JRAL RESOURCES AGENCY OF CALIFORN
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 **216-0271**

REPORT ON OPERATIONS

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

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

Ventura, California
July 20, 2016

Your operations at well **"Standard Sesnon" 13**, A.P.I. No. **037-00765**, Sec. **28**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **7/8/2016**, by **Jay N. Huff**, a representative of the supervisor.

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

DECISION:

APPROVED

JNH/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel, *District Deputy*

KG711.

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

No. T 216-0271
#16,1

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

Operator: SoCal Gas					Well: Standard Sesnon 13
Sec. 28	T. 3N	R. 16W	B.&M. SB	API No.:037-00765	Field: Aliso Canyon
County: Los Angeles					Witnessed/Reviewed on: 7/8/2016

Jay Huff , representative of the supervisor, was present from 1020 to 1130.

Also present were: Mike Giuliani

Casing record of the well:
13-3/8" 54.5# J55 @ 732'. Cemented to surface.
7" 23/26/29# J55/N80 @ 9,035'. Cemented to 7,556'.
5" 18# J55 Liner 8,938'-9,349.
2-7/8" tubing with production packer at 8,880' and plug set at 8,846'. Gas lift mandrel with plug removed at 8,802'.

The Internal MIT was performed for the purpose of pressure testing the 7" casing above Packer at 8,880' (2) (prior to injecting fluid).
Tubing was also tested with a tubing plug set at 8,846'.

[x] The Internal MIT is approved since it indicates that the 7" casing has mechanical integrity above 8,880' at this time.

[ ] The Internal MIT is not approved due to the following reasons: (specify)

INDICATE WHERE PACKER WAS SET AND HOW LONG PRESSURE WAS HELD ALONG WITH ANY BLEEDOFF DATA.

Pressure testing of Production casing, packer, and tubing plug with 8.5 ppg polymer fluid. Well is to be idled.
Pressure Test 1. P1=1080 psi @ 10:25. P2=1073 psi @ 11:26.

DOGGR Dist2@DOC KG711.

From: Huff, Jay@DOC
Sent: Monday, July 11, 2016 8:18 AM
To: DOGGR Dist2@DOC
Cc: Huff, Jay@DOC
Subject: Submitted Pressure Test Field Forms
Attachments: SAPT 037-00765.docx

Here are the submitted field forms for pressure test completed last week. Please advise when document specifying Calwims entry format is completed and I will fill out the calwims entries.

Thanks,

Jay Huff

Associate Oil and Gas Engineer
Department of Conservation
Division of Oil, Gas and Geothermal Resources - District 1
5816 Corporate Avenue, Suite 100
Cypress, CA 90630
714-484-6225 *direct*

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

Operator: **Southern California Gas Company** WELL DESIGNATION **"Standard Sesnon" 13**

API No. **03700765** SE **28** T: **3N** R.: **16W** , **SB** B. and M.

County: **Los Angeles** FIELD: **Aliso Canyon**

Type of Notice: **Rework** **Date** **7/3/2016** **Report Number:** **P216-0118**

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

	Date	OK	NEED	Remarks
Well Summary (OG100)				
History (OG103)				
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				
Press Test	7/8/16	✓	✓	Need date from SCG

NEW STATUS

DATE: _____

NOTICE OF RECORDS DUE

DATE: _____

DATE: _____

DATE: _____

DATE: _____

WELL STATUS INQUIRY

DATE: _____

DATE: _____

Well Stat

Change Required: _____

Change Done: _____

ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS

CalWims Abandonment Form: _____ SURFACE INSPECTION NEEDED _____ COMPLETED _____
Date and Inspector

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

ENGINEER'S CHECK LIST

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

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

CLERICAL CHECK LIST

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

REMARKS

RECORDS SCANNED: _____
(Date)

RECORDS APPROVED: _____
(Date and Engineer)

Modified OGD2

AOR Datbase _____

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

No. P 216-0118

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

PERMIT TO CONDUCT WELL OPERATIONS

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

Ventura, California
July 08, 2016

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

Your proposal to **Rework** well **"Standard Sesnon" 13**, A.P.I. No. **037-00765**, Section **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **7/3/2016**, received **7/5/2016** has been examined in conjunction with records filed in this office. (Lat: **34.309885** Long: **-118.563719** 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 of the **7"** casing and tubing plug.

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

Engineer Kris Gustafson
Office (805) 654-4761

KG/kg

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____ for
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.

OG111 (revised 6/2011)

NOTE:

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

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

ATTACHMENT 1
TO DOGGR ORDER 1109

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

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

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

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

REQUIRED TESTS FOR EACH WELL IN THE FACILITY

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

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

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

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

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

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

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

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

REQUIRED TESTS IF A WELL IS INTENDED TO RESUME OPERATIONS

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

Step 4a: The Operator shall conduct a **Casing Inspection log.**
The Operator shall conduct a Casing Inspection log of the well that measures the thickness of the production casing, from the surface to the bottom of the gas storage reservoir cap rock. If the inspection reveals a reduction in wall thickness, the current minimum strength of the casing will be calculated. If the current minimum strength of the casing has diminished to the point that it cannot withstand authorized operating pressures for the well plus a built-in additional safety factor of pressure, the well has failed this test. *A passing test for a casing inspection log would show no thinning of the casing that diminishes the casing's ability to contain at least 115% of the well's maximum allowable operating pressure as authorized in the current Project Approval Letter.*

Step 5a: The Operator shall conduct a **Cement Bond Log** for the well.
The Operator shall conduct a Cement Bond Log (CBL) that measures the bonding between cement and the production casing of the well, and also the bonding between the annular cement and the formation. Cement should be solidly bonded to both the well's production casing and the geologic formation to ensure a seal that prevents fluids from migrating up or down the outside of the well. *A passing test for a cement bond log shows definitive bond, as demonstrated by sonic waveform,*

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

Step 6a: The Operator shall conduct a **Multi-Arm Caliper Inspection** of the well. The operator shall conduct an inspection that measures any internal degradation or significant changes to the well's geometry from the surface to the top of the gas storage reservoir, using a minimum 32-arm caliper tool. If the inspection reveals a thinning or deformity of the casing, the current strength of the casing will be calculated. If the current strength of the casing has diminished, such that it cannot withstand authorized operating pressures plus a built-in safety factor of additional pressure, the well fails this inspection. *A passing test for a Multi-Arm Caliper Inspection would show no deformation or thinning of the casing that diminishes the casing from being able to properly contain at least 115% of each well's maximum operating pressure.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

REQUIREMENTS FOR WELLS RESUMING OPERATIONS IN ALISO CANYON

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

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

FOR DIVISION USE ONLY			
	Forms		
Bond	~~OGD114~~	OGD121	
	CAL WIMS	1151	

P216-0118

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 (Check one) Standard Sesnon 13, API No. 037-00765,

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

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

The total depth is: 9350 feet. The effective depth is: 9345 feet.

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

Present zone pressure: storage psi. Anticipated/existing new zone pressure: storage psi.

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

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

The proposed work is as follows: (A complete program is preferred and may be attached.)
The SCGC plans to take this well out of operation and isolate from the gas storage reservoir as per the First Amended Safety Review Testing Regime: Steps 4b-7b.
4b - ETOC at 7556' as per attached wellbore mechanical.
5b - Packer set at 8880'. Plug set in XN nipple at 8846' and pulled plug from GLM at 8802' on 6/3/16.
6b - Circulated 8.5 ppg kill fluid down tbg. through GLM at 8802' and back to surface to completely fill well on 6/15/2016.
7b - With casing valve closed, pressure-up on tubing to 1000 psi. for 1 hour (will test csg., packer and tubing plug all at same time).

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

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

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

Name of Operator: Southern California Gas Company			
Address: P. O. Box 2300		City/State: Chatsworth	Zip Code: 91313-2300
Name of Person Filing Notice: Mike Giuliani	Telephone Number: (805) 290-2074	Signature	Date: 7/3/16
Individual to contact for technical questions: Mike Giuliani	Telephone Number: (805) 290-2074	E-Mail Address: mike.giuiliani@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.

Rec'd 07-05-16 DOGGR Ventura.

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

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

CRITICAL WELL DEFINITION

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

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

WELL OPERATIONS REQUIRING BONDING

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

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

Rec'd 07-05-16 DOGGR Ventura.

Well
Standard Sesnon 13

API #: 04-037-00765-00
Sec 28, T3N, R16W

Operator: So. California Gas Co.

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

Ground Elevation: 2578.75' asl
Datum to Ground: 6.92' DF

Spud Date: 10/5/1948
Completion Date: 12/24/1948

Junk: None

13-3/8" TOC Surface

17-1/4" Hole

Surface Casing
13-3/8", 54.5#, J-55
0' - 732'

CMT'D w/ 500 SKS
+ 250 SKS Top Job

732'

12-1/4" Hole (732' - 1553')

11" Hole (1553' - 9035')

7" ETOC 7556'

Production Casing
7"
0' - 3834' 23#, J-55
3834' - 5707' 23#, N-80
5707' - 7439' 26#, N-80
7439' - 9035' 29#, N-80

CMT'D w/ 500 SKS
(+ 100 SKS CMT SQZ'D @ Shoe)

Four (4) 1/2" Holes (7/11/1957) WSO 8920'
Co. WSO Splice (2/9/1956) & TOC 8938'

7" & 5" Perfs: 8962' - 8980' & 8995' - 9014'
Four (4) Holes (7/11/1957)

5" Perfs:
9045' - 9100', 9335' - 9338', 9337' - 9345'
Four (4) 1/2" HPF (6/1976)
9121' - 9156', 9195' - 9285' & 9295' - 9335'
Four (4) 1/2" HPF (2/11/1956)
9121' - 9156', 9195' - 9285' & 9295' - 9335'
Reprf'd w/ Two (2) HPF (2/15/1956)*

Four (4) Holes (Seg., 2/10/1956) 9172'

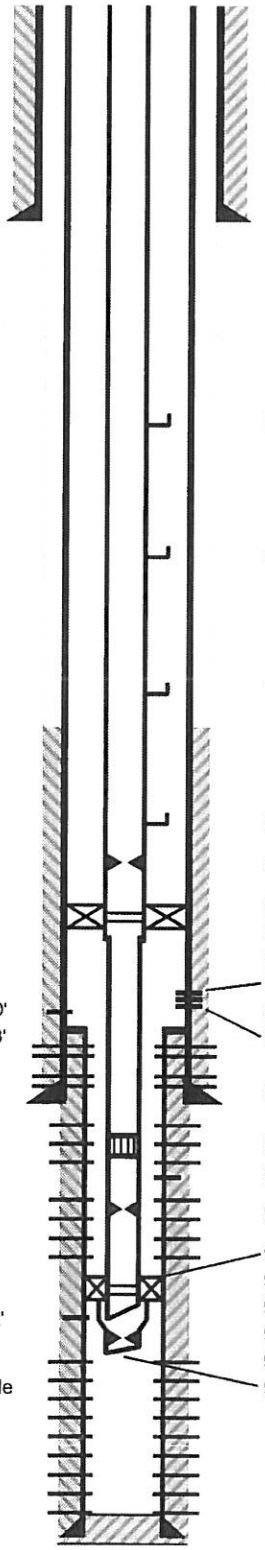
Liner
5", 18#, J-55 6" Hole
8938' - 9349'

CMT'D w/ 80 SKS, Good Returns @ TOL

PBTD 9345'

9349'

TD 9350'
TVD (9350')
Directionally Drilled: No



Tubing
2-7/8",
0' - 977' 6.5#, N-80
977' - 8886' 6.5#, J-55
2-3/8"
8886' - 9175' 4.7#, N-80

3060' MMA GLM 1-1/2" "RA"
Latch on L-12R Valve

5319' MMA GLM 1-1/2" "RA"
Latch on L-12R Valve

7254' MMA GLM 1-1/2" "RA" Latch on L-12R Valve

8802' MMA GLM 1-1/2" "RA" Latch on L-12R Valve

8846' Otis "XN" Nipple

8880' Otis "VTL" PCKR
8881' Otis Seal Units (2)
8883' Otis Guide Shoe
8907' Eight (8) 1/2" Holes (50 SKS CMT SQZ'D, 6/8/1976)
8907' - 8909' Eight (8) 1/2" Holes (9 CF CMT SQZ'D Away, 6/5/1976)
8909' Four (4) Holes (Co. WSO 6/4/1976)

9035' (Shoe) WSO

9084' Otis "XD" SSD
9113' Four (4) Holes (Seg., 2/10/1956)

9127' Otis "X" Nipple

9168' Otis "BWB" PCKR
9169' Otis Seal Units (6)
9175' Tail w/ Otis Guide Shoe
9178' 2-7/8" x 3-1/8" X-Over
9185' Otis "XN" Nipple
9186' Tail w/ Otis Guide Shoe

Notes

Well deepened from 9175' to current TD in 2/1956

*Re-perf'd interval after finding the perfs that were shot on 2/11/1956 had no gas or fluid entry.

Top of Zone Markers	md (tvd)
A1	4764' (4764')
UP	6129' (6129')
LP	6589' (6589')
UDA1	6895' (6895')
MDA	7919' (7919')
LDA	8159' (8159')
MP	8760' (8760')
S1	8966' (8966')
S4	9044' (9044')
S8	9200' (9200')

Prepared by: MAM (6/1/2016)

InterAct

Rec'd 07-05-16 DOGGR Ventura.

Casing Pressure Test Safety Check (1000 psi)

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

Rec'd 07-05-16 DOGGR Ventura.

