STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Ventura, California

October 30, 1991

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

Your request, dated July 24, 1991, proposing to change the designation of well(s) in Sec. 27, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon field, Los Angeles County, District No. 2, has been received.

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

FROM	TO
"SFZU" P-12 (037-00701)	"Porter" 12 (037-00701)
"SFZU" P -14 (037-00703)	"Porter" 14 (037-00703)
"SFZU" P-30 (037-00717)	"Porter" 30 (037-00717)
"SFZU" P-31 (037-00718)	"Porter" 31 (037-00718)
"SFZU" P-32 (037-00719)	"Porter" 32 (037-00719)
"SFZU" P-36 (037-00723)	"Porter" 36 (037-00723)
"SFZU" P-37 (037-00724)	"Porter" 37 (037-00724)
"SFZU" P-45 (037-00732)	"Porter" 45 (037-00732)
"SFZU" FF-32 (037-00686)	"Fernando Fee" 32 (037-00686)
"SFZU" P-50A (037-22737)	"Porter 50A (037-22737)
"SFZU" P-68A (037-22742)	"Porter" 68A (037-22742)
"SFZU" P-37-A (037-22046)	"Porter" 37-A (037-22046)
"SFZU" FF-32-A (037-21872)	"Fernando Fee" 32-A (037-21872)

M. G. MEFFERD, State Oil and Gas Supervisor

By *Patrick J. Kinnear*
Deputy Supervisor
PATRICK J. KINNEAR

OGD157 (10/85/DWRR/1M)

OPERATOR Southern Calif Gas Co. Ltd
LSE & NO SF 21, P-12
MAP NO. 250

INTENTION	DRILL 1	SUPP TO 2	ATR 3 SG	CONVERT TO GAS 4 STORAGE	Alter casing 5
NOTICE DATED	4-21-39	2-26-40	1-15-70	1-19-73	NO NOTICE
P-REPORT NUMBER	1-33732	1-34850	170-65	273-65	276-18
CHECKED BY/DATE					
MAP LETTER DATED	4-24-39	N/C	N/C		
SYMBOL	②				

NOTICE	4-24-39 REC'D	NEED	2-27-40 REC'D	NEED	1-21-70 REC'D	NEED	2-2-73 REC'D	NEED	REC'D	NEED
HISTORY			8-13-40		7-17-70		10-1-73		1-14-76	
SUMMARY			8-13-40							
IES/ELECTRIC LOG										
DIRECTIONAL SURV.										
CORE/SWS DESCRIP.			8-13-40							
DIPMETER RESULTS										
OTHER										
RECORDS COMPLETE									✓	

ENGINEERING CHECK

T-REPORTS	
OPERATOR"S NAME	
WELL DESIGNATION	
LOC. & ELEV.	
SIGNATURE	
SURFACE INSPECTION	
LINAL LETTER OK	

CLERICAL CHECK

POSTED TO 121		170 MAILED	FINAL LETTER MAILED
			RELEASE
			BOND

REMARKS:

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

Operator Southern California Gas Company Field Aliso Canyon County Los Angeles
Well ~~Porter~~ 85320 #12, Sec. 27, T 3N., R 16W S.B. B. & M.
A.P.I. No. 037-00701 Name R. M. Morrow (Person submitting report) Title Agent (President, Secretary or Agent)
Date August 10, 19 87.

Signature M W Burr

P.O. Box 3249 Terminal Annex, L.A., CA 90051 (213)689-3925
(Address) (Telephone Number)

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

Date	
	GWO No: 91325: was issued to install gas lift mandrel with pump out plug
	NOTE: DOG does not require notification of workover for this well.
1987	
7-11	Moved rig from Porter #43 to Porter #12 location.
7-13	Moved rig over well. Installed back pressure valve in doughnut. Removed xmas tree and installed 10" Class III BOPE.
7-14	Pressure tested blind rams, pipe rams, choke manifold to 3000 psi; and Hydril bag to 2300 psi for 20 minutes. Removed back pressure valve & unlanded doughnut. Seals would not come out of packer at 6843'. Using wireline, cut 2-3/8" tubing at 6831', and left one 10' x 2-3/8" stub, Baker 2-3/8" x 1.76" No-Go nipple, & Baker 2-3/8" x 5' anchor seal assembly above packer. Wireline chemical cutter would not pass back through sliding sleeve at 6809'. Sheared out wireline rope socket, and left wireline cutter with 1-7/16" fishing neck, and bottom in tubing.

DIVISION OF OIL AND GAS
RECEIVED
AUG 11 1987
VENTURA, CALIFORNIA

OG103 (3/86/DWRR/5M)

7-15 Finished pulling out of well. Recovered wireline tools. Ran 2-3/8" overshot on 2-3/8" OD bumper sub, 2-3/8" hydraulic jars and six 3-1/8" OD drill collars on 2-3/8" tubing, and 2-7/8" tubing to surface. Ran overshot to 6831'. Attached to stub and worked seal assembly out of packer at 6843'. Pulled out of well with 10' x 2-3/8" cut-off, Baker 2-3/8" x 1.76" No-Go nipple and Baker 2-3/8" seal assembly. Ran 4-3/4" casing scraper to packer at 6843'.

7-16 Finished pulling out of well with casing scraper. Made up Baker test seals on tubing. Landed in packer at 6843', and pressure tested seals to 1000 psi for 20 minutes. Pulled out with seals. Made up Baker production tube on Baker 2-3/8" anchor seal assembly with two seals on 2-3/8" tubing, 2-3/8" x 1.76" Model "R" No-Go nipple, one joint of 2-3/8" tubing, 2-3/8" x 1.87" Baker sliding sleeve-closed, one joint of 2-3/8" tubing, 2-3/8" BST special clearance gas lift mandrel with 2500 psi pump-out plug, and ran in well. Hydrotested to 5000 psi. Attached to packer and landed with 2000# on latch when doughnut was in place.

7-17 Pressure tested annulus between tubing and casing at 1000 psi. Installed back pressure valve in doughnut. Removed BOPE and installed 8" x 3000 psi xmas tree. Pressure tested xmas tree to 5000 psi. Removed back pressure valve from doughnut. Shifted sleeve open. Displaced polymer completion fluid from well with 200 bbls. of 63#/cu.ft. KCl water. Blind flanged outlets and released rig at 2:00 P.M.

FORM 103

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

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

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Southern California Gas Company FIELD ALISO CANYON

Well No. PORTER #12, Sec. 27, T. 3N, R. 16W, S.B. B. & M.

Date December 27, 1975 Signed P. S. Magruder Jr.
P. S. MAGRUDER, Jr.

P. O. Box 3249, Terminal Annex
Los Angeles, California 90051 Title Agent
(Address) (Telephone Number) (President, Secretary or Agent)

(213) 689-3561

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

Date	
12- 4-75	Bled off tubing and casing pressure through flow line 2700 psi to 600 psi. Using HOWCO, killed well with 200 barrels of 85#/cu.ft. brine-polymer mud. Circulated well free of gas cut mud. Well dead at 8:00 P.M.
12- 5-75	Moved in and rigged up California Production Service "M-20" rig, pump and shaker tank. Circulated bottoms up. Removed Christmas tree, installed B.O.P.E. Shut job down at 10:30 P.M.
12- 6-75	Tested B.O.P.E. with clear water as follows: Blind Rams @ 2800 psi) Pipe Rams @ 3000 psi)each test for 20 minutes - O.K. Hydril @ 2500 psi) Using nitrogen, tested as follows: Hydril @ 2200 psi) Pipe Rams @ 2500 psi)each test for 20 minutes - O.K. Blind Rams @ 2500 psi) Division of Oil and Gas declined to witness. Pulled out of packer at 6843'. Circulated bottoms up - 84.5#/cu.ft. returns. Pulled tubing out of hole. Laid down gas lift valves, 1/4" control line and safety equipment. Shut job down at 11:30 P.M.
12- 7-75	Rig and crew idle.
12- 8-75	Filled hole - 30 barrels. Installed packer testing plug in No-Go nipple and Hydrotested to 4500 psi. Removed test plug and ran production tubing. All tubing and doughnut Hydrotested to 4000 psi. Tubing landed with 15,000# weight on packer. Pulled 15,000# over weight of tubing to test latch. Removed B.O.P.E. and reinstalled Christmas tree. Tested between upper and lower seals on doughnut at 4500 psi. Tested Christmas tree at 4500 psi.

12- 8-75 (cont'd) Both tests for 20 minutes each - O.K. Displaced 85#/cu.ft. brine-polymer fluid with 198 barrels of lease salt water. Installed test plug in No-Go nipple and attempted to test packer and seals. Shut job down at 10:30 P.M.

12- 9-75 Using Archer-Reed, set test plug in No-Go and attempted to test packer and seals. Removed plug from well. Closed sliding sleeve and attempted to test packer and seals. Opened sliding sleeve and displaced lease salt water in well with 200 barrels of brine-polymer drilling fluid (85#/cu.ft.). Removed Christmas tree, reinstalled B.O.P.E. and shut job down.
NOTE: Pressure dropped when testing packer, 1900 psi - 1400 psi in 90 seconds.

12-10-75 Using clear water, tested as follows:

Blind Rams @ 2600 psi)
Pipe Rams @ 2600 psi) each test for 20 minutes - O.K.
Hydril @ 2000 psi)

Using nitrogen, tested as follows:

Blind Rams @ 2300 psi)
Pipe Rams @ 2500 psi) each test for 20 minutes - O.K.
Hydril @ 2100 psi)

Released tubing from packer and circulated bottoms up. Pulled tubing out of hole. Laid down safety valve and nipples. Made up Baker 4 3/4" Model "B" Lok-Set bridge plug on 2 3/8" tubing. Started in hole. Shut job down at 11:30 P.M.

12-11-75 Finished running in hole with bridge plug. Set plug at 6838'. Pulled out of hole with setting tool. Made up Baker 6 5/8" Full Bore cementer on 2 7/8" tubing. Set Full Bore at 4566'. Using Halliburton pump truck, pumped down tubing. Pumped fluid away at 5.5 cu.ft. per minute rate under 1000 psi. Bled pressure off tubing. Open valve on 9" casing and gauge reading 1000 psi. Bled to ZERO quickly. Applied 2000 psi to 6 5/8" casing - held for 20 minutes - O.K. Pulled out of hole with 6 5/8" Full Bore. Made up 4 3/4" Full Bore. Ran in hole on 2 3/8" - 2 7/8" tubing. Set Full Bore at 6818'. Tested casing and bridge plug under 2000 psi for 5 minutes - O.K. Reset Full Bore at 6781', obtained breakdown, 11 cu.ft. per minute rate at 1800 psi. Applied 2000 psi down annulus for 20 minute test - O.K. Released Full Bore and sjut job down.

12-12-75 Using Halliburton, spotted 3 sacks of sand on top of bridge plug at 6838'. Tagged top of sand at 6800'. Cleaned out to 6806'. Set Full Bore at 6786'. Obtained breakdown at 1600 psi, 10 cu.ft. per minute rate. Mixed 100 cu.ft. 118#/cu.ft. Class "G" cement slurry. Squeezed through holes at 6800'. Pumped 20 cu.ft. fresh water ahead, 5 cu.ft. fresh water behind. Started mixing at 1:04 P.M., cement in place at 1:32 P.M. Final pressure 1700 psi. Bled back 1 cu.ft. Calculate 94 cu.ft. cement outside 4 3/4" casing, 6 cu.ft. cement inside casing. Total displacement 207 cu.ft. Pulled out of hole. Made up 3 7/8" bit, 4 3/4" casing scraper and four 3 1/8" drill collars. Ran in hole and tagged top of cement at 6710'. Shut job down at 10:00 P.M.

12-13-75 Drilled out cement from 6710' to 6806'. Circulated hole clean. Pulled out of hole. Using McCullough, shot four holes at 6797' to 6798' (jet perforated) for WSO test. Shut job down at 8:30 P.M.

12-14-75 Rig and crew idle.

12-15-75 Ran in hole with Johnston tester for WSO test. Set packer at 6749', tail at 6765'. Opened tool at 11:00 A.M. very light blow - dead in 2" of water after 10 minutes. Closed tool at 12:04 P.M. and pulled out of hole - 19' fluid rise, mud. Chart Data, as follows:

No.1		No.2	
Depth 6753'		Depth 6757'	
Initial Hydrostatic	3854 psi	Initial Hydrostatic	3864 psi
Initial Flow	15.4 psi	Initial Flow	15.2 psi
Final Flow	15.4 psi	Final Flow	15.2 psi
Final Hydrostatic	3814 psi	Final Hydrostatic	3845 psi

WSO witnessed and approved by Larry Brite of the Division of Oil and Gas. Ran in hole with Baker 4 3/4" Full Bore cementer. Set at 6586'. Using Halliburton pump truck, obtained breakdown at 1800 psi at 9 cu.ft. per minute rate. Mixed 100 cu.ft. 118#/cu.ft. slurry, Class "G" cement. Squeezed through shot holes from 6797' to 6798'. Starting mixing at 7:08 P.M., cement in place at 7:46 P.M. Stopped pumping at 2100 psi. Closed in for 30 minutes. Final pressure 2400 psi. Bled back 2 cu.ft. Calculate 88 cu.ft. outside casing, 12 cu.ft. cement inside casing. Total displacement 214 cu.ft. Released Full Bore, backscuttled and started out of hole. Shut job down at 10:00 P.M.

12-16-75 Finished pulling out of hole. Made up 3 7/8" bit and 4 3/4" casing scraper on tubing. Tagged top of cement at 6635'. Cleaned out to 6806'. Circulated hole clean, pulled out of hole. Using McCullough, jet perforated four holes for WSO test (6796'-6795'). Attempted to apply 2000 psi to casing. Fluid going away at 1700-1800 psi. Made up 4 3/4" Full Bore. Ran in hole to 6586'. Shut job down at 9:30 P.M.

12-17-75 Set Full Bore at 6586'. Obtained breakdown under 2800 psi at 20 cu.ft. per minute rate. Mixed 172 cu.ft. 118#/cu.ft. Class "G" cement slurry (150 sacks). Squeezed through shot holes from 6795' to 6796'. Started mixing at 9:04 A.M. cement in place at 9:35 A.M. Pressure built up to 3000 psi, dropped to 1500 psi. Cleared holes with 30 cu.ft. mud. Waited four hours, obtained breakdown under 3250 psi at 12 cu.ft. per minute rate. Mixed 115 cu.ft. 118#/cu.ft. Class "G" cement slurry (100 sacks). Started mixing at 1:30 P.M. Cement in place at 2:00 P.M. 3200 psi while pumping. Slowed rate to 2 cu.ft. per minute rate after cleaning tool. Pressure dropped to 1500 psi. Built up to 2500 psi. Cleared holes with 30 cu.ft. mud. Waited four hours, obtained breakdown under 3500 psi at 14 cu.ft. per minute rate. Mixed 230 cu.ft. 118#/cu.ft. Class "G" cement slurry (200 sacks). Started mixing at 6:11 P.M. cement in place at 7:05 P.M.

12-17-75 (cont'd) Cleared holes with 30 cu.ft. mud. Pressure built up to 3000 psi at 12 cu.ft. per minute rate. Cleared tool, reduced rate. Pressure dropped to 1000 psi. Waited 3 minutes, pumping slowly under 1800-2100 psi. Total displacement, including mud, 244 cu.ft. Shut job down at 8:00 P.M.

12-18-75 Obtained breakdown under 2700 psi at 8 cu.ft. per minute rate. Reset Full Bore at 6461'. Mixed 115 cu.ft. 118#/cu.ft. Class "G" cement slurry (100 sacks). Squeezed through holes at 6795'-6796'. Started mixing at 8:23 A.M. cement in place at 9:04 A.M. Final pressure at 3600 psi. Bled back 2 cu.ft. Calculated 94 cu.ft. cement outside pipe, 21 cu.ft. cement inside pipe. Pulled out of hole. Made up 3 3/4" bit and 4 3/4" casing scraper. Ran in hole and tagged top of cement at 6540'. Shut job down at 4:30 P.M.

12-19-75 Drilled out cement from 6540' to 6809'. Cleaned out sand to 6825'. Circulated hole clean. Attempted to test casing under 2000 psi. Pressure dropped from 2000 psi to 1750 psi in 5 minutes. Unable to isolate leak. Started out of hole. Shut job down at 9:30 P.M.

