

HAER
CAL
36-REDLANDS,
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HISTORIC AMERICAN ENGINEERING RECORD

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Santa Ana River Hydroelectric System,
SAR-2 Powerhouse
San Bernardino National Forest
Redlands Vicinity
San Bernardino County
California

HAER No. CA-130-Q

David G. De Vries, photographer

October, 1991

Note: Photographs Nos. CA-130-Q-1 through CA-130-Q-23 are 8x10 inch enlargements from 4x5 inch negatives.

- CA-130-Q-1 SOUTH ELEVATION, WITH SWITCH RACK.
- CA-130-Q-2 WEST ELEVATION, WITH TRANSFORMERS AND SWITCH RACK.
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- CA-130-Q-10 INTERIOR VIEW TO WEST, SHOWING EXCITER, RHEOSTATS, DISCONNECT PANEL WITH BUS ABOVE, AND OPERATOR'S DESK.
- CA-130-Q-11 SAR-2, RHEOSTAT, GENERATOR CIRCUIT BREAKER DISCONNECTS, AND BUS. VIEW TO NORTH.
- CA-130-Q-12 BATTERY BANK AND RHEOSTATS BEHIND DISCONNECT CONTROL PANEL. VIEW TO SOUTHWEST.
- CA-130-Q-13 NORTH SIDE OF DISCONNECT CONTROL PANEL, TO WEST.
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- CA-130-Q-16 EXCITERS, AND SYNCHROSCOPE GAUGE ON WALL. ACTIVE ELECTRIC EXCITER AT REAR; UNUSED WATER-DRIVEN EXCITER IN FOREGROUND. VIEW TO SOUTH-SOUTHWEST.
- CA-130-Q-17 TELEPHONE BOOTH. VIEW TO EAST-SOUTHEAST.
- CA-130-Q-18 INTERIOR OF TELEPHONE BOOTH, LOOKING EAST.
- CA-130-Q-19 GENERATOR #2, NORTH EXIT WITH FANLIGHT, AND WATERWHEEL. VIEW TO NORTH.
- CA-130-Q-20 GENERATOR #1 NEEDLE VALVE CONTROL WHEEL, WATERWHEEL GOVERNOR, PENSTOCK PRESSURE GAUGE, AND GOVERNOR OIL SET. VIEW TO EAST.

CA-130-Q-21 SAR-2, WOODWARD WATERWHEEL GOVERNOR. VIEW TO NORTH-NORTHEAST.

CA-130-Q-22 DETAIL OF WATERWHEEL GOVERNOR, LOOKING NORTH.

CA-130-Q-23 SAR-2, CRANE DETAIL. VIEW TO EAST.

Note: Photographs Nos. CA-130-Q-24 through CA-130-Q-38 are 8x10 inch enlargements from 4x5 inch copy negatives of photographs curated at Southern California Edison Company (SCE), Rosemead, CA.

CA-130-Q-24 SOUTH ELEVATION. SCE negative no. 15346, May 21, 1928. Photograph by G. Haven Bishop.

CA-130-Q-25 SAR-2, SHOWING TAILRACE REPAIRS AFTER FLOOD OF JANUARY, 1916; ALSO FLUME CONNECTION TO MENTONE SYSTEM. SCE negative no. 3904, July 13, 1916. Photograph by G. Haven Bishop.

CA-130-Q-26 SAR-2, GENERAL VIEW FROM WEST SHOWING DAMAGE FROM 1938 FLOOD. SCE negative no. 20949, March 30, 1938. Photograph by G. Haven Bishop.

CA-130-Q-27 WEST AND NORTH ELEVATIONS. SCE negative no. 15347, May 21, 1928. Photograph by G. Haven Bishop.

CA-130-Q-28 IVY-COVERED NORTH AND WEST ELEVATIONS. SCE negative no. 10326, November 1, 1923. Photograph by G. Haven Bishop.

CA-130-Q-29 SAR-2, VIEW TO NORTH WITH EXCITERS AT LEFT. SCE negative no. 1043, photographed June 6, 1912. Photograph by G. Haven Bishop.

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- CA-130-Q-30 INTERIOR OVERVIEW TO NORTH. SCE negative no. 1905, May 20, 1913. Photograph by G. Haven Bishop.
- CA-130-Q-31 SAR-2, INTERIOR SHOWING SWITCHBOARD, OPERATOR'S DESK, AND TRANSFORMER BANK. SCE negative no. 10327, November 1, 1923. Photograph by G. Haven Bishop.
- CA-130-Q-32 SAR-2 SWITCHBOARD. SCE negative no. 15348, May 21, 1928. Photograph by G. Haven Bishop.
- CA-130-Q-33 UNIT #1. SCE negative no. 10330, November 1, 1923. Photograph by G. Haven Bishop.
- CA-130-Q-34 SAR-2, WATER-DRIVEN EXCITERS. SCE negative no. 10329, November 1, 1923. Photograph by G. Haven Bishop.
- CA-130-Q-35 REAR OF SWITCHBOARD, OLDER ARRANGEMENT. SCE negative no. 10328, November 1, 1923. Photograph by G. Haven Bishop.
- CA-130-Q-36 REAR OF SWITCHBOARD, NEWLY MODIFIED. SCE negative no. 15349, May 21, 1928. Photograph by G. Haven Bishop.
- CA-130-Q-37 SAR-2, SHOWING OIL CIRCUIT BREAKERS (ABOVE) AND GENERATOR FIELD COIL CONTROL RHEOSTATS (BELOW). SCE negative no. 10331, November 1, 1923. Photograph by G. Haven Bishop.
- CA-130-Q-38 HIGH VOLTAGE GETAWAYS. SCE negative no. 10332, November 1, 1923. Photograph by G. Haven Bishop.