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" SS-11 (037-00763)	"Standard Sesnon" 11 (037-00763)
"SFZU" SS-13 (037-00765)	"Standard Sesnon" 13 (037-00765)
"SFZU" SS-14 (037-00766)	"Standard Sesnon" 14 (037-00766)
"SFZU" SS-16 (037-00768)	"Standard Sesnon" 16 (037-00768)
"SFZU" SS-17 (037-00769)	"Standard Sesnon" 17 (037-00769)
"SFZU" SS-25 (037-00776)	"Standard Sesnon" 25 (037-00776)
"SFZU" SS-29 (037-00741)	"Standard Sesnon" 29 (037-00741)
"SFZU" SS-30 (037-00780)	"Standard Sesnon" 30 (037-00780)
"SFZU" SS-31 (037-00781)	"Standard Sesnon" 31 (037-00781)
"SFZU" SS-44 (037-00788)	"Standard Sesnon" 44 (037-00788)
"SFZU" SS-1-0 (037-22058)	"Standard Sesnon" 1-0 (037-22058)

M. G. MEFFERD, State Oil and Gas Supervisor

By _____
Deputy Supervisor
PATRICK J. KINNEAR

OGD157 (10/85/DWRR/1M)

OPERATOR Southern Calif. Gas
LSE & NO SFZU" SS-13
MAP 25D

	(1)	(2)	(3)	(4)	( )	( )
INTENTION	DRILL	DEEPEN	ALTR CSG	REWORK & RECOMP AS GAS STORAGE WELL	rework	
NOTICE DATED	9-3-48	10-24-55	6-17-57	5-11-76	9-18-91	
P-REPORT NUMBER	1-45552	155-1657	157-781	276-152	291-487	
CHECKED BY/DATE						
MAP LETTER DATED		N/C	N/C	NC	NC	
SYMBOL	⊕					

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE	9-7-48		10-26-55		6-18-57		5-14-76		9-19-91			
HISTORY	3-10-49		7-16-56		9-27-57		8-13-76		12/2/91			
SUMMARY	3-10-49		7-16-56									
IES/ELECTRIC LOG												
DIRECTIONAL SURV									GR-Neutron 12/2/91			
CORE/SWS DESCRIP	3-10-49											
OTHER							NL 6-28-76		11/19/91 GR/N			
RECORDS COMPLETE	✓		✓		✓		✓		pmc			

ENGINEERING CHECK

T-REPORTS	
OPERATOR'S NAME	
WELL DESIGNATION	
LOC & ELEV	
SIGNATURE	
SURFACE INSPECTION	
FINAL LETTER OK	

CLERICAL CHECK

POSTED TO 121 _____ 170 _____ MAILED _____ FINAL LETTER MAILED _____

RELEASED BOND _____

REMARKS: _____

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
DEC 2 - 1991
VENTURA, CALIFORNIA

History of Oil or Gas Well

Operator Southern California Gas Company Field Aliso Canyon County Los Angeles
Well Standard Sesnon #13, Sec. 28, T 3N, R 16W SB B. & M.
A.P.I. No. 037-~~00713~~ 00765 Name R. D. Phillips (Person submitting report) Title Agent (President, Secretary or Agent)
Date November 18, 1991

Signature J. B. Lane for R. D. Phillips

P. O. Box 3249 Terminal Annex, L. A. California 90051 (213) 244-2666
(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	
1991	
10-14 to 10-15	Moved in and rigged up.
10-16	Set tubing plug on wireline at 60'. Removed xmas tree and installed BOPE. Pressure tested blind rams and pipe rams to 5000 psi. Choke manifold would not test. Pam Ceccarelli with the DOG waived witnessing the test.
10-17	Retested blind and pipe rams to 5000 psi. Tested annular preventer to 3000 psi. Attempted to test choke manifold. Valves on choke manifold would not test. Removed choke manifold.
10-18	Installed new choke manifold and pressure tested to 5000 psi. Retrieved tubing plug at 60'. Unlanded tubing hanger and well started flowing. Circulated tubing and hole volume. Unlatched from packer. Pulled 60 stands out of well.
10-19	Finished pulling out of well with tubing. Recovered Baker latch and seals. Picked up Baker retrieving tool, bumper sub, jars and four 4-3/4" drill collars on 2-7/8" tubing and ran in well. Latched into Baker Retrieva-D packer. Jarred for one hour and packer came free. Started out of well.
10-21	Pulled out of well. Laid down packer and tools. Made up bit and scraper for 7" casing. Picked up 247 joints of 2-7/8" IF drill pipe.
10-22	Ran 2-7/8" drill pipe to 8938' (top of liner). Pulled out of well. Made up 4-1/8" bit and scraper. Ran in and tagged fill at 9313'. Cleaned out liner to 9343'. Pulled to top of liner.

10-23 Ran in and backscuttled well clean to 9343'. Pulled out of well. Ran GAMMA/NEUTRON/CCL LOG from 9347' to 8500'. Pulled out of well. Made up and ran 7-5/8" bit to top of liner. Secured well.

10-24 Changed over hole fluid to 2% KCL water at 9343'. Pulled out of well. Laid down drill pipe. Picked up tubing conveyed perforating guns. Started in well and filled pipe with water. Ran kill string. Secured well.

10-25 Ran in well filling 81 stands of drill pipe with water for 500 psi underbalance. Tagged bottom. Picked up 3'. Ran correlation log. Located guns on depth. Picked up 3' (bottom shot 9341' top shot 9045'). Set packer at 8952', dropped bar, and fired guns. Opened tools for 1 hour and 30 minutes. Fluid did not come to surface. Opened circulating valve and backscuttled gas out. Started pulling out of well.

10-28 Started out of well. Had to circulate gas out of well. Finished pulling out of well. Laid down tubing guns. Made up 4-1/8" bit and scraper. Ran in to 9343'. Backscuttled well clean. Pulled to top of liner.

10-29 Pulled out of well. Made up pin point injection packer. Ran in and pressure tested casing to locate blank pipe from 9156' to 9195'. Pulled to top of liner. Blanked off tool. Ran in at 9183'. Blanked off tool to 2000 psi. Worked up to 9149' and broke circulation. Spaced out packer back to 9183'.

10-30 Ran in and pulled standing valve from packer. Ran Gamma/CCL log from 9343' to 9100' to locate blank pipe. Pulled out of liner.

10-31 Pulled out of well. Ran 5" 18# Otis "BWB" packer on wireline. Set top of packer at 9168'. Made up Otis production equipment. Ran in with 7" 23# - 29# Otis Versa-Trieve packer. Worked Versa-Trieve tail assembly into bottom packer. Set top packer at 8887' with 3200 psi tubing pressure. Pulled 25,000 lbs to release from packer. Started out of well.

11-01 Pulled out of well. Laid down tools, 2-3/8" EUE tubing, 4-3/4" drill collars and kelly. Made up production equipment. Tested kill string to 4000 psi.

11-02 Tested 2-7/8" EUE tubing in well to 4000 psi. Located packer. Latched in and pulled 20,000 lbs over weight. Spaced out tubing. Set plug in No-Go nipple. Pulled out of well. Tested packer and seals to 1500 psi. Ran in and pulled plug. Landed 10,000 lbs on packer, 40,000 lbs on tubing hanger.

11-04 Installed equalizing back pressure valve. Removed BOPE. Installed x-mas tree and tested to 5000 psi. Released rig.

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

No.P291- 427
Field Code 010
Area Code 00
New Pool Code 30
Old Pool Code 30

PERMIT TO CONDUCT WELL OPERATIONS
GAS STORAGE

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

Ventura, California
September 26, 1991

Your proposal to rework well "SFZU" SS-13, A.P.I. No. 037-00765, Section 28, T. 3 N, R. 16W, S.B. B.&M., Aliso Canyon field, any area, Sesnon pool, Los Angeles County, dated 9/18/91, received 9/19/91, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOG Class III 5M requirements shall be installed and maintained in operating condition at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. Wire line operations are conducted through at least a 5M lubricator.
4. This office shall be consulted before initiating any changes or additions to this proposed operation, or if operations are to be suspended.
5. THIS DIVISION SHALL BE NOTIFIED:
   a. To inspect the installed blowout prevention equipment before commencing downhole operations. Waived 10/10/91

Blanket Bond
SF:ljg

Engineer Steve Fields

Phone (805) 654-4761

M.G. MEFFERD, State Oil and Gas Supervisor

By Patrick J. Kinnear
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.
OG111

DIVISION OF OIL AND GAS
RECEIVED
SEP 19 1991
VENTURA, CALIFORNIA

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
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
MB	✓	✓

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 "1730" S S- ~~Standard Sesnon~~ #13 (Well designation), API No. 037-00765

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

The present condition of the well is as follows:

1. Total depth 9350'

2. Complete casing record, including plugs and perforations (present hole)

0' - 732'	13-3/8"	54.5# line pipe
0' - 9035'	7"	23# J-55, and N-80, 5705'
		26# N-80, 7439'
		29# N-80, 9035'
		WSO 8920', Baker Retrieva "D" packer, 4" ID, 8895'
8938' - 9345'	5"	18# Liner
		Perforations: 8962'-8980', 8995'-9014', 9045'-9100', 9121'-9156', 9195'-9285', 9295'-9345'
		Plugged back, 9350'-9345'

3. Present producing zone name Standard Sesnon ; Zone in which well is to be recompleted _____

4. Present zone pressure 3492 psig ; New zone pressure _____

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

(or)

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

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

The proposed work is as follows:

1. Move in, rig up, and install and pressure test BOPE.
2. Pull tubing.
3. Retrieve packer and clean out well.
4. Reperforate intervals: 9045'-9100', 9121'-9156', 9195'-9285', 9295'-9345'.
5. Set isolation packer between the Sesnon zones 6 and 8.
6. Install packer and production tubing string.
7. Remove BOPE, install wellhead and return well to service.

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

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

Address Box 3249, Terminal Annex (Street)

Los Angeles, California 90051 (City) (State) (Zip)

Telephone Number (213) 689-3925

Southern California Gas Company (Name of Operator)

By J. B. Lane for R. D. Phillips (Agent) (Name-Printed)

(Name-Signature) 9-18-91 (Date)

Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

OG107 (2/86/DWRR/5M)

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIVISION OF OIL AND GAS
RECEIVED
AUG 13 1976
SANTA PAULA, CALIFORNIA

30981-705 2-75 10M (8) OSP

OPERATOR SOUTHERN CALIFORNIA GAS COMPANY FIELD Aliso Canyon

Well No. STANDARD-SESNON #13, Sec. 28, T. 3N, R. 16W, S.B. B. & M.

Date August 6, 1976

Signed P. S. Magruder Jr. 393
P. S. MAGRUDER, Jr.

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

(213) 689-3561
(Telephone Number)

Title Agent
(President, Secretary or Agent)

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

Date

5-26-76 Rigged up Fillmore's Dewaxing Service. Injected 50 barrels of lease oil (one barrel per minute ± 250°F).

5-27-76 Rigged up Archer-Reed. Pulled gas lift valve from MM mandrel from 8902'. Rigged up B. J. pump truck - killed well using 63.5# brine-polymer fluid (tubing pressure 1525 psi - casing pressure 1500 psi). Set tubing plug at 140' (up) - set tubing plug at 80' (down). Rigged down Archer-Reed. Moved in Pool Rig #38 from Standard-Sesnon #14.

5-28-76 Bled off casing. Removed production head. Installed 3000 psi 6" Class III B.O.P.E. Rigged up H. & H. pump truck and hydrostatically tested B.O.P.E., as follows:

Blind rams	2950 psi	for	20 minutes	O.K.
Pipe rams (2 7/8")	3150 "	"	20 "	O.K.
Hydril bag	2800 "	"	20 "	O.K.

Rigge Rigged up Nowsco and tested B.O.P.E. with nitrogen, as follows:

Blind rams	2850 psi	for	20 minutes	O.K.
Pipe rams (2 7/8")	2850 "	"	20 "	O.K.
Hydril bag	2950 "	"	20 "	O.K.

D.O.G. witnessed and approved tests on B.O.P.E.
Rigged up Archer-Reed and pulled plugs, as follows

Type "A"	from 69'
Type "F" (stop ring)	from 70'
Type "D" (Otis)	from 164'

Picked up Kelly and swivel.

5-29-76 Bled off casing. Filled hole with 24 barrels of drilling fluid. Circulated hole. Unlanded tubing hanger. Pulled loose Guiberson KV-30 packer with 15,000#. Tallied pipe out of hole, laying down gas lift mandrels. Ran in hole with 6" bit on 7" Shorty casing scraper to top of liner. Circulated hole.

5-30-76 Idle.

5-31-76 Idle. (Memorial Day)

and 273 cu.ft. of drilling fluid. Broke head off tubing (no back flow) and pulled 5 stands. Rigged in and outdisplacement tank, then hooked up lines and backscuttled. Got back 7 cu.ft. ± of cement. Set Retrievamatic and squeezed holes at 3:15 P.M. Pressured to 6500 psi and had 9 cu.ft. out, bled back one hour later and got back 7 cu.ft. Pulled out of hole and laid down Retrievamatic. Started in hole with 6" bit, 7", 29#, casing scraper and 60' 3-3/4" drill collars.

6- 6-76 Idle.

6- 7-76 Finished going in hole. Top of cement at 8771'. Drilled out cement to 8920', sand at 8922'. Circulated hole clean. Pulled out of hole. Dresser Atlas shot eight 1/2" holes at 8907'. Started in hole with squeeze tool.

6- 8-76 Ran in hole, set packer at 8699', tail at 8920'. Mixed 50 cu.ft. water, plus 200 lbs. caustic and pumped 36 cu.ft. into formation at 2 cu.ft. per minute at 6250 psi. Mixed 50 sacks of type "G" cement with .5% CFR2 - had cement in tubing when packer closed. Reversed out cement. Mixed 50 sacks type "G" cement with .5% CFR2 - closed tool. Pumped 8 cu.ft. at final psi of 6500. Held for 30 minutes. Received 7 cu.ft. back. Pulled 10 stands, set packer. Held 6000 psi for 20 minutes. Pulled out of hole. Laid down 9 joints of 2 7/8" bent and cemented tubing. Going in hole with bit and scraper.

6- 9-76 Ran in hole with 6" bit and scraper. Cleaned out cement 8792'-8922' and sand to 8938'. Circulated for one hour. Pulled out of hole. Ran in with 4 1/2" bit and scraper to 8847'.

6-10-76 Cleaned out sand from 8938' to 8950'. Circulated hole clean. Pulled out of hole. Ran Welex Cement Bond Log from 8950' to 7500' - bonding satisfactory. Set Baker Model "C" bridge plug at 75'. Removed B.O.P.E.

6-11-76 Unlanded 7" casing. Cut off 13 3/8" wellhead. Cut 8rd threads on 7". Installed 29#, 7" pup and tested with 3500 psi for 20 minutes. Welded on new 13 3/8" Gulfco 5000 psi head - X-rayed O.K.

6-12-76 Landed 7" casing at 230,000#. Installed Gulfco 7" seal flange and Gulfco tubing head and tested seals to 4000 psi for 20 minutes - O.K. Installed B.O.P.E. Tested as follows:

Blind rams with 3000 psi for 20 minutes - O.K.
Pipe rams " 3000 psi " 20 " - O.K.
Hydril " 2500 psi " 20 " - O.K.

Used water on all three tests. Tested with nitrogen, as follows"

Blind rams with 3000 psi for 20 minutes - O.K.
Pipe rams " 3000 psi " 20 " - O.K.
Hydril " 3000 psi " 20 " - O.K.

Pulled bridge plug at 75'. Started in hole with 7" Baker fullbore.

6-13-76 Rig idle.

5-31-76 Pulled out of hole. Picked up 2 3/8" tubing and ran in hole with 4 1/4" bit and 5 1/2" scraper. Circulated out 13' of fill at 8945'. Pulled out of hole.

6- 1-76 Installed lubricator and rigged up Schlumberger. Ran TDT, CBL and CNL Logs (cement bond doubtful). Made up and ran 5" Johnston "Bobcat" bridge plug. Set plug at 8950'.