12-20-75 Finished pulling out of hole with bit and scraper. Made up 6 5/8" Baker Full Bore cementer. Ran in hole on 2 7/8" tubing. Set at 4571'. Applied 2000 psi down tubing, testing 6 5/8" x 4 3/4" swage and 4 3/4" casing. Bled off very rapidly. Applied 2000 psi down annulus, testing 6 5/8" casing. Held firm for 22 minutes. Pulled out of hole, made up 4 3/4" Full Bore. Ran in hole and set at 6807'. Tested bridge plug and casing below 6800' under 2000 psi for 10 minutes - O.K. Reset Full Bore at 6775', obtained breakdown at 3000 psi - 6 cu.ft. per minute rate. Spotted 2 sacks of sand on top of bridge plug. Waited two hours. Tagged top of sand at 6802'. Reset Full Bore at 6460'. Obtained breakdown at 3200 psi, 7.5 cu.ft./minute rate. Mixed 100 sacks of Class "G" cement with 14% salt by weight of water, 118 cu.ft.119#/cu.ft. slurry. Squeezed through holes at 6795' to 6796'. Started mixing at 7:48 P.M. Unable to clear squeeze tool. Reached maximum pressure (4000 psi). Backscuttled at 8:20 P.M. Backscuttled 79 cu.ft. cement. Estimate 4-5 cu.ft. cement outside casing, 31 cu.ft. inside casing. Pulled 44 doubles. Shut job down at 10:00 P.M.

12-21-75 Rig and crew idle.

12-22-75 Finished pulling out of hole with Full Bore. Made upt bit and scraper. Ran in hole, tagged top of cement at 6462'. Drilled out of cement at 6754'. Cleaned out to 6825'. Started out of hole. Shut job down at 10:00 P.M.

12-23-75 Using Halliburton, pressure tested casing from surface to 6825' under 2000 psi for 35 minutes - O.K. Pulled bit and scraper out of hole. Using Dresser Atlas, ran Cement Bond Log. Recorded from 6830' to 5000' (wireline measurement). Released Dresser Atlas. Made up 6 5/8" casing scraper (positive), ran in hole to 4574'. Pulled 25 doubles. Shut job down at 8:30 P.M.

12-24-75 Finished pulling out of hole with scraper. Made up 6 5/8", 26#, Type "A" Gearhart-Owen casing patch. Ran in hole on 2 3/8"-2 7/8" tubing to 3650' (bottom of patch) 3618' to top. Using Go-International Wireline Service, set patch. Pulled tubing out of hole, laid down GO setting tools. Ran 30 doubles in hole. Shut job down at 3:30 P.M.

12-25-75 Rig and crew idle.

12-26-75 Ran in hole with bridge plug, retrieving tool. Using rig pump, tested casing under 1500 psi for 10 minutes - O.K. Released bridge plug at 6840'. Back-scuttled bottoms up and circulated hole free of gas. Pulled out of hole with bridge plug. Ran production tubing (see detail attached). Landed tubing with 12,000# weight on Baker "F-1" packer at 6843'. Pulled 16,000# over weight of tubing to test latch in packer....O.K. All tubing and doughnut Hydrotested to 4000 psi. Shut job down at 11:00 P.M.

12-27-75 Removed B.O.P.E. and reinstalled Christmas tree. Tested between upper and lower seals on doughnut at 4500 psi for 23 minutes - O.K. Tested Christmas tree at 4500 psi for 27 minutes - O.K. Displaced workover fluid with 191 barrels of lease salt water. Using Halliburton pump truck, tested packer, seal assembly and casing under 1500 psi for 20 minutes - O.K. Opened sliding sleeve at 6809'. Closed well in.
Released rig at 5:00 P.M.

FORM 109

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 276-23

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

Santa Paula, Calif.
Jan. 26, 1976

DEAR SIR:

Operations at well No. "SEZU" P-12, API No. 037-00701, Sec. 27, T. 3N, R. 16W, S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed on 12/15/75. Mr. L. Bright, representative of the supervisor was present from 1500 to 1600. There were also present T. Ashe, foreman

Present condition of well: additions to casing since proposal 1/13/76: Perf. 6798' WSO, c.p. 6800'.

The operations were performed for the purpose of testing 4 3/4" shut-off by means of a formation tester.

DECISION:

THE 4 3/4" SHUT-OFF AT 6798' IS APPROVED.

b

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

By [signature] Deputy Chief

FORM 109 (REV. 1-73)

19190-705 11-73 20M ② OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 276-18

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

Santa Paula, Calif.
Jan. 21, 1976

DEAR SIR:

(037-00701)

Your proposal to alter casing Well No. "SFZU" P-12, Section 27, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County, dated 1/13/76, received 1/20/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL, COVERING WORK ALREADY COMPLETED IN ACCORDANCE WITH PRIOR AGREEMENT, IS APPROVED.

Blanket Bond
MD:b

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

By M. G. Mefford, Deputy

25476-705 7-74 50M ①D OSP
OG 111

FORM 107

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

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

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

Los Angeles Calif. January 13 19 76

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of deepening, redrilling, plugging or altering casing at Well No. SFZU P12
(Cross out unnecessary words)

_____, 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. 8202'; Plug 7551'

2. Complete casing record, including plugs: 16", 75#, C512';11-3/4", 61#, F & C 2310
9", 45#, C 4721; WSO out the shoe @ 4721
4-3/4", 16#, & 6-5/8" 26 & 28#, C 6910; WSO, out shoe at 6910'
6800' 4 holes WSO - cemented
6797' 4 holes WSO - cemented
6795' 4 holes - cemented
Hole at 3436 - cemented
4.93" I.D. x 5.62 O.D. Gearhart - Owens Casing patch 3618 to 3650'
684' - 3-1/2"; 13.3# L7548'; T.L.H. 6864'.
Slots: 6908' - 7548' (2" x 60M x 6R x 6" C)
Jet Perforations, 2-1/2" HPF 6924-6930, 6952-6962, 6978-6984, 6990-7090, 7100-7102, 7120-7206

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

The proposed work is as follows: Work completed 12-27-75 - included above.

1. Kill well and install Class III B.O.P.E.
2. Pull tubing and remove defective safety valve.
3. Pressure test casing and WSO holes.
4. Repair casing and re-confirm WSO as required.
5. Recomplete well with new safety valve.

DIVISION OF OIL AND GAS
RECEIVED
JAN 20 1976
SANTA PAULA, CALIFORNIA

MAP	MAP BOOK	CARDS	BOND	114	121
			BB	✓	✓

P.O. Box 54790, Terminal Annex
Los Angeles, Ca. 90054
(Address)

(213) 689-3561
(Telephone No.)

Southern California Gas Co.
(Name of Operator)

By R.S. Magruder Jr.

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

61590-708 12-65 15M ② OSP

FORM 103

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS △OSP
RECEIVED
OCT 1 1973
SANTA PAULA, CALIFORNIA

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Company FIELD Aliso Canyon

Well No. SFZU P12, Sec. 27, T. 3N, R. 16W, SB B. & M.

Date September 27, 19 73 Signed J. B. Maguder Jr.

P. O. Box 54790, Terminal Annex
Los Angeles, Calif. 90054 (213) 689-3561 Title Agent
(Address) (Telephone Number) (President, Secretary or Agent)

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

Date
1973

CASING RECORD:

16", 75#, c512
11-3/4", 61# F & C 2310
9", 45#, c4721
WSO shoe 4721*
4-3/4", 16# & 6-5/8", 26 & 28# c6910
WSO shoe 6910*; cmtd hole 3634-3636
Perfs: 6908-7548 (2" x 60M x 6R x 6"c)
TLH 6864
* Witnessed & approved by D.O.G.

NEW PERFS:

4 holes - 6799-6800*
2 HPF, Jet perfed:
7206-7120
7102-7100
7090-6990
6984-6978
6962-6952
6930-6924

3/1,3/2 Moved in equipment. Killed tubing. Pulled Otis "X" choke. Unlanded packer; circulated out packer fluid. Pulled tubing string. Replaced 2400' of 2-7/8 with 2-3/8 tubing. Picked up 787' of 1-1/4" tubing. Ran tubing string to bottom 7547' (rig tally). Cleaned Out.

3/3 Pulled tubing string. Ran 6-5/8 scraper, found top of 4-3/4 at 4613'. Ran 4-3/4 scraper, found top of 3-1/2" liner at 6881'.

3/4 Off.

3/5 Ran Schlumberger cement bond log & TDT log. TDT tool malfunctioned. Tested 4-3/4" casing with bridge plug and squeeze tool. Qualified 4-3/4" casing for 3500 psi from 4613' to 6881'. Pulled tools.

3/6 Ran 6-5/8 tools. Pressure tested and qualified 6-5/8" casing for 3500 psi from 4613' to surface. Reran cement bond and TDT logs.

3/7 Ran 1-1/4" tubing to bottom, circulated 1 hour. Shot four 1/2" WSO holes 6799'-6800'.

SFZU P12 History (cont'd)

1973

3/8 Ran 4-3/4 test tools: Set bridge plug 6842', tester 6745', tail 6762'. Opened tool 7:00 A.M., closed tool 8:00 A.M., medium blow throughout one hour. Pulled test tools; had 31' fluid rise, no water, all mud; 17 psi initial & final. WSO approved by Division of Oil & Gas.

Ran Schlumberger perforator: Shot 2 hyper-jet HPF: 7206'-7120', 7102'-7100', 7090'-6990', 6984'-6978', 6962'-6952', 6930'-6924'.

3/9 Ran Johnston test tool; tester 6844', tail 6887'. Opened tool 10:00 A.M. to 1:35 P.M. Had 112 psi. Shot fluid level at 3441'. Pulled tool Hydrostatic pressures 3074' and 3036'psi; initial flow 945 to 1637; final 1637 to 1789 psi. Ran 4-3/4 Baker F-1 packer to 6836' (wireline).

3/10 Set bridge plug 120'. Replaced tubing hanger. Rigged to run tubing.

3/11 Off.

3/12 Ran tubing string: Page safety valve, Otis circulating sleeve, 5 gas lift valves.

3/13 Removed B.O.P.E. Install wellhead and tested. Displaced mud. Moved out equipment.

FORM 109

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T273-154

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

Santa Paula Calif.
March 16, 1973

DEAR SIR:

Operations at well No. (037-00701) "SFZU" P-12, Sec. 27, T. 3N, R. 16W, S.B B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed on March 8, 1973. Mr. A. L. Lorshbough, engineer, representative of the supervisor was present from 1030 to 1130. There were also present J. Hampton, foreman

Present condition of well: 16" cem. 512'; 11 3/4" cem. 2310'; 9" cem. 4721', WSO' 6 5/8" & 4 3/4" cem. 6910', WSO, (reducer at 4574'), c.p. 3634', perf. 6799', WSO; 3 1/2" ld. 6864-7548', perf. 6908-7548'. T.D. (Present hole) 8202'. Plugged with cem. 8202-7551', with bridge plug at 6842'. Junk: T.D. (1st hole) 7600'.

The operations were performed for the purpose of testing the 4 3/4" shut-off by means of a formation tester.

Mr. _____ reported:

THE 4 3/4" SHUT-OFF AT 6799' IS APPROVED.

a
cc: Operator

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

By _____ Deputy

59471-705 1-72 20M ② OSP

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 273-65

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

Santa Paula Calif.
February 8, 1973

DEAR SIR:

Your proposal to convert to gas storage Well No. "SFZU" P-12 (037-00701), Section 27, T. 3N., R. 16W., S.B.B. & M., Aliso Canyon Field, Los Angeles County, dated 1/19/73, received 2/2/73, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT NONE OF THE PROPOSED PERFORATIONS BE ABOVE 6910'

Jack Hampton / DEQ 3/6/73
May need to perf. higher.
If so told will have to take a WSO
Will phone when know program.

Blanket Bond
ALL:a
cc: Operator

Will make test @ 6800 for WSO - not perf above 6910', but well is wet + want to see if water is coming from above. Will not file a notice just for this WSO test.

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

By [signature], Deputy

57625-705 11-71 35M ③ OSP

FORM 107

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

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

DIVISION OF OIL AND GAS
RECEIVED
FEB 2 1973
SANTA BARBARA, CALIFORNIA

Los Angeles, Calif. January 19, 1973

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of deepening, redrilling, plugging or altering casing at Well No. SFZU P12
(Cross out unnecessary words)

, Sec. 27, 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. TD 8202'; Pg. 7551'

2. Complete casing record, including plugs:

16", 75#, C 512'
11-3/4", 61#, F & C 2310'
9", 45#, C 4721'; WSO out the shoe at 4721'*
4-3/4", 16#, & 6-5/8" 26 & 28#, C 6910';
WSO out shoe at 6910'*
6841'-3-1/2", 13.3# L 7548'
Pf: 6908'-7548' (2" x 60M x 6R x 6" C)
TLH 6864'

* Witnessed and approved by D.O.G.

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

The proposed work is as follows:

Jet perforate four 1/2" holes per foot and/or reperforate two 1/2" holes per foot in the Sesnon zone as required to convert well to gas storage well.

MAP | FORMS 121

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

(213) 689-3561
(Telephone No.)

Pacific Lighting Service Company
(Name of Operator)

By R. S. Magruder Jr.

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

81988-705 10-66 15M OSP

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS RECEIVED 226

History of Oil or Gas W

JUL 17 1970

OPERATOR GETTY OIL COMPANY FIELD ALISO CANYON FIELD

VENTURA, CALIFORNIA

Well No. "SFZU" P-12, Sec. 27, T. 3N, R. 16W, S.B. B. & M.

Date July 16, 1970 Signed Carl G Nelson

P.O. Box 811, Ventura, Calif. (Address) 643-2154 (Telephone Number) Title Agent (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.

1/21/70	California Production Service moved in and rigged up to locate and repair a suspected hole in the casing.
1/22	Circulated down 6 5/8" casing and out 9" casing to sump. Recovered 20 barrels of oil. Squeezed 30 barrels salt water down tubing. Pulled choke from 6488' and circulated bottoms up. Removed tree and installed B.O.P.E. Pulled tubing and packer. Ran 6 5/8" fullbore and tested for leaks from 1041' to surface; 2305' to surface; 3377' to surface and 4543' to surface. Found leak between 3376' and 4553'.
1/23	With fullbore set at 4553' squeezed 30 barrels salt water into formation. Circulated hole free of gas. Located hole in 6 5/8" casing at 3634'. Pulled out with fullbore. Made up 4 3/4" retrievable bridge plug. Set plug at 6014'. Pulled tubing. Ran 6 5/8" fullbore to 4543'. Tested 4 3/4" bridge plug to 1500 psi, held O.K. Spotted 2 sax sand on top of bridge plug. Rechecked hole in casing - hole between 3634' and 3636'. Set fullbore at 3503' and pumped through hole in casing at 3 bbls/min. rate, 1000 psi. Mixed 40 sax Class G cement preceded with 5 cu.ft. water. Displaced with 5 cu.ft. water and 76 cu.ft. salt water. Stopped going and pressure went to 1500 psi. Could not move cement at 1500 psi. Backscuttled cement at 11:40 P.M. Pulled 15 doubles and shut job down for night.
1/24-26	Finished pulling fullbore. Ran 6 5/8" scraper and 5 5/8" bit. Tagged cement at 3504' with stringers to 3584'. Had hard cement from 3584' to 3600'. Had stringers from 3600' to 3634'. Ran down to swedge at 4622'. Closed rams and tested 6 5/8" casing to 1750 psi, held O.K. Pressure tested 9" casing to 1000 psi, held O.K. Pulled bit and scraper. Ran retrieving tool, tagged sand at 5985' and cleaned out to 6014'. Latched on to bridge plug. Backscuttled hole free of gas. Circulated corrosion inhibitor in salt water. Pulled tubing. Lost bridge plug coming out of hole. Reran tubing and latched on to bridge plug at 4800'. Pulled and recovered same. Hydrotested tubing in the hole. Set packer at 6564'. Removed B.O.P. and installed tree. Swabbed fluid to 3000'.
1/27	Swabbed fluid to 3500'.
1/28	Swabbed well from 4000'. Sand and mud cut becoming lower - mostly salt water with small showing of gas.
1/29	Tubing pressure 800#. Fluid level 2500'. Swabbed fluid level to 4500'.
2/6	Swabbed fluid from 2000' to 4500'. Well would not flow.
2/12	California Production Service moving in to swab well.
2/13	Moved in, could not swab well due to welding in vicinity of the well.
2/25	California Production Service moved in and rigged up. Found fluid level at 1700'. Swabbed to 4500'. Found fluid at 3500' between runs.
2/27	Found fluid level at 2200'. Swabbed fluid to 4000'. Last two runs had gas follow-up.

