

RRM’S Request for Determination of Vested Rights Appendix B: Maps and Graphics

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Table B-1: Ground Disturbances and Surface Mining Activity

Legend

M - Surface Mining Disturbance
R - Other Surface mining activity (Haul Roads, Stockpiles, etc.)
E - Exploration Activities (Drilling, Sampling, etc.)

Reference Type

Text: RFD Text
APP. B: Maps and Exhibits

<i>Map I.D.</i>	<i>Date</i>	<i>Disturbance</i>	<i>Description</i>	<i>Text</i>	<i>App. B</i>
M-1	1853-1888	Tin-bearing tourmaline veins discovered in Temescal Mining District, leading to a "tin rush," including exploration, prospecting, and mining of surface-level tourmaline outcrops and veins	In 1853, tin was "discovered" by Daniel Sexton, initiating a rush of individual miners and prospectors to the Temescal Mining District. In 1888, agents of the Sobrante owners describe to members of State Mineralogist survey hand excavation of tin bearing tourmaline veins dating from the time of tin discovery in 1853. The Sobrante property contains over fifty such veins, running northeasterly/southwesterly, through "granite" in a region approximately 7 miles long and 4 miles wide. As of 1890, the Sobrante owners had mapped the tin property, as depicted in Figure B-5.5.1	Sections II.D.1, II.D.4, V.A.2, V.B.1	Figures 3.4, 3.6, 3.9, 4.1.
R-2	Pre-1891	Construction and use of "Tin Mine Haul Road," running northeast to southwest through HH VRA	Sobrante owners construct haul road to move produced tin to market, which ran through the HH VRA to move produced tin east of the HH VRA to market west of the HH VRA. The HH VRA provided access points to ATSF railroad and Corona-Elsinore Highway.	Sections II.D.1, II.D.4, V.A.2, V.B.1	Figures 3.1, 3.3, 3.4, 3.6, 3.9, 4.1, 4.3, 4.4, 4.5, 4.6, 4.11, 4.13, 4.15, 4.17
M-3	1888	Porphyry quarrying begins at Temescal Rock Quarry	Quarry established by Sobrante owners north of HH VRA, along same porphyry occurrence as the HH VRA, demonstrates intent to develop all mineral resources in Temescal Mining District. This occurrence of suitable porphyry rock is "a mile or two in width stretch[ing] a considerable distance in a northwest and southeast direction along the western side of the Rancho El Sobrante de San Jacinto, and extends east to within about one mile of the tin mines" with crushing works ¼ mile below the quarry along Temescal Creek.	Sections II.D.1, II.D.4, V.A.2, V.B.2	Figures 3.4, 3.9
M-4	1891	Tourmaline surface excavation and production of tin	First year of commercial excavation and production from Cajalco Tin Mine, resulting in 125,289 pounds of tin. Work in 1891 was limited to surface excavations.	Sections II.D.1, II.D.4, V.A.2, V.B.1	Figures 3.4, 3.6, 3.9, 4.6, 4.13

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M-5	1892	Tourmaline surface excavation; construction of ancillary facilities in support of tin mining operations; and production of tin	Second year of commercial excavation and production from Cajalco Tin Mine, resulting in 126,000 pounds of tin. Work in 1892 included both surface tourmaline vein excavation, as well as underground workings consisting of 2 shafts, 180 feet deep, 300 feet long.	Sections II.D.1, II.D.4, V.A.2, V.B.1	Figures 3.4, 3.6, 3.9, 4.6, 4.13
M-6	1911	Small porphyry quarries (rip-rap and aggregate) established along eastern bank of Temescal Wash by Sobrante owners, including one within HH VRA	Corona "Rock Boom" leads to multiple quarrying operations along the known porphyry body on east and west sides of Temescal Canyon. Multiple quarries, including one on the HH VRA were established to meet demand of Los Angeles construction needs. These early quarries, known for high-quality building material and demonstrated the intent of Sobrante owners to utilize HH VRA in conjunction with neighboring quarry operations to produce mineral materials as needed.	Sections II.D.1, II.D.4, V.A.2, V.B.2	Figures 3.1, 3.3, 3.4, 3.6, 3.9, 4.2, 4.8, 4.9, 4.10, 4.12, 4.14
M-7	1911	Clay prospecting and quarrying throughout the Temescal Mining District, including within the northern portion of the HH VRA	Clay mineral resources evaluated for development throughout the Temescal Mining District, including within the HH VRA. This evaluation was focused on determining viable deposits of high aluminum clay and resulted in surface scrapings. Demonstrates the intent of Sobrante owners to fully develop all mineral resources with Temescal Mining District	Sections II.D.1, II.D.4, V.A.2, V.B.2	Figure 4.3, 4.11
R-8	1911	Road construction in Temescal (Hoag's) Canyon connecting Temescal Mining District with broader regional markets and other regional surface mining operations	Sobrante owners construct a road through Hoag's (Temescal) Canyon to provide connectivity with multiple mining operations within the Temescal Mining District. This road allowed multiple mineral developments to access the Corona market, thus facilitating development throughout the Temescal Mining District. The location of the road next to the HH VRA also established the property as a central location for hauling mineral materials	Section V.A.2, V.B.2	Figure 4.8, 4.16
R-9	1911	Railroad construction, connecting the Temescal Mining District with primary rail lines and broader regional market.	ATSF constructs a spur line from the ATSF mainline at Corona, south to the mouth of Cajalco Canyon, terminating at the northwest corner of the HH VRA. This spur line becomes the main loading and export point for multiple minerals (tin and porphyry) produced in the Temescal Mining District. The location of the railroad siding to the northwest of the HH VRA also established the property as a central location for hauling mineral materials.	Sections V.A.2, V.B.2	
R-10	1911-1926	Construction and use of clay haul road running south to northwest through the HH VRA	Sobrante owners construct and use clay haul road, running from clay pits on the border of the Temescal Mining District and Alberhill Clay District (including Harrington Clay Pit), to the ATSF railroad and Corona-Elsinore Highway, through the HH VRA.	Sections II.D.1, V.A.2	Figure 4.10
M-11	1917	Increased quarrying activities and improvements within Temescal Mining District.	Sobrante owners undertake activities at the Temescal Rock Quarry activities, including construction of private railway line and crushing plant at the Temescal Rock Quarry. The Sobrante owners' continued investment in regional mining operations demonstrates intent to fully develop the Temescal Mining District as a regional mining hub.	Sections II.D.1, V.B.2	
R-12	1917	Establishment of borrow pits to restore and maintain tin Mine haul road; use of tin mine haul road.	Sobrante owners open rock, sand, and gravel borrow pits, including at least one within the HH VRA, to provide material for repairs and improvements to "tin mine haul road," in preparation for resumption of operations at Cajalco Tin Mine.	Sections II.D.1, V.B.1	Figure 4.4, 4.5, 4.6, 4.11, 4.13, 4.15, 4.17

<i>Map I.D.</i>	<i>Date</i>	<i>Disturbance</i>	<i>Description</i>	<i>Text</i>	<i>App. B</i>
M-13	1918-1923	Refurbishment of Cajalco Tin Mine, including surface facilities.	The Sobrante owners begin restoring surface facilities at the Cajalco Tin Mine, including restoration of surface buildings and historic (1890-1892) tin mine workings.	Sections II.D.1, V.B.1	Figure 4.6, 4.13
M-14	1918-1923	Tourmaline vein excavation	The Sobrante owners begin increased excavation (surface and tunnel) of Vein No. 1 in Cajalco Hill. Vein is excavated to 650 feet and ore removed for smelting and assaying.	Sections II.D.1, V.B.1	Figure 4.6, 4.13
M-15	1918-1923	Tourmaline vein excavation and exploration	The Sobrante owners undertake exploration and excavation of at least ten (10) surface tourmaline veins in the vicinity of Cajalco Tin Mine.	Sections II.D.1, V.B.1	Figures 3.1, 3.3, 3.4, 3.6, 3.9, 4.6, 4.7, 4.13
E-16	1920-1923	Surveying and exploration for developable silica sand deposits	Corona Sand & Silica Co. undertakes exploration, sampling, and testing of silica sand resources within the Temescal mining district, generally located within and just to the west of the HH VRA (and specifically areas along east and west banks of Temescal Wash) to determine viability of establishing silica sand mining and processing operation. This exploration demonstrates the continued intent to fully develop all mineral resources in the Temescal Mining District.	Section V.B.2	Figures 3.1, 3.3, 3.4, 3.6, 3.9, 6.
M-17	1923	Continued quarrying activities and investment within the Temescal Mining District.	Activities to modernize equipment at Temescal Rock (“Blue Diamond”) Quarry and expanded surface mining activities. The Sobrante owners’ continued investment in regional mining operations demonstrates intent to fully develop the Temescal Mining District as a regional mining hub.	Section V.B.2	Figures 3.4, 3.6, 3.9
M-18	1923	Corona Sand and Silica Co. constructs a production plant and begins pit excavations along the east and west sides Temescal Wash	The Sobrante owners began initial silica sand mining operation, along with the western edge of the HH VRA, which would later significantly expand, first under P.J. Weisel, and later under the Owens-Illinois Glass Co. The initial development of the site demonstrates the Sobrante owners’ continued intent to fully develop all mineral resources in the Temescal Mining District.	Section V.B.2	Figures 3.1., 3.3, 3.4, 3.6, 3.9, 4.8, 4.14
M-19	1927	Expansion of porphyry quarrying within the HH VRA to provide material for railroad expansion	Rock quarrying operations resume at porphyry quarry originally established c. 1911, within S-4 VRA, along western edge of HH VRA to provide materials (<i>i.e.</i> railroad track ballast, rip rap) for 5,000 yards of track for the ATSF Railroad. This demonstrates the intent of the HH VRA owners to continue utilizing the property for surface mining.	Section V.C.2	Figures 3.1, 3.3, 3.4, 3.6, 3.9, 4.8, 4.14.
M-20	1927-1928	Third wave of surface improvements, excavation, and exploration at Cajalco Tin Mine and associated surface tourmaline veins and tourmaline blowouts	Restoration and mining at the Cajalco Tine Mine resume, including restoration of underground mines and exploration and excavation of tin-bearing, surface level tourmaline veins, including veins located in the northeast of the HH VRA. The tin mine rejuvenation continued to utilize the tin mine haul road through the HH VRA.	Section V.C.2	Figures 3.4, 3.6, 3.9, 4.6, 4.13
M-21	1927-1928	Expansion of P.J. Weisel silica sand excavation and production facilities	P.J. Weisel takes over operations of Corona Sand & Silica, Co., and expands processing facility and undertakes new plant construction. Silica sand mining occurred along the western edge of the HH VRA and the Weisel operation utilized access roads in the HH VRA to transport produced materials to the ATSF railroad	Section V.D.2	Figure 3.2, 3.3, 3.5, 3.6, 3.9, 4.7, 4.8, 4.14

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M-22	1928	Continued clay excavation and transfer of material through HH VRA	Sobrante owners and other clay mining entities continue clay mining operations (<i>i.e.</i> , El Sobrante Pit) to the south of the HH VRA, and utilize the clay haul road to access ATSF railroad.	Section V.C.D	Figure 3.5, 3.6.
E-23	1930	Exploration related to economic and strategic mineral development describes occurrences of dumortierite	Geology survey describes rock formations in Section 10 and potential economic uses, including surveys of dumortierite occurrences. This demonstrates continued intent to fully develop all possible mineral resources within the HH VRA.	Section V.E	Figure 6
E-24	1931-1938	Exploration and sampling for high aluminum clays and bauxite, primarily north of Cajalco Road as part of strategic mineral evaluation.	Exploration within the HH VRA (and adjacent areas) related to occurrence of bauxite and other high-aluminum clays, including sampling and analysis by state laboratory to determine future development feasibility. This demonstrates continued intent to fully develop all possible mineral resources within the HH VRA.	Section V.E	Figure 3.2, 3.3, 3.5, 3.6, 3.9, 4.3, 4.10.
M-25	1931-1938	Initial excavation and mining at Cajalco Clay Pit	Pacific Clay Products begins operations at Cajalco Clay Pit, located primarily, but not entirely, within S-4 VRA. This initial clay mining would later expand east across the HH VRA and demonstrates continued intent to fully develop all mineral materials within the HH VRA.E	Sections II.D.1, V.C.2	Figures 3.2, 3.3, 3.5, 3.6, 3.9, 4.8, 4.9
R-26	1931	Rock, sand, and gravel borrow pits opened to supply materials to improvements to tin mine haul road and Cajalco Canyon trails	Multiple rock, sand, and gravel borrow pits opened to supply materials related to improvements made along the tin mine haul road (1927-1929) and Cajalco Canyon Trails (and in preparation for construction of Cajalco Road), demonstrating an intent to utilize all mineral resources within the HH VRA.	Sections II.D.1, V.C.2	Figures 3.2, 3.3, 3.5, 3.6, 3.9, 4.5
M-27	1931	Mining disturbances consistent with clay prospecting and sampling.	Surface mining disturbance along hillside consistent with clay prospecting and sampling, demonstrating a continued intent to mine the entirety of the property.	Sections V.C.2	Figures 3.2, 3.3, 3.5, 3.6, 3.9.
M-28	1931	Aerial photographs show extent of tin mine exploration and excavation	As of 1931, the area of influence of the Cajalco Tin Mine included the northeastern corner of the HH VRA, and utilized the Tin Mine Haul Road through the HH VRA	Sections VB.1, V.C.2	Figures 3.5, 3.6, 3.9. 4.6.1, 4.6.2, 4.6.3
M-29	1931	Aerial photographs show extent of silica sand plant excavations	Silica sand mining occurred along the western edge of the HH VRA and the Weisel operation utilized access roads in the HH VRA to transport produced materials to the ATSF railroad	Sections V.B.2, V.D.2	Figures 3.2, 3.3, 3.5, 3.6, 3.9, 4.8, 4.14
E-30	1935	Multiple geologic survey and studies and economic analyses completed and published	Geologic surveys and studies of the Temescal Mining District, including the HH VRA, are conduct to determine presence of strategic minerals and economic feasibility of development. These studies determined presence of multiple economically feasible strategic minerals, including porphyry, multiple clay varieties (including fire clays), tourmaline, and dumortierite.	Section V.E	Figure B-

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R-31	1935	Silica sand rail siding expansions constructed both along P.J. Weisel spur line and Temescal Wash Siding to accommodate increased production	Silica sand mining occurred along the western edge of the HH VRA and the Weisel operation utilized access roads in the HH VRA to transport produced materials to the ATSF railroad	Section V.D.2	Figures 3.2, 3.3, 3.6, 3.9, 4.9, 4.14
R-32	1935	Multiple borrow pits opened up to construct and surface Cajalco Road	Use of rock, sand and gravel borrow pits to assist with construction of Cajalco Road utilized rock, sand, and gravel	Sections II.D.1, V.C.2	Figures 3.2, 3.3, 3.5, 3.6, 3.9, 4.15
M-33	1938	Expansion of known clay resource within HH VRA.	Red clay worked in irregular quarry of approximately 100 feet, east of Temescal Wash and ATSF Railroad	Sections II.D.1, V.C.2	Figure 4.10, 4.14
E-34	Pre-1931	Clay prospecting and sampling in Section 10 to determine presence of bauxite and or other high-aluminum clays	Aerial photo has small spur road and excavation in canyon north of HH VRA, likely consistent with clay prospecting and sampling in Section 10 to determine presence of bauxite and or other high-aluminum clays	N/A	Figure 3.2, 3.3, 3.5, 3.6, 3.9.
M-35	1938-1945	Expansion of silica sand production and surface mining adjacent to HH VRA	P.J. Weisel uses a rail siding on the ATSF railroad to export materials. Silica sand mining occurred along the western edge of the HH VRA and the Weisel operation utilized access roads in the HH VRA to transport produced materials to the ATSF railroad	Section V.D.2	Figure 3.2, 3.3, 3.5, 3.6, 3.9.
M-36	1938-1939	Expansion of porphyry quarry located within HH VRA and establishment of the "Blarney Stone Quarry"	Increased production of porphyry from HH VRA and establishment of the Blarney Stone Quarry, primarily associated with contract to supply 450,000 tons of materials to Prado Dam construction. Production was increased to meet regional demand.	Sections II.D.1, V.C.2.	Figure 3.2, 3.3, 3.5, 3.6, 3.9., 4.12, 4.14, 4.15,
M-37	1943	Expansion of sand and silica mining, including surface mining within HH VRA.	P.J. Weisel Sand and Silica excavation includes excavation of sandstone cliffs along east side of Temescal Wash. Surface mining activities within the HH VRA, in conjunction with regional mining operations, and outside the S-4 VRA demonstrate an intent to mine the HH VRA to meet demand for multiple mineral materials.	Sections V.D.2	Figure 3.2, 3.3, 3.5, 3.6, 3.9., 4.14
E-38	1942-1945	Surveying and sampling of tourmaline veins and tin resources.	USGS conducts survey of six square miles around Cajalco Hill (site of Cajalco Tin Mine, located northeast of HH VRA), to map, sample, and evaluate suitability of tin resources to supply U.S. war effort. This evaluation of mineral materials useful to the U.S. war effort, including evaluation of mineral resources in the northeast corner of HH VRA, outside the S-4 VRA	Section V.C.2	Figure 3.5, 3.6, 3.9.

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M-39	1947	Expand silica sand mining and processing operations adjacent to and within the HH VRA	<p>Owens-Illinois Glass Co. leases the P.J. Weisel silica sand operation, expands silica tailings, and constructs a new production plant</p> <p>Silica sand mining occurred along the western edge of the HH VRA and the silica sand operation utilized access roads in the HH VRA to transport produced materials to the ATSF railroad. Additionally, the operation mined certain portions of the HH VRA. Finally, Harlow sought to compete with the silica sand and attempt to purchase neighboring silica sand resources, demonstrating intent to fully exploit known mineral resources.</p>	Section V.D.2	Figure 3.2, 3.3, 3.5, 3.6, 3.9., 4.14
M-40	1948	Clay side-cut exploration and mining operations north of the Blarney Stone Quarry	Liston Brick Co. begins small side-cut clay exploration and mining operations north of the Blarney Stone quarry. Surface mining activities within the HH VRA and outside the S-4 VRA demonstrate an intent to mine the entirety of the property based on mineral demand.	Sections II.D.1 V.C.2	Figure 3.2, 3.3, 3.5, 3.6, 3.9., 4.15
M-41	1938-1948	Surface mining of alluvial gravel, including aerial photograph showing extent of access to and excavation from gravel resource	Carl Bliss mines alluvial gravel resource south of Cajalco Road to supply aggregate for Prado Dam, including for use in concrete. The 1948 aerial photograph shows extent of access and excavation of these alluvial gravel resources, south of Cajalco Road. Surface mining activities within the HH VRA and outside the S-4 VRA demonstrate an intent to mine the entirety of the property based on mineral demand.	Section II.D.1, V.C.2	Figure, 3.2, 3.3, 3.5, 3.6, 3.9. 4.15, 4.17
M-42	1949	Aerial photograph shows extent of 3M (“Temescal Rock”) quarry operations	Continued expansion of quarry along porphyry ore body indicates continued intent to fully exploit known mineral resources within Temescal Mining District, including mining of same ore body found within HH VRA	Section V.D.1	Figure 3.5, 3.6, 3.9
M-43	1948-1960s	Clay, rock, sand, and gravel mining to supply Liston Brick Co. manufacturing plant.	<p>Liston Brick Co. begins operations, mining (i) miocene diatomaceous shale; (ii) quaternary alluvium; and (iii) local soil and sandstone.</p> <p>Liston uses unnamed plots on the east side of Temescal Canyon, along Cajalco Road within the HH VRA, for metasedimentary rocks used in brick production.</p>	Section V.C.2, V.F.3	Figures 3.8, 3.9 4.16, 4.17, 4.18
M-44	1954	Clay discovery and mining	Gladding discoveries viable source of red clay adjacent to and within the HH VRA in 1954.	Sections II.D.2, V.F.3.	Figures 3.8, 3.9, 4.17
M-45	1953-1959	Continued porphyry mining	<p>Mining within the HH VRA provided multiple water infrastructure projects with porphyry, including: Orange County Santa Ana River Levee and Long Beach flood control channels.</p> <p>Production is noted on a per-project basis, with 250,000 tons produced in 1958 for the Santa Ana River Levee, and 500,000 tons produced in 1958 for other flood control channels. Quarrying capacity is given at 6,000 tons per day (over 2 million tons per year).</p>	Sections II.D.2, V.F.3	Figures 3.8, 3.9 4.16, 4.18, 4.19, 4.20, 4.22




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M-46	1959	Aerial photograph shows extent of surface mining activities within the HH VRA as of 1959.	Aerial photograph shows continued mining of multiple resources, including porphyry and clay, within the HH VRA, as of 1963. This mining, without permits, is consistent with the exercise of vested rights.	Sections II.D.2, V.F.3	Figures 3.8, 3.9, 4.18, 4.19
M-47	1963	Aerial photograph shows extent of surface mining activities within the HH VRA as of 1963	Aerial photograph shows continued mining of multiple resources, including porphyry and clay, within the HH VRA, as of 1963. This mining, without permits, is consistent with the exercise of vested rights.	Sections II.D.2, V.F.3	Figures 3.8, 3.9, 4.20
M-48	1967	Change in road status – private to public	Riverside County Board of Supervisors approves construction of “Eagle Valley Road” as a County road to replace the formally private tin mine road. This County action removed the Tin Mine Haul Road	Section V.F.3	Figure 3.9
M-49	1972	Extent of surface mining activities related to silica sand and rock, sand, and gravel.	Aerial photograph shows the extent of Owens-Illinois Glass Co. silica sand plant mining and operations, including connectivity with HH VRA via conveyer and roads.	Section V.F.3	Figures 3.8, 3.9
M-50	1984	Analysis of historic rock, sand, gravel, and clay disturbances.	1984 investigation and analysis of known, historic mining features within the HH VRA, including multiple heavily disturbed clay pits, all outside the S-4 VRA boundary.	Section V.G	Figures 3.8, 3.9
M-51	1962	Surface mining activity consistent with clay scraping and exploration	Surface disturbance was visible in aerial imagery dated 1962, in area of property associated with clay mining during tenancy of Corona Quarries, Inc. and construction of MWD lower-feeder line. Site investigation and LiDAR analysis determined disturbance may be associated with either clay exploration or construction of MWD lower-feeder line.	Sections II.D.2, V.F.3	Figures 3.8, 3.9, 4.21
M-52	1962-1967	Surface mining activity consistent with clay scraping and exploration	Surface disturbance was visible in aerial imagery dated 1967 in area of property associated with clay mining during tenancy of Corona Quarries, Inc. Site investigation and LiDAR analysis determined ground disturbance and several roads consistent with clay mining/exploration, including a trench-like feature.	Sections II.D.2, V.F.3	Figures 3.8, 3.9, 4.21
M-53	1980's	Surface mining activity consistent with exploration and bedrock exposure/evaluation.	A road cut/dozer scrape path trending along a bedrock ridgeline. Visible in aerial imagery dated 2020 and LiDAR. This feature is consistent with surface explorations for mining using a bulldozer to create shallow bedrock exposure along a transect and could be associated with a reported prior attempt to develop a quarry (Harlow Hill Development report (1984).	Section V.F.3, V.G	Figures 3.8, 3.9, 4.19
M-54	2012	Mining activity as of 2019 in accordance		Section II.D.3, V.G	Figures 3.8, 3.9, 4.22

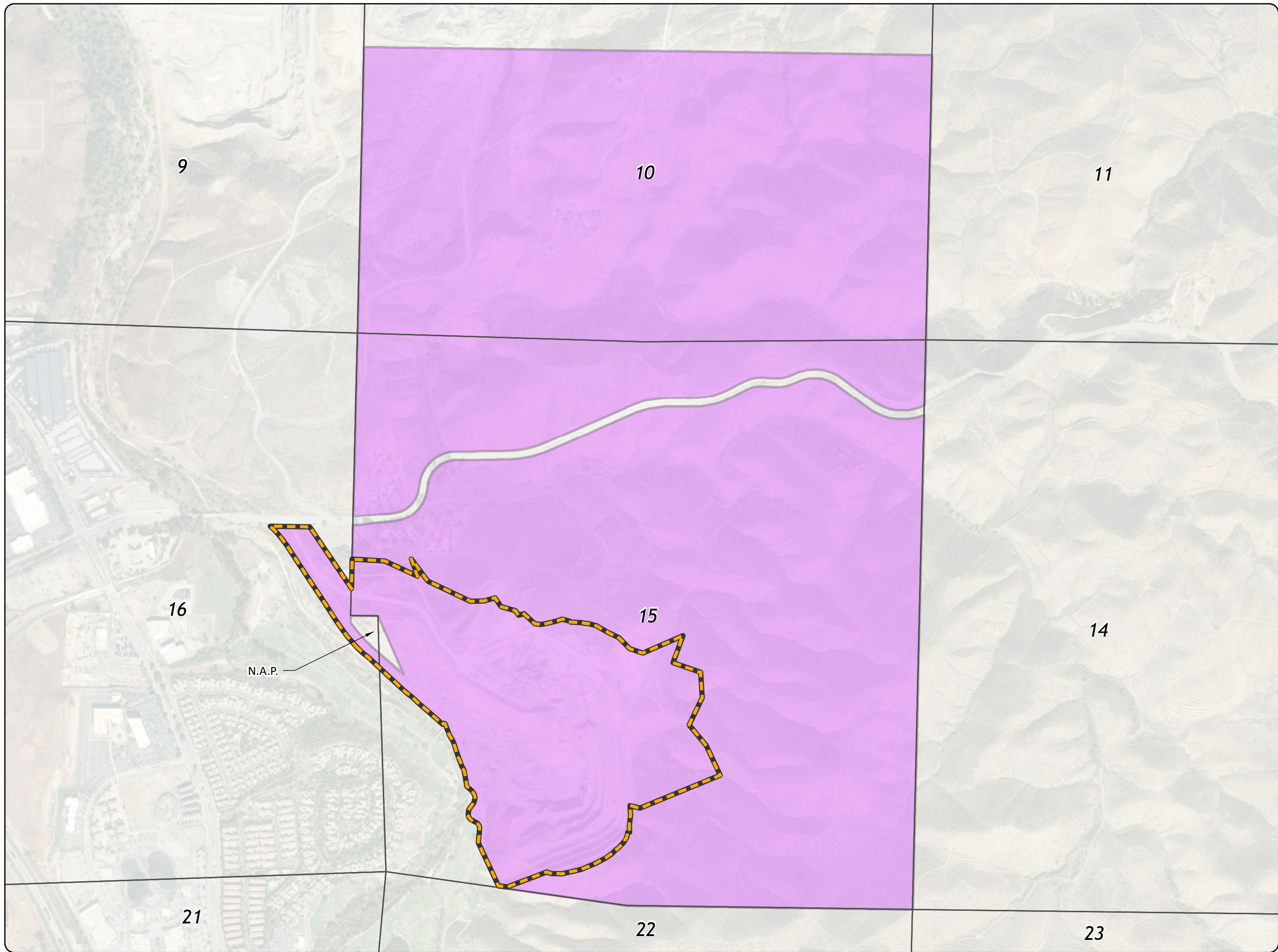
Appendix B-1: Vested Rights Area

Figure B-1.1: 1949 HH VRA

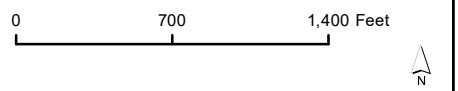
Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1949 Vested Rights Area
-  Not a Part (of Robertson's Ownership Interest, 1949)



Basemap: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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


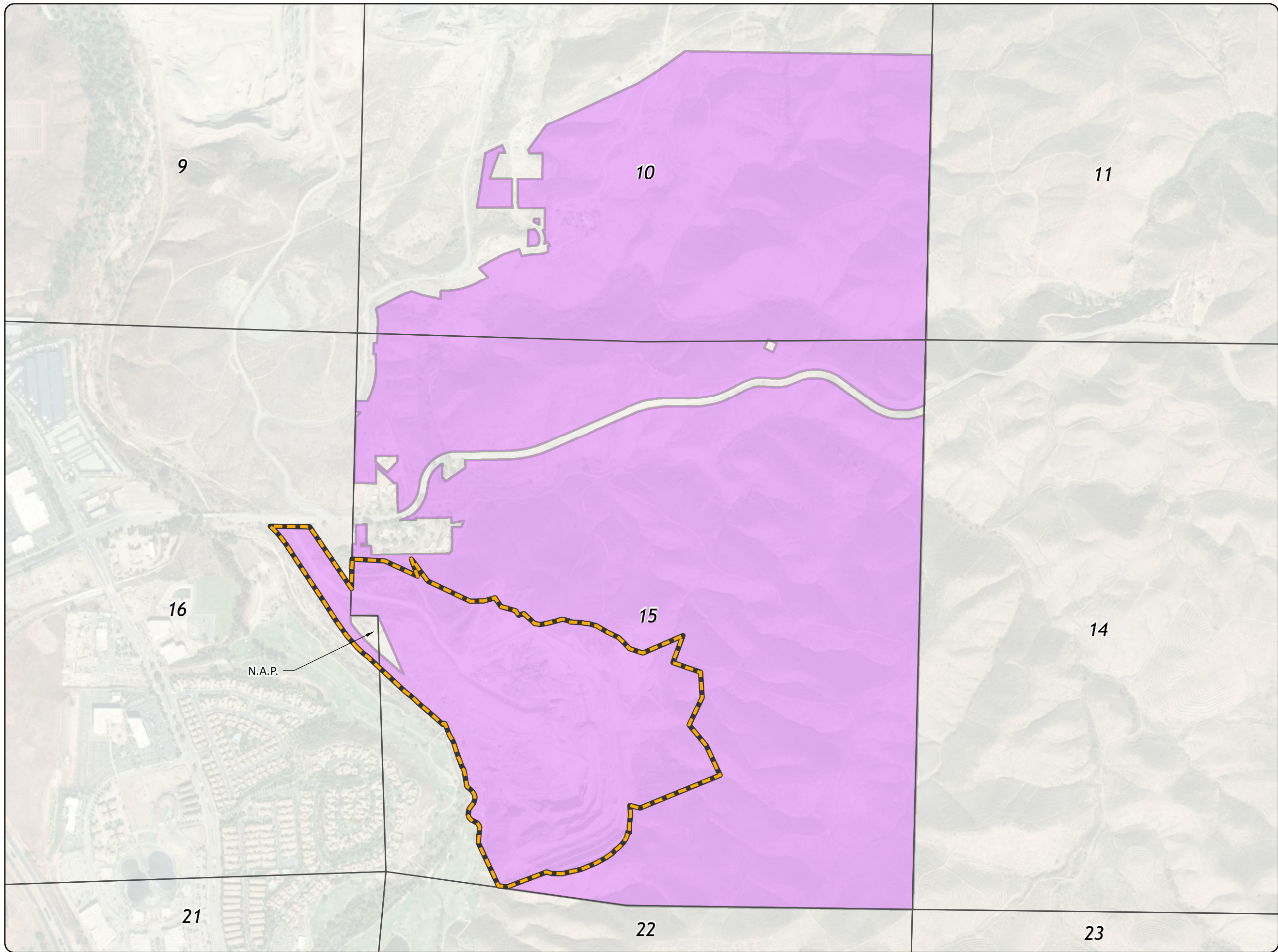
Appendix B-1: Vested Rights Area

Figure B-1.2: 2021 HH VRA

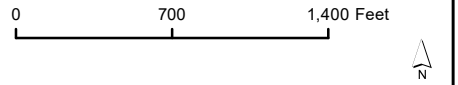
Confirmation of Geographic
Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary
(Vested Rights Confirmed)
-  Vested Rights Area (HH VRA)
-  Not a Part (of Robertson's
Ownership Interest, 1949)



Basemap: Source: Esri, Maxar, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS,
AeroGRID, IGN, and the GIS User Community



*Disclaimer: The data was mapped for planning purposes
only. No liability is assumed for accuracy of the data shown.*





Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652



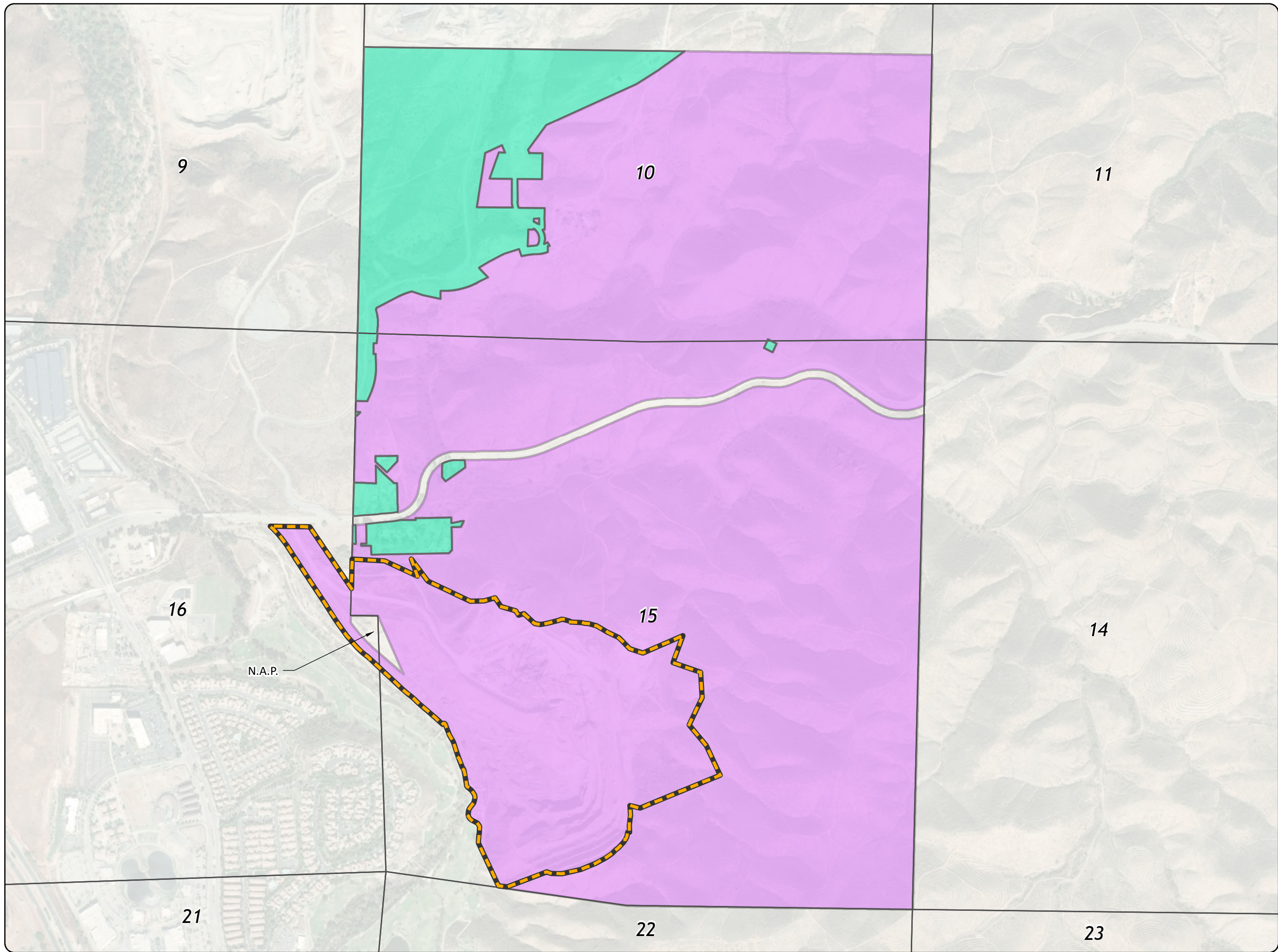
Appendix B-1: Vested Rights Area
**Figure B-1.3: Comparison of 1949
 and 2021 HH VRA Boundaries**

Confirmation of Geographic
 Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

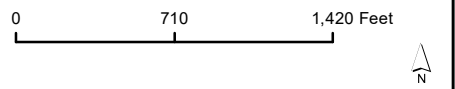
Legend:

-  RCL118S4 Boundary
(Vested Rights Confirmed)
-  2021 HH VRA
-  Ownership interests modified
since original vesting in 1949*
-  Not a Part (of Robertson's
Ownership Interest, 1949)

Note:
 *RRM is not seeking at this time to confirm vested
 rights in the areas for which ownership interests
 have been modified. RRM reserves the right to seek
 confirmation of vested rights in those areas in the
 future.



Basemap: Source: Esri, Maxar, GeoEye, Earthstar
 Geographics, CNES/Airbus DS, USDA, USGS,
 AeroGRID, IGN, and the GIS User Community



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 only. No liability is assumed for accuracy of the data shown.

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Appendix B-2: Ownership

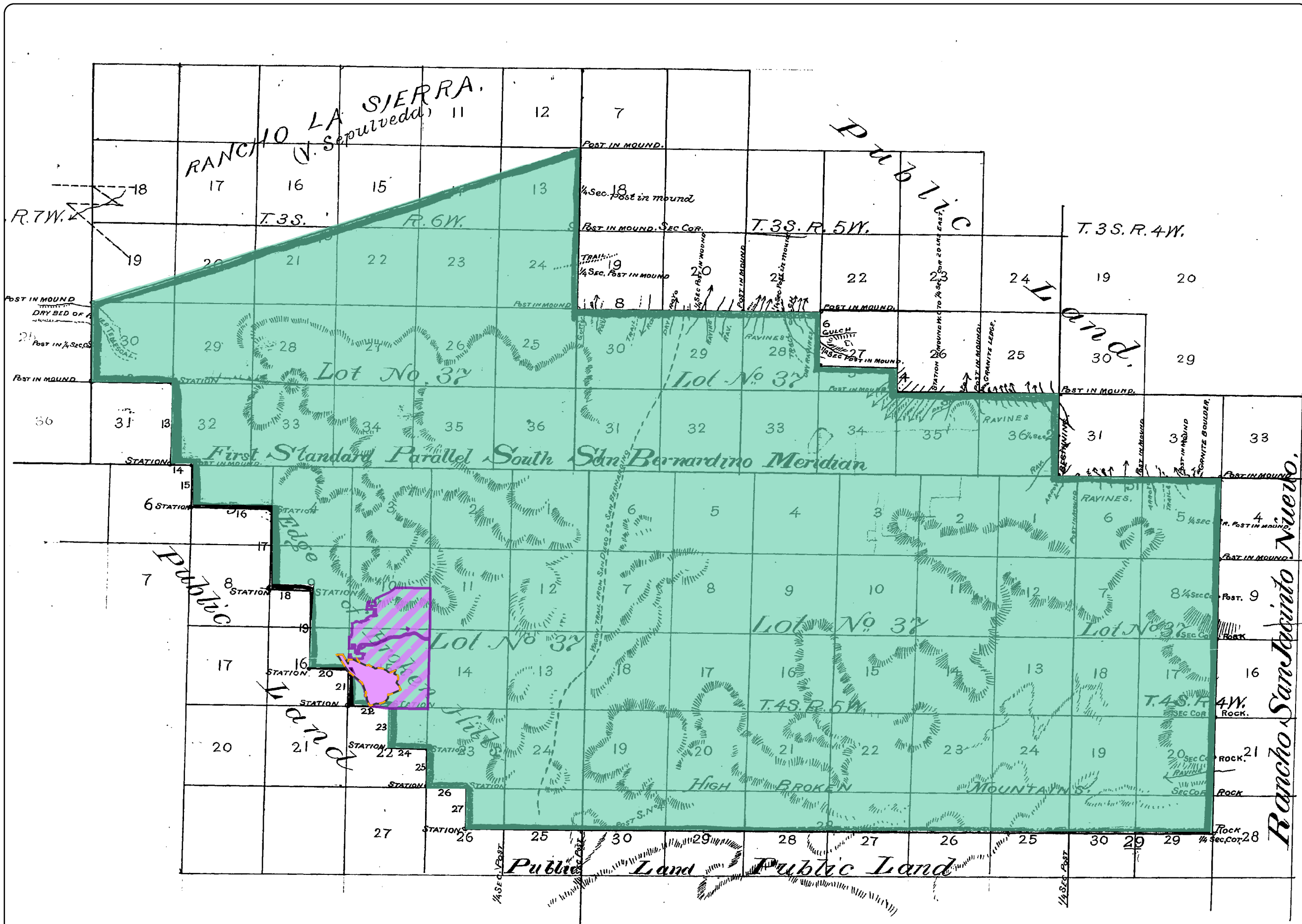
Figure B-2.1: 1867

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

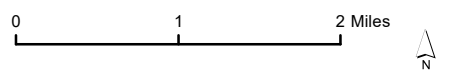
Legend:

-  RCL118S4 Boundary
-  Area subject to Prior Vesting Confirmation (S-4 VRA)
-  HH VRA
-  Rancho El Sobrante de Jacinto Land Grant Ownership*

*Note: The Rancho el Sobrante de San Jacinto was a Mexican Land Grant, confirmed and conveyed into private ownership by U.S. Patent in 1867. The Rancho El Sobrante de Jacinto Land Grant is a RRM predecessor.



Basemap: Plat of the Rancho el Sobrante de San Jacinto. Geo H. Thompson, Dep. Surv. May and November 1866.



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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Appendix B-2: Ownership

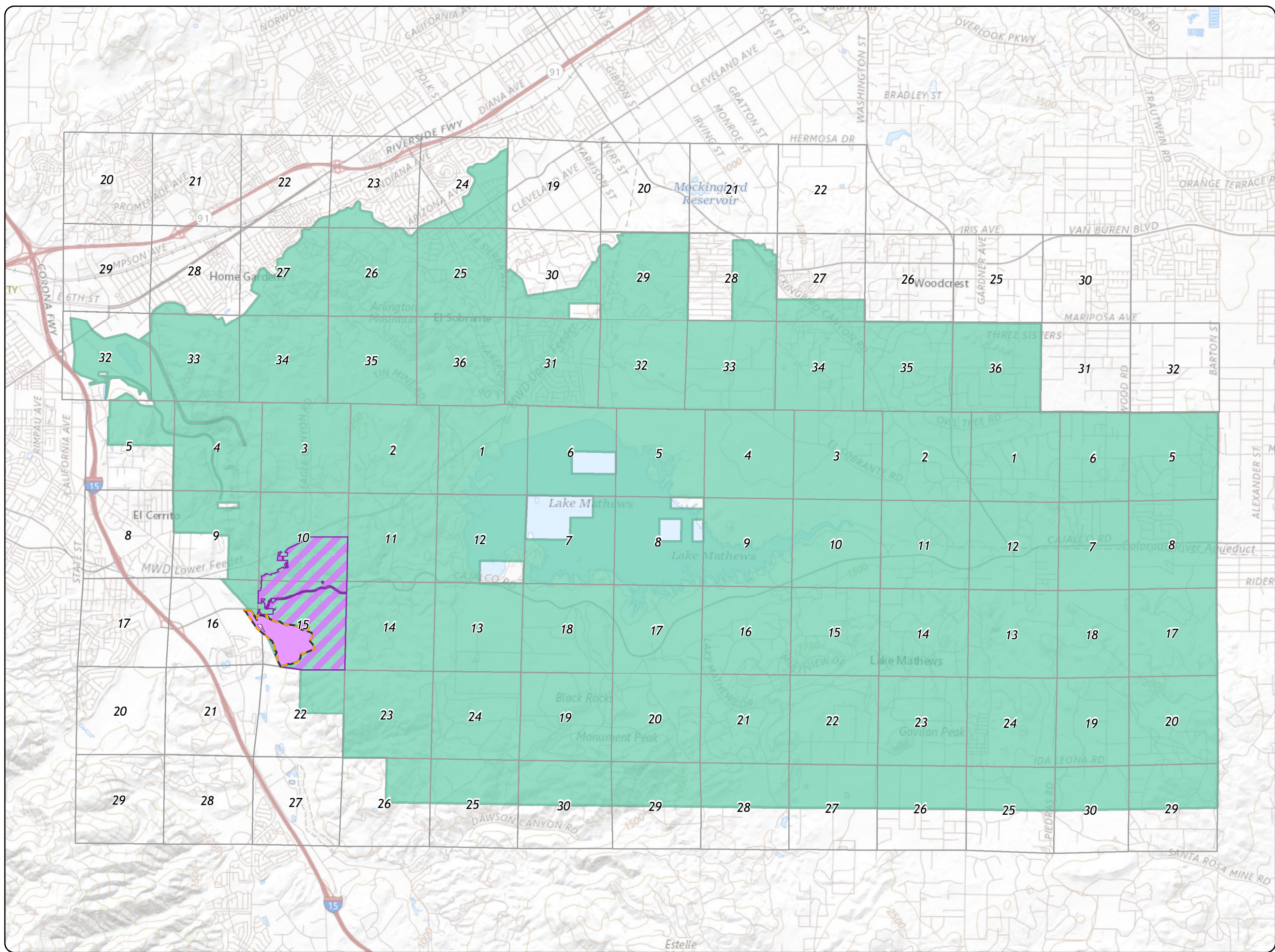
Figure B-2.2: 1924

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary
-  Area subject to Prior Vesting Confirmation (S-4 VRA)
-  HH VRA
-  1924 Sobrante Ownership*

*Note: The 1924 ownership depicts the remainder of the Rancho el Sobrante de San Jacinto, following the sale of portions of the original land holding from 1867-1924. The Sobrante Ownership is a RRM predecessor.



Basemap: USGS The National Map.

