



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

No. T 216-0307

REPORT ON OPERATIONS

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

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

Ventura, California
August 10, 2016

Your operations at well "**Porter**" 26E, A.P.I. No. 037-21319, Sec. 28, T. 03N, R. 16W, SB B.&M., Aliso Canyon field, in Los Angeles County, were witnessed on 8/6/2016, by Mark Davis, a representative of the supervisor.

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

DECISION:

APPROVED

MD/TKC

Kenneth A. Harris Jr.

State Oil and Gas Supervisor

By



Patricia A. Abel, District Deputy

No. T 216-0307
 16, 1

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

Operator: <u>SP. CAL GAS CO</u>					Well: <u>"PORTER" 26E</u>				
Sec.	T.	R.	B & M.	API No.	Field:				
<u>28</u>	<u>34</u>	<u>16</u>	<u>SB</u>	<u>037-21319</u>	<u>ALISO CANYON</u>				
County: <u>LOS ANGELES</u>					Witnessed/Reviewed on: <u>8-6-16</u>				
<u>MARK DALLS</u> , representative of the supervisor, was present from <u>11:00</u> to <u>16:30</u>									
Also present were: <u>ROBERT LEFLER - GAS CO.</u>									
Casing record of the well:									
The Internal MIT was performed for the purpose of pressure testing the _____ " casing above _____ (2) (prior to injecting fluid) <u>SLIDING SLEEVES @ 7269 CEMENT PLUG @ 7303</u> <u>500 PSI FOR 1 HOUR LAST 40 PSI PACKER @ 7345'</u>									
<input checked="" type="checkbox"/> The Internal MIT is approved since it indicates that the _____ " casing has mechanical integrity above <u>7345'</u> at this time..									
<input type="checkbox"/> The Internal MIT is not approved due to the following reasons: (specify)									
INDICATE WHERE PACKER WAS SET AND HOW LONG PRESSURE WAS HELD ALONG WITH ANY BLEEDOFF DATA.									

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

Operator: Southern California Gas Company WELL DESIGNATION "Porter" 26E

API No. 03721319 SE 28 T: 3N R.: 16W , SB B. and M.

County: Los Angeles FIELD: Aliso Canyon

Type of Notice: Rework Date 6/29/2016 Report Number: P216-0110

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

NEW STATUS

	Date	OK	NEED	Remarks
Well Summary (OG100)				
History (OG103)				
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				
<i>Press. Test</i>	<i>8/6/16</i>	<i>✓</i>	<i>✓</i>	<i>Need data from SCG</i>

DATE: _____

NOTICE OF RECORDS DUE

DATE: _____

DATE: _____

DATE: _____

DATE: _____

WELL STATUS INQUIRY

DATE: _____

DATE: _____

Well Stat

Change Required: _____

Change Done: _____

ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS

CalWims Abandonment Form: _____ SURFACE INSPECTION NEEDED _____ COMPLETED _____

Date and Inspector

FINAL LETTER NEEDED _____ COMPLETED _____ Calwims DRILL/REDRILL Form _____

(Date)

ENGINEER'S CHECK LIST

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

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

CLERICAL CHECK LIST

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

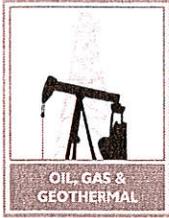
REMARKS

RECORDS SCANNED: _____

(Date)

RECORDS APPROVED: _____

(Date and Engineer)



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 216-0110**

PERMIT TO CONDUCT WELL OPERATIONS

Old	New
010	010
FIELD CODE	
00	00
AREA CODE	
30	30
POOL CODE	

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

Ventura, California
 July 13, 2016

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

Your proposal to **Rework** well "Porter" 26E, A.P.I. No. 037-21319, Section 28, T. 03N, R. 16W, SB B. & M., Aliso Canyon field, Any area, Sesnon-Frew pool, Los Angeles County, dated 6/29/2016, received 6/30/2016 has been examined in conjunction with records filed in this office. (Lat: 34.315774 Long: -118.557116 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 of the 8 5/8" casing and tubing plug.

Continued on Next Page

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

Engineer Kris Gustafson
 Office (805) 654-4761

KG/do

Kenneth A. Harris Jr.
 State Oil and Gas Supervisor

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

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

NOTE:

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

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

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

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

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

REQUIRED TESTS IF A WELL IS INTENDED TO RESUME OPERATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

REQUIREMENTS FOR WELLS RESUMING OPERATIONS IN ALISO CANYON

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



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

FOR DIVISION USE ONLY		
Bond	Forms	
		OGD114
	CAL V WIMS	115V

P216-0110

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 26E, API No. 037-21319

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

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

See attached wellbore schematic

The total depth is: 7916 feet. The effective depth is: 7912 feet.
 Present completion zone(s): Sesnon (Name) Anticipated completion zone(s): Same (Name)
 Present zone pressure: storage psi. Anticipated/existing new zone pressure: storage psi.

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

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

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

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

4b - ETOC of 1st stage at 3570' as per attached wellbore mechanical.

5b - Packer set at 7329'. Plug set in WXN nipple at 7288' on 11/6/15 and SSD at 7254' verified open 6/13/16.

6b - Circulate 8.5 ppg kill fluid down tbg. through SSD at 7254' and back to surface to completely fill well.

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

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

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

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

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

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

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

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

CRITICAL WELL DEFINITION

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

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

WELL OPERATIONS REQUIRING BONDING

1. Drilling, 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 26E**

API #: 04-037-21319-00
Sec 28, T3N, R16W

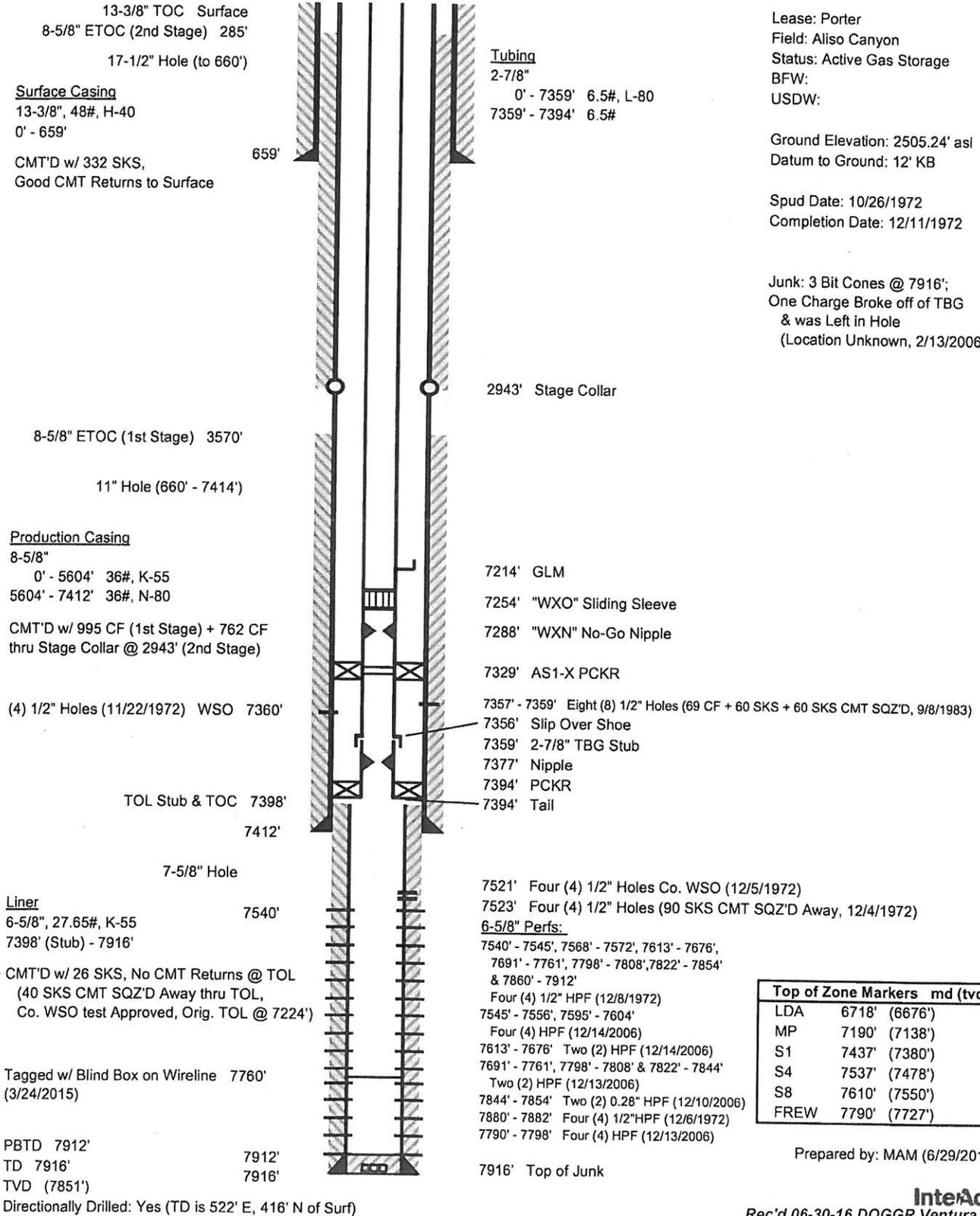
Operator: So. California Gas Co.

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

Ground Elevation: 2505.24' asl
Datum to Ground: 12' KB

Spud Date: 10/26/1972
Completion Date: 12/11/1972

Junk: 3 Bit Cones @ 7916';
One Charge Broke off of TBG
& was Left in Hole
(Location Unknown, 2/13/2006)



Prepared by: MAM (6/29/2016)

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
Porter 26A RD	7687'/7657'	8-5/8", 36#, K-55 8-5/8", 36#, N-80	5842 7687	4460 6490	3791 5517	3582 4398	Yes Yes
Porter 26E	7328'/7271'	8-5/8", 36#, K-55 8-5/8", 36#, N-80	5604 7328	4460 6490	3791 5517	3477 4239	Yes Yes

Hesson, Bruce@DOC

From: Lane, Bret <JLane@semprautilities.com>
Sent: Friday, January 8, 2016 2:28 PM
To: Hesson, Bruce@DOC; Abel, Pat@DOC
Cc: Walker, Scott@DOC; McGurk, Scott@DOC; Schwecke, Rodger; Cho, Jimmie I; Kitson, Amy
Subject: RE: P 26E

We set a plug in the nipple at the bottom of the tubing

From: Hesson, Bruce@DOC [mailto:Bruce.Hesson@conservation.ca.gov]
Sent: Friday, January 08, 2016 2:11 PM
To: Lane, Bret; Abel, Pat@DOC
Cc: Walker, Scott@DOC; McGurk, Scott@DOC; Schwecke, Rodger; Cho, Jimmie I; Kitson, Amy
Subject: RE: P 26E

Hi Bret,

Thank you for your response and submittal. Just to confirm, was the plug a temporary bridge plug?

Bruce H. Hesson, P.E.
Senior Oil & Gas Engineer
Division of Oil, Gas and Geothermal Resources
1000 South Hill Road, Suite 116
Ventura, CA 93003
Bruce.Hesson@conservation.ca.gov



Every Californian should conserve water. Find out how at:



SaveOurWater.com · Drought.CA.gov

From: Lane, Bret [mailto:JLane@semprautilities.com]
Sent: Friday, January 8, 2016 8:16 AM
To: Abel, Pat@DOC <Pat.Abel@conservation.ca.gov>; Hesson, Bruce@DOC <Bruce.Hesson@conservation.ca.gov>
Cc: Walker, Scott@DOC <Scott.Walker@conservation.ca.gov>; McGurk, Scott@DOC <Scott.McGurk@conservation.ca.gov>; Schwecke, Rodger <RSchwecke@semprautilities.com>; Cho, Jimmie I <JCho@semprautilities.com>; Kitson, Amy <AKitson@semprautilities.com>
Subject: FW: P 26E

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

Rec'd 07-07-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

Operator Southern California Gas Company

Field: Aiso Canyon

County: Los Angeles

Well: Porter 26 E

Surface Location: Sec 28 3N 16W S.B.B.M.

A P I No. 03721319

Todd Van de Putte

Title: Drilling Manager

(President, Secretary, or Agent)

Date: 7/2/2015

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
2/25/2015	Rigged up the Carbon wireline unit. Ran 2 205" gauge rings to the XN profile sub at 7353'. Ran in the well with the pulling tool Pulled the prong from the PXN Plug at 7353'. Made up and ran the shifting tool to verify that the sliding sleeve at 7312' was in the open position and secured the well
2/26/2015	Opened the well with 0 psig surface pressure on the tubing and the casing Shot fluid levels Casing at 421'. Tubing at 436' Rigged up the Carbon Wireline unit Ran 2.5" GS pulling tools on a 1-1/2" jarring assembly to pull the PXN plug body at 7353' Sheared off. Pulled out of the well and redressed the GS pulling tool. Ran in the well to 7353' The slickline parted at the surface while jarring on the plug body Secured the well Offloaded the Class III 5M BOPE and the accumulator. Rigged up Cameron to test the wellhead seals Pressure tested the primary seals to 2760 psig (80% of collapse) for 15 minutes (Lost 100 psig) Pressure tested the secondary seals to 2760 psig for 15 minutes (Lost 75 psig) Rigged Cameron down and moved in the Rival Rig #12 and associated equipment.
2/27/2015	Opened the well with 0 psig surface pressure on the tubing and the casing Rigged up the rig floor and the Carbon Wireline Unit Rigged up and dropped the slickline cutter Recovered the slick line from the well. Rigged down and moved out the Carbon Wireline Unit Moved in and rigged up the Western Wireline Unit Ran in the well and fished the wireline cutter. Ran in the well and recovered the tool assembly Laid down the fish and ran in well with a 2-1/2" GS Pulling Tool on a 1-3/4" string Jarred on the plug with no recovery Sheared the GS Pulling Tool off the PXN plug body Pulled out of the well and rigged down the Western Wireline unit and secured the well
3/2/2015	Moved in and rigged up the Onyx test separator Connected the lateral line to the tubing and the casing. Pressure tested the lines and the tubing with field gas Rocked the well and unloaded 187 bbl of 8.5 KCl brine to the storage tank The tubing side flowed gas only Shut in the well and secured the well
3/3/2015	Rigged down and moved out the Onyx separator and rigged up the Carbon wireline unit Shot fluid levels (Tubing at 4882', Casing at 1350') Made up a "GS" pulling tool on wireline Ran in the well to the plug body at 7346' and attempted to pull. Bled down 200 psig pressure from the tubing and the plug came free Rigged down and moved out the Carbon wireline unit Moved in and rigged up the Onyx separator. Rigged up for the well kill and secured the well.
3/4/2015	Opened the well with 1045 psig surface pressure on the casing and 2100 psig surface pressure on the tubing. Moved in and rigged up the WELACO wireline unit Made up a temperature tool on wireline Pick up depth at 7828' (previous PU at 7866' on 7/24/92) Ran the temperature survey to the surface. Rigged down and moved out the WELACO wireline unit Rigged up and pumped 50 bbl of Hi-vis polymer and displaced with 42 bbl of 8.5 ppg KCl brine and killed the well with through the separator with 430 bbl of 8.5 ppg KCl brine Rigged down and moved out the separator Installed the BPV, rigged down the production tree Rigged up the Class III 5M BOPE and secured the well
3/5/2015	Opened the well with 0 psig surface pressure on the tubing and the casing. Continued to rig up the Class III 5M BOPE and rigged up the WEA tester. Pressure tested the blind rams to 300 psig (low) and 5000 psig (high) for twenty minutes (test good) Pressure tested the pipe rams to 300 psig (low) and 5000 psig (high) for twenty minutes (test good). Pressure tested the Hydril annular preventer to 300 psig (low) and 2600 psig (high) for twenty minutes (test good). Pressure tested the choke manifold and all the control lines to 300 psig (low) and 5000 psig (high) for twenty minutes (tests good; C. Knight, DOGGR inspected and approved BOPE) Rigged up the tubing equipment and backed out the hold down studs. Unlanded the completion tubing at 25,000 lb and pulled the completion packer 12' before pulling over string weight. Released the completion packer and pulled out of well (dragging 8 klb over string weight) Laid down the 2-7/8" completion tubing to 3900' and secured the well
3/6/2015	Opened the well with 0 psig surface pressure on the tubing and the casing The well was filled with 2 bbl of 8.5 ppg KCl brine Pulled out of the well and laid down the 2-7/8" completion tubing Laid down the GLM, the sliding sleeve and the production packer Moved in the 2-7/8" workstring. Measured and picked up a bumper sub, an 8-5/8" casing scraper on the 2-7/8", P-110 workstring tubing. Ran in the well to 2700' and secured the well
3/9/2015	The well was filled with 5 bbl of 8.5 ppg KCl brine. Measured and picked up the 2-7/8" workstring tubing and ran in the well with the 8-5/8" casing scraper to the top of the stub at 7359' Rigged up and reverse circulated the well with 130 bbl of KCl brine. Pulled out of the well to a kill string at 3480' and secured the well