2/28-3/2/70	Ran swab, hit fluid at 1500'. Swabbed to 3500'. Ran swab, hit fluid at 1500' and swabbed to 4500'. Fluid level staying at 2000'. Prep. to swab - well had 400# tubing pressure. Flowed well to cellar with 400 psi through 14/64" surface choke. Put well in flowline. Well flowed all night at 400 psi through 13/64" choke.
3/3	Rigged down and moved out. Well flowing with 500 psi tubing pressure through 13/64" surface choke.
3/6	Flowed 12 BFPD; 33%; 8 BOPD.
3/17	Flowed 16 BFPD; 25%; 12 BOPD.
3/24	Flowed 8 BFPD; 8 BOPD.

FINAL REPORT

Casing Record:

16" 75# c 512'
11 3/4" 61# F&C 2310'
9" 45# c 4721'
WSO shoe 4721'*
4 3/4" 16# & 6 5/8" 26 & 28# c 6910'
WSO shoe 6910'
Cmtd. hole 3634-3636'
684'-3 1/2" 13.3# L 7548'
Pf: 6908-7548'
(2" x 60 M x 6 R x 6" C)
T.L.H. 6864'

*Witnessed and approved by D.O.G.

Tubing Record:

6487'	- 2 7/8", 8 RT, J-55 EU Tbg. (206 Jts)
1'	- 2 7/8" Otis Type X port collar at 6488'
61'	- 2 7/8", 8 RT, EU Tbg. (2 Jts)
1'	- 2 7/8" x 2 3/8" 8 RT Xover
6'	- 2 3/8" 8 RT N-80 pup jt.
7'	- 2 3/8" x 4 3/4" 16# KV-30 packer
1'	- 2 3/8" belled collar
6564'	- Overall

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 170-65

Mr. C. G. Nelson, Agent
GETTY OIL CO., OPERATOR
P. O. Box 811
Ventura, California 93002

Inglewood, Calif.
January 22, 1970

DEAR SIR: (037-00701)

Your proposal to alter casing Well No. "SFZU" P-12,
Section 27, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 1/15/70, received 1/21/70, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED.

MM:nw

cc C. G. Nelson

Blanket Bond

F. E. KASLINE, State Oil and Gas Supervisor

BY _____, Deputy

: ① △ OSP

FORM 107

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

RECEIVED
JAN 21 1970
DIV. OF OIL AND GAS

DIVISION OF OIL AND GAS

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

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

Ventura, Calif. January 15, 1970

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening~~ ~~redrilling~~ plugging or altering casing at Well No. " SFZU P-12 " (037-00701)
(Cross out unnecessary words)

, 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. T.D. 8202'; Pg. 7551'

2. Complete casing record, including plugs:

16" 75# c 512'
11 3/4" 61# F&C 2310'
9" 45# c 4721'; WSO out shoe at 4721'*
4 3/4" 16# & 6 5/8" 26 & 28# c 6910';
WSO out shoe at 6910'*
684'-3 1/2" 13.3# L 7548'
Pf: 6908-7548' (2" x 60M x 6R x 6" C)
T.L.H. 6864'
*Witnessed and approved by D.O.G.

3. Last produced. ~~Shut in June 1961: Gas Cap Well~~ (Date) (Oil, B/D) (Water, B/D) (Gas Mcf/D)

The proposed work is as follows:

Locate and repair suspected hole in the casing.

Alter Casing

MAP	MAP BOOK	CARDS	BOND	FORM 9 114	FORM 9 121
			B	ARG	ARG

P.O. Box 811, Ventura, Calif.
(Address)

643-2154
(Telephone No.)

GETTY OIL COMPANY, Operator
(Name of Operator)

By C. G. Nelson
C.G. Nelson, Agent

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

61590-705 12-65 15M © OSP

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 26, 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. 27,28,34, 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: (formerly owned by Getty Oil Co.)

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

P-12

Proposed Changes of Well Designation

Old Designation:	New Designation:
Sec. 27:	
"Fernando Fee" 32	"SFZU" FF-32 (037-00686)
"Porter" 12	" P-12 (037-00701)
" 30	" P-30 (037-00717)
" 31	" P-31 (037-00718)
" 32	" P-32 (037-00719)
" 36	" P-36 (037-00723)
" 37	" P-37 (037-00724)
" 45	" P-45 (037-00732)
Sec. 28:	
"Porter" 4	"SFZU" P-4 (037-00699)
" 25	" P-25 (037-00712)
" 26	" P-26 (037-00713)
" 34	" P-34 (037-00721)
" 35	" P-35 (037-00722)
" 38	" P-38 (037-00725)
" 39	" P-39 (037-00726)
" 40	" P-40 (037-00727)
" 41	" P-41 (037-00728)
" 42	" P-42 (037-00729)
" 43	" P-43 (037-00730)
" 44	" P-44 (037-00731)
" 46	" P-46 (037-00733)
" 47	" P-47 (037-00734)
"Porter-Sesnon" 42	" PS-42 (037-00753)
Sec. 34:	
"Fernando Fee" 31	"SFZU" FF-31 (037-00685)
" 33	" FF-33 (037-00687)
" 34	" FF-34 (037-00688)
" 35	" FF-35 (037-00689)
"Mission-Adrian Fee" 3	" MA-3 (037-00693)
" 4	" MA-4 (037-00694)
" 5	" MA-5 (037-00695)

FORM 156

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

REPORT OF PROPERTY AND WELL TRANSFER

Field or County: Los Angeles — District: 1

Former Owner: Getty Oil Company — Date: Sept. 26, 1968

Description of Property: Sec. 27,28,34, T. 3 N., R. 16 W., S. B. B. & M.

Sec. 27:

List of Wells

*"Fernando Fee" 32 (037-00686)
"Porter" 12 (037-00701)
" 30 (037-00717)
" 31 (037-00718)
" 32 (037-00719)
"Porter" 36 (037-00723)
" 37 (037-00724)
" 45 (037-00732)

Sec. 28:

"Porter" 4 (037-00699)
" 25 (037-00712)
" 26 (037-00713)
" 34 (037-00721)
" 35 (037-00722)
" 38 (037-00725)
" 39 (037-00726)
"Porter" 40 (037-00727)
" 41 (037-00728)
" 42 (037-00729)
" 43 (037-00730)
" 44 (037-00731)
" 46 (037-00733)
" 47 (037-00734)
"Porter-Sesnon" 42 (037-00753)

Sec. 34:

"Fernando Fee" 31 (037-00685)
" 33 (037-00687)
" 34 (037-00688)
" 35 (037-00689)
"Mission-Adrian Fee" 3 (037-00693)
" 4 (037-00694)
" 5 (037-00695)

Date of Transfer: August 1, 1968
New Owner: GETTY OIL COMPANY, OPERATOR
Address: 3450 Wilshire Boulevard, Room 720
Los Angeles, California 90005
Telephone No. 381-7151

Type of Organization: Corporation
Reported by: C. G. Nelson for Getty Oil Co. & Getty Oil Co., Operator (letter of 8-7-68)*
Confirmed by:
New Operator New Status: PA , Old Operator New Status: PA
Request Designation of Agent: No

Remarks:

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

Wm. C. Bailey
Deputy Supervisor

	INITIALS	DATE
Form 121		
New Well Cards		
Well Records		
Electric Logs		
Production Reports		
Map and Book		
Form 148		
Notice to be cancelled		
Bond status		

LEGEND
PA—Producing Active
NPA—Non Potential Active
PI—Potential Inactive
NPI—Non Potential Inactive
Ab—Abandoned or No More Wells

71869-705 5-66 3M ② OSP

FORM 100. 78025 10-39 20M
CALIFORNIA STATE PRINTING OFFICE

SUBMIT LOG IN DUPLICATE

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

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL

DIVISION OF OIL & GAS
RECEIVED
AUG 13 1940
LOS ANGELES, CALIFORNIA

P-12

Operator WIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, T. 3-N, R. 16-W S. B. B. & M.

Location 609' South & 523' W. from Station #81 Elevation 1971

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 July 15, 1940

Signed Ray A. Cook

G. C. Pierce (Engineer or Geologist) R. S. Cook (Superintendent) Title Ray A. Cook (President, Secretary or Agent)

Commenced drilling 8/23/39 Completed drilling 3/28/40 Drilling tools ~~Cable~~ ~~Rotary~~ Rotary

Total depth 8202 Plugged depth 7551

Junk

GEOLOGICAL MARKERS DEPTH

(Reference to file of data)

Map	Model	Cross Section	Cards	Zones 11#	Zones 13#
					✓

Commenced producing 4/3/40 (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						
Production after 30 days	40 (rate)	53.4	77.0	13,522 (rate	1500#	1700#
	289	53.1	5.1	18,318	1150#	2100#

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
16"	512	0	75#	New	Elec.Weld	High Yield	20½"	500	
11-3/4"	2310	0	61#	New	Seamless	J-55	14-3/4"	300	
9" 1-3/4"	4721	0	45#	New	Seamless	J-55	14-3/4"	750	
5-5/8" &	6910	0	16#,26#&28#	New&S.H.	Seamless	J-55 & D	7-7/8"	196	
3½"	7548	6864	13.30#	New	Stainless S (Drill Pipe)		7-7/8"	x	

PERFORATIONS

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
	ft.	ft.				
3½"	6908 ft.	7548 ft.	60 mesh x 2"	6	6"	Kobe
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

Electrical Log Depths 512' - 8202' (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 & GAS
RECEIVED
AUG 13 1940
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR Elde Water Associated Oil Company FIELD Aliso Canyon

Well No. Portuo #18, Sec. 29, T. 2N, R. 17W, S.B. B. & M.

Signed Roy A. Ewell

Date July 15, 1940 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: 608.78' South and 522.73' West from Station #84

ELEVATION: 1971.26'

A - PREPARING TO DRILL

1939

/10-5/4 Graded road and rig site.

/5-8/2 Idle

/3-8/8 Dug cellar and built foundations.

/9-8/14 Built rig.

/15-8/22 Rigged up rotary.

B - DRILLING

	Depth	
8/23	0'	Spudded 14-3/4" hole at 12:30 A.M.
8/28	512'	Reamed 14-3/4" hole to 20¾" from 0' to 200'.
8/29		Reamed 14-3/4" hole to 20¾" from 200' to 512'. Cemented 16", 75# A.O. Smith slip joint Marcoil welded casing at 512' with 500 sacks Blue Diamond Construction Cement. Had good cement returns to surface. Pressure jumped from 200# to 400# when plugs bumped. Time 9:15 P.M. - Oil Well Cementing Company.
8/30-31		Landed casing. Changed collar connections. Located top of cement at 502'. Cleaned out to 512'.
9/1		Resumed drilling making 14-3/4" hole.
9/2	605'	Twisted off while drilling at 605' leaving 1 stand 6" drill pipe, drill collar and Zublin Differential bit in hole. Recovered fish with over-shot. Resumed drilling.
9/9	1001'	Twisted off while drilling at 1001' leaving 6 stands 6" drill pipe, drill collar and Globe bit in hole. Recovered fish with over-shot. Resumed drilling.

FORM 103. 28073 1-36 5M
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

FIELD Wide Water Associated Oil Company COMPANY Aliso Canyon

Sec. 27, T. 3-W, R. 16-W, S. B. B. & M., Well No. Porter #12

Signed

Date July 15, 1940 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	Depth	
1939		
9/11	1094'	Twisted off while drilling at 1094' leaving Chicago Pneumatic bit and sub in hole. Recovered fish. Resumed drilling.
9/12	1103'	Twisted off while drilling at 1103' leaving 1⅓ stands 6" drill pipe, drill collar and Chicago Pneumatic bit in hole. Recovered fish with overshot. Resumed drilling.
9/14	1297'	Stuck drill pipe at 1210' while coming out of hole. Worked same loose. Resumed drilling.
0/22	4300'	Ran Schlumberger electric log at 4300'. Resumed drilling.
0/23	4576'	Ran Schlumberger electric log at 4576'. Resumed drilling.
0/24	4705'	Ran Schlumberger electric log at 4705'.
0/25	4721'	Froze and cemented 11-3/4", 61#, Grade J-55 Youngstown Modified Speedtite casing at 2310' with 300 sacks Santa Cruz Oil Well Cement - - last 100 sacks treated. Bumped plugs with 250#. Time 10:15 P.M. - Oil Well Cementing Company.
0/26-28		Landed casing. Laid down 6" drill pipe. Made up 4" drill pipe. Located top of plugs at 2258'. Cleaned out to 4721'.
10/29		Cemented 9", 45#, Grade J-55 Youngstown Speedtite casing at 4721' with 750 sacks Santa Cruz Oil Well Cement - - last 100 sacks treated. Pressure jumped from 650# to 900# when plugs bumped. Time 11:20 A.M. - Oil Well Cementing Company.
0/30-11/1		Landed casing. Located top of plugs at 4662'. Tested casing with 1000# for 15 minutes - O.K. Cleaned out to 4721' and drilled 7-5/8" hole to 4726'.
11/2		Ran Johnston tester on 4" drill pipe and set packer at 4715'; 10' tail piece. Used 697' water cushion. Opened 1/16" bean at 6:31 A.M. Mild steady blow of air. Opened 1/8" bean at 6:37 A.M. Mild steady blow of air. Opened 3/16" bean at 6:42 A.M. Mild steady blow of air. Opened 2 - 1/4" beans at 7:04 A.M. Mild steady blow of air until 7:20 A.M.; then mild to fair blow of gas for balance of test. Closed valve at 8:14 A.M., after being open 1 hour and 43 minutes. Pulled drill pipe and recovered 4191' (58.2 barrels) fluid, or 3494' (48.5 barrels) new fluid. New fluid oil, which blew out of drill pipe as same was pulled, except bottom 261' (3.6 barrels) muddy water. Samples of fluid blown from drill pipe as follows:

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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 Allen Canyon

Well No. Canton #32, Sec. 27, T. 3N, R. 16W, S.B. B. & M.

Signed

Date July 15, 1940 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	Depth	
1939		
1/2 (Cont'd.)		4191' above tester cut 89.0% water and 9.0% mud; gravity 14.1; salinity 53 grains per gallon 1755' above tester cut 19.0% water and 5.0% mud; gravity 20.1; salinity 86 grains per gallon 1246' above tester cut 15.3% water and 1.8% mud; gravity 20.6; salinity 116 grains per gallon 885' above tester cut 25.0% water and 5.0% mud; not enough fluid to take gravity; salinity 125 grains per gallon. Salinity of water 174' above tester 130 grains per gallon; 87' above tester 137 grains per gallon; at tester 144 grains per gallon. Chart in pressure bomb showed valve open throughout test. W.S.O. approved by Division of Oil and Gas. Resumed drilling making 7-7/8" hole.
1/7	5080'	Began coring at 5080'.
1/14	5172'	Twisted off while drilling at 5172' leaving 10¼ stands 4" drill pipe, drill collar and Reed core barrel in hole. Unable to pull fish with overshot.
1/15		Spotted 35 barrels of oil and recovered fish. Resumed coring.
1/15	6721'	Had strong showing of gas after making trip at 6721'.
1/17	6800'	Had good showing of oil and gas on ditch from 6730' to 6800'.
1/25	7129'	Had good showing of oil and gas on ditch from 6938' to 7129'
1/26	7137'	Ran Schlumberger electric log at 7137'. Discontinued coring.
1940		
2/2	7178'	Lost cone off Reed rock bit. Milled same up.
2/13	7218'	Resumed coring.
2/19	7600'	Tried to ream shoulder from 7265' to 7290' with Globe bit. Did not get out of the old hole. Cleaned out to 7600'.
2/20		Ran Eastman directional survey to 7595'.
2/21	7600' Pg. 7225'	Pumped 150 sacks Golden Gate High Temperature cement through 3" tubing hung at 7588'. Time 5:53 A.M. - Perkins Cementing, Inc. Pulled tubing to 7115' and circulated. Pulled tubing. Ran in with bit and located top of plug at 7225'. Had thin sand bridges from 5150' to 5600'.

