

OPERATOR Ray L. Lister  
 LSE & NO 5720 P 42  
 MAP NO. 250

REPERFORATE  
4

DEWORK  
GAS 3 STOP

INTENTION	Other 1	Other 2	DEWORK GAS 3 STOP	REPERFORATE 4	5
NOTICE DATED	?		4-13-77	02/09/2006	
P-REPORT NUMBER	273-62	273-24	277-133	P206-49	
CHECKED BY/DATE					
MAP LETTER DATED	N/C	N/C	4-9-77		
SYMBOL	*	*	AG	NC	

	REC'D		NEED		REC'D		NEED		REC'D		NEED	
NOTICE					4-21-77							
HISTORY	7-21-73		9-21-73	X	6-30-77				02/10/06			
SUMMARY									3/6/00			
IES/ELECTRIC LOG												
DIRECTIONAL SURV.												
CORE/SWS DESCIP.					VERT LOG							
DIPMETER RESULTS					11/1/88							
OTHER												
RECORDS COMPLETE	9-21-73		9-21-73		(2)				3/13/00			

ENGINEERING CHECK				CLERICAL CHECK			
T-REPORTS				POSTED TO 121		170 MAILED	FINAL LETTER
OPERATOR'S NAME							MAILED
WELL DESIGNATION							
LOC. & ELEV.							RELEASE
SIGNATURE							BOND
SURFACE INSPECTION							
FINAL LETTER OK							

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company  
 Well: Porter 47  
 A.P.I. No. 037-00734

Field: Aliso Canyon  
 Surface Location: Sec 28 3N 16W S.B.B.M.  
 Mark Kuncir  
 Title: Storage Field Engineer  
(President, Secretary, or Agent)

Date: 03/03/2006

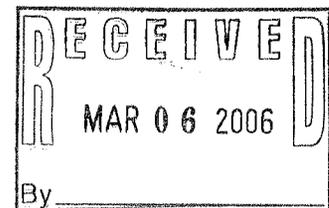
Signature:   
(Person Submitting Report)

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

Telephone Number: 818-700-3810

**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
01/23/2006	RU Spicer W/L. RIH w/ 1-3/4" x 30' drift tool to clear tbg. Tagged fill @ 8348'. RD W/L.
02/22/2006	MIRU Schlumberger W/L. RIH w/ PDC GR-NL tool and tagged @ 8311'. RIH w/ 1-11/16" strip gun and perforated the 5" liner w/ 2 SPF (Enjet-DP 1.69", EF3, RDX, ~0.28" hole) from 8308-8300' (Run 1, 8'). Closed well in overnight.
02/23/2006	RIH w/ 1-11/16" strip gun and perforated the 5" liner w/ 2 SPF from 8280-8265', 8265-8250', 8223-8211', 8211-8200' and 8189-8174' (Runs 2 - 6, 68'). Top gun canceled because it was too close to the tbg tail @ 8158'. RD W/L.



**PERMIT TO CONDUCT WELL OPERATIONS**

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

Gas Storage

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

Ventura, California  
February 15, 2006

Your \_\_\_\_\_ proposal to \_\_\_\_\_ reperformate \_\_\_\_\_ well "Porter" 47  
A.P.I. No. 037-00734 \_\_\_\_\_ Sec. 28, T. 3N, R. 16W, SB B.&M.,  
Aliso Canyon \_\_\_\_\_ field, \_\_\_\_\_ area, Sesnon-Frew \_\_\_\_\_ pool  
Los Angeles \_\_\_\_\_ County, dated 02/9/2006 received 2/10/2006 has been examined in conjunction  
with records filed in this office.

**THE PROPOSAL IS APPROVED PROVIDED THAT:**

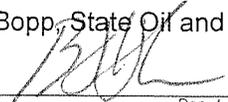
1. Wire line operations are conducted through at least a 5M lubricator.
2. This office shall be consulted before initiating any changes or additions to this proposed operation or if operations are to be suspended.

The Division recommends, as a minimum, that carbon monoxide monitoring equipment and a vent line be installed and maintained operational during all extensive perforating operations.

SAF:sf

Engineer Steven A. Fields  
Phone (805) 654-4761

Hal Bopp, State Oil and Gas Supervisor

By   
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 has been completed or the operations have been suspended.**

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

NOTICE OF INTENTION TO REWORK / REDRILL WELL **P206-4**

C.E.Q.A. INFORMATION (when re-drilling or deepening only)			
Exempt <input type="checkbox"/>	Neg. Dec. <input type="checkbox"/>	E.I.R. <input type="checkbox"/>	Document not required by local jurisdiction <input type="checkbox"/>
Class _____	S.C.H. No. _____	S.C.H. No. _____	
See Reverse Side			

FOR DIVISION USE ONLY			
	Forms		EDP Well File
Bond	OGD114 <input checked="" type="checkbox"/>	OGD121 <input checked="" type="checkbox"/>	
1000 000	111 <input checked="" type="checkbox"/>	115 <input checked="" type="checkbox"/>	

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

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework/redrill well Porter 47 (Well designation) API No. 03700734  
(Circle one)

Sec. 28 T. 3N R. 16W S.B.&M. Aliso Canyon Gas Storage Field  
Los Angeles County.

1. The complete casing record of the well (present hole), including plugs and perforations, is as follows:

- 0-516' 13-3/8" 55# J55 Surface csg;
- 0-7005' 7" 26, 28 & 30# J55 Prod. csg;
- 6889-8366' 5" 18# J55 FJ liner;
- 2-7/8" 6.5# J55 EUE 8rd tbg crossed-over to 2-3/8" 4.7# J55 Hydril SFJ tbg;
- 5" pkrs @ 6891' and 8153';
- 5" liner perforated w/ four 1/2" HPF from 8200-8223', 8250-8280', 8300-8354' and 8159-8189'.

**GS**

2. The total depth is: 8366 feet. The effective depth is: 8364 feet.

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

4. Present zone pressure: 2740 psi. Anticipated/existing new zone pressure: 2740 psi.

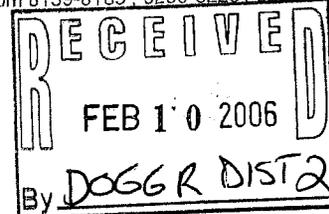
5. Last produced: 12/2005 2.2 (Date) (Oil, B/D) 0.3 13,409 (Water, B/D) (Gas, Mcf/D)

(or)  
Last injected: - (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psi/g)

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: (A complete program is preferred and may be attached.)

Re-perforate storage-zone (Sesnon) w/ 2 SPF (1-11/16" strip gun loaded w/ Enjet-DP 1.69", RDX, ~0.28" hole) from 8159-8189', 8200-8223', 8250-8280' and 8300-8308' (91' total).



For re-drilling or deepening: NA (Proposed bottom-hole coordinates) NA (Estimated true vertical depth)

The division must be notified if changes to this plan become necessary.

Name of Operator Southern California Gas Company	Telephone Number 818.700.3810	Zip Code 91326
Address 12801 Tampa Avenue	City Northridge	Date 2/9/06
Name of Person Filing Notice Mark T. Kuncir	Signature <i>[Signature]</i>	

File In Duplicate

STATE OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Ventura, California

November 6, 1991

R. D. Phillips, Agent  
SOUTHERN CALIFORNIA GAS COMPANY  
P.O. Drawer 3249 Mail Location 22GO  
Los Angeles, CA 90051-1249

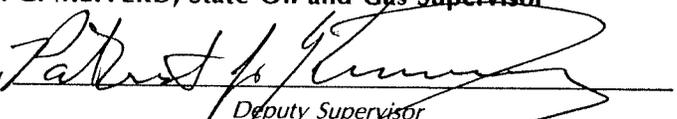
Your request, dated July 24, 1991, proposing to change the designation of well(s) in Sec. 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon field, Los Angeles County, District No. 2, has been received.

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

<u>FROM</u>	<u>TO</u>
"SFZU" P-4 (037-00699)	"Porter" 4 (037-00699)
"SFZU" P-25 (037-00712)	"Porter" 25 (037-00712)
"SFZU" P-26 (037-00713)	"Porter" 26 (037-00713)
"SFZU" P-34 (037-00721)	"Porter" 34 (037-00721)
"SFZU" P-35 (037-00722)	"Porter" 35 (037-00722)
"SFZU" P-38 (037-00725)	"Porter" 38 (037-00725)
"SFZU" P-39 (037-00726)	"Porter" 39 (037-00726)
"SFZU" P-40 (037-00727)	"Porter" 40 (037-00727)
"SFZU" P-41 (037-00728)	"Porter" 41 (037-00728)
"SFZU" P-42 (037-00729)	"Porter" 42 (037-00739)
"SFZU" P-43 (037-00730)	"Porter" 43 (037-00730)
"SFZU" P-44 (037-00731)	"Porter" 44 (037-00731)
"SFZU" P-46 (037-00733)	"Porter" 46 (037-00733)
✓ "SFZU" P-47 (037-00734)	"Porter" 47 (037-00734)

M. G. MEFFERD, State Oil and Gas Supervisor

By

  
Deputy Supervisor  
PATRICK J. KINNEAR

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

DIVISION OF OIL AND GAS  
RECEIVED  
JUN 30 1977  
SANTA PAULA, CALIFORNIA

**History of Oil or Gas Well**

Operator SOUTHERN CALIFORNIA GAS COMPANY Field or County Aliso Canyon  
Well name and No. PORTER #47, Sec. 28, T. 3N, R 16W, S. BB. & M.  
A.P.I. well No. 037-00734 Name P. S. Magruder, Jr. Title Agent  
Date June 27, 1977. (Person submitting report) (President, Secretary or Agent)

Signature P. S. Magruder, Jr.

P. O. Box 3249, Terminal Annex, 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

5-10-77 Tore out California Production Service Rig #D-3 from Porter #25 and moved and rigged up on Porter #47.

5-11-77 Finished rigging up. Circulated and conditioned drilling fluid. Removed Christmas tree and installed Class III B.O.P.E.

5-12-77 Finished installing Class III B.O.P.E.

Tested B.O.P.E. with water as follows:

Blind Rams	at	4300	psi	for	37	minutes	-	O.K.
Pipe Rams	"	4500	"	"	29	"	-	O.K.
Hydril Bag	"	3000	"	"	27	"	-	O.K.

Tested B.O.P.E. with nitrogen as follows:

Hydril Bag	at	3000	psi	for	22	minutes	-	O.K.
Pipe Rams	"	4000	"	"	21	"	-	O.K.
Blind Rams	"	4000	"	"	24	"	-	O.K.

All above tests witnessed by D.O.G.

Pulled hydrostatic packer loose with 85,000#. Pulling out of hole with 2 7/8" tubing and laying down 1" side line.

5-13-77 Finished laying down 2 7/8" tubing with 1" GST side line, Page ball valve and packer. Ran in hole to 2000'.

5-14-77 Ran chemical cutter and cut 2 3/8" tubing at 8130'. Pulled tubing. Picked up fishing tools. Ran in hole. Jarred 5" 18# liner hanger out of hole. Recovered 5" 18# liner hanger with drive-over adapter. Ran in hole. Jarred out landing nipple and 15' 2 3/8" tubing.

JUN 30 1977

SANTA PAULA, CALIFORNIA

- 5-15-77 Rig and crew idle.
- 5-16-77 Finished coming out of hole with spear - no recovery. Ran in hole with overshot - got over fish - pulled out of hole, no recovery. Ran in hole with 4 1/8" mill to 6850'.
- 5-17-77 Finished running in to 8112' with 4 1/8" mill. Milled from 8112' to 8118'. Circulated well clean. Pulled out. Made up overshot. Ran in hole to 6850'.
- 5-18-77 Ran in hole with overshot to 8118'. Worked over fish and jarred fish loose. Pulled out of hole. Recovered 13' 2 3/8" liner. Picked up junk mill. Ran in hole and milled 2 3/8" liner from 8130' to 8132' to remove damaged pipe. Circulated hole clean. Pulled out to 5000±.
- 5-19-77 Finished pulling out of hole. Picked up four joints of 3 3/4" wash pipe with 4 1/8" shoe. Ran in hole and located fill at 8162' or 44' below top of fish. Washed over from 8162' to 8233' (top of packer). Circulated hole clean. Pulled up to 2000'.
- 5-20-77 Finished pulling out of hole. Picked up overshot. Ran in hole and worked over fish at 8132'. Pulled fish out of packer at 8233'. Pulled out of hole. Recovered 96' of fish or all of 2 3/8" liner. Picked up 2 3/8" Hydril tubing and ran on 2 3/8" 8RD tubing. Ran in hole, stabbed through packer at 8233' and ran to 8326' (no fill). Circulated 1/2 hour. Pulled to 8225'. Circulated hole clean. Pulled out of hole.
- 5-21-77 Finished pulling out of hole. Ran in hole with mill-over tool. Milled on packer. Jarred on packer. Pulling out of hole.
- 5-22-77 Rig and crew idle.
- 5-23-77 Finished pulling out of well with packer mill. Left retriever in well. Ran in well to 8234'. Milled on packer, making approximately 6" and dulling mill. Pulled out for new mill.
- 5-24-77 Finished pulling out of well. Picked up new milling shoe. Ran in well and milled on packer at 8234'. Milled on packer for one hour. Packer moved down. Pushed packer to 8305'. Pulled out of well. Picked up spear and ran in to 8305'. Pulled out of hole with no recovery. Picked up overshot and ran in to 2000'.
- 5-25-77 Ran in well with overshot. Worked over fish. Pulled out of well with no recovery. Laid down fishing tools and wash pipe. Ran in well with flat bottom mill. Milled on packer and junk from 8288' to 8355'. Pulled out of well.

5-26-77 Finished pulling out of well with mill. Picked up 6" bit and scraper. Ran in well to top of liner at 6889'. Pulled out of well. Ran drillable bridge plug on wireline and using reference collars, set at 8153'. Shot four 1/2" holes at 8137'. Picked up WSO tools. Ran in well 500' and filled tubing with polymer drilling fluid. Running in well.

5-27-77 Ran in well with WSO tools. Set packer at 8096', tail at 8100'. Tool open at 8:15 a.m. with no blow for 15 minutes, weak blow for 10 minutes, then dead throughout test of 90 minutes. Pulled tester out of well, had no recovery. Pressures as follows:

IH - 3650 - 3650 psi  
 FH - 3650 - 3650 psi  
 IF - 250 - 300 psi  
 FF - 250 - 300 psi

DIVISION OF OIL AND GAS  
 RECEIVED

JUN 30 1977

SANTA PAULA, CALIFORNIA

WSO by Company on holes at 8137'. Ran in well with 5" 18# Full Bore to 8150' and changed over to fresh water with surface tension agent. Tested as follows:

8153' - 8139' with 2000 psi for 20 minutes - O.K.  
 8153' - 8108' with 2000 psi for 15 minutes - Lost 400 psi.  
 8108' - Surface with 2000 psi for 20 minutes - Lost 400 psi.  
 6905' - Surface with 2700 psi for 70 minutes - O.K.

5-28-77 Finished pulling out with full bore. Picked up new full bore and ran in well. Tested 7" casing from 6350' to surface - no test - packer leaking. Pulled out of well, changed full bore. Hydrottested tubing in well. Test casing as follows:

6340' to Surface with 3000 psi for 60 minutes - O.K.  
 5085' to Surface with 3200 psi for 60 minutes - O.K.

5-29-77 Rig and crew idle.

5-30-77 Pulled up to 4389' - tried to test casing but retainer did not hold. Pulled out of well. Ran in well with 7" scraper to 4395'. Backscuttled well clean. Pulled out of well. Ran in well with Lok-Set packer to 4389'. Tested as follows:

4389' to Surface with 3400 psi for 60 minutes - O.K.  
 3700' to Surface with 3800 psi for 60 minutes - O.K.  
 2100' to Surface with 4000 psi for 60 minutes - O.K.

