

NATURAL 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 216-0172**

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
 August 10, 2016

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

Your proposal to **Rework** well "**Porter**" 32D, A.P.I. No. **037-21355**, Section **27**, T. **03N**, R. **16W**, **SB B. & M.**, **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **7/29/2016**, received **8/3/2016** has been examined in conjunction with records filed in this office. (Lat: **34.312440** Long: **-118.550426** 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 **8 5/8"** casing.
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 on the **8 5/8"** casing and tubing plug.

Continued on Next Page

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

Engineer Clifford R. Knight
 Office (805) 654-4761

CRK/do

Kenneth A. Harris Jr.
 State Oil and Gas Supervisor

By 
 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 resuming 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:
- Conduct further investigation and demonstrate to the Division's satisfaction that the abnormal finding is not an indicator of a lack mechanical integrity;
 - Remediate the well to the Division's satisfaction; or
 - 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:
- 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
 - 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:

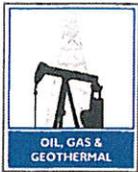
- a. Conduct daily gas monitoring at the surface of the non-operational well, including monitoring the area around the well perimeter and in the annular space between the plugged casing string and the outmost casing;
- b. Conduct noise log, temperature log and positive pressure test every six months;
- 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
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 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

FOR DIVISION USE ONLY		
Bond	Forms	
		OGD114
	CAL WINS	115V

P216-0172

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 32D, API No. 037-21355,
 (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 and completed work summary.

The total depth is: 7750 feet. The effective depth is: 7726 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.

5b - Set plug set in WXN profile at 7260' and open SSD at 7226'.

6b - Circulate well with 8.5 ppg KCL brine down tbg. through SSD at 7226' and back to surface to completely fill well.

7b - With casing valve closed, pressure-up on tubing to 500 psi. for 1 hour (will test csg., packer and tubing plug all at same time). Note: well has stage collar at 3011'.

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 A.J. Alshammasi	Telephone Number: (818) 700-3887	Signature
Individual to contact for technical questions: Mike Giuliani	Telephone Number: (805) 290-2074	Date 7/29/16
		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, redrilling, 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 32D

API #: 04-037-21355-00
Sec 27, T3N, R16W

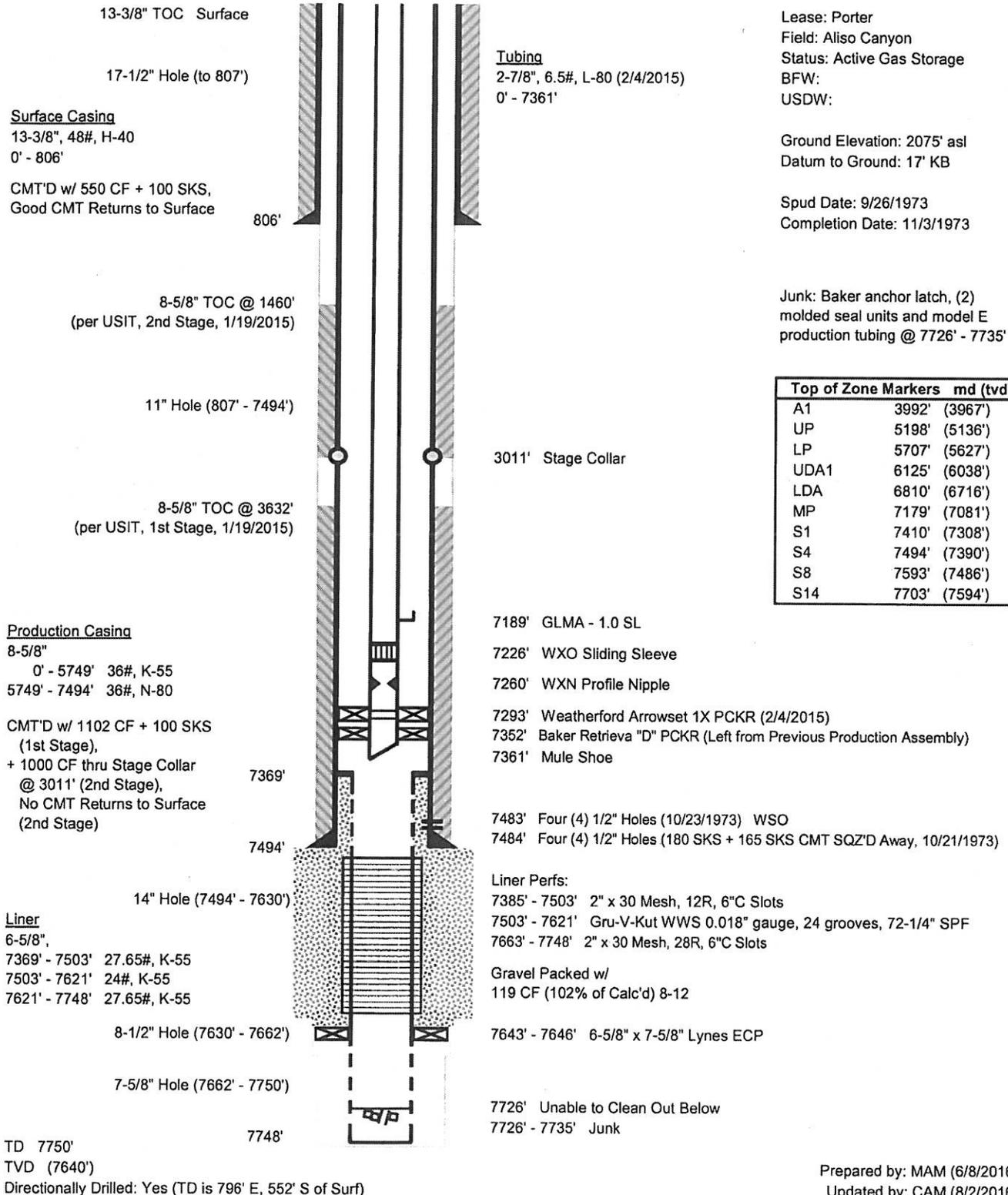
Operator: So. California Gas Co.

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

Ground Elevation: 2075' asl
Datum to Ground: 17' KB

Spud Date: 9/26/1973
Completion Date: 11/3/1973

Junk: Baker anchor latch, (2)
molded seal units and model E
production tubing @ 7726' - 7735'



Top of Zone Markers md (tvd)	
A1	3992' (3967')
UP	5198' (5136')
LP	5707' (5627')
UDA1	6125' (6038')
LDA	6810' (6716')
MP	7179' (7081')
S1	7410' (7308')
S4	7494' (7390')
S8	7593' (7486')
S14	7703' (7594')

Prepared by: MAM (6/8/2016)
Updated by: CAM (8/2/2016)
InterAct
Rec'd 08-03-16 DOGGR Ventura.

Completed Work Summary - Porter 32D		
Step	Work Completed	Date
4b	TOC (1st stage) at 3632' per USIT. Good bond from bottom of log at 7298' to well above MP.	1/19/2015
5b	Packer set at 7293'.	2/4/2015

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
Fernando Fee 34A	7483'/7411'	7", 26#, N-80	7483	7240	6154	4307	Yes
Porter 37A	7330'/7246'	8-5/8", 40#, N-80	2015	7300	6205	1891	Yes
		8-5/8", 36#, N-80	5582	6490	5517	3467	Yes
		8-5/8", 40#, N-80	7330	7300	6205	4240	Yes
Porter 32D	7293'/7195'	8-5/8", 36#, K-55	5749	4460	3791	3541	Yes
		8-5/8", 36#, N-80	7293	6490	5517	4224	Yes
Sesnon Fee 4	8930'/8930'	7", 29#, N-80	52	8160	6936	1023	Yes
		7", 23#, N-80	6103	6340	5389	3698	Yes
		7", 26#, N-80	8146	7240	6154	4601	Yes
		7", 29#, N-80	8930	8160	6936	4947	Yes
Sesnon Fee 8	8953'/8953'	7", 29#, N-80	151	8160	6936	1067	Yes
		7", 23#, N-80	6541	6340	5389	3891	Yes
		7", 26#, N-80	8598	7240	6154	4800	Yes
Porter 69E	7155'/7005'	9-5/8", 47#, N-80	7155	6870	5840	4163	Yes

Casing Pressure Test Safety Check (500 psi)

Well		Casing Size/Grade/Weight	Depth MD	Burst PSI	85% of Burst PSI	Pressure at Depth w/500 psi Surface Pressure	Press < 85% of Burst
Porter 32B	7212' / 6905'	8-5/8", 36#, K-55 8-5/8", 36#, N-80 7", 26#, L-80	5800 6652 7212	4460 6490 7240	3791 5517 6154	3064 3440 3688	Yes Yes Yes
Porter 32D	7293' / 7195'	8-5/8", 36#, K-55 8-5/8", 36#, N-80	5749 7293	4460 6490	3791 5517	3041 3724	Yes Yes
Fernando Fee 32B	7350' / 6863'	8-5/8", 36#, K-55 8-5/8", 36#, N-80 6-5/8", 28#, K-55*	5863 6810 7350	4460 6490 6970	3791 5517 5925	3091 3510 3749	Yes Yes Yes

Revised by SCG (A.J.)
 500 psi press. test vs
 1000 psi press test. in
 program 1101
 D. ORTIZ
 2-9-16

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

Rec'd 04-01-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Field: Aliso Canyon

County: Los Angeles

Well: Porter 32 D

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

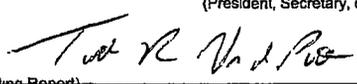
A.P.I. No. 03721355

Todd Van de Putte

Title: Drilling Manager

(President, Secretary, or Agent)

Date: 4/1/2015

Signature: 

(Person Submitting Report)

