

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

Rec'd 10-13-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator Southern California Gas Company Field Aliso Canyon County Los Angeles
Well Standard Sesnon 2 Sec. 29, T3N, R16W SBB&M
A.P.I. No. 03700755 Name Tom McMahon Title SIMP Project Manager
(Person submitting report) (President, Secretary, or Agent)
Date 9/27/2016
(Month, day, year) Signature 
Address PO Box 2300, SC9365, Chatsworth, CA, 91313-2300 Telephone Number 714-398-5020

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.

Daily Operation Period: 1/27/2016 - 1/28/2016

Operations this Report Period (DOGGR)

Rigged up Western Wireline. Held safety meeting. Ran in the hole with a 1.84" gauge ring. Tagged at 8,465'. Pulled out of the hole. Ran in the hole with a 1.87" PXN plug body. Set in Otis profile sub at 8,467'. Pull out of the hole with the running tool. Ran in the hole with the prong. Set prong into the plug body at 8,467'. Pull out of the hole with the running tool. Ran in the hole with a 1.87" B shifting tool. Could not locate the sleeve at 8,433'. Sliding sleeve is in the open position. PULled out of the hole. Rigged down wireline unit.

1.87" PXN plug installed at 8,467'.

Sliding sleeve is open

Daily Operation Period: 2/1/2016 - 2/2/2016

Operations this Report Period (DOGGR)

Held safety meeting with Operations. Rigged up Halliburton to pump kill fluid down the tubing with returns up the casing. Pressure tested the pump and lines to 2,000 psi. Good. Pumped 299 bbls of 8.5 KCL with corrosion inhibitor and biocide while bleeding the gas to the withdrawal line. Received fluid to surface after pumping 298.8 bbls. Bled tubing and casing to zero. Rig down pumping equipment. Secured the well.

Daily Operation Period: 7/26/2016 - 7/26/2016

Operations this Report Period (DOGGR)

MIRU 5000 psi test truck and iron to tubing wing valve. RU choke manifold to casing wing valve. RU vac truck to manifold and carbon canisters to vac truck.

Opened casing valve and topped off well with fluid by slowly pumping down tubing. With DOGGR representative on location, shut-in casing and pressured-up tubing to 1000 psi.

Tested packer, tubing plug and casing for 1 hour. Test recorded digitally and with circle-chart. Test witnessed approved by DOGGR. Bled down pressure, shut-in well, RDMO



State of California • Natural Resources Agency
Department of Conservation
Division of Oil, Gas, and Geothermal Resources
801 K Street • MS 18-05
Sacramento, CA 95814
(916) 445-9686 • FAX (916) 319-9533

Edmund G. Brown Jr., Governor
Kenneth A. Harris Jr., State Oil and Gas Supervisor

January 3, 2017

SENT VIA EMAIL

Mr. Rodger Schwecke
Vice President
Transmission and Storage
Southern California Gas Company
RSchwecke@semprautilities.com

FINDING THAT WELL STANDARD SESNON 2 (API NO. 03700755) HAS PASSED THE FIRST BATTERY OF TESTS AND WAS TAKEN OUT OF SERVICE AND ISOLATED FROM THE UNDERGROUND GAS STORAGE RESERVOIR

Dear Mr. Schwecke:

I am writing regarding the safety review results of one of the 114 wells at the Aliso Canyon gas storage facility (Facility). Each of the wells are subject to the comprehensive safety review that State Oil and Gas Supervisor Order 1109 and SB 380¹ require to be completed before the Division of Oil, Gas, and Geothermal Resources (Division) may authorize resumption of injection operations at the Facility. Order 1109 describes two batteries of well tests. To complete the review, each well must (1) pass both batteries of tests, (2) pass the first battery of tests and be taken out of service and isolated from the underground gas storage reservoir, or (3) be properly plugged and abandoned.

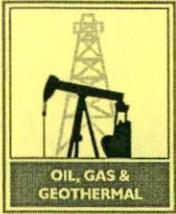
The first battery of tests assesses the casing using temperature and noise logs to ensure that there is no migration of fluids near the wellbore. If a well passes those tests, it may (1) undergo the second battery of tests for potential approval to use for injection if and when injections may resume, or (2) be taken out of service and isolated from the underground gas storage reservoir as specified in Steps 4b through 7b of the Safety Review Testing Regime of Order 1109 (Testing Regime). The Division posts the current status and testing results for each of the 114 wells on its website at <http://www.conservation.ca.gov/dog/AlisoCanyon/Pages/Well-Detail.aspx>.

After receiving and evaluating all test results and other data concerning the well, I find for purposes of Order 1109 and SB 380, that well Standard Sesnon 2 (API No. 03700755) has completed the first battery of the Testing Regime and was taken out of service and, on October 11, 2016, the well was isolated from the underground gas storage reservoir as specified in Step 6b of the Testing Regime. Monitoring and testing of the well must continue as required by Order 1109 and any applicable law. If the well does not pass the second battery of tests within one year of being isolated from the reservoir, then the well must be plugged and abandoned in accordance with Public Resources Code section 3208.

Sincerely,

Kenneth A. Harris Jr.,
State Oil and Gas Supervisor

¹ Senate Bill 380 (Pavley, Chapter 14, Statutes of 2016) codified in part at Public Resources Code section 3217.



RAL 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 216-0338

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 15, 2016

Your operations at well "**Standard Sesnon**" 2, A.P.I. No. **037-00755**, Sec. **28**, T. **03N**, R. **16W**, **SB B.&M.**, **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **7/26/2016**, by **Hafiz Ali**, a representative of the supervisor.

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

DECISION:

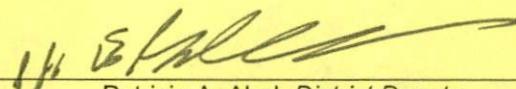
APPROVED

HAM/TKC

Kenneth A. Harris Jr.

State Oil and Gas Supervisor

By



Patricia A. Abel, District Deputy

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

T 216-0388
#16, 1

Casing and Tubing Pressure Test

Operator: So. Cal. Gas Co. Well Designation: "Standard Sesnon" 2
Sec. 28, T. 03N, R. 16W, S. B. B.M. API No. 037-00755 Field: Aliso Canyon
County, Los Angeles Witnessed on: 26-Jul-2016. Hafiz Ali, representative
of the supervisor, was present from 0930 to 1130.

Also Present were Michael Giuliani, Interact Consultant

Casing Record of the Well:
13-3/8" cem 923'; 9-5/8" cem 8801', perfs @ int 7975'-8050'; 6" Id 7726' - 8074', slotted 7875' - 8050'; 5" Id 8072'-
8274', slotted 8115'-8240'. Td 8801'. Plug w/cem 8801'-8273'.

The operations were performed for the purpose of P & S testing-WSO below pkr

Pressure Test of the Casing

Packer/ Bridge Plug at <u>8500'</u>	Well Type <u>Gas Storage</u>
Casing Pressured with <u>3% KCl</u>	Volume _____
Casing Pressure Start PSI: <u>1120psig</u>	Start Time: <u>1022</u>
Casing Pressure End PSI: <u>1084 psig</u>	End Time: <u>1122</u>
Pressure Held <u>60</u> Min. Total drop in Pressure _____	<u>36</u> psi <u>3</u> %.

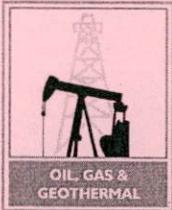
Test Result: Good Not Good

Pressure Test of the Tubing

Packer/ Bridge Plug at _____	Well Type _____
Tubing Pressured with _____	Volume _____
Tubing Pressure Start PSI: _____	Start Time: _____
Tubing Pressure End PSI: _____	End Time: _____
Pressure Held _____ Min. Total drop in Pressure _____	_____ psi _____ %.

Test Result: Good Not Good

Remarks: _____



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 216-0142**

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 20, 2016

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

Your proposal to **Rework** well "Standard Sesnon" 2, A.P.I. No. **037-00755**, Section **28**, T. **03N**, R. **16W**, **SB B.** & **M.**, **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **7/15/2016**, received **7/15/2016** has been examined in conjunction with records filed in this office. (Lat: **34.314786** Long: **-118.569017** Datum:83)

THE PROPOSAL IS APPROVED PROVIDED:

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

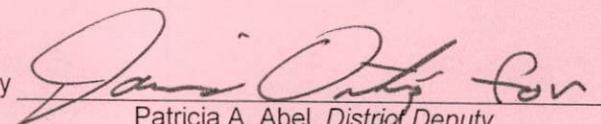
Continued on Next Page

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

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

CRK/do

Kenneth A. Harris Jr.
 State Oil and Gas Supervisor

By 
 Patricia A. Abel, District Deputy

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

NOTE:

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

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

**ATTACHMENT 1
TO DOGGR ORDER 1109**

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

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

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

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

REQUIRED TESTS FOR EACH WELL IN THE FACILITY

- Step 1:** The Operator shall perform an initial casing assessment on the well consisting of temperature and noise logs.
- a. **Temperature Log:**
A temperature survey shall be run from the surface to the packer to measure the temperature within the wellbore. A temperature survey that demonstrates no unexplained anomalous temperature changes in the well is one indication of casing integrity.
 - b. **Noise Log:**
An acoustic sensor survey capable of detecting the sound of fluid flow will be conducted the length of the well above the packer to the surface. The survey will include stops at least every 250 feet and at the midpoint of any anomaly detected by the temperature survey. The absence of anomalous sound above the packer is an indication of well integrity

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

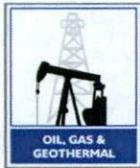
- a. Conduct daily gas monitoring at the surface of the non-operational well, including monitoring the area around the well perimeter and in the annular space between the plugged casing string and the outmost casing;
- b. Conduct noise log, temperature log and positive pressure test every six months;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

Rec'd 07-15-16 DOGGR Ventura

FOR DIVISION USE ONLY		
Bond	Forms	
	000114	OGD/21
CALL WIMS	115V	<input checked="" type="checkbox"/>

P216-0142

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 Standard Sesnon 2, API No. 037-00755
(Check one)

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

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

See attached wellbore schematic and completed work summary

The total depth is: 8808 feet. The effective depth is: 8757 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.

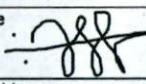
The proposed work is as follows: (A complete program is preferred and may be attached.)

7b - MIRU pump, 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, CA	Zip Code 91313-2300
Name of Person Filing Notice A.J. Alshamasi	Telephone Number: (818) 700-3887	Signature:  Date 07/15/2016
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.

Completed Work Summary - Standard Sesnon 2		
Step	Work Completed	Date
4b	Good cement returns to top of liner per records (TOL at 7557', Top MP 8270'), 121' Liner Lap	
5b	5" permanent packer set at 8500'	7/2/1977
5b	Set tubing plug in No-Go nipple at 8467'	1/27/2016
6b	Circulated well full of 3% KCl through sliding sleeve at 8433'	2/1/2016

Well Standard Sesnon 2 RD

API #: 04-037-00755-01
Sec 28, T3N, R16W

Operator: So. California Gas Co.

Lease: Standard Sesnon
Field: Aliso Canyon
Status: Active Gas Storage
BFW:
USDW:

Ground Elevation: 2873.34' asl
Datum to Ground: 6.93' KB

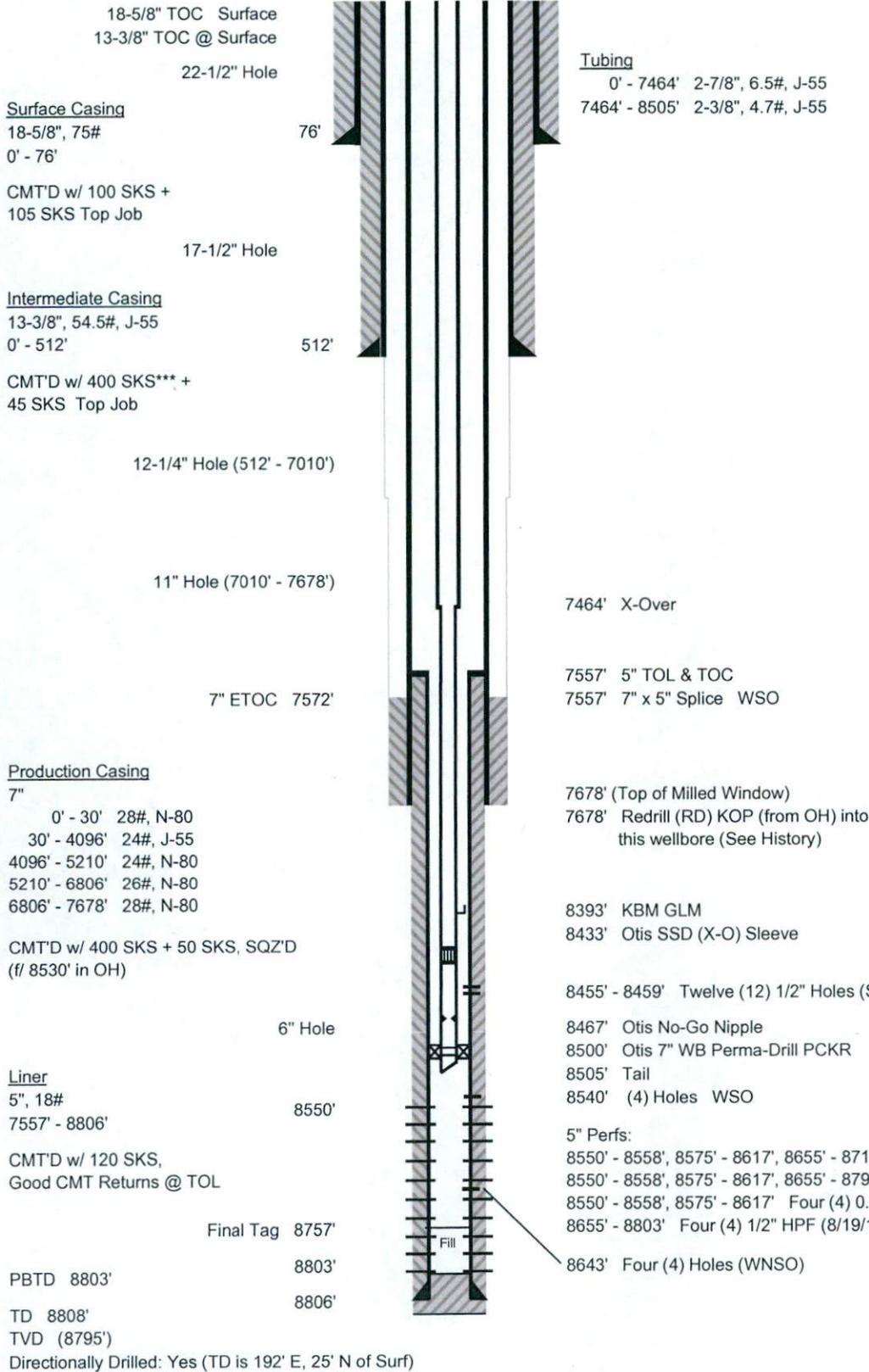
Spud Date: 3/11/1943
Redrill (RD) Kick-off Date: 7/25/1954
Completion Date: 9/7/1954

Junk: None

Wellbore History	
Orig. Hole (OH) TD @ 8821'	
(See Standard Sesnon 2 OH)	
RD KOP @ 7678'	
TD @ 8808'	

Notes	
***Lost circ. while CMT'ing 13-3/8" CSG w/ 50 CF CMT still to dispace, Had some CMT Returns to Surface	

Top of Zone Markers md (tvd)	
A1	4400' (4400')
A36	5500' (5500')
UP	5830' (5830')
LP	6240' (6240')
UDA1	6610' (6610')
MDA	7449' (7447')
LDA	7704' (7700')
MP	8270' (8257')
S1	8471' (8459')
S4	8552' (8539')
S8	8648' (8635')
S12	8786' (8773')



Prepared by: MAM (2/16/2016)
Updated by: LD (7/13/2016)

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/500 psi Surface Pressure	Press < 85% of Burst
Standard Sesnon 2	8500	7", 28#, N-80*	30	6616	5624	1013	Yes
		7", 24#, J-55**	4096	3664	3114	2810	Yes
		7", 24#, N-80**	5210	5055	4297	3303	Yes
		7", 26#, N-80	6806	6616	5624	4008	Yes
		7", 28#, N-80*	7678	6616	5624	4394	Yes
		5", 18#, J-55	9010	6970	5925	4982	Yes

* Discontinued weight. Used 7" 26# of same grade for burst rating

** Discontinued weight. Used 7" 23# of same grade for burst rating

Knight, Clifford@DOC

From: Alshammasi, Ahmed J <AAlshammasi@semprautilities.com>
Sent: Tuesday, July 19, 2016 12:34 PM
To: Knight, Clifford@DOC
Cc: McMahon, Thomas D.; Iguaz, Jose; mike.giuliani@interactprojects.com; ZACHRY, JAKE M (KRUMMRICH)
Subject: Typo Mistake on the last page on NOI's (SS 2, SS 3, SS 29, SS 31, FF 32 and F 6)

Cliff,

Thanks for contacting me today regarding this matter. We have a typo on our NOI's that we submitted recently on the very last page for the Following wells SS 2, SS 3, SS 29, SS 31, FF 32 and F 6. The Pressure Test for these wells should be 1000 psi for 60 min.

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/500 psi Surface Pressure	Press < 85% of Burst
------	---------------------	--------------------------	----------	-----------	------------------	--	----------------------

For the pointed Pressure this should be a 1000 Psi. I also want to clarify that all the calculations for the Burst are calculated for 1000 psi. please let me know if you have any other questions.