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

Rec'd 07-07-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

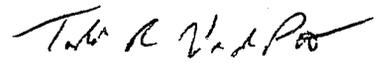
Operator: Southern California Gas Company
Well: Porter 26 E
A.P.I. No. 03721319

Field: Aliso Canyon
Surface Location: Sec 28 3N 16W S.B.B.M.
Todd Van de Putte
Title: Drilling Manager

County: Los Angeles

(President, Secretary, or Agent)

Date: 7/2/2015

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
3/10/2015	Filled the well with 8 bbl of 8.5 ppg KCl brine. Pulled out of the well and laid down the 8-5/8" casing scraper. Ran in the well with an 8-5/8" 36# bridge plug on the 2-7/8" workstring. Tagged the tubing stub at 7360' and set the bridge plug at 7351' COE. Pulled up the well to 7290' and pressure tested the bridge plug to 500 psig surface pressure for 5 minutes (Good test). Dumped 6 sacks of sand down the tubing and displaced with 35 bbl of KCl brine. Pulled out of the well, installed the shooting flange and secured the well.
3/11/2015	The well was standing full of 8.5 ppg of KCl brine. Moved in and rigged up the Schlumberger wireline unit. Ran the high resolution USIT/CBL/Neutron log from 7340' to the surface. Rigged down and moved out the Schlumberger wireline unit and secured the well.
3/12/2015	The well was standing full of KCl brine. Made up a 8-5/8" test packer on the 2-7/8" workstring. Ran in well to 500', set test packer and pressure tested the 8-5/8" production casing from 500' to surface at 3100 psig for 20 minutes (Test good). Released the test packer and ran in well to 7200'. Pressure tested the 8-5/8" production casing from the RBP at 7351' to 7200' at 1000 psig for 20 minutes (Test good). Released the test packer and pulled to 5700'. Set the test packer and pressure tested from 5700' to 7351' to 1000 psig for 20 minutes (Test good). Pressure tested from 5700' to surface at 1000 psig for 20 minutes (Test good). Released the test packer and pulled up the well to 5000'. Set the test packer and pressure tested from 5000' to surface at 1300 psig for 20 minutes (Test good). Released the test packer and pulled up the well to 4500'. Set the test packer and pressure tested from 4500' to surface at 1500 psig for 20 minutes. Bled off 100 psig. Repaired a leak at the casing valve. Re-tested from 4500' to surface at 1500 psig (Test good). Released the test packer and pulled up the well to 4,000' and secured the well. (All pressure tests recorded on a chart)
3/13/2015	Pressure tested the 8-5/8" production casing from 4000' to the surface at 1700 psig for 20 minutes (Test good). Released the test packer and pulled up the well to 3500'. Set the test packer and pressure tested to 1900 psig for 20 minutes (Lost 22 psig). Released the test packer and pulled to 3000'. Set the test packer and pressure tested to 2100 psig for 20 minutes (Lost 11 psig). Released the test packer and pulled up the well to 2500'. Set the test packer and pressure tested to 2300 psig for 20 minutes (Test good). Released the test packer and pulled to 1500'. Set the test packer and pressure tested to 2700 psig for 20 minutes (Test good). Pull out of the well and laid the 8-5/8" test packer down. Picked up a 8-5/8" Lok-Set Bridge plug on the 2-7/8" workstring. Ran in the well and set retrievable bridge plug at 1021' COE and secured the well.
3/16/2015	Opened the well with 0 psig surface pressure on the tubing and the casing. Bled 7 psig from the 13-3/8" x 8-5/8" annulus. Dumped 5 sacks of sand down the tubing and displaced with 3 bbls of 8.5 ppg KCl brine. Pulled out of the well from 1000'. Rigged down the rig floor and the tubing tools. Rigged down the Class III 5M BOPE. Removed the 13-5/8" x 11" 5M tubing head and DSA seal flange. Pulled the primary seal from the 8-5/8" x 13-3/8" annulus. Installed a 13-5/8" 5M x 11" 5M crossover spool and surplus production tree to secure the well. Sent the wellhead equipment to Cameron for service.
3/18/2015	Rigged down the production tree and the crossover spools. Installed a new primary seal. Installed the refurbished 13-5/8" DSA seal flange. Pressure tested the seals to 300 psig (low) and 2700 psig (high) for 15 minutes each; recorded on a test chart. Installed the refurbished 13-5/8" 5M x 11" 5M tubing head. Pressure tested the secondary seals to 300 psig (low) and 2700 psig (high) for 15 minutes each; recorded on a test chart. Rigged up the Class III 5M BOPE. Function tested the pipe rams and the annular preventer. Installed the tubing hanger and pressure tested the new API rings to 3000 psig (Good test). Made up an 8-5/8" bridge plug retrieving tool on the 2-7/8" workstring. Ran in the well to 950' and secured the well.
3/19/2015	Installed the PGSR and circulated the sand from 1016' to 1021'. Released the 8-5/8" bridge plug and pull out of the well. Laid down the 2-7/8" work string and the bridge plug. Ran in the well with the remaining 2-7/8" P-110 workstring from the derrick. Pull out of the well to 2535', laid the 2-7/8" P-110 workstring tubing down and secured the well.
3/20/2015	Opened the well with 0 psig surface pressure on the casing. Laid down the remainder of the 2-7/8" P-110 workstring from 2535'. Offloaded the new 2-7/8" L80 completion string. Picked up the 8-5/8" bridge plug retrieving tool, 80 joints of new 2-7/8", L-80 completion tubing to 2520' and secured the well.

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

Rec'd 07-07-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

Operator. Southern California Gas Company
Well: Porter 26 E
A P I. No. 03721319

Field Aliso Canyon
Surface Location. Sec 28 3N 16W S.B.B M.
Todd Van de Putte
Title: Drilling Manager

County Los Angeles

(President, Secretary, or Agent)

Date 7/2/2015

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
3/23/2015	The well was standing full of 8.5 ppg KCl brine Continued running in the well with the 8-5/8" bridge plug retrieving head from 2520' and picked up new 2-7/8" L-80 tubing Tagged the sand at 7340'. Installed the PGSR cage and the pack off. Cleaned out the sand to the top of the 8-5/8" bridge plug at 7351' Worked the 8-5/8" bridge plug free, pulled up the well to 3133' and secured the well.
3/24/2015	Opened the well with 0 psig surface pressure on the casing Filled the well with 1 5 bbl of 8 5 ppg KCl brine Pulled out of the hole and laid down the 8-5/8" bridge plug. Picked up 2-7/8" x 7-3/8" Slip Over Shoe, 8' & 10' 2-7/8" L-80 pup joints, Wfd 8-5/8" AS1-X Packer, 8' x 2-7/8" L-80 pup joint, 1 joint of 2-7/8" L-80 tubing, 2 33" WXN, 1 joint 2-7/8" L-80 tubing, 2-7/8" x 2.31" WYO Sliding Sleeve, 1 joint 2-7/8" L-80 tubing, 2' x 2-7/8" L-80 pup, 2-7/8" GLMA mandrel (w/ DV-1 0 Dummy Valve), 4' x 2-7/8" L-80 pup, Ran in the well with 230 joints of 2-7/8" L-80 completion tubing. Pumped 60 bbl of 8 5 ppg KCl brine with CAP corrosion inhibitor down the tubing Worked the Slip Over Shoe over the tubing stub at 7359' to space out the well completion. Picked up a 10' and a 6' x 2-7/8" L-80 pup and the tubing hanger Worked the Slip Over Shoe over the tubing stub at 7359' Set the completion packer at 7394'. Landed the completion string on the tubing hanger with 12 klb compression. Moved in and rigged up the Carbon Wireline unit Ran in the well with a 1-1/2" blind box on wireline and tagged at 7760'. Rigged down and moved out the Carbon wireline unit Pressure tested the 2-7/8" completion x 8-5/8" annulus to the packer at 7333' COE to 1000 psig for 20 minutes (Test good) Recorded on a test chart and secured the well. Up Weight 43K Down Weight 39K
3/25/2015	Opened the well with 0 psig surface pressure on the tubing and the casing. Rigged down the Class III 5M BOPE. Removed the pup joint and TIW valve Installed the BPV and rigged up the production tree. Pressure tested the tubing hanger seals to 250 psig (low) and 5000 psig (high) for 15 minutes each (Test good) Loaded the BOP equipment and secured the well
3/26/2015	Held safety meeting with crew
5/19/2015	Moved in and rigged up the Western Wireline sickline unit Made up a 2-1/2" GS Pulling Tool on wireline and ran in the well to 7279' Pulled the X Test Tool out of the well Rigged down and moved out the wireline unit.
5/27/2015	Moved in and rigged up the Rival Rig #12, rig pump, and tanks Spotted the rig equipment, raised the mast
5/28/2015	Opened the well with 10 psig surface pressure on the casing and 1038 psig on the tubing. Moved in and rigged up the Onyx test separator Bled the tubing pressure to 0 psig with no pressure change on the casing. Rigged up and pumped 53 bbls of 8.7 ppg KCl brine down the tubing at 1 bpm at 1500 psig The tubing required 2 5 bbl to fill No pressure change on the casing and no returns from the casing The tubing bled to 1300 psig in 3 minutes. Bled the tubing to zero. Filled the annulus with 19 bbl of 8.5 ppg KCl brine. Pressure tested the tubing x casing annulus to 450 psig Pressure on the annulus held for 5 minutes. Testing indicated that the sliding sleeve was closed Rigged down and moved out the test separator. Rigged up the work floor, the accumulator lines and secured the well.
5/29/2015	Opened the well with 110 psig surface pressure on the tubing and 0 psig on the casing Moved in rigged up the Western Wireline unit Ran in the well and set a X-Lock plug without packing or keys in XN profile sub at 7287' Ran in the well with a kick-over tool and 1-1/4" JDC pulling tool Unable to latch onto the prong in the dummy valve at 7214'. Ran in the well with OK05 kick over tool with 1-1/4" JDC pulling tool Latched onto the prong at 7214'. Jarred free and pulled out of the well with no recovery Ran in the well with kick over tool and pulling tool for the dummy valve. Set down on the valve pocket at 7214'. Unable to latch on to the dummy valve Assumed prong and dummy valve dropped down to X-Lock plug at 7287' Pumped down the tubing at 3 5 bpm at 400 psig and breaking circulation. Rigged down and moved out the Western Wireline unit and secured the well
6/1/2015	Opened the well with 0 psig surface pressure on the tubing and the casing. Changed the well over with 364 bbl of 8 7 ppg KCl brine at 3 5 bpm at 450 psig Installed the BPV and removed the production tree Installed the 2-7/8" pup and safety valve Rigged up the 11" Class III 5M BOPE Pressure tested the blind rams, the pipe rams, the valves and the choke manifold to 300 psig (low) and 5000 psig (high) for 20 minutes Pressure tested the annular preventer to 300 psig (low) and 3500 psig (high) for 20 minutes All tests good; Each test recorded on a chart Secured the well.

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

Rec'd 07-07-15 DOGGR D2 Ventura

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 26 E
A P.I. No. 03721319

Field: Aliso Canyon
Surface Location: Sec 28 3N 16W S.B.B.M
Todd Van de Putte
Title: Drilling Manager

County: Los Angeles

(President, Secretary, or Agent)

Date 7/2/2015

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
6/2/2015	Pressure tested the two Safety Valves and the Inside BOP to 300 psig (low) and 5000 psig (high) Backed out the hold down pins and released the production packer. Filled the well with 6.5 bbl of 8 7 ppg KCl brine Pulled out of the well and laid the down the GLM, the Sliding Sleeve, the XN profile, the production packer and the guide shoe Recovered the X-Plug body and the Dummy Valve Checked the drift on the Sliding Sleeve (good) Ran in the well with 2-7/8" tubing to 3124' and secured the well
6/3/2015	Pulled out of hole from 3124'. Made up an 8-5/8" x 2-7/8" guide shoe, 10' & 8' x 2-7/8" L-80 pups, x/o, 4-1/2" x 8-5/8" AS1-X Packer, x/o, 2-7/8" x 8' L-80 pup, one joint of 2-7/8" L-80 tubing, 2 31" WXN profile sub, one joint 2-7/8" L-80 tubing, 2.31" WXO sliding sleeve, one joint 2-7/8" L-80 tubing, 2-7/8" x 2' L-80 pup, GLMA mandrel with dummy valve, 2-7/8" x 4' L-80 pup, 230 joints of 2-7/8" L-80 tubing Spaced the completion string out with a 10' & 6" x 2-7/8" L-80 tubing and an 8" tubing hanger Pumped 60 bbl of 8 7 ppg KCl brine with corrosion inhibitor down the tubing Displaced with 10 bbl of KCl brine Set the production packer at 7333.5' COE. Landed the completion string with 10 klb compression. Screwed hold down pins into the tubing hanger Pressure tested the 2-7/8" completion tubing x 8-5/8" production casing annulus to 500 psig and secured the well.
6/4/2015	Moved in and rigged up the Western Wireline unit Made a feeler run with a 1-3/4" gauge ring and set down on the old tubing stub at 7359' Pulled out the well and rigged down the lubricator Released the production packer and added a 2' x 2-7/8" L-80 pup below the tubing hanger to re-space the completion string Re-set the production packer at 7335' COE with 14 klb compression Moved in and rigged up the Western Wireline unit Made up a 1-3/4" gauge ring on wireline and ran through the production packer at 7394' down to 7500'. Re-pressure tested the production packer to 500 psig for 20 minutes (Test good). Ran in the well and set a PXN Plug in the XN profile sub at 7289'. Ran in the well and installed the prong in the plug Pressure tested the tubing to 1500 psig (Test good) Ran in well with the shifting tool and opened the sliding sleeve at 7255'. Pumped down the tubing and circulated to verify that the sliding sleeve was open Rigged down and moved out the Western Wireline unit and secured the well
6/5/2015	Opened the well with 0 psig surface pressure on the tubing and the casing Rigged down the rig floor and the tubing tools Rigged down the Class III 5M BOPE Installed the production tree and pressure tested void to 300 psig (low) and 5000 psig (high) for 20 minutes, recorded on a test chart Rigged down the accumulator and loaded the production tools.