6- 2-76 Rigged up Halliburton. With setting tool at 8927', mixed seven sacks of 20-mesh silica sand with 14 cu.ft. water - had 20 cu.ft. ahead and 20 cu.ft. water behind. Displaced with 220 cu.ft. of drilling fluid. Sand in place at 8:02 A.M. Found top of sand at 8919' at 9:15 A.M. with pipe at 8915' - backscuttled for one hour. Rigged up Schlumberger. Using collar locator, shot four holes at 8909'. Ran in with Baker 7" fullbore and set at 8811'. Using Halliburton, tested displacement lines to 5000 psi for 5 minutes - O.K. Backed up tubing with 1500 psi and could not break down formation with 5000 psi. Ran in and found top of sand at 8918'. Pulled up to 8691' - reset fullbore and could not break down formation at 5000 psi (back up 1500 psi).

6- 3-76 Released 7" Baker fullbore and backscuttled sand 8919' to 8922'. Spotted 50 cu.ft. fresh water from 8922'. Using Halliburton, could not get break down at 5500 psi (1500 psi backup). Rigged down Halliburton and pulled out of hole. Ran in hole with Johnston WSO packer (two pressure bombs below and one above) with backscuttle valve and set packer at 8855' (tail at 8873'). Opened valve at 6:47 P.M. for one hour test. Puff blow-then dead. Pulled loose at 7:47 P.M. and started out of hole.

6- 4-76 Pulled Johnston 7" WSO tool out of hole (cushion 16 stands water) and had gross rise of 41 stands - net rise of 25 stands - of gassy oil cut drilling fluid. Pressure bomb information, as follows:

	IN	OUT	OUT
Temperature of	178	178	178
I. Hyd. psig	3912	3933	3923
I. Flow "	672	697	624
F. Flow "	970	959	924
F. Hyd. "	3912	3896	3904

Installed 7" shooting flange. Rigged up Dresser Atlas wireline, touch top of sand plug, pulled up and located collar at 8904'. Shot eight 1/2" bullet holes from 8907 1/2" to 8909'. Ran in hole with 7" Baker fullbore, cementing squeeze tool and set at 8811'. Tested lines at 6000 psi - O.K. Reset tool, backed up tubing with 1500 psi, then squeezed away 31 cu.ft. drilling fluid in 70 minutes.

6- 5-76 Pulled out of hole and laid down safe-tied 7" Baker fullbore. Picked up and ran in with 7" Baker Retrievamatic squeeze tool (244', 2 7/8" tubing tail) and touched sand plug at 8922'. Pulled up to 8917' (tool at 8666') and circulated. Tested lines at 6000 psi. Set tool, backed up tubing with 1500 psi and broke down formation at 4 cu.ft./minute. Unset tool and circulated. Displaced 50 cu.ft. into tubing. Mixed HR-7 retarder in mixing water (0.1%). Mixed 36 sacks in three minutes (103#, 116#, 119# and 118#) at 2:23 P.M. Displaced with 5 cu.ft. water

6-14-76 Rigged up Dowell pump truck. With Baker 7" fullbore set at 8800', tested as follows:
down tubing (against bridge plug at 8950') at 1550 psi for 20 minutes - O.K.
down annulus (8800' to surface) at 2100 psi for 20 minutes - O.K.
Pulled up to 7000', set fullbore and tested as follows:
down annulus at 2450 psi for 20 minutes - O.K.
Pulled up and set fullbore at 1000' and tested as follows:
down annulus at 3050 psi for 20 minutes - O.K.
Pulled up and set fullbore at 250' and tested as follows:
down annulus at 3500 psi for 20 minutes - O.K.
Ran in with Johnston 5" bobcat bridge plug retrieving tool to 8948' and circulated hole. Retrieved bridge plug at 8950'. Ran in hole with 4 1/8" bit on 5" Shorty casing scraper.

6-15-76 Ran in to 9345' and circulated hole. Pulled out. Rigged up McCullough wireline service. Using 3 1/8" gun and 1/2" Omega jets, shot four holes per foot from 9345' to 9337' (missed two feet due to misfire) and 9100' to 9045'. Started in hole with 4 1/8" bit and 5" Shorty casing scraper.

6-16-76 Ran in hole to 9345' and circulated hole. Pulled out of hole and laid down 30 singles of 2 7/8" and 14 singles of 2 3/8" tubing (measured out). Rigged up McCullough wireline and lubricator. Shot four 1/2" Omega jets per foot from 9338' to 9335'. Rigged up 7" Baker Retrieva "D" packer on wireline. Ran and set packer at 8895'. Rigged down McCullough. Laid down Kelly and swivel.

6-17-76 Rigged up Buck's Hydrostatic Testing and H. & H. Tubing Tongs. Made up Baker seal assembly, "R" nipple, blast joints, latch-in locator assembly and KP-5 safety valve. Plug tested to 5000 psi for one minute - O.K. Ran 2 7/8" tubing and Camco safety valves, backing off each coupling, cleaning pin thread, applying Baker seal sparingly to pins only and installing reconditioned couplings at 2300#/ft., J-55. and 3200#/ft. N-80. Hydrotested tubing to 5000 psi for one minute.

6-18-76 Continued running tubing as before. Latched into 7" Baker Retrieva "D" packer at 8895', after spacing out tubing. Tested latch with 15,000# tension. Landed tubing with 10,000# compression. Installed tubing hanger plug (right-hand thread). Removed B.O.P.E. Installed Gulfco Christmas tree (all wellhead equipment is Gulfco). Energized seals on tubing hanger extended neck. Tested extended neck seals, API ring and tubing hanger seal at 5100 psi for 20 minutes - O.K. Tested Christmas tree at 5200 pis for 20 minutes - O.K.

6-19-76 Changed over circulating system from brine-polymer drilling fluid to waste lease salt water. Rigged up Archer-Reed wireline service. Ran and set Baker "RB-2" equalizing check valve in "R" nipple at 8884'. Using H. & H., hydrostatically tested packer and seal assembly to 2175 psi for 20 minutes - O.K.' Rigged down Archer-Reed and H. & H. Retrieved Baker "RB-2" equalizing check valve. Released rig at 6:00 P.M.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 276-129

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

Santa Paula, Calif.
June 3, 1976

DEAR SIR:

Operations at well No. "SEZU" SS-13, API No. 037-00765, Sec. 28, T. 3N, R. 16W, S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed on 5/28/76. Mr. L. Bright, representative of the supervisor was present from 1800 to 2000. There were also present C. Downey, foreman

Present condition of well: No additions to the casing record since proposal dated 5/11/76.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

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

By M. G. Mefford Chief Deputy
Lmwd

OG109 (2-75—OSP-20M)

30986-705 2-75 20M ① ◇ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 276-152

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

Santa Paula, Calif.
May 17, 1976

DEAR SIR:

Your rework and complete as (037-00765) proposal to gas storage Well No. "SFZU" SS-13, Section 28, T. 3N, R. 16W, SB B. & M., Aliso Canyon Field, Los Angeles County, dated 5/11/76, received 5/14/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

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

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

Blanket Bond
MD:b

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

By _____, Chief, Deputy

25476-705 7-74 50M ①D OSP
OG 111

DIVISION OF OIL AND GAS
RECEIVED
MAY 14 1976
SANTA PAULA, CALIFORNIA

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

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	
	114	121
BB	✓	✓

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well No. STANDARD SESNON #13, API No. _____,

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

The present condition of the well is as follows:

1. Total depth. 9350'

2. Complete casing record, including plugs and perforations:

13 3/8" cemented 732'

7" cemented 9349', WSO shoe and 8920'

411' 5" cemented 9349', cement plug 9345'
segregation tests 9172' and 9113', WSO splice 8938'
perforated at intervals 8962'-9335'

3. Present producing zone name SESNON Zone in which well is to be recompleted -

4. Present zone pressure 2600 psi New zone pressure -

5. Last produced Gas Storage Well _____ _____ _____
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

or

6. Last injected _____ _____ _____ _____
(Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

1. Move in rig, kill well, install B.O.P.E. and test.
2. Pull tubing, clean out to 9345'. Run Neutron lifetime and cement bond logs. Perform any indicated remedial work.
3. Install new 5000 psi well heads. Pressure test 7" casing.
4. Perform any indicated remedial work. Perforate Sesnon Zone sands not now exposed.
5. Run packer and tubing with safety valve. Complete as gas storage well.

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

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

SOUTHERN CALIFORNIA GAS COMPANY
(Name of Operator)
By P. S. Magruder, Jr.
(Name) P. S. Magruder, Jr. (Date) 5-11-76
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

OG107 (12-73-GSR1-15M)

FORM 157

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 ~~requested~~ 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

△ SPO

Proposed Changes in Designation

Sec. 28:

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

Sec. 29:

Old Designation		New Designation	
"Standard-Sesnon 1"	4	"SFZU" SS-4	(037-00757)
"	10	" SS-10	(037-00040)
"	12	" SS-12	(037-00764)

FORM 103 SUBMIT IN DUPLICATE 91818 1-54 77,050 SPO

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 27 1957

History of Oil or Gas Well

OPERATOR TIDEWATER OIL COMPANY FIELD ALISO CANYON FIELD LOS ANGELES, CALIFORNIA

Well No. "Standard-Seaman 1-/13", Sec. 28, T. 3N, R. 16W S.B. B. & M.

Date ..., 19... Signed L. A. Braden

September 17, 1957 Title L. A. Braden, Agent TS

(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

Before altering casing, the well was on gas lift 41 B/D net, 16% cut, 21° gravity, 117 MCF, 2853 GOR, and was in the following mechanical condition:

	13-3/8"	54.5#	C	732'	
	7"	23, 26, 29#	C	9035'	
411'	5"	18#	L	9349'	Pf. 2 H/F 9335'-9295' 9285'-9195'; 9156'-9121' Top 8938'

1957

7/9 Killed well with 320 bbls. oil. Preparing to perforate.

7/10 Contractor moved in and rigged up. Removed Christmas tree, installed B.O.P. and pulled tubing. Shot two jet 1/2" holes at 8920' by McCullough. Running tester.

7/11 WSO 8920': Completed running Johnston hydraulic straddle tester on 2-7/8" tubing and set bobtail packer at 8925' with multi-ring packer at 8895'. Used 2000' water cushion. Opened 3/4" bean at 11:00 AM. Had faint blow for 1/2 min. then dead for balance of 1 hour test. Recovered 5' net rise hole fluid. Charts confirmed results of test. WSO at 8920' witnessed and approved by D.O.G. Jet perforated 4 holes/foot 9014'-8995' and 8980'-8962' by McCullough super casing jets. Ran wall scraper and scraped 5" casing from 8962'-9014'. Running tubing.

7/12 Completed running 2-7/8" tubing and landed on 7" Guiberson KV-30 packer at 8906'. Six flow valves included in tubing string. Installed Christmas tree and returned well to production on gas lift at 2:00 PM. In 16 hours recovered 160 bbls. circulating oil, 22/64" bean, 100/1100#.

7/13 In 24 hours well produced on gas lift 93 bbls. circulating oil, 67 bbls. circulating oil remaining.

7/14 In 24 hours well produced on gas lift 41 bbls. circulating oil. 60 MCF Net.

7/15 Well circulated gas lift gas 24 hours - no production. 60 MCF Net.

7/16 In 24 hours well produced on gas lift 52 bbls. gross, 40 bbls. net, of which 14 bbls. is formation oil, 23% cut. All circulating oil has been recovered. 61 MCF Net.

OPERATOR: TIDEWATER OIL COMPA

WELL NO.: STANDARD-SESNON 1-#13, Aliso Canyon Field

1957	Gross	Net	Cut	Bean	Pressures	MCF Gas	Gravity
7/17	61	49	20%	22/64"	100/1100#	35	
7/18	62	36	40%	26/64"	100/1050#	36	17.0
7/19	72	64	11%	26/64"	150/1000#		18.3
7/20	62	58	7%	26/64"	150/1000#	40	
7/21	62	58	5.4%	26/64"	150/1000#	40	
7/22	72	67	7.5%	26/64"	150/1000#	41 Net	
7/23	41	27	35%	26/64"	100/1000#	41 "	
7/24	62	50	20%	26/64"	200/1000#	65	20.4
7/25	72	59	18%	26/64"	100/1000#	59 "	(1000 CF/B GOR)
7/26	52	43	18%	26/64"	100/1000#	46	
7/27	72	62	14%	26/64"	100/1000#		
7/28	56	47	16%	26/64"	100/1000#	49 Net	
7/29	57	49	14%	26/64"	100/1000#	49	
7/30	62	55	12%	24/64"	100/1000#	106	
7/31	62	55	11%	26/64"	100/1000#	106	
8/1	66	45	32%	26/64"	100/1000#	142	
8/2	67	56	17%	26/64"	100/1000#	142	
8/3	83	69	17%	26/64"	100/1000#	138	
8/4	61	51	17%	26/64"	100/1000#	138	
8/5	61	51	17%	26/64"	100/1000#		
8/6	61	51	17%	26/64"	100/1000#		
8/7	61	51	17%	26/64"	100/1000#		
8/8	61	51	17%	26/64"	100/1000#		
8/9	60	50	17%	26/64"	100/1000#		
8/10	59	49	17%	26/64"	100/1000#		64 (24 hr.)
8/11	59	49	17%	26/64"	100/1000#		
8/12	59	49	17%	26/64"	100/1000#		
8/13	59	49	17%	26/64"	100/1000#		
8/14	59	49	17%	26/64"	100/1000#		
8/15	60	50	17%	26/64"	100/1000#		

CASING RECORD

13-3/8" 54.5# C 732'
7" 23, 25, 29# C 9035' WSO Shoe, 8920'
J.P. 4 H/F Pf. 8962'-8980'; 8995'-9014'
5" 18# C 9349' Hanger 8938' Seg. 9113', 9172'
C.P. 4 H/F & J.P. 2 H/F 9121'-9156'; 9195'-9285'; 9295'-9335'
J.P. 4 H/F 8962'-8980'; 8995'-9014'

TUBING RECORD

2-7/8" L w/pkr @ 8906'

FORM 109-A

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

(FORMATION TESTER)

No. T 157-858

Mr. Lawrence A Braden
P O Box Y
LOS NIETOS California
Agent for TIDEWATER OIL CO

Los Angeles 15 Calif.
July 17, 1957

DEAR SIR:

Your well No. "Standard-Sesnon 1" 13, 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 July 10, 1957. Mr. M. Dosch, Engineer, designated by the supervisor was present
from 4:35 to 5:50 p.m. as prescribed by law; there were also present A. Babylon, Engineer,
P. Frantz, Drilling Foreman.

