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 **216-0254**

# REPORT ON OPERATIONS

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

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

Ventura, California
July 13, 2016

Your operations at well **"Standard Sesnon" 30**, A.P.I. No. **037-00780**, Sec. **28**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **7/1/2016**, by **Mike Woods**, a representative of the supervisor.

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

DECISION:

**DEFERRED PENDING REVIEW BY THE DIVISION'S SAFETY TEAM.**

MW/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By
Patricia A. Abel, *District Deputy*

EB76.

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

216-0254
#16, 3
No. T_____

# MECHANICAL INTEGRITY TEST (MIT)

| | | | | | |
|---|---|---|---|---|---|
| Operator: ***Southern California Gas Company*** | | | | Well: ***"Standard Sesnon" 30*** | |
| Sec. ***28*** | T. ***3N*** | R. ***16W*** | ***SB*** B.&M. | API No.: ***037-00780*** | Field: ***Aliso Canyon*** |
| County: ***Los Angeles*** | | | | ☒ Witnessed ☐ Reviewed on: ***7/01/2016*** As per M. Woods 7-14-16. | |

***M. Woods*** ,representative of the supervisor, was present from ~~***1100***~~ 1030 to ***1130***.

Also present were: ***Mike Giuliani, Consultant***

Casing record of the well:
***2 7/8" landed on packer @ 8840', tubing plug @ 8807', open mandril @ 8760'.***

The MIT was performed for the purpose of demonstrating the mechanical integrity of the ***7"*** casing.

☐ The MIT is approved since the R/A tracer survey indicates that all of the injection fluid is confined to formations below at this time.

☒ The MIT is approved because the ***7"*** casing held a pressure of ***1100 psi*** for ***60*** minutes.

☐ The MIT is approved since the temperature survey indicates no fluid migration between and the surface.

☐ The MIT is not approved due to the following reasons:

Comments:

Deficiencies Corrected:

Deficiencies to be Corrected:

Uncorrectable Deficiencies:

Contractor: ***Premier Oilfield Service and Oryx Oil Service***

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

Operator: **Southern California Gas Company** WELL DESIGNATION **"Standard Sesnon" 30**

API No. **03700780** SE **28** T: **3N** R.: **16W** , **SB** B. and M.

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

**Type of Notice:** **Rework** **Date** **6/16/2016** **Report Number:** **P216-0097**

**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 | 7-1-16 | ✓ | ✓ | Need data from SGC |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |
| | | | | |

**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 _____ *(Date)* Calwims DRILL/REDRILL Form _____

## ENGINEER'S CHECK LIST

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

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

## CLERICAL CHECK LIST

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

## REMARKS

**RECORDS SCANNED:** _____ (Date)

**RECORDS APPROVED:** _____ (Date and Engineer)

*Modified OGD2*

AOR Datbase _____

URAL 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 216-0097

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

# PERMIT TO CONDUCT WELL OPERATIONS

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

Ventura, California
June 30, 2016

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

Your proposal to **Rework** well **"Standard Sesnon" 30**, A.P.I. No. **037-00780**, Section **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **6/16/2016**, received **6/20/2016** has been examined in conjunction with records filed in this office. (Lat: **34.309101** Long: **-118.565108** 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:
2. a. Class **I** **Note: work to be completed without the removal of the injection assembly.**
3. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
4. Prior to commencing downhole operations, a pressure test is conducted to demonstrate the mechanical integrity of the **7"** casing.
5. Injection shall be through tubing and packer only. Injection or withdrawal through the casing is not permitted.
6. 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.
7. In all other respects, the provisions of Division Order #1109 shall remain in effect.
8. This office shall be contacted by phone prior to making any program changes and no changes are made without Division approval.
9. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Witness a pressure test on the **7"** casing and tubing plug.

**Continued on Next Page**

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

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

CRK/crk

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By
Patricia A. Abel, *District Deputy*

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

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 | | | |
|---|---|---|---|
| Bond | Forms | | |
| | ~~OGD114~~ | OGD121 | |
| | CALV WIMS | 1151 | |

P216-0097

# 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 30, API No. 037-00780,

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: 9248 feet. The effective depth is: 9240 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 - Theo. TOC at 7253' as per attached wellbore mechanical.
5b - Packer set at 8840' and plug set in XN nipple at 8807' on 6/2/16.
6b - Well was circulated full of 8.5 ppg kill fluid on 6/11/16.
7b - With tubing valve closed, pressure test anulus to 1000 psi. for 1 hour.

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: 6/16/16 |
| 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 06-20-16 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 06-20-16 DOGGR Ventura.*

# Well
# Standard Sesnon 30

API #: 04-037-00780-00
Sec 28, T3N, R16W

Operator: So. California Gas Co.

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

Ground Elevation: 2329.9' asl
Datum to Ground: 9.57' DF

Spud Date: 8/1/1953
Completion Date: 10/11/1953

Junk: None

11-3/4" TOC Surface

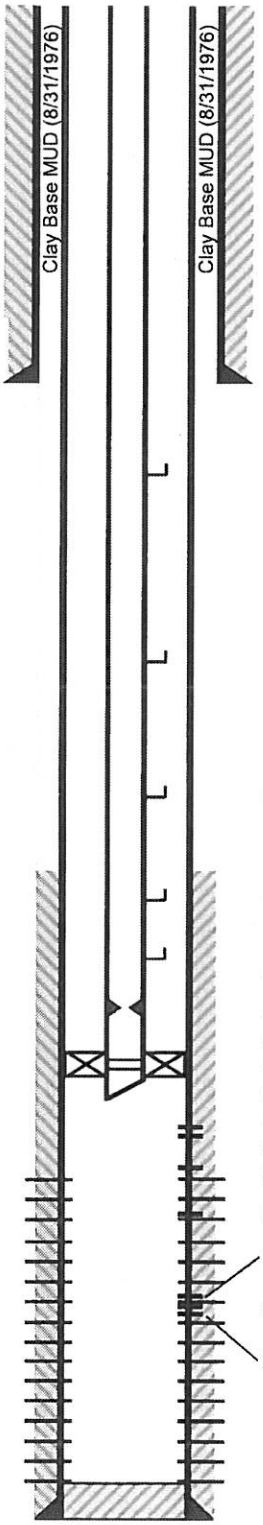
17-1/2" Hole (0' - 2229')

Surface Casing
11-3/4", T&C
0' - 1274' 42#, H-40
1274' - 2500' 47#, J-55

CMT'D w/ 1775 SKS,
Good CMT Returns to Surface

16" Hole (2229' -2500')

2500'




Tubing
2-7/8"
0' - 1915' 6.5#, N-80
1915' - 8847' 6.5#, J-55

2791' Camco MMA GLM w/ RA Latch

5330' Camco MMA GLM w/ RA Latch

6880' Camco MMA GLM w/ RA Latch

7882' Camco MMA GLM w/ RA Latch

8761' Camco MMA GLM w/ RA Latch

8807' Otis "XN" No-Go Nipple
8839' Baker Latch-In Locator
8840' Baker Retieva-D PCKR w/ Baker Latch & Seal Assembly (2' Seals)
8847' Tail
8853' Four (4) 1/2" Holes (9/10/1976) WSO
8854' Four (4) 1/2" Holes (115 CF CMT SQZ'D (9/8/1976)
8873' Four (4) Holes (10/4/1953) WSO
8955' Four (4) 1/2" Holes (10/3/1953) WSO
9083' Four (4) 1/2" Holes (100 SKS CMT SQZ'D, 10/1/1953)
9093' Four (4) 1/2" Holes (Co. Test, 10/2/1953)
9095' Four (4) 1/2" Holes (100 SKS CMT SQZ'D Away, 9/28/1953)

**Notes**
*Set BP @ 8890', shot & SQZ'D holes @ 8854'. Following retrieval of BP, cleaned out CMT f/ 8919' - 9095', re-shot perfs f/ 8894' - 9080'.

