

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST-RECORDS RECEIVED AND WELL STATUS

Operator: So Cal Gas WELL DESIGNATION "Porter" 26 B

API No. 037 21357 SE 28 T: 311 R.: 16W , SB B. and M.

County: Los Angeles FIELD: Aliso Canyon

Type of Notice: _____ Date _____ Report Number: _____

RECORDS RECEIVED (ATTACH PAGES IF REQUIRED)

NEW STATUS

	Date	OK	NEED	Remarks
Well Summary (OG100)				
History (OG103)				
E-Log				
Mud Log				
Dipmeter				
Directional				
Core and/or SWS				
MIT (Noise, Temp)	3/21/16	✓		C. Knight Approved Doctor to Senior

DATE: _____

NOTICE OF RECORDS DUE

DATE: _____

DATE: _____

DATE: _____

DATE: _____

WELL STATUS INQUIRY

DATE: _____

DATE: _____

Well Stat

Change Required: _____

Change Done: _____

ABANDONMENTS/REABANDONMENTS/DRILLS/REDRILLS

CalWims Abandonment Form: _____ SURFACE INSPECTION NEEDED _____ COMPLETED _____

Date and Inspector

FINAL LETTER NEEDED _____ COMPLETED _____ Calwims DRILL/REDRILL Form _____

(Date)

ENGINEER'S CHECK LIST

T-REPORT(S) ✓ OPERATOR'S NAME ✓ WELL DESIGNATION ✓ SIGNATURE ✓

Calwims Location _____ Calwims ELEVATION: _____ CONFIDENTIAL RELEASE DATE: _____ PERMIT REQUIREMENTS MET _____

CLERICAL CHECK LIST

LOCATION CHANGE (OG165) _____ ELEVATION CHANGE (OG165) _____ RELEASE OF BOND (OG150) _____

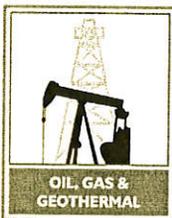
REMARKS

RECORDS SCANNED: _____

(Date)

RECORDS APPROVED: D.O.

(Date and Engineer)



DEPARTMENT OF CONSERVATION

No. T216-0075

DEPARTMENT OF OIL, GAS & GEOTHERMAL RESOURCES

1000 S. Hill Rd, Suite 116 Ventura, CA 93003-4450

Phone: (805) 654-4761 Fax: (805) 654-4765

REPORT ON OPERATIONS

GAS STORAGE PROJECT "Sesnon-Frew" - Modelo (Miocene-Eocene)

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

Ventura, California
April 20, 2016

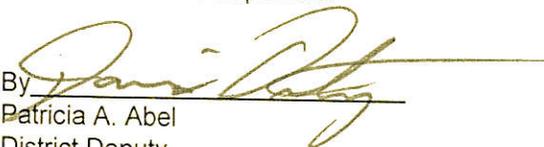
Your operations at well "**Porter**" **26B**, A.P.I. No. **037-21357**, Sec. **28**, T. **03N**, R. **16W**, **SB B. & M.**, **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **3/21/2016** by , a representative of the supervisor.

The operations were performed for the purpose of **demonstrating that all of the injection fluid is confined to the approved zone.**

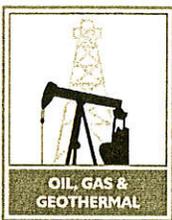
DECISION:

WITNESSED

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By 
Patricia A. Abel
District Deputy

/tkc
OG109



DEPARTMENT OF CONSERVATION

No. T216-0074

DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES

1000 S. Hill Rd, Suite 116 Ventura, CA 93003-4456

Phone:(805) 654-4761 Fax:(805) 654-4765

REPORT ON OPERATIONS

GAS STORAGE PROJECT "Sesnon-Frew" - Modelo (Miocene-Eocene)

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

Ventura, California
April 20, 2016

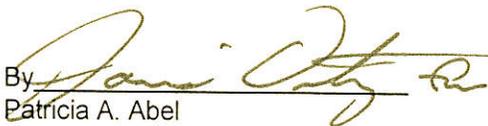
Your operations at well **"Porter" 26B**, A.P.I. No. **037-21357**, Sec. **28**, T. **03N**, R. **16W**, **SB B. & M.**, **Aliso Canyon** field, in **Los Angeles** County, were witnessed on **3/21/2016**. **Clifford R. Knight**, a representative of the supervisor.

The operations were performed for the purpose of **demonstrating that all of the injection fluid is confined to the approved zone.**

DECISION:

WITNESSED

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By 
Patricia A. Abel
District Deputy

CRK/tkc
OG109

216-0074
 No. T 216-0075
 15,3

MECHANICAL INTEGRITY TEST (MIT)

Operator: So Cal Gas					Well: Porter 26 B				
Sec. 28	T. 3N	R. 16W	B.&M. SB	API No.: 037-21357			Field: Aliso Canyon		
County: Los Angeles					Witnessed/Reviewed on: C. Knight 3-21-16				

C. Knight, representative of the supervisor, was present from 1300 to 1400.
 Also present were: Mike Giuliani, Mario Hurtado, Cesar Barajas

Casing record of the well:					Notes: Casing patch (Pengo) 8 5/8 2726 - 2773 (08/1981)				
13 3/8"	48 #	/H40	/O-797'						
8 5/8"	36 #	/K-55	/O-5910'	• Stage Collar 2793', later located at 2749'					
8 5/8"	36 #	/N-80	/5910-7525'	• 7338' OTIS SSSV 2 1/2"					
2 7/8"	6.5 #	/N-80	/O-7390	• 7368' OTIS XN No-60					
6 5/8"	28 #	/K-55	/7392-7932	• WSD 7500'					
PKR	7384'	30 mesh slots			• X-over 3 1/2"				

The MIT was performed for the purpose of perform temperature survey and noise log.