Shut-off data: 7 in. 29 lb. casing was re cemented through perforations at 9035 ft.
on December 15,1948 in 11 in. hole with 100 ~~xxxftx~~ sacks of cement
calculated to fill behind casing to xxxx ft. below surface.

Casing record of well: 13-3/8" cem. 732'; 7" cem. 9035', W.S.O.; 5" ld. 8938'-9349', perf. 9121'-9.56', 9195'-9285', 9295'-9335'; four 1/2" holes 9113', four 1/2" holes 9172', two 1/2" test holes 8920', W.S.O.
plugged with cement 9350'-9345'

Present depth 9350 ft/cmt. bridge xxx ft. to xxx ft. Cleaned out cmt. xxx ft. to xxx ft. for test.
A Johnston gun and tester was run into the hole on 2-7/8 in. ~~drill pipe~~ tubing,
with 2000 ft. of water-~~mud~~ cushion, and packers set at 8895 and 8925 ft. with tailpiece to xxxx ft.
Tester valve, with 3/4 in. bean, was open for 1 hr. and xxx min. During this interval there was a light blow for 1/2 min., and no blow thereafter.

Mr. Babylon reported: that the 7" casing was shot-perforated with two 1/2" holes at 8920'.

THE ENGINEER NOTED:

1. When the tubing was removed, a net rise of 5' of oily water was found in the tubing above the tester, equivalent to 0.1 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hr.

THE 7" SHUT-OFF AT 8920' IS APPROVED.

MD:OH

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

E. H. MUSSER
State Oil and Gas Supervisor

By [signature] Deputy

48005 12-56 17M ② SPO

FORM 111

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P 157-781

Mr. Lawrence A Braden
P O Box "Y"
Los Nietos California
Agent for TIDEWATER OIL COMPANY

Los Angeles 15 Calif.
June 19 1957

DEAR SIR:

Your proposal to alter casing Well No. "Standard-Sesnon 1" 13

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

dated June 17, 1957, received June 18, 1957, 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 present condition of the well is as follows:

1. Total depth. T.D. 9175'; Dpnd. 9350'; Pg. 9345'
2. Complete casing record.

13-3/8"	54.5#	C	732'	
7"	23, 26, 29#	C	9035'	WSO Shoe
411' 5"	18#	H	9349'	Hanger 8938' WSO 9113', 9172'

G.P. 4 H/F & J.P. 2 H/F 9121'-9156'; 9195'-9285'; 9295'-9335'

3. Pres. Prod. Apr., 1957 (Avg.) (Date) | 41 B/D (Net Oil) | 21.0 (Gravity) | 16% (Cut)"

PROPOSAL

"The proposed work is as follows:

1. Shoot and test for water shut-off at 8954'. Division of Oil and Gas to witness.
2. Perforate four holes per foot from 8962' to 8980' and 8995' to 9024'.
3. Scrape well and wash if needed.
4. Complete on gas lift."

DECISION

THE PROPOSAL IS APPROVED.

DER:ys

cc Mr F W Hertel
c/o Tidewater Oil Company
79 New Montgomery Street
San Francisco 20 California

History in covering this proposal

E. H. MUSSER, State Oil and Gas Supervisor

By _____, Deputy

Blanket Bond

25463 10-55 60M SPO

FORM 107.

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
JUN 18 1957
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 57

DIVISION OF OIL AND GAS

Los Angeles Calif.

In compliance with Section 3203, Public Resources Code, 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-#13
(Cross out unnecessary words)

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

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. T.D. 9175'; Dpnd. 9350'; Pg. 9345'

2. Complete casing record.

	13-3/8"	54.5#	C	732'	
	7"	23, 26, 29#	C	9035'	WSO Shoe
411'	5"	18#	H	9349'	Hanger 8938' WSO 9113', 9172'

G.P. 4 H/F & J.P. 2 H/F 9121'-9156'; 9195'-9285'; 9295'-9335'

3. Pres.Prod. ~~Unproduced~~. Apr., 1957 (Avg.) (Date) 41 B/D (Net Oil) 21.0 (Gravity) 16% (Cut)

The proposed work is as follows:

1. Shoot and test for water shutoff at 8954'. Division of Oil and Gas to witness.
2. Perforate four holes per foot from 8962' to 8980' and 8995' to 9024'.
3. Scrape well and wash if needed.
4. Complete on gas lift.

MAP	CARDS	BOND	FORMS 114	FORMS 121

TIDEWATER OIL COMPANY
(Name of Operator)

By L. A. Braden, Agent

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

42864 9-56 12,950 SPO

FORM 100

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

DIVISION OF OIL AND GAS
RECEIVED
JUL 16 1956
LOS ANGELES, CALIFORNIA

25

Operator TIDEWATER OIL COMPANY Well No. "Standard-Sesnon 1" - #13

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

Location 2709.8' S and 5254.80' W from Station #8

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

Elevation of ground above sea level 2578.75 feet.

All depth measurements taken from top of Derrick Floor which is 6.92 feet above ground.

(Derrick Floor, Rotary Table or Kelly Bushing)

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

Date June 4, 1956 Signed T. E. Weaver

R. M. Burns (Engineer or Geologist) W. D. Gould (Superintendent) Title T. E. Weaver, Agent (President, Secretary or Agent)

Commenced ~~drilling~~ deepening 1/21/56

Completed ~~drilling~~ 2/25/56

Total depth 9175' Dpn. 9350' Plugged depth 9345'

Junk

GEOLOGICAL MARKERS | DEPTH

Geologic age at total depth: Miocene

Commenced producing 2/23/56 (Date) ~~Flowing~~/gas lift/~~pumping~~ (Cross out unnecessary words) Name of producing zone Sesnon

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
3/3/56 Initial production	149	18.5(wet)	19.0%	0	500#	925#
Production after 30 days	62	19.0	12.0%	251	300#	750#

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforations
13 3/8"	732	0'	54.5	New	Seamless	J-55	17 1/4	750	
7"	9035	0'	23,26,29#	New	Seamless	J-55, N-80	11"	500	
5"	9349'	8938	18#	New	Seamless	J-55	6"	80	

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

5"	9121'-9156'	4-1/2" bullet holes/Ft. & 2 super Jet holes/Ft by McCullough
5"	9195'-9285'	" " " " " " " " " "
5"	9295'-9335'	" " " " " " " " " "

Electrical Log Depths 9035'-9350' (Attach Copy of Log)

28649 12-55 34M SPO

FORM 103

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS SPO

RECEIVED

JUL 16 1956

LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

TIDEWATER OIL COMPANY — OPERATOR

ALISO CANYON — FIELD

Standard-Sesnon 1-#13 — Well No.

28 — Sec.

3 W — T.

16 W — R.

S.B. — B. & M.

June 4, 1956 — Date, 19

J. E. Weaver — Signed

Los Nietos, Calif. — (Address)

Oxford 91051 — (Telephone Number)

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

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

Date	
1956	
1/16	Installed drilling crown and reinforced derrick.
1/17-21	Idle
1/22	Killed well with 370 barrels salt water.
1/23	Contractor moving in - California Production Service.
1/24	Contractor rigged up at 12:00 Noon. Circulated salt water to kill well - required 120 barrels to get returns. Tore out Christmas tree. Installed B.O.P.
1/25	Lowered tubing to bottom of liner and circulated hole clean. Found 12' of junk (sinker bars) on bottom. Well very gassy. Lost approximately 60 barrels salt water to formation.
1/26	Pulled tubing. Started making up drill pipe. Rig shut down at 8:00 PM due to power failure.
1/27	Finished making up 2-7/8" drill-tubing. Ran Bowen socket and recovered 12' sinker bar. Started running M & T washing tool.
1/28	Ran M & T washing tool and washed perforations from 9031'-9170'. With tool at 9170', circulated out salt water with Kenflo. Rewashed liner with Kenflo and backscuttled hole clean. Made up spear and hydraulic jack to recover liner.
1/29	Ran spear. Hooked and recovered 5" liner. Ran 6" bit and cleaned out to 9175' T.D.
1/30	Deepened well from 9175' to 9230' with 6" bit. Mud weight 62#, 200 viscosity (Kenflo).
1/31	Deepened well from 9230' to 9250'. Repairing draw works. Mud weight 63#, 190 viscosity (Kenflo).
2/1	Shut down - repairing drilling equipment.
2/2	Shut down - repairing drilling equipment.
2/3	Deepened well from 9250' to 9255' with 6" bit. Mud weight 61#, 180 viscosity.
2/4	Deepened well from 9255' to 9295' with 6" bit. Mud weight 63#, 150 viscosity.
2/5	Deepened well from 9295' to 9350' with 6" bit. Mud weight 63#, 150 viscosity. Ran Schlumberger Neutron-Induction log at 9350'.

1956

2/6 Reamed hole from 9175' to 9350'. Ran and cemented 411' of blank 5", 18#, J-55, F.J., liner at 9349'. Top of hanger 8938'. Cemented liner with 80 sacks Victor Hi-temp. cement. Pulled drill-tubing to 8890' and backscuttled without cement returns. Time 11:30 PM.

2/7 Ran 6" bit and scraper and found top of cement at 8908'. Cleaned out cement from 8908'-8938' (top of hanger).

2/8 Circulated out Kenflo with salt water. Drilled out cement from 8938' - 9340'. Circulated hole clean.

2/9 Splice Test: Ran Johnston tester on 2-7/8" drill-tubing with 2000' water cushion and set packer at 8890' with perforated tailpipe to 8905'. Opened tester at 4:31 PM. Had faint puff, then dead for balance of 1 hour test. No new fluid entry. Ran McCullough Gamma Ray and collar locator at 9340'. Shot four jet holes at 9172' by McCullough. Division of Oil and Gas waived witnessing test.

2/10 Ran McCullough Gamma Ray and collar locator log from 8700'-93 36'.
Segregation 9172' (S-8): Shot four jet holes at 9172' by McCullough. Ran Johnston tester on 2-7/8" drill tubing with 2000' water cushion and set packer at 9125' with perforated tailpipe to 9140'. Opened 3/4" bean at 9:15 AM. Had faint puff, then dead for balance of 1 hour test. No fluid entry. Charts confirmed results of test.
Segregation 9113' (S-6): Shot four jet holes at 9113' by McCullough. Ran Johnston tester on 2-7/8" drill tubing with 2000' water cushion and set packer at 9065' with perforated tailpipe to 9080'. Opened 3/4 bean at 6:55 PM. Had light puff, then dead for balance of 1 hour test. Recovered 5' hole fluid. Ran bit and scraper and cleaned out to 9345'.

2/11 Ran McCullough bullet gun and shot four 1/2" holes per foot from 9335'-9295'; 9285'-9195'; 9156-9121' (depths from Gamma Ray log). Ran bit and scraper and scraped holes from 9121'-9335' and cleaned out to 9345'.

2/12 Laid down tubing. Ran and broached 2-7/8" tubing, including 234' of 2-3/8" tubing on bottom, with Guiberson KV-30 packer and choke nipple, and set at 9173' (S_8 Shale). Blank choke not installed. Installed Christmas tree. Started swabbing at 11:00 PM. Swabbed 120 barrels circulating salt water to 6: 6:00 AM (2-13-56). Fluid level 3000'.

2/13 In 24 hours swabbed 180 barrels circulating salt water. Fluid level 7500'.

2/14 Swabbed well to 7800'. No gas or fluid entry. Filled well with salt water. Tore out Christmas tree. Installed B.O.P. Pulled tubing.

2/15 Ran McCullough superjet gun and reperforated with 2 holes per foot from 9335'-9295'; 9285'-9195'; 9156'-9121'. Ran bit and scraper and found 26' of sand fill on bottom. Ran 2-7/8" tubing, including 234' of 2-3/8" tubing on bottom, with Guiberson KV-30 packer and choke nipple and set at 9173'. Blank choke not installed. Tore out blowout preventor. Installed Christmas tree.

2/16 In 16 hours swabbed 206 barrels circulating salt water. Fluid level 5000'. Repairing rig 8 hours.

2/17 In 18 hours swabbed 150 barrels circulating salt water (total of 356 barrels). Fluid level 6000'. Released contractor at Midnight (California Production Service.)

2/18 Contractor tearing out. Tubing pressure 200#; casing pressure 600#. Bleeding down tubing.

2/19 Shut in. 100# tubing pressure; 600# casing pressure. Fluid level in tubing 3330'.

1956

2/20 Shut in. 100# tubing pressure; 600# casing pressure.

2/21 Shut in. Tubing pressure 100#; casing pressure 400#. Fluid level in tubing 3290'.

2/22 Shut in. Tubing pressure 100#; casing pressure 400#.

2/23 Rigged up to swab. Found fluid level at 3000'. In 8 hours swabbed 57 barrels gross, approx. 4 barrels net. Fluid level 5000'. 175# casing pressure.

2/24 Fluid level 2000'. In 8 hours swabbed 60 barrels gross, 36 barrels net, 40% cut. Fluid level after swabbing, 4500#. Fluid level at 6:00 AM (2-25-56), 2000'. Installed gas injection line and started injecting gas in casing at 1:00 PM. Injection pressure 1100#.

2/25 Fluid level 900'. In 8 hours swabbed 90 barrels gross, 63 barrels net, 30% cut. Fluid level after swabbing, 3400'. Gas injection pressure 1100#.

2/26 In 8 hours swabbed 93 barrels gross, 69 barrels net, 26.0% cut, 1300# injection pressure. Fluid level 1900' at 6:00 AM
Fluid level 3200' at 4:00 PM
Fluid level 1000' at 8:00 AM (2-27-56)

2/27 Fluid level 1000'. Swabbed 85 barrels gross. Fluid started flowing at 2:30 PM. Flowed 48 barrels gross, then died at 9:00 PM. Total net production 106 barrels. Average cut 20%. Injection pressure 1050#.

2/28 Bled down well. Killed well with 224 barrels tank oil. Removed Christmas tree. Installed B.O.P.

2/29 Returned 71 barrels tank oil, leaving 153 barrels to be recovered. Pulled and reran tubing with flow valves at the following depths: 2710', 4890', 6520', 7695', 8475, 8920'. Set packer at 9075' with 10,000#. Tore out B.O.P.

3/1 Installed Christmas tree. Began injecting gas at 12:00 Noon. On gas lift at 3:00 PM. To 7:00 AM (3-2-56) produced 92 barrels gross, 87 barrels net circulating oil, 5.0% cut (emulsion), 18.9 gravity, 20/64" bean, 750/1200#.

3/2 In 24 hours well produced on gas lift 196 barrels gross, 96 barrels net, of which 30 barrels is formation oil, 31.0% cut, 15.5 wet gravity, 30/64" bean at 7:00 AM (3-2-56).

