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 H
A.P.I. No. 03724223
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: Thomas McMahon
(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)
6/2/2016	Held safety. Remove barriers around well w/ crane. Lay out plastic pollution ground pans. Spot trench plates for pipe rack area. Spot trench plate and rig mat for back of rig. MIRU Rival rig # 15, guy out rig. Spot BOPE on mats. Spot baskets and choke manifold. Secure well and rig. EOT.
6/3/2016	Held safety meeting. Field pressure is 1182. Rig up Onyx separator and Pacific Petroleum carbon canisters w/ Gas company operator on location. SITP 1250-psi, SICP 1250-psi. Rig up 2'" hose to tubing side. Test lines to 2000 psi. Bull head 50-bbls polymer pill down tubing, bull head 40-bbls polymer down tubing (90-bbls bull headed). Open casing to separator, pump 350-BBLS of polymer following pump schedule and open casing to canister @ 480-psi on casing, continue Pumping 125-bbls, to get circulation. Circulate w/ 25-bbls. Note: 590-BBLS pumped total. Bled off casing & tubing to 0-psi. R/D Onyx and Pacific Petroleum. Install back pressure valve. N/D tree. Remove BPV and install 10' pup joint w/ TIW valve. Function lock screws. N/U BOPE, function BOP. R/O floor and stairs. Test bag 300 low and 3,500 high, Test 2 7/8" pipe rams with 3' coflex hose w/ valves 1,2,5, 300 low & 5000 high. Test manifold values choke kill values 300 low and 5,000 high found 2 1/16" Kill valve leaking will service or change. Secure rig & well. EOT
6/4/2016	Held a safety meeting. Field pressure 1086-psi. SITP 0-psi, SICP 0-psi. Service kill valves and Re-Test choke & kill values 300 low and 5,000 high. Established circulation w/ 45-bbls. Removed pup joint, installed back pressure value. Tested blind rams 300 low and 5,000 high. Mark Davis w/ DOGGR approved BOPE and charts tests. Removed back pressure value. P/U king swivel. Release lock screws. Pull hanger free. Release Halliburton G-6 packer and let elements relax for 1-HR while monitoring well. POOH w/ tubing hanger, X/O, fatigue nipple, tally 127-joints 2-7/8"tubing, L/D gas mandrel, Continue POOH tally 34-joints 2-7/8" tubing, tail @ 2600'. Secure well and rig. EOT.
6/6/2016	Held safety meeting. Field pressure is 1188-psi. SITP 0-PSI, SICP 0-PSI. Fill well w/ 24–BBLS of polymer. POOH w/ 72-joints 2-7/8", gas mandrel, 1-joint 2-7/8", sleeve, on/off tool, x-nipple, 9-5/8" G-6 packer, pup jt, sleeve, pup jt, XN-nipple, X/O, L/D 9 -joints 1.66" 10-RD and 1- cut piece. Note: found hole in 1.66" tubing @ 7657'. RIH w/ 9-5/8" 47# positive scraper assembly, 239-joints 2-7/8", tag TOL @ 7474'. Reverse circulate w/ 150-bbls. POOH w/ 239-joints 2-7/8" tubing, L/D 9-5/8" Scraper assembly. RIH w/ 2-1/16" 45° shoe, 10-joints 2-1/16" tubing, X/O, 118-joints 2-7/8" tubing, tail @ 4028'. Note: Blow out drill, shut in time 48-seconds. Secure well & rig. EOT.
6/7/2016	Held safety meeting. Field pressure is 1089-psi. SITP 0-PSI, SICP 0-PSI. Fill with 8-bbls. Continue RIH w/ 108-joints 2-7/8" tubing. N/U crossover spool and PGSR circulating head. RIH w/ 11-joints 2-7/8" TBG, tag TOF @ 7710' (62' of fill). M/U king swivel. Reverse circulate @ 3-BPM while cleaning out fill F/ 7710' T/ 7772'. Reverse Circulate w/ 3X tubing volume. R/O king swivel, L/D 2-joints 2-7/8". Remove circulating rubber. POOH w/ 236-joints 2-7/8" tubing, L/D crossover and 10-joints 2-1/16" tubing w/ 2-1/16" 45° shoe on bottom. RIH w/ 46-joint kill sting w/ saw tooth collar on bottom. Tail @ 1457'. Secure well and rig. EOT.
6/8/2016	Held safety meeting. Field pressure is 1190-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 5-BBLS of polymer. POOH w/ 46-joint 2-7/8" kill string w/ saw tooth collar. N/U X/O spool and 7" shooting flange. R/U Scientific w/ full lubricator and Gyro tools. RIH w/ Gyro Surveying F/ surface T/ 7750'. POOH w/ Gyro Surveying F/ 7750' T/ surface. R/D scientific Gyro tools and truck. N/D flange and spool. RIH w/ Halliburton 9-5/8" 47# RTTS packer, 8' pup joint, 111-joints 2-7/8" tubing, set packer @ 3500'. Test to 1000-psi, for 15-minutes, good test. Release packer. Continue RIH w/ 128-joints, packer @ 7469'. Secure well and rig. EOT.

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Start Date	Ops this Report (DOGGR)
6/9/2016	Held safety meeting. Field pressure is 1190-psi. SITP 0-PSI, SICP 0-PSI. Fill well w/ 3–BBLS of polymer. P/U king swivel w/ 1 -joint, tag TOL @ 7474', Set 9-5/8" 47# packer COE @7465', bottom of packer @ 7769'. R/U PROS tester. A Lagunzad w/ DOGGR witnessed and approved pressure integrity test of 9-5/8" 47# casing F/ 7465' T/ Surface for 1-hour F/6:26am T/7:26am, F/ 2348-psi bled T/ 2330-psi. Release packer. POOH w/ 129-jts 2-7/8" tubing. Set 9-5/8" 47# packer COE @3500'. R/U PROS tester. A Lagunzad w/ DOGGR witnessed and approved pressure integrity test of 9-5/8" 47# casing F/ 3500' T/ surface for 1-hour F/ 9:36am T/ 10:36pm, F/ 3723-psi bled T/ 3704-psi. Note: Charts and digital data available. Release packer. POOH w/ 111-joints 2-7/8" tubing, 8' pup, L/D 9-5/8" Halliburton RTTS packer. RIH w/ 9-5/8" 47# Halliburton RBP, 238-joints 2-7/8" tubing, Pick up king swivel. Tag TOL @ 7474', Set 9-5/8" 47# RBP, COE @ 7465', bottom of RBP @ 7469'. Laydown king swivel and pull 2-joints 2-7/8". Tail @ 7402'. Chart Test RBP to 1000-psi for 10-minutes, good test. Dump 4 cu Ft of sand on top of 9-5/8" RBP. Estimated top of sand @ 7455' + or -, Displace tubing w/ 43-bbls of polymer @ 1-BPM. POOH w/ 58-joint 2-7/8" tubing. Tail @ 5589'. Secure well and rig. EOT.
6/10/2016	Held safety meeting. Field pressure 1190-psi. SICP 0-PSI. Continue POOH w/ 118-jts 2-7/8" tubing and retrieving tool. R/D tubing equipment, R/D stairs and floor. N/D BOP and bag. Cameron rep on location to bleed all voids on DSA and tubing spool. N/D 11" 5K tubing spool w/ 13-5/8" 3K DSA. N/U 13-5/8" 3K DSA, N/U 11" 5K BOP. R/U floor and stairs. Chart Test Blind rams T/ 1000-psi for 10-minutes, good test. Secure well and rig. EOT.
6/11/2016	Held safety meeting. Estimated field pressure is 1190-psi. SICP 0-PSI. N/U 7" shooting flange. R/U Schlumberger wireline w/ full lubricator. RIH w/ USIT and CBL logging tools, tag @ 7447'. Log F/ 7447' T/ surface. L/D logging tools and lubricator. R/D Schlumberger wireline. Secure well and rig. EOT.
6/13/2016	Held safety meeting. Estimated field pressure is 1193-psi. SICP 0-PSI. N/U 7" shooting flange. R/U Baker wireline w/ pack off. RIH w/ 56 arm caliper tool, tag @ 7447'. POOH calipering F/ 7447' T/ surface. Laydown caliper tools. RIH w/ High resolution vertical logging tool, log F/ surface T/ 30'. Unable to HRV tools to work. Re-head line still unable to log. Laydown HRV logging tools. R/D Baker wireline. Secure well and rig. EOT.
6/14/2016	Held safety meeting. Estimated field pressure is 1195-psi. SICP 0-PSI. Perform maintenance on rig, rearrange tubing racks and clean location. Haul all junk metal to scrap bin. Wait on orders. Release crew for the day. Secure well and rig. EOT.
6/16/2016	Held safety meeting. Estimated field pressure is 1196-psi. SICP 0-PSI. N/D & remove BOPE and crossover spools. N/U 13-5/8" 3K x 11" 5K DSA and 11" 5K tubing spool w/ Cameron HYD Wrench's. Cameron chart tested 13-5/8" 300-low & 3k high, tested 11" 5K tubing spool 300-low & 3800-psi for 20-minutes each test. Install cellar grading. N/U 11" 5K BOPE. R/U floor and stairs. Chart Test pipe rams and coflex hose connections w/ check valve out 300-low and 5K-high. Install check valve and test 300-low and 5k-high. Chart test bag T/ 300-low and 3500K-high for 20-minutes, each test. Secure well and rig. EOT.
6/17/2016	Held safety meeting. Estimated field pressure is 1193-psi. SICP 0-PSI. N/U 7" shooting flange. R/U Baker wireline w/ pack off. RIH w/ High resolution vertical logging tool, Log F/ surface T/ 7380'. Note: HRV tools got stuck @ 7380', pull free and Log F/ 7380' T/ surface. Laydown HRV logging tools. R/D Baker wireline. RIH w/ Halliburton retrieving tool and 238-joints 2-7/8" tubing, P/U king swivel, tag top of sand @ 7447'. Reverse circulate sand off top of RBP w/ 2x tubing volume. Open by pass and wait 30-minutes. Release Halliburton RBP, let elements relax for 1-HR while monitoring well. Laydown king swivel w/ 1-joint. POOH w/ 120-joints 2-7/8" tubing, tail @ 3711'. Secure well and rig. EOT.
6/18/2016	Held safety meeting. Estimated field pressure is 1193-psi. SITP 0-PSI, Continue POOH w/ 118-joints 2-7/8" tubing. Laydown 9-5/8" Halliburton RBP. Make up saw tooth collar and RIH w/ 238-joints 2-7/8" tubing. Spot flatbed trailer. POOH laying down 3-joints 2-7/8" yellow band on ground, L/D 189-joints 2-7/8" tubing on a trailer, Tail @ 1457'. Secure well and rig. EOT.

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6/20/2016	Held safety meeting. Estimated field pressure is 1199-psi. SICP 0-PSI. Fill well w/ 10-BBLS polymer. Continue POOH laying down 46-joints 2-7/8" tubing w/ saw tooth collar on a trailer. Land tubing hanger w/ 3.5" pup joint. Change pipe rams T/ 3.5". Chart test 3.5" pipe rams 300-low ad 5K high. Pull hanger free. RIH w/ 4.5" entry guide, Halliburton 9-5/8" 47# G-6 packer, X/O, 2-7/8" pup joint 10.12', XN -nipple, 1-joint 2-7/8" tubing, sliding sleeve, 1-joint 2-7/8" tubing, X/O, 3-jts 3.5" N-80 tubing. R/U Western wireline and set N-test plug in nipple. Test T /5K w/ Weatherford tubing tester. Pull N-test plug out w/ Western wireline. R/D wireline. R/U tester and bar tools, test T/5K, continue RIH testing 87-joints 3.5" tubing w/ quality tubular services on location T/5k. Tail @ 2740'. Note: BOP drill, shut in time 41-seconds. Secure well and rig. EOT.
6/21/2016	Held safety meeting. Estimated field pressure is 1200-psi. SICP 0-PSI. Continue P/U 150-joints 3.5" tubing, 12' of 3.5" pup joints, testing T/ 5k w/ Quality tubular services on location, R/O bar tool. Plug test tubing hanger fatigue nipple and X/O T/ 5K. R/O Weatherford tubing tester. M/U and land hanger hanger. Secure well and rig. EOT.
6/22/2016	Held safety meeting. Estimated field pressure is 1201-psi. SICP 0-PSI. P/U king swivel and Pull tubing hanger up above hanger bowl 3'. Pump down tubing w/ 52-BBLS packer fluid sending returns into tank, displace w/ 38-bbls polymer. P/U on tubing, Up weight 100k, down weight 86k, set Halliburton 9-5/8" 47# G-6 packer COE @ 7414', pulled 120k (20k over) and hold for 20-minutes, land hanger @ 70k w/ 16k compression, set lock screws. R/U Western wireline, run 2.30" gauge ring to 7400'. POOH, RIH and set test plug in BXN-nipple @ 7400', POOH, RIH set prong in plug. POOH. R/U PROS tester. J. Huff w/ DOGGR witnessed approved annulus test F/ 10:46am T/ 11:46am, start 1109-psi ending 1104-psi. J. Huff w/ DOGGR witnessed approved tubing test F/12:01pm T/ 1:01pm, start 3806-psi ending 3800-psi. R/D Pros tester. Install 2-way check. N/D BOPE. N/U well head. Chart test tree void w/ Cameron 300-low 20-miniutes and 5k-high 20-minutes. Note: Try to test down thru tree and it is leaking thru test ports, unable to get tree shell to test. Remove 2-way check. Install 1-way BPV. Secure well and rig. EOT.
6/23/2016	Held safety meeting. Estimated field pressure is 1201-psi. SITP 0-PSI, SICP 0-PSI. R/U Cameron. Remove BPV. Install 2-way check valve. N/D well head w/ HYD wrenches. Note: found secondary seals were the wrong size. Replace seals. N/U well head w/ HYD wrenches. Chart test tree void w/ Cameron 300-low 20-miniutes and 5k-high 20-minutes, good test. Chart Test tree 300-low 20-minutes and 5K-high for 20-minutes with test ports open, good test. Remove 2 way check. Drop guy wires. RDMO. Move Rig, equipment and containments off location. Clean location. Location ready for Onyx and nitrogen unit. Job complete

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6/7/2016	Held safety meeting. Field pressure is 1089-psi. SITP 0-PSI, SICP 0-PSI. Fill with 8-bbls. Continue RIH w/ 108-joints 2-7/8" tubing. N/U crossover spool and PGSR circulating head. RIH w/ 11-joints 2-7/8" TBG, tag TOF @ 7710' (62' of fill). M/U king swivel. Reverse circulate @ 3-BPM while cleaning out fill F/ 7710' T/ 7772'. Reverse Circulate w/ 3X tubing volume. R/O king swivel, L/D 2-joints 2-7/8". Remove circulating rubber. POOH w/ 236-joints 2-7/8" tubing, L/D crossover and 10-joints 2-1/16" tubing w/ 2-1/16" 45° shoe on bottom. RIH w/ 46-joint kill sting w/ saw tooth collar on bottom. Tail @ 1457'. Secure well and rig. EOT.
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6/14/2016	Held safety meeting. Estimated field pressure is 1195-psi. SICP 0-PSI. Perform maintenance on rig, rearrange tubing racks and clean location. Haul all junk metal to scrap bin. Wait on orders. Release crew for the day. Secure well and rig. EOT.
6/16/2016	Held safety meeting. Estimated field pressure is 1196-psi. SICP 0-PSI. N/D & remove BOPE and crossover spools. N/U 13-5/8" 3K x 11" 5K DSA and 11" 5K tubing spool w/ Cameron HYD Wrench's. Cameron chart tested 13-5/8" 300-low & 3k high, tested 11" 5K tubing spool 300-low & 3800-psi for 20-minutes each test. Install cellar grading. N/U 11" 5K BOPE. R/U floor and stairs. Chart Test pipe rams and coflex hose connections w/ check valve out 300-low and 5K-high. Install check valve and test 300-low and 5k-high. Chart test bag T/ 300-low and 3500K-high for 20-minutes, each test. Secure well and rig. EOT.
6/17/2016	Held safety meeting. Estimated field pressure is 1193-psi. SICP 0-PSI. N/U 7" shooting flange. R/U Baker wireline w/ pack off. RIH w/ High resolution vertical logging tool, Log F/ surface T/ 7380'. Note: HRV tools got stuck @ 7380', pull free and Log F/ 7380' T/ surface. Laydown HRV logging tools. R/D Baker wireline. RIH w/ Halliburton retrieving tool and 238-joints 2-7/8" tubing, P/U king swivel, tag top of sand @ 7447'. Reverse circulate sand off top of RBP w/ 2x tubing volume. Open by pass and wait 30-minutes. Release Halliburton RBP, let elements relax for 1-HR while monitoring well. Laydown king swivel w/ 1-joint. POOH w/ 120-joints 2-7/8" tubing, tail @ 3711'. Secure well and rig. EOT.
6/18/2016	Held safety meeting. Estimated field pressure is 1193-psi. SITP 0-PSI, Continue POOH w/ 118-joints 2-7/8" tubing. Laydown 9-5/8" Halliburton RBP. Make up saw tooth collar and RIH w/ 238-joints 2-7/8" tubing. Spot flatbed trailer. POOH laying down 3-joints 2-7/8" yellow band on ground, L/D 189-joints 2-7/8" tubing on a trailer, Tail @ 1457'. Secure well and rig. EOT.

