State of California • Natural Resources Agency
Department of Conservation
Division of Oil, Gas, and Geothermal Resources
801 K Street • MS 18-05
Sacramento, CA 95814
(916) 445-9686 • FAX (916) 319-9533

Edmund G. Brown Jr., *Governor*
Kenneth A. Harris Jr., *State Oil and Gas Supervisor*

January 3, 2017

SENT VIA EMAIL

Mr. Rodger Schwecke
Vice President
Transmission and Storage
Southern California Gas Company
RSchwecke@semprautilities.com

FINDING THAT WELL PORTER 69B (API NO. 03724127) PASSED TESTS REQUIRED TO ENSURE MECHANICAL INTEGRITY

Dear Mr. Schwecke:

I am writing in regard to the safety review test results for one of the 114 wells at the Aliso Canyon gas storage facility (Facility). Each of these wells are subject to the comprehensive safety review that State Oil and Gas Supervisor Order 1109 and SB 380[1] require to be completed before the Division of Oil, Gas, and Geothermal Resources (Division) may authorize resumption of injection operations at the Facility. Order 1109 describes two batteries of well tests. To complete the review, each well must (1) pass both batteries of tests, (2) pass the first battery of tests and be taken out of service and isolated from the underground gas storage reservoir, or (3) be properly plugged and abandoned.

The first battery of tests is an initial casing assessment that uses temperature and noise logs to ensure that there is no migration of fluids near the wellbore. The second battery of tests consists of a casing inspection using electromagnetic and ultra-sonic technologies, a multi-arm caliper inspection, a cement bond log, and a positive pressure test to ensure well integrity and the prevention of fluid and gas migration. The Division posts the current status and testing results for each of the 114 wells on its website at http://www.conservation.ca.gov/dog/AlisoCanyon/Pages/Well-Detail.aspx.

After receiving and evaluating all test results for the well, I find for purposes of Order 1109 and SB 380, that well Porter 69B (API No. 03724127) passed the first and second batteries of the comprehensive safety review testing regime and, as of June 9, 2016, the mechanical integrity of the well has been ensured. Accordingly, this well may be used for injection if and when I authorize injection operations to resume at the Facility, and if the well is in compliance with all other applicable requirements. I make this finding as of the date of this letter, and underscore that ongoing monitoring and testing are necessary to ensure the continued integrity of the well.

Sincerely,

Kenneth A. Harris Jr.,
State Oil and Gas Supervisor

[1] Senate Bill 380 (Pavley, Chapter 14, Statutes of 2016) codified in part at Public Resources Code section 3217.

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

Rec'd 12-12-16 DOGGR Ventura.

Workover SIMP
Start Date: 3/18/2016 - End Date:

WELL SUMMARY REPORT

API No. 03724127

Operator: Southern California Gas Company	Well: Porter 69 B	
Field (and Area, if applicable): Aliso Canyon	County: Los Angeles	Sec. 28, T3N, R16W, SBB&M
Location of well (Give surface location from property or section corner, street center line) N/S Dist (ft): , E/W Dist (ft):		Elevation of ground above sea level: 2,366
Lat./Long. in decimal degrees, to six decimal places, NAD 83 format: Lat: 34.31497839 Long: 118.55682792		

Was the well directionally drilled? ☐ Yes ☐ No If yes, show coordinates (from surface location) and true vertical depth at total depth.
Total Depth All (TVD) (ftKB): Main - 7,707

Commenced drilling (date): 1/28/1992	Total depth: (1st hole)	(2nd)	(3rd)	Depth measurements taken from top of: ☐ Derrick Floor ☐ Rotary Table ☒ Kelly Bushing
Completed drilling (date): 3/16/1992	** See attached report			Which is 23 feet above ground.
Commenced production/injection (date): ** See attached report	Present effective depth			GEOLOGICAL MARKERS: ** See attached report
Production mode: ☐ Flowing ☐ Pumping ☐ Gas lift	Junk? Describe:			DEPTH
Name of production/injection zone(s): ** See attached report				Formation Name / Geologic Age / 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						
Production After 30 days						

CASING AND CEMENTING RECORD (Present Hole)

Size of Casing (Inches 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
** See attached report for CASING RECORD**									

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

** See attached report

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

** See attached report

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 of person filing report: Tom McMahon	Telephone Number: 714-398-5020	Signature: Thomas McMahon	Date: 11.14.16
Address: PO Box 2300, SC9365		City/State: Chatsworth, CA	Zip Code: 91313-2300
Individual to contact for technical questions: Tom McMahon	Telephone Number: 714-398-5020	E-Mail Address:	

OG100 (3/09)

SUBMIT IN DUPLICATE

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

Rec'd 12-12-16 DOGGR Ventura.

Workover SIMP
Start Date: 3/18/2016 - End Date:

WELL SUMMARY REPORT

API No. 03724127

Operator	Well	
Southern California Gas Company	**Porter 69 B**	
Field (and Area, if applicable) **Aliso Canyon**	County **Los Angeles**	Sec. 28, T3N, R16W, SBB&M

WELLBORES

Total Hole & Present Effective Depth

Wellbore Name: Main | PBTD (All) (ftKB):

Size (in)	Section Des	Act Btm (ftKB)	Act Btm (TVD) (ftKB)
17 1/2		1,048	1,048
12 1/4		7,344	7,251
13		7,805	7,701
12 1/4		7,811	7,707

PRODUCTION METHOD

Method

PRODUCTION/INJECTION DETAILS

Start Date	Activity Type	Zone

ZONES

Zone Name	Wellbore	Top (ftKB)	Btm (ftKB)

FORMATIONS

Formation Name	Geologic Age	Final Top MD (ftKB)	Final Btm MD (ftKB)

CASING RECORD (Present Hole)

Csg Des	Run Date	OD (in)	ID (in)	Wt/Len (lb/ft)	Grade	Top Thread	Top (ftKB)	Set Depth (ftKB)	Set Depth (TVD) (ftKB)
Surface Casing	2/1/1992	13 3/8	12.615	54.50	K-55		23	1,046	1,046
Production Casing	2/26/1992	9 5/8					24	7,345	7,251
Liner	3/12/1992	5 1/2	4.892	17.00	J-55		7,272	7,811	

PERFORATIONS

Nom Hole Dia (in)	Btm - Top (ftKB)	Top (ftKB)	Btm (ftKB)	Calculated Shot Total	Zone	Wellbore	Type

LOGS

Date	Run #	Type	Top (ftKB)	Btm (ftKB)	Wellbore

SURVEYS

Wellbore Name	Description	Date	Definitive?	Job

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

Rec'd 12-12-16 DOGGR Ventura.

WELL SUMMARY REPORT

API No. 03724127

Operator	Well	
Southern California Gas Company	**Porter 69 B**	
Field (and Area, if applicable) **Aliso Canyon**	County **Los Angeles**	Sec. 28, T3N, R16W, SBB&M

WELLBORES

Total Hole & Present Effective Depth

Wellbore Name	PBTD (All) (ftKB)
Main	

Size (in)	Section Des	Act Btm (ftKB)	Act Btm (TVD) (ftKB)
17 1/2		1,048	1,048
12 1/4		7,344	7,251
13		7,805	7,701
12 1/4		7,811	7,707

CASING RECORD (Present Hole)

Surface Casing, Run Date: 2/1/1992

Wellbore	OD (in)	ID (in)	Wt/Len (lb/ft)	String Grade	Top Connection	Top Depth (ftKB)	Set Depth (ftKB)	Set Depth (TV...
Main	13 3/8	12.615	54.50	K-55		23	1,046	1,046

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)
Surface Casing	13 3/8	12.615	54.50	K-55	1,021.50
Surface Casing Shoe	13 3/8				1.00

Production Casing, Run Date: 2/26/1992

Wellbore	OD (in)	ID (in)	Wt/Len (lb/ft)	String Grade	Top Connection	Top Depth (ftKB)	Set Depth (ftKB)	Set Depth (TV...
Main	9 5/8					24	7,345	7,251

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)
Casing	9 5/8				7,275.00
CTC Packer	9 5/8				34.00
Pup Joint	9 5/8	8.681	47.00	N-80	10.00
Casing Shoe	9 5/8				2.00

Liner, Run Date: 3/12/1992

Wellbore	OD (in)	ID (in)	Wt/Len (lb/ft)	String Grade	Top Connection	Top Depth (ftKB)	Set Depth (ftKB)	Set Depth (TV...
Main	5 1/2	4.892	17.00	J-55		7,272	7,811	

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)
Liner	5 1/2	4.892	17.00	J-55	84.00
WWS	5 1/2	4.892	17.00	J-55	454.00
Spade Bull Plug	5 1/2				1.00

CEMENT RECORDS - Casing

Wellbore	Start Date	Stg #	Des	Top (ftKB)	Btm (ftKB)
Main	2/1/1992		Surface Cement	24	1,046
Main	2/27/1992		Production Cement	24	7,344

TUBING STRING (Present Hole)

Tubing, Run Date: 4/18/2016

Wellbore	Set Depth (ftKB)	String	Cut Pull Date	Depth Cut Pull (ftKB)
Main	7,211	Production Casing, 7,345ftKB		

Tubing Components

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)
Depth Correction					-1.75
Tubing Hanger	10 5/8	2.441			0.50
Landing Nipple	2 7/8	2.441	6.50	L-80	0.65
Tubing	3 11/16	2.441	6.50	L-80	30.86
Cross Over	3 3/4	2.441		L-80	1.10
Tubing	4 1/2	2.992	9.30	L-80	7,066.74
Cross Over	4 1/2	2.441		L-80	1.12
Tubing	3 11/16	2.441	6.50	L-80	30.20
Sliding Sleeve	3 11/16	2.312			3.08
Tubing	3 11/16	2.441	6.50	L-80	30.17
Profile Nipple	3 11/16	2.250			1.05
Tubing Pup Joint	3 11/16	2.441	6.50	L80	10.08

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

Rec'd 12-12-16 DOGGR Ventura.

WELL SUMMARY REPORT

API No. 03724127

Operator	Well	
Southern California Gas Company	**Porter 69 B**	
Field (and Area, if applicable) **Aliso Canyon**	County **Los Angeles**	Sec. 28, T3N, R16W, SBB&M

Tubing Components

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)
Cross Over	3 3/4	2.441		L-80	1.07
Cross Over	4 1/2	2.992		L-80	1.72
Packer	8 1/4	3.937			8.20
Mule Shoe Guide	5 1/2	3.938			0.52

LOGS

Wellbore	Date	Run #	Type	Top (ftKB)	Btm (ftKB)
Main	2/25/1992		DIL/GR log	7,344	7,813
Main	2/25/1992		DIL/GR/Caliper log	1,046	7,325
Main	3/5/1992		Densilog Neutron Gamma Ray	7,344	7,811
Main	3/12/1992		4 Arm Caliper log		

DOGGR Dist2@DOC

From: Brisco, Daisy (AllSource) <DBrisco@semprautilities.com>
Sent: Friday, September 23, 2016 11:15 AM
To: DOGGR Dist2@DOC
Cc: Ortiz, David@DOC; McMahon, Thomas D.; Iguaz, Jose; Ghann-Amoah, Mark
Subject: Well Histories - Porter 69A and Porter 69B
Attachments: 03722051_WellHistory_08-22-2016.pdf; 03724127_WellHistory_07-25-2016.pdf

To whom it may concern:

Attached please find the (revised) well histories for Porter 69A and Porter 69B.

Both histories have been previously submitted but due to an internal discrepancy in WellView (which has been corrected as of today), both wells had been assigned the same API number so the filenames under which the histories were submitted were likewise erroneous. Please replace your files with the enclosed copies.

