INFORMATION HANDOUT

For Contract No. 02-4E6904
At 02, 03-Las,Sac-395, 5-49.6, 23.3

Identified by
Project ID 0212000033

MATERIALS INFORMATION

Geotechnical Recommendations – Water Well Design dated February 15, 2014

Request to use trade name memo dated February 21, 2015

Water Well Drillers Report dated October 27, 1970

Water Well Drillers Report dated September 5, 1986

FOR CONTRACT NO.: 02-4E6904
Project ID: 0212000033

INFORMATION HANDOUT

MATERIALS INFORMATION

(***NOT A PART OF THE CONTRACT***)

Geotechnical Recommendations – Water Well Design dated February 15, 2014

ROUTE: 02, 03-LAS, SAC-395, 5-49.6, 23.3

State of California
Department of Transportation

Memorandum

Business, Transportation and Housing Agency

Flex your power!
Be energy efficient!

To: **MARK HEDGLIN**
Project Engineer

Date: February 15, 2013

File: 02-Las-395 PM 49.6
02-4E690K
Honey Lake SRRA

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – MS 5

Subject: Geotechnical Recommendations – Water Well Design

Introduction

As requested, the Office of Geotechnical Design North (OGDN) is providing Geotechincal Recommendations for a new water well at the Honey Lake Safety Roadside Rest Area (SRRA) located on Highway 395 near PM 49.6 between the towns of Janesville and Milton, in Lassen County. This project has proposed to construct a new water well for potable and irrigation water.

Pertinent Reports and Investigations

The following publications and plans have been reviewed to assist in the assessment of site conditions and to aid in preparation of this report:

1. Handman, E.H., Londquist, C.J., Maurer, D.K., 1990, *Ground-Water Resource of Honey Lake Valley, Lassen County, California, and Washoe County, Nevada,* United States Geological Survey, Water-Resources Investigations Report 90-4050.
2. Hilton, G.S., 1963, *Water resources reconnaissance in southeastern part of Honey Lake Valley, Lassen County, California*, United States Geological Survey Water Supply Paper 1619-Z.
3. Lydon, P.A., Gay, T.E., Jennings, C.W., 1960, *Geologic Map of California, Westwood Sheet,* California Geologic Survey.
4. Topographic Map of the Standish quadrangle, 1:24000 scale series, United States Geological Survey, 1994.
5. Topographic Map of the Susanville quadrangle, 1:100,000 series, United States Geological Survey, 1984.
6. Western Regional Climate Center data for the Fleming Fish and Game Station (Station # 043087). http://www.wrcc.dri.edu/

Existing Facilities and Proposed Improvements

In 1970, a water well was constructed to provide potable water and irrigation to the rest area. The well was constructed to a maximum depth of about 60-feet where hard bedrock was encountered. Due to the shallow depth of the well, only shallow groundwater was encountered. Over time, nitrate concentrations became higher than State drinking water standards and a Reverse Osmosis (RO) system was installed in 2009. Currently the discharge from the RO is higher than regulatory allowances. Additional treatment is required for use a potable water.

In 2005, a 100-foot test hole was performed but due to a low yield (<5 GPM), the well was abandoned and the existing well continued to be utilized.

The project proposes to construct a deeper well and abandon the existing well. The work includes constructing an advanced Onsite Wastewater Treatment System (OWTS) in order to treat the nitrates in the wastewater stream so that discharge will meet requirements set forth by the Regional Water Quality Control Board (RWQCB).

Physical Setting

The physical setting of the project site and the surrounding area was reviewed to provide climate, topography and drainage, man-made and natural features, geology characteristics to aid in project design and construction planning. The following is a discussion of the review:

Climate

The Western Regional Climate Center data from the Fleming Fish and Game Station (Station #043087) which is located 10 miles northeast of the project site, gives an average maximum monthly temperature of 89.3° F in July and an average minimum of 17.9 ° F in January from 1959 to 1977. The average of annual precipitation total is 9.05 inches. Average snow depth is zero inches with a maximum of 1-inch in January.

Topography and Drainage

According to the Topographic Map of the Standish quadrangle (USGS, 1984), the site lies in an area of moderate to steep topographic relief.

Honey Lake Valley is situated about fifteen miles south of Susanville, California. The basin is approximately 2200 square miles, trending northeast from Highway 395. Topographic uplands

surround the basin. The Diamond Mountains situated to the west of Honey Lake rise to an elevation of about 6700 -feet above mean sea level. Bald Mountain to the north of Honey Lake tops out at an elevation of 5219 -feet. Amedee Mountains, to the east of Honey Lake, rise to an elevation of about 6721 -feet. The lowest point on Honey Lake Valley is situated at an elevation of about 3998-feet.

Drainage into Honey Lake Valley is primarily through streams and infiltration. Major streams that feed Honey Lake Valley are the Susan River and Baxter Creek to the north, Brownell Creek to the west and several unnamed intermittent streams. Drainage out of Honey Lake is through Long Valley Creek.

Site Geology

The geology of Honey Lake Valley is comprised of three main divisions, a basement complex composed of igneous and metamorphic rocks, a volcanic rock sequence, and alluvial deposits. According to Hilton, 1963, the igneous and metamorphic rocks yield little to no water to wells. The volcanic rocks tend to be highly fractured and thus moderately permeable. Hilton states these rocks can transmit and store substantial quantities of groundwater. The alluvial deposits are the major sources for groundwater. Much of this information is from 1963 and many of the shallow groundwater sources have since been contaminated with agricultural residue.

The Geologic Map of California: Westwood Sheet (CGS, 1960) indicates that Honey Lake Valley is primarily made up of Quaternary lake (Ql) deposits. These lake deposits are assumed to be about 750-feet thick on the east end of the valley (Handman, et al., 1990) and are composed of fine grained sands, silts and clays. Interfacied with the lake deposits on the west side of the valley are Quaternary terrace (Qt) deposits that contain gravel, sand, silt and clay. Underlying the terrace deposits and lake Eocene to Pliocene volcanic rocks. Mesozoic granitic rocks underlie the volcanic rocks in the valley sequence at a depth of about 4000-feet below ground surface (Handman, et al., 1990).

