INSPECTION						
NOTICE DATED	12-11-79	8/18/81	4-26-83		REWORK 06/18/2004	REWORK 01/29/20
REPORT NUMBER	279-377	281-273	283-101		P204-92	P207-2
CHECKED BY/DATE	FT 5-28-80					
MAIL LETTER DATED	5-31-80					
SYMBOL	*	N/C	N/C	N/C		

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE	12-11-79		8-14-81		4-26-83				06/21/04		01/29/07	
HISTORY	5/26/80		12-28-81		10-19-83		2-7-91		2-2-05		6-13-08	
SUMMARY	4/26/80				11-19-83							
IES/ELECTRIC LOG	4-16-80											
DIRECTIONAL SURV	5/26/80											
CORE/SWS DESCRIP												
OTHER	3-10-80 4-16-80 2-23-80								GRAVEL PACK LOG 10-7-04 FLUID DENSITY 10-7-04 2-2-05			
RECORDS COMPLETE	CJN		RKT		RN							

ENGINEERING CHECK

- REPORTS
- OPERATOR'S NAME
- WELL DESIGNATION
- LOC & ELEV
- SIGNATURE
- SURFACE INSPECTION
- FINAL LETTER OK

POSTED TO 171 _____

CLERICAL CHECK

170 MAILED _____

FINAL LETTER MAILED _____

RELEASED BOND _____

REMARKS: Caliper log 5-1-80 (2 runs)

P. Kelsey 5-1-80

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 A
A.P.I. No. 037-22051

Field: Aliso Canyon
Surface Location: 894' S & 3,179' E of Sta. 84; 28 3N 16W
County: Los Angeles

Date: 6/13/2008

Title: S R R M
(President, Secretary, or Agent)

Signature: Michael L Dagin
(Person Submitting Report)

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

Telephone Number: 818 960 84

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

Start Date	Ops. DOGGR Rpt
1/31/2007	Rigged up Spicer slickline set PXN plug in X nipple at 7550'. Opened sliding sleeve at 7516'. Moved in Baker tanks spotted pump. Removed laterals moved in equipment.
2/1/2007	Spot mats and beams. Spot rig and rig up tie down hoist. Set in choke manifold and accumlator.Set in equipment. Open well 400 psi tubing and casing 9-5/8"X7". Filled and bled tubing and 7' annulus. (Packer leaking by fill 9-5/8"X7" annulus) with 420 bbls 3% KCL. Filled 9-5/8"X 13-3/8" annulus with 20 bbls. Secured rig and well.
2/2/2007	Open well 0 psi installed back pressure plug. Nippled down production tree nippled up class III BOP. Rigged up WEA test unit tested blind rams to 5000 psi for twenty minutes. Removed BPV made up 2-7/8" pup joint. Tested pipe rams to 5000 psi for twenty minutes. Tested Hydril to 2750 psi for twenty minutes. Tested all valves and choke manifold to 5000 psi for twenty (All tests good F Pineda DOGGR waived witness of test and inspection of BOP).Rigged up working floor. Secured well.
2/5/2007	Rigged up tubing equipment. Released from on/off tool at 7549' Pulled out of well laying down gas lift mandrels, Sliding sleeve and on off tool. Rigged down tubing equipment set out working floor. Secured well.
2/6/2007	Nippled down class III BOP nippled down tubing head (Loaded out tubing head and production send in for repairs) Remove primary packing unit and snap rings. Nippled up Class III BOP changed pipe rams to 7". Made up spear and bumper sub on 3-12" drill pipe pup joint. Speared 7" innersting unland at 200,000# removed slips. Rigged up casing tongs Layed down cut off and fishing tools. Pulled out of well laying down 7" casing.
2/7/2007	Pulled out of well laying down and loading out 7" innerstring. (Layed down 111 joints) secured well.
2/8/2007	Layed down and loaded out 7" LT&C casing. (total 188 joints and cut off) Rigged down casing tongs. Changed pipe rams to 2-7/8". Picked up spear,bumper sub, jars, (4) 4-3/4" drill collats, instenisfer. Measured in well to 3500' Secured well.
2/9/2007	Ran in well to 7400' (shut down to work on transmission leaking oil.) Engaged fish at 7474' Jarred on pack for one hour at 80 over string weight. Pulled loose (dragging) pulled out of well to 6500' . Secured well (transmisson leaking again Key to change out transmission on 02-10-07)
2/12/2007	Pulled out of well layed down fish (Recovered Baker SLP-R packer). Layed down fishing tools and (4) 4-3/4" drill collars. Made up 9-5/8" casing scraper and bumper sub. Ran in well to 7556'. Pulled out of well to 6900'. Secured well.
2/13/2007	Pulled out of well layed down casing scraper and bumper sub. Made up top half on/off tool. Ran in well to 7549' engaged on/off tool attempted to release from anchor latch at 7556'. (would not release) Released from on/off tool pulled out of well to kill string at 2600'. Secured well.
2/14/2007	Pulled out of well layed down on/off tool. made up 8-1/8' wash over shoe Ran in well to 7556' (No fill) Reverse circulated 90 bbls. Pulled out of well layed down shoe made up on/off tool and ported sub. Ran in well 7100'. Secured well
2/15/2007	Ran in well to 7549' Engaged on/off tool attempt to release anchor latch at 7556' Rigged up PPS slick line unit. Ran in well with pulling tool pulled equalizing prong. Ran in with 2-1/2" GS pulled tool released plug body. Rigged down wire line Released from packer at 7556. Pulled out of well to 7000'. Secured well.
2/16/2007	Pulled out of well layed down Baker latch and seals, sliding sleeve and XN nipple. Layed down (8) joints 1-1/4" IJ tubing (Sent latch and seal in to be redressed). Made up Baker On/Off tool , BXN nipple with 2.205 no/go,Baker latch and seals with re-entry guide. Ran in well to 7556' engaged seals and latch. Pulled 20,000 over to check latch. Released o/o tool filled well with 75 bbls tested to 500 psi for 15 minutes. Secured well.
2/20/2007	Pulled out of well. Layed down o/o tool. Made up (1) joint 7" 26# casing and Baker F-1 packer. Made up hydraulic setting tool. Ran in well to 7556' with bottom of casing at 7556' and packer top at 7513' rigged up WEA test truck. Set packer released from packer and pulled out of well to 1500'.
2/21/2007	Pulled out of well layed down setting tool. Made up seal assembly ran in well to 7513' stabbed into packer tested annulus to 500 psi for 20 minutes. Pulled out of well layed down seal assembly. Rigged up to run casing. Secured well.
2/22/2007	Rigged up to run 7" casing rigged up casing tongs. Made up seal assembly. Ran in well picking up 7" casing with seal lube and JAM unit.(Shut down due to heavy rain could not apply seal lube) Secured well.
2/23/2007	Measured and picked up 7" casing applying seal lube and making up with JAM unit to 6500'. Secured well.

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Well: Porter 69 A
A.P.I. No. 037-22051

Field: Aliso Canyon
Surface Location: 894' S & 3,179' E of Sta. 84; 28 3N 16W S.B.B.M.

County: Los Angeles

Title:
(President, Secretary, or Agent)

Date: 6/13/2008

Signature:
(Person Submitting Report)

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

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.

Start Date	Ops. DOGGR Rpt
2/26/2007	Measured and picked up 7" casing with seal lube making up with JAM unit. Ran in well to 7500' rigged up and changed over annulus (200 bbls.) to 3% KCL with bio-cide and corrosion inhibitor. Stabbed in packer at 7513' tested annulus to 500 psi for twenty minutes. Rigged down casing equipment. Rigged down working floor. Secure rig and well.
2/27/2007	Nippled down and stripped off Class III BOP. Landed 7" casing in slips with 70,000 compression. Rigged up WEA casing saw cut off casing. Installed primary seals. Nippled up tubing head tested all seals to 5000 psi for twenty minutes. Nippled up class III BOP. Set in working floor rigged up tubing equipment. Secured well.
2/28/2007	Made up Baker L-10 on/off tool (top half) (3) joints 2-7/8" tubing, Sliding sleeve, (1) joint 2-7/8" tubing, gas lift mandrel.,2-7/8" tubing to 3000' gas lift mandrel. Tubing to surface. Latch on/off tool at 7550' pulled 10,000 over to check latch. Released on/off tool respaced well landed in tubing hanger with 10,000# compression. Pulled 10,000 ovefr to check latch. Annulus would not test (not latched) Attempt to latch on/off tool. Pulled out of well to 4600'.
3/1/2007	Pulled out of well. Made up re-dressed on/off tool ran in well to 7550' worked over on/off tool. Pulled 20,000 over to check latch Released from on/off tool respaced tubing. Landed in tubing hanger with 12,000 compression. Made up hold down studs tested annulus to 500 psi for twenty minutes. Secured well
3/2/2007	Loaded out tubing equipment rigged out working floor. Nippled down and load out class III BOP. Nippled up production tree. Load out equipment. (unable to rig down hoist due to high winds) Rigged own.
3/5/2007	Rigged down hoist loaded out equipment. Installed laterals lines and saqfety valves. Moved rig and equipment to FF-35C. Cleaned lacation.

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

No. P207-23

PERMIT TO CONDUCT WELL OPERATIONS

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

Gas Storage

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

Ventura, California
February 13, 2007

Your _____ proposal to rework well "Porter" 69-A, A.P.I. No. 037-22051 Sec. 28, T. 3N, R. 16W, SB B.&M., Aliso Canyon field, ---------- area, Sesnon-Frew pool Los Angeles County, dated 1/29/2004 received 1/29/2007 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOGGR Class III 5M requirements shall be installed and maintained in operating conditions at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. Requirements specified in our approval of the gas storage operations dated July 26, 1989 shall apply.
4. This office shall be consulted before sidetracking the well or running any additional casing.
5. This office shall be consulted before initiating any changes or additions to this proposed operation or if operations are to be suspended.

Note: Verbal approval was given on this work prior to issuing this permit.

SAF:sf

Engineer Steven A. Fields

Phone (805) 654-4761

Hal Bopp, State Oil and Gas Supervisor

By _____
Deputy Supervisor

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

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

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

0D/0D/3D

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

NOTICE OF INTENTION TO REWORK / REDRILL WELL

P207-23

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

FOR DIVISION USE ONLY			
	Forms		EDP Well
Bond	OGD114 ✓	OGD121 ✓	File
	111 ✓	115 ✓	

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

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

rework/ *(Circle one)* well Porter 69A *(Well designation)* API No. 037-22051

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

Los Angeles, County.

1. The complete casing record of the well (present hole), including plugs and perforations, is as follows:
See attached program
13-3/8 casing cemented at 1001'
9-5/8" casing cemented at 7700'.
5-1/2 perforated liner at 8390', top at 7641'.
7" inner string from surface to 7474'

GS

2. The total depth is: 8390' feet. The effective depth is: 8390' feet.

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

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

5. Last produced: 1-07 *(Date)* _____ *(Oil, B/D)* _____ *(Water, B/D)* _____ *(Gas, Mcf/D)*

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

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

The proposed work is as follows: *(A complete program is preferred and may be attached.)*
Remove tubing and inner string and faulty inner string packer.
Run new 9-5/8" seal bore packer at 7550'
Rerun inner string and tubing.

RECEIVED
JAN 29 2007
By DOGGR DIST 2

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

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

Name of Operator	Telephone Number	
Southern California Gas Company	818 701 3251	
Address: 9400 Oakdale Av	City: Chatsworth	Zip Code: 91313
Name of Person Filing Notice: Richard Jackson	Signature: Richard Jackson	Date: 01-29-2004

File In Duplicate

OG107 (7/87/GSR/5M)

RECOMPLETION PROGRAM

28 November 2006

Porter 69A

DATE: 28 November 2006

Revisions: 1/26/2007RJ

OPERATOR: **Southern California Gas Company**

FIELD: **Aliso Canyon**

WELL: **Porter 69A**

CONTRACTOR: **Key 447**

OBJECTIVE: **Remove tubing and inner string. Replace inner string packer and service inner string. Rerun tubing.**

ACCOUNT:

ELEVATION: **Take all measurements from the original KB = 21' above GL.**

Note: **Well has failed inner string packer. The holes in the 9-5/8" casing have been squeezed but can not be assumed to have full integrity. Before departing from this written procedure obtain approval for written supplemental program.**

Approval from the Ca DOGGR will be required for this work. Post copy of notice of intent and of approval on site. Notify DOGGR as required 24hr before operations are scheduled. BOP requirements in 224.05 should be fully implemented. Class III 5K should be followed. Reservoir inventory and pressures should be monitored regularly. Aliso Canyon is a Title V Facility: Check with Staff environmental specialist to assure all permits and procedures are properly recorded.

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JAN 29 2007
By

WELL WORK PROGRAM

Pre rig:

1. Remove laterals and install companion flanges for killing well.
2. Set wireline plug in profile of on/off tool.
3. Bleed 500psi from tubing to confirm plug is latched. Equalize tubing and casing and open sliding sleeve.
4. Move in pump with tank, shaker and mixer. Well crew to provide labor for killing well and installing kill equipment.
5. Set 500 barrel Baker tank and fill with 3% KCl water/ucarcide. Maintain 500psi overbalance while killing and working on well. MI drilling fluids (661) 598-6370.
   a) Treat all water with ucarcide, 5 gallons per 100 barrels.
   b) Connect pump to tubing and vent casing through choke manifold to Gas Co. system.
6. Kill well per schedule: Maintain overbalance on plug throughout kill. Fill 7" X 9-5/8" and 9-5/8 X13-3/8" annulus with water. All annulus valves should be bled of all pressure and standing full of water before proceeding.

Rig work:

1) Move in production rig capable of 300,000#. Rig up with Sub base.
2) Set 3-1/2" LH Shaffer BPV. Install Class III-5000psi BOPE. Fit BOPE with 2-7/8" pipe rams and CSO. BOPE must have connection and valve below the blind rams. Fit with 5000psi valve.
3) Test BOPE system to assure integrity of connections. Test to 5000psi. Test Hydril to 2500psi. WAived
4) Install pup jt of 3-1/2" N-80 tubing in tubing hanger with Safety valve in top. Unland tubing. Release from On/off tool at 7546'.
5) Pull out of well. 2-7/8" tubing will be used as work string. Remove BOPE and tubing head.
6) Pick up 7" casing spear with stop and pack off and set in 7" IS. Unland 7" and remove slips. String is landed with 70,000# set on packer at 7627'. Watch for any movement at packer before removing elevators.
7) Install BOPE with 7" rams.
8) Pull 7" inner string with packer. Pull out of well laying down 7" casing.
9) Run 9-5/8" scraper to 7546' on 2-7/8" tubing.

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By

10) Wireline set 9-5/8" permanent packer between 7450' and 7500'. Note I.D. of seal assembly must have bore larger than 4.500". Use Baker Model F-1 or equivalent. Set in well cemented joint away from casing collar.

11) Run 7" LT&C casing as inner string and set seals in packer. Note: I.D. of seals in inner string to allow for removal of on/off overshot on tubing string. Use Seal-lube on all connections.

12) Remove BOPE. Land 7" inner string as directed by tube move calculations by packer manufacture.

13) Cut off casing and install slips, seals and DS seal flange and tubing head. Energize all plastic seals and test all connections to 5000psi.

14) Install BOPE on tubing head and test.

15) Run tubing and accessories as follows:

A) Top half of on/off tool

B) 1 joint of 2-7/8" EUE 8R N-80 tubing

C) 2-7/8" HES XD sliding sleeve (use large capacity sleeve)

D) 1 joint of 2-7/8" EUE 8R N-80 tubing

E) 2-7/8" GLM with Dummy valve.

F) 2-7/8" tubing removed from well. Install a second Gas Lift mandrel at approximately 3000' for unloading well.

G) Latch on to on/off tool and over pull 10,000# to check latch and seals. Land tubing in 10,000# compression. Space out as required.

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

Post rig:

1. Replace laterals and instrumentation. Unload well above plug. Equalize pressure and remove PXN plug. Replace valves in gas lift mandrels as required to unload.
2. Place well on high rate tubing withdrawal to clean up water from completion interval. Clean location.