Best Regards,

Ahmed J (AJ) Alshammasi
Gas Storage Engineer
Southern California Gas Company
Direct: (818) 700-3887
Cell: (818) 269-6083
aalshammasi@semprautilities.com



So. Calif. Gas Co.

OPERATOR R. L. Lee
 LSE & NO. 277-234
 MAP NO. 150

INTENTION	<u>alter</u>	<u>rework (gas storage)</u>	<u>alter casing</u>	REPERFORATE	
NOTICE DATED		<u>7-1-77</u>	<u>11-16-82</u>	<u>01/19/2006</u>	
P-REPORT DATED	<u>277-251</u>	<u>277-234</u>	<u>282-434</u>	<u>P206-23</u>	
CHECKED BY/DATE					
MAP LETTER DATED		<u>5/20/78</u>			
SYMBOL	<u>WC</u>	<u>⊙g</u>			

REC'D NEED REC'D NEED REC'D NEED REC'D NEED REC'D NEED

NOTICE		<u>7-14-77</u>	<u>11-18-82</u>	<u>01/25/06</u>	
HISTORY	<u>8-22-73</u>	<u>8-8-77</u>	<u>10-27-83</u>	<u>3/6/06</u>	
SUMMARY	<u>8-22-73</u>	-			
IES/ELECTRIC LOG		-			
DIRECTIONAL SURV.		-			
CORE/SWS DESCRIP.					
DIPMETER RESULTS				<u>3/12/06</u>	
OTHER				<u>✓</u>	
RECORDS COMPLETE	<u>8-22-73</u>	<u>EPH</u>	<u>B-1-84 ME</u>	<u>✓</u>	

ENGINEERING CHECK
 T-REPORTS _____
 OPERATOR'S NAME _____
 WELL DESIGNATION _____
 LOC. & ELEVATION _____
 SIGNATURE _____
 SURFACE INSPECTION _____
 FINAL LETTER OK _____

CLERICAL CHECK
 POSTED TO 121 _____ 170 MAILED _____
 FINAL LETTER MAILED _____
 RELEASE BOND _____

REMARKS

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Standard Sesnon 2
A.P.I. No. 03700755

Field: Aliso Canyon County: Los Angeles
Surface Location: Sec. 29, T3N, R16W SBB&M
Mark Kuncir Title: Storage Field Engineer
(President, Secretary, or Agent)

Date: 03/03/2006

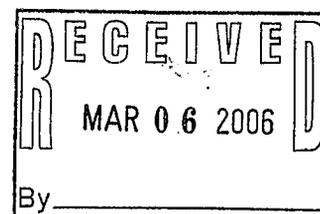
Signature: 
(Person Submitting Report)

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

Telephone Number: 818-700-3810

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

Start Date	Ops. DOGGR Rpt
01/16/2006	RU Spicer W/L. RIH w/ 1-3/4" x 30' drift tool and tagged @ 8550'. Beat-down tool and fell thru bridge. Final tag @ 8757' w/ tbg tail @ 8500'. RD W/L.
01/25/2006	RU Schlumberger W/L. RIH w/ PDC GR-NL tool. Had difficulty getting below Otis No-Go (1.791" ID) @ 8467' going down hole and when getting back up inside tbg tail @ 8500'. Tagged @ 8720'. Closed well in overnight.
01/26/2006	RIH w/ 1-11/16" strip guns and perforated 5" liner w/ 2 SPF (Enjet-DP 1.69", EJ3, RDX, ~0.28" holes) from 8710-8690', 8690-8670', 8670-8655', 8617-8596', 8596-8575' and 8558-8550' (Runs 1 - 6, 105'). Closed well in and RD W/L.



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

NOTICE OF INTENTION TO REWORK / REDRILL WELL **P206-23**

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		
Bond	Forms	EOP Well File
	OGD114 <input checked="" type="checkbox"/>	OGD12 <input checked="" type="checkbox"/>
1000	111V	115V

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 Standard-Sesnon 02 API No. 03700755
(Circle one) (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:

0-510' 13-3/8" 55# J55 Surface csg;
 0-7678' 7" 23-28# J55 & N80 Prod. csg;
 7557-8803' 5" 18# FJ liner;
 0-7464' 2-7/8" 6.5# J55 EUE 8rd tbg X-over to 2-3/8" 4.7# J55 to 8505'. Tbg string landed on Otis 7" WB Perma-Drill pkr @ 8500'.
 5" 18# liner perforated w/ four 1/2" HPF from 8655-8803' and four 0.31" HPF from 8550-8558' and 8575-8617' (198' total). Re-perforated w/ two 1/2" HPF from 8550-8558', 8575-8617' and 8655-8790'.

GS

2. The total depth is: 8808 feet. The effective depth is: 8803 feet.

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

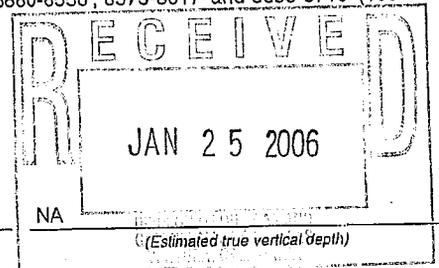
4. Present zone pressure: 2740 psi. Anticipated/existing new zone pressure: 2740 psi.

5. Last produced: 11/2005 - - 2,189
(Date) (Oil, B/D) (Water, B/D) (Gas, Mc/D)

(or)
 Last injected: - - - -
(Date) (Water, B/D) (Gas, Mc/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 Sesnon w/ 2 SPF (1-11/16" strip gun loaded w/ Enjet-DP 1.69", RDX, -0.28" hole) from 8880-8558', 8575-8617' and 8655-8710' (105' total).



For redrilling or deepening: 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
Address 12801 Tampa Avenue	City Northridge
Name of Person Filing Notice Mark T. Kuncir	Signature <i>M T Kuncir</i>
	Zip Code 91326
	Date 1/19/06

File In Duplicate

C.E.Q.A. INFORMATION

Information for compliance with the California Environmental Quality Act of 1970 (C.E.Q.A.).

If an environmental document has been prepared by the lead agency, please submit a copy of the document with this notice or supply the following information:

Lead Agency: _____

Lead Agency Contact Person: _____

Address: _____

Phone: _____

FOR DIVISION USE ONLY

District review of environmental document (if applicable)? Yes No

Remarks: _____

CRITICAL WELL DEFINITION

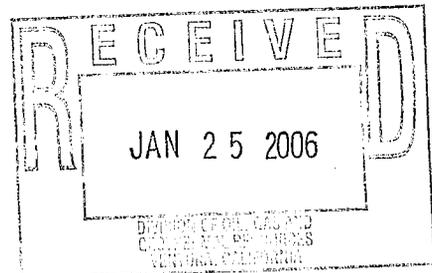
As defined in the California Code of Regulations, Title 14, Section 1720 (a), "Critical well" means a well within:

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 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.

Exceptions or additions to this definition may be established by the State Oil and Gas Supervisor upon his or her own judgment or upon written request of an operator. The written request must contain justification for such an exception.

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.



STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Ventura, California

November 6, 1991

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

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

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

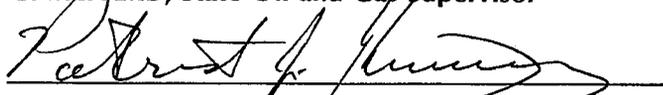
FROM

TO

"SFZU" P-42A (037-21876)	"Porter" 42A (037-21876)
"SFZU" P-42B (037-21877)	"Porter" 42B (037-21877)
"SFZU" P-42C (037-21878)	"Porter" 42C (037-21878)
"SFZU" P-69A (037-22051)	"Porter" 69A (037-22051)
"SFZU" PS-42 (037-00753)	"Porter Sesnon" 42 (037-00753)
"SFZU" SS-1 (037-00754)	"Standard Sesnon" 1 (037-00754)
✓ "SFZU" SS-2 (037-00755)	"Standard Sesnon" 2 (037-00755)
"SFZU" SS-3 (037-00756)	"Standard Sesnon" 3 (037-00756)
"SFZU" SS-5 (037-00758)	"Standard Sesnon" 5 (037-00758)
"SFZU" SS-6 (037-00759)	"Standard Sesnon" 6 (037-00759)
"SFZU" SS-7 (037-00760)	"Standard Sesnon" 7 (037-00760)
"SFZU" SS-8 (037-00761)	"Standard Sesnon" 8 (037-00761)
"SFZU" SS-9 (037-00762)	"Standard Sesnon" 9 (037-00762)

M. G. MEFFERD, State Oil and Gas Supervisor

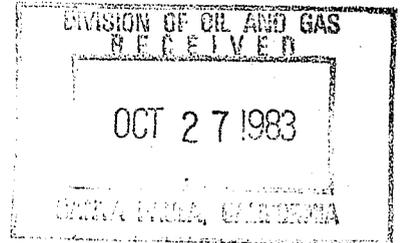
By



Deputy Supervisor

PATRICK J. KINNEAR

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



History of Oil or Gas Well

Operator Southern California Gas Company Field Aliso Canyon County Los Angeles
Well "SFZU" SS #2, Sec. 28, T 3N, R 16W, SB B. & M.
A.P.I. No. 037-00755 Name J. P. Anand Title Agent
Date September 29, 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 #99015 was issued to repair shoe leak.

1983

6-27 Day 1. Moved SPS Rig #39 from Ventura to SS#2 location.

6-28 Day 2. Rigged up SPS #39. Circulated gas out of polymer completion fluid. Installed back pressure valve in doughnut. Removed Xmas tree and installed 8" x3000 psi Class III BOPE. Installed flanged lines from well head to choke manifold, and kill system.

6-29 Day 3. Finished installing rigid lines to well head and rigging up. Re-installed back pressure valve in doughnut and pressure tested BOPE with water as follows: Manifold and access lines 3000 psi for 20 min.; blind rams 3000 psi for 20 min., pipe rams 3000 psi for 20 min.; hydril 2500 psi for 20 min. Test witnessed by DOG (Miss Fulco). Removed back pressure valve. Unlanded doughnut. Released latch from Otis permatrieve packer at 8500'. Pulled out laying down safety system. Made up Otis pulling tool on 2-3/8" tubing and started back in well.

6-30 Day 4. Attached Otis pulling tool to packer at 8500' released packer and pulled out of well, retrieving packer. Ran Baker Model "N" wireline bridge plug on McCullough electric line to 8500' and set at 8500'. Using 1/2" bullet gun, shot 12 holes from 8456'-55'. Ran 400' of 2-3/8" tubing tail on 5" Johnston retrievable retainer to 8500'. Displaced 300 bbls of 64#/cu.ft. completion fluid from well with 300 bbls of lease salt water set retainer at 8060' with tail at 8460'. Obtained breakdown at 3 cu.ft. per minute at 2000 psi.

7-1 Day 5. Released Johnston tool. Equalized 40 cu.ft. of 12% Hcl and 3% HF acid at 8455'. Set tool and displaced 35 cu.ft. into perforations (8455'-56') at 8 cu.ft./min at 2000 psi. Pulled out with retrievable retainer. Ran Baker model "K" wireline cement retainer on McCullough electric line and set at 8380'. Ran Baker stinger to 8380' tested retainer. Preceded by 25 cu.ft. of 6% Hcl and 1 1/2% HF acid mixed 57 cu.ft. of neat "G" cement with .5% D31 & .6% D19 and displaced all cement past holes at 8455'. Maximum

pressure 2000 psi. Squeeze #2 mixed 57 cu.ft. of neat "G" with .5% D31 & .6% D19 and displaced 53 cu.ft. out of holes at 8455' before reaching 3000 psi final pressure. Released from retainer backscuttled and started out with stinger.

- 7-2 Day 6. Finished pulling out with Baker stinger. Made up 3-3/4" O.D. mill on 2-3/8" tubing. Milled retainer at 8380' to 8386'. Pulled up to 7550'.
- 7-5 Day 7. Ran in well to 8386' & milled cement & retainer down to 8435'. Pulled out of well. Made up mill #2. Ran in well to top of liner.
- 7-6 Day 8. Filled well with 1.5 bbls. Ran in well to 8436'. Milled cement to 8490'. Circulated well clean. Pulled out of well. Made up & ran in well with Johnston retrievable retainer with 400' of 2-3/8" tubing tail to 8488'. Set retainer & pressure tested to 2200 psi. Pulled out of well. Made up 3-3/4" O.D. mill & ran in well to 2000'.
- 7-7 Day 9. Filled well with 3 bbls of salt water. Ran in well to 8490'. Changed over from salt water to polymer completion fluid using 497 bbls. Milled bridge plug and cement from 8496'. Pushed & milled to 8525'. Pulled out of well. Made up new 3-3/4" O.D. mill and junk sub, ran in well to 3000'.
- 7-8 Day 10. Filled well with 1 1/2 bbls polymer completion fluid. Ran in well to 8525'. Milled to bottom of liner at 8806'. Circulated well for two hours. Pulled up to top of liner.
- 7-9 Day 11. Ran in well to 8806'. Circulated well for 2 hours. Pulled out of well. Made up Lynes 5" test tools and started in well.
- 7-11 Day 12. Set Johnston test tools at 8420' with tail to 8423'. Opened tool for 6 hours but fluid did not unload from well. Gas blow from well never was more than a light blow. Gas reached surface in 3 hours. Backscuttled well with 45 bbls to fill tubing (46 bbls total volume). Made up Lynes 5" test tools on 843' of 2-3/8" tubing crossed over to 2-7/8" tubing. Started in well with new test tools.
- 7-12 Day 13. Set Lynes test tool at 8421'. Shot fluid level in empty tubing. Opened tool at 8:30 a.m., shot rising fluid levels to 6800' in 1/2 hour intervals. Well would not unload past 6800'. Released Lynes test tools & backscuttled gas from well and pulled out with tools. Made up 4-1/8" bit & 5" 18# casing scraper and started in well.
- 7-13 Day 14. Ran 4-1/8" bit and 5" casing scraper to 8787' and cleaned out fill to 8806'. Pulled out of well. Made up Lynes 5" test tool on 960' of 2-3/8" tubing, crossed over to 2-7/8" tubing and installed 6 - 2-7/8" Camco Gas lift mandrels from 7500' to surface. Set test tool at 8427' with 10,000# on tool when doughnut landed in tubing head. Closed pipe rams and pressured doughnut to 3,000 psi. Closed valve to lock rams closed. Pressure tested injection and withdrawal lines to 3,000 psi.

- 7-14 Day 15. Displaced 383 bbls. of polymer completion fluid from well using gas lift equipment in 15 hours. Closed well in.
- 7-15 Day 16. Continued trying to displace polymer completion fluid from well. Shot fluid level in tubing, found fluid at 5500'. Shot fluid level in casing, found fluid at 7164'. Closed well in, shut rig down for gas lift equipment repairs.
- 7-16 Day 17. Using Archer Reed wireline, installed new gas lift valve in mandrel at 5508'. Gas still communicated from casing to tubing. Installed dummy valves at 2161' and 4073'. Gas still communicated from casing to tubing. Pressured down tubing 2200 psi. Did not have communication from tubing to casing. Ran 2- $\frac{1}{2}$ " impression block on wireline, found fluid level in tubing at 7140'. Attempted to lift polymer completion fluid from tubing by injecting down casing. Received gas out of tubing at 1300 psi casing pressure. Hooked well up to inject down tubing for weekend.
- 7-18 Day 18. Increased surface pressure from 2300 psi to 3000 psi but unable to inject gas down tubing into Sesnon zone.
- 7-19 Day 19. Open tubing to Baker tank and left well open 12 hours. Pressure fell from 2600 psi to "0" in 1 hour and built back to 100 psi for 9 hours. Then to 75 psi for 2 hours. Casing pressure fell from 1300 psi to 1100 psi during flow interval. Prepared to inject down tubing.
- 7-20 Day 20. Injected gas down annulus and attempted to unload well. Did not displace any fluid but produced gas from tubing. Found fluid level in tubing at 6841'. Using Baker wireline truck attempted to remove gas lift mandrels #3, #4, #5. Unable to remove because of incorrect tool.
- 7-21 Day 21. Using Baker wireline truck removed valve #3 at 5508', and replaced with dummy valve. Attempted to remove valve #4 at 6468' and valve #5 at 7292' with no success. Shut down to change tools.
- 7-22 Day 22. Using Baker wireline attempted to remove gas valves from mandrels #4 & #5 without success. Using 355 bbls. of 63#/cu.ft. polymer completion fluid, displaced gas from well. Released Lynes test tool and pulled out laying down 6 KBMG mandrels. Made up new Lynes test tool on 843' of 2- $\frac{3}{8}$ " tubing crossed over to 2- $\frac{7}{8}$ " and ran 4 new 2- $\frac{7}{8}$ " Camco "MMG" gas lift mandrels at 2605', 4789', 6497' and 7527'. Set Lynes packer at 8437' with 10,000# on tool when doughnut was in place. Closed pipe rams and pressured doughnut to 3000 psi & locked pressure on doughnut.
- 7-23 Day 23. Displaced 278 bbls of polymer completion fluid from well with gas. Opened injection down tubing to Gas Company injection line back to Gas Company manifold for shift personnel to operate.
- 7-25 Day 24. Released 2100 psi gas pressure from tubing and unloaded 22 bbls of polymer completion fluid from well in 5 hours. Tubing dried up and casing pressure communicated with tubing. Pressure would not transmit from tubing to casing. Blew down casing and tubing. Shot fluid levels. Tubing showed fluid at 7204' and casing 7530'. Repressured tubing for night to 2200 psi.

