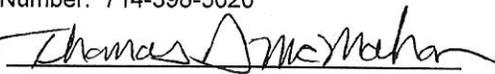


RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES *Rec'd 08-15-16 DOGGR Ventura.*

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company  
Well: Porter 69 D  
A.P.I. No. 03724130  
Date: 7/25/2016  
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles  
Surface Location: Sec 28, T3N, R16W, SBB&M  
Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)  
Telephone Number: 714-398-5020

Signature: 

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)  |
|------------|--|
| 5/14/2016  | <p>Alert DOGGR (Cliff Knight) on 5/13/16 @ 07:30 hrs that we would be MIRU on P69D this morning- No permit issued yet, obtain verbal approval. Hold safety meeting with crew and contractors. Spot containments. Spot 2 @ 500 bbls tanks, mud pump, and Rival rig #6. Set in fuel cell and generator. Stand rig and tie down. R/U suction manifold and hoses to tanks and pump. Haul 900 bbls 8.5ppg, 55vis, HEC polymer to location.</p> <p>Ready to kill well.</p> <p>SDFN.</p>  |
| 5/16/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1210 psi / SITP= 1165 psi / SICP= 1165 psi. Strap tanks= 850 bbls 8.5ppg, 55 vis, HEC polymer on location.</p> <p>Request OPS to open withdraw line valve. MIRU flow test separator and carbon canister. Open tubing and pump 60 bbls, 8.5ppg, 110 vis, HEC polymer and displace to TOL @ 7711' w/ 49 bbls 8.5ppg, 55 vis, HEC polymer @ 5bpm. Open casing and kill well as per schedule, pumping a total of 500 bbls polymer into the annulus @ 5bpm while returning to SCG withdraw line and 3bpm when returning through the carbon canister. Establish circulation down tubing / up casing. Shut down pump-well dead tubing and casing. Release well kill equipment. Turn withdraw line back over to OPS.</p> <p>Install 2-7/8" Shaffer BPV and N/D WH. Install 2-7/8" x 10' pup joint and 2-7/8" TIW valve. MIRU Stinger and N/U Class III 5M BOPE as per SCG Standard 224.05- Class III 5M double gate, Class III 5M Annular bag, 5M choke manifold, and all associated piping. Function test BOPE. R/U work floor.</p> <p>MIRU WFT test truck. Change out pipe rams to 2-7/8". Pressure test 2-7/8" pipe rams to 300 psi (low) / 5000 psi (high) for 20 min- chart test.</p> <p>Call DOGGR ( Chris Gustafson) and alert office that we will be testing BOPE and require an inspection 5/17/16 @ 09:00hrs.</p> <p>Shut in and secure well. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company  
 Well: Porter 69 D  
 A.P.I. No. 03724130  
 Date: 7/25/2016  
 Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles  
 Surface Location: Sec 28, T3N, R16W, SBB&M  
 Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)  
 Telephone Number: 714-398-5020  
 Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)   |
|------------|---|
| 5/17/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1210 psi / SITP= vacuum / SICP= vacuum. Strap tanks= 188 bbls 8.5ppg, 55 vis, HEC polymer on location- Top off tanks (887bbls)</p> <p>WFT continue testing BOPE: Pressure test Class III 5M Annular Bag to 300 psi(low)/ 3500 psi (high) for 20 min. Pressure test all 3" 5M BOP casing valves, all 2" 5M kill line valves, 2" 5M kill line, 2-7/8" TIW valves, 2-7/8" IBOP, and 2" 5M choke manifold vales and chokes to 300 psi (low) / 5000 psi ( high) for 20 min- chart all tests. DOGGR perform BOPE inspection @ 09:00 hrs.- pass inspection.</p> <p>Install 2-7/8" Shaffer BPV in tubing hanger and attempt to pressure test blind rams to 5000 psi- BPV leaking. Unable to release BPV from tubing hanger- work dry rod with wrenches-valve stuck. Re-install 2-7/8" TIW valve and 2-7/8" /6.5# P110 tubing joint. Unscrew lockdowns and attempt to unland tubing hanger- tubing hanger stuck. Work tubing up to 140k- hanger stuck. Call out donut puller. Continue to work BPV- valve will not come free.</p> <p>Cameron test primary well head seals between 13-3/8" / 54.5# K55 surface casing and 9-5/8"/47# N-80 production casing to 300 psi (low) / 3800 psi ( high- 80% of 9-5/8"/47# N-80 collapse pressure) for 20 min- chart tests. Pressure test secondary seals to 300 psi (low-good) and 3800 psi (high-leaking). Repack secondary seals with plastic sealant and retest to 300 psi (low)/ 3800 psi (high) 20 min each - chart test.</p> <p>MIRU donut puller. Hold safety meeting. Pop donut free at 150k. RDMO puller. R/U tubing swivel and TIW valve. Baker hand release seals from 9-5/8"/47# x 3.25" SB Model ' D' permanent packer. L/D donut, 2-7/8" x 2' &amp; 8' L80 pup joints, and swivel.</p> <p>Attempt to remove BPV from tubing hanger with 36" pipe wrenches and snapped the pulling tool in half.</p> <p>Shut in and secure well. SDFN.</p> <p>DOGGR: Ernie Blevins</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>                     Liner: 5-1/2"/17# J55 (7711-8107')</p> |

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

Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Well: Porter 69 D

A.P.I. No. 03724130

Date: 7/25/2016

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

Field: Aliso Canyon County: Los Angeles

Surface Location: Sec 28, T3N, R16W, SBB&M

Name: Tom McMahon Title: SIMP Project Manager

(President, Secretary, or Agent)

Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)   |
|------------|---|
| 5/18/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1211 psi / SITP= vacuum / SICP= vacuum. Strap tanks= 810 bbls 8.5ppg, 55 vis, HEC polymer on location.</p> <p>Cameron deliver 10-3/4" x 2-7/8" Shaffer tubing hanger from P68A and install new packing. R/U pump to tubing, open well, and establish circulation after pumping 35bbls polymer @ 5bpm. Install new tubing hanger and 2-7/8" BPV. Land tubing hanger. WFT test blind rams to 300 psi (low) and 5000 psi (high) for 20 min ea- chart tests. Pull and L/D tubing hanger.</p> <p>Pull out with completion string as follows:<br/> 10-3/4" x 2-7/8" Shaffer tubing hanger<br/> 2-7/8"/6.5# L80 EU x 2' pup jt<br/> 2-7/8"/6.5# L80 EU x 8' pup jt<br/> (240) jts x 2-7/8"/6.5# L80 EU tubing<br/> 2-7/8"/6.5# L80 EU x 6' pup jt<br/> 2-7/8" BST gas lift mandrel<br/> 2-7/8"/6.5# L80 EU x 2' pup jt<br/> (1) jts x 2-7/8"/6.5# L80 EU tubing<br/> 2-7/8" x 2.31" 'BXO' sliding sleeve<br/> (1) jts x 2-7/8"/6.5# L80 EU tubing<br/> Baker 7" x 2-7/8" On/Off overshot c/w 2.31" 'BX' seal nipple<br/> 2-7/8"/6.5# L80 EU x 8' pup jt<br/> 2-7/8" x 2.31" 'BXN' profile nipple c/w 2.205" No-Go<br/> 2-7/8"/6.5# L80 EU x 6' pup jt<br/> Baker Model 'D' 3.25" OD x 2' anchor latch / seal section</p> <p>Load out completion tools to Baker for redress. M/U 9-5/8"/47# positive casing scraper, 2-7/8" bumper sub, and 2-7/8" x 4' L80 pup joint. Tally in hole w/ BHA and 242 joints x 2-7/8" production tubing. P/U 2 joints x 2-7/8" /6.5# N80 workstring and tag top of BHI 9-5/8"/47# x 3.25" SB Model 'D' packer 10' deeper than recorded depth of 7642'. Pull out with 40 stands of tubing. Leave EoT @ 5110' for overnight.</p> <p>BOP drill @ 10:13 hrs: ; Well shut in and secured in 60 seconds</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/> Liner: 5-1/2"/17# J55 (7711-8107')</p> |

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Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Well: Porter 69 D

A.P.I. No. 03724130

Date: 7/25/2016

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

Field: Aliso Canyon County: Los Angeles

Surface Location: Sec 28, T3N, R16W, SBB&M

Name: Tom McMahon Title: SIMP Project Manager

(President, Secretary, or Agent)

Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)  |
|------------|--|
| 5/19/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1211 psi / SITP= vacuum / SICP= vacuum. Strap tanks= 668 bbls 8.5ppg, 55 vis, HEC polymer on location.</p> <p>Continue pulling out with 81 stands x 2-7/8"/6.5# L80 tubing, 2-7/8" bumper sub, and 9-5/8" /47# casing scraper. L/D tools. Ready rig to run 2-3/8" tubing. Tally and P/U 2-3/8"/5.95# PH6 45" shoe, 16 joints x 2-3/8"/5.95# L80 PH-6, 2-3/8 PH6 pin x 2-3/8" IF box Xover, and 2-3/8" IF pin x 2-7/8" EUB Xover. RIH w/ BHA and 114 joints 2-7/8"/6.5# L80 EUE tubing. Enter 9-5/8" x 3.25" Seal Bore packer @ 7642' w/ no problems. Continue RIH w/ remainder of 243 joints x 2-7/8" tubing. Tag bottom 10' deeper than recorded depth of 8107'. Circulate bottoms up down casing/ up tubing @ 4 bpm/ 400 psi. Pull out with 98 stands. Leave EoT @ 2025' for overnight.</p> <p>Shut in and secure well. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p>   |
| 5/20/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1211 psi / SITP= vacuum / SICP= vacuum. Strap tanks= 638 bbls 8.5ppg, 55 vis, HEC polymer on location. R/U to tubing and pump 15bbls polymer to establish circulation.</p> <p>POOH with 48 joints x 2-7/8"/6.5# L80 EUE tubing. L/D Xovers, 16 joints x 2-3/8"/5.95# L80 PH6 tubing, and mule shoe.</p> <p>P/U Baker 3.25" x 2' seal section, 2-7/8"/6.5# x 8' EUE L80 pup joint, and 2-7/8" x 2.31" 'XN' nipple. RIH w/ BHA and 244 joints x 2-7/8" tubing. Locate top of 9-5/8"/47# Model 'D' permanent packer 10' deeper than recorded depth of 7642'. Stab in seals and set down +30k compression. MIRU PROS testing. As per the program, pressure test casing (7642' to surface) to 2252 psi and digitally record the test- pressure inclined 1 psi to 2253 psi in 1 hour. DOGGR witness and pass test. Bleed casing and POOH with tubing and tools.</p> <p>P/U Baker 9-5/8"/47# x 3-1/2" Retrievamatic test packer, 3-1/2" EUP x 2-7/8" EUB L80 Xover, 2-7/8" x 8' L80 pup joint, and 2-7/8" x 2.31" 'XN' nipple. RIH w/ BHA and 112 joints x 2-7/8" tubing. Set test packer @ 3510' CoE. As per program, pressure test casing (3510' to surface) to 3701 psi and digitally record the test- pressure declined 26 psi to 3675 psi in 1 hour. DOGGR witness and pass test. Bleed casing and release packer. Leave EoT @ 3536' for overnight.</p> <p>Shut in and secure well. SDFN.</p> <p>CASING INTEGRITY BLOCK TESTING:<br/>7642' (permanent packer) to surface: 2252 psi to 2253 psi for 1 hr (10:28 hrs - 11:28hrs)<br/>3510' to surface: 3701 psi to 3675 psi for 1 hour (16:04hrs - 17:03hrs)</p> <p>DOGGR: Cliff Knight</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |

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

Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company  
Well: Porter 69 D  
A.P.I. No. 03724130  
Date: 7/25/2016  
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles  
Surface Location: Sec 28, T3N, R16W, SBB&M  
Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)  
Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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| Start Date | Ops this Report (DOGGR)  |
|------------|--|
| 5/21/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1211 psi / SITP= vacuum / SICP= vacuum. Strap tanks= 548 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well and fill with 3 bbls polymer.</p> <p>POOH w/ 113 joints x 2-7/8"/6.5# L80 EUE tubing and tools. L/D Baker 9-5/8"/47# x 3-1/2" Retrievamatic Packer. N/U shooting flange.</p> <p>MIRU Baker Wireline truck. Hold safety meeting with crew. M/U Multi-Arm caliper tools and pack off. RIH and tag BHI 9-5/8"/47# x 3.25" SB Model 'D' permanent packer at a correlated depth of 7641' KB ( Jan. 2013 SLB USIT correlation log). Pick up @ 7636' and log to surface @ 30 fpm. L/D caliper tools.</p> <p>Top off hole w/ less than 1 bbls polymer. M/U 3-1/8" weight bars and High Resolution Vertilog tools (Magnetic flux leakage log) and pack off. Log down @ 120 fpm to a correlated depth of 7628' KB (13' above 9-5/8" permanent packer). Pick up @ 7615' and log to surface @ 120 fpm. L/D HRVRT tools. N/D shooting flange and RDMO Baker Wireline equipment.</p> <p>P/U Baker 9-5/8" x 4-1/2" AS1-X RBP, 4-1/2" EUP x 3-1/2" EUP L80 Xover, 3-1/2" Model 'L'-valve, 8-5/8" x 3-1/2" Running tool, 3-1/2" EUP x 2-7/8" EUB L80 Xover, 2-7/8" x 8' L80 pup joint, and 2-7/8" x 2.31" 'XN' nipple. RIH w/ BHA and 57 joints x 2-7/8"/6.5# L80 EUE tubing. Leave EoT @ 1822' for overnight.</p> <p>Close in and secure well. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |

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Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Well: Porter 69 D

A.P.I. No. 03724130

Date: 7/25/2016

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

Field: Aliso Canyon County: Los Angeles

Surface Location: Sec 28, T3N, R16W, SBB&M

Name: Tom McMahon

Title: SIMP Project Manager

(President, Secretary, or Agent)

Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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| Start Date | Ops this Report (DOGGR)   |
|------------|---|
| 5/23/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1211 psi / SITP= vacuum / SICP= vacuum. Strap tanks= 529 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well and fill with 8 bbls polymer.</p> <p>Currently in the hole with Baker 9-5/8"/47# x 4-1/2" AS1-X RBP w/ 'L' Valve BHA and 57 joints x 2-7/8"/6.5# L80 EUE tubing. Set RBP @ 1810' CoE, pack off, and release from tool. Shallow test RBP to 525 psi/10 min on a digital gauge- good test. Bleed off casing. Latch on, equalize, and unset RBP. Continue RIH w/ remainder of 244 joints x 2-7/8" tubing. Tag 5-1/2"/17# liner top 10' lower than recorded depth of 7642'. Record up /down weights (75k/52k). P/U and set BHI 9-5/8"/47# AS1-X RBP @ 7633' CoE. Pack off and release from tool. Attempt to pressure test casing to 1000 psi- pumping away 2bpm @ 400 psi. Reset RBP @ 7633' (CoE) / 7623' (top) and ensure 3-1/2" Model 'L' valve is secured in 'closed' position. Pull 2 stands. Pressure test RBP and casing to 1000 psi for 20 min on a digital gauge- good test. Bleed down casing.</p> <p>Dump 3ft3 of sand down tubing and displace w/ 40 bbls polymer. Estimated top of sand @ 7616'. POOH and L/D running tool. N/U Shooting flange.</p> <p>Close in and secure well. SDFN.</p> <p>RBP: BHI 9-5/8"/47# x 4-1/2" AS1-X w/ 'L' Valve @ 7623' (top)<br/>Sand top : 7616'</p> <p>Perform BOP drill @ 08:00 hrs- Well closed in 20 seconds.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |

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Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company  
Well: Porter 69 D  
A.P.I. No. 03724130  
Date: 7/25/2016  
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles  
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Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)  
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| Start Date | Ops this Report (DOGGR)   |
|------------|---|
| 5/24/2016  | <p>Hold safety meeting with crew and service personnel. Pressures= Field= 1211 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 529 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well.</p> <p>MIRU SLB wire line unit. M/U Ultra Sonic Imaging Tools (USIT, CBL, CCL, GR, Neutron) and lubricator. RIH, correlate on depth (2013 USIT correlation to open hole), and tag sand top @ 7620'. P/U @ 7616' and pull repeat passes (2800 fph) to 7400' at 0 psi, 500 psi, and 1000 psi. Log main pass @ 2800 fph from 7616' to 200'. Repeat high resolution passes over 11 different intervals. Log remaining 200' to surface @ 2800 fph.</p> <p>RDMO wire line unit.</p> <p>Close in and secure well. SDFN.</p> <p>RBP: BHI 9-5/8"/47# x 4-1/2" AS1-X w/ 'L' Valve @ 7623' (top)<br/>Sand top : 7616'</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p>   |
| 5/25/2016  | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1211 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 529 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well.</p> <p>N/D shooting flange. P/U BHI 8-5/8" x 3-1/2" Model 'L' Retrieving tool, 3-1/2" EUP x 2-7/8" EUB L80 Xover, and 2-7/8" x 8' L80 pup joint. RIH w/ BHA and 241 joints x 2-7/8"/6.5# L80 EUE tubing. N/U PGSR. P/U 2-7/8" TIW and tubing swivel on joint # 242. Tag sand @ 7616' and reverse circulate down to top of RBP @ 7623', pumping @ 5 BPM/ 1000 psi. Circulate 1.5 times tubing volume w/ 66 bbls polymer. Come down and latch onto BHI 9-5/8"/47# AS1-X RBP @ 7633' CoE. Pump 20 bbls polymer down tubing @ 3bpm/ 800psi and then immediately reverse circulate with 88 bbls polymer @ 4bpm/650 psi.. Pump 10 bbls polymer below RBP through bypass @ 2 bpm/400 psi to ensure valve in 'open' position. Let tools equalize for 30 minutes while monitoring fluid level. Release RBP and let elements relax for 1 hour. Stroke out tool, come back down, and tag 5-1/2"/17# liner top @ 7711'. N/D PGSR. POOH w/ tubing and tools @ 100 fpm.</p> <p>RIH w/ 25 stands x 2-7/8" tubing. Leave EoT @ 3142' for overnight.</p> <p>Close in and secure well. SDFN.</p> <p>Invite DOGGR for BOPE inspection 5/27/16 @ 09:00 hrs after ram change- inspection waived as per Chris Gustafson 5/25/16 @ 14:30hrs.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |

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DEPARTMENT OF CONSERVATION  
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## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Well: Porter 69 D

A.P.I. No. 03724130

Date: 7/25/2016

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

Field: Aliso Canyon County: Los Angeles

Surface Location: Sec 28, T3N, R16W, SBB&amp;M

Name: Tom McMahon Title: SIMP Project Manager

(President, Secretary, or Agent)

Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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| Start Date | Ops this Report (DOGGR)   |
|------------|---|
| 5/26/2016  | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1218 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 487 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well and fill with 5 bbls polymer.</p> <p>Run in hole with remainder of 242 joints x 2-7/8"/6.5# L80 EUE production tubing (old). Lay down 192 joints tubing onto trailer, leaving 50 joints in the hole for a kill string @ 1577'.</p> <p>Close well and secure for overnight. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p>   |
| 6/6/2016   | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1188 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 451 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well. R/U to tubing and establish circulation with 30 bbls polymer.</p> <p>L/D 50 joints x 2-7/8"/6.5# L80 EUE production tubing (old) onto trailer. Load out 242 joints x 2-7/8" tubing, 2-7/8" pup joints, and 2-7/8" GLM. Spot 265 joints x 3-1/2"/9.3# L80 EUE tubing on location. Change pipe rams to 3-1/2" and pressure test to 300 psi (low) and 5000 psi (high) for 20 min each- charted.</p> <p>P/U pretested Baker 3.25" SB x 2-7/8" EU Model 'D' anchor latch seal assembly, 2-7/8"/6.5# x 10' L80 EUE pup joint, and 2-7/8" x 2.31" 'BXN' nipple w/ 2.205" NO-GO (all seal lubed). P/U and seal lube 1 joint x 2-7/8"/6.5# L80 EUE tubing, 2-7/8" x 2.31" Baker 'CD' sliding sleeve (open down), 1 joint x 2-7/8" tubing, and 3-1/2" EUB x 2-7/8" EUP L80 Xover. P/U, tally, drift, and seal lube 3 joints x 3-1/2"/9.3# L80 EUE tubing.</p> <p>MIRU slickline unit. P/U lubricator and RIH w/ 2.31" 'N' test tool and set in 2.31" 'BXN' nipple. MIRU hydrotest unit. Bundle test BHA to 4000 psi for 20 mins on a digital gauge. Bleed off and recover 2.31" 'N' test tool from profile nipple. RDMO slick line. P/U 3-1/2" bar tools.</p> <p>Continue to tally, drift, seal lube, and hydrotest in hole w/ BHA and 83 more joints x 3-1/2" tubing. Leave EoT @ 2702' for overnight.</p> <p>Close well and secure for overnight. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |

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

Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Well: Porter 69 D

A.P.I. No. 03724130

Date: 7/25/2016

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

Field: Aliso Canyon County: Los Angeles

Surface Location: Sec 28, T3N, R16W, SBB&M

Name: Tom McMahon Title: SIMP Project Manager

(President, Secretary, or Agent)

Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)  |
|------------|--|
| 6/7/2016   | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1189 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 395 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well and fill with 2 bbls polymer.</p> <p>Continue in hole with production tubing BHA. P/U , tally, drift, seal lube, and hydrotest in hole with remainder of 250 joints x 3 -1/2"/9.3# L80 EUE production tubing. P/U tubing swivel and 3-1/2" TIW valve. Record up and down weights (110k/80k). Locate top of Baker 9-5/8"/47# x 3.25" Model 'D' packer @ 7642' and latch in. Set down 15k lbs, mark tubing, and release from packer, L/D 2 joints x 3-1/2" tubing and space out seals. P/U, drift, tally, seal lube, and hydrotest ( 1 each) @ 3-1/2"/9.3# L80 x8',6', and 4' pups joints. P/U pretested tubing hanger assembly: 2-7/8" EUB x 3-1/2" EUP L80 Xover, 2-7/8"/6.5# x 10' EU L80 pup joint, 2-7/8"/6.5# x 3' EU L80 Fatigue Nipple, and Shaffer 11" x 2-7/8" EU 'AJS' tubing hanger. Re Latch into packer @ 7642' and land tubing hanger in +15,000# compression.</p> <p>Lockdown tubing hanger. RDMO hydrotest truck.</p> <p>Pressure test casing to 1100 psi for 20 mins on a digital gauge. Close well and secure for overnight. SDFN.</p> <p>BOPE drill @ 08:00 hrs- well closed in 32 seconds.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |
| 6/8/2016   | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1189 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 395 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well.</p> <p>MIRU PROS testing. Pressure up on 9-5/8"/47# N80 casing( packer @ 7642' to surface) to 1101 psi and digitally record test for 1 hour. Pressure declined 3 psi to 1098 psi. DOGGR witness and pass test.</p> <p>MIRU slickline unit. RIH w/ 2.31" 'PXN' plug and prong and set in 2.31" 'XN' nipple @ 7629.80'. RDMO slickline unit.</p> <p>Pressure up on 3-1/2"/9.3# L80 tubing ( 7629.80' to surface) to 3758 psi and digitally record for 1 hour. Pressure declined 26psi to 3732 psi. DOGGR Witness and pass test.</p> <p>RDMO test truck. Remove work floor.<br/>Waiting on DOGGR approval of caliper log. Close in and secure well. SDFN.</p> <p>DOGGR Witness: Mark Woods</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p>  |

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

Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company  
Well: Porter 69 D  
A.P.I. No. 03724130  
Date: 7/25/2016  
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles  
Surface Location: Sec 28, T3N, R16W, SBB&M  
Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)  
Telephone Number: 714-398-5020  
Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)  |
|------------|--|
| 6/9/2016   | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1189 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 395 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well. Decision made to pull well and re-run Multi-Arm caliper log.</p> <p>R/U work floor and spot pipe trailer. MIRU slickline unit. Pull 2.31" 'PXN' plug from 2.31" 'BXN' nipple @ 7630'. RDMO slickline. R/U tubing swivel and TIW valve. Unscrew lock downs on tubing hanger and release anchor latch seals from Baker 9-5/8"/47# x 3.25" Model 'D' packer @ 7642'. Break circulation with 2 bbls polymer. L/D Shaffer 11" x 2-7/8" tubing hanger assembly. Start to pull out of hole with 3-1/2"/9.3# L80 EUE tubing. 50% of the thread connections in the first 30 stands galling on the way out. Call out Quality Tubular to investigate- recommend laying down all the tubing due to excessive galling. L/D 218 joints x 3-1/2"/9.3# L80 EU tubing, 2-7/8" flow control equipment, and Baker 3.25" x 2-7/8" seal section assembly.</p> <p>RIH w/ 60 joints x 3-1/2" tubing. Leave kill string @ 1848' for overnight.<br/>Close in and secure well. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |
| 6/10/2016  | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1190 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 620 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well and fill with 10 bbls polymer.</p> <p>POOH w/ 60 joints x 3-1/2"/9.3# L80 tubing. N/U shooting flange. MIRU Baker wireline and re-head rope socket. M/U, record fishing dimensions, and calibrate Hotwell 56-Arm caliper tools. P/U wire line tools and pack off. RIH and tag BHI 9-5/8"/47# Model 'D' permanent packer 8' deeper than recorded depth of 7642' (correlate to Jan. 2013 SLB USIT log). P/U @ 7644' and log to surface @ 30 fpm- Repeat passes from: 7644' to 7400', 7644' to 5800', 3850' to 3650', and 4190' to 3990'. Onsite field engineers review data and email to Senior Engineer for approval. Perform 1 min time log near surface inside 9-5/8"/47# casing and 1 min time log inside 9-5/8"/40# casing stub at surface.</p> <p>RDMO wireline. N/D shooting flange.</p> <p>RIH w/ 60 joints x 3-1/2" tubing. Leave kill string @ 1848' for overnight.<br/>Close in and secure well. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p>   |

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

Rec'd 08-15-16 DOGGR Ventura.

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Well: Porter 69 D

A.P.I. No. 03724130

Date: 7/25/2016

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

Field: Aliso Canyon County: Los Angeles

Surface Location: Sec 28, T3N, R16W, SBB&M

Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)

Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)   |
|------------|---|
| 6/11/2016  | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1190 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 620 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well and fill with 1 bbls polymer.</p> <p>L/D remaining 60 joints x 3-1/2"/9.3# L80 EUE production tubing (used) onto trailer. Load out 265 joints (248 used/17 new) x 3-1/2" tubing and 3-1/2" pup joints- Send to NOV in Santa Paula. Spot 265 joints (new) x 3-1/2"/9.3# L80 EUE tubing on location.</p> <p>P/U pretested Baker 3.25" SB x 2-7/8" EU Model 'D' anchor latch seal assembly, 2-7/8"/6.5# x 10' L80 EUE pup joint, and 2-7/8" x 2.31" 'BXN' nipple w/ 2.205" NO-GO (all seal lubed). P/U and seal lube 1 joint x 2-7/8"/6.5# L80 EUE tubing, 2-7/8" x 2.31" Baker 'CD' sliding sleeve (open down), 1 joint x 2-7/8" tubing, and 3-1/2" EUB x 2-7/8" EUP L80 Xover. P/U, tally, drift, and seal lube 3 joints x 3-1/2"/9.3# L80 EUE tubing.</p> <p>MIRU slickline unit. P/U lubricator and RIH w/ 2.31" 'N' test tool and set in 2.31" 'BXN' nipple. MIRU hydrotest unit. Bundle test BHA to 4128 psi for 20 mins on a digital gauge. Bleed off and recover 2.31" 'N' test tool from profile nipple. RDMO slick line. P/U 3-1/2" bar tools.</p> <p>Continue to tally, drift, seal lube, and hydrotest in hole w/ BHA and 132 more joints (135 total) x 3-1/2" tubing. All 3-1/2"/9.3# L80 EUE tubing torque to 2500 ft/lbs, as per Quality Tubular representative. Quality Tube R/U digital line pull gauge and double check hydraulic pressures for tubing torque on rig tongs- torque gauge within acceptable variance for all sizes, weights, and grades of tubing run at SCG Aliso Canyon. Leave EoT @ 4222' for overnight.</p> <p>Close in and secure well. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> |

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company  
 Well: Porter 69 D  
 A.P.I. No. 03724130  
 Date: 7/25/2016  
 Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles  
 Surface Location: Sec 28, T3N, R16W, SBB&M  
 Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)  
 Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)  |
|------------|--|
| 6/13/2016  | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1193 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 608 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well and fill with 2 bbls polymer.</p> <p>Continue to tally, drift, seal lube, and hydrotest in hole w/ BHA and 114 more joints (249 total) x 3-1/2"/9.3# 180 EUE tubing. All 3-1/2"/9.3# L80 EUE tubing torque to 2500 ft/lbs , as per Quality Tubular representative. P/U 3-1/2" TIW valve and tubing swivel. Record up &amp; down weights (108k/78k). Locate Baker 9-5/8"/47# x 3.25" SB Model 'D' packer 10' deeper than recorded depth of 7642'. Latch into packer and pull 25k over string weight to ensure positive latch. Apply +15k compression and mark tubing. Release seals from packer, L/D 2 joints x 3-1/2" tubing (247 in hole), and space out production string (obtain permission to turn up torque to 2800 ft/lbs to rotate tubing free from packer) . P/U, drift, tally, seal lube, and hydro-test (1 ea) 3-1/2"/9.3# L80 EUE x 10', 2' pup joint .P/U pretested tubing hanger assembly: 2-7/8" EUB x 3-1/2" EUP L80 Xover, 2-7/8"/6.5# x 10' EU L80 pup joint, 2-7/8"/6.5# x 3' EU L80 Fatigue Nipple, and Shaffer 11" x 2-7/8" EU 'AJS' tubing hanger.</p> <p>RDMO test truck. MIRU vacuum truck and pump 50 bbls packer fluid (3% KCL w/ 5gal/100bbls Amber-Guard &amp; 5gal/100bbls CAP) @ 3bpm down tubing/ up casing. Displace packer fluid with 60bbls polymer and balance across bottom of tubing string from 7642'- 6928'.</p> <p>Re Latch into packer @ 7642' and land tubing hanger in +18,000# compression. Lockdown hanger and pressure test casing to 1018 psi for 20min on a digital gauge.</p> <p>Bleed off casing. Close in and secure well. SDFN.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>                     Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>                     Liner: 5-1/2"/17# J55 (7711-8107')</p> <p>BOP drill @ 10:00 hrs- well closed and secured in 38 seconds.</p> |

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES *Rec'd 08-15-16 DOGGR Ventura.*

## HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company

Well: Porter 69 D

A.P.I. No. 03724130

Date: 7/25/2016

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

Field: Aliso Canyon County: Los Angeles

Surface Location: Sec 28, T3N, R16W, SBB&amp;M

Name: Tom McMahon Title: SIMP Project Manager  
(President, Secretary, or Agent)

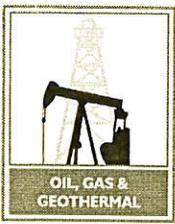
Telephone Number: 714-398-5020

Signature: \_\_\_\_\_

(Person Submitting Report)

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

| Start Date | Ops this Report (DOGGR)   |
|------------|---|
| 6/14/2016  | <p>Hold safety meeting with crew and service personnel. Service rig and equipment. Pressures= Field= 1193 psi / SITP= 0 psi / SICP= 0 psi. Strap tanks= 710 bbls 8.5ppg, 55 vis, HEC polymer on location. Open well.</p> <p>MIRU slickline unit. RIH w/ 2.31" 'PXN' plug and prong and set in 2.31" 'XN' nipple @ 7629.80'. RDMO slickline unit.</p> <p>MIRU PROS testing. Pressure up on 9-5/8"/47# N80 casing( packer @ 7642' to surface) to 1105 psi and digitally record test for 1 hour. Pressure declined 4 psi to 1101 psi. DOGGR witness and pass test. Pressure up on 3-1/2"/9.3# L80 tubing ( 7629.80' to surface) to 3777 psi and digitally record for 1 hour. Pressure declined 7 psi to 3770 psi. DOGGR Witness and pass test.</p> <p>RDMO test truck. Remove work floor. MIRU Stinger. N/D BOPE and load out onto trailer. Load out BOPE and choke manifold - spot at Porter 69A.</p> <p>Spot Cameron Nipple-Up crew. N/U 5M wellhead with 2-9/16" double master and wing valves. Torque bolts with power unit. Pressure test wellhead seals to 300 psi (low) and 5000 psi (high) for 20 min each- chart tests. Install 2-7/8" Shaffer BPV and shell test wellhead to 300 psi (low) and 5000 psi (high) for 20 min each- chart tests. Remove BPV.</p> <p>Lay down rig.</p> <p>Casing: 9-5/8"/47# N80 (0-7801')<br/>Packer: BHI 9-5/8"/47# x 3.25" SB Model 'D' (7642')<br/>Liner: 5-1/2"/17# J55 (7711-8107')</p> <p>DOGGR Witness: Scott McGurk &amp; B.G. Tackett</p> |
| 6/14/2016  | <p>Hold safety meeting with slickline crew. SITP= 0 psi / SICP=0 psi.</p> <p>R/U lubricator onto well head. Open well. RIH and shift Baker 2-7/8" x 2.31" 'CD' sleeve @ 7595' to the 'OPEN' position.</p> <p>Pull out of hole. RDMO.</p> <p>Close in well.</p>  |



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

No. T 216-0217

## REPORT ON OPERATIONS

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

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

Ventura, California  
August 02, 2016

Your operations at well "**Porter**" 69D, A.P.I. No. 037-24130, Sec. 28, T. 03N, R. 16W, SB B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on 6/8/2016, by **Michael Woods**, a representative of the supervisor.

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

DECISION:

APPROVED

MW/TKC

Kenneth A. Harris Jr.  
State Oil and Gas Supervisor

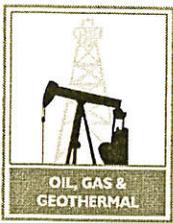
By   
FAR Patricia A. Abel, District Deputy

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

No. T 216-0217  
 16,1

## MECHANICAL INTEGRITY TEST (MIT)

|  |       |        |          |   |                            |
|--|-------|--------|----------|---|----------------------------|
| Operator: <b>Southern California Gas Company</b>   |       |        |          | Well: <b>"Porter" 69D</b>   |                            |
| Sec. 28  | T. 3N | R. 16W | SB B.&M. | API No.: <b>037-24130</b>   | Field: <b>Aliso Canyon</b> |
| County: <b>Los Angeles</b>   |       |        |          | <input checked="" type="checkbox"/> Witnessed <input type="checkbox"/> Reviewed on: <b>6/8/2016</b> |                            |
| <b>Michael Woods</b> , representative of the supervisor, was present from <b>0945</b> to <b>1130</b> .   |       |        |          |   |                            |
| Also present were: <b>Jason Pike, Consultant</b>   |       |        |          |   |                            |
| Casing record of the well:   |       |        |          |   |                            |
|  |       |        |          |   |                            |
| The MIT was performed for the purpose of demonstrating the mechanical integrity of the <b>9 5/8"</b> casing.   |       |        |          |   |                            |
| <input type="checkbox"/> The MIT is approved since the R/A tracer survey indicates that all of the injection fluid is confined to formations below _____ at this time.   |       |        |          |   |                            |
| <input checked="" type="checkbox"/> The MIT is approved because the <b>9 5/8"</b> casing held a pressure of <b>1100 psi</b> for <b>60</b> minutes.<br><input checked="" type="checkbox"/> The MIT is approved because the <b>3 1/2"</b> tubing held a pressure of <b>3750 psi</b> for <b>60</b> minutes. |       |        |          |   |                            |
| <input type="checkbox"/> The MIT is approved since the temperature survey indicates no fluid migration between _____ and the surface.  |       |        |          |   |                            |
| <input type="checkbox"/> The MIT is not approved due to the following reasons:   |       |        |          |   |                            |
| Comments:<br>1. <b>The tubing was landed on a packer @ 7642' for the casing test.</b><br>2. <b>A tubing plug was set inside the 3 1/2" tubing at 7630' for the tubing test.</b>  |       |        |          |   |                            |
| Deficiencies Corrected: <b>None</b>  |       |        |          |   |                            |
| Deficiencies to be Corrected: <b>None</b>  |       |        |          |   |                            |
| Uncorrectable Deficiencies: <b>None</b>  |       |        |          |   |                            |
| Contractor: <b>Rival Well Services</b>   |       |        |          |   |                            |



NATURAL RESOURCES AGENCY OF CALIFORNIA  
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1000 S. Hill Rd, Suite 116 Ventura, CA 93003-4458  
Phone:(805) 654-4761 Fax:(805) 654-4765

No. T 216-0192

## REPORT ON OPERATIONS

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

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

Ventura, California  
August 02, 2016

Your operations at well "**Porter**" 69D, A.P.I. No. 037-24130, Sec. 28, T. 03N, R. 16W, SB B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on 5/20/2016, by **Clifford R. Knight**, a representative of the supervisor.