Production Casing
7"
0' - 1996' 23#, N-80
1996' - 4199' 23#, J-55
4199' - 6321' 23#, N-80
6321' - 8206' 26#, N-80
8206' - 9248' 29#, N-80

CMT'D w/ 600 SKS

7" ETOC 7253'

10-5/8" Hole

7" Perfs:
8884' - 8896' & 8911' - 8945'
Four (4) 1/2" HPF (10/21/1956)
8894' - 8906', 8921' - 8955',
8972' - 9020' & 9040' - 9080'
Two (2) 1/2" HPF (9/15/1976)*
8962' - 9010', 9030' - 9070',
9100' - 9125', 9135' - 9180'
& 9200' - 9240'
Six (6) 1/2" HPF (10/5/1953)

8884'

9240'

9248'

PBTD 9240'
TD 9248'
TVD (9248')
Directionally Drilled: No

| Top of Zone Markers | md | (tvd) |
|---|---|---|
| PEupth | 2690' | (2690') |
| FREWupth | 3354' | (3354') |
| CRupth | 3650' | (3650') |
| K1upth | 3970' | (3970') |
| UDA1 | 6987' | (6987') |
| MDA | 7941' | (7941') |
| MP | 8682' | (8682') |
| S1 | 8885' | (8885') |
| S4 | 8962' | (8962') |
| S8 | 9082' | (9082') |

Prepared by: MAM (5/27/2016)

InteAct

*Rec'd 06-20-16 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 |
|---|---|---|---|---|---|---|---|
| Mission Adrian 1B | 7183'/7183' | 6-5/8", 24#, N-80 | 7213 | 7440 | 6324 | 4188 | Yes |
| Porter 12 | 6843'/6842' | 6-5/8", 24#, J-55* | 4109 | 5110 | 4344 | 2816 | Yes |
| | | 6-5/8", 24#, N-80* | 4572 | 7440 | 6324 | 3021 | Yes |
| | | 5", 15#, J-55* | 6910 | 5700 | 4845 | 4054 | Yes |
| Sesnon Fee 6 | 8878'/8878' | 7", 29#, N-80 | 51 | 8160 | 6936 | 1023 | Yes |
| | | 7", 23#, N-80 | 6231 | 6340 | 5389 | 3754 | Yes |
| | | 7", 26#, N-80 | 8377 | 7240 | 6154 | 4703 | Yes |
| | | 7", 29#, N-80 | 9268 | 8160 | 6936 | 5096 | Yes |
| Standard Sesnon 30 | 8840'/8840' | 7", 23#, N-80 | 1996 | 6340 | 5389 | 1882 | Yes |
| | | 7", 23#, J-55 | 4199 | 4360 | 3706 | 2856 | Yes |
| | | 7", 23#, N-80 | 6321 | 6340 | 5389 | 3794 | Yes |
| | | 7", 26#, N-80 | 8206 | 7240 | 6154 | 4627 | Yes |
| | | 7", 29#, N-80 | 9248 | 8160 | 6936 | 5088 | Yes |

* Actual pipe in well is a non-API grade so assumed closest size, weight & grade of API pipe

Rec'd 06-20-16 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 22G0
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 Patrick J. Kinnear

*Deputy Supervisor*
PATRICK J. KINNEAR

OGD157 (10/85/DWRR/1M)

OPERATOR So Calif Gas
LSE & NO SFZU SS 30
MAP 250

| | (1) | (2) | ( ) | ( ) | ( ) | ( ) |
|---|---|---|---|---|---|---|
| INTENTION | DRILL | REWORK GAS STORAGE WELL | no permit for replace Bad tubing | | | |
| NOTICE DATED | 7-17-53 | 7-28-76 | | | | |
| P-REPORT NUMBER | 153-963 | 276-269 | | | | |
| CHECKED BY/DATE | | | | | | |
| MAP LETTER DATED | | 11-6-76 | | | | |
| SYMBOL | ● | G | NC | | | |

| | REC'D | NEED | REC'D | NEED | REC'D | NEED | REC'D | NEED | REC'D | NEED | REC'D | NEED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOTICE | 7-20-53 | | 7-30-76 | | – | | | | | | | |
| HISTORY | 2-17-54 | | 11-3-76 | | 3/23/89 | | | | | | | |
| SUMMARY | 2-17-54 | | | | | | | | | | | |
| IES/ELECTRIC LOG | | | | | | | | | | | | |
| DIRECTIONAL SURV | | | | | | | | | | | | |
| CORE/SWS DESCRIP | | | | | | | | | | | | |
| OTHER | | | | | | | | | | | | |
| RECORDS COMPLETE | ✓ | | ✓ | | ✓ | | | | | | | |

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: HISTORY 2-5-57 NO PROPOSAL

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

# DIVISION OF OIL AND GAS

DIVISION OF OIL AND
RECEIVED
MAR 23 1989
VENTURA, CALIFORNIA

## History of Oil or Gas Well

Operator Southern Calif. Gas Co. Field Aliso Canyon County Los Angeles
Well Standards Sesnon #30 "5/70" SS-30, Sec. 28, T 3N, R 16W, B. & M.
A.P.I. No. #037-00780 Name R. W. Weibel (Person submitting report) Title Agent (President, Secretary or Agent)
Date March 10, 1989

Signature N. W. Buss for R. W. Weibel 3/22/89

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

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

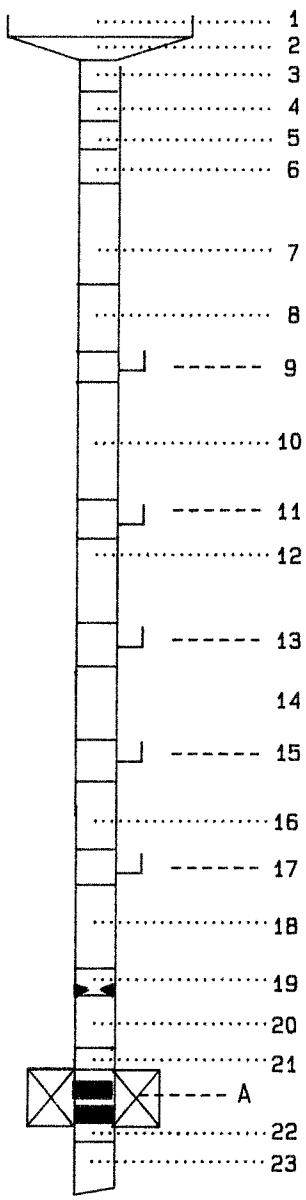
| Date | |
|---|---|
| | MWO No. 99934: was issued to replace bad tubing. |
| 1989 | |
| 1-28 to 1-30 | Rigged up. Removed xmas tree. Installed Shaffer 7-1/16" 5000 psi BOPE. Tested blind rams, pipe rams, choke manifold and Hydril bag to 3000 psi. Steve Mulqueen of the DOG declined to witness BOPE test. |
| 1-31 | Circulated bottoms up. Worked and turned tubing to release from packer. Pulled out of well. Found six joints with holes between 900' and 2250'. |
| 2-1 | Finished pulling out of well. Laid down production equipment. Made up test seals. Ran in well hydrotesting tubing. Laid down 59 joints of bad tubing. Picked up 27 joints of 2-7/8" N-80 tubing. |
| 2-2 | Finished picking up tubing. Pulled 20,000 lb over string weight to check the packer latch. Set 10,000 lb down on packer and tested for 30 minutes with 1500 psi. Measured out of well. Made up production euqipment, hydrotesting to 4000 psi. |
| 2-3 | Finished hydrotesting tubing in well. Spaced out and changed fluid over to 2% KCl water. Landed tubing with 49,000 lb on donut, 8000 lb down on packer. Removed BOPE. Installed and tested xmas tree to 3000 psi. Released rig at 5:00 P.M. |

# TUBING DETAIL

WELL: Standard Sesnon #30
FIELD: Aliso Canyon

STATUS: Gas Lift Oil Well
DATE: March 10, 1989

TUBING PROFILE




| | TUBING | TUBING | TUBING | |
|---|---|---|---|---|
| SIZE | 2-7/8" | 2-7/8" | | |
| WEIGHT | 6.5# | 6.5# | | |
| GRADE | N-80 | J-55 | | |
| THREAD | 8rd EUE | 8rd EUE | | |
| DEPTH | 0'- 1914' | 1914'-8847' | | |