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. T215-0231

GAS STORAGE PROJECT
"Wayside 13" - Southeast Area - Modelo (

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

Ventura, California
June 12, 2015

Your operations at well "**Porter**" **26E**, A.P.I. No. **037-21319**, Sec. **28**, T. **03N**, R. **16W**, **SB B. & M.**, **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **6/2/2015**. **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

BLOWOUT PREVENTION EQUIPMENT MEMO

12,1

Operator Go Cal Gas Well Porter 26 E Sec. 28 T. 03N R. 16W
 Field Alice Cyn County Los Angeles Spud Date _____
 VISITS: Date 6-2-15 Engineer C. Knight Time (0730 to 0830) Operator's Rep. Alan Fortenberry Title RSS
 1st _____
 2nd _____
 Contractor Rival Rig # 12 Contractor's Rep. & Title _____
 Casing record of well: _____

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y N
 DECISION: The blowout prevention equipment and its installation on the 8 5/8 " casing are approved.

Proposed Well Opns: Change out slide/groove, exchange packer MACP: _____ psi
 Hole size: _____ " fr. to _____ " to _____ " & _____ " to _____ " REQUIRED BOPE CLASS:
Class # 5M

CASING RECORD OF BOPE ANCHOR STRING					Cement Details		Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at			Casing	Annulus
11								

BOP STACK							TEST DATA						
API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul	Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
Rd	27 1/2	NOV		11	5M								
Rd	150	NOV		11	5M								
A	150	Hydr.		11	5M								

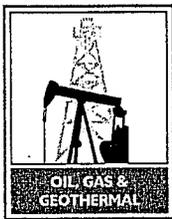
ACTUATING SYSTEM					TOTAL:	AUXILIARY EQUIPMENT						
Accumulator Unit(s) Working Pressure <u>3000</u> psi						No.	Size (in.)	Rated Press	Connections			Test Press.
Total Rated Pump Output _____ gpm		Fluid Level _____ ft.							Weld	Flange	Thread	
Distance from Well Bore <u>50+</u> ft.		60%										
Accum. Manufacturer	Capacity	Precharge	psi	psi	1	Fill-up Line						
1	Koomey Type	80 gal.			1	Kill Line	2	5M		X		
2		gal.			2	Control Valve(s)		0M		X		

CONTROL STATIONS				Elec.	Hyd.	Pneu.	1	Check Valve(s)				
1	Manifold at accumulator unit				X		1*	Aux. Pump Cnct.		5M		X
1	Remote at Driller's station					X	1	Choke Line		5M		X
	Other:						7	Control Valve(s)		5M		X

EMERG. BACKUP SYSTEM				Press.	Wkg. Fluid	1	Pressure Gauge				
3	N ₂ Cylinders	1	L= 55 "	2500	8.0 gal.	2	Adjstble Choke(s)	2	5M		X
	Other:	2	L= 55 "	2700	9.1 gal.		Bleed Line				
		3	L= 55 "	2550	8.3 gal.		Upper Kelly Cock				
		4	L= "		gal.		Lower Kelly Cock				
		5	L= "		gal.		Standpipe Valve				
		6	L= "		gal.		Stndpipe Pres. Gau.				
				TOTAL:	gal.	1	Pipe Safety Valve		2 7/8	5M	

HOLE FLUID MONITORING EQUIPMENT			Alarm Type		Class	Hole Fluid Type	Weight	Storage Pits (Type & Size)
Audible	Visual							
Calibrated Mud Pit				A.	KCL	8.8	460 bbl - Baker Tanks	
Pit Level Indicator				B				
Pump Stroke Counter				C				
Pit Level Recorder								
Flow Sensor								
Mud Totalizer								
Calibrated Trip Tank								
Other:								

REMARKS AND DEFICIENCIES:
*emergency kill line 2-in flanged connections



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Phone:(805) 654-4761 Fax:(805) 654-4765
REPORT ON OPERATIONS

No. T215-0113

GAS STORAGE PROJECT
"Wayside 13" - Southeast Area - Modelo (

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

Ventura, California
March 27, 2015

Your operations at well **"Porter" 26E**, A.P.I. No. **037-21319**, Sec. **28**, T. **03N**, R. **16W**, **SB B. & M.**, **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **3/5/2015**. **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

BLOWOUT PREVENTION EQUIPMENT MEMO 12,1

Operator So Cal Gas Well Porter 26E Sec. 28 T. 03N R. 16W
 Field Aliso Canyon County Los Angeles Spud Date _____
 VISITS: Date 3/5/15 Engineer Cr Knight Time (1345 to 1545) Operator's Rep. Larry Garcia Title RSS
 1st _____
 2nd _____
 Contractor Rival Rig # 12 Contractor's Rep. & Title Larry Garcia / Mike Uulmur
 Casing record of well: _____

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y N
 DECISION: The blowout prevention equipment and its installation on the 8 5/8 " casing are approved.

Proposed Well Opns: Rework MACP: _____ psi
 Hole size: _____ " fr. _____ " to _____ " to _____ " & _____ " to _____ " **REQUIRED BOPE CLASS: Class III SM**

CASING RECORD OF BOPE ANCHOR STRING					Cement Details		Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at			Casing	Annulus
8 5/8	36							

BOP STACK							TEST DATA						
API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul	Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
Rd	ESD	Schuffler		11	SM							3/5/15	5M
Rd	27/8	Schuffler		11	SM								5M
A	CSO	Hydril		11	SM								5M

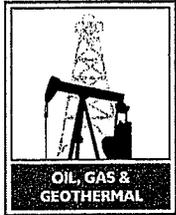
ACTUATING SYSTEM				TOTAL:		AUXILIARY EQUIPMENT						
Accumulator Unit(s) Working Pressure <u>1,500</u> psi						Connections						
Total Rated Pump Output _____ gpm				Fluid Level _____		No.	Size (in.)	Rated Press	Weld	Flange	Thread	Test Press.
Distance from Well Bore <u>50+</u> ft.				50%								
Accum. Manufacturer		Capacity	Precharge	Fill-up Line								
1 Koomey		80 gal.	psi	Kill Line			2	5M		X		5M
2		gal.	psi	Control Valve(s)				5M		X		5M
				Check Valve(s)				5M		X		5M
				Aux. Pump Cnct.								
1				Choke Line			3	5M				5M
1				Control Valve(s)				5M				

CONTROL STATIONS				Elec.	Hyd.	Pneu.	
1 Manifold at accumulator unit					X		1 Check Valve(s)
1 Remote at Driller's station						X	1 Choke Line
Other:							5 Control Valve(s)

EMERG. BACKUP SYSTEM				Press.	Wkg. Fluid		
2 N2 Cylinders				1	2750	10.6 gal.	1 Pressure Gauge
Other:				2	2,750	10.6 gal.	2 Adjstble Choke(s)
1				3	2,750	10.6 gal.	Bleed Line
2				4		gal.	Upper Kelly Cock
3				5		gal.	Lower Kelly Cock
4				6		gal.	Standpipe Valve
5						gal.	Standpipe Pres. Gau.
6						gal.	Standpipe Pres. Gau.
TOTAL:					31.8 gal.		1 Pipe Safety Valve

HOLE FLUID MONITORING EQUIPMENT			Alarm Type		Hole Fluid Type			Storage Pits (Type & Size)	
	Audible	Visual	Class			Weight			
Calibrated Mud Pit			A		KCL	8.5	780 bbls baker tanks		
Pit Level Indicator			B						
Pump Stroke Counter									
Pit Level Recorder									
Flow Sensor									
Mud Totalizer									
Calibrated Trip Tank									
Other:									

REMARKS AND DEFICIENCIES:
 * Emergency Kill line 2" (So Cal Gas required) 2" flanged installed
 * 2 Tested by Weatherford, Larry Garcia reported



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 215-0022

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

"Wayside 13" - Southeast Area - Modelo (Late Miocene) Formation

Ventura, California
 February 25, 2015

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

Your proposal to **Rework** well "Porter" 26E, A.P.I. No. 037-21319, Section 28, T. 03N, R. 16W, SB B. & M., Aliso Canyon field, Any area, Sesnon-Frew pool, Los Angeles County, dated 2/20/2015, received 2/20/2015 has been examined in conjunction with records filed in this office. (Lat: 34.315774 Long: -118.557116 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 III 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.
 - b. Witness a pressure test of the 8 5/8" casing prior to commencing injection.

NOTE:

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

Blanket Bond Dated: 7/6/1999
 UIC Project No. 3080001

Engineer Kris Gustafson
 Office (805) 654-4761

KG/kg

Steven Bohlen
 State Oil and Gas Supervisor

By 
 Bruce Hesson, 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.



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

Rec'd 02-20-15 DOGGR D2 Ventura

FOR DIVISION USE ONLY		
Bond	Forms	
	OGGR-1	OGGR-21
	CAL WIMS	115V

NOTICE OF INTENTION TO REWORK / REDRILL WELL

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

P215-0022

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework / redrill well "Porter" 26E, API No 037-21319
(Check one)

Sec. 28, 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# H-40 at 659' (cemented to surface)
8-5/8", 36# K-55, N-80(cemented) at 7412'; WSO @ 7357'-7360'(8, 1/2" holes squeezed w/120 sks Class "G") 0'-5604' K-55 / 5604'-7412' N-80 WSO @ 7483' (w/4, 1/2" holes).
6-5/8", 28#, K-55 from 7398'-7916'; WSO @ 7521'-7523' Perf w/ 1/2" jspf from 7540'-7545', 7568'-7572', 7613'-7676', 7691'-7761', 7798'-7808', 7822'-7854' 7860'-7912' TD: 7916' MD / PBTD: 7912

The total depth is 7916 feet

The effective depth is 7912 feet.

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

Anticipated completion zone(s): Sesnon (Storage)
(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 the 8-5/8" production casing, perforate and squeeze the 8-5/8" production casing if necessary.
Clean out fill to the bottom of the 6-5/8" liner at 7912' (+/-)
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 SoCal Gas			
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 	Date 2-20-2015
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: February 20, 2015
OPERATOR: Southern California Gas Company
FIELD: Aliso Canyon
WELL: Porter 26E
CONTRACTOR: Rival Rig #12
OBJECTIVE: Pull the existing 2-7/8", 6.5# L-80 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", 6.5# L-80 completion string if required.
API Number: 037-21319
ELEVATION: Take all measurements from the original KB = 12' above GL (GL@ 2505').
SURFACE LOCATION: Sec 28, T3N, R16W, S.B. B&M (34.315774, -118.557116)

PRESENT WELL CONDITION (See attached wellbore schematic(s)):

0' - 659'	13-3/8"	48#	H-40	Cemented (surface)
0'-7412'	8-5/8"	36#	K-55 N-80	Cemented - WSO @ 7357'-7360' (8, 1/2" holes squeezed w/120 sks Class "G") 0'-5604' K-55 / 5604'-7412' N-80
7398'- 7916'	6-5/8"	28#	K-55	Liner - WSO @ 7521'-7523' Perf w/ 1/2" jspf from 7540'-7545', 7568'-7572', 7613'-7676', 7691'-7761', 7798'-7808', 7822'-7854' 7860'-7912' TD: 7916' MD / PBTD: 7912'

Estimated Wellbore Top of Geologic Markers:

MP: 7190' MD / 7080' TVD
 S1: 7435' MD / 7307' TVD
 S4: 7537' MD / 7477' TVD
 S8: 7610' MD / 7548' TVD
 HZ: 7788' MD

Estimated Surface Pressure: 2150 psig (variable)

Estimated Bottomhole Static Temperature: 160 deg F @ TD / 100 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.

A wireline temperature survey run in August 2012 showed a pick up depth at 7853'.

There is a suspected leak in the 2-7/8", completion tubing below the XN profile or a possible casing leak. 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 128-38 Model D packer and there is an HES G-6 retrievable mechanical set packer with a tubing overshot installed above the original 2-7/8" tubing stub connected to the Baker seal assembly.

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 7 bbl. The tubing volume is approximately 43 bbl and the tubing/casing annulus is approximately 380 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#, L-80 tubing string and pull out of the hole with the completion tubing, and the GLM. Release the HES G-6 completion packer and the tubing overshot as per the vendor recommendation. Lay down the 2-7/8" L-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 tubing overshot completion from the Baker Retrieval permanent packer seal tubing stub, then run in the hole with a wireline chemical cutter and cut the completion string between below the HES G-6 packer and the tubing below.
6. Remove and lay down the 2-7/8", L-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 HES G-6 mechanical set packer.