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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. Porter #12, Sec. 27, T. 3-N, R. 16-W, S. B. B. & M.

Signed

Date July 15, 1940 Title Agent (President, Secretary or Agent)

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Date	Depth	
1940		
1/22	7600' Pg. 7242'	Ran Eastman removable whipstock. Stopped at 6930'. Pulled same. Went in with Reed reamer and Globe bit. Cleaned out to 7242'. -- top of cement.
1/23		Ran Eastman removable whipstock. Stopped at 6930'. Pulled same.
1/24-25		Straightened hole from 7191' to 7240' with Reed bit. Began re-drilling 7-7/8" hole at 7240'.
2/7	7600' Rd. 7600'	Re-drilled 7-7/8" hole to 7600'. Laid down 4" drill pipe. Made up 3" full hole drill pipe.
2/8	7600'	Resumed coring at 7600'.
2/27	8202'	Ran Schlumberger electric log at 8202'. Ran Schlumberger dip survey 7210' to 7225'.
2/28		Pumped 150 sacks Golden Gate High Temperature cement through 3" tubing hanging at 8200'. Time 5:19 A.M. Pulled up to 7635', and circulated. Pulled up inside casing. At 3:45 P.M. located top of cement at 7675'. Pumped 50 sacks Golden Gate High Temperature cement through 3" tubing hanging at 7665'. Time 4:59 P.M. Pulled up to 7466' and circulated. Cementing by Perkins Cementing, Inc.
2/29	8202' Pg. 7551'	Located top of cement at 7541'. Cleaned out to hard cement at 7551'. Had showing of gas while conditioning mud to run casing.
3/1		Cemented 6-5/8" and 4-3/4" casing at 8010', with 196 sacks Golden Gate High Temperature cement, using 6.6' Securaloy tail pipe below shoe. Final pressure 750#. Time 11:02 P.M. - Perkins Cementing, Inc. Detail of casing as follows:

Bottom 2336.4' is 4½", 16# Youngstown Grade "J-55" flush joint
Next 1.3' is 4½" x 6-5/8" swage nipple with left hand thread to 4½"
Next 4683.5' is 6-5/8", 28# Youngstown Grade "J-55" flush joint
Next 3005.8' is 6-5/8", 26# Second Hand Grade "D" flush joint
Remainder is 6-5/8", 28# Youngstown Grade "J-55" Speedlito.

Had strong showing of gas while circulating preparatory to cementing after

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DIVISION OF OIL AND GAS

History of Oil or Gas Well

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OPERATOR Ido Water Associated Oil Company FIELD Aliso Canyon

Well No. Porter #12, Sec. 27, T. 3-N, R. 16W, S.B., B. & M.

Signed [signature]

Date July 15, 1940 Title Agent (President, Secretary or Agent)

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Date	Depth	
9/0		
2-4		Landed casing, laid down 3" drill pipe and 3" tubing.
5 & 6		Made up 2½" tubing and 2-7/8" full hole drill pipe.
7-9		Located top of cement at 6800'. Made casing test - O.K. with 1500# for 15 minutes. Cleaned out to 6915'. Used pumps on Pacific Cementing Company cement wagon to circulate. Maximum circulating pressure 2100#. Landed 2½" tubing at 6055'. Made up Xmas tree.
10		Tested Xmas tree with 1000#. Circulated out mud with water. Ran swab four times and well began flowing to sump at 6:20 A.M. Gas and muddy water with very slight showing of oil. Fluid estimated at 500 B/D rate and gas at 5,000 M.C.F. rate. Salinity of water 36 grains per gallon. Had 1600# Tubing Pressure with 10/64" bean; 1200# - 1300# Tubing Pressure with nominal 22/64" bean. Beans cut out rapidly. Maximum casing pressure 240#. Began killing well at 8:20 A.M. Dead by 10:15 A.M.
11-15		Made up 6000# Xmas tree and installed high pressure gas trap and flow connections. Tested connections with 1200#. Circulated out mud with water.
/16		Swabbed to approximately 1500'. Well began flowing to sump at 11:40 A.M. Turned to tanks at 8:45 P.M. In 9 hours and 12 minutes well flowed 146 bbls. gross fluid; 71 barrels approximate net oil; 53.7° gravity (dry); 51.6% average cut; 32/64" bean; 1840# Tubing Pressure; 1550#-1725# Casing Pressure; 10,584 M.C.F. gas rate. Maximum salinity 57 grains per gallon; W.S.O. passed for production by Division of Oil and Gas.
17		Well flowed 313 barrels gross fluid; 159 barrels approximate net oil; 53.7° gravity; 49.2% average cut; 32/64" - 34/64" bean; 1790# - 1900# Tubing Pressure; 1750# - 2250# Casing Pressure; 12,625 M.C.F. gas.
18		In 15 hours well flowed 171 barrels gross fluid; 146 approximate net oil; 53.7° gravity (dry); 14.5% average cut; 20/64" - 36/64" bean; 1800# - 2500# Tubing Pressure; 2200# - 2500# Casing Pressure; 13,388 M.C.F. gas rate. Began killing well at 7:55 P.M.
19-20		Circulated and conditioned mud.
/21		Pumped 25 sacks Santa Cruz Oil Well Cement through 2½" tubing hanging at 6045'. Time 9:35 A.M. Halliburton Oil Well Cementing Company. Pulled up to 4515', and circulated.

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SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Kern County Associated Oil Company FIELD Elk Hills Canyon

Well No. Norton #19, Sec. 27, T. 29S, R. 23E, S. B. B. & M.

Signed

Date July 15, 1940 Title Agent
(President, Secretary or Agent)

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Date — Depth

6/22-27 — Located top of cement at 5865'. Re-landed 6-5/8" and 4-3/4" casing. Made casing test - O.K. with 1600#. Cleaned out to 7551'. Found sand bridges from 6940' to 6952'; 6972' to 6980'; and 7223' to 7273'. Had strong showing of gas below 7183'.

6/28 — Landed 6824' of 3½", 13.30#, Range 1, Grade "G" inserted drill pipe, including 640' of Kobe perforated at 7548'. Top of 4.3" liner hanger 6836'. Top of perforations 6908'. Perforations are 6 rows; 60 mesh; 2" slots; 6" centers; 6° undercut.

6/29-7/2 — Installed 10,000# Xmas tree. Landed 2½" tubing at 6855'. Tubing catcher 6370'. 2½" x 2" swage on bottom.

7/3 — Test Xmas tree and connections with 1600#. Circulated out mud with water. Swabbed to 500'. Well began flowing to sump at 1:50 P.M. Turned to tanks at 7:50 P.M. In 12 hours well flowed 160 barrels gross fluid; 20 barrels approximate net oil; average cut 89.0% including 12.0% mud; 45.0% emulsion; and 32.0% water; 39/64" bean; 1500# Tubing Pressure; 1700# Casing Pressure; 13,522 M.C.F. gas rate.

C = PRODUCING

7/4 — 8202'

Pg. 7551' — Well flowed 262 barrels gross fluid; 201 barrels approximate net oil; 53.4° gravity (dry); average cut 23.4% including 16.7% water, 5.7% emulsion, and 1.0% mud; 32/64" bean; 1675# Tubing Pressure; 2320# Casing Pressure; 12,628 M.C.F. gas. Salinity at 6:00 A.M. 57 grains per gallon.

7/5 — In 8½ hours well flowed 81 barrels gross fluid; 78 barrels approximate net oil; 54.0° gravity (dry); average cut 3.4% including 1.8% water, 1.6% emulsion. 32/64" - 30/64" bean; 1675# - 2000# Tubing Pressure; 2320# to 2400# Casing Pressure; 12,376 M.C.F. gas rate. During a 20½ hour production test from 7:00 P.M. 7/4/40 to 3:30 P.M. 7/5/40 the well flowed 198 barrels gross fluid; 193 barrels approximate net oil; 54.0° gravity (dry); average cut 2.4% including 1.4% water, and 1.0% emulsion; 32/64" - 30/64" bean; 1675# - 2000# Tubing Pressure; 2300# - 2400# Casing Pressure; 12,690 M.C.F. gas rate. The well was shut-in at 3:30 P.M. 7/5/40.

7/6-16 — Shut-In. Tubing Pressure 2920#. Casing Pressure 2990#.

7/17 — Shut-In. Tubing Pressure 2920#. Casing Pressure 2950#.

12-30 — Shut-In. Tubing Pressure 2920#. Casing Pressure 2920#.

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SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Page #3

History of Oil or Gas Well

OPERATOR TIDE WATER ASSOCIATED OIL CO. FIELD Aliso Canyon

Well No. Porter #12, Sec. 27, T. 3-N, R. 16-W, S. B. B. & M.

Signed

Date July 15, 1940 Title Agent
(President, Secretary or Agent)

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Date 1940	Depth
5/1	Began opening well up at 4:35 P.M. Opened bean gradually to 18/64" at 5:00 P.M. and to 19/64" at 7:45 P.M. Shut well in at 8:30 P.M. with gas trap frozo. In 3 hours and 55 minutes the well flowed 18 barrels gross fluid, 18 barrels approximate net oil; average of hourly cuts 0.2% mud and 0.2% water. Tubing pressure 2190# - 2350#; Casing Pressure 2620# - 2580#.
5/2	Began opening well up at 8:00 A.M. Opened bean to 48/64" by 2:00 P.M. and maintained 48/64" bean thereafter. Pressures dropped as beans were opened, reaching equilibrium pressures of 1150# tubing and 2100# casing with 48/64" bean. In 22 hours well flowed 261 barrels gross fluid; 238 barrels approximate net oil; average of hourly cuts 0.1% mud, 2.4% emulsion, 6.0% water, 8.5% total. 18,318 m.c.f. gas rate with 48/64" bean.
5/3	Well flowed 305 barrels gross fluid; 289 barrels approximate net oil; average of hourly cuts 3.6% emulsion, 1.5% water, 5.1% total; 48/64" bean; 1150# Tubing Pressure, 2100# Casing Pressure; 18,318 m.c.f. gas. Salinity of water sample taken from low pressure trap at 10:45 A.M. 107 grains per gallon.
5/4	Began closing well in at 11:55 A.M. Closed in at 1:32 P.M. In 7 hours and 32 minutes well flowed 85 barrels gross fluid and 80 barrels approximate net oil; average of hourly cuts 5.4% emulsion; 0.8% water, 6.2% total. 48/64" - 0/64" bean; 1150# - 2900# T.P.; 2100# - 2925# Casing Pressure; 18,308 m.c.f. gas rate with 48/64" bean.
5/5	Shut-in. Tubing Pressure 2900# Casing Pressure 2950#
5/6	Shut-in Tubing Pressure 2920# Casing Pressure 2975#
5/7	Shut-in Tubing Pressure 2925# Casing Pressure 2975#
5/8	Shut-in Tubing Pressure 2900# Casing Pressure 2925#
9-10	Shut-in Tubing Pressure 2925# Casing Pressure 2925#

FORM 103.
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SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

Page 1 of 2

OPERATOR TIDE WATER ASSOCIATED OIL CO. FIELD Aliso Canyon

Well No. Porter #12, Sec. 27, T. 3-N, R. 16-W, S.B. B. & M.

Signed

Date July 15, 1949 Title Agent (President, Secretary or Agent)

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Date

CASING RECORD

T.D. 8202' Pb. 7551'

16"	75#	C	512'	
11-3/4"	61#	Fac	2310'	
8"	49#	C	4721'	
6-5/8" & 26#, & 20# & 4-3/4"	16#	C	6910'	Top 4572' is 6-5/8"
684' - 3-1/2"	13.30#	L	7518'	Perf. 7518-6908'
				Top of liner hanger 6684'

TUBING RECORD

2-1/2"	6.5#	L	6555'

Tubing catcher 4570'. Tubing has 8½" x 2" swage on bottom.

Size of Hole: 0' - 512' is 20½"
512' - 4721' is 14-3/4"
4721' - 8202' is 7-7/8"

6 PMB

FORM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Sheet #1

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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	512'		Drilled		Sand
512	771		"		Sand
771	1142		"		Sand
1142	1153		"		Sand
1153	1224		"		Shale
1224	1297		"		Sand and shale
1297	1491		"		Shale
1491	1524		"		Shale, streaks sand
1524	1537		"		Shale
1537	1577		"		Shale, streaks sand
1577	1948		"		Sand and shale
1948	2099		"		Sand and shale
2099	2135		"		Sand, streaks shale
2135	2258		"		Sand and shale
2258	2308		"		Sandy shale, streaks shale
2308	2485		"		Sand and shale
2485	2507		"		Shale, streaks sand
2507	2532		"		Sandy shale
2532	2545		"		Shale
2545	2626		"		Sand and shale
2626	2654		"		Sand and shale
2654	2670		"		Hard shale
2670	2823		"		Sand and shale
2823	2878		"		Sand, streaks shale
2878	2951		"		Sandy shale
2951	3063		"		Sand and shale
3063	3135		"		Sandy shale
3135	3222		"		Sand and shale
3222	3247		"		Sandy shale
3247	3289		"		Sand and shale
3289	3294		"		Sand
3294	3434		"		Sand and shale
3434	3438		"		Shale
3438	3494		"		Sand and shale
3494	3509		"		Shale
3509	3549		"		Shale, streaks sand
3549	3580		"		Sand and shale
3580	3585		"		Hard shale
3585	3605		"		Sand
3605	3625		"		Sand and shale
3625	3667		"		Shale
3667	3707		"		Sand and shale
3707	3715		"		Shale
3715	3727		"		Shale and hard sand
3727	3963		"		Sand and shale
3963	4014		"		Shale

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STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
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Sheet #2

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, T. 3-W, 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
4014	4020		Drilled		Shale
4020	4052		"		Shale, streaks of sand
4052	4088		"		Shale
4080	4210		"		Sand and shale
4210	4220		"		Shale
4220	4247		"		Hard sand
4247	4705		"		Sand and shale
4705	4721		"		Sand and shale
4721	4726		"		Sand and shale
4726	4769		"		Sand
4769	4805		"		Sand, streaks shale
4805	4816		"		Shale
4816	4826		"		Sand and shale
4826	4840		"		Sand
4840	4891		"		Sand and shale
4891	5080		"		Sand
		7-7/8"	Reed Wire Line Cores:		
5080	5090		Cored	0' 4"	Pieces of sandy silt
5090	5100		"	1' 0"	Hard sandy silt
5100	5110		"	6' 0"	Streaks fine, very silty sand, sandy silt, and firm, coarse, oil sand, with good cut and burned odor.
5110	5120		"	0' 10"	0'6" Firm, fine, silty oil sand, with good cut and odor. 0'4" Shell
5120	5128		"	3' 0"	Hard, fine, very silty, sand and sandy silt
5128	5138		"	9' 0"	5'0" Firm, fine, very silty, sand, sometimes oil stained. Dip 25° 0'4" Shell 3'8" Firm, fine to medium, oil sand. Good cut; fair to burned odor. Occasional thin streaks of sandy silt.
5138	5148		"	6' 6"	0'3" Shell 6'3" Firm, fine, grading downward to coarse, pebbly, oil sand. Fair to good cut, good odor.
5148	5158		"	7'0"	Firm to fairly hard, fine, very silty, oil sand, with streaks of sandy silt and two thin streaks of firm, medium oil sand. Good cut and odor. Dip 25°.

