a associated with improvements over 45 years of age.

Historical Landscapes

The Black and White Mountain Quarries are considered to be representative of a historic landscape represented by the presence of the natural environment altered by man-made activities that are still present and on-going. In this case, the activities are directly related to the late 1940s (+) mining activities associated with the California Portland Cement company and CEMEX USA company. Additional quarrying activities will result in continued impacts to the natural setting of the area. Given the extent of the existing impacts and the proposed impacts, the visual impacts will be minimal.

Ethnic Resources

No evidence was found to indicate the project area is related to any population that can be referred to as "ethnic." This area lacks the necessary associations to suggest any

future associations. The activities and impacts are mining related and do not represent the activities of any individual group that can be considered “ethnic.”

RECOMMENDATIONS

Based on the findings presented above, McKenna et al. has concluded the project area is a historic landscape associated with mining activities and the mine (and associated elements) are considered to be a locally significant cultural resource under Criteria 2 and 4 of the California Environmental Quality Act, as amended. The proposed expansion of the mining and the additional impacts to the area will, by definition, result in adverse impacts requiring avoidance or mitigations. To address these impacts, McKenna et al. has prepared the following recommendations for consideration by the Lead Agency. The Lead Agency may accept these recommendations a presented, amend the recommendations, and/or negate all or part of these recommendations, pending consultation with local Native American representatives and/or the project proponent.

MM-1: Paleontological Monitoring: McKenna et al. is recommending a paleontological monitoring program for those areas below 3,600 feet and/or in any areas where older Quaternary alluvium (or older) deposits are identified. This program should be conducted in a manner consistent with the policies and guidelines of the San Bernardino County Museum, Redlands, and include the following:

- Preparation of a PRIMP (methodological approach);
- On site paleontological monitoring in areas of identified sensitivity;
- Adjustment to the monitoring locations as additional data becomes available;
- Conduct periodic sampling of the soils for small flora and fauna specimens;
- Complete the analysis of any collected specimens;
- Prepare a technical report summarizing the findings;
- Arrange for the curation of any collected specimens.

MM-2: Prehistoric Archaeological Testing: McKenna et al. is recommending an archaeological (Phase II) testing program at the site of the identified lithic scatter. This program should consist of:

- A systematic surface collection (including all locational data);
- Inventorying of the artifact assemblage;
- Analysis of the spatial and identifying data;

- Subsurface testing via a series of shovel scrapes (screened);
- If Subsurface deposits are identified, a series of control units Should be excavation to determine depth and content;
- Recovery of the isolate core (downslope);
- A secondary surface examination between the site and isolate To determine whether additional artifacts are present;
- Preparation of a technical report documenting the approach, findings, and other recommendations.

MM-3: Prehistoric Archaeological Monitoring: Pending receipt of comments from the local Native American representatives through the SB-18/AB-52 consultation process, the County should consider the McKenna et al. recommendation for a prehistoric archaeological monitoring program in undisturbed areas that will be subjected to direct impacts. The prehistoric archaeological monitoring program must be overseen by a professional meeting the Secretary of the Interior's standards for archaeological proficiency and have knowledge of the prehistory of the western Mojave Desert region.

If deemed appropriate by the Lead Agency, the monitoring program can include the presence of a Native American representative(s), working with the archaeological consultant to insure professional and respectful treatment of any identified resources.

The extent of the prehistoric archaeological monitoring program will be determined by the schedule and extent of earthmoving related to the proposed mining expansion.

MM-4: Historic Archaeological Monitoring: At this time, McKenna et al. is not recommending a historic archaeological monitoring program. However, at the discretion of the Lead Agency, historic archaeological monitoring can be added to the prehistoric archaeological monitoring program to insure previously unidentified historic-period resources with a potential to yield undocumented activities is accurately and professionally addressed. Any historic archaeological monitoring program should include the presence of a professional archaeologist trained in historic archaeology and, if possible, knowledge of mining sites.

MM-5: Human Remains: If, at any time, evidence of human remains (or potentially human remains) is uncovered, the County Coroner must be notified immediately and permitted to examine the find(s) *in situ*. A buffer of 50+ feet around the finds must be defined to prevent adverse impacts to the remains.

If the remains are determined to be of Native American origin, the Coroner will notify the Native American Heritage Commission and the Commission will name the Most Likely Descendent (MLD). In consultation between the MLD, County, Project Proponent, and consulting archaeologist, the disposition of the remains will be determined. Any costs associated with managing these remains will be borne by the property owner.

If the remains are determined to be of archaeological value, but not Native American, the archaeological consultant, in consultation with the County and property owner, will remove the remains, complete the required analysis, and prepare the remains for reburial. The reburial costs will be borne by the property owner.

If the remains are determined to be of forensic value, the Coroner will oversee the removal of the remains and the County will take jurisdiction of the remains and cover all required tasks.

As noted above, these recommendations may be amended, as deemed appropriate and in compliance with CEQA, by the Lead Agency.

CERTIFICATION

I hereby certified that the statements furnished above and in the attached exhibits present the data and information required for this report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: Nov. 9, 2020 Signed: Jeanette A. McKenna

Jeanette A. McKenna, Principal Investigator

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