Richard Jackson 28 November, 2006

Approved:

RECEIVED
JAN 29 2007
By

Porter 69A Workover Program to Repair Innerstring Leak

28 November 2006

ORIGINAL

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

HISTORY OF OIL OR GAS WELL

RECEIVED FEB - 2 2005 DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES VENTURA, CALIFORNIA

Operator: Southern California Gas Company
Field: Aliso Canyon
County: Los Angeles
Well: Porter 69 A
Surface Location: 894' S & 3,179' E of Sta. 84; 28 3N 16W S.B.B.M.
A.P.I. No. 037-22051
Richard Jackson (Person Submitting Report)
Title: Storage Engineer (President, Secretary, or Agent)
Date: 01/28/2005
Signature: Richard Jackson
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300
Telephone Number: 818-701-3251

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

Start Date	Ops. DOGGR
07/06/2004	Rigged up slickline and set PXN plug in no/go at 7573'. Made up shifting tool and shifted sliding sleeve open at 7539'.
07/07/2004	
07/08/2004	Rigged up to kill well. Opened surface pipe 0 psi. Opened tubing, psi., 2400 psi. on 7" interstring and 2400 psi. on 9-5/8" casing. Bled casing to 1400 psi. and monitored. Pressured to 1550 psi. in one hour.
07/09/2004	Opened well with 2300 psi. on tubing, 7" interstring and 9-5/8" casing. 13-3/8" surface pipe 0 psi. Rigged up Spicer slickline and ran in well and retrieved PXN plug (brass bar stock stuck on prong). Ran in well and set PXN plug in no/go at 7573'. Bled down casing to 1500 psi. and monitored. Mixed 500 bbls. of KCL to 9 ppg. Pressure held at 1500 psi. Killed well with 500 bbl. of KCL bleeding pressure to 0 psi.
07/12/2004	Opened well, 0 psi 9-5/8" casing, 550 psi 7" innerstring, 0 psi tubing. Bled down innerstring and pumped 44 bbls KCL. Nippled up Class III BOPE, function test BOP. Rigged Weatherford test truck and tested and charted BOP blind rams to 5000 psi. Removed BPV and made up 2-7/8" pup joint and tested pipe rams to 5000 psi., hydril to 3500 psi. M. Davis DOGGR witnessed and approved test.
07/13/2004	Rigged up Tiger wireline and made up chemical cutter. Ran in well and cut 2-7/8" tubing at 7557' (cutter stuck in tubing, pulled out of rope socket). Rigged down wireline and pulled out of well laying down 2-7/8". Laid down gas lift mandrel and sliding sleeve. (wireline tools left in well).
07/14/2004	Rigged up and pumped a 70 bbl., hi-vis polymer pill and displaced with 150 bbls. of KCL. Made up 4-3/4" drill collar with 7" spear. Speared 7 " innerstring, removed innerstring seals and slips. Stacked out 7" innerstring. Nippled down BOP and removed innerstring head. Replaced 9-5/8" primary seals. Nippled up BOP.
07/16/2004	Clean location as directed.
07/20/2004	Nippled down BOP and installed 9-5/8" spoolhead energized and tested seals with 5000 psi. for 15 minutes. Nippled up BOP. Tested 9-5/8" casing to 1000 psi. for 20 minutes OK.
07/21/2004	Well standing full. Picked up 10" test plug, set in 9-5/8" casing and tested pipe rams to 5000 psi. and Hyrdil to 3000 psi. Changed pipe rams to 7". Picked up 7" spear and 4-3/4" drill collar. Speared innerstring and unland from packer at 7606' with 250,000 #. Laid down spear and landing joint. Circulated well.
07/22/2004	Pulled out of well with 7" innerstring to 3500'.
07/23/2004	Pulled out of well with 7" innerstring. Laid down seal assembly. Picked up 2500' of 3-1/2"drill pipe and ran in well.
07/26/2004	Pulled out of well. Made up packer recovery tool, (2) junk baskets, jars, five 4-3/4" drill collars, crossover and ran in well with 40 stands of 3-1/2" drill pipe.
07/27/2004	Picked up 3-1/2" to 7550'.
07/28/2004	Made up kelly and tagged packer ar 7928' broke circulation (80 bbls to fill well) started milling on packer at 7628'. Milled 3', pulled 100,000#'s and packer came free. Pulled out of well, packer, stuck at 7588'. Worked free and pulled out of well.
07/29/2004	Filled with 110 bbls. Pulled out of well. Rigged up Tiger wireline. Made up 5-1/2" cast iron bridge plug. Ran in well with BP and CCL to 7838' could not pass through. Pulled out of well laid down bridge plug. Rigged down wireline. Ran in well to 2500'.
07/30/2004	Filled well with 80 bbls. of KCL. Pulled out of well. Made up 4-1/2" shoe and picked up 15 joints of 2-1/16" tubing. Ran in well to 7641'. Reversed circulated two tubing volumes, ran in well to 7655', attempted to work down. Could not work down. Pulled out of well.
08/02/2004	Opened well 0 psi filled well with 80 bbls. of KCL. Pulled out of well, stood back 14 joints of 2-1/16" tubing and laid down shoe. Picked up 4-5/8" tapered mill and two 3-1/8" drill collars and ran in well to 7655', tagged, pulled to 7650'.
08/03/2004	Opened well, 0 psi., filled well with 80 bbls. Ran in well to 7655', cleaned out to 7705', pulled out of well. Ran in well with 4-5/8" mill and two 3-1/8" and ran in well to 4000'.
08/04/2004	Filled hole with 110 barrels of brine. Ran in hole and tagged at 7809'. Unable to clean out past 7809' with tapered mill. Pulled out of hole, laid down 2-1/16" tubing and tapered mill. Made up round nosed mill on 3-1/8" drill collars. Picked up 15 joints of 2-7/8" PH-6 tubing. Ran in hole.

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Field: Aliso Canyon
County: Los Angeles
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Surface Location: 894' S & 3,179' E of Sta. 84; 28 3N 16W S.B.B.M.
A.P.I. No. 037-22051
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Start Date	Ops. DOGGR
08/05/2004	Filled well with 100 bbls. Ran in well to liner top at 7641', ran in well to 7809' reamed through tight spot. Ran in well to 7913', tagged, pulled out of well and reamed through tight spots at 7655' and 7809'. Pulled out of well and laid down 15 joints of 2-7/8", PH-6 tubing and laid down mill. Ran in well to 2500'.
08/06/2004	Filled well with 80 bbls. of KCL. Pulled out of well. Rigged up Tiger wireline. Made up 5-1/2" cast iron bridge plug. Ran in well and set bridge plug at 7885'. Made up 5-1/2" jet cutter and ran in well to 7870'. Jet cut liner. Rigged down wire line. Made up 4-1/2" hydraulic cutter and two, 3-1/8" drill collars. Ran in well to 7400'.
08/09/2004	Filled well with 80 bbls. of KCL. Ran in well to 7668' and cut 5-1/2" blank liner. Pulled out of well and laid down 3-1/8" drill collars and hydrualic cutter. Made up 5-1/2" spear, 5-3/4" stop, bumper sub, jars, five, 4-3/4" drill collars and intensifer. Ran in well to 2400'.
08/10/2004	Filled well with 80 bbls. Ran in well with 5-1/2" spear to 7655' and engaged liner. Liner started moving at 140,000#'s. Pulled slow, liner dragging. Pulled out of well, laid down tools. Layed down liner hanger and 5-1/2" blank liner, 5 joints of 5-1/2" screen liner and cut off blank. (226' of liner). Ran in well to 2500'.
08/11/2004	Filled with 80 bbls. of KCL. Pulled out of well with kill string and made up 7-7/8" bit, bit sub, (5) 4-3/4" drill collars and ran in well 7640'.
08/12/2004	Ran in well to 7787' tagged fill. Rigged up and changed over with 565 bbls. of Dou-vis polymer. Clean out fill to 7889' top of stub. Circulated and conditioned mud. Pulled to 7606'.
08/13/2004	Ran in well to 7871' tagged. Pulled out of well and laid down 7-7/8" bit, made up 7-1/4" x 15" underreamer. Ran in well to 7590', broke circulation. Scraped casing with reamer to 7650'.
08/14/2004	Scraped 9-5/8" casing from 7500' to 7700'. Gauge ream 15" hole from 7702' to 7819'. Unable to go down hole. Circulated well and pulled out of well to 5300'.
08/16/2004	Filled well with 20 bbls. of KCL. Pulled out of well and laid down 15" underreamer. Made up 7-7/8" bit and ran in well to 7819'. Broke circulation and clean out fill to 7879'. Circulated well clean and pulled to 7550'.
08/17/2004	Mixed hi-vis sweep ran in well to 7870', and tagged. Cleaned out to 7879'. Circulated well clean and pulled out of well with bit. Laid down bit and made up 7-1/4" x 15" underreamer and ran in well to 7690'.
08/18/2004	Ran in well to 7868' tagged fill. Cleaned out to 7877' and circulated well. Pulled to shoe at 7700' Gauged 15" hole with no rotation to 7877'. Circulated well clean. Pulled out of well to 7650'.
08/19/2004	Ran in well to 7879', no fill. Pumped a 54 bbl., hi- vis pill and displaced with 54 bbls. of filtered KCL. Pulled out of well to 7526' changed over well with 650 bbls. of filtered KCL. Pulled out of well and laid down underreamer. Picked up 5" liner, circulating shoe, four joints of 5" WWS with 6-5/8" shroud, two joints of 5" semi-perf and one joint of 5" blank pipes. Made up tail pipe and GP tools. Made up 9-5/8" SC-1 packer, ran in well to 7005' tail at 6775' packer stopped unable to move up or down. Filled backside and sheared out of packer. Pulled out of well.
08/20/2004	Continued pulling out of well, laid down seals and drill pipe. Picked up packer retrieving tool and ran in well. Engauged packer, pulled out of well. Picked up replacement dip tube and packer and ran in well. Packer stopped at 6623'. Unable to work through.
08/21/2004	Continued pulling out of well, packer dragging. Laid down packer and liner. Picked up 8-3/8" string mill and ran in well to 6590'.
08/22/2004	Continued reaming from 6590' to 7559', ran in well and tagged at 7872', 7' of fill. Note: reamed spots at 6652', 6931', 7278'. Pulled out of well, picked up 5" casing, dip tube, and packer and ran in well. Packer stopped at 6823', worked packer free, ran in well.
08/23/2004	Continued running in well. Stopped at 7876', rigged up gravel pack equipment, pumped 60 bbls. to displace pill, unable to to pack theoretical volume away. Pulled out of well. Laid down packer seals and casing equipment. Rigged up Schlumberger, density logging tool. Logged 5" liner. Pulled out of well and rigged down loggers. Ran in well.
08/24/2004	Pulled out of well. Picked up a joint of 2-3/8" tubing with holes spaced out on the bottom 10'. Ran in well with tail pipe. Stopped at 7869', mixed and pumped bleach then displaced with clean fluid. Pulled out of well.

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

HISTORY OF OIL OR GAS WELL

Operator: Southern California Gas Company
Field: Aliso Canyon
County: Los Angeles
Well: Porter 69 A
Surface Location: 894' S & 3,179' E of Sta. 84; 28 3N 16W S.B.B.M.
A.P.I. No. 037-22051
Richard Jackson (Person Submitting Report)
Title: Storage Engineer (President, Secretary, or Agent)
Date: 01/28/2005
Signature:
Address: PO Box 2300, SC9365, Chatsworth, CA, 91313-2300
Telephone Number: 818-701-3251

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

Start Date	Ops. DOGGR
08/25/2004	Ran in well to 7730'. Picked up kelly, reverse circulated 60 bbls., washed out liner from 7730' to 7786'. Continued making passes over that interval. Washed to bottom at 7876'. Pulled 20 stands.
08/26/2004	Filled well with 17 bbls. Pulled out of well. Laid down wash tools. Ran in well with Halliburton density log. Unable to pass 7803', tool not moving. Dropped off 2-1/2" bottom tool assembly. Logged open hole strip. Pulled out of well. Ran in well.
08/27/2004	Filled well with 40 bbls. Pulled out of well. Picked up 3-1/2" tail pipe and gravel pack tools. Ran in well to SC-1 packer at 7556', engaged seals. Began pumping fluid at 5.5 bpm. 950 psi., pumped 60 bbls. and started sand at 1/2 ppm. Pumped 180 cubic feet. Pressured to 1400 psi., displaced sand and reversed out. Started pumping fluid at 1000 psi. started sand at 1 bpm., pumped 14 cu. ft. pressured to 1600 psi. reverse circulated out and restressed with 1600 psi. at 1.4 bpm. Total of 302 cu. ft in place. 153% of theoretical voloume. Pulled out of well to 6900'.
08/30/2004	Filled well with 36 bbls. Pulled out fo well.
08/31/2004	Filled well with 27 bbls. Pulled out of well and laid down tail pipe and gravel pack tools. Rigged up and ran 8 joints 1-1/4" tail pipe, crossover 1-1/4" x 2-7/8", 2.205 "XN" nipple, one 10', 2-7/8" pup joint, sliding sleeve, 10' pup joint seals with latch 6' pup joint on/off tool, crossover to drill pipe. Ran in well to 7556' latched into SC-1 packer filled annulus and tested to 1000 psi. for 10 minutes.
09/01/2004	Rigged up Spicer slickline. Made up ring gauge and ran in well to 7550', pulled out of well and made up 2.313" PXN plug. Ran in well and set plug. Left plug at 7340'. Ran in well and retreived plug. Ran in well with 2.31" swedge, would not pass 7556'. Rigged down slickline and released from on/off tool pulled out of well. Changed out 3-1/2" x 2-7/8" made up on/off tool and ran in well to 7556' latched on/off tool and tested annulus to 1000 psi. for 10 minutes.
09/02/2004	Rigged up Spicer slickline. Made up PXX plug and ran in well to 7560' attempted to set plug in X profile. Pulled out of well, hit tight spot at 7340', left wireline plug in well. Retrieved plug at 7340'. Made up 2.31" swedge and ran in hole to 7582', (XN nipple). Rigged down wireline, released seals and pulled out of well with seals and tail pipe. Inspected seals and changed out top nipple from "XN" to "X" profile. Installed PXX in top "X" profile and ran in well to 3100'.
09/03/2004	Filled well with 24 bbls. Ran in well to 7556', latched seal in SC-1 packer and tested to 1000 psi. for 15 minutes. Released from on/off tool and pulled out of well. Made up SLS 9-5/8" liner hanger and ran in well to 5600'.
09/07/2004	Ran in well with Baker SLP packer to 7474'. Filled tubing and casing, dropped ball and pressured to 1400 psi. packer set and blew ball seat. Sit down 70,000 #'s on packer and tested annulus to 1000 psi. for 15 minutes. Released from packer and pulled out of well laying 3-1/2" drill pipe. Ran in well with 4-3/4" drill collars laid down drill collars.
09/08/2004	Changed pipe rams to 7". Rigged up casing tong and equipment. Rigged up Weatherford JAM unit. Made up seal assembly and ran in well picking up and measuring 7" casing applying seal lube to threads. Ran in well to 3100'.
09/09/2004	Continued running 7" innerstring applying seal lube with JAM unit. Ran in well to 7474', tagged packer, pumped 190 bbls. ofKCL with ten gallons of corrision inhibitor and ten gallons of Bio-cide in annulus. Landed 7" innerstring with 50,000 # compression and tested annulus to 1000 psi.
09/10/2004	Open well 0 psi .Set out rotary table and floor Nippled down and set out BOPE. Landed 7" casing in SLP packer with 50,000 # compression. Cut off 7" casing and installed primary and seal. Nippled up tubing head and Energized seals tested to 5000psi. Nippled up class III BOP set in rotary table and floor. Secured well.
09/13/2004	Open well 0 psi. Rigged up and pump 65 bbls. 9.6 ppg clay base mud in 13-3/8" surface pipe. Changed pipe rams to 2-7/8" and rigged up tubing equipment. Made up top half On/Off tool (1) joint 2-7/8" tubing CMD sliding sleeve (1) joint 2-7/8" tubing gaslift mandrel ran in well measuring and picking up 2-7/8 tubing to 6500'. Secured well.
09/14/2004	Open well, 0 psi ran in well with 2-7/8 tbg to 7547' latched on to on/off tool. Pulled 20000 over to check latch, set in 10000 lbs compression, released from on/off tool and respaced well. Landed tbg on hanger with 10000 lbs compression. Tested annulus to 1000 psi for 10 min. Nippled down class III BOPE. Nippled up production tree. Rig down.
09/15/2004	Rig down equipment, move off hydrotarder trailer. Rigged down and loaded mud pump. Rigged down mast and loaded rig equipment. Rigged down sub base.
09/16/2004	Rigged out sub base and equipment. Move mud pump and pit to P-69H. Rigged out and cleaned location.
09/17/2004	Loaded out equipment. Installed laterals lines and handrails. Cleaned location

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

No. **T204-154**

Report on Operations

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

Ventura, California
August 23, 2004

Your operations at well **"Porter" 69-A,** API No. **037-22051,** Sec. **28**, T. **3N**, R.**16W**, S.B.B.&M. **Aliso Canyon** Field, in **Los Angeles** County, were witnessed on **08-04-2004**. **Mark Davis,** representative of the supervisor, was present from **1645** to **1845**. There were also present **Mike Volkmar.**

Present condition of well: **13 3/8" cem 1002'; 9 5/8" cem 7700', perf 7574' (cem off); 7" ld 7641'; 5 ½" ld 7641'-8390', perf @ int 7641'-8390'. TD 8398'.**

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

DECISION:

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

tkc

Hal Bopp
State Oil and Gas Supervisor

By _____
Bruce H. Hesson
Deputy Supervisor

OG109 (Modified 2000)

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

No. P204-92

PERMIT TO CONDUCT WELL OPERATIONS

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

Gas Storage

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

Ventura, California
June 28, 2004

Your _____ proposal to rework well "Porter" 69-A,
A.P.I. No. 037-22051 Sec. 28, T. 3N, R. 16W, SB B.&M.,
Aliso Canyon field, ---------- area, Sesnon-Frew pool
Los Angeles County, dated 06/18/2004 received 06/21/2004 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOGGR Class III 5M requirements shall be installed and maintained in operating conditions at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. Requirements specified in our approval of the gas storage operations dated July 26, 1989 shall apply.
4. This office shall be consulted before sidetracking the well or running any additional casing.
5. This office shall be consulted before initiating any changes or additions to this proposed operation or if operations are to be suspended.
6. **THIS DIVISION SHALL BE NOTIFIED:**
   a. To witness a pressure test of the blowout prevention equipment before commencing downhole operations.

