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 K
A.P.I. No. 03724236
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 J 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)
4/29/2016	Held safety. Remove barriers around well w/ crane. Lay out plastic pollution ground pans. Spot trench plates for pipe rack area. Spot trench plate for back of rig. MIRU Rival rig # 15 on 69K-guy out rig. Spot BOPE on mats. Spot baskets and choke manifold.
4/30/2016	Held safety meeting. Rig up Onyx separator to Annulus & production with draw line with Gas company operator on location. SITP 1050-psi, SICP 1050-psi. Bleed off tree, rig up 2'" hose to tubing side. Test lines to 2000 psi. Bull head 40-bbl polymer pill down tubing, bull head 45-bbls polymer down tubing (85-bbls bull headed). Open casing to separator, pump 365-BBLS of polymer following pump schedule and open casing to tank @ 360-psi on casing, continue pumping 271-bbls, to get circulation. Circulate w/ 30-bbls. Note: 751-BBLS pumped total. Bled off casing & tubing to 0-psi. R/D Onyx. Install back pressure valve. N/D tree. Remove BPV and install 10' pup joint w/ TIW valve. Function lock screws take measurements. Nipple up BOPE, function BOP. R/O floor and stairs. Chart Test bag and all BOP connections to 2000-high with rig pump good test. Clean location. Secure rig & well. EOT
5/2/2016	Held a safety meeting with Weatherford, Test 2 7/8" pipe rams with 3' coflex line with valves 1,2,5, -300 low & 5000 high for 20 minutes on each test good test-Test manifold values choke kill values 300 low and 5,000 high test bag 300 low and 3,500 high. Daniel Woldemariam w/ DOGGR witnessed and approved BOP testing. Filled well with 60-bbls and established circulation. Removed test pup, installed back pressure value tested blind rams 300 low and 5,000 high. Removed back pressure value. Install 10' pup w/ TIW valve. Release lock screws. Pull hanger free, work seal assembly F/ 60k T/ 100k, unable to release. P/U king swivel and try working seal assemble while rotating tubing F/ 60k T/ 80K, unable to release. L/D king swivel. Secure well and rig. Ready for wireline. EOT.
5/3/2016	Held safety meeting. Field pressure is 1066-psi. Fill well w/ 90-bbls of polymer. Rig up Western e-line. RIH with free point, Stack out @ 7918', found tubing 75% free @ 7900'. POOH. RIH w/ 2.125" gauge ring and sinker bars, tag @ 7918'. POOH. RIH w/ 2 1/8" Chemical cutter, cut tubing @ 7890' wireline measurements. POOH with E-line. Pump 100-bbl polymer pill, (circulation established after 60-bbls of pill pumped), displace w/ 40-bbls polymer. Pull tubing string free. Rig down E-line. L/D hanger & pup joints. POOH tallying 210-joints 2-7/8" tubing, tail @ 1302'. Secure well & rig. EOT.
5/4/2016	Held safety meeting. Field pressure is 1049-psi. SITP 0-PSI, SICP 0-PSI. Fill well w/ 3–BBLS 8.5-PPG polymer. Continue POOH w/ gas mandrels, sliding sleeves and tallying 33-joints 2-7/8" tubing, L/D 6-joints 2-7/8" 511-HYD and 1- cut piece. RIH w/ 9-5/8" 47# scraper, bumper sub w/ pup joint, 242-joints from derrick, P/U 4-joints off the ground and tag @ 7726'. POOH standing back 246-joints 2-7/8" tubing, L/D 9-5/8" Scraper BHA. Changeover to 4.5" tubing equipment. P/U 4.5" cut lip Shoe, 7-joints 4.5" wash pipe, X/O, 4.5" Bowen jar, 8' pup joint, 238-joints 2-7/8" tubing from derrick, tail @ 7684'. Secure well & rig. EOT.
5/5/2016	Held safety meeting. Estimated field pressure is 1066-psi. SITP 0-PSI, SICP 0-PSI. Fill with 3-bbls polymer. N/U crossover spool and PGSR circulating head. Continue RIH w/ 7-joints 2-7/8" TBG, tag TOF @ 7879'. M/U king swivel. Establish reverse circulation @ 3-BPM. Wash over tubing fish F/ 7879' T/ 7983', hard spot @ 7983'. Unable to get past 7983', tubing is torqueing up and we over pulled 10k. Circulate 2X tubing volume. R/O king swivel, L/D 2-joints 2-7/8". Remove circulating rubber. POOH w/ 246-joints 2-7/8" tubing. L/D Bowen jar, stand back 6-joints wash pipe. L/D 1-joint wash pipe w/ shoe. RIH w/ 4-11/16" overshot loaded w/ 2-7/8" grapple, 4.5" bumper sub, 8' pup joint, spider 244-joints from derrick. Tail @ 7667'. Secure well and rig. EOT.
5/6/2016	Held safety meeting. Estimated field pressure is 1070-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 2–BBLS polymer. Continue RIH w/ 7-joints 2-7/8" tubing, tag TOF @ 7879', M/U king. Engage TOF while rotating tubing w/ tongs @ 7879'. Latch onto fish and Try to work seals free, no results. Set torque on tongs and blind back off 2-7/8" 511-HYD tubing. L/D king swivel and 1-jt 2-7/8" tubing. POOH w/ 250-joints 2-7/8" tubing, 8' pup joint, 4.5" BS, 4-11/16" overshot w/ fish, L/D 22' cut piece and 2-joints of 511-HYD tubing. Note: found holes in 511-HYD @ 7883', 7906', 7916', 7917'. C/O to 4.5" tubing equipment. RIH w/ 4.5" cut lip Shoe, 4-joints 4.5" wash pipe, X/O, 4.5" Bowen jar, 8' pup joint, spider 250-joints 2-7/8" tubing from derrick. N/U X/O spool and PGSR circulating head. R/U power swivel. Establish reverse circulation @ 2.5-BPM, tag bad spot @ 7983', wash pipe is Torqueing up and unable to make hole. L/D power swivel w/ 1-joint. POOH w/ 60-joint 2-7/8" tubing, tail @ 6086'. Secure well and rig. EOT.

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5/7/2016	Held safety meeting. Estimated field pressure is 1072-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 2–BBLS polymer. Continue POOH w/ 190-joints 2-7/8" tubing, 8' pup joint, X/O, 4.5" Bowen jar, 4-joints 4.5" wash pipe, 4.5" cut lip Shoe. Found wear marks on outside and inside of shoe. RIH w/ 4-11/16" OS loaded w/ 2-7/8" grapple, 4.5" BS, 4.5" Bowen jar, 8' pup, 254-joints. Latch TOF @ 7960' space out and pull 20k over. Rig up Western e-line. RIH 2.125" gauge, Stack out @ 7964'. Pump on tubing, pressured up to 2500-psi, unable to unplug tubing. POOH and R/O E-line. Release from fish. L/D pup joint and 1-joint. POOH w/ 20-joints 2-7/8" tubing. Tail @ 7290'. Secure well and rig. EOT.
5/9/2016	Held safety meeting. Estimated field pressure is 1077-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 13-BBLS polymer. RIH w/ 21d-joints 2-7/8" tubing, space out w/ 6' pup joint. Latch TOF @ 7960' and pull 20k over. Rig up Western slick-line. RIH w/ 2.125" bailer, tag fill @ 7941', wireline measurements. Stroke bailer, POOH. Found bailer full of fluid and some scale. RIH w/ 1-5/8" bailer, tag @ 7941', wireline measurements. Stroke bailer and it got stuck, work bailer free, POOH. Found bailer w/ scale and metal shavings. R/D wireline. Release from fish. L/D pup joint and 1-joint. POOH w/ 252-joints 2-7/8" tubing, L/D fishing BHA. RIH w/ 4.5" mill shoe, 4-joints 4.5" wash pipe, X/O, 4.5" Bowen jar, 8' pup joint, 38-joints 2-7/8" tubing from derrick, Tail @ 1334'. Secure well and rig. EOT.
5/10/2016	Held safety meeting. Estimated field pressure is 1073-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 10–BBLS polymer. Continue RIH w/ 212-joints 2-7/8" tubing from derrick. Install PGSR rubber. R/U power swivel, P/U 1-joint. Establish reverse circulation @ 3-BPM, tag bad spot @ 7983'. Mill thru tight spot F/ 7983' T / 7984', continue cleaning out fill F/ 7984' T 8048'. Circulate 2X tubing volume. L/D power swivel w/ 1-joint. Remove PGSR rubber. POOH w/ 252-joint 2-7/8" tubing, L/D 8' pup joint, X/O, 4.5" Bowen jar, 4-joints 4.5" wash pipe, 4.5" mill Shoe. RIH w/ 4-11/16" overshot loaded w/ 2-7/8" RHW, 4.5" LBS, 4.5" Bowen jar, 8' pup joint, 54-joints from derrick. Tail @ 1723'. Secure well and rig. EOT.
5/11/2016	Held safety meeting. Estimated field pressure is 1078-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 3–BBLS polymer. Continue RIH w/ 200-joints 2-7/8" tubing. M/U king swivel. Engage TOF @ 7960'. Latch onto fish and work seals w/ rotation. L/D king swivel. POOH w/ 254-joints 2-7/8" tubing, 8' pup joint, 4.5" jar, 4.5" BS, 4-11/16" overshot w/ fish, L/D 23' broken piece of 511 tubing. Note: 511 tubing was twisted off. RIH w/ 4-11/16" overshot and 3' extension loaded w/ 2-7/8" RHW, 4.5" LBS, 4.5" jar, 8' pup joint, perf fatigue nipple, 255-joints 2-7/8" tubing. M/U king swivel. Engage TOF @ 7983'. Latch onto fish and work seals w/ rotation. L/D king swivel and 1-joint. POOH w/ 90-joints 2-7/8" tubing. Tail @ 5160'. Note: BOP drill shut in time 42-seconds. Secure well and rig. EOT.
5/12/2016	Held safety meeting. Estimated field pressure is 1064-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 10–BBLS polymer. Continue POOH w/ 164-joints 2-7/8" tubing, perf nipple, 8' pup, 4.5" jar, 4.5" BS, 4-11/16" overshot w/ no fish. Note: sand found on grapple and grapple had flat wickers. RIH w/ 4.5" mill shoe, 3-joints 4.5" wash pipe, X/O, 4.5" Bowen jar, 8' pup joint, 254-joints 2-7/8" tubing, tag fill @ 8044'. P/U king swivel, clean out fill F/ 8044" T/ 8048'. Circulate well clean 2x tubing volume. L/D king swivel and 2-joints. POOH w/ 252-joint 2-7/8" tubing, L/D 8' pup joint, X/O, 4.5" Bowen jar, 3-joints 4.5" wash pipe, 4.5" mill Shoe. RIH w/ 4-11/16" overshot and 13' of extensions loaded w/ new 2-7/8" RHW, 4.5" LBS, 4.5" jar, 8' pup, spider 132-joints 2-7/8" tubing in the hole, Tail @ 4170'. Secure well and rig. EOT.
5/13/2016	Held safety meeting. Estimated field pressure is 1075-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 2–BBLS polymer. Continue RIH spidering 123-joints 2-7/8" tubing in the hole. Latch fish @ 8000' and set jars off @ 100k 10-times. Rotate and try to release seal assembly with no results. Set torque on tongs and do blind back off while working tubing. Tubing backed off high. POOH w/ 140-joints and a collar, pin looking up. TOF @ 4378'. RIH w/ new 2-7/8" collar spidering in hole w/ 140-joints. M/U king swivel and screw in to tubing string @ 4378', make up tubing string with tongs. Work tubing and set jars off F/ 100k T/ 120K, no movement. Jars stopped working. R/U power swivel, work tubing with swivel and work fishing tools free. L/D power swivel. POOH w/ 21-joints 2-7/8" tubing. Tail @ 7371'. Secure well and rig. EOT.
5/14/2016	Held safety meeting. Estimated field pressure is 1050-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 2–BBLS of polymer. Continue POOH w/ 234-joints 2-7/8" tubing, 8' pup, 4.5" jar, 4.5" BS, 4-11/16" overshot w/ fish 1.6' of fish in drive sub. RIH w/ 4.5" mill shoe, 3-joints 4.5" wash pipe, X/O, 4.5" Bowen jar, 8' pup joint, 253-joints 2-7/8" tubing. P/U power swivel and 1-joint, Tag @ 8048', wash over F/ 8048" T/ 8052'. Circulate well clean 2x tubing volume. L/D power swivel and 2-joints of 2-7/8" tubing. POOH w/ 174-joints 2-7/8" tubing, tail @ 2550'. Secure well and rig. EOT.