- 7-26 Day 25. Released tubing pressure from tubing. No fluid entered tubing. Pumped 40 bbls of polymer completion fluid down tubing. Gas lifted polymer from tubing. Hooked up Gas Company injection line to well and started on 3000 psi at 6:00 p.m.
- 7-27 Day 26. Continued with injection pressure of 3,000 psi through 20/64" bean. Blew pressure down at 10:00 a.m. to correct collar leak on tubing. Recovered 8 bbls of polymer completion fluid. Re-pressured tubing. Well took small amount of gas from 4 p.m. till 4:45 p.m., and from 6:30 till 6:45 p.m. No additional injection to 6 a.m. 7-28-83.
- 7-28 Day 27. Bleed gas from tubing. Dropped bar and opened backscuttle valve at 8435'. Displaced remaining gas from well with 278 bbls of 63#/cu.ft. of polymer completion fluid. Pulled out laying down Camco gas lift mandrels and Lynes test tools. Made up 4-1/8" bit on 943' of 2-3/8" tubing tail and cleaned out to 8806'. Started out with tubing.
- 7-29 Day 28. Using NL McCullough 2-1/2" jet guns shot (2) 1/2" jet holes per foot 8790'-8655', 8617'-8575', 8558'-8550'. Ran 2000' of 2-7/8" tubing to secure well.
- 7-30 Day 29. Made up 5" 18# Lynes test tools with (2) outside and (1) inside 72 hour recorders on 896' of 2-3/8" tubing. Tail at 8432' with packer at 8416'. Pressure tested lines to tree and Gas Co. withdrawal system at 3000 psi. Closed well in.
- 8-1 Day 30. Set Lynes packer at 8416' & opened tool at 7:20 a.m. Flowed well to Baker tank till 2:00 p.m. Produced 17 bbls polymer completion fluid at 1050 psi tubing pressure on 16/64" choke. Turned to withdrawal line at 2:00 p.m. & flowed well till 6:00 a.m. Rate 3MMCF per/day on 24/64" choke w/900 psi tubing pressure.
- 8-2 Day 31. Flowed well to Gas Company withdrawal line until 10:00 p.m. at 3MMCF/day with tubing pressure of 900 psi. Shut well in at 10:00 p.m. and secured for night. 6:00 a.m. tubing pressure 2200 psi.
- 8-3 Day 32. Rigged up NL McCullough and ran Audio analyzer log from 8400' to surface. No gas movement. Rigged down McCullough. Killed well. Pulled out of well. Ran 4" O.D. gauge ring to 8520'. Ran & set Otis permadrill packer at 8500'. Rigged down McCullough. Ran in well with 2 seals & locator on 2-3/8" & 2-7/8" tubing to top of liner.
- 8-4 Day 33. Ran in well to 8500'. Stabbed into packer & tested to 1500 psi for 20 minutes. Pulled out of well. Ran in well w/ production equipment, 2-3/8" & 2-7/8" tubing. Applied Baker seal & Hydrotested to 5000 psi. Landed tubing w/6000# on packer. Pulled 15,000# over weight of tubing to check latch. Landed tubing & installed back pressure valve.
- 8-5 Day 34. Removed BOPE. Installed Xmas tree. Pressure tested tree to 5000 psi with oil. Changed over from polymer fluid with 350 bbls. lease salt water. Tightened wellhead bolts. Installed blind flanges & closed all valves. Released rig at 3:00 p.m. 8-5-83.

DIVISION OF OIL AND GAS

Report on Operations

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

Santa Paula, Calif.
Aug. 5, 1983

Your operations at well "SFZU" SS-2, API No. 037-00755,
Sec. 28, T. 3N, R. 16W, SB B. & M. Aliso Canyon Field, in Los Angeles County,
were witnessed on 6/29/83 by M. Fulco, representative of
the supervisor, was present from 1200 to 1300. There were also present Sonny Miller,
Drilling foreman

Present condition of well: 18 5/8" cem 76'; 13 3/8" cem 512'; 7" cem 8530', milled window
7678-7697'; 5" cem 7557-8806', perf 8540', 8643' WSO, perf 8550-8803' at intervals.
TD original hole 8821'. TD 8808'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

M. G. MEFFERD

By

Murray W. Dosch
State Oil and Gas Supervisor

Deputy Supervisor

Murray W. Dosch

REPORT ON PROPOSED OPERATIONS

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

Mr. J. P. Anand, Agent

So. Calif. Gas Co.

Box 3249 Terminal Annex

Los Angeles, CA 90051

Santa Paula, California

Nov. 22, 1982

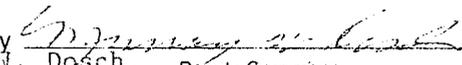
Your proposal to alter casing in well "SFZU" SS-2, A.P.L. No. 037-00755, Section 28, T. 3N, R. 16W, SB B. & M., Aliso Canyon field, any area, Sesnon-Frew pool, Los Angeles County, dated 11/16/82, received 11/18/82 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Hole fluid of sufficient quality and quantity shall be maintained in the hole to control any subsurface condition, and a reserve supply shall be on hand for emergencies.
2. Blowout prevention equipment of at least DOG Class III 3M shall be installed and maintained in operating condition at all times.
3. This office shall be consulted before initiating any changes or additions to this proposed operation, or if operations are to be suspended.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS A PRESSURE TEST OF THE BLOWOUT PREVENTION EQUIPMENT BEFORE COMMENCING DOWNHOLE OPERATIONS.

Blanket Bond
RLH:b

M. G. MEFFERD, State Oil and Gas Supervisor

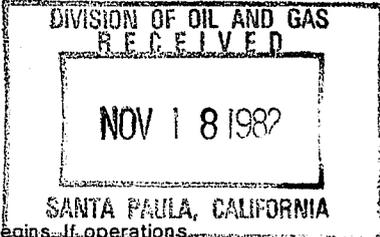
By 
Murray W. Dosch, Deputy Supervisor

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
SB	✓	✓

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 Standard Sesnon #2 SFZU 55-2, API No. 037-00755
(Well designation)
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 8808'
- Complete casing record, including plugs and perforations
 - 13-3/8" cemented 510'
 - 7" cemented 7678' - window
 - 1249' 5" cemented 8806', Top 7557', WSO 8643'
8540' & on lap at 7557'. Perforated
8803'-8655', 8617'-8575' and 8558'-8550'
- Present producing zone name Sesnon; Zone in which well is to be recompleted -
- Present zone pressure 3600 psi; New zone pressure -
- Last produced Gas storage well
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
(or)
Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psig)

The proposed work is as follows:

- Move in & rig up. Kill well. Install BOPE & pressure test.
- Pull tubing. Recover packer from 8500'. Set bridge plug near 8500', shoot holes 8456'-55' & squeeze with cement. Drill out cement, test & run Audio analyzer log.
- Set packer near 8500', run 2-3/8" & 2-7/8" tubing & complete.
- Return well 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 J.D.M. Nov. 16, 1982
(Signature) (Date)

Telephone Number (213) 689-3925

P.O.

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

DIVISION OF OIL AND GAS
RECEIVED

AUG 8 1977

SANTA PAULA, CALIFORNIA

History of Oil or Gas Well

Operator... SOUTHERN CALIFORNIA GAS COMPANY... Field or County... Aliso Canyon
Well name and No. STANDARD SESNON #2... Sec. 28, T. 3N., R. 16W., S. B. & M.
A.P.I. well No. 037-00755... Name P. S. Magruder, Jr. Title Agent
Date July 30, 1977 (Person submitting report) (President, Secretary or Agent)

Signature *P.S. Magruder, Jr.*

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

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

- | Date | |
|---------|---|
| 7-8-77 | Job was started on July 8 at 8:30 A.M. Halliburton rigged and pumped 68#/cu.ft. at 3 barrels per minute and 2800 psig against 2730 psig well head. Theoretical volume required to fill the hole was 1645 cu.ft. (293 barrels) but returns started at 1635 cu.ft. Mud was circulated for 30 minutes and last measured density was 53#/cu.ft. Off well at 10:30 A.M. and shut down until morning in order to let gas break out. |
| 7-9-77 | Using Halliburton, circulated hole. Well killed. Rigged up McCullough. Ran 2 1/8" chemical cutter to 2700'. Ran 1 11/16" chemical cutter to 8523' and could not get deeper. Rigged down McCullough. |
| 7-10-77 | I dle |
| 7-11-77 | Rigged up Archer-Reed. Pulled 0.570 choke in Otis "D" Lock from 8515'. Made run to fish Otis "XN" plug from "XN" nipple at 8636' - fishing tool stopped at 8591'. Rigged down Archer-Reed. |
| 7-12-77 | Rigged up McCullough. Ran 1 1/16" chemical cutter and cut 2 3/8" tubing at 8612'. Rigged down McCullough. Set and plugged tubing hanger with Shaffer plug. Installed blind flanges on well-head (four). |
| 7-13-77 | Moved in Oilwell Service Rig #1 and rigged up. Rig on location at 10:00 A.M. Started circulating hole at 8:30 P.M., with bottoms up at 9:30 P.M. - well took 16 barrels. |
| 7-14-77 | Removed Christmas tree and master valve. Installed X-over flange and 10" 5000 psi Class III B.O.P.E. Tested blind rams and 2 7/8" pipe rams at 4000 psi for 20 minutes - O.K. Tried to test Hydril bag on 2 7/8" tubing - no good. Replaced Hydril rubber. Continued trying to test Hydril bag preventer. |
| 7-15-77 | Unable to obtain test of Hydril Bag using water. Changed rubber in bag for second time. NOWSCO tested bag with nitrogen at 3000 psi for 20 minutes - O.K. Hooked up water and tested bag at 3000 psi for 20 minutes - O.K. Tested choke and kill manifold with water at 2000 psi for 10 minutes - one minor leak. Leaking valve will be changed. B.O.P.E. approved by D.O.G. Tried to test pipe rams with nitrogen; tubing hanger leaked. Using Triple "A" Fishing Tool Co., pulled upper packer loose and started out of hole. |

- 7-16-77 Measured out of hole, recovered upper hydraulic packer and tubing above cut (15'). Dressed tubing hanger with new hydraulic packing. Using NOWSCO, tested 2 7/8" pipe and blind rams with nitrogen at 4000 psi for 20 minutes - O.K. Started in hole with fishing tools (overshot, bumper sub and jars).
- 7-17-77 Rig and crew idle.
- 7-18-77 Finished running in hole with Triple "A" fishing tools and latched on to Otis packer and jarred loose. Pulled to 8165' - pipe flowing back, rigged up and circulated out gas pocket.
- 7-19-77 Pulled out of well and recovered all tubing, fittings and packer. Ran 6" bit and casing scraper. Cleaned out to top of liner at 7557'. Ran 4 1/8" bit and casing scraper.
- 7-20-77 Run in and cleaned out fill from 8730' to 8803' & circulated hole clean. Pull out and made up Johnston Bridge Plug (Bobcat). Run in and set at 8500'. Set and tested to 1200 P.S.I.
- 7-21-77 Ran to bottom and change over to fresh water treated with surfactant. Pulled out and made up Johnston full bore. Run in and set at 4000' test 4000' to 8500' w/2600 psi 1 hour O.K.
" 4000' to surface 2800 psi 1 hour O.K.
" 3500' to surface 3000 psi 1 hour O.K.
" 2800' to surface 3300 psi 1 hour O.K.
- 7-22-77 Set packer at 2300' and tested to 3600 psi O.K. Pulled up and set at 1300'. Tested to 4000 psi O.K. Pulled out made-up retrieving tool. Set above bridge plug and changed over to polymer drilling fluid. Latched onto bridge plug and pulled out of hole. Rigged up GO wireline. Ran in and set Otis production packer at 8500'.
- 7-23-77 Rigged up Hydrotest and hydrotested in hole with 2 3/8" x 2 7/8" tubing, testing to 5000 psi for one minute. Changed collars and applied Baker Seal to each connection.
- 7-24-77 Rig and crew idle.
- 7-25-77 Hydrotested in hole with 2 7/8" tubing and tested to 5000 psi for one minute each test. Rigged down hydrotest. Secured well.
- 7-26-77 Finished hydrotesting in well and spaced out tubing. Landed with 8000# on packer. Pulled 25,000# over weight of tubing to check latch. Removed B.O.P.E. Made up and tested Christmas tree to 5000 psi. Circulated brine-polymer drilling fluid out of well with waste lease salt water.

P10

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

Report on Operations

No. T 277-202

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

Santa Paula, Calif.
Aug. 18, 1977

DEAR SIR:

Operations at well No. "SGZU" SS-2, API No. 037-00755, Sec. 28, T. 3N, R. 10W,
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 7/15/77. Mr. P.R. Wyle, representative of the supervisor was
present from 1730 to 1900. There were also present A. Awalt, foreman

Present condition of well: No additions to the casing record since proposal dated
7-1-77.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION.

b

M. G. MEFFERD
JOHN F. MATTHEWS, JR.
Acting, State Oil and Gas Supervisor
By [Signature] Deputy

7-27-77

Rigged up and using Archer-Reed, set tubing plug in NO-GO nipple. Pressure tested to 2000 psi for 20 minutes - O.K. Rigged down and released rig at 10:00 A.M. Weight of string when landed on packer was 52,000#.

n/a

REPORT ON PROPOSED OPERATIONS

Santa Paula, California

July 15, 1977

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

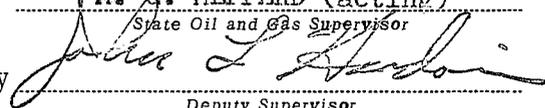
Your proposal to rework gas storage well "SEZU" SS-2
(Name and number)
, A.P.I. No. 037-00755, Section 28, T. 3N, R. 16W,
S.B. B. & M., Aliso Canyon field, Los Angeles County,
dated 7-1-77, received 7-14-77, has been examined in conjunction
with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

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

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

Blanket Bond
MD:b

M. G. MEFFERD (acting)
State Oil and Gas Supervisor
By 
Deputy Supervisor

John L. Hardoin

pu

JUL 14 1977

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

SANTA PAULA, CALIFORNIA

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	
	114	121
<i>BB</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well No. STANDARD SESNON #2, API No. _____, Sec. 28, T3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth. 8808'
- Complete casing record, including plugs and perforations:
 - 13 3/8" cemented 510'
 - 7" cemented 7678' (window)
 - 1256' 5" cemented 8803' - WSO on splice 7557'
 - WSO 8540' - segregation 8645'
 - perforated 8803'-8655'
 - 8617'-8575'
 - 8558'-8500'

- Present producing zone name SESNON Zone in which well is to be recompleted -
- Present zone pressure 3200 psi New zone pressure -
- Last produced Gas Storage Well
 (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
 or
- Last injected _____
 (Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

- Move in and rig up. Kill well. Install B.O.P.E. and test.
- Pull tubing and packers. Clean out to 8803'.
- Pressure test casing. Perform any remedial work indicated by pressure testing.
- Set packer and run tubing with down-hole safety system.
- Return well to Gas Storage.

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

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

SOUTHERN CALIFORNIA GAS COMPANY
 (Name of Operator)
 By *P. S. Magruder, Jr.*
 (Name) P. S. Magruder, Jr. (Date) 7-1-77
 Type of Organization Corporation
 (Corporation, Partnership, Individual, etc.)

STANDARD SESNON #2 - ALISO CANYON

Program to install new packer, pressure test casing, and install new down hole safety valve.

TUBING WITHDRAWAL AND CASING INJECTION

Take all measurements from original Kelly Bushing 12' above doughnut.

PRESENT CONDITIONS

13 3/8" cemented 510'
7" cemented 7678' (milled window)
1256' 5" cemented 8803', WSO on splice @ 7557'
WSO 8540', segregation 8643'
18# flush joint - Assume J-55
Perforated 8803' - 8655'
8617' - 8575'
8558' - 8550'

<u>CASING DETAIL:</u>				80% Safety Factor	
				Burst	Collapse
7"	0' - 30'	28#	N-80	6280	4630
	30' - 4096'	24#	J-55	3650	2750
	4096' - 5210'	24#	N-80	5320	3600
	5210' - 6806'	26#	N-80	5790	4260
	6806' - 7678'	28#	N-80	6280	4630
5"	7557' - 8803'	18#	J-55	5600	5220

TUBING DETAIL:

Otis "XN" 1.44" 8637' (plug in place)
Otis Hydrostatic packer 8635' (5")
Udell seating nipple 1 25/32" 8536'
10' perforated nipple 8526' - 8536'
Otis Hydrostatic packer 8521' (5")
3 Camco gas lift mandrels with dummies
Mandrel at 8485' (empty)
Udel landing nipple 2 3/8" 8475'
Otis sliding sleeve 7514' (closed)
Udell landing nipple 7489'
2 3/8" and 2 7/8" tubing landed 8637'
(See attached detail)

DIVISION OF OIL AND GAS
RECEIVED

JUL 14 1977

SANTA PAULA, CALIFORNIA

PROGRAM:

1. Move in and rig up.
2. Kill well with 68#/cu. ft. brine polymer drilling fluid. Check bottom hole pressure before moving in rig. Volume of well = 330 barrels
3. Install back pressure valve in doughnut. Remove Xmas tree and install class III 5000 psi BOPE. Pressure test complete shut-off rams and pipe rams to 4000 psi with water and nitrogen. Also pressure test Hvdril bag to 3000 psi with water and nitrogen.

4. Pull tubing - note there are two Otis hydrostatic packers to recover - If necessary to cut tubing - note only a 4' bank pup below top packer. Cut tubing as required to jar packers loose. Return gas lift valves and sliding sleeve to supplier for reconditioning.
5. Run 6" bit and casing scraper. Clean out to top of 5" liner at 7557'. Run 4 1/8" bit and casing scraper. Clean out to 8803'. Note amount and type of fill.
6. Set bridge plug at 8500'. Pressure test bridge plug with rig pump. Circulate polymer drilling fluid out of well with fresh water treated with surface tension agent. Pressure test casing using cement re-tainer and cement pump truck equipped with calibrated pressure chart and pressure gauge, as follows:

4000'-8500'	with 2600	psi for 60	minutes		
4000'	to Surface	with 2800	psi for 60	minutes	
3500'	" "	" "	3000	psi "	60 "
2800'	" "	" "	3300	psi "	60 "
2300'	" "	" "	3600	psi "	60 "
1300'	" "	" "	4000	psi "	60 "

Change to polymer drilling fluid.