SAF:sf

Engineer Steven A. Fields

Phone (805) 654-4761

Hal Bopp, State Oil and Gas Supervisor

By _____
Deputy Supervisor

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

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

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

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DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

NOTICE OF INTENTION TO REWORK / REDRILL WELL

P204-92

010/02 30-Sesnon-Frew

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

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

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

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework/redrill well Porter 69A API No. 037-22051
(Circle one) *(Well designation)*

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

Los Angeles, County.

GS

1. The complete casing record of the well (present hole), including plugs and perforations, is as follows:
See attached program
13-3/8 casing cemented at 1001'
9-5/8" casing cemented at 7700'.
5-1/2 perforated liner at 8390', top at 7641'.
7" inner string from surface to 7627'

2. The total depth is: 8390' feet. The effective depth is: 8390' feet.

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

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

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

(or)

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

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

The proposed work is as follows: *(A complete program is preferred and may be attached.)*
Remove tubing and inner string
Abandon Frew with cement plug to 7880'
Cut liner and recover below Sesnon at 7870'
Gage 15" open hole across Sesnon and Gravel pack new 5" wire wrapped screen.
Rerun inner string and tubing.

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

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

Name of Operator	Telephone Number	
Southern California Gas Company	818 701 3251	
Address: 9400 Oakdale Av	City: Chatsworth	Zip Code: 91313
Name of Person Filing Notice: Richard Jackson	Signature: [signature]	Date: 6-18-2004

File In Duplicate

OG107 (7/97/GSR/SM)

RECOMPLETION PROGRAM

15 June 2004

Porter 69A

DATE: 15 June, 2004

Revisions: 21 June 2004RJ

OPERATOR: **Southern California Gas Company**

FIELD: **Aliso Canyon**

WELL: **Porter 69A**

CONTRACTOR: **Key 447**

OBJECTIVE: **Remove tubing and inner string and recover liner, replace with new gravel packed wire wrapped screen. Replace inner string and repair well head.**

ACCOUNT:

ELEVATION: **Take all measurements from the original KB = 21' above GL.**

Note: **Well has hole in inner string and leak at wellhead into surface casing. The holes in the 9-5/8" casing have been squeezed but can not be assumed to have full integrity. Before departing from this written procedure obtain supplemental program before proceeding.**

Approval from the Ca DOGGR will be required for this work. Post copy of notice of intent and of approval on site. Notify DOGGR as required 24hr before operations are scheduled.

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Group List - Actual

Surface casing

Des	OD	ID	Top (MD)	Wt.	Grd
Surface Casing	13 3/8	12.615	21	54.50	K-55
Flost Shoe	13 3/8		1,001		

7" innerstring

Des	OD	ID	Top (MD)	Wt.	Grd
1 cut off joint 7", N-80	7		21	29.00	N-80
2 joints 7", LT&C	7		33	29.00	N-80
Xover 7" LT&C box x ABFL4S pin	7		121		
191 joints 7", ABFL4S casing	7	6.184	122	26.00	N-80
Baker locator	7		7,626		
Baker 4 seal units	3		7,627		

Production casing

Des	OD	ID	Top (MD)	Wt.	Grd
Casing Joints	9 5/8	8.755	21	43.50	N-80
Casing Joints	9 5/8	8.681	4,315	47.00	N-80
Casing Joints	9 5/8	8.535	6,611	53.50	N-80
Casing shoe	9 5/8		7,699		

Production tubing

No.	Des	OD	ID	Top (MD)	Len
1-1	Otis 2.313" "XD" sliding sleeve (opens down)	3.668		7,539	3.2
1-2	1 joint 2-7/8" tubing	3.668	2.441	7,543	30.6
1-3	Otis "XN" nipple 2.205" (2.313") profile	3.668		7,573	1.3
1-4	1 joint 2-7/8" tubing	3.668	2.441	7,575	30.6
1-5	Baker 80-32 latch	3.668		7,606	0.5
1-6	Baker latch (inside packer)	3.668		7,606	0.7
1-7	Baker seal assembly -2-	3.668		7,607	2.0
1-8	Baker production tube	3.668	2.441	7,609	5.3

Perforations

Des	Int (MD)	Date	Top (TVD)
Sqz'd perf	4,913-4,923		
WSO Sqz'd perf	7,572-7,573		
WSO Sqz'd perf	7,574-7,575		

Other in Hole

Des	OD	Int (MD)
Baker Model "D" Packer	6	7,606-7,612
Baker Model "D" Packer	9	7,627-7,633

Sliding sleeve is closed.

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Note: BOP requirements in 224.05 should be fully implemented. Class III 5K should be followed. Reservoir inventory and pressures should be monitored regularly.

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

WELL WORK PROGRAM

Pre rig:

1. Remove laterals and install companion flanges for killing well.
2. Set PXN plug in XN nipple at 7573'.
3. Bleed 500psi from tubing to confirm plug is latched. Open sliding sleeve.
4. Move in pump with tank, shaker and mixer. Well crew to provide labor for killing well and installing kill equipment.
5. Set 500 barrel Baker tank and fill with 3% KCl water. Maintain 500psi overbalance while working on well. MI drilling fluids (661) 598-6370.
   a) Treat all water with ucarcide, 5 gallons per 100 barrels.
   b) Connect pump to tubing and vent casing through choke manifold to Gas Co. system.
6. Kill well per schedule: Maintain overbalance on plug throughout kill. Fill 9-5/8" and 13-3/8" annuli with water. All annulus valves should be bled of all pressure and standing full of water before proceeding. Pump down 7" inner string with tubing closed to confirm circulation down 7" and back up 9-5/8" through suspected hole.

Rig work:

1) Move in production rig capable of 300,000#. Rig up with Sub base.
2) Set 3-1/2" LH Shaffer BPV. Install Class III-5000psi BOPE. Fit BOPE with 2-7/8" pipe rams and CSO. BOPE must have connection and valve below the blind rams. Fit with 5000psi valve.
3) Test BOPE system to assure integrity of connections. Test to 5000psi. Test Hydril to 2500psi.
4) Install pup jt of 3-1/2" N-80 tubing in tubing hanger with Safety valve in top. Unland tubing and pull 10000# over string weight. Rig up shooters and cut tubing in first full joint above plug.
5) Pull out of well. Lay down all tubing and accessories.
6) Remove BOPE, tubing head and strip down to Inner String slips.
7) Pick up 7" casing spear with stop and set in 7" IS. Unland 7" and remove slips. Do not pull seals from packer. String is landed with 50,000# set on packer at 7627'.

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8) Stack out 7" and remove IS flanges and strip wellhead down to casing primary seal. Replace primary seals in 13-5/8" 5000# Shafco casing head. Reinstall BOP on this flange.

9) With spear set in 7", test below Hydril to 1000psi to confirm integrity of 9-5/8" casing to 7627'.

10) Pull 7" inner string from packer. Kill well through hole in 7" and place HEC/XD polymer in well for duration of work. Pull out of well laying down 7" casing. (if string cannot be released from packer, cut casing approximately 20' above stub of 2-7/8" tubing. Fish remaining 7" with spear, BS, Collars and jars)

11) Pick up Model "D" recovery tool with plucker on 3-1/2" drill pipe and remove packer from well at 7627'.

12) Abandon Frew: Run 2-1/16" Hydril tail pipe to 8390' and place cement plug in 5-1/2 slotted liner with top at 7900'. Pull to 7880' and reverse/circulate clean.

13) Make up 5-1/2" casing cutter on 3-1/2 DP with 2-1/16 Hydril tail and cut liner on blank at 7870'. If cement is above 7860' clean out to 7880'. Make a second cut at 7660'. Review liner detail and cut with adequate blank below to allow for fishing.

14) Recover hanger using spear, BS, Jars and adequate collars to fail slips.

15) Run 9-5/8" scraper to top of stub.

16) Pick up adequate 7-5/8" to wash over liner from top cut to 7870'. Use "T" dog to recover top piece of liner.

17) Make cleanout run with and with 7-7/8" bit to top of cement and polish off to 7870'. Pick up 15" hole opener to gage hole from 7700' to 7860'. Scrape lap with hole opener going in from 7600'.

18) Place filtered, clean high viscosity 2% KCl/HEC pill across open hole. Pull to top of pill and change over to filtered, clean 2% KCl water.

19) Run caliper log in open hole interval of well.

20) Run liner as follows:

a) 7880 – 7860'	5" blank liner with circulating shoe and flapper.
b) 7860 – 7700'	5" wire wrapped screen with protective shroud (.010" mesh)
c) 7700 – 7600'	5" semi-perf
d) 7600 – 7560'	5" blank
e) 7660 – 7635'	5" X 9-5/8 liner hanger with seal receptacle

Run dip tube for gravel packing operation.

Porter 69A Workover Program

18 June 2004

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21) Set hanger and gravel pack with washed 20/40 sand to pack off. Re-stress until completely packed off. All water used in the packing to be filtered and isolated until used to avoid contamination. Use Ucarcide at 5gallons per 100 barrels.

22) Close packing ports and remove packing tools. Lay down drill pipe.

23) Run seal assembly with on/off tool 6' above latch and set in hanger/locator. Test seals/casing to 500psi for 10 minutes. Monitor open tubing and 13-3/8" casing for flow.

24) Run in place PXN plug in XN profile in on/off tool with perf nipple above.

25) Release from on/off tool and pull out of well.

26) Run 7" LT&C casing as inner string and set in packer at 7600'.

27) Remove BOPE (re-torque primary seal) and install DS flange and Inner string spool. Land 7" inner string as directed by tube move calculations by packer manufacture. Pickle with lease crude oil prior to setting in seals.

28) Cut off casing and install slips, seals and DS seal flange. Energize all plastic seals and test all connections to 5000psi.

29) Install BOPE on inner string flange and test.

30) Run tubing and accessories as follows:

A) Top half of on/off tool

B) 1 joint of 2-7/8" EUE 8R N-80 tubing

C) 2-7/8" HES XD sliding sleeve (use large capacity sleeve)

D) 1 joint of 2-7/8" EUE 8R N-80 tubing

E) 2-7/8" GLM with Dummy valve.

F) 2-7/8" tubing removed from well. Install a second Gas Lift mandrel approximately 1000' below static fluid level for unloading well.

G) Latch on to on/off tool and over pull 10,000# to check latch and seals. Land tubing in 20,000# compression. Space out as required.

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

Post rig:

1. Replace laterals and instrumentation. Unload well and remove PXN plug. Replace valves in gas lift mandrels as required to unload.
2. Place well on high rate tubing withdrawal to clean up water from completion interval. Clean location.

Richard Jackson 15 June, 2004

Approved: J. Mansdorfer 6-21-2004 M. Ortwein6-17-2004

Porter 69A Workover Program

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VENTURA, CALIFORNIA

Mr. Steve Fields
DIVISION OF OIL, GAS
AND GEOTHERMAL RESOURCES
1000 South Hill Road, Suite 116
Ventura, CA 93003-4458

Southern California
Gas Company
555 W. Fifth Street
Los Angeles, CA
90013-1011

Mailing Address:
Box 3249
Los Angeles, CA
90051-1249

RE: Rework Notice for Well "Porter" 69-A
Aliso Canyon Field

Dear Steve:

Recently we received a letter requesting that we submit two copies of "Notice of Intention to Rework Well" for work which was completed between 12-27-93 and 1-10-94 on well Porter 69-A from Stephen Mulqueen. The letter also states that a "Permit to Conduct Well Operations" is required whenever this type of rework is conducted on a well. We, however, do not agree with the interpretation of the section of the code which is being used to make this determination. We interpret "the casing of the well" to mean the primary protective string which is in contact with the open well bore.

From time to time we install various sizes of tubing within the primary casing for different operating reasons. These tubing sizes vary from 2 3/8" to 7" depending on the size of the primary casings and the operation. Generally, when well work is performed to remove or replace those inner tubing strings, no permit request is made because in our opinion the code does not require it. We do not think the size of the tubing string should determine the need for a permit. We are also concerned that this interpretation could lead to confusion if permits are arbitrarily decided on whenever certain size tubing is installed inside the primary casing.

While we do not have any questions regarding permit request for work that will permanently alter the primary casing, we do think it is unnecessary and could burden the system with added paperwork to require permits for work performed inside the primary casing, and work which will in no way permanently alter the primary casing.

We hope that this explanation of our action will help to clarify the situation.

Sincerely,

Stan Sinclair

Stan Sinclair
Staff Drilling Engineer

cc: J. D. Mansdorfer
M. A. Woiemberghe

28-3-16
D37-22051

STATE OF CALIFORNIA—THE RESOURCES AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

1000 SOUTH HILL ROAD, SUITE 116
VENTURA, CALIFORNIA 93003-4458
(805) 654-4761
TELEFAX (805) 654-4765

June 13, 1994

M. A. Woiemberghe, Agent
Southern California Gas Co.
Box 3249
Terminal Annex, ML 2260
Los Angeles, CA 90051

RE: Rework Notice for Well
"Porter" 69-A
Aliso Canyon Field

Dear Sir:

The well history for well "Porter" 69-A which covers work completed between 12-27-93 and 1-10-94 indicates that 7" casing was replaced during well operations. A "Permit to Conduct Well Operations" is required whenever this type of rework is conducted on a well.

Please submit two copies of the completed form "Notice of Intention to Rework Well", form OG 107, by July 1, 1994 covering the rework as described above. In the future, please advise your staff of the permitting requirements when reworking wells.

Sincerely,

Stephen Mulqueen

Stephen Mulqueen
Oil & Gas Engineer

SPM:SM
Enclosure

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

Operator: Southern California Gas Company Field: Aliso Canyon County: Los Angeles
Well: Porter #69A Sec. 28 T. 3N R. 16W S.B. B. & M.
A.P.I. No. 037-22051 Name: M. A. Woiemberghe (Person submitting report) Title: Agent (President, Secretary or Agent)
Date: January 25, 19 94

Signature: J. A. Hemmerly for M. A. Woiemberghe

P. O. Box 3249 Los Angeles, CA 90051-1249 (213) 244-2680
(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.

RECEIVED
FEB 07 1994
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
VENTURA, CALIFORNIA

Date	
1993	
12/27	Started moving rig and equipment from SS-25A to Porter 69A.
12/28	Moved in and rigged up. Started workover operations 12:00 p.m. Circulated gas to SoCalGas system. Installed back pressure valve. Removed xmas tree. Installed BOPE. Removed back pressure valve and secured well.
12/29	Tested blind rams, pipe rams and choke manifold to 4000 psi; Annular preventor to 2500 psi. Unlatched from Baker Model D packer. Circulated well with 300 Bbls of 2% KCl water with 5 gal/100 bbls Hib-19, 5 gals/100 bbls Ucarcide, and 2gals/100 bbls COS. Pulled out of well to 3000' for kill string.
12/30	Pulled out of well. Laid down production equipment. Ran in well with Baker 7" bridge plug and set at 7604'. Pulled out of well. Installed BOPE lift kit. Secured well.
12/31	Un-landed 7" casing. Speared 7" casing. Pulled out of straight slot locator with casing jacks. Laid down 1 joint of casing.
01/03	Pulled out of well and laid down 110 joints of 7" casing. Secured well with 80 joints of 7" casing in well.
01/04	Continued laying down 7" casing. Changed out rams and mixed 2% KCL fluid. Ran in well with 4-5/8" seal assembly on 2-7/8" tubing. Tested packer @ 7627', seals and 9-5/8" casing; ram doors leaked. Installed seal on ram door. Tested casing to 1000 psi, for 20 minutes.

