

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

No. T200-122

**Report on Operations**

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

Ventura, California  
August 15, 2000

Your operations at well "Fernando Fee" 35D, API No. 037-21453, Sec. 34, T. 3N, R.16W, S.B.B.&M. Aliso Canyon Field, in Los Angeles County, were witnessed on 07-17-2000. Steve Mulqueen, representative of the supervisor, was present from 1200 to 1400. There were also present Art Thomas.

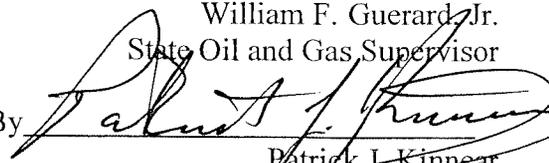
Present condition of well: 13 3/8" cem 791'; 8 5/8" cem 7148', cp 7133', perf 7132' wso; 6 5/8" ld 7117'-7270', perf 7148'-7270'. TD 7270'.

The MIT was performed for the purpose of witnessing an initial temperature survey prior to start-up of a water-disposal project.

DECISION:

The MIT is approved.

CBT

William F. Guerard, Jr.  
State Oil and Gas Supervisor  
By   
Patrick J. Kinnear  
Deputy Supervisor

**DEPARTMENT OF CONSERVATION**

1000 S. Hill Road, Suite 116  
Ventura, CA 93003-4458

(805) 654-4761  
FAX (805) 654-4765



July 22, 1998

James D. Mansdorfer  
Southern California Gas Co.  
22245 Placerita Canyon Road ML9181  
Newhall, CA 91322-1124

Dear Mr. Mansdorfer:

**Water-Disposal Project  
Aliso Canyon Field  
"Fernando Fee" 30**

In the process of conducting an evaluation into your "Notice to Rework" and "Supplementary Notice" for "Fernando Fee" 30, this Division determine that several wells in the vicinity of the well did not have the required cement behind the production string to protect the fresh waters from injection zone. However, this Division was able to approve the injection into this wells provided that a monitoring program was devised. As a result, the Division will require that static temperature surveys be conducted on the following wells within 60 days after injection has commenced and once a year thereafter.

Wells

"Fernando" Fee 35D  
"Fernando Fee" 33  
"Porter" 37-A

This Division shall be notified every year to witness the surveys and copies submitted within 60 days after the surveys are conducted.

If you have any questions on this matter, please contact us (805) 654-4761.

  
Steven A. Fields  
Operations Engineer  
Division of Oil, Gas, and  
Geothermal Resources

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

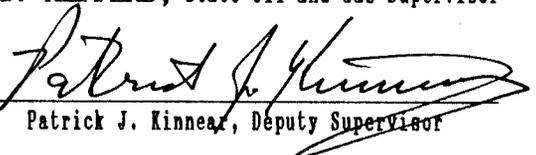
Your request, dated February 13, 1990, proposing to change the designation of wells in Sec. 34, T. 3N, R. 16W, SB B.&M., Aliso Canyon field Los Angeles County, District No. 2, has been received.

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

From:		To:	
IW 63	(037-21278)	"Fernando Fee" 35E	(037-21278)
IW 64	(037-21453)	"Fernando Fee" 35D	(037-21453)
IW 66	(037-21457)	"Fernando Fee" 35A	(037-21457)
IW 67	(037-21279)	"Fernando Fee" 35C	(037-21279)
IW 82	(037-21458)	"Fernando Fee" 35B	(037-21458)

bb

M.G. MEFFERD, State Oil and Gas Supervisor

By   
Patrick J. Kinnear, Deputy Supervisor

**DIVISION OF OIL AND GAS**

**WELL SUMMARY REPORT**

SUBMIT IN DUPLICATE

Operator Pacific Lighting Service Company Well No. IW 64

Sec. 34, T. 3N, R. 16, S.B.B. & M. Aliso Cyn. Field Los Angeles County.

Location From Station 84 3402.9' Southerly and 644.7' Easterly at right angles.

(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 1674 feet USGS

All depth measurements taken from top of kelly bushing which is 15 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 August 19, 1974

Signed P. S. Magruder, Jr.

E. A. Olson

B. F. Jones

Title Agent

(Engineer or Geologist)

(Superintendent)

(President, Secretary or Agent)

Commenced drilling April 16, 1974

GEOLOGICAL MARKERS

DEPTH

Completed drilling May 6, 1974

M/P

6808

Total depth 7270 Plugged depth None

Top Sesnon Zone S-4

7148

Junk None

Geologic age at total depth: Miocene

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

Name of producing zone Sesnon

Initial production

Production after 30 days

Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
	<b>GAS</b>	<b>STORAGE</b>			

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 perforation
13-3/8"	791	sfc	48#	N	S	K-55	17 1/2	388	
8-5/8"	7148	sfc	36#	N	S	K&N	11	438	5595-450 3337-1670
6-5/8"	7270	7117	24#	N	S	K-55	14	Gravel packed	

PERFORATED CASING

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

8-5/8" - 4 - 1/2" holes at 7133' squeezed with cement; 4 - 1/2" holes at 7132 WSO  
6-5/8" - Perforated liner 7148-7270

Was the well directionally drilled? Yes Electrical Log Depths 7270' (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 64, Sec. 34, T. 3N, R. 16W, S.B. B. & M.  
Date August 19, 19 74 Signed P. S. Magruder, Jr.  
P. O. Box 54790, Terminal Annex P. S. Magruder, Jr.  
Los Angeles, California 90054 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  
1974

4-16 Well drilled by Camay Drilling Company, Contractor, using Rig #8. All measurements taken from top of kelly bushing which was 15' above ground. Spudded 17½" hole at 2:00 AM, 4-16-74, and drilled to 483'. Down three hours for pump repair.

