

## DOCKETED

<b>Docket Number:</b>	09-AFC-07C
<b>Project Title:</b>	Palen Solar Power Project - Compliance
<b>TN #:</b>	200171
<b>Document Title:</b>	Applicant Response to CEC Data Request 57- Part 2
<b>Description:</b>	N/A
<b>Filer:</b>	Tiffani Winter
<b>Organization:</b>	Galati Blek, LLP
<b>Submitter Role:</b>	Applicant's Representative
<b>Submission Date:</b>	8/13/2013 11:07:01 AM
<b>Docketed Date:</b>	8/13/2013

# LOCATION MAP

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

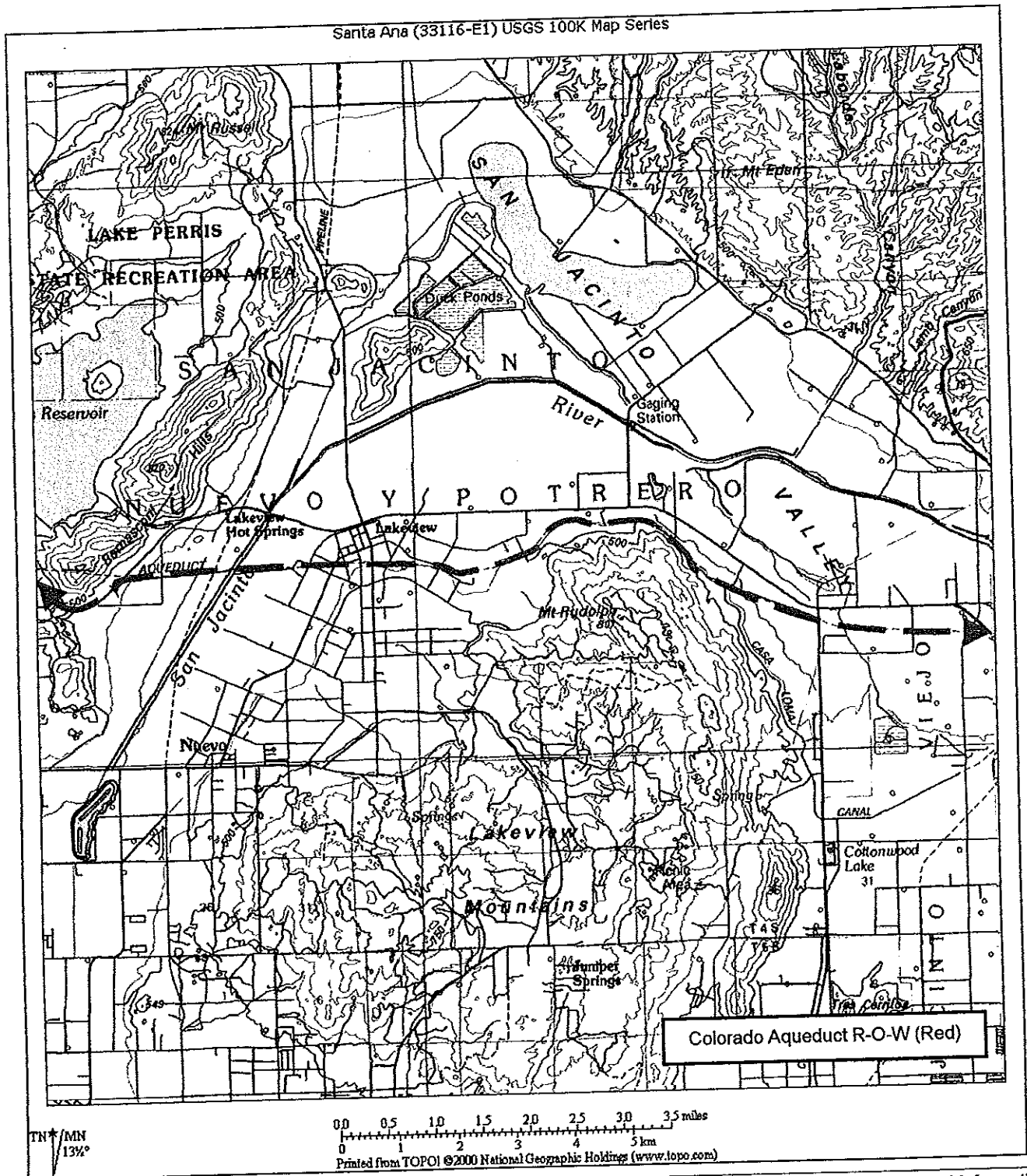
Page 24 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Santa Ana (33117-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975



\*Required information

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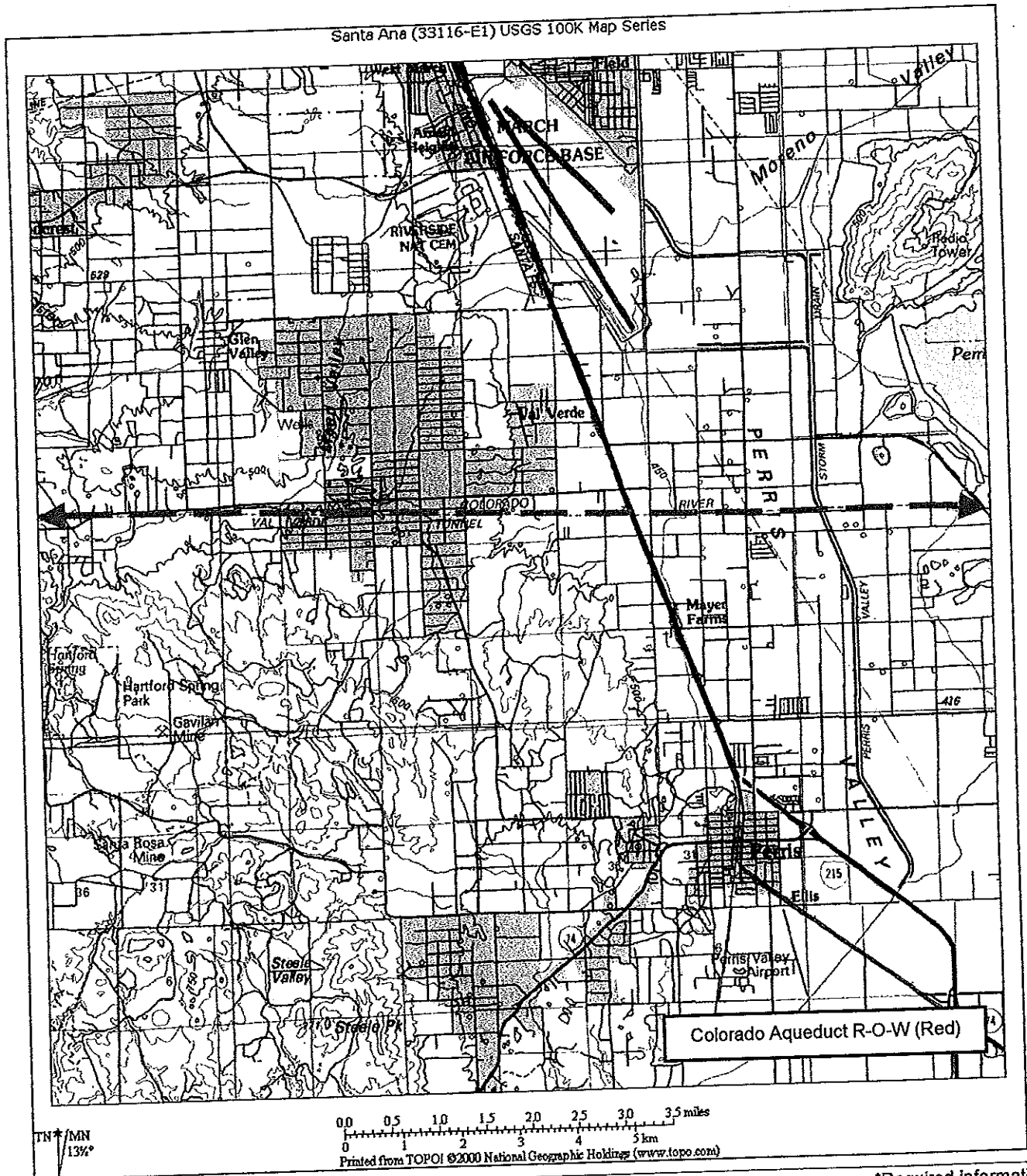
Page 25 of 29

\*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

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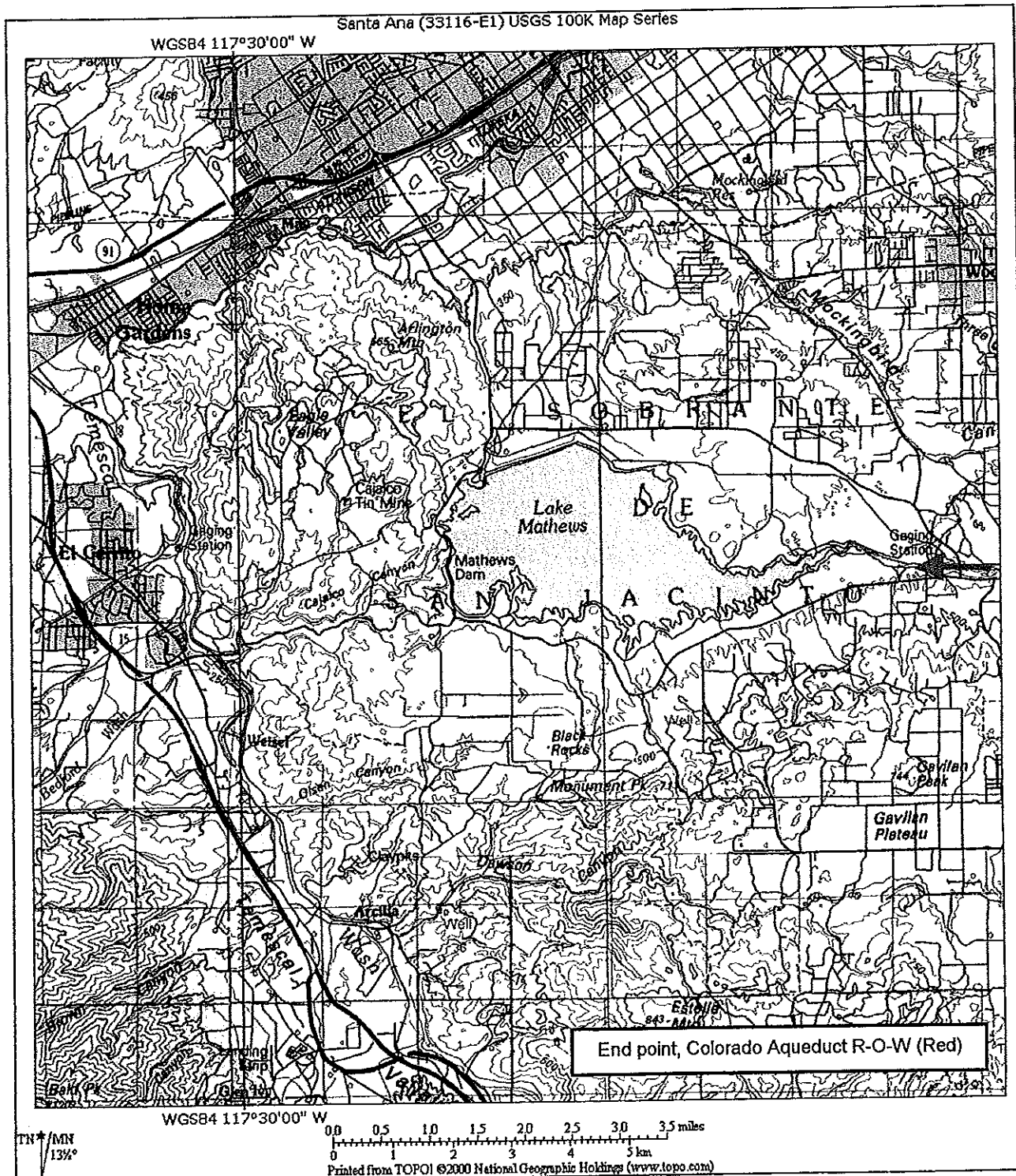
Page 26 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Santa Ana (33117-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975



PHOTOGRAPHIC RECORD PAGE

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 27 of 29

\*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

Camera format: xxxx

Lens size: xxxx

Film type and speed: xxxx

Negative on file at: no negative on file

Month	Day	Time	Exp/ Frame	Subject/Description	View Toward	Acc#
2 (1951)	15	-	-	Whittier/Fairchild Archival photograph (north is up)	-	
4 (1939)	16	-	-	Whittier/Fairchild Archival photograph (north is up)	-	
3 (1960)	10	-	-	Whittier/Fairchild Archival photograph (north is up)	-	

Archival photos are associated with the on-site portion (trench) only

Digital copy of 2-15-51 Whittier/Fairchild Archival Photograph:



**PHOTOGRAPHIC RECORD PAGE**

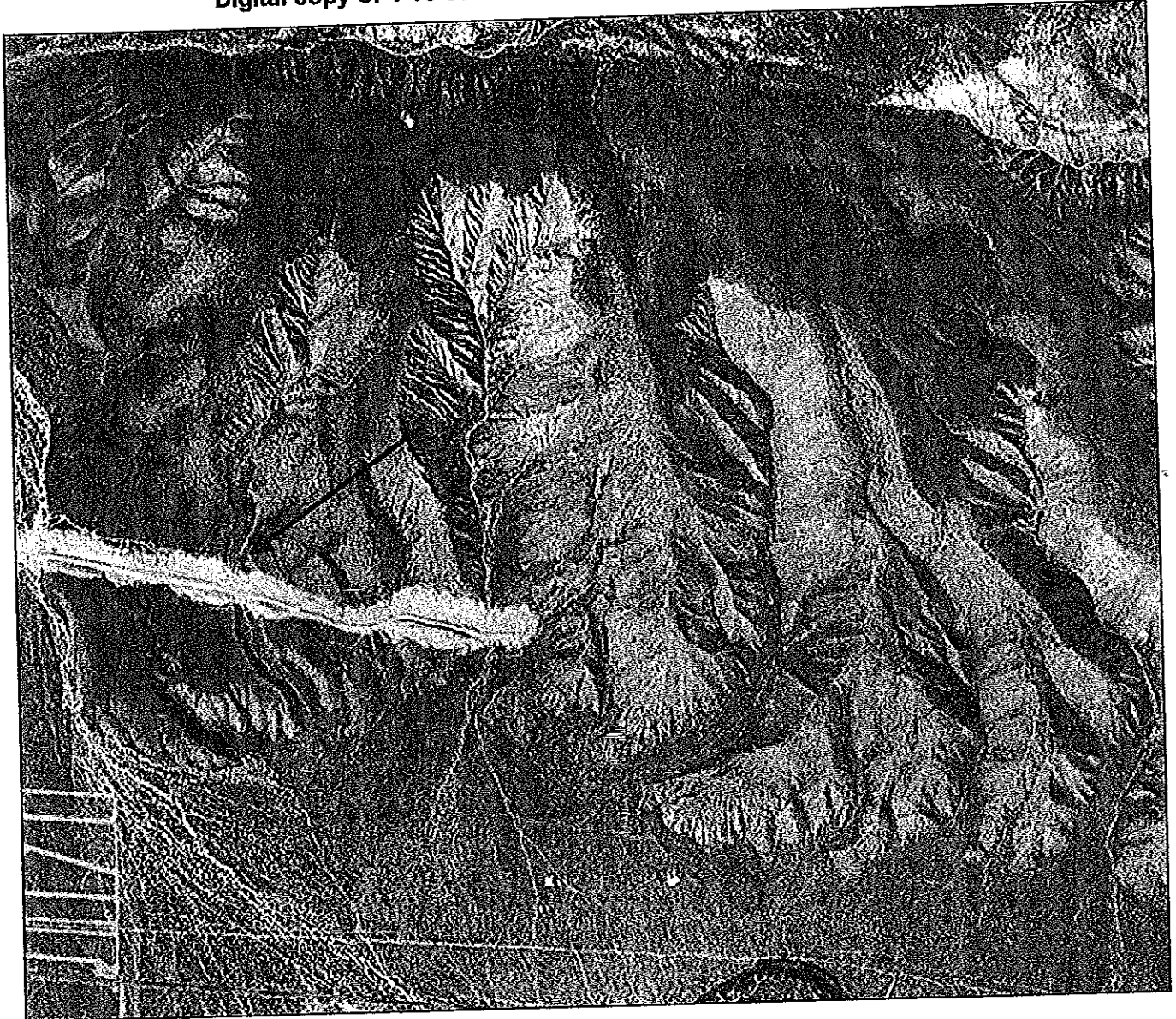
L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 28 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

Digital copy of 4-16-39 Whittier/Fairchild Archival Photograph:



**PHOTOGRAPHIC RECORD PAGE**

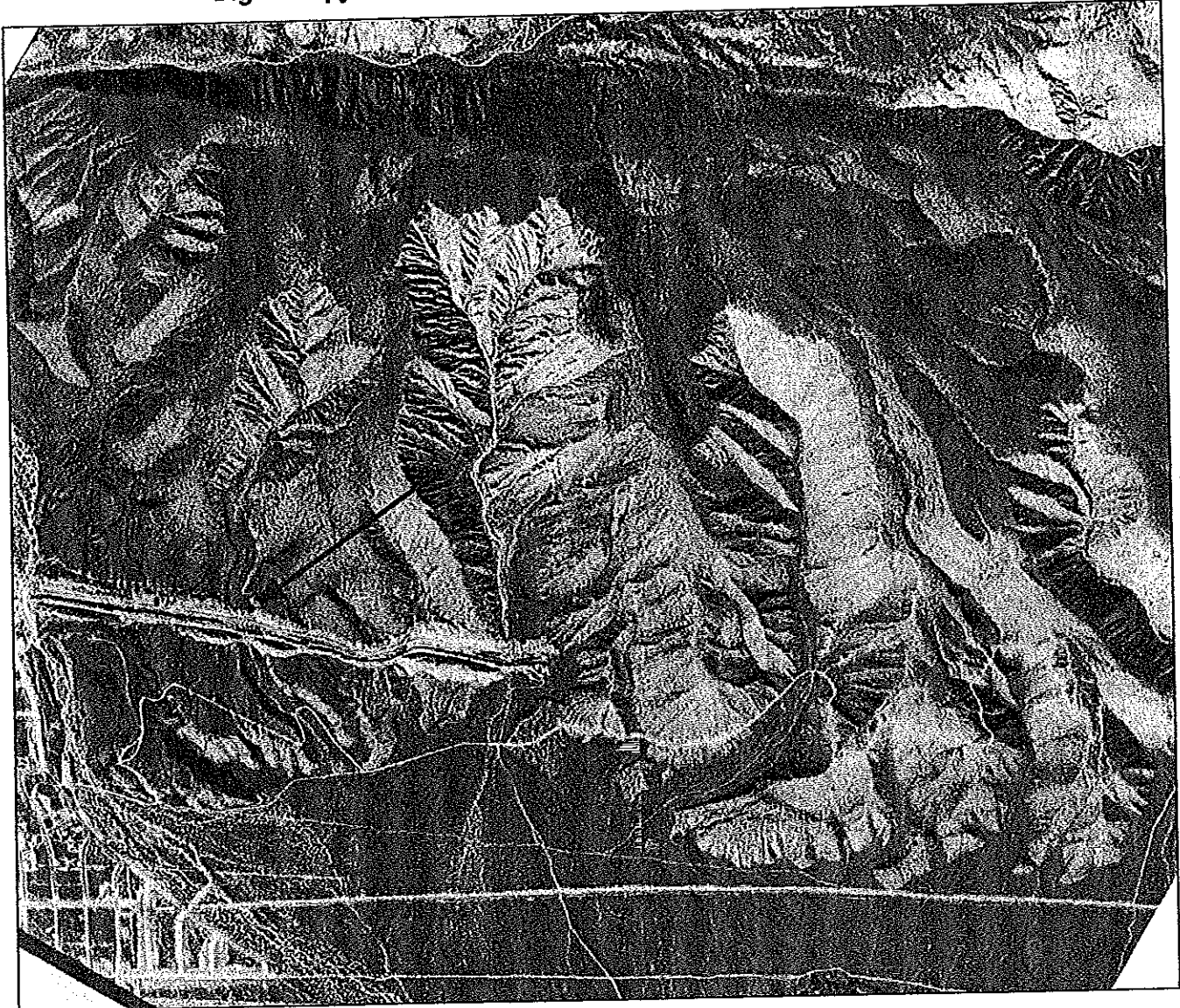
L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 29 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

Digital copy of 3-10-60 Whittier/Fairchild Archival Photograph:



State of California — The Resources Agency  
 DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary #: 33-11265  
 HRI #: CA-RIV-6126H  
 Trinomial:  
 NRHP Status Code:

Other Listings  
 Review Code

Reviewer

Date

Page 1 of 6

\*Resource Name or #: (Assigned by recorder) FS 51a, b, c, d

P1. Other Identifier: Colorado River Aqueduct

\*P2. Location:  Not for Publication  Unrestricted

\*a. County: San Bernardino (FS 51a, b, c); Riverside (FS 51d) and (P2b and P2c or P2d. Attach a Location Map as necessary.)

