

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

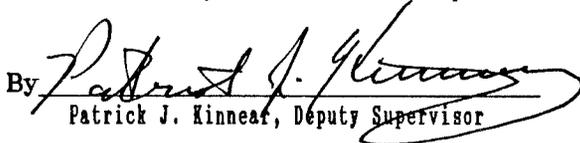
Your request, dated February 13, 1990, proposing to change the designation of wells in Sec. 27, T. 3N, R. 16W, SB B.&M., Aliso Canyon field Los Angeles County, District No. 2, has been received.

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. Kinnear, Deputy Supervisor

1985

- 12-24 Moved wash pipe, 4-1/2" drill collars, jars, bumper sub. Ran in well with all 2-7/8" J-55 tubing. Pulled out of well. Laying down tubing to 3854'.
- 12-25 Holiday.
- 12-26 Removed working platform. Unloaded and placed sub-base and rotary table. Loaded out tubing; unloaded and rigged up pipe racks. Unloaded 2-7/8" drill pipe, pulling J-55 kill string.
- 12-27 Rigged up rotary tongs, stand pipe; straightened up monkey board. Installed water regulator. Laid down remainder of 2-7/8" J-55 tubing. Made up fishing tools, overshot, jars and bumper sub, 6 drill collars and 2-7/8" drill pipe. Worked over fish. Set overshot and jarred on fish for 3-1/2 hours. No movement.
- 12-28 Released fish and pulled out of well with fishing assembly. Picked up Kelly and Kelly hoses. Rebuilt pitcher nipple. Made up washover shoe, 3 joints of wash pipe, drive sub, jars, two drill collars, crossover sub, 2-7/8" drill pipe and ran in well. Flowing over, running very slowly to 7021'.
- 12-30 Ran in to top of packer at 7417'; no fill. Circulated bottoms up. Pulled out of well, set back and broke down tools. Made up fishing assembly. Ran in well. Worked over fish. Jarred on fish until overshot would not hold. Pulled out of well. Redressed overshot. Ran in well to 2080'.
- 12-31 Worked over fish, jarring on same. Rigged up and ran in well with string shot. Could not enter fish. Pulled string shot. Made up spud tool and 6 sinker bars but could not enter fish. Pulled out wireline. Tried for manual backoff. Backed off at 3800'. Screwed back into drill pipe.

1986

- 1-1 Holiday.
- 1-2 Pulled out of well. Broke down tools. Made up outside cutter fishing tool. Ran in well to 7364'. Tried cut. Pulled out of well. All knives broken off. Replaced outside cutter. Ran in well with outside cutter #2 to 7263'.

1986

- 1-3 Made cut at 7367' and pulled out of well. Made up overshoot, bumper sub, jars, six 4-3/4" drill collars and 2-7/8" drill pipe. Ran in well. Worked overshoot over fish at 7367'. Set off jars once. Rigged up string shot. Ran in well. Tried for backoff at bottom of No-Go nipple. Pulled out and laid down string shot.
- 1-4 Finished pulling out of well with fish. Retrieved 2-7/8" EUE 8rd blast joint (19.83') and Camco annular flow safety system (15.2') and .50' of 2-7/8" tubing cutoff. Made up skirted guide pup joint and on and off tool. Ran in well to 7406'; screwed into fish. Ran wireline with impression block and with spud tool. Cleared No-Go nipple. Pulled out of well; laid down 2-7/8" drill pipe.
- 1-6 Laid down 2-7/8" drill pipe, drill collars and Kelly. Loaded out 2-7/8" drill pipe, drill collars and kelly. Unloaded 7000' 2-7/8" tubing. Rigged up and ran ring gauge and collar locator. Made up casing patch. Ran in well. Set patch with top at 3003', bottom at 3025' with 6.57" I.D. Rigged down wireline. Rigged up Hydro-Test and tongs. Rigged to run production equipment. Changed to chamfered collars.
- 1-7 Rig shut down due to high winds.
- 1-8 Rigged up Hydro-Test, H&H and Wood's tongs. Continued picking up 2-7/8" tubing and changed over to chamfered collars below 2900'. Used 145 collars. Ran a total of 176 joints to 5552'.
- 1-9 Finished running 2-7/8" tubing, hydrotesting to 5000 psi. Latched into Baker packer at 7396'. Pulled 20,000# over weight. Set 6,000# on packer when landed in doughnut. Installed xmas tree and tested to 5000 psi. Rigged up wireline. Ran in well and opened sliding sleeve. Rigged down wireline. Rigged up and changed from polymer completion fluid to KCl inhibited salt water.
- 1-10 Rigged down and released at 9:00 p.m., 1-10-86.