4-17 Drilled 17½" hole to 814'. SWECO solid separator used to T.D. Mud: 70#, 80 sec., 15 cc., 8% solids.

TO CEMENT 13-3/8" SURFACE CASING: Ran 20 joints, plus one pup or 793.64' of 13-3/8", 48#, K-55, R-3, Buttress thread new seamless casing and cemented same at 791' with 592 cu. ft. of 94#/cu. ft. slurry, consisting of 288 sacks of Class "G" cement and 541# of A-2 lodense and 100 sacks of Class "G" cement mixed with 2% calcium chloride. Used 25% excess cement. Circulated one hour prior to cementing. Preceded cement with 100 cu. ft. of water and displaced with 704 cu. ft. (1% excess) to bump one top rubber plug under 1200 psi pressure at 11:00 PM. Full circulation throughout job with estimated 3 sacks cement to surface. Forty-five minutes mixing and displacing cement to place with Byron-Jackson equipment.

CASING DETAIL:

All 20 joints or 793.64', 13-3/8" fitted on bottom with cement guide shoe and with one centralizer at 764'. Shoe and bottom 3 joints treated with Baker LOK.

IW 64 History (Continued)

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1974

- 4-18 Cut and recovered 13-3/8" casing, installed Shaffer 13", 5000# casinghead and tested same Ok with 3500 psi for 15 minutes. Installed double Shaffer and GK Hydrill.
- 4-19 Completed installation of B.O.P. and tested same Ok with 1000 psi for 15 minutes. Approved by Larry Bright of DIVISION OF OIL AND GAS.  
Drilled out cement and shoe and drilled 11" hole to 968'.  
Mud: 65#, 38 sec., 21 cc., 3% solids.
- 4-20 Drilled 11" hole to 1408'. Ran Dyna-Dril #1 and drilled 11" hole to 1431'.  
Mud: 64#, 38 sec., 13 cc., 3% solids.
- 4-21 Dyna-Dril #1 & #2 to 1764'.  
Mud: 67#, 40 sec., 14 cc., 6% solids.
- 4-22 Reamed 1408' to 1764' and directionally drilled 11" hole to 2292'.  
Mud: 65#, 38 sec., 16 cc., 5% solids.
- 4-23 Directionally drilled 11" hole to 2837'.  
Mud: 70#, 41 sec., 11 cc., 12% solids. SWECO unit down 18 hours.
- 4-24 Directionally drilled 11" hole to 3495'.  
Mud: 70#, 43 sec., 10 cc., 10% solids.
- 4-25 Directionally drilled 11" hole to 3986'.  
Mud: 70#, 36 sec., 10 cc., 8% solids.
- 4-26 Reamed 3922' to 3986' and Dyna-Dril #3, 11" hole to 4099'.  
Mud: 66#, 35 sec., 10.4 cc., 6% solids.
- 4-27 Reamed 3986' to 4099' and directionally drilled 11" hole to 4507'.  
Mud: 66#, 39 sec., 11 cc., 6% solids.
- 4-28 Reamed 4470' to 4507' and directionally drilled 11" hole to 4940'.  
Mud: 68#, 37 sec., 8.2 cc., 7% solids.
- 4-29 Directionally drilled 11" hole to 5298'.  
Mud: 68#, 38 sec., 7.8 cc., 8% solids.

IW 64 History (Continued)