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5/16/2016	Held safety meeting. Estimated field pressure is 1078-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 5–BBLS of polymer. Continue POOH w/ 80-joints 2-7/8" tubing, L/D 8' pup joint, X/O, 4.5" Bowen jar, 3-joints 4.5" wash pipe, 4.5" mill Shoe. RIH w/ 4-11/16" overshot and 15' of extensions loaded w/ new 2-7/8" RHW, 3.75" LBS, 3.75" jar, (4) 3.5" drill collars, 3.75" slinger, X/O, 8' pup, 250-joints 2-7/8" tubing, P/U king swivel and 1-joint, latch fish @ 8003'. Set jars off @ 100k 2-times. L/D king swivel and 1-joint. P/U power swivel and Try to release seal assembly and torque broke free but seals are still stuck. Work jars @ 120k and seals are still stuck, unable to pull seals free. Tubing rotates 25k over string weight and stalls out @ 30k over. Power swivel broke down. R/D power swivel and R/U 2nd power swivel 2-hours down for swivel. Continue rotating tubing and working jars with power swivel. Seals are still stuck but tubing rotates. Secure well and rig. EOT.
5/17/2016	Held safety meeting. Estimated field pressure is 1080-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 6–BBLS of polymer. Circulate well while Setting jars off @ 110k, continue working tubing w/power swivel w/ no results. Bump down on tools and rotate off fish with swivel. R/D power swivel. POOH w/ 250-joints 2-7/8" tubing, slinger, 4-DC, jars, BS, OS w/ no fish. L/D all fishing equipment. Load all Weatherford tools and equipment on flatbed. RIH w/ Halliburton 9-5/8" RTTS packer, 6' pup joint, 111-joints 2-7/8" tubing, set packer @ 3500'. Test to 1000-psi, for 15-minutes. Release packer continue RIH w/ 41-joints, packer @ 4791'. Secure well and rig. EOT. (4 1/4" x 4"locator with seals=6.00 crossover=1.06 -xn nipple=1.10-crossover=.86 -cut off & 2 joints of 511 tubing=65.71-est. top of fish tbg measure=7984'
5/18/2016	Held safety meeting. Field pressure is 1074-psi. SITP 0-PSI, SICP 0-PSI. Fill well w/ 2–BBLS of polymer. Continue RIH w/ 94 -joints 2-7/8" tubing, tag TOL @ 7721', Set 9-5/8" 47# packer COE @7710', bottom of packer @ 7713'. R/U PROS tester. Cliff Knight w/ DOGGR witnessed and approved pressure integrity test of 9-5/8" 47# casing F/ 7710' T/ Surface for 1-hour F/8am T/9am, F/ 2297-psi bled T/ 2274-psi. Release RTTS packer. POOH w/ 136-jts 2-7/8" tubing. Set 9-5/8" 47# packer COE @3500'. R/U PROS tester. Cliff Knight w/ DOGGR witnessed and approved pressure integrity test of 9-5/8" 47# casing F/ 3500' T/ surface for 1-hour F/ 11:22am T/ 12:22pm, F/ 3714-psi bled T/ 3688-psi. Note: Charts and digital data available. Release RTTS packer. POOH w/ 111-joints 2-7/8" tubing, 6' pup, L/D 9-5/8" Halliburton RTTS packer. RIH w/ Saw tooth collar & 42-joint kill string, tail @ 1338'. Secure well and rig. EOT.
5/19/2016	Held safety meeting. Field pressure is 1082-psi. SITP 0-PSI, SICP 0-PSI. Fill well with 2–BBLS of polymer. POOH w/ 42-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/ 7961'. POOH w/ Gyro Surveying F/ 7961' T/ surface. R/D scientific Gyro tools and truck. N/D flange and spool. RIH w/ 9-5/8" 47# Halliburton RBP, 246-joints 2-7/8" tubing, Tag TOL @ 7721'. Pick up king swivel. Set 9-5/8" 47# RBP, COE @ 7712'. Laydown king swivel and pull 2-joints 2-7/8". Tail @ 7665'. Test RBP to 500-psi for 10-minutes, good test. Dump 4 cu Ft of sand on top of 9-5/8" RBP. Estimated top of sand @ 7700' +or-. Displace tubing w/ 44-bbls of polymer @ 1-BPM. POOH w/ 94-joint 2-7/8" tubing. Tail @ 4727'. Secure well and rig. EOT.
5/20/2016	Held safety meeting. Field pressure 1076-psi. SITP 0-PSI, SICP 0-PSI. Continue POOH w/ 150-jts 2-7/8" tubing and retrieving tool. R/D tubing equipment, R/D stairs and floor. N/D BOP and bag. N/D 11" 5K tubing spool w/ 13-5/8" 3K DSA. N/U 11" 5K BOP. R/U floor and stairs. Test Blind rams T/ 500-psi for 15-mins, good test. Secure well and rig. EOT.
5/21/2016	Held safety meeting. Estimated field pressure is 1078-psi. SICP 0-PSI. N/U 7" shooting flange. R/U Weatherford wireline w/ pack off. RIH w/ URS and CBT logging tools, tag @ 7705'. Log F/ 7705' T/ surface. L/D logging tools. R/D Weatherford wireline. Note: (BOP drill) Review emergency nitrogen close in procedure with crew. Secure well and rig. EOT.
5/23/2016	Held safety meeting. Estimated field pressure is 1086-psi. SICP 0-PSI. N/U 7" shooting flange. R/U Schlumberger wireline w/ full lubricator. RIH w/ USIT and CBL logging tools, tag @ 7705'. Log F/ 7705' T/ surface. L/D logging tools and lubricator. R/D Schlumberger wireline. Secure well and rig. EOT.
5/24/2016	Held safety meeting. Estimated field pressure is 1083-psi. SICP 0-PSI. N/U 7" shooting flange. R/U Baker wireline w/ pack off. RIH w/ 56 arm caliper tool, tag @ 7703'. POOH calipering F/ 7698' T/ surface. Laydown caliper tools. RIH w/ High resolution vertical logging tool, Tag @ 7703'. Log F/ 7686' T/ surface. Laydown HRV logging tools. R/D Baker wireline. Secure well and rig. EOT.

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5/26/2016	Held safety meeting. Estimated field pressure is 1084-psi. SICP 0-PSI. R/D stairs and floor. N/D & remove BOPE. 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, test 11" 5K tubing spool 300-low & 3700-psi for 20-minutes each test. Install cellar grading. Remove tubing hanger. Note: Found corrosion and pitting in hanger bowl. N/D 11" 5K tubing spool w/ 13-5/8" 3K DSA and send back to Cameron for repair. N/U 11" 5K BOP. Test Blind rams T/ 500-psi for 15-mins, good test. Secure well and rig. EOT.
6/2/2016	Held safety meeting. Estimated field pressure is 1184-psi. SICP 0-PSI. Fill well w/ 8-bbls polymer. Chart Test casing T/ 1000-psi for 10-mins. N/D 11" 5K BOPE. N/U 11" 5K x 7" 5K spool, N/U 7" 5K double gate BOPE w/ PGSR head. Test Blind rams T/ 1000-psi for 10-mins, good test. R/U floor and tubing equipment. RIH w/ 242-joints 2-7/8" tubing w/ collar on bottom, tail @ 7591'. Install TIW valve and hand slips. Chart Test pipe rams T/1000-psi for 10-minutes. R/D tubing equipment and floor. Drop guy wires. RDMO. Job complete
6/24/2016	Held safety meeting. Service Rig oil and filters. Grease derrick and carrier. Clean Rig. Take trash to trash bin. Secure Rig. EOT.
6/25/2016	Held safety meeting. M/U 2" coflex hose. Remove 3.5" pup joint from test hanger for other rig to use. Continue Cleaning Rig. Take trash to trash bin. Secure Rig. EOT.
6/27/2016	Held safety. Estimated field pressure is 1209-psi. SICP 0-PSI. Lay out plastic pollution ground pans. MIRU Rival rig # 15, guy out rig. R/U floor and tubing equipment. Connect accumulator hoses and function test BOPE. Fill well w/ 1-bbl and Reverse circulate w/ 90-bbls of polymer. Remove hand slips and install PGSR head and rubber. POOH w/ 242-joints 2-7/8" tubing w/ collar on bottom.change ram s to 2 7/8: in 11" double gate. Secure well and Rig. EOT.
6/28/2016	Held safety. Estimated field pressure is 1206-psi. SICP 0-PSI. Clean floor hand rails. Clean and grease tongs and slips. Clean pump and tool truck. R/D stairs and floor. Clean and straighten up location. Take trash to trash bin. Secure well and Rig. EOT.
6/29/2016	Held safety meeting. Estimated field pressure is 1207-psi. SICP 0-PSI. N/D & remove 7" 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, Chart 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. Chart test bag T/ 300-low, unable to get bag to test high. Install 2-way check valve and check valve for kill line. Chart test blind Rams 300-low and 5K-high for 20-minutes each test. Note: Bryan Norman w/ DOGGR witnessed and approved charts for pipe and blinds rams. Note: will swap out bag and test in the morning. Secure well and rig. EOT.
6/30/2016	Held safety meeting. Estimated field pressure is 1207-psi. SICP 0-PSI. N/D bag. N/U new bag. Chart test bag 300-low and 3500K-high for 20-minutes each test. R/O Weatherford. RIH w/ Halliburton retrieving tool and 246-joints 2-7/8" tubing, M/U king swivel, tag top of sand @ 7700'. 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 and 4-joints. N/D PGSR and spool. POOH w/ 196-joints 2-7/8" tubing, RBP @ 1472'. Secure well and rig. EOT.
7/1/2016	Held safety meeting. Estimated field pressure is 1208-psi. SICP 0-PSI, SITP 0-PSI. Spot flatbed trailer. Continue POOH w/ 46 -joints 2-7/8" tubing. Laydown 9-5/8" Halliburton RBP. Make up saw tooth collar and RIH w/ 242-joints 2-7/8" tubing. POOH installing thread protectors and L/D 196-joints 2-7/8" tubing on a trailer, Tail @ 1463'. Note: Blow out drill, shut in time 40-seconds. Secure well and rig. EOT.
7/5/2016	Held safety meeting. Estimated field pressure is 1210-psi. SICP 0-PSI. Fill well w/ 20-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/ 2-7/8" entry guide, XN–nipple, 8' pup joint, X/O, Halliburton 9-5/8" 47# AS1-XHT packer, X/O, 2-7/8" pup joint 10', 2-7/8" 2' pup joint, 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 117-joints 3.5" tubing w/ quality tubular services on location T/5k. Tail @ 3798'. Secure well and rig. EOT.

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 K
A.P.I. No. 03724236
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)
7/6/2016	Held safety meeting. Estimated field pressure is 1212-psi. SICP 0-PSI. Continue P/U 125-joints 3.5" tubing, 3.5" 8' pup joint, 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 hanger and lower it 3' above hanger bowl. P/U king swivel. Pump down tubing w/ 42-BBLS packer fluid sending returns into tank, displace w/ 60-bbls polymer. P/U on tubing, Up weight 102k, down weight 90k, set Halliburton 9-5/8" 47# AS1-XHT packer COE @ 7627', pulled 127k (25k over) and hold for 30-minutes, land hanger @ 76k w/ 14k compression, set lock screws. Test casing T/ 1000-psi for 15-minutes. R/U Western wireline, run 2.30" gauge ring to 7642'. POOH, RIH and set test plug in BXN-nipple @ 7642', POOH, RIH set prong in plug @ 7642'. Secure well and rig. EOT.
7/7/2016	Held safety meeting. Estimated field pressure is 12158-psi. SICP 0-PSI. R/U PROS tester. Hafiz. Ali w/ DOGGR witnessed approved annulus test F/ 7:09am T/ 8:09am, start 1111-psi ending 1090-psi. Hafiz. Ali w/ DOGGR witnessed approved tubing test F/8:26am T/ 9:26am, start 3804-psi ending 3759-psi. R/D Pros tester. R/U western and open sleeve @ 7578'. R/D wireline. Install BPV. N/D BOPE. N/U well head. Pull BPV and install 2-way check valve. 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. Job complete

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

No. T **216-0340**

REPORT ON OPERATIONS

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

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

Ventura, California
August 18, 2016

Your operations at well **"Porter" 69K**, A.P.I. No. **037-24236**, Sec. **28**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **7/7/2016**, by **Hafiz Ali**, a representative of the supervisor.

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

DECISION:

APPROVED

HAM/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By pp. E
Patricia A.Abel, *District Deputy*

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

T 216-0340
#16, 1

Casing and Tubing Pressure Test

Operator: So. Cal. Gas Co. Well Designation: "Porter" 69 K

Sec. 28, T. 03N, R. 16W, S. B. B.M. API No. 037-24236 Field: Aliso Canyon

County. Los Angeles Witnessed on: 07-Jul-2016. Hafiz Ali, representative

of the supervisor, was present from 0700 to 1015.

Also Present were John Herrn, Interact Consultant

Casing Record of the Well:
13-3/8" cem 923'; 9-5/8" cem 8801', perfs @ int 7975'-8050'; 6" ld 7726' - 8074', slotted 7875' - 8050'; 5" ld 8072'-8274',slotted 8115'-8240'.Td 8801'.Plug w/cem 8801'-8273',

The operations were performed for the purpose of Final Well Certification

Pressure Test of the Casing

Packer/ Bridge Plug at 7627'
Casing Pressured with 3% KCl
Casing Pressure Start PSI: 1111psig
Casing Pressure End PSI: 1090 psig
Pressure Held 60 Min. Total drop in Pressure 2 psi 1.8 %.

Well Type Gas Storage
Volume
Start Time: 0904
End Time: 1004

Test Result: X Good ____ Not Good

Pressure Test of the Tubing

Packer/ Bridge Plug at 3800'/7642' plug
Tubing Pressured with 3% KCl
Tubing Pressure Start PSI: 3804psig
Tubing Pressure End PSI: 3759 psig
Pressure Held 60 Min. Total drop in Pressure 454 psi 1 %.

Well Type Gas Storage
Volume
Start Time: 1020
End Time: 1120

Test Result: X Good ____ Not Good

Remarks:

N 'URAL 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 **216-0156**

REPORT ON OPERATIONS

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

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

Ventura, California
August 02, 2016

Your operations at well **"Porter" 69K**, A.P.I. No. **037-24236**, Sec. **28**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **8/2/2016**, by, **D. Woldemariam** a **representative** of the supervisor.

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

DECISION:

APPROVED

DW/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By B
FOR Patricia A. Abel, *District Deputy*

API No. 03724236 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T 216-0156 12,1

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SoCal Gas Well Porter 69k Sec. 28 T. 03N R. 16W
Field Aliso Canyon County Los Angeles Spud Date 01/01/2012

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	05/02/2016	D. Woldemariam	(0830 to 1050)	Mike Wakefield	BOP tester (3rd party)
2nd			(to)		

Contractor Rival Rig # 15 Contractor's Rep. & Title John Herron, Company man

Casing record of well: 13 3/8", 54.5#, N-80, 0-923'
9 5/8", 47#, N-80, 0-8801'

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: Class III 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#	N-80	8801			0	0

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
A	2 7/8	Hydril			5k	
Rd	-	NOV			5k	
Rd	CSO	NOV			5k	

TEST DATA

Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
18.7						
2.8						
2.8						
TOTAL:						

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3000 psi
Total Rated Pump Output — gpm Fluid Level
Distance from Well Bore 50 ft. 1/2

	Accum. Manufacturer	Capacity	Precharge
1	Weatherford	80 gal.	psi
2		gal.	psi

CONTROL STATIONS

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

EMERG. BACKUP SYSTEM

				Press.	Wkg.Fluid
6	N_2 Cylinders	1	L= "	2600	8.5 gal.
	Other:	2	L= "	2600	8.5 gal.
		3	L= "	2600	8.5 gal.
		4	L= "	2600	8.5 gal.
		5	L= "	2600	8.5 gal.
		6	L= "	2600	8.5 gal.
			TOTAL:		gal.