FORM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Sheet #3

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Portor #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores(Cont'd.)		
5158	5168		Cored	7' 0"	Firm, medium oil sand, with occasional thin streaks of hard sandy silt. Fair odor, good cut.
5168	5178		"	6' 0"	Firm, medium to coarse, oil sand. Fair odor, good cut.
5178	5188		"	5' 0"	0'2" Firm, coarse, pebbly, oil sand. Good cut and odor. 0'2" Shell 4'8" Firm, fine to medium, oil sand. Good cut and odor.
5188	5198		"	1' 0"	Shell
5198	5201		"	1' 6"	Firm, medium, oil sand, with good cut and odor.
5201	5211		"	10' 0"	1'0" Firm, medium, oil sand. Good cut and odor. 2'0" Firm, coarse, pebbly, somewhat pale, oil sand. Slight odor, good cut. 7'0" Firm, fine to medium, oil sand, with a 0'6" streak of coarse, pebbly, oil sand 1'6" from bottom. Good cut and odor.
5211	5221		"	5'0"	4'8" Firm, fine to medium, biscuit-Type, oil sand, with 0'3" streak shell 1'0" from bottom. Fair odor, good cut. Dip 23°. 0'4" Firm, fine, silty, dark gray sand. No odor; very slight cut.
5221	5231		"	8' 0"	2'0" Firm, coarse, pebbly, pale, oil sand. Slight odor; good cut. 3'0" Firm, medium, oil sand, with 0'1" streak fine, silty, dark gray sand in middle. Fair odor, good cut. 3'0" Firm, coarse, pebbly, pale, oil sand. Slight to burned odor, good cut.
5231	5240		"	0' 5"	Several well rounded pebbles to 0'1" in diameter at top of core. 0'1" Shell 0'4" Firm, coarse, oil sand. Good cut and odor

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cored: (Cont'd.)		
5240	5250		Cored	0' 6"	Several well rounded pebbles to 1" in diameter at top of core. 0'6" Firm to fairly hard, fine, silty, dark gray sand, with no cut or odor.
5250	5260		"	7' 6"	6'0" Streaks firm, medium to coarse, oil sand and gray sand, with 0'3" streak shell 2'0" from bottom. 1'6" Firm, coarse, gray sand. No cut or odor.
5260	5270		"	7' 0"	Firm, medium to rather coarse, gray sand. No cut or odor.
5270	5280		"	1' 0"	Streaks firm, medium, gray sand, oil sand, and shell, with several pebbles to 1/2" in diameter at top of core.
5280	5290		"	10' 0"	0'6" Shell 9'6" Firm, medium to rather coarse, gray sand. No cut or odor.
5290	5300		"	7' 0"	3'0" Firm, medium to coarse, gray sand. No cut or odor. 0'3" Shell 1'0" Firm, fine, grey sand. No cut or odor. 2'9" Firm, medium, gray sand. Bottom 1'0" shows occasional very slight oil stain and gives slight cut.
5300	5307		"	4' 0"	Firm, medium to coarse, gray sand. No cut or odor.
5307	5317		"	3' 0"	0'6" Shell 2'0" Firm, coarse, pebbly, gray sand. No cut or odor. Pebbles to 3/8" in diameter. 0'6" Firm, fine, silty, dark gray sand and drilling mud. No cut or odor.
5317	5327		"	6' 6"	Firm, medium to coarse, pebbly gray sand. Top 3'0" oil stained and with slight cut.
5327	5337		"	7' 6"	3'6" Firm, medium, gray sand, with no cut or odor, grading downward to firm, medium, oil sand, with good cut and fiar odor. 0'6" Shell 3'6" Firm, medium to coarse, mottled, oil sand and gray sand, with fair to good cut and slight to fair odor, grading downward to gray sand, with no cut or odor.

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DIVISION OF OIL AND GAS

Sheet #6

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
5412	5422		Cored	6' 0"	Streaks of firm, medium to coarse, oil sand and oil stained gray sand. No to good odor. Slight to good cut.
5422	5429		"	4' 6"	Thin streaks firm, medium to coarse, oil sand and mottled oil sand and gray sand. Fiar to good cut. Slight to burned odor.
5429	5436		"	4' 0"	2'9" Firm, medium to coarse, oil sand. Good cut and fair to good odor 0'1" Shell 1'2" Firm, medium to coarse, gray sand. Occasional slight oil stain.
5436	5445		"	0' 6"	Shell fragments and about 25 well rounded pebbles from 1/4" to 1" in diameter.
5445	5455		"	2' 0"	0'2" Firm, dark brown, silt. Slight cut and odor. 0'6" Firm, fine, very silty, oil sand. Good cut, fair odor. 1'4" Hard, dark gray, siltstone. No cut or odor.
5455	5465		"	5' 6"	0'8" Hard, dark gray, siltstone. No cut or odor. 2'10" Hard, dark gray and brown, mottled, siltstone. Fair cut, slight odor. 3'0" Hard, dark gray, siltstone. No cut or odor. Dip on fracture planes 23°.
5465	5472		"	6' 6"	Firm to hard, dark gray siltstone, sometimes oil stained. Dip on fracture planes 23°.
5472	5476		"	"	No recovery
5476	5486		"	3' 0"	2'9" Firm, dark gray, siltstone. Slight cut and odor. 0'3" Hard, dark gray, siltstone. No cut or odor.
5486	5496		"	4' 6"	Firm to very hard, dark gray, siltstone. No cut or odor.

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Sheet #7

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator PURE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, T. 3-W, 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
		7-7/8"	Reed Wire	Line Cores:	(Cont'd.)
5496	5506		Cored	5' 6"	1'10" Firm, dark gray, siltstone, thin streaks silty sand. No cut or odor. 0'8" Shell 3'0" Thin streaks firm, dark gray, siltston and very fine, silty, sand. No cut or odor.
5506	5516		"	4' 4"	0'2" Shell 0'4" Fairly hard, dark gray, siltstone. 2'4" Shell 1'6" Fairly hard, dark gray, siltstone. Slight cut, no odor.
5516	5526		"	9' 6"	Firm, dark gray, sandy, silt and very fine, silty, sand. No cut or odor.
5526	5536		"	8' 4"	2'6" Firm, dark gray, sandy, silt 1'2" Shell 4'8" Firm, dark gray, sandy, silt and very fine, silty, sand. No cut or odor.
5536	5541		"	3' 0"	Firm to hard, dark gray, siltstone
5541	5551		"	0' 4"	Fragments of firm, dark gray, sandy, silt. No cut or odor.
5551	5561		"	2' 0"	Firm, dark gray, sandy, silt. No cut or odor.
5561	5571		"	4' 6"	2'0" Firm, dark gray, sandy, silt. No cut or odor. 1'2" Shell 1'4" Firm, dark gray, sandy, silt. No cut or odor.
5571	5581		"	4' 0"	Firm, dark gray, sandy, silt. No cut or odor.
5581	5591		"	8' 6"	Fairly hard to hard, dark gray, siltstone. Top 0'8" with very slight cut and oder.
5591	5601		"	4' 0"	Firm to fairly hard, dark gray, siltstone, with thin streaks fine, silty, sand. No cut or odor. Average dip 20°.
5601	5611		"	2' 0"	Firm, dark gray, sandy silt. No cut or odor.

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #8

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
5611	5621		Cored	1' 2"	Firm, dark gray, sandy, silt. No cut or odor.
5621	5631		"	7' 0"	Firm, dark gray, sandy, silt. Extremely slight cut, no odor.
5631	5638		"	4' 0"	Soft, dark gray, sandy, silt, impregnated with drilling mud. No cut or odor.
5638	5648		"	0' 9"	0'3" Firm, dark gray, sandy, silt. 0'6" Soft, dark gray, sandy, silt, impregnated with drilling mud.
5648	5658		"	0' 5"	Firm, dark gray, sandy, silt. No cut or odor.
5658	5668		"	1' 6"	Soft, dark gray, sandy, silt. No cut or odor.
5668	5678		"	3' 0"	Firm, dark gray, sandy, silt, with two 0'6" streaks shell. No cut or odor.
5678	5688		"	4' 0"	Fairly hard to hard, dark gray, siltstone.
5688	5698		"	2' 6"	Firm to hard, dark gray, siltstone
5698	5699		"	-	No Recovery
5699	5709		"	7' 0"	Hard, dark gray, siltstone. Dip 25°.
5709	5718		"	8' 6"	Firm to hard, dark gray, siltstone. No cut or odor.
5718	5728		"	6' 10"	0'10" Hard, dark gray, siltstone. 6'0" Firm, dark gray, sandy, silt. No cut or odor. Dip 25°.
5728	5738		"	0' 9"	Hard, dark gray, siltstone.
5738	5747		"	1' 6"	Hard, dark gray, siltstone
5747	5757		"	2' 6"	1'2" Firm, dark gray, sandy, silt. No cut or odor 1'0" Shell 0'4" Hard, dark gray, siltstone
5757	5767		"	3' 0"	Hard, dark gray, siltstone
5767	5774		"	4' 6"	Hard, dark gray, siltstone

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LOG AND CORE RECORD OF OIL OR GAS WELL

Operator KERN WATER ASSOCIATED OIL COMPANY Field Alico Canyon

Well No. Barber 32 Sec. 27, T. 32N, R. 26W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Mfg. Line Cored: (Cont'd.)		
5774	5782		Cored	1' 3"	Hard, dark gray, siltstone
5782	5792		"	9' 6"	Hard, dark gray, siltstone
5792	5801		"	5' 6"	Hard, dark gray, siltstone
5801	5811		"	9' 0"	Hard, dark gray, sandy, siltstone. Numerous slight oil stains. Slight cut and odor.
5811	5821		"	9' 6"	Hard, dark gray, sandy, siltstone. Top 0'8" oil stained and with slight cut and odor.
5821	5831		"	8' 0"	Hard, dark gray, sandy, siltstone.
5831	5838		"	6' 6"	Hard, dark gray, sandy siltstone. Occasionally oil stained. Slight cut and odor.
5838	5843		"	1' 6"	Hard, dark gray, sandy, siltstone. Occasionally oil stained and with slight cut.
5843	5858		"	14' 6"	Hard, dark gray, sandy, siltstone. Occasionally oil stained and with slight cut.
5858	5868		"	5' 6"	4' 0" Hard, dark grey, sandy, siltstone 1' 6" Hard, very sandy, siltstone, with thin streaks hard, medium, very silty, sand. Heavily oil stained and with fair cut and slight odor. Dip 25°.
5868	5876		"	2' 6"	Hard, dark gray, siltstone
5876	5886		"	10' 0"	Hard, dark gray, siltstone, streaks sandy siltstone
5886	5891		"	5' 0"	Hard, dark gray, generally rather sandy, siltstone. 0'6" streak 1'0" from top has slight cut, no odor.
5892	5901		"	9' 0"	Hard, dark gray, generally rather sandy, siltstone, with two 0'2" streaks hard, sandy, silt, with no cut or odor.
5901	5911		"	9' 0"	Hard, dark gray, sandy, siltstone
5911	5921		"	10' 0"	Hard, dark gray, sandy, siltstone

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #20

Operator PURE OIL ASSOCIATION OIL COMPANY Field Alma Canyon

Well No. Dayton #12 Sec. 27, T. 3N, R. 16W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Wire Line	Cores (Cont'd.)	
5918	5929		Cored	7' 0"	Hard, dark gray, sandy, siltstone
5929	5938		"	0' 3"	Hard, dark gray, siltstone
5938	5947		"	-	No recovery
5947	5957		"	2' 2"	Hard, dark gray, sandy, siltstone. No cut or odor.
5957	5961		"	0' 10"	Hard, dark grey, siltstone.
5961	5971		"	9' 6"	Hard, dark gray, to almost black, siltstone. No cut or odor. Bottom 2'0" shows some fracturing and slickensiding.
5971	5981		"	9' 6"	Hard, very dark gray, almost black, siltstone
5981	5991		"	10' 0"	Hard, very dark gray, almost black, siltstone
5991	5999		"	3' 6"	Hard, very dark gray, almost black, siltstone
5999	6009		"	2' 6"	Hard, very dark gray, almost black, siltstone Minor slickensiding evident.
6009	6019		"	0' 10"	Hard, very dark gray, almost black, sandy, siltstone.
6019	6029		"	7' 0"	Hard, very dark gray, almost black, sandy, siltstone. One nearly horizontal slickenside surface.
6029	6033		"	2' 9"	Hard, very dark gray, almost black, sandy, siltstone. One nearly horizontal slickenside surface.
6033	6043		"	0' 1"	Hard, very dark gray, almost black, sandy, siltstone. No cut or odor.
6043	6053		"	10' 0"	Hard, very dark gray, almost black, sandy, siltstone. No cut or odor.
6053	6061		"	3' 9"	Hard, very dark gray, almost black, sandy, siltstone. No cut or odor. A few slickenside fracture planes dipping 25° to 45° in various directions.
6061	6066		"	6' 10"	Hard, very dark gray, almost black, sandy siltstone. No cut or odor. Several slickenside fracture planes dipping in various directions at from 0° to 60°. Approximately recovered gash of core not from [illegible].

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #11

Operator [illegible] Field Aliso Canyon

Well No. [illegible] Sec. 27, T. 3N, R. 16W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Wire Line Cores: (Cont'd)		
6066	6075		Cored	7' 1"	Hard, very dark gray, almost black, sandy, siltstone. No cut or odor. Several slickensided fracture planes dipping in various directions at from 0° to 60°.
6075	6082		"	-	No recovery
6082	6090		"	6' 6"	Hard, very dark gray, almost black, sandy, siltstone. No cut or odor. Minor slickensiding evident.
6090	6099		"	5' 0"	Hard, very dark gray, almost black, sandy, siltstone. No cut or odor. Minor slickensiding evident.
6099	6109		"	6' 4"	Fairly hard, light gray to almost black, sandy, siltstone. Slight cut and odor.
6109	6119		"	7' 6"	Fairly hard, light gray to almost black, sandy, siltstone. Occasionally oil stained and with slight cut and odor.
6119	6129		"	10' 0"	Fairly hard, light gray to almost black, sand siltstone. Slight cut and odor. Mud around core showed some gas.
6129	6139		"	10' 0"	Fairly hard, light gray to almost black, sandy, siltstone. Sometimes with very slight cut and odor.
6139	6149		"	8' 6"	Fairly hard to hard, light gray to almost black, sandy, siltstone. Generally with slight cut and odor.
6149	6157		"	6' 6"	Fairly hard to hard, light to dark gray, very sandy, siltstone. Bottom 2'6" sometimes oil stained and with slight cut and odor.
6157	6167		"	7' 0"	Hard, light to dark gray, very sandy, siltstone. No cut, but scrobbles with very slight odor.
6167	6177		"	1' 0"	Very hard, black, siltstone (shell). One slickensided fracture plane dipping approximately 15°.
6177	6187		"	9' 6"	0'6" fairly hard, mottled gray and [illegible] very sandy, siltstone. Faint cut and odor.

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #12

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line	Cores: (Cont'd.)	
					8'6" Firm, fine, silty, biscuit-type, oil sand. Good cut and odor. Dip 20°.
6187	6197		Cored	7' 7"	7'0" Firm, fine to medium, poorly sorted, silty, semi-biscuit type, oil sand. Good cut and odor. Dip 20°. 0'6" Shell 0'1" Firm, fine, oil sand. Good cut and odor.
6197	6207		"	8' 6"	Hard, dark gray, sandy, siltstone, with numerous heavily oil stained splotches, with good cut and odor. A few spots of free oil along fractures.
6207	6217		"	8' 0"	Fairly hard to hard, dark gray, sandy, siltstone, with occasional, lightly to heavily, oil stained splotch, with slight to good cut and odor.
6217	6227		"	9' 6"	0'6" Hard, dark gray, sandy, siltstone. 1'0" Shell. Several almost horizontal, slickensided fracture planes 8'0" Hard, dark gray, sandy, siltstone. Sometimes with slight cut. Dip 21°.
6227	6237		"	6' 0"	Fairly hard, to hard, dark gray, sandy, siltstone, with numerous oil stains and thin streaks and splotches of firm, fine, generally silty, oil sand, with good cut and odor. Dip 20°.
6237	6247		"	10' 0"	3'0" Hard, dark gray, oil stained, sandy, siltstone, with streaks firm, fine, silty, oil sand. Good cut and odor. 0'8" Firm, fine to medium, oil sand, Good cut and odor. Dip 18°. 6½" Hard, dark gray, heavily oil stained, sandy, siltstone, with streaks firm, fine, silty, oil sand. Good cut and odor.
6247	6257		"	5' 0"	Hard, dark grey, very sandy, siltstone, or very fine, silty, sand. Oil stained throughout and with slight odor and slight to fair cut.