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1974

- 4-30 Directionally drilled 11" hole to 5811'.  
Mud: 69#, 50 sec., 7.6 cc., 11% solids.
- 5-1 Measured out of hole at 5943', Ok. Directionally drilled 11" hole to 6137'. Worked through tight hole at 4620' and reamed 5850-5922' on bit change.  
Mud: 73#, 46 sec., 8 cc., 13% solids. SWECO unit down 13 hrs.
- 5-2 Directionally drilled 11" hole to 6460'.  
Mud: 69#, 43 sec., 19 cc., 12% solids.
- 5-3 Directionally drilled 11" hole to 6678'.  
Mud: 67#, 51 sec., 8 cc., 10% solids.
- 5-4 Directionally drilled 11" hole to 6941'. Ream 6890-6922'.  
Mud: 69#, 48 sec., 7.8 cc., 8% solids.
- 5-5 Directionally drilled 11" hole to 7148' and 9-7/8" hole to 7255'.  
Mud: 69#, 52 sec., 7.6 cc., 9% solids.
- 5-6 Directionally drilled 9-7/8" hole to 7270, TOTAL DEPTH.  
Mud: 69#, 52 sec., 7.6 cc., 9% solids.  
Ran Welex Induction Electric log and recorded from 7269' to 793'.  
Ran Welex Compensated Density-Gamma log and recorded from 7270-6700' and Caliper log from 7270' to 793'.  
Ran Welex Sidewall Neutron log and same stuck at 6830'.
- 5-7 Could not work line free with Welex unit. Cut line and stripped over to 2790' when sheave sling parted which then parted wireline. Pulled 1196' and found wireline. Secured same to Welex truck and pulled estimated 1300' of wireline when same parted. Ran Midway 9" stop spear to 4743' and worked same. Pulled to 4028' and pipe stuck. Worked stuck pipe and pulled to 3865'. Hole took about 35 bbls. of mud.
- 5-8 Recovered spear and massive ball of wireline. Reran spear to 3784', no recovery. Made two additional runs recovering 20' and 30' of wireline pieces. Ran one joint of 9-1/2" O.D. H-90 washpipe with 9-1/2" O.D. washover shoe with 7 evenly spaced inside prongs 6" & 12" above bottom of shoe and cleaned out to 3915'.  
Mud: 69#, 43 sec., 8 cc., 10% solids.

IW 64 History (Continued)

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1974

- 5-9 Recovered 3'8" wireline core. Reran wash pipe and cleaned out from 3915' to 4761'. Recovered 4' of wireline core in two runs. Mud: 70#, 38 sec., 8.2 cc., 14% solids.
- 5-10 Ran wash pipe to 4947'. Worked past tight place at 4825' and recovered 2'8" of wireline core. Revamped shoe to have two prongs 6" above bottom. Reran wash pipe and pushed wire 4853-4947' and clean out to 5599'. Mud: 72#, 46 sec., 7.4 cc., 11% solids.
- 5-11 Recovered 8'8" of wireline core. Rerun wash pipe to 6373' and recovered 2'8" of wireline core. Mud 71#, 47 sec., 7.4 cc., 9% solids.
- 5-12 Reran wash pipe to 7148' and recovered 9' of wireline core. Ran 8-1/2" wash pipe and shoe to 7143' and found shoe plugged. Mud 71#, 65 sec., 7.4 cc., 15% solids.
- 5-13 Pulled and found jars and wash pipe plugged with 5' of wireline core. Reran wash pipe to 7237' and workover fish to 7270'. No recovery of wireline. Ran 11" bit to 3800' where same stopped. Spot ream and work pipe to 7089'. Mud: 71#, 61 sec., 7.2 cc., 15% solids.
- 5-14 Clean out to 7148' with 11" bit. Ran 9-7/8" bit and clean out 7148' to 7270'. Ran Welex Sidewall Neutron log, Compensated Density log and Acoustic Velocity log and recorded from 7223' (47' off bottom) to 6700'. Mud: 70#, 38 sec., 7.0 cc., 8% solids.
- 5-15 Ran 9-7/8" bit and cleaned out to 7270'.
- &
- 5-16 JOHNSTON FORMATION TEST OF INTERVAL 7152-7270': Ran Johnston tester with MFE tool on 5" drill pipe with 1000' of water cushion. Set dual sidewall packers at 7145' and 7152' with tail to 7270'. Opened tool at 6:40 PM on 1/8" surface bean with immediate increasing blow. Gas to surface in 20 minutes with 1200 psi flow pressure. Shut-in at surface at 7:15 PM to hook up to Company withdrawal line. Reopened flow at 9:20 PM 1325 psi flow pressure on 24/64 bean. Water cushion to surface at 9:50 PM.

1974

5-15 & 5-16 Contd.	<u>FLOW DATA</u>			<u>FLOW</u>
	<u>TIME</u>	<u>BEAN</u>	<u>M<sup>2</sup>CF/D RATE</u>	<u>PRESS (PSIG)</u>
	11:00 PM 5/15	24/64	1.9	1320
	12:00 Mid	32/64	3.4	1200
	1:00 AM 5/16	40/64	6.8	1250
	2:00 AM	40/64	7.0	1275
	3:00 AM	40/64	7.8	1275
	4:00 AM	40/64	6.1	1275
	5:00 AM	40/64	6.1	1275

Total gas produced, 1,525,000 C.F.