The well log from 10/15/1970 (DWR #6118) at the rest area show alluvial soils consisting of fine black sand and gravel to a depth of about 61-feet below ground surface where solid granitic rock was encountered.

A 100-foot test hole was performed at the rest area location. This test hole indicated top soil and surface clay extends to a depth of 15-feet below ground surface. Sand was encountered below the top soil to a depth of 45-feet bgs. Below the sand was decomposed granite to a depth of 65-

feet bgs where 'salt and pepper granite' was encountered. Electric logs were performed on that test hole and show potential fracturing in the granite at depths of 75 and 90-feet bgs.

Well logs for other properties surrounding the site were also reviewed and indicated similar geologic units.

Groundwater

In general the groundwater surface elevation is just below the elevation of Honey Lake. The sources to groundwater in Honey Lake Valley are infiltration through streams, runoff, and precipitation.

There are two principal aquifers to groundwater in the valley, the upper alluvial soils, and the underlying volcanic bedrock. The granitic bedrock is assumed to be relatively impermeable to groundwater with exception to the fractures. The deepest of the fractures carry heated meteoric water across the bottom of the valley to hot springs on the east side of Honey Lake.

Surrounding wells that are completed in the underlying granitic bedrock have varied groundwater pumping rates. These rates vary from about 5 GPM to 30 GPM. Water quality was not able to be determined by the time of this report.

Recommendations

It is estimated that to meet the water volume and quality requirements, the well should be completed to a depth of about 800-feet below ground surface. Surrounding wells have been completed to a depth of 400-feet and have experienced extremely low volumes (<10 GPM) of water as indicated in pumping tests. Depending on the exact volume of water needed, the 800-foot elevation may need to be increased.

It is recommended to place the well screen intervals in those areas where the granitic rock has water laden fractures or screen a large interval to capture a large number of fractures.

The elevations of the fractures can be determined with the use of video, caliper logs, gamma logs and electrical resistance. These tests are recommended after completing the boring of the well. Likewise a smaller diameter test hole can be performed in the well location, and the fractures mapped. The water volume and quality can be tested at that time.

Another option is to utilize Caltrans well (02-325004), south of Mapes Road, approximately five-miles to the north of Honey Lake. Logs indicate an approximate 3000 GPM yield. This well was situated in a portion of the valley where the upper aquifers are thicker, resulting in more yield. At the time of this report, water quality from the well was not determined.

If you have any questions or comments, please call me at (916) 227-1046.

BRANDON BADEKER, CEG
Engineering Geologist
Office of Geotechnical Design – North
Branch E

Attachments:
Plate 1: Vicinity Map/Aerial Photograph
Plate 2: Topographic Map
Plate 3: Geologic Map
Plate 4: Cross Section A-A'
Plate 5: Cross Section B-B'

Maps adapted from Google Maps, 2013.

