

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

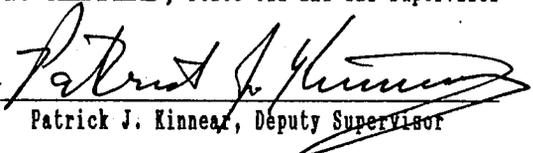
Your request, dated February 13, 1990, proposing to change the designation of wells in Sec. 34, T. 3N, R. 16W, SB B.&M., Aliso Canyon field Los Angeles County, District No. 2, has been received.

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. Kinneer, Deputy Supervisor

DIVISION OF OIL AND GAS

JAN 26 1978

WELL SUMMARY REPORT
SUBMIT IN DUPLICATE

037-21278

SANTA PAULA, CALIFORNIA

Operator SOUTHERN CALIFORNIA GAS COMPANY, Well No. I.W. #63, API No. 037-21278

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

Location From Station 84 South 3419' and East 637'
(Give surface location from property or section corner, or street center line and/or Lambert coordinates)

Elevation of ground above sea level 1674 feet.

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, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date January 20, 1978

Signed P. S. Magruder, Jr.

G. C. ABRAHAMSON
(Engineer or Geologist)

Title Agent

Commenced drilling July 10, 1977

GEOLOGICAL MARKERS

DEPTH

Completed drilling November 1, 1977

Top Sesnon S₄ Marker 7170'

Total depth (1st hole) 7390' (2nd) 7350' (3rd)

Present effective depth 7343'

Junk None in present hole

Formation and 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
		<u>Gas</u>	<u>Storage</u>	<u>Well</u>	

CASING RECORD (Present Hole)

Size of Casing (A. P. I.)	Depth of Shoe	Top of Casing	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Numbers of Sacks or Cubic Feet of Cement	Depth of Cementing it through perforations
<u>13 3/8"</u>	<u>699'</u>	<u>Surface</u>	<u>48#</u>	<u>H-40</u>	<u>New</u>	<u>17 1/2"</u>	<u>534</u>	<u>-</u>
<u>8 5/8"</u>	<u>7190'</u>	<u>Surface</u>	<u>36#</u>	<u>K-55 and N-80</u>	<u>New</u>	<u>11"</u>	<u>600,100</u>	<u>1919'</u>
<u>7"</u>	<u>7187'</u>	<u>6904'</u>	<u>26#</u>	<u>N-80</u>	<u>New</u>	<u>-</u>	<u>130 cu.ft.</u>	<u>-</u>

PERFORATED CASING

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

331' 5" wire-wrapped 10-mesh landed 7343', perforated 7343'-7180'.

7" 26# N-80 landed on packer at 6899'

Was the well directionally drilled? Yes If yes, show coordinates at total depth 731' N and 923' E

Electrical log depths 7350' Other surveys

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History of Oil or Gas Well

SANTA PAULA, CALIFORNIA

OPERATOR Southern California Gas Company Aliso Canyon

Well No. I. W. #63 , Sec. 34 , T. 3N , R. 16W , S. B. B. & M.

Date December 9 , 19 77 Signed P. S. Magruder, Jr.

Los Angeles P. S. Magruder, Jr.
P.O. Box 3249 Terminal Annex, Ca., 90051 Title Agent
 (Address) (Telephone Number) (213) 689-3561 (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	
11-13-76	Pumped 83-1/2# mud 39-40 viscosity in well. Used displacement + 20 barrels to receive fluid to surface in casing. Started pumping at 8:00 A.M finished at 3:30 P.M. Mud returns were 74# (in tank 79#).
11-14-76	Mixed 400 barrels of 82-1/2# in Baker tank. Started pumping at 7:00 A.M. Added 140 barrels of 86# per cu.ft. water to Baker tank. Received 81-1/2# returns at 1:25 P.M. Circulated until 2:00 P.M. Returns 81-1/2#.
7-8-77	Moving CPS D-6 rig from Porter #26 to I.W. #63.
7-9-77	Finished moving California Production Service Rig #D-6 from Porter #26 to I.W. #63 and rigged up. Associated Services tested primary casing seal in casing head and seal flange to 3500 psi.
7-10-77	Finished rigging up. Rigged up choke manifold and circulated out old hole fluid with new polymer 86# drilling fluid. Set in B.O.P.E. and flanged up.
7-11-77	Using H. & H. test pump, tested pipe and blind rams to 4000 psi with water and Hydril bag to 3000 psi. Using NOWSCO Services, tested pipe and blind rams to 4000 psi with nitrogen and Hydril bag to 3000 psi. After testing with nitrogen, opened Hydril and found bag rubber damaged. Changed Hydril rubber and re-tested with water. Attempted to unlatch tubing from Retrieva-"D" packer.
7-12-77	Ran McCullough freepoint and collar locator. Ran 2 1/8" cutter - made chemical cut at 7942'. Pulled and laid down 207 joints seal lock tubing, 18 joints 2 7/8" J-55, and cut off, Baker Model "L" sliding sleeve, Baker Model "F" nipple. Picked up 2 7/8" drill pipe.
7-13-77	Finished picking up 2 7/8" drill pipe. Pulled out of well. Made up Midway 7 5/8" O.D. x 4 1/8" I.D. mill shoe. Ran in well and milled over Baker C-1 safety system at 7063' to remove shield from bottom of safety system.

- 7-14-77 Milled over Baker C-1 safety valve to 7070' with 7 5/8" O.D. x 4 1/8" I.D. mill. Pulled out of well. Ran in with 5 7/16" O.D. x 4 3/4" mill shoe. Milled over 7065'. Pulled out of well. Ran back in with 7 5/8" O.D. x 4 1/8" O.D. mill shoe. Milling over C-1 safety valve.
- 7-15-77 Finished pulling out of hole. Recovered 14.85' of 2 7/8" tubing from cut-off joint above C-1 safety valve. Ran back in well with 7 5/8" O.D. x 4 1/8" I.D. mill shoe. Milled over down to 7067'. Pulled out of well. Ran back in with new mill shoe.
- 7-16-77 Milling over C-1 safety valve to 7068'. Pulled out of well - left 2" x 3 1/4" piece of mill shoe in well. Ran back in well with new 7 5/8" O.D. x 4 1/8" mill, attempted to mill over C-1 safety valve - unable to rotate.
- 7-17-77 Pulled out of well. Ran in well with 5 5/8" O.D. Bowen overshot with 3 5/8" grapple. Ran down to 7068', pulled out of well. No indication of anything inside overshot.
- 7-18-77 Ran in well with 7 5/8" Servco concave mill and two 6 5/8" junk subs. Milled on junk from 7066' to 7070', pulled out of well. Both junk subs were full of small pieces of iron junk. Ran back in well with 5 1/2" O.D. x 4 3/8" I.D. mill shoe and located junk at 7069'. Milled to 7071', but could not mill any deeper and mill shoe was badly worn.
- 7-19-77 Pulled out of well with 5 1/2" O.D. x 4 3/8" mill shoe. Ran back in well with 7 5/8" Servco concave mill and two junk subs. Located junk at 7070' and milled on junk to 7072'. Pulled out of well, recovered several pieces of junk. Mill indicated it was on top of 6 5/8" liner hanger. Running in well with Midway 5 5/8" surge tool to recover iron junk.
- 7-20-77 Finished running in well, with Midway 5 5/8" surge tools. Dropped knock out bar. Pulled out of well. Recovered 10 gallons of small steel cuttings. Reran surge tool. Pulled out of well. Recovered 3 small pieces of junk. Ran back in well with 5 1/2" washover shoe and joint of washover pipe. Washed over tubing fish from 7072' to 7093' top of Retrieva "D" packer. Circulated well clean. Pulling out of well.
- 7-21-77 Finished pulling out of well, with wash, pipe, ran in well with Baash Ross Socket with 2 7/8" slips. Worked over tubing fish at 7072', slips did not hold. Pulled out of well, changed slips in socket, ran back in, latched onto fish, jarred fish loose, pulled out of well. Recovered 25.55' 2 7/8" tubing and seal assembly, total 37.79'. Ran back in well with Baker packer retrieving tool.

- 7-22-77 Finished running in well, with Baker Retrieving tool. Pulled out of well but did not recover packer. Ran in well with 4 1/2 casing spear. Pulled out of well with no recovery. Ran back in well with 2 3/8 tubing stinger and cleaned out inside packer down to 7105'. Pulled out of well. Ran back in well with packer retrieving tool.
- 7-23-77 Worked Baker packer retrieving tool into packer. Pulled out of well. Recovered top sub from packer mandrel. Ran back in well with Midway 4" latch spear - worked down to 7099'. Pulled out of well. . . no recovery. Ran back in well with Baker packer retrieving tool with mill shoe. Pulling out of well.
- 7-24-77 Finished pulling out of well with Baker packer retrieving tool with no recovery. Ran back in well with Midway 3 1/4" spear. Pulled out of well with no recovery. Ran back in well with Servco 5 5/8" x 3" pilot mill. Milled on packer from 7095'.
- 7-25-77 Continue milling on Retrieva "D" packer. Milled to 7098'. Pulled out Servco pilot mill. Ran in with Midway spear - attempted to work spear in Retrieva "D" packer - unable to take a hold of packer. Pulled out. Ran in with Servco 5 11/16" pilot mill and milled to 7099'.
- 7-26-77 Milled on Baker Retrieva "D" packer with Servco 5 21/32" pilot mill to 7101'. Pulled out and changed mill. Picked up four 4 1/16" drill collars. Ran in and milled with #5 pilot mill.
- 7-27-77 Continued milling with #5 Servco 5 21/32" pilot mill on Baker Retrieva-"D" packer at 7101'. Unable to mill. Pulled out. Ran in with 12' 3 1/8" O.D. drill collar with 3 1/8" mill shoe on jars and bumper sub + 4 1/16" drill collars. Cleaned out inside of packer and port subs to 7106'. Unable to clean out any deeper. Pulled out and recovered 13.50' of Retrieva-"D" packer assembly + port subs, including X-over sub and inside mandrel of shear-out safety joint - to of fish at 7112'.
- 7-28-77 Picked up and ran in with 251' of 5" wash pipe and 5 7/16" shoe. Washed over 2 3/8" wire-wrapped liner from 7112' to 7268'. Unable to wash deeper. Pulled out. Ran in with same set-up with 5 3/8" shoe, washed over fish from 7112' to 7262' - would not wash any deeper.

- 7-29-77 Pulled out 5" wash pipe - ran in hole with 4 11/16" outside cutter in 6 5/8" liner. Pulled out and recovered 133.55' of 2 3/8" blank and wire wrapped liner. Fish details: 2.80' shear out safety
30.26' tell tale
31.26' blank
16.44' (4 pups - blank)
31.34' wire wrapped
21.45 wire wrapped cut off
133.55' TOTAL
- Laid down fish and 5" wash pipe. Ran in hole with 5 5/8" junk mill and located top of fish stub at 7248' Circulated bottoms up. Pulled out of hole.
- 7-30-77 Ran in hole with Servco 7 5/8" x 5 5/8" pilot mill and milled 8 5/8" x 6 5/8" Burns liner hanger and 6 5/8" cemented liner from 7072' to 7092' - 21 hours - 20'.
- 7-31-77 Continued milled 6 5/8" cemented liner with Servco 7 5/8" x 5 5/8" pilot mill from 7092' to 7099'. Pulled out, changed mills, picked up two 4 1/4" drill collars. Ran in with #2 mill. Milled from 7099' to 7101'. Six hours down Time repairing mud pump.
- 8-1-77 Milled 6 5/8" liner from 7101' with Servco 7 5/8" x 5 5/8" pilot mill.
- 8-2-77 Pulled out of well and cleaned out junk subs which were full of small steel cuttings. Changed mills and ran in well. Reamed from 7099' to 7123' and milled 6 5/8" liner from 7123' to 7143'.
- 8-3-77 Milled 6 5/8" liner from 7143' to 7164'.
- 8-4-77 Milled 6 5/8" liner to 7166' - drill pipe twisted off. Pulled out of well. Top of fish at 1413'. Made up 5 3/4" Bowen overshot with 4" grapple. Ran in and latched on to fish. Pulled out to twist off and laid down same. Finished pulling out of well and cleaned out junk sub which was full of small steel cuttings. Ran in well to 2115'. Changed out transmission on rig. Finished running in well and milled 6 5/8" liner from 7166' to 7169'.
- 8-5-77 Pulled out of well. Ran back in well with 5 5/8" Servco concave mill. Worked into 6 5/8" liner at 7174' and pushed junk to 7215'. Milled and cleaned out to 7248', top 2 3/8" wire wrapped liner. Circulated hole clean and pulled out of well.
- 8-6-77 Finished pulling out of well with 5 5/8" concave mill. Ran back in well with new Servco 7 5/8" pilot mill. Milled 6 5/8" liner from 7174' to 7189'. Cross head broke D-500 in D-500 mud pump. Pulled 10 stands and secured well.

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- 8-7-77 Rigged down for mud pump repairs - 20 hours. Ran in 101 stands back to bottom. Milled 6 5/8" liner from 7189' to 7192'.
- 8-8-77 Milled 6 5/8" liner from 7192' to 7195' - drill pipe torqued up while milling. Kelly bushing bumped out of rotary table and drill pipe backed off at 792'. Ran in well with 5 3/4" Bowen overshot with 4" grapple and latched on to fish. Pulled to 60,000#, dropped off to 30,000#. Pulled out of well. Drill pipe pulled out of box at 1846'. Ran back in well with overshot - could not get over fish because box on drill pipe swelled out to 5 7/16". Pulled out and ran back in well with two 4 1/8" drill collars and 7 5/8" concave mill. Milled up tool joint.
- 8-9-77 Milled tool joint on drill pipe from 1846' to 1848'. Pulled out of well. Ran in well with 5 3/4" Bowen overshot with 2 7/8" grapple, latched onto fish at 1848'. Pulled to 130,000#, fish pulled free. Pulled out of well. Ran back in well with 7 5/8" x 5 5/8" Servco pilot mill, checked each joint while running in well. Replaced 46 bad joints of drill pipe.
- 8-10-77 Milled 6 5/8" liner from 7195' to 7197'. Pulled out of well. Ran back in well with new 7 5/8" x 5 5/8" Servco pilot mill. Milled 6 5/8" liner from 7197' to 7204'.
- 8-11-77 Milled 6 5/8" liner from 7204' to 7232'. While working drill pipe pulled to 140,000# and drill pipe parted. Pulled out of well and left 23-1/2 stands in well plus 255' of drill collars and tools with top of fish at 5522'.
- 8-12-77 Ran in well with 5 3/4" Bowen overshot with 6 5/8" guide and 4" grapple. Worked over top of fish. Pulled to 130,000# and overshot slipped off. Pulled out of well and ran back in with overshot with 3 7/8" grapple. Worked over fish and pulled up to 100,000# but overshot slipped off of fish. Pulled out of well. Ran back in well with 7 5/8" concave mill 60' of 4 1/8" drill collars. Milled up tool joint from 5522' to 5524' pulling out of well, laying down 2 7/8" drill pipe.
- 8-13-77 Finished laying down 2 7/8" drill pipe. Made up 5 3/4" Bowen overshot with 2 7/8" grapple, bumper, jars and 60' of 4 1/8" drill collars. Measured and picked up new string of 2 7/8" drill pipe and latched onto fish at 5524' - pulled to 150,000# - tripped jars twice and fish came free. Pulled out.
- 8-14-77 Finished pulling out of well. Laid down 2 7/8" drill pipe (46 joints). Ran back in well with 5 5/8" Servco concave mill, located top of 6 5/8" stub at 7232' and cleaned out to top of 2 3/8" liner stub at 7248'. Pulled out of well and ran back in well with new 7 5/8" x 5 5/8" Servco mill. Milled 6 5/8" liner from 7232' to 7238'.

- 8-15-77 Milled 6 5/8" liner from 7238' to 7245' and pulled out of well. Ran back in well with Tristate 9" x 7 1/2" hole opener. Opened 7 5/8" hole to 9" from 7190' to 7243'. Pulling out of well with hole opener.
- 8-16-77 Ran in well with open end drill pipe to 7240' and pumped in 40 cu.ft. water, followed by 75 sacks of Class "G" cement mixed with 20% sand for a total of 96 cu.ft. slurry. Displaced with 10 cu.ft. water and 141 cu.ft. hole fluid to equalize cement. Pulled up to 6604' and down squeezed 46 cu.ft. cement. Cement in place at 9:00 A.M. Ran back in well and located top of cement at 7102'. Pulled out of well. Ran back in well with 7 5/8" bit and 8 5/8" casing scraper. Drilled out cement from 7102' to 7170' and circulated hole clean.
- 8-17-77 Finished circulating well clean. Pulled out of well. Ran GO-International perforating gun - gun stopped at 7129'. Ran back in well with bit and scraper, located fill at 7140' and cleaned out to 7170'. Drilled out cement from 7170' to 7175'. Circulated well clean. Pulled up to 6185' - waited one hour, ran back in, located fill at 7158'. Pulled out of well. Ran back in well with open-end drill pipe, located fill at 7150' and cleaned out to 7175'. Reverse circulated well clean. Pulled up to 6624' - waited one hour to check for fill.
- 8-18-77 Ran back in well to 7175' - found no fill, pulled out of well. Ran GO International and jet perforated four 1/2" holes at 7150'-7151'. Ran and set Baker Model "C" fullbore at 6995'. Obtained breakdown at 8 cu. ft. per minute under 2200 psi. Pumped 20 cu.ft. water ahead and 114 cu.ft. Class "G" cement. Displaced cement through holes at 7150' with maximum pressure of 2500 psi at 8 cu.ft. per minute. Holes cleared at 10:40 A.M. Obtained breakdown at 12 cu.ft. per minute under 3200 psi. Pumped 20 cu.ft. water ahead followed by 114 cu.ft. Class "G" cement. Displaced cement through holes at 7150', cleared tool and displaced at rate of 4 cu.ft. per minute under 2400 psi. Final displacement at 1400 psi min. 1 cu. ft. per minute. Cleared holes at 4:30 P.M. Used Halliburton cementing equipment.
- 8-19-77 Using Halliburton cementing equipment obtained breakdown at 3 cu.ft. per minute under 3200 psi. Pumped 20 cu.ft. water ahead followed by 57 cu.ft. Class "G" cement slurry, followed by 10 cu.ft. water and 56 cu.ft. hole fluid. Closed tool, pump 42 cu.ft. hole fluid. Pressure built up to 4000 psi. Attempted to back scuttle. Release tool, pull out of well. Found 75 joints of 2 7/8" drill pipe full of cement. Ran Back in well with 7 5/8" bit and 8 5/8" casing scraper. Located cement at 6997'. Drilled out cement from 6997' to 7160' (hard cement) and cement stringers from 7160' to 7175'. Circulated well clean.

8-20-77

Circulated well clean. Pulled out of well. Ran in well with open-end drill pipe to 7174' and reverse circulated well clean. Pulled out of well. Ran back in well with Baker Model "C" fullbore and set at 6995'. Using Halliburton cementing equipment, obtained breakdown at 5 cu.ft./ minute under 3100 psi. Pumped 40 cu.ft. water ahead, followed by 114 cu.ft. Class "G" cement slurry, followed by 10 cu.ft. water and closed tool. Displaced 106 cu.ft. cement through holes at 7150' with final pressure at 3400 psi. Cement in place at 4:30 P.M. Pulled out of well. Running back in well with bit and casing scraper.

8-21-77

Finished running in well with bit and casing scraper. Drilled out cement from 7095' to 7153'. Pulled out of well. Ran back in well with open-end drill pipe to 7174'. Reverse circulated well clean. Pulled out of well. Using McCullough Wireline Services, shot four 1/2" holes at 7149' to 7148'. Ran Lynes WSO Tester. Set packer at 7090' with tail at 7109'. Opened tool at 9:09 A.M. Gas to surface in three minutes with strong flow. Shut in valve at surface after 10 minutes.

8-22-77

Pulled out Lynes WSO Tester. Had 620' rise of formation fluid in 2 7/8" drill pipe. Charts O.K. 2800 psi shut in pressure WNSO by Co. Ran Baker full bore squeeze tool and set at 6995'. Formation took fluid through WSO holes at 7148' - 7150' at 14 cu.ft. per minute at 2100 psi. Bled down to 600 psi. Mixed and squeezed holes with 200 sacks of class G cement and cleared holes by 30 cu.ft. polymer fluid at 4 1/2 cu.ft. per minute at 3750 psi. Bled down to 2200 psi. Cement in place at 1:30 A.M. After 3 hours, formation took fluid rate at 3 1/2 cu.ft. per min. at 3750 psi. Bled down to 2900 psi. Mixed and pumped 50 sacks of Class G cement. Closed on 30 cu.ft. fresh water. Thus squeezed 21 cu.ft. cement through squeeze tool with 4500 psi final pressure. Cement 37 cu.ft. from WSO holes. Back scuttled out 37 cu.ft. cement. Left 21 cu.ft. cement in casing. Believed holes plugged. Pulled out squeeze tool. Ran in with 7 5/8" bit and 8 5/8" casing scraper and drilled out cement from 7003' - 7062'. Drilled hard cement from 7074' to 7122'. Unable to make hole past 7122'.

8-23-77

Pulled out 7 5/8" bit and 8 5/8" casing scraper. Ran in hole with 6 3/4" Reed bit and attempted to drill out cement. Unable to clean out below 7122'. Believed to have had casing at 7122'. Pulled out and ran in 4 5/8" bit and drilled out cement from 7122' to 7175'. Pulled out of hole. Made up Servco 5 1/2" tapered mill.

8-24-77

Ran in hole with Servco 5 1/2" tapered mill and milled bad pipe from 7122' to 7125'. Cleaned out to 7175'. Pulled out of hole and ran in with 7 1/2" Servco tapered mill and milled bad 8 5/8" casing from 7121' to 7126'. Drilled out cement from 7126' to 7151'. Circulated at 7175'. Pulled out 7 1/2" Servco tapered mill. Ran in with 7 5/8" bit to 7121'.

- 8-25-77 Ran 7 5/8" bit and circulated at 7175'. Pulled out and ran open-end drill pipe to 7175'. Mixed and equalized 50 sacks of Class "G" cement. Pulled up 300' - attempted to squeeze cement with 2200 psi - unable to squeeze - pulled out. Ran in with 7 5/8" bit and 8 5/8" casing scraper. Drilled out firm cement from 7053' to 7100'. Circulated hole clean. Pulled out.
- 8-26-77 Ran in with McCullough jet gun. Found 14' of fill - pulled out. Ran in open end drill pipe to 7086'. Circulated and back scuttled out cement to 7100'. Pulled out. Reran McCullough jet gun. Shot four 1/2" holes at 7074'. Pulled out and found gun mis-fired. Reran gun and shot four 1/2" jet holes at 7074'. Ran and set Baker fullbore squeeze tool at 6962'. Obtained breakdown at 7 cu.ft. per minute at 2500 psi. Bled down to 1000 psi in 1 minute. Mixed and squeezed 150 sacks of Class G Cement, thus squeezed 135 sacks through holes at 7074' with 2500 psi, final press. Unable to hole back-up press an annulus while squeezing. Cement in place at 11 A.M. Pulled out squeeze tool. Ran in hole with Baker full bore squeeze tool and tested 8 5/8" casing and found slow leak between 2344' to 2375'. Pulled out. Ran in with Baker model "B" retrievable Lok-Set bridge plug and set at 2551'.
- 8-27-77 Equalized 5 sacks of sand on top of Baker Lok-Set bridge plug. Using open-end pipe hung at 2490', mixed and equalized 75 sacks of Class "G" cement. Pulled up to 2040'. Closed rams and attempted to squeeze with 2000 psi. Squeezed 1 cu.ft. away. Held pressure for four hours. Pulled out. Ran in with 7 5/8" bit and 8 5/8" casing scraper, located cement at 2227'. Drilled out cement to 2410' and circulated at 2500'. Closed pipe rams. Pressure tested 8 5/8" casing from 2500' to surface with 1500 psi for one hour. Pulled out. Ran in Baker retrieving tool. Circulated out sand and latched onto Baker Lok-Set bridge plug and pulled out. Ran in with 7 5/8" bit and casing scraper and located cement at 6967'. Drilled out cement from 6967' to 6990'.
- 8-28-77 Continued drilling cement from 6990' to 7100'. Circulated and conditioned brine polymer drilling fluid raising weight to 85#/cu.ft. Pulled out and ran in open-end drill pipe. Circulated and back-scuttled hole clean. Pulled out. Ran McCullough jet gun and shot four 1/2" holes at 7072' to 7073'. Ran in with Baker fullbore squeeze tool. Set tool at 6930' and holes broke down at 1600 psi - pumped 6 cu.ft. per minute at 2000 psi.
- 8-29-77 Mixed and pumped 100 sacks of Class "G" cement. Squeezed 88 sacks through holes at 7072' - 7073' with 1700 psi to 3500 psi final pressure - held 3500 psi for 20 minutes. Pulled out of well. Ran back in well with 7 5/8" bit 8 5/8" casing scraper to 6856'. Stopped and cleaned suction pits. Continued running in well and located top of cement at 6924'. Drilled out cement from 6924' to 7080' and cleaned out to 7100'. Pulled out of well.