Regards,

Daisy E. Brisco
Tech Advisor 3
Southern California Gas Company
12801 Tampa Ave SC9382
Northridge, CA 91326
949-425-4763

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

Rec'd 10-13-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 B
A.P.I. No. ~~03722051~~ 03724127
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 D 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)
3/18/2016	Move rig and equipment from Porter 44 to Porter 69 B. Rig up hoist. Spot mud pump and tanks onto containment trays. Rig up tanks and manifolds. Fill tanks with HEC polymer.
3/19/2016	Field pressure = 1203 psi. Rig up gas separator. Pumped 50 bbls 8.5 ppg HEC polymer and displace with 48 bbls of 8.5 ppg polymer. Kill well using 469 bbls of 8.5 ppg HEC polymer pumping at 5 bpm, fluid to surface at 540 barrels and circulated out gas cut polymer. Rig down gas separator. Monitor well for 30 minutes. Well dead. Install 2.5" BPV in tubing hanger and N/D master valve. N/U Weatherford 11-1/16" 5K Class III BOP. Install work floor. Pressure test pipe rams 300 psi low and 5000 psi high, leaked off on high. Pressure test annular preventer 300 psi low and 3500 psi high for 20 minutes hold on each test (good). Secure well til Monday AM.
3/21/2016	Check well pressure: SITP = 30 psi and SICP = 0 psi. Field pressure = 1023 psi. Pumped 80 bbls of 8.5 ppg HEC polymer down annulus. Tubing and casing @ 0 psi. Continue pressure test BOPE as per Gas Company Standard 224.05: Pressure test pipe and blind rams, all lines and connections at 300 psi low / 5000 psi high for 20 min. each test. Annular preventer at 300 psi low / 3500 psi high for 20 min each test. Good test. Bleed off pressure and R/D Weatherford BOP equipment was inspected by DOGGR Cliff Knight. Filled well with 2 bbls 8.5 ppg HEC polymer. Back out hanger lock screws. Release J latch from BWD packer @ 7200'. Pulled out of the well with tubing, standing back (97) joints of 2-7/8" N80 EUE 8rd tubing. Secure well until AM.
3/22/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1027 psi. Fill annulus with 10 bbls of 8.5 ppg polymer. Continue pulling out of the well with (130) joints of 2-7/8" N80 EUE 8rdtubing, 2-7/8" MMG mandrel, (1) joint of 2-7/8" N80 tubing, (1) Otis 2.313" XD SSD, (1) joint of 2-7/8" N80 tubing, (1) Otis XN profile nipple, (1) joint of 2-7/8" N80 tubing, (1) Otis J latch seal assembly. P/U and run in the well with 9-5/8" 47# Weatherford casing scraper, 4-3/4" bumber sub on (229) jts 2-7/8" N80 tubing. Tagged top of packer @ 7205' (tubing measured depth), Reverse circulate with 135 bbls of 8.5 ppg polymer. Pull out of the well with (14) joints of 2-7/8" N80 tubing. Secure well until AM.
3/23/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1043 psi. Fill annulus with 10 bbls of 8.5 ppg polymer. Continue pulling out of the well with (215) joints of 2-7/8" N80 EUE 8rd tubing, 4-3/4" lubricated bumper sub and 9 5/8" 47# casing scraper. P/U and M/U milling assembly consisting of 8-1/8" OD X 6' mill shoe, 8-1/8" Hydril X 4-1/2" IF drive sub, 6-1/4" OD 4-1/2" IF pin X 4-1/2" reg box cross-over, (2) 6-15/16" OD boot baskets, 4-1/2" reg box X 3-1/2" IF box cross-over, 4-3/4" cushion sub, 4-34" lubricated bumper sub, 4-3/4" jars, (6) 4-3/4" drill collars, 3-1/2" IF pin X 2-7/8" EUE 8rd box cross-over and run in the well on (222) joints of 2-7/8" 6.5# EUE 8rd N80 tubing. R/U power swivel. Circulated with 130 bbls 8.5 ppg HEC polymer. Secure well until AM.
3/24/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1032 psi. Fill well with 40 bbls of 8.5 ppg HEC polymer. Mill on Otis BWD packer @ 7205' (made 30" surface measurement). Reverse circulate from 3 bpm to 1 bpm, losing 20 bbls of 8.5 ppg HEC polymer per hour. Hung back power 2.5 power swivel. Pull out of the well with (110) joints of 2-7/8" N-80 8rd EUE tubing. Secure well until AM.
3/25/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1033 psi. Fill well with 37 bbls of 8.5 ppg HEC polymer. Continue to pull out of the well with (112) joints of 2-7/8" N-80 8rd EUE tubing and milling assembly. Laid down mill shoe and drive sub. M/U milling assembly consisting of 8-1/8" OD X 6' mill shoe, 8-1/8" Hydril X 4-1/2" IF drive sub, 6-1/4" OD 4-1/2" IF pin X 4-1/2" reg box cross-over, (2) 6-15/16" OD boot baskets, 4-1/2" reg box X 3-1/2" IF box cross-over, 4-3/4" cushion sub, 4-34" lubricated bumper sub, 4-3/4" jars, (6) 4-3/4" drill collars, 3-1/2" IF pin X 2-7/8" EUE 8rd box cross-over and run in the well on (222) joints of 2-7/8" 6.5# EUE 8rd N80 tubing. R/U power swivel. Circulate @ 3 bpm, losing 20 bbls of 8.5 ppg HEC polymer per hour. Mill on Otis BWD packer (made 1' surface measurement). Hung back power 2.5 power swivel. Secure well until AM.
3/26/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1030 psi. Fill well with 22 bbls of 8.5 ppg HEC polymer. Continue milling on Otis BWD packer (according to surface measurement should be @ the bottom packer slips), pumping from 3 bpm to 1 bpm. Hung back power swivel. Laid down (1) joint of 2-7/8" N-80 8rd EUE tubing and 10' pup joint. Secure well until Monday.

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

Rec'd 10-13-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 B
A.P.I. No. ~~03722051~~ 03724127
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)
3/28/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1023 psi. Fill well with 32 bbls of 8.5 ppg HEC polymer. P/U (1) 2-7/8" N-80 EUE joint and (1) 2-7/8" X 10' pup joint, R/U 2.5 power swivel and circulate. Mill on 9-5/8" Otis BWD packer (clean out 2' of debris from previously made hole and 6" additional) switching between circulating and reverse circulating @ 2.5 bpm to 0.5 bpm with 100 to 0 psi pump pressure. Hung back 2.5 power swivel. Laid down (1) joint of 2-7/8" N-80 EUE tubing and (1) 2-7/8" x 10' pup joint. Pull out of the well with (172) joints of 2-7/8" N-80 EUE 8rd tubing, filling well every 10 stands with 8.5 ppg HEC Polymer. Secure well til the AM.
3/29/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1021 psi. Fill well with 10 bbls of 8.5 ppg HEC polymer. Continue pulling out of the well with (50) joints of 2-7/8" N80 EUE 8rd tubing, and milling assembly. Laid down mill shoe and drive sub. M/U milling assembly consisting of 8-1/8" OD X 6' mill shoe, 8-1/8" Hydril X 4-1/2" IF drive sub, 6-1/4" OD 4-1/2" IF pin X 4-1/2" reg box cross-over, (2) 6-15/16" OD boot baskets, 4-1/2" reg box X 3-1/2" IF box cross-over, 4-3/4" cushion sub, 4-34" lubricated bumper sub, 4-3/4" jars, (6) 4-3/4" drill collars, 3-1/2" IF pin X 2-7/8" EUE 8rd box cross-over and run in the well on (220) joints of 2-7/8" 6.5# EUE 8rd N80 tubing. R/U power swivel. P/U (1) 2-7/8" N-80 EUE joint and (1) 2-7/8" X 10' pup joint, Mill on Otis BWD packer. Pull high. Secure well til the AM.
3/30/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1015 psi. Fill the well with 10 bbls of 8.5 ppg polymer. Mill on BWD packer. Packer dropped down to 7209', work packer down to 7246'. Rig down / load out power swivel. Pull out of the well with (222) joints of 2-7/8" N80 EUE 8rd tubing, (6) 4-3/4" drill collars, 4-3/4" jars, 4-3/4" lubricated bumber sub, cushion sub, crossover, (2) 6-15/16 boot baskets, 8-1/8" drive sub and 8-1/8" mill shoe. P/U and run in the well with ITCO spear loaded with 4.96" grapple, 2-7/8" reg pin X 3-1/2" IF pin cross over, stop sub, 4-3/4" bumber sub, 4-3/4" jars, (6) 4-3/4" drill collars, cross over on (50) joints of 2-7/8" N80 EUE 8rd tubing, Secure well til the AM.
3/31/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1028 psi. Continue to run in the well with ITCO spear loaded with 4.96" grapple, 2-7/8" reg pin X 3-1/2" IF pin cross over, stop sub, 4-3/4" bumber sub, 4-3/4" jars, (6) 4-3/4" drill collars, cross over on (224) joints of 2-7/8" N80 EUE 8rd tubing, Engage BWD packer @ liner top 7272'. Pull out of the well with BHA and lay down BWD packer remnants, upper housing, slips and packer elements were milled over, lower body was intact but missing (1) lower slip die. Ran in and pulled out of the well laying down fishing BHA. M/U 9-5/8" 47# scraper, 4-3/4" bumper sub and ran in the well with (231) joints of 2-7/8" N80 EUE 8rd tubing to 7272' liner top (tagged @ 7274' tubing measured depth). Pull out of the well with (41) joints of 2-7/8" N80 EUE 8rd tubing. Secure well til the AM.
4/1/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1033 psi. Fill the well with 10 bbls of 8.5 ppg polymer. Pull out of the well with (190) joints of 2-7/8" N80 EUE 8rd tubing. L/D bumpersub and 9-5/8" 47# casing scraper. P/U 2-1/16" x 6' mule shoed pup joint, (20) joints of 2-1/16" Hydril tubing, 2-1/16" Hydril pin X 2-7/8" EUE 8rd box cross overand run in the well on (227) joints of 2-7/8" N80 EUE 8rd tubing.Tagged @ 7813' (tubing measured depth), Reverse circulate with 120 bbls of HEC polymer. Pull out of the well with (227) joints of 2-7/8" N80 tubing, L/D (20) joints of 2-1/16" tubing and 2-1/16" X 6' mule shoed joint. Run in the well with (40) joints of 2-7/8" N80 tubing, Secure well til the AM.
4/2/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1044 psi. Fill the well with 10 bbls of 8.5 ppg polymer. Pull out of the well with (40) joints of 2-7/8" N80 EUE 8rd tubing. R/U WL. Run gyro / directional survey to 7784'. R/D WL. P/U 9-5/8" retrievable bridge plug and run in the well on (231) joints of 2-7/8" N80 EUE 8rd tubing. Set bridge plug @ 7268'. Pressure test casing, no test, pumping away @ 250 psi, 3.3 bpm. Release bridge plug. Pull out of the well with (3) joints of 2-7/8" N80 EUE 8rd tubing. Set bridge plug @ 7200'. Pressure test to 500 psi 20 minutes hold, good. Release bridge plug and run in the well with (3) joints of 2-7/8" N80 EUE 8rd tubing. Set Bridge plug @ 7268'. Release from bridge plug and L/D (1) joint of 2-7/8" N80 tubing. Dump 6 sacks of sand on top of bridge plug. Displace with 42 bbls of 8.5 ppg HEC polymer. Pull out of the well with (190) joints of 2-7/8" N80 EUE 8rd tubing. Secure well til Monday.

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

Rec'd 10-13-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 B
A.P.I. No. ~~03722051~~- 03724127
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)
4/4/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1044 psi. Fill the well with 9 bbls of 8.5 ppg polymer. Pull out of the well with (40) joints of 2-7/8" N80 EUE 8rd tubing and RBP retrieving head. R/U Baker WL. Log with HRVRT from 7257' to surface. R/D WL. R/U Western WL run multi-arm caliper log from 7258' to surface. Run in the well with (40) joints of 2-7/8" N80 EUE 8rd tubing. Secure well til AM.
4/5/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1044 psi. Fill the well with 2 bbls of 8.5 ppg polymer. Pull out of the well with (40) joints of 2-7/8" N80 EUE 8rd tubing. R/U Schlumberger WL. Run USIT and log from 7258' to surface. R/D WL. Pressure test casing against RBP to 500 psi, hold for 20 mins good. Secure well til AM.
4/6/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1041 psi. P/U and run in the well with 9-5/8" 47# Arrow set packer on (62) joints of 2-7/8" N80 EUE 8rd tubing. Set and test to 1500 psi, hold for 5 mins, good. Release packer. Continue to run in the well with 9-5/8" 47# Arrow set packer on (49) joints of 2-7/8" N80 EUE 8rd tubing. Set packer @ 3500'. Pressure test from 3500' to surface @ 3625 psi and 3500' - 7268' @ 2250 psi, both were recorded with a 1 hour hold on each test, DOGGR Ernie Blevins witnessed and approved pressure tests. Release 9-5/8" Arrow set packer. Pull out of the well with (112) joints of 2-7/8" N80 EUE 8rd tubing. L/D packer. Rig out tubing equipment and work floor. Land tubing hanger. N/D 11-1/16" 5K annular preventer. Secure well til AM.
4/7/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1031 psi. N/D double gate BOPE, 11-1/16" X 13-5/8" wellhead spool, remove inner seal assembly. Install 13-5/8" x 11-1/16" riser spool and 11-1/16" double gate BOP. Pressure test with Ensign pump to 1000 psi, good. Secure well til spool is returned from servicing.
4/11/2016	Check well pressure: SICP = 0 psi. Field pressure = 1053 psi. N/D double gate BOPE, 11-1/16" 5K X 13-5/8" 3K 2' spool. Install seals and tubing spool,. Pressure test and chart for 20 minutes to 3000 PSI, good. Install 11-1/16" 5K Class 3 BOP. Pressure test with pump to 1200 psi. Install work floor and tubing equipment. P/U and run in the well with RBP retrieving head on (228) joints of 2-7/8" N80 EUE 8rd tubing. Secure well til AM.
4/12/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1058 psi. P/U (3) joints of 2-7/8" N80 EUE 8rd tubing continue running in the well with RBP retrieving head to 7258', Reverse circulate cleaning sand off of RBP. Attempt to release RBP. Pull out of the well with (231) joints of 2-7/8" N80 EUE 8rd tubing and L/D RBP retrieving head (packed with sand and rubber - no RBP). Run in the well with 2nd retrieving head on (231) joints of 2-7/8" N80 EUE 8rd tubing. Rev circ. Work to free up 9-5/8" RBP. Pull out of the well with (231) joints of 2-7/8" N80 EUE 8rd tubing and LD 9-5/8" RBP (all packing elements missing). Run in the well with (40) joints of 2-7/8" N80 EUE 8rd open ended tubing. Secure well til AM.
4/13/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1057 psi. Fill with 10 bbls of 8.5 ppg HEC polymer. Pull out of the well with (40) joints of 2-7/8" N80 EUE 8rd tubing. P/U and run in the well with 7-7/8" junk basket 8-1/8" OD head, 4 -1/2" XH pin X 4-1/2" FH box cross over, 4-1/2" FH pin X 3-1/2" FH box cross over, 3-1/2" FH pin X 2-7/8" EUE box cross over on (231) joints of 2-7/8" N80 EUE 8rd tubing, to top of liner @ 7272', Rig up king swivel with 2" hose. Reverse circulate with 200 bbls of 8.5 HEC polymer @ 4 bpm @ 800 psi. Pull out of the well with (231) joints of 2-7/8" N80 EUE 8rd tubing. L/D junk basket (no debris recovered). P/U and run in the well with 4-1/2" junk basket w/ 4-5/8" OD head, 2-7/8" reg pin X 2-7/8" EUE box cross over, (232) joints of 2-7/8" N80 EUE 8rd tubing. Attempt to work into liner top (unsuccessful). Pull out of the well with (3) joints of 2-7/8" N80 EUE 8rd tubing. Secure well til AM.
4/14/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1050 psi. P/U (18) joints of 2-7/8" N80 EUE 8rd tubing worked junk mill from 7776' to 7811'. Reverse circulate with 180 bbls 8.5 ppg polymer @ 3 bpm 400 psi. Pull out of the well with (249) joints 2-7/8" N80 tubing L/D 4-1/2" junk basket. Junk basket recovered rubber and metal debris. Run in the well with 4-5/8" OD head, 2-7/8" reg pin X 2-7/8" EUE box cross over,on (249) jts 2-7/8" N80 EUE 8rd tubing. Worked junk basket from 7810' to 7813' (tubing measured depth). Pull out of the well with (20) joints of 2-7/8" N80 EUE 8rd tubing. Secure well til AM.
4/15/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1052 psi. Monitored high winds, Pull out of the hole laying down (229) joints of 2-7/8" N80 EUE 8rd tubing, 4-1/2" junk basket. RIH with (40) joints of 2-7/8" N80 EUE 8rd tubing. Secure well til AM.