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

DECISION:

**APPROVED**

CRK/TKC

Kenneth A. Harris Jr.  
State Oil and Gas Supervisor

By

  
PAA Patricia A. Abel, District Deputy

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

Operator: So Cal Gas Well: Porter 69 D

Sec. 28 T. 3N R. 16W B.&M. SB API No.: 037-24136 Field: Aliso Canyon

County: Los Angeles Witnessed/Reviewed on: C. Knight 15-20-16

C. Knight, representative of the supervisor, was present from 1000 to 1830.

Also present were: Jason Fike, Jim Dobbs (tool pusher), Enrique Marroquin (PRDs)

Casing record of the well:

|  |  |
|--|--|
| Test (psi)<br>① Surface : 2252-2253<br>hydrostatic : 3382<br>Total : 5634-5635<br><br>② Surface : 3700-3675<br>hydrostatic : 1547<br>Total : 5247-5222 | <p style="text-align: right;">70L<br/>771'<br/>810'</p> <p style="text-align: right;">9 5/8" (7801')<br/>13 3/8" (1038')</p> <p style="text-align: right;">Test Packer 3510'<br/>Perm. Packer 7652' tagged</p> |
|--|--|

weather: cloudy, cool, some sun showing  
8.5 ppm Polymer Fluid

The Internal MIT was performed for the purpose of pressure testing the 9 5/8" casing above 7652 (2) (prior to injecting fluid)

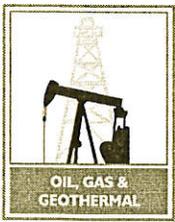
The Internal MIT is approved since it indicates that the 9 5/8" casing has mechanical integrity above 7652 at this time.

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

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

|             |             |               |
|-------------|-------------|---------------|
| <u>Time</u> | <u>Time</u> |               |
| ① 10:28     | 16:03       | } 25 psi drop |
| 11:28       | ② 17:03     |               |
| 2252psi     | 3700psi     |               |
| 2753 psi    | 3675psi     |               |

The 9 5/8" casing and production packer held 115% of reservoir pressure for 60 minutes.



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

No. T 216-0180

## REPORT ON OPERATIONS

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

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

Ventura, California  
August 02, 2016

Your operations at well "**Porter**" 69D, A.P.I. No. 037-24130, Sec. 28, T. 03N, R. 16W, SB B.&M., Aliso Canyon field, in **Los Angeles** County, were witnessed on 5/17/2016, by **Ernest Blevins**, a representative of the supervisor.

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

DECISION:

APPROVED

EB/TKC

Kenneth A. Harris Jr.  
\_\_\_\_\_  
State Oil and Gas Supervisor

By   
\_\_\_\_\_  
P.A. Patricia A. Abel, District Deputy

API No. 037-24130

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

T 216-0180 #12,1

# BLOWOUT PREVENTION EQUIPMENT MEMO

Operator So. CA Gas Well "Porter" 69D Sec. 28 T. 3N R. 16W  
 Field Aliso Canyon County Los Angeles Spud Date \_\_\_\_\_  
 VISITS: Date 5-17-2016 Engineer Ernie Blevins Time (0815 to 1030) Operator's Rep. \_\_\_\_\_ Title \_\_\_\_\_  
 1st \_\_\_\_\_ ( \_\_\_\_\_ to \_\_\_\_\_ ) \_\_\_\_\_  
 2nd \_\_\_\_\_ ( \_\_\_\_\_ to \_\_\_\_\_ ) \_\_\_\_\_  
 Contractor Rival Rig # 6 Contractor's Rep. & Title \_\_\_\_\_  
 Casing record of well: \_\_\_\_\_

JIM Dabbs - P.S.S.  
Jason Fike - Consultant

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y  N   
 DECISION: The blowout prevention equipment and its installation on the 9 5/8 " casing are approved. 47#

Proposed Well Ops: Re Work . MACP: \_\_\_\_\_ psi  
 Hole size: \_\_\_\_\_ " fr. \_\_\_\_\_ " to \_\_\_\_\_ " to \_\_\_\_\_ " & \_\_\_\_\_ " to \_\_\_\_\_ " to \_\_\_\_\_ " psi  
 REQUIRED BOPE CLASS: III SM

| CASING RECORD OF BOPE ANCHOR STRING                              |                |              |               |                       |                                     |  |                    |                    |  | Cement Details              |                |           |             | Top of Cement |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|--|----------------|--------------|---------------|-----------------------|-------------------------------------|--|--------------------|--------------------|--|-----------------------------|----------------|-----------|-------------|---------------|------------|--------------|-------------|--|--|-------------|--|--|--|------|--------|--------|--|---|----|----|--|--|--|----|---|----|----|--|--|--|----|
| Size   | Weight(s)      | Grade(s)     | Shoe at       | CP at                 |                                     |  |                    |                    | Casing   | Annulus                     |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|  |                |              |               |                       |                                     |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| BOP STACK  |                |              |               |                       |                                     |  | TEST DATA          |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| API Symb.  | Ram Size (in.) | Manufacturer | Model or Type | Vert. Bore Size (in.) | Press. Rtg.                         | Date Last Overhaul                                   | Gal. to Close      | Recov. Time (Min.) | Calc. GPM Output   | psi Drop to Close           | Secs. to Close | Test Date | Test Press. |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| A  | Vari           | Hydril       |               | 11"                   | 5K                                  |  | 9.8                |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Rd   | 2 7/8          | Shaffer      |               | 11"                   | 5K                                  |  | 2.8                |                    |  | DOG-B                       |                | 5/17/16   | 3500        |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Rd   | 1.50           | Shaffer      |               | 11"                   | 5K                                  |  | 2.8                |                    |  | did NOT witness Tests.      |                |           | 5K          |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| ACTUATING SYSTEM   |                |              |               |                       |                                     |  | TOTAL: 15.4        |                    | AUXILIARY EQUIPMENT  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Accumulator Unit(s) Working Pressure <u>3000</u> psi             |                |              |               |                       |                                     |  | Inside BOP         |                    | <table border="1"> <thead> <tr> <th>No.</th> <th>Size (in.)</th> <th>Rated Press.</th> <th colspan="3">Connections</th> <th>Test Press.</th> </tr> <tr> <th></th> <th></th> <th></th> <th>Weld</th> <th>Flange</th> <th>Thread</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2"</td> <td>5K</td> <td></td> <td></td> <td></td> <td>5K</td> </tr> <tr> <td>2</td> <td>3"</td> <td>5K</td> <td></td> <td></td> <td></td> <td>5K</td> </tr> </tbody> </table> |                             |                |           |             | No.           | Size (in.) | Rated Press. | Connections |  |  | Test Press. |  |  |  | Weld | Flange | Thread |  | 1 | 2" | 5K |  |  |  | 5K | 2 | 3" | 5K |  |  |  | 5K |
| No.  | Size (in.)     | Rated Press. | Connections   |                       |                                     | Test Press.  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|  |                |              | Weld          | Flange                | Thread                              |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| 1  | 2"             | 5K           |               |                       |                                     | 5K   |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| 2  | 3"             | 5K           |               |                       |                                     | 5K   |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Total Rated Pump Output _____ gpm                                |                |              |               |                       |                                     |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Distance from Well Bore <u>~60</u> ft.                           |                |              |               |                       |                                     |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Accum. Manufacturer  |                |              | Capacity      | Precharge             | Fill-up Line                        |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| 1 <u>Weatherford</u>   |                |              | 80 gal.       | 1365 psi              | Kill Line                           |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| 2 <u>Knooney type</u>  |                |              | gal.          | psi                   | Control Valve(s)                    |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| CONTROL STATIONS   |                |              |               | Elec.                 | Hyd.                                | Pneu.  | Check Valve(s)     |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Manifold at accumulator unit |                |              |               |                       | <input checked="" type="checkbox"/> |  | Aux. Pump Connect. |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Remote at Driller's station  |                |              |               |                       |                                     | <input checked="" type="checkbox"/>                  | Choke Line         |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Other:   |                |              |               |                       |                                     |  | Control Valve(s)   |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| EMERG. BACKUP SYSTEM   |                |              |               | Press.                | Wkg. Fluid                          | Pressure Gauge                                       |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| 6 N <sub>2</sub> Cylinders                                       |                | 1            | L= 55 "       | 2500                  | 9.02 gal.                           | Adjustable Choke(s)                                  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Other:   |                | 2            | L= 55 "       | 2500                  | gal.                                | Bleed Line   |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|  |                | 3            | L= 35 "       | 2500                  | gal.                                | <input checked="" type="checkbox"/> Upper Kelly Cock |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|  |                | 4            | L= 55 "       | 2500                  | gal.                                | <input checked="" type="checkbox"/> Lower Kelly Cock |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|  |                | 5            | L= 55 "       | 2500                  | gal.                                | Standpipe Valve                                      |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|  |                | 6            | L= 55 "       | 2500                  | gal.                                | Standpipe Press. Gau.                                |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| TOTAL:   |                |              |               | 54.12                 | ga                                  | 2 Pipe Safety Valve                                  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| HOLE FLUID MONITORING  |                |              |               | Alarm Type            |                                     | Internal Preventer <u>DAAT</u>                       |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
|  |                | Audible      | Visual        | Class                 |                                     | Hole Fluid Type                                      |                    | Weight             |  | Storage Pits (Type & Size)  |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Calibrated Mud Pit           |                |              |               | A                     |                                     | <u>Poly Tec</u>                                      |                    | <u>8.5 #</u>       |  | <u>(700 bb/s) 6697 bb/s</u> |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Pit Level Indicator          |                |              |               | B                     |                                     |  |                    |                    |  | <u>498 bb/s in hole</u>     |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Pump Stroke Counter          |                |              |               | C                     |                                     | REMARKS AND DEFICIENCIES:                            |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Pit Level Recorder           |                |              |               |                       |                                     | <u>Jeremy w/ Weatherford was 3rd Party</u>           |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Flow Sensor                  |                |              |               |                       |                                     | <u>BOP Tester. Tests were charted.</u>               |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Mud Totalizer                |                |              |               |                       |                                     |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| <input checked="" type="checkbox"/> Calibrated Trip Tank         |                |              |               |                       |                                     |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |
| Other:   |                |              |               |                       |                                     |  |                    |                    |  |                             |                |           |             |               |            |              |             |  |  |             |  |  |  |      |        |        |  |   |    |    |  |  |  |    |   |    |    |  |  |  |    |

**DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES**

**CHECK LIST-RECORDS RECEIVED AND WELL STATUS**

Operator: Southern California Gas Company WELL DESIGNATION "Porter" 69D

API No. 03724130 SE 28 T: 3N R.: 16W , SB B. and M.

County: Los Angeles FIELD: Aliso Canyon

Type of Notice: Rework Date 5/12/2016 Report Number: P216-0064

**RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)**

**NEW STATUS**

|                      | Date    | OK | NEED | Remarks           |
|----------------------|---------|----|------|-------------------|
| Well Summary (OG100) |         |    | ✓    | NOTE              |
| History (OG103)      | 8-15    | ✓  |      |                   |
| E-Log                |         |    |      |                   |
| Mud Log              |         |    |      |                   |
| Dipmeter             |         |    |      |                   |
| Directional          |         |    |      |                   |
| Core and/or SWS      |         |    |      |                   |
| BOPE Ins             | 5/17/16 | ✓  |      |                   |
| Press. Test          | 5/20/16 | ✓  |      | Digital Data Rec. |
| Press. Test.         | 6/8/16  | ✓  |      | " " "             |
|                      |         |    |      |                   |
|                      |         |    |      |                   |
|                      |         |    |      |                   |
|                      |         |    |      |                   |
|                      |         |    |      |                   |
|                      |         |    |      |                   |
|                      |         |    |      |                   |
|                      |         |    |      |                   |
|                      |         |    |      |                   |

DATE: \_\_\_\_\_

**NOTICE OF RECORDS DUE**

DATE: 10-26-16

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

**WELL STATUS INQUIRY**

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

**Well Stat**

Change Required: \_\_\_\_\_

Change Done: \_\_\_\_\_

**ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS**

CalWims Abandonment Form: \_\_\_\_\_ SURFACE INSPECTION NEEDED \_\_\_\_\_ COMPLETED \_\_\_\_\_

Date and Inspector

FINAL LETTER NEEDED \_\_\_\_\_ COMPLETED \_\_\_\_\_ Calwims DRILL/REDRILL Form \_\_\_\_\_

(Date)

**ENGINEER'S CHECK LIST**

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

Calwims Location \_\_\_\_\_ Calwims ELEVATION: \_\_\_\_\_ CONFIDENTIAL RELEASE DATE: \_\_\_\_\_ PERMIT REQUIREMENTS MET \_\_\_\_\_

**CLERICAL CHECK LIST**

LOCATION CHANGE (OG165) \_\_\_\_\_ ELEVATION CHANGE (OG165) \_\_\_\_\_ RELEASE OF BOND (OG150) \_\_\_\_\_

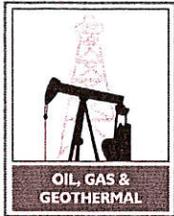
**REMARKS**

RECORDS SCANNED: \_\_\_\_\_

(Date)

RECORDS APPROVED: D.O. 8-16-16

(Date and Engineer)



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

No. P 216-0064

**PERMIT TO CONDUCT WELL OPERATIONS**

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

Gas Storage

"Sesnon-Frew" - Modelo (Miocene-Eocene) Formation

Ventura, California  
 May 18, 2016

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

Your proposal to **Rework** well "**Porter**" 69D, A.P.I. No. **037-24130**, Section **28**, T. **03N**, R. **16W**, **SB B. & M.**, **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **5/12/2016**, received **5/16/2016** has been examined in conjunction with records filed in this office. (Lat: **34.314924** Long: **-118.557258** Datum:83)

**THE PROPOSAL IS APPROVED PROVIDED:**

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
  - a. Class III 5M on the 9 5/8" casing.
2. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
4. A Temperature and Noise log are run on the well from the packer to surface.
5. **A Casing Wall Thickness Inspection, Cement Bond Log, and a Multi-Arm Caliper Inspection** shall be performed to demonstrate that the 9 5/8" casing has integrity.
6. Prior to commencing injection, a pressure test is conducted to demonstrate the mechanical integrity of the 9 5/8" casing.
7. Injection shall be through tubing and packer only. Injection or withdrawal through the casing is not permitted.
8. This office shall be contacted by phone prior to making any program changes and no changes are made without Division approval.
9. **THIS DIVISION SHALL BE NOTIFIED TO:**
  - a. Inspect the installed blowout prevention equipment prior to commencing **downhole** operations.
  - b. Witness a pressure test of the tubing and 9 5/8" casing prior to commencing injection.

Continued on Next Page

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

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

CRK/crk

Kenneth A. Harris Jr.  
 State Oil and Gas Supervisor

By   
 Patricia A. Abel, District Deputy

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

Page 2

Well #: "Porter" 69D

API #: 037-24130

Permit : P 216-0064

Date: May 18, 2016

**NOTE:**

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

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

**ATTACHMENT 1  
TO DOGGR ORDER 1109**

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

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

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

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

**REQUIRED TESTS FOR EACH WELL IN THE FACILITY**

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

- Step 2:** The results of the Temperature Logs and Noise Logs will be independently reviewed by Division engineers. Any unexplained abnormal findings in this set of tests shall be addressed by the Operator in one of the following ways:
- a. Conduct further investigation and demonstrate to the Division's satisfaction that the abnormal finding is not an indicator of a lack mechanical integrity;
  - b. Remediate the well to the Division's satisfaction; or
  - c. With Division review and approval, remove the well from operation and isolate the well from the underground gas storage reservoir in accordance with Steps 4b through 7b below.

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

- Step 3:** After these tests are completed on the well, and all required action has been completed, the operator shall either:
- a. Conduct the additional tests and evaluations on the well, outlined in Steps 4a through 7a below, in order to gain approval for injecting gas through that well; or
  - b. Remove the well from operation and isolate the well from the underground gas storage reservoir in accordance with Steps 4b through 7b below.