AUXILIARY EQUIPMENT

		No.	Size (in.)	Rated Press	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line							
✓	Kill Line		2"	5K				5K
	Control Valve(s)							
	Check Valve(s)							
	Aux. Pump Cnnct.							
✓	Choke Line		3"	5K				5K
	Control Valve(s)							
	Pressure Gauge							
	Adjstble Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Stndpipe Pres. Gau.							
2	Pipe Safety Valve		2 7/8	5k				
1	Internal Preventer		7 1/16	5k				

HOLE FLUID MONITORING EQUIPMENT

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

Hole Fluid Type	Weight	Storage Pits (Type & Size)
Polymer	8.5	1100 bbl

REMARKS AND DEFICIENCIES:

OGD9 (9/06)

N[illegible]IRAL RESOURCES AGENCY OF CALIFORNIA
[illegible]EPARTMENT 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 **216-0185**

REPORT ON OPERATIONS

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

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

Ventura, California
August 02, 2016

Your operations at well **"Porter" 69K**, A.P.I. No. **037-24236**, Sec. **28**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **5/18/2016**, by **Clifford R. Knight**, a representative of the supervisor.

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

DECISION:

APPROVED

CRK/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By [signature]
FOR Patricia A. Abel, *District Deputy*

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

No. T 216-0185
16,1

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

Operator: So Cal Gas					Well: Porter 69K
Sec. 28	T. 3N	R. 16W	B.&M. SB	API No.: 037-24236	Field: Aliso Canyon
County: Los Angeles					Witnessed/Reviewed on: C-IKnight 5-18-16

C. Knight, representative of the supervisor, was present from 0630 to 1400.

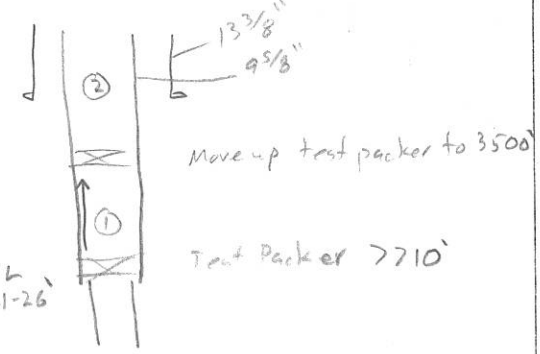
Also present were: John Herrin, Matt Melnar (PROs)

Casing record of the well:

13 3/8 54.5# 0-923' K-55
9 5/8 47# 0-8801' N-80
5 1/2 Liner 7726-8072'
4 1/2 Liner 8072-8274'
Top of liner 7721' measured, 7726' reported diagram

8.5 ppg polymer fluid

① (psi) Surface 2297-2274, hydro 3407, Total 5704-5681
② Surface 3714-3686, hydro 1547, Total 5261-5235



The Internal MIT was performed for the purpose of pressure testing the 9 5/8" casing above 7710 COE' (2) (prior to injecting fluid)

☒ The Internal MIT is approved since it indicates that the 9 5/8" casing has mechanical integrity above 7710 COE' 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.

Test ①
~~0729 2288 psi~~
0732 2303
0746 2250 Packing leaking restart
0800 2297 psi Start } drop
0900 2274 psi End } 1.1%

Test ②
11:22 3714 psi } <1%/hr
12:22 3688 psi

The 9 5/8" casing and test packer at 7710 and 3500' held 115% of reservior pressure for 60 minutes each. -CK

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

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

API No. **03724236** SE **28** T: **3N** R.: **16W** , **SB** B. and M.

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

Type of Notice: **Rework** **Date** **4/30/2016** **Report Number:** **P216-0060**

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

	Date	OK	NEED	Remarks
Well Summary (OG100)				
History (OG103)	8/16/16	✓		KG for DD 10/25/16
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				
BOPE Ins	5/2/16	✓		
Press. Test	5/18/16	✓		Digital Data Rec.
Press. Test	7/7/16	✓		" " "

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: D. ORTIZ 8/16/16
(Date and Engineer)

Modified OGD2

AOR Datbase _____

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

No. P 216-0060

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 06, 2016

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

Your proposal to **Rework** well **"Porter" 69K**, A.P.I. No. **037-24236**, Section **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **4/30/2016**, received **5/2/2016** has been examined in conjunction with records filed in this office. (Lat: **34.314809** Long: **-118.557931** Datum:**83**)

THE PROPOSAL IS APPROVED PROVIDED:

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

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

Engineer Kris Gustafson
Office (805) 654-4761

KG/kg

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____ for
Patricia A. Abel, *District Deputy*

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

OG111 (revised 6/2011)

NOTE:

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

P216-0060

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 69K, API No. 037-24236,

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

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

See attached wellbore schematic

The total depth is: 8820 feet. The effective depth is: 8280 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: 04/30/16
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.

OG107 (1/09)

Rec'd 05-02-16 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 69K – Well Inspection

DATE: April 30, 2016

OPERATOR: SOUTHERN CALIFORNIA GAS COMPANY

FIELD: ALISO CANYON

WELL: Porter 69K

API NUMBER: 037-24236

ELEVATION: All depths based on original KB, 29' above GL

SURFACE LOCATION: SEC 28, T3N, R16W, S.B. B&M

OBJECTIVE

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

WELL RECORD

Current Status:	Active
TD:	8820'; PBTD at 8280'
Special Conditions:	Last tagged inside tubing at 7914', temp survey 03/20/2016
Casing Record:	13-3/8", 54.5#, K-55 casing cemented at 923' with 449 sks 9-5/8", 47#, N-80 casing cemented at 8801' with 1636 sks Perfs: 7875'-7975', 7975'-8050', 8093'-8096', 8115'-8240' 4 jts. 4-1/2", 0.012" WWS liner inside perforated 5-1/2" jacket from 7726'-8072' 6 jts. 5-1/2", 0.012" WWS liner inside perforated 6-1/2" jacket from 8072'-8274'. Note: very little detail available on liner
Tubing Record:	See attached mechanical for tubing detail as run 07/24/2003

GEOLOGIC MARKERS

Surface Elevation = 2370.48'tvd
Original KB = 29'

MP	7562'md	-7416'tvd	S10	8009'md	-7839'tvd
S1	7795'md	-7637'tvd	S12	8058'md	-7885'tvd
S2	7825'md	-7665'tvd	Frew	8112'md	-7935'tvd
S4	7872'md	-7710'tvd	CR	8247'md	-8061'tvd
S6	7912'md	-7748'tvd	K1	8350'md	-8156'tvd
S8	7975'md	-7807'tvd			

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

Estimated Bottom-hole Temperature: 154°F from 03/20/16 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 45 bbls. and the tubing/casing annulus is approximately 526 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. POOH standing back 2-7/8", EUE 8rd, N-80 tubing string and lay down SSD, SSSV, & mandrels. Note: tubing stabbed into seal bore at 8060' and landed with 14,000 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 7726'. Circulate well clean. POOH.

8. RIH with clean-out assembly for 5-1/2" x 4-1/2" liner and clean-out to bottom of liner at 8274'. POOH.

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

10. Make-up and run a 9-5/8" retrievable bridge plug (BP) on production string. Set at approximately 7716' (10 ft above liner top), pressure test to 1000psi, and sand off.

12. Nipple down 11" Class III 5 M BOPE, crossover spool, and primary pack-off.

    a.) Send DSA and tubing spool to Cameron for refurbishment.
    b.) Install auxiliary DSA and spacer spool. Function test rams.

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

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

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

    a.) Replace the pack-off seals and reinstall tubing head, refurbished as necessary.
    b.) Reinstall the 11" Class III BOPE.
    c.) Pressure test the Class III 5M annular preventer to 3500 psig for 20 minutes. Test blind rams and the 2-7/8" pipe rams to 5000 psig for 20 minutes. Test all lines and connections to 5000 psig.
    d.) Perform a 300 psig low pressure test on the annular preventer, blind rams and pipe rams for 20 minutes. Test all lines and connections to 300 psig.
    e.) All tests are to be charted and witnessed by a DOGGR representative.

15. RIH with a test packer and run a Pressure Integrity Test on 9-5/8" casing from surface to BP to 115% of the wells maximum allowable operating pressure (3625 psi) as per attached Pressure Test Schedule. POOH with test packer.

    a.) Engineering team to analyze log and pressure test results and recommend any additional remediation.

13. RIH with retrieving tool for BP on production string to top of sand. Circulate out sand and engage BP. Release BP at 7716'', circulate as required to control well. POOH and lay down production string.

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

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

Notes

- Run sliding sleeve in closed position. Ensure new production packer depth is at or above depth at which retrievable bridge plug was used for pressure testing.
- Make up items a) through d) under the supervision of Quality Tubulars. Pressure test assembly to 3700 psi for 1hr, chart test. Test caps to be installed and removed by Quality Tubulars.
- Make up items f) through h) under the supervision of Quality Tubulars. Pressure test assembly to 3700 psi for 1hr, chart test. Test caps to be installed and removed by Quality Tubulars.
- Shift sliding sleeve and drift with XN plug prior to shipping tools to location.
- Seal lube top sub on ASX-1 packer, to be witnessed by Quality Tubulars.

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

16. Rig-up slickline unit and lubricator. Set a plug in the 4-1/2" XN profile.

17. 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.

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

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

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

UNLOAD WELL

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

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

WELL LATERAL HYDROTESTING

21. 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.

22. Reinstall the hydro-tested laterals.

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

24. 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 69K

		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				7716			
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		
7716	5840	0.00	0	3410	-			5660	4324		
				0.442 psi/ft int. grad.					0.091 psi/ft int. grad.		

Well
Porter 69K

API #: 04-037-24236-00
Sec 28, T3N, R16W

Operator: So. California Gas Co.

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

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

Spud Date: 1/3/2002
Completion Date: 5/25/2002

Junk: None

13-3/8" TOC Surface
9-5/8" ETOC Surface (*Calc'd)

17-1/2" Hole
(to 930')

Surface Casing
13-3/8", 54.5#, K-55
0' - 923'

CMT'D w/ 683 CF/449 SKS,
Good CMT Returns to Surface

923'

12-1/4" Hole

Production Casing
9-5/8", 47#, N-80
0' - 8801'

CMT'D w/ 3214 CF/1636 SKS,
No CMT Returns to Surface*

Inner Liner
5-1/2"
7726' - 8072'

9-5/8" Perfs:
7875' - 7975'* & 8115' - 8240'
Six (6) HPF (6/26/2003)
7975' - 8050'*
Six (6) 5/8" HPF (5/25/2002)
(*Perfs Frac'd w/ 114,600 lbs.
of 20/40 Sand, 7/12/2003)

7726'

Inner Liner
4-1/2"
8072' - 8274'

8072'

8274'

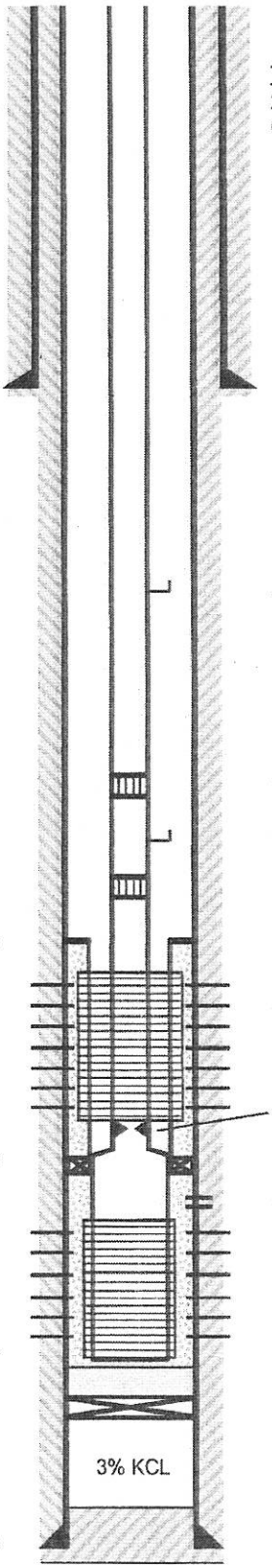
3% KCL

PBTD 8641'

TD 8820'
TD VSS (-6216')

8801'

Directionally Drilled: Yes (TD is 1021' E, 600' S of Surf, 8615' TVD)



Tubing
2-7/8"
0' - 8072'

4404' GLM

7552' Halliburton "XO" Sliding Sleeve

7623' GLM

7662' Baker CMP Press Activated Sliding Sleeve

5-1/2" Inner Liner Perfs: (Interval Not Reported)
0.012" WWS w/ 6-1/2" Shroud

Gravel Packed w/ 59 CF (52 CF Calc'd) 16/30

8058' "XN" Nipple w/ Standing Valve in place
8060' Locator & Seal Assembly
8072' PCKR (Also Top of 4-1/2" Liner)

8093' - 8096' Four (4) 1/2" HPF (30 CF CMT SQZ'D Away, 7/2/2003)

4-1/2" Inner Liner Perfs:
(Interval Not Reported)
WWS w/ 5-1/2" Shroud

Gravel Packed w/ 54 CF 16/30

8275' - 8280' CMT Plug
8280' CIBP (6/26/2003)

Top of Zone Markers		
A1	3995'	(-1595')
MP	7562'	(-5046')
S1	7795'	(-5267')
S4	7872'	(-5340')
S8	7975'	(-5437')
FREW	8112'	(-5565')
CR	8247'	(-5691')
K1	8350'	(-5786')

Prepared by: MAM/CAM (4/13/2016)

InterAct

Rec'd 05-02-16 DOGGR Ventura.

Well
Porter 69K

API #: 04-037-24236-00
Sec 28, T3N, R16W

Production Casing Pressure Test - Program

Operator: So. California Gas Co.

