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

Rec'd 08-15-16 DOGGR Ventura.

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 68 B
A.P.I. No. 03724136
Date: 7/25/2016
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles
Surface Location: S. 27, T3N, R16W, S.B.B.&M.
Name: Tom McMahon Title: SIMP Project Manager
(President, Secretary, or Agent)
Telephone Number: 714-398-5020
Signature: Thomas E McMahon
(Person Submitting Report)

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

Start Date	Ops this Report (DOGGR)
4/4/2016	Held Safety Meeting; JSA- MIRU Ensign Rig 334. Layout containments & spot equipment & trailers. Install Tanks (2) tanks and pump. Skip loader to build base to spot rig.. Move in generator and doghouse.
4/5/2016	Held Safety Meeting; JSA- Vac. trucks offloaded 861 bbls of 8.5 ppg polymer fluid. R/U lights and Aux.equip around location. R/U hoses T/pump. ONXY rigged up hard lines T/Kill well through separator. Pumped 40 bbls of high Vis pill and displaced 38 bbls of 8.4 ppg of polymer. Proceeded with kill schedule pumping 465 bbls of fluid bleeding well into withdraw system, then into tank. Pumped additional 80 bbls to circulate out entrained gas. Monitor well. Static. Break out and remove production tree. Installed double gate and Annular preventor. Flanged and secured BOPE. Shut in well, secured location. Note; Crew member pinched two fingers installing bolt on Annular; First Aid- No loss time
4/6/2016	Held Safety Meeting; JSA- Remove Annular and 3 damaged bolt and chased threads, reinstall Annular. R/U BOPE & choke manifold and individual valves. Installed correct studs on outlet of double gate (not showing full threads). Test controls and check for leaks. Install Rig floor/stairs and supports. Secure location.
4/7/2016	Held Safety Meeting; JSA- Tbg and Csg has 200 psi/ bled down T/0 psi. Pumped 50 bbls down Tbg & got returns after 20 bbls, hole staying full. MIRU Weatherford BOPE testing unit. Test all safety vales/choke manifold/ and stack. 300 psi low & 5000 psi high. Note; The new Annular preventor bleeding down. Troubleshoot and piston seals in bag leaking. Pulled up Rig floor. Installed new Hydril bag and Re-tested. Good. Loosened lock down screws. Unset the Guiberson (Uniset IV) Packer & pull and laydown two joints of J-55 Tbg. Install TIW vlv & secure well and location. Note; DOGGER- Inspection; Erine Blevins inspected and approved BOPE installation.@ 1000 hrs and signed off.
4/8/2016	Held Safety Meeting; JSA-Check well. 0 PSI on both the tubing and the casing. Open Well and fill casing w/ 6 BBLS of 8.6 PPG polymer. POOH with Injection assembly standing back 2-7/8" J55 Production String. Pumping iron displacement every 10 stands. Lay down side pocket mandrel, XN nipple and Packer. No noticeable damage to equipment. Make up and RIH W/ 9-5/8" 47# Positive Casing scraper and Bumper sub. Tally Tubing in the hole. Rig started losing power 50' above the Liner top. Attempt to trouble shoot problem. Called out mechanic. Secured Well and Location for Night. Cleaned Location and Hauled off trash.
4/9/2016	Held Safety Meeting; JSA - 0 psi on well, added 6 bbls to fill. RIH and Tagged TOL @ 6648' (12' Deeper than on program 6632') POOH Standing Back tubing. Break down and lay down Scraper Assembly. Make up and RIH with 2-7/8" saw tooth collar. Tagged Bottom @ 7195' (12' deeper than on program 7183') Rigged up swivel and hoses. Reverse circulate 60 BBLS getting oil polymer in the returns. Shut pump off. Tubing flowing. Pump 20 BBLs down Tubing. Opened well and still flowing. Pumped 45 BBLs down Tubing. Monitor well. Well Static. Assisted Vac Truck drivers in pulling fluids from cellar and containments. Pull 15 stands out of the hole. Secure well and location for the weekend. Clean location and Hauled off trash.

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Name: Tom McMahon Title: SIMP Project Manager
(President, Secretary, or Agent)
Telephone Number: 714-398-5020

Signature: _____
(Person Submitting Report)

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Start Date	Ops this Report (DOGGR)
4/11/2016	Held Safety Meeting; JSA- 0 psi on well, added 13 bbls of fluid. Pulled 3 stands. ** Downtime- 1 hr.; Due to Rig engine stalling. Called out Cummins mechanic. Got engine to staying online. POOH w/ kill string Install Logging flange/Pack off; M/U & RIH with GYRO logging tool. Log F/7138' to surface. R/D SDI . Straight hole down to Liner with 5 degree inclination @ TD. M/U saw tooth collar and RIH with Kill string of 20 stands. Install TIW vlv and Secure well. (4) Mechanics on location troubleshooting Engine issues (Electrical)
4/12/2016	Held Safety Meeting; JSA 0 psi on well and full. Make up and RIH with Baker Oil Tools 9-5/8" Retrievable Bridge Plug. Set and released from packer @ 1057'. Fill and Surface test casing to 500 PSI for 5 minutes. Engage and release packer. Continue to RIH. Set and Released from Packer @ 6626'. Pull tail to 6580' Fill Casing and Test to 600 PSI for 10 minutes. Test good no leaks or bleed off. Rig up pumping swivel. Condition hole pumping 90 BBLs of 8.6 PPG polymer down tubing up casing taking returns to mud pit. Dump Ten 5 Gal buckets of sand down tubing while flushing it with fresh water. Work tubing to help sand Fall. Pumped 15 BBLs down tubing of 8.6 PPG polymer. Work tubing. RIH and Tagged sand Cap @ 6620'.POH with Retrieving tool leaving 40 Joints as a kill string. Secure well.
4/13/2016	Held Safey Meeting; JSA - 0 psi on well. MIRU Schlumberger Wire line equipment. Make up USIT logging tools. Strip on and make up logging flange.RIH with Schlumberger USIT logging tools. Tagged Top of sand cap @ 6600'. Performed USIT (Neutron, CBL, GR) log F/6600' to Surface. Break down logging tools. RDMO Schlumberger logging Equipment. RIH with Kill String. Secure well and location for night. **** Crew Preformed Weekly BOP Drill ****
4/14/2016	Held Safety Meeting; JSA= 0 psi on well. POOH with Kill String.MIRU Baker Wire Line Surface equipment. M/U and RIH with Baker HRVRT/ICAL logging tools. Log F/ 6603' to Surface. Break down tools. M/U and RIH with Baker 56 Arms Caliper tool. Caliper Log F/ 6603' to Surface. RIH and Re-Log Critical Areas. Log 11' piece of True 9-5/8" Casing at Surface. Rig down and move off Baker wire line equipment. Make up and Spider in the hole with BOT 9-5/8" Retrievomatic Test Packer. RIH to 40 Jt Kill String. Secure well and location for night.

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Operator: Southern California Gas Company
Well: Porter 68 B
A.P.I. No. 03724136
Date: 7/25/2016
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles
Surface Location: S. 27, T3N, R16W, S.B.B.&M.
Name: Tom McMahon Title: SIMP Project Manager
(President, Secretary, or Agent)
Telephone Number: 714-398-5020
Signature: _____
(Person Submitting Report)

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Start Date	Ops this Report (DOGGR)
4/15/2016	Held Safety meeting; JSA- 0 psi on well. Continue to RIH with BOT 9-5/8" Retrievomatic Test Packer and Set with COE @ 3505'. ***Note: Running in the hole slowly due to high wind conditions. *** Rig up Hoses to Tubing and Casing. Fill and Pressure test Casing F/3505' to Surface to 2500 PSI. No leaks or bleed off. DOGGR: Clifford Knight here to witness pressure test. Signed off Pros Arrived on location. Held PJSM with all personnel on location. MIRU Pros Testing Equipment. Pressure Test and Chart Record Casing Pressure to 3701 PSI for 1 Hour. Lost 20 PSI in 1 Hour.Bled off Casing Pressure. Rig up hose to tubing. Pressure test and Chart record Casing Pressure F/ 3505'-6626' to 2300 PSI for 1 Hour. Lost 7 PSI in 1 Hour. TEST GOOD: Bleed off pressure. Release BOT Test Packer. POOH Standing back work string. Rig Down Tubing Equipment and Raised work floor. Remove Class III BOPE. Bleed off pressure in well head pack off. Attempt to break out nuts with hammer wrenches nuts were too tight. Use Hydraulic Torque wrench and Impact gun to remove Nuts. *** Nuts took long time due to tightness cause by Rust. *** Made several attempts to un-land well head working it F/5K-25K. Unable to get well head free. Decision was made to Secure well and location and return in morning with welders assistance. Secure well and location
4/16/2016	Held Safety Meeting; JSA- 0 psi on well. Get Hot Work Permit. Prep well area for cutting Well head studs. Cut off head bolts & DSA. Work head free (lots of rust up throughout) Removed DSA with Rig. Cleaned out bolt holes and surface flange, sent off head wit Cameron. Install X- over spool and Double gate. Pressure up Accumulator, function test & close in blind Rams. Lock out Blind Rams Rig up raised work floor. Clean and secure well and location
4/18/2016	Arrive on Location. Held PTSM. Reviewed JSA. Service Rig and Equipment. MIRU Weatherford Wire Line Surface Equipment. Make up and RIH with Weatherford Casing Imaging Tool and 60 Arm Multi Sensor Caliper Logging tools, Perform CIT/MSC Log F/6604-Surface. Lay Down tools. M/U and RIH with Ultra Sonic Radial Scanner and Cement Bond logging tools. Perform URS/CBL Log F/6604'-Surface. RDMO Weatherford Wire Line Surface Equipment. Secure well and Location for the night.

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A.P.I. No. 03724136
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Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles
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Name: Tom McMahon Title: SIMP Project Manager
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Start Date	Ops this Report (DOGGR)
4/19/2016	Arrive on Location. Held PTSM, Review JSA. Service Rig and Equipment. Rig Down Raised work Floor. Nipple down Double Gate and Cross over spool. Cameron Field Service Rep Replaced Primary Packing at Well Head. Attempt to Install Double studded adapter but unable to push adapter over 9 5/8" Csg. Note; Seal Groove is not machined deep enough for seal to expand over Csg. Inspected Double studded adapter and Decision was made to send in adapter to Cameron shop for machining Load up adapter on Cameron Field Service truck. Install Cross over flange and Double Gate. Function Test and Closed Blind Rams. Secure well and location for night.
4/20/2016	Attend Ensign Monthly Safety Meeting at Holiday Inn in Valencia. Drove to Location. Held PTSM. Reviewed JSA. Serviced Rig and Equipment. Remove Double Gate and Cross Over Spool. Installed Double Studded Adapter and Well Head Spool. Cameron Field Service Rep Filled and Tested Pack off to 3625 PSI for 20 minutes & charted. Test Good with no leaks or bleed off. Continue installing Class III BOPE and Hoses. Function tested all Preventers. Test Good. Rig up Raised Work Floor and Tubing Equipment. Rig up Plastic around floor for containment. Make up and RIH with BOT RBP Retrieving head. Install Circulating Head. Rig up Production swivel. Clean out Sand to top of RBP and reverse out well clean. Engage RBP and activate unloader. Let well equalize. release BOT RBP.
4/21/2016	Arrived on Location. Held PTSM, Reviewed JSA. Serviced Rig and Equipment. Checked Pressure on well. Tubing and Casing 0 PSI and on slight vacuum. Fill casing pumping 5 BBLS of 8.6 PPG Polymer. POOH and Laid Down BOT RBP. Pump Iron Displacement every 10 stands. Packer had no noticeable damage or missing elements. Rigged up tubing trailer platform. RIH with saw tooth collar and Work String. POOH Lay down Laid down L-80 work string. Secured the well and Held Meal Break. POOH laying down Old Production String on Trailer. Laid Down total of 174 leaving a 40 joint kill string. Secured well and Location for Night.