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Sheet #3

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL CO. Field Allen Canyon

Well No. Porter #12 Sec. 27, 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
			7"/8" Reed Wire	Line Cores (Cont'd.)	
6257	6267		Cored	3' 6"	Hard, dark gray to almost black, siltstone. Top 1'0" shows fracturing and has spots of heavy free oil along fractures. Mud around core shows a few small pieces of fine, silty, oil sand.
6267	6277		"	8' 0"	2'0" Hard, oil stained, sandy, siltstone. 6'0" Thin streaks dark siltstone and firm, dark, sandy silt, with no to fair cut and odor. Core badly contaminated with drilling mud containing occasional small piece of firm, fine, silty, oil sand, with good cut.
6277	6286		"	4' 6"	Firm, fine to medium, poorly sorted, generally rather silty, biscuit type, oil sand, with two 0'3" streaks sandy siltstone, good cut and odor.
6286	6296		"	3' 6"	0'2" oil sand as above 3'4" Hard, dark, sandy, siltstone. Few slight oil stains.
6296	6306		"	10' 0"	Hard, dark gray, sandy, siltstone. No cut or odor. Several fracture planes dipping 20° to 25°.
6306	6313		"	3' 0"	As above
6313	6323		"	6' 3"	Hard, dark gray, badly fractured and slickensided, sandy, siltstone.
6323	6332		"	7' 6"	Hard, dark gray, badly fractured and slickensided, sandy, siltstone. Dips 48°, 55°, and 55°.
6332	6342		"	8' 0"	Hard, dark gray, badly fractured and slickensided, sandy, siltstone. Occasionally with slight oil stain. No good dips, but indications of fairly high dip. Often looks crushed.
6342	6348		"	3' 6"	Fairly hard to hard, dark gray, badly fractured and slickensided, sandy, siltstone. Sometimes with slight cut and odor.

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
6318	6357		Cored	5' 6"	1'8" Hard, dark, very badly fractured and slickensided, sandy, siltstone. Slight odor. Minute amounts of free oil along fractures. 3'10" Hard, dark gray, sandy, siltstone. Dip 37°.
6357	6367		"	10' 0"	Hard, dark gray, sandy, siltstone. No cut or odor.
6367	6377		"	6' 0"	5'8" Hard, dark gray, very sandy, siltstone. Several fracture planes dipping 25° to 50°. 0'4" Shell
6377	6387		"	5' 0"	1'0" Firm, fine, silty, semi-biscuit type, very poorly saturated, oil sand. Fair cut and odor. 0'3" Shell 3'9" Fairly hard to hard, dark gray, sandy, siltstone. Slight cut and odor.
6387	6397		"	7' 6"	Hard, dark gray, very sandy, siltstone. Numerous oil stains. No to slight cut and odor. Several slickensided fracture planes dipping 20° to 35°.
6397	6407		"	8' 6"	0'9" Hard, dark gray, sandy, siltstone. 0'9" Firm, oil stained, sandy, silt. Fair cut and odor. 7'0" Hard, dark gray, sandy, siltstone. Occasional slight oil stain. No to slight cut and odor. Several slickensided fracture planes dipping 0° to 40°.
6407	6417		"	8' 6"	Hard, dark gray, sandy, siltstone. Occasional oil stain at top to numerous oil stains at bottom.)0'2" streak firm, oil stained, sandy, silt, with fair cut and odor, 2'0" from bottom. Several slickensided fracture planes dipping 0° to 25°.
6417	6427		"	7' 0"	Hard, dark gray, sandy, siltstone. Numerous oil stains. No to slight cut and odor. Several slickensided fracture planes dipping 0° to 50°.

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #15

Operator [illegible] Field Aliso Canyon

Well No. [illegible] Sec. 27, T. 3N, R. 16W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Wire Line Cores (Cont'd.)		
6427	6437		Cored	4' 6"	Hard, dark gray, sandy, siltstone. No cut or odor. Several slickensided fracture planes.
6437	6446		"	7' 9"	Hard, very dark gray - almost black - siltstone. No cut or odor. Dip on several partings 25°.
6446	6456		"	8' 6"	Hard, very dark gray - almost black, siltstone. No cut or odor. One slickensided fracture plane dipping 32°.
6456	6462		"	3' 0"	Hard, very dark gray - almost black, siltstone. No cut or odor.
6462	6472		"	8' 1"	Hard, very dark gray - almost black, siltstone. No cut or odor.
6472	6482		"	9' 6"	5'6" as above. Several slickensided fracture planes dipping 0° to 60°. 2'0" Shell 1'3" Siltstone as above. One slickensided fracture plane dipping 30°.
6482	6492		"	5' 0"	Siltstone as above.
6492	6504		"	5' 6"	2'6" hard, very dark gray - almost black - siltstone. No cut or odor. 1'3" Shell 1'9" Siltstone as above.
6504	6521		"	4' 2"	2'8" Hard, generally fine and silty, dark gray, sandstone, with occasional oil stain. Scattered large grains to 1/4" in diameter. Badly cross bedded. Average of several poor dips 20°. 1'6" Shell. Heavily veined with calcite.
6521	6522		"	3' 0"	Very hard, poorly sorted, silty, limestone cemented sand, with scattered well rounded pebbles to 0'1" in diameter. Numerous slickensided surfaces. Calcite veinlets common.
6522	6532		"	9' 0"	1'0" Shell 7'6" Hard, dark brown, shale, with occasional thin sandy streak. Abundant fossil fish [illegible] dip 15° to 20° - average 20°.

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LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Bonbon #12 Sec. 27, T. 3N, R. 16W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
6532	6542		Cored	9' 0"	0'1" Reddish, sandstone shell. 8'11"Hard, dark brown, shale, showing some fracturing and slickensiding. Abundant foraminifera. Few small spots of free oil in fractures of top 1'0". Poor dip 28°.
6542	6552		"	9' 0"	Hard, dark brown, shale. 0'6" streaks very badly fractured and slickensided 1'0" from top and 1'0" from bottom, respectively. Abundant foraminifera. Phosphatic (?) nodules. Dip 15° to 28° - Average 20°. Phosphatic (?) nodules. Dip 15° to 28° - Average 20°.
6552	6562		"	10' 0"	Hard, dark brown, shale, showing some fracturing and slickensiding. Abundant foraminifera. One 0'6" streak limestone shell 4'0" from bottom. Dips 20° to 27°.
6562	6572		"	9' 6"	Hard, dark brown, badly fractured and slickensided, shale. Abundant foraminifera. Dips 23° to 32° - Average 25°. Spots of free oil in fractures in bottom 2'0".
6572	6581		"	4' 0"	Hard, dark brown, shale. Considerable fracturing and slickensiding evident. Abundant foraminifera. Phosphatic (?) nodules. Average dip 22°.
6581	6590		"	8' 0"	As above. Average dip 21°.
6590	6600		"	8' 6"	Hard, dark brown, shale. Considerable fracturing and slickensiding evident. Abundant foraminifera. Phosphatic (?) nodules. Average dip 21°.
6600	6610		"	9' 6"	Shale as above.
6610	6618		"	8' 6"	Shale as above. Poor dip 17°.
6618	6628		"	10' 0"	Hard, dark brown, shale. Several slickensided fracture planes. Abundant foraminifera. Considerable heavy oil along bedding planes. Phosphatic (?) nodules. Numerous dips 17° to 22° - Average 20°.

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DIVISION OF OIL AND GAS

Sheet 17

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
6628	6638		Cored	8' 0"	Hard, dark brown, shale. Several slickensided fracture planes. Abundant foraminifera. Phosphatic (?) nodules. Top 0'8" with considerable heavy oil along bedding planes. Good dips 18° to 30° - Average 21°.
6638	6648		"	8' 6"	Shale as above. Several slickensided fracture planes. 0'8" limestone shell 1'0" from bottom. Dips 16° to 20° - Average 18°.
6648	6658		"	9' 0"	Shale as above. Several slickensided fracture planes. 0'1" limestone shell 1'6" from bottom. Dips 17°, 20°, and 21°.
6658	6669		"	6' 0"	Fractured and slickensided shale as above. Occasional film of heavy oil along fractures.
6669	6678		"	9' 0"	Hard, dark brown, shale. Abundant foraminifera. Phosphatic (?) nodules. Several slickensided fracture planes. Dips 18°, 20°, and 20°.
6678	6688		"	9' 0"	As above. Dips 14°, 14°, 15°, 15°, and 19°.
6688	6698		"	4' 0"	Shale as above. Considerable fracturing and slickensiding evident. Occasional spot of heavy oil in fractures. Dips 17°, 20°, and 22°.
6698	6708		"	2' 6"	As above.
6708	6716		"	4' 6"	Fractured and slickensided shale as above.
6716	6721		"	3' 0"	Hard, dark brown, shale. Abundant foraminifera. Phosphatic (?) nodules. Fractured and slickensided. Sometimes with film of heavy oil along fractures. Dips 16° and 20°.
6721	6731		"	3' 0"	As above. Dip 20°.
6731	6739		"	7' 0"	As above.
6739	6749		"	9' 6"	Hard, dark brown, shale. Abundant foraminifera. Phosphatic (?) nodules. Some fracturing and slickensiding evident. Sometimes with film of heavy oil along fractures. Dip 21°.

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DIVISION OF OIL AND GAS

Sheet #25

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator PURE OIL & ASSOCIATED OIL CO'PANY Field Aliso Canyon

Well No. Porter #32 Sec. 27, T. 3-S, 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
			1-7/8" Hoad	Wire Line Coring: (Cont'd.)	
6749	6759		Cored	1' 6"	As above, except no showing of oil. Dip 0° to 10°.
6759	6760		"	0' 10"	Hard, dark brown, shale. Dip 6°.
6760	6770		"	0' 3"	Hard, dark brown, shale.
6770	6780		"	0' 0"	No recovery
6780	6790		"	0' 0"	No recovery
6790	6800		"	0' 0"	No recovery. Driller reports core drilled like soft sand. Had good showing of oil and gas on ditch.
6800	6805		"	0' 0"	No Recovery
6805	6815		"	6' 0"	Hard, brownish gray, sandy, siltstone. Slight cut and odor. Occasional slight oil stain.
6815	6825		"	9' 0"	Firm, grading downward to hard, brownish gray finely sandy silt and sandy siltstone. Slight to fair cut and odor. 0'1" streak shell 1'0" from bottom. Parting planes indicate low dip (5° to 10°).
6825	6835		"	0' 6"	Hard, brownish gray, sandy, siltstone. Slight cut and odor.
6835	6845		"	4' 0"	As above. 0'1" shell at bottom.
6845	6855		"	0' 8"	As above.
6855	6858		"	9' 6"	As above. Apparently recovered part of core cut from 6845' - 6855'.
6858	6866		"	6' 0"	Hard brownish gray sandy siltstone. Slight cut and odor.
6866	6870		"	11' 0"	Fairly hard to hard brownish gray finely sandy silt and sandy siltstone. Slight cut and odor. Average dip on parting planes 11°. Abundant foraminifera. Apparently recovered part of core cut 6858' - 6866'.
6870	6880		"	9' 6"	Hard brownish gray sandy siltstone. Slight cut and odor.

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LOG AND CORE RECORD OF OIL OR GAS WELL

Operator [illegible] ASSOCIATED OIL COMPANY Field Alice (Canyon)

Well No. Barber Hill Sec. [illegible], 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
[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
6088	6098		Cored	7' 6"	1'6" Hard brownish gray sandy siltstone. Slight cut and odor. 1'0" Firm light brown finely sandy silt. Good cut and odor. Dip on parting plane 0° to 7°.
6098	6108		"	3' 6"	1'6" Hard brownish gray sandy siltstone. Slight cut and odor. 1'0" Fairly hard brown sandy siltstone. Good cut, fair odor. 6'0" Hard brownish gray sandy siltstone. Slight cut and odor.
6108	6118		"	6' 6"	Hard brownish gray mottled sandy siltstone. Slight to fair cut and odor.
6119	6128		"	10' 6"	Hard brownish gray sandy siltstone. Slight cut and odor.
6128	6130		"	"	No recovery. Inner barrel broke out.
6130	6148		"	7' 0"	Firm to hard light brown to brownish gray finely sandy silt and sandy siltstone. Slight cut and odor. 0'9" streak shell 1'6" from bottom. Dip on parting planes 11°.
6148	6158		"	8' 6"	As above. Dips 9°, 11°, and 12°.
6158	6168		"	6' 4"	Soft very fine silty sand contaminated with drilling mud. Slight cut and odor.
6168	6178		"	9' 0"	2'6" Fairly hard brownish gray sandy siltstone. Slight cut and odor. 0'1" Shell 3'0" Firm light brown finely sandy silt. Slight to fair cut and odor. 3'0" Fairly hard brownish gray sandy siltstone. Slight cut and odor. Good dips 0° to 10°.
6178	6188		"	8' 6"	Fairly hard brownish gray sandy siltstone. Slight cut and odor.

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DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator PURE WATER ASSOCIATION OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8"	Reed Wire Line Cores: (Cont'd.)	
6998	6998		Cored	3' 6"	0'6" Firm light brown, finely sandy silt. Slight cut and odor. 2'0" Hard brownish gray sandy siltstone 1'0" Firm light brown finely sandy silt. Slight cut and odor.
6998	7008		"	0' 6"	Pieces of firm light brown finely sandy silt and hard brownish gray sandy siltstone. Slight cut and odor.
7008	7018		"	7' 6"	Firm to fairly hard light brown to brownish gray silt. Slight cut and odor. Mud around core showed a little gas.
7018	7038		"	8' 0"	Firm light brown to brownish gray finely sandy silt. Slight cut and odor. Dip 12°. One 1/2" well rounded pebble loose on core.
7038	7040		"	0' 2"	Shell
7040	7050		"	1' 6"	Pieces of fairly hard brownish gray finely sandy silt. Slight cut. No odor.
7050	7064		"	2' 0"	Firm brownish gray finely sandy silt. Slight cut. No to slight odor.
7064	7068		"	No Recovery	Three quartzite fragments. Apparently pieces of larger rocks. Core cut hard and rough.
7068	7071		"	0' 2"	Fine silty sand mixed with drilling mud. Slight cut. Core cut hard and rough.
7071	7081		"	1' 3"	0'3" Shell 0'1" Firm very fine and silty dark grey sand Slight cut, no odor. 0'6" Shell
7081	7092		"	3' 0"	2'1" Firm semi-biscuit type brownish gray finely sandy silt. Slight cut. To to very slight odor. 0'5" Shell
7092	7103		"	2' 9"	Firm semi-biscuit type brownish gray finely sandy silt contaminated with drilling mud. Slight cut. To to very slight odor. Several pieces of shell mixed with core.

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LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores (Cont'd.)		
7101	7110		Cored	0' 6"	Small pieces brownish gray sandy siltstone and shell with several 1/4" well rounded pebbles and several jagged quartzite fragments. Apparently pieces of larger rocks.
7110	7120		"	7' 0"	Fairly hard brownish gray sandy siltstone. Slight cut and odor.
7120	7129		"	0' 6"	Fragments of shell and brownish gray sandy siltstone with slight cut and odor.
7129	7135		"	0' 8"	Pieces of very hard poorly sorted but generally very fine silty dark gray sand with scattered well rounded pebbles to 1/2" in diameter. Several loose jagged quartzite fragments to 1-1/2" in diameter. Apparently parts of larger rocks and several loose well rounded pebbles to 1/2" in diameter.
7135	7136		"	"	No recovery
7136	7137		"	"	No recovery
7137	7178		Drilled		Conglomerate
7178	7203		"		Conglomerate
7203	7208		"		Conglomerate
7208	7218		"		Sand
			7-7/8" Reed Wire Line Cores (Cont'd.)		
7218	7228		Cored	1' 6"	Fragments shell sometimes slightly oil stained with several small pieces slickensided gray shale and firm fine to coarse poorly sorted oil sand with good cut and odor. Dip 22°.
7228	7238		"	2' 0"	0'6" Fragments of hard gray shale. Dip 25° to 30°. 1'6" Shell. Streaks to 0'2" firm medium to coarse poorly sorted pebbly pale oil sand. Slight to fair cut. Slight odor. One 0'1" streak firm coarse gray sand with no cut or odor 0'6" from top.