0 0.5 1 1.5 Miles

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


Appendix B-2: Ownership

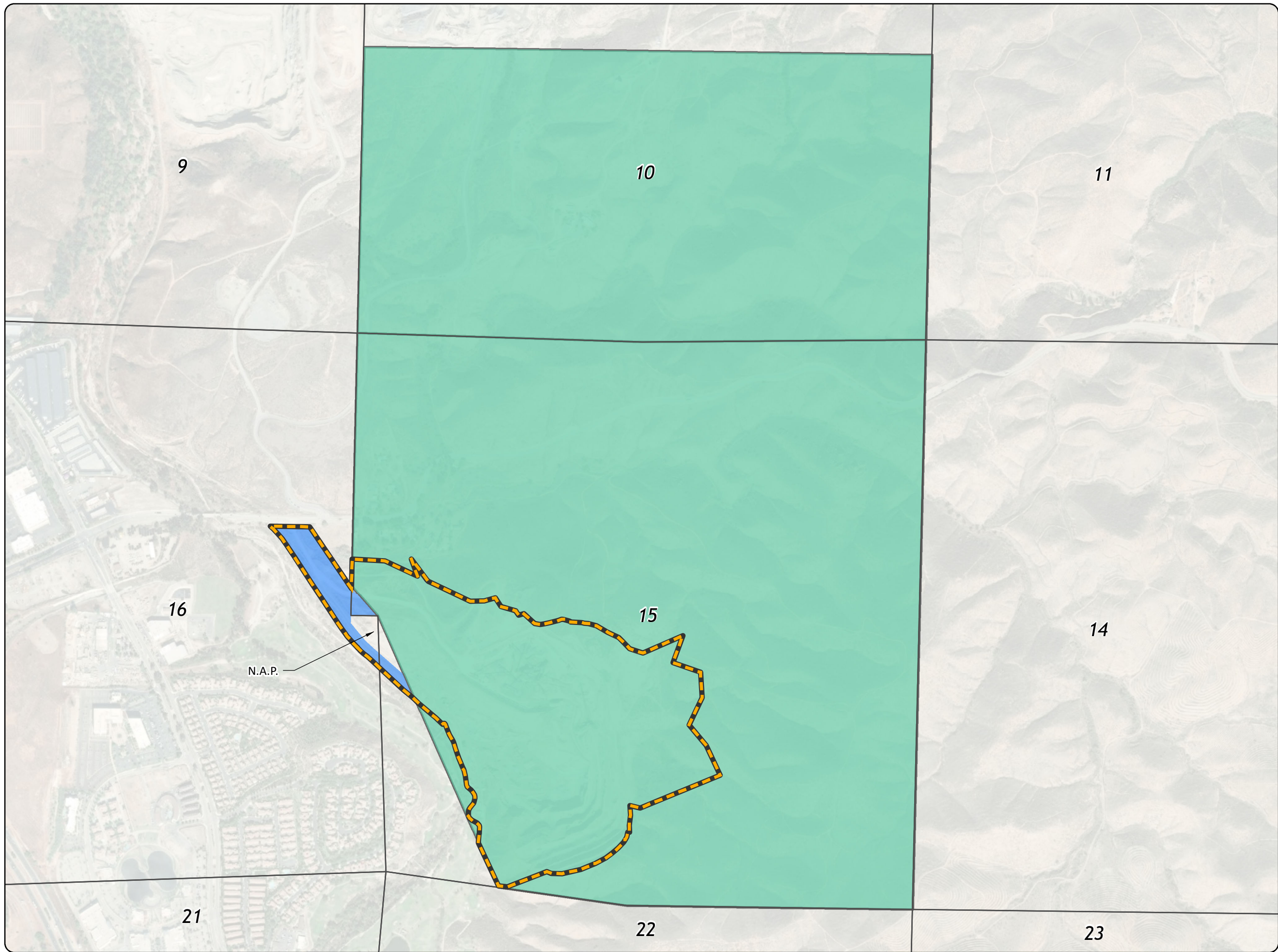
Figure B-2.3: 1925

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

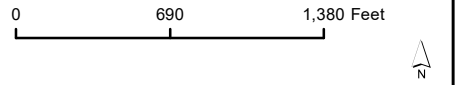
Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1925 E.E. Peacock Ownership (1*)
-  Easement Area (2*)

*Note:
(1) The Peacock Ownership is a RRM predecessor.
(2) Easement Area acquired by RRM predecessor by 1932, including in area condemned by ATSF Railroad. Underlying fee simple land reacquired by RRM by 1986.



Basemap: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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



Appendix B-2: Ownership

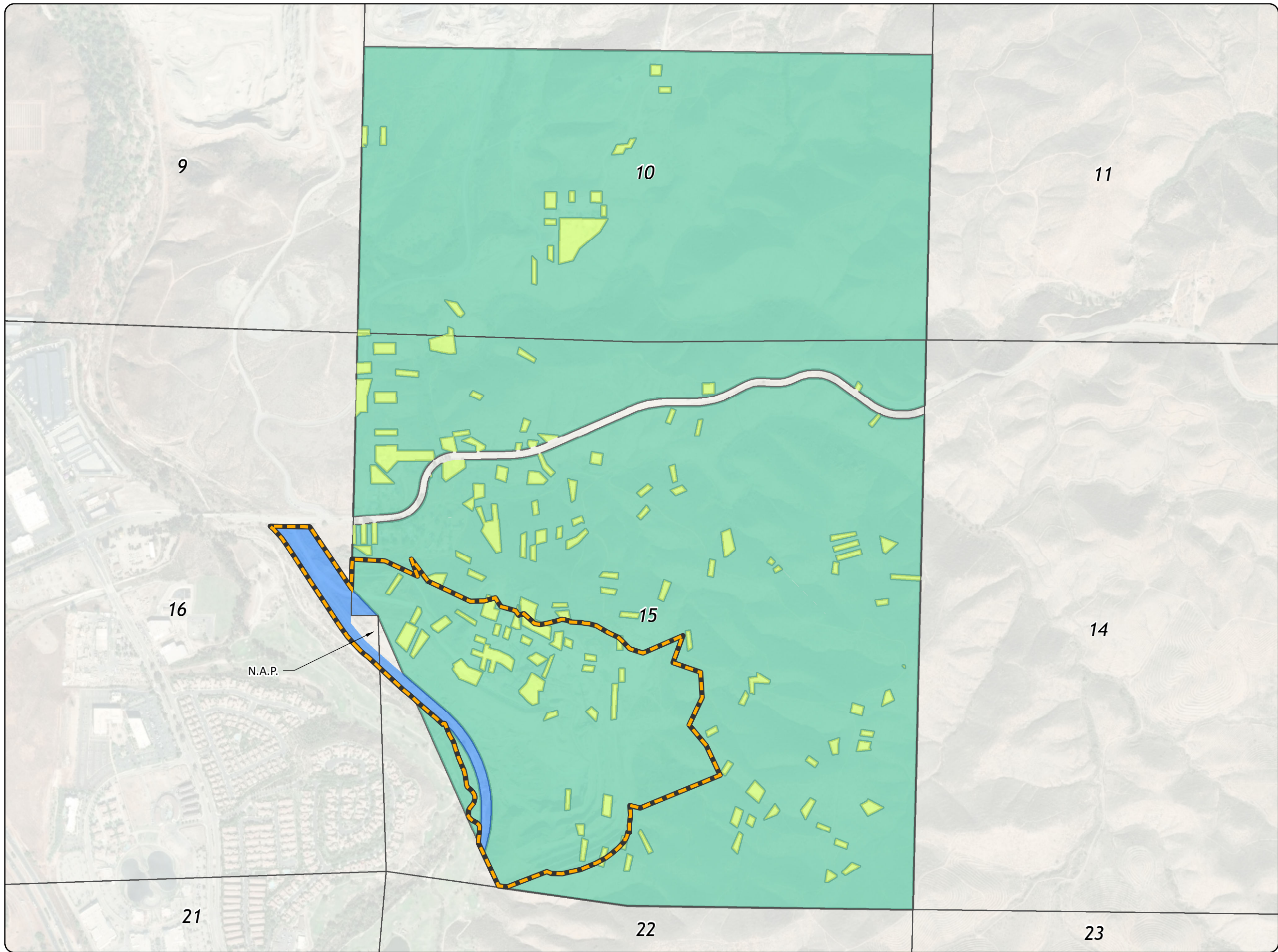
Figure B-2.4: 1948

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

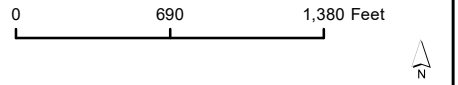
Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1948 Kuhry / Harlow Ownership (1*)
-  Easement Area (2*)
-  Reserved Rights (3*)

**Note:*
(1) The Kuhry / Harlow Ownership is a RRM predecessor.
(2) Easement Area acquired by RRM predecessor by 1932, including in area condemned by ATSF Railroad. Underlying fee simple land reacquired by RRM by 1986.
(3) Area of ownership conveyance by Peacock, RRM predecessor, subject to reserved rights, including all mineral rights.



Basemap: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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Appendix B-2: Ownership

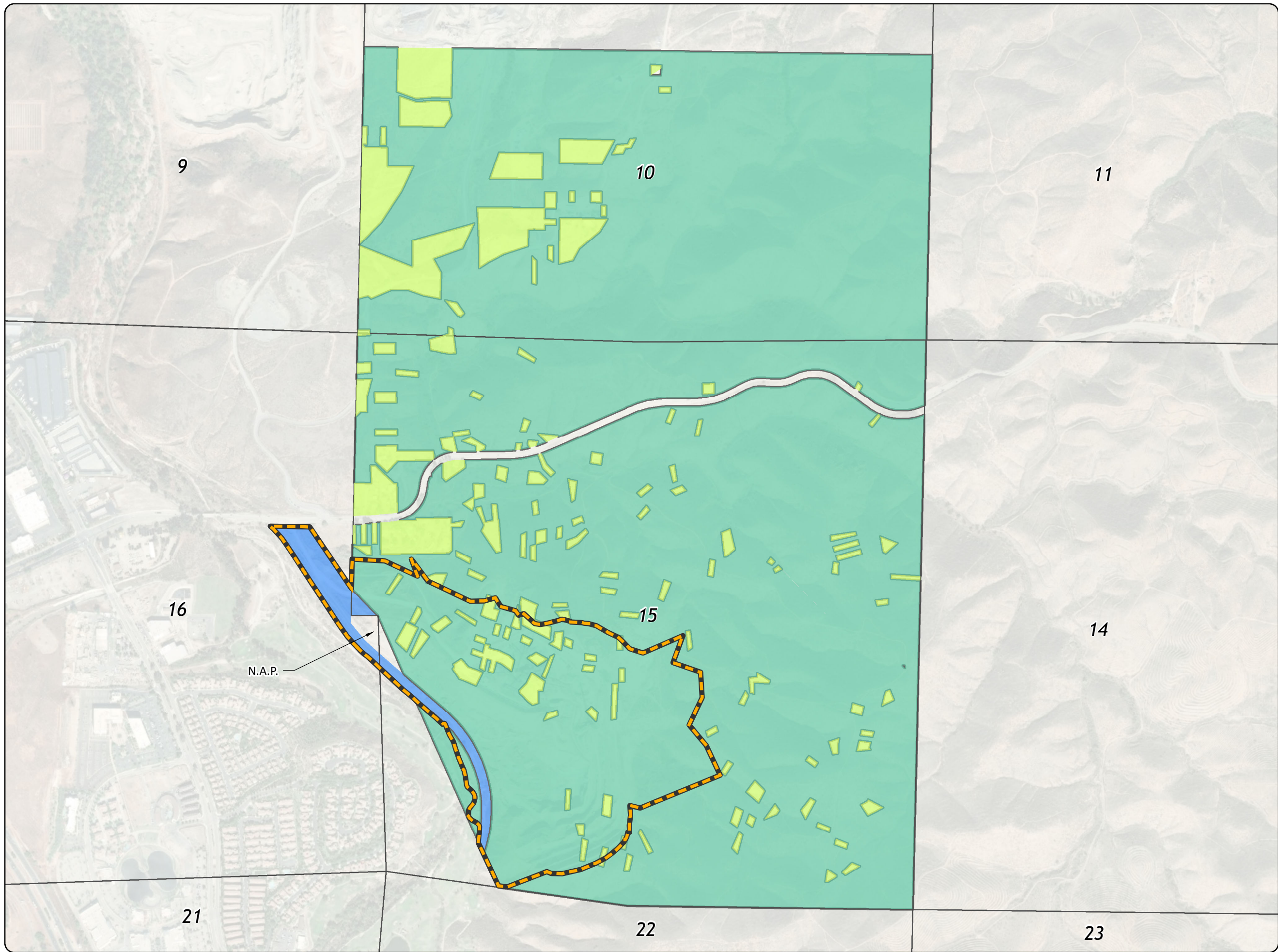
Figure B-2.5: 1966

Confirmation of Geographic
Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

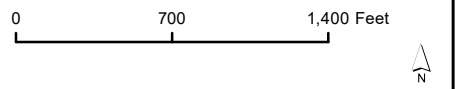
Legend:

-  RCL118S4 Boundary
(Vested Rights Confirmed)
-  1966 Harlow Ownership (1*)
-  Easement Areas (2*)
-  Reserved Rights (3*)

**Note:*
(1) The Harlow Ownership is a RRM predecessor.
(2) Easement Area acquired by RRM predecessor
by 1932, including in area condemned by ATSF
Railroad. Underlying fee simple land reacquired by
RRM by 1986.
(3) Area of ownership conveyance by Peacock,
RRM predecessor, subject to reserved rights,
including all mineral rights.



Basemap: Source: Esri, Maxar, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS,
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Appendix B-2: Ownership

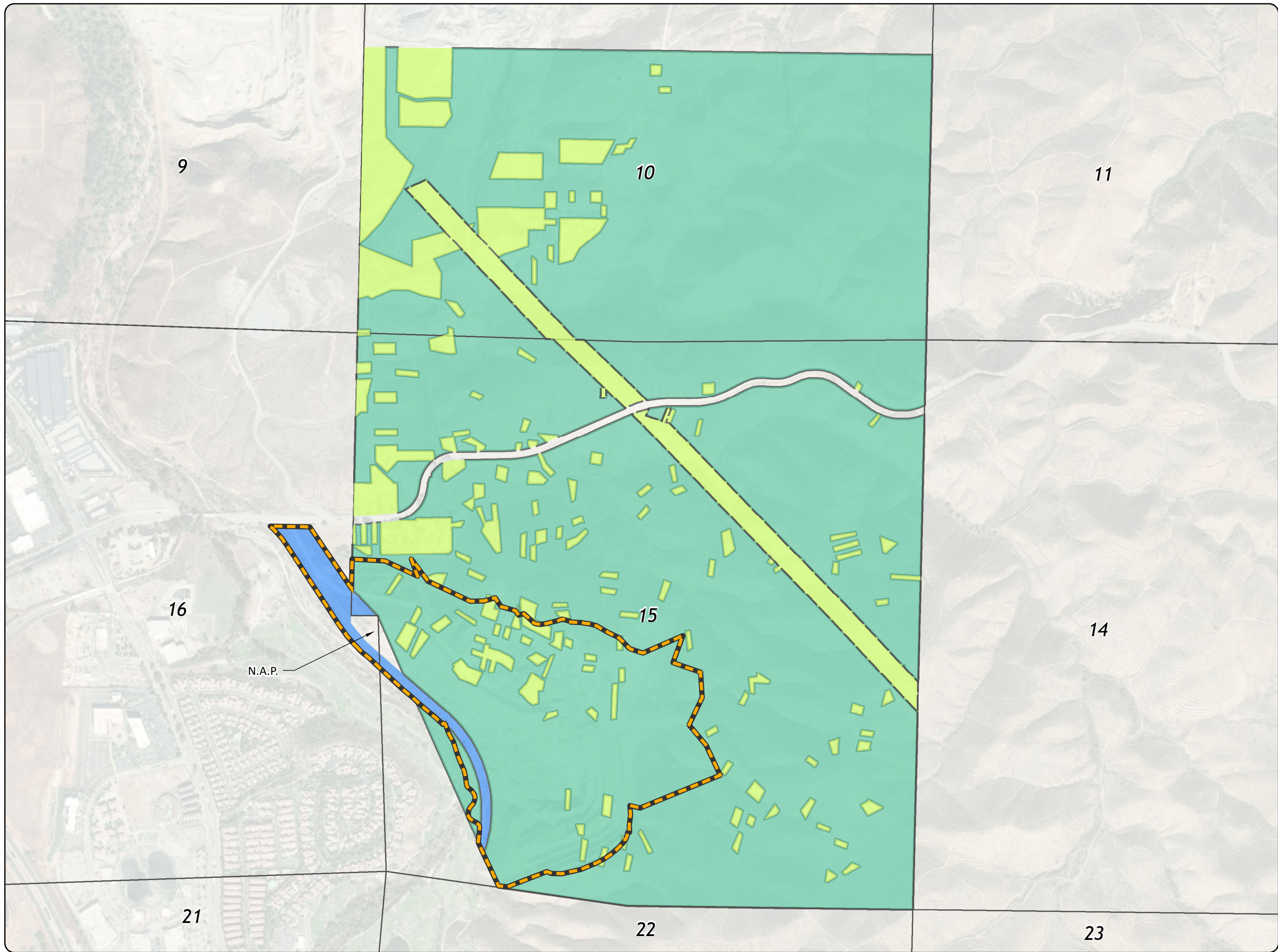
Figure B-2.6: 1976

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

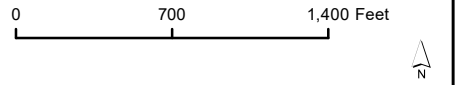
Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1976 Occidental Ownership (1*)
-  Easement Areas (2*)
-  Reserved Rights (3*)
-  Reserved Rights subject to Public Utility (4*)

**Note:*
(1) The Occidental Ownership is a RRM predecessor.
(2) Easement Area acquired by RRM predecessor by 1932, including in area condemned by ATSF Railroad. Underlying fee simple land reacquired by RRM by 1986.
(3) Area of ownership conveyance by Peacock, RMM predecessor, subject to reserved rights, including all mineral rights.
(4) Reserved Rights subject to public utility use by Southern California Edison.



Basemap: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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Appendix B-2: Ownership

Figure B-2.7 : 2021

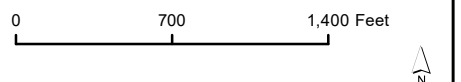
Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  2021 RRM Ownership
-  Reserved Rights (1*)
-  Reserved Rights subject to Public Utility (2*)
-  Ownership interests modified since original vesting in 1949(3*)

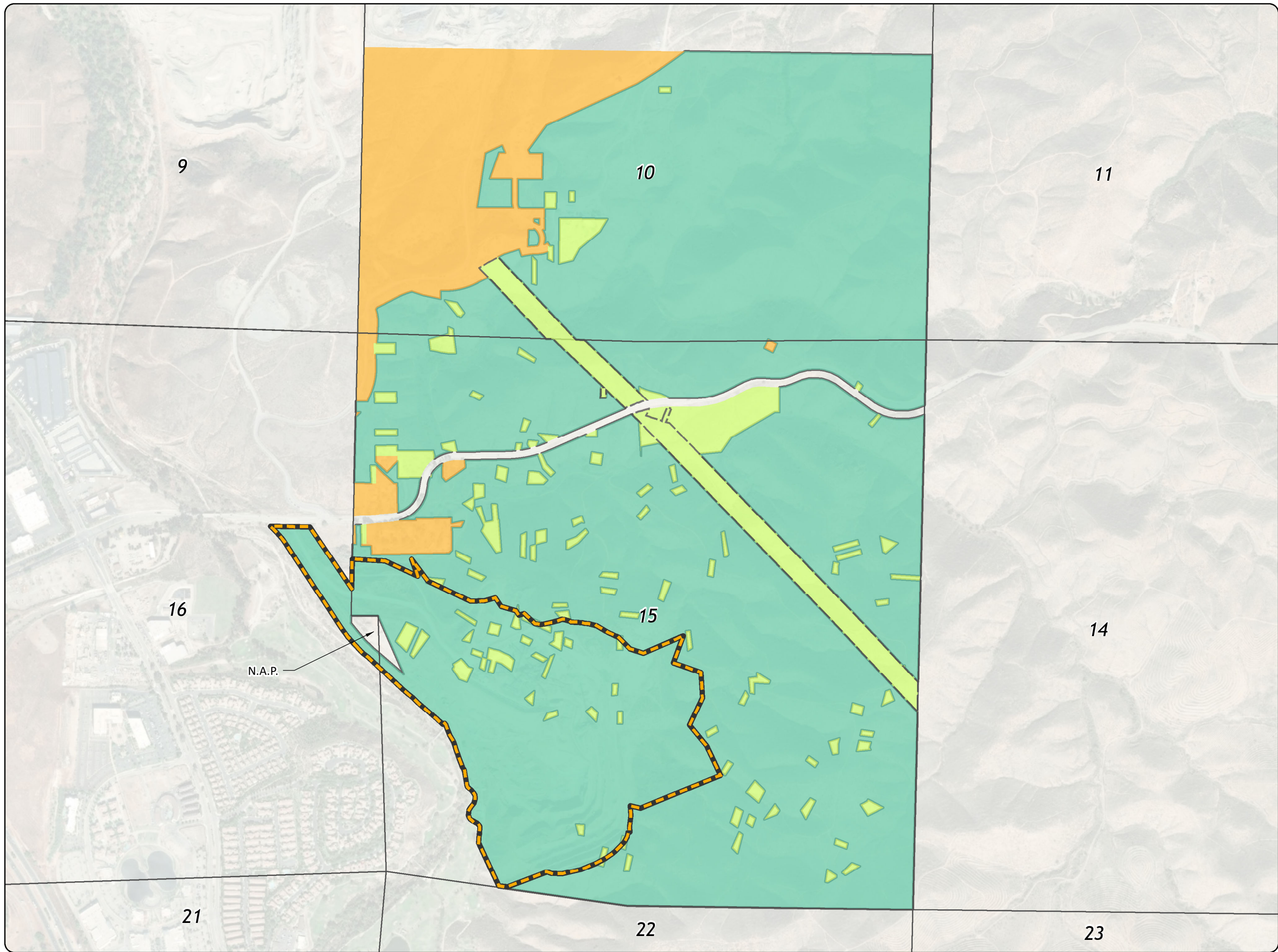
**Note:*
(1) Area of ownership conveyance by Peacock, RMM predecessor, subject to reserved rights, including all mineral rights.
(2) Reserved Rights subject to public utility use by Southern California Edison.
(3) RRM is not seeking at this time to confirm vested rights in the areas for which ownership interests have been modified. RRM reserves the right to seek confirmation of vested rights in those areas in the future.

Basemap: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



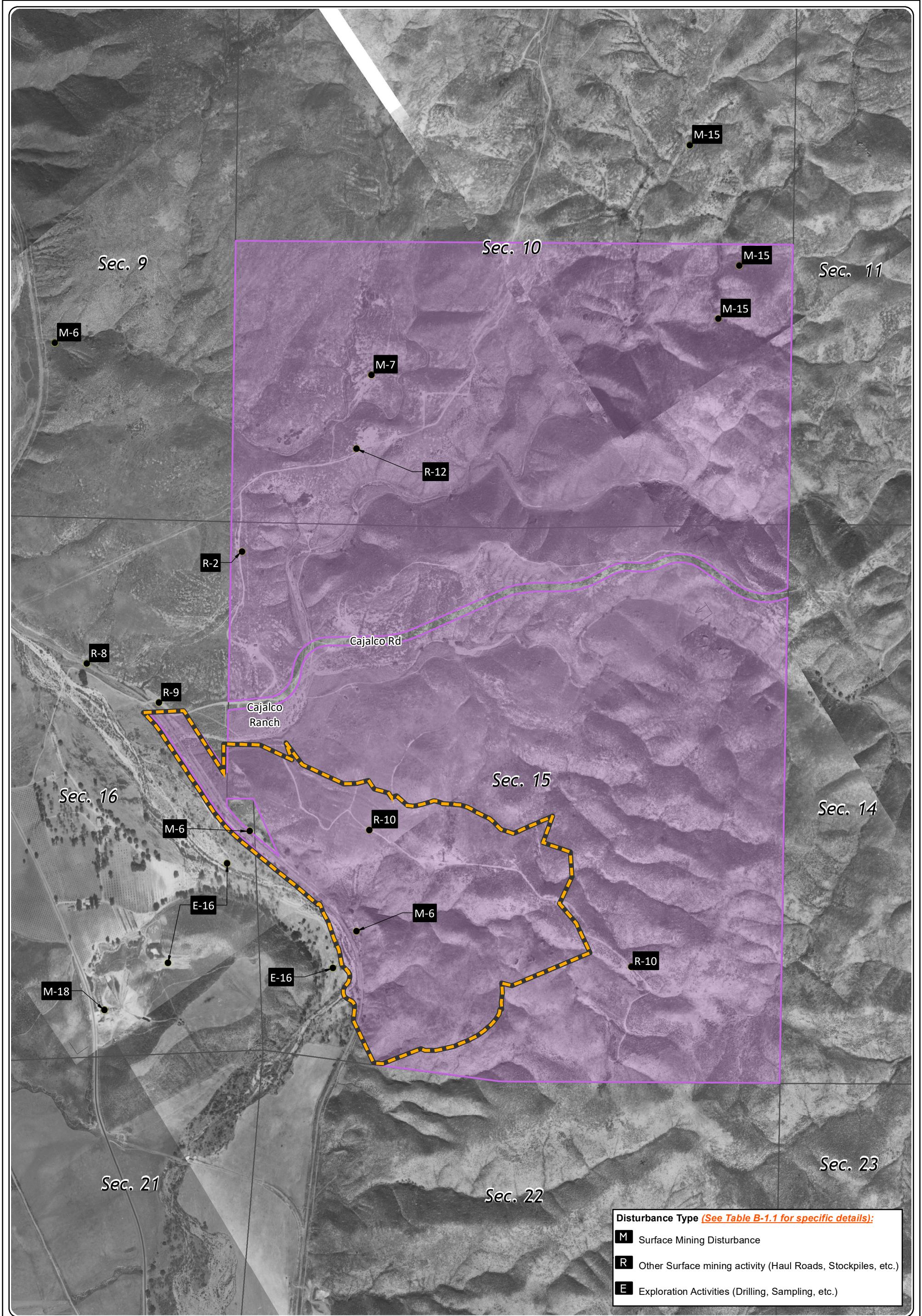
Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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N.A.P.

Projects\038 - Robertsons Ready Mix\Reserved Rights\Parcel Mapping\1048 Ownership Draft.mxd 12/13/2021



Aerial photograph dated 1931. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

Legend:

- RCL118S4 Boundary (Vested Rights Confirmed)
- 1949 HH VRA
- Pre-1949 Surface Mining Activity

0 1,000 2,000 Feet

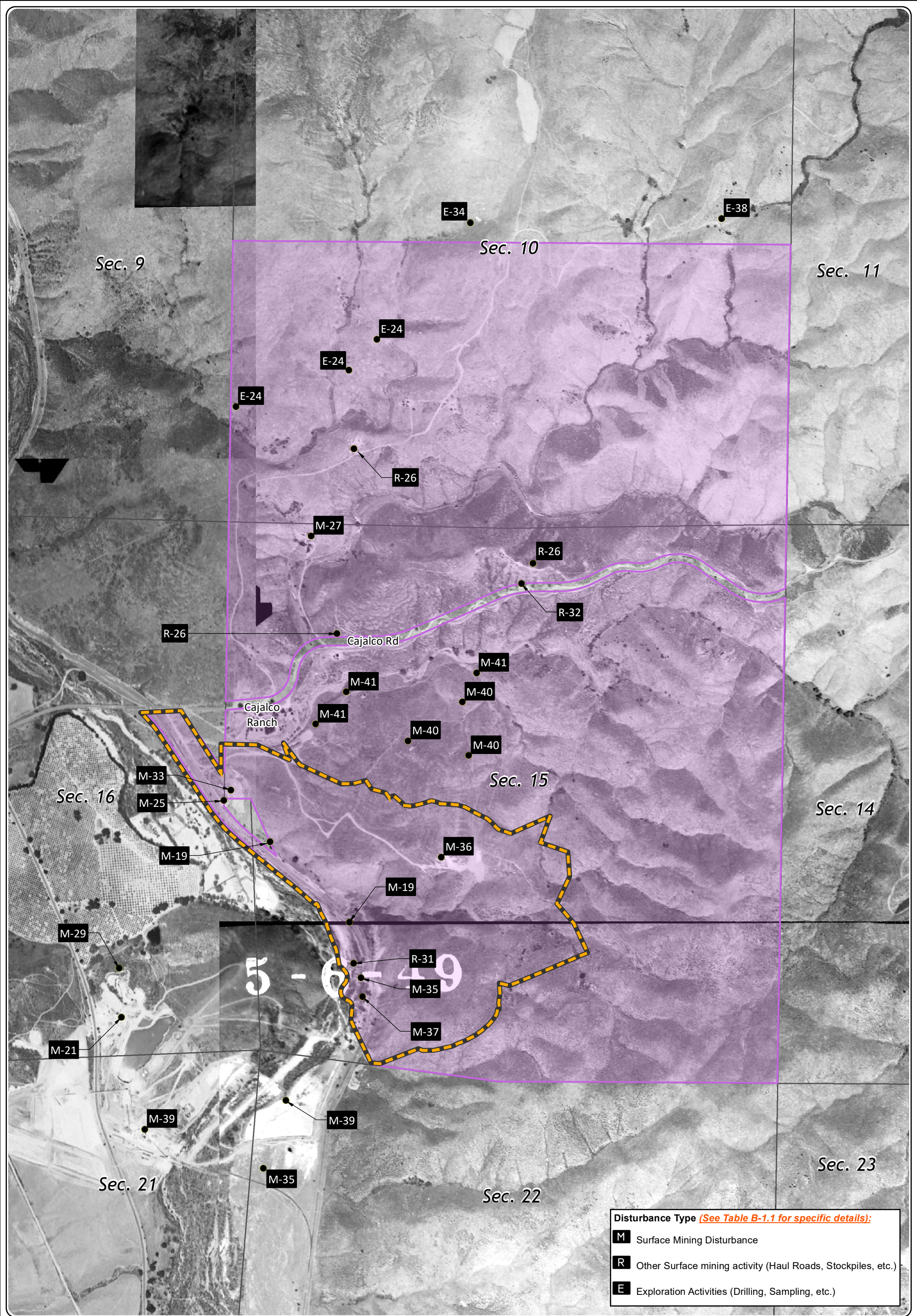
HH VRA 1867-1925
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-3: Surface Mining Activity
 Figure B-3.1: HH VRA 1867-1925

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

12/15/2021

COMPASS LAND
GROUP



Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

Legend:

- RCL118S4 Boundary (Vested Rights Confirmed)
- 1949 HH VRA
- Pre-1949 Surface Mining Activity

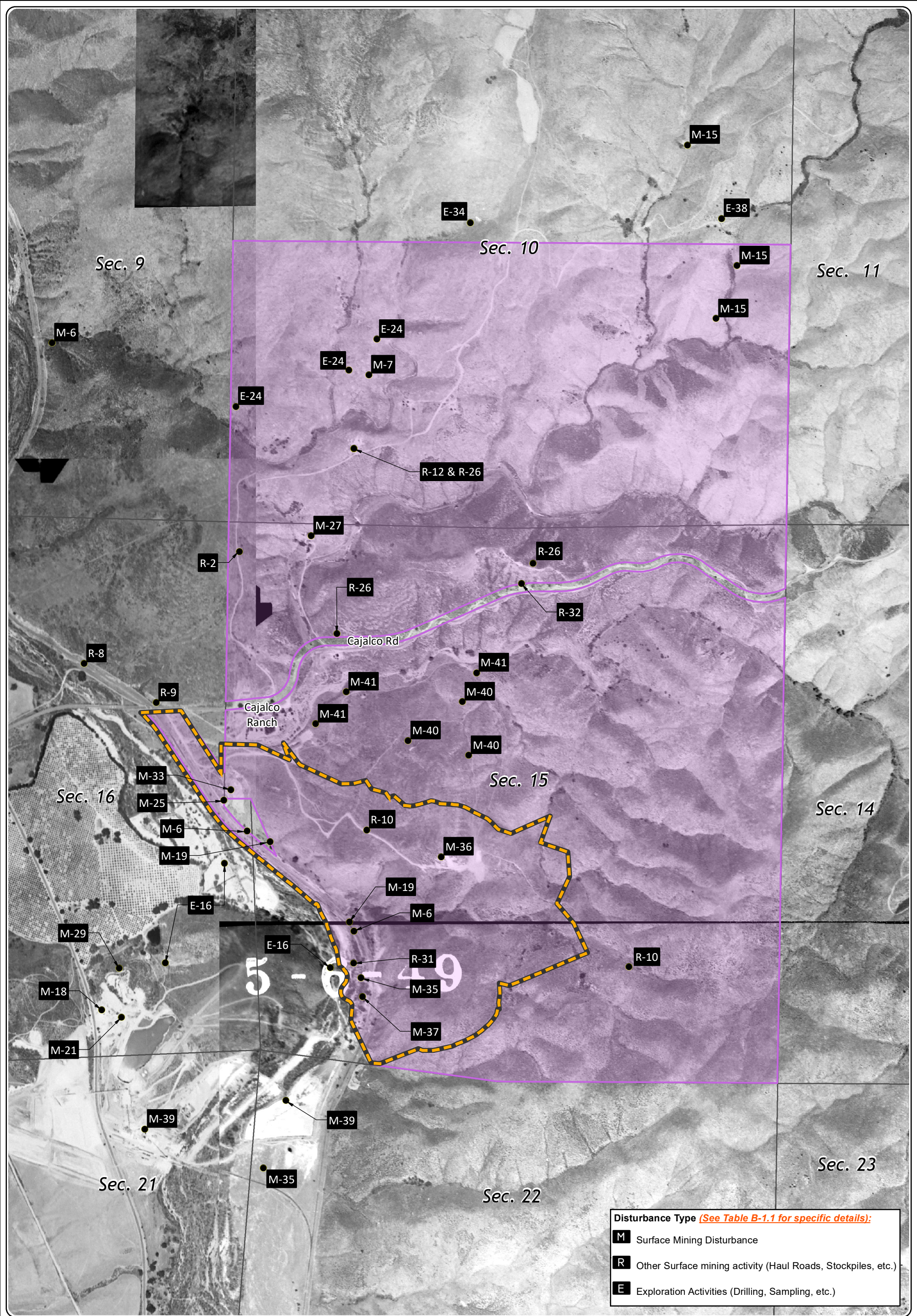
0 1,000 2,000 Feet

HH VRA 1925-1949
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-3: Surface Mining Activity
 Figure B-3.2: HH VRA 1925-1949

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

12/15/2021 **COMPASS LAND GROUP**



Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

Legend:

- RCL118S4 Boundary (Vested Rights Confirmed)
- 1949 HH VRA
- Pre-1949 Surface Mining Activity

0 1,000 2,000 Feet

HH VRA 1867-1949
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-3: Surface Mining Activity
 Figure B-3.3: HH VRA 1867-1949

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

12/15/2021 **COMPASS LAND GROUP**

Disturbance Type (See Table B-1.1 for specific details):












- Surface Mining Disturbance
- Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- Exploration Activities (Drilling, Sampling, etc.)

Appendix B-3: Surface Mining Activity




**Figure B-3.4:
Regional Disturbances 1867-1925**

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1949 HH VRA
-  Proximate Area of Tin Mine Activity
-  Proximate Area of Silica-Sand Mine Activity
-  Proximate Area of Aggregate Mine Activity
-  Tin Mine Haul Road
-  Clay Mine Haul Road
-  Rail Road
-  Haul Road
-  Public Roads
-  Pre-1949 Surface Mining

USGS Plate-3 Tin Mine Features

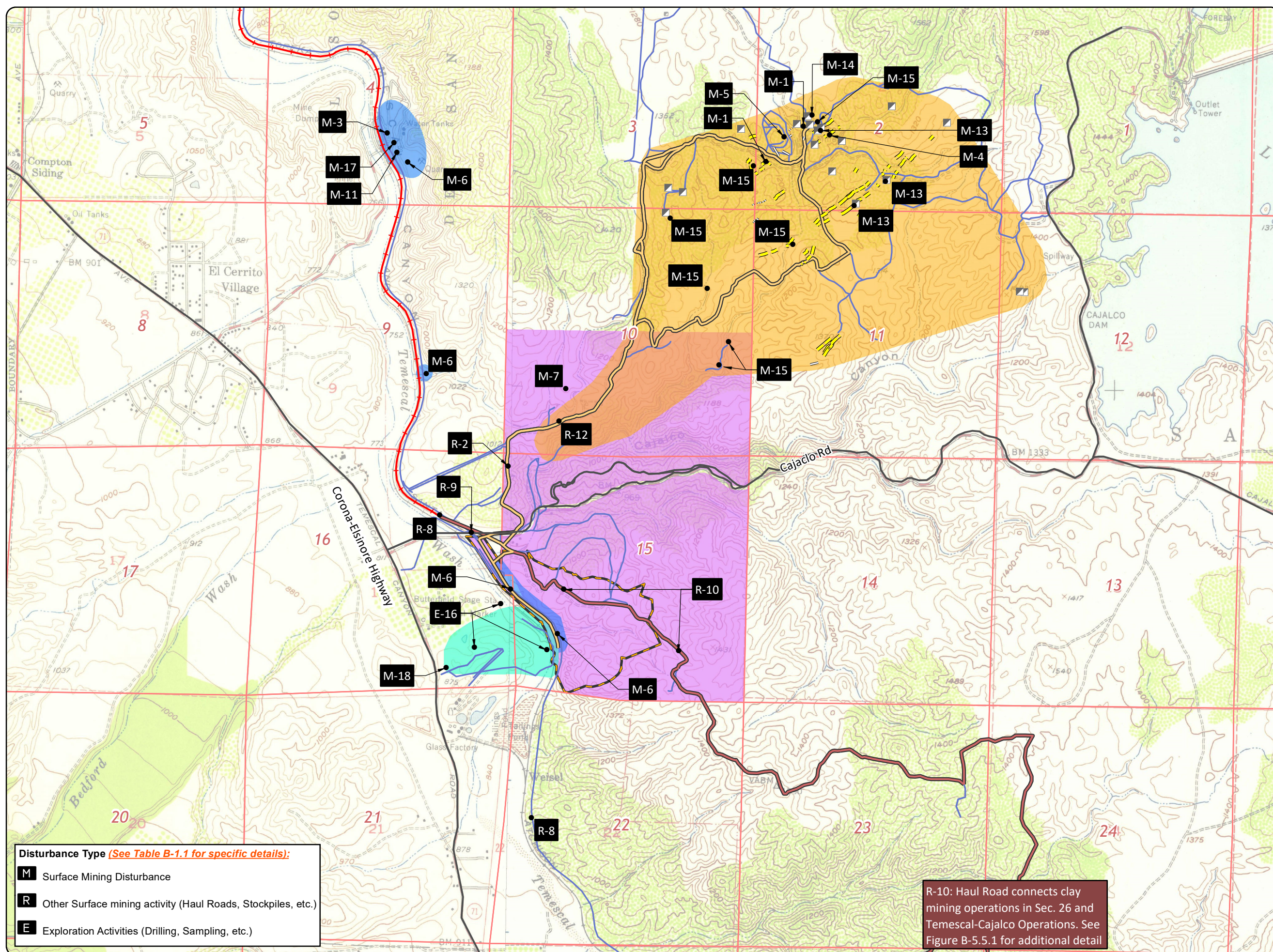
-  Stripped Tourmaline vein
-  Trench, Pit or Adit
-  Mine Shaft

This base map was compiled from historical USGS topo quadrangles maps and county GIS parcel dataset. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

0 1,500 3,000 Feet

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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Disturbance Type (See Table B-1.1 for specific details):


- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Appendix B-3: Surface Mining Activity

**Figure B-3.5:
Regional Disturbances 1925-1949**

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

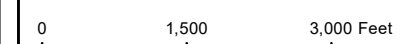
Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1949 HH VRA
-  Proximate Area of Tin Mine Activity
-  Proximate Area of Silica-Sand Mine Activity
-  Proximate Area of Aggregate Mine Activity
-  Tin Mine Haul Road
-  Clay Mine Haul Road
-  Haul Road
-  Rail Road
-  Public Roads
-  Pre-1949 Surface Mining

USGS Plate-3 Tin Mine Features

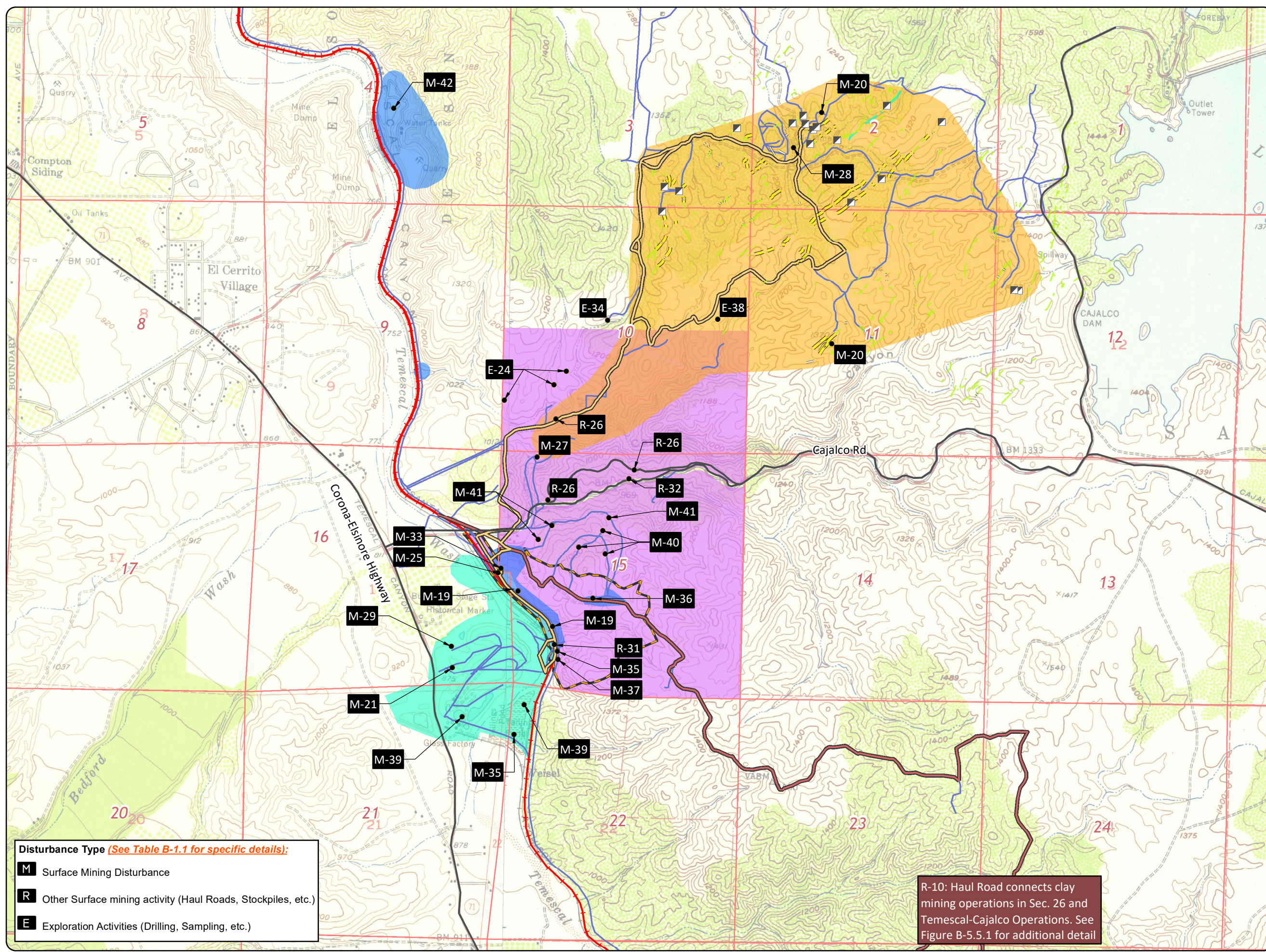
-  Stripped Tourmaline vein
-  Tourmaline vein
-  Trachyte porphyry vein
-  Trench, Pit or Adit
-  Mine Shaft




This base map was compiled from historical USGS topo quadrangles maps and county GIS parcel dataset. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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- Disturbance Type (See Table B-1.1 for specific details):**
-  Surface Mining Disturbance
 -  Other Surface mining activity (Haul Roads, Stockpiles, etc.)
 -  Exploration Activities (Drilling, Sampling, etc.)