\*b. USGS 7.5' Quad: Arica Mountains, CA Date: 1983 Provisional Edition (FS 51a, b)

USGS 7.5' Quad: East of Granite Pass, CA Date: 1983 Provisional Edition (FS 51c)

USGS 7.5' Quad: Cadiz Valley SE, CA Date: 1985 Provisional Edition (FS 51d)

T. 1S; R. 20E; SE of NW of Sec 17; B.M. San Bernardino (FS 51a)

T. 1S; R. 19E; NW of SE of Sec 12; B.M. San Bernardino (FS 51b)

T. 1S; R. 18E; NE of SW of Sec 17; B.M. San Bernardino (FS 51c)

T. 1S; R. 16E; Ctr of NE of Sec 26; B.M. San Bernardino (FS 51d)

c. Address: N/A City: N/A Zip: N/A

d. UTM: (Give more than one for large and/or linear resources) Zone 11; 692000 mE/ 3775420 mN (FS 51a)

UTM: (Give more than one for large and/or linear resources) Zone 11; 690800 mE/ 3775020 mN (FS 51b)

UTM: (Give more than one for large and/or linear resources) Zone 11; 674120 mE/ 3773230 mN (FS 51c)

UTM: (Give more than one for large and/or linear resources) Zone 11; 659940 mE/ 3769900 mN (FS 51d)

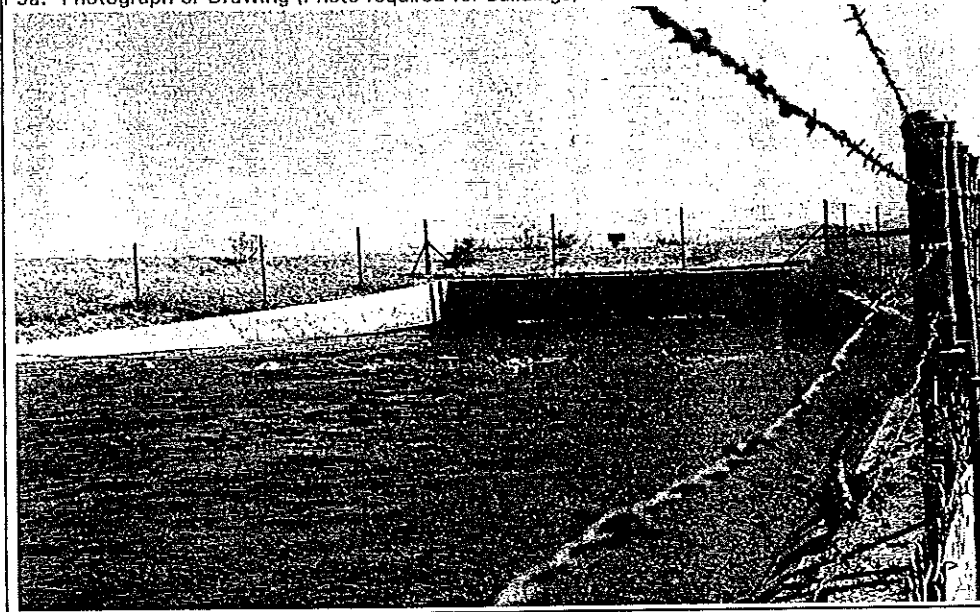
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)  
 Colorado River Aqueduct. The aqueduct has an average width of 15m.

\*P3b. Resource Attributes: (List attributes and codes) HP20- Canal

\*P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)

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



P5b. Description of Photo (View, date, accession #) Overview of aqueduct looking south. Roll 33, negative 41. April 13, 2000.

\*P6. Date Constructed/Age and Sources:  Historic  Prehistoric  Both

\*P7. Owner and Address: BLM/Caltrans/MWD

\*P8. Recorded by: (Name, affiliation, and address)  
 J. Goodman, J. Neves  
 SWCA, Inc., Environmental Consultants,  
 114 N. San Francisco St., Suite 100,  
 Flagstaff, AZ 86001

\*P9. Date Recorded: April 13, 2000

\*P10. Survey Type: (Describe):  
 Intensive pedestrian survey for fiber  
 optic cable alignment

\*P11. Report Citation: (Cite survey report and other sources, or enter "none")

Purcell, David E. (editor) 2000. The El Paso to Los Angeles Fiber Optic Cable Project: Cultural Resources Survey of the California Segment, Riverside, San Bernardino, and Los Angeles Counties. Report 4 of 4. SWCA, Inc., Environmental Consultants, Flagstaff.

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

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L1. **Historic and/or Common Name:** Colorado River Aqueduct

L2a. **Portion Described:**  Entire Resource  Segment  Point Observation **Designation:**

b. **Location of point or segment:** (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map.)

51a- USGS 7.5' Arica Mountains, CA;	T. 1S; R. 20E; SE of NW of Sec 17;	UTM: 692000 mE/ 3775420 mN
51b- USGS 7.5' Arica Mountains, CA;	T. 1S; R. 19E; NW of SE of Sec 12;	UTM: 690800 mE/ 3775020 mN
51c- USGS 7.5' East of Granite Pass, CA;	T. 1S; R. 18E; NE of SW of Sec 17;	UTM: 674120 mE/ 3773230 mN
51d- USGS 7.5' Cadiz Valley SE, CA;	T. 1S; R. 16E; Ctr of NE of Sec 26;	UTM: 659940 mE/ 3769900 mN

L3. **Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

See Continuation sheet for description of points 51a, b, c, and d

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)

- a. **Top Width** Approximately 50 feet
- b. **Bottom Width** Undetermined
- c. **Height or Depth** Undetermined
- d. **Length of Segment** NA

L4e. **Sketch of Cross-Section** (include scale) None

F  
a  
c  
i  
n  
g

L5. **Associated Resources:**

Two dirt roads, one on either side of the canal (both running parallel to it), and chain-link fencing.

L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.): See Continuation sheet for setting at points 51a, b, c, and d.

L7. **Integrity Considerations:** See Continuation sheet for integrity considerations.

L8a. **Photograph, Map or Drawing**

L8b. **Description of Photo, Map, or Drawing** (View, scale, etc.) See Primary Record

L9. **Remarks:** The El Paso to Los Angeles Fiber Optic Project Plan of Development requires that structures such as the Colorado River Aqueduct will be bored beneath, thus avoiding impacts to the site.

L10. **Form Prepared by:** (Name, affiliation, and address) J. Neves, J. Goodman  
SWCA, Inc., Environmental Consultants.  
114 N. San Francisco St., Suite 100.  
Flagstaff, AZ 86001

L11. **Date:** April 13, 2000

FS 51 is the Colorado River Aqueduct, constructed by the Los Angeles Metropolitan Water District (MWD) in the early 1930s from Lake Havasu (the Colorado River upstream from Parker Dam) to Lake Mathews south of Riverside. The aqueduct consists of a large, open, concrete-lined canal crossing the Colorado and Mojave deserts and long segments that are tunnels bored beneath mountain ranges and other landscape relief. Initial surveys for the project were conducted as early as 1928; the first water was delivered to Los Angeles in 1941 (Los Angeles Dept. of Water and Power [LADWP] 2000).

The El Paso to Los Angeles Fiber Optic Project preferred route crosses the aqueduct in three locations along State Route (S. R.) 62 (FS 51 a, c, and d); the alternate route along the All American Pipeline also crosses the aqueduct west of Rice (FS 51b). Where the All American Pipeline passes beneath the Colorado River Aqueduct (FS 51b), and at the easternmost crossing of the aqueduct by S. R. 62 (FS 51a), the aqueduct flows below ground and is visible as a large, earth-covered linear structure broken in places by concrete fixtures that contain access panels or manholes. A graded dirt access road parallels the aqueduct to the south. The configuration of the Colorado River Aqueduct at these two crossings is depicted on USGS 7.5' topographic quadrangle *Arica Mountains, California*. S. R. 62 crosses open canal segments of the Colorado River Aqueduct west of Pump Station Road (FS 51c), as depicted on the *East of Granite Pass, California* USGS 7.5' topographic quadrangle and west of Granite Pass (FS 51d) as shown on the *Cadiz Valley SE, California* USGS 7.5' topographic quadrangle.

At FS 51c the canal flows northwest toward the Iron Mountain Pump Station, which is situated about 3 miles north of S. R. 62 against the east face of Iron Mountain. The aqueduct flows beneath the highway in a short tunnel that runs at an oblique angle to the road; the orientation of the open canal segments on each side of the highway is such that the canal north of the road appears off-set west from the canal south of the road. The canal at this crossing is a concrete-lined earthen canal, similar in construction to what is visible at FS 51d, except that the ramparts between the canal and S. R. 62 are covered with gray granitic stones. Dirt access roads run from S. R. 62 parallel to the canal, on either side of it, and have chains with padlocks stretched across the road to block access; the roads are 24 feet in width, and are linked by a segment of road that runs along the base of each rampart. The bases of the ramparts are about 105' from the edge of S. R. 62.

The canal at FS 51d is 50 feet wide and flows south down the Cadiz Valley. A chain-link fence with four strands of barbed wire on top runs along both sides of the canal walls. The concrete lining of the canal extends about one foot above the waterline and does not cover the entire interior surface of the earthworks within which the canal runs. The earthwork consists of sandy local soil, which is visible where it slopes sharply up from the concrete lining (about 1-1/2 feet) to the level top surface of the canal walls, then back down on the exterior surface of the earthwork. Approximately 52 feet north of the road, the canal narrows to about 33 feet east-west then passes into a tunnel, the entrance to which is marked by an earthen rampart covered in imported igneous rocks; the rampart ties together the walls of the earthwork. The canal walls are about 50 feet in width; 12-foot-wide patrol roads run along the top of each canal wall about 15 feet from the canal lining and four feet above the water surface. The roads are linked by a short segment that arcs along the top of the ramparts at each end of the tunnel. The segment of the canal that continues southward from the highway crossing is constructed in the same manner, except that the rampart (which is covered on both sides with a triangle-pattern wire mesh) begins 157 feet south of the edge of S. R. 62 (the rampart is 23 feet from the north edge of the pavement on the north side of S. R. 62). The dirt roads east and west of the canal begin at the level of S. R. 62 and slope up past the ends of the above-ground canal to the level of half way up the fences.

SWCA recommends that the Colorado River Aqueduct (FS 51) is eligible to the National Register for its significant association under Criteria A, B, and C. As the city of Los Angeles developed into a major metropolitan center after the Mexican-American War resulted in the ceding of California to the United States, the acquisition and control of water became the central goal of city governments (Reisner 1993). Beginning in the latter decades of the Nineteenth Century, the City of Los Angeles undertook massive and technologically challenging construction projects to obtain fresh water from great distances. Site LAN-2105H, the Los Angeles-Owens River Aqueduct (crossed by the preferred route between San Fernando and Santa Clarita) was constructed 1908-1913 to bring water 238 miles from the Owens Valley east of the Sierra Nevada; subsequently, the aqueduct was extended in 1926 to Bishop and in 1940 to Mono Lake (LADWP 2000:1). The Colorado River Aqueduct was built to tap the waters of a different drainage system, that of the Lower Basin of the Colorado River, the waters of which are shared with Nevada and Arizona. The Colorado River Aqueduct is therefore a physical monument to both the political will (Criterion A) and engineering ability (Criterion C) required for a city to build a structure across the vast desert regions of southeastern California. Because the use of Colorado River water is regulated by an interstate compact, this site is significant at local, state, and national levels. The construction of the Colorado River Aqueduct is also intimately associated with the life and career of William Mulholland (1855-1835), chief engineer and general manager of the Los Angeles Bureau of Water Works and Supply, now the Water System for the Los Angeles Department of Water and Power. The LADWP says today that "the man who did more than any other to furnish that vital element [water] to Los Angeles is William Mulholland" and "generations unborn will have occasion to give thanks for his engineering skill and broad foresight" (LADWP 2000).