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

Rec'd 07-25-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 H
A.P.I. No. 03724223
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)
6/20/2016	Held safety meeting. Estimated field pressure is 1199-psi. SICP 0-PSI. Fill well w/ 10-BBLS polymer. Continue POOH laying down 46-joints 2-7/8" tubing w/ saw tooth collar on a trailer. Land tubing hanger w/ 3.5" pup joint. Change pipe rams T/ 3.5". Chart test 3.5" pipe rams 300-low ad 5K high. Pull hanger free. RIH w/ 4.5" entry guide, Halliburton 9-5/8" 47# G-6 packer, X/O, 2-7/8" pup joint 10.12', XN -nipple, 1-joint 2-7/8" tubing, sliding sleeve, 1-joint 2-7/8" tubing, X/O, 3-jts 3.5" N-80 tubing. R/U Western wireline and set N-test plug in nipple. Test T /5K w/ Weatherford tubing tester. Pull N-test plug out w/ Western wireline. R/D wireline. R/U tester and bar tools, test T/5K, continue RIH testing 87-joints 3.5" tubing w/ quality tubular services on location T/5k. Tail @ 2740'. Note: BOP drill, shut in time 41-seconds. Secure well and rig. EOT.
6/21/2016	Held safety meeting. Estimated field pressure is 1200-psi. SICP 0-PSI. Continue P/U 150-joints 3.5" tubing, 12' of 3.5" pup joints, testing T/ 5k w/ Quality tubular services on location, R/O bar tool. Plug test tubing hanger fatigue nipple and X/O T/ 5K. R/O Weatherford tubing tester. M/U and land hanger hanger. Secure well and rig. EOT.
6/22/2016	Held safety meeting. Estimated field pressure is 1201-psi. SICP 0-PSI. P/U king swivel and Pull tubing hanger up above hanger bowl 3'. Pump down tubing w/ 52-BBLS packer fluid sending returns into tank, displace w/ 38-bbls polymer. P/U on tubing, Up weight 100k, down weight 86k, set Halliburton 9-5/8" 47# G-6 packer COE @ 7414', pulled 120k (20k over) and hold for 20-minutes, land hanger @ 70k w/ 16k compression, set lock screws. R/U Western wireline, run 2.30" gauge ring to 7400'. POOH, RIH and set test plug in BXN-nipple @ 7400', POOH, RIH set prong in plug. POOH. R/U PROS tester. J. Huff w/ DOGGR witnessed approved annulus test F/ 10:46am T/ 11:46am, start 1109-psi ending 1104-psi. J. Huff w/ DOGGR witnessed approved tubing test F/12:01pm T/ 1:01pm, start 3806-psi ending 3800-psi. R/D Pros tester. Install 2-way check. N/D BOPE. N/U well head. Chart test tree void w/ Cameron 300-low 20-miniutes and 5k-high 20-minutes. Note: Try to test down thru tree and it is leaking thru test ports, unable to get tree shell to test. Remove 2-way check. Install 1-way BPV. Secure well and rig. EOT.
6/23/2016	Held safety meeting. Estimated field pressure is 1201-psi. SITP 0-PSI, SICP 0-PSI. R/U Cameron. Remove BPV. Install 2-way check valve. N/D well head w/ HYD wrenches. Note: found secondary seals were the wrong size. Replace seals. N/U well head w/ HYD wrenches. Chart test tree void w/ Cameron 300-low 20-miniutes and 5k-high 20-minutes, good test. Chart Test tree 300-low 20-minutes and 5K-high for 20-minutes with test ports open, good test. Remove 2 way check. Drop guy wires. RDMO. Move Rig, equipment and containments off location. Clean location. Location ready for Onyx and nitrogen unit. Job complete

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

No. T **216-0230**

REPORT ON OPERATIONS

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

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

Ventura, California
July 12, 2016

Your operations at well **"Porter" 69H**, A.P.I. No. **037-24223**, Sec. **27**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **6/22/2016**, by **Jay N. Huff**, a representative of the supervisor.

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

DECISION:

APPROVED

JNH/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By
Patricia A. Abel, *District Deputy*

CK622.

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

No. T 216-0230
16,1

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

Operator: SoCal Gas					Well: Porter 69H
Sec. 27	T. 3N	R. 16W	B.&M. SB	API No.:037-24223	Field: Aliso Canyon
County: Los Angeles					Witnessed/Reviewed on: 6/22/16

Jay Huff , representative of the supervisor, was present from 10:30 to 13:15.

Also present were: John Herrin and Ryan Felix

Casing record of the well:
13-3/8" 48# K55 @ 859'. Cemented to surface
9-5/8" 47# N80 @ 7,960'. Cemented to surface
5-1/2" 17# 7507' – 7772'. Wire Wrapped Screen.

The Internal MIT was performed for the purpose of pressure testing the _9-5/8__" casing above _Packer (7,413'-COE)_____' (2) (prior to injecting fluid).
Tubing was also tested with a tubing plug set at 7,400'.

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

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

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

Pressure testing of producting tubing x casing x packer annulus and of production tubing in 2 seperate tests using 8.5ppg HEC Polymer fluid with Packer. 3-1/2" N80 9.3ppf 8rd tubing.
Pressure Test 1 of casing x tubing annulus. Packer at 7,413'. P1=1,109 psi @ 10:46. P2=1,104 psi @ 11:04.
Pressure Test 2 of tubing. Plug at 7,400'. P1=3,806 psi @ 12:01. P2=3,751 psi @ 1:01.

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Phone:(805) 654-4761 Fax:(805) 654-4765

No. T **216-0235**

REPORT ON OPERATIONS

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

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

Ventura, California
July 12, 2016

Your operations at well **"Porter" 69H**, A.P.I. No. **037-24223**, Sec. **27**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **6/9/2016**, by **Arsenio Lagunzad**, a representative of the supervisor.

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

DECISION:

APPROVED

AL/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel, *District Deputy*

216.0235

KG613

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

T 1 OF 2

Casing and Tubing Pressure Test

Operator: SOUTHERN CAL GAS Well Designation: PORTER 69H

Sec. 27, T. 03N, R. 16W, SB B.M. API No. 037-24223 Field: ALISO CANYON

County. LOS ANGELES Witnessed on: 6/9/16, A. LAGUNAS, representative

of the supervisor, was present from 0530 to 0800.

Also Present were JOHN HERRIN

Casing Record of the Well:

The operations were performed for the purpose of CIT

Pressure Test of the Casing

Packer/ Bridge Plug at 7465'
Casing Pressured with WATER
Casing Pressure Start PSI: 2348
Casing Pressure End PSI: 2330
Pressure Held 60 Min. Total drop in Pressure 18 psi 0.77 %

Well Type GS
Volume N.A. - PRE FILLED
Start Time: 0626
End Time: 0726

Test Result: ✓ Good _____ Not Good

Pressure Test of the Tubing

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

Well Type _____
Volume _____
Start Time: _____
End Time: _____

Test Result: _____ Good _____ Not Good

Remarks: _____

2 of 2

KG613

T 216-0235
#16, 1

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

Casing and Tubing Pressure Test

Operator: SOUTHERN CAL GAS Well Designation: PORTER 69H

Sec. 27, T. 03N, R. 16W, SB B.M. API No. 037-24223 Field: ALISO CANYON

County: LOS ANGELES Witnessed on: 6/9/16 A. LAGUNZAD, representative

of the supervisor, was present from 0900 to 1036.

Also Present were JOHN HERRIN

Casing Record of the Well:

The operations were performed for the purpose of CIT BLOCK TEST 0-3500'

Pressure Test of the Casing

Packer/ Bridge Plug at 3500'
Casing Pressured with WATER
Casing Pressure Start PSI: 3723
Casing Pressure End PSI: 3704
Pressure Held 60 Min. Total drop in Pressure 19 psi 0.51 %.

Well Type GS
Volume N.A. - PREPUMED W/WATER
Start Time: 0936
End Time: 1036

Test Result: ✓ Good _____ Not Good

Pressure Test of the Tubing

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

Well Type _____
Volume _____
Start Time: _____
End Time: _____

Test Result: _____ Good _____ Not Good

Remarks:

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

No. T **216-0214**

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
June 13, 2016

Your operations at well **"Porter" 69H**, A.P.I. No. **037-24223**, Sec. **27**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **6/4/2016**, by **Mark Davis**, a representative of the supervisor.

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

DECISION:

APPROVED

MD/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel, *District Deputy*

API No. 037-24229 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T 216-0214

BLOWOUT REVENTION EQUIPMEN MEMO 12, 1

Operator SO. CAL. GAS CO. Well "PORTER" 69 H Sec. 27 T. 3N R. 16W
Field ALISO CANYON County LOS ANGELES Spud Date

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	6-4-16	M. DAVIS	(10:30 to 11:00)		
2nd			(to)		

Contractor RIVAL Rig # 15 Contractor's Rep. & Title JOHN HUTTON - TEC
Casing record of well:

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.

Proposed Well Opns: REWORK . MACP: psi
Hole size: " fr. ' to ', " to ' & " to '

REQUIRED BOPE CLASS: 11 5M

CASING RECORD OF BOPE ANCHOR STRING

Size	Weight(s)	Grade(s)	Shoe at	CP at	Cement Details	Top of Cement: Casing	Top of Cement: Annulus
9 5/8	47#						

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
A	—	HYDRIL		11"	5M	
Rd	2 7/8	SHAFFER		11"	"	
Rd	CSO	SHAFFER		11"	"	

TEST DATA

Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
18.67		5				
2.8		5				
2.8		5				

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3000 psi
Total Rated Pump Output gpm Fluid Level
Distance from Well Bore 50 ft. OK

	Accum. Manufacturer	Capacity	Precharge
1	KOOMEY	80 gal.	1500 psi
2		gal.	psi

CONTROL STATIONS

		Elec.	Hyd.	Pneu.
X	Manifold at accumulator unit		X	
	Remote at Driller's station			
	Other:			

EMERG. BACKUP SYSTEM

				Press.	Wkg.Fluid
X	N_2 Cylinders	1	L= 48"	2700	gal.
	Other:	2	L= 48"	2750	gal.
		3	L= 48"	2750	gal.
		4	L= 48"	2750	gal.
		5	L= 48"	2700	gal.
		6	L= 48"	2700	gal.
			TOTAL:		gal.

HOLE FLUID MONITORING EQUIPMENT

		Alarm Type: Audible	Alarm Type: Visual	Class
	Calibrated Mud Pit			A
	Pit Level Indicator			B
	Pump Stroke Counter			B
	Pit Level Recorder			B
	Flow Sensor			B
	Mud Totalizer			B
	Calibrated Trip Tank			C
	Other:			C

TOTAL:

AUXILIARY EQUIPMENT

	No.	Size (in.)	Rated Press	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
X		3"	5M			X	
X	8		5M			X	
X	2	3"	5M			X	
X		2 1/2	5M				
X		2 7/8	5M				

Fill-up Line
Kill Line
Control Valve(s)
Check Valve(s)
Aux. Pump Cnnct.
Choke Line
Control Valve(s)
Pressure Gauge
Adjstble Choke(s)
Bleed Line
Upper Kelly Cock
Lower Kelly Cock
Standpipe Valve
Stndpipe Pres. Gau.
Pipe Safety Valve
Internal Preventer

Hole Fluid Type	Weight	Storage Pits (Type & Size)
POLYMER	8.5	800 BBLS

REMARKS AND DEFICIENCIES:

OGD9 (9/06)

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

Operator: **Southern California Gas Company** WELL DESIGNATION **"Porter" 69H**

API No. **03724223** SE **27** T: **3N** R.: **16W** , **SB** B. and M.

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

Type of Notice: **Rework** **Date** **5/20/2016** **Report Number:** **P216-0068**

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

	Date	OK	NEED	Remarks
Well Summary (OG100)				
History (OG103)	7/25/16	✓		
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				
All logs & pressure charts On line & approved				

NEW STATUS

DATE: 10/25/16 GS

NOTICE OF RECORDS DUE

DATE: _____

DATE: _____

DATE: _____

DATE: _____

WELL STATUS INQUIRY

DATE: _____

DATE: _____

Well Stat

Change Required: _____

Change Done: _____

ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS

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

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

ENGINEER'S CHECK LIST

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

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

CLERICAL CHECK LIST

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

REMARKS

RECORDS SCANNED: _____
(Date)

RECORDS APPROVED: KG- 10/25/16
(Date and Engineer)

Modfied OGD2

AOR Datbase _____

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

No. P 216-0068

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

PERMIT TO CONDUCT WELL OPERATIONS

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

Ventura, California
May 31, 2016

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

Your proposal to **Rework** well **"Porter" 69H**, A.P.I. No. **037-24223**, Section **27**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **5/20/2016**, received **5/23/2016** has been examined in conjunction with records filed in this office. (Lat: **34.314837** Long: **-118.557701** 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 **9 5/8"** casing prior to commencing injection.