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

Telephone Number: 818-701-3339

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

Start Date	Ops. DOGGR Rpt
12/9/2014	Obtained a hot work permit. Built and installed four 7" x 10' stanchions inside the cellars on the Porter 32E and the Porter 32F wells. Removed the handrails on the wells Porter 32E and Porter 32F. Installed three 1" crossing plates over the top of Porter 32E and Porter 32F. Spotted two closed top tanks. Filled the tanks with 800 bbl of 9 ppg NaCl brine.
12/10/2014	Continued to move the Rival Rig #12 rig from Porter 42B to Porter 32D. Removed the blind flange and the lateral lines. Installed a safety cage over Porter 32 C well. Rigged up the Rival Rig #12 rig and associated equipment. Rigged up the Onyx portable gas separator.
12/11/2014	Opened the well with 2610 psig surface pressure on the tubing and 2605 psig surface pressure on the casing. Pumped 40 bbl of 9 ppg high viscosity NaCl pill down the tubing and displaced with 43 bbl of 9 ppg NaCl brine. Opened the choke on the gas separator and killed the well with 418 bbl of 9 ppg NaCl brine using the Oryx Gas Separator. Installed the BPV and rigged down the production tree. Installed a 2-7/8" pup and TIW valve in the tubing hanger. Rigged up the riser spools and the Class III 5M BOPE and secured the well.
12/12/2014	Continued to rig up the 11" Class III 5M BOPE and installed the rig floor. Pressure tested the pipe rams, the mud cross valves and the choke manifold to 300 psig (low) and 5000 psig (high). Pressure tested the TIW valves and IBOP to 300 psig (low) and 5000 psig (high). Pressure tested the annular preventer to 300 psig (low) and 3500 psig (high). All tests held for 15 minutes each. Recorded on a test chart. BOPE inspected by Mr. Cliff Knight, DOGGR. Secured the well.
12/15/2014	Opened the well with the tubing and the casing on a slight vacuum. Filled the well with 42 bbl of 9 ppg NaCl brine. Backed out the tubing hanger lock screws. Picked up on the completion tubing and released the Baker latch and seal assembly from the Retrieva D Packer at 7352'. Laid down the tubing hanger and the pup joints. Assisted in closing in P 32E and P 32F and blowing down the lateral lines. Moved in the tubing trailer. Laid down 129 joints of 2-7/8", 6.5# N-80 tubing and secured the well.
12/16/2014	Filled the well with 36 bbl of 9.0 ppg NaCl brine. Finished laying down the 2-7/8" N80 production string. Found a broken pin on the lower blast joint connection to the top of the Otis XN nipple. Left the 2-7/8" Otis XN nipple, one joint of 2-7/8" N-80 tubing and the Baker Latch/Seal Assembly in the hole. Move out the tubing trailer. Moved in trailer with the 2-7/8" P110 KC workstring tubing. Measured in the hole with 123 joints of 2-7/8" P110 KC workstring tubing, a bumper sub and a 8-5/8" positive casing scraper to 3832' and secured the well.
12/17/2014	Opened the well with 0 psig surface pressure on the tubing and the casing. Filled the well with 42 bbl of 9.0 ppg NaCl brine. Finished running in the hole with the 8-5/8" 36# casing scraper from 3832' to the top of the fish (Otis XN Nipple) at 7320'. Pulled out of the hole and laid down the 8-5/8" casing scraper. Picked up one joint of 7-3/8" wash pipe with a cut lip shoe on the 2-7/8" P-110 workstring. Ran in the hole to 3215' and secured the well.
12/18/2014	Opened the well with 0 psig surface pressure on the tubing and the casing. Filled the well with 41 bbl of 9.0 ppg NaCl brine. Finished running in the hole with the 7-3/8" wash pipe and the cut lip shoe. Worked over the fish at 7320'. Rigged up the power swivel and cleaned out fill from 7320' to 7343'. Reverse circulated the well clean. Pulled out of hole to 3220' and secured the well.
12/19/2014	Opened the well with 304 psig on the tubing. Bled off the pressure and circulated the well with 195 bbl of 9 ppg NaCl brine. Pulled out of the hole to 687' and the tubing began flowing. Ran in the hole to 3220' and installed PGSR to direct displacement to the pump tank. Filled the tubing and continued running in the hole to 7267'. Filled the tubing and broke circulation and secured the well.
12/22/2014	Opened the well with 0 psig surface pressure on the tubing (IBOP in place) and 50 psig surface pressure on the casing. Filled the well with 60 bbl of 9 ppg NaCl brine. Circulated the gas cut brine from the well. Monitored high winds gusting in excess of 40 mph, secured the well.
12/23/2014	Opened the well with 0 psig surface pressure on the tubing and the casing. Filled the well with 26 bbl of 9 ppg NaCl brine. Pulled out of the hole with the 7-3/8" cutlip shoe pumping a tubing volume every 30 stands. Rigged up the rotary tongs and laid down the cutlip shoe. Made up a 7-1/2" wavy bottom shoe on one joint of 7-3/8" wash pipe on the 2-7/8" workstring. Ran in the hole to 4,800' and secured the well.
12/29/2014	Bled 27 psig from the casing and 180 psig from the tubing. Pumped 30 bbl of 9 ppg NaCl brine down the tubing. Filled the casing with 43 bbl of 9 ppg brine. Finished running in the hole with the 7-1/2" wavy bottom shoe from 4800'. Rigged up the power swivel and worked the shoe over the fish at 7320'. Cleaned out asphaltenes to 7341' with a low penetration rate. Pulled the rotary shoe to 7292' and secured the well.

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

Rec'd 04-01-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Field: Aliso Canyon

County: Los Angeles

Well: Porter 32 D

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

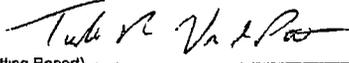
A.P.I. No. 03721355

Todd Van de Putte

Title: Drilling Manager

(President, Secretary, or Agent)

Date: 4/1/2015

Signature: 

(Person Submitting Report)

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

Telephone Number: 818-701-3339

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

Start Date	Ops. DOGGR Rpt
12/30/2014	Filled the well with 34 bbl of 9 ppg NaCl brine. Circulated the well with 430 bbl of 9 ppg NaCl brine. Pulled out of the well to 3219'. Shut down operations due to high winds and secured the well.
12/31/2014	Filled the well with 37 bbl of 9 ppg NaCl brine. Unable to trip pipe due to the high winds gusting to 51 mph. Secured the well.
1/5/2015	Opened the well with 0 psig surface pressure on the casing and 18 psig on the tubing. Bled the well down and filled the well with 100 bbl of 9 ppg NaCl brine. Monitored high winds at 40 to 55 mph and secured the well.
1/6/2015	Filled the well with 65 bbl of 9 ppg NaCl brine. Monitored high winds at 40 to 48 mph and secured the well.
1/7/2015	Monitored the winds at 40- 44 mph. Winds dropped to 30 mph at 11 am. Filled the well with 35 bbl of 9 ppg NaCl brine. Pulled out of the well from 3220' and laid down the 7-1/2" rotary shoe. Made up a new 7-1/2" wavy bottom rotary shoe on the 2-7/8" workstring. Picked up four, 4-3/4" drill collars. Ran in the hole to 7320' and secured the well.
1/8/2015	Opened the well with 0 psig surface pressure on the tubing and the casing. Filled the well with 37 bbl of 9 ppg NaCl brine. Rigged up a 3.5 power swivel. Tagged the top of the fish at 7331'. Rotated 1/4 turn and dropped over the fish. Lowered the shoe and at tagged at 7340'. Rotated and worked the 7-1/2" shoe down to 7352'. Had metal shavings in returns. Circulated the well clean. Rigged down the power swivel. Pulled out of the hole and stood back the drill collars. Rigged up the rotary tongs and laid down the shoe. Found the tubing stuck inside the wash pipe. Laid down the wash pipe; recovered XN profile, one joint of tubing (broken in half) and the locator sub from the top of the seal assembly. Ran in the hole open ended to 3210' and secured the well.
1/9/2015	Filled the well with 90 bbl of 9 ppg NaCl brine. Pulled out of hole with the kill string. Made up 7" magnet on the 2-7/8" workstring. Ran in the hole to 7156' and secured the well.
1/12/2015	Opened the well with 60 psig surface pressure on the casing. Bled off the pressure. Picked up two joints of the 2-7/8" P110 KC workstring tubing. Magnet hanging at 7328'. Filled the well with 78 bbl of 8.5 KCl brine. Circulated the gas out of the well with 430 bbl of KCl brine. Tagged the top of the packer at 7352' with magnet. Pulled out of the hole and laid down the magnet (Had fine metal shavings on magnet). Made up a 10' x 2-1/16" mule shoe joint on the 2-7/8" workstring. Ran in the hole to the top of the packer at 7352'. Turned the mule shoe 1/4 turn and dropped into the packer. Lowered the 2-1/16" mule shoe joint through the seal assembly (seal assembly still lodged inside packer). Sat down with 4 kib on the seal assembly several times. No movement. Pulled the tubing tail to 7302' and secured the well.
1/13/2015	Filled the well with 105 bbl of 8.5 ppg KCl. Pull out of the well the and laid down the 2-1/16" tubing tail joint. Made up a 2-1/4" mule shoe x 3-5/8" spear stop on a 3-1/2" lead collar, a drain sub, a bumper sub and four, 4-3/4" drill collars on the 2-7/8" workstring. Located the top of the packer at 7352'. Worked the mule shoe into the packer 5 feet and tagged the seal assembly with the 3-5/8" spear stop at 7352'. Used the spear stop to drive the seal assembly and the production tube out the bottom of the packer. Lowered the 3-5/8" spear stop to 7362'. Pulled the tubing tail to 7302' and secured the well.
1/14/2015	Filled the well with 90 bbl of 8.5 ppg KCl brine. Picked up tubing and lowered the mule shoe and the spear stop through the packer at 7352' down to 7362' (No restrictions.). Pulled to 7335' and circulated the well with a total of 420 bbl of 8.5 ppg KCl brine while monitoring the wellsite wind conditions. Pulled out of the hole and stood back the drill collars. Laid down the bumper sub and the spear stop. Made up an 8-5/8" 36# casing scraper on the 2-7/8" workstring. Ran in the hole to 3750' and secured the well.
1/15/2015	The well required 85 bbl of 8.5 ppg KCl brine to fill. Continued running in the well with the 8-5/8" casing scraper from 3705' to the top of the packer at 7352'. Pulled out of the hole and laid down the 8-5/8" casing scraper. Picked up an 8-5/8" Lok-Set Bridge Plug on the 2-7/8" workstring. Ran in the hole to 1000', set and tested the bridge plug to 500 psig surface pressure (Good). Released the bridge plug and ran in the hole and tagged the packer at 7352'. Picked up 5' and set the bridge plug at 7343'. Pulled the bridge plug retrieving tool to 7302' and secured the well.
1/16/2015	Filled the well with 95 bbl of 8.5 ppg KCl brine. Circulated the well with 430 bbl of 8.5 ppg KCl brine. Pressure tested the bridge plug at 7343 (COE) to 500 psig surface pressure for 10 minutes (Good test). Dumped 2 cu. ft of sand and displaced with 35 bbl of KCl brine. Pulled the tubing to 2000' and secured the well.