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

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

Spud Date: 1/3/2002
Completion Date: 5/25/2002

Junk: None

13-3/8" TOC Surface
9-5/8" ETOC Surface (*Calc'd)

17-1/2" Hole
(to 930')

Surface Casing
13-3/8", 54.5#, K-55
0' - 923'

CMT'D w/ 683 CF/449 SKS,
Good CMT Returns to Surface

923'

12-1/4" Hole

TEST 3500' to Surface - 3625 psi
TEST 3500' to 7716' - 2250 psi

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

Production Casing
9-5/8", 47#, N-80
0' - 8801'

CMT'D w/ 3214 CF/1636 SKS,
No CMT Returns to Surface*

7716' 9-5/8" Retrievable Bridge Plug

Inner Liner
5-1/2"
7726' - 8072'

7726'

5-1/2" Inner Liner Perfs: (Interval Not Reported)
0.012" WWS w/ 6-1/2" Shroud

Gravel Packed w/ 59 CF (52 CF Calc'd) 16/30

9-5/8" Perfs:
7875' - 7975'* & 8115' - 8240'
Six (6) HPF (6/26/2003)
7975' - 8050'*
Six (6) 5/8" HPF (5/25/2002)
(*Perfs Frac'd w/ 114,600 lbs.
of 20/40 Sand, 7/12/2003)

8072'

8093' - 8096' Four (4) 1/2" HPF (30 CF CMT SQZ'D Away, 7/2/2003)

Inner Liner
4-1/2"
8072' - 8274'

4-1/2" Inner Liner Perfs:
(Interval Not Reported)
WWS w/ 5-1/2" Shroud

Gravel Packed w/ 54 CF 16/30

8274'

8275' - 8280' CMT Plug
8280' CIBP (6/26/2003)

3% KCL

PBTD 8641'

TD 8820'
TD VSS (-6216')

8801'

Directionally Drilled: Yes (TD is 1021' E, 600' S of Surf, 8615' TVD)

Top of Zone Markers		
A1	3995'	(-1595')
MP	7562'	(-5046')
S1	7795'	(-5267')
S4	7872'	(-5340')
S8	7975'	(-5437')
FREW	8112'	(-5565')
CR	8247'	(-5691')
K1	8350'	(-5786')

Prepared by: MAM/CAM (4/13/2016)

InterAct

Rec'd 05-02-16 DOGGR Ventura.

OPERATOR So. Cal. Gas Co.
WELL NO. "PORTER" 69R
MAP

A.P.I. 037-24236
SECTION 23, T. 3 N, R. 16 W

INTENTION	DRILL	REWORK				
NOTICE DATED	12-7-2001	06/16/2003				
P-REPORT NUMBER	P201-268	P203-133				
CHECKED BY/DATE						
MAP LETTER DATED						
SYMBOL						

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE	12-21-01		06/17/03									
HISTORY	7-18-02		6-18-04									
SUMMARY	7-18-02											
E-LOG W/DENSITY	2-11-02											
MUD LOG												
DIPMETER												
DIRECTIONAL	7-12-02											
CORE/SWS												
CBL												
SONIC/GAMMA	2-11-02											
PERF METHOD	6-4-02											

ENGINEERING CHECK

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

RECORD'S COMPLETE 7-25-02 7-29-04 SM

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 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 K Surface Location: Sec.28, T3N, R16W, SBB&M
A.P.I. No. 037-24236 Matt Ortwein (Person Submitting Report) Title: Storage Engineer (President, Secretary, or Agent)

Date: 06/23/2004 Signature:

Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300 Telephone Number: 818-700-3802

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
06/20/2003	Move in rig up, spotted pump and choke manifold. Rigged up Spicer wire line, set "F" stop at 7732'. Made up 3/8" punch and punched hole at 7732'. Pumped in annulus to confirm communication. Removed laterals and rigged up to kill well.
06/21/2003	Opened well with 2100 psi., tubing and 1700 psi.casing. Pumped 100 bbls. polymer pill displaced with 46 bbls. KCL. Killed well per schedule with 512 bbls. 3% KCL . Made up back pressure plug, nippled down production tree. Nippled up class III BOPE and tested to 5000 psi. Removed back pressure plug. Rigged up working floor and tubing equipment.
06/23/2003	Released HES G-6 packer, pulled out of well. Circulated out gas kick. Pulled out of well, laid down G-6 packer. Laid down TCP guns. Changed pipe rams to 3-1/2", made up 9-5/8" scraper, ran in well picking up 3-1/2" tubing to 2200".
06/24/2003	Ran in well with 9-5/8" casing scraper to 8641', tagged top of cement. Reverse circulated out 200 bbls. of mud. Pulled out of well to 2400'.
06/25/2003	Pulled out of well with 9-5/8" casing scraper. Nippled up shooting flange and rigged up Halliburton wireline. Made up cement bond log tool with neuton and gamma ray tools. Ran in well, tagged bottom at 8637', ran cement bond log to surface. Ran in well with 2100' of 3-1/2" tubing for kill string.
06/26/2003	Pulled out of well with kill string. Nippled up shooting flange and rigged up Halliburton wireline. Made up Halliburton, 9-5/8" cast iron bridge plug, ran in well to 8280', set plug with top at 8280'. Made up dump bailer with 6 cu.ft. class "G" cement. Ran in well to 8280', dumped cement. Top of cement at 8275'. Made up 4-5/8" perforating guns and perforated Frew zone from 8240' to 8115' with 6 shots per foot. Made up 4-5/8" perforating guns and perferated Sesnon zone from 7975' to 7875' with 6 shots per foot. Rigged down Halliburton wire line. Made up 9-5/8"casing scraper and bumper sub and ran in well to 2200'.
06/27/2003	Ran in well with 9-5/8" casing scraper tagged at 8283' tubing measurements. Reversed circulated well clean. Pulled above perforations. Pulled to kill string at 2100'.
06/28/2003	Pulled out of well with kill string. Made up Weatherford, 9-5/8" Arrow Set 1X ,10K frac packers and ran in well to top of perforations at 7875"
06/29/2003	Moved in frac equipment.
06/30/2003	Ran in well with Weatherford frac packers to 8099' set packer. Rigged up Halliburton frac lines and tested to 7000 psi. OK. Pumped mini-frac, casing pressured up. Closed down-hole valve and tested tubing to 1000 psi. Released from on/off tool, pulled 10' set top frac packer and tested to 1800 psi. Released packer re-latched on/off tool, opened down hole valve. Pumped down tubing at 1/2 barrel per minute with 1800 psi. returns up annulus. Pumped down annulus at 1-1/2 barrels per minute with 1800 psi. with slight retuns through tubing. Rigged down Halliburton frac equipment. Released packer, pulled out of well to 2100' kill string.
07/01/2003	Pulled out of well with frac packers. Layed down packers. Rigged up Halliburton wireline. Made up 9-5/8" cast iron bridge plug and ran in well to 8105'. Correlated to perforation at 8115' and 3 casing collars above. Set bridge plug at 8105' wire line measurements. Made up 4" perforating gun with four 1/2" holes per foot. Ran in well to 8105', tagged plug and pulled to 8093'. Shot tweleve, 1/2" holes from 8093' to 8096'. Made up 9-5/8" cement retainer and ran in well to 8070' set retainer. Rigged down Halliburton wireline. Made up stab in tool and ran in well to 8070' stabbed in to retainer. Pumped into holes with breakbown at 1/2 BPM and 2000 psi. Unstab from retainer and pulled to 7800'.
07/02/2003	Stabbed into retainer at 8070'. Rigged up Halliburton cementers, estalished breakdown at 1/2 bpm. with 2100 psi. Unstabbed from retainer and pumped 5 bbls. of fresh water ahead, mixed and pumped 69 cu. ft. of class "G" cement with 0.6% halad-322- 0.2% halad-344 0.2% SCB-1 and 0.1% HR-5, displaced with 48 bbls. of water. Stabbed into retainer and squeezed 30 cu. ft. out holes at 8093' with no returns up annulus. Cement in place at 11:00 am. Final squeeze pressure 3000 psi. Unstabbed from retainer and pulled 30' and reverse circulated out 5 bbls. of cement. Reversed out two tubing volumes. Rigged out cementers and pulled out of the well. Laid down stab in and made up 8-1/2" bit and 2 junk subs one, 6" drill collar, five, 4-3/4" drill collars and ran in well to 3000'.
07/03/2003	Ran in well to top of cement at 8053'. Nippled up circulating head and pick up power swivel. Drilled out cement to top of retainer at 8070'. Drilled out retainer to 8074'. Pulled to 7870'.

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 K
A.P.I. No. 037-24236

Field: Aliso Canyon
Surface Location: Sec.28, T3N, R16W, SBB&M
Matt Ortwein (Person Submitting Report)
Title: Storage Engineer (President, Secretary, or Agent)

County: Los Angeles

Date: 06/23/2004

Signature:

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

Telephone Number: 818-700-3802

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
07/05/2003	Drilled out retainer at 8070' drilled out cement to bridge plug at 8105'. Drilled out bridge plug. Ran in well to 8275'. Reversed circulated 140 bbls. and loaded out power swivel. Removed circulating head and pulled out fo well to 3400'.
07/06/2003	Pulled out of well and layed down drill collars and bit. Made up 9-5/8" postive casing scraper and lubriucated bumper sub. Ran in well tagged top of cement at 8275'. Changed over with 537 bbls. clean 3% KCL. Pulled out of well to kill string at 2400'.
07/07/2003	Pulled out of well with 9-5/8" casing scraper. Made up Weatherford pin point injection tool ran in well to 7750'.
07/08/2003	Ran in well to 8117' set tool injection down tubing at 2500 psi. with return uo casing. Pulled up to squeeze holes at 8092'-8097'. Pumped down tubing at 3000 psi. at 1/2 bpm. with no returns. Released tool, ran in well to 8240', washed perferations to 8115'. Pulled to 8050', washed perferations to 7875'. Released tool, ran to 8090', set tool blank and tested tool. Dropped bar, did not shear knock. Set tool at 8092' to 8097' inject in tubing at 3000 psi. at 1/2 bpm. with no returns to casing. Dropped second bar. Could not set tool, pulled out of well to 7696'.
07/09/2003	Pulled out of well with pin point injection tool. Layed down pin point injection tool, recovered scale above knock out. Made up Weatherford tandem frac packers and ran in well to 8076'. Set packer and filled annulus. Injected down tubing at 3400 psi. and 2.5 bpm. with no returns up annulus. Shut down, bled down to 150 psi. in 12 minutes.
07/10/2003	Rigged up Halliburton frac equipment. Pumped injection and mini frac at 10 bpm. Halliburton problems with fluid. Shut in well at 2:00 p.m. due to Halliburton.
07/11/2003	Tested lines to 6000 psi. Held safety meeting. Start mini frac, shut down. Start frac at 18 bpm. cut sand due to high pressure. Released from on/off tool and reversed tubing clean. Pulled to 7765', set packer and rigged up to frac second stage.
07/12/2003	Rigged up and tested lines to 6000 psi. Held safety meeting. Started frac a at 25 bpm. Pumped 114,600 bls. of 20/40 sand maximum pressure 4800 psi. Rigged out Halliburton, released packer and tagged sand at 7790'. Rigged up and reversed out sand to 8077'. Released bottom packer and pulled out of well to 7500'.
07/14/2003	Pulled out of well with frac packers. Made up 9-5/8" casing scraper ran in well to 8225'. Tagged sand, rigged up circulating head and reversed out frac sand to 8275'. Circulated well clean and pulled out of well to 7870'.
07/15/2003	Ran in well with 9-5/8" scraper, tagged top of cement at 8275'. Rigged up and pumped 50 bbls. high viscosity polymer and displaced with 60 bbls. of KCL. Pulled out of well laid down casing scraper. Made up 4-1/2" bull plug on 4 joints of 4-1/2" wire wrapped liner with 5-1/2" shroud,1 joint blank 4-1/2" liner and 180' of 2-3/8" tail pipe. Made up gravel pack tools and ran in well to 7870'. Made up PGSR and rigged up gravel pack machine.
07/16/2003	Ran in well with 4-1/2" liner, tagged at 8280 and pulled up to 8275'. Rigged up gravel pack unit packed liner with 54 cubic feet of 16/30 gravel. Screened out at 1200 psi., reversed clean and restressed pack with 1200 psi. Released from running tool pulled out of well. Laid down tools and made up 9-5/8" hydrualic liner packer with drive on adapter. Ran in well to 3000'.
07/17/2003	Ran in well with liner packer to top of liner at 8083'. Latch on liner with drive over. Pulled 5000 lbs. over string weight. Dropped ball to set packer, pumped 2 tubing volumes, packer would not set. Dropped second ball to set packer and pumped 2 tubing volumes with no success. Reversed circulated with no success. Released from running tool and pulled out of well. Did not recover either setting balls. Ran in well with perferated nipple and bull plug to 2000'.
07/18/2003	Pulled out of well with kill string. Made up hydraulic setting tool with ball in place. Ran in well rabbiting pipe. Found part of retainer rubber in joint #172. Ran in well to 8083', screwed into liner packer. Set liner packer with 1600 psi. and sheared ball seat at 3400 psi. Released from liner and pulled out of well. Made up 6-5/8" cup and perforated nipple and 9-5/8" tested packer and ran in well to 6000'.
07/19/2003	Ran in well with test cups and 9-5/8" packer to 8073'. Stabbed into polish bore and set packer, tested liner packer to 1200 psi. for 15 minutes. Released packer, pulled out of well and laid down tools. Made up 5-3/4" seal assembly and picked up picked up 6 joints of 5-1/2" liner with .012" screen and 6.12" shroud. Picked up 2 joints of blank 5-1/2" liner and landing nipple. Picked up 310' of 2-7/8" tail and gravel pack tools. Ran in well with liner to 8073' and stabbed into liner packer at 8073'.