Location Map

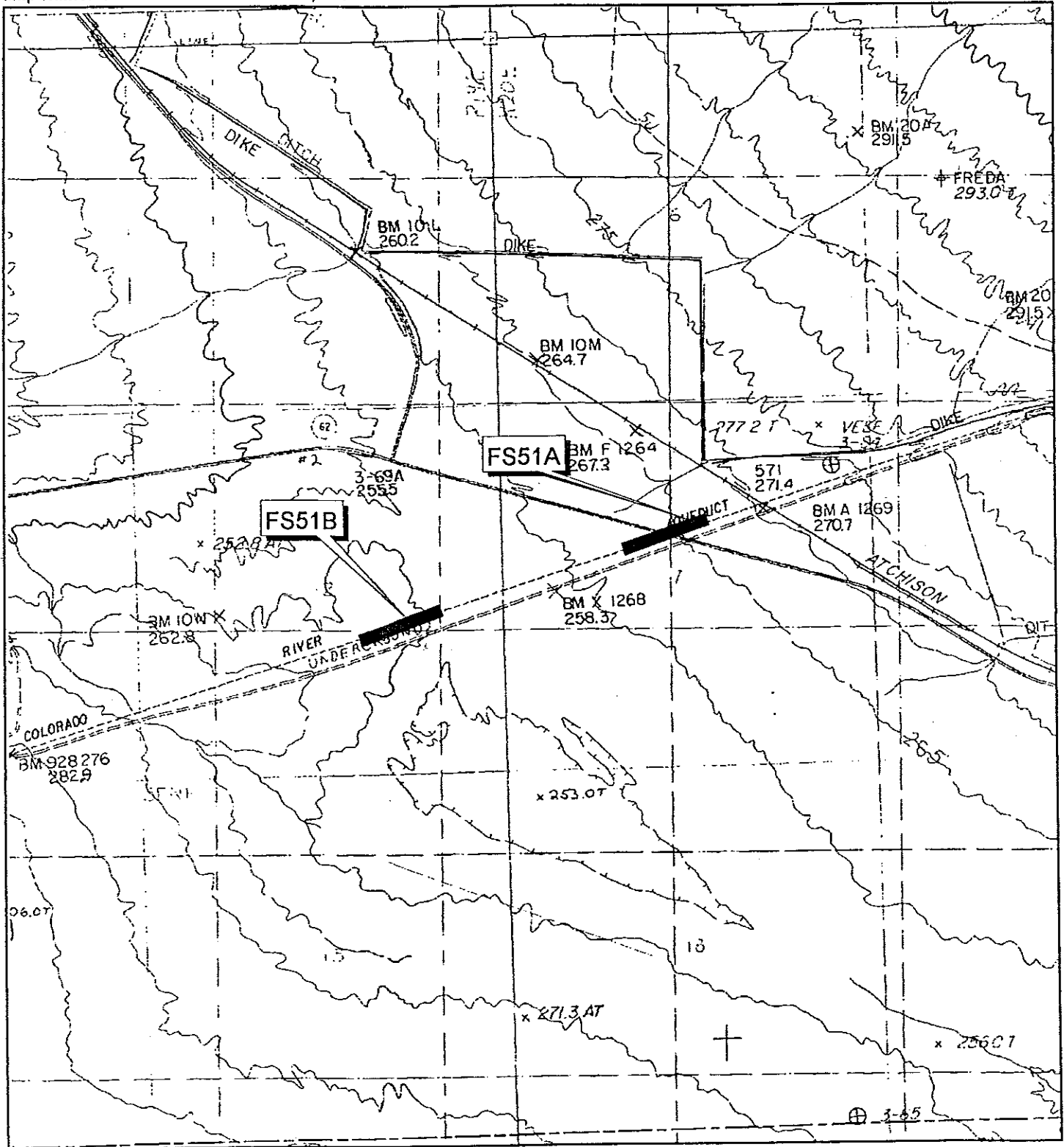
Page 4 of 6

Resource Name or #: FS 51a, b

Date of Map: Provisional Edition 1983

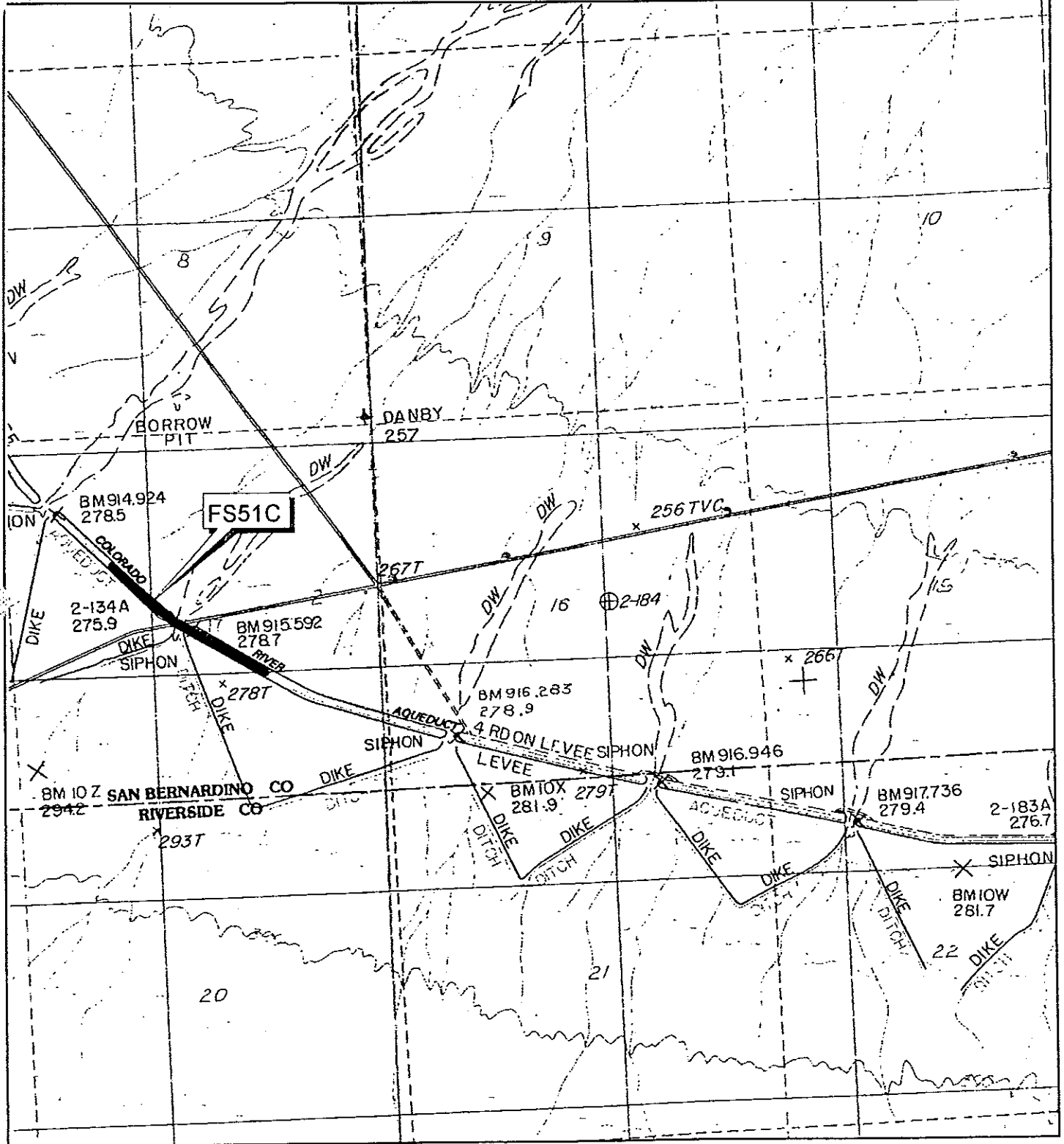
Map Name: USGS 7.5' Arica Mountains, CA

Scale: 1:24000

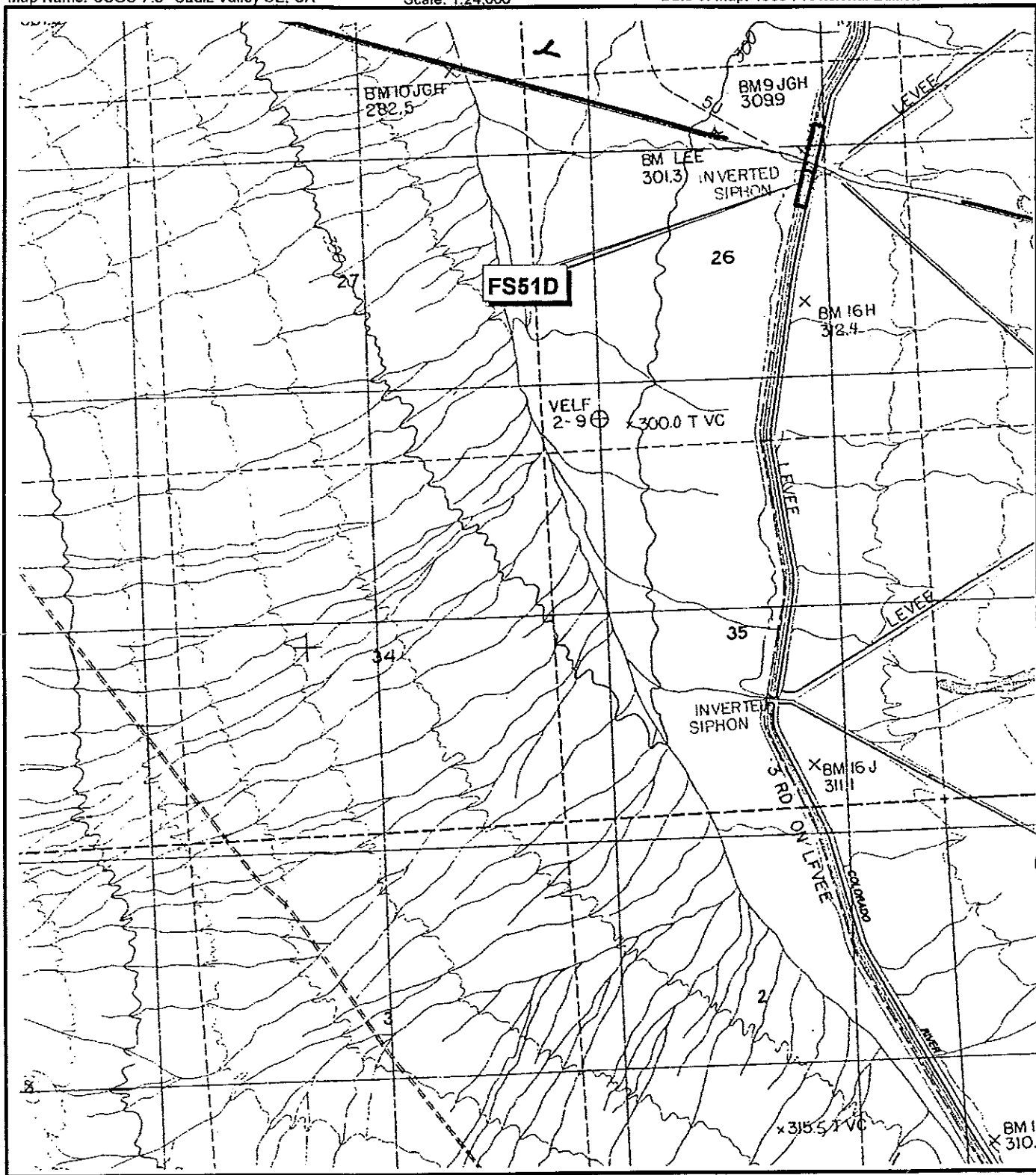


SBA Co

Location Map



SBA Co



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State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

EIC

Primary Number: P-33-11265 UPDATE

HRI Number: \_\_\_\_\_

Trinomial: CA-RIV-6726H UPDATE

NRHP Status Code: \_\_\_\_\_

Other Listings: \_\_\_\_\_

Review Code: \_\_\_\_\_

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

Page 1 of 5

Resource Name: CA-RIV-6726H UPDATE

P1. Other Identifier: Colorado River Aqueduct; Casa Loma Siphon ; East Portal Adlt of the San Jacinto Tunnel

P2. Location:  Not for Publication  Unrestricted  
b. USGS 7.5' Quad: Lakeview Date: 1967 (Photorevised 1979)  
b. USGS 7.5' Quad: Cabazon Date: 1956 (Photorevised 1988)  
c. Address: vicinity City: Lakeview and Cabazon, CA Zip:  
d. UTM: Zone 11; NAD 83; 494335mE/ 3743925mN (Casa Loma Siphon section, under existing SCE transmission lines)  
521511mE/ 3751067mN (East Portal Adlt of the San Jacinto Tunnel)

a. County: Riverside  
T4S; R2W; N 1/2 of S 1/2 of Sec 11; S.B.B.M.  
T3S; R2E; N 1/2 of N 1/2 of Sec 22; S.B.B.M.

e. Other Locational Data: The existing SCE 500kV Devers-Valley Transmission line transects two portions of the Colorado River Aqueduct. The 'western' location is part of the Casa Loma Siphon, at the northern base of Mt. Rudolph on the southern margin of the San Jacinto Valley, 0.1 mi. east of SCE Tower 33-1. The 'eastern' location is a half-mile section of the aqueduct within the SCE transmission line and access road ROW southeast of Cabazon, CA. The 'eastern' location also includes the East Portal Adit of the San Jacinto Tunnel, situated at the northern base of the San Jacinto Mountains. The East Portal Adit is located approximately 1,500 ft. west of the intersection of Esperanza Ave. and Peach St., 0.2 mi. southwest of Tower 13-3.

P3a. Description: The current survey updates two short segments of the Colorado River Aqueduct (CRA): a section of the Casa Loma Siphon near Lakeview, CA, and a section that includes the East Portal Adit of the San Jacinto Tunnel near Cabazon, CA. A more detailed description of the entire Colorado River Aqueduct (CRA) can be found on previously filed DPR forms. Since most of the surveyed portion the CRA is underground, this update focuses on the aboveground features present.

The section located near Cabazon consists of the East Portal Adit of the San Jacinto Tunnel and a large spoils pile some 420 ft. northeast of the adit. The East Portal Adit is marked on the 1956 7.5' Cabazon and 1956 15' Banning USGS topo maps. Construction of San Jacinto Tunnel began in 1933 and continued until the "holing through" on November 18, 1938. The tunnel was then lined with concrete and on October 14, 1939, a ceremony marking the official completion of the aqueduct was held at the West Portal of the San Jacinto Tunnel (Gruen 1998). (Continued on page 5)

P3b. Resource Attributes: HP.20 Canal/Aqueduct

P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)

P5a. Photograph or Drawing: IMG\_1763, December 16, 2008

P5b. Description of Photo: Overview of East Portal Adit, view southwest

P6. Age and Sources: 1933-1980  Historic  Prehistoric  Both

P7. Owner and Address:  
Metropolitan Water District of Southern California  
P.O. Box 54153, Los Angeles, CA 90053

P8. Recorded by:  
M. DeGiovine, T. Martin, S. Wilson, and K. Chmiel  
ICF Jones & Stokes  
9775 Businesspark Avenue Suite 200  
San Diego, CA 92131-1120

P9. Date Recorded: December 12 & 16, 2008, and January 15, 2009

P10. Survey Type: Intensive Pedestrian

P11. Report Citation:

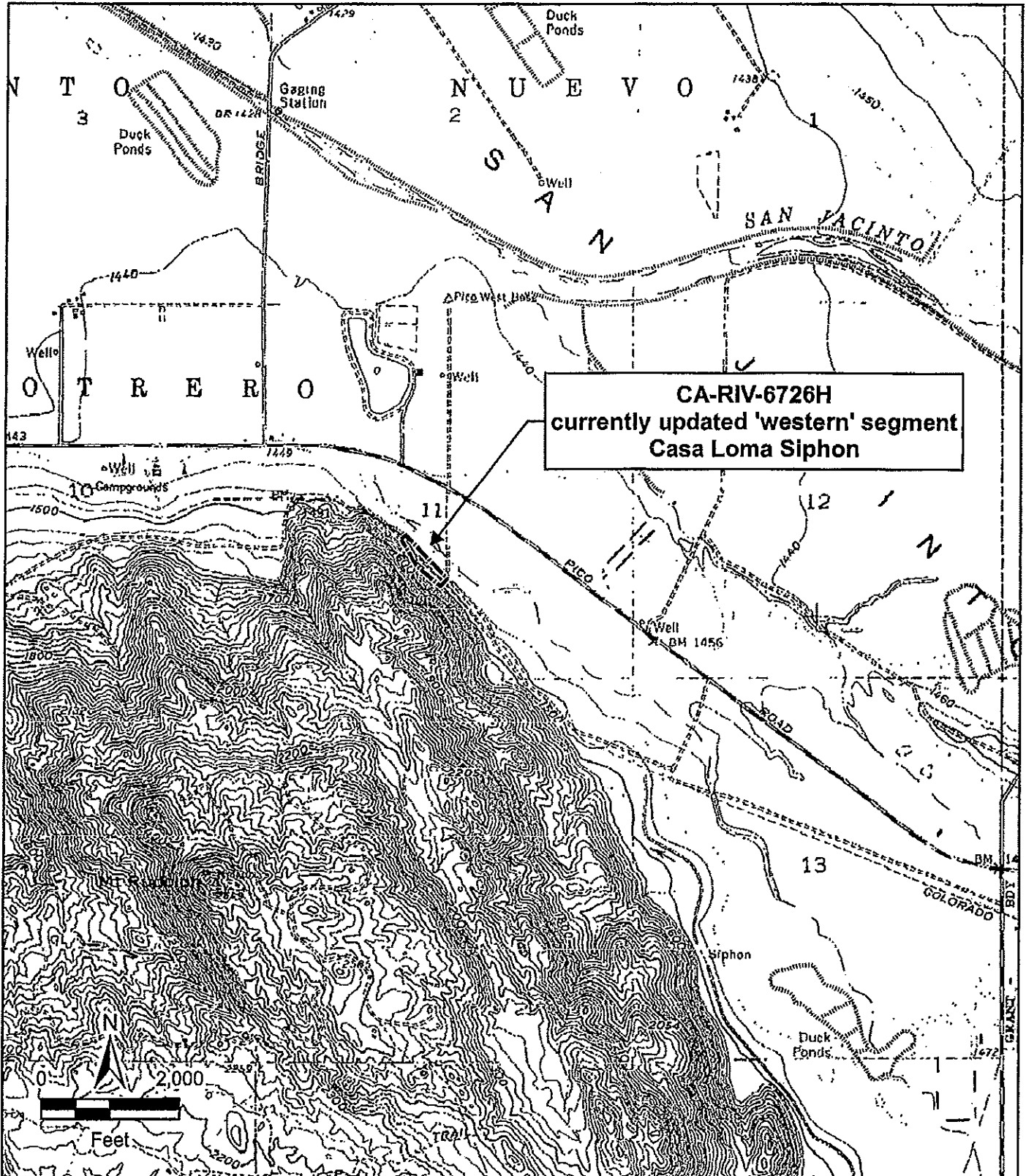
Eckhardt, William T. and Stacie L. Wilson  
2009 *Cultural Resources Inventory of the Proposed SCE Devers Substation to Valley Substation Project, Riverside County, California*. Prepared by ICF Jones & Stokes for Bureau of Land Management, Palm Springs.

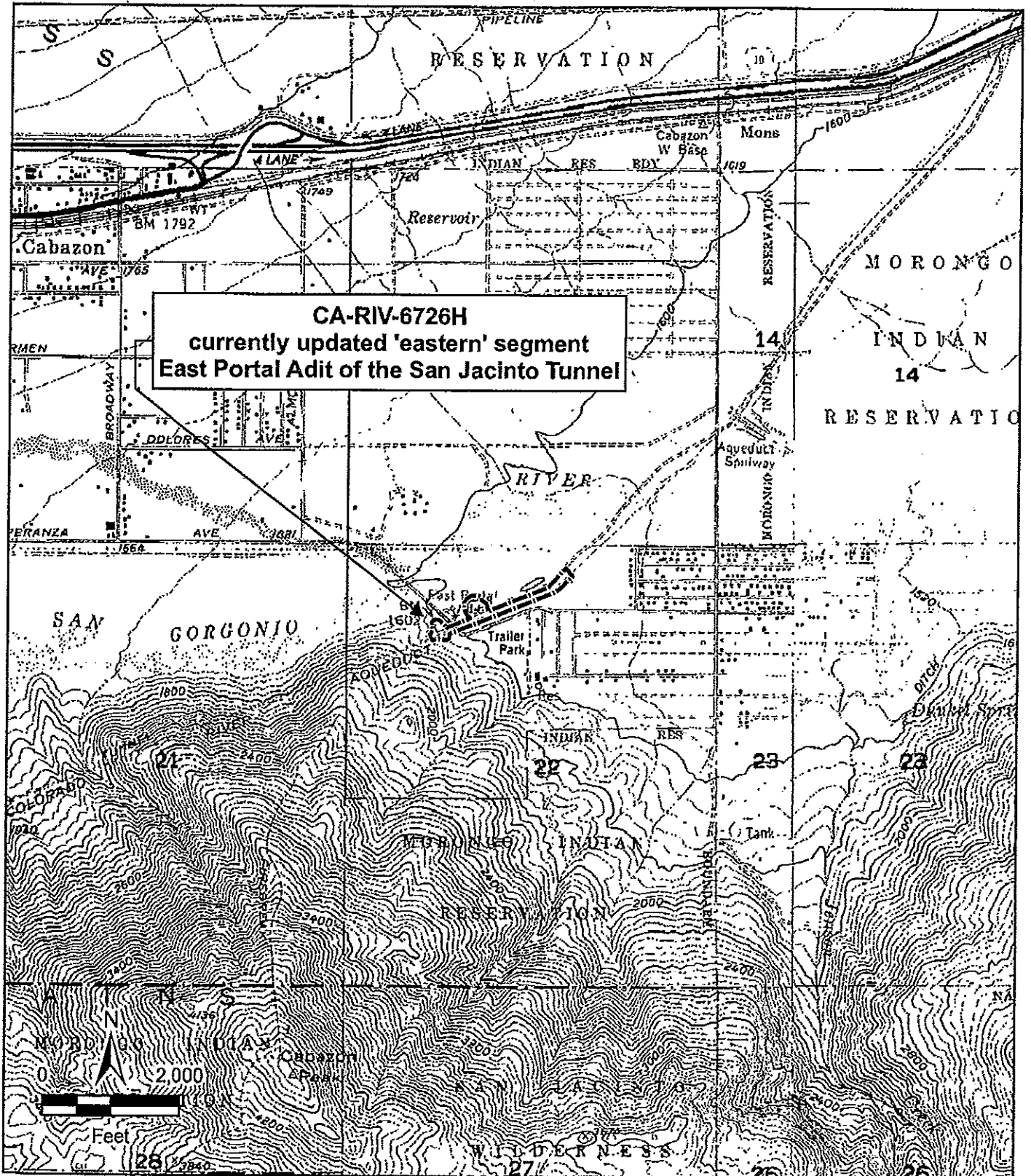
Other Sources:

Gruen, J. P.  
1998. *Colorado River Aqueduct Recording Project*. Groucho Publications, Los Angeles

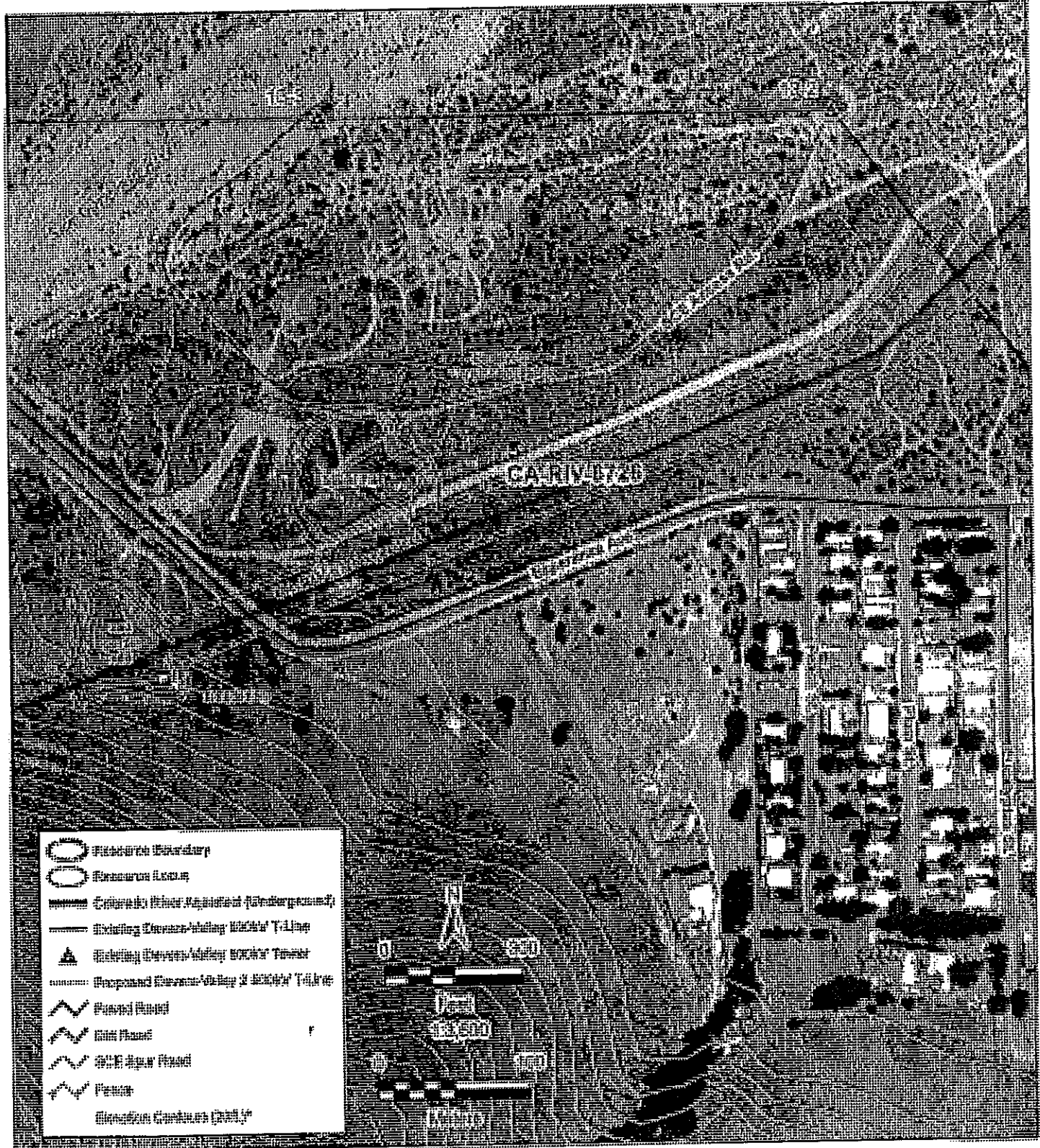


Attachments:  NONE  Location Map  Sketch Map  Continuation Sheet  Building, Structure, and Object Record  
 Archaeological Record  District Record  Linear Feature Record  Milling Station Record  Rock Art Record  Artifact Record  
 Photograph Record  Other (List):





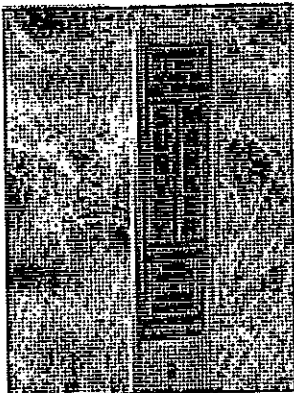




Source: ESRI USA Imagery 2009. \*Derived from Riverside County 30m DEM

**P3a. Description (continued):** Structural and physical remains in the East Portal Adit area consist of six concrete pillars, three concrete walls, a concrete foundation, and a large spoils pile. The adit, going into the San Jacinto Mountains, is approximately 20 ft. deep with a silty/sandy bottom. Three concrete walls are imbedded in the sides of the hill, measuring from 25 ft. to 12 ft. long. Several of the concrete pillars have fallen over and graffiti has been written on many of the concrete elements. The concrete foundation is located 30 ft. to the south and uphill from the adit. The foundation measures 17.5 ft. wide by 29 ft. long with a raised "section," "platform," or "cover" measuring 4 ft. by 6 ft. by 4.4 in. The spoils pile measures 270 ft. wide by 240 ft. long and is located 420 ft. to the northeast of the adit on the north side of Esperanza Ave. The Colorado River Aqueduct leading to the San Jacinto Tunnel from the northeast is underground and marked by several survey markers. DV-SLW-03 is located 75 ft. to the northwest of the spoils pile. DV-SLW-03 consists of a trash scatter measuring 470 ft. by 100 ft., primarily comprised of construction debris, concrete waste, and large metal-rimmed wooden wire cable spools. Two datable items place DV-SLW-03 to the late 1950s/early 1960s. It is unclear if the DV-SLW-03 debris is associated with the CRA or the construction of the East Portal Adit (occurring between 1933 and 1939). If so, debris has been added to scatter throughout the decades following CRA construction.

