

SOUTHERN CALIF GAS

OPERATOR For Lyle
 LSE & NO IW 83
 MAP NO. 250

INTENTION	1	2	3	4	5
NOTICE DATED	5-23-74	7-14-76	6-3-78		
P-REPORT NUMBER	274-228	276-253	278-161		
CHECKED BY/DATE					
MAP LETTER DATED	6-8-74 loc	N/C	N/C		
SYMBOL					

	5-31-74	7-16-76	6-3-78							
NOTICE	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
HISTORY	3-11-75	✓	9-29-76		8-3-78					
SUMMARY	3-11-75	✓								
IES/ELECTRIC LOG	11-27-74 11-4-74									
DIRECTIONAL SURV.	1-20-75	✓								
CORE/SWS DESCRIPT.										
DIPMETER RESULTS										
OTHER	SWN									
RECORDS COMPLETE										

ENGINEERING CHECK		CLERICAL CHECK		
T-REPORTS		POSTED TO 121	170 MAILED	FINAL LETTER
OPERATOR'S NAME	_____	_____	_____	MAILED _____
WELL DESIGNATION	_____	_____	_____	_____
LOC. & ELEV.	_____	_____	_____	RELEASE _____
SIGNATURE	_____	_____	_____	BOND _____
SURFACE INSPECTION	_____	_____	_____	_____
FINAL LETTER OK	_____	_____	_____	_____

REMARKS: _____

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

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

Ventura, California
February 23, 1990

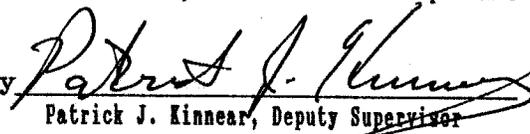
Your request, dated February 13, 1990, proposing to change the designation of well in Sec. 28, T. 3N, R. 16W, SB B.&M., Aliso Canyon field Los Angeles County, District No. 2, has been received.

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

From:	To:
IW 54 (037-21319)	"Porter" 26E (037-21319)
IW 55 (037-21353)	"Porter" 26C (037-21353)
IW 65 (037-21320)	"Porter" 26D (037-21320)
IW 69 (037-21322)	"Standard Sesnon" 25A (037-21322)
IW 74 (037-21357)	"Porter" 26B (037-21357)
IW 79 (037-21361)	"Standard Sesnon" 44B (037-21361)
IW 80 (037-21362)	"Porter" 26A (037-21362)
IW 83 (037-21455)	"Standard Sesnon" 44A (037-21455)

bb

M.G. MEFFERD, State Oil and Gas Supervisor

By 
Patrick J. Kinnear, Deputy Supervisor

SUBMIT IN DUPLICATE
RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED

MAY 21 1986

History of Oil or Gas Well

VENTURA, CALIFORNIA

Operator Southern California Gas Co. Field Aliso Canyon County Los Angeles.
Well IW #83, Sec. 28., T. 3N., R 16W. S. B.B. & M.
A.P.I. No. 037-21455 Name J. W. Gourley Title Agent
Date May 19, 1986 (Person submitting report) (President, Secretary or Agent)

Signature

N.W. Buss
N.W. Buss for J.W. Gourley

Box 3249, Terminal Annex, Los Angeles, CA 90051

(213) 689-3925

(Address)

(Telephone Number)

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

Date

MWO No. 99613: was issued to replace leaking casing patch
and stimulate well with acid wash

1986

2-20

Loaded out rig at SF #2 and moved rig to IW #83. Set in rig.
Rigging up.

2-21

Rigged up pump and manifold lines to well. Pumped 100 bbls. down
tubing with no returns. Mixed 50 bbls. pill; pumped down tubing
and waited 1-1/2 hours. Circulated well. Total fluid to fill
well was 245 bbls. Removed xmas tree. Installed 9" BOPE.
Tested blind rams, pipe rams and choke manifold to 3000 psi.
Hydril bag to 2300 psi. Tests approved by Stephen P. Mulqueen of
the D.O.G. Secured well.

2-22

Worked pipe 6 hours to release from packer. Laid down tubing
hanger. Filled well with 60 bbls. Backscuttled gas out of well.
Measured out of well, working collars through casing patch.
Laid down production equipment. Ran kill string to secure well.

2-24

Filled well with 100 bbls. Pulled kill string out of well. Made
up kelly, spear, bumper sub and jars. Installed flow line.
Measured and picked up drill collars. Ran in well to casing
patch at 3936'. Speared into casing patch and jarred on top
swedge. Recovered top swedge. Picked up new fishing tools. Ran
in well. Engaged casing patch. Jarred on casing patch and same
came loose.

2-25

Filled well with 62 bbls. Laid down casing patch and tools. Ran
in well with 7-5/8" O.D. mill and drill collars to bottom swedge
at 3938'. Pushed swedge to packer at 8800'. Equalized 50 bbls.
of high viscosity pill. Laid down mill. Ran in well with Otis
packer retrieving tool, bumper sub, jars, drill collars to kill
string.

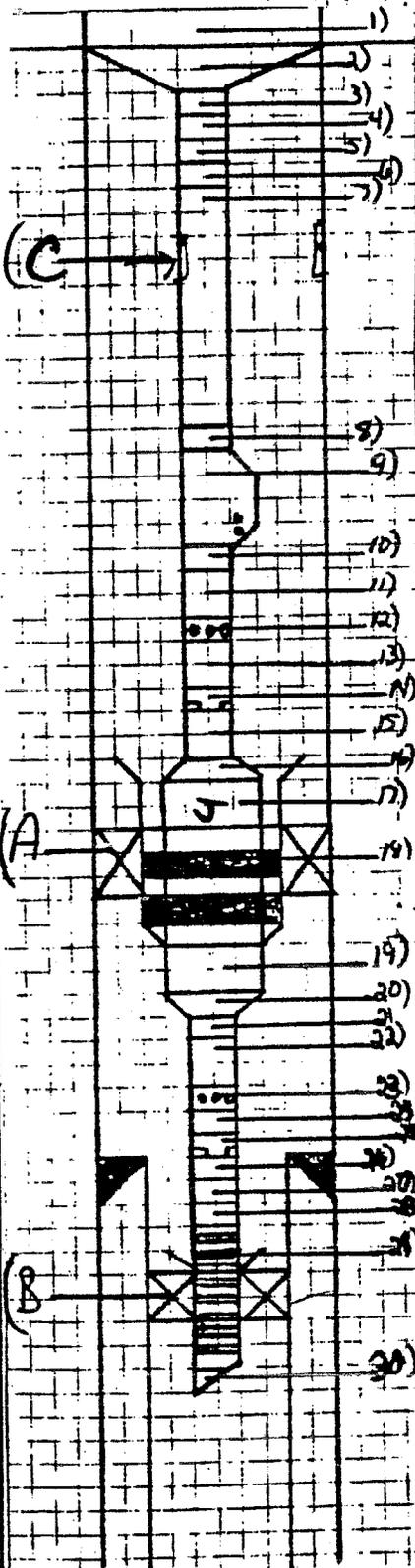
1986

- 2-26 Filled well with 18 bbls. Finished running in well with Otis packer retrieving tool. Stabbed into packer. Worked packer loose. Recovered packer and bottom swedge from patch. Made up 5-5/8" bit on 6-5/8" casing scraper. Ran in well to top of liner. Worked into liner. Ran in to top of packer at 9073'. Backscuttled clean.
- 2-27 Filled well with 10 bbls. Laid down casing scraper. Made up wash tool and ran in well. Located top of liner at 8830'. Pumped pressure 1500 psi at 8840'. Wash tool blanked. At 8865', pumped rate of one bbl. per minute, circulated 400 psi. Depth 8885'; pumped one bbl. per minute, circulated at 900 psi. Depth 8960'; pumped one bbl. per minute 1200 psi; circulated. Laid down wash tool. Picked up 458' 2-3/8" Flush Joint tubing with sawtooth collar.
- 2-28 Filled well with 14 bbls. Finished running in well with tubing. Located fill at 9420'. Cleaned out rubber and sand to total depth 9424'. Circulated clean and pulled out of well, changing to chamfered collars.
- 3-1 Filled well with 9 bbls. Finished pulling out of well, changing collars. Laid down 2-3/8" Hydril tubing. Rigged up wireline. Ran junk basket with 7.625" O.D. gauge ring to liner top at 8823'. Ran in 8-5/8" Otis type "PW" packer and set at 8756'. Picked up Pengo 7-5/8" O.D. x 6-3/4" I.D. x 20' casing patch. Stopped at 3008'. Pulled out of well. Picked up 8-5/8" 36# casing scraper with 7-5/8" bit. Ran in on tubing to 2925'. Worked casing scraper to 3050'. Ran in well to 4100' and backscuttled.
- 3-3 Filled well with 28 bbls. Rigged up wireline. Ran collar locator and measured distance between packer tops 321'. Ran collar log from 4100'-3800'. Made up casing patch. Ran in and stopped at 3008'. Pulled out of well. Ran casing caliper log from 4500'-2800'. Showed oval casing just under 1/8" restriction from 3014'-3010'. Loaded out wireline. Ran kill string and secured well.
- 3-4 Made up casing patch on 2-7/8" tubing. Ran in and set bottom of patch at 3987', top at 3966'. Rigged up wireline. Ran collar locator from 4300'-3700'. Made up Otis test seals. Ran latch-in to packer at 8756'. Tested with 1500 psi for 30 minutes. Released from packer.

1986

- 3-5 Pulled out of well and laid down drill collars and kelly. Made up production equipment, hydrotesting tubing in well to 5000 psi. Spaced out and landed tubing with 10,000# weight on packer at 8760'. Pulled 20,000# over up weight to check latch.
- 3-6 Removed BOPE. Installed 8" xmas tree and tested to 5000 psi. Seal leaked. Removed xmas tree and redressed tubing hanger. Reinstalled tree. Tested to 5000 psi. Circulated fluid out of well with KCl water. Rigged down and released rig at 8:00 p.m., 3-6-86.