	Gross	Net	Cut	Wet Gravity	Bean	Tubing Pressure	Casing Pressure	MCF Inj.	MCF Net
3/3	184	149	19.0%	18.5	#18/64"	500#	925#	1003	0
3/4	130	108	17.0%	18.5	18/64"	225#	925#	325	0
3/5	119	100	16.0%	19.0	18/64"	250#	925#	300	0
3/6	97	80	17.0%	19.0	18/64"	250#	925#	289	18
	Off 6 hours - injection lines frozen.								
3/7	114	101	12.0%	19.0	18/64"	250#	925#	289	18
3/8	107	91	15.0%	19.0	18/64"	250#	925#	312	135
3/9	105	86	18.0%	19.0	18/64"	250#	855#	440	52
3/10	100	85	15.0%	19.0	18/64"	250#	855#	480	146
3/11	100	86	14.0%	19.0	18/64"	250#	855#	398	167
3/12	68	61	11.0%	19.0	18/64"	350#	900#	300	72
	Off 6 hours - injection lines frozen.								
3/13	100	86	14.0	19.0	18/64"	350#	900#	300	72
3/14	100	86	14.0	19.0	18/64"	350#	900#	300	75
3/15	100	87	13.0%	19.0	18/64"	150#	750#	490	47

DIVISION OF OIL AND GAS
RECEIVED
JUL 16 1956
LOS ANGELES, CALIFORNIA

OPERATOR: TIDEWATER OIL COMPANY

WELL NO.: Standard-Sesnon 1-#13, Aliso Canyon Field

1956	Gross	Net	Cut	Wet Gravity	Bean	Tubing Pressure	Casing Pressure	MCF Inj.	MCF Net	
3/16	115	104	13.0%	19.0	24/64"	150#	700#	464	100	
3/17	95	81	12.0%	19.0	24/54"	150#	750#	451	90	
3/18	103	91	12.0%	19.0	24/64"	150#	700#	578	160	
3/19	97	85	12.0%	19.0	24/64"	150#	700#	456	146	
3/20	86	74	12.0%	19.0	24/64"	150#	700#	413	67	
3/21	86	74	12.0%	19.0	24/64"	150#	700#	-	100	
3/22	86	74	12.0%	19.0	24/64"	150#	700#	-	421	
3/23	86	74	12.0%	19.0	24/64"	150#	700#	300	90	
3/24	87	75	12.0%	19.0	24/64"	150#	700#	300	85	
3/25	81	71	12.0%	19.0	24/64"	150#	700#	375	63	
3/26	81	71	12.0%	19.0	24/64"	150#	700#	390	39	
3/27	81	71	12.0%	19.0	24/64"	150#	700#			
3/28	81	71	12.0%	19.0	24/64"	150#	700#			
3/29	81	71	12.0%	19.0	24/64"	300#	750#	412		
3/30	68	60	12.0%	19.0	14/64"	300#	750#	346	598	48 hr.
3/31	68	60	12.0%	19.0	14/64"	300#	750#			
4/1	70	62	12.0%	19.0	14/64"	300#	750#	367		
4/2	70	62	12.0%	19.0	14/64"	300#	750#			48
4/3	70	62	12.0%	19.0	14/64"	300#	750#	329	502	hr.
4/4	70	62	12.0%	19.0	14/64"	300#	750#			

CASING RECORD

	13-3/8"	54.5#	C	732'	
	7"	23,26, 29#	C	9035'	
411'	5"	18#	L	9349'	Pf. 2 H/F 9335'-9295'; 9285'-9195'; 9156'-9121' Top 8938'

TUBING RECORD

2-7/8" L 9173' incl. 234' of 2-3/8" on bottom w/packer, choke nipple and 6 flow valves

FORM 111 (1-49)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P155-1657

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

Los Angeles 15 Calif.
October 28 1955

DEAR SIR:

Your proposal to deepen Well No. 13 "Standard-Sesnon 1",

Section 28, T3 N, R.16 W, S B B. & M., Aliso Canyon Field, Los Angeles County,

dated Oct. 24 1955, received Oct. 26 1955, has been examined in conjunction with records filed in this office.

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

RECORDS The condition of the well is as stated in the notice.

THE NOTICE STATES
"The present condition of the well is as follows:
1. Total depth. 9175'
2. Complete casing record.

13-3/8"	54.5#	C 732'	
7"	29, 26, 23#	C 9035'	WSO on shoe
173' 5"	18#	L 9170'	Top 8998'
			Pf. 9031'-9170'

3. Producing October 15, 1955 (Date) 83 B/D (Net Oil) 21.0 (Gravity) 2.4% (Cut)"

PROPOSAL
"The proposed work is as follows:
1. Install adequate blowout prevention equipment and kill well with salt water.
2. Wash perforations in 5" liner from 9030' to 9170' with salt water until liner washes freely.
3. Change to oil base mud and pull liner.
4. Deepen to approximately 9340' and run Schlumberger induction-neutron log.
5. Run and cement approximately 360' 5" F.J. blank liner on bottom.
6. Clean out to top of 5" and make splice test. Recement, if required.
7. Jet perforate four holes at approximately 9175' and test for zonal segregation. Squeeze cement and retest if required.
8. Jet perforate four holes at approximate 9117' and test for zonal segregation. Squeeze cement and retest if required.
9. Selectively gun perforate four holes per foot as follows: 9125'-9160' and 9190'-9330'.
10. Scrape casing and complete well."

DECISION
THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS
1. A test after cleaning out below the top of the liner to demonstrate that no fluid has access to the well between the 5" and 7" casings.
2. A test of the effectiveness of the 5" shut-off at 9117'.

FEK:OH

cc F W Hertel
R S Curl
R M Burns (2)
11210 1-55 30M SPO
Blanket bond.

E. H. MUSSER, State Oil and Gas Supervisor

By R. J. Walling, Deputy

1/17

FORM 107.

DIVISION OF OIL AND GAS
RECEIVED
OCT 26 1955
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

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

Los Nietos, Calif. October 24, 1955

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			Blanket	EB	EB

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-A/13
(Cross out unnecessary words)

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

Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 9175'

2. Complete casing record.

	13-3/8"	54.5#	C	732'	WSO on shoe
	7"	29, 26, 23#	C	9035'	
173'	5"	18#	L	9170'	Top 8998'
					Pf. 9031'-9170'

3. Last produced. Producing

October 15, 1955	83 B/D	21.0	2.4%
(Date)	(Net Oil)	(Gravity)	(Cut)

The proposed work is as follows:

1. Install adequate blowout prevention equipment and kill well with salt water.
2. Wash perforations in 5" liner from 9030' to 9170' with salt water until liner washes freely.
3. Change to oil base mud and pull liner.
4. Deepen to approximately 9340' and run Schlumberger induction-neutron log.
5. Run and cement approximately 360' 5" F.J. blank liner on bottom
6. Clean out to top of 5" and make splice test. Recement, if required.
7. Jet perforate four holes at approximately 9175' and test for zonal segregation. Squeeze cement and retest if required.

(Name of Operator)

- See following page -

By _____

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

DIVISION OF OIL AND GAS
RECEIVED
OCT 26 1955
LOS ANGELES, CALIFORNIA

Standard-Sesnon 1-#13, Aliso Canyon Field
Sec. 28, T 3 N, R 16 W, S.B. B. & M., Los Angeles County

The Proposed Work is as follows: (cont.)

8. Jet perforate four holes at approximate 9117' and test for zonal segregation. Squeeze cement and retest if required.
9. Selectively gun perforate four holes per foot as follows: 9125'-9160' and 9190'-9330'.
10. Scrape casing and complete well.

TIDE WATER ASSOCIATED OIL COMPANY

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

~~#30 on since~~

FORM 100.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT LOG IN DUPLICATE

FILL IN BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PA... ONLY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

MAR 10 1949
LOS ANGELES, CALIFORNIA

WELL SUMMARY REPORT

Operator TIDE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON

Well No. STANDARD-SESNON (#)-13 Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Location (2709.84' S. and 5254.60' W. from Sta. #84 or 450.00' N. and 400.00' W. of SE corner lease.) Elevation of derrick floor ~~ground~~ above sea level 2565.67 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 March 1, 1949 Signed H. C. Foster

W. E. Perkes (Engineer or Geologist) R. S. Curl (Superintendent) Title Agent (President, Secretary or Agent)

Commenced drilling October 5, 1948 Completed drilling December 21, 1948 Drilling tools Cable ~~Rotary~~ Rotary

Total depth 9175' Plugged depth

GEOLOGICAL MARKERS — DEPTH

Junk

Commenced producing December 24, 1948 (date) Flowing/~~gas lift~~/pumping (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	1270 rate	20.9	3.0	365	360#	0#
Production after 30 days	211	22.5	0.1	56	480#	480#

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
13-3/8"	732'	0'	54.5#	New	Seamless	J-55	17-1/4"	750	
7"	9035'	0'	23,26,29#	New	Seamless	J-55,N-80	11"	500	
5"	9170'	8998'	18#	New	Seamless	J-55	6"	0	

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
5"	9031 ft.	9170 ft.	80 Mesh 2" slots	12	6"	Pacific undercut.
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

MAP | MAP BOOK | CARDS | BOND | FORMS 114 | 121

Electrical Log Depths 732' - 9175' (Attach Copy of Log)

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 10 1949
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR PURE OIL COMPANY FIELD ALISO CANYON

Well No. STANDARD-SESSON #1-13, Sec. 28, T. 3 S, R. 16 W, S.B. B. & M.

Signed J. C. Slater
P

Date March 1, 1949 Title Agent
(President, Secretary or Agent)

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

Date 1948	History
7/26	Graded rig site.
7/29	Graded road
7/30	Graded road and rig site.
7/31 - 8/1	Idle.
8/2 - 8/7	Graded road and rig site.
8/8	Idle.
8/9	Graded road and rig site.
8/10 - 8/11	Graded rig site.
8/12 - 8/13	Graded road and rig site.
8/14	Finished grading road and rig site.
8/15	Idle.
8/16	Dug cellar.
8/17	Built foundation forms.
8/18	Build forms and pouring foundation concrete.
8/19	Poured foundation concrete
8/20	Finished pouring foundation concrete.
8/21	Erected derrick.
8/22	Idle.
8/23 - 8/24	Built casing racks.
8/25	Built casing racks and installed sub-base.
8/26	Moved in drilling equipment
8/27	Moved in drilling equipment and rigged up rotary.
8/28 - 9/3	Rigged up rotary.
9/4 - 10/3	IDLE, on account of Strike.
10/4	Rigged up rotary.
10/5	Spudded 12-1/4" hole at 6:00 A.M. and drilled to 133'.
10/6	Lost circulation while drilling at 133'. Mixed Jel and rice hulls and regained circulation. Drilled 12-1/4" hole from 133' to 330'.

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. STANDARD-SESNON (#1-13), Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Signed T. C. Foster

Date March 1, 1949 Title Agent
(President, Secretary or Agent)

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

Date 1948	(Cont'd)
10/7	Drilled 12-1/4" hole from 330' to 632'.
10/8	Drilled 12-1/4" hole from 632' to 922'.
10/9	Drilled 12-1/4" hole from 922' to 1142'.
10/10	Drilled 12-1/4" hole from 1142' to 1262'.
10/11	Drilled 12-1/4" hole from 1262' to 1413'. Opened 12-1/4" hole to 17-1/4" from surface to 480'.
10/12	Opened 12-1/4" hole to 17-1/4" from 480' to 732'. Ran and cemented 13-3/8", 54.5# Youngstown R&C casing at 732' with 500 sacks of Victor Construction cement. Treated first and last 150 sacks with quick setting chemical. Had no cement returns to surface. Pressure increased from 100 - 600# when plugs bumped. Bottom 4 joints spot welded. Time 7:30 P.M. International Bulk Method.
10/13	Cemented around outside of 13-3/8" casing with 250 sacks Construction cement. Installed cellar connections.
10/14	Finished installing cellar connections. Drilled out cement and shoe at 732' and circulated to 1413'.
10/15	Drilled 12-1/4" hole from 1413' to 1553'. Drilled 11" hole from 1553' to 1762'.
10/16	Drilled 11" hole from 1762' to 2150'.
10/17	Drilled 11" hole from 2150' to 2419'.
10/18	Drilled 11" hole from 2419' to 2553'.
10/19	Drilled 11" hole from 2553' to 2847'. Mud weight 79#; viscosity 45; 11 cc.; filter cake 1.5 mm.
10/20	Drilled 11" hole from 2847' to 3045'.
10/21	Drilled 11" hole from 3045' to 3266'.
10/22	Drilled 11" hole from 3266' to 3520'.
10/23	Drilled 11" hole from 3520' to 3694'.
10/24	Drilled 11" hole from 3694' to 3830'.
10/25	Drilled 11" hole from 3830' to 3984'. Mud 65#; viscosity 70; fluid loss 7 cc.; filter cake 2 mm.
10/26	Drilled 11" hole from 3984' to 4242'. Mud 82#; viscosity 45; fluid loss 7 cc.; filter cake 1.5 mm.
10/27	Drilled 11" hole from 4242' to 4402'.

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR THE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. STANDARD-SESNON #2-13, Sec. 28, T. 5 N, R. 16 W, S.B. B. & M.

Signed F. C. Foster

Date March 1, 1949 Title Agent (President, Secretary or Agent)

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

Date	
1948	(Cont'd)
10/28	Drilled 11" hole from 4402' to 4581'.
10/29	Drilled 11" hole from 4581' to 4748'. Mud 80#; viscosity 60+; fluid loss 6.0 cc.; filter cake 2.0 mm.
10/30	Drilled 11" hole from 4748' to 4846'. Mud 82#; viscosity 60+; fluid loss 6.0 cc.; filter cake 2.0 mm.
10/31	Drilled 11" hole from 4846' to 4933'. Mud 82#; viscosity 45.
11/1	Drilled 11" hole from 4933' to 5050'.
11/2	Drilled 11" hole from 5050' to 5138'.
11/3	Drilled 11" hole from 5138' to 5199'.
11/4	Drilled 11" hole from 5199' to 5278'.
11/5	Drilled 11" hole from 5278' to 5403'.
11/6	Drilled 11" hole from 5403' to 5664'.
11/7	Drilled 11" hole from 5664' to 5795'.
11/8	Drilled 11" hole from 5795' to 5839'.
11/9	Drilled 11" hole from 5839' to 5929'.
11/10	Drilled 11" hole from 5929' to 6012'.
11/11	Drilled 11" hole from 6012' to 6076'.
11/12	Drilled 11" hole from 6076' to 6302'.
11/13	Drilled 11" hole from 6302' to 6450'.
11/14	Drilled 11" hole from 6450' to 6710'.
11/15	Drilled 11" hole from 6710' to 6950'.
11/16	Drilled 11" hole from 6950' to 7175'.
11/17	Drilled 11" hole from 7175' to 7325'.
11/18	Drilled 11" hole from 7325' to 7490'.
11/19	Drilled 11" hole from 7490' to 7635'.
11/20	Drilled 11" hole from 7635' to 7845'.
11/21	Drilled 11" hole from 7845' to 7965'.
11/22	Drilled 11" hole from 7965' to 8171'.
11/23	Drilled 11" hole from 8171' to 8319'.
11/24	Drilled 11" hole from 8319' to 8456'.
11/25	Drilled 11" hole from 8456' to 8588'.
11/26	Drilled 11" hole from 8588' to 8679'.