- 8-30-77 Ran in well with open-end drill pipe. Located fill at 7094'. Cleaned out to 7100'. Reverse circulated well clean. Pulled out of well. Ran GO-International perforating gun - jet perforated four 1/2" holes at 7071' to 7070'. Ran in well with fullbore and set at 6995'. Tested holes with 2000 psi, bled off 600 psi in one minute. Set fullbore at 6930' and obtained breakdown at 6 cu.ft./minute under 2500 psi. Pumped 40 cu.ft. water ahead, 100 sacks of "G" cement with 1/10 of 1% Halad 9. Displaced with 10 cu.ft. water plus 176 cu.ft. well fluid. Squeezed 106 cu.ft. slurry through holes at 7071' to 7070' with final pressure of 3500 psi. Cement in place at 2:30 P.M. Held pressure for 7 hours. Released tool. Pulling out of well.
- 8-31-77 Finished pulling out of well. Ran back in well with 7 5/8" bit and 8 5/8" casing scraper to 6729'. Waited on cement. Continued on in well and located top of cement at 7010'. Drilled out hard cement from 7010' to 7048', soft cement from 7048' to 7100'. Pulled out of well. Ran back in well with open drill pipe to 7100'. Reverse circulated well clean. Pulled out of well. Ran GO-International perforating gun and jet perforated four 1/2" holes from 7069' to 7068'.
- 9-1-77 Ran in well with Lynes WSO test tools and set packer at 7003' with tail to 7024'. Opened tool and had faint blow for one hour test. Pulled packer loose and pulled out of well. Recovered 65' of drilling fluid. Ran in well with Baker fullbore and set at 6990'. Pressure tested WSO holes at 7068' - 7069' with 2000 psi and bled off to 600 psi for one minute. Pulled out of well and ran back in with Baker Model "K" drillable retainer. Set retainer at 7050'. Obtained breakdown at 6 cu.ft./minute under 2800 psi. Pumped 80 cu.ft. fresh water ahead, followed by 100 sacks of Class "G" cement with 3/4 of 1% CFR2. Slurry weight 131#/cu.ft. Squeezed 90 sacks through holes at 7069' - with final pressure of 3300 psi. Cement in place at 6:00 P.M.
- 9-2-77 Ran in well with 7 5/8" bit and junk sub to 7013'. Waited on cement. Drilled out model "K" retainer at 7050' and hard cement to 7078'. Cleaned out to 7100'. Pulled out of well. Ran back in with open-end drill pipe and reversed circulated well clean. Pulled out of well.
- 9-3-77 Ran GO International perforating gun, jet perforated 4 1/2" holes at 7067'. Ran in well with Lynes WSO test tools set packer at 7009' tail 7030'. Opened tool and had faint blow for 1 hour test. Pulled packer loose and pulled out of well. Recovered 65' of drilling fluid, WSO by Co. Ran in well with Baker full bore and set at 6990'. Pressure tested W.S.O. holes at 7067' to 7066' with 2000 psi. Bled down to 1825 psi in 2 minutes. Pulled out of well and ran back in well with Baker model "K" drillable retainer. Set retainer at 7049' and obtained breakdown at 4 1/2 cu.ft. per minute under 2900 psi. Pumped 80 cu. ft. fresh water ahead, followed by 100 sacks class "G" cement with 3/4 of 1% CFR 2 w/slurry weight 131# cu.ft. Squeezed 93 sacks through holes at 7067' - 7066' with final pressure of 3500 psi. Cement in place 6:00 P.M. Pulled out of well.

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- 9-4-77 Made up 7 5/8" bit & junk sub. Broke pin on cross over sub 3 1/4 Reg. pin x 4 1/2 Reg box. Ran in well, located top of cement at 7045'. Circulated bottoms up. Pulled up to 6890'. Secured well.
- 9-5-77 (Holiday) Rig and crew idle.
- 9-6-77 Drilled out cement and Baker Model "K" drillable retainer at 7045' to 7082'. Cleaned out to 7100'. Pulled out of well. Ran back in well with open drill pipe to 7100' and reverse circulated well clean. Pulled out of well. Running in well with GO-International perforating gun.
- 9-7-77 GO-International shot four 1/2" holes from 7064' to 7065'. Ran Baker Model "C" fullbore and set tool at 6995'. Pressure tested holes under 2000 psi and bled off to 1500 psi in 30 minutes. Pulled out of well. Ran and set Model "K" drillable retainer at 7044'-7046'. Attempted to obtain breakdown, but had communication to annulus. Pressure increased from 1500 psi to 2600 psi. Pulled out of well with stab-in assembly. Ran back in well with Model "C" fullbore. Fullbore stopped at 7026'. Pulled up to 6992', set tool - had communication under 1200 psi. Pulled to 6928' - had communication under 100 psi. Pulled to 6896' - had communication under 100 psi. Pulled to 6865' - held pressure at 1500 psi. Pulled out of well.
- 9-8-77 Finished pulling out of well. Ran back in with 7 5/8" Servco tapered mill. Located tight spot from 6930' to 6937' and 7026' to 7028'. Cleaned out to 7044' - top of Model "K" retainer. Pulled out of well. Made up 538.79' of 2 7/8" tubing stinger below Baker fullbore. Ran in well with stinger at 7040' and fullbore at 6505'. Pumped 20 cu.ft. water ahead, followed by 100 sacks of Class "G" cement at 114 cu.ft. slurry, followed by 10 cu.ft. water and followed by 138 cu.ft. well fluid. Displaced to equalization point. Pulled up to 5846' with fullbore with tail at 6385. Attempted to down squeeze. Unset tool. Unable to circulate or back scuttle. Pulling out of well. Pulled from 90,000# to 145,000#. Swabbing well. Pulled to 6007' and came free. Circulated well. Pulled out of well. Rubber on fullbore damaged - had been dragging.
- 9-9-77 Ran in well with 7 5/8" bit and 8 5/8" casing scraper. Located top of cement at 6817'. Drilled out hard cement to top of model "K" retainer at 7044'. Pulled out of well. Ran back in well with open-end drill pipe. Reversed circulated well clean. Changed well fluid over to new 86#/cu.ft. brine polymer drilling fluid and cleaned mud pits. Pulled out of well.

- 9-10-77 Finished cleaning circulating pit. Ran back in well with 7 5/8" bit, 8 5/8" casing scraper, 240' of 4 1/8" drill collars and bumper sub. Drilled out Model "K" retainer at 7044' and hard cement from 7100' to 7156'. Bearing went out on rotary drive. Pulling out of well, stuck casing scraper at 7121-7126' at bad spot in casing. Worked free. Continued pulling out of well.
- 9-11-77 Finished pulling out of well. Laid down 8 5/8" casing scraper. Ran back in well with new 7 5/8" bit to 6917'. Repaired rig. Drilled out hard cement from 7156' to 7175'. Pulled out of well. Ran back in well with open-end drill pipe to 7175'. Reversed circulated well clean and pulled out of well. Rigged up McCullough 8 5/8" lubricator.
- 9-12-77 Ran McCullough Cement Bond Log... ran Casing Inspection Log... ran Sound Log from 7160' to 6500'. Ran Casing Caliper Log.
- 9-13-77 Finished running McCullough internal Casing Caliper Log. Ran in well with open-end drill pipe to 7175'. Using Halliburton Services, pumped 20 cu.ft. fresh water ahead followed by 110 sacks of Class "G" cement, displaced with 3 cu.ft. water plus 145 cu.ft. of well fluid. Pulled up to 6666' and reverse circulated drill pipe clean. Unable to squeeze cement away under 1000 psi. Standing cemented for five hours. Located top of cement at 6920'. Tested casing under 1000 psi for 20 minutes. Pulled out of well and measured in well with 7 5/8" bit plus 240' of 4 1/8" drill collars.
- 9-14-77 Continued running in well. Located top of cement at 6920' and drilled out hard cement from 6920' to 7190'. Pressure tested casing under 1000 psi for 20 minutes and bled down to 700 psi. Pulled out of well. Ran back in well with Servco taper mill (7 11/16"). Reamed through tight casing at 6462' to 6465', 7118' to 7126' and 7178' to 7190'. Pulled out of well.
- 9-15-77 Ran in well with Servco 7 11/16" taper mill and two 7 5/8" stabilizers. Reamed 8 5/8" casing from 7178' to 7190'. Circulated well clean. Pulled out of well. Ran back in well with open-end drill pipe to 7190' and reverse circulated well clean. Pulled out of well. Made up 282.53' of 7" 26# N-80 LT&C with turned down collars, including Burn's plain grooved hanger with four 3/4" holes and Baker float shoe - turned down.
- 9-16-77 Ran in well with 282.53' 26# N-80 casing. Circulated bottoms up. Landed 7" at 7187', top 7" at 6904'. Using Halliburton equipment, cemented with 20 cu.ft. fresh water ahead, plus 130 cu.ft. class "G" cement, displaced under 1000 to 1200 psi with 160 cu.ft. well fluid. Cement in place at 4:26 A.M. Pulled up to 6718' and reversed circulated drill pipe clean. Pulled out of well, ran back in well with 7 5/8" bit and 8 5/8" casing scraper. Located top of cement at 6778' and drilled out cement from 6778' to 6904'. Pulled out of well.

9-17-77 Ran back in well with open-end drill pipe, reverse circulated well clean. Pulled out of well. Rigged up McCullough lubricator. Ran cement Bond Log under 1000 psi. Ran McCullough perforating gun and jet perforated four 1/2" holes at 6885' to 6884'. Ran Baker Model "K" drillable retainer and set at 6861'. Using Halliburton equipment, pumped 140 cu.ft. of water treated with sodium Hexameta phosphate. Stabbed into Model "K" retainer and pumped 60 cu.ft. treated water. Obtained breakdown rate at 10.5 cu.ft. per minute under 2500 psi. Pumped 80 cu.ft. fresh water, followed by 171 cu.ft. Class "G" with 5% KCL, 0.3% HR7 and 0.75% CFR2, followed by 10 cu.ft. fresh water, followed by 142 cu.ft. of well fluid. Pressure fell to 1400 psi.

9-18-77 Pumped 10 cu.ft. fresh water ahead followed by 100 cu.ft. cement. Stabbed back into Model "K" retainer, followed by 71 cu.ft. of cement, followed by 10 cu.ft. fresh water, displaced with 141 cu.ft. of well fluid. Final pressure 2200 psi. Left 8 cu.ft. cement in 8 5/8" below Model "K" retainer. Pulled out of well. Ran back with 7 5/8" bit and 8 5/8" casing scraper to 6795'. Standing cemented. Drilled out Model "K" retainer at 7861' and cleaned out to 6904'. Circulated well clean. Pulling out of well.

9-19-77 Pulled out 7 5/8" bit and 8 5/8" casing scraper. Rigged up X-over flange and lubricator. Ran McCullough jet gun through lubricator and shot four 1/2" holes at 6882'-6883'. Laid down lubricator - made up and ran Lynes WSO tester on 2 7/8" drill pipe. Set packer at 6821' - tail to 6841' - open tester to surface at 7:40 A.M. for 1 hour test. Light blow decrease to zero after 15 minutes - dead next 10 minutes - then faint blow remainder of test. Pulled and recovered 125' rise of 85# polymer fluid in 2 7/8" drill pipe. Charts O.K. No plugging.

Inside Recorder	Top outside recorder	Bottom outside Recorder
IH 3880	IH 3880	IH 3880
FH 3880	FH 3880	FH 3880
IF-1-100	IF-1-90	IF-1-90
FF-1-100	FF-1-90	FF-1-90

Test O.K.'d by Gas Company Representatibe. Ran in hole with 6 1/8" bit and 7 5/8" casing scrpaer - drilled out cement from 6908' to 7107'.

9-20-77 Continued drilling out cement from 7107' to 7190'. Circulated hole clean. Pulled out. Rigged up and ran Triangle Noise Log from 7190'-5590' - which indicated gas still leaking by new WSO at 6883'. Closed blind rams and pressure tested 8 5/8" and 7" casing from 7190' to surface at 1000 psi. Pressure dropped from 1000 psi to 750 psi in 87 minutes. Ran in Baker Model "B" Lok-Set bridge plug and set in 7" casing at 6950'. Pulling out.

- 9-21-77 Pulled out of hole. Ran in hole with Baker fullbore squeeze tool. Set at 6830'. Pressure tested WSO holes at 6882-6883' with 1000 psi. Pressure dropped to 750 psi in 10 minutes. Pulled out. Ran in with Baker Model "K" cement retainer and set at 6831. Pumped and WSO holes took fluid at 8 cu.ft. per minute at 2500 psi and bled back to 1600 psi in 10 minutes. Mixed 50 sacks of Class "G" cement premixed with 0.75% CFR2 and 0.2% of HR7. Preceeded cement with 80 cu.ft. fresh water. Squeezed water and cement at 2 1/2 cu.ft. per minute at 2500 psi with 1500 psi on annulus. Squeezed 32 cu.ft. cement through holes with 2500 psi final pressure. Back scuttled out 8 cu.ft. cement. One hour mixing and squeezing. Cement in place at 7:30 P.M. Pulling out.
- 9-22-77 Pulled out Model "K" cement retainer setting tool. Ran in hole with 7 5/8" bit and 8 5/8" casing scraper. Circulated and conditioned polymer fluid at 6731'. Drilled out cement and Baker Model "K" retainer at 6831' and drilled out cement from 6831' to 6904'. Circulated hole clean. Pulled out of hole.
- 9-23-77 Ran in hole with Baker full bore squeeze tool and set at 6851'. Pumped and tested WSO holes with 1000 psi - pressure increased to 1100 psi in 55 minutes, then dropped to 1000 psi in 10 minutes. Retested same with 1000 psi and dropped to 750 psi in 40 minutes. Pulled out of hole. Ran in Baker model K cement retainer and set at 6856'. Pumped and WSO holes at 6882' - 6883' took fluid rate at 6 cu.ft. per minutes at 2500 psi with 1500 psi on annulus. Mixed and pumped 50 sacks of class G cement + 1% latex. Preceeded cement with 40 cu.ft. fresh water and 5 cu.ft. behind thus squeezed 40 cu.ft. water and 35 cu.ft. cement through WSO holes with 2600 psi final pressure. Held 2500 psi for 3 minutes. Pulled out of model K retainer and back-scuttle out 32 cu.ft. cement. 30 minutes mixing and squeezing. Cement in place at 12:30 P.M. Pulled out of hole. Ran in hole with Baker full bore squeeze tool - set at 2570' - tested casing from 2570' to 6856' at 1500 psi - O.K. Test in 60' intervals up from 2570' at 1500 psi. Located leak between 1902' to 1933' - 1500 psi and drop to 1200 psi in 5 minutes - pulled out full bore squeeze tool.
- 9-24-77 Pulled out Baker fullbore squeeze tool. Ran in with Baker Model "B" Lok-Set bridge plug and set at 2024'. Pulled out running tool. Ran in open-end drill pipe and spotted four sacks of sand above bridge plug. Pulled up to 1965'. Mixed and equalized 50 sacks of Class "G" cement premixed with 1% latex. Pulled up to 1700' - closed pipe rams. Then squeezed 1 cu.ft. at 2000 psi. Held 2000 psi for six hours. Bled off and pulled out. Ran in with 7 5/8" bit and 8 5/8" casing scraper and drilled out cement from 1785' to 1965'. Circulated hole clean at 2000'. Closed pipe rams. Pressure tested casing from 2024' to surface at 1600 psi for one hour. Casing leak between 1902'-1933' O.K. Pulled out of hole.

- 9-25-77 Ran in with Baker Model "B" retrieving tool. Latched onto Lok-Set bridge plug at 2024' and pulled out. Ran in hole with 7 5/8" bit and 8 5/8" casing scraper and drilled out Baker Model "K" cement retainer at 6851' and cement to 6890'. Circulated hole clean at 6904'. Pulled out of hole. Made up Baker fullbore squeeze tool and running in hole.
- 9-26-77 Ran in well with Baker Model "C" fullbore, set at 6834'. Pressure tested WSO holes at 6882'-6883' under 1200 psi for 60 minutes. Pulled out of well. Ran McCullough Cement Bond Log from 6904'-5200'. Ran Noise Log from 6898' - 5000'. Ran in well with Baker retrieving tool and washed out sand above bridge plug. Latched onto bridge plug at 6940'. Worked bridge plug out of 7" and pulled out of well.
- 9-27-77 Finished pulling out of well with Bridge plug. Rigged up McCullough and ran Noise Log. Which stopped at 7070'. Ran in well with open-end drill pipe and located fill at 7170'. Cleaned out to 7190' and reversed circulated well clean. Pulled out of well, ran triangle Noise Log, logged from 7189' to 4000'. Log showed no gas leak behind casing. Ran in well with 6 1/8" bit, drill collars and drill pipe. Drilled out cement from 7090' to 7210'.
- 9-28-77 Circulated well clean. Displaced drilling fluid with new 86#/cu.ft. brine polymer drilling fluid. Cleaned suction pit and pulled out of well. Made up Dyna drill assembly. Ran in well, Dyna drilled 6 1/8" hole from 7210' to 7246', pulling out of well.
- 9-29-77 Finished pulling out of well. Layed down Dyna drill tools. Made up drilling assembly. Ran in well reamed from 7202' to 7246' and drilled 6 1/8" hole from 7246' to 7301'. Pulled out of well, changed bits, ran back in well. Reamed from 7259' to 7301', drilled 6 1/8" hole to 7302'. Survey at 7247' 32° N 39E.
- 9-30-77 Pulled out of well, left 3 cones from 6 1/8" bit in hole. Ran back in well with 6" Globe junk basket and junk sub. Worked over junk at 7302'. Pulled out of well, no junk in junk basket. Recovered several small pieces of junk in junk sub. Ran back in well with Servco 6" junk mill and junk sub. Milled on junk from 7302' to 7303'. Pulled out of well and recovered several small pieces of junk in junk sub. Made up 6 1/8" drilling assembly. Running in well.
- 10-1-77 Finished running in well with 6 1/8" drilling assembly. Drilled 6 1/8" hole from 7302' to 7350'. Survey at 7350' 35° N 34° E. Made wiper trip tp to 7190'. Circulated well clean. Pulled out of well. Rigged up and ran Dresser Atlas Induction Log from 7350' to 7190'. 7350' V.D. 7053' 731' N 923' E.

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Well History for I.W #63 - Aliso Canyon

- 10-2-77 Finished running Dresser Atlas Induction Log. Ran in well with Tri-State 6" x 13" hole opener with 240' x 4 1/8" drill collars, bumper sub. Opened 6 1/8" hole to 13" from 7190' to 7208'. Pulled out of well, changed hole opener. Ran back in well. Opened hole from 7208' to 7218' and tool failed to open. Pulled out of well. Changed hole opener. Ran back in well with hole opener #3. Opened hole from 6 1/8" to 13" from 7208' to 7228'.
- 10-3-77 Opened 6 1/8" hole to 13" from 7228' to 7245'. Pulled out of well and changed hole opener. Ran back in well with hole opener #4. Opened hole from 7245' to 7247'. Pulled out of well, left two cones from hole opener in well. Ran back in well with hole opener #5 and opened hole from 7247' to 7263' - 16' in 4 hours. Pulled out of well and changed hole opener. Ran in well with hole opener #6.
- 10-4-77 Finished running in well with hole opener #6. Unable to get hole opener through 7" hanger at 6900'. Pulled out of well. Ran back in well, with open end drill pipe with 45° on bottom and located fill at 7275'. Cleaned out to 7350'. Circulated well clean. Pulled out. Ran back in well with hole opener #7, open 6 1/8" hole to 13" from 7263' to 7288'.
- 10-5-77 Finished pulling out of well with hole opener #7. Ran back in well with hole opener #8 - opened 6 1/8" hole to 13" from 7288' to 7298'. Pulled out of well, ran back in well with hole opener #9 - unable to go through 7" hanger at 6904'. Pulled out of well. Ran back in well with hole opener #10 and opened hole from 7298' to 7299' - one foot in one hour. Pulling out of well.
- 10-6-77 Finished pulling out of well with hole opener #10. Ran back in well with hole opener #11 - unable to get inside 7" hanger. at 6904'. Pulled out of well. Ran back in well with hole opener #12, opened 6 1/8" hole to 13" from 7299' to 7300'. Pulled out of well. Ran back in well with hole opener #13, opened hole from 7300' to 7301'.
- 10-7-77 Pulled out of well with Tri-State hole opener #13. Ran back in well with Servco 6" x 13" hole opener. Found shoulder at 7299', started opening hole. Drill pipe parted. Pulled out of well. Top of fish 6030'. Ran back in well with Servco 7 5/8" concave mill. Milled tool joint from 6030' to 6032'.
- 10-8-77 Pulled out of well with 7 5/8" Servco concave mill. Made up and ran in well with 5 3/4" Bowen overshot with 2 3/8" bumper sub and jars. Latched onto fish at 6032'. Jarred on fish with 150,000# and came free. Pulled up to shoe of 7" casing, but unable to close arms on hole opener. Ran back to bottom (7299'). Rigged up Dia-Log. Ran collar locator and string shot. Unable to torque pipe because hole opener kept turning. Pulled up to shoe of 7" casing with hole opener stuck in shoe. Backed off at 7000'. Pulled out of well and left hole opener and six 4 1/8" drill collars in well.

- 10-9-77 Ran drill pipe in well. Pulled out of well laying down damaged 2 7/8" drill pipe. Made up Midway screw in sub. bumper sub, bumper sub, jars, four 4 3/4" drill collars and accelerator. Measured and picked up 2 7/8" drill pipe. Screwed into top of fish at 7000'. Jarred on fish. Pulled up to shoe. Rotated against shoe to close arms on hole opener. Pulling out of well with fish.
- 10-10-77 Finished pulling out of well with fish. Left cone and arm from Servco hole opener in hole. Ran back in well with drill pipe and chased junk from 7300' to 7350'. Circulated well clean. Pulled out of well. Ran back in well with Tri-State hole opener with hard-faced cones.
- 10-11-77 Finished running in well with Tri-State 6" x 12" hole opener with hard faced cones but unable to open any hole. Pulled out of well and left nose of hole opener in hole. Ran back in well with Servco 6" junk mill. Milled and pushed junk from 7302' to 7347'. Pulled out of well. Ran in well with Tri-State hole opener 6" x 12".
- 10-12-77 Finished running in well with Tri-State hole opener 6" x 12" - opened 6 1/8" hole to 12" from 7300' to 7310'. Pulled out of well. Ran back in well with Tri-State 6" x 13" hole opener and opened 6 1/8" hole to 13" from 7300' to 7315'. Pulled out of well.
- 10-13-77 Ran in well with Tri-State 6" x 13" hole opener. Opened 6 1/8" hole to 13" from 7315' to 7326' and pulled out of well. Changed hole opener. Ran back in well and opened hole from 7326' to 7339'. Pulled up to 7300'. Opened 12" hole to 13" from 7300' to 7308'. Pulled out of well.
- 10-14-77 Finished pulling out of well. Ran in well with 6 1/8" bit, cleaned out fill from 7330' to 7346' and circulated well clean. Pulled out of well. Ran back in well with Tri-State 6" x 13" hole opener and re-opened 13" hole from 7190' to 7339'.
- 10-15-77 Circulated well clean. Pulled out of well. Ran Dresser Atlas hole Caliper Log which showed hole opened to 13". Ran back in well with open-end drill pipe to 7343'. Displaced drilling fluid with new clean filtered 86#/cu.ft. brine=polymer completion fluid. Pulled up to 7000' and cleaned suction pits. Pulled out of well.
- 10-16-77 Finished pulling out of well. Rigged up and ran 331' 10-mesh wire-wrapped (5") liner. Landed liner at 7343' with hanger at 7012'. Tested lead seal with 1200 psi. Pulled out of well. Ran back in well with gravel packing tools and located port collar and opened same. Circulated for one hour before gravel packing. Using B. & W. gravel packing equipment, packed with 20-40 gravel under 500 psi at two barrels per minute - 63 cu.ft. in place.

- 10-17-77 Continued gravel packing 5" liner with 500 psi at 2 barrels per minute. Had displaced 122 cu.ft. of 20-40 gravel behind 5" liner when packed off. Closed port collar and backscuttled out 1 cu.ft. of gravel. Tested port collar at 1000 psi. 121 cu.ft. of gravel behind liner. Pulled out. Ran in with Burns washer on 2 3/8" tubing stinger. Located liner shoe at 7343'. Broke circulation and washed liner with four passes from 7341' to 7238'. Pulled out washing tool. Ran in with Burns gravel packing tool-opened port collar at 7016' and circulated.
- 10-18-77 Continued gravel packing with 20-40 gravel. Pumped in 4 cu.ft. of gravel pack-off. Back scuttled out 1 cu.ft. total gravel behind 5" liner 124 cu.ft. closed port collar. Tested at 1000 psi - O.K. Calculated volume 110 cu.ft. Pulled out gravel packing tool. Rigged up lubricator. Ran Dresser Atlas Photo Log from 7334' to 6850' in 5" liner. Removed lubricator. Ran in hole with Servco 7 11/16" tapered mill and two 7 5/8" stabilizer 4 1/16" drill collars on top of 7" casing at 6904'. Circulated and conditioned polymer fluid. Pulled out and rigged up lubricator.
- 10-19-77 Rigged up lubricator. Ran GO-International junk basket with feeler gauge to top of 7" innerstring at 6904'. Ran Otis 8 5/8" WC packer with 3 1/2" N-80 pup extension with Otis NO-GO nipple with XN plug in place below pup joint, and set top of packer J-latch mandrel at 6899'. Removed Lubricator. Ran in 2 7/8" drill pipe and laid down 220 joints of 2 7/8" drill pipe, six 4 1/4" drill collar, Kelly and 10 joints of 2 3/8" tubing. Ran in Baker Model "B" Lok-Set bridge plug and set at 180'. Dismantling rig. preparing to raise rig and base. Secured well at 10:00 P.M.
- 10-20-77 Started tour at 7:00 A.M. Removed sand line drum from rig. Lowered derrick. Removed sub-base and pipe rack. Installed cement pads for pipe rack. Shut crew down at 3:00 P.M. Rig on stand-by.
- 10-21-77 Moved rig and sub-base off. Removed B.O.P.E. Raised mats 15". Replaced rig and sub-base back over well.
- 10-22-77 Rig inoperative due to repairs. Set 10" 5000# casing landing spool and tested between secondary seal in new McEvoy casing head on 8 5/8" 36# K-55 casing and seal flange at 3700 psi for 30 minutes. Installed Class III 5000 psi B.O.P. and nipped up. Tested blind rams with water at 3100 psi for 30 minutes. Off loaded 177 joints of 7" 26# casing on rack. General rig up. Secured well at 6:00 P.M.
(10-23-77) Rig and crew idle. C.P.S. will repair rig Sunday.
- 10-23-77 Rig and crew idle.