WELL PROFILE



OPE TOR So. Calif. Gas Co.
 WELL # IW #83
 FIELD Aliso Canyon
 COUNTY Los Angeles
 STATE California
 DATE Revised 5-8-86
3-10-86
 NEW COMPLETION WORKOVER

CASING	LINER	TUBING		
		1	2	3
SIZE _____				
WEIGHT _____				
GRADE _____				
THREAD _____				
DEPTH _____				

ITEM NO.	TUBING DETAILS	LENGTH	DEPTH
1.	K.B.	17.00	17.00
2.	Doughnut 2-7/8" x 9"	.55	17.55
3.	Pup joint 2-7/8" J-55 EUE 8rd	3.65	21.20
4.	Pup joint 2-7/8" J-55 EUE 8rd	6.10	27.30
5.	Pup joint 2-7/8" J-55 EUE 8rd	6.20	33.50
6.	Pup joint 2-7/8" J-55 EUE 8rd	10.10	43.60
7.	278 joints 2-7/8" J-55 EUE 8rd tubing	8598.75	8642.35
8.	Pup joint 2-7/8" J-55 EUE 8rd	4.07	8646.42
9.	BST MMA mandrel (RA) latch 2000# pump out	8.25	8654.67
10.	Pup joint 2-7/8" J-55 EUE 8rd	1.93	8656.60
11.	One joint 2-7/8" J-55 EUE 8rd tubing	31.60	8688.20
12.	Otis "XO" SSD; opens down 2.31" I.D.	3.20	8691.40
13.	One joint 2-7/8" J-55 EUE 8rd tubing	31.17	8722.57
14.	Otis "XN" No-Go nipple 2.205" I.D.	1.19	8723.76
15.	One joint 2-7/8" J-55 EUE 8rd tubing	31.17	8754.93
16.	Crossover 2-7/8" x 3-1/2" EUE 8rd	1.07	8756.00
17.	Otis J-latch	1.22	8757.22
	Top of Packer		8756.00
18.	Otis 4" seal units (2)	2.03	8759.25
19.	Otis 4" production tube 4.00" I.D.	2.24	8761.49
20.	Crossover 3-1/2" 10rd x 2-3/8" 8rd 4.00" I.D.	.68	8762.17
21.	Pup joint 2-3/8" EUE 8rd	3.97	8766.14
	Pup joint 2-3/8" EUE 8rd	8.15	8774.29
	Pup joint 2-3/8" EUE 8rd	10.13	8784.42
22.	7 joints 2-3/8" J-55 EUE 8rd	217.69	9002.11
23.	Otis "XO" SSD, opens down 1.87" I.D.	2.88	9004.99
24.	One joint 2-3/8" J-55 EUE 8rd tubing	30.96	9035.95
25.	Otis "XN" No-Go nipple 1.79" I.D.	1.27	9037.22
26.	One joint 2-3/8" J-55 EUE 8rd tubing	31.66	9068.88
27.	Crossover 2-3/8" x 2-7/8" 8rd	1.03	9069.91
28.	Crossover 2-7/8" x 2-7/8" 10rd 3.50" O.D.	1.14	9071.05
29.	Otis seal units (12) 3.25" I.D.	12.05	9083.10
30.	Otis guide 45°	.40	9083.50

- A) Otis 8-5/8" permatrieve packer 4.00" ID 7.50" O.D.
- B) Otis 6-5/8" permatrieve packer 3.25" ID
- C) 20' casing patch in 8-5/8" casing covering stage collar at 3976'

COMMENTS:
 Tubing weight up 62,000#
 Tubing weight down 56,000#
 Tubing landed with 10,000# comp. on packer

DIVISION OF OIL AND GAS

Report on Operations

J.W. Gourley, Agent
So. Calif. Gas Co.
Box 3249 Terminal Annex,
Mail Location 511C
Los Angeles, CA 90051

Ventura Calif.
March 18, 1986

Your operations at well IW 83, API No. 037-21455,
Sec. 28, T. 3NR, 16W SB B. & M. Aliso Canyon Field, in Los Angeles County,
were witnessed on 2/21/86 by S. Mulqueen, representative of
the supervisor, was present from 1800 to 1900. There were also present Gerry Woods

Present condition of well: 13 3/8" cem 854'; 8 5/8" cem 8865', cp3958',
8811' and 8833'; 6 5/8" 1d. 8822-9424', perfs 8822-9061' and 9066-9424'
TD 9426'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND ITS INSTALLATION ON THE 8 5/8"
CASING ARE APPROVED.

M. G. MEFFERD

Murray W. Dosch

Murray W. Dosch

PERMIT TO CONDUCT WELL OPERATIONS

010

(field code)

00

(area code)

30

(new pool code)

30

(old pool code)

J. W. Gourley, Agent
Southern California Gas Co.
Box 3249 Terminal Annex
Mail Location 511C

Ventura, California
December 31, 1985

Your _____ proposal to rework well IW 83,
A.P.I. No. 037-21455, Section 28, T. 3N, R. 16W, S.B. B. & M.,
Aliso Canyon field, any area, Sesnon-Frew pool,
Los Angeles County, dated 12/10/85, received 12/23/85 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 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:
 - a. TO WINTESS a pressure test of the blowout prevention equipment before commencing downhole operations.

Blanket Bond
SM:ljpg

Engineer Stephen P. Mulqueen

Phone (805) 654-4761

M. G. MEFFERD, State Oil and Gas Supervisor

By 
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.

DIVISION OF OIL AND GAS

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	
	OGD114	OGD121
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 IW #83, API No. 037-21455
(Well designation)
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:

- Total depth 9426'
- Complete casing record, including plugs and perforations (present hole)
 - 13-3/8" cemented at 854'
 - 8-5/8" cemented at 8865', cp'd 8833' - 35' and 8811' - 8812' and through stage collar at 3958'. Casing patch 3978' - 3936'.
 - 602' 6-5/8" landed 9424', top 8822', 30 mesh slots 9424' - 9066' Lynes external packer 9081' - 9066', wire wrapped 9061' - 8822' gravel flow packed
- Present producing zone name Seson & Frew; Zone in which well is to be recompleted _____
- Present zone pressure 2,800 psi; New zone pressure _____
- 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)
- Is this a critical well according to the definition on the reverse side of this form? (Yes) (No)

The proposed work is as follows:

- Move in and rig up. Kill well. Install BOPE and pressure test.
- Pull tubing. Recover casing patch. Recover packer. Wash perforations 9061' - 8865' with acid. Clean out to 9424'. Set packer near 8800'.
- Set new casing patch 3978' - 3938'. Run tubing and complete.
- Return well to gas storage service.

Note: If well is to be redrilled, show proposed new bottom-hole coordinates and true vertical depth.

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

Address P.O. Box 3249 Terminal Annex Southern California Gas Company
(Street) (Name of Operator)
Los Angeles, California 90051 By J.W. Gourley 12/1/83
(City) (State) (Zip) (Name) (Date)
Telephone Number (213) 689-3561 Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

CRITICAL WELL

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

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

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

Superior Court of California
County of Los Angeles, Dept. "A"
6230 Sylmar Avenue
Van Nuys, California 91408

RE: CASE NO. NWC 42075
SUBPENA FOR RECORDS
WELL NO. IW 83

As custodian of the division's records of Southern California Gas Co. well No. IW 83, Section 28, T. 3N., R. 16W., Aliso Canyon field, Los Angeles County, I certify that the enclosed 31 pages are true copies of all of the history and summary records filed with this office pertaining to IW 83 from September 3, 1974 to and including the present.



John L. Hardoin
Deputy Supervisor

JLH:b

cc: James T. Catlow

Enclosure: subpoena

DIVISION OF OIL AND GAS

AUG 3 1978

History of Oil or Gas Well

SANTA PAULA, CALIFORNIA

OPERATOR SOUTHERN CALIFORNIA GAS COMPANY FIELD Aliso Canyon

Well No. I.W. #83 - A.P.I. No.037-21455, Sec. 28, T. 3N, R. 16W, S.B. B. & M.

Date July 27, 1978 Signed F. S. Magruder, Jr.

P. O. Box 3249, Terminal Annex
Los Angeles, California Title Agent

(Address) (Telephone Number) (President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date

1978

- 6-16 Killed well with 610 barrels of 72#/cu.ft. polymer drilling fluid. Removed lateral lines.
- 6-17 Moved in California Production Service Rig #D-4 and rigged up.
- 6-18 Rig and crew idle.
- 6-19 Removed Xmas tree. Installed Class III 5000 psi B.O.P.E. Pressure tested with water and nitrogen, as follows:
Blind rams to 4000 psi
Pipe rams " 4000 psi
Hydril bag " 3000 psi
Above tests witnessed and approved by Division of Oil and Gas.
Released tubing from packer.
- 6-20 Well took 50 barrels of drilling fluid overnight. Pulled tubing. Laid down safety system, production equipment and 2 3/8" tubing. Ran 7 5/8" bit with casing scraper to top of packer at 8803'. Circulated well.
- 6-21 Well took 40 barrels of drilling fluid overnight. Continued pulling out of well. Ran Otis retrieving tool and latched into Permatrieve packer at 8803'. Unable to release packer. Pulled out and removed Otis tool.
- 6-22 Ran jars and bumper sub above Otis retrieving tool. Engaged packer at 8803'. Tripped jars once. Pulled out of well with packer leaving all but one packing element from packer in well. Ran Otis plug which was set and tested in 6 5/8" packer at 9080'. Pulled above top of 6 5/8" 8802'.
- 6-23 Ran 2 7/8" tubing to 9048' and circulated well. Halliburton equalized 35 sacks

