

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

OPERATOR **Southern Calif. Gas Co.**

WELL DESIGNATION: **"Fernando Fee" 32C**

API No. **03721359**

SEC **27** , T. **3N** , R. **16W** , **SB** B. and M.

COUNTY: **Los Angeles**

FIELD **Aliso Canyon**

Type of Notice: **Rework**

Date: **9/29/2010**

Report Number: **P210-234**

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

NEW STATUS

	Date	OK	NEED	Remarks
Well Summary (OG100)	11/19/11			
History (OG103)	11/19/11			
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				
USIT	OK		X	

DATE: 10/10

NOTICE OF RECORDS DUE

DATE: _____

DATE: _____

DATE: _____

DATE: _____

WELL STATUS INQUIRY

DATE: _____

DATE: _____

Well Stat

Change Required: 100

Change Done: _____

ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS

ABANDONMENT DATABASE : _____ SURFACE INSPECTION NEEDED _____ COMPLETED _____

Date and Inspector

FINAL LETTER NEEDED _____ COMPLETED _____ DRILL/REDRILL DATABASE _____

(Date)

ENGINEER'S CHECK LIST

T-REPORT(S) _____ OPERATOR'S NAME _____ WELL DESIGNATION _____ SIGNATURE _____

LOCATION _____ ELEVATION: _____ CONFIDENTIAL RELEASE DATE: _____ PERMIT REQUIREMENTS MET _____

CLERICAL CHECK LIST

LOCATION CHANGE (OG165) _____ ELEVATION CHANGE (OG165) _____ RELEASE OF BOND (OG150) _____

REMARKS

RECORDS SCANNED: 11/19/11
(Date)

RECORDS APPROVED: 11/19/11 [Signature]
(Date and Engineer)

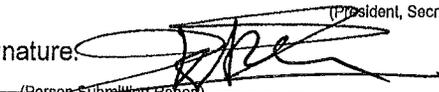
RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Fernando Fee 32 C
A.P.I. No. 03721359

Field: Aliso Canyon County: Los Angeles
Surface Location: Sec 27 3N 16W S.B.B.M.
Title:

Azra Kargar

Signature: 

(President, Secretary, or Agent)

(Person Submitting Report)

Date: 1/3/2011

Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Telephone Number: 818-360-1245

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, balling tests, and initial production data.

Start Date	Ops. DOGGR Rpt.
9/15/2010	Held safety meeting with crew. Rigged up Western wire line pulled PXN plug. Rigged down wire line. Moved in pump and rigged up for well kill. Opened well with 2700 psi. Pumped 50 bbls high viscosity polymer and displaced with 42 bbls 9.6 ppg. Killed well per schedule with 370 bbls 9.6 ppg. Secured well.
9/16/2010	Held safety meeting with crew. Opened well 300 annulus 100 tubing, bled down and filled with 31 bbls, and circulated out the gas cut fluid. Installed back pressure plug, nipped down production tree (bolts were rusted). Nipped up class III BOP and perform function test and removed BPV. Rigged up working floor and tubing equipment.
9/17/2010	Held safety meeting with crew. Opened well 0 psi tubing 300 psi casing, bled down casing, filled well with 24 bbls. Installed BPV and tested blind rams to 300 psi for low and 5000 psi for high pressure for twenty minutes. Removed BPV and installed tubing pup joint. Tested pipe ram to 300 psi for low and 5000 psi for high pressure for twenty minutes. Tested Hydрил to 300 psi for low and 5000 psi for high pressure for twenty minutes. Tested all control valves to 300 psi for low and 5000 psi for high pressure for twenty minutes (All tests good). Backed out and hold down studs, unlanded tubing at 40000 lbs, and worked loose form packer at 7163'. Secured well.
9/18/2010	Held safety meeting with crew. Opened well 0 psi, needed 7 bbls to fill. Pulled out of well and laid down seal assembly and blast joints. Redressed seals assembly and made up seals, latch, 6' pup joint, on/off tools with PXN plug in place, and perforated sub. Measured in well to 7163', latched in packer, and released from o/o tool. Tested to 500 psi for twenty minutes. Secured well.
9/19/2010	Held safety meeting with crew. Opened well 0 psi 0 bbls to fill. Rigged up Tuboscope unit and pulled out of well thru scan unit (175 yellow 51 blue and 3 red). Laid down top half of On/Off tool. Rigged down scan unit. Rigged down tubing equipment and working floor. Secured well.
9/20/2010	Held safety meeting with crew. Opened well 0 psi 0 bbls to fill. Nipped down class III BOPE and tubing head bolts (could not pull). Welder cut bolts. Replaced primary seals. Nipped up class III BOP. Secured well.
9/29/2010	Held safety meeting with crew. Opened well 0 psi, well standing full. Nipped down class III BOP, installed seal flange and tubing head. Energized seals and tested them to 5000 psi for twenty minutes. Nipped up and function tested BOP. Rigged up working floor and tubing equipment. Secured well.
9/30/2010	Held safety meeting with crew. Opened well 0 psi 0 bbls to fill. Made up 7.064 inch spear with stop, bumper sub, jars, and 2 4 -3/4" drill collars, and intensifier. Measured in well to top part of the patch at 3725' (found patch 12' high). Engaged fish, jarred loose, pulled out of well to 3488' (rig motor was shut down for repairs). Secured well.
10/1/2010	Held safety meeting with crew. Opened well 0 psi 0 bbls to fill. Pulled out of well (recovered top cone) and made up 7.064" spear with 38' extensions bumper sub, jars (2) 4-3/4" drill collars, intensifier. Ran in well to top of fish at 3719'. Engaged fish jarred loose and pulled out of well (recovered 41' Pengo patch). Laid down fish, broke down tools and fish. Secured well.
10/4/2010	Held safety meeting with crew. Open well 0 psi 0 bbls to fill. Made up 7.064" spear, bumper sub, jars (2) 4-3/4" drill collars. Ran in well to 3758' and engaged fish jarred loose. Pulled out of well (recovered bottom 1' section of the patch), laid down fishing tools. Replaced leaking ram seals on blind rams. Made up 8-5/8" casing scraper and bumper sub. Ran in well to 3748', tagged, and attempted to work down. Secured well.
10/5/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Made up 7-3/8" shoe, bumper sub, jars, and (2) 4-3/4" drill collars. Ran in well to 3748' and pushed the fish down to 3900'. Pulled out of well and laid down tools. Made up shooting flange. Secured well.
10/6/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Made up 7-3/8" shoe, (1) joint 7-3/8" wash pipe, drive sub, bumper sub, jars, and (2) 4-3/4" drill collars. Ran in well to 3900', tagged fish, and pushed fish down to top of the packer at 7202'. Reverse circulated well for 3 times of the tubing volumes (125 bbls). Pulled out of the well and laid down tools. Secured well.
10/7/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Nipped up shooting flange and rigged up SLB wire line. Made up USIT tools and ran in well to 1000' (tools stop working). Pulled out of well and re-headed wire line. Ran in well to 7150' and logged to surface. Rigged down wire line. Made up 7.8125 string mill and (2) 4-3/4" drill collars. Ran in well to 3792' and reamed the patch area from 3710' to 3770'. Pulled out of well to 1800'. Secured well.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Field: Aliso Canyon

County: Los Angeles

Well: Fernando Fee 32 C

Surface Location: Sec 27 3N 16W S.B.B.M.

A.P.I. No. 03721359

Azra Kargar

Title:

(President, Secretary, or Agent)

Date: 1/3/2011

Signature:

(Person Submitting Report)

Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Telephone Number: 818-360-1245

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

Start Date	Ops. DOGGR Rpt
10/8/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Pulled out of the well and laid down tools. Made up 8-5/8" (40') Homco casing patch and setting tools. Ran in well to 3718'. Pressured the well to 4000 psi to set top part of the patch at 3718' and the bottom at 3758'. Pulled out of well and laid down setting tools. Secured well.
10/11/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Made up Weatherford inflatable packer and ran in the well to 2500'. Pulled out of well and laid down packer. Filled the well and pressure tested from surface to 7163' to 1400 psi for one hour (test went well). Secured well.
10/12/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Laid down (2) 4-3/4" drill collars. Made up top half on/off tool, 1 joint tubing, sliding sleeve, 1 joint tubing, GLMA, and the rest of the tubing to surface. Attempted to latch on/off tool, spaced well, and released on/off tool. Could not latch on/off tool. Pulled out of well (backed off service break in sliding sleeve). Secured well.
10/13/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Made up 5-3/4" over shot with 3.89" grapple and bumper sub. Ran in well to 7123', engaged the fish, and released on/off tool. Pulled out of well and laid down fishing tools and sliding sleeve. Made up top half of on/off tool, 1 joint tubing, sliding sleeve, 1 joint tubing, GLMA; and, ran in well to 5000'. Secured well.
10/14/2010	Held safety meeting with crew. Opened well with 0 psi and 0 bbls to fill. Ran in well to the packer at 7163', engaged on/off tools, and re-spaced well. Landed in tubing hanger with 10000 compression. Tested annulus to 500 psi for twenty minutes (went well). Installed BPV, nipped down BOPE, nipped up production tree, and removed BPV. Loaded out equipment, rigged down hoist and moved rig and equipment to SS25A.
10/15/2010	Held safety meeting with crew. Installed laterals and cleaned location.