- 10-24-77 Started tour at 6:00 A.M. Rigged up and tested Hydril bag with water at 2700 psi for 25 minutes. Ran Baker Model "B" retrieving tool and recovered Baker Model "B" Lok-Set bridge plug at 180'. Rigged up R. & R. power tongs and Hydrotest for 7" 26# casing. Made up Otis overshot 3' cross-over on 7" casing. Picking up and running in hole and hydrotesting 7" 26# casing at 4000 psi.
- 10-25-77 Continued running 7" 26# N-80 8rd casing, hydrotesting at 4000 psi. Ran to top of Otis packer. Mixed 10 gallons of KIB-100 inhibitor in 100 barrels of polymer fluid and displaced between 8 5/8" and 7" annulus. Latched 7" casing on Otis mandrel above Otis packer at 6901' - set 50,000# on packer. Pumped down annulus between 8 5/8" and 7" with 1000 psi - held 1000 psi for 15 minutes - O.K. Unflanged B.O.P. Landed 7" casing on slips and pack-off. Cut off 7" casing and recovered 15.62' of 7" casing. Removed B.O.P. Installed 7" secondary seals - tubing head. Reinstalled B.O.P. 7" 26# N-80 168 joints = 6908' - Landed at 6901'.
- 10-26-77 Unable to get test on 7" casing slip seals. Installed B.O.P.E. Ran and set Baker Model "B" Lok-Set bridge plug at 172'. Attempted to test blind rams - pressured up to 1100 psi and casing parted. Circulated between 8 5/8" casing through 7" casing. Removed B.O.P.E. Ran in with Midway 7" spear. Pulled up to 80,000# - would not come free. Rigged up Alco hydraulic jacks - took ahold of 7" casing - pulled 90,000# and came free...pulled out. Pulled out 56' of 7" 26# casing parted at collar, leaving pin up. Rigged down jacks. Reinstalled B.O.P.E.
- 10-27-77 Continued nipping up Class III 5000 psi B.O.P. Ran and set Baker Model "B" Lok-Set bridge plug at 30' in 8 5/8" casing, tested blind rams with water at 2000 psi. Pulled 8 5/8" Baker bridge plug. Ran in retrieved 7" Baker bridge plug at 172'. Removed 10" bag. Rigged up Alco jacks on top of Shafer gate. Made up and ran Midway spear, tool took ahold of 7" casing at 75'. Worked in one and half around torque and worked pipe from 80,000# to 110,000#. Pulled up 7" casing with jacks and unjayed from Otis packer. Pulled and laid down one joint of 7" casing and collar. Picked up and ran 3 joints of 7" 26# N-80 8rd LT&C on 7" casing string. Hydrotested casing at 4000 psi. Landed casing on Otis packer. Closed rams. Tested Otis overshot seals, pumping down 8 5/8" and 7" casing at 1000 psi with rig pump. Held pressure for 15 minutes - O.K. Unflanged Shaffer gate.
- 10-28-77 Unflanged B.O.P. and raised up. Landed 7" 26# casing with 56,000# on Otis packer and balance on wellhead. Cut off 7" casing, installed secondary flange and tubing head. Tested seals at 5000 psi. Reinstalled Class III 5000 psi B.O.P. Tested blind rams and 2 7/8" pipe rams with water and nitrogen at 4000 psi for 20 minutes each. Tested Hydril bag at 3000 psi for 20 minutes. Installed 8 5/8"x 3" flange on bag for lubricator and secured well at 10:00 A.M.

- 10-29-77 Started tour at 6:00 A.M. Rigged up Archer-Reed wireline unit. Ran Otis retrieving plug catcher - unable to latch on "XN" plug at 6909'. Removed lubricator and flange. Ran in hole with 12' x 1 3/4" pipe on 2 7/8" tubing, measuring and picking up tubing. Tagged Otis "XN" plug at 6909'. Circulating.
- 10-30-77 Circulated hole clean. Pulled out. Ran in with Otis "XN" pulling tool on 1 3/4" hydraulic - had jars and bumper sub on 2 7/8" tubing. Attempted to latch on. Pulled out and found pin sheared. Rigged up Archer-Reed lubricator. Ran same, pulling set-up on wireline. Unable to latch on. Pulled out and left equalizing prong in "XN" plug. Ran impression block on wireline and located prong in "XN" plug. Ran 3/4" overshot on wireline. Unable to latch on. Ran overshot with 3/4" grapple - unable to get equalizing prong. Ran in hole with "XN" plug, retrieving tool on tubing.
- 10-31-77 Continued running in hole with Archer-Reed "XN" plug retrieving tool on 2 7/8" tubing. Latched on to plug and pulled out and recovered plug. Ran back in hole to top of Otis packer. Circulated out gas-cut mud. Pumped in 200 barrels of new 86#/cu.ft. brine-polymer drilling fluid from storage tank. Pulled out. Rigged up GO-International and lubricator. Ran 6" feeler gauge and junk catcher to 6899'. Ran Baker Retrieval "D" packer and set at 6883'6899'. Made up Camco safety flow system on Baker seal units and latch-in sub. Running in and hydro-testing tubing at 5000 psi using Baker seal on couplings.
- 11-1-77 Continued running 2 7/8" - K-55 tubing and hydro-test at 5000 psi. Spaced out tubing string. Latched on to Baker Retrieval D packer. Pulled 20,000# over weight of string. Landed tubing string with Camco flow system at 6878' with 10,000# on packer. Tubing string weight 48,000#. Removed B.O.P. and installed Xmas tree. Tested between upper and lower tubing hanger seals. Tested upper tubing seals and Xmas tree at 5000 psi. O.K. Rigged up and circulated polymer fluid in well without lease salt water. Archer-Reed ran Camco standing valve plug and set in Camco D nipple, tested Baker seals and Retrieval D packer at 1500 psi for 30 minutes. Blind flanged out lets on well head and tree. Finished well and released rig at 10:00 P.M. 11-1-77.

SOUTHERN CALIF. GAS CO.
IW-63
ALISO CANYON, CA.

STA. NO.	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES
1	7190	28°00'	6920.0		N 43°00' E	859.0 N 871.0 E
2	7247	32°00'	6968.3	30.2	N 39°00' E	882.5 N 890.0 E
3	7350	35°00'	7052.7	59.1	N 34°00' E	931.5 N 923.1 E

CLOSURE: 1311.4' N 44°44' E

SURVEY DATA AT 7190' WAS FURNISHED BY THE OPERATOR

DIVISION OF OIL AND GAS
RECEIVED

JAN 25 1978

SANTA PAULA, CALIFORNIA



JOB NO. 39-977

DATE 9/77

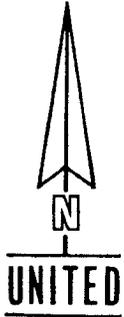
DECL. 15°00'

DIVISION OF OIL AND GAS
RECEIVED

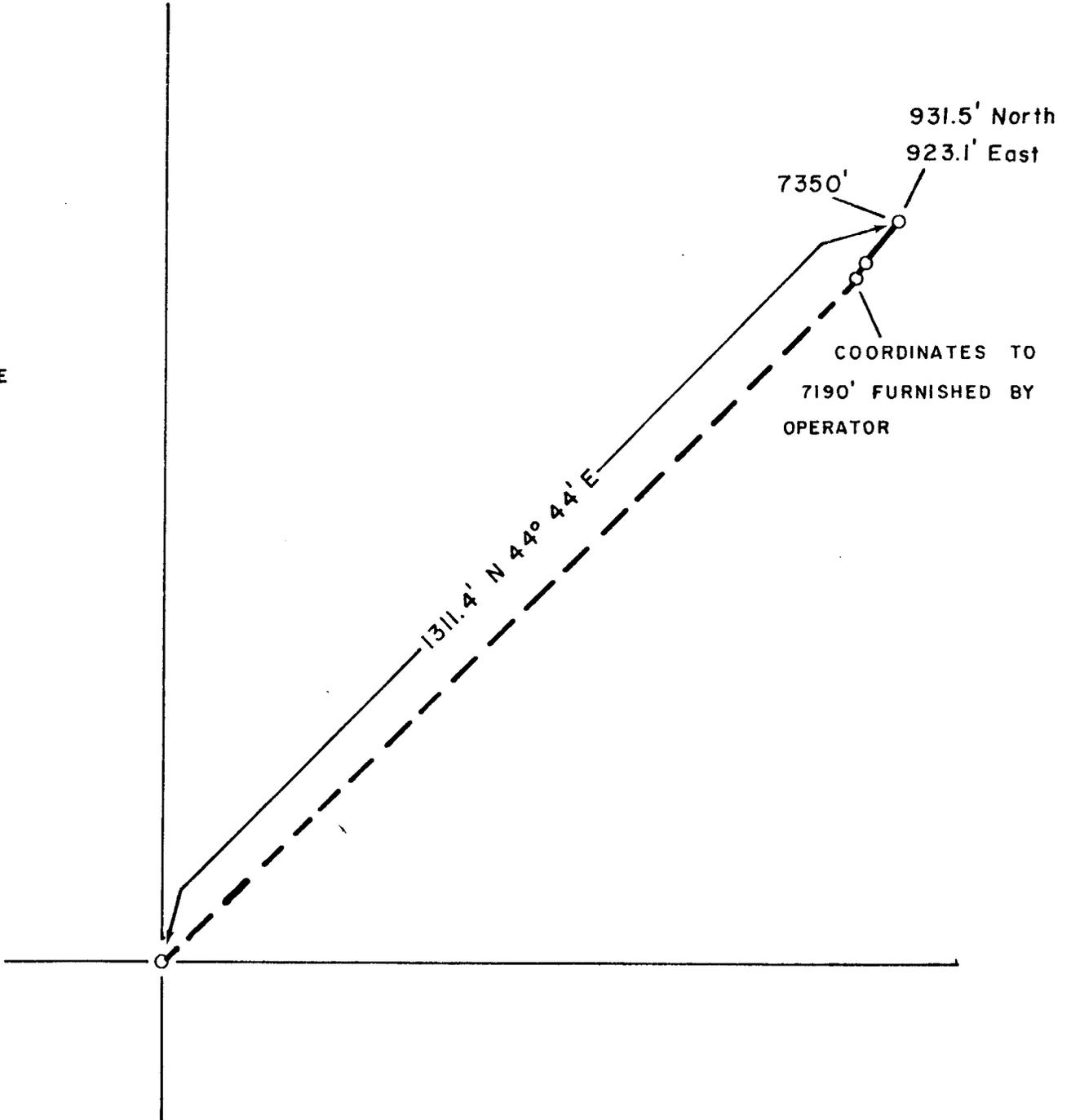
JAN 25 1978

SANTA PAULA, CALIFORNIA

Decl. 15° 00' E



scale
1" = 200'



IW-63

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

Report on Operations

No. T. 277-357

Mr. P. S. Karraker, Jr., Agt.
So. Calif. Gas Co.
P.O. Box 54700 Terminal Annex
Los Angeles, CA 90054

Santa Paula, Calif.
July 15, 1977

DEAR SIR:

Operations at well No. W 63, API No. 037-21278, Sec. 34, T. 31, R. 16,
S.W. 1/4 B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 7/11/77 by Mr. P.P. Wagle, representative of the supervisor was
present from 0600 to 0800. There were also present R. Springer, contract foreman

Present condition of well: No additions to the casing record since proposal dtd 6/20/77.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

M. G. MATHERD

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

By [Signature] Deputy

REPORT ON PROPOSED OPERATIONS

Santa Anita, California

June 21, 1971

Dr. J. J. ...
in ...
...
Log No. ...

Your proposal to ... well (Name and number)

A.P.I. No. ... Section ... T. ... R. ...

B. & M. ... field, ... County,

dated ... received ... has been examined in conjunction with records filed in this office.

- 1. The drilling fluid shall be of a grade and in sufficient quantity to protect all subsurface conditions in order to prevent loss of circulation and a reserve supply of this material shall be kept on hand to meet any emergency.
- 2. Blowout prevention equipment, at least as prescribed in Section 150000, shall be installed and maintained in operating condition at all times.
- 3. THIS DIVISION SHALL BE KEPT ADVISED OF THE PROGRESS OF THE OPERATIONS AND OF ANY ACCIDENTS OR OTHER EMERGENCIES THAT MAY OCCUR.

OPERATIONS.

Blanket and
pink

By John L. Kardola
Deputy Supervisor
John L. Kardola

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR PACIFIC LIGHTING SERVICE, CO. FIELD Aliso Canyon

Well No. IW-#63 (Re-work), Sec. 34, T. 3N, R. 16W, S.B. B. & M.

Date May 29, 1975, 19

Signed P. S. Magruder, Jr.

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

P. S. MAGRUDER, Jr.

(Address)

(Telephone Number)

Title Agent

(President, Secretary or Agent)

(213) 689-3561

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

- 4-4-75 Well was killed with 72# brine polymer fluid by Drilling Fluid, Inc. - used 500 barrels.
- 4-7-75 Moved in California Production Service Rig D-4. Set up hoist, suction tank and two mud pumps.
- 4-8-75 Continued rigging up mud pumps, shaker pit and sub base. Using welder, made up new suction and circulating lines on both pumps. Raised sub base up 24 inches.
- 4-9-75 Continued rigging up. Rigged up to circulate. Bled off gas in 8 5/8" annulus, pumped in 150 barrels of 72# brine polymer drilling fluid to get returns. Circulated until free from gas cut mud. Reconditioned mud to 45 viscosity. Removed Christmas tree and installed Class III B.O.P.
- 4-10-75 Tested B.O.P. with H & H test pump with water, as follows:
- Blind Rams at 2800 psi for 20 minutes - O.K.
 2 7/8" Pipe Rams at 2750 psi for 20 minutes - O.K.
 10" Hydril Bag at 2650 psi for 20 minutes - O.K.
- Tested with nitrogen, as follows:
- Blind rams at 2900 psi for 20 minutes - O.K.
 2 7/8" Pipe Rams at 2700 psi for 20 minutes - O.K.
 10" Hydril Bag at 2650 psi for 20 minutes - O.K.
- Rotated and unseated Browns Husky packer. Filled hole with six barrels of fluid. Pulled and laid down 2 7/8" Seal-Lock tubing. 184 joints down at 10:00 P.M.

- 4-11-75 Finished pulling and laid down 2 7/8" Seal-Lock tubing and Brown tubing equipment. Udell landing nipple was plugged. Brown Husky packer was sand cut and washed around rubbers and seal units. Packer in very bad condition. Unloaded 3 1/2" drill pipe, six 5 3/4" drill collars, Kelly. Changed 2 7/8" rams to 3 1/2" rams. Changed drilling line. Made up 4 1/2" full bore squeeze tool on 2 7/8" tubing. Picking up 3 1/2" drill pipe and rubbering each joint. 20 singles in at 10:00 P.M.
- 4-12-75 Continued picking up and rubbering 3 1/2" drill pipe with Baker full bore squeeze tool. Ran in to 4 1/2" liner and attempted to set tool. Drill pipe backed off about 20 stands down. Screwed back on, pulling out to check drill pipe and tools. 20 stands out at 10:00 P.M.
- 4-13-75 Rig idle.
- 4-14-75 Finished pulling out with Baker 4 1/2" full bore squeeze tool. Tool was plugged with hard sand. Made up 203' of 2" tubing with sawtooth collar. Ran in to top of 4 1/2" liner at 7159'. Cleaned out fill from 7159' to 7268'. Circulated bottoms up at 7268'. Closed well in at 11:00 P.M.
- 4-15-75 Continued cleaning out fill from 7268' to 7354'. Circulated hole clean and pulled out. Ran in with 4 1/2" Baker full bore squeeze tool and set tool in 4 1/2" liner at 7170'. Tested 6 5/8" x 4 1/2" lead seal hanger and 8 5/8" casing at 1000 psi. Had no bleed off and seal and casing O.K. Pulled out of 4 1/2" liner. Circulated bottoms up. Pulled 20 stands and closed well in.
- 4-16-75 Finished pulling out and laid down tools. Made up and ran in with Midway 4 1/2" cutter on 3 1/2" drill pipe. Cut 4 1/2" liner at 7165', approximately 6' below top of 6 5/8" X 4 1/2" hanger. Pulled out. Made up and ran in with Midway spear on jars and bumper sub on 3 1/2" drill pipe. Took ahold of cut off 4 1/2" liner and hanger. Pulling out. Closed well in.
- 4-17-75 Continued pulling out with Midway spear and recovered all of 4 1/2", 9.5# Gru-V-Kut liner - total 196'. Laid down Midway tools and liner. Ran in hole with 5 5/8" bit on 3 1/2" drill pipe to 7080'. Reamed out 6 5/8" cemented liner from 7080' to 7360'. Circulated hole clean and pulled up in 8 5/8" casing. Closed well in.

NOTE: 4 1/2", 9.5# Gru-V-Kut liner hung at 7159' to 7355'. Lead seal hanger was not sand cut. Liner was sand cut with holes from intervals at second joint down from 7196' to 7222' with big holes at 7211' to 7217'. Fourth joint from 7259' to 7290' with big holes from 7269' to 7272'. Third and bottom two joints O.K.

- 4-18-75 Pulled out 5 5/8" bit. Ran in Hampton circulating washer on 3 1/2" drill pipe. Washing tool stopped at 7258' - unable to work through tight place. Pulled out. Ran in with positive 6 5/8" casing scraper and 5 5/8" bit. Worked scraper through tight spot from 7253'-7262'. Ran to 7361' and circulated bottoms up. Pulled 10 stands and closed well in at 11:30 P.M.
- 4-19-75 Finished pulling out 5 5/8" bit and scraper. Made up and ran in with Hampton 6 5/8" washer on 3 1/2" drill pipe. Washer stopped at 7258' - unable to work tool below 7258'. Washed perforations from 7256'-7240' and 7230'-7220'. This interval did not circulate, but pushed fluid out in formation. Washed and circulated from 7214'-7198'. Ran back to 7256'. Circulated two hours. Pulled 97 stands. Closed well in.
- 4-20-75 Rig idle.
- 4-21-75 Finished pulling out Hampton washer. Ran in with turned down 5 3/8" thimbles from 5 1/2" Hampton washer to 7355'. Tested tool at 4000 psi. Tried to open perforations with 3500 to 4000 psi from 7332'-7324' - perforations would not break down. Perforations from 7302'-7294' took fluid in formation at 3000 psi. Perforations from 7294'-7290' circulated at 2000 psi. Perforations from 7280'-7256' circulated at 1000 to 2500 psi. Ran washer back to 7355' and circulated two hours. Washer stuck at 7355'. Working pipe, clutch slipped. Installed new clutch pads. Worked stuck pipe at 110,000# and sheared bolts on right-angle drive. Repaired same. Worked stuck pipe, pulling 90,000# to 120,000#. Worked pipe up 30 feet. While pulling at 120,000# on weight indicator, jack plate went through mat in front end of rig. Rig went off of jacks, breaking three load lines, dropping blocks and drilling string on rotary table. Hoist moved over two feet to IW-#67 and sub base moved out approximately one foot, leaning B.O.P. over. Secured derrick and rig. Closed well in and secured operation.
- Accident took place at 9:00 P.M. California Production Service pusher watched rig and well from 10:00 P.M. (4-21-75) to 6:00 A.M. (4-22-75). Persons at rig when accident took place - D. E. Underwood, B. Hill, G. Aviles, J. Patton, Ron Watson, Ron Ramsdell, C.P.S. mechanic, Elmer Patty and C. B. Todd.
- 4-22-75 California Production Service used two 75-ton cranes to help in lowering derrick on hoist, also moved hoist out. With crane, picked up 3 1/2" drill pipe string and moved sub base back over center of well. Attempted to circulate, but washing tool was in squeeze position. Filled hole with three barrels of mud and pressured up same at 450#. No leak on casing head or flanges. Closed pipe rams and Hydril Bag with 450# on casing. Well closed in at 5:00 P.M.

- 4-23-75 California Production Service Rig D-4 in shop for hoist and lower derrick structure repairs from 4-23-75 to 5-12-75.
- 5-12-75 Moved in D-4 rig on IW-#63 location. Rigged up hoist and mast. Started circulating at 6:30 P.M. Circulated bottoms up and worked stuck pipe at 190,000# pull. Worked 1-1/2 hours. Closed well in at 10:00 P.M. Rig time started at 6:30 P.M. (5-12-75). Hampton washer stuck at 7355'.
- 5-13-75 Circulated and worked stuck pipe at 7355'. Rigged up Dia-Log unit. Ran string shot in 3 1/2" drill pipe and attempted to make backoff at 7300'-one single above Hampton washer. Worked pipe after shot and pipe came free. Pulled and chain tonged out of hole. Recovered 116 1/2 stands of 3 1/2" drill pipe - total 7273'. Left in hole 62' of 3 1/2" drill pipe and 15' of Hampton washer. Top of fish at 7273'. Made up Midway fishing tool on four 4 1/2" drill collars, jars, bumper sub and screwed on sub on bottom. Ran in 20 stands. Closed well in at 12 midnight.
- 5-14-75 Continued running in hole with Midway tools. Screwed in to top of 3 1/2" drill pipe at 7273'. Jarred on fish and worked pipe from 160,000# to 185,000# for three hours. Fish did not move. Circulated bottoms up. Rigged up Dia-Log unit. Ran collar locator (1") to 7365'. Pulled and ran string shot and backed off pipe at 7365' in 3 1/2" drill pipe and washing tool. Worked and rotated pipe to the left. Pipe came free. Pulled out remeasuring drill pipe. Closed well in at 10:00 P.M.
- 5-15-75 Continued pulling Midway fishing tool out. Left in 14 feet of Hampton washer in hole. Top of fish at 7354'. Laid down all tools and drill collars. Ran in with 5 5/8" bit and 6 5/8" casing scraper to top of fish. Circulated hole clean. Pulled and left 20 stands in hole. Closed well in at 9:00 P.M.
- 5-16-75 Finished pulling out of hole with 6 5/8" casing scraper. Left 5 5/8" bit in hole. Rigged up McCullough tool lubricator on 10" Hydril Bag. Ran McCullough 4" Omega jet guns and perforated four 1/2" holes per foot from 7210'-7302', using reference collar to shoot by (368 shots). Tore out McCullough equipment, reinstalled picture nipple and flow line. Ran in with 6 5/8" casing scraper on 3 1/2" drill pipe (tight spot in 6 5/8" liner at 7280'-7290'). Circulated on bottom and screwed into 5 5/8" bit. Pulled up and closed well in on 20 stands.
- 5-17-75 Finished pulling out of hole with 5 5/8" bit and scraper. Ran in with Hampton washer with turned down thimbles and rubber cups to 7333'. Blanked tool at 7333' with 3000 psi - O.K. Pulled up to 7302' and washed perforations to 7198' with maximum 3500 psi. Washed perforations in 2-foot intervals with 9 cu.ft. per setting, with 3500 psi to 1000 psi - using

- 5-17-75 cont'd Halliburton pump truck. Pulled out of hole. Ran in hole with 5 5/8" bit and 6 5/8" scraper to 7355'. Circulated 1-1/2 hours. Closed well in.
- 5-18-75 Rig idle.
- 5-19-75 Ran in to top of fish at 7355' with 5 5/8" bit. Circulated hole clean. Pulled out. Picked up 2 3/8" Howard Smith wire wrapped liner, Baker gravel packing and setting tools (2 3/8" liner detail on next page). Ran in to 6970' and closed well in.
- 5-20-75 Ran liner to top of fish. Pulled up and hung liner with top of Baker Retrieva "D" packer at 7096' with bottom at 7350'. Rigged up Byron-Jackson pump. Circulated at 1200 psi, 4.5 barrels per minute. Established breakdown at 1350 psi, 4.5 barrels per minute. Dropped ball and set packer at 7096'. Screwed off of packer. With tool in breakdown position, displaced into drill pipe 300 gallons of Terra-Pak II KCL fluid at 1000 psi (rate 4.5 barrels per minute). Followed by 500 gallons of Terra-Pak II KCL fluid mixed with 5000# of "Heart of Texas" 10-20 gravel at 1000-1200 psi (rate 4.0-4.3 barrels per minute). Followed by 150 gallons of Terra-Pak II KCL fluid at 1250 psi. Followed by brine polymer fluid. Pressure build-up from 1200 psi to 3500 psi final pressure. Rigged up to backscuttle. Backscuttled clean. Pulled up and sheared collette. Total 41 cu.ft. of sand packed behind 2 3/8" liner and backscuttled out 9 cu.ft. sand packed gravel. Pulled and chain tonged out of hole. Ran in hole with open end drill pipe to 3000'. Closed well in.
- 5-21-75 Laid down 3 1/2" drill pipe and Kelly. Changed 3 1/2" rams to 2 7/8" rams. Picked up and ran 20 joints of 2 7/8", 8rd tubing. Closed well in.
- 5-22-75 Pulled 20 joints of 2 7/8" tubing. Made up 2 7/8", 8rd and Seal-Lock tubing with Baker jewelry and tested tubing at 4500 psi - tubing detail on next page. Landed and latched in Baker Retrieva "D" packer at 7096' with 14,000# on packer. Closed well in.
- 5-23-75 Removed B.O.P. and installed Christmas tree. Tested casing head and tubing head at 3000 psi - O.K. Tested Christmas tree at 5000 psi - O.K. Dismantled rig and lines. Rig released at 10:00 P.M. (5-23-75).
- 5-24-75 Changed over to lease salt water, displaced brine polymer fluid with 450 barrels. Removed tubing cross for pipe rack for IW-#67.