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Date: 7/25/2016
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Start Date	Ops this Report (DOGGR)
4/22/2016	Arrive on Location. Held PTSM, Review JSA. Service rig and equipment. Check Pressure on Well. Both tubing and casing with 0 PSI. Open well and Fill casing with 2-1/2 BBLs. POOH laying down 40 Joints of Production String. Rig Down Trailer walk around platforms. Moved out old Production String. Clean and Organized location while waiting on Trailer w/ Production String. Move in and Spot Trailer w/225 Joints of 2-7/8" L-80 Production string. Rig up Platforms on Trailer. Moved in and spot Weatherford Hydro test Unit. Held Safety meeting with all parties on location. Shut down for 30 minute meal break while Gas Company personnel Bleed Off and Vent gas in nearby lines. Make up and RIH with BOT 9-5/8" X 4" Hornet Packer, 4" X 2-7/8" Crossover, 2-7/8" X 10' PUP JT, 2-7/8" R Nipple with plug installed, 1 JT of 2-7/8" L-80 Prod String, 2-7/8" Sliding Sleeve, 1 JT of 2-7/8" L-80 Prod string. *** NOTE: Quality Tubular Field Service Rep Inspected and Seal Lubed each Connection*** Weatherford Hydro-Test Filled and Solid test assembly to 5000 PSI for 15 seconds. Test good. bleed off pressure. MIRU Western Wire Line Surface equipment. RIH and retrieved plug in R Nipple. RDMO Western Wire line. Rig up Weatherford Hydro testing Surface equipment. Continue to RIH w/ BOT 9-5/8" Hornet Packer Assembly P/U and Hydro Testing to 5,000 PSI 2-7/8" L-80 Prod String. Quality Tubular Field Rep inspected and seal lubed each connection. Picked up a total of 95 Joints. Secured well and Location for Night.
4/23/2016	Arrive on Location. Held PTSM, Reviewed JSA. Serviced Rig and Equipment. Check well pressure. 0 PSI on Tubing and Casing. Open Well. Tubing and Casing on slight vacuum. Fill well pumping 3 BBLS of 8.6 PPG Polymer. Continue to RIH w/ BOT 9-5/8" Hornet Packer Assembly P/U and Hydro Testing to 5,000 PSI 2-7/8" L-80 Prod String. Quality Tubular Field Rep inspected and seal lubed each connection. Picked up a total of 222 Joints. Spaced out by installing a 2-7/8" X 8' PUP JT. Installed Fatigue Nipple and Tubing Hanger. Rigged down Weatherford Hydro Testing Surface Equipment. Rigged up hoses to tubing and casing. Pumped 100 BBLS of 3% KCL Treated w/ Corrosion Inhibitor displaced with 30 BBLS of 8.6 PPG Polymer. Set Packer on 15K Compression with COE @ 6625.05', BXN Nipple @ 6609.80', and Sliding Sleeve @ 6578.47'. Run in Donut Rams and packing. Pressure Test Casing to 1000 PSI for 5 minutes. Good. Bleed off pressure. Secure well and location for night.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
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Well: Porter 68 B
A.P.I. No. 03724136
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Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300

Field: Aliso Canyon County: Los Angeles
Surface Location: S. 27, T3N, R16W, S.B.B.&M.
Name: Tom McMahon Title: SIMP Project Manager
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Telephone Number: 714-398-5020

Signature: _____
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Start Date	Ops this Report (DOGGR)
4/25/2016	Arrive on Location. Held PTSM, Reviewed JSA. Service Rig and Equipment. Rig down platforms around trailer. Move out trailer. MIRU Western Wire Line Surface equipment. RIH and set plug in BXN Nipple @ 6609'. POOH with Wire Line. M/U and RIH w/ Prong attachment. Install Prong attachment on plug. POOH with Wire line. RDMO Western Wire Line surface equipment. Install hose on tubing and Pressure up to 2000 PSI. MIRU Pros Test Truck. Chart Record Pressure Test Tubing F/ Plug @ 6609'-Surface. Pressured up to 3695 PSI for 1 Hour. Bled down 25 PSI in 1 hour. Bled down Tubing . Chart Record Pressure Test Casing F/ Packer Depth @ 6625'-Surface. Pressured up to 1100 PSI for 1 Hour. Bled down 4 PSI in 1 hour. RDMO Pros Testing Equipment. Pressure Tests Witnessed and Approved by Ernie B with the DOGGR. Rigged down tubing equipment and Raised work floor. Break down Kill line and hoses from Manifold. Remove Class III BOPE. Install Replacement well head. Cameron Serviced and Test Well Head to 300 PSI Low for 5 minutes and 5000 PSI High for 20 minutes. Test Good. Rig Down and Move Rig to side of Road. So Cal Gas Crew Removed Lateral line near next well. Move equipment to next well site Porter 68A. Clean well head. Secure Well. Assist stinger in moving and spotting Rig Mat, Manifold, hoses, and tangible equipment. Move and spot Rig Containment. Note; Heavy Rain/Hail with higher winds. DID NOT RAISE MAST

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 4/4/2016) for your well "Porter" 68B (037-24136).

Aliso Canyon Field, Los Angeles County, Sec. 27, 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
- [X] 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)

Gyro log ran 4/11/2016.

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)

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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. T216-0144

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
May 02, 2016

Your operations at well **"Porter" 68B**, A.P.I. No. **037-24136**, Sec. **27**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **4/25/2016**, by **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 216-0144
#16, I

INTERNAL MECHANICAL INTEGRITY TEST (MIT)

Completion → **(Standard Annulus Pressure Test-SAPT)**

Operator: So CA Gas					Well: "Porter" 68B
Sec. 27	T. 3N	R. 16W	B.&M. SB	API No.: 037-24136	Field: Aliso Canyon
County: Los Angeles					Witnessed/Reviewed on: 4-25-2016

Ernie Blevins, representative of the supervisor, was present from 0720 to 1430.

Also present were: Jesus Ortega w/ EASign Donnie Baldwin - Consultant Rig Manager

Casing record of the well:

2 7/8" L80

9 5/8" 47#

The Internal MIT was performed for the purpose of pressure testing the 9 5/8" casing above 6625.05' Hornet by Baker 9 5/8 x 2 7/8 (2) (prior to injecting fluid)

☒ The Internal MIT is approved since it indicates that the 9 5/8" casing has mechanical integrity above 6625' 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: 3695 → 3670 = Pass

2 7/8" BxN Nipple - Plug @ 6609'

2 7/8" Tubing 10:30 → 11:30 (-25 psi in 60 min)

2nd Test - Annulvar Space

Packer @ 6625' Pressure: 1100 psi → 1096 psi

Time: 1158 am → 1258 pm

9 5/8" CASING (-4 psi 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. T216-0130

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
May 05, 2016

Your operations at well **"Porter" 68B**, A.P.I. No. **037-24136**, Sec. **27**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **4/15/2016**, by **Clifford R. Knight**, 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

CRK/tkc
OG109

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

No. T 216-0130
16, 1

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

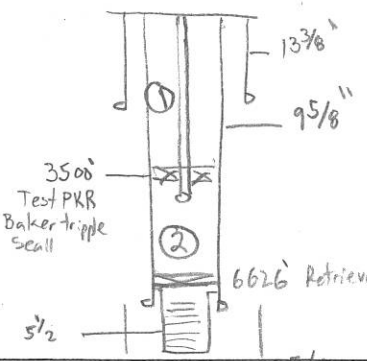
Operator: Southern California Gas					Well: Porter 68B
Sec. 28	T. 3N	R. 16W	B.&M. SB	API No.: 037-24136	Field: Aliso Canyon
County: Los Angeles					Witnessed/Reviewed on: C. Knight / 4-15-16

C. Knight, representative of the supervisor, was present from 0900 to 1200.

Also present were: Donnie Baldwin, Joel Romine, Matt Melnar (PROs Inc.)

Casing record of the well:

13 3/8" 0-799 (17.5" hole) 0-799'
9 5/8" 0-6800' (12 1/4" hole) 799-6800
5 1/2" 17# J-55 6636-7183'
8.5 ppg Polymer fluid
804' original Kickoff point
See well History: Note



① Surface pressure: 3701-3681 psi
Hydrostatic @3500': 1547 psi
Total pressure combo: 5248-5228 psi

② Surface pressure: 2300-2293 psi
Hydrostatic @6626': 2928 psi
Total pressure combo: 5228-5221 psi

The Internal MIT was performed for the purpose of pressure testing the 9 5/8" casing above 6626' (2) (prior to injecting fluid)

☒ The Internal MIT is approved since it indicates that the 9 5/8" casing has mechanical integrity above 6626' 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.

① Test
09:04 3701 psi
< 1% decrease
10:05 3681 psi

② Test
10:28 2300 psi
> -0.004% decrease
11:28 2293 psi

The 9 5/8" casing held 115% of reservior pressure from surface to 6626' for 1 hour. - CK

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No. T216-0109

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 14, 2016

Your operations at well **"Porter" 68B**, A.P.I. No. **037-24136**, Sec. **27**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **4/7/2016**, by **Ernest Blevins**, a representative of the supervisor.

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

DECISION:

APPROVED

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By _____
Patricia A. Abel
District Deputy

EB/tkc
OG109

API No. 037-24136 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T 216-0109

BLOWOUT PREVENTION EQUIPMENT MEMO #12, I

Operator So CA Gas Well "Porter" 68B Sec. 28 T. 3N R. 16W
Field Aliso Canyon County Los Angeles Spud Date

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	4-7-2016	Ernie Blevins	(0845 to 1015)		
2nd			(to)		

Contractor Ensign Rig # 334 Contractor's Rep. & Title
Casing record of well:
Donnie Baldwin - Consultant
Jesse - Safety Capt.

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: III 5M

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
A	CSO	Axon			5K	
Rd	2 7/8"	Shaffer			5K	
Rd	CSO	Shaffer			5K	

TEST DATA

Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
9.8						
2.8					4/7/16	5K
2.8					4/7/16	5K

TOTAL: 15.4

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 3050 psi
Total Rated Pump Output gpm Fluid Level
Distance from Well Bore 50' ft. 1/2 full

	Accum. Manufacturer	Capacity	Precharge
1	Weatherford	80 gal.	1200 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
4	N_2 Cylinders	1 L= 51 "	2600	8.5 gal.
	Other:	2 L= 51 "	2600	8.5 gal.
		3 L= 51 "	2630	8.8 gal.
		4 L= 51 "	2600	8.5 gal.
		5 L= "		gal.
		6 L= "		gal.
		TOTAL:		34.3 ga

AUXILIARY EQUIPMENT

IBOP

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

HOLE FLUID MONITORING	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)
HEC Polymer	8.5	800 bbls

REMARKS AND DEFICIENCIES:

OGD9 (9/00)

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

Operator: **Southern California Gas Company** WELL DESIGNATION **"Porter" 68B**

API No. **03724136** SE **28** T: **3N** R.: **16W** , **SB** B. and M.