JAN - 4 2011

NATURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES

No. P **210-234**

PERMIT TO CONDUCT WELL OPERATIONS

<u>010</u>	<u>010</u>
(Old) Field Code	(New)
<u>00</u>	<u>00</u>
(Old) Area Code	(New)
<u>30</u>	<u>30</u>
(Old) Pool Code	(New)

James D. Mansdorfer, Agent
Southern California Gas Co..
9400 Oakdale Ave.
Chatsworth CA 91313

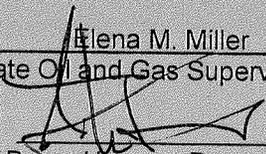
Ventura, California
October 27, 2010

Your proposal to **rework** well "**Fernando Fee**" **32C**, A.P.I. No. **037-21359**, Section **27**, T. **3N**, R. **16W**, **S.B.** B. & M., **Aliso Canyon** Field, **Sesnon-Frew** Pool, **Los Angeles** County, dated **09/29/10**, received **09/29/10** has been examined in conjunction with records filed in this office.

THE PROPOSAL, COVERING WORK ALREADY COMPLETED, IS APPROVED.

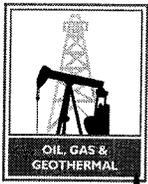
Engineer: Steve Fields

Phone: (805) 654-4761

Elena M. Miller
State Oil and Gas Supervisor
By 
Bruce Hesson, Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work is completed or the operations have been suspended. Issuance of this permit does not preclude the recipient from the obligation of being in compliance with all applicable Federal, State and Local laws, regulations and ordinances.

010
00
30



Sesnon - Free

FOR DIVISION USE ONLY		
Bond	Forms	
	1000 500	OGD 14 ✓
	111 ✓	115 ✓

NOTICE OF INTENTION TO REWORK / REDRILL WELL

Detailed instructions can be found at: www.conservation.ca.gov/dog/

P210-234

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework / redrill well FF32C, API No. 037-21359,
(Check one)

Sec. 27, T. 3N, R. 16W, S.B. B.&M., Aliso Canyon Field, Los Angeles County.

The complete casing record of the well (present hole), including plugs and perforations, is as follows: (Attach wellbore schematics diagram also.)

PRESENT WELLBORE CONDITIONS:

- 1) 0' - 798', 13-3/8", 48#, H-40, Surface casing (cemented)
- 2) 0' - 7339', 8-5/8", 36#, K-55, Production Casing (cemented, WSO 7374', stage collar 3738', Pengo casing patch from 3737'-3759')
- 3) 7204' - 7676', 6-5/8", 28#, K-55, Gravel Packed 30 Mesh Slotted Liner (slots from 7210'-7676') w/ 335 cu.ft 6-9 gravel in 14" hole.

The total depth is: 7676' feet. The effective depth is: 7676' feet. **GS**

Present completion zone(s): Sesnon (Name) Anticipated completion zone(s): Sesnon (Name)

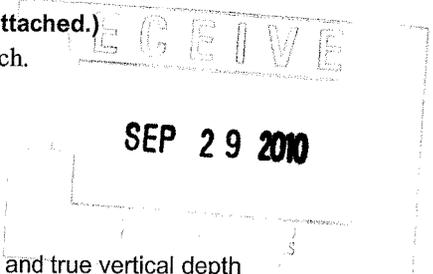
Present zone pressure: Variabl psi. Anticipated/existing new zone pressure: Variable psi.

Is this a critical well as defined in the California Code of Regulations, Title 14, Section 1720(a) (see next page)? Yes No

For redrilling or deepening only, is a California Environmental Quality Act (CEQA) document required by a local agency? Yes No If yes, see next page.

The proposed work is as follows: (A complete program is preferred and may be attached.)

Replace wellhead seals, change wellhead valves, replace tubing, and replace casing patch.



If well is to be redrilled or deepened, show proposed coordinates (from surface location) and true vertical depth at total depth: n/a feet n/a (Direction) and n/a feet n/a (Direction) Estimated true vertical depth: n/a

Will the Field and/or Area change? Yes No If yes, specify New Field: n/a New Area: n/a

The Division must be notified immediately of changes to the proposed operations. Failure to provide a true and accurate representation of the well and proposed operations may cause rescission of the permit.

Name of Operator Southern California Gas Company			
Address 12801 Tampa Avenue		City/State Northridge	Zip Code 91326
Name of Person Filing Notice Azra Kargar	Telephone Number: 818-360-1245	Signature A.K.	Date 09/29/2010
Individual to contact for technical questions: same as above	Telephone Number: same as above	E-Mail Address: AKargar@semprautilities.com	

This notice and an indemnity or cash bond must be filed, and approval given, before the workover begins. (See the reverse side for bonding information.) If operations have not commenced within one year of the Division's receipt of the notice, this notice will be considered cancelled.

INFORMATION FOR COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970 (CEQA)

If an environmental document has been prepared by the lead agency, submit a copy of the **Notice of Determination** or **Notice of Exemption** with this notice. Please note that a CEQA determination by a local jurisdiction, if required, must be complete, or the Division may not issue a permit.

CRITICAL WELL DEFINITION

As defined in the California Code of Regulations, Title 14, Section 1720 (a), "Critical well" means a well within:

- (1) 300 feet of the following:
 - (A) Any building intended for human occupancy that is not necessary to the operation of the well; or
 - (B) Any airport runway.
- (2) 100 feet of the following:
 - (A) Any dedicated public street, highway or the nearest rail of an operating railway that is in general use;
 - (B) Any navigable body of water or watercourse perennially covered by water;
 - (C) Any public recreational facility such as a golf course, amusement park, picnic ground, campground or any other area of periodic high-density population; or
 - (D) Any officially recognized wildlife preserve.

WELL OPERATIONS REQUIRING BONDING

1. Drilling, re-drilling, or deepening any well.
2. Milling out or removing a casing or liner.
3. Running and cementing casing or tubing.
4. Running and cementing liners and inner liners.
5. Perforating casing in a previously unperforated interval for production, injection, testing, observation, or cementing purposes.
6. Drilling out any type of permanent plug.
7. Reentering an abandoned well having no bond.

This form may be printed from the DOGGR website at www.conservation.ca.gov/dog/

SEP 29 2010

WORKOVER PROGRAM

FF32C – Wellhead Repair/Change Wellhead Valves/Tubing Replacement

DATE: September 13, 2010

OPERATOR: Southern California Gas Company

FIELD: Aliso Canyon

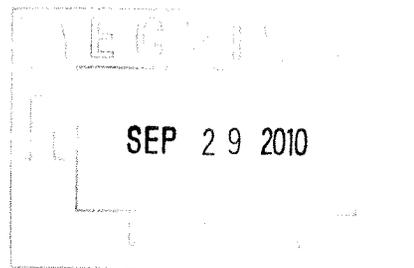
WELL: FF32C

CONTRACTOR: Ensign #321

OBJECTIVE: Repair or replace wellhead seals, change wellhead valves, and replace tubing

API NUMBER: 037-21359

ELEVATION: All measurements from the original KB = 15' above GL.



PRESENT WELLBORE CONDITIONS:

0' – 798'	13-3/8"	48#	H-40	Surface casing (cemented)
0' - 7339'	8-5/8"	36#	K-55	Production Casing (cemented, WSO 7374', stage collar 3738', Pengo casing patch from 3737'-3759')
7204' - 7676'	6-5/8"	28#	K-55	Gravel Packed 30 Mesh Slotted Liner (slots from 7210'-7676') w/ 335 cu.ft 6-9 gravel in 14" hole

(See attached Schematic and Well Data Sheet for Additional Wellbore Details)

TOP OF ZONES: (M-P): 6990'MD/6668' TVD, (S-1): 7235'MD/6894' TVD, (S-4): 7338' MD/6989' TVD, (S-8): 7410' MD/7056' TVD

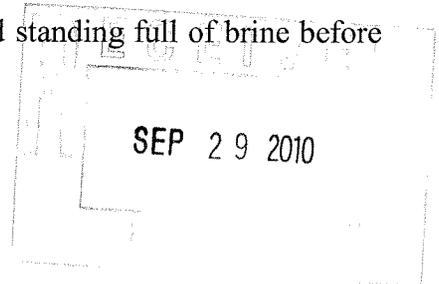
FIELD PRESSURE: 2700 psig (surface)

Notes: BOP requirements in 224.05 should be fully implemented. Class III 5,000 psig (minimum) requirements should be followed. Field reservoir inventory and pressures should be monitored during the workover with a 300 psig minimum overbalance on well control fluids.

WELL WORK PROGRAM

Pre Rig Work:

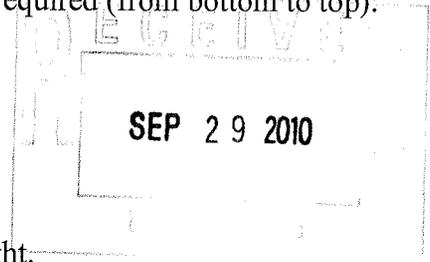
1. De-energize and remove laterals. Install companion flanges for killing well.
2. Move in pump with tank, shaker and mixer. The Ensign #321 crew will provide the labor for killing the well and installing the kill equipment.
3. Spot the 500 bbl Baker tanks and fill with 9.3 ppg NaCl brine.
 - Treat the kill fluids with biocide, 5 gal/100 barrels concentration.
 - Connect the rig pump to the tubing and vent the casing through the choke manifold to the Gas Company system.
 - Verify the current field pressure and confirm the correct weight of kill fluid.
4. Pump a heavy HEC polymer pill into the 6-5/8" slotted liner interval from the surface. Displace the polymer pill with minimum one tubing volume approximately 45 bbl.
5. All the annulus valves should be bled of all pressure and standing full of brine before proceeding with the rig work.