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 K
Surface Location: Sec.28, T3N, R16W, SBB&M
A.P.I. No. 037-24236
Matt Ortwein (Person Submitting Report)
Title: Storage Engineer (President, Secretary, or Agent)

Date: 06/23/2004
Signature:

Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300
Telephone Number: 818-700-3802

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Start Date	Ops. DOGGR
07/21/2003	Rigged up gravel pack unit. Gravel packed liner with 63 cubic feet of 16/30 gravel, screened out at 1200 psi. Reversed out 4 cubic feet, restrested with 1200 psi., 59 cubic feet in place (52 cubic feet caculated to cover screen.) Released from liner and pulled out of well and laid down gravel pack tools. Made up 9-5/8" hydraulic liner packer and ran in well to 4000'.
07/22/2003	Ran in well with drive on adapter to 7733' latch drive to liner top. Dropped ball and set packer with 1200 psi. Pressured to 2500 psi. for 15 minutes. Tested packer to 1500 psi. lost 300 psi. in 8 minutes. Sheared ball seat at 3400 psi., released from packer and pulled out of well laying down 3-1/2" tubing to 4000'.
07/23/2003	Pulled out of well laid down 3-1/2" tubing and hydraulic setting tool. Changed out pipe rams to 2-7/8". Ran in well picking up 2-7/8" tubing to 2300'
07/24/2003	Pulled out of well with kill string. Made up seal assembly and "XN" nipple. Picked up 356' of 511 Hydril tubing. Made up Baker CMP pressure activated sliding sleeve, gas lift mandrel, " XO" sliding sleeve, tubing to 4400', gas lift mandrel and tubing to surface. Ran in well to 8062', stabbed into seal bore. Respaced well landed tubing with 14000lbs. of compression. Made up back pressure plug, nippled down BOP and nippled up production tree. Removed back pressure plug.
07/25/2003	Load out equipment and rig down and clean location. Released rig for move to SoCal 6 Playa Del Rey.

The Resources Agency of California
Department of Conservation
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

WELL STATUS INQUIRY

Ventura ,Calif.

June 18, 2004

To: James D. Mansdorfer, Agent
Southern California Gas Company
9400 Oakdale Avenue
Bakersfield CA 91313

In a notice dated 06/16/2003 , you propose to rework
Well "Porter" 69K API number 037-24236
Field Aliso Canyon , County Los Angeles , Sec. 28 ,T. 3N ,R. 16W , SB B.&M.

Please indicate below the conditions or intentions regarding this proposed work, and return the completed form to this office within 10 days.

Hal Bopp,
State Oil and Gas Supervisor
By _____

☑ PROPOSED WORK HAS BEEN DONE. (If you check this box, please file the required well records on this work in duplicate within 60 days after work was completed.*)

☐ PROPOSED WORK IS IN PROGRESS AND SHOULD BE COMPLETED ABOUT _____ (date)

☐ PROPOSED WORK HAS NOT BEEN DONE, BUT WE STILL INTEND TO DO THE WORK.**

- ☐ SUPPLEMENTARY NOTICE (Form OG123) ATTACHED.
- ☐ PLEASE CONSIDER THIS FORM AS A SUPPLEMENTARY NOTICE.

RECEIVED
JUN 28 2004
DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES
VENTURA, CALIFORNIA

☐ WE DO NOT INTEND TO DO THE PROPOSED WORK. Please cancel our notice to _____, dated June 24, 2004.

☐ OTHER: _____

_____
(Signature)

Technical Specialist Mike Dozier
(Name and title)

* Division 3 of the *Public Resources Code* states, in part:
Section 3215, ...Well records shall be filed 60 days after completion or suspension of proposed work.

** Section 3203, ...If operations have not commenced within one year of receipt of the notice, the notice will be considered canceled. (To prevent cancelation, file a Supplementary Notice with the division.)

OGD3 (12/97)

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

No. P203-133

PERMIT TO CONDUCT WELL OPERATIONS

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

Gas Storage Project

James D. Mansdorfer, Agent
Southern California Gas Co.
9400 Oakdale Avenue
Bakersfield CA 91313

Ventura, California
June 24, 2003

Your _____ proposal to rework well "Porter" 69K,
A.P.I. No. 037-24236 Sec. 28, T. 3N, R. 16W, SB B.&M.,
Aliso Canyon field, ---------- area, Sesnon-Frew pool
Los Angeles County, dated 06/16/2003 received 06/17/2003 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 III 5M requirements is installed and maintained in operating condition at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. Wire line operations are conducted through at least a 5M lubricator.
4. The proposed bridge plug at 8275' may not fulfill the requirements for the abandonment of the lower portion of the well without further considerations.
5. This office shall be consulted before initiating any changes or additions to this proposed operations, orif operations are to be suspended.
6. **THIS DIVISION SHALL BE NOTIFIED:**
   a. To test the blowout prevention equipment prior to commencing downhole operations.

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

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.

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

NOTICE OF INTENTION TO REWORK / REDRILL WELL P203-133

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 File
Bond	OGD114 ✓	OGD121 ✓	
	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 69K (Well designation) API No. 037-24236

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

Los Angeles, County.

GS

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 923'
9-5/8" casing cemented at 8801'.
Perforated 7975' - 8050'

2. The total depth is: 8820 feet. The effective depth is: 8635' feet.

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

4. Present zone pressure: 3500 psi. Anticipated/existing new zone pressure: 3500 psi.

5. Last produced: (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.)*
See attached program for frac stimulation of Frew and Sesnon.

JUN 17 2003

VTA DOG6R

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: 9400 Oakdale Av	City: Chatsworth	Zip Code: 91313
Name of Person Filing Notice: Richard Jackson	Signature	Date: 06-16-03

File In Duplicate

OG107 (7/97/GSR/5M).

Frac Stimulation PROGRAM

22 July 2002

Porter 69K

DATE: 22 July 2002

Revisions: **13 June 2003RJ**

OPERATOR: **Southern California Gas Company**

FIELD: **Aliso Canyon**

WELL: **Porter 69K API# 037-24236**

CONTRACTOR: **Pool / HES / WEA**

OBJECTIVE: **Complete well in Frew and Sesnon with Frac Packed Liner with zones isolated. Evaluate Frew and Inject/Withdraw from the Sesnon managing reservoirs separately.**

ACCOUNT:

ELEVATION: **Take all measurements from the original KB = 30' above GL.**

SAFETY: **Hard hats are to be worn by all personnel on or near a rig. No smoking is permitted within 100' of any wellhead or near any other flammable material.**

PRESENT CONDITIONS:

Casing:

0' - 922'	13-3/8"	54#	K-55	Cemented
0' - 8800'	9-5/8"	47#	N-80	Cemented
E.D. – 8635'				
7974'-8049'				Perforated 6 HPF (TVDTP=7836')
S-8 thru S-12				

Tubing:

252 Joints	2-7/8"	6.5#	N-80	EUE 8R

Packer

Halliburton G-6	9-5/8"	Top at 7859'

Note: BOP requirements in 224.05 should be fully implemented. Class III should be followed. Reservoir is at high inventory and pressures should be monitored regularly.

Aliso Canyon is a Title V Facility: Check with Staff environmental specialist to assure all permits and procedures are properly recorded.

Work in this program will require approval from CaDOGGR

Notice of approval to be posted on sit during well work operations. All provisions are to be followed.

History

Well was originally drilled and completed in 2001 as part of the "Cushion Gas Project" and was perforated in lower Sesnon sands. Performance from this completion was marginal at best. The Frew interval was not completed in the original completion but holds promise as oil production interval.

WELL WORK PROGRAM Porter 69K

Pre rig:

Well kill procedure will use fluids which will provide a 500psi minimum overbalance at all open intervals in the well bore.

1) Remove laterals and install companion flanges for killing well.

2) Set 500 barrel closed top tank and fill with 3% KCl water. Treat all water with ucarcide, 5 gallons per 100 barrels or as directed by HES. Set 2 additional frac tanks as required providing storage capacity for Frac procedure. Tanks to be fitted with 4" suction manifold and with 3" circulating line to back of tank.

3) Dead head 80 barrels of polymer KCl water down tubing to provide 500psi overbalance. Use HEC polymer with 60 sec minimum viscosity. Check wellhead pressure prior to pumping and calculate gradient using TVD=7836'

4) Rig up Spicer Wireline with full lubricator and run in well with tubing punch. Perforate 1) ½" equalizing hole at Approximately 7700'. Avoid radioactive marker at 7816-7820'. (Spicer (661) 322-4260 or 303-9145)

5) Move in pump with tank, shaker and mixer. Well crew to provide labor for killing well and installing kill equipment.

6) Fill 500 barrel closed top tank with 3% KCl water (and sufficient Sodium Chloride if required) for adequate fluid weight to obtain 500psi overbalance.

   a) Treat all water with ucarcide, 5 gallons per 100 barrels or as drected by HES.

   b) Connect pump to tubing and vent casing through choke manifold to Gas Co. system

7) Kill well per schedule: Maintain 500psi overbalance throughout kill.

Rig work:

1) Move in Pool light work over rig capable of 300,000#. Rig up.
2) Set 2-7/8" LH Shaffer BPV. Install Weatherford Class III BOPE directly on 11"-5000psi flange. Fit BOPE with 2-7/8" pipe rams and CSO. BOPE must have connection and valve below the blind rams. Fit with 5000psi valve.
3) Test BOPE system per Co. job instruction. Test to 5000psi. Notify DOGGR to witness testing.
4) Install 1 jt of 2-7/8" N-80 tubing in tubing hanger with Safety valve in top. Unland and work RH torque in tubing to get ¼ turn at packer. Pick up to equalize across packer. (4000# above string weight) Continue picking up to automatically "J" to running position. Allow element to relax then work up and down until free. Pull out of well with packer and TCP assembly. Lay down all tubing accessories. Call HES to handle radioactive marker sub and to redress packer.
5) Run 9-5/8" –47# positive scraper on 2-7/8" tubing to top of cement at 8635'. Reverse circulate clean. Lay down 2-7/8" tubing as necessary when pulling out.
6) Run HES CBL from clean out depth to surface, or as directed by field engineer.
7) Wireline set CI bridge plug at 8280' and cap with cement using dump bailer.
8) Perforate: 6 JHPF
   a) Frew form 8115' to 8240'
   b) Perforate remaining Sesnon intervals S-4 through S-6 from 7875' to 7975'. (7975' to 8050', S-8 through S-12, has been perforated).
9) Run 9-5/8" –47# positive scraper to top of cement on BP at 8275'. Reverse circulate clean.
10) Run Weatherford dual packer frac system and set lower packer at 8100'. Pump down tubing and observe casing pressure to assure packer and cement integrity.
11) Frac Frew per attached HES frac stimulation program.
12) Pull out of tandem and make second set at 7850'. Frac Sesnon per attached HES frac stimulation program.
13) Release top packer and pull out of well. Make up retrieving tool and retrieve packer from 8100'
14) Clean out to cement on CI BP at 8275'.
15) Pick up 5" wire wrapped, shielded liner and run in well on WEA "over the top" tools:
   a) Use 2-1/16" Hydril dip tube.

b) Bottom of liner set at 8270'

c) Wicker on top at 8075' for drive on adapter.

16) Gravel pack using 16-30 gravel and WEA pots with rig pump using filtered, treated, 3% KCl water. Pack, re-stress and repack as required. Bump liner during packing operation.

17) Reverse out any excess and release from liner and pull out of well.

18) Run WEA elastomer seal packer with drive on wicker and latch for second stage of pack.

19) Pick up 5-1/2" wire wrapped, shielded liner and run in well on WEA "over the top" tools

a) Bottom of liner to include Latch, and PBR with locator for tubing.

b) Use 2-1/16" Hydril dip tube.

c) Latch on to first stage liner. Top of liner at 7750'. or to reach above the ECP as found on CBL. Records indicate that ECP was not run on this well.

20) Gravel pack using 16-30 gravel and WEA pots with rig pump using filtered, treated, 3% KCl water. Pack, re-stress and repack as required. Bump liner during packing operation.

21) Make up 9-5/8" X 5-1/2" drive on liner adapter with elastomer seal and hold down slips and install on top of liner.

22) Clean out as required.

23) Run completion tubing as follows:

a) Seal assembly and stop for PBR

b) 2-7/8" XN nipple

c) XO 2-7/8" EUE pin X 2-7/8" 511 Hydril box

d) 310' of 2-7/8" 511 Hydril

e) XO 2-7/8" 511 Hydril pin X 2-7/8" EUE Box

f) 1 jt 2-7/8" EUE 8R tubing

g) Baker Model CMP pressure activated sliding sleeve pinned for 4000psi

h) 1 jt 2-7/8" EUE 8R tubing

i) 2-7/8" KBMG gas lift mandrel with Dummy valve in place

j) 2-7/8" EUE 8R N-80 to surface with unloading GLM placed 1000' below static fluid level. Load with 5/16" orfice.

k) 2-7/8" N-80 pup joints as required

24) Run tubing to locator. Space out with 10,000# set on seals. Land in hanger.

25) Install BPV and remove BOPE. Install tree and test to 5000psi. Remove BPV.

26) Release rig.