#### **REQUIRED TESTS IF A WELL IS INTENDED TO RESUME OPERATIONS**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### **REQUIREMENTS FOR WELLS RESUMING OPERATIONS IN ALISO CANYON**

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



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

Rec'd 05-16-16 DOGGR Ventura.

| FOR DIVISION USE ONLY |                   |        |
|-----------------------|-------------------|--------|
| Bond                  | Forms             |        |
|                       | <del>000114</del> | 000121 |
|                       | CAU<br>WIMS       | 115    |

P216-0064

## NOTICE OF INTENTION TO REWORK / REDRILL WELL

Detailed instructions can be found at: [www.conservation.ca.gov/dog/](http://www.conservation.ca.gov/dog/)

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework  / redrill  well Porter 69D, API No. 037-24130  
(Check one)

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

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

See attached wellbore schematic

The total depth is: 8120 feet. The effective depth is: 8107 feet.  
Present completion zone(s): Sesnon Anticipated completion zone(s): Same  
(Name) (Name)  
Present zone pressure: storage psi. Anticipated/existing new zone pressure: storage psi.

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

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

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

See attached program

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

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

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

|  |                                     |   |                        |
|--|-------------------------------------|---|------------------------|
| Name of Operator<br>Southern California Gas Company                |                                     |   |                        |
| Address<br>P. O. Box 2300  |                                     | City/State<br>Chatsworth                            | Zip Code<br>91313-2300 |
| Name of Person Filing Notice<br>Mark Ghann-Amoah                   | Telephone Number:<br>(806) 401-2979 | Signature<br>                                       | Date<br>05/12/16       |
| Individual to contact for technical questions:<br>Mark Ghann-Amoah | Telephone Number:<br>(806) 401-2979 | E-Mail Address:<br>mghann-amoah@semprautilities.com |                        |

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

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

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

### CRITICAL WELL DEFINITION

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

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

### WELL OPERATIONS REQUIRING BONDING

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

This form may be printed from the DOGGR website at [www.conservation.ca.gov/dog/](http://www.conservation.ca.gov/dog/)

# WORKOVER PROJECT

## Porter 69D – Well Inspection

**DATE:** May 12, 2016  
**OPERATOR:** SOUTHERN CALIFORNIA GAS COMPANY  
**FIELD:** ALISO CANYON  
**WELL:** Porter 69D  
**API NUMBER:** 037-24130  
**ELEVATION:** All depths based on original KB, 23.5' above GL  
**SURFACE LOCATION:** SEC 28, T3N, R16W, S.B. B&M

### OBJECTIVE

The intent of this program is to inspect the well integrity and remediate identified conditions as part of the Storage Integrity Management Program (SIMP). This project will include pulling 2-7/8" completion string, running casing inspection logs, pressure testing casing and well laterals, installing a new completion string, converting well to tubing flow, and installing pressure monitors. Baseline assessment data will be gathered on vertical casing pipe and other well components.

### WELL RECORD

|                     |  |
|---------------------|--|
| Current Status:     | Active   |
| TD:                 | 8120' MD; 7723 TVD   |
| Special Conditions: | Last tagged at 8085' during temp survey 03/15/2016   |
| Casing Record:      | 13-3/8", 54.5#, K-55 casing cemented at 1038' with 1035 CF<br><br>9-5/8", 47#, N-80 casing cemented at 7801' with 463 Bbls<br><br>5-1/2", 17#, J-55 WWS liner from 7711'-8107'<br>Perfs: 0.012" slots from 7794'-7822'; 0.012" WWS from 7822'-8105';<br>GP'd with 241 sks 20-40 sand |
| Tubing Record:      | See attached mechanical diagram for tubing/packer detail   |

### GEOLOGIC MARKERS

Surface Elevation = 2366'  
 Original KB = 23.5'

|    |         |           |     |         |           |
|----|---------|-----------|-----|---------|-----------|
| MP | 7505'md | -4759'vss | S8  | 7940'md | -5160'vss |
| S1 | 7773'md | -5006'vss | S10 | 8006'md | -5221'vss |
| S2 | 7803'md | -5034'vss | S12 | 8062'md | -5273'vss |
| S4 | 7853'md | -5080'vss | S14 | 8095'md | -5303'vss |
| S6 | 7874'md | -5100'vss |     |         |           |

Estimated Field Pressure: 1068 psi on 3/15/2016 (Variable)

Estimated Bottom-hole Temperature: 161°F from 03/15/2016 temperature survey

**PROJECT NOTES**

1. BOPE requirements in Gas Company Standard 224.05 shall be fully implemented at all times.
2. The storage reservoir pressures shall be monitored during the workover with a minimum of 300 psig overbalance for well control fluids.
3. Prepare the location by removing all relevant landscaping/lighting fixtures as well as surface piping and electrical components as needed. Locate rig anchors, reinstall if necessary.
4. DOGGR permit must be posted on site. Notify the DOGGR as required for BOPE testing prior to commencing downhole operations as stated on permit. DOGGR Ventura District office (805)-654-4761. If a permit has not been issued contact DOGGR 24 hours prior to rigging up on the well for verbal approval to rig up.

**PRE-RIG WORK**

1. De-energize and remove all laterals. Install companion flanges for circulating the well.
2. Complete slickline work as required to set-up well for circulation.

**WELLWORK PROGRAM**

1. Move in production rig and rig pump with tank, shaker, and mixer.
2. Spot 500 bbl Baker tanks and load with 8.5 ppg KCl brine.
  - a.) Connect pump to the tubing and vent the casing through the choke manifold to the SoCalGas withdrawal system.
  - b.) Treat all brine with Biocide, 5 gals/100 bbls
3. Change well over to 8.5 ppg KCL brine. The tubing volume is approximately 44 bbls. and the tubing/casing annulus is approximately 497 bbls. Use HEC polymer as required to minimize lost circulation.
4. Install backpressure valve in tubing hanger. Nipple down tree. Send-in wellhead and tree components to Cameron for inspection.
5. +++Install a Class III 5M BOPE per Gas Company Standard 224.05 and in accordance with the DOGGR permit. All connections and valves must be flanged and at least 5000 psig rated.
  - a.) Pressure test the Class III 5M annular preventer to 3500 psig for 20 minutes. Test blind rams and the 2-7/8" pipe rams to 5000 psig for 20 minutes. Test all lines and connections to 5000 psig.
  - b.) Perform a 300 psig low pressure test on the annular preventer, blind rams and pipe rams for 20 minutes. Test all lines and connections to 300 psig.
  - c.) All tests are to be charted and witnessed by a DOGGR representative.
  - d.) Remove BPV.

6. Attempt to unlatch from Baker Model D packer at 7642'. POOH laying down production string and jewelry. Note: if tubing won't release, chemical cut tubing above no-go at +/- 7610' and POOH.
7. Pick-up BHA for milling over Baker Model D packer and RIH on 2-7/8, 6.5#, P-110, TKC work-string. Mill and retrieve packer as required.
8. Pick-up a 9-5/8", 47# positive casing scraper and bumper sub on 2-7/8" work-string and RIH to 5-1/2" liner top at 7711'. Circulate well clean. POOH.
9. RIH with clean-out assembly for 5-1/2" liner on production string and clean-out to bottom at 8120'. POOH.
10. Run Gyro from TD to surface. Send a copy of the survey file to engineering team
11. Make-up and run a 9-5/8", 47# retrievable bridge plug (BP) on work-string. Set at approximately 7701' (10 ft above liner top), pressure test to 1000 psi, and sand off.
12. Nipple down 11" Class III 5 M BOPE, crossover spool, and primary pack-off.
  - a.) Send DSA and tubing spool to Cameron for refurbishment.
  - b.) Install auxiliary DSA and spacer spool. Function test rams.
13. Rig-up wireline unit(s) with lubricator and run the following:
  - a.) Ultrasonic imager from BP to surface (SLB)
  - b.) Cement bond log from BP to surface (SLB)
  - c.) Magnetic flux leakage BP to surface (Baker)
  - d.) Multi-arm caliper log from BP to surface (Baker)
14. Nipple down 11" Class III 5 M BOPE, spacer spool, and auxiliary DSA.
  - a.) Replace the pack-off seals and reinstall tubing head, refurbished as necessary.
  - b.) Reinstall the 11" Class III BOPE.
  - c.) Pressure test the Class III 5M annular preventer to 3500 psig for 20 minutes. Test blind rams and the 2-7/8" pipe rams to 5000 psig for 20 minutes. Test all lines and connections to 5000 psig.
  - d.) Perform a 300 psig low pressure test on the annular preventer, blind rams and pipe rams for 20 minutes. Test all lines and connections to 300 psig.
  - e.) All tests are to be charted and witnessed by a DOGGR representative.
15. RIH with a test packer and run a Pressure Integrity Test on 9-5/8" casing from surface to BP to 115% of the wells maximum allowable operating pressure (3625 psi) as per attached Pressure Test Schedule. POOH with test packer.
  - a.) Engineering team to analyze log and pressure test results and recommend any additional remediation.
16. RIH with retrieving tool for BP on work-string to top of sand. Circulate out sand and

engage BP. Release BP at 7701', circulate as required to control well. POOH and lay down work-string.

17. RIH with new completion string as detailed below. Run items a) through k) and 1 joint of 5-1/2" tubing. Install XN plug with slick line unit. Make up testing sub and test BHA to 3700 psi for 5 mins. Remove test sub and pull XN plug. Continue running 5-1/2" tubing hydrotesting each connection to 3700psi. Change-over to 4-1/2" hydrotest tools to test 4-1/2" surface space out pups.

- a.) 4-1/2" 12.75# L-80 EUE 8RD wireline re-entry guide
- b.) 4-1/2" 12.6# x 9-5/8" 47# TCPC production packer
- c.) 10' pup joint 4-1/2" 12.6# L-80 TCPC tubing
- d.) 4-1/2" 12.6# L-80 TCPC XN (3.81" w/3.725" no-go) nipple
- e.) Full joint 4-1/2" 12.6# L-80 TCPC tubing
- f.) 2ft Pup 4-1/2" 12.6# L-80 TCPC
- g.) 4-1/2" 12.6# L-80 TCPC (3.81" Open Down) sliding sleeve
- h.) 4ft Pup 4-1/2" 12.6# L-80 TCPC
- i.) Full joint 4-1/2" 12.6# L-80 TCPC tubing
- j.) 4-1/2" 12.6# TCPC Pin x 5-1/2" 20# TCPC Box Crossover pup joint (Top 4-1/2" neck on crossover to 3ft long minimum)
- k.) 5-1/2" 20# L-80 TCPC tubing to surface
- l.) Pup joints 4-1/2" 12.6# L-80 TCPC tubing for space-out
- m.) 4' 4-1/2" 12.6# L-80 TCPC fatigue nipple (pin x pin)
- n.) 10-3/4" tubing hanger with 4-1/2" EUE top box / 4" BPV / 4-1/2" TCPC bottom box

#### Notes

- Run sliding sleeve in closed position. Ensure new production packer depth is at or above depth at which test packer was used for pressure testing.
  - Make up items a) through d) under the supervision of Quality Tubulars. Pressure test assembly to 3700 psi for 1hr, chart test. Test caps to be installed and removed by Quality Tubulars.
  - Make up items f) through h) under the supervision of Quality Tubulars. Pressure test assembly to 3700 psi for 1hr, chart test. Test caps to be installed and removed by Quality Tubulars.
  - Shift sliding sleeve and drift with XN plug prior to shipping tools to location.
  - Seal lube top sub on ASX-1 packer, to be witnessed by Quality Tubulars.
18. Land tubing as per vendor specifications. **Note: amount of compression to set on packer will be determined by Force Analysis / Tube Move Calculations.**
19. Rig-up slickline unit and lubricator. Set a plug in the 4-1/2" XN profile.
20. Notify DOGGR to witness pressure tests of annulus to 1000 psi and tubing to 3700 psi. Both tests to be an hour in duration and recorded digitally.
21. RIH and recover plug from XN nipple. RIH and shift the sliding sleeve open.
22. Install BPV in tubing hanger. Nipple down the Class III 5M BOPE and install the production tree and test to 5000 psig. Remove BPV.

23. Release production rig, rig down and move out.

### **UNLOAD WELL**

24. Rig-up nitrogen unit. Recover workover fluid by pumping down annulus taking returns up tubing.
25. RIH with slickline and shift sliding sleeve closed. POOH and rig down slickline unit.

### **WELL LATERAL HYDROTESTING**

26. Per Gas Company Standard 182.0170, pressure test the tubing and casing kill laterals from the wellhead to the remote tie in to 3625 psig. Pressure test the tubing and casing withdrawal/injection laterals from wellhead to operating valves to 3625 psig.
27. Reinstall the hydro-tested laterals.
28. Install the well safety systems and instrumentation. Install pressure transmitters on tubing, casing, and surface casing.
29. Release well to operations.

### **EXTERNAL CORROSION PROTECTION**

Per Gas Company Standard 167.30, remove any lead based paint and recoat wellhead, production tree, and laterals.

Casing Pressure Test Schedule:

| Well: Porter 69D           |                       |                                     |                                 |                                     |  |   |   |        |                                  |                              |  |  |
|----------------------------|-----------------------|-------------------------------------|---------------------------------|-------------------------------------|--|---|---|--------|----------------------------------|------------------------------|--|--|
| Depth (TVD)                | 85% of Burst Strength | External Casing Backup Pressure     |                                 | Internal Water Hydrostatic Pressure | Pressure Test Net Burst Pressure @ Depth |   |   |        | Tubing Leak Net Burst Pressure @ | Test Pressure > 85% of Burst | Test Pressure < Tubing Leak - Net Burst (Gas-filled annulus) |  |
|                            |                       | Fluid / Formation Pressure Gradient | External Casing Backup Pressure |                                     | 1  | 2 | 3 | Final  | Gas-Filled Annulus               |                              |  |  |
| Surface Test Pressure      |                       |                                     |                                 |                                     | 3625                                     |   |   | 2250   | 3625                             |                              |  |  |
| Test Packer Depth          |                       |                                     |                                 |                                     | 3500                                     |   |   | 7695   |                                  |                              |  |  |
| Test Down Casing or Tubing |                       |                                     |                                 |                                     | Casing                                   |   |   | Casing |                                  |                              |  |  |
| Bridge Plug Depth          |                       |                                     |                                 |                                     |  |   |   | 7701   |                                  |                              |  |  |
| 0                          | 5840                  | 0.00                                | 0                               | 0                                   | 3625                                     |   |   | 2250   | 3625                             |                              |  |  |
| 500                        | 5840                  | 0.00                                | 0                               | 221                                 | 3846                                     |   |   | 2471   | 3670                             |                              |  |  |
| 1000                       | 5840                  | 0.00                                | 0                               | 442                                 | 4067                                     |   |   | 2692   | 3716                             |                              |  |  |
| 1500                       | 5840                  | 0.00                                | 0                               | 663                                 | 4288                                     |   |   | 2913   | 3761                             |                              |  |  |
| 2000                       | 5840                  | 0.00                                | 0                               | 884                                 | 4509                                     |   |   | 3134   | 3806                             |                              |  |  |
| 2500                       | 5840                  | 0.00                                | 0                               | 1105                                | 4730                                     |   |   | 3355   | 3852                             |                              |  |  |
| 3000                       | 5840                  | 0.00                                | 0                               | 1326                                | 4951                                     |   |   | 3576   | 3897                             |                              |  |  |
| 3500                       | 5840                  | 0.00                                | 0                               | 1547                                | 5172                                     |   |   | 3797   | 3942                             |                              |  |  |
| 4000                       | 5840                  | 0.00                                | 0                               | 1768                                | -  |   |   | 4018   | 3988                             |                              |  |  |
| 4500                       | 5840                  | 0.00                                | 0                               | 1989                                | -  |   |   | 4239   | 4033                             |                              |  |  |
| 5000                       | 5840                  | 0.00                                | 0                               | 2210                                | -  |   |   | 4460   | 4078                             |                              |  |  |
| 5500                       | 5840                  | 0.00                                | 0                               | 2431                                | -  |   |   | 4681   | 4123                             |                              |  |  |
| 6000                       | 5840                  | 0.00                                | 0                               | 2652                                | -  |   |   | 4902   | 4169                             |                              |  |  |
| 6500                       | 5840                  | 0.00                                | 0                               | 2873                                | -  |   |   | 5123   | 4214                             |                              |  |  |
| 7695                       | 5840                  | 0.00                                | 0                               | 3401                                | -  |   |   | 5651   | 4322                             |                              |  |  |
|                            |                       |                                     |                                 |                                     | 0.442                                    |   |   |        |                                  | 0.091                        |  |  |
|                            |                       |                                     |                                 |                                     | psi/ft                                   |   |   |        |                                  | psi/ft                       |  |  |
|                            |                       |                                     |                                 |                                     | int. grad.                               |   |   |        |                                  | int. grad.                   |  |  |

## Well Porter 69D

API #: 04-037-24130-00  
Sec 28, T3N, R16W

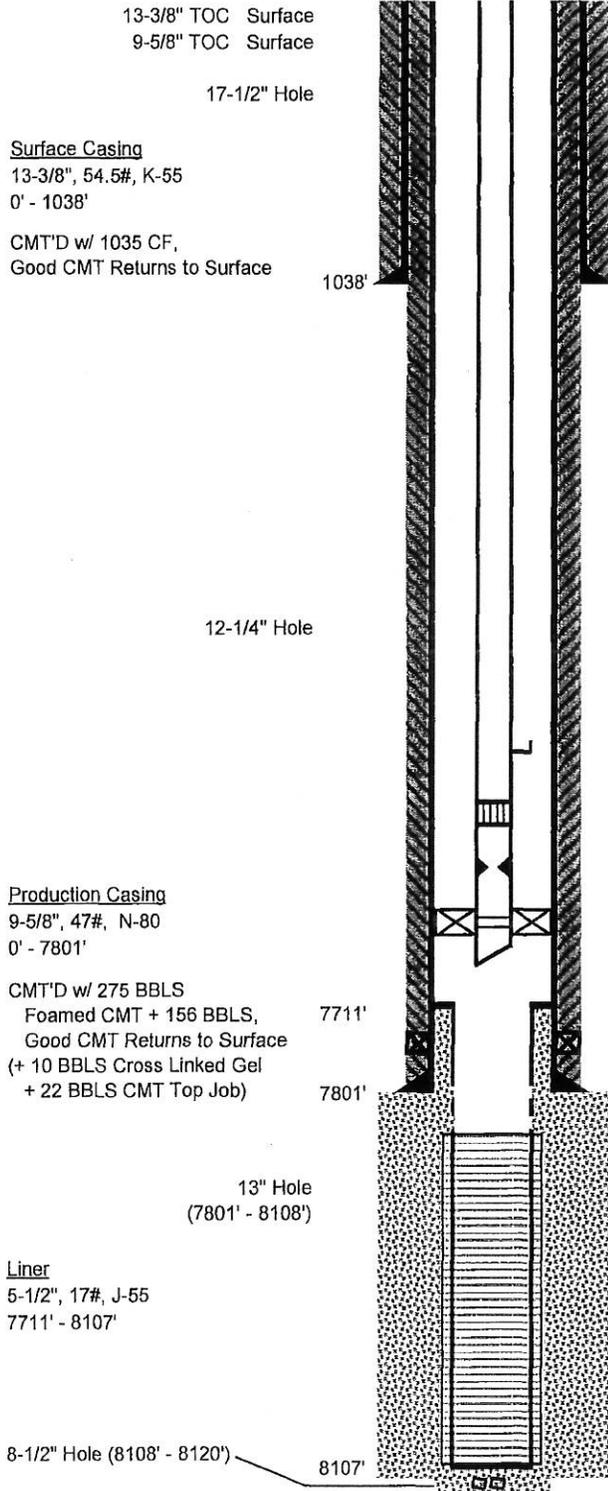
Operator: So. California Gas Co.