The MIT is approved since it indicates that all of the injection fluid is confined to the formations below 7384 feet at this time.

The MIT is not approved due to the following reasons: (specify)

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

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

Ventura, California
February 23, 1990

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

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

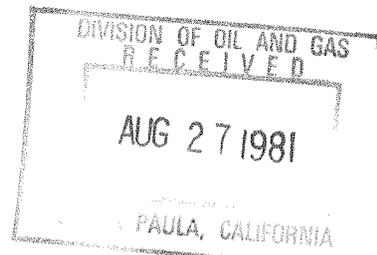
From:	To:
IW 54 (037-21319)	"Porter" 26E (037-21319)
IW 55 (037-21353)	"Porter" 26C (037-21353)
IW 65 (037-21320)	"Porter" 26D (037-21320)
IW 69 (037-21322)	"Standard Sesnon" 25A (037-21322)
IW 74 (037-21357)	"Porter" 26B (037-21357)
IW 79 (037-21361)	"Standard Sesnon" 44B (037-21361)
IW 80 (037-21362)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

bb

M.G. MEFFERD, State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear, Deputy Supervisor

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



History of Oil or Gas Well

Operator Southern California Gas Co. Field Aliso Canyon County Los Angeles
Well IW #74, Sec. 28, T. 3N, R. 16W, S. B. & M.
A.P.I. No. 037-21357 Name P. S. Magruder, Jr. Title Agent
Date August 17, 1981 (Person submitting report) (President, Secretary or Agent)

Signature *P. S. Magruder, Jr.*

P.O. Box 3249 Terminal Annex, Los Angeles, CA 90051 (213) 689-3561
(Address) (Telephone Number)

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

Date

- MWO #99950 was issued to seal off leak in stage collar with casing patch.
- 1981
- 8-07 1st Day. Moved CPS #D-4 on location. Rigged up and circulated well for 2-1/2 hours.
- 8-08 2nd Day. Removed xmas tree and installed BOPE. Pressure tested blind rams, pipe rams and manifold with water at 4000 psi for 20 minutes. Tested Hydril at 3000 psi for 20 minutes. Division of Oil and Gas was called but did not witness test.* Unjayed from packer. Removed tubing hanger. Circulated for 2 hours. Started out of well.
- 8-10 3rd Day. Finished pulling out of well. Ran in well with bit and casing scraper to 7370'. Circulated well clean. Pulled out of well. Ran collar log 2623' to 2917', stage collar located at 2746'-2749'.
- 8-11 4th Day. Changed to chamfered collars. Mc Cullough ran casing inspection log and internal caliper logs from 5000' to 1000'. Picked up Pengo casing patch and ran to 2750'.
- 8-12 5th Day. Set Pengo patch top at 2726', bottom 2773'. Pulled out of well. Ran in hole with stab in and seals. Tested packer and patch with 1500 psi for 20 minutes. Ran in well hydrotesting tubing for completion.
- 8-13 6th Day. Spaced out and checked latch with 30,000# pull over weight of tubing. Landed tubing with 10,000# on packer. Removed BOPE and installed xmas tree. Tested seals and xmas tree with 5000 psi. Changed from polymer completion fluid to lease salt water. Released rig at 10 P.M. 8-13-81.

* DOG rept was present that day accompanied by D. Lewis, SOGC chief supervisor. His arrival was delayed by refusal of gate guard to let him in w/o his supervisor's approval.

DIVISION OF OIL AND GAS

Report on Operations

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

Santa Paula, Calif.
Aug. 14, 1981

Your operations at well TW 74, API No. 037-21357, Sec. 28, T. 3N, R. 16W
SB, B. & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 8/8/81 by R. Navia, representative of the supervisor, was
present from 1600 to 1700. There were also present J. Montgomery, Toolpusher and
R. Lewis, Shift Supervisor
Present condition of well: No additions to the casing record since Report No. T276-277.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

b

M. G. MEYER
State Oil and Gas Supervisor
By John L. Hardoin
Deputy Supervisor

REPORT ON PROPOSED OPERATIONS

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

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

Santa Paula, California
June 22, 1981

Your _____ proposal to alter casing in gas storage well IW 74,
A.P.I. No. 037-21357, Section 28, T. 3N, R. 16W, S.B. B. & M.,
Aliso Canyon field, Main area, Sesnon-Frew pool,
Los Angeles County, dated 6/17/81, received 6/19/81 has been examined in conjunction with records
filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

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

Blanket Bond
MD:b

M. G. MEFFERD, State Oil and Gas Supervisor

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

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

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

JUN 10 1981

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

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

FOR DIVISION USE ONLY		
BOND	FORMS	
	OGD114	OGD121
55	✓	✓

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well IW #74 (Well designation), API No. 037-21357

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

The present condition of the well is as follows:

- Total depth 7932'
- Complete casing record, including plugs and perforations
 - 13-3/8" cemented 797'
 - 8-5/8" cemented 7525', WSO 7500', stage collar 2793'
 - 540' 6-5/8" landed 7932', slotted 7932'-7392' and gravel flow packed with 276 cu. ft.
 - 6 - 9 gravel

Sesnon

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

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

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

(or)

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

The proposed work is as follows:

- Move in & rig up. Kill well. Install BOPE & pressure test.
- Pull tubing. Run 7-5/8" bit and casing scraper to packer at 7370'.
- Set casing patch over stage collar at reported depth of 2793'.
- Run tubing & recomplete as gas storage well.