CALTRANS

Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

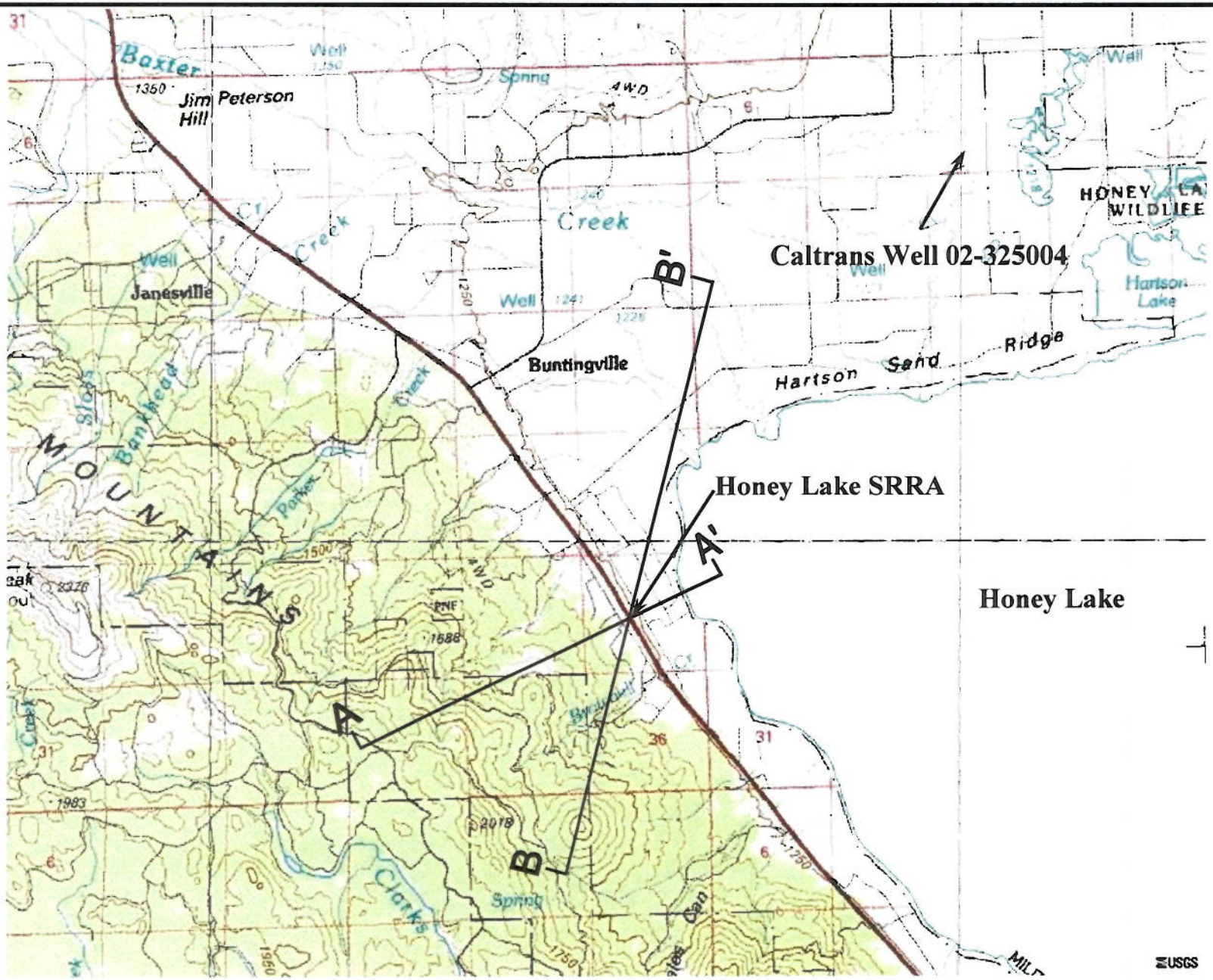
EA: 02-4E690K

Date: February 2013

VICINITY MAP/AERIAL PHOTOGRAPH

Plate 1

02-Las-395 PM R 49.6
Honey Lake SRRA Rehab



Maps adapted from the USGS Topographic Map of the Suasanville 100,000 series quadrangle, 1984

CALTRANS

Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

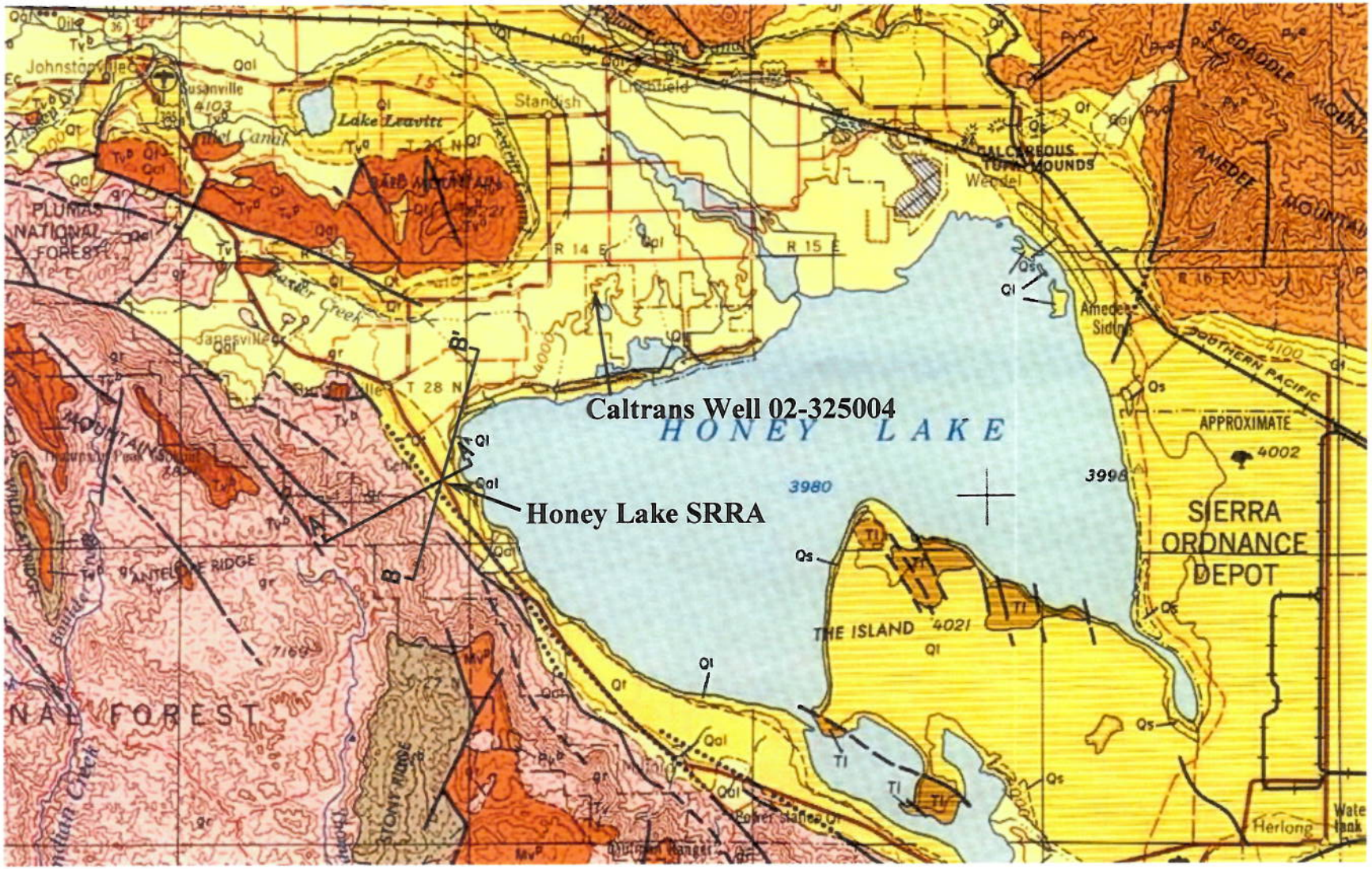
EA: 02-4E690K

Date: February 2013

Topographic Map

Plate 2

02-Las-395 PM R 49.6
Honey Lake SRRA Rehab



Map adapted from Lydon, P.A., Gay, T.E., Jennings, C.W., 1960, *Geologic Map of California, Westwood Sheet*, California Geologic Survey