- of sand inside 6 5/8" liner. Pulled out of well. Ran 7 5/8" bit and 8 5/8" 36# casing scraper to top of 6 5/8" liner at 8822'. Circulated well. Pulled above top of 6 5/8" liner at 8822'.
- 6-24 Pulled out of well. Wellex shot four 1/2" holes from 8811' to 8812'. Started in well with open-end 2 7/8" tubing.
- 6-25 Rig and crew idle.
- 6-26 Ran in well to top of liner at 8822'. Worked through hanger but could not get below 8846'. Rigged up Dowell and equalized six (6) sacks of sand. Pulled up and waited two hours. Sand bridged at top of liner at 8822'. Backscuttled clean down to 8846'. Re-spotted sand at 8846'. Pulled two stands and located sand at 8820'. Rigged up Dowell - had breakdown of 3 cu.ft. per minute at 1500 psi. Hung tubing at 8818' and pumped 5 cu.ft. water. Mixed 50 cu.ft. of Class "G" cement with 1% D-65 and with 5 cu.ft. water behind and 275 cu.ft. drilling fluid. Pulled to 8398' and squeezed away 32 cu.ft. at 2500 psi.
- 6-27 Pulled out of well. Rigged up power swivel. Ran 7 5/8" bit on 172' of 4 3/4" drill collars. Drilled out cement from 8695' to 8818'.
- 6-28 Ran in well and cleaned out fill from 8805' to 8818'. Pulled out. Rigged up Triangle and ran Noise Log which indicated gas still leaking by shoe. Pressure tested holes at to 3000 psi but could not get breakdown.
- 6-29 Pulled out of well. Rigged up Wellex and shot four 1/2" holes at 8811'. Ran in to 8815' with open-end tubing. Pumped in 50 cu.ft. water. Pumped 4 cu.ft. per minute at 2800 psi. Hung tubing at 8818' - pumped in 30 cu.ft. water, 25 sacks of Class "G" cement with 1% D-65 and 5 cu.ft. water behind. Pulled to 8507', squeezed 20 cu.ft. - held 2500 psi on cement for two hours.
- 6-30 Pulled out. Made up 7 5/8" bit and scraper. Ran in and located cement at 8735'. Drilled out cement to 8818'. Circulated well clean.
- 7-1 Ran in and located fill at 8803'. Backscuttled clean to 8818' and pulled out of well. Rigged up and ran Triangle Noise Log which indicated gas leakage had stopped. Ran in well with sawtooth collar on 2 7/8" tubing. Cleaned out sand from 8818' to 8819'. Tools stopped.
- 7-2 Rig and crew idle.
- 7-3 Pulled out of well with 2 7/8" tubing to 1400' and transmission failed
- 7-4 Rig and crew idle. (Holiday)

- 7-5 Pulled out of well. Made up 4 3/4" bit and 4 3/4" drill collar. Ran in well and cleaned out rubber at top of liner hanger at 8822'. Cleaned out sand down to packer at 9060'. Circulated clean.
- 7-6 Pulled out of well. Made up Otis retrieving tool. Ran in and pulled packer plug loose. Circulated gas cut mud. Pulled out and laid down Otis tools. Measured and picked up 12 joints of 2 3/8" C.S. Hydril tubing (396'). Ran in well - had to work through packer at 9066'. Ran in to 9424' - no fill.
- 7-7 Ran in well to bottom of liner at 9424'. Pulled out. Made up Lynes drill stem test tools. Ran in and tested all Lynes valves and 1 1/2" test lines.
- 7-8 Set tester at 8796' with tail to 8816'. Took initial flow and shut in. Opened tool at 8:00 A.M. - did not have enough pressure to flow well in withdrawal line and opened into Baker tank. Bled off drilling fluid and well pressure dropped to zero. Closed valve on Lynes head and pressure built up to 560 psi. Reopened to Baker tank and pressure bled to zero. Closed in and pressure built to 350 psi. Bled off small amount of gas and drilling fluid. Closed tool at 4:00 P.M. and backscuttled gas from tubing.
- 7-9 Rig and crew idle.
- 7-10 Bled off well. Pulled tester loose. Rigged up Triangle Noise Log. Ran from 8830' to 7800' indicating no gas leak.
- 7-11 Pulled out of well. Rigged up Welex and ran Otis Permatrieve packer and set same at 8800' with bottom at 8805'. Ran Pengo 8 5/8" casing patch and set top at 3936' and bottom at 3978' with stage collar at 3958'. Rigged down "GO".
- 7-12 Rigged up Hydrotest and tubing tongs. Hydrotested tubing in well. Tested each joint to 5000 psi. Changed collars, cleaned pins and applied Baker seal.
- 7-13 Finished hydrotesting in well. Loaded out power tongs and test tools. Unable to latch into packer at 8800'. Pulled 2 3/8" tubing and tools through packer. Ran back in but still unable to latch into packer. Pulling out slowly - collars hanging on bottom of casing patch at 3978'.
- 7-14 Finished pulling out of well. Broke off Otis seal assembly and latch-in. Replaced seals and latch-in. Ran back in well, hydrotesting to 5000 psi for one minute. Spaced out tubing and landed with 10,000# on packer. Pulled 25,000# over weight of tubing to check latch. Removed B.O.P.E. and installed Xmas tree.

1978

History of Well I.W. #83 - Aliso Canyon

PAGE 4.

7-15

Rigged up Associated Services test pumps and tested Xmas tree to 5000 psi. Circulated 72#/cu.ft. polymer drilling fluid out of well with salt water. Ran in and pulled separation sleeve. Set plug in NO-GO nipple and tested packer and seals to 1000 psi. Pulled tubing plug.

RELEASED RIG at 6:00 P.M. (7-15-78).

JP

WELL PROFILE

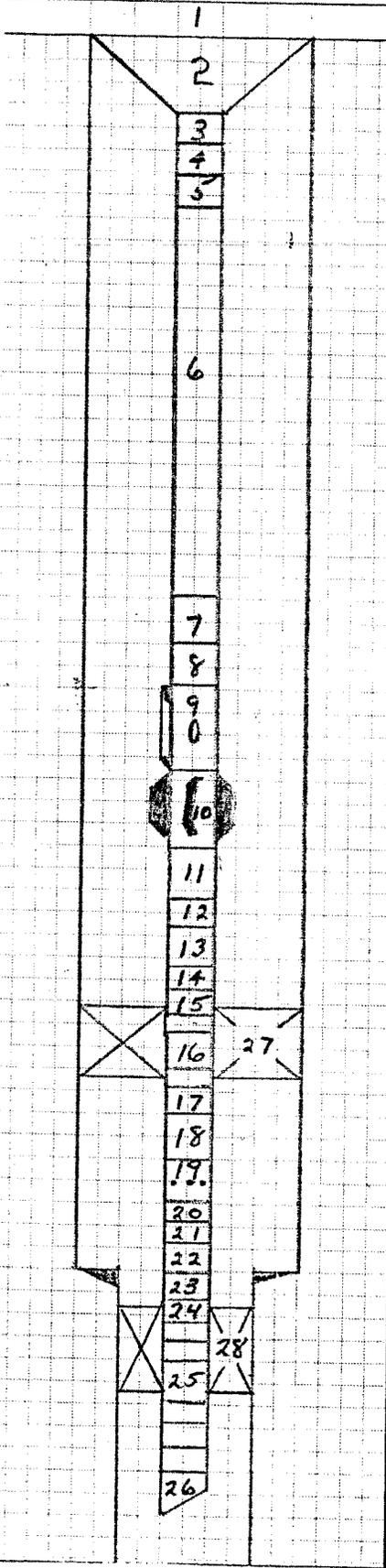
SOUTHERN CALIFORNIA
 OPERATOR GAS COMPANY
 WELL # I.W. #83
 FIELD Aliso Canyon
 COUNTY Los Angeles
 STATE California
 DATE July 18, 1978
 NEW COMPLETION WORKOVER

CASING	LINER	TUBING		
		1	2	3
SIZE _____				
WEIGHT _____				
GRADE _____				
THREAD _____				
DEPTH _____				

ITEM NO.	TUBING DETAILS	LENGTH	DEPTH
1.	Kelly Bushing	17.00	17.00
2.	Doughnut	.60	17.60
3.	Pup Joint 2 7/8" EU 8rd J-55	3.53	21.13
4.	Pup Joint 2 7/8" EU 8rd J-55	6.18	27.31
5.	Pup Joint 2 7/8" EU 8rd J-55	10.08	37.39
6.	282 Joints 2 7/8" EU 8rd J-55 Tubing	8725.61	8763.00
7.	Pup Joint 2 7/8" EU 8rd J-55	8.05	8771.05
8.	X-Nipple 2.350" I.D. 3.668" O.D.	1.08	8772.13
9.	Otis annular flow safety system 2.313" I.D.	7.67	8779.80
10.	Otis blast joint 2.441" I.D. 6.50" O.D.	9.83	8789.63
11.	Otis blast joint 2.441" I.D. 3.668" O.D.	9.83	8799.46
12.	Otis NO-GO nipple 2.313" x 2.205"	1.20	8800.66
13.	Otis blast joint 2.441" I.D. 3.668" O.D.	9.83	8810.49
14.	X-Over 2.441" I.D. 3.668" O.D.	1.07	8811.56
15.	Otis J-Latch 3.00" I.D. 4.50" O.D.	1.23	8812.79
16.	Otis Seal Assembly 3.00" I.D. 4.04" O.D.	4.10	8816.89
17.	X-Over 1.995" I.D. 3.95" O.D.	.70	8817.59
18.	8 Joints 2 3/8" EU 8rd J-55 Tubing	248.67	9066.26
19.	Otis 2 3/8" Sliding Sleeve (run open)	2.90	9069.16
20.	Pup Joint 2 3/8" EU 8rd J-55 1.995" I.D.	2.12	9071.28
21.	Pup Joint 2 3/8" EU 8rd J-55 1.995" I.D.	2.18	9073.46
22.	Otis NO-GO nipple 1.625" x 1.536"	1.15	9074.61
23.	X-Over 1.995" I.D. 3.063" O.D.	1.04	9075.65
24.	X-Over 1.995" I.D. 3.375" O.D.	1.17	9076.82
25.	Otis Seal Assembly 2.38" I.D. 3.29" O.D.	12.10	9088.92
26.	Otis Guide 1.995" I.D. 3.12" O.D.	.42	9089.34
27.	Otis 8 5/8" FW Packer 32-40# 4.00" I.D. 7.50" O.D. wire-line measurement set at.....		8800.00
28.	Otis 6 5/8" FW Packer 24-28# w/1 measurement set at...		9073.00

- NOTES -
 Tubing landed with 9,000# on packer.
 Weight of tubing before landing - 55,000#

COMMENTS:



DIVISION OF OIL AND GAS

Report on Operations

Mr. P. S. Magruder, Jr., Agent
Southern Calif. Gas Co.
P.O. Box 54790 Terminal Annex
Los Angeles, CA. 90054

Santa Paula, Calif.
Aug. 8, 1978

Your operations at well IW 83, API No. 037-21455, Sec. 28, T. 3N, R. 16W
S.B., B. & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 6/19/78 by T.E. Adams, representative of the supervisor, was
present from 1000 to 1400. There were also present G.C. Abrahamson, company
foreman

Present condition of well: No additions to the casing record since proposal dated 6/2/78.