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

Rec'd 10-13-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 B
A.P.I. No. ~~03722051~~- 03724127
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)
4/16/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1054 psi. Fill well with 10 bbls of 8.5 ppg HEC polymer. Pull out of the well laying down (40) joints of 2-7/8" N-80 EUE 8rd tubing. Change pipe rams from 2-7/8" to 3-1/2". Test pipe rams to 2000 psi, 15 minute hold (good). Move out 2-7/8" pipe trailer and spot in (2) 3-1/2" pipe trailers. Pick up, run in the well with re-entry guide shoe, 9-5/8" AS 1X packer, (1) 4-1/2" X 3-1/2" cross over, (1) 3-1/2" X 2-7/8" cross over, (1) 2-7/8" X 10' L-80 EUE 8rd pup joint, 2-7/8" WXN profile nipple with 2.312" and 2.250" No Go (preloaded with "N" test plug), (1) joint of 2-7/8" L-80 EUE 8rd tubing, 2-7/8" WXO sliding sleeve with 2.312" profile, (1) joint of 2-7/8" L-80 EUE 8rd tubing, (1) 2-7/8" X 3-1/2" cross over (1) joint of 3-1/2" L-80 EUE 8rd tubing. Plug test BHA to 5000 psi. Rig up wireline, retrieve "N" test tool from WXN profile nipple and rig down wireline. Rig up hydrotest equipment using bar tools. Pick up and run in the well with (114) joints of 3-1/2" L-80 EUE 8rd tubing using thread lube and hydrotesting tubing to 5000 psi. Secure well til Monday AM.
4/18/2016	Check well pressure: SITP = 0 psi and SICP = 0 psi. Field pressure = 1055 psi. Fill well with 10 bbls of 8.5 ppg HEC polymer. Continue picking up, run in the well with (112) joints of 3-1/2" L-80 EUE 8rd tubing using thread lube and hydrotesting tubing to 5000 psi. Suspend operations for noise log run on Porter 69J. Continue picking up, run in the well with (4) joints of 3-1/2" L-80 EUE 8rd tubing, , 3-1/2" x 2-7/8" L-80 cross over, (1) joint of 2-7/8" L-80 EUE 8rd tubing, 2-7/8" fatigue nipple and tubing hanger using thread lube and hydrotesting tubing to 5000 psi. Rig down hydro test unit. Set Arrowset 1X packer with the center of element @ 7205.89' with 16K compression. Secure well til AM.
4/19/2016	SITP=0 psi. SICP=0 psi. Field pressure 1041 psi. Rig up wireline ran 2.30" gauge ring to 7194', set 2.313" X plug body @ 7194'. Rig down wireline unit. RU Pros test unit and recorders. Pressure test tubing from surface to WXN profile nipple at 3700 psi and casing annulus from packer to tubing hanger at 1000 psi and chart each test for 60 minute hold, DOGGR Addison Williams witnessed pressure tests, both passed. Rig out tubing equipment and work floor. N/D Weatherford Class III BOP. Install 11-1/16" 5K master valve tree assembly. Cameron pressure test tree 250 psi low and 5000 psi high, 20 minute hold on each, good. Secure well til AM.
4/20/2016	Rig down hoist, mud pump and equipment. Pick up containment bins. Clean location. Release Ensign rig 342 to Sesnon Fee 5.
6/6/2016	Held safety meeting. Serviced rig. Field pressure = 1,188 psi, SITP = 0 psi, SICP = 0 psi. Rigged up (Weatherford) testers and rigged up BOP testing equipment. Pressure test BOP as per Gas Company Standard 224.05: Pressure tested pipe and blind rams, all lines and connections at 300 psi low / 5000 psi high for 20 min. each test. Annular preventer at 300 psi low / 3500 psi high for 20 min each test. Good test. Bled off pressure and rigged down (Weatherford) equipment. Mike Woods with the DOGGR inspected BOP equipment. Pulled back pressure valve. Rigged up (Baker) wireline unit. Logged GR/CCL from 7,225' to 7,000'. Rigged down (Baker) wireline. Secured well till the AM.
6/7/2016	Held safety meeting. Service rig. Field pressure = 1,189 psi. SITP = 0 psi, SICP = 0 psi. Filled the hole with 16 bbls of 8.5 ppg, 56 vis polymer. Un-land hanger and unset (Weatherford) packer. Laid down (4) joints of 3-1/2", 9.3#, L-80, 8rd tubing. Tallied and pickup 1' & 2' 2-7/8", 6.5#, L-80, 8rd pup joints. Set (Weatherford) 9-5/8", 47# Arrowset packer at 7,082' (COE) in 12K compression. Landed hanger. Screwed in lockdown screws. Held safety meeting & rigged up (Western) wireline unit. Ran in the hole with 2.3" gauge and tagged "XN at 7,065'. Pulled out of the hole. Ran in the hole with "PXN" plug and set in "XN" at 7,065'. Pulled out of the hole. Ran in with equalizing prong and set in plug. Pulled out of the hole. Ran in with shifting tool and closed sleeve at 7,031'. Pulled out of the hole. Rigged down (Western) wireline unit. Rigged up (PROS) testers. Tested casing annulus to 1,000 psi for one hour. Bled off pressure. Tested tubing to 3,700 psi for one hour. Bled off pressure. Good test. Witnessed by Mike Woods (DOGGR). Rigged down (PROS) testers. Rigged up (Western) wireline. Ran in the hole with Shifting tool. Opened sleeve at 7,031'. Rigged down (Western) wireline. Secured well till the AM.
6/8/2016	Held safety meeting. Serviced rig. Nippled down 11" 5M annular and double gate. Rigged up (Cameron) and nippled up 2-9/16" 5M production tree. Tested void 300 psi low ad 5000 psi high for 20 minutes. Good test. Shell test tree to 5000 psi. Good test. Rigged down (Cameron). Rigged down rig and load out equipment and move to Fernando Fee 35B.

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

Rec'd 10-13-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 B
A.P.I. No. ~~03722051~~ 03724127
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)
7/17/2016	Hold safety meeting with service personnel. SITP= 1375 psi N2/ SICP= 525 psi N2 / Field pressure= 1218 psi/ Withdraw line pressure = 457 psi. [07/16/2016: Well was unloaded with N2 down casing/ up tubing and 66 bbls of fluid was returned to the 500 bbls tank. 2.31" 'XO' sleeve @ 7031' was moved to the 'CLOSED' position. ONYX flowback and Pacific carbon canister equipment already rigged up.] MIRU Western wireline. Call ops for witness before standing mast on and removing mast from the wellhead. RIH and remove prong and plug from 2.31" 'XN' nipple @ 7065'. RDMO slick line unit. Begin purging N2 from the tubing thru carbon canister. Pressure declined from 1375 psi to 430 psi before flow changed over from N2 to natural gas. Ops called to verify gas content (tubing pressure 250 psi and falling). Continue to let well try and clean up, taking returns to carbon canister. Pressure declined to from 250 psi to 35 psi in 30 mins. Tubing pressure stabilized at 35 psi and then began to slowly climb at 10 psi per hour. Send well to SCG withdraw line. Tubing pressure climbs slowly to 463 psi- flow rate is too small too measure, if any. Discuss with engineering after 5 hours of testing- decision made to close in well. Secure well. RDMO flowback equipment. SDFN.

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

NOTICE OF RECORDS DUE

Ventura, California
10/25/2016

Roberto (Bob) Dentici
Southern California Gas Company (S4700)
555 West 5th Street, ML 17G4
Los Angeles, CA 90013

In accordance with Division 3 of the California Public Resources Code, the following records are due (covering the reworking notice dated 3/16/2016) for your well "Porter" 69B (037-24127).

Aliso Canyon Field, Los Angeles County, Sec. 28, T. 03N, R. 16W, SB B.&M.

Records, in duplicate are due within 60 days after completion of any well work or tests. Failure to provide such records may result in enforcement action, including issuance of violations, civil penalties and orders of the supervisor, pursuant to PRC 3236.5.

- [X] Well Summary (Form OG 100)
- [ ] History (Form OG 103, OGG 103)
- [ ] Core of sidewall sample (Form OG 101, OGG 101)
- [ ] Directional survey
- [ ] Other
- [ ] All Logs
- [ ] Dipmeter (computed)
- [ ] Oil and/or gas analysis
- [ ] Water analysis
- [ ] Pressure measurements (flowing or static)
- [ ] Velocity Survey
- [ ] Temperature Survey
- [ ] Spinner survey
- [ ] Standard Annular Pressure Test
- [ ] RA Tracer survey (fluid migration test)

REPORTS FOR THE MONTH OF : *Production, oil and gas disposition, and injection reports are due on or before the 30th day of each month for the preceding calendar month. Division forms must be signed in the spaces provided.*

OIL AND GAS OPERATION

- [ ] Production and disposition reports (Form OG 110 or computer report)
- [ ] Injection reports (Form OG 110B or computer report)

GEOTHERMAL OPERATION

- [ ] Production reports (Form OGG 110)
- [ ] Injection reports (Form OGG 110B)

Name: Mark Davis	Title: Energy & Mineral Resources Engineer	Signature:

OG170 (03/01/2012)

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

No. T **216-0216**

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 15, 2016

Your operations at well **"Porter" 69B**, A.P.I. No. **037-24127**, Sec. **28**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **6/7/2016**, by **Michael L. Woods**, a representative of the supervisor.

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

DECISION:

APPROVED

MLW/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel, *District Deputy*

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

No. T 216-0216
16,1

MECHANICAL INTEGRITY TEST (MIT)

Operator: ***Southern California Gas Company***				Well: ***"Porter" 69B***	
Sec. ***28***	T. ***3N***	R. ***16W***	***SB*** B.&M.	API No.: ***037-24127***	Field: ***Aliso Canyon***
County: ***Los Angeles***				☒ Witnessed ☐ Reviewed on: ***6/7/2016***	

Michael Woods ,representative of the supervisor, was present from ***1410*** to ***1600***.

Also present were: ***Jeff Sandoval, Consultant***

Casing record of the well:

The MIT was performed for the purpose of demonstrating the mechanical integrity of the ***9 5/8"*** casing.

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

☒ The MIT is approved because the ***9 5/8"*** casing held a pressure of ***1100 psi*** for ***60*** minutes.
☒ The MIT is approved because the ***3 1/2"*** tubing held a pressure of ***3900 psi*** for ***60*** minutes.

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

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

Comments:
1. The tubing was landed on a packer @ 7082' for the casing test.
2. A tubing plug was set inside the 3 1/2" tubing at 7070' for the tubing test.

Deficiencies Corrected: ***None***

Deficiencies to be Corrected: ***None***

Uncorrectable Deficiencies: ***None***

Contractor: ***Ensign Energy Services Inc.***

N JRAL RESOURCES AGENCY OF CALIFORNI
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 **216-0219**

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 15, 2016

Your operations at well **"Porter" 69B**, A.P.I. No. **037-24127**, Sec. **28**, T. **03N**, R. **16W**, **SB** B.&M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **6/7/2016**, by **Michael L. Woods**, a representative of the supervisor.

