FORM 102.

13

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
OCT 4 1944
LOS ANGELES, CALIFORNIA

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated July 18, 1941, was filed.

SIGNED Henry E Winter

Date September 27, 1944 Title Division Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Casing Record at Beginning of Work:

13-3/8" C 757'
8-5/8" C 4005' O.K.
1572' 4-3/4" C 5376' -
Perf. and Reperf. 5113-5158,
5168-5175' and 5280-5350'
(565' 6-5/8" L 4408', inc 60' Perf.
(Behind 4-3/4")
C.P. 4344' - Reperf. 4348-4399')

Casing Record at End of Work:

13-3/8" C 757'
8-5/8" C 4005' O.K.
1572' 4-3/4" C 5376'
Perf. and Reperf. 5113-5158',
5168-5235' and 5280-5350'
(565' 6-5/8" L 4408', inc. 60'
Perf. (Behind 4-3/4")
C.P. 4344' - Reperf. 4348-4399')

Date 1944	Depth	Effective Depth	Remarks
8-7	5379	Plug 5361	Moved in and rigged up to reperforate.
8-12	5379	C.O. 5360	Cleaned out sand from 5325 to 5360' with 2-7/8" bailer. Fluid level 3561'
8-14	5379		Perforated and reperforated 4-3/4" casing with 1/2" Lane-Wells gun holes as follows: 5350-5282' with 34 holes, 5235-5168' with 120 holes, and 5158-5113' with 21 holes.
8-22	5379	C.O. 5361	Checked top of oil at 3520'; top of water at 5325' and hole open to 5361
8-25	5379		Ran rods and 2-1/2" plain and upset tubing to 5329' overall. Put well to pumping.

PRODUCTION DATA

Date	Hours	Gross	Net	Gravity	Cut	Remarks
8-27	24	1	1	26.2	4.4	
8-29	24	1	1	26.2	4.4	
8-31	0					Changed pump
9-4	24	57	54	26.2	4.4	
9-9	8	12	10	26.2	16.0	
9-11	24	17	14	26.2	16.0	
9-13	24	15	9	26.2	20.0	
9-15	24	14	9	26.2	38.0	
9-17	24	14	9	26.2	38.0	

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-39835

Los Angeles 14, Calif. July 18, 1944

Mr. W. S. Eggleston

Los Angeles 14, Calif.

121

Agent for UNION OIL COMPANY OF CALIFORNIA

Dear Sir:

Your proposal to plug & alter casing Well No. "Oil Operators" 4, Section 13, T. 4 S., R 13 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated July 15, 1944, received July 17, 1944, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice.

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Complete casing record.
   Total depth 5379' - plug 5361'
   13-3/8" cmtd. 757'
   8-5/8" cmtd. 4005' O.K.
   (565' 6-5/8" landed 4408', inc. 60' perf. C.P. 4344'. Perf. 4005-4028, 4070-4130' - deepened through)
   1572' 4-3/4" cmtd. 5376' - perf. and re-perf. 5113-5158', 5168-5175', 5280-5350'
2. July, 1944 (Date) produced 87 (Net Oil) 26.2 (Gravity) 40.0 - 29 days. (Cut)"

PROPOSAL:

"The proposed work is as follows:

1. Add perforations 5175-5235' and re-perforate present perforations.
2. If wet or no fluid, plug to 5090' and test by Division of Oil and Gas.
3. Perforate 4850-4920' and test. If unsuccessful, test higher.
4. If any test is unsuccessful, plug to 20' above perforations and test by Division of Oil and Gas."

DECISION:

THE PROPOSAL IS APPROVED.

ERMA:OH

cc- P. A. W.
H. E. Winter
Long Beach

WS

R. D. BUSH
State Oil and Gas Supervisor

By E H Musser ERMA Deputy

Blanket bond No. 99071

FORM 107. 29275 11-43 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
JUL 17 1944
LOS ANGELES, CALIFORNIA

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

This notice must be given fifteen days before work begins when possible

Santa Fe Springs Calif. July 15 19 44

DIVISION OF OIL AND GAS

Los Angeles Calif.

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. Oil Operators #4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Complete casing record.

Total depth 5379' - plug 5361'
13-3/8" cmtd. 757'
8-5/8" cmtd. 4005' O.K.
(565' 6-5/8" landed 4408', inc. 60' perf. C.P. 4344'. Perf. 4005-4028, 4070-4130' - deepened through)
1572' 4-3/4" cmtd. 5376' - perf. and re-perf. 5113-5158', 5168-5175', 5280-5350'

2. July, 1944 ~~Discontinued~~ Produced (Date) 87 (Net Oil) 26.2 (Gravity) 40.0 - 29 days. (Cut)

The proposed work is as follows:

1. Add perforations 5175-5235' and re-perforate present perforations.
2. If wet or no fluid, plug to 5090' and test by Division of Oil and Gas.
3. Perforate 4850-4920' and test. If unsuccessful, test higher.
4. If any test is unsuccessful, plug to 20' above perforations and test by Division of Oil and Gas.

plug + alter casing

MAP | MAP BOOK | CARDS | BOND | FORMS 114 | 121

Blanket Bond #99071 | M | M

UNION OIL COMPANY OF CALIFORNIA
(Name of Operator)

By Henry L White
Division Engineer.

cc: P.A.W.