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

Ground Elevation: 2366' asl  
Datum to Ground: 23.5' KB

Spud Date: 4/28/1992  
Completion Date: 6/4/1992

Junk: Two (2) 8-1/2" Insert Bit  
Cones Below Liner @ 8107'



Tubing  
2-7/8", 6.5#, N-80  
0' - 7647'

Surface Casing  
13-3/8", 54.5#, K-55  
0' - 1038'

CMT'D w/ 1035 CF,  
Good CMT Returns to Surface

12-1/4" Hole

Production Casing  
9-5/8", 47#, N-80  
0' - 7801'

CMT'D w/ 275 BBLS  
Foamed CMT + 156 BBLS,  
Good CMT Returns to Surface  
(+ 10 BBLS Cross Linked Gel  
+ 22 BBLS CMT Top Job)

13" Hole  
(7801' - 8108')

Liner  
5-1/2", 17#, J-55  
7711' - 8107'

8-1/2" Hole (8108' - 8120')

7542' Camco 'MMA' GLM w/ 1-1/2" S.O.V.  
Set @ 2750 PSI on 1-1/2" 'RA' Latch

7577' Otis 'XD' SSD (Opens Down)

7610' Otis 'XN' No-Go Nipple

7642' Baker Model "D" PCKR  
w/ Baker E-22 Latch-in Shear Release Seal Assembly

7647' Tail

7757' - 7791' CTC Packer (Inflated w/ 19.4 BBLS)

Liner Perfs:  
7794' - 7822' 1-1/2" x 0.012", 12R, 6"C Slots  
7822' - 8105' 0.012" ga. WWS

Gravel Packed w/  
241 SKS (243 SKS Calc'd) 20-40

Junk below liner (see details above)

| Top of Zone Markers |       |          |
|---------------------|-------|----------|
| A36                 | 5098' | (-2541') |
| UP                  | 5557' | (-2966') |
| UDA1                | 6177' | (-3540') |
| MDA                 | 6868' | (-4174') |
| LDA                 | 7047' | (-4339') |
| MP                  | 7505' | (-4759') |
| S1                  | 7773' | (-5006') |
| S4                  | 7853' | (-5080') |
| S8                  | 7940' | (-5160') |

TD 8120'  
TD VSS (-5326')  
Directionally Drilled: Yes (TD is 2047' E, 332' S of Surf, 7723' TVD)

Prepared by: MAM (5/12/2016)

**Well  
Porter 69D**

API #: 04-037-24130-00  
Sec 28, T3N, R16W

**Production Casing Pressure Test - Program**

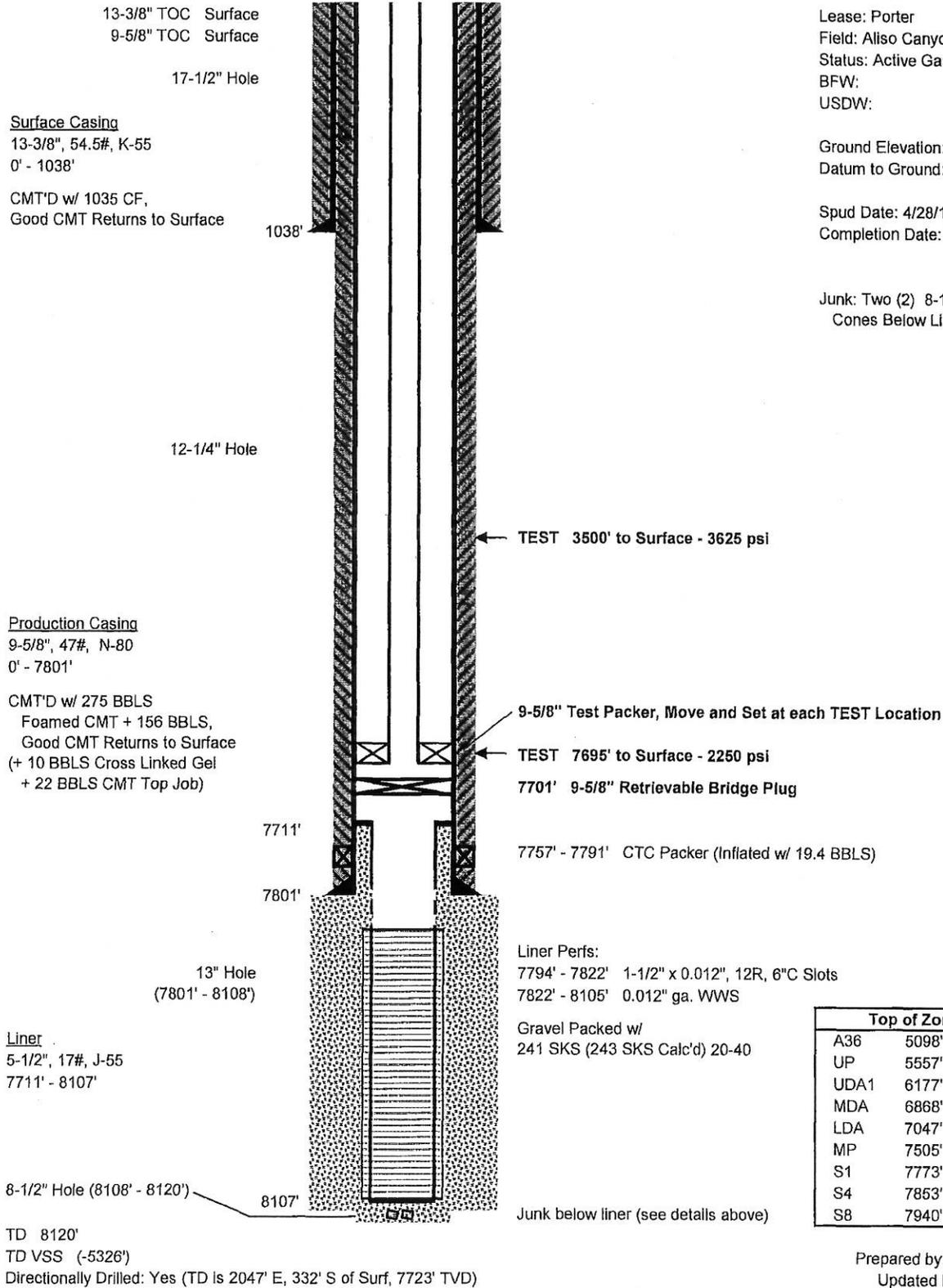
Operator: So. California Gas Co.

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

Ground Elevation: 2366' asl  
Datum to Ground: 23.5' KB

Spud Date: 4/28/1992  
Completion Date: 6/4/1992

Junk: Two (2) 8-1/2" Insert Bit  
Cones Below Liner @ 8107'



| Top of Zone Markers |       |          |
|---------------------|-------|----------|
| A36                 | 5098' | (-2541') |
| UP                  | 5557' | (-2966') |
| UDA1                | 6177' | (-3540') |
| MDA                 | 6868' | (-4174') |
| LDA                 | 7047' | (-4339') |
| MP                  | 7505' | (-4759') |
| S1                  | 7773' | (-5006') |
| S4                  | 7853' | (-5080') |
| S8                  | 7940' | (-5160') |

Prepared by: MAM (4/20/2016)  
Updated by: LD (5/12/2016)





WELL SUMMARY REPORT AUG 28 1992

|  |  |   |            |          |  |             |
|--|--|---|------------|----------|--|-------------|
| Operator<br>Southern California Gas Company  |  | Well<br>VENTURA, CALIFORNIA<br>Porter 69D |            |          |  |             |
| Field<br>Aliso Canyon  |  | County<br>Los Angeles                     | Sec.<br>28 | T.<br>3N | R.<br>16W                                    | B.&M.<br>SB |
| Location (Give surface location from property or section corner, street center line and/or California coordinates)<br>863' South and 3313' West of Station 84. |  |   |            |          | Elevation of ground above sea level<br>2366' |             |

|  |   |              |              |  |                                       |  |
|--|---|--------------|--------------|--|---------------------------------------|--|
| Commenced drilling (date)<br>4/28/92   | Total depth   |              |              | Depth measurements taken from top of:                |                                       |  |
|  | (1st hole)<br>8120                                    | (2nd)<br>N/A | (3rd)<br>N/A | <input type="checkbox"/> Derrick Floor               | <input type="checkbox"/> Rotary Table | <input type="checkbox"/> Kelly Bushing |
| Completed drilling (date)<br>6/4/92  | Present effective depth<br>8107'                      |              |              | Which is feet above ground                           |                                       |  |
| Commenced producing (date)   | Junk  |              |              | GEOLOGICAL MARKERS                                   |                                       | DEPTH                                  |
|  | 2, 8-1/2" insert bit cones below liner depth (8107'). |              |              | Miocene/Pliocene Contact                             |                                       | 7504'                                  |
| <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping<br><input type="checkbox"/> Gas lift |   |              |              | S2   |                                       | 7803'                                  |
| Name of producing zone(s)<br>Sesnon  |   |              |              | S4   |                                       | 7854'                                  |
|  |   |              |              | S8   |                                       | 7940'                                  |
|  |   |              |              | Formation and age at total depth<br>Sesnon - Miocene |                                       |  |

|                          | Clean Oil (bbl per day) | Gravity Clean Oil | Percent Water including emulsion | Gas (Mcf per day) | Tubing Pressure | Casing Pressure |
|--------------------------|-------------------------|-------------------|----------------------------------|-------------------|-----------------|-----------------|
| Initial Production       |                         |                   |                                  |                   |                 |                 |
| Production After 30 day: |                         |                   |                                  |                   |                 |                 |

| CASING RECORD (Present Hole) |               |               |                  |                          |                    |                      |   |  |
|------------------------------|---------------|---------------|------------------|--------------------------|--------------------|----------------------|---|--|
| Size of Casing (API)         | Top of Casing | Depth of Shoe | Weight of Casing | Grade and Type of Casing | New or Second Hand | Size of Hole Drilled | Number of Sacks or Cubic Feet of Cement | Depth of Cementing (if through perforations) |
| 20"                          | Surface       | 44'           | Conductor        |                          |                    |                      |   |  |
| 13-3/8"                      | Surface       | 1038'         | 54.5#            | K55; Buttress            | New                | 17-1/2"              | 1035 cu.ft.                             |  |
| 9-5/8"                       | Surface       | 7801'         | 47#              | N80; LT&C                | New                | 12-1/4"              | 2653 cu.ft.                             |  |

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforation and method.)  
5-1/2", 17#, J55, LT&C. Top: 7711'. Bottom: 8107'. .012" slotted csg.: 7794' to 7822'. 12 rows, 1-1/2" slots, 6" centers. .012" wire wrapped screen: 7822' to 8105'. Gravel packed 13" open hole with 241 cu. ft. 20-40 sand.

Was the well directionally drilled? If yes, show coordinates at total depth  
 Yes  No

334' South and 2035' East of surface location at 8120' T.D.  
Other surveys DIL-SFL, GR, SP: 1038' - 7731'; 7801' - 8113'. Density-Neutron: 7801' - 8117'.

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

|   |                                 |                           |                   |
|---|---------------------------------|---------------------------|-------------------|
| Name<br>R. M. Dowell                      |                                 | Title<br>Drilling Manager |                   |
| Address<br>P. O. Box 3249, Terminal Annex |                                 | City<br>Los Angeles       | Zip Code<br>90013 |
| Telephone Number<br>(213) 244 - 2666      | Signature<br><i>R.M. Dowell</i> | Date<br>August 26, 1992   |                   |

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

RECEIVED  
JUN 30 1992

History of Oil or Gas Well

VENTURA, CALIFORNIA

Operator Southern California Gas Company Field Aliso Canyon County Los Angeles...  
Well Porter #69D Sec. 28., T 3N., R 16W. SB. B. & M.  
A.P.I. No. 04-037-24130 Name R. D. Phillips Title Agent  
Date June 17, 1992 (Person submitting report) (President, Secretary or Agent)

Signature *R. M. Dowell*

R. M. Dowell for R. D. Phillips

P. O. Box 3429 Terminal Annex, Los Angeles, CA 90051 (213) 244-2666  
(Address) (Telephone Number)

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

Date

1992

4-26  
to  
4-27

Moved in and rigged up.

4-28

Mixed spud mud. Made up 17-1/2" Hughes insert bit below one 9" monel, two 10" DC, four 8" DC then 4-1/2" HWDP. Drilled 17-1/2" hole from 60' to 400'.

4-29

Drilled 17-1/2" hole from 400' to 816'.

4-30

Drilled 17-1/2" hole from 816' to 1038'. Circulated bottoms up. Surveyed. Pulled out of hole. Ran in hole for wiper run. Circulated and conditioned mud. Pulled out of hole.

5-1

Made up and ran 13-3/8" 54.5# K-55 buttress casing as follows: float shoe, one joint of casing, stab-in float collar, then 24 joints to surface. Ran in with stab-in collar on drill pipe. Rigged up cementers. Pumped 10 Bbls of water ahead of 1035 cu. ft. Class G cement with 3% CaCl<sub>2</sub>. Displaced with 13 Bbls of water. Good cement returns to surface. Float collar held. Pulled drill pipe out of well. Orange peeled 20" conductor around 13-3/8" casing. Cut off 13-3/8" casing. Welded on 13-5/8" 3M x 13-3/8" 3M "SD" casing head. Tested weld to 1500 psi. X-rayed weld. Installed bowl protector below double studded flange. Installed BOPE. Tested blind and pipe rams, choke manifold to 2500 psi. Tested annular preventer to 2000 psi. Steve Mulqueen of D.O.G. declined witnessing of BOPE test.

5-2

Ran in hole to 944' with 12-1/4" bit. Tested 13-3/8" casing to 500 psi. Drilled and cleaned out cement to shoe at 1038'. Drilled 12-1/4" hole from 1038' to 1345'.

- 5-3 Drilled 12-1/4" hole from 1345' to 1400'. Pulled out of hole. Ran HTC 12-1/4" XXC bit on Eastman M-3, 9-1/2" mud motor, 1 degree kick sub, monel, one 8" DC, XO sub, 20 joints HWDP, 4-1/2" drill pipe. Drilled 12-1/4" hole from 1400' to 1625'. Lost power to mud pumps. Pulled to shoe.
- 5-4 Repaired pumps. Ran in hole surveying 90' intervals from 13-3/8" shoe to 1625'. Directionally drilled 12-1/4" hole from 1625' to 2090'.
- 5-5 Drilled 12-1/4" hole from 2096' to 2149'. Pulled out of hole. Made up 12-1/4" Smith FDS mill tooth bit, 12-1/4" stab, monel, stab, 3- 8" drill collars, xover, 30 joints HWDP, 4-1/2" drill pipe. Ran in and wiped hole from 1401' to 2149'. Continued drilling 12-1/4" hole from 2149' to 2495'. Pulled out of hole. Made up new Smith 12-1/4" MFDSH bit on previous BHA.
- 5-6 Ran in hole. Drilled 12-1/4" hole from 2495' to 3066'.
- 5-7 Continued drilling with mud motor from 3066' to 3406'. Pulled out of hole. Made up and reran 12-1/4" Smith FDS milltooth bit on rotary drilling assembly. Ran in hole and reamed from 2495' to 3130'.
- 5-8 Finished wiping hole from 3130' to 3406'. Drilled 12-1/4" hole from 3406' to 3776'. Pulled out of hole. Picked up directional assembly as follows: Hughes 12-1/4" ATJ bit, DTU motor, stabilizer, orienting sub, monel, flow sub, four 8" drill collars, 20 joints HWDP, 4-1/2" drill pipe. Ran in hole. Directionally drilled 12-1/4" hole from 3776' to 3816'.
- 5-9 Directionally drilled 12-1/4" hole from 3816' to 4048'. Pulled out of hole. Laid down mud motor and MWD tools. Made up and ran new 12-1/4" Smith SVH bit on locked-up BHA. Wiped hole from 3776' to 4048'. Drilled 12-1/4" hole from 4048' to 4180'.
- 5-10 Drilled 12-1/4" hole from 4180' to 4463'. Pulled out of hole. Ran 12-1/4" Hughes ATJ05 insert bit on locked-up BHA. Ran in hole. Drilled 12-1/4" hole from 4463' to 4528'.
- 5-11 Drilled 12-1/4" hole from 4528' to 5082'.
- 5-12 Drilled 12-1/4" hole from 5082' to 5842'.
- 5-13 Drilled from 5842' to 6032'. Pulled out of hole for directional drilling assembly. Ran in well with 12-1/4" Smith SVH bit on .67 degree DTU MACH-I motor. Drilled from 6032' to 6071'.