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

DECISION:

APPROVED

MLW/TKC

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel, *District Deputy*

API No. 037-24127 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T 216-0219

BLOWOUT PREVENTION EQUIPMENT MEMO 12,1

Operator Southern California Gas Company Well "Porter" 69B Sec. 28 T. 3N R. 15W
Field Aliso Canyon County Los Angeles Spud Date

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	6/7/2016	Michael Woods	(1100 to 1115)	Jeff Sandoval	Consultant
2nd			(to)		

Contractor Ensign Energy Services, Inc. Rig # Contractor's Rep. & Title
Casing record of well:

OPERATION: **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: 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
					See History		

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
A		Shaffer	Spher.	11	5M	
Rd	3.5"	Shaffer	LWS	11	5M	
Rd		Shaffer	LWS	11	5M	

TEST DATA

Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
18.87						Insp
2.98						Insp
2.98						Insp

TOTAL: 24.83

ACTUATING SYSTEM

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

	Accum. Manufacturer	Capacity	Precharge
1	Koomey	80 gal.	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= G "	2400	7.32 gal.
☐ Other:	2	L= G "	2400	7.32 gal.
	3	L= G "	2400	7.32 gal.
	4	L= G "	2400	7.32 gal.
	5	L= "		gal.
	6	L= "		gal.
	TOTAL			29.29 gal.

AUXILIARY EQUIPMENT

	No.	Size (in.)	Rated Press.	Connections Weld	Connections Flange	Connections Thread	Test Press.
☐ Fill-up Line							
☒ Kill Line		2	5M	☐	☒	☒	Insp
☒ Control Valve(s)	2		5M	☐	☒	☐	Insp
☒ Check Valve(s)	1		5M	☐	☒	☐	Insp
☒ Aux. Pump Connect.			5M	☐	☐	☒	Insp
☒ Choke Line		4	5M	☐	☒	☒	Insp
☒ Control Valve(s)	7		5M	☐	☒	☐	Insp
☐ Pressure Gauge				☐	☒	☐	
☒ Adjustable Choke(s)	2	2	5M	☐	☒	☐	Insp
☐ Bleed Line		2		☐	☐	☒	
☐ Upper Kelly Cock							
☐ Lower Kelly Cock							
☐ Standpipe Valve							
☐ Standpipe Press. Gau.							
☐ Pipe Safety Valve							
☐ Internal Preventer							

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)
Lease Water	8.5#/g	

REMARKS AND DEFICIENCIES:

OGD9 (1/03)

D PARTMENT OF CONSERVAT N
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. T216-0137

REPORT ON OPERATIONS

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

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

Ventura, California
April 25, 2016

Your operations at well **"Porter" 69B**, A.P.I. No. **037-24127**, Sec. **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **4/19/2016**, by **Addison T. Williams**, a representative of the supervisor.

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

DECISION:

APPROVED

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By
Patricia A. Abel
District Deputy

ATW/tkc
OG109

No. T 216-0137
*16, 1

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

PRESSURE TEST (MIT)

Operator SoCal Gas Well Designation "Porter" 69B

Sec. 28 ,T. 03N ,R. 16W, SB B.& M. API No. 037-24127 Field Aliso Canyon

County Los Angeles Witnessed on 4/19/16. Addison T. Williams, representative

Supervisor, was present from 1018 to 1118.

Also present were Rodger 661-301-7102

Casing record of the well

The operation were performed for the purpose of * determining casing & tubing integrity.

Pressure Test Casing

Packer at WXN/tbg-plug @ 7188', PKR @ 7206' COE, Tbg tail @ 6848' Well Type GS

Casing Pressured With Polimer 8 1/2# & Water Volume N/A

Casing Pressure Start (psi) Csg 1101psi Time End 1018

Casing Pressure End (psi) Csg 1098psi StartTime 1118

Pressure Held 60min minutes. Total change in pressure 3psi psi 0.0027 %

Test results X Good ____ No Good ____ Inconclusive

Pressure Test Tubing

Plug-Back to WXN/tbg-plug @ 7188', PKR @ 7206' COE, Tbg tail @ 6848' Well Type GS

Tubing Pressured With Polimer 8 1/2# & Water Volume N/A

Tubing Pressure Start (psi) Tbg 3773psi Start Time 0856

Tubing Pressure End (psi) Tbg 3744psi End Time 0956

Pressure Held 60min minutes. Total drop in pressure 29psi psi 0.0076 %

Test results X Good ____ No Good ____ Inconclusive

Remarks Chart recorder calibrated 3/28/16

Rig Ensign 342

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. T216-0111

REPORT ON OPERATIONS

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

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

Ventura, California
April 11, 2016

Your operations at well **"Porter" 69B**, A.P.I. No. **037-24127**, Sec. **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **4/6/2016**. **Ernest Blevins**, a representative of the supervisor.

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

DECISION:

APPROVED

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel
District Deputy

EB/tkc
OG109

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

No. T 216-0111
#16, 1

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

Operator: So CA Gas				Well: "Porter" 69B	
Sec. 28	T. 3N	R. 16W	B.&M. SB	API No.: 037-24127	Field: Aliso Canyon
County: Los Angeles				Witnessed/Reviewed on: 4-6-16	

Ernie Blevins, representative of the supervisor, was present from 0715 to 1505.

Also present were: Consultant – Roger Lefler w/ So CA Gas Easign Rig #342

Casing record of the well:
BP @ 7268 10' sand Plug on top
Packer @ 3500' C.O.E. (Center of Element)

2 7/8" Tubing Annulus has HEC Polymer

The Internal MIT was performed for the purpose of pressure testing the 9 5/8" 47# N80 casing above 7268' (2) (prior to injecting fluid)

☒ The Internal MIT is approved since it indicates that the 9 5/8" casing has mechanical integrity above 7268' & 3500' 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.

1st Test – From Packer to Surface PASS
Top Test: Time: 1020am 1120am
Pressure: 3640psi 3623
(-17psi in 60 min)

From Packer to Bridge Plug 2nd Test
Bottom Test Time: 12:03pm – 13:03pm
Pressure: 2267psi → 2250
(-17psi in 60 min) PASS

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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. T216-0072

REPORT ON OPERATIONS

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

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

Ventura, California
April 11, 2016

Your operations at well **"Porter" 69B**, A.P.I. No. **037-24127**, Sec. **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **3/21/2016**. **Clifford R. Knight**, a representative of the supervisor.

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

DECISION:

APPROVED

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel
District Deputy

CRK/tkc
OG109

API No. 03724127 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T 216-0072 12,1

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator So Cal Gas Well Porter 69B Sec. 28 T. 3N R. 16W
Field Aliso Canyon County Los Angeles Spud Date

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	3-21-16	C. Knight	(1200 to 1300)	Roger Lefler	PSS Consultant
2nd			(to)		

Contractor Ensign Rig # 342 Contractor's Rep. & Title Roger Lefler
Casing record of well:

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

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

REQUIRED BOPE CLASS: Class III 5M

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus
9 5/8	47 #	N-80	>3444				
13 3/8	54.5 #	K-55	1046				
5 1/2	17 #	K-55	BOP STACK 7272 7811				

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul	TEST DATA: Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	* Test Date	* Test Press.
A	CSO	Cameron		13 3/8	5M		18.67					3/21	5M
Rd	CSO	Schaffer		↓	↓		2.8					3/19	5M
Rd	2 7/8	"		↓	↓		2.8					3/19	3.5M

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3,000 psi
Total Rated Pump Output gpm Fluid Level
Distance from Well Bore 50 ft. 1/2

	Accum. Manufacturer	Capacity	Precharge
1	Koomey type	80 gal.	1,000 psi
2		gal.	psi

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

EMERG. BACKUP SYSTEM				Press.	Wkg.Fluid
6	N_2 Cylinders	1	L= 55 "	2500	9.02 gal.
	Other:	2	L= 55 "	2600	9.65 gal.
		3	L= 55 "	2550	9.34 gal.
		4	L= 55 "	2550	9.34 gal.
		5	L= 55 "	2650	9.96 gal.
		6	L= 55 "	2600	9.65 gal.
		TOTAL:			gal.

AUXILIARY EQUIPMENT

TOTAL:

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

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

Hole Fluid Type	Weight	Storage Pits (Type & Size)
Polymer	8.5	800 bbl

REMARKS AND DEFICIENCIES:
* reviewed available charts while inspecting BOPE

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

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

API No. **03724127** SE **28** T: **3N** R.: **16W** , **SB** B. and M.

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

Type of Notice: **Rework** **Date** **3/16/2016** **Report Number:** **P216-0032**

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

	Date	OK	NEED	Remarks
Well Summary (OG100)				
History (OG103)				
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				

NEW STATUS

DATE: _____

NOTICE OF RECORDS DUE

DATE: _____

DATE: _____

DATE: _____

DATE: _____

WELL STATUS INQUIRY

DATE: _____

DATE: _____

Well Stat

Change Required: _____

Change Done: _____

ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS

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

FINAL LETTER NEEDED _____ COMPLETED _____ 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: _____
(Date and Engineer)

Modfied OGD2

AOR Datbase _____

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

No. P 216-0032

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
March 18, 2016

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

Your proposal to **Rework** well **"Porter" 69B**, A.P.I. No. **037-24127**, Section **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **3/16/2016**, received **3/16/2016** has been examined in conjunction with records filed in this office. (Lat: **34.314969** Long: **-118.556833** 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 is through tubing with packer set in cemented casing immediately above the approved zone of injection.
8. This office shall be contacted by phone prior to making any program changes and no changes are made without Division approval.
9. **THIS DIVISION SHALL BE NOTIFIED TO:**
   a. Inspect the installed blowout prevention equipment prior to commencing **downhole** operations.
   b. Witness a pressure test of the tubing and **9 5/8"** casing prior to commencing injection.

Continued on Next Page

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

Engineer Kris Gustafson
Office (805) 654-4761

KG/kg

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____ for Pat Abel
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.

NOTE:

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

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

ATTACHMENT 1
TO DOGGR ORDER 1109

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

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

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

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

REQUIRED TESTS FOR EACH WELL IN THE FACILITY

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

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

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

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

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

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

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

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

REQUIRED TESTS IF A WELL IS INTENDED TO RESUME OPERATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

REQUIREMENTS FOR WELLS RESUMING OPERATIONS IN ALISO CANYON

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

Rec'd 03-16-16 DOGGR Ventura

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

FOR DIVISION USE ONLY		
	Forms	
Bond	~~OGD114~~	~~OGD121~~
	CAL WIMS	1151

P216-0032

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 69B, API No. 037-24127,

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: 7811 feet. The effective depth is: 7811 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: Ahmed Alshammasi	Telephone Number: (484) 904-8428	Signature	Date: 03/16/16
Individual to contact for technical questions: Ahmed Alshammasi	Telephone Number: (484) 904-8428	E-Mail Address: aalshammasi@semprautilities.com	

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

Rec'd 03-16-16 DOGGR Ventura

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

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

CRITICAL WELL DEFINITION

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

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

WELL OPERATIONS REQUIRING BONDING

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

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

Rec'd 03-16-16 DOGGR Ventura

Well
Porter 69B

API #: 04-037-24127-00
Sec 28, T3N, R16W

Operator: So. California Gas Co.

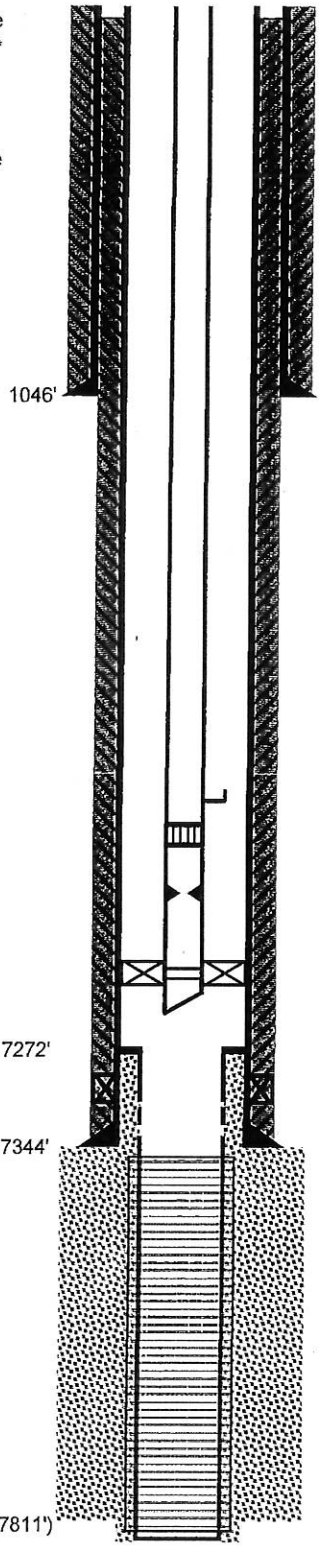
Lease: Porter
Field: Aliso Canyon
Status: Active Gas Storage
BFW:
USDW:

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

Spud Date: 1/28/1992
Completion Date: 3/16/1992

Junk: None

Notes
*After top job, found 9-5/8" CSG shifted off center. Unable to install CSG slips w/ CMT at surface so drilled out CMT 30' below CSG head in 9-5/8" x 13-3/8" annulus.