D.O.G. 2/2/94

OG103 (6/91/GSR1/5M)

01/06 Pulled 4-5/8" seal assembly out of well. Ran 7" 26# N80 ABFL4S casing to 3870'.

01/07 Ran 7", 26#, N80, ABFL4S casing to 7610'. Set bridge plug at 100'.

01/08 Stabbed into packer and tested to 1000 psi. Nippled down BOPE. Landed casing with 50,000 lbs. on packer. Set slips and made cut off on 7" casing. Installed tubing head and seal flange. Nippled up BOPE. Tested tubing head. Made up production string and ran in well to 3800'.

01/10 Ran 2-7/8" production string to 7606'. Spaced out and landed tubing hanger. Tested 7" casing to 1500 psi. Removed BOPE. Installed xmas tree. Tested tree to 5000 psi. Released rig at 4:00 p.m.

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Ventura, California

November 6, 1991

R. D. Phillips, Agent
SOUTHERN CALIFORNIA GAS COMPANY
P.O. Drawer 3249 Mail Location 22GO
Los Angeles, CA 90051-1249

Your request, dated July 24, 1991, proposing to change the designation of well(s) in Sec. 28, T. 3N, R 16W, S.B. B. & M., Aliso Canyon field, Los Angeles County, District No. 2, has been received.

The proposed change in designation, in accordance with Section 3203, Public Resources Code, is authorized as follows:

FROM	TO
"SFZU" P-42A (037-21876)	"Porter" 42A (037-21876)
"SFZU" P-42B (037-21877)	"Porter" 42B (037-21877)
"SFZU" P-42C (037-21878)	"Porter" 42C (037-21878)
"SFZU" P-69A (037-22051)	"Porter" 69A (037-22051)
"SFZU" PS-42 (037-00753)	"Porter Sesnon" 42 (037-00753)
"SFZU" SS-1 (037-00754)	"Standard Sesnon" 1 (037-00754)
"SFZU" SS-2 (037-00755)	"Standard Sesnon" 2 (037-00755)
"SFZU" SS-3 (037-00756)	"Standard Sesnon" 3 (037-00756)
"SFZU" SS-5 (037-00758)	"Standard Sesnon" 5 (037-00758)
"SFZU" SS-6 (037-00759)	"Standard Sesnon" 6 (037-00759)
"SFZU" SS-7 (037-00760)	"Standard Sesnon" 7 (037-00760)
"SFZU" SS-8 (037-00761)	"Standard Sesnon" 8 (037-00761)
"SFZU" SS-9 (037-00762)	"Standard Sesnon" 9 (037-00762)

M. G. MEFFERD, State Oil and Gas Supervisor

By Patrick J. Kinnear
Deputy Supervisor
PATRICK J. KINNEAR

OGD157 (10/85/DWRR/1M)

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

DIV. OF OIL AND GAS
RECEIVED
OCT 19
SANTA PAULA, CALIFORNIA

Operator Southern California Gas Co. Field Aliso Canyon County Los Angeles
Well "SFZU" P-69A, Sec. 28, T 3N, R 16W, SB B. & M.
A.P.I. No. 037-22051 Name J. P. Anand (Person submitting report) Title Agent (President, Secretary or Agent)
Date July 14, 1983

Signature J. P. Anand

P.O. Box 3249 Terminal Annex, Los Angeles, CA 90051 (Address) (213) 689-3561 (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	
	MWO #99185 was issued to remove casing patches & repair shoe leak. GWO #95030 was issued to install inner string & replace tubing.
1983	
4-27	1st Day. Rigged down SPS Rig #45 and moved to Porter #69A.
4-28	2nd Day. Rigged up SPS #45. Circulated well. Installed back pressure valve in doughnut. Removed Xmas tree and installed 11" x 5000 psi Class III BOPE.
4-29	3rd Day. Pressure tested BOPE with water as follows: blind rams 3,000 psi - 20 minutes; pipe rams 3,000 psi - 20 minutes; Hydril 2,300 psi - 20 minutes; choke manifold 3,000 psi - 20 minutes. Tests witnessed by Ms. Fulco with DOG. Removed back pressure valve from doughnut, unlanded doughnut and circulated well. Pulled out of well laying down production equipment. Made up 7.75" O.D. spear on one 4-3/4" bumper sub, hydraulic jars and six 4-3/4" O.D. drill collars. Started in well.
4-30	4th Day. Ran Bowen 7.75" spear to 4888' and attached to top swedge of casing patch. Pulled out of well and retrieved swedge. Ran 7.75" index on fishing assembly and set tool at 4930'. Pushed lower swedge from patch and pulled out of well. Made up 7.75" O.D. spear on fishing assembly and attached to casing patch. Pulled to 1800' and tools came free. Pulled out and found grapple had released. Started back in well with spear.
5-2	5th Day. Attached 7.75" O.D. spear to casing patch at 6555' and pulled out of well. Recovered complete patch less bottom swedge. Made up Otis latch-in pulling tool on fishing assembly and ran to 7520' and attached to 9-5/8" Otis permatrieve packer and pulled out of well. Recovered 2 swedges and Otis 9-5/8" permatrieve packer. Made up 7.75" O.D. spear on fishing assembly and started in well.

5-3 6th Day. Ran 7.75" O.D. spear to 7540'. Attempted to attach to top swedge of casing patch but had no indication of attaching. Pulled out of well and did not retrieve swedge. Ran 7.75" on index tool on fishing assembly but could not work index tool into top of casing patch at 7540'. Started out of well.

5-4 7th Day. Finished pulling out with index tool. Shut rig down six hours for repairs. Made up 7-½" O.D. spear on fishing assembly and ran to 7540'. Attached to top swedge of casing patch and started out of well.

5-5 8th Day. Finished pulling out with 7-½" O.D. spear and retrieved top swedge of casing patch. Re-ran 7-½" spear to 7541' and attached to casing patch. Worked patch out of well recovered casing patch less bottom pack off section 1' x 7-½" I.D..

5-6 9th Day. Made up 8-3/8" O.D. concave mill on milling assembly and found Pengo pack off assembly at 7485'. Milled assembly and cleaned out to 7584'. Pulled out of well. Layed down 20 bad joints of 3-½" tubing.

5-7 10th Day. Replaced 14 bad 3-½" 8 rd collars of work string. Ran Johnston 5-½" 20# retrievable bridge plug on 2-7/8" tubing tail to 7655'. Set bridge plug and displaced 540 bbls. of 64#/cu.ft. polymer completion fluid with 540 bbls. of 63#/cu.ft. lease salt water. Pulled out of well with Johnston retrieving tool. Made up 18 joints (560') of 2-7/8" tubing tail on 3-½" tubing and ran tail to 7650'.

5-9 11th Day. Filled hole with 3 bbls. of salt water. Ran in well to 7650'. Set bridge plug at 7655'. Pumped 10 sacks sand. Pulled up 5 stands. Waited one hour. Ran in well and located sand at 7588'. Pulled out of well and measured out. Ran feeler on with wire line and located sand at 7588'. Ran bailer with one sack of sand. Located at 7583'. Ran bailer and dump 1.5 sacks cement. Ran bailer and dumped 1.5 sacks cement.

5-10 12th Day. Filled well with 3 bbls. of salt water. Ran Hercules wire line bailer and located top of cement at 7575'. Pulled out of well. Made up and ran in well with 313' of tubing tail on Johnston 9-5/8" retrievable squeeze tool, equalized 100 cu.ft. acid at 7561'. Set retrievable retainer and obtain breakdown of 5.6 cu.ft./min. at 2800 psi. Left 2 cu.ft. acid in casing.

5-11 13th Day. Equalized 174 cu.ft. of acid. Obtained breakdown of 8.4 cu.ft./minute at 2,600 psi. Pulled out of well. Rigged up Welex. Ran 8" O.D. gauge ring to 7550'. Made up and ran Johnston 9-5/8" cement retainer and set top of retainer at 7510'. Ran stinger on 3-½" tubing to 7200'.

5-12 14th Day. Finish running in well to 7510'. Stabbed into retainer. Pressure tested retainer on annulus to 500 psi for 20 minutes. Pulled stinger up to 7508' and established circulation. Test lines to 3,000 psi. Pumped 25 cu.ft. acid, followed by 57 cu.ft. 131#/ cu.ft. cement, 10 cu.ft. fresh water and 264 cu.ft. salt water. Stabbed into retainer and pumped 12 cu.ft. salt water with 2 cu.ft. acid and obtained returns. Attempted to set more weight but could not go down. Pulled 25,000 # over string weight. Pulled 4 stands, reversed out and cleared tubing. Pulled out of well and found 7 joints of bent tubing.

5-13 15th Day. Rig down for repairs.

5-14 16th Day. Rig down for repairs.

5-15 17th Day. Made up 8-3/8" O.D. bit on six 4-3/4" drill collars and found retainer at 7482' with no cement above it. Pulled out of well. Ran 8-3/8" x 7-½" mill shoe on milling assembly to 7482' and milled for 2 hours.

5-17 18 Day. Continued milling on retainer from 7482' - 7484'. Retainer moved down to 7487'. Milled retainer without circulation for 15 minutes. Pulled out of well. Did not recover retainer. Ran 8-3/8" x 7-½" mill back to 7487' and milled to 7571' where mill stopped. Started out of well.

5-18 19th Day. Finished pulling out of well. Retrieved upper cone and lock ring from Johnston 9-5/8" retainer. Made up 8-½" O.D. concave mill on milling assembly and ran to 7571'. Continued milling from 7571' - 7573'.

5-19 20th Day. Continued milling from 7573' to 7578'. Started out of well laying down bad 3-½" tubing and measuring tubing.

5-20 21st Day. Finished pulling out with milling assembly. Made up 240' of 3-½" tubing tail on Johnston 9-5/8" retainer and ran tail to 7475'. Back scuttled fill to 7576'. Set retrievable retainer at 7334' and obtained break down with water at 5 cu.ft./minute at 3,000 psi. Spotted 125 cu.ft. of 12% Hcl and 3% HF acid at 7574' and displaced 100 cu.ft. into holes at 7574' at 21 cu.ft./ minute at 3,000 psi. Pulled out with retainer. Ran Baker drillable retainer on McCullough electric line and set at 7502'. Made up Baker cementing stinger on 3-½" tubing and started in well.

5-21 22nd Day. Ran Baker stinger to retainer at 7502'. Preceded by 25 cu.ft. of 6% Hcl and 1-½% HF acid. Mixed 115 cu.ft. of neat "G" cement with .5% D31 and .6% D19 and displaced 20 cu.ft. past holes at 7574' with final pressure of 2400 psi. Mixed 115 cu.ft. of neat "G" cement with no additives and displaced 84 cu.ft. out holes at 7574' before reaching 3000 psi final pressure. Pressure tested holes in casing at 4913' with 1300 psi for 35 minutes. Pulled out with Baker stinger. Ran Johnston 9-5/8" retrievable bridge plug to 3000' and set. Started out with tubing.

5-23 23rd Day. Pulled out with Johnston retrieving tool. Removed 11" x 5,000 # BOPE, tubing head and seal flange. Using CPS hydraulic jacks and Midway spear unlanded 9-5/8" casing with 525,000 #. Cut 13-3/8" casing below 13-5/8" x 5,000 psi casing head and removed 30" section of 13-3/8" casing.

5-24 24th Day. Reinstalled 13-5/8" casing head on 13-3/8" casing. Using Valley X-Ray, inspected weld, but weld failed to pass inspection. Cut off wellhead and prepared to re-install.

5-25 25th Day. Re-welded 13-5/8" casing head on 13-3/8" casing. Inspected weld with Valley X-Ray (weld passed inspection). Using Midway, 9-5/8" spear and CPS hydraulic jacks, relanded 9-5/8" casing with 350,000# on slips. Cut off excess 9-5/8" casing. Started re-installing 11" x 5000 psi BOPE.

5-26 26th Day. Finished installing 11" x 5000 psi Class III BOPE. Pressure tested to 2,000 psi. Ran Johnston retrieving tool to 3,000'. Attached to 9-5/8" retrievable bridge plug and pulled out of well. Made up 8-3/8" concave mill on milling assembly and ran to 7500'. Displaced 540 bbls. of 63#/cu.ft. lease water from well with 540 bbls. of 64#/cu.ft. polymer completion fluid. Started milling on retainer at 7509'.

5-27 27th Day. Milled retainer at 7509' and cement to 7578'. Pulled out of well with mill. Made up 300' of 2-7/8" tubing tail below Johnston 9-5/8" retrievable retainer and started in well.

5-28 28th Day. Ran 3-½" tubing tail below 9-5/8" Johnston retrievable retainer to 7547' and cleaned out to 7578'. Set Johnston 9-5/8" retainer at 7275' with tail at 7575' and pressured 2000 psi for 20 minutes. Pulled out with retainer. Made up 8-5/8" bit on drilling assembly with one 9-5/8" casing scraper and drilled out cement to 7584', top of liner. Started out of well.

5-31 29th Day. Finished pulling out with 9-5/8" bit. Made up 4-5/8" bit and 5-½" 20# casing scraper on 2-7/8" tubing. Cleaned out sand from 7584' to 7650' and back-scuttled at 7635'. Pulled out of well and found one casing scraper blade 4" x 1" thick missing.

6-1 30th Day. Made up casing surge tool with 4-½" O.D. 4-1/8" I.D. skirt on 300' of 2-7/8" tubing tail. Ran to 7606' and surged tubing four times. Pulled out of well but did not retrieve anything. Ran Bowen 4-½" O.D. magnet on sand line three times but did not recover scraper blade. Made up 4-½" O.D. 4-1/8" I.D. junk catcher type washover shoe on 2-7/8" tubing tail and started in well.

6-2 31st Day. Ran catcher type washover shoe to 7606' and back-scuttled to 7647'. Pulled out of well. Ran Johnston 5-½" retrieving tool on 2-7/8" tail to 7642' and back-scuttled sand out to 7655'. Attached to retrievable plug at 7655', released plug and pulled out of well. Plug came off retrieving tool while pulling out of well. Made up new retrieving tool on tubing and started in well. Recovered large piece of casing scraper blade and several pieces of metal inside retrieving tool.

6-3 32nd. Ran retrieving tool to 7950'. Attached to 5-½" Johnston retrievable bridge plug and pulled out of well. Made up 4-½" O.D. washover shoe on 2-3/8" tubing tail and cleaned out fill from 8261' - 8390'. Started out with shoe.

6-4 33rd Day. Pulled out with washover shoe. Made up Lynes test tools on 3-½" tubing. Ran packer to 7539' with tail to 7545'. Installed test head on tubing and pressure tested head, manifold and lines to 3,000 psi.

6-6 34th Day. Open Lynes test tool and flowed well to Baker tank. Produced 12 bbls. of fluid. Connected test lines to Gas Company line. Flowed well from 1:00 p.m. to 9:00 p.m. through 14/64" choke @ 950 psi tubing pressure = 6 MMCF per day rate.

6-7 35th Day. Opened Lynes tool @ 6:05 a.m. shut in pressure 1,500 psi. Flowed well on 12/64" bean at 1480 psi till 1:00 p.m. Flowed well on 30/64" bean at 1,000 psi till 9:00 p.m. at 6.5 MMCF per day. Shut well in.

6-8 36th Day. Rigged up and ran McCullough Audio Analyzer log from 7500' to surface. Open Lynes tool and killed well. Circulated well and bled off gas. Pulled out of well. Ran in hole with casing cutter to 3000'.

6-9 37th Day. Filled hole with 12 bbls. fluid. Finished running in well from 3000' to 7595'. Cut 5-½" casing. Pulled out of well. Made up and ran in hole with spear, bumper sub, jars and drill collars to 7593'. Set spear and pulled out well. Did not retrieve fish. Made up and ran in well with 8-3/8" mill and junk sub to 7000'.

6-10 38th Day. Cleaned out to top of Liner Hanger. Circulated for 30 minutes. Got 26 bbl gas kick. Shut well in. Went through choke manifold and conditioned mud. Circulated gas out. Pulled out of well. Ran in well with 4-1/8" bit and scraper to 7614', cleaning out top of liner. Circulated well for 1 hour. Pulled up to 5414'.