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

REPORT ON PROPOSED OPERATIONS No. P. 27-87

GAS STORAGE

Mr. P. S. Macruden, Jr.
Pacific Lighting Service Co.
P.O. Box 34790, Terminal Annex
Los Angeles, California 90054

Santa Paula, Calif.
March 13, 1975

DEAR SIR:

Your proposal to alter casing Well No (037-21278) IW 65, Section 34, T. 34, R. 16, S. B. & M., Aliso Canyon Field, Los Angeles County, dated 3/5/75, received 3/11/75, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. The drilling fluid used shall be of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts. NO CONTAMINANTS OR TOXIC MATERIAL SHALL BE USED IN ANY DRILLING FLUID THAT IS TO BE PLACED IN AN UNLINED STRONG.
2. 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.
3. Blowout-prevention practice drills shall be conducted at least weekly for each crew, and recorded in the log book.
4. THIS DIVISION SHALL BE NOTIFIED OF ANY CHANGES IN THE OPERATING STATUS OF BLOWOUT PREVENTION EQUIPMENT.

NOTE: A COPY OF THIS APPROVAL SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.

Blanket Bond
ALL:b
cc: Operator

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

By *[Signature]*, Deputy

DIVISION OF OIL AND GAS

Notice of Intention to ~~Deepen, Redrill, Plug or~~ Alter Casing in Well

This notice must be given before work begins; one copy only

AK

Los Angeles Calif. March 5 1975

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling, plugging or~~ altering casing at Well No. T.W. #63
(Cross out unnecessary words)

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

The present condition of the well is as follows:

1. Total depth. 7390'

2. Complete casing record, including plugs:

13-3/8" cemented 699'

8-5/8" cemented 7190', cp'd 1919' and 2344'
WNSO 7060', squeezed with cement, WSO 7059'

301' 6-5/8" cemented 7373', TOP 7072'
WSO on lap. Shot four 1/2" holes per foot
7210'-7198'. Later shot four 1/2" holes per foot
7332'-7324', 7302'-7290', 7280'-7240', 7230'-7220'
and 7214'-7200'

196' 4-1/2" 9.5#, J-55, 18 mesh wire weld slotted liner
landed 7355' with lead seal liner hanger

3. Last produced. GAS STORAGE WELL
(Date) (Oil, B/D) (Water, B/D) (Gas Mcf/D)

The proposed work is as follows:

1. Kill well, install BOPE and pressure test.
2. Lay down tubing and make up drill pipe.
3. Recover 4-1/2" liner.
4. Mill up 6-5/8" liner 7072'-7335'.
5. Open hole to 14" 7190'-7335'.
6. Run 360' of 6-5/8" wire weld and slotted liner. Land at 7330'. Gravel flow pack with 8-12 gravel.
7. Run tubing and return to gas storage.

P.O. Box 547901, Terminal Annex
(Address)

PACIFIC LIGHTING SERVICE CO.
(Name of Operator)

Los Angeles, California 90054
(213) (Telephone No.) 689-3561

By P. S. Magruder Jr.
P. S. Magruder, Jr.

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 CanyonWell No. IW 63 Rework, Sec. 34, T. 3N, R. 16W, S.B.B. & M.Date August 19, 1974 Signed P. S. Magruder, Jr.P. O. Box 54790, Terminal Annex P. S. Magruder, Jr.Los Angeles, Calif. 90054 (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

1974

REWORK HISTORY

IW 63 was completed in November, 1972. The well did not test satisfactorily from the S-4 perforated interval 7198-7210'. Prior to re-drilling, additional logs were to be run and additional perforations made and the well placed on a production test. The re-perforating and re-testing determined the well to be satisfactory for gas storage and gas withdrawal obviating the necessity to re-drill. Thus the only change in the well is additional perforations.

- 6-18 Camay Drilling Company, Contractor, moved in and rigged up. Operations commenced at 10:00 AM. After circulating with 64#/c.f. mud with no evidence of gas, removed Christmas tree and installed double Shaffer and GK Hydrill B.O.P.E.
- 6-19 Test tubing rams and B.O.P. with 1500 psi Ok. Pull 2-7/8" tubing and standback in derrick.
- 6-20 Pick up and measure 5" drill pipe. Ran Baker C-1 milling tool and milled on Baker Model "D" production packer at 7044'.
- 6-21 Milled over packer to 7053' and recovered portion of packer.
- 6-22 Ran packer mill plucker and chased packer skirt to top of liner at 7072'. No recovery. Ran spear, no recovery. Ran bit and scraper and cleaned out to top of liner at 7072'.
- 6-23 Ran 5-5/8" bit and 6-5/8" casing scraper to 7126' where same stopped. Ran 5-5/8" mill with junk sub and milled and cleaned out to 7292'.

1974

6-24 Ran 5-5/8" bit and cleaned out to 7359'. Left 2 cones in hole. Conditioned hole for logs. Ran Dresser-Atlas Neutron Lifetime log.

6-25 Finished logging 7350-7000'. TO SQUEEZE HOLE WITH CEMENT: Set Baker fullbore cementer at 6992' and hole took fluid at 8 c.f./M rate under 2000 psi. Holes at 7060, lap at 7072' or holes at 7198-7210' taking fluid. Preceded cement with 20 cu. ft. of water, pumped in 100 sacks of Class "G" cement and followed with 10 cu. ft. of water and displaced with 690 cu. ft. of mud under 2000 to 3000 psi final pressure. Cement in place at 10:30 PM. Used Byron-Jackson power and bulk cement. Ran 7-5/8" bit. Located top of cement at 6966' and cleaned out to 7072'.

6-26 Ran 5-5/8" bit with 6-5/8" casing scraper and drilled out cement from 7072' to 7169' and ran in to 7355' and circulated hole clean. Holes at 7198-7210' did not take cement. Displaced fluid in hole with lease salt water and rigged up Dresser-Atlas perforating equipment. Perforated four Golden Jet holes per foot 7332-7324, 7302-7290, 7280-7240', 7230-7220', 7214-7200'. Hole taking fluid after perforating.

6-27 Ran 5-5/8" bit to 7355' and conditioned hole for production test.

HALLIBURTON PRODUCTION TEST ON HOLES AT INTERVALS 7200-7332: Ran Halliburton RTTS tool with bottom hole sampler on 2 joints of 3-1/2" drill pipe with balance of 5" drill pipe. Set packer at 7117' in 6-5/8" casing with tail to 7132'. With flow line shut-in opened tool on 5/8" maximum bottom hole bean and 1/8" surface bean at 8:23 AM. Pressure rose to 900 psi in 7 minutes, 2020 psi in 22 minutes and 2060 psi in 27 minutes. Opened flow line with 1/8" surface bean at 9:55 AM and well flowed as follows:

1974

<u>TIME</u>	<u>SURFACE BEAN</u>	<u>WELL HEAD PRESS. PSI</u>	<u>FLUID RATE BBLs/DAY</u>		<u>MCF/D RATE</u>
			<u>WTR.</u>	<u>OIL</u>	
9:55	1/8"	2000	-	-	378
10:00	1/4"	1995	-	-	2888
10:30	1/4"	1980	-	-	2888
10:30	3/8"	1980	-	-	-
11:20	3/8"	1880	-	-	4724
11:25	1/2"	1880	-	-	-
11:30	1/2"	1700	-	-	9004
12:00	1/2"	1600	-	-	-
12:30	5/8"	1600	-	-	-
1:30	5/8"	1400	51	50	10005
2:30	5/8"	1400	36	19	10172
3:30	5/8"	1400	43	31	10338
4:30	5/8"	1400	36	17	10218
5:30	5/8"	1360	31	22	10520
6:30	5/8"	1360	55	31	10670
7:30	5/8"	1360	26	24	10386
8:00	5/8"	1360	26	34	10554

Well flowed average rate of 36 B/D water and 25 B/D oil. Tester shut-in at 8:00 PM for final shut-in pressure.

PRESSURE RECORDER DATA

	<u>INSIDE (7107)</u>	<u>BOTTOM OUTSIDE (7131)</u>	<u>TOP OUTSIDE</u>
INITIAL HYDRO, PSI	2990	2982	2990
INITIAL FLOW, PSI	1778	1998	2007
FINAL FLOW, PSI	2484	2485	2484
FINAL SHUT-IN, PSI	2574 INSTANT	2565 INSTANT	2565 INSTANT
FINAL HYDRO, PSI	3056	3049	3043

6-28

Ran Technical Service Company fluid determination and found fluid level at 6355' or 762' over packer and 843' above top perforation. Bled off gas pressure through Gas Company kill line. Displaced lease salt water with 64#/cu. ft. polymer mud.

1974

- 6-29 Pulled tester. Ran Johnston bobcat retrievable bridge plug on bottom of positrievie packer. Packer set pin sheared. Pulled tools. TO TEST WSO on 8-5/8" x 6-5/8" LAP AT 7072' & HOLES AT 7060: Ran Johnston bobcat retrievable bridge plug and positrievie packer. Set bridge plug at 7089' and while attempting to release, well commenced to flow in annulus. Closed GK Hydril bag and pumped in weighted calcium chloride water to dispel gas. Circulated through choke line until fluid stabalized. Released from bridge plug, dropped bar to shear circulating disc and circulated out all gas.
- 6-30 Engaged bridge plug and released same. Well flowed through drill pipe. Circulated and conditioned drilling fluid to 77#/cu. ft. with 88#/cu. ft. calcium chloride water. Released bridge plug and circulated hole. Pulled bridge plug and ran 8-5/8" retrievable bridge plug.
- 7-1 thru 7-3 Set bridge plug in 8-5/8" casing at 7000', closed GK Hydril bag and tested same and casing with 1800 psi pump pressure. Install new API rings on choke manifold and install Willis gasket between Hydril and Shaffer. Tested B.O.P. and choke manifold with 2000 psi water pressure and same held Ok. Retested above with nitrogen and flange between Hydril and Shaffer would leak at 900 psi. Replaced Hydril with shop inspected Hydril and reflanged. Pressured up with 2000 psi nitrogen and 3" flanged valve in flow line leaked. Removed valve and replaced same. Tested manifold with 2000 psi nitrogen for 30 minutes Ok. Set Baker retrievable bridge plug at 1040' and tested B.O.P. with 3000 psi nitrogen for 30 minutes Ok. Retrieved Baker bridge plug. Ran in to retrieve Johnson bridge plug and circulated out gas cut mud.
- 7-4 Pulled Johnston bridge plug set in 8-5/8" casing at 7000'. Set Johnston retrievable bridge plug at 7117' in 6-5/8" casing. Closed pipe rams and holes at 7059' or lap at 7072' took 10 bbls. of fluid under 2200 psi. Dumped 3 sacks of gravel on bridge plug. TO SQUEEZE HOLES AT 7059' AND/OR LAP AT 7072': Set Johnston positrievie tool at 6986' and hole took fluid at 16 CFM under 2500 psi. Preceded 75 sacks Class "G" cement with 20 cu. ft. of water and displaced with 528 cu. ft. of mud. Closed tool and stage cemented with additional 195 cu. ft. of mud to squeeze estimated 70 sacks away under 3000 psi at 8:00 PM. Held 1500 psi in annulus while squeezing. Bled back 5 cu. ft. Used Byron Jackson power and bulk cement.

- 1974
- 7-5 After standing cemented 11 hours, closed pipe rams and holes and lap held 2000 psi Ok for 5 minutes. Pulled and layed down tools. Down 4 hours for Gas Company repair to lines. Located top of cement at 6990' and hard cement 7046 to 7072'.
- 7-6 Ran 5-5/8" bit to 7115' and circulated out gravel.
TO TEST WATER SHUT-OFF ON HOLES AT 7059' & LAP AT 7072': Ran Johnston tester and set tool at 7030' with tail to 7048'. Opened tool at 3:34 PM for one hour test. Puff blow then dead balance of test. Recovered 30' rise of drilling fluid. Charts Ok. Test approved by Division of Oil & Gas.
- 7-7 Released bridge plug and circulated and conditioned 76#/cu. ft. gas cut mud for 11 hours to equalize mud at 76#/cu. ft. Pulled bridge plug. Ran 5-5/8" bit to 7358' where same stopped. Circulated hole to run liner.
- 7-8 Ran 6 joints or 196' of 4-1/2", 9.5#, J-55, 8rd. ST&C "Gru-V-Kut" Layne & Bowler wire weld 0.018 gauge screen with bull plug on bottom and Burns 6-5/8" x 4-1/2" lead seal liner hanger with hold down slips on top and hung same at 7355' with top at 7159'.
- 7-9 Layed down drill pipe and drill collars. Ran 2-7/8" tubing broaching and hydro testing to 3000 psi and landed same in doughnut with Brown Husky M-1 packer set at 7067' with 10,000#.

1974

TUBING DETAIL

Tubing detail IW 63 all 2-7/8" 6.5# J-55 & N-80 used

Bottom	0.4'	45° collar	7106.05 - 7105.65'
Next	31.70'	2-7/8" EUE 8rd.	7106.05 - 7073.95'
Next	1.10'	Cross-over 2-7/8" x 3-1/2"	7073.95 - 7072.85'
Next	5.40'	Brown husky packer	7072.85 - 7067.45'
Next	1.10'	Cross-over 3-1/2" x 2-7/8"	7067.45 - 7066.35'
Next	0.82'	No-Go nipple	7066.35 - 7065.53'
Next	1.14'	Cross-over 2-7/8" EUE seal lock	7065.53 - 7064.39'
Next	31.00'	2-7/8" seal lock	7064.39 - 7033.39'
Next	1.05'	Cross-over 2-7/8" seal lock EUE	7033.39 - 7032.34'
Next	2.32'	Udell landing nipple	7032.34 - 7030.02'
Next	1.15'	Cross-over 2-7/8" EUE seal lock	7030.02 - 7028.87'
Next	31.07'	2-7/8" seal lock	7028.87 - 6997.80'
Next	1.07'	Cross-over 2-7/8" seal lock EUE	6997.80 - 6996.78'
*Next	5.92'	Udell ported nipple	6996.78 - 6990.86'
Next	1.15'	Cross-over 2-7/8" EUE seal lock	6990.86 - 6989.71'
Next	6989.71'	223 jts. 2-7/8" seal lock & donut	6989.71 - surface

All measurements from derrick floor 15' above ground.

* Wireline pack off in place - plugs off ports from inside tubing.

7-10 Installed Gulfco Christmas tree and tested same Ok with 3500 psi. RIG RELEASED AT 7:30 AM.

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

REPORT ON PROPOSED OPERATIONS No. P 274-278

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

Santa Paula Calif.
July 15, 1974

DEAR SIR:

Your supplementary proposal to redrill Well No. DW 63 (037-21278),
Section 34, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 7/3/74, received 7/11/74, has been examined in conjunction with records filed in this office.

THE PROPOSED OPERATIONS ARE APPROVED.

Blanket Bond
DER:r

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

By *John F. Matthews, Jr.*, Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

SUPPLEMENTARY NOTICE

Los Angeles Calif. July 3, 19 74

DIVISION OF OIL AND GAS

Santa Paula Calif.

A notice to you dated April 25, 19 74, stating the intention to

redrill well No. I.W. 63

(Drill, deepen, redrill, abandon)

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

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

The present condition of the well is as follows:

Total depth 7390'; plugged depth, 7367'; effective depth, 7355'

Complete casing record including plugs.

- 13-3/8" 48# H-40 cemented at 699'
- 8-5/8" 36# K-55 & N-80 cemented at 7190' & 7919'
- WNSO 7060' squeezed with cement, WSO 7059'
- 6-5/8" 28# K-55 cemented at 7373', top at 7072', Lap & WSO holes at 7059-60' squeezed with cement. Perforated 7198'-7210', Reperf'd. 7200'-7210' & perforated 7210'-14', 7220'-7230', 7240'-7280', 7290'-7302', 7324'-7332'

We now propose (Confirming telephone conversation Ritzius - Olson June 28, 1974)

1. Test water shut-off on 8-5/8" x 6-5/8" lap at 7072'.
Division of Oil & Gas to witness test.
2. Run tubing and complete as gas storage well.

NOTE: Additional perforating made a satisfactory well obviating necessity to redrill.

P.O. Box 54790, Term. Annex

(Address)

Pacific Lighting Service Company

(Name of Operator)

L. A. Calif. 90051 (213) 689-3561

(Telephone No.)

By *P. S. Magruder, Jr.*

P. S. Magruder, Jr.

ADDRESS ONE COPY OF NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 274-181

Mr. E. S. Maeruder, Jr.
Pacific Drilling Service Inc.
P. O. Box 28700, Terminal Annex
Los Angeles, California 90054

Santa Paula, Calif.
April 25, 1974

DEAR SIR:

(037-21278)

Your proposal to redrill Well No. IW 65, Section 34, T. 3N., R. 16W., S. 4. B. & M., Aliso Canyon Field, Los Angeles County, dated 4/19/74, received 4/24/74, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. 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.
2. 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.
3. All portions of the hole not plugged with cement shall be filled with heavy rotary mud.
4. THIS DIVISION SHALL BE NOTIFIED:
 - a. TO INSPECT the installed blowout prevention equipment before drilling below 5500'.
 - b. TO WITNESS a test, after cleaning out below the top of the liner to determine the seal-off capability of the well from between the 6 5/8" and 8 5/8" casings.
 - c. TO WITNESS the test of the 6 5/8" water shut-off above the S4 zone marker.

Approved by [Signature]
Deputy State Oil and Gas Supervisor
will retain copy
D. J. [Signature]

Blanket Bond
ALL:b

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

By *[Signature]*, Deputy

DIVISION OF OIL AND GAS

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given before work begins; one copy only

Los Angeles Calif. April 19, 1974

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening~~ [&] redrilling, plugging ~~xxx~~ altering casing at Well No. IW 63
(Cross out unnecessary words)
Sec. 34, T. 3N, R. 16W, S.B.B. & M.
Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- 1. Total depth. 7390'; Plugged depth. 7367'
- 2. Complete casing record, including plugs:
 - 13-3/8" 48# H-40 cemented at 699'
 - 8-5/8" 36# K-55 & N-80 cemented at 7190', and cp at 1919'.
 - WNSO 7060' squeezed with cement. WSO 7059'.
 - 6-5/8" 28# K-55 cemented at 7373', top at 7072'.
 - Jet perforated 4 HPF 7198' - 7210'

3. Last produced. UNSATISFACTORY GAS INJECTION/WITHDRAWAL WELL
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

The proposed work is as follows:

- 1. Plug hole with cement from 7367' to 6900'. Division of Oil & Gas to witness location of plug.
- 2. Place 100' cement bridge from 5100' - 5000'.
- 3. Mill 30' section from 5000'± to 5030±. Wall scrape hole to 14" and plug hole with cement. Drill out cement to 5005'.
- 4. Directionally drill 7-5/8" hole to 7300'+.
- 5. Complete well with combination liner or cemented blank liner.
- 6. Obtain water shut-off on lap and in shale above S4 Sesnon zone marker. Division of Oil & Gas to witness.
- 7. Complete well for gas storage.

BB ✓ ✓

P. O. Box 54790, Terminal Annex
(Address)
Los Angeles, California 90051
(Telephone No.)
(213) 689-3561

Pacific Lighting Service Co.
(Name of Operator)
By P. S. Magruder, Jr.
P. S. Magruder, Jr.

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator Pacific Lighting Service Company Well No. IW 63

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

Location From Station 84 South 3419' & East 637'
(Give location from property or section corner, or street center lines)

Elevation of ground above sea level 1674 feet US65

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 June 8, 1973

Signed *P. B. Magruder Jr.*
Title Agent
(President, Secretary or Agent)

E. A. Olson
(Engineer or Geologist)

B. F. Jones
(Superintendent)

Commenced drilling August 6, 1972

Completed drilling September 1, 1972

Total depth 7390' Plugged depth 7367'

Junk _____

GEOLOGICAL MARKERS DEPTH

Top Sesnon S4 Marker 7170

Geologic age at total depth: Miocene

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

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
GAS STORAGE WELL					

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
13-3/8	699	Sfc	48#	N	S	H-40	17-1/2"	534	
8-5/8	7190	Sfc	36#	N	S	K-55 N-80	11"	600 100	Shoe 1919
6-5/8	7373	7072	27.65#	N	S	K-55	7-5/8"	75	

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

8-5/8" - four 1/2" jet holes 7060' WNSO squeezed with cement; four 1/2" jet holes 7059' WSO
6-5/8" - four 1/2" jet holes per foot 7198'-7210' NLT Log measurements

Was the well directionally drilled? Yes Electrical Log Depths 7386' (Attach Copy of Log)

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Company FIELD Aliso Canyon

Well No. IW 63, Sec. 34, T. 3N, R. 16W, SB B. & M.

Date June 8, 1973

Signed

P. S. Magruder Jr.

P. O. Box 54790, Terminal Annex

Los Angeles, Calif. 90054 (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.

1972

Date

8-6

Well drilled by Camay Drilling Company, Contractor, rig #8.
 All measurements taken from top of kelly bushing which was 15' above mat.
 Spudded well at 12:01 PM, 8-6-72, and drilled 11" hole to 922'.

8-7

Opened 11" hole to 17-1/2" from 40' to 705'.

8-8

TO CEMENT 13-3/8" SURFACE CASING: Ran 17 joints or 704.11 feet of 13-3/8",
 1 1/8", H-40, 8rd., ST&C, R-3, new seamless blank casing and cemented same at
 699' with 534 sacks of Class "G" cement treated with 2% calcium chloride.
 Cement in place 12:30 AM.

CASING DETAIL:

All 17 joints or 699 feet, 13-3/8" fitted on bottom
 with Baker stab in shoe.

Cut and recovered 13-3/8" casing, welded on Shaffer casing head and
 tested same to 3000# OK.
 Installed BOP.

8-9

Tested BOP to 1000# OK. Test witnessed and APPROVED BY ENGINEER FOR
 DIVISION OF OIL AND GAS.

8-10

Drilled 11" hole to 1270'.
 Pow-R-Drill #1 11" hole to 1288'.

8-11

Pow-R-Drill #1 11" hole to 1600'.
 Reamed 1482' to 1600' and directionally drilled 11" hole to 1778'.

8-12

Directionally drilled 11" hole to 2542'.

8-13

Directionally drilled 11" hole to 3153'.

8-14

Directionally drilled 11" hole to 3830'.

8-15

Directionally drilled 11" hole to 4405'.

1972

- 8-16 Directionally drilled 11" hole to 4540'.
Pow-R-Drill #2 11" hole to 4617'.
- 8-17 Reamed 4540' to 4617' and directionally drilled 11" hole to 5000'.
- 8-18 Directionally drilled 11" hole to 5192'.
Pow-R-Drill #3 11" hole to 5310'.
- 8-19 Pow-R-Drill #3 11" hole to 5351'.
Ream 5191' to 5351' and directionally drilled 11" hole to 5722'.
- 8-20 Directionally drilled 11" hole to 6100'.
- 8-21 Reamed 6060' to 6100' and directionally drilled 11" hole to 6447'.
- 8-22 Directionally drilled 11" hole to 6798'.
- 8-23 Ream 6123' to 6163' and directionally drilled 11" hole to 6950'.
Ran Dresser Atlas Induction Electrolog and recorded from 6937' to 699'.
- 8-24 Directionally drilled 11" hole to 7100'. Circulate and condition gas cut mud.
Ran Dresser Atlas Induction Electrolog and recorded from 7092' to 5600'.
Directionally drilled 11" hole to 7106'.
- 8-25 Directionally drilled 11" hole to 7190'.
TO CEMENT 8-5/8" CASING: Ran 172 joints or 7195' of 8-5/8", 36#, K-55 and N-80, Buttress thread, R-3, new seamless blank casing and cemented same at 7190' with 600 sacks Class "G" cement. Displaced with 2390 cu. ft. of mud to bump plug to place at 9:22 PM under 750# final pressure. Dropped plug and opened stage collar at 1919'. Pumped in 100 sacks Class "G" cement. Displaced with 690 cu. ft. mud. Did not bump plug; cement in place at 10:30 PM. Used Dowell bulk cement and power.
CASING DETAIL
Bottom 33 joints or 1386' (7190' to 5804') N-80 fitted on bottom with Davis fill-up float shoe and at 7146' with Davis fill-up float collar.
Next 139 joints or 5804' (5804' to Sfc.) K-55
Stage collar at 1919'.
Total 172 joints or 7190 feet.
- 8-26 Removed BOP, cut and recovered 8-5/8" casing, installed secondary 8-5/8" packing and tested same OK with 5000# psig.
Reinstalled BOP, ran 7-5/8" bit to stage collar plug at 1913'.
- 8-27 Drilled out stage collar at 1919' and same took fluid under 1000# pressure. Set Baker full bore cement tool at 2000' and tested casing OK under 1500#. Reset tool at 1800' and pumped away. Stage collar not holding.
TO SQUEEZE STAGE COLLAR AT 1919' WITH CEMENT: Set Baker cement tool above collar at 1919' and stage cemented with 100 sacks of Class "G" cement. Final pressure 1500# psig; cement in place at 1:00 PM.