PERMIT TO CONDUCT WELL OPERATIONS

010
(field code)
00
(area code)
30
(new pool code)
30
(old pool code)

J. W. Gourley, Agent
Southern California Gas Co.
P.O. Box 3249, Terminal Annex
Los Angeles, CA 90051

Ventura, California
December 9, 1985

Your _____ proposal to rework well IW 81
A.P.I. No. 037-21363, Section 27, T. 3N, R. 16W, S.B. B. & M.,
Aliso Canyon field, any area, Sesnon pool.
Los Angeles County, dated 11/18/85, received 11/15/85 has been examined in conjunction with records
filed in this office.

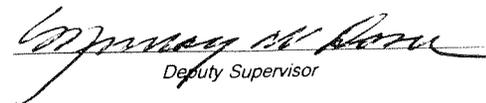
THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Hole fluid of sufficient quality and quantity shall be maintained in the hole to control any subsurface condition, and a reserve supply shall be on hand for emergencies.
2. Blowout prevention equipment of at least DOG Class III 3M shall be installed and maintained in operating condition at all times.
3. This office shall be consulted before initiating any changes or additions to this proposed operation, or if operations are to be suspended.
4. THIS DIVISION SHALL BE NOTIFIED:
 - a. TO WITNESS a pressure test of the blowout prevention equipment before commencing downhole operations.

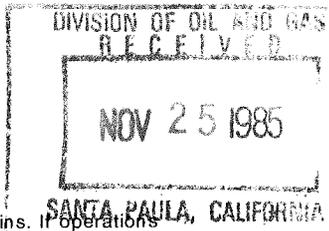
Blanket Bond
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Engineer Michael Stettner
Phone (805) 654-4761

M. G. MEFFERD, State Oil and Gas Supervisor

By 
Deputy Supervisor

A copy of this report 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 has been completed or the operations have been suspended.



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 cancelled.

FOR DIVISION USE ONLY		
BOND	FORMS	
	OGD 114	OGD 121
<i>B/B</i>	✓	✓

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 IW #81, API No. 037-21363
(Well designation)

Sec. 27, T. 3N, R. 16W, S. 4B & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth 7770'

2. Complete casing record, including plugs and perforations (present hole)

13-3/8" cemented at 791'
8-5/8" cemented at 7443', wso 7436', stage collar 3014'
356' 6-5/8" landed 7770', top 7414', 18 mesh wire wrapped
7770' - 7462'

3. Present producing zone name sesnon; Zone in which well is to be recompleted _____

4. Present zone pressure 2,800 psi; New zone pressure _____

5. 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)

6. Is this a critical well according to the definition on the reverse side of this form? (Yes) (No)

The proposed work is as follows:

1. Move in and rig up. Kill well. Install BOPE and pressure test.
2. Pull tubing. Run neutron and collar log. Set casing patch from 3034' - 2996'.
3. Run tubing and return well to gas storage service.

Note: If well is to be redrilled, show proposed new bottom-hole coordinates and true vertical depth.

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 90051
(City) (State) (Zip)

Southern California Gas Company
(Name of Operator)
By J.W. Gourley
(Name) *[Signature]* 11/18/85
(Date)

Telephone Number (213) 689-3561

Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS
RECEIVED
AUG 8 1977
pw

SUBMITTANCE NO. _____
RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

History of Oil or Gas Well

SANTA PAULA, CALIFORNIA

Operator Southern California Gas Company Field or County Aliso Canyon
Well name and No. I. W. 81, Sec. 27, T 3N, R 16W, S. B. & M.
A.P.I. well No. 037-21363 Name P. S. Magruder, Jr. Title Agent
Date 7-20-77, 19 (Person submitting report) (President, Secretary or Agent)

Signature *P. S. Magruder, Jr.*

P. O. Box 3249, Los Angeles, California 90051 (213) 689-3561
(Address) (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