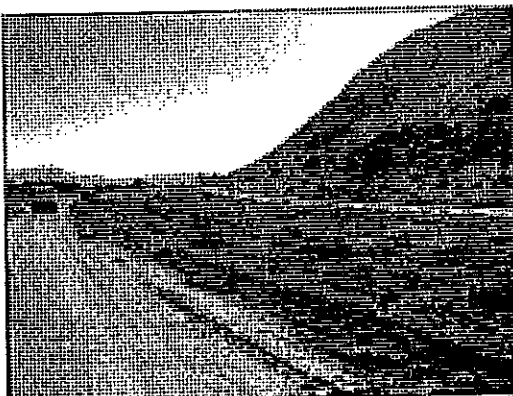
The currently updated 'western' segment is part of the Casa Loma Siphon portion of the Colorado River Aqueduct and is located directly under the SCE existing 500kV transmission lines at the northern base of the Lakeview Mountains. The Casa Loma Siphon is a double-barrel siphon that travels underground from the west portal of the San Jacinto Tunnel to the east portal of the Bernasconi Tunnel. It was one of the last components of the aqueduct to be completed in the fall of 1939. Six survey markers (mostly MWDCS) were noted. An example of the survey markers delineating the aqueduct location is shown below. These markers are mounted on flat, rectangular plastic and read: "Survey Marker" above "Metropolitan Water District of Southern California." Some modern trash in the area was observed.



P5a. DSCF0738, January 16, 2009  
P5b. Example of survey marker found near the Casa Loma Canal portion of the Colorado River Aqueduct.



P5a. DSCF0720, January 15, 2009  
P5b. Overview of foundation found at East Portal Adit, view north.



P5a. DSCF0744, January 16, 2009  
P5b. Overview of the Casa Loma Siphon portion of the CRA, view east.



P5a. DSCF0721, January 15, 2009  
P5b. Overview of the East Portal Adit, arrow points to foundation, view east/southeast.

State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary #: P33-11265  
HRI #: \_\_\_\_\_  
Trinomial: CA-RIV-6726H UPDATE  
NRHP Status Code: \_\_\_\_\_

Other Listings: \_\_\_\_\_  
Review Code: \_\_\_\_\_ Reviewer: \_\_\_\_\_ Date: \_\_\_\_\_

Page 1 of 3

\*Resource Name: CA-RIV-6726H UPDATE

P1. Other Identifier: Colorado River Aqueduct (CRA); P33-11265; BEP.625-B67

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

\*a. County: Riverside County, CA

\*b. USGS 7.5' Quad: Hayfield, CA

Date: 1987 Provisional

T5S; R13E; Unsectioned Portion of; S.B.B.M.

c. Address: Vicinity

City: Chiriaco Summit, CA

Zip: 92201

d. UTM: (Give more than one for large and/or linear resources) Zone 11; NAD 83; 627115mE/ 3730525mN (N boundary)

627090mE/ 3730335mN (Pumping Station)

627400mE/ 3730300mN (E boundary)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

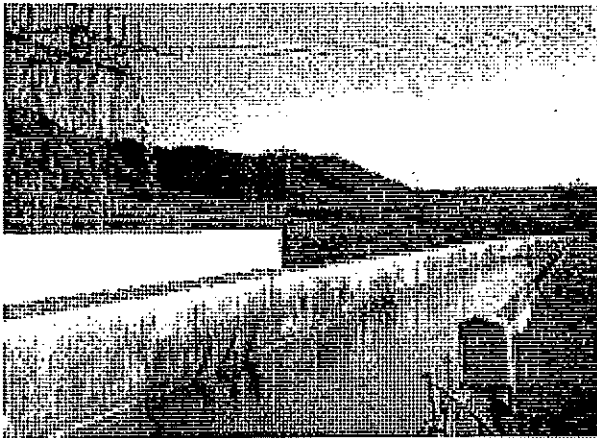
A portion addressed in this update is located at the Julian Hinds Pumping Station off of Hayfield Rd, north of Interstate 10.

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)  
The resource consists of a small portion of the 242 mile long stretch of the Colorado River Aqueduct (CRA) located within the vicinity of the Julian Hinds Pumping Station and the current area of potential effect from the proposed Blythe Energy transmission line corridor. The visible portions of the aqueduct are feeder pipes that run from the pumping station west over the Eagle Mountains. Natural setting in the location of this resource consists of alluvial soils, an elevation of approximately 1360 ft above MSL, and the Creosote Bush Scrub vegetation habitat that includes desert holly, hop sage, mesquite, mojave yucca, teddy bear cholla, and white bur-sage.

\*P3b. Resource Attributes: (List attributes and codes) AH6. Water conveyance system.

\*P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other (isolates, etc.):

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



P5b. Description of Photo (View, date, accession #): 9 February 2005, Photo 7B, View to the east: Overview of Colorado River Aqueduct (CRA).

\*P6. Age and Sources:  Historic  Prehistoric  Both

\*P7. Owner and Address:  
Metropolitan Water District (MWD)  
700 North Alameda Street  
Los Angeles, CA 90012-2944

\*P8. Recorded by: (Name, affiliation, and address)  
Stacie Wilson, Andrea Craft, and Michael Wise  
Mooney•Jones & Stokes  
9903 Businesspark Avenue  
San Diego, CA 92131

\*P9. Date Recorded: 9 February 2005

\*P10. Survey Type: (Describe) Intensive pedestrian survey.

\*P11. Report Citation: (Cite survey report and other sources, or enter "none")

Survey Report:

Carrico, Richard L. and William T. Eckhardt

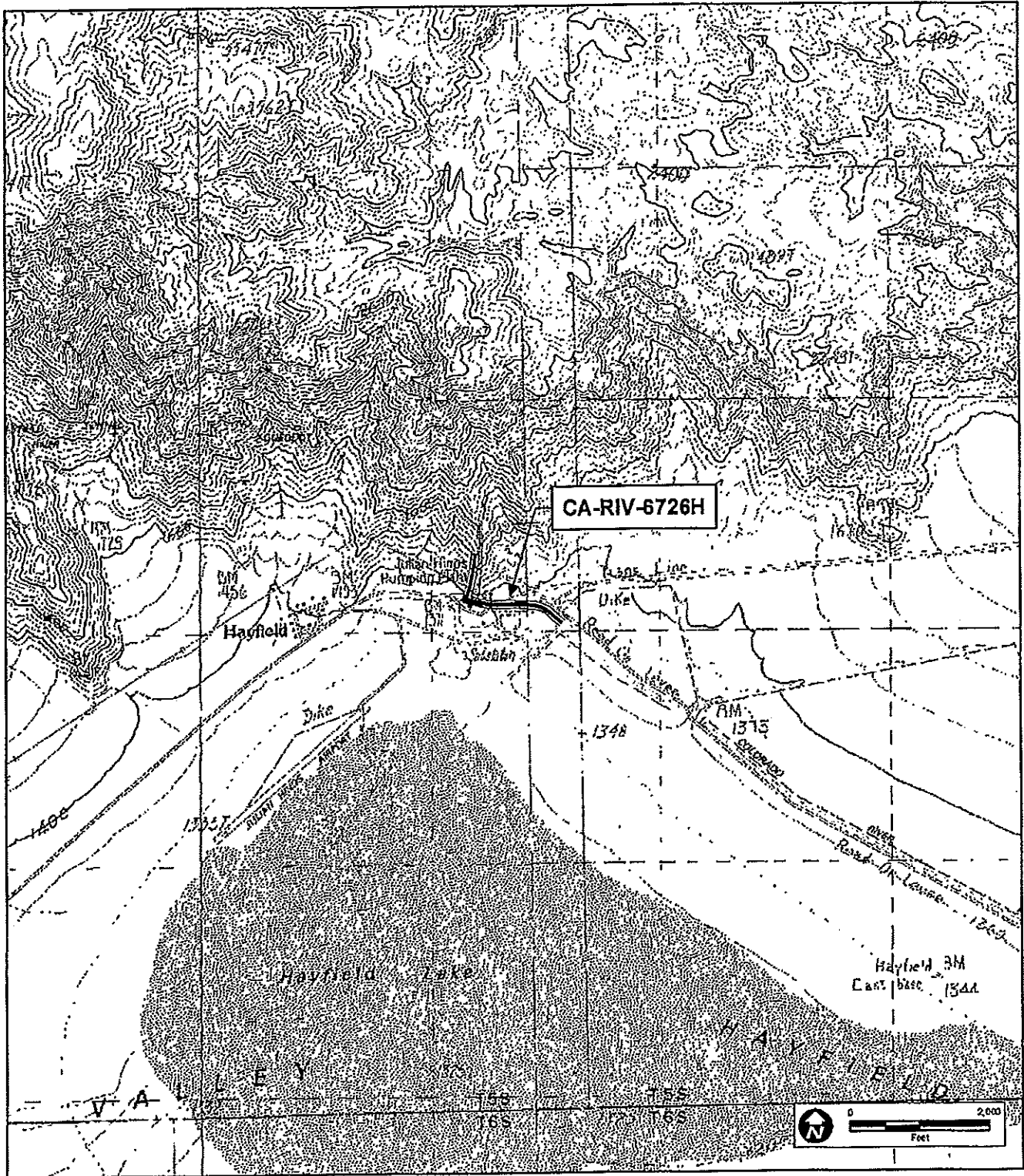
2005 Cultural Resource Inventory of the Proposed Blythe Energy Transmission Project, Riverside County, CA.

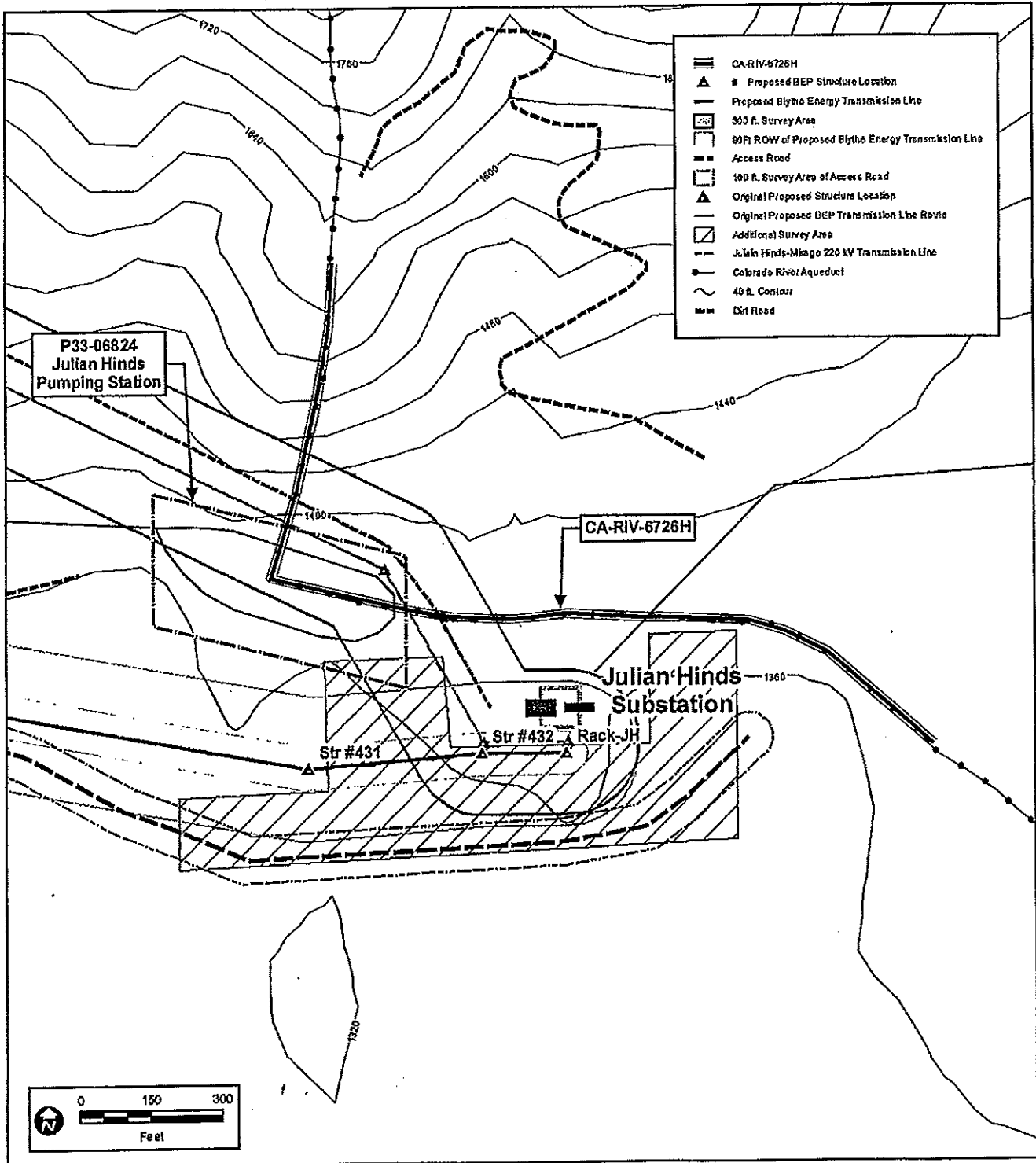
Other Sources:

Dice, Michael

2001 Site Record CA-RIV-6726H. Dated, 22 November 2001. California Historical Resources Information System, Eastern Information Center, University of California, Riverside.

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





State of California — The Resources Agency DEPARTMENT OF PARKS AND RECREATION <b>PRIMARY RECORD</b>	Primary # 33-11265 HRI # Trinomial CA-RIV-6726; Update NRHP Status Code
Other Listings Review Code	Reviewer Date

\*Resource Name or #: Colorado River Aqueduct Casa Loma Siphon

Page 1 of 84

P1. Other Identifier:

\*P2. Location: \*a. County Riverside, California  Not for Publication  Unrestricted  
 \*b. USGS 7.5' Quad Winchester, CA Date 1953 (1979)  
 T 4 S; R 2 W; ¼ of ¼ of Sec 13, 24, 25; S.B.B.M.  
 T 4 S; R 1 W; City San Jacinto Zip 92582 Sec 29, 30, 20  
 c. Address: Nuevo 92567

d. Zone 11, NAD 27 495403 mE/ 3742817mN  
 496971 3738792  
 497890 3738776  
 500227 3740073

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FEB 15 2007

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e. Other Locational Data (e.g., parcel #, legal description, directions to resource, additional UTM's, etc., when appropriate):

\*P3a. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries): Siphons convey the water under such geological features as washes, and beneath constructed features such as railroad lines. Although called siphons, it is always noted that there is no real siphon action. The water flows down into the siphon and the pressure forces the water to the surface on the opposite side.

There are two basic siphon types on the Colorado River Aqueduct: barrel siphons and box siphons. Box siphons are square, usually constructed in threes, and were used to connect two sections of open canal that traversed a wash. The barrel siphons are round. The single barrel siphon has a diameter of 16 feet; the double barrel siphons have a diameter of 12 feet. Double-barreled siphons were used in situations with heads more than 25 feet. Blow-off valves are used to dewater these siphons when repairs are needed.

At the beginning of aqueduct construction, the siphons were cast-in-place concrete. When the plans called for a double barrel siphon, only one was constructed, although the connectors from the canal sections were constructed for the second barrel, to reduce the amount of disturbance around the siphon when the second barrel would be constructed.

The Casa Loma Siphon is a double-barreled siphon that travels underground from the west portal of the San Jacinto Tunnel to the east portal of the Bernasconi Tunnel. It was one of the last components of the aqueduct to be completed in the fall of 1939.

\*P3b. Resource Attributes (List all attributes and codes): HP 20: Canal/Aqueduct

\*P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other:

P5. Photograph or Drawing: (Photograph required for buildings, structures, and objects.)

\*P6. Date Constructed/Age and Source: 1939  Prehistoric  Historic  Both

\*P7. Owner and Address: Metropolitan Water District of Southern California, P.O. Box 54153, Los Angeles, CA 90053.

\*P8. Recorded by (Name, affiliation, address): Peggy Beedle, Applied EarthWorks, Inc., 3292 E. Florida Ave., Suite A, Hemet, CA 92544.

P9. Date Recorded: March 15, 2005

\*P10. Type of Survey:  Intensive  Reconnaissance  Other  
Describe:

State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary # 33-11265  
HRI #  
Trinomial CA-RIV-6726; Update  
NRHP Status Code

\*Resource Name or #: Colorado River Aqueduct Casa Loma Siphon

Page 2 of 24

\*P11. **Report Citation** (Provide full citation or enter "none"): *Historical Resources Evaluation Report: Realign State Route 79 Between Domenigoni Parkway and Gilman Springs Road in the Cities of Hemet and San Jacinto and the County of Riverside.* Prepared for David Bricker, Caltrans District 8. Prepared by Applied EarthWorks, Inc., Hemet, California.

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

State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**BUILDING, STRUCTURE, OBJECT RECORD**

Primary # 33-11265  
HRI #  
Trinomial CA-RIV-6726; Update  
NRHP Status Code

\*Resource Name or #: Colorado River Aqueduct Casa Loma Siphon

Page 3 of 24

B1. Historic Name: Colorado River Aqueduct

B2. Common Name: Colorado River Aqueduct

B3. Original Use: Canal/Aqueduct

B4. Present Use: Canal/Aqueduct

B5. Architectural Style: No Style

B6. Construction History (Construction date, alterations, and date of alterations): 1933-1939

The Colorado River Aqueduct conducts water from the Colorado River to the greater Los Angeles area. West of the San Jacinto Mountains the water travels underground through tunnels and siphons. The Casa Loma siphon extends west from the San Jacinto Tunnel to the Bernasconi Tunnel. Siphons typically have two 12 foot-diameter barrels. The first barrel was usually cast-in-place concrete, the second one, which was installed during the aqueduct expansion in 1958 and 1959, was pre-cast concrete. The surveyed segment is underground with no above-ground features.

B7. Moved?  No  Yes  Unknown Date: Original Location:

B8. Related Features: Pumping plants, villages, siphons, reservoirs, dams,

B9a. Architect: Metropolitan Water District of Southern California

b. Builder: Metropolitan Water District

B10. Significance: Theme Water Conveyance

Area: Riverside County, CA

Period of Significance 1933-present Property Type: Aqueduct Applicable Criteria A, C  
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity): The Colorado River Aqueduct meets the criteria for eligibility for both the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). The Colorado River Aqueduct is regionally significant under Criterion A as a driving and enabling force for the economic development of southern California. It is also significant under Criterion C as a marvel of civil engineering. The use of pre-cast concrete pipes was developed during its construction; this is now the construction method of choice for underground pipes. The Casa Loma Siphon is a contributing feature of the Colorado River Aqueduct as part of the system that brings water to Los Angeles and as a early example of a pre-cast concrete pipe.