7. Perform any remedial work indicated by pressure testing recover bridge plug.
8. Set Otis permatrieve packer near 8500' using wire line and reference collars. DO NOT set packer in a collar.
9. Run 2 3/8" and 2 7/8" tubing, changing collars, cleaning pins, applying Baker seal and hydrotesting to 5000 psi holding each test for one minute.

Tubing to include:

- Otis production tube
- Otis 4 seals
- Otis Latch-in locator
- Otis 10' heavy wall tube
- Otis 1.56" "XN" "NO GO" nipple with 2 3/8" threads
- Otis 20' heavy wall tube
- Otis annular flow safety system
- 2 3/8" tubing to 7500' and
- 2 7/8" to surface

DIVISION OF OIL AND GAS
RECEIVED

JUL 14 1977

SANTA PAULA, CALIFORNIA

PROGRAM: (continued)

10. Land tubing on packer with up to 10,000 pounds maximum - pull 25,000 pounds over weight of tubing to check latch.
11. Install back pressure valve in doughnut. Remove BOPE and install Xmas tree. Pressure test Xmas tree to 5000 psi. Also retest well head seals to 4500 psi.
12. Circulate drilling fluid out of well with waste salt water. Set tubing plug in 1.56" nipple. Pressure test seals and packer to 2000 psi. Pull tubing plug and release rig.

G. C. ABRAHAMSON
June 30, 1977

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

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

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Company FIELD Aliso Canyon

Well No. SFZU SS-2, Sec. 28, T. 3N, R. 16W, S.B. B. & M.

Date August 20, 1973 Signed P. S. Magruder, Jr.

P. O. Box 54790, Terminal Annex
Los Angeles, California 90054 (213) 689-3561 Title Agent

(Address) (Telephone Number) (President, Secretary or Agent)

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

Date
1973

7-9 California Production Service rig No. D-3 moved in and rigged up. Killed well with 63#, 38 sec. vis. workover fluid. Obtained good circulation.

7-10 Circulated for 2 hours. Installed Class III B.O.P.E. Tested pipe rams with 1500 psig for 15 minutes and bag with 1400 psig for 15 minutes. Pulled Guiberson KV-30 packer loose. Pulled and tallied 2-7/8" and 2-3/8" tubing.

7-11 Ran 5-5/8" bit and scraper for 7" casing to top of 5" liner at 7549'. Ran 4-1/8" bit and scraper for 5" liner to 8798 (bottom of liner 8806').

7-12 Ran Dresser-Atlas logs (CBL, NLL, CDL and CDN). Recorded CBL from 8796'-6800', NLL from 8786'-7670', CDL 8792'-8300' and CDN from 8794'-8250'.

7-13 Idle due to lack of wellhead availability.

7-14 Idle due to lack of wellhead availability.

7-15 Idle - Sunday.

7-16 Idle due to lack of wellhead availability.

7-17 Set Johnston "Bobcat" bridge plug in 5", 18# liner at 8520'. Rigged casing jacks and Midway spear. Unlanded 7" casing with 224,000#. Cut off and removed existing casinghead and removed base plate.

7-18 Excavated concrete from cellar to accomodate new casinghead. Dressed stub of 13-3/8". Welded on new Rucker-Shaffer 5000 psig casinghead (with 13-3/8" stub prewelded in base).

1973

- 7-19 X-rayed 13-3/8" casing weld--Ok. Ran Midway spear and pulled 224,000# on 7" casing. Set slips and installed packing in casinghead. Installed sealing flange and tubinghead. Tested between sealing flange and casinghead packing with 3500 psig for 15 minutes--Ok. Tested between sealing flange and secondary seal in tubinghead with 3400 psig for 15 minutes--Ok. Installed and tested B.O.P.E. Set Johnston packer at 1900', closed pipe rams and pressured annulus with 3400 psig for 20 minutes. Ran in to 2986' and did not set packer; closed pipe rams and pressured to 2500 psig for 15 minutes. Set packer at 2986', closed pipe rams and pressured annulus to 3000 psig for 15 minutes.
- 7-20 Retrieved Johnston bridge plug from 8520' in 5", 18# liner. McCullough perforated four 0.31" diameter Omega jet holes per foot from 8550'-8558' and 8575'-8617'. Checked bottom at 8797' with McCullough wireline and 3-1/8" jet carrier. Measured and made up tubing production equipment.
- 7-21 Ran 2-3/8" and 2-7/8" tubing and production equipment as per attachment. Hydrotested tubing to 5000 psig while going in hole. All joints tested Ok but found one joint crimped. Set Otis packers with 2000 psig using rig pump.
- 7-22 Idle - Sunday.
- 7-23 Tested top packer setting at 8521.75' by pressuring annulus with 1000 psig for 15 minutes. Opened sliding sleeve at 7514.36' and circulated out workover fluid with lease salt water. Installed valve in tubing donut and moved rig to Porter No. 47. Presently awaiting Xmas tree from Rucker-Shaffer.

Present condition of well:

1. Filled with workover fluid from 8797'-7514' and with salt water from 7514'-surface.
2. Plug in place in tubing separating S-4 from S-8.
3. Blanking sleeve in place across S-4 tubing slots.
4. Sliding sleeve at 7514.36' is open.
5. Valve installed in tubing donut.

After tree is received and installed, sliding sleeve at 7514.36' will be closed and well unloaded with nitrogen down to top gas lift valve at 5003.21'.

TUBING DETAIL

<u>Item</u>	<u>Length</u>	<u>Depth</u>
K. B. to donut	12.00	12.00
Donut	1.00	13.00
2-7/8" 6.5# N-80 EU 8rd. fatigue nipple	1.00	14.00
4 jts. 2-7/8" 6.5# J-55 EU 8rd. R-2	124.25	138.25
216 jts. 2-7/8" 6.5# J-55 EU 8rd. R-1	4854.70	4992.95
Pup - 2-7/8" 6.5# N-80 EU 8rd.	4.06	4997.01
Gas lift valve - Camco KBMG mandrel w/BK 1/4" valve w/BK-2 latch (1050#)	6.20	5003.21
Pup - 2-7/8" 6.5# N-80 EU 8rd.	1.83	5005.04
44 jts. 2-7/8" 6.5# J-55 EU 8rd. R-1	992.20	5997.24
Pup - 2-7/8" 6.5# N-80 EU 8rd.	4.07	6001.31
Gas lift valve - Camco KBMG mandrel w/BK 1/4" valve w/BK-2 latch (1025#)	6.18	6007.49
Pup - 2-7/8" 6.5# N-80 EU 8rd.	1.84	6009.33
39 jts. 2-7/8" 6.5# J-55 EU 8rd. R-1	881.49	6890.82
Pup - 2-7/8" 6.5# N-80 EU 8rd.	4.05	6894.87
Gas lift valve - Camco KBMG mandrel w/BK 1/4" valve w/BK-2 latch (1000#)	6.23	6901.10
Pup - 2-7/8" 6.5# N-80 EU 8rd.	1.83	6902.93
26 jts. 2-7/8" 6.5# J-55 EU 8rd. R-1	583.48	7486.41
Landing sleeve - Udell - 2-7/8" LT #74063-3	2.35	7488.76
1 jt. 2-7/8" 6.5# J-55 EU 8rd. R-1	22.88	7511.64
Sliding sleeve - Otis model XO w/2.313" bore	2.72	7514.36
1 jt. 2-7/8" 6.5# J-55 EU 8rd. R-1	20.38	7534.74
X-over 2-7/8" EU 8rd. x 2-3/8" EU 8rd.	1.00	7535.74
6 jts. 2-3/8" 4.7# J-55 EU 8rd. R-2	177.79	7713.53
Pup - 2-3/8" 4.7# N-80 EU 8rd.	3.99	7717.52
Gas lift valve - Camco KBMG mandrel w/BK 1/4" valve w/BK-2 latch (975#)	6.13	7723.65
Pup - 2-3/8" 4.7# N-80 EU 8rd.	1.93	7725.58
25 jts. 2-3/8" 4.7# J-55 EU 8rd. R-2	746.72	8472.30
Landing sleeve - Udell - 2-3/8" LT #74063-4	2.35	8474.65
Pup - 2-3/8" 4.7# N-80 EU 8rd.	4.10	8478.75
Gas lift valve - Camco KBMG mandrel w/BK 1/4" valve w/BK-2 latch (950#)	6.12	8484.87
Pup - 2-3/8" 4.7# N-80 EU 8rd.	1.92	8486.79
1 jt. 2-3/8" 4.7# J-55 EU 8rd. R-2	30.86	8517.65
Packer - Otis model RH 5", 18# w/1.94" drift	4.10	8521.75
Pup - 2-3/8" 4.7# N-80 EU 8rd.	4.00	8525.75
Perforated pup - 2-3/8" 4.7# N-80 EU 8rd. w/30M x 1-1/2" slots, 10R, 6" centers	10.00	8535.75
Collar - 2-3/8" EU 8rd.	0.40	8536.15
Seating nipple - Udell 1-25/32" #64135	0.33	8536.48
3 jts. 2-3/8" 4.7# J-55 EU 8rd. R-2	90.53	8627.01
Pup - 2-3/8" 4.7# N-80 EU 8rd.	4.00	8631.01
Packer - Otis model RH 5" 18# w/1.94" drift	4.10	8635.11
Collar - 2-3/8" EU 8rd.	0.40	8635.51
X-over - 2-3/8" EU 8rd. x 1.900" EU 10 thd.	0.40	8635.91
Collar - 1.900" EU 10 thd.	0.32	8636.23
No-Go nipple - Otis model N w/1.50" polish bore and 1.44" No-Go stop	0.60	8636.83
Collar - 1.900" EU 10 thd.	0.32	8637.15

1973

Tubing was run with blanking sleeve in place across perforations, No-Go plug in place and sliding sleeve open. Sleeve was closed to set packers.

Blanking sleeve detail:

Top: 2-3/8" slip type hold down - Otis
2-3/8" upper packoff - Udell
1-1/4" AIJ 10rd. reg. with boxes turned
to 1.860" O.D. (one 4 jt. & one 6' jt.)

Bottom: 1-25/32" seal assembly w/1-1/4" 10rd. R-9
box - Udell #74105

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 273-254

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

Santa Paula Calif.
June 13, 1973

(037-00755)

DEAR SIR:

Your _____ proposal to alter casing Well No. "SFZU" SS-2,
Section 28, T. 3N, R. 16W, S. B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 6/5/73, received 6/11/73, has been examined in conjunction with records filed in this office.

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

Blanket Bond
DER:a
cc: Operator

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

By *LOP Pitman*, Deputy

JUN 11 1973

DIVISION OF OIL AND GAS

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

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

Los Angeles Calif. June 5, 1973

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling, plugging or~~ altering casing at Well No. SFZU SS 2
(Cross out unnecessary words)
Sec. 28, T. 3N, R. 16W, S.B. B. & M.
Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- 1. Total depth. 8808'; Pg. 8806
- 2. Complete casing record, including plugs:

18-5/8", 75#, c. 75'
 13-3/8", 54.5#, c. 512'
 7", 28#, 24# & 26# eff. to 7678'
 Sec. (#2) 7678'-7697'
 12 1/4' of 5", 18# c. 8806'
 WSO splice & 4 holes 8540'*
 WSO 4 h's (T.O.Co.) 8643'
 GP 4 HPF 8655'-8803'
 TLH 7557'

* Wit. & app'd. by D.O.G.

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

The proposed work is as follows:

Jet perforate 4 holes per foot and/or reperforate 2 holes per foot in the Sesnon Zone to convert well to a gas storage well.

(8552 - 8803) perfs will be in this interval



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

(Address)

(213) 689-3561

(Telephone No.)

Pacific Lighting Service Company

(Name of Operator)

By

P. S. Magruder Jr.
P. S. Magruder, Jr. - Agent

Proposed Changes in Designation

Sec. 28:

<u>Old Designation</u>	
"Standard-Sesnon 1"	1
"	2
"	3
"	5
"	6
"	7
"	8
"	9
"	11
"	13
"	14
"	16
"	17
"	24
"	25
"	29
"	30
"	31
"	44

<u>New Designation</u>	
"SFZU" SS-1	(037-00754)
" SS-2	(037-00755)
" SS-3	(037-00756)
" SS-5	(037-00758)
" SS-6	(037-00759)
" SS-7	(037-00760)
" SS-8	(037-00761)
" SS-9	(037-00762)
" SS-11	(037-00763)
" SS-13	(037-00765)
" SS-14	(037-00766)
" SS-16	(037-00768)
" SS-17	(037-00769)
" SS-24	(037-00770)
" SS-25	(037-00776)
" SS-29	(037-00041)
" SS-30	(037-00780)
" SS-31	(037-00781)
" SS-44	(037-00788)

Sec. 29:

<u>Old Designation</u>	
"Standard-Sesnon 1"	4
"	10
"	12

<u>New Designation</u>	
"SFZU" SS-4	(037-00757)
" SS-10	(037-00040)
" SS-12	(037-00764)

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

830 North La Brea Avenue
Inglewood, California

September 23, 1968

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

DEAR SIR:

Your request dated letter dated August 26, 1968, relative to change in designation of well(s) in Sec. 28, 29, T. 3 N., R. 16 W., S. B. B. & M., Aliso Canyon field, Los Angeles County, District No. 1, has been received; and in accordance with Section 3203, Public Resources Code, reading in part as follows:

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

the proposed change in designation is hereby authorized as follows:

See attached list.

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

F. E. KASLINE
~~E. R. MURRAY AARON~~
State Oil and Gas Supervisor

By *Wm. C. Bailey*
Deputy Supervisor

DIVISION OF OIL AND GAS

JAN 14 1955

LOS ANGELES, CALIFORNIA

WELL SUMMARY REPORT

Operator TIDE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON
Well No. Standard-Beam 1-42 Sec. 28, T. 3 N, R. 16 W S. S. & M.
528.14' South & 6051.11' West Elevation of ground above sea level 2573.35' feet.
Location from station #84 All depth measurements taken from top of surface 1200',
which is 849' feet above ground.

In compliance with the provisions of Chapter 93, Statutes of 1939, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date January 5, 1955 Signed J. L. Deane
W. C. Young W. B. Gould Agent
(Engineer or Geologist) (Superintendent) (President, Secretary or Agent)

Commenced drilling xxxxxx Redrilling 7-7-54 Completed drilling xxxxxx Redrilling 8/16/54 Drilling tools Cable
8821' R.D. 8808' 7697' R.D. 8803' Rotary
Total depth 833' - 5" 21.12' 1. 8815' Top USLO' 81.8512' - 8815 GEOLOGICAL MARKERS DEPTH
Junk 833' - 7" 23' 7697' - 8800'

~~Completed~~ 9/7/54
Commenced producing 9/7/54 Flowing/gas lift/pumping
(date) (cross out unnecessary words)

2/23/54 Recomp.
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
53	22.1	0.1	7	200'	825'
48	22.5	0.2	45	200'	850'

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforations
18-5/8"	75'	0'	75#	New	Welded	-	22-1/2"	100	
13-3/8"	512'	0'	51.5#	New	Smls.	J-55	17-1/2"	145	Milled Sec.
7"	7678'	0'	21, 26, 28#	New	Smls.	J-55, N-80	11"	(100)	7678'-7697'
5"	8806'	7697'	10#	New	Smls.	"	5"	120 S.	
								120 CP Strata.	"

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
5"	8895' ft.	8803' ft.	4 - 1/2" holes/26.			run pf. by McCullough
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

Electrical Log Depths 7700' - 8806' (Attach Copy of Log)

DIVISION OF OIL AND GAS

JAN 14 1955

History of Oil or Gas Well

LOS ANGELES, CALIFORNIA

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. Standard-Sesnon 1-#2, Sec. 28, T. 3 N, R. 16 W, S.B. S.B.