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

Address P.O. Box 3249 Terminal Annex
(Street)

Southern California Gas Company
(Name of Operator)

LA CA 90051
(City) (State) (Zip)

By P.S. Magruder, Jr.
(Print Name)

Telephone Number (213) 689-3561

P.S. Magruder 6/17/81
(Signature) (Date)

DIVISION OF OIL AND GAS

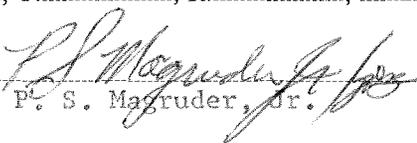
History of Oil or Gas Well

△ OSP

DIVISION OF OIL AND GAS
RECEIVED
AUG 13 1976
SANTA PAULA, CALIFORNIA

OPERATOR SOUTHERN CALIFORNIA GAS COMPANY FIELD Aliso CanyonWell No. I.W. #74, Sec. 28, T. 3N, R. 16W, S.B. B. & M.Date July 29, 1976, 19

Signed


 P. S. Magruder, Jr.

 P. O. Box 3249, Terminal Annex
 Los Angeles, California 90051
Title Agent

(Address)

(Telephone Number)

(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	
6-23-76	Installed B.O.P.E. Rigging up.
6-24-76	Finished rigging up. Tested B.O.P.E. with water under 4000 psi for 20 minutes. Tested B.O.P.E. with nitrogen under 4000 psi, except Hydril bag, for 20 minutes. Unseated packer and started circulating well.
6-25-76	Circulated for one hour. Pulled packer. Ran 5 5/8" bit and casing scraper - junk at 7925' - no fill. Circulated one and one-half hours. Pulled ten stands.
6-26-76	Circulated for one hour. Pulled out of hole. Ran inhole with Burns washer. Washed out soft fill from 7927' to 7932'. Started washing liner - top cup at 7922'. Washed liner to 7392'.
6-27-76	Rig and crew idle.
6-28-76	Ran in hole with Burns 6 5/8" liner washer. Washed liner five times over at 60' intervals from 7919' to 7392'. Circulated and conditioned mud. Pulled out of hole. Ran in hole with Burns gravel packing tool.
6-29-76	Ran Burns gravel packing tools and opened port collar at 7390'. Circulated slowly and could not displace any additional gravel. Pulled out of hole and ran Baker fullbore and set at 7380'. Packer would not hold. Pulled out of hole.
6-30-76	Finished pulling out of well. Ran 7 5/8" bit and casing scraper to 8390' and circulated and conditioned mud. Pulled out of hole. Ran in hole with Baker fullbore retrievable retainer. Tested 8 5/8" casing at 7380' with Halliburton cement truck with 1200 psi for 20 minutes - O.K. and at 500' with 1500 psi for 20 minutes - O.K.

7-1-76

Tested 8 5/8" casing with Baker fullbore and Halliburton cement truck, as follows:

4000'	to surface under 2000 psi for 20 minutes)	
3000'	" " " 2500 psi " " ")	
2250'	" " " 2800 psi " " ")	
2000'	" " " 3000 psi " " ")	All tests O.K.
1500'	" " " 3300 psi " " ")	
1000'	" " " 3500 psi " " ")	
500'	to surface under 4000 psi for 20 minutes)	

Ran Otis Permatrieve packer and set at 7370'. Made up Otis stab-in joint, blast joint, pup joint and safety valve. Made up 2 1/2" tubing and changing collars, using Baker lock seal.

7-2-76

Ran in hole and changed collars on 2 1/2" tubing. Using Bker lock seal and Hydro, tested tubing with 5000 psi for one minute each test. Stabbed in Otis packer at 7370' - pulled 15,000# to check latch. Landed tubing with 8000#. Set plug in doughnut and removed B.O.P.E. Installed Christmas tree and tested to 5000 psi - O.K. Shut well in.

7-3-76

Changed over from mud to lease salt water. Ran Otis plug in No-Go nipple at 7357'. Tested packer and seals under 1500 psi with Halliburton truck - O.K. Pulled Otis plug. Released rig at 2:00 P.M.