PRESSURE RECORDER DATA

	<u>DEPTH</u>		
	<u>7137 (INSIDE)</u>	<u>7155 (OUTSIDE)</u>	<u>7265 (OUTSIDE)</u>
INITIAL HYDRO, PSIG	3612	Unreadable due to fishing Operations	
INITIAL FLOW, PSIG	1040-1380		
INITIAL SHUT-IN, PSIG	2241		
FINAL SHUT-IN, PSIG	2556 and building		

At 5:00 AM, attempted to close tool and found packer or string stuck. Pulled 250,000# but jars would not work or tool would not close. Pressure rose to 1800 psi and annulus commenced to boil, indicating leak in drill pipe. Closed pipe rams and hooked well to Company flow line at 7:00 AM, 5/16/74. At 8:00 AM, well flowing at 1350 psig at 8.2 M<sup>2</sup>CF/D rate. Dropped bar which failed to open backscuttle valve. Rigged up Dowell and pressured drill pipe to 3700 psig when pump out disc sheared and well commenced to circulate. Mud heavily gas cut. Worked pipe without success. Increased mud weight in stages to 74#/CF with returns gas cut at 67-68#/CF. Hole would stand full 30 minutes and then gas would appear in annulus. Closed rams and pumped 75 barrels of mud under 1000 psig maximum pressure. All gas shows ceased.

5-17 Ran McCullough free point and backed off drill pipe at 1904'. Ran  
thru Brown Oil Tool jars and jarred on fish 10 hours but same would not  
5-19 come free. Ran Dia Log free point and backed off fish at 2200'.  
Engaged fish and jarred for 9 hours. Spotted 35 barrels of oil.  
Attempted backoff shot at 3300' and pipe came free. Recovered all  
but 136' of Johnston test tools and packers.

1974

5-20 Ran series of overshots and grapples with jars and accelerator  
thru sub and alternately jarred and washed over with 8-5/8" O.D. or  
5-31 7-5/8" O.D. wash pipe with various types of washover shoes.  
Obtained pieces of rubber, aluminum from packers and pieces of  
wireline over shaker when washing over. On 5-27-74, recovered  
27' of fish leaving log in hole with top at 7164'. Washed over  
fish to 7252'. Ran Brown overshot with 5-3/4" grapple, bumper  
sub, jars and accelerator sub and took hold of fish. Jarred  
for 4 hours with 300,000#. Fish would not move. Released and  
pulled. Ran 3 joints of 7-5/8" washpipe with flat bottom tung-  
sten carbide washover shoe and went over fish to 7252'. Washed  
over fish to 7270'. Ran Brown Oil Tool 8-5/8" overshot with  
5-3/4" grapple and pack-off, bumper sub, jars and accelerator.  
Took hold of fish and same came free. Recovered entire fish.

6-1 Measured in hole and conditioned mud for casing. Ran 172 joints  
& or 7151.92' of 8-5/8", 36#, K-55 & N-80, R3, buttress thread new  
6-2 seamless blank casing and cemented same at 7148' as follows:

SHOE JOB: Pumped in 595 cu. ft. of 2% Lodense A mixed to  
94#/cu. ft. slurry followed by 150 cu. ft. of Class "G" cement  
mixed to 116#/cu. ft. slurry. Preceded cement with 200 cu. ft.  
of fresh water and displaced with 2475 cu. ft. of mud. Did not  
bump top plug. Forty-five minutes mixing and pumping cement to  
place at 10:25 PM, 6-1-74, under 1000 psi final pressure. Good  
circulation throughout job. Used two Byron-Jackson power trucks.

STAGE COLLAR AT 5595: Dropped opening plug and opened Halli-  
burton DV collar at 5595' and circulated mud for 4-1/2 hours. No  
cement to surface. Pumped in 925 cu. ft. of 2% Lodense A mixed  
to 116#/cu. ft. slurry. Displaced closing plug with 2025 cu. ft.  
of mud to close DV collar under 2500 psi. Bled off and repressured  
to 2500 psi. Fifty-five minutes mixing and displacing cement to  
place at 4:10 AM, June 2, with two Byron-Jackson power trucks.  
Good circulation throughout job.

STAGE COLLAR AT 3337': Dropped opening plug and opened Halli-  
burton DV collar at 3337' and circulated for 6-1/2 hours with no  
returns of cement or water. Pumped in 3165 cu. ft. of 2% Lodense  
A mixed to 94#/cu. ft. slurry followed by 150 cu. ft. of Class  
"G" cement mixed to 116#/cu. ft. slurry. Displaced closing plug  
with 1188 cu. ft. of drilling fluid to close DV collar under 2500

1974

6-1       psi. Bled off and repressured to 2500 psi. Estimate 600 cu. ft.  
    &       of cement returns to surface. One hour 23 minutes mixing and  
6-2       displacing cement to place at 1:24 PM, June 2, using two Byron-  
Contd.     Jackson power trucks.

CASING DETAIL:

Bottom 33 joints or 1392' (7148-5756) N-80 fitted on bottom with  
Davis-Lynch differential fill-up shoe  
& on top of bottom joint with Davis-  
Lynch fill-up collar. Also fitted on  
top and bottom of bottom joint with  
turbolizers with metal petal cement  
basket in middle of bottom joint. Tur-  
bolizers on each of bottom 8 collars.  
Applied Baker-Lok on shoe, collar,  
bottom 3 joints and each DV collar.

Next 4 joints or       164' (5756-5592) K-55 fitted from 5595-  
5592' with Halliburton DV collar.  
Turbolizer above collar and centra-  
lizer below collar.