Date January 5, 1955, 19____ Signed J. J. [Signature]

Los Nietos, California Oxford 91051 Title Agent

(Address) (Telephone Number) (President, Secretary or Agent)

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

Date	Description
1954	
6/23	Killed well with salt water.
6/24	Idle.
6/25	Installed reinforcements and contractor's drilling crown.
6/26-29	Idle.
6/30	Ioffland Bros. Drilling Contractor moving in.
7/1-7/6	Rigged up rotary.
7/7	Contractor on daily rate at 8:00 AM. Displaced salt water with mud. Hooking up B.O.P.
7/8	Circulated 2-1/2" and 2" tubing to bottom and found hole clean. Measured tubing. Ran 2-1/2" tubing with 310' of 2" stinger on bottom equipped with one inverted Guiberson grab rubber at 8655' and hung at 8616'. Mixed 125 sacks Colton Hi-temperature cement preceded by 100 cu. ft. of water. Washed interval 8655'-8625' once while displacing water and twice while displacing cement. Pulled tubing to 7665'. Closed rams and squeezed 12 cu. ft. of mud. Final pressure 2800#. Time 5:15 AM. B.J. Service (7-9-54).
7/9	Made up and measured 2-7/8" drill pipe. Going in hole with bit and scraper.
7/10	Located top of cement at 7933'. Conditioned mud. Ran Kinsback whipstock, oriented South 5° West. Slips failed to hold and left whipstock at 7933'.
7/11	Ran Baker bridge plug on McCullough wire line and set at 7850'. Ran Kinsback whipstock oriented South 5° West and set bottom of whipstock at 7795'; top at 7775'.
7/12	Ran diamond pilot and milled 7" casing from 7775' to 7776'. Mud weight 76#.
7/13	Milled window in 7" casing with diamond core head from 7776' to 7785'. Mud weight 75#, 55 viscosity, 8.0 c.c. water loss.
7/14	Thought to be in formation while drilling with diamond core head from 7785' to 7788'. Went in with Hughes bit but unable to get below 7780'. Ran in with Kinsback Type "W" mill and cleaned out to 7784'. Mud weight 78#, 60 viscosity, 8.0 c.c. water loss.
7/15	Cleaned out with Kinsback Type "W" mill from 7784' to 7784.5'. Had difficulty pulling back through previously milled portion. Now cleaning out with Kinsback Type "A" mill at 7781'. Mud weight 78#, 60 viscosity, 8.0 c.c. water loss.
7/16	Milled from 7784.5' to 7785.5'. Mud weight 78#, 60 viscosity, 8.0 c.c. water loss.
7/17	Milling at 7785' with 6" Kinsback Type "A" mill. Mud weight 76#, 50 viscosity, 8.0 c.c. water loss.
7/17	Milling on whipstock at 7785' with 6" Kinsback Type "A" mill. Mud weight 76#, 50 viscosity, 8.0 c.c. water loss.

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

JAN 14 1955

WELL NO.: Standard-Sesnon 1-#2, Aliso Canyon Field LOS ANGELES, CALIFORNIA

Page 2

1954

- 7/18 Abandoned whipstock at 7785'. Located collar in 7" casing at 7670'. Ran Baash-Ross section mill and began milling section at 7678'. Mud weight 76#, 82 viscosity, 6.0 c.c. water loss.
- 7/19 Milled section with Baash-Ross cutters from 7678' to 7684'. Mud weight 76#, 74 viscosity, 6.0 c.c. water loss.
- 7/20 Milled 3' with Baash-Ross cutters. Mud weight 77#, 75 viscosity, 6.8 c.c. water loss. (Milled from 7684' to 7687'.)
- 7/21 Milled with Baash-Ross cutters from 7687' to 7694'. Mud weight 77#, 100 viscosity, 9.0 c.c. water loss.
- 7/22 Milled with Baash-Ross cutters from 7694' to 7697'. Wall scraped 11" hole from 7678' to 7697'. Backscuttled cuttings from 7697'. Mud weight 77#, 85 viscosity, 7.2 c.c. water loss.
- 7/23 Cleaned out in 7" stub to 7724' with 6" bit. Ran Baash-Ross whipstock on 2-7/8" drill pipe and set on top of 7" stub at 7697', oriented South 20° West. Top of whipstock 7686'. Cemented in place, using 50 sacks Colton Hi-temperature cement. Final pressure 1900#. Time 8:00 AM. Backscuttled excess cement from 7610'.
- 7/24 Ran in 6" Hughes bit and found top of cement at 7691'.
- 7/25 Cleaned out cement from 7691' to 7697'. Drilled off whipstock with 6" Hughes bit and redrilled 6" hole to 7758'. Mud weight 72#, 43 viscosity, 8.0 c.c. water loss.
- 7/26 Redrilled 6" hole from 7758' to 7846'. Mud weight 72#, 40 viscosity, 9.5 c.c. water loss.
- 7/27 Redrilled 6" hole from 7846' to 7927'. Changed to Kenflo oil base mud at 7900'. Mud weight 62#, 190 viscosity.
- 7/28 Redrilled 6" hole from 7927' to 8012'. Mud weight 62#, 225 viscosity.
- 7/29 Redrilled 6" hole from 8012' to 8040'. Mud weight 60#, 105 viscosity.
- 7/30 Redrilled 6" hole from 8040' to 8145'. Mud weight 60#, 105 viscosity.
- 7/31 Redrilled 6" hole from 8145' to 8199'. Mud weight 60#, 90 viscosity.
- 8/1 Redrilled 6" hole from 8199' to 8241'. Mud weight 60#, 85 viscosity.
- 8/2 Redrilled 6" hole from 8241' to 8283'. Mud weight 61#, 100 viscosity.
- 8/3 Redrilled 6" hole from 8283' to 8293'. Mud weight 61#, 110 viscosity.
- 8/4 Redrilled 6" hole from 8293' to 8347'. Mud weight 60#, 120 viscosity.
- 8/5 Redrilled 6" hole from 8347' to 8391'. Mud weight 61#, 169 viscosity.
- 8/6 Redrilled 6" hole from 8391' to 8439'. Mud weight 60#, 110 viscosity.
- 8/7 Redrilled 6" hole from 8439' to 8492'. Mud weight 59#, 109 viscosity.
- 8/8 Redrilled 6" hole from 8492' to 8558'. Mud weight 59#, 115 viscosity.
- 8/9 Redrilled 6" hole from 8558' to 8648'. Mud weight 60#, 120 viscosity.
- 8/10 Redrilled 6" hole from 8648' to 8729'. Mud weight 61#, 102 viscosity.
- 8/11 Redrilled 6" hole from 8729' to 8767'. Mud weight 61#, 115 viscosity.
- 8/12 Redrilled 6" hole from 8767' to 8808'. Mud weight 61#, 118 viscosity. (Hard Zone 8808'.)
- 8/13 Ran Schlumberger electric log and Gamma Ray log and reamed hole. Mud weight 61#, 122 viscosity.
- 8/14 Reamed hole. Mud weight 61#, 110 viscosity.
- 8/15 Ran and cemented 1249' 5" blank Youngstown 18# flush joint liner at 8806'. Top of hanger at 7557'. Cemented in place with 120 sacks Victor Hi-temperature cement premixed with 120 cu. ft. of Strata-Crete plus 1/2 Gal. Final pressure 2000#. Time 11:40 AM. B.J. Service.
- 8/16 Found top of cement at 7248' and cleaned out to top of liner. Ran Johnston casing tester on 2-7/8" drill pipe and set packer at 7515' with tailpipe to 7532'. Opened 5/8" bean at 12:05 PM. Had light, heading blow for first 15 minutes, then dead for remainder of 1 hour test. Recovered 60' of drilling fluid. Pressure bomb charts checked details of test. Witnessed and approved by Division of Oil

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

JAN 14 1955

WELL NO.: Standard-Sesnon 1-#2, Aliso Canyon Field

LOS ANGELES, CALIFORNIA

Page 4

1954	Gross	Net	Cut	Gravity	Bean	Tubing Pressure	Casing Pressure	MCF Inj.	MCF Net
9/9	7	7	3.0%	22.0	8/64	350#	900#	106	19
9/10	35	35	0.5%	21.2	22/64	200#	800#	97	-17
9/11	32	32	0.1%	22.3	22/64	300#	800#	120	-2
9/12	31	31	0.2%	22.7	22/64	350#	825#	118	-5
9/13	47	47	0.1%	22.2	30/64	250#	800#	123	1
9/14	47	47	0.1%	22.0	30/64	200#	800#	180	2
9/15	47	47	0.2%	22.1	30/64	200#	725#	214	19
9/16	14	14	0.2%	22.0	30/64	500#	950#	126	32
9/17	38	38	0.1%	22.6	30/64	200#	825#	130	56
9/18	53	53	0.1%	22.1	30/64	200#	825#	131	7
9/19	45	45	0.2%	22.4	30/64	250#	850#	127	4
9/20	37	37	0.1%	22.3	30/64	200#	850#	107	10
9/21	41	41	0.1%	22.3	30/64	200#	850#	114	6
9/22	53	50	5.0%	22.3	30/64	200#	850#	111	8
9/23	49	47	5.0%	22.5	30/64	250#	850#	180	40
9/24	49	47	5.0%	22.5	30/64	250#	850#	196	60
9/25	44	42	5.0%	22.5	30/64	250#	850#	133	33
9/26	43	41	5.0%	22.5	30/64	250#	850#	86	72
9/27	38	38	0.2%	22.5	30/64	250#	850#	80	36
9/28	27	27	0.2%	22.5	30/64	250#	850#	38	43
9/29	38	38	0.2%	22.5	30/64	250#	850#	46	96
9/30	38	38	0.2%	22.5	30/64	250#	850#	108	7
10/1	35	35	0.2%	22.5	30/64	250#	850#	93	55
10/2	43	43	0.2%	22.5	30/64	250#	850#	82	42
10/3	38	38	0.2%	22.5	30/64	250#	850#	67	25
10/4	54	54	0.2%	22.5	30/64	250#	850#	110	69
10/5	44	44	0.2%	22.5	30/64	250#	850#	142	7
10/6	48	48	0.2%	22.5	30/64	250#	850#	99	45

CASING RECORD

1249' 18-5/8" 75# C 75'
 13-3/8" 54.5# C 512'
 7" 24, 26, 28# to 7678' (Section 7678'-7697')
 5" 18# C 8806' Top 7557' 4 H 8643', 8540'
 4 H/F 8655'-8803'

JUNK

833' 7" 23# 7697' - 8530'
 5" 21.42# L 8816' Top 8510'; Pg. 8542'-8816'

TUBING RECORD

2-7/8" H 8646' inc. 1104' of 2" on bottom

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T. 154-968

Mr Thomas E Weaver Los Angeles 15 Calif. August 30 19 54
~~XXX~~ Box "Y"
 Los Nietos Calif.
 Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Operations at your well No. "Standard-Sesnon 1" 2 Sec. 28, T. 3 N., R. 16 W., S. B. B. & M.,
Aliso Canyon Field, in Los Angeles County, were witnessed by
J. F. Foster, Engineer, representative of the supervisor,
 on August 16, 1954. There was also present E. Young, Engineer, and
C. E. Fay, Drilling Foreman

Casing Record <u>18 5/8" cem. 76¹; 13 3/8" cem. 512¹;</u>	Junk
<u>7" cem. 8530¹, W.S.O. milled through 7678¹-7697¹; 5"</u>	<u>T.D. (1st hole) 8821¹</u>
<u>cem. 7557¹-8806¹; T.D. 8808¹.</u>	

The operations were performed for the purpose of demonstrating that no fluid has access to the well between the 7" and 5" casings.

The inspector arrived at the well at 3:20 p.m. and Mr. Young reported:

1. On July 9, 1954, 125 sacks of cement were pumped into the hole through 2 1/2" tubing hanging at 8816' filling to 7933'.
2. The 7" casing was milled through from 7678' to 7697'.
3. A Beash-Ross permanent whipstock was set at 7686'.
4. A 6" rotary hole was drilled from 7686' to 8808'.
5. On August 15, 1954, 5" 18-lb. casing was cemented from 7557' to 8806' with 160 sacks of cement and 100 cu. ft. Stratacrete plus 4% gel.
6. Cement was drilled out of the 5" casing from 7248' to 7557' (equivalent to 26 sacks), and the hole was cleaned out to 7557'.
7. A Johnston tester was run into the hole 2 7/8" drill pipe and packer set at 7515'.
8. The tester valve was opened at 12:05 p.m. and remained open for 1 hour. During this interval, there was a light blow diminishing to no blow in 3 minutes and no blow thereafter.

THE ENGINEER NOTED:

1. When the drill pipe was removed, 60¹ of oil-base drilling fluid was found in the drill pipe above the tester, equivalent to 0.3 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hour.

The test was completed at 4:20 p.m.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED as indicating that no fluid has access to the well between the 7" and 5" casings.

JFF:MN

cc T L Wark
 R S Curl
 J R Bovyer (2)

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

By *[Signature]* Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

(FORMATION TESTER)

No. T. 154-969

Mr. Thomas E WeaverBox "Y"

Los Nietos Calif

Agent for TIDE WATER ASSOCIATED OIL COMPANYLos Angeles 15 Calif.August 30 19 54

DEAR SIR:

Your well No. "Standard-Sesnon 1" 2, Sec. 28, T. 3 N., R. 16 W., S.B.B & M. Aliso Canyon Field, in Los Angeles County, was tested for water shut-off on August 18, 19 54. Mr. G. Y. Lee, Engineer, designated by the supervisor was present from 1:00 p.m. to 2:00 p.m. as prescribed by law; there were also present E. Young, Engineer and C. P. Fay, Drilling Foreman.

Shut-off data: 5 in. 18 lb. casing was cemented at 8806 ft. on August 15, 19 54 in. 6 in. hole with 160 ~~xxxx~~ sacks of cement xxxx calculated to fill behind casing to xxxx ft. below surface.

Casing record of well: 18 5/8" cem. 76'; 13 3/8" cem. 512'; 7" cem. 8530', W.S.O., milled through 7678'-7697'; 5" cem. 7557'-8806'; four 1/2" holes, 8643'; four 1/2" holes, 8540', W.S.O. Junk: T.D. (1st hole) 8821'.

Present depth 8808 ft. cmt. bridge 8806 ft. to 8808 ft. Cleaned out cmt. 8708 ft. to 8808 ft. for test.

A pressure of xxx lb. was applied to the inside of casing for xxx min. without loss after cleaning out to xxx ft.

A Schlumberger gun and Johnston tester was run into the hole on 2 7/8 in. drill pipe xxxx with 1010 ft. of water xxxx cushion, and packer set at 8508 ft. with tailpiece to 8523 ft.

Tester valve, with 3/8 in. bean, was opened at 9:40 a.m. and remained open for 1 hr. and xxx min. During this interval there was a light steady blow for 5 minutes, light heads for 10 minutes, then no blow for the remainder of the test.

Mr. Young reported:

1. The 5" casing was shot-perforated with four 1/2" holes at 8643', for Company test of shut-off.
2. The above perforations tested dry.
3. A Schlumberger gun and Johnston tester was run as noted above.
4. The 5" casing was shot-perforated with four 1/2" holes at 8540'.

THE ENGINEER NOTED:

1. When the drill pipe was removed, a net recovery of 120' of gassy drilling fluid was found in the drill pipe above the tester, equivalent to 0.54 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hour.

THE 5" SHUT-OFF AT 8540' IS APPROVED.

GYL:MN

cc T L Wark
R S Curl
J R Boyer (2)

E. H. MUSSER
~~REDACTED~~ State Oil and Gas Supervisor

By R. N. Halling, Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
REPORT ON PROPOSED OPERATIONS

No. P154-766

Mr. Thomas E Weaver
Box #7 Los Angeles California
Los Nietos California June 22 19 54
Agent for TIDE WATER ASSOCIATED OIL CO

DEAR SIR:

"Standard-Sesnon 1"

Your _____ proposal to redrill Well No. 2

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

dated June 17 19 54, received June 18 19 54, has been examined in conjunction with records filed in this office.

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

Records in addition to, or at variance with, those shown in the notice:
The proposed work, approved by our report No. P 152-733 dated June 12, 1952, in answer to your proposal to alter casing dated June 6, 1952, was never performed.
The 7" shut-off at 8530' was approved.

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Total depth.	8821'			
2. Complete casing record.				
	18-5/8"	75#	C	76'
	13-3/8"	54.5#	C	512'
	7"	24, 26, 28#	C	8530'
	306'	5"	L	8816'
3. Last produced.	Nov., 1950	65	23.0	1.0%
	(Date)	(Net Oil)	(Gravity)	(Cut)

PROPOSAL:

"The proposed work is as follows:

1. Kill well and plug with 125 sacks cement.
2. Mill out window in 7" casing at approx. 7800' and redrill to approximately 8800'.
3. Cement 5" blank liner on bottom with 100' lap in 7" casing.
4. Obtain water shutoff on 5" to 7" splice, to be witnessed by Div. of Oil and Gas.
5. Obtain Zonal segregation at approximately 8640'.
6. Obtain water shutoff at top of Sesnon Zone (est. 8540'), to be witnessed by D.O.G.
7. Perforate portions of Lower Sesnon Zone and complete well."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Adequate blowout prevention equipment shall be installed and maintained in operating condition at all times.
3. THIS DIVISION SHALL BE NOTIFIED TO WITNESS
 - (a) A test after cleaning out below the top of the liner to demonstrate that no fluid

E. H. MUSSER

State Oil and Gas Supervisor

By (CONTINUED ON PAGE 2) Deputy

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P. 154-766

Page 2

TIDE WATER ASSOCIATED OIL CO

Well No. "Standard-Sesnon 1" 2, Section 28, T. 3 N, R. 16 W, S. B B. & M.

has access to the well between the 5" and 7" casings.

(b) A test of the effectiveness of the 5" shut-off at about 8540'.

M/B

FMK:DS

cc T L Wark
R S Curl
J R Boyer (2)

Blanket bond.

E. H. MUSSER
~~California~~ State Oil and Gas Supervisor

By *R. H. Halling* Deputy

STATE OF CALIFORNIA DEPARTMENT OF NATURAL RESOURCES

JUN 18 1954

DIVISION OF OIL AND GAS

LOS ANGELES, CALIFORNIA

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

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

Los Nietos Calif. June 17 19 54

DIVISION OF OIL AND GAS

Los Angeles Calif.

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of deepening, redrilling, plugging or altering casing at Well No. Standard-Sesnon 1-#2

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

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- 1. Total depth. 8821'
2. Complete casing record. 18-5/8" 75# C 76' 13-3/8" 51.5# C 512' 7" 24, 26, 28# C 8530' 5" 21.42# L 8816' Top 8510' Pf. 8542'-8816'

3. Last produced. Nov., 1950 65 23.0 1.0% (Date) (Net Oil) (Gravity) (Cut)

The proposed work is as follows:

- 1. Kill well and plug with 125 sacks cement.
2. Mill out window in 7" casing at approx. 7800' and redrill to approximately 8800'.
3. Cement 5" blank liner on bottom with 100' lap in 7" casing.
4. Obtain water shutoff on 5" to 7" splice, to be witnessed by Div. of Oil and Gas.
5. Obtain Zonal segregation at approximately 8640'.
6. Obtain water shutoff at top of Sesnon zone (est. 8540'), to be witnessed by D.O.G.
7. Perforate portions of lower Sesnon zone and complete well.