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

TIDE WATER ASSOCIATED OIL COMPANY — Operator — ALISO CANYON — Field

STANDARD-SPENCER #1-13 — Well No. — 26 — Sec. — 3 N — T. — 16 W — R. — S.B. — B. & M.

Signed: T. C. Foster

March 1, 194[illegible] — Date

Agent — Title (President, Secretary or Agent)

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

1946

11/27 Drilled 11" hole from 8679' to 8758'.
11/28 Drilled 11" hole from 8758' to 8816'.
11/29 Drilled 11" hole from 8816' to 8850'.
11/30 Drilled 11" hole from 8850' to 8854'. Lost rollers from bit in hole while drilling at 8850'. Ran junk basket and recovered portion of junk.
12/1 Ran junk basket and recovered portion of rollers from bit lost in hole. Drilled 11" hole from 8854' to 8860'.
12/2 Drilled 11" hole from 8860' to 8865'. Ran junk basket and recovered small pieces of iron from bit.
12/3 Repaired rotary and conditioned mud.
12/4 Working on rotary. Drilled 11" hole from 8865' to 8872'.
12/5 Drilled 11" hole from 8872' to 8917'.
12/6 Drilled 11" hole from 8917' to 8954'.
12/7 Drilled 11" hole from 8954' to 9000'. Ran Schlumberger electric log at 9000'.
12/8 Drilled 11" hole from 9000' to 9035'. Changed lines
12/9 Ran and cemented 7", 29#, 26#, and 23# Youngstown speedtite casing at 9035' with 500 sacks Colton Hi-temperature cement. Pressure increased from 1000# - 1350# when plugs bumped. Time 9:45 P.M. International Bulk Method. Casing detail as follows:

Bottom	1596.0'	29# N-80
then	1732.2'	26# N-80
then	1672.5'	23# N-80
then	3834.3'	23# J-55
	9035.0'	

12/10 - 11 Standing cemented.
12/12 Standing cemented. Located top of cement at 8990'.
12/13 At depth of 8988' tested casing with 1000# pressure for 15 minutes with no loss. Cleaned out hard cement from 8990' to 9035' and drilled 5' to 9040' for water shut off test. Running tester.

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. STANDARD-SESNON (#1-13), Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Signed F C Foster
P

Date March 1, 1949

Title Agent
(President, Secretary or Agent)

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

DATE (Cont'd)

12/14 Ran Johnston tester on 2-7/8" drill pipe with 950' of water cushion and set packer at 8998' with tail pipe to 9015'. Opened tester at 1:25 A.M. Had light steady blow throughout test with gas to surface in 30 minutes. Pulled tester loose at 3:35 A.M. after being open 2 hours 10 minutes. Recovered 3160' (14.3 barrels) of new fluid. New fluid all watery drilling mud with trace of oil and gas, with Salinities as follows:

2392' from bottom 75 g/g
1472' from bottom 75 g/g
276' from bottom 171 g/g

Test of water shut off witnessed but not approved by Division of Oil & Gas. Made up tubing to re-cement.

12/15 Ran Baker model "K" retainer on 2-1/2" tubing and set retainer at 8991'. Applied pressure and formation took fluid at 1700# and broke down to 1500#. Mixed 100 sacks Colton Hi-temperature cement and displaced all cement below retainer. Final pressure 2200#. Time 6:00 P.M.

12/16 Standing cemented.

12/17 Cleaned out retainer and cement from 8990' to 9040'. Ran Johnston tester on 2-7/8" drill pipe with 960' water cushion and set packer at 8968' with tail pipe to 8985'. Opened tester at 11:45 P.M. Had one puff, then dead.

12/18 Well remained dead for balance of 1 hour 35 minute test. Pulled packer at 1:20 A.M. and recovered 40' of drilling mud. Pressure Bomb Charts checked details of test. Test of water shut off witnessed and approved by Division of Oil and Gas. Cored 6" hole from 9040' to 9056'.

12/19 Cored 6" hole from 9056' to 9095'.

12/20 Cored 6" hole from 9095' to 9135'.

12/21 Cored 6" hole from 9135' to 9175'. Ran Schlumberger electric log at 9175'.

12/22 Reamed 6" hole from 9035' to 9175'. Ran 173' of 5", 18# Security threaded liner, including 139' of 60 Mesh perforated and landed at 9170'. Top of Burns hanger 8998'. Top of perforations 9031'. Perforations are 60 Mesh, 12 rows, 2" slots, 6" centers, with 6" undercut, by Pacific.

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. STANDARD-SESNON (9L-13), Sec. 28, T. 3 N, R. 16 W, S.E., B. & M.

Signed F. C. Foster

Date March 1, 1949 Title Agent
(President, Secretary or Agent)

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

Date	
1948	(Cont'd)
12/23	Ran 2-7/8", 6.5# J-55 Upset tubing, including bottom 179' of 2-3/8", 4.7# J-55 Upset Tubing and hung at 9088'. Installed Xmas tree and tested with 1500# pressure for 15 minutes without loss. Circulated out mud with oil. Rigged up to swab.
12/24	Well started flowing without swabbing at 11:00 A.M. Flowed all circulating oil (325 barrels) and was then turned into production tanks at 4:00 P.M. In 14 hours to 6:00 A.M., 12/25/48, well flowed 764 barrels gross fluid; 740 barrels approximate net oil (1270 bbls. net rate); 3.0% cut; 40 - 20/64 bean; 360# tubing pressure; 0# casing pressure; 20.9° gravity; 365 MCF gas. On 2-hour test through 40/64 bean well flowed at rate of 2200 barrels per day.
12/25	In 12 hours well flowed 367 barrels gross fluid; 360 barrels approximate net oil (720 barrels net rate); 2.0% cut; including 1% mud; 16/64 bean; 21.1° gravity; 490# tubing pressure; 0# casing pressure; 115 MCF gas.
12/26	In 21 hours well flowed 1071 barrels gross fluid; 1055 barrels approximate net oil;(1210 barrels net rate); 1.5% cut, including 0.5% mud; 20/64 bean; 450# tubing pressure; 460# casing pressure; 21.0° gravity;465 MCF gas.
12/27	In 24 hours well flowed 824 barrels gross fluid; 820 barrels approximate net oil; 0.5% cut; 16/64 bean; 21.0° gravity; 500# tubing pressure; 500# casing pressure; 354 MCF gas.
12/28	In 24 hours well flowed 679 barrels gross fluid; 675 barrels approximate net oil; 0.1% cut; 14/64 bean; 21.1° gravity; 500# tubing pressure; 500# casing pressure; 317 MCF gas.
12/29	In 24 hours well flowed 679 barrels gross fluid; 678 barrels approximate net oil; 0.1% cut; 14/64 bean; 21.1° gravity; 510# tubing pressure; 500# casing pressure; 241 MCF gas.
12/30	Shut in.
12/31	Shut in.
1949	
1/1	Shut in.
1/2	Shut in.
1/3	Shut in.

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. STANDARD-SESSION (#)1-13, Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Signed F. C. Foster

Date March 1, 1949

Title Agent
(President, Secretary or Agent)

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1949 (Cont'd)

Date	Gross Fluid	Approx. Net Oil	Cut	Gravity	Bean	Tubing Pressure	Casing Pressure	MCF Gas	Hours On
1/4	700	699	0.1%	21.1	16/64	460#	450#	199	16
1/5	350	349	0.1%	21.1	10/64	560#	550#	159	24
1/6	267	266	0.1%	21.1	8/64	560#	550#	110	24
1/7	247	246	0.5%	21.1	8/64	540#	500#	110	24
1/8	242	241	0.5%	21.1	8/64	550#	525#	111	24
1/9	237	236	0.5%	21.1	8/64	540#	600#	115	24
1/10	246	245	0.5%	21.1	8/64	740#	550#	100	24
1/11	216	216	0.2%	21.1	8/64	300#	600#	101	24
1/12	237	237	0.2%	21.1	8/64	540#	550#	115	24
1/13	237	236	0.1%	22.3	8/64	530#	550#	108	24
1/14	226	225	0.1%	22.3	8/64	520#	500#	101	24
1/15	225	224	0.1%	22.3	8/64	520#	550#	101	24
1/16	227	226	0.1%	22.3	8/64	500#	550#	97	24
1/17	222	221	0.1%	22.3	8/64	500#	550#	96	24
1/18	222	221	0.2%	22.5	8/64	500#	550#	96	24
1/19	206	205	0.2%	22.5	8/64	490#	500#	90	24
1/20	206	205	0.1%	22.5	8/64	500#	490#	98	24
1/21	220	219	0.1%	22.5	8/64	480#	480#	95	24
1/22	212	211	0.1%	22.5	8/64	480#	480#	86	24
1/23	212	211	0.1%	22.5	8/64	480#	480#	86	24
1/24	203	202	0.1%	22.5	8/64	490#	490#	59	24
1/25	205	204	0.1%	22.5	8/64	450#	480#	61	24
1/26	205	204	0.1%	22.5	8/64	480#	490#	60	24
1/27	202	201	0.1%	22.5	8/64	480#	500#	79	24
1/28	124	123	0.1%	22.5	8/64	440#	450#	63	24
1/29	134	133	0.1%	22.5	8/64	440#	450#	76	24

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

TIDE WATER ASSOCIATED OIL COMPANY — ALISO CANYON

OPERATOR — FIELD

STANDARD-SESNON (#)-13 — 28 — 3 N — 16 W — S.B.

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

Signed: R. C. Foster

March 1, 1949 — Agent

Date — Title (President, Secretary or Agent)

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

1949 Date | Gross Fluid | Approx. Net Oil | Cut | Gravity | Bean | Tubing Pressure | Casing Pressure | MCF Gas | Hours On

1/30	114	113	0.1%	22.5	8/64	450#	450#	60	24
1/31	236	235	0.1%	22.5	14/64	480#	500#	100	24
2/1	270	269	0.1%	22.5	14/64	470#	500#	128	24
2/2	206	205	0.1%	22.5	12/64	520#	550#	87	24

CASING RECORD

13-3/8", 54.5# @ 732'
7", 29,26,23# @ 9035'

173' - 5", 18# inc. 139' of Perf. L 9170'. Top 8998'.

TUBING RECORD

2-7/8", 6.5# inc. botton 179' of 2-3/8", 4.7# Upset M 9058'.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

FORM 101
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 10 1949
LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator THE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON

Well No. STANDARD-SESNON (52)-13 Sec. 28, T. 3 N, R. 16 W, S.B.B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
0'	15'		Drilled		Sand and shale
15'	65'		"		Surface sand and shale
65'	2487'		"		Sand and shale
2487'	2493'		"		Shale
2493'	8750'		"		Sand and shale
8750'	8758'		"		Shale
8758'	8850'		"		Sand and shale
8850'	8854'		"		Shale
8854'	8865'		"		Shale and iron
8865'	8954'		"		Shale
8954'	9035'		"		Sand and shale
9035'	9040'		"		Shale
9040'	9056'		Cored		Oil sand streaks of siltstone
9056'	9095'		"		Oil sand
9095'	9175'		"		Oil sand and siltstone.

FORM 101
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 10 1949
LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON

Well No. STANDARD-SESNON (1)-13 Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
			6" REED CONVENTIONAL CORES		
9040'	9057'			17' 0"	2' 6" Hard, gray and oil stained sandy siltstone. No to slight cut and odor. 2' 6" Hard, friable, medium to coarse grained, oil sand. Good cut and odor. 12' 0" Hard, medium grained friable oil sand. Good cut and odor.
9057'	9075'			17' 0"	Firm, friable, medium grained oil sand. Good cut and odor. Including 0' 3" shell.
9075'	9095'			11' 0"	2' 0" Shell. 5' 6" Firm, medium grained, poorly sorted oil sand. Good cut and odor. 0' 6" Shell. 3' 0" Firm, fine grained, well sorted oil sand. Good cut and odor.
9095'	9115'			5' 0"	3' 0" Drilling mud and shale. 2' 0" Very hard, silty oil sand. Fair to good cut and odor. Looks under saturated.
9115'	9135'			20' 0"	0' 8" Hard, gray, sandy siltstone. No cut or odor. 6' 2" Hard, silty oil sand. Good cut and odor. 2' 8" Hard, grey, sandy siltstone. No cut or odor. 9' 0" Hard, silty oil sand. Good cut and odor. 1' 6" Firm, medium grained, poorly sorted oil sand. Well saturated. Good cut and odor. (Cont'd)

FORM 101
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOC. STANDARD SESNON Well No. 1-13 Field [illegible] 3 N 16 W S.B.

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

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
6" Reed Conventional Coree (Cont'd)					
				(Cont'd)	5' 10" Hard, silty oil sand. Good cut and odor. Bottom 2' grades to oil stained, sandy siltstone. Fair cut and odor.
					0' 2" Firm, medium grained, poorly sorted oil sand. Good cut and odor.
9135'	9155'			20' 0"	3' 0" Firm, medium grained, poorly sorted, well saturated oil sand. Good cut and odor.
					2' 0" Hard, oil stained siltstone. Slight to fair cut and odor.
					15' 0" Firm, silty oil sand. Good cut and fair odor.
9155'	9175'			16' 0"	10' 0" Hard, silty oil sand. Good cut and fair odor.
					5' 0" Hard, oil stained, sandy siltstone. Slight to fair cut and odor.
					1' 0" Arenaceous limestone shell.
					2' 0" Very hard sandy siltstone. No cut or odor.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

PETROLEUM ENGINEERING ASSOCIATES, Inc.

CORE LABORATORIES

TIDE WATER ASSOCIATED OIL COMPANY

Aliso Canyon Field

Well Sesnon 13

PETROLEUM CONSULTANTS BLDG.,
709-711 SO. FAIR OAKS AVE., PASADENA 2, CALIF.

PETROLEUM ENGINEERING ASSOCIATES, INC.
Complete Laboratory Service
PASADENA 2, CALIFORNIA

709-711 SOUTH FAIR OAKS AVENUE
TELEPHONE SYCAMORE 3-3649
RYAN 1-7806

December 28, 1948

Tide Water Associated Oil Company
P.O. Box "Y"
Los Nietos, California

Attention: W. E. Perkes

Gentlemen:

Enclosed herewith is our final report on the analysis of 103 core samples, ranging in depth from 9040 to 9172 feet from your Well Sesnon 13, Aliso Canyon Field.