1972

- 8-28 Drilled out cement with 7-5/8" bit from 1859' to 1919'; tested casing with 1500# psig for 15 minutes OK, and cleaned out to 7080'.
- TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7060': Ran combination gun and tester on 5" drill pipe and shot 4-1/2" jet holes at 7060'. Set packer at 7000'. Opened tool at 11:10 AM for 1 hour test. Strong blow 15 minutes and dead in 25 minutes. Recovered 1000' rise of drilling fluid. Water shut-off not approved.
- 8-29 TO SQUEEZE HOLES IN 8-5/8" CASING AT 7060' WITH CEMENT: Ran squeeze tool and set same at 6951'. Squeezed holes with 100 sacks Class "G" cement mixed to 118#/cu. ft. slurry. Cement in place at 4:35 AM under 2500# psig.
- Ran 7-5/8" bit with scraper above and drilled out cement from 7009' to 7060'. Tested casing OK with 1650# psig cement.
- 8-30 TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7059': Ran Johnston combination gun and tester and shot four 1/2" jet holes at 7059'. Set packer at 7014' with tail to 7039'. Opened tool at 1:17 AM for one hour test. Medium blow for 5 minutes, dead balance of test. Recovered 300' drilling fluid rise in 5" drill pipe. Charts OK. Water shut-off approved by ENGINEER FOR DIVISION OF OIL & GAS.
- TO TEST HOLES IN 8-5/8" CASING AT 7059': Ran squeeze tool on 5" drill pipe and set same at 6952'. Pumped 30 cu. ft. of fluid to obtain 2500# psig on holes. Held OK. Holes not taking fluid.
- Drilled out cement 7111' to 7190'. Drilled out shoe and drilled 7-5/8" hole to 7623'.
- 8-31 Drilled 7-5/8" hole to 7331'. Left 3 bit cones in hole. Ran Globe junk basket and recovered all cones. Reamed 7-5/8" hole 7300' to 7331'.
- 9-1 Drilled 7-5/8" hole to 7390'. Ran Dresser Atlas suite of logs.
- 9-2 TO CEMENT 6-5/8" BLANK LINER: Ran 301' of 6-5/8", 27.65#, K-55, R-3, Security flush joint, new seamless blank casing on 5" drill pipe and liner cementing tool and hung liner at 7072'. Cemented same at 7373' with 75 sacks of Class "G" cement, with .2 of 1% D13, mixed to 118#/cu. ft. slurry. Preceded cement with 30 cu. ft. of water and displaced with 722 cu. ft. of mud to bump plug under 3000# final pressure. Cement to place at 5:20 PM. Used Dowell cementing equipment and bulk cement.
- 9-3 Ran in to 7082' where bit stopped. Displaced mud in hole with salt water. Layed down drill pipe.
- 9-4 Finish laying down drill pipe, removed BOP and installed Christmas tree.

1972

- 9-5 Removed tree, reinstalled BOP and picked up drill pipe.
- 9-6 Ran spear on 3-1/2" and 5" drill pipe and attempted to stab into liner cementing tool. Lost spear in hole.
Ran socket and recovered spear.
Ran mill and milled up and pushed liner cementing tool with swab cups down hole to 7367'.
- 9-7 Ran Dresser Atlas cement Bond Log and Density Log.
Ran 5-5/8" bit with scraper above and cleaned out to 7367' EFFECTIVE DEPTH.
- 9-8 Lay down drill pipe and run Dresser Atlas Neutron Lifetime Log.
Removed BOP and installed Shaffer Tree.
RIG RELEASED 9:30 PM.
- 11-2 Moved in CPS and rigged up. Installed BOPE. Tested pipe rams with 3500 psi for 10 minutes, OK. Tested Hydril bag with 3400 psi for 10 minutes, OK.
- 11-3 Picked up 2-7/8" Seal-Lock tubing and ran 5-5/8" bit and 6-5/8" casing scraper. Tagged bottom at 7368'. Ran 8-5/8" Baker fullbore packer to 4427'.
- 11-4 Set fullbore packer at 4427' and tested from surface to 4427' with 3700 psi. Pressure fell off at a rate of 150 psi/hr. Made nine additional pressure tests as follows:

<u>Test Interval</u>	<u>Results</u>
Surface to 4488'	No good
" " 1848'	Held 3700 psi for 20 minutes, OK
" " 1943'	Held 3700 psi for 20 minutes, OK
" " 3192'	No good
" " 2567'	No good
" " 2261'	Held 3700 psi for 20 minutes, OK
" " 2440'	No good
" " 2347'	Held 3625 psi for 20 minutes, OK
Surface to 2409'	No good

Leak isolated between 2347' and 2409'.

- 11-5 Crew off

1972

- 11-6 Rigged up Welex. Ran Cement Bond and collar logs 1200-3000'. Ran 8-5/8" Baker Model "C" bridge plug on fullbore packer. Set bridge plug at 2460'. Set fullbore at 2440' and tested bridge plug with 3700 psi for 15 minutes, OK. Pulled up and set fullbore at 2410'. Tested 2410'-2460' with 3800 psi for 20 minutes, OK. Pulled up and set fullbore at 2378'. Tested 2378'-2460' with 3800 psi for 20 minutes, OK. Pulled up and set packer at 2318'. Tested 2318' - 2460', no good. Leak in collar at 2344' (CBL/CCL measurement). Broke down at 3200 psi and took fluid at a rate of 10 ft³/minute at 1750 psi. Ran in to 2440' and dumped five sacks sand. Pulled up and set fullbore packer at 2194'. With 50 ft³ fresh water ahead mixed and pumped 100 sacks Class "G" cement with 2% calcium chloride and 0.5% CFR-2. Displaced with 115 ft³ salt water. Final pressure 1350 psi. Cement in place at 10:00 pm. Used Halliburton equipment.
- 11-7 Ran 7-5/8" bit and 8-5/8" casing scraper. Tagged cement at 2250'. Drilled and cleaned out cement stringers 2250'-2285' and hard cement 2285'-2337'.
- 11-8 Tested from surface to 2460' with 2750 psi, no good. Measured in and set fullbore at 2360'. Tested 2360'-2460' with 2700 psi for 15 minutes, OK. Pulled up and set fullbore at 2320'. Tested from surface to 2320' with 2525 psi for 15 minutes, OK. Tested 2320'-2460', no good. Broke down at 4550 psi and took fluid at a rate of 12 cu ft per minute at 1800 psi. Pulled up and set fullbore at 2164'. With 50 ft³ fresh water ahead mixed and pumped 100 sacks Class "G" cement with 2% calcium chloride and 0.5% CFR-2. Displaced with 107 ft³ salt water. Final pressure 3250 psi. Cement in place 11:20 pm. Used Halliburton equipment.
- 11-9 Ran 7-5/8" bit and 8-5/8" casing scraper. Tagged cement at 2238'. Drilled and cleaned out hard cement 2238'-2344'.
- 11-10 Tested from surface to 2460' with 2600 psi for 20 minutes, OK. Ran in with bridge plug retrieving tool. Backscuttled cement and sand, and pulled bridge plug. Rigged up Dresser Atlas. Jet perforated four 1/2" holes per foot 7198'-7210' (NLL/CCL measurement). Used 4" carrier and 17 gram charges. During perforating operations discovered junk in hole. Ran 7-5/8" bit and 8-5/8" casing scraper. Tagged top of liner at 7072'.
- 11-11 Ran 5-1/2" junk basket on Dresser Atlas Electric line. Could not work basket into liner. As basket was being pulled through BOPE rope socket parted. Made feeler run with electric line and tagged junk basket fish at 7056'. Ran overshot and guide shoe on tubing and recovered fish. No significant recovery in junk basket.
- 11-12 Crew off

1972

- 11-13 Ran 6-5/8" casing scraper to 7355'. Backscuttled 2-1/2 hours. Recovered 100-150 bbls drilling mud. Pulled up to 7045' and backscuttled 30 minutes. Ran Baker Model "D" production packer on Dresser Atlas Electric line and set same at 7044' (NLL/CCL measurement).
- 11-14 Rigged up to run safety valve and control line. Tested safety valve and 6800' of 1/4" control line with 5000 psi for 30 minutes, OK.
- 11-15 Ran safety valve and control line on tubing to 6750'. Tested safety valve and control line with 5000 psi for 15 minutes, OK. Made control line splice and continued in hole. Tested safety valve and control line through donut with 5000 psi for 15 minutes, OK. Landed tubing with 13000# on Model "D" packer. Tore out BOPE and installed production head. Tested safety valve and control line through head with 5000 psi for 30 minutes, OK. Tested donut seals through test port with 4500 psi for 10 minutes, OK. Set Shaffer back pressure valve in donut and tested through unbolt cap with 4500 psi for 10 minutes, OK.

TUBING DETAIL

2-7/8"N-80 Seal-Lock fatigue nipple	.60'
2-7/8" N-80 Seal-Lock pup joint	8.00'
2-7/8" N-80 Seal-Lock pup joint	12.00'
225 joints 2-7/8" J-55 Seal-lock tubing	7025.37'
2-7/8" Seal-Lock x 2-7/8" 8 rd N-80 X-over	1.20'
Page 3-1/2" type RTL safety valve with ported nipple	5.62'
3-1/2" 8 rd x 2-7/8" 8 rd J-55 X-over	1.20'
Baker Seal Assembly	<u>7.70'</u>
	7061.69'

SURVEY RECORD

JOB NO 520 ONE DATE 8-25-1972

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS	
						NORTH	SOUTH	EAST	WEST		
120	.59	120		I 04	N 06 E	I 03			10		
210	.39	210		79	N 31 W	I 71					31
300	VERY	300		0 00	VERT	I 71					31
400	.30	400		94	S 20 W	I 86					71
501	1.15	503	03	2 03	S 60 W			16			2 47
504	3.00	503	05	4 07	S 64 W			4 30			5 29
600	3.15	603	70	5 59	S 63 W			8 45			8 52
701	4.00	703	43	6 42	S 41 W			13 20			12 74
874	5.00	873	18	8 11	S 57 W			19 73			17 62
1001	5.45	999	49	12 75	S 57 W			29 04			23 23
1002	6.00	1002	09	10 04	S 42 W			37 33			32 40
1136	6.00	1135	56	6 73	S 51 W			41 07			37 66
1249	8.45	1245	40	14 15	S 56 W			49 73			49 09
1331	6.30	1326	95	9 23	S 62 W			54 14			57 29
1393	4.15	1393	78	4 59	S 51 W			57 03			60 24
1456	2.00	1451	74	2 20	S 53 W			58 29			62 66
1518	1.00	1513	73	1 08	N 09 W			57 22			62 83
1549	2.30	1543	70	1 31	N 36 E			56 16			62 06
1693	5.15	1693	07	13 73	N 57 E			43 03			50 55
1709	5.30	1703	65	8 72	N 54 E			43 53			45 59
1916	5.00	1910	17	11 07	N 57 E			37 53			34 21
2010	5.00	2011	70	8 09	N 57 E			32 69			26 75
2190	5.00	2191	10	15 69	N 57 E			24 14			15 52
2373	5.00	2367	43	15 43	N 55 E			15 29			13 23
2542	4.30	2533	91	13 11	N 52 E						9 33
2773	4.45	2766	12	19 39	N 52 E	4 66		7 22			24 59
3000	4.00	3000	50	15 70	N 52 E	14 52					36 95
3291	4.30	3290	65	23 63	N 53 E	27 53					56 54
3509	3.30	3509	12	17 02	N 61 E	35 70					71 43
3869	3.15	3843	67	15 03	N 65 E	42 49					85 02
4103	3.30	4096	20	15 13	N 74 E	46 66					109 27
4220	3.15	4210	00	6 92	N 74 E	49 56					107 03

SURVEY RECORD

JOB NO 520 TWO DATE 8-25-1972

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS
					NORTH	SOUTH	EAST	WEST	
4303	4.00	4310 77	6 49	N 78 E	49 91		118 57		
4414	4.39	4401 49	7 14	N 68 E	50 90		120 44		
4506	5.15	4493 10	8 42	N 78 E	52 05		120 03		
4501	5.45	4550 81	5 81	N 77 E	53 95		123 34		
4605	6.30	4591 55	4 64	N 69 E	56 27		123 55		
4709	9.00	4603 38	14 06	N 80 E	69 13		145 78		
4734	11.30	4777 49	16 74	N 84 E	04 66		156 23		
4806	13.15	4867 04	21 09	N 41 E	100 58		170 10		
4900	15.45	4957 51	25 53	N 49 E	117 32		189 53		
5075	18.20	5045 70	29 51	N 55 E	124 24		218 54		
5100	22.15	5133 63	35 97	N 59 E	132 77		244 57		
5211	23.15	5173 14	16 97	N 56 E	162 26		253 43		
5242	21.30	5201 93	11 36	N 51 E	169 41		267 26		
5275	21.30	5232 68	12 09	N 46 E	177 01		275 25		
5309	26.30	5261 22	12 11	N 42 E	186 01		284 05		
5397	26.20	5342 66	49 69	N 37 E	219 24		303 48		
5522	27.20	5453 54	57 71	N 37 E	265 35		343 21		
5722	28.30	5629 30	95 44	N 38 E	340 54		401 97		
5820	28.30	5715 42	46 76	N 33 E	377 59		430 76		
6012	29.00	5833 35	93 08	N 40 E	448 69		490 59		
6100	29.30	5939 94	43 33	N 40 E	491 03		518 44		
6206	29.45	6123 01	89 47	N 42 E	543 37		573 30		
6400	27.30	6224 13	52 63	N 42 E	597 49		613 51		
6571	28.00	6375 11	80 23	N 43 E	646 19		669 26		
6736	29.15	6536 53	90 39	N 44 E	711 21		731 05		
6930	28.15	6707 41	91 32	N 44 E	777 26		794 03		
7100	29.00	6838 60	72 72	N 44 E	829 57		845 35		
7300	26.00	7099 25	127 13	N 41 E	923 52		923 76		
HORIZONTAL DEPARTURE					1311.83	N 45.06	E 5425	SUB SEA DEPTH	

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

Report on Operations

No. T 172-1036

Mr. P. S. Magruder, Jr., Agent
PACIFIC LIGHTING SERVICE CO.
P.O. Box 54790, Term. Annex
Los Angeles, CA 90054

Inglewood, Calif.
Sept. 5, 1972

DEAR SIR:

Operations at well No. IW 63 (037-21278), Sec. 34, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on August 30, 1972. Mr. R. Dreessen, Engineer, representative of the supervisor was
present from 0600 to 0630. There were also present C. Coates, Drilling Foreman.

Present condition of well: 13-3/8" cem. 699'; 8-5/8" cem. 7190', cp 1919', cp 7060', perf.
7059' WSO. T.D. 7190'.

The operations were performed for the purpose of testing the water shut-off with a formation
tester.

Mr. ----- reported:

THE 8-5/8" SHUT-OFF AT 7059' IS APPROVED.

RD:dr

cc Company

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

By WES Ingram Deputy

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

Report on Operations

No. T 172-936

Mr. F. S. Macruder, Jr., Agent
PACIFIC LIGHTING SERVICE COMPANY
P. O. Box 54790, Terminal Annex
Los Angeles, CA 90054

Inglewood, Calif.
August 11, 1972

DEAR SIR:

Operations at well No. IM 63 (09/-21278), Sec. 34, T. 3 N, R. 15 N, S.E. B & M,
Aliso Canyon Field, in Los Angeles County, were witnessed
on August 9 & 10, 1972. Mr. G. Ledingham, Engineer, representative of the supervisor was
present from 2200 to 0100. There were also present P. Geddes and G. Coatas,
Drilling Foremen.

Present condition of well: 13-3/8" cas. 699'. I.D. 921'.

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

Mr. ----- reported:

THE BLOWOUT-PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

GL:rah

cc: Company

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

By W. L. Ingram Deputy

JUN 22 1977

DIVISION OF OIL AND GAS

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given before work begins; one copy only

SANTA PAULA, CALIFORNIA

Santa Paula Calif. June 20 19 77

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling, plugging or altering casing at~~ Well No. I. W. #63
(Cross out unnecessary words)

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

The present condition of the well is as follows:

1. Total depth. 7390'
2. Complete casing record, including plugs:
 - 13 3/8" cemented 699'
 - 8 5/8" cemented 7190', stage collar 1919', cp'd 2344'
 - 301' 6 5/8" cemented 7373', top of cement plug at 7367'
four 1/2" holes per foot 7332'-7324'; 7302'-7290'; 7280'-7240';
7230'-7220' and 7214'-7200', WSO on lap at 7072'
 - 254' 2 3/8" 20-mesh wire-wrapped landed 7350', Retrieva-"D" packer at 7193'; perforated 7096'-7380' and gravel packed with 41 cu.ft. of 10-20 gravel

MAP	Well	Section	Township	Range	Subsection
					11A 121
					✓

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

The proposed work is as follows:

1. Move in rig. Kill well. Install B.O.P.E. and pressure test. Pull and lay down tubing.
2. Make up drill pipe. Recover packer and 2 3/8" liner. Plug 6 5/8" liner with cement 7367'-7270'. Mill up 6 5/8" liner 7072'-7240'.
3. Open 7 5/8" hole to 9" 7190'-7740' and plug with cement.
4. Shoot four 1/2" holes at 7150' and squeeze with cement. Shoot four 1/2" holes at 7149' and test WSO. Pressure test casing.
5. Re-cement holes at 2344' which are indicated to be leaking.
6. Redrill 7 5/8" hole 7210'-7350' and run Log. Open hole to 14".
7. Run 160' of 5 1/2" wire-wrapped liner and gravel flow pack with 20-40 mesh gravel.
8. Set packer at 7080'. Set casing patch 2324'-2282'.
9. Run tubing with down-hole safety system. Return well to gas storage.

P. O. Box 3249, Terminal Annex
Los Angeles (Address) California 90051

(213) (Telephone No.) 689-3561

SOUTHERN CALIFORNIA GAS COMPANY

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

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 172-851

Mr. F. S. Magruder, Jr., Agent
PACIFIC LIGHTING SERVICE COMPANY
P. O. Box 54790, Terminal Annex
Los Angeles, CA 90056

Inglewood, Calif.
July 21, 1972

DEAR SIR:

Your _____ proposal to drill _____ Well No. W 63 (037-21278),
Section 34, T. 3N, R. 10W, S. D. B. & M., Aliso Canyon Field, Los Angeles County,
dated 7-10-72, received 7-13-72, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. A COPY OF THIS REPORT SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.
2. The surface casing shall be cemented in competent beds and blowout prevention equipment, conforming to this Division's Class III requirements, shall be installed and maintained in operating condition at all times.
3. Sufficient cement shall be used to fill back of the 13-3/8" casing to fill back of the casing to the surface.
4. Sufficient cement shall be used to fill all the space back of the 8-5/8" casing to above the top of any oil, gas, or salt water-bearing formations, or the casing shall be cemented also through ports at a point below the base of the fresh water-bearing formations with sufficient cement to fill above such base.
5. THIS DIVISION SHALL BE NOTIFIED:
 - a. To inspect and witness a test of the blowout prevention equipment prior to drilling out cement in the shoe of the 13-3/8" casing.
 - b. To witness a test of the effectiveness of the 8-5/8" shut-off above the Sennon zone.

AJE:rah

cc: Company

Blanket Bond

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

By F. S. Magruder, Jr., Deputy

Recd. 7-17-72
JUL 13 1972

037-21278

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

Los Angeles, Calif. Inglewood, California
July 10, 1972

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 63 (037-21278), Sec. 34, T. 3N,

R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 234.2 acres, is as follows: Fernando Fee Lease
(Attach map or plat to scale)

(See attached plat)

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: 3418.53 feet South along section line and 636.98 feet East
(Direction) (Direction)

at right angles to said line from the Station 84 property corner of section.

Elevation of ground above sea level 1673.67 feet Per Metrex A.S. Co. datum.

All depth measurements taken from top of K.B. which is 12.0 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	0'	700'	700'
8 5/8	36#	K-55 & N-80	0'	7150'	7150'

Intended zone(s) of completion: Sesnon 6970', 7150' Estimated total depth 7150'
(Name) (Depth, top and bottom)

MAP	MAP BOOK	CASING	LOGS	FORMS
				114 121

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

Address 720 West Eighth St.

Pacific Lighting Service Co.
(Name of Operator)

Los Angeles, California

By P. S. Magruder, Jr.

Telephone Number 213-689-3561

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

- 9-25-77 Ran in with Baker Model "B" retrieving tool. Latched onto Lok-Set bridge plug at 2024' and pulled out. Ran in hole with 7 5/8" bit and 8 5/8" casing scraper and drilled out Baker Model "K" cement retainer at 6851' and cement to 6890'. Circulated hole clean at 6904'. Pulled out of hole. Made up Baker fullbore squeeze tool and running in hole.
- 9-26-77 Ran in well with Baker Model "C" fullbore, set at 6834'. Pressure tested WSO holes at 6882'-6883' under 1200 psi for 60 minutes. Pulled out of well. Ran McCullough Cement Bond Log from 6904'-5200'. Ran Noise Log from 6898' - 5000'. Ran in well with Baker retrieving tool and washed out sand above bridge plug. Latched onto bridge plug at 6940'. Worked bridge plug out of 7" and pulled out of well.
- 9-27-77 Finished pulling out of well with Bridge plug. Rigged up McCullough and ran Noise Log. Which stopped at 7070'. Ran in well with open-end drill pipe and located fill at 7170'. Cleaned out to 7190' and reversed circulated well clean. Pulled out of well, ran triangle Noise Log, logged from 7189' to 4000'. Log showed no gas leak behind casing. Ran in well with 6 1/8" bit, drill collars and drill pipe. Drilled out cement from 7090' to 7210'.
- 9-28-77 Circulated well clean. Displaced drilling fluid with new 86#/cu.ft. brine polymer drilling fluid. Cleaned suction pit and pulled out of well. Made up Dyna drill assembly. Ran in well, Dyna drilled 6 1/8" hole from 7210' to 7246', pulling out of well.
- 9-29-77 Finished pulling out of well. Layed down Dyna drill tools. Made up drilling assembly. Ran in well reamed from 7202' to 7246' and drilled 6 1/8" hole from 7246' to 7301'. Pulled out of well, changed bits, ran back in well. Reamed from 7259' to 7301', drilled 6 1/8" hole to 7302'. Survey at 7247' 32° N 39E.
- 9-30-77 Pulled out of well, left 3 cones from 6 1/8" bit in hole. Ran back in well with 6" Globe junk basket and junk sub. Worked over junk at 7302'. Pulled out of well, no junk in junk basket. Recovered several small pieces of junk in junk sub. Ran back in well with Servco 6" junk mill and junk sub. Milled on junk from 7302' to 7303'. Pulled out of well and recovered several small pieces of junk in junk sub. Made up 6 1/8" drilling assembly. Running in well.
- 10-1-77 Finished running in well with 6 1/8" drilling assembly. Drilled 6 1/8" hole from 7302' to 7350'. Survey at 7350' 35° N 34° E. Made wiper trip to 7190'. Circulated well clean. Pulled out of well. Rigged up and ran Dresser Atlas Induction Log from 7350' to 7190'. 7350' V.D. 7053' 731' N 923' E.

RECEIVED
DEC 30 1977

Well History for I.W #63 - Aliso Canyon

SANTA PAULA, CALIFORNIA

- 10-2-77 Finished running Dresser Atlas Induction Log. Ran in well with Tri-State 6" x 13" hole opener with 240' x 4 1/8" drill collars, bumper sub. Opened 6 1/8" hole to 13" from 7190' to 7208'. Pulled out of well, changed hole opener. Ran back in well. Opened hole from 7208' to 7218' and tool failed to open. Pulled out of well. Changed hole opener. Ran back in well with hole opener #3. Opened hole from 6 1/8" to 13" from 7208' to 7228'.

- 10-3-77 Opened 6 1/8" hole to 13" from 7228' to 7245'. Pulled out of well and changed hole opener. Ran back in well with hole opener #4. Opened hole from 7245' to 7247'. Pulled out of well, left two cones from hole opener in well. Ran back in well with hole opener #5 and opened hole from 7247' to 7263' - 16' in 4 hours. Pulled out of well and changed hole opener. Ran in well with hole opener #6.