**Figure B-3.6:
Regional Disturbances 1867-1949**

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1949 HH VRA
-  Proximate Area of Tin Mine Activity
-  Proximate Area of Silica-Sand Mine Activity
-  Proximate Area of Aggregate Mine Activity
-  Tin Mine Haul Road
-  Clay Mine Haul Road
-  Rail Road
-  Haul Road
-  Public Roads
-  Pre-1949 Surface Mining

USGS Plate-3 Tin Mine Features

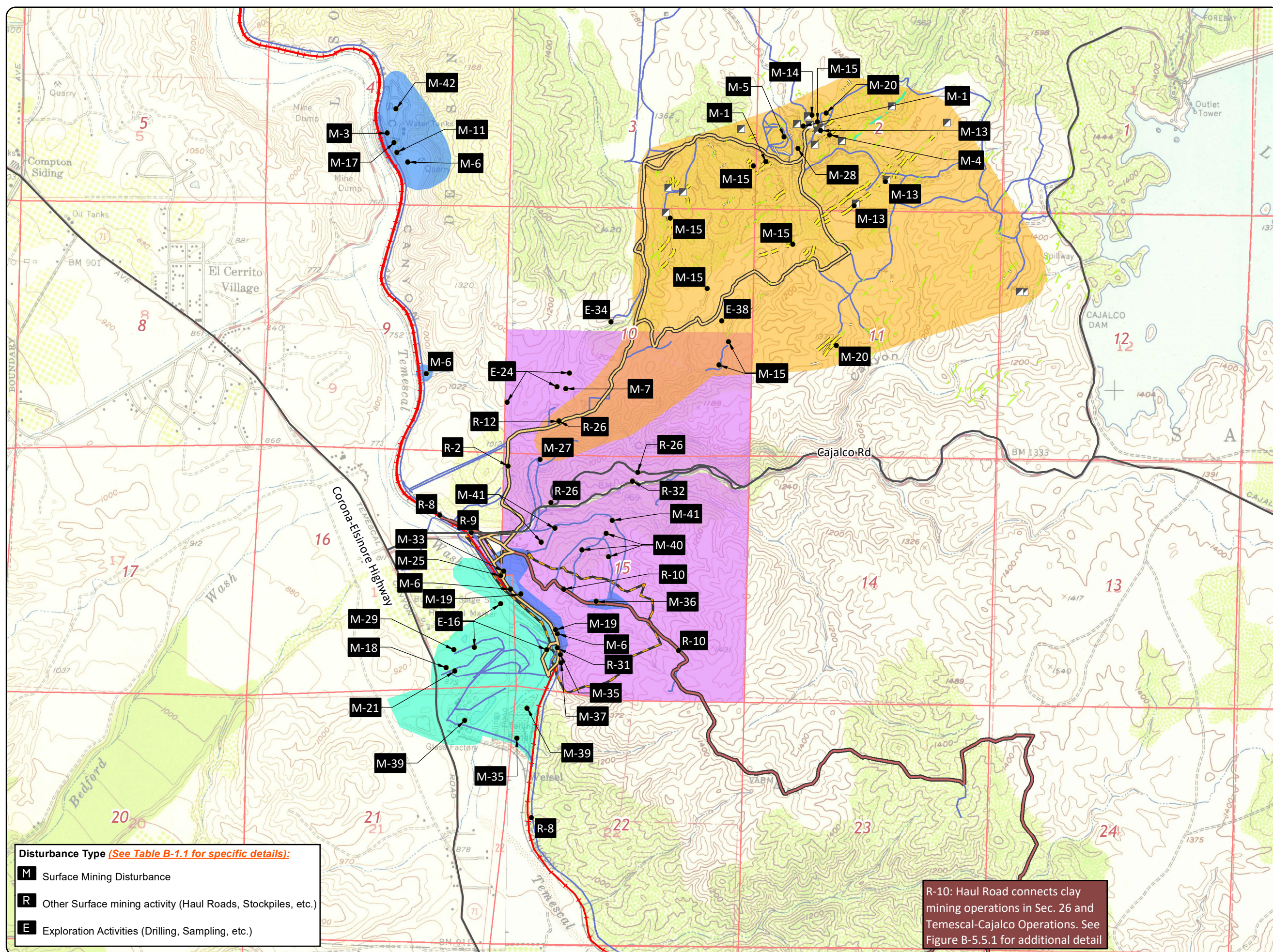
-  Stripped Tourmaline vein
-  Tourmaline vein
-  Trachyte porphyry vein
-  Trench, Pit or Adit
-  Mine Shaft

This base map was compiled from historical USGS topo quadrangles maps and county GIS parcel dataset. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

0 1,500 3,000 Feet

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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Disturbance Type (See Table B-1.1 for specific details):








- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

R-10: Haul Road connects clay mining operations in Sec. 26 and Temescal-Cajalco Operations. See Figure B-5.5.1 for additional detail

Figure B-3.7:
Haul Roads 1867-1949

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1949 HH VRA
-  Tin Mine Haul Road
-  Clay Mine Haul Road
-  Internal Haul Roads
-  Rail Road
-  Public Roads

Note:
Haul Road use by surface ownership and/or easement rights.

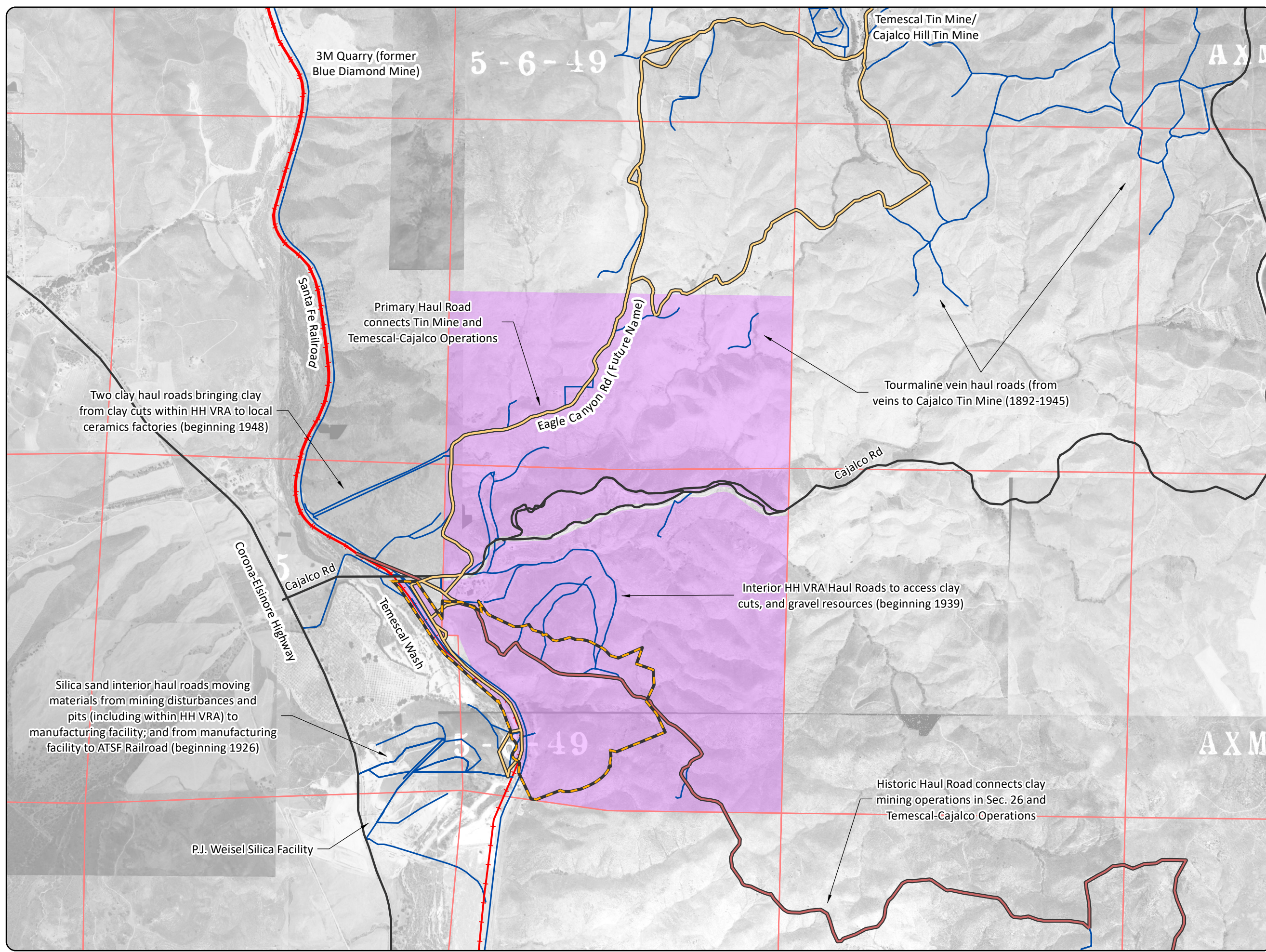
This base map was compiled from multiple historical May 1949 aerial photographs. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

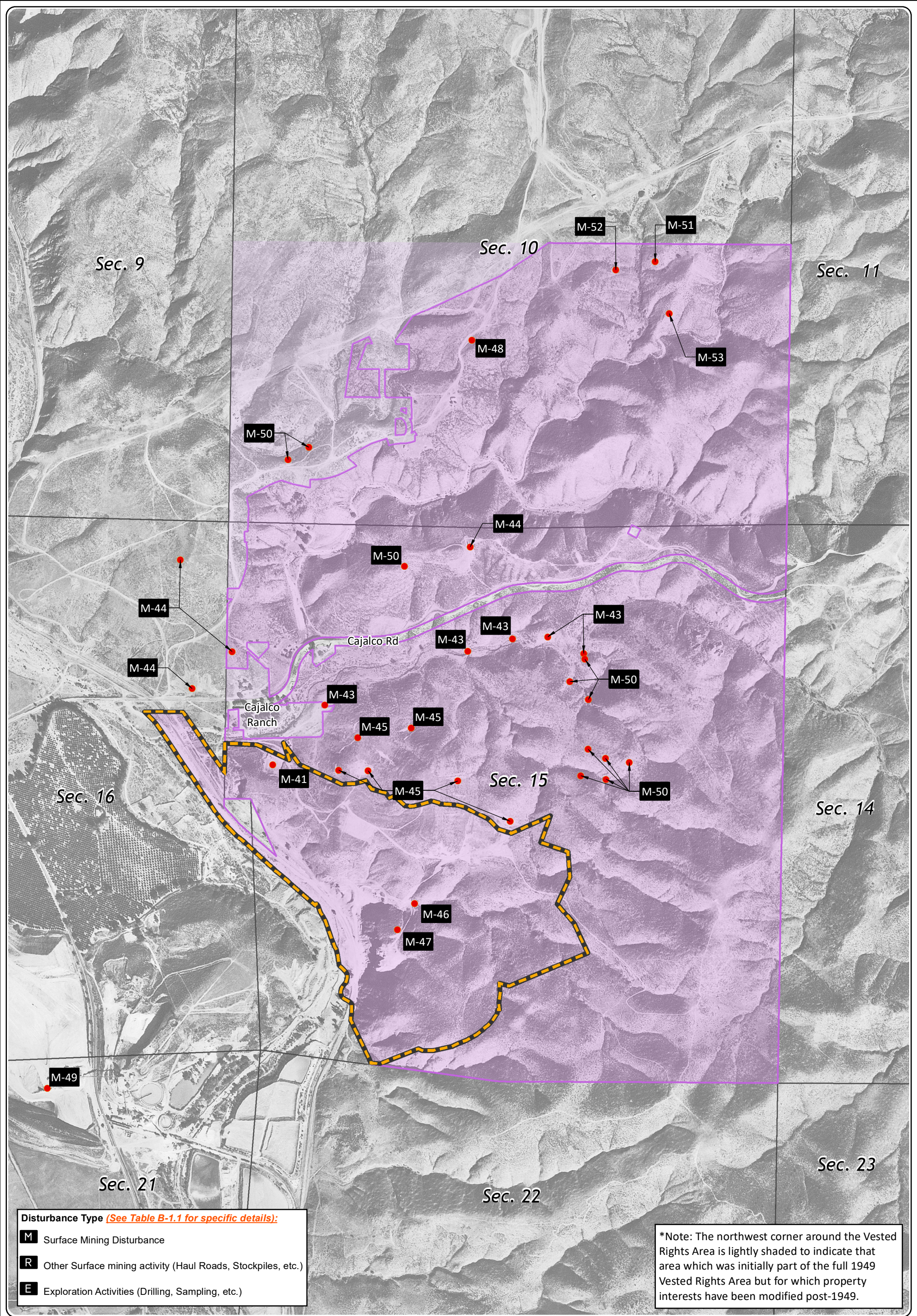
0 1,000 2,000 Feet



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652





Disturbance Type (See Table B-1.1 for specific details):

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

*Note: The northwest corner around the Vested Rights Area is lightly shaded to indicate that area which was initially part of the full 1949 Vested Rights Area but for which property interests have been modified post-1949.

Aerial photograph dated 1959. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

Legend:

- RCL 118S4 Boundary (Vested Rights Confirmed)
- HH VRA*
- Post-1949 Surface Mining Activity

0 1,000 2,000 Feet

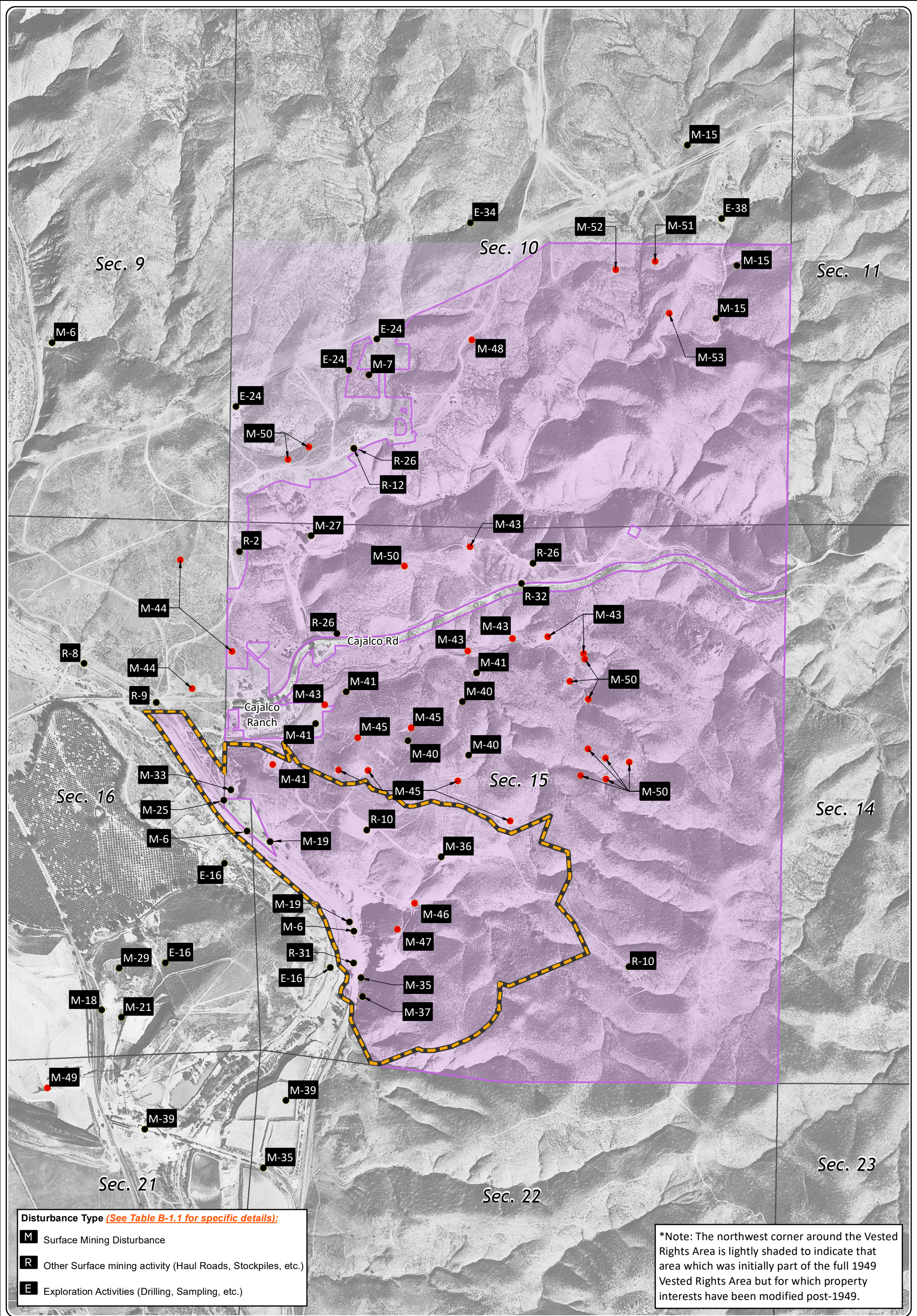
HH VRA 1949-1976
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-3: Surface Mining Activity
 Figure B-3.8: HH VRA 1949-1976

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

12/13/2021

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Disturbance Type (See Table B-1.1 for specific details):

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

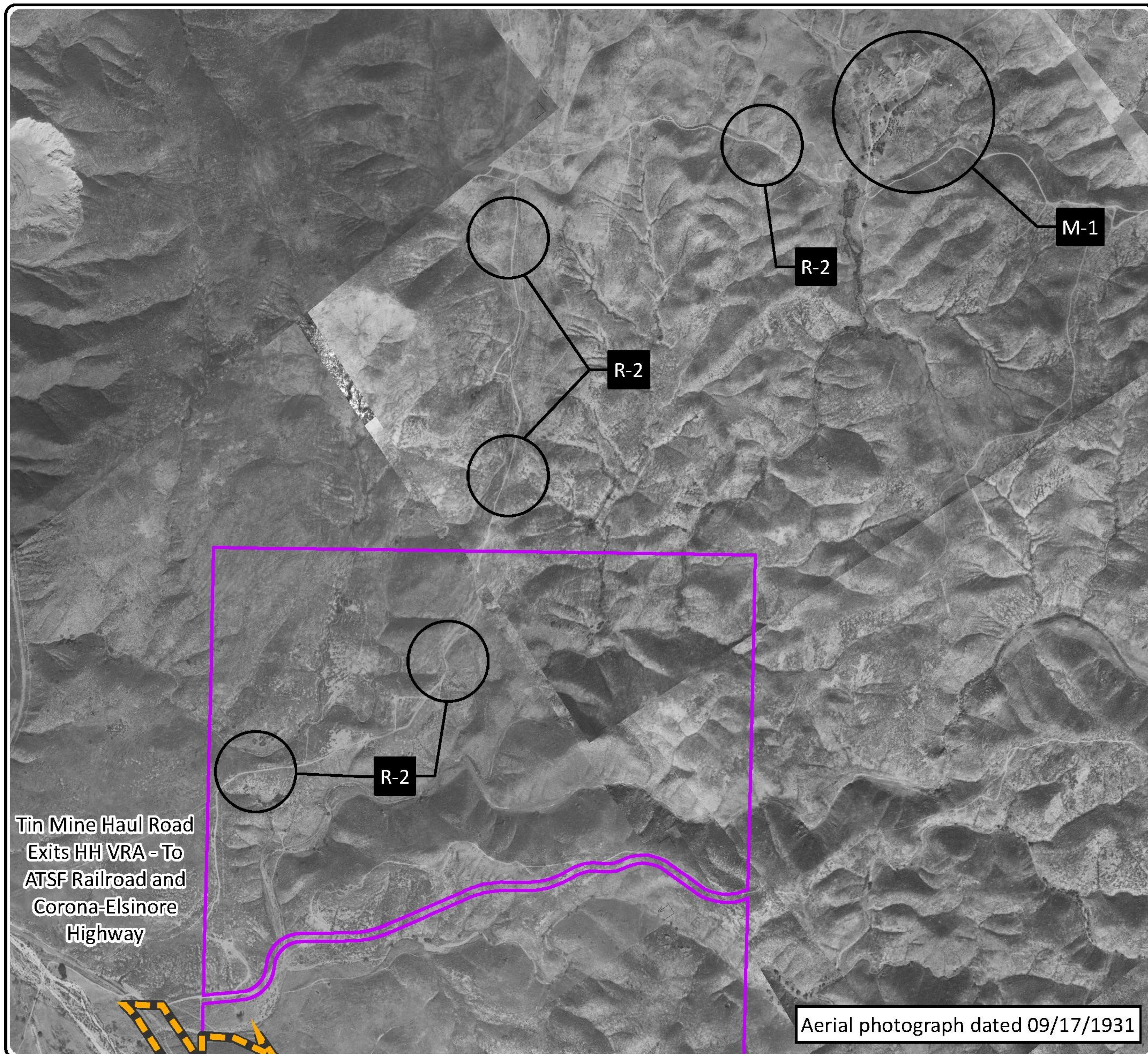
*Note: The northwest corner around the Vested Rights Area is lightly shaded to indicate that area which was initially part of the full 1949 Vested Rights Area but for which property interests have been modified post-1949.

Aerial photograph dated 1959. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

<p>Legend:</p> <ul style="list-style-type: none"> RCL118S4 Boundary (Vested Rights Confirmed) HH VRA* 	<ul style="list-style-type: none"> Pre-1949 Surface Mining Activity Post-1949 Surface Mining Activity
<p>0 1,000 2,000 Feet</p>	

HH VRA 1867-1976
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

<p>Appendix B-3: Surface Mining Activity Figure B-3.9: HH VRA 1867-1976</p> <p><i>Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.</i></p>	<p>12/15/2021</p>	
--	-------------------	--



Disturbance Description:

Tin Mine Haul Road running northeast to southwest through HH VRA.

Vested Rights

Relevancy/Commentary:

Sobrante owners construct interior haul road, running from Cajalco Tin Mine to ATSF Railroad/Corona-Elsinore Highway, through the HH VRA. The haul road is used to transport tin ore and produced tin from active mine to market.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA

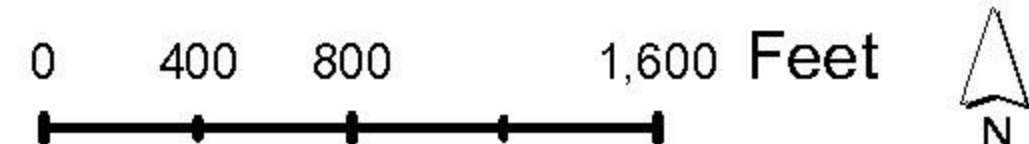
5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

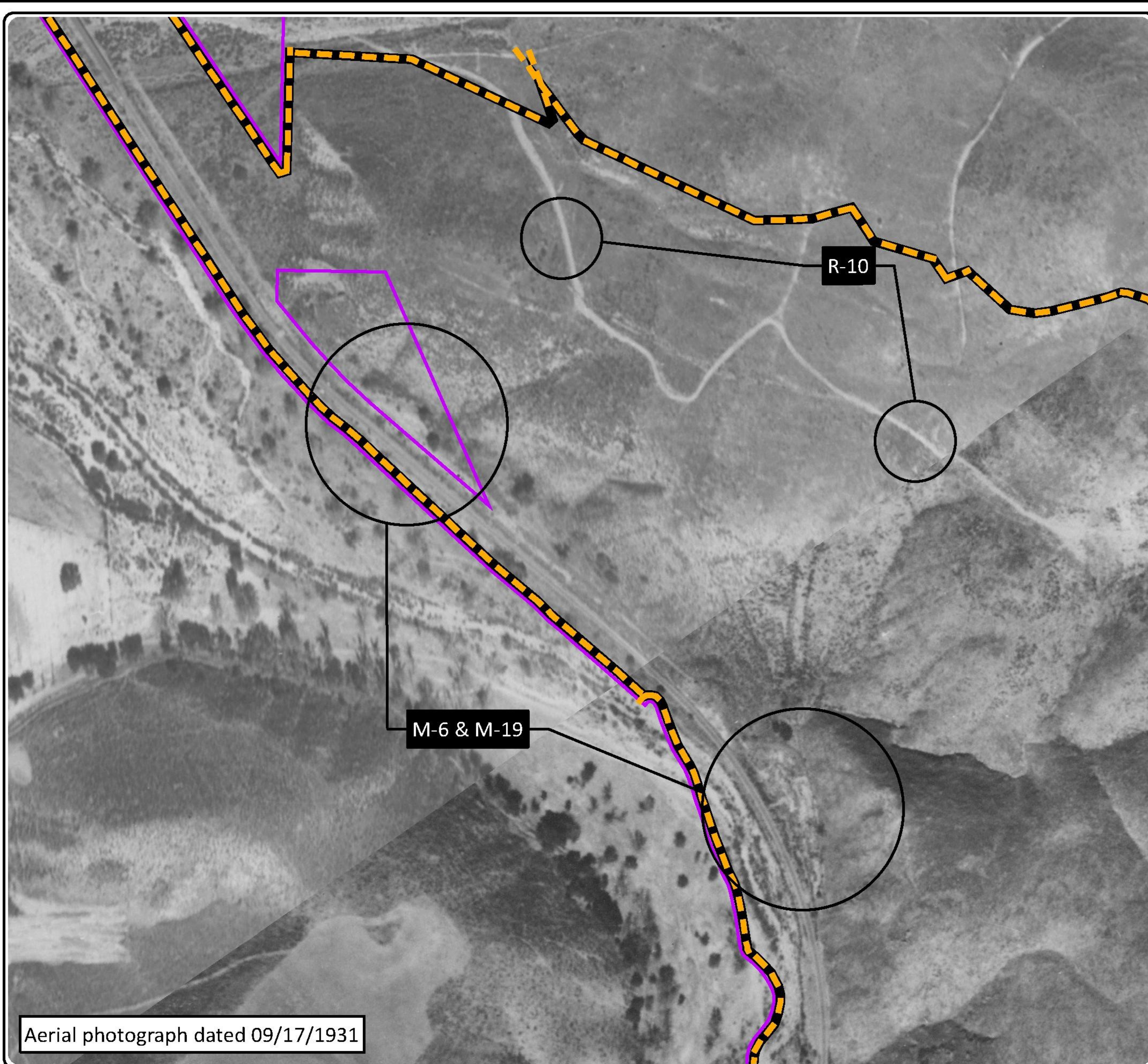
Tin Mine Haul Road Through HH VRA (Pre-1917)

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps
 Figure B-4.1

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-6 & M-19: Small porphyry quarries (rip-rap/aggregate) established along eastern edge of Temescal Wash by Sobrante owners (c. 1911).

R-10: Clay Haul road running south to north through HH VRA.

Vested Rights

Relevancy/Commentary:

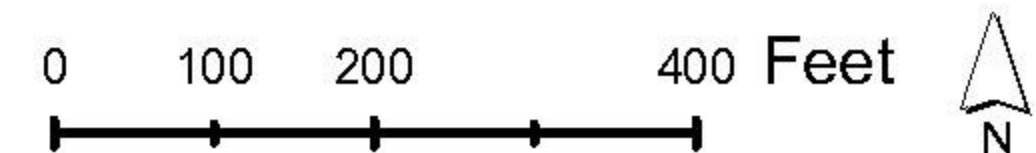
Early quarries for known, high-quality building materials within the HH VRA, and haul roads that transported clay from multiple active mine sites (south of the HH VRA) to market (north of the HH VRA), via ATSF railroad and Corona-Elsinore highway.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Aerial photograph dated 09/17/1931

- Legend:
- RCL 118S4 Boundary (Vested Rights Confirmed)
 - 1949 HH VRA



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Early (Pre-1925) Quarry Activity

Confirmation of Geographic Scope of HH VRA

Hubbs/Harlow Quarry

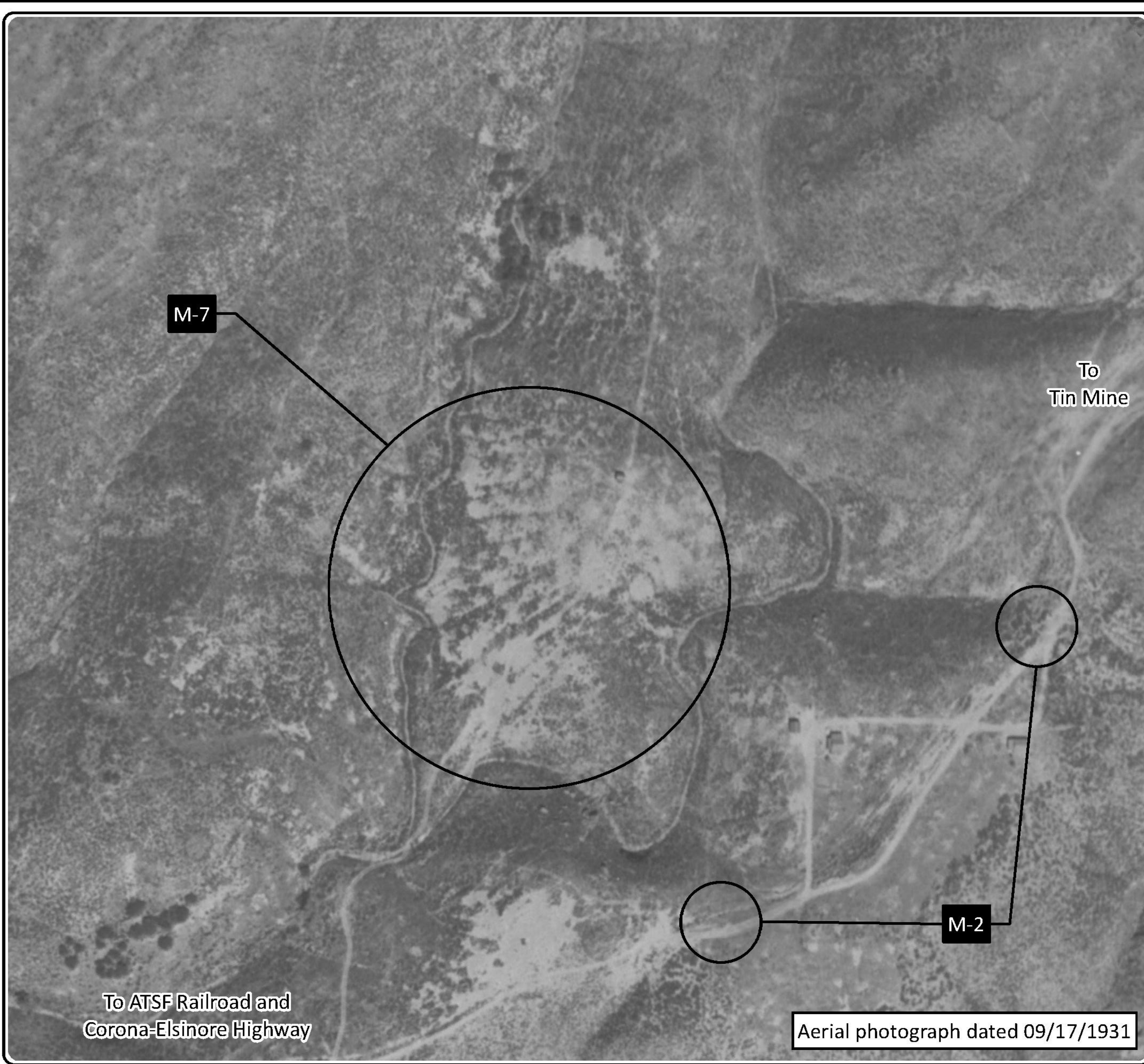
Riverside County, California

Appendix B-4: Detailed Disturbance Maps

Figure B-4.2

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-7: Clay prospecting and mining (1911), made in conjunction with exploration of Sobrante clay resources, including evaluation of high-aluminum content clay in northwest quarter of HH VRA.

Vested Rights Relevancy/Commentary:

Surface mining operation on the HH VRA, but outside S-4 VRA prior to 1949 Establishment Date.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

1949 HH VRA

0 75 150 300 Feet

N

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Clay Prospecting (1911-1931)

Confirmation of Geographic Scope of HH VRA

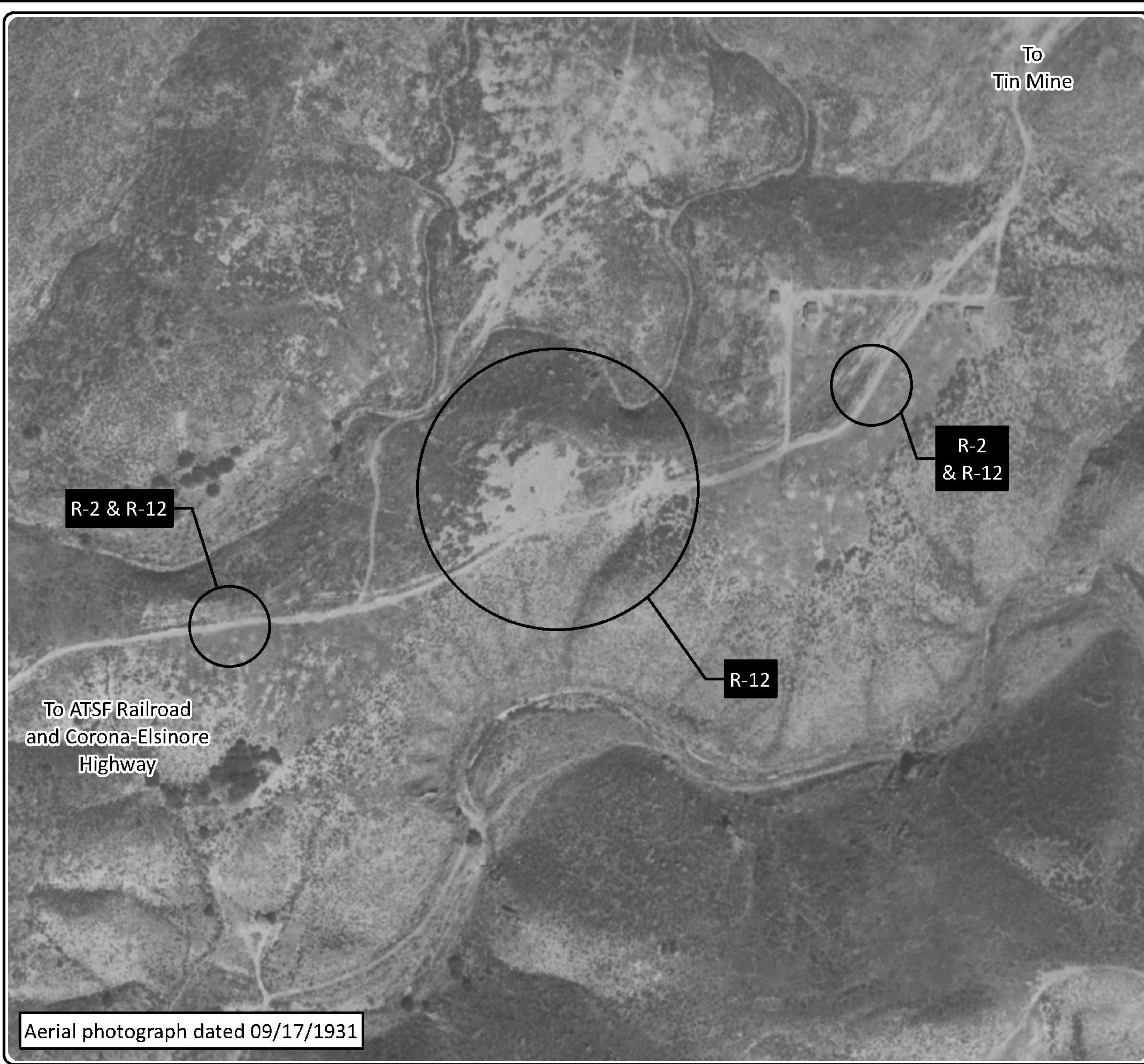
Hubbs/Harlow Quarry

Riverside County, California

Appendix B-4: Detailed Disturbance Maps
Figure B-4.3

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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Disturbance Description:

R-12: Sobrante owners open borrow pits which are used to repair and maintain tin mine haul road, in Section 10, within the HH VRA, further facilitating movement of tin resources from northeast of the HH VRA, to market southwest of the HH VRA.

Vested Rights

Relevancy/Commentary:

Established surface mining operations within HH VRA, but outside S-4 VRA, in support of adjoining operations in common ownership.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

1949 HH VRA

0 75 150 300 Feet

N

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

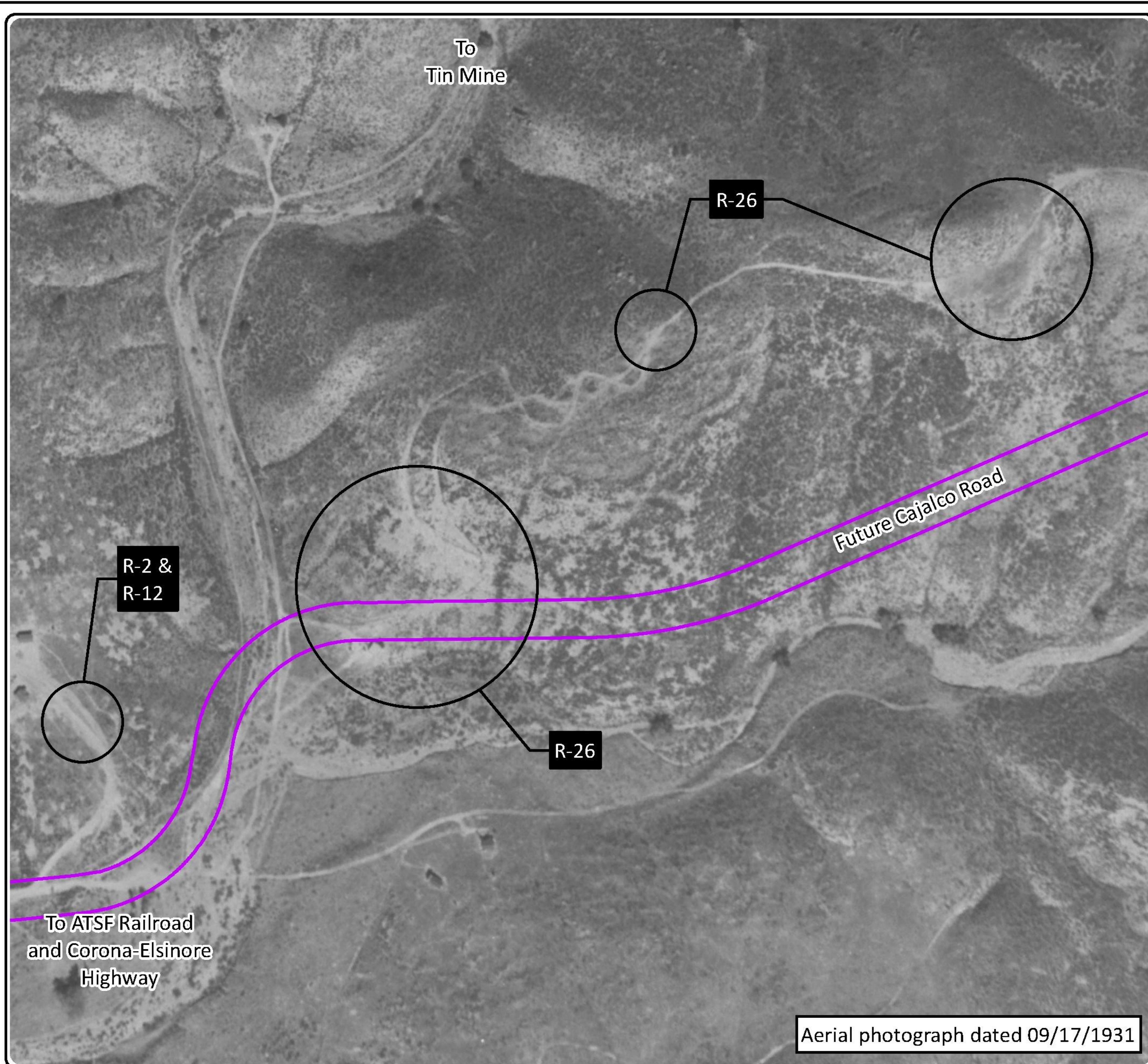
Tin Mine Haul Road Improvements (1917-1924)

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps Figure B-4.4

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

R-26: Opening of multiple rock, sand, and gravel borrows used to facilitate construction of the Cajalco Road (1931-1935), Borrow pits were also used to supply materials for the continued repair and maintenance of tin mine haul road.

Vested Rights

Relevancy/Commentary:

Use of rock, sand and gravel borrow pits and internal haul roads within HH VRA; but outside S-4 VRA.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

1949 HH VRA

0 100 200 400 Feet

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Continued Road Improvements and Borrow Pit Use (Pre-1931)

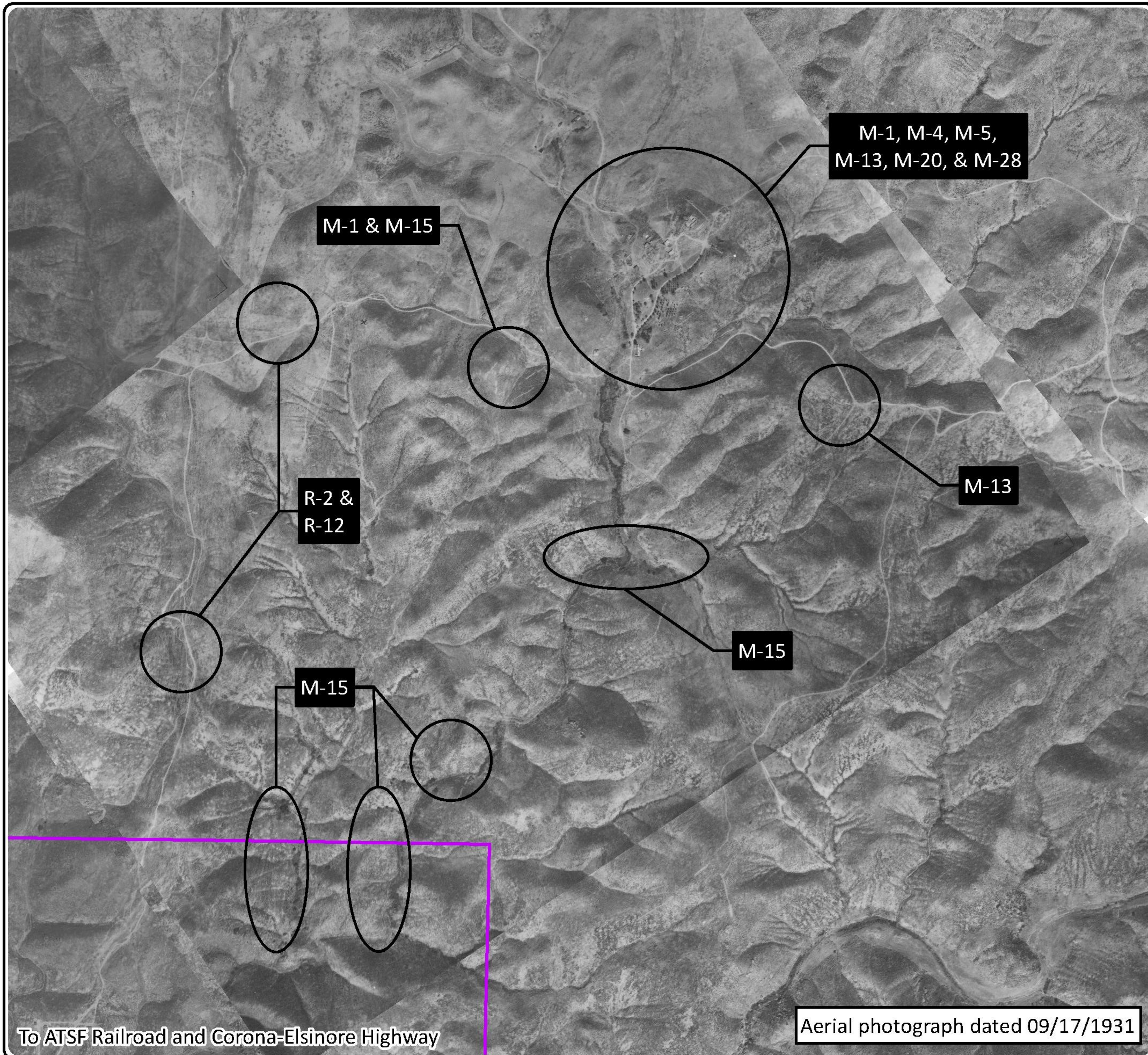
Confirmation of Geographic Scope of HH VRA

Hubbs/Harlow Quarry
Riverside County, California

Appendix B-4: Detailed Disturbance Maps
Figure B-4.5

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-15: Excavations of surface tourmaline (tin-bearing igneous rock) veins associated with the Cajalco Tin Mine.