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

Engineer Kris Gustafson
Office (805) 654-4761

KG/kg

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel, *District Deputy*

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

OG111 (revised 6/2011)

NOTE:

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

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

ATTACHMENT 1
TO DOGGR ORDER 1109

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

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

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

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

REQUIRED TESTS FOR EACH WELL IN THE FACILITY

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

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

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

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

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

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

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

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

REQUIRED TESTS IF A WELL IS INTENDED TO RESUME OPERATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

REQUIREMENTS FOR WELLS RESUMING OPERATIONS IN ALISO CANYON

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

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

FOR DIVISION USE ONLY		
	Forms	
Bond	~~OGD114~~	OGD121
	CALV WIMS	115V

P216-0068

NOTICE OF INTENTION TO REWORK / REDRILL WELL

Detailed instructions can be found at: www.conservation.ca.gov/dog/

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework ☒ / redrill ☐ (Check one) well Porter 69H, API No. 037-24223,

Sec. 27, 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: 7980 feet. The effective depth is: 7773 feet.

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

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

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

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

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

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 _____ (Direction) and _____ feet _____ (Direction) Estimated true vertical depth: _____

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

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

Name of Operator			
Southern California Gas Company			
Address P. O. Box 2300		City/State Chatsworth	Zip Code 91313-2300
Name of Person Filing Notice Brian Vlasko	Telephone Number: 714-655-9506	Signature	Date 05/20/16
Individual to contact for technical questions: Brian Vlasko	Telephone Number: 714-655-9506	E-Mail Address: bvlasko@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.

Rec'd 05-23-16 DOGGR Ventura.

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

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

CRITICAL WELL DEFINITION

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

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

WELL OPERATIONS REQUIRING BONDING

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

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

WORKOVER PROJECT

Porter 69H – Well Inspection

DATE:	May 20, 2016
OPERATOR:	SOUTHERN CALIFORNIA GAS COMPANY
FIELD:	ALISO CANYON
WELL:	Porter 69H
API NUMBER:	037-24223
ELEVATION:	All depths based on original KB, 29' above GL
SURFACE LOCATION:	SEC 27, 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:	7980'; PBTD 7773' (BP)
Special Conditions:	Last tagged inside tubing at 7350', temp survey 03/17/2016
Casing Record:	13-3/8", 48#, J-55, K-55 casing cemented at 859' with 618 sks 9-5/8", 47#, N-80 casing cemented at 7960' with 1329 sks ECP at 7390' COE Perfs: 7605'-7670', 7704'-7762', 7785'-7850' 5-1/2", 17# WWS liner from 7507'-7772'. Note: Current liner top may be at 7464' - no detail on liner grade, screen width or gravel packing
Tubing Record:	See attached mechanical diagram for tubing/packer detail

GEOLOGIC MARKERS

Surface Elevation (includes KB) = 2400'
Original KB = 29'

MP	7189'md	-7052'tvd	S8	7605'md	-7435'tvd
S1	7432'md	-7276'tvd	S10	7632'md	-7460'tvd
S2	7475'md	-7316'tvd	S12	7704'md	-7527'tvd
S4	7530'md	-7366'tvd	S14	7730'md	-7551'tvd
S6	7556'md	-7390'tvd	Frew	7805'md	-7620'tvd

Estimated Field Pressure: 917 psi on 2/3/2016 (Variable)

Estimated Bottom-hole Temperature: 162°F from 03/17/2016 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. Release G-6 packer at 7402' and pull tubing tail below packer out of liner. POOH standing back all 2-7/8", EUE 8rd, N-80 tubing and lay down packer, jewelry and tubing stinger below packer. Note: tubing landed in 10,000 lbs. compression.

7. Pick-up a 9-5/8", 47# casing scraper on 2-7/8" production string and RIH to 5-1/2" liner top at 7507'. (Liner top may be at 7464'). Circulate well clean. POOH.

8. RIH with clean-out assembly for 5-1/2" liner on production string and clean-out to bottom at 7772'. POOH.

9. Run Gyro from TD to surface. Send a copy of the survey file to bvlasko@semprautilities.com.

10. RIH with a 9-5/8", 47# test packer and run a Pressure Integrity Test on 9-5/8". Set packer at 7497' and test annulus to 2250psi for 1hr. Set packer at 3500' and test annulus to 3625 psi for 1hr. POOH with test packer.

    a.) Pressure test to 115% of the wells maximum allowable operating pressure (3625 psi) as per attached Pressure Test Schedule.
    b.) Engineering team to analyze log and pressure test results and recommend any additional remediation.

11. Make-up and run a 9-5/8", 47# retrievable bridge plug (BP) on production string. Set at 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.

13. Rig-up wireline unit(s) with lubricator and run the following:

    a.) Ultrasonic imager from BP to surface
    b.) Cement bond log from BP to top of cement
    c.) Magnetic flux leakage BP to surface
    d.) Multi-arm caliper log from BP to surface

14. Nipple down 11" Class III 5 M BOPE, spacer spool, and auxiliary DSA.

    a.) Replace the pack-off seals and reinstall refurbished tubing spool.
    b.) Reinstall the 11" Class III BOPE.
    c.) Verify casing head rating. Test connections.

15. RIH with retrieving tool for BP on production string to top of sand. Circulate out sand and engage BP. Release BP, circulate as required to control well. POOH and lay down production string.

16. RIH with new completion string as detailed below. Run items a) through f) and 1 joint of 3-1/2" tubing. Install XN plug with slick line unit. Make up testing sub and test BHA to 4000 psi for 5 mins. Remove test sub and pull XN plug. Continue running 3-1/2" tubing hydro-testing each connection to 4000psi.

    a) 4-1/2" Wireline re-entry guide
    b) +/- 8ft - 4-1/2" 12.75# EUE L-80 x 9-5/8" 47# Mechanical production packer
    c) +/- 1ft – 4-1/2" 12.75# EUE x 3-1/2" 9.3# EUE L-80 Crossover sub
    d) +/- 10ft - Pup joint 3-1/2" 9.3# L-80 EUE
    e) +/- 2ft – 3-1/2" 9.3# L-80 EUE XN (2.75" w/2.635" no-go) nipple
    f) +/- 31ft - Full joint 3-1/2" 9.3# L-80 EUE tubing
    g) +/- 2ft - Pup 3-1/2" 9.3# L-80 EUE
    h) +/- 2ft – 3-1/2" 9.3# L-80 EUE (2.813" Open Down) sliding sleeve
    i) +/- 4ft - Pup 3-1/2" 9.3# L-80 EUE
    j) +/- 7433ft - 3-1/2" 9.3# L-80 EUE tubing to surface
    k) Pup joints 3-1/2" 9.3# EUE L-80 for space-out
    l) +/- 4ft - 3-1/2" 9.3# L-80 EUE fatigue nipple (pin x pin)
    m) Tubing hanger with 3-1/2" EUE top box / 3-1/8" BPV / 3-1/2" EUE bottom box

Notes

- Make up items a) through e) under the supervision of Quality Tubulars. Pressure test assembly at Halliburton facility to 4000 psi for 1hr, chart test. Test caps to be installed and removed by Quality Tubulars.
- Make up items g) through i) under the supervision of Quality Tubulars. Pressure test assembly at Halliburton facility to 4000 psi for 1hr, chart test. Test caps to be installed and removed by Quality Tubulars.
- Cameron to make up items l) through m) under the supervision of Quality Tubulars. Pressure test assembly at Cameron facility to 4000 psi for 1hr, chart test. Test caps to be installed and removed by Quality
- Shift sliding sleeve and drift with XN plug prior to shipping tools to location.
- Seal lube all connections. To be witnessed by Quality Tubulars.

17. Land tubing as per vendor specifications. **Note: amount of compression to set on packer will be determined by Force Analysis / Tube Move Calculations.**

18. Rig-up slickline unit and lubricator. Set a plug in the 2-7/8" XN profile.

19. Notifiy 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.

20. RIH and recover plug from XN nipple. RIH and shift the sliding sleeve open.

21. Install BPV in tubing hanger. Nipple down the Class III 5M BOPE and install the production tree and test to 5000 psig. Remove BPV.

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

UNLOAD WELL

23. Rig-up nitrogen unit. Recover workover fluid by pumping down annulus taking returns up tubing.

24. RIH with slickline and shift sliding sleeve closed. POOH and rig down slickline unit.

WELL LATERAL HYDROTESTING

25. 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.

26. Reinstall the hydro-tested laterals.

27. Install the well safety systems and instrumentation. Install pressure transmitters on tubing, casing, and surface casing.

28. 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 69H

		External Casing Backup Pressure			Pressure Test Net Burst Pressure @ Depth				Tubing Leak Net Burst Pressure @		
Depth (TVD)	85% of Burst Strength	Fluid / Formation Pressure Gradient	External Casing Backup Pressure	Internal Water Hydrostatic	1	2	3	Final	Gas-Filled Annulus	Test Pressuree > 85% of Burst	Test Pressure < Tubing Leak - Net Burst (Gas-filled annulus)
				Surface Test Pressure	3625			2250	3625		
				Test Packer Depth	3500						
				Test Down Casing or Tubing	Casing			Tubing			
				Bridge Plug Depth				7497			
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		
7497	5840	0.00	0	3314	-			5564	4304		
				0.442 psi/ft int. grad.					0.091 psi/ft int. grad.		

Well
Porter 69H

API #: 04-037-24223-00
Sec 27, 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: 29' KB

Spud Date: 11/23/2001
Completion Date: 12/11/2001

Junk: None

Notes
*Top of 5-1/2" liner could be as high as 7464', very little detail on 5-1/2" liner.

13-3/8" TOC Surface
9-5/8" TOC Surface

17-1/2" Hole
(0' - 865')

Surface Casing
13-3/8"
0' - 836' 54.5#, J-55
836' - 859' 54.5#, K-55

CMT'D w/ 164 BBLS/618 SKS,
18 BBLS CMT Returns to Surface

859'

Tubing
3-1/2"
0' - 29'
2-7/8"
29' - 7430'
1.66"
7430' - 7743'

3988' KBM w/ 1" Pocket GLM

Production Casing
9-5/8", 47#, N-80
0' - 7960'

CMT'D w/ 2712 CF/1329 SKS,
30 BBLS CMT Returns to Surface

7316' KBM w/ 1" Pocket GLM

7355' "XD" Sliding Sleeve

7380' - 7399'
ECP (Inflated w/ 230 CF/200 SKS)

7391' Top Half of on/off tool
7392' Btm Half of 9-5/8" x 2-7/8" on/off tool
7393' "X" Nipple

12-1/4" Hole
(865' - 7980')

7402' Baker Mechanical G-6 PCKR

7414' "XD" Sliding Sleeve

7429' "XN" No-Go Nipple

9-5/8" Perfs:
7605' - 7670', 7704' - 7762'
Six (6) 5/8" HPF (6/3/2002)
7785' - 7850'
Six (6) 5/8" HPF (5/21/2002)

7507'*

Inner Liner Perfs:
7597' - 7771' WWS

Gravel Packed (Details Not Reported)

Inner Liner
5-1/2"
7507'* (Baker SC-1) - 7772'

7743' Tail (1 Cut Off, Perf'd Joint f/ 7723' - 7743')

7772'

7773' BP (8/14/2004)

Fill

7847' Tagged Fill (8/13/2004)

Top of Zone Markers		
MP	7189'	(-4653')
S1	7432'	(-4877')
S4	7530'	(-4967')
S8	7605'	(-5036')
FREW	7805'	(-5220')

PBTD 7856'

7960'

TD 7980'
TD VSS (-5383')
Directionally Drilled: Yes (TD is 201' E, 974' N of Surf, 7783' TVD)

Prepared by: CAM (4/15/2016)

InterAct

Rec'd 05-23-16 DOGGR Ventura.

Well

Porter 69H

API #: 04-037-24223-00
Sec 27, T3N, R16W

Production Casing Pressure Test - Program

Operator: So. California Gas Co.

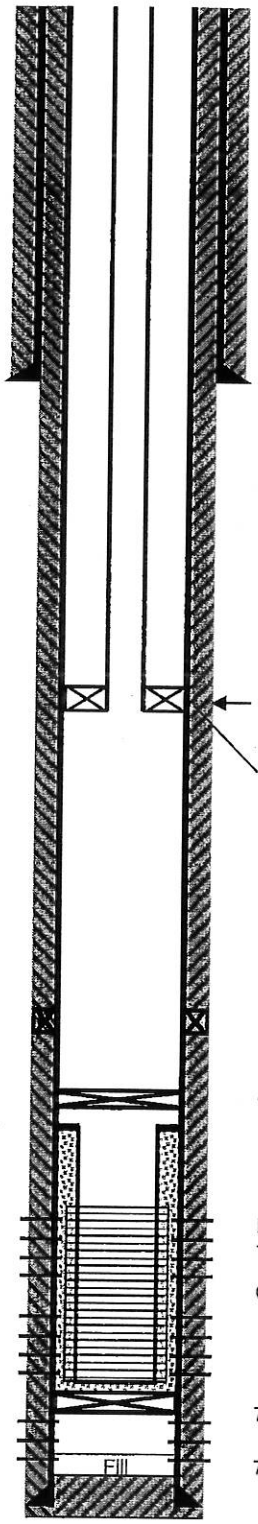
Lease: Porter
Field: Aliso Canyon
Status: Active Gas Storage
BFW:
USDW:

Ground Elevation: 2366' asl
Datum to Ground: 29' KB

Spud Date: 11/23/2001
Completion Date: 12/11/2001

Junk: None

Notes
*Top of 5-1/2" liner could be as high as 7464', very little detail on 5-1/2" liner.



13-3/8" TOC Surface
9-5/8" TOC Surface

17-1/2" Hole
(0' - 865')

Surface Casing
13-3/8"
0' - 836' 54.5#, J-55
836' - 859' 54.5#, K-55

CMT'D w/ 164 BBLS/618 SKS,
18 BBLS CMT Returns to Surface

859'

Production Casing
9-5/8", 47#, N-80
0' - 7960'

CMT'D w/ 2712 CF/1329 SKS,
30 BBLS CMT Returns to Surface

TEST 3500' to Surface - 3625 psi
TEST 3500' to 7497' - 2250 psi

9-5/8" Test Packer (COE @ 3500')

12-1/4" Hole
(865' - 7980')

7380' - 7399'
ECP (Inflated w/ 230 CF/200 SKS)

9-5/8" Perfs:
7605' - 7670', 7704' - 7762'
Six (6) 5/8" HPF (6/3/2002)
7785' - 7850'
Six (6) 5/8" HPF (5/21/2002)

7507'*

7497' 9-5/8" Retrievable Bridge Plug

Inner Liner
5-1/2"
7507'* (Baker SC-1) - 7772'

Inner Liner Perfs:
7597' - 7771' WWS

Gravel Packed (Details Not Reported)

7772'

7773' BP (8/14/2004)

7847' Tagged Fill (8/13/2004)

PBTD 7856'

TD 7980'
TD VSS (-5383')

7960'

Directionally Drilled: Yes (TD is 201' E, 974' N of Surf, 7783' TVD)

Top of Zone Markers		
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Prepared by: CAM (4/15/2016)

InterAct

Rec'd 05-23-16 DOGGR Ventura.