6-11 39th Day. Pulled out of well from 5414'. Ran in well with casing cutter. Cut 5-½" casing at 7596'. Pulled out of well. Ran in with spear, bumper sub, jars, & D.C. to 7592'. Set spear. Worked fish loose. Pulled up to 7300'.

6-13 40th Day. Pulled out of well with fishing tools. Retrieved Burns 9-5/8" x 5-½" liner hanger, port collar and 4.70' of wire wrapped liner. Made up 4-5/8" tapered mill on milling assembly and ran mill to 7660'. Pulled out of well. Made up 60' of 7-5/8" x 6-3/4" wash pipe on 3-½" tubing. Ran wash pipe to 7619', attempted to clean out by back scuttling. Would not clean out.

6-14 41st Day. Cleaned out gravel pack sand from 7619' to 7650'. Pulled out with washover pipe. Made up 5-½" cutter on 2-7/8" tubing tail and ran to 7645'. Cut 5-½" liner and pulled out of well. Made up 5-½" spear on fishing assembly and started in well.

6-15 42nd Day. Attached 5-½" casing spear to liner top at 7600' and pulled out of well. (Retrieved remaining 35' of wire wrapped screen and 10' of blank from 7634' to 7705'). Ran Baker 9-5/8" 53.5# x 5-½" lead seal pack off to 7645', attached to 5-½" casing and packed off the lead seal. (Top of pack off = 7641'). Pulled out with setting tools. Made up 4-5/8" bit on 2-3/8" tubing tail and started in well.

6-16 43rd Day. Ran 4-5/8" bit to 8253' (top of fill) and cleaned out to 8390'. Pulled out of well. Ran Baker 8.315" O.D. junk basket on McCullough electric line. Stopped at 7570'. Ran Baker 8.128" O.D. packer on electric line; stopped at 7570'. Ran McCullough 4" O.D. collar locator to liner and found top of blank at 7651'. Made up Servco 7-5/16" O.D. mill on milling assembly and ran to 7570'. Mill stopped and would not stick or work down well with 40,000# set down weight; started out with mill.

6-17 44th Day. Finished pulling out with 8-5/8" mill. Made up Baker liner running tool on fishing assembly. Ran to 7570', attached to Baker adapter and pulled out of well. Retrieved adapter.

6-18 45th Day. Made up new Baker 9-5/8" x 5-½" Drive over lead seal pack off. Ran to 7645' and attached to 5-½" liner and packed off lead seal. Released from hanger and pulled out of well.

6-20 46th Day. Made up Baker 9-5/8" Model "D" Packer on Pengo Electric line and located liner Hanger at 7641'. Corrected to collars and set top of Packer at 7627'. Ran Baker test seals on 3-½" tubing to 7627' and pressure tested seals and packer to 1300 psi. Started out of well laying down 3-½" tubing.

6-21 47th Day. Finished laying down 3-½" tubing. Removed 3-½" rams and installed 7" rams in BOPE. Made up Baker 7" x 3.875 I.D. locator seal on 7" 26# N-80 N.L. F.L. - 4S Quadraseal casing. Ran casing to 7627'. Spotted 200 bbls. of 70# cu.ft. Double Inhibited polymer completion fluid between 7" and 9-5/8" casing and landed 7" on slips in Inner string spool with 55,000 # set down weight on Baker model "D" packer at 7627'.

6-22 48th Day. Installed 7" Baker model "C" retrievable plug at 60'. Removed BOPE. Cut off excess 7" casing. Dressed oversized casing stub (1/16" oversized). Re-installed BOPE and pressure tested to 2000 psi. Removed Baker 7" retrievable bridge plug. Using Pengo electric line set Baker 7" 26# model "D" packer at 7606'. Made up Baker test seals on 2-7/8" EUE 8 rd tubing and started in well picking up new 2-7/8" tubing.

6-23 49th Day. Finished picking up 2-7/8" tubing. Landed Baker locator latch in model "D" packer at 7606'. Pulled 20,000 # over tubing weight and set 10,000 # on packer. Pressured seals and packer to 1,500 psi. Pulled out with test seals. Made up Baker Production tube on one 2-7/8" locator latch with 2 seals 1-joint of 2-7/8" tubing 1 2-7/8" x 2.205" Otis no-go nipple; 1-joint of 2-7/8" tubing, 1 2-7/8" Otis sliding sleeve (open) 1-joint of 2-7/8" tubing; 1 Camco 2-7/8" gas lift mandrel with 4000# BST pump out and hydrotested in well at 5000 psi. Baker sealed tubing threads. Attached to Baker model "D" at 7606' and landed with 3000 # on Baker latch when doughnut was in place.

6-24 50th Day. Installed back pressure valve in doughnut. Removed BOPE and installed Xmas tree. Pressure tested tree, doughnut seals and 7" seal flange at 5000 psi. Removed back pressure valve from doughnut. Displaced 500 bbls. of polymer completion fluid with 500 lbs of 63#/cu.ft. lease salt water. Blind flanged outlets on tree and released rig to contractor at 2:00 p.m.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

No. T 283-68

DIVISION OF OIL AND GAS

Report on Operations

Mr. J. P. Anand, Agent
Southern Calif. Gas Co.
Box 3249 Terminal Annex
Los Angeles, CA 90051

Santa Paula, Calif.
June 7, 1983

Your operations at well "SFZU" P-69A, API No. 037-22051, Sec. 28, T. 3N R. 16W, SB B.& M. Aliso Canyon Field, in Los Angeles County, were witnessed on 4/29/83. Marilu Fulco, representative of the supervisor, was present from 1030 to 1200. There were also present Sonny Miller, Drilling Foreman

Present condition of well: 13 3/8" cem 1002; 9 5/8" cem 7700', perf 7572' WSO, perf 7574' (cem off); 5 1/2" ld 7584-8398', all perf. TD 8398'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

M. G. MEFFERD
State Oil and Gas Supervisor

By Murray W. Dosch
Deputy Supervisor
Murray W. Dosch

OG109(12-80-15M)

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

No. P 283-101

REPORT ON PROPOSED OPERATIONS

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

Mr. J. P. Anand, Agent
Southern Calif. Gas Co.
Box 3249 Terminal Annex
Los Angeles, CA 90051

Santa Paula, California
April 26, 1983

Your _____ proposal to alter casing well "SFZU" P-69A, A.P.I. No. 037-22051, Section 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon field, Main area, Sesnon-Frew pool, Los Angeles County, dated 4/26/83, received 4/26/83 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Hole fluid of sufficient quality and quantity shall bemmaintained in the hole to control any subsurface condition, and a reserve supply shall be on hand for emergencies.
2. Blowout prevention equipment of at least DOG Class III 3M B shall be installed and maintained in operating condition at all times.
3. This office shall be consulted before initiating any changes or additions to this proposed operation, or if operations are to be suspended.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS A PRESSURE TEST OF THE BLOWOUT PRVENTION EQUIPMENT BEFORE COMMENCING DOWNHOLE OPERATIONS.

Blanket Bond
MD:b

M. G. MEFFERD, State Oil and Gas Supervisor

By Murray W. Dosch
Murray W. Dosch, Deputy Supervisor

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

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

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

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

DIVISION OF OIL AND GAS
RECEIVED
APR 25 1983
SANTA PAULA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	FORMS	
	OGD 114	OGD 121
BB	✓	✓

DIVISION OF OIL AND GAS

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

to rework well Porter #69A (Well designation), API No. 037-22051

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

The present condition of the well is as follows:

1. Total depth 8398'

2. Complete casing record, including plugs and perforations
   13-3/8" cemented 1002'
   9-5/8" cemented 7700', cp'd 7574', WSO 7572', cp'd 4923-13'
   casing patches set 7582'-7540' & 4930'-4888'
   806' 5-1/2" landed 8390', top 7584', slotted 8390'-8224'
   8185'-8102', 8014'-7953', Lynes packer 7910'-7901'
   10 mesh w.w. 7860'-7677', 7634'-7594'. Gravel flow
   packed with 251 sacks of gravel.

3. Present producing zone name Sesnon & Frew ; Zone in which well is to be recompleted -

4. Present zone pressure 2400 psi ; New zone pressure -

5. Last produced Gas Storage Well (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

   (or)

   Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psig)

The proposed work is as follows:

1. Move in & rig up. Kill well. Install BOPE & pressure test.
2. Pull tubing. Recover casing patch 4930'-4888', recover packer from 7500' & recover casing patch 7582'-7540'. Set bridge plug at 7655-, cap with sand to 7584' & with cement to 7575'. Squeeze holes 7574' & 7572' with cement shooting new holes 7555'-7554' if necessary. Drill out cement. Test & run Audio analyzer log to determine gas leakage has stopped.
3. Set packer near 7540'. Land 7" inner string in packer. Set packer near 7500' in 7" run 2-7/8" tubing & complete. Return to Gas Storage service.

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

Address P.O. Box 3249 Terminal Annex (Street)
Los Angeles, CA 90051 (City) (State) (Zip)

Telephone Number (213) 689-3925

Southern California Gas Co. (Name of Operator)

By J.P. Anand (Print Name)

J.P. Anand by GCA (Signature)

4-26-83 (Date)

OG107 (6/81/GSR1/5M)

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
DEC 28 1981
SANTA PAULA, CALIFORNIA

History of Oil or Gas Well

Operator Southern California Gas Co. Field or County Aliso Canyon
Well "SFZU" P-69A, Sec. 28, T 3N, R 16W, SB B. & M.
A.P.I. No. 037-22051 Name P.S. Magruder, Jr. (Person submitting report) Title Agent (President, Secretary or Agent)
Date December 14, 1981

Signature P.S. Magruder

P.O. Box 3249 Terminal Annex, Los Angeles, CA 90051 (Address) (213) 689-3561 (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	
	MWO #99962 was issued to seal casing leaks with casing patches.
1981	
10-30	1st Day. Moved rig from IW #69 to Porter #69A. Spotted rig, hooked up pump and kill lines. Circulated and killed well with 78#/cu. ft. polymer completion fluid. Circulated out gas to Baker tank.
10-31	2nd Day. Circulated out gas and removed xmas tree. Installed mud cross and BOPE. Hooked up lines and tested BOPE blind and pipe rams to 4000 psi and Hydril to 3000 psi with H&H test pump. Test witnessed by Mike Stettner of Division of Oil and Gas.
11-02	3rd Day. Backed out tubing hanger ram nuts and broke off one ram nut. Installed back pressure plug. Removed BOPE. Cut off ram nut with chisel.
11-03	4th Day. Welder ground off ram bolt. Reinstalled BOPE. Pulled seal assembly out of Otis packer at 7547'. Pulled out of well with 3-1/2" tubing, laying down Otis production equipment.
11-04	5th Day. Ran 7-7/8" bit and 47# casing scraper to top of Otis packer at 7547'. Circulated well clean and pulled out of well. Layed down bit and casing scraper. Made up Otis "J" slot retrieving tool and ran in to top of packer.
11-05	6th Day. Latched onto packer at 7547' and pulled packer loose. Pulled out of well and layed down packer. Made up Baker Model "C" bridge plug, ran in to 7500' set bridge plug. Pressured annulus to 3000 psi, would not hold, repeatedly set packer at 7492', 7200', 6000' but unable to obtain good pressure test. Pulled out lay down bridge plug. Made up Baker full bore packer and ran in to 2500'.

11-06 7th Day. Ran Baker lock set bridge plug to 7500' and tested annulus to 3000 psi but would not hold. Pulled to 6000' and tested to 3000 psi but would not hold. Tested at 5400' but would not hold. Pulled to 600' and tested to 3000 psi which held. Stage tested in hole and located leak in casing between 4910' and 4940'. Pulled out and layed down bridge plug. Made up bit and 9-5/8" casing scraper.

11-07 8th Day. Ran bit and casing scraper to top of liner at 7584', circulated hole clean.

11-09 9th Day. Filled hole which took 70 bbls fluid. Pulled out and layed down bit and casing scraper. Made up Baker Model "C" bridge plug and full bore squeeze tool. Ran to 4000' and pressure tested tools to 4000 psi. Ran to 7500', set bridge plug at 7500' and set full bore at 7460'. Tools would not test.

11-10 10th Day. Pulled out and layed down Baker bridge plug and full bore cementer. Rigged up Hydro-test. Made up Johnson bridge plug and positrieve cementer. Hydro-tested in well to 4000 psi. Ran in and set bridge plug at 7525'. Set retainer at 7499' and tested to 3000 psi. Tested casing up well to 4923', found no additional hole in casing. Hole in casing between 4913' and 4923'.

11-11 11th Day. Ran in to 7525'. Released bridge plug, pulled and reset at 5031'. Equalized 15 cu. ft. sand on bridge plug and set squeeze tool at 4855'. Tested annulus to 1000 psi. Open slide valve, pumped 20 cu. ft. fresh water followed by 115 cu. ft. Class "G" neat cement and 10 cu. ft. fresh water. Displaced with 98 cu. ft. polymer. Closed slide valve and squeezed 85 cu. ft. cement at 2 bbls per minute with pressure build up from 1800 psi to 2400 psi. Let set for 30 minutes and pressure bled off. Pumped 30 cu. ft. to clear leak in casing.

11-12 12th Day. Closed slide valve and pressured up on annulus to 1000 psi. Obtained breakdown of 2 bbl per minute at 1600 psi. Opened valve, pumped 20 cu. ft. fresh water, 115 cu. ft. Class "G" neat cement, 10 cu. ft. fresh water and displaced with 98 cu. ft. polymer. Closed slide valve. Pressured annulus to 1000 psi and squeezed 90 cu. ft. cement at 2 bbls per minute. Pressure build up from 1600 psi to 2000 psi, let set 30 minutes and held 2000 psi. Released squeeze tool. Pulled out and layed down retainer. Removed BOPE and installed tubing head and tested to 5000 psi. Made up bit and casing scraper. Ran to top of cement at 4860'. Rigged up power swivel.

11-13 13th Day. Drilled out cement from 4860' to 4890' and pulled out to change bit. Ran in hole and drilled out cement from 4890' to 4905'.

11-14 14th Day. Drilled out cement from 4905' to 4925'. Cleaned out to top of bridge plug at 5031' and circulated well clean. Pulled out, layed down 8-1/2" bit and casing scraper. Made up retrieving head. Pressure tested cement squeeze to 1500 psi. Ran in and circulated down over bridge plug and pulled bridge plug loose.

11-16 15th Day. Pulled out and layed down bridge plug. Made up 9-5/8" 53.5# Pengo patch and ran in to 7584' (top of liner), picked up and set patch. Bottom at 7582' top at 7540' using Mc Cullough wireline. Casing patch did not set. Pulled out with casing patch. Layed down same. (Note: Found cement scale on top of firing pin.)

11-17 16th Day. Made up 7-7/8" bit and casing scraper. Ran to 7584' and circulated well clean. Pulled out and made up 9-5/8" 53.5# Pengo patch. Ran in and set bottom at 7582' top at 7540', using Mc Cullough wireline.

11-18 17th Day. Pulled out and layed down Pengo tools. Made up Lynes tester. Ran in and set packer at 7500'. Opened tool at 2:30 P.M. and blew fluid out of rat hole to Baker tank. Opened well to gas flow line, to clean up tubing to reservoir pressure 2950 psi. Ran noise log to 7500' but could not record log due to high winds.

11-19 18th Day. Ran N.L. Triangle noise log from 7465' to 1500' which showed no gas movement. Opened bypass in Lynes packer and circulated out gas. Unset packer and pulled out of well. Broke down Lynes tools. Well started kicking. Ran in 21 stands and circulated out gas. Staged in well to 6814' and circulated out gas.

11-20 19th Day. Continued to circulate out gas until well was dead. Pulled out of well and made up Otis 9-5/8" 53.5# Permatrieve packer. Ran in on Mc Cullough wireline. Set top of packer at 7500'. Pulled out of well and setting tool hung. Pulled out of rope socket at 4300'. Ran 3-1/2" overshot on wireline to 7490' and worked over fish. Pulled out lay down setting tool and overshot.

11-21 20th Day. Made up 9-5/8" 47# Pengo casing patch. Ran in 80 stands, picked up single to space out patch and could not move patch which stuck at 4872'-4914'. Tried to work patch past tight spot. Patch would not move up or down well. Released from patch and pulled out of well. Layed down setting tool.

11-23 21st Day. Pulled out of well. Made up spear, bumper sub and jars on four 4-3/4" drill collars. Ran in to top of patch at 4872'. Latched in and pulled top swedge. Pulled out and layed down same. Ran in to 4873' and latched in to Pengo patch. Jarred patch loose and pulled out of well. Layed down patch (left bottom swedge in well). Made up 8-1/2" bit, casing scraper and ran in to 2000'.