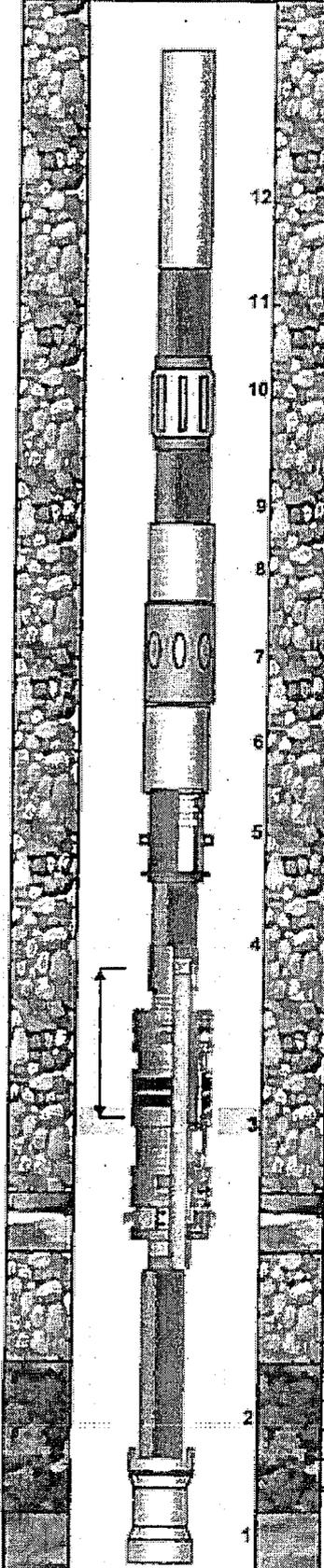
7. Pick up an 8-5/8", 36# casing scraper on the 2-7/8" workstring and run in the hole to the top of the Baker Model D permanent packer seal assembly tubing stub at 7394'(+/-). Circulate the hole clean.
8. Rig up the wireline unit and run a high resolution USIT/CBL/Neutron log in the 8-5/8" production casing from the top of the permanent packer profile at 7394' to the surface. Rig down the wireline unit and the associated equipment. Note: If the well won't support the column of workover brine and stay full to the surface, then make up and run an 8-5/8" retrievable bridge plug on the 2-7/8" workstring, set, pressure test, and sand off, prior to running the casing inspection logs.
9. If the existing 2-7/8" tubing stub and Baker seal assembly have been removed, then make up a cleanout BHA with a 2-1/16" tubing tail on the 2-7/8" workstring and run in the hole, tag fill and make an attempt to clean out the 6-5/8", 28# liner to 7912'(+/-). Otherwise skip to the next step in the workover program.
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, then pick up an 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 an 8-5/8" test packer on the 2-7/8" workstring 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. Also continue to pressure test the 8-5/8" production casing to the surface as per the pressure testing schedule. Also note the combination 8-5/8" casing grades K-55 and N-80 and adjust the pressure testing schedule accordingly.
15. Pressure test the wellhead seals to a minimum of 3300 psig. If the wellhead seals do not test them 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. Inspect the wellhead valves, if required then 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. If the wellhead seals did not properly pressure test then, 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 8-5/8" mechanical set production packer, and a new tubing overshot seal assembly. NOTE: Place the various completion equipment components at the same depths as the completion that was removed from the well. Run in the hole to 7394'(+/-) and land the completion string in the permanent packer seal assembly tubing stub as per the 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, the instrumentation, pressure test the laterals/connection and release the well to operations.



Halliburton Energy Services		NEW	
VANNSYSTEM INSTALLATION		<input type="checkbox"/> Shoot & Pull	
Company SO CAL GAS		Co. Representative MIKE VOLKMAR	
Well Name PORTER 26-E		Field Name ALISO CANYON	
County VENTURA		DATE 11/3/2010	
Casing	Size 8 5/8	Weight 24-40	Depth
			C.O.E 0.00
Tubing	Size 2.875	Weight 6.50	Thread
Perforations		BHA Length (R.A.to bottom)	
			Fluid Level in Tubing
			BHP
			BHT
			FLUID WT.
			FLUID TYPE
			DEVIATION

Item	Description	OD	ID	Length	Depth
	NOTE: BOTTOM OVER SHOT IN 3FT ON CUT JOINT				
	NOTE: UP WEIGHT IS 47K UP 45K DOWN				
	NOTE: LANDED HANGER WITH 10K IN COMPRESSION				
	NOTE: RELEASING PACKER PUT WEIGHT DOWN ON PACKER				
	1/4 TURN TO THE RIGHT AND PICK UP.				
					0.00
					0.00
15	KB			12	12.00
14	TUBING HANGER AND FATIGUE NIPPLE	2.875	2.441	1.75	13.75
13	2 7/8" EUE 8RD 6.5# N-80 10',4',1' PUPS	3.68	2.441	15.26	29.01
12	2 7/8" EUE 8RD 6.5# N-80 231 JOINTS	3.68	2.441	7236.07	7265.08
11	2 7/8" EUE 8RD 6.5# N-80 PUP	3.68	2.441	4.17	7269.25
10	2 7/8 8RD GAS LIFT MANDREL	4.437	2.441	6.33	7275.58
9	2 7/8" EUE 8RD 6.5# N-80 PUP	2.875	2.441	1.90	7277.48
8	2 7/8" EUE 8RD 6.5# N-80 1 JOINT	3.68	2.441	31.28	7308.76
7	2 7/8 EUE 8RD SLIDING SLEEVE	3.91	2.313	4.05	7312.81
6	2 7/8" EUE 8RD 6.5# N-80 1 JOINT	3.680	2.441	31.31	7344.12
5	2 7/8" EUE 8RD ON & OFF TOOL	6.37	2.312	2.15	7346.27
4	2 7/8" EUE 8RD 6.5# N-80 PUP	3.680	2.441	6.17	7352.44
3	8 5/8" 24-40# D&L PACKER	7.500	2.500	7.41	7359.85
2	2 7/8" EUE 8RD 6.5# N-80 PUP	3.680	2.441	4.18	7364.03
1	2 7/8 EUE 8RD OVER SHOT	7.375	3.120	3.83	7367.86

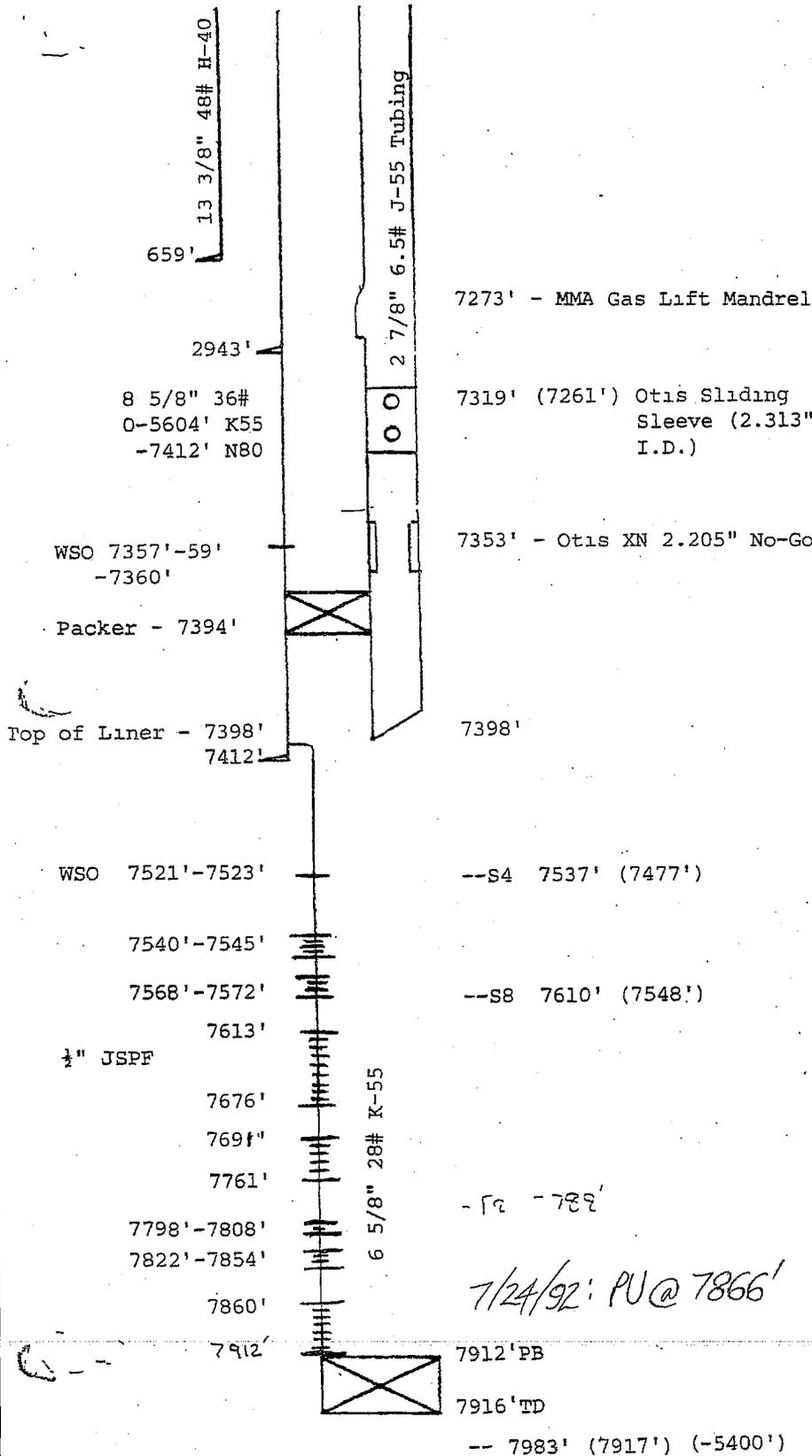


Elevation - 2505' G.L.

KB:12' M.V. - 8'
Casing Flow String

-26E (IW-54)
Rec'd 02-20-45 DOGGR D2 Ventura

10/26/72 - Well spud
12/11/72 - Well completed
6/29/76 - Well cleaned out to 7918'. Tubing run with SSSV.
8/5/83 - 9/18/83 - To repair shoe leak. Milled liner from 7224' to 7398'. Shot 8 1/2" holes from 735' to 7359'. Squeezed 120 sacks of Class "G" cement with final pressure of 2500 psi. Completed well.



MP-7190'
SI-7435'

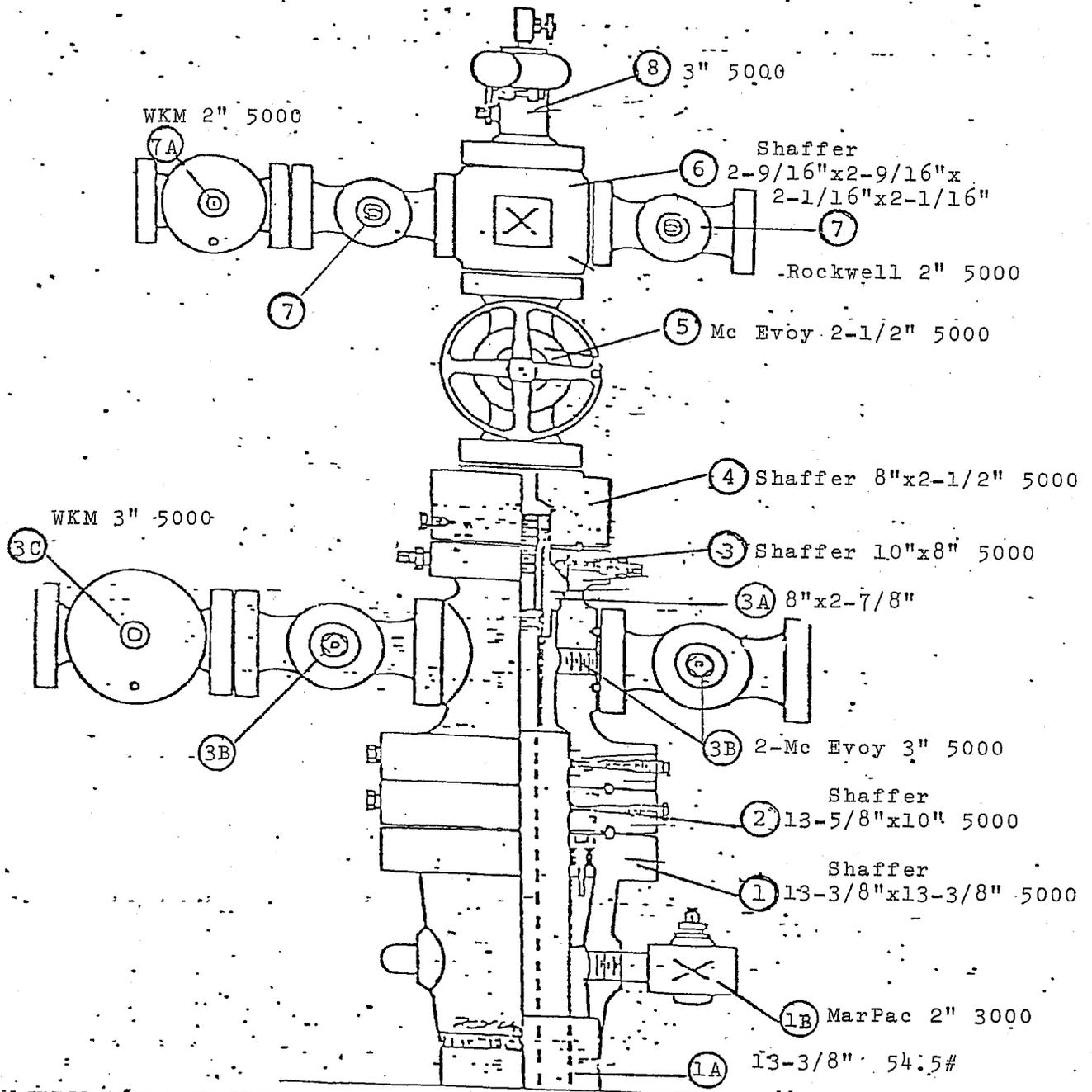
7/24/92: PU @ 7866'

WELL VOLUME		
	CU.ft.	Bbl.
Tubing	240	43
Csg/Lnr	40	7
Annulus	2136	380

5/ 30/85

TYPE IV

Rec'd 02-20-15 DOGGR D2 Ventura



Well Name: IW 54 - Aliso Canyon

Mfgr.: Shaffer

Date Prepared: 11-29-82

Well No. IW. 7. 54. P. 26E.

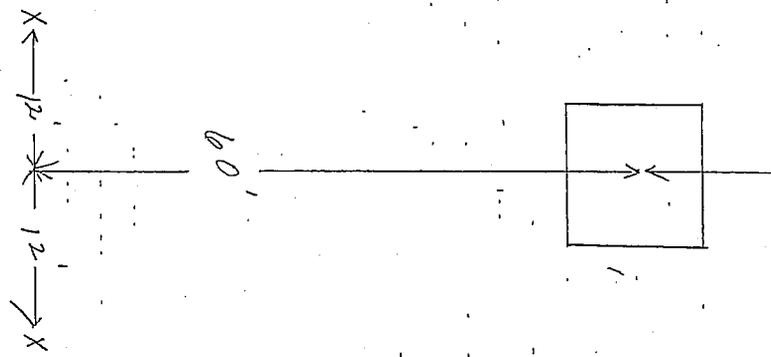
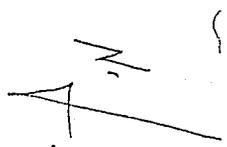
Rec'd 02-20-15 DOGGR D2 Ventura

Field. Aliso

Date Prepared. 3-19-81

Wellhead Mfgr. Shaffer

1. Casing Head. Shaffer. Size. 13-5/8" x 13-3/8" Type. KD. SOW.
 - Slips & Pack-off. 13-5/8" x 8-5/8" KD
 - A. Surface Csg. Size. 13-3/8" Wt. 54.5# 48# Grade. C
 - B. Casing Head Valve. Maypac. Size. 2" 3000 Fig. No. CSB-790-JN
2. Seal Flange. Shaffer. Size. 13-5/8" x 10" 5000
 - A. Type Seal. PS-63 L.S. Ring. BX-160 & R-54
3. Tubing Head. Shaffer. Size. 10" x 8" 5000 Type. 55-63 L-1
 - Ring. R-54 & Ring. R-50
 - Outlets. 2-3" 5000 Sec. Seal. Lock screw
 - Valve Removal Thrd. 2-1/2" line pipe
 - A. Tubing Hanger. Shaffer. Size. 8" x 2-7/8" Type. AJO
 - B.P.V. Size. 2-7/8" Thrd. 4 LH
 - B. Tubing Head Valves. Mc. EVOY. Size. 3" 5000 Fig. No. 21055
 - C. Automatic Csg. Valve. WKM. Size. 3" 5000 Fig. No. 114522
4. Adapter Seal Flange. Shaffer. Size. 8" x 2-1/2" 5000 Type. AJO
 - A. Ring Size. R-50 & R-27
5. Master Valve. Mc. EVOY. Size. 2-1/2" 5000 Fig. No. 129
6. Xmas Tree Cross. Shaffer. Size. 2-1/16" x 2-1/16" Bore Thru. 2-1/2" Across 2-1/16"
7. Tubing Wing Valves. Rockwell. Size. 2" 5000 Fig. No. 21055
 - A. Automatic Tbg. Valve. WKM. Size. 2" 5000 Fig. No. 110261
8. Unibolt Size. 2-1/2" x 3" x 3-1/8" Inside Thrds
9. Wt. Landed in Csg. Head 266,000. Wt. 36# 2-7/8" Grade. K-55 Butt
10. Wt. Landed on Doughnut. 26,000. Wt. 6.5 Grade. K-55
11. Tubing Head to Ground Level. 2.87 Above



ANCHORS 1034

6-11-76

IW 54

*Division of Oil, Gas, and Geothermal Resources
District 2-Ventura
Log Report*

Operator Southern Calif. Gas Co.