- 7-21-76 Killed well with 78# polymer drilling fluid.
- 6-9-77 Rekilled well at 9:00 A. M. Surface pressure 2490 psi. Used 76#/cu.ft. drilling fluid - took 437 barrels to fill hole. Circulated for 30 minutes with return of 63#/cu.ft drilling fluid. Shut well.
- 6-10-77 Surface pressure was 50 psi. Bled OFF pressure and required one barrel to fill hole. Circulated for 30 minutes and obtained returns of 72#/cu.ft drilling fluid. Shut well in.
- 7-5-77 Rigged down from I. W. #78. Moved rig to I. W. #81.
- 7-6-77 Finished moving in California Production Service Rig #D-3 on to I. W. #81. Circulated 75# mud out of well with 78# mud. Nippled up Class III B.O.P.E.
- 7-7-77 Testing B.O.P.E. Tested blind rams to 4000 psi with water for 20 minutes - O.K. Tested pipe rams to 4000 psi with water - no good. Tested Hydril bag to 3000 psi with water for 20 minutes - O.K. Changed pipe rams. Re-tested pipe rams to 4000 psi with water for 20 minutes - O.K. Tested choke manifold and lines to 1500 with water for 15 minutes - O.K. Tested pipe rams and blind rams to 4000 psi with nitrogen for 20 minutes - O.K. Tested Hydril bag to 3000 psi with nitrogen for 20 minutes - O.K. Unlanded tubing. Pulled out of well. Ran in well with 7 5/8" bit and scraper.
- 7-8-77 Ran in well to 7414' with 7 5/8" bit and scraper. Pulled out of well. Located fill at 7723' and cleaned out to 7770' in 6 5/8" liner. Circulated hole clean. Pulled out of well. Picked up bridge plug and RTTS tool. Ran in well.
- 7-9-77 Ran in well with bridge plug and squeeze tool. Set bridge plug at 7400'. Tested bridge plug to 1000 psi for 15 minutes - O.K. Changed over from polymer drilling fluid to fresh water. Pulled up to 4989' - well started flowing. Pumped down tubing to 2400 psi - would not bleed off with squeeze tool set. Bled off tubing to 1800 psi. Pressured annulus to 1800 psi. Released squeeze tool Circulated water and gas out through choke with 78#/cu.ft. polymer drilling fluid. Ran in well to 7385'. Circulated water from 4989' to 7385' out of well. Closed in well.

- 7-10-77 Rig and crew idle.
- 7-11-77 Pulled out RTTS tool. Ran in with retrieving tool to top bridge plug at 7400'. Circulated bottoms up. Latched on to bridge plug and pulled out bridge plug cups looked O.K. Ran in with bit and 6 5/8" casing scraper in 6 5/8" liner to 7770'. Circulated bottoms up and pulled into 8 5/8" casing. Secured well.
- 7-12-77 Pulled out bit and casing scraper. Ran in hole with bridge plug and set same at 7360'. Pressure tested at 1200 psi for 20 minutes. Displaced polymer drilling fluid with fresh water treated with surface tension agent. Well started to flow - 250 psi shut-in pressure. Changed back over to polymer workover fluid and circulated out gas cut water. Secured well.
- 7-13-77 Curculated and stringing in 86#/cu.ft. calcium chloride water and circulated out gas - polymer workover fluid weighing 76#/cu.ft. Pulled out bridge plug. Ran in Lok-Set bridge plug and set at 7391'. Tested plug at 1300 psi for 15 minutes - O.K. Rigged up to backscuttle out polymer drilling fluid. Secured well.
- 7-14-77 Displaced polymer workover fluid with fresh water treated with surface tension agent. Pulled out Baker Model "B" running tool. Ran in with squeeze tool and set at 5000'. Using pump truck, tested as follows:
- | | | | | | | | | |
|--------------------------|-------|----|---------|------|----------|-----|------------|------------------|
| <u>8 5/8" 36# casing</u> | | | | | | | | |
| From | 7391' | to | 5000' | with | 2000 psi | for | 60 minutes | } all tests O.K. |
| " | 5000' | " | Surface | " | 2200 psi | " | 60 " | |
| " | 4500' | " | " | " | 2500 psi | " | 60 " | |
| " | 4000' | " | " | " | 2800 psi | " | 60 " | |
| " | 3500 | " | " | " | 3000 psi | " | 60 " | |
- Pulled up to 2700' set tool and secured well.
- 7-15-77 Continued tested 8 5/8" 36# casing as follows:
- | | | | | |
|-------|------------|-------------|------------|-------------|
| 2700' | to Surface | at 3300 psi | for 1 hour | - Test O.K. |
| 2000' | to Surface | at 3600 psi | for 1 hour | - Test O.K. |
| 1500' | to Surface | at 3800 psi | for 1 hour | - Test O.K. |
| 1000' | to Surface | at 4000 psi | for 1 hour | - Test O.K. |
- Pulled out squeeze tool. Ran in with Lok-Set retrieving tool to 7360'. Displaced fresh water with 77# polymer workover fluid. Latched on to bridge plug. Released same and pulled out. Ran in 20 stands and secured well.
- 7-16-77 Pulled out 20 stands. Rigged up lubricator. Using wireline equipment ran 8 5/8" 36# casing feeler gauge to 7416' - located top of liner at 7416' (collars at 7390', 7348' and 7304. Ran Baker Retrieval "D" packer and set at 7400'-7408.55'.. Pulled out running tool. Made up production tube, seals assembly, latch-in-locator sub and annular flow safety system and MMG mandrel. Changed couplings and hydro-tested tubing at 5000 psi for one minute. Secured well.
- 7-17-77 Rig and crew idle.