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LOG AND CORE RECORD OF OIL OR GAS WELL

Operator SIGNAL HAYES ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 29, T. 3N, R. 16W, S. B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Wire Line		Coreas (Cont'd.)
7233	7240		Cored	6' 6"	Firm friable fine to very coarse poorly sorted oil sand. Slight to fair odor. Fair cut. One 1/2" streak coarse gray sand with no cut or odor 0'8" from top.
7240	7253		"	2' 11"	0'6" Firm medium gray and slightly oil stained sand. Very slight cut; no odor. 0'1" Shell 1'6" Fractured hard gray shale. Occasional slickensided surface evident. Dips 19° to 29°. 0'6" Firm fine to coarse poorly sorted oil stained sand. Slight cut; no odor. 0'4" Fragments gray shale
7251	7260		"	3' 0"	Shell sandstone with slight oil stain. Thin streaks fine to coarse poorly sorted oil stained sand with slight cut and odor.
7258	7270		"	7' 0"	Firm generally friable fine to coarse poorly sorted pale oil sand. Occasional thin streak shell. Fair cut; slight to fair odor.
7270	7272		"	0' 2"	Medium oil sand and drilling mud in core catcher. Fair cut and odor.
7272	7298		"	5' 6"	Firm friable fine to coarse poorly sorted pale oil sand. Slight to fair cut and slight odor.
7298	7300		"	6' 0"	Firm friable medium to very coarse poorly sorted pale oil sand. Slight to fair cut and odor.
7300	7316		"	3' 0"	0'2" Shell 2'6" Firm friable fine to coarse poorly sorted pale oil sand. Slight to fair cut and odor. 0'4" Shell
7316	7320		"	3' 6"	Shell with several thin streaks firm friable fine to medium poorly sorted oil stained sand. Slight to fair cut slight odor.
7320	7330		"	8' 0"	0'10" Shell occasionally slightly oil stained 9'10" Firm friable fine to medium poorly sorted pale oil sand. Slight to fair cut and odor.

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LOG AND CORE RECORD OF OIL OR GAS WELL Sheet #23

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line		Cores: (Cont'd.)
7338	7348		Cored	1' 6"	Shell. Occasionally slightly oil stained.
7348	7358		"	5' 6"	0'8" Firm fine to medium poorly sorted pale oil sand. Slight to fair cut and odor. 2'10" Fairly hard to hard fine to coarse poorly sorted gray sand with occasional slight oil stain near top.
7358	7368		"	3' 0"	Soft to hard friable fine to medium poorly sorted gray sand. No cut or odor.
7368	7378		"	-	No recovery.
7378	7388		"	5' 0"	1'0" Fairly hard fine to medium poorly sorted gray sand. Slight cut and odor. 4'0" Hard to soft fine to medium poorly sorted gray sand. No cut or odor. Occasional slight oil stain.
7388	7402		"	1' 0"	Firm to fairly hard fine to coarse poorly sorted oil stained (mottled) gray sand. Slight to fair cut. Slight odor.
7402	7412		"	0' 1"	Fairly hard fine to coarse poorly sorted gray sand. No cut or odor.
7412	7422		"	0' 4"	Soft to firm fine to medium poorly sorted gray sand. No cut orodor.
7422	7432		"	1' 0"	Firm to hard fine to medium poorly sorted gray sand. No cut or odor.
7432	7442		"	0' 9"	0'5" Soft to firm medium to coarse poorly sorted pebbly oil sand. Fair cut; slight odor. 0'1" Gray shale 0'3" Firm fine gray sand. No cut or odor.
7442	7450		"	1' 0"	Firm fine to medium semi-biscuit type oil sand. Fair cut and slight odor. Free black oil along partings.
7450	7460		"	1' 6"	Gray shale thin streaks firm fine brownish gray sand with slight cut and odor. Dips 21° 25°, 26°, 29°, and 30°.
7460	7470		"	0' 2"	Grah shale. Two small pieces firm medium oil sand. Fair cut; no odor.

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LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #2

Operator WEST WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Harbor #12 Sec. 27, T. 3S, R. 16W, S. B., B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Mine Line Screen (Cont'd.)		
7470	7480		Cored	1' 0"	0'2" Firm medium oil sand. Good cut and odor 0'10" Piece of gray shale.
7480	7485		"	0' 1"	Small pieces of firm medium pale oil sand. Slight cut and no odor.
7485	7490		"	1' 2"	Firm fine to coarse poorly sorted firm biscuit type pale oil sand. Occasional small mottling of gray sand. Slight to fair cut; slight odor.
7490	7495		"	0' 6"	Firm medium biscuit type pale oil sand. Fair cut; slight odor.
7495	7500		"	1' 1"	0'1" Shell 1'0" Soft medium pale oil sand badly contaminated with drilling mud. Slight cut and odor.
7500	7505		"	2'10"	0'6" Shell with occasional oil stain. 2'4" Firm medium sand-biscuit type oil sand with free oil in parting planes. Fair cut and odor.
7505	7510		"	1' 0"	0'6" Oil sand as above 0'6" Shell
7510	7515		"	0' 6"	Oil sand as above
7515	7520		"	-	No Recovery
7520	7525		"	0' 6"	Firm medium oil sand. Fair cut and odor.
7525	7530		"	-	No recovery
7530	7535		"	1' 6"	0'1" Firm medium oil sand. Fair cut and odor. 1'5" Shell
7535	7540		"	0' 4"	Very hard generally firm gray sand. No cut or odor, but with occasional oil stain.
7540	7545		"	1' 0"	Firm to hard fine to coarse poorly sorted gray sand. No cut or odor.
7545	7550		"	0' 3"	Fairly hard medium gray sand. Very slight cut; no odor.

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LOG AND CORE RECORD OF OIL OR GAS WELL Sheet #25

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 29, 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
			7- 7/8" Reed Wire Line Cores (Cont'd.)		
7550	7555		Cored	1' 4"	1'2" Shell 0'2" Firm medium to coarse oil sand. Fair cut and odor.
7555	7560		"	0' 4"	Firm fine to medium oil sand. Fair to good cut; fair odor.
7560	7565		"	1' 0"	0'8" Soft to firm medium oil sand. Fair to good cut; fair odor. 0'4" Firm fine gray sand. No cut or odor.
7565	7570		"	2' 0"	Soft to hard generally medium gray sand. No cut or odor. Occasional slight oil stain.
7570	7575		"	1' 0"	Firm medium gray sand. No cut or odor.
7575	7580		"	0' 9"	Soft to firm medium oil sand. Fair cut and odor. A little free oil in mud around core.
7580	7585		"	-	No recovery
7585	7590		"	0' 3"	0'2" Soft medium to coarse oil sand. Fair cut and odor. 0'1" Hard gray sandy shale
7590	7595		"	-	No recovery
7595	7600		"	-	No recovery
7600	7610		"	3' 6"	Firm generally medium pale bisquit type oil stained sand. Slight to fair cut. Slight odor.
7610	7620		"	1' 6"	1'5" Shell 0'1" Firm fine gray sand. No cut or odor.
7620	7628		"	1' 6"	Firm medium bisquit type gray sand. No cut or odor.
7628	7638		"	2' 0"	Soft to firm fine to coarse pebbly poorly sorted grey sand. No cut or odor. Small spots free oil in top 0'2".
7638	7648		"	0' 2"	Firm medium gray sand. No cut or odor.
7648	7658		"	0' 2"	0'1" Firm medium gray sand. No cut or odor 0'1" Shell

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sheet (a)

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter 712 Sec. 27, 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
			7-7/8" Reed Wire Line Cores (Cont'd.)		
7658	7668		Cored	2' 3"	Firm fine to medium gray sand with two 0'3" streaks shell. No cut or odor.
7668	7678		"	0' 2"	Firm fine to medium gray sand. No cut or odor.
7678	7681		"	1' 6"	Firm fine to coarse poorly sorted biscuit type gray sand. Occasional small spot oil near top. Slight to no cut. No odor.
7681	7686		"	&	No Recovery
7686	7696		"	0' 6"	Firm generally medium biscuit type gray sand. No cut or odor.
7696	7705		"	2' 6"	0'8" Soft fine to coarse pebbly poorly sorted gray sand. No cut or odor. 0'8" Shell 0'4" Firm fine biscuit type gray sand. No cut or odor. 0'10" Soft fine gray sand. No cut or odor.
7705	7716		"	1' 6"	Soft to firm fine gray sand. No cut or odor.
7716	7726		"	0' 6"	As above
7726	7736		"	2' 0"	1'0" Firm medium gray sand. No cut or odor 1'0" Hard gray sandy shale. dips 20°, 25°, and 27°.
7736	7746		"	5' 6"	Hard fine to medium gray and oil stained sand. No to slight cut and odor. Dips 16°, 18°, and 37°.
7746	7756		"	0' 1"	Firm medium oil stained sand. Slight cut and odor.
7756	7766		"	2' 0"	Firm medium biscuit type gray sand. No cut or odor.
7766	7769		"	0' 3"	Soft to firm medium gray sand. No cut or odor.
7769	7779		"	1' 6"	1'0" Gougy slickensided gray sand. Fault material. Dip on fracture plane 60°. 0'6" Soft fine gray sand. No cut or odor.

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Sheet #27

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
7779	7789		Cored	3' 0"	Hard fine to medium gray sand. No cut or odor. Dip on fracture plane 42°.
7789	7800		"	3' 0"	Firm to hard fine to medium semi-biscuit type gray sand. No cut or odor.
7800	7810		"	3' 0"	Soft to firm medium gray sand. No cut or odor. Several thin streaks shell. Occasional vertical fracture plane.
7810	7820		"	0'10"	Soft medium gray sand. No cut or odor.
7820	7829		"	0'1"	Firm medium gray sand. No cut or odor.
7829	7838		"	0' 6"	0' 3" Soft medium gray sand. No cut or odor 0'3" Hard gray shale
7838	7848		"	1' 3"	0'3" Soft to firm fine to medium gray sand. No cut or odor. 1'0" Hard dark gray shale. Dips 19° and 26°.
7848	7858		"	2' 0"	Hard dark gray shale and sandy shale, with thin streaks hard medium gray sand. No cut or odor. Dips 25°, 25°, and 26°.
7858	7868		"	0' 3"	Pieces hard dark gray shale and firm medium gray sand. No cut or odor.
7868	7874		"	0' 1"	Pieces firm medium gray sand. No cut or odor.
7874	7884		"	0' 6"	0'3" Shell 0'3" Pieces firm medium gray sand. No cut or odor.
7884	7894		"	0' 6"	Firm medium gray sand. No cut or odor.
7894	7904		"	0' 9"	Firm medium semi biscuit type gray sand. No cut or odor.
7904	7914		"	4' 0"	0'6" Firm medium gray sand. No cut or odor. 1'2" Hard medium gray sand. No cut or odor. 2'4" Soft medium gray sand, with streaks firm to hard gray sand. No cut or odor.

FORM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #28

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, T. 3-N, R. 16-W, M. D. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
7914	7920		Cored	0' 6"	Pieces soft to firm medium gray sand. No cut or odor.
7920	7928		"	0' 3"	Soft medium gray sand. No cut or odor.
7928	7938		"	0' 9"	0'3" Hard dark gray shale. 0'6" Shell.
7938	7946		"	1' 5"	0'4" Firm to hard fine to coarse poorly sorted gray and slightly oil stained sand. Slight cut and odor. 0'1" Shell 1'0" Hard dark gray shale. Dips 29°.
7946	7951		"	0' 9"	0'1" Hard dark gray shale 0'6" Firm, fine to medium gray and slightly oil stained sand. Slight cut and odor. 0'2" Hard dark gray shale. Dip 24°.
7951	7954		"	0' 10"	Hard dark gray shale. Badly broken - probably in coring.
7954	7959		"	4' 0"	Hard dark gray shale with thin sand partings and lenses. Badly broken - probably in coring. Dips 25° and 28°.
7959	7965		"	5' 0"	Shale as above. Broken. Bottom 0'6" badly fractured and slickensided. 0'6" streak coarse sand shell 1'0" from bottom. Good dips 30°.
7965	7971		"	0' 4"	0'2" Hard dark gray sandy shale. Dip 29°. 0'2" Hard fine to medium slightly oil stained sand - almost a shell.
7971	7979		"	0' 4"	0'1" Pieces hard fine dark gray sand. No cut or odor. 0'3" Shell
7979	7985		"	0' 1"	Firm medium mottled gray and oil stained sand. Slight cut and odor.
7985	7994		"	-	No recovery.
7994	8002		"	1' 0"	0'2" Firm fine to medium gray sand. No cut or odor.

FORM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Sheet (3)

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TEXAS ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter 12 Sec. 27, 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
			7-7/8" Hard Rive Line Cores (Cont'd.)		
7994	8004	(Continued)	Cored	1' 0"	0'10" Soft fine to medium gray sand impregnated with drilling mud. No cut or odor
8004	8011		"	0' 10"	Hard fine gray sand with streaks to 0'1" sandy shale. No cut or odor. Bedd dips 31°, 33°, and 34°.
8011	8022		"	0' 2"	Firm medium mottled gray and oil stained sand. Slight cut and odor.
8022	8034		"	0' 2"	0'1" Hard fine gray sand. No cut or odor. 0'1" Firm fine to coarse poorly sorted oil stained sand. Fair cut; slight odor.
8034	8039		"	0' 1"	Firm fine to coarse poorly sorted oil stained sand. Fair cut; slight odor.
8039	8045		"	1' 0"	0'2" Shell 0'8" Pieces hard dark gray shale 0'2" Pieces fine to medium mottled gray and oil stained sand with slight cut and odor and pieces hard dark gray shale.
8045	8050		"	1' 6"	0'2" Hard fine dark gray sand. No cut or odor. 0'4" Firm fine biscuit type gray sand. No cut or odor. 1'0" Pieces hard dark grey shale and sandy shale. Fractured and slickensided.
8050	8056		"	"	No recovery. One small piece oil stained gray sand. Slight cut.
8056	8061		"	0' 9"	0'1" Firm medium gray sand. No cut or odor. 0'8" Soft fine to medium gray sand. No cut or odor.
8061	8066		"	0' 3"	Firm fine to medium grey sand. No cut or odor
8066	8071		"	0' 2"	Firm fine to coarse poorly sorted gray sand. No cut or odor.

FORM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #30

Operator SIDS WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Hole	Wire Line	Cores: (Cont'd.)
8071	8076		Cored	0' 6"	0'3" Firm fine to medium gray sand. No cut or odor. 0'3" Shell
8076	8081		"	1' 6"	0'2" Firm to hard medium gray sand. No cut or odor. 1'4" Shell
8081	8086		"	1' 0"	Shell
8086	8091		"	0' 2"	Pieces fractured and slickensided hard dark gray shale. Several small pieces firm medium gray sand. No cut or odor.
8091	8095		"	1' 0"	0'9" Shell 0'1" Pieces fractured and slickensided hard dark gray shale 0'2" Pieces firm to hard fine to medium gray sand. No cut or odor.
8095	8103		"	1' 0"	0'1" Shell 0'11" Fractured and slickensided hard dark gray shale. Very badly fractured and slicken-sided near bottom. Dip 25°.
8103	8108		"	-	No recovery
8108	8113		"	-	No recovery. Drilled very soft - probably sand.
8113	8118		"	-	No recovery. Drilled very soft - probably sand.
8118	8123		"	0' 10"	Firm grading downward to hard fine to coarse poorly sorted gray sand. Occasional pebble to 1/4" in diameter. No cut or odor.
8123	8128		"	0' 9"	0'6" Firm to hard medium gray sand. No cut or odor. 0'3" Soft medium gray sand. No cut or odor.
8128	8133		"	0' 9"	0'4" Shell 0'5" Hard fine to coarse poorly sorted gray sand. No cut or odor.

FORM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Sheet #31

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed Wire Line Cores: (Cont'd.)		
8133	8138		Cored	0' 9"	0'6" Firm medium biscuit type gray sand. No cut or odor. 0'3" Shell
8138	8143		"	0' 2"	Pieces firm medium to coarse gray sand with no cut or odor; hard dark gray shale; and shell.
8143	8148		"	0' 9"	Hard dark gray shale and sandy shale. Two 0'1" streaks firm medium oil stained sand. Slight cut and odor. Dips 28° and 31°.
8148	8153		"	0' 5"	Hard dark gray shale with 0'1" streak shell near bottom.
8153	8158		"	1' 3"	0'1" Firm medium gray sand. No cut or odor. 1'2" Hard dark gray shale and sandy shale. Cross bedded. Average of poor dips 30°.
8158	8163		"	0' 6"	Hard dark gray shale and sandy shale. Some fracturing and slickensiding evident.
8163	8168		"	0' 3"	Firm medium slightly oil stained sand. Slight cut and odor.
8168	8172		"	-	No recovery.
8172	8178		"	0' 3"	0'1" Firm medium to coarse gray sand. No cut or odor. 0'2" Hard fine to medium gray sand. No cut or odor.
8178	8183		"	2' 0"	0'1" Shell 0'3" Hard medium to coarse gray sand. No cut or odor. 1'8" Hard dark gray shale. Good dips 29° and 31°. Minor fracturing and slickensiding evident.
8183	8188		"	1' 6"	Hard dark gray shale and sandy shale. Poor dips 33° and 34°.
8188	8193		"	-	No recovery.
8193	8198		"	0' 6"	Hard dark gray shale and sandy shale. Dip 26° and 29°.
8198	8202		"	1' 8"	Hard dark gray shale and sandy shale. Good dips 25° to 30°.