CALTRANS

Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

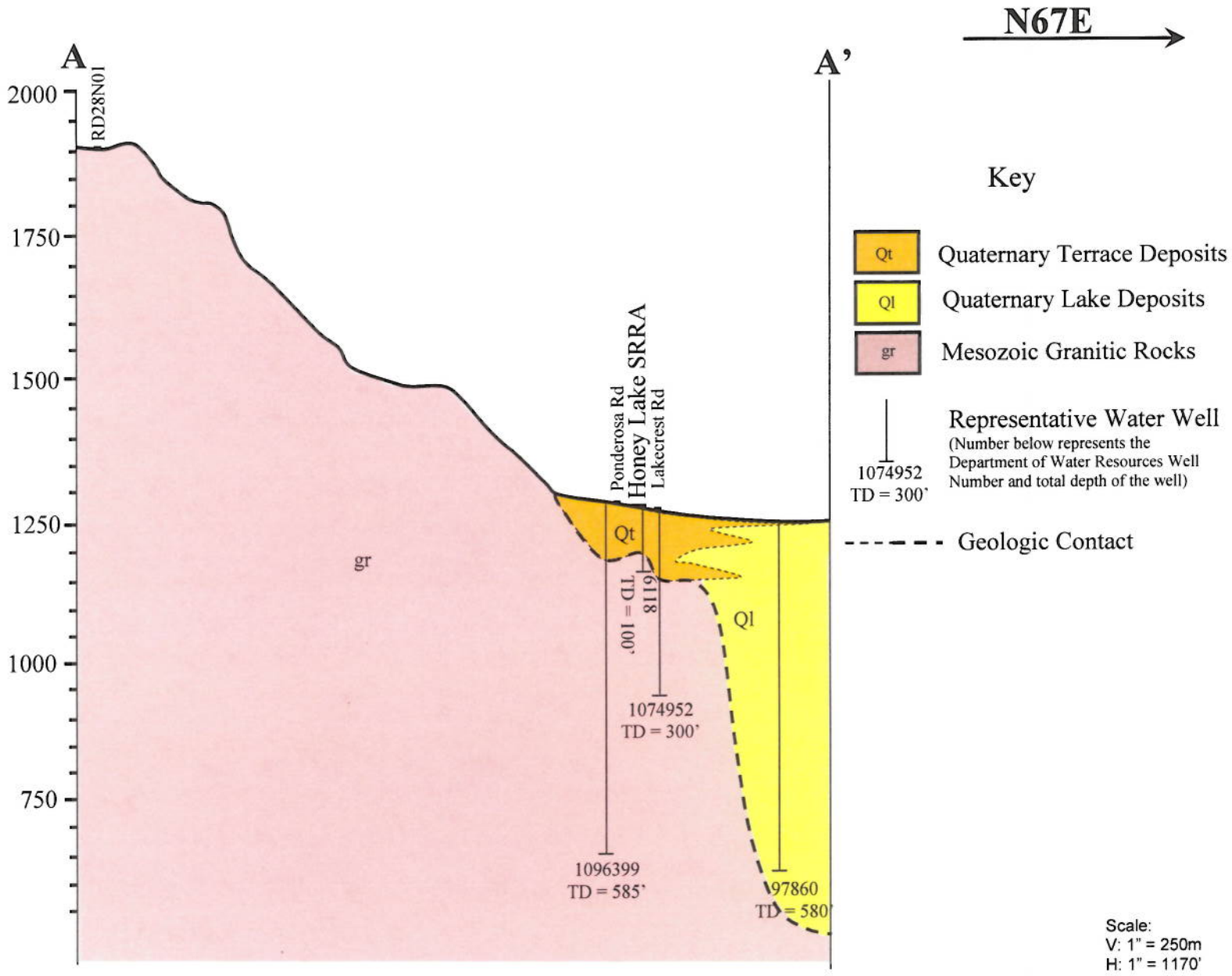
EA: 02-4E690K

Date: February 2013

Geologic Map

Plate 3

02-Las-395 PM R 49.6
Honey Lake SRRA Rehab



Cross section based on the Suasanville 100,000 series topographic map (USGS, 1984), the Geologic Map of California, Westwood Sheet (CGS, 1960) and surrounding well logs from DWR. The numbers under the wells correspond to the DWR permit number on the well log form. Elevations are in meters. All contacts are questionable.

Scale:
V: 1" = 250m
H: 1" = 1170'

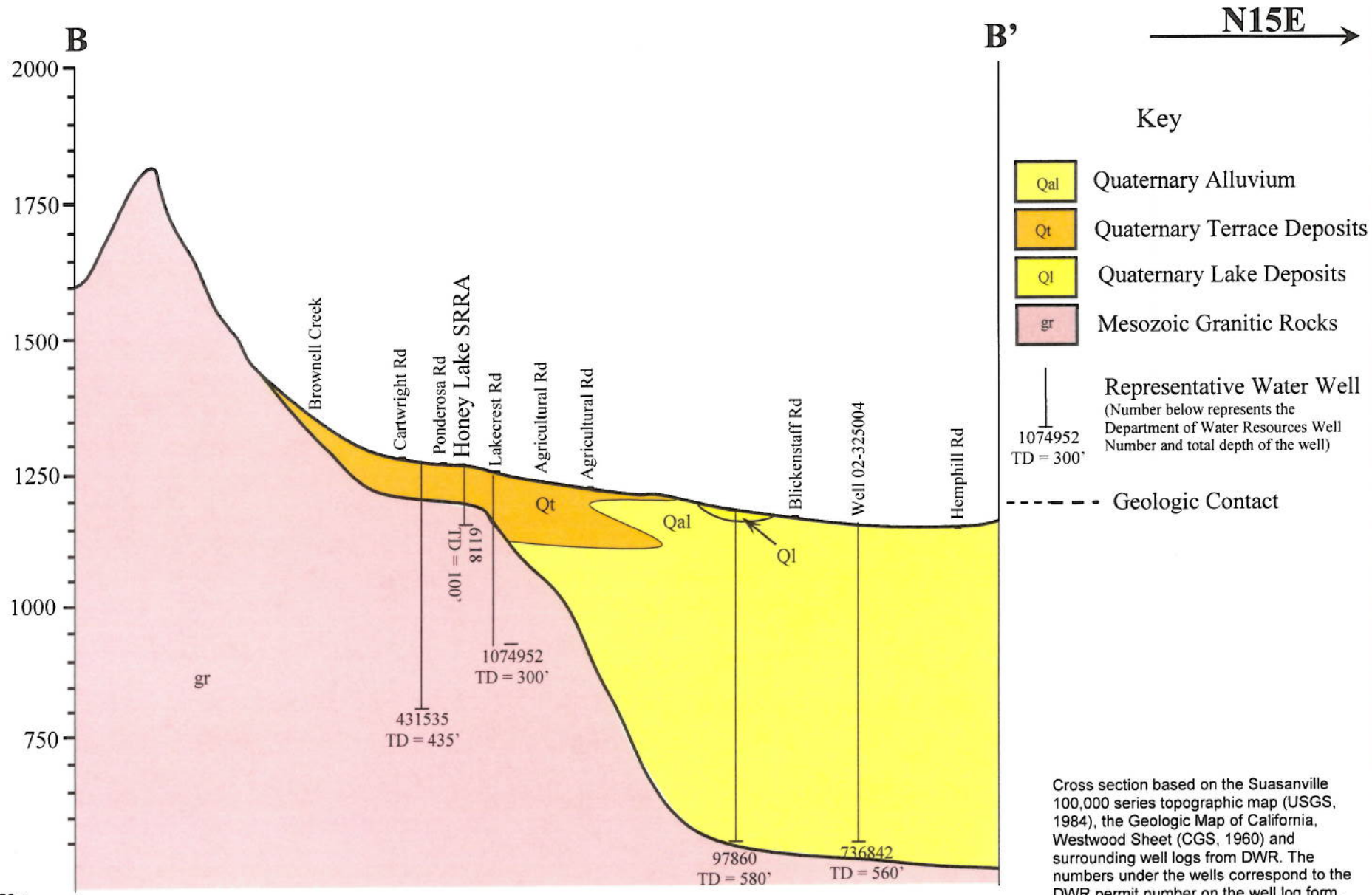
CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