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

Rec'd 04-01-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Field: Aliso Canyon

County: Los Angeles

Well: Porter 32 D

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

A.P.I. No. 03721355

Todd Van de Putte

Title: Drilling Manager

(President, Secretary, or Agent)

Date: 4/1/2015

Signature: 

(Person Submitting Report)

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

Telephone Number: 818-701-3339

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

Start Date	Ops. DOGGR Rpt
1/19/2015	The well was standing full of 8.5 ppg KCl brine. Pulled out of the hole from 2000'. Filled the hole with 8.5 KCl brine. Installed the 7" shooting flange. Moved in and rigged up the Schlumberger wireline unit to run the USIT - CBL- CNL - GR log. Ran in the hole with the logging tools and logged from 7331' to the surface. Rigged down and moved out the Schlumberger wireline unit and secured the well.
1/20/2015	Made up an 8-5/8" test packer on the 2-7/8" workstring. Ran in the hole to 522', set the test packer and pressure tested the 2-7/8" tubing x casing annulus to 3100 psig for 15 minutes (Lost 40 psig). Released the test packer and ran in the hole to 5802'. Pressure tested the casing to 1000 psig surface pressure from 5802' to the bridge plug at 7332' (lost 85 psig in 15 minutes). Pressure tested the casing to 1000 psig from 5802' to the surface for 15 minutes (Good test). Released the test packer and pulled to 5010'. Pressure tested the casing from 5010' to the surface at 1300 psi for 15 minutes (Good test). Released the test packer and ran in the hole to 6595'. Pressure tested the casing from 6595' to the surface at 1000 psig for 15 minutes (Good test). Pressure tested the casing from 6595' to the bridge plug at 7343' to 1000 psig for 15 minutes (Lost 100 psig) and secured the well Note: All pressure tests recorded on pressure chart.
1/21/2015	Ran in the hole with the test packer from 6595' and tagged sand on top of the retrievable bridge plug at 7331'. Set the test packer at 7321' and pressure tested tubing x casing annulus to the surface to 1000 psig for 15 minutes (Good test). Pressure tested the casing and RBP from 7321 to 7343' to 1000 psig (Bled down 300 psig in 8 minutes). Pulled the test packer to 4506', set the test packer and pressure tested the casing from 4506' to the surface at 1500 psig for 15 minutes (Good test). Released the test packer and pulled to 4000'. Set the test packer and pressure tested the casing from 4000' to the surface at 1700 psig for 15 minutes (Good test). Released the test packer and pulled to 3496'. Set the test packer and pressure tested the casing from 3496' to the surface at 1900 psig for 15 minutes (Good test). Released the test packer and pulled to 2990'. Set the test packer and pressure tested the casing from 2990' to the surface at 2100 psig for 15 minutes (Good test). Released the test packer and pulled to 2484'. Set the test packer and pressure tested the casing from 2484' to the surface at 2300 psig for 15 minutes (Good test). Released the test packer and pulled to 1502'. Set the test packer and pressure tested the casing from 1502' the surface to 2700 psig for 15 minutes (Good test) and secured the well. Note: All pressure tests recorded on chart recorder.
1/22/2015	Pulled out of the well from 1500' with the test packer. Laid down the test packer. Made up an 8-5/8" Lok-Set bridge plug on the 2-7/8" workstring. Ran in the hole to 2035' and set the bridge plug. Pressure tested the casing to 1200 psig for 10 minutes (recorded on test chart; Good test). Spotted 4 sacks of sand on top of the bridge plug. Pulled out of the hole with the 8-5/8" retrieving head. Rigged down the working floor and the tubing tools. Nipped down the Class III 5M BOPE, the mud cross and the riser. Installed the production tree. Removed the bottom nuts from the 13-5/8" 5M Seal Flange. Attempted to pull the tubing head and the seal flange with rig blocks with no success. Unable to get a hot work permit to cut the wellhead bolts due to high winds. Secured the well.
1/23/2015	Obtained a hot work permit. Cut the wellhead bolts with a grinder and removed the 9"5M x 13-5/8" 5M tubing head and the seal flange. Pulled the primary seals from 13-5/8" casing head. Nipped up a crossover spool, the production tree, and secured the well.
1/26/2015	Finished removing the bolts stuck in the 13-5/8" casing head. Cleaned the location while waiting on tubing head and seal flange repairs and secured the well.
1/27/2015	Removed the spool and the tree. Installed new 8-5/8" x 13-5/8" primary packoff seals. Installed the refurbished 13-5/8" DSA/Seal Flange and the refurbished tubing head. Pressure the tested primary seals and the secondary seals to 400 psig (low) and 2760 psig (high) for 15 minutes each (recorded on a test chart; Good tests). Nipped up the 11" Class III 5M BOPE. Shell tested to 1500 psig for 15 minutes (recorded on a test chart; Good test). Laid the 4-3/4" drill collars down. Ran in the hole with the 8-5/8" bridge plug retrieving tool to 1565' and secured the well.
1/28/2015	Ran in the hole with the 8-5/8" bridge plug retrieving tool from 1565' to the Lok-Set bridge plug at 2035'. Rigged up and reverse circulated the sand off the top of the 8-5/8" retrieveable bridge plug. Released the 8-5/8" bridge plug and pulled out of the well, and laid down 64 joints of 2-7/8" P-110 KC workstring tubing down. Laid down the 8-5/8" bridge plug. Ran in the hole with open-ended 2-7/8" workstring to 5300' and laid down 72 joints of the 2-7/8", P110 KC workstring tubing. Secured the well with the tubing tail at 3000'.

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

Rec'd 04-01-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 32 D
A.P.I. No. 03721355

Todd Van de Putte

Field: Aliso Canyon

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

Title: Drilling Manager

County: Los Angeles

(President, Secretary, or Agent)

Date: 4/1/2015

Signature: 

(Person Submitting Report)

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

Telephone Number: 818-701-3339

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

Start Date	Ops. DOGGR Rpt
1/29/2015	Swapped the tubing trailers and laid down 99 joints of the 2-7/8", 6.5# P-110 KC workstring tubing. Swapped the workstring trailer out for the new 2-7/8" production tubing. Picked up the 8-5/8" bridge plug retrieving tool. Measured and picked up 142 joints of new 2-7/8", 6.5# L-80 completion tubing. Secured the well with the completion tubing tail at 4475'.
1/30/2015	Continued picking up new 2-7/8" 6.5# L-80 completion tubing. Ran in the hole from 4475' and tagged the sand on top of the bridge plug at 7331'. Installed the PGSR spool and secured the well.
2/2/2015	Reverse circulated the sand from 7331' to the retrievable bridge plug at 7243'. Released the bridge plug and pulled out of the hole. Laid down the 8-5/8" retrievable bridge plug. Found a bad spot on drilling line and secured the well. Replaced the drilling line. Picked up 15 joints of 2-1/16" tubing with a mule shoe pup. Crossed over to 2-7/8" eue. Ran in the hole to 2795 and secured the well.
2/3/2015	Filled the well with 81 bbl of 8.5 ppg KCl brine. Continued running in the hole with 2-1/16" mule shoe and tubing from 2795'. Worked thru the Retrieva D packer profile at 7352' and tagged fish/fill at 7719'. Rigged up an reverse circulated down to 7726' (Unable to clean out further). Reverse circulated the well clean. Pulled out of hole to 2800' and secured the well. Note: Top of the fish is at 7726'. Fish consists of a Baker anchor latch, (2) molded seal units and a Model E Production tube, 8,87' overall length. The 5.25" O.D. top sub above the seal assembly latch was recovered during the fishing operations.
2/4/2015	Opened the well with 0 psig surface pressure on the tubing and the casing. Filled the well with 84 bbl of 8.5 ppg KCl brine. Pulled out of the well from 2800' and laid down 15 joints of 2-1/16" tubing and the mule shoe. Picked up a 2-7/8" L-80 mule shoe joint, 1 joint of 2-7/8" L-80, 8-5/8" Weatherford Arrowset 1X Packer, a 8' x 2-7/8" L-80 pup, 1 joint of 2-7/8" L-80, a 2.312" WXN Profile Nipple, 1 joint of 2-7/8" L-80, a 2.213" WXO Sliding Sleeve, 1 joint of 2-7/8" L-80 tubing, a 2-7/8" GLMA - 1.0 SL, 231 joints of 2-7/8", 6.5#, L-80 tubing, Tagged the top of the Retrieva D packer at 7352' with the bottom of the 8-5/8" Arrowset Packer. Circulated 150 bbl of 8.5 ppg KCl brine with corrosion inhibitor down the tubing at 2 bpm. Laid two joints of 2-7/8" tubing down. Made up a 4' x 2-7/8" L-80 pup, a fatigue nipple and the tubing hanger. Set the 8-5/8" Arrowset 1X Packer at 7296' (COE). Landed the 2-7/8" completion tubing with 14 klb compression. The tail of mule shoe joint is located at 7364'. Filled the annulus and ran lock screws above the tubing hanger. Pressure tested the 2-7/8" completion tubing x 8-5/8" casing annulus to 1000 psig for 15 minutes (Recorded on a test chart; Good test). Secured the well.
2/5/2015	Opened the well with a slight blow on the tubing. Pumped 10 bbl of 8.5 KCl brine down the tubing (Tubing on a vacuum). Rigged down the tubing tools and the rig floor. Nipped down the Class III 5M BOPE stripping over pup joint and the TIW valve. Installed BPV and installed the production tree. Tested void to 300 psig (low) and 5000 psig (high) for 15 minutes each (recorded on a test chart). Rigged down and moved out the BOPE, the accumulator, the choke manifold and the tubing tools. Laid the mast down and cleaned the location.



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
REPORT ON OPERATIONS

No. T214-0496

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

Thomas W. Schroeder
Southern California Gas Company (S4700)
9400 Oakdale Avenue
Chatsworth, CA 91313

Ventura, California
January 05, 2015

Your operations at well "**Porter**" 32D, A.P.I. No. 037-21355, Sec. 27, T. 03N, R. 16W, SB B. & M., Aliso Canyon field, in Los Angeles County, were witnessed on 12/12/2014. Clifford R. Knight, a representative of the supervisor.

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

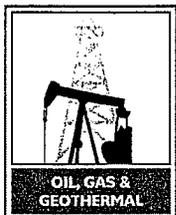
DECISION:

APPROVED

Steven Bohlen
State Oil and Gas Supervisor

By 
Bruce Hesson
District Deputy

CRK/tkc
OG109



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 214-0341**

PERMIT TO CONDUCT WELL OPERATIONS

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

Gas Storage
 "Sesnon-Frew" - Modelo (Miocene-Eocene) Formation

Ventura, California
 November 20, 2014

Thomas W. Schroeder, Agent
 Southern California Gas Company (S4700)
 9400 Oakdale Avenue
 Chatsworth, CA 91313

Your proposal to **Rework** well "Porter" 32D, A.P.I. No. 037-21355, Section 27, T. 03N, R. 16W, SB B. & M., Aliso Canyon field, Any area, Sesnon-Frew pool, Los Angeles County, dated 11/19/2014, received 11/19/2014 has been examined in conjunction with records filed in this office. (Lat: 34.312440 Long: -118.550426 Datum:83)

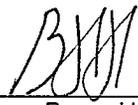
THE PROPOSAL IS APPROVED PROVIDED:

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 **IIIB 5M** on the **8 5/8"** casing.
2. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
4. This office shall be contacted by phone prior to making any program changes and no changes are made without Division approval.
5. **THIS DIVISION SHALL BE NOTIFIED TO:**
 - a. Inspect the installed blowout prevention equipment prior to commencing **rework** operations.

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

Engineer Kris Gustafson
 Office (805) 654-4761

 Steven Bohlen
 State Oil and Gas Supervisor

By 
 Bruce Hesson, District Deputy

KG/kg

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.