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

REPORT ON PROPOSED OPERATIONS

Santa Paula, California

June 15, 1978

Mr. P. S. Magruder, Jr., Agent
Southern California Gas Company
P. O. Box 54790, Terminal Annex
Los Angeles, CA 90054

Your proposal to alter casing in gas storage well IV 83
(Name and number)

A.P.I. No. 037-21455, Section 28, T. 3N, R. 16W

S.B. B. & M., Aliso Canyon field, Los Angeles County,

dated 6/2/78, received 6/7/78, 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.

A COPY OF THIS APPROVAL SHALL BE AVAILABLE AT THE WELL SITE DURING THE PROPOSED OPERATIONS.

Blanket Bond
MWD:r

M. G. MEFFERD

State Oil and Gas Supervisor

By

John L. Hardoin
Deputy Supervisor

John L. Hardoin

JUN 7 1978

DIVISION OF OIL AND GAS

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.

SANTA PAULA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	FORMS	
	114	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 No. I. W. #83, API No. 037-21455, 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:

- Total depth. 9426'
- Complete casing record, including plugs and perforations:
 - 13 3/8" cemented 830'
 - 8 5/8" cemented 8865', stage collar 3950', cp'd 8835, WSO 8833'
 - 602' 6 5/8" landed 9424', top 8822', 30-mesh slots 9424'-9080' 18-mesh wire-wrapped 9061'-8822', Lynes packer 9080'-9061' Gravel flow packed 9061'-8822'
- Present producing zone name Sesnon and Frew Zone in which well is to be recompleted -
- Present zone pressure 2400 psi New zone pressure -
- Last produced Gas Storage Well
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
- Last injected
(Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

- Move in and rig up. Kill well. Install B.O.P.E. and pressure test.
- Pull tubing. Clean out to 8802' and recover packer.
- Set plug in packer at 9066'. Fill liner with sand to 8020'.
- Shoot four 1/2" holes at 8012', obtain breakdown and squeeze. Drill out cement and pressure test. Run Noise Log.
- Set packer at 8602' and casing patch from 3970-3930'. Re-run tubing with safety system and 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)
Los Angeles California 90051
(City) (State) (Zip)
Telephone Number (213) 689-3561

SOUTHERN CALIFORNIA GAS COMPANY
(Name of Operator)
By P. S. Magruder, Jr.
(Name) (Date) 6-2-78
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

JUN 7 1978

Program to Repair Shoe Leak

SANTA PAULA, CALIFORNIA

Take all measurements from original derrick floor 17' above ground.

PRESENT CONDITIONS:

13 3/8" cemented 830'
8 5/8" cemented 8865', stage collar 3950'
cp'd 8835', 8834' - WSO 8833'
602' 6 5/8" landed 9424', top 8022'
30-mesh slots 9424'-9080'
18-mesh wire-wrapped 9061'-8822'
blank and Lynes packer 9080'-9061'
gravel flow packed 9061'-8822'
with 130 cu.ft. 12-20 mesh gravel.
Port collar and lead seal liner hanger.

TUBING DETAILS:

2 7/8" and 2 3/8" tubing landed 9076'
Otis Permatrieve packer set at 9066' in
6 5/8" liner and at 8802'.
Tubing includes 8 seal nipples on bottom,
Otis 1.536" NO-GO nipple at 9065' with plug
in place, Otis 2 3/8" sliding sleeve at 9061',
(open), 2 3/8" tubing to 8810', 4 seals, blast
joints, 2.205" NO-GO nipple with choke in place,
Otis 2 7/8" annular flow safety system with safety
valve and separation tool in place.

PROGRAM

Using piano-wire equipment pull separation tool, safety valve,
choke and tubing plug.

Kill well with suitable weight polymer drilling fluid, exact
weight to depend on reservoir pressures. Volume of well = 590 barrels.

1. Move in rig and mud pump.
2. Circulate and condition drilling fluid.

3. Install Class III 5000 psi B.O.P.E. Pressure test complete shut-off and pipe rams to 4000 psi with water and nitrogen. Also pressure test Hydril bag to 3000 psi with water and nitrogen.
4. Pull tubing - lay down 2 3/8" tubing and all equipment. Send all equipment, seals, sliding sleeves, nipples and safety system to Otis for inspection and repairs, as necessary.
5. Run 7 5/8" bit and casing scraper. Clean out to top of packer at 8802'. Run Otis retrieving tool and recover packer from 8802'. Send packer to Otis for inspection and repair, as required.
6. Set plug in Otis 6 5/8" packer at 9066'. Fill liner with sand from 9066' to 8020' - make sure sand is above top of liner at 8022'.
7. Using reference collars, shoot four 1/2" holes at 8012'. Equalize up to 100 sacks of Class "G" cement and squeeze (Braden head) but DO NOT exceed 2500 psi - repeat if required.
8. Drill out cement and clean out to 8020'. Run Noise Log to determine if gas leakage has stopped. Shoot holes, squeeze with cement and re-run Noise Log, as required, to shut off gas leakage.
9. Using reference collars, set "GO" Services casing patch from 3970' to 3930'.
10. Clean out sand to 9066' and recover plug from packer. Also clean out through packer to 9424' - I.D. of packer 3.25". Use Hydril "CS" 2 3/8" tubing - O.D. 2.7"
11. Run Otis Permatrieve packer on wireline and set near 8802', but DO NOT set in a collar.
12. Run 2 3/8" and 2 7/8" tubing, change collars, clean pins, apply Baker seal and hydrotest to 5000 psi, holding each test for one minute.
Tubing to include:
 - Otis 2 3/8" Production Tube
 - Otis Seals (12)
 - Otis 1.536" NO-GO 2 3/8" threads
 - Otis 2 3/8" sliding sleeve (open)
 - Eight joints 2 3/8" tubing
 - Otis Seals (4)
 - Otis latch-in Locator
 - Otis 10' Heavy wall tube with 2 7/8" threads
 - Otis 2.205" "XN" NO-GO Nipple with 2 7/8" threads
 - Otis 20' Heavy wall tube with 2 7/8" threads
 - Otis 2 7/8" Annular Flow Safety System

13. Land tubing on packer with up to 10,000# and balance on tubing hanger. Pull 25,000# over weight of tubing to check latch.
14. Remove B.O.P.E. and install Xmas tree. Pressure test tree to 500 psi.
15. Circulate drilling fluid out of well with waste lease salt water. Set tubing plug in 2:205" NO-GO nipple. Pressure test seals and packer to 2000 psi. Remove tubing plug and release rig.

GCA
G. C. ABRAHAMSON
April 11, 1978

cc: Rig Supervisor
Relief Rig Supervisor
Contract Pusher (2)
Book Copy

D.O.G. ✓
M. Grijalva
B. Jones
D. Justice
J. Melton (W. Davis)

Well File

GCA/jp

SUBMIT IN DUPLICATE
RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

30981-705 2-75 10M © OSP

DIVISION OF OIL AND GAS
RECEIVED

SEP 29 1976

History of Oil or Gas Well

OPERATOR SOUTHERN CALIFORNIA GAS COMPANY FIELD Aliso Canyon SANTA PAULA, CALIFORNIA

Well No. I.W. #83, Sec. 28, T. 3N, R. 16W, S. B. B. & M.

Date September 16, 1976 Signed P. S. Magruder, Jr.

P. O. Box 3249, Terminal Annex
Los Angeles, California 90051 Title Agent
(Address) (213) 689-3561 (Telephone Number) (President, Secretary or Agent)

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

- 8-19-76 Moved Pool Rig #26 from I.W. #79 to I.W. #83. Rigged up to circulate well. Filled hole - took 35 barrels to fill. Circulated out gas - lost 236 barrels while circulating.
- 8-20-76 Mixed 85 barrels of 73#/cu.ft. mud and 95 sec. vis. Pumped down tubing - waited four hours - circulated out gas cut mud. Conditioned mud to 75#/cu.ft. and 45 sec. vis. Installed tubing hanger plug. Removed Christmas tree. Installed Class III B.O.P.E.
- 8-21-76 Finished flanging up B.O.P.E. Tested with water, as follows:
 - Blind rams to 4000 psi for 20 minutes
 - Pipe rams " 4000 psi " 20 "
 - Hydril bag " 3000 psi " 20 "Tested with nitrogen, as follows:
 - Blind rams to 4000 psi for 20 minutes
 - Pipe rams " 4000 psi " 20 "
 - Hydril bag " 3000 psi " 20 "Above tests witnessed and O.K.'d by D.O.G.
With McCullough Services, cut 2 7/8" tubing with chemical cutter at 8790' - wireline measurement. Pulled tubing up, breaking out tubing hanger.
- 8-22-76 Rig and crew idle.
- 8-23-76 Pulled out of hole, laid down tubing. Moved 200 joints of tubing away from rig. Going in hole with fishing tools, drill collars and picking up 2 7/8" drill pipe.
- 8-24-76 Picked up drill pipe and ran fishing tools to 8760'. Pumped in 60-barrel pill and pipe plugged. Pulled 20 stands - could not circulate.