7-18-77

Finished running 2 7/8" tubing, changed collars and hydrotested to 5000 psi for one minute. Landed and spaced out tubing with 10,000# on packer. Pulled 25,000# over weight of tubing to check latch-in. Pulled B.O.P.E. Installed Christmas tree and tested seals on tree to 5000 psi. Hook load when tubing landed 43,000#.

7-19-77

Tested seals, doughnut and API rings to 5000 psi for 20 minutes - O.K. Changed well over to lease water. Wellhead pressure 600 psi. Ran standing valve in NO-GO nipple. Tested packer to 1800 psi for 20 minutes - O.K. Pulled standing valve. Closed all valves. Released rig at 5:00 P.M.

P.W.

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

Report on Operations

No. T 277-156

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

Santa Paula, Calif.
July 15, 1977

DEAR SIR:

Operations at well No. IV 81, API No. 037-21363, Sec. 27, T. 3N, R. 16W,
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 7/8/77. Mr. P.R. Wylie, representative of the supervisor was
present from 1000 to 1030. There were also present G. Osburne, Foreman

Present condition of well:

No additions to the casing record since proposal dated 6/17/77.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

6

M. G. MEFFERD

~~JOHN F. MATTHEWS, JR.~~
JOHN F. MATTHEWS, JR.

Acting,

State Oil and Gas Supervisor

By

John L. ...
Deputy

P.W.

REPORT ON PROPOSED OPERATIONS

Santa Paula, California

June 23, 1977

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

Your proposal to rework gas storage well IW 81
(Name and number)

A.P.I. No. 037-2133 Section 27 T. 21 R. 16W

S.B. B. & M., Aliso Canyon field, Los Angeles County,

dated 6-17-77, received 6-22-77, 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, 21 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

M. G. HEFFERD (acting)
Deputy Supervisor
By *John L. Hardein*
Deputy Supervisor

John L. Hardein

DIVISION OF OIL AND GAS
Notice of Intention to Rework Well

JUN 22 1977

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.

SANTA PAULA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	OGD114	OGD121
	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. #81, 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:

- Total depth. 7770'
- Complete casing record, including plugs and perforations:

13 3/8" cemented 791'
8 5/8" cemented 7443', WSO 7436'
356' 6 5/8" landed 7770', top 7414'
slotted and wire-wrapped 7770'-7462'

- Present producing zone name SESNON Zone in which well is to be recompleted -
- Present zone pressure 3000 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) (Surface pressure, psig.)

The proposed work is as follows:

- Move in and rig up. Kill well. Install B.O.P.E. and pressure test.
- Clean out to 7770'. Pressure test 8 5/8" casing.
- Perform any remedial work indicated by pressure testing.
- Run packer and tubing with down-hole safety system.
- Return well 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 90051
(City) (State) (Zip)
Telephone Number (213) 689-3561

SOUTHERN CALIFORNIA GAS COMPANY
(Name of Operator)
By P. S. Magruder, Jr.
(Name) (Date) 6-17-77
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator Pacific Lighting Service Company Well No. IW 81

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

Location From Station 84, 1790.77' South and 1229.16' West

(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 2075 feet USGS

All depth measurements taken from top of kelly bushing which is 17 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 October 31, 1973

Signed P. S. Magruder, Jr.
P. S. Magruder, Jr.

E. A. Olson

B. F. Jones

Title Agent

(Engineer or Geologist)

(Superintendent)

(President, Secretary or Agent)

Commenced drilling	Completed drilling	Total depth	Plugged depth	Junk	GEOLOGICAL MARKERS	DEPTH
<u>August 26, 1973</u>	<u>September 18, 1973</u>	<u>7770'</u>	<u>None</u>	<u>None</u>	<u>Top Sesnon Zone S-4</u>	<u>7483'</u>
					<u>S-8</u>	<u>7590'</u>
					<u>H-Z</u>	<u>7710'</u>

Geologic age at total depth: Miocene

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

	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>791</u>	<u>sfc.</u>	<u>48#</u>	<u>N</u>	<u>S</u>	<u>H</u>	<u>17-1/2"</u>	<u>350</u>	
<u>8-5/8"</u>	<u>7443</u>	<u>sfc.</u>	<u>36#</u>	<u>N</u>	<u>S</u>	<u>K & N</u>	<u>11"</u>	<u>685</u> <u>530</u>	<u>shoe</u> <u>3014</u>
<u>6-5/8"</u>	<u>7770</u>	<u>7414</u>	<u>24#</u>	<u>N</u>	<u>S</u>	<u>K</u>	<u>7-5/8"</u>	<u>landed</u>	<u>liner</u>

PERFORATED CASING

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

8-5/8" - four 1/2" jet holes at 7436' for WSO
6-5/8" - perforated wire weld liner screen

Was the well directionally drilled? yes Electrical Log Depths 7770' (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 81, Sec. 27, T. 3N, R. 16W, S.B. B. & M.