Post rig

1. Clean location and replace laterals with new sacrificial probes.
2. Unload and test well.

Richard Jackson 29 August 2002 – final 6-17-03

Approved:

J.D.Mansdorfer 6-17-03; M.Ortwein 6-17-03

Group List - Actual

Surface casing

Des	OD	Wt.	Grd	ID	Top (MD)	Btm (MD)	Len	Top (TVD)
Csg head housing	13 3/8			12.615	28	29	1.0	28
Surface Casing	13 3/8	54.50	K-55	12.615	29	897	868.3	29
Float collar	13 3/8			12.615	897	899	2.0	897
Surface Casing	13 3/8	54.50	K-55	12.615	899	922	22.3	899
Casing shoe	13 3/8			12.615	922	923	1.4	922

Production casing

Des	OD	Wt.	Grd	ID	Top (MD)	Btm (MD)	Len	Top (TVD)
Tbg head housing	9 5/8			9.625	27	28	1.0	27
Casing Hanger	9 5/8			8.681	28	29	1.0	28
Casing Joints	9 5/8	47.00	N-80	8.681	29	7,572	7542.8	29
Casing Joints	9 5/8	47.00	N-80	8.681	7,572	8,714	1141.9	7,454
Float Collar	9 5/8			8.681	8,714	8,715	1.5	8,518
Casing Joints	9 5/8	47.00	N-80	8.681	8,715	8,800	84.9	8,520
Float Shoe	9 5/8			8.681	8,800	8,801	1.0	8,597

Tubing - Production

Des	OD	ID	Top (MD)	Btm (MD)	Len
Tubing Hanger	7 1/16	2.441	27	28	0.6
Tubing Pup Joint	2 7/8	2.441	28	29	1.7
Tubing Pup Joint	2 7/8	2.441	29	31	2.0
Tubing Pup Joint	2 7/8	2.441	31	39	8.1
Tubing Pup Joint	2 7/8	2.441	39	48	8.0
Tubing	2 7/8	2.441	48	7,816	7768.2
Radioactive marker	2 7/8	2.441	7,816	7,820	4.1
Tubing	2 7/8	2.441	7,820	7,851	31.4
Tubing Pup Joint	2 7/8	2.441	7,851	7,857	6.1
Cross Over	4 3/4	2.441	7,857	7,859	1.1
Packer	6 3/6	4.000	7,859	7,864	5.3
Cross Over	4 3/4	2.441	7,864	7,865	1.2
Tubing	2 7/8	2.441	7,865	7,896	30.5
TCP Gun Fluid Isolation Sub	3 7/8	2.250	7,896	7,897	1.3
Tubing	2 7/8	2.441	7,897	7,960	62.7
Cross Over	3 5/8	1.560	7,960	7,960	0.3
TCP Gun Firing Head	2 7/8	1.562	7,960	7,965	5.0
TCP Gun Spacer	4 5/8		7,965	7,974	9.0
TCP Gun Assembly	4 5/8		7,974	8,049	75.0
Bull Plug	4 5/8		8,049	8,050	1.1

Perforations

Des	Int (MD)	Date	Top (TVD)	Com
Perforated	7,975-8,050	5/25/2002	7,836	TCP/4 5/8-inch/6-spf/RDX DP/.43EHD/30"Pen

Formations

Des	Top (MD)	Top (TVD)
MP	7,562	7,445
S1	7,795	7,666
S2	7,825	7,695
S4	7,870	7,737
S6	7,910	7,775
S8	7,975	7,836
S10	8,009	7,866
S12	8,040	7,897
S14	8,055	7,911
Frew	8,115	7,967

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JUL 25 2002
By

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

WELL SUMMARY REPORT

API NO. 037- 24236

Operator	Well				
Southern California Gas Company	Porter 69 K				
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)
903' South and 3511' 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.
8154' TVD, 500.00' S and 850.00' E

Commenced drilling (date) 1/3/02
Completed drilling (date) 1/19/02
Commenced production/injection (date)

Total depth: (1st hole) 8820' (2nd) (3rd)

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

Present effective depth 8635'

Production mode: ■ Flowing ☐ Pumping ☐ Gas lift

Junk: None

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

GEOLOGICAL MARKERS	DEPTH
MP	7562'
S4	7870'
Frew	8110'
Cretaceous	8247'

Formation and age at total depth: Cretaceous

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	2220 psi.	2220 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	923' KB	54.5 #	N-80 SMLS	N	17-1/2"	449 sks.	Shoe	Surface
9 5/8"	30' KB	8801' KB	47 #	N-80 SMLS	N	12-1/4"	1636 sks.	Shoe	Surface

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

7975' to 8050', 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. DSL log from 8803' to 923'. Platform Express array from 923' to 8812'.

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)
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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 K
A.P.I. No. 037-24236

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
8/30/2001	Prepare location.
1/3/2002	Spud a 17-1/2" hole at 11:30 a.m. January 3, 2002. Drilled to 107', lost circulation. Conditioned mud, regained circulation, drilled to 246', lost circulation. Spotted CACL2 pill, regained circulation, drilled to 454'
1/4/2002	Drilled from 454' to 930'. Ran 22 joints of 13-3/8", 54.5 #, K-55 casing. Shoe set @ 923' with float @ 900'.
1/5/2002	Cemented 13 3/8" casing. Precced cement with 20 bbls. fresh water. Mixed and pumped 185 sacks 2.02 yield 12.4 Ppg 374 C.F slurry w/ 65:35:6 pozmix , Class G cement 264 sacks 15.8 Ppg 1.17 yield 309 C.F. cement. Good returns to surface through cement job. Displaced with 16 bbls. fresh water cement in place @ 09:45 a.m.
1/6/2002	Nippled up Class III, BOP, tested BOP OK, witnessed by Stephen P. Mulqueen DOGGR. Drilled 12-1/4" hole from 930' to 1464'.
1/7/2002	Drilled from 1464' to 2774'.
1/8/2002	Drilled from 2774' to 3578'.
1/9/2002	Drilled from 3518' to 4351'.
1/10/2002	Drilled from 4351' to 5108'.
1/11/2002	Drilled From 5108' to 5670'.
1/12/2002	Drilled from 5670' to 6638'
1/13/2002	Drilled from 6638' to 7099'.
1/14/2002	Drilled from 7099' to 7542'.
1/15/2002	Drilled from 7542' to 7905'.
1/16/2002	Drilled from 7905' to 8250'
1/17/2002	Drilled from 8250' to 8498'.
1/18/2002	Drilled from 8498' to 8632', bit failed. Reamed 12-1/4" hole from 5005' to 7668'.
1/19/2002	Drilled from 8632' to 8820'.
1/20/2002	Ran Platform Express log from 8803' to 923'. Ran DSL log from 8803' to 923'. Ran 9-5/8" casing to 2822'.
1/21/2002	Ran casing from 2822' to 8801'. Cemented 9 5/8", N-80 and P 110, 47# casing. Precede cement with 25 bbls. of Mud Clean and 25 bbls. of Ultra Flush II. Mixed and pumped lead: 948 sacks of 12.0 ppg. Tail: 488 sacks of 15.8 ppg. and 41 bbls. of latex. Displaced with 649 bbls. Final pressure 2000 psi., did not bump plug. C.I.P. @ 5:45 a.m. Total slurry pumped 3214 cu/ft. Good circulation through cement job, no cement returns to surface.
1/22/2002	Landed 9-5/8" casing on slips with 250 K on slips. Pressure tested between 9-5/8" and 13-3/8" casing, leaked off @ 450 psi. 9-5/8" shoe @ 8801', float @ 8713'. Ran 9-5/8" scraper tagged cement in 9-5/8" @ 8635'. Changed well over to 8.4 ppg. KCL treated with Green Cide 640 bbls.
1/23/2002	Laid down drill pipe and drill collars, removed B.O.P.
1/24/2002	Load out top drive, relased rig @ 16:00 hrs.

RESOURCES AGENCY OF CALIFORNIA
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HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 K
A.P.I. No. 037-24236

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

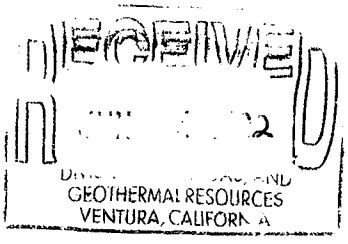
Signature: Mike Dozier

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
5/24/2002	Moved in and rigged up. Removed tree. Picked up 75' of 4-5/8" tubing conveyed perforating guns, safety spacer, fireing head, one joint of 2-7/8" tubing, bar pressure vent, one joint of 2-7/8" tubing, G-6 Mec packer, 2-7/8", 6' pup, one joint 2-7/8" tubing, R / A tag. Ran 253 joints of 2-7/8" 6.5#, N-80 tubing, bottom of guns @ 8060'.
5/25/2002	Correlated perforating guns on depth. Spaced out tubing. Bottom shot @ 8050' and top shot @ 7975', R / A tag @ 7816'. Packer was set @ 7858' with 12 K on packer. Installed and tested well head to 5000 psi. OK. Dropped bar, guns fired. Flowed well, 19 bbls. fluid returns. Final well head pressure 2200 psi. Rigged down.

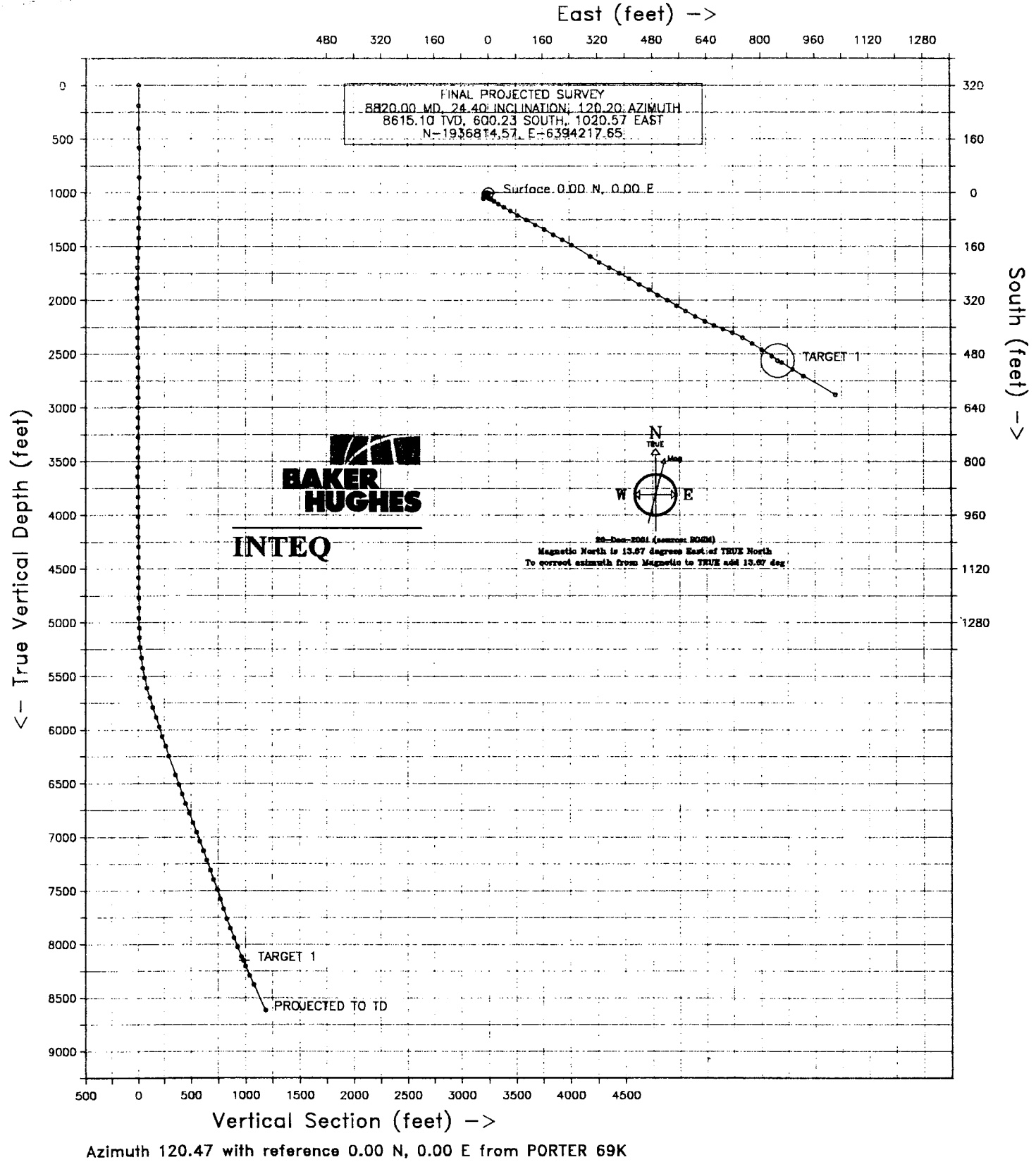
Perforating intervals Aliso canyon			
WELL NAME	TOP DEPTH	BOTTOM DEPTH	SHOT DENSITY / SIZE
Fernando Fee 38 A	7175'	7185'	12 spf – 1"
"	7195'	7212'	12 spf – 1"
"	7222'	7242'	12 spf – 1"
"	7247'	7345'	12 spf – 1"
"			
Fernando Fee 38 B	7035'	7100'	6 spf – 0.43"
Fernando Fee 38 C	7160'	7230'	6 spf – 0.43"
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"



THE GAS COMPANY

Structure : PORTER LEASE Well : PORTER 69K

Field : ALISO CANYON Location : CALIFORNIA



THE GAS COMPANY
PORTER LEASE

PORTER 69K
PORTER 69K
ALISO CANYON
CALIFORNIA

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

by
Baker Hughes INTEQ

Your ref : PORTER 69K MWD
Our ref : svy22732
License :

Date printed : 22-Jan-2002
Date created : 22-Jan-2002
Last revised : 22-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 53.370,w118 33 28.473
Slot Grid coordinates are N 1937420.340, E 6393200.410
Slot local coordinates are 17692.33 N 2789.34 W