11-24 22nd Day. Made up 7-7/8" bit and casing scraper and ran in well. Pushed Pengo swedge to top of Otis packer at 7500'. Circulated bottoms up. Pulled out, changed bit to 8-1/2" and ran in to 4840'. Reamed cement squeeze from 4840' to 4960'. Pulled out of well. Layed down bit and casing scraper. Made up Otis "J" latch assembly and ran to 2000'.

11-25 23rd Day. Ran in to 7500' and Jayed into packer. Pressured annulus to 1500 psi. Unjayed from packer and pulled out of well. Layed down seal assembly. Made up Pengo 9-5/8" 47# casing patch. Ran in and set patch, top at 4888', bottom 4930' with Mc Cullough wireline. Pulled out, layed down Pengo tools and made up "J" latch.

11-27 24th Day. Pulled out of well. Ran Otis "J" latch and seals. Changed 32 N-80 and 58 J-55 bevelled collars. Ran in to Otis packer at 7500' and Jayed in packer. Pressured annulus to 1500 psi for 20 minutes. Unjayed from packer and pulled out of well. Made up Otis completion equipment, ran in to 2000' and hydrotested to 5000 psi.

11-28 25th Day. Hydrotested tubing to 5000 psi. Ran in well and stabbed in packer. Spaced out tubing and landed on doughnut with 20,000# on packer. Removed working floor. Removed BOPE and installed xmas tree. Tested to 5000 psi.

11-30 26th Day. Circulated hole fluid out with waste salt water. Tear out rig and equipment for move to SS-4. Loaded out rig equipment. Released rig at 5:00 P.M., 11-30-81.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

No. T 281-213

DIVISION OF OIL AND GAS

Report on Operations

Mr. J. W. Tenfelder, Agent
So. Calif. Gas Co.
12801 Tampu Avenue
Northridge, CA 91324

Santa Paula, Calif.
Nov. 4, 1981

Your operations at well "SFZU" P-69A, API No. 037-22051, Sec. 28, T. 3N, R. 16W, SB B.& M. Aliso Canyon Field, in Los Angeles County, were witnessed on 11/1/81. M. Stettner, representative of the supervisor, was present from 1600 to 1800. There were also present Fritz, company Pusher

Present condition of well: No additions to the casing record since proposal dated 8/13/81.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

M. G. MEFFORD
State Oil and Gas Supervisor

By John L. Hardoin
Deputy Supervisor

John L. Hardoin

OG109(12-80-15M)

FORM OG111 (11/80/DWRR/5M)

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

No. P 281-273

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

REPORT ON PROPOSED OPERATIONS

Mr. J. W. Tenfelder, Agent
So. California Gas Co.
12801 Tampa Avenue
Northridge, CA 91324

Santa Paula, California
Aug. 17, 1981

Your alter casing in proposal to gas storage well "SFZU" P-69A,
A.P.I. No. 037-22051, Section 28, T. 3N, R. 16W, S.B. B. & M.,
Aliso Canyon field, Main area, Sesnon-Frew pool,
Los Angeles County, dated 8/13/81, received 8/14/81 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Hole fluid of sufficient quality and quantity shall be maintained in the hole to control any subsurface condition, and a reserve supply shall be on hand for emergencies.
2. Blowout prevention equipment of at least DOG Class III 3M, shall be installed and maintained in operating condition at all times.
3. THIS DIVISION SHALL BE NOTIFIED TO WITNESS A PRESSURE TEST OF THE BLOWOUT PREVENTION EQUIPMENT BEFORE COMMENCING DOWNHOLE OPERATIONS.

Blanket Bond
MD:b

M. G. MEFFERD, State Oil and Gas Supervisor

By John L. Hardoin, Deputy Supervisor

A copy of this report 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.

OG 107 (8/79)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
AUG 14 1981
SANTA PAULA, CALIFORNIA

Notice of Intention to Rework Well

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

FOR DIVISION USE ONLY		
BOND	FORMS	
	OGD 114	OGD 121
BB	✓	✓

DIVISION OF OIL AND GAS

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

to rework well Porter #69A (Well designation), API No. 037-22051

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

The present condition of the well is as follows:

1. Total depth 8398'

2. Complete casing record, including plugs and perforations

13-3/8" cemented 1002'
9-5/8" cemented 7700', squeezed 7574', WSO 7572'
5-1/2" landed 8390', Top 7584', slotted 8390'-8224', 8185'-8102', 8014'-7953', Lynes packer 7910'-7901', 10 mesh wire wrapped 7860'-7677' & 7634'-7594'. Gravel flow packed with 251 sacks of gravel.

3. Present producing zone name Sesnon & Frew ; Zone in which well is to be recompleted -

4. Present zone pressure 3100 psi ; New zone pressure -

5. Last produced Gas storage well (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

(or)

Last injected (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psig)

The proposed work is as follows:

1. Move in & rig up. Kill well. Install BOPE & pressure test.
2. Pull tubing. Recover packer from 7547'. Pressure test 9-5/8" casing.
3. Set casing patch 7582'-7540'. Set packer 7500'.
4. Run tubing with down hole safety system.
5. Return well to gas storage service.

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

Address P.O. Box 3249 Terminal Annex (Street)
LA (City) CA (State) 90051 (Zip)
Telephone Number (213) 689-3561

Southern California Gas Company (Name of Operator)
By P.S. Magruder, Jr. (Print Name)
(Signature) (Date)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAY 9 1980
SANTA PAULA, CALIFORNIA

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator Southern California Gas Co, Well No. Porter #69-A, API No. 037-22051,

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

Location 894' south and 3,179' west from Station #84
(Give surface location from property or section corner, or street center line and/or lambert coordinates)

Elevation of ground above sea level 2,368' feet.

All depth measurements taken from top of Kelly Bushing which is 21 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

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.

Date May 14, 1980 Signed [signature]

D.S. Smiley (Engineer or Geologist) Title P.S. Magruder, Jr. Agent

Commenced drilling January 3, 1980

Completed drilling March 21, 1980

Total depth (1st hole) 8,398' (2nd) - (3rd) -

Present effective depth 8,398'

Junk Three (3) cones at 8,398'

GEOLOGICAL MARKERS	DEPTH

Formation and age at total depth Eocene

Commenced producing - (Date) Flowing/gas lift/pumping (Cross out unnecessary words)

Name of producing zone Sesnon and Frew

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	Gas Storage Well					
Production after 30 days						

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Numbers of Sacks or Cubic Feet of Cement	Depth of Cementing if through perforations
13 3/8"	1002'	Surf.	54.5	K-55 Butt.	New	17 1/2"	1030 cf	-
9 5/8"	7700'	Surf	43.5, 47, 53.5	N-80 LT&C and Butt	New	12 1/4"	1853 cf	-
5 1/2"	8390'	7583'	20	K-55 LT&C screen	New	7 7/8" &	Gravel Packed	-
				& slotted		15"		

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

9 5/8" - Jet perforated four 1/2" holes 7,574' cp'd, 7,572' WSO

5 1/2" - 0.010" wire wrapped screen 7,594' - 7,634' and 7,677' - 7,860'; slotted 0.060" 7,953' - 8,014', 8,102' - 8,185' and 8,224' - 8,390'; Lynes ECP 7901

Was the well directionally drilled? Yes If yes, show coordinates at total depth 1100' west and 1133' north

Electrical log depths 7700' and 8398' Other surveys Comp. Neutron - Density, Cement Bond Log

OG 100 ATTACH ONE COPY OF EACH LOG AND SURVEY 27907-705 10-74 6M ② OSP

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAY 26 1980
SANTA PAULA, CALIFORNIA

History of Oil or Gas Well

Operator Southern California Gas Co Field or County Aliso Canyon
Well Porter #69-A, Sec. 28, T 3N, R 16W S.B.B. & M.
A.P.I. No. 037-22051 Name P. S. Magruder, Jr. (Person submitting report) Title Agent (President, Secretary or Agent)
Date April 25, 1980

Signature P. S. Magruder Jr.

P.O. Box 3249 Terminal Annex, Los Angeles, Cal 90051 (Address) (213) 689-3561 (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	
1979	GWO # 98596 was issued to drill new Gas Storage well to Sesnon and Frew zones.
12.21.	Dismantled and moved Kenai Camrich Rig #2 from Well #34-A to Porter #69-A.
12.22.	Rig and crew idle until 12.30.79.
12.31.	Rigging up Kenai Camrich Rig #2.
1980	
1.01.	Rig and crew idle.
1.02.	Rigging up Kenai Camrich Rig #2.
1.03.	Rigging up Kenai Camrich Rig #2. Spudded at 7:00 pm 1-3-80. Drilled 17 1/2" hole from o' to 168' with bit #1.
1.04.	1st Day. Drilled 17 1/2" hole from 168' to 442' with bit #1 and to 493' with bit #2.
1.05.	2nd Day. Drilled 17 1/2" hole from 493' to 745' with bit #2.
1.06.	3rd Day. Drilled 17 1/2" hole from 745' to 869' with bit #2 and to 1,002' with bit #3. Pulled out of hole. Rigged up and ran 13 3/8" casing.

1.07. 4th Day. Ran 27 joints of 13 3/8", 54.5# K-55 casing for a total of 1,005' on hook. Cemented casing with Baker float shoe at 1,002' with 800 cu.ft. of class "G" cement premixed with 8% gel and 3% calcium chloride followed with 200 sacks of class "G" neat and 3% calcium chloride. Displaced cement with 840 cu.ft. of mud. Cement in place at 5:20 am. Landed 13 3/8" casing. Welded on 13 5/8", 5,000 psi casing head. Pressure tested weld to 1,500 psi. X-rayed weld on casing head.

1.08. 5th Day. Installed 12", 5,000 psi BOPE, 3" kill line and manifold. Pressure tested blind rams to 2,675 psi. Pressure dropped to 850 psi in one minute. Ran 12 1/4" bit and 7 3/4" drill collar to top of cement at 971'. Pulled out of hole.

1.09. 6th Day. Ran Baker model "C" bridge plug. Found collar leak at 961' (top of shoe joint). Ran in well with 4 1/2" open end drill pipe which was hung at 950'. Equalized 172 cu.ft. of class "G" cement with 2% calcium chloride. Pulled out of well. Braden Head squeezed 19 cu.ft. out hole at 961' at 2,000 psi. Cement in place at 9:00 pm.

1.10. 7th Day. Tested blind rams, pipe rams and hydril bag to 2,000 psi for 20 minutes with water and nitrogen. (O.K. by D.O.G. Ed Hickey).

1.11. 8th Day. Drilled out cement from 764' to 970'. Pressure tested casing collar at 961' to 1,000 psi for 20 minutes. Drilled out cement and 13 3/8" casing shoe at 1,002'. Drilled 12 1/4" hole from 1,002' to 1,246' with bit #4.

1.12. 9th Day. Drilled 12 1/4" hole from 1,246' to 1,899' with bit #5.

1.13. 10th Day. Drilled 12 1/4" hole from 1,899' to 2,007' with bit #5 and to 2,572' with bit #6.

1.14. 11th Day. Drilled 12 1/4" hole from 2,572' to 2,880' with bit #7 and to 3,080' with bit #8.

1.15. 12th Day. Drilled 12 1/4" hole from 3,080' to 3,485' with bit #9 and pulled out. Drilling jars parted while running Bit #10.

1.16. 13th Day. Ran Tristate 6" x 8 7/8" Bowen overshot and worked over top of fish at 3,198'. Pulled out of well with total fish in good condition. Drilled 12 1/4" hole from 3,485' to 3,520' with bit #11.

1.17. 14th Day. Drilled 12 1/4" hole from 3,520' to 3,673' with bit #11 and to 3,681' with bit #12. Drill string parted. Pulled out of well and ran Midway-Bowen 6 1/4" x 9 7/8" overshot.

1.18. 15th Day. Ran in hole with Midway-Bowen 6 1/4" x 9 3/8" overshot. Worked over top of fish at 3,395'. Pulled out of well with total fish in good condition. (Rig down eleven hours for repairs).

1.19. 16th Day. Drilled 12 1/4" hole from 3,681' to 4,001' with bit #13.

1.20. 17th Day. Ran 12 1/4" bit #14. Reamed from 3,910' to 4,001'. Drilled to 4,063'. Pulled out of hole and ran 12 1/4" bit #15 on Dyna-drill #1-A. Unable to orient Dyna-drill. Pulled out of hole and found bit baffle at top of non-magnetic drill collar. Ran 12 1/4" bit #14RR to 4,063'.

1.21. 18th Day. Ran Eastman Multishot survey from 1,005' to 4,063'. Reran 12 1/4" bit #15 on Dyna-drill #1-A and Dyna-drilled from 4,063' to 4,129'. Ran 12 1/4" bit #16 on Dyna-drill #1-B and Dyna-drilled from 4,129' to 4,139'.

1.22. 19th Day. Dyna-drilled 12 1/4" hole from 4,139' to 4,179' with bit #16 on Dyna-drill #1-B, to 4,249' with bit #17 on Dyna-drill #1-C, and to 4,256' with bit #18 on Dyna-drill #1-D.

1.23. 20th Day. Dyna-drilled 12 1/4" hole from 4,256' to 4,290' with bit #18 on Dyna-drill #1-D, to 4,331' with bit #19 on Dyna-drill #1-E, and to 4,346' with bit #20 on Dyna-drill #1-F.

1.24. 21st Day. Dyna-drilled 12 1/4" hole from 4,346' to 4,352' with bit #20 on Dyna-drill #1-F. Ran 12 1/4" bit #21 on drilling assembly. Reamed from 3,970' to 4,352'. Directionally drilled 12 1/4" hole to 4,412' and pulled out of hole.

1.25. 22nd Day. Dyna-drilled 12 1/4" hole from 4,412' to 4,452' with bit #22 on Dyna-drill #1-G and to 4,476' with bit #23 on Dyna-drill #1-H.

1.26. 23rd Day. Dyna-drilled 12 1/4" hole from 4,476' to 4,495' with bit #23 on Dyna-drill #1-H. Directionally drilled 12 1/4" hole from 4,495' to 4,557' with bit #24. Ran 12 1/4" bit #25 on Dyna-drill #1-I to 4,557'.

1.27. 24th Day. Dyna-drilled 12 1/4" hole from 4,557' to 4,616' with bit #25 and to 4,673' with bit #26.

1.28. 25th Day. Directionally drilled 12 1/4" hole from 4,673' to 5,112' with bit #27 and to 5,178' with bit #28.

1.29. 26th Day. Directionaly drilled 12 1/4" hole from 5,178' to 5,706' with bit #28.

1.30. 27th Day. Dyna-drilled 12 1/4" hole from 5,706' to 5,792' with bit #29.

1.31. 28th Day. Directionally drilled 12 1/4" hole from 5,792' to 6,327' with rerun bit #24.

2.01. 29th Day. Directionally drilled 12 1/4" hole from 6,327' to 6,643' with bit #30.

2.02. 30th Day. Dyna-drilled 12 1/4" hole from 6,643' to 6,686' with bit #31.

2.03. 31st Day. Directionally drilled 12 1/4" hole from 6,686' to 7,049' with bit #32.

2.04. 32nd Day. Directionally drilled 12 1/4" hole from 7,049' to 7,157' with bit #33. Twisted off pin in drill collar. Pulled out of well. Left 131' of drill collar fish in hole with top at 7,026'. Ran Midway 7 3/4" x 10 3/4" overshot. Ran in well. Worked over fish at 7,026'. Jarring on fish.

2.05. 33rd Day. Jarring on fish. Run Dia-log free point. Top drill collar of fish free. Run Dia-log back off shot. Tried to back drill collar off at 7,054'.

2.06. 34th Day. Jarred on fish five hours. Run Dia-log free point. Released from fish at 7,026' and pulled out of well. Made up Midway Bowen 7 3/4" x 10 1/8" overshot with pack off on top and bottom. Run in well and worked over top of fish at 7,026'. Circulating and jarring on fish. Run Dia-log free point. Top drill collar 50% stuck. Spotted oil around fish.

2.07. 35th Day. Moving oil around at 2 barrels per hour and jarring on fish. After fourteen hours circulated oil out of hole. Ran Go wire line free point and found fish 100% stuck at 7,026'. Released overshot. Pulled out of well.

2.08. 36th Day. Made up Midway Bowen 7 3/4" x 10 1/8" overshot with top and bottom pack off. Ran in well and circulated over top of fish at 7,026'. Pack off would not hold. Released from fish. Pulled out of well. Changed pack off in overshot. Ran in well and worked over top of fish at 7,026'. Circulated through bit at 7,157'. Spotted 70 barrels of 72# emulsion with N.I.O. additive. Jarring on fish.