Table with columns: MAP, MAP BOOK, CARDS, BOND, FORMS (114, 121). Includes handwritten entries: Redrill, Blanket, eB, eS.

TIDE WATER ASSOCIATED OIL COMPANY (Name of Operator)

By J E Weaver

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



TIDE WATER ASSOCIATED OIL COMPANY

DIVISION OF OIL AND GAS
RECEIVED

JUN 18 1954

LOS ANGELES, CALIFORNIA

Los Nietos, California
P. O. Box "Y".

June 17, 1954

Division of Oil and Gas
1015 West Olympic Blvd.
Los Angeles 15, California

Attention: Mr. F. E. Kasline

Dear Fred:

In regards to your letter of June 9, 1954 in which you requested information regarding a work proposal dated June 6, 1952 covering altering casing at Standard-Sesnon 1-#2 well, Aliso Canyon Field, that work was never performed; however, we are enclosing herewith a request to redrill the well.

We are also enclosing a copy of the map you asked for a couple months ago.

Sincerely,

TIDE WATER ASSOCIATED OIL COMPANY

John R. Bovyer
District Petroleum Engineer

JRB/rds

6/18/54
Please cancel notice to
alter casing proposed to above
732

E H Musser
XXXXXX

Goodwin J Knight
XXXXXXXXXX

DeWitt Nelson
XXXXXXXXXXXXXX

FOLLOW-UP
7-9

1015 West Olympic Boulevard
Los Angeles 15 California

June 9 1954

Mr Thomas E Weaver
Box Y
Los Nietos California

Agent for Tide Water Associated Oil Company

Dear Sir

Will you please inform me if the work proposed in your notice dated June 6, 1952, covering altering casing operations at well No. "Standard-Sesnon 1" 2, Sec. 28, T. 3 N., R. 16 W., S. B. B. & M., Aliso Canyon field, has been performed. If so, a history in duplicate covering the work done is now due.

Yours truly

R. W. Walling
FEK

R W WALLING
Deputy Supervisor

Note Address reply to attention
of Mr F E Kasline

FEK:eb

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS
REPORT ON PROPOSED OPERATIONS

No. P.152-733

Los Angeles 15 Calif. June 12 19 52

Mr. F C Foster
Box Y
LOS NIÑOS Calif.

CANCELLED ¹²¹

Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

"Standard-Sesnon 1"

Your proposal to alter casing Well No. 2

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

dated June 6 19 52, received June 9 19 52, has been examined in conjunction with records filed in this office.

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

RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE
The 7" shut-off at 8530' was approved.

THE NOTICE STATES

"The present condition of the well is as follows:

1. Total depth. 8821'
2. Complete casing record.

18-5/8"	75#	C	76'
13-3/8"	54.5#	C	512'
7"	24, 26, 28#	C	8530'
306' 5"	21#	L	8816'
			Perf. 8542' - 8816'

3. Last produced.	<u>Nov. 1950</u>	<u>65</u>	<u>23.0</u>	<u>1.0</u>
	(Date)	(Net Oil)	(Gravity)	(Cut)"

PROPOSAL

"The proposed work is as follows:

1. Set bridging plug at 8660'.
2. Scab cement 5" liner from 8650' to 8630' until interval will hold 1500# pressure.
3. Run tubing with packer set in scabbed interval and return well to production."

DECISION

THE PROPOSAL IS APPROVED.

ERMA:OH

cc Wm. E. Perkes (2)
T. L. Wark

B/G
Jos Jensen
c/o Tide Water Associated Oil Co
888 Pacific Electric Building
LOS ANGELES 14

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL & GAS

RECEIVED

JUN 9 1952

DIVISION OF OIL AND GAS

LOS ANGELES

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

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

Los Nietos, Calif. June 6, 1952 19

DIVISION OF OIL AND GAS

Los Angeles Calif.

CANCELLED

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of deepening, redrilling, plugging or altering casing at Well No. Standard-Semen #1-2
(Cross out unnecessary words)

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

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 8827'

2. Complete casing record.

18-5/8" 75# C 76'
13-3/8" 54.5# C 512'
7" 21, 26, 28# C 8530'
5" 27# L 8816'
Perf. 8512' - 8816'

MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121

alter casing

Deleted if OK

3. Last produced. Nov. 1950 65 23.0 1.0
(Date) (Net Oil) (Gravity) (Cut)

The proposed work is as follows:

1. Set bridging plug at 8660'.
2. Seal cement 5" liner from 8650' to 8630' until interval will hold 1500# pressure.
3. Run tubing with packer set in scabbed interval and return well to production

TIDE WATER ASSOCIATED OIL COMPANY

(Name of Operator)

F. C. Foster

By Agent

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

~~037 00955~~

Operator () of Field _____

Well No. _____ Sec. _____, T. _____, R. _____, B. & M. _____

Location _____ Elevation of ~~ground~~ ^{derrick floor} above sea level _____ feet.

In compliance with the provisions of Chapter 93, Statutes of 1939, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date _____ Signed _____

(Engineer or Geologist) (Superintendent) Title _____
(President, Secretary or Agent)

Commenced drilling _____ Completed drilling _____ Drilling tools Cable Rotary

Total depth _____ Plugged depth _____ GEOLOGICAL MARKERS DEPTH

Junk	GEOLOGICAL MARKERS	DEPTH

Commenced producing _____ (date) Flowing/gas lift/pumping _____
(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

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 Casing landed in	Number of Sacks of Cement	Depth of Cementing if through perforations

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

MAP MAP CAMEL BOND FORMS
114 121

Electrical Log Depths _____ (Attach Copy of Log)

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL & GAS
RECEIVED
1370 - 1943
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR..... FIELD.....

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

Signed.....

Date..... Title.....

(President, Secretary or Agent)

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

Date

[Empty reporting area for well history]

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

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1948

LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR _____ FIELD _____

Well No. _____, Sec. _____, T. _____, R. _____, _____ B. & M.

Signed _____

Date _____ Title _____

(President, Secretary or Agent)

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Date

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

OPERATOR _____ FIELD _____

Well No. _____, Sec. _____, T. _____, R. _____, B. & M. _____

Signed _____

Date _____ Title _____

(President, Secretary or Agent)

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Date

[Empty reporting area for well history]

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

OPERATOR _____ FIELD _____

Well No. _____, Sec. _____, T. _____, R. _____, B. & M. _____

Signed _____

Date _____

Title _____

(President, Secretary or Agent)

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Date

Large empty rectangular area for reporting well operations.

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1948
LOS ANGELES, CALIFORNIA

OPERATOR..... FIELD.....

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

Signed.....

Date..... Title.....

(President, Secretary or Agent)

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Date

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

OPERATOR..... FIELD.....

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

Signed.....

Date..... Title.....

(President, Secretary or Agent)

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Date

[Empty reporting area for well history]

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DEPARTMENT OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

OPERATOR W. J. ... FIELD ...

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

Signed _____

Date ... Title ...

(President, Secretary or Agent)

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Date

...

Reamed 11" hole from 7945' to 8331'. Spaced 4 1/2" hole to 11" from 8331' to 8417'. Reamed 11" hole from 8417' to 8470'.

11-13-43 8470' Landed 11" hole from 8470' to 8476'.

11-14-43 8476' Cased 4 1/2" hole from 8476' to 8501'.

For re-landowner? Reamed Log. Spaced out and spot reamed 11" hole

Reamed 11" hole from 8501' to 8483'. Spaced 4 1/2" hole to 11" from 8476' to 8483'.

Cleaned out 4 1/2" hole from 8476' to 8504'. ran Johnston formation tester on 4 1/2" full hole drill pipe. Set pusher on shoulder at 8483' - displaced from hole to 8486' when valve was opened. Used 2 1/2" beam and 14' ball pipe, including 3' perforated. Opened valve at 11:00 AM. Had fair to strong blow throughout test with gas to surface after eight minutes. Closed valve at 11:01 AM, after being open 36 minutes. Fluid reached surface at approximately same time as valve was closed. Fluid was initially mud changing in 4 minutes to oil. Closed for short time at calculated surface rate of 100 bbl/cross field and recovered gas rate of 2000 to 3000 bbl. Flow line sample out 3.0 including 1.0 water and 2.0 mud; 21.0 dry gas. Most of fluid blew out of drill pipe before core was pulled or being drilled. Sample taken immediately above tester out 25.0 including 0.2 water, 1.0 mud, and 23.8 emulsion (10.0 gas free); 22.0 dry gravity; chart in pressure recorder showed valve open time about test with 1250. flow pressure. Cleaned out to 8476'.

ran 4 1/2" drill pipe at 8476' and pumped in 30 sacks Gellon 100 lb temperature in 10 min. Circulation 100 GPM on 20 min. Since 11:15 AM. After three minutes, circulation time 10 minutes. Pulled up to 8480'. Circulation. Landed top of cement at 8483'. Cleaned out with 4 1/2" casing 4 1/2" hole to 11" to 8483'.

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

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1948
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR..... FIELD.....

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

Signed.....

Date..... Title.....

(President, Secretary or Agent)

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

Date

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DEPARTMENT OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR..... FIELD.....

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

Signed.....

Date..... Title.....

(President, Secretary or Agent)

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Date

[Empty reporting area for well history]

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

OPERATOR _____ FIELD _____

Well No. _____, Sec. _____, T. _____, R. _____, B. & M. _____

Signed _____

Date _____

Title _____

(President, Secretary or Agent)

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Date

[Empty reporting area for well history]

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL & GAS
RECEIVED
1948 - 1948
LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR _____ FIELD _____

Well No. _____, Sec. _____, T. _____, R. _____, B. & M. _____

Signed _____

Date _____ Title _____
(President, Secretary or Agent)

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Date

Table with multiple columns for recording well operations, including dates, descriptions of operations, and test results. The table is mostly blank with some faint, illegible markings.

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

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1943
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR _____ FIELD _____

Well No. _____, Sec. _____, T. _____, R. _____, B. & M. _____

Signed _____

Date _____ Title _____
(President, Secretary or Agent)

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Date

LOGGING RECORD

20-6/37, 78' S.D. 3021' 0 76'
 20-6/37, 51-52 0 812'
 78, 24, 23, 2, 80, 0 8650'
 8100' - 82, 11, 48'

0' - 80' in 80'; 20' - 4000' in 24'; 4000' - 6000' in 20'; 6000' - 8000' in 20'; Top 4000'; 20' - 4000' - 8000'

PERFORATION RECORD

Bottom 100' of casing in 20'. Perforations in 20' section on bottom.

Size of Hole:

0' - 76' in 20'
 78' - 812' in 20'
 810' - 8650' in 20'
 8000' - 8000' in 20'

MAP	MAP BOOK	CARD	FORMS	FORMS	
				103	121

(3021)

DIVISION OF OIL & GAS
RECEIVED
NOV 9 - 1943

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator _____ Field _____

Well No. _____ Sec. _____, T. _____, R. _____, B. & M. _____

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
					215' to 220' (5')
215'	220'			5'	Top sand. Fine, fine to coarse, partly, mostly sorted, somewhat silty. Overlain by 1' of shale. No oil or gas. See 114' depth. Sandstone shell 0' to 1' from top.
220'	225'		drilled		1' of soft shale.
225'	230'				1' of soft shale.
230'	235'				1' of shale.
235'	240'				1' of shale.
240'	245'				1' of shale.
245'	250'				1' of shale.
250'	255'				1' of shale.
255'	260'				1' of shale.
260'	265'				1' of shale.
265'	270'				1' of shale.
270'	275'				1' of shale.
275'	280'				1' of shale.
280'	285'				1' of shale.
285'	290'				1' of shale.
290'	295'				1' of shale.
295'	300'				1' of shale.
300'	305'				1' of shale.
305'	310'				1' of shale.
310'	315'				1' of shale.
315'	320'				1' of shale.
320'	325'				1' of shale.
325'	330'				1' of shale.
330'	335'				1' of shale.
335'	340'				1' of shale.
340'	345'				1' of shale.
345'	350'				1' of shale.
350'	355'				1' of shale.
355'	360'				1' of shale.
360'	365'				1' of shale.
365'	370'				1' of shale.
370'	375'				1' of shale.
375'	380'				1' of shale.
380'	385'				1' of shale.
385'	390'				1' of shale.
390'	395'				1' of shale.
395'	400'				1' of shale.
400'	405'				1' of shale.
405'	410'				1' of shale.
410'	415'				1' of shale.
415'	420'				1' of shale.
420'	425'				1' of shale.
425'	430'				1' of shale.
430'	435'				1' of shale.
435'	440'				1' of shale.
440'	445'				1' of shale.
445'	450'				1' of shale.
450'	455'				1' of shale.
455'	460'				1' of shale.
460'	465'				1' of shale.
465'	470'				1' of shale.
470'	475'				1' of shale.
475'	480'				1' of shale.
480'	485'				1' of shale.
485'	490'				1' of shale.
490'	495'				1' of shale.
495'	500'				1' of shale.
500'	505'				1' of shale.
505'	510'				1' of shale.
510'	515'				1' of shale.
515'	520'				1' of shale.
520'	525'				1' of shale.
525'	530'				1' of shale.
530'	535'				1' of shale.
535'	540'				1' of shale.
540'	545'				1' of shale.
545'	550'				1' of shale.
550'	555'				1' of shale.
555'	560'				1' of shale.
560'	565'				1' of shale.
565'	570'				1' of shale.
570'	575'				1' of shale.
575'	580'				1' of shale.
580'	585'				1' of shale.
585'	590'				1' of shale.
590'	595'				1' of shale.
595'	600'				1' of shale.
600'	605'				1' of shale.
605'	610'				1' of shale.
610'	615'				1' of shale.
615'	620'				1' of shale.
620'	625'				1' of shale.
625'	630'				1' of shale.
630'	635'				1' of shale.
635'	640'				1' of shale.
640'	645'				1' of shale.
645'	650'				1' of shale.
650'	655'				1' of shale.
655'	660'				1' of shale.
660'	665'				1' of shale.
665'	670'				1' of shale.
670'	675'				1' of shale.
675'	680'				1' of shale.
680'	685'				1' of shale.
685'	690'				1' of shale.
690'	695'				1' of shale.
695'	700'				1' of shale.
700'	705'				1' of shale.
705'	710'				1' of shale.
710'	715'				1' of shale.
715'	720'				1' of shale.
720'	725'				1' of shale.
725'	730'				1' of shale.
730'	735'				1' of shale.
735'	740'				1' of shale.
740'	745'				1' of shale.
745'	750'				1' of shale.
750'	755'				1' of shale.
755'	760'				1' of shale.
760'	765'				1' of shale.
765'	770'				1' of shale.
770'	775'				1' of shale.
775'	780'				1' of shale.
780'	785'				1' of shale.
785'	790'				1' of shale.
790'	795'				1' of shale.
795'	800'				1' of shale.
800'	805'				1' of shale.
805'	810'				1' of shale.
810'	815'				1' of shale.
815'	820'				1' of shale.
820'	825'				1' of shale.
825'	830'				1' of shale.
830'	835'				1' of shale.
835'	840'				1' of shale.
840'	845'				1' of shale.
845'	850'				1' of shale.
850'	855'				1' of shale.
855'	860'				1' of shale.
860'	865'				1' of shale.
865'	870'				1' of shale.
870'	875'				1' of shale.
875'	880'				1' of shale.
880'	885'				1' of shale.
885'	890'				1' of shale.
890'	895'				1' of shale.
895'	900'				1' of shale.
900'	905'				1' of shale.
905'	910'				1' of shale.
910'	915'				1' of shale.
915'	920'				1' of shale.
920'	925'				1' of shale.
925'	930'				1' of shale.
930'	935'				1' of shale.
935'	940'				1' of shale.
940'	945'				1' of shale.
945'	950'				1' of shale.
950'	955'				1' of shale.
955'	960'				1' of shale.
960'	965'				1' of shale.
965'	970'				1' of shale.
970'	975'				1' of shale.
975'	980'				1' of shale.
980'	985'				1' of shale.
985'	990'				1' of shale.
990'	995'				1' of shale.
995'	1000'				1' of shale.

DIVISION OF OIL AND GAS LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator _____ Field _____

Well No. _____ Sec. _____, T. _____, R. _____, B. & M. _____

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
11'	11.5'				hard and cherty.
			5' 10" sand		
	11.5'		10'	0' 8"	Shell. Fine grained limestone.
	11.8'		0	11' 0"	0' 0" oil sand. Fine. Fine to medium. Generally silty. Thin to medium. 0' 0" shell. Fine to medium. Fine to coarse. 0' 0" sand limestone. Fine to coarse. Hard. Gray. Oil stained. Thin sandy plastic composed of fine, silty oil sand. This is a good oil sand.
	12.1'		0	5' 0"	Shell. Limestone. Generally fine to medium. Oil stained and on occasional layers of oil sand.
	12.4'		0	5' 0"	Sandy oil sand. Fine to coarse. Silty. Thin to medium. Generally silty. Thin to medium. 1" is noticeably sandy. To be good oil sand.
	12.7'		0	7' 0"	0' 9" oil sand. Fine. Thin to medium. Generally silty. Noticeable variation probably due to pore water variation. 0' 0" and over. 0' 0" shell. Silty limestone.
			11' 6" sand		
	13.0'		0	5' 0"	Very fine. Generally silty. Thin to medium. Generally silty. Thin to medium. 1" is noticeably sandy. To be good oil sand.