Rig Work:

1. Move in the Ensign #321 rig with the rig pump and mud pit.
2. Install BPV. Remove the tree and install the 10" Class III BOPE (minimum) as per Gas Company Procedure on the tubing head.
3. Test the 5M BOPE system to assure the integrity of connections.
 - Test to 4000 psig minimum. Test the Annular Preventer to 4000 psig.
 - Notification of the DOGGR prior to the BOPE test is not required for this project.
4. Install a pup joint of 2-7/8" tubing in the 8" x 2-7/8" Type AJO tubing hanger with a Safety valve in the top. Back out the tubing hanger pins and unland the 2-7/8" tubing.
5. Release from Otis 8-5/8" Perma-Trieve packer 4.00" ID, 7.5" OD.

6. Pull out of the well with the 2-7/8" tubing string and lay down the 2-7/8" and completion equipment.
7. Redress seals and run in with: seal assembly, 6'-8' pup joint, on/off tool with PXN plug, and perf nipple. Release from on/off tool and test to 500 psi.
8. Pull tubing. Scan tubing when pulling to inspect via Tuboscope unit. Lay down damage tubing and replace the bad tubing with new tubing.
9. Nipple down the 10" Class III BOPE and remove the 10" x 8" 5M tubing head and 13-5/8" x 10" seal flange. Send in the tubing head and seal flange in for inspection, repair or replacement.
10. Install new primary seals. Install a 10" 5M x 13-5/8 3M" spool and reinstall the 10" Class III 5M BOPE and function test the BOPE.
11. Remove the spool and the Class III 5M BOPE. Install the tubing head and secondary seal flange and reinstall the 10" Class III 5M BOPE and function test.
12. Remove Pengo casing patch.
13. 7. Pick up a 8-5/8" casing scraper on 2-7/8", 6.5#, L-80 tubing and make a scraper run in the 8-5/8" production casing from surface to approximately 7204'(+/-). Circulate the hole clean.
14. Run a USIT casing inspection log in the cemented 8-5/8" production casing to verify the mechanical integrity of the 8-5/8" production casing.
15. Install Weatherford bonded casing patch from 3717'-3759'.
13. Run tubing and accessories as follows and space out as required (from bottom to top):
 - Top half on/off tool with 2.313 profile
 - 1 joint of tubing
 - Sliding Sleeve
 - 1 joint of tubing
 - GLMA
 - Run tubing stretch calculation to verify landing weight.
 - Pressure test the tubing/casing annulus to confirm integrity of packer and seals to 1000 psig for 10 minutes.
14. Install the BPV and remove the 8" Class III 5M BOPE. Install the tree and test to 5000 psig. Remove the BPV.
15. Clean the pits, the location and properly dispose of any well work fluids.



Post Rig Work:

1. Replace the laterals and the instrumentation.
2. Unload the well and leave open the sliding sleeve.
3. Place well on tubing withdrawal to clean up water from completion interval. Clean up the location.

Azra Kargar

Storage Field Engineer I

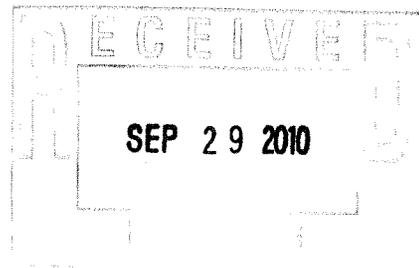
Southern California Gas Company

Aliso Canyon

Office: 818-360-1245

Cell: 818-472-4110

AKargar@semprautilities.com



1995'

Elevation: 795' G.L.

KB: 15'

MV: 14'

IW-76 (FF 32c)

Surface choke: _____

Casing flow string

5/16/73 - Well spud
 6/26/73 - Well completed
 4/30/74 - 5/13/74 - Squeezed 3714'-3741', ran 6-5/8" sleeve 3714'-3804' & ran tubing.
 11/22/74 - 11/29/74 - Pulled & ran tubing.
 6/75 - Well shut-in for work on IW-75.
 10/75 - Wireline tools lost in well
 6/17/76 - 7/26/76 - Recovered wireline fish, cleaned out to 7676', pressure tested csg, milled out 3710'-3760', ran 6-5/8" casing patch 3670'-3808' & ran tbg with SSSV.

798'

13-3/8" 48# H40

3737'

Stage Collar 3738' pengo casing patch

3759'

8-5/8" 36# csg
0-5745' K55
-7339' N80

2-7/8" 6.5# N80 tbg

--7118' Otis 2-1/2" SSSV (6785') 2.313" ID

--7151' Otis "XN" No-Go 2.205" ID (6816')

pkc 7163'

--x-over 7162' 3 1/2"

-- 7167'

7-29-81 - 8-6-81 pulled csg. to repair leaking patch. Pengo csg. patch set @ 3737' to 3759'.

lnr 7204'

WSO 7324'

WSO 7335'

7339'

--S4 7338' (6989')

DIRECTIONAL DATA: MAX ANGLE OF 24° @ ± 6900'

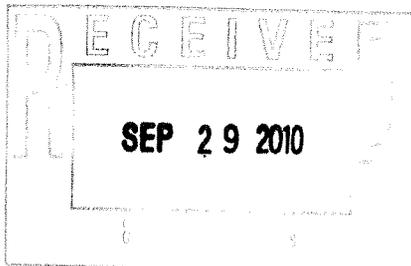
335 cu. ft. 6-9 gravel in 14" hole

6-5/8" 28# K55 30 mesh slotted

--S8 7375' (7021')

TOP OF ZONES (MD/TVD)

MP - 6990/6668
 S1 - 7235/6894
 S4 - 7338/6989
 S8 - 7410/7056



WELL VOLUME

	Cu.Ft.	Bbl.
Tubing	233	41
Csg/Lnr.	99	18
Annulus	2069	368

7676' TD (SS - 5311')

-- 7785' (7410') (-5400')

SOUTHERN CALIF GAS
 OPERATOR For Life
 LSE & NO LW 76
 MAP NO. 250

INTENTION	Drill 1	ALTER CSG 2	REWORK 3	After Casing 4	5
NOTICE DATED	2-13-73	5-1-74	6-16-76	6-29-81	
P-REPORT NUMBER	273-113	274-193	276-203	281-225	
CHECKED BY/DATE					
MAP LETTER DATED	250 10-6-73	N/C	N/C	N/C	
SYMBOL	Φ 9				

	2-27-73		5-6-74		6-17-76		7-2-81			
	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE										
HISTORY	10-1-73		5-31-74		8-19-76		8-27-81			
SUMMARY	10-1-73									
IES/ELECTRIC LOG	10-8-73									
DIRECTIONAL SURV.	12-31-75									
CORE/SWS DESCRIP.										
DIPMETER RESULTS										
OTHER							130 FE 8-2-81			
RECORDS COMPLETE	Ⓜ		Ⓜ		Ⓜ		JR			

ENGINEERING CHECK

CLERICAL CHECK

T-REPORTS	<u>OK</u>	POSTED TO 121	_____	170 MAILED	_____	FINAL LETTER	_____
OPERATOR'S NAME	<u>OK</u>		_____		_____	MAILED	_____
WELL DESIGNATION	<u>OK</u>		_____		_____		_____
LOC. & ELEV.	<u>OK</u>		_____		_____	RELEASE	_____
SIGNATURE	<u>OK</u>		_____		_____	BOND	_____
SURFACE INSPECTION	_____		_____		_____		_____
LINAL LETTER OK	_____		_____		_____		_____

REMARKS: _____

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

R.D. Phillips, Agent
Southern Calif. Gas Company
810 S. Flower St.
Los Angeles, CA. 90017

Ventura, California
February 23, 1990

Your request, dated February 13, 1990, proposing to change the designation of wells in Sec. 27, T. 3N, R. 16W, SB B.&M., Aliso Canyon field Los Angeles County, District No. 2, has been received.

The proposed change in designation, in accordance with Section 3203, Public Resources Code, is authorized as follows:

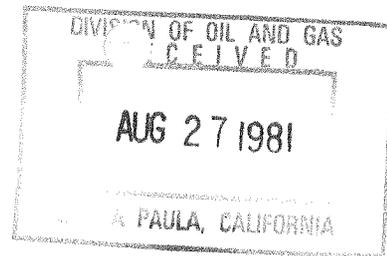
From:	To:
IW 56 (037-21354)	"Porter" 32F (037-21354)
IW 57 (037-21355)	"Porter" 32D (037-21355)
IW 58 (037-21321)	"Fernando Fee" 32E (037-21321)
IW 60 (037-21276)	"Porter" 32B (037-21276)
IW 61 (037-21277)	"Porter" 32A (037-21277)
IW 62 (037-21313)	"Fernando Fee" 32F (037-21313)
IW 73 (037-21358)	"Fernando Fee" 32B (037-21358)
IW 75 (037-21356)	"Fernando Fee" 32D (037-21356)
IW 76 (037-21359)	"Fernando Fee" 32C (037-21359)
IW 77 (037-21323)	"Standard Sesnon" 25B (037-21323)
IW 78 (037-21360)	"Porter" 32C (037-21360)
IW 81 (037-21363)	"Porter" 32E (037-21363)

bb

M.G. MEFFERD, State Oil and Gas Supervisor

By 
Patrick J. Kinneaf, Deputy Supervisor

SUBMIT IN DUPLICATE
RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS



History of Oil or Gas Well

Operator Southern California Gas Co. Field Aliso Canyon County Los Angeles
Well IW 76, Sec. 27, T. 3N, R. 16W S.B.B. & M.
A.P.I. No. 037-21359 Name P.A. Magruder, Jr. Title Agent
Date August 17, 19 81 (Person submitting report) (President, Secretary or Agent)

Signature *P.A. Magruder, Jr.*

P.O. Box 3249 Terminal Annex, Los Angeles, CA 90051 (Address) (213) 689-3561 (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

MWO #99951 was issued to replace leaking inner string with casing patch

1981

- 7-29 1st Day. Loaded out and moved rig from Playa del Rey to IW #76 in Aliso Canyon.
- 7-30 2nd Day. Rigged up. Killed IW #76 - with Haliburton pump truck using 79#/cu. ft. HEC polymer completion fluid. Set tubing plug in IW #75 with Otis wireline services.
- 7-31 3rd Day. Rigged up and circulated gas from completion fluid. Removed xmas tree and installed BOPE.
- 8-01 4th Day. Finished installing BOPE. Tested blind rams and pipe rams with water to 4000 psi for 20 minutes. Tested Hydril to 3000 psi with water for 20 minutes. Pulled Otis tools loose from packer and circulated bottoms up. Measured out of well, layed down Otis tools and picked up Midway fishing tools.
- 8-03 5th Day. Ran in well. Set spear into 6-5/8" inner casing. Jarred on fish 12 times and inner string came free. Pulled out of well. Recovered all 6-5/8" casing and 2 lead seals. Ran 7-5/8" bit and casing scraper to packer and circulated hole clean. Started out of well changing to chamfered collars.
- 8-04 6th Day. Finished pulling out of well changing to chamfered collars. Gearhart ran collar log to 3818'. Collars at 3648', 3690', 3731', stage collar at 3737', 3776' and 3818'. Made up Pengo casing patch, ran in well and set top 3717' and bottom 3759'. Pulled out of well. Made up stab in and seals.
- 8-05 7th Day. Stabbed into packer and tested packer and Pengo patch with 1500 psi for 20 minutes. Pulled out of well. Picked up production equipment. Going in well hydrotesting tubing.