There appear to be several intervals from which water might be produced, judging from saturations and permeabilities of core samples. The following intervals appear wet, but tight enough so that any water production would be of minor significance:

Interval	Air Permeability
9040-9042	11
9075	4
9115-9118	2
9127	23
9132	4
9164-9172	2

In the case of samples measuring 20 md. air permeability or over, it would seem highly desirable to know whether these sands are virtually impermeable when wet with interstitial water as they are in the formation. Water permeabilities do not give any specific information on the identity of the clay present, but do evaluate its effect on reservoir permeability, at least approximately. Your wishes in this matter are awaited.

Sincerely,

Norris Johnston

Norris Johnston

Encl.

NJ:jmp

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company ACCESSION NO. 195 PAGE 1 OF 7

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE December 28 19 48

CORE DIA. IN. 2-1/4 TYPE MUD Lube Seal SATURATION METHOD Mod ASTM OIL GRAV. 24 °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	Kobe POROSITY % (Helium)	PERMEABILITY-MD			I.W.*	OIL WATER RATIO	% PORES FULL OF			REMARKS
				AIR	WATER	EFFECTIVE			OIL	WATER	TOTAL	
9040	1	fm Silt sndy	15.7	1.3				0.06	5	85	90	
9041	2	do vy sndy	15.8	20				0.04	3	82	85	
9042	3	fm-frbl Sand f carb incl	13.8	11				0.11	9	79	88	
9043	4	fm-frbl pk chps Sand f-med silt	9.1	10				0.34	24	70	94	
9044	5	fm-frbl pk chps Sand f silty	22.2	112				0.23	16	68	84	
9045	6	fm pk chps Sand f silty	23.1	97				0.20	12	61	73	
9046	7	do	23.2	116				0.25	15	58	73	
9047	8	fm-frbl Sand f	19.5	116				0.24	14	58	72	
9048	9	fm-sft Sand f	23.0	91				0.34	19	56	75	
9049	10	do	22.3	237				0.36	19	53	72	
9050	11	fm-frbl Sand slty	21.4	57				0.76	28	37	65	
9051	12	fm Sand f fossiliferous	9.5	11				0.21	11	50	61	
9052	13	fm-frbl pk chps Sand f	25.2	103				0.33	17	50	67	
9053	14	vy frbl Sand f	20.9	107				0.47	24	51	75	
9054	15	frbl Sand f med incl	21.9	8.7				0.55	24	43	67	
9055	16	fm-frbl Sand f slty	20.0	46				0.26	14	54	68	

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company ACCESSION NO. 195 PAGE 2 OF 7

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE December 28 19 48

CORE DIA. IN. 2-1/4 TYPE MUD Lube Seal SATURATION METHOD Mod ASTM OIL GRAV. 24 °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	Kobe POROSITY % (Helium)	PERMEABILITY-MD AIR	PERMEABILITY-MD WATER	PERMEABILITY-MD EFFECTIVE	I.W.*	OIL WATER RATIO	% PORES FULL OF OIL	% PORES FULL OF WATER	% PORES FULL OF TOTAL	REMARKS
9056	17	fm-frbl Sand slty	20.9	83				0.46	20	43	63	
9057	18	pk chps Sand med-f	21.6	64				0.24	15	62	77	
9058	19	fm Sand med-f	20.3	63				0.27	15	56	71	
9059	20	pk chps Same as 9058	19.8	35				0.23	14	62	76	
9060	21	do	20.0	144				0.27	17	62	79	
9061	22	do	16.2	82				0.21	14	65	79	
9062	23	do	20.5	135				0.37	18	48	66	
9063	24	frbl Sand crs	21.4	892				0.43	19	45	64	
9064	25	Same as 9063	22.8	757				0.77	29	38	67	
9065	26	do	23.7	604				0.41	17	42	59	
9066	27	do	26.1	cracked 1665				0.50	18	35	53	
9067	28	do	21.2	595				0.56	22	40	62	
9068	29	do	23.0	511				0.52	20	38	58	
9069	30	pk chps Sand med crs	22.1	345				0.75	24	32	56	
9070	31	fm Same as 9069	21.2	400				0.43	21	48	69	
9071	32	do	23.0	119				0.42	19	45	64	

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company ACCESSION NO. 195 PAGE 3 OF 7

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE December 28 19 48

CORE DIA. IN. 2-1/4 TYPE MUD Lube Seal SATURATION METHOD Mod ASTM OIL GRAV. 24 °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	Kobe POROSITY % (Helium)	PERMEABILITY-MD AIR	PERMEABILITY-MD WATER	PERMEABILITY-MD EFFECTIVE	I.W.*	OIL WATER RATIO	% PORES FULL OF OIL	% PORES FULL OF WATER	% PORES FULL OF TOTAL	REMARKS
9072	33	fm-frbl pk chps Sand med-crs	23.5	823				0.83	26	31	57	
9075	34	hd wl cm pk chps Sand med	7.3	3.9				0.04	2	59	61	
9076	35	frbl pk chps Sand med	17.3	101				0.30	19	64	83	
9077	36	unc Sand						0.21				
9078	37	Same as 9077	26.4	564				0.28	16	56	72	
9079	38	fm Sand med	17.7	170				0.35	21	60	81	
9080	39	Same as 9079	22.3	390				0.28	16	56	72	
9081	40	hd wl cm Sand med-crs pr srtd	4.0	0.3				0.40	16	39	55	
9082	41	fm-frbl Sand med lam	24.5	21				0.34	17	50	67	
9083	42	frbl Sand f-med	23.2	45				0.25	15	58	73	
9084	43	frbl Sand f	21.0	10				0.43	23	54	77	
9098	47	1/2 wl cm Sand 1/2 f slty	13.6	12				0.16	12	78	90	
9099	48	vy fm Sand vy slty	20.2	2.6				0.23	14	61	75	
9115	49	fm Sand f slty	17.8	1.3				0	0	87	87	
9116	50	hd Same as 9115	14.6	0.4				0	0	93	93	
9117	51	do	18.3	4.6				0	0	83	83	

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company ACCESSION NO. 195 PAGE 4 OF 7

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE December 28 19 48

CORE DIA. IN. 2-1/4 TYPE MUD Lube Seal SATURATION METHOD Mod ASTM OIL GRAV. 24 °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	Kobe POROSITY % (Helium)	PERMEABILITY-MD			I.W.*	OIL WATER RATIO	% PORES FULL OF			REMARKS
				AIR	WATER	EFFECTIVE			OIL	WATER	TOTAL	
9118	52	fm Sand med-crs	17.4	2.1				0.05	4	74	78	
9119	53	pk chps Sand slty	20.9	11				0.16	12	74	86	
9120	54	Same as 9119	19.3	7.4				0.13	9	69	78	
9121	55	fm pk chps Sand f slty	23.1	3.2				0.28	16	58	74	
9122	56	Same as 9121	18.0	3.0				0.23	16	70	86	
9123	57	do	17.6	2.4				0.19	13	71	84	
9124	58	do	22.1	7.2				0.22	14	63	77	
9125	59	fm pk chps do	21.2	8.7				0.21	13	62	75	
9126	60	do	20.3	11				0.20	13	63	76	
9127	61	fm Sand med slty	16.3	23				0.08	5	63	68	
9128	62	frbl unc Sand med-crs slty	20.5	418				0.33	16	49	65	
9129	63	fm lam Sand slty med-crs	17.9	26				0.25	17	66	83	
9130	64	Same as 9129	21.7	9.6				0.21	13	62	75	
9131	65	fm lam Sand slty med-f	17.8	5.7				0.24	13	56	69	
9132	66	Same as 9131	17.5	4.1				0.03	2	69	71	
9133	67	fm-frbl Sand med-f	18.5	4.4				0.22	13	58	71	

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company ACCESSION NO. 195 PAGE 5 OF 7

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE December 28 19 48

CORE DIA. IN. 2-1/4 TYPE MUD Lube Seal SATURATION METHOD Mod ASTM OIL GRAV. 24 °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	Kobe POROSITY % (Helium)	PERMEABILITY-MD			I.W.*	OIL WATER RATIO	% PORES FULL OF			REMARKS
				AIR	WATER	EFFECTIVE			OIL	WATER	TOTAL	
9134	68	frbl pr srtd Sand crs	19.8	189				0.44	17	38	55	
9135	69	frbl-sft Sand crs	20.3	517				0.28	19	68	87	
9136	70	Same as 9135	19.5	509				0.38	17	46	63	
9137	71	do	20.9	608				0.54	24	44	68	
9138	72	do	19.5	22				0.91	40	44	84	
9139	73	fm Sand med-f	23.4	68				0.74	31	42	73	
9140	74	fm-frbl Sand f	22.0	17				0.19	12	62	74	
9141	75	do	22.5	16				0.20	12	62	74	
9142	76	do slty	19.5	1.6				0.29	17	59	76	
9143	77	do	20.0	6.5				0.14	9	66	75	
9144	78	do	18.7	2.7				0.16	10	64	74	
9145	79	do	19.5	0.9				0.24	15	63	78	
9146	80	do	20.2	11				0.30	17	55	72	
9147	81	fm Sand vy slty	20.9	11				0.22	13	58	71	
9148	82	do	22.5	58				0.27	16	60	76	
9149	83	do	20.9	25				0.23	14	61	75	

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company ACCESSION NO. 195 PAGE 6 OF 7

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE December 28 19 48

CORE DIA. IN. 2-1/4 TYPE MUD Lube Seal SATURATION METHOD Mod ASTM OIL GRAV. 24 °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	Kobe POROSITY % (helium)	PERMEABILITY-MD AIR	PERMEABILITY-MD WATER	PERMEABILITY-MD EFFECTIVE	I.W.*	OIL WATER RATIO	% PORES FULL OF OIL	% PORES FULL OF WATER	% PORES FULL OF TOTAL	REMARKS
9150	84	Same as 9147	22.1	26				0.21	12	58	70	
9151	85	do	22.3	35				0.17	10	57	67	
9152	86	do	21.4	14				0.23	13	57	70	
9153	87	hd Sand f slty	22.5	21				0.29	17	60	77	
9154	88	Same as 9153	20.6	9.3				0.22	14	62	76	
9155	89	fm Sand f	18.3	6.6				0.16	11	70	81	
9156	90	pk chps Same as 9155	20.9	5.1				0.24	15	61	76	
9157	91	fm Sand f	19.1	6.1				0.15	10	64	74	
9158	92	Same as 9157	18.3	5.6				0.17	11	64	75	
9159	93	do lam	17.1	4.8				0.13	9	70	79	
9160	94	do	18.5	6.9				0.19	12	63	75	
9161	95	fm Sand f slty stks	19.8	6.5				0.20	12	61	73	
9162	96	Same as 9161	18.6	8.7				0.16	11	67	78	
9163	97	fm Sand f slty stks	17.8	9.0				0.24	16	67	83	
9164	98	Same as 9163	17.8	4.5				0.09	7	73	80	
9165	99	fm-hd Sand f	18.3	1.6				0.04	3	76	79	

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company

ACCESSION NO. 195 PAGE 7 OF 7

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE December 28 19 48

CORE DIA. IN. 2-1/4 TYPE MUD Lube Seal SATURATION METHOD Mod ASTM OIL GRAV. 24 °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	Kobe POROSITY % (Helium)	PERMEABILITY-MD			I.W.*	OIL WATER RATIO	% PORES FULL OF			REMARKS
				AIR	WATER	EFFECTIVE			OIL	WATER	TOTAL	
9166	100	Same as 9165	18.4	1.8				0.06	4	72	76	
9167	101	do	17.3	1.7				0.02	2	82	84	
9168	102	do	16.8	0.8				0.03	2	81	83	
9169	103	hd shells Ss f	3.3	0				1.14	40	35	75	
9170	104	fm-hd Sand f	17.1	0.9				0.08	6	79	85	
9171	105	Same as 9170	19.0	5.4				0.02	2	78	80	
9172	106	do	19.1	2.9				0.03	2	76	78	

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

PETROLEUM ENGINEERING ASSOCIATES, INC.

CORE ANALYGRAPH

COMPANY: TIDE WATER ASSOCIATED OIL COMPANY
WELL: SESNON 1-13
FIELD: ALISO CANYON

COUNTY: LOS ANGELES
STATE: CALIFORNIA
SEC. 28 TWP. 3N RGE. 16W

LOG MEASURED FROM _____ ELEV. _____
DRILLING MEASURED FROM _____ ELEV. _____
PERMANENT DATUM _____ ELEV. _____

ELECTRIC LOG – SCHLUMBERGER

POROSITY	PERMEABILITY	SELF-POTENTIAL	DEPTH	CORE LOG	RESISTIVITY	SATURATION – MOD. ASTM
P effective Kobe – Helium PERCENT 40 30 20 10	K air MILLIDARCYS 2000 1000 500 200 100 50 20 10 5 2	← 100 MILLIVOLTS			0 — OHM-METERS → 60	OIL/WATER RATIO .1 .2 .3 .4 .5 .6 .7 .8 .9 1

PERCENT PORE SPACE
OIL → 100 90 80 70 60 50 40 30 20 10 ← WATER
10 20 30 40 50 60 70 80 90 100

9100
9200

* See Table for Values

PETROLEUM ENGINEERING ASSOCIATES, Inc.

CORE LABORATORIES

TIDE WATER ASSOCIATED OIL COMPANY

Aliso Canyon Field

Well: Sesnon 13

PETROLEUM CONSULTANTS BLDG.,
709-711 SO. FAIR OAKS AVE., PASADENA 2, CALIF.

PETROLEUM ENGINEERING ASSOCIATES, INC.
Complete Laboratory Service
PASADENA 2, CALIFORNIA

709-711 SOUTH FAIR OAKS AVENUE
TELEPHONES: SYCAMORE 3-1156
RYAN 1-8141

May 31, 1949

Tide Water Associated Oil Company
Pacific Electric Building, Room 888
610 South Main Street
Los Angeles, California

Attention: Joseph Jensen Subject: Sesnon 1-13
Interstitial Water

Gentlemen:

Enclosed herewith is our final report on interstitial water determinations for 21 core samples, ranging in depth from 9040 to 9166 feet, from your Well Sesnon 1-13, Aliso Canyon Field.

The data are in close agreement with those previously determined in this laboratory for samples from your Well Fernando 32. Data obtained when Fernando 32 was redrilled the second time do not check as closely, and therefore probably should not be given as much weight in estimating field average interstitial water values.

The determinations were all made by the same method, restored state, and the same laboratory procedure was carefully followed for all wells.

Very truly yours,

Paul B. Mallory

Paul B. Mallory

PBM:dr

Encls.