Vested Rights

Relevancy/Commentary:

Surface mining activities within HH VRA, but outside of S-4 VRA, in support of adjoining operations in common ownership.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

1949 HH VRA

0 350 700 1,400 Feet

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Tin Mine Area Development as of 1931

Confirmation of Geographic Scope of HH VRA

Hubbs/Harlow Quarry

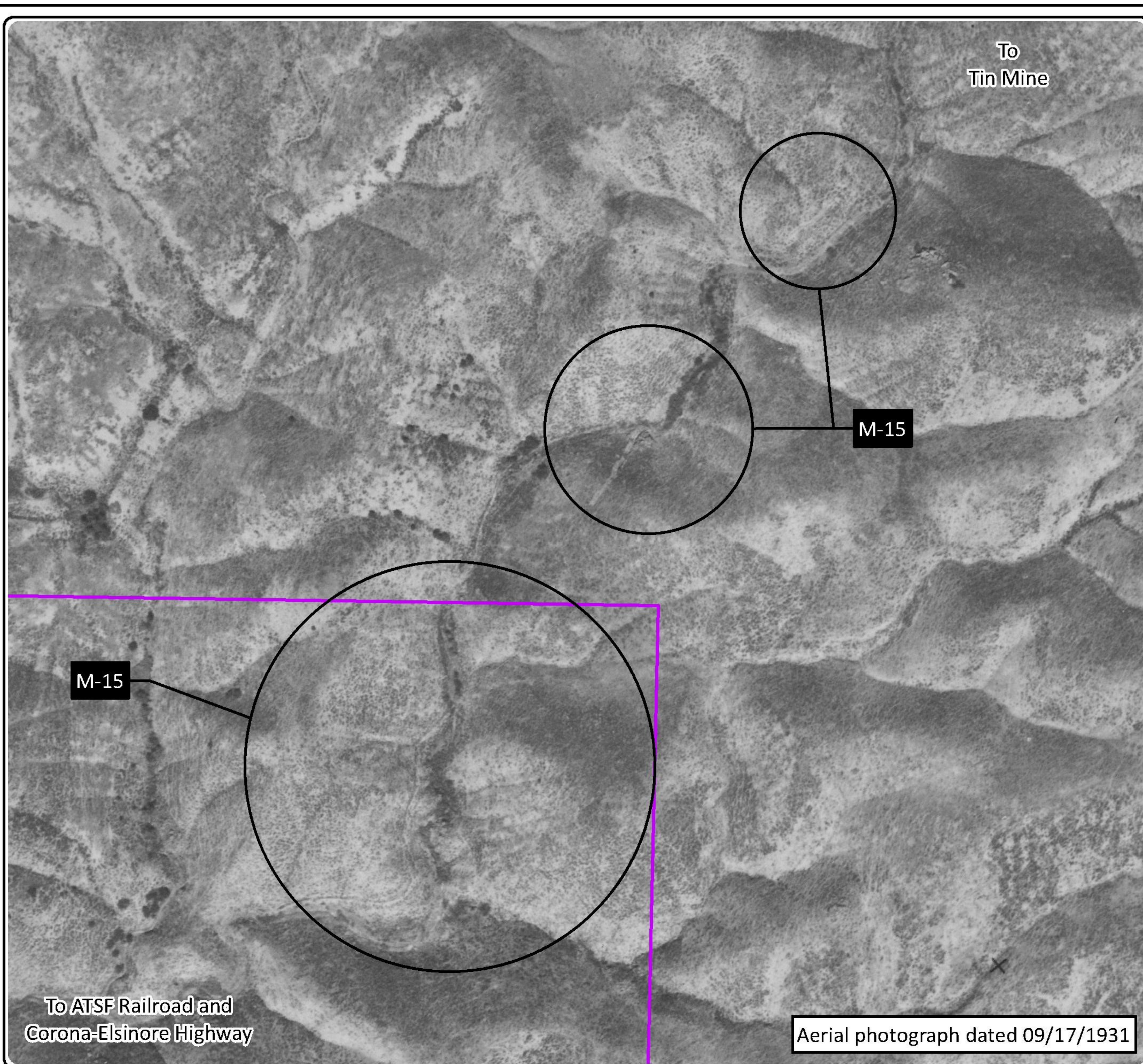
Riverside County, California

Appendix B-4: Detailed Disturbance Maps

Figure B-4.6.1

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-15: Excavations of surface tourmaline (tin-bearing igneous rock) veins associated with the Cajalco Tin Mine.

Vested Rights

Relevancy/Commentary:

Surface mining activities within HH VRA, but outside of S-4 VRA, in support of adjoining operations in common ownership.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

1949 HH VRA

0 100 200 400 Feet

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Tin Mine Activity within HH VRA as of 1931

Confirmation of Geographic Scope of HH VRA

Hubbs/Harlow Quarry
Riverside County, California

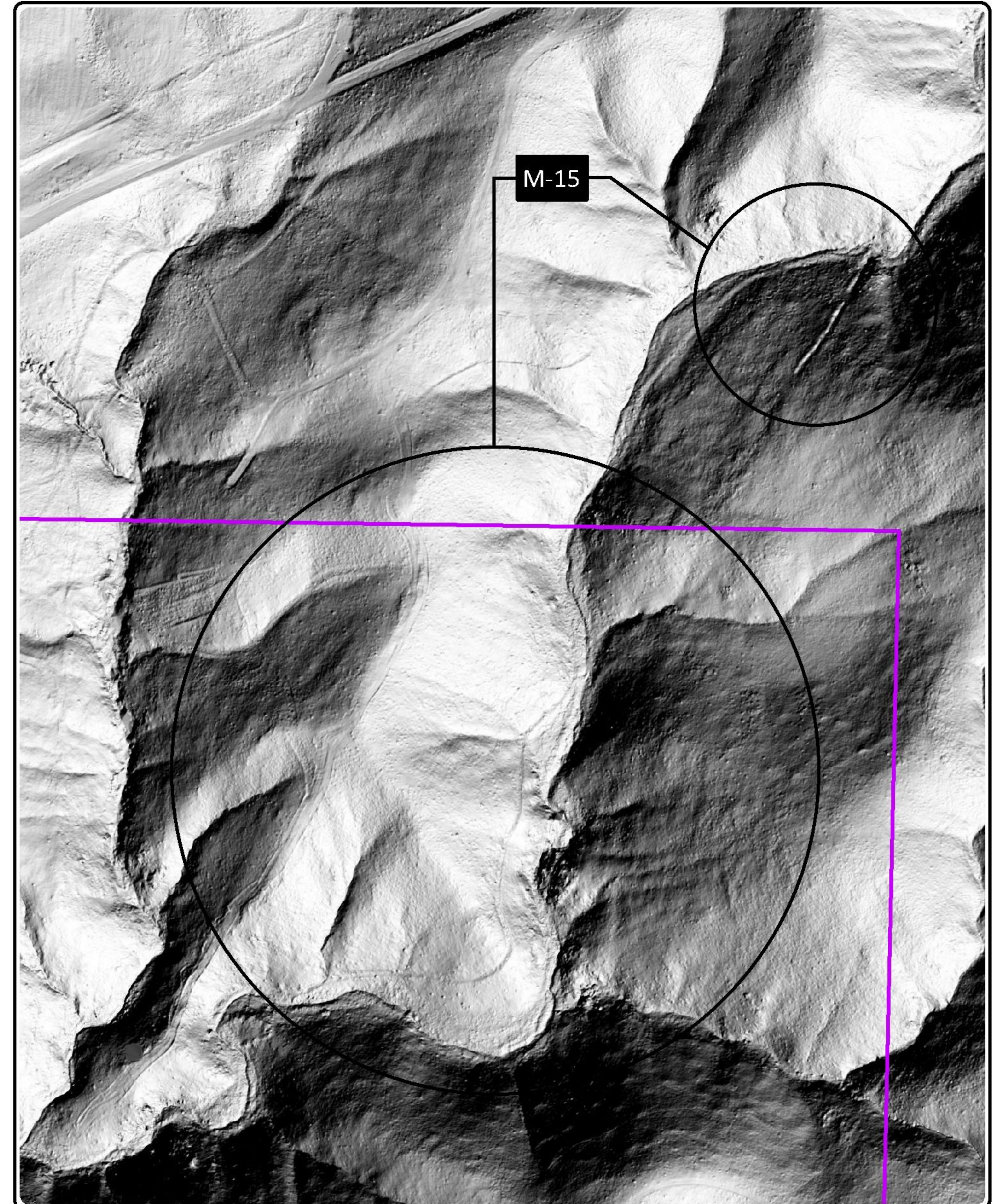
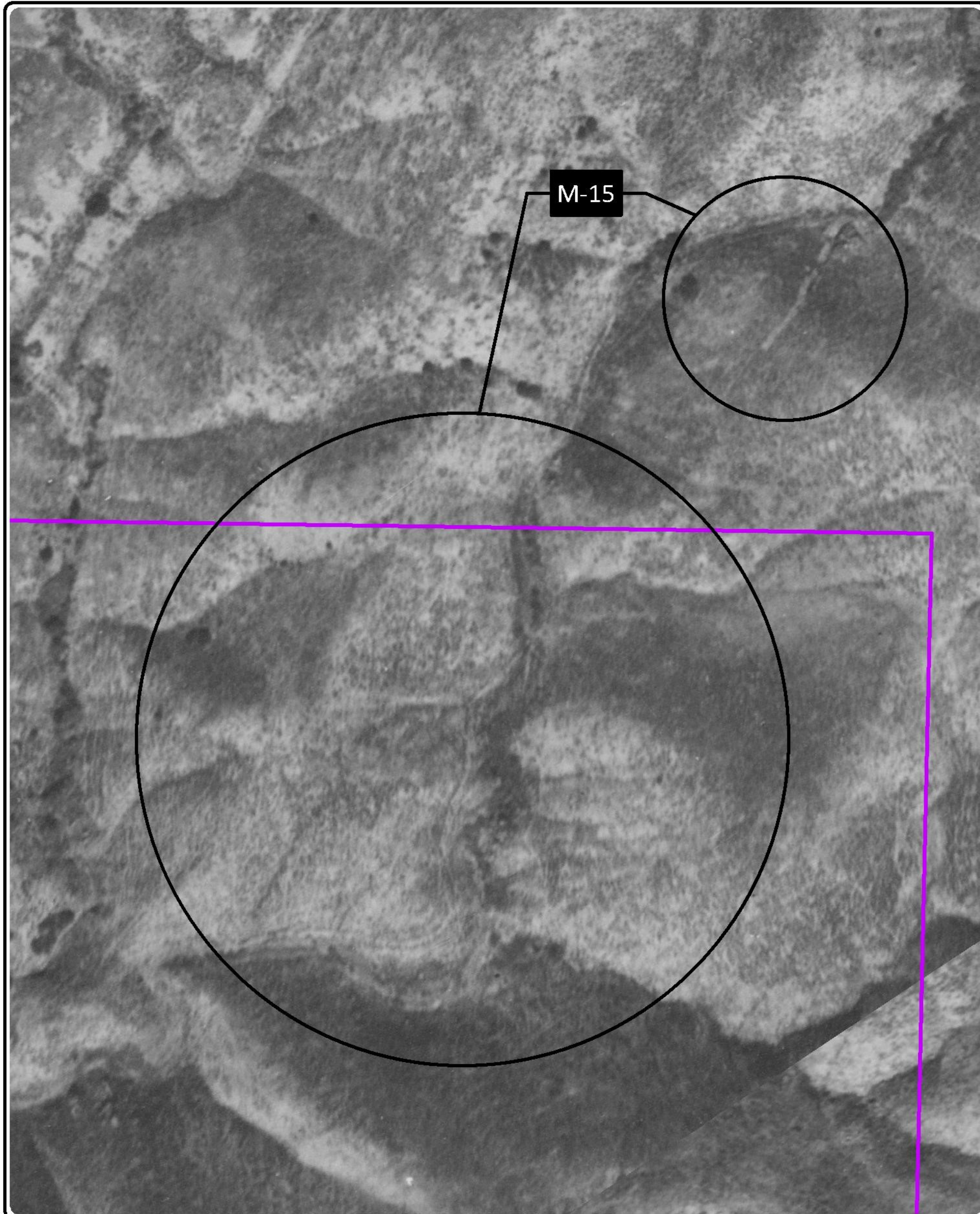
Appendix B-4: Detailed Disturbance Maps
Figure B-4.6.2

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.


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1931 Aerial Photography



2021 Aerial LiDAR



Legend:

 1949 HH VRA

0 100 200 400 Feet 

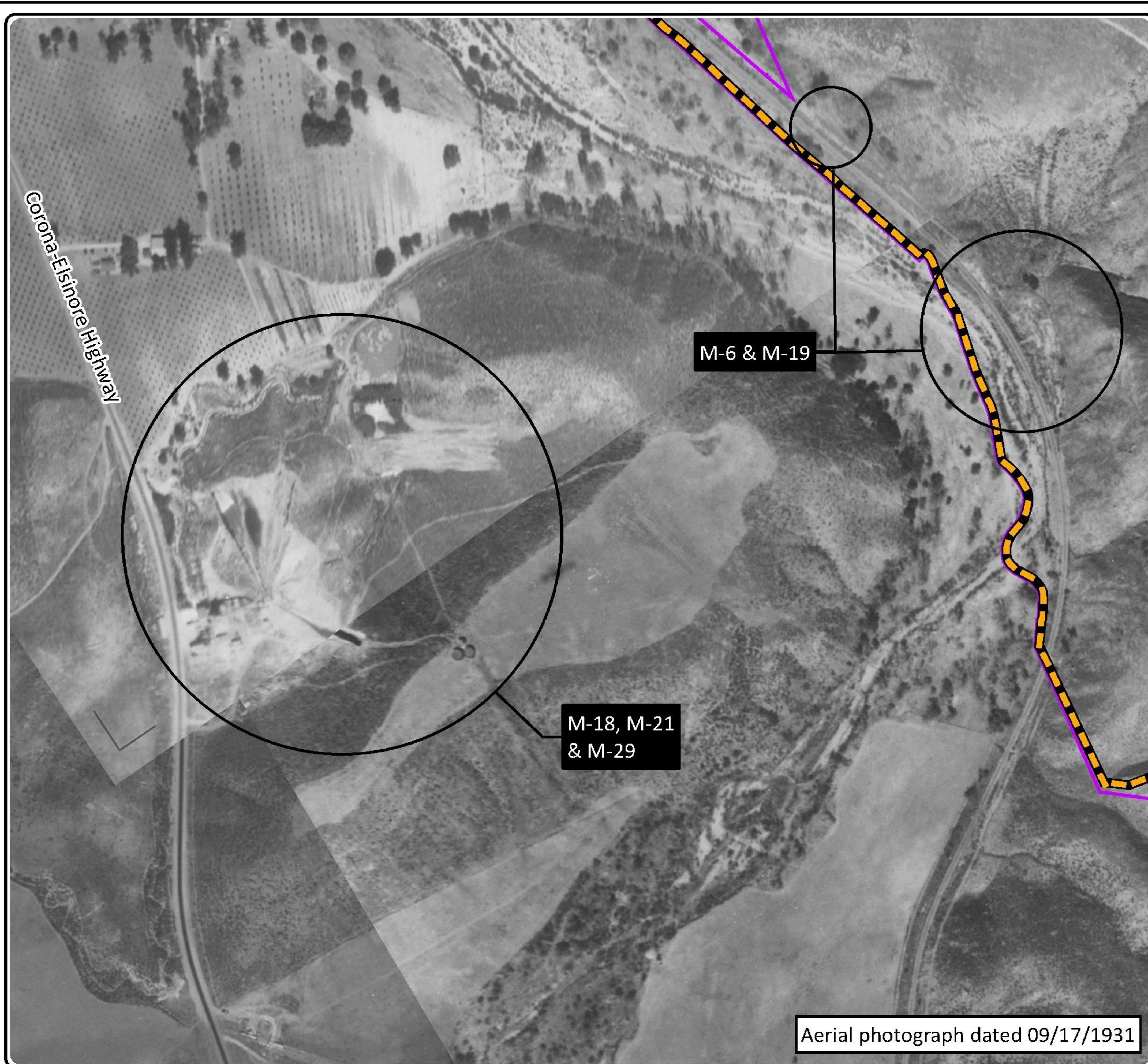
5	4	3	2	1
8	9	10 	11	12
17	16	15 	14	13
20	21	22	23	24
Vicinity Map				

**Tin Mine Activity Within HH VRA
as of 1931: LiDAR Comparison**
Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Appendix B-4: Detailed Disturbance Maps
Figure B-4.6.3

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

Extent of silica sand disturbances associated with the Corona Sand and Silica Plant (P.J. Weisel), adjacent to and directly on the HH VRA, as of 1931.

Vested Rights Relevancy/Commentary:

Ongoing regional, interrelated mining operations encompassing the silica sand operation, the HH VRA, and the tin mine. This operation would receive decomposed materials from both the HH VRA and the tin mine area for use in the silica sand/glass manufacturing process. Finished products would then be transported back through the HH VRA to the market north of the HH VRA, via the ATSF Railroad.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL 118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

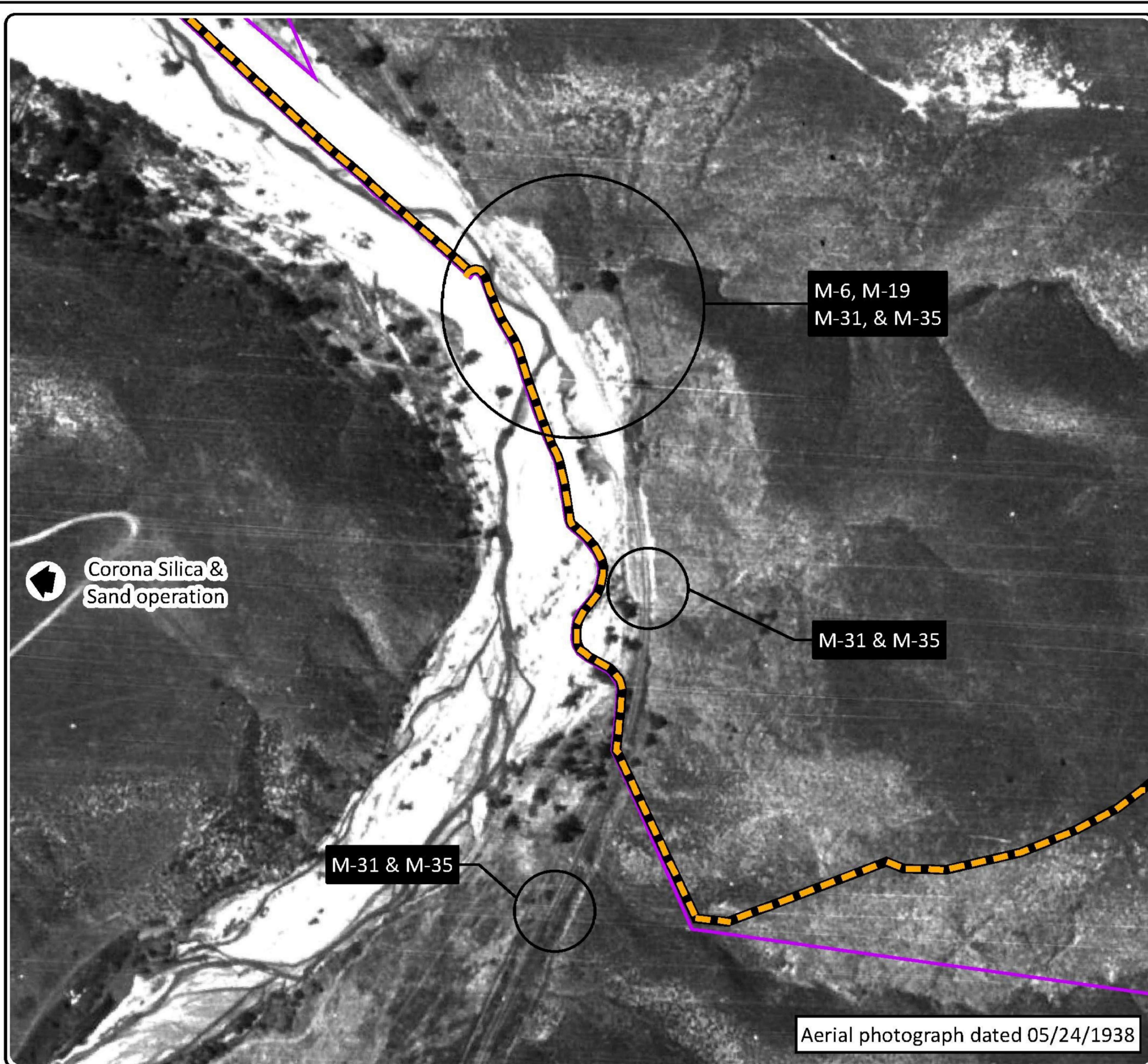
Silica Sand Operations Proximate to HH VRA as of 1931

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps
 Figure B-4.7

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

Increased surface mining activity located within the HH VRA along ATSF, concurrent with start of Blarney Stone Quarry. Increased quarrying activity also consistent with noted increase in use of rail siding to move mined product from both HH VRA and Corona Sand & Silica (P.J. Weisel).

Vested Rights

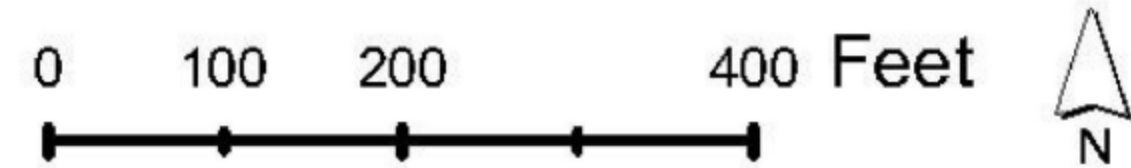
Relevancy/Commentary:

Surface mining activity within the HH VRA, as well as interaction of adjacent mining operations and the HH VRA.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

- Legend:
- RCL 118S4 Boundary (Vested Rights Confirmed)
 - 1949 HH VRA



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

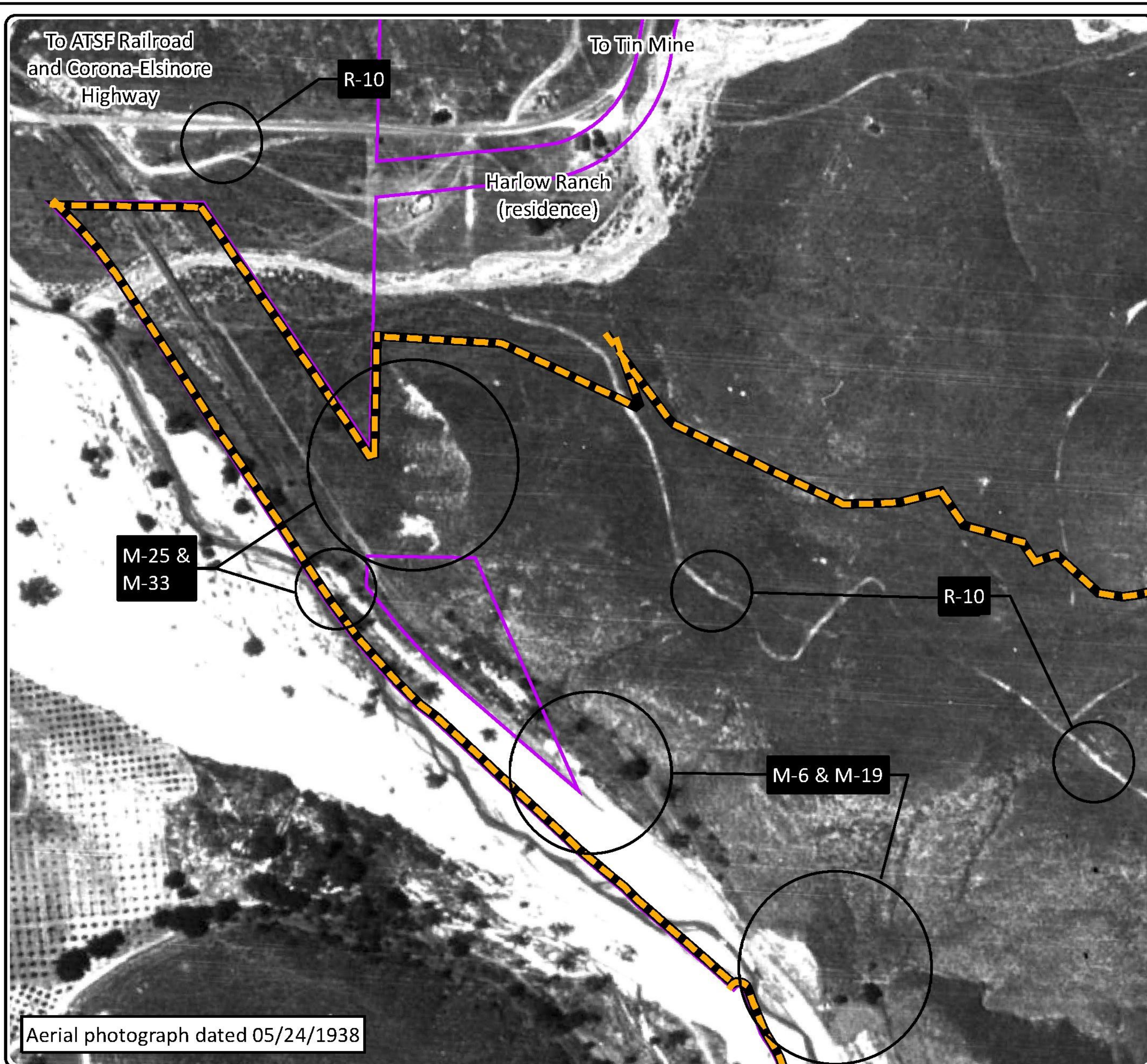
Increase in Surface Mining Activities as of 1938

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps Figure B-4.8

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-25: Pacific Clay Products begins operations at Cajalco Clay Pit, located primarily within S-4 VRA.

M-33: Red clay worked in irregular quarry, east of Temescal Wash and Santa Fe Tracks.

M-6 & M-19: Small porphyry quarries (rip-rap/aggregate) established along eastern edge of Temescal Wash by Sobrante owners (c. 1911). ATSF railroad operated porphyry quarry in 1927.

R-10: Haul road that transported clay from multiple active mine sites (south of the HH VRA) to market (north of the HH VRA), via ATSF railroad and Corona-Elsinore highway.

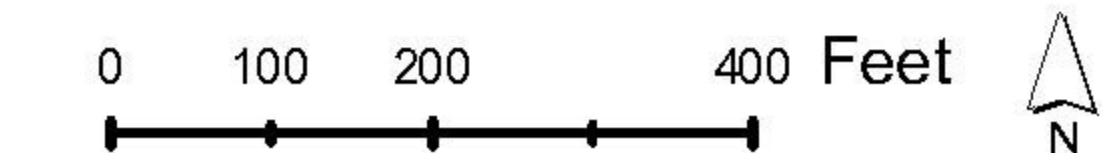
Vested Rights Relevancy/Commentary:

Development of HH VRA as an expanding source of multiple building materials before Establishment Date.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL 118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

**Disturbances Associated with
Clay Surface Mining (1931-1938)**
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps
 Figure B-4.9

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-7: Exploration of regional clay resources (See Figure 4.3 for detailed description).

E-24: Continued surface mining activity in conjunction with previous clay prospecting and sampling, related to development of a potential commercial bauxite deposit and evaluation of strategic mineral reserves (i.e. domestic aluminum source)

R-12: Tin Mine Haul Roads (See Figure 4.2 for detailed description).

Vested Rights

Relevancy/Commentary:

Increase of surface mining activity within HH VRA outside of S-4 VRA, following acquisition of HH VRA by Kuhry/Harlow.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

 1949 HH VRA

0 100 200 400 Feet



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Surface Mining Activity: Strategic Minerals Evaluation as of 1938

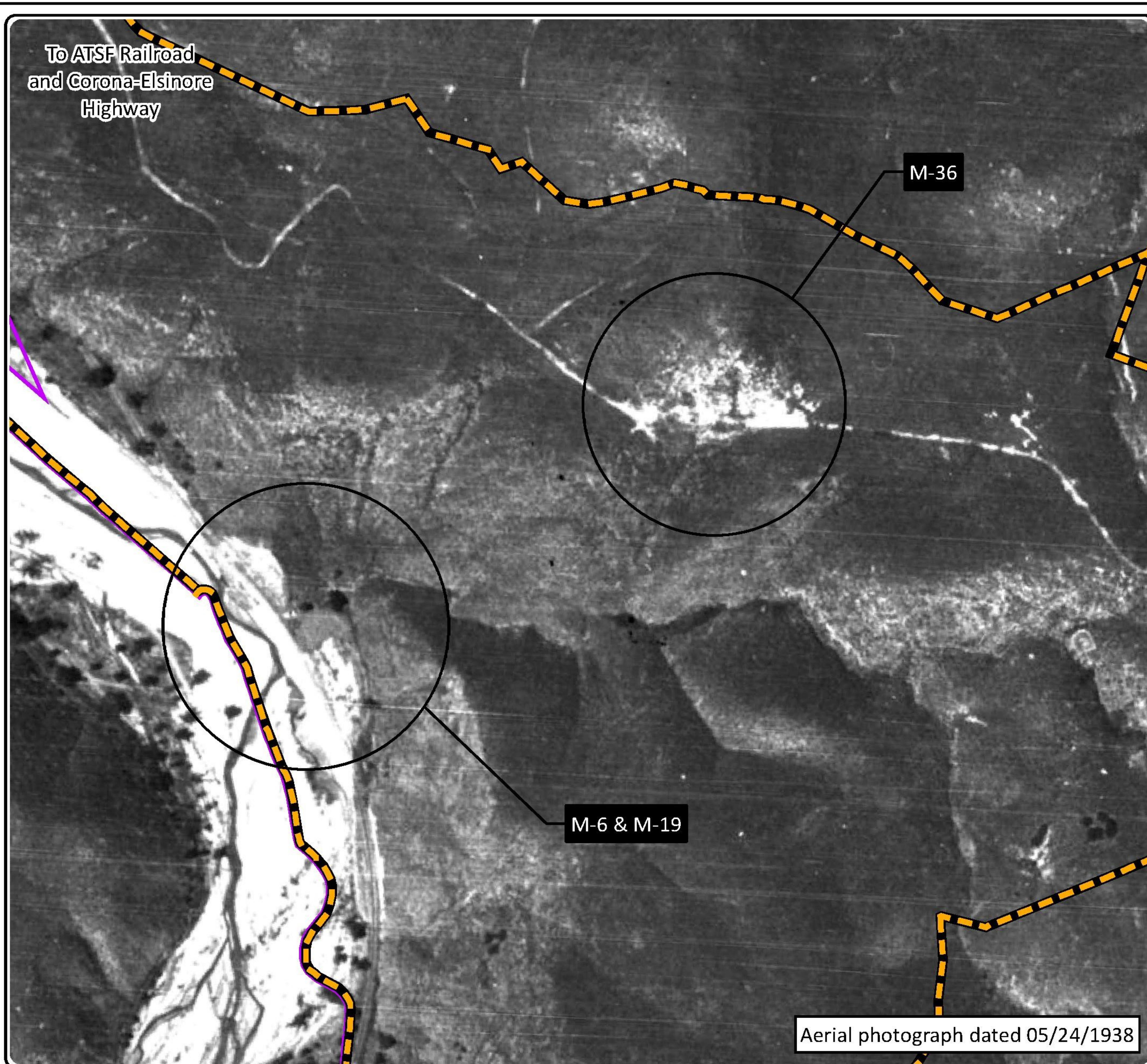
Confirmation of Geographic Scope of HH VRA

Hubbs/Harlow Quarry
Riverside County, California

Appendix B-4: Detailed Disturbance Maps
Figure B-4.10

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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Disturbance Description:

M-36: Early stages (1938) of Blarney Stone operation prior to increased production for construction of Prado Dam.

M-6 & M-19: Early ATSF rip-rap quarries (See Figure 4.3 for detailed description).

Vested Rights Relevancy/Commentary:

Surface mining activity within HH VRA.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

- Legend:
- RCL118S4 Boundary (Vested Rights Confirmed)
 - 1949 HH VRA



5	4	3	2	1
		15		
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

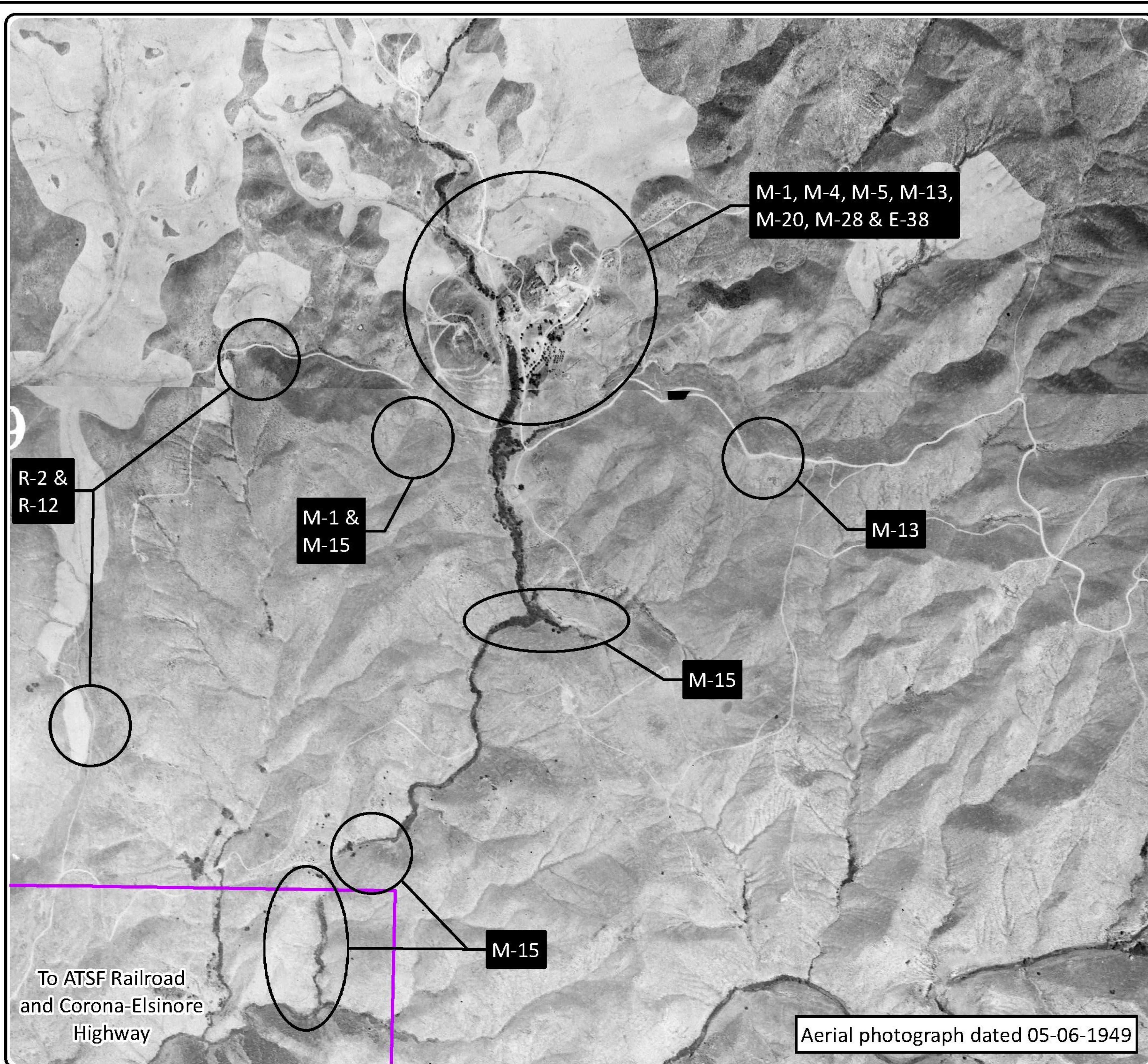
Initial Blarney Stone Quarry Operations: 1938

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps Figure B-4.11

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

Extent of tin mining activity at time of vesting (post World War II development), including tin mine haul road through HH VRA and exploration and excavation of tin-bearing tourmaline veins within HH VRA outside of S-4 VRA.

M-15: Excavations of surface tourmaline (tinbearing igneous rock) veins associated with the Cajalco Tin Mine.

See Figures B-4.6.1, 4.6.2, 4.6.3 for additional detail.

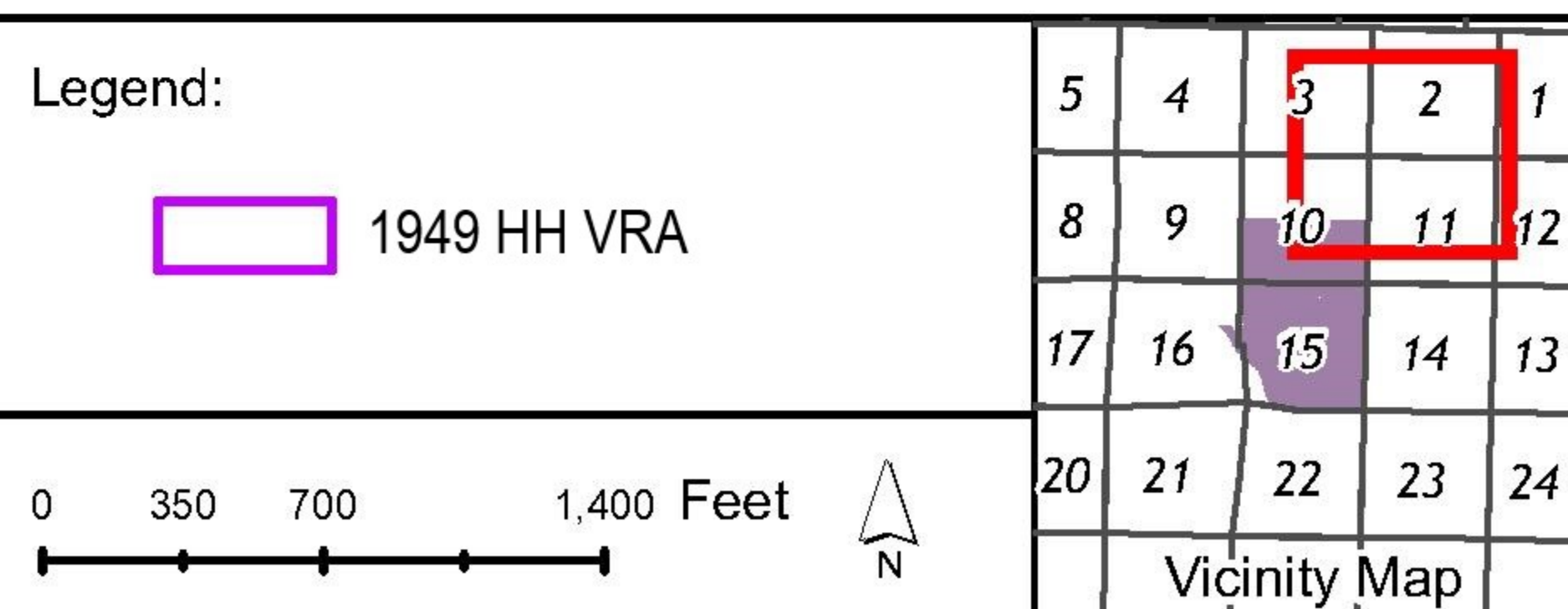
Vested Rights

Relevancy/Commentary:

Surface mining activity within HH VRA as part of interrelated, regional tin mining operation.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)



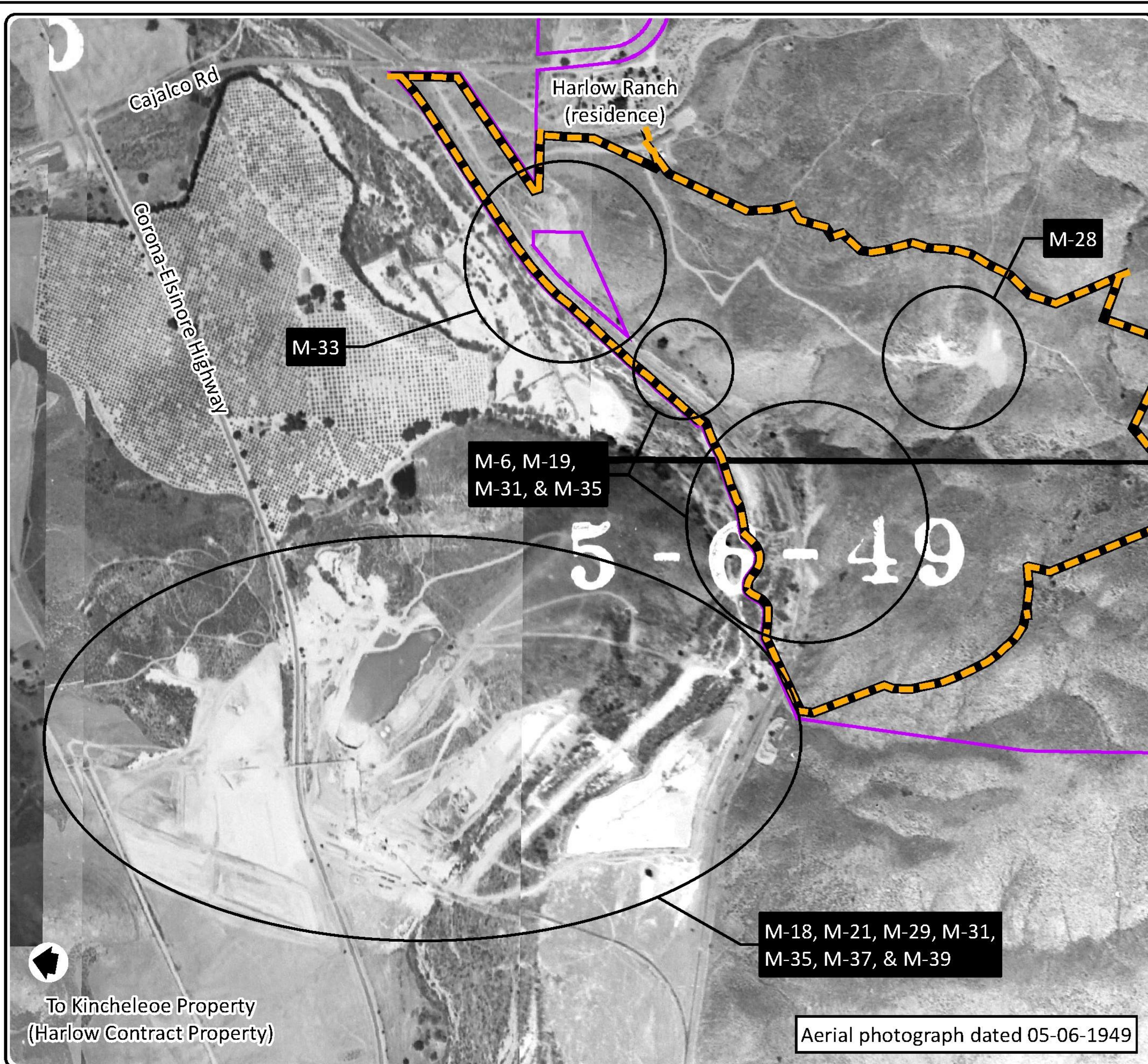
Extent of Tin Mining Surface Activities as of 1949

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps
 Figure B-4.12

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

Extent of Sand Silica (Owens-Illinois) operations on or about the Establishment Date, including connectivity to HH VRA and ATSF railroad siding via haul road. Connectivity includes link with Cajalco Tin Mine via HH VRA tin mine haul road.

Vested Rights

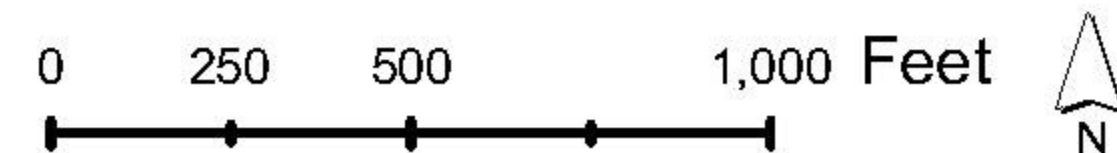
Relevancy/Commentary:

Expanded surface mining operations at both Blarney Stone Quarry, clay resource, and silica sand operations, demonstrating continued surface mining activity within HH VRA and integration of the HH VRA with regional mineral resources.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL 118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

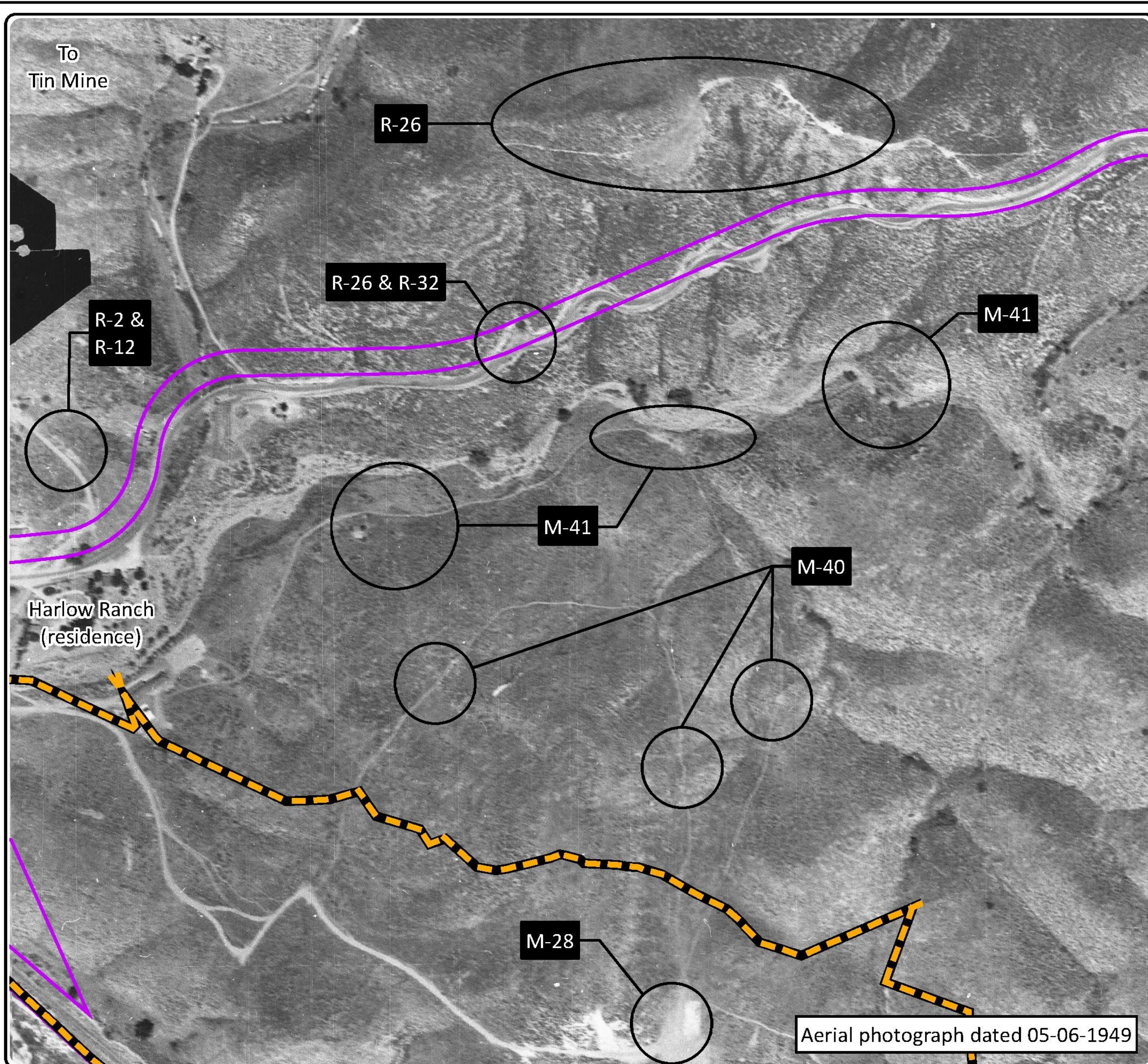
Extent of Surface Mining Activities as of 1949

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps
 Figure B-4.13

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

R-32: Construction of Cajalco Road, which utilized multiple borrow pits within HH VRA for rock, sand, and gravel resources (1931-1935)

M:40 Expansion of clay trenching and excavation related to the Harlow Clay Pit, primarily by Pacific Clay (1931-1938) and Liston Brick Co. (from 1948).