Next 55 joints or     2255' (5592-3337) K-55 fitted from 3340-  
3337' with Halliburton DV collar.  
Metal petal cement basket below col-  
lar with turbolizer above collar and  
centralizer below basket.

Top 80 joints or       3341' (3337-sfc) K-55 fitted at 3177' with  
metal petal cement basket with centra-  
lizer below and turbolizer above.

Total 172 joints     7152' (7148-sfc)

Cut and recovered 24' of 8-5/8" casing, 20' of which was below  
K.B.

6-3       Cut off 13-3/8" head and realigned same to accommodate 8-5/8"  
slips and pack-off. Rewelded 13-3/8" head and tested to 3500 psi  
Ok. Installed secondary seal and Gulfco 10" 5000# tubing head  
with 7-5/8" bit guide. Tested secondary seal and tubing head  
with 3500 psi for 40 minutes Ok. Reinstalled B.O.P.

1974

6-4 Tested B.O.P. with 1000 psi Ok. Measured in hole with 7-5/8" bit and casing scraper and drilled out DV collar plug at 3337'. Closed rams and tested collar Ok with 1700 psi for 15 minutes. Drilled out DV collar at 5592' and tested Ok as above. Drilled out cement to 7138'. Ran Welex MSG log 7138-400'. Ran Welex 4-1/2" O.D. carrier and shot four 1/2" jet holes at 7133'.

6-5 Closed pipe rams and holes at 7133', took fluid under 1000 psi.

TO SQUEEZE HOLES IN 8-5/8" CASING AT 7133' WITH CEMENT: Ran Johnston Positrieve cement tool on 5", 19.5# drill pipe. Set tool at 6997' and obtained breakdown at 2500 psi and holes took fluid at 25 cu. ft./min. rate under 2000 psi. Mixed 200 sacks Class "G" cement with 2% calcium chloride to 118#/c.f. slurry. Preceded cement with 20 cu. ft. water and displaced 300 cu. ft. of mud. Closed tool and displaced with additional 420 cu. ft. of mud to obtain a running squeeze pressure of 3250 psi. Bled back 10 cu. ft. for total displacement of 710 cu. ft. Estimate 155 sacks away at 6:35 AM. Fifty-seven minutes mixing and displacing cement to place. Used Dowell bulk cement and power.

Pulled drill pipe wet and recovered 12 joints of cement plugged drill pipe.

6-6 After standing cemented 10 hours, located hard cement at 7001' and drilled out to 7138' with 7-5/8" bit and 8-5/8" casing scraper.

TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7132': Ran Johnston combination gun and tester on dry 5" 19.5# drill pipe. Shot four 1/2" jet holes at 7132'. Set packer at 7100' with tail to 7114'. Opened tool at 1:55 PM for 1 hour test. No blow. Pulled and found fluid 300' from surface. Inadvertently opened tool going in hole. No test. Ran new tester and set packer at 7100' with tail to 7118'. Opened tool at 10:02 PM for 1 hour test. Puff blow, then dead balance of test. Recovered 3' of drilling fluid. Chart Ok. Test witnessed and approved by Peter Wygle of Division of Oil and Gas.

6-7 Displaced fluid in hole with lease salt water treated with DMS and polymer. Drilled out cement 7138-7143' and shoe at 7148' and cleaned out to 7270' with 7-5/8" bit.

1974

- 6-8 Ran Grant hole opener and opened 9-7/8" hole to 14" from 7148' to 7260'.
- 6-9 Reopened 9-7/8" hole to 14" from 7148-7264'. Ran 7-5/8" bit and cleaned out to 7270'.
- 6-10 Ran 6-5/8" liner with gravel packing tools and liner hanger hung up at 5583' but was worked through and liner set on bottom at 7270' with top at 7105'. Could not set lead seal which was probably damaged working past 3583'. Attempted to jar liner loose to no avail. Ran 7-5/8" bit and 8-5/8" casing scraper and worked past DV collar at 3337' and 5592' and cleaned out to 7103'.
- 6-11 Set Burns 8-5/8" x 6-5/8" x 3' lead seal bottom hole packer at 7105'. Top of liner now at 7102'. 13-3/8" casing head repositioned weld tested by Mobile Inspection using magnetic particle method. Approved as Ok. Test witnessed by R. D. Geddes and E. A. Olson.
- Ran B & W gravel packing tools and commenced packing liner with Layne & Bowler 12-20 mesh (.030"-.065") washed gravel at 3:30 PM and by 9:30 PM had pumped in 105 cu. ft. of gravel. Closed port collar and tested same closed.
- 6-12 Ran B & W washer and washed liner from 7270-7148'. Reran gravel packing tools and could not displace any gravel. Tested port collar closed. Theoretical fill is 102 cu. ft. of gravel.

LINER DETAIL:

Bottom 4 joints or 123.09' (7270-7147) is 6-5/8", 24#, 8rd. ST&C with couplings turned to 7.090 O.D., Layne & Bowler "Gru-V-Kut", 24 rows, 72-2-5/8" long by 1/4" wide slots per foot with stainless steel wire weld 0.018" gauge screen (7.062" O.D.) fitted on bottom with bull nosed shoe.