| ITEM # | TUBING DETAIL | LENGTH | DEPTH |
|---|---|---|---|
| 1. | KB | 8.70 | 8.70 |
| 2. | Tubing hanger 7-1/16" x 2-7/8" 8rd EUE | .62 | 9.32 |
| 3. | Fatigue nipple | .66 | 9.98 |
| 4. | Fatigue nipple | 1.11 | 11.09 |
| 5. | Pup joint N-80 | 2.15 | 13.24 |
| 6. | Pup joint N-80 | 10.12 | 23.36 |
| 7. | 60 joints tubing N-80 (new) | 1891.38 | 1914.74 |
| 8. | 28 joints tubing J-55 | 876.34 | 2791.08 |
| 9. | Camco 2-7/8" x 1.5" MMA GLM w/RA latch | 14.03 | 2805.11 |
| 10. | 82 joints tubing J-55 | 2524.84 | 5329.95 |
| 11. | Camco 2-7/8" x 1.5" MMA GLM w/RA latch | 12.71 | 5342.66 |
| 12. | 50 joints tubing J-55 | 1536.99 | 6879.65 |
| 13. | Camco 2-7/8" x 1.5" MMA GLM w/RA latch | 14.04 | 6893.69 |
| 14. | 32 joints tubing J-55 | 988.34 | 7882.03 |
| 15. | Camco 2-7/8" x 1.5" MMA GLM w/RA latch | 13.40 | 7895.43 |
| 16. | 28 joints tubing J-55 | 865.59 | 8761.02 |
| 17. | Camco 2-7/8" x 1.5" MMA GLM w/RA latch | 14.03 | 8775.05 |
| 18. | One joint tubing | 31.45 | 8806.50 |
| 19. | Otis 2-7/8" XN No-Go nipple 2.205" ID | 1.30 | 8807.80 |
| 20. | One joint tubing | 31.45 | 8839.25 |
| 21. | Baker 2-7/8" latch-in locator | .75 | 8840.00 |
| 22. | Baker latch and seal assembly (2' seals) | 2.34 | 8842.34 |
| 23. | Baker production tube | 5.25 | 8847.59 |
| A. | Baker 7" Retrieva-D packer set at: | | 8840.00 |
| | Packer bore has 3.25" ID. Pulled 20,000 lb over tubing weight to check latch. Tubing landed in compression with 8000 lb on packer. | | |
| | NOTE: Each GLM length includes a 4' pup joint above the GLM and a 1' pup joint below the GLM | | |

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

# DIVISION OF OIL AND GAS

30981/705 2-75 10M © OSP

DIVISION OF OIL AND GAS
RECEIVED
NOV - 3 1976
SANTA PAULA, CALIFORNIA

## History of Oil or Gas Well

OPERATOR Southern California Gas Company FIELD Aliso Canyon

Well No. Standard Sesnon #30, Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Date ....., 19.... Signed P.S. Magruder, Jr.

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

(Address) (Telephone Number) (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 | |
|---|---|
| 8-26-76 | Moved in CPS rig and rigged up. Ran type XX wire line blanking plug and set in Otis "X" nipple at 518'. Removed Xmas tree. Installed BOPE and tested blind rams and pipe rams to 4000 psi with water and nitrogen. Tested Hydril to 3000 psi with water and nitrogen. D.O.G. witnessed and approved tests. |
| 8-27-76 | Using piano wire equipment recovered plug from "X" nipple at 518'. Circulated until all gas was removed from drilling fluid. Released Guiberson KV-30 packer and pulled out of well measuring tubing. |
| 8-28-76 | Finished pulling tubing and packer out of hole. Made up Robison 7" scraper and 6" bit on tubing drilled out fill to 9240'. Circulated hole. |
| 8-29-76 | Rig and crew idle. |
| 8-30-76 | Finished pulling out of hole. Ran Dresser Atlas Neutron Lifetime log with gamma-ray and Cement Bond log with Neutron log. Found total depth at 9220'. Made up Johnston retrievable bridge plug on tubing and started in hole. |
| 8-31-76 | Ran tubing with Johnston 7" retrievable plug and set plug at 8850'. Pressure tested plug to 1500 psi for 20 minutes. Pulled out of well. Made up another 7" retrievable plug and set at 30'. Took off B.O.P.E. Filled casing annulus between 11 3/4" and 7" with clay-base mud. Unlanded 7" casing using Alco jacks and Midway Fishing Tools spear. Cut off casing head. |
| 9-1-76 | Jack-hammered cellar - making ready to cut off surface casing and thread 7" for extension. |

9-2-76 Cut off 11 3/4" casing stub. Threaded 7" casing stub, installed 7", 29# casing extension using R. & R. casing tongs. Tested new connection to 4000 psi for 20 minutes. Butt welded 13 5/8" x 11 3/4" casing head and extension to surface casing.

9-3-76 Checked casing butt-weld and 11 3/4" wellhead weld with gamma-ray device and welds were satisfactory. Re-landed 7" casing string with 240,000# on slips. Installed 13 5/8" x 10" x 5000 psi seal flange; 10" x 6" 5000 psi tubing head and tested below and above seal flange at 5000 psi for 20 minutes. Installed B.O.P.E. and tested with water and nitrogen as follows:

Blind rams at 4000 psi
Pipe rams at 4000 psi
Hydril at 4000 psi

Tests witnessed by D.O.G.

9-4-76 Pulled Johnston 7" retrievable bridge plug from 30'. Ran tubing with retrieving tool to 8850' and reset Johnston 7" retrievable bridge plug at 8890'. Pulled tubing to 8850' and spotted 6 sacks of sand on bridge plug. Pulled tubing out of hole. Ran McCullough jet perforating gun to 8842' and found sand bridge - could not work bridge loose with gun. Ran in hole with tubing to wash out bridge.

9-5-76 Rig and crew idle.

9-6-76 Rig and crew idle. (Labor Day)

9-7-76 Cleaned out sand to 8860'. Pulled tubing out of hole. Ran McCullough jet perforator in hole and shot four holes at 8854'. Started in hole with Johnston 7" bobcat squeeze tool.

9-8-76 Set Johnston packer at 8665'. Pressured annulus at 1000 psi for 15 minutes - O.K. Took breakdown 8 cu.ft./minute at 3500 psi. Opened by-pass on Johnston tool. Using tubing capacity 282 cu.ft.; casing capacity below tool 39 cu.ft. preceeded mixing cement (100 sacks with .1% retarder 115 cu.ft. slurry) with 10 cu.ft. of water ahead. Mixed 80 cu.ft. of cement when Johnston tool packed off. Opened by-pass again and tool would not stay open. Set packer and attempted to go on with job, but packer leaked. Released tool and backscuttled cement out of hole. Pulled Johnston packer out of hole and made up Baker fullbore cementer on tubing, ran to 8665' and set fullbore - tested annulus to 1000 psi - held O.K. Using same displacements as before, mixed 100 sacks of Class "G" cement preceeded and followed by 10 cu.ft. of fresh water (115 cu.ft. slurry), displaced cement and water with 111 cu.ft. of mud. Closed by-pass on Baker fullbore. Displaced cement with additional 186 cu.ft. of mud and reached 4000 psi squeeze pressure. Total displaced behind cement 307 cu.ft., leaving 80 lineal feet in the casing.

9-9-76 Released Baker 7" fullbore and pulled out of hole. Made up 6" bit on Robison casing scraper and drilled out cement from 8772' to 8860'. Circulated hole and started out with tubing.

9-10-76 Finished pulling out of hole with tubing. Ran McCullough jet perforating gun and shot four 1/2" holes at 8853'. Ran Lynes conventional tester to 8803' with tail to 8821' with 1000' of water cushion. Test witnessed and approved by D.O.G. Ran 20 stands of tubing in hole and shut down.

| Recorder No. 1816 (I.S.) | Recorder No. 6856 (I.S.) | Recorder No. 6855 (Outside) |
|---|---|---|
| I.H. 4250 | I.H. 4286 | I.H. 4276 |
| F.H. 4250 | F.H. 4286 | F.H. 4276 |
| I.F. 500 | I.F. 469 | I.F. 404 |
| F.F. 500 | F.F. 469 | F.F. 404 |

9-11-76 Pulled tubing out of hole. Made up Baker fullbore on tubing and made the following tests:

PACKER

| | | |
|---|---|---|
| 4500' to 8860' | 2500 psi | 20 minutes - O.K. |
| 4500' to surface | 1500 psi | 20 minutes - O.K. |
| 3200' to surface | 2000 psi | 20 minutes - O.K. |
| 2250' to surface | 2500 psi | 20 minutes - O.K. |
| 1750' to surface | 4000 psi | 20 minutes - O.K. |

Pulled Baker fullbore out of hole. Made up Johnston retrieving tool on tubing and ran in - unable to get by 8868'. Pulling out of hole with Johnston retrieving head.

9-12-76 Rig and crew idle.

9-13-76 Pulled out Johnston retrieving tool. Ran in with 6" bit and 7" casing scraper on 2 7/8" tubing. Drilled out cement and sand from 8868' to 8890' - top of Johnston bridge plug. Circulated hole clean. Pulled out of hole. Made up Jonston retrieving tool. Started in hole.

9-14-76 Ran in Johnston retrieving tool to 8890'. Circulated over Johnston bridge plug and latched on to it. Pulled it out of hole. Ran in with 6" bit and 7" casing scraper to 8919' - top of fill. Drilled out cement from 8919' to 9095' opposite perforations in upper Sesnon Zone. Circulated for 2 hours and pulled up above perforations.