Pulled out of well. Picked up 5" casing scraper, ran in well.

- 5-31-77 Ran in well to 8153' with bit and scraper. Backscuttled well clean. Pulled out of well. Ran Lok-Set to 8138' and tested bridge plug. Pulled up well looking for leaks. Found leak at 8137' (new WSO hole). Pumped into WSO holes with 10 cu.ft. per minute under 3400 psi. Pulled up well looking for leaks. Found leak at 7328'. Ran in to 8150', changed over to polymer. Changed pipe rams. Pulled up to 7820'. Squeezed holes at 8137' with 20 cu.ft. water ahead, 25 sacks Neat cement and 20 cu.ft. water behind. Displaced with 253 cu.ft. drilling fluid. Held at 3300 psi. Held 1200 psi on annulus. Pulled up 120'. Backscuttled. Pulled out of liner.
- 6- 1-77 Ran in well and set squeeze tool at 7300'. Unable to obtain breakdown on leak at 7328'. Pulled out of well. Rigged up and shot four 1/2" holes at 7328'. Ran in well and set squeeze tool at 7291'. Pumped into holes with 4 cu.ft./minute under 3900 psi. Pulled tool up to 6978'. Pumped 20 cu.ft. water ahead; 25 sacks Neat Class "G" cement, 20 cu.ft. water behind. Displaced with 216 cu.ft. drilling fluid. Held 1200 psi on annulus. Pumped 15 cu.ft. cement away, holding 3300 psi for 30 minutes. Pulled out of well. Picked up 4 1/8" bit and scraper. Ran in well.
- 6- 2-77 Ran in well with 4 1/8" bit and scraper. Drilled out cement from 7141' to 7350'. Pressure tested casing from surface to 8100' with 2000 psi for 33 minutes. . . . lost 250 psi. Circulated well clean. Pulled out of well with bit and scraper. Ran in well with squeeze tool.
- 6- 3-77 Ran in well to 7291'. Tested from 7291' to 8115' with 4000 psi. Pressure dropped to 2200 psi. Ran in to 7353'. Tested from 7353' to 8115' with 2000 psi for 60 minutes - O.K. Tested from 7353' to Surface with 2000 psi for 60 minutes - O.K. Pulled out of well. Picked up 4 1/8" bit and scraper. Ran in to 7353'. Pushed cement plug to 8076'. Drilled cement to 8153'. Circulated hole clean. Pulled out of well.
- 6- 4-77 Pulled out of well. Picked up squeeze tool. Ran in well to 8150'. Changed over to fresh water. Tested casing from 8100' to 8155' with 2000 psi - lost 200 psi in 30 minutes. Tested from 8150' to 8155' with 2000 psi for 14 minutes - O.K. Tested from 8102' to surface with 2000 psi - lost 300 psi. Had leaks in squeeze tool and leak in B.O.P.E. rams. Pulled out of well. Ran in well with new fullbore. Preparing to change rams.
- 6- 5-77 Rig and crew idle.
- 6- 6-77 Installed new pipe rams. Ran in well to 7355'. Tested from 7355' to surface with 2000 psi for 60 minutes - O.K. Tested from 7355' to 8155' - no good. Tested from 8107' to 8155' - pressure dropped from 2000 psi to 1800 psi in 30 minutes. Breakdown holes with 5 cu.ft./minute at 3800 psi. Cemented with 20 cu.ft. water ahead, 25 sacks Neat cement, 20 cu.ft. water behind, displaced with 246 cu.ft. testing fluid. Squeezed approximately 22 cu.ft. away, holding 4000 psi for two hours. Worked squeeze tool loose. Pulled out of well wet. Had 10 joints of 2 3/8" tubing filled with cement. Ran in well with 4 1/8" bit and scraper.

- 6- 7-77 Finished running in well with 4 1/8" bit and scraper. Located cement at 7821'. Drilled out cement to 8044' (93' above WSO holes at 8137'). Cleaned out stringers to 8155'. Circulated hole clean. Measured tubing out of well. Made up squeeze tool. Ran in well to top of liner.
- 6- 8-77 Finished running in well to 8107'. Tested from 8107' to 8155' with 2000 psi for 60 minutes - lost 200 psi in 60 minutes. Tried to obtain break-down at 4000 psi - losing 400 psi in 8 minutes. Pulled out of well. Shot four 1/2" holes at 8136'. Ran in well with WSO tool with 540' water cushion. Tool open for 1-1/2 hours with very weak blow for one minute - well dead throughout the test. Pulling out of well with WSO tools.
- 6- 9-77 Finished pulling out with WSO tool. Ran in well with squeeze tool. Tested from 8107' to 8155' with 4000 psi - unable to obtain breakdown on WSO holes at 8137'. Pulled out of well. Ran in with 4 1/8" junk mill and junk sub. Changed over from water to polymer. Cleaned out to top of packer and milled on same. Pulled out of liner.
- 6-10-77 Ran in well and drilled out bridge plug. Cleaned out to 8355'. Circulated bottoms up. Pulled out of well. Ran 4 1/8" bit and scraper in well to 8355'. Circulated bottoms up. Pulled out of well.
- 6-11-77 Ran Otis 5" 18# Permatrtrieve packer and set same at 8153'. Ran Otis 5" 18# Permatrtrieve packer and set same at 6891'. Ran Otis 12 seals, X-over sub, 41 joints (1256') 2 3/8" 4.6# Hydril super flush joint. Hydril x Otis X-over sub, 4 Otis seals, Otis Latch-in-locator. 2 3/8" 8RD x 2 7/8" 8RD X-over sub, 10' Otis blast joint, Otis No-Go nipple, 20' Otis blast joint, Otis safety system, 2 7/8" 6.5# 8RD J-55 tubing. Changing collars, using Baker Seal and hydrotesting all to 5000 psi for one minute.
- 6-12-77 Rig and crew idle.
- 6-13-77 Continued running tubing string and changing collars. Hydrotested at 5000 psi for one minute. Spaced out tubing. Spotted workover fluid with inhibitor between both PW packers. Landed tubing with 12,000# compression. Pulled 20,000# over to check J-latch. Removed B.O.P.E. and reinstalled Christmas tree.
- 6-14-77 Tested tubing head flange, doughnut and Christmas tree at 5000 psi for 20 minutes. Changed over from polymer workover fluid to lease salt water. Ran wireline pulling tool and retrieved side-door choke. Ran tubing plug and set in "XN" nipple. Tested PW packer and seals at 1900 psi for 20 minutes - O.K. Retrieved plug in "XN" nipple. Crew and rig released at 4:00 P.M. (6-14-77)

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

Report on Operations

No. T 277-124

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

Santa Paula, Calif.  
June 27, 1977

DEAR SIR:

Operations at well No. "SFZU" P-47, API No. 037-00734, Sec. 28, T. 3N, R. 16W,  
S.B. B & M. Aliso Canyon Field, in Los Angeles County, were witnessed  
on 5/12/77. Mr. P.R. Wycle, representative of the supervisor was  
present from 1500 to 1700. There were also present G. Osburn, foreman

Present condition of well: No additions to the casing record since proposal dated 4/13/77.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

M. G. MEFFERD

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

By John L. [Signature] Deputy

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

REPORT ON PROPOSED OPERATIONS No. P 277-133

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

Santa Paula, Calif.  
Apr. 22, 1977

DEAR SIR:

Your proposal to rework gas storage Well No. "SFZII" P-47 (037-00734),  
Section 28, T. 3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County,  
dated 4/13/77, received 4/21/77, 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, 3M 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. MEFFERD (acting)

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

By [Signature], Deputy

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

APR 21 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 ANA, 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. PORTER #47, API No. -, Sec. 28, 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. 8366'
- Complete casing record, including plugs and perforations:
  - 13 3/8" cemented 516'
  - 7" cemented 7005'
  - 5" cemented 8364' - WSO 6889'; 8138'; 8247'; 8193'
  - Perforated 8159'-8354'

- Present producing zone name SESNON Zone in which well is to be recompleted -
- Present zone pressure 2500 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, kill well and install B.O.P.E.
- Pull gas lift valves and hydrostatic packer.
- Pressure test casing and perform indicated remedial work.
- Set Permatrieve packer at 8140'.
- Run tubing and safety system 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 90051  
 (City) (State) (Zip)  
 Telephone Number (213) 689-3561

SOUTHERN CALIFORNIA GAS COMPANY  
 (Name of Operator)  
 By P.S. McGruder, Jr. 4-13-77  
 (Name) (Date)  
 Type of Organization Corporation  
 (Corporation, Partnership, Individual, etc.)

**DIVISION OF OIL AND GAS**

DIVISION OF OIL AND GAS  
 RECEIVED

SEP 21 1973

**History of Oil or Gas Well**

OPERATOR Pacific Lighting Service Company FIELD Aliso Canyon SANTA PAOLA, CALIFORNIA

Well No. Porter 47, Sec. 28, T. 3N, R. 16W, S.B. B. & M.

Date September 19, 1973 Signed P. S. Magruder Jr.  
P. O. Box 54790, Terminal Annex P. S. Magruder  
Los Angeles, California 90051 (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	
7-23	California Production Service rig No. D-3 moved in.
7-24	Rigged up. Killed well with 320 barrels of 63#, 40 seconds, polymer workover fluid. Installed Class III B.O.P.E.
7-25	Pulled top packer loose with 90,000# and bottom packer with 85,000#. Pulled approximately 5000' of 2-7/8" tubing and 1" GST control line. Had some difficulty pulling first stand, possibly due to sand on bottom packer. Well started unloading after bottom packer was pulled above liner top at 6889'. Closed Hydril bag and circulated and conditioned mud for 3 hours. No further problems with unloading.
7-26	Pulled balance of tubing, control line and tools. Ran 3-7/8" bit and scraper for 5" liner. Cleaned out fill from 8313' to top of junk at 8357'. Had gas kick while cleaning out. Circulated and conditioned mud to remove gas.  Upon pulling the 2-3/8" tubing, found a 3/8" diameter sand blasted hole near the top of the first joint above the 5" packer (opposite the S-6 sand). Decided to run and gravel pack a slotted liner.
7-27	Set Otis WB packer at 8233' in 5", 18# liner using Welex wireline.
7-28	Idle - waiting on gravel packing tools.
7-29	Idle - Sunday.
7-30	Idle - waiting on gravel packing tools.
7-31	Idle - waiting on gravel packing tools.
8-1	Ran in with 2-3/8" perforated liner and tail pipe for gravel packing. Unable to circulate down tubing prior to gravel packing, but could circulate down annulus, indicating that tail pipe was plugged.

SEP 21 1973

1973

SANTA PAULA, CALIFORNIA

- 8-2 Pulled 2-3/8" liner. Found top joint of 1" GST gravel packing tail pipe plugged with scale. Ran 1-1/4" drill tubing stinger (+ 180') on 2-3/8" and 2-7/8" tubing. Tagged packer at 8226'. Stung through packer with 1-1/4" drill tubing and tagged bottom (top of junk) at 8357'. No fill. Pulled out and made up 2-3/8" perforated liner and tools. Started in hole with liner.
- 8-3 Ran 2-3/8" liner (details attached). Burns gravel packed with 7 cu. ft. of 6-9 gravel (6.15 cu. ft. calculated to fill). Started job at 10:30 AM and finished at 2:15 PM. Initial pressure 800 psig, final pressure 1000 psig. Backscuttled a trace of gravel over shaker. Circulated down tubing and repressured to 1000 psig. Went through liner releasing procedure, pulled up and circulated. Pressure drop appeared to indicate that liner had been successfully released. Pulled up out of 5" liner. Shut rig down for repairs.
- 8-4 Idle - repairing rig transmission.
- 8-5 Idle - Sunday.
- 8-6 Pulled and recovered 2-3/8" liner setting tools, gravel packing cups and 1" tail pipe. Set Burns combination adapter and tie back sleeve with lead seal and hold down slips, top at 8105.49' (correlating liner detail with wireline top of Otis W.B. packer at 8233'). Pulled adapter setting tool. Made up tie back sleeve packer, Page safety valve (2-7/8" RTL), etc. Tested safety valve with 5000 psig for 15 minutes.
- 8-7 Ran 2-7/8" tubing and 1" GST control line. With 2385' of 1" GST in hole above Page safety valve, pressured 1" GST to 5000 psig with N<sub>2</sub>. Although pressure gauge showed no drop in pressure, bubbling in amulus appeared to indicate leak in 1" GST. Pulled 1" GST with pressure still on same and found leak in 3rd. pup joint below hanger. Replaced seal in same.
- 8-8 With 2385' of GST in hole above Page safety valve, retested successfully with 5000 psig of N<sub>2</sub> for one hour. With 3672' of 1" GST in hole above Page safety valve, tested successfully with 4950 psig of N<sub>2</sub> for one hour. With 4946' of 1" GST in hole above Page safety valve, pressured up with N<sub>2</sub> to test and had leak. Will pull 1" GST doubles run since test at 3672' and replace seal rings in all tool joints that have been broken out.
- 8-9 Replaced seals in tool joints made up since successful test made with 3672' of 1" GST in hole above safety valve. With 4946' of 1" GST above Page safety valve, retested successfully with 4980 psig for one hour. With 6214' of 1" GST in hole above Page safety valve, pressure tested successfully with N<sub>2</sub> with 4950 psig for one hour. Ran balance of 1" GST. Made up donut and short length of 1/4" control line between 1" GST and donut. Pressured with N<sub>2</sub> and found leak in coupling in third pup joint below donut. Replaced seal ring, pressured up with N<sub>2</sub> and had another down hole leak.

1973

8-10 Pulled 2-7/8" tubing and 1" GST leaving 6214' of 1" GST in hole. Retested and had minute leak even though same interval had been successfully tested 8-9-73. Decided to continue running 1" GST. Ran balance of 1" GST replacing all seals. Made up donut and short section of 1/4" control line between 1" GST and donut. Pressure tested successfully with 4950 psig for one hour. No bubbling apparent in annulus even though test with 6214' of 1" GST in hole above Page safety valve showed minute bubbles. (Tubing detail attached).

Set plug in Otis "X" nipple at 6835.25' and closed Otis "XO" sleeve at 6743.65'.

Pressured tubing to 2000 psig with rig pump to set Otis RH packer at 6834.30'. Checked packer setting by pressuring annulus with rig pump at 1150 psig for 15 minutes. Opened Otis "XO" sleeve at 6743.65' and pulled plug from Otis "X" nipple at 6835.25'. Bled N<sub>2</sub> from control line to close Page safety valve at 6830.05'. Removed B.O.P.E.

8-11 Installed balance of Xmas tree above tubing head. Tested between hydraulic packing on donut and lower seal on extended neck of donut with 3450 psig for 20 minutes. Tested above upper seal on extended neck of tubing donut (testing adapter flange, master gate, cross, unbolt and wing valves) with 3500 psig for 15 minutes. Displaced workover fluid through annulus with lease salt water. Pressured control line to 5000 psig with N<sub>2</sub>.

Rig released for move to SS-7.

8-12 Pressure on control line holding at 5000 psig.

8-13 Pressure on control line holding at 5000 psig.

Rigged up Otis wireline truck. Attempted to run plug and seat same in Otis "XN" no-go landing nipple at 8232.32'. Plug has 1.875" O.D. which stopped at 6900' in 2-3/8" tubing which has 1.995" I.D. Ran tubing drift with 1.90625" O.D. which went to 8100'.

8-14 Rigged up Otis wireline truck. Set Otis type "XX" plug in Otis type "XN" landing nipple at 8232.32', isolating the S-4 Zone from the S-8 Zone. No difficulty in setting plug.