EA: 02-4E690K
Date: February 2013

Section A-A'

Plate 4

02-Las-395 PM R 49.6
Honey Lake SRRA Rehab



Scale:
V: 1" = 250m
H: 1" = 1170'

Cross section based on the Suasanville 100,000 series topographic map (USGS, 1984), the Geologic Map of California, Westwood Sheet (CGS, 1960) and surrounding well logs from DWR. The numbers under the wells correspond to the DWR permit number on the well log form. Elevations are in meters. All contacts are questionable.

CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

EA: 02-4E690K
Date: February 2013

Section B-B'

Plate 5

02-Las-395 PM R 49.6
Honey Lake SRRA Rehab

FOR CONTRACT NO.: 02-4E6904
Project ID: 0212000033

INFORMATION HANDOUT

MATERIALS INFORMATION

(***NOT A PART OF THE CONTRACT***)

Request to use trade name memo dated February 21, 2015

ROUTE: 02, 03-LAS, SAC-395, 5-49.6, 23.3

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought.
Help Save Water!

To: ROBERT PIEPLOW
Chief
Division of Engineering Services

Date: January 21, 2015

File: 02-4E6901
02 1200 0033
02-Las-395-PM 79.7
Honey Lake SRRA

From: MICHAEL D. KEEVER
Deputy Division Chief
Structure Design
Division of Engineering Services

Subject: **REQUEST TO USE TRADE NAME**

Your approval is requested to advertise the above-mentioned project with a trade name to be used in the special provisions per Chapter 3, Article 5, Section 3400 (c) of the California Public Contract Code 2013.

On the Honey Lake SRRA project, it is necessary to use Tesco Controls, Inc. Supervisory Control and Data Acquisition (SCADA) system to match the Tesco Controls master control system located in Sacramento County.

The attached memo from J. Stephen Schoff, Chief, Office of Electrical, Mechanical, Water and Wastewater (EMWW), explains the need for using the Tesco Controls product.

The cost of this work is included in the attached confirmed price quote for the integration of the new SCADA system with the existing Tesco Controls SCADA system.

Questions regarding the structure plans and specifications may be directed to Jaswinder Gill, Senior Electrical Engineer, at (916) 227-8342.

APPROVAL RECOMMENDED BY:

1-21-15
RUTH FERNANDES — Date
Office Chief,
Structure Office Engineer
Structure Design

APPROVED BY:

Jan. 27, 2015
ROBERT PIEPLOW — Date
Chief
Division of Engineering Services

Attachment(s)
(1) Request to Use Trade Name From Stephen Schoff

(2) Manufacturer Quote Request Letter
(3) Manufacturer Quote
(4) Supervisory Control and Data Acquisition System Non-Standard Special Provision
(5) Plans

c: J. Stephen Schoff, Office Chief, Office of EMWW
Jaswinder Gill, Senior Electrical Engineer, Office of EMWW
Craig Whitten, Branch Chief, SOE, Structure Specifications (North)
Jerry Marcotte, P.E., Branch Chief, Office of EMWW, Water and Wastewater

TESCO CONTROLS, INC. www.TescoControls.com

Corporate Office
8440 Florin Road, Sacramento, CA 95828
P.O. Box 299007, Sacramento, CA 95829
PH: 916.395.8800 FX: 916.429.2817

December 30, 2014

State of California
Department of Transportation
Division of Engineering Services
Ms. Ruth Fernandes
Structure Office Engineer – MS 9-2/2H
P.O. Box 168041
Sacramento, CA 95816-8041
State of California

Re: 02-4E6901
0212000033
02-LAS-395-PM 79.7
Honey Lake SRRA Water And Wastewater Upgrade-
TESCO Quote No:14J070Q01

Ms. Fernandes:

Inasmuch as it is deemed advisable by the California Department of Transportation to require the use of the Tesco Controls SCADA system at the Honey Lake SRRA and integrate it with the existing Siteglas Enterprise SCADA system, the master control system, located in Sacramento County, to be constructed under contract awarded pursuant to competitive bidding, the undersigned,