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

Type of Notice: **Rework** **Date** **4/5/2016** **Report Number:** **P216-0038**

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 216-0038

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
April 06, 2016

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

Your proposal to **Rework** well **"Porter" 68B**, A.P.I. No. **037-24136**, Section **28**, T. **03N**, R. **16W**, **SB** B. & M., **Aliso Canyon** field, **Any** area, **Sesnon-Frew** pool, **Los Angeles** County, dated **4/4/2016**, received **4/5/2016** has been examined in conjunction with records filed in this office. (Lat: **34.316159** Long: **-118.550802** Datum:**83**)

THE PROPOSAL IS APPROVED PROVIDED:

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

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

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

ATTACHMENT 1
TO DOGGR ORDER 1109

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

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

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

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

REQUIRED TESTS FOR EACH WELL IN THE FACILITY

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

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

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

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

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

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

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

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

REQUIRED TESTS IF A WELL IS INTENDED TO RESUME OPERATIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

REQUIREMENTS FOR WELLS RESUMING OPERATIONS IN ALISO CANYON

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

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

Rec'd 04-05-16 DOGGR Ventura

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

P246-0038

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 68B, API No. 037-24136,

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

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

See attached wellbore schematic

The total depth is: 7330' feet. The effective depth is: 7183' 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		City/State	Zip Code
P. O. Box 2300		Chatsworth	91313-2300
Name of Person Filing Notice	Telephone Number:	Signature	Date
Brian Vlasko	(714) 655-9506		04/04/16
Individual to contact for technical questions:	Telephone Number:	E-Mail Address:	
Brian Vlasko	(714) 655-9506	bvlasko@semprautilities.com	

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

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

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

CRITICAL WELL DEFINITION

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

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

WELL OPERATIONS REQUIRING BONDING

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

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

WORKOVER PROJECT

Porter 68B – Well Inspection

DATE: April 5, 2016

OPERATOR: SOUTHERN CALIFORNIA GAS COMPANY

FIELD: ALISO CANYON

WELL: Porter 68B

API NUMBER: 037-24136

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

SURFACE LOCATION: SEC 27, T3N, R16W, S.B. B&M

OBJECTIVE

The intent of this program is to inspect the well integrity and remediate identified conditions as part of the Storage Integrity Management Program (SIMP). This project will include pulling 2-7/8" completion string, running casing inspection logs and a gyro survey, 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:	7330' md / 7183' md PBTD
Special Conditions:	Last tag on 07/26/1994 at 7183'
Casing Record:	13-3/8" 54.5# K-55 BTC casing cemented at 843' with 657 cuft. Class G 9-5/8" 47# N-80 LT&C casing cemented at 6800' with 2313 cuft. Class G 5-1/2" 17# J-55 LT&C Liner at 6636' – 7183' (0.012" WWS 6723' – 7181' & 0.012" Slots 6682' – 6723') GP'd w/ 808 cuft. 20-40 sand
Tubing Record:	See attached tubing detail as run on 07/26/1993

GEOLOGIC MARKERS (Surface Elev. 2100.5' above MSL)

S1	6774'md	-4617'vss	S6	6887'md	-4730'vss
S2	6810'md	-4653'vss	S8	6924'md	-4766'vss
S4	6853'md	-4696'vss	S14	7170'md	-5011'vss

Estimated Field Pressure: 1044psi on 04/04/2016 (Variable)

Estimated Bottom-hole Temperature: 174°F (as per 10/15/2014 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 circulating the well.

2. Complete slickline work as required to set-up well for circulation.

WELLWORK PROGRAM

1. Move in production rig and rig pump with tank, shaker, and mixer.

2. Spot 500 bbl Baker tanks and load with 8.5 ppg KCl brine.

   a.) Connect pump to the tubing and vent the casing through the choke manifold to the SoCalGas withdrawal system.
   b.) Treat all brine with Biocide, 5 gals/100 bbls.

3. Change well over to 8.5 ppg KCL brine. The tubing volume is approximately 38 bbls and the tubing/casing annulus is approximately 423 bbls. Use HEC polymer as required to minimize lost circulation.

   NOTE: Verify field surface pressure to ensure the proper well control fluid density is used prior to circulating well and for well control during workover operations.

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.) Pull back pressure valve from tubing hanger.

6. Pick up a 2-7/8", 6.5#, N-80 joint of tubing with safety valve, unset Halliburton G6 packer with ¼ right hand rotation and straight pull. Guiberson Uni IV packer at 6561' and POOH laying-down production tubing and tools.

7. Pick-up a 9-5/8", 47# casing scraper on 2-7/8" production string and RIH to top of liner at 6636'. Circulate well clean. POOH.

8. RIH with clean-out assembly for 5-1/2", 17# liner and RIH to clean out bottom of liner at 7183' or as deep as possible. POOH.

9. Rig-up wireline unit with lubricator as required. Run a gyro survey from PBTD @ 7183'md to surface.

10. Make-up and run a 9-5/8", 47# retrievable bridge plug (BP) on 2-7/8" production string. Set at approximately 6626' (10' above liner top), fill hole and pressure test and sand off. POOH and lay down BP retrieving head.

11. Rig-up wireline unit(s) with lubricator as required to run the following logs:

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

12. RIH with a 9-5/8", 47# test packer and run a Pressure Integrity Test on 9-5/8" casing from surface to BP to a minimum 115% of the wells maximum allowable operating pressure (3625 psi) as per attached Pressure Test Schedule. POOH with test packer.

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

13. 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.

14. Pick-up retrieving head for BP and RIH to top of sand. Circulate out sand. Release BP at approximately 6626', circulate with weighted brine as required to control well. POOH and laying down 2-7/8" production string and BP.

15. RIH with new completion string as follows (packer to be set at or above BP testing depth):

    a.) 4-1/2" L-80 EUE 8RD wireline re-entry guide
    b.) 4-1/2" 12.6# x 9-5/8" 47# EUE 8RD L-80 production packer
    c.) 4-1/2" 12.6# x 2-7/8" 6.5# EUE 8RD L-80 crossover sub
    d.) 10' pup joint 2-7/8" 6.5# L-80 EUE 8RD L-80 tubing
    e.) 2-7/8" 6.5# L-80 EUE 8RD XN no-go nipple (2.313" ID, 2.205" no go)

f.) Full joint 2-7/8" 6.5# L-80 EUE 8RD tubing
g.) 2-7/8" 6.5# EUE 8RD L-80 sliding sleeve
h.) Full joint 2-7/8" 6.5# EUE 8RD L-80 tubing
i.) 2-7/8" 6.5# L-80 EUE 8RD tubing to surface
j.) Pup joints 2-7/8" 6.5# L-80 EUE 8RD tubing for space-out
k.) 4' 2-7/8" 6.5# L-80 EUE 8RD fatigue nipple (pin x pin)
m.) Tubing hanger

Notes: Run sliding sleeve in closed position. Ensure new production packer depth is at or above depth at which retrievable bridge plug was used for pressure testing. Hydro-test production string.

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

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

18. Notify DOGGR to witness pressure tests of annulus to 1000 psi and tubing to 3625 psi. Both tests to be an hour in duration and recorded digitally.

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

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

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

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

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

WELL LATERAL HYDROTESTING

24. Per Gas Company Standard 182.0170, pressure test the tubing and casing well circulation 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.

25. Reinstall the hydro-tested laterals.

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

27. 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 run 07/26/1993

Quantity	Item	Length	Depth
1	KB	23.5	
1	Tubing Hanger	0.53	23.5
212	2-7/8", EUE 8rd tbg.	6426.82	24.03
1	2-7/8", EUE 8rd, pup jt.	4.1	6450.85
1	BSt MMA Mandrel 1-1/2" pocket	7.98	6454.95
1	2-7/8", EUE 8rd, pup jt.	1.67	6462.93
1	2-7/8", EUE 8rd tbg. - 1 joint	30.67	6464.6
1	Otis XD Sliding Sleeve 2.313"	3.2	6495.27
1	2-7/8", EUE 8rd tbg. - 1 joint	30.22	6498.47
1	Otis XN Nipple 2.205"	1.28	6528.69
1	2-7/8", EUE 8rd tbg. - 1 joint	30.2	6529.97
1	Crossover 2-7/8" EUE x 3-1/2" EUE	1	6560.17
1	9-5/8" Uni-IV Packer 8.25" OD / 4" ID	8	6561.17
1	4-1/2" x 6" Re-Entry Guide	0.5	6569.17
			6569.67

Note: All tubing is J-55

Casing Pressure Test Schedule

Well: Porter 68B

		External Casing Backup Pressure			Pressure Test Net Burst Pressure @ Depth				Tubing Leak Net Burst Pressure @		
Depth (TVD)	85% of Burst Strength	Fluid / Formation Pressure Gradient	External Casing Backup Pressure	Internal Water Hydrostatic	1	2	3	Final	Gas-Filled Annulus	Test Pressuree > 85% of Burst	Test Pressure < Tubing Leak - Net Burst (Gas-filled annulus)
				Surface Test Pressure	3625			2250	3625		
				Test Packer Depth	3500						
				Test Down Casing or Tubing	Casing			Tubing			
				Bridge Plug Depth				6626			
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		
6626	5840	0.00	0	2929	-			5179	4225		
				0.442 psi/ft int. grad.					0.091 psi/ft int. grad.		

Rec'd 04-05-16 DOGGR Ventura.

Well
Porter 68B

API #: 04-037-24136-00
Sec 28, T3N, R16W

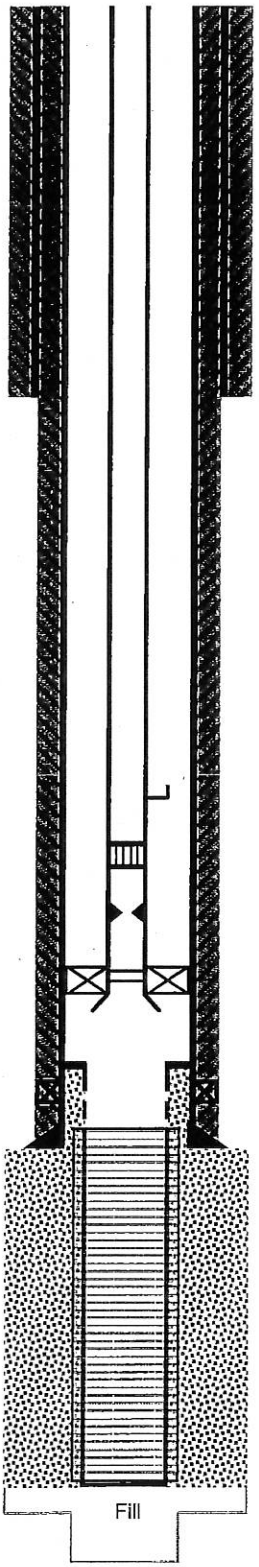
Operator: So. California Gas Co.

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

Ground Elevation: 2077' asl
Datum to Ground: 23.5' KB

Spud Date: 5/19/1993
Sidetrack Kick-off Date: 5/28/1993
Completion Date: 7/27/1993

Junk: None



Wellbore History
Orig. Hole (OH) TD @ 2209'
(See Porter 68B OH)
Sidetrack KOP @ 840'
TD @ 7330'

Notes
*Discovered shoe joint had screwed off & fell in orig. hole, see orig. hole for details.

Top of Zone Markers		
S1	6774'	(-4618')
S4	6853'	(-4696')
S8	6924'	(-4767')

TD 7330'
TD VSS (-5171')
Directionally Drilled: Yes (TD is 216' W, 767' N of Surf, 7272' TVD)

Prepared by: MAM (3/31/2016)

InterAct

Rec'd 04-05-16 DOGGR Ventura.