FORM 101.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Sheet #5

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator TIDE WATER ASSOCIATED OIL COMPANY Field Aliso Canyon

Well No. Porter #12 Sec. 27, 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
			7-7/8" Reed	Wire Line	Cores: (Cont'd.)
5337	5347		Cored	4' 0"	0'2" Shell 1'0" Firm, medium to coarse, gray sand, no cut or odor. 0'10" Shell 2'0" Firm, fine, grading to coarse, gray sand No cut or odor. One well rounded pebble 1" in diameter near bottom of core.
5347	5357		"	2' 3"	0'3" Firm, fine, gray sand 0'2" Shell 1'6" Firm, fine to medium, oil sand, Fair to good odor, good cut. 0'4" Shell
5357	5367		"	4' 6"	Firm, fine to medium, oil sand, Good cut, fair to good odor. Two 0'1" streaks of shell.
5367	5377		"	4' 3"	Firm, medium to coarse, oil sand. Good cut, slight to good odor.
5377	5387		"	1' 3"	0'1" Shell 0'8" Firm, coarse, pebbly, mottled, oil sand and gray sand. Pebbles to 3/8" in diameter. 0'3" Shell 0'3" Firm, medium, oil sand. Good cut and odor.
5387	5392		"	4' 3"	Firm, medium to coarse, pebbly gray sand. Numerous oil stains at top of core, decreasing to occasional oil stains at bottom. No odor. No to slight cut.
5392	5402		"	2' 0"	1'4" Firm, fine, silty, dark gray sand. No cut or odor. 0'8" Firm, medium to coarse, pebbly, gray sand. No cut or odor.
5402	5412		"	10' 0"	2'6" Firm, fine, gray sand 0'6" Shell 0'6" Firm, fine, gray sand 0'3" Shell 6'3" Firm, medium, gray sand, with occasional very slight oil stain. A few thin silty streaks.

FORM 109-B. 78635 10-39 8750
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

No. T 1-37879

Los Angeles, Calif. April 12, 1940

Mr. R. S. Curl,
Los Nietos, Calif.
Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your well No. "PORTER" 12, Sec. 27, T. 3N, R. 16W, S.B. B. & M.,
Aliso Canyon Field, in Los Angeles County, was tested for
shut-off of water on March 16, (Time and date) 1940. Mr. J. T. Carriel, Inspector,
designated by the supervisor, was present as prescribed in Sections 3222 and 3223, Chapter 93, Statutes 1939, and there were
also present G.C.Pfeffer and J. R. Boyer, Engineers

Location of water tested above 6910' and normal fluid level not determined

Depth and manner of water shut-off: 4110 ft. of 6 5/8 in. 26 lb. / 464 ft. of 6 5/8 in. 28 lb. / 2336 ft. of 4 3/4 in. 16 lb. } casing was { 3-1-40 cemented / landed } in shale (Formation)

at 6910 ft. with 196 sacks Golden Gate high temp cement by casing method.

Water string was landed in 7 7/8" rotary (Size, rotary or cable tool) hole.

Casing record of well 16" cem. 512'; 11 3/4" cem. 2310', not tested; 9" cem. 4721', W.S.O.; 6 5/8" & 4 3/4" as above; 2 1/2" tubing hanging at 6055' (for this test only).

T.D.(1st hole) 7600'; plugged with cement 7600'-7242'.

Reported total depth of hole 8202 ft. Hole bridged from present ft. to 6917 plugged with cement 8202'-7551' and WATER SHUT ft. Hole cleaned out to 6915 ft. for this test.

At time of test depth of hole measured xx ft. and bailer brought up sample of xx

At xx (Time and date) oil bailed to ft., drilling fluid { bailed / swabbed } to ft.

At xx (Time and date) top of oil found at ft., top of fluid found at ft.

THE INSPECTOR ARRIVED AT THE WELL AT 1:45 P.M. AND MR. PFEFFER REPORTED THE FOLLOWING:

1. A 7 7/8" rotary hole was drilled from 4721' to 7600'.
2. On January 25, 1940, 150 sacks of Golden Gate high temperature cement was pumped in through 3" tubing hanging at 7588'. The top of the cement plug was located at 7242'.
3. A 7 7/8" rotary hole was drilled from 7242' to 8202'.
4. On February 28, 1940, 200 sacks of Golden Gate high temperature cement was pumped in through 3" tubing hanging at 8200' and 7665'. The cement was cleaned out to 7551'.
5. Mud fluid was circulated 4 hr. before cementing the casing.
6. Electrical core readings showed siltstone 6750' - 6920'.
7. A casing test was made by applying a pressure of 1500 lb. to the inside of the casing for 1/4 hr. without loss.
8. 110' of set cement was drilled out of the 4 3/4" casing, (equivalent to 10 sacks).
9. The well came in at 11:40 a.m. March 16, 1940 after swabbing the fluid to 1500'.

R. D. BUSH
State Oil and Gas Supervisor

(continued on page 2)

By ..... Deputy

FORM 109-X. 76662 9-39 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 1-37879
Page 2

TIDE WATER ASSOCIATED OIL COMPANY

Well No. "PORTER" 12, Sec. 27, T. 3N, R. 16W, S.B. B. & M.,

THE INSPECTOR NOTED THE FOLLOWING:

1. The well was flowing through the 2½" tubing at the reported estimated rate of 150 bbl. of light oil and muddy water and 11,000 M.C.F. gas per day with a pressure of 1500 lb. and 1100 lb. on the tubing and casing respectively.
2. Fluid samples taken from the lead line at 2:15 p. m. and 2:45 p. m. tested 51 and 34 grains of salt per gallon respectively.

The test was completed at 3:30 p. m.

The test indicates that the 6 5/8" ~~and~~ 4 3/4" shut-off is probably effective, but is not conclusive because of the high back pressure held on the well. A decision is therefore deferred pending the receipt of production data after completion of the well. *

NOTE: The issuance of this report has been delayed due to pressure of work at this office.

cc L. G. Decius
J. A. Jones
Jos. Jensen
G.C.Pfeffer 2

CLB:SS

*Correction L. 4-18-40

R. D. BUSH
State Oil and Gas Supervisor

By E. Haynes Deputy

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-34850

Los Angeles, Calif. February 28, 1940.

Mr. R. S. Curl,

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

Dear Sir:

Your supplementary proposal to drill Well No. "PORTER" 12,

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

dated Feb. 26, 1940, received Feb. 27, 1940, 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 new conditions are as follows:
Well has been drilled to 8202; 7-7/8" hole was cored continuously from 5080 to 8202'.
Based upon core evidence sands below 7300' are believed to be non-productive or water bearing.
Casing in the well at present is as follows:

16",	75#	C	512'
11-3/4",	61#	F & C	2310'
9",	45#	C	4721'."

PROPOSAL:

"We now propose
1. To plug well with cement to 7300'.
2. To cement 6-5/8" and 4-3/4" casing at 6925'. Top 4700' of casing to be 6-5/8", 26# Grade D flush joint and Grade J-55 Speedtite; next 550' to be 4-3/4" Securaloy flush joint; bottom 1675' to be 4-3/4" Grade J-55 flush joint.
3. To make an open hole production test of zone from 6925 to 7300'."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT THIS DIVISION SHALL BE NOTIFIED TO WITNESS a test of the effectiveness of the 6-5/8" and 4-3/4" shut-off.

cc- L. C. Decius
J. A. Jones
Jos. Jensen
G. C. Pfeffer (2)
CLB:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Haynes Deputy

FORM 123. 55609 3-38 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Supplementary Notice

Los Nietos Calif. February 26, 1940

DIVISION OF OIL AND GAS

Los Angeles Calif.

Our notice to you dated April 21, 1939, stating our intention to

Drill well No. Porter #12,
(Drill, deepen, redrill, abandon)

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

Los Angeles County, must be amended on account of changed or recently discovered conditions.

The new conditions are as follows: Well has been drilled to 8202; 7-7/8" hole was cored continuously from 5080 to 8202'. Based upon core evidence sands below 7300' are believed to be non-productive or water bearing. Casing in the well at present is as follows:

16",	75#	C	512'
11¾",	61#	F & C	2310'
9",	45#	C	4721'

We now propose

1. To plug well with cement to 7300'.
2. To cement 6-5/8" and 4½" casing at 6925'. Top 4700' of casing to be 6-5/8", 26# Grade D flush joint and Grade J-55 Speedtite; next 550' to be 4½" Securaloy flush joint; bottom 1675' to be 4½" Grade J-55 flush joint.
3. To make an open hole production test of zone from 6925 to 7300'.

Susp. Drill

TIDE WATER ASSOCIATED OIL COMPANY
(Name of Operator)

By Roy A Carl
Agent

FORM 109-B.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

No. T 1-36813

Los Angeles, Calif. November 16, 1939.

Mr. R. S. Curl,

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your well No. "PORTER" 12, Sec. 27, T. 3 N., R. 16 W., S.B. B. & M.,

Aliso Canyon Field, in Los Angeles County, was tested for shut-off of water on November 2, (Time and date), 1939. Mr Carl V. Bloom, Engineer, designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present G. C. Pfeffer, Engineer, and L. M. Allen, Driller.

Location of water tested above 4721' and normal fluid level not determined

Depth and manner of water shut-off: 4721 ft. of 9 in. 45 lb. / ft. of in. lb. } casing was { 10/29/39 cemented / ~~knocked~~ } in shale (Formation)

at 4721 ft. with 750 sacks Santa Cruz oil well cement by casing method.

Water string was landed in 14-3/4" rotary (Size, rotary or cable tool) hole.

Casing record of well 16" cem. 512'; 11-3/4" froze and cemented 2310', not tested; 9" as above.

Reported total depth of hole 4726 ft. Hole bridged from xxx ft. to xxx ft. Hole cleaned out to 4726 ft. for this test.

At time of test depth of hole measured See below ft. and bailer brought up sample of xxxx

At See below (Time and date) oil bailed to xxxx ft., drilling fluid { bailed / swabbed } to xxx ft.

At " " (Time and date) top of oil found at xxxx ft., top of fluid found at xxxx ft.

ENGINEER BLOOM ARRIVED AT THE WELL AT 9:00 A. M. AND MR. PFEFFER REPORTED THE FOLLOWING:

1. A 14-3/4" rotary hole was drilled from 512' to 4721'.
2. While running the 11-3/4", 61 lb. casing to 4726', it froze at 2310' and it was cemented at that depth with 300 sacks of Santa Cruz oil well cement on October 25, 1939.
3. The 9" casing was cemented as noted above.
4. The last 100 sacks of cement was treated with quick-setting chemical.
5. A casing test was made by applying a pressure of 1000 lb. to the inside of the casing 1/4 hr. without loss.
6. 59' of set cement was drilled out of the 9" casing (equivalent to 18 sacks), and a 7-5/8" rotary hole was drilled ahead to 4726'.
7. The Johnston tester was run into the hole on 4" drill pipe, and the wall packer was set at 4713'.
8. The Johnston trip valve was placed in the drill pipe above 697' of fresh water cushion.
9. The tester valve was opened at 6:31 a. m. and remained open 103 minutes. During this interval there was a mild blow of air for 49 minutes, and a fair, steady blow of gas for the remainder of the test.

R. D. BUSH
State Oil and Gas Supervisor

By (CONTINUED ON PAGE 2) Deputy

FORM 109-X
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 1-36813
Page 2

TIDE WATER ASSOCIATED OIL COMPANY

Well No. "PORTER" 12, Sec. 27, T. 3 N., R. 16 W., S.B. B. & M.,

10. The fluid between the drill pipe and the 9" casing remained stationary during the time that the valve was open.
11. After breaking off six dry stands of drill pipe. the cushion water, some mud, and oil blew out of the drill pipe.

ENGINEER BLOOM NOTED THE FOLLOWING:

1. When the drill pipe was removed 3230' of oil, showing spots of mud and water, and 264' of muddy water was found in the drill pipe above the tester, equivalent to 44.8 and 3.7 bbl. respectively.
2. The fluid sample taken from the bottom of the drill pipe tested 144 grains of chloride salt per gallon.
3. The recording pressure bomb chart showed the tester valve was open 103 minutes.

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

THE SHUT-OFF IS APPROVED.

cc- L. C. Decius
J. A. Jones
Jos. Jensen
G. C. Pfeffer (2)

CVB:OH
SAR.

R. D. BUSH
State Oil and Gas Supervisor

By E. Haguenin Deputy

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-33732

Los Angeles, Calif. April 25, 1939.

MR. R. S. Curl,

Los Nietos, Calif.

Agent for TIDE WATER ASSOCIATED OIL COMPANY

DEAR SIR:

Your proposal to drill Well No. "PORTER" 12,

Section 27, T.3 N., R16 W., S.B. B. & M., Aliso Canyon Field, Los Angeles County,

dated April 21, 1939, received April 24, 1939, 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 605 feet S. and 535 feet W. from Station #84
The elevation of the ground above sea level is 2000 feet.
We estimate that the first productive oil or gas sand should be encountered at a depth of about 4800 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
16"	75#	Slip Joint	500'	Cemented
11-3/4"	60#	New, Seamless, Grade "J-55"	4800'	Cemented
8-5/8"	36#	New, Seamless, Grade "J-55" & "N-80"	7500'	Cemented
500' - 6-5/8"	26#	Used, Seamless, Grade "H-40"	8000'	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. (a) Mud fluid consistent with good drilling practice shall be used in the drilling of the well and the column of mud fluid shall be maintained at all times to the surface, particularly while pulling the drill pipe.
   (b) Adequate blowout prevention equipment shall be provided and ready for operation at all times.
2. Any hole to be sidetracked in any oil zone shall be completely filled with cement, if possible.
3. The formations to be left back of the 11-3/4" and 8-5/8" casings shall be mudded in a manner consistent with good drilling practice.
4. This division shall be notified to examine cores and/or electrical log before running the 11-3/4" and 8-5/8" casings.
5. Sufficient cement shall be used to fill back of the 8-5/8" casing to reach to the 11-3/4" casing shoe.
6. The column of mud fluid back of the 11-3/4" and 8-5/8" casings shall be maintained to the surface for at least 30 days after cementing these casings.
7. THIS DIVISION SHALL BE NOTIFIED TO WITNESS a test of the effectiveness of the 11-3/4" and 8-5/8" shut-offs.

R. D. BUSH
State Oil and Gas Supervisor

By E. Haynes Deputy

cc- L. C. Decius
J. A. Jones
Jos. Jensen
M. D. Hughes

CVB:OH

FORM 105. 45230 6-37 10M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

037-00701

Notice of Intention to Drill New Well

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

Los Nietos, Calif. April 21, 1939

DIVISION OF OIL AND GAS

Los Angeles, Calif.

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. SF20 P- ~~Porter~~ #12, Sec. 27, T. 3-N, R. 16-W, S. B. B. & M., Aliso Canyon Field, Los Angeles County.

Lease consists of

The well is 605 feet ~~N~~ S., and 535 feet ~~E~~ W. from Station #84
(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the ~~derrick floor~~ ground above sea level is 2000 feet.

We estimate that the first productive oil or gas sand should be encountered at a depth of about 4800 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
16"	75#	Slip Joint	500'	Cemented
11 3/4"	60#	New, Seamless, Grade "J-55"	4800'	Cemented
8-5/8"	36#	New, Seamless, Grade "J-55" & "N-80"	7500'	Cemented
500' - 6-5/8"	26#	Used, Seamless, Grade "H-40"	8000'	Landed

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, Calif.

TIDE WATER ASSOCIATED OIL COMPANY
(Name of Operator)

Telephone number Whittier 420-43

By

Reference to file of card

Maps	Model	Cross Section	Cards		Me
LAB CW W.C.B.				Y	21

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

4-24-39
Book
W.C.B.