Well Designation: Porter

26E

API Number: 03721319

Sec. 28 T. 3N R 16W SB

<i>Date Run</i>	<i>Type</i>	<i>Depth from</i>	<i>Depth to</i>
2/10/2006	Gamma Ray-Neutron Log	6290	7867
11/19/1972	Induction-Electrical Log	662	7396
8/16/2005	Pressure Survey	0	0
8/3/2006	Pressure Survey	0	0
11/12/1998	Temperature	0	0
10/26/1999	Temperature	0	0
11/2/2001	Temperature	0	0
8/5/2004	Temperature	0	0
8/16/2005	Temperature	0	0
8/3/2006	Temperature	0	0
10/13/2009	Temperature	0	0
10/21/2010	Ultrasonic Imager Gamma Ray	50	7330

	(1)	(2)	(3)	()	()	()
INTENTION	DRILL	REWORK	altering in G-5	REPERFORATE		
NOTICE DATED	10-25-72	6-29-76	7-12-83	02/09/2006		
P-REPORT NUMBER	172-1218	276-228	283-181	P206-47		
CHECKED BY/DATE						
MAP LETTER DATED	3-3-73	N/C	N/C	N/C		
SYMBOL	⊕ G					

	REC'D NEED		REC'D NEED		REC'D NEED		REC'D NEED		REC'D NEED		REC'D NEED	
NOTICE	10-26-72		7-1-76		7-14-83		02/07/06					
HISTORY	3-26-72		8-2-76		12-1-83		3/16/06					
SUMMARY	3-26-72											
IES/ELECTRIC LOG	8-22-75											
DIRECTIONAL SURV	8-22-75											
CORE/SWS DESCRIP												
OTHER	-						6/2 3/13/06					
RECORDS COMPLETE	10-1-75 TEA		Ⓜ		3-18-84 M		Ⓜ					

ENGINEERING CHECK

T-REPORTS

OPERATOR'S NAME

WELL DESIGNATION

LOC & ELEV

SIGNATURE

SURFACE INSPECTION

FINAL LETTER OK

CLERICAL CHECK

POSTED TO 121 _____ 170 MAILED _____ FINAL LETTER _____

MAILED _____

RELEASED BOND _____

REMARKS: _____

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

NOTICE OF INTENTION TO REWORK / REDRILL WELL

P206-4

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

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

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

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to

rework/redrill well Porter 26E (Circle one) API No. 03721319
(Well designation)

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

Los Angeles County.

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

- 0-659' 13-3/8" 48# H40 Surface csg;
- 0-7412' 8-5/8" 36# K55 & N80 Prod. csg;
- 7398-7912' 6-5/8" 28# K55 liner;
- 2-7/8" 6.5# J55 EUE Brd tbg landed on 8-5/8" Baker Model 'D' pkr @ 7394';
- 6-5/8" csg perforated w/ four 1/2" HPF from 7540-7545', 7568-7572', 7613-7676', 7691-7761', 7798-7808', 7822-7854' and 7860-7912'.

2. The total depth is: 7916 feet. The effective depth is: 7912 feet.

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

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

5. Last produced: 1/2005 0 0 12,524
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

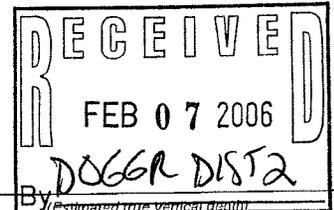
(or)

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

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

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

Re-perforate storage-zone (Sesnon) w/ 2 SPF (1-11/16" strip gun loaded w/ Enjet-DP 1.69", RDX, ~0.28" hole) from 7545-7556', 7595-7604', 7613-7676', 7691-7761', 7790-7798' and 7798-7808' (171' total).



For redrilling or deepening: NA NA
(Proposed bottom-hole coordinates)

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

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

File In Duplicate

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 well in Sec. 28, 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:

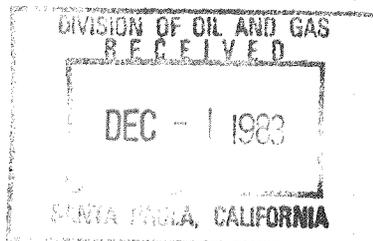
From:	To:
IW 54 (037-21319)	"Porter" 26E (037-21319)
IW 55 (037-21353)	"Porter" 26C (037-21353)
IW 65 (037-21320)	"Porter" 26D (037-21320)
IW 69 (037-21322)	"Standard Sesnon" 25A (037-21322)
IW 74 (037-21357)	"Porter" 26B (037-21357)
IW 79 (037-21361)	"Standard Sesnon" 44B (037-21361)
IW 80 (037-21362)	"Porter" 26A (037-21362)
IW 83 (037-21455)	"Standard Sesnon" 44A (037-21455)

bb

M.G. MEFFERD, State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear, Deputy Supervisor

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



History of Oil or Gas Well

Operator Southern California Gas Company, Field Aliso Canyon County Los Angeles
Well IW #54, Sec. 28, T. 3N, R. 16W, SB. B. & M.
A.P.I. No. 037-21319 Name J. P. Anand Title Agent
Date October 7, 1983 (Person submitting report) (President, Secretary or Agent)

Signature J. P. Anand

P.O. Box 3249, Terminal Annex, Los Angeles, Ca 90051 (213) 689-3925
(Address) (Telephone Number)

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

Date

MWO #99230 was issued to repair shoe leak.

1983

8-5 Day 0. Moved from SS-#2 to IW #54 & rigged up.

8-6 Day 1. Rigged up SPS #39.

8-8 Day 2. Rigged up. Fabricated cover for nearby IW #65. Installed marsh anchor. Installed back pressure valve. Removed Xmas tree. Installed 9" Class III, 3000 psi BOPE. Rigged up choke manifold, flow lines & bell nipple.

8-9 Day 3. Finished rigging up. Pressure tested blind rams, pipe rams & choke manifold to 3000 psi for 20 minutes. Tested Hydril to 2000 psi for 20 minutes. Witnessed by DOG. Unlanded tubing from Baker packer. Circulated well for 1.5 hrs. at 800 psi. Pulled out of well to 2000'.

8-10 Day 4. Filled well with 2 bbls drilling fluid. Finished pulling out of well. Ran into well with Baker "CJ" milling tool, 2 junk baskets & 6 - 4-3/4" O.D. drill collars. Shut down for rig repairs from 9:00 a.m. to 10:00 a.m. Ran into well. Located packer but unable to get Kelly on. Safetyed tool & pulled out of well. Reset tool & ran back into well to 7000'.

8-11 Day 5. Filled well with 1 bbls polymer drilling fluid. Ran in well from 7000' to packer. Milled Baker packer. Pushed packer down to 7205'. Pulled out of well but did not recover packer. Made up new shoe on CJ milling tool. Ran back in well to 6432'. Latched packer & milled for 30 minutes. Pulled up to 6307'.

8-12 Day 6. Fill well with 1 bbl polymer completion fluid. Pulled out of well from 6307'. Recovered packer mandrel. Ran in well with 2-7/8" saw-tooth collar on 2-7/8" tubing to 2500'. Slipped & cut drilling line (80'). Finished running into well to 7229', 5' below liner top. Unable to go deeper. Pulled out of well. Ran in well with 5-5/8" O.D. concave mill. Milled Junk to 7231'. Ran to bottom

of liner at 7912'. Pulled up to 7180'.

- 8-13 Day 7. Pulled out of well from 7180'. Laid down mill. Ran in well open-ended with 2-7/8" tubing to 7380'. Equalized 95 sacks of silica sand. Pulled out of well. Ran Hercules electric line and found top of sand at 7342'. Ran tubing to top of liner.
- 8-15 Day 8. Ran open end tubing to 7342' and backscuttled sand out to 7404'. Checked in one hour for firm sand plug. Pulled out of well. Using Hercules Electric line laid cement from 7404' to 7393'. Ran 7-5/8" O.D. Mill, on (2) 5" O.D. junk baskets and 6 - 4-3/4" O.D. drill collars to 7224' and milled to 7227'.
- 8-16 Day 9. Continued milling to 7232' (5' in 9 hours). Displaced 417 bbls of 63#/cu.ft. 36 seconds viscosity polymer with 417 bbls of 63#/cu.ft. 80 seconds viscosity polymer and continued milling for 2 additional hours with no progress. Started out of well measuring tubing.
- 8-17 Day 10. Finished pulling out with Mill #1. Ran 7½" O.D. Mill on milling assembly and continued milling 6-5/8" liner from 7232' to 7241'. Tubing twisted off. Circulated well. Started out with tubing. Brakes on rig failed. Shut down for repairs at 4:00 p.m.
- 8-18 Day 11. SPS Rig down for brake linkage replacement.
- 8-19 Day 12. Repaired rig. Pulled out of well to 4366' where tubing pin had sheared. Ran Bowen 3-3/32" overshot on 2-7/8" tubing to 4366'. Attached to fish and pulled out to overshot. Removed bad joint and ran Mill back to 7240-½' and continued milling to 7241-½'.
- 8-20 Day 13. Continued milling with Pilot Mill #2 from 7241.5' to 7274'. Pulled 5 stands.
- 8-22 Day 14. Continued milling up 6-5/8" 28# casing with Mill #2 from 7266' (corrected depth) to 7281'. Mill stopped cutting. Circulated 1½ hours and pulled out of well. Made up 7½" O.D. Pilot Mill #3 on milling assembly and started in well.
- 8-23 Day 15. Continued milling 6-5/8" 29# casing with 7½" O.D. Pilot Mill #3 from 7281' to 7314'. Pulled 5 stands.
- 8-24 Day 16. Continued milling 6-5/8" 28# casing from 7314' to 7324'. Mill torqued up. Pulled out of well. Found bottom guide (4½" long x 4" across had ground off of mill). Made up 4½" O.D. Cavins surge tool on 2-7/8" tubing and ran to 7325', and cleaned out to 7340'. Started out with surge tool.
- 8-25 Day 17. Finished pulling out with surge tool. (Recovered 5 gallons of cuttings). Ran 2-7/8" sawtooth collar on 2-7/8" tubing to 7325' and cleaned out to 7340'. Pulled out with collar. Ran 4½" fish tail bit on 2-7/8" tubing and cleaned out from 7340' to 7390'. Fill would not circulate out of well. Mixed 4 sacks of polymer in system and increased viscosity to 55 seconds and circulated for 1½ hours. Fill would not circulate out of well. Pulled 5 stands.

- 8-26 Day 18. Ran bit back to 7360' and found top of fill. Pulled out with fish tail bit and ran 2-7/8" Carbide tipped sawtooth collar to 7360'. Cleaned out to 7390' & backscuttled cuttings out from 7360' to 7390'. Pulled out of well and made up 7½" Mill #4 on milling assembly and started in well.
- 8-27 Day 19. Milled 6-5/8" 28# casing from 7324' to 7343' with 7½" O.D. Pilot mill #4. Circulated well and pulled 5 stands.
- 8-29 Day 20. Milled to 7371'. Twisted off, circulated clean and pulled out of well. Ran in well with Midway Fishing Tool's, overshot and worked over fish at 4439'. Pulled out of well and laid down Midway Fishing Tools. Ran in well to 7371' and milled to 7372.56'.
- 8-30 Day 21. Milled to 7373'. Circulated and pulled out of well to clean fill. Ran in well with 2-7/8" sawtooth collar and reverse circulated cuttings out of well. Ran in well with mill to 7018'.
- 8-31 Day 22. Pumped one bbl. of fluid to fill well and ran in well to 7372' and milled to 7391'. Unable to circulate. Pulled out of well, tubing extremely tight. Laid down mill and junk sub. Ran in well with 7-5/8" bit and scraper. Located fill at 7380'. Unable to clean out or circulate. Pulled out of well with 240' tubing.
- 9-1 Day 23. Pulled out of well with 7-5/8" bit and casing scraper. Ran in with sawtooth collar. Fill still at 7380'. Circulated and reverse circulated and cleaned out to 7390'. Flow lines plugged on 3 occasions. Backscuttled and pulled 5 stands. Ran back in well 15 min. later & found fill at 7385'. Unable to clean well by rotating, circulating and backscuttling. Pulled out of well.
- 9-2 Day 24. Ran in well with 7-5/8" junk mill, fill at 7387'. Milled to 7392'. Pulled 30 stands of tubing out of well and waited one hour. Ran back in well and located fill at 7388'. Circulated for 2 hours and pulled up 30 stands. Ran in well and located fill at 7390'. Pulled out of well. Laid down mill and cleaned out junk subs. Ran in well with sawtooth collar and located fill at 7388'. Circulated, rotated and cleaned out to 7390'. Backscuttled 3 hours. Picked up 70 stands of tubing.
- 9-3 Day 25. Reverse circulated polymer workover fluid out of well with clean salt water. Mixed cement and used Hercules cement dump bailer to lay cement plug from 7389' to 7371'.
- 9-6 Day 26. Ran in well and located cement at 7371'. Ran Johnston retrievable retainer to 7058' with tubing tail at 7359'. Rigged up Halliburton and attempt to obtain breakdown at 2700 psi. Equalized 75 cu.ft. of 12% Hcl and 3% HFL and maintained pressure at 2700 psi for 2 hrs. with no breakdown. Pulled out of well. Rigged up McCullough wireline to perforate. McCullough's collar depth did not correlate with cement bond. McCullough located cement at 7353' instead of 7371'.
- 9-7 Day 27. Pulled out of well with 2-7/8" tubing and ran in with McCullough perforated gun. Located bottom at 7356'. Pulled out, laid down McCullough tools and ran in well with 7-5/8" bit and scraper and cleaned out fill from 7362' to 7370'. Backscuttled, pulled up 30'

and waited 30 min. Located bottom at 7370'. Pulled out of well and ran McCullough perforated gun and located bottom at 7359.2'. Shot 8- $\frac{1}{2}$ " holes from 7359' to 7357'. Laid down McCullough tools and ran in well with Johnston retrievable retainer. Pressure up to 2700 psi with salt water with Halliburton but no breakdown obtained.