- 5-14 Pulled out of hole. Reran 12-1/4" Smith SVH on 9-1/2" MACH-3 slickmotor, 1 degree bent sub and MWD. Drilled from 6071' to 6280' making course corrections so as to intersect target. Pulled out of hole. Ran in hole with 12-1/4" Hughes ATJ-11H insert bit on locked up BHA. (bit, junk sub, 6 pt. stab, shock sub, NBWB stab, monel, 12-1/4" stab, 4 drill collars, 20 joints HWDP).
- 5-15 Started running in hole with Hughes 12-1/4" ATJ 11H bit. Stuck pipe at 4913'. Using Dialog, freepointed and backed off at 4182'. Pulled out of hole. Made up Midway 7-3/4" screw in sub, 7-3/4" bumper sub, 7-3/4" super jars, four 7-3/4" drill collars, jar intensifier, xover, 20 joints HWDP. Ran in hole and screwed into fish. Jarred one time 80,000 lbs over string weight. Pulled out of hole. Laid down fish. Made up Smith 12-1/4" SVH bit.
- 5-16 Ran in well to 4600'. Circulated and conditioned mud. Reamed and wiped hole to 5869'. Lost 60,000 lbs string weight to indicate drill pipe twisted off. Ran in hole to top of fish at 3135'. Bit at 5980'. Pulled out of hole. Recovered 33-2/3 stands of drill pipe. Left 22 stands drill pipe (2038') and BHA 812'. Made up 9-3/8" overshot with 5-3/4" grapple, 5-3/4" mill control, 6" bumper sub with 2" ID xover, 4-1/2" drill pipe. Ran in hole to top of fish at 3135', sized tool joint with mill control. Pulled out of hole. Removed mill control from overshot.
- 5-17 Ran in hole to top of fish at 3135' with 6" basket grapple and bumper sub. Attached grapple to fish. Rigged up Dialog. Ran freepoint. Showed good movement at 5879'. Attempted backoff, no good. Made backoff with 2nd shot. Chained out of well. Laid down 6" overshot and fish at 3135'. Continued pulling out of hole with all 4-1/2" drill pipe, HWDP and three 8" drill collars. Made up screw in sub, 8" bumper sub, 8" super jars on three drill collars. Ran in hole and screwed into fish at 5879'. Circulated well. Jarred fish up hole.
- 5-18 Finished pulling out of hole. Laid down 2 joints of 4-1/2" drillpipe, fishing tools and two 8" drill collars. Made up 12-1/4" Smith SDGH mill tooth bit. Ran in hole. Circulated hole at 5891'. Reamed hole from 5891' to 6280'. Drilled 12-1/4" from 6280' to 6582'.
- 5-19 Drilled 12-1/4" hole from 6582' to 6911'. Pulled out of hole. Made up new 12-1/4" Hughes ATJ-11H bit on previous BHA with two new stabilizers. Ran in hole. Circulated and reamed hole from 6396' to 6466'.
- 5-20 Reamed hole from 6466' to 6911'. Drilled 12-1/4" hole from 6911' to 7265'.
- 5-21 Drilled 12-1/4" hole from 7265' to 7680'.

- 5-22 Drilled 12-1/4" hole from 7680' to 7737'. Circulated and surveyed. Made wiper trip to 4000'. Tight hole from 7737' to 7197'. Ran in hole. Reamed from 7134' to 7737'. Circulated and conditioned mud. Pulled out of hole.
- 5-23 Ran DIL/GR/Sp/Calp. Found pickup at 7693' (44' above TD). Logs indicate revised casing point now at 7768'. Ran in hole to 7737' without hitting bridge at 7693'. Drilled 12-1/4" hole from 7737' to 7768'. Pulled out of hole.
- 5-24 Ran DIL/GR/Sp/Calp. Found pickup at 7738' (30' above TD). Could not work tools below 7738'. Logged hole. Shorted tool by removing caliper. Ran DIL/GR/SP. Found pickup at 7738'. Could not work tools below 7738'. Ran in hole with drilling assembly. Cleaned out bridge at 7738'. Drilled 12-1/4" hole from 7768' to 7794'. Circulated hole clean. Pulled 20 stands. Ran in hole. Cleaned 8' of fill. Circulated hole clean.
- 5-25 Ran Neutron/GR/CCL through the drill pipe to top of bit. Logged hole from 7792' to 7000'. Log indicated additional 10' required to be below the S1 sand. Drilled 12-1/4" hole from 7794' to 7804' (revised casing depth). Circulated hole clean. Pulled 20 stands. Waited one hour. Ran to bottom and circulated out 4' fill. Pulled out of hole. Changed to 9-5/8" pipe rams. Began running 9-5/8" 47# N-80 LT&C casing.
- 5-26 Finished running 9-5/8" 47# N-80 LT&C casing to 7801' as follows: 9-5/8" differential float shoe, 10' pup joint, 34' CTC cement inflatable packer, 9-5/8" casing to surface with a 15' pup joint at 7445' and 15' pup joint at 3005'. Circulated mud for 2 hours. Cemented 9-5/8" casing as follows: pumped 10 Bbls of water, 30 Bbls 9.4 ppg. super flush, 10 Bbls water ahead of 275 Bbls Class "G" lead cement with 3% Diacel LWL foamed with nitrogen between 45 and 531 scf/Bbls, 156 Bbls Class "G" tail cement with 1.0% Halaad-322 and .15% HR7. Dropped top plug. Pumped additional 19.4 Bbls Class "G" inflation cement with 1% Halaad-322 and .15% HR7 followed by 10 Bbls of water. Displaced cement with 572 Bbls of 9.4 PPG mud. Bumped plug at 1300 psi. Good cement returns to surface. Inflated external packer to a seal load gradient of .85 psi/ft. Pumped 10 Bbls cross linked gel, followed by 22 Bbls of Class "G" cement with pcf CAL seal and 3% CaCl<sub>2</sub>, down 9-5/8" x 13-3/8" annulus. Displaced with 6 Bbls of water. Waited on cement for 6 hours. Released pressure. Bled off 10 gals. fluid. Picked up BOPE. Landed 9-5/8" casing with 280,000# on hook. Cut off 9-5/8" pipe. Removed BOPE. Installed 13-5/8" 3000# x 11" 5000# x 9-5/8" double studed PS seal flange, 11" x 11" 5000# type 75LI tubing head.
- 5-27 Tested double studed seal flange to 3000 psi. Tested tubing head to 5000 psi. Finished installing BOPE. Tested blind rams, pipe rams, and manifold to 3500 psi for 20 minutes. Tested annular preventer to 2000 psi. Made up 8-1/2" Security M44G mill tooth bit on directional BHA. Ran in well.

- 5-28 Located top of cement at 7520'. Drilled out cement to 7739'. Tested casing to 1000 psi for 20 minutes. Continued drilling out cement to casing shoe at 7801'. Drilled 8-1/2" hole from 7801' to 7966'. Pulled out of well. Made up and ran 8-1/2" Hughes ATJ-22 bit on same BHA.
- 5-29 Drilled 8-1/2" hole from 7966' to 8120'. Circulated and surveyed. Pulled to shoe. Ran in hole and circulated well clean. Pulled out of hole. Ran DIL/GR/SP log from 8120' to 7801'. Ran density/neutron log from 8120' to 7801'. Made up TriState 7" x 13" hole opener (cobra cones) on Eastman 6-3/4" MIPHF mud motor, monel, four 6" drill collars, one joint HWDP, drilling jars, 19 joints HWDP, 4-1/2" drill pipe. Ran in well to casing shoe. Changed over to 63# polymer fluid.
- 5-30 Opened hole from 8-1/2" to 13" from 7801' to 8013'. Pulled out of well. Left 2 cones in hole. Made up K5A 7" x 13" hole opener with three cutters on same bottom hole assembly. Ran in well.
- 5-31 Continued opening hole from 8-1/2" to 13" to 8018'. Pulled to 7801'. Reamed hole to 8018'. Changed over to clean polymer completion fluid. Pulled out of hole. Ran 4 arm caliper log from 8101' to 7801'. Could not work logging tool any deeper. Pulled out of hole. Began running liner.
- 6-1 Ran 5-1/2", 17#, J-55, LT&C liner to 8107' as follows: spaded bull plug, 7 joints (285') of .012" gauge WWS, 1 joint of .012" slotted (12R, 6C, 2S) pipe w/lugs, 1 joint blank pipe w/o lugs, 1 joint blank pipe w/lugs, landing nipple. Gravel packed well with 325 sx of 20-40 mesh sand. Sanded out at 1500 psi. Backscuttled 84 sx out leaving 241 sx in place (theoretical open hole: 243 sx). Waited 2 hrs. Pressured gravel pack to 1900 psi. Waited 2 hrs. Re-pressured to 1900 psi with no bleed off. Released from liner. Pulled out of well.
- 6-2 Ran in well and set 5-1/2" x 9-5/8" lead seal adapter at 7711'. Pulled out of well. Made up 390' of 2-7/8" CS Hydril tubing xover to 4-1/2" drill pipe. Ran in well to 8106'. Backscuttled well clean. Changed over to 3% KCl with biocide and oxygen scavenger. Pulled out of well laying down drill pipe.
- 6-3 Ran and set Baker 9-5/8" Model "D" packer on wireline at 7642.50'. Changed from 4-1/2" to 2-7/8" pipe rams. Made up seals, 1 joint of 2-7/8" tubing, Otis 2.205" XN No-Go, 1 joint of 2-7/8" tubing, Otis 2-7/8" 2.313" XD SSD (open down), 1 joint 2-7/8" tubing, 2-7/8" MMA GLM w/1.5" SOV set at 2750 psi on RA latch. Pressured tested to 4000 psi. Continued picking up and running 2-7/8" 6.5# N-80 EUE 8RD tubing externally pressure testing each connection to 4000 psi. Landed in packer with 10,000 lbs. compression. Pulled 20,000 lbs over string weight to check latch. Installed back pressure valve in tubing hanger.

6-4 Landed tubing with 10,000 lbs down on packer. Removed BOPE. Installed xmas tree. Tested xmas tree seals to 5000 psi for 20 minutes. Pulled side pocket shear out valve. Ran new shear out valve. Opened XD sliding sleeve. Released rig.

DIVISION OF OIL AND GAS  
Notice of Intention to Drill New Well  
Attachment

NOTE: A 9-5/8" CTC PACKER WILL BE SET BETWEEN 7760' and 7740' AND  
CEMENTED IN LIEU OF A W.S.O.

DIVISION OF OIL AND GAS  
RECEIVED

APR 21 1992

VENTURA, CALIFORNIA

DIVISION OF OIL AND GAS  
RECEIVED

SEP 2 1992

VENTURA, CALIFORNIA

SOUTHERN CALIFORNIA GAS COMPANY  
PORTER

690  
690  
ALISO CANYON  
CALIFORNIA

**SURVEY LISTING**

Your ref : PORTER 690  
Our ref : svy2056  
Other ref :

Date printed : 1-Sep-92  
Date created : 4-May-92  
Last revised : 1-Sep-92

Field is centred on 0.000,0.000,999.00000,+  
structure is centred on 0.000,0.000,3.00000,N

SOUTHERN CALIFORNIA GAS COMPANY  
PORTER, 690  
ALISO CANYON, CALIFORNIA

SURVEY LISTING Page 1  
Your ref : PORTER 690  
Last revised : 1-Sep-92

| Measured Depth | Inclin. Degrees | Azimuth Degrees | True Vert. Depth | RECTANGULAR COORDINATE | Dogleg Deg/100Ft | Vert Sact |
|----------------|-----------------|-----------------|------------------|------------------------|------------------|-----------|
| 0.00           | 0.00            | 0.00            | -2389.50         | 862.81 S 3313.09 W     | 0.00             | 0.00      |
| 362.00         | 0.75            | 103.00          | -2027.51         | 863.34 S 3310.78 W     | 0.21             | 2.37      |
| 527.00         | 0.75            | 91.00           | -1862.52         | 863.60 S 3308.65 W     | 0.10             | 4.51      |
| 720.00         | 1.75            | 103.00          | -1669.57         | 864.29 S 3304.52 W     | 0.53             | 8.70      |
| 877.00         | 1.50            | 100.00          | -1512.64         | 865.18 S 3300.16 W     | 0.17             | 13.15     |
| 993.00         | 1.00            | 67.00           | -1396.66         | 865.05 S 3297.73 W     | 0.74             | 15.31     |
| 1106.00        | 1.25            | 80.00           | -1283.68         | 864.45 S 3295.61 W     | 0.31             | 17.48     |
| 1293.00        | 1.50            | 72.00           | -1094.74         | 863.33 S 3291.22 W     | 0.17             | 21.58     |
| 1386.00        | 1.50            | 97.00           | -1003.77         | 863.11 S 3288.91 W     | 0.71             | 23.81     |
| 1479.00        | 2.50            | 92.00           | -910.83          | 863.33 S 3285.67 W     | 1.09             | 27.03     |
| 1580.00        | 3.75            | 106.00          | -809.98          | 864.32 S 3280.30 W     | 1.44             | 32.49     |
| 1612.00        | 4.50            | 107.00          | -778.06          | 864.97 S 3278.09 W     | 2.35             | 34.78     |
| 1640.00        | 4.50            | 113.00          | -750.15          | 865.72 S 3276.03 W     | 1.68             | 36.95     |
| 1674.00        | 4.25            | 120.00          | -716.24          | 866.87 S 3273.71 W     | 1.73             | 39.44     |
| 1704.00        | 4.25            | 126.00          | -686.33          | 868.08 S 3271.85 W     | 1.48             | 41.50     |
| 1736.00        | 4.50            | 132.00          | -654.42          | 869.62 S 3269.96 W     | 1.63             | 43.64     |
| 1765.00        | 4.00            | 134.00          | -625.50          | 871.08 S 3268.38 W     | 1.80             | 45.46     |
| 1796.00        | 3.75            | 140.00          | -594.57          | 872.61 S 3266.95 W     | 1.54             | 47.16     |
| 1857.00        | 4.00            | 155.00          | -533.71          | 876.07 S 3264.77 W     | 1.71             | 49.95     |
| 1919.00        | 4.50            | 166.00          | -471.88          | 880.39 S 3263.27 W     | 1.54             | 52.23     |
| 1982.00        | 6.00            | 168.00          | -409.14          | 886.00 S 3261.99 W     | 2.40             | 54.55     |
| 2043.00        | 7.25            | 167.00          | -348.55          | 892.87 S 3260.46 W     | 2.06             | 57.34     |
| 2105.00        | 8.50            | 167.00          | -287.14          | 901.15 S 3258.55 W     | 2.02             | 60.76     |
| 2215.00        | 10.00           | 161.00          | -178.57          | 918.10 S 3253.61 W     | 1.62             | 68.80     |
| 2338.00        | 11.00           | 161.00          | -57.63           | 939.30 S 3246.31 W     | 0.81             | 79.94     |
| 2461.00        | 12.25           | 162.00          | 62.84            | 962.80 S 3238.46 W     | 1.03             | 92.06     |
| 2500.00        | 12.50           | 162.00          | 100.94           | 970.75 S 3235.88 W     | 0.64             | 96.09     |
| 2562.00        | 11.50           | 156.00          | 161.58           | 982.78 S 3231.29 W     | 2.58             | 102.85    |
| 2624.00        | 11.00           | 150.00          | 222.39           | 993.55 S 3225.82 W     | 2.05             | 110.24    |
| 2686.00        | 11.50           | 144.00          | 283.20           | 1003.67 S 3219.23 W    | 2.05             | 118.62    |
| 2750.00        | 10.75           | 139.00          | 346.00           | 1013.34 S 3211.56 W    | 1.91             | 127.96    |
| 2812.00        | 11.00           | 132.00          | 406.89           | 1021.66 S 3203.37 W    | 2.17             | 137.56    |
| 2872.00        | 11.25           | 126.00          | 465.77           | 1028.93 S 3194.38 W    | 1.97             | 147.76    |
| 2932.00        | 11.75           | 120.00          | 524.56           | 1035.43 S 3184.36 W    | 2.16             | 158.82    |
| 2992.00        | 12.00           | 114.00          | 583.28           | 1041.02 S 3173.36 W    | 2.10             | 170.67    |
| 3023.00        | 11.75           | 110.00          | 613.62           | 1043.41 S 3167.46 W    | 2.77             | 176.92    |
| 3086.00        | 12.25           | 106.00          | 675.24           | 1047.45 S 3155.00 W    | 1.54             | 189.91    |
| 3117.00        | 12.25           | 102.00          | 705.54           | 1049.04 S 3148.62 W    | 2.74             | 196.47    |
| 3177.00        | 13.25           | 100.00          | 764.06           | 1051.55 S 3135.63 W    | 1.82             | 209.71    |
| 3237.00        | 14.25           | 96.00           | 822.34           | 1053.52 S 3121.51 W    | 2.30             | 223.95    |
| 3299.00        | 15.50           | 95.00           | 882.26           | 1055.04 S 3105.67 W    | 2.06             | 239.80    |
| 3330.00        | 16.25           | 95.00           | 912.08           | 1055.78 S 3097.22 W    | 2.42             | 248.23    |
| 3361.00        | 17.00           | 94.00           | 941.78           | 1056.47 S 3088.38 W    | 2.59             | 257.05    |
| 3453.00        | 17.00           | 98.00           | 1029.76          | 1059.28 S 3061.64 W    | 1.27             | 283.83    |
| 3546.00        | 18.50           | 100.00          | 1118.34          | 1063.74 S 3033.65 W    | 1.74             | 312.17    |
| 3639.00        | 20.00           | 102.00          | 1206.14          | 1069.61 S 3003.56 W    | 1.76             | 342.82    |
| 3732.00        | 21.75           | 102.00          | 1293.03          | 1076.50 S 2971.14 W    | 1.88             | 375.95    |
| 3824.00        | 23.40           | 102.10          | 1377.98          | 1083.87 S 2936.61 W    | 1.79             | 411.26    |
| 3884.00        | 24.20           | 99.10           | 1432.87          | 1088.31 S 2912.81 W    | 2.42             | 435.47    |
| 3945.00        | 24.20           | 95.60           | 1488.52          | 1091.51 S 2888.02 W    | 2.33             | 460.42    |

All data is in feet unless otherwise stated  
Coordinates are from Station 84 and TVDs are from mean sea level.  
Vertical section is from S 862.81 W 3313.09 on azimuth 100.81 degrees.  
Calculation uses the minimum curvature method.