TESCO Controls Inc.
P. O. Box 239012
3434 52nd. Avenue
Sacramento, CA 95823
916-395-8800
Contact: Mr. Shain Thomas

a supplier for the TESCO Control SCADA system, which meets the requirements of the California Department of Transportation specifications, hereby proposes and agrees to quote the following "Scope of Work" pertaining to the above-mentioned State Highway contract, to any Contractor or Subcontractor on the above-referenced State Highway contract in compliance with the requirements of the applicable drawings EE4-1 through EE4-11 and specification section 99-16918 and in accordance with our prevailing prices and terms as follows (please refer to enclosed quotation 14J070Q01 for pricing and scope of work):

TERMS

- SUBMITTAL: approximately 4-6 weeks after receipt of purchase order.
- DELIVERY: approximately 14-16 weeks after receipt of approved submittals.
- ADDENDUMS ACKNOWLEDGED: 0
- **QUOTATION FIRM FOR 365 DAYS UNLESS OTHERWISE STATED.**
- Final retention to be paid 10 days after the project notice of completion.
- TESCO price is FOB factory, full freight allowed.
- TESCO warranties against defect in design workmanship and materials for a period of one year from date of installation, and does not exceed 18 months from the date of shipment from the factory.
- TESCO carries liability insurance, with full workman's compensation coverage.
- Terms: Net 30 days on approved credit accounts.
- Interest will be applied on all past due invoices.
- All merchandise sold is subject to lien laws.
- TESCO's price will be to furnish only, and does not include conduit, wire, tubing, termination, or installation.

Prices, conditions and discounts quoted will apply to all orders received on or before July 1, 2016.

Sincerely,

Shain Thomas
CEO

TESCO Controls, Inc.
Phone: (916) 395-8800
Fax: (916) 429-2817
sthomas@tescocontrols.com
www.tescocontrols.com

TESCO CONTROLS, INC.
An Employee-Owned Company

P.O. Box 239012
3434 52nd. Avenue
Sacramento, CA 95823-9012
Voice (916) 395-8800
Fax (916) 429-2817
sthomas@tescocontrols.com

DATE: October 14, 2014

TO: **Caltrans Department of Transportation**
ATTN: **Jaswinder Gill, PE, LEED AP**

JOB NAME: Honey Lake Safety Roadside Rest Area
TESCO QUOTE NO.: 14J070Q01

Dear Sunny,

We are pleased to quote the following "Scope of Work" pertaining to the above-mentioned project, in general conformance with the requirements of the applicable drawings EE 4-1 through EE 4-11 and specification section 99-16918.

UPGRADES FOR SCADA SYSTEM

Item	Qty.	Description
1	Lot	**PLC Application Software**
2	Lot	**Required SCADA Application Software**
3	2	**Tablet computer with SCADA access software**
4	Lot	**Tesco Services** to include: • Submittals • PLC application Programming • **SCADA Configuration Modifications to Existing Tesco Siteglas Enterprise System** • System Communication Configuration • Start-up & Calibration of Tesco Supplied Equipment • Manuals & Guarantee

Total cost for items #1 thru #4 **$ 75,000.00**
Not Including Tax
Full freight Allowed

SYSTEM CONTROL PANEL (OPTIONAL)

Item	Qty.	Description
5	1	**PLC Control Cabinet** to include: • Freestanding NEMA 3R **Tesco 24-000** enclosure • Panel disconnect • Distribution breakers as specified • Main Programmable Logic Controller (PLC) • Hot Standby Programmable Logic Controller (PLC) • PLC power supply • Cellular Modem • Human Machine Interface (HMI) • Controls • Uninterruptible Power Supply (UPS) • Two(2)-A/C units • Terminal blocks and nameplates as required
6	Lot	**Tesco Services** to include: • Submittals • Start-up & Calibration of Tesco Supplied Equipment • Manuals & Guarantee

Total cost for items #5 thru #6 **$ 85,000.00**
Not Including Tax

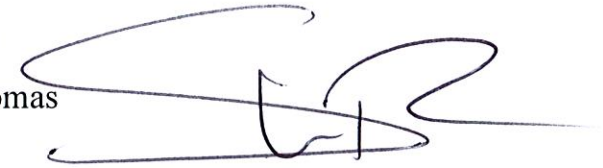
JOB NAME: Honey Lake Safety Roadside Rest Area
TESCO QUOTE NO.: 14J070Q01

TERMS

- SUBMITTAL: approximately 4-6 weeks after receipt of purchase order.
- DELIVERY: approximately 14-16 weeks after receipt of approved submittals.
- ADDENDUMS ACKNOWLEDGED: 0
- **QUOTATION FIRM FOR 365 DAYS UNLESS OTHERWISE STATED.**
- Final retention to be paid 10 days after the project notice of completion.
- TESCO price is FOB factory, full freight allowed.
- TESCO warranties against defect in design workmanship and materials for a period of one year from date of installation, and does not exceed 18 months from the date of shipment from the factory.
- TESCO carries liability insurance, with full workman's compensation coverage.
- Terms: Net 30 days on approved credit accounts.
- Interest will be applied on all past due invoices.
- All merchandise sold is subject to lien laws.
- TESCO's price will be to furnish only, and does not include conduit, wire, tubing, termination, or installation.

If we can be of any further assistance, please contact us.

Sincerely,



Shain Thomas
CEO

TESCO Controls, Inc.
An Employee-Owned Company
Phone: (916) 395-8800
Fax: (916) 429-2817
sthomas@tescocontrols.com
www.tescocontrols.com

FOR CONTRACT NO.: 02-4E6904
Project ID: 0212000033

INFORMATION HANDOUT

MATERIALS INFORMATION

(***NOT A PART OF THE CONTRACT***)

Water Well Drillers Report dated October 27, 1970

ROUTE: 02, 03-LAS, SAC-395, 5-49.6, 23.3

ORIGINAL
File with DWR

WATER WELL DRILLERS REPORT

(Sections 7079, 7080, 7081, 7082, Water Code)

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

CONFIDENTIAL LOG NO
Water Code Sec. 13752

Do Not Fill In
6118

State Well No.
Other Well No. 28N/13E-25L1
W.R. 925

(1) OWNER:

Name Division of Highways
Address 1657 Riverside Dr. Redding, Calif.