13-3/8" TOC Surface
9-5/8" TOC 30' Below CSG Head*

17-1/2" Hole

Surface Casing
13-3/8", 54.5#, K-55
0' - 1046'

CMT'D w/ 916 CF,
Good CMT Returns to Surface

1046'

12-1/4" Hole

Production Casing
9-5/8", 47#, N-80
0' - 7344'

CMT'D w/ 2423 CF Foamed CMT,
Good CMT Returns to Surface
+ 168 CF Cap CMT Top Job*

7272'

7344'

13" Hole (7344' - 7805')

Liner
5-1/2", 17#, K-55
7272' - 7811'

8-1/2 Hole (7805' - 7811')

TD 7811'
TD VSS (-5311')
Directionally Drilled: Yes (TD is 964' E, 620' N of Surf, 7707' TVD)

Tubing
2-7/8", 6.5#, N-80
0' - 7204'

7086' MMG w/ 1-1/2" M.S.O.V. set @ 2750 psi on 1/2" "RK" Latch GLM

7132' Otis "XD" SSD (Opens Down)

7167' Otis "XN" Nipple

7200' Otis J-Latch
7200' Otis "BWD" PCKR
7201' Otis 2 Seal Units
7204' Tail

7300' - 7332' 9-5/8" CSG CTC Inflatable PCKR
(Inflated w/ 109 CF CMT)

Liner Perfs:
7322' - 7327' 1-1/2" x 0.012" Mesh , 12R, 6"C Slots
7356' - 7809' 0.012" Mesh WWS

Gravel Packed w/
425 SKS 20-40

Top of Zone Markers		
UDA1	5760'	(-3305')
MDA	6396'	(-3929')
LDA	6597'	(-4126')
MP	7025'	(-4543')
S1	7318'	(-4829')
S4	7420'	(-4929')
S8	7493'	(-5000')
FREW	7655'	(-5158')

Prepared by: CAM (3/11/2016)

InterAct

WORKOVER PROJECT

Porter 69B – Well Inspection

DATE: March 10, 2016

OPERATOR: SOUTHERN CALIFORNIA GAS COMPANY

FIELD: ALISO CANYON

WELL: Porter 69B

API NUMBER: 037-24127

ELEVATION: All depths based on original KB, 23.5' above GL

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

OBJECTIVE

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

WELL RECORD

Current Status:	Active
TD:	7811'
Special Conditions:	Last tagged at 7811', temp survey 10/30/2015
Casing Record:	13-3/8", 54.5#, K-55 LTC casing cemented at 1046' with 916 cu ft 9-5/8", 47#, N-80 LTC casing cemented at 7344' with 2591 cu ft 5-1/2", 17#, K-55 LTC from 7272'-7811' Perfs: 7322'-7327', 0.012" slots; 7356'-7809', 0.012" WWS
Tubing Record:	See attached tubing detail as run 03/15/1992

GEOLOGIC MARKERS

UDA1	5760'md	-3305'vss	S4	7420'md	-4929'vss
UDA2	6047'md	-3587'vss	S6	7446'md	-4954'vss
MDA	6396'md	-3929'vss	S8	7493'md	-5000'vss
LDA	6597'md	-4126'vss	S10	7518'md	-5025'vss
MP	7025'md	-4543'vss	S12	7575'md	-5080'vss
S1	7318'md	-4829'vss	S14	7618'md	-5122'vss
S2	7364'md	-4874'vss	Frew	7655'md	-5158'vss

Estimated Field Pressure: 917 psi on 9/3/2016 (Variable)

Estimated Bottom-hole Temperature: 140°F from 10/30/15 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 as stated on permit.

PRE-RIG WORK

1. De-energize and remove all laterals. Install companion flanges for killing 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. Circulate as required to kill well. The tubing volume is 42 bbls, and the tubing/casing annulus is approximately 469 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. Pick-up a 2-7/8", 6.5#, N-80 joint of tubing with safety valve, un-latch the 2-7/8", 6.5#, N-80 tubing from 9-5/8" "BWD" packer at 7200' and POOH laying down tubing and all tools. Note: packer was landed in 10,000 lbs. compression.

7. Fish Otis BWD permanent packer at 7200' as required using 2-7/8", 6.5#, P-110, TKC workstring.

8. Pick-up a 9-5/8", 47# casing scraper on workstring and RIH to 5-1/2" liner top at 7275'. Circulate well clean. POOH.

9. Make-up and run a 9-5/8" retrievable bridge plug (BP) on workstring string. Set at approximately 7270' (5 ft above liner top), pressure test, and sand off.

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

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

11. 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.

12. RIH with kill string and land on tubing hanger. Install BPV in tubing hanger. Nipple down 11" Class III 5 M BOPE, crossover spool, and primary pack-off.

    a.) Replace the pack-off seals and reinstall tubing head, refurbished as necessary. Install new wellhead and tree valves.
    b.) Pressure test all the wellhead seals to 3625 psig.
    c.) Reinstall the 11" Class III BOPE and function test.
    d.) Remove BPV.

13. RIH with retrieving tool for BP on workstring to top of sand. Circulate out sand and engage BP. Release BP at 7262', re-kill the well if necessary. POOH and lay down workstring.

14. RIH with new completion string as follows:

    a) Pup joint 3-1/2" 9.3# N-80 EUE 8RD tubing with guide shoe
    b) 3-1/2" x 9-5/8" hydraulic production packer with ball catcher seat
    c) 10' pup joint 3-1/2" 9.3# N-80 EUE 8RD tubing
    d) 3-1/2" XN EUE 8RD no-go nipple
    e) Full joint 3-1/2" 9.3# N-80 EUE 8RD tubing
    f) 3-1/2" EUE 8RD sliding sleeve
    g) Full joint 3-1/2" 9.3# N-80 EUE 8RD tubing
    h) 3-1/2" x 5-1/2" Crossover pup joint
    i) 5-1/2" 20# N-80 EUE 8RD tubing to surface
    j) Pup joints 5-1/2" 20# N-80 EUE 8RD tubing for space-out
    k) Tubing hanger and fatigue nipple

15. Land tubing on tubing hanger as per vendor specification at approximately the same depths as prior completion string. **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 3-1/2" XN profile.

17. Notifiy DOGGR to witness pressure tests of annulus to 2250 psi. and tubing to 3625 psi.

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

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

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

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

WELL LATERAL HYDROTESTING

22. 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.

23. Reinstall the hydro-tested laterals.

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

25. 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.

Tubing Detail as ran 03/15/1992:

Quantity	Item	Length	Depth
1	KB	23.00	23.00
1	Hanger (above ground)	3.00	20.00
1	Donut	0.45	20.45
1	2-7/8", EUE 8rd, N-80 fatigue nipple	0.65	21.10
1	2-7/8", EUE 8rd, N-80 pup jt	6.23	27.33
1	2-7/8", EUE 8rd, N-80 pup jt	10.20	37.53
224	2-7/8", EUE 8rd, N-80 tbg.	7048.81	7086.34
1	2-7/8" MMG mandrel	14.08	7100.42
1	2-7/8", EUE 8rd, N-80 tbg.	31.53	7131.95
120	Otis 2.313 XD SSD	3.21	7135.16
1	2-7/8", EUE 8rd, N-80 tbg.	31.51	7166.67
1	Otis 2.205 XN nipple	1.28	7167.95
1	2-7/8", EUE 8rd, N-80 tbg.	31.45	7199.40
1	Otis J-Latch (above)	0.60	7200.00
1	Otis J-Latch (below)	1.27	7201.27
1	Otis seal units (2)	2.00	7203.27
1	Otis 45° guide shoe	0.65	7203.92

Casing Pressure Test Schedule:

Depth	Pressure	Tool
3500'	3625 psig	Test Packer
7270'	2250 psig	BP

Rec'd 03-16-16 DOGGR Ventura

		External Casing Backup Pressure			Pressure Test Net Burst Pressure @ Depth									Tubing Leak Net Burst Pressure @ Depth	Test Pressuree > 85% of Burst	Test Pressure < Tubing Leak - Net Burst (Gas-filled annulus)
Depth (TVD)	85% of Burst Strength	Fluid / Formation Pressure Gradient	External Casing Backup Pressure	Internal Water Hydrostatic	1	2	3	4	5	6	7	8	Final	Gas-Filled Annulus		
				Surface Test Pressure	3625								2250	3625		
				Test Packer Depth	3500											
				Bridge Plug Depth									7270			
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		
7000	5840	0.00	0	3094	-								5344	4259		
7270	5840	0.00	0	3213	-								5463	4284		
				0.442 psi/ft int. grad.										0.091 psi/ft int. grad.		

OPERATOR So Cal Gas
WELL NO. Porter 69B
MAP

INTENTION	Drill	Supp				
NOTICE DATED	1-8-92	2-3-92				
P-REPORT NUMBER	292-32	292-53				
CHECKED BY/DATE		8/1/05				
MAP LETTER DATED		8/6/05				
SYMBOL						

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE			1-9-92									
HISTORY			4/20/92									
SUMMARY			4/20/92									
E-LOG			3/2/92 4/20/92									
MUD LOG												
DIPMETER												
DIRECTIONAL			9-1-92									
CORE/SWS												
CBL			NOT RUN									
Press Grad. Bore			2/2/92									
GR/N/Density log			4/20/92									
CALIPER			4/20/92									

ENGINEERING CHECK

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

RECORD'S COMPLETE ______ SA

FINAL LETTER OK
MAILED
RELEASED BOND

NJECTION BOOK
DLE WELL LIST
URFACE INSP. CARD
K TO RELEASE FROM CONFIDENTIAL
EMOVED FROM E.D.P.

REMARKS:

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

API No. 037-24127

WELL SUMMARY REPORT

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

Location (Give surface location from property or section corner, street center line and/or California coordinates)
849' S. & 3184' W. of Station 84, Sec. 28, T3N, R16W

Elevation of ground above sea level
2366'

Commenced drilling (date): 1/28/92
Completed drilling (date): 3/16/92
Commenced producing (date): Gas Storage Well
☐ Flowing ☐ Pumping ☐ Gas lift
Name of producing zone(s): S4 - S12, Frew

Total depth: (1st hole) 7811' (2nd) (3rd)
Present effective depth: 7811'
Junk:

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

GEOLOGICAL MARKERS	DEPTH
Miocene/Pliocene	7071'
S-4	7412'
Frew	7652'

Formation and age at total depth: Frew/Paleocene

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

CASING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing (if through perforations)
20"	Surface	40'	Conductor					
13-3/8"	Surface	1046'	54.5#	K55 Buttress	New	17-1/2"	916 cu.ft.	
9-5/8"	Surface	7344'	47#	N80 LT&C	New	12-1/4"	2591 cu.ft.	

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforation and method.)
5-1/2", 17#, LT&C Liner: Top 7272', bottom 7811'; .012 mesh wirewrapped screen from 7356'-7809'. Slotted: .012" mesh 1.5" S, 12R, 6"C from 7322'-7327'.

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

615' N., 961' E. of surface location at a TVD of 7706'.

Other surveys: DIL/GR/CAL 1046'-7325', 7344'-7811'; DENSITY/NEUTRON/GR 7344'-7810', CAL/GR 7344'-7810.

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	
R. M. Dowell	Drilling Manager	
Address	**City**	**Zip Code**
555 W. Fifth Street	Los Angeles	90013-1011
Telephone Number	**Signature**	**Date**
(213) 244-2666	R. M. Dowell	4/16/92

OG100 (10/85/DWRR/5M)

SUBMIT IN DUPLICATE

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

Operator Southern California Gas Company Field Aliso Canyon County Los Angeles
Well Porter #69B, Sec. 28, T 3N, R 16W, SB B. & M.
A.P.I. No. 037-24127 Name R. D. Phillips (Person submitting report) Title Agent (President, Secretary or Agent)
Date March 30, 19 92

Signature R. M. Dowell
R. M. Dowell for R. D. Phillips
P. O. Box 3249 Terminal Annex, Los Angeles, CA 90051 (213) 244-2666
(Address) (Telephone Number)

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

Date	
1992	
1-22 to 1-27	Moved in Kenai Rig #44 and rigged up.
1-28	Mixed spud mud. Made up 17-1/2" retip mill tooth bit on two 10" drill collars. Ran in hole and drilled 17-1/2" hole from 64' to 330'.
1-29	Pulled out of hole. Picked up 9" monel and added one 17-1/2" stabilizer. Ran in hole. Drilled 17-1/2" hole from 330' to 485'. Pulled out of hole. Changed out bit. Ran in hole with new 17-1/2" sealed bearing mill tooth bit on previous BHA. Drilled 17-1/2" hole from 485' - 650'.
1-30	Drilled 17-1/2" hole from 650' to 806'. Pulled out of hole. Changed out bit. Ran in hole with 17-1/2" Smith mill tooth D.S. Retip bit. Continued drilling from 806' to 820'.
1-31	Drilled 17-1/2" hole from 820' to 1048'. Circulated and wiped hole to surface.

OG103 (10/89/GSR1/5M)

Mailed 4/17/92

2-1 Made wiper trip to 1048'. Circulated hole clean. Pulled out of hole. Laid down 17-1/2" stabilizers and 10" drill collars. Picked up and ran 26 joints of 13-3/8" 54.5# K-55 buttress casing to 1045' as follows: guide shoe, 1 joint of 13-3/8" with 2 centralizers and one scratcher, stab-in float collar, 3 joints of 13-3/8" casing with scratchers and one centralizer on every other joint to 200' Bakerlocked and tack welded the first five joints. Ran stab-in assembly on 4-1/2" drill pipe to 1002'. Stabbed into float collar. Circulated well. Rigged up cementers. Pressure tested surface lines and connections to 2500 psi. Pumped 15 Bbls of fresh water ahead of 163 Bbls of Class "G" cement w/3% CaCl2. Good cement returns to surface. Displaced with 12 Bbls of mud. Pulled out of stab-in collar. Float valve held. Pulled out of hole. Cut off 13-3/8" casing and welded on 13-5/8" 3000 psi casing head. Began installing 13-5/8" Class III B3M BOPE stack and choke manifold.