M:41: Multiple small-scale borrow pits and haul roads for rock, sand and gravel resources related to construction of public works project, including Cajalco Road and Cajalco Dam (1931-1938); and Prado Dam (1938-1942).

Vested Rights

Relevancy/Commentary:

Significantly expanded scope of surface mining operations progressing towards Establishment Date, under ownership of Kuhry and Harlow as they continued to dedicate and fully appropriate the HH VRA to mining.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA



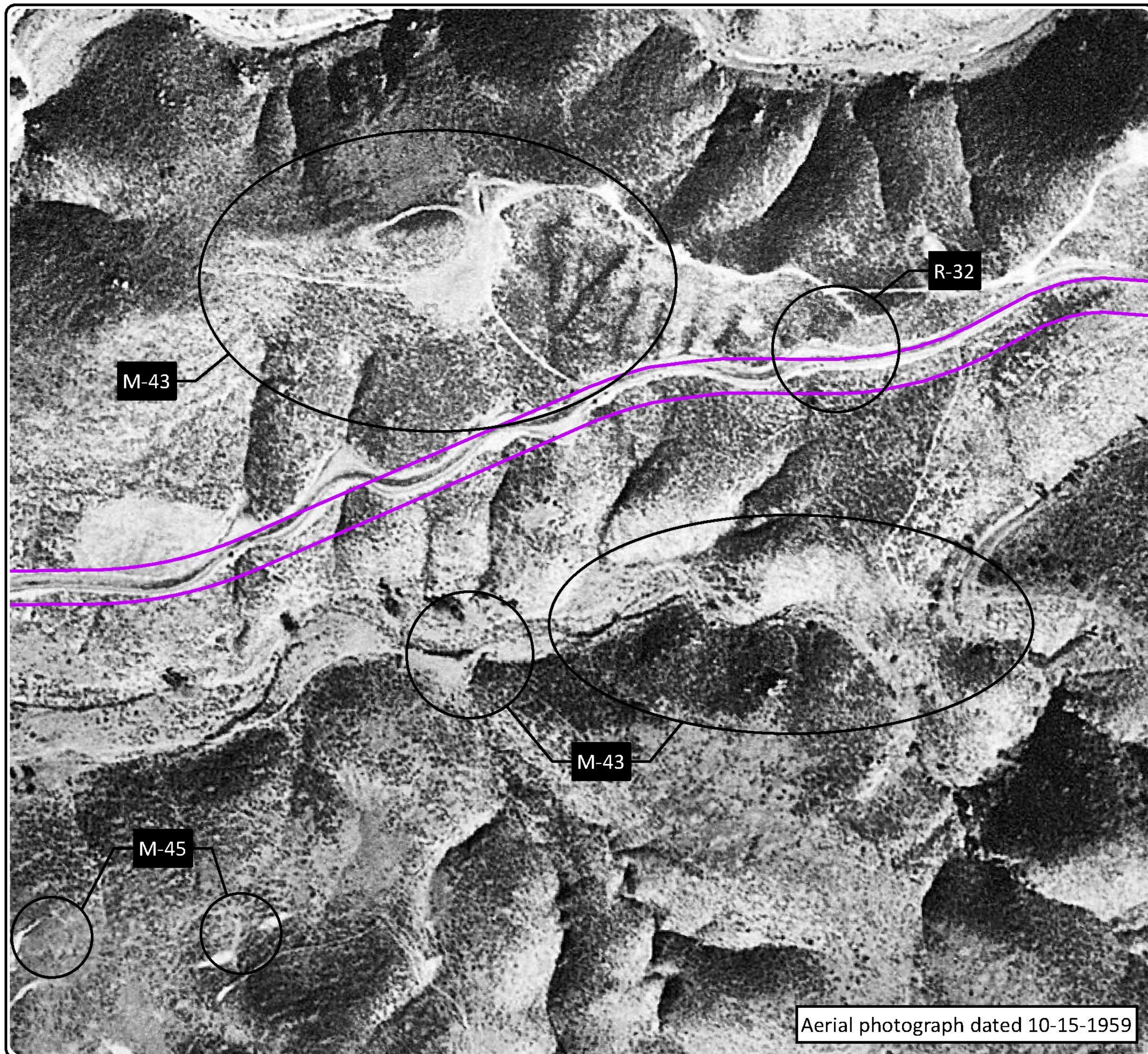
5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

**Extent of Rock, Sand, Gravel,
and Clay Borrow Pits as of 1949**
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps
 Figure B-4.14

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-43 (1948-1959): Expansion of rock, sand and gravel clay pits, primarily associated with Liston Brick Co. (and other, local ceramics manufacturers) after Establishment Date.

M-45 (1948-1959): Continued expansion of clay trenching and excavation as part of the mining activities at the Harlow Clay Pit.

Vested Rights Relevancy/Commentary:

Expansion of surface mining activities within HH VRA, outside S-4 VRA, consistent with exercise of vested rights.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

1949 HH VRA

0 100 200 400 Feet

N

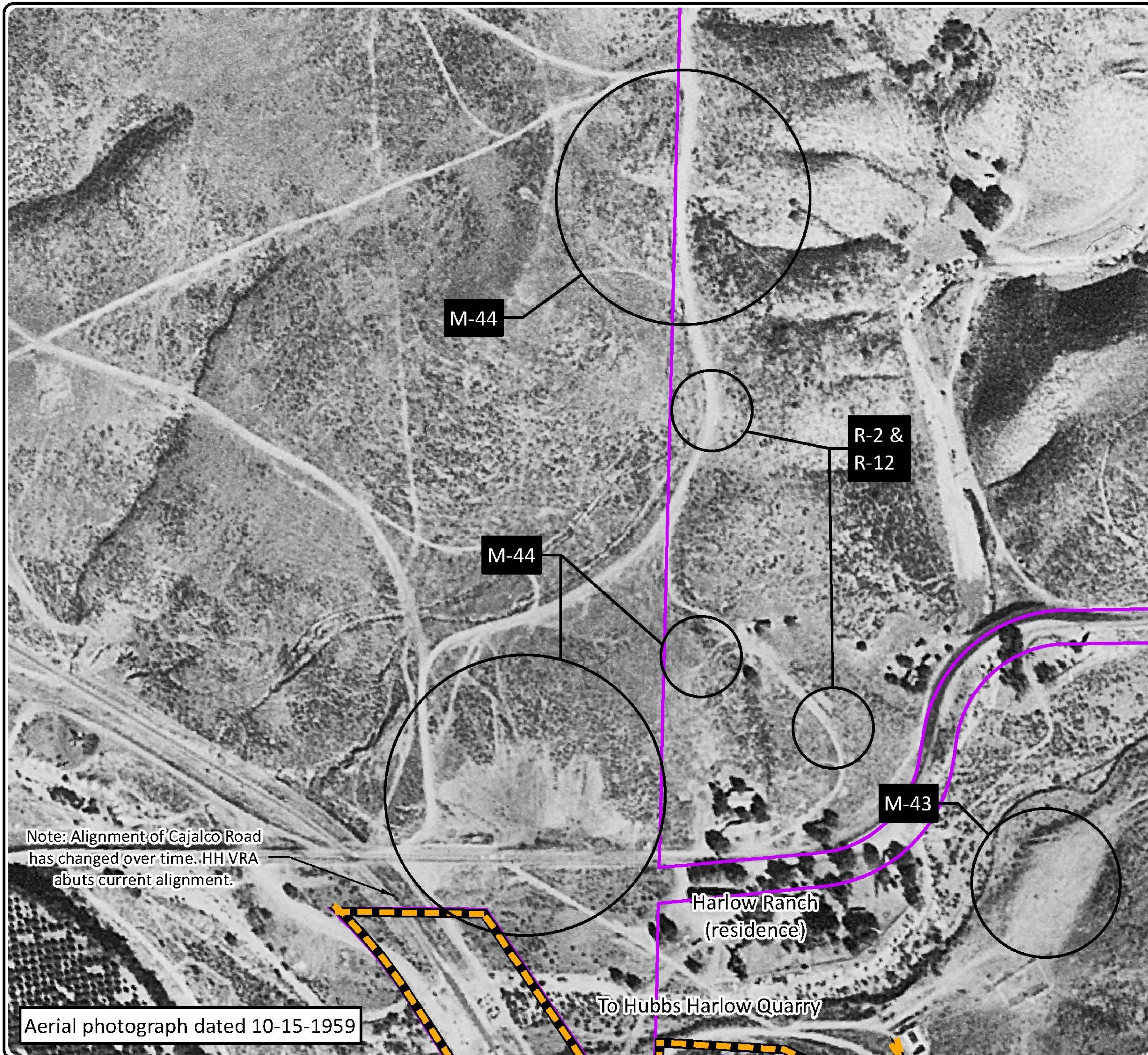
5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Post-1949 Surface Mining Activities for Rock, Sand, Gravel, and Clay Confirmation of Geographic Scope of HH VRA Hubbs/Harlow Quarry Riverside County, California

Appendix B-4: Detailed Disturbance Maps Figure B-4.15

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-43: Expansion of rock, sand and gravel clay pits, primarily associated with Liston Brick Co. (and other, local ceramics manufacturers) beginning in 1948.

M-44: Discovery and excavation of red clay resources associated with Gladding McBean Co. and other ceramics manufacturers beginning in 1954.

Vested Rights

Relevancy/Commentary:

Surface mining activity within HH VRA, outside of S-4 area without permit demonstrates exercise of vested right. Interaction between HH VRA activities and proximate surface mining activities.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA

0 100 200 400 Feet



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Post-1949 Clay Mining Activity on and Proximate to HH VRA

Confirmation of Geographic Scope of HH VRA

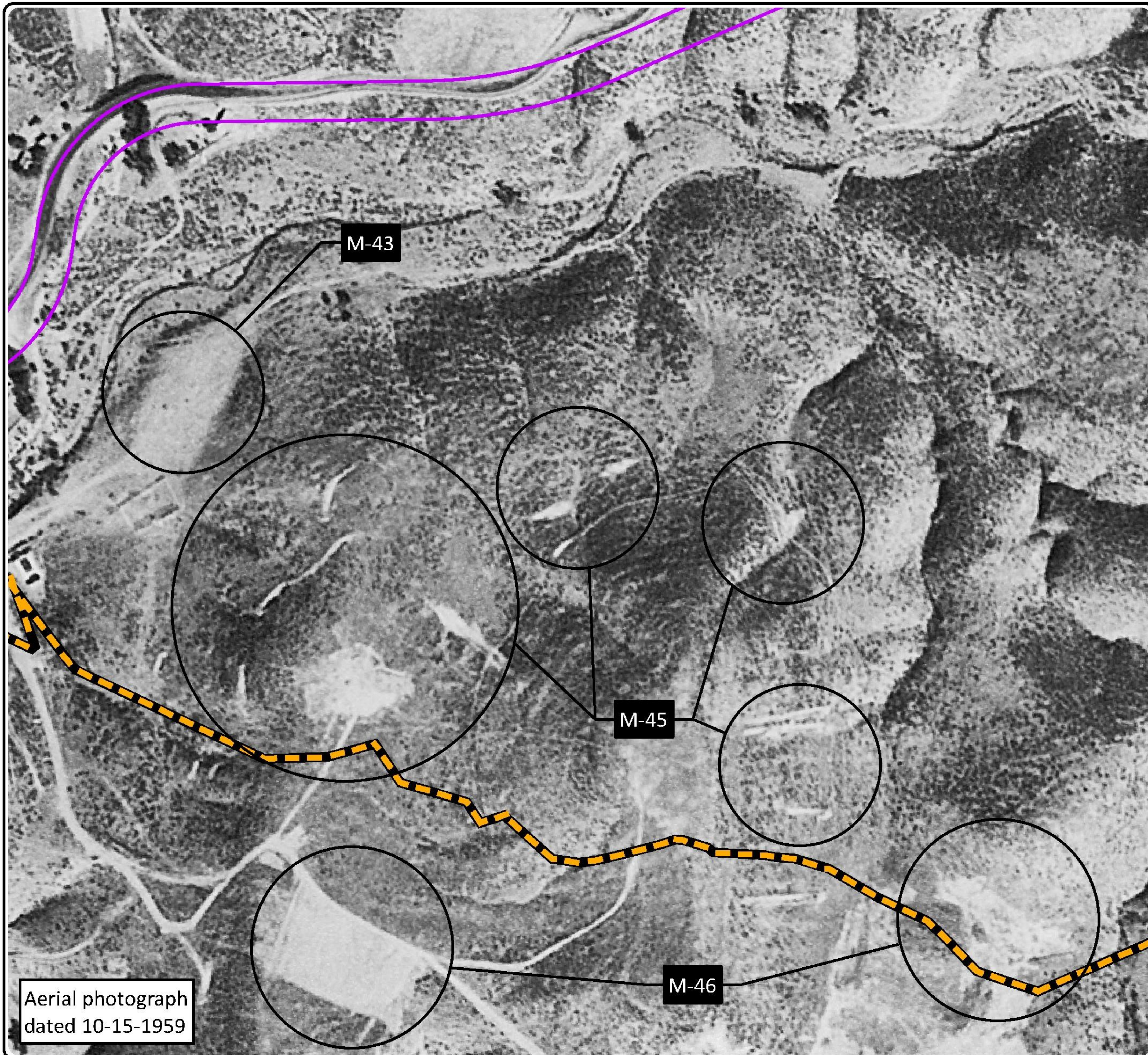
Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps

Figure B-4.16

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-45: Dramatic expansion of clay trenching and excavation as part of the mining activities at the Harlow Clay Pit as of 1959.

M-46: Continued expansion of Hubbs Harlow Quarry Operations (primarily by Stringfellow, Livingston, and Corona Quarries).

Vested Rights

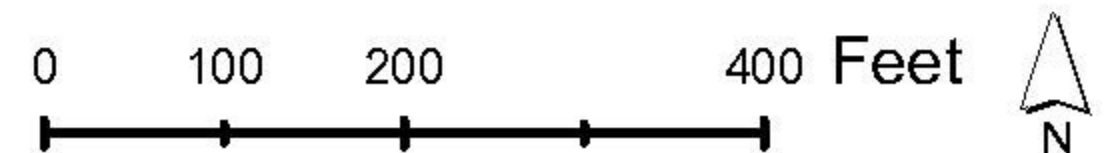
Relevancy/Commentary:

Post vesting clay and aggregate surface mining activity without a permit, located within HH VRA, outside S-4 demonstrates exercise of vested right. Interaction between surface mining activities both within and outside the S-4 VRA demonstrate intent to utilize entire HH VRA as an appropriated mining site.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

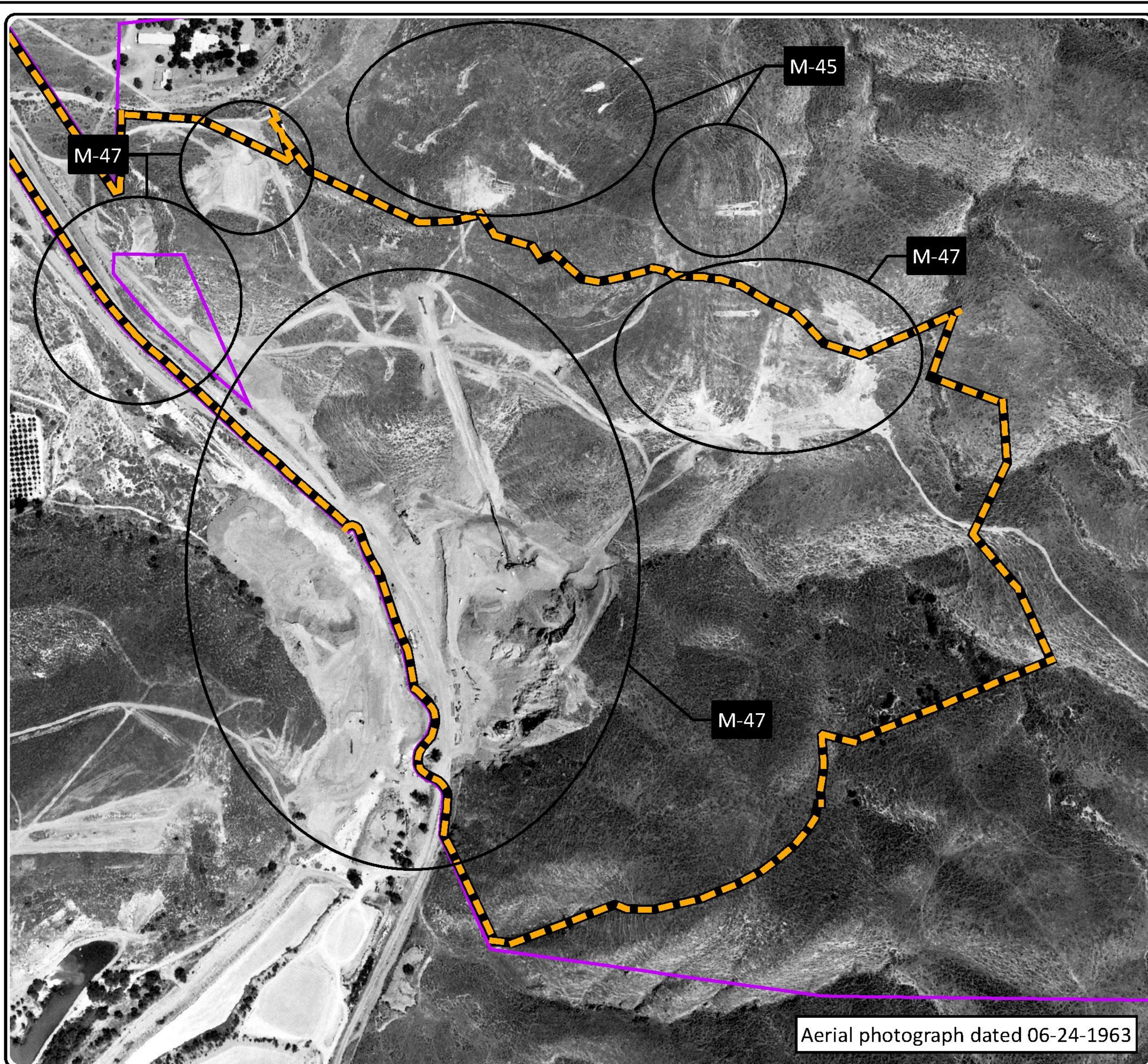
Extent of Surface Mining Activities as of 1959

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-4: Detailed Disturbance Maps
 Figure B-4.17

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-45: Continued expansion of clay trenching and excavation as part of the mining activities at the Harlow Clay Pit as of 1959.

M-47: Continued expansion of Hubbs Harlow Quarry Operations (primarily by Stringfellow, Livingston, and Corona Quarries).

Vested Rights Relevancy/Commentary:

Post vesting clay and aggregate surface mining activity without a permit, located within HH VRA, outside S-4 demonstrates exercise of vested right. Interaction between surface mining activities both within and outside the S-4 VRA demonstrate intent to utilize entire HH VRA as an appropriated mining site.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

- Legend:
- RCL 118S4 Boundary (Vested Rights Confirmed)
 - 1949 HH VRA



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Limit of Hubbs Harlow Site Development as of 1963

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Appendix B-4: Detailed Disturbance Maps Figure B-4.18

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Disturbance Description:

M-51 & M-52: Post vesting clay and aggregate surface mining activity(1962), including shallow bedrock exposure using bulldozer (1967), within the upper northeast corner of the HH VRA.

Vested Rights

Relevancy/Commentary:

Post-vesting surface mining activity occurring without a permit within the northeastern corner of the HH VRA demonstrates exercise of a vested right and the intent to appropriate the entire HH VRA as a mining site.

Disturbance Type [\(See Table B-1.1 for specific details\):](#)

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:

1949 HH VRA

0 100 200 400 Feet

N

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Continued Clay Exploration and Development: 1962-1967

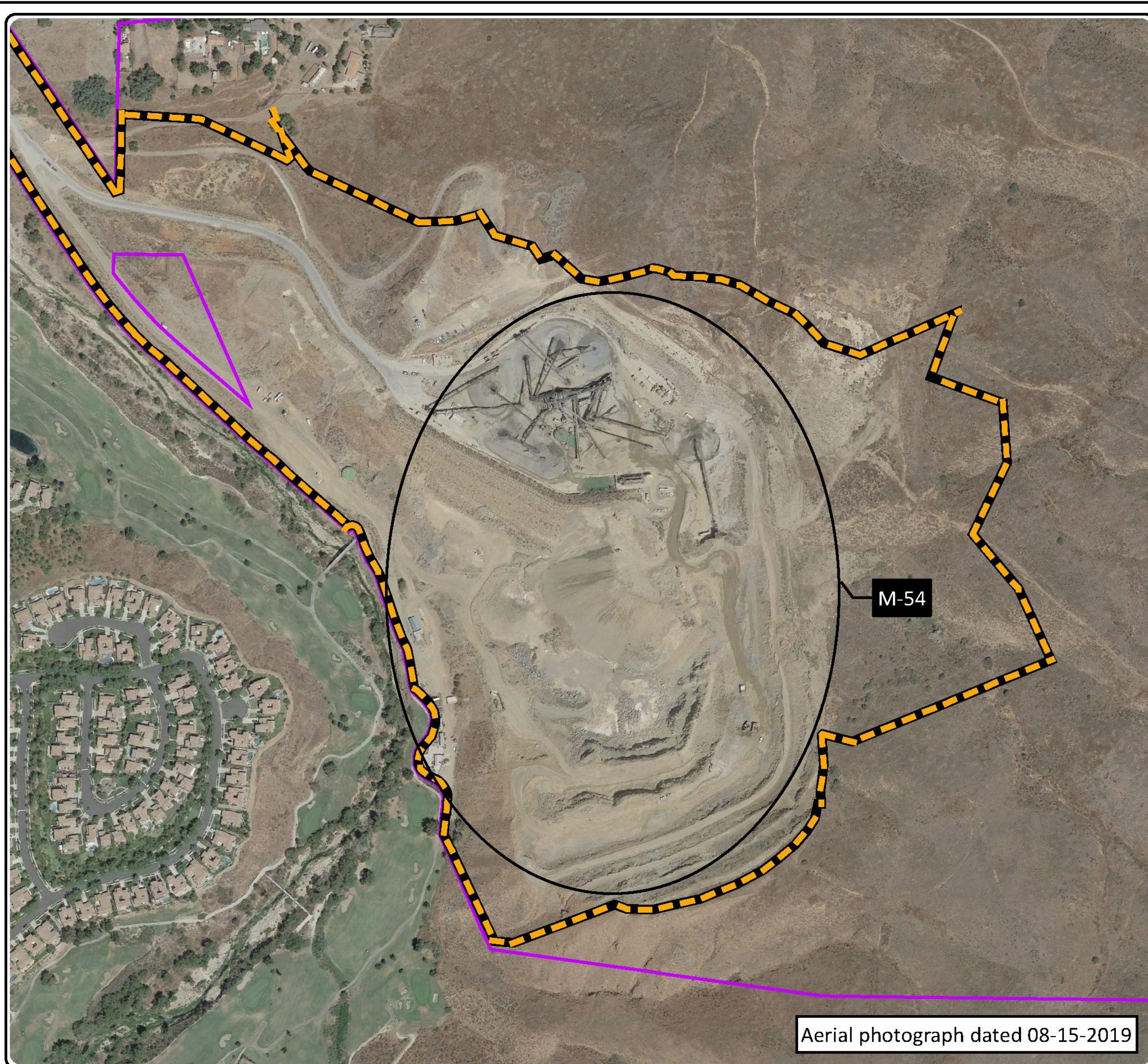
Confirmation of Geographic Scope of HH VRA

Hubbs/Harlow Quarry
Riverside County, California

Appendix B-4: Detailed Disturbance Maps Figure B-4.19

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Aerial photograph dated 08-15-2019

Disturbance Description:

M-54 Current surface mining activity, within the HH VRA, subject to Reclamation Plan 118 and revisions thereto.

Vested Rights

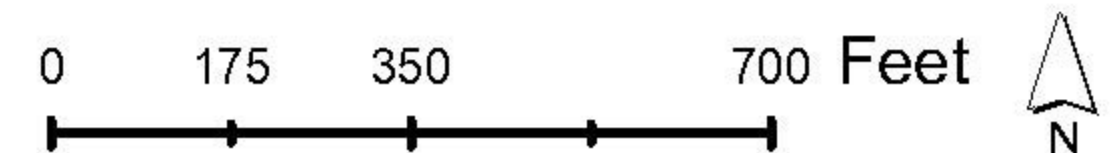
Relevancy/Commentary:

Current surface mining activity occurring without a permit, demonstrating continued exercise of vested rights within current reclamation boundary.

Disturbance Type *(See Table B-1.1 for specific details):*

- M** Surface Mining Disturbance
- R** Other Surface mining activity (Haul Roads, Stockpiles, etc.)
- E** Exploration Activities (Drilling, Sampling, etc.)

Legend:
 RCL118S4 Boundary (Vested Rights Confirmed)
 1949 HH VRA



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Surface Mining Activity within Reclamation Boundary as of 2019

Confirmation of Geographic Scope of HH VRA

Hubbs/Harlow Quarry
Riverside County, California

Appendix B-4: Detailed Disturbance Maps
Figure B-4.20

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

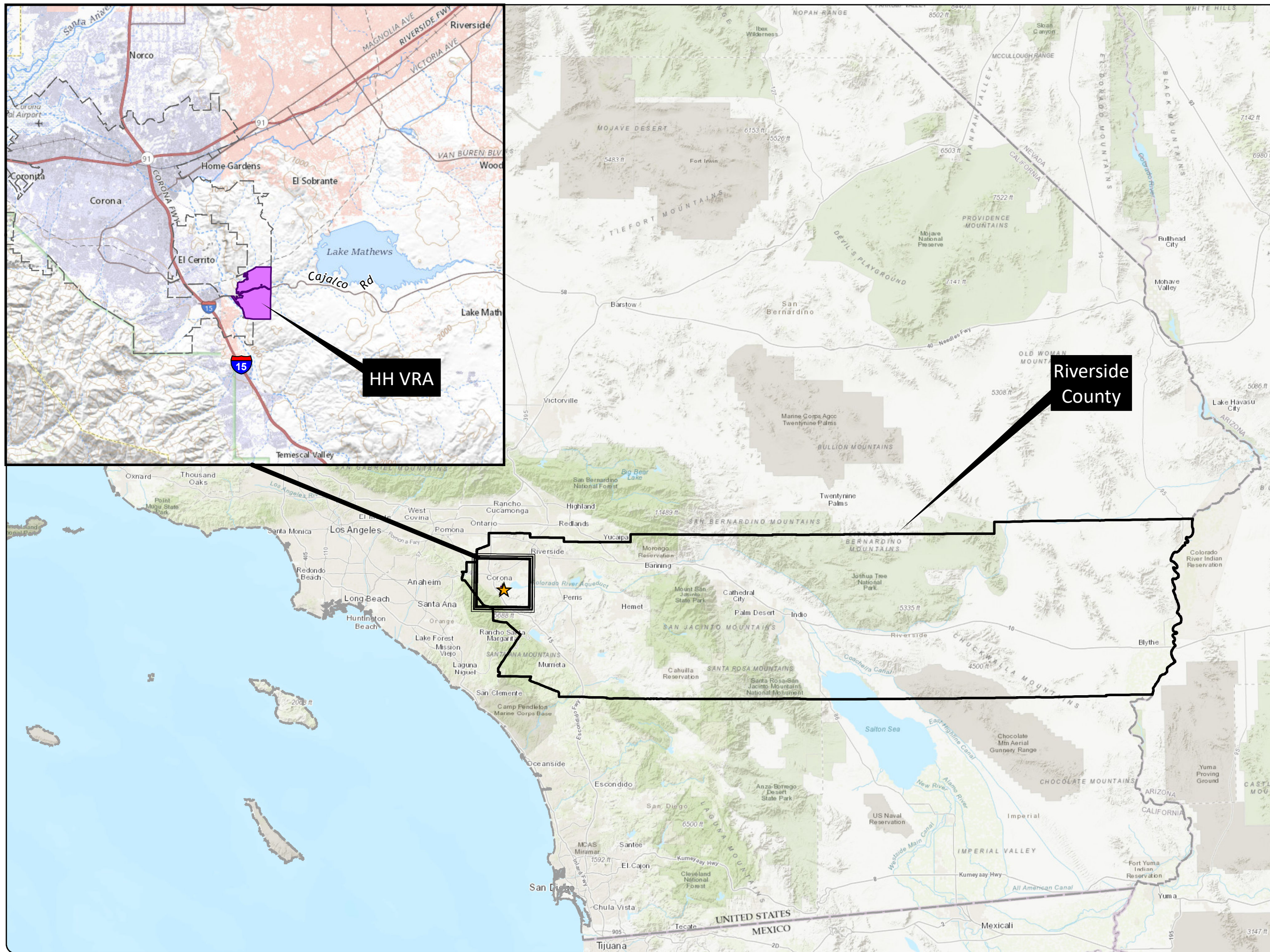


**Figure B-5.1:
Regional Location Map**

Confirmation of Geographic
Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

- ★ HH VRA Site Location
- HH VRA



12/10/2023

0 20 40 Miles




Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

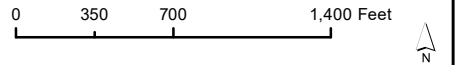
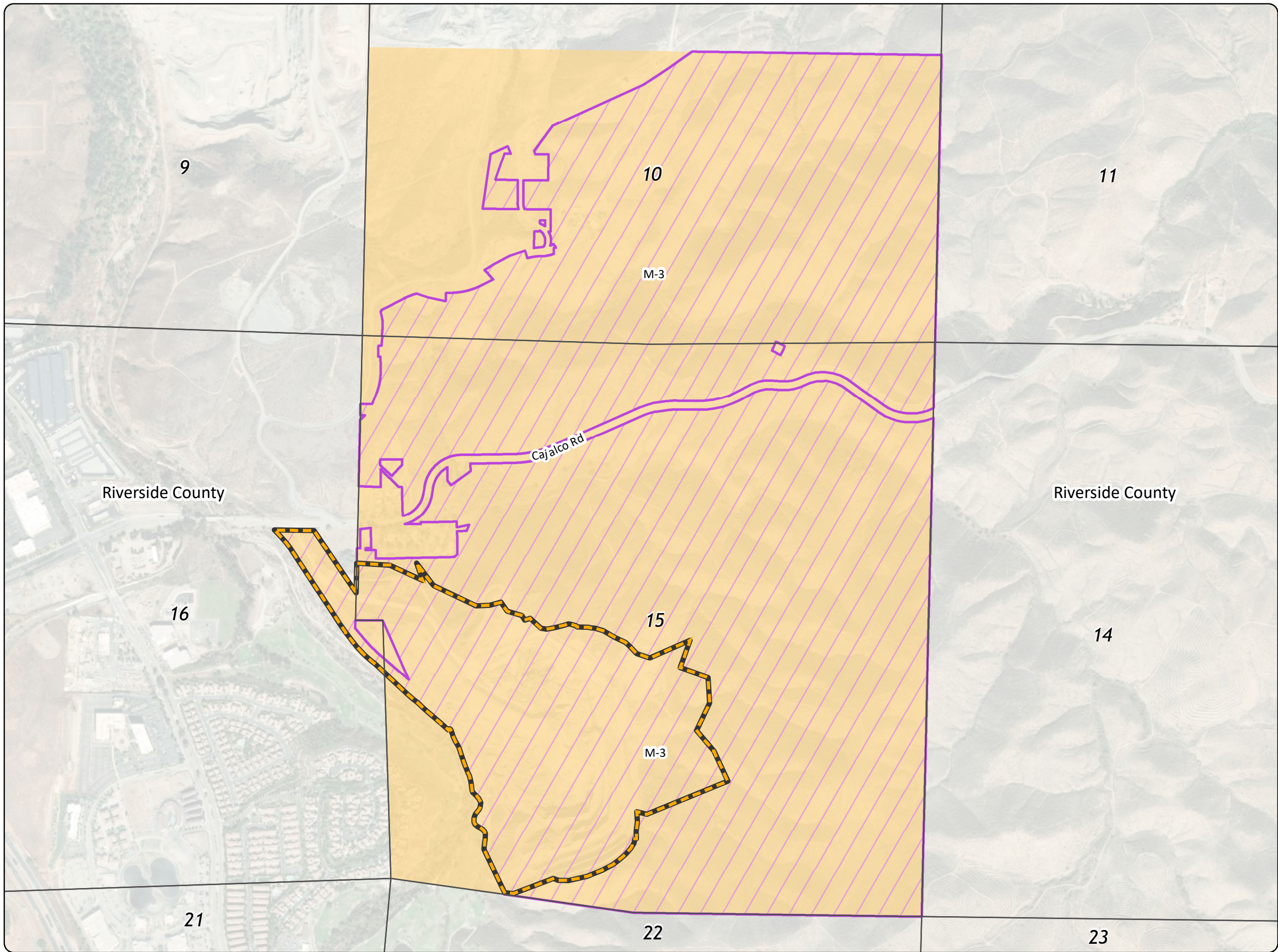
Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652

Appendix B-5: Additional Maps
Figure B-5.2: 1949 Zoning Map

Confirmation of Geographic
Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  RCL118S4 Boundary
-  HH VRA
- Riverside County Zoning
-  Regulated Industrial (M-3)



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.






Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652

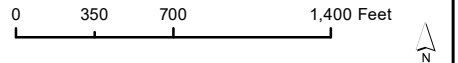
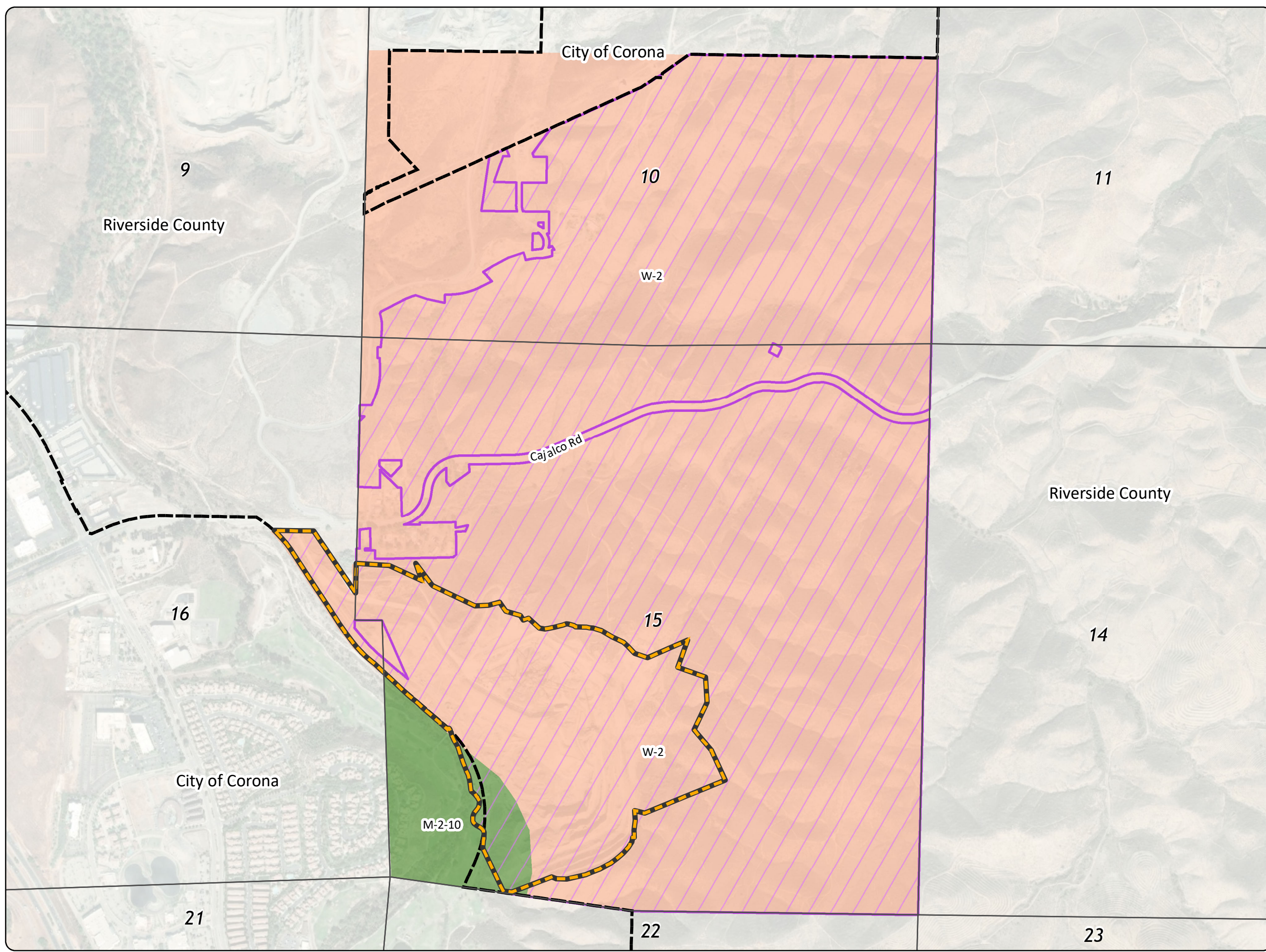


Appendix B-5: Additional Maps
Figure B-5.3: 1976 Zoning Map

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Legend:

-  RCL118S4 Boundary
 -  HH VRA
 -  City of Corona / Riverside County Boundary
- Riverside County Zoning**
-  Heavy Industrial (M-2-10)
 -  Controlled Development Areas (W-2)



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.