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

FORM 102.

DIVISION OF OIL & GAS
RECEIVED
JUL 22 1941
LOS ANGELES, CALIFORNIA

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators No. 4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 3-21-38

_____, was filed.

SIGNED Henry E Winter

Date July 18, 1941 Title DIVISION ENGINEER
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

CASING RECORD AT START OF WORK
13-3/8" C. 757'
8-5/8" C. 4005', O.K.
565' 6-5/8L. 4408', inc. 60' perf.
CP. 4344'
Reperf: 4348-4399', Perf: 4005-4028', 4070-4130'.

CASING RECORD AT END OF WORK
13-3/8C757'
8-5/8C4005', O.K.
1572' 4-3/4 C. 5376'
Perf. and Reperf: 5113-58'; 5168-75'; 5280-5350'
(565' 6-5/8 L. 4408', inc. 60' perf. behind 4-3/4". CP 4344', Reperf: 4348-4399'; Perf: 4005-4028'; 4070-4130').

1941	Depth	Eff. Depth	Remarks
3-19	4408	Plg. 4305	Pulled rods and tubing.
3-21	4407		Drilled out cement plug.
3-22	4408		Drilled out lead seal and bottom of liner.
3-23	4500		Drilled with 5-5/8" bits.
3-24	4555		Cored with 5-5/8" wire line core barrel.
3-28	5112		Drilled with 5-5/8" bits.
4-2	5379		Cored with 5-5/8" core barrel. Ran Schlumberger electric log and inclinometer from 4408' to 5375'. Co-ordinates at 5370', 155'S, 195'E.
4-9	5379		Under-reamed with Grant hydraulic under-reamer from 4112' to 5377'.
4-10	5379		Ran in 1572' 4-3/4" 16#, Grade "C" seamless second-hand liner, including 8-5/8" x 4-3/4" Burns liner hanger and adapter. Landed at 5376' with Baker float shoe on bottom and Baker float collar at 5361'. Cemented with 200 sacks by displacement method.
4-11	5379		Found top of cement at 3680' and drilled out to 3804' with 7-5/8" bit.

5376 / 13 / 8

FORM 102.

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

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Date 1941	Depth	Eff. Depth	Remarks
4-13	5379	Plg. 5361	Drilled out cement with 3-7/8" bit and 4-3/4" casing scraper from 3804' to 3814' and from 5305' to 5361'.
4-14	5379		Bailed mud with 6-5/8" bailer to 3093' and checked bottom with bailer. After 8 hours no rise in fluid as witnessed by Corwin of Division of Oil & Gas, and casing splice approved.
4-15	"		Perforated 4-3/4" casing with Lane-Wells gun, shooting .45 caliber bullets from 5113-5137' with 48 holes. 5280-5322' with 85 holes.
4-16	"		Landed 2½ upset tubing at 5167'.
4-18	"		Swabbed fluid, ran in pump and rods, installed pumping unit, and put on production.

PRODUCTION DATA

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Produced
4-18	72	54	-	24.7	19
4-19	36	34	23.2	6.1	24
4-20	38	36	23.2	6.4	24
4-21	39	37	23.2	6.4	24
4-22	36	34	23.2	6.4	24
4-23	31	29	23.2	6.4	18
4-24	33	31	23.2	6.0	24
4-25	31	29	23.2	6.0	24
4-26	32	30	23.2	6.0	24
4-27	32	30	23.2	6.0	24
4-28	32	30	23.2	6.0	24
4-29	20	19	23.2	6.0	10

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Date 1941	Depth	Eff. Depth	Remarks
4-29	5379	Plg. 5361	Pulled rods and tubing.
5-1	"		Bailed and swabbed perforations.
5-2	"		Reperforated 4-3/4" liner with Lane-Wells gun, shooting .45 caliber bullets from 5114' to 5140', with 26 holes. 5280' to 5325', with 45 holes. Ran 2½" tubing to 5290'. Ran in pump and rods. Connected pumping unit. Put on production.

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Produced	
5-2	37	18	23.2	50.0	4	
5-3	71	69	23.2	2.4	24	
5-4	34	33	23.2	2.5	24	
5-5	23	22	23.2	2.5	24	
5-6	27	26	23.2	2.5	18	
5-7	31	30	23.2	2.5	24	
5-8	6	6	23.2	2.5	4	
5-9	37	36	23.2	2.5	12	(Run pressure bomb)
5-10	29	28	23.2	2.5	24	
5-11	29	28	23.2	2.5	24	
5-12	30	29	23.2	2.5	24	
5-13	40	39	23.2	2.5	17	(Pull pressure bomb)
5-14	26	25	23.2	2.5	24	
5-15	29	28	23.2	2.5	24	
5-18	28	27	23.2	2.5	24	
5-20	20	20	23.2	2.5	24	
5-22	28	27	23.2	2.5	24	
5-24	26	25	23.2	2.5	24	
5-26	41	40	23.2	2.5	18	
5-28	27	26	23.2	2.5	24	
5-30	25	24	23.2	2.5	24	
6-2	3	3	23.2	2.5	3	

FORM 102.