Next 1 joint or 30.28' (7147-7117) is 6-5/8" 24#, 8rd. ST&C with turned down couplings blank with wire weld screen tattle tale from 7126-7124.

1974

6-12 LINER DETAIL (CONTINUED):

Next 12.2' (7177-7105) is B&W 8-5/8" x 6-5/8" lead seal liner hanger with hold down slips and port collar with ports at 7115'.

Next 3' (7105-7102) is Burns 8-5/8" x 6-5/8" lead seal bottom hole packer.

Total 5 joints or 168.57'

6-13 Ran Baker 49A Model C retrievable bridge plug and set same at 7003'. Tested Ok with 1125 psi for 15 minutes. Layed down tubing and 5" drill pipe.

6-14 Flow testing IW 63. Rig on standby at 3:00 PM, 6-14-74. Installed tree and RIG RELEASED at 11:00 PM, 6-14-74.

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATIONDIVISION OF OIL AND GAS  
RECEIVED

## DIVISION OF OIL AND GAS

AUG 15 1975

## History of Oil or Gas Well

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

Well No. IW #64, Sec. 34, T. 3 N., R. 16 W., S.B. B. & M.

Date 8-1-75, 19\_\_\_\_ Signed P. S. Magruder, Jr.  
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)

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

- 7-24-75 Moved in and rigged up California Production Service rig, pump, and shaker tank to kill well and pull tubing.
- 7-25-75 Using Byron Jackson truck, killed well with 464 barrels of 81#/cu.ft. calcium chloride drilling fluid. Circulated 2 1/2 hours with rig pump. 81#/cu.ft. returns. Removed Christmas tree and installed B.O.P.E. Using H. & H. pump, tested with fresh water as follows: Blind rams 2300 psi; pipe rams 2650 psi; hydril 2450 psi. Each test for 20 minutes -- OK. Using nitrogen, tested pipe rams at 2450 psi; blind rams 2400 psi; hydril 2400 psi. Each test 20 minutes -- OK. Division of Oil and Gas declined to witness tests. Attempted to release packer.
- 7-26-75 Continued to try and release packer with no success. Using McCullough Services, cut off 2 7/8" tubing at 7062' (chemical cut, wire line measurement). Pulled and measured tubing. Laid down sliding sleeve, two landing nipples, and section of cut joint tubing (11.52'). Ran 30 doubles in hole.
- 7-27-75 Rig idle.
- 7-28-75 Pulled 30 doubles. Made up one joint 7" O.D. wash pipe with drill collars and subs. Ran in hole on 2 7/8" tubing. Tagged fill at 7078'. Cleaned out to 7082' (tubing measurement, top of packer). Pulled out of hole with wash pipe. Ran back in with socket, drill collars and subs. Found top of fish at 7062' (2 7/8" tubing). Worked over same and jarred packer loose. Pulled up 11 stands.
- 7-29-75 Filled hole, nine barrels. Finished pulling out of hole. Did not have fish. Ran back in and worked over fish at 300'. Pulled out of hole with same. (19' 2 7/8" tubing, Brown H-1 RSP 8 5/8" hydraulic packer, Baker No-Go nipple, one joint 2 7/8" tubing, and bevel collar). Found Camco circulating plug and Otis pulling tool stuck in No-Go nipple. Made up 5 5/8" bit and 6 5/8" casing scraper, ran in hole on 2 7/8" tubing. Unable to get past 7121'. Pulled up above top of liner hanger. Shut job down.

History of Well I.W. #64  
August 1, 1975

PAGE 2.

- 7-30-75 Filled hole, 45 barrels. Using power swivel, cleaned out to 7263' (bottom 7270'). Circulated two hours. Pulled out of hole with bit and scraper. Using McCullough Services, set 8 5/8" 36# Baker Model "D" packer at 7088' (top of packer). Tagged top of liner at 7107' wire line measurements. Ran production string in hole, (tubing detail attached) landed with 15,000# weight packer. All tubing and doughnut hydrotested to 4000 psi.
- 7-31-75 Removed B.O.P.E. and reinstated Christmas tree. Tested doughnut, A.P.I. ring under 5000 psi for 20 minutes -- OK. Tested upper tree assembly. Wing valve South side dripping. Pressure drop approximately 100 psi per minute. Displaced 81# per cubic foot drilling fluid in hole with 400 barrels of lease salt water. Rigged down to move.
- 8-1-75 Loaded out equipment. Released rig at 10:00 A.M.

DIVISION OF OIL AND GAS  
 RECEIVED

DEC 8 1975

## DIVISION OF OIL AND GAS

### History of Oil or Gas Well

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

Well No. I.W.-#64, Sec. 34, T. 3N, R. 16W, S.B. B. & M.

Date November 24, 1975, 19

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)

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

NOT REQUIRED TO BE SUBMITTED TO DIVISION OF OIL & GAS

PROGRAM: Pull Tubing. Check Leaking Backer or Seal Nipples.