B11. Additional Resource Attributes (List attributes and codes): HP 20: Canal/Aqueduct

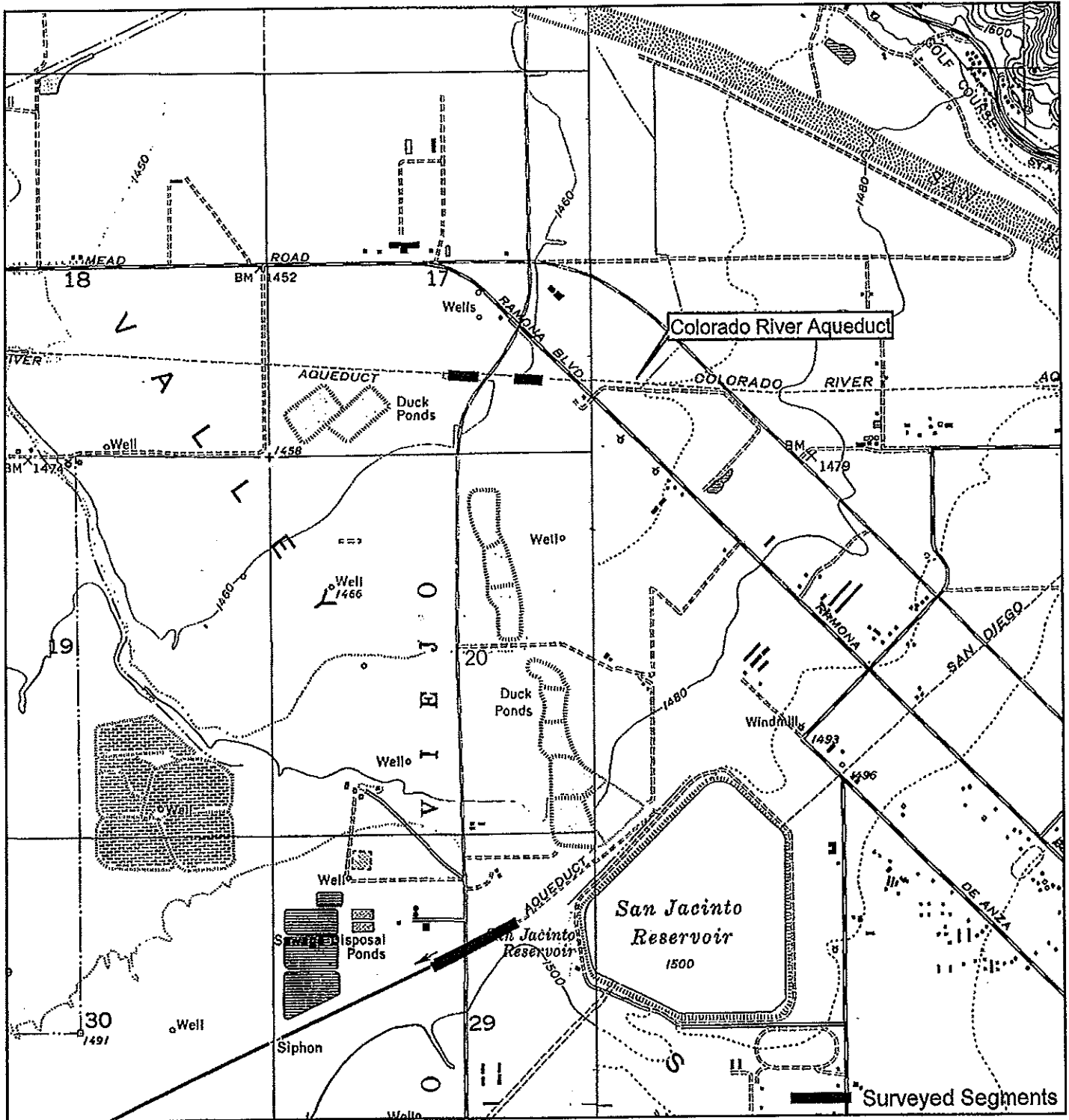
B12. References: *Historic Resource Evaluation Report: Realign State Route 79 Between Domenigoni Parkway and Gilman Springs Road in the Cities of Hemet and San Jacinto and the County of Riverside.* Prepared for David Bricker, Caltrans District 8. Prepared by Applied EarthWorks, Inc., Hemet, California.

B13. Remarks: None.

B14. Evaluator: Applied EarthWorks, Inc., 3292 E. Florida Ave., Suite A, Hemet, CA 92544.  
Date of Evaluation: March 15, 2005

(This space reserved for official comment)





TRUE NORTH

Page 1 of 5

\*Resource Name or #: Colorado River Aqueduct (CRA)

\*Recorded by: Brian Boggs

Date: November 3, 2003

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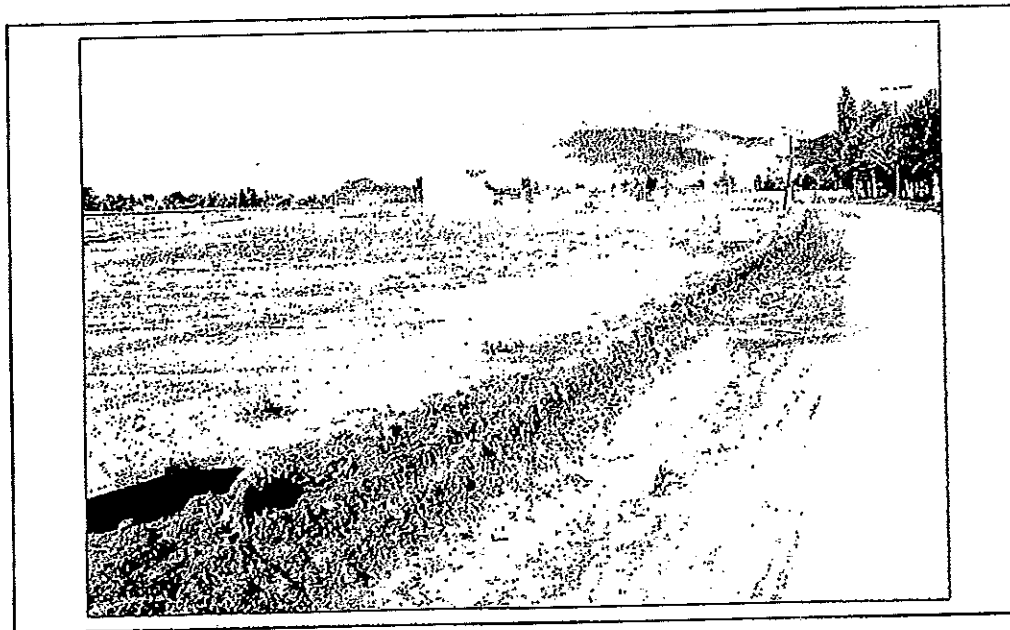
AUG 24 2007

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- \*P2. \*a. County: Riverside  
\*b. USGS 7.5' Quad: Lakeview and Perris, CA Date: 1967 (Photorevised 1979)  
d. UTM: (Give more than one for large and/or linear resources) Zone 11, begin point: 494461 mE / 3743811 mN,  
end point: 490322 mE / 3743424 mN

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries). The Colorado River Aqueduct (CRA) is 242 miles long and runs from the Colorado River in the vicinity of Parker Dam, CA, to Lake Mathews in western Riverside County. Dice (2001) recorded the segment of the CRA in Riverside County. This update includes only the portion of the CRA within The Villages of Lakeview (TVOL) development project area, extending from the northern edge of the Lakeview Mountains, across plowed agricultural fields, and then through the town of Lakeview, California. This section of the CRA is buried and its location is marked by a series of standpipes, pressure valves, concrete access ports, and two benchmarks.

P5b. Description of Photo (View, date, accession #): View west along the aqueduct.



\*P7. Owner and Address:  
Metropolitan Water District  
(MWD) of Southern California  
5230 Carroll Canyon Rd. #310  
San Diego, CA 92121

\*P8. Recorded by:  
Brian Boggs, Gini Austerman,  
and Lashawn Lee  
Statistical Research, Inc.  
P.O. Box 390  
Redlands, CA 92373

\*P9. Date Recorded:  
November 3, 2003

\*P10. Survey Type:  
(Describe):  
Intensive survey for CEQA  
review.

\*P11. Report Citation: Lerch, Michael K., and Amanda C. Cannon (editors), 2007, *Mystic Paavo: Cultural Resources Survey and Evaluation of The Villages of Lakeview Specific Plan, Riverside County, California*. Technical Report 05-34. Statistical Research, Redlands, California. Final report submitted to County of Riverside and Lewis Operating Corporation, Upland, California.

- \*A1. Dimensions: a. Length: 14,980 feet (E/W)      b. Width: 15 feet (N/S)  
Method of Measurement:     Paced     Taped     Visual estimate     Other: Global Information System (GIS)  
Method of Determination: (check any that apply)     Artifacts     Features     Soil     Vegetation  
 Topography     Cut bank     Animal burrow     Excavation     Property boundary     Other (Explain):  
USGS Lakeview and Perris, CA 7.5-minute maps

Reliability of Determination:     High     Medium     Low

Explain: The CRA alignment is clearly marked on the USGS Lakeview and Perris, CA 7.5-minute maps. This section of the CRA is buried and its location is marked by a series of standpipes, pressure valves, and concrete access ports.

- \*A4. Features (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map): The portion of the CRA within the TVOL project area consists of a pipe buried approximately 3 feet below ground surface, serviced by vertical hatches (Dice 2001). Its surface expression in the project area consists of a series of vertical standpipes, pressure valves, and concrete access ports. Graded areas and access roads are adjacent to portions of the CRA. Off-site components include benchmarks. Two were identified, including one in TVOL-22 Locus C (CA-RIV-398/414).

The central component of the CRA was built between 1933 and 1938, and ancillary facilities were completed in 1941, all under the direction of Frank Weymouth. L & L Environmental first recorded this portion of the CRA in 2001 for the Municipal Water

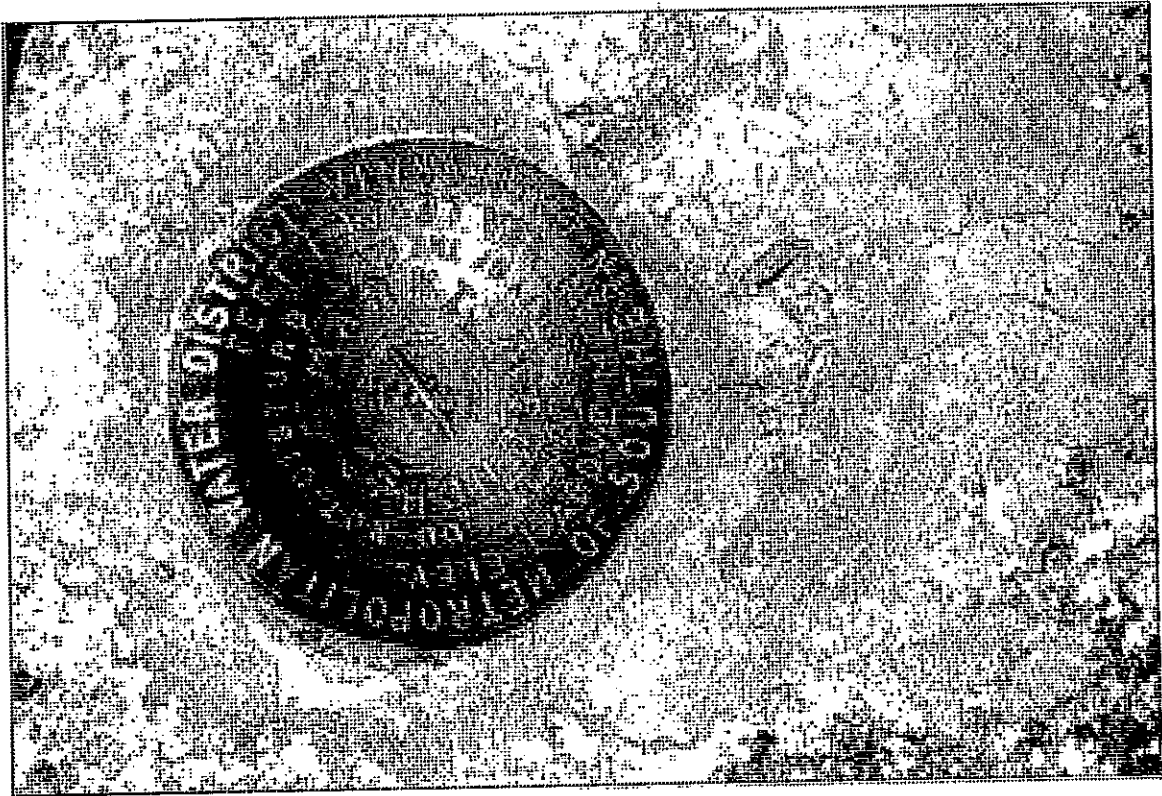
District (MWD). Dice (2001) noted that the portion of the CRA in the project area is intact and has not been notably modified since its construction.

Two benchmarks were identified associated with this section of the CRA in the TVOL project area. Both benchmarks were placed by the MWD, likely during the survey in advance of the construction of the CRA. The following is a description of each benchmark.

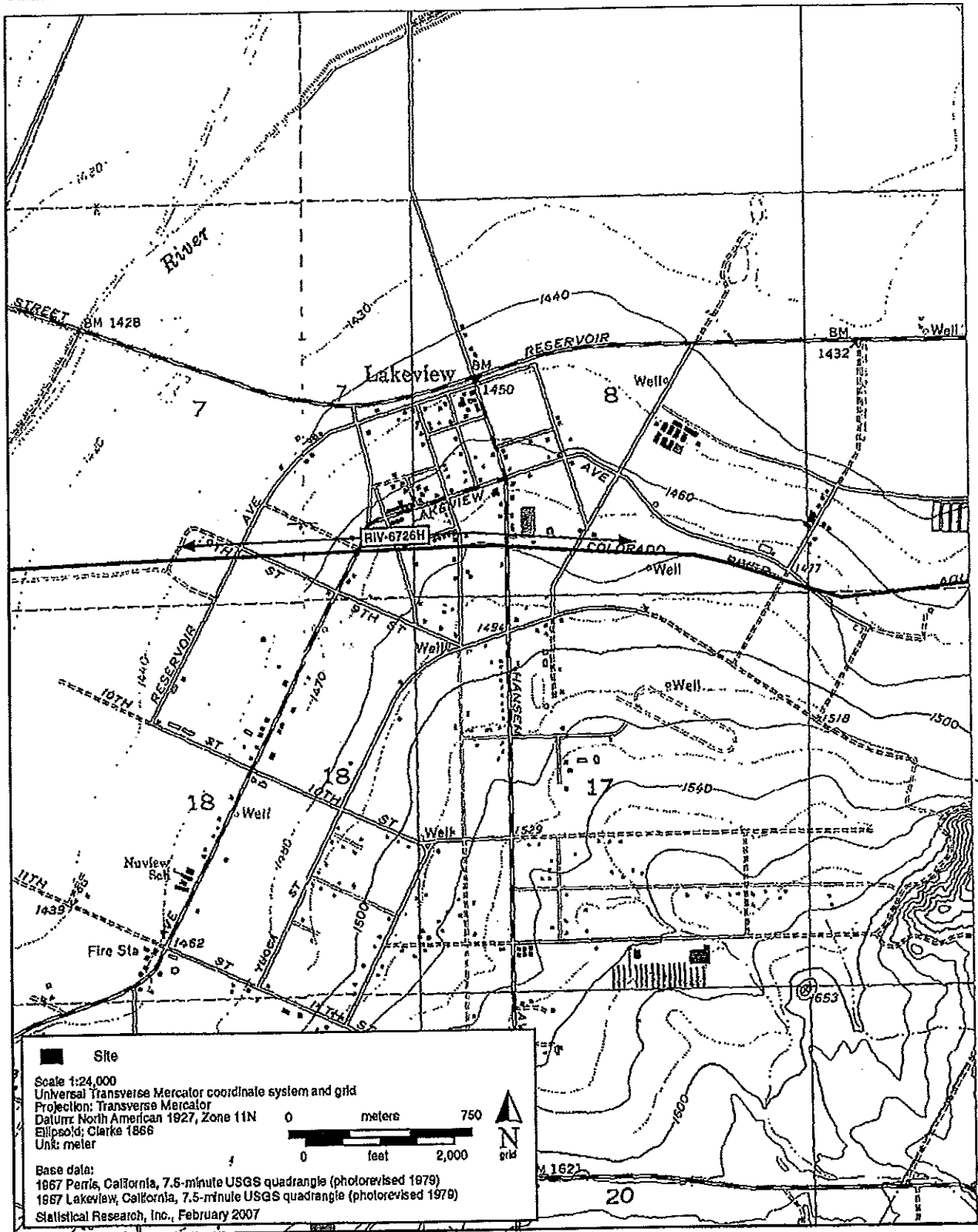
Aqueduct Benchmark 1: Placed on a large, isolated granite boulder on the south side of the dirt road that skirts the northern slope of Mt. Rudolph. A metal plaque, placed on the north side of the boulder and visible from the road, reads "Please do not disturb nearby survey marker. For information write to the director, Dept. Of Water Resources, Sacramento, Calif." The brass benchmark cap reads "METROPOLITAN DISTRICT OF SOUTHERN CALIFORNIA / ELEVATION [blank] FEET ABOVE MEAN SEA LEVEL / DO NOT DISTURB UNDER PENALTY OF THE LAW / BENCHMARK 40 S 1931." A large white arrow, outlined in gray, is painted on the boulder surface, pointing to the benchmark. The paint is weathered. Two spike nails have been pounded into cracks in the boulder. Animal burrows were noted on all sides at the base of the boulder.

Aqueduct Benchmark 2: Cemented into a flat, horizontal rock surface on the west side of the northernmost toe of Mt. Rudolph. The brass benchmark caps reads "METROPOLITAN DISTRICT OF SOUTHERN CALIFORNIA / ELEVATION [blank] FEET ABOVE MEAN SEA LEVEL / DO NOT DISTURB UNDER PENALTY OF THE LAW / BENCHMARK 40 R 1931." A large white arrow, outlined in gray, is painted on the boulder surface, pointing to the benchmark. The paint is weathered. A second plastic benchmark, placed by the MWD and labeled "LS 3708," is located nearby.

- \*A7. Site Condition:     Good     Fair     Poor (Describe disturbances.): The CRA remains in use and this segment is in good condition. The CRA segment is underground; however, the alignment is marked by standpipes and round concrete access ports. The ports are in good condition. However, the setting of the CRA in the Lakeview area has changed since its construction in the 1930s, from entirely rural to mixed use.
- A14. Remarks: In 1995, the CRA was named a National Historic Civil Engineering Landmark by the American Society of Civil Engineers. CA-RIV-6726H is recommended as eligible for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) under Criterion A. The CRA is currently in use. The MWD owns the aqueduct and CRA easement. This segment of the CRA is located within proposed open space land use designation for TVOL development project and consequently, will be preserved as a greenbelt.
- A15. References: (Documents, informants, maps, and other references)  
Dice, Michael L.  
2001 Archaeological site record for CA-RIV-6726H. Document on file, California Historical Resources Information System, Eastern Information Center, University of California, Riverside.
- \*A17. Form Prepared by: Amanda Cannon    Date: April 4, 2007  
Affiliation and Address: Statistical Research, Inc., P.O. Box 390, Redlands, CA 92373



MWD Benchmark 1512, associated with CA-RIV-6726H.





**PRIMARY RECORD**

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

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FEB 04 2002

**E I C**

Primary #: **33-11265**

HRI#: update

Trinomial: **CA-RIV-6726H**

NRHP Status Code: \_\_\_\_\_

Other Listings: \_\_\_\_\_

Date: \_\_\_\_\_

Review Code: \_\_\_\_\_ Reviewer: \_\_\_\_\_

Page 1 of 29

\*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

**P1. Other Identifier: Riverside County Portion of the Colorado River Aqueduct**

**P2.\* Location: \_\_\_\_\_ Not for Publication  Unrestricted**

**a.\* County: Riverside**

and (P2b and P2c or P2d; attach location map) **San Bernardino**

**b.\* USGS Quad: various, see continuation page. Dated: various. Photo-revised: xxxx.**

Township: various Range: various Section: various

Elevation: 450ft. asl Parker Lake, 1807ft. Hayfield Lift pump, 1405ft. Lake Mathews

**c. Address: None City: \_\_\_\_\_ Zip: \_\_\_\_\_**

**d.\* UTM: Zone 11 Begin point: 686456mE 3772825mN (WGS1984 datum) (or 686535mE /3772631mN according to NAD1927). Begin Riverside County only, not on Colorado River. End point: 464668mE 3744269mN (WGS1984 datum) (or 464748mE /3744073mN according to NAD1927).**

UTM Derivation: \_\_\_\_\_ USGS Quad  GPS

GPS UTM Corrected: \_\_\_\_\_ Yes  No GPS brand/model: **Topo v2.6.1**

**e. Other Locational Data** (e.g. parcel number, directions to resource, etc. as appropriate): The Riverside County portion of the Aqueduct begins on the *Arica Mts, CA*. USGS 7.5' and then the *East of Granite Pass, CA*. USGS 7.5'. It then skips to the *Cadiz Valley SE, CA*. USGS 7.5'. Once on this USGS, it runs west until it ends on the *Lake Mathews, CA*. USGS 7.5'.