9-15-76 Ran in to 9100'. Cleaned out to 9240' - tight spot at 9210'. Circulated hole clean. Pulled out. Rigged up Dresser Atlas and lubricator. Perforated intervals with two 1/2" holes per foot with Golden Jet gun from 9080' - 9040'; 9020' - 8972'; 8955' - 8921' and 8906' - 8894'.

9-16-76 Ran in with 6" bit and 7" casing scraper to 9240'. Circulated hole clean. Pulled out of hole. Made up and ran in with Hampton circulating washer to 8661'. Closed well in at 7:00 P.M.

9-17-76 Ran Hampton washer to 9080'. Broke formation down in two foot intervals and circulated with 3000 psi to 750 psi from 9080' - 9038'; 9008' - 8964'; 8953' - 8915' and 8898' - 8888'. Circulated bottoms up and pulled up. Ran in hole with Baker fullbore squeeze tool to 8661'.

9-18-76 Set Baker fullbore squeeze tool at 9023'. With Halliburton pump and squeeze 521 cu ft. of HCL-HF acid through perforations from 9080' - 9038' under 1350 psi to 1100 psi - pumping 24 cu.ft./min. Re-set squeeze tool at 8959'. Pumped and squeezed 534 cu.ft. of acid through perforated intervals from 8964' - 9008' under 900 psi to 750 psi- pumping 26 cu.ft./min. Re-set squeeze tool at 8860'. Pumped and squeezed 573 cu.ft. of acid through perforated intervals from 8888' - 8953' under 1300 psi to 800 psi - pumping 26 cu.ft./min. Used 16,000 gallons of acid. Lost approximately 75 barrels of polymer fluid. Pulled squeeze tool. Ran in with 6" bit and 7" casing scraper to 9240'. Circulated hole clean.

9-19-76 Rig and crew idle.

9-20-76 Finished pulling out of hole with 6" bit and scraper. Ran 7" Baker Retrieva-D packer on McCullough Electric Line and set packer at 8840'. Made up Baker anchor-type seal assembly: Canco 2 7/8" x 10' blast joint; 2 7/8" x 1.81" seating nipple; 2 7/8" x 20' blast joint; Camco 2 7/8" KP-5 safety valve housing (EH valve closed); and tested it to 5000 psi for one minute. Started in hole, breaking off 2 7/8" collars, cleaning and Baker sealing the tubing pins and installing tested and cleaned collars; installing Camco gas lift mandrels at the proper depth; then tested tubing joints to 5000 psi for one minute with Hydro test.

9-21-76 Continued running 2 7/8" tubing. Changing out tubing collars, drifting and testing to 5000 psi for one minute.

9-22-76 Landed Baker seal assembly in Retrieva-"D" packer. Spaced out and checked latch on seal assembly with 25,000# over weight of tubing landed with 10,000# on packer. Set weight down on tool. Took off B.O.P.E. Installed 6" x 5000 psi Xmas tree and tested to 5000 psi for 20 minutes, using Associated Services Equipment. Changed drilling fluid to lease water in well, using rig pump.

9-23-76 Ran Camco 1.81" blanking plug on Archer-Reed Wireline and landed it at 8830'. Tested Baker packer and seal assembly at 1500 psi for 20 minutes - held O.K.

EB/pc

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

# DIVISION OF OIL AND GAS

## Report on Operations

No. T 276-292

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

Santa Paula, Calif.
Sept. 28, 1976

DEAR SIR:

Operations at well No. "SP20" SS-30, API No. 037-00780, Sec. 28, T. 3N, R. 16W, S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed on 9/10/76. Mr. P.R. Wygle, representative of the supervisor was present from 1600 to 2100. There were also present E. Bradbury, foreman

Present condition of well: additions to casing record since Report No. T276-254: 7" casing cp 8854', perf. 8853' WSO.

The operations were performed for the purpose of demonstrating a water shut off on the 7" casing by means of a formation tester.

DECISION:

THE 7" SHUT-OFF AT 8853' IS APPROVED.

b

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

By [signature] Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

# DIVISION OF OIL AND GAS

## Report on Operations

No. T 276-254

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

Santa Paula, Calif.
Sept. 15, 1976

DEAR SIR:

Operations at well No. "SFZU" SS-30, API No. 037-00780, Sec. 28, T. 3N, R. 16W, S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed on 8/26/76. Mrs. T. M. Callaway, representative of the supervisor was present from 1600 to 2000. There were also present Ed. Bradbury, engineer

Present condition of well: 11 3/4" cem. 2500'; 7" cem. 9248'. C.P. 9095', perf. 8873' WSO, perf. 8884-9240' PB T.D. 9240. T.D. 9248'.

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

By John L. Hendrix Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

# DIVISION OF OIL AND GAS

## REPORT ON PROPOSED OPERATIONS No. P 276-269

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

Santa Paula, Calif.
Aug. 3, 1976

DEAR SIR:

Your proposal to rework gas storage Well No. "SFZU" SS-30 (037-00780), Section 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County, dated 7/28/76, received 7/30/76, 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

Fonecon → PRW 101300 Sep 76
Cem bond log showed poor bond
Perf 4 holes 8854
Sqz w/ 90 sx
Perf 8853 for new WSO DOG will witness

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

By John L. Hardin, Deputy

25476-705 7-74 50M ①D OSP
OG 111

# DIVISION OF OIL AND GAS

JUL 30 1976

SANTA PAULA, CALIFORNIA

## 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 |
| | | |

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 #30, API No. _____,

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

The present condition of the well is as follows:

1. Total depth. 9248'

2. Complete casing record, including plugs and perforations:

11 3/4" cemented 2500'

7" cemented 9248', cement plug 9240'
cp'd 9095', segregation 9033', 8955', WSO 8873'
Perforated at intervals 8884'-9240'

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

4. Present zone pressure 3000 psi New zone pressure -

5. Last produced S.I. 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 9240'. Run Neutron Lifetime and Cement Bond Logs.
3. Perform any necessary remedial work. Install new wellheads.
4. Pressure test 7" casing. Perform any indicated remedial work.
5. Run packer, tubing, safety valve and gas lift valves.
6. Circulate drilling fluid out of well with salt water, pressure test seals and packer. Turn well to gas storage operations.

9854
905x
8870

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 7-29-76
(Name) P.S. Magruder, Jr. (Date)
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

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 ~~request dated~~ letter dated August 26, 1968, relative to change in designation of well(s) in Sec. 28,29, T. 3 N., R. 16 W., S.B. B. & M., Aliso Canyon field, Los Angeles County, District No. 1, has been received;

and in accordance with Section 3203, Public Resources Code, reading in part as follows:

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

the proposed change in designation is hereby authorized as follows:

See attached list.

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

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

By Wm. C. Bailey
*Deputy Supervisor*

## 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.
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
FEB 5 1957
LOS ANGELES, CALIFORNIA

10

## History of Oil or Gas Well

OPERATOR TIDEWATER OIL COMPANY FIELD Aliso Canyon Field

Well No. Standard-Sesnon 1-#30, Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Date December 11, 1956 Signed L. A. Braden

P. O. Box "Y"
Los Nietos, California Oxford 91051 Title L. A. Braden, 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

Before rework, Standard-Sesnon 1-#30 produced an average of 150 B/D net, 20.2 gravity, 20.0% cut, on gas lift, and was in the following mechanical condition:

11-3/4" 42, 47# C 2500'
7" 23, 26, 29# C 9248' L H 8955' C.P. 9083', 9095'
WSO 8873' Seg. 9093'
C.P. 6 H/F 8962'-9010'; 9030'-9070'; 9100'-9125';
9135'-9180'; 9200'-9240'

T.D. 9248'; Pg. 9240'

1956

10/20 California Production Service moved in.

10/21 Rigged up. Killed well with Ken Oil. Installed blowout preventor and pulled tubing. Perforated four bullet holes per foot from 8911'-8945'; 8884'-8896'.

10/22 Ran scraper. Ran packer and flow valves on 2-7/8", 6.5# tubing. Set packer at 8843' with flow valves at approximately 2552', 4740', 6390', 7560', 8340' and 8843'. Connected up Christmas tree. C.P.S. moved out.

10/23 On gas lift at 12:00 Noon. Recovered 127 barrels Ken Oil.

10/24 In 20 hours well produced on gas lift 14 barrels Ken Oil. Compressor down 4 hours.

10/25 In 24 hours well produced on gas lift 94 barrels Ken Oil.