Date October 31, 1973 Signed P. S. Magruder, Jr.

P. O. Box 54790, Terminal Annex P. S. Magruder, Jr.

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

8-26 Peter Bawden Drilling, Inc., Contractor, Rig #10 spudded 17-1/2" hole at 3:30 AM and drilled to 314'. All measurements from top of kelly bushing which was 17' above mat.

8-27 Drilled 17-1/2" hole to 800'.
Mud: 69#, 34 sec., 8.6 cc., 6% solids.

TO CEMENT 13-3/8" SURFACE CASING: Ran 20 joints or 793.25' of 13-3/8", 48#, H-40, Buttress thread, R-3, new seamless blank casing and cemented same at 791' with 500 cu. ft. of 94#/cu. ft. slurry consisting of 200 sacks of Class "G" cement, 200 cu. ft. of Lite Poz, 200 sacks of gel and 150 sacks Class "G" cement treated with 2% calcium chloride. Moved casing 10' and circulated 30 minutes prior to cementing. Preceded cement with 100 cu. ft. of water and displaced with 50 cu. ft. water and 602 cu. ft. of mud. Did not bump plug. Cement to place at 11:05 PM under 500 psi final pressure. Full circulation throughout job. Cement to surface. Forty-five minutes mixing and displacing cement to surface. Used Dowell bulk cement and power.

CASING DETAIL:

All 20 joints or 793.25', 13-3/8" fitted on bottom with float shoe and with centralizer at 780'.

8-28 Cut and recovered 13-3/8" casing, installed Shaffer 13", 5000# casing head. Tested Ok with 1500 psi for 15 minutes. Installed bit guide and GK Hydrill and double Shaffer B.O.P.

8-29 B.O.P. tested to 1000 psi and approved by DIVISION OF OIL & GAS. Located cement at 708'. Drilled out cement and shoe and drilled 11" hole to 1318'.

Mud: 69#, 35 sec., 14 cc., 5% solids.

IW 81 History (Cont'd)

Page 2

1973

- 8-30 Drilled 11" hole to 1810'.
Mud: 68#, 35 sec., 6.8 cc., 5% solids.
- 8-31 Drilled 11" hole to 2385'.
Mud: 70#, 39 sec., 4.4 cc., 4% solids.
- 9-1 Drilled 11" hole to 2754'.
Mud: 70#, 38 sec., 5.2 cc., 4% solids.
- 9-2 Drilled 11" hole to 3193'.
Mud: 70-1/2#, 36 sec., 5.8 cc., 5% solids.
- 9-3 Drilled 11" hole to 4043'.
Mud: 71#, 40 sec., 7.0 cc., 5% solids.
- 9-4 Drilled 11" hole to 4391'.
Mud: 70#, 35 sec., 5.0 cc., 5% solids.
- 9-5 Drilled 11" hole to 4594'. Dyna-Dril #1, 11" hole to 4627'.
Mud: 69-1/2#, 38 sec., 5.6 cc., 5% solids.
- 9-6 Dyna-Dril #1 & #1-A, 11" hole to 4872'.
Mud: 69#, 34 sec., 6.0 cc., 5% solids.
- 9-7 Reamed 4610'-4872' and directionally drilled 11" hole to 5380'.
Mud: 70#, 36 sec., 7.0 cc., 5% solids.
- 9-8 Directionally drilled 11" hole to 5830'.
Mud: 69#, 34 sec., 5.4 cc., 7% solids.
- 9-9 Directionally drilled 11" hole to 6160'. Found wash out in bumper
sub and changed same.
Mud: 71#, 36 sec., 7.2 cc., 7% solids.
- 9-10 Directionally drilled 11" hole to 6605'.
Mud: 69#, 36 sec., 8.0 cc., 7% solids.
- 9-11 Directionally drilled 11" hole to 6980'.
Mud: 70#, 38 sec., 7.2 cc., 8% solids.
- 9-12 Directionally drilled 11" hole to 7189'.
Mud: 70#, 34 sec., 8 cc., 8% solids.
- 9-13 Directionally drilled 11" hole to 7450' and conditioned hole for
logging. Mud: 69#, 33 sec., 10 cc., 8% solids.
- 9-14 Ran Welex Induction Electric log and hole caliper. Conditioned hole
and commenced running 8-5/8" casing.