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

Report on Operations

No. T 276-177

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

Santa Paula, Calif.
July 15, 1976

DEAR SIR:

Operations at well No. IW 74, API No. 037-21357, Sec. 28, T. 3N, R. 16W,
S.B., B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on 6/24/76. Mr. T. E. Adams, representative of the supervisor was
present from 1230 to 1500. There were also present Allen Smith, foreman

Present condition of well No additions to casing record since proposal dated 6/14/76.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

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

By John L. [Signature] Deputy

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

REPORT ON PROPOSED OPERATIONS No. P 276-205

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

Santa Paula, Calif.
June 21, 1976

DEAR SIR:

(037-21357)

Your proposal to rework gas storage Well No. IW 74, Section 28, T. 3N, R. 16W, S.B. B. & M., Aliso Canyon Field, Los Angeles County, dated 6/14/76, received 6/17/76, 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 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

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

By *H.W. Bertholf* Chief, Deputy

DIVISION OF OIL AND GAS
RECEIVED

DIVISION OF OIL AND GAS
Notice of Intention to Rework Well

JUN 17 1976

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

SANTA PAULA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	FORMS	
	114	121
BB	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3. Public Resources Code, notice is hereby given that it is our intention to rework well No. I.W. #74, API No. --, Sec. 28, T. 3N, R. 16W, S. B. B. & M., Aliso Canyon Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth. 7932'
- Complete casing record, including plugs and perforations:
 - 13 3/8" cemented 797'
 - 8 5/8" cemented 7525'
 - 540' 6 5/8" landed 7932', 30 mesh - Gravel flow packed with 6-9 gravel, 15" hole

- Present producing zone name SESNON Zone in which well is to be recompleted --
- Present zone pressure 3000 psi New zone pressure --
- Last produced Gas Storage Well
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
or
- Last injected _____
(Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

- Move in rig, kill well, install B.O.P.E. and test.
- Pull tubing, clean out to 7932'.
- Attempt to displace additional gravel.
- Pressure test 8 5/8" casing. Perform remedial work, if required.
- Run packer, tubing and safety valve.

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

Address P.O. Box 3249, Terminal Annex
(Street)
Los Angeles, California 90051
(City) (State) (Zip)
Telephone Number (213) 689-3561

SOUTHERN CALIFORNIA GAS COMPANY
(Name of Operator)
By P.S. Magruder, Jr. 6/14/76
(Name) (Date)
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

SUBMIT IN DUPLICATE

Operator Pacific Lighting Service Company Well No. IW 74

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

Location From Station 84, 580.31' South and 3307.11' West

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

Elevation of ground above sea level 2505 feet USGS

All depth measurements taken from top of kelly bushing which is 12 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 September 19, 1973

Signed P. S. Magruder
P. S. Magruder

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>June 6, 1973</u>	<u>July 1, 1973</u>	<u>7932'</u>	<u>None</u>		<u>Sesnon S-4</u>	<u>7525</u>
					<u>Frew unconf.</u>	<u>7760</u>

Geologic age at total depth: Eocene

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

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 perforation
<u>13-3/8"</u>	<u>797</u>	<u>sfc</u>	<u>48#</u>	<u>N</u>	<u>S</u>	<u>H-40</u>	<u>17 1/2"</u>	<u>330</u>	
<u>8-5/8"</u>	<u>7525</u>	<u>sfc</u>	<u>36#</u>	<u>N</u>	<u>S</u>	<u>K & N</u>	<u>11"</u>	<u>660</u> <u>550</u>	<u>shoe</u> <u>2793</u>
<u>6-5/8"</u>	<u>7932</u>	<u>7392</u>	<u>27.65#</u>	<u>N</u>	<u>S</u>	<u>K</u>	<u>11"</u>	<u>Perforated</u> <u>liner</u>	

PERFORATED CASING

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

8-5/8" Four 1/2" jet holes - WSO, 7550'.
6-5/8" Perforated 28R, 2" + 30M, 6" centers 7392'-7932'

Was the well directionally drilled? Yes Electrical Log Depths 7932' (Attach Copy of Log)

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Pacific Lighting Service Company FIELD Aliso CanyonWell No. IW 74, Sec. 28, T. 3N, R. 16W, S.B. B. & M.Date September 19, 1973Signed P. S. Magruder Jr.
P. S. MagruderP. O. Box 54790, Terminal AnnexLos Angeles, California 90054 (213) 689-3561Title 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
1973
- 6-6 Camay Drilling Company, Rig #18, spudded 11" hole at 5:00 AM 6-6-73. All measurements from top of kelly bushing which is 12' above mat. Drilled 11" hole to 133' and Dyna-Dril #1 to 357'.
- 6-7 Directionally drilled 11" hole to 785'.
Mud: 72.5#, 73 sec.
- 6-8 Directionally drilled 11" hole to 799'. Opened 11" hole to 17-1/2" from surface to 525'.
- 6-9 Opened 11" hole to 17-1/2" from 525' to 799'. Ran 13-3/8" casing.
Mud: 74#, 70 sec.
- 6-10 TO CEMENT 13-3/8" SURFACE CASING: Ran 20 joints or 799.15' of 13-3/8", 48#, H-40, 8rd. ST&C, R-3, new seamless blank casing and cemented same at 797' with 570 cu. ft. of 94#/cu. ft. slurry consisting of 230 sacks of Class "G" cement, 230 cu. ft. of Lite Poz, 4 sacks gel, followed by 100 sacks Class "G" treated with 2% calcium chloride. Shoe and bottom 2 joints welded in place. Preceded cement with 100 cu. ft. of water and displaced with 10 cu. ft. water and 660 cu. ft. of mud. (Did not bump plug). Cement in place at 4:30 AM under 400 psi final pressure. Full circulation throughout job. Cement to surface. 55 minutes mixing and displacing cement to surface. Used Dowell bulk cement & power.
CASING DETAIL:
All 20 joints or 799.15', 13-3/8" fitted on bottom with float shoe and with TIW centralizer at 787'.
- Cut and recovered 13-3/8" casing. Welded on Shaffer 13" 5000# casing head and tested with 3600 psi--Ok.
Installed B.O.P.E.
- 6-11 Operation of B.O.P.E. witnessed and approved by Division of Oil & Gas. Drilled out cement 768' to shoe at 797' and directionally drilled 11" hole to 1084'.
Mud: 68#, 42 sec., 6.6 cc., 5% solids.