- 8-25-76 Cleared drill pipe with Halliburton pump truck. Ran in hole and pulled fish free with 60,000#. Pulled out of hole. Recovered all fish. Laid down tools.
- 8-26-76 Ran 7 5/8" bit and casing scraper to 8808' - top of liner. Pulled out of hole. Ran 5 5/8" bit and casing scraper - hit fill at 9297'. Cleaned out to 9303' - hit junk (6' x 1 1/4' bar).
- 8-27-76 Finished pulling out of hole. Ran in hole with 5 1/2" washover shoe. Washed over junk from 9303' to 9410'. Circulated for three hours.
- 8-28-76 Pulled out of hole. Bar (6' x 1 1/4') was in washover shoe. Ran in hole with Burns perforation washer. Washed from 9410' up to top of liner. Checked tool in blank liner - O.K. Pulled above liner and circulated hole clean.
- 8-29-76 Rig and crew idle.
- 8-30-76 Ran back in hole to rewash liner. Washer stopped at 9056'. Pulled out of hole. Ran back in hole with 5 5/8" bit and 6 5/8" casing scraper to 9410'. Circulated hole clean - 5' of fill on bottom.
- 8-31-76 Finished pulling out of hole. Ran back in hole with Burns wash tool. Washer liner - pulled to top of liner - circulated.
- 9- 1-76 Finished pulling out of hole with Burns wash tool. Ran in hole with Burns gravel-packing tool. Attempted to open port collar - drill pipe backed off 2 stands above tool. Screwed back in, torqued drill pipe up - pulled 30' above liner. Circulated bottoms up.
- 9 -2-76 Finished pulling out of hole with gravel tool. Ran back in hole with Baker Model "C" 8 5/8" bridge plug and fullbore retainer cementer. Set bridge plug at 8800'. Tested casing from 8000' to 8800' at 1500 psi for 20 minutes - O.K. Tested from 7000' to 8000' at 2000 psi for 20 minutes - O.K.
- 9- 3-76 Tested casing from 6000' to 7000' at 2300 psi for 20 minutes - O.K.
 Tested casing from 5500' to 6000' at 2800 psi for 20 minutes - O.K.
 With bridge plug set at 6000', pressure tested as follows:

Surface	to	5500'	with	1300	psi	for	20	minutes
"	"	5000'	"	1600	psi	"	20	"
"	"	4250'	"	2000	psi	"	20	"
"	"	3500'	"	2300	psi	"	20	"
"	"	3000'	"	2600	psi	"	20	"
"	"	2500'	"	2900	psi	"	20	"
"	"	2000'	"	3100	psi	"	20	"
"	"	1500'	"	3400	psi	"	20	"
"	"	1000'	"	3600	psi	"	20	"
"	"	500'	"	3800	psi	"	20	"
"	"	250'	"	4000	psi	"	20	"

- 9- 4-76 Finished running in hole - retrieved bridge plug. Laying down 4 3/4" drill collars and 2 7/8" drill pipe.
- 9- 5-76 Rig and crew idle.
- 9- 6-76 Rig and crew idle.
- 9- 7-76 Finished laying down 2 7/8" drill pipe. With McCullough Wireline Service, ran 6 5/8" junk catcher. Ran and set Otis 6 5/8" permatrieve packer - top at 9066'. Ran in hole with 8 5/8" permatrieve packer - wireline pulled out of rope socket - left rope socket, collar locator, setting tool and packer in hole - top of tools at 8757' and packer at 8768'.
- 9- 8-76 Made up Midway overshot, bumper sub and jars. Picked up 283 joints of 2 7/8" tubing. Latched on to fish at 8762'.
- 9- 9-76 Finished pulling out of hole. Recovered rope socket, collar locator and setting tool. Left packer in hole. Ran in hole with Otis packer retrieving toll, latched into packer. Pulled out of hole - recovered 8 5/8" packer.
- 9-10-76 With McCullough Services, ran 8 5/8" junk catcher to top of 6 5/8" liner. Recovered several pieces of rubber. Ran 6 5/8" junk catcher to top of 6 5/8" packer. Recovered some rubber. Ran and set Otis permatrieve packer at 8802'. Made up production equipment and hydrotested to 5000 psi.
- 9-11-76 Ran 2 7/8" tubing. Changed out all collars and applied Baker seal. Hydrotested tubing to 5000 psi. Held each test for one minute.
- 9-12-76 Rig and crew idle.
- 9-13-76 Finished running 2 7/8" tubing. Changed out collars and applied Baker seal. Hydrotested tubing to 5000 psi - held each test for one minute. Dressed tubing hanger - spaced out tubing. Latched into Otis 8 5/8" permatrieve packer at 8802'. Pulled 25,000# over weight of tubing to check latch. Landed tubing with 6,000#. Installed tubing hanger plug. Removed B.O.P.E. Changed out tubing hanger tie-down studs. Installed Christmas tree and tested to 5000 psi for 20 minutes.
- 9-14-76 Changed well fluid to lease salt water. Using Otis Wireline Service, ran "GS" pulling tool - retrieved 2 1/2" side-door choke at 8766'. Ran in with 2 1/2" "XN" plug - failed to leave in place. Dressing running tool and ran back in with "XN" plug which stopped at 8605' - in working plug loose, left plug in hole at 8575. Side-door choke shows two rings of packing left in tubing.
- 9-15-76 Ran in and retrieved "XN" plug at 8575'. Rigged up and reverse circulated out broken packing rings and "O" ring from side-door choke. Ran 2 1/4" tubing gauge to No-Go nipple at 8790'. Ran and set "XN" plug in No-Go nipple. Tested packer and seals under 1800 psi for 20 minutes - O.K. Rig released at 7:00 P.M.

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

Report on Operations

No. T 276-278

Mr. P. S. Magruder, Jr., Agent
Southern Calif. Gas Co.
P.O. Box 54790 Terminal Annex
Los Angeles, Calif. 90054

Santa Paula, Calif.
Sept. 22, 1976

DEAR SIR:

Operations at well No. W 83, API No. 037-21455, Sec. 28, T. 3N, R. 16W,
S.B. B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 8/21/76. Mr. P.R. Wygle, representative of the supervisor was
present from 1600 to 1730. There were also present G. Bond, contract foreman

Present condition of well: No additions to casing record since proposal dated 7/14/76.

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

HAROLD W. BERTHOLF
JOHN E. MATTHEWS, Jr.
State Oil and Gas Supervisor

By John L. [Signature] Deputy

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

REPORT ON PROPOSED OPERATIONS No. P 276-253

Mr. P. S. Magruder, Jr., Agent
Southern California Gas Co.
P.O. Box 54790 Terminal Annex
Los Angeles, Calif. 90054

Santa Paula, Calif.
July 22, 1976

DEAR SIR:

(037-21455)

Your proposal to rework gas storage Well No. IW 83,
Section 28, T. 3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County,
dated 7/14/76, received 7/16/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. A copy of this approval shall be posted at the well site prior to commencing operations.
2. The drilling hole fluid used shall be of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts; and a reserve supply of this material shall be kept on hand to meet any emergency.
3. Blowout prevention equipment, at least of the Division of Oil and Gas Class III 3M rating, shall be installed and maintained in operating condition at all times.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS A PRESSURE TEST OF THE BLOWOUT PREVENTION EQUIPMENT BEFORE COMMENCING DOWNHOLE OPERATIONS.

Blanket Bond
JLH:b

HAROLD W. BERTHOLF
~~JOHN R. MATTHEWS, Jr.~~ State Oil and Gas Supervisor
By *James L. [Signature]*, Deputy

JUL 16 1976

DIVISION OF OIL AND GAS
Notice of Intention to Rework Well

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

SANTA PAULA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	FORMS	
	114	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 No. I. W. #83, API No. _____, Sec. _____, T. _____, R. _____, B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth. 9426'
- Complete casing record, including plugs and perforations:

13 3/8" cemented
 8 5/8" cemented 8865', stage collar 3958', cp'd 8835' & 8834' - WSO 8833'
 602' 6 5/8" landed 9424', slotted 9424'-9066'
 W.W. 9066'-8822', Top liner 8822'
 Gravel flowpacked

- Present producing zone name Sesnon and Frew Zone in which well is to be recompleted -
- Present zone pressure 3100 psi New zone pressure -
- Last produced Gas Storage Well
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
 or
- Last injected _____
(Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

- Move in rig. Kill well. Install B.O.P.E. and test.
- Pull and lay down tubing. Pick up 8rd tubing and clean out to 9424'.
- Wash perforations and re-gravel pack.
- Pressure test 8 5/8" casing. Perform any indicated remedial work.
- Run packer, tubing and safety valve.
- 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)
Los Angeles, California 90051
(City) (State) (Zip)
 Telephone Number (213) 689-3561

Southern California Gas Company
(Name of Operator)
 By P. S. Magruder, Jr. 7-14-76
(Name) (Date)
 Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator PACIFIC LIGHTING SERVICE CO., Well No. IW-83

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

Location From Station 84, 1763.1' South and 5801.9' West at right angles
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 2674 feet USGS

All depth measurements taken from top of Kelly Bushing which is 17 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, 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 3/6/75 Signed R.B. Magruder Jr.
E. A. Olson B. F. Jones Title Agent
(Engineer or Geologist) (Superintendent) (President, Secretary or Agent)

Commenced drilling	Completed drilling	Total depth	Plugged depth	Junk	GEOLOGICAL MARKERS	DEPTH
<u>September 3, 1974</u>	<u>October 29, 1974</u>	<u>9426</u>	<u>None</u>	<u>one underreamer cone at 9926</u>	<u>Sesnon S-4 marker</u>	<u>8878</u>
					<u>Top of Frew Zone V-4</u>	<u>9202</u>

Geologic age at total depth: Eocene

Commenced producing _____ Flowing/gas lift/pumping _____ Name of producing zone Sesnon-Frew
(Date) (Cross out unnecessary words)

	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	New or Second Hand	Seamless or Lapweld	Grade of Casing	Size of Hole Drilled	Number of Sacks of Cement	Depth of Cementing if through perforations
<u>13-3/8</u>	<u>830'</u>	<u>8 fc</u>	<u>54.5#</u>	<u>N</u>	<u>S</u>	<u>K</u>	<u>17-1/2</u>	<u>333</u>	
<u>8-5/8</u>	<u>8864'</u>	<u>8 fc</u>	<u>36#</u>	<u>N</u>	<u>S</u>	<u>K & N</u>	<u>11</u>	<u>697</u> <u>547</u>	<u>shoe</u> <u>3958</u>
<u>6-5/8</u>	<u>9424'</u>	<u>8822</u>	<u>24#</u>	<u>N</u>	<u>S</u>	<u>K</u>	<u>7-5/8 & 14"</u>		<u>Gravel packed liner</u>

PERFORATED CASING

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

8-5/8" - 4-1/2" set holes at 8834 and 8835 WNSO, squeezed with cement 8833-WSO
6-5/8" perforated gravel packed liner 8822-9424

Was the well directionally drilled? Yes Electrical Log Depths 8856 and 9426 (Attach Copy of Log)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Co. FIELD Aliso Canyon

Well No. IW 83, Sec. 28, T. 3N, R. 16W, S.B. B. & M.