Well
Porter 68B

API #: 04-037-24136-00
Sec 28, T3N, R16W

Production Casing Pressure Test - Program

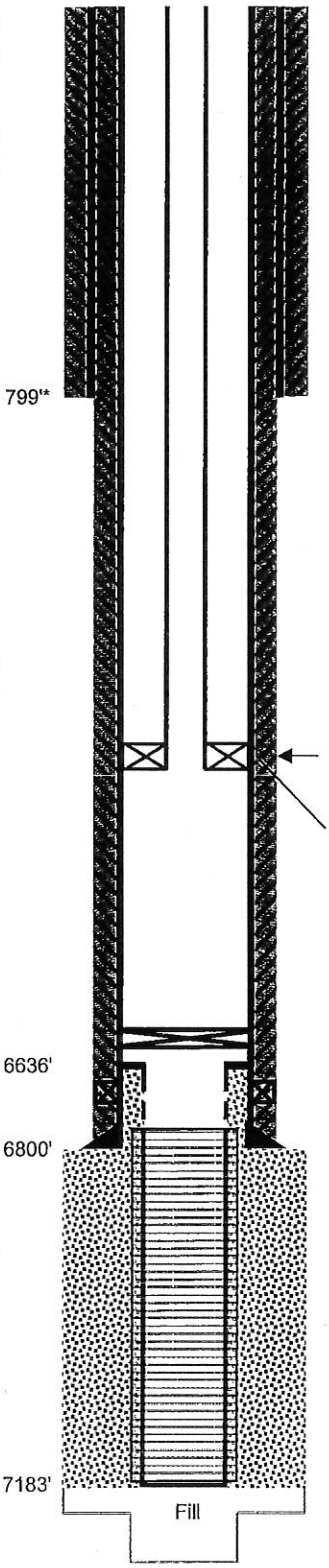
Operator: So. California Gas Co.

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

Ground Elevation: 2077' asl
Datum to Ground: 23.5' KB

Spud Date: 5/19/1993
Sidetrack Kick-off Date: 5/28/1993
Completion Date: 7/27/1993

Junk: None



Surface Casing
13-3/8", 54.5#, K-55
0' - 799'*

CMT'D w/ 657 CF

840' KOP (from Orig. Hole)
into this wellbore (See History)

TEST 3500' to Surface - 3625 psi
TEST 3500' to 6626' - 2250 psi

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

Production Casing
9-5/8", 47#, N-80
0' - 6800'

CMT'D w/ 1392 CF Foam CMT
+ 921 CF
+ 100 CF SQZ'D Top Job

6626' 9-5/8" Retrievable Bridge Plug

ECP Inflated w/ 1.27 BBLS CMT (Depth Not Reported)

Liner Perfs:
6682' - 6723' 0.012" Slots
6723' - 7181' 0.012" WWS

Gravel Packed w/
808 CF (120% of Calc'd) 20-40

Liner
5-1/2", 17#, J-55
6636' - 7183'

Wellbore History
Orig. Hole (OH) TD @ 2209'
(See Porter 68B OH)
Sidetrack KOP @ 840'
TD @ 7330'

Notes
*Discovered shoe joint had screwed off & fell in orig. hole, see orig. hole for details.

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TD 7330'
TD VSS (-5171')
Directionally Drilled: Yes (TD is 216' W, 767' N of Surf, 7272' TVD)

Prepared by: MAM (3/31/2016)

InterAct

JOINT	SPACING	TOTAL DEPTH	SUB TOTAL	MISC. DATA & DESC. ALISO CANYON PORTER 68-B TUBING DETIAL
		6569.67	0.00	0.00
1	0.50	6569.17	0.50	BELL NIPPLE 4-1/2 8RD 6" OD
2	8.00	6561.17	8.50	9-5/8 GUIBERSON PKR OD 8.25 ID4"
3	1.00	6560.17	9.50	CROSS OVER 2-7/8 EUE TO 3-1/2 EUE
4	30.20	6529.97	39.70	1-JOINT 2-7/8 J-55 EUE 8RD TUBING
5	1.28	6528.69	40.98	OTIS XN NIPPLE 2.205
6	30.22	6498.47	71.20	1-JOINT 2-7/8 J-55 EUE 8RD TUBING
7	3.20	6495.27	74.40	OTIS XD SLIDING SLEEVE 2.313 ID
8	30.67	6464.60	105.07	1-JOINT 2-7/8 J-55 EUE 8RD TUBING
9	1.67	6462.93	106.74	2-7/8 N-80 EUE 8RD PUP
10	7.98	6454.95	114.72	BST MMA MANDREL 1-1/2 POCKET
11	4.10	6450.85	118.82	2-7/8 N-80 EUE 8RD PUP
12	6426.82	24.03	6545.64	212- JOINTS 2-7/8 EUE 8RD TUBING
13	0.53	23.50	6546.17	SHAFFER TBG HANGER 11"X 2-7/8 EUE
14	23.50	0.00	6569.67	DRILLING RIG KB
15	0.00	0.00	0.00	TUBING UP WT# 45000
16	0.00	0.00	0.00	TUBING DOWN WT# 42000
17	0.00	0.00	0.00	RIG BLOCKS WT# 8000
18	0.00	0.00	0.00	LANDED 12000# PACKER AT 6561.17
19	0.00	0.00	0.00	LANDED 30000# ON TUBING HANGER
0	0.00	0.00	0.00	TO RELEASE PACKER PULL 2000#
0	0.00	0.00	0.00	OVER STRING WT# AND ROTATE 3 TURNS
0	0.00	0.00	0.00	TO RIGHT AND PICK UP
0	0.00	0.00	0.00	DUMMY VALVE IS IN MANDREL AT 6454.95
0	0.00	0.00	0.00	DATE 7-26-1993
0	0.00	0.00	0.00	0.00
0	0.00	0.00	0.00	0.00
0	0.00	0.00	0.00	0.00
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0	0.00	0.00	0.00	0

OPERATOR So C[illegible] GAS CO P.I. 037- 24136

WELL NO. "PORTER" 68B SECTION 27, T. 3 N, R. 16 W

MAP

INTENTION	DRILL	SUPP DRILL				
NOTICE DATED	5-3-93	5-27-93				
P-REPORT NUMBER	P293-148	P293-165				
CHECKED BY/DATE		PC 2-13-99				
MAP LETTER DATED						
SYMBOL		*				

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEE
NOTICE	5-5-93		6-1-93									
HISTORY	10-1-93											
SUMMARY	1-14-94											
E-LOG DIL	6-21-93											
MUD LOG	6-21-93											
DIPMETER												
DIRECTIONAL	6-21-93											
CORE/SWS												
CBL	6-7-93											
Csg Insp	6-7-93											
CD/NL	6-21-93											
DIGL	7-12-93											
Caliper	7-22-93											
MIT	OK	✓										

ENGINEERING CHECK

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

RECORD'S COMPLETE EDP 6/93 PC 2-13-99

FINAL LETTER OK

MAILED

RELEASED BOND

INJECTION BOOK

IDLE WELL LIST

SURFACE INSP. CARD

REMARKS:

OK TO RELEASE FROM CONFIDENTIAL

ABANDONED-REMOVED FROM E.D.P.

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

RECEIVED
JAN 14 1994
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
VENTURA, CALIFORNIA

API No. 037-24136

WELL SUMMARY REPORT

Operator	Well				
Southern California Gas Company	Porter 68B				
Field	**County**	**Sec.**	**T.**	**R.**	**B.&M.**
Aliso Canyon	Los Angeles	27	3N	16W	SB

Location (Give surface location from property or section corner, street center line and/or California coordinates)
425' South and 1359' West of Station 84

Elevation of ground above sea leve
2077'

Commenced drilling (date): 5/19/93
Completed drilling (date): 7/27/93
Commenced producing (date):
☐ Flowing ☐ Pumping ☐ Gas lift

Name of producing zone(s)
Sesnon
Frew

Total depth (1st hole)	(2nd)	(3rd)
2209	7330	

Present effective depth: 7183' MD.

Junk
13-3/8" 54.5# K55, Buttress casing and float shoe 990' - 1034'.

Depth measurements taken from top of:
☐ Derrick Floor ☐ Rotary Table ☒ Kelly Bushing
Which is 23.5 feet above ground

GEOLOGICAL MARKERS	DEPTH
M-P	6207'
S-1	6714'
S-4	6857'

Formation and age at total depth
Frew - Eocene

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

CASING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementing (if through perforations)
13-3/8"	Surface	843'	54.5	K55, Buttress	New	17-1/2	657	
9-5/8"	Surface	6800'	47	N80, LT&C	New	12-1/4	2313	
5-1/2"	6636'	7183'	17	J55, LT&C	Used	15" & 8-1/2"	Gravel Packed	

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforation and method.)
5-1/2", 17#, J55, LT&C 6636' - 7183'. .012" WWS 7181' - 6723'. .012" slots 6723' - 6682'. Gravel packed with 808 cu.ft. 20-40 sand.

Was the well directionally drilled? If yes, show coordinates at total depth
☒ Yes ☐ No 767' North and 214' West of surface location at a TVD of 7272'.

DIL/SP/GR/Cal 7196' - 799'; 7311' - 6150'. Density/Neutron 7196' - 799'; 7311' - 6150'.

Other surveys
4 arm caliper / gamma ray 7164' - 6800'.

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	
Jim Hemmerly	Drilling Engineer	
Address	**City**	**Zip Code**
Box 3249, M.L. 22GO	Los Angeles CA	90013
Telephone Number	**Signature**	**Date**
(213) 244- 2687	J. Hemmerly	Jan 4, 1994

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

28-3-16

Operator Southern California Gas Company **Field** Aliso Canyon **County** Los Angeles
Well Porter #68 B, **Sec.** 28, **T** 3N, **R** 16W, **S.B.B. & M.**
A.P.I. No. 037-24136 **Name** R. D. Phillips (Person submitting report) **Title** Agent (President, Secretary or Agent)
Date January 4, 19 94

Signature J. Hemmerly
J.A. Hemmerly for R. D. Phillips

P. O. Box 3249 Los Angeles, CA. 90051-1249 (213)244-2658
(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	
1993	
05/19	Finished rigging up Kenai #44. Spudded well at 6:30 p.m. Drilled 17-1/2" surface hole to 434'.
05/20	Drilled 17-1/2" from 434' to 850'. Circulated bottoms up.
05/21	Conditioned mud for casing and pulled out of hole. Ran and cemented 13-3/8", 54.5#, K-55, buttress casing at 843' with 657 cu.ft. Class G cement. Waited on cement. Cut casing and welded 13-3/8", 3000# S.O.W. Model SD on casing head. X-ray and tested welds to 1000 psi.
05/22	Installed BOPE. Laid down 10" drill collars. Repaired accumulator. Attempted BOPE test. Unable to get manifold to test. Suspended testing. Begin repairing and replacing valves in manifold.
05/23	Completed repairing valves in manifold. Tested BOPE for the Division of Oil and Gas. Drilled floats and cement and cleaned out to 850'. Drilled to 865'. Tripped for bit. Cones locked up. Drilled to 901'.
05/24	Drilled 12-1/4" hole and surveyed to 1423'. Wiped hole to shoe. Drilled and surveyed to 1580'. Circulated for trip.
05/25	Tripped for dropping assembly. Drilled 12-1/4" hole from 1580' to 1994'. Tripped for mud motor. Drilled to 2053'.
05/26	Directionally drilled 12-1/4" hole to 2209'. Tripped for bit. Stopped at 990' going in. Tripped and worked bit through 990'. Would not clean up. Rigged up and ran casing inspection log. Discovered shoe joint had screwed off at 990' to 1034'.
05/27	Ran cement bond log through 13-3/8" casing from shoe to surface . Set 400' cement plug at 1422' (bottom). Pulled out of hole. Waited on cement. Fariba Neese of D.O.G. witnessed tagging of plug at 1018'. Set second cement plug from 1017'. Squeezed cement. Waited on cement.