- 9-8 Day 28. Equalized with 75 cu.ft. of acid and squeezed acid at 5.6 cu.ft./min. and 2600 psi. Pulled out of well & laid down Johnston retrievable retainer. Ran in well with Baker drillable retainer using McCullough wireline and set retainer at 7320'. Ran in well with Baker stinger and squeezed acid away at 8 cu.ft./min and 2500 psi. Squeezed holes with 69 cu.ft. of cement with final pressure at 2200 psi. Cleaned holes by 50 cu.ft. & pulled 15 stands.
- 9-9 Day 29. Ran in well to retainer and obtained breakdown rate of 11 cu.ft./min at 2500 psi. Squeezed 60 sacks of Class "G" cement. Displaced with 246 cu.ft. of water and cleared holes. Pressure build up unsatisfactory. Re-squeezed with another 60 sacks, leaving about 4 cu.ft. of cement below retainer. Pulled out of well and ran in with bit and junk subs to 7337'. Drilled to 7338'. Circulated.
- 9-10 Day 30. Drilled out retainer and cement from 7338' - 7370'. Pulled out of well and laid down bit and junk subs. Ran in well with Baker retrievable retainer and pressure tested casing with Dowell's pumps in 30 min. intervals as follows: 0 - 1000' at 4000 psi, 0 - 2300' at 3500 psi, 0 - 4600' at 2500 psi, 0 - 7370' at 2000 psi.
- 9-12 Day 31. Slipped and cut 40' of drilling line. Ran in well with 7-5/8" bit and drilled from 7376' to 7386'. Unable to drill any further. Pulled from well and ran in with 5-5/8" bit to get into the liner, drilled from 7386'-7398'. Pulled out and ran in with 5-5/8" concave mill and junk subs.
- 9-13 Day 32. Cleaned out fill with concave mill from 7398' to 7424'. Pulled out of well and cleaned out junk subs. Ran in well with saw-tooth collar to 7379' and changed over from salt water to polymer. Cleaned out sand from 7424' - 7912'. Reverse circulated well clean. Pulled out of 6-5/8" liner.
- 9-14 Day 33. Pulled out of well from 7912' and picked up Johnston test tools. Ran in well and set packer at 7350'. Rigged Johnston lines to withdrawal line and tested surface lines to 3600 psi. Opened well and unloaded fluid in rathole to Baker tank. Pressure upstream from choke remained at about 200 psi even after shutting off flow to Baker tank and waiting for 1 - 2 hours twice.
- 9-15 Day 34. Opened well to Baker tank & then flowed it into withdrawal line at 5000 McF/day for about 6 hrs. Pressure upstream from choke at start of flow test was 2200 psi. Ran noise log with McCullough tri-angle. Showed no gas movement. Closed Johnston test tools and bled gas in tubing to the Baker tank then filled tubing with polymer work-over fluid. Circulated gas in the rathole out of well. Pulled 30 stands of tubing.

- 9-16 Day 35. Pulled out of well and laid down Johnston test tools. Rigged up Dresser Atlas to run packer. Unable to get through 8-5/8" casing with gauge ring. Ran in well with packer on tubing past 8-5/8" casing with no problem. Pulled out of well and ran back in with packer on wireline and set Baker Model "D" packer at 7370' using reference collars at 7305' & 7348'. Pulled out of well and ran in with test seals and tested seals & packer to 1500 psi for 20 min. Pulled out and started laying down tubing.
- 9-17 Day 36. Laid down Kelly, 6 drill collars & 250 joints of 2-7/8" tubing. Ran in well with production equipment consisting of Baker production tube, Otis 2.205" No-Go Nipple, Otis sliding sleeve in the open position and a Camco gas lift mandrel. Hydrotesting new 2-7/8" tubing in singles while going in the well. Hydrotested 136 joints of tubing.
- 9-18 Day 37. Continued running in well with completion string, hydrotesting to 5,000 psi. Landed tubing with 10,000# on packer. Displaced polymer completion fluid from well with salt water. Installed and tested Xmas tree. Released rig at 11:00 p.m. 9-18-83.

DIVISION OF OIL AND GAS

Report on Operations

Mr. J. P. Anand, Agent
Southern Calif. Gas Company
Box 3249 Terminal Annex
Los Angeles, CA 90051

Santa Paula
October 26, 1983
Calif.

Your operations at well IW 54, API No. 037-21319,
Sec. 20, T. 5, R. 8/9/83, B. & M. Aliso Canyon Field, in Los Angeles County,
were witnessed on 8/9/83 by H. Fulco, representative of
the supervisor was present from 1300 to 1430. There were also present Sonny Miller,
contract foreman, Jerry Claudio, SCG Company rep.

Present condition of well: 22" em. 13'; 13 3/8" cem. 659'; 8 5/8" cem. 7412', c.p. 2943',
perf. 7380', WSO; 6 5/8" id 7224'-7916', c.p. 7523', perf. 7521', WSO, perf. 7540-
7912' at intervals. T.D. 7916'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

M. G. MEFFERD

State Oil and Gas Supervisor

By Murray W. Bosch
Deputy Supervisor
Murray W. Bosch

REPORT ON PROPOSED OPERATIONS

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

Mr. J. P. Anand, Agent
Southern Calif. Gas Co.
Box 3249 Terminal Annex
Los Angeles, CA 90051

Santa Paula, California
July 19, 1983

alter casing in

Your gas storage proposal to gas storage well IW 54
A.P.I. No. 037-21319, Section 28, T. 3N, R. 16W, SB B & M,
Aliso Canyon field, any area, Sesnon-Frew pool.
Los Angeles County, dated 7/12/83, received 7/14/83 has been examined in conjunction with records
filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Hole fluid of sufficient quality and quantity shall be maintained in the hole to control any subsurface condition, and a reserve supply shall be on hand for emergencies.
2. Blowout prevention equipment of at least DOG Class II 3M, with a hydraulic actuating system, shall be installed and maintained in operating condition at all times.
3. This office shall be consulted before initiating any changes or additions to this proposed operation, or if operations are to be suspended.

Blanket Bond
MS:b

M. G. MEFFERD, State Oil and Gas Supervisor

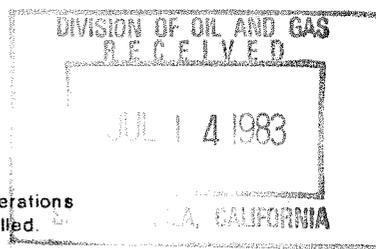
By *M. G. Mefferd*
Deputy Supervisor

A copy of this report and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well



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

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

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well IW #54 (Well designation), API No. 037-21319

Sec. 28, T. 3N, R. 16W, SB. B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth 7916'
- Complete casing record, including plugs and perforations
13-3/8" cemented 659'
8-5/8" cemented 7412', WSO 7360', stage collar 2943'
692' 6-5/8" cemented 7916', Top 7224', plug 7912', WSO 7521'-23'
Perforated 7912'-7860', 7854'-7822', 7808'-7798',
7761'-7690', 7676'-7613', 7572'-7563' & 7545'-7540'
- Present producing zone name Sesnon & Frew; Zone in which well is to be recompleted -
- Present zone pressure 2300 psi; New zone pressure -
- Last produced Gas storage well
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcl/D)
(or)
Last injected _____
(Date) (Water, B/D) (Gas, Mcl/D) (Surface pressure, psig)

The proposed work is as follows:

- Move in & rig up. Kill well. Install BOPE & pressure test.
- Pull tubing. Recover packer from 7178'. Mill 6-5/8" liner 7224'-7400'.
- Set bridge plug near 7350', shoot holes 7270'-7269' & squeeze with cement.
- Drill out cement & bridge plug. Test & run Audio analyzer log.
- Set packer near 7390'. Run tubing & complete. Return to gas storage service.

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

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

Southern California Gas Company
(Name of Operator)

By J. P. Anand
(Print Name)
J. P. Anand 7-12-83
(Signature) (Date)

Telephone Number (213) 689-3925

△ OSP
 DIVISION OF OIL AND GAS
 RECEIVED
 AUG 2 1976
 SANTA PAULA, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR SOUTHERN CALIFORNIA GAS COMPANY FIELD Aliso Canyon

Well No. I.W. #54, Sec. 28, T. 3N, R. 16W, S.B. B. & M.

Date July 28, 1976, 19

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

P. O. Box 3249, Terminal Annex
Los Angeles, California 90051

Title Agent
 (President, Secretary or Agent)

(Address) (213) 689-3561 (Telephone Number)

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	
7-14-76	Killed well with 80#/cu.ft. brine-polymer drilling fluid.
7-16-76	Finished moving Pool Rig #26 from I.W. #55 to I.W. #54. Installed plugs in doughnut and removed Christmas tree. Installed and hooked up Class III 5000 psi B.O.P.E. Tested blind rams and pipe rams under 4000 psi with water for 20 minutes - O.K. Tested Hydril with 3000 psi for 20 minutes - O.K.
7-17-76	Tested blind rams and pipe rams with nitrogen under 4000 psi for 20 minutes. Tested Hydril with nitrogen under 3000 psi for 20 minutes - both tests O.K. Circulated and conditioned mud. Pulled out of Baker packer at 7170'. Pulling out of hole, removing 1/4" control line.
7-18-76	Idle.
7-19-76	Finished pulling out of hole. Ran 6" magnet on sand line. Recovered small pieces of band each of two trips. Ran in hole with 2 3/8" tail. Cleaned out from 7852' to 7918'. Circulated for one hour and pulled above packer.
7-20-76	Ran to 7913' and conditioned mud to 80#, 38 viscosity, 4.8 water loss. Pulled out of hole. Ran 7 5/8" bit and casing scraper to 7170'. Circulated for 1-1/2 hours. Started out of hole.
7-21-76	Finished pulling out of hole. Ran in hole with retrievable retainer. Tested 8 5/8" casing, as follows:

Surface to 7150'	1200 psi for 20 minutes
" " 5000'	1500 psi " " "
" " 4500'	1800 psi " " "
" " 4000'	2100 psi " " "
" " 3250'	2500 psi " " "
" " 2500'	2800 psi " " "
" " 2000'	3100 psi " " "
" " 1500'	3400 psi " " "
" " 1000'	3800 psi " " "

Surface to 500' 4000 psi for 20 minutes

Started in hole with production equipment. Hydrotesting to 5000 psi for one minute and changing collars.

7-22-76

Going in hole, testing tubing to 5000 psi.....19 doubles to go.

7-23-76

Ran 7188' of tubing and valves. Hydrotested to 5000 psi for one minute. Landed tubing with 6000# on packer. Picked up 18,000#. Installed Christmas tree and tested to 5000 psi for 20 minutes - O.K. Changed to lease salt water. Tested packer and seals with 1700 psi - O.K. Rig released at 10:00 P.M.

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

Report on Operations

No. T. 276-192

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

Santa Paula, Calif.
July 23, 1976

DEAR SIR:

Operations at well No. TW 54, API No 037-21519, Sec. 28, T. 3N, R. 16W,
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 7/17/76. Mr. T.E. Adams, representative of the supervisor was
present from 1230 to 1400. There were also present Allen Smith, foreman

Present condition of well: No additions to casing record since proposal dated 6/29/76.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

HAROLD W. BERTHOLF
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
JOHN F. MATTHEWS, JR.
State Oil and Gas Supervisor

By John L. [Signature] Deputy

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

REPORT ON PROPOSED OPERATIONS No. P 276-228

Mr. P. S. Magruder, Jr., Agent
Southern California Gas Co.
P.O. Box 54790 Terminal Annex
Los Angeles, Calif. 90024

Santa Paula, Calif.
July 9, 1976

DEAR SIR:

(037-21319)

Your proposal to rework gas storage Well No. IW 54
Section 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 6/29/76, received 7/1/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

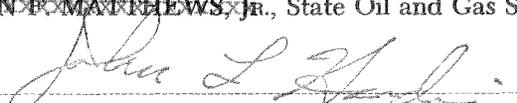
1. The drilling fluid used shall be of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts; and a reserve supply of this material shall be kept on hand to meet any emergency.
2. Blowout prevention equipment, at least of the Division of Oil and Gas Class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

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

Blanket Bond
MD:b

HAROLD W. BERTHOLF

~~JOHN P. MATTHEWS, Jr.~~, State Oil and Gas Supervisor

By  Deputy

DIVISION OF OIL AND GAS
RECEIVED

JUL 1 1976

DIVISION OF OIL AND GAS Notice of Intention to Rework Well

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

SANTA PAULA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	FORMS	
	114	121
DB	r	✓

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. #54, API No. _____, Sec. 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth. 7916'
- Complete casing record, including plugs and perforations:
 - 13 3/8" cemented 659'
 - 8 5/8" cemented 7412', stage collar 2943'
 - 692' 6 5/8" cemented 7916', cement plug 7913'
top of liner 7224'
WSO through 8 5/8" 7360' Perforated at intervals 7540'-7912'
cp'd through 6 5/8" 7523'
WSO through 6 5/8" 7521'
cement plug 7913'
- Present producing zone name SESNON Zone in which well is to be recompleted -
- Present zone pressure 3300 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, kill well, install B.O.P.E. and test.
- Pull tubing and clean out to 7916'.
- Pressure test 8 5/8" casing. Perform any remedial work indicated.
- Run tubing and safety valve.
- Recomplete as gas storage well.

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

Address P. O. Box 3249, Terminal Annex
(Street)
Los Angeles California 90051
(City) (State) (Zip)
Telephone Number (213) 689-3561

SOUTHERN CALIFORNIA GAS COMPANY
(Name of Operator)
By P. S. Magruder, Jr. 4/29/76
(Name) (Date)
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

MAR 26 1973

Operator Pacific Lighting Service Co. Well No. 1W 54

Sec. 28, T. 3N, R. 16W, SB B. & M. Aliso Canyon Field Los Angeles County.