Date _____, 19____

Signed *P.B. Magruder Jr.*

P.O. Box 54790 Terminal Annex
L. A. California 90051 (213) 689-3561

Title Agent

(Address)

(Telephone Number)

(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. Use this form to report a full account of all important operations during the drilling and testing of the well or during re-drilling, altering of casing, plugging, or abandonment with the dates thereof. Be sure to include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, shooting and initial production data.

Date

SEE ATTACHED DAILY REPORT

IW 83 Well History

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1974

- 9-3 Peter Bawden Drilling, Inc., Contractor using Rig #10 spudded 17-1/2 hole at 11:00 P.M. 9-3-74 and drilled to 80'.
- 9-4 Drilled 17-1/2" hole to 566'. Used Petroleum Solids Control separator. Mud: 73#, 38 sec, 15 cc.
- 9-5 Drilled 17-1/2" hole to 856'. Found washout in shock sub. Conditioned hole for casing. Mud: 68#, 35 sec, 18 cc, 9% solids.
- 9-6 TO CEMENT 13-3/8" SURFACE CASING:
Ran 20 joints and 5 pups or 856.20' of 13-3/8" 54.5#, K-55. Buttress now seamless casing to 830' where same stopped. Put on cementing head and circulated and worked casing to 854'. Preceded cement with 200 cubic feet of water. Mixed 185 sacks Class "G" with 185 cubic feet of Pozmix plus 2% gel followed by 148 sacks Class "G" with 2% calcium chloride. Moved casing 5' while mixing and displacing cement. Good circulation with cement returns to surface. Displaced cement with 100 cubic feet of water and 600 cubic feet of mud. No plugs used. Started mixing at 8:05 A.M. with C.I.P. at 9:30 A.M. Used HOWCO. Casing fitted on bottom with Davis-Lynch fill-up float shoe with one centralizer 10' above. Shoe and bottom 3 joints treated with thread locking compound.
Cut and recovered 13-3/8" casing and welded on 13" - 5000# Cameron casing head and test same. Ok with 1500 psi for 15 minutes.
- 9-7 Installed double shafter and OK Hydril and tested same OK with 1500 psi water pressure. Tested CSO, pipe rams and Hydril OK with 2500 psi nitrogen for 30 minutes each. B.O.P inspected and approved by Larry Bright of Division of Oil and Gas. Ran 11" bit, located cement at 664 and drilled out to shoe and drilled 11" hole to 1430'. Mud: 71#, 44 sec, 120 cc, 10% solids.
- 9-8
- 9-9 Drilled 11" hole to 1975'. Mud: 71#, 45 sec, 11.2 cc, 9% solids.
- 9-10 Drilled 11" hole to 2511'. Mud: 71#, 44 sec, 11.0 cc, 10% solids.
- 9-11 Drilled 11" hole to 2856'. Mud: 72#, 48 sec, 8.8 cc, 12% solids.
- 9-12 Reamed from 2790 to 2856' and drilled 11" hole to 3023'. Down, 1-3/4 hours for repairs. Mud: 73#, 47 sec, 7.8 cc, 12% solids.
- 9-13 Dyna-Drill #1 and #1A, 11" hole to 3223'. Mud: 72#, 49 sec, 8.2 cc, 12% solids.
- 9-14 Reamed 11" hole from 3023-3223' and directionally drilled 11" hole to 3512 where circulation was lost. Pulled to 13-3/8" shoe and mixed mud. Mud: 72#, 48 sec, 8 cc, 11% solids.

IW 83 Well History

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1974

- 9-15 Directionally drilled 11" hole to 3804' with no further fluid loss.
Mud: 71#, 47 sec, 7.6 cc, 11% solids.
- 9-16 Directionally drilled 11" hole to 4067'.
Mud: 71#, 50 sec, 7.6 cc, 12% solids.
- 9-17 Directionally drilled 11" hole to 4154'. Down 6 hours repairing electrical equipment.
Mud: 71#, 46 sec, 7.6 cc, 10% solids.
- 9-18 Directionally drilled 11" hole to 4411'.
Mud: 71#, 48 sec, 7.8 cc, 9% solids.
- 9-19 Directionally drilled 11" hole to 4667'. Down 1 hour repairs to starter.
Mud: 72#, 50 sec, 7.5 cc, 9% solids.
- 9-20 Directionally drilled 11" hole to 4877'.
Mud: 72#, 47 sec, 7.8 cc, 9% solids.
- 9-21 Directionally drilled 11" hole to 5106'. Work through tight hole to 4888 to 4688'.
Mud: 72#, 51 sec, 7.8 cc, 9% solids.
- 9-22 Dyna-Dril #2 and #2A, 11" hole 5106' to 5217'.
Mud: 72#, 50 sec, 7.4 cc, 8.5% solids.
- 9-23 Reamed 11" hole 5116 to 5217 and directionally drilled 11" hole to 5458'.
Mud: 74#, 55 sec, 7.4 cc, 11% solids.
- 9-24 Directionally drilled 11" hole to 5757'.
Mud: 72#, 43 sec, 7.8 cc, 9% solids.
- 9-25 Directionally drilled 11" hole to 6030'.
Mud: 73#, 48 sec, 7.2 cc, 9% solids.
- 9-26 Pipe stuck while running in at 5084'. Worked same loose and reamed out bridge 5084 to 5124 and 5934-6030'. Directionally drilled 11" hole to 6197'.
Mud: 73#, 59 sec, 7.00 cc, 9% solids.
- 9-27 Directionally drilled 11" hole to 6486'.
Mud: 73#, 48 sec, 7.6 cc, 9% solids.
- 9-28 Directionally drilled 11" hole to 6808'.
Mud: 73#, 47 sec, 7.6 cc, 9% solids.
- 9-29 Directionally drilled 11" hole to 7144'.
Mud: 72#, 40 sec, 7.2 cc, 5% solids.
- 9-30 Directionally drilled 11" hole to 7316. 3-3/4 hours repairs.
Mud: 72#, 44 sec, 7.2 cc, 6% solids.

IW 83 Well History

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1974

- 10-1 Directionally drilled 11" hole to 7389'. Down 12 hours repairing generator.
Mud: #73, 43 sec, 7.8 cc, 6% solids.
- 10-2 Directionally drilled 11" hole to 7643. Down 2 hours repairing generator.
Mud: #73, 56 sec, 7.6 cc, 6% solids.
- 10-3 Directionally drilled 11" hole to 7953'.
Mud: 72#, 47 sec, 7.0 cc, 7% solids.
- 10-4 Directionally drilled 11" hole to 8136'.
Mud: 73#, 50 sec, 7.4 cc, 7% solids.
- 10-5 Directionally drilled 11" hole to 8384'.
Mud: 73#, 49 sec, 7.2 cc, 7% solids.
- 10-6 Directionally drilled 11" hole to 8577'.
Mud: 73#, 42 sec, 7.2 cc, 6% solids.
- 10-7 Directionally drilled 11" hole to 8691'.
Mud: 73#, 43 sec, 7.0cc, 6% solids.
- 10-8 Directionally drilled 11" hole to 8806'.
Mud: 73#, 44 sec, 7.2 cc, 6% solids.
- 10-9 Directionally drilled 11" hole to 8856 and conditioned hole for logging. Ran Wellex Induction Electric log with hole caliper and logged from 8850 to 854. Installed rams for 8-5/8" casing.
Mud: 73#, 49 sec, 7.0cc, 6% solids.
- 10-10 TO CEMENT 8-5/8" CASING:
- &
- 10-11 Ran 214 joints or 8867.36' of 8-5/8" 36, #K-55 & N-80, R-3, new seamless casing to 8864. Could not work casing as draw works clutch air leak and could not pull above 300,000#. Circulated for 1-1/2 hours. Pumped in 472 sacks Class "G", 472 cubic feet Pozmix D, 2% gel mixed with 14% salt water and 0.5% CFR2 followed by 225 Class "G" mixed with 0.75% CFR and 14% salt water. Started mixing at 10:10 P.M. and finished mixing at 11:15 P.M. Displaced with 3042 cubic feet of mud to bump one top rubber plug under 3500 psi at 1:07 A.M. 10-11-74. Held 3500 psi for 15 minutes. Bled back 31 cubic feet. Lost circulation after displacing 2850 cubic feet of mud. Good circulation prior.
Dropped opening plug and opened Balaker stage collar under 1000 psi and circulated for 2-1/2 hours. Pumped in 547 sacks Class "G", 547 cubic feet Pozmix D with 2% gel. Started mixing at 4:25 A.M. 10-11-74, finished at 5:10 A.M. Dropped closing plug and displaced with 1354 cubic feet of mud and closed Balaker collar under 2500 psi final pressure at 5:40 A.M., 10-11-74. No circulation while mixing last 400 cubic feet of cement slurry. Circulation returned while displacing. Good cement returns to surface. Bled back 9 cubic feet and collar held OK. Used HOWCO.

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CASING DETAIL

Bottom 83 joints or 3490.96' (8864-5373.04) 8-5/8", 36#, N-80, 8 rd LT & C, R-3 new seamless casing fitted on bottom with Halliburton fill-up float shoe and at Halliburton fill-up float collar at 8775. Used thread locking compound on bottom 3 joints. Metal petal cement basket at 43rd joint with turbolizers above and below. Turbolizers 10' above shoe and 10' above float collar and on every 3rd joint for 500'.

Next 34 joints or 1406.18' (5373.09-3966.86) 8-5/8", 36#, K-55, 8 rd LT & C new seamless casing with top joint 8 rd pin to buttress coupling with buttress Baker stage collar at 3958. Centralizers above and below collar. Metal petal cement basket one joint below collar with centralizers above and below.

Net 97 joints or 3970.22' (3966.86-sfc) 8-5/8", 36#, K-55, Buttress thread, new seamless casing with centralizers on 167, 169, 171, 174, 180 and 183rd joints.

TOTAL: 214 joints or 8867.36

Landed 8-5/8" casing in slips and installed secondary packing. Installed Cameron 10"-5000# tubing head and tested OK with 3500 psi for 15 minutes.