- 10-4-77 Finished running in well with hole opener #6. Unable to get hole opener through 7" hanger at 6900'. Pulled out of well. Ran back in well, with open end drill pipe with 45° on bottom and located fill at 7275'. Cleaned out to 7350'. Circulated well clean. Pulled out. Ran back in well with hole opener #7, open 6 1/8" hole to 13" from 7263' to 7288'.

- 10-5-77 Finished pulling out of well with hole opener #7. Ran back in well with hole opener #8 - opened 6 1/8" hole to 13" from 7288' to 7298'. Pulled out of well, ran back in well with hole opener #9 - unable to go through 7" hanger at 6904'. Pulled out of well. Ran back in well with hole opener #10 and opened hole from 7298' to 7299' - one foot in one hour. Pulling out of well.

- 10-6-77 Finished pulling out of well with hole opener #10. Ran back in well with hole opener #11 - unable to get inside 7" hanger at 6904'. Pulled out of well. Ran back in well with hole opener #12, opened 6 1/8" hole to 13" from 7299' to 7300'. Pulled out of well. Ran back in well with hole opener #13, opened hole from 7300' to 7301'.

- 10-7-77 Pulled out of well with Tri-State hole opener #13. Ran back in well with Servco 6" x 13" hole opener. Found shoulder at 7299', started opening hole. Drill pipe parted. Pulled out of well. Top of fish 6030'. Ran back in well with Servco 7 5/8" concave mill. Milled tool joint from 6030' to 6032'.

- 10-8-77 Pulled out of well with 7 5/8" Servco concave mill. Made up and ran in well with 5 3/4" Bowen overshot with 2 3/8" bumper sub and jars. Latched onto fish at 6032'. Jarred on fish with 150,000# and came free. Pulled up to shoe of 7" casing, but unable to close arms on hole opener. Ran back to bottom (7299'). Rigged up Dia-Log. Ran collar locator and string shot. Unable to torque pipe because hole opener kept turning. Pulled up to shoe of 7" casing with hole opener stuck in shoe. Backed off at 7000'. Pulled out of well and left hole opener and six 4 1/8" drill collars in well.

- 10-9-77 Ran drill pipe in well. Pulled out of well laying down damaged 2 7/8" drill pipe. Made up Midway screw in sub. bumper sub, bumper sub, jars, four 4 3/4" drill collars and accelerator. Measured and picked up 2 7/8" drill pipe. Screwed into top of fish at 7000'. Jarred on fish. Pulled up to shoe. Rotated against shoe to close arms on hole opener. Pulling out of well with fish.
- 10-10-77 Finished pulling out of well with fish. Left cone and arm from Servco hole opener in hole. Ran back in well with drill pipe and chased junk from 7300' to 7350'. Circulated well clean. Pulled out of well. Ran back in well with Tri-State hole opener with hard-faced cones.
- 10-11-77 Finished running in well with Tri-State 6" x 12" hole opener with hard faced cones but unable to open any hole. Pulled out of well and left nose of hole opener in hole. Ran back in well with Servco 6" junk mill. Milled and pushed junk from 7302' to 7347'. Pulled out of well. Ran in well with Tri-State hole opener 6" x 12".
- 10-12-77 Finished running in well with Tri-State hole opener 6" x 12" - opened 6 1/8" hole to 12" from 7300' to 7310'. Pulled out of well. Ran back in well with Tri-State 6" x 13" hole opener and opened 6 1/8" hole to 13" from 7300' to 7315'. Pulled out of well.
- 10-13-77 Ran in well with Tri-State 6" x 13" hole opener. Opened 6 1/8" hole to 13" from 7315' to 7326' and pulled out of well. Changed hole opener. Ran back in well and opened hole from 7326' to 7339'. Pulled up to 7300'. Opened 12" hole to 13" from 7300' to 7308'. Pulled out of well.
- 10-14-77 Finished pulling out of well. Ran in well with 6 1/8" bit, cleaned out fill from 7330' to 7346' and circulated well clean. Pulled out of well. Ran back in well with Tri-State 6" x 13" hole opener and re-opened 13" hole from 7190' to 7339'.
- 10-15-77 Circulated well clean. Pulled out of well. Ran Dresser Atlas hole Caliper Log which showed hole opened to 13". Ran back in well with open-end drill pipe to 7343'. Displaced drilling fluid with new clean filtered 86#/cu.ft. brine-polymer completion fluid. Pulled up to 7000' and cleaned suction pits. Pulled out of well.
- 10-16-77 Finished pulling out of well. Rigged up and ran 331' 10-mesh wire-wrapped (5") liner. Landed liner at 7343' with hanger at 7012'. Tested lead seal with 1200 psi. Pulled out of well. Ran back in well with gravel packing tools and located port collar and opened same. Circulated for one hour before gravel packing. Using B. & W. gravel packing equipment, packed with 20-40 gravel under 500 psi at two barrels per minute - 63 cu.ft. in place.

- 10-17-77 Continued gravel packing 5" liner with 500 psi at 2 barrels per minute. Had displaced 122 cu.ft. of 20-40 gravel behind 5" liner when packed off. Closed port collar and backscuttled out 1 cu.ft. of gravel. Tested port collar at 1000 psi. 121 cu.ft. of gravel behind liner. Pulled out. Ran in with Burns washer on 2 3/8" tubing stinger. Located liner shoe at 7343'. Broke circulation and washed liner with four passes from 7341' to 7238'. Pulled out washing tool. Ran in with Burns gravel packing tool-opened port collar at 7016' and circulated.
- 10-18-77 Continued gravel packing with 20-40 gravel. Pumped in 4 cu.ft. of gravel pack-off. Back scuttled out 1 cu.ft. total gravel behind 5" liner 124 cu.ft. closed port collar. Tested at 1000 psi - O.K. Calculated volume 110 cu.ft. Pulled out gravel packing tool. Rigged up lubricator. Ran Dresser Atlas Photo Log from 7334' to 6850' in 5" liner. Removed lubricator. Ran in hole with Servco 7 11/16" tapered mill and two 7 5/8" stabilizer 4 1/16" drill collars on top of 7" casing at 6904'. Circulated and conditioned polymer fluid. Pulled out and rigged up lubricator.
- 10-19-77 Rigged up lubricator. Ran GO-International junk basket with feeler gauge to top of 7" innerstring at 6904'. Ran Otis 8 5/8" WC packer with 3 1/2" N-80 pup extension with Otis NO-GO nipple with XN plug in place below pup joint, and set top of packer J-latch mandrel at 6899'. Removed Lubricator. Ran in 2 7/8" drill pipe and laid down 220 joints of 2 7/8" drill pipe, six 4 1/4" drill collar, Kelly and 10 joints of 2 3/8" tubing. Ran in Baker Model "B" Lok-Set bridge plug and set at 180'. Dismantling rig. preparing to raise rig and base. Secured well at 10:00 P.M.
- 10-20-77 Started tour at 7:00 A.M. Removed sand line drum from rig. Lowered derrick. Removed sub-base and pipe rack. Installed cement pads for pipe rack. Shut crew down at 3:00 P.M. Rig on stand-by.
- 10-21-77 Moved rig and sub-base off. Removed B.O.P.E. Raised mats 15". Replaced rig and sub-base back over well.
- 10-22-77 Rig inoperative due to repairs. Set 10" 5000# casing landing spool and tested between secondary seal in new McEvoy casing head on 8 5/8" 36# K-55 casing and seal flange at 3700 psi for 30 minutes. Installed Class III 5000 psi B.O.P. and nipped up. Tested blind rams with water at 3100 psi for 30 minutes. Off loaded 177 joints of 7" 26# casing on rack. General rig up. Secured well at 6:00 P.M. (10-23-77) Rig and crew idle. C.P.S. will repair rig Sunday.
- 10-23-77 Rig and crew idle.

- 10-24-77 Started tour at 6:00 A.M. Rigged up and tested Hydril bag with water at 2700 psi for 25 minutes. Ran Baker Model "B" retrieving tool and recovered Baker Model "B" Lok-Set bridge plug at 180'. Rigged up R. & R. power tongs and Hydrotest for 7" 26# casing. Made up Otis overshot 3' cross-over on 7" casing. Picking up and running in hole and hydrotesting 7" 26# casing at 4000 psi.
- 10-25-77 Continued running 7" 26# N-80 8rd casing, hydrotesting at 4000 psi. Ran to top of Otis packer. Mixed 10 gallons of KIB-100 inhibitor in 100 barrels of polymer fluid and displaced between 8 5/8" and 7" annulus. Latched 7" casing on Otis mandrel above Otis packer at 6901' - set 50,000# on packer. Pumped down annulus between 8 5/8" and 7" with 1000 psi - held 1000 psi for 15 minutes - O.K. Unflanged B.O.P. Landed 7" casing on slips and pack-off. Cut off 7" casing and recovered 15.62' of 7" casing. Removed B.O.P. Installed 7" secondary seals - tubing head. Reinstalled B.O.P. 7" 26# N-80 168 joints = 6908' - Landed at 6901'.
- 10-26-77 Unable to get test on 7" casing slip seals. Installed B.O.P.E. Ran and set Baker Model "B" Lok-Set bridge plug at 172'. Attempted to test blind rams - pressured up to 1100 psi and casing parted. Circulated between 8 5/8" casing through 7" casing. Removed B.O.P.E. Ran in with Midway 7" spear. Pulled up to 80,000# - would not come free. Rigged up Alco hydraulic jacks - took ahold of 7" casing - pulled 90,000# and came free...pulled out. Pulled out 56' of 7" 26# casing parted at collar, leaving pin up. Rigged down jacks. Reinstalled B.O.P.E.
- 10-27-77 Continued nipling up Class III 5000 psi B.O.P. Ran and set Baker Model "B" Lok-Set bridge plug at 30' in 8 5/8" casing, tested blind rams with water at 2000 psi. Pulled 8 5/8" Baker bridge plug. Ran in retrieved 7" Baker bridge plug at 172'. Removed 10" bag. Rigged up Alco jacks on top of Shafer gate. Made up and ran Midway spear, tool took ahold of 7" casing at 75'. Worked in one and half around torque and worked pipe from 80,000# to 110,000#. Pulled up 7" casing with jacks and unjayed from Otis packer. Pulled and laid down one joint of 7" casing and collar. Picked up and ran 3 joints of 7" 26# N-80 8rd LT&C on 7" casing string. Hydrotested casing at 4000 psi. Landed casing on Otis packer. Closed rams. Tested Otis overshot seals, pumping down 8 5/8" and 7" casing at 1000 psi with rig pump. Held pressure for 15 minutes - O.K. Unflanged Shaffer gate.
- 10-28-77 Unflanged B.O.P. and raised up. Landed 7" 26# casing with 56,000# on Otis packer and balance on wellhead. Cut off 7" casing, installed secondary flange and tubing head. Tested seals at 5000 psi. Reinstalled Class III 5000 psi B.O.P. Tested blind rams and 2 7/8" pipe rams with water and nitrogen at 4000 psi for 20 minutes each. Tested Hydril bag at 3000 psi for 20 minutes. Installed 8 5/8"x 3" flange on bag for lubricator and secured well at 10:00 A.M.

- 10-29-77 Started tour at 6:00 A.M. Rigged up Archer-Reed wireline unit. Ran Otis retrieving plug catcher - unable to latch on "XN" plug at 6909'. Removed lubricator and flange. Ran in hole with 12' x 1 3/4" pipe on 2 7/8" tubing, measuring and picking-up tubing. Tagged Otis "XN" plug at 6909'. Circulating.
- 10-30-77 Circulated hole clean. Pulled out. Ran in with Otis "XN" pulling tool on 1 3/4" hydraulic - had jars and bumper sub on 2 7/8" tubing. Attempted to latch on. Pulled out and found pin sheared. Rigged up Archer-Reed lubricator. Ran same, pulling set-up on wireline. Unable to latch on. Pulled out and left equalizing prong in "XN" plug. Ran impression block on wireline and located prong in "XN" plug. Ran 3/4" overshot on wireline. Unable to latch on. Ran overshot with 3/4" grapple - unable to get equalizing prong. Ran in hole with "XN" plug, retrieving tool on tubing.
- 10-31-77 Continued running in hole with Archer-Reed "XN" plug retrieving tool on 2 7/8" tubing. Latched on to plug and pulled out and recovered plug. Ran back in hole to top of Otis packer. Circulated out gas-cut mud. Pumped in 200 barrels of new 86#/cu.ft. brine-polymer drilling fluid from storage tank. Pulled out. Rigged up GO-International and lubricator. Ran 6" feeler gauge and junk catcher to 6899'. Ran Baker Retrieval "D" packer and set at 6883'6899'. Made up Camco safety flow system on Baker seal units and latch-in sub. Running in and hydro-testing tubing at 5000 psi using Baker seal on couplings.
- 11-1-77 Continued running 2 7/8" - K-55 tubing and hydro-test at 5000 psi. Spaced out tubing string. Latched on to Baker Retrieval D packer. Pulled 20,000# over weight of string. Landed tubing string with Camco flow system at 6878' with 10,000# on packer. Tubing string weight 48,000#. Removed B.O.P. and installed Xmas tree. Tested between upper and lower tubing hanger seals. Tested upper tubing seals and Xmas tree at 5000 psi. O.K. Rigged up and circulated polymer fluid in well without lease salt water. Archer-Reed ran Camco standing valve plug and set in Camco D nipple, tested Baker seals and Retrieval D packer at 1500 psi for 30 minutes. Blind flanged out lets on well head and tree. Finished well and released rig at 10:00 P.M. 11-1-77.

SOUTHERN CALIF. GAS CO.
IW-63
ALISO CANYON, CA.

P-53

STA. NO.	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES
1	7190	28°00'	6920.0		N 43°00' E	859.0 N 871.0 E
2	7247	32°00'	6968.3	30.2	N 39°00' E	882.5 N 890.0 E
3	7350	35°00'	7052.7	59.1	N 34°00' E	931.5 N 923.1 E

CLOSURE: 1311.4' N 44°44' E

SURVEY DATA AT 7190' WAS FURNISHED BY THE OPERATOR

DIVISION OF OIL AND GAS
RECEIVED
JAN 25 1978
SANTA PAULA, CALIFORNIA



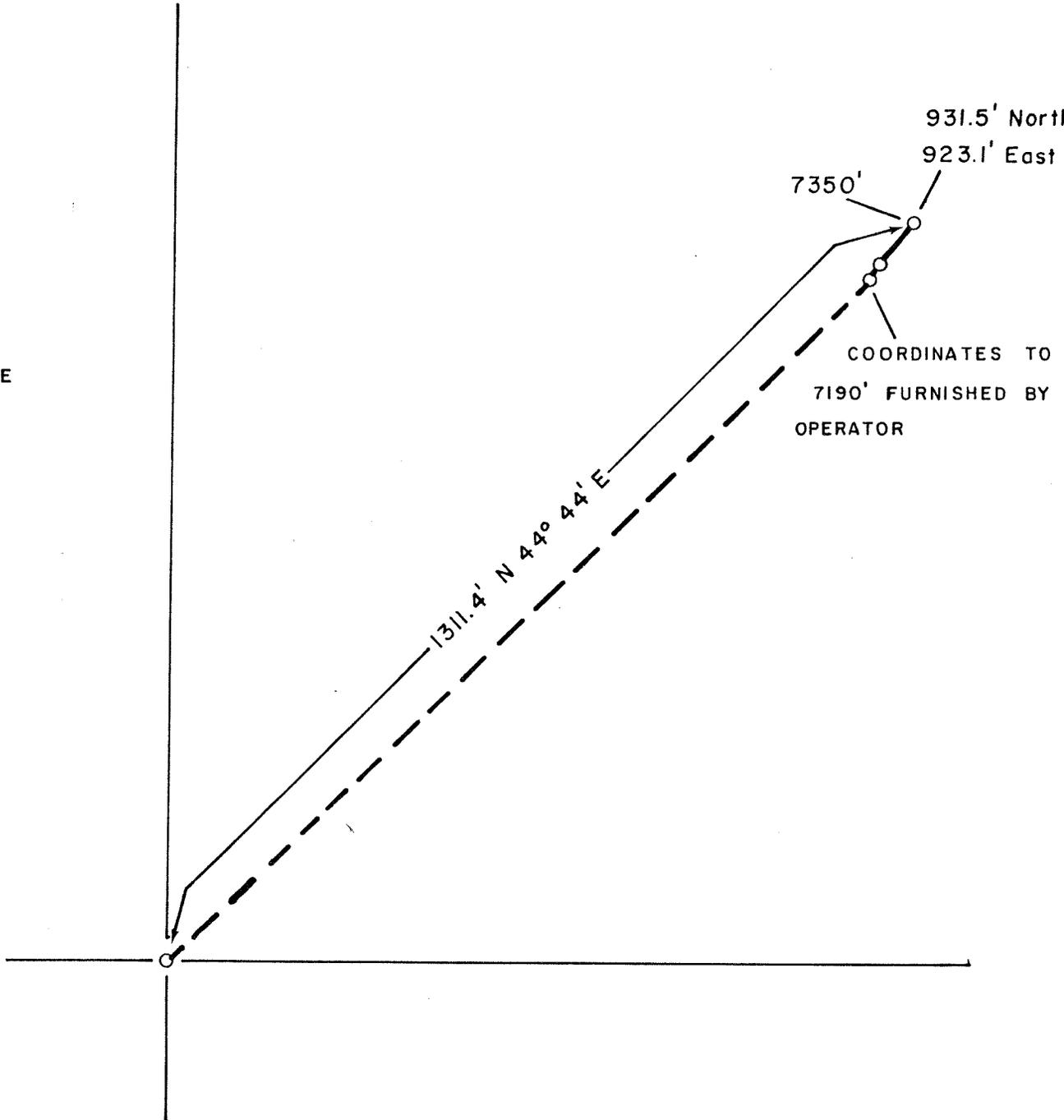
JOB NO. 39-977
DATE 9/77
DECL. 15°00'

DIVISION OF OIL AND GAS
RECEIVED

JAN 25 1978

SANTA PAULA, CALIFORNIA

Decl. 15° 00' E



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

Report on Operations

No. T 277-157

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

Santa Paula, Calif.
July 15, 1977

DEAR SIR:

Operations at well No. 1W 63, API No. 037-21278, Sec. 34, T. 3N, R. 16W,
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 7/11/77. Mr. P.R. Wygle, representative of the supervisor was
present from 0600 to 0800. There were also present R. Springer, contract foreman

Present condition of well: No additions to the casing record since proposal dtd 6/20/77.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

M. G. MEFFERD

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

By John L. [Signature]

Deputy

REPORT ON PROPOSED OPERATIONS

Santa Paula, California

June 23, 1977

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

Your proposal to deepen, plug and alter
gas storage well IW 63
(Name and number)
A.P.I. No. 037-21278, Section 34, T. 3N, R. 16W

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

dated 6-20-77, received 6-22-77, has been examined in conjunction
with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. The drilling 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.
2. 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.
3. THIS DIVISION SHALL BE NOTIFIED TO WITNESS A PRESSURE TEST OF THE BLOWOUT PREVENTION EQUIPMENT BEFORE COMMENCING DOWNHOLE OPERATIONS.

NOTE: A COPY OF THIS APPROVAL SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.

Blanket Bond
MD:b

M. G. MEFFERD (acting)
State Oil and Gas Supervisor
By *John L. Hardoin*
Deputy Supervisor

John L. Hardoin

JUN 6 1975

SANTA PAULA, CALIFORNIA

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR PACIFIC LIGHTING SERVICE, CO. FIELD Aliso Canyon

Well No. IW-#63 (Re-work), Sec. 34, T. 3N, R. 16W, S. & B. B. & M.

Date May 29, 1975, 19 _____ Signed P. S. Magruder, Jr.

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

P. S. MAGRUDER, Jr.

(Address)

(Telephone Number)

Title Agent

(President, Secretary or Agent)

(213) 689-3561

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

- 4-4-75 Well was killed with 72# brine polymer fluid by Drilling Fluid, Inc. - used 500 barrels.
- 4-7-75 Moved in California Production Service Rig D-4. Set up hoist, suction tank and two mud pumps.
- 4-8-75 Continued rigging up mud pumps, shaker pit and sub base. Using welder, made up new suction and circulating lines on both pumps. Raised sub base up 24 inches.
- 4-9-75 Continued rigging up. Rigged up to circulate. Bled off gas in 8 5/8" annulus, pumped in 150 barrels of 72# brine polymer drilling fluid to get returns. Circulated until free from gas cut mud. Reconditioned mud to 45 viscosity. Removed Christmas tree and installed Class III B.O.P.
- 4-10-75 Tested B.O.P. with H & H test pump with water, as follows:
- Blind Rams at 2800 psi for 20 minutes - O.K.
 2 7/8" Pipe Rams at 2750 psi for 20 minutes - O.K.
 10" Hydril Bag at 2650 psi for 20 minutes - O.K.
- Tested with nitrogen, as follows:
- Blind rams at 2900 psi for 20 minutes - O.K.
 2 7/8" Pipe Rams at 2700 psi for 20 minutes - O.K.
 10" Hydril Bag at 2650 psi for 20 minutes - O.K.
- Rotated and unseated Browns Husky packer. Filled hole with six barrels of fluid. Pulled and laid down 2 7/8" Seal-Lock tubing. 184 joints down at 10:00 P.M.

- 4-11-75 Finished pulling and laid down 2 7/8" Seal-Lock tubing and Brown tubing equipment. Ude11 landing nipple was plugged. Brown Husky packer was sand cut and washed around rubbers and seal units. Packer in very bad condition. Unloaded 3 1/2" drill pipe, six 5 3/4" drill collars, Kelly. Changed 2 7/8" rams to 3 1/2" rams. Changed drilling line. Made up 4 1/2" full bore squeeze tool on 2 7/8" tubing. Picking up 3 1/2" drill pipe and rubbering each joint. 20 singles in at 10:00 P.M.
- 4-12-75 Continued picking up and rubbering 3 1/2" drill pipe with Baker full bore squeeze tool. Ran in to 4 1/2" liner and attempted to set tool. Drill pipe backed off about 20 stands down. Screwed back on, pulling out to check drill pipe and tools. 20 stands out at 10:00 P.M.
- 4-13-75 Rig idle.
- 4-14-75 Finished pulling out with Baker 4 1/2" full bore squeeze tool. Tool was plugged with hard sand. Made up 203' of 2" tubing with sawtooth collar. Ran in to top of 4 1/2" liner at 7159'. Cleaned out fill from 7159' to 7268'. Circulated bottoms up at 7268'. Closed well in at 11:00 P.M.
- 4-15-75 Continued cleaning out fill from 7268' to 7354'. Circulated hole clean and pulled out. Ran in with 4 1/2" Baker full bore squeeze tool and set tool in 4 1/2" liner at 7170'. Tested 6 5/8" x 4 1/2" lead seal hanger and 8 5/8" casing at 1000 psi. Had no bleed off and seal and casing O.K. Pulled out of 4 1/2" liner. Circulated bottoms up. Pulled 20 stands and closed well in.
- 4-16-75 Finished pulling out and laid down tools. Made up and ran in with Midway 4 1/2" cutter on 3 1/2" drill pipe. Cut 4 1/2" liner at 7165', approximately 6' below top of 6 5/8" X 4 1/2" hanger. Pulled out. Made up and ran in with Midway spear on jars and bumper sub on 3 1/2" drill pipe. Took ahold of cut off 4 1/2" liner and hanger. Pulling out. Closed well in.
- 4-17-75 Continued pulling out with Midway spear and recovered all of 4 1/2", 9.5# Gru-V-Kut liner - total 196'. Laid down Midway tools and liner. Ran in hole with 5 5/8" bit on 3 1/2" drill pipe to 7080'. Reamed out 6 5/8" cemented liner from 7080' to 7360'. Circulated hole clean and pulled up in 8 5/8" casing. Closed well in.

NOTE: 4 1/2", 9.5# Gru-V-Kut liner hung at 7159' to 7355'. Lead seal hanger was not sand cut. Liner was sand cut with holes from intervals at second joint down from 7196' to 7222' with big holes at 7211' to 7217'. Fourth joint from 7259' to 7290' with big holes from 7269' to 7272'. Third and bottom two joints O.K.