1973

9-15 TO CEMENT 8-5/8" CASING: Ran 181 joints or 7449.64' of 8-5/8", 36#, K-55 and N-80, Buttress thread, R-3, new seamless blank casing and cemented same at 7443' with 1100 cu. ft. of 94#/cu. ft. slurry consisting of 535 sacks Class "G" cement, 535 cu. ft. of 2% Lodense A, followed by 150 sacks Class "G" with 2% calcium chloride mixed to 118#/cu. ft. slurry. Moved casing 8' and circulated 60 minutes prior to cementing and for 10 minutes while mixing and displacing cement. Preceded cement with 100 cu. ft. of water and 500 gallons of mud sweep and displaced with 2500 cu. ft. of mud to bump plug to place at 7:45 AM under 3500 psi final pressure. Held 3500 psi for 15 minutes. Bled back 18 cu. ft. for total displacement of 2482 cu. ft. Full circulation throughout job. 1-1/2 hours mixing and displacing cement. Dropped plug and opened stage collar at 3014' under 1000 psi. Mixed 10 cu. ft. of cement and cement container compressor failed. Displaced cement with rig pump. Shut down 1 hour 45 minutes. Pumped in 1090 cu. ft. of 94#/cu. ft. slurry consisting of 530 sacks Class "G" cement, 530 cu. ft. 2% Lodense A and displaced with 1046 cu. ft. of mud to bump plug and close collar under 250 psi at 10:45 AM. Bled back 20 cu. ft. for total displacement of 1026 cu. ft. One hour mixing and displacing cement. Good circulation throughout job. Cement returns to surface. Used Byron Jackson bulk cement and power.

CASING DETAIL:

Bottom 40 joints or 1646.96' (7443'-5796') N-80 fitted on bottom with Davis-Lynch fill-up float shoe and at 7356' with Davis-Lynch fill-up float collar. TIW turbo centralizers at 7433' and at top of each of bottom four joints.

Next 141 joints or 5802.68' (5796'-surface) K-55 fitted with stage collar at 3010'.

Total 181 joints or 7449.64'.

Landed 8-5/8" casing in slips and cut and recovered 8-5/8" casing.

9-16 Reinstalled B.O.P. and tested same Ok with 1500 psi. Measured in hole and located stage collar at 3015', drilled out same and tested casing Ok with 1500 psi for 15 minutes. Drilled out 7352' to 7438'.

9-17 Ran Johnston combination gun and tester for water shut-off test and gun failed to fire. Reran Johnston combination gun and tester and gun failed to fire and hydraulic tool failed. Ran Welex 4" O.D. carrier and shot four 1/2" jet holes at 7436'. Closed rams and tested casing and holes with 1600 psi for 10 minutes Ok.

1973

- 9-17 TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7436': Ran Johnston tester on 4-1/2" drill pipe. Set packer at 7379' with tail to 7405'. Opened tool at 7:19 PM for one hour test. Puff blow with faint blow throughout. No gas to surface. Recovered 10' rise of drilling fluid. Charts showed tool functioned properly. Water shut-off witnessed and approved by Engineer for Division of Oil & Gas.
- 9-18 Clean out mud system and displaced fluid in hole with Polycarb R completion fluid. Drilled out cement and 8-5/8" shoe at 7443' and drilled 7-5/8" hole from 7450' to 7475'.
- 9-19 FORMATION TEST OF INTERVAL 7443'-7475': Ran Johnston tester with MFE tool on 4-1/2", 16.6# drill pipe. Set packer in 8-5/8" casing at 7420' with tail to 7439'. Used 500' of water cushion. Opened tool at 12:09 PM for four minute initial flow. Immediate blow increasing to medium hard on 5/8" bottom hole bean. Took 25 minute initial shut-in. Reopened tool at 12:38 PM. Very faint blow for 60 minutes. Bled off gas and recovered 500' of water cushion and 180' of drilling fluid. Charts showed tool functioned properly. Interpretation of test: Low pressure, low volume gas with no liquid.

PRESSURE RECORDER DATA

	<u>INSIDE (7426')</u>	<u>OUTSIDE (7432')</u>
INITIAL HYDRO	Clock Stopped	3336
INITIAL FLOW		212
INITIAL SHUT-IN		585
SECOND FLOW		276
FINAL FLOW		328
FINAL SHUT-IN		585
FINAL HYDRO		3362

- 9-20 Reamed 7446' to 7475' and directionally drilled 7-5/8" hole to 7705'. Mud: 65-1/2#, 39 sec., 6.0 cc., 3% solids, 2360 G/G.
- 9-21 Reamed 7695' to 7705' and directionally drilled 7-5/8" hole to 7770', TOTAL DEPTH. Found leak in bumper sub and changed same. Mud: 66#, 41 sec., 5.8 cc., 3% solids, 2300 G/G.
- 9-22 Ran Welex Induction Electric log, Acoustic Velocity log and Density-Neutron log. Ran 6 point reamer and reamed hole from 8-5/8" shoe at 7443' to 7770'.
- 9-23 Ran 9 joints or 356.48' of 6-5/8", 24#, K-55, Extreme line, new seamless Layne & Bowler "Wire Weld" screen liner and hung same at 7770' with TIW lead seal liner hanger at 7414'.