Location From Station 84, 560.11' south and 3250.70' west

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

Elevation of ground above sea level 2505.24 feet USGS

All depth measurements taken from top of Kelly Bushing which is 12 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 March 21, 1973

Signed E. S. Maguire

E. A. Olson

B. F. Jones

Title Agent

(Engineer or Geologist)

(Superintendent)

(President, Secretary or Agent)

Commenced drilling October 26, 1972 GEOLOGICAL MARKERS DEPTH

Completed drilling November 28, 1972 Top Sesnon Zone S4 7537

Total depth 7916 Plugged depth 7913 Top Frew Zone 7788

Junk 3 bit cones at 7916'

Geologic age at total depth: Eocene

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

Initial production
Production after 30 days

Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
GAS STORAGE WELL					

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforation
13-3/8"	659'	sfc.	48#	N	S	H-40	17-1/2"	332	
8-5/8"	7412	sfc.	36#	N	S	N-80 & K-55	11"	995 ft ³ 762 ft ³	shoe 2943
6-5/8"	7916'	7224'	28#	N	S	K-55	7-5/8"	26	

PERFORATED CASING

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

8-5/8" - 7360' four 1/2" jet holes for WSO
6-5/8" - 7521' four 1/2" jet holes for WSO; 7523' four 1/2" jet holes squeezed with cement.
6-5/8" - Production Perforations; four 1/2" jet holes per foot; 7540-7545', 7568-7572', 7613-7676', 7691-7761', 7798-7808, 7822-7854' & 7860-7912'

Was the well directionally drilled? Yes Electrical Log Depths 7414' & 7916' (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 CanyonWell No. IW 54, Sec. 28, T. 3N, R. 16W, SB B. & M.Date March 21, 1973 Signed R. S. MaguireP.O. Box 54790, Terminal Annex
Los Angeles, CA 90054 (213) 689-3561 Title Agent

(Address)

(Telephone Number)

(President, Secretary or Agent)

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

1972

Date

Well drilled by Camay Drilling Company, Rig #18.
All measurements taken from kelly bushing which was 12' above concrete mat.

- 10-26 Spudded well at 5:30 pm and drilled 17-1/2" hole to 73'.
- 10-27 Drilled and surveyed 17-1/2" hole to 412'.
- 10-28 Drilled 17-1/2" hole to 541'. Lost 5 hours working on mud line.
- 10-29 Drilled 17-1/2" hole to 633'. Lost wing off stabalizer, Drilled same up.
- 10-30 Drilled and surveyed 17-1/2" hole to 660'. TO CEMENT 13-3/8" SURFACE CASING: Ran 17 joints or 665' of 13-3/8", 48#, H-40, R-3, 8 rd., ST&C, new seamless casing and cemented same at 659' with 232 sacks Class "G" 1:1 Perf-A-Lite cement with 4% gel and 2% calcium chloride mixed to 90#/cu ft slurry, followed by 100 sacks Class "G" cement mixed to 116#/cu ft slurry. Preceded cement 50 cu ft of water and displaced with 100 cu ft of water and 506 cu ft of mud to bump top rubber plug under 700# final pressure. Bled back 2 cu ft. Good circulation with cement returns to surface. Casing fitted on bottom with Baker stab-in float shoe, and 10' from shoe with one centralizer. 45 minutes mixing and displacing cement to place at 5:20 pm. Used Howco bulk cement & power. Cut and recovered 17.70' of 13-3/8" casing and welded on casing head. Tested same under 1500# psi for 15 minutes, OK.
- 10-31 Install GK Hydrill and double Shaffer, hydraulic BOP, and tested same to 1000# psi for Division of Oil & Gas. Drilled 11" holetto 761'.
- 11-1 Drilled and surveyed 11" hole to 1275'. Lost 4-1/2 hours on equipment. Mud: 73#, 35 sec., 8.5 cc., 5% solids.
- 11-2 Drilled and surveyed 11" hole to 1600'. Lost 5 hours on equipment. Mud: 69#, 34 sec., 9 cc., 3% solids.

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MAR 26 1973

TANA BEACH OILFIELD

- 1972
- 11-3 Drilled and surveyed 11" hole to 2534'.
Mud: 69#, 34 sec., 9 cc., 3% solids.
- 11-4 Reamed 2500'-2534' and drilled and surveyed 11" hole to 3197'.
Mud: 76#, 44 sec., 7 cc., 7% solids.
- 11-5 Drilled and surveyed 11" hole to 3834'.
Mud: 74#, 35 sec., 9 cc., 5% solids.
- 11-6 Pow-R-Drill 11" hole 3834'-3932', ream 3800'-3932' and drill & survey 11" hole to 4180'.
Mud: 70#, 35 sec., 9.2 cc., 4% solids.
- 11-7 Drilled and surveyed 11" hole to 4232' and Pow-R-Drill 11" hole to 4296'. Ran junk basket and recovered two cones off bit from Pow-R-Drill run.
Mud: 72#, 35 sec., 9 cc., 5% solids.
- 11-8 Reamed 4265'-4296' and drilled 11" hole on bit junk to 4389'.
Pow-R-Drill 11" hole 4389'-4430'.
Mud: 71#, 35 sec., 9 cc., 5% solids.
- 11-9 Pow-R-Drill and survey 11" hole to 4474'. Drilled and surveyed 11" hole to 4703'.
Mud: 71#, 35 sec., 9 cc., 5% solids.
- 11-10 Drilled and surveyed 11" hole to 5345'.
Mud: 73#, 35 sec., 9 cc., 5% solids.
- 11-11 Drilled and surveyed 11" hole to 5745'. Lost 5 hours on equipment.
Mud: 72#, 37 sec., 9 cc., 5% solids.
- 11-12 Drilled and surveyed 11" hole to 6130'. 3-1/2 hours work on pump.
Mud: 74#, 40 sec., 9.5 cc., 8% solids.
- 11-13 Pow-R-Drill 11" hole to 6140'. Down 11 hours for draw works repair.
Mud: 73#, 36 sec., 8.1 cc., 5% solids.
- 11-14 Dyna drill 11" hole to 6151'. Down 19 hours draw works repair.
- 11-15 Dyna drill 11" hole to 6223'. Ream 6130' to 6223' and drill and survey 11" hole to 6378'.
Mud: 71#, 35 sec., 8.6 cc., 5% solids.
- 11-16 Drilled and surveyed 11" hole to 6856'.
Mud: 72#, 36 sec., 8.8 cc., 6% solids.

1972

- 11-17 Drilled and surveyed 11" hole to 7050'.
Mud: 72#, 35 sec., 9 cc., 5% solids.
- 11-18 Drilled and surveyed 11" hole to 7295'.
Mud: 70#, 39 sec., 8.8 cc., 5% solids.
- 11-19 Drilled and surveyed 11" hole to 7414'. Ran Welex Induction-
Electric log and recorded from 659' to 7401'.
Mud: 71#, 38 sec., 9 cc., 5% solids.
- 11-20 TO CEMENT 8-5/8" CASING: Ran 183 joints or 7414' of 8-5/8", 36#,
K-55 & N-80, R-3, Buttress thread, new seamless blank casing and
cemented same at 7412' with 943 cu ft Class "G" 1:1 Diamix A
cement with 4% gel and 52 cu ft Class "G" cement with 2% calcium
chloride mixed to 104# and 116# per cu ft slurry respectively.
Preceded cement with 100 cu ft water and displaced with 2606 cu ft
of mud to bump plug at 1:52 pm under 3500# final pressure. Held
3500# for 15 minutes and bled back 21 cu ft for final displacement
of 2565 cu ft. Opened stage collar at 2943'. Preceded cement with
30 cu ft of water and displaced 762 cu ft of Class "G" 1:1-1/2 Dia-
mix A cement with 4% gel mixed to 104# per cu ft slurry. Displaced
with 1036 cu ft of mud to bump plug at 3:45 pm under 3000# final
pressure. Bled back 6 cu ft for final displacement of 1030 cu ft.
Moved casing 10' while mixing cement. 1 hour 34 minutes mixing
and displacing cement. Used Byron-Jackson bulk cement and power.
Good circulation throughout both jobs.
- CASING DETAIL
Bottom 44 joints or 1808.55 (7412' to 5604') N-80 fitted on bottom
with Davis fill-up float shoe and at
7367' with Davis fill-up float collar.
Turbo centralizers at 7402', 7382',
7290' and 7230'.
- Next 139 joints or 5603.45 (5604' to top of KB) K-55 fitted with metal
petal cement basket at 5400' & 1480' with
centralizers one joint above and below each basket.
Stage collar at 2943' with one centralizer on collar
above.
- Total 183 joints or 7412'
- 11-21 Cut and recovered 13.85' of 8-5/8" casing. While landing casing
sling on BOP broke necessitating recutting of 8-5/8" stub. In-
stalled secondary 8-5/8" packing and re-installed BOP, testing same to
1000# pressure OK. Ran 7-5/8" bit with 8-5/8" casing scraper
above but could not work scraper past 8-5/8" stub. Removed scraper
and drilled out cement 2933' to stage collar at 2943'. Drilled out
stage collar and cleaned out to cement at 7357'. Drilled out cement
to 7363'.

1972

- 11-22 TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7360': Ran Lynes combination gun and tester on 5" drill pipe and shot four 1/2" jet holes at 7360'. Set packer at 7322' with tail to 7342'. Opened tool at 6:07 am for one hour test. Faint blow increasing to light steady blow at end of test. No gas to surface. Recovered 184' of drilling fluid testing 20 grains per gallon sodium chloride. No evidence of gas in mud. Charts showed tool functioned properly. Water shut-off witnessed and approved by Engineer for Division of Oil and Gas.
Removed BOP and installed bit guide in spool. Re-installed BOP and drilled out cement from 7363' to shoe at 7412' and conditioned drilling fluid for lower weight. Drilled 7-5/8" hole to 7488'.
Mud: 69#, 35 sec., 10 cc., 5% solids.
- 11-23 Drilled and surveyed 7-5/8" hole to 7706'.
Mud: 69#, 35 sec., 10.4 cc., 4% solids.
- 11-24 Lost two cones off bit. Ran junk basket and drilled on junk to 7707'. Recovered two cones and 1' of formation. Ran bit and junk sub and drilled and surveyed 7-5/8" hole to 7761'.
Mud: 69#, 35 sec., 10.4 cc., 4% solids.
- 11-25 Drilled and surveyed 7-5/8" hole to 7862'. Lost three cones off bit.
Mud: 68#, 35 sec., 10.4 cc., 3% solids.
- 11-26 Ran Globe junk basket and drilled on junk to 7864'. Recovered small pieces of cones and bearings. Ran 7-1/2" mill and milled on junk to 7866'.
Mud: 68#, 36 sec., 10.0 cc., 3% solids.
- 11-27 Reamed 7802' to 7866' and drilled 7-5/8" hole to 7912'.
Mud: 69#, 35 sec., 9.6 cc., 4% solids.
- 11-28 Drilled 7-5/8" hole to 7916'. 4' in two hours and lost all cones off bit. Ran Dresser Atlas Induction Electrolog, Sidewall Neutron and Densilog from 8-5/8" shoe to TOTAL DEPTH 7916' driller (7939' logger).
Mud: 68#, 35 sec., 11.0 cc., 4% solids.
- 11-29 Ran 17 joints or 692' of 6-5/8", 27.65#, K-55, Security flush joint, R-3, new seamless blank casing on 5" drill pipe and while setting hanger, liner setting tool failed, leaving liner in hole from 7224' to 7916'. Ran spear on 5" drill pipe and recovered portion of fish.

1972

- 11-30 Made two runs with fishing tool and recovered balance of fish.
TO CEMENT 6-5/8" LINER: Ran inverted swab cups on 3-1/2" cementing assembly on 5" drill pipe and set cups in liner at 7235'. Preceded cement with 500 gallons of "mud flush" and 50 cu. ft. of water. Pumped in 26 sacks Class "G" cement, 26 cu.ft. Pozmix D, 50# gel, 3/4 of 1% CFR 2 mixed to 95#/cu. ft. slurry. Displaced with 724 cu. ft. of mud to release liner pump down plug and followed with an additional 128 cu. ft. of mud to bump plug under 1100# final pressure. Bled back 3 cu. ft. Good circulation throughout job. 40 minutes mixing and displacing cement to place at 1:20 PM. Used HOWCO bulk cement and power.
- Ran 7-5/8" bit with 8-5/8" casing scraper above and cleaned out to top of liner. No cement. Scraped casing from 7164'-7224'.
- 12-1 Ran 5-3/8" bit with casing scraper above and cleaned out to 7913'. No cement.
TO TEST WATER SHUT-OFF ON 6-5/8" x 8-5/8" LAP AT 7224': Ran Johnston tester on 5" drill pipe and set packer at 7197' with tail to 7215'. Opened tool at 3:25 PM. Hard blow 10 minutes. Pulled loose at 3:35 PM. Recovered 185' rise in 5" drill pipe. Charts OK. WNSO by company test.
- 12-2 TO SQUEEZE 6-5/8" x 8-5/8" LAP WITH CEMENT: Ran Johnston retrievable cementer on 5", 19.5# drill pipe and set in 8-5/8" casing at 7130'. Lap took fluid at 4 cu. ft. per minute rate under 2200# pressure. Preceded cement with 50 cu.ft. of water. Pumped in 50 sacks Class "G" cement mixed to 116-118#/cu. ft. slurry and displaced in stages to obtain final 2000# pressure. Estimated 40 sacks away. Cement in place at 1:00 AM. Used Byron-Jackson bulk cement and power. Ran 7-5/8" bit with casing scraper above and located top of cement at 7180'. Drilled out cement to top of liner at 7224' and scraped 8-5/8" casing 7164'-7224'.
- 12-3 Ran 5-3/8" bit with 6-5/8" casing scraper above and cleaned out cement 7232'-7239' and run in to 7890'. Closed rams and pressured up with 1000#. Held OK.
RETEST WATER SHUT-OFF ON 6-5/8" x 8-5/8" LAP: Ran tester on 5" drill pipe and set packer at 7197' with tail of 7215'. Opened tool at 9:12 AM for one hour test. One minute puff blow, dead balance of test. Recovered 60' rise of drilling fluid in 5" drill pipe. Charts OK. Water shut-off approved by company test. Ran Dresser Atlas Cement Bond and Neutron logs. Ran Dresser Atlas gun and shot four 1/2" jet holes per foot at 7508' Neutron log depth, equivalent to 7523' on Induction Electrolog run of 11-28-72.

1972

12-4 TO TEST WATER SHUT-OFF ON HOLES IN 6-5/8" LINER AT 7523':
Ran Johnston tester on 3-1/2" and 5" drill pipe and set packer at 7476' with tail to 7494'. Opened tool at 12:27 AM. No blow first 4 minutes, light blow increasing to hard blow in 8 minutes when gas reached surface. Closed tool at 12:50 AM. Bled off gas and recovered 450' rise of drilling fluid slightly gas cut. Charts OK. Water shut-off NOT approved by company test.

TO SQUEEZE HOLES IN 6-5/8" LINER AT 7523' WITH CEMENT: Ran Johnston retrievable cement tool on 3-1/2" and 5" drill pipe and set tool at 7400'. Holes at 7508' took fluid at 24 cu. ft./min. rate under 1600# pressure. Preceded cement with 20 cu. ft. water and displaced 100 sacks Class "G" cement with 10 cu. ft. of water and 545 cu. ft. mud to close circulating ports. Followed with 100 additional cu. ft. of mud in stages to displace estimated 90 sacks away under 1700# final pressure. Cement in place at 11:00 AM. Used HOWCO bulk cement and power.