8-06

8th Day. Hydrottested in well with 5000 psi for 1 minute. Latched into packer spaced out. Pulled 25,000# to check latch. Landed tubing with 10,000# on packer. Removed BOPE. Installed xmas tree and tested with 5000 psi for 20 minutes.. Changed from polymer completion fluid to lease water. Started rigging down. Rig released at 10:00 P.M. 8-6-81.

DIVISION OF OIL AND GAS

Report on Operations

Mr. Kern Guppy, Agent
So. Calif. Gas Co.
12801 Tampa Avenue
Northridge, CA 91324

Santa Paula, Calif.
9/29/81

Your operations at well IN 76, API No. 037-21359, Sec. 27, T. 3N R. 16W
SB, B. & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on Aug. 2, 1981 by M. Stettner, representative of the supervisor, was
present from 1200 to 1300. There were also present C. Lemke, Foreman

Present condition of well: No additions to the casing record since proposal dated 6/29/81.

The operations were performed for the purpose of inspecting the blowout prevention equipment
and installation.

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

M. G. MEYERD
State Oil and Gas Supervisor
By John L. Hardoin
Deputy Supervisor
John L. Hardoin

JUL 2 1981

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

SANTA PAULA, CALIFORNIA

This notice and indemnity or cash bond shall be filed, and approval given, before rework begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

FOR DIVISION USE ONLY		
BOND	FORMS	
	OGD 114	OGD 121
BB	✓	✓

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well TW #76 (Well designation), API No. 037-21359, Sec. 27, T. 3N, R. 16W, S. BB & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth 7676'
- Complete casing record, including plugs and perforations
 - 13-3/8" cemented 798'
 - 8-5/8" cemented 7339', WSO 7374', stage collar 3738'
 - 472' 6-5/8" landed 7676', slotted 7676'-7210', top 7204'
 - 138' 6-5/8" 3808'-3670', lead seals top and bottom

- Present producing zone name Sesnon & Frew; Zone in which well is to be recompleted -
- Present zone pressure 3100 psi; New zone pressure -
- Last produced Gas Storage Well (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
- (or)
- Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psig)

The proposed work is as follows:

- Move in & rig up. Kill well. Install BOPE & pressure test.
- Pull tubing. Recover 138' of 6-5/8" set 3808'-3670'. Clean out to 7162'.
- Set casing patch over stage collar at 3738'.
- Run tubing & recomplete as gas storage well.

It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address P.O. Box 3249 Terminal Annex (Street)
LA CA 90051
 (City) (State) (Zip)

Southern California Gas Company (Name of Operator)
 By P.S. Magruder, Jr. (Print Name)

Telephone Number (213) 689-3561

P.S. Magruder, Jr. (Signature) 6/29/81 (Date)

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR SOUTHERN CALIFORNIA GAS COMPANY FIELD Aliso CanyonWell No. I.W. #76, Sec. 27, T. 3N, R. 16W, S.B. B. & M.Date August 12, 1976

Signed

P. S. Magruder, Jr.
P. S. MAGRUDER, Jr.

P. O. Box 3249, Terminal Annex

Los Angeles, California 90051

Title Agent

(Address)

(213) 689-3561

(Telephone Number)

(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date

6-17-76

Using Dowell Pump Truck, killed I. W. #76 using 78# brine-polymer drilling fluid.

6-18-76

To keep location safe, killed FF-32 using waste lease salt water, then using Archer-Reed, set Otis P-X plug in "X-N" nipple at 7081'.

6-19-76 and6-20-76

Idle.

6-21-76

Idle until work on I. W. #75 is completed.

7-2-76

Moved in Pool Rig #38 from I. W. #75. Started installing B.O.P.E. at 10:00 a.m. Installed 5000 psi 10 3/4" Class IV B.O.P.E. Using H & H Triplex pump, tried to test B.O.P.E. Did not test.

7-3-76

Using H & H, tried to test blind rams - tubing hanger leaked. Using 2 7/8" tubing, screwed into tubing hanger and hydrostatically tested pipe rams to pipe rams for 20 minutes at 4500 psi - O.K. Then tested lower pipe rams to Shaffer bag at 4200 psi for 20 minutes - O.K. Rigged up NOWSCO - using nitrogen, tested bottom pipe rams to Shaffer bag at 4200 psi for 20 minutes - O.K. Then tested pipe rams to pipe rams at 4500 psi for 20 minutes - O.K. Circulated hole.

7-4-76

Rig idle.

7-5-76

(Holiday) Rig idle.

7-6-76

Rigged up McCullough Wire Line Service. Ran 2 7/8" chemical cutter and shot off tubing at 7145' (above wire line junk in tubing.) Measured out of hole. Dressed tubing hanger, then ran tubing hanger on 1800' of 2 7/8" tubing.

- 7-7-76 Rigged up Halliburton pump truck. Tried to test blind rams against tubing hanger - no good. Pulled tubing hanger and set Baker 8 5/8" Model "C" Lockset bridge plug at 110'. Tested blind rams to bridge plug at 4100 psi for 20 minutes - O.K. Rigged down Halliburton and rigged up NOWSCO. Using nitrogen, tested blind rams to bridge plug at 4100 psi for 20 minutes - O.K. Ran in hole with 6 5/8" casing spear on 10' extender, on 6 5/8" casing stop, on bumper sub, on jars, on 120' 4 3/4" drill collars, on accelerator, on one joint 2 7/8" tubing, on float valve to 3400' to fish 6 5/8" casing.
- 7-8-76 Latched on to fish at 3724'. Jarred on fish at 80,000# (15 times.) Fish came loose. Pulled out hole, recovering fish (Hook Wall packer; 3 joints 6 5/8", 24#, J-55, R-2, T & C; Lead seal adapter with hold down slips.) Junk in hole on packer at 7175', 2 slips 4" x 3" x 1/2", 3 slips 2 1/2" x 3" x 1/4". Ran in hole with 2 7/8" Baash-Ross over shot, on bumper sub, on Bowen jars, on 120' 4 3/4" Drill collars, on accelerator, on 1 joint 2 7/8", 6.5#, J-55, EUE tubing, on float valve, to 6985' and conditioned drilling fluid. Latched on to fish at 7045' and released packer. Pushed fish down hole 5' and inadvertently released overshot.
- 7-9-76 Pulled out of hole. Re-jayed slips in Baash-Ross overshot. Ran in hole with same fishing set up. Circulated hole and conditioned mud. Could not get over fish.
- 7-10-76 Pulled out of hole. Ran in hole with 5 1/2" x 2 7/8" Bowen socket (3 1/4" mill guide), safety joint, jars, 5' bumper sub, 120' 4 3/4" drill collars, 2 7/8" joint of tubing, float valve on 2 7/8", 6.5#, J-55, 8rd EUE tubing to top of fish at 7143'. Latched on to fish and worked fish when jars went off at 80,000# - overshot stripped off. Tried several times to re-engage fish, but with no success. Pulled out of hole. Ran overshot extension on above tools to 6900' (changed mill guide and grapple.)
- 7-11-76 Idle.
- 7-12-76 Engaged fish with socket, jarred four times and fish came free. Pulled out of hole. Recovered 24' of 2 7/8" tubing and top of Brown bridge plug assembly. Ran in hole with overshot with 1 5/8" slips and 7 1/2" guide to fish for lost wire line tools.
- 7-13-76 Ran in hole with overshot with 1 5/8" slips. Recovered all wire line tools and tubing plug. Ran in hole with one joint of 7" wash pipe and 7" x 5 1/2" shoe. Milled on junk at 7166' for one-half hour, received gas cut mud while circulating.
- 7-14-76 Milled on junk for 2-1/2 hours. Pulled out of hole. Ran overshot. Jarred packer free. Pulled out of hole, packer hanging up on most 8 5/8" collars.

7-15-76

Finished pulling out of hole. Recovered packer. Ran 7 5/8" bit and casing scraper to 7204'. Circulated for two hours. Pulled out of hole.

7-16-76

Ran in hole with 5 5/8" bit and casing scraper. Cleaned out fill from 7606' to 7676' - circulated hole clean. Pulled out of hole. Ran Johnston Bobcat Retrievable Bridge Plug to 7190'.