2.09. 37th Day. Soaking hole around fish with emulsion mud with 1.6% of N.I.O. Jarring on fish. Circulated emulsion mud out of well. Released from fish at 7,026' and pulled out of well.

2.10. 38th Day. Picked up 9" wash pipe and drill collars. Ran in hole. Circulated conditioned mud. Washed over fish from 7,026' to 7,060'. Pulled out of well. Made up Midway 7 3/4" x 10 1/2" overshot on jars and bumper sub. Ran in well and worked over top of fish at 7,026 Jarred on fish for two hours and fish came free. Pulled out of well with fish.

2.11. 39th Day. Magna fluxed all drill collars and subs. Made up 12 1/4" bit and drilling set up. Ran in hole. Reamed from 5,700' to 5,790' and from 7,000' to 7,157'. Directionally drilled 12 1/4" hole from 7,157' to 7,262' with bit #34.

2.12. 40th Day. Directionally drilled 12 1/4" hole from 7,262' to 7,363' with bit #34 and to 7,456' with bit #35.

2.13. 41st Day. Directionally drilled 12 1/4" hole from 7,456' to 7,700' with bit #35. Wiped hole 17 stands and circulated hole clean. Pulled out of hole. Rigged up Welex.

2.14. 42nd Day. Ran Welex Induction Log and Caliper Log. Strung blocks from 8 lines to 10 lines. Made up 12 1/4" rerun bit. Ran in well. Reamed from 6,629' to 6,722'.

2.15. 43rd Day. Reamed 12 1/4" hole from 6,722' to 6,770' and lost hole. Pulled out of well and picked up Dyna-drill. Ran in well, rigged up Scientific eye tool and Dyna-drilled from 6,770' to 6,783'. Ran into old hole. Cleaned out to 6,813'.

2.16. 44th Day. Pulled out of well with Dyna-drill. Made up reaming set up and ran in hole. Reamed from 6,750' to 6,904'. Ran in hole to 7,100'. Reamed to 7,260'. Ran in to bottom 7,700'. Circulated wipe hole up to 6,550'. Ran back to bottom 7,700'. Circulated hole clean for casing. Pulling out of well.

2.17. 45th Day. Ran 187 joints of 9 5/8" casing, including 1,089.11' or 26 joints of 53.5# LT&C N-80, 1,295.76' or 56 joints of 47# LT&C N-80 and 4,325.88' or 105 joints of 43.5# buttress thread N-80 for a total of 7,710.72' on hook. Bottom 1,000' of 53.5# casing was grit blasted. There was a Baker float shoe on bottom at 7,700', a Baker float collar at 7,571.45', two B&W centralizers and three scratcher clusters on each of the bottom four joints and one B&W centralizer latched over every other coupling up to 1,000'. Circulated after losing 200 barrels of drilling mud. Casing became stuck on bottom.

2.18. 46th Day. Circulated and added corrosion inhibitor to drilling fluid. Cemented casing at 7,700' as follows: 500 cu.ft. "CW7" wash followed with 1,200 cu.ft. of 1-1 class "G" cement "Lite-Poz 7" premixed with 1% "D-65" and 0.5% "D-60" followed with 350 sacks of class "G" cement with 0.75% "D-65" and 0.5% "D-60" and with 250 cu.ft self-stress cement. Total slurry 2,040 cu.ft. Displaced with 3,230 cu.ft. drilling mud. Had good circulation throughout. Unable to reciprocate casing. Bumped plug with 2,000 psi. Cement in place at 10:50 am. Landed casing with 260,000# on slips. Cut and trimmed casing. Installed seal flange.

2.19. 47th Day. Installed and pressure tested tubing head. Installed BOPE Set Baker fullbore retainer at 100' and pressure tested pipe rams and choke manifold to 4,000 psi with water and nitrogen. Tested Hydril "GK" to 2,200 psi with water and nitrogen. Pulled fullbore and installed test plug in tubing head. Tested blind rams to 4,000 psi with water.

2.20. 48th Day. Tested blind rams to 4,000 psi with nitrogen. Restrung drilling line. Laid down 8" drill collars and picked up 5 5/8" drill collars. Ran 8 3/8" retip bit #38 installing casing protector rubbers on each joint of 4 1/2" heavy wall and drill pipe. Drilled plug and float collar at 7,569'. Drilled out cement to 7,641

2.21. 49th Day. Drilled out cement from 7,641' to 7,684'. Circulated well clean and cleaned mud tanks. Displaced drilling mud from well with waste lease water. Pulled out of well.

2.22. 50th Day. Ran Welex cement bond with neutron log and recorded from 7,670' to 4,000'. Closed blind rams and Dowell pressure tested 9 5/8" casing to 2,000 psi. Welex shot four 1/2" jet holes at 7,574'. Closed blind rams and Dowell pressure tested holes to 2,000 psi for 20 minutes. Ran Lynes tester on dry 4 1/2" drill pipe. Set packer at 7,535' with tail to 7,556'. Opened tool at 8:57 pm. Observed very weak blow in bubble bucket for duration of one hour test. Pulled packer loose and started out of well.

2.23. 51st Day. Continued out of well with tester. Test results:

Bottom chart @ 7,556'	Top chart @ 7,550'
IH 3200	3100
FH 3150	3100
IF 280	290
FF 290	300

Ran Baker model "K" cement retainer to 7,580' and spotted 50 cu.ft. 12% HcL and 3% HF acid. Pulled up to 7,425' and squeezed away 40 cu acid at breakdown of 24 cu.ft. per minute at 2,200 psi. Set retaine at 7,529'. Pumped 30 cu.ft. acid ahead of 115 cu.ft. class "G" ceme with 12% latex. Squeezed away all acid and 104 cu.ft. of cement with

2.23. (cont) final pressure of 2,400 psi. Cement in place at 12:20 pm. Pulled out of retainer and backscuttled 700 cu.ft. Pulled out of well and ran 8 3/8" bit #39. Drilled for two hours on retainer at 7,529'.

2.24. 52nd Day. Drilled out cement retainer at 7,529' and cement to 7,684'. Circulated hole clean. Pulled out of well. Ran Welex wire line gun. Shot four 1/2" holes from 7,572' to 7,573'. With Dowell pump truck, pressure tested holes to 2,000 psi for 20 minutes. Set packer at 7,538' with tail at 7,556'. Made one hour test. Pulled out of well. Recovered 60' of hole fluid.

IH 3,200 psi	IH 3,100 psi
FF 3,200 psi	FH 3,200 psi
IF 230 psi	IF 200 psi
FF 230 psi	FF 200 psi

WSO approved by Company.

2.25. 53rd Day. Ran in well with 8 3/8" rerun bit #38. Cleaned mud pits. Circulated out 63#/cu.ft. salt waste water with 68#/cu.ft. clay base mud. Drilled out cement from 7,684' to 7,700'.

2.26. 54th Day. Directionally drilled 7 7/8" hole from 7,700' to 7,877' with bit #40.

2.27. 55th Day. Directionally drilled 7 7/8" hole from 7,877' to 7,926' with bit #41.

2.28. 56th Day. Directionally drilled 7 7/8" hole from 7,926' to 7,969' with bit #42.

2.29. 57th Day. Directionally drilled 7 7/8" hole from 7,969' to 8,058' with bit #43.

3.01. 58th Day. Directionally drilled 7 7/8" hole from 8,058' to 8,144' with bit #44 and to 8,156' with bit #45.

3.02. 59th Day. Directionally drilled 7 7/8" hole from 8,156' to 8,219' with bit #45 and to 8,247' with bit #46.

3.03. 60th Day. Directionally drilled 7 7/8" hole from 8,247' to 8,271' with bit #47.

3.04. 61st Day. Directionally drilled 7 7/8" hole from 8,271' to 8,329' with bit #48. Pulled out of well and left two cones in hole. Ran in with 7 5/8" Globe Junk Basket. Made 1 foot of hole. Pulled out of well and recovered cones.

3.05. 62nd Day. Directionally drilled 7 7/8" hole from 8,330' to 8,339' with bit #49 and to 8,348' with bit #50.

3.06. 63rd Day. Directionally drilled 7 7/8" hole from 8,348' to 8,383' with bit #51 and to 8,390' with bit #52.

3.07. 64th Day. Directionally drilled 7 7/8" hole from 8,390' to 8,398' with bit #53. Circulated hole clean. Pulled out of well. Lost three 7 7/8" cones on bottom. Ran Welex Induction Electric Log and Compensated Density - Neutron Log and recorded from 8,395' to 7,700'.

3.08. 65th Day. Ran in well to 9 5/8" casing shoe at 7,700'. Cleaned mud pits. Changed over from 69#/cu.ft. clay-base mud to 71#/cu.ft. HEC polymer calcium chloride water.

3.09. 66th Day. Pulled out of well. Made up Tristate 6 1/4" x 15" hole opener. Ran in well. Opened 7 7/8" hole to 15" from 7,700' to 7,794' with hole opener #1.

3.10. 67th Day. Opened 7 7/8" hole to 15" from 7,794' to 7,870' with hole opener #2. Pulled out of well. Picked up hole opener. Ran in reamed from 7,700' to 7,870' with hole opener #3.

3.11. 68th Day. Ran in well with 7 7/8" bit. Cleaned out from 8,298' to 8,395'. Circulated hole clean. Pulled out of well and ran Dresser Atlas Caliper Log with computer from 8,100' to 7,700'. Hole not fully opened 7,700' to 7,716'. Ran Tristate 6 1/4" x 15" hole opener to 9 5/8" shoe at 7,700'.

3.12. 69th Day. Reopened 15" hole from 7,700' to 7,870' and circulated hole clean. Pulled out of well. Ran Dresser Atlas Caliper Log with computer. Hole not fully opened from 7,700' to 7,708'. Rerun hole opener and opened hole from 7,700' to 7,870'. Circulated hole clean. Pulled out of well and ran in wtih 9 5/8" casing scraper.

3.13. 70th Day. Ran in well with 9 5/8" casing scraper to 7,700'. Pulled out of well. Made up 7 7/8" bit and ran in well to 8,380'. Cleaned out from 8,380' to 8,395'. Pulled up to 7,700' and cleaned mud pits. Ran back to bottom 8,395'. Circulated out with clean filtered 71#/cu.ft. HEC polymer completion fluid.

DIVISION OF OIL AND GAS
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MAY 20 1980
SANTA PAULA, CALIFORNIA

3.14. 71st Day. Pulled out of well. Rigged up and ran 806' of 5 1/2" liner as follows: from 8,390' to 8,224' 60 mesh slotted with closed shoe; from 8,224' to 8,185' blank; from 8,185' - 8,102' 60 mesh slot from 8,102' to 8,014' blank; from 8,014' - 7.953' 60 mesh slotted; b from 7,953' to 7,860', baffle collar 7,952'; from 7,860' to 7,677' 1 mesh wire wrapped; from 7,677' to 7,634' blank; from 7,634' to 7,594 10 mesh wire wrapped; from 7,588' to 7,583' Burns Lead Seal liner hanger. Tested lead seal to 1,000 psi. Pulled out of well. Picked up Baker fullbore packer and ran in well.

3.15. 72nd Day. Ran in hole with Baker fullbore packer and pressure set Lynes external packer at 7,901'. Pulled out of well. Made up Baker gravel pack tools. Ran in well and started gravel packing.

3.16. 73rd Day. Gravel packed 5 1/2" liner with 248 sacks of 20-40 mesh gravel. Pulled out of well. Ran in well with washing tools and washed liner from 7,860' up to 7,677'. Pulled out of well. Made up gravel packing tools. Ran in well. Pumped in 5 sacks of gravel and packed off at 1,000 psi. Backscuttled out 2 sacks of gravel leaving total of 251 sacks. Tested port collar with 1,000 psi.

3.17. 74th Day. Pulled out of well. Rigged up and ran Dresser Atlas Photon Log from 7,800' to 7,592'. Ran in well with 4 5/8" bit and 5 1/2" casing scraper. Drilled out baffle collar at 7,952' and cleaned out to bottom of liner at 8,390'. Circulated well clean. Pulled out and laid down 3 1/2" drill pipe and 2 3/8" tubing.

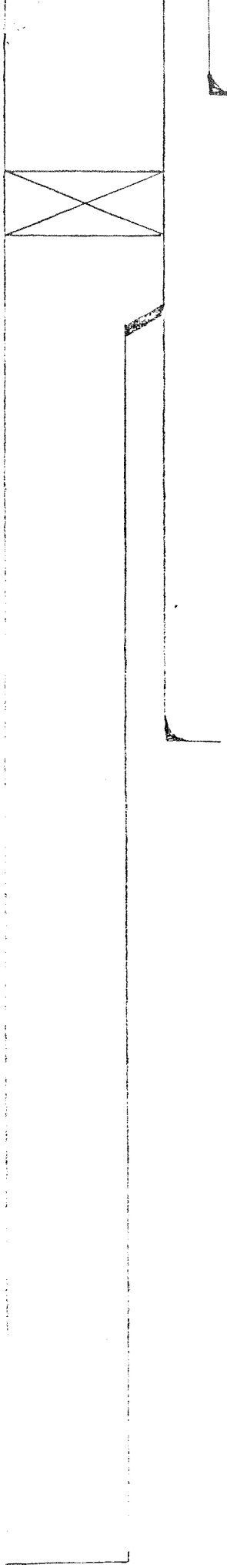
3.18. 75th Day. Run Otis 8.2" Gauge Tool on Welex wireline to 7,550'. Rigged up and ran Otis Permatrieve Packer and set at 7,547'. Ran in hole with open end 4 1/2" drill pipe. Pulled out laying down pipe. Changed rams in BOPE.

3.19. 76th Day. Made up Otis seals and locator sub. Picked up 3 1/2" tubing. Ran in and stabbed into packer at 7,547'. Tested packer and seals at 1,500 psi for 20 minutes. Circulated bottoms up and pulled out of well.

3.20. 77th Day. Ran 3 1/2" 9.3# EUE J-55 and N-80 tubing. Cleaned pins and applied Baker seal to triples. Hydrotested tubing to 5,000 psi for 1 minute. Tubing included Otis production tube, Otis 6 seals, Otis locator sub, Otis 10' heavy wall tube with 3 1/2" threads, Otis 2.25" "XN" nipple with 3 1/2" threads, Otis 20' heavy wall tube with 3 1/2" threads, Otis 3 1/2" annular flow safety system with shield. Spaced out and landed tubing on packer at 7,546' with 23,000#. Removing BOPE.

3.21. 78th Day. Removed BOPE. Installed xmas tree and pressure tested tree to 5,000 psi for 20 minutes. Circulated polymer completion fluid out with waste salt water. Installed blind flanges on wellhead valves. Tightened all wellhead bolts. Released rig at 4:00 pm 3.21.80.

PORTER #69-A
Aliso Canyon



13 3/8" casing at 1,002'

Otis 9 5/8" permatrieve packer at 7,547'

Burns lead seal hanger at 7,583'

Burns port collar at 7,588'

10 mesh wire wrapper at 7,594'

Blank at 7,634'

10 mesh wire wrapped at 7,677'

9 5/8" shoe at 7,700'

Blank at 7,860'

Lynes external packer at 7,901'

Blank at 7,910'

Lynes baffle collar at 7,952'

60 mesh at 7,953'

Blank at 8,014'

60 mesh slotted at 8,102'

Blank at 8,185'

60 mesh slotted at 8,224'

Bottom of 5 1/2" liner at 8,390'

A. Well File

SOUTHERN CALIFORNIA GAS CO.
WELL NO: PORTER 69-A FILE: RK-47
LOCATION: ALISO CANYON
DATE: 1-21-80 & 2-17-80
JOB NO: P-0180-D0388 & P-0180-S0425 & P-0180-S0502
ELEV:2389'
TYPE: MULTI-SHOT DECL: 16E
SEC. BEARING: N48 21W
VENDOR: EASTMAN WHIPSTOCK
SURVEYOR: BURLESON
DECL: 16E

VERTICAL SECTION CALCULATED IN PLANE OF PROPOSAL
DIRECTION: N 48 DEG. 21 MIN. W

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

SOUTHERN CALIFORNIA GAS CO.
WELL NO: PORTER 69-A FILE: RK-47
LOCATION: ALISO CANYON

COMPUTATION
TIME 00:18:46 DATE 00--00

PAGE NO.