10/26 In 24 hours well produced on gas lift 134 barrels Ken Oil (all recovered) and 92 barrels formation oil.

10/27 In 24 hours well produced on gas lift 309 bbls. gross, 210 bbls. net, 32.0% cut, 17.7 gravity, 150/1050#, 20/64" bean.

10/28 In 24 hours well produced on gas lift 319 bbls. gross, 223 bbls. net, 30.0% cut, 17.7 gravity, 150/1050#, 20/64" bean.

10/29 In 24 hours well produced on gas lift 329 bbls. gross, 230 bbls. net, 30.0% cut, 17.7 gravity, 150/1050#, 20/64" bean.

10/30-31 On gas lift 24 hours - no gauge.

| | Gross | Net | Cut | Gravity | Bean | Tubing Pressure | Casing Pressure | MCF Gas |
|---|---|---|---|---|---|---|---|---|
| 11/1 | 340 | 272 | 20.0% | | 20/64" | 300# | 1000# | 760 GOR |
| 11/2 | 267 | 225 | 16.0% | 21.1 | 20/64" | 400# | 1050# | |
| 11/3 | No gauge | | | | | | | |
| 11/4 | 255 | 201 | 21.0% | 19.3 | 20/64" | 500# | 1050# | |
| 11/5 | 244 | 195 | 20.0% | 19.3 | 20/64" | 500# | 1050# | |

DIVISION OF OIL AND GAS
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LOS ANGELES, CALIFORNIA



OPERATOR: TIDEWATER OIL COMPANY

Well No. Standard-Sesnon 1-#30, Aliso Canyon Field

| 1956 | Gross | Net | Cut | Gravity | Bean | Tubing Pressure | Casing Pressure | MCF Gas |
|---|---|---|---|---|---|---|---|---|
| 11/6 | 244 | 180 | 26.0% | 17.9 | 20/64" | 500# | 1050# | |
| 11/7 | 285 | 228 | 20.0% | 17.9 | 20/64" | 500# | 1050# | |
| 11/8 | 319 | 249 | 22.0% | 17.9 | 24/64" | 250# | 1050# | |
| 11/9 | 309 | 275 | 11.0% | 20.2 | 24/64" | 250# | 1050# | 542 |
| 11/10 | 320 | 269 | 16.0% | 21.5 | 24/64" | 300# | 1050# | 530 |
| 11/11 | On 24 hours - no gauge. | | | | | | | |
| 11/12 | 309 | 265 | 14.0% | 22.0 | 24/64" | 300# | 1050# | 461 |
| 11/13 | 309 | 265 | 14.0% | 22.0 | 24/64" | 300# | 1050# | 396 |
| 11/14 | 300 | 258 | 14.0% | 22.0 | 24/64" | 300# | 1050# | 386 |
| 11/15 | 320 | 275 | 14.0% | 20.6 | 24/64" | 300# | 1050# | 503 |
| 11/16 | 338 | 290 | 14.0% | 20.6 | 24/64" | 300# | 1050# | 426 |
| 11/17 | 338 | 290 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/18 | 298 | 251 | 14.0% | 20.6 | 24/64" | 300# | 1050# | 864 - 48 hr. |
| 11/19 | 298 | 251 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/20 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/21 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | 1150 - 48 hr. |
| 11/22 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/23 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/24 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/25 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/26 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/27 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |
| 11/28 | 309 | 265 | 14.0% | 20.6 | 24/64" | 300# | 1050# | |

## CASING RECORD

11-3/4" 42 & 47# C 2500'
7" 23, 26, 29# C 9248' G.P. 4 ½" H 8873' (WSO), 8955' (Seg)
J.P. 4 ½" H 9083' (CP ), 9093' (Seg)
9095' (CP )

G.P. 4 ½" H/F 8884'-8896'; 8911'-8945'
G.P. 6 ½" H/F 8962'-9010'; 9030'-9070'; 9100'-9125';
9135'-9180'; 9200'-9240'

## TUBING RECORD

2-7/8" 6.5# w/packer L 8843'

10

FORM 100
CALIFORNIA STATE PRINTING OFFICE

SUBMIT LOG IN DUPLICATE
FILL THIS BLANK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAPER ONLY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

# DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
FEB 17 1954
LOS ANGELES, CALIFORNIA

## WELL SUMMARY REPORT

Operator TIDE WATER ASSOCIATED OIL COMPANY Field ALISO CANYON

Well No. "Standard-Seenon 1-#30" Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Location 2994.65' South and 5674.99' West from Station #84

Elevation of ground above sea level 2329.90 feet.
All depth measurements taken from top of Derrick Floor, which is 9.57 feet above ground.

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

Date February 11, 1954 Signed J E Weaver

J. R. Bowyer (Engineer or Geologist) P. O. Susan (Superintendent) Title Agent (President, Secretary or Agent)

Commenced drilling August 1, 1953 Completed drilling September 23, 1953 Drilling tools ~~Cable~~ Rotary

Total depth 9248' Plugged depth 9240'

| | GEOLOGICAL MARKERS | DEPTH |
|---|---|---|
| Junk | | |

Commenced producing October 11, 1953 (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 |
|---|---|---|---|---|---|---|
| 10/12/53 Initial production | 920 | 20.2 | 3.4% | 460 | 200# | 0# |
| Production after 30 days | 278 | 20.2 | 0.1% | 191 | 500# | 300# |

### 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 |
|---|---|---|---|---|---|---|---|---|---|
| 11-3/4" | 2500' | 0' | 42 & 47# | New | Seamless | H-40, J-55 | 16" & 17" | 1775 Dia. | |
| 7" | 9248' | 0' | 23, 26, 29# | New | Seamless | J-55, N-80 | 10-5/8" | 600 | |

### Perforations

| Size of Casing | From | To | Size of Perforations | Number of Rows | Distance Between Centers | Method of Perforations |
|---|---|---|---|---|---|---|
| 7" | 8962 ft. | 9010 ft. | 6 - 1/2" holes/ft. | | | G.P. by McCullough |
| 7" | 9030' ft. | 9070 ft. | 6 - 1/2" holes/ft. | | | " " |
| 7" | 9100 ft. | 9125 ft. | 6 - 1/2" holes/ft. | | | " " |
| 7" | 9135 ft. | 9180 ft. | 6 - 1/2" holes/ft. | | | " " |
| 7" | 9200 ft. | 9240 ft. | 6 - 1/2" holes/ft. | | | " " |

Electrical Log Depths 50' - 9248' (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
FEB 17 1954
LOS ANGELES, CALIFORNIA

10

# History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL COMPANY FIELD ALISO CANYON

Well No. Standard-Gesnon 1-#30, Sec. 28, T. 3 N, R. 16 W, S.B. B. & M.

Signed J E Weaver Bo

Date February 11, 1954 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

LOCATION: 2994.65' South and 5674.99' West of Station #84.

ELEVATION: 2329.90' Mat
2339.47' Derrick Floor

1953

5/28-7/8 Clearing rig site, installing culvert, grading. Orders were received to change location approximately 168' East of coordinates previously given.

7/9-7/20 Grading.

7/21 Dug rat hole.

7/22-7/23 Set conductor pipe at 35' below mat.

7/24 Poured cellar.

7/25-7/26 Idle.

7/27-7/29 Laid drain tile.

7/30-7/31 Moving in and rigging up rotary. (Pike Drilling Contractor)

8/1 Spudded 10-5/8" hole at 7:00 PM and drilled to 84'.

8/2-8/6 Drilled 10-5/8" hole from 84' to 1487'. Repaired slide damage and reassembled rig.

8/7 Repaired slide damage. Resumed drilling operations at 3:45 PM. Drilled 10-5/8" hole from 1487' to 1603'.

8/8-8/10 Drilled 10-5/8" hole from 1603' to 2515'.

8/11 Ran Schlumberger electric log at 2515'. Opened 10-5/8" hole to 17" to 532'.

8/12-8/16 Opened 10-5/8" hole to 17" to 2142'. Left three drill collars and one stand of drill pipe in hole while opening at 2142'. Recovered same.

8/17 Opened 10-5/8" hole to 17" to 2229'. Twisted off, leaving one single, one stand and three drill collars in hole. Pipe stuck. Spotting oil.

8/18 Recovered fish.