2-2 Finished installing BOPE. Pressure tested blind rams, 4-1/2" pipe rams and choke manifold to 2500 psi. Tested annular preventer to 2000 psi. BOPE test witnessed and approved by B. Hesson of the D.O.G. Made up 12-1/4" mill tooth bit. Ran in hole and tagged top of cement at 987'. Drilled out cement to 1018'. Pressure tested casing to 500 psi. Drilled out float collar and shoe. Drilled 12-1/4" hole from 1046' to 1058'. Closed pipe rams and pressured to 600 psi for leak off. Drilled 12-1/4" hole from 1058' to 1092'. Pulled out of hole.

2-3 Made up 12-1/4" Hughes ATX-MG3 mill tooth bit on 9-1/2" Eastman Navi-Drill Mach III motor with 1-1/4 degree bent sub and ran in well to 1092'. Directionally drilled 12-1/4" hole from 1092' to 1320'. Single shot survey indicated possibility of approaching another well and motor kept stalling out at 1320'. Pulled out of well.

2-4 Ran Gyro survey in well and also ran Gyro survey in Porter 69A. Gyro surveys indicated that Porter 69B was not in proximity with another well. Ran in well with 12-1/4" Smith MFDSH bit on same BHA run on 2/3. Directionally drilled 12-1/4" hole from 1320' to 1462'. Pulled out of hole. Made up and ran locked-in BHA. Reamed hole from 1092' to 1370'.

2-5 Finished reaming hole to 1462'. Drilled 12-1/4" hole from 1462' to 1839'. Pulled out of hole. Changed out bits. Ran new 12-1/4" Smith MFDSH bit in hole on same BHA. Drilled 12-1/4" hole from 1839' to 1964'.

2-6 Drilled 12-1/4" hole from 1964' to 2235'. Wiped hole. Drilled 12-1/4" hole from 2235' to 2489'. Pulled out of hole. Changed out bits. Ran 12-1/4" Security SS33C bit in hole on same BHA.

2-7 Drilled 12-1/4" hole from 2489' to 3000'.

2-8 Drilled 12-1/4" hole from 3000' to 3123'. Pulled out of hole. Changed out bits. Ran 12-1/4" Security SS33G bit with new bottom stabilizer on same BHA in hole. Drilled 12-1/4" hole from 3123' to 3330'.

2-9 Drilled 12-1/4" hole from 3330' to 3357'. Pulled out of hole. Changed out bits and BHA. Ran new Reed HP-13G 12-1/4" mill tooth bit on Eastman Nava-Drill Mach-3 1.25 DTU motor in hole. Drilled 12-1/4" hole from 3357' to 3489'.

2-10 Drilled 12-1/4" hole from 3489' to 3742'. Started pulling out of hole to change bit.

2-11 Pulled out of hole. Made up Hughes 12-1/4" HTJP-11-H bit on same BHA. Ran in hole. Drilled 12-1/4" hole from 3742' to 4050'.

2-12 Drilled 12-1/4" hole from 4050' to 4126'. Pulled out of hole to change BHA. Re-ran Hughes 12-1/4" ATJ-P-11-H bit on Navi-Drill 1.72 DTU motor and MWD tool. Drilled 12-1/4" hole from 4126' to 4345'.

2-13 Drilled 12-1/4" hole from 4345' to 4480'. Pulled out of hole.

2-14 Pulled out of hole. Laid down mud motor. Ran in well with Smith 12-1/4" SDGH bit, 12-1/4" NBWBS, shock sub, NBWBS, NMDC, WBS, 2 8" drill collars, xover to 16 joints HWDP. Reamed hole to 4480'. Drilled 12-1/4" hole from 4480' to 4815'.

2-15 Drilled 12-1/4" hole from 4815' to 5194'. Pulled out of hole. Made up and ran new 12-1/4" Smith SDGH bit on previous BHA to 5100'.

2-16 Reamed hole from 5100' to 5194'. Drilled 12-1/4 hole from 5194' to 5640'.

2-17 Drilled 12-1/4" hole from 5640' to 6154'. Pulled out of hole.

2-18 Made up new Smith 12-1/4" SDGH bit on Eastman 12.125 Navi Drill M1 motor. Ran in hole. Drilled 12-1/4" hole from 6154' to 6392'.

2-19 Pulled out of hole. Made up and ran 12-1/4" Smith MFDSH mill tooth bit on BHA. Reamed 90'. Drilled 12-1/4" hole from 6392' to 6566'. Pulled out of hole.

2-20 Laid down directional drilling tools. Reran previous Smith bit. Reamed tight hole from 5670' to 5897'. Reamed hole from 6154' to 6566'. Drilled 12-1/4" hole from 6566' to 6709'. Pulled out of hole.

2-21 Pulled out of hole. Set 13-3/8" retrievable bridge plug at 90'. Removed BOPE. Installed new 13-5/8" 3000# x 13-3/8" SOW model SD casing head. Inspected weld with Valley xray. Retrieved bridge plug. Ran in hole with Smith 12-1/4" SDGH mill tooth bit to 4581'.

2-22 Cleaned out 30' fill. Drilled 12-1/4" hole from 6708' to 6857'. Pulled out of hole. Ran in hole with Hughes 12-1/4" XCC mill tooth bit.

2-23 Finished running in hole. Reamed 60'. Drilled 12-1/4" hole from 6857' to 7044'. Pulled out of hole.

2-24 Finished pulling out of hole. Made up Smith 12-1/4" SDGH mill tooth bit on same BHA. Ran in hole. Reamed hole from 6924' to 7044'. Drilled 12-1/4" hole from 7044' to 7318'.

2-25 Drilled 12-1/4" hole from 7318' to 7343'. Circulated hole clean. Made 20 stand wiper trip, circulated and conditioned mud. Pulled out of hole. Installed shooting flange. Ran DIL/GR/Caliper log from 7325' to 1046'. Ran in well to 7253' and reamed to 7325'. Cleaned out fill to 7343'.

2-26 Drilled 12-1/4" hole from 7343' to 7348'. Circulated hole clean. Made 20 stand wiper trip. Circulated for 3 hours. Pulled out of hole. Changed pipe rams to 9-5/8" rams. Made up and ran 9-5/8", 47#, N-80, LT&C casing to 7344' as follows: differential float shoe, 10' pup joint, 34' CTC inflatable packer (20' seal element), 7 joints, 15' pup joint, 63 joints, 15' pup joint, 99 joints to surface (169 joints total). Circulated hole for 3 hours.

2-27 Rigged up cementers. Pressure tested surface lines and connections to 3500 psi. Cemented 9-5/8" casing as follows: Pumped 30 Bbls of mud flush followed by 10 Bbls of fresh water. Mixed and pumped 1663 cu.ft. of foamed cement slurry consisting of Class "G" cement with .3% Diacel and nitrogen staged between 227-2470 scf/min, followed by 760 cu.ft. of Class "G" cement with .15% HR-7 and 1% Halad-322. Dropped top plug. Pumped 109 cu.ft. of packer inflation cement consisting of Class "G" cement with .15% HR-7 and 1% Halad-322 followed by 10 Bbls of water then 545 Bbls of mud (Good cement returns to surface). Bumped plug with 500 psi. Inflated packer. Bled back well, float shoe held. Mixed and pumped 168 cu.ft. of cap slurry down 13-3/8" x 9-5/8" annulus consisting of Class "G" with 2% CaCl2. Cement in place at 5:15 p.m. Rigged down cementers. Waited on cement 13 hours.

2-28 Removed BOPE. 9-5/8" casing had shifted off center of 13-5/8" x 3000# casing head. Unable to install 9-5/8" casing slips with cement at surface. RU power swivel and 60' of 1" CS Hydril tubing and 1-1/4" junk mill. Drilled out cement 30' below casing head in 9-5/8" x 13-3/8" annulus. Shifted 9-5/8" casing to center of 13-5/8" x 3000# casing head and installed slips. Unable to install 13-3/8" x 9-5/8" packing in casing head. Removed slips and cut off 13-5/8" x 3000# casing head.

2-29 13-3/8" x 3000# casing head was worn by the kelly. Installed new 13-3/8" x 3000# casing head. X-rayed weld. Installed 2 slips, seal, packing, 13-5/8" 3000# x 11" 5000# double studded seal flange with 9-5/8" seal, 11" x 5000# tubing head. Tested seals to 5000 psi. Installed 11" Class III BOPE with 4-1/2" pipe rams.

3-1 Finished installing BOPE. Installed back pressure valve in tubing hanger and tested blind rams and manifold to 3500 psi for 20 minutes. Pressure tested annular preventer to 2400 psi. Tested 4-1/2" pipe rams to 2500 psi. Stephen Mulqueen of DOG approved test pending 2500 psi test. Repaired air leak on accumulator. Made up 8-1/2" Smith MSDGH bit on 6-3/4" Navi-Drill with 8.375" of NT-WSB monel, two 6" drill collars and 21 joints HWDP. Ran in well to 4500'. Circulated drilling mud. Centered sub-base and derrick over hole.

3-2 Cleaned out cement in 9-5/8" casing from 7109' to 7333'. Pressure tested casing 1000 psi for 20 minutes. Continued drilling out cement from 7333' and drilled out guide shoe. Drilled 8-1/2" hole from 7342' to 7610'.

3-3 Drilled 8-1/2" hole from 7610' to 7616'. Pulled out of well. Ran Reed 8-1/2" MHP-11G mill tooth bit on previous BHA and ran in hole. Continued drilling 8-1/2" hole from 7617' to 7681'. Pulled out of well. Made up Hughes ATJ-11H 8-1/2" insert bit on previous BHA and started running in well.

3-4 Finished running in well. Reamed 60'. Continued drilling 8-1/2" hole from 7681' to 7811'. Circulated for 1 hour. Pulled out of well. Rigged up loggers.

3-5 Ran DIL/GR log from 7344' to 7813'. Densilog Neutron Gamma Ray from 7344' to 7811'. Made up 7" x 13" TriState under reamer on Navi-Drill mud motor. Ran in well to 6002'. Made up xover from drillpipe to 2-7/8" EUE 8RD for tubing hanger. Made up tubing hanger. Lower tubing hanger to tubing head. Bottom threads on tubing hanger stripped out and drillpipe fell down well. Located top of fish at 1367'.

3-6 Made up 5-7/8" overshot. Ran in well to 1365' with overshot. Could not get over fish. Pulled out of well. Changed to 6-1/4" overshot and grapple. Ran in well. Attached overshot to fish. Pulled out and laid down fish and tools. Continued pulling out of well separating good pipe from bent pipe.

3-7 Continued laying down bent drillpipe. Made up 7-1/4" x 13" TriState under reamer on Eastman 6-3/4" Navi-Drill on nine 6" drill collars, xover to 4-1/2" drillpipe. Measured and picked up 119 joints of grade "G" drillpipe, 21 joints Grade "C" drillpipe. Ran in well to 9-5/8" shoe at 7344'. Changed over to 63# polymer completion fluid. Opened hole to 13" from 7344' to 7430'.

3-8 Continued opening hole to 13" from 7430' to 7486'. Pulled out of well. Changed out hole opener on same BHA. Ran in and opened hole to 13" from 7486' to 7606'. Pulled out of well.

3-9 Finished pulling out of well. Made up 7-1/4" x 13" hole opener on previous BHA . Ran in and opened hole to 13" from 7606' to 7613'. Pulled out of well. Made up 7-1/4" x 13" TriState hole opener with insert bits on previous BHA. Ran in well. Opened hole to 13" from 7613' to 7658'. Pulled out of well. Made up new hole opener on previous BHA. Ran in well.

3-10 Opened hole to 13" from 7658' to 7687'. Pulled out of well. Made up 7-1/4" x 13" TriState hole opener with insert bits. Ran in well. Opened hole to 13" from 7687' to 7767'.

3-11 Opened hole to 13" from 7767' to 7805'. Pulled out of well and laid down hole opener. Made up new 7-1/4" x 13" TriState hole opener with insert bits. Ran in and reamed hole to 7805'. Tight hole from 7745' to TD. Circulated bottoms up. Pulled to casing shoe. Cleaned pits. Mixed 400 Bbls of clean polymer fluid.

3-12 Equalized 200 Bbls of clean polymer fluid at 7805'. Pulled out of well. Installed shooting flange. Ran 4 arm caliper log. Made up 5-1/2" 17# K55 LT&C liner as follows: 5-1/2" spaded bull plug, 4' blank pipe, 454' (11 joints) of 5-1/2" (.012" mesh) wire wrapped liner, 81' (2 joints) blank 5-1/2" pipe with 5' of .012" mesh slots 6.5' from top of bottom blank joint. Made up 16 joints of 2-7/8" CS Hydril tail pipe (530'). Ran in well. Set liner bottom at 7811', top at 7273'.

3-13 Mixed and pumped 340 sacks of 20-40 gravel. Pressured up to 1700 psi. Waited 2 hours. Repressured gravel pack to 900 psi. Bled pressure off. Pumped 35 sacks 20-40 gravel. Waited one hour. No pressure build up. Pumped 50 sacks 20-40. Waited 3 hours. Pressured to 1800 psi. Pressure leaked off. Released from liner. Pulled out of well. Made up 518' tubing tail on bottom of lead seal adapter. Ran in well. Unable to get tubing tail into 5-1/2" liner.