**P3a.\* Description** (Describe resource and its major elements; include design, materials, condition, alterations, size, setting, and boundaries): *Note: the "Detailed Description" below is associated with that portion of the Aqueduct located in the study area only.*

**General Description:**

The site boundary is associated with that portion of the Colorado River Aqueduct (CRA) that is located in Riverside County only. The CRA runs from Parker Lake on the Colorado River to Lake Mathews in Western Riverside County. The eastern third of the Aqueduct is mostly located in San Bernardino County. The San Bernardino County portion is not included in this site record.

The CRA lifts water up and over a series of ranges in the eastern part of Southern California. Water then runs mostly downhill to Lake Mathews, the primary reservoir. Water is lifted from a point 450ft above sea level on Parker Lake to Hayfield Mountain at 1807ft abs. Once crossing the range, water runs downhill through a series of tunnels, conduits and siphons to Lake Mathews at 1405ft. abs. The total length of the main Aqueduct system is 242 miles, of which about 162 miles is located in Riverside County. Additional pipelines and reservoirs are located downstream from Lake Mathews, and the San Diego Aqueduct takes part of the water at San Jacinto, but these segments of the system are not discussed herein.

The Aqueduct first appears as a short stretch located northeast of the Granite Mountains. It then enters Riverside County three miles south of the West Iron Portal, a tunnel that carries water through a lift and drop system near the Iron Mountains. From here, the Aqueduct runs south in the Palin Valley, then west through a tunnel across the Coxcomb Mountains. Upon crossing a plain, the water is pumped through a tunnel under the Eagle Mountains and into the Chuckwilla Valley. Upon reaching Hayfield Lake, once part of the CRA system of reservoirs but subsequently abandoned, the water is pumped upward to the highest point crossed, 1807ft. It then flows downhill within the Shavers valley and thence through a series of tunnels (the Coachella Tunnels) to the northwest. North of Desert Hot Springs, the water runs through a series of conduits, siphons and tunnels until the east portal of the San Jacinto tunnel, located a few miles south of Cabazon.

**CONTINUATION PAGE**

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 2 of 29

\*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

**Continued P3.a**

After exiting the San Jacinto Mountains, the Aqueduct runs a relatively straight and unimpeded path until emptying in the artificial Lake Mathews. The San Diego Aqueduct begins at San Jacinto. This conduit was not added to the system until much later.

The CRA was constructed from 1933-1938, with completion of all ancillary facilities in 1941. William Mulholland, the head of the LADWP, had planned the associated surveys in eastern Riverside County and southeastern San Bernardino County as early as 1923. Details of CRA construction would require that a vast "wasteland" (some 25,000 square miles of mostly parched desert), would need to be surveyed, cost-effective right-of-way alternatives examined, electric power, transportation corridors and communications lines brought in, the Parker Dam and supplemental dams spanning the Colorado built, tunnels dug, access roads constructed and water obtained and piped to the workers and equipment needed for the construction. The right-of-way route was termed the Parker Route because of its beginnings at a new dam that was planned for a location on the Colorado River north of Parker, Arizona.

To carry out this engineering feat required nearly 16 years of planning and 242 miles of total construction length from the Colorado to the artificial Lake Mathews. Included was the boring of some 92.09 miles of tunnel approximate 16 feet in diameter, construction of 54.1 miles of trenched conduit roughly 18ft wide and 16ft high, excavation and lining of 62.8 miles of canal, the construction of the Parker Dam and two smaller dams, and finally five hydraulic lift stations that would suck water from the Colorado to the point where gravity would take over.

The system would require much more power that was available from Parker Dam power generators, so a 237-mile transmission line network was built in order to link Parker Dam and Boulder (Hoover) Dam to the system. The total cost for the project would eventually reach about \$220 million in 1933 dollars. Actual construction began in the nadir of the Depression, and the 10,000 jobs it created softened the blow of the Depression on Southern California.

**Detailed (on-site) Description:**

The portion of the CRA located within the study area that can be observed at the modern ground surface level is found between the western White Water tunnel exit and Cottonwood Creek. The portion consists of a pipeline placed into a trench that had been cut into low rolling hills with a southern aspect. Intermittent stream channels were filled between the cuts, then a trench was cut that would be able to support a steel conduit. Similar to other sections of the Aqueduct, the water is transported in a pipe buried about three feet below grade and serviced by vertical hatches. Further east, between the tunnel exit and the Whitewater Canyon to the east, the Aqueduct runs through a tunnel bored through alluvium and rock several hundred feet below Whitewater Mesa itself.

Two types of Aqueduct construction took place within the archaeological study area on or about 1933-4 (the exact dates of construction within the study area are uncertain). Several miles east of the study area, an excavated trench and conduit section fed water from the Big Morongo siphon to the San Andreas Fault siphon, whereupon two connected tunnels, one short and one larger, were excavated beneath the mesas surrounding the White Water River canyon. Figure 4 in *Dice and Irish (2001)* shows that there were some impacts the result of construction in the center of the White Water canyon. Here, it is likely a siphon was placed beneath the alluvium of the canyon. In the western portion of the study area, the Aqueduct exits from the White Water tunnel portal and heads for the eastern terminus of the San Jacinto Mountain tunnel roughly 15 miles away. Thus, the study area associated with the Phase 1 survey exhibits a trenched conduit, a conduit-tunnel joint, a tunnel right-of-way, and associated access roads.

Given its importance to Southern California modern history, the CRA should be considered a National Register-eligible site.



**CONTINUATION PAGE**

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 3 of 29

\*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

Continued P2.b.\* USGS Quad: see list below

Note: Off-project area 7.5' quad maps are not attached as part of this recordation form since more than 75 maps would be required. The on-site (project) 7.5' quad map and a set of 1:100,000 scale maps have been attached instead. The following is a list of the 7.5' quad maps associated with San Bernardino and Riverside Counties, and the Aqueduct right-of-way can be found on these maps.

7.5' Quad Name	County	Version Date
Gene Wash, CA/AZ	San Bernardino (SBC)	1975
Whipple Wash, CA	SBC	1970
Parker AZ/CA	SBC	1975
Parker NW, CA	SBC	1975
Vidal Junction, CA	SBC	1971
Vidal NW, CA	SBC	1971
Grommet, CA	SBC	1971
Rice, CA	SBC	1978
Arica Mountains, CA	Riverside (RIV) and SBC	1978
East of Granite Pass, CA	RIV and SBC	1983
Granite Pass, CA	SBC	1978
Danby Lake, CA	SBC	1978
Iron Mountains, CA	SBD	1978
Cadiz Valley SE, CA	RIV and SBC	1978
Coxcomb Mountains, CA	RIV	1985
East of Victor Pass, CA	RIV	1985
Pinto Wells, CA	RIV	1985
Victory Pass, CA	RIV	1985
Buzzard Spring, CA	RIV	1985
Hayfield Spring, CA	RIV	1985

**CONTINUATION PAGE**

L & L Environmental, Inc.  
 1269 Pomona Rd. Suite #102  
 Corona, CA. 92882

Primary #: 33-11265  
 HRI#: \_\_\_\_\_  
 Trinomial: CA-RIV-6726H

Page 4 of 29

\*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

P2.b.\* USGS Quad: see list

7.5' Quad Name	County	Version Date
Hayfield, CA	RIV	1985
Cottonwood Spring, CA	RIV	1985
Cottonwood Basin, CA	RIV	1984
Thermal Canyon, CA	RIV	1972
Rockhouse Canyon, CA	RIV	1985
West Berdoo Canyon, CA	RIV	1985
Keys View, CA	RIV	1988
East Deception Canyon, CA	RIV	1985
Seven Palms Valley, CA	RIV	1978
Desert Hot Springs, CA	RIV	1972
Morongo Valley, CA	RIV	1997
<b>White Water, CA</b>	<b>RIV</b>	<b>1996 (Attached Below)</b>
Cabazon, CA	RIV	1996
Beaumont, CA	RIV	1996
San Jacinto, CA	RIV	1978
Lakeview, CA	RIV	1976
Perris, CA	RIV	1978
Steele Peak, CA	RIV	1973
Lake Mathews, CA	RIV	1988

PRIMARY RECORD, (continued)

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 5 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

P3b.\* Resource Attributes (List attributes and codes): HP20

P4.\* Resources Present: \_\_\_\_\_ Building X Structure \_\_\_\_\_ Object \_\_\_\_\_ Site \_\_\_\_\_ District  
\_\_\_\_\_ Element of District \_\_\_\_\_ Isolate \_\_\_\_\_ Other

P5a. Photograph or Drawing (Required for HRI buildings, structures, and objects): Sample cross-section of site taken from MWD (1941). Drawing of on-site cut/fill area attached on map page. Also attached are Fairchild/Whittier archival aerial photographs.

P5b. Description of Photo (View, date, accession #): See attached table in Photography section.

P6.\* Date Constructed/Age and Source: \_\_\_\_\_ Prehistoric X Historic \_\_\_\_\_ Both

P7.\* Owner and Address: Metropolitan Water District of Southern California 5230 Carroll Canyon Rd. #310, San Diego, CA. 92121

P8.\* Recorded by: Michael Dice L & L Environmental, Inc. 1269 Pomona Rd. Suite 102 Corona, California 92882  
Project #: JBG-01-172 (survey) and JBG-01-281 (recordation)

P9.\* Date recorded: September 5 and 17, 2001

P10.\* Type of Survey (Describe): Systematic field survey utilizing 10 m transects, with spot checking within the historic Aqueduct right-of-way area, excluding off-project portions.

P11.\* Report citations: 1) Dice, M.H., and L. Irish (2001) "Mark Technologies Corporation Alta Mesa Pumped Storage Hydroelectric Project: A Class III Intensive Field Survey On Federal And Private Properties Located Within Sections 3, 4, 5, 9 And 10, T3S, R3E, Cabazon/White Water Area, County Of Riverside, California". 2) Metropolitan Water District Of Southern California (1941) "The Great Aqueduct: The Story Of The Planning And Building Of The Colorado River Aqueduct." Metropolitan Water District Of Southern California, Los Angeles.

- Attachments:
- X Location Map (7.5' USGS quadrangle)
  - X Archaeological Site Record
  - \_\_\_\_\_ Sketch Map
  - X Linear Feature Record
  - \_\_\_\_\_ Milling Station Record
  - \_\_\_\_\_ Rock Art Record
  - \_\_\_\_\_ Artifact Record
  - \_\_\_\_\_ Illustration Sheet
  - X Photograph Record
  - \_\_\_\_\_ Building, Structure, and Object Record
  - \_\_\_\_\_ District Record
  - X Other (list): scanned images added to Photograph record page.

# ARCHAEOLOGICAL SITE RECORD

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
Trinomial: CA-RIV-6726H

Page 6 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

A1.\* Dimensions: Length: 162 miles (m/l) Width: average 100 meters.

Method of measurement:  Paced  Taped  Visual estimate  Other

Method of determination (Check any that apply):  Artifacts  Features  Soil  
 Vegetation  Topography  Cut bank  Animal burrow  Excavation  
 Property boundary  Other (Explain): An estimate of the width of the CRA was made using topographic maps, while the length in Riverside County is noted by MWD (1941).

Reliability of determination:  High  Medium  Low Explain:

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

A2. Depth:  None  Unknown. Method of Determination: maximum depth below the modern ground surface is about 20ft, as described in MWD (1941), other parts are on the surface.

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

A4.\* Features (Number, describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map): The Colorado River Aqueduct should be considered a feature within the site, and visual aspects of the feature include access portals, a trench and roads and earthworks associated with the 1933 construction.

A5.\* Cultural Constituents (Describe and quantify artifacts, human-introduced organic residues, etc. not associated with features): No artifacts were noted that are not associated with features.

A6.\* Were Specimens Collected?  No  Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated).

A7.\* Site Condition:  Good  Fair  Poor (Describe disturbances). The site, within the study area, is probably unchanged since the construction date.

A8.\* Nearest Water (Type, distance, and direction): Cottonwood Creek lies along the western edge of the studied portion of the site, but the Aqueduct runs beneath Cottonwood Creek (within a siphon?).

A9.\* Elevation: (see P2b). 1600 feet above sea level.

ARCHAEOLOGICAL SITE RECORD, (continued)

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
Trinomial: CA-RIV-6726H

Page 7 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

**A10. Environmental Setting (within project area only)**

**Vegetation** (Site and vicinity): Ruderal vegetation and alien grasses are located on the right-of-way.

**Soil** (Site and surrounding): Moderately coarse alluvium, but varies due to trench cut.

**Landform**: Site cuts across finger ridges and shallow valley

**Geology**: Decomposed granitic alluvium.

**Exposure/Slope**: varies: 3-10%.

**Other associations**: None.

**A11. Historical Information**: None.

**A12.\* Age**: \_\_\_\_\_ Prehistoric \_\_\_\_\_ 1542-1769 \_\_\_\_\_ 1769-1848 \_\_\_\_\_ 1848-1880 \_\_\_\_\_ 1880-1914  
\_\_\_\_\_ X 1914-1945 \_\_\_\_\_ Post 1945 \_\_\_\_\_ Undetermined

**Factual or estimated dates of occupation** (Explain): Construction of the site is well documented by many historians.

**A13. Interpretations** (Discuss scientific, interpretive, ethnic, and other values of site, if known): The site represents a major historical development associated with water availability for all of Southern California.

**A14. Remarks**: None.

**A15. Report citations**: 1) Dice, M.H., and L. Irish (2001) "*Mark Technologies Corporation Alta Mesa Pumped Storage Hydroelectric Project: A Class III Intensive Field Survey On Federal And Private Properties Located Within Sections 3, 4, 5, 9 And 10, T3S, R3E, Cabazon/White Water Area, County Of Riverside, California*". 2) Metropolitan Water District Of Southern California (1941) "*The Great Aqueduct: The Story Of The Planning And Building Of The Colorado River Aqueduct*." Metropolitan Water District Of Southern California, Los Angeles.

**A16. Photographs** (List subject(s), direction of view, and accession numbers or attach a Photograph Record): Photograph record attached with scanned images.  
Accession numbers: None.

## BUILDING, STRUCTURE AND OBJECT RECORD

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
Trinomial: CA-RIV-6726H

Page 8 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

- B1. Historic Name: Colorado River Aqueduct  
B2. Common Name: Same as above.  
B3. Original Use: Water transport.  
B4. Present Use: Same.  
\*B5. Architectural Style: No known style.  
\*B6. Construction History: (Construction date, alterations, and date of alterations): Probably between 1933 and 1941.  
\*B7. Moved?  No  Yes  Unknown. Date: \_\_\_\_\_ Original Location:  
\*B8. Related Features: none.  
B9a. Architect: MWD, LAMWD B9b. Builder: W. Mulholland et al.  
\*B10. Significance: Theme: Water Resource Development Area: Southern California

Period of Significance: Regional Development of Southern California, post-1930. Property Type: Aqueduct. Applicable Criteria: Sec. Int. Standards Criterion A and B (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.):

Within the study area, this portion of the site exhibits an adit, cut-and-filled conduit trench and probably a siphon under Cottonwood Creek. The site is likely to be significant as the Aqueduct is a) associated with events that have made a significant contribution to the broad patterns of our history, and b) is associated with the lives of persons significant in our past. Clearly, the Aqueduct is important to the historic of modern industrial development in Southern California, and is directly associated with the most important architect of that development, William J. Mulholland.

- B11. Additional Resource Attributes: (List attributes and codes): HP20.  
\*B12. References: 1) Dice, M.H., and L. Irish (2001) "*Mark Technologies Corporation Alta Mesa Pumped Storage Hydroelectric Project: A Class III Intensive Field Survey On Federal And Private Properties Located Within Sections 3, 4, 5, 9 And 10, T3S, R3E, Cabazon/White Water Area, County Of Riverside, California*". 2) Metropolitan Water District Of Southern California (1941) "*The Great Aqueduct: The Story Of The Planning And Building Of The Colorado River Aqueduct.*" Metropolitan Water District Of Southern California, Los Angeles.

- B13. Remarks: The portion of the site discussed appears to be unchanged since construction ended.  
\*B14. Evaluator: Michael Dice.

Date of Evaluation: November 22, 2001.

This space reserved for official comments:

**NOTE: A sketch map of the site can be found on the Sketch Map pages.**

## LINEAR FEATURE RECORD

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
Trinomial: CA-RIV-6726H

Page 9 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

- L1. Historic and/or Common Name: Colorado River Aqueduct
- L2. Portion Described: \_\_\_\_\_ Entire Resource X Segment \_\_\_\_\_ Point Observation  
Designation: The data found within the November 2001 DPR523 recordation forms is only associated with that portion located within a particular study area, as delineated in Dice and Irish (2001). This portion is about 4000 feet long. A general statement about the Aqueduct, as it relates to Riverside County, is also discussed.
- L3. Description (Describe construction details, materials and artifacts found at this segment/point. Provide plans/sections as appropriate): See attached continuation pages for feature description.
- L4e. Sketch of Cross-Section (include scale) Facing: East.  
See attached site recordation map. Cross-section is included as an inset.
- L4. Dimensions: (in feet for historic features)  
a. Top Width: roughly 200 feet, if the cut-and-fill trench across ridges is included.  
b. Bottom Width: roughly 10 feet at the base of the conduit.  
c. Height or Depth: roughly 16 feet from the base of the conduit to the modern ground surface.  
d. Length of Segment: Total length is about 4000 feet.
- L5. Associated Resources: none.
- L6. Setting (Describe natural features, landscape characteristics, slope, etc. as appropriate): The segment is located between an adit and Cottonwood Creek: cut-and-fill trench through finger ridges.
- L7. Integrity Considerations: The site appears to be completely intact since initial construction.
- L8. Description of Photo, map or Drawing (View, scale, etc.): See attached photographic record page.
- L9. Remarks: None.
- L10. Form prepared by (name/affiliation/address): Michael Dice L&L Environmental, Inc. 1269 Pomona Road Suite 102 Corona, CA. 92882.
- L11. Date: November 22, 2001.

# LOCATION MAP

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

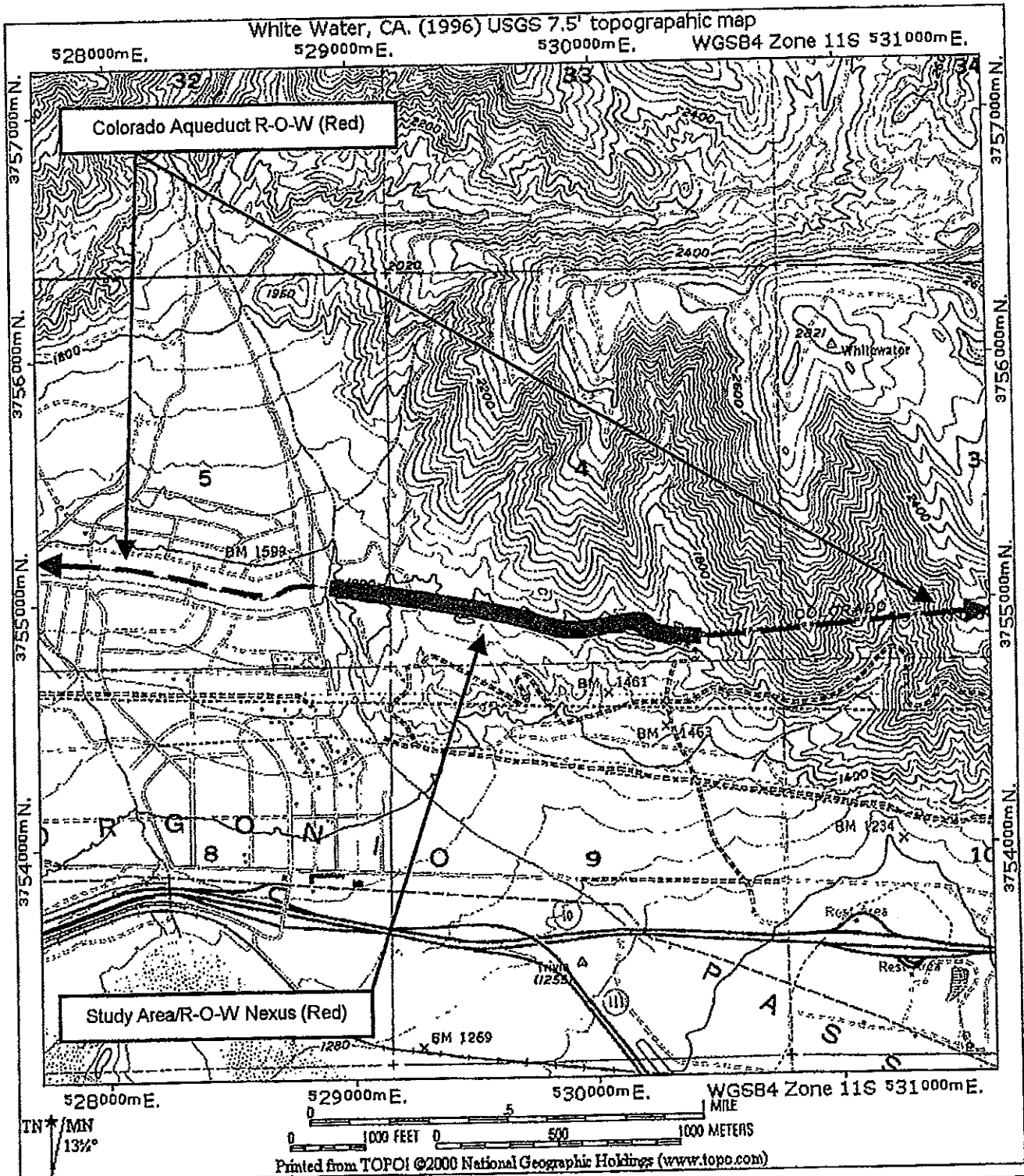
Page 10 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS White Water, CA. 7.5'

Scale: 1:24,000 (inches)  
Focused map.