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

Rec'd 11-19-14 DOGGR D2 Ventura

FOR DIVISION USE ONLY			
	Forms		
Bond	03117	03121	
	CALL WINS	115V	

NOTICE OF INTENTION TO REWORK / REDRILL WELL

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

P214-0341

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework / redrill well "Porter" 32D, API No 037-21355
(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)

13-3/8", 48# J-55 at 806' (cemented to surface)
8-5/8", 36# K-55, N-80(cemented) at 7494'; Stage Collar at 3011'; WSO @ 7483' (w/4, 1/2" holes).
6-5/8", 24#, 26#, K-55 from 7369'-7748'; 0.018" WWS from 7503'-7621'; slotted from 7645'-7747' w/28R, 2"x 0.03" slots, 6" ctrs Gravel packed in 14" hole with 119 cf of 8-12 sand. 14" hole: 7494'-7630'; 8-1/2" hole 7630'-7662'; 7-5/8" hole: 7662'-7750'; TD = 7750'

The total depth is: 7750 feet The effective depth is 7748 feet
Present completion zone(s) Sesnon (Storage) Anticipated completion zone(s) Sesnon (Storage)
(Name) (Name)
Present zone pressure Varies psi Anticipated/existing new zone pressure Variable psi

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

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

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

(See Attached Program) : Nipple up a Class III 5M BOPE
Pull the 2-7/8" completion string/scrape the 8-5/8" production casing.
Run a USIT/CBL log, pressure test 8-5/8" production casing, perforate and squeeze 8-5/8" production casing if necessary.
Clean out fill to the bottom of the 6-5/8" liner at 7748' (+/-)
Run a new 2-7/8" completion string and test.
Nipple down the Class III 5M BOPE

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 12801 Tampa Ave		City/State Northridge, CA	Zip Code 91326-1045
Name of Person Filing Notice Todd Van de Putte	Telephone Number 661-305-5387	Signature <i>Todd Van de Putte</i>	Date 11-19-2014
Individual to contact for technical questions Todd Van de Putte	Telephone Number 661-305-5387	E-Mail Address tvandeputte@semprautilities.com	

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

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

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

CRITICAL WELL DEFINITION

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

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

WELL OPERATIONS REQUIRING BONDING

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

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

Workover Program

DATE: November 19, 2014
OPERATOR: Southern California Gas Company
FIELD: Aliso Canyon
WELL: Porter 32D
CONTRACTOR: Ensign #321
OBJECTIVE: Pull/replace the existing failed 2-7/8" completion string and inspect/test the 8-5/8" production casing. Perform a cement squeeze on the 8-5/8" production casing, if required. Run a new 2-7/8" completion string.
API Number: 037-21355
ELEVATION: Take all measurements from the original KB = 17' above GL (GL@ 2075').
SURFACE LOCATION: Sec 27, T3N, R16W, S.B. B&M (34.312440, -118.550426)

PRESENT WELL CONDITION (See attached wellbore schematic):

0' - 806'	13-3/8"	48#	H-40	Cemented (surface)
0' - 7494'	8-5/8"	36#	K-55 N-80	Cemented - Stage Collar @ 3011' WSO @ 7483' (4, 1/2" holes)
7369' - 7748'	6-5/8"	24#, 26#	K-55	Liner - 0.018" WWS from 7645' - 7747'; Slotted from 7645' - 7747' with 28R of 2" x 0.03" slots, 6" ctrs. Gravel packed w/ 119 cf of 8-12 sand in 14" hole only. ECP from 7636' - 7642'; 14" Hole: 7494' - 7630'; 8-1/2" hole: 7630' - 7662'; 7-5/8" hole: 7662' - 7550'; TD: 7750' MD / 7639' TVD

Estimated Wellbore Top of Geologic Markers:

MP: 7179' MD / 7080' TVD
 S1: 7410' MD / 7307' TVD
 S4: 7494' MD / 7389' TVD
 S8: 7593' MD / 7489' TVD
 HZ: 7723' MD / 7612' TVD
 Estimated Surface Pressure: 2644 psig (variable)

Estimated Bottomhole Static Temperature: 170 deg F @ TD / 110 deg F @ 3000'
 Estimated Formation Fracture Gradient: 0.80 psi/ft

Pre Rig Notes:

Locate the rig anchors and reinstall if necessary.

The wellbore is essentially vertical.

Last wireline pick up depth was at approximately 7727' on 11-25-13.

There is a suspected hole in the 2-7/8" completion tubing below the XN profile @ 7320' MD. The well could not be filled and kept full of brine with a wireline plug in the tubing during a recent wellhead valve replacement operation.

The permanent completion packer is noted as a Baker Retrievea D packer.

WELL WORK PROGRAM

1. Move in and rig up the Rival #12 production rig and associated equipment. Spot the pump and the closed top, 500 bbl Baker tanks.
2. If the hole is not standing full of brine, then kill the well with an HEC polymer pill with approximately 8.6 ppg KCl brine. The liner volume is approximately 13 bbl. The tubing volume is approximately 43 bbl and the tubing/casing annulus is approximately 378 bbl.
Note: Verify the current field surface pressure to confirm the proper kill fluid density prior to killing the well and for well control fluids during the workover operation.
3. Install an 11" Class III 5M BOPE with a 9" x 11" crossover per Gas Company instructions. All connections and valves must be flanged and at least 5000 psig rated.
 - a. Pressure test the 11" 5M annular preventer to 3500 psig for 20 minutes. Test Blind Rams and the 2-7/8" Pipe Rams to 5000 psig for 20 minutes. Test all lines and connections to 5000 psig.
 - b. Perform a 300 psig low pressure test on the annular preventer, blind rams and pipe rams for 20 minutes. Test all lines and connections to 300 psig.
 - c. All tests are to be charted and witnessed by a DOGGR representative.
4. Pick up a 2-7/8", 6.5#, N-80 joint of tubing with safety valve, unland the 2-7/8", 6.5#, N-80 tubing string and pull out of the hole with the completion tubing, and the GLM. Release the completion seal assembly from the Baker Retrievea D permanent packer as per the vendor recommendation. Lay down the 2-7/8" N-80 tubing and pick up a 2-7/8", 6.5#, P-110 workstring with the TKC connection.
5. If there is difficulty in releasing the completion/seals from the Baker Retrievea D permanent packer profile (Bore I.D. = 3.875" then run in the hole with a wireline chemical cutter and cut the completion string between the XN nipple and the seal units. NOTE: There is a 20' blast joint between the GLM and the Otis XD sliding sleeve, and another 20' blast joint between the Otis XD sliding sleeve and the Otis XN nipple.

6. Remove and lay down the failed 2-7/8", N-80 completion string and run in the hole with a fishing BHA on the 2-7/8", 6.5#, P-110 workstring, engage the tubing stub and attempt to release the Baker Retrieval D permanent packer seals from the permanent packer profile.
7. Pick up an 8-5/8", 36# casing scraper and run to the top of the Baker Retrieval D permanent packer seal assembly at 7352'. Circulate the hole clean.
8. Rig up the wireline unit and run a high resolution USIT/CBL/Neutron log in the 8-5/8" production casing from the top of the permanent packer profile at 7352' to the surface. Rig down the wireline unit and the associated equipment.
9. Make up a cleanout BHA with a 2-1/16" tubing tail and run in the hole, tag fill and make an attempt to clean out the 6-5/8", 24#, 26# liner to 7748' (+/-) .
10. If the USIT log shows poor cement/quality near the permanent packer profile in the 8-5/8" production casing or poor cement quality at stage collar @ 3011', then pick up a 8-5/8" retrievable bridge plug, set to within 20'-30' below the area to be squeezed, pressure test to 1000 psig and sand off above the bridge plug running tool. If the USIT log shows reasonable cement then Skip to Step 14.
11. Rig up the wireline unit and run a perforating gun, correlate the depth and shoot 8, 1/2" holes/per foot in the 8-5/8" production casing at a depth determined from the USIT log. Notify the DOGGR of the squeeze/ perforation depth. Perform a pump in test to determine the effectiveness of the perforations. Do not exceed the formation fracture gradient during the pump in test. This formation fracture gradient surface pressure will be determined based on the actual depth of the perforations.
12. Pick up and run a 8-5/8" test packer on 2-7/8" tubing with an aluminum tail and squeeze (50 sxs/minimum delivery) 14.8 ppg, Class "G" cement with additives into the perforations. Release the 8-5/8" test packer and pull 1500' above the squeeze holes and clear the tubing. Wait on the cement at least 8-12 hrs.
13. Lay down the 8-5/8" test packer and pick up and run a 7-1/2" mill tooth bit on a cleanout BHA and clean out the cement from the 8-5/8" production casing. Circulate the sand from the top of the 8-5/8" retrievable bridge plug.
14. Perform an initial pressure test the 8-5/8" production casing to 1000 psig surface pressure to verify the cemented perforation integrity. Continue to pressure test the 8-5/8" production casing to the surface as per the pressure testing schedule.
15. Set an additional 8-5/8" retrievable bridge plug at 1000' (+/-) and nipple down the 11" Class III 5M BOPE, remove the 9" x 11" 5M tubing head, remove the 11" 5M x 13-5/8" 5M seal flange, install a crossover spool and reinstall the 11" Class III 5M BOPE and function test. Send in the tubing head and seal flange in for redress/refurbishment. Replace the two, 2-1/16", 5M tubing wing valves, the 2-9/16", 5M master valve, and the two, 3-1/8", 5M casing wing valves from the Gas Company Inventory.
16. Remove the 11" Class III 5M BOPE, the crossover spool, the primary packoff and replace the packoff seals. Reinstall the refurbished 11" x 13-5/8" 5M seal flange, the refurbished 9" x 11" 5M tubing head and pressure test all the wellhead seals to 5000 psig. Reinstall the 11" Class III 5M BOPE on the tubing head and function test.

17. Run in the hole and remove the 8-5/8" retrievable bridge plugs at 1000'(+/-) and 7000'(+/-). Re-kill the well if necessary.
18. Pick up a new 2-7/8", 6.5# L-80 tubing string with a MMA GLM, 2-7/8" Sliding Sleeve, 2-7/8" XN nipple, a new set of Baker Retrivea D Seals and a guide shoe. NOTE: Place the various completion equipment components at the same depths as the completion that was removed from the well. Do not install or re-install the blast joints in the new completion string. Run in the hole to 7352'(+/-) and land the completion string in the permanent packer seal assembly as per vendor specification. Pressure test the 2-7/8" tubing x 8-5/8" production casing annulus to 1000 psig surface pressure.
19. Nipple down the 11" Class III 5M BOPE and install the production tree and test to 5000 psig.
20. Release the Rival Rig #12, rig down and move out the production rig and the associated equipment.
21. Run a wireline plug in the 2-7/8" XN profile, shift the sliding sleeve open and unload the workover brine from the tubing/casing annulus. Pull the wireline plug from the XN profile.
22. Install the well laterals, instrumentation, pressure test and release the well to operations.

**PORTER 32 D
ALISO CANYON**

Elevation (GRD) 2075' ASL
 Elevation (KB) 2092' ASL
 Elevation (KB) 17' AGL

Status Injection/Withdrawal

Flow Region: Casing Flow

Surface Loc: 1779' S and 1247' W of station 84

Bottomhole Loc: At 7750' MD, wellbore is 556' S and 795' W of surface location.

9/26/73 Well spudded
 11/3/73 Well completed
 6/21/76 - 7/23/76 Cleaned out to 7748'
 Installed Camco downhole safety system.
 6/16/94 - 6/25-94 Replaced worn no-go nipple Removed downhole safety system.