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

Reference North is True North

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

SURVEY LISTING Page 1
Your ref : PORTER 69K MWD
Last revised : 22-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	6393200.41	1937420.34
190.00	1.00	190.00	189.99	1.63S	0.29W	0.53	0.58	6393200.11	1937418.71
400.00	0.75	179.00	399.97	4.81S	0.58W	0.14	1.94	6393199.80	1937415.53
581.00	0.75	170.00	580.95	7.16S	0.36W	0.07	3.33	6393200.01	1937413.18
860.00	0.00	0.00	859.94	8.96S	0.04W	0.27	4.51	6393200.32	1937411.38
1047.00	0.40	321.60	1046.94	8.45S	0.44W	0.21	3.90	6393199.92	1937411.89
1140.00	0.50	338.90	1139.94	7.82S	0.79W	0.18	3.28	6393199.58	1937412.53
1234.00	0.80	339.90	1233.93	6.82S	1.17W	0.32	2.45	6393199.21	1937413.53
1325.00	1.40	338.20	1324.91	5.19S	1.80W	0.66	1.08	6393198.59	1937415.16
1419.00	1.50	342.00	1418.88	2.95S	2.60W	0.15	-0.75	6393197.79	1937417.40
1513.00	1.70	285.80	1512.85	1.40S	4.32W	1.61	-3.02	6393196.08	1937418.96
1605.00	2.20	278.40	1604.80	0.77S	7.38W	0.61	-5.97	6393193.02	1937419.61
1698.00	0.70	281.60	1697.77	0.40S	9.71W	1.61	-8.17	6393190.70	1937419.99
1792.00	0.50	286.80	1791.76	0.16S	10.66W	0.22	-9.11	6393189.75	1937420.23
1884.00	0.50	299.50	1883.76	0.15N	11.40W	0.12	-9.90	6393189.02	1937420.55
1977.00	0.50	204.90	1976.76	0.02S	11.92W	0.79	-10.26	6393188.49	1937420.39
2069.00	0.90	189.50	2068.75	1.10S	12.21W	0.48	-9.97	6393188.20	1937419.31
2162.00	1.10	178.20	2161.74	2.71S	12.30W	0.30	-9.23	6393188.09	1937417.70
2256.00	1.30	172.20	2255.71	4.67S	12.13W	0.25	-8.09	6393188.26	1937415.74
2348.00	1.30	184.90	2347.69	6.74S	12.08W	0.31	-6.99	6393188.30	1937413.67
2440.00	1.50	187.00	2439.66	8.98S	12.31W	0.22	-6.06	6393188.05	1937411.43
2533.00	1.60	190.90	2532.63	11.46S	12.71W	0.16	-5.14	6393187.64	1937408.95
2626.00	1.60	198.60	2625.59	13.96S	13.36W	0.23	-4.44	6393186.97	1937406.45
2719.00	0.70	197.90	2718.57	15.73S	13.95W	0.97	-4.05	6393186.37	1937404.68
2812.00	0.40	198.60	2811.57	16.58S	14.23W	0.32	-3.86	6393186.09	1937403.84
2906.00	0.80	36.90	2905.57	16.37S	13.94W	1.26	-3.72	6393186.38	1937404.05
2999.00	1.70	25.30	2998.54	14.60S	12.96W	1.00	-3.77	6393187.37	1937405.81
3092.00	2.00	20.30	3091.50	11.83S	11.81W	0.37	-4.18	6393188.54	1937408.57
3185.00	1.20	28.40	3184.46	9.45S	10.78W	0.89	-4.50	6393189.57	1937410.94
3278.00	1.30	36.20	3277.44	7.75S	9.70W	0.21	-4.43	6393190.67	1937412.65
3372.00	1.40	28.40	3371.41	5.88S	8.52W	0.22	-4.37	6393191.86	1937414.51
3463.00	1.40	10.50	3462.38	3.81S	7.79W	0.48	-4.79	6393192.60	1937416.58
3554.00	1.40	9.80	3553.36	1.62S	7.40W	0.02	-5.56	6393193.00	1937418.76
3644.00	0.80	47.10	3643.34	0.11S	6.75W	1.00	-5.77	6393193.66	1937420.27
3736.00	0.80	60.80	3735.33	0.64N	5.72W	0.21	-5.26	6393194.69	1937421.02
3830.00	0.50	69.20	3829.33	1.11N	4.76W	0.33	-4.67	6393195.65	1937421.48
3924.00	0.60	185.60	3923.32	0.77N	4.43W	1.00	-4.21	6393195.99	1937421.13
4017.00	1.20	194.00	4016.31	0.66S	4.71W	0.66	-3.72	6393195.69	1937419.70
4109.00	1.20	189.50	4108.29	2.55S	5.10W	0.10	-3.11	6393195.29	1937417.82
4202.00	1.50	187.70	4201.27	4.71S	5.43W	0.33	-2.29	6393194.96	1937415.65
4296.00	1.20	187.70	4295.24	6.91S	5.72W	0.32	-1.43	6393194.65	1937413.46
4390.00	0.60	141.30	4389.23	8.27S	5.55W	0.96	-0.59	6393194.82	1937412.10
4485.00	0.50	119.10	4484.22	8.86S	4.88W	0.25	0.29	6393195.49	1937411.51
4581.00	0.70	136.70	4580.22	9.49S	4.11W	0.28	1.27	6393196.25	1937410.87
4673.00	0.60	155.70	4672.21	10.34S	3.52W	0.26	2.20	6393196.83	1937410.02
4768.00	0.70	143.40	4767.21	11.26S	2.97W	0.18	3.15	6393197.38	1937409.10
4862.00	1.00	136.60	4861.20	12.31S	2.07W	0.34	4.46	6393198.28	1937408.04
4958.00	0.90	127.20	4957.18	13.38S	0.89W	0.19	6.02	6393199.45	1937406.97
5053.00	1.40	127.20	5052.16	14.53S	0.63E	0.53	7.91	6393200.96	1937405.81
5138.00	2.90	122.70	5137.10	16.32S	3.26E	1.77	11.09	6393203.59	1937404.00

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from PORTER 69K and TVD from rotary table (2399.48 Ft above mean sea level).
Bottom hole distance is 1184.00 on azimuth 120.46 degrees from wellhead.
Vertical section is from wellhead on azimuth 120.47 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 69K
ALISO CANYON,CALIFORNIA

SURVEY LISTING Page 2
Your ref : PORTER 69K MWD
Last revised : 22-Jan-2002

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting	Northing
5234.00	5.00	123.00	5232.87	19.91S	8.82E	2.19	17.70	6393209.12	1937400.38
5329.00	7.50	122.70	5327.30	25.52S	17.51E	2.63	28.03	6393217.78	1937394.73
5426.00	10.00	122.30	5423.16	33.44S	29.96E	2.58	42.77	6393230.18	1937386.74
5519.00	12.00	120.90	5514.45	42.72S	45.08E	2.17	60.51	6393245.25	1937377.38
5615.00	14.50	119.10	5607.88	53.69S	64.15E	2.64	82.51	6393264.26	1937366.30
5710.00	16.90	120.20	5699.33	66.42S	86.48E	2.55	108.21	6393286.52	1937353.45
5806.00	18.30	117.70	5790.84	80.45S	111.88E	1.66	137.22	6393311.85	1937339.29
5901.00	18.40	118.10	5881.01	94.44S	138.31E	0.17	167.10	6393338.20	1937325.15
5997.00	18.50	118.80	5972.07	108.92S	165.02E	0.25	197.46	6393364.83	1937310.53
6093.00	19.30	119.80	6062.90	124.14S	192.14E	0.90	228.55	6393391.86	1937295.16
6189.00	19.20	120.20	6153.53	139.96S	219.55E	0.17	260.20	6393419.18	1937279.19
6283.00	19.50	120.90	6242.22	155.80S	246.37E	0.40	291.35	6393445.91	1937263.21
6471.00	19.70	123.40	6419.33	189.35S	299.75E	0.46	354.37	6393499.11	1937229.36
6566.00	19.90	119.80	6508.72	206.20S	327.15E	1.30	386.53	6393526.41	1937212.36
6661.00	19.90	119.10	6598.04	222.10S	355.30E	0.25	418.86	6393554.48	1937196.31
6757.00	20.40	119.10	6688.17	238.18S	384.20E	0.52	451.92	6393583.29	1937180.07
6852.00	20.50	120.40	6777.18	254.65S	413.02E	0.49	485.11	6393612.01	1937163.45
6948.00	20.70	121.20	6867.04	271.95S	442.03E	0.36	518.88	6393640.93	1937145.99
7043.00	21.00	120.40	6955.82	289.26S	471.07E	0.44	552.69	6393669.87	1937128.52
7129.00	19.50	119.80	7036.50	304.19S	496.82E	1.76	582.46	6393695.54	1937113.45
7224.00	19.30	119.80	7126.11	319.88S	524.20E	0.21	614.01	6393722.84	1937097.62
7320.00	19.30	120.20	7216.72	335.74S	551.68E	0.14	645.74	6393750.23	1937081.61
7415.00	19.20	121.20	7306.40	351.73S	578.61E	0.36	677.06	6393777.07	1937065.47
7511.00	19.30	118.80	7397.04	367.55S	606.02E	0.83	708.70	6393804.38	1937049.50
7607.00	19.50	116.30	7487.59	382.29S	634.28E	0.89	740.54	6393832.57	1937034.61
7703.00	18.00	113.20	7578.49	395.24S	662.28E	1.88	771.24	6393860.50	1937021.51
7798.00	17.40	110.30	7669.00	405.95S	689.10E	1.12	799.78	6393887.25	1937010.65
7894.00	19.20	112.50	7760.14	416.97S	717.15E	2.01	829.54	6393915.24	1936999.48
7989.00	20.80	119.80	7849.42	431.33S	746.22E	3.12	861.89	6393944.23	1936984.96
8085.00	20.70	122.30	7939.20	448.87S	775.35E	0.93	895.89	6393973.27	1936967.26
8179.00	21.10	122.70	8027.01	466.89S	803.64E	0.45	929.40	6394001.45	1936949.09
8273.00	21.80	123.70	8114.50	485.71S	832.40E	0.84	963.74	6394030.11	1936930.11
8368.00	22.70	123.40	8202.43	505.59S	862.38E	0.95	999.66	6394059.98	1936910.07
8463.00	23.70	122.00	8289.74	525.80S	893.87E	1.20	1037.05	6394091.36	1936889.69
8557.00	24.40	120.20	8375.59	545.58S	926.67E	1.08	1075.35	6394124.05	1936869.73
8820.00	24.40	120.20	8615.10	600.23S	1020.57E	0.00	1184.00	6394217.65	1936814.57

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from PORTER 69K and TVD from rotary table (2399.48 Ft above mean sea level).
Bottom hole distance is 1184.00 on azimuth 120.46 degrees from wellhead.
Vertical section is from wellhead on azimuth 120.47 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

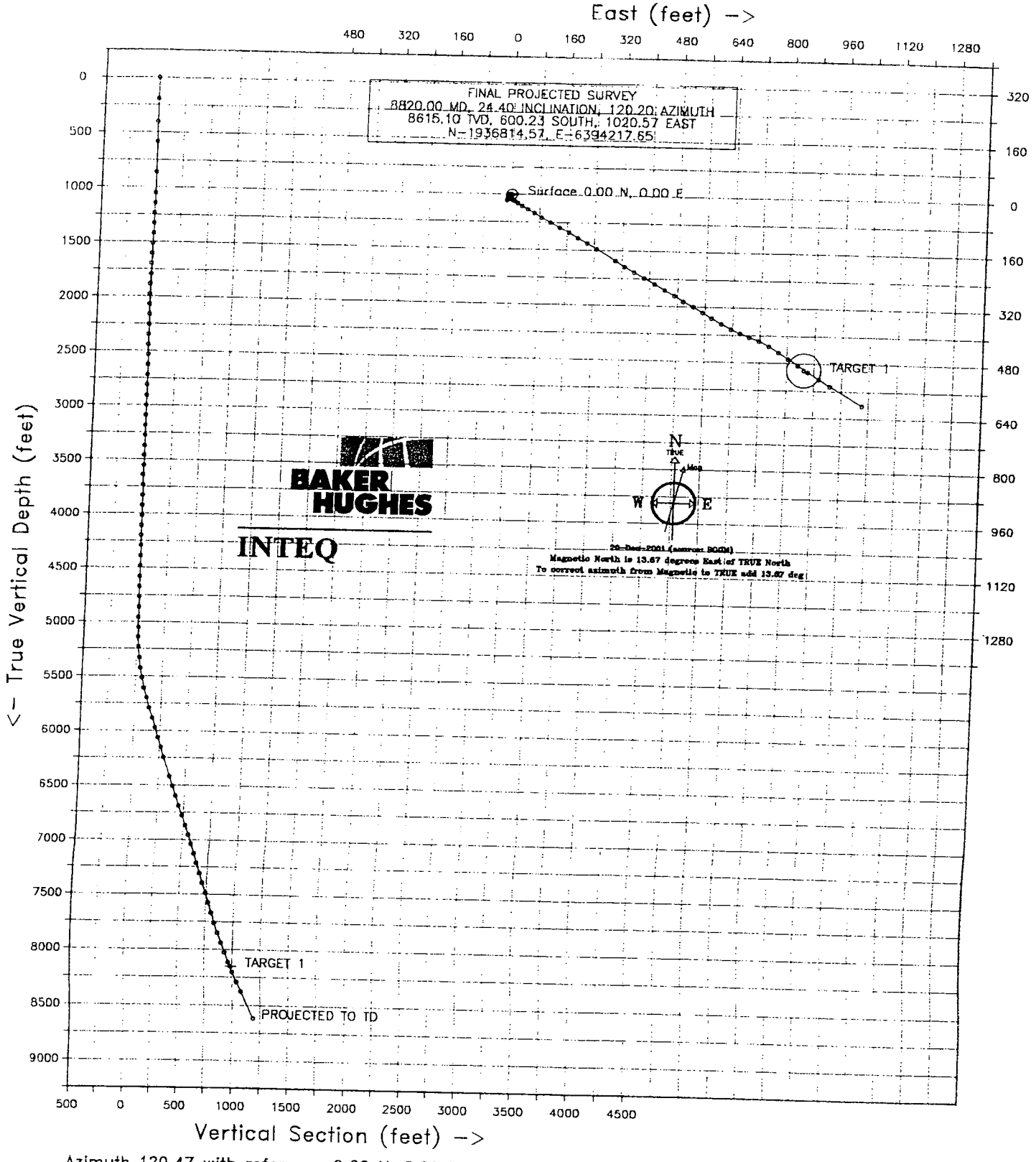
MD	TVD	Rectangular Coords.		Comment
8820.00	8615.10	600.23S	1020.57E	PROJECTED TO TD

Targets associated with this wellpath

Target name	Geographic Location	T.V.D.	Rectangular Coordinates		Revised
TARGET 1		8154.00	500.00S	850.00E	20-Dec-2001

THE GAS COMPANY

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



THE GAS COMPANY
PORTER LEASE

PORTER 69K
PORTER 69K
ALISO CANYON
CALIFORNIA

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

by
Baker Hughes INTEQ

Your ref : PORTER 69K MWD
Our ref : svy22732
License :

Date printed : 22-Jan-2002
Date created : 22-Jan-2002
Last revised : 22-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 53.370,w118 33 28.473
Slot Grid coordinates are N 1937420.340, E 6393200.410
Slot local coordinates are 17692.33 N 2789.34 W