10-12 Reinstalled B.O.P and tested same OK with 2000 psi water pressure. Rigged up NOWSCO and tested C.S.O, pipe rams and Hydril with 3000 psi nitrogen for 30 minutes each. O.K. Division of Oil & Gas waived witnessing B.O.P test, but requested nitrogen chart be left at rig for his observation. Replaced a rented flange leak and retested same OK with 3000 psi nitrogen.

10-13 Measured in hole and ran 7-5/8" bit with casing scraper above and drilled out cement and stage collar to 3967. Closed rams and stage collar held 200 psi for 15 minutes. Measured in and located cement at 8776 and drilled out to 8850'.
Ran Welx Microseismogram from 8850 to 800'.

10-14 Ran Welx 4" OD carrier and shot four 1/2" jet holes at 8835. Closed rams and holes took fluid under 800 psi rig pressure.

TO SQUEEZE HOLES AT 8835 IN 8-5/8" CASING WITH CEMENT:

Ran Johnston positrieve on 8644' of 4-1/2" 16.6# drill pipe. Set tool at 8639 and holes took fluid at 12 CFPM rate under 1600 psi. Preceded cement with 100

1974

cubic feet of water. Mixed 200 sacks Class "G" to 120#/cubic feet slurry and followed with 20 cubic feet of water and 339 cubic feet of mud. Closed tool and squeezed with additional 383 cubic feet of mud in 3 stages to force estimated 190 sacks of cement away under 3000 psi final pressure. Cement in place at 9:12 A.M. Used HOWCO.

10-15 After standing cemented for 18 hours, located cement at 8645 and drilled
& out to 8850.

10-16 TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 8834:

Ran Johnston combination gun and tester and shot four 1/2" holes at 8834. Set packer at 8756. Opened tool at 2:55 P.M. for 1 hour test. No blow. Polled and found tester pulled off in mandrel, leaving tools in hole. Ran Brown Oil Tool overshot, bumper sub and jars and latched onto fish and recovered same. Gun failed to fire.

Ran Welex 4" OD carrier and shot four 1/2" jet holes at 8834'.

Closed rams and holes held 2000 psi for 10 minutes.

Ran Johnston tester and set packer at 8756 with tail to 8722.

Opened tool at 3:05 P.M. with puff blow, steadily increasing for 20 minutes. Pulled and recovered 1232' rise of drilling fluid.

Charts O.K. WNSO by Co. Test.

Ran Johnston positrieve cement tool.

10-17 TO SQUEEZE HOLES IN 8-5/8" CASING AT 8834 WITH CEMENT:

Run Johnston positrieve on 4-1/2" 16.6# drill pipe and set packer at 8639. Holes took fluid at 22 CFPM rate under 1800 psi. Preceded cement with 100 cubic feet of water. Mixed 200 sacks of Class "G" cement to 125#/cubic feet slurry and displaced with 20 cubic feet of water and 319 cubic feet of mud. Closed tool and displaced with additional 413 cubic feet of mud to force estimated 180 sacks away under 2400 psi, final pressure at 3:00 A.M. Mud line on cement truck parted during displacement which caused some confusion as to the amount of mud displaced before closing tool. Used HOWCO. Pulled cement tool.

10-18 After standing cemented 19 hours, located hard cement at 8647 and drilled out same to 8850'.

Ran Welex 4" OD carrier and shot four 1/2" jet holes at 8833'.

Closed rams and holes held 1900 psi - OK for 10 minutes.

TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 8833:

Ran Johnston tester on 4-1/2" 16.6# drill pipe and set packer at 8761' with tail to 8786. Opened tool at 4:15 P.M. No blow. Recycled tool and reset packer. Again, no blow. Pulled tester after 1 hour test and recovered 5' of drilling fluid. Charts showed tool functioned properly. Test witnessed and approved by Peter Wygle of the Division of Oil & Gas.

10-19 Ran 7-5/8" and drilled out cement and 8-5/8" shoe and drilled 7-5/8" hole to 9065'. Down 8 hours repairing clutch.

Mud: 72#, 45 sec, 8 cc, 5% solids.

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- 10-20 Drilled 7-5/8" hole to 9148'. Down 8 hours repairing clutch.
Mud: 72#, 42 sec, 7.6 cc, 5% solids.
- 10-21 Drilled 7-5/8" hole to 9238.
Mud: 70#, 44 sec, 7.8 cc, 5% solids.
- 10-22 Drilled 7-5/8" hole to 9313. Down 1-1/2 hours replacing swivel.
Mud: 69#, 41 sec, 7.4 cc, 4% solids.
- 10-23 Drilled 7-5/8" hole to 9412.
Mud: 69#, 42 sec, 7.6 cc, 5% solids.
- 10-24 Drilled 7-5/8" hole to 9426 TOTAL DEPTH
Installed shooting flange on Hydril and ran Welex I.E., C.O.,
SWN and AV logs from 9426 to 8865.
- 10-25 Ran Grant underreamer #1 and opened 7-5/8" hole to 14" from
8865' to 8901'.
- 10-26 Ran Grant underreamer #2 and #3 and opened hole to 14" to 8951'.
Lost cone on #3 which fell to bottom of hole.
- 10-27 Ran Grant underreamer #3 and #4 and opened hole to 14" to 8988'.
Lost cone on #4 which came out of hole in box of tool.
- 10-28 Ran Grant underreamer #4 and #5 and opened hole to 14" to 9031'.

Tool #1 opened 36' in 9-3/4 hours
Tool #2 " 34' " 9-1/2 "
Tool #3 " 49' " 9-1/4 "
Tool #4 " 30' " 5-3/4 "
Tool #5 " 20' " 8-1/2 "
- 10-29 Ran Grant underreamer #6 and opened hole to 14" to 9080 - 49' in
6-1/2 hours.
Ran Welex hole caliper.
- 10-30 Changed over drilling fluid to salt water treated with polymer
65#/ft3.
- 10-31 Ran 601.69' of 6-5/8" liner with gravel packing tools on 2-7/8"
tubing stringer and hung same at 8822' with bottom at 9424.
Inflated Lynes external casing packer at 9062.

LINER DETAIL

Bottom 18 joints or 359.41 (9424-9064.59) 6-5/8", 24#, K-55, Security flush joint,
perforated 32 rows, 30 mesh, 2-1/2" x
6" center slots, bull nosed on bottom
with 8 rd thread on top with top 10'
blank.

Next 11.30'(9064.59-9053.29) 6-5/8", 28#, N80, Lynes Type BTX
external casing packer with packer at
9062.

LINER DETAIL (cont'd)

- Next 7 joints or 200.52 (9053.29-8852.77) 6-5/8", 24#, K-55, 8 rd ST & C with formed down couplings to 7.090" OD. Layne & Bowler Gru-V-Kut 0.018 gauge wire weld screen.
- Next 1 joint or 25.16 (8852.77-8827.61) 6-5/8", 24#, K-55, 8 rd ST & C with turned down coupling to 7.090" OD. Tell tale with 2' of Layne & Bowler wire weld screen at 8846'.
- Top 5.3 (8827.61-8822.31) Burns 8-5/8", 36# X 6-5/8", 24# lead seal off bottom liner hanger with hold down slips and Burns port collar below.

TOTAL: 26 Joints or 601.69' (9424-8822.3')

Set lead seal and tested O.K. with 1000 psi. Inflated Lynes external casing packer at 9062 with 3000 psi and tested O.K. with 600 psi. Cups pulled tight and had to be worked past Lynes packer. Pulled 250,000 psi and cups passed through

- 10-31 Opened port collar and commenced gravel packing with Layne & Bowler 12-20 mesh (.030 X .060"). Washed gravel at 12:15 P.M. at 10 sacks per hour rate, increasing to 18 sacks per hour. 120 cubic feet in at 7:30 P.M. when pressure rose to 900 psi. Back-scuttled 2 cubic feet.
- 11-1 Ran Burns circulating type washer and washed liner from 9053 to 8846' making four passes each 62'. Reran gravel packing tools and pumped in additional 12 sacks of gravel. Back-scuttled 3 sacks.
- 11-2 Reran wash tools and washed liner as before. Reran gravel packing tool and pumped in 3 sacks of gravel. Back-scuttled trace of gravel. Total gravel in place 130 sacks. Theoretical fill from caliper log is approximately 140 sacks.
- 11-3 Pickup, measure and rabbit 2-7/8" second-hand and new tubing and stand back in derrick. Changed pipe rams to tubing rams.
- 11-4 Changed tubing rams to pipe rams and ran drill pipe to 8000'. Pulled laying down drill pipe. Layed down drill collars. Commence running 2-7/8" tubing. All tubing Hydro tested to 5000 psi and broached with 2.347" OD broach.
- 11-5 Continued running tubing and 8-5/8" packer stopped 14' lower than anticipated. Ran Welex collar locator and determined 6-5/8" liner had been hung at 8822

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instead of 8808. Ran Archer-Reed blanking plug and set in NO-GO nipple. Pressured to 4000 psi and set packers with tubing landed on doughnut.