05/28 Drilled out cement from 743' to 840'. Tripped for mud motor. Directionally drilled 12-1/4" hole to 1032'.

05/29 Directionally drilled to 1155' with mud motor. Tripped for locked up BHA. Reamed mud motor run. Drilled from 1155' to 1620'.

05/30 Drilled 12-1/4" hole and surveyed from 1620' to 2010'. Tripped for bit. Drilled and surveyed to 2400'.

05/31 Drilled 12-1/4" hole to 2696'. Wiped hole to shoe. Drilled to 3440'.

06/01 Drilled 12-1/4" hole to 3627'. Tripped to change bit . Drilled to 4224'.

06/02 Drilled 12-1/4" hole to 4407'. Tripped for steerable mud motor. Drilled to 4670'.

06/03 Drilled with steerable mud motor to 5068'. Tripped for locked up drilling assembly. Reamed motor run from 4407' to 4442'.

06/04 Finished reaming motor run to 5068'. Drilled to 5400'. Wiped hole to 4407'. Drilled to 5615'.

06/05 Drilled to 5708'. Tripped to change bit and drilling assembly. Drilled to 6073'.

06/06 Drilled to 6198'. Wiped hole to 5200'. Drilled to 6474'. Fill found on last connection. Circulated and built mud weight to control fill and gas.

06/07 Built mud weight to 11 ppg. Drilled 12-1/4" hole from 6474' to 6655'. Tripping to change to 8-1/2" bit and assembly.

06/08 Finished trip and drilled 8-1/2" hole from 6655' to 7020'.

06/09 Drilled to 7167'. Tripped for new bit. Reamed 8-1/2" hole. Drilled to 7195'.

06/10 Drilled to 7202' and had 25' fill in 30 min. Tripped for bit. Conditioned mud for logs. Added weight material and polymer. Pulled out of well to log.

06/11 Ran DIL/SP/GR/CALP. from 7196' to 799'. Ran Density/Neutron log from 7196' to 799'. Tripped in hole. Circulated and mixed plug to isolate zone below 6800'.

06/12 Pumped acid soluble plug from 6946' to 6760'. Strung to 10 lines and waited on plug. Circulated out plug to 6789'. Tripped for 12-1/4" drilling assembly. Lowered 12-1/4" shoulder to 6810'.

06/13 Conditioned mud. Wiped hole to shoe. Ran in hole to 6810' and conditioned mud. Started wiper trip to shoe.

06/14 Pulled to shoe, broke circulation and ran in hole to 6748'. Circulated fill to 6810' and conditioned mud. Twenty stand wiper trip found no additional fill. Conditioned mud and pulled out of hole.

06/15 Finished pulling out of hole. Rigged up and ran 9-5/8" , 47#, N80, LT&C casing to 6800'. Conditioned mud prior to cementing.

06/16 Started cementing casing. Nitrogen truck failed. Circulated cement out of hole. Mixed mud and fought lost circulation. Pumped lost circulation material. Ran temperature, and tracer logs. Regained circulation. Began cement job at 5:15 a.m.

06/17 Cemented 9-5/8" casing at 6798' as follows: pumped 10 bbls of water ahead of 15 bbls 9.2 ppg superflush, 10 bbls water, 248 bbls Class G cement with 0.2% Diacel LWL foamed to 10.8 ppg. with Nitrogen, 164 bbls Class G cement with 0.1% Hr7 and 1.0% Halad 322. Dropped top plug and pumped an additional 20 bbls of packer inflation cement. Displaced with 468 bbls mud. Bumped plug. Inflated packer with 1.27 bbls cement at 2050 psi. Squeezed an additional 100 cu. ft Class G cmenet with 2% CaCl2 between 9-5/8" and 13-3/8" casing. Waited on cement. Landed casing in slips with 280,000#. Cut off casing. Laid down drill pipe and collars.

06/18 Laid down drill pipe. Nippled down BOPE. Set packing in wellhead. Set bridge plug at 90'. Released rig at 7:30 p.m. Getting ready for move to next well, Porter 69E.

Note: **Move off drilling rig (Kenai #44).**
Move on completion rig (CPS M-72).

06/28 Moved in. Rigged up. Installed BOPE.

06/29 Tested blind rams, pipe rams, and choke manifold to 4000 psi. Tested Hydril bag to 3500 psi. Pressure test witnessed by Fariba M. Neese with the D.O.G.

06/30 Unset and pulled bridge plug at 90'. Picked up 8-1/2" bit, mud motor, six 6" drill collars on 3-1/2" drill pipe and ran in well. Tagged top of cement at 6507'. Drilled out hard cement from 6507' to 6600'.

07/01 Drilled out cement from 6600' to 6785'. Pressure tested casing to 1500 psi. Conditioned mud. Drilled out cement from 6785' to shoe at 6800'. Drilled out shoe. Cleaned out form-a-plug. Circulated out 10.5 ppg mud to 7065'.

07/02 Reamed hole and cleaned out cement stringers from 6965' to 7206'. Found 8-1/2" bit cones at 7206'. Circulated and conditioned mud. Pulled out of well. Ran in well with junk basket and junk sub.

07/03 Ran in well with junk sub. Stopped and stacked weight at 7036'. Pulled out of well. Laid down junk sub. Ran in well with 8-1/2" bit to top of fish at 7206'. Conditioned mud. Pulled out of well. Laid down bit. Ran in well with junk sub , junk basket and six 6" drill collars.

07/04 Ran in well to 7205' (1' of fill). Circulated to top of fish. Cored over fish from 7206' to 7208'. Pulled out of well. Ran in well with 8-1/2" bit, mud motor, and drill collars on 3-1/2" drill pipe. Drilled from 7208' to 7216'. Rig pump failed. Pulled to shoe. Rig down for 3 hours.

07/05 Repaired rig pump. Ran in well and drilled from 7216' to 7221'. Pulled out of well. Ran in well with new 8-1/2" bit. Drilled from 7221' to 7281'.

07/06 Drilled from 7281' to 7330'. Circulated and conditioned mud for logs. Pulled out of well. Ran DIL/SP/GR/Density/Neutron log from 7311'-6150'. Logs found metal at 7146' and 7200'. Picked up 8-1/2" bit and monel drill collar and ran in well.

07/07 Ran in well to 9-5/8" shoe at 6800'. Mixed 200 Bbl of 9.0 ppg HEC polymer fluid in 3% KCl. Ran in well to 7305'. Changed mud system over to KCl - HEC polymer fluid.

07/08 Pulled out of well. Ran in well with 8" x 15" insert bit hole opener. Opened 8-1/2" hole to 15" from 6800' to 6932'.

07/09 Opened 8-1/2" hole to 15" from 6932' to 7190'. Pulled out of well to replace mud motor. Ran in well with 8-1/2" x 15" hole opener and new mud motor. Started taking weight at 6920'. Could not work past 6940'. Stuck at 6940'. Worked loose.

07/10 Pulled out of well and laid down hole opener. Ran in well to 6940' with 8-1/2" bit. Cleaned out fill from 6940' to 7330'. Circulated and built completion fluid viscosity to 70. Pulled to shoe and waited 1-1/2 hours. Ran in well and tagged fill at 7290' (approximately 40' fill in 1-1/2 hours). Cleaned out to 7330'.

07/11 Circulated hole clean. Rig down for repairs. Pulled to 9-5/8" shoe at 6800'.

07/12 Rig down for repairs to mud system.

07/13 Rig down for repairs to mud system.

07/14 Rig down for repairs to mud system.

07/15 Started rig at 6:00 a.m.. Recorded 100 psi on casing. Circulated gas cut polymer out from 6808'. Ran in well to 7090'. Reamed and cleaned out from 7090' to 7330'. Circulated and conditioned polymer system. Pulled out of well. Made up and reran 15" x 8-1/4" hole opener. Ran in well to 6800'. Located 9-5/8" casing shoe at 6800'. Gauge reamed from 6800' to 6918'.

07/16 Gauge reamed from 6918' to 7067'. Plugged hole opener. Pulled out of well. Made up 15" x 8-1/4" hole opener. Ran in well to 6912'. Reamed from 6912' to 7065'. Plugged tool. Pulled 20 stands. Cleared tool. Ran in well to 7066'. Circulated and conditioned polymer. Reamed from 7065' to 7090'. Opened 8-1/2" hole to 15" from 7090' to 7157'.

07/17 Opened 8-1/2" hole to 15" from 7157' to 7262'. Unable to rotate tight hole. Pulled out of well. Made up 8-1/2" bit. Ran in well and tagged fill at 7234'. Cleaned out to 7279'. Unable to work deeper. Bit running on junk. Pulled out of well.

07/18 Made up 8-1/2" OD junk mill on 182' of 6" OD drill collars. Ran in well to 7176' (Approximately 103' fill fine sand). Circulated and cleaned out to 7267'. Plugged mill. Pulled up to 6667'. Cleared plugged tool. Circulated and conditioned polymer fluid. Ran in well to 7257'. Cleaned out to 7284'. Could not mill past 7284'. Pulled out of well. Installed shooting flange and lubricator. Ran Halliburton logging 4 arm caliper with Gamma Ray. Tool set down on fill at 7164'. Ran caliper log from 7164' to 6800'. Logged up to MP marker at 6211'.

07/19 Made up 8-1/2" bit on 182' of 6" OD drill collars. Ran in well and found top of fill at 7173'. Cleaned out to 7284'. Circulated well clean. Mixed 196 Bbls of 9.3# high vis polymer. Spotted high vis pill from 7284' to 6600'. Pulled drill pipe up to 6600'. Changed well over to clean 3% KCl polymer. Pulled out of well.

07/20 Ran 544.74' of 5-1/2" 17# J-55 wire wrap and blank liner. Made up cup type over top gravel packing tool with 535' of 2-7/8" CS Hydril tubing for tail. Ran in well to 4597'. Fluid flowed back through drill pipe. Misol in polymer caused fluid to foam. Circulated bottoms up from 4597'. Ran in well slow with liner. Tagged fill at 7169' (93' of fill above shoulder at 7262'). Liner bottom at 7183'. Top of landing nipple at 6639'. Mixed and pumped 696 cu.ft. of 20-40 sand. Packed off with 658 cu.ft. in place. Backscuttled out 38 cu.ft. of gravel. Waited 3 hours. Established rate at 3 Bbls per/min at 300 psi. Mixed 116 sacks of 20-40 sand.

07/21 No#1 pack 658 cu.ft. in place. No#2 repack 49 cu.ft. in place. Final psi at 1000. No#3 repack 20 cu.ft in place. No#4 repack 30 cu.ft. in place. No#5 repacked 21 cu.ft. in place. No#6 repack 30 cu.ft. in place. Total of 808 cu.ft. of 20-40 sand in place at 6:00 p.m. (120% theoretical volume). Pack pressure up to 1000 psi with slow bleed off of 100 psi in 15 minutes. Held 900 psi. Released from liner. Pulled out of well. Made up lead seal drive over adapter. Ran in well.

07/22 Ran lead seal drive over. Set lead seal at 6635'. Laid down 3-1/2" drill pipe. Pulled casing proctor bowl. Changed pipe rams to 2-7/8". Picked up 2-7/8" tubing.

07/23 Measured out with 2-7/8" tubing. Made up Schlumberger drill stem test tools. Ran in well. Set packer at 6580'. Pressure tested surface lines to 4000 psi. Applied 2300 psi gas cushion to tubing. Opened down hole valve at 4:27 p.m. Pressure at surface 2275 psi. Close tool for one-hour shut in. Opened tool at 5:43 p.m. Flow well through 24/64" choke. Pressure down to 10 psi at 6:00 a.m. Total daily liquid recovery = 28 Bbls 8.9 ppg completion fluid (chlorides at 49,000 ppm).