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

Reference North is True North

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

SURVEY LISTING Page 1
Your ref : PORTER 69K MWD
Last revised : 22-Jan-2002

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting	GRID COORDS Northing
0.00	0.00	0.00	0.00	0.00N	0.00E	0.00	0.00	6393200.41	1937420.34
190.00	1.00	190.00	189.99	1.63S	0.29W	0.53	0.58	6393200.11	1937418.71
400.00	0.75	179.00	399.97	4.81S	0.58W	0.14	1.94	6393199.80	1937415.53
581.00	0.75	170.00	580.95	7.16S	0.36W	0.07	3.33	6393200.01	1937413.18
860.00	0.00	0.00	859.94	8.96S	0.04W	0.27	4.51	6393200.32	1937411.38
1047.00	0.40	321.60	1046.94	8.45S	0.44W	0.21	3.90	6393199.92	1937411.89
1140.00	0.50	338.90	1139.94	7.82S	0.79W	0.18	3.28	6393199.58	1937412.53
1234.00	0.80	339.90	1233.93	6.82S	1.17W	0.32	2.45	6393199.21	1937413.53
1325.00	1.40	338.20	1324.91	5.19S	1.80W	0.66	1.08	6393198.59	1937415.16
1419.00	1.50	342.00	1418.88	2.95S	2.60W	0.15	-0.75	6393197.79	1937417.40
1513.00	1.70	285.80	1512.85	1.40S	4.32W	1.61	-3.02	6393196.08	1937418.96
1605.00	2.20	278.40	1604.80	0.77S	7.38W	0.61	-5.97	6393193.02	1937419.61
1698.00	0.70	281.60	1697.77	0.40S	9.71W	1.61	-8.17	6393190.70	1937419.99
1792.00	0.50	286.80	1791.76	0.16S	10.66W	0.22	-9.11	6393189.75	1937420.23
1884.00	0.50	299.50	1883.76	0.15N	11.40W	0.12	-9.90	6393189.02	1937420.55
1977.00	0.50	204.90	1976.76	0.02S	11.92W	0.79	-10.26	6393188.49	1937420.39
2069.00	0.90	189.50	2068.75	1.10S	12.21W	0.48	-9.97	6393188.20	1937419.31
2162.00	1.10	178.20	2161.74	2.71S	12.30W	0.30	-9.23	6393188.09	1937417.70
2256.00	1.30	172.20	2255.71	4.67S	12.13W	0.25	-8.09	6393188.26	1937415.74
2348.00	1.30	184.90	2347.69	6.74S	12.08W	0.31	-6.99	6393188.30	1937413.67
2440.00	1.50	187.00	2439.66	8.98S	12.31W	0.22	-6.06	6393188.05	1937411.43
2533.00	1.60	190.90	2532.63	11.46S	12.71W	0.16	-5.14	6393187.64	1937408.95
2626.00	1.60	198.60	2625.59	13.96S	13.36W	0.23	-4.44	6393186.97	1937406.45
2719.00	0.70	197.90	2718.57	15.73S	13.95W	0.97	-4.05	6393186.37	1937404.68
2812.00	0.40	198.60	2811.57	16.58S	14.23W	0.32	-3.86	6393186.09	1937403.84
2906.00	0.80	36.90	2905.57	16.37S	13.94W	1.26	-3.72	6393186.38	1937404.05
2999.00	1.70	25.30	2998.54	14.60S	12.96W	1.00	-3.77	6393187.37	1937405.81
3092.00	2.00	20.30	3091.50	11.83S	11.81W	0.37	-4.18	6393188.54	1937408.57
3185.00	1.20	28.40	3184.46	9.45S	10.78W	0.89	-4.50	6393189.57	1937410.94
3278.00	1.30	36.20	3277.44	7.75S	9.70W	0.21	-4.43	6393190.67	1937412.65
3372.00	1.40	28.40	3371.41	5.88S	8.52W	0.22	-4.37	6393191.86	1937414.51
3463.00	1.40	10.50	3462.38	3.81S	7.79W	0.48	-4.79	6393192.60	1937416.58
3554.00	1.40	9.80	3553.36	1.62S	7.40W	0.02	-5.56	6393193.00	1937418.76
3644.00	0.80	47.10	3643.34	0.11S	6.75W	1.00	-5.77	6393193.66	1937420.27
3736.00	0.80	60.80	3735.33	0.64N	5.72W	0.21	-5.26	6393194.69	1937421.02
3830.00	0.50	69.20	3829.33	1.11N	4.76W	0.33	-4.67	6393195.65	1937421.48
3924.00	0.60	185.60	3923.32	0.77N	4.43W	1.00	-4.21	6393195.99	1937421.13
4017.00	1.20	194.00	4016.31	0.66S	4.71W	0.66	-3.72	6393195.69	1937419.70
4109.00	1.20	189.50	4108.29	2.55S	5.10W	0.10	-3.11	6393195.29	1937417.82
4202.00	1.50	187.70	4201.27	4.71S	5.43W	0.33	-2.29	6393194.96	1937415.65
4296.00	1.20	187.70	4295.24	6.91S	5.72W	0.32	-1.43	6393194.65	1937413.46
4390.00	0.60	141.30	4389.23	8.27S	5.55W	0.96	-0.59	6393194.82	1937412.10
4485.00	0.50	119.10	4484.22	8.86S	4.88W	0.25	0.29	6393195.49	1937411.51
4581.00	0.70	136.70	4580.22	9.49S	4.11W	0.28	1.27	6393196.25	1937410.87
4673.00	0.60	155.70	4672.21	10.34S	3.52W	0.26	2.20	6393196.83	1937410.02
4768.00	0.70	143.40	4767.21	11.26S	2.97W	0.18	3.15	6393197.38	1937409.10
4862.00	1.00	136.60	4861.20	12.31S	2.07W	0.34	4.46	6393198.28	1937408.04
4958.00	0.90	127.20	4957.18	13.38S	0.89W	0.19	6.02	6393199.45	1937406.97
5053.00	1.40	127.20	5052.16	14.53S	0.63E	0.53	7.91	6393200.96	1937405.81
5138.00	2.90	122.70	5137.10	16.32S	3.26E	1.77	11.09	6393203.59	1937404.00

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from PORTER 69K and TVD from rotary table (2399.48 Ft above mean sea level).
Bottom hole distance is 1184.00 on azimuth 120.46 degrees from wellhead.
Vertical section is from wellhead on azimuth 120.47 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 69K
ALISO CANYON,CALIFORNIA

SURVEY LISTING Page 2
Your ref : PORTER 69K MWD
Last revised : 22-Jan-2002

Measured Depth	Inclin Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect	GRID COORDS Easting	Northing
5234.00	5.00	123.00	5232.87	19.91S	8.82E	2.19	17.70	6393209.12	1937400.38
5329.00	7.50	122.70	5327.30	25.52S	17.51E	2.63	28.03	6393217.78	1937394.73
5426.00	10.00	122.30	5423.16	33.44S	29.96E	2.58	42.77	6393230.18	1937386.74
5519.00	12.00	120.90	5514.45	42.72S	45.08E	2.17	60.51	6393245.25	1937377.38
5615.00	14.50	119.10	5607.88	53.69S	64.15E	2.64	82.51	6393264.26	1937366.30
5710.00	16.90	120.20	5699.33	66.42S	86.48E	2.55	108.21	6393286.52	1937353.45
5806.00	18.30	117.70	5790.84	80.45S	111.88E	1.66	137.22	6393311.85	1937339.29
5901.00	18.40	118.10	5881.01	94.44S	138.31E	0.17	167.10	6393338.20	1937325.15
5997.00	18.50	118.80	5972.07	108.92S	165.02E	0.25	197.46	6393364.83	1937310.53
6093.00	19.30	119.80	6062.90	124.14S	192.14E	0.90	228.55	6393391.86	1937295.16
6189.00	19.20	120.20	6153.53	139.96S	219.55E	0.17	260.20	6393419.18	1937279.19
6283.00	19.50	120.90	6242.22	155.80S	246.37E	0.40	291.35	6393445.91	1937263.21
6471.00	19.70	123.40	6419.33	189.35S	299.75E	0.46	354.37	6393499.11	1937229.36
6566.00	19.90	119.80	6508.72	206.20S	327.15E	1.30	386.53	6393526.41	1937212.36
6661.00	19.90	119.10	6598.04	222.10S	355.30E	0.25	418.86	6393554.48	1937196.31
6757.00	20.40	119.10	6688.17	238.18S	384.20E	0.52	451.92	6393583.29	1937180.07
6852.00	20.50	120.40	6777.18	254.65S	413.02E	0.49	485.11	6393612.01	1937163.45
6948.00	20.70	121.20	6867.04	271.95S	442.03E	0.36	518.88	6393640.93	1937145.99
7043.00	21.00	120.40	6955.82	289.26S	471.07E	0.44	552.69	6393669.87	1937128.52
7129.00	19.50	119.80	7036.50	304.19S	496.82E	1.76	582.46	6393695.54	1937113.45
7224.00	19.30	119.80	7126.11	319.88S	524.20E	0.21	614.01	6393722.84	1937097.62
7320.00	19.30	120.20	7216.72	335.74S	551.68E	0.14	645.74	6393750.23	1937081.61
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7607.00	19.50	116.30	7487.59	382.29S	634.28E	0.89	740.54	6393832.57	1937034.61
7703.00	18.00	113.20	7578.49	395.24S	662.28E	1.88	771.24	6393860.50	1937021.51
7798.00	17.40	110.30	7669.00	405.95S	689.10E	1.12	799.78	6393887.25	1937010.65
7894.00	19.20	112.50	7760.14	416.97S	717.15E	2.01	829.54	6393915.24	1936999.48
7989.00	20.80	119.80	7849.42	431.33S	746.22E	3.12	861.89	6393944.23	1936984.96
8085.00	20.70	122.30	7939.20	448.87S	775.35E	0.93	895.89	6393973.27	1936967.26
8179.00	21.10	122.70	8027.01	466.89S	803.64E	0.45	929.40	6394001.45	1936949.09
8273.00	21.80	123.70	8114.50	485.71S	832.40E	0.84	963.74	6394030.11	1936930.11
8368.00	22.70	123.40	8202.43	505.59S	862.38E	0.95	999.66	6394059.98	1936910.07
8463.00	23.70	122.00	8289.74	525.80S	893.87E	1.20	1037.05	6394091.36	1936889.69
8557.00	24.40	120.20	8375.59	545.58S	926.67E	1.08	1075.35	6394124.05	1936869.73
8820.00	24.40	120.20	8615.10	600.23S	1020.57E	0.00	1184.00	6394217.65	1936814.57

All data in feet unless otherwise stated. Calculation uses minimum curvature method.
Coordinates from PORTER 69K and TVD from rotary table (2399.48 Ft above mean sea level).
Bottom hole distance is 1184.00 on azimuth 120.46 degrees from wellhead.
Vertical section is from wellhead on azimuth 120.47 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
8820.00	8615.10	600.23S	1020.57E	PROJECTED TO TD

Targets associated with this wellpath

Target name	Geographic Location	T.V.D.	Rectangular Coordinates		Revised
TARGET 1		8154.00	500.00S	850.00E	20-Dec-2001

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

No. **T202-029**

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" 69K,** API No. **037-24236,** Sec. **28,** T. **3N,** R.**16W,** S.B.B.&M. **Aliso Canyon** Field, in **Los Angeles** County, were witnessed on **01-06-2002. Steve Mulqueen,** representative of the supervisor, was present from **1000** to **1200**. There were also present **Jim Dayton.**

Present condition of well: **13 3/8" cem 923'. TD 923' (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 _____
Patrick J. Kinnear
Deputy Supervisor

API No. 037-24236 DIVI[illegible]I OF OIL, GAS, AND GEOTHERMAL R[illegible]JRCES T202 ~~S~~ 029

1/8/02

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SOUTHERN CALIFORNIA GAS CO. Well "PORTER" 69 K Sec. 28 T. 3N R. 16W
Field ALISO CANYON County LOS ANGELES Spud Date 1-3-02

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	1-6-02	S. MULQUEEN	(1000 to 1200)	JIM DAYTON	ENGINEER
2nd			(to)		

Contractor NABORS Rig # 37 Contractor's Rep. & Title BILL THOMPSON
Casing record of well: 13 3/8" cem 923'. TD 923' (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 923' , ___ " to ___ ' & ___ " to ___ '

REQUIRED BOPE CLASS: III B 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
13 3/8	54.5	K-55	923'		LEAD 65/35 POZ 185 SX + TAIL	900'	SURF.
					"G" 264 SX FLOAT @ 900'		
					CIP 1-5-02 0950		

BOP STACK

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							1-6	1500
RD	5	"	LWS	"	"							1-6	2500
RD	CSO	"	LWS	"	"							1-6	2500
							(w/ TEST PUMP & CHART)						

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3000 psi
Total Rated Pump Output ___ gpm Fluid Level OK
Distance From Well Bore 115 ft.

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

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

	EMERG. BACKUP SYSTEM			Press.	Wkg. Fluid
✓	N_2 Cylinders	1	L= "	2300	gal.
	Other:	2	L= "	2400	gal.
		3	L= "	2400	gal.
		4	L= "	2400	gal.
		5	L= "	2400	gal.
		(6)	L= "	2400	gal.
			TOTAL:		gal.

TOTAL:

AUXILIARY EQUIPMENT

w/ TOP DRIVE

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

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	✓	✓	C
Mud Totalizer		✓	C
Calibrated Trip Tank			
Other:			

Hole Fluid Type	Weight	Storage Pits (Type & Size)
CLAY GEL	9.6	2000 BBL

REMARKS AND DEFICIENCIES:

OGD9 (1/96/GSR1/3M)

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

No. P201-268

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
December 27, 2001

Your proposal to drill well "Porter" 69K,
A.P.I. No. 037-24236 Sec. 28, T. 3N, R. 16W, SB B.&M.,
Aliso Canyon field, ---------- area, Sesnon-Frew pool,
Los Angeles County, dated 12/21/01 received 12/21/01 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 _____ PSK
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
December 27, 2001
P201-268

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

P201-268

NOTICE OF INTENTION TO DRILL NEW WELL

C.E.Q.A. INFORMATION			
EXEMPT ☐ CLASS ____	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	12-29-01		1,000,000	✓	✓

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 K, well type Gas Storage, API No. 037-24236 (Assigned by Division)

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

Legal description of mineral-right lease, consisting of _____ acres (attach map or plat to scale), is as follows:
(Aliso Canyon Gas Storage Field)

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

903' South and 3511' 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:
500 feet South (Direction) and 850 feet East (Direction) Estimated true vertical depth 8154. Elevation of ground above sea level 2371 feet. All depth measurements taken from top of KB (Derrick Floor, Rotary Table, or Kelly Bushing) that is 28 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	8014	8014	8014

(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 8300 (Feet)

RECEIVED DEC 21 2001 DIV. OF OIL, GAS & GEOTHERMAL RESOURCES VENTURA, CALIFORNIA

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	Date: 12/17/01

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.