- 1973
- 6-12 Directionally drilled 11" hole to 1505'.
Mud: 69#, 40 sec., 6.2 cc., 6% solids.
- 6-13 Ream from 1570-1609' and directionally drilled 11" hole to 2145'.
Mud: 69.5#, 39 sec., 6 cc., 6% solids.
- 6-14 Ream 2117'-2145' and directionally drilled 11" hole to 2518'.
Dyna-Dril #2, 11" hole to 2628'.
Mud: 72#, 40 sec., 5.6 cc., 7% solids.
- 6-15 Dyna-Dril #2 & 2A, 11" hole to 2715'.
Mud: 71#, 43 sec., 5.4 cc., 5% solids.
- 6-16 Ream Dyna-Dril hole 2518'-2715' and directionally drill 11" hole to 2960'. Lost circulation. Treated mud with Kwik seal. Lost approximately 400 barrels of mud. Regained circulation and directionally drilled 11" hole to 3092'.
Mud: 71#, 42 sec., 8.1 cc., 6% solids.
- 6-17 Directionally drilled 11" hole to 3580'. Full circulation. Adding LCM to drilling fluid.
Mud: 70#, 41 sec., 7.8 cc., 6% solids.
- 6-18 Directionally drilled 11" hole to 4200'.
Mud: 70#, 40 sec., 8.2 cc., 6% solids.
- 6-19 Directionally drilled 11" hole to 5085'.
Mud 70#, 38 sec., 8 cc., 6% solids.
- 6-20 Dyna-Dril #3, 11" hole to 5364'.
Mud: 70#, 39 sec., 7.2 cc., 5% solids.
- 6-21 Lost bit cone. Ran junk basket and drilled 11" hole to 5366'. Recovered bit cone.
Directionally drilled 11" hole to 5590'.
Mud: 70#, 40 sec., 7.6 cc., 6% solids.
- 6-22 Directionally drilled 11" hole to 5653'.
Dyna-Dril #4 & 4-A, 11" hole to 5693'.
Mud: 70#, 40 sec., 7 cc., 6% solids.
- 6-23 Dyna-Dril 4A, 11" hole to 5704'.
Reamed 11" hole 5653'-5704' and directionally drilled 11" hole to 5766'.
Mud: 70#, 40 sec., 7 cc., 6% solids.
- 6-24 Dyna-Dril 5 & 5-A, 11" hole to 5958'.
Mud: 69#, 39 sec., 7.4 cc., 5% solids.
- 6-25 Ream 5716'-5958' and directionally drilled 11" hole to 6392'. Pulled tight at 5160'.
Mud: 69.5#, 40 sec., 7.4 cc., 6% solids.
- 6-26 Directionally drilled 11" hole to 6811'.
Mud: 70#, 39 sec., 7.2 cc., 6% solids.

1973

6-27 Directionally drilled 11" hole to 7117'.
Mud: 70.5#, 38 sec., 7.4 cc., 6% solids.

6-28 Directionally drilled 11" hole to 7529'.
Mud: 70#, 42 sec., 7.2 cc., 6% solids.

6-29 Directionally drilled 11" hole to 7196'.
Mud: 70#, 40 sec., 7.6 cc., 6% solids.

6-30 Directionally drilled 11" hole to 7830'.
Mud: 69.5#, 40 sec., 7 cc., 6% solids.

7-1 Directionally drilled 11" hole to 7932', TOTAL DEPTH.
Ran Welex IEL & AVL.
Mud: 70.5#, 40 sec., 7.2 cc., 6% solids.

7-2 Ran Welex SWN & CDL.
Condition hole and commenced running 8-5/8" casing.
Mud: 69.5#, 39 sec., 7.3 cc., 5% solids.

7-3 TO CEMENT 8-5/8" CASING: Ran 182 joints or 7534' of 8-5/8", 36#, K-55 and N-80, Buttress thread, R-3, new seamless blank casing and cemented same at 7525' with 1150 cu. ft. of 94#/cu. ft. slurry consisting of 560 sacks Class "G" cement, 560 cu. ft. of Lodense A, followed by 100 sacks Class "G" with 2% calcium chloride mixed to 118#/cu. ft. slurry. Moved casing 10' and circulated 20 minutes prior to cementing and for 20 minutes while mixing and displacing cement. Preceded cement with 100 cu. ft. water and displaced with 200 cu. ft. water and 2436 cu. ft. of mud to bump plug to place at 1:45 AM under 3000# final pressure. Cementing head leaking. Bled back 18 cu. ft. for total displacement of 2618 cu. ft. Full circulation throughout job. 1 hour 40 minutes mixing and displacing cement. Dropped plug and opened stage collar at 2793' under 2000 psi. Preceded cement with 100 cu. ft. water. Pumped in 1100 cu. ft. of 94#/cu. ft. slurry consisting of 550 sacks Class "G" cement, 550 cu. ft. Lodense A, displaced with 100 cu. ft. water and 852 cu. ft. of mud to bump plug and close collar under 2000 psi at 3:15 AM. Good circulation throughout job. No cement returns to surface. Used Byron-Jackson bulk cement and power.