7-17-76

Using Dowell Pump Truck, tested 8 5/8" casing as follows:

7190'	to Surface	1000 psi	for 20 minutes	- O.K.
5000'	" "	1300 psi	" " "	- O.K.
4500'	" "	1600 psi	" " "	- O.K.
4000'	" "	2000 psi	" " "	- O.K.
3250'	" "	2300 psi	" " "	- O.K.
2750'	" "	2500 psi	" " "	- O.K.
2000'	" "	3000 psi	" " "	- O.K.
1500'	" "	3300 psi	" " "	- O.K.
1000'	" "	3600 psi	" " "	- O.K.
500'	" "	4000 psi	" " "	- O.K.

Ran Servco 7 11/16" mill. Milled from 3710' to 3760'. Did not have any bad casing.

7-18-76

Idle.

7-19-76

Pulled out 7 11/16" mill. Laid down four drill collars. Rigged up Dresser Atlas and ran Otis 8 5/8" Permatrieve packer and set packer at 7162'. Laid down lubricator and ran in 30 stands tubing.

7-20-76

Pulled out 30 stands of 2 7/8" tubing. Made up Burns 8 5/8", 36# x 6 5/8", 28# casing patch as follows:

Bottom	8 5/8" x 36# lead seal hook wall packer	6.85'
	3 joints of 128.16' of 6 5/8" x 28# Hydril FJ	128.16'
Top	Lead seal adapter with hold-down slips (8 5/8" x 36# - 6 5/8", 28#)	3.30'
	Total	<u>138.31'</u>

Ran on 2 7/8" tubing and 60' x 4 3/4" drill collars. Bottom packer at 3808' and top adapter at 3670'. Set packer and adapter. Tested seals at 1200 psi for 20 minutes - O.K. Pulled out running tool. Made up Otis production and safety equipment on 2 7/8" tubing, changing every collar and hydrotesting tubing at 5000 psi for one minute. Applied Baker seal thread lubricant to pins only, in a sparing fashion.

7-21-76

Continued running 2 7/8", 6.5#, EUE 8rd, production string as before. Spaced out tubing. Landed 7162' of 2 7/8" tubing with Otis production equipment, with 10,000# on Otis Permatrieve packer - pulled 15,000# over weight to check latch. Landed 15' below K.B.

7-22-76

Removed Class IV B.O.P.E. and installed Christmas tree. Tested doughnut and flange at 5000 psi for 20 minutes - O.K. Rigged up and changed over from 80# polymer fluid to lease salt water. Used 430 barrels of salt water. Rigged up Otis wire line unit. Ran and pulled out side door choke in safety system. Ran Otis P-X plug and set in "No-Go" nipple. Rigged up to test Otis Permatrieve packer and seal assembly. Had 800 psi on annulus when plug was seated in "No-Go" nipple. Pumped 20 barrels in annulus and pressure rose from 800 psi to 1300 psi. Unable to make test. Rigged up and circulated through choke manifold. Circulated four hours.

7-23-76

Attempted to test Otis Permatrieve packer and seals - fluid pumped away at 1300 psi freely. Ran Otis wire line and pulled "P-X" plug. Re-dressed plug and reset in Otis "No-Go" nipple. Attempted to re-test. Fluid pumped away as before. Raised polymer fluid from 80# to 83#. Changed over from lease salt water to 83# polymer work over fluid. Cleaned pits and circulated around.

7-24-76

Removed Christmas tree and installed 5000 psi Class IV B.O.P.E. Tested B.O.P.E. with water, as follows: Tested blind rams, top and bottom 2 7/8" pipe rams at 4000 psi for 20 minutes each; Tested Hydril bag at 3000 psi for 20 minutes - all tests O.K. Tests witnessed by D.O.G. Rigged up NOWSCO Unit - tested bottom and top pipe rams at 4000 psi, tested Hydril bag at 3000 psi, tested blind rams at 3800 psi - all tests for 20 minutes each - O.K. Picked up one joint of 2 7/8" tubing and screwed into doughnut. Pulled up to 80,000# and came free. Went back down 8', believed that Otis Permatrieve packer moved down hole and re-set packer 8' deeper. Tested packer and seals at 1500 psi - O.K. Spaced out and landed 10,000# on packer. Pulled 20,000# over weight. Installed tubing hanger plug.

7-25-76

Idle.

7-26-76

Pulled tubing hanger plug. Circulated hole. Rigged up Hydro-test. Tested pup joints and tubing hanger to 5000 psi for one minute - O.K. Tested packer and P-X plug in "XN" nipple at 1500 psi for 10 minutes with rig pump - O.K. Installed tubing hanger plug and removed B.O.P.E. Installed Christmas tree. Using Associated Services, hydrostatically tested tubing hanger and extended neck seals at 5100 psi for 20 minutes - O.K. Then tested Christmas tree at 5100 psi for 20 minutes - O.K. Changed circulating system to waste lease salt water. Using H & H triplex pump, tested Otis "PX" plug in "XN" nipple and Otis Permatrieve packer at 1550 psi for 20 minutes - O.K. Released rig #38 at 9:00 p.m. Rigged down to move to Standard-Sesnon #4.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

Report on Operations

No. T 276-273

Mr. P. S. Magruder, Jr., Agent
Southern Calif. Gas Co.
P.O. Box 54790 Terminal Annex
Los Angeles, Calif. 90054

Santa Paula, Calif.
Sept. 21, 1976

DEAR SIR:

Operations at well No. IW 76, API No. 037-21359, Sec. 27, T. 3N, R. 16W,
S.B. B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 7/24/76. Mr. P.R. Wylie, representative of the supervisor was
present from 0900 to 1100. There were also present R. Dargatz, foreman

Present condition of well: No additions to casing record since proposal dated 6/16/76.

The operations were performed for the purpose of testing the blowout prevention equipment and installation.

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

HAROLD W. BERTHOLF

~~JOHN F. MATTHEWS, JR.~~

State Oil and Gas Supervisor

By John L. Gordon

Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 276-203

Mr. P. S. Magruder, Jr., Agent
Southern California Gas Co.
P.O. Box 54790 Terminal Annex
Los Angeles, Calif. 90054

Santa Paula, Calif.
June 21, 1976

DEAR SIR:

(037-21359)

Your proposal to rework gas storage Well No. IW 76, Section 27, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County, dated 6/16/76, received 6/17/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. The drilling fluid used shall be of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts; and a reserve supply of this material shall be kept on hand to meet any emergency.
2. Blowout prevention equipment, at least of the Division of Oil and Gas Class III rating, shall be installed and maintained in operating condition at all times.
3. THIS DIVISION SHALL BE NOTIFIED TO WITNESS A PRESSURE TEST OF THE BLOWOUT PREVENTION EQUIPMENT BEFORE COMMENCING DOWNHOLE OPERATIONS.

NOTE: A COPY OF THIS APPROVAL SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.

Blanket Bond
MD:b

HAROLD W. BERTHOLF
JOHN E. MATTHEWS, Jr., State Oil and Gas Supervisor

By *M. J. McFarland*, Deputy Chief

JUN 17 1976

DIVISION OF OIL AND GAS
Notice of Intention to Rework Well

This notice and indemnity or cash bond shall be filed, and approval given, before rework begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered null and void.

SANTA ANA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	FORMS	
	114	121
BB	✓	✓

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3. Public Resources Code, notice is hereby given that it is our intention to rework well No. I.W. #76, API No. _____, Sec. 27, T. 3N, R. 16W, S. B. B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 7676'

2. Complete casing record, including plugs and perforations:

- 13 3/8" cemented 798'
- 8 5/8" cemented 7339', cp'd 7325', WSO 7324', stage collar 3738'
- 472' 6 5/8" landed 7676', 30-mesh slotted 7676'-7210' gravel-flow packed with 6-9 gravel
- 90' 6 5/8" 3804'-3714', lead seals top and bottom

3. Present producing zone name SESNON Zone in which well is to be recompleted -

4. Present zone pressure 2900 psi New zone pressure -

5. Last produced Gas Storage Well
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
or

6. Last injected _____
(Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows: (KILL WELL PRIOR TO MOVING IN RIG)

1. Move in rig and mud pump. Install B.O.P.E. and test.
2. Pull tubing. Cut and recover 6 5/8" casing from 3804'-3714'.
3. Recover packer. Clean out to bottom. Pressure test 8 5/8" casing.
4. Perform any remedial work indicated. Set packer at 7190'.
5. Set Go-International casing patch at 3760'-3720'.
6. Run tubing with safety valve and return to gas storage.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address P. O. Box 3249, Terminal Annex
(Street)
Los Angeles California 91351
(City) (State) (Zip)
Telephone Number (213) 689-3561

SOUTHERN CALIFORNIA GAS COMPANY
(Name of Operator)
By P. S. Magruder, Jr. 6/16/76
(Name) (Date)
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Co. FIELD Aliso Canyon
 Well No. IW 76, Sec. 27, T. 3N, R. 16W, S.B.B. & M.
 Date May 28, 19 74 Signed [Signature]
P. O. Box 54790, Terminal Annex
Los Angeles, Ca. 90054 (213) 689-3561 Title Agent
(Address) (Telephone Number) (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date	
1974	
4-30	Moved in CPS "D" type service rig with pump and shaker tank.
5-1	Killed well and circulated out all gas with 450 barrels brine-polymer work over fluid.
5-2	Bled off 50 psi well pressure. Filled hole with 2 barrels and circulated bottoms up. Installed BOPE. Tested pipe rams to 2000 psi and Hydril to 1300 psi--Ok. Started pulling tubing and packer.
5-3	Finished pulling tubing and packer. Ran and set Brown Husky M-1 packer at 7173' with type 3 tubing plug extension with I.D. of 2.25". Brown Oil Tools tubing plug in place in packer temporarily making it a bridge plug. Ran in hole with Baker bridge plug and squeeze tool. Set bridge plug at 3843'. Hung squeeze tool at 3757' for the night.
5-4	Displaced 3 sacks sand in bridge plug at 3843'. Set squeeze tool at 3590' and pressured hole at 3738' to 4000 psi which leaked off to 2000 psi in 2 minutes. Ran McCullough through tubing clean-jet with 21 gram charge and shot 4-1/2" holes at 3739'-3741'. Squeezed out 65 cf class "G" cement with 1% fluid loss additive and 2% cc through holes at 3739' at final pump pressure of 2000 psi which would leak off to 1500 psi in 15 minutes. Shut in with 1500 psi until Monday morning, 5-6-74.