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Note: Photographs Nos. CA-130-Q-39 through CA-130-Q-53 are 8x10 inch contact prints from copy negatives of recent blue line prints from original engineering drawings curated at Southern California Edison Company (SCE), Rosemead, CA.

- CA-130-Q-39 SECTION - POWER HOUSE - SANTA ANA RIVER #2, NOVEMBER 15, 1904. SCE drawing no. 4330.
- CA-130-Q-40 POWER HOUSE SANTA ANA NO. 2 (PLAN AND VIEWS), NOV. 14, 1910. SCE drawing no. 5277.
- CA-130-Q-41 EXTERNAL ELEVATIONS, POWER HOUSE SANTA ANA RIVER NO. 2, EDISON ELECTRIC CO., NOV. 3, 1904. SCE drawing no. 5392.
- CA-130-Q-42 FOUNDATIONS - TAIL RACE, ETC., POWER HOUSE SANTA ANA RIVER NO. 2, EDISON ELECTRIC CO., NOV. 3, 1904. SCE drawing no. 5393.
- CA-130-Q-43 FLOOR PLAN OF POWER HOUSE, EXHIBIT L, SANTA ANA RIVER NO. 2 PROJECT, APR. 30, 1945. SCE drawing no. 523643 (sheet no. 14; for filing with Federal Power Commission).
- CA-130-Q-44 SECTIONS OF POWER HOUSE, EXHIBIT L, SANTA ANA RIVER NO. 2 PROJECT, APR. 30, 1945. SCE drawing no. 523644 (sheet no. 15; for filing with Federal Power Commission).
- CA-130-Q-45 800 H.P. WATER WHEEL UNIT (LEFT HAND) DIRECT CONNECTED TO A 500 K.W. G.E. CO. GENERATOR, SPEED 176 R.P.M., HEAD OF WATER 305 FT EFF., FOR SANTA ANA RIVER NO. 2 PLANT. ABNER DOBLE CO., ENGINEERS, SAN FRANCISCO, AUG. 29, 1904. TRACED FROM DOBLE BLUE PRINT, SEPT. 9, 1911. SCE drawing no. 5698.

- CA-130-Q-46 LONGITUDINAL SECTION - POWER HOUSE S.A.R. NO. 2, EDISON PROJECT, APR. 30, 1945. SCE drawing no. 523198 (sheet no. 8; for filing with Federal Power Commission).
- CA-130-Q-47 S.A.R. #2 PRELIMINARY ARRANGEMENT OF HOUSING FOR 800 HORSEPOWER WATER WHEEL UNIT, JUNE 7, 1904. TRACED ON SEPT. 6, 1911 BY E.P., FROM ABNER DOBLE CO'S. BLUE PRINT NO. 1663. SCE drawing no. 4611.
- CA-130-Q-48 AUTOMATIC WATER CONTROL MOTOR DRIVE FOR NEEDLES CONSTRUCTION DETAILS, SANTA ANA RIVER NO. 2, JAN. 24, 1977. SCE drawing no. 455667-0.
- CA-130-Q-49 THREE LINE WIRING DIAGRAM, SANTA ANA RIVER NO. 2, MAR. 17, 1952. SCE drawing no. 419809-0.
- CA-130-Q-50 PARTIAL FLOOR PLAN SHOWING INDOOR 750 VOLT SWITCHRACK AND MISC. EQUIPMENT, SANTA ANA RIVER NO. 2, DEC. 11, 1951; REVISIONS, DEC. 14, 1951. SCE drawing no. 534985-1.
- CA-130-Q-51 SWITCHBOARD ELEVATIONS, SANTA ANA RIVER NO. 2, DEC. 14, 1951; REVISIONS, MAR. 20 AND SEPT. 19, 1952. SCE drawing no. 534984-2.
- CA-130-Q-52 INDOOR SWITCHRACK, ELEVATION AND SECTIONS. SANTA ANA RIVER NO. 2, DEC. 11, 1951, AND MAR. 20, 1952. SCE drawing no. 534986-2.
- CA-130-Q-53 NEW BCB AND LIGHTNING ARRESTER ARRANGEMENT, SANTA ANA RIVER NO. 2, JAN. 24, 1977. SCE drawing no. 455670-0.