CASING DETAIL:

Bottom 39 joints or 1615' (7525'-5910') N-80 fitted on bottom with Davis-Lynch fill-up float shoe; at 7479' with Davis-Lynch fill-up float collar; at 7384' with Lynes external casing packer; at 6292' with TIW metal petal cement basket and at 7505', 7469', 7399', 7369', 6332' and 6250' with TIW turbo centralizers.

Next 143 joints or 5910' (5910'-surface) K-55 fitted at 2793' with Halliburton stage collar, with centralizer above & below stage collar.

Total 182 joints or 7525' (7525'-surface)

1973

7-3 Set 8-5/8" slips and packing and landed 8-5/8" casing. Tubing head not available for installation.
Con't.

7-4 Idle.

7-5 Reinstalled B.O.P.E. and tested same--Ok with 1500 psi for 15 minutes. Measured in hole and drilled out stage collar at 2793'. Test casing to 1500 psi--Ok. Measured in hole and located cement at 7475'. Test casing Ok with 1500 psi. Drilled out cement to 7510' and pressure test casing with 2000 psi for 15 minutes--Ok.
Removed B.O.P.E. and installed Shaffer 10" 5000# tubing head. Tested Ok with 3420 psi for 15 minutes.

7-6 Reinstalled B.O.P.E. and tested rams Ok with 1500 psi.

TO TEST WATER SHUT-OFF ON HOLES IN 8-5/8" CASING AT 7500': Ran Johnston combination gun and tester on 5" drill pipe and shot four 1/2" jet holes at 7500'. Set packer at 7455' with tail to 7475'. Opened tool at 5:15 PM for one hour test. No gas to surface. Recovered 30' of drilling fluid. Charts showed tool functioned properly. Water shut-off witnessed and approved by engineer for Division of Oil & Gas.

7-7 Drilled out cement 7510' to shoe at 7525'. Drilled out shoe and cement bridges to 7588' and clean out to 7932'. Displaced fluid in hole with Polycarb R completion fluid.
Ran OMT rotary type hole opener and opened 11" hole to 14" from 7525' to 7596'.

7-8 Opened 11" hole to 14" from 7596' to 7702'.

7-9 Opened 11" hole to 14" from 7702' to 7717'. Hardness of formation negated further hole opening.
Ran open end drill pipe and staged in hole from 7525' to 7932' and backscuttled hole clean.

7-10 Ran Welex caliper log and microseismogram log.

thru
7-13 TO LAND 6-5/8" LINER FROM 7392'-7932': Ran 13 joints or 540' of 6-5/8", 27.65#, K-55, R-3, Security flush joint, new seamless perforated liner on 5" drill, with 3-1/2" drill pipe tail for gravel packing to 7919'. Commenced gravel packing at 5:00 PM, 7-10-73, with 6-9 gravel. 259 cu. ft. in 10 hours when pack-off occurred at 900 psi. Backscuttled 1 cu. ft. of gravel. Closed port collar at 7390' and tested same closed with 800 psi. Washed perforations with circulating type washer from 7932' to 7406'. Tight place at 7758', balance free. Tested lower port collar at 7739' closed under 1000 psi; opened same and gravel packed liner with 9 cu. ft. of 6-9 gravel when pack-off occurred. In two additional stages, forced 18 cu. ft. behind liner for a total displacement of 276 cu. ft. or 92% of calculated amount. Set lead seal on liner adapter. Tested upper and lower port collars closed. Finished packing and testing at 6:00 AM, 7-13-73, or 61 hours total time, gravel packing.

1973

7-10 LINER DETAIL:

thru Bottom 5 joints or 172.00 (7932'-7760') Perforated with 28 rows, 2" x 30 mesh,
 7-13 6" centers, SMC slots. Bullnosed shoe.
 (Cont'd) Next 20.00 (7760'-7740') Blank
 Next 3.44 (7740'-7737') Burns port collar
 Next 5 joints or 214.03 (7737'-7523') Perforated 28 rows as above
 Next 3 joints or 130.77 (7523'-7392') Perforated 12 rows as above and fitted
 on top with Burns lead seal adapter with
 port collar below.

TOTAL 13 joints or 540.24'

7-14 Layed down drill pipe.
 Ran 236 joints or 7363' of 2-7/8", 6.5#, N-80, 8rd., EUE, new seamless tubing
 and landed same on doughnut with packer at 7363'.

TUBING DETAIL:

	<u>Length</u>	<u>Depth</u>
K. B. to Doughnut	18.00	18.00
Doughnut & cross over	1.75	19.75
234 jts. of 2-7/8"	7268.73	7288.48
Udell ported nipple	3.80	7292.28
1 joint of 2-7/8"	30.00	7322.28
Udell landing nipple	2.30	7324.58
1 joint of 2-7/8"	31.56	7356.14
Tubing to packer crossover	1.00	7357.14
Brown Oil Tool Husky M-1 packer	5.90	7363.04

7-15 Removed B.O.P.E. Installed Shaffer Christmas tree and tested Ok for 15 minutes
 with 3500 psi.
 RIG RELEASED AT 7:00 AM.