1973

9-23 LINER DETAIL:

Bottom 8 joints or 308.33' (7770'-7462') Layne & Bowler "Gru-V-Kut" 24 grooves, 72-2-5/8" long by 1/4" wide slots per foot with "Wire Weld" 0.018" gauge screen (O.D. of screen is 7.062"). Liner fitted with centralizers at top of each joint (8) & bullnosed on bottom & fitted with 8rd. collar on top.

Next 1 joint or 48.15' (7462'-7414') blank 8rd. thread with TIW lead seal liner hanger on top.

Total 9 joints or 356.48'

Pick up and measure 2-7/8" tubing.

9-24 Lay down drill pipe. Set Johnston retrievable bridge plug at 35'. Removed B.O.P., installed Shaffer 10", 5000# tubing head. Tested Ok with 3500 psi for 15 minutes. Reinstalled B.O.P.

9-25 Retrieved bridge plug. Ran 2-7/8", 6.5#, N-80, 8rd. EUE, new seamless tubing and landed same in doughnut with 12,000# on packer at 7401'.

TUBING DETAIL:

	<u>LENGTH</u>	<u>DEPTH</u>
K. B. to doughnut	21.00	21.00
Doughnut	1.00	22.00
234 joints of tubing	7301.96	7323.96
Udell ported nipple	3.83	7327.79
1 joint of tubing	31.60	7359.39
Udell landing nipple	2.33	7361.72
1 joint of tubing	31.39	7393.11
Cross-over	1.06	7394.17
Brown Oil Tool Husky M-1 packer with bell collar	6.92	7401.09

Removed B.O.P. Installed and tested Ok with 3500 psi Shaffer Christmas tree.

RIG RELEASED AT 4:00 PM, 9/25/73.

SURVEY RECORD

1790.77 SOUTH & 1238.27 WEST FROM STATION #81

JOB NO IN-81

ONE

DATE 9-21-1972

MATT.....2075
 K.B.....17
 ELEV.....2092

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DIRECTION	RECTANGULAR COORDINATES				REMARKS
					NORTH	SOUTH	EAST	WEST	
1	193	193	8L	S 70 W		29		79	
2	376	376	60	N 84 W		12		2 38	
3	619	618	06	S 04 E		1 18		2 31	
4	800	799	58	S 60 E		1 97		2 94	
5	960	959	79	S 44 E		3 98		1 00	
6	1118	1117	38	S 26 E		5 22		1 61	
7	1339	1338	94	S 05 E		7 14		1 78	
8	1559	1558	84	S 26 E		10 59		3 46	
9	1777	1746	10	S 50 E		13 22		6 60	
10	1842	1841	49	S 34 E		14 68		8 62	
11	1968	1957	73	S 44 E		16 66		10 53	
12	2061	2060	44	S 30 E		18 77		11 75	
13	2165	2155	49	S 24 E		21 05		12 76	
14	2219	2218	10	S 08 E		22 14		12 91	
15	2409	2408	56	S 55 E		23 09		14 27	
16	2660	2659	19	S 72 E		23 77		16 35	
17	2787	2785	70	N 80 E		23 85		17 44	
18	3100	3099	73	S 62 W		24 85		15 03	
19	3193	3192	03	N 86 W		24 72		13 00	
20	3507	3506	74	S 66 W		25 83		10 50	
21	3617	3616	41	N 52 W		22 59		6 24	
22	3947	3946	84	N 46 W		20 53		4 20	
23	4198	4197	29	S 76 W		21 33		1 01	
24	4512	4511	85	S 63 W		24 14		5 10	
25	4594	4593	15	S 57 W		25 61		6 90	
26	4644	4643	05	S 61 W		27 08		9 56	
27	4706	4705	94	S 63 W		29 78		14 85	
28	4769	4767	59	S 78 W		31 15		21 30	
29	4801	4799	62	N 88 W		31 02		24 92	
30	4832	4830	91	N 76 W		30 07		24 71	
31	4926	4923	46	N 86 W		29 13		42 17	
32	5083	5077	96	N 83 W		25 48		71 91	