IW 76 History (Continued)

Page 2
1974

- 5-6 Pulled Baker squeeze tool. Ran 7-5/8" bit and 8-5/8" casing scraper. Drilled out stringers and soft cement from 3662' to 3729' and hard cement to 3741' and stringers to 3821'. Pressure tested 8-5/8" casing from surface to 3821' at 1750 psi with rig pump for 15 minutes--Ok.
- 5-7 Using Halliburton pump truck, pressure tested holes at 3738' to 3741' and 8-5/8" casing from surface to cement plug at 3821' with 3000 psi for 30 minutes--Ok. Drilled out cement 3821' to 3838' and found sand at 3838'. Circulated hole clean. Retested 8-5/8" casing from 3838' to surface including holes at 3738' to 3741' with 3000 psi for 20 minutes--Ok. Pulled bit and scraper. Ran retrieving tool and circulated sand off bridge plug at 3843'.
- 5-8 Retrieved bridge plug from 3843'. Started in with 6-5/8" casing patch with Burns 8-5/8" x 6-5/8" lead seal packer but packer prematurely set at 60'. Pulled packer and lost two 3" x 4" slip segments in hole. Shut down at noon to repair Burns packer.
- 5-9 Ran 81.74' 6-5/8" K-55 24# 8 rd. range 2 (3 joints) casing with Burns 6-5/8" x 8-5/8" lead seal packer and 6-5/8" x 8-5/8" lead seal adaptor. Set packer at 3804' and pressure tested to 1000 psi--Ok. Set top of lead seal adaptor at 3714' and tested against both seals at 1200 psi--Ok.
- 5-10 Ran final tubing string. Hung tubing above packer at 7173' and changed over from kill fluid to lease salt water. Landed tubing with 15,000 pounds on packer. Tested tubing to 1200 psi--Ok. Tore out BOPE and installed tree. Doughnut seals would not hold test pressure. Raised doughnut and inspected tubing head seal area finding seal area kelly whipped to approximately 1/8" depth on approximately 1/5 of circumference. Tubing head will require repair or replacement. Reinstalled tree, making well safe.
- 5-11 Released rig and started rigging out.
- 5-12 Idle.
- 5-13 Moved out rig.

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 274-193

Mr. P.S. Magruder, Jr.
Pacific Lighting Service Co.
P.O. Box 54790, Terminal Annex
Los Angeles, California 90054

Santa Paula, Calif.
May 7, 1974

DEAR SIR:

(037-21359)

Your proposal to alter casing Well No. IW 76,
Section 27 T. 3N, R. 16W S.B. & M., Aliso Canyon Field, Los Angeles County,
dated 5/1/74, received 5/6/74, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT BLOWOUT PREVENTION EQUIPMENT, AT LEAST OF THE DIVISION OF OIL AND GAS CLASS III RATING, SHALL BE INSTALLED AND MAINTAINED IN OPERATING CONDITION AT ALL TIMES.

Blanket Bond
ALL:b
cc: Operator

JOHN F. MATTHEWS, JR., State Oil and Gas Supervisor

By OOD Pitzers, Deputy

RECEIVED

MAY 6 1974

DIVISION OF OIL AND GAS

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given before work begins; one copy only

Los Angeles Calif. May 1, 1974

SANTA PAULA, CALIFORNIA

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling, plugging or~~ altering casing at Well No. IW 76

(Cross out unnecessary words)

Sec. 27, T. 3N, R. 16W, S.B. B. & M.

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- 1. Total depth. 7676'
- 2. Complete casing record, including plugs:
 - 13-3/8", 48#, H-40 cemented 798'.
 - 8-5/8", 36#, K-55 & N-80 cemented 7339', CP at 3738'.
WNSO 7325' squeezed with cement. WSO 7324'.
 - 6-5/8", 28#, K-55 liner hung 7204' to 7676' 30 M slots 7210' to 7676'.

3. Last produced. GAS INJECTION/WITHDRAWAL WELL
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

The proposed work is as follows:

- 1.) Cement through hole in stage collar at 3715' or shoot 4 holes at 3742' and squeeze cement.
- 2.) Install 6-5/8", 24#, K-55 casing from 3715' to 3805' with 6-5/8" x 85/8" lead seal packer at 3805' and a 6-5/8" x 8-5/8" lead seal hanger at 3715'.

MAP	MAP DATE	CASING	DATE	FORM NO.
			BB	114 ✓

P. O. Box 54790 Terminal Annex
Los Angeles, California 90054
(Address)
(213) 689-3561
(Telephone No.)

Pacific Lighting Service Company
(Name of Operator)
By P. S. Magruder, Jr.

DIVISION OF OIL AND GAS
WELL SUMMARY REPORT

OCT 1 1973

SUBMIT IN DUPLICATE

Operator Pacific Lighting Service Company Well No. IW 76 SANTA PAULA, CALIFORNIA

Sec. 27, T. 3N, R. 16W, S.B. B. & M. Aliso Canyon Field Los Angeles County.

Location From Station 84 1505.81' South and 1906.59 East
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 1995 feet USGS

All depth measurements taken from top of kelly bushing which is 15 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date September 28, 1973

Signed P. S. Magruder Jr.
P. S. Magruder
Agent

E. A. Olson
(Engineer or Geologist)

B. F. Jones
(Superintendent)

Title
(President, Secretary or Agent)

Commenced drilling	Completed drilling	Total depth	Plugged depth	Junk	GEOLOGICAL MARKERS	DEPTH
<u>May 16, 1973</u>	<u>June 17, 1973</u>	<u>7676'</u>	<u>Not</u>	<u>5.5' 18" hole opener 808-813</u>	<u>Top Sesnon S-4</u>	<u>7338</u>

Geologic age at total depth: MIOCENE

Commenced producing _____ (Date) Flowing/gas lift/pumping (Cross out unnecessary words) Name of producing zone _____

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	GAS STORAGE WELL					
Production after 30 days						

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforation
<u>13-3/8</u>	<u>798</u>	<u>sfc</u>	<u>48#</u>	<u>N</u>	<u>S</u>	<u>H-40</u>	<u>17-1/2"</u>	<u>342</u>	
	<u>695</u>	<u>Milled</u>	<u>13-3/8</u>	<u>695-716</u>					
<u>8-5/8</u>	<u>7339</u>	<u>sfc</u>	<u>36#</u>	<u>N</u>	<u>S</u>	<u>K&N</u>	<u>11"</u>	<u>585</u> <u>810</u>	<u>shoe</u> <u>3738</u>
<u>6-5/8</u>	<u>7676</u>	<u>7204</u>	<u>27.65#</u>	<u>N</u>	<u>S</u>	<u>K</u>	<u>14"</u>	<u>slotted liner</u>	

PERFORATED CASING

(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

8-5/8" - Four 1/2" jet holes 7325', squeezed with cement; 4 - 1/2" holes @ 7324-WSC
6-5/8" - Perforated 12 rows & 28 rows, 2" x 30M, 6" centers, SMC 7676-7210
Gravel packed.

Was the well directionally drilled? yes Electrical Log Depths 7676' (Attach Copy of Log)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Co. FIELD Aliso Canyon
Well No. IW 76, Sec. 27, T. 3N, R. 16W, S.B.B. & M.
Date September 28, 19 73 Signed P. S. Magruder
P. O. Box 54790, Term. Annex P. S. Magruder
Los Angeles, Ca. 90054 (213) 689-3561 Title Agent
(Address) (Telephone Number) (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date	
1973	
5-16	Camay Drilling Company, Rig #8 spudded 17-1/2" hole at 9:00 PM, 5/16/73 and drilled to 65'. All measurements from top of kelly bushing which is 15' above mat.
5-17	Drilled 17-1/2" hole to 355. Mud: 70#, 55 sec.
5-18	Drilled 17-1/2" hole to 676'. Mud: 72#, 63. sec.
5-19	Drilled 17-1/2" hole to 798'. Mud: 83#, 55 sec.
5-20	<p><u>TO CEMENT 13-3/8" SURFACE CASING:</u> Ran 21 joints or 821.70' of 13-3/8", 48#, H-40, 8rd., ST&C, R-3, new seamless blank casing and cemented same at 798' with 684 cu. ft. of 94#/cu. ft. slurry consisting of 342 sacks of Class "G" cement, 342 cu. ft. of Poz D, 4% gel, 3% calcium chloride. Moved casing 5' and circulated 20 minutes prior to cementing. Preceded cement with 50 cu. ft. of water and displaced with 10 cu. ft. water and 660 cu. ft. of mud. Did not bump plug. Cement in place at 12:45 AM. Full circulation throughout job. Cement to surface. One hour mixing and displacing cement to surface. Used Howco bulk cement and power.</p> <p><u>CASING DETAIL:</u> All 21 joints or 798 feet, 13-3/8" fitted on bottom with float shoe and with one centralizer at 783'.</p> <p>Cut and recovered 13-3/8" casing. Welded on Shaffer 13-3/8", 5000# casing head. Test Ok under 3500 psi for 15 minutes. Installed BOP.</p>
5-21	<p>BOP tested and approved by DIVISION OF OIL & GAS. Drilled out cement from 674' to shoe at 798'. Drilled 11" hole to 960'. Mud: 72#, 34 sec., 10.2 cc.</p>