3-14 Pulled out of well. Ran in well with Otis 9-5/8" x 5-1/2" lead seal adapter. Set lead seal adapter with top at 7275'. Pulled out of well. Made up 560' of 2-3/8" CS Hydril tubing tail. Ran in well. Circulated out fill and gel and pumped 500 Bbls of 2% KCL in well. Pulled out of well laying down drill pipe.

3-15 Finished laying down drill pipe. Ran and set Otis 9-5/8" 47# BWD packer on wireline at 7200'. Made up latch, 2 seals, 1 joint tubing, 2-7/8" Otis 2.205" "XN" NoGo nipple, 1 joint, 2-7/8" Otis 2.313" "XD" sliding sleeve, 1 joint, 2-7/8" GLM with pump out plug set at 2750 psi. Solid tested to 4000 psi. Drifted and Hydrotested 2-7/8" 6.5# N-80 EUE 8RD tubing to 4000 psi while running in well. Landed on packer with 10,000 lbs. Checked latch at 20,000 lbs over string weight. Tested seals and packer to 1500 psi. Installed back pressure valve. Removed BOPE. Installed xmas tree.

3-16 Pressure tested xmas tree seal flange and tubing head to 5000 psi for 20 minutes. Released rig.

SOUTHERN CALIFORNIA GAS COMPANY
PORTER

#69B
69B
ALISO CANYON
CALIFORNIA

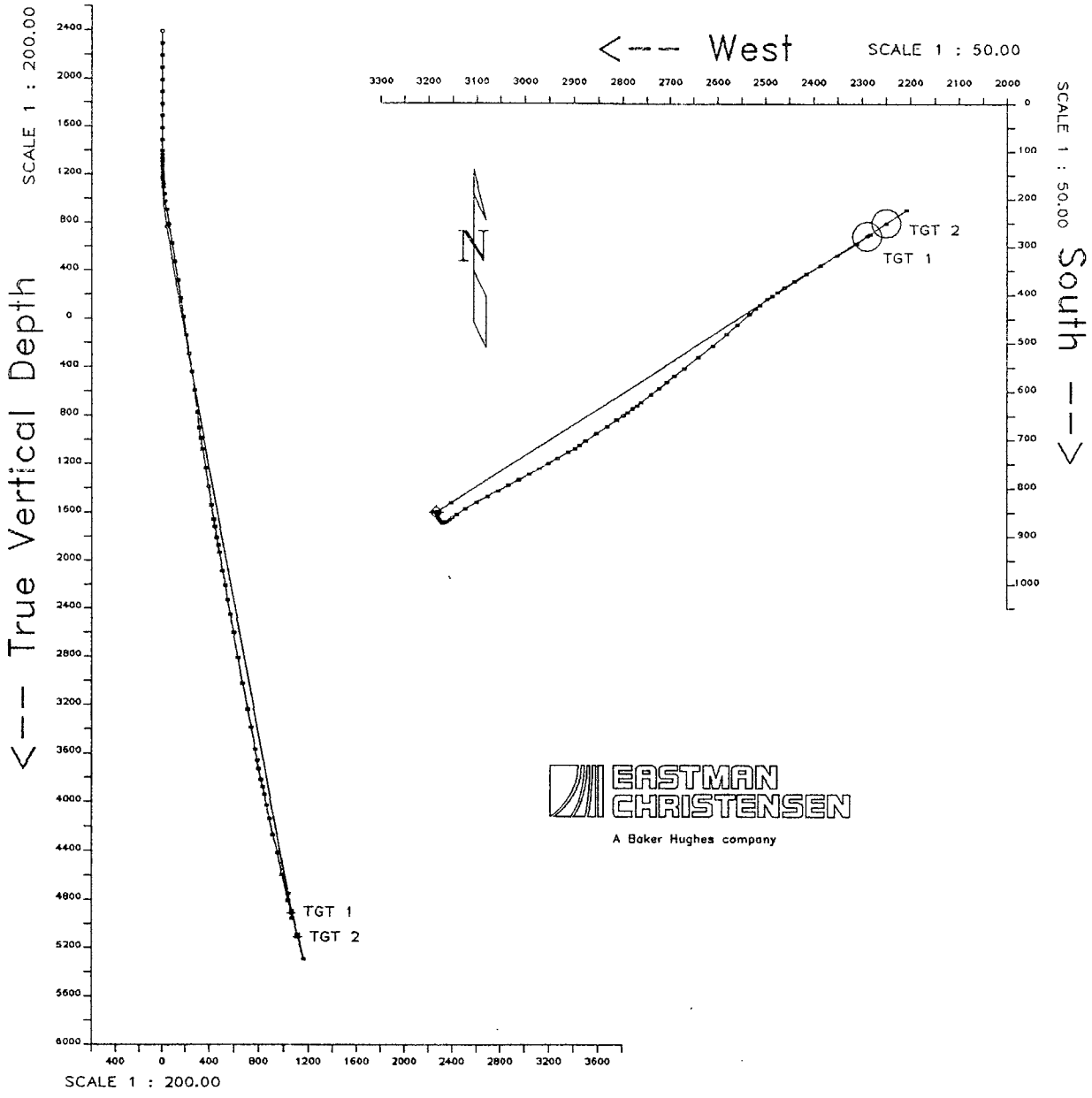
S U R V E Y L I S T I N G

Your ref : GYRO SUR 69-B
Our ref : svy1994
Other ref :

Date printed : 22-Jul-92
Date created : 4-Feb-92
Last revised : 18-Mar-92

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

SOUTHERN CALIFORNIA GAS COMPANY	
Structure : PORTER	Well : #69B
Field : ALISO CANYON	Location : CALIFORNIA



Vertical Section on 57.41 azimuth with reference −849.00 S, −3184.00 W from Station 84

SOUTHERN CALIFORNIA GAS COMPANY — SURVEY LISTING — Page 1
PORTER,#69B — Your ref : GYRO SUR 69-B
ALISO CANYON,CALIFORNIA — Last revised : 18-Mar-92

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES	Dogleg Deg/100Ft	Vert Sect
0.00	0.00	0.00	-2389.50	849.00 S 3184.00 W	0.00	0.00
100.00	1.29	167.32	-2289.51	850.10 S 3183.75 W	1.29	-0.38
200.00	1.48	174.33	-2189.54	852.48 S 3183.38 W	0.25	-1.35
300.00	1.47	157.81	-2089.57	854.95 S 3182.77 W	0.42	-2.17
400.00	1.37	160.58	-1989.60	857.27 S 3181.88 W	0.12	-2.67
500.00	1.41	157.73	-1889.63	859.54 S 3181.02 W	0.08	-3.16
600.00	1.66	138.65	-1789.66	861.76 S 3179.60 W	0.56	-3.16
700.00	1.52	142.73	-1689.70	863.90 S 3177.84 W	0.18	-2.84
800.00	1.41	143.58	-1589.74	865.95 S 3176.30 W	0.11	-2.64
900.00	1.44	137.27	-1489.77	867.86 S 3174.72 W	0.16	-2.34
995.00	1.18	137.48	-1394.79	869.46 S 3173.25 W	0.27	-1.96
1025.00	1.09	141.70	-1364.80	869.91 S 3172.86 W	0.41	-1.88
1055.00	1.29	137.14	-1334.80	870.38 S 3172.46 W	0.74	-1.79
1085.00	1.15	120.74	-1304.81	870.78 S 3171.97 W	1.25	-1.60
1115.00	1.50	98.25	-1274.82	871.00 S 3171.32 W	2.07	-1.16
1145.00	1.86	86.29	-1244.83	871.02 S 3170.45 W	1.67	-0.44
1175.00	2.32	75.69	-1214.85	870.84 S 3169.37 W	2.00	0.56
1205.00	2.70	70.81	-1184.88	870.46 S 3168.12 W	1.45	1.82
1235.00	4.14	62.78	-1154.94	869.73 S 3166.49 W	5.05	3.59
1265.00	4.50	61.05	-1125.02	868.66 S 3164.49 W	1.28	5.84
1295.00	5.17	59.79	-1095.13	867.41 S 3162.30 W	2.26	8.37
1356.00	6.50	57.00	-1034.44	864.15 S 3157.02 W	2.23	14.57
1417.00	8.25	54.00	-973.95	859.70 S 3150.59 W	2.94	22.39
1487.00	9.75	58.00	-904.81	853.60 S 3141.50 W	2.32	33.33
1611.00	9.75	58.00	-782.60	842.48 S 3123.69 W	0.00	54.33
1769.00	10.00	60.00	-626.95	828.53 S 3100.46 W	0.27	81.41
1924.00	9.50	62.00	-474.18	815.79 S 3077.51 W	0.39	107.60
2080.00	9.00	62.00	-320.21	804.02 S 3055.37 W	0.32	132.60
2235.00	9.00	61.00	-167.12	792.45 S 3034.06 W	0.10	156.78
2387.00	9.00	63.00	-16.99	781.29 S 3013.07 W	0.20	180.48
2541.00	9.00	61.00	135.11	769.98 S 2991.81 W	0.20	204.49
2695.00	8.50	61.00	287.32	758.62 S 2971.32 W	0.32	227.87
2848.00	8.00	59.00	438.73	747.66 S 2952.30 W	0.38	249.80
3005.00	8.00	59.00	594.21	736.40 S 2933.57 W	0.00	271.64
3188.00	7.50	62.00	775.54	724.24 S 2912.11 W	0.35	296.28
3313.00	7.25	61.00	899.50	716.58 S 2898.01 W	0.22	312.28
3398.00	8.00	49.00	983.75	710.10 S 2888.85 W	2.06	323.49
3495.00	10.00	57.00	1079.56	701.09 S 2876.69 W	2.43	338.59
3650.00	10.00	55.00	1232.20	686.04 S 2854.38 W	0.22	365.49
3806.00	9.25	56.00	1386.01	671.26 S 2832.89 W	0.49	391.56
3960.00	8.75	56.00	1538.11	657.79 S 2812.92 W	0.32	415.64
4081.00	8.25	56.00	1657.78	647.78 S 2798.09 W	0.41	433.52
4142.00	8.20	56.90	1718.15	642.96 S 2790.82 W	0.23	442.25
4234.00	9.60	52.00	1809.04	634.66 S 2779.28 W	1.73	456.45
4296.00	10.20	50.60	1870.12	627.99 S 2770.96 W	1.04	467.04
4359.00	10.00	52.70	1932.15	621.13 S 2762.30 W	0.66	478.03
4513.00	9.75	53.00	2083.86	605.18 S 2741.25 W	0.16	504.36
4636.00	10.00	53.00	2205.04	592.49 S 2724.40 W	0.20	525.39
4759.00	9.75	53.00	2326.22	579.79 S 2707.56 W	0.20	546.42
4884.00	9.75	53.00	2449.41	567.05 S 2690.65 W	0.00	567.53

All data is in feet unless otherwise stated
Coordinates are from Station 84 and TVDs are from mean sea level.
Vertical section is from wellhead on azimuth 57.41 degrees.
Calculation uses the minimum curvature method.

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES	Dogleg Deg/100Ft	Vert Sect
5038.00	9.75	52.00	2601.19	551.18 S 2669.96 W	0.11	593.51
5251.00	10.00	52.00	2811.03	528.69 S 2641.18 W	0.12	629.88
5467.00	10.25	52.00	3023.67	505.31 S 2611.25 W	0.12	667.68
5683.00	10.50	49.00	3236.14	480.57 S 2581.26 W	0.28	706.29
5838.00	10.75	49.00	3388.48	461.82 S 2559.69 W	0.16	734.56
6022.00	10.75	49.00	3569.25	439.30 S 2533.78 W	0.00	768.51
6114.00	10.75	48.00	3659.64	427.93 S 2520.93 W	0.20	785.46
6184.00	10.90	49.90	3728.39	419.30 S 2511.02 W	0.55	798.46
6275.00	11.70	55.50	3817.63	408.53 S 2496.83 W	1.49	816.22
6337.00	11.90	56.20	3878.32	401.41 S 2486.34 W	0.40	828.89
6398.00	12.10	56.90	3937.99	394.42 S 2475.76 W	0.40	841.57
6489.00	12.10	56.20	4026.97	383.91 S 2459.84 W	0.16	860.64
6601.00	12.75	57.00	4136.34	370.65 S 2439.72 W	0.60	884.74
6736.00	12.75	59.00	4268.01	354.86 S 2414.46 W	0.33	914.53
6888.00	12.50	59.00	4416.34	337.75 S 2385.98 W	0.16	947.74
7073.00	12.50	60.00	4596.95	317.43 S 2351.48 W	0.12	987.75
7290.00	12.75	56.00	4808.71	292.30 S 2311.29 W	0.42	1035.15
7443.00	12.25	55.00	4958.08	273.54 S 2284.00 W	0.36	1068.24

All data is in feet unless otherwise stated
Coordinates are from Station 84 and TVDs are from mean sea level.
Vertical section is from wellhead on azimuth 57.41 degrees.
Calculation uses the minimum curvature method.

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

No.T292-067

REPORT ON OPERATIONS

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

Ventura, California
March 3, 1992

Your operations at well "Porter" 69B, API No. 037-24127, Sec. 28, T. 3N, R. 16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles County, were witnessed on 3/1/92. S. Mulqueen, representative of the supervisor, was present from 1800 to 2100. There were also present Bill Killebrew, Consultant.