12-5 Ran 5-3/8" bit with scraper above and drilled out cement from 7395'-7510' and cleaned out to 7916'. Dresser Atlas shot four 1/2" jet hole at 7506' CBL measurement (7521' IEL measurement).

TO TEST WATER SHUT-OFF ON HOLES IN 6-5/8" LINER AT 7521': Ran Johnston tester on 3-1/2" and 5" drill pipe and set packer at 7476' with tail to 7493'. Opened tester at 3:00 PM for one hour test. Puff blow, dead balance of test. Recovered 30' rise of drilling fluid in 3-1/2" drill pipe. Charts OK. Water shut-off approved by company test.

12-6 Dresser Atlas ran Neutron Lifetime Log. Dresser Atlas ran jet gun and shot four 1/2" "Jumbo Jet" hole per foot 7880'-7882' NLL measurement.

PRODUCTION TEST OF INTERVAL 7880'-7882': Ran Johnston Multiflow Evaluator on 3-1/2" and 5" drill pipe and set packer at 7850' with tail to 7872'. Used 1000' fresh water cushion. Opened tool at 12:07 PM. Faint blow during 5 minute initial flow period. Took 20 minute initial shut in and reopened tool at 12:32 PM. Medium hard blow for 10 minutes then flowed well through Porter 26 flow line. Gas to surface in 12 minutes, 1/4" bean. Opened bean in stages to maximum of 30/64. Closed tool at 2:32 PM and took 2 hour final shut-in. Recovered 300' of muddy water testing 25 g/gal sodium chloride, and 20' of floury to medium grained sand. Sample container held 2.08 cu. ft. of gas at 600# psi and 175° F, no fluid.

Maximum flow rate on 30/64 bean of 862 MCF/D after tool open one hour. Flow at end of test on 30/64 bean was 594 MCF/D. Well produced 1.6 bbls. of water and 1.0 bbls of oil during test.

1972

12-6 PRESSURE RECORDER DATA

Initial hydrostatic	3630# psi
Initial flow	561
Initial shut-in	1600
Final flow	844
Final shut-in	1600 (immediate)
Final shut-in	3617

Note: See Johnston Technical Report # 19940B

12-7 Ran 5-3/8" bit with 6-5/8" scraper above and cleaned out 15' of fill 7898'-7913'. Displaced mud in hole with lease salt water treated with 3#/bbl. DMS. Lay down drill pipe.

12-8 Finished laying down drill pipe. Ran Dresser Atlas and shot four 1/2" holes per foot with "Jumbo Jet" charge 7798-7808', 7822-7854', 7860-7912', and with "Golden Jet" charge 7540-7545', 7568-7572', 7613-7676' and 7691-7761'. All depths from NLL run of 12-5-72.

12-9 Dresser Atlas set Baker Model D production packer at 7190'. Removed BOP, installed head. Wait on spool. Reinstall BOP. Run 2-7/8" tubing and 1/2" Bundy control line.

12-10 Finish running 2-7/8" tubing and 1/4" Bundy tubing control line. Control line tested to 5000# psi.

TUBING DETAIL
Bottom 11.00'

	Baker 120-38 Model G locator seal assembly with 2-7/8" 8rd EUE box with blank and chamfer pin, fitted on top with 2-7/8" x 3-1/2" crossover to 4.4' of Page 3-1/2" RTL rotating ball safety valve with equalizing ports and ported nipple assembly.
231 joints or 7162.83	6.5#, N-80, 8rd., upset, R-2, new smls.
next jt. or 8.00	ditto pup
next jt. or 8.00	ditto pup
next jt. or 1.00	ditto pup
KB to tbg. head 9.00	
Tbg. landed 7199.83	

12-11 Removed BOP, installed Christmas tree and tested upper and lower secondary seals for 15 minutes with 3450# psi OK. RIG RELEASED AT 7:00 AM 12-11-72.

Well 111

Porter 26E

DIRECTIONAL DRILLING REPORT

PACIFIC LIGHTING SERVICE COMPANY

PORTER- ALISO CANYON

WELL NO. IW-54

JOB NO _____

DATE 10-27-72

U. S.

DIRECTIONAL DRILLING SYSTEMS

2852 GARDENIA AVE.

LONG BEACH, CALIFORNIA

DATE COMPLETION 1972

SURVEY RECORD

GROUND ELEVATION 2505 FT.
KB 12 FT.
ELEVATION 2517 FT.

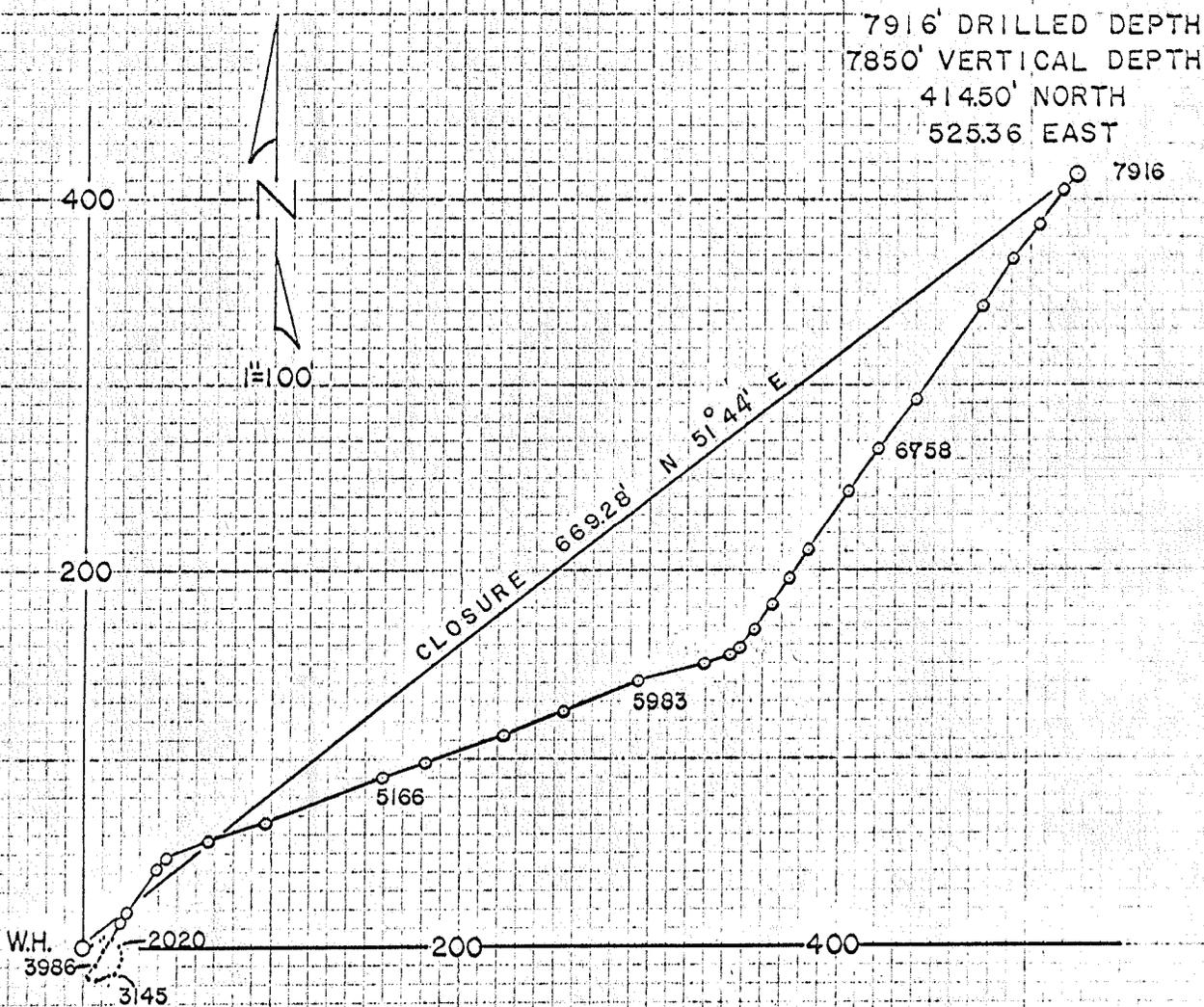
JOB NO _____

IM-54

DATE 10-27-72

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DIRECTION	RECTANGULAR COORDINATES				REMARKS
					NORTH	SOUTH	EAST	WEST	
1	.15	120		N 42 W	39			35	
2	.15	210		N 40 W	69			60	
3	.15	312		S 82 E	63			16	
4	VERTICAL	558		VERTICAL	63			16	
5	.15	660		S 15 W	20			28	
6	.30	780		N 66 E	63				
7	.30	900		N 66 E	63			67	
8	1.0	1090		N 66 E	1			62	
9	1.15	1300		N 67 E	2			67	
10	1.0	1394		N 69 E	4			8	
11	1.15	1600		N 72 E	4			10	
12	1.15	1838		EAST	4			14	
13	.30	2020		S 54 E	1			19	
14	.30	2333		S 20 E	46			19	
15	1.0	2534		S 27 E				20	
16	.45	2831		S 23 W	2			19	
17	1.0	3145		S 04 W	5			19	
18	.45	3285		S 34 W	9			19	
19	1.15	3640		S 84 W	14			14	
20	1.30	3829		S 66 W	14			6	
21	1.15	3868		S 37 W	17			26	
22	1.15	3899		N 14 E	47			26	
23	4.0	3985		N 36 E	15			37	
24	5.30	4078		N 31 E	34			53	
25	6.30	4173		N 28 E	14			12	
26	7.45	4232		N 31 E	68			28	
27	9.15	4266		N 32 E	9			5	
28	13.15	4389		N 35 E	77			10	
29	11.30	4431		N 38 E	18			19	
30	8.15	4600		N 70 E	41			15	
31	10.0	4785		N 73 E	48			38	
32	10.0	5165		N 69 E	55			74	
					66			90	
					66			68	
					89			97	
					76			89	

DIVISION OF OIL AND GAS
RECEIVED
AUG 21 1975
SANTA PAULA, CALIFORNIA



PACIFIC LIGHTING SER. CO.

WELL NO. IW-54

ALISO CANYON

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 172-1413

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

Long Beach, Calif.
Dec. 18, 1972

DEAR SIR:

Operations at well No. IW 54 (037-21319), Sec. 28, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on Nov. 22, 1972. Mr. W. Guerard, Engineer, representative of the supervisor was
present from 1115 to 1145. There were also present E. Olson, Engineer, and
L. Holiday, Tester Operator.

Present condition of well: 22" cem. 13'; 13-3/8" cem. 659'; 8-5/8" cem. 7412', cp 2943, perf. WSO
7360'. T.D. 7414'.

The operations were performed for the purpose of testing the water shut-off with a formation
tester.

Mr. ---- reported:

THE 8-5/8" SHUT-OFF AT 7360' IS APPROVED.

WG:dr

cc Company

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

By [Signature] Deputy

DIVISION OF OIL AND GAS

REPORT OF CORRECTION OR CANCELLATION

5199 E. Pacific Coast Highway
Long Beach 90804 California

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

December 6, 1972

Dear Sir:

In accordance with information in this office

the following change pertaining to your well No. IW 54 (037-21319) IW 65 (037-21320)
Sec. 27, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon field,
Los Angeles County, District No. 1, is being made in our records:

The corrected location is

The corrected elevation is

Report No. 172-1218 & 172-1220 dated November 2, 1972, has been
corrected as follows: FROM SEC. 27 to SEC. 28

CORRECTIONS MADE AS FOLLOWS:		BY
REPORT NO.	DATE	
172-1218 & 172-1220	NOV 2 1972	
DESCRIPTION		
FROM SEC. 27 TO SEC. 28		
INITIALS		

Your notice to (Drill, abandon, etc.) dated
and our report No. P, issued in answer thereto, are hereby cancelled
inasmuch as the work will not be done. If you have a drilling bond on file covering
this notice it will be returned. No request for such return is necessary.

Other:

ADS:rk
cc Company
Production Dept.

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

By W. L. Ingram
Deputy Supervisor

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 172-1316

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

Long Beach, Calif.
Nov. 17, 1972

DEAR SIR: correc. letter 12-6-72-rk
Operations at well No. IW 54 (037-21319) Sec. 27-28, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on Oct. 31, 1972. Mr. R. Dreessen, Jr., Engineer, representative of the supervisor was
present from 1900 to 2000. There were also present J. Gardner, Drilling Foreman.

Present condition of well: 13-3/8" cem. 659'. T.D. 659'.

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

Mr. ---- reported:

THE BLOWOUT-PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

RD:dr

cc Company

dr

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

By W. E. Ingram Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 172-1218

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

Inglewood, Calif.
November 2, 1972

DEAR SIR: correc. letter 12-6-72 rk

Your 28 proposal to drill Well No. IW 54 (037-21319),
Section 27, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 10/25/72, received 10/26/72, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. A COPY OF THIS REPORT SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.
2. Sufficient cement shall be pumped back of the 13-3/8" casing to reach to the surface.
3. Drilling fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
4. The surface casing shall be cemented in competent beds and blowout prevention equipment conforming to this Division's Class III requirements, shall be installed and maintained in operating condition at all times.
5. Sufficient cement shall be used to fill all the space back of the 8-5/8" casing to above the top of any oil, gas or salt water-bearing formations, or the casing shall be cemented also through ports at a point below the base of the fresh water-bearing formations with sufficient cement to fill above such base.
6. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
 - a. A test of the effectiveness of the blowout prevention equipment prior to drilling out cement in the shoe of the 13-3/8" casing.
 - b. A test of the effectiveness of the 8-5/8" shut-off above the Sesnon zone.

ADS:dr

cc Company

Blanket Bond

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

By *W. E. Ingram*, Deputy

NOV 1 1972

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

INGLEWOOD, CALIFORNIA

037-21319

Los Angeles Calif. Oct. 25 19 72

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. TW54 (037-21319), Sec. 28, 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: Porter Lease (plat has been filed)

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

Location of Well: 560.11 feet South ^{property} ~~along section line~~ and 3250.70 feet West ^{property} ~~council of section~~ at right angles to said line from Station B 4

Elevation of ground above sea level 2501 feet S.L. datum. All depth measurements taken from top of K.B. which is 12.0 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
<u>13 3/8"</u>	<u>48#</u>	<u>H-40 Sm.</u>	<u>0'</u>	<u>700'</u>	<u>700'</u>
<u>8 5/8"</u>	<u>36#</u>	<u>K-55 E' N-80</u>	<u>0'</u>	<u>7200'</u>	<u>7200' E' CP if necessary</u>
<u>6 5/8"</u>	<u>27.65</u>	<u>J-55</u>	<u>7150'</u>	<u>7400'</u>	<u>7400'</u>

Intended zone(s) of completion: Sesnon 7200'-7400' Estimated total depth 7400'
(Name) (Depth, top and bottom)

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

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

Address 720 West Eighth St. Pacific Lighting Serv. Co.
Los Angeles, Cal. 90017 By P.S. Magreder, Jr.
Telephone Number 213-689-3561 Type of Organization Corporation
(Name of Operator) (Corporation, Partnership, Individual, etc.)