(2) LOCATION OF WELL:

County Lassen Owner's number, if any
Township, Range, and Section
Distance from cities, roads, railroads, etc. about 16 mi. East Susanville. 200' N. highway. Road side rest.

(3) TYPE OF WORK (check):

New Well ☐ Deepening ☐ Reconditioning ☒ Destroying ☐
If destruction, describe material and procedure in Item 11.

(4) PROPOSED USE (check):

Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☒ Test Well ☐ Other ☐

(5) EQUIPMENT:

Rotary ☐
Cable ☒
Other ☐

(6) CASING INSTALLED:

STEEL: OTHER:
SINGLE ☒ DOUBLE ☐

From ft.	To ft.	Diam.	Gage or Wall
40	56	4 3/4	12

If gravel packed

Diameter of Bore	From ft.	To ft.
8	51-7	60

Size of shoe or well ring: none
Size of gravel: 3/8 - 1"
Describe joint none

(7) PERFORATIONS OR SCREEN:

Type of perforation or name of screen torch

From ft.	To ft.	Perf. per row	Rows per ft.	Size in. x in.
40	56	6	2	1/8 x 5"

(8) CONSTRUCTION: origional well by others

Was a surface sanitary seal provided? Yes ☐ No ☐ To what depth ft.
Were any strata sealed against pollution? Yes ☐ No ☐ If yes, note depth of strata
From ft. to ft.
From ft. to ft.
Method of sealing

(9) WATER LEVELS:

Depth at which water was first found, if known ft.
Standing level before perforating, if known ft.
Standing level after perforating and developing ft. 21 ft.

(10) WELL TESTS:

Was pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Temperature of water Was a chemical analysis made? Yes ☐ No ☒
Was electric log made of well? Yes ☐ No ☒ If yes, attach copy

(11) WELL LOG:

Total depth ~~60~~ 61 ft. Depth of completed well ~~60~~ 61 ft.

Formation: *Describe by color, character, size of material, and structure*

ft. to	ft.	
42 ft.	60 ft.	sand fine black
60	61	sand some loose rock
61		solid rock

CONFIDENTIAL LOG
Water Code Sec. 13752

Work started 10-2-70 19 , Completed 10-15-70

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Beymer well service
(Person, firm, or corporation) (*Typed or printed*)
Address P.O. Box 1212 Yub City, Calif. 95991

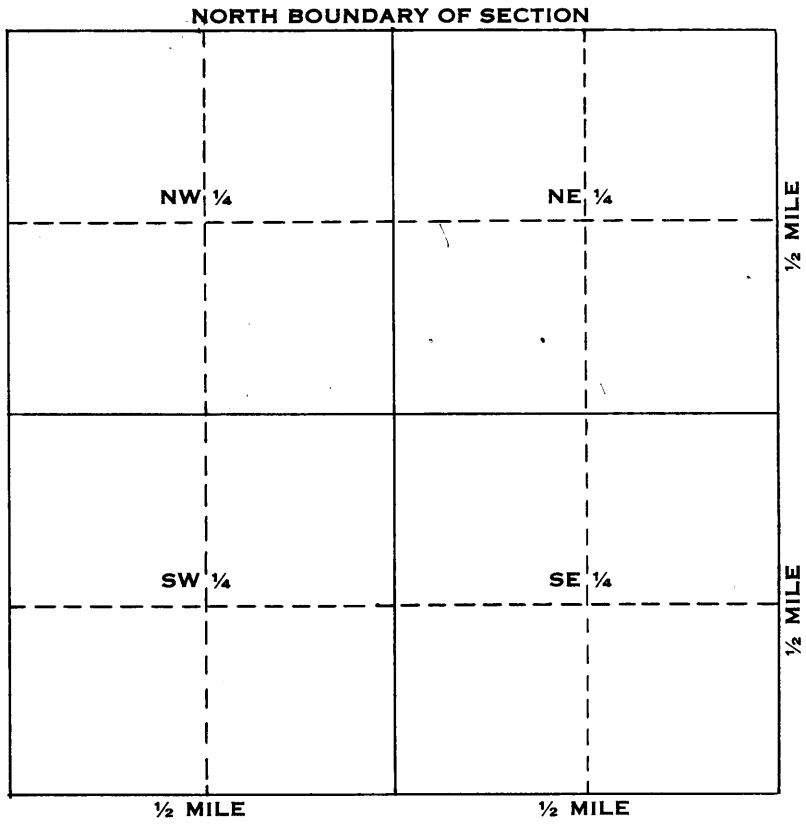
[SIGNED] C.A. Beymer
(Well Driller)