Present condition of well: 13 3/8" cem 1046'; 9 5/8" cem 7346'.
TD 7346' (drilling).

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

DECISION:

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

tkc

K.P. HENDERSON, Acting Chief

By Patrick J. Kinnear
Deputy Supervisor

OG109

API No. 037-24127 DIVISION OF OIL AND GAS 4 T 01

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator SOUTHERN CALIFORNIA GAS CO. Well "Porter" 69B
Field ALISO CANYON County LOS ANGELES Spud Date 1-28-93

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	3-1-92	S. MULQUEEN	(1800 to 2100)	BILL KILLEBREW	CONSULTANT
2nd			(to)		

Contractor KENAI DRILLING CO. Rig # 44 Contractor's Rep. & Title RICK GRIMES
Casing record of well: 13 3/8" cem 1046'; 9 5/8" cem 7346', TD 7346' (drilling).

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

Proposed Well Opns: DRILL . MACP: psi
Hole size: 17 1/2" fr. SURF' to 1046' , 12 1/4" to 7346 TD & " to '

REQUIRED BOPE CLASS: III B 5M

CASING RECORD OF BOPE ANCHOR STRING

Size	Weight(s)	Grade(s)	Shoe at	CP at
13 3/8"	54.5 #	K-55	1046'	
9 5/8"	47#	N-80	7346'	

Cement Details

FLOAT COLLAR @ 1040', cem w/ 1093 cf, 2-1-92
FLOAT SHOE @ 7348', INFLAT. PKR. 7313
2-27-92 CEM W/ 2508 cf

Top of Cement

Casing	Annulus
1040'	SURFACE
7348'	SURFACE

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
A	—	HYDRIL	GK	10	5000	
RD	4 1/2	SHAFFER	B	10	5000	
RD	CSO	"	B	10	5000	

TEST DATA

Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
REVIEWED		CHART			3-1	2400
	"				3-1	3500
	"				3-1	3500

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3000 psi
Total Rated Pump Output ____ gpm
Distance From Well Bore 95 ft.

	Accum. Manufacturer	Capacity	Precharge
1	KOOMEY	120 gal.	1000 psi
2		gal.	psi

CONTROL STATIONS

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

EMERG. BACKUP SYSTEM

				Press.	Wkg. Fluid
X	N_2 Cylinders	1	L= "	1850	gal.
	Other:	2	L= "	1900	gal.
		3	L= "	1950	gal.
		4	L= "		gal.
		5	L= "		gal.
		6	L= "		gal.
			TOTAL:		gal.

TOTAL:

AUXILIARY EQUIPMENT

		No.	Size (in.)	Rated Press.	Connections: Weld	Flange	Thread	Test Press.
X	Fill-up Line							
X	Kill Line		2	5000	✓	✓	✓	3400
X	Control Valve(s)	3		"		✓		3400
X	Check Valve(s)	1		"		✓		3400
X	Aux. Pump Connect.			"			✓	3400
X	Choke Line		3 1/4	5000	✓	✓	✓	3400
X	Control Valve(s)	13		"		✓		3400
X	Pressure Gauge						✓	
X	Adjustable Choke(s)	2	3			✓		—
X	Bleed Line		3		✓	✓	✓	
X	Upper Kelly Cock							—
X	Lower Kelly Cock		4 1/2	5000				—
X	Standpipe Valve							3400
X	Standpipe Press. Gauge							
X	Pipe Safety Valve		4 1/16	3000				—
X	Internal Preventer		4 1/16	"				—

HOLE FLUID MONITORING EQUIPMENT

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

Hole Fluid Type	Weight	Storage Pits (Type & Size)
CLAY GEL	9.3 #/g	600 BBL
" "	69 #/cf	350

REMARKS AND DEFICIENCIES:

AIR LINE SHUT-OFF VALVE ON ACCUMULATOR HAS AIR LEAK - CORRECTED 3-1-92

OGD9 (12/90/GSR1/2M) 3/3

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

No. P292- 53
Field Code 10
Area Code 00
New Pool Code 30
Old Pool Code 30

PERMIT TO CONDUCT WELL OPERATIONS

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

Ventura, California
February 20, 1992

Your supplementary proposal to drill well "Porter" 69B, A.P.I. No. 037-24127, Section 28, T. 3 N, R. 16W, S.B. B.&M., Aliso Canyon field, amu area, Sesnon-Frew pool, Los Angeles County, dated 2/3/92, received 2/13/92, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Requirements specified in permit No. P292-32, dated January 12, 1992 shall apply.
2. A MIT shall be run within 3 months after well is used for injection.

NOTE: The use of a external casing packer is not an approved alternative for a MIT test.

Blanket Bond
SF:ljg

Engineer Steve Fields

Phone (805) 654-4761

K.P. HENDERSON, Acting Chief

By Patrick J. Kinnear
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.
OG111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

VENTURA, CALIFORNIA

FEB 13 1992

RECEIVED
DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS

SUPPLEMENTARY NOTICE

FOR DIVISION USE ONLY			
BOND	FORMS		EDP WELL FILE
	OGD114	OGD121	
✓	–	✓	

Ventura Calif.

A notice to you dated January 8, 1992, stating the intention to

drill (Drill, rework, abandon), Porter 69B (Well name and number), API No. 037-24127,

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

Los Angeles County, should be amended because of changed conditions.

The present condition of the well is as follows:

Total depth

Complete casing record including plugs and perforations:

We now propose

In addition to the initial notice, a 9-5/8" external casing packer will be installed and inflated with cement at approximately 7300' (TVD). This step to be completed in lieu of a noise log to confirm a complete water shut-off has been accomplished.

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

Address 555 W. Fifth St. (Street)
Los Angeles (City) CA. (State) 90013-1011 (Zip)
Telephone Number (213) 244-2666

Southern Calif. Gas Co. (Name of Operator)
Type of Organization Corporation (Corporation, Partnership, Individual, etc.)
By J. B. Lane (Name) 2/3/92 (Date)
Signature J. B. Lane 63F9892

OG123 (3/82/GSR1/5M)

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

No.T292- 36

REPORT ON OPERATIONS

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

Ventura, California
February 20, 1992

Your operations at well "Porter" 69B, API No. 037-24127, Sec. 28, T. 3N, R. 16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles County, were witnessed on 2/2/92. Bruce Hesson, representative of the supervisor, was present from 1300 to 1800. There were also present Bill Killebrew.

Present condition of well: 13 3/8" cem to 1046'. TD 1046' (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.

ljg

K.P. HENDERSON, Acting Chief

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

OG109

API No. 037-24127 DIVISION OF OIL AND GAS T 86

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator Southern Calif. Gas Co. Well "Porter" 69B
Field Aliso Canyon County Los Angeles Spud Date

VISITS: Date / Engineer / Time / Operator's Rep. / Title
1st 2/2/92 B. Hesson (1200 to 1300) Bill Killebrew Drilling Foreman
2nd (to)

Contractor Kenai Rig # 44 Contractor's Rep. & Title Dick Hoar, Toolpusher

Casing record of well: 13 3/8" cmt to 1046', TD 1046 (Drilling)

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

Proposed Well Opns: MACP: psi
Hole size: 17 1/2 " fr. 0 ' to 1046 ' , " to ' & " to '

REQUIRED BOPE CLASS: III B 3M

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	FCP at		Casing	Annulus
13 3/8	54.5	K-55	1046'	1006	Cemented with 951 sx. Good Returns	1006	Surf.

BOP STACK							TEST DATA						
API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul	Gal. to Close	Recovery Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
A	—	Shaffer	GK	13 5/8	3000		8.6 (w/4 1/2" DP)						2000
Rd	4 1/2	"	E	"			3.55 + 2.9 (open)						2500
Rd	CSO	"	E	"			—			Bad J. Bipper -			2500

TOTAL: 15.05

ACTUATING SYSTEM
Accumulator Unit(s) Working Pressure 1500 psi
Total Rated Pump Output — gpm
Distance From Well Bore 50 ft.

	Accum. Manufacturer	Capacity	Precharge
1	Koomey	120 gal.	750 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= "	2150	9.0 gal.
	Other: 3	2	L= "	2050	8.5 gal.
		3	L= "	2050	8.5 gal.
		4	L= "		gal.
		5	L= "		gal.
		6	L= "		gal.
				TOTAL	26.0 gal.

	AUXILIARY EQUIPMENT	No.	Size (in.)	Rated Press.	Weld	Flange	Thread	Test Press.
✓	Fill-up Line							
✓	Kill Line		2	3000	✓	✓	✓	2500
✓	Control Valve(s)	2				✓		
✓	Check Valve(s)	1				✓		
✓	Aux. Pump Connect.						✓	
✓	Choke Line		4		✓	✓	✓	
✓	Control Valve(s)	13				✓		
✓	Pressure Gauge						✓	
✓	Adjustable Choke(s)	2	4			✓		
✓	Bleed Line		2		✓		✓	
—	Upper Kelly Cock	Not Tested						
✓	Lower Kelly Cock		4 1/2					
✓	Standpipe Valve							
✓	Standpipe Press. Gauge							
✓	Pipe Safety Valve		4 1/2					
—	Internal Preventer		4 1/2					

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

Hole Fluid Type	Weight	Storage Pits (Type & Size)
CB Mud	—	

REMARKS AND DEFICIENCIES:

OGD9 (12/90/GSR1/2M)

2/10

MEMO DUM OF TELEPHONE OR PERSONAL CO. ERSATION

VENTURA, Calif.

1-22 1992

Operator SO. CALIF. GAS CO. Well No. "PORTER" 69 B

Field ALISO CANYON Sec. T. R. B&M

personal
A telephone conversation was held, concerning above well, with Mr. JIM HEMMERLY

(213) 244-2687 for above operator on 1-22 1992 at AM.

Details of the conversation were as follows:

HEMMERLY CALLED REGARDING THE PREPARATION OF A "BLOWOUT PREVENTION & CONTROL PLAN" AS REQUIRED ON THE "PERMIT TO DRILL". HE WAS INFORMED THAT IT SHOULD INCLUDE:

1. BOPE REQUIREMENT
   A. DRILLING
   B. WORKOVER
2. TEST SCHEDULE
   C.D.O.G. WITNESS
   WEEKLY TESTS
3. CREW TRAINING & DRILLS
4. TEST PROCEEDURE
5. KICK CONTROL
   A. SHUT-IN PROCEEDURE
   B. WEIGHT-UP MUD
   C. CIRCULATING KICK
   D. REPORT TO CDOG.

(Signed) Stephen Mulqueen

Title

OG136 (11-74-GSR1-5M) (see reverse side for proposed well operations)

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

No. P292-32
Field Code 10
Area Code 00
New Pool Code 30
Old Pool Code ---

PERMIT TO CONDUCT WELL OPERATIONS
GAS STORAGEu

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

Ventura, California
January 13, 1992

Your proposal to drill well "Porter" 69B, A.P.I. No. 037-24127, Section 28, T. 3 N, R. 16W, S.B. B.&M., Aliso Canyon field, any area, Sesnon-Frew pool, Los Angeles County, dated 1/8/92, received 1/9/92, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

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

Engineer Steve Fields

Phone (805) 654-4761

K.P. HENDERSON, Acting Chief

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.
OG111

11. THIS DIVISION SHALL BE NOTIFIED:
    a. To witness a pressure test of the blowout prevention equipment prior to drilling out the shoe of the 13 3/8" casing. Prior to notifying the division engineer to witness the test, the blind rams must be tested. Information of the blind ram test must be entered on the tour sheet along with the signature of the person in charge.
    b. To witness a Mit Survey within three months after injection has commenced.

Blanket Bond
SF:ljg

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

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

DIVISION OF OIL AND GAS
RECEIVED
JAN 9 1992
VENTURA, CALIFORNIA

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		✓	93	✓	✓

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well Porter #69B, well type Gas Storage, API No. 037-24127 (Assigned by Division),

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

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

Not applicable, owned by Southern California Gas Co. in fee

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

Location of well _____ feet _____ (Direction) ~~along section/property line~~ (Cross out one) and _____ feet _____ (Direction)

at right angles to said line from the _____ ~~corner of section/property~~ (Cross out one) or

848.88' South and 3183.88' West of Station #84

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

If well is to be directionally drilled, show proposed coordinates (from surface location) at total depth:
190 feet South (Direction) and 2215 feet West of Station 84 (Direction)

Elevation of ground above sea level 2365.62 feet.

All depth measurements taken from top of Kelly bushing (Derrick Floor, Rotary Table, or Kelly Bushing) that is 12-20 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#	J-55	0	1100'	1100'	Surface
9-5/8"	47#	N-80	0	8200'	8200'	7100'
5-1/2"	17#	J-55	8140'	8600'	Gravel	Flow Pack

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

Intended zone(s) of completion Sesnon and Upper Frew (Name, depth, and expected pressure) Estimated true vertical depth 7578'

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

Name of Operator	Type of Organization (Corporation, Partnership, Individual, etc.)	
Southern California Gas Co.	Corporation	
Address	**City**	**Zip Code**
P. O. Box 3249, Terminal Annex	Los Angeles	90013
Telephone Number	**Name of Person Filing Notice**	**Signature** / **Date**
(213) 244-2666	J. B. Lane	1-8-92

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

OG105 (9/83/GSR1/5M)

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.