8-15 Unloaded approximately 250 barrels of lease salt water from well with N<sub>2</sub>.

Porter No. 47  
Liner Detail - 2-3/8" (top at 8105.49')

	<u>Length</u>	<u>Depth</u>
Burns combination adapter & tie back sleeve, lead seal and hold down slips	6.32	8111.81
Burns landing nipple, Sec. FJ pin down	3.51	8115.32
1 jt. 2-3/8" 4.6# N-80 Sec. FJ	29.94	8145.26
X-over Sec. FJ box x 8rd. EU pin	0.58	8145.84
Otis "X" landing nipple 2-3/8" 1.875" I.D.	1.00	8146.84
Pup 2-3/8" 4.7# N-80 8rd. EU with 20M x 1-1/2" slots, 12R on 6" C	6.10	8152.94
Otis polished nipple 2-3/8" 1.875" I.D.	1.61	8154.55
X-over 8rd. EU box up x Sec. FJ pin down	0.80	8155.35
Pup 2-3/8" 4.7# N-80 Sec. FJ box up x Sec. FJ pin down	6.00	8161.35
X-over Sec. FJ box up x 8rd. EU pin down	0.68	8162.03
Otis "X" landing nipple 2-3/8" 1.875" I.D.	0.97	8163.00
Pup 2-3/8" 4.7# N-80 8rd. EU with 20M x 1-1/2" slots, 12R on 6" C	10.00	8173.00
Pup (perforated as above)	10.12	8183.12
Pup (perforated as above)	10.11	8193.23
Otis polished nipple 2-3/8" 1.875" I.D.	1.61	8194.84
X-over 8rd. EU box up x Sec. FJ pin down	0.72	8195.56
Pup 2-3/8" 4.7# N-80 Sec. FJ box up x 8rd. EU pin down	5.00	8200.56
Otis "X" landing nipple 2-3/8" 1.875" I.D.	0.98	8201.54
Pup 2-3/8" 4.7# N-80 8rd. EU with 20M x 1-1/2" slots, 12R on 6" C	8.11	8209.65
Pup (perforated as above)	8.12	8217.77
Pup (perforated as above)	8.10	8225.87
Otis polished nipple 2-3/8" 1.875" I.D.	1.60	8227.47
X-over 8rd. EU box up x Sec. FJ pin down	0.70	8228.17
Pup 2-3/8" 4.7# N-80 Sec. FJ box up x 8rd. EU pin down	3.00	8231.17
Otis "XN" no-go landing nipple 2-3/8" with 1.875" I.D. & 1.791" no-go	1.15	8232.32
Otis stop with straight slot locator assembly	0.68	8233.00
 Total Liner	 121.19'	
 Seals - 6' total, 1' apart plug guide on bottom	 7.56	 8240.56
 Otis WB packer at 8233' with 2.55" bore.		

RTER 47 TUBING DETAIL - 8-10-12

	<u>Length</u>	<u>Depth</u>
Below K. B.	6.92	6.92
Donut with fatigue nipple	1.10	8.02
Pup 2-7/8" 8rd. J-55	2.24	10.26
19 jts. 2-7/8" 8rd. J-55	600.16	610.42
Pup 2-7/8" 8rd. N-80	4.02	614.44
2-7/8" box w/hanger F/1" GST	.60	615.04
Pup 2-7/8" 8rd. N-80	1.60	616.64
40 jts. 2-7/8" 8rd. J-55	1262.29	1878.93
Pup 2-7/8" 8rd. N-80	4.05	1882.98
2-7/8" box w/hanger F/1" GST	.60	1883.58
Pup 2-7/8" 8rd. N-80	1.60	1885.18
40 jts. 2-7/8" J-55	1267.88	3153.06
Pup 2-7/8" 8rd. N-80	4.05	3157.11
2-7/8" box w/hanger F/1" GST	.60	3157.71
Pup 2-7/8" 8rd. N-80	1.60	3159.31
25 jts. 2-7/8" J-55	791.71	3951.02
Pup 2-7/8" 8rd. J-55	4.05	3955.07
Camco KBMG with 1/4" BK valve 1050#	8.00	3963.07
15 jts. 2-7/8" 8rd. J-55	476.02	4439.09
Pup 2-7/8" 8rd. N-80	4.05	4443.14
2-7/8" box w/hanger F/1" GST	.60	4443.74
Pup 2-7/8" 8rd. N-80	1.60	4445.34
20 jts. 2-7/8" J-55 8rd.	632.77	5078.11
Pup 2-7/8" 8rd. J-55	4.05	5082.16
Camco KBMG with 1/4" BK valve 1025#	8.00	5090.16
20 jts. 2-7/8" J-55 8rd.	634.46	5724.62
Pup 2-7/8" 8rd. N-80	4.04	5728.66
2-7/8" box w/hanger F/1" GST	.60	5729.26
Pup 2-7/8" 8rd. N-80	1.60	5730.86
8 jts. 2-7/8" 8rd. J-55	249.22	5980.08
Pup 2-7/8" 8rd. J-55	4.05	5984.13
Camco KBMG with 1/4" BK valve 1000#	8.02	5992.15
24 jts. 2-7/8" 8rd. J-55	748.35	6740.50
2-7/8" Otis sliding sleeve type "XO" 2.313" bore	3.15	6743.65
1 jt. 2-7/8" 8rd. J-55	31.76	6775.41
Pup 2-7/8" 8rd. J-55	4.05	6779.46
Camco KBMG with 1/4" BK valve 975#	8.02	6787.48
1 jt. 2-7/8" 8rd. J-55	31.76	6819.24
Otis "X" nipple 2-7/8" 2.313" bore	.96	6820.20
Pup 2-7/8" 8rd. N-80	4.10	6824.30
2-7/8" box w/hanger threaded F/1" GST	.60	6824.90
Pup 2-7/8" N-80 8rd.	1.60	6826.50
Page safety valve 2-7/8" RTL	3.55	6830.05
Otis Hyd. packer 7" type RH	4.25	6834.30
Otis "X" nipple 2-7/8" 2.313" bore	.95	6835.25
1 jt. 2-7/8" 8rd. J-55	31.36	6866.61
2-7/8" x 2-3/8" 8rd. X-over	1.11	6867.72
38 jts. 2-3/8" 8rd. J-55	1164.43	8032.15
2-3/8" Otis sliding sleeve type "XO" 1.875" bore	2.85	8035.00
2 jts. 2-3/8" 8rd. J-55	61.77	8096.77
Burns tie back stem )	.50	8097.27
Tail of tie back stem) - Drawing in well file	4.68	8101.95

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 273-345

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

Santa Paula Calif.  
August 6, 1973

DEAR SIR:

(037-00734)

Your proposal to alter casing Well No. "SPZU" P-47  
Section 28, T. 3N, R. 16W, S. 8, B. & M., Aliso Canyon Field, Los Angeles County,  
dated 7/26/73, received 8/3/73, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT ADEQUATE BLOWOUT PREVENTION EQUIPMENT SHALL  
BE INSTALLED AND MAINTAINED IN OPERATING CONDITION AT ALL TIMES.

Blanket Bond  
ALL:r  
cc: Operator

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

By *LOU R. [Signature]*, Deputy

AUG 3 1973

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

SANTA PAULA, CALIFORNIA

Los Angeles Calif. July 26, 19 73

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 **setting a permanent packer** commence the work of ~~deepening, redrilling, plugging or altering casing~~ at Well No. SFZU P47  
(Cross out unnecessary words)

Sec. 28, 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. TD 8366'; Pg 8360'

2. Complete casing record, including plugs:

13-3/8", 61# c 516'  
7", 26, 28 & 30# c 8050'  
1475'-5", 18# c 8364'  
TLH 6889'

WSO on splice & 4 holes @ 8183' approved by D.O.G.  
Pfs: 8200'-8223'; 8250'-8280'; 8300'-8354'; Old perfs, all cemented off. New pfs. (3-27-73) 8159'-8189', 8200'-8223', 8270'-8276' and 8330'-8343'.

3. Last produced. (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

The proposed work is as follows:

Set permanent packer at 8233'.

Run and gravel pack a 2-3/8" slotted liner from 8233'-8114'.

MAP	MAP DATE	DATE	DATE	FORMED	
				101	102
			BB.	✓	✓

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.B. Maguire Jr.

## DIVISION OF OIL AND GAS

JUL 23 1973

### History of Oil or Gas Well

SANTA PAULA, CALIFORNIA

OPERATOR Pacific Lighting Service Company FIELD Aliso Canyon

Well No. Porter 47, Sec. 28, T. 3N, R. 16W, S.B. B. & M.

Date \_\_\_\_\_, 19\_\_\_\_ Signed P. B. Maguid Jr.

P. O. Box 54790, Terminal Annex  
Los Angeles, California 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	
3-10	Moved in California Production Service and rigged up. Killed tubing with work-over fluid. Rigged up Archer Reed wireline. Pulled Otis "H" valve set in sliding sleeve at 8126'. Made run for blanking choke at 8229'. Found no choke. Upper S-8 and S-6 open for production through port collar at 8229'. Opened sliding sleeve at 8126'. Spotted pill to kill well and shut well in for one hour. Displaced salt water in annulus with workover fluid.
3-11	Idle.
3-12	Filled hole. Took 1 barrel. Tore out production head and installed class 3 B.O.P.E. Tested pipe rams with 2500 psi for 15 minutes OK. Tested bag with 1775 psi for 15 minutes OK. Measured out of hole with tubing. Ran 4-1/8" bit and 5" 18# casing scraper. Found fill at 8345'.
3-13	Circulated out fill 8345'-8357'. Hitting on iron at 8357'. Circulated on bottom 1-1/2 hours. Started out of hole. Rig engine broke down with bit and scraper at 7633'. Circulated 2 hours from 7633'. Waiting on new engine.
3-14	Replaced rig engine.
3-15	Filled hole. Took 1 barrel. Circulated 1 hour from 7633'. Pulled bit and scraper. Rigged up Dresser Atlas. Ran cement bond log 6700'-8354', neutron lifetime/gamma ray logs 7780'-8352' and densilog 7800'-8351'.
3-16	Ran 7" casing scraper. Tagged top of 5" liner at 6887'. Started out of hole. Discovered cracked brake flange. Shut down for repairs with scraper at 1532'.
3-17	Pulled 7" scraper from 1532'. Made up 5" Baker model "C" bridge plug and 12 1/2" 2-3/8" tubing on 7" Baker fullbore packer. Ran in and set bridge plug at 8122'. Set fullbore packer at 6833' with tail to 8075'. Tested casing 6833'-8122' with 1500 psi - No good. Tested from surface to 6833' with 1700 psi for 15 minutes OK. Retrieved bridge plug and reset same at 6911'. Set fullbore packer at 5609' with tail to 6851'. Tested 5609'-6911' with 1700 psi for 15 minutes OK.



1973

- 3-17 Splice OK. Pulled up and set fullbore packer at 3525'. Tested from surface to (cont'd) 3525' with 2150 psi for 15 minutes OK. Pulled up and set fullbore packer at 2505'. Tested from surface to 2505' with 3200 psi for 15 minutes OK. Pulled packer and tail.
- 3-19 Filled 7" x 13-3/8" annulus with waste rotary mud. Took 45 barrels. Tore out B.O.P.E. and tubing head. Rigged up casing jacks and spear. Cut off casing head. Welded extension on 7" casing.
- 3-20 X-rayed 7" weld OK. Cut off base plate and welded on new 13-3/8" casing head. X-rayed casing head weld OK. Relanded 7" casing with 185,000 lbs. Installed new tubing head. Tested between primary and secondary seals with 3275 psi for 15 minutes OK. Tested between secondary and tubing head seals with 3300 psi for 15 minutes OK.
- 3-21 Installed B.O.P.E. on new tubing head. Tested pipe rams and casing from surface to 6911' with 1650 psi for 15 minutes OK. Made up 5" Baker fullbore packer and retrieving tool. Retrieved bridge plug at 6911' and reset same at 8126'. Tested 5" liner with fullbore packer and isolated leak between 8038' and 8056'. With fullbore packer set at 8038' could not break down formation with 3100 psi. Pumped in 2 sacks sand. Pulled up and set fullbore at 7864'. Rigged up Go International and jet perforated 4 holes at 8056'. Could not get breakdown with 3100 psi.
- 3-22 With fullbore hanging at 8093' pumped in 500 gallons of 15% HCl. Pulled up and set packer at 7281'. Broke down with 4000 psi. Took fluid at a rate of 8 cubic feet per minute at 3500 psi. Hung fullbore at 7864'. With 20 cu. ft. fresh water ahead, mixed and pumped 50 sacks class "G" cement with 0.75% CFR-2. Displaced with 5 cu. ft. fresh water and 161 cu. ft. workover fluid. Closed tool and squeezed 49 cu. ft. cement to formation. Final pressure 3300 psi. Released pressure and had 2 cu. ft. bleed back. Cement in place 2:25 PM. Used Halliburton equipment. Pulled fullbore packer and started in hole with 4-1/8" bit and 5" casing scraper.
- 3-23 No morning tour. Waiting on cement. Tagged cement at 7888' (60' high, 41 cu. ft. cement away). Drilled and cleaned out hard cement 7888'-8058'. Circulated from 8104' for one hour. Pressure tested from surface to 8126' with 1625 psi for 30 minutes OK.
- 3-24 Pulled bit and scraper. Ran retrieving tool and released bridge plug at 8126'. Ran in from 8126' to set bridge plug on bottom. Hit cement at 8138'. Cement bypassed bridge plug and re-entered liner through WSO holes at 8138'. Ran 4-1/8" bit and 5" casing scraper. Drilled and cleaned out soft cement 8138'-8200', and hard cement 8200'-8283'. Drilled and cleaned out hard cement 8297'-8352'. Circulated on bottom 1 hour.
- 3-26 Pulled bit and scraper. Rigged up Dresser Atlas. Ran cement bond log 7900'-8355'. Jet perforated four 1/2" holes at 8135'. Made up and ran Johnston tester and bridge plug in tandem. Set bridge plug at 8158'. Pulled up and set test tool at 8062', tail to 8080'. Opened tool at 6:50 PM. Dead throughout 1 hour test. Pulled bridge plug and tester. Recovered 5' rise thin, oily workover fluid. Charts OK. WSO witnessed and approved by Mr. P. R. Wygle of the Division of Oil & Gas.

P 47 History (Cont'd)

Page 3

1973

- 3-27 Rigged up Dresser Atlas. Jet perforated four 1/2" holes per foot 8159'-8189', 8200'-8223', 8270'-8276' and 8330'-8343'. Used 3-1/2" carriers and 11.0 gram charges. Made up and ran Baker Model "C" bridge plug and fullbore packer. Set bridge plug at 8242'. Pulled up and set packer at 8140'. Pumped into formation at rate of 0.8 barrels per minute at 2200 psi. Formation too tight for sand control treatment. Pulled bridge plug and fullbore.
- 3-28 Rigged up to run Otis hydraulic packers, Page safety valve, and 1" GST control line. Tested safety valve and control line connections with 4850 psi for 20 minutes OK. Ran tubing, safety valve, and control line to 5623'. Tested control line and safety valve with 4975 psi for 30 minutes OK.
- 3-29 Continued running production string. Tested control line and safety valve through donut with 5000 psi for 45 minutes OK. Landed tubing. Removed B.O.P.E. Installed and tested production head. Rigged up Otis wireline. Closed all sleeves and set No-Go plug at 8254'. Pressured tubing to set hydraulic packers. Tested top packer by pressuring casing with 1140 psi for 15 minutes OK. Pulled No-Go plug and opened circulating sleeve at 6782'.
- 3-30 Tore out C.P.S. Unloaded 240 barrels workover fluid with nitrogen. Bled off nitrogen from tubing and casing. Shut well in with safety valve at 6823' and circulating sleeve at 6782' open. Sliding sleeve for S-4 production at 8241' closed. S-8 open for production.

TUBING DETAIL

<u>No. Jts.</u>	<u>Item</u>	<u>Length</u>	<u>Depth</u>
	K.B. to tubing flange in cellar	16.00	
	Donut & 2-7/8 EU 8 thd. x 2-7/8 GST thd. pup jt. N-80	4.10	20.10
	2-7/8 GST thd. box w/hanger for 1" control line	.80	20.90
41	2-7/8 GST thd. x 2-7/8 EU 8 thd. pup jt. N-80	1.40	22.30
	2-7/8 EU 8 thd. J-55 tubing	1294.78	1317.08
	2-7/8 EU 8 thd. x 2-7/8 GST thd. pup jt. N-80	4.10	1321.18
	2-7/8 GST thd. box w/hanger for 1" control line	.80	1321.98
42	2-7/8 GST thd. x 2-7/8 EU 8 thd. pup jt. N-80	1.40	1323.38
	2-7/8 EU 8 thd. J-55 tubing	1329.72	2653.10
	2-7/8 EU 8 thd. x 2-7/8 GST thd. N-80 pup jt.	4.10	2657.20
	2-7/8 GST thd. box w/hanger for 1" control line	.80	2658.00
42	2-7/8 GST thd. x 2-7/8 EU 8 thd. N-80 pup jt.	1.40	2659.40
	2-7/8 EU 8 thd. J-55 tubing	1330.42	3989.82
	2-7/8 EU 8 thd x 2-7/8 GST thd. N-80 pup jt.	4.10	3993.92
	2-7/8 GST thd. box w/hanger for 1" control line	.80	3994.72
44	2-7/8 GST thd. x 2-7/8 EU 8 thd. N-80 pup jt.	1.40	3996.12
	2-7/8 EU 8 thd. J-55 tubing	1394.08	5390.20
	2-7/8 EU 8 thd. x 2-7/8 GST thd. N-80 pup jt.	4.10	5394.30
	2-7/8 GST thd. box w/hanger for 1" control line	.80	5395.10
42	2-7/8 GST x 2-7/8 EU 8 thd. N-80 pup jt.	1.40	5396.50
	2-7/8 EU 8 thd. J-55 tubing	1317.78	6714.28
	2-7/8 EU 8 thd. Otis x nipple	1.00	6715.28
2	2-7/8 EU 8 thd. J-55 tubing	63.50	6778.78
	2-7/8 EU 8 thd. Otis sliding sleeve	3.00	6781.78
1	2-7/8 EU 8 thd. J-55 tubing	31.53	6813.31
	2-7/8 EU 8 thd. x 2-7/8 GST thd. N-80 pup jt.	4.10	6817.41
	2-7/8 GST thd. box w/hanger for 1" control line	.80	6818.21
	2-7/8 GST thd. x 2-7/8 EU 8 thd. N-80 pup jt.	1.40	6819.61
	2-7/8 EU 8 thd. Page safety valve	3.55	6823.16
	2-7/8 EU 8 thd. x 7" 30# Otis Hydro static set packer w/20,000# shear	4.25	6827.41
1	2-7/8 EU 8 thd. J-55 tubing	31.53	6858.94
	2-7/8 x 2-3/8 EU 8 thd. crossover	1.00	6859.94
45	2-3/8 EU 8 thd. J-55 tubing	1378.18	8238.12
	2-3/8 EU 8 thd. Otis sliding sleeve	2.85	8240.97
	2-3/8 EU 8 thd. x 5" 18# Otis Hydro static set packer w/ 17,000# shear	4.05	8245.02
	2-3/8 EU 8 thd. N-80 pup jt.	8.00	8253.02
	2-3/8 EU 8 thd. Otis X nipple 1.875 I.D. & 1.791 No-Go	1.10	8254.12

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION

## DIVISION OF OIL AND GAS

## Report on Operations

No. T 273-186Mr. P. S. Magruder, Jr., Agent  
Pacific Lighting Service Co.  
P O Box 54790, Terminal Annex  
Los Angeles, California 90054Santa Paula Calif.  
April 5, 1973

DEAR SIR:

Operations at well No. "SFZU" P-47, API No. 037-00734, Sec. 28, T. 3N, R. 16W,  
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed  
on March 26, 1973. Mr. P R Wygle, engineer, representative of the supervisor was  
present from 2100 to 2300. There were also present W. Chakanaka, contract drilling  
foreman.Present condition of well: 13 3/8" cem. 516'; 7" cem. 8050', milled section 7005-7022';  
5" cem. 6889-8634', bad casing 8052' (cem off), perf. 8135' WSO, perf. 8138' WSO, c.p.  
8056', perf. (ints) 8193-8354'. T.D. (present hole) 8366'. Plugged with cem. 8364-8354'  
T.D. (1st hole) 8276'. T.D. (2nd hole) 7509'.The operations were performed for the purpose of testing the 5" shut-off by means of a  
formation tester.

DECISION:

**THE 5" SHUT-OFF AT 8135' IS APPROVED.**a  
cc: OperatorJOHN F. MATTHEWS, JR.  
State Oil and Gas SupervisorBy LOCP Pitman Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 273-62

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

Santa Paula Calif.  
February 8, 1973

DEAR SIR:

(037-00734)

Your proposal to convert to gas storage Well No. "SFZU" P-47  
Section 28, T. 3N, R. 16W, S.B B. & M., Aliso Canyon Field, Los Angeles County,  
dated 1/19/73, received 2/2/73, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT NONE OF THE PROPOSED PERFORATIONS BE ABOVE  
8135'.

Blanket Bond  
ALL:a  
cc: Operator

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

By *LOTT P. [Signature]*, Deputy

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.

January 19, 1973

DIVISION OF OIL AND GAS  
RECEIVED

FEB 2 1973

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. SANTA FE 2147

(Cross out unnecessary words)

Sec. 28, T. 3N, R. 16W, SB B. & M.

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. TD 8366'; Pg 8360'

2. Complete casing record, including plugs:

13-3/8", 61# c 516'

7", 26, 28 & 30# c 8050'

1475'-5", 18# c 8364'

TLH 6889'

WSO on splice & 4 holes @ 8183' approved by D.O.G.

Pfs: 8200'-8223'; 8250'-8280'; 8300'-8354'.

3. Last produced. \_\_\_\_\_ (Date) \_\_\_\_\_ (Oil, B/D) \_\_\_\_\_ (Water, B/D) \_\_\_\_\_ (Gas, Mef/D)

The proposed work is as follows:

Jet perforate four 1/2" holes per foot and/or perforate two 1/2" holes per foot in the Sesnon zone as required to convert well to a gas storage well.

MAP	MAP	MAP	MAP	FORMS
				113
				121
			<i>P.B.</i>	✓
				✓

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.B. Magruder Jr.*

Proposed Changes of Well Designation

Old Designation:

New Designation:

Sec. 27:

"Fernando Fee" 32  
 "Porter" 12  
 " 30  
 " 31  
 " 32  
 " 36  
 " 37  
 " 45

"SFZU" FF-32 (037-00686)  
 " P-12 (037-00701)  
 " P-30 (037-00717)  
 " P-31 (037-00718)  
 " P-32 (037-00719)  
 " P-36 (037-00723)  
 " P-37 (037-00724)  
 " P-45 (037-00732)

Sec. 28:

"Porter" 4  
 " 25  
 " 26  
 " 34  
 " 35  
 " 38  
 " 39  
 " 40  
 " 41  
 " 42  
 " 43  
 " 44  
 " 46  
 " 47  
 "Porter-Sesnon" 42

"SFZU" P-4 (037-00699)  
 " P-25 (037-00712)  
 " P-26 (037-00713)  
 " P-34 (037-00721)  
 " P-35 (037-00722)  
 " P-38 (037-00725)  
 " P-39 (037-00726)  
 " P-40 (037-00727)  
 " P-41 (037-00728)  
 " P-42 (037-00729)  
 " P-43 (037-00730)  
 " P-44 (037-00731)  
 " P-46 (037-00733)  
 " P-47 (037-00734)  
 " PS-42 (037-00753)

Sec. 34:

"Fernando Fee" 31  
 " 33  
 " 34  
 " 35  
 "Mission-Adrian Fee" 3  
 " 4  
 " 5

"SFZU" FF-31 (037-00685)  
 " FF-33 (037-00687)  
 " FF-34 (037-00688)  
 " FF-35 (037-00689)  
 " MA-3 (037-00693)  
 " MA-4 (037-00694)  
 " MA-5 (037-00695)

STATE OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

830 North La Brea Avenue  
Inglewood, California

September 26, 1968

Mr. Mr. C. G. Nelson, Agent  
Getty Oil Co., Operator  
P. O. Box 811  
Agent for Ventura, California 93001

DEAR SIR:

Your request dated letter dated August 26, 1968, relative to change in designation of well(s) in Sec. 27, 28, 34, T.3 N., R.16 W., S. B. B. & M., Aliso Canyon field, Los Angeles County, District No. 1, has been received;

and in accordance with Section 3203, Public Resources Code, reading in part as follows:

“\* \* \* The number or designation by which any well heretofore drilled has been known, and the number or designation specified for any well in a notice filed as required by Section 3203, shall not be changed without first obtaining a written consent of the Supervisor.”

the proposed change in designation is hereby authorized as follows: (formerly owned by Getty Oil Co.

See attached list.

ag  
cc: F. E. Kasline  
Production Dept.  
Conservation Committee

F. E. KASLINE

~~E. R. MURRAY-AARON~~  
State Oil and Gas Supervisor

By *Wm. C. Bailey*  
Deputy Supervisor

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

MAR 16 1955

LOS ANGELES, CALIFORNIA

WELL SUMMARY REPORT

Operator TIDE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON  
Well No. Porter #47 (Redrill) Sec. 28, T. 3 N, R. 16 W S. 8. B. & M.  
1311.07' South and 4185.03' West Elevation of ground above sea level 2489.25 feet.  
Location from Station #84. All depth measurements taken from top of derrick floor,  
which is 6.92 feet above ground.

In compliance with the provisions of Chapter 93, Statutes of 1939, 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 February 23, 1955 Signed T. E. Weaver  
E. O. Young (Engineer or Geologist) W. D. Coold (Superintendent) Title T. E. Weaver, Agent (President, Secretary or Agent)

Commenced 1st R.D. 8/26/54 Completed 2nd R.D. 10/15/54 Drilling tools Cable Rotary  
Total depth 8276' 1st R.D. 7509'; 2nd R.D. 8366'

DEPTH	GEOLOGICAL MARKERS
7012'	1st R.D. 7012'
1027.5'	7" 30# G 8050'
127'	5" 21.42# I 8150'
8023'	Pr. 8055'-8150'

Commenced producing 10/27/54 (date) Flowing/intermittent (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	448	23.2	0.2	270	200#	0#
Production after 30 days	89	23.0	0.1	313	2500#	2100#

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 perforations
13-3/8"	516'	0'	51.5, 61#	S.H.	Seamless	J-55 & C	17-1/2"	450'	
7"	7005'	0'	26, 28, 30#	New	Seamless	J-55	11"	(600) 7005'-1027.5'	
5"	8366'	6889'	18#	New	Seamless	J-55	6"	180 cc. + 100 c.f. Sealite & 45	

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
5"	8200 ft.	8223 ft.	4 - 1/2" holes/ft.			Gun Pfs. by D.J.
5"	8250 ft.	8280 ft.	4 - 1/2" holes/ft.			" " "
5"	8300 ft.	8350 ft.	4 - 1/2" holes/ft.			" " "

3

DIVISION OF OIL AND GAS

MAR 16 1955

History of Oil or Gas Well

LOS ANGELES, CALIFORNIA

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. Porter #47, Sec. 28, T. 3 N, R. 16 W, S. R. B. & M.

February 23, 1955

Signed [Signature]

Date Los Nietos, Calif. Oxford 91051 Title Agent  
(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form in reporting the history of all important operations at the well, together with the dates thereof, prior to the first production. Include in your report such information as size of hole drilled to cementing or landing depth of casings, number of sacks of cement used in the plugging, number of sacks or number of feet of cement drilled out of casing, depth at which cement plugs started, and depth at which hard cement encountered. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

1954

- 8/17 Reinforcing and stripping derrick.
- 8/20 Killed well with salt water.
- 8/21-22 Idle.
- 8/23 Loffland Bros. Drilling Contractor moving in.
- 8/24-25 Rigging up rotary.
- 8/26 Completed rigging up rotary at 7:00 PM. Displaced water with mud. Mud weight 70#, 37 viscosity, 6.0 c.c. water loss.
- 8/27 Running tubing to plug with cement.
- 8/28 With 157' of 2-3/8" stinger on 2-7/8" tubing hanging at 8149', equalized 75 sacks Colton HI-temperature cement, preceded with 45 cu. ft. of water and followed by 5 cu. ft. of water. Washed across interval 8117' to 8097' by reciprocating inverted swab cups. Pulled tubing to 7430' and closed runs. Squeezed plug with 2500#, 1 1/2 cu. ft. away. Cement in place at 12:30 PM. B.J. Service. Standing cemented.
- 8/29 Ran Sperry-Sun wire line survey to 7600'. Ran 6" bit on drill pipe to top of cement at 7550'.
- 8/30 Milled with Bash-Ross #1 mill from 7005' to 7010'.
- 8/31 Milled with Bash-Ross Mill #1 from 7010' to 7018'. Mud weight 68.5#, 55 viscosity, 6.0 c.c. water loss.
- 9/1 Milled with Bash-Ross Mill #1 from 7018' to 7022.5'.
- 9/2 Scraped section to 12-1/4". Set Bash-Ross whipstock on 7" stub at 7022.5', oriented due West. Equalized 50 sacks Colton HI-temperature cement through 10' 2-3/8" tubing stinger below whipstock. Cement in place 12:25 AM 9-3-54. B.J. Service. Sheared pins and pulled off whipstock.
- 9/3 Found top of cement at 6861'. Cleaned out to 6995' and drilled off whipstock from 7012' to 7018' with 6" bit and drill collar.
- 9/4 Drilled from 7018' to 7036' with 5-7/8" bit and 6" reamer. Drilled to 7051' with 6" bit and reamer.
- 9/5 Drilled 6" hole from 7051' to 7136'. Mud weight 70#, 56 viscosity, 10.0 c.c. water loss.
- 9/6 Drilled 6" hole from 7136' to 7166'. Mud weight 69#, 54 viscosity, 8.0 c.c. water loss. Ran whipstock to 7166' but could not orient properly. Pulled whipstock.
- 9/7 Drilled 6" hole from 7166' to 7207'. Mud weight 70#, 53 viscosity, 8.5 c.c. water loss. Oriented whipstock at 7207' North 50° West.
- 9/8 Drilled 6" hole from 7207' to 7225'. Mud weight 71#, 45 viscosity, 8.0 c.c. water loss. Attempted to run whipstock at 7225'. Sheared pin before reaching bottom.

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

MAR 16 1955

WELL NO.: Porter #47, Aliso Canyon Field

Page 2

LOS ANGELES, CALIFORNIA

1954

- 9/9 Oriented whipstock at 7225' North 50° West. Mud weight 71#, 50 viscosity, 6.0 c.c. water loss.
- 9/10 Drilled 4-5/8" rat hole off whipstock from 7225' to 7235'. Opened rat hole to 6" and drilled to 7263'. Mud weight 72.5#, 66 viscosity, 6.2 c.c. water loss.
- 9/11 Drilled 6" hole from 7263' to 7300'. Mud weight 72#, 62 viscosity, 6.0 c.c. water loss.
- 9/12 Drilled 6" hole from 7300' to 7304'. Oriented whipstock at 7304', North 27° West. Mud weight 72#, 67 viscosity, 6.1 c.c. water loss.
- 9/13 Drilled 4-5/8" rat hole off whipstock to 7310'. Opened hole to 6" and drilled to 7340'. Set whipstock at 7340', oriented North 74° West. Drilled 4-5/8" rat hole off whipstock to 7345'.
- 9/14 Opened rat hole to 6" to 7345'. Attempted to set whipstock at 7345' but could not get to bottom. Pulled whipstock and cleaned out to 7345'.
- 9/15 Reran whipstock to 7345', oriented North 44° West. Drilled 4-5/8" rat hole off whipstock to 7353'. Opened rat hole to 6". Mud weight 72#, 57 viscosity, 6.4 c.c. water loss.
- 9/16 Oriented whipstock at 7375', North 71° West. Drilled 4-3/4" rat hole off whipstock to 7358'. Opened hole to 6" and redrilled to 7359'. Mud weight 71#, 63 viscosity, 5.8 c.c. water loss.
- 9/17 Drilled 6" hole from 7359' to 7424'. Oriented whipstock to 7424', North 63° West. Drilled 4-5/8" rat hole off whipstock to 7429'. Opened hole to 6" to 7429'. Mud weight 71#, 54 viscosity, 5.5 c.c. water loss.
- 9/18 Drilled 6" hole to 7431'. Oriented whipstock at 7431', North 68° West. Drilled 4-3/4" rat hole off whipstock to 7441'. Opened rat hole to 6".
- 9/19 Drilled 6" hole from 7433' to 7447'. Mud weight 72#, 60 viscosity, 5.6 c.c. water loss.
- 9/20 Drilled 6" hole from 7447' to 7509'. With 2-7/8" drill pipe hanging at 7317', equalized 62 sacks Colton Hi-temperature cement plus 13 sacks sand. Cement in place at 5:00 PM. B.J. Service. Mud weight 72#, 57 viscosity, 5.4 c.c. water loss.
- 9/21 Found top of cement plug at 7047'. Cleaned out cement to 7114'.
- 9/22 Set 5-1/4" whipstock at 7114', oriented North 55° West. Drilled 4-5/8" rat hole off whipstock to 7116'. Attempted to run whipstock at 7116' but could not reach bottom. Opened hole to 6" to 7116'.
- 9/23 Ran Eastman whipstock at 7116' facing North 55° East and drilled 4-5/8" hole to 7128'. Ran in 6" hole opener but unable to get in whipstock hole. Mud weight 73#, 55 viscosity, 5.6 c.c. water loss.
- 9/24 Opened rat hole to 6" and drilled 6" hole from 7128' to 7141'. Oriented whipstock at 7141' North 60° West. Drilled 4-5/8" rat hole off whipstock to 7149'. Opened hole to 6" to 7149'. Mud weight 73.5#, 56 viscosity, 5.8 c.c. water loss.
- 9/25 Drilled 6" hole from 7149' to 7153'. Oriented whipstock at 7153', North 45° West. Drilled 4-5/8" rat hole off whipstock to 7165'. Opened hole to 6" to 7165'. Mud weight 72#, 56 viscosity, 5.7 c.c. water loss.
- 9/26 Drilled 6" hole from 7165' to 7201'. Mud weight 74#, 51 viscosity, 5.2 c.c. water loss.
- 9/27 Drilled 6" hole from 7201' to 7211'. Ran whipstock at 7211', oriented North 20° West. Drilled 4-5/8" rat hole off whipstock to 7222'. Opened hole to 6". Mud weight 74#, 51 viscosity, 5.2 c.c. water loss.
- 9/28 Drilled 6" hole from 7222' to 7253'. Oriented whipstock at 7253', North 20° East. Drilled 4-5/8" rat hole off whipstock to 7260'.
- 9/29 Drilled 4-5/8" rat hole to 7265'. Opened hole to 6" and drilled 6" hole to 7282'. Mud weight 74#, 50 viscosity, 4.0 c.c. water loss.
- 9/30 Drilled 6" hole from 7282' to 7384'. Mud weight 75#, 50 viscosity, 4.0 c.c. water loss.

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

WELL NO.: Porter #47, Aliso Canyon Field

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LOS ANGELES, CALIFORNIA

1954

- 10/1 Drilled 6" hole from 7384' to 7469'. Mud weight 75#, 53 viscosity, 5.0 c.c. water loss.
- 10/2 Drilled 6" hole from 7469' to 7499'. Mud weight 77#, 55 viscosity, 4.1 c.c. water loss. Reamed to bottom.
- 10/3 Drilled 6" hole from 7499' to 7619'. Mud weight 77#, 51 viscosity, 3.8 c.c. water loss.
- 10/4 Drilled 6" hole from 7619' to 7720'. Mud weight 76#, 52 viscosity, 3.8 c.c. water loss.
- 10/5 Drilled 6" hole from 7720' to 7821'. Mud weight 76#, 49 viscosity, 3.8 c.c. water loss.
- 10/6 Drilled 6" hole from 7821' to 7908'. Mud weight 76#, 51 viscosity, 3.9 c.c. water loss.
- 10/7 Drilled 6" hole from 7908' to 7980'. Mud weight 76#, 50 viscosity, 4.0 c.c. water loss.
- 10/8 Circulated clay base mud out with Ken Oil at 7980'. Drilled 6" hole from 7980' to 8016'. Ken Oil 76#, 55 viscosity, 4.2 c.c. water loss.
- 10/9 Drilled 6" hole from 8016' to 8086'. Ken Oil 61#, 155 viscosity.
- 10/10 Drilled 6" hole from 8086' to 8151'. Ken Oil 61.5#, 125 viscosity.
- 10/11 Drilled 6" hole from 8151' to 8238'. Ken Oil 62#, 128 viscosity.
- 10/12 Drilled 6" hole from 8238' to 8298'. Ken Oil 62#, 135 viscosity.
- 10/13 Drilled 6" hole from 8298' to 8351'. Ken Oil 63#, 170 viscosity.
- 10/14 Drilled 6" hole from 8351' to 8366'. Mud weight 73#, 150 viscosity.
- 10/15 Ran Schlumberger induction log, Mono-electrode scratcher and Gamma Ray at 8366'.
- 10/16 Landed 47 joints (1475.37') of 5" 18#, J-55, new seamless, Range 2, Ventura flush joint liner at 8364'. Top of liner hanger at 6889'. Cemented liner through float shoe on bottom using inverted swab cups on 2-7/8" drill pipe with 100 sacks Colton Hi-temperature cement plus 100 cu. ft. Sealite, 4% Gel. Displaced cement with 304 cu. ft. mud. Final pressure 2200#. Cement in place 9:45 PM. B.J. Service. Liner detail (bottom to top):
- |          |                    |
|----------|--------------------|
| 1.75'    | Baker float shoe   |
| 1471.50' | Blank liner        |
| 2.12'    | Burns steel hanger |
| 1475.37' | Overall            |
- Standing cemented.
- 10/17 Found top of cement at 6663'. Cleaned out cement to 6859'. Standing cemented.
- 10/18 Cleaned out cement from 6859' to 6889'. Ran J.C.T. on 3-1/2" drill pipe, dry. Set packer in 7" casing at 6850', with tailpipe to 6868'. Opened valve at 5:15 PM for one hour. Had light blow for 1 minute, dead for balance of test. Recovered 30' normal drilling fluid. WSO at splice witnessed and approved by Division of Oil and Gas.
- 10/19 Drilled out cement stringers from 7975' to 8212' and hard cement from 8212' to 8354'. Ran Schlumberger Gamma Ray and collar locator. Schlumberger jet perforated four holes at 8247'.
- 10/20 Ran J.C.T. on 2-7/8" drill pipe with 960' water cushion. Set packer at 8215' with tailpipe to 8230'. Opened valve at 3:00 AM. Had faint steady blow for 14 minutes, dead for balance of 1 hour test. Recovered 370' net rise of Ken Oil drilling fluid. Charts indicate oil fluid entered when coming out of hole with tester (used conventional tester with two main valves only). Segregation at 8247' O.K. Using Schlumberger gun, shot four jet holes at 8193'.

MAR 16 1955

LOS ANGELES, CALIFORNIA

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

WELL NO.: Porter #47, Aliso Canyon Field

1954

- 10/21 Ran J.C.T. on 2-7/8" drill pipe with 1000' water cushion. Set packer at 8155' with tailpipe to 8177'. Opened valve at 4:55 AM. Had light steady blow for 9 minutes, dead for 5 minutes, faint blow for 7 minutes, dead for balance of 1 hour test. Recovered 60' net rise Ken Oil drilling fluid. Charts confirmed results of test. Segregation O.K. at 8193'. Using Schlumberger jet perforator, shot four holes at 8138'. Ran J.C.T. as before with 1000' water cushion. Set packer at 8099' with tailpipe to 8115'. Opened valve at 5:30 PM for one hour. Had 1 minute light blow, dead for balance of test. Recovered 20' net rise Ken Oil drilling fluid. W.S.O at 8138' witnessed and approved by Division of Oil and Gas.
- 10/22 Using B.J. jet perforator, shot four holes at 8211'. Ran J.C.T. on 2-7/8" drill pipe with 1000' water cushion. Set packer at 8163' with tailpipe to 8183'. Opened valve at 5:40 AM. Had light to strong blow with gas to surface in 8 minutes (138 MCF rate). Had cushion to surface after 10 minutes. Flowed cushion by heads. Fluid dropped steadily in annulus during test. Shut in tool at 6:00 AM after packer leak became apparent. Made two hour shut in test. Recovered 1660' net rise gassy Ken Oil drilling fluid with some formation oil. Test of holes at 8211' inconclusive. Reran J.C.T. as before with dual packers set at 8162' and 8159' with tailpipe to 8182'. Opened valve at 10:30 PM. Had medium steady blow with gas to surface in 5 minutes, strong steady blow with cushion to surface after 7 minutes. Blew cushion with Ken Oil for 3 minutes and turned well to traps. On 7 hour flow test, well produced 85 barrels clean oil and 53 mcf gas. Daily rates - 338 B/D oil, 211 MCF/D gas. Average cut 0.2% mud, average gravity 23.5. 62h gas-oil ratio.
- 10/23 Pulled J.C.T. Well blew clean while pulling tester. Sample on bottom cut 0.2% mud. Charts confirmed results of test. Cleaned out to 8360'. Using B.J. Gun perforator shot four 1/2" bullets per foot from 8354'-8300' and 8280'-8250'.
- 10/24 Using B.J. gun perforator as before, shot four 1/2" holes from 8223' to 8200'. Scraped casing through perforated interval and laid down 2-7/8" drill pipe.
- 10/25 Ran 2-3/8" and 2-7/8" tubing to bottom. Displaced Ken Oil with 280 barrels crude oil.
- 10/26 Landed 2-7/8" tubing at 8189' including 1507' of 2-3/8" on bottom. Installed Christmas tree and began swabbing at 3:00 PM. In 15 hours swabbed and flowed well by heads 237 barrels circulating oil through 17/64" bean, 60# tubing pressure, 0# casing pressure. Well began flowing steadily at 3:30 AM (10-27-54).
- 10/27 In 24 hours well flowed 493 barrels gross, of which 450 barrels is formation oil, 449 net, 0.2% cut, 23.2 gravity, 30/64" bean, 200# tubing pressure, 0# casing pressure, 270 MCF gas. Released contractor at 10:00 AM 10-27-54.

	Gross	Net	Cut	Gravity	Bean	Tubing Pressure	Casing Pressure	MCF Gas
10/28	200	200	0.1%	22.6	16/64	620#	1000#	122
	Changed to 10/64" bean after 6 hours.							
10/29	162	162	0.1%	23.3	11/64	600#	1175#	114
10/30	149	148	0.1%	23.3	11/64	650#	1150#	115
10/31	180	180	0.1%	23.2	11/64	680#	1300#	231
11/1	49	49	0.1%	23.2	11/64	1340#	2100#	
	Shut in at 11:00 AM for static pressure determination after flowing 6 hours.							
11/2-4	Shut in.							

MAR 16 1955

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

WELL NO.: Porter #47, Aliso Canyon Field

LOS ANGELES, CALIFORNIA

<u>1954</u>	<u>Gross</u>	<u>Net</u>	<u>Cut</u>	<u>Gravity</u>	<u>Bean</u>	<u>Tubing Pressure</u>	<u>Casing Pressure</u>	<u>MCF Gas</u>
11/5	Returned well to production 4:00 PM.				In 1 1/2 hours well flowed:			
	60	60	0.1%	23.0	9/64	700#	2100#	104
11/6	126	126	0.1%	23.0	9/64	750#	2100#	112
11/7	108	108	0.1%	23.8	8/64	825#	2100#	98
11/8	108	108	0.2%	23.3	8/64	1000#	2100#	124
11/9	109	109	0.1%	23.0	8/64	1075#	2100#	151
11/10	100	100	0.1%	23.0	8/64	1200#	2100#	172
11/11	100	100	0.1%	23.0	8/64	1400#	2100#	178
11/12	108	108	0.1%	23.0	8/64	1400#	2100#	183
11/13	108	108	0.1%	23.0	8/64	1400#	2100#	180
11/14	91	91	0.1%	23.0	8/64	1400#	2100#	200
11/15	108	108	0.1%	23.0	8/64	1400#	2100#	227
11/16	91	91	0.1%	23.0	8/64	1400#	2100#	233
11/17	100	100	0.1%	23.0	8/64	1400#	2100#	249
11/18	91	91	0.1%	23.0	8/64	1400#	2100#	259
11/19	92	92	0.1%	23.0	8/64	1400#	2100#	267
11/20	97	97	0.1%	23.0	8/64	1400#	2100#	275
11/21	92	92	0.1%	23.0	8/64	1400#	2100#	283
11/22	97	97	0.1%	23.0	8/64	1400#	2100#	290
11/23	87	87	0.1%	23.0	8/64	1500#	2100#	296
11/24	97	97	0.1%	23.0	8/64	1500#	2100#	300
11/25	86	86	0.1%	23.0	8/64	1500#	2100#	305
11/26	86	86	0.1%	23.0	8/64	1500#	2100#	213
11/27	89	89	0.1%	23.0	8/64	1500#	2100#	313
11/28	89	89	0.1%	23.0	8/64	1500#	2100#	303
11/29	89	89	0.1%	23.0	8/64	1500#	2100#	310
11/30	89	89	0.1%	23.0	8/64	1500#	2100#	317
12/1	88	88	0.1%	23.0	8/64	1500#	2100#	317

CASING RECORD

13-3/8" 54.5# C 516'  
 7" 26, 28, 30# to 7005' (Section 7005'-7022.5')  
 1475' 5" 18# C 8364' Top 6889' 4 H 8193'; 8247'  
 WSO 8138'  
 4 H/F 8354'-8300'; 8280'-8250'; 8223'-8200'

JUNK

1027.5' 7" 30# C 8050'  
 127' 5" 21.42# L 8150' Top 8023' Pf. 8055'-8150'

TUBING RECORD

2-7/8" L 8189' inc. 1507' of 2-3/8" on bottom

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

## DIVISION OF OIL AND GAS

## Special Report on Operations Witnessed

No. T 154-1183

Mr. Thomas E Weaver  
Box Y  
Los Nietos California  
Agent for TIDE WATER ASSOCIATED OIL COLos Angeles 15 Calif.  
November 4 19 54

DEAR SIR:

Operations at your well No. "Porter" 47 Sec 28, T. 3 N, R. 16 W, S. B B. & M.,  
Aliso Canyon Field, in Los Angeles County, were witnessed  
on October 18, 19 54. Mr. Murray Dosch, Engineer, representative of the supervisor was present  
from 8:00 to 9:00 p.m. There were also present Al. Hanson, Engineer;  
C. Fay, Drilling Foreman.Present condition of well: 13-3/8" cem. 516'; 7" cem. 8050', W.S.O., milled out 7005'-7022',  
5" liner cem. 6689'-8364'. T.D. (present hole) 8366'. T.D. (1st hole) 8276'.The operations were performed for the purpose of demonstrating that no fluid has access to the  
well between the 7" and 5" casings.Mr. Hanson reported:

1. On August 28, 1954, 75 sacks of cement was pumped into the hole through 2-7/8" drill pipe hanging at 8149', filling to 7650'.
2. A section was milled out of the 7" casing from 7005' to 7022'.
3. A permanent whipstock was cemented from 7012' to 7020'.
4. A 6" rotary hole was drilled from 7012' to 8366'.
5. On October 16, 1954, 1475' of 5", 18 lb. liner was cemented at 8364' with 171 sacks of cement, filling to 6663'.
6. Cement was drilled out of the 7" casing from 6663' to 6689' (equivalent to 2 sacks), and the hole was cleaned out to 6689'.
7. A Johnston tester was run into the hole on 2-7/8" drill pipe and the packer was set at 6850'. The tester valve with a 3/4" bean was opened at 5:15 p.m., and remained open for 1 hr. During this interval, there was a light, steady blow for 1/2 min., and no blow thereafter.

## THE ENGINEER NOTED:

1. When the drill pipe was removed, 30' of medium oil-base drilling fluid was found in the drill pipe above the tester, equivalent to 0.1 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hr.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT NO FLUID HAS ACCESS TO THE WELL BETWEEN THE 7" AND 5" CASINGS.

MD:OH

cc F W Hertel  
R S Curl  
J R Bovyer (2)E. H. MUSSER  
State Oil and Gas SupervisorBy R. J. Walling Deputy

## DIVISION OF OIL AND GAS

Report on Test of Water Shut-off  
(FORMATION TESTER)

No. T-154-1184

Mr. Thomas E Weaver  
 Box Y  
Los Nietos California  
 Agent for TIDE WATER ASSOCIATED OIL CO

Los Angeles 15 Calif.  
November 4 19 54

DEAR SIR:

Your well No. "Porter" 47, Sec. 28, T. 3 N, R. 16 W, S. B B & M.  
Aliso Canyon Field, in Los Angeles County, was tested for water shut-off  
 on October 21, 1954. Mr. G. Y. Lee, Engineer, designated by the supervisor was present  
 from 9:20 to 10:15 p.m. as prescribed by law; there were also present A. Hanson, Engineer;  
C. P. Fay, Drilling Foreman.

Shut-off data: 5 in. 18 lb. ~~was~~ xx cemented from 6689'-8364' ~~xxxxxxx~~  
 on October 16, 1954 in 6 in. hole with 125 ~~xxxxxx~~ sacks of cement,  
41 sacks Sealite & 5 sacks of Gel. calculated to fill behind casing to See below ft. below surface.

Casing record of well: 13-3/8" cem. 516'; 7" cem. 8050', W.S.O., milled out 7005'-7022'; 5"  
liner cem. 6689'-8364', four 1/2" holes 8138', W.S.O. T.D. (present hole) 8366'; T.D.  
 (1st hole) 8276'.

Present depth 8366 ft. cmt. bridge 8364 ft. to 8354 ft. Cleaned out cmt. 8124 ft. to 8354 ft. for test.  
 A pressure of xxx lb. was applied to the inside of casing for xxx min. without loss after cleaning out to xxx ft.  
 A Johnston gun and tester was run into the hole on 2-7/8 in. drill pipe ~~xxxxxx~~  
 with 1000 ft. of water ~~xxx~~ cushion, and packer xx set at 8099 ft. with tailpiece to 8115 ft.  
 Tester valve, with 3/8 in. bean, was opened at 5:30 p.m. and remained  
 open for 1 hr. and xxxx min. During this interval there was a light blow for 3 min.; no blow  
for 7 min.; light blow for 5 min.; and no blow thereafter.

Mr. Hanson reported:

1. Cement was drilled out of 5" liner from 8124' to 8354'.
2. The 5" liner was shot-perforated with four 1/2" holes at 8138'.

## THE ENGINEER NOTED:

1. When the drill pipe was removed, a net recovery of 40' of oil drilling fluid (Ken-Oil),  
 was found in the drill pipe above the tester, equivalent to 0.1 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hr.

THE 5" SHUT-OFF AT 8138' IS APPROVED.

GYL:OH

cc F W Hertel  
R S Curl  
J R Bovyer (2)

E. H. MUSSER  
R. D. BUSH, State Oil and Gas Supervisor

By R. H. Helling, Deputy

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCESDIVISION OF OIL AND GAS  
REPORT ON PROPOSED OPERATIONSNo. P 154-1021

Mr. Thomas E Weaver  
 Box X Los Angeles 15 California  
Los Nietos California August 24 1954  
 Agent for TIDE WATER ASSOCIATED OIL CO

DEAR SIR:

Your proposal to REDRILL & DEEPEN Well No. "Porter" 47  
 Section 28, T. 3 N, R. 16 W, S. B B. & M., Aliso Canyon Field, Los Angeles County,  
 dated Aug. 20 19 54, received Aug. 23 19 54, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

**RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE**

The 7" shut-off at 8050' was approved.

The hole was plugged with cement from 8276' to 8155'.

**THE NOTICE STATES**

"The present condition of the well is as follows:

- Total depth. 8276' Pg. 8155'
- Complete casing record.  
 13-3/8" 54, 61¢ G 516'  
 7" 26, 28, 30¢ G 8050'  
 127' 5" 21¢ L 8150' Top 8023'  
 Pt. 8055'-8150'
- Last produced. October, 1950 15 B/D 24.0 1.0%  
 (Date) (Net Oil) (Gravity) (Cut)"

**PROPOSAL**

"The proposed work is as follows:

- Plug well with cement from 7900' - 8150'.
- Set whipstock at 7000' and mill out window. Redrill and deepen well to 8350'.
- Cement 5" blank liner at approximately 8300', with 100' lap in 7" casing.
- Obtain water shutoff on 5" to 7" splice. Test to be witnessed by Division of Oil and Gas.
- Obtain zonal segregation at approximately 8230' (Sg Shale).
- Obtain water shutoff at top of Season Zone at approximately 8120'. Test to be witnessed by Division of Oil and Gas.
- Shoot four holes at approximately 8170' and squeeze with cement.
- Shoot four holes in lower sand of Upper Season Zone and make formation test. If high gas-oil ratio, squeeze off.
- Can perforate approximately from 8180' to 8210' and from 8240' to 8350'. Scrape liner and sweep in well."

**DECISION**

**THE PROPOSAL IS APPROVED PROVIDED THAT** adequate blowout prevention equipment shall be installed and maintained in operating condition at all times.

**FECK:OH**

cc F L Wark  
 R S Curl  
 J R Boyyer (2)

E. H. MUSSER

State Oil and Gas Supervisor

By *D. M. Williams*

Deputy

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS  
RECEIVED

DIVISION OF OIL AND GAS

AUG 23 1954

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

LOS ANGELES, CALIFORNIA

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

Los Nietos, Calif. August 20 19 54

DIVISION OF OIL AND GAS

Los Angeles Calif.

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. Porter #17  
(Cross out unnecessary words)

Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 8276' Pg. 8155'

2. Complete casing record.

	13-3/8"	54, 61#	C	516'	
	7"	26, 28, 30#	C	8050'	
127'	5"	21#	L	8150'	Top 8023' Pt. 8055'-8150'

3. Last produced. October, 1950 15 B/D 24.0 1.0%  
(Date) (Net Oil) (Gravity) (Cut)

The proposed work is as follows:

1. Plug well with cement from 7900' - 8150'.
2. Set whipstock at 7000' and mill out window. Redrill and deepen well to 8350'.
3. Cement 5" blank liner at approximately 8300', with 100' lap in 7" casing.
4. Obtain water shutoff on 5" to 7" splice. Test to be witnessed by Division of Oil and Gas.
5. Obtain zonal segregation at approximately 8230' (S<sub>2</sub> Shale).

Redrill & deepen (continued on following page)

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121

(Name of Operator)

By

AUG 23 1954

Porter #17, Aliso Canyon Field  
Sec. 28, T 3 N, R 16 W, Los Angeles County

LOS ANGELES, CALIFORNIA

The proposed work is as follows (cont.)

6. Obtain water shutoff at top of Sesnon Zone at approximately 8120'. Test to be witnessed by Division of Oil and Gas.
7. Shoot four holes at approximately 8170' and squeeze with cement.
8. Shoot four holes in lower sand of Upper Sesnon Zone and make formation test. If high gas-oil ratio, squeeze off.
9. Gun perforate approximately from 8180' to 8210' and from 8240' to 8350'. Scrape liner and swab in well.

TIDE WATER ASSOCIATED OIL COMPANY

By

J. E. Weaver

Agent

80

DIVISION OF OIL & GAS  
**RECEIVED**  
OCT 7 1943  
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

**DIVISION OF OIL AND GAS**  
**LOG OF OIL OR GAS WELL**

P. 47

Operator **WIDE WATER ASSOCIATED OIL COMPANY** Field **Aliso Canyon**

Well No. **Porter #47** Sec **28** T **5E** R **16W** S. B. B. & M.

Location **1311.07' S. & 4185.03' W. from Station 104.** Elevation of ~~surface~~ **ground** above sea level **2496.17** feet.

In compliance with the provisions of Chapter 718, Statutes of 1915, as amended, 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 30, 1943** Signed *R. S. Carl*  
**J. C. Pfeffer** (Engineer or Geologist) **R. S. Carl** (Superintendent) Title **Agent**  
 (President, Secretary or Agent)

Commenced drilling **April 20, 1943** Completed drilling **August 21, 1943** Drilling tools **REGG Rotary**

Total depth **6276'** Plugged depth **6155'** GEOLOGICAL MARKERS DEPTH

Junk

Commenced producing **August 23, 1943** (Date) Flowing ~~gas~~ **oil** (from gas separator or separator)

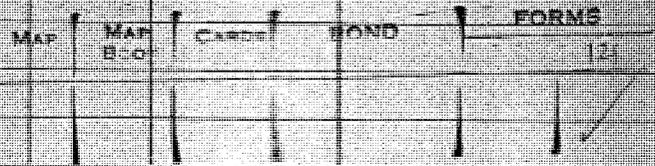
Initial production (21 hrs.)	Gas (cu ft per day)	Gravity	Gas-Cent Water (including emulsion)	Gas MCF per day	Flowing Pressure	Flowing Temperature
495	23.4	8.0	400 M/D rate	0 1/2 - 600	0 1/2 - 15	
Production after 30 days	Shut-in			1475	2300	

**CASING RECORD (Present Hole)**

Size of Casing (A, B, C)	Depth of Shoe	Top of Casing	Weight of Casing	Necks or Rivet Head	Scratches or Lap weld	Grade of Casing	Size of Hole Casing landed in	Number of Joints of Casing	Depth of Cement at through perforations
13-5/8"	516'	0'	54.5 & 51	Second-hand	Seamless	J-55 & C	17 1/2"	450	
7"	8050'	0'	36 & 28 & 30	New	Seamless	J-55	11"	400	
5"	6150'	8025'	31.43	Second-hand	Seamless	C	8"		

**PERFORATIONS**

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforation
5"	8055 ft.	6150 ft.	30 mesh x 2"	10	6	Kobe
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				



Electrical Log Depths **516' - 6276'** (Attach Copy of Log)

SUBMIT IN DUPLICATE  
 STATE OF CALIFORNIA  
 DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS  
 RECEIVED  
 OCT 7 1943

Subsequent Work Report

LOS ANGELES, CALIFORNIA

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD Aliso Canyon

Well No. Porter #47, Sec. 23, T. 3N, R. 16W, S. B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated \_\_\_\_\_

September 30, 1943, was filed.

SIGNED Agent

Date \_\_\_\_\_ Title \_\_\_\_\_  
 (President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

LOCATION: 1811.07' South and 4185.03'  
West from Station #84.

ELEVATION: 2496.17'

A. PREPARING TO DRILL

1943

3/5	Cleared road and rig site.
3/6-3/7	Idle.
3/8-3/13	Graded road and rig site.
3/14	Idle.
3/15-3/17	Graded road and rig site.
3/18-3/19	Idle.
3/20-3/27	Graded road and rig site.
3/28	Idle.
3/29-3/30	Graded road.
3/31-4/1	Dug cellar.
4/2	Graded road and rig site.
4/3-4/4	Idle.
4/5-4/8	Dug cellar and built forms.
4/9-4/12	Poured concrete.
4/13-4/14	Surfaced rig site.

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121

SUBMIT IN DUPLICATE  
STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

Sheet 19

OPERATOR THE ASSOCIATED OIL COMPANY FIELD Miss Canyon

Well No. \_\_\_\_\_, Sec. \_\_\_\_\_, T. \_\_\_\_\_, R. \_\_\_\_\_, B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated \_\_\_\_\_

September 30, 1943

SIGNED \_\_\_\_\_

Date \_\_\_\_\_ Title \_\_\_\_\_  
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which re-drilling operations were started, size of hole re-drilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

4/15-4/18 Built rig and moved in equipment.

4/19 Rigged up Rotary.

B. DRILLING TO 6276'

Depth

4/20 25' Spudded 12 1/2" hole at 7:00 P.M. Drilled 12 1/2" hole from 0' to 25'.

4/21-4/22 178' Dug rat hole. Drilled 12 1/2" hole from 25' to 178'. Had trouble maintaining circulation from 112' to 135'.

4/23 246' Drilled 12 1/2" hole from 178' to 246'. Repaired equipment.

4/24 340' Drilled 12 1/2" hole from 246' to 340'. Lost circulation while drilling at 340'. Mixed cottonseed hulls and Aquagel with drilling mud and recovered circulation and resumed drilling.

4/25-4/26 522' Drilled 12 1/2" hole from 340' to 522'.

4/27 Opened 12 1/2" hole to 17 1/2" from surface to 516'. Cemented 13-5/8" secondhand slip joint Marcell welded casing at 516' with 400 sacks Slow Colton cement in bulk. Lost 200 sacks treated. Had only partial circulation while displacing final 100 cu.ft. of cement. Pressure jumped from 150# to 250# when plugs bumped. Time 4:01 P.M. Mixing time 20 minutes. Displacing time 17 minutes. Calculated displacement mud 443 cu.ft. Actual displacement mud 448 cu.ft. International Cementers, Inc. Cemented around top of 13-3/8" casing with 50 sacks Colton Construction Cement. Detail of casing as follows: bottom 12.2' is new 54.5# Grade J-55 Youngstown; remainder is secondhand 61# Grade C.

4/28 582' Landed 13-5/8" casing and installed cellar connections. Cleaned-out plugs and cement from 515' to 522'.

4/29-5/1 3355' Drilled 12 1/2" hole from 522' to 3355'. Reamed 12 1/2" hole from 516' to 3355'. Laid down 6-5/8" drill pipe.

SUBMIT IN DUPLICATE  
STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Sheet #10

Subsequent Work Report

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD Aliso Canyon

Well No. Porter 147, Sec. 20, T. 3N, R. 10W, S. D. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated \_\_\_\_\_

September 30, 1943 was filed.

SIGNED \_\_\_\_\_  
Agent

Date \_\_\_\_\_ Title \_\_\_\_\_  
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

6/1-7/1	7109'	Made up 5-9/16" drill pipe, and resumed drilling. Drilled 12 3/4" hole from 5355' to 7109'.
7/2		Changed mud pumps.
7/3-7/4	7216'	Drilled 12 3/4" hole from 7109' to 7216'.
7/5-7/6		Reamed 12 3/4" hole from 5355' to 4640'. Re-reamed 12 3/4" hole from 5840' to 4640'. Reamed 12 3/4" hole from 4640' to 5383'. Re-reamed 12 3/4" hole from 3850' to 5383'. Reamed 12 3/4" hole from 5383' to 5700'.
7/7-7/8		Rereamed 12 3/4" hole from 5670' to 5700'. Reamed 12 3/4" hole from 5700' to 7215'.
7/9		Laid down 5-9/16" drill pipe. Made up 4 1/2" drill pipe.
7/10-7/14	7604'	Resumed drilling making 11" hole. Drilled 11" hole from 7216' to 7604'.
7/15	7624'	Cored 8 1/2" hole from 7604' to 7624'. Opened 8 1/2" hole to 11" from 7604' to 7624' and continued drilling 11" hole.
7/16	7701'	Drilled 11" hole from 7624' to 7701'. Changed sand lines.
7/17-7/20	7825'	Cored 8 1/2" hole from 7701' to 7825'.
7/21		Reamed 11" hole from 7216' to 7701'. Opened 8 1/2" hole to 11" from 7701' to 7825' and continued drilling 11" hole.
7/22-7/27	7992'	Drilled 11" hole from 7825' to 7992'.
7/28-7/29	8117'	Cored 8 1/2" hole from 7992' to 8117'.
7/30		Ran Schlumberger electric log. Hung 4 1/2" drill pipe at 8117' and pumped in 50 sacks Colton High Temperature cement in bulk. Displaced with 627 cu.ft. mud. Time 8:37 P.M. Mixing time 4 minutes. Displacing time 21 minutes. International Cementers, Inc. Pulled up to 7757' and circulated.

SUBMIT IN DUPLICATE  
STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD Aliso Canyon

Well No. Porter #47, Sec. 20, T. 2N, R. 16W, S. B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated \_\_\_\_\_

September 30, 1943, was filed.

SIGNED \_\_\_\_\_ Agent

Date \_\_\_\_\_ Title \_\_\_\_\_  
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

7/31-8/1 Reamed 11" hole from 7216' to 7992'. Opened 8 1/2" hole to 11" from 7992' to 8050'. Did not locate top of cement.

8/2 Cemented 7" Youngstown T & C casing at 8050' with 400 sacks Colton High Temperature cement. Pressure jumped from 500# to 900# when plugs bumped. Time 8:25 P.M. Mixing time 1 1/2 minutes. Displacing time 48 minutes. Calculated displacement mud 1674 cu.ft. Actual displacement mud 1680 cu.ft. International Cementers, Inc. Detail of casing is as follows:

- 0' - 2245.0' is 30# Grade J-55
- 2245.0' - 2768.0' is 28# Grade J-55
- 2768.0' - 3380.1' is 26# Grade J-55
- 3380.1' - 4759.7' is 28# Grade J-55
- 4759.7' - 8050.0' is 30# Grade J-55

8/3-8/4 Standing cemented. Laid down 4 1/2" drill pipe. Landed 7" casing.

8/5 Standing cemented. Installed cellar connections. Made up 2-7/8" drill pipe.

8/6 Located top of cement at 7895'. Cleaned out to 8022'. Made casing test O.K. with 1400# for one hour.

8/7 Cleaned out cement to 8055'. Ran Johnston tester on 3 1/2" drill pipe. Set packer at 8023'. Bottom of tail pipe 8044'. Opened 3/16" bean at 3:57 P.M. Had weak intermittent blow of air for 7 minutes; fair to strong heading flow of air for 18 minutes; gas to surface after 25 minutes; moderate steady blow of gas for balance of test. Closed valve at 4:42 P.M. after being open 1 hour 5 minutes. Recovered 550' (3.6 barrels) fluid as follows: top 200' heavy gas cut drilling fluid; bottom 350' thin gassy drilling fluid. Salinity of filtrate as follows:

350' above tester	171 grains per gallon
120' above tester	137 grains per gallon
At tester	109 grains per gallon

Chart in pressure recorder showed valve open throughout test. S.S.O. approved by D.O.G.

**SUBMIT IN DUPLICATE**  
 STATE OF CALIFORNIA  
 DEPARTMENT OF NATURAL RESOURCES  
**DIVISION OF OIL AND GAS**

**History of Oil or Gas Well**

Sheet #13

OPERATOR WIDE WATER ASSOCIATED OIL COMPANY FIELD Aliso Canyon

Well No. Dorson #47, Sec. 22, T. 3N, R. 10W, S. D. B. & M.

Signed R. A. Caryl

Date September 30, 1943 Title Agent  
 (President, Secretary or Agent)

**Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance.** Such operations include drilling, re-drilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, re-drilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date

8/8 Cleaned out cement from 8055' to 8117'. Conditioned mud.

8/8-8/12 8276' Cored 6" hole from 8117' to 8276'. Ran Schlumberger electric log at 8276'.

8/13 8276' Well scraped 8 1/2" hole from 8055' to 8117'.

8/14 Hung 2-7/8" tubing at 8014'. Connected up Xmas tree and tested same O.K. with 1000#.

8/15 Circulated and thinned mud with water. Well began flowing at 5:00 A.M. Turned to tanks at 8:00 A.M. In 25 hours well flowed 559 barrels gross fluid; 562 barrels approximate net oil; 25.2 dry gravity; 12.0 tank out including 10.0 water and 2.0 mud and sand; 12/64" to 14/64" bean; 600.0 to 750.0 tubing pressure; 0# to 500# casing pressure; 265 M/D gas rate. Tabulation below shows hourly gages, etc:

Time	Gross Fluid Barrels	Gravity	Out			Bean	T.P.#	C.P.#
			Wtr.	M & S	Total			
8:00 AM		21.5	11.5	2.2	13.5	12/64"	750#	0#
9:00 "	24	--	8.5	1.4	10.0	"	"	"
10:00 "	21	--	--	24.0	24.0	"	"	"
11:00 "	13	--	--	--	14.0	"	800#	"
12:00 Noon	8	--	--	--	5.7	"	"	"
1:00 PM	13	--	2.7	3.0	5.7	"	"	"
2:00 "	29	--	1.8	1.4	3.2	"	750#	"
3:00 "	39	--	14.6	1.2	16.0	16/64"	725#	"
4:00 "	39	--	8.0	0.4	8.4	12/64"	"	"
	21							

**SUBMIT IN DUPLICATE**  
STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

**DIVISION OF OIL AND GAS**

**History of Oil or Gas Well**

Sheet #12

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD Aliso Canyon

Well No. Porter 47, Sec. 22, T. 3N, R. 16W, S. 23 B. & M.

Signed [Signature]

Date September 30, 1945 Title Agent  
(President, Secretary or Agent)

**Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance.** Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date

1945

9/15

Time	Gross Fluid Barrels	Gravity	Cut			Bear	T.P.	C.P.
			Str.	M & S	Total			
4:00 PM		--	1.2	2.0	3.2	12/64"	760#	0#
5:00 "	21	--	1.4	1.6	3.0	14/64"	800#	250#
6:00 "	13	--	1.0	1.0	2.0	"	"	"
7:00 "	8	--	2.6	5.0	8.6	"	"	"
8:00 "	10	--	3.0	4.0	6.0	16/64"	700#	350#
8:30 "	10	--	25.0	1.0	26.0	14/64"	500#	"
9:30 "	23	--	79.0	1.0	80.0	"	625#	"
10:30 "	42	--	50.0	--	50.0	"	560#	"
11:30 "	36	--	16.0	--	16.0	"	680#	"
12:30 AM	47	--	8.0	6.0	14.0	"	640#	"
1:30 "	21	22.1	3.0	1.0	4.0	"	650#	400#
2:30 "	47	--	5.8	1.0	6.8	"	600#	"
3:30 "	56	23.9	11.0	1.0	12.0	"	"	425#
4:30 "	42	--	13.5	1.0	14.5	"	"	450#
5:30 "	50	--	10.0	1.0	11.0	"	"	"
6:30 "	42	--	3.0	1.0	4.0	"	"	"
	45							

**SUBMIT IN DUPLICATE**  
 STATE OF CALIFORNIA  
 DEPARTMENT OF NATURAL RESOURCES

**DIVISION OF OIL AND GAS**

**History of Oil or Gas Well**

OPERATOR THE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. Porter 440, Sec. 20, T. 30N, R. 16W, S. 11. B. & M.

Signed [Signature]

Date September 30, 1943 Title AGENT (President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing loaded, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shoots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date

1943  
9/30

In fifteen hours well flowed 768 barrels gross fluid; 736 barrels approximate net oil (1178 B/D net rate); 23.4 dry gravity; average of hourly load line cuts 2.1 including 1.2 water and 1.0 mud; 14/64" beam; 600' to 650' tubing pressure; 600' to 600' casing pressure; 430 M/D gas rate. Began killing well at 9:30 P.M. Tabulation following shows hourly rates, etc.

Time	Gross Fluid		Gas			Beam	T.P.	C.P.
	Barrels	Gravity	Wt.	M.M.S.	Total			
6:30 AM		--	3.0	1.0	4.0	14/64"	600'	600'
7:30 "	46	--	1.9	0.5	2.4	"	650'	600'
8:30 "	63	--	0.2	3.0	3.2	"	"	"
9:30 "	47	23.4	1.0	0.8	1.8	"	"	"
10:30 "	31	--	1.0	0.5	1.5	"	"	"
11:30 "	53	--	0.5	0.6	0.8	"	"	"
12:30 PM	61	23.0	0.6	0.2	0.8	"	"	"
1:30 "	57	--	1.0	5.0	6.0	"	620'	620'
2:30 "	61	--	1.0	0.5	1.5	"	600'	"
3:30 "	61	--	1.0	0.3	1.3	"	"	"
4:30 "	60	--	0.1	1.2	1.3	"	640'	"
5:30 "	61	--	3.0	1.0	2.0	"	"	"
6:30 "	60	--	3.0	1.0	4.0	"	"	"
7:30 "	50	--	1.5	0.5	2.0	"	"	"
8:30 "	58	--	1.5	0.5	2.0	"	600'	600'
9:30 "	25	21.5	1.5	0.5	2.0	"	"	"

**SUBMIT IN DUPLICATE**  
STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

**DIVISION OF OIL AND GAS**

DIVISION OF OIL & GAS

**RECEIVED**

OCT 7 1943

**History of Oil or Gas Well**

LOS ANGELES, CALIFORNIA

OPERATOR Phillips 66 Associated Oil Company FIELD Aliso Canyon

Well No. Barber #47, Sec. 33, T. 3N, R. 10E, S. 1, B. & M.

Signed T. A. Goff

Date September 27, 1943 Title Agent

(President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Includes in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date	Depth	
2/17		Killed well. Conditioned mud. Pulled tubing.
3/28		Installed collar connections. Cleaned out to 8275'. Found sand bridges 8035' - 8040' and 8095' - 8130'. Began running tubing to plug well.
4/19		Ran 2-7/8" tubing at 8275' and pumped in 35 sacks Victor High Temperature cement. Displaced with 253 cubic feet of mud. Time 2:34 A.M. Mixing time four minutes. Displacing time twenty minutes. Pulled up to 8094' and circulated. International Cementers, Inc.
5/10	8275' Pg. 8155'	Located top of cement at 8118'. Cleaned out to 8135'. Well surveyed 8 1/2" hole from 8060' to 8117' and opened 6" hole to 8 1/2" from 8117' to 8155'. Began running liner.
5/31		Landed 127.1' of 5" O.D. 31.4lb second hand drill pipe at 8150' including 94.6' of 80 mesh Kobe perforated; 10 rows; 2" slots; 8" centers; 5" undercut. Top of 1.9' Bump liner hanger 8035'. Perforated 805' - 8150'. Ran 2", 4.7' and 2 1/2", 6.5' Youngstown Grade Y-40 Range 2 round thread upset tubing at 8155'; bottom 150.3' of tubing in 2". Tubing has balled collar on bottom.
6/22		Installed flow tree. Tested flow connections O.K. with 2000#. Circulated and thinned mud to water. Well began flowing at 4:00 P.M. Turned to tanks at 7:00 P.M. In 11 hours well flowed 817 barrels gross fluid; 476 barrels approximate net oil; (1088 B/D net rate); 23.4 dry gravity; 8.0 tank cut; 32.64" to 16/64" beam; 04 to 600; tubing pressure; 04 to 100; casing pressure; 400 M/D gas rate. Well flowed 105 barrels gross fluid; 95 barrels approximate net oil (8260 B/D net rate); 2.4 average cut; 36/64" beam during first hour after which the beam was reduced to 16/64".

MAP	MAP BOOK	CARD	BOND	FORMS	
				10	101

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 STATE OF CALIFORNIA  
 DEPARTMENT OF NATURAL RESOURCES

**DIVISION OF OIL AND GAS**

DIVISION OF OIL & GAS  
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 OCT 7 1943

**History of Oil or Gas Well**

LOS ANGELES, CALIFORNIA

OPERATOR \_\_\_\_\_ FIELD \_\_\_\_\_

TIDE WATER ASSOCIATED OIL COMPANY Aliso Canyon

Well No. \_\_\_\_\_, Sec. \_\_\_\_\_, T. \_\_\_\_\_, R. \_\_\_\_\_, B. & M. \_\_\_\_\_

Porter 247 20 20 10W S. D.

Signed \_\_\_\_\_

Date \_\_\_\_\_ Title \_\_\_\_\_

September 20, 1943

Agent

(President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, re-drilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, re-drilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations; number of feet of cement drilled out of casing; location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Date

U. PRODUCTION DATA

Date	Gross Fluid	Approximate Net Oil	Dry Gravity	Prod		Tubing Pressure	Casing Pressure	M/D	Hours
				Out	Beam				
8/25	825	818	23.5	0.0	16/64	600	700	376	23
				(Tank)				(rate)	
8/24	1030	1022	23.5	0.3	16/64	600	850	476	24
8/25	1030	1027	23.5	0.3	16/64	600	950	486	24
8/26	671	669	23.5	0.3	16/64	675	975	330	24
8/27	255	254	23.5	0.3	16/64	975	1100	84	24
8/28	Shot-in.					1050	1150		
8/29	Shot-in.					1025	1150		
8/30	672	677	23.5	0.3	16/64	625	950	355	18
8/31	1000	1047	23.5	0.3	16/64	675	950	414	24
9/1	835	823	23.5	0.3	8/64	675	1175	336	24
9/2	437	436	23.5	0.3	8/64	775	1400	197	24
9/3	661	679	23.5	0.3	8/64	780	1635	310	24
9/4	561	647	23.5	0.7	8/64	780	1800	226	24
9/5	509	506	23.5	0.3	8/64	800	2350	209	24
9/6		478	23.5	0.2	8/64	975	2620	272	24
9/7	542	541	23.5	0.2	8/64	925	2500	272	24



OCT 7 1943

DIVISION OF OIL AND GAS

LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #1

Operator FIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #47 Sec. 29, T. 3 N, R. 16 W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
0	813		Drilled		Sand and shale
813	875		"		Sandy shale
875	1666		"		Sand and shale
1666	1714		"		Sandy shale
1714	1817		"		Sand and shale
1817	1883		"		Sandy shale
1883	1920		"		Sand and shale
1920	1945		"		Hard shale
1945	2126		"		Sand and shale
2126	2166		"		Sandy shale
2166	2399		"		Sand and shale
2399	2465		"		Sandy shale
2465	2555		"		Sand and shale
2555	2613		"		Sandy shale
2613	3308		"		Sand and shale
3308	3346		"		Sandy shale
3346	3387		"		Sand and shale
3387	3433		"		Sandy shale
3433	3575		"		Sand and shale
3575	3935		"		Sandy shale
3935	4418		"		Sand and shale
4418	4443		"		Hard shale
4443	4480		"		Sand and shale
4480	4504		"		Shale
4504	4520		"		Hard shale
4520	4545		"		Sand and shale
4545	4585		"		Shale
4585	4902		"		Sand and shale
4902	4916		"		Hard shale
4916	7216		"		Sand and shale
7216	7227		"		Hard shale
7227	7422		"		Sand and shale
7422	7444		"		Sand and shale; hard streaks
7444	7469		"		Sand and shale; streaks hard shale
7469	7486		"		Hard shale
7486	7495		"		Hard shale and sand
7495	7515		"		Sand
7515	7548		"		Sand and shale
7548	7594		"		Sandy shale
7594	7604		"		Sand and shale

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121

STATE OF CALIFORNIA  
 DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #2

Operator Ride Water associated Oil Company Field Aliso Canyon

Well No. Porter #47 Sec. 22, T. 3 N, R. 16 W, S. 8 B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
					<u>8 1/2' Globe Wire Line Cores:</u>
7604	7614		Cored	2'6"	Sandy siltstone with streaks to 0'2" gray sand. Sandy siltstone is fairly hard; dark brownish-gray. Gray sand is firm; fine to medium; silty. No cut or odor. Cross bedding evident.
7614	7624		"	3'0"	Sandy siltstone with streaks to 0'2" gray sand. As above. Poor 35° dip at 7615'.
7624 7676	7678 7701		Drilled "		Sand and shale Sand and shale with hard streaks
					<u>10' Globe Wire Line Cores:</u>
7701	7711		Cored	10'0"	Sandy siltstone with streaks to 0'4" gray sand. Sandy siltstone is gray to dark brownish-gray -- shows considerable cross bedding. Gray sand is fine, somewhat silty. No cut or odor.
7711	7721		"	4'6"	Gray sand. Firm to fairly hard. Fine. Somewhat silty. No cut or odor. 0'4" streak shell near top and 0'2" streak near bottom.
7721	7731		"	8'0"	Sandy siltstone. Fairly hard. Gray to dark brownish-gray. Cross bedded. Indication of 30° dip.
7731	7741		"	11'0"	Sandy siltstone. As above.
7741	7751		"	6'0"	Sandy siltstone. As above. Poor dips 20° to 30°.
7751	7757		"	4'6"	Sandy siltstone. As above.

STATE OF CALIFORNIA  
 DEPARTMENT OF NATURAL RESOURCES

**DIVISION OF OIL AND GAS**

**LOG AND CORE RECORD OF OIL OR GAS WELL**

Sheet No.

Operator WIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter 447 Sec. 28, T. 31, R. 16E, S. 4, B. & M.

**FORMATIONS PENETRATED BY WELL**

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
<u>8 1/2" Globe Wire Line Cores (Cont'd)</u>					
7757	7767		Cored	8'0"	Sandy siltstone. As above. Two thin streaks fine somewhat silty gray sand with no cut or odor near bottom. Indication of 20° to 30° dip.
7767	7777		"	10'0"	Sandy siltstone. As above. Dip 2° to 30°.
7777	7787		"	1'0"	Sandy siltstone. As above.
7787	7795		"	1'6"	Sandy siltstone. As above.
7795	7804		"	2'6"	1'6" Sandy siltstone. As above. 1'0" Shell. Limestone
7804	7824		"	5'6"	Shell. Limestone. Occasionally conglomeratic with subangular pebbles to 0"-3/4" in diameter. Numerous calcite veins and inclusions.
7814	7824		"	0'2"	Fragments limestone as above.
7824	7825		"	1'0"	Fragments limestone as above.
7825	7992		Drilled		Hard shale
<u>8 1/2" Globe Wire Line Cores</u>					
7992	8002		Cored	10'0"	4'0" Sandy siltstone. Fairly hard. Gray to dark gray. Foraminiferal. Occasional small megafossil. Fish scales. Sandier phases oil stained. No to slight cut and odor. 1'6" Sandy siltstone. Firm to fairly hard. Heavily oil stained. Approached fine silty oil sand. Good cut and odor. 2'3" Sandy siltstone. As first above. No to slight cut and odor.

STATE OF CALIFORNIA  
 DEPARTMENT OF NATURAL RESOURCES

**DIVISION OF OIL AND GAS**

**LOG AND CORE RECORD OF OIL OR GAS WELL**

Sheet 14

Operator WIDE WATER ASSOCIATED OIL COMPANY Field Allan Canyon

Well No. Porter #47 Sec. 28, T. 3N, R. 16W, S. B. B. & M.

**FORMATIONS PENETRATED BY WELL**

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
					<u>3 1/2" Globe Wire Line Cores (Cont'd)</u>
8002	8012		Cored	4'6"	0'6" Shell. Limey siltstone. 1'9" Sandy siltstone. Firm to fairly hard. Heavily oil stained. Approached fine silty oil sand.
8012	8022		"	9'0"	0'4" Shell. Limestone. 8'8" Sandy siltstone. Fairly hard. Gray to dark gray. Foraminiferal. Occasional small megafossil. Fish scales. Sandier phases oil stained. No to slight cut and odor. Top 2'8" and bottom 3'0" show almost vertical fracturing with some minor slickensiding.
8022	8032		"	6'0"	5'0" Sandy siltstone. Fairly hard. Gray to dark gray. Foraminiferal. Occasional small megafossil. Fish scales. Sandier phases oil stained. No to good cut and odor. 0'3" Shell. Limestone. 0'9" Sandy siltstone. Firm. Heavily oil stained. Approaches a fine silty oil sand. Good cut and odor.
8032	8042		"	8'0"	2'0" Sandy siltstone. As last above 1'0" Sandy siltstone. Fairly hard. Gray. Occasional small megafossil. Fish scales. Sandier phases oil stained. Minor high angle fracturing and slickensiding. No to slight cut and odor. 1'6" Sandy siltstone. As first above. 2'6" Sandy siltstone. As second above. Some free heavy oil in fractures. 2'0" Sandy siltstone. As first above.

# DIVISION OF OIL AND GAS

## LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #5

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #47 Sec. 28, T. 3N, R. 16W, S. B. B. & M.

### FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
<u>8 1/2" Globe Wire Line Cores (Cont'd)</u>					
8048	8052		Cored	4'0"	Sandy siltstone. Fairly hard. Gray. Occasional small megafossil. Fish scales. Sandier phases oil stained. No to slight cut and odor.
8052	8062		"	11'0"	Sandy siltstone. As above. Good to slight cut and odor.
8062	8072		"	4'6"	4'4" Sandy siltstone as above. No to slight cut and odor. 0'2" Oil sand. Fine, somewhat silty. Good cut and odor.
8072	8082		"	0'2"	0'1" Shell. Sandstone. Oil stained. 0'1" Oil sand. Firm, medium. Good cut and odor.
8082	8092		"	0'1"	Shell. Sandstone, oil stained.
8092	8102		"	9'0"	3'0" Oil sand. Firm, fine, generally silty. Good cut and odor. 6'0" Sandy siltstone. Fairly hard. Gray. Fish scales. Sandier phases oil stained. no to fair cut and odor. Dip 27°.
8102	8112		"	1'0"	Oil sand. Fragments. Firm, generally medium. Good cut and odor. A few pieces light in color and with a pronounced grayish cast but silty and with good cut.
8112	8117		"	3'0"	Oil sand. Firm, generally medium. Good cut and odor.
<u>6" Reed Conventional Cores</u>					
8117	8137		"	9'0"	8'0" Oil sand with streaks to 0'4" sandy siltstone. Oil sand is firm, fine to medium. Generally well sorted. Good cut and odor. Siltstone is firm to fairly hard. Gray. Oil stained. 1'0" Sandy siltstone. As above. Fair cut. Good odor.

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet 70

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #47 Sec. 28, T. 3N, R. 16W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
8137	8157		Cored	6'0"	1'6" Sandy siltstone. Firm to fairly hard. Gray. Oil stained. Fair cut and odor. 1'6" Shell. Limestone. Good Dip 25°. 5'0" Sandy siltstone as above with thin streaks (to 0'3") shell as above.
8157	8177		"	3'6"	2'3" Sandy siltstone. Fairly hard to hard. Gray. Occasionally oil stained. No to slight cut and odor. 1'3" Shale. Hard. Bluish-gray. Argillaceous. Some fracturing and slickensiding evident. Good dips on massive thin (to 1/16"). Sand partings 54°.
8177	8195		"	5'0"	Shale. Hard. Bluish-gray. Highly fractured and slickensided. Dips 5° to 50°. Frequent calcite veinlets and a few thin (to 1/16") sand partings.
8195	8215		"	7'0"	1'0" Shell. Sandstone. Limey. Sometimes oil stained. Considerable shearing evident. 1'6" Sandy siltstone. Firm. Gray. Generally heavily oil stained. Sandier phases approach a fine, silty oil sand. Occasional fracture shows free heavy oil. No to fair cut and odor. 3'0" Shell. Limestone. Numerous small megafossils. 1'6" Sandy siltstone. Firm to fairly hard. Gray. Oilstained. Minor fracturing and slickensiding. Slight to fair cut and odor.
8215	8236		"	4'0"	3'0" Sandy siltstone. Fairly hard to hard. Gray. Generally oil stained. No to fair cut and odor. Lower 2'0" sometimes limey. 1'0" Shell. Sandstone.

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #7

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #47 Sec. 23, T. 3N, R. 16W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
8236	8256		Cored	16'6"	<p>3'0" Mottled oil sand and gray sand. Firm. Fine to coarse. Poorly sorted. Occasionally pebbly. Generally gray with irregular oil staining. No to fair cut and odor.</p> <p>8'0" Sandstone. (Shell). Frequently coarse and pebbly. Cross bedded. Gray. Poor indications of 15 to 45° dips. Considerable biotite evident.</p> <p>1'0" Shell. Limestone. Poor indication of 45° dip.</p> <p>4'6" Sandy siltstone. Firm. Gray. Generally oilstained. Fair cut and odor. One 1'0" streak shell consisting of limestone and sandstone in middle of interval. Occasional fracture and slickenside.</p>
8256	8276		"	8'0"	<p>1'0" Sandy siltstone. Firm to fairly hard. Gray. Oil stained. Fair cut and odor.</p> <p>1'0" Oil sand. Firm. Fine to medium. Good cut and odor. Some color variation which may be due to permeability differences.</p> <p>0'8" Shell. Sandstone.</p> <p>2'0" Sandy siltstone. As first above.</p> <p>3'0" Oil sand. As above.</p> <p>0'2" Shell. Sandstone.</p> <p>0'2" Gray sand. Firm. Fine to medium. Clayey matrix. No cut or odor.</p>

## DIVISION OF OIL AND GAS

Report on Test of Water Shut-off  
(FORMATION TESTER)

No. T 1-41991

Los Angeles 14, Calif. August 11, 1943.

Mr. R. S. Curl,

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY.

DEAR SIR:

Your well No. "Porter" 47, Sec. 26, T. 3 N., R. 16 W., S. B. B. & M.  
 Aliso Canyon Field, in Los Angeles County, was tested for water shut-off  
 on August 7, 1943. Mr. J. L. White, Inspector, designated by the supervisor,  
 was present as prescribed in Sec. 3222 and 3223, Ch. 93, Stat. 1939; there were also present J. T. Sinclair,  
 Engineer, and H. T. Thresher, Drilling Foreman.

Shut-off data: 7 in 26, 28, 30 lb. casing was cemented at 8050 ft. on August 2, 1943.  
 in 11" hole with 400 sacks of cement of which 27 sacks was left in casing.  
 Casing record of well: 13-3/8" cen. 516'; 7" cen. 8050', V.S.O.

Reported total depth 8117 ft. Bridged with cement from 8117 ft. to 1 ft. Cleaned out to 8055 ft. for this test.  
 A pressure of 1400 lb. was applied to the inside of casing for 60 min. without loss after cleaning out to xx ft.  
 A Johnston tester was run into the hole on 3-1/2 in. drill pipe, with xx ft. of water cushion,  
 and packer set at 8028 ft. with tailpiece to 8044 ft. Tester valve, with 3/16" bean, was opened at 3:37 p.m.  
 and remained open for 1 hr. and 5 min. During this interval there was a weak, intermittent  
 blow for 7 minutes; a fair to strong, leading blow for 18 minutes (gas reaching the  
 surface in 25 minutes); and a moderate, steady blow of gas for 40 minutes.

## THE INSPECTOR ARRIVED AT THE WELL AT 7:00 P. M. AND MR. SINCLAIR REPORTED:

1. A 17-1/2" rotary hole was drilled from the surface to 516'; a 12-1/4" rotary hole was drilled from 516' to 7216'; an 11" rotary hole was drilled from 7216' to 8050'; and an 8-1/2" rotary hole was drilled from 8050' to 8117'.
2. On August 1, 1943, 50 sacks of cement was pumped into the hole through 3-1/2" drill pipe hanging at 8117'.
3. Electrical core readings showed the top of the Miocene at 7790' and the top of the Seanon oil sand at 8068'.

## THE INSPECTOR NOTED:

1. When the drill pipe was removed, 550' of drilling fluid was found in the drill pipe above the tester, 350' of which was heavy, gas-out mud grading to 200' of gassy, thin drilling fluid, equivalent to 2.3 bbl. and 1.3 bbl., respectively.
2. Water filtered from fluid samples taken from 310', 128', and 5' above bottom of drill pipe tested 171, 137, and 109 grains of salt per gallon, respectively.
3. The recording pressure bomb chart showed that the tester valve was open throughout the test.

The test was completed at 5:30 p. m.

THE SHUT-OFF IS APPROVED.

cc - Messrs. L. C. Decius  
 - Jos. Jensen  
 - G. C. Pfeffer (2)

R. D. BUSH, State Oil and Gas Supervisor

By E. H. Mussen, Deputy

JLN:wy

STATE OF CALIFORNIA  
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-38373

Los Angeles, Calif. April 27, 19 43.

Mr. R. S. Curl,  
Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your proposal to drill Well No. "PORTER" 47  
Section 28, T. 3 N., R. 16 W., S. B. B. & M., Aliso Canyon Field, Los Angeles County,  
dated April 23, 19 43, received April 26, 19 43, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 1311 feet S. and 4165 feet W. from Station #84  
The elevation of the derrick floor above sea level is 2496 feet.  
We estimate that the first productive oil or gas sand should be encountered at a depth of about 7900 feet."

PROPOSAL:

"We propose to use the following strings of casing, either cementing or landing them as herein

indicated:	Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
	13-3/8"	54.5	J-55 S.J.	500'	Cemented
	7"	24.30	J-55AN-60 & T&O	7900'	Cemented
	5"	21	J-55 F.J.	8150'	Landed (Pf. liner)

Well is to be drilled with rotary tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Adequate blowout prevention equipment shall be provided and ready for use at all times.
3. Any hole to be sidetracked in any oil zone shall be filled with cement, if possible.
4. This division shall be notified to examine cores and/or electrical log before running the 7" casing.
5. THIS DIVISION SHALL BE NOTIFIED TO WITNESS a test of the effectiveness of the 7" shut-off.

cc- L. C. Decius  
Jos. Jensen  
G. C. Pfeffer  
ERMA:OH

*S/ma*

R. D. BUSH  
State Oil and Gas Supervisor

By *E. H. Musser* Deputy