- 1973
- 5-22 Drilled 11" hole to 1077'.
Dyna-Dril could not be worked past 769'.
Ran 12-1/4" bit to 796', then could not work past 769'.
Ran Welex collar locator and determined bottom joint of 13-3/8" casing had parted and dropped 10' down hole.
Ran OMT 18" hole opener. Opened hole from 808' to 814' when same stuck.
- 5-23 Unable to free hole opener. Ran McCullough back-off shot and backed off above opener, leaving 5.5' of fish in hole from 808'-813'.
Ran 5" open end drill pipe to 769' and equalized 100 sacks Class "G" cement treated with 2% calcium chloride. Cement in place 6:30 AM.
Used Byron Jackson bulk cement and power.
Locate top of cement at 687'.
- 5-24 Drilled out hard cement 715'-725'.
Ran OMT section mill and milled 13-3/8" casing from 690'-695'.
Mud: 68-1/2#, 44 sec., 8.4 cc.
- 5-25 Milled 13-3/8" casing from 695' to 706'. Mud: 69#, 62 sec.
- 5-26 Milled 13-3/8" casing from 706'-714'.
Ran 12-1/4" bit and drilled out cement 708'-725'. Opened hole to 18" from 688'-714'.
Milled 13-3/8" casing from 714'-716'.
Ran open end 5" drill pipe to 725' and equalized 100 sacks Class "G" cement treated with 19 sacks of sand and 3% calcium chloride.
Cement in place at 8:27 PM. Used Byron-Jackson bulk cement and power. Mud: 70#, 64 sec.
- 5-27 Located top of cement at 650'. Drilled out cement to 689'.
Ran Dyna-Dril #1 and drilled 11" hole from 689' to 796'.
Mud: 68#, 36 sec., 8.4 cc.
- 5-28 Reamed 11" hole from 690'-796' and directionally redrilled 11" hole to 1077' and drilled to 1093'. Mud: 68#, 38 sec., 8.4 cc.
- 5-29 Directionally drilled 11" hole to 1865'. Mud: 72#, 37 sec., 8.0 cc., 6% solids.
- 5-30 Directionally drilled 11" hole to 2629'. Mud: 71-1/2#, 38 sec., 7.2 cc., 6% solids.
- 5-31 Directionally drilled 11" hole to 3377'. Mud: 71#, 34-1/2 sec., 7.6 cc., 6% solids.
- 6-1 Directionally drilled 11" hole to 4104'. Mud: 72#, 37 sec., 7.4 cc., 6% solids.
- 6-2 Directionally drilled 11" hole to 4621'. Mud: 73#, 37 sec., 7.6 cc., 6% solids.

1973

- 6-3 Work bit through tight hole at 701'. Directionally drilled 11" hole to 5271'. Mud: 75#, 37 sec., 7.8 cc., 7% solids.
- 6-4 Directionally drilled 11" hole to 5886'. Lost approximately 90 barrels of mud while drilling at 5682'. Added LCM, regained circulation without further loss. Mud: 74#, 36 sec., 7.6 cc., 6% solids.
- 6-5 Directionally drilled 11" hole to 6355'. Mud: 71#, 37 sec., 7.4 cc., 5% solids.
- 6-6 Directionally drilled 11" hole to 6776'. Mud: 72#, 40 sec., 8.2 cc., 5% solids.
- 6-7 Check pipe measurements Ok. Directionally drilled 11" hole to 6991'. Mud: 71#, 39 sec., 7.6 cc., 5% solids.
- 6-8 Directionally drilled 11" hole to 7390'. Hole taking fluid at 15 barrels per hour rate. Mud: 70#, 35 sec., 7.8 cc., 4% solids.
- 6-9 Ran Dresser-Atlas Induction Electrolog with hole caliper and recorded from 7374' to 690'.
Ran bit to 7374' and circulated hole clean to 7390'. Spotted gel pill treated with LCM on bottom. Mud: 71#, 44 sec., 7.4 cc., 5% solids.
- 6-10 TO CEMENT 8-5/8" CASING: Ran 176 joints or 7359.77' of 8-5/8", 36#, K-55 and N-80, Buttress thread, R-3, new seamless blank casing and cemented same at 7339' with 1000 cu. ft. of 94#/cu. ft. slurry consisting of 485 sacks Class "G" cement, 485 cu. ft. of Lodense A, followed by 100 sacks Class "G" with 2% calcium chloride mixed to 118#/cu. ft. slurry. Circulated 20 minutes prior to cementing. Preceded cement with 100 cu. ft. water and displaced with 2494 cu. ft. of mud to bump plug to place at 6:25 AM under 3500 psi final pressure. Held 3500 psi for 15 minutes. Bled back 36 cu. ft. for total displacement of 2458 cu. ft. No circulation while mixing cement, then full circulation balance of job. One hour 25 minutes mixing and displacing cement. Dropped plug and opened stage collar at 3738' under 1000 psi. Preceded cement with 100 cu. ft. water. Pumped in 1675 cu. ft. of 94#/cu. ft. slurry consisting of 810 sacks Class "G" cement, 810 cu. ft. Lodense A, and displaced with 1300 cu. ft. of mud to bump plug and close collar under 2400 psi pressure at 9:00 AM. Bled back 11 cu. ft. for total displacement of 1289 cu. ft. Forty-Five minutes mixing and displacing cement. Full circulation throughout job. No cement returns to surface. Used Byron-Jackson bulk cement and power.

1973

6-10 CASING DETAIL:

Bottom 38 joints or 1594.51' (7339.77-5745.26) N-80 fitted on bottom with Davis Lynch fill-up float shoe and at 7295' with Davis-Lynch fill-up float collar. TIW turbo centralizers at 7329' & 7285'.

Next 138 joints or 5745.26' (5745.26-surface) K-55 fitted with metal petal basket at 3779' with centralizers one joint above and below the basket. Stage collar at 3738' with one centralizer on joint above.

Total 176 joints or 7339.77'.

Cut and recover 8-5/8" casing, install slips and packing and Shaffer 8", 5000# tubing head.

6-11 Drill out stage collar at 3738' and cement 7295'-7330'. Closed rams and tested casing Ok with 1500 psi.

WSO TEST ON HOLES @ 7325': Ran Lynes combination gun and tester on 5" drill pipe. Shot four 1/2" jet holes 7325'. Set packer at 7267', tail to 7295'. Open tester @ 2:25 PM. Immediate blow increasing to hard blow in 3 minutes. Pulled packer loose at 2:28 PM. Recovered 210' rise of drilling fluid. Charts Ok. WNSO by Company test.

TO SQUEEZE HOLES IN 8-5/8" CASING AT 7325' WITH CEMENT: Ran Johnston retrievable cement tool on 5", 19.5# drill pipe and set same at 7207'. Holes took fluid at 10 cu. ft. per minute rate under 1500 psi pressure. Preceded cement with 20 cu. ft. of water. Pumped in 100 sacks Class "G" cement treated with 2% calcium chloride mixed to an average 118#/cu. ft. slurry. Displaced with 10 cu. ft. water and 546 cu. ft. of mud, then closed tool and displaced an additional 190 cu. ft. of mud in stages to squeeze estimated 84 sacks away under 3800 psi final pressure. Held pressure for 2 hours. Bled back 5 cu. ft. for total displacement of 746 cu. ft. Twelve minutes mixing and 33 minutes displacing cement to place at 9:00 PM. Used Byron-Jackson bulk cement and power.

6-12 Located top of cement at 7235' after standing cemented 24 hours. Drilled out cement to 7330'.

6-13 WATER SHUT-OFF TEST ON HOLES IN 8-5/8" CASING AT 7324': Ran Lynes combination gun and tester on 5" drill pipe. Shot 4 holes at 7324'. Set packer at 7253' with tail to 7281'. Open tool at 5:20 AM for 1 hour test. Puff blow 3 minutes, dead balance of test. Recovered 200' of drilling fluid. Charts Ok. Water shut-off witnessed and approved by DIVISION OF OIL & GAS.

1973

- 6-13 Drilled out cement and shoe 7330'-7349' and directionally drilled 7-5/8" hole to 7425'.
- 6-14 Directionally drilled 7-5/8" hole to 7556'.
Rig shut down for repairs to draw works shaft at 4:00 PM. Down 7 hours.
- 6-15 Down 24 hours for rig repairs.
- 6-16 Down 24 hours for rig repairs.
- 6-17 Down 12 hours for rig repairs. Commence operations at 11 AM.
Directionally drill 7-5/8" hole to 7676', TOTAL DEPTH.
- 6-18 Ran Dresser Atlas suite of logs.
- 6-19 Ran Grant hole opener and opened 7-5/8" hole to 14" from 7666' to 7676'. Pulled to shoe at 7339' and displaced fluid in hole with lease salt water treated with potash, DMS and poly carb R. Opened hole to 14" from 7340'-7416'.
- 6-20 Opened hole to 14" to 7532'.
- 6-21 Opened hole to 14" to 7666' and clean out to 7676'.
- 6-22 Ream from shoe at 7339' to 7676'. Insert backscuttle sub in string thru and circulate hole clean.
- 6-25 Ran Dresser-Atlas caliper log.

Ran 11 joints or 472.11' of 6-5/8", 27.65#, K-55, R-3 new slotted liner and landed same on bottom at 7676' with top at 7204'. Burns packing tool on top with 2-7/8" tubing, tail to 7670'.