8/19-8/21 Opened 10-5/8" hole to 16" from 2229' to 2500'. Ran and cemented 11-3/4" 42 & 47# H-40 and J-55 T & C Youngstown casing at 2500' with 1050 sacks of Diamix mixed with 525 sacks Colton construction cement (2:1 mix), followed by 200 sacks Neat cement, all treated with calcium chloride. Had good cement returns to surface. Plugs did not bump. Final pressure 400#. Time 4:30 PM. Casing detail is as follows: 1226' 47# J-55 on bottom, balance of casing 42# H-40.

8/22 Standing cemented. Installed blowout preventor.

8/23-8/26 Found top of hard cement at 2498'. Cleaned out to 2515' and drilled 10-5/8" hole from 2515' to 3615'. Changed drilling engine.

8/27-9/9 Drilled 10-5/8" hole from 3615' to 7015'. Changed engines.

9/10 Drilled 10-5/8" hole from 7015' to 7085'. Repaired engine 12 hours.

9/11-9/16 Drilled 10-5/8" hole from 7085' to 8326'. Converted to low water loss Carbonox mud.

DIVISION OF OIL AND GAS
RECEIVED
FEB 17 1954
LOS ANGELES, CALIFORNIA

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

WELL NO.: Standard-Sesnon 1-#30



1953

9/17-9/23 Drilled 10-5/8" hole from 8326' to 9248'. Ran Schlumberger electric log at 9248'.

9/24 Laid down drill pipe. Ran and cemented 7" 23, 26 & 29# N-80 and J-55 Youngstown T & C casing at 9248' with 600 sacks Colton Hi-temperature cement. Plugs bumped at 4:30 AM. B.J. Service. Casing detail is as follows: bottom 1042' 29# N-80; next 1885' 26# N-80; next 2122' 23# N-80; next 2203' 23# J-55; and top 1996' 23# N-80.

9/25 Reinstalled blowout preventor. Standing cemented.

9/26 Standing cemented. Made up 2-7/8" drill pipe.

9/27 Cleaned out to 9233'. Ran McCullough Gamma Ray Radiation Log to 9228'. Ran McCullough jet gun and shot four holes at 9095'. Ran Johnston formation tester on 2-7/8" drill pipe and set packer at 9066' with perforated tailpipe to 9081'. Used 1000' water cushion. Opened tester at 12:45 AM (9-28-53). Had strong to medium, steady blow for 30 minutes, at which time fluid surfaced. Gas to surface in 5 minutes. Well flowed cushion for 20 minutes; viscous drilling fluid for 10 minutes; muddy oil for 5 minutes. Closed tester after 1 hour and 5 minute test. Average of three samples tested showed 19.0 gravity; 1.5% mud; 2.5% water.

9/28 Cleaned out to 9233'. Conditioned mud. Ran Baker Model "K" retainer on 2-7/8" drill pipe and set at 9010'. Applied pressure to holes at 9095'. Formation broke down at 2000# and took fluid at rate of 10 cu. ft. per minute at 1600#. Squeezed 100 sacks Colton Hi-temperature cement below retainer. Final pressure 2800#. Time 9:00 PM. B.J. Service. Standing cemented.

9/29 Drilled out cement retainer. Cleaned out to 9240'. Could not locate cement.

9/30 Ran McCullough jet gun and shot four holes at 9083'. Ran Johnston tester on 2-7/8 drill pipe and set packer at 9032' with perforated tailpipe to 9048'. Used 1000' water cushion. Opened tester at 7:30 AM. Had light, steady blow throughout 1 hour test. Gas to surface in 45 minutes. Recovered 6300' net rise heavy black oil. Samples at 4430' from tool tested 16.8 gravity, 1.5% mud, 21.5 water, approximately 190 g/g; sample at 1890' from tester, 17.5 gravity, 0.5% mud, 11.5% water, approximately 250 g/g; sample at tester 16.0 gravity, 0.4% mud, 8.6% water. Conditioned mud.

10/1 Ran Baker Model "K" retainer on 2-7/8" drill pipe and set at 9038'. Applied pressure to holes at 9083'. Formation broke down at 2600# and took fluid at rate of 14 cu. ft. per minute at 1600#. Squeezed 100 sacks Colton Hi-temperature cement below retainer. Final pressure 3400#. Time 5:00 AM. B.J. Service. Standing cemented.

10/2 Drilled up retainer and hard cement from 9038' to 9100' and cleaned out to 9240'. Ran McCullough jet perforating tool and shot four 1/2" holes at 9093'. Ran Johnston formation tester on 2-7/8" drill pipe and set packer at 9032' with tailpipe to 9047'. Used 1000' water cushion. Opened tester at 2:18 PM. Had light, steady blow for 5 minutes, then dead for balance of 1 hour test. Recovered 50' net rise of drilling fluid. Pressure bomb charts confirmed results of test.

10/3 Finished running McCullough Neutron logs. Ran Johnston gun and tester on 2-7/8" drill pipe and shot four jet holes at 8955'. Set packer at 8906' with perforated tailpipe to 8926'. Used 1000' water cushion. Opened tester at 7:10 AM. Had medium to light heading blow for duration of 1 hour test. Gas to surface in 20 minutes. Recovered 4770' net rise of oil which tested as follows:

| | | | |
|---|---|---|---|
| 4500' above tool | 9.4 gravity | 8.0% mud | 32.0% water & emulsion |
| 2520' above tool | 16.9 gravity | 1.5% mud | 8.5% water & emulsion |
| 1260' above tool | 16.6 gravity | 2.0% mud | 3.0% water & emulsion |
| 360' above tool | 18.7 gravity | 0.7% mud | 0.7% water & emulsion |
| At tool | 19.3 gravity | 1.5% mud | 4.0% water & emulsion |

Charts confirmed results of tests.

DIVISION OF OIL AND GAS
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FEB 1 1954
LOS ANGELES, CALIFORNIA

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

WELL NO.: Standard-Sesnon 1-#30



1953

10/4 Ran Johnston combination gun and tester on 2-7/8" drill pipe and shot four jet holes at 8873'. Straddled holes with packers at 8854' and 8892'. Used 1000' water cushion. Opened tester at 4:07 AM. Had light, steady blow for 1 minute, then dead for 25 minutes, at which time packer failed at 8854'. Recovered 2160' net rise of drilling mud due to packer failure. Pressure bomb indicated 400# when tester was opened and remained constant at 400# until packer failed. Water shutoff witnessed and approved by Division of Oil and Gas. Cleaned out to 9240'. Spotted 25 barrels of oil on bottom. Started perforating with McCullough gun perforator.

10/5 Ran McCullough gun perforator and shot six holes per foot at the following intervals: 8962'-9010'; 9030'-9070'; 9100'-9125'; 9135'-9180'; 9200'-9240'. Scraped casing.

10/6 Changed cellar connections. Ran 2-7/8" tubing with 2-1/2" Otis side door choke nipple and Guiberson circulating packer which was set at 9087'.

10/7 Connected up Christmas tree. Displaced drilling fluid with oil. Laying down drill pipe.

10/8 Swabbing fluid.

10/9 Pulled tubing. Replaced 2-1/2" Otis side door choke nipple with 2" Otis side door choke nipple. Reran tubing, testing each stand with drift. Packer failed to set. Started pulling tubing.

10/10 Finished pulling tubing. Replaced Guiberson circulating packer and reran tubing to 9087'. Displaced salt water with oil. Connected up Christmas tree.

10/11 Swabbed. Fluid level down to 2200'. Well started flowing at 4:00 PM. In 14 hours well flowed 660 barrels gross fluid, 624 barrels net oil, of which 400 barrels is circulating oil and 224 barrels is formation oil; 5.4% cut; 19.9 gravity; 250# tubing pressure; 0# casing pressure; 64/64" bean; 311 MCF gas.