SOUTHERN CALIFORNIA GAS COMPANY  
PORTER, 690  
ALISO CANYON, CALIFORNIA

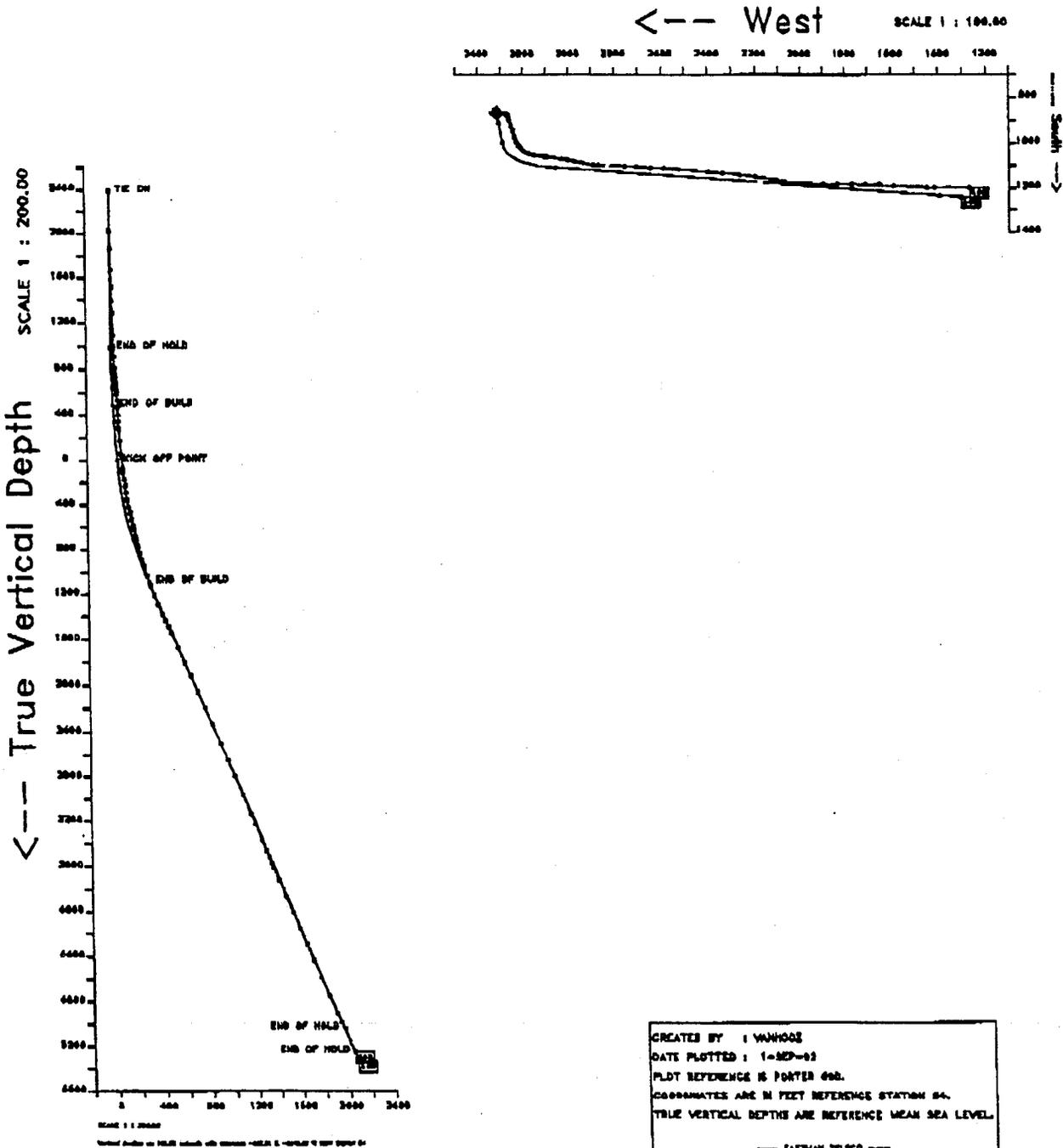
SURVEY LISTING Page 2  
Your ref : PORTER 690  
Last revised : 1-Sep-92

| Measured Depth | Inclin. Degrees | Azimuth Degrees | True Vert. Depth | RECTANGULAR COORDINATES |           | Dogleg Deg/100Ft | Vert Sect |
|----------------|-----------------|-----------------|------------------|-------------------------|-----------|------------------|-----------|
| 3995.00        | 24.00           | 94.90           | 1534.16          | 1093.38 S               | 2867.69 W | 0.70             | 480.74    |
| 4138.00        | 23.50           | 92.00           | 1665.05          | 1096.86 S               | 2810.22 W | 0.89             | 537.84    |
| 4282.00        | 23.50           | 93.00           | 1797.11          | 1099.36 S               | 2752.86 W | 0.28             | 594.66    |
| 4406.00        | 23.25           | 94.00           | 1910.93          | 1102.36 S               | 2703.76 W | 0.38             | 643.45    |
| 4558.00        | 22.75           | 93.00           | 2050.85          | 1106.00 S               | 2644.48 W | 0.42             | 702.36    |
| 4712.00        | 22.75           | 93.00           | 2192.87          | 1109.11 S               | 2585.00 W | 0.00             | 761.36    |
| 4865.00        | 23.25           | 95.00           | 2333.71          | 1113.29 S               | 2525.38 W | 0.61             | 820.71    |
| 5051.00        | 22.75           | 95.00           | 2504.92          | 1119.63 S               | 2452.98 W | 0.27             | 893.01    |
| 5204.00        | 22.50           | 95.00           | 2646.15          | 1124.76 S               | 2394.34 W | 0.16             | 951.57    |
| 5359.00        | 22.25           | 95.00           | 2789.48          | 1129.90 S               | 2335.56 W | 0.16             | 1010.27   |
| 5543.00        | 22.25           | 96.00           | 2959.78          | 1136.58 S               | 2266.22 W | 0.20             | 1079.64   |
| 5730.00        | 22.25           | 98.00           | 3132.86          | 1143.20 S               | 2195.95 W | 0.40             | 1150.28   |
| 5823.00        | 22.00           | 99.00           | 3219.01          | 1150.38 S               | 2161.31 W | 0.49             | 1185.28   |
| 5978.00        | 22.25           | 100.00          | 3362.59          | 1160.02 S               | 2103.73 W | 0.29             | 1243.64   |
| 6086.00        | 22.10           | 101.20          | 3462.61          | 1167.51 S               | 2063.67 W | 0.44             | 1284.40   |
| 6145.00        | 22.30           | 98.40           | 3517.23          | 1171.30 S               | 2041.70 W | 1.82             | 1306.68   |
| 6207.00        | 22.50           | 95.60           | 3574.56          | 1174.18 S               | 2018.26 W | 1.75             | 1330.25   |
| 6243.00        | 23.00           | 93.50           | 3607.76          | 1175.28 S               | 2004.38 W | 2.65             | 1344.09   |
| 6368.00        | 23.50           | 92.00           | 3722.61          | 1177.64 S               | 1953.10 W | 0.62             | 1392.94   |
| 6522.00        | 23.75           | 90.00           | 3863.70          | 1178.72 S               | 1893.40 W | 0.34             | 1453.76   |
| 6677.00        | 23.75           | 90.00           | 4005.58          | 1178.72 S               | 1830.98 W | 0.00             | 1515.06   |
| 6834.00        | 23.25           | 91.00           | 4149.55          | 1179.26 S               | 1768.38 W | 0.41             | 1576.65   |
| 6990.00        | 23.00           | 91.00           | 4293.02          | 1180.32 S               | 1707.12 W | 0.16             | 1637.02   |
| 7141.00        | 23.25           | 92.00           | 4431.89          | 1181.88 S               | 1647.84 W | 0.31             | 1695.54   |
| 7297.00        | 23.25           | 94.00           | 4575.22          | 1185.10 S               | 1586.35 W | 0.51             | 1756.54   |
| 7482.00        | 23.25           | 93.00           | 4745.20          | 1189.56 S               | 1513.46 W | 0.21             | 1828.97   |
| 7656.00        | 22.75           | 91.00           | 4905.37          | 1191.94 S               | 1445.53 W | 0.53             | 1896.15   |
| 7737.00        | 22.75           | 91.00           | 4980.06          | 1192.49 S               | 1414.21 W | 0.00             | 1927.02   |
| 8118.00        | 22.75           | 91.00           | 5331.42          | 1195.06 S               | 1266.90 W | 0.00             | 2072.20   |

All data is in feet unless otherwise stated  
 Coordinates are from Station 84 and TVDs are from mean sea level.  
 Vertical section is from S 862.81 W 3313.09 on azimuth 100.81 degrees.  
 Calculation uses the minimum curvature method.

# SOUTHERN CALIFORNIA GAS COMPANY

Structure : PORTER      Well : 69D  
Field : ALISO CANYON    Location : CALIFORNIA



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

No. T292-104

REPORT ON OPERATIONS

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

Ventura, California  
June 2, 1992

Your operations at well "Porter" 69D, API No. 037-24130, Sec. 28, T. 3N, R. 16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles County, were witnessed on 5/28/92. Bruce Hesson, representative of the supervisor, was present from 0000 to 0500. There were also present Bill Killebrew, So. CA Gas Co. Consultant.

Present condition of well: 20" cem 56'; 13 3/8" cem 1038'; 9 5/8" cem 7804'. TD 7804' (Drilling)

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

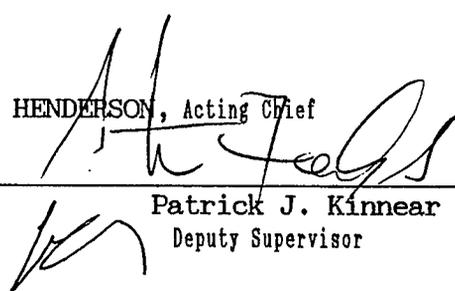
DECISION:

The blowout prevention equipment and its installation on the 9 5/8" casing are approved.

tkc

K.P. HENDERSON, Acting Chief

By

  
Patrick J. Kinnear  
Deputy Supervisor

# BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SOUTHERN CALIF. GAS CO. Well "PORTER" 69D  
 Field ALISO CANYON County LOS ANGELES Spud Date 4/28/92  
 VISITS: Date Engineer Time Operator's Rep. Title  
 1st 5/28/92 B. HANSON (0000 to 0500) BILL KILLEBREW SLG. CONSULTANT  
 2nd \_\_\_\_\_ (\_\_\_\_\_ to \_\_\_\_\_) \_\_\_\_\_ \_\_\_\_\_  
 Contractor KENAI DRILLING Rig # 44 Contractor's Rep. & Title RICK RODRIGAS  
 Casing record of well: 20" CEM 56'; 13 3/8" CEM 1038'; 9 5/8" CEM 7804'. TD 7804' (DRILLING)

OPERATION: Testing (inspecting) the blowout prevention equipment and installation.  
 DECISION: The blowout prevention equipment and its installation on the 9 5/8" casing are approved.

Proposed Well Opns: DRILL MACP: \_\_\_\_\_ psi **REQUIRED**  
 Hole size: 17 1/2" fr. 56' to 1038', 12 1/4" to 7804' & " to " **BOPE CLASS: III B 5M**

| CASING RECORD OF BOPE ANCHOR STRING |           |          |         |        | Cement Details |  |  | Top of Cement |         |
|-------------------------------------|-----------|----------|---------|--------|----------------|--|--|---------------|---------|
| Size                                | Weight(s) | Grade(s) | Shoe at | FCP at | LEAD-IN        |  |  | Casing        | Annulus |
| 9 5/8"                              | 47 #      | N-80     | 7804    | 7758   | 275 BBLs CEM   |  |  | 7758          | SUPF    |
|                                     |           |          |         |        | TAIL-IN        |  |  |               |         |
|                                     |           |          |         |        | 156 BBLs CEM   |  |  |               |         |
|                                     |           |          |         |        | RETURNS        |  |  |               |         |

| BOP STACK |                |              |               |                       |             |                    | TEST DATA     |                      |                  |                   |                |           |             |
|-----------|----------------|--------------|---------------|-----------------------|-------------|--------------------|---------------|----------------------|------------------|-------------------|----------------|-----------|-------------|
| API Symb. | Ram Size (in.) | Manufacturer | Model or Type | Vert. Bore Size (in.) | Press. Rtg. | Date Last Overhaul | Gal. to Close | Recovery Time (Min.) | Calc. GPM Output | psi Drop to Close | Secs. to Close | Test Date | Test Press. |
| A         | -              | SHAFFCO      | GK            | 13 3/8                | 5000        | /                  | 12.6          | (w/4 1/2" D.P.)      |                  |                   |                | 5/28      | 2100        |
| Pd        | 4 1/2"         | "            | E             | "                     | "           | /                  | 3.55          | + 2.9 (D.P.) = 6.45  |                  |                   |                | 1         | 3500        |
| Pd        | 2 3/8          | "            | E             | "                     | "           | /                  |               |                      |                  |                   |                |           | 3400        |

| ACTUATING SYSTEM                                     |          |           |   | TOTAL: 20.05           |  | AUXILIARY EQUIPMENT |            |              |      |        |        |             |
|--|----------|-----------|---|------------------------|--|---------------------|------------|--------------|------|--------|--------|-------------|
| Accumulator Unit(s) Working Pressure <u>3000</u> psi |          |           |   |                        |  | Connections         |            |              |      |        |        |             |
| Total Rated Pump Output _____ gpm                    |          |           |   |                        |  | No.                 | Size (in.) | Rated Press. | Weld | Flange | Thread | Test Press. |
| Distance From Well Bore <u>50+</u> ft.               |          |           |   |                        |  |                     |            |              |      |        |        |             |
| Accum. Manufacturer                                  | Capacity | Precharge |   |                        |  |                     |            |              |      |        |        |             |
| 1 KOOMERT  | 120 gal. | 1000 psi  | ✓ | Fill-up Line           |  |                     |            |              |      |        |        |             |
| 2  | gal.     | psi       | ✓ | Kill Line              |  | 2                   | 5000       | ✓            | ✓    |        | 3500   |             |
|  |          |           | ✓ | Control Valve(s)       |  | 2                   |            |              | ✓    |        |        |             |
|  |          |           | ✓ | Check Valve(s)         |  | 1                   |            |              | ✓    |        |        |             |
|  |          |           | ✓ | Aux. Pump Connect.     |  |                     |            |              | ✓    |        |        |             |
|  |          |           | ✓ | Choke Line             |  |                     |            | ✓            | ✓    |        |        |             |
|  |          |           | ✓ | Control Valve(s) (12)  |  |                     |            |              | ✓    |        |        |             |
|  |          |           | ✓ | Pressure Gauge         |  |                     |            |              | ✓    |        |        |             |
|  |          |           | ✓ | Adjustable Choke(s)    |  | 2                   | 3          |              | ✓    |        |        |             |
|  |          |           | ✓ | Bleed Line             |  |                     | 3          |              | ✓    |        |        |             |
|  |          |           | ✓ | Upper Kelly Cock       |  |                     |            |              |      |        |        |             |
|  |          |           | ✓ | Lower Kelly Cock       |  |                     | 4 1/2      |              |      |        |        |             |
|  |          |           | ✓ | Standpipe Valve        |  |                     |            |              |      |        |        |             |
|  |          |           | ✓ | Standpipe Press. Gauge |  |                     |            |              |      |        |        |             |
|  |          |           | ✓ | Pipe Safety Valve      |  |                     | 4 1/2      |              |      |        |        |             |
|  |          |           | ✓ | Internal Preventer     |  |                     | 4 1/2      |              | ✓    |        |        |             |
|  |          |           |   |                        |  |                     |            |              |      |        |        |             |

| HOLE FLUID            |         |        | Alarm Type |           | Hole Fluid Type |   | Weight |          | Storage Pits (Type & Size) |  |
|-----------------------|---------|--------|------------|-----------|-----------------|---|--------|----------|----------------------------|--|
| MONITORING EQUIPMENT  | Audible | Visual | Class      |           |                 |   |        |          |                            |  |
| ✓ Calibrated Mud Pit  |         | ✓      | A          | CLAY BASE |                 | - |        | 300 BBLs |                            |  |
| ✓ Pit Level Indicator | ✓       | ✓      | B          |           |                 |   |        |          |                            |  |
| ✓ Pump Stroke Counter |         | ✓      |            |           |                 |   |        |          |                            |  |
| ✓ Pit Level Recorder  |         | ✓      |            |           |                 |   |        |          |                            |  |
| ✓ Flow Sensor         |         | ✓      | C          |           |                 |   |        |          |                            |  |
| ✓ Mud Totalizer       |         | ✓      |            |           |                 |   |        |          |                            |  |
| Calibrated Trip Tank  |         |        |            |           |                 |   |        |          |                            |  |
| Other:                |         |        |            |           |                 |   |        |          |                            |  |

REMARKS AND DEFICIENCIES:

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

No. T292-100

REPORT ON OPERATIONS

R.D. Phillips, Agent

Southern Calif. Gas Company

810 S. Flower St.

Los Angeles, CA. 90017

Ventura, California

May 13, 1992

Your operations at well "Porter" 69D, API No. 037-24130,  
Sec. 28, T. 3N, R. 16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles  
County, were witnessed on 5/2/92. S. Mulqueen, representative of  
the supervisor, was present from 0900 to 1100. There were also  
present Bill Killebrew, Consultant.