SURVEY RECORD

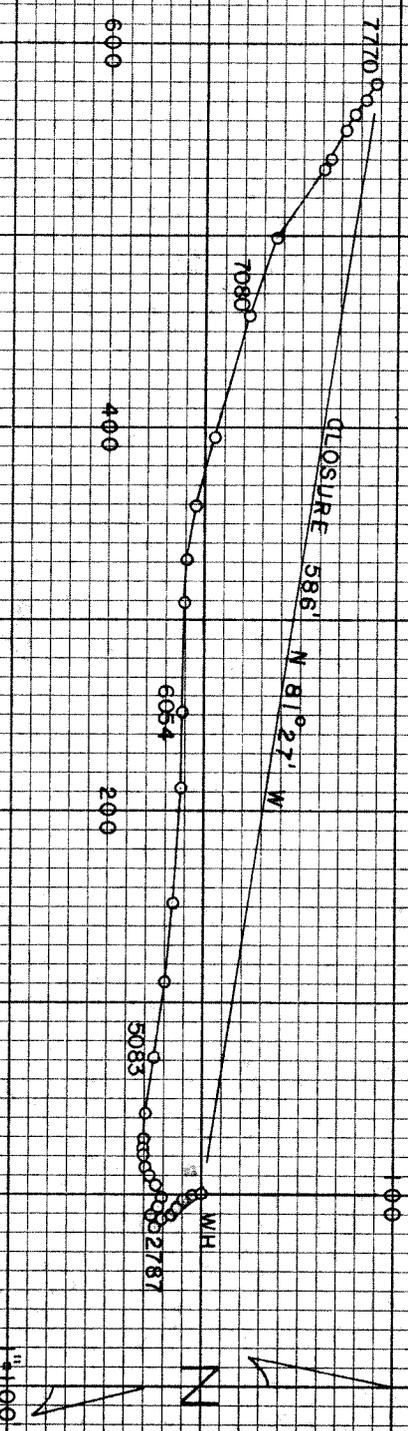
JOB NO. TM-81 TWO DATE 9-21-1973

	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS	
						NORTH	SOUTH	EAST	WEST		
33	5279	11.30	5269	39	D8		20	04	110	61	
34	5496	11.00	5484	41	79		15	67	152	17	
35	5830	10.30	5810	60	80		12	50	212	59	
36	6054	10.15	6031	39	86		11	80	252	44	
37	6378	10.00	6350	56	26		10	82	306	69	
38	6515	9.30	6486	22	78		9	63	331	44	
39	6851	11.00	6828	27	67		5	30	358	77	
40	6817	14.00	6780	37	44				395	05	
41	7080	14.30	7034	65	85		23	25	458	35	
42	7254	14.15	7203	42	83		36	49	492	08	
43	7450	13.00	7394	44	09		61	15	535	63	
44	7483	9.15	7427	2	30		63	80	540	22	
S8 - 45	7590	9.15	7532	17	20		72	40	555	11	
46	7653	9.15	7594	10	13		77	47	563	88	
47	7710	9.00	7651	8	92		82	20	571	44	
TD - 48	7770	9.00	7710	9	39		87	17	579	40	
				CLOSURE			5861 N 81.27 W				

PACIFIC LIGHTING SERVICE CO

ALISO CANYON

WELL NO. IW-81



RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T. 273-427

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

Santa Paula Calif.
October 9, 1973

DEAR SIR:

Operations at well No. IW 81, Sec. 27, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on Sept. 17, 1973. Mr. P R Wygle, engineer, representative of the supervisor was
present from 2100 to 2300. There were also present E. Olson, engineer

Present condition of well: 13 3/8" cem. 791'; 8 5/8" cem. 7443', c.p. 3014', perf. 7436'
WSO. T.D. 7450'.

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

Mr. _____ reported:

THE 8 5/8" SHUT-OFF AT 7436' 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 273-104

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

Santa Paula Calif.
March 2, 1973

DEAR SIR: (037-21363)
Your proposal to drill Well No. DW 81
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 Sennon zone.

Blanket Bond
ALL: r

cc: Operator

*BOPE test waived. Injection made
on 8-29-73.*

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

By LOCP P. J. Jones, Deputy

(037-21363)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

RECEIVED
DIVISION OF OIL AND GAS

037-21363

Porter 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

FEB 27 1973

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. IW81, Sec. 27, T. 3N,

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

Legal description of mineral-right lease, consisting of 431.5 acres, is as follows: _____
(Attach map or plat to scale)
(as per plat previously filed)

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

Location of Well: 1790.77 feet South ~~along section line~~ 1238.27 feet West
(Direction) (Direction)

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

(reference: Metrex Aerial Surveys Company drawing no. 11679 - sheet 2 of 5)

Elevation of ground above sea level 2075 feet U.S.G.S. datum.

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

2075
15
90

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'	750'	750'
8-5/8	36#	K-55 sm s. & N-80	0'	7300'	7300' & 3000'
6-5/8	27.65#	K-55 sm s.	7200'	7700'	7700'

Intended zone(s) of completion: Seson 7100', 7700' Estimated total depth 7700'
(Name) (Depth, top and bottom)

GAS STORAGE WELL	MAP	Casing	FORMS	
			114	121
150	9373	✓	BB	✓

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

Los Angeles, California 90054

By P.B. Magruder Jr.

Telephone Number (213) 689-3621 or (213) 689-3561

Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)