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	SUBSEA TVD FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
0.	0 0	0 0	0.	0.00	0.00	-2389.00	0.00	0.00	0.00
BELOW THIS POINT ARE SINGLE-SHOT SURVEYS									
211.	0 15	N 6 0 E	211.	211.00	0.27	-2178.00	0.46 N	0.05 E	0.12
392.	0 0	0 0	181.	392.00	0.50	-1997.00	0.85 N	0.09 E	0.14
575.	0 45	S 57 0 W	183.	574.99	0.81	-1814.01	0.19 N	0.92 W	0.41
755.	0 15	N 74 0 W	180.	754.99	1.79	-1634.01	0.03 S	2.43 W	0.34
972.	0 45	S 88 0 W	217.	971.98	3.35	-1417.02	0.20 N	4.30 W	0.24
BELOW THIS POINT IS A MULTI-SHOT SURVEY OF 1-21-80									
1013.	0 45	N 6 0 W	41.	1012.97	3.83	-1376.03	0.52 N	4.67 W	2.50
1044.	0 45	N 11 0 W	31.	1043.97	4.14	-1345.03	0.92 N	4.73 W	0.21
1075.	1 0	N 13 0 W	31.	1074.97	4.53	-1314.03	1.38 N	4.83 W	0.81
1106.	1 15	N 26 0 W	31.	1105.96	5.06	-1283.04	1.95 N	5.03 W	1.15
1137.	1 15	N 21 0 W	31.	1136.95	5.67	-1252.05	2.57 N	5.30 W	0.35
1168.	1 15	N 16 0 W	31.	1167.95	6.26	-1221.05	3.22 N	5.51 W	0.35
1261.	1 45	N 36 0 W	93.	1260.91	8.50	-1128.09	5.39 N	6.58 W	0.77
1354.	1 15	N 33 0 W	93.	1353.88	10.86	-1035.12	7.40 N	7.95 W	0.54
1447.	1 30	N 39 0 W	93.	1446.86	13.04	-942.14	9.20 N	9.27 W	0.31
1540.	1 45	N 49 0 W	93.	1539.82	15.67	-849.18	11.10 N	11.10 W	0.41
1633.	1 15	N 38 0 W	93.	1632.79	18.09	-756.21	12.86 N	12.77 W	0.62
1726.	1 0	N 71 0 W	93.	1725.77	19.88	-663.23	13.91 N	14.23 W	0.73
1819.	1 0	N 73 0 W	93.	1818.75	21.37	-570.25	14.41 N	15.78 W	0.04
1912.	1 30	N 86 0 W	93.	1911.73	23.10	-477.27	14.78 N	17.77 W	0.61
2005.	1 15	N 67 0 W	93.	2004.70	25.06	-384.30	15.30 N	19.93 W	0.56
2098.	0 45	N 68 0 W	93.	2097.69	26.59	-291.31	15.92 N	21.43 W	0.54
2191.	1 0	N 85 0 W	93.	2190.68	27.84	-198.32	16.25 N	22.80 W	0.38
2284.	1 30	N 67 0 W	93.	2283.66	29.63	-105.34	16.74 N	24.76 W	0.68
2377.	1 15	N 71 0 W	93.	2376.63	31.71	-12.37	17.53 N	26.85 W	0.29

SOUTHERN CALIFORNIA GAS CO.
WELL NO: PORTER 69-A FILE: RK-47
LOCATION: ALISO CANYON

COMPUTATION TIME 00:18:46 DATE 00--00

PAGE NO.

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	SUBSEA TVD FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
2470.	1 30	N 66 0 W	93.	2469.60	33.81	80.60	18.35 N	28.92 W	0.30
2563.	1 30	N 64 0 W	93.	2562.57	36.14	173.57	19.38 N	31.13 W	0.06
2656.	2 0	N 90 0 W	93.	2655.53	38.61	266.53	20.01 N	33.87 W	1.00
2749.	2 0	N 87 0 W	93.	2748.47	41.09	359.47	20.10 N	37.11 W	0.11
2842.	1 30	N 84 0 W	93.	2841.43	43.35	452.43	20.32 N	39.95 W	0.55
2935.	1 45	S 76 0 W	93.	2934.39	45.19	545.39	20.14 N	42.56 W	0.66
3028.	1 15	S 67 0 W	93.	3027.36	46.40	638.36	19.37 N	44.87 W	0.59
3121.	0 45	S 62 0 W	93.	3120.34	47.03	731.34	18.67 N	46.33 W	0.55
3214.	0 45	S 66 0 W	93.	3213.33	47.49	824.33	18.14 N	47.43 W	0.06
3307.	0 30	N 86 0 W	93.	3306.33	48.12	917.33	17.96 N	48.42 W	0.42
3400.	1 15	N 68 0 W	93.	3399.32	49.36	1010.32	18.28 N	49.80 W	0.85
3493.	1 0	N 34 0 W	93.	3492.30	51.15	1103.30	19.41 N	51.20 W	0.75
3586.	1 30	N 41 0 W	93.	3585.28	53.15	1196.28	21.02 N	52.43 W	0.56
3679.	1 30	N 38 0 W	93.	3678.25	55.55	1289.25	22.90 N	53.98 W	0.08
3772.	1 15	N 77 0 W	93.	3771.22	57.71	1382.22	24.07 N	55.82 W	1.02
3865.	1 15	S 75 0 W	93.	3864.20	59.19	1475.20	24.04 N	57.83 W	0.65
3958.	1 30	S 43 0 W	93.	3957.17	59.85	1568.17	22.90 N	59.72 W	0.85
4051.	1 30	S 36 0 W	93.	4050.14	59.75	1661.14	21.03 N	61.27 W	0.20
4063.	1 30	S 36 0 W	12.	4062.13	59.72	1673.13	20.77 N	61.45 W	0.00

BELOW THIS POINT ARE SINGLE SHOT SURVEYS.

4107.	2 15	S 36 0 W	44.	4106.11	59.58	1717.11	19.61 N	62.30 W	1.70
4135.	3 0	S 46 0 W	28.	4134.08	59.57	1745.08	18.64 N	63.14 W	3.13
4165.	4 0	S 61 0 W	30.	4164.02	59.94	1775.02	17.56 N	64.61 W	4.49
4194.	3 45	S 76 0 W	29.	4192.96	60.82	1803.96	16.84 N	66.42 W	3.59
4225.	3 45	S 86 0 W	31.	4223.89	62.11	1834.89	16.52 N	68.42 W	2.11
4255.	4 30	N 82 0 W	30.	4253.81	63.77	1864.81	16.60 N	70.58 W	3.80
4286.	5 15	N 74 0 W	31.	4284.70	66.06	1895.70	17.15 N	73.15 W	3.26
4317.	5 0	N 54 0 W	31.	4315.58	68.71	1926.58	18.35 N	75.63 W	5.79
4363.	5 0	N 74 0 W	46.	4361.40	72.55	1972.40	20.10 N	79.21 W	3.77

SOUTHERN CALIFORNIA GAS CO.
WELL NO: PORTER 69-A FILE: RK-47
LOCATION: ALISO CANYON

COMPUTATION TIME 00:18:46 DATE 00--00 PAGE NO.

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	SUBSEA TVD FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
4392.	5 15	N 74 0 W	29.	4390.29	74.88	2001.29	20.82 N 81.70 W	0.86
4436.	6 0	N 69 0 W	44.	4434.07	78.85	2045.07	22.18 N 85.79 W	2.03
4465.	6 45	N 65 0 W	29.	4462.89	81.90	2073.89	23.44 N 88.76 W	3.00
4537.	9 0	N 74 0 W	72.	4534.21	91.09	2145.21	26.89 N 97.99 W	3.55
4586.	9 45	N 69 0 W	49.	4582.56	98.43	2193.56	29.42 N 105.55 W	2.26
4643.	10 15	N 55 0 W	57.	4638.69	108.02	2249.69	34.06 N 114.27 W	4.34
4719.	11 0	N 48 0 W	76.	4713.39	122.00	2324.39	42.78 N 125.23 W	1.96
4812.	13 0	N 47 0 W	93.	4804.35	141.34	2415.35	55.84 N 139.49 W	2.16
4936.	16 0	N 46 0 W	124.	4924.38	172.36	2535.38	77.21 N 162.00 W	2.43
5055.	20 0	N 40 0 W	119.	5037.54	208.95	2648.54	104.08 N 187.07 W	3.70
5251.	20 30	N 35 0 W	196.	5221.42	275.56	2832.42	157.89 N 228.35 W	0.92
5407.	20 0	N 34 0 W	156.	5367.78	327.98	2978.78	202.38 N 258.93 W	0.39
5589.	20 0	N 34 0 W	182.	5538.80	388.28	3149.80	253.99 N 293.74 W	0.00
5765.	20 0	N 40 0 W	176.	5704.19	447.28	3315.19	302.04 N 329.95 W	1.17
5873.	21 0	N 45 0 W	108.	5805.35	484.89	3416.35	329.92 N 355.49 W	1.87
6060.	21 30	N 45 0 W	187.	5979.63	552.55	3590.63	377.84 N 403.42 W	0.27
6243.	22 0	N 44 0 W	183.	6149.60	620.21	3760.60	426.21 N 450.95 W	0.34
6432.	22 0	N 44 0 W	189.	6324.84	690.81	3935.84	477.14 N 500.13 W	0.00
6457.	22 0	N 44 0 W	25.	6348.02	700.14	3959.02	483.88 N 506.64 W	0.00
6618.	21 0	N 43 0 W	161.	6497.82	758.94	4108.82	526.68 N 547.25 W	0.66
6656.	21 0	N 45 0 W	38.	6533.29	772.52	4144.29	536.47 N 556.71 W	1.89
6734.	21 15	N 48 0 W	78.	6606.05	800.61	4217.05	555.82 N 577.10 W	1.42
6799.	22 15	N 48 0 W	65.	6666.42	824.70	4277.42	571.94 N 595.00 W	1.54

BELOW THIS POINT IS A MULTI-SHOT SURVEY OF 2-17-80

6828.	22 15	N 46 0 W	29.	6693.26	835.67	4304.26	579.43 N 603.03 W	2.61
6921.	25 0	N 46 0 W	93.	6778.46	872.91	4389.46	605.32 N 629.84 W	2.96
7014.	27 0	N 45 0 W	93.	6862.04	913.62	4473.04	633.89 N 658.92 W	2.20
7107.	28 30	N 45 0 W	93.	6944.35	956.85	4555.35	664.51 N 689.54 W	1.61
7200.	29 0	N 45 0 W	93.	7025.88	1001.51	4636.88	696.14 N 721.17 W	0.54

SOUTHERN CALIFORNIA GAS CO.
WELL NO: PORTER 69-A FILE: RK-47
LOCATION: ALISO CANYON

COMPUTATION TIME 00:18:46 DATE 00--00

PAGE NO.

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	SUBSEA TVD FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
7293.	28 30	N 45 0 W	93.	7107.42	1046.16	4718.42	727.77 N 752.80 W	0.54
7386.	27 0	N 45 0 W	93.	7189.72	1089.39	4800.72	758.39 N 783.42 W	1.61
7479.	27 0	N 42 0 W	93.	7272.58	1131.46	4883.58	789.01 N 812.48 W	1.46
7572.	27 0	N 40 0 W	93.	7355.45	1173.33	4966.45	820.87 N 840.17 W	0.98
7665.	27 0	N 40 0 W	93.	7438.31	1215.10	5049.31	853.22 N 867.31 W	0.00
7682.	27 0	N 40 0 W	17.	7453.46	1222.74	5064.46	859.13 N 872.27 W	0.00

SURVEY AT STATION 7700 IS A PROJECTED SURVEY

7700.	27 0	N 40 0 W	18.	7469.49	1230.82	5080.49	865.39 N 877.53 W	0.00

FINAL CLOSURE - DIRECTION: N 45 DEGS 23 MINS 57 SECS W
DISTANCE: 1232.46 FEET

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

No. T 280-37

DIVISION OF OIL AND GAS

Report on Operations

Mr. J. W. Tenfelder, Agent
So. California Gas Co.
12801 Tampa Avenue
Northridge, CA 91324

Santa Paula, Calif.
Feb. 27, 1980

Your operations at well "SFZU" P-69A, API No. 037-22051, Sec. 28, T. 3N, R. 16W S.B., B.& M. Aliso Canyon Field, in Los Angeles County, were witnessed on 2/23/80. Ed Hickey, representative of the supervisor, was present from 0300 to 0400. There were also present Mr. Bill Bulley, rig tool pusher

Present condition of well: 13 3/8" cem 1002'; 9 5/8" cem 7700'; perf 7572' WSO, perf 7574' (cem off); T.D. 7705'.

The operations were performed for the purpose of demonstrating a water shut-off on the 9 5/8" casing by means of a formation tester.

DECISION:

THE 9 5/8" SHUT-OFF AT 7574' IS APPROVED.

b

M. G. MEFFERD
State Oil and Gas Supervisor

By
Deputy Supervisor
John L. Hardoin

OG109 (6-77-GSRI-15M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

No. T 280-14

DIVISION OF OIL AND GAS

Report on Operations

Mr. J. W. Tenfelder, Agent
Southern California Gas Co.
12801 Tampa Avenue
Northridge, CA 91324

Santa Paula, Calif.
Jan. 14, 1980

Your operations at well "SPZU" P-69A, API No. 037-22051, Sec. 28, T. 3N, R. 16W, S.B. B.& M. Aliso Canyon Field, in Los Angeles County, were witnessed on 1/10/80, Ed Hickey, representative of the supervisor, was present from 0730 to 1230. There were also present Lonnie Cornelli, foreman

Present condition of well: 13 3/8" csg 1002'. T.D. 1005'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

M. G. MEFFERD
State Oil and Gas Supervisor

By John L. Hardoin
Deputy Supervisor

John L. Hardoin

OG109 (6-77-GSRI-15M)

FORM OG111

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

No. P 279-397

REPORT ON PROPOSED OPERATIONS

010 (field code)
03 (area code)
30 (pool code)

Mr. J. W. Tenfelder, Agent
Southern California Gas Co.
12801 Tampa Avenue
Northridge, CA 91324

Santa Paula, California
Dec. 19, 1979

Your proposal to drill gas storage well "SFZU" P-69A, A.P.I. No. 037-22051, Section 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon field, Main area, Sesnon-Frew pool, Los Angeles County, dated 12/11/79, received 12/14/79 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Sufficient cement shall be pumped back of the 13 3/8" casing to fill to the surface
2. Hole fluid of sufficient quality and quantity shall be maintained in the hole to control any subsurface condition, and a reserve supply shall be on hand for emergencies.
3. Blowout prevention equipment of at least DOG Class III 1M B shall be installed on the 13 3/8" casing and Class III 3M B on the 8 5/8" casing and maintained in operating condition at all times.
4. Blowout prevention practice drills shall be conducted at least weekly for each crew and recorded in the log book.
5. This office shall be consulted before placing any plugs or sidetracking any hole.
6. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   a. A pressure test of the blowout prevention equipment before drilling below 1000'
   b. A test of the 8 5/8" shut-off above the zone to be produced.

Blanket Bond
MD:b

Lonnie

M. G. MEFFERD, State Oil and Gas Supervisor

By John L. Hardoin
John L. Hardoin, Deputy Supervisor

DI SION OF OIL AND GA.
Notice of Intention to Drill New Well

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

FOR DIVISION USE ONLY					
MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
254	2-28-M		BB	✓	✓

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well "SFZU" P-69A ~~Porter #69A~~, API No. 037-22051 (Assigned by Division),

Sec. 28, T. 3N, R. 16W, S.B. B. & M., _____ Field, _____ County.

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

Previously submitted

DIVISION OF OIL AND GA
RECEIVED
DEC 14 1979
SANTA PAULA, CALIFORNIA

Do mineral and surface leases coincide? Yes_____ No_____ If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

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

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

894' south and 3179' west from station #84

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

If well is to be directionally drilled, show proposed coordinates (from surface location) at total depth: 1192 feet west (Direction) and 1060 feet north (Direction)

Elevation of ground above sea level 2368 feet.

All depth measurements taken from top of Kelly Bushing (Derrick Floor, Rotary Table, or Kelly Bushing) that is 21 feet above ground.

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES API	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS	CALCULATED FILL BEHIND CASING
13-3/8"	54.5#	K-55 Butt	Surface	1000'	1000'	To Surface
8-5/8"	36&40	N-80 Butt	Surface	7725'	7725'	4000'
5-1/2"	20	K-55 ST&C	7625'	8450'	gravel packed screen liner	-

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

Intended zone(s) of completion Sesnon (S-4, 7725') and Frew (8100'), 3600 psi (Name, depth, and expected pressure) Estimated total depth 8450'

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 Company	Corporation	
Address	**City**	**Zip Code**
P.O. Box 3249 Terminal Annex	Los Angeles, CA	90051
Telephone Number / **Name of Person Filing Notice**	**Signature**	**Date**
3-689-3561 / P. S. Magruder, Jr.	P. S. Magruder Jr.	12/11/79

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 (7-78-GSRI-5M)