OPERATOR So. Cal. Gas Co.
WELL NO. "Porter" 69W
MAP

A.P.I. 037 - 34203
SECTION 21, T. 3 N, R. 11 W

INTENTION	Drill	REWORK				
NOTICE DATED	6-28-01	07/26/2004				
P-REPORT NUMBER	501163	P209-151				
CHECKED BY/DATE						
MAP LETTER DATED	7-6-01	6-25-05				
SYMBOL	⊙	✱				

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE	6-28-01		08/18/04									
HISTORY	7-16-02		3-23-05									
SUMMARY	7-25-02		3-23-05									
850 1928 E-LOG PLAT. EXP.	9-11-02											
MUD LOG												
DIPMETER												
DIRECTIONAL												
CORE/SWS												
CBL												
PERF MEMO	6-4-02											

ENGINEERING CHECK

T-REPORTS	✓	✓				
OPERATOR'S NAME	✓					
WELL NO.	✓					
LOC & ELEV	✓					
SIGNATURE	✓					
SURFACE INSP.						
DRILL CARD						

RECORD'S COMPLETE SPM 7-05-02 MO 5-19-05

FINAL LETTER OK
MAILED
RELEASED BOND

INJECTION BOOK
IDLE WELL LIST
SURFACE INSP. CARD

REMARKS:

OK TO RELEASE FROM CONFIDENTIAL
ABANDONED-REMOVED FROM E.D.P.

RESOURCES AGENCY OF CALIFORNI/
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company Field: Aliso Canyon County: Los Angeles
Well: Porter 69 H Surface Location: Sec.28, T3N, R16W, SBB&M
A.P.I. No. 037-24223 Mike Dozier (Person Submitting Report) Title: Technical Specialist (President, Secretary, or Agent)
Date: 03/21/2005 Signature:
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300 Telephone Number: 818-701-3235

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

Start Date	Ops. DOGGR Rpt
08/11/2004	Rigged up Spicer Wireline and perforated tubing with two holes above the connection at 7382' on 8/10/04. Killed well. Annulus full of fluid, unable to reverse circulate. Tubing pressure zero. Install BPV and removed tree. Nippled up BOPE.
08/12/2004	Completed testing BOPE and choke. BOPE test witnessed and approved by S. Mulqueen, DOGGR. Pulled out of hole, laid down RA marker, packer and TCP guns. Made up 9-5/8" casing scraper and ran in hole 35 stands.
08/13/2004	Continued running in hole with casing scraper. Ran in hole to top of fill at 7847'. Pulled casing scraper to 6930'.
08/14/2004	Pulled out of hole and laid down casing scraper. Rigged up Baker Atlas and ran CBL, CCL, Gamma Ray, Neutron log. Logged from 7858' to 6200'. Found top of cement at 1495', very good bond at 7100' and good cement at 5600'. Rigged up and ran HES bridge plug and set with top of plug at 7773' (11' above the top Frew perforation), had good cement bond between bridge plug and Frew.
08/16/2004	Pulled out of hole. Picked up PPI tool and six drill collars. Ran in hole and set PPI with bottom element at 7569'. Pressure tested against blank csasing to 1275 psi. OK. Released PPI tool.
08/17/2004	Rigged up HES, reset packer at 7652', unable to get pressure test or release lower slips on packer. Pulled out of well and laid down packer.
08/18/2004	Made up PPI tool and ran in well to 7500'. Set tool in blank casing and tested to 5000 psi. OK.
08/19/2004	Ran in well, reset packer at 7771' and washed perforations up to blank at 7702' and from 7668' to 7603'. Pulled out of well, laid down drill collars and PPI tool. Made up and ran 5.5" wire wrapped screen liner and ran in well.
08/20/2004	Run wire wrapped screen in hole on tubing checking connections. Tagged bridge plug at 7774.5'. Spaced out and land wire wrapped screen on donut hanger with shoe at 7771.65' and top of landing adapter at 7508.74'. Tighten hold down screws. Secure well. Rigged down for move to Montebello.
09/20/2004	Moved in and rigged up hoist. Changed over well with 538 bbls. of 9.6 ppg. KCL water.
09/21/2004	Pulled out of hole and laid down liner landing tools and tail pipe. Rigged up and ran Schlumberger Gamma Ray Fluid Density log in 5.5" gravel packed liner from 7769' to 7508'. Log indicated good pack. Rigged down loggers. Ran kill string. Secured well.
09/22/2004	Pulled out of hole and picked up 5-1/2" by 9-5/8" slip on adaptor / packer assembly on setting tools. Ran assembly in hole slow, slipped pack off over polished landing nipple and set down on nipple. Dropped ball and set packer at 7507' with 1000 psi. and increased pressure to 2500 psi. Pulled off of packer with 6k over pick up.
09/23/2004	Pulled out of hole and laid down overshot / packer setting tools. Picked up BOT 5.5" test packer, RIH and set packer at 7525', unable to pressure test above packer at 15:30 hours. Reset and repressured packer four times in different places with out success. (Had flow up through tubing, indicating either test packer leak by or a leak in the 5.5" by 9.625" overshot / packer adaptor.) At 16:30 hours pulled out of hole to a kill string.
09/24/2004	Open well 0 psi. filled with 5 bbls. Pulled out of well with kill string laid down packer. Made up 5" full bore packer and ran in well to 7529' set packer. Pressured 9-5/8" annulus to 1000 psi (bled down 325 psi. in 20 minutes). Released packer and reset at 7524' pressured annulus to 1200 psi. bleeding down at same rate. Released packer and reset with 40,000 tension and pressured to 1500 psi. (bled down 325 psi. in 20 minutes) . Released packer and pulled to 7462'.
09/27/2004	Pulled out of well with full bore packer laid down packer. Made up 5" lock-set bridge plug and ran in well to 7540'. Set and released from bridge plug. Fill annulus and tubing pressured annulus to 1400 psi. (bled off 520 psi. in 30 minutes). Repressured annulus to 1500 psi. recorded presure every 2 minutes. Bleeding 20 psi. every two minutes total 500 psi. in 24 minutes. Bled down pressure and pulled out of well to 5000'.
09/28/2004	Pulled out of well with retreiving tool. Made up Baker seals with snap latch and ran in well to 7508' Stabbed in packer and filled annulus tested to 1500 psi. for 30 minutes with no leak off. Rigged up and pressured down tubing to 1500 psi. (bled down to 100 psi. in 8 minutes). Unstabbed from seals and dumped 4 cu. ft. sand displaced with 43 bbls. Pulled out of well to 3100'.
09/29/2004	Pulled out of well and laid down seal assembly. Ran in well with mill assembly to 7488'.
09/30/2004	Started milling on packer at 7508' . Milled to 7510.5'. Pulled out of well. Made up 6" spear, bumper sub, jars (4) 4-3/4" drill collars and intensifer. Ran in well to 3100'.

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company Field: Aliso Canyon County: Los Angeles
Well: Porter 69 H Surface Location: Sec.28, T3N, R16W, SBB&M
A.P.I. No. 037-24223 Mike Dozier (Person Submitting Report) Title: Technical Specialist (President, Secretary, or Agent)

Date: 03/21/2005 Signature:

Address: PO Box 2300, SC9365 Chatsworth, CA, 91313-2300 Telephone Number: 818-701-3235

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

Start Date	Ops. DOGGR Rpt
10/01/2004	Ran in well with spear to 7508' worked in fish. Pulled out of well with tubing, no recovery. Laid down fishing tools and ran in welll to 3100'.
10/02/2004	Pulled out of well. Made up Baker anchor latch, bumper sub. junk basket,jars (4) 4-3/4" drill collars,instensifer. Ran in well with tubing to 7500' Nippled up circulating head. ran in to top of packer at 7508'. Pumped down tubing and attempted to latch packer. Pulled out of well, no recovery. Made up spear with 6.095 grapple, bumper sub, jars (4) 4-3/4" drill collars, instensifer. Ran in well to 3500'.
10/04/2004	Pulled out of well. Made up 6" Baker anchor lock with bumper sub and baskets. Ran in well to 7508'. Did not see an increase in pump rate. Set down and stacked out 6' higher. Pulled out of well, did not recover fish. Made up 6.095" grapple. Ran in well with kill string.
10/05/2004	Continued running in well with tubing. Tagged at 7511', grapple at 7509'. Latched on to fish, jarred for 4 hours, unable to pull fish free. Released grapple and pulled out of well to 2970'.
10/06/2004	Continued pulling out of well. Made up 7-3/8" mill shoe, 3 boot baskets, jars and drill collars. Ran in well and tagged at 7508'. Began milling on packer with 4,000 lbs. on work string. Milled down one foot and lost 4,000 lbs. Pulled out with 2 stands.
10/07/2004	Ran in with 2 stands and tagged at 7509'. Reverse circulated and rotated mill shoe for 2 hours. Unable to make progress. Reverse circ. Spudded shoe assembly while circulating. Pulled out of well. Mill shoe showed no marks or indication of milling on packer. Ran in well with a kill string.
10/08/2004	Pulled out of well, made up mill shoe and magnets. Ran in well and tagged at 7508', appeared to mill one foot.
10/09/2004	Rigged up Tiger Wireline, ran in with collar locator and tagged the top of sand at 7518'. Pulled out of well. Ran in with 300 grain string shot. Shot across packer mandrel attempted to swell packer. Pulled out of well with wireline. Began milling with no significant changes to prior operations. Rotated on packer for 3 hours with no rubber recovery. Pulled out of well.
10/11/2004	Continued pulling out of well. Ran in well with 238 joints of 2-7/8" tubing to 7441'. Landed tubing nippled down BOPE, nippled up tree. Moved out.
12/11/2004	Moved in Key rig 477.
12/12/2004	Rigged down tree and rigged up BOPE. Witness of BOPE test waived by Steve Mulqueen (CADOGGR)
12/13/2004	Pulled out of well and layed down 2-7/8" tubing. Changed pipe rams to 3-1/2".
12/14/2004	Made up 8-1/8" mill shoe, bumper sub, jars (6) 4-3/4" drill collars. Ran in well measured and picked up 3-1/2" drill pipe to 5300'.
12/15/2004	Ran in well to 7508'. Picked up kelly and milled Baker F-1 packer to 7509'.
12/16/2004	Milled on F-1 packer (not making hole). Pulled out of well to kill string.
12/17/2004	Pulled out of well with kill string. Laid down mill shoe and clean junk subs. Made up 6.40 spear, jars, bumper sub ran in well to 7509', engaged fish and attempted to jar free. Released from fish and pulled out of well.
12/18/2004	Pulled out of well and laid down spear. Made up 8-1/8" mill shoe, (3) junk subs, jars, (6) 4-3/4" drill collars ran in well to 7000'.
12/19/2004	Ran in well to 7509' picked up kelly and milled on F-1 packer.
12/20/2004	Mixed and pumped 20 bbls. hi-vis HEC polymer pill. Displaced with 60 bbls. Reversed circulated 2 pipe volumes. Milled on packer. Pulled out of well, laid down mill shoe and clean junk subs. Made up 8-1/8" mill shoe and ran in well to 2500'.
12/21/2004	Ran in well to 7511' milled on fish. Milled for 2 hours with no progress. Pulled out of well. Laid down shoe and clean junk subs. Made up 6.40" spear, jars, bumper sub (6) 4-3/4" drill collars. Ran in well to 2500'.
12/22/2004	Ran in well to 7511' engaged fish. Jarred loose fish dragging up hole. Pulled out of well and laid down tools. Laid down fish, recovered F-1 packer. Ran in well with kill string to 3100'
12/27/2004	Pulled out of well with kill string. Made up 9-5/8" casing scraper and ran on well to 7508'. Pulled out of well to 2500'.
12/28/2004	Shut down due to severe weather.
12/29/2004	Pulled out of well with kill string. Made up casing bowl with seals and extension and Baker SC-1 packer. Ran in well to 7000'.

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company Field: Aliso Canyon County: Los Angeles
Well: Porter 69 H Surface Location: Sec.28, T3N, R16W, SBB&M
A.P.I. No. 037-24223 Mike Dozier Title: Technical Specialist
(Person Submitting Report) (President, Secretary, or Agent)

Date: 03/21/2005 Signature:

Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300 Telephone Number: 818-701-3235

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Start Date	Ops. DOGGR Rpt
01/04/2005	Ran in well to 7508' tagged. Attempted to latch on polish nipple. Pulled out of well and laid down packer. Chervon seal pushed into slip area. Made up 8-1/8" shoe with 6' extension (2) junk subs ran in well to 5000'.
01/05/2005	Ran in well to 7507'. Circulated to 7509'. Reverse circulated 120 bbls. and pulled out of well to kill string at 3000'.
01/11/2005	Pulled out of well with kill string layed down shoe and junk subs. Made up guide with casing bowl, 5-1/2" extension and Baker SC-1 packer ran in well to 7000'.
01/12/2005	Ran in well with packer assembly to 7510'. Worked over polish bore, unable to latch with casing bowl. Tested down tubing to 500 psi. Attempted to latch casing bowl. Pulled out of well with packer assembly. Laid down and loaded out tools. Ran in with kill string to 2500'.
01/13/2005	Open well 0 psi pulled out of well with kill string. Made up 8-1/8" shoe with 15' extension, (2) junks subs and bumper sub. Ran in well to 7504' liner top worked down to 7518'. Reversed circulated rwo tubing volumes. Pulled out of well to 2500' Secured well.
01/14/2005	Pulled out of well and laid down 8-1/8" mill assembly. Made up over shot with 5.50" ID with impression block at top. Ran in well to 7505' worked over liner 3' and set down 12,000#'s. Pulled out of well and laid down overshot.
01/18/2005	Made up over shot with seals, a 30', 5-1/2" extension and SC-1 packer. Ran in well to 7505'. Worked over polish bore 3'. Set down 12,000#'s. Pulled 15,000#'s tension and tested tubing to 500 psi. for 20 minutes. Dropped ball and set packer with 1600 psi. Tested annulus to 1200 psi. Released from packer and pulled out of well to 7400'.
01/19/2005	Pulled out of well with drill pipe. Laid down setting tool for bridge plug. Picked up 5-1/2" retrieving tool and ran in well to 7154'.
01/20/2005	Ran in well to 7464', tagged top of packer ran in to 7505' cleaned out to bridge plug at 7540'. Released bridge plug and pulled out of well. Laid down PH-6 and bridge plug. Nippled down circulating head. Made up (10) joints 1.66 integral joint tubing, 1.66X2-7/8" crossover ,"XN" nipple, 10' pup joint, "XD" sliding sleeve, and a 6' pup joint. Ran in well to 2500' kill string
01/21/2005	Made up G-6 packer and on/off tool, ran in well with completion string (10) joints 1.66 integral joint tubing, 1-1/4" x 2-7/8" crossover, "XN" nipple, 10', 2-7/8" pup joint ",XD" sliding sleeve, a 6' pup joint, G-6 packer, a 6' pup joint, "X" nipple, on/off tool. Ran in well to 7404' set packer and tested annulus to 1000 psi. for 20 minutes. Rigged Spicer wire line and set PXN plug in "X" nipple at 7394'. Released from on/off tool and tested plug to 1000 psi. for 20 minutes.
01/24/2005	Pulled out laying down and loading out 3-1/2" drill pipe. Laid down 238 joints, laid down (6) 4-3/4" drill collars. Rigged out drill pipe equipment.
01/25/2005	Laid down kelly and swivel. Laid down 5 joints of PH-6 tubing. Changed pipe rams to 2-7/8". Rigged up tubing equipment. Made up on/off tool (1) joint of 2-7/8" tubing, "XD" sliding sleeve, (1) joint of 2-7/8" tubing, gas lift mandrel. Ran 2-7/8" tubing to 3500'.
01/26/2005	Ran in well with 2-7/8" tubing to 7393' latched on/off tool, and respaced well. Released from on/off tool made up spacing subs (found tubing hanger threads galled sent to Shaffco for repairs).
01/27/2005	Made up tubing hanger and landed tubig with 10,000#'s compression. Filled and tested annulus to 1000 psi. for 20 minutes. Made up back prssure plug and nippled down Class III BOP. Nippled up production tree removed back pressure plug. Rigged out.
01/28/2005	Rigged down moved out
01/31/2005	Rigged up Spicer Wireline and ran in well with shifting tool stopped at 4500'. Made up bailer and ran in well to 7454'. Ran in and pulled gas lift valve at 7322'. Rigged up pump and changed over well to 8.5ppg. KCL water. Loaded out equipment.
02/01/2005	Rigged up Spicer Wireline, ran in well, shifted sliding sleeve at 7374' open and pulled out of well. Ran in well with wireline magnet, retrieved small metal shavings and pulled out of well. Ran in well with 2" impression block, tagged at 7366' and pulled out of well. Impression block showed scale. Ran in well with wireline bailer.
02/02/2005	Rigged up Spicer Wireline and made up 2" bailer, ran in well and bailed from 7366' to 7373'.
02/03/2005	Rigged up Spicer Wireline and made up 2" bailer. Bailed from 7359' to 7370'.