Prepared by: Sage Thurmond, Compass Land Group
 3140 Peacekeeper Way #102, McClellan Park, CA 95652

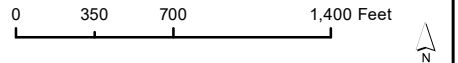
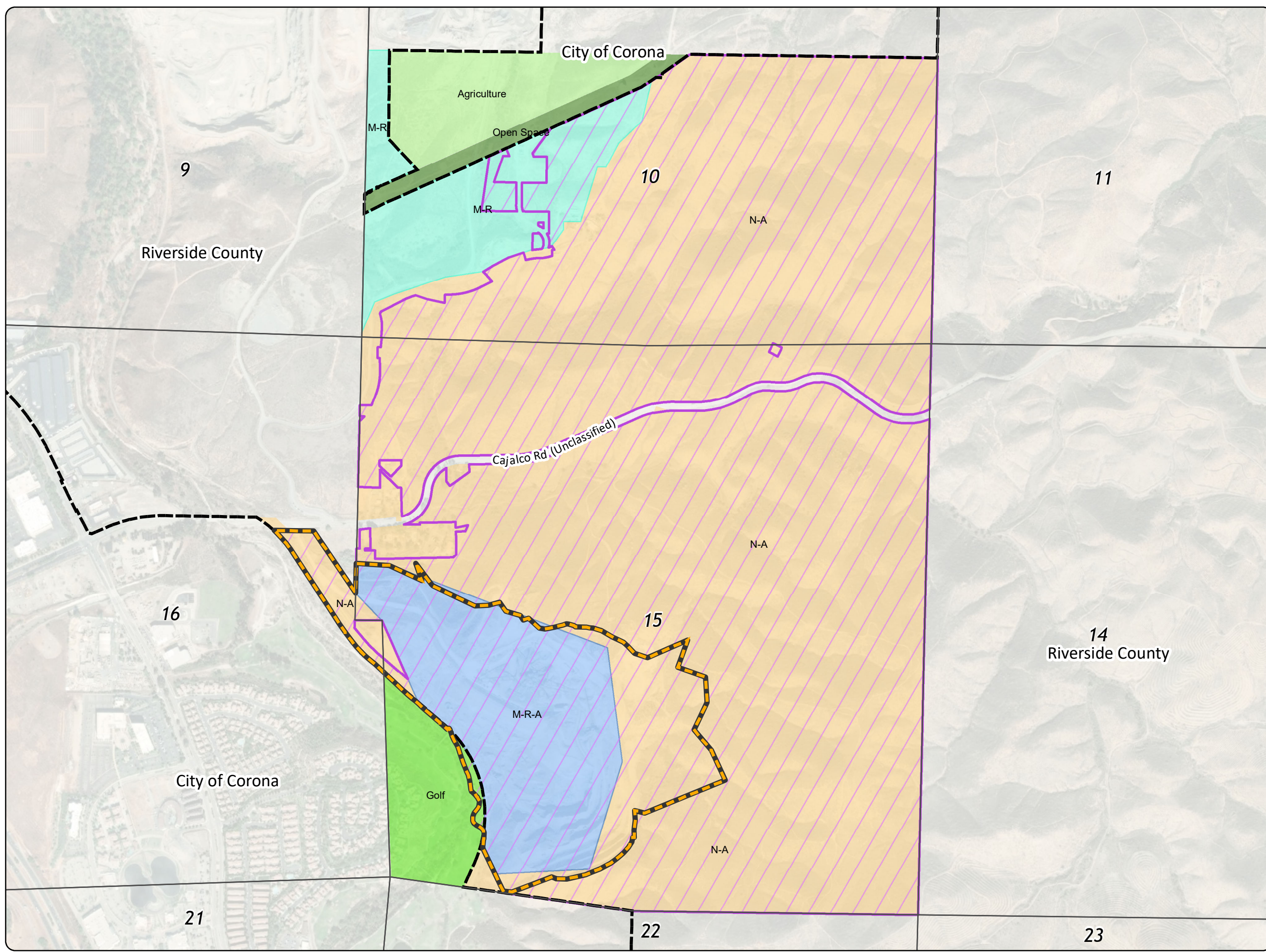


Appendix B-5: Additional Maps
Figure B-5.4: 2021 Zoning Map

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Legend:

-  RCL118S4 Boundary
-  HH VRA
-  City of Corona / Riverside County Boundary
- Riverside County Zoning**
-  Natural Asset (N-A)
-  Mineral Resources (M-R)
-  Mineral Resources & Related Manufacturing (M-R-A)
- City of Corona Zoning**
-  Open Space (OS)
-  Golf
-  Agriculture (A)



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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 3140 Peacekeeper Way #102, McClellan Park, CA 95652



Appendix B-5: Additional Maps
Figure B-5.1: Temescal Mining District Activity, Pre-1925

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Legend:

- HH VRA*
- Proximate Area of Aggregate Mine Activity
- Proximate Area of Tin Mine Activity
- Proximate Area of Silica-Sand Mine Activity
- Proximate Area of Clay Pit Mine Activity
- Tin Mine Haul Road
- Clay Mine Haul Road
- Rail Road
- Haul Road
- Temescal Tin District Map (1890 Temescal Tin District Report)*

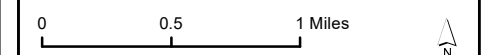
**Note: Exh. C2.21 "Temescal Tin District (San Jacinto Estate) Reports of E.N. Robinson, M.E.; Henry Mathey, M.E.; Captain Charles Craze, M.E.; and Geogre Grant Francis, M.E. (1888, 1889, 1890)*

USGS Plate-3 Tin Mine Features

- Stripped Tourmaline vein
- Trench, Pit or Adit
- Mine Shaft

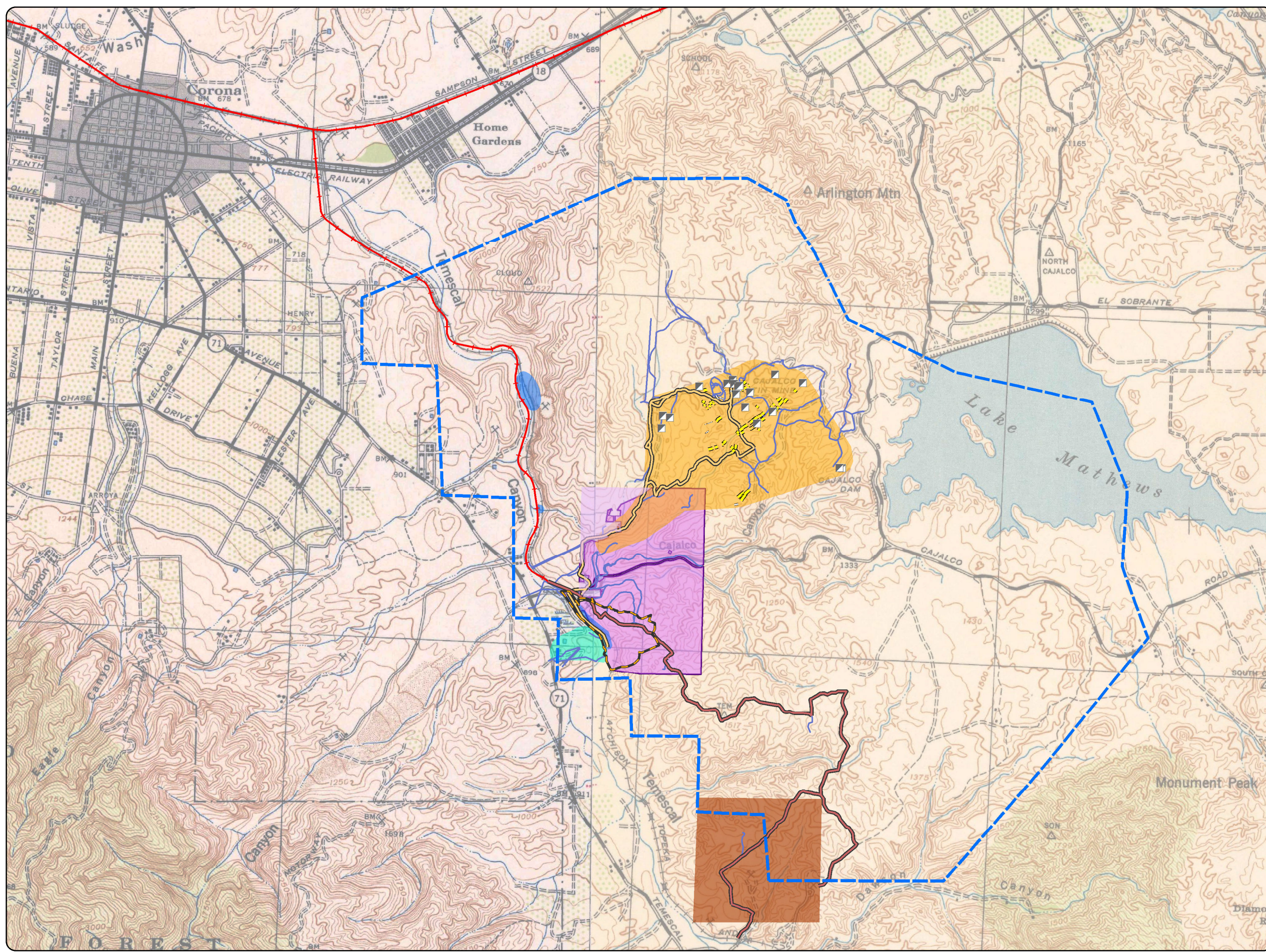
**Note: The northwest corner around the Vested Rights Area is lightly shaded to indicate that area which was initially part of the full 1949 Vested Rights Area but for which property interests have been modified post-1949.*

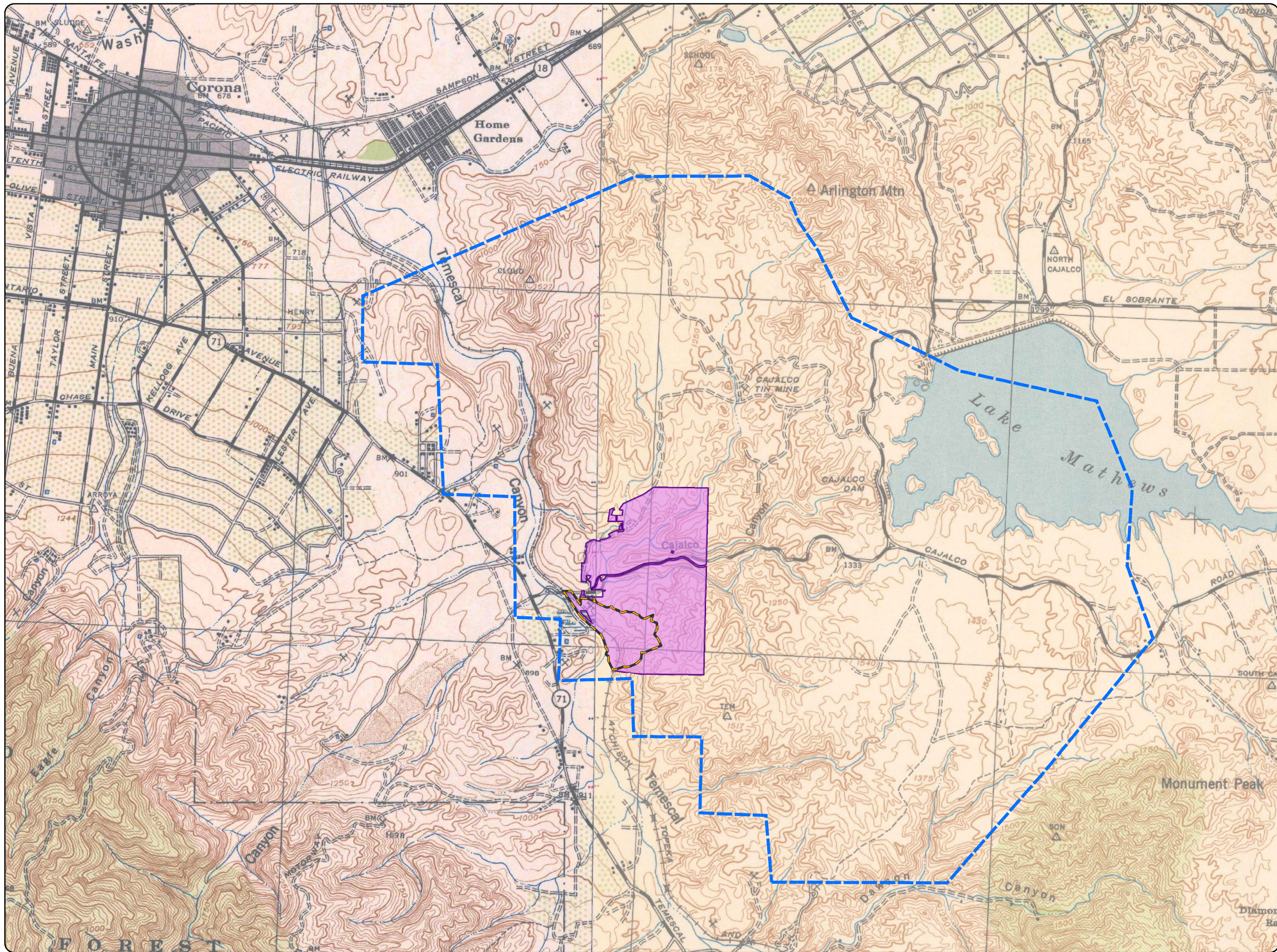
This base map was compiled from historical USGS topo quadrangles maps. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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 3140 Peacekeeper Way #102, McClellan Park, CA 95652





Appendix B-5: Additional Maps

**Figure B-5.2:
Temescal Mining District**

Confirmation of Geographic
Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

- RCL118S4 Boundary
(Vested Rights Confirmed)
- HH VRA
- Temescal Tin District Map (1890
Temescal Tin District Report)*

**Note: Exh. C2.21 "Temescal Tin District (San Jacinto Estate) Reports of E.N. Robinson, M.E.; Henry Mathey, M.E.; Captain Charles Craze, M.E.; and Geogre Grant Francis, M.E. (1888, 1889, 1890)*

This base map was compiled from historical USGS topo quadrangles maps. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.








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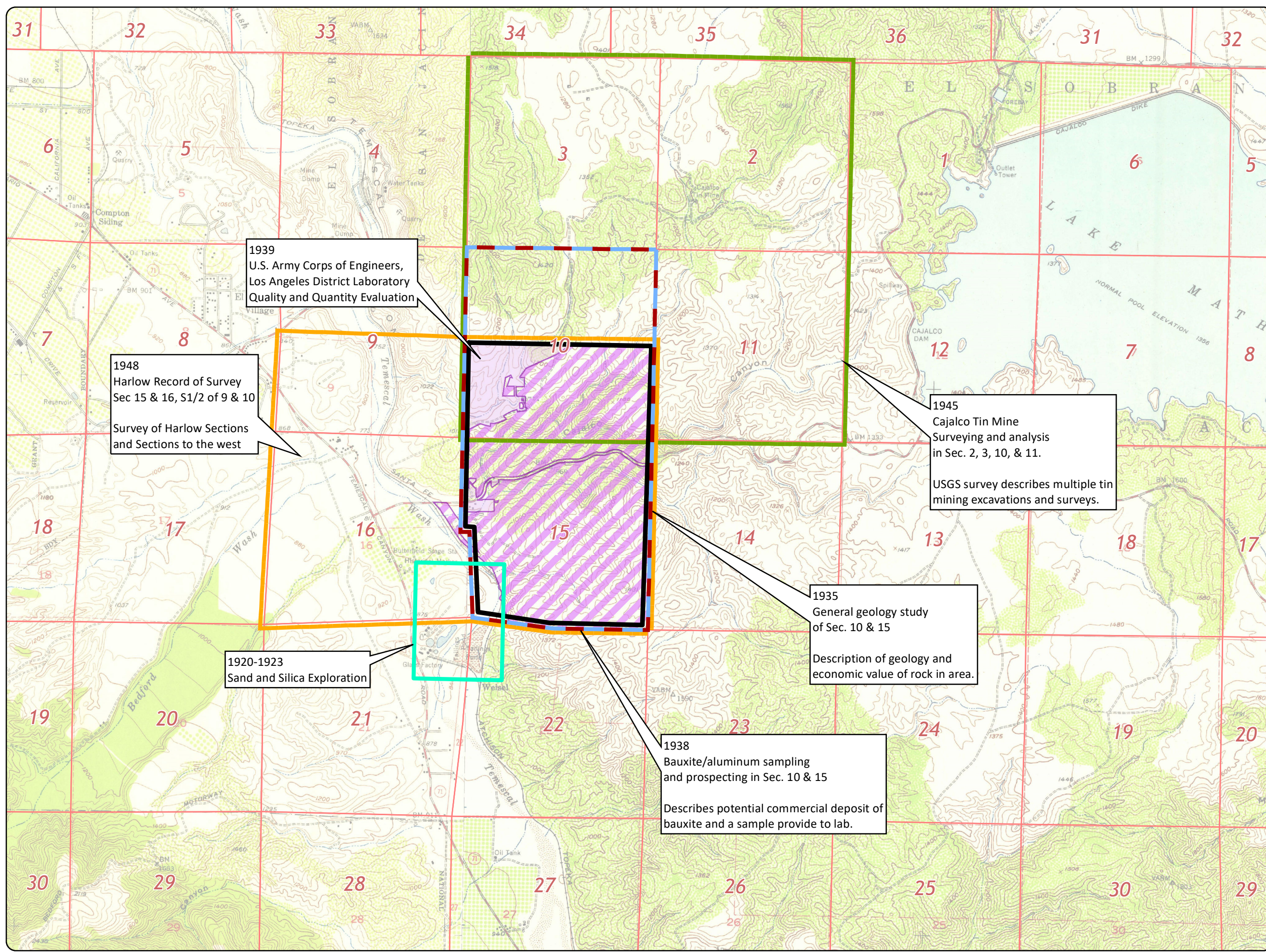


**Figure B-5.6:
Exploration Activities Map**

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

-  HH VRA
- Exploration Areas**
-  1920-1923 Sand exploration
-  1935 Geology Study
-  1938 Sampling and Prospecting
-  1939 US Army Corps Study
-  1945 Surveying and analysis
-  1948 Harlow R.O.S.



1939
U.S. Army Corps of Engineers,
Los Angeles District Laboratory
Quality and Quantity Evaluation

1948
Harlow Record of Survey
Sec 15 & 16, S1/2 of 9 & 10
Survey of Harlow Sections
and Sections to the west

1920-1923
Sand and Silica Exploration

1945
Cajalco Tin Mine
Surveying and analysis
in Sec. 2, 3, 10, & 11.

USGS survey describes multiple tin
mining excavations and surveys.

1935
General geology study
of Sec. 10 & 15

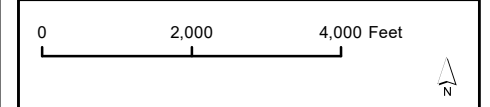
Description of geology and
economic value of rock in area.

1938
Bauxite/aluminum sampling
and prospecting in Sec. 10 & 15

Describes potential commercial deposit of
bauxite and a sample provide to lab.

*Note: The northwest corner around the Vested Rights Area is lightly shaded to indicate the area which would have part of the full 1949 Vested Rights Area had the property not fragragmented post 1949.

This base map was compiled from historical USGS topo quadrangles maps and county GIS parcel dataset. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652







Appendix B-5: Additional Maps

Figure B-5.7: Regional Vested Right Operations

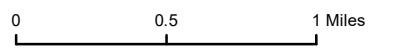
Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Legend:

-  RCL118S4 Boundary
-  HH VRA
-  Previously Vested Mining Areas (1*)
-  Public Lands (2*)

**Note:*
 (1) These vested rights boundaries are based upon reclamation plans, use permit and other documentation which indicate the operation as vested.
 (2) The public lands consists of properties controlled by Metropolitan Water District, Riverside County Habitat Conservation Agency, and USA Bureau of Land Management.

Basemap: USGS The National Map and county GIS parcel dataset. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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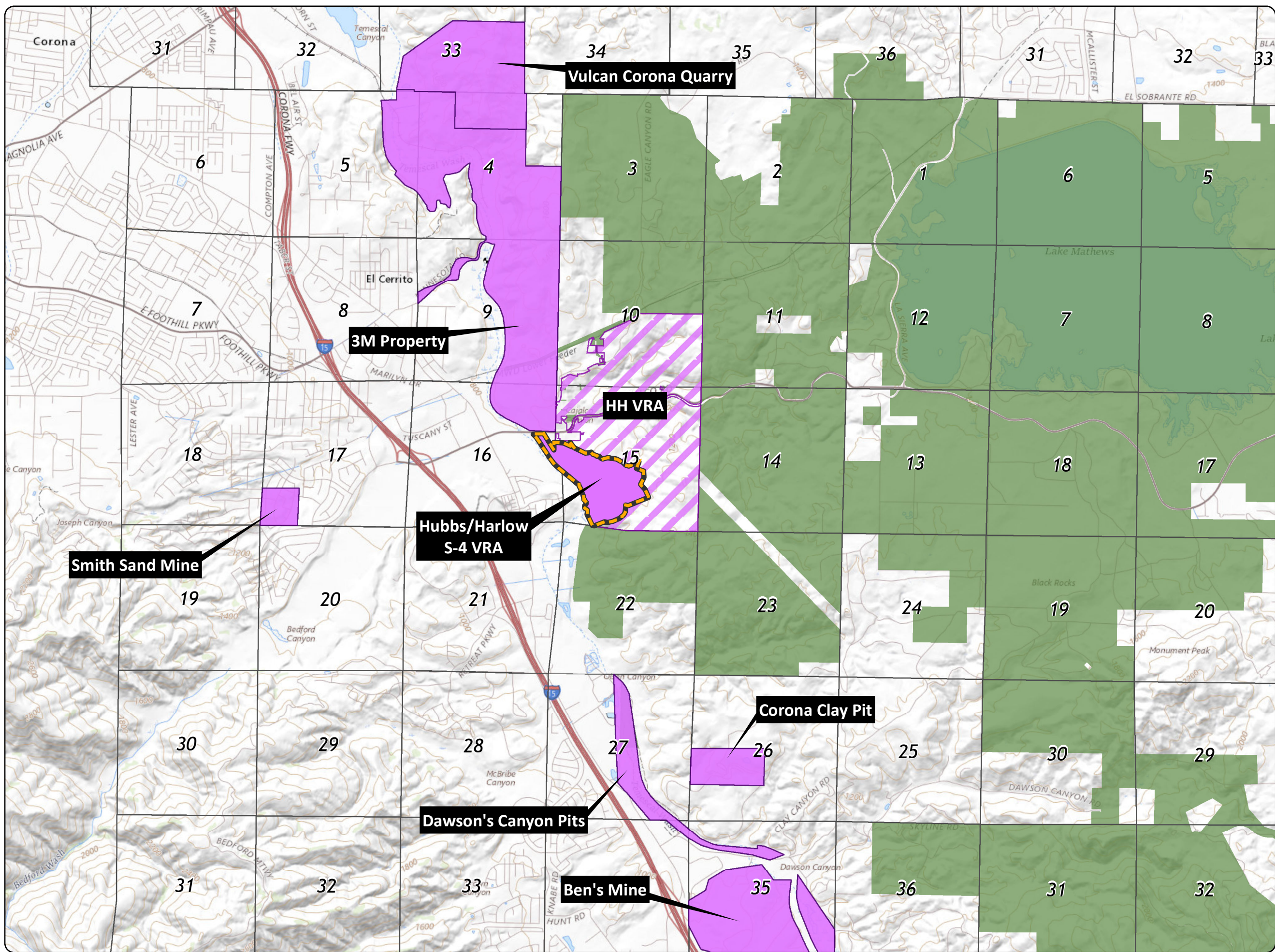
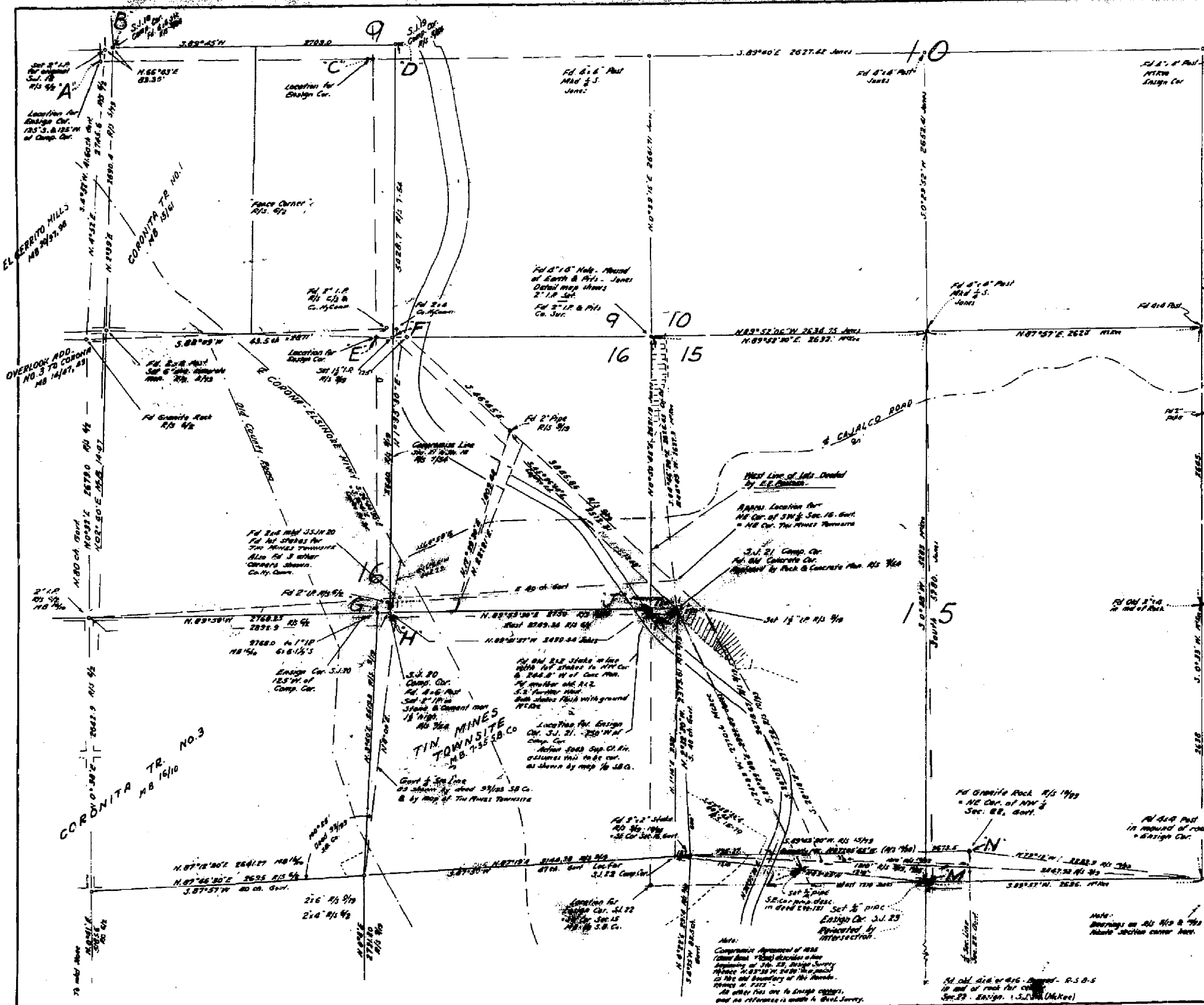


Figure B-5.8:
1948 Record of Survey

Confirmation of Geographic
Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California



RECORD OF SURVEY

of Sec. 15 and 16 and portion of Sec. 9 and 10
T.4 S. R.6 W. S.B. 17, and in Ranch El Sabronite
De San Jacinto M.B. 1-8 S.B. Co. Calif.

May 1948 Scale 1 in. = 600 ft.
Donald J. McKee - Licensed Surveyor

This was made to show the relative locations of corners used by previous surveys; the theoretical location of corners shown on original Gov't and Rancho Maps; and the corners and property lines established by the Compromise Agreement of 1895 and other deeds of record. Compiled from Recorded Maps, Records of Surveys, Highway and Railroad Surveys; unrecorded Maps and Surveys, by John C. Lewis, and original Surveys by Donald J. McKee to locate corners of Section 15; to determine a location for S.1.23 and the SE. Corner of the property described in Deed No. 292-131. Courses and distances are those shown on the original maps as noted without adjustments.

Note: "Eason" refers to survey of the Rancho El Sabronite by Caleb Eason, unrecorded map filed in County Surveyors Office. "Gov't" refers to U.S. Gov't. surveys of sections adjoining the Rancho. "Comp. Cor." refers to corners established by the Compromise Agreement of 1895 - Deed 77-318 R.V.C. "Co. Hwy. Com." refers to Survey of Corona Elsinore Highway Riverside Co. Highway Commission F.B. 22 and 26. "Jones" refers to survey by Franklin D. Jones, C.E. for E.R. Peacock in 1925 - unrecorded map filed in County Surveyors Office.

I hereby certify that I am a Licensed Land Surveyor in the State of California, and that this map consisting of one sheet, correctly represents a survey made by me in 1947 and that all the monuments shown hereon for Section 15 actually exist and their positions are as hereon shown.
Donald J. McKee
Licensed Land Surveyor

Note: Bearings are based on the center-line of Corona Elsinore Highway and are true courses.

M.B. 1 pp. 8 S.B. Co	June 1868
M.B. 7 pp. 35 S.B. Co	1888
Caleb A. Eason Survey	1891
John Goldsworthy - Gov't Survey	1874
Comp. Agreement	1906

This map prepared at the request of Leila Mae Horlow

FILED

DEC - 3 1948

JACK A. ROSS
County Recorder

Examined December 3, 1948
10:30 AM

AC Keith by C.T. Womack Deputy
County Surveyor Riverside County Calif
and filed to make valuable information a public record.



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652



RS 16/26

Figure B-5.9: 1948 Record of Survey with HH VRA

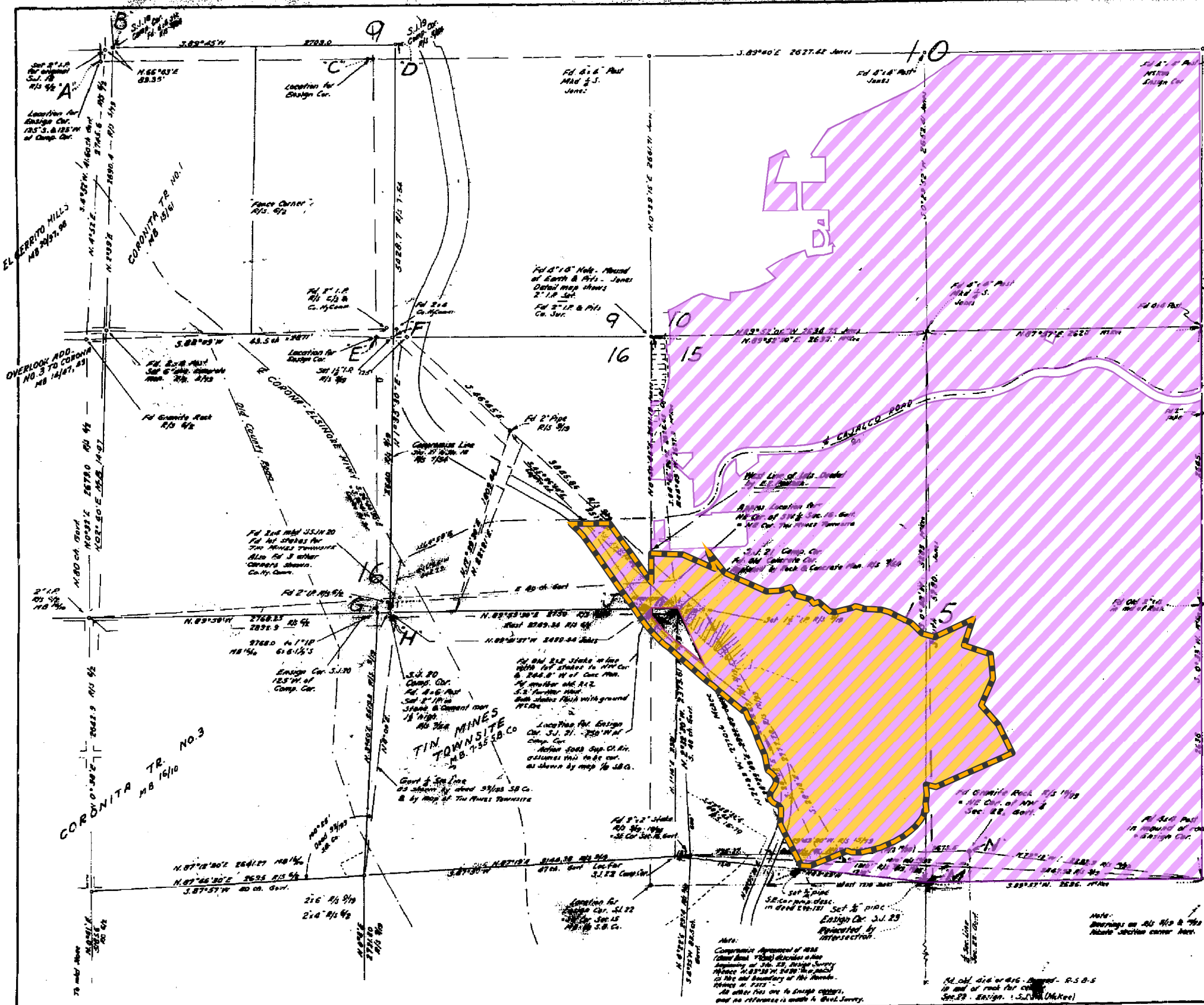
Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Legend:

- RCL118S4 Boundary
- Area subject to Prior Confirmation (S-4 VRA)
- HH VRA

Vested Rights Relevancy/Commentary:

Harlow commission an ambitious Record of Survey of the entire HH VRA site and adjoining mineral property to define and fully exploit the mineral resources, spurred on by failed effort to acquire nearby mineral lands, coupled with rapidly expanding mineral operations, demonstrating an intent to appropriate the entire HH VRA as a mine site.



RECORD OF SURVEY

of Sec. 15 and 16 and portion of Sec. 9 and 10
T.4 S. R.6 W. S.B. 17, and in Ranch El Sabranite
De San Jacinto M.B. 1-8 S.B. Co. Calif.

May 1948 Scale 1 in. = 600 ft.
Donald J. McKee - Licensed Surveyor

This was made to show the relative locations of corners used by previous surveys; the theoretical location of corners shown on original Gov't and Rancho Maps; and the corners and property lines established by the Compromise Agreement of 1895 and other deeds of record. Compiled from Recorded Maps, Records of Surveys, Highway and Railroad Surveys; unrecorded Maps and Surveys, by John C. Lewis, and original Surveys by Donald J. McKee to locate corners of Section 15; to determine a location for S.1.23 and the SE corner of the property described in Deed No. 297-13. Courses and distances are those shown on the original maps as noted without adjustments.

Notes:
 "Eason" refers to survey of the Rancho El Sabranite by Caleb Eason, unrecorded map filed in County Surveyors Office.
 "Gov't" refers to U.S. Gov't. surveys of sections adjoining the Rancho.
 "Comp. Agr." refers to corners established by the Compromise Agreement of 1895 - Deed No. 318 R.C.C.
 "Co. Hwy. Com." refers to Survey of Corona Elsinore Highway Riverside Co. Highway Commissioners F.B. 22 and 26.
 "Jones" refers to survey by Franklin D. Jones, C.E. for E.R. Porech in 1925 - unrecorded map filed in County Surveyors Office.

I hereby certify that I am a Licensed Land Surveyor in the State of California, and that this map consisting of one sheet, correctly represents a survey made by me in 1947 and that all the monuments shown hereon for Section 15 actually exist and their positions are as hereon shown.
Donald J. McKee
Licensed Land Surveyor

Note: Bearings are based on the center-line of Corona Elsinore Highway and are true courses.

M.B. 1 pp. 8 S.B. Co	June 1868
M.B. 7 pp. 35 S.B. Co	1888
Caleb A. Eason Survey	1891
John Goldsworthy - Gov't Survey	1874
Comp. Agreement	1906

This map prepared at the request of Leila Mae Harlow

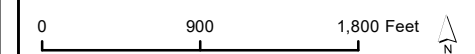
FILED

DEC - 3 1948
JACKA ROSS
County Recorder

#100
Examined December 3, 1948

AC Keith by C.T. Worsley Deputy
County Surveyor Riverside County Calif
and filed to make valuable information a public record.

RS 16/26



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.






Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652



Appendix B-5: Additional Maps
Figure B-5.10: Harlow Mineral Properties Subject to Ownership or Contract, as of 1947

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Legend:

-  RCL118S4 Boundary (Vested Rights Confirmed)
-  1949 Vested Rights
-  Kincheloe Property (~617)
-  Owens-Illinois Silica Sand
-  Known Resource Deposit
-  Active Resource Activity

Vested Rights Relevancy/Commentary:

See RFD, Section V.E for details.

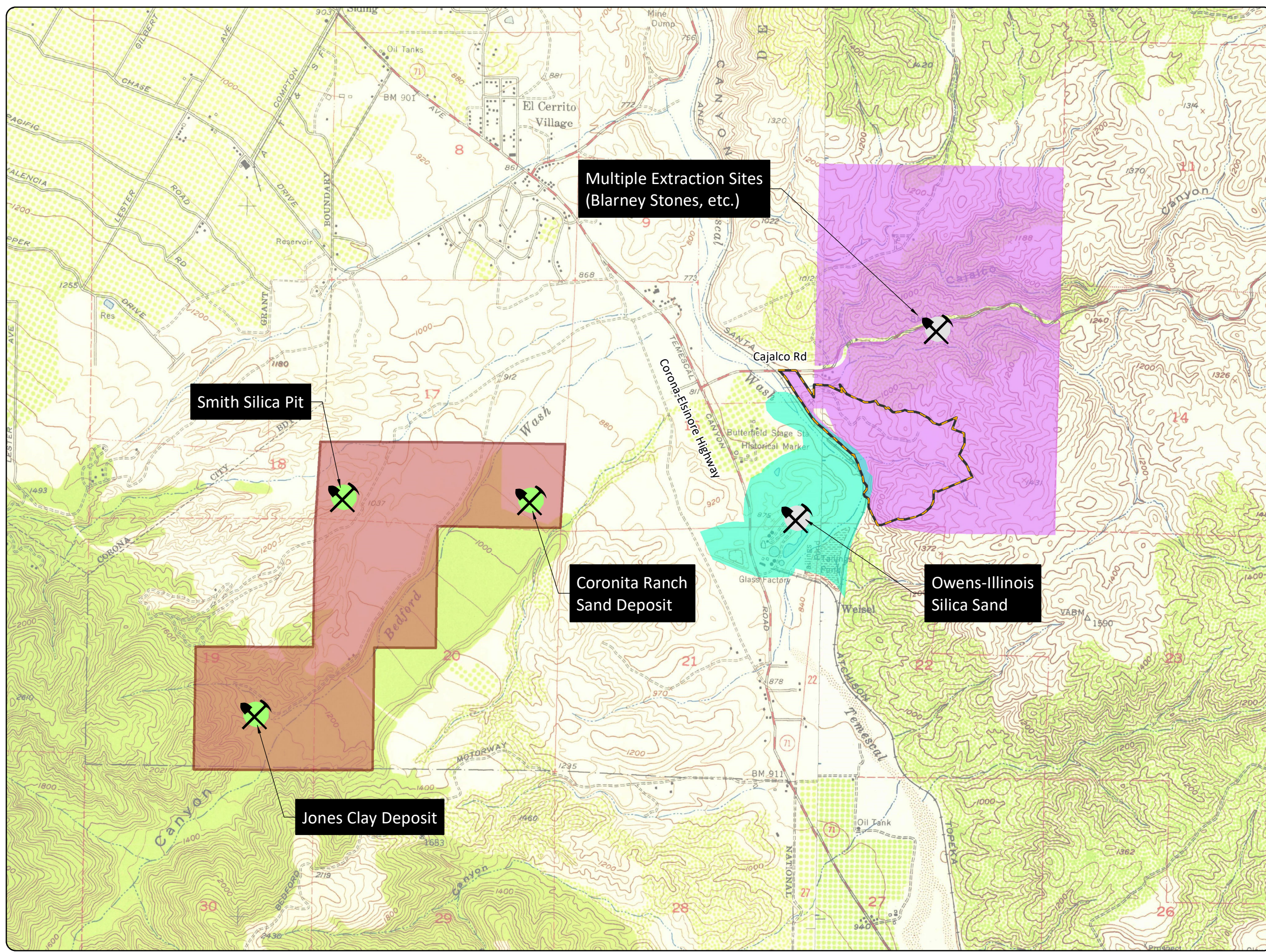
This base map was compiled from historical USGS topo quadrangles maps and county GIS parcel dataset. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

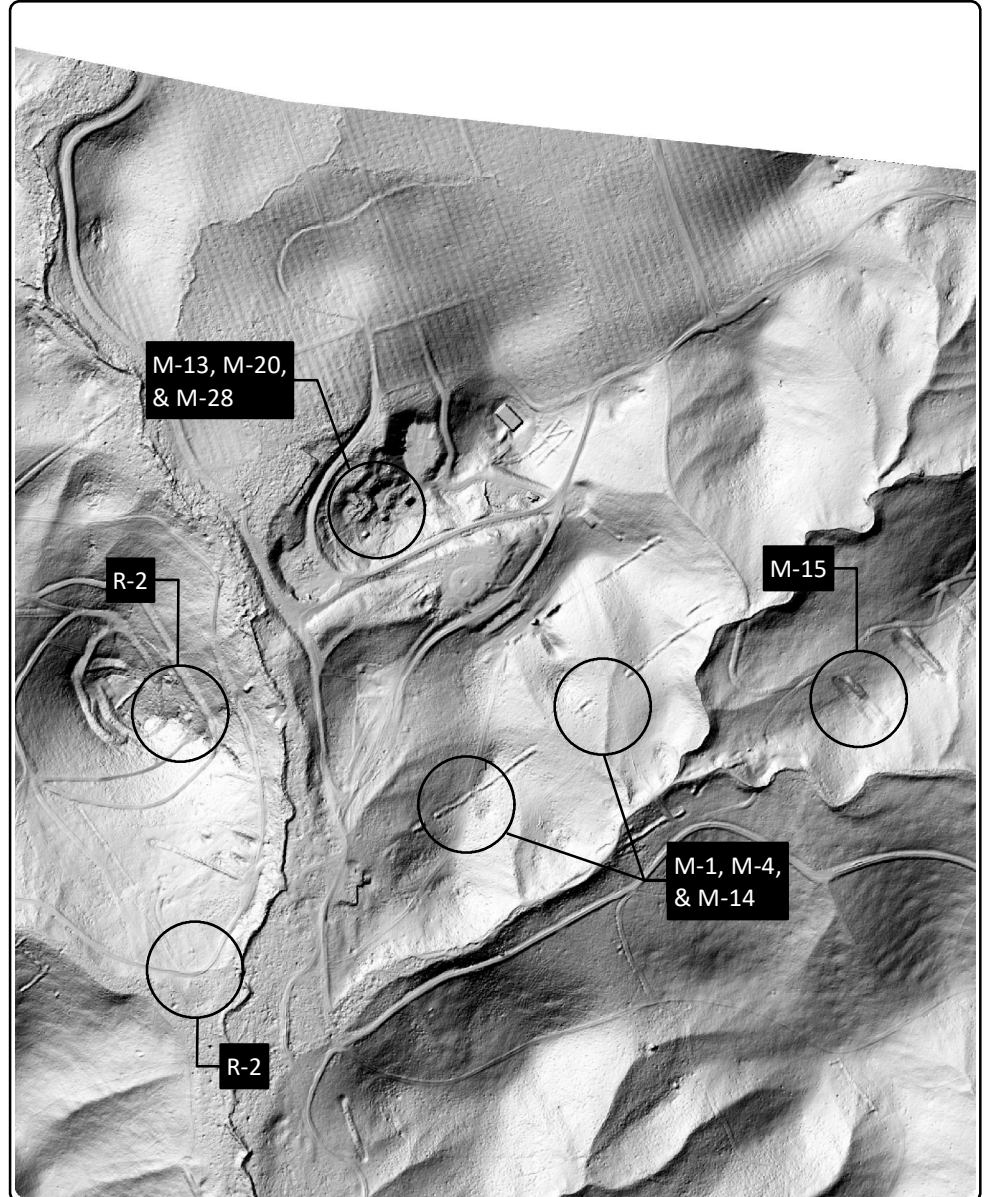
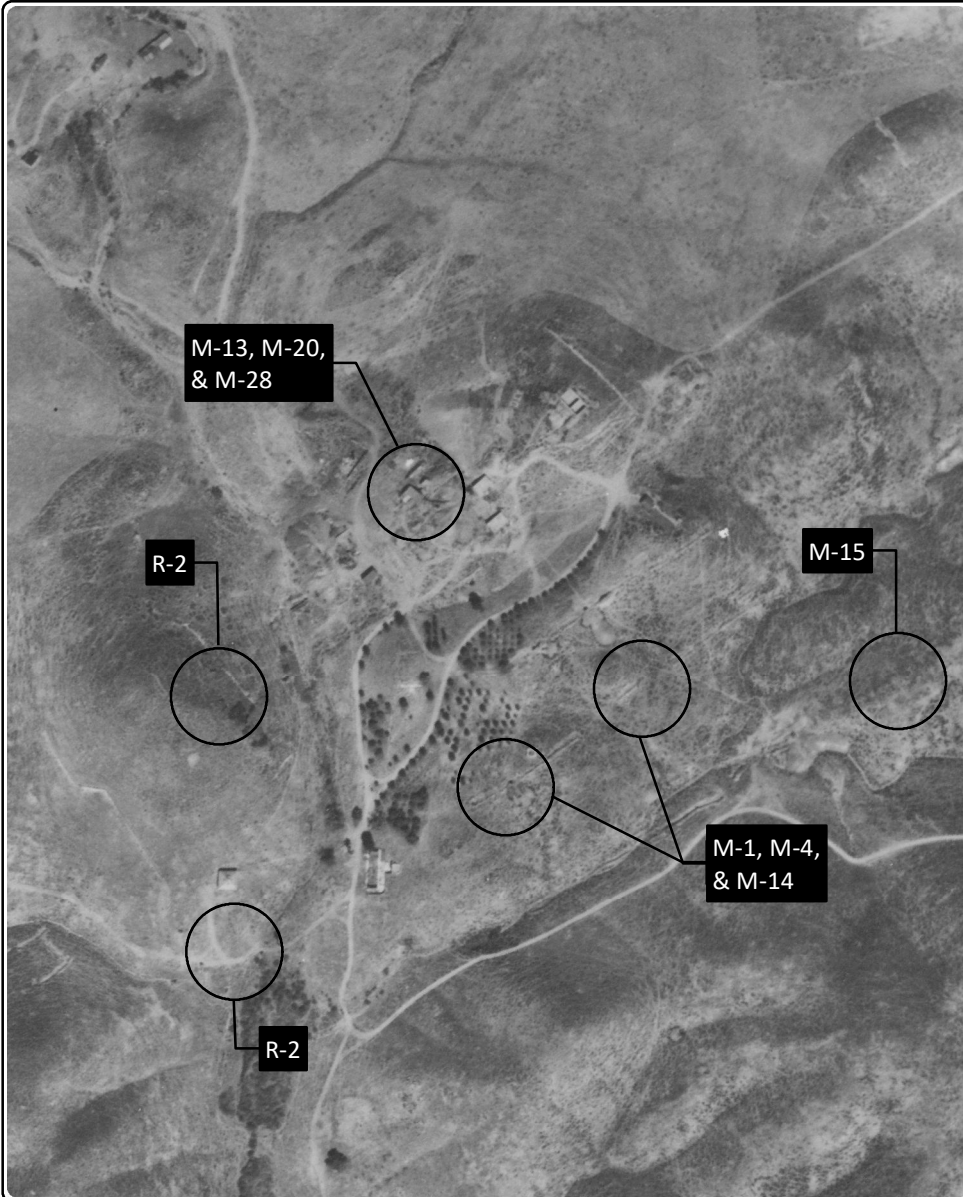
0 1,500 3,000 Feet



Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

Prepared by: Sage Thurmond, Compass Land Group
 3140 Peacekeeper Way #102, McClellan Park, CA 95652





Legend:

1948 Vested Rights Area

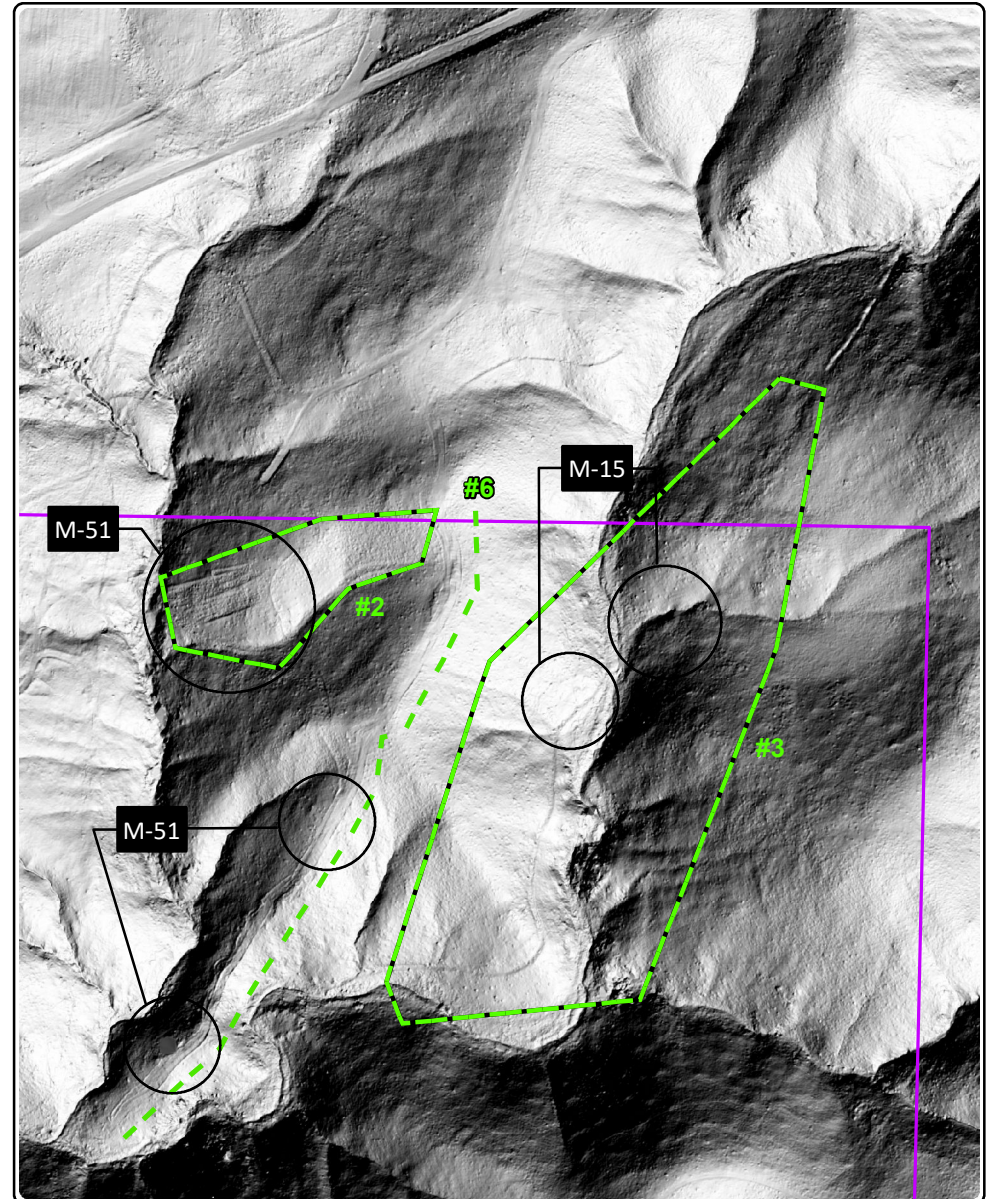
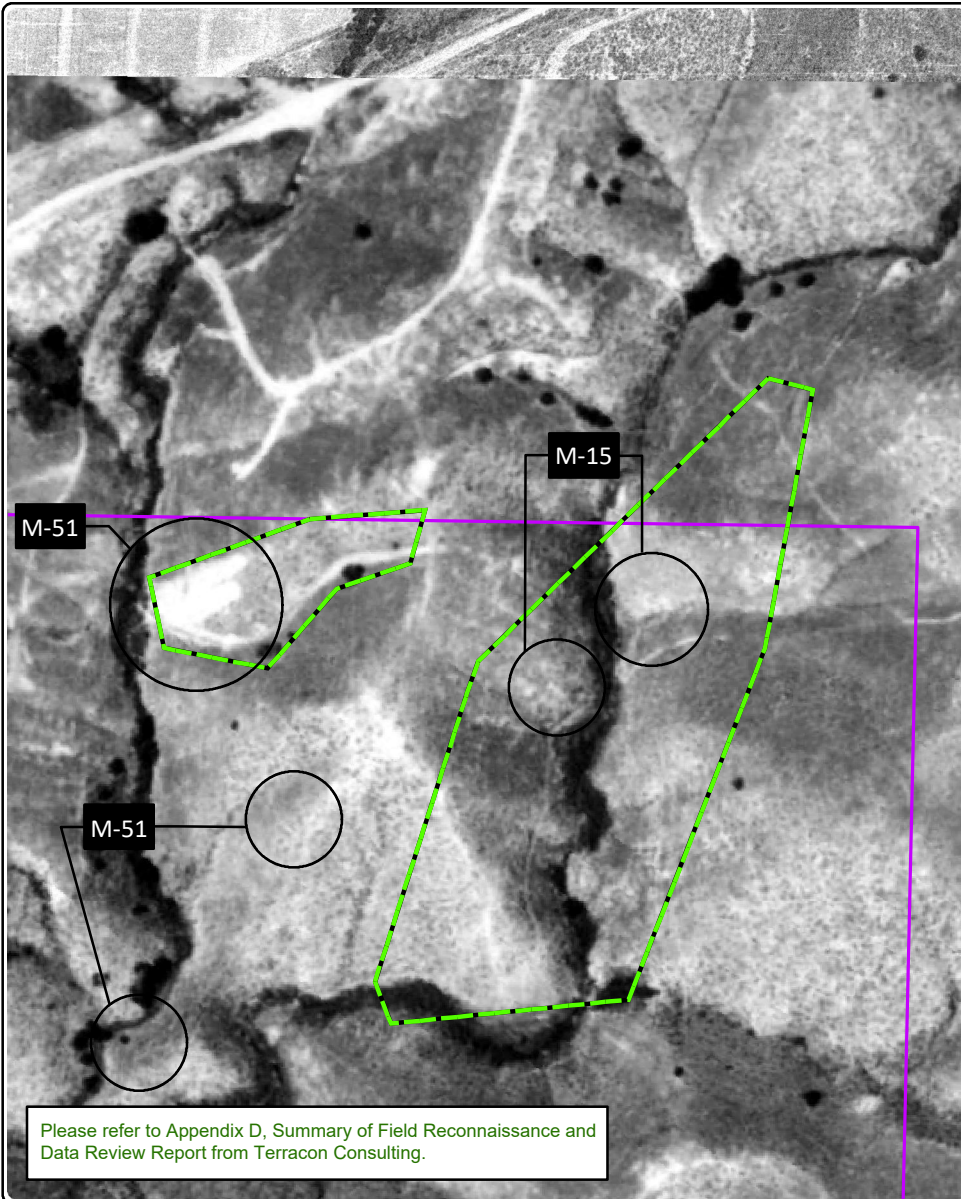
5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Aerial and LiDAR Comparison of Tin Mine Area Surface Mining Disturbances
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-6:
 Figure B-6.1

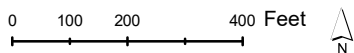
Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Please refer to Appendix D, Summary of Field Reconnaissance and Data Review Report from Terracon Consulting.