Date of Map: 1996





# LOCATION MAP

L & L Environmental, Inc.  
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Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 11 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

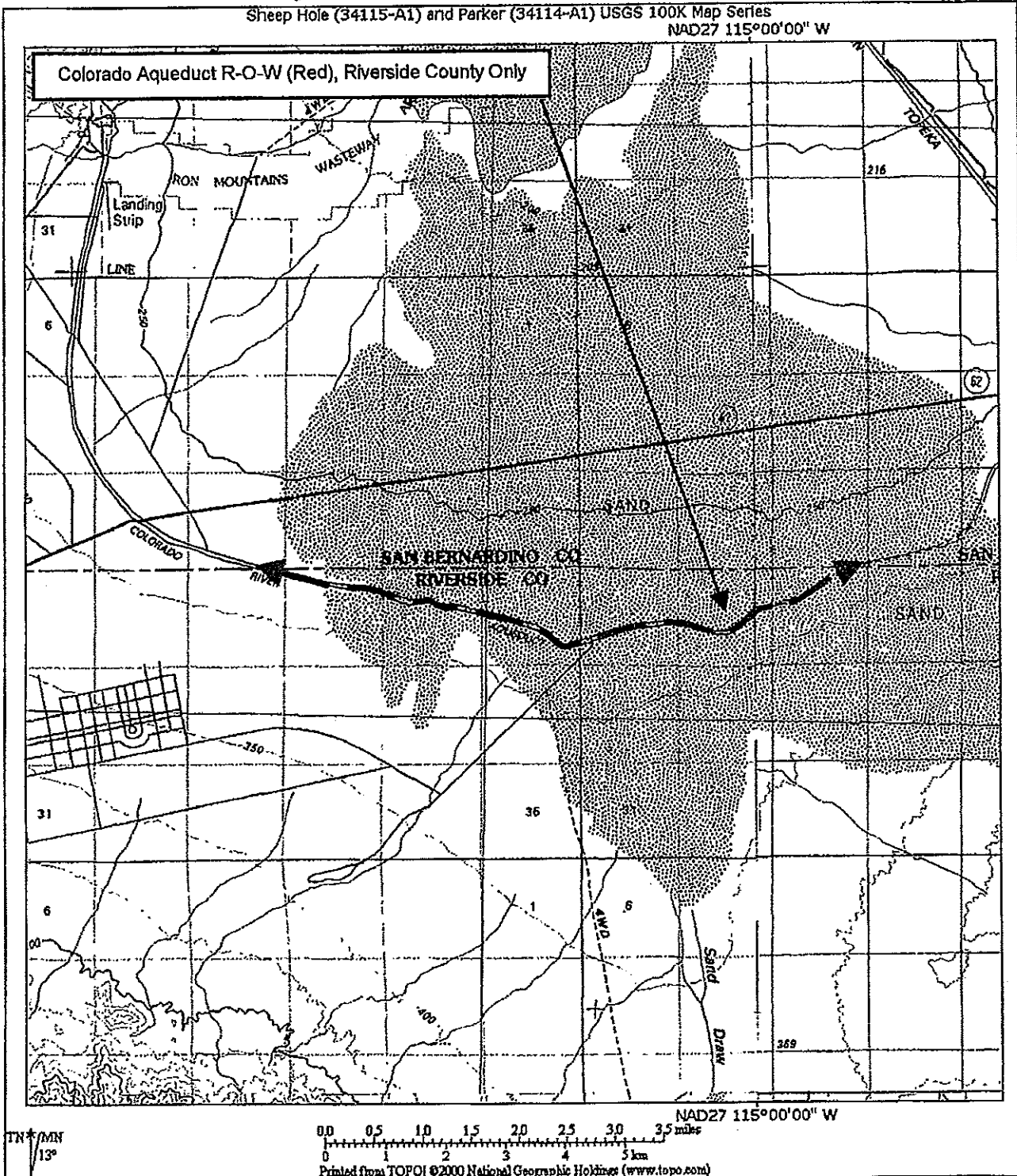
\*Map Name: USGS Sheep Hole Mts. (34115-A1) and USGS Parker (34114-A1)

Scale: 1:100,000 (inches)

Date of Maps: 1975

Begin 100K Series Within Riverside County Only

Sheep Hole (34115-A1) and Parker (34114-A1) USGS 100K Map Series  
NAD27 115°00'00" W



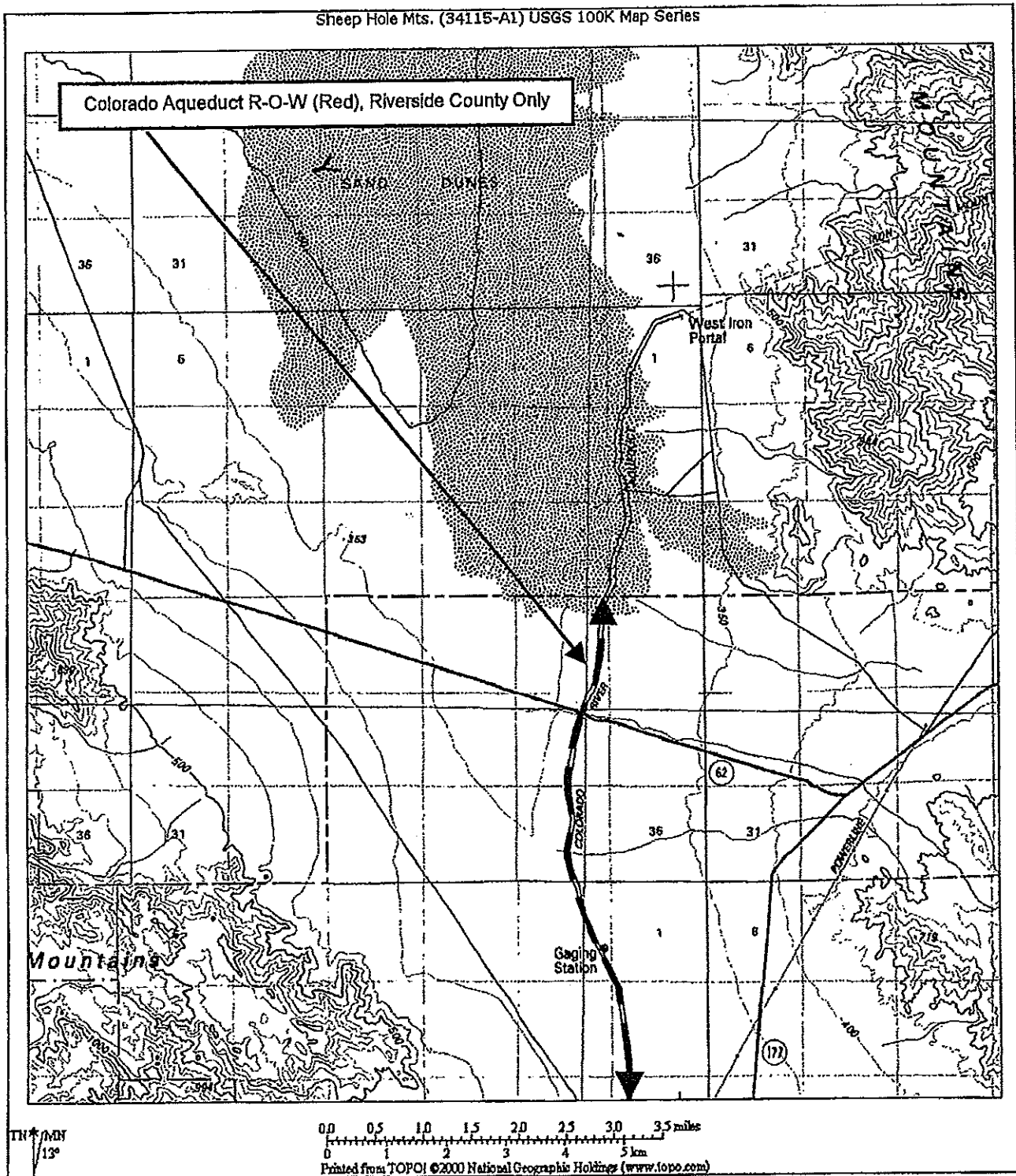
# LOCATION MAP

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Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 12 of 29      \*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Sheep Hole Mts. (34115-A1)      Scale: 1:100,000 (inches)      Date of Map: 1975



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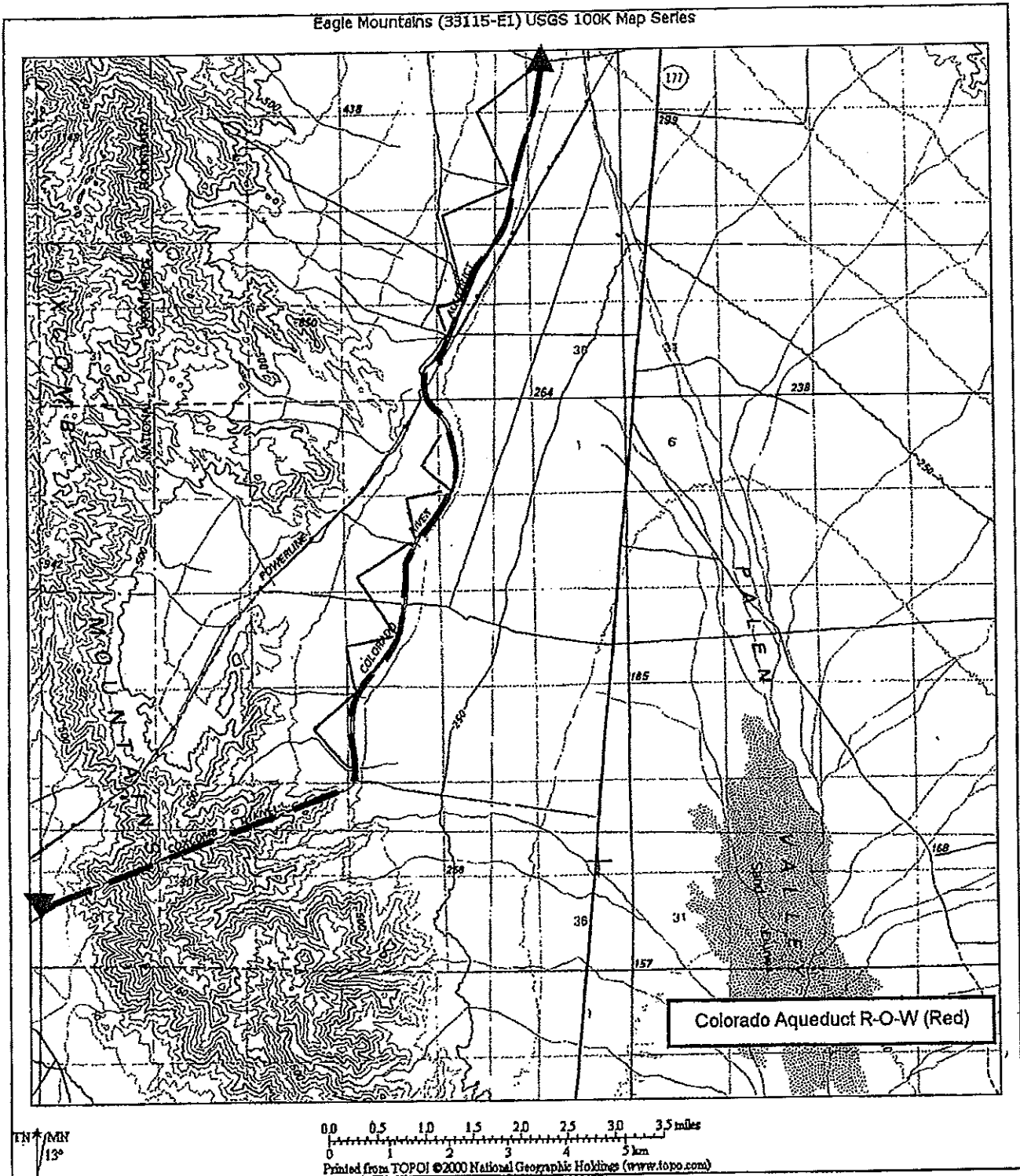
Page 13 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Eagle Mountains (33115-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975



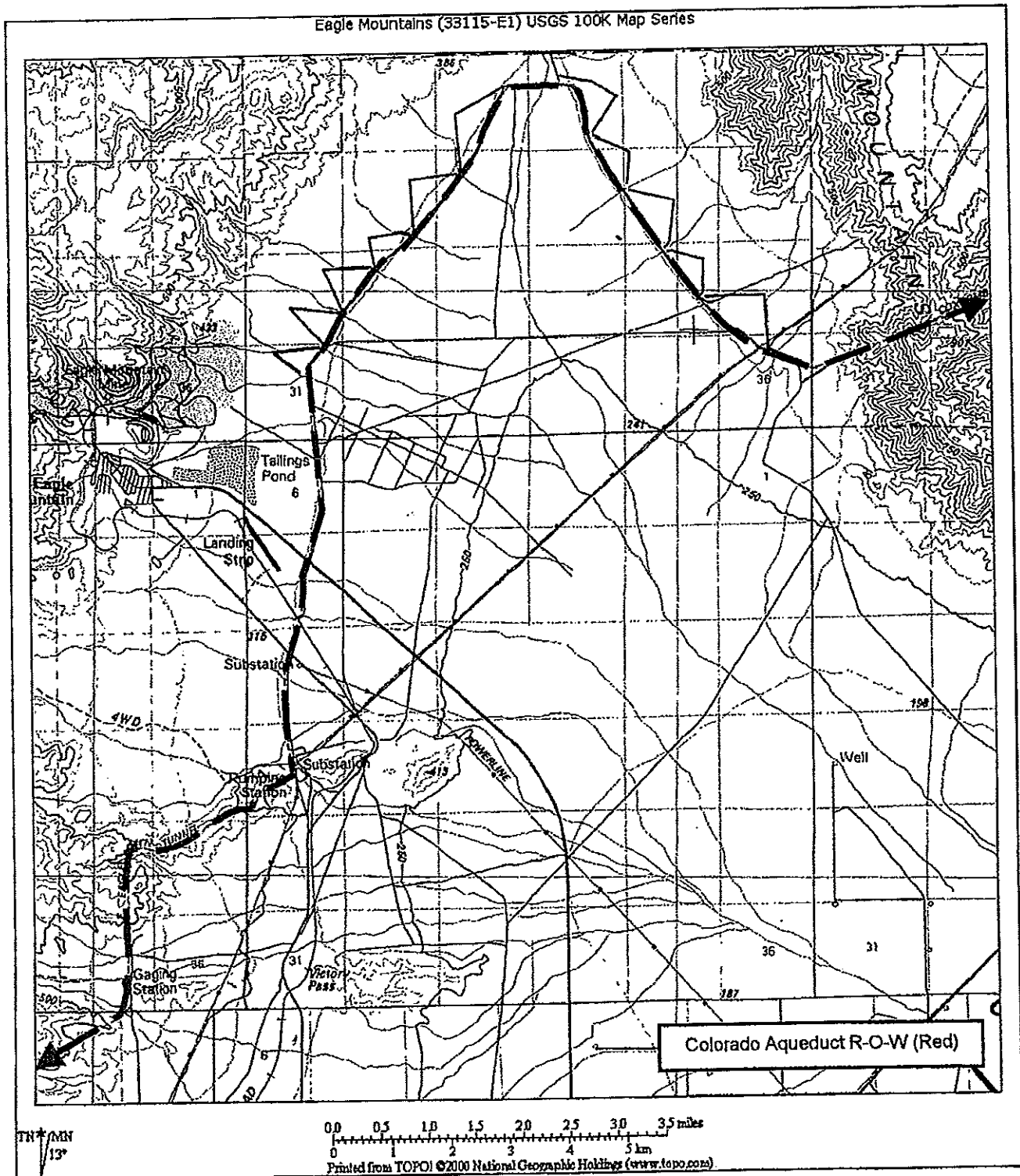
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Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 14 of 29      \*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

\*Map Name: **USGS Eagle Mountains (33115-E1)**      Scale: **1:100,000 (inches)**      Date of Map: **1975**



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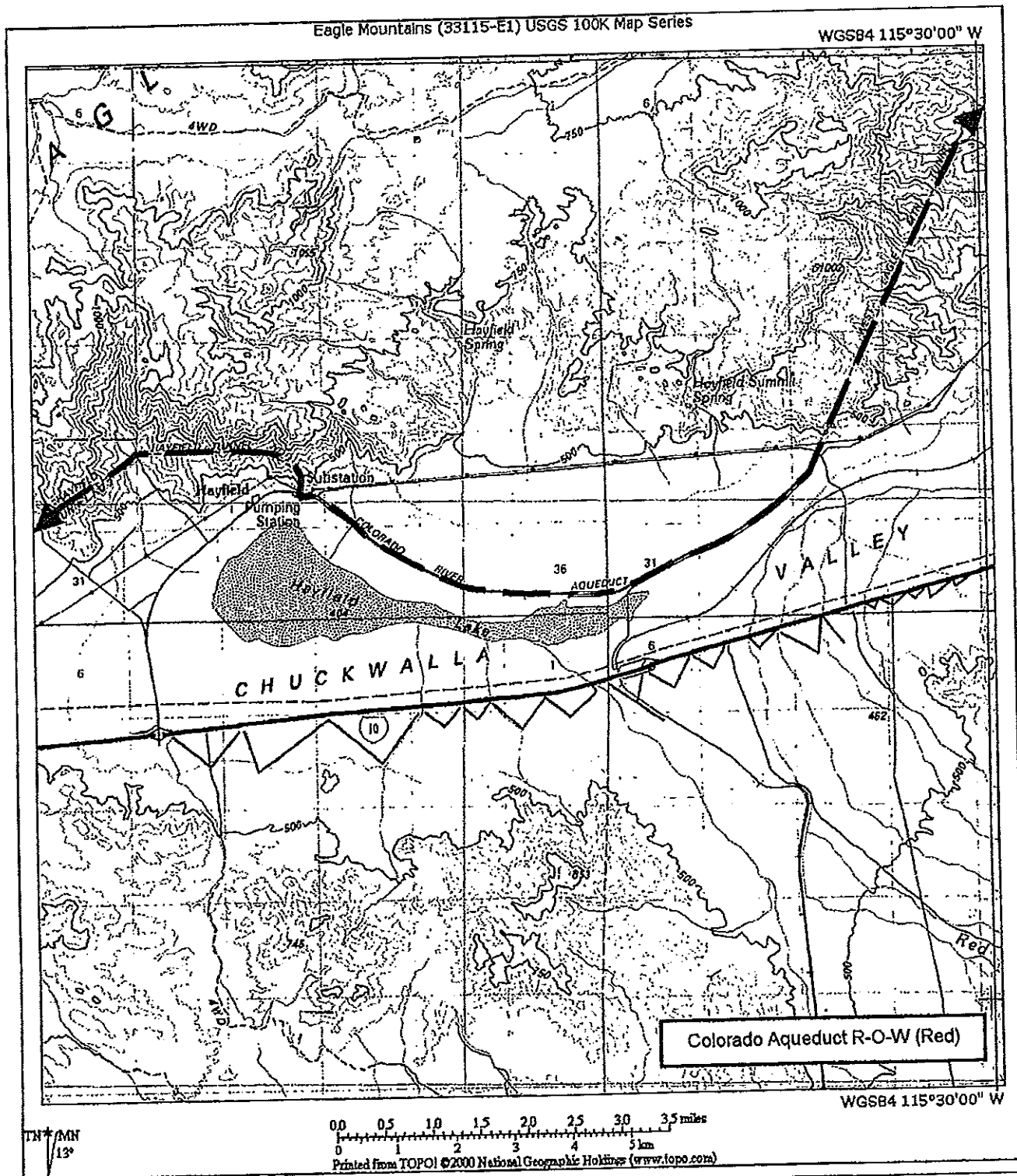
Page 15 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Eagle Mountains (33115-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975