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 H
A.P.I. No. 037-24223

Field: Aliso Canyon County: Los Angeles
Surface Location: Sec.28, T3N, R16W, SBB&M

Mike Dozier Title: Technical Specialist
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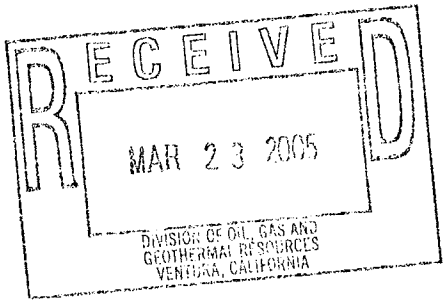
Start Date	Ops. DOGGR Rpt
02/04/2005	Rigged up Spicer Wireline. Made up 2.31" shifting tool and ran in well to 7338'. Shifted sleeve closed. Made up kick over tool and ran in well with 1" dummy valve. Unable to set valve. Made up 2.250" impression block and ran in well.
02/08/2005	Rigged up Spicer Wireline and bailed to 7370'. Ran 2" impression block.
02/09/2005	Rigged up Spicer Wireline and ran 1.75" hydrostatic bailer. Bailed down to 7371'.
02/10/2005	Rigged up Spicer Wireline and bailed down to 7272'. Pulled prong from PXN plug rigged down.



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

WELL SUMMARY REPORT

API NO. **037-24223**

Operator	Well				
Southern California Gas Company	**Porter 69 H**				
Field	County	Sec.	T.	R.	B.&M.
Aliso Canyon	**Los Angeles**	**28**	**3N**	**16W**	**S.B.**

Location (Give surface location from property or section corner, street center line)
868' South and 3363' West of Station 84

Elevation of ground above sea level
2366'

California Coordinates (if known):

Was the well directionally drilled? ☒ Yes ☐ No If yes, show coordinates at total depth. **7300 TVD, 780' N. and 200' E.**

Commenced drilling (date)
10/07/2001

Completed drilling (date)
10/29/2001

Total depth: (1st hole) **7980"** (2nd) (3rd)

Depth measurements taken from top of:
☐ Derrick Floor ☐ Rotary Table ☒ Kelly Bushing

Which is **29** feet above ground

Commenced production/injection (date)
Jan, 2002

Present effective depth **7993'**

Production mode: ☒ Flowing ☐ Pumping ☐ Gas lift

Junk
None

Name of production/injection zone(s)
Frew
Lower Sesnon

GEOLOGICAL MARKERS	DEPTH
MP	**7189'**
S4	**7527'**
Frew	**7805'**

Formation and age at total depth
Frew / Eocene

Base of fresh water

	Clean Oil (bbl per day)	API Gravity (clean oil)	Percent Water (including emulsion)	Gas (Mcf per day)	Tubing Pressure	Casing Pressure
Initial Production				Gas Storage	2440 psi	2440 psi
Production After 30 days						

CASING AND CEMENTING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New (N) or Used (U)	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing (if through perforations)	Top(s) of Cement in Annulus
13-3/8"	29	859	54.5#	J-55	N	17-1/2"	618 sks.	Shoe	Surf
9-5/8"	29	7960	47	N-80	N	12-1/4"	1529 sks	Shoe	Surf

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforations, and method.)
TCP/4 5/8-inch/6-spf/DP/.43EHD/30"Pen. Interval: 7605' to 7670'.
TCP/4 5/8-inch/6-spf/DP/.43EHD/30"Pen. Interval: 7704' to 7762'.
TCP/4 5/8-inch/6-spf/DP/.43EHD/30"Pen. Interval: 7785' to 7850'.

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DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES
VENTURA, CALIFORNIA

Logs/surveys run? ☒ Yes ☐ No If yes, list type(s) and depth(s).
Radial Analysis Log 7854' to1300'.
Nuclear Fluid Density Log 7510' to7772'.

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	Title	
Mike Dozier	**Technical Specialist**	
Address	City/State	Zip Code
P.O. Box 2300, M.L. SC 9365	**Chatsworth, CA**	**99313**
Telephone Number	Signature	Date
818.701.3235	Michael L Dozier	**March 21, 2005**

OG100 (1/98/GSR/1M)
Printed on recycled paper.

SUBMIT IN DUPLICATE

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

No. **T204-147**

Report on Operations

James D. Mansdorfer, Agent
SOUTHERN CALIFORNIA GAS CO.
9400 Oakdale Ave.
Chatsworth, CA 91313

Ventura, California
August 30, 2004

Your operations at well **"Porter" 69H,** API No. **037-24223,** Sec. **27,** T. **3N,** R.**16W,** S.B.B.&M. **Aliso Canyon** Field, in **Los Angeles** County, were witnessed on **08-12-2004. Steve Mulqueen,** representative of the supervisor, was present from **0800** to **1000.** There were also present **Mike Volkmar.**

Present condition of well: **13 3/8" cem 859'; 9 5/8" cem 7960', perfs @ int 7605'-7850'. TD 7980'.**

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

DECISION:

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

tkc

Hal Bopp
State Oil and Gas Supervisor

By _____
Bruce H. Hesson
Deputy Supervisor

API No. 037 - 24223 DIVISION OF OIL AND GAS T 2N - 14W

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SOUTHERN CALIFORNIA GAS CO. Well "Porter" 69 H
Field ALISO CANYON County LOS ANGELES Spud Date —

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	8-4-04	S. MULQUEEN	(0800 to 1000)	MIKE VOLKMAR	FOREMAN
2nd			(to)		

Contractor TORCH RIG SERVICE Rig # Contractor's Rep. & Title LARRY GARCIA
Casing record of well: 13 3/8" cem 859'; 9 5/8" cem 7960', perfs @ int 7605'-7850'. TD 7980'.

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: COMPLETION . MACP: psi
Hole size: " fr. ' to ' , " to ' & " to '
REQUIRED BOPE CLASS: II 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

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
A	—	SHAFFER	SPH.	11 5/8	5000	
RD	2 7/8	"	LWS	"	5000	
RD	CSO	"	LWS	"	5000	

TEST DATA

Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
TEST PUMP &					8-11	2500
PRESSURE CHART					8-11	5000
					8-12	5000

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3000 psi
Total Rated Pump Output gpm
Distance From Well Bore 70 ft.

	Accum. Manufacturer	Capacity	Precharge
1	WEATHERFORD	80 gal.	1000 psi
2	(KOOMEY TYPE)	gal.	psi

CONTROL STATIONS

		Elec.	Hyd.	Pneu.
X	Manifold at accumulator unit		✓	
	Remote at Driller's station			
	Other:			

EMERG. BACKUP SYSTEM

				Press.	Wkg. Fluid
X	N_2 Cylinders	1	L= "	2100	gal.
	Other:	2	L= "	2300	gal.
		3	L= "	2500	gal.
		4	L= "	2650	gal.
		5	L= "		gal.
		6	L= "		gal.
			TOTAL:		gal.

HOLE FLUID MONITORING EQUIPMENT

		Alarm Type: Audible	Alarm Type: Visual	Class
X	Calibrated Mud Pit		✓	A
	Pit Level Indicator			B
	Pump Stroke Counter			B
	Pit Level Recorder			B
	Flow Sensor			C
	Mud Totalizer			C
	Calibrated Trip Tank			C
	Other:			

TOTAL:

AUXILIARY EQUIPMENT

		No.	Size (in.)	Rated Press.	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line							
X	Kill Line		3					5000
X	Control Valve(s)	2						5000
X	Check Valve(s)	1						5000
X	Aux. Pump Connect.							5000
X	Choke Line	2	3&4	5000		✓	✓	5000
X	Control Valve(s)	11	3			✓		5000
X	Pressure Gauge					✓	✓	
X	Adjustable Choke(s)	2	3			✓		—
X	Bleed Line						✓	
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Standpipe Press. Gauge							
X	Pipe Safety Valve							5000
	Internal Preventer							

Hole Fluid Type	Weight	Storage Pits (Type & Size)
KCl WATER	9#/g	300
KCl WATER	8.5#	450

REMARKS AND DEFICIENCIES:

1. HYDRAULIC LEAK AT "CLOSE" SIDE OF PIPE RAMS
2. HYD. LEAK AT "OPEN" SIDE OF BLIND RAMS

OGD9 (12/90/GSR1/2M)

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

No. P204-151

PERMIT TO CONDUCT WELL OPERATIONS

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

Gas Storage Project

James D. Mansdorfer, Agent
Southern California Gas
9400 Oakdale Ave.
Chatsworth, CA. 91313

Ventura, California
August 19, 2004

Your proposal to rework well "Porter" 69H,
A.P.I. No. 037-24223 Sec. 28, T. 3N, R. 16W, SB B.&M.,
Aliso Canyon field, ---------- area, Sesnon-Frew pool
Los Angeles County, dated 7/26/2004 received 8/18/2004 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOGGR Class II 5M requirements shall be installed and maintained in operating conditions at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. Wire line operations are conducted through at least a 5M lubricator.
4. Requirements specified in our approval of the Gas Storage project dated July 26, 1989 shall apply.

Note: The Division recommends, as a minimum, that carbon monoxide monitoring equipment and a vent line be installed and maintained operational during all extensive perforating operations.

SAF:sf
Super Blanket Bond

Engineer Steven A. Fields

Phone (805) 654-4761

Hal Bopp, State Oil and Gas Supervisor

By _____
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

OG111 (6/96/GSR/5M) Printed on recycled paper.

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

NOTICE OF INTENTION TO REWORK / REDRILL WELL

P204 - 151

C.E.Q.A. INFORMATION (when redrilling or deepening only)			
Exempt ☐	Neg. Dec. ☐	E.I.R. ☐	Document not required by local jurisdiction ☐
Class	S.C.H. No.	S.C.H. No.	
See Reverse Side			

FOR DIVISION USE ONLY			
	Forms		EDP Well
Bond	OGD114	OGD121	File
1,000,000	111	115	

This notice and an indemnity or cash bond must be filed, and approval given, before the rework/redrill begins. *(See the reverse side for bonding information.)* If operations have not commenced within one year of receipt of the notice, this notice will be considered canceled.

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to

rework/redrill *(Circle one)* well Porter 69H *(Well designation)* API No. 037-24223

Sec. Sec 28, T. 3N 16W SBB&M. Aliso Canyon Field

Los Angeles, County.

1. The complete casing record of the well (present hole), including plugs and perforations, is as follows:
See attached program
13-3/8 casing cemented at 859'
9-5/8" casing cemented at 7960'.

GS

2. The total depth is: 7980' feet. The effective depth is: 7865' feet.

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

4. Present zone pressure: Storage zone - variable psi. Anticipated/existing new zone pressure: same psi.

5. Last produced: 6-04 *(Date)* _____ *(Oil, B/D)* _____ *(Water, B/D)* _____ *(Gas, Mcf/D)*

(or)

Last injected: _____ *(Date)* _____ *(Water, B/D)* _____ *(Gas, Mcf/D)* 2660 *(Surface pressure, psig)*

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

The proposed work is as follows: *(A complete program is preferred and may be attached.)*
Remove tubing
Perforate 7785' – 7750'
Run new 5" wire wrapped screen across Sesnon.
Frac stimulate.
Place drive on adapter.
Rerun tubing.
(See attached program)

RECEIVED
AUG 18 2004
DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES
VENTURA, CALIFORNIA

For redrilling or deepening: _____ *(Proposed bottom-hole coordinates)* _____ *(Estimated true vertical depth)*

The division must be notified if changes to this plan become necessary.

Name of Operator	Telephone Number	
Southern California Gas Company	818 701 3251	
Address	City	Zip Code
9400 Oakdale Av	Chatsworth	91313
Name of Person Filing Notice	Signature	Date
Richard Jackson	OK	7-26-2004

File In Duplicate

OG107 (7/97/GSR/5M)

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

WELL SUMMARY REPORT

API NO. 037- 24223

Operator	Well				
Southern California Gas Company	Porter 69 H				
Field	County	Sec.	T.	R.	B.&M.
Aliso Canyon	Los Angeles	28	3N	16W	S.B.

Location (Give surface location from property or section corner, street center line)
878' South and 3463' West from Station 84

Elevation of ground above sea level
2366'

California Coordinates (if known):

Was the well directionally drilled? ■ Yes ☐ No If yes, show coordinates at total depth.
7300' TVD, 780.00' N and 200.00' E

Commenced drilling (date)	Total depth (1st hole)	(2nd)	(3rd)
11/23/01	7980'		
Completed drilling (date) 12/6/01			
Commenced production/injection (date)	Present effective depth 7856'		

Depth measurements taken from top of: ☐ Derrick Floor ☐ Rotary Table ■ Kelly Bushing
Which is 29 feet above ground

Production mode: ■ Flowing ☐ Pumping ☐ Gas lift

Junk: None

Name of production/injection zone(s)
Frew
Lower Sesnon

GEOLOGICAL MARKERS	DEPTH
MP	7189'
S4	7527'
Frew	7805'

Formation and age at total depth: Frew / Eocene

Base of fresh water:

	Clean Oil (bbl per day)	API Gravity (clean oil)	Percent Water (including emulsion)	Gas (Mcf per day)	Tubing Pressure	Casing Pressure
Initial Production				Gas Storage	2440 psi.	2440 psi.
Production After 30 days						

CASING AND CEMENTING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New (N) or Used (U)	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing (if through perforations)	Top(s) of Cement in Annulus
13 3/8"	30' KB	859' KB	54.5 #	N-80 SMLS	N	17-1/2"	618 sks.	Shoe	Surface
9 5/8"	30' KB	7960' KB	47 #	N-80 SMLS	N	12-1/4"	1529 sks.	Shoe	Surface

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

7605' to 7670', 7704' to 7762', 7785' to 7850', 5/8" holes, six holes per foot, gun perforated.

Logs/surveys run? ■ Yes ☐ No If yes, list type(s) and depth(s).

Wellbore deviation survey 72' to TD. Platform Express array from 854' to 7978'.

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	Title	
Mike Dozier	Technical Specialist	
Address	City/State	Zip Code
P. O. Box 2300, M.L. SC 9365,	Chatsworth, CA	91313-2300
Telephone Number	Signature	Date
818.701.3235	Mike Dozier	July 5, 2002

OG100 (1/98/GSR/1M)
Printed on recycled paper.