PEA FORM 1

PETROLEUM ENGINEERING ASSOCIATES, INC.

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company ACCESSION NO. 195 PAGE 1 OF 2

FIELD Aliso Canyon ZONE WELL Sesnon 13 DATE May 31 19 49

CORE DIA. IN. TYPE MUD SATURATION METHOD OIL GRAV. °API WATER SALINITY GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	POROSITY %	PERMEABILITY-MD			I.W.*	OIL WATER RATIO	% PORES FULL OF			REMARKS
				AIR	K' air after IW	EFFECTIVE			OIL	WATER	TOTAL	
9040	1			1.3	1.0	0.3	82.8					
9049	10			156	181	167	14.3					
9050	11			55	63	56	20.8					
9056	17			64	66	76	12.1					
9070	31			393	764	764	12.3					
9076	35			87	103	93	21.6					
9083	42			40	51	63	28.5					
9116	50			0.4	0.2	0	77.7					
9123	57			1.4	0	0	50.7					
9129	63			25	32	25	24.9					
9132	66			1.4	2.0	0	68.3					
9134	68			118	12.8	116	22.8					
9135	69			104	cracked 1267	cracked 1323	25.8					
9139	71			608	698	598	9.4					
9139	73			77	82	76	16.8					
9141	75			16	18	13	26.0					

*INTERSTITIAL WATER

UNDERLINE DENOTES ADJACENT SAMPLE

PEA FORM 1

PETROLEUM ENGINEERING ASSOCIATES, INC.

CORE ANALYSIS

COMPANY Tide Water Associated Oil Company

ACCESSION NO. 195 PAGE 2 OF 2

FIELD Aliso Canyon ZONE _____ WELL Sesnon 13 DATE May 31 19 49

CORE DIA. IN. _____ TYPE MUD _____ SATURATION METHOD _____ OIL GRAV. _____ °API WATER SALINITY _____ GPG NaCl

DEPTH FT.	SAMPLE NO.	CHARACTER OF SAMPLE	POROSITY %	PERMEABILITY-MD			I.W.*	OIL WATER RATIO	% PORES FULL OF			REMARKS
				AIR	K'air after IW	EFFECTIVE			OIL	WATER	TOTAL	
9149	83			28	31	28	15.6					
9151	85			35	36	28	24.9					
9154	88			8.4	11	6.3	34.1					
9155	89			6.1	9.3	5.0	45.5					
9166	100			0.8	0.6	0.7	40.9					

*INTERSTITIAL WATER

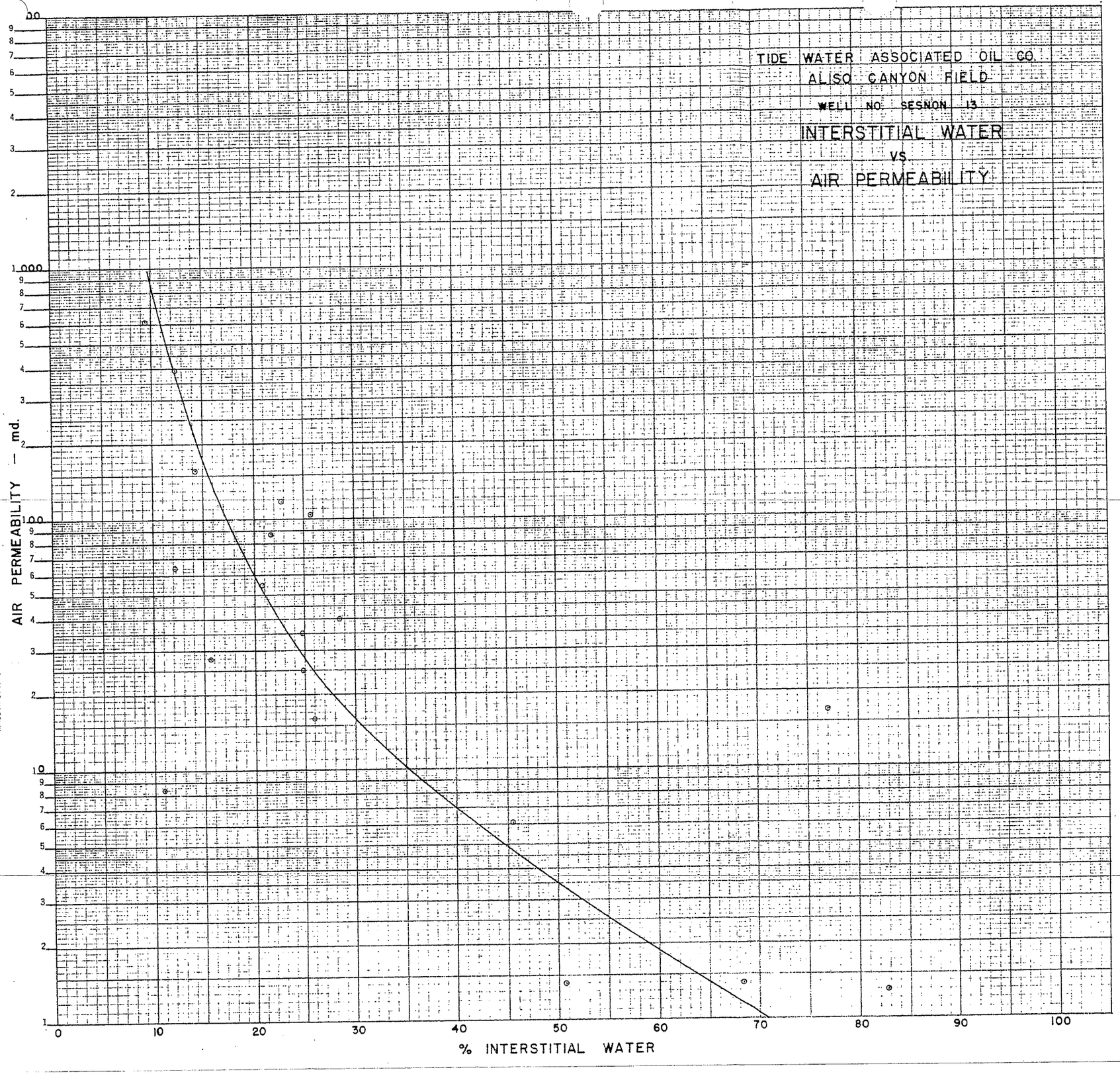
UNDERLINE DENOTES ADJACENT SAMPLE

TIDE WATER ASSOCIATED OIL CO.

ALISO CANYON FIELD

WELL NO. SESNON 13

INTERSTITIAL WATER VS. AIR PERMEABILITY



KEUFFEL & ESSER CO., N. Y. NO. 358-81LS
4 cycles X 10 to the inch, 5th lines accented.
MADE IN U.S.A.

FORM 109-A (10-48)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

No. T 1-49140

Los Angeles 15, Calif. December 28, 1948

Mr. F. C. Foster
Los Nietos, Calif.
Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your well No. "Standard-Sesnon 1" 13, 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 December 18, 1948. Mr. N. N. Sampson, Inspector, designated by the supervisor, was present as prescribed in Secs. 3222 and 3223, Ch. 93, Stat. 1939; there were also present Gordon Larter, Engineer; F. E. Marsh, Drilling Foreman.

Shut-off data: 7 in. 23, 26, 29 lb. casing was re-cemented xxxx at 9035 ft. on December 15, 1948 in 11 in. hole with 100 sacks of cement xxxx of which xxxx sacks was left in casing.

Casing record of well: 13-3/8" cem. 732'; 7" cem. 9035', W. S. O.

Present depth 9040 ft. Bridged with cement from xxx ft. to xxx ft. Cleaned out to 9040 ft. for test. A pressure of 1000 lb. was applied to the inside of casing for 15 min. without loss after cleaning out to 8988 ft. A Johnston tester was run into the hole on 2-7/8 in. drill pipe ~~tubing~~ with 960 ft. of water-~~mud~~ cushion, and packer set at 8968 ft. with tailpiece to 8985 ft. Tester valve, with 3/8 in. bean, was opened at 11:45 p.m., December 17, 1948 and remained open for 1 hr. and 35 min. During this interval there was a light, 5-second blow, and no blow thereafter.

INSPECTOR J. L. WHITE VISITED THE WELL FROM 5:45 - 7:00 A. M., DECEMBER 14, 1948, AND MR. LARTER, ENGINEER, REPORTED:

1. An 11" rotary hole was drilled from 1413' to 9035'.
2. On December 9, 1948, 7", 23, 26, and 29 lb. casing was cemented at 9035' with 500 sacks of cement.
3. Electrical core readings showed the top of the Sesnon zone at 9042' (estimated).
4. Cement was drilled out of the 7" casing from 8988' to 9035' (equivalent to 9 sacks).
5. A 6" rotary hole was drilled from 9035' to 9040'.
6. A Johnston tester was run into the hole on 2-7/8" drill pipe with 960' of water cushion, and packer set at 8998'.
7. The tester valve was opened at 1:25 a.m. and remained open 2 hr. and 10 min. During this interval, there was a light, steady blow for 25 min.; a medium, steady blow for for 20 min.; and a light, steady blow for the balance of the test. (Gas reached the surface in 30 minutes).

THE INSPECTOR NOTED:

1. When the drill pipe was removed, 3160' (net) of slightly oily, thin, drilling fluid was found in the drill pipe above the tester, equivalent to 12.2 bbl.
2. Water filtered from fluid samples taken from 1472' and 276' above the bottom of the drill pipe tested 75 and 171 grains of salt per gallon, respectively.

The operator decided to recement.

INSPECTOR SAMPSON ARRIVED AT THE WELL AT 5:00 A. M., DECEMBER 18, 1948, AND MR. LARTER REPORTED:

1. On December 15, 1948, a cement retainer was set at 8991' and the 7" casing was re-cemented at 9035' with 100 sacks of cement, all of which was squeezed away under a final pressure of 2200 lb.
2. The top of the cement was found at 8991' and drilled out to 9040' with a 6" bit.

R. D. BUSH, State Oil and Gas Supervisor

By (CONTINUED ON PAGE 2), Deputy

98241 10-48 25M SPO

FORM 109-X. 36345 7-44 7500
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
OR
Special Report on Operations Witnessed

No. T 1-49140
Page 2

TIDE WATER ASSOCIATED OIL COMPANY

Well No. "Standard-Sesnon 1" 13, Sec. 28, T. 3 N., R. 16 W., S. B. B. & M.,

3. A Johnston tester was run as noted above.

THE INSPECTOR NOTED:
1. When the drill pipe was removed, 40' of medium drilling fluid was found in the drill pipe above the tester, equivalent to 0.2 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hr.

The test was completed at 6:30 a.m.

THE SHUT-OFF IS APPROVED.

NNS:OH

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

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Nusser Deputy

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-48915

Los Angeles 15, Calif. November 5, 1948

Mr. F. C. Foster
Los Nietos, Calif.
Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR: "Standard-Sesnon 1"

Operations at your well No. 13 Sec. 28, T. 3 N., R. 16 W., S.B. B. & M., Aliso Canyon Field, in Los Angeles County, were witnessed by J. L. White, Inspector, representative of the supervisor, on October 19, 1948. There was also present Gordon Larter, Engineer; S. M. Peek, Driller.

Casing Record	Junk
13-3/8" cem. 732'. T. D. 2763'.	None

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

The inspector arrived at the well at 7:45 p.m. and Mr. Larter reported:

1. A 12-1/4" rotary hole was drilled from the surface to 1413' (opened to 17-1/4", from surface to 732').
2. On October 12, 1948, 13-3/8", 54 lb. casing was cemented at 732' with 500 sacks of cement. An additional 150 sacks of cement was pumped around the outside of the casing at the surface.
3. An 11" rotary hole was drilled from 1413' to 2763'.

THE INSPECTOR NOTED THAT THE WELL WAS EQUIPPED WITH THE FOLLOWING BLOWOUT PREVENTION EQUIPMENT:

1. A Shaffer ram-type gate for closing in the well with the drill pipe out of the hole.
2. A Shaffer ram-type gate for closing around the 4-1/2" drill pipe.
3. The controls for the above equipment were located outside the derrick.
4. A 2" mud fill-up line with a 2" high pressure gate into the 13-3/8" casing below the above equipment.

The inspection was completed at 8:00 p.m.

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

JLW:OH

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

R. D. BUSH
State Oil and Gas Supervisor
By E. H. Messer Deputy

86681 2-48 16,250 ② SPO

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-45552

Los Angeles 15, Calif. September 10, 1948

Mr. F. C. Foster

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

Dear Sir:

Your proposal to drill Well No. "Standard-Sesnon 1" 13

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

dated Sept. 3, 1948, received Sept. 7, 1948, 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 2709.84 feet S. and 5254.80 feet W. from Station #84
Elevation of ground above sea level 2578.75 feet.
All depth measurements taken from top of derrick floor, which is 6.92 feet above ground.
We estimate that the first productive oil or gas sand should be encountered at a depth of about _____ feet."

PROPOSAL:

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

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
13-3/8"	54.5#	J-55 T&C Speedtite	800'	Cemented
7"	23, 26, 29#	J-55 N-80	9050'	Cemented
5"	18#	J-55; F.J.	9200'	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. Blowout prevention equipment, sufficient to provide a complete close-in of the well under pressure at any time, shall be installed.
3. Any hole to be sidetracked in any oil or gas zone shall be filled with cement, if possible.
4. THIS DIVISION SHALL BE NOTIFIED AS FOLLOWS:
   (a) To inspect the installed blowout prevention equipment before drilling below 1500'.
   (b) To witness a test of the effectiveness of the 7" shut-off.

ABH:OH

R/A

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

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Meesser Deputy

Blanket bond.

FORM 105.
CALIFORNIA STATE PRINTING OFFICE

037-00765

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
SEP 7 - 1948
LOS ANGELES, CALIFORNIA

14

Notice of Intention to Drill New Well

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

Los Nietos, Calif. September 3, 1948

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-Sesnon #1-13, Sec. 28, T. 3 N, R. 16 W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

Legal description of lease Standard Sesnon #1

The well is 2709.84 feet ~~N~~ S., and 5254.80 feet ~~E~~ W. from Station #84
(Give location in distance from section corners or other corners of legal subdivision)

Elevation of ground above sea level 2578.75 feet.

All depth measurements taken from top of derrick floor, which is 6.92 feet above ground.

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

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

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
13-3/8"	54.5#	J-55 T&C	800'	Cemented
7"	23, 26, 29#	Speedtite J-55 N-80	9050'	Cemented
5"	18#	J-55; F.J.	9200'	Landed

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
P	P	M	Blanket	P	P

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

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

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

TIDE WATER ASSOCIATED OIL COMPANY
(Name of Operator)

Telephone number Whittier 42-043

By T. C. Foster
Agent

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