07/24 Flow well to tank (wide open, FTP = 33psi). Close tool in at 12:50 p.m. Swabbed tubing from 5450' to 6000' with no liquid returns. Opened tool at 3:09 p.m. Liquid to surface at 3:12 p.m. Recovered 4 Bbls. Maximum pressure = 568 psi. Flowed through choke on 48/64" bean. Well bleed off to 8 psi at 6:45 p.m. Put gas through test separator to obtain gas rate. No liquid recovery. Closed down-hole valve at 12:01 a.m. Bleed off pressure at surface. Well closed in for 24-hour shut-in build-up test. Cumulative liquid recovered = 48 Bbls.

07/25 Resumed operations at 12:01 a.m. on 7/26/93. Checked well for pressure. Filled tubing with 37 Bbls of polymer. Opened down hole valve. Upset packer at 6580'. Circulated well. Pulled out of well.

07/26 Pulled out of well with test tools. Made up 587' of 2-7/8" CS Hydril tubing tail. Ran in well to 7183'. Changed well over to 63# KCl water, 2% KCl with 5 gals/per 100 Bbls Ucarcide, 5 gals/per 100/Bbls, Hib-19, 2-1/2" gals/per 100 Bbl COS. Pulled out of well. Made up and ran production string. External pressure tested tubing in well. Set Guiberson 9-5/8" Uni VI packer at 6561'. Pulled 40,000 lbs over string weight to pack off packer. Landed 12,000 lbs on packer with 30,000 lbs on tubing hanger. Tested packer down annulus to 1500 psi for 20 minutes (held o.k.). Installed back psi valve in tubing hanger. Removed BOPE.

07/27 Installed and tested xmas tree to 5000 psi. Released rig.

FINAL PRINT

THE GAS COMPANY
PORTER

68B
68B
ALISO CANYON
CALIFORNIA

037-22742
27-3-14

SURVEY LISTING

by
Eastman Teleco

Your ref : REDRILL
Our ref : svy2797
License :

Date printed : 7-Jan-94
Date created : 2-Jun-93
Last revised : 11-Jun-93

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

Slot location is s0 0 4.217,w1 29 32.238
Slot Grid coordinates are N -129.889, E -415.340
Slot local coordinates are 425.00 S 1359.00 W
Reference North is True North

THE GAS COMPANY
PORTER,68B
ALISO CANYON,CALIFORNIA

SURVEY LISTING Page 1
Your ref : REDRILL
Last revised : 11-Jun-93

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES	Dogleg Deg/100Ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N 0.00 E	0.00	0.00
142.00	0.75	124.00	142.00	0.52 S 0.77 E	0.53	-0.71
225.00	0.00	0.00	224.99	0.82 S 1.22 E	0.90	-1.12
314.00	1.00	129.00	313.99	1.31 S 1.82 E	1.12	-1.76
404.00	0.50	149.00	403.98	2.14 S 2.64 E	0.62	-2.78
523.00	1.00	185.00	522.97	3.62 S 2.81 E	0.56	-4.25
553.00	1.50	174.00	552.96	4.27 S 2.83 E	1.84	-4.88
613.00	1.00	194.00	612.95	5.56 S 2.79 E	1.09	-6.11
672.00	1.00	174.00	671.94	6.57 S 2.72 E	0.59	-7.06
750.00	1.00	194.00	749.93	7.91 S 2.62 E	0.44	-8.33
824.00	1.25	219.00	823.92	9.16 S 1.96 E	0.74	-9.35
891.00	1.75	278.00	890.90	9.59 S 0.49 E	2.30	-9.36
952.00	3.25	303.00	951.84	8.52 S 1.89 W	2.98	-7.69
1043.00	5.25	334.00	1042.59	3.37 S 5.88 W	3.27	-1.66
1075.00	6.00	340.00	1074.44	0.48 S 7.09 W	2.98	1.45
1105.00	6.75	343.00	1104.25	2.68 N 8.14 W	2.73	4.78
1156.00	8.50	342.00	1154.80	9.13 N 10.18 W	3.44	11.54
1248.00	8.50	343.00	1245.79	22.10 N 14.27 W	0.16	25.13
1404.00	8.25	345.00	1400.13	43.93 N 20.54 W	0.25	47.85
1590.00	8.75	343.00	1584.08	70.35 N 28.13 W	0.31	75.34
1745.00	8.25	344.00	1737.38	92.32 N 34.64 W	0.34	98.24
1898.00	8.25	344.00	1888.80	113.42 N 40.69 W	0.00	120.20
2085.00	8.25	347.00	2073.86	139.39 N 47.41 W	0.23	147.02
2272.00	8.00	348.00	2258.99	165.19 N 53.13 W	0.15	173.40
2459.00	8.25	350.00	2444.11	191.13 N 58.17 W	0.20	199.74
2646.00	8.25	353.00	2629.18	217.66 N 62.13 W	0.23	226.35
2832.00	8.75	355.00	2813.13	245.00 N 64.99 W	0.31	253.45
3019.00	9.25	356.00	2997.83	274.16 N 67.28 W	0.28	282.14
3205.00	9.75	357.00	3181.28	304.80 N 69.15 W	0.28	312.14
3390.00	10.00	358.00	3363.54	336.50 N 70.53 W	0.16	343.03
3577.00	10.25	358.00	3547.62	369.35 N 71.68 W	0.13	374.97
3763.00	10.25	359.00	3730.66	402.44 N 72.54 W	0.10	407.06
3977.00	10.25	360.00	3941.24	440.52 N 72.87 W	0.08	443.81
4162.00	10.00	2.00	4123.36	473.03 N 72.31 W	0.23	474.96
4345.00	10.00	3.00	4303.58	504.77 N 70.93 W	0.09	505.15
4410.00	10.00	1.30	4367.59	516.05 N 70.50 W	0.45	515.89
4472.00	9.40	352.60	4428.71	526.46 N 71.03 W	2.55	526.05
4503.00	9.10	347.60	4459.31	531.36 N 71.89 W	2.77	531.00
4533.00	9.10	343.40	4488.93	535.95 N 73.07 W	2.21	535.74
4564.00	9.20	338.80	4519.54	540.61 N 74.67 W	2.38	540.66
4594.00	9.10	333.20	4549.16	544.96 N 76.61 W	2.98	545.38
4657.00	8.30	319.50	4611.44	552.87 N 81.81 W	3.52	554.39
4688.00	7.80	313.20	4642.13	556.01 N 84.79 W	3.27	558.22
4720.00	6.90	306.50	4673.87	558.64 N 87.92 W	3.88	561.60
4751.00	6.20	302.30	4704.67	560.64 N 90.83 W	2.73	564.32
4784.00	5.30	304.00	4737.50	562.45 N 93.60 W	2.78	566.80
4813.00	4.70	304.40	4766.39	563.87 N 95.69 W	2.07	568.74
4844.00	4.50	307.90	4797.29	565.33 N 97.70 W	1.11	570.69
4876.00	4.70	306.90	4829.19	566.89 N 99.74 W	0.67	572.74
4906.00	4.60	306.50	4859.09	568.34 N 101.69 W	0.35	574.67

All data is in feet unless otherwise stated
Coordinates from 68B and TVD from wellhead (2100.50 Ft above mean sea level).
Vertical section is from wellhead on azimuth 344.31 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Eastman Teleco

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES	Dogleg Deg/100Ft	Vert Sect	
4937.00	4.50	305.80	4889.99	569.80 N 103.68 W	0.37	576.60	
4967.00	4.40	306.10	4919.90	571.16 N 105.56 W	0.34	578.43	
4998.00	4.40	307.60	4950.81	572.59 N 107.46 W	0.37	580.31	
5029.00	4.50	314.20	4981.72	574.16 N 109.28 W	1.68	582.32	
5113.00	4.30	320.00	5065.47	578.87 N 113.66 W	0.58	588.04	
5204.00	4.30	321.00	5156.21	584.14 N 118.00 W	0.08	594.28	
5360.00	4.80	333.00	5311.72	594.50 N 124.65 W	0.69	606.05	
5544.00	5.00	326.00	5495.05	608.00 N 132.63 W	0.34	621.22	
5668.00	5.00	322.00	5618.58	616.74 N 138.98 W	0.28	631.34	
5854.00	5.80	327.00	5803.75	631.01 N 149.08 W	0.50	647.82	
6008.00	6.00	332.00	5956.94	644.64 N 157.10 W	0.36	663.11	
6163.00	6.00	333.00	6111.09	659.01 N 164.58 W	0.07	678.97	
6316.00	6.50	332.00	6263.18	673.78 N 172.28 W	0.33	695.27	
6433.00	7.00	343.00	6379.37	686.45 N 177.47 W	1.18	708.87	
6582.00	7.00	343.00	6527.26	703.82 N 182.78 W	0.00	727.02	
6730.00	6.25	342.00	6674.27	720.10 N 187.91 W	0.51	744.09	
6945.00	5.00	338.00	6888.24	739.92 N 195.03 W	0.61	765.09	
7166.00	5.25	316.00	7108.37	756.12 N 205.67 W	0.89	783.57	
7202.00	5.25 est	316.00	7144.22	758.49 N 207.95 W	0.00	786.47	PROJECTED T.D.

TD 7330' MD 5.25 est 7271.68 ≈ 7272' TVD " "

All data is in feet unless otherwise stated
Coordinates from 68B and TVD from wellhead (2100.50 Ft above mean sea level).
Vertical section is from wellhead on azimuth 344.31 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Eastman Teleco