SUBMIT IN DUPLICATE

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 H
A.P.I. No. 037-24223

Field: Aliso Canyon
Surface Location: Sec.28, T8N, R16W, SBB&M

County: Los Angeles

Mike Dozier (Person Submitting Report)
Title: (President, Secretary, or Agent)

Date: 7/11/2002
Signature: Mike Dozier

Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300
Telephone Number: (818) 701-3235

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 Rpt
11/22/2001	Moved rig.
11/23/2001	Spud @ 09:00 a.m. Drilled 17-1/2" hole from 63' to 750'.
11/24/2001	Drilled 17-1/2" hole from 750' to 865'. Ran 859.42' 13-3/8" K-55 54.5# casing S.T.C. Float collar @ 835'. Cemented well to surface, 18 bbls. cement returns C.I.P. 00:30 AM, preceded cement with 25 bbls. fresh water ahead. Lead: 88 bbls. 243 sacks, lead G cement w/ 65/35/6 w/2% cal, .5% cello flake 12.4 Ppg. Tail: G cement with 3% cal 76 bbls. 375 sacks 15.9 Ppg.
11/25/2001	Installedl class III B.O.P. Pressure tested BOP.
11/26/2001	Tested B.O.P OK, wittnessed by Stephen P. Mulqueen DOGGR. Made up 12-1/4" bit on mud motor W/ 1.1 AKO setting. Made up MWD tools. Drilled from 859' to 1202'.
11/27/2001	Drilled from 1202' to 2502'.
11/28/2001	Drilled from 2502' to 3528'.
11/29/2001	Drilled from 3528' to 4078'.
11/30/2001	Drilled from 4078' to 4433'.
12/1/2001	Drilled from 4433' to 5480'.
12/2/2001	Drilled from 5480' to 6052'.
12/3/2001	Drilled from 6052' to 6662'.
12/4/2001	Drilled from 6622' to 7030'.
12/5/2001	Drilled 12-1/4" hole from 7030' to 7436'.
12/6/2001	Drilled from 7436' to TD at 7980'.
12/7/2001	Ran platfform Express Array Induction /SP/ML Density/Neutron/GR logs from 7986' to 854'. Ran in well with locked reaming assembly.
12/8/2001	Reamed from 7100' to 7980'. Circulated and conditioned mud. Pulled to run 9-5/8" casing. Made up float equipment and ran 9-5/8" 47# N-80 casing.
12/9/2001	Ran 9-5/8", 47# N-80 casing to 7960'. Precede cement with 25 bbls. mud clean 1, 25 bbls. of ultra flush II, Lead: 841 sacks, 2148 cu/ft. of 12.00 ppg. slurry, Class G cement = 1.25% bwoc R-3 + 0.2% bwoc FL-62 +2 gals/100 sack FP-6L+ 2.5% bwoc Sodium metasilicate + 7.5% bwoc, MPA-1 + 132.2% fresh water. # 1 tail slurry: 488 sacks 564 cu/ft., 15.8 ppg. class G cement with + 0.5% bwoc R-3 + 0.4% bwoc FL-63 + 0.5% bwoc CD-32 +1 gal/100 sacks FP-6L + 0.3% bwoc Sodium Metasilic + 30.3% fresh water. # 2 tail slurry: 200 sacks 230 cu/ft. slurry. Class G + 2 gals /100 sacks PF-6L + 0.3% bwoc Sodium Metasilicate + 1.5 gps BA-86L + 0.5% bwoc R-3 0.4% bwoc FL-63 + 0.5% bwoc CD-32 + 30.2% fresh water. Displaced 496 bbls. @ 10 bbls. per minute & 104 bbls. @ 4 bbls. per minute. Bumped plug 1685 psi., cement in place @ 02:45 a.m. Pressured up casing to inflate E.C.P. @ 7390' center of rubber. Pressured up to 2600 psi. dropped to 2514'. Wait on cement for six hours. Good circulation through out cement job, 30 bbls. cement returns, reciprocated casing 20' strokes through out cement job.
12/10/2001	Landed 9-5/8" csg on slips. Cut off 9-5/8" casing, installed BOP. Ran 9-5/8" scraper to 7856'. Changed well over to 3% KCL water.
12/11/2001	Nipple down BOP. Released rig @ 10:00 a.m.

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 H
A.P.I. No. 037-24223

Field: Aliso Canyon
County: Los Angeles
Surface Location: Sec.28, T3N, R16W, SBB&M

Mike Dozier
(Person Submitting Report)
Title: Storage Field Engineer
(President, Secretary, or Agent)

Date: 7/11/2002

Signature: Mike Dozier

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

Telephone Number: (818) 701-3235

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 Rpt
5/20/2002	Made up 4-5/8" Vannguns 6 spf, RDX DP 65' loaded, 4-5/8" safety spacer, 3-3/8" model IIID firing head, two joints 2-7/8" N-80 tubing, 2-7/8" bar pressure vent, one joint 2-7/8" tubing, 9-5/8" G-6 Mec packer, 6', 2-7/8" pup, one joint 2-7/8" tubing, R / A tag. Measured and picked up tubing. Ran in well to 7848'.
5/21/2002	Rigged up and ran depth control log. Cement was tagged @ 7856' with guns. R/A tag 19' high, set G-6 packer @ 7675' with 10K down on packer, pulled 80 K to check packer. Installed and tested tree to 5000 psi, Dropped bar @ 13:00 hrs. Shot 5/8" holes from 7785' to 7850'. No blow or vacuum on tubing. Pressured up tubing to 2500 psi. bled to 600 psi. in 20 min. Rigged down.

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

HISTORY OF OIL OR GAS WELL

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Start Date	Ops This Rpt
5/31/2002	Move back on well. BOPE test approved by Steve Mulqueen (CADOGGR). Unseated packer and pulled tubing out of well. Ran 2000' kill string.
6/1/2002	Pulled kill string out of well. Ran TCP gun assembly, correlated on depth 7605' to 7762'. Set packer with 10,000 lbs. compression. Landed tubing on donut.
6/3/2002	Nippled down BOPE. Nippled up wellhead and testd to 5000 psi. OK. Dropped bar at 11:08 a.m., bar hit guns at 11:09 a.m. Perforated 6 spf. from 7605' to 7670' and 7704' to 7762'. Fluid to surface in 4 minutes. Final tubing pressure was 2440 psi. 16 bbls. fluid returns to tank. Rigged down moved out.
6/4/2002	Rigged down, moved out and cleaned location.

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

No. **T202-173**

Report on Operations

James D. Mansdorfer, Agent
SOUTHERN CALIFORNIA GAS CO.
9400 Oakdale Ave.
Chatsworth, CA 91313

Ventura, California
July 9, 2002

Your operations at well **"Porter" 69H,** API No. **037-24223,** Sec. **27,** T. **3N,** R.**16W,** S.B.B.&M. **Aliso Canyon** Field, in **Ventura** County, were witnessed on **05-31-2002**. **Steve Mulqueen,** representative of the supervisor, was present from **1100** to **1300**. There were also present **Mike Dozier.**

Present condition of well: **13 3/8" cem 859'; 9 5/8" cem 7960'. TD 7980'.**

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

William F. Guerard, Jr.
State Oil and Gas Supervisor

By _____
Patrick J. Kinnear
Deputy Supervisor

API No. 037-04223 DIVIS OF OIL, GAS, AND GEOTHERMAL RE RCES T 2N-17W

6/24/02

BLOWOUT PREVENTION EQUIPME..T MEMO

Operator SOUTHERN CALIFORNIA GAS CO. Well "FOSTER" 69 H Sec. 27 T. 3N R. 16W

Field ALISO CANYON County LOS ANGELES Spud Date

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	5-31-02	S. MULQUEEN	(1100 to 1300)	MIKE DOZIER	FOREMAN
2nd			(to)		

Contractor Rig # Contractor's Rep. & Title

Casing record of well: 13 3/8" cem. 859'; 9 5/8" cem. 7960'. TD 7980'.

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.

Proposed Well Opns: PERFORATE . MACP: psi

Hole size: " fr. ' to ' , " to ' & " to '

REQUIRED BOPE CLASS: II SM

CASING RECORD OF BOPE ANCHOR STRING

Size	Weight(s)	Grade(s)	Shoe at	CP at	Cement Details	Top of Cement: Casing	Top of Cement: Annulus
9 5/8"	47#	N-80	7960	—	2148 ft cem. CLASS "G", TAIL 564 ft cem.	7390'	SURFACE

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
A	—	HYDRIL	10	5000	5000	
RD	2 7/8	SHAFFER	10	"	"	
RD	CSO	"	10	"	"	

TEST DATA

Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
					5-31	3800
PRESSURE CHART					5-31	5000
					5-31	5000

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3000 psi

Total Rated Pump Output ____ gpm Fluid Level

Distance From Well Bore 45 ft.

	Accum. Manufacturer	Capacity	Precharge
1	KOOMEY	100 gal.	1000 psi
2		gal.	psi

	CONTROL STATIONS	Elec.	Hyd.	Pneu.
X	Manifold at accumulator unit		✓	
X	Remote at Driller's station			✓
	Other:			

	EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
X	N_2 Cylinders	1	L= "	2000	gal.
	Other:	2	L= "	2250	gal.
		3	L= "	2000	gal.
		4	L= "		gal.
		5	L= "		gal.
		6	L= "		gal.
			TOTAL:		gal.

TOTAL:

AUXILIARY EQUIPMENT

		No.	Size (in.)	Rated Press.	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line							
X	Kill Line		3	5000	✓	✓	✓	5000
X	Control Valve(s)	2		"		✓		5000
X	Check Valve(s)	1		"		✓		5000
X	Aux. Pump Connect.			"		✓		—
X	Choke Line			5000		✓	✓	5000
X	Control Valve(s)	10		"		✓		5000
X	Pressure Gauge						✓	
X	Adjustable Choke(s)	2		"		✓		—
X	Bleed Line						✓	
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Standpipe Press. Gauge							
✓	Pipe Safety Valve		2 7/8					5000
X	Internal Preventer		"					5000

HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Alarm Type: Visual	Class
X Calibrated Mud Pit		✓	A
Pit Level Indicator			B
Pump Stroke Counter			B
Pit Level Recorder			C
Flow Sensor			C
Mud Totalizer			C
Calibrated Trip Tank			C
Other:			

Hole Fluid Type	Weight	Storage Pits (Type & Size)
LEASE WATER		500

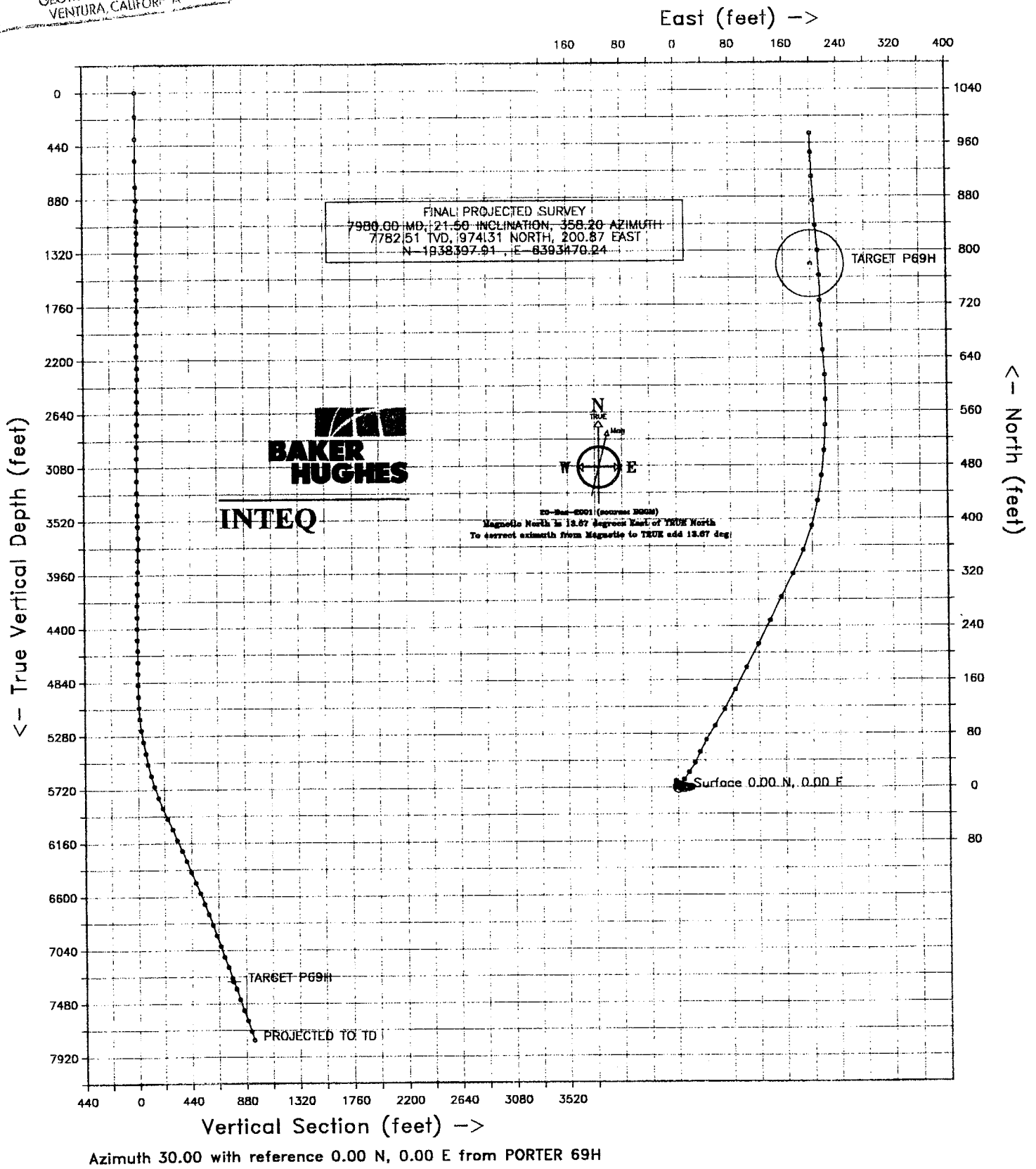
REMARKS AND DEFICIENCIES:

DEFICIENCIES: ACCUMULATOR RESERVOIR CONTAINS USED CRANKCASE OIL

OGD9 (1/96/GSR1/3M)

THE GAS COMPANY

Structure : PORTER LEASE Well : PORTER 69H
Field : ALISO CANYON Location : CALIFORNIA



THE GAS COMPANY
PORTER LEASE

PORTER 69H
PORTER 69H
ALISO CANYON
CALIFORNIA

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : P69H MWD
Our ref : svy22716
License :

Date printed : 16-Jan-2002
Date created : 30-Nov-2001
Last revised : 16-Jan-2002

Field is centred on n34 15 58.360,w118 32 55.220,-117
Structure is centred on n34 15 58.360,w118 32 55.22

Slot location is n34 18 53.417,w118 33 27.715
Slot Grid coordinates are N 1937424.750, E 6393264.060
Slot local coordinates are 17697.09 N 2725.71 W