Surface Casing
 13-3/8" 48#
 0' - 806'

Stage Collar at 3011'

Production Casing
 8-5/8", 36#, N80 & K55
 0' - 7494'

Tubing
 2-7/8", 6 5#, N80, EUE
 0' - 7361'

7237' MMA Mandrel w/ 1 5" SOV @ 2700 psi w/ 1.5 RA latch
 7277' Blast Joint (20')
 7297' Otis XD Sliding Sleeve (2 313" ID)
 7300' Blast Joint (20')
 7320' Otis XN Nipple (2.313" seal bore) (2.205" no go)

Baker Retrieva D Packer at 7352'
 3.875" ID

7352' Anchor Latch landed with 10000 # on pkr
 7353' Seal Units (2)
 7361' Guide Shoe

WSO at 7483'
 Four 1/2" holes

Liner
 6-5/8", 24# & 26#, K55
 7369' - 7748'
 Wire wrapped from 7503' to 7621' with 018" gauge screen.
 Slotted from 7645' to 7747' with 28 rws of 2" x 030" slits, 6" ctrs
 WWS gravel packed in 14" hole with 119 cf of 8-12 gravel
 Hole size:
 14", 7494' - 7630'
 8-1/2", 7630' - 7662'
 7-5/8", 7662' - 7750'

Lyons External Casing Packer
 7636' - 7642'

Well Volume

	Cu Ft	Bbl
Tubing	241	43
Csg/Lnr	73	13
Annulus	2122	378
Total	2436	434

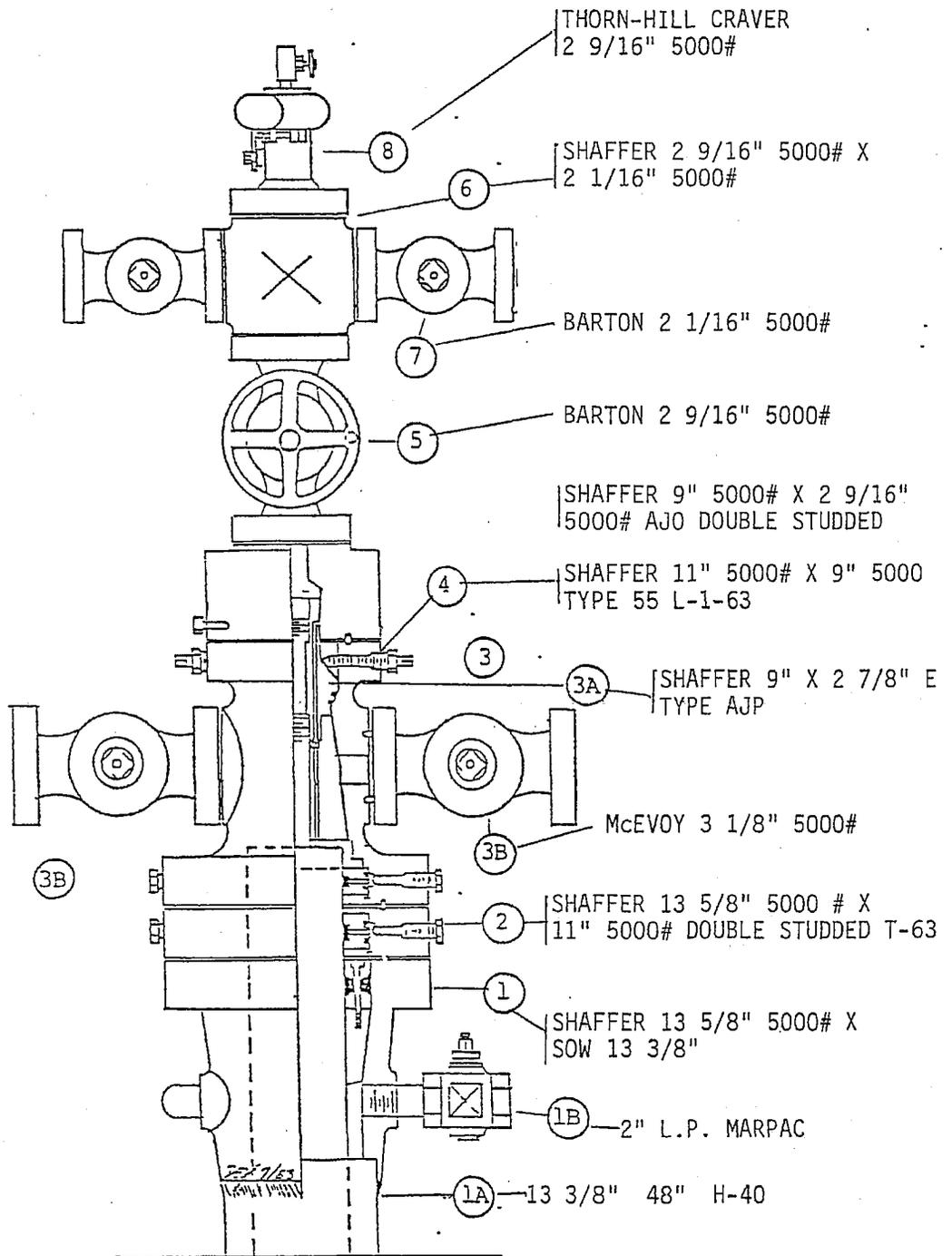
Zone Tops

MP	7179'	(7080')
S1	7410'	(7307')
S4	7494'	(7389')
S8	7593'	(7485')
HZ	7723'	(7612')

TD at 7750' (7639')

Reviewed By: *[Signature]* Date: 1/6/95
 Drlg. Eng: *[Signature]*
 Petr. Eng: *[Signature]* 1/9/95
 Region: *[Signature]* 1/13/95

TYPE IV



Well Name: PORTER 32-D (FORMERLY IW-57)

Mfgr: SHAFFER OIL TOOL

Date Prepared: 6/23/94

WELLHEAD DESCRIPTION TYPE IVWell No: PORTER 32-D (FORMERLY IW-57)Field: ALISO CANYONDate Prepared: 6/23/94Wellhead Mfr: SHAFFER OIL TOOL

1. Casing Head SHAFFER Size 13 5/8" 5000# X SOW 13 3/8" TYPE "KD"
 Slips & Pack-off SHAFFER 13 5/8" X 8 5/8" TYPE "KD"
- A. Surface Csg Size 13 3/8" Wt 48# Grade H-40
- B. Casing Head Valve MARPAC Size 2" L.P. 3000# Fig CSB-790-JN
2. Seal Flange SHAFFER Size 13 5/8" 5000# X 11" 5000# DOUBLE STUDDED
 Type Seal "63" Ring BOTTOM BX-160 & TOP RX-54
3. Tubing Head SHAFFER Type Seal "63"
 Size 11" 5000# X 9" 5000# TYPE 55 L-1-63 Outlets 3 1/8" 5000#
 Sec.Seal 8 5/8" Valve Thrd 2 1/2" L.P. Ring Type Btm RX-54 Top RX-50
- A. Tubing Hanger SHAFFER Size 9" X 2 7/8" EUE 8 RD Bore 2.375
 Type AJP Thread 2 7/8" EUE 8 RD
- B.P.B. Size & Thrd SHAFFER 2 7/8"
- B. Tubing Head Valves McEVOY Size 3 1/8" 5000#
- C. Automatic Csg Valve WKM Size 3 1/8" 5000#
4. Adapter Seal Flange SHAFFER Size 9" 5000# X 2 9/16" 5000# DOUBLE STUDDED
 A. Ring Size BOTTOM RX-50 & TOP RX-27 Bore 2 9/16"
5. Master Valve BARTON Size 2 9/16" 5000#
6. Xmas Tree Cross SHAFFER Size 2 9/16" 5000# X 2 1/16" 5000#
7. Tbg Wing Valves BARTON Size 2 1/16" 5000#
 Auto Tbg. Prod Valve WKM Size 2 1/16" 5000#
 THORN HILL
8. Unibolt CRAVER Size 2 9/16" 5000# Inside Thrds N/A
9. Csg Size 8 5/8" Wt 36# Grade K-55
10. Tubing Head to Ground Level 65" BELOW GROUND LEVEL
11. Wt. Landed on Doughnut 33,000 # Tubing Size 2 7/8" EUE Type N-80

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

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

Ventura, California
February 23, 1990

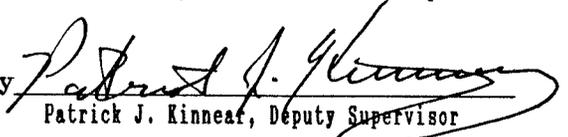
Your request, dated February 13, 1990, proposing to change the designation of wells in Sec. 27, T. 3N, R. 16W, SB B.&M., Aliso Canyon field Los Angeles County, District No. 2, has been received.

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

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

bb

M.G. MEFFERD, State Oil and Gas Supervisor

By 
Patrick J. Kinneer, Deputy Supervisor

OPERATOR Paul L. Lee
 LSE & NO 12057
 MAP NO. 250

INTENTION

	<i>Drill</i> 1	REWORK GAS 2 STOP	3	4	5
NOTICE DATED	2-13-76	5-21-76			
P-REPORT NUMBER	273-109	276-193			
CHECKED BY/DATE					
MAP LETTER DATED	12-1-73	N/C			
SYMBOL	<i>Q</i>				

NOTICE

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
HISTORY	11-19-73		8-5-76							
SUMMARY	11-19-73									
IES/ELECTRIC LOG	10-30-73 10-19-73									
DIRECTIONAL SURV.	12-12-73									
CORE/SWS DESCRIP.										
DIPMETER RESULTS										
OTHER										
			12-24-79							
RECORDS COMPLETE	12/12-73		✓							

ENGINEERING CHECK

CLERICAL CHECK

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

REMARKS: _____

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIVISION OF OIL AND GAS
RECEIVED
AUG 5 1976
SANTA PAULA, CALIFORNIAOPERATOR SOUTHERN CALIFORNIA GAS COMPANY FIELD Aliso CanyonWell No. I.W. #57, Sec. 27, T. 3N, R. 16W, S.B. B. & M.Date July 29, 1976

Signed

P. S. Magruder, Jr.
P. S. MAGRUDER, Jr.P. O. Box 3249, Terminal Annex
Los Angeles, California 90051Title 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

6-21-76

Rigging up Halliburton to circulated 78# mud to kill well.

7-12-76Moved rig over hole. Removed Christmas tree. Installed B.O.P.E.
Installed working platform.7-13-76

Rigged up H. & H. tester. Tested B.O.P.E., blind rams and pipe rams to 4000 psi, Hydril to 3000 psi - held for 20 minutes - O.K. Rigged up NOWSCO and repeated test - held for 20 minutes - O.K. Witnessed and approved by D.O.G. Circulated hole from 7259'. Pulled 105,000# on tubing attempting to unset Hydrostatic packers. Sheared out of Brown B-4 safety joint at 7225'. Will run fishing tools.

7-14-76

Made up Brown tools, bumper sub and socket on 2 7/8" tubing. Ran in to top of fish at 7225'. Latched on. Made up Dia-Log tools. Ran free point indicator - found pipe stuck at 7239'. Made up 2 1/4" jet cutter - unable to get below 7239'. Pulled out. Made up 2 1/8" jet cutter - unable to get below 7239'. Rigged out Dia-Log. Attempted to release Brown socket from fish - unable to do so. Preparing to run Dia-Log.

7-15-76

Ran Dia-Log string shot in to Udell landing nipple at 7293'. Backed off tubing, recovered overshot, bumper sub and tubing. Made up Brown over-shot without Grapple. Circulated and conditioned mud. Preparing to re-run Dia-Log.

7-16-76

Ran Dia-Log jet cutter and cut 2 7/8" tubing at 7613' above packer at 7656'. Pulled out and made up Brown overshot, jar, four drill collars on 2 7/8" tubing. Ran in and latched on fish - jarred to 100,000#. Knocked packer loose. Circulated and conditioned mud to 80#.