- Legend:
- 1948 Vested Rights Area
 - Terracon Report Area (Area #)



5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

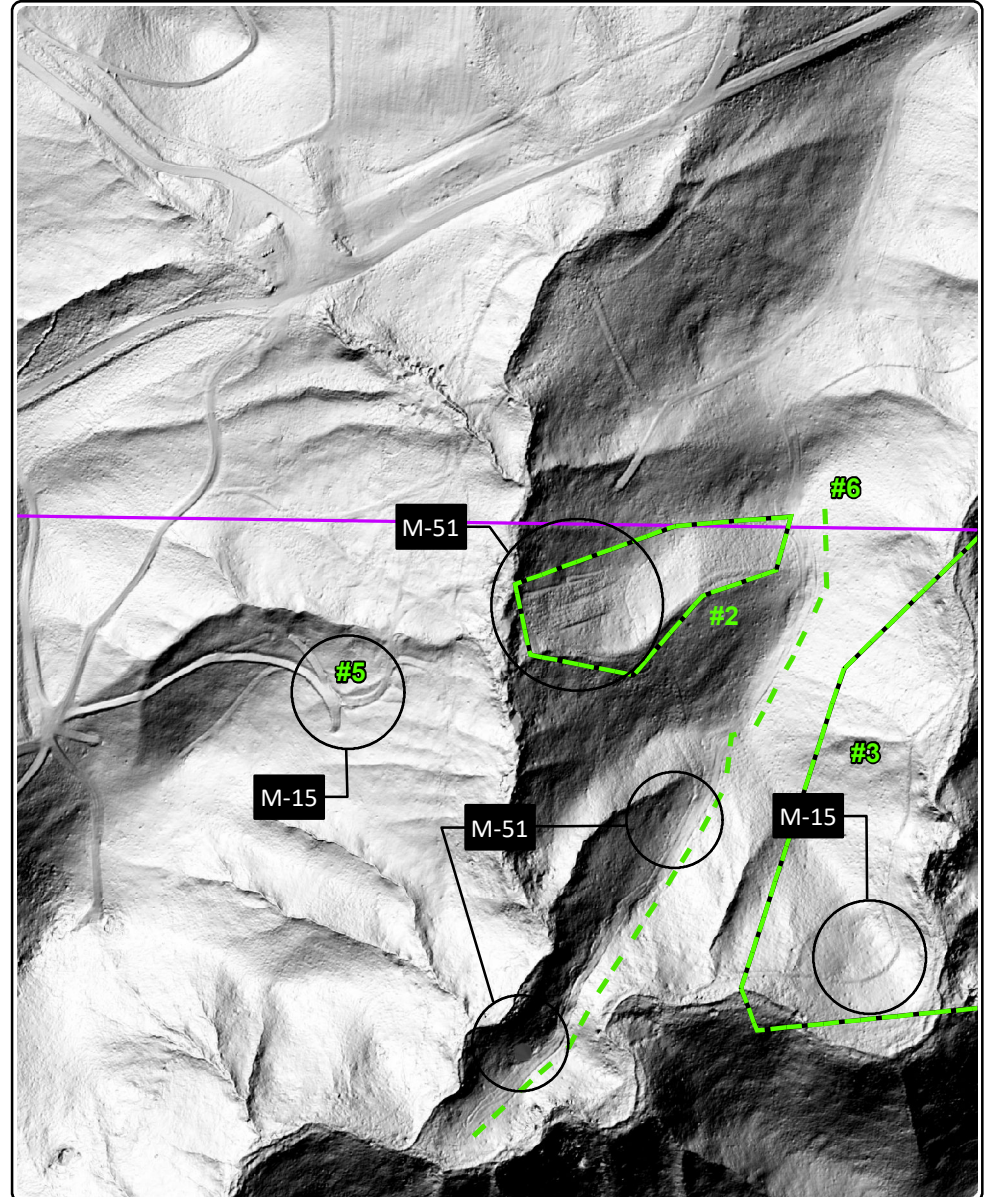
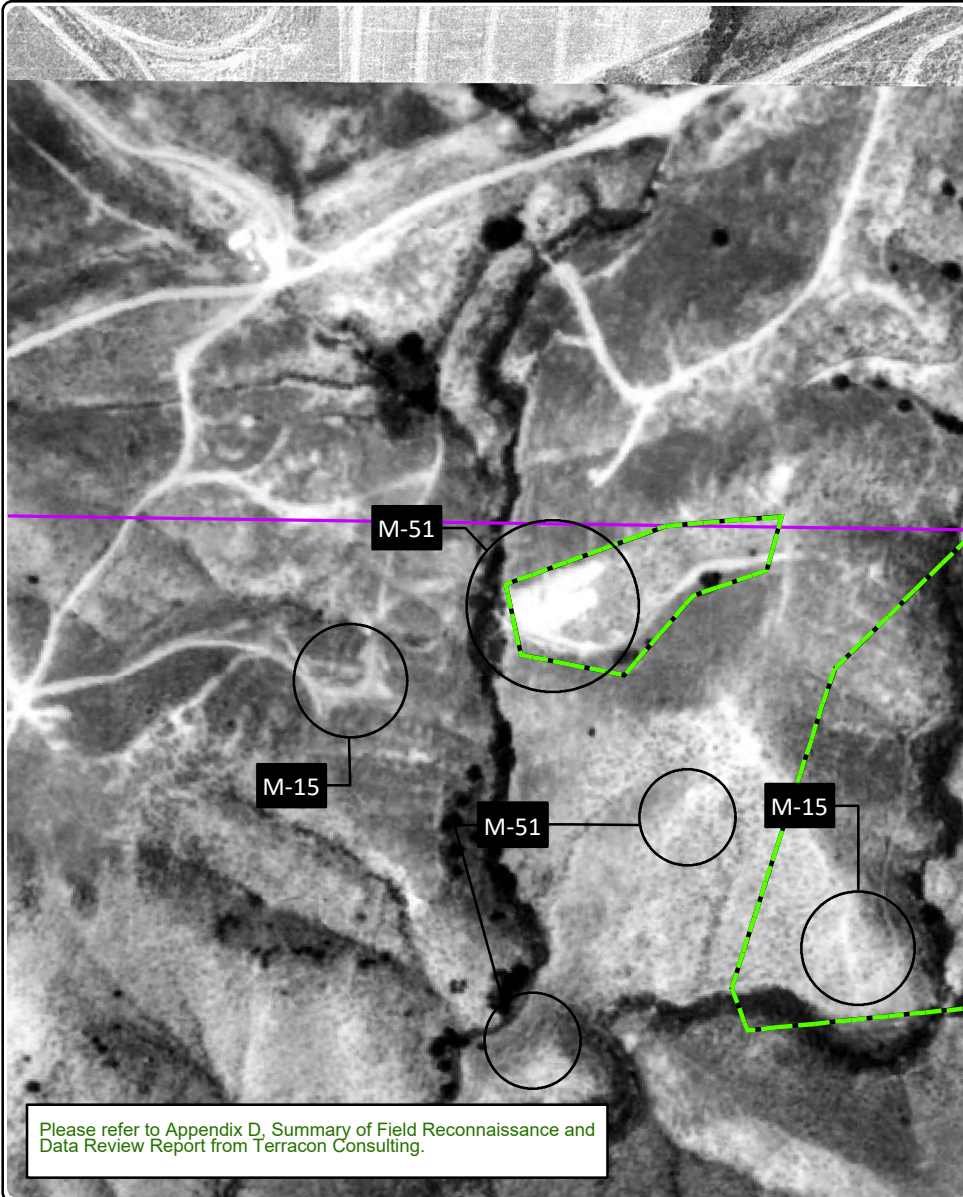
Aerial and LiDAR Comparison of Tin Mine Related Surface Mining Disturbances within HH VRA

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-6:
 Figure B-6.2

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Legend:

- 1948 Vested Rights Area
- Terracon Report Area (Area #)

0 100 200 400 Feet

Vicinity Map

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24

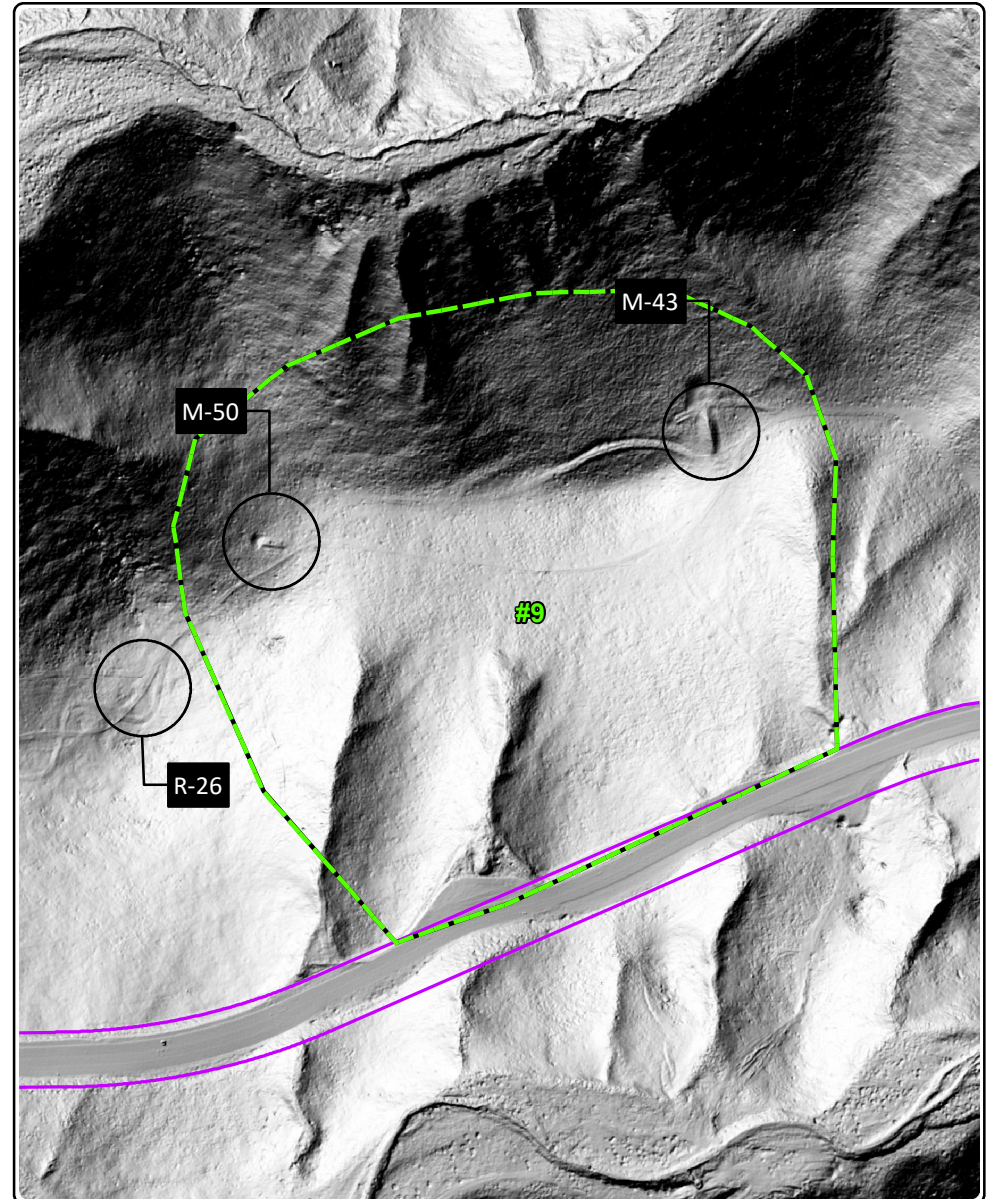
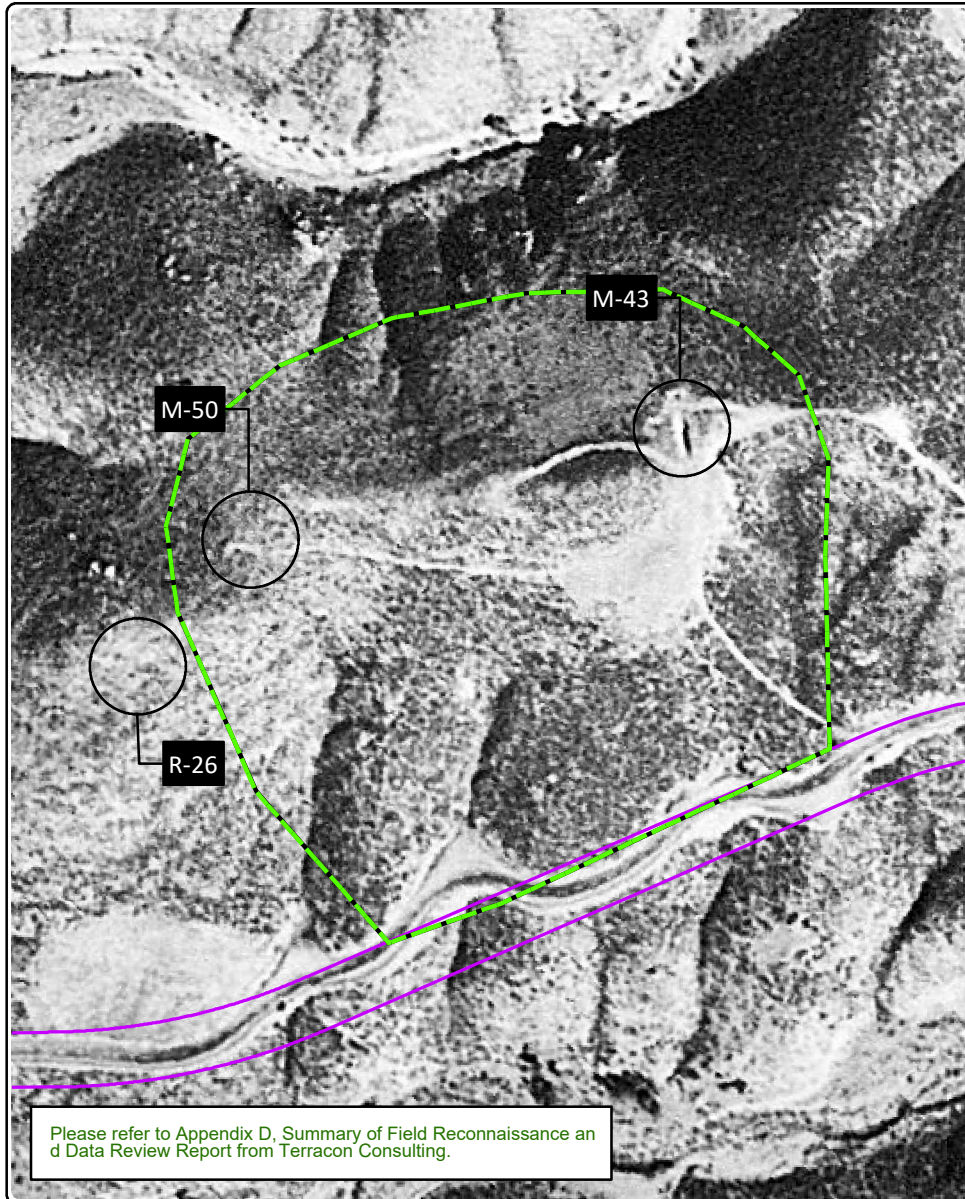
Aerial and LiDAR Comparison of Tin Mine Related Surface Mining Disturbances within HH VRA

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-6:
 Figure B-6.3

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Legend:

- 1948 Vested Rights Area
- Terracon Report Area (Area #)

0 75 150 300 Feet

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

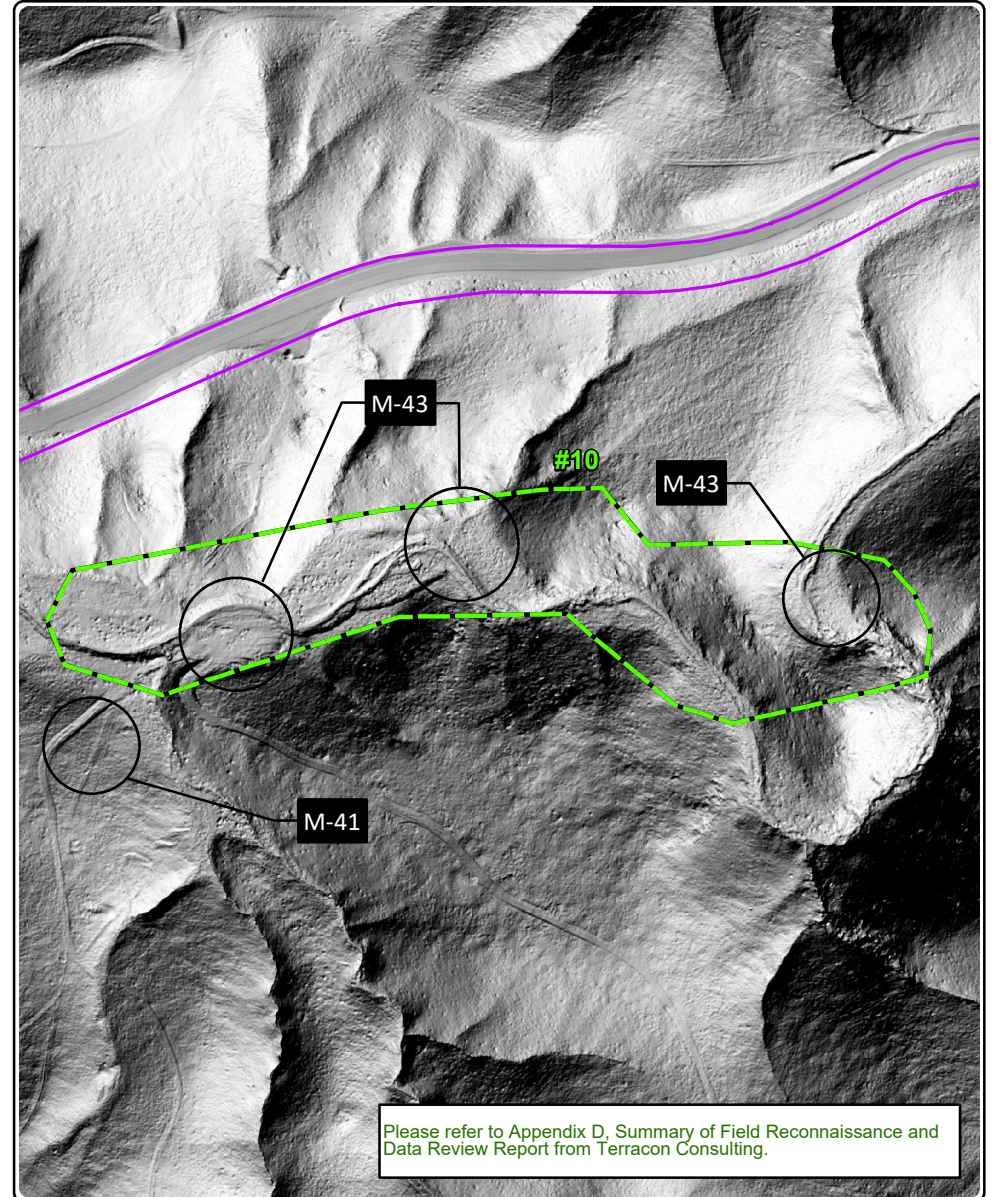
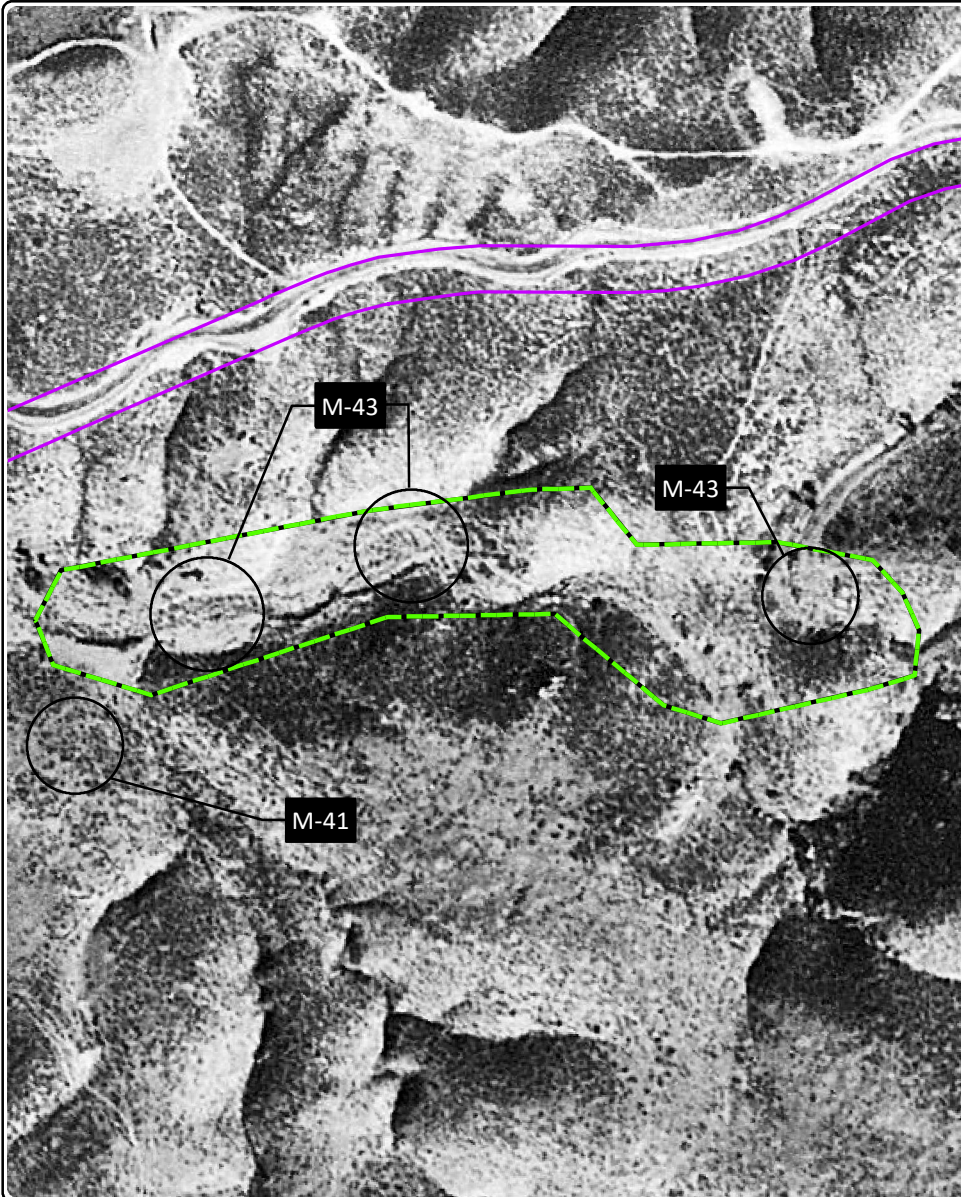
Aerial and LiDAR Comparison of Rock, Sand, Gravel, and Clay Borrow Pit Disturbances

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-6:
 Figure B-6.4

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

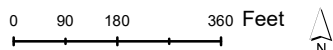




Please refer to Appendix D, Summary of Field Reconnaissance and Data Review Report from Terracon Consulting.

- Legend:
- 1948 Vested Rights Area
 - Terracon Report Area (Area #)

5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				



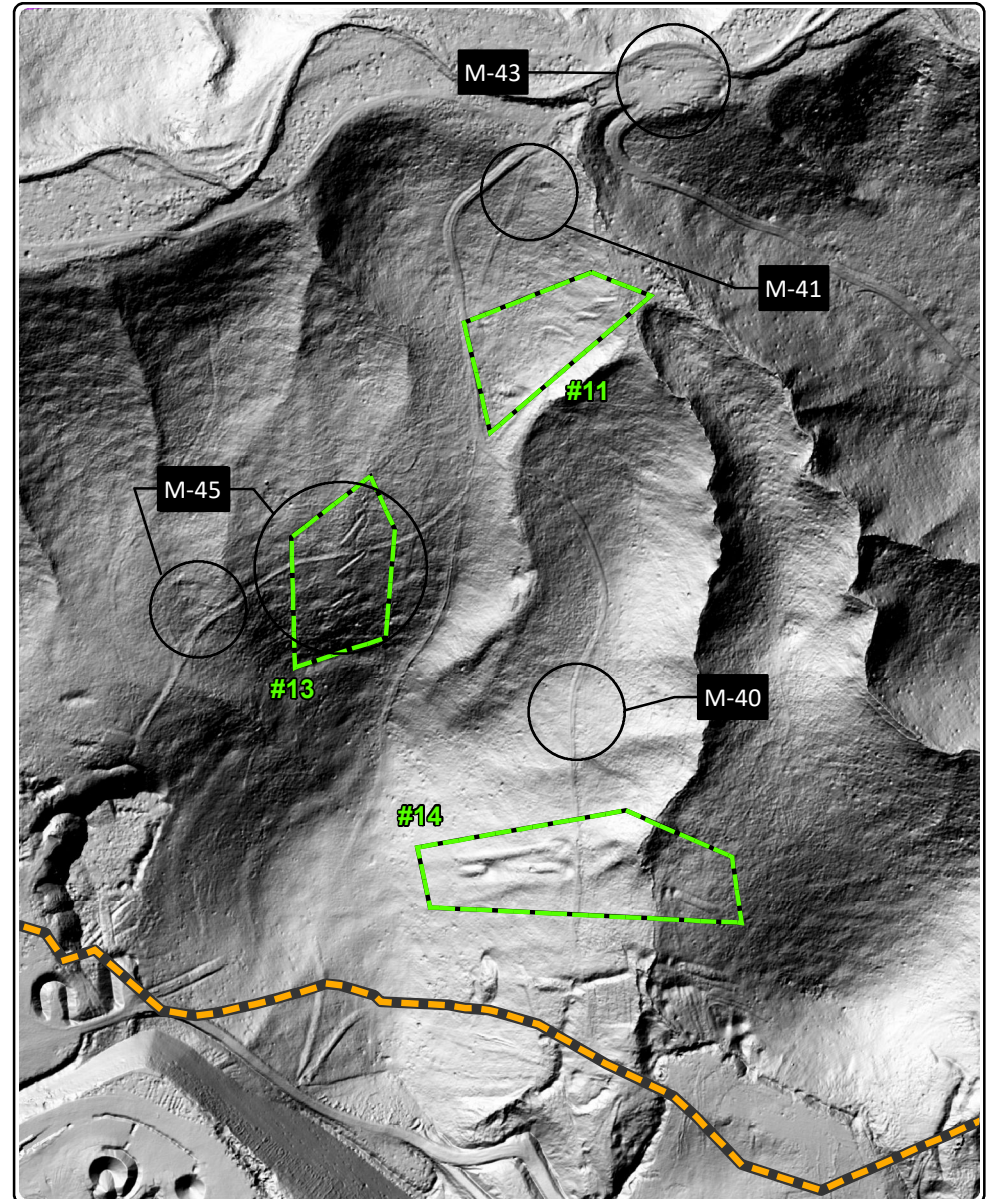
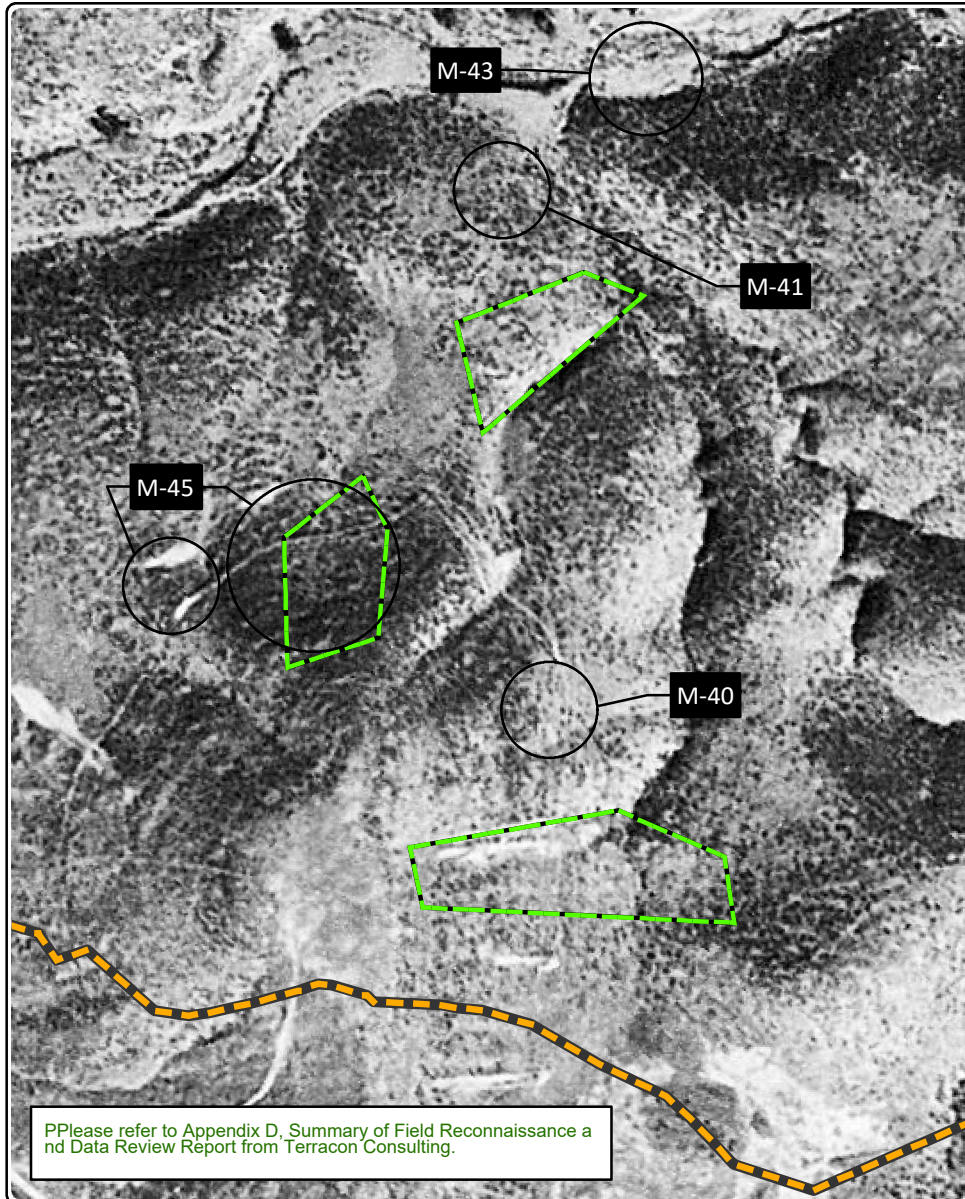
Aerial and LiDAR Comparison of Alluvial Gravel Resource Surface Mining Disturbances

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-6:
 Figure B-6.5

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Legend:

- RCL 118S4 Boundary
- 1948 Vested Rights Area
- Terracon Report Area (Area #)

0 75 150 300 Feet

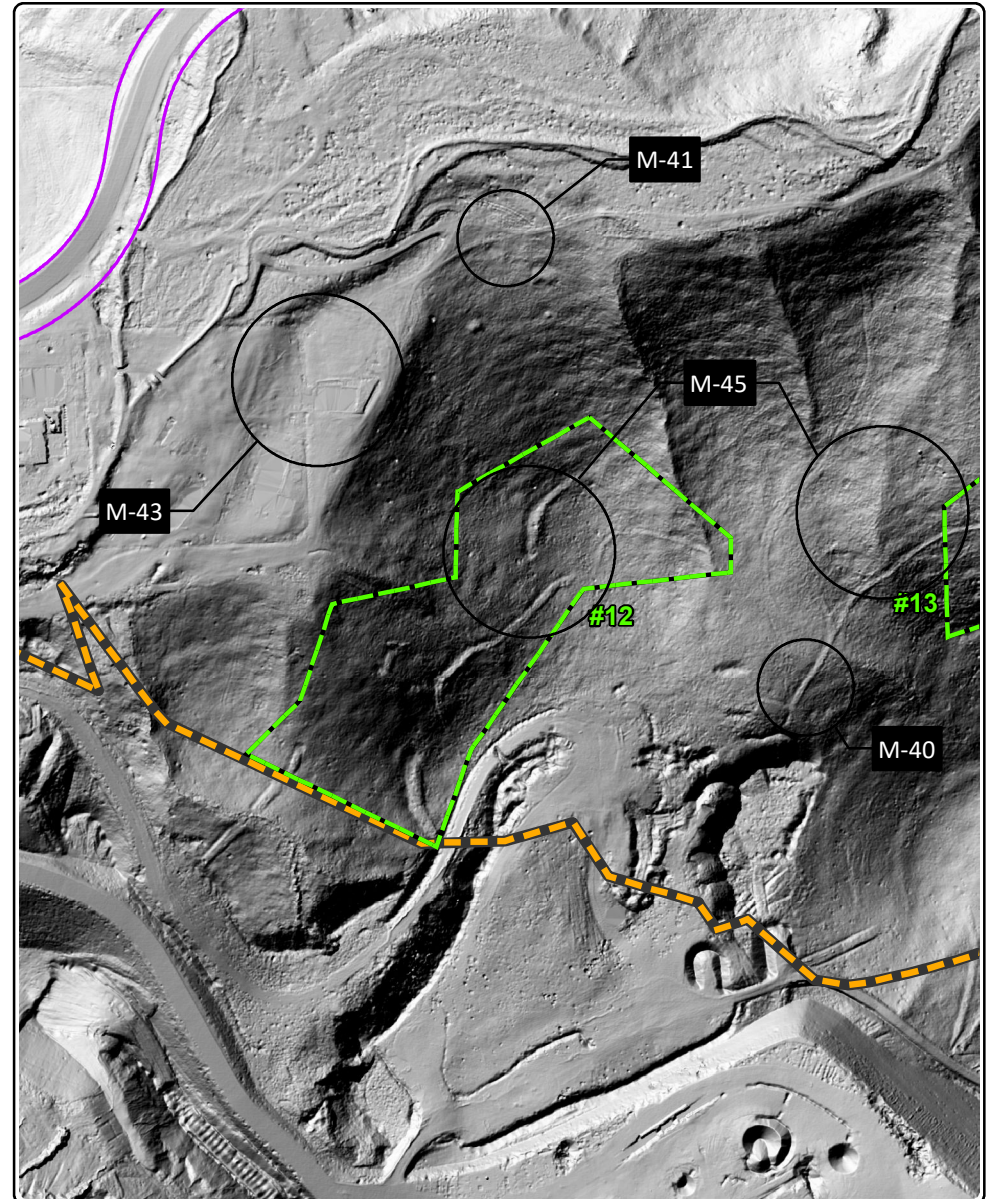
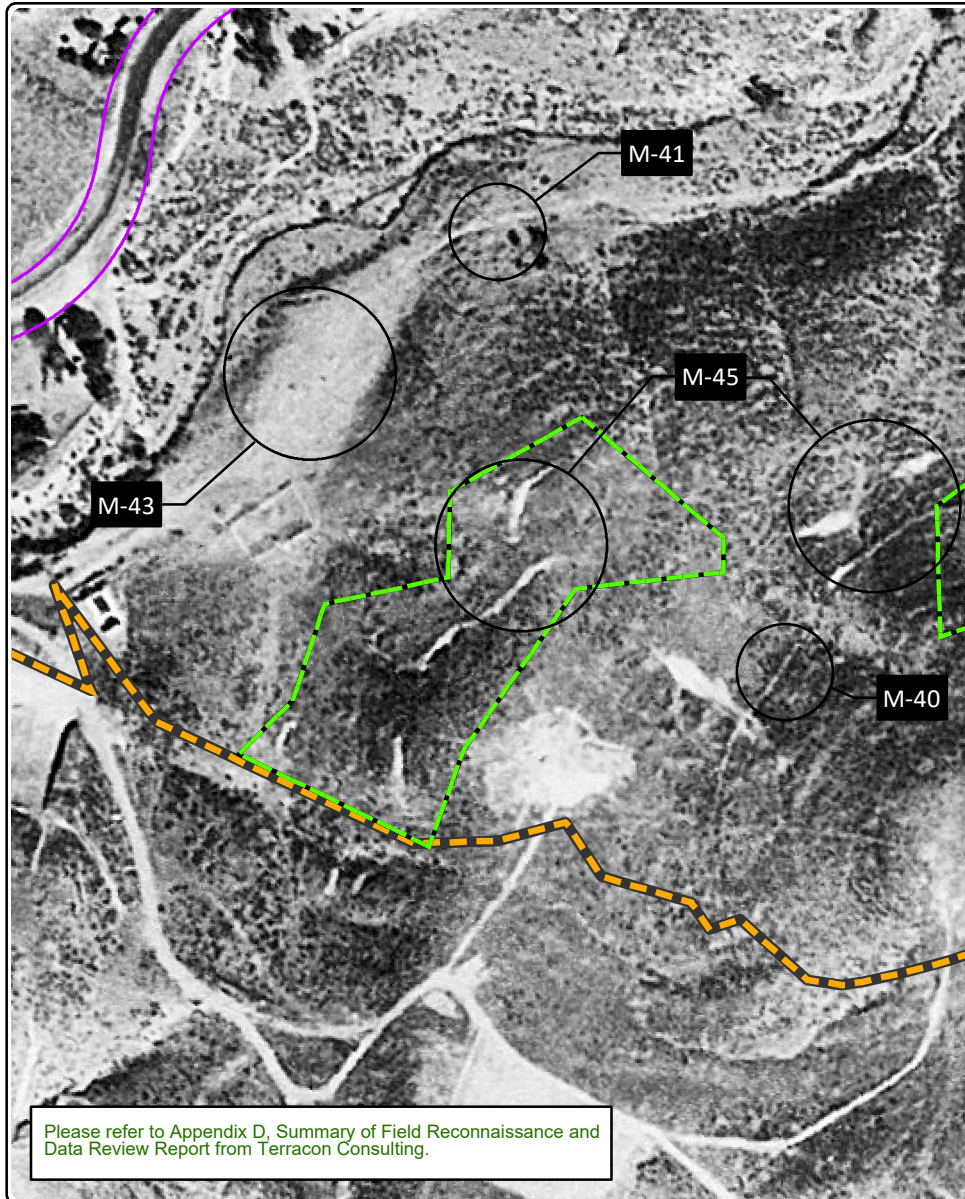
5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Aerial and LiDAR Comparison of Clay Trenching and Surface Mining Disturbances - East
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-6:
 Figure B-6.6

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Legend:

- RCL 118S4 Boundary
- 1948 Vested Rights Area
- Terracon Report Area (Area #)

0 75 150 300 Feet

N

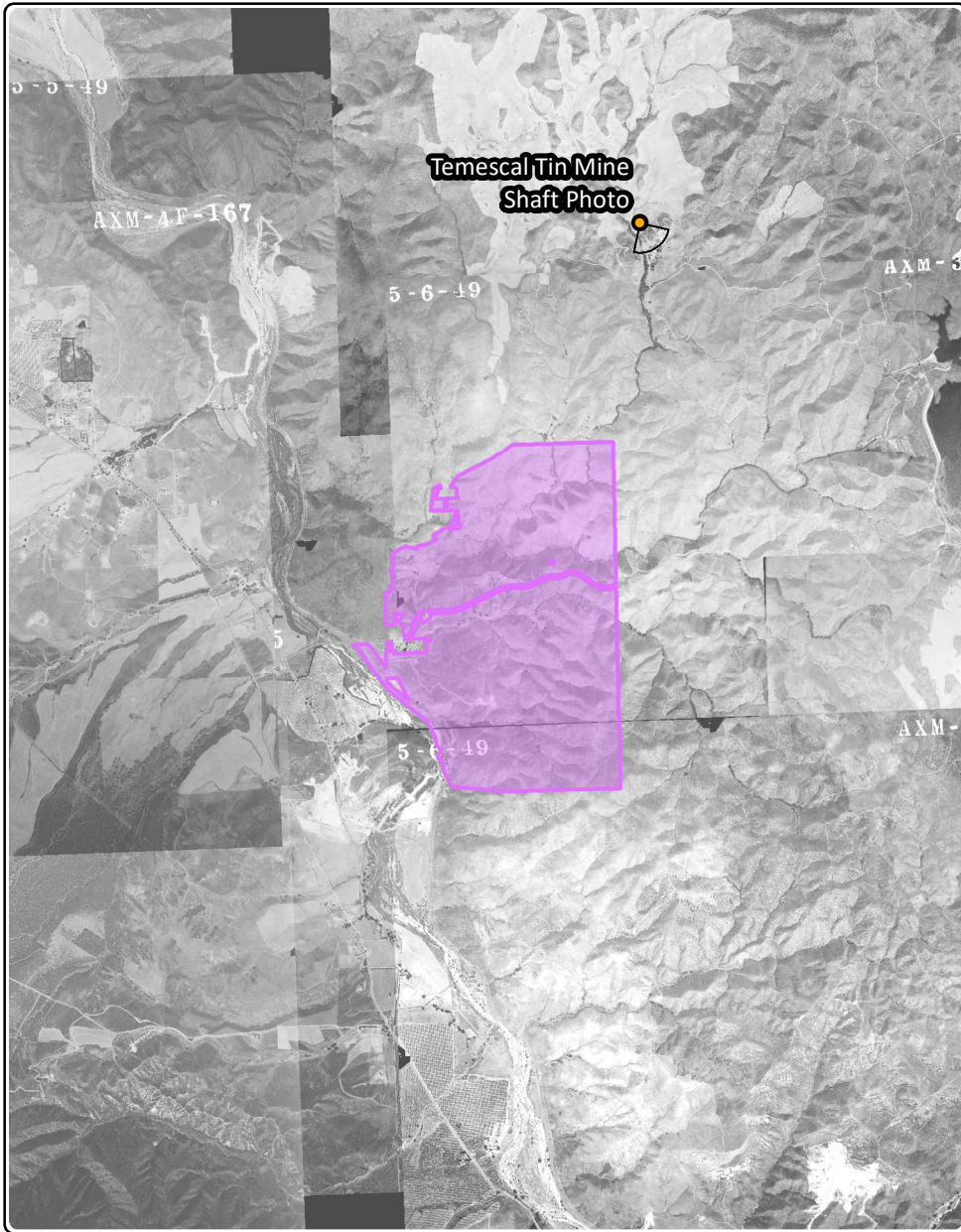
5	4	3	2	1
8	9	10	11	12
17	16	15	14	13
20	21	22	23	24
Vicinity Map				

Aerial and LiDAR Comparison of Clay Trenching and Surface Mining Disturbances - West
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

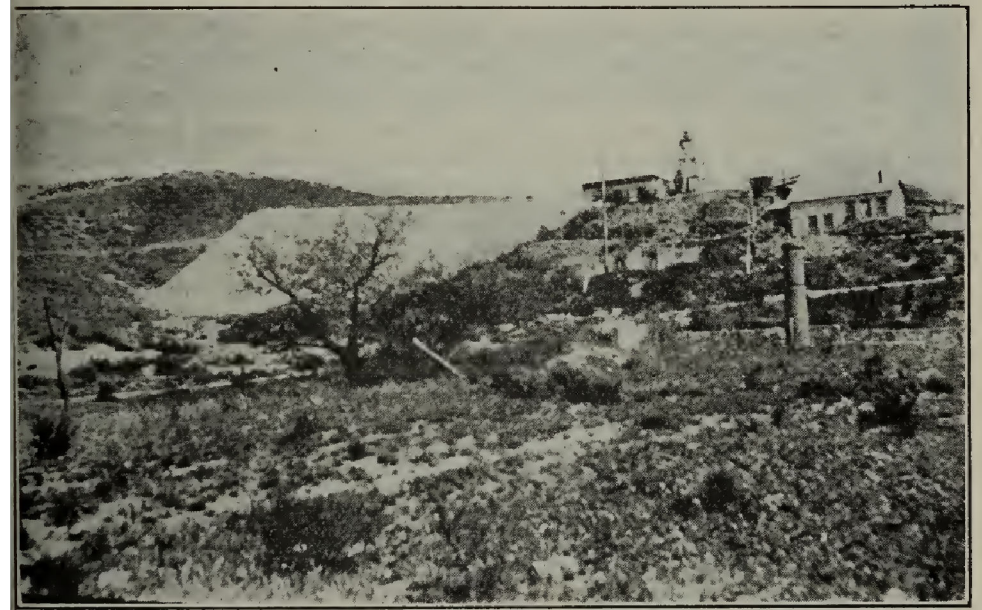
Appendix B-6:
 Figure B-6.7

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



No. 1 Shaft, Temescal Tin Mine, American Tin Corporation, Riverside County.