License No. 258472 Dated Oct. 27, 1970, 19

SKETCH LOCATION OF WELL ON REVERSE SIDE

56391-950 10-65 50M TRIP ① △ OSP

WELL LOCATION SKETCH

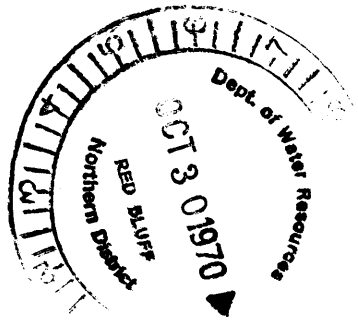


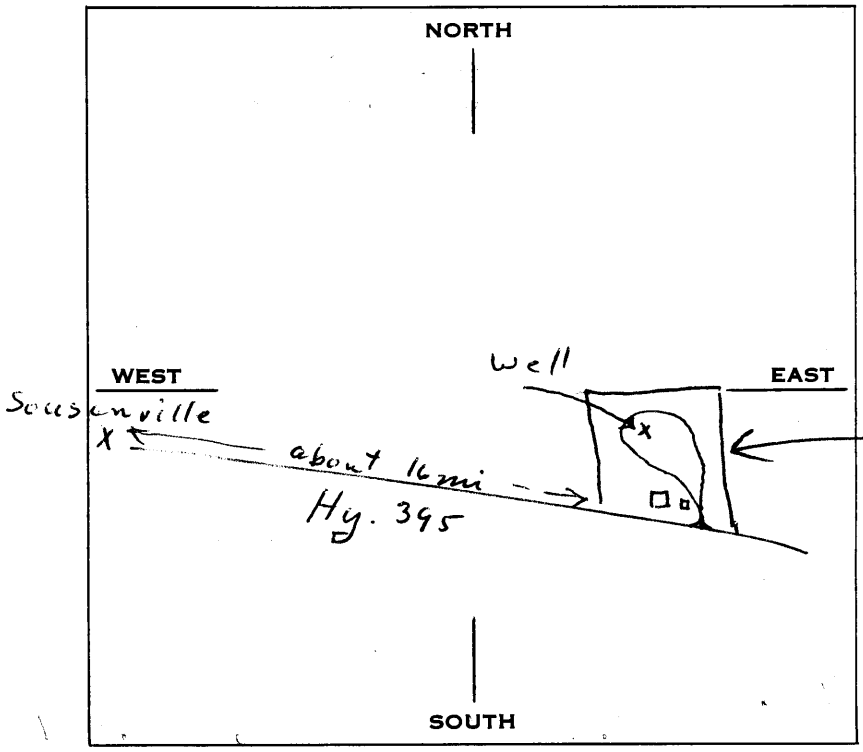
Township _____ N/S

Range _____ E/W

Section No. _____

A. Location of well in sectionized areas.
Sketch roads, railroads, streams, or other features as necessary.





B. Location of well in areas not sectionized.
Sketch roads, railroads, streams, or other features as necessary.
Indicate distances.

FOR CONTRACT NO.: 02-4E6904
Project ID: 0212000033

INFORMATION HANDOUT

MATERIALS INFORMATION

(***NOT A PART OF THE CONTRACT***)

Water Well Drillers Report dated September 5, 1986

ROUTE: 02, 03-LAS, SAC-395, 5-49.6, 23.3

ELECTRIC LOG IN FILE

28N/13E-25M

ORIGINAL

File with DWR

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

Do not fill in

No. 215266

Notice of Intent No.

Local Permit No. or Date

State Well No.

Other Well No.

(1) OWNER: Name Cal Trans
Address P.O. Box 2107
City Redding, CA Zip 96099

(2) LOCATION OF WELL (See instructions):
County Lassen Owner's Well Number
Well address if different from above
Township 28N Range 13E Section 25
Distance from cities, roads, railroads, fences, etc.
7.5 miles north of milford, at the Honey Lake Safety Roadside Rest Area

(3) TYPE OF WORK:
New Well [X] Deepening [ ]
Reconstruction [ ]
Reconditioning [ ]
Horizontal Well [ ]
Destruction [ ] (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic [X]
Irrigation [ ]
Industrial [ ]
Test Well [ ]
Stock [ ]
Municipal [ ]
Other [ ]

WELL LOCATION SKETCH

(5) EQUIPMENT:
Rotary [X] Reverse [ ]
Cable [ ] Air [ ]
Other [ ] Bucket [ ]

(6) GRAVEL PACK:
Yes [X] No [ ] Size Birdseye
Diameter of bore 24" to 31'; 15½" to 65'
Packed from 65' to 0' ft.

(7) CASING INSTALLED:
Steel [X] Plastic [ ] Concrete [ ]

(8) PERFORATIONS:
Type of perforation or shoe of screen

From ft.	To ft.	Dia. in.	Gage or Wall	From ft.	To ft.	Slot size
+3	38'	6	5/8"x.250 blank			
38'	60'	6	5/8"x.304 stainless	Keystone shape wire screen		.080/1000 slot.
60'	65'	6	5/8"x.250 blank			

centralizers for casing installed at 61½' and 35'.
cap welded on bottom.

(9) WELL SEAL:
Was surface sanitary seal provided? Yes [X] No [ ] If yes, to depth sealed 31' to top ft.
Were strata sealed against pollution? Yes [ ] No [X] Interval ft.
Method of sealing cement pumped in

(10) WATER LEVELS:
Depth of first water, if known unknown-drilled with mud ft.
Standing level after well completion 22' ft.

(11) WELL TESTS:
Was well test made? Yes [X] No [ ] If yes, by whom? A-1 Pump Co
Type of test Pump [X] Bailer [ ] Air lift [ ]
Depth to water at start of test 22' ft. At end of test 55' ft.
Discharge 45 gal/min after 30 hours Water temperature
Chemical analysis made? Yes [X] No [ ] If yes, by whom? Sierra Cascade Lab.
Was electric log made? Yes [X] No [ ] If yes, attach copy to this report

(12) WELL LOG: Total depth 65 ft. Depth of completed well 65 ft.
from ft. 0 to 75 ft. Formation (Describe by color, character, size or material)

0	- 5	decomposed granite boulders and clay
5	-10	coarse granite sand & gravel with some clay
10	-15	granite soft, getting harder
15	-20	granite, medium hard
20	-25	granite, medium hard
25	-30	granite, medium hard, lots of mica
30	-35	granite, medium hard, mica and some gravel lava
35	-40	granite, soft decomposed
40	-45	gravel, pea sized clean loose lava
45	-50	gravel, pea sized clean loose lava
50	-55	granite sand coarse, med soft
55	-60	granite sand sea shells
60	-63	granite, harder, has sea shells
63	-65	granite, medium hard
65	-70	granite, medium hard
70	-75	granite med hard

Test hole is 75' deep

Work started 5/12 19 86 Completed 7/22 1986

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief

SIGNED Thomas E. Waldrop (Well Driller) 9/2/86

NAME Waldrop Drilling & Pump Co, Inc.
(Person, firm, or corporation) (Typed or printed)

Address 702-635 Johnstonville Rd
City Susanville, CA Zip 96130
License No. 364033 Date of this report 9/5/86

DWR 188 (REV. 7-76) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM