

FEDERAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
1000 S. Hill Rd, Suite 116 Ventura, CA 93003-4458
Phone:(805) 654-4761 Fax:(805) 654-4765

No. T 216-0247

REPORT ON OPERATIONS

GAS STORAGE PROJECT
"Sesnon-Frew" - Modelo (Miocene-Eocene) Formation

Amy Kitson
Southern California Gas Company (S4700)
12801 Tampa Ave., SC9382
Northridge, CA 91326

Ventura, California
July 13, 2016

Your operations at well "**Porter**" 37, A.P.I. No. 037-00724, Sec. 27, T. 03N, R. 16W, SB B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on 7/6/2016, by **Jay N. Huff**, a representative of the supervisor.

The operations were performed for the purpose of **determining casing integrity**.

DECISION:

DEFERRED PENDING REVIEW BY THE DIVISION'S SAFETY TEAM.

JNH/TKC

Kenneth A. Harris Jr.

State Oil and Gas Supervisor

By 

Patricia A. Abel, District Deputy

EB76.

State of California
Department of Conservation
Division of Oil, Gas, and Geothermal Resources

No. T 216-0247
#16,3

**INTERNAL MECHANICAL INTEGRITY TEST (MIT)
(Standard Annulus Pressure Test-SAPT)**

Operator: SoCal Gas				Well: Porter 37	
Sec. 27	T. 3N	R. 16W	B.&M. SB	API No.:037-00724	Field: Aliso Canyon
County: Los Angeles				Witnessed/Reviewed on: 7/6/2016	
Jay Huff, representative of the supervisor, was present from 1000 to 1110					
Also present were: Mike Giuliani					
Casing record of the well: 13-3/8" 54.5# J55 @ 520'. Cemented to surface. 7" 23/26/29# J55/N80 @ 7640'. Cemented to 6,180'. 5" 18# J55 Liner 7592'-7740' 2-3/8" tubing with production packer at 7,434' and plug set at 7,402'. Sliding sleeve in open position at 7,370'.					
The Internal MIT was performed for the purpose of pressure testing the 7" casing above Packer at 7,434' (2) (prior to injecting fluid). Tubing was also tested with a tubing plug set at 7,402'.					
<input checked="" type="checkbox"/> The Internal MIT is approved since it indicates that the 7" casing has mechanical integrity above <u>7,434'</u> at this time.					
<input type="checkbox"/> The Internal MIT is not approved due to the following reasons: (specify)					
INDICATE WHERE PACKER WAS SET AND HOW LONG PRESSURE WAS HELD ALONG WITH ANY BLEEDOFF DATA.					
Pressure testing of Production casing, packer, and tubing plug with 8.5 ppg polymer fluid. Well is to be idled. Pressure Test 1. P1=1,103 psi @ 10:05. P2=1,099 psi @ 11:06.					

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

Operator: Southern California Gas Company WELL DESIGNATION "Porter" 37

API No. 03700724 SE 27 T: 3N R.: 16W , SB B. and M.

County: Los Angeles FIELD: Aliso Canyon

Type of Notice: Rework Date 6/29/2016 Report Number: P216-0112

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

NEW STATUS

	Date	OK	NEED	Remarks
Well Summary (OG100)				
History (OG103)				
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				
<i>Press Test</i>	<i>7/6/16</i>	<i>✓</i>		<i>Digital data all one day</i>

DATE: _____

NOTICE OF RECORDS DUE

DATE: _____

DATE: _____

DATE: _____

DATE: _____

WELL STATUS INQUIRY

DATE: _____

DATE: _____

Well Stat

Change Required: _____

Change Done: _____

ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS

CalWims Abandonment Form: _____ SURFACE INSPECTION NEEDED _____ COMPLETED _____

Date and Inspector

FINAL LETTER NEEDED _____ COMPLETED _____ (Date) _____ Calwims DRILL/REDRILL Form _____

ENGINEER'S CHECK LIST

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

Calwims Location _____ Calwims ELEVATION: _____ CONFIDENTIAL RELEASE DATE: _____ PERMIT REQUIREMENTS MET _____

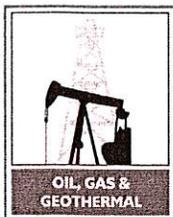
CLERICAL CHECK LIST

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

REMARKS

RECORDS SCANNED: _____
(Date)

RECORDS APPROVED: Doc 8-16-16
(Date and Engineer)



N. JRAL RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF CONSERVATION
 DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
 1000 S. Hill Rd, Suite 116 Ventura, CA 93003 - 4458

No. **P 216-0112**

PERMIT TO CONDUCT WELL OPERATIONS

<u>Old</u>	<u>New</u>
010	010
FIELD CODE	
00	00
AREA CODE	
30	30
POOL CODE	

Gas Storage
 Plugback and Suspend for One Year
 "Sesnon-Frew" - Modelo (Miocene-Eocene) Formation

Ventura, California
 July 06, 2016

Amy Kitson, Agent
 Southern California Gas Company (S4700)
 12801 Tampa Ave., SC9382
 Northridge, CA 91326

Your proposal to **Rework** well "Porter" 37, A.P.I. No. 037-00724, Section 27, T. 03N, R. 16W, SB B. & M., Aliso Canyon field, Any area, Sesnon-Frew pool, Los Angeles County, dated 6/29/2016, received 7/5/2016 has been examined in conjunction with records filed in this office. (Lat: 34.309548 Long: -118.550502 Datum:83)

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
 - a. Class I **Note: work to be completed without the removal of the injection assembly.**
2. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. A pressure test is conducted to demonstrate the mechanical integrity of the 7" casing. The minimum test pressure shall 1000 psi.
4. This well is to be taken out of service and isolated from the storage reservoir. The well shall be re-evaluated or abandoned within 1 year of the completion of the pressure testing pursuant to Order #1109 and its amendments.
5. In all other respects, the provisions of Division Order #1109 and its amendments shall remain in effect.
6. This office shall be contacted by phone prior to making any program changes and no changes are made without Division approval.
7. **THIS DIVISION SHALL BE NOTIFIED TO:**
 - a. Witness a pressure test of the 7" casing and tubing plug.

Continued on Next Page

Blanket Bond Dated: 7/6/1999
 UIC Project No. 0100006

Engineer Kris Gustafson
 Office (805) 654-4761

KG/kg

Kenneth A. Harris Jr.
 State Oil and Gas Supervisor

By *Patricia A. Abel*
 Patricia A. Abel, District Deputy

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. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

NOTE:

1. The base of the freshwater zone is at 800'±.
2. No operation shall be undertaken or continued that will contaminate or otherwise damage the environment.
3. This permit is being issued as part of Division Order No. 1109 dated March 4, 2016. Any well that fails any of the testing must be taken out of service and isolated from the storage reservoir pursuant to the Safety Review Testing Regime.
4. The required History of Oil or Gas Well (OG103) shall include a complete description of the required pressure testing. **An updated casing and tubing diagram shall be included with the well history.**
5. **A Well Summary Report (Form OG 100)** and **Well History (Form OG 103)** shall to be submitted to the Division within 60 days after the well is drilled, reworked, plugged and abandoned, or if the work is suspended. Any additional well work will require an additional notice to be submitted to this office prior to well operations.

Enclosure: Attachment 1 to DOGGR Order 1109. Safety Review Testing Regime for the Aliso Canyon Natural Gas Storage Facility

**ATTACHMENT 1
TO DOGGR ORDER 1109**

**SAFETY REVIEW TESTING REGIME
FOR THE ALISO CANYON NATURAL GAS STORAGE FACILITY**

This document identifies the requirements of this comprehensive safety review that shall be completed by the Southern California Gas Company (Operator) and verified by the Department of Conservation, Division of Oil, Gas, and Geothermal Resources (Division). The Operator shall use accepted industry practices and procedures.

The Division has consulted with independent technical experts from the Lawrence Berkeley, Lawrence Livermore, and Sandia National Laboratories ("National Laboratories") to develop the requirements of this facility safety review. The National Laboratories experts independently reviewed and concurred with the testing requirements for the safety review detailed below.

This comprehensive safety review requires that each of the active injection wells in the Aliso Canyon Storage facility either pass a thorough battery of tests in order to resume gas injection or be taken out of operation and isolated from the underground gas storage reservoir. Several steps, detailed below, are required in this safety review. Documentation of all testing required under this comprehensive safety review shall be provided electronically to the Division within 72 hours of completion of a test in digital (i.e. LAS) and printed (i.e. pdf) form. All pressure tests required under this comprehensive safety review shall be witnessed by Division staff. A well that is properly plugged and abandoned in accordance with Public Resources Code section 3208 is not subject to testing under this comprehensive safety review. A well that does not pass all tests must be repaired, retested, and pass all tests, or be plug and abandoned.

REQUIRED TESTS FOR EACH WELL IN THE FACILITY

Step 1: The Operator shall perform an initial casing assessment on the well consisting of temperature and noise logs.

a. Temperature Log:

A temperature survey shall be run from the surface to the packer to measure the temperature within the wellbore. A temperature survey that demonstrates no unexplained anomalous temperature changes in the well is one indication of casing integrity.

b. Noise Log:

An acoustic sensor survey capable of detecting the sound of fluid flow will be conducted the length of the well above the packer to the surface. The survey will include stops at least every 250 feet and at the midpoint of any anomaly detected by the temperature survey. The absence of anomalous sound above the packer is an indication of well integrity

Step 2: The results of the Temperature Logs and Noise Logs will be independently reviewed by Division engineers. Any unexplained abnormal findings in this set of tests shall be addressed by the Operator in one of the following ways:

- a. Conduct further investigation and demonstrate to the Division's satisfaction that the abnormal finding is not an indicator of a lack mechanical integrity;
- b. Remediate the well to the Division's satisfaction; or
- c. With Division review and approval, remove the well from operation and isolate the well from the underground gas storage reservoir in accordance with Steps 4b through 7b below.

Necessary actions to remediate any abnormalities revealed by these tests will be reviewed by Division engineers. Once repairs or mitigations are completed, the Temperature Log and Noise Log must then be repeated on the well and reviewed by Division engineers to ensure that there are no additional abnormal test results and to confirm the issue was repaired.

Step 3: After these tests are completed on the well, and all required action has been completed, the operator shall either:

- a. Conduct the additional tests and evaluations on the well, outlined in Steps 4a through 7a below, in order to gain approval for injecting gas through that well; or
- b. Remove the well from operation and isolate the well from the underground gas storage reservoir in accordance with Steps 4b through 7b below.

REQUIRED TESTS IF A WELL IS INTENDED TO RESUME OPERATIONS

If Temperature and Noise Logs have been completed on a well and they indicate well integrity, and the Operator designates the well to return to injection operations, then the Operator shall perform the additional testing outlined in Steps 4a through 7a. The results of these tests will be independently reviewed by Division engineers and posted publicly. Each of the following tests requires that the production tubing be removed from the well.

Step 4a: The Operator shall conduct a **Casing Inspection log**.

The Operator shall conduct a Casing Inspection log of the well that measures the thickness of the production casing, from the surface to the bottom of the gas storage reservoir cap rock. If the inspection reveals a reduction in wall thickness, the current minimum strength of the casing will be calculated. If the current minimum strength of the casing has diminished to the point that it cannot withstand authorized operating pressures for the well plus a built-in additional safety factor of pressure, the well has failed this test. *A passing test for a casing inspection log would show no thinning of the casing that diminishes the casing's ability to contain at least 115% of the well's maximum allowable operating pressure as authorized in the current Project Approval Letter.*

Step 5a: The Operator shall conduct a **Cement Bond Log** for the well.

The Operator shall conduct a Cement Bond Log (CBL) that measures the bonding between cement and the production casing of the well, and also the bonding between the annular cement and the formation. Cement should be solidly bonded to both the well's production casing and the geologic formation to ensure a seal that prevents fluids from migrating up or down the outside of the well. *A passing test for a cement bond log shows definitive bond, as demonstrated by sonic waveform,*

between cement and casing and between cement and the gas storage formation and/or cap rock for at least 100 feet above the top of the gas storage reservoir.

Step 6a: The Operator shall conduct a **Multi-Arm Caliper Inspection** of the well.

The operator shall conduct an inspection that measures any internal degradation or significant changes to the well's geometry from the surface to the top of the gas storage reservoir, using a minimum 32-arm caliper tool. If the inspection reveals a thinning or deformity of the casing, the current strength of the casing will be calculated. If the current strength of the casing has diminished, such that it cannot withstand authorized operating pressures plus a built-in safety factor of additional pressure, the well fails this inspection. *A passing test for a Multi-Arm Caliper Inspection would show no deformation or thinning of the casing that diminishes the casing from being able to properly contain at least 115% of each well's maximum operating pressure.*

Step 7a: The Operator will conduct a **Pressure Test** of the production casing and of the well once the production tubing has been reinstalled. The Operator may conduct the casing pressure test prior to reinstalling the production tubing. Using a digital recorder, the operator will conduct a liquid-filled positive pressure test within the production tubing of the well, and in the annular space between the production tubing and the casing, to determine the well's ability to withstand normal operating pressures. The production tubing will be isolated and then pressure tested. The annular space between tubing and casing will be pressure tested. This testing also evaluates the integrity of any packers, which seal the annular space between the tubing and casing. The pressure test will be one hour and begin at a pressure of 115% of the maximum operating pressure or the minimum yield strength of the casing and tubing, whichever is less. *A passing pressure test is a pressure loss not exceeding 10% for any 30 minute period during the hour long test.*

After conducting the above tests, the Operator will conduct any indicated remediation so that the well can pass these tests. All remediation will be subject to the review of Division engineers. The well would then be required to undergo the tests once again to demonstrate well integrity.

If the well passes the Casing Wall Thickness Inspection, the Cement Bond Log, the Multi-Arm Caliper inspection and the Pressure Test to the Division's satisfaction, then the Division may clear the well for use for gas injections and withdrawal, once the Division has authorized resumption of injection into the gas storage reservoir. As noted below, wells approved for operation will only be permitted to inject or withdraw gas through the production tubing.

REQUIRED ACTIONS IF THE WELL IS TO BE TAKEN OUT OF OPERATION AND ISOLATED FROM THE GAS STORAGE RESERVOIR:

If the operator elects to take a well out of service, then the following steps shall be taken to isolate the well from the gas storage reservoir:

Step 4b: The Operator shall confirm the presence of cement outside the well's external casing in the section of the well that prevents the movement of gas from the underground gas storage reservoir to shallower geologic zones above the gas storage reservoir. Existing cement bond logs and well construction

records may be used to make this confirmation. This confirmation requires concurrence from Division engineers.

Step 5b: The Operator shall install a mechanical seal or “packer” within the well’s production casing and install a mechanical plug within the well’s production tubing, if applicable. These seals shall be set in place near the bottom of the well, within the portion of the well surrounded by cement. This kind of seal is an industry standard practice for isolating a well from reservoir gases or fluids and will further protect the casing from internal gas pressure.

Step 6b: The Operator shall fill the well with fluid to the well’s surface in order to create appropriate downward hydrostatic pressure in the well that further contributes to the integrity of the well seal.

These measures will isolate a well from the underground gas reservoir, as confirmed by National Laboratory experts. Each of the above actions is subject to review and approval by Division Engineers.

Step 7b: Once the Operator has completed steps 4b, 5b, and 6b, and the seal is in place at the bottom of the well and the well is filled with fluid above the seal, the operator shall:

- a. Conduct daily gas monitoring at the surface of the non-operational well, including monitoring the area around the well perimeter and in the annular space between the plugged casing string and the outmost casing;
- b. Conduct noise log, temperature log and positive pressure test every six months;
- c. Conduct weekly monitoring of fluid levels in the well or, install and operate real-time pressure monitors that provide immediate notification to the operator when pressures deviate from normal in the well’s interior tubing and its annular space.

The above monitoring shall be reported to Division engineers and maintained as a part of the well file. Division engineers will review all submitted information for evaluation on a regular basis to ensure that the well taken out of service has maintained safety, and the operator shall take all necessary steps maintain the safety of the well.

Any well taken out of operation cannot be approved to resume operations and gas injection until the successful completion of the battery of tests outlined above in Steps 4a through 7a (Casing Wall Thickness Inspection, the Cement Bond Log, the Multi-Arm Caliper Extension and the Pressure Test) is completed. Those tests must be successfully completed within one year of completing step 6b. If a well cannot successfully complete all necessary steps required in this safety review after one year of completing step 6b, then the well shall be properly plugged and abandoned in accordance with Public Resources Code section 3208.

REQUIREMENTS FOR WELLS RESUMING OPERATIONS IN ALISO CANYON

The Division’s authorization to resume injection in the Aliso Canyon Storage Facility will be contingent on the successful completion of this comprehensive safety review. The State Oil and Gas Supervisor must confirm in writing that all wells in the facility have either completed and passed the full battery of tests required in the safety review, been taken out of service and isolated from the underground gas storage reservoir, or been properly plugged and abandoned in accordance with Public Resources Code Section 3208.



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

FOR DIVISION USE ONLY		
Bond	Forms	
		OGD114
	CALV WIMS	115V

P216-0112

NOTICE OF INTENTION TO REWORK / REDRILL WELL

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

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework / redrill well Porter 37, API No. 037-00724,
 (Check one)

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

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

See attached wellbore schematic

The total depth is: 7881 feet. The effective depth is: 7740 feet.
 Present completion zone(s): Sesnon Anticipated completion zone(s): Same
 (Name) (Name)
 Present zone pressure: storage psi. Anticipated/existing new zone pressure: storage psi.

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

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

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

The SCGC plans to take this well out of operation and isolate from the gas storage reservoir as per the First Amended Safety Review Testing Regime: Steps 4b-7b.

4b - ETOC 6180' as per attached wellbore mechanical.

5b - Packer set at 7434'. Plug set in XN nipple at 7402' on and SSD at 7370' verified open 6/9/16.

6b - Circulated 8.5 ppg kill fluid down tbg. through SSD at 7370' and back to surface to completely fill well on 6/17/16.

7b - With casing valve closed, pressure-up on tubing to 1000 psi. for 1 hour (will test csg., packer and tubing plug all at same time).

If well is to be redrilled or deepened, show proposed coordinates (from surface location) and true vertical depth

at total depth: _____ feet and _____ feet Estimated true vertical depth: _____
 (Direction) (Direction)

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

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

Name of Operator Southern California Gas Company			
Address P. O. Box 2300		City/State Chatsworth	Zip Code 91313-2300
Name of Person Filing Notice Mike Giuliani	Telephone Number: (805) 290-2074	Signature	Date 6/29/16
Individual to contact for technical questions: Mike Giuliani	Telephone Number: (805) 290-2074	E-Mail Address: mike.giuliani@interactprojects.com	

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

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

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

CRITICAL WELL DEFINITION

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

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

WELL OPERATIONS REQUIRING BONDING

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

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

Well Porter 37

API #: 04-037-00724-00
Sec 27, T3N, R16W

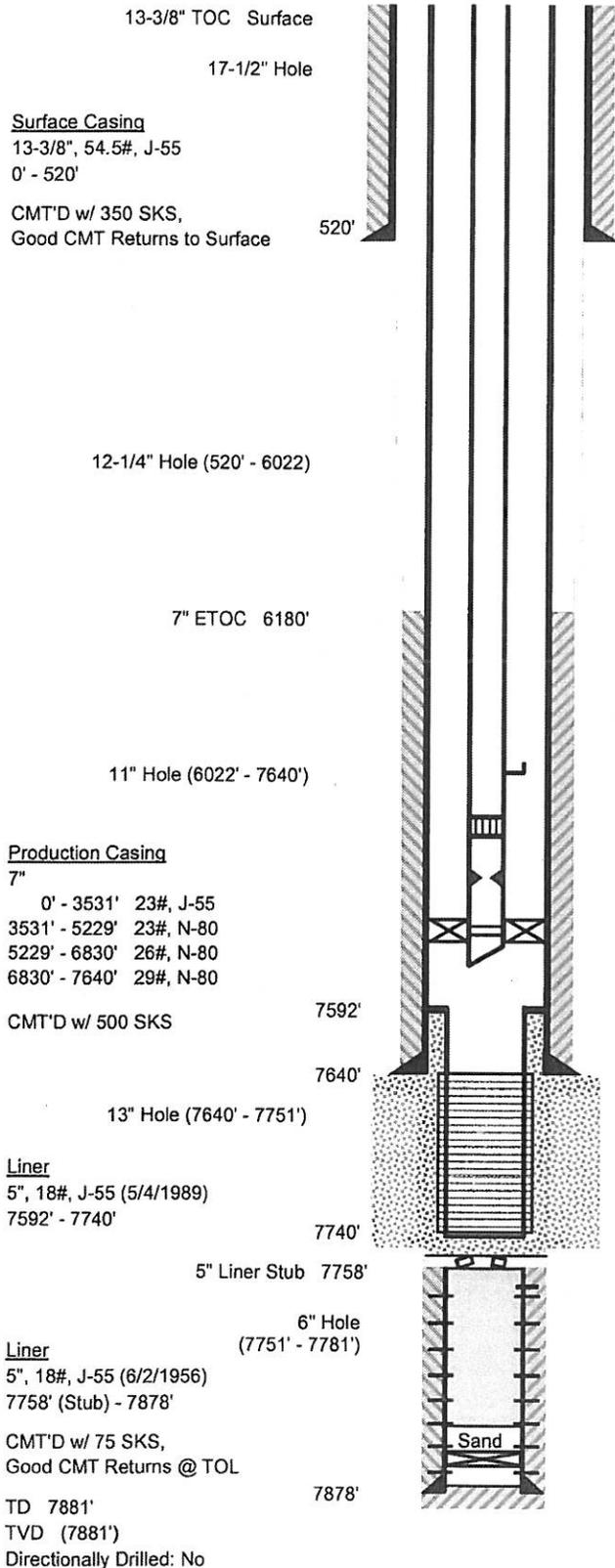
Operator: So. California Gas Co.

Lease: Porter
Field: Aliso Canyon
Status: Active Gas Storage
BFW:
USDW:

Ground Elevation: 1900.45' asl
Datum to Ground: 6.92' DF

Spud Date: 6/12/1946
Completion Date: 8/26/1946

Junk: Milled on 8" of nose cone
from hole opener to 7756'



Top of Zone Markers md (tvd)		
A36	4790'	(4790')
UP	5090'	(5090')
LP	5575'	(5575')
UDA1	6060'	(6060')
MDA	6704'	(6704')
LDA	6880'	(6880')
MP	7341'	(7341')
S1	7560'	(7560')
S4	7650'	(7650')
S8	7780'	(7780')
S14	7874'	(7874')

7331' BST GLM w/ 1" pocket w/ 8K latch

7370' Otis "XD" Sliding Sleeve

7402' Otis "XN" No-Go Nipple

7434' Otis WCB PCKR & J-Latch w/ Two (2) Seal Units

7438' Tail

SQZ'D 7" Shoe w/ 50 SKS CMT (8/22/1946)

7640' (Shoe) WSO (8/20/1946)

5" Perfs: 1/2" HPF 0.008" Gauge WWS 7640' - 7738'

Gravel Packed w/ 155 CF (110% fo Calc'd) 20-40

7756' Top of Fill / Possible Junk (see desc. above)

7758' - 7827' CMT Plug (20 SKS, 6/18/1956)

7780' Four (4) 1/2" Holes WSO (100 SKS CMT SQZ'D, 6/6/1956)

5" Perfs: 7783' - 7827' Four (4) 1/2" HPF (6/11/1956, ineffec.)

7840' - 7870' Two (2) 1/2" HPF (6/11/1956, ineffec.)

7862' Four (4) Holes (6/10/1956, ineffec.)

7827' Unable to Wash Out Sand Below

7833' Baker Model "K" Retainer

7876' TOC

Prepared by: MAM (6/21/2016)

InterAct

Rec'd 07-05-16 DOGGR Ventura.

Casing Pressure Test Safety Check (1000 psi)

Well	Packer Depth MD/TVD	Casing Size/Grade/Weight	Depth MD	Burst PSI	85% of Burst PSI	Pressure at Depth w/1000 psi Surface Pressure	Press < 85% of Burst
Ward 3A	7231'/7106'	8-5/8", 36#, N-80	4592	6490	5517	3030	Yes
		8-5/8", 40#, N-80	7231	7300	6205	4196	Yes
Standard Sesnon 9	8544'/8544'	7", 23#, N-80	3777	4360	3706	2669	Yes
		7", 23#, N-80	5463	6340	5389	3415	Yes
		7", 26#, N-80	7093	7240	6154	4135	Yes
		7", 29#, N-80	8544	8160	6936	4776	Yes
Standard Sesnon 13	8880'/8880'	7", 23#, J-55	3834	4360	3706	2695	Yes
		7", 23#, N-80	5707	6340	5389	3522	Yes
		7", 26#, N-80	7439	7240	6154	4288	Yes
		7", 29#, N-80	8880	8160	6936	4925	Yes
		7", 29#, N-80	52	4360	3706	1023	Yes
Standard Fee 6	8878'/8877'	7", 23#, N-80	6231	6340	5389	3754	Yes
		7", 26#, N-80	8377	7240	6154	4703	Yes
		7", 29#, N-80	8878	8160	6936	4924	Yes
		7", 23#, J-55	4667	4360	3706	3063	Yes
Porter 45	7320'/7318'	7", 23#, N-80	6707	6340	5389	3964	Yes
		7", 26#, N-80	7320	7240	6154	4235	Yes
		7", 23#, J-55	3531	4360	3706	2561	Yes
Porter 37	7434'/7434'	7", 23#, N-80	5229	6340	5389	3311	Yes
		7", 26#, N-80	6830	7240	6154	4019	Yes
		7", 29#, N-80	7434	8160	6936	4286	Yes

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Ventura, California

October 30, 1991

R. D. Phillips, Agent

SOUTHERN CALIFORNIA GAS COMPANY

P.O. Drawer 3249m Mail Location 22GO

Los Angeles, CA 90051-1249

Your request, dated July 24, 1991, proposing to change the designation of well(s) in Sec. 27, 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:

FROM

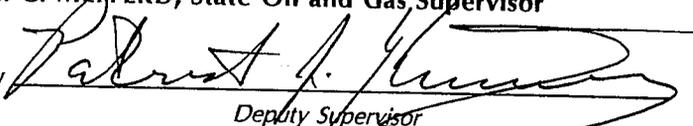
"SFZU" P-12 (037-00701)
"SFZU" P -14 (037-00703)
"SFZU" P-30 (037-00717)
"SFZU" P-31 (037-00718)
"SFZU" P-32 (037-00719)
"SFZU" P-36 (037-00723)
"SFZU" P-37 (037-00724)
"SFZU" P-45 (037-00732)
"SFZU" FF-32 (037-00686)
"SFZU" P-50A (037-22737)
"SFZU" P-68A (037-22742)
"SFZU" P-37-A (037-22046)
"SFZU" FF-32-A (037-21872)

TO

"Porter" 12 (037-00701)
"Porter" 14 (037-00703)
"Porter" 30 (037-00717)
"Porter" 31 (037-00718)
"Porter" 32 (037-00719)
"Porter" 36 (037-00723)
"Porter" 37 (037-00724)
"Porter" 45 (037-00732)
"Fernando Fee" 32 (037-00686)
"Porter" 50A (037-22737)
"Porter" 68A (037-22742)
"Porter" 37-A (037-22046)
"Fernando Fee" 32-A (037-21872)

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
RECEIVED
AUG 15 1989
VENTURA, CALIFORNIA

History of Oil or Gas Well

Operator Southern Calif. Gas Co. Field Aliso Canyon County Los Angeles
Well "SFZU" Porter #37, Sec. 27, T. 3N, R. 16W S.B.B. & M.
A.P.I. No. #037-00724 Name R. W. Weibel Title Agent
Date June 8, 19 89 (Person submitting report) (President, Secretary or Agent)

Signature N. W. Buss for R. W. Weibel
P.O. Box 3249 Terminal Annex, L.A., California 90051 (213) 689-3925

(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

1989	
4-14 to 4-15	GWO No. 91769: Were issued to replace liner, gravel MWO No. 99039: pack liner and install innerstring
4-17	Rigged up. Installed back pressure valve. Removed xmas tree and installed BOPE. Tested blind rams to 1500 psi.
4-18	Using Hydrotest, attempted to test BOPE. Donut leaked 2000 psi in 10 minutes on hydril bag, pipe rams and blind rams. Made visual test at 3000 psi, witnessed by Mr. Hesson of the DOG. Released Otis latch from packer at 7459' and started out of well laying down tubing.
4-19	Recovered all tubing and production equipment. Set bridge plug in 7" casing at 17'. Using Hydrotest, tested BOPE with water, hydril bag at 2500 psi, pipe rams, blind rams and choke manifold at 3000 psi for 20 minutes. Test witnessed by Mr. Mulqueen of the DOG. Retrieved bridge plug. Made up Otis pulling tool on hydraulic jars and bumper sub with four drill collars and started in well.
4-20	Finished picking up 3-1/2" drill pipe and ran to 7465'. Attached to Otis packer and pressure tested casing to 1000 psi for 20 minutes. Worked Otis packer free and started out of well.
4-20	Finished pulling out of well with packer. Ran 6" bit and 7" casing scraper on drill pipe to 7486' and pulled out of well. Made up 4" OD washover shoe on one joint of 4" OD washpipe with 245' of 2-3/8" drill pipe tail, started in well.

- 4-21 Ran washpipe to 7650' and cleaned out to 7752'. Pulled out of well.
- 4-22 Made up 5" hydraulic cutter on 126' of 2-3/8" drill pipe, crossed over to 3-1/2" drill pipe. Made cuts in
4-25 5" liner 123' and 10' below top of liner. Tripped for 4-1/4" spear and fishing assembly. Recovered 7" x 5" liner hanger, port collar and 121' of 5" flush joint slotted liner. Ran 5" 18# opposed cup wash tool on 8 joints of 2-3/8" drill pipe to top of liner.
- 4-26 Washed liner from 7619'-7735' and pulled out of well.
to Ran 5" 18# spear on fishing assembly to 7613'.
- 4-27 Attached to liner and pulled liner out of well. Ran 6" bit to 7684' and cleaned out to 7721'.
- 4-28 Cleaned out well from 7690'-7759'. Ran 6" x 13"
to Tri-State hole opener to 7640' and reamed to 7745'.
- 4-29
- 5-1 Ran 6" bit on drilling assembly to 7748' and cleaned out to 7758'.
- 5-2 Ran 6" bit back to 7738' (top of fill). Ran Welex caliper log from 7726'-7640'.
- 5-3 Ran muleshoe on drill pipe to 7726' and cleaned out to 7756'.
- 5-4 Changed well over using 330 bbls of filtered polymer completion fluid. Ran liner assembly as follows:

<u>Description</u>	<u>Length</u>
5" 18# wire wrapped joint (bull plugged)	22.00'
5" 18# wire wrapped joint	40.00'
5" 18# wire wrapped joint	40.05'
5" 18# blank joint	40.55'
Landing nipple (5" OD)	<u>1.75'</u>
Total Length	144.35'

Ran 115' of 2-3/8" Hydril CS tubing tail below gravel packing tool and attached to liner. Landed liner at 7740' with top of landing nipple at 7595'.

- 5-5 Mixed 160 cu.ft. of 40-60 mesh sand. Displaced 55 cu.ft. behind liner before sand packed off. Backscuttled excess sand. Pressure packed and pumped away at 200 psi. Mixed and displaced 82 cu.ft. of additional 40-60 sand behind liner in second stage. Did not pack off. Waited 5 hours. Mixed 46 cu.ft. of 0-60 sand and displaced 18 cu.ft. behind liner and reached 2000 psi. Backscuttled and repressured to 2000 psi. Total of 155 cu.ft. of 40-60 sand (110% of calculated fill) behind liner.
- 5-6 Repressured gravel pack to 1900 psi. Released gravel pack tool from liner and pulled out of well. Ran 7" x 5" lead seal adapter on drill pipe and attached to landing nipple. Set lead seal and released running tool. Made up 180' of 2-3/8" drill pipe below 3-1/2" drill pipe.
- 5-8 Ran drill pipe to bottom of liner. No fill in liner. Set bridge plug at 5650' and tested at 1000 psi. Set bridge plug #2 at 100'. Removed BOPE and tubing head. Installed 11" x 11" 5000 psi landing spool.
- 5-9 Tested connections to 1000 psi. Retrieved bridge plugs from 100' and 5650'. Ran gauge ring on wireline to 7500'. Set Otis 7" 29# WCB packer at 7434'. Ran in with test seals overshot to 5370'.
- 5-10 Latched onto packer and pulled 20,000# over drill pipe weight. Set with 10,000# on packer and tested to 1500 psi for 30 minutes. Released from packer and pulled out of well.
- 5-11 Changed pipe rams. Ran 5-1/2" 19.80# N-80 Atlas Bradford FL-4S pipe to 5900', using Torque-N-Turn, drifting and hydrotesting to 4000 psi.
- 5-12 Located packer at 7434'. Set 20,000# over weight on packer and tested annulus to 1500 psi. Filled annulus with 2% KCl water. Set Baker bridge plug at 60'. Removed BOPE. Set 5-1/2" slips with 20,000# on packer. Installed seal flange. Cut off 5-1/2" casing. Installed tubing head. Reinstalled BOPE and tested to 1000 psi.

- 5-13 Ran and hydrottested production equipment and 2-3/8" 8rd N-80 tubing at 4000 psi. Located packer at 7434'. Pulled 20,000# on latch and tested annulus to 1500 psi. Released from packer. Changed fluid over to 2% KCL water and landed tubing with 8000# on packer. Using wireline opened sliding sleeve.
- 5-15 Installed back pressure valve in donut. Removed BOPE and installed xmas tree. Pressure tested xmas tree and donut seals to 5000 psi. Blind flanged outlets and released rig at 8:00 P.M.

LINER DETAIL

WELL: Porter #37
 FIELD: Aliso Canyon

STATUS: Injection/Withdrawal
 DATE: June 26, 1989

DIAGRAM	LINER	LINER	LINER	LINER	
	SIZE	5"	SIZE	5"	
	WEIGHT	18#	ID	4.276"	
	GRADE	J-55	DRIFT ID	4.151"	
	THREAD	8rd LTC/SFJ	OD	5.563" (collar)	
	DEPTH	7740'		5.500" (Screen)	
	ITEM #	DESCRIPTION		LENGTH	DEPTH
	A.	7" 29# N-80 casing, 6.184" ID Shoe at:			7640.00
		Top of liner at:			7592.53
	1.	Lead seal drive over adapter			
		5.938" OD, 4.276" ID		3.12	7595.65
	2.	Landing nipple 5.00" OD, 4.276" ID		1.75	7597.40
		5" SFJ pin			
	3.	Blank joint w/welded centralizer lugs		40.55	7637.95
		for 7" casing, 5" SFJ box x 5" LT&C pin			
	4.	Wire-wrapped joint		40.05	7678.00
5.	Wire-wrapped joint		40.00	7718.00	
6.	Wire-wrapped joint with bull plug		22.00	7740.00	
	welded on bottom				
	Wire wrapped liner detail:				
	- 18 rows 1.5" centers 0.5" holes (144 holes/ft)				
	- 304 stainless steel 0.008" gauge screen jacket				
	- 2' blank pipe on each end of wire-wrapped joints				

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

No. T 289-119

REPORT ON OPERATIONS

R. W. Weibel, Agent
SOUTHERN CALIF. GAS CO.
810 S. Flower Street
Los Angeles, CA 90017

Ventura, California
May 3, 1989

Your operations at well "SFZU" P-37, API No. 037-00724,
Sec. 27, T. 3N, R. 16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles
County, were witnessed on 4/18/89. Steve Mulqueen, representative of
the supervisor, was present from 1200 to 1300. There were also
present Ed Bradbury, Drilling Foreman.

Present condition of well: 13 3/8" cem 520'; 7" cem 7640' WSO, hole @
6000'±?; 5" ld 7486'-7752', perfs 7486'-7752'. Junk below ?. TD 7881'.
Plugged w/cem 7881'-7758'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND ITS INSTALLATION ON THE 13 3/8" CASING
ARE APPROVED.

l j g

M.G. MEFFERD, State Oil and Gas Supervisor
By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

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

No.P 289-80
Field Code 010
Area Code 00
New Pool Code 30
Old Pool Code 30

PERMIT TO CONDUCT WELL OPERATIONS

R. W. Weibel, Agent
SOUTHERN CALIF. GAS COMPANY
810 S. Flower Street
Los Angeles, CA 90017

Ventura, California
March 17, 1989

Your proposal to rework well "SFZU" P-37,
A.P.I. No. 037-00724, Section 27, T. 3N, R. 16W, S.B. B.&M.,
Aliso Canyon field, any area, Sesnon-Frew pool,
Los Angeles County, dated 3/9/89, received 3/13/89, has been
examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

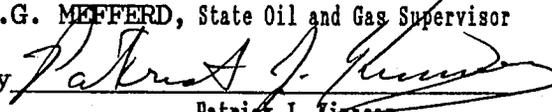
1. Blowout prevention equipment conforming to DOG Class III 3M requirements shall be installed and maintained in operating condition at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. This office shall be consulted before initiating any changes or additions to this proposed operation, or if operations are to be suspended.
4. THIS DIVISION SHALL BE NOTIFIED:
 - a. To witness a pressure test of the blowout prevention equipment before commencing downhole operations.

Blanket Bond
SF:ljg

Engineer Steve Fields

Phone (805) 654-4761

M.G. MEFFERD, State Oil and Gas Supervisor

By 

Patrick J. Lincoln
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.
OG111

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

DIVISION OF OIL AND GAS
RECEIVED

MAR 13 1989

Notice of Intention to Rework Well

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

VENTURA, CALIFORNIA

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

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well Porter #37, API No. 037-00724
(Well designation)

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

The present condition of the well is as follows:

- Total depth 7881'; plugged back to 7758'
- Complete casing record, including plugs and perforations (present hole)
 - 13-3/8" cemented 520'
 - 7" cemented 7640'
 - 266' 5" landed 7752', top 7486', slotted 7486'-7752'
- Present producing zone name Sesnon; Zone in which well is to be recompleted --
- Present zone pressure 2000 psi; New zone pressure _____
- Last produced Gas Storage Well _____
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
(or)
Last injected _____
(Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psig)
- Is this a critical well according to the definition on the reverse side of this form? (Yes) (No)

The proposed work is as follows:

- Move in and rig up. Kill well. Install and test BOPE.
- Pull tubing and packer.
- Pull existing 5" liner, open hole to 13" from 7640' to 7752'.
- Run and gravel pack new 5" liner.
(continued on attachment)

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

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

Address Box 3249, Terminal Annex
(Street)
Los Angeles, CA 90051
(City) (State) (Zip)
Telephone Number (213) 689-3925

Southern California Gas Company
(Name of Operator)
By N. W. Buss for R. W. Weibel, Agent
(Name - Printed)
NWB 3/19/89
(Name - Signature) (Date)
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

Page 2
Notice of Intention to Rework Well
Porter #37, API No. 037-00724
Aliso Canyon Field, Los Angeles County

The proposed work is as follows: (continued from first page)

5. Run 5-1/2" casing as innerstring and land on packer at 7550'.
6. Run packer and tubing.
7. Return well to gas storage service.

OPERATOR SOUTHERN CALIF GAS
 LSE & NO "SEZU" P-37
 MAP 250

	(1)	(2)	(3)	(4)	(5)	()
INTENTION	DRILL	DEEPEU	ALTER CSF & CONVERT TO GAS STORAGE	ALTER CSF	rework gas storage	inspect 7"
NOTICE DATED	4-18-46	5-21-56	9-8-72	2-17-75	9-3-77	No permit required
P-REPORT NUMBER	1-41943	156-008	172-1137	275-69	332	
CHECKED BY/DATE						
MAP LETTER DATED	4-19-46			N/C		-
SYMBOL	⊙	●	⊙			NC

	REC'D NEED		REC'D NEED		REC'D NEED		REC'D NEED		REC'D NEED		REC'D NEED	
NOTICE	4-19-46		5-24-56		10-5-72		2-24-75		9-12-77		-	
HISTORY	10-4-46		8-27-56		12-4-72		4-17-75		10-7-77		1/3/89	
SUMMARY	10-4-46		8-27-56									
IES/ELECTRIC LOG												
DIRECTIONAL SURV												
CORE/SWS DESCRIP												
OTHER							4-3-78					
RECORDS COMPLETE									EFF		PMC	

ENGINEERING CHECK

REPORTS _____

OPERATOR'S NAME _____

WELL DESIGNATION _____

LOC & ELEV _____

SIGNATURE _____

SPACE INSPECTION _____

FINAL LETTER OK _____

CLERICAL CHECK

POSTED TO 121 _____ 170 MAILED _____

FINAL LETTER MAILED _____

RELEASED BOND _____

REMARKS: _____

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

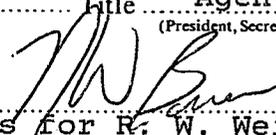
VISION OF OIL AND GAS
RECEIVED

JAN 3 1989

History of Oil or Gas Well

VENTURA, CALIFORNIA

Operator Southern Calif. Gas Co. Field Aliso Canyon County L.A.
Well Porter #37 "SF20" P-37 Sec. 27, T. 3N, R. 16W S.B. & M.
A.P.I. No. #037-00724 Name R. W. Weibel Title Agent
Date October 21, 1988 (Person submitting report) (President, Secretary or Agent)

Signature 

N. W. Buss for R. W. Weibel

P.O. Box 3249 Terminal Annex, Los Angeles, CA 90051 (213) 689-3952

(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

MWO No. 99933: was issued to inspect 7" casing

1988

- 10-6 Set back pressure valve in doughnut. Removed xmas tree and installed and tested BOPE. Tested blind rams, pipe rams
- 10-10 and choke manifold to 3000 psi, hydril bag to 2300 psi. Released from packer and filled well with 80 bbls. Pulled out of well. Laid down production equipment. Made up bit and scraper for 7" casing.
- 10-11 Finished running into packer at 7460'. Circulated well clean. Ran vertilog from 7460' to surface.
- 10-12 Set bridge plug at 600' and tested casing to 3200 psi. Set bridge plug at 1200' and tested to 2900 psi. Ran Full Bore Packer, set at 1800' and tested casing to 2600 psi. Set packer at 2400' and tested to 2300 psi. Made up production equipment and hydrotested to 4000 psi.
- 10-13 Pulled 20,000# over weight on latch, 12,000# on packer and tested at 1900 psi for 20 minutes. Opened XD sliding side door at 7392'. Circulated polymer out of well with 2% KCl water.
- 10-14 Removed BOPE and installed xmas tree. Tested xmas tree to 5000 psi. Released rig at 11:00 A.M.

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

DIVISION OF OIL AND GAS
 RECEIVED

001 7 1517

History of Oil or Gas Well

SANTA PAULA, CALIFORNIA

Operator Southern California Gas Company Field or County Aliso Canyon
 Well name and No. PORTER #37 Sec. 27, T. 3N, R. 16W S.B. B. & M.
 A.P.I. well No. 037-00724 Name P. S. Magruder, Jr. Title Agent
(Person submitting report) (President, Secretary or Agent)
 Date September 29, 1977

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 | |
|---------|---|
| 9-19-77 | Killed Porter #37 with 325 barrels of 84# polymer drilling fluid. |
| 9-20-77 | Circulated gas out of drilling fluid. Installed back-pressure valve in doughnut. Removed Christmas tree and installed B.O.P.E. |
| 9-21-77 | Rigged up Halliburton and tested B.O.P.E. Blind rams to 4000 psi for 20 minutes; pipe rams to 4000 psi for 20 minutes; Hydril bag to 3000 psi for 20 minutes. Rigged up NOWSCO-while testing blind rams found leak in cross-over spool. Removed spool. Installed new spool and reinstalled B.O.P.E. |
| 9-22-77 | Tested B.O.P.E. with nitrogen, as follows:

Blind rams to 4000 psi for 20 minutes
Pipe rams " 4000 psi " 20 "
Hydril bag " 3000 psi " 20 "

Released Otis packer and pulled tubing. Measuring in hole with 6" bit and scraper. |
| 9-23-77 | Ran in well to top of liner at 7501'. Pulled out made up 4 1/8" bit and scraper. Cleaned out to 7752' (No Fill). Pulled out and made up Baker Bridge plug. Ran in hole to 7476' and set Bridge plug. Tested with 1200 psi. Circulated brine polymer drilling fluid out of well with fresh water treated with surface tension agent. |
| 9-24-77 | Pulled out of well. Ran in well with Baker fullbore and set at 3300'.
Tested casing from 3300' to 7476' with 2800 psi for 60 minutes
" 3300' to Surface with 3000 psi for 60 minutes
" 2700' " " " 3200 psi " 60 "
" 2400' " " " 3400 psi " 60 "
" 2000' " " " 3600 psi " 60 "
" 1300' " " " 3800 psi " 60 "
" 800' " " " 4000 psi " 60 "

Pulled fullbore. Ran in hole with retrieving tool to 7400'. Secured well. |

- 9-25-77 Rig and crew idle.
- 9-26-77 Changed over from water to polymer drilling fluid. Retrieved Baker Bridge plug and pulled out of hole. Rigged up GO-International wireline and set Otis permatrieve production packer at 7460'. Made up Otis safety system and tested to 5000 psi. Hydrotested tubing while running, cleaning threads and changing collars. Testing to 5000 psi for one minute.
- 9-27-77 Finished changing collars, cleaning pins and Hydro-testing in well. Spaced out and landed with 10,000# on packer. Pulled 25,000# over weight of tubing to check latch. String weight 38,000#. Secured well.
- 9-28-77 Installed Xmas tree and tested tree to 5000 psi (O.K.). Changed over to lease salt water. Rigged up Archer Reed and pulled separation tool. Set tubing plug in NO GO nipple and tested seals and packer to 2000 psi for 20 minutes. Released rig at 10:00 P.M. 9-28-77.

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

Report on Operations

No. T 277-279

Mr. P. R. Wyrule, Jr., Agent
Southwest Calif. Gas Co.
P.O. Box 54700 Terminal Annex
Los Angeles, Calif. 90054

Santa Paula, Calif.
Oct. 14, 1977

DEAR SIR:

Operations at well No. "BEEZIE" D-32, API No. 037-00724, Sec. 22, T. 3N, R. 10W,
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 9/22/77. Mr. P. R. Wyrule, representative of the supervisor was
present from 1530 to 1630. There were also present R. Barton, foreman

Present condition of well: No additions to the casing record since proposal dated
9/3/77.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

M. G. METTERT
JOHN P. MATTHEWS, JR.
State Oil and Gas Supervisor

By John L. Hartman Deputy

PW

REPORT ON PROPOSED OPERATIONS

Santa Paula, California

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

Sept. 13, 1977

Your proposal to rework gas storage well "EYU" P-37 (Name and number)

A.P.I. No. 037-00724, Section 27, T. 3N, R. 16W

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

dated 9-3-77, received 9-12-77, 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.

Blanket Bond
MD:b

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

M. G. MEEFERD
State Oil and Gas Supervisor
By [Signature]
Deputy Supervisor

John L. Hardin

DIVISION OF OIL AND GAS
RECEIVED

SEP 12 1977

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

This notice and indemnity or cash bond shall be filed, and approval given, before rework ^{SANTA BARBARA, CALIFORNIA} operations have not commenced within one year of receipt of the notice, this notice will be considered recalled.

FOR DIVISION USE ONLY		
BOND	OGD114	OGD121
	66	✓

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 #37, API No. 037-00724, Sec. 27, T3N, R. 16W, SB B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth. 7752'
- Complete casing record, including plugs and perforations:
 - 13 3/8" cemented 520'
 - 7" cemented 7640', WSO on shoe
 - 266' 5" landed 7752', perforated 7502' - 7752'
Top liner 7486' - gravel flow packed.

- Present producing zone name Sesnon Zone in which well is to be recompleted --
- Present zone pressure 3650 psi New zone pressure --
- Last produced Gas Storage Well (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
or
- Last injected (Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

- Move in and rig up. Kill well. Install B.O.P.E. and pressure test.
- Pull tubing and packer. Clean out to 7752'.
- Pressure test 7" casing. Perform any remedial work indicated by pressure testing.
- Set packer. Run tubing with down hole safety system.
- Return well to gas storage operation.

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.A. Magruder, Jr.
(Name) (Date) 9-3-77
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS
RECEIVED

SEP 12 1977

SANTA PAULA, CALIFORNIA

PORTER #37 - ALISO CANYON

Program to run new packer, pressure test "7" casing and run down hole safety system.

WITHDRAWAL ONLY

Take all measurements from original derrick floor 6.92' above ground.

PRESENT CONDITIONS:

13 3/8" cemented 520' 54.5# J-55
7" cemented 7640', WSO on shoe
266' 5" landed 7752', perforated 7502' - 7752'
top liner 7486'. Gravel flow packed
in 13" hole with 82 sacks 8-12 gravel

<u>7" CASING DETAIL</u>		<u>100% Safety Factor</u>	
		<u>Burst</u>	<u>Collapse</u>
0' - 3531'	23# J-55	4360	3290
3531' - 5229'	23# N-80	6340	4300
5229' - 6830'	26# N-80	7240	5320
6830' - 7640'	29# N-80	8160	6370

TUBING DETAIL

2 7/8" tubing landed 7480'
Otis "XN" nipple 7448'
Otis Perma latch packer
Otis "X" nipple 7411'
Otis sliding sleeve 7347' (closed)

PROGRAM

1. Move in and rig up. Pressure test well head seals to 3000 psi.
2. Kill well with 84#/cu.ft. brine polymer drilling fluid. Check bottom hole pressure before moving in rig. Volume of well = 310 barrels.
3. Install back pressure valve in doughnut. Remove Christmas tree and install class III 5000 psi B.O.P.E. Pressure test complete shut-off rams and pipe rams to 4000 psi with water and nitrogen. Also pressure test Hydril bag to 3000 psi with water and nitrogen.
4. Unseal packer and pull tubing. Run 6" bit and casing scraper. Clean out to top of liner at 7486'. Run 4 1/8" bit and casing scraper.

- 5. Set bridge plug at 7476' and pressure test with rig pump. Circulate polymer drilling fluid out of well with fresh water treated with surface tension agent. Pressure test casing using cement retainer and cement pump truck equipped with calibrated pressure chart and pressure gauge, as follows:

3300' - 7476'	with 2800 psi for 60 minutes
3300' to Surface	" 3000 psi " 60 "
2700' " "	" 3200 psi " 60 "
2400' " "	" 3400 psi " 60 "
2000' " "	" 3600 psi " 60 "
1300' " "	" 3800 psi " 60 "
800' " "	" 4000 psi " 60 "

Change to polymer drilling fluid.

- 6. Perform any remedial work indicated by pressure testing. Pull bridge plug at 7476'.
- 7. Run Otis Permatrieve packer on wire line and using reference collars set near 7460'. DO NOT set packer in a collar.
- 8. Run 2 7/8" tubing, changing collars, cleaning pins, applying Baker seal and hydrotesting to 5000 psi holding each test for one minute. Tubing to include:

- Otis production tube
- Otis four seals
- Otis Latch-in locator
- Otis 10' heavy wall tube
- Otis 1.79" "XN" "NO GO" nipple with 2 7/8" threads
- Otis 20' heavy wall tube
- Otis annular flow safety valve

- 9. Land tubing on packer with up to 10,000#, pull up 25,000# over weight at tubing to charge latch
- 10. Install back pressure valve in doughnut. Remove B.O.P.E. Install Christmas tree and pressure test to 5000 psi.
- 11. Circulate drilling fluid out of well with waste salt water. Set tubing plug in "NO GO" nipple and pressure test seals and packer to 2000 psi. Recover tubing plug and release rig.

cc: Rig Supervisor
 Relief Rig Supervisor
 Contract Pusher (2)

Division of Oil & Gas ✓

GCA 9/6/77

Well File
 Book Copy
 Spare Copy

B. Jones
 D. Smiley
 J. Melton
 D. Justice)
 M. Grijalva)

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

REPORT ON PROPOSED OPERATIONS No. P 275-69
GAS STORAGE WELL

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

Santa Paula, Calif.
February 25, 1975

DEAR SIR: alter casing in (037-00724)
Your proposal to Gas storage Well No. "SFZU" P-37,
Section 27, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 2/17/75, received 2/24/75, 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. NO CONTAMINANTS OR TOXIC MATERIAL SHALL BE USED IN ANY DRILLING FLUID THAT IS TO BE PLACED IN AN UNLINED SUMP.
2. Blowout prevention equipment, at least of the Division of Oil and Gas Class III rating, shall be installed and maintained in operating condition at all times.
3. Blowout prevention drills shall be held for each crew, prior to that crews' initial tour.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS A PRESSURE TEST OF THE BLOWOUT PREVENTION EQUIPMENT BEFORE COMMENCING THE MILLING OPERATIONS.

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

Blanket Bond
ALL:b
cc: Operator

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

By 100 P. Riggs, Deputy

DIVISION OF OIL AND GAS
RECEIVED

DIVISION OF OIL AND GAS

Notice of Intention to ~~Deepen, Redrill, Plug or~~ Alter Casing in Well JAN 24 1975

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

9/11/68

Los Angeles Calif. January 17 1975

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. Porter #37

(Cross out unnecessary words)
Sec. 27, T. 3N, R. 16W, B. & M.
Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 7881'
2. Complete casing record, including plugs:
 - 13-3/8" cmt'd. 520'
 - 7" cmt'd. 7640' WSO on shoe
 - 350' 5" cmt'd. 7878', top 7528', plugged with cement 7558' WSO on splice 7528', shot four 1/2" holes per foot 7750'-7726' & 7708'-7702' Reperf'd four 1/2" holes per foot 7755'-7750', 7750'-7726', 7726'-7708', 7708'-7702' & 7675'-7650'.

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

The proposed work is as follows:

1. Install BOPE and pull tubing.
2. Mill over and recover packer.
3. Mill 5" liner 7528'-7758'.
4. Open 6" hole to 13" 7640-7758'.
5. Land 200' of 5" - bottom 120' wire wrapped, top 80 slotted with top 10' blank at 7753'.
6. Gravel flow pack with 105 sacks 8-12 gravel.
7. Run tubing and complete.

MAP	MAP BOOK	CARDS	BOND	FORMS	
			<i>bb</i>	11	12
				✓	✓

P. O. Box 54790, Terminal Annex
Los Angeles, California 90054

(Address)

(213) 689-3561

(Telephone No.)

Pacific Lighting Service Company

(Name of Operator)

By *P. S. Magrader, Jr.*
P. S. Magrader, Jr.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Co. FIELD Aliso Canyon
 Well No. Porter #37 *SKZU-P-37*, Sec. 27, T. 3N, R. 16W, S.B.B. & M.
 Date September 13, 1973 Signed *P.B. Maguider Jr.*
 P. O. Box 54790, Terminal Annex
 Los Angeles, Calif. 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

- 8-7 Program: (1) Pull defective 1/4" safety valve control line, (2) Clean out to bottom and check for sand fill, (3) Recomplete with seating nipple for wireline safety valve. Moved in California Production Service rig with pump and shaker tank at 10:00 AM. Killed and circulated well with 266 barrels brine-polymer workover fluid. Spotted 60 barrels low fluid loss fluid on bottom.
- 8-8 Hole standing full, however, if safety valve is closed, the fluid would not be against the formation. Removed flow lines and production head and installed and tested B.O.P.E. Pulled tubing, 1/4" control line and safety valve. Lost 8 Baker clamps for 1/4" tubing. Picked up 291' of 2-3/8" seal lock tubing with 2.700" collars and ran in hole to top of Model "D" packer at 7516'.
- 8-9 Hole standing full. Stabbed thru packer Ok and ran on in to bottom at 7758' finding no fill. Pulled out and laid down seal lock tubing. Ran completion tubing and spaced out to land 14000 pounds on Model "D" packer at 7516'.
- 8-10 Hole standing full. Hung tubing above packer and changed over from mud to lease salt water using 280 barrels. Landed tubing on packer with 14000 pounds. Removed B.O.P.E. Installed and tested production head at 3600 psi for 20 minutes--Ok. Moved out and released rig at 8:30 PM.

1973

TUBING DETAIL

<u>No.</u>	<u>Jts.</u>	<u>Item</u>	<u>Length</u>	<u>Depth</u>
		Below K. B.	10.92	
		2-7/8" donut w/2-7/8" NSL x 2-7/8"		
		EU 8 thd. crossover	1.00	
138		2-7/8" EU 8 thd. pup jt.	8.00	
		2-7/8" EU 8 thd. J-55 tubing	4288.36	
		2-7/8" EU 8 thd. pup jt.	4.05	4312.33
		2-1/2" Camco KBMG mandrel w/1/4" BK		
		1050# valve	7.32	4319.65
38		2-7/8" EU 8 thd. J-55 tubing	1167.60	
		2-7/8" EU 8 thd. pup jt.	4.00	5491.25
		2-1/2" Camco KBMG mandrel w/1/4" BK		
		1025# valve	7.32	5498.57
33		2-7/8" EU 8 thd. J-55 tubing	1011.38	
		2-7/8" EU 8 thd. pup jt.	4.05	6514.00
		2-1/2" Camco KBMG mandrel w/1/4" BK		
		1000# valve	7.32	6521.32
29		2-7/8" EU 8 thd. J-55 tubing	890.25	
		2-7/8" EU 8 thd. pup jt.	4.12	7415.69
		2-1/2" Camco KBMG mandrel w/1/4" BK		
		975# valve	7.40	7423.09
1		2-7/8" EU 8 thd. J-55 tubing	30.55	
		2-1/2" Otis "XO" sliding sleeve	3.20	7456.84
1		2-7/8" EU 8 thd. J-55 tubing	30.55	
		2-1/2" x 2.31" Baker "F" landing nipple	1.30	7488.69
1		2-7/8" EU 8 thd. J-55 tubing	31.10	
		2-1/2" Baker locator sub landed in		
		Model "D" packer at 7516'	1.00	7520.79
		5 sets seals for Model "D" packer	4.60	7525.39

DIVISION OF OIL AND GAS

DEC 1 1972

History of Oil or Gas Well

LONG BEACH, CALIFORNIA

OPERATOR Pacific Lighting Service Co. FIELD Aliso Canyon
 Well No. SFZU P 37, Sec. 27, T. 3N, R. 16W, SB SB B. & M.
 Date 11-30, 1972 Signed R.S. Magruder, Jr.
 P. O. Box 54790, Terminal Annex
 Los Angeles, CA 90054 (213) 689-3561 Title Agent
(Address) (Telephone Number) (President, Secretary or Agent)

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

1972
 Date

10-31 Moved in CPS production rig. Hauled in workover fluid from Porter 45 and FF 32.

11-1 Rigged up and killed well with brine-polymer workover fluid.

11-2 Tore out Xmas tree. Installed BOP. Unlanded packer and pulled out of hole with tubing.

11-3 Ran 6" bit and 7" scraper in 7" casing to top of liner at 7528'. Made up and ran bit and 5" scraper in 5" liner. Cleaned out 20' of hard sand fill in 5" liner from 7738' to 7758'. Ran Dia-Log casing Caliper log from 7528' to surface.

11-4 Ran Dresser-Atlas cement bond log from 7759' to 6000' and Neutron-Lifetime log from 7759' to 6800'. Ran Johnston bridge plug and set at 7518'. Pressure test held 1500 psi for 15 minutes from surface to bridge plug.

11-6 Removed BOP and old tubing head. Unlanded 7" casing. Required more than 312,000 lb to unland. Had to cut old casing head to remove slips. Removed casing head. Welded extension on 7" casing for secondary seal. Found that 7" casing has slipped down from original completion while unlanded.

11-7 X-rayed weld on extended 7" casing. Chipped out approximately 10" of concrete from cellar floor. Cut surface pipe and welded new casing head 2-1/2" below original cellar floor.

11-8 X-rayed weld on casing head. Re-landed 7" casing with 200,000 lb. Installed tubing head and BOPE. Pressure tested casing from surface to 7518'; held 2500 psi for 15 minutes. Pressure tested casing from surface to 2000'; held 3200 psi for 15 minutes.

1972

11-9 Jet perforated with Welex 3-1/8" Super Dyna-Jet the following intervals:

7702-7755
7755 - 7750' (5' with 4 holes per foot)
7750 - 7726' (24' with 2 holes per foot)
7726 - 7708' (18' with 4 holes per foot)
7708 - 7702' (6' with 2 holes per foot)
7675 - 7650' (25' with 4 holes per foot)

Ran 4-3/4" bit and 5" scraper to total depth at 7758'. Ran and set Baker Model "D" packer at 7516'.

11-10 Ran 2-7/8" tubing to total depth with Baker Locator Sub and five seal nipples for Model "D" packer. Page safety valve set at 7514' to 7518'; Otis sliding side door 7511' to 7514'; Camco mandrel with 1/4" BK valve 975 psi at 7473' to 7480'; Camco mandrel with 1/4" BK valve 1000 psi at 7409' to 7517'; Camco mandrel with 1/4" BK valve 1025 psi at 5486' to 5494'; Camco mandrel with 1/4" BK valve 1050 psi at 4305' to 4312'. Splices in 1/4" tubing were at 871', 1150' and 6350'. Tested 1/4" steel control line at surface and filled line with oil to approximately 800' above safety valve. Pressure tested control line to 5000 psi when connecting valve and at all splices. Hydro-tested 2-7/8" tubing to 5000 psi. Landed donut with 13,000 lb set down weight on packer.

11-11 Removed BOP's and installed tree. Rucker-Shaffer tested seals on donut sleeve. Held 4500 psi below donut sleeve. Tree held 2900 psi above donut sleeve. Pressure tested control line test port with nitrogen with 4600 psi. Held for one hour. Released rig. Unloaded 120 bbls., workover fluid with nitrogen into Baker tank. Waiting pipeline hookup.

DIVISION OF OIL AND GAS
RECEIVED

DEC 1 1972

LONG BEACH, CALIFORNIA

DIVISION OF OIL AND GAS

APR 17 1975

History of Oil or Gas Well

SANTA PAULA, CALIFORNIA

OPERATOR PACIFIC LIGHTING SERVICE CO., FIELD Aliso CanyonWell No. Porter #37, Sec. 27, T. 3N, R. 16W, S.B. B. & M.Date April 7, 1975, 19Signed P. S. Magruder Jr.
P. S. MAGRUDER, Jr.

P. O. Box 54790, Terminal Annex

Los Angeles, California 90051

Title Agent

(Address)

(Telephone Number)

(President, Secretary or Agent)

(213) 689-3561

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

- 2-13-75 Moved in California Production Service Rig D-4, pump and shaker tank and rig equipment. Moved in 500-barrel storage tank and hauled in 200 barrels of 80#/cu.ft. of brine polymer workover fluid.
- 2-14-75 Rigged up rig equipment, pump lines and flow lines. Rigged up to kill well to Getty's trap. Ran Otis Wire Line and opened sleeve at 7456.84' - had 2100 psi on tubing and 1700 psi on casing.
- 2-15-75 Rigged up Halliburton pump truck to wellhead. Pumped down tubing with returns to Getty's trap. Pumped 110 barrels of lease salt water, followed by 290 barrels of 80# brine polymer workover fluid, and circulated out oil and gas cut fluid until free of gas. Installed doughnut plug, removed Christmas tree and installed Class III B.O.P.
- 2-16-75 Rig idle.
- 2-17-75 Rigged up H. & H. pump and tested Hydril Bag with water at 2500 psi. Tested 2 7/8" rams at 3100 psi. Tested blind rams at 3000 psi. All tests 20 minutes each. Rigged up NOWSCO nitrogen unit and tested blind rams at 3000 psi; tested 2 7/8" rams at 3100 psi; tested Hydril Bag at 2500 psi. All tests 20 minutes each and all O.K. Pulled seals and tubing out of Baker Model "D" packer and circulated out gas cut mud. Pulled out and laid down 2 7/8" tubing string on rack, 200 joints down.
- 2-18-75 Continued laying down 41 joints of 2 7/8" tubing. Install picture nipple and flow line. Made up 3" Kelly and swivel. Made up Baker 6 1/8" packer mill and retrieving tool on Miday jars and 59' of 4 3/4" drill collars. Measured and picked up 2 7/8" drill pipe and ran in hole. Ran in to 7468'. Hung tongs.
- 2-19-75 Latched into Baker Model "D" packer at 7516' with milling tool. Milled and

jarred 9 1/2 hours. Milled 1 1/2', worked pipe 2 hours and got free from packer and pulled mill to 1200'.

- 2-20-75 Finished pulling out Baker packer milling tool and made up new mill. Picked up two 4 3/4" drill collars. Installed Kelly cock. Changed out rotary tools. Ran in hole with packer mill and retrieving tool. Milled on Model "D" packer at 7516' for 3 hours. Made 6" packer come free. Pulled out slow to keep from swabing. Pulled 41 stands.
- 2-21-75 Finished pulling out with Baker Model "D" packer and milled. Made up 4 1/8" junk mill on 2 7/8" tubing. Ran in hole, installed pipe rubbers on every other single. Circulated and cleaned out fill from 7738' to 7758'. Circulated bottoms up and free from gas cut mud. Pulled 20 stands.
- 2-22-75 Pulled out of hole and made up Servco 6" x 4" Pilot mill and picked up four 4 3/4" drill collars. Ran in hole to top of 5" liner at 7516'. Broke circulation. Changed rotary hose from 2" to 3" hose. Took two valves out of pump. Changed 20-mesh shaker screen.
- 2-23-75 Rig idle.
- 2-24-75 Conditioned brine polymer workover fluid and added 26 sacks of Brinadd to raise 40 viscosity to 70 viscosity in two circulations. Started milling with Servco pilot mill at 11:00 A.M. Milled 7" x 5" Burns liner hanger at 7528' and milled to 7537'. Mud viscosity went to 150 viscosity. Removed two valves in pump to circulate. Unable to mill with 150 viscosity and pump. Changed 6" liners and heads to 5" liners and heads. Changed brine polymer mud system to new 40 + viscosity fluid. Used 300 barrels to change over.
- 2-25-75 Continued milling 5" liner with 6" x 4 1/8" pilot mill from 7537' to 7550'. Pulled out and changed mills. Ran in with 5 1/2" x 4 1/8" pilot mill and milled from 7550' to 7553'. Circulated one hour.
- 2-26-75 Continued milling with #2 5 1/2" x 4 1/8" pilot mill from 7553' to 7574 (24'). Circulated bottoms up and pulled out. Cleaned out shaker tank. Ran in 2 7/8" drill pipe to 1200'. (Mill showed that 5" liner was laying over to one side of 7" casing).
- 2-27-75 Pulled out 20 stands and ran in with #3 pilot mill on eight 4 3/4" drill collars. Milled 5" cemented liner from 7575' to 7588' in 8 hours. Circulated 1 3/4 hours. (#3 Servco mill 5 1/2" x 4 1/8").
- 2-28-75 Continued milling after cleaning out 5' of fill. Milled 5" liner from 7588' to 7592'. Kelly hose split. Pulled part way out while waiting for new hose. Installed new hose. Pulled out of hole. Recovered one small piece of steel from 5" liner. Ran part way in hole with 6" junk mill.
- 3-1-75 Finished running 6" junk mill. Cleaned out cement and junk from 7528' to 7592'.

Milled up 5" liner 7592' to 7594'. Pulled out of hole. Ran part way in hole with 5 1/4" x 4 1/8" pilot mill.

- 3-2-75 Rig idle.
- 3-3-75 Continued running in hole with 5 1/4" x 4 1/8" mill. Milled 5" liner from 7590' to 7616'. Milled 26' in 11 1/2 hours. Circulated 2 hours.
- 3-4-75 Continued milling 5" liner cemented in 7" casing with 5 1/4" a 4 1/8" Servco pilot mill from 7616' to 7642'....26' in 11 hours. Mixed high viscosity pill and circulated around to clean hole of cuttings. Pulled out to change mills.
- 3-5-75 Finished pulling out. Changed mills and ran in with Servco 6" x 4 1/8" pilot mill to 7342'. Reamed out 7" casing from 7342' to 7370'. Ran to 7560' and reamed out 7" casing from 7560' to 7642'. Circulated hole clean. Pulled two stands.
- 3-6-75 California Production Service mechanic dismantled and removed 2 pump motors and sent same to shop for repairs. Started milling with 2 motors on pump. Milled 5" liner with 6" x 4 1/8" pilot mill from 7642' to 7669'. Milled 27' in 8 hours. Circulated 2 1/2 hours.
- 3-7-75 Continued milling 5" liner from 7669' to 7682' - 13' in 8 1/2 hours. California Production Service mechanic reinstalled 2 pump motors - 2 1/2 hours installing motors. Continued milling 5" liner from 7682' to 7694' - 12' in 3 hours. Circulated hole clean and closed well in.
- 3-8-75 Continued milling 5" liner from 7694' to 7729' - 35' in 11 hours. Two hours down changing 5" head in pump. Circulated 3 hours. Closed well in.
- 3-9-75 Rig idle.
- 3-10-75 Circulated bottoms up and pulled out. Changed mills and picked up jars, and bumper sub. Ran in to 7602', circulated bottoms up. (Cleaned out shaker tank while making trip).
- 3-11-75 Reamed 7" casing with 6" x 4 1/8" pilot mill from 7600' to 7640' and reamed 6" open hole from 7640' to 7728'. Milled 5" liner from 7728' to 7748'. Circulated 1 1/2 hours.
- 3-12-75 Continued milling 5" liner from 7748' to 7758'. Circulated hole clean. Pulled and measured drill pipe. Made up Baker rotary 13" x 6" hole opener on 4 3/4" drill collars. Ran in to 6700'. Attempted to circulate, tool plugged. Closed well in.
- 3-13-75 Tool plugged. Backscuttled and unplugged tool. Ran in to 7640' and opened 6"

hole to 13" from 7640' to 7669' - 29' in 8 hours. Circulated one hour and pulled to 1200'. Closed well in.

- 3-14-75 Finished pulling out. Changed rotary hole opener. Ran in to 7640'. Reamed 13" hole from 7640' to 7669' and opened 6" hole to 13" from 7669' to 7694' - 25' in 5 1/2 hours. Circulated 1 1/4 hours and pulled to 1830'. Closed well in.
- 3-15-75 Finished pulling out. Changed Baker rotary hole opener. Ran in #3 hole opener to 7675'. (Cleaned out shaker tank while running in hole). Reamed 13" hole from 7675' to 7694' and opened 6" hole from 7694' to 7711' - 17' in 5 1/2 hours. Circulated one hour and pulled to 1200'. Closed well in.
- 3-16-75 Rig idle.
- 3-17-75 Finished pulling #3 hole opener. Changed hole opener. Ran in with #4 hole opener to 7794' and reamed 13" hole from 7794' to 7711'. Opened 6" hole to 13" from 7711' to 7729' - 18' in 4 1/2 hours. Circulated 1 1/4 hours and pulled 2 stands. Elevator broke and were unable to get one installed until next morning. Closed well in at 7:30 P.M.
- 3-18-75 Pulled out of hole. Changed hole opener. Ran in with #5 hole opener to 7700' and reamed 13" hole from 7700' to 7729'. Opened 6" hole from 7729' to 7732' - 3' in 4 hours. Pulled out and left 8" of nose cone from hole opener in hole. Ran in with 6" Servco junk mill to 1400'. Closed well in.
- 3-19-75 Continued running in hole with 6" junk mill to 7732'. Milled on junk at 7732' to 7747' - then slip to 7756'. Milled on junk at 7756'. Circulated bottoms up and pulled out. Ran in with Baker rotary hole opener to 7600'. Broke circulation and closed well in.
- 3-20-75 Opened 6" hole with #6 rotary hole opener to 13" from 7732' to 7739'. Opened 7' in 4 1/2 hours. Pulled out and changed hole opener. Ran in with #7 hole opener and opened 6" hole from 7739' to 7746'. Opened 7' in 4 hours. Pulled 2 stands and closed well in.
- 3-21-75 Pulled out #7 hole opener. Ran in with #8 hole opener and opened 6" hole to 13" from 7746' to 7751'. Opened 5' in 5 1/2 hours. Circulated 2 hours and pulled pipe.

BAKER ROTARY HOLE OPENER

- #1 - 29' in 8 hours - Cones half gone
 #2 - 25' in 5 1/2 hours - Dull
 #3 - 17' in 5 1/2 hours - Dull
 #4 - 18' in 4 1/2 hours - Nose cone gone - left in hole
 #5 - 3' in 4 hours - Dull
 #6 - 7' in 4 1/2 hours - Dull
 #7 - 7' in 4 hours - Dull - ran on iron
 #8 - 5' in 5 1/2 hours - Dull - ran on iron

3-22-75 Finishes pulling out of hole. Ran Welex caliper log and recorded 7753' to 7640' (opened satisfactorily). Ran 6" economill, unable to work below 7754'. Pulled into casing. Closed well in.

3-23-75 Rig idle.

3-24-75 Changed over mud system to new 80# brine polymer workover fluid. Used 360 barrels. Cleaned out shaker tank and 500-barrel storage tank. Hauled in 200 barrels of new mud. Pulled out junk mill. Made up 5" 15# and 18# K-55 liner with Burns port collar and lead seal liner hanger. Total liner 266.35'. Liner detail as follows:

	<u>Length</u>	<u>Depth</u>
Burns lead seal casing hanger w/hold down slips - 7" 29# x 5" 15# 8rd	3.50'	7486'
Burns port collar - 5" 15# 8rd	2.44'	
Top 3 joints security flush 2" x 30 mesh	41.66'	7502'
6" centers and 24 rows - top 10' blank	43.18'	
Total - 127.52'	42.68'	
Next 5 joints Gru-V-Kut 0.018" 18 mesh	26.64'	Perf.
fitted on bottom with bull plug	26.59'	
O.D. - 5.437" wire rap	26.49'	
Total - 132.89'	25.52'	
Total Liner = 266.35'	27.65'	7752'

Ran in on 2 7/8" drill pipe and landed at 7752' - 2' off of bottom with top of hanger at 7486' - 2" tubing tail at 7748'. Tested lead seal at 1000 psi - O.K. Rigged up sub gravel packed 5" liner through ports at 7490.60' with 8-12 gravel. Pumped in 95 cu.ft. of gravel and backscuttled out 5 cu.ft. - total of 90 cu.ft. behind liner. Pulled out liner setting tool and gravel pack tool at 6:00 A.M.

3-25-75 Pulled out gravel flow packing tool. Ran in with Burns circulating washing tool and circulated through perforations. Washed perforations from 7750' to 7502' - made four passes. Pulled washing tool. Ran in with Burns gravel packing tool to 1500'. Closed well in.

3-26-75 Continued running in with Burns tool. Attempted to test and locate port holes in 5" port collar. Set cups in blank pipe and attempted to pressure up to test tool. Instead, the tool did not blank off, but circulated. Pulled out of hole and left in hole 178.89' of 2 3/8" tubing + 19.45' of Burns gravel packing tool. Total fish 198.34'. Made up Midway 2" spear on bumper sub and jars on 2 3/8" tubing and 2 7/8" drill pipe. Ran in and located top of fish at 7554', took ahold of fish with spear. Pulled 20 stands. Closed well in.

3-27-75 Finished pulling out with fish and recovered all of fish. Made up a new Burns gravel packing tool. Ran in hole and tested tool in blank liner - O.K. Attempted to open ports for 45 minutes. Believed that ports were opened. Circulated O.K. Pumped in 25 sacks of 8-12 gravel and got gravel returns over shaker. Continued circulating and cleaned up 7" annulus and got approximately all of gravel back. Pulled up to test tool in blank liner - tool circulated

instead of blanking off. Pulled out of hole. Closed well in with 20 stands in well.

- 3-28-75 Finished pulling out of hole with Burns gravel packing tool. Tool came unscrewed between cups at gravel outlet. Left in hole 9 1/2' of Burns tool, including 2 cups + 6 joints of 2 3/8" tubing. Total fish in hole 187.89'. Installed new brake bands on California Production Service hoist while waiting for fishing tool. Ran in with Midway 1 1/2" x 7' circulating sub, bumper sub and jars on four 2 3/8" tubing. Ran in to top of fish at 7564'. Circulated 1 1/2 hours. Pulled out.
- 3-29-75 Finished pulling wash pipe. Made up and ran in with Midway 2" x 8' spear, bumper sub and jars to 7564'. Took ahold of fish at 7564'. Pulled and recovered all of fish. Ran in with 2 3/8" sawtooth collar on 5 stands of 2 3/8" tubing to 6500'. Closed well in.
- 3-30-75 Rig and crew idle.
- 3-31-75 Continued running in hole with 300' of 2 3/8" tubing with sawtooth collar. Circulated and cleaned out gravel from 7548' to 7752' and circulated hole clean. Pulled out and laid down 6 joints of 2 3/8" tubing. Made up Burns gravel packing tool on 2 3/8" tubing and 2 7/8" drill pipe. Ran in to 7486' and attempted to open ports at 7491' - worked for 45 minutes and believed that the ports were open, pressured up and would bleed off slowly. Closed ports and tested same O.K. Pulled out and closed well in.
- 4-1-75 Finished pulling out and laid down Burns gravel packing tool. Rigged up to lay down 2 7/8" drill pipe. Laid down 102 singles + eight 4 3/4" drill collars. Ran in 26 stands.
- 4-2-75 Continued laying down drill pipe. Laid down 118 singles + Kelly. Made up Otis equipment on 2 7/8" tubing string. Picked up and Hydro tested at 4000 psi. 80 joints in at 10:00 P.M.
- 4-3-75 Continued picking up and Hydro-testing 2 7/8" tubing string. Ran a total of 241 joints of 2 7/8" tubing + Otis equipment (tubing details see attached list). Landed tubing on Otis Permalach packer at 7479.75'. Removed sub base, Class III B.O.P. and reinstalled Christmas tree. Doughnut studs would not screw in. Removed same and cleaned out fine iron cuttings and reran again. Still would not screw in on doughnut. Tightened packing on studs and tested seals, doughnut and flange at 4600 psi for 20 minutes - O.K. Attempted to test Christmas tree, but 2" valves on tree leaked. Closed well in.
- 4-4-75 Pulled doughnut studs in tubing head and chased threads in tubing head with tap. Reinstalled studs and packing in head. Tested same at 4500 psi for 20 minutes - O.K. After greasing valve, tested Christmas tree at 4500 psi - O.K. Rigged

up and changed over to lease salt water, displacing 80# cu.ft. brine polymer fluid in well. Used 310 barrels of lease salt water. In place at 4:30 P.M. Rig released and prepared to move at 4:30 P.M.

PORTER #37

TUBING DETAIL

April 3, 1975

<u>No. JOINTS</u>	<u>ITEM</u>	<u>LENGTH</u>	<u>DEPTH</u>
	Below K. B.	10.92	
	2 7/8" x 7" doughnut w/2 7/8" NSL x 2 7/8" EU 8 thd crossover	1.27	
237	2 7/8" EU 8 thd tubing	7331.72	
	Otis "XO" 2 7/8" sliding sleeve (down to open)	3.17	7347.08
1	2 7/8" EU 8 thd tubing	30.00	7377.11
	Otis "X" nipple 2 7/8" - 2.313 I.D.	1.03	7378.11
1	2 7/8" EU 8 thd tubing	31.69	7409.80
	Otis "X" nipple 2 7/8" - 2.313 I.D.	1.02	7410.82
1	2 7/8" EU 8 thd tubing	30.62	7441.44
	Otis 2 7/8" x 7" Permalach Packer	5.70	7447.14
	Otis "XN" NO-GO Land nipple 2 7/8" 2.313 I.D. and 2.205 I.D.	1.18	7448.32
1	2 7/8" EU 8 thd w/45° collar	31.43	7479.75

Tubing landed with 14,000# weight on Permalach Packer

All tubing J-55

Otis sliding sleeve run open - April 3, 1975

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 172-1137

Mr. P. S. Magruder, Jr., Agent
 PACIFIC LIGHTING SERVICE CO.
 P.O. Box 54790, Terminal Annex
 Los Angeles, CA 90054

Inglewood, Calif.

October 10, 1972

DEAR SIR:

Your proposal to **to gas storage**
 alter casing & convert/ Well No. "SFZU" P-37 (037-00724)
 Section 27, T. 3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County,
 dated 9/8/72, received 10/5/72, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED BLOWOUT PREVENTION EQUIPMENT WITH A MINIMUM 3000 PSI WORKING PRESSURE SHALL BE INSTALLED AND MAINTAINED IN OPERATING CONDITION DURING ALL STAGES OF PERFORATING.

ADS:dr

cc Company

Blanket Bond

dr/saw

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

By *W. L. Ingram*, Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

OCT 5 1972

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

INGLEWOOD, CALIFORNIA

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

Los Angeles Calif. September 8, 1972

DIVISION OF OIL AND GAS

Inglewood 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. "SFZU" P-37 (037-00724).
(Cross out unnecessary words)

Sec. 27, 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. 7881' Plug 7758'

2. Complete casing record.

13-3/8" 54.5# C520'
7" 23, 26 & 29# C7640' WSO
350' 5" 18# C7881, Top Liner Hanger 7528'.
Jet Perforations 4 holes per foot 7702' - 7708' and 7726' - 7758'.
Ineffective casing below cement plug at 7758'
Baker Model K Cement Retainer at 7833'
Jet Perforations 4 holes at 7862'.
Jet Perforations 2 holes per foot 7783-7827 & 7840-7870'.

3. Last produced. Sept. 1972 (Date) 32 Bbls. (Net Oil) 26.0 (Gravity) 20.0% (Cut)

The proposed work is as follows:

Jet Perforate 4 holes per foot 7648'-7702', 7708'-7726 and Re-Perforate 2 holes per foot 7702'-7708' and 7726'-7750' in gas productive intervals as required to convert well to a gas storage well.

All casing cement to new storage

MAP	MAP BOOK	CARDS	BOND	FORMS	
		ARG	8	114	121
			ARG		ARG

PACIFIC LIGHTING SERVICE COMPANY

(Name of Operator)

By *P.B. Maguire Jr.*

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

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)

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

AUG 27 1956

Operator TIDEWATER OIL COMPANY Well No. Porter #37

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

Location 2832.20' South and 1264.71' West from Station 84
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 1900.45 feet

All depth measurements taken from top of Derrick Floor which is 6.92 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

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

Date August 21, 1956

Signed T. E. Weaver

H. M. Burns
(Engineer or Geologist)

W. D. Coold
(Superintendent)

Title T. E. Weaver, Agent
(President, Secretary or Agent)

Commenced drilling	GeOLOGICAL MARKERS	DEPTH
Start <u>Deepening 5/28/56</u>		
Completed <u>Deepening 6/11/56</u>		
Total depth <u>7750'</u> Blueschist <u>7881'</u> ; <u>7750'</u>		
Junk		

Geologic age at total depth: Miocene

Commenced producing 6/19/56 ~~with~~ flowing/gas lift/pumping Name of producing zone Serrano
(Date) (Cross out unnecessary words)

6/20/56 Initial production
Production after 30 days

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	276	22.7	16.0%	144	300#	1000#
Production after 30 days	150	22.7	18.0%	25	120#	1050#

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforation
13-3/8"	520'	0'	54.5#	-	Smls.	J-55	17-1/2"	350	
7"	7640'	0'	23, 26, 29#	-	Smls.	J-55, N-80	11"	500	
5" (350')	7878'	7528'	18#	New	Smls.	J-55	6"	75	

PERFORATED CASING

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

5" 7702'-7708', 1/2" - 1/2" bullet holes per foot
5" 7726'-7750' 1/2" " " " "
5" (7783'-7827'; 7840'-7870') 1/2" H/P ineff.

Electrical Log Depths 7640'-7881' (Attach Copy of Log)

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDEWATER OIL COMPANY FIELD ALISO CANYON

Well No. Porter #37, Sec. 27, T. 3 N, R. 16 W, S.B. B. & M.

Date August 21, 19 56 Signed T. E. Weaver

P.O. Box "Y", Los Nietos Oxford 91051 Title T. E. Weaver, 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	
1956	
5/23	Killed well with oil base mud.
5/24	Contractor moved in. Rigging up.
5/25	Rigging up.
5/26-27	Idle.
5/28	Finished rigging up at 8:00 AM. Circulated and lightened Ken Oil to 60#. Tore out Christmas tree. Installed and tested B.O.P. Lowered tubing to bottom of liner and circulated hole clean. Found 10' of fill on bottom.
5/29	Measured tubing out on hook, checked within 1'. Ran M & T circulating type washer on 2-7/8" drill-tubing to bottom and started washing liner in 1' stages. Bottom 8' tight. Rewashed liner and backscuttled hole clean. Mud weight 60%, 130 viscosity.
5/30	Ran Bowen spear, safety joint and hydraulic jack. Hooked on to liner. Pulled 100,000#. Liner failed to pull. Hooked on jack. Pulled 370,000# and liner pulled loose. Recovered liner and laid down tools. Mud weight 60%, 130 viscosity.
5/31	Reamed hole to 7750'. Deepened from 7750' to 7842' with 6" bit. Mud weight 60%, 120 viscosity.
6/1	Deepened hole from 7842' to 7881'. Ran Schlumberger Induction-Mono log. Reamed to 7881'. Mud weight 60%, 120 viscosity.
6/2	Ran 350' 5", 18#, F.J. blank liner equipped with Baker float shoe and Burns liner hanger. Hung liner at 7878', top 7528'. Cemented liner with 75 sacks 112# Victor Hi-temp. cement. Time 5:30 PM. Oil Well Cementers. Ran bit and scraper. Found top of cement at 7285'. Cleaned out to 7390'. Mud weight 60%, 120 viscosity.
6/3	Cleaned out to 7528'. Conditioned mud. Running tester. Mud weight 60%, 120 visc.
6/4	Splice Test: Ran Cook hydraulic casing tester on 2-7/8" drill tubing and set packer at 7501' with tailpipe to 7520'. Used 1200' water cushion. Opened tester at 8:15 AM for 1 hour. Had light puff, then dead for balance of test. Recovered 30' net rise of watery drilling fluid. Charts confirmed results of test. Splice test at 7528' O.K. Cleaned out hard cement from 7520' to 7535', hole open to 7800' and hard cement from 7800' to 7876'. Ran McCullough Gamma Ray log and collar locator. Shot four 1/2" holes at 7780' by McCullough. Running tester.
6/5	WSO 7780': Ran Johnston hydraulic tester on 2-7/8" drill tubing and set packer at 7750' with tailpipe to 7766'. Used 1400' water cushion. Opened 3/4" bean at 8:25 AM. Had faint blow for 1 min. then dead for duration of 1 hour test. Recovered 15' net rise drilling fluid. Charts O.K. Jet perforated 4 holes at 7694' by McCullough. WSO 7694': Ran Johnston hydraulic tester on 2-7/8" drill tubing and set packer at 7652' with tailpipe to 7669'. Used 1400' water cushion.

1956

- 6/5 (cont.) Opened 3/4" bean at 4:55 PM. Had light blow for 1 1/2 min. increasing to strong blow for 3 min. (estimated 2000-3000 MCF rate). Pulled tester loose after 17 min. test. Recovered 300' rise of gassy oily drilling fluid. Ran bit and scraper and conditioned mud to 60#, 135 viscosity. Ran in Baker Model "K" retainer.
- 6/6 Ran Baker Model "X" retainer on 2-7/8" and 2-3/8" drill tubing and set at 7610'. Formation broke down at 4200# and took fluid at rate of 5 cu.ft. per min. at 4100#. Mixed and displaced 100 sacks Victor Hi-temp. cement below retainer. Final pressure 4000#. Time 11:10 AM. Ran in 1/2" bit and hit cement at 7608'.
- 6/7 Drilled out retainer at 7610' and cement to 7673'. Cleaned out to 7676'. Shot four 1/2" holes at 7682' by McCullough. J.C.T. 7682': Ran Johnston hydraulic tester on 2-7/8" drill tubing and set packer at 7624' with tailpipe to 7639'. Used 1300' water cushion. Opened 3/4" bean at 10:00 PM. Had light to medium light blow throughout 1 hour 15 min. test. Recovered 2100' rise of gassy oil, 22.8 gravity. Charts increased from 700-1150#. Estimated gas rate 5-6 MCF/D. Running bit and scraper.
- 6/8 Ran bit and scraper to bottom and conditioned mud to 60# and 135 viscosity. C.P. 7682': Ran Baker retainer and set at 7582'. Retainer blew up at 5800# while breaking down formation. Left retainer in hole. Ran Baker retainer #2 and set at 7552'. Formation broke down at 5800# and took fluid at 1/2 cu.ft./min. at 2500#. Pumped in 50 sacks Victor Hi-temp. cement and displaced all below retainer. Final pressure 3500#. Time 1:00 AM. Oil Well Cementers.
- 6/9 Ran bit and scraper and drilled out retainers and cement from 7600'-7693'. Cleaned out to bottom.
- 6/10 Ran blank pipe to bottom and backscuttled. J.C.T. 7862': Ran Johnston gun and tester and shot four gun holes at 7862'. Used 1400' oil cushion. Set packer at 7811' with tailpipe to 7831'. Opened 3/4" bean at 10:35 PM. Had light blow for 3 min., faint blow for 20 min., then dead for 10 min. Reset packer, had puff, then dead for balance of 1 hour test. Recovered 10' net rise drilling fluid.
- 6/11 Shot two 1/2" holes per foot from 7870'-7840' and four 1/2" holes per foot from 7827'-7783' by McCullough. Ran Johnston hydraulic tester on 2-7/8" drill pipe with 1300' water cushion and set packer at 7746' with tailpipe to 7761' (J.C.T. 7783'-7870'). Opened 3/4" bean at 5:15 PM. Had light steady blow decreasing to almost dead at end of 2 hour test. Made 15 min. shut in test. Recovered 4100' net rise of gassy oil and salt water, estimated 10-15% oil. Water salinity 725 g/g. Final flow pressure 2350#. Shut in pressure 2400#. Scraped all holes. Running bridge plug. Mud weight 60#, 135 viscosity.
- 6/12-13 Set Baker Model "K" retainer with latch-on sub at 7833'. Laid down drill tubing. Running tubing with gas lift valves.
- 6/14 Ran 2-7/8" and 2-3/8" tubing (158' of 2-3/8" on bottom) and set on packer at 7678' with 8000#. Five Camco flow valves located at 2599', 4583', 5936', 6893', 7508'. Hooked up Christmas tree and circulated out Ken Oil with oil. On gas lift at 10:00 PM. In 8 hours well produced 175 barrels circulating oil, 20/64" bean.
- 6/15 In 24 hours well produced on gas lift 89 barrels circulating oil, followed by 84 barrels water with trace of oil. 300/1000#, 20/64" bean, 350 MCF injected, 370 MCF net.
- 6/16 In 24 hours well produced on gas lift 79 barrels gross, 5 barrels net, 94.0% cut, 300/1000#, 20/64" bean.
- 6/17 Killed well with salt water. Pulled tubing and laid down flow valves and packer. Ran 2-7/8" and 2-3/8" tubing and attempted to latch on to Baker Model "K" retainer at 7835'. Found sand fill to 7827'. Unable to wash out sand.

OPERATOR: TIDEWATER OIL COMPANY

WELL NO.: Porter #37, Aliso Canyon Field

Page 3

1956

6/18 Hung 2-7/8" and 2-3/8" tubing at 7826' and equalized 20 sacks Victor Hi-temp. cement. Pulled up to 7753' and backscuttled excess cement. Time 10:00 AM. O.W.C. After 6 hours found top of cement at 7758'. Shot four 1/2" holes per foot from 7750'-7726' and 7708'-7702' by McCullough. Ran 2-7/8" and 2-3/8" tubing (158' of 2-3/8" on bottom) and set packer at 7678' with 8000#. Flow valves at 2599', 4583', 5936', 6393' and 7508'. Hooked up Christmas tree. Released contractor at 8:00 AM. Hooked up injection line. In 20 hours well produced on gas lift 371 barrels gross, 80 barrels net, 20/64" bean, 442 MCF injected, 310 MCF net, 3875 GOR. Cut 30.0% at 6:00 AM.

6/19

	Gross	Net	Cut	Gravity	Bean	Tubing Pressure	Casing Pressure	MCF Inj.	MCF Net
6/20	333	276	16.0%		16/64"	300#	1000#	509	1 1/4 G.L.
6/21	289	243	16.0%		12/64"	300#	1000#	139	193 G.L.
6/22	82	66	20.0%	22.7	7/64"	250#	Pkr.	34	45 Flow
6/23	75	74	0.8%	22.7	10/64"	300#	1000#	79	126 G.L.
6/24-26	No gauge								
6/27	75	63	16.0%	22.7	10/64"	425#	1000#	69	85 G.L.
6/28	79	74	6.0%	22.7	10/64"	450#	1000#	80	99 G.L.
6/29	80	67	16.0%	22.7	12/64"	400#	1000#	27	96
6/30	127	89	30.0%	22.7	12/64"	300#	1000#	36	128
7/1	65	45	30.0%	22.7	12/64"	300#	1000#	17	96
7/2	87	61	30.0%	22.7	11/64"	300#	1000#	22	129
7/3	134	87	35.0%	22.7	16/64"	300#	1000#	225	180
7/4	140	98	30.0%	22.7	16/64"	300#	1000#	116	224
7/5	192	129	33.0%	22.7	16/64"	300#	1000#	72	224
7/6	212	155	27.0%	22.7	16/64"	450#	1050#	149	172
7/7	162	119	27.0%	22.7	16/64"	500#	1050#	97	119
7/8	221	161	27.0%	22.7	16/64"	450#	1050#	135	165
7/9	209	146	30.0%	22.7	16/64"	450#	1050#	114	73
7/10	221	177	20.0%	22.7	16/64"	400#	1000#	175	88
7/11	200	160	20.0%	22.7	16/64"	350#	1050#	188	56
7/12	141	113	20.0%	22.7	16/64"	400#	1050#	133	39
	Compressor down 6 hours								
7/13	79	63	20.0%	22.7	16/64"	300#	1050#	102	23
7/14	134	107	20.0%	22.7	16/64"	250#	1050#	172	38
7/15	152	122	20.0%	22.7	16/64"	300#	1050#	111	15
7/16	200	164	18.0%	22.7	16/64"	350#	1050#	149	19
	Compressor down 12 hours								
7/17	159	130	18.0%	22.7	16/64"	300#	1050#	13	45
7/18	183	150	18.0%	22.7	16/64"	120#	1050#	23	50
7/19	183	150	18.0%	22.7	16/64"	120#	1050#	9	25

CASING RECORD

13-3/8" 54.5# C 520'
 7" 23, 26, 29# C 7640' WSO Shoe, WSO 7780'
 350' 5" 18# L 7878' Top 7528'
 Pf. 7750'-7726'; 7708'-7702'
 (Pf. 7870'-7840'; 7827'-7783' ineff.)

TUBING RECORD

2-7/8" L w/Pkr. @ 7678' incl. 158' of 2-3/8" on bottom
 and five flow valves

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCESDIVISION OF OIL AND GAS
REPORT ON PROPOSED OPERATIONS

No. P156-808

Mr. Thomas E Weaver
P O Box Y
LOS NIPTOS California
Agent for TIDEWATER OIL CO.Los Angeles 15 Calif.
May 31, 1956

DEAR SIR:

Your _____ proposal to deepen Well No. "Porter" 37,
Section 27, T. 3 N, R. 16 W, S. B B. & M., Aliso Canyon Field, Los Angeles County,
dated May 21, 1956, received May 24, 1956, 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 The condition of the well is as stated in the notice,**THE NOTICE STATES****"The present condition of the well is as follows:**

1. Total depth. 7750'
2. Complete casing record.

<u>13-3/8" 54.5#</u>	<u>C 520'</u>	
<u>7" 23, 26, 29#</u>	<u>C 7640'</u>	<u>W30 shoe</u>
<u>129' 5" 18#</u>	<u>L 7750'</u>	<u>Top 7621</u>
	<u>Pf. 7655-7750'</u>	

3. Produced	<u>P.P. May, 1956</u>	<u>11 B/D</u>	<u>22.7</u>	<u>12.0%</u>
	(Date)	(Net Oil)	(Gravity)	(Cut)"

PROPOSAL**"The proposed work is as follows:**

1. Wash perforations and pull 5" liner.
2. Deepen well to approximately 7880'.
3. Cement 340' 5" blank liner on bottom.
4. Make splice test of 5" to 7" lap.
5. Run Gamma Ray Log and make segregation tests at 7745' and 7690'.
6. Gun perforate four holes per foot from 7700' to 7740' and 7750' to 7870'.
7. Scrape casing and complete well."

DECISION**THE PROPOSAL IS APPROVED.**

FEK:OH

cc R M Burns (2)
R S Curl

Y
D

Mr F W Hertel
c/o Tidewater Oil Co
79 New Montgomery Street
SAN FRANCISCO 20

E. H. MUSSER, State Oil and Gas Supervisor

By R. H. Muller, Deputy

DIVISION OF OIL AND GAS
RECEIVED
MAY 24 1956
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

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 Nietos, Calif. Calif. May 21 1956

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
and
commence the work of deepening, ~~redrilling or deepening~~ altering casing at Well No. Porter #37
(Cross out unnecessary words)

Sec. 27, T. 3 N, R. 16 W, S. 2 B. & M.

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- 1. Total depth. 7750'
- 2. Complete casing record.

	<u>13-3/8"</u>	<u>54.5#</u>	<u>G 520'</u>
	<u>7"</u>	<u>23, 26, 29#</u>	<u>C 7640' WSO shoe</u>
<u>129'</u>	<u>5"</u>	<u>18#</u>	<u>L 7750' Top 7621</u>
			<u>Pf. 7655'-7750'</u>

~~3.0%~~ next produced. P.P. May, 1956 11 B/D 22.7 12.0%
 (Date) (Net Oil) (Gravity) (Cut)

The proposed work is as follows:

- 1. Wash perforations and pull 5" liner.
- 2. Deepen well to approximately 7880'.
- 3. Cement 340' 5" blank liner on bottom.
- 4. Make splice test of 5" to 7" lap.
- 5. Run Gamma Ray Log and make segregation tests at 7745' and 7690'.
- 6. Gun perforate four holes per foot from 7700' to 7740' and 7750' to 7870'.
- 7. Scrape casing and complete well.

Deepen

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121
			<i>Blank</i>	<i>EB</i>	<i>EB</i>

Tidewater Oil Company

(Name of Operator)

By Thomas E. Weaver
T. E. Weaver, Agent

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
RECEIVED
OCT 4 1946
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

Operator TIDE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON

Well No. FOSTER 437 Sec. 27, T. 3 N, R. 16 W, S.B. B. & M.

Location 2632.20' S & 1264.71' West from Station #34. Elevation of derrick floor above sea level 1907.37 feet.
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 September 27, 1946 Signed R. S. Curl
W. E. Perken (Engineer or Geologist) R. S. Curl (Superintendent) Title Agent (President, Secretary or Agent)

Commenced drilling 6/12/46 Completed drilling 8/24/46 Drilling tools Cable Rotary

Total depth 7750' Plugged depth _____ GEOLOGICAL MARKERS _____ DEPTH _____

Junk _____

Commenced producing 8/26 (date) Flowing/gas lift pumping
(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	<u>870 net rate</u>	<u>21.3</u>	<u>2.0</u>	<u>511 MCF net rate</u>	<u>735#</u>	<u>0#</u>
Production after 30 days	<u>277</u>	<u>22.0</u>	<u>0.3</u>	<u>128</u>	<u>960#</u>	<u>1000#</u>

CASING RECORD (Present Hole)

Size of Casing (A. P. T.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Casing landed in	Number of Sacks of Cement	Depth of Cementing if through perforations
<u>13 3/8"</u>	<u>520'</u>	<u>0'</u>	<u>54.5#</u>	<u>New</u>	<u>Seamless</u>	<u>J-55</u>	<u>17 1/2"</u>	<u>350</u>	<u>-</u>
<u>7"</u>	<u>7640'</u>	<u>0'</u>	<u>23.26.29</u>	<u>"</u>	<u>"</u>	<u>J-55 N-80</u>	<u>11"</u>	<u>500</u>	<u>-</u>
<u>5"</u>	<u>7750'</u>	<u>7621'</u>	<u>17.93#</u>	<u>"</u>	<u>"</u>	<u>N-80</u>	<u>6"</u>	<u>-</u>	<u>-</u>

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
<u>5"</u>	<u>7655</u> ft.	<u>7750</u> ft.	<u>80 Mesh x 2"</u>	<u>12</u>	<u>6"</u>	<u>Pacific</u>
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

MAP MAP BOOK CARDS BOND FORMS
114 121

Electrical Log Depths 500' - 7749' (Attach Copy of Log)

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

RECEIVED

OCT 4 1946

DIVISION OF OIL AND GAS

History of Oil or Gas Well

LOS ANGELES, CALIFORNIA

OPERATOR PITNEY WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. PORTER 27, Sec. 27, T. 3 N, R. 16 W, S. 3, B. & M.

Signed _____

Date September 27, 1946

Title Agent
R. J. Carl
(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

1946

- 4/18-5/17 Graded road and rig site,
 - 5/18-23 Idle.
 - 5/24-6/11 Dug cellar. Built forms. Hauled in equipment. Poured foundations. Moved in equipment. Erected derrick. Built casing racks and reinforced derrick. Rigged up rotary.
- LOCATION: 2832.20' South and 1264.71' West from Station 184.
- ELEVATION: 1907.37'
- 6/12 30' Spudded 12-1/4" hole at 11:00 PM. Drilled 12-1/4" hole from 0' to 30',
 - 6/13 229' Drilled 12-1/4" hole from 30' to 229'. Opened 12-1/4" hole to 17 1/2" from 0' to 63'.
 - 6/14-20 1119' Drilled 12-1/4" hole from 229' to 1119'. Opened 12-1/4" hole to 17 1/2" from 167' to 520'. Ran and cemented 13-3/8", 54.5# J-55 T&C Youngstown casing at 520' with 350 sacks Colton Construction cement in bulk. Treated with quick setting chemical. Had good cement returns. Time 11:45 PM. International Cementers, Inc.
 - 6/19 Installed cellar connections. Standing cemented.
 - 6/20 Installed cellar connections. Cleaned out cement from 510' to 520'. Circulated to bottom at 1119'.
 - 6/21-7/26 6022' Drilled 12-1/4" hole from 1119' to 6022'. Changed from 5" to 4" drill pipe.

DIVISION OF OIL AND GAS
RECEIVED
OCT 4 1946
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR THE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. PORTER #37, Sec. 27, T. 3 N, R. 15 W, S. E. B. & M.

Signed R. J. Carl
Title Agent (President, Secretary or Agent)

Date September 27, 1946

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Date

1946

- 7/27-8/15 7610' Drilled 11" hole from 6022' to 7610'. Ran Schlumberger electric log.
- 8/16 7640' Drilled 11" hole from 7610' to 7640'. Ran and cemented 7" Youngstown Speedtite casing at 7640' with 500 sacks Colton High Temperature cement in bulk. Casing details as follows:
7640' - 6830' is 29# N-80
6830' - 5229' is 26# N-80
5229' - 3531' is 23# N-80
3531' - 0' is 23# J-55
Pressure increased from 500# to 600# when plugs bumped. Time 11:00 PM.
- 8/17-18 Standing cemented. Lay down 4" drill pipe.
- 8/19 7645' Drilled 6" hole from 7640' to 7645'.
- 8/20 Ran Johnston formation tester on 2-7/8" drill pipe using 975' water cushion and set packer at 7609' with bottom of tail pipe at 7632'. Opened 3/8" valve at 8:11 AM. Had fair, diminish to weak heading blow for 1 1/4 minutes then dead for duration of 1 hour 1 1/4 minute test. Net fluid rise 940' (3.7 bbls) of heavy to light gas out drilling fluid with trace of oil. Water sample filtered from fluid 150' above tester 28 G/G. Pressure chart verified results. Test of W.S.O. witnessed and approved by D.O.G.
- 8/21 Made up tubing to re-cement 7" casing.
- 8/22 Cleaned out to 7645'. Ran Baker retrievable on 2-7/8" tubing and set packer at 7610'. Applied pressure and formation began taking fluid at 3200# and decreased to 2850#. Mixed 50 sacks Colton High Temperature cement and squeezed all cement below retainer. Pressure dropped to 2500# when cement started around shoe of 7" casing and increased to 3300# when all cement had been displaced. Time 4:00 AM. International Cementers, Inc.

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

RECEIVED
OCT 4 1946
LOS ANGELES, CALIFORNIA

OPERATOR YIP WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. FOURTEEN 37, Sec. 27, T. 3 N, R. 16 W, S. S. 8. B. & M.

Signed R. S. Carl
Title AGENT
(President, Secretary or Agent)

Date September 27, 1946

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Date

1946

- 8/23 7650' Drilled 6" hole from 7645' to 7650'. Cleaned out to 7645'. Ran Johnston tester on 2-7/8" drill pipe with 975' water cushion. Set packer at 7609' with bottom of tail pipe at 7632'. Opened 3/8" valve at 11:30 AM. Had fair blow for 6 minutes then dead for balance of 1 hour and half test. Pulled packer loose and recovered 190' of drilling fluid. Maximum salinity 35 G/G. D.C.G. waived witnessing of test.
- 8/24 7750' Drilled 6" hole from 7650' to 7750'.
- 8/25 Ran Schlumberger electric log at 7750'. Reamed 6" hole to 7750'. Ran 123' of 5", 17.93# liner including 95' of perforated and landed at 7750'. Top of liner 7621'. Perforations are 80 Mesh, 12 rows, 6" centers, 2" slots with 6" undercut.
- 8/26 Ran 157' of 2-3/8", 4.6# J-55 upset tubing and 7519' of 2-7/8", 6.5# tubing and landed at 7676'. Installed Kmas tree. Circulated out mud with oil. Well began flowing to sump at 11:00 PM. Produced 70 bbls gross fluid in one hour on 48/64" bean. Turned to production tanks at 12 midnig t. At 6:00 AM 8/27 produced 223 bbls gross fluid; 218 bbls approximate net oil; (670 net rate) in 6 hours. 24/64" bean average out 2.0%; 21.8° gravity; 725# tubing pressure; 0# casing pressure 511 MCF gas.
- 8/27 In 24 hours well produced 988 bbls gross fluid; 986 bbls approximate net oil; 0.2% cut; 22.0% gravity; 900# tubing pressure; 275# casing pressure; 344 MCF gas; 48/64" to 16/64" bean. In 2 hour production test well flowed 204 bbls net oil (2448 bbls net rate); 0.1% cut; 48/64" bean; 380# tubing pressure; no gauge on casing; 93 MCF gas (1116 gas rate).

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DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
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OCT 4 1946
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. FORSTER #37, Sec. 27, T. 3 N, R. 16 W, S.B. B. & M.

Signed R. J. Carl

Date September 27, 1946 Title Agent
(President, Secretary or Agent)

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Date	Gross Fluid	Approximate Net Oil	Cut	Gravity	Bean	Tubing Press.	Casing Press.	Gas MCF	Hours On
8/28	515	514	0.3	22.0°	16/64"	900#	275#	223	24
8/29	500	480	4.0	22.0°	16/64"	900#	260#	229	24
8/30	267	266	0.1	22.0°	16/64"	600#	1100#	62	8
8/31-9/2	Shut in								
9/3	175	174	0.2	22.0°	10/64"	950#	550#	118	15
9/4	278	277	0.1	22.0	10/64"	960#	550#	119	24
9/5	277	276	0.2	22.0°	10/64"	975#	1000#	119	24
9/6	195	194	0.2	22.0	8/64"	975#	1000#	78	24
9/7	164	163	0.2	22.0°	8/64"	980#	1000#	78	24
9/8	159	158	0.2	22.0	8/64"	980#	990#	74	24
9/9	184	183	0.2	22.0°	9/64"	1000#	1100#	86	24
9/10	195	194	0.2	22.0°	9/64"	975#	1000#	89	24
9/11	201	200	0.2	22.0°	9/64"	975#	1000#	87	24
9/12	200	199	0.2	22.0°	9/64"	950#	550#	90	24
9/13	200	199	0.3	22.0°	9/64"	950#	550#	89	24
9/14	200	199	0.2	22.0	9/64"	950#	550#	90	24
9/15	191	190	0.3	22.0	9/64"	980#	570#	89	24
9/16	190	189	0.3	22.0	9/64"	980#	550#	87	24
9/17	267	266	0.2	22.0	10/64"	980#	550#	121	24
9/18	283	282	0.2	22.0	10/64"	980#	550#	123	24
9/19	285	284	0.2	22.0	10/64"	975#	1000#	124	24
9/20	278	277	0.1	22.0	10/64"	975#	1000#	129	24
9/21	278	277	0.1	22.0	10/64"	975#	1000#	129	24
9/22	263	262	0.3	22.0	10/64"	975#	1000#	130	24
9/23	288	287	0.3	22.0	10/64"	960#	1000#	132	24
9/24	278	277	0.3	22.0	10/64"	960#	1000#	128	24

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
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LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR THE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. PORTER #37, Sec. 27, T. 3 N, R. 15 W, S. E. B. & M.

Signed R. J. Carl
Title Agent (President, Secretary or Agent)

Date September 27, 1946

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1946

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3531' - 0' is 23# J-55
Pressure increased from 500# to 600# when plugs bumped. Time 11:00 PM.
- 8/17-18 Standing cemented. Lay down 4" drill pipe.
- 8/19 7645' Drilled 6" hole from 7640' to 7645'.
- 8/20 Ran Johnston formation tester on 2-7/8" drill pipe using 975' water cushion and set packer at 7609' with bottom of tail pipe at 7632'. Opened 3/8" valve at 8:11 AM. Had fair, diminish to weak heading blow for 1 1/4 minutes then dead for duration of 1 hour 1/4 minute test. Net fluid rise 940' (3.7 bbls) of heavy to light gas out drilling fluid with trace of oil. Water sample filtered from fluid 150' above tester 28 G/G. Pressure chart verified results. Test of W.S.O. witnessed and approved by D.O.G.
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DEPARTMENT OF NATURAL RESOURCES

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DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TYDIP LATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. FOURTEEN 37, Sec. 27, T. 3 N, R. 16 W, S. S. 8. B. & M.

Signed _____

Date September 27, 1946

Title R. S. Carl
(President, Secretary or Agent)

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DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. FORSTER #37, Sec. 27, T. 3 N, R. 16 W, S.B. B. & M.

Signed R. J. Carl

Date September 27, 1946 Title Agent
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9/10	195	194	0.2	22.0°	9/64"	975#	1000#	89	24
9/11	201	200	0.2	22.0°	9/64"	975#	1000#	87	24
9/12	200	199	0.2	22.0°	9/64"	950#	550#	90	24
9/13	200	199	0.3	22.0°	9/64"	950#	550#	89	24
9/14	200	199	0.2	22.0	9/64"	950#	550#	90	24
9/15	191	190	0.3	22.0	9/64"	980#	570#	89	24
9/16	190	189	0.3	22.0	9/64"	980#	550#	87	24
9/17	267	266	0.2	22.0	10/64"	980#	550#	121	24
9/18	283	282	0.2	22.0	10/64"	980#	550#	123	24
9/19	285	284	0.2	22.0	10/64"	975#	1000#	124	24
9/20	278	277	0.1	22.0	10/64"	975#	1000#	129	24
9/21	278	277	0.1	22.0	10/64"	975#	1000#	129	24
9/22	263	262	0.3	22.0	10/64"	975#	1000#	130	24
9/23	288	287	0.3	22.0	10/64"	960#	1000#	132	24
9/24	278	277	0.3	22.0	10/64"	960#	1000#	128	24

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
RECEIVED
OCT 4 1946
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. PORTER #37, Sec. 27, T. 3 N, R. 16 W, B. B. & M.

Signed *R. S. Curl*
Title Agent

Date September 27, 1946

(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

0' - 520' is 17 1/2"
520' - 6022' is 12 1/2"
6022' - 7640' is 11"
7640' - 7750' is 6"

CASING RECORD

13-3/8", 54.5# C 520'
7", 23#, 26#, 29# C 7640'
129' - 5", 17.93# L 7750' Top 7621' P.H. 7655-7750'

TUBING RECORD

157' - 2-3/8", 4.6# & 7519' - 2-7/8", 6.5# H 7676'

JP

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121
					e

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON

Well No. FORT E #37 Sec. 27, T. 3 N, R. 16 W, S. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
0'	30'		Drilled		Sand and shale
30'	73'		"		Sand and gravel
73'	161'		"		Sand
161'	702'		"		Sand and shale
702'	830'		"		Shale
830'	993'		"		Sand and shale
993'	1195'		"		Shale
1195'	1206'		"		Sand and shale
1206'	1444'		"		Shale
1444'	1745'		"		Sand and shale
1745'	1766'		"		Shale
1766'	1807'		"		Sand and shale
1807'	1833'		"		Shale
1833'	3866'		"		Sand and shale
3866'	3913'		"		Shale streaks hard sand
3913'	4089'		"		Sand and shale
4089'	4108'		"		Hard sand
4108'	4152'		"		Hard shale streaks sand
4152'	4329'		"		Sand and shale
4329'	4345'		"		Hard shale
4345'	6001'		"		Sand and shale
6001'	6012'		"		Hard sandy shale
6012'	6022'		"		Hard sand
6022'	6098'		"		Sand and shale
6098'	6109'		"		Shale
6109'	6799'		"		Sand and shale
6799'	6811'		"		Hard shale
6811'	7339'		"		Sand and shale
7339'	7364'		"		Hard sand and shale
7364'	7400'		"		Sand and shale
7400'	7460'		"		Hard shale
7460'	7504'		"		Shale
7504'	7571'		"		Sand and shale
7571'	7640'		"		Hard shale and sand
7640'	7645'		"		Shale
7645'	7750'		"		Sand and shale

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121

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DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
(FORMATION TESTER)No. T 1-45749Los Angeles 14, Calif. August 29, 19 46Mr. R. S. CurlLos Nietos, Calif.Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your well No. "Porter" 37, Sec. 27, 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 20, 19 46. Mr. John M. Carls, Inspector, designated by the supervisor, was present as prescribed in Sec. 3222 and 3223, Ch. 93, Stat. 1939; there were also presentJ. R. Bovyer, Engineer; R. Frantz, Drilling Foreman.Shut-off data: 7 in 29, 26, 23 lb. casing was cemented at 7640 ft. on August 16, 19 46 in 11" hole with 500 sacks of cement of which 8 sacks was left in casing. Casing record of well: 13-3/8" cem. 520'; 7" cem. 7640', W. S. O.

Reported total depth 7645 ft. Bridged with cement from xxx ft. to xxx ft. Cleaned out to 7645 ft. for this test. A pressure of 1000 lb. was applied to the inside of casing for 15 min. without loss after cleaning out to 7593 ft. A Johnston tester was run into the hole on 2-7/8 in. drill pipe, with 975 ft. of water cushion, and packer set at 7609 ft. with tailpiece to 7632 ft. Tester valve, with 3/8" bean, was opened at 8:11 a.m. and remained open for 1 hr. and 14 min. During this interval there was a fair to diminishing blow for 14 minutes, and no blow for the remainder.

THE INSPECTOR ARRIVED AT THE WELL AT 11:30 A. M. AND MR. BOVYER REPORTED:

1. A 12-1/4" rotary hole was drilled from 520' to 6022' and an 11" rotary hole, from 6022' to 7645'.
2. Electrical core readings showed the estimated top of the "Sesnon" zone at 7654'.
3. A Johnston tester was run as noted above.

THE INSPECTOR NOTED:

1. When the drill pipe was removed a net rise of 940' of heavy to light gas-cut drilling fluid with a show of oil was found in the drill pipe above the tester, equivalent to 5.5 bbl.
2. Water filtered from fluid sample taken from 150' above the bottom of the drill pipe tested 24 grains of salt per gallon.
3. The recording pressure bomb chart showed that the tester valve was open 1 hr. and 14 minutes.

The test was completed at 12:30 p.m.

THE SHUT-OFF IS APPROVED.

JMC:OH

cc- T. L. Wark
Jos. Jensen
Wm. E. Perkes (2)

R. D. BUSH, State Oil and Gas Supervisor

By E. H. Murrell, Deputy
ESB

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-45577

Los Angeles 14,

Calif. July 16,

19 46

Mr. R. S. Curl,

Los Nietos,

TIDE WATER ASSOCIATED OIL COMPANY

Agent for

DEAR SIR:

Operations at your well No. "Porter" 37 Sec. 27 T. 3 N. R. 16 W. S. B. & M.,
Also Canyon Field, in Los Angeles County, were witnessed by

on July 10, 1946. There was also present Paul Betts, Inspector representative of the supervisor,
L. Windle, Driller,
L. H. Barnes, Derrickman.

Casing Record 13-3/8" cas. 520'. T.D. 3805'

Junk xxx

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

The inspector arrived at the well at 11:00 a.m. and Mr. Windle reported:

1. A 12-1/4" rotary hole was drilled from surface to 3805', opened to 17-1/2" from surface to 520'.
2. On June 8, 1946, 13-3/8", 54.5 lb. casing was cemented at 520' with 350 sacks of cement.

THE INSPECTOR NOTED that the well was equipped with the following blowout prevention equipment:

1. A Shaffer double cellar control gate for closing in the well with the drill pipe out of the hole and for closing around the 5-9/16" drill pipe.
2. The controls for the above equipment were located outside the derrick.
3. A 2" mud fill-up line, with a 2" high pressure stopcock, into the 13-3/8" casing, below the above equipment.
4. A Hogner type blowout preventer with packer to fit the 5-9/16" drill pipe.
5. An 8-5/8" shut-off gate on mud discharge line.

The inspection was completed at 11:15 a.m.

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

cc - T. L. Wark
Jos. Jensen
Wm. E. Perkes (2)

FB:ES

w/b

R. D. BUSH

State Oil and Gas Supervisor

By E. H. Musser

Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-41943

Los Angeles 14, Calif. April 22, 1946

Mr. R. S. Curl

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your proposal to drill Well No. "Porter" 37, Section 27, T. 3 N., R. 16 W., S. B. B. & M., Aliso Canyon Field, Los Angeles County, dated April 18, 1946, received April 19, 1946, 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 2832.20 feet S. and 1264.71 feet W. from Station #84. The elevation of the derrick floor above sea level is approx. 1910 feet. We estimate that the first productive oil or gas sand should be encountered at a depth of about _____ feet."

PROPOSAL:

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

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
13-3/8"	54.5#	T & O J-55	500	Cemented
7"	23#, 26#, 29#	J-55 N-80	7650	Cemented
5"	17.93#	N-80 inserted	7900	Perf. lnr.

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

- 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.
- Blowout prevention equipment, sufficient to provide a completed close-in of the well under pressure at any time, shall be installed.
- Any hole to be sidetracked in any oil or gas zone shall be filled with cement, if possible.
- THIS DIVISION SHALL BE NOTIFIED AS FOLLOWS:
 - To witness a test of the effectiveness of the 7" shut-off.
 - To inspect the installed blowout prevention equipment before drilling below 1500'.

CLB:OH

cc- T. L. Wark
Jos. Jensen
Wm. E. Perkes (2)

R. D. BUSH

State Oil and Gas Supervisor

By S. H. Messer Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

037-00724

Notice of Intention to Drill New Well

This notice must be given and surety bond filed before drilling begins

14

Los Nietos, Calif. April 18 19 46

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 drilling well No. Porter #37 SF2U-P37, Sec. 27, T. 3 N, R. 16 W, SB B. & M., Aliso Canyon Field, Los Angeles County.

Lease consists of Porter Lease

The well is 2832.20 feet ~~XXX~~ S., and 1264.71 feet ~~XXX~~ W. from Station #84
(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the ~~XXXX~~ derrick floor above sea level is approx. 1910 feet.

We estimate that the first productive oil or gas sand should be encountered at a depth of about _____ feet.

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

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
13-3/8"	54.5#	T & C J-55	500	Cemented
7"	23#, 26#, 29#	J-55 N-80 Speedtite	7650	Cemented
5"	17.93#	N-80 inserted n	7900	Perf. Inr.

Well is to be drilled with ~~rotary~~ rotary tools.

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

Address Los Nietos, Calif.

Tide Water Associated Oil Company
(Name of Operator)

Telephone number Whittier 42043

By [Signature]
Agent

ADDRESS NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121
<u>18A</u>	<u>4-19-46</u>				