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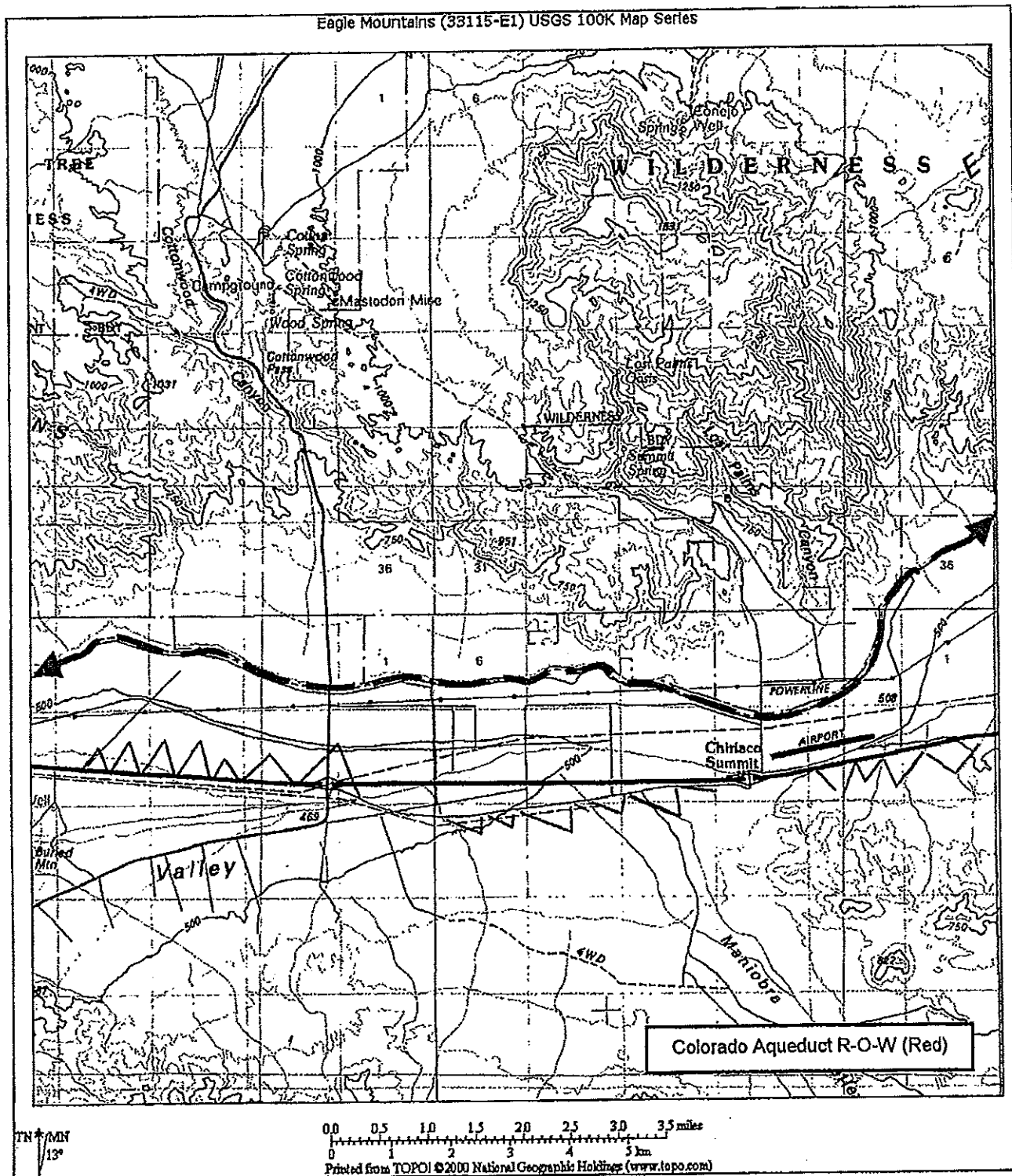
Page 16 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Eagle Mountains (33115-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975



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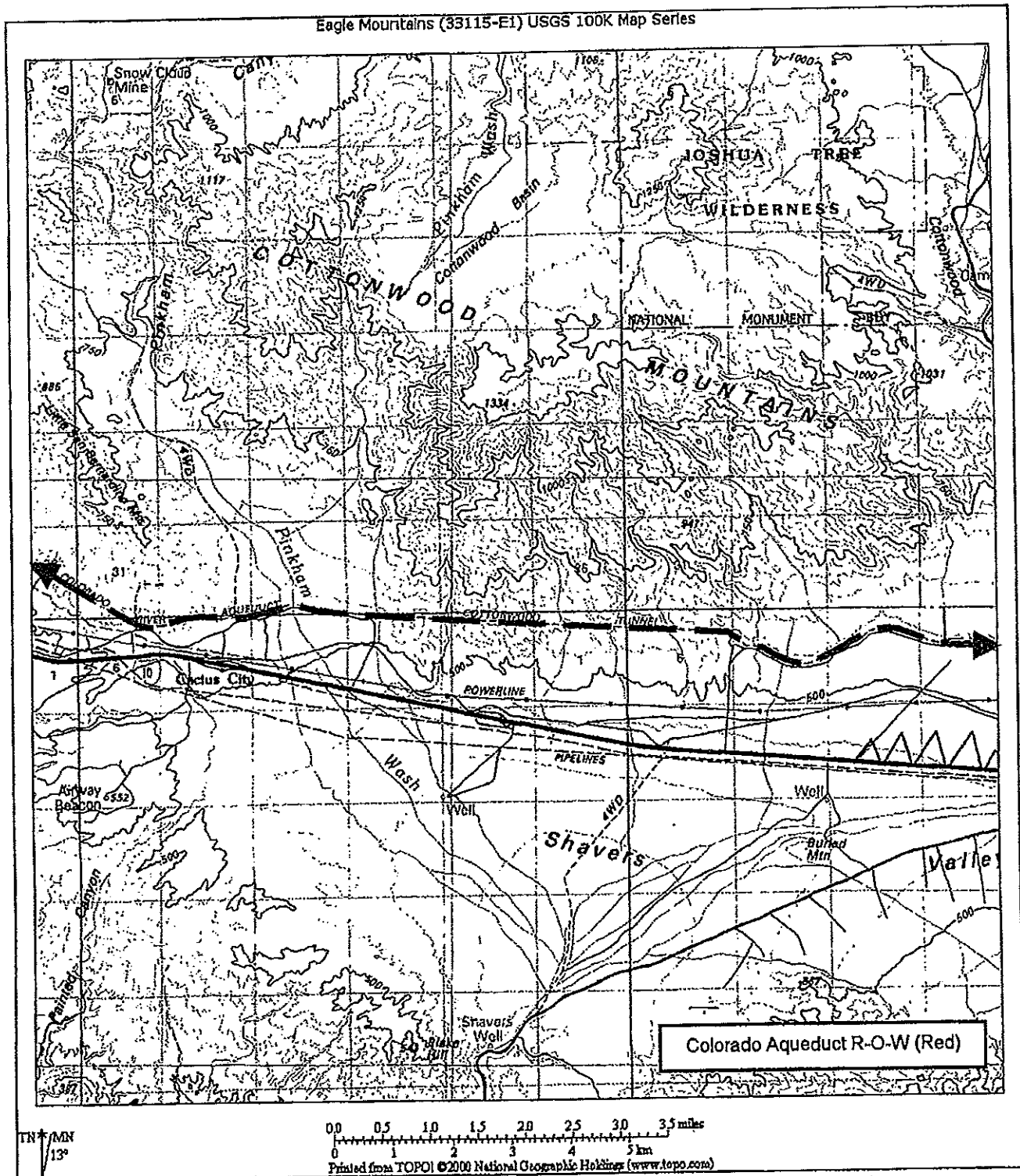
Page 17 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Eagle Mountains (33115-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975



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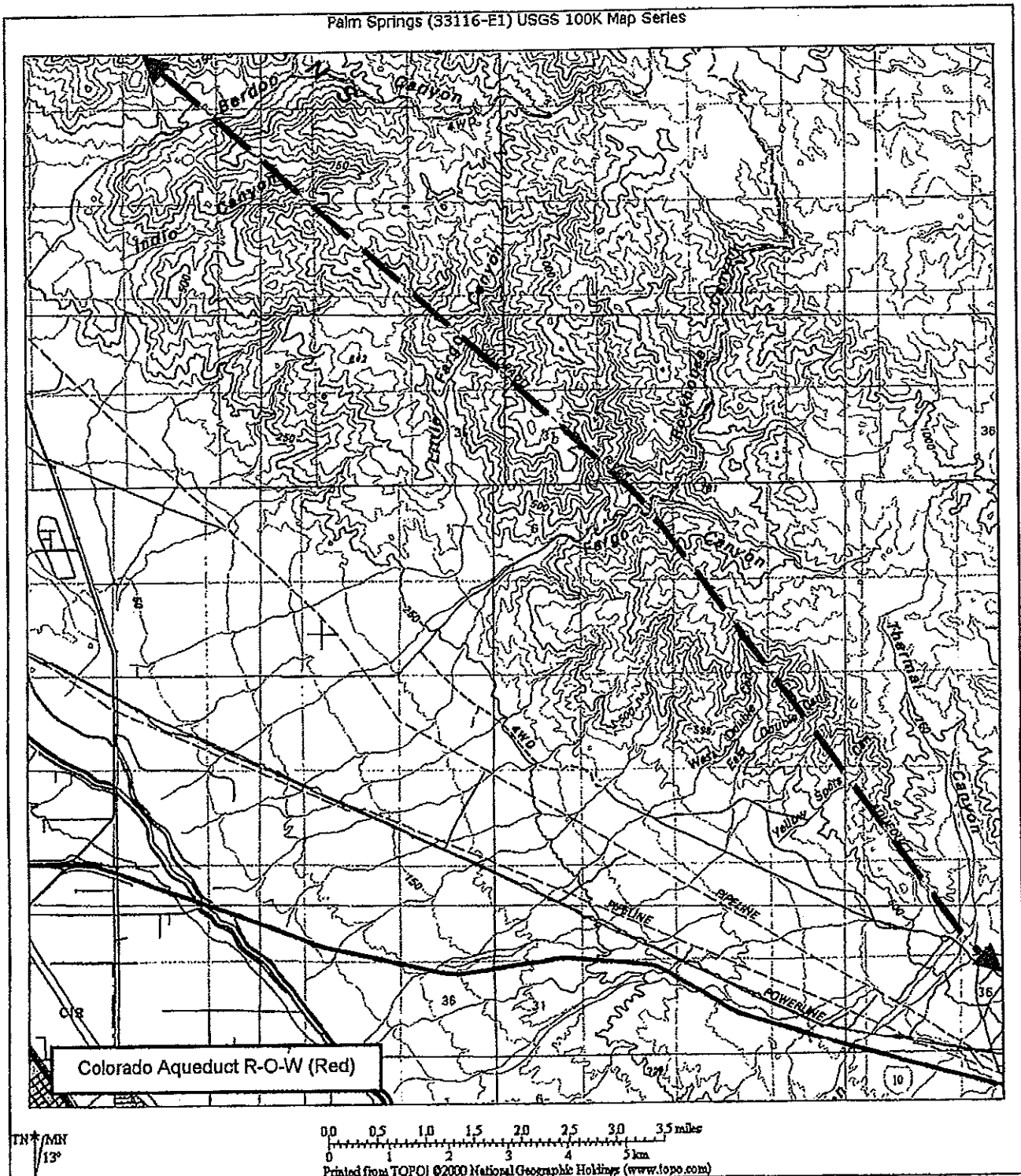
Page 18 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Palm Springs (33116-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975





# LOCATION MAP

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Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

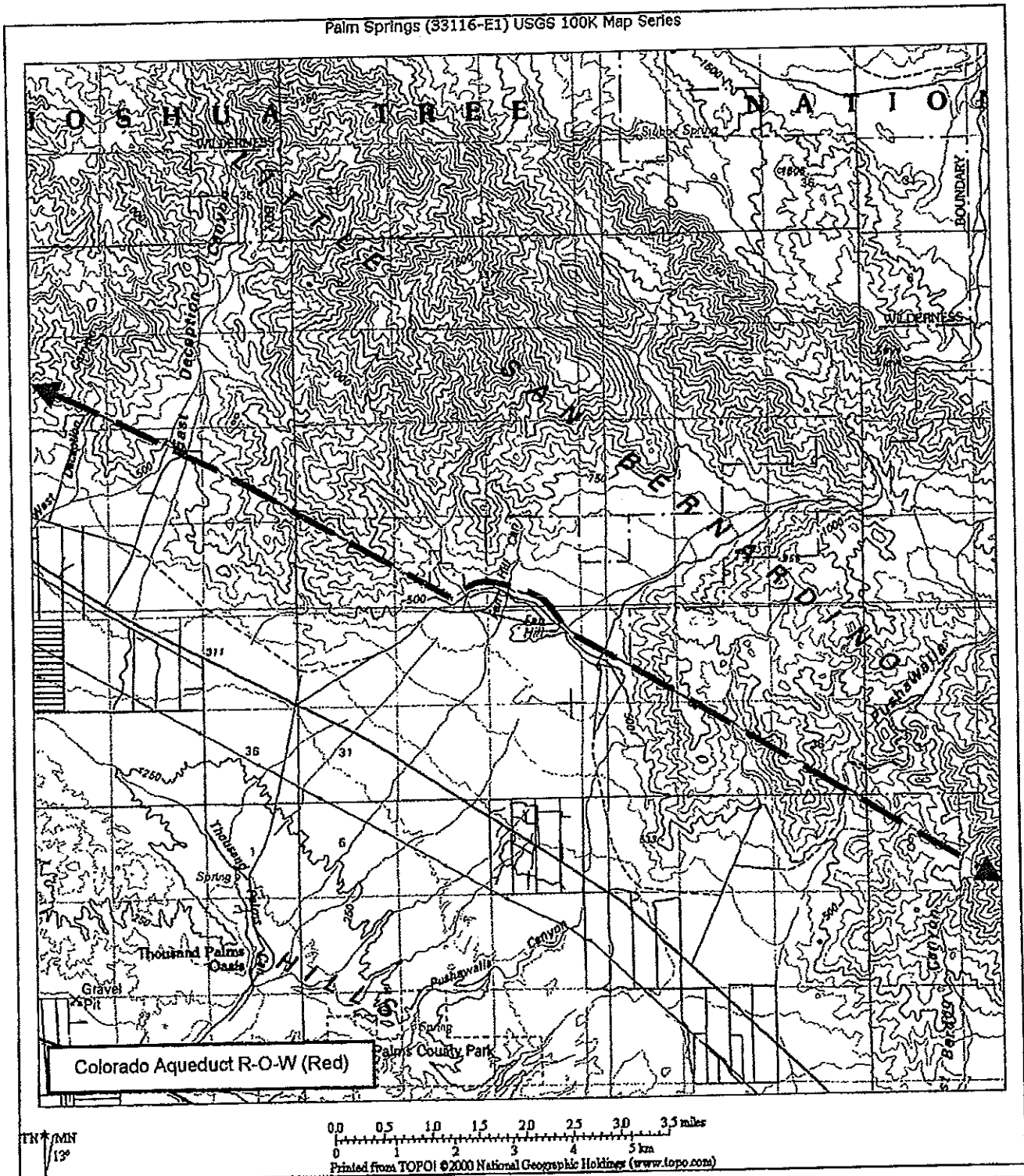
Page 19 of 29

\*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Palm Springs (33116-E1)

Scale: 1:100,000 (inches)

Date of Map: 1975



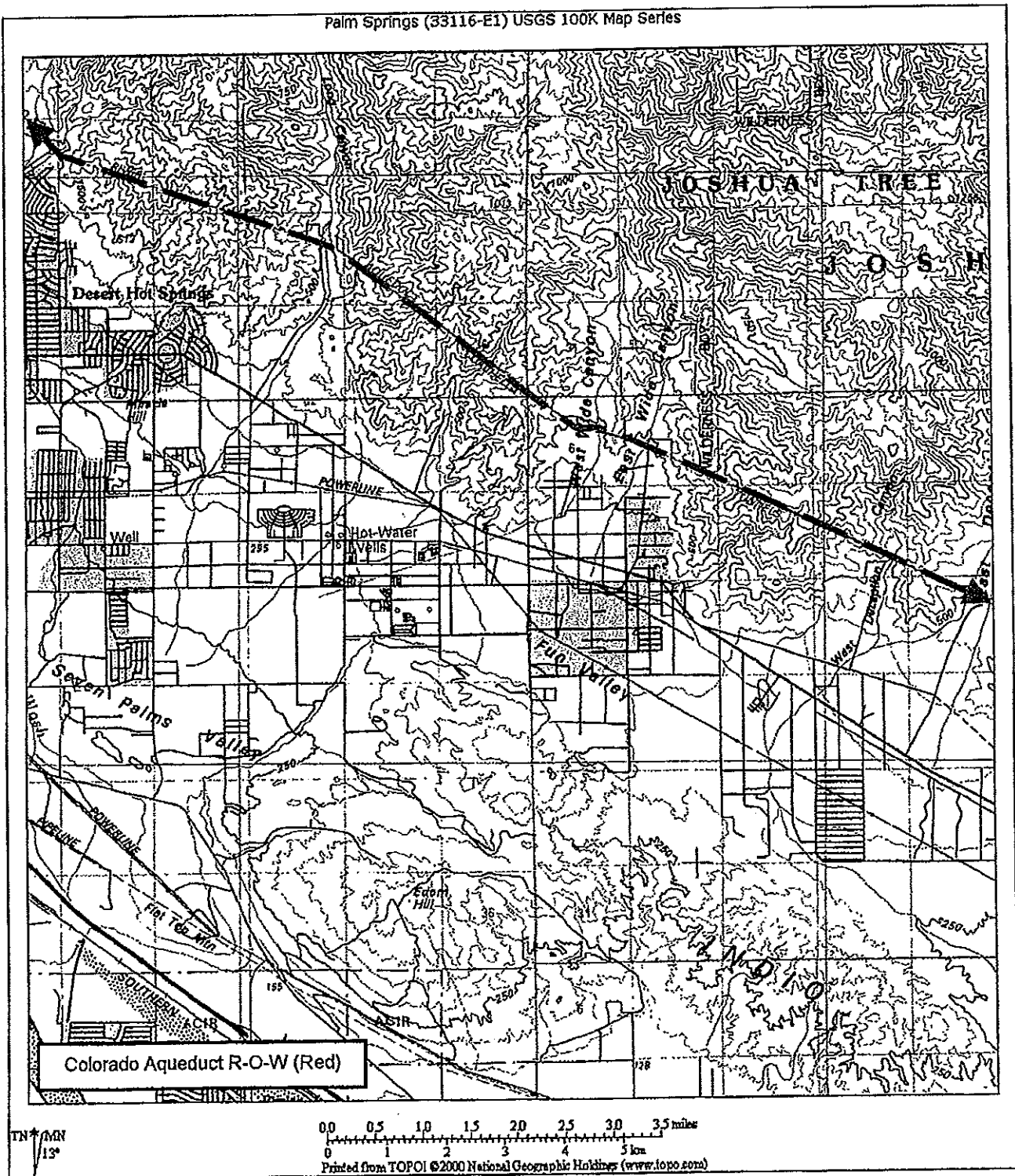
# LOCATION MAP

L & L Environmental, Inc.  
1269 Pomona Rd. Suite #102  
Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 20 of 29      \*Resource Name or # (Assigned by recorder): Colorado River Aqueduct (CRA)

\*Map Name: USGS Palm Springs (33116-E1)      Scale: 1:100,000 (inches)      Date of Map: 1975



# LOCATION MAP

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Corona, CA. 92882

Primary #: 33-11265  
HRI#: \_\_\_\_\_  
Trinomial: CA-RIV-6726H

Page 21 of 29

\*Resource Name or # (Assigned by recorder): **Colorado River Aqueduct (CRA)**

\*Map Name: **USGS Palm Springs (33116-E1)**

Scale: **1:100,000 (inches)**

Date of Map: **1975**