Present condition of well: 20" cem 56'; 13 3/8" cem 1038'.  
TD 1038' (Drilling).

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

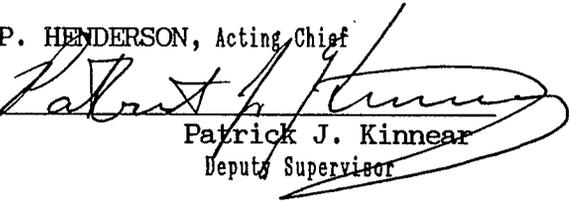
DECISION:

The blowout prevention equipment and its installation on the 13 3/8" casing  
are approved.

tkc

K.P. HENDERSON, Acting Chief

By

  
Patrick J. Kinnear  
Deputy Supervisor

# BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SO. CALIF GAS CO. Well "PORTER" 69 D  
 Field ALISO CANYON County LOS ANGELES Spud Date 4-28-92 AOC  
 VISITS: Date 5-2-92 Engineer S. MULQUEEN Time (0900 to 1100) Operator's Rep. BILL KILLEBREW Title SCG. CONSULTANT  
 1st 5-2-92 S. MULQUEEN (0900 to 1100) BILL KILLEBREW SCG. CONSULTANT  
 2nd \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_  
 Contractor KENAI DRILLING CO Rig # 44 Contractor's Rep. & Title RICK ROGERS  
 Casing record of well: 20" cem 56'; 13 3/8" cem 1038'. TD 1038' (DRILLING).

**OPERATION:** Testing (inspecting) the blowout prevention equipment and installation.  
**DECISION:** The blowout prevention equipment and its installation on the 13 3/8" casing are approved.

Proposed Well Opns: DRILL MACP: \_\_\_\_\_ psi **REQUIRED BOPE CLASS:** III B 3M  
 Hole size: 17 1/2" fr. 56' to 1038', \_\_\_\_\_" to \_\_\_\_\_" & \_\_\_\_\_" to \_\_\_\_\_"

| CASING RECORD OF BOPE ANCHOR STRING |             |                |              |       | Cement Details                      |                         | Top of Cement |              |
|-------------------------------------|-------------|----------------|--------------|-------|-------------------------------------|-------------------------|---------------|--------------|
| Size                                | Weight(s)   | Grade(s)       | Shoe at      | CP at | Float Collar @                      | Float Shoe @            | Casing        | Annulus      |
| <u>13 3/8"</u>                      | <u>34.5</u> | <u>BUTRESS</u> | <u>1038'</u> |       | <u>1038', USED 1035' @ "G" CEM.</u> | <u>994'</u>             | <u>994'</u>   | <u>SURF.</u> |
|                                     |             |                |              |       | <u>20% RET.</u>                     | <u>11 AM CEM 5-1-92</u> |               |              |

| BOP STACK |                |               |               |                       |             |                    | TEST DATA     |                      |                  |                   |                |            |             |
|-----------|----------------|---------------|---------------|-----------------------|-------------|--------------------|---------------|----------------------|------------------|-------------------|----------------|------------|-------------|
| API Symb. | Ram Size (in.) | Manufacturer  | Model or Type | Vert. Bore Size (in.) | Press. Rtg. | Date Last Overhaul | Gal. to Close | Recovery Time (Min.) | Calc. GPM Output | psi Drop to Close | Secs. to Close | Test Date  | Test Press. |
| <u>A</u>  | <u>-</u>       | <u>SHAFCO</u> | <u>6K</u>     | <u>13 3/8"</u>        | <u>5000</u> |                    |               |                      |                  |                   |                | <u>5-2</u> | <u>2000</u> |
| <u>RD</u> | <u>4 1/2"</u>  | <u>SHAFCO</u> | <u>-</u>      | <u>"</u>              | <u>"</u>    |                    |               |                      |                  |                   |                | <u>"</u>   | <u>2500</u> |
| <u>RD</u> | <u>CSO</u>     | <u>"</u>      | <u>-</u>      | <u>"</u>              | <u>"</u>    |                    |               |                      |                  |                   |                | <u>"</u>   | <u>2500</u> |

| ACTUATING SYSTEM                                     |                                     |                         |                                     | TOTAL:                              |                           | AUXILIARY EQUIPMENT |               |                                     |                                     |                                     |                                     |             |
|--|-------------------------------------|-------------------------|-------------------------------------|-------------------------------------|---------------------------|---------------------|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------|
| Accumulator Unit(s) Working Pressure <u>3000</u> psi |                                     |                         |                                     |                                     |                           | Connections         |               |                                     |                                     |                                     |                                     |             |
| Total Rated Pump Output _____ gpm                    |                                     |                         |                                     |                                     |                           | No.                 | Size (in.)    | Rated Press.                        | Weld                                | Flange                              | Thread                              | Test Press. |
| Distance From Well Bore <u>95</u> ft.                |                                     |                         |                                     |                                     |                           |                     |               |                                     |                                     |                                     |                                     |             |
| Accum. Manufacturer                                  | Capacity                            | Precharge               |                                     |                                     |                           |                     |               |                                     |                                     |                                     |                                     |             |
| <u>1 ROCKET</u>                                      | <u>120 gal</u>                      | <u>1000 psi</u>         | <input checked="" type="checkbox"/> | <u>Fill-up Line</u>                 |                           |                     |               |                                     |                                     |                                     |                                     |             |
| <u>2</u>   | <u>gal.</u>                         | <u>psi</u>              | <input checked="" type="checkbox"/> | <u>Kill Line</u>                    |                           | <u>2</u>            | <u>5000</u>   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>2500</u>                         |             |
| <b>CONTROL STATIONS</b>                              |                                     |                         |                                     | <input checked="" type="checkbox"/> | <u>Control Valve(s)</u>   | <u>2</u>            | <u>"</u>      |                                     | <input checked="" type="checkbox"/> |                                     | <u>"</u>                            |             |
| <input checked="" type="checkbox"/>                  | <u>Manifold at accumulator unit</u> |                         | <input checked="" type="checkbox"/> | <u>Check Valve(s)</u>               | <u>7</u>                  | <u>"</u>            |               |                                     | <input checked="" type="checkbox"/> |                                     | <u>"</u>                            |             |
| <input checked="" type="checkbox"/>                  | <u>Remote at Driller's station</u>  |                         | <input checked="" type="checkbox"/> | <u>Aux. Pump Connect.</u>           |                           | <u>"</u>            |               |                                     |                                     | <input checked="" type="checkbox"/> | <u>"</u>                            |             |
|  | <u>Other:</u>                       |                         | <input checked="" type="checkbox"/> | <u>Choke Line</u>                   |                           | <u>2 3/4"</u>       | <u>5000</u>   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     | <u>2500</u>                         |             |
|  |                                     |                         | <input checked="" type="checkbox"/> | <u>Control Valve(s)</u>             | <u>12</u>                 | <u>"</u>            |               |                                     | <input checked="" type="checkbox"/> |                                     | <u>"</u>                            |             |
| <b>EMERG. BACKUP SYSTEM</b>                          |                                     |                         |                                     | <input checked="" type="checkbox"/> | <u>Pressure Gauge</u>     |                     |               |                                     |                                     |                                     | <input checked="" type="checkbox"/> |             |
| <input checked="" type="checkbox"/>                  | <u>N<sub>2</sub> Cylinders 3</u>    | <u>1 L= " 2150 gal.</u> | <input checked="" type="checkbox"/> | <u>Adjustable Choke(s)*</u>         | <u>2</u>                  | <u>3</u>            | <u>"</u>      |                                     | <input checked="" type="checkbox"/> |                                     | <u>"</u>                            |             |
|  | <u>Other:</u>                       | <u>2 L= " 2150 gal.</u> | <input checked="" type="checkbox"/> | <u>Bleed Line</u>                   |                           | <u>3</u>            |               |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |             |
|  |                                     | <u>3 L= " 2100 gal.</u> | <input checked="" type="checkbox"/> | <u>Upper Kelly Cock</u>             |                           |                     |               |                                     |                                     |                                     | <u>2500</u>                         |             |
|  |                                     | <u>4 L= " gal.</u>      | <input checked="" type="checkbox"/> | <u>Lower Kelly Cock</u>             |                           | <u>4 1/2"</u>       | <u>5000</u>   |                                     |                                     |                                     | <u>2500</u>                         |             |
|  |                                     | <u>5 L= " gal.</u>      | <input checked="" type="checkbox"/> | <u>Standpipe Valve</u>              |                           |                     |               |                                     |                                     |                                     | <u>2500</u>                         |             |
|  |                                     | <u>6 L= " gal.</u>      | <input checked="" type="checkbox"/> | <u>Standpipe Press. Gauge</u>       |                           |                     |               |                                     |                                     |                                     |                                     |             |
| <b>TOTAL:</b>  |                                     |                         |                                     | <input checked="" type="checkbox"/> | <u>Pipe Safety Valve</u>  |                     | <u>4 1/2"</u> | <u>"</u>                            |                                     |                                     |                                     | <u>2500</u> |
|  |                                     |                         |                                     | <input checked="" type="checkbox"/> | <u>Internal Preventer</u> |                     | <u>4 1/2"</u> | <u>"</u>                            |                                     |                                     |                                     | <u>2500</u> |

| HOLE FLUID                          |                             |                                     | Alarm Type |  | Hole Fluid Type          |            | Weight |                | Storage Pits (Type & Size) |  |
|-------------------------------------|-----------------------------|-------------------------------------|------------|--|--------------------------|------------|--------|----------------|----------------------------|--|
| MONITORING EQUIPMENT                | Audible                     | Visual                              | Class      |  |                          |            |        |                |                            |  |
| <input checked="" type="checkbox"/> | <u>Calibrated Mud Pit</u>   | <input checked="" type="checkbox"/> | <u>A</u>   |  | <u>CLAY (WATER BASE)</u> | <u>9.5</u> |        | <u>300 BBL</u> |                            |  |
| <input checked="" type="checkbox"/> | <u>Pit Level Indicator</u>  | <input checked="" type="checkbox"/> | <u>B</u>   |  |                          |            |        |                |                            |  |
| <input checked="" type="checkbox"/> | <u>Pump Stroke Counter</u>  | <input checked="" type="checkbox"/> | <u>C</u>   |  |                          |            |        |                |                            |  |
| <input checked="" type="checkbox"/> | <u>Pit Level Recorder</u>   | <input checked="" type="checkbox"/> |            |  |                          |            |        |                |                            |  |
| <input checked="" type="checkbox"/> | <u>Flow Sensor</u>          | <input checked="" type="checkbox"/> |            |  |                          |            |        |                |                            |  |
| <input checked="" type="checkbox"/> | <u>Mud Totalizer</u>        | <input checked="" type="checkbox"/> |            |  |                          |            |        |                |                            |  |
|                                     | <u>Calibrated Trip Tank</u> |                                     |            |  |                          |            |        |                |                            |  |
|                                     | <u>Other:</u>               |                                     |            |  |                          |            |        |                |                            |  |

**REMARKS AND DEFICIENCIES:**  
\* W/ SURF CHOKE  
ACCUM. LOW - OK 4-28-92  
8" DRILL COLLARS

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

No. P292-115  
Field Code 10  
Area Code 00  
New Pool Code 30  
Old Pool Code --

PERMIT TO CONDUCT WELL OPERATIONS

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

Ventura, California  
April 28, 1992

Your                      proposal to drill well "Porter" 69D,  
A.P.I. No. 037-24130, Section 28, T. 3N, R. 16W, S.B. B.&M.,  
Aliso Canyon field, any area, Sesnon-Frew pool,  
Los Angeles County, dated 1/20/92, received 4/21/92, has been  
examined in conjunction with records filed in this office.

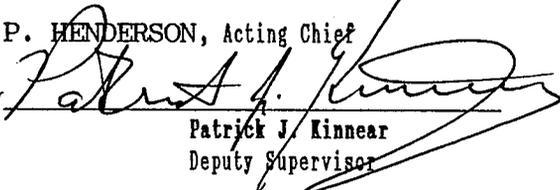
THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOG Class III B3M requirements is installed on the 13 3/8" casing and DOG Class III B5M requirements is installed on the 9 5/8" casing and maintained in operating condition at all times.
2. Drilling fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. An approved blowout prevention and control plan is on file with this office prior to commencing operations.
4. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet.
5. This office shall be consulted before sidetracking the well or running any additional casing.
6. The 13 3/8" casing is cemented with sufficient cement to fill behind this casing from the shoe to the ground surface.
7. The 9 5/8" casing is cemented with sufficient cement to fill behind this casing to at least 500 feet above the uppermost oil and/or gas zone or anomalous pressure interval, whichever is higher.
8. Requirements specified in our approval of the gas storage project dated July 26, 1986 shall apply.
9. Injection shall cease if any evidence of damage is observed, or upon written notice from this Division.
10. This office shall be consulted before initiating any changes or additions to this proposed operation, or if operations are to be suspended.

Engineer Steve Fields

Phone (805) 654-4761

K.P. HENDERSON, Acting Chief

By 

Patrick J. Kinnear  
Deputy Supervisor

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

P292-115

Southern California Gas Co.

"Porter" 69D

con't

11. THIS DIVISION SHALL BE NOTIFIED:

- a. To witness a pressure test of the blowout prevention equipment prior to drilling out the shoe of the 13 3/8" casing and the 9 5/8" casing. Prior to notifying the division engineer to witness the test, the blind rams must be tested. Information on the blind rams test must be entered on the tour sheet along with the signature of the person in charge.
- b. To witness a MIT survey within three months after injection has commenced.

Blanket Bond

BHH:tkc

**DIVISION OF OIL AND GAS**  
**Notice of Intention to Drill New Well**

1992 1 1992

| C.E.Q.A. INFORMATION                  |   |   |   |
|---------------------------------------|---|---|---|
| EXEMPT CLASS <input type="checkbox"/> | NEG. DEC. <input checked="" type="checkbox"/><br>S.C.H. NO. _____ | E.I.R. <input type="checkbox"/><br>S.C.H. NO. _____ | DOCUMENT NOT REQUIRED BY LOCAL JURISDICTION <input checked="" type="checkbox"/> |
| See Reverse Side                      |   |   |   |

| FOR DIVISION USE ONLY |          |       |      |         |
|-----------------------|----------|-------|------|---------|
| MAP                   | MAP BOOK | CARDS | BOND | FORMS   |
|                       |          |       |      | 114 121 |
| 254                   | 5-2-92   | ✓     | BB   | ✓ ✓     |

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our Gas intention to commence drilling well Porter 69D, well type Storage, API No. 037-24130 (Assigned by Division) Sec. 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

Legal description of mineral-right lease, consisting of \_\_\_\_\_ acres, is as follows: \_\_\_\_\_ (Attach map or plat to scale)  
Not applicable, owned by Southern California Gas Co. in fee

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

Location of well \_\_\_\_\_ feet \_\_\_\_\_ along section 7 property line and \_\_\_\_\_ feet \_\_\_\_\_ (Direction) (Cross out one) (Direction)

at right angles to said line from the \_\_\_\_\_ corner of section 7 property \_\_\_\_\_ or (Cross out one)

863' South and 3313' West of Station #84 Fr Station 84 863 S 3313 W F1 2389 lbs (Directional)

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

If well is to be directionally drilled, show proposed coordinates (from surface location) at total depth: 496' feet North and 5236' feet East of Surface (Direction) (Direction) Location

Elevation of ground above sea level 2365.62 feet.

All depth measurements taken from top of Kelly Bushing that is 23.5 feet above ground. (Derrick Floor, Rotary Table, or Kelly Bushing)

**PROPOSED CASING PROGRAM**

| SIZE OF CASING INCHES API | WEIGHT | GRADE AND TYPE | TOP  | BOTTOM | CEMENTING DEPTHS | CALCULATED FILL BEHIND CASING (Linear Feet) |
|---------------------------|--------|----------------|------|--------|------------------|---|
| 13-3/8"                   | 54.5#  | J-55           | 0    | 1040'  | 1040'            | Surface                                     |
| 9-5/8"                    | 47#    | N-80           | 0    | 7770'  | 7770'            | Surface                                     |
| 5-1/2"                    | 17#    | J-55           | 7710 | 8043'  | Gravel           | Flow Pack                                   |

(A complete drilling program is preferred and may be submitted in lieu of the above program.)

Intended zone(s) of completion Sesnon Estimated true vertical depth 7430' (Name, depth, and expected pressure)

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

|  |   |
|--|---|
| Name of Operator<br><u>Southern California Gas Co.</u> | Type of Organization (Corporation, Partnership, Individual, etc.)<br><u>Corporation</u> |
| Address<br><u>P. O. Box 3249, Terminal Annex</u>       | City<br><u>Los Angeles</u>  |
| Telephone Number<br><u>(213) 244-2666</u>              | Zip Code<br><u>90013</u>  |
| Name of Person Filing Notice<br><u>R. M. Dowell</u>    | Signature<br><u>R. M. Dowell</u>  |
|  | Date<br><u>1/20/92</u>  |

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