Comments in wellpath

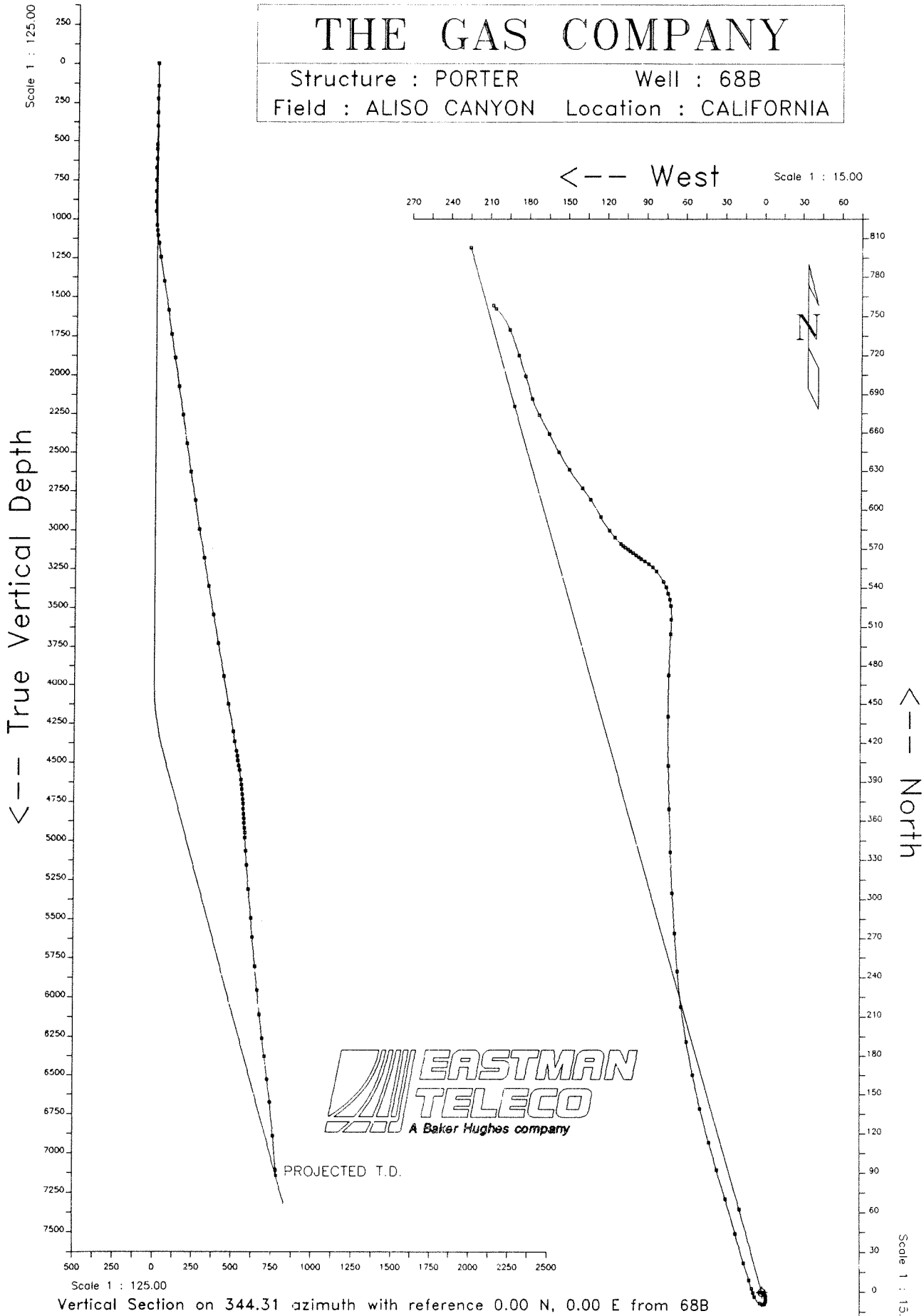
MD	TVD	Rectangular Coords.	Comment
7202.00	7144.22	758.49 N 207.95 W	PROJECTED T.D.

All data is in feet unless otherwise stated
Coordinates from 68B and TVD from wellhead (2100.50 Ft above mean sea level).
Bottom hole distance is 786.48 on azimuth 344.67 degrees from wellhead.
Vertical section is from wellhead on azimuth 344.31 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Eastman Teleco

THE GAS COMPANY

Structure : PORTER Well : 68B

Field : ALISO CANYON Location : CALIFORNIA



Vertical Section on 344.31 azimuth with reference 0.00 N, 0.00 E from 68B

037-24136

THE GAS COMPANY
PORTER

68B
68B
ALISO CANYON
CALIFORNIA

28 - 3 - 16

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

by
Eastman Teleco

Your ref : REDRILL
Our ref : svy2797
License :

Date printed : 13-Jan-94
Date created : 2-Jun-93
Last revised : 11-Jun-93

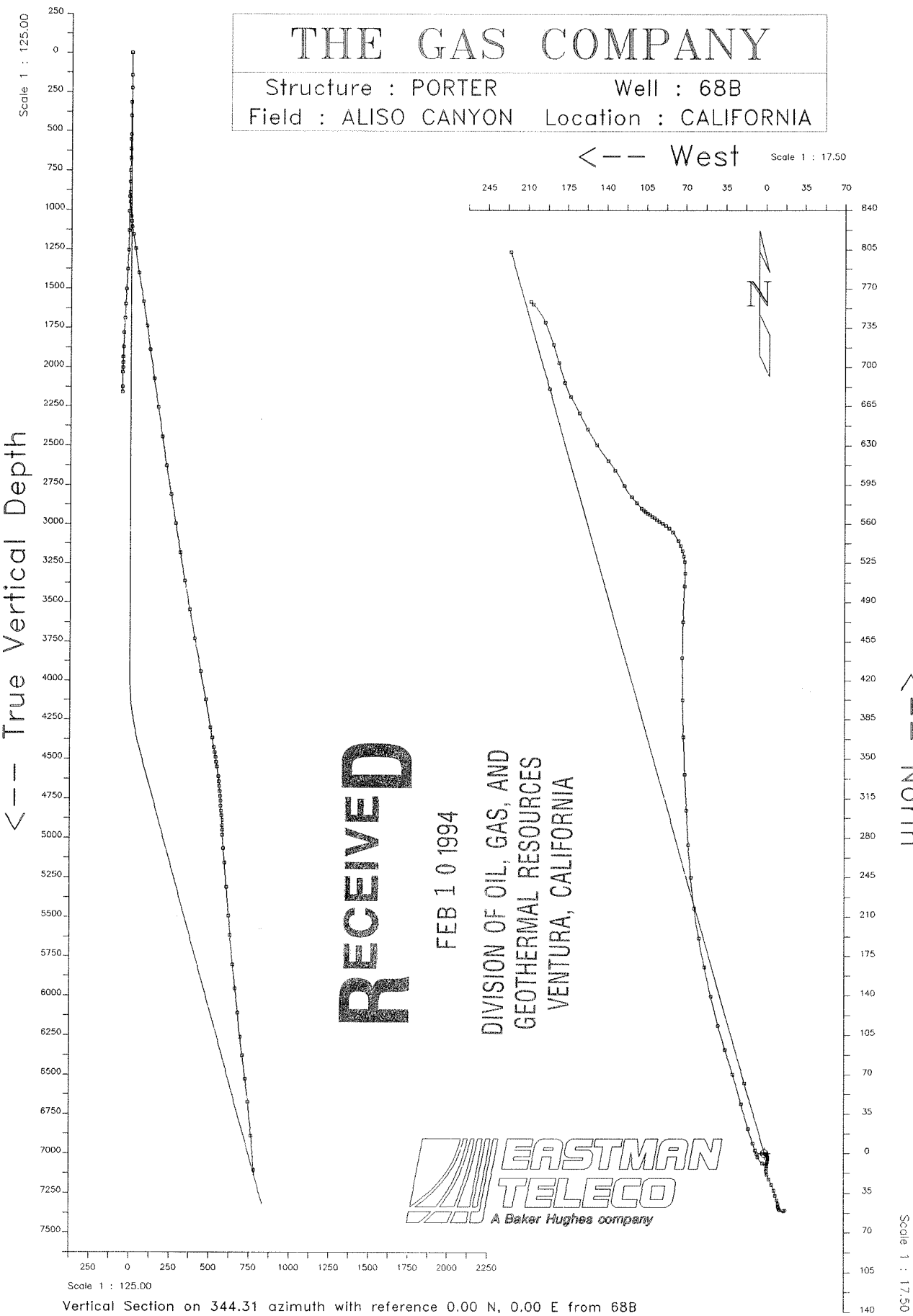
Field is centred on 0.000,0.000,999.00000,+
Structure is centred on 0.000,0.000,3.00000,N

Slot location is s0 0 4.217,w1 29 32.238
Slot Grid coordinates are N -129.889, E -415.340
Slot local coordinates are 425.00 S 1359.00 W
Reference North is True North

THE GAS COMPANY

Structure : PORTER Well : 68B

Field : ALISO CANYON Location : CALIFORNIA



EASTMAN TELECO
A Baker Hughes company

Vertical Section on 344.31 azimuth with reference 0.00 N, 0.00 E from 68B

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES	Dogleg Deg/100Ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N 0.00 E	0.00	0.00
142.00	0.75	124.00	142.00	0.52 S 0.77 E	0.53	-0.71
225.00	0.00	0.00	224.99	0.82 S 1.22 E	0.90	-1.12
314.00	1.00	129.00	313.99	1.31 S 1.82 E	1.12	-1.76
404.00	0.50	149.00	403.98	2.14 S 2.64 E	0.62	-2.78
523.00	1.00	185.00	522.97	3.62 S 2.81 E	0.56	-4.25
553.00	1.50	174.00	552.96	4.27 S 2.83 E	1.84	-4.88
613.00	1.00	194.00	612.95	5.56 S 2.79 E	1.09	-6.11
672.00	1.00	174.00	671.94	6.57 S 2.72 E	0.59	-7.06
750.00	1.00	194.00	749.93	7.91 S 2.62 E	0.44	-8.33
824.00	1.25	219.00	823.92	9.16 S 1.96 E	0.74	-9.35
891.00	1.75	278.00	890.90	9.59 S 0.49 E	2.30	-9.36
952.00	3.25	303.00	951.84	8.52 S 1.89 W	2.98	-7.69
1043.00	5.25	334.00	1042.59	3.37 S 5.88 W	3.27	-1.66
1075.00	6.00	340.00	1074.44	0.48 S 7.09 W	2.98	1.45
1105.00	6.75	343.00	1104.25	2.68 N 8.14 W	2.73	4.78
1156.00	8.50	342.00	1154.80	9.13 N 10.18 W	3.44	11.54
1248.00	8.50	343.00	1245.79	22.10 N 14.27 W	0.16	25.13
1404.00	8.25	345.00	1400.13	43.93 N 20.54 W	0.25	47.85
1590.00	8.75	343.00	1584.08	70.35 N 28.13 W	0.31	75.34
1745.00	8.25	344.00	1737.38	92.32 N 34.64 W	0.34	98.24
1898.00	8.25	344.00	1888.80	113.42 N 40.69 W	0.00	120.20
2085.00	8.25	347.00	2073.86	139.39 N 47.41 W	0.23	147.02
2272.00	8.00	348.00	2258.99	165.19 N 53.13 W	0.15	173.40
2459.00	8.25	350.00	2444.11	191.13 N 58.17 W	0.20	199.74
2646.00	8.25	353.00	2629.18	217.66 N 62.13 W	0.23	226.35
2832.00	8.75	355.00	2813.13	245.00 N 64.99 W	0.31	253.45
3019.00	9.25	356.00	2997.83	274.16 N 67.28 W	0.28	282.14
3205.00	9.75	357.00	3181.28	304.80 N 69.15 W	0.28	312.14
3390.00	10.00	358.00	3363.54	336.50 N 70.53 W	0.16	343.03
3577.00	10.25	358.00	3547.62	369.35 N 71.68 W	0.13	374.97
3763.00	10.25	359.00	3730.66	402.44 N 72.54 W	0.10	407.06
3977.00	10.25	360.00	3941.24	440.52 N 72.87 W	0.08	443.81
4162.00	10.00	2.00	4123.36	473.03 N 72.31 W	0.23	474.96
4345.00	10.00	3.00	4303.58	504.77 N 70.93 W	0.09	505.15
4410.00	10.00	1.30	4367.59	516.05 N 70.50 W	0.45	515.89
4472.00	9.40	352.60	4428.71	526.46 N 71.03 W	2.55	526.05
4503.00	9.10	347.60	4459.31	531.36 N 71.89 W	2.77	531.00
4533.00	9.10	343.40	4488.93	535.95 N 73.07 W	2.21	535.74
4564.00	9.20	338.80	4519.54	540.61 N 74.67 W	2.38	540.66
4594.00	9.10	333.20	4549.16	544.96 N 76.61 W	2.98	545.38
4657.00	8.30	319.50	4611.44	552.87 N 81.81 W	3.52	554.39
4688.00	7.80	313.20	4642.13	556.01 N 84.79 W	3.27	558.22
4720.00	6.90	306.50	4673.87	558.64 N 87.92 W	3.88	561.60
4751.00	6.20	302.30	4704.67	560.64 N 90.83 W	2.73	564.32
4784.00	5.30	304.00	4737.50	562.45 N 93.60 W	2.78	566.80
4813.00	4.70	304.40	4766.39	563.87 N 95.69 W	2.07	568.74
4844.00	4.50	307.90	4797.29	565.33 N 97.70 W	1.11	570.69
4876.00	4.70	306.90	4829.19	566.89 N 99.74 W	0.67	572.74
4906.00	4.60	306.50	4859.09	568.34 N 101.69 W	0.35	574.67