LINER DETAIL:

Bottom 1 joint, 43.40'	(7676-7633) perforated with 28 rows, 2" x 30 mesh, 6" centers, straight machine cut slots with bull nose on bottom.
Next 1 joint, 40.76'	(7633-7592) perforated with 12 rows, 2" x 30 mesh, 6" centers, SMC.
Next 6 joints, 253.01'	(7592-7339) perforated with 28 rows as above.
Next 3 joints, 129.34'	(7339-7210) perforated with 12 rows as above.
Next 2.45'	(7210-7207) Burns 6-5/8" port collar.
Next 3.15'	(7207-7204) Burns 6-5/8" x 8-5/8" lead seal adapter.
Total 11 joints 472.11'	

1973

6-22 Gravel packed liner with 260 cu. ft. 6-9 gravel. Gravel bridged.
 thru Ran open end tubing and backscuttled out 15' of fill. Gravel
 6-25 packed liner with 72 cu. ft. of 6-9 gravel and set lead seal adapter.
 Cont. Ran circulating washer and washed liner from 7676 to 7339. Gravel
 packed with 3 cu. ft. of 6-9 gravel. Total 335 cu. ft. of gravel.
 Theoretical fill calculated from hole caliper, plus lap, is 292 cu.
 ft. Liner packed with 15% excess gravel. Used Burns Tool Company
 gravel pack equipment and tools.

6-25 Layed down drill pipe.

6-26 Finished laying down drill pipe and tools.
 Ran 2-7/8", 6.5#, K-55 & N-80, 8rd. EUE used tubing and landed same
 on doughnut with packer at 7176'. Tubing Hydro-Tested and broached.

TUBING DETAIL:

	<u>LENGTH</u>	<u>DEPTH</u>
K. B. to doughnut	16.00	16.00
Doughnut	.70	16.70
229 joints of 2-7/8" tubing	7085.72	7102.42
Udell ported nipple	4.00	7106.42
1 joint of 2-7/8" tubing	30.45	7136.87
Udell landing nipple	2.50	7139.37
1 joint of 2-7/8" tubing	30.46	7169.83
2-7/8" tubing to packer crossover	1.10	7170.93
Brown Oil Tool Husky M-1 packer fitted on bottom with 3" bell collar.	5.30	7176.23

Removed BOP. Installed Shaffer Xmas tree and tested same with 3200
 psi for 15 minutes Ok.
 RIG RELEASED @ 8:00 PM.

SURVEY RECORD

1506-S & 1907E from station 84

JOB NO IW-76 I DATE 6-20-1973

Mat-----1995
K.B.-----15
Elev-----2010

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DIRECTION	RECTANGULAR COORDINATES				REMARKS
					NORTH	SOUTH	EAST	WEST	
1	2.00	164	90	S 03 E		5	75	30	78
2	2.30	287	78	S 35 W		10	14		
3	4.00	411	48	S 29 W		17	65		6
4	4.15	530	16	S 27 W		25	51		94
5	4.15	650	84	S 24 W		33	63		10
6	4.00	688	75	S 28 W		35	97		14
7	4.30	726	63	S 49 W		37	92		15
8	4.00	757	55	S 86 W		38	07		18
9	6.45	863	82	N 82 W		36	34		20
10	10.45	955	21	N 86 W		35	14		32
11	14.15	1048	35	N 86 W		35	14		49
12	16.30	1186	67	WEST		35	82		72
13	17.30	1310	93	S 89 W		37	87		111
14	18.30	1436	42	S 88 W		36	87		149
15	18.30	1561	96	S 86 W		40	64		188
16	18.30	1683	65	S 86 W		43	34		228
17	19.00	1727	25	N 89 W		43	09		267
18	19.00	1788	93	N 77 W		48	63		281
19	18.15	1852	71	N 87 W		39	16		300
20	19.00	1969	80	N 69 W		4	17		313
21	19.30	2156	47	N 71 W		26	42		353
22	18.30	2342	80	N 69 W		66	04		410
23	17.30	2649	93	N 66 W		93	19		468
24	17.30	2855	39	N 64 W		66	04		557
25	17.15	3086	00	N 63 W		124	28		613
26	17.15	3390	32	N 65 W		162	38		674
27	17.00	3705	55	N 68 W		196	88		756
28	16.15	4047	87	N 67 W		234	27		841
29	17.15	4358	88	N 68 W		268	81		929
30	18.30	4821	28	N 70 W		297	35		1015
31	18.45	4924	19	N 70 W		330	66		1093
32	17.15	5231	38	N 70 W		361	79		1184

SURVEY RECORD

JOB NO. IW-76 2 DATE 6-20-1973

	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS	
						NORTH	SOUTH	EAST	WEST		
33	5500	17.30	5279	80	N 70 W	389	45		1346	54	
34	5786	18.00	5551	88	N 69 W	421	13		1429	05	
35	5912	20.30	5669	44	N 70 W	436	22		1470	58	
36	6036	23.30	5783	49	N 71 W	452	32		1517	28	
37	6355	22.15	6078	120	N 69 W	491	65		1631	49	
38	6728	21.00	6427	133	N 68 W	539	55		1756	28	
39	6916	23.30	6599	74	N 65 W	567	63		1825	79	
40	6990	23.00	6667	28	N 65 W	579	84		1851	99	
41	7133	23.00	6799	55	N 65 W	603	45		1902	63	
42	7338	22.30	6988	78	N 62 W	640	28		1971	90	
43	7390	22.30	7036	19	N 62 W	649	62		1989	47	
44	7488	20.30	7128	34	N 62 W	665	73		2019	77	
45	7556	20.30	7192	23	N 62 W	676	92		2040	80	
1.D.45	7676	18.30	7306	38	N 62 W	694	80		2074	42	
			HORIZONTAL DEPARTURE		2188	N 71.29 W					

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

Report on Operations

No. T 273-299

Mr. P. S. Magruder, Jr.
Pacific Lighting Service Co.
P O Box 54790, Terminal Annex
Los Angeles, California 90054

Santa Paula Calif.
June 27, 1973

DEAR SIR:

Operations at well No. "IW" 76, API No. 037-21359, Sec. 27, T. 3N, R. 16W,
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on June 13, 1973. Mr. P R Wygle, engineer, representative of the supervisor was
present from 0730 to 0830. There were also present C. Lemke, foreman

Present condition of well: 13 3/8" cem. 688'; 8 5/8" cem. 7339', c.p. 3738' & 7325',
perf. 7324' WSO. T.D. 7390'.

The operations were performed for the purpose of testing the 8 5/8" shut-off by means of
a formation tester.

DECISION:

THE 8 5/8" SHUT-OFF AT 7324' IS APPROVED.

a
cc: Operator

JOHN F. MATTHEWS, JR.
State Oil and Gas Supervisor

By *[Signature]* Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P. 273-113

Mr. P. S. Magruder, Jr., Agent
Pacific Lighting Service Co.
P. O. Box 54790, Terminal Annex
Los Angeles, California 90054

Santa Paula Calif.
March 5, 1973

DEAR SIR:

(037-21359)

Your proposal to drill Well No. IW 76,
Section 27, T. 3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County,
dated 2/13/73, received 2/27/73, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Sufficient cement shall be pumped back of the 13 3/8" casing to fill from the shoe to the surface.
2. Drilling fluid of proper weight and consistency shall be used to keep the well under control at all times; and a reserve supply of this material shall be kept on hand to meet any emergency. NO CONTAMINATES OR TOXIC MATERIAL SHALL BE USED IN ANY DRILLING FLUID THAT IS TO BE PLACED IN AN UNLINED SUMP.
3. Blowout prevention equipment, at least of the Division of Oil and Gas Class III rating, shall be installed and maintained in operating condition at all times.
4. Fresh waters and oil or gas zones back of the 8 5/8" casing shall be protected with cement.
5. A directional survey shall be filed with this Division, if one is made.
6. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
 - a. A pressure test of the blowout prevention equipment before drilling out of the shoe of the 13 3/8" casing.
 - b. A test of the 8 5/8" water shut-off above the Sesnon zone.

Blanket Bond
ALL:r

cc: Operator

JOHN F. MATTHEWS, Jr., State Oil and Gas Supervisor

By LOU Ritzius, Deputy

Fernando Fee No. 32 Site

DIVISION OF OIL AND GAS
Notice of Intention to Drill New Well

This notice and surety bond must be filed before drilling begins

037-21359

Los Angeles Calif. February 13 19 73

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. IW76, Sec. 27, T. 3N,

R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 234.2 acres, is as follows: (Attach map or plat to scale)

(as per plat previously filed)

Do mineral and surface leases coincide? Yes No If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of Well: 1505.81 feet South ~~along section line and~~ 1906.59 feet East
(Direction) ~~PROPERTY~~ (Direction)

at right angles to said line from ~~the~~ Station No. 84 ~~corner of section~~ ~~PROPERTY~~

(reference: Metrex Aerial Surveys Company drawing no. 11679

sheet 3 of 5)

Elevation of ground above sea level 1995 feet U.S.G.S. datum.

All depth measurements taken from top of kelly bushing which is 12 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
13-3/8	48#	H-40	sm's. 0'	800'	800'
8-5/8	36#	K-55 & N-80	sm's. 0'	7200'	7200' & 3000'
6-5/8	27.65#	K-55	sm's. 7100'	7750'	7750'

Intended zone(s) of completion: Sesnon 7300', 7750' Estimated total depth 7750'
(Name) (Depth, top and bottom)

GAS STORAGE WELL

NO.	DATE	INITIALS	114	121
150	2-3-73	V B B	✓	✓

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address P.O. Box 54790 T.A.

Pacific Lighting Service Company

(Name of Operator)

Los Angeles, California 90054

By P.B. Maguid Jr.

(213) 689-3621 or

Telephone Number (213) 689-3561

Type of Organization Corporation

(Corporation, Partnership, Individual, etc.)