10/12 In 24 hours well flowed:

| | Gross | Net | Cut | Gravity | Bean | Tubing Pressure | Casing Pressure | MCF Gas |
|---|---|---|---|---|---|---|---|---|
| | 952 | 920 | 3.4% | 20.2 | 64/64 | 200# | 0# | 460 |
| 10/13 | 705 | 695 | 1.5% | 20.2 | 64-24/64 | 250# | 350# | 388 |
| | Changed to 24/64" bean at 6:00 PM. | | | | | | | |
| 10/14 | 330 | 328 | 0.7% | 20.1 | 16/64 | 500# | 550# | 202 |
| 10/15 | 344 | 340 | 1.4% | 20.6 | 24/64 | 500# | 225# | 197 |
| 10/16 | 320 | 311 | 2.8% | 20.4 | 16/64 | 500# | 200# | 188 |
| 10/17 | 329 | 327 | 0.6% | 20.2 | 16/64 | 500# | 250# | 198 |
| 10/18 | 329 | 307 | 6.8% | 20.1 | 16/64 | 500# | 250# | 188 |
| 10/19 | 314 | 312 | 0.6% | 20.3 | 16/64 | 500# | 250# | 185 |
| 10/20 | 320 | 319 | 0.3% | 20.2 | 16/64 | 500# | 350# | 185 |
| 10/21 | 320 | 318 | 0.7% | 20.2 | 16/64 | 500# | 300# | 158 |
| 10/22 | 320 | 320 | 0.1% | 20.2 | 16/64 | 500# | 300# | 173 |
| 10/23 | 312 | 312 | 0.1% | 20.2 | 16/64 | 500# | 300# | 178 |
| 10/24 | 240 | 240 | 0.1% | 20.2 | 16/64 | 500# | 300# | 179 |
| 10/25 | 326 | 326 | 0.1% | 20.2 | 16/ 64 | 500# | 300# | 182 |
| 10/26 | 319 | 319 | 0.1% | 20.2 | 16/64 | 500# | 300# | 186 |
| 10/27 | 329 | 329 | 0.1% | 20.2 | 16/64 | 500# | 300# | 188 |
| 10/28 | 325 | 325 | 0.1% | 20.2 | 16/64 | 500# | 300# | 188 |
| 10/29 | 351 | 351 | 0.1% | 20.2 | 16/64 | 500# | 300# | 203 |
| 10/30 | 293 | 293 | 0.1% | 20.2 | 16/64 | 500# | 300# | 198 |
| 10/31 | 349 | 349 | 0.1% | 20.2 | 16/64 | 500# | 300# | 206 |
| 11/1 | 344 | 344 | 0.1% | 20.2 | 16/64 | 500# | 300# | 204 |
| 11/2 | 320 | 320 | 0.1% | 20.2 | 16/64 | 500# | 300# | 200 |

DIVISION OF OIL AND GAS
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LOS ANGELES, CALIFORNIA

OPERATOR: TIDE WATER ASSOCIATED OIL COMPANY

WELL NO.: Standard-Sesnon 1-#30



| 1953 | Gross | Net | Cut | Gravity | Bean | Tubing Pressure | Casing Pressure | MCF Gas |
|---|---|---|---|---|---|---|---|---|
| 11/3 | 295 | 295 | 0.1% | 20.2 | 16/64 | 500# | 300# | 100 |
| 11/4 | 305 | 305 | 0.1% | 20.2 | 16/64 | 500# | 300# | 112 |
| 11/5 | 278 | 278 | 0.1% | 20.2 | 16/64 | 500# | 300# | 213 |
| 11/6 | 330 | 330 | 0.1% | 20.2 | 16/64 | 500# | 300# | 206 |
| 11/7 | 329 | 329 | 0.1% | 20.2 | 16/64 | 500# | 300# | 210 |
| 11/8 | 319 | 319 | 0.1% | 20.2 | 16/64 | 500# | 300# | 217 |
| 11/9 | 320 | 320 | 0.1% | 20.2 | 16/64 | 500# | 300# | 206 |
| 11/10 | 41 | 41 | 0.1% | 20.2 | 16/64 | 500# | 300# | 16 |
| | Shut in for 20 hours to build up pressures. | | | | | | | |
| 11/11 | 278 | 278 | 0.1% | 20.2 | 16/64 | 500# | 300# | 191 |

## CASING RECORD

11-3/4" 42 & 47# C 2500'
7" 23, 26, 29# C 9248' 4 H 8955' C.P. 9083', 9095'
WSO 8873'; Zonal Segregation 9093'
G.P. 6 H/Ft. 8962'-9010'; 9030'-9070'
9100'-9125'; 9135'-9180'; 9200'-9240'

## TUBING RECORD

2-7/8" tubing w/2" Otis Choke and Guiberson Pkr. L 9085'

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. T153-1204

Los Angeles 15, Calif. October 8, 1953

Mr F C Foster
~~Mr.~~ Box Y
Los Nietos, Calif.
Agent for TIDE WATER ASSOCIATED OIL CO

DEAR SIR:

Your well No. "Standard-Seanon 1" 30, 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 October 3, 1953. Mr. V. F. Gaede, Inspector, designated by the supervisor, was present as prescribed in Secs. 3222 and 3223, Ch. 93, Stat. 1939; there were also present R. M. Burns, Engineer; F. C. Harsh, Driller.

Shut-off data: 7 in 23, 26, 29 lb. casing was re-cemented through perforations at 9083 ft. on October 1, 1953 in 10-5/8 in. hole with 100 sacks of cement xxxxx of which xxx sacks was left in casing.

Casing record of well: 11-3/4" cem. 2500'; 7" cem. 9248', c.p. 9095', 9083', four 1/2" holes 9093', four 1/2" holes 8955', W.S.O.

Present depth 9248 ft. Bridged with cement from 9248 ft. to 9240 ft. Cleaned out to 9240 ft. for test. A pressure of 1000 lb. was applied to the inside of casing for 15 min. without loss after cleaning out to 9240 ft. A Johnston gun and tester was run into the hole on 2-7/8 in. drill pipe ~~tubing~~, with 1000 ft. of water-~~mud~~ cushion, and packer set at 8906 ft. with tailpiece to 8926 ft. Tester valve, with 3/8 in. bean, was opened at 7:10 a.m. and remained open for 1 hr. and xxx min. During this interval there was a light, medium, steady blow.

THE INSPECTOR ARRIVED AT THE WELL AT 12:01 P.M. AND MR. BURNS REPORTED:

1. A 10-5/8" rotary hole was drilled from 2500' to 9248'.
2. On September 25, 1953, 7", 23, 26, and 29 lb. casing was cemented at 9248' with 600 sacks of cem.
3. Cement was drilled out of the 7" casing from 9186' to 9240' (equivalent to 9 sacks), and the hole was cleaned out to 9240'.
4. The 7" casing was shot-perforated with four 1/2" holes at 9095' for company test of shut-off.
5. The above perforations tested wet.
6. On September 28, 1953, the 7" casing was recemented through perforations at 9095' with 100 sacks of cement, all of which was squeezed away under a final pressure of 2800 lb.
7. The 7" casing was shot-perforated with four 1/2" holes at 9083' for company test of shut-off.
8. The above perforations tested wet.
9. On October 1, 1953, the 7" casing was recemented through perforations at 9083' with 100 sacks of cement, all of which was squeezed away under a final pressure of 3400 lb.
10. The 7" casing was shot-perforated with four 1/2" holes at 9093' for company test of shut-off.
11. The above perforations tested dry.
12. The 7" casing was shot-perforated with four 1/2" holes at 8955'.
13. A Johnston gun and tester was run as noted above.

THE INSPECTOR NOTED:

1. When the drill pipe was removed, a net rise of 4770' of oil was found in the drill pipe above the tester, equivalent to 28.1 bbl.
2. The recording pressure bomb chart showed that the tester valve was open 1 hr.

The test was completed at 1:00 p.m.

THE 7" SHUT-OFF AT 8955' IS APPROVED.

VFG:OH

cc T. L. Wark
Jos. Jensen
J. R. Bovyer (2)

R. D. BUSH, State Oil and Gas Supervisor

By R. N. Walling, Deputy

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 153-1205

Los Angeles 15 Calif. October 8 1953

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

DEAR SIR:

Your well No. "Standard-Sesnon 1" 30, 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 October 4, 1953. Mr. V. F. Gaede, Inspector, designated by the supervisor, was present as prescribed in Secs. 3222 and 3223, Ch. 93, Stat. 1939; there were also present R. M. Burns, Engineer; F. C. Marsh, Driller.

Shut-off data: 7 in. 23, 26, 29 lb. casing was re-cemented through perforations at 9083 ft. on October 1, 1953 in 10-5/8 in. hole with 100 sacks of cement xxxx of which xxx sacks was left in casing.

Casing record of well: 11-3/4" cem. 2500'; 7" cem. 9248', c.p. 9095', 9083', four 1/2" holes 9093', four 1/2" holes 8955', W.S.O., four 1/2" holes 8873', W.S.O.

Present depth 9248 ft. Bridged with cement from 9248 ft. to 9240 ft. Cleaned out to 9240 ft. for test. A pressure of 1000 lb. was applied to the inside of casing for 15 min. without loss after cleaning out to 9240 ft. A Johnston gun and tester was run into the hole on 2-7/8 in. drill pipe-~~tubing~~, with 1000 ft. of water-~~mud~~ cushion, and packer set at 8854' & 8892 ft. with tailpiece to xxxx ft. Tester valve, with 3/8 in. bean, was opened at 4:07 a.m. and remained open for xxx hr. and 30 min. During this interval there was a puff blow for 1 min., then no blow thereafter.