11-15-75

Rigged up California Production Service rig M-22 and H. & H. pump with shaker tank. Using Halliburton pump truck, killed well with 84#/cu.ft. brine-polymer workover fluid. Gas cut returns after pumping 397 barrels. Fluid loss 230 barrels. Spotted 30-barrel 84#/cu.ft. 50-viscosity pill on bottom and closed well in. Shut job down at 7:00 P.M.

11-16-75

Rig and crew idle.

11-17-75

Filled hole - 4 barrels. Circulated 3-1/2 hours, 83#/cu.ft. returns. No fluid loss. Installed plug in doughnut and removed Christmas tree. Installed Class III B.O.P.E. and choke manifold. Using H. & H. pump, tested with clear water, as follows:

Blind rams @ 2400 psi	}	each test for 20 minutes - O.K.
Pipe rams @ 2800 psi		
Hydril @ 2000 psi		

Tested Hydril with nitrogen at 2100 psi for 20 minutes - O.K. Unable to continued test because of leak in valve on B.O.P.E. kill line. Removed plug from doughnut and installed pup joint with Hydril safety valve. Shut job down at 9:00 P.M.

11-18-75

Filled hole - 2 barrels. Changed valve on B.O.P.E. kill line. Using nitrogen, tested B.O.P.E. as follows:

Hydril @ 2000 psi	}	each test for 20 minutes - O.K.
Pipe rams @ 2200 psi		
Blind rams @ 2500 psi		

Pulled out of hole with tubing. Put on new seal assembly with latch and locator sub. Installed Baker RZR blanking plug in No-Go nipple. Hydro-tested plug and one joint under 4000 psi. Ran in hole with tubing, landed

- 11-18-75 tubing on packer with 3000# weight. Pulled 10,000# against latch. All tubing and doughnut Hydrottested to 4000 psi. Shut job down at 11:00 P.M. Upon stabbing into packer, found that tubing went 10' deeper than as pulled this morning, indicating that seal nipples had not previously been stabbed into seal bore of the packer.
- 11-19-75 Made up locking screws on doughnut. Using Hydrottest, tested packer and casing under 2000 psi for 20 minutes - O.K. Using Archer-Reed, removed plug from No-Go nipple. Installed plug in doughnut and removed B.O.P.E. Reinstalled Christmas tree, tested between upper and lower seals on doughnut at 4500 psi and tested Christmas tree at 4500 psi - each test for 20 minutes - O.K. Removed plug from doughnut and displaced workover fluid in hole with 450 barrels of lease salt water. Shut job down at 1:00 A.M. (11-20-75).
- 11-20-75 Loaded out tools and pump lines. Rigged down. Released California Production Service rig at 10:30 A.M.

# SURVEY RECORD

3402±SOUTH & 637±EAST FROM STATION # 84  
 JOB NO 548 ONE DATE 6-15-1974

GROUND... 1674  
 K.B... 15  
 ELEV... 1689

	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS		
						NORTH	SOUTH	EAST	WEST			
1	317	0.30	317	207	N 85 W		24					
2	371	0.45	570	333	S 26 W			2	75		2	76
3	814	1.15	813	530	S 59 W			5	48		4	22
4	897	2.30	896	362	S 86 W			5	73		8	76
5	1000	4.30	999	809	S 82 W			6	86		12	37
6	1129	5.00	1128	1124	S 70 W			10	69		20	38
7	1221	6.30	1219	1041	S 71 W			14	08		30	95
8	1345	8.00	1342	1726	S 69 W			20	27		40	80
9	1408	8.30	1404	931	S 64 W			24	36		56	91
10	1451	7.30	1447	561	S 74 W			25	91		65	28
11	1514	5.00	1509	549	S 88 W			26	10		70	68
12	1576	2.30	1571	270	S N 24 W			23	63		77	17
13	1606	2.15	1601	118	N 11 E			22	47		77	26
14	1669	4.30	1664	494	N 69 E			20	70		72	03
15	1697	5.45	1692	281	N 76 E			19	02		69	69
16	1729	7.45	1724	432	N 78 E			19	12		65	47
17	1866	12.15	1858	2907	N 88 E			18	11		36	42
18	1991	16.15	1978	3498	N 88 E			16	89		36	46
19	2081	19.15	2063	29 67	N 87 E			15	34		17	
20	2251	19.30	2223	5675	N 88 E			13	36		84	89
21	2406	19.30	2369	5174	N 89 E			12	46		136	62
22	2593	19.15	2546	6165	N 89 E			11	38		198	26
23	2761	18.30	2705	5331	EAST			11	38		251	57
24	2965	18.00	2899	6304	EAST			11	38		314	61
25	3149	17.15	3075	5456	S 88 E			13	28		369	14
26	3392	16.00	3308	6698	S 86 E			17	95		435	96
27	3520	15.45	3431	3475	S 86 E			20	37		470	63
28	3708	14.45	3613	4787	S 84 E			23	71		518	38
29	3986	13.30	3883	6490	S 84 E			30	49		582	92
30	4017	13.30	3914	724	N 88 E			30	24		590	16
31	4048	14.00	3944	750	N 81 E			29	07		597	57
32	4146	16.30	4038	2783	N 73 E			20	94		624	18