Projection type: lambert, NAD83 - California V (0405), Spheroid: NAD 83

Reference North is True North

THE GAS COMPANY
PORTER LEASE,PORTER 69H
ALISO CANYON,CALIFORNIA

SURVEY LISTING Page 1
Your ref : P69H MWD
Last revised : 16-Jan-2002

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting	Northing
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00	6393264.06	1937424.75
198.00	1.50	137.00	197.98	1.90S	1.77E	0.76	-0.76	6393265.82	1937422.85
381.00	1.00	103.00	380.94	4.01S	4.96E	0.48	-0.99	6393268.99	1937420.72
560.00	1.75	81.00	559.88	3.93S	9.18E	0.51	1.19	6393273.22	1937420.77
776.00	1.75	77.00	775.78	2.67S	15.65E	0.06	5.51	6393279.69	1937421.99
885.00	1.60	62.20	884.74	1.59S	18.62E	0.42	7.93	6393282.67	1937423.06
962.00	1.30	48.80	961.71	0.51S	20.23E	0.59	9.67	6393284.28	1937424.13
1056.00	1.00	2.10	1055.70	1.01N	21.06E	1.01	11.40	6393285.12	1937425.65
1147.00	1.60	287.90	1146.68	2.19N	19.88E	1.80	11.84	6393283.95	1937426.84
1237.00	2.20	276.30	1236.63	2.77N	16.97E	0.79	10.88	6393281.04	1937427.43
1328.00	2.50	279.80	1327.55	3.30N	13.27E	0.37	9.49	6393277.35	1937427.98
1420.00	2.00	275.60	1419.48	3.80N	9.70E	0.57	8.14	6393273.78	1937428.50
1513.00	1.20	282.60	1512.44	4.17N	7.13E	0.88	7.18	6393271.22	1937428.88
1607.00	1.10	301.60	1606.42	4.86N	5.40E	0.42	6.91	6393269.49	1937429.58
1700.00	1.00	279.10	1699.41	5.45N	3.84E	0.45	6.64	6393267.93	1937430.18
1794.00	0.50	311.10	1793.40	5.85N	2.72E	0.67	6.43	6393266.82	1937430.59
1888.00	0.50	291.80	1887.40	6.27N	2.03E	0.18	6.45	6393266.13	1937431.01
1981.00	0.60	279.10	1980.39	6.50N	1.18E	0.17	6.22	6393265.27	1937431.24
2072.00	0.30	293.50	2071.39	6.67N	0.49E	0.35	6.02	6393264.58	1937431.42
2167.00	0.20	140.90	2166.39	6.64N	0.36E	0.51	5.93	6393264.46	1937431.39
2261.00	0.70	87.80	2260.39	6.54N	1.04E	0.64	6.18	6393265.14	1937431.28
2353.00	0.60	137.80	2352.38	6.20N	1.93E	0.61	6.33	6393266.02	1937430.94
2447.00	0.70	165.50	2446.38	5.28N	2.40E	0.35	5.77	6393266.49	1937430.02
2537.00	0.70	208.40	2536.37	4.27N	2.28E	0.57	4.83	6393266.36	1937429.00
2629.00	0.60	204.90	2628.36	3.33N	1.81E	0.12	3.79	6393265.88	1937428.07
2723.00	1.00	197.20	2722.35	2.10N	1.36E	0.44	2.50	6393265.43	1937426.85
2815.00	0.60	239.00	2814.35	1.09N	0.71E	0.74	1.30	6393264.77	1937425.84
2908.00	0.50	222.10	2907.34	0.54N	0.02E	0.20	0.47	6393264.08	1937425.29
3002.00	0.60	293.90	3001.34	0.43N	0.71W	0.69	0.02	6393263.35	1937425.19
3095.00	0.60	322.00	3094.33	1.01N	1.45W	0.31	0.15	6393262.61	1937425.77
3188.00	0.80	328.00	3187.33	1.95N	2.10W	0.23	0.64	6393261.97	1937426.71
3282.00	0.80	356.10	3281.32	3.16N	2.49W	0.41	1.49	6393261.59	1937427.92
3376.00	1.00	353.30	3375.31	4.63N	2.63W	0.22	2.69	6393261.46	1937429.39
3468.00	0.80	348.00	3467.29	6.05N	2.86W	0.24	3.81	6393261.24	1937430.82
3560.00	1.00	350.40	3559.28	7.47N	3.12W	0.22	4.91	6393260.98	1937432.24
3654.00	1.10	345.90	3653.27	9.16N	3.48W	0.14	6.19	6393260.63	1937433.93
3746.00	0.10	139.20	3745.26	9.95N	3.64W	1.29	6.80	6393260.47	1937434.72
3840.00	1.10	175.00	3839.26	8.99N	3.51W	1.09	6.03	6393260.60	1937433.76
3931.00	1.50	180.70	3930.23	6.93N	3.45W	0.46	4.28	6393260.65	1937431.70
4023.00	1.80	186.30	4022.19	4.29N	3.62W	0.37	1.90	6393260.46	1937429.06
4117.00	1.50	193.30	4116.16	1.63N	4.07W	0.38	-0.63	6393260.00	1937426.40
4210.00	0.80	181.70	4209.14	0.21S	4.37W	0.79	-2.36	6393259.69	1937424.57
4304.00	0.50	91.70	4303.13	0.88S	3.98W	1.00	-2.75	6393260.08	1937423.90
4396.00	0.70	76.60	4395.13	0.76S	3.03W	0.28	-2.17	6393261.03	1937424.01
4488.00	0.60	58.00	4487.12	0.37S	2.07W	0.25	-1.36	6393261.98	1937424.39
4580.00	0.60	88.60	4579.12	0.10S	1.18W	0.34	-0.68	6393262.88	1937424.65
4674.00	0.70	75.20	4673.11	0.05N	0.14W	0.19	-0.02	6393263.92	1937424.80
4768.00	0.90	88.60	4767.10	0.22N	1.16E	0.29	0.77	6393265.22	1937424.96
4861.00	1.10	24.60	4860.09	1.05N	2.26E	1.15	2.04	6393266.32	1937425.79
4954.00	1.20	16.50	4953.07	2.79N	2.91E	0.20	3.87	6393266.98	1937427.53

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from PORTER 69H and TVD from rotary table (2399.45 Ft above mean sea level).
Bottom hole distance is 994.80 on azimuth 11.65 degrees from wellhead.
Vertical section is from wellhead on azimuth 30.00 degrees.
Grid is lambert, NAD83 - California V (0405).
Grid coordinates in FEET and computed using the NAD 83 spheroid
Presented by Baker Hughes INTEQ

THE GAS COMPANY
PORTER LEASE,PORTER 69H
ALISO CANYON,CALIFORNIA

SURVEY LISTING Page 2
Your ref : P69H MWD
Last revised : 16-Jan-2002

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES	Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting	Northing
5049.00	2.90	33.00	5048.01	5.76N	4.50E	1.88	7.24	6393268.59	1937430.49
5142.00	6.50	34.80	5140.68	12.06N	8.79E	3.87	14.84	6393272.91	1937436.76
5236.00	9.10	34.80	5233.80	22.54N	16.07E	2.77	27.55	6393280.25	1937447.20
5331.00	11.00	27.00	5327.34	36.78N	24.47E	2.46	44.09	6393288.73	1937461.40
5425.00	11.20	24.60	5419.59	53.07N	32.34E	0.54	62.13	6393296.69	1937477.64
5521.00	13.40	29.80	5513.38	71.21N	41.75E	2.56	82.54	6393306.20	1937495.72
5616.00	15.80	31.20	5605.31	91.82N	53.92E	2.55	106.48	6393318.48	1937516.27
5711.00	18.80	29.50	5696.00	116.22N	68.16E	3.20	134.73	6393332.85	1937540.59
5808.00	21.80	27.70	5786.96	145.77N	84.24E	3.16	168.36	6393349.09	1937570.06
5902.00	24.50	27.40	5873.39	178.54N	101.32E	2.88	205.28	6393366.35	1937602.72
5997.00	24.80	26.70	5959.73	213.82N	119.34E	0.44	244.85	6393384.56	1937637.91
6093.00	23.60	26.00	6047.29	249.09N	136.81E	1.29	284.12	6393402.22	1937673.07
6188.00	23.90	26.30	6134.25	283.43N	153.67E	0.34	322.29	6393419.27	1937707.32
6284.00	24.30	26.30	6221.88	318.57N	171.04E	0.42	361.41	6393436.83	1937742.37
6379.00	23.90	21.80	6308.60	353.97N	186.85E	1.98	399.97	6393452.83	1937777.68
6475.00	23.20	16.50	6396.62	390.16N	199.45E	2.32	437.61	6393465.62	1937813.80
6571.00	23.10	11.20	6484.90	426.77N	208.48E	2.17	473.83	6393474.85	1937850.35
6667.00	23.80	6.60	6572.98	464.48N	214.36E	2.04	509.44	6393480.94	1937888.04
6761.00	23.70	4.50	6659.02	502.16N	218.02E	0.91	543.89	6393484.81	1937925.69
6855.00	23.60	2.80	6745.12	539.79N	220.42E	0.73	577.68	6393487.42	1937963.30
6950.00	23.30	359.60	6832.28	577.57N	221.22E	1.38	610.80	6393488.42	1938001.08
7044.00	22.80	356.80	6918.78	614.35N	220.08E	1.28	642.08	6393487.48	1938037.86
7140.00	22.80	355.70	7007.28	651.47N	217.64E	0.44	673.01	6393485.25	1938074.99
7236.00	22.90	356.10	7095.74	688.65N	214.98E	0.19	703.88	6393482.78	1938112.19
7330.00	23.20	359.60	7182.24	725.41N	213.60E	1.49	735.03	6393481.61	1938148.96
7426.00	22.90	357.80	7270.58	762.99N	212.75E	0.80	767.14	6393480.97	1938186.53
7522.00	23.10	355.70	7358.95	800.43N	210.63E	0.88	798.51	6393479.04	1938223.99
7617.00	22.90	355.70	7446.40	837.45N	207.84E	0.21	829.17	6393476.46	1938261.01
7713.00	22.70	356.00	7534.90	874.55N	205.15E	0.24	859.96	6393473.97	1938298.13
7808.00	22.20	357.50	7622.70	910.77N	203.09E	0.80	890.29	6393472.11	1938334.36
7904.00	21.50	358.20	7711.80	946.47N	201.74E	0.78	920.54	6393470.96	1938370.06
7980.00	21.50	358.20	7782.51	974.31N	200.87E	0.00	944.21	6393470.24	1938397.91

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from PORTER 69H and TVD from rotary table (2399.45 Ft above mean sea level).
Bottom hole distance is 994.80 on azimuth 11.65 degrees from wellhead.
Vertical section is from wellhead on azimuth 30.00 degrees.
Grid is lambert, NAD83 - California V (0405).
Grid coordinates in FEET and computed using the NAD 83 spheroid
Presented by Baker Hughes INTEQ

Comments in wellpath

MD	TVD	Rectangular Coords.		Comment
7980.00	7782.51	974.31N	200.87E	PROJECTED TO TD

Targets associated with this wellpath

Target name	Geographic Location	T.V.D.	Rectangular Coordinates		Revised
TARGET P69H		7300.00	780.00N	200.00E	16-Aug-2001

Porter 69 H

Cement Summary

API/UWI	Field Name	Area	Operator	County	State/Province
037-24223	Aliso Canyon		Southern California Gas Company	Los Angeles	California

KB Elevation (ft)	Ground Elevation (ft)	Casing Flange Elevation (ft)	KB-Ground Distance (ft)	KB-Casing Flange Distance (ft)	Spud Date
2399.00	2371.00		28.00		11/23/2002

Cement: 13-3/5" Surface casing, casing, 11/24/2001 22:30

Cement Objective	Cementing Start Date	Cementing End Date
	11/24/2001 22:30	11/25/2001 00:30

Cement Stages: 1, 29.0-380.0ftKB

Top (ftKB)	Bottom (ftKB)	Q(start) (bbl/min)	Q(end) (bbl/min)	Q(avg) (bbl/min)	Final Pump Pressure (psi)	Pipe Reciprocated?	Stroke (ft)
29.0	380.0	5	5				

Rotated?	Pipe RPM (rpm)	Top Plug?	Bottom Plug?	P(bump) (psi)	Cement Volume Return (bbl)	Top measurement method	Drill out diameter (in)
		No	No				

Comment: 1/4 lb cello flake per sack cement

Cement Stages: 2, 380.0-859.0ftKB

Top (ftKB)	Bottom (ftKB)	Q(start) (bbl/min)	Q(end) (bbl/min)	Q(avg) (bbl/min)	Final Pump Pressure (psi)	Pipe Reciprocated?	Stroke (ft)
380.0	859.0						

Rotated?	Pipe RPM (rpm)	Top Plug?	Bottom Plug?	P(bump) (psi)	Cement Volume Return (bbl)	Top measurement method	Drill out diameter (in)
		No	No				

Comment:

Cement: 9-5/8" Production casing, casing, 12/9/2001 18:00

Cement Objective	Cementing Start Date	Cementing End Date
	12/9/2001 18:00	12/9/2001 00:00

Cement Stages: 1, 32.0-5,429.0ftKB

Top (ftKB)	Bottom (ftKB)	Q(start) (bbl/min)	Q(end) (bbl/min)	Q(avg) (bbl/min)	Final Pump Pressure (psi)	Pipe Reciprocated?	Stroke (ft)
32.0	5,429.0	0	4			Yes	20.00

Rotated?	Pipe RPM (rpm)	Top Plug?	Bottom Plug?	P(bump) (psi)	Cement Volume Return (bbl)	Top measurement method	Drill out diameter (in)
		Yes	Yes	1,685.0		Volume Calculations	

Comment: Yield 2.55 c.f. 841 Sacks

Cement Stages: 2, 5,429.0-7,228.0ftKB

Top (ftKB)	Bottom (ftKB)	Q(start) (bbl/min)	Q(end) (bbl/min)	Q(avg) (bbl/min)	Final Pump Pressure (psi)	Pipe Reciprocated?	Stroke (ft)
5,429.0	7,228.0					Yes	

Rotated?	Pipe RPM (rpm)	Top Plug?	Bottom Plug?	P(bump) (psi)	Cement Volume Return (bbl)	Top measurement method	Drill out diameter (in)
		Yes	Yes				

Comment: 488 sacks , 564 c.f. slurry

Cement Stages: 3, 7,228.0-7,960.8ftKB

Top (ftKB)	Bottom (ftKB)	Q(start) (bbl/min)	Q(end) (bbl/min)	Q(avg) (bbl/min)	Final Pump Pressure (psi)	Pipe Reciprocated?	Stroke (ft)
7,228.0	7,960.8						

Rotated?	Pipe RPM (rpm)	Top Plug?	Bottom Plug?	P(bump) (psi)	Cement Volume Return (bbl)	Top measurement method	Drill out diameter (in)
		No	No			Volume Calculations	

Comment: 200 sacks G, 230 c.f. slurry.