- 4-18-75 Pulled out 5 5/8" bit. Ran in Hampton circulating washer on 3 1/2" drill pipe. Washing tool stopped at 7258' - unable to work through tight place. Pulled out. Ran in with positive 6 5/8" casing scraper and 5 5/8" bit. Worked scraper through tight spot from 7253'-7262'. Ran to 7361' and circulated bottoms up. Pulled 10 stands and closed well in at 11:30 P.M.
- 4-19-75 Finished pulling out 5 5/8" bit and scraper. Made up and ran in with Hampton 6 5/8" washer on 3 1/2" drill pipe. Washer stopped at 7258' - unable to work tool below 7258'. Washed perforations from 7256'-7240' and 7230'-7220'. This interval did not circulate, but pushed fluid out in formation. Washed and circulated from 7214'-7198'. Ran back to 7256'. Circulated two hours. Pulled 97 stands. Closed well in.
- 4-20-75 Rig idle.
- 4-21-75 Finished pulling out Hampton washer. Ran in with turned down 5 3/8" thinmbles from 5 1/2" Hampton washer to 7355'. Tested tool at 4000 psi. Tried to open perforations with 3500 to 4000 psi from 7332'-7324' - perforations would not break down. Perforations from 7302'-7294' took fluid in formation at 3000 psi. Perforations from 7294'-7290' circulated at 2000 psi. Perforations from 7280'-7256' circulated at 1000 to 2500 psi. Ran washer back to 7355' and circulated two hours. Washer stuck at 7355'. Working pipe, clutch slipped. Installed new clutch pads. Worked stuck pipe at 110,000# and sheared bolts on right-angle drive. Repaired same. Worked stuck pipe, pulling 90,000# to 120,000#. Worked pipe up 30 feet. While pulling at 120,000# on weight indicator, jack plate went through mat in front end of rig. Rig went off of jacks, breaking three load lines, dropping blocks and drilling string on rotary table. Hoist moved over two feet to IW-#67 and sub base moved out approximately one foot, leaning B.O.P. over. Secured derrick and rig. Closed well in and secured operation.
- Accident took place at 9:00 P.M. California Production Service pusher watched rig and well from 10:00 P.M. (4-21-75) to 6:00 A.M. (4-22-75). Persons at rig when accident took place - D. E. Underwood, B. Hill, G. Aviles, J. Patton, Ron Watson, Ron Ramsdell, C.P.S. mechanic, Elmer Patty and C. B. Todd.
- 4-22-75 California Production Service used two 75-ton cranes to help in lowering derrick on hoist, also moved hoist out. With crane, picked up 3 1/2" drill pipe string and moved sub base back over center of well. Attempted to circulate, but washing tool was in squeeze position. Filled hole with three barrels of mud and pressured up same at 450#. No leak on casing head or flanges. Closed pipe rams and Hydril Bag with 450# on casing. Well closed in at 5:00 P.M.

- 4-23-75 California Production Service Rig D-4 in shop for hoist and lower derrick structure repairs from 4-23-75 to 5-12-75.
- 5-12-75 Moved in D-4 rig on IW-#63 location. Rigged up hoist and mast. Started circulating at 6:30 P.M. Circulated bottoms up and worked stuck pipe at 190,000# pull. Worked 1-1/2 hours. Closed well in at 10:00 P.M. Rig time started at 6:30 P.M. (5-12-75). Hampton washer stuck at 7355'.
- 5-13-75 Circulated and worked stuck pipe at 7355'. Rigged up Dia-Log unit. Ran string shot in 3 1/2" drill pipe and attempted to make backoff at 7300'-one single above Hampton washer. Worked pipe after shot and pipe came free. Pulled and chain tonged out of hole. Recovered 116 1/2 stands of 3 1/2" drill pipe - total 7273'. Left in hole 62' of 3 1/2" drill pipe and 15' of Hampton washer. Top of fish at 7273'. Made up Midway fishing tool on four 4 1/2" drill collars, jars, bumper sub and screwed on sub on bottom. Ran in 20 stands. Closed well in at 12 midnight.
- 5-14-75 Continued running in hole with Midway tools. Screwed in to top of 3 1/2" drill pipe at 7273'. Jarred on fish and worked pipe from 160,000# to 185,000# for three hours. Fish did not move. Circulated bottoms up. Rigged up Dia-Log unit. Ran collar locator (1") to 7365'. Pulled and ran string shot and backed off pipe at 7365' in 3 1/2" drill pipe and washing tool. Worked and rotated pipe to the left. Pipe came free. Pulled out remeasuring drill pipe. Closed well in at 10:00 P.M.
- 5-15-75 Continued pulling Midway fishing tool out. Left in 14 feet of Hampton washer in hole. Top of fish at 7354'. Laid down all tools and drill collars. Ran in with 5 5/8" bit and 6 5/8" casing scraper to top of fish. Circulated hole clean. Pulled and left 20 stands in hole. Closed well in at 9:00 P.M.
- 5-16-75 Finished pulling out of hole with 6 5/8" casing scraper. Left 5 5/8" bit in hole. Rigged up McCullough tool lubricator on 10" Hydril Bag. Ran McCullough 4" Omega jet guns and perforated four 1/2" holes per foot from 7210'-7302', using reference collar to shoot by (368 shots). Tore out McCullough equipment, reinstalled picture nipple and flow line. Ran in with 6 5/8" casing scraper on 3 1/2" drill pipe (tight spot in 6 5/8" liner at 7280'-7290'). Circulated on bottom and screwed into 5 5/8" bit. Pulled up and closed well in on 20 stands.
- 5-17-75 Finished pulling out of hole with 5 5/8" bit and scraper. Ran in with Hampton washer with turned down thimbles and rubber cups to 7333'. Blanked tool at 7333' with 3000 psi - O.K. Pulled up to 7302' and washed perforations to 7198' with maximum 3500 psi. Washed perforations in 2-foot intervals with 9 cu.ft. per setting, with 3500 psi to 1000 psi - using

- 5-17-75 cont'd Halliburton pump truck. Pulled out of hole. Ran in hole with 5 5/8" bit and 6 5/8" scraper to 7355'. Circulated 1-1/2 hours. Closed well in.
- 5-18-75 Rig idle.
- 5-19-75 Ran in to top of fish at 7355' with 5 5/8" bit. Circulated hole clean. Pulled out. Picked up 2 3/8" Howard Smith wire wrapped liner, Baker gravel packing and setting tools (2 3/8" liner detail on next page). Ran in to 6970' and closed well in.
- 5-20-75 Ran liner to top of fish. Pulled up and hung liner with top of Baker Retrieva "D" packer at 7096' with bottom at 7350'. Rigged up Byron-Jackson pump. Circulated at 1200 psi, 4.5 barrels per minute. Established breakdown at 1350 psi, 4.5 barrels per minute. Dropped ball and set packer at 7096'. Screwed off of packer. With tool in breakdown position, displaced into drill pipe 300 gallons of Terra-Pak II KCL fluid at 1000 psi (rate 4.5 barrels per minute). Followed by 500 gallons of Terra-Pak II KCL fluid mixed with 5000# of "Heart of Texas" 10-20 gravel at 1000-1200 psi (rate 4.0-4.3 barrels per minute). Followed by 150 gallons of Terra-Pak II KCL fluid at 1250 psi. Followed by brine polymer fluid. Pressure build-up from 1200 psi to 3500 psi final pressure. Rigged up to back-scuttle. Backscuttled clean. Pulled up and sheared collette. Total 41 cu.ft. of sand packed behind 2 3/8" liner and backscuttled out 9 cu.ft. sand packed gravel. Pulled and chain tonged out of hole. Ran in hole with open end drill pipe to 3000'. Closed well in.
- 5-21-75 Laid down 3 1/2" drill pipe and Kelly. Changed 3 1/2" rams to 2 7/8" rams. Picked up and ran 20 joints of 2 7/8", 8rd tubing. Closed well in.
- 5-22-75 Pulled 20 joints of 2 7/8" tubing. Made up 2 7/8", 8rd and Seal-Lock tubing with Baker jewelry and tested tubing at 4500 psi - tubing detail on next page. Landed and latched in Baker Retrieva "D" packer at 7096' with 14,000# on packer. Closed well in.
- 5-23-75 Removed B.O.P. and installed Christmas tree. Tested casing head and tubing head at 3000 psi - O.K. Tested Christmas tree at 5000 psi - O.K. Dismantled rig and lines. Rig released at 10:00 P.M. (5-23-75).
- 5-24-75 Changed over to lease salt water, displaced brine polymer fluid with 450 barrels. Removed tubing cross for pipe rack for IW-#67.

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

REPORT ON PROPOSED OPERATIONS No. P. 275-87

GAS STORAGE

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

Santa Paula, Calif.
March 13, 1975

DEAR SIR:

Your proposal to alter casing Well No. (037-21278) IW 63
Section 34, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 3/5/75, received 3/11/75, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. The drilling fluid used shall be of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts. NO CONTAMINANTS OR TOXIC MATERIAL SHALL BE USED IN ANY DRILLING FLUID THAT IS TO BE PLACED IN AN UNLINED SUMP.
2. 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.
3. Blowout-prevention practice drills shall be conducted at least weekly for each crew, and recorded in the log book.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS THE PRESSURE TEST OF THE BLOWOUT PREVENTION EQUIPMENT.

NOTE: A COPY OF THIS APPROVAL SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.

Blanket Bond
ALL:b
cc: Operator

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

By *R. E. Rejoice*, Deputy

DIVISION OF OIL AND GAS
RECEIVED

DIVISION OF OIL AND GAS

Notice of Intention to ~~Deepen, Redrill, Plug or~~ Alter Casing in Well

This notice must be given before work begins; one copy only

MAR 11 1975

Allen

Los Angeles Calif. March 5 1975

SANTA PAULA, CALIFORNIA

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling, plugging or~~ altering casing at Well No. I.W. #63

(Cross out unnecessary words)

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

The present condition of the well is as follows:

1. Total depth. 7390'

2. Complete casing record, including plugs:

13-3/8" cemented 699'

8-5/8" cemented 7190', cp'd 1919' and 2344'
WNSO 7060', squeezed with cement, WSO 7059'

301' 6-5/8" cemented 7373', TOP 7072'
WSO on lap. Shot four 1/2" holes per foot
7210'-7198'. Later shot four 1/2" holes per foot
7332'-7324', 7302'-7290', 7280'-7240', 7230'-7220'
and 7214'-7200'

196' 4-1/2" 9.5#, J-55, 18 mesh wire weld slotted liner
landed 7355' with lead seal liner hanger

3. Last produced. GAS STORAGE WELL
(Date) (Oil, B/D) (Water, B/D) (Gas Mcf/D)

The proposed work is as follows:

1. Kill well, install BOPE and pressure test.
2. Lay down tubing and make up drill pipe.
3. Recover 4-1/2" liner.
4. Mill up 6-5/8" liner 7072'-7335'.
5. Open hole to 14" 7190'-7335'.
6. Run 360' of 6-5/8" wire weld and slotted liner. Land at 7330'. Gravel flow pack with 8-12 gravel.
7. Run tubing and return to gas storage.

Not done

Changed to 14"

W.S.

No response to date

MAP	BOPE	PERMITS
		114 121
		✓ ✓

P.O. Box 547901, Terminal Annex
(Address)

PACIFIC LIGHTING SERVICE CO.,
(Name of Operator)

Los Angeles, California 90054
(213) (Telephone No.) 689-3561

By *P.S. Magruder Jr.*
P. S. Magruder, Jr.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

8-21-74

OPERATOR Pacific Lighting Service Co. FIELD Aliso CanyonWell No. IW 63 Rework, Sec. 34, T. 3N, R. 16W, S.B.B. & M.Date August 19, 1974 Signed P. S. Magruder, Jr.P. O. Box 54790, Terminal Annex P. S. Magruder, Jr.Los Angeles, Calif. 90054 (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

1974

REWORK HISTORY

IW 63 was completed in November, 1972. The well did not test satisfactorily from the S-4 perforated interval 7198-7210'. Prior to redrilling, additional logs were to be run and additional perforations made and the well placed on a production test. The re-perforating and retesting determined the well to be satisfactory for gas storage and gas withdrawal obviating the necessity to redrill. Thus the only change in the well is additional perforations.

- 6-18 Camay Drilling Company, Contractor, moved in and rigged up. Operations commenced at 10:00 AM. After circulating with 64#/c.f. mud with no evidence of gas, removed Christmas tree and installed double Shaffer and GK Hydrill B.O.P.E.
- 6-19 Test tubing rams and B.O.P. with 1500 psi Ok. Pull 2-7/8" tubing and standback in derrick.
- 6-20 Pick up and measure 5" drill pipe. Ran Baker C-1 milling tool and milled on Baker Model "D" production packer at 7044'.
- 6-21 Milled over packer to 7053' and recovered portion of packer.
- 6-22 Ran packer mill plucker and chased packer skirt to top of liner at 7072'. No recovery. Ran spear, no recovery. Ran bit and scraper and cleaned out to top of liner at 7072'.
- 6-23 Ran 5-5/8" bit and 6-5/8" casing scraper to 7126' where same stopped. Ran 5-5/8" mill with junk sub and milled and cleaned out to 7292'.

1974

- 6-24 Ran 5-5/8" bit and cleaned out to 7359'. Left 2 cones in hole. Conditioned hole for logs. Ran Dresser-Atlas Neutron Lifetime log.
- 6-25 Finished logging 7350-7000'. TO SQUEEZE HOLE WITH CEMENT: Set Baker fullbore cementer at 6992' and hole took fluid at 8 c.f./M rate under 2000 psi. Holes at 7060, lap at 7072' or holes at 7198-7210' taking fluid. Preceded cement with 20 cu. ft. of water, pumped in 100 sacks of Class "G" cement and followed with 10 cu. ft. of water and displaced with 690 cu. ft. of mud under 2000 to 3000 psi final pressure. Cement in place at 10:30 PM. Used Byron-Jackson power and bulk cement. Ran 7-5/8" bit. Located top of cement at 6966' and cleaned out to 7072'.
- 6-26 Ran 5-5/8" bit with 6-5/8" casing scraper and drilled out cement from 7072' to 7169' and ran in to 7355' and circulated hole clean. Holes at 7198-7210' did not take cement. Displaced fluid in hole with lease salt water and rigged up Dresser-Atlas perforating equipment. Perforated four Golden Jet holes per foot 7332-7324, 7302-7290, 7280-7240', 7230-7220', 7214-7200'. Hole taking fluid after perforating.
- 6-27 Ran 5-5/8" bit to 7355' and conditioned hole for production test.

HALLIBURTON PRODUCTION TEST ON HOLES AT INTERVALS 7200-7332: Ran Halliburton RTTS tool with bottom hole sampler on 2 joints of 3-1/2" drill pipe with balance of 5" drill pipe. Set packer at 7117' in 6-5/8" casing with tail to 7132'. With flow line shut-in opened tool on 5/8" maximum bottom hole bean and 1/8" surface bean at 8:23 AM. Pressure rose to 900 psi in 7 minutes, 2020 psi in 22 minutes and 2060 psi in 27 minutes. Opened flow line with 1/8" surface bean at 9:55 AM and well flowed as follows:

1974

<u>TIME</u>	<u>SURFACE BEAN</u>	<u>WELL HEAD PRESS. PSI</u>	<u>FLUID RATE BBLs/DAY</u>		<u>MCF/D RATE</u>
			<u>WTR.</u>	<u>OIL</u>	
9:55	1/8"	2000	-	-	378
10:00	1/4"	1995	-	-	2888
10:30	1/4"	1980	-	-	2888
10:30	3/8"	1980	-	-	-
11:20	3/8"	1880	-	-	4724
11:25	1/2"	1880	-	-	-
11:30	1/2"	1700	-	-	9004
12:00	1/2"	1600	-	-	-
12:30	5/8"	1600	-	-	-
1:30	5/8"	1400	51	50	10005
2:30	5/8"	1400	36	19	10172
3:30	5/8"	1400	43	31	10338
4:30	5/8"	1400	36	17	10218
5:30	5/8"	1360	31	22	10520
6:30	5/8"	1360	55	31	10670
7:30	5/8"	1360	26	24	10386
8:00	5/8"	1360	26	34	10554

Well flowed average rate of 36 B/D water and 25 B/D oil. Tester shut-in at 8:00 PM for final shut-in pressure.

PRESSURE RECORDER DATA

	<u>INSIDE (7107)</u>	<u>BOTTOM OUTSIDE (7131)</u>	<u>TOP OUTSIDE</u>
INITIAL HYDRO, PSI	2990	2982	2990
INITIAL FLOW, PSI	1778	1998	2007
FINAL FLOW, PSI	2484	2485	2484
FINAL SHUT-IN, PSI	2574 INSTANT	2565 INSTANT	2565 INSTANT
FINAL HYDRO, PSI	3056	3049	3043

6-28 Ran Technical Service Company fluid determination and found fluid level at 6355' or 762' over packer and 843' above top perforation. Bled off gas pressure through Gas Company kill line. Displaced lease salt water with 64#/cu. ft. polymer mud.

1974

- 6-29 Pulled tester. Ran Johnston bobcat retrievable bridge plug on bottom of positrieve packer. Packer set pin sheared. Pulled tools. TO TEST WSO on 8-5/8" x 6-5/8" LAP AT 7072' & HOLES AT 7060: Ran Johnston bobcat retrievable bridge plug and positrieve packer. Set bridge plug at 7089' and while attempting to release, well commenced to flow in annulus. Closed GK Hydril bag and pumped in weighted calcium chloride water to dispel gas. Circulated through choke line until fluid stabilized. Released from bridge plug, dropped bar to shear circulating disc and circulated out all gas.
- 6-30 Engaged bridge plug and released same. Well flowed through drill pipe. Circulated and conditioned drilling fluid to 77#/cu. ft. with 88#/cu. ft. calcium chloride water. Released bridge plug and circulated hole. Pulled bridge plug and ran 8-5/8" retrievable bridge plug.
- 7-1 thru 7-3 Set bridge plug in 8-5/8" casing at 7000', closed GK Hydril bag and tested same and casing with 1800 psi pump pressure. Install new API rings on choke manifold and install Willis gasket between Hydril and Shaffer. Tested B.O.P. and choke manifold with 2000 psi water pressure and same held Ok. Retested above with nitrogen and flange between Hydril and Shaffer would leak at 900 psi. Replaced Hydril with shop inspected Hydril and reflanged. Pressured up with 2000 psi nitrogen and 3" flanged valve in flow line leaked. Removed valve and replaced same. Tested manifold with 2000 psi nitrogen for 30 minutes Ok. Set Baker retrievable bridge plug at 1040' and tested B.O.P. with 3000 psi nitrogen for 30 minutes Ok. Retrieved Baker bridge plug. Ran in to retrieve Johnson bridge plug and circulated out gas cut mud.
- 7-4 Pulled Johnston bridge plug set in 8-5/8" casing at 7000'. Set Johnston retrievable bridge plug at 7117' in 6-5/8" casing. Closed pipe rams and holes at 7059' or lap at 7072' took 10 bbls. of fluid under 2200 psi. Dumped 3 sacks of gravel on bridge plug. TO SQUEEZE HOLES AT 7059' AND/OR LAP AT 7072': Set Johnston positrieve tool at 6986' and hole took fluid at 16 CFM under 2500 psi. Preceded 75 sacks Class "G" cement with 20 cu. ft. of water and displaced with 528 cu. ft. of mud. Closed tool and stage cemented with additional 195 cu. ft. of mud to squeeze estimated 70 sacks away under 3000 psi at 8:00 PM. Held 1500 psi in annulus while squeezing. Bled back 5 cu. ft. Used Byron Jackson power and bulk cement.

IW 63 History (Continued)

Page 5

- 1974
- 7-5 After standing cemented 11 hours, closed pipe rams and holes and lap held 2000 psi Ok for 5 minutes. Pulled and layed down tools. Down 4 hours for Gas Company repair to lines. Located top of cement at 6990' and hard cement 7046 to 7072'.
- 7-6 Ran 5-5/8" bit to 7115' and circulated out gravel.
TO TEST WATER SHUT-OFF ON HOLES AT 7059' & LAP AT 7072': Ran Johnston tester and set tool at 7030' with tail to 7048'. Opened tool at 3:34 PM for one hour test. Puff blow then dead balance of test. Recovered 30' rise of drilling fluid. Charts Ok. Test approved by Division of Oil & Gas.
- 7-7 Released bridge plug and circulated and conditioned 76#/cu. ft. gas cut mud for 11 hours to equalize mud at 76#/cu. ft. Pulled bridge plug. Ran 5-5/8" bit to 7358' where same stopped. Circulated hole to run liner.
- 7-8 Ran 6 joints or 196' of 4-1/2", 9.5#, J-55, 8rd. ST&C "Gru-V-Kut" Layne & Bowler wire weld 0.018 gauge screen with bull plug on bottom and Burns 6-5/8" x 4-1/2" lead seal liner hanger with hold down slips on top and hung same at 7355' with top at 7159'.
- 7-9 Layed down drill pipe and drill collars. Ran 2-7/8" tubing broaching and hydro testing to 3000 psi and landed same in doughnut with Brown Husky M-1 packer set at 7067' with 10,000#.

1974

TUBING DETAIL

Tubing detail IW 63 all 2-7/8" 6.5# J-55 & N-80 used

Bottom	0.4'	45° collar	7106.05 - 7105.65'
Next	31.70'	2-7/8" EUE 8rd.	7106.05 - 7073.95'
Next	1.10'	Cross-over 2-7/8" x 3-1/2"	7073.95 - 7072.85'
Next	5.40'	Brown husky packer	7072.85 - 7067.45'
Next	1.10'	Cross-over 3-1/2" x 2-7/8"	7067.45 - 7066.35'
Next	0.82'	No-Go nipple	7066.35 - 7065.53'
Next	1.14'	Cross-over 2-7/8' EUE seal lock	7065.53 - 7064.39'
Next	31.00'	2-7/8" seal lock	7064.39 - 7033.39'
Next	1.05'	Cross-over 2-7/8" seal lock EUE	7033.39 - 7032.34'
Next	2.32'	Udell landing nipple	7032.34 - 7030.02'
Next	1.15'	Cross-over 2-7/8" EUE seal lock	7030.02 - 7028.87'
Next	31.07'	2-7/8" seal lock	7028.87 - 6997.80'
Next	1.07'	Cross-over 2-7/8" seal lock EUE	6997.80 - 6996.78'
*Next	5.92'	Udell ported nipple	6996.78 - 6990.86'
Next	1.15'	Cross-over 2-7/8" EUE seal lock	6990.86 - 6989.71'
Next	6989.71'	223 jts. 2-7/8" seal lock & donut	6989.71 - surface

All measurements from derrick floor 15' above ground.

* Wireline pack off in place - plugs off ports from inside tubing.

7-10 Installed Gulfco Christmas tree and tested same Ok with 3500 psi. RIG RELEASED AT 7:30 AM.

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 274-278

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

Santa Paula Calif.
July 15, 1974

DEAR SIR:

Your supplementary proposal to redrill Well No. IW 63 (037-21278),
Section 34, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 7/3/74, received 7/11/74, has been examined in conjunction with records filed in this office.

THE PROPOSED OPERATIONS ARE APPROVED.

Blanket Bond
DER:r

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

By W.C. Pitzius, Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

SUPPLEMENTARY NOTICE

DIVISION OF OIL AND GAS
RECEIVED

JUL 11 1974

SANTA PAULA, CALIF.

Los Angeles Calif. July 3, 19 74

DIVISION OF OIL AND GAS

Santa Paula Calif.

A notice to you dated April 25, 1974, stating the intention to

redrill well No. I.W. 63
(Drill, deepen, redrill, abandon)

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

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

The present condition of the well is as follows:

Total depth 7390'; plugged depth, 7367'; effective depth, 7355'

Complete casing record including plugs.

- 13-3/8" 48# H-40 cemented at 699'
- 8-5/8" 36# K-55 & N-80 cemented at 7190' & 7919'
WNSO 7060' squeezed with cement, WSO 7059'
- 6-5/8" 28# K-55 cemented at 7373', top at 7072', Lap & WSO
holes at 7059-60' squeezed with cement. Perforated
7198'-7210', Reperf'd. 7200'-7210' & perforated
7210'-14', 7220'-7230', 7240'-7280', 7290'-7302',
7324'-7332'

We now propose (Confirming telephone conversation Ritzius - Olson
June 28, 1974)

1. Test water shut-off on 8-5/8" x 6-5/8" lap at 7072'.
Division of Oil & Gas to witness test.
2. Run tubing and complete as gas storage well.

NOTE: Additional perforating made a satisfactory well
obviating necessity to redrill.

DATE	MAP	STATUS	REMARKS	114	115
			BB	✓	

P.O. Box 54790, Term. Annex
(Address)

Pacific Lighting Service Company
(Name of Operator)

L. A. Calif. 90051 (213) 689-3561
(Telephone No.)

By P.S. Magruder, Jr.
P. S. Magruder, Jr.

ADDRESS ONE COPY OF NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 274-181

Mr. P. S. Mazruder, Jr.
Pacific Lighting Service Inc.
P. O. Box 54790, Terminal Annex
Los Angeles, California 90054

Santa Paula, Calif.
April 25, 1974

DEAR SIR:

(037-21278)

Your proposal to redrill Well No. IW 63,
Section 34, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
dated 4/19/74, received 4/24/74, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. 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.
2. 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.
3. All portions of the hole not plugged with cement shall be filled with heavy rotary mud.
4. THIS DIVISION SHALL BE NOTIFIED:
 - a. TO INSPECT the installed blowout prevention equipment before drilling below 5500'.
 - b. TO WITNESS a test, after cleaning out below the top of the liner to demonstrate that no fluid has access to the well from between the 6 5/8" and 8 5/8" casings.
 - c. TO WITNESS the test of the 6 5/8" water shut-off above the S4 zone marker.