All data is in feet unless otherwise stated
Coordinates from 68B and TVD from wellhead (2100.50 Ft above mean sea level).
Vertical section is from wellhead on azimuth 344.31 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Eastman Teleco

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	RECTANGULAR COORDINATES	Dogleg Deg/100Ft	Vert Sect	
4937.00	4.50	305.80	4889.99	569.80 N 103.68 W	0.37	576.60	
4967.00	4.40	306.10	4919.90	571.16 N 105.56 W	0.34	578.43	
4998.00	4.40	307.60	4950.81	572.59 N 107.46 W	0.37	580.31	
5029.00	4.50	314.20	4981.72	574.16 N 109.28 W	1.68	582.32	
5113.00	4.30	320.00	5065.47	578.87 N 113.66 W	0.58	588.04	
5204.00	4.30	321.00	5156.21	584.14 N 118.00 W	0.08	594.28	
5360.00	4.80	333.00	5311.72	594.50 N 124.65 W	0.69	606.05	
5544.00	5.00	326.00	5495.05	608.00 N 132.63 W	0.34	621.22	
5668.00	5.00	322.00	5618.58	616.74 N 138.98 W	0.28	631.34	
5854.00	5.80	327.00	5803.75	631.01 N 149.08 W	0.50	647.82	
6008.00	6.00	332.00	5956.94	644.64 N 157.10 W	0.36	663.11	
6163.00	6.00	333.00	6111.09	659.01 N 164.58 W	0.07	678.97	
6316.00	6.50	332.00	6263.18	673.78 N 172.28 W	0.33	695.27	
6433.00	7.00	343.00	6379.37	686.45 N 177.47 W	1.18	708.87	
6582.00	7.00	343.00	6527.26	703.82 N 182.78 W	0.00	727.02	
6730.00	6.25	342.00	6674.27	720.10 N 187.91 W	0.51	744.09	
6945.00	5.00	338.00	6888.24	739.92 N 195.03 W	0.61	765.09	
7166.00	5.25	316.00	7108.37	756.12 N 205.67 W	0.89	783.57	
7202.00	5.25	316.00	7144.22	758.49 N 207.95 W	0.00	786.47	PROJECTED T.D.

All data is in feet unless otherwise stated
Coordinates from 68B and TVD from wellhead (2100.50 Ft above mean sea level).
Vertical section is from wellhead on azimuth 344.31 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Eastman Teleco

PORTER,6C.
ALISO CANYON,CALIFORNIA

Your ref : REDRILL
Last revised : 11-Jun-93

Comments in wellpath

MD	TVD	Rectangular Coords.	Comment
7202.00	7144.22	758.49 N 207.95 W	PROJECTED T.D.

All data is in feet unless otherwise stated
Coordinates from 68B and TVD from wellhead (2100.50 Ft above mean sea level).
Bottom hole distance is 391.62 on azimuth 330.25 degrees from wellhead.
Vertical section is from wellhead on azimuth 344.31 degrees.
Declination is 0.00 degrees, Convergence is 0.00 degrees.
Calculation uses the minimum curvature method.
Presented by Eastman Teleco

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

No.T293-148

REPORT ON OPERATIONS

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

Ventura, California
July 13, 1993

Your operations at well "Porter" 68B, API No. 037-24136, Sec. 27, T. 3N, R. 16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles County, were witnessed on 6-29-93. Fariba Neese, representative of the supervisor, was present from 1300 to 1600. There were also present Larry Mueller, Rig Supervisor.

Present condition of well: 20" ld 64'; 13 5/8" cem 799'; 9 5/8" cem 7300'. TD 7300'.

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.

PK:FN:nr

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

By
Patrick J. Kinnear
Deputy Supervisor

OG109

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

No. P293-165
Field Code 010
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
June 8, 1993

Your supplementary proposal to drill well "Porter" 68B, A.P.I. No. 037-24136, Section 27, T. 3 N, R. 16W, S.B. B.&M., Aliso Canyon field, --- area, Sesnon-Frew pool, Los Angeles County, dated 5-27-93, received 6-1-93, has been examined in conjunction with records filed in this office.

THE PROPOSAL, COVERING WORK ALREADY COMPLETED IN ACCORDANCE WITH PRIOR AGREEMENT, IS APPROVED PROVIDED THAT:

1. Requirements specified in permit No. P293-148, dated 5-13-93 shall apply.

PK:SF:nr

Engineer Steve Fields

Phone (805) 654-4761

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

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

SUPPLEMENTARY NOTICE

FOR DIVISION USE ONLY			
BOND	FORMS		EDP WELL FILE
	OGD114	OGD121	
X	—	6-2-93	

DIVISION OF OIL AND GAS

Ventura Calif.

A notice to you dated May 3, 19 93, stating the intention to

Drill (Drill, rework, abandon), Porter 68B (Well name and number), API No. 037-24136,

Sec. 27, T. 3N, R. 16W, SB 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 2209'

Complete casing record including plugs and perforations:
20" Conductor set at 64' K.B.
13-3/8", 54.5#, K55 Buttress casing from 0' - 799' K.B.
13-3/8", 54.5#, K55 Buttress shoe joint from 990' - 1034' K.B. (lost in hole)

DIVISION OF OIL AND GAS
RECEIVED
JUN 1 1993
VENTURA, CALIFORNIA

We now propose
Plug back from 1420' to approximately 1050' and from approximately 1050' to 650' (two stage cement plug).
Drill out cement to 850'.
Kick off cement plug and redrill 12-1/4" hole as per original notice to approximately 7300' TVD. Complete as originally proposed.

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

Address Box 3249 (Street)

Los Angeles (City) CA (State) 90051-1249 (Zip)

Telephone Number (213) 244-2687

Southern California Gas Co. (Name of Operator)

Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

By James Hemmerly (Name) 5/27/93 (Date)

Signature

OG123 (3/82/GSR1/5M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

SUPPLEMENTARY NOTICE

FOR DIVISION USE ONLY			
BOND	FORMS		EDP WELL FILE
	OGD114	OGD121	

DIVISION OF OIL AND GAS

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DIVISION OF OIL AND GAS
RECEIVED
MAY 27 1993
VENTURA, CALIFORNIA

We now propose
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Address Box 3249 (Street)

Los Angeles (City) CA (State) 90051-1249 (Zip)

Telephone Number (213) 244-2687

Southern California Gas Co. (Name of Operator)

Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

By James Hemmerly (Name) 5/27/93 (Date)

Signature

OG123 (3/82/GSR1/5M)

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

No.T293-110

REPORT ON OPERATIONS

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

Ventura, California
June 8, 1993

Your operations at well "Porter" 68B, API No. 037-24136, Sec. 27T. 3N,R. 16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles County, were witnessed on 5-27-93. Fariba Neese, representative of the supervisor, was present from 2000 to 2100. There were also present Bill Melcher, Rig Supervisor.

Present condition of well: 20" ld 64'; 13 5/8" cem 799'. TD 2209'. Lost in hole: Collar, 1Jt 13 5/8" csg, csg shoe fr 990'-1034'. Plugged w/cem 1420'-1018'.

The operations were performed for the purpose of plugback.

DECISION:

The location and hardness of the cement plug @ 1018' is approved.

PK:FN:nr

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

By _____
Patrick J. Kinnear
Deputy Supervisor

OG109

DIVISION OF OIL AND GAS
Cementing/Plugging Memo

8F T 293-1

Operator Southern Calif Gas Company Well No. "Porter" 68B
API No. 037-24136 Sec. 27, T. 3N, R. 16 W, S.B. B&M
Field Aliso Canyon, County Los Angeles. On May 27, 1993,
Mr./Ms. Fariba Neese, representative of the supervisor, was present from 2000 to 2100.
There were also present Bill Melcher, Rig Supervisor
Casing record of well: 20" id. 64'; 13 5/8" cem. 799'. T.D. ~~1420~~ 2209! Lost in hole:
Collar, 1 Jt 13 5/8" csg, csg shoe from 990'-1034'! Plugged w/cem 1420-1018'.

The operations were performed for the purpose of plugback (new well).

☐ The plugging/cementing operations as witnessed and reported are approved.
☑ The location and hardness of the cement plug @ 1018' is approved.

Hole size:____" fr.____' to____', ____" to____' & ____" to____'

Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			

Casing/tubing recovered:____" shot/cut at____', ____', ____' pulled fr.____';
____" shot/cut at____', ____', ____' pulled fr.____'.

Junk (in hole):____

Hole fluid (bailed to) at____'. Witnessed by____

Mudding	Date	Bbls.	Displaced	Poured	Fill	Engr.

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time	Engr.
5/27	457 ft3	EOT @ 1420'	-	rpt	1018'	5K #	5/27 2000	FMN

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

No.T293-102

REPORT ON OPERATIONS

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

Ventura, California
May 26, 1993

Your operations at well "Porter" 68B, API No. 037-24136, Sec. 27T. 3N,R. 16, S.B.B.&M. Aliso Canyon Field, in Los Angeles County, were witnessed on 5-22-93. Fariba Neese, representative of the supervisor, was present from 1900 to 0400. There were also present Bill Melcher, Rig Supervisor.

Present condition of well: 20" ld 40'; 13 5/8" cem 843'. TD 850'.

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.

PK:FN:nr

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

By
Patrick J. Kinnear
Deputy Supervisor

OG109

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

No. P293-148
Field Code 010
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
May 13, 1993

Your proposal to drill well "Porter" 68B, A.P.I. No. 037-24136, Section 27, T. 3 N, R. 16W, S.B. B.&M., Aliso Canyon field, -- area, Sesnon-Frew pool, Los Angeles County, dated 5-3-93, received 5-5-93, 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 IIIB 3M requirements on the 13 3/8" casing and Blowout prevention equipment conforming to DOG Class IIIB 5M requirements on the 9 5/8" casing and maintained in operating condition at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. Drilling fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
4. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet.

Continued on Page 2

Blanket Bond
PK:SF:nr

Engineer Steve Fields

Phone (805) 654-4761

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

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

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 7-26-86 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.
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" & 9 5/8" casing. Prior to notifying the division engineer to witness the test, the blind rams must be tested. Information on the blind rams test must be entered on the tour sheet along with the signature of the person in charge.
    b. To witness a M.t survey with three months after injection has commenced.

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
MAY 5 1993
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	5-16-93	✓	BB	5-11-93 ✓	✓

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well Porter 68B, well type GS, API No. 037-24136 (Assigned by Division)

Sec. 27, T. 3N, R. 16W, SB 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 approximately 420' south and 1355' west of station #84 (exact coordinates to be determined by surveyors)

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: 192 feet west (Direction) and 786 feet north (Direction)

Elevation of ground above sea level 2080 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'	800'	800'	800'
9-5/8"	47#	N-80	0'	7000'	7000'	7000'
5-1/2"	17#	J-55	6900'	7110'	Gravel	Gravel

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

Intended zone(s) of completion Sesnon, 6860' TVD, 2600 psi; Frew, 7010' TVD, 2700 psi (Name, depth, and expected pressure) Estimated true vertical depth 7110'

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	Los Angeles	90051-1249
Telephone Number / **Name of Person Filing Notice**	**Signature**	**Date**
(213) 244-2665 / Stan Sinclair	E. S. Sinclair	5/3/93

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 (9/92/GSB1/5M)