Vested Rights Relevancy/Commentary:

Tin Mine production facilities, which required tin mine haul road through HH VRA to move produced materials to market.

Corresponds with surface mining activities: M-1, R-2, M-4, M-5, R-12, M-13, M-14, M-15, and M-20

Legend:

- HH VRA
- Photograph Location/Direction

0 2,000 4,000 8,000 Feet



Historic View of Tin Mine in 1929

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-7:
 Figure B-7.1.1

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.



Photo #1: Temescal Tin Mine – Smelting Plant



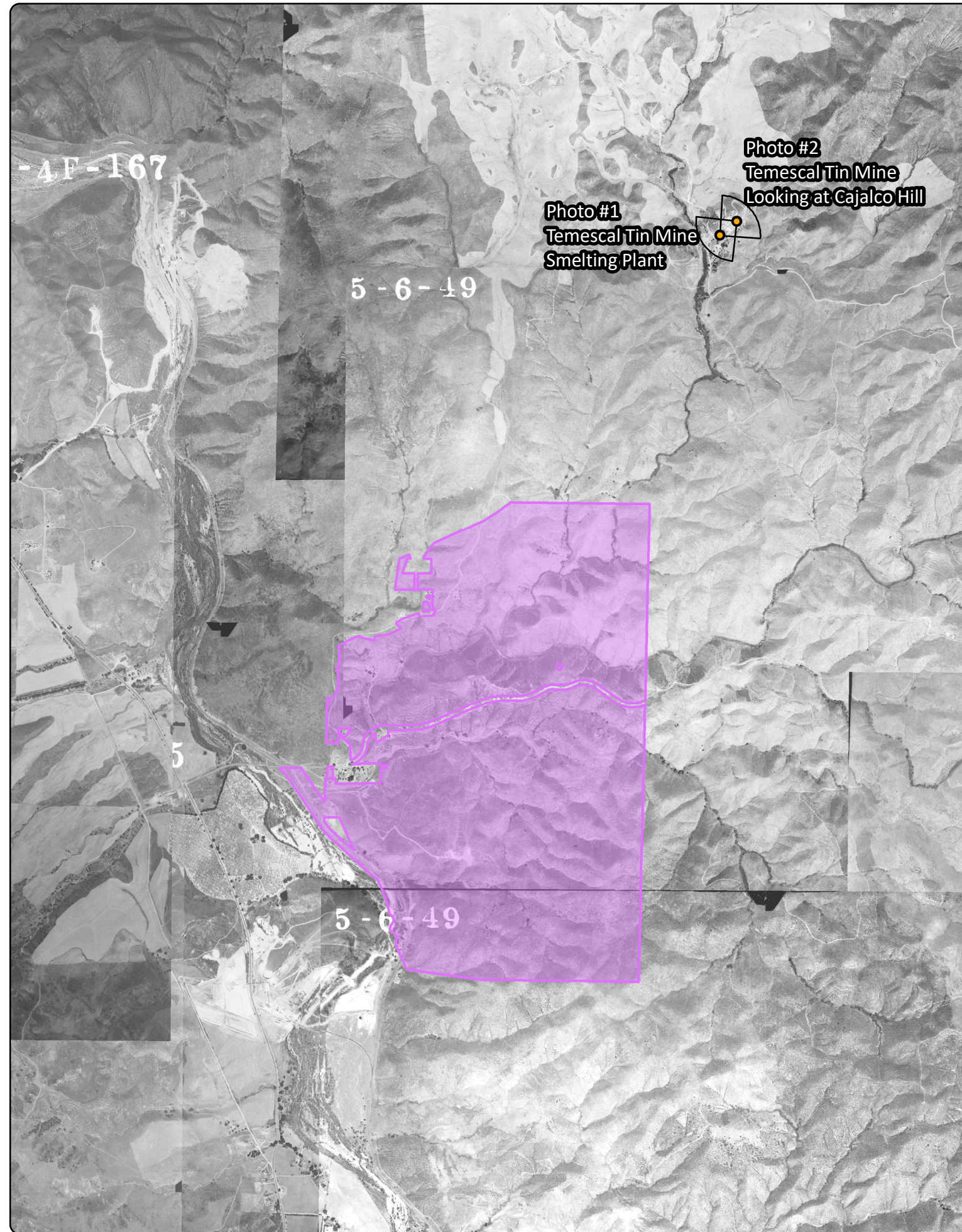
Photo #2: Temescal Tin Mine Looking at Cajalco Hill



Vested Rights Relevancy/Commentary:

Remnants of Tim Mine production facilities and surface excavations of tourmaline veins, which required tin mine haul road through HH VRA to move produced materials to market.

Corresponds with surface mining activities: M-1, R-2, M-4, M-5, R-12, M-13, M-14, M-15, M-20, and E-38

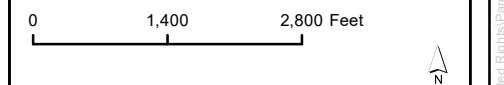


Appendix B-7:
Figure B-7.1.2: View of Tin Mine Facilities and Cajalco Hill in 1949

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

- Legend:
- Photograph Location/Number
 - HH VRA

Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

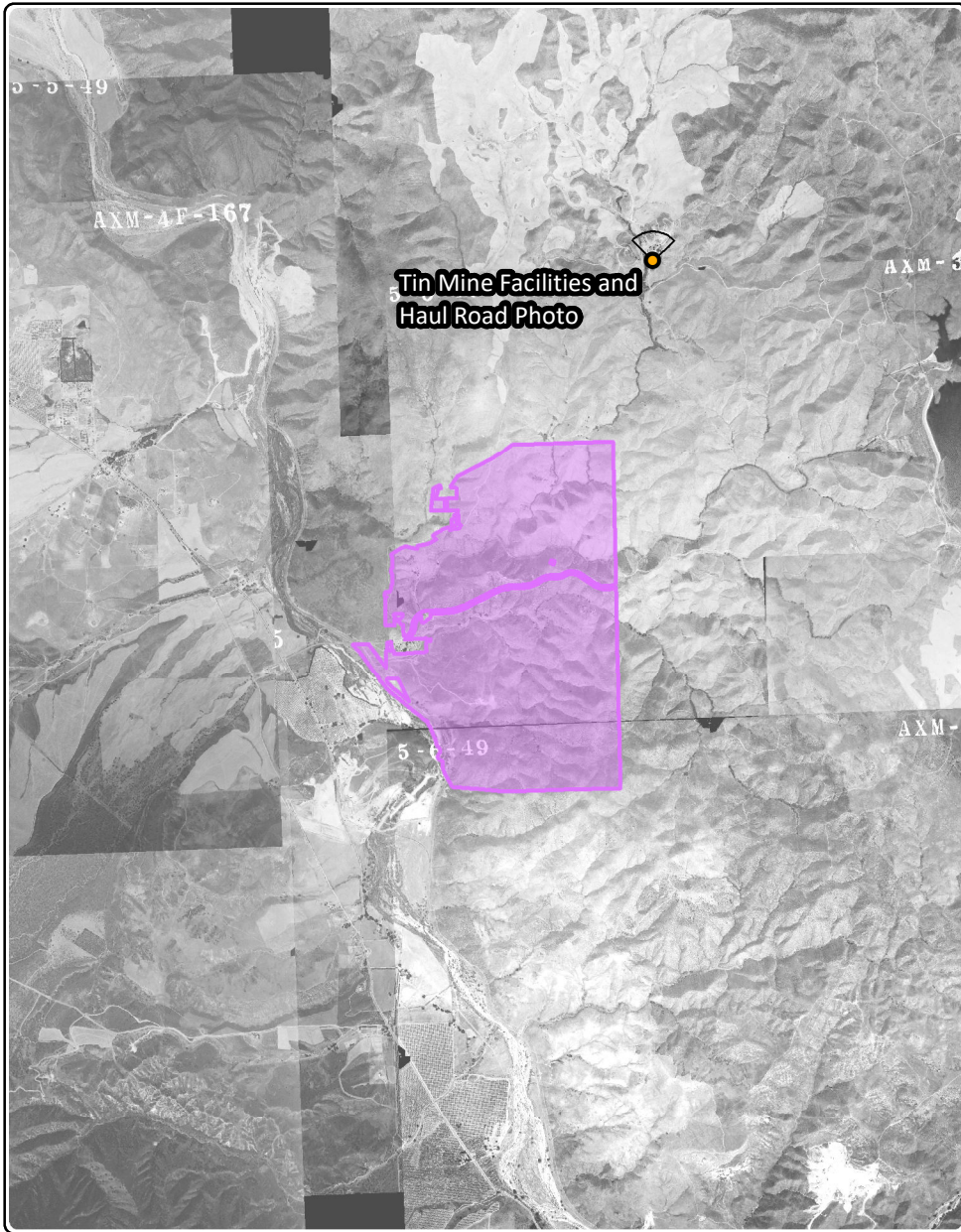


Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

Prepared by: Sage Thurmond, Compass Land Group
3140 Peacekeeper Way #102, McClellan Park, CA 95652



Projects\038 - Robertsons Ready Mix\Vested Rights\Parcel Mapping\09-08 HH Vested Rights Area.mxd



Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Vested Rights Relevancy/Commentary:

Tin mine facilities likely erected in conjunction with tin mine efforts during World War II (1942-1945), located along Tin Mine Haul Road (visible in foreground), which ran through the HH VRA.

Corresponds with surface mining activities: M-1, R-2, M-4, M-5, R-12, M-13, M-14, M-15, M-20, and E-38

Legend:

- HH VRA
- Photograph Location/Direction

0 2,000 4,000 8,000 Feet

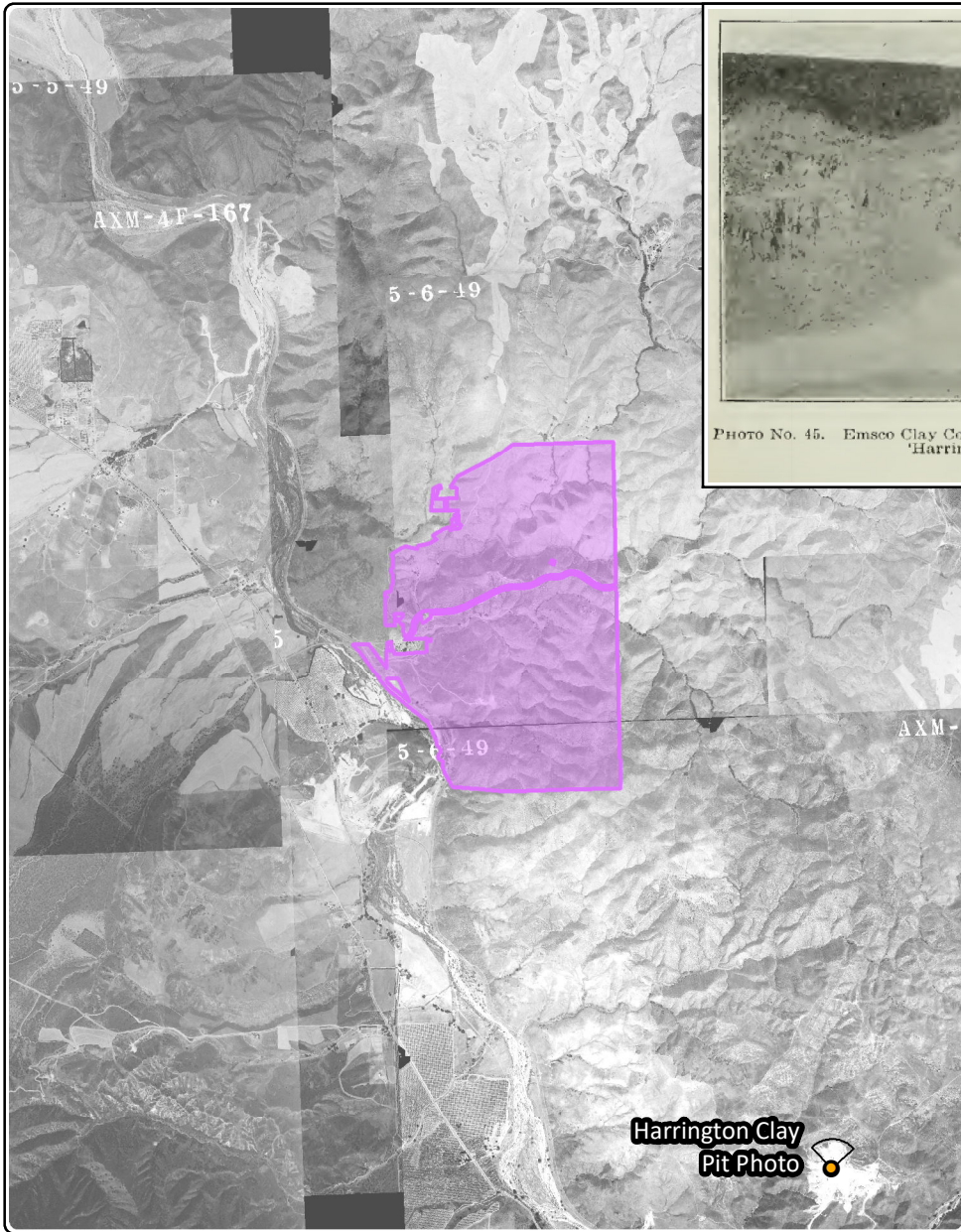


**View of Tin Mine Facilities and
Tin Mine Haul Road in 1949**
Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Appendix B-7:
Figure B-7.1.3

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





DIVISION OF MINES AND MINING

PHOTO No. 45. Emsco Clay Co. Harrington pit, facing east, 8 miles SE. from Corona, Riverside County. The shovel is standing on top of the 'Harrington No. 5' fireclay (sample No. 70) and is digging pink mottled clay (sample No. 71).

Vested Rights Relevancy/Commentary:

Image of Harrington Clay Pit, located in Section 26 at the southern terminus of the clay haul road, used to move produced clay north through the HH VRA to the ATSF railroad. Photograph also representative of standard clay surface mining operations during this period, including clay surface mining operations within HH VRA.

Corresponds with surface mining activities: R-10 and M-22

Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

Legend:

- HH VRA
- Photograph Location/Direction

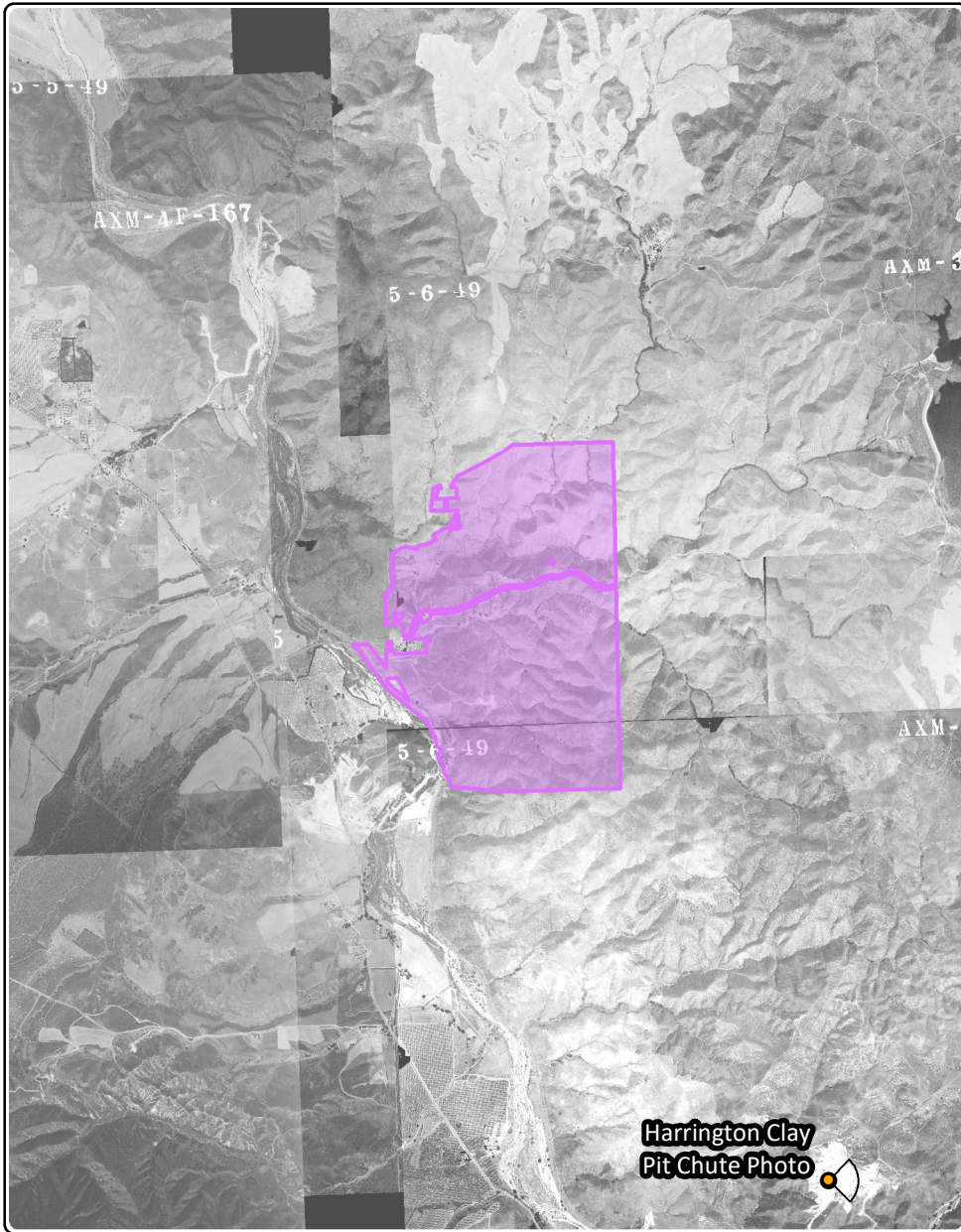
0 2,000 4,000 8,000 Feet

Clay Operations Using Clay Haul Road as of 1929
 Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-7:
 Figure B-7.2.1

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

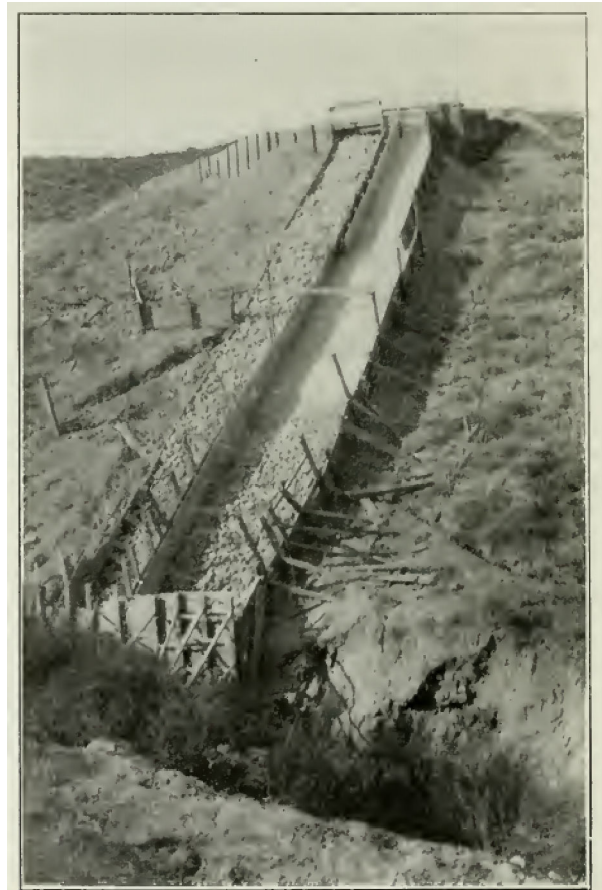


PHOTO No. 46. Loading chute, Emseo Clay Co. (Harrington pit), Riverside County.

Vested Rights Relevancy/Commentary:

Image of Trenching and Chute operations at Harrington Clay Pit, located in Section 26 at southern terminus of clay haul road, used to move produced clay north through the HH VRA to the ATSF railroad. Photograph also representative of standard clay trenching operations during this period, including clay trenching operations within HH VRA.

Corresponds with surface mining activities: R-10 and M-22

Legend:

- HH VRA
- Photograph Location/Direction

0 2,000 4,000 8,000 Feet



Clay Operations Using Clay Haul Road as of 1929

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Appendix B-7:
Figure B-7.2.2

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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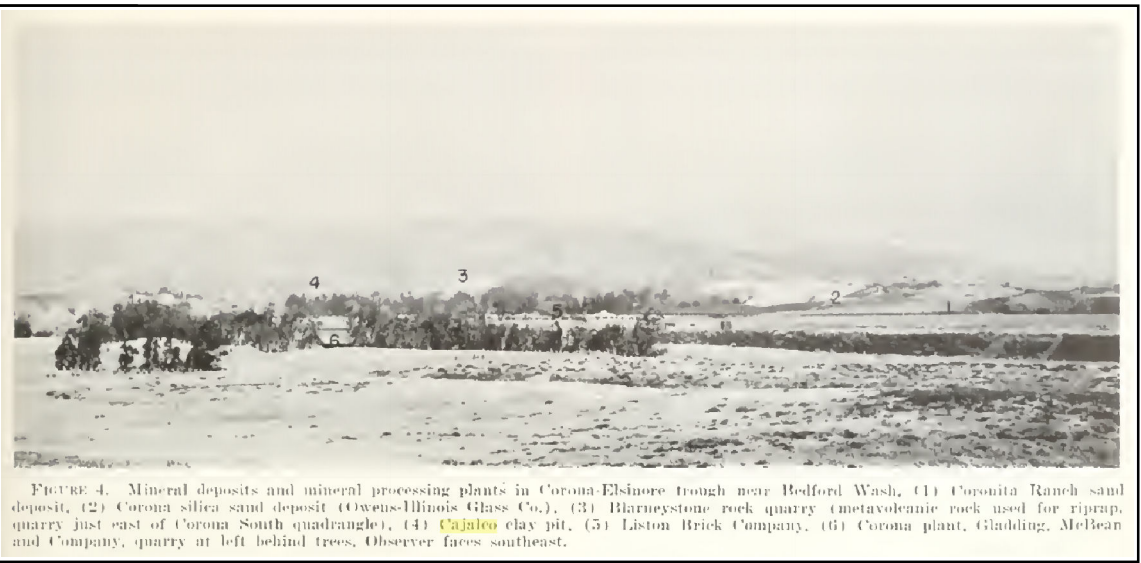
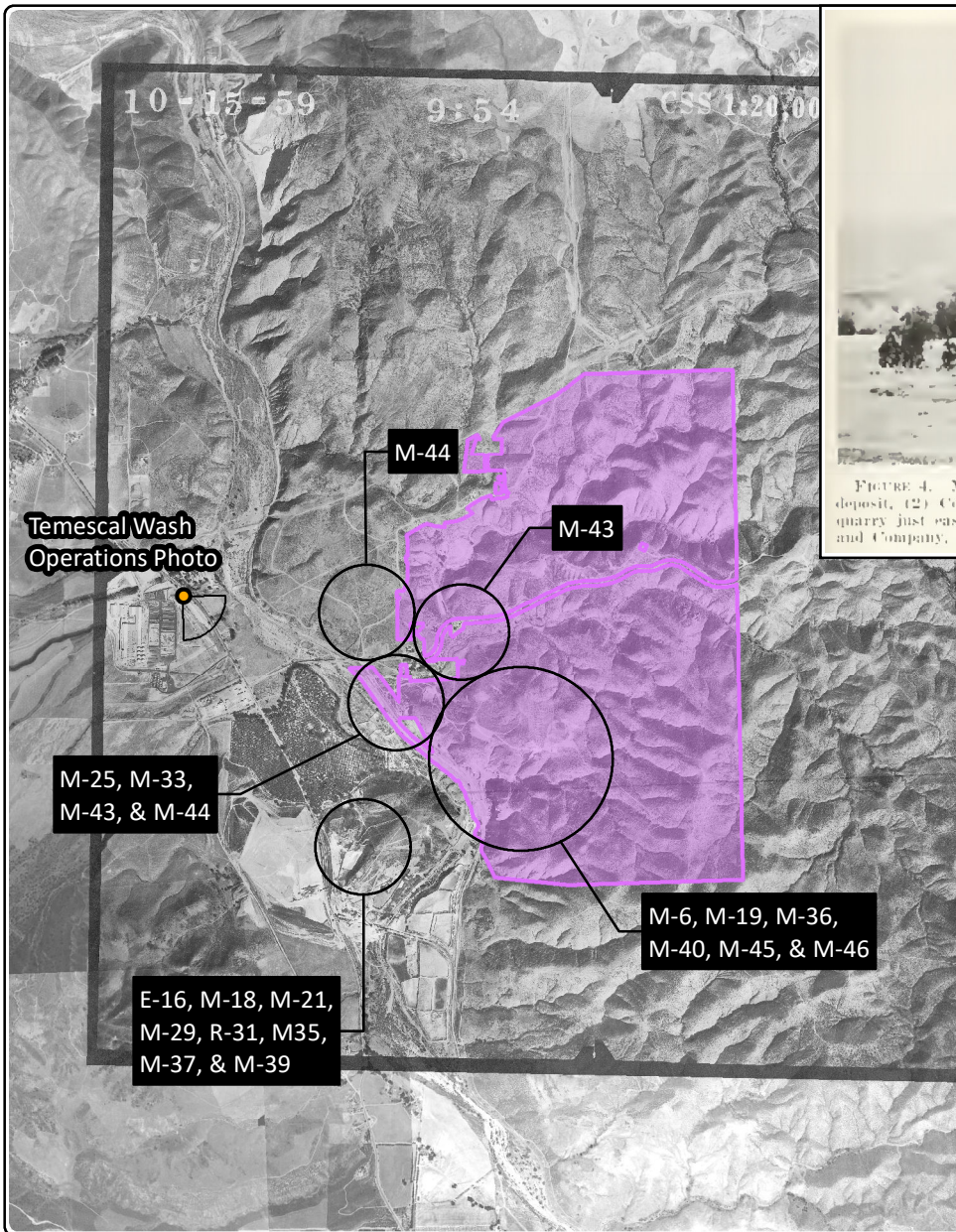


FIGURE 4. Mineral deposits and mineral processing plants in Corona-Elsinore trough near Bedford Wash, (1) Coronita Ranch sand deposit, (2) Corona silica sand deposit (Owens-Illinois Glass Co.), (3) Blarneystone rock quarry (metavolcanic rock used for riprap, quarry just east of Corona South quadrangle), (4) **Cajalco** clay pit, (5) Liston Brick Company, (6) Corona plant, Gladding, McBean and Company, quarry at left behind trees, Observer faces southeast.

Vested Rights Relevancy/Commentary:

Surface perspective of multiple surface mining operations located at the mouth of the Cajalco Canyon, as described by the California Division of Mines, in their 1961 report on the geology and mining in the Temescal region (Exh. C-2.3). These operations include the Blarney Stone Quarry and Cajalco Clay Pit.

- Item 2 corresponds with surface mining activities: E-16, M-18, M-21, M-29, R-31, M-35, M-37, and M-39
- Item 3 corresponds with surface mining activities: M-6, M-19, M-36, M-40, M-45, and M-46
- Item 4 corresponds with surface mining activities: M-25, M-33, M-43, and M-44
- Item 5 corresponds with surface mining activity: M-43
- Item 6 corresponds with surface mining activity: M-44

Disturbance Type *(See Table B-1.1 for specific details):*

Aerial photograph dated 1949/1959. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

Legend:

- HH VRA
- Photograph Location/Direction

0 1,300 2,600 5,200 Feet

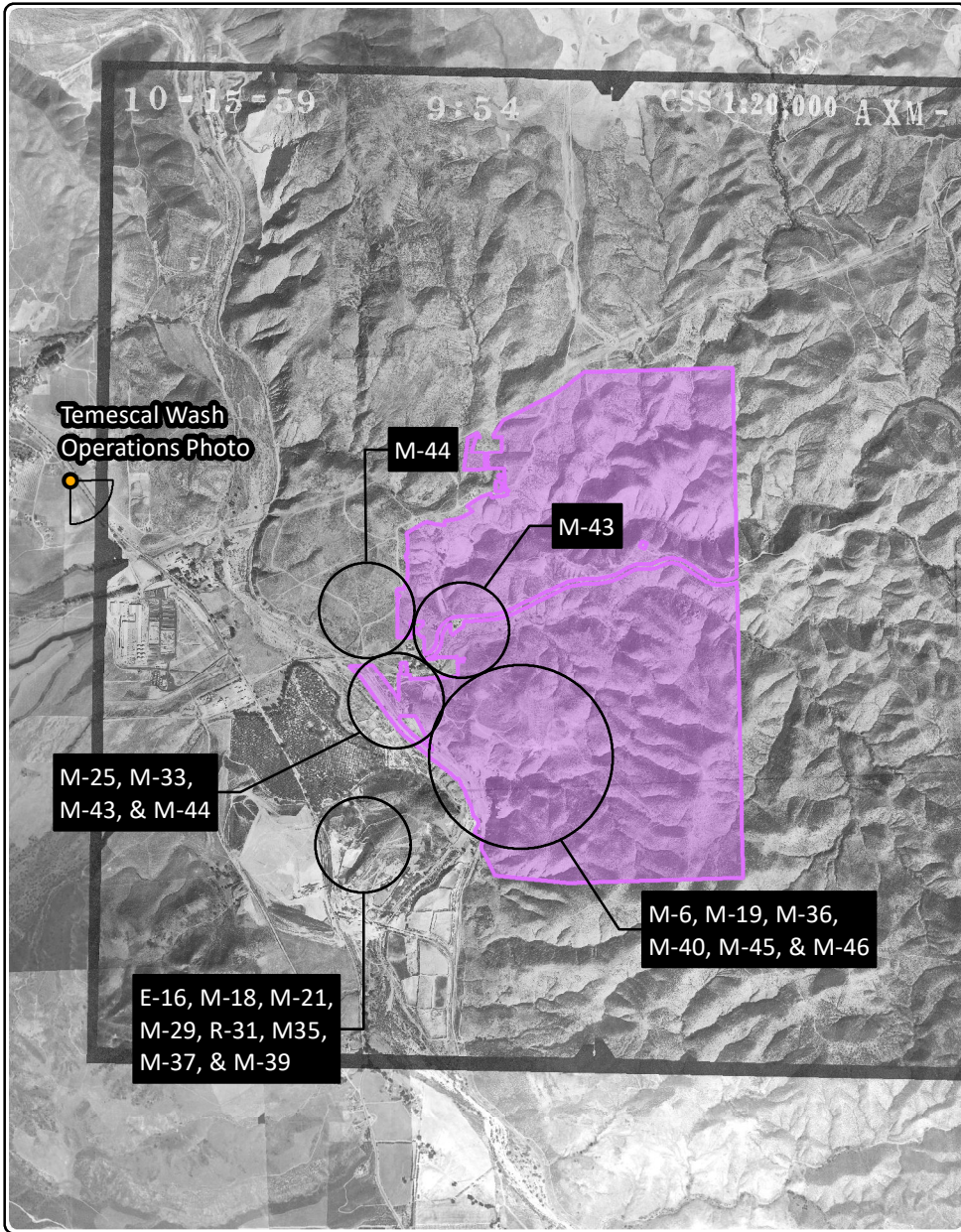
Mining Operations at Cajalco Canyon as of 1959

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-7:
 Figure B-7.3.1

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Aerial photograph dated 1949/1959. The accuracy of the base map is limited as it is not a part of any field survey on the ground.

Legend:

- HH VRA
- Photograph Location/Direction

0 1,300 2,600 5,200 Feet

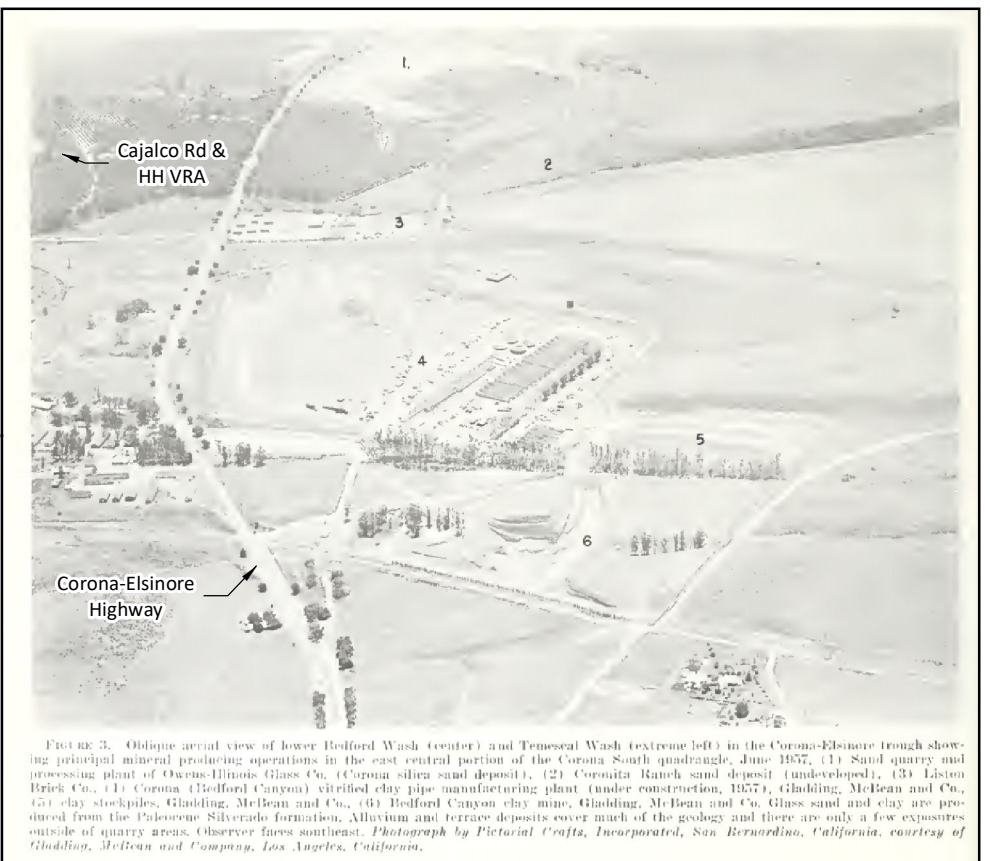


Mining Operations at Cajalco Canyon as of 1959

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Appendix B-7:
Figure B-7.3.2

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.



Vested Rights Relevancy/Commentary:

Aerial perspective of multiple surface mining operations located at mouth of Cajalco Canyon, as described by the California Division of Mines, in their 1961 report on the geology and mining in the Temescal region (Exh. C-2.3). These operations include Blarney Stone Quarry and the Cajalco and Harlow Clay Pits.

- Item 1 corresponds with surface mining activities: E-16, M-18, M-21, M-29, R-31, M-35, M-37, and M-39
- Item 3 corresponds with surface mining activity: M-43
- Item 4 corresponds with surface mining activity: M-44



Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Vested Rights Relevancy/Commentary:

Demonstrates historic surface mining operations, including outside the S-4 VRA, of quarrying and stockpiling within the HH VRA, consistent with the exercise of a vested right.

Corresponds with surface mining activities: M-6, M-19, M-36, M-40, M-45, M-46, M-47, and M-50

Legend:

- HH VRA
- Photograph Location/Direction

0 2,000 4,000 8,000 Feet



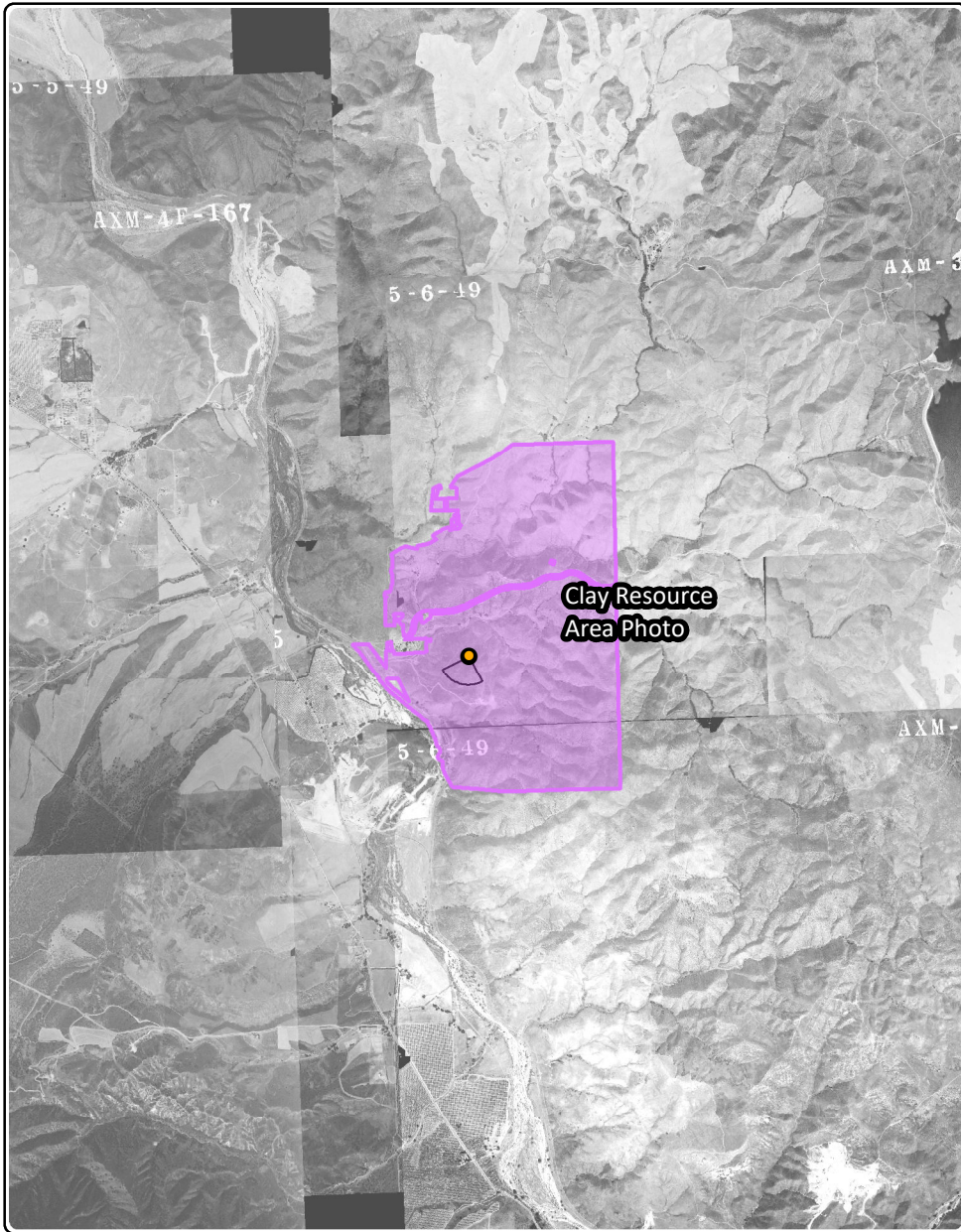
Quarry Disturbances within HH VRA as of 1983

Confirmation of Geographic Scope of HH VRA
 Hubbs/Harlow Quarry
 Riverside County, California

Appendix B-7:
 Figure B-7.4.1

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.





Aerial photograph dated 1949. The accuracy of the base map is limited as it is not a part of any field survey on the ground.



Photo 7 Panorama of clay resource area. The zone of highly-weathered metamorphic rock is probably at least 3 m thick over much of the disrupted area shown in this photograph. Total volume would therefore be about 130,000 m³ (176,000 yd³). Volume verification would require test borings or pits and additional surface measurements.

Vested Rights Relevancy/Commentary:

Demonstrates significant historic surface mining operations, including surface scraping, trenching, and heavily disturbed clay beds, known to have occurred beginning in 1948.

Corresponds with surface mining activities: M-43 and M-50

Legend:

- HH VRA
- Photograph Location/Direction

0 2,000 4,000 8,000 Feet



Clay Mining Disturbances within HH VRA as of 1983

Confirmation of Geographic Scope of HH VRA
Hubbs/Harlow Quarry
Riverside County, California

Appendix B-7:
Figure B-7.4.2

Disclaimer: The data was mapped for planning purposes only. No liability is assumed for accuracy of the data shown.

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DECLARATION OF SAGE THURMOND

I, Sage Thurmond, declare as follows:

1. I am a Technical Services Manager, employed by Compass Land Group. I have personal knowledge of the facts set forth herein, except as to those stated on information and belief and, as to those, I am informed and believe them to be true. If called as a witness, I could and would competently testify to the matters stated herein. I make this declaration in support of Robertson's Ready Mix's ("RRM") Request for Determination of Vested Rights ("RFD").

2. My professional experience includes, but is not limited to, a Bachelor of Arts Degree in Geographic Information Systems ("GIS) from California State University Sacramento, over 6 years working in the GIS field performing tasks in support of regulatory permit applications, analytical mapping, and research. During my time in the field, I have worked on vested rights and other nonconforming use related projects associated with the mining and construction materials industries.

3. On behalf of RRM, I undertook research with state and local agencies, including Riverside County and the California Department of Conservation. This research task involved Public Record Act requests for permits and other related entitlement documents and review and analysis of the documents received from responsible agencies.

4. In the course of my research, I did not locate any land use permits or reclamation plans beyond those identified in the RFD (M-404, CU-1146, RP-118 and amendments thereto) relating to the Hubbs Harlow Vested Rights Area ("HH VRA").

5. In the course of my research, I obtained information on vested surface mining operations neighboring the HH VRA from responsible agencies, including Riverside County and the California Department of Conservation. This information included reclamation plans, use permits and other supplemental documentation for mining operations. For all of the areas

identified as vested on Figure B-5.7, which I prepared, no use permits were identified or provided to me by any of the agencies contacted.

6. On behalf of and in consultation with RRM, I prepared the Figures in Appendix B, which, to the best of my knowledge, are accurate and correct based on the information available to me. In preparing the Figures, I utilized historical information (attached to the RFD in Appendix C) and historic aerial photographs. I obtained the historical aerial photographs from Aerial Archives, Historical Information Gatherers, Inc., and the Riverside County Flood Control & Water Conservation District.

7. In preparing Appendix B, using GIS in conjunction with historical aerial and LiDAR, I documented 24 mining activity sites and 15 haul road/public road systems pre-1949. I also documented 23 additional mining activity sites that occurred within the 792.22 acre HH VRA site between 1949 and 1976.

8. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on this 15th day of December, 2021, at Colton, California.

Sage Thurmond

Sage Thurmond