7-17-76

Pulled out of hole and recovered 8 5/8" packer and tubing. Made up Brown 4 5/8" overshot with jars and drill collars on 2 7/8" tubing. Ran in to top of fish at 7613'. Latched on fish, jarred to 120,000#. Knocked packer loose. Pulled to top of liner at 7369'. Circulated and conditioned mud. Pulled out. Secured well for the week-end.

7-18-76

Idle.

7-19-76

Pulled out of hole. Recovered 6 5/8" Brown packer and Baker "R" nipple. Broke down Brown fishing tools (packer and one joint of 2 7/8" was filled with silty sand.) Made up 6 5/8" scraper with 5 5/8" bit. Cleaned out from 7739' to 7748'. Circulated and conditioned mud. Pulled out of hole. Preparing to run bond log.

7-20-76

Rigged up Welex. Ran cement bond log from 7350' to 1500' - indicated good cement bonding. Rigged out Welex. Made up Baker 8 5/8" 32# fullbore - ran in hole to 7359', set plug. Pressured tested casing with NOWSCO to 2000# - held for 20 minutes - O.K. Pulled to 3500' - tested to 3500 psi. Pulled to 750' - tested to 4000 psi. All tests held for 20 minutes - O.K. Tore out Halliburton pump truck. Closed well in.

7-21-76

Rigged up McCullough wire line truck. Made up Baker 8 5/8", 36# Retrieval-"D" packer. Set packer at 7357'. Made up Baker latch-in locator sub with four seals, 10' blast joint, Camco No-Go nipple, Camco safety valve, and 20' blast joint to 2 7/8" tubing. Rigged up Hydro test. Removing and doping collars with Baker seal. Testing collars to 5000# for one minute duration. Running in hole.

7-22-76

Finished hydrotesting tubing in hole, latched into packer at 7352' with 10,000#. Pulled 15,000# over weight of pipe. Installed Christmas tree. Tested seal and tree to 5,000#. Held for 20 minutes - O.K.

7-23-76

Rigged up Halliburton. Changed over from 80# polymer brine to lease salt water. Rigged up Otis wire line truck. Ran 1.81 O.D. blanking plug in to No-Go nipple at 7341'; set same. Using Halliburton, pressured up to 2000 psi to test packer at 7352'. Held for 20 minutes - O.K. Released rig at 2:00 p.m.

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 276-193

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

Santa Paula, Calif.
June 11, 1976

DEAR SIR:

(037-21355)

Your proposal to rework gas storage Well No. IW 57, Section 27, T. 3N., R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County, dated 5/21/76, received 6/10/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

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

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

Blanket Bond
MD:b

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

By *[Signature]* Chief, Deputy

JUN 10 1976

DIVISION OF OIL AND GAS
Notice of Intention to Rework Well

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

FOR DIVISION USE ONLY		
BOND	FORMS	
	114	121
<i>bb</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3. Public Resources Code, notice is hereby given that it is our intention to rework well No. I.W. #57, API No. _____, Sec. 27, T3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth. 7750'
- Complete casing record, including plugs and perforations:
 - 13 3/8" cemented 806'
 - 8 5/8" cemented 7494', cp'd 3011', WNSO 7494', squeezed WSO 7483'
 - 379' 6 5/8" landed 7748', Gru-V-Kut gravel packed and 30-mesh slotted not gravel packed - Lynes packer Top of liner 7369'
- Present producing zone name SESNON Zone in which well is to be recompleted -
- Present zone pressure 2400 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 rig and kill well. Install B.O.P.E. and pressure test.
- Pull tubing and packers.
- Run 5 5/8" bit and clean out to 7748'. Run cement bond log.
- Pressure test 8 5/8" casing. Perform remedial work as indicated.
- Set packer. Run tubing with safety valve.
- Return well to gas storage.

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

Address P.O. Box 3249, Terminal Annex SOUTHERN CALIFORNIA GAS COMPANY
(Street) (Name of Operator)
Los Angeles California 90051 By P.S. Magruder, Jr. 5-21-76
(City) (State) (Zip) (Name) (Date)
Telephone Number (213) 689-3561 Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

DIVISION OF OIL AND GAS
RECEIVED

Operator Pacific Lighting Service Company Well No. IW 57 NOV 19 1973

Sec. 27, T. 3N, R. 16W, S.B. & M. Aliso Cyn. Field Los Angeles County. SANTA PAULA, CALIFORNIA

Location From Station 84; 1778.85' South and 1247.38' West
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 2075 feet USGS

All depth measurements taken from top of kelly bushing which is 17 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

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

Date November 16, 1973 Signed P. S. Magruder, Jr.
E. A. Olson B. F. Jones Title Agent
(Engineer or Geologist) (Superintendent) (President, Secretary or Agent)

	COMMENCED DRILLING	COMPLETED DRILLING	TOTAL DEPTH	PLUGGED DEPTH	JUNK	GEOLOGICAL MARKERS	DEPTH
	<u>September 26, 1973</u>	<u>October 26, 1973</u>	<u>7750</u>	<u>None</u>	<u>None</u>	<u>Top Sesnon Zone S-4</u>	<u>7494</u>
						<u>S-8</u>	<u>7593</u>
						<u>H-Z</u>	<u>7723</u>

Commenced producing _____ (Date) Flowing/gas lift/pumping _____ (Cross out unnecessary words) Name of producing zone Sesnon
Geologic age at total depth: Miocene

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

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforation
<u>13-3/8"</u>	<u>806</u>	<u>sfc</u>	<u>48#</u>	<u>N</u>	<u>S</u>	<u>H-40</u>	<u>17-1/2"</u>	<u>355</u>	
<u>8-5/8"</u>	<u>7494</u>	<u>sfc</u>	<u>36#</u>	<u>N</u>	<u>S</u>	<u>K-55&N-80</u>	<u>11"</u>	<u>575</u> <u>431</u>	<u>shoe</u> <u>3011</u>
<u>6-5/8"</u>	<u>7748</u>	<u>7369</u>	<u>24#&28#</u>	<u>N</u>	<u>S</u>	<u>K-55</u>	<u>14" & 8 1/2"</u>	<u>Liner</u>	

PERFORATED CASING

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

8-5/8" - four 1/2" jet holes at 7484' squeezed with cement; four 1/2" jet holes at 7483' WSO

6-5/8" - perforated liner per detail 7385'-7748'

Was the well directionally drilled? Yes Electrical Log Depths 7500' & 7750' (Attach Copy of Log)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Co. FIELD Aliso Canyon

Well No. IW 57, Sec. 27, T. 3N, R. 16W, S.B. B. & M.

Date November 16, 19 73 Signed P. S. Magruder, Jr.

P. O. Box 54790, Terminal Annex
Los Angeles, Ca. 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

9-26 Peter Bawden Drilling Company, Inc., Contractor, Rig #10 spudded 17-1/2" hole at 6:30 PM and drilled to 87'.

9-27 Drilled 17-1/2" hole to 508'.
Mud: 67#, 35 sec.

9-28 Drilled 17-1/2" hole to 807'.

TO CEMENT 13-3/8" SURFACE CASING: Ran 20 joints or 811.47' of 13-3/8", 48#, H-40, Buttress thread, R-3, new seamless blank casing and cemented same at 806' with 550 cu. ft. of 94#/cu. ft. slurry consisting of 255 sacks of Class "G" cement, 255 cu. ft. of 2% Lo-dense A, followed by 100 sacks of Class "G" cement mixed with 2% calcium chloride. Moved casing 10' and circulated 15 minutes prior to cementing. Preceded cement with 50 cu. ft. of water and displaced with 632 cu. ft. of mud. Did not bump plug as cement returns to surface at 2:45 PM under 200 psi final pressure. Full circulation throughout job. Twenty-five minutes mixing and displacing cement to surface. Used Byron-Jackson bulk cement and power.

CASING DETAIL:

All 20 joints or 811.47', 13-3/8" fitted on bottom with Davis-Lynch float shoe and with centralizers at 785'.

Cut and recovered 13-3/8" casing and welded on Shaffer 13", 5000# casing head.

9-29 Tested casing head with 3500 psi for 15 minutes-Ok.
Installed BOP and tested same Ok with 1000 psi. Drilled out cement 695' to 806' and drilled 11" hole to 907'.
Mud: 70#, 38 sec., 11.5 cc., 5% solids.

1973

- 9-30 Drilled 11" hole to 1725'.
Mud: 70-1/2#, 35 sec., 9.0 cc., 5% solids.
- 10-1 Drilled 11" hole to 2222'.
Mud: 69-1/2#, 34 sec., 5.8 cc., 5% solids.
- 10-2 Drilled 11" hole to 2793'.
Mud: 69#, 35 sec., 6 cc., 6% solids.
- 10-3 Drilled 11" hole to 2993'. Dyna-Dril #1, 11" hole to 3078'.
Mud: 67-1/2#, 33 sec., 4.6 cc., 6% solids.
- 10-4 Spot ream from 950' to 2824' and ream 2824' to 3078'.
Directionally drilled 11" hole to 3650'.
Mud: 69#, 33 sec., 5.2 cc., 6% solids.
- 10-5 Directionally drilled 11" hole to 4250'.
Mud: 70#, 37 sec., 7.2 cc., 6% solids.
- 10-6 Directionally drilled 11" hole to 4575'.
Mud: 71#, 36 sec., 8.2 cc., 4% solids.
- 10-7 Directionally drilled 11" hole to 5065'.
Mud: 72#, 35 sec., 5.8 cc., 5% solids.
- 10-8 Directionally drilled 11" hole to 5244'. Two hours idle moving
equipment for pipeline construction. While orienting Dyna-Dril,
sand line parted. Recovered and repaired sand line.
Mud: 70#, 38 sec., 6.4 cc., 5% solids.
- 10-9 Dyna-Dril #2, 11" hole from 5244' to 5468'. Reamed 5244' to 5468'
and directionally drilled 11" hole to 5561'.
Mud: 70-1/2#, 35 sec., 6 cc., 5% solids.
- 10-10 Directionally drilled 11" hole to 5871'. On trip, reamed tight hole
at 5356', spot reamed to 5717' and cleaned out fill from 5717' to
5785'. Mud: 73#, 36 sec., 6.2 cc., 5% solids.
- 10-11 Directionally drilled 11" hole to 6090'. Dyna-Dril #3, 11" hole to
6125'. Mud: 75#, 35 sec., 6.5 cc., 6% solids.
- 10-12 Dyna-Dril #3, 11" hole to 6204'. Reamed 6169' to 6204' and Dyna-
Dril #3A, 11" hole to 6258'.
Mud: 73#, 35 sec., 6.0 cc., 5% solids.
- 10-13 Reamed 6090' to 6258' and directionally drilled 11" hole to 6629'.
Mud: 72#, 35 sec., 7.2 cc., 7% solids.