THE INSPECTOR ARRIVED AT THE WELL AT 7:30 A.M. AND MR. BURNS REPORTED:

1. A Johnston gun and tester was run as noted above.
2. The 7" casing was shot-perforated with four 1/2" holes at 8873'.
3. The Johnston tester packer failed after 30 min.

THE INSPECTOR NOTED:

1. The amount and nature of any fluid entry could not be determined.
2. The pressure recorder charts showed no pressure "build-up" indicating that no fluid entered the drill pipe during the test.
3. No free water was found above the tester valve.

The test was completed at 8:15 a.m.

THE 7" SHUT-OFF AT 8873' IS APPROVED.

VFG:OH

cc T L Wark
Jos Jensen
J R Bovyer (2)

R. D. BUSH, State Oil and Gas Supervisor

By R. N. Walling, Deputy

Los Angeles

R D BUSH

September 24 1953

I have received your letter of September 22 concerning our "P" reports issued in answer to notices to drill Tide Water Associated Oil Company wells in Sec. 28, T. 3 N., R. 16 W., S. B. B. & M., Aliso Canyon field.

The correct designations of the wells referred to are "Standard-Sesnon 1" 29 and "Standard-Sesnon 1" 30. A correction letter was mailed to the company, copies to your office, on September 14, 1953, for "Standard-Sesnon 1" 30. If you do not have your copy of this letter, please let me know and I will make a copy to complete your file. A correction letter for "Standard-Sesnon 1" 29 was mailed to the company yesterday, copies to your office.

R. H. Helling

Deputy Supervisor

my

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

# DIVISION OF OIL AND GAS

## Special Report on Operations Witnessed

No. T 153-1112

Los Angeles 15 Calif. September 18 1953

Mr F C Foster
Mr. Box Y
Los Nietos Calif.
Agent for TIDE WATER ASSOCIATED OIL CO

DEAR SIR:

Operations at your well No. "Standard-Sesnon 1" 30 Sec. 28, T. 3 N, R. 16 W, S B B. & M., Aliso Canyon Field, in Los Angeles County, were witnessed by G. J. Borkovich, Inspector, representative of the supervisor, on September 8, 1953. There was also present G. Meyer, Driller; L. Rooks, Derrickman.

Casing Record 11-3/4" cem. 2500'. T.D. 6840'.

Junk None

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

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

1. A 17" rotary hole was drilled from the surface to 2229'; a 16" rotary hole, 2229'-2500'.
2. On August 21, 1953, 11-3/4", 42 and 47 lb. casing was cemented at 2500' with 525 sacks o cement and 1050 sacks of Diamix, followed by 200 sacks of cement.
3. Cement returned to the surface.
4. A 10-5/8" rotary hole was drilled from 2500' to 6840'.

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

1. A Shaffer double cellar control gate for closing in the well with the drill pipe out of the hole, and for closing around the 4-1/2" drill pipe.
2. A Hydril blowout preventer 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 stopcock into the 11-3/4" casing below the above equipment.
5. A high pressure stopcock on the kelly.

The inspection was completed at 11:45 a.m.

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

GJB:OH

cc J R Bovyer (2)

T L Wark
c/o Tide Water Associated Oil Co
79 New Montgomery Street
SAN FRANCISCO 5

Jos . Jensen
c/o Tide Water Associated Oil Co
888 Pacific Electric Bldg
LOS ANGELES 14

R. D. BUSH
State Oil and Gas Supervisor

By R. W. Walling Deputy

82547 7-53 17,650 (2)

FORM 165

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

# REPORT OF CORRECTION OR CANCELLATION

Los Angeles 15 California

September 14 19 53

Mr F C Foster
Box Y
Los Nietos

Agent for Tide Water Associated Oil Co

Dear Sir

In accordance with xxxx (letter, form, etc.) dated xxxx

the following change pertaining to your well No. "Standard-Sesnon 1" 30,

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

District No. 1, is being made in our records:

☐ The corrected location is

☐ The corrected elevation is

☒ Report No. 153-963, dated July 28, 1953, has been corrected as follows: to show the well designation, "Standard-Sesnon 1" 30, instead of "Standard-Sesnon" 1-30, as shown on the report.

☐ Your notice to (Drill, abandon, etc.) dated

and our report No. P, issued in answer thereto, are hereby cancelled inasmuch as the work will not be done.

☐ Other:

| Corrections Made as Follows: | By Whom |
|---|---|
| Form 114 | |
| " 115 | |
| " 143 | |
| Cards | |
| Production Reports | |
| Well Records (Folders) | OK |
| Well Records (Records) | OK |
| Field Maps | No chg necessary |
| Map Book | |

MY:OH

cc Messrs R D Bush (2)
T L Mark
Jos. Jensen
J R Boyer (2)

Yours truly

R. D. BUSH
*State Oil and Gas Supervisor*

By R. N. Walling
*Deputy Supervisor*

70612 11-52 4150 SPO

FORM 111 (1-49)

D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

# DIVISION OF OIL AND GAS

## REPORT ON PROPOSED OPERATIONS

No. P153-963

Los Angeles 15 Calif. July 28 1953

Mr. F C Foster
Box Y
Los Nietos Calif.

121

Agent for TIDE WATER ASSOCIATED OIL CO

Dear Sir:

"Standard-Sesnon 1" 30
~~"Standard-Sesnon"~~

* Your proposal to drill Well No. ~~1-30~~,

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

dated July 17 1953, received July 20 1953, has been examined in conjunction with records filed in this office.
*Correction letter 9-14-53 OH

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

THE NOTICE STATES
"The well is 2994.65 feet S. and 5674.99 feet W. from Station #84
Elevation of ground above sea level Approx. 2328 feet.
All depth measurements taken from top of Derrick Floor, which is approx. 7 feet above ground.
We estimate that the first productive oil or gas sand should be encountered at a depth of about 8900 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 |
|---|---|---|---|---|
| 11-3/4" | 42 & 47# | T & C, H-40, J-55 | 2500' * | Cemented |
| 7" | 23, 26 & 29# | T & C, N-80, J-55 | 9300' | Cemented |

We propose to gun perforate the Sesnon Zone selectively for production.

*Casing will be set between 800-2500', depending upon lost circulation.
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. Blowout prevention equipment, sufficient to provide a complete close-in of the well under pressure at any time, shall be installed and approved by this division.
2. THIS DIVISION SHALL BE NOTIFIED AS FOLLOWS:
   (a) To inspect the installed blowout prevention equipment before drilling below 2500'.
   (b) To witness a test of the effectiveness of the 7" shut-off through perforations above the Sesnon zone.

ERMA:OH

cc J R Bovyer (2)
Jos Jensen
T L Wark

G
M

R. D. BUSH
State Oil and Gas Supervisor

By Edith Musser Deputy

DIVISION OF OIL AND GAS
RECEIVED
JUL 20 1953
LOS ANGELES, CALIFORNIA

FORM 105 (2-49)
CALIFORNIA STATE PRINTING OFFICE

037-00780

14

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

# DIVISION OF OIL AND GAS

## Notice of Intention to Drill New Well

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

Los Nietos Calif. July 17 1953

DIVISION OF OIL AND GAS

Los Angeles Calif.

| MAP | MAP BOOK | CARDS | BOND | FORMS 114 | FORMS 121 |
|---|---|---|---|---|---|
| 18a JFM | JFM | EB | Blanket | EB | EB |

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 #1-30", Sec. 28, T. 3 N, JFM R. 16 W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

Legal description of lease Standard-Sesnon #1

The well is 2994.65 feet ~~N or~~ S., and 5674.99 feet ~~E or~~ W. from Station #84
(Give location in distance from section corners or other corners of legal subdivision)

Elevation of ground above sea level Approx. 2328' feet.

All depth measurements taken from top of Derrick Floor, which is Approx. 7 feet above ground.

We estimate that the first productive oil or gas sand should be encountered at a depth of about 8900 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 |
|---|---|---|---|---|
| 11-3/4" | 42 & 47# | T & C, H-40, J-55 | 2500' * | Cemented |
| 7" | 23, 26 & 29# | T & C, N-80, J-55 | 9300' | Cemented |
| | | We propose to gun perforate the Sesnon Zone selectively for production. | | |

*Casing will be set between 800-2500', depending upon lost circulation.

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, Calif.

TIDE WATER ASSOCIATED OIL COMPANY
(Name of Operator)

Telephone number OXford 91051

By F. C. Foster
Agent

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