SURVEY RECORD

580-S & 3307-W FROM STATION NO. 84

MAPT..... 2505
 K.B..... 12
 ELEV..... 2517

JOB NO IW-74 ONE DATE 7-1-1973

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS
					NORTH	SOUTH	EAST	WEST	
1	2:00	143	5	S 34 E					
2	1:15	204	1	N 08 E		4 17	2	82	
3	3:45	267	4	N 08 E	1		3	01	
4	4:45	296	2	N 06 E	3		3	58	
5	7:45	411	15	N 03 W	19		3	84	
6	7:45	522	15	N 03 W	34		2	02	
7	8:30	793	40	N 06 E	74		6	76	
8	9:15	982	30	N 03 E	105		8	99	
9	9:00	1100	18	N 05 E	123		10	24	
10	8:30	1288	28	N 10 E	151		15	11	
11	8:15	1339	31	N 11 E	158		16	54	
12	7:00	1609	42	N 21 E	188		27	76	
13	7:45	1926	42	N 34 E	223		51	67	
14	6:30	2096	21	N 38 E	240		65	84	
15	6:45	2437	40	N 39 E	271		90	21	
16	7:30	2497	7	N 41 E	277		95	34	
17	7:30	2566	9	N 16 E	286		97	86	
18	9:00	2627	9	N 06 E	296		98	87	
19	8:15	2657	4	N 03 W	300		98	64	
20	7:30	2756	13	N 16 W	313		95	05	
21	7:00	3066	38	N 12 W	350		87	15	
22	6:15	3322	28	N 12 W	377		81	21	
23	6:30	3581	29	N 11 W	406		75	53	
24	6:30	3890	35	N 05 W	441		72	53	
25	6:45	4167	32	N 02 W	474		71	38	
26	5:45	4476	31	N 01 W	505		70	84	
27	6:00	4848	39	N 05 E	544		74	25	
28	6:00	5221	39	N 12 E	582		82	40	
29	5:45	5291	3	N 11 E	585		82	99	
30	4:15	5334	3	NORTH	589		82	89	
31	5:30	5404	6	N 10 W	595		81	83	
32	6:15	5458	10	N 12 W	605		79	70	