1973

- 10-14 Directionally drilled 11" hole to 6998'.
Mud: 70#, 35 sec., 6.8 cc., 5% solids.
- 10-15 Measured in hole. Depth-Ok. Reamed 6908' to 7028' and directionally drilled 11" hole to 7126'.
Mud: 70#, 36 sec., 6.2 cc., 5% solids.
- 10-16 Directionally drilled 11" hole to 7310'.
Mud: 70#, 35 sec., 6.4 cc., 6% solids.
- 10-17 Directionally drilled 11" hole to 7500'. Ran Schlumberger Induction Electric log from 7491' to 13-3/8" shoe.
Mud: 70#, 35 sec., 6.4 cc., 6% solids.
- 10-18 TO CEMENT 8-5/8" CASING: Ran 181 joints or 7497.91' of 8-5/8", 36#, K-55 and N-80, Buttress thread, R-3, new seamless blank casing and cemented same at 7494' with 1102 cu. ft. of 101#/cu. ft. slurry consisting of 475 sacks Class "G" cement, 475 cu. ft. of Poz 7, followed by 100 sacks Class "G" with 2% calcium chloride mixed to 118#/cu. ft. slurry. Casing had to be worked and pumped to cementing point for last 4 feet. Circulated 45 minutes prior to cementing. Preceded cement with 100 cu. ft. water and displaced with 2542 cu. ft. of mud to bump plug to place at 3:30 PM under 3500 psi final pressure. Held 3500 psi for 15 minutes. Bled back 40 cu. ft. for total displacement of 2502 cu. ft. Full circulation throughout job. Forty-seven minutes mixing and 1 hour 15 minutes displacing cement. Dropped plug and opened stage collar at 3011' under 2000 psi. Preceded cement with 50 cu. ft. water. Pumped in 1000 cu. ft. 101#/cu. ft. slurry consisting of 431 sacks Class "G" cement, 431 cu. ft. Poz 7 and displaced with 1046 cu. ft. of mud to bump plug and close collar under 2000 psi at 7:50 PM. Bled back 8 cu. ft. for total displacement of 1038 cu. ft. One hour 10 minutes mixing and displacing cement. Good circulation throughout job. No returns to surface. Used Dowell bulk cement and power.

CASING DETAIL:

Bottom 42 joints or 1744.88' (7494'-5749') N-80 fitted on bottom with Davis-Lynch fill-up float shoe and at 7409' with Davis-Lynch fill-up float collar. TIW turbo centralizers at 7484', 7453', 7406', 7368' & 7327'. Scratcher clusters (2) at 7483', 7451', 7436' & 7408'.

Next 139 joints or 5753.03' (5749'-sfc.) K-55 fitted with Halliburton DV collar at 3011'.

Total 181 joints or 7497.91'

1973

- 10-19 Set 8-5/8" slips and secondary packing. Cut and recover 8-5/8" casing. Installed Shaffer 10" 5000 psi tubing head and tested same Ok with 3450 psi for 15 minutes. Reinstalled BOP and tested same Ok with 1500 psi for 15 minutes. Measured in hole and drilled out DV collar at 3011' with 7-5/8" bit with casing scraper above.
- 10-20 Closed rams and tested casing with 1500 psi for 15 minutes Ok. Continued measuring in hole and drilled out cement and float collar from 7407' to 7485'.
WATER SHUT-OFF TEST ON HOLES IN 8-5/8" CASING AT 7484': Ran Johnston combination gun and tester. Shot four 1/2" jet holes at 7484'. Attempted to set packer at various depths to no avail. Pulled and found packer rings distorted. Iron marks on metal portion. Later examination of casing scraper revealed set screws in scraper had backed out and most likely caused the damage to packer. NO TEST. Made clean out run with 7-5/8" bit and different model casing scraper to 7485'. Closed rams and holes at 7484' took fluid under 1300 psi.
- 10-21 TO SQUEEZE HOLES IN 8-5/8" CASING AT 7484' WITH CEMENT: Ran Johnston Positriev cement tool on 4-1/2", 16.6# drill pipe and set same at 7206'. Holes took fluid at 22 cu. ft. per minute rate under 1000 psi pressure. Preceded cement with 50 cu. ft. of water. Pumped in 200 sacks Class "G" cement treated with 2% calcium chloride and .04% D-19 mixed to an average 118#/cu. ft. slurry. Displaced with 300 cu. ft. of mud, then closed tool and displaced an additional 312 cu. ft. of mud in stages to squeeze estimated 180 sacks away under 2250 psi final pressure. Bled back 4 cu. ft. for total displacement of 608 cu. ft. Held 1500 psi pressure on annulus. Ten minutes mixing and 1 hour 55 minutes displacing cement to place at 7:30 AM. Used Byron-Jackson bulk cement and power.

After standing cemented 15 hours, located firm cement at 7462' and drilled out same to 7485'.

- 10-22 Closed rams, applied 1000 psi and holes took fluid.
TO RESQUEEZE HOLES IN 8-5/8" CASING AT 7484' WITH CEMENT: Ran Johnston Positriev cement tool on 4-1/2", 16.6# drill pipe and set same at 7270'. Holes took fluid at 12 cu. ft. per minute rate under 1000 psi pressure. Preceded cement with 50 cu. ft. of water. Pumped in 200 sacks Class "G" cement treated with 2% calcium chloride mixed to an average 118#/cu. ft. slurry. Displaced 284 cu. ft. of mud, then closed tool and displaced an additional 324 cu. ft. of mud in stages to squeeze estimated 165 sacks away under 3000 psi final pressure. Bled back 6 cu. ft. for total displacement of 602 cu. ft. Held 1500 psi pressure on annulus. Ten minutes mixing and 60 minutes displacing cement to place at 9:30 AM. Used Byron-Jackson bulk cement and power.

After standing cemented 15 hours, located soft cement at 7370' and cleaned out to 7462'.

1973

10-23 Drilled out firm cement from 7462' to 7485'. Closed rams and casing held 1500 psi Ok for 15 minutes.

TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7483': Ran Johnston combination gun and tester on 4-1/2", 16.6# drill pipe and shot four 1/2" jet holes at 7483'. Set packer at 7438' with tail to 7474'. Opened tool at 7:56 AM for one hour test. No gas to surface. Recovered 40' rise of drilling fluid. Charts showed tool functioned properly. Water shut-off witnessed and approved by Company test. Division of Oil & Gas waived witnessing same. Closed rams, applied 1500 psi and casing held Ok for 15 minutes. Commenced change over to Poly Carb R completion fluid.

10-24 Completed change over of mud system and drilled 7-5/8" hole to 7683'. Mud: 65#, 32 sec., 8 cc., 1% solids.

10-25 Drilled 7-5/8" hole to 7737'. Formation drilling change at 7683'. Used Hughes button bit from 7692'. Mud: 65#, 37 sec., 6 cc., 1% solids.

10-26 Drilled 7-5/8" hole to 7750', TOTAL DEPTH. Ran Schlumberger Dual Induction-Laterlog, Compensated Neutron Formation Density log with Gamma Ray and hole caliper. Ran Grant 3 arm rock bit underreamer and opened hole from 7-5/8" to 14" from 7494' to 7537'. Mud: 65-1/2#, 38 sec., 6.5 cc., 1% solids.

10-27 Opened hole from 7-5/8" to 14" from 7537' to 7630'; used 2 hole openers. Ran Grant underreamer and opened 7-5/8" hole to 8-1/2" from 7630' to 7651'. Mud: 65#, 38 sec., 5.8 cc., 1% solids.

10-28 Opened hole from 7-5/8" to 8-1/2" from 7651' to 7662'. Ran 6 point reamer and reamed 7-5/8" hole from 7662' to 7750'. Backscuttle in stages from 7494' to 7750'. Lost approximately 50 barrels of mud while backscuttling. Ran Schlumberger Borehole Geometry log which showed 14" hole opened to maximum of 13-1/2", 8-1/2" hole opened to less than 8" and 7-5/8" hole drilled to be 7-1/2". Reran underreamer and regauged 8-1/2" hole 7630'-7662'. Ran Grant 6 point reamer and reamed 7-5/8" hole 7662' to 7750'. Conditioned hole from liner.

10-29 Ran 6-5/8", 24# and 28# combination Layne & Bowler wire weld screen and conventional slotted liner. Hung same at 7748', top at 7369'.

1973

10-29 LINER DETAIL:

Bottom 2 joints or	85.04'	(7747.63-7662.59)	6-5/8", 27.65#, Security flush joint, R-3 perforated 28 rows, 2" x 30 mesh slots, 6" centers with bull nose on bottom.
Next 1 joint or	14.99'	(7662.59-7647.60)	6-5/8", 27.65# Security flush joint, blank with 8rd. pin on top.
Next	1.69'	(7647.60-7645.91)	Blank
Next	3.10'	(7645.91-7642.81)	Lynes External casing packer 6-5/8" x 7-5/8" Packer Element
Next	6.60'	(7642.81-7636.21)	Blank
Next 1 joint or	15.00'	(7636.21-7621.21)	6-5/8", 27.65#, 8rd. pin down to 8rd. box up, blank
Next	.70'	(7621.21-7620.51)	6-5/8" crossover from 8rd. to Exline box up.
Next 3 joints or	117.43'	(7620.51-7503.08)	6-5/8", 24# Exline Layne & Bowler, Gru-V-Kut wire weld 0.018" gauge screen, 24 grooves, 72-1/4" slots per foot. 7.062" O.D. Wire wrap inlet area of 30.970 square inches per foot.
Next 3 joints or	128.48'	(7503.08-7374.60)	6-5/8", 27.65#, Security flush joint, R-3 perforated 12 rows, 2" x 30 mesh slots, 6" centers with top 10' blank.
Next	5.90'	(7374.60-7368.70)	Burns lead seal liner hanger with hold down slip & Burns port collar below. Ports at 7373'.
Total 10 joints or	378.93	(7747.63-7368.70)	

1973

- 10-30 Ran Burns Tool Company gravel packing tools and opened port collar at 7373'. Pumped in 120 cu. ft. of Filter Rock Company 8-12 gravel in 7 hours. Backscuttled 5 cu. ft. of gravel.
- 10-31 Ran Burns Tool Company type "A" circulating washer and washed perforations from 7617' to 7381'. Reran gravel packing tools and pumped in 5 sacks of 8-12 gravel. Backscuttled 1 cu. ft. for a total gravel placement of 119 cu. ft. or 102% of theoretical fill. Closed port collar and tested same closed under 1000 psi.
- 11-1 Picked up tubing, ran to bottom at 7747' and circulated hole clean. Layed down 4-1/2" drill pipe.
- 11-2 Completed laying down drill pipe and drill collars. Ran 2-7/8", 6.5#, N-80, 8rd. upset, new seamless R-3 tubing with No-Go plug on bottom. Ran Otis wireline and closed sliding sleeve. Pressured tubing to 2500 psi and set Brown Oil Tool Company packers at 7330' and 7655'. Applied pressure to annulus and determined packer holding Ok but hole would circulate past doughnut.
- 11-3 Otis removed blanking plug and set tubing plug near 3600'. Removed B.O.P. Pulled tubing off of doughnut and found stripper rubber beneath doughnut. Removed rubber, relanded tubing and tested Ok with 1000 psi. Otis set Baker "RWR" plug in Baker "R" nipple at 7656'.