11-6 Removed B.O.P. Installed Cameron christmas tree and tested tree and doughnut with 4500 psi O.K. RIG RELEASED AT 7:00 A.M. 11-6-74.
TOTAL TIME: 62 days and 9 hours

K B to Doughnut	17.00	17.00
199 Joints 2-7/8", 6.5#, used Buttress Thread Tubing w/buttress to 8 rd X-0 and Doughnut on top	6,278.30	6,295.30
31 Joints 2-7/8", 6.5#, K-55, 8 rd, new Tubing w/8 rd to buttress X-0 on top	919.39	7,214.69
48 Joints 2-7/8" Tubing, as above	1,488.22	8,702.91
2-7/8" Brown Type B-4 Safety Joint	2.28	8,705.19
2-7/8" Tubing, as above	30.00	8,735.19
2-7/8" Macco Sliding Sleeve closed w/shield (2.31 ID)	2.28	8,737.47
2-7/8" Tubing, as above	30.17	8,767.64
2-7/8" Udell Landing Nipple (2.31 ID)	2.28	8,769.92
2-7/8" Tubing, as above	30.62	8,800.54
Brown 8-5/8", 36# Husky H-1 RSP Packer	6.90	8,807.44
2-7/8" Tubing, as above	31.11	8,838.55
2-7/8" Brown Type CC Safety Joint	1.51	8,840.06
2-7/8" Tubing, as above 5 Joints	156.49	8,996.55
2-7/8" Udell Landing Nipple (2.31 ID)	2.28	8,998.83
2-7/8" Tubing, as above	31.00	9,029.83
2-7/8" Macco Sliding Sleeve Closed w/ Shield (2.31 ID)	2.28	9,032.11
2-7/8" Tubing, as above	31.41	9,063.52
Brown 6-5/8", 28#, Husky H-1 RSP Packer Rubber @ 9066	5.48	9,069.00
Baker R NO-GO Nipple	.81	9,069.81
2-7/8", 6.5#, N-80, 8 rd new Tubing	31.20	9,101.01
2-7/8", Bell Collar	.45	9,101.46

SURVEY RECORD

1763' - SOUTH & 5802' - WEST from Sta. #84

GRD 2674
KB 17
ELEV 2691

JOB NO _____ IN - 83 DATE 9-4-74

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS
					NORTH	SOUTH	EAST	WEST	
1	2.45	229		N 87 W	58			10 57	
2	3.15	413	228 74	N 76 W	3 10			2 21 09	
3	2.15	519	412 44	S 87 W	2 88			25 25	
4	1.15	668	667 32	N 74 W	3 78			28 37	
5	1.00	891	890 29	N 80 W	4 46			32 20	
6	.30	957	956 29	S 58 W	4 15			32 69	
7	1.00	1021	1020 28	N 80 W	4 34			33 79	
8	1.00	1084	1083 27	N 64 W	4 82			34 78	
9	1.30	1147	1146 25	S 89 W	4 79			36 43	
10	1.30	1210	1209 23	S 53 W	3 80			37 75	
11	2.45	1305	1304 12	S 45 W		14		41 69	
12	4.30	1398	1396 83	S 54 W		4 43		47 59	
13	5.30	1490	1488 41	S 51 W		9 98		54 45	
14	7.00	1556	1553 92	S 52 W		14 93		60 78	
15	8.00	1854	1849 02	S 56 W		38 12		95 16	
16	8.45	2166	2157 39	S 56 W		64 66		134 51	
17	8.45	2448	2436 11	S 60 W		86 11		171 66	
18	8.30	2732	2716 99	S 61 W		106 46		208 38	
19	8.15	2856	2839 71	S 59 W		115 62		223 63	
20	9.00	3023	3004 65	S 57 W		129 85		245 54	
21	10.30	3055	3036 11	S 59 W		132 85		250 54	
22	11.45	3088	3068 42	S 65 W		135 69		256 63	
23	12.00	3119	3098 74	S 75 W		137 36		262 86	
24	11.45	3150	3129 09	S 84 W		138 02		269 14	
25	11.15	3181	3159 49	N 89 W		137 91		275 19	
26	13.30	3315	3289 79	WEST		137 91		306 47	
27	13.45	3628	3593 82	WEST		137 91		380 87	
28	14.00	3734	3696 67	N 89 W		137 46		406 51	
29	12.30	3898	3856 78	N 89 W		136 84		442 00	
30	12.45	3992	3948 46	S 89 W		137 20		462 74	
31	13.00	4154	4106 31	S 87 W		139 10		499 14	
32	13.30	4411	4356 22	S 87 W		142 24		559 05	

SURVEY RECORD

JOB NO _____

FW-83

DATE _____

9-4-74

	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS	
						NORTH	SOUTH	EAST	WEST		
33	4717	13.30	4653		S 88 W		144	73	630	43	
34	4819	13.00	4753		S 86 W		146	33	653	33	
35	5106	11.45	5034		S 84 W		152	44	711	45	
36	5145	12.45	5072		N 88 W		152	83	719	71	
37	5177	12.30	5103		N 88 W		152	00	726	60	
38	5285	12.15	5209		N 72 W		144	92	748	40	
39	5458	12.30	5377		N 74 W		134	60	784	39	
40	5725	11.30	5639		N 76 W		121	72	836	05	
41	6030	10.00	5939		N 78 W		110	71	887	85	
42	6197	10.30	6194		N 77 W		103	86	917	50	
43	6486	9.45	6388		N 78 W		93	69	965	36	
44	6791	9.30	6689		N 76 W		81	51	1014	19	
45	7105	9.30	6999		N 76 W		68	97	1064	48	
46	7389	9.45	7279		N 80 W		60	62	1118	85	
47	7643	10.30	7529		N 80 W		52	58	1157	44	
48	7953	10.15	7834		N 81 W		43	95	1211	92	
49	8136	10.45	8013		N 80 W		38	02	1245	53	
50	8394	11.45	8266		N 80 W		28	90	1297	27	
51	8590	12.15	8448		N 79 W		21	37	1336	01	
52	8719	13.00	8583		N 76 W		13	81	1366	35	
53	8856	13.45	8716		N 70 W				1396	95	
54	8878	13.30	8738		N 70 W				1401	78	
55	8990	12.30	8847		N 68 W				1424	25	
56	8994	12.30	8851		N 65 W				1425	04	
57	9162	11.30	9016		N 69 W				1456	32	
58	9202	10.45	9055		N 70 W				1499	38	
59	9245	10.45	9097		N 72 W				1504	91	
60	9426	11.30	9275		N 74 W				1540	38	
HORIZONTAL DEPARTURE 1540.79' N 88.68° W											

S-4
S-8
HZ
V-4

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

Report on Operations

No. T 274-380

Mr. P. S. Magruder, Jr.
Pacific Lighting Service Co.
P.O. Box 54700, Terminal Annex
Los Angeles, California 90054

Santa Paula, Calif.
November 15, 1974

DEAR SIR:

Operations at well No. 17 83, API No. 037-21455, Sec. 28, T. 3N, R. 16W,
S.B. B & M, Aliso Canyon Field, in Los Angeles County, were witnessed
on Oct. 18, 1974. Mr. P.R. Wyle, representative of the supervisor was
present from 1800 to 2000. There were also present Mr. E.A. Olsen, engineer

Present condition of well: 13 3/8" cem. 854'; 8 5/8" cem. 8864', c.p. 3997', 8834' &
8835' surf. 8833', 430. T.D. 8866'.

The operations were performed for the purpose of testing the 8 5/8" shut-off by means of
a formation tester.

DECISION:

THE 8 5/8" SHUT-OFF AT 8833' IS APPROVED.

cc: Operator

JOHN F. MATTHEWS, JR.
State Oil and Gas Supervisor

By [Signature] Deputy

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

Report on Operations

No. T 274-319

Mr. P. S. Magruder, Agent
Pacific Lighting Service Co.
P.O. Box 54790, Terminal Annex
Los Angeles, California 90054

Santa Paula, Calif.
September 19, 1974

DEAR SIR: (037-21455)

Operations at well No. IW 83, Sec. 28, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on September 8, 1974 Mr. L. Bright, representative of the supervisor was
present from 0700 to 0900. There were also present Mr. R. L. Wandigriff, driller

Present condition of well: 13 3/8" cem. 854' T.D. 854'.

The operations were performed for the purpose of inspecting the blowout prevention equipment and installation.
Mr. _____ reported:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

JOHN F. MATTHEWS, JR.
State Oil and Gas Supervisor

By RCR Pitman Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 274-228

3606 WELL

Mr. P.S. Magruder, Jr.
Pacific Lighting Service Co.
P.O. Box 54790, Terminal Annex
Los Angeles, California 90024

Santa Paula, Calif.
June 7, 1974

DEAR SIR:

(057-21455)

Your proposal to drill Well No. IV 83,
 Section 28, T. 3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County,
 dated 5/23/74, received 5/31/74, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. The provisions of Sec. 3606 relating to derricks and subsurface spacing shall be followed.
2. Sufficient cement shall be pumped back of the 13 3/8" casing to fill from the shoe to the surface.
3. Drilling fluid of proper weight and consistency shall be used to keep the well under control at all times; and a reserve supply of this material shall be kept on hand to meet any emergency. NO CONTAMINANTS OR TOXIC MATERIAL SHALL BE USED IN ANY DRILLING FLUID THAT IS TO BE PLACED IN AN UNLINED SUMP.
4. Any sump used during drilling operations shall be thoroughly cleaned of all drilling materials and the site restored to its prior condition as soon as drilling operations are completed.
5. Blowout prevention equipment, at least of the Division of Oil and Gas Class III rating, shall be installed and maintained in operating condition at all times.
6. Fresh waters (and oil or gas zones) back of the 8 5/8" casing shall be protected with cement.
7. A subsurface directional survey of this well shall be made and a plat of said survey filed with this Division within 15 days of the completion of drilling.
8. THIS DIVISION SHALL BE NOTIFIED:
 - a. TO WITNESS a pressure test of the blowout prevention equipment before drilling out of the shoe of the 13 3/8" casing.
 - b. TO WITNESS the test of the 8 5/8" water shut-off above the Seanon zone.

NOTE: This approval is granted under Sec. 3606 of the Public Resources Code.

Blanket Bond
 ALL:b
 cc: Operator

JOHN F. MATTHEWS, JR., State Oil and Gas Supervisor

By LOO Pitzius, Deputy

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

15

037-21455

This notice and surety bond must be filed before drilling begins

Los Angeles Calif. May 23, 1974

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. IW-83, Sec. 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 431.5 acres, is as follows: As previously filed (Attach map or plat to scale)

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 _____ property along section line and _____ feet _____ property at right angles to said line from the _____ corner of section
From station 84 1770' southerly and 3780 westerly at right angles

Elevation of ground above sea level 2682 feet USGS datum.
All depth measurements taken from top of Kelly bushing which is 15 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
13-3/8"	48#	H-40 Smls	Stc	850'	850'
8-5/8"	36#	K-55 & N-80	Stc	8700+-	8700' & 3300'
6-5/8"	24#	K-55	8650	9000+-	Perforated liner

Intended zone(s) of completion: Sesnon (Name) 8700 - 9000 (Depth, top and bottom) Estimated total depth 9000

Gas Storage Well

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

Address P. O. Box 54790 Terminal Annex
Los Angeles, California 90054

Pacific Lighting Service Company
(Name of Operator)

Telephone Number (213) 723-7312

By P.B. Magruder, Jr.
Type of Organization Corp.
(Corporation, Partnership, Individual, etc.)