03700755

Std Lesson 1-2

DAT OF UNDERGROUND SURVEY

STA. N ^o	MEASURED DEPTH	VERTICAL DEPTH	DRIFT ANGLE	DIRECTION DRIFT	DRIFT FEET	COORDINATES			
						NORTH	SOUTH	EAST	WEST
1	89.50		0°15'	S 46°15' E	.39		.26	.29	
2	176.20		0°15'	S 64°15' E	.38		.43	.63	
3	262.50		0°10'	S 80°45' E	.25		.65	.85	
4	348.50		0°10'	South	.25		.80	.85	
5	435.30	435.30	0°20'	S 25°00' W	.50		1.25	.64	
6	520.90		0°25'	S 16°15' W	.62		1.85	.47	
7	607.30		0°15'	S 13°00' E	.39		2.22	.56	
8	694.60		0°20'	S 3°15' E	.51		2.73	.59	
9	781.40		0°25'	S 5°45' E	.63		3.36	.65	
10	867.30	867.30	0°15'	S 25°15' E	.38		3.70	.81	
11	955.10		0°25'	S 10°30' E	.54		4.28	.93	
12	1041.40		0°20'	S 19°00' E	.50		4.80	1.09	
13	1127.50		0°20'	S 25°15' E	.50		5.26	1.29	
14	1213.30		0°15'	S 24°30' E	.39		5.59	1.47	
15	1299.70	1299.70	0°20'	S 24°30' E	.50		6.05	1.68	
16	1384.50		0°25'	S 5°30' E	.62		6.67	1.74	
17	1469.00		0°25'	S 1°00' E	.62		7.29	1.75	
18	1556.40		0°20'	S 4°00' E	.51		7.80	1.79	
19	1642.20		0°20'	S 2°15' W	.50		8.30	1.77	
20	1729.00	1729.00	0°20'	S 2°00' E	.50		8.80	1.79	
21	1814.90		0°15'	S 16°00' W	.38		9.17	1.71	
22	1900.90		0°15'	S 4°30' W	.38		9.55	1.58	
23	1989.00		0°10'	S 3°45' E	.26		9.81	1.70	
24	2072.40		0°10'	S 4°45' E	.24		10.05	1.72	
25	2158.00	2158.00	0°00'	Vertical	.00		10.05	1.72	
26	2244.80		0°10'	N 2°15' E	.25		9.80	1.73	
27	2332.30		0°10'	N 23°30' W	.25		9.57	1.83	
28	2419.00		0°06'	N 57°00' W	.13		9.50	1.52	
29	2505.60		0°10'	N 25°30' E	.25		9.27	1.83	
30	2591.90	2591.90	0°10'	N 7°00' S	.25		9.02	1.85	
31	2677.50		0°10'	N 23°00' W	.25		8.79	1.56	
32	2764.20		0°10'	N 25°00' W	.25		8.56	1.45	
33	2850.50		0°10'	N 45°30' W	.25		8.38	1.27	
34	2935.40		0°05'	N 46°00' W	.13		8.29	1.18	
35	3022.60	3022.60	0°10'	N 71°30' W	.25		8.21	.94	
36	3109.00		0°10'	N 69°00' W	.25		8.12	.71	
37	3194.90		0°10'	N 69°00' W	.25		8.05	.48	
38	3281.30		0°10'	N 58°30' W	.25		7.90	.27	
39	3368.50		0°10'	N 71°30' W	.25		7.82	.03	
40	3455.10	3455.10	0°10'	N 71°30' W	.25		7.74	.21	
41	3539.70		0°05'	S 55°00' W	.13		7.75	.84	
42	3625.90		0°10'	S 63°30' W	.25		7.86	.66	
43	3714.30		0°10'	S 39°00' W	.26		8.05	.72	
44	3800.50		0°10'	S 16°00' W	.25		8.30	.79	
45	3886.80	3886.80	0°10'	S 21°30' W	.25		8.53	.88	
46	3973.20		0°10'	S 43°15' W	.25		8.71	1.05	
47	4060.80		0°10'	S 19°00' W	.25		8.95	1.14	
48	4147.10		0°05'	S 68°00' W	.13		9.00	1.26	
49	4233.30		0°10'	S 73°15' W	.25		9.07	1.49	
50	4320.70	4320.70	0°15'	S 79°30' W	.38		9.14	1.65	
51	4405.90		0°15'	S 76°00' W	.39		9.23	2.23	
52	4490.20		0°15'	S 68°00' W	.37		9.32	2.48	
53	4576.40		0°10'	S 73°00' W	.25		9.40	2.72	
54	4663.10		0°15'	N 55°00' W	.39		9.18	3.03	
55	4750.30	4750.30	0°10'	N 41°00' W	.25		9.00	3.20	
56	4838.40		0°10'	N 4°00' E	.25		8.74	3.47	
57	4925.40		0°10'	N 38°00' E	.25		8.54	3.02	
58	5012.20		0°10'	N 36°15' E	.25		8.34	2.87	
59	5099.50		0°10'	N 26°15' E	.25		8.12	2.76	
60	5187.00	5187.00	0°10'	N 28°00' E	.25		7.80	2.64	

TYPE OF SURVEY - Oriented Single-shot	EASTMAN OILWELL	TIDEWATER ASSOCIATED OIL CO.
SURVEY NO. - 66743 Control	SURVEY CORPORATION	SESSION 1-2
Date - June 27, 1943 June, July, August, 1943		ALISO CANYON

DATA OF UNDERGROUND SURVEY

STA NO	MEASURED DEPTH	VERTICAL DEPTH	DRIFT ANGLE	DIRECTION DRIFT	DRIFT FEET	COORDINATES			
						NORTH	SOUTH	EAST	WEST
61	5275.00		0°15'	N 21°15' E	.39		7.54		2.50
62	5382.10		0°20'	N 24°00' E	.51		7.07		2.29
63	5449.20		0°25'	N 26°00' E	.64		6.52		1.84
64	5534.80		0°25'	N 28°30' E	.82		6.21		1.38
65	5619.70	5619.70	0°25'	N 31°15' E	.62		5.82		1.00
66	5707.30		0°30'	N 35°00' E	.77		5.19		.48
67	5798.80		0°50'	N 12°45' E	1.29		3.93		.18
68	5883.50		0°45'	N 11°00' E	1.14		2.81	.04	
69	5989.20		0°40'	North	.99		1.82	.04	
70	6056.30	6056.28	0°45'	N 9°00' W	1.14		.68		.14
71	6143.90		0°30'	N 8°00' E	.76	.97			.06
72	6238.50		0°20'	N 43°30' E	.49	1.43		.28	
73	6314.60		0°25'	N 39°30' E	.63	.92		.68	
74	6401.80		0°25'	N 23°00' E	.64	1.51		.98	
75	6487.40	6487.38	0°30'	N 25°30' E	.74	2.18		1.25	
76	6572.80		0°30'	N 8°00' W	.74	2.92		1.17	
77	6659.80		0°25'	N 10°00' W	.63	3.54		1.06	
78	6746.00		0°30'	N 25°00' W	.76	4.24		.76	
79	6833.00		0°35'	N 12°00' W	.99	5.11		.57	
80	6915.40	6915.34	0°45'	N 12°00' W	1.05	5.17		.35	
81	7002.60	7002.54	0°30'	N 16°30' W	.76	6.90		.18	
82	7035.00	7034.91	2°25'	S 74°00' E	1.37	6.52		1.45	
83	7060.00	7059.88	2°40'	S 81°00' E	1.16	6.34		2.50	
84	7110.00	7109.73	4°25'	S 81°00' E	3.05	5.74		6.40	
85	7142.00	7141.60	5°10'	S 74°00' E	2.88	4.96		9.17	
86	7237.00	7236.17	5°25'	S 74°00' E	8.97	2.49		17.79	
87	7342.00	7340.85	5°45'	S 86°00' E	10.52	1.75		29.28	
88	7390.00	7388.35	6°25'	S 87°00' E	5.37	1.47		33.74	
89	7410.00	7507.41	7°10'	S 87°00' E	14.98	.69		48.60	
90	7571.00	7666.85	8°00'	S 88°00' E	22.41		.09	71.00	
91	7794.00	7788.23	9°20'	East	19.85		.09	80.85	
92	7934.00	7925.83	10°30'	East	25.51		.09	118.46	
93	8000.00	7890.58	11°25'	N 87°00' E	13.08	.59		129.52	
94	8073.00	8062.05	11°45'	N 87°00' E	14.86	1.37		144.86	
95	8154.00	8141.65	10°40'	N 87°00' E	14.99	2.15		159.33	
96	8235.00	8221.58	10°10'	N 85°00' E	14.30	3.89		173.57	
97	8290.00	8276.00	8°20'	N 79°00' E	7.97	5.41		181.34	
98	8378.00	8361.17	8°00'	N 75°00' E	11.97	6.51		192.90	
99	8470.00	8454.38	7°25'	N 73°00' E	12.14	12.06		204.51	
100	8594.00	8576.56	9°50'	N 63°00' E	21.18	21.58		223.58	
101	8684.00	8635.82	9°00'	N 80°00' E	9.38	23.31		232.62	
102	8764.00	8744.69	8°15'	S 79°00' E	15.79	20.26		248.30	
103	8821.00	8801.25	7°10'	S 65°00' E	7.11	17.28		254.74	

TYPE OF SURVEY - Oriented
Single-shot
SURVEY NO. 2743
Control
Date - June 27, 1943
June, July, August, 1943

**EASTMAN OILWELL
SURVEY
CORPORATION**

TIDEWATER ASSOCIATED OIL CO.
SESSION 1-2
ALISO CANYON FIELD

DATA OF UNDERGROUND SURVEY

STA Nº	MEASURED DEPTH	VERTICAL DEPTH	DRIFT ANGLE	DIRECTION DRIFT	DRIFT FEET	COORDINATES			
						NORTH	SOUTH	EAST	WEST
1	100.10		0°40'	S 3°00'E	1.16		1.16	.06	
2	193.10		0°40'	S 5°00'E	1.08		2.24	.15	
3	286.80		0°45'	S26°00'W	1.23		3.35		.39
4	380.70		0°35'	S14°30'W	.96		4.28		.63
5	473.90	473.85	0°40'	S18°00'W	1.08		5.31		.96
6	565.30		0°35'	S15°30'W	.93		6.21		1.21
7	659.20		0°40'	S16°30'W	1.09		7.26		1.52
8	752.70		0°35'	S19°00'W	.95		8.16		1.83
9	846.00		0°30'	S11°30'W	.81		8.95		1.89
10	939.70	739.62	0°30'	S16°30'W	.82		9.74		2.22
11	1032.70		0°30'	S11°30'W	.81		10.53		2.38
12	1126.20		0°30'	S10°00'W	.81		11.33		2.52
13	1219.60		0°20'	S17°00'W	.54		11.85		2.68
14	1311.40		0°15'	S10°00'E	.40		12.24		2.61
15	1405.80	1311.32	0°15'	S 4°00'W	.42		12.66		2.64
16	1500.10		0°20'	S 4°00'W	.55		13.21		2.68
17	1594.30		0°15'	S 2°30'E	.41		13.62		2.66
18	1689.00		0°10'	S 5°00'E	.27		13.89		2.64
19	1783.00		0°15'	S 3°30'E	.41		14.30		2.61
20	1874.60	1874.52	0°15'	S15°00'W	.40		14.69		2.71
21	1967.70		0°20'	S 5°00'E	.54		15.23		2.66
22	2060.00		0°20'	S14°00'E	.54		15.75		2.53
23	2154.10		0°20'	S10°00'E	.55		16.29		2.43
24	2247.70		0°15'	S20°30'W	.41		16.67		2.57
25	2340.50	2340.42	0°25'	S10°00'W	.68		17.34		2.69
26	2434.50		0°20'	S27°00'W	.55		17.83		2.94
27	2528.60		0°15'	S38°45'W	.41		18.15		3.20
28	2622.80		0°10'	S54°30'W	.27		18.31		3.42
29	2716.30		0°10'	N76°30'W	.27		18.25		3.68
30	2809.70	2809.62	0°20'	N59°30'W	.54		17.98		4.15
31	2904.20		0°15'	N12°00'W	.42		17.57		4.24
32	2998.00		0°20'	N 1°30'W	.54		17.03		4.25
33	3092.30		0°25'	N18°30'W	.69		16.38		4.47
34	3186.30		0°30'	N30°30'W	.82		15.67		4.89
35	3279.40	3279.32	0°30'	N21°30'W	.81		14.92		5.19
36	3372.90		0°20'	N52°00'W	.54		14.59		5.62
37	3466.50		0°20'	N52°30'W	.54		14.26		6.05
38	3560.40		0°30'	N75°00'W	.82		14.05		6.84
39	3652.00		0°30'	S86°45'W	.80		14.10		7.64
40	3745.40	3745.31	0°35'	S74°00'W	.95		14.36		8.55
41	3837.20		0°25'	S59°00'W	.67		14.71		9.12
42	3930.20		0°20'	S39°00'W	.54		15.13		9.46
43	4023.00		0°25'	S17°00'W	.68		15.78		9.66
44	4116.20		0°35'	S18°45'W	.95		16.68		9.97
45	4208.30	4208.21	0°25'	S26°45'W	.67		17.28		10.27
46	4301.60		0°15'	S42°00'W	.41		17.58		10.54
47	4395.10		0°10'	S42°00'W	.27		17.78		10.72
48	4489.10		0°05'	S79°00'W	.14		17.81		10.85
49	4581.60		0°00'		.00		17.81		10.86
50	4675.00	4674.91	0°00'		.00		17.81		10.86

cc - J^o D - 4/12/43

Type of Survey-Oriented	EASTMAN OILWELL SURVEY CORPORATION	Tidewater-Associated Oil Co.
Survey No. 82542		Sesnon No. 1
Date-August 16, 1942		Aliso Canyon Field

DATA OF UNDERGROUND SURVEY

STA No	MEASURED DEPTH	VERTICAL DEPTH	DRIFT ANGLE	DIRECTION DRIFT	DRIFT FEET	COORDINATES			
						NORTH	SOUTH	EAST	WEST
51	4768.60		0°00'		.00		17.81		10.86
52	4861.70		0°10'	S34°00'E	.27		18.03		10.71
53	4955.60		0°15'	N89°00'E	.41		18.02		10.30
54	5046.00		0°20'	N53°00'E	.52		17.71		9.88
55	5139.40	5931.31	0°10'	S69°45'E	.27		17.80		9.63
56	5230.80		0°40'	S 7°00'E	1.06		18.85		9.50
57	5325.20		1°00'	S14°00'E	1.65		20.45		9.10
58	5416.20		1°10'	S16°45'E	1.86		22.23		8.56
59	5510.10		1°20'	S13°30'E	2.19		24.36		8.05
60	5603.70	5603.50	1°20'	S13°00'E	2.18		26.48		7.56
61	5695.40		1°25'	S17°30'E	2.26		28.64		6.88
62	5787.90		0°40'	S15°30'E	1.07		29.67		6.59
63	5880.60		0°40'	S 5°00'E	1.08		30.75		6.50
64	5972.80		0°15'	South	.41		31.16		6.50
65	6064.50	6064.25	0°30'	N56°00'W	.80		30.71		7.16
66	6157.70		0°20'	S85°00'W	.54		30.76		7.70
67	6250.00		0°20'	S70°00'W	.54		30.94		8.21
68	6341.30		1°00'	S88°30'W	1.60		30.98		9.81
69	6433.90		0°35'	S70°00'W	.94		31.30		10.69
70	6527.30	6527.02	0°30'	S44°00'W	.81		31.88		11.25
71	6620.80		0°50'	S46°15'W	1.36		32.82		12.23
72	6714.40		1°10'	S44°14'W	1.91		34.19		13.56
73	6807.60		1°10'	S39°15'W	1.90		35.66		14.76
74	6900.80		0°40'	S31°30'W	1.08		36.58		15.32
75	6992.60	6992.26	0°20'	N79°00'W	.53		36.48		15.84
76	7084.40		0°05'	S81°00'W	.14		36.50		15.98
77	7176.40		0°00'		.00		36.50		15.98
78	7268.40		0°15'	S 9°30'W	.40		36.89		16.05
79	7362.80		1°05'	S25°30'W	1.78		38.50		16.82
80	7455.30	7454.85	2°30'	S35°00'W	4.03		41.80		19.13
81	7549.40		3°20'	S38°15'W	5.47		46.10		22.52
82	7643.60		3°30'	S47°30'W	5.75		49.98		26.67
83	7736.90		3°00'	S47°00'W	4.88		53.31		30.33
84	7830.00		2°10'	S67°00'W	3.52		54.69		33.57
85	7922.40	7921.39	1°00'	N81°00'W	1.62		54.44		35.17
86	8015.10		2°40'	S73°50'W	4.31		55.66		39.30
87	8109.50		3°45'	N84°00'W	6.17		55.02		45.44
88	8203.80		3°45'	N81°00'W	6.17		54.06		51.53
89	8295.10		3°20'	N76°15'W	5.30		52.80		56.68
90	8387.40	8385.66	2°20'	N83°00'W	3.76		52.34		60.41
91	8480.90		1°10'	S81°15'W	1.91		52.63		62.30
92	8573.20	8571.42	1°15'	S75°45'W	2.01		53.12		64.25

Type of Survey-Oriented

Survey No. 82542

Date-August 16, 1942

**EASTMAN OILWELL
SURVEY
CORPORATION**

Tidewater-Associated Oil Co

Sesnon No. 1

Aliso Canyon Field

MEMORANDUM

Los Angeles, California
August 26, 1943

Standard (T.W.A.)--Standard-Sesnon No. 1-2
Aliso Canyon - Sec. 28, T. 3 N., R. 16 W.