# SURVEY RECORD

JOB NO. 548 T.W.O. DATE 6-15-1974

	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS
						NORTH	SOUTH	EAST	WEST	
33	4364	17.00	4246	63	N 72 E	11		884	80	
34	4507	16.30	4383	40	N 72 E		1 24	723	42	
35	4738	17.00	4604	67	N 73 E	31		788	02	
36	5080	16.15	4932	95	N 74 E	57		880	01	
37	5440	15.00	5280	70	N 75 E	81		970	02	
38	5781	14.30	5610	84	N 74 E	105		1052	09	
39	5922	14.15	5747	50	N 74 E	114		1085	46	
40	6083	18.45	5899	95	N 74 E	128		1135	20	
41	6176	21.45	5986	33	N 73 E	139		1168	15	
42	6460	21.15	6251	102	N 72 E	170		1266	04	
43	6678	20.00	6455	87	N 72 E	193		1336	95	
M+P	6808	16.00	6580	84	N 68 E	207		1370	17	
S+4	7148	16.00	6907	67	N 68 E	242		1457	07	
S-8	7220	14.30	6977	38	N 72 E	247		1474	22	
mn	7270	14.30	7025	79	N 72 E	251		1486	13	
CLOSURE 1508 • N 80.23 E										

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION

## DIVISION OF OIL AND GAS

## Report on Operations

No. T 275-352

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

Santa Paula, Calif.  
 Nov. 5, 1975

DEAR SIR:

Operations at well No. IW 64, API No. 037-21453, Sec. 34, T. 3N, R. 16W,  
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed  
 on 6/7/74. Mr. P. R. Wygle, representative of the supervisor was  
 present from 0100 to 0300. There were also present C. Coats, contract foreman

Present condition of well: 13 3/8" cem. 783'; 8 5/8" cem. 7148' c.p. 3337', 5595', & 7133',  
perf. 7132' WSO. T.D. 7270'.

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 7132' IS APPROVED.

b

HAROLD W. BERTHOLF  
 JOHN F. MATTHEWS, JR.  
 State Oil and Gas Supervisor

By H.W. Pitman Deputy

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 274-148

Mr. P. S. Macruder, Jr.  
Pacific Lighting Service Co.  
720 W. 8th St.  
Los Angeles, Calif. 90017

Santa Paula, Calif.  
April 23, 1974

DEAR SIR:

Operations at well No. IW 64, API No. 037-21453, Sec. 34, T. 3N, R. 16W,  
S.B. B & M. Aliso Canyon Field, in Los Angeles County, were witnessed  
on April 19, 1974. Mr. L. Bright, representative of the supervisor was  
present from 1400 to 1600. There were also present Mr. Clyde Coates, drilling  
foreman

Present condition of well: 13 3/8" cem. 783'. T.D. 814'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

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

By W.C.P. Rogers Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 274-171

3606 WELL

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

Santa Paula, Calif.  
April 15, 1974

DEAR SIR:

(037-21453)

Your Proposal to drill Well No. IM 64  
Section 34 T 3N R 16W S.B. B. & M. Aliso Canyon Field, Los Angeles County,  
dated 3/21/74, received 4/10/74, 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 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 a test of the 8 5/8" water shut-off above the seaman zone.

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

Blanket Bond  
ALL:b

*Phoon*  
BOPE 4/17/74 (1130) tested blank 1000'  
Told to continue testing  
If OOG don't show - start drilling  
DOG to make inspection later

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

By DDP Pitzius, Deputy

**DIVISION OF OIL AND GAS**  
**Notice of Intention to Drill New Well**  
This notice and surety bond must be filed before drilling begins

2 RECEIVED

037-21453

APR 10 10 35 AM '74

Los Angeles Calif.

March 21, 1974  
DIVISION OF OIL AND GAS  
LONG BEACH, CA.

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 64, Sec. 34, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

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

APR 12 1974

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  
(Direction) (Direction)

at right angles to said line from the \_\_\_\_\_ corner of section \_\_\_\_\_

From Station 84 3450' south and 650' east, approximately.

Elevation of ground above sea level 1674 feet USGS datum.

All depth measurements taken from top of 689 Kelly busing 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#	K-55 Smls	Sfc	800' ±	800' ±
8 5/8	36#	K & N Smls	Sfc	7200' ±	7200' ± & 3000'
6 5/8	24#&28#	K-55 Smls	7100'	7500' ±	Perforated liner

Intended zone(s) of completion: Seson 7200' - 7500' Estimated total depth 7500'  
(Name) (Depth, top and bottom)

VIAP	MAP BOOK	GRIDS	CODES	FORMS
250	4-20-74	✓	BB	✓ ✓

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

Address P. O. Box 54790, Terminal Annex Pacific Lighting Service Co.

Los Angeles, Ca 90051

By P.S. Magruder, Jr.  
(Name of Operator)  
P. S. Magruder, Jr.

Telephone Number (213) 689-3561

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