1973

<u>TUBING DETAIL</u>	<u>I.D.</u>	<u>LENGTH</u>	<u>DEPTH</u>
K. B. to doughnut		22.90	22.90
232 joints 2-7/8" tubing		7200.25	7223.15
Brown Oil Tool B-4 safety joint	(2.4375)	2.34	7225.49
1 joint 2-7/8" tubing		31.56	7257.05
Macco sliding sleeve (jar down to open)	(2.4375)	2.30	7259.35
1 joint 2-7/8" tubing		31.38	7290.73
Udell landing nipple	(2.4375)	2.32	7293.05
1 joint 2-7/8" tubing		31.55	7324.60
Brown Oil Tool 8-5/8" 36# H1-RSP Hydraulic packer	(2.375)	5.72	7330.32
7 joints 2-7/8" tubing		219.27	7549.59
Brown Oil Tool CC safety joint	(2.4375)	1.42	7551.01
1 joint 2-7/8" tubing		31.83	7582.84
Udell landing nipple	(2.4375)	2.32	7585.16
1 joint 2-7/8" tubing		31.28	7616.44
Macco sliding sleeve (jar down to open)	(2.4375)	2.28	7618.72
1 joint 2-7/8" tubing		31.03	7649.75
Brown Oil Tool 6-5/8" 28# H1-RSP Hydraulic packer	(2.375)	5.52	7655.27
Baker "R" nipple	(2.25)	.97	7656.24

Installed Shaffer tree and tested Ok with 3450 psi. Ran Otis wire-
line and opened sliding sleeves at 7259' and 7618'.
RIG RELEASED AT 9:00 PM, 11-3-73.

SURVEY RECORD

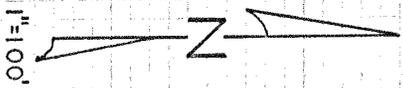
1778.85 SOUTH & 1247.38 WEST OF STATION #84

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

JOB NO IW-57

DATE 10-25-1973

C	MEASURED DEPTH		DRIFT ANGLE	TRUE VERTICAL DEPTH		COURSE DEVIATION		DRIFT DIRECTION		RECTANGULAR COORDINATES				REMARKS
										NORTH	SOUTH	EAST	WEST	
1	165		0.30	164	99	1	44	S 65 E			61	1	31	
2	255		0.30	254	99		79	N 75 E			40	2	07	
3	409		0.30	408	98	1	34	S 63 E				1	01	3 26
4	561		1.00	560	96	2	65	S 61 E			1	2	30	5 58
5	717		1.30	716	91	4	08	N 80 E			1		59	9 60
6	903		1.15	902	87	4	06	N 70 E					20	13 42
7	1091		0.30	1090	86	1	64	S 41 E			1		44	14 50
8	1279		0.15	1278	86		82	S 74 E			1		67	15 29
9	1593		0.30	1592	85	2	74	S 33 E				3	97	16 78
10	1750		0.45	1749	84	2	06	S 44 E				5	45	18 21
11	2065		0.30	2065	83	2	75	S 15 E				8	11	18 92
12	2185		0.30	2184	83	1	05	N 28 W				7	18	18 43
13	2476		1.15	2475	76	6	35	S 86 W				7	62	12 09
14	2634		1.00	2633	74	2	76	S 75 W				8	33	9 42
15	2824		1.00	2823	71	3	32	N 75 W				7	47	6 21
16	2860		0.30	2859	71		31	N 15 E				7	17	6 28
17	2891		1.30	2890	70		81	N 66 E				6	84	7 02
18	2922		2.15	2921	68	1	22	S 87 E				6	90	8 24
19	2953		3.15	2952	63	1	76	S 76 E				7	32	9 95
20	3016		5.30	3015	34	6	04	S 66 E				9	78	15 47
21	3113		8.30	3111	27	14	34	S 58 E				17	38	27 63
22	3206		10.30	3202	71	16	95	S 53 E				27	58	41 17
23	3331		13.00	3324	51	28	12	S 48 E				46	40	62 07
24	3650		14.30	3633	35	79	87	S 45 E				102	88	118 55
25	3898		14.00	3873	98	60	00	S 44 E				146	04	160 23
26	4213		14.30	4178	95	78	87	S 42 E				204	65	213 00
27	4347		14.45	4308	54	34	12	S 42 E				230	01	235 83
28	4641		14.30	4593	18	73	61	S 39 E				287	22	282 15
29	4961		13.30	4904	34	74	79	S 39 E					27	345 27
30	5244		13.30	5179	53	66	07	S 36 E				345	72	329 16
31	5304		16.00	5237	20	16	54	S 43 E				398	72	368 00
32	5365		16.15	5295	76	17	07	S 52 E				410	81	379 28
												421	32	392 74



W/H 200 400 600

200

400

600

800

3016

3898

4961

6090

7028

7750 T.D.

CLOSURE

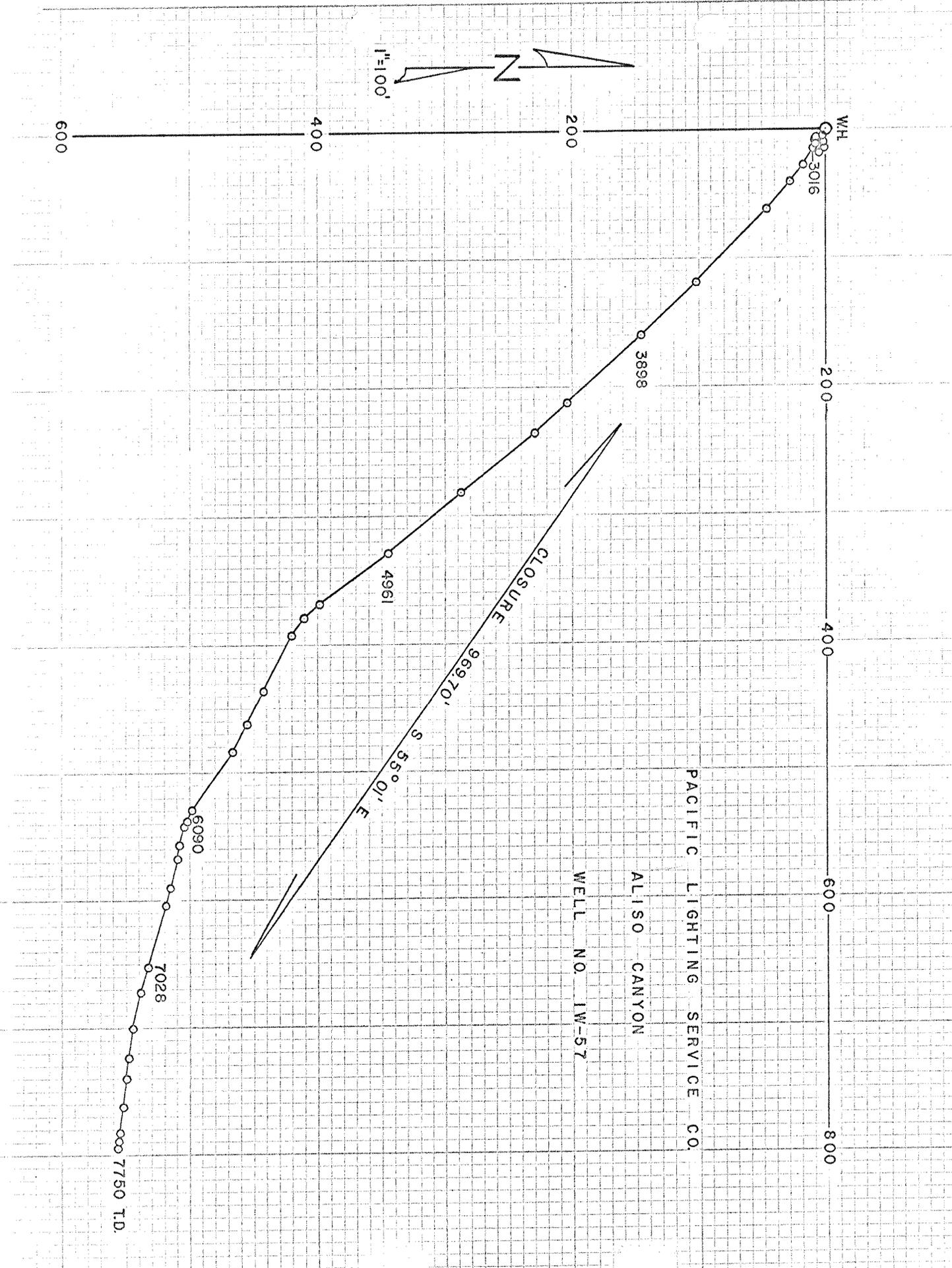
969.70'

S 55° 01' E

PACIFIC LIGHTING SERVICE CO.

ALISO CANYON

WELL NO. IW-57



RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T. 273-509

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

Santa Paula Calif.
November 27, 1973

DEAR SIR:

Operations at well No. IW 57 (037-21355), Sec. 27, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles Sup't. County, were witnessed
on Oct. 23, 1973, Mr. B. F. Jones, Pacific Lighting, ~~was~~ was
present from 0700 to 1000. There were also present -

Present condition of well: 13 3/8" cem. 806'; 8 5/8" cem. 7494', c.p. 748+', perf. 7483',
WSO; 6 5/8" ld. 7369-7748', perf. 7385-7748'. T.D. 7750'.

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

Mr. _____ reported:

THE 8 5/8" SHUT-OFF AT 7483' IS APPROVED.

a
cc: Operator

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

By W.C. Putman Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 273-416

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

Santa Paula Calif.
October 2, 1973

DEAR SIR:

Operations at well No. IV 57 (037-21355), Sec. 27, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on Sept. 29, 1973 Mr. P R Wygle, engineer representative of the supervisor was
present from 1800 to 1930. There were also present E. Olsen, engineer

Present condition of well: 13 3/8" cen. 806'. T.D 807'.

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

Mr. _____ reported:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

cc: Operator

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

By LOD Rytzins Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 273-109

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

Santa Paula Calif.
March 5, 1973

DEAR SIR:

(037-21355)

Your proposal to drill Well No. IW 57,
Section 27, T. 3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County,
dated 2/13/73, received 2/27/73, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

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

Blanket Bond
ALL:r

cc: Operator

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

By John F. Matthews, Jr., Deputy

(037-21355)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS
RECEIVED 12

FEB 27 1973

Porter No. 32 site

DIVISION OF OIL AND GAS
Notice of Intention to Drill New Well
This notice and surety bond must be filed before drilling begins

SANTA PAULA, CALIFORNIA

037-21355

Los Angeles Calif. February 13, 19 73

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. IW57, Sec. 27, T. 3N,

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

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

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

Location of Well: 1778.85 feet South ~~along section line and~~ 1247.38 feet West
(Direction) ~~corner of section~~ (Direction)

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

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

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

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

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
13-3/8	48#	H-40	smls. 0'	750'	750'
8-5/8	36#	K-55 & N-80	smls. 0'	7400'	7400' & 3000'
6-5/8	27.65#	K-55	smls. 7300'	7750'	7750'

Intended zone(s) of completion: Sesnon 7200', 7750' Estimated total depth 7750'
(Name) (Depth, top and bottom)

GAS STORAGE WELL

DATE	DESCRIPTION	INITIALS	FORMS
150	3-3-73	BB	114 121

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

Address P.O. Box 54790 T.A.

Pacific Lighting Service Company

(Name of Operator)

Los Angeles, California 90054

By P.S. Maguidy

(213) 689-3621 or

Telephone Number (213) 689-3561

Type of Organization Corporation

(Corporation, Partnership, Individual, etc.)