Elmer Olson / DER 6/28/74
Did not redrill but
will retest lap
Div. will witness

Blanket Bond
ALL:b

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

By *D.C. Riggs*, Deputy

DIVISION OF OIL AND GAS

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given before work begins; one copy only

Los Angeles Calif. April 19, 19 74

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening~~, redrilling, plugging [&] ~~xx~~ altering casing at Well No. IW 63

(Cross out unnecessary words)

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

The present condition of the well is as follows:

1. Total depth. 7390'; Plugged depth. 7367'

2. Complete casing record, including plugs:

- 13-3/8" 48# H-40 cemented at 699'
- 8-5/8" 36# K-55 & N-80 cemented at 7190', and cp at 1919'.
- WNSO 7060' squeezed with cement. WSO 7059'.
- 6-5/8" 28# K-55 cemented at 7373', top at 7072'.
- Jet perforated 4 HPF 7198' - 7210'

3. Last produced. UNSATISFACTORY GAS INJECTION/WITHDRAWAL WELL

(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

The proposed work is as follows:

1. Plug hole with cement from 7367' to 6900'. Division of Oil & Gas to witness location of plug.
2. Place 100' cement bridge from 5100' - 5000'.
3. Mill 30' section from 5000'± to 5030±. Wall scrape hole to 14" and plug hole with cement. Drill out cement to 5005'.
4. Directionally drill 7-5/8" hole to 7300'+.
5. Complete well with combination liner or cemented blank liner.
6. Obtain water shut-off on lap and in shale above S4 Sesnon zone marker. Division of Oil & Gas to witness.
7. Complete well for gas storage.

TRAP	Mud Log	Casing	Gases	FORMS	
				113	70
			BB	✓	✓

P. O. Box 54790, Terminal Annex

(Address)

Pacific Lighting Service Co.

(Name of Operator)

Los Angeles, California 90051

(Telephone No.)

By P. S. Magruder, Jr.

P. S. Magruder, Jr.

(213) 689-3561

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator Pacific Lighting Service Company Well No. IW 63

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

Location From Station 84 South 3419' & East 637'

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

Elevation of ground above sea level 1674 feet US65

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 June 8, 1973

Signed B. F. Jones

E. A. Olson
(Engineer or Geologist)

B. F. Jones
(Superintendent)

Title Agent
(President, Secretary or Agent)

Commenced drilling	Completed drilling	Total depth	Plugged depth	Junk	GEOLOGICAL MARKERS	DEPTH
<u>August 6, 1972</u>	<u>September 1, 1972</u>	<u>7390'</u>	<u>7367'</u>		<u>Top Sesnon 84 Marker</u>	<u>7170</u>

Geologic age at total depth: Miocene

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

	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 Cement if through perforation
<u>13-3/8</u>	<u>699</u>	<u>Sfc</u>	<u>48#</u>	<u>N</u>	<u>S</u>	<u>H-40</u>	<u>17-1/2"</u>	<u>534</u>	
<u>8-5/8</u>	<u>7190</u>	<u>Sfc</u>	<u>36#</u>	<u>N</u>	<u>S</u>	<u>K-55 N-80</u>	<u>11"</u>	<u>600 100</u>	<u>Shoe 1919</u>
<u>6-5/8</u>	<u>7373</u>	<u>7072</u>	<u>27.65#</u>	<u>N</u>	<u>S</u>	<u>K-55</u>	<u>7-5/8"</u>	<u>75</u>	

PERFORATED CASING

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

8-5/8" - four 1/2" jet holes 7060' WNSO squeezed with cement; four 1/2" jet holes 7059' WSO
6-5/8" - four 1/2" jet holes per foot 7198'-7210' NLT Log measurements

Was the well directionally drilled? Yes Electrical Log Depths 7386' (Attach Copy of Log)

DIVISION OF OIL AND GAS

Notice of Intention to Deepen, Redrill, Plug or Alter Casing in Well

This notice must be given before work begins; one copy only

Santa Paula Calif. June 20 1977

DIVISION OF OIL AND GAS

In compliance with Section 3203, Chapter 93, Statutes of 1939, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling, plugging or altering casing at~~ Well No. I. W. #63
(Cross out unnecessary words)

Sec. 34, 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. 7390'
- Complete casing record, including plugs:
 - 13 3/8" cemented 699'
 - 8 5/8" cemented 7190', stage collar 1919', cp'd 2344'
 - 301' 6 5/8" cemented 7373', top of cement plug at 7367'
four 1/2" holes per foot 7332'-7324'; 7302'-7290'; 7280'-7240';
7230'-7220' and 7214'-7200', WSO on lap at 7072'
 - 254' 2 3/8" 20-mesh wire-wrapped landed 7350', Retrieva-"D" packer at
7193'; perforated 7096'-7380' and gravel packed with
41 cu.ft. of 10-20 gravel

MAP	MAP BOOK	CARDS	BOND	FORMS	
			BB	114	121
				✓	✓

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

The proposed work is as follows:

- Move in rig. Kill well. Install B.O.P.E. and pressure test. Pull and lay down tubing.
- Make up drill pipe. Recover packer and 2 3/8" liner. Plug 6 5/8" liner with cement 7367'-7270'. Mill up 6 5/8" liner 7072'-7240'.
- Open 7 5/8" hole to 9" 7190'-7740' and plug with cement.
- Shoot four 1/2" holes at 7150' and squeeze with cement. Shoot four 1/2" holes at 7149' and test WSO. Pressure test casing.
- Re-cement holes at 2344' which are indicated to be leaking.
- Redrill 7 5/8" hole 7210'-7350' and run Log. Open hole to 14".
- Run 160' of 5 1/2" wire-wrapped liner and gravel flow pack with 20-40 mesh gravel.
- Set packer at 7080'. Set casing patch 2324'-2282'.
- Run tubing with down-hole safety system. Return well to gas storage.

P. O. Box 3249, Terminal Annex
Los Angeles (Address) California 90051

SOUTHERN CALIFORNIA GAS COMPANY

(Name of Operator)

By P. S. MAGRUDER, Jr.

(213) (Telephone No.) 689-3561

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Company FIELD Aliso Canyon
 Well No. IW 63, Sec. 34, T. 3N, R. 16W, SB B. & M.
 Date June 8, 19 73 Signed P. B. Magruder Jr.
P. O. Box 54790, Terminal Annex
Los Angeles, Calif. 90054 (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.

1972

Date

- 8-6 Well drilled by Camay Drilling Company, Contractor, rig #8. All measurements taken from top of kelly bushing which was 15' above mat. Spudded well at 12:01 PM, 8-6-72, and drilled 11" hole to 922'.
- 8-7 Opened 11" hole to 17-1/2" from 40' to 705'.
- 8-8 TO CEMENT 13-3/8" SURFACE CASING: Ran 17 joints or 704.11 feet of 13-3/8", 48#, H-40, 8rd., ST&C, R-3, new seamless blank casing and cemented same at 699' with 534 sacks of Class "G" cement treated with 2% calcium chloride. Cement in place 12:30 AM.
CASING DETAIL:
 All 17 joints or 699 feet, 13-3/8" fitted on bottom with Baker stab in shoe.
- Cut and recovered 13-3/8" casing, welded on Shaffer casing head and tested same to 3000# OK.
 Installed BOP.
- 8-9 Tested BOP to 1000# OK. Test witnessed and APPROVED BY ENGINEER FOR DIVISION OF OIL AND GAS.
- 8-10 Drilled 11" hole to 1270'.
 Pow-R-Drill #1 11" hole to 1288'.
- 8-11 Pow-R-Drill #1 11" hole to 1600'.
 Reamed 1482' to 1600' and directionally drilled 11" hole to 1778'.
- 8-12 Directionally drilled 11" hole to 2542'.
- 8-13 Directionally drilled 11" hole to 3153'.
- 8-14 Directionally drilled 11" hole to 3830'.
- 8-15 Directionally drilled 11" hole to 4405'.

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- 8-16 Directionally drilled 11" hole to 4540'.
Pow-R-Drill #2 11" hole to 4617'.
- 8-17 Reamed 4540' to 4617' and directionally drilled 11" hole to 5000'.
- 8-18 Directionally drilled 11" hole to 5192'.
Pow-R-Drill #3 11" hole to 5310'.
- 8-19 Pow-R-Drill #3 11" hole to 5351'.
Ream 5191' to 5351' and directionally drilled 11" hole to 5722'.
- 8-20 Directionally drilled 11" hole to 6100'.
- 8-21 Reamed 6060' to 6100' and directionally drilled 11" hole to 6447'.
- 8-22 Directionally drilled 11" hole to 6798'.
- 8-23 Ream 6123' to 6163' and directionally drilled 11" hole to 6950'.
Ran Dresser Atlas Induction Electrolog and recorded from 6937' to 699'.
- 8-24 Directionally drilled 11" hole to 7100'. Circulate and condition gas cut mud.
Ran Dresser Atlas Induction Electrolog and recorded from 7092' to 5600'.
Directionally drilled 11" hole to 7106'.
- 8-25 Directionally drilled 11" hole to 7190'.
TO CEMENT 8-5/8" CASING: Ran 172 joints or 7195' of 8-5/8", 36#, K-55 and N-80, Buttress thread, R-3, new seamless blank casing and cemented same at 7190' with 600 sacks Class "G" cement. Displaced with 2390 cu. ft. of mud to bump plug to place at 9:22 PM under 750# final pressure. Dropped plug and opened stage collar at 1919'. Pumped in 100 sacks Class "G" cement. Displaced with 690 cu. ft. mud. Did not bump plug; cement in place at 10:30 PM. Used Dowell bulk cement and power.
- CASING DETAIL
Bottom 33 joints or 1386' (7190' to 5804') N-80 fitted on bottom with Davis fill-up float shoe and at 7146' with Davis fill-up float collar.
Next 139 joints or 5804' (5804' to Sfc.) K-55
Stage collar at 1919'.
Total 172 joints or 7190 feet.
- 8-26 Removed BOP, cut and recovered 8-5/8" casing, installed secondary 8-5/8" packing and tested same OK with 5000# psig.
Reinstalled BOP, ran 7-5/8" bit to stage collar plug at 1913'.
- 8-27 Drilled out stage collar at 1919' and same took fluid under 1000# pressure. Set Baker full bore cement tool at 2000' and tested casing OK under 1500#. Reset tool at 1800' and pumped away. Stage collar not holding.
TO SQUEEZE STAGE COLLAR AT 1919' WITH CEMENT: Set Baker cement tool above collar at 1919' and stage cemented with 100 sacks of Class "G" cement. Final pressure 1500# psig; cement in place at 1:00 PM.

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8-28 Drilled out cement with 7-5/8" bit from 1859' to 1919'; tested casing with 1500# psig for 15 minutes OK, and cleaned out to 7080'.

TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7060': Ran combination gun and tester on 5" drill pipe and shot 4-1/2" jet holes at 7060'. Set packer at 7000'. Opened tool at 11:10 AM for 1 hour test. Strong blow 15 minutes and dead in 25 minutes. Recovered 1000' rise of drilling fluid. Water shut-off not approved.

8-29 TO SQUEEZE HOLES IN 8-5/8" CASING AT 7060' WITH CEMENT: Ran squeeze tool and set same at 6951'. Squeezed holes with 100 sacks Class "G" cement mixed to 118#/cu. ft. slurry. Cement in place at 4:35 AM under 2500# psig.

Ran 7-5/8" bit with scraper above and drilled out cement from 7009' to 7060'. Tested casing OK with 1650# psig cement.

8-30 TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7059': Ran Johnston combination gun and tester and shot four 1/2" jet holes at 7059'. Set packer at 7014' with tail to 7039'. Opened tool at 1:17 AM for one hour test. Medium blow for 5 minutes, dead balance of test. Recovered 300' drilling fluid rise in 5" drill pipe. Charts OK. Water shut-off approved by ENGINEER FOR DIVISION OF OIL & GAS.

TO TEST HOLES IN 8-5/8" CASING AT 7059': Ran squeeze tool on 5" drill pipe and set same at 6952'. Pumped 30 cu. ft. of fluid to obtain 2500# psig on holes. Held OK. Holes not taking fluid.

Drilled out cement 7111' to 7190'. Drilled out shoe and drilled 7-5/8" hole to 7623'.

8-31 Drilled 7-5/8" hole to 7331'. Left 3 bit cones in hole. Ran Globe junk basket and recovered all cones. Reamed 7-5/8" hole 7300' to 7331'.

9-1 Drilled 7-5/8" hole to 7390'. Ran Dresser Atlas suite of logs.

9-2 TO CEMENT 6-5/8" BLANK LINER: Ran 301' of 6-5/8", 27.65#, K-55, R-3, Security flush joint, new seamless blank casing on 5" drill pipe and liner cementing tool and hung liner at 7072'. Cemented same at 7373' with 75 sacks of Class "G" cement, with .2 of 1% D13, mixed to 118#/cu. ft. slurry. Preceded cement with 30 cu. ft. of water and displaced with 722 cu. ft. of mud to bump plug under 3000# final pressure. Cement to place at 5:20 PM. Used Dowell cementing equipment and bulk cement.

9-3 Ran in to 7082' where bit stopped. Displaced mud in hole with salt water. Layed down drill pipe.

9-4 Finish laying down drill pipe, removed BOP and installed Christmas tree.

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- 9-5 Removed tree, reinstalled BOP and picked up drill pipe.
- 9-6 Ran spear on 3-1/2" and 5" drill pipe and attempted to stab into liner cementing tool. Lost spear in hole.
Ran socket and recovered spear.
Ran mill and milled up and pushed liner cementing tool with swab cups down hole to 7367'.
- 9-7 Ran Dresser Atlas cement Bond Log and Density Log.
Ran 5-5/8" bit with scraper above and cleaned out to 7367' EFFECTIVE DEPTH.
- 9-8 Lay down drill pipe and run Dresser Atlas Neutron Lifetime Log.
Removed BOP and installed Shaffer Tree.
RIG RELEASED 9:30 PM.
- 11-2 Moved in CPS and rigged up. Installed BOPE. Tested pipe rams with 3500 psi for 10 minutes, OK. Tested Hydril bag with 3400 psi for 10 minutes, OK.
- 11-3 Picked up 2-7/8" Seal-Lock tubing and ran 5-5/8" bit and 6-5/8" casing scrapers. Tagged bottom at 7368'. Ran 8-5/8" Baker fullbore packer to 4427'.
- 11-4 Set fullbore packer at 4427' and tested from surface to 4427' with 3700 psi. Pressure fell off at a rate of 150 psi/hr. Made nine additional pressure tests as follows:
- | <u>Test Interval</u> | <u>Results</u> |
|----------------------|----------------------------------|
| Surface to 4488' | No good |
| " " 1848' | Held 3700 psi for 20 minutes, OK |
| " " 1943' | Held 3700 psi for 20 minutes, OK |
| " " 3192' | No good |
| " " 2567' | No good |
| " " 2261' | Held 3700 psi for 20 minutes, OK |
| " " 2440' | No good |
| " " 2347' | Held 3625 psi for 20 minutes, OK |
| Surface to 2409' | No good |
- Leak isolated between 2347' and 2409'.
- 11-5 Crew off

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- 11-6 Rigged up Welex. Ran Cement Bond and collar logs 1200-3000'. Ran 8-5/8" Baker Model "C" bridge plug on fullbore packer. Set bridge plug at 2460'. Set fullbore at 2440' and tested bridge plug with 3700 psi for 15 minutes, OK. Pulled up and set fullbore at 2410'. Tested 2410'-2460' with 3800 psi for 20 minutes, OK. Pulled up and set fullbore at 2378'. Tested 2378'-2460' with 3800 psi for 20 minutes, OK. Pulled up and set packer at 2318'. Tested 2318' - 2460', no good. Leak in collar at 2344' (CBL/CCL measurement). Broke down at 3200 psi and took fluid at a rate of 10 ft³/minute at 1750 psi. Ran in to 2440' and dumped five sacks sand. Pulled up and set fullbore packer at 2194'. With 50 ft³ fresh water ahead mixed and pumped 100 sacks Class "G" cement with 2% calcium chloride and 0.5% CFR-2. Displaced with 115 ft³ salt water. Final pressure 1350 psi. Cement in place at 10:00 pm. Used Halliburton equipment.
- 11-7 Ran 7-5/8" bit and 8-5/8" casing scraper. Tagged cement at 2250'. Drilled and cleaned out cement stringers 2250'-2285' and hard cement 2285'-2337'.
- 11-8 Tested from surface to 2460' with 2750 psi, no good. Measured in and set fullbore at 2360'. Tested 2360'-2460' with 2700 psi for 15 minutes, OK. Pulled up and set fullbore at 2320'. Tested from surface to 2320' with 2525 psi for 15 minutes, OK. Tested 2320'-2460', no good. Broke down at 4550 psi and took fluid at a rate of 12 cu ft per minute at 1800 psi. Pulled up and set fullbore at 2164'. With 50 ft³ fresh water ahead mixed and pumped 100 sacks Class "G" cement with 2% calcium chloride and 0.5% CFR-2. Displaced with 107 ft³ salt water. Final pressure 3250 psi. Cement in place 11:20 pm. Used Halliburton equipment.
- 11-9 Ran 7-5/8" bit and 8-5/8" casing scraper. Tagged cement at 2238'. Drilled and cleaned out hard cement 2238'-2344'.
- 11-10 Tested from surface to 2460' with 2600 psi for 20 minutes, OK. Ran in with bridge plug retrieving tool. Backscuttled cement and sand, and pulled bridge plug. Rigged up Dresser Atlas. Jet perforated four 1/2" holes per foot 7198'-7210' (NLL/CCL measurement). Used 4" carrier and 17 gram charges. During perforating operations discovered junk in hole. Ran 7-5/8" bit and 8-5/8" casing scraper. Tagged top of liner at 7072'.
- 11-11 Ran 5-1/2" junk basket on Dresser Atlas Electric line. Could not work basket into liner. As basket was being pulled through BOPE rope socket parted. Made feeler run with electric line and tagged junk basket fish at 7056'. Ran overshot and guide shoe on tubing and recovered fish. No significant recovery in junk basket.
- 11-12 Crew off

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- 11-13 Ran 6-5/8" casing scraper to 7355'. Backscuttled 2-1/2 hours. Recovered 100-150 bbls drilling mud. Pulled up to 7045' and backscuttled 30 minutes. Ran Baker Model "D" production packer on Dresser Atlas Electric line and set same at 7044' (NLL/CCL measurement).
- 11-14 Rigged up to run safety valve and control line. Tested safety valve and 6800' of 1/4" control line with 5000 psi for 30 minutes, OK.
- 11-15 Ran safety valve and control line on tubing to 6750'. Tested safety valve and control line with 5000 psi for 15 minutes, OK. Made control line splice and continued in hole. Tested safety valve and control line through donut with 5000 psi for 15 minutes, OK. Landed tubing with 13000# on Model "D" packer. Tore out BOPE and installed production head. Tested safety valve and control line through head with 5000 psi for 30 minutes, OK. Tested donut seals through test port with 4500 psi for 10 minutes, OK. Set Shaffer back pressure valve in donut and tested through unbolt cap with 4500 psi for 10 minutes, OK.

TUBING DETAIL

2-7/8"N-80 Seal-Lock fatigue nipple	.60'
2-7/8" N-80 Seal-Lock pup joint	8.00'
2-7/8" N-80 Seal-Lock pup joint	12.00'
225 joints 2-7/8" J-55 Seal-lock tubing	7025.37'
2-7/8" Seal-Lock x 2-7/8" 8 rd N-80 X-over	1.20'
Page 3-1/2" type RTL safety valve	
with ported nipple	5.62'
3-1/2" 8 rd x 2-7/8" 8 rd J-55 X-over	1.20'
Baker Seal Assembly	<u>7.70'</u>
	7061.69'

SURVEY RECORD

JOB NO. 520 ONE DATE 8-25-1972

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS	
					NORTH	SOUTH	EAST	WEST		
120	0.50	120	I 04	N 06 E	I 03					
810	0.50	810	I 79	N 51 W	I 71			10		
809	VERT	809	0 00	VERT	I 71					
403	0.30	403	0 34	S 23 W	86					
501	1.15	503	2 03	S 60 W						
504	8.00	595	4 07	S 24 W						
609	3.15	608	5 53	S 39 W						
701	4.00	700	6 42	S 41 W						
874	5.00	878	0 11	S 37 W						
1001	5.45	999	12 73	S 37 W						
1005	6.30	1002	10 64	S 42 W						
1156	6.00	1153	6 33	S 51 W						
1240	8.45	1245	14 15	S 56 W						
1301	6.30	1300	9 28	S 62 W						
1393	4.15	1383	4 59	S 51 W						
1456	2.00	1451	2 20	S 53 W						
1518	1.00	1513	1 08	N 09 E						
1529	2.30	1543	1 31	N 36 E						
1693	5.15	1693	13 73	N 57 E						
1789	5.30	1783	8 72	N 54 E						
1916	5.00	1910	11 07	N 57 E						
2018	5.00	2011	8 89	N 57 E						
2190	5.00	2191	15 69	N 57 E						
2378	5.00	2367	15 43	N 53 E						
2542	4.50	2533	13 11	N 52 E						
2773	4.45	2766	19 39	N 52 E						
3000	4.00	2990	15 70	N 52 E						
3301	4.30	3299	23 63	N 56 E						
3500	3.30	3569	17 02	N 61 E						
3809	3.15	3843	15 03	N 65 E						
4103	3.30	4096	15 15	N 74 E						
4230	3.15	4210	6 92	N 74 E						

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 172-936

Mr. P. S. Magruder, Jr., Agent
PACIFIC LIGHTING SERVICE COMPANY
P. O. Box 54790, Terminal Annex
Los Angeles, CA 90054

Inglewood, Calif.
August 11, 1972

DEAR SIR:

Operations at well No. IV 63 (037-21278), Sec. 34, T. 3 N, R. 16 W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on August 9 & 10, 1972. Mr. G. Ledingham, Engineer, representative of the supervisor was
present from 2200 to 0100. There were also present R. Geddes and C. Coates,
Drilling Foremen.

Present condition of well: 13-3/8" cem. 699'. T.D. 921'.

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

Mr. ***** reported:

THE BLOWOUT-PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

GL:reh

cc: Company

rah/dw

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

By W. L. Ingram Deputy

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T 172-1036

Mr. F. S. Magruder, Jr., Agent
PACIFIC LIGHTING SERVICE CO.
P.O. Box 54790, Term. Annex
Los Angeles, CA 90054

Inglewood, Calif.
Sept. 5, 1972

DEAR SIR:

Operations at well No. IW 63 (037-21278), Sec. 34, T. 3N, R. 16W, S.B. B & M.
Aliso Canyon Field, in Los Angeles County, were witnessed
on August 30, 1972. Mr. R. Dreessen, Engineer, representative of the supervisor was
present from 0600 to 0630. There were also present C. Coates, Drilling Foreman.

Present condition of well: 13-3/8" cem. 699'; 8-5/8" cem. 7190', cp 1919', cp 7060', perf.
7059' WSO. T.D. 7190'.

The operations were performed for the purpose of testing the water shut-off with a formation
tester.

Mr. ----- reported:

THE 8-5/8" SHUT-OFF AT 7059' IS APPROVED.

RD:dr

cc Company

de/m

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

By W E Ingram Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 172-851

Mr. P. S. Magruder, Jr., Agent
 PACIFIC LIGHTING SERVICE COMPANY
 P. O. Box 54790, Terminal Annex
 Los Angeles, CA 90054

Inglewood, Calif.

July 20, 1972

DEAR SIR:

Your proposal to drill Well No. IW 63 (037-21278),
 Section 34, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County,
 dated 7-10-72, received 7-13-72, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. A COPY OF THIS REPORT SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.
2. The surface casing shall be cemented in competent beds and blowout prevention equipment, conforming to this Division's Class III requirements, shall be installed and maintained in operating condition at all times.
3. Sufficient cement shall be used to fill back of the 13-3/8" casing to fill back of the casing to the surface.
4. Sufficient cement shall be used to fill all the space back of the 8-5/8" casing to above the top of any oil, gas, or salt water-bearing formations, or the casing shall be cemented also through ports at a point below the base of the fresh water-bearing formations with sufficient cement to fill above such base.
5. THIS DIVISION SHALL BE NOTIFIED:
 - a. To inspect and witness a test of the blowout prevention equipment prior to drilling out cement in the shoe of the 13-3/8" casing.
 - b. To witness a test of the effectiveness of the 8-5/8" shut-off above the Sesnon zone.

ADS:rah

cc: Company

Blanket Bond

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

By W.K. Ingram, Deputy

Recd. 7-17-72 d. d. 2
JUL 13 1972

037-21278

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

Los Angeles, Calif. July 10, 1972

INGLEWOOD, CALIFORNIA

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 63 (037-21278), Sec. 34, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County.

Legal description of mineral-right lease, consisting of 234.2 acres, is as follows: Fernando Fee Lease
(Attach map or plat to scale)

(See attached plat)

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: 3418.53 feet South along section line and 636.98 feet East
(Direction) (Direction)
at right angles to said line from the Station 84 corner of section property

Elevation of ground above sea level 1673.67 feet Per Metrex A.S. Co. datum.

All depth measurements taken from top of K.B. which is 12.0 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	0'	700'	700'
8 5/8	36#	K-55 & N-80	0'	7150'	7150'

Intended zone(s) of completion: Sesnon 6970', 7150' Estimated total depth 7150'
(Name) (Depth, top and bottom)

MAP	MAP BOOK	CARDS	BOND	FORMS
				114 121
	<u>RSD</u>	<u>ARG</u>	<u>B</u>	<u>ARG</u> <u>ARG</u>

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

Address 720 West Eighth St. Pacific Lighting Service Co.
(Name of Operator)

Los Angeles, California By P. S. Magruder, Jr.

Telephone Number 213-689-3561 Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)