(K)

Samples have been examined to a depth of 8,812 feet. The lowermost material continues to be middle Miocene in age. The angle of dip as measured from these cores averages about 25 degrees. A formation test from 8,728 to 8,813 feet with valve open 30 minutes showed a rise of 7,825 feet, the upper 3,400 feet of which was mud and water followed by 4,425 feet of black oil estimated to be 22.5-23.2 degrees gravity. The well is now drilling in the extremely hard calcareous sandstone which is considered to be the base of the Sesnon zone.

H. L. Driver
H. L. DRIVER

HLD:AD.

cc: Mr. E. G. Lawson

MEMORANDUM

Los Angeles, California
August 19, 1943

Standard (T.W.A.)--Standard-Sesnon No. 1-2
Aliso Canyon - Sec. 28, T. 3 N., R. 16 W.

(K)

87 Collins

Samples have been examined to a depth of 8,738 feet. The lowermost portion of this well is within Miocene sediments containing Valvulineria californica zone fauna. Cores indicate the contact between these Miocene sediments and lower Pliocene to lie at 8,279 feet. This is an unconformable contact. The adjacent cores show the amount of dip to be about 28 degrees, both above and below the contact. Seven feet of oil sand were recovered in the bottom core, 8,738-8,758 feet. Core analysis reports show the oil content to be 35 degrees gravity. Oil sands above this core are reported to contain oil of 25 degrees gravity.

H. L. Driver
H. L. DRIVER

HLD:AD.

cc: Mr. E. G. Lawson

Done 8/26

CORE LABORATORIES, INC.
Petroleum Engineering Service
DALLAS

September 11, 1943

Tide Water Associated Oil Company
Route # 1, Box 197A
Bakersfield, California

Attention: Mr. G. D. Suman

Subject: Core Analysis
Mesnon # 2 Well
Aliso Canyon Field
Los Angeles County, California

Gentlemen:

The Mesnon Zone, cored in the above well from 8594 to 8804 feet, is interpreted to be primarily oil productive from the permeable, recovered sand sections. The interval, 8758 to 8761 feet, is water productive, but may be a local accumulation. The productive capacity of the interval is very low.

Sand present in the interval, 8594 to 8598 feet, has permeability of an average of 416 millidarcys. The remaining sand recovered below the depth 8615 feet has low permeability of an average of approximately 30 millidarcys. It is indicated that the majority of possible productive sand that may be in the lost core intervals is of low permeability and thus the overall section will have low productive capacity.

Analysis data are given in the typed report with interpretations for probable production.

Very truly yours,

CORE LABORATORIES, INC.



J. H. Campbell
Vice-President

JEC/mm
enc.

IBM

COPY

CORE LABORATORIES, INC.
 Petroleum Engineering Service
 DALLAS

Company TIFFIN WATER ASSOCIATED OIL COMPANY Date Report AUGUST 20, 1941 Page 1 of 2
 Well SECTION # 2 Cores MURKINS, MEND CONV. File PL 7-212
 Field ALISO CANYON Formation SECTION 2012 Analysts RM-LOL
 County LOS ANGELES State CALIFORNIA Elevation _____ Coregraph YES
 Location _____ Remarks ON LOCATION ANALYSIS

CORE ANALYSIS AND INTERPRETATION
 (Figures in parentheses refer to footnote remarks)

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL LIQUID SATURATION % PORE SPACE		PROBABLE PRODUCTION	REMARKS
				OIL	TOTAL WATER		
1	8594.5	230	24.3	21.0	34.2	OIL	
2	95.5	360	22.8	20.2	47.8	OIL	
3	96.5	872	23.8	12.5	35.9	OIL	
4	97.5	200	23.6	15.2	50.4	OIL	
8595.0 - 8614.0 LOW CORE							
5	8615.0	24	23.4	23.1	46.6	OIL	
6	16.3	21	23.2	25.4	44.4	OIL	
7	18.5	34	22.7	20.1	53.0	OIL	
8	19.5	53	24.7	22.3	47.3	OIL	
8623.0 - 8634.0 LOW CORE							
8637.0 - 8652.0 LOW CORE							
8654.0 - 8666.0 DRILLING							
8667.0 - 8678.0 LOW CORE							
9	8678.5	175	20.2	20.7	50.0	OIL	
10	81.5	5.2	22.1	20.3	52.0	OIL	
11	82.5	8.0	21.9	20.5	51.7	OIL	
12	83.5	3.8	22.0	19.6	50.5	OIL	
13	84.5	5.7	21.4	16.4	53.3	OIL	
14	85.5	8.4	20.0	17.5	51.4	OIL	
15	86.5	10	21.9	16.5	54.5	OIL	
16	87.5	6.8	20.9	19.1	49.5	OIL	
17	88.5	6.8	22.0	18.4	49.0	OIL	
8689.0 - 8692.0 LOW CORE							
8701.0 - 8716.0 LOW CORE							
18	8722.5	0.0			None	None	Low Permeability
19	83.5	0.0			None	None	Low Permeability
8724.0 - 8734.0 LOW CORE							
20	8735.5	15	19.6	16.8	48.8	OIL	

NOTE:
 (*) REFER TO ATTACHED LETTER.
 (1) INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED.
 (2) OFF LOCATION ANALYSES—NO INTERPRETATION OF RESULTS.

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

RM

CORE ANALYSIS AND INTERPRETATION

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL LIQUID SATURATION % PORE SPACE		PROBABLE PRODUCTION	REMARKS
				OIL	TOTAL WATER		
21	8739.5	103	20.7	14.5	46.5	OIL	
22	8740.5	28	19.5	15.3	42.5	OIL	
23	8741.5	61	19.0	16.5	47.2	OIL	
24	8742.5	35	15.3	14.7	45.5	OIL	
25	8743.5	45	21.4	14.5	35.0	OIL	
26	8744.5	28	20.2	14.4	44.2	OIL	
8745.0 - 8754.0 Lost Core							
27	8756.5	10	14.9	0.0	60.5	(2)	
28	8757.5	21	14.9	0.0	55.0	(2)	
29	8758.5	21	15.0	0.0	61.3	(2)	
30	8759.5	0.0				None	Low Permeability
31	8760.5	60.	23.5	16.2	44.5	(*)	
32	8761.0	0.0				None	Low Permeability
8766.0 - 8784.0 Lost Core							
33	8785.5	0.0				None	Low Permeability
34	8786.5	0.0				None	Low Permeability
35	8787.5	0.0				None	Low Permeability
36	8788.5	0.0	14.6	0.0	74.0	None	Low Permeability
37	8789.5	0.0	14.2	0.0	73.7	None	Low Permeability
38	8790.5	0.0	20.3	16.5	47.0	None	Low Permeability
39	8791.5	0.0				None	Low Permeability

CORE LABORATORIES, INC.

J. Campbell

A. H. Campbell September 10, 1943

11B M

NOTE:
 (*) REFER TO ATTACHED LETTER. (2) OFF LOCATION ANALYSES—NO INTERPRETATION OF RESULTS.
 (1) INCOMPLETE CORE RECOVERY—INTERPRETATION RESERVED.

These analyses, opinions or interpretations are based on observations and material supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation as to the productivity, proper operation, or profitableness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

Chloride Determinations
 Tide Water Associated Oil Company
 Season # 2 Well
 Aliso Canyon Field
 Los Angeles County, California

<u>DEPTH</u>	<u>CHLORIDE PARTS PER BILLION IN PURE WATER</u>	<u>CHLORIDE GRAINS PER GALLON IN PURE WATER</u>	<u>SODIUM CHLORIDE GRAINS PER GALLON IN PURE WATER</u>
8681.5	3550	297	342
84.5	4170	243	401
8739.5	4000	233	384
41.5	4400	257	424
43.5	3580	299	345
58.5	2740	160	264
59.5	4000	233	384
60.5	3650	213	352

629 South Hill Street,
Los Angeles 14, California,
September 17, 1943.

Mr. R. S. Curl, Agent,
Tide Water Associated Oil Company,
P. O. Box Y,
Los Nietos, California.

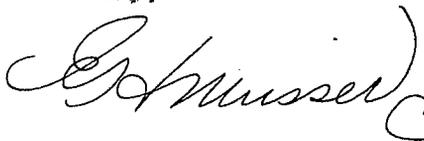
Dear Sir:

Please refer to our report No. F 1-42004 dated August 16, 1943, covering test of water shut-off at your well No. "Standard-Sesnon 1" 2, Sec. 28, T. 3 N., R. 16 W., S. B. D. & M., Aliso Canyon field.

The last item under the casing record of the well should read " 7" cas. 553', "S.S.O." instead of 753' as shown.

Please correct your copies of the report accordingly.

Yours truly,



Deputy Supervisor.

cc - Messrs. L. C. Decius
- Jos. Jensen
- G. C. Pfeffer (2)
- Mr. R. D. Bush (2)

my

429 South Hill Street
Los Angeles 14, California
August 16, 1943.

Mr. H. H. Nash,
State Oil and Gas Supervisor,
San Francisco, Calif.

Dear Sir:

In accordance with your letter of August 12, 1943,
our records have been checked to show title later associated Oil
Company to the number of title No. ~~414141-414141~~ 1 1 and
~~414141-414141~~ 1 2, Sec. 33, T. 3 N., R. 16 E., S. 3, N. & S.,
also Canyon field.

Yours truly,

Deputy Supervisor.

WHT:RHS

629 South Hill Street
Los Angeles 14, California
July 20, 1943.

Standard Oil Company of California
Tide Water Associated Oil Company, Operator,
Box 2037 Terminal Annex
Los Angeles 54, Calif.

Gentlemen:

I have been informed by Mr. R. A. Duch, State Oil and Gas Supervisor, that your blanket drilling bonds do not cover your joint operations in the Aliso Canyon field.

At the present time you are drilling well No. "Standard-Section 1" T, Sec. 26, T. 3 N., R. 16 W., S. E. 1/4 S. 1.

It will therefore be necessary for you to furnish either an individual bond or a rider to your blanket bond to cover the drilling of this well.

Please attend to this immediately.

Yours truly,

Deputy Supervisor.

CC - Standard Oil Company of California, Attention Mr. J. E. Cosline.
Tide Water Associated Oil Company, Attention Mr. Joseph Jensen.

REMARKS

629 South Hill Street
Los Angeles 14, California
June 8, 1943

Mr. R. B. Bush,
State Oil and Gas Supervisor,
San Francisco 11, California.

Dear Sir:

In a letter dated May 24, 1943, supplemented by telephone conversation today, Tide Water Associated Oil Company states that wells Nos. 1 Standard-Lesson 1-1 and 1 Standard-Lesson 1-2, Sec. 25, T. 3 N., R. 16 W., S. R. B. & M., Alice Canyon field, should be changed in our records to show the operator as

Standard Oil Company of California
Tide Water Associated Oil Company, Operator.

This change is to be retroactive to prior to the commencement of operations on this property. We are changing our records accordingly.

Request for designation of agent may be addressed to: Standard Oil Company of California, Box 2437 Terminal Annex, Los Angeles; Tide Water Associated Oil Company, Pacific Electric Building, 610 South Main St., Los Angeles.

Yours truly,

E. H. Musser

Deputy Supervisor

EHMA:G
cc- R. Peckey

Corrections Made as Follows	By Whom
Weekly Summaries	
121	
Law and Lec. Cards	
Production Reports	
Well Records	
Log Models	
Accounts	
Other Data	

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

No. T 1-42004

Los Angeles 14, Calif. August 16, 1943.

Mr. R. S. Curl,

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your well No. STANDARD-SEASON 1" 2, Sec. 28, T. 3 N., R. 16 W., S. B. B. & M. Aliso Canyon Field, in Los Angeles County, was tested for water shut-off on August 11, 1943. Mr. J. H. Show, Inspector, designated by the supervisor, was present as prescribed in Sec. 3222 and 3223, Ch. 93, Stat. 1939; there were also present J. T. Sinclair, Engineer, and H. H. Thrasher, Drilling Foreman.

Shut-off data: 7 in 24, 26, 28 lb. casing was ^{re-}cemented at 8530 ft. on August 8, 1943 in 11" hole with 56 sacks of cement of which 7 sacks was left in casing. Casing record of well: 18-5/8" cem. 76'; 13-3/8" cem. 512'; 7" cem. 8530' W.S.O. (Correction letter 9/17/43)

Reported total depth 8594 ft. Bridged with cement from 8585 ft. to 8535 ft. Cleaned out to 8535 ft. for this test. A pressure of xxx lb. was applied to the inside of casing for xxx min. without loss after cleaning out to xxx ft. A Johnston tester was run into the hole on 2-7/8 in. drill pipe, with xxx ft. of water cushion, and packer set at 8493 ft. with tailpiece to 8508 ft. Tester valve, with 3/8" bean, was opened at 7:08 a.m. and remained open for 1 hr. and xxx min. During this interval there was a weak intermittent blow.

INSPECTOR J. L. WHITE VISITED THE WELL FROM 10:20 P. M., AUGUST 5, TO 1:00 A. M., AUGUST 6, 1943, AND MR. SINCLAIR REPORTED:

1. A 12-1/4" rotary hole was drilled from 512' to 7010', an 11" rotary hole from 7010' to 8530' and an 8-1/2" rotary hole from 8530' to 8594'.
2. Electrical core readings showed the top of the Miocene at 8262' and the top of the Season zone at 8548'.
3. The hole was plugged with cement, pumped in through 2-7/8" drill pipe, from 8585' to 8512'. Cement was cleaned out to 8530'.
4. On July 31, 1943, the 7", 24, 26 and 28 lb. casing was cemented at 8530' with 400 sacks of cement, of which 80 sacks was left in the casing.

THE INSPECTOR NOTED THAT a Johnston tester recovered 4750' of heavy to watery drilling fluid. It was decided to retest.

INSPECTOR WHITE VISITED THE WELL FROM 8:20 TO 9:20 P. M., AUGUST 6, 1943, AND NOTED THAT a Johnston tester recovered 6850' of drilling fluid.

The Company stated that the 7" casing would be recemented.

INSPECTOR SHOW VISITED THE WELL AT 10:10 A. M., AUGUST 11, 1943, AND MR. SINCLAIR REPORTED THAT on August 8, 1943, the 7" casing was recemented at 8530' through a Baker cement retainer set at 8500' with 56 sacks of cement of which 49 was forced away at a final pressure of 2400 lb.

THE INSPECTOR NOTED:

1. When the drill pipe was removed 350' of light, gas-cut, slightly oily drilling fluid was found in the drill pipe above the tester, equivalent to 1.4 bbl.
2. There was no free water in the fluid.
3. The recording pressure bomb chart showed that the tester valve was open during the entire test.

The test was completed at 11:20 a. m.

THE SHUT-OFF IS APPROVED.

cc- L. C. Decius

J. H. Show, INSPECTOR

G. C. Pfeffer (2)
JHS:OH

R. D. BUSH, State Oil and Gas Supervisor

By E. H. Mussen, Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-38228

Los Angeles, Calif. March 9, 19 43.

Mr. R. S. Curl,

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

121

DEAR SIR:

"STANDARD-SESNON 1"

Your proposal to drill Well No. 2

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

dated March 5, 19 43, received March 8, 19 43, has been examined in conjunction with records filed in this office.

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

THE NOTICE STATES:

"The well is 928 feet S. and 6854 feet W. from Station #84

The elevation of the derrick floor above sea level is 2880 feet. (Approx.)

We estimate that the first productive oil or gas sand should be encountered at a depth of about 8500 feet."

PROPOSAL:

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

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
13-3/8"	54.5	J-55 S.J.	500	Cemented
7"	24 to 30	J-55 & N-80 T&O	8500	"
5"	21	J-55 F.J.	8750	Landed

Well is to be drilled with rotary tools.

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

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Adequate blowout prevention equipment shall be provided and ready for use at all times.
3. Any hole to be sidetracked in any oil zone shall be filled with cement, if possible.
4. This division shall be notified to examine cores and/or electrical log before running the 7" casing.
5. The column of mud fluid back of the 7" casing shall be maintained to the surface for at least 30 days after cementing this casing.
6. THIS DIVISION SHALL BE NOTIFIED TO WITNESS a test of the effectiveness of the 7" shut-off.

cc- L. C. Decius
Jos. Jensen
G. C. Pfeffer (2)
ERMA:OH

12

R. D. BUSH

State Oil and Gas Supervisor

By S. H. Messer Deputy

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Notice of Intention to Drill New Well

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

RECEIVED
MAY 10 1943
12
LOS ANGELES, CALIFORNIA

037-00755

Los Angeles, Calif. March 7, 1943

DIVISION OF OIL AND GAS

Los Angeles, Calif.

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of drilling well No. Standard-Session #102, Sec. 23, T. 3-N,

R. 34, So. B. & M., Aliso Canyon Field, Los Angeles County.

Lease consists of Standard-Session #1 Lease

The well is 229 feet N. or S. and 694 feet E. or W. from Station #21
(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the derrick floor above sea level is 2000 feet. (Approx.)
ground

We estimate that the first productive oil or gas sand should be encountered at a depth of about 3500 feet.

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

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
1 1/2"	21.5	J-55 S.S.	500	Landed
2"	21 to 22	J-55 S.S.	3500	"
3"	22	J-55 S.S.	3750	Landed

Well is to be drilled with rotary tools.
cable

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

Address So. B. & M.

FEDERAL ASSOCIATED OIL COMPANY
(Name of Operator)
(Operator for Standard Oil Co. of Calif.)

Telephone number Station 120-13

By Agent

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

18a
JKW.
Book
2.8.43
JKW.

Blanket Bond No. 43486