Porter 69 H

Casing String Summary

API/UWI	Field Name	Area	County	State/Province	Operator	License No.
037-24223	Aliso Canyon		Los Angeles	California	Southern California Gas Company	

KB Elevation (ft)	Ground Elevation (ft)	Casing Flange Elevation (ft)	Spud Date	Rig Release Date
2399.00	2371.00		11/23/2002	12/11/2001

Casing: Conductor, 69.0ftKB

Bottom or Set Depth (ftKB)	Set Tension (lbf)	String Max Nominal OD (in)	String Drift Min (in)	Centralizers	Scratchers
69.0		20			

Jts	Item Des	OD (in)	ID (in)	Wt (lbs/ft)	Grade	Top Thread	Top (ftKB)	Btm (ftKB)	Len (ft)	Burst Pres. (psi)	Collapse Pres. (psi)
	Casing Joints	20	19.124	94.00	K-55		29.0	69.0	40.00		520.0

Casing: Surface, 859.0ftKB

Bottom or Set Depth (ftKB)	Set Tension (lbf)	String Max Nominal OD (in)	String Drift Min (in)	Centralizers	Scratchers
859.0		13 3/8			

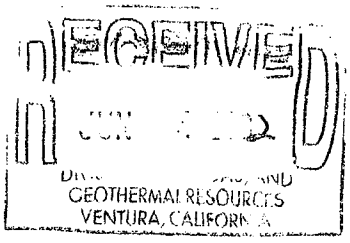
Jts	Item Des	OD (in)	ID (in)	Wt (lbs/ft)	Grade	Top Thread	Top (ftKB)	Btm (ftKB)	Len (ft)	Burst Pres. (psi)	Collapse Pres. (psi)
	Csg head housing	20	12.615				28.0	29.0	1.00		
22	Casing Joints	13 3/8	12.615	54.50	J-55		29.0	834.6	805.60		1,130.0
	Float collar	13 3/8	12.615	54.50	J-55		834.6	836.1	1.50		1,130.0
1	Casing Joints	13 3/8	12.615	54.50	K-55		836.1	857.5	21.42		1,130.0
	Casing float shoe	13 3/8	12.615				857.5	859.0	1.50		

Casing: Production, 7,960.8ftKB

Bottom or Set Depth (ftKB)	Set Tension (lbf)	String Max Nominal OD (in)	String Drift Min (in)	Centralizers	Scratchers
7,960.8		9 5/8			

Jts	Item Des	OD (in)	ID (in)	Wt (lbs/ft)	Grade	Top Thread	Top (ftKB)	Btm (ftKB)	Len (ft)	Burst Pres. (psi)	Collapse Pres. (psi)
	Tbg head housing	14	9.625				27.0	28.0	1.00		
	Casing Hanger	9 5/8	8.681				28.0	29.0	1.00		
159	Casing Joints	9 5/8	8.681	47.00	N-80		29.0	7,379.5	7350.50		4,760.0
	External Casing Packer	9 5/8	8.681				7,379.5	7,398.8	19.29		
10	Casing Joints	9 5/8	8.681	47.00	N-80		7,398.8	7,865.1	466.30		4,760.0
	Float Collar	9 5/8	8.681				7,865.1	7,866.6	1.50		
1	Casing Joints	9 5/8	8.681	47.00	N-80		7,866.6	7,913.2	46.60		4,760.0
1	Casing Joints	9 5/8	8.681	47.00	N-80		7,913.2	7,959.3	46.09		4,760.0
	Float Shoe	9 5/8	8.681				7,959.3	7,960.8	1.50		

Perforating intervals Aliso canyon			
WELL NAME	TOP DEPTH	BOTTOM DEPTH	SHOT DENSITY / SIZE
Fernando Fee 38 A	7175'	7185'	12 spf – 1"
"	7195'	7212'	12 spf – 1"
"	7222'	7242'	12 spf – 1"
"	7247'	7345'	12 spf – 1"
"			
Fernando Fee 38 B	7035'	7100'	6 spf – 0.43"
Fernando Fee 38 C	7160'	7230'	6 spf – 0.43"
Porter 69 F	7645'	7790'	6 spf – 0.43"
Porter 69 G	7820'	7900'	6 spf – 0.43"
Porter 69 H	7605'	7670'	6 spf – 0.43"
"	7704'	7762'	6 spf – 0.43"
"	7785'	7850'	6 spf – 0.43"
Porter 69 J	7920'	8000'	6 spf – 0.43"
Porter 69 K	7975'	8050'	6 spf – 0.43"



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

No. **T202-024**

Report on Operations

James D. Mansdorfer, Agent
SOUTHERN CALIFORNIA GAS COMPANY
9400 Oakdale Ave.
Chatsworth, CA 91313

Ventura, California
January 17, 2002

Your operations at well **"Porter" 69H,** API No. **037-24223,** Sec. **27**, T. **3N**, R.**16W**, S.B.B.&M. **Aliso Canyon** Field, in **Los Angeles** County, were witnessed on **11-26-2001**. **Steve Mulqueen ,** representative of the supervisor, was present from **0600** to **0900**. There were also present **Jim Dayton.**

Present condition of well: **13 3/8" cem 859'. TD 865' (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

William F. Guerard, Jr.
State Oil and Gas Supervisor

By _____
FOR Patrick J. Kinnear
Deputy Supervisor

API No. 037-24223 DIVIS 'OF OIL, GAS, AND GEOTHERMAL RE 'URCES T 2N-24

11/28/01

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SOUTHERN CALIF. GAS CO. Well "PORTER" 69 H Sec. 28 T. 3N R. 16W
Field ALISO CANYON County LOS ANGELES Spud Date 11-23-01

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	11-26-01	S. MULQUEEN	(0600 to 0900)	JIM DAYTON	ENGINEER
2nd			(to)		

Contractor NABORS Rig # 37 Contractor's Rep. & Title JIM DAYTON
Casing record of well: 13 3/8" CEM 859'. TD 865' (DRILLING).

OPERATION: Testing (~~inspecting~~) the blowout prevention equipment and installation. Critical well? Y ____ N ✓
DECISION: The blowout prevention equipment and its installation on the 13 3/8 " casing are approved.

Proposed Well Opns: DRILL . MACP: ____ psi
Hole size: 17½" fr. 40' to 865', ____" to ____' & ____" to ____'

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
13 3/8	54.5 #	K-55	859'		LEAD 88 BBL, 5% BWOC THIXOTROPIC 65/35 POZ + 6% GEL. "G" + 3% CaCl. FLOAT COL. @ 835' 1230 ATTEMPTED	835	0
		(20" CONDUCTOR)					

BOP STACK							TEST DATA (11-24-01)						
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	—	SHAFFER	SPH.	13 5/8	5000							11-25	1500
RD	5	"	LWS	"	"							11-26	2500
RD	CSO	"	"	"	"							11-26	2500
							(TEST PUMP & CHART)						

ACTUATING SYSTEM
Accumulator Unit(s) Working Pressure 3000 psi
Total Rated Pump Output ____ gpm Fluid Level LOW
Distance From Well Bore 110 ft.

	Accum. Manufacturer	Capacity	Precharge
1	KOOMEY	160 gal	1000 psi
2		gal.	psi

CONTROL STATIONS	Elec.	Hyd.	Pneu.
X Manifold at accumulator unit		✓	
X Remote at Driller's station			✓
Other:			

EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
N_2 Cylinders	1	L= "	2000	gal.
Other:	2	L= "	2200	gal.
	3	L= "	2200	gal.
	4	L= "	2200	gal.
	5	L= "	2200	gal.
	6	L= "	2200	gal.
		TOTAL:		gal.

TOTAL:

AUXILIARY EQUIPMENT

	w/ TOP DRIVE	No.	Size (in.)	Rated Press.	Connections: Weld	Flange	Thread	Test Press.
✓	Fill-up Line							
X	Kill Line		2+3	5000	✓	✓	✓	2500
X	Control Valve(s)	3		"		✓		2500
X	Check Valve(s)	1		"		✓		2500
X	Aux. Pump Connect.			"			✓	2500
X	Choke Line		3+4	5000	✓	✓	✓	2500
X	Control Valve(s) /2	14		"		✓		2500
X	Pressure Gauge						✓	
X	Adjustable Choke(s)	2	3	"		✓		—
X	Bleed Line		5				✓	
X	Upper Kelly Cock							2500
X	Lower Kelly Cock		5	5000				2500
X	Standpipe Valve							2500
✓	Standpipe Press. Gauge							
X	Pipe Safety Valve		5	5000				2500
✓	Internal Preventer		5	5000				2500

HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Visual	Class
X Calibrated Mud Pit		✓	A
X Pit Level Indicator	✓	✓	B
X Pump Stroke Counter		✓	B
X Pit Level Recorder		✓	B
X Flow Sensor	✓	✓	C
X Mud Totalizer		✓	C
Calibrated Trip Tank			
Other:			

Hole Fluid Type	Weight	Storage Pits (Type & Size)
CLAY GEL	9.0	700

REMARKS AND DEFICIENCIES:
1. ACCUMULATOR RESERVOIR FLUID LEVEL LOW. (CORRECTED)

OGD9 (1/96/GSR1/3M)

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

No. P201-163

PERMIT TO CONDUCT WELL OPERATIONS

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

Gas Storage Project

James D. Mansdorfer, Agent
Southern California Gas Company
9400 Oakdale Ave.
Chatsworth, CA. 91313

Ventura, California
July 3, 2001

Your proposal to drill well "Porter" 69H,
A.P.I. No. 037-24223 Sec. 28, T. 3N, R. 16W, SB B.&M.,
Aliso Canyon field, ---------- area, Sesnon-Frew pool
Los Angeles County, dated 06-28-2001 received 06-28-2001 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

Drilling Operations

1. Blowout prevention equipment conforming to DOGGR Class IIIB 5M equipment on the 13-3/8" casing and maintained in operating condition at all times during drilling.
2. Drilling fluid of a quality and in sufficient quantity is used to control all subsurface condition in order to prevent blowouts.
3. An approved blowout prevention and control plan shall be available during the proposed operations.
4. Any sump used during these operations shall be thoroughly cleaned and filled with earth as soon as operations are completed.
5. If extensive, unplanned drill pipe operations occur (such as fishing, milling, etc.) and there is a possibility of casing damage, the casing must be pressure tested prior to resuming normal operations. This Division must be notified to witness the tests
6. The spacing provisions of Section 3606 shall apply.
7. A subsurface directional survey is made and a plat of such survey is filled with this office within 15 days of completion of the well.
8. This office shall be consulted before sidetracking the well or running any additional casing.
9. This office shall be consulted before initiating any changes or additions to this proposed operation, or operations are to be suspended.
10. **THIS DIVISION SHALL BE NOTIFIED:**
    a. To witness a pressure test of the blowout prevention equipment prior to drilling out of the shoe of the 13-3/8" 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 is charge

Continued on Page 2

SAF:sf
Super Blanket Bond

Engineer Steven A. Fields
Phone (805) 654-4761

WILLIAM F. GUERARD, JR., State Oil and Gas Supervisor
By _____
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.

Southern California Gas Company
July 3, 2001
P201-163

Completion Operations

1. Blowout prevention equipment conforming to DOGGR Class II 5M requirements shall be installed and maintained in operating conditions at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. Wire line operations are conducted through at least a 5M lubricator.
4. Requirements specified in our approval of the Gas Storage project dated July 26, 1989 shall apply.
5. **THIS DIVISION SHALL BE NOTIFIED:**
   a. To inspect the installed blowout prevention equipment prior to commencing downhole operations.

Note: The Division recommends, as a minimum, that carbon monoxide monitoring equipment and a vent line be installed and maintained operational during all extensive perforating operations.

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

P201-163

NOTICE OF INTENTION TO DRILL NEW WELL

C.E.Q.A. INFORMATION			
EXEMPT ☒ CLASS 1	NEG. DEC. ☐ S.C.H. NO.	E.I.R. ☐ S.C.H. NO.	DOCUMENT NOT REQUIRED BY LOCAL JURISDICTION ☐
See Reverse Side			

FOR DIVISION USE ONLY					
MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
254	7-6-01		Inlo.	✓	✓

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well Porter 69 H, well type Gas Storage, API No. 037-24223 (Assigned by Division),

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

Legal description of mineral-right lease, consisting of _____ acres (attach map or plat to scale), is as follows:
(See attached base map)

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

Location of well _____ feet _____ (Direction) along section ☐ / property ☐ (Check one) line and _____ feet _____ (Direction)

at right angles to said line from the _____ corner of section ☐ / property ☐ (Check one) _____ or

878' South and 3463' West from Station 84

Is this a critical well according to the definition on the next page of this form? Yes ☐ No ☒

If well is to be directionally drilled, show proposed coordinates (from surface location) and true vertical depth at total drilled depth:
860 feet North (Direction) and 302 feet East (Direction) Estimated true vertical depth 7646. Elevation of ground above sea level 2366 feet. All depth measurements taken from top of KB (Derrick Floor, Rotary Table, or Kelly Bushing) that is 24 feet above ground.

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 lb/ft	K55 ST&C	Surface	800	800	800
9-5/8"	47 lb/ft	N80 LT&C	Surface	7835	7835	7835

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

Intended zone(s) of completion Sesnon, Frew (Name, depth, and expected pressure) Estimated total depth 7835 (Feet)

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

Name of Operator	Type of Organization (Corporation, Partnership, Individual, etc.)	
Southern California Gas Company	Corporation	
Address 9400 Oakdale Avenue	**City** Chatsworth	**Zip Code** 91313
Telephone Number 818-701-3251	**Name of Person Filing Notice** Dan Neville	**Signature** Dan Neville **Date** 6/28/01

This notice and an 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.

OG105 (5/98)

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

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

Lead Agency: _____

Lead Agency Contact Person: _____

Address: _____

_____

Phone: ( ) _____

FOR DIVISION USE ONLY
District review of environmental document (if applicable)? Yes ☐ No ☐
Remarks: _____
_____
_____

CRITICAL WELL

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

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

Exceptions or additions to this definition may be established by the supervisor upon his own judgment or upon written request of an operator. This written request shall contain justification for such an exception.

California Public Utilities Commission

505 Van Ness Avenue, San Francisco, CA 94102

News Release

MEDIA CONTACT: Kyle DeVine
213-576-7050 kyl@cpuc.ca.gov

June 28, 2001

CPUC -522
A.01-04-007;A00-04-031

CPUC MAKES MORE NATURAL GAS AVAILABLE

The California Public Utilities Commission (CPUC) today approved Southern California Gas' (SoCal Gas) request to reclassify and withdraw cushion gas (natural gas that is needed to maintain the storage pressure necessary to allow stored gas to be withdrawn) from three of its underground natural gas storage fields in Montebello and Aliso Canyon in Los Angeles County, and La Goleta in Santa Barbara County.

This will make approximately 41 billion cubic feet (Bcf) of additional natural gas available to California consumers over the next five years. Making this gas available helps California meet its demand from in-state resources and reduces the need to import expensive natural gas from other states.

One Bcf is enough natural gas to supply about 17,500 homes for a year.

SoCal Gas will close its Montebello gas storage facility after all the gas has been withdrawn from it and parts have been salvaged or sold. The Montebello facility is very small compared to SoCal Gas' other facilities. It occasionally delivers 100 to 200 MMcfd (million cubic feet per day) of gas for a couple days during the year compared to Aliso Canyon which can deliver more that 1,000 MMcfd.

Montebello has not been used for four years and keeping it operating would cost more than its benefit to Southern California gas users. In addition to the benefits of using the cushion gas, ratepayers will see a $44 million reduction in their bills resulting from the closure of the Montebello facility. About 24 Bcf of cushion gas can be drawn from the ground.

SoCal Gas plans to redesign its La Goleta and Aliso Canyon natural gas storage fields. It plans to drill new wells and rework several existing wells so that the utility can store the same amount of gas with less cushion gas. About 7 Bcf of cushion gas will be made available for sale from each of these fields (14 Bcf in total).

The costs of natural gas prices received at the southern California border soared last winter from an average of $2.41\Dth (decatherm, or 10 therms) in December 1999 to $13.82\Dth in December 2000.

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