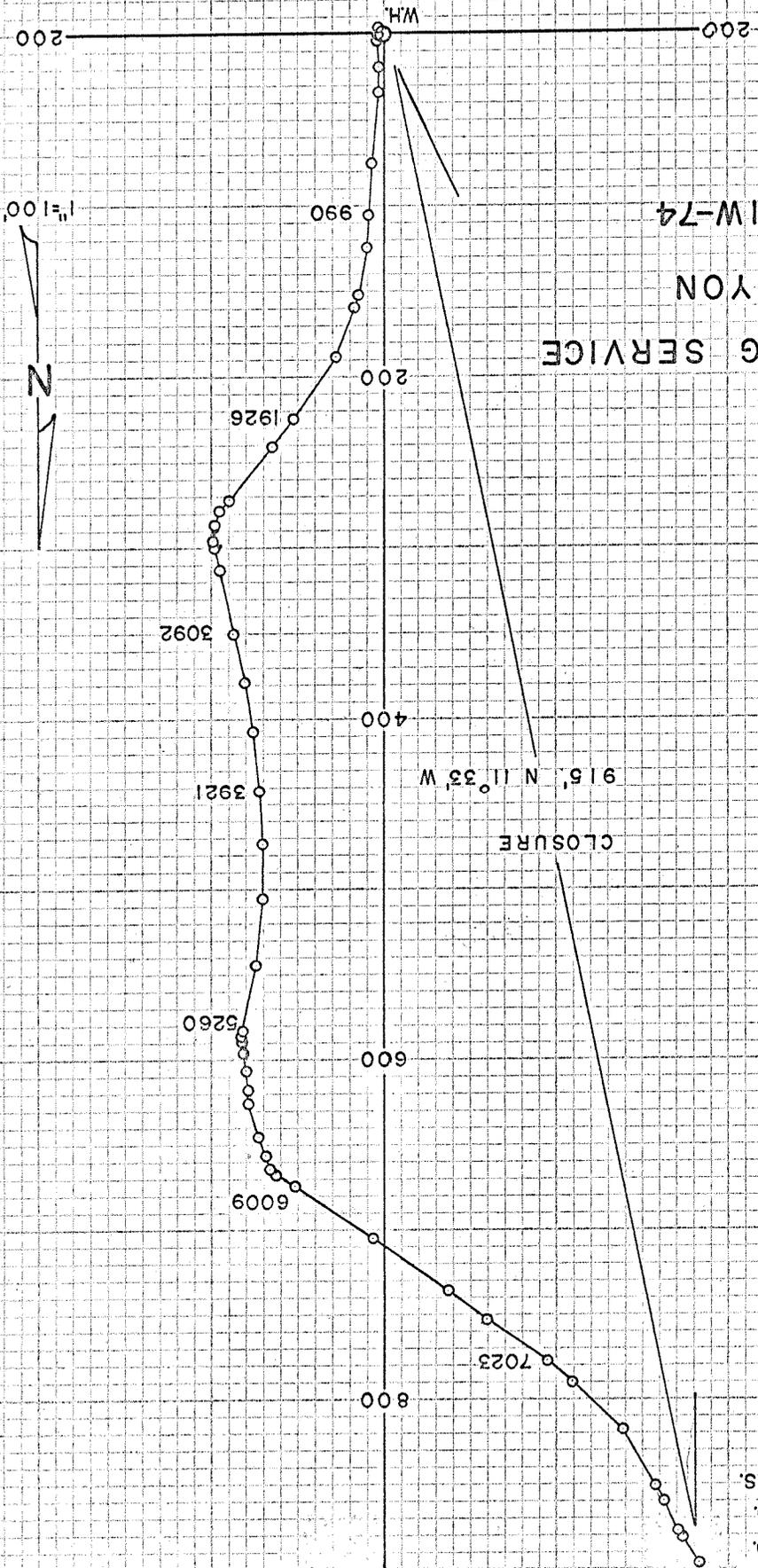
DIVISION OF OIL AND GAS
 RECEIVED
 AUG 21 1975
 SANTA PAULA, CALIFORNIA

SURVEY RECORD

JOB NO 1W-74 TWP 2 DATE 7-1-1973

MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS	
					NORTH	SOUTH	EAST	WEST		
33	7.00	5549	11	N 03 W	616	93	79	11		
34	7.15	5653	7	N 01 W	624	88	78	97		
35	11.45	5756	20	N 15 W	645	14	73	55		
36	10.30	5823	12	N 24 W	656	29	68	57		
37	7.30	5885	8	N 21 W	663	84	65	67		
38	7.15	5918	4	N 37 W	667	16	63	17		
39	8.15	6009	13	N 58 W	674	08	52	10		
40	9.15	6354	55	N 56 W	705	09	6	11		
41	10.00	6661	53	N 54 W	736	43			3702	
42	10.30	6811	27	N 53 W	752	88			5885	
43	11.30	7023	42	N 55 W	777	12			9547	
44	12.30	7110	18	N 46 W	790	20			10902	
45	12.30	7297	68	N 46 W	818	32			13813	
46	9.30	7525	56	N 30 W	850	90			15694	
47	9.30	7583	76	N 30 W	859	18			16173	
48	9.15	7704	19	N 27 W	876	51			17056	
49	6.00	7760	88	N 32 W	881	47			17365	
50	6.00	7932	94	N 32 W	896	72			18318	
HORIZONTAL DEPARTURE 915'					N 11.33 W					

PACIFIC LIGHTING SERVICE
 ALISO CANYON
 WELL NO. IW-74



7932 M.D.
 7857 V.D.
 5340 V.S.S.
 897-N
 183-W

915' N 11° 33' W

CLOSURE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Operations

No. T. 273-278

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

Santa Paula Calif.
June 13, 1973

DEAR SIR:

Operations at well No. IW 74, API No. 037-21357, Sec. 28, T. 3N, R. 16W,
S.B. B & M. Aliso Canyon Field, in Los Angeles County, were witnessed
on June 11, 1973. Mr. Larry Bright, engineer, representative of the supervisor was
present from 0730 to 1000. There were also present R. L. King, foreman

Present condition of well: 13 3/8" cem. 797'. T.D. 799'.

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

DECISION:

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

a
cc: Operator

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

By [Signature] Deputy

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P. 273-111

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

Santa Paula Calif.
March 5, 1973

DEAR SIR:

(037-21357)

Your proposal to drill Well No. IW 74
Section 28, T. 3N, R. 16W, S.B.B. & M., Aliso Canyon Field, Los Angeles County,
dated 2/13/73, received 2/27/73, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Sufficient cement shall be pumped back of the 13 3/8" casing to fill from the shoe to the surface.
2. 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 CONTAMINATES OR TOXIC MATERIAL SHALL BE USED IN ANY DRILLING FLUID THAT IS TO BE PLACED IN AN UNLINED SUMP.
3. 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.
4. Fresh waters and oil or gas zones back of the 8 5/8" casing shall be protected with cement.
5. A directional survey shall be filed with this Division, if one is made.
6. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
 - a. A pressure test of the blowout prevention equipment before drilling out of the shoe of the 13 3/8" casing.
 - b. A test of the 8 5/8" water shut-off above the Sesnon zone.

Approved 7/6/73

Blanket Bond
ALL:r

cc: Operator

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

By *LOP Ritzius*, Deputy

(037-21357)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS
1 1 3 0 1 1 1 0 0

Porter No. 26 site

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

FEB 13 1973

9

037-21357

Los Angeles Calif. February 13, 1973

SANTA MARIA 01107010

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. IW74, Sec. 28, T3N,

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

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

Do mineral and surface leases coincide? Yes X No _____ If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of Well: 580.31 feet South ~~PROPERTY~~ 3307.11 feet West
(Direction) ~~along section line and~~ (Direction)

at right angles to said line from ~~the~~ Station No. 84 ~~PROPERTY~~ XXXXXX

(reference: Metrex Aerial Surveys Company drawing no. L.D. 11728 - sheet 2 of 4)

Elevation of ground above sea level 2505 feet U.S.G.S. datum.

All depth measurements taken from top of kelly bushing which is 12 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
13-3/8	48#	H-40 smls.	0'	800'	800'
8-5/8	36#	K-55 smls. & N-80	0'	7400'	7400' & 3000'
6-5/8	27.65#	K-55 smls.	7300'	7900'	7900'

Intended zone(s) of completion: Seson 7500', 7900' Estimated total depth 7900'
(Name) (Depth, top and bottom)

GAS STORAGE WELL	114	121
<u>150</u>	<u>BB</u>	<u>✓</u>

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

Address P.O. Box 54790 T.A. Pacific Lighting Service Company
(Name of Operator)

Los Angeles, California 90054
(213) 689-3621 or

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