10

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

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Date 1941	Depth	Eff. Depth	Remarks
6-2	5379	Plg. 5361	Pulled rods and tubing.
6-4	"		Ran Lane-Wells gun perforator, shooting .45 caliber bullets. Reperforated: 5113-5140', 28 holes; Perforated: 5140-5148', 38 holes; Perforated: 5168-5175', 15 holes; Reperforated: 5280-5325', 46 holes; Perforated: 5325-5350', 50 holes. Fluid level at 1830' by bailer after perforating.
6-5	"		Ran 2½" tubing to 5100'.
6-6	"		Swabbing through tubing. Well flows by heads part time.

PRODUCTION DATA

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Produced	
	52	51	23.2	2.4	19	(Flowing and swabbing)
6-7	99	97	26.0	2.4	17	(Ran in rods and put on pump)
6-8	103	101	26.0	2.4	24	
6-9	60	59	21.5	2.4	24	
6-10	49	48	26.0	2.4	24	
6-11	47	46	26.0	2.4	24	
6-12	45	44	26.4	1.8	19	
6-13	60	59	26.4	1.8	24	
6-14	59	58	26.4	1.8	24	
6-15	58	57	26.4	1.8	24	
6-18	54	53	26.4	1.8	24	
6-21	54	53	26.4	1.8	24	
6-24	7	7	26.4	1.8	3	(Pull rods)

6-27	Perforations washed with Yowell Type "S" washer.
6-28	Ran 2½" upset tubing to 5384', ran in rods and pump, and put on production.

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Date 1941	Depth	Eff. Depth	Remarks
	5379	Plg. 5361	

PRODUCTION DATA

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Pumped	
6-28	96	65	26.4	32.0	10	
6-29	72	57	26.4	20.3	24	
6-30	0	0	-	-	0	(Pump sanded)
7-1						(Pulled rods & tubing)
7-2	110	95	26.4	14.0	13	(Ran tubing, rods & pump)
7-3	81	62	26.4	14.0		
7-4	53	47	26.4	10.5		
7-5	54	51	26.4	5.9		
7-6	54	51	26.4	5.4		
7-7	52	49	26.4	5.4		
7-10	50	48	26.4	3.8		
7-11	49	48	26.4	3.0	24	
7-12	30	29	26.4	3.3	19	(Sanded)
7-13						(Pulled rods & tubing)
7-14	85	81	26.4	4.8	24	(and re-ran)
7-15	64	61	26.4	4.8	24	
7-16	54	52	26.4	4.2	24	
7-17	52	50	26.4	3.0	24	
7-18						

MEASUREMENT DATUM

All measurements from top of rotary table which is 18" above top of derrick floor, or 31" above top of cement foundation piers.

M 101.

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
JUL 22 1941
LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator Union Oil Company of California Field Long Beach

Well No. Oil Operators No. 4 Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

FORMATIONS PENETRATED BY WELL

Henry E Winter

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
4408	4545	137	Drilled		Sand and shale.
4545	4555	10	Cored		Sand. (See Core Record)
4555	5112	557	Drilled		Sand and shale.
5112	5379	267	Cored		Sand and shale. (See Core Record)
		TOTAL DEPTH - 5379'			

7708A 2-41 10M
TED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

DIVISION OF OIL & GAS
RECEIVED
JUL 22 1941
LOS ANGELES, CALIFORNIA

33

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-23-41		5-5/8" Barrett Robishaw	4500	4510	0.8	0.4	0.4			Mixed burnt shale and oil sand.		
3-23-41		"	4510	4520	2.6		0.5			Hard fine to medium oil sand. Carbon particles. Good odor and fair cut.		
						0.1				Hard burnt shale		
							2.0			Mixed mud and fine oil sand. Slight odor and fair amber cut.		
3-23-41		"	4520	4530	1.3				0.9	Hard sandstone shell (probably at 4527' by driller)		
							0.4			Loose mixed oil sand and mud. Fair odor and cut.		
3-23-41		"	4530	4535	0.7		0.7			Pieces of hard calcareous fine to medium grayish brown oil sand (carbonaceous). Fair odor and light amber cut. One piece has irregular vertical shale sand contact (possibly fault gouge).		
3-23-41		"	4535	4545	2.0		0.5			Hard slightly calcareous grayish brown oil sand. Fair odor and light cut.		
							1.5			1/2" pieces of firm fine to medium oil sand. Fair odor and amber cut.		
							2.0			Oil sand has few grayish spots.		
3-24-41		"	4545	4555	0.6		0.3			Pieces of hard calcareous grayish brown oil sand. One piece has small shale streak at approximately 75°. Possibly fault gouge. Fair odor and light cut.		
							0.3			Soft fine brown oil sand. (Mud striations). Good odor and light amber ether cut.		
							0.6					
3-24-41		"	4555	4565	2.6	1.0				Pieces of hard brown shale. One apparent dip of 20°.		
						0.7	0.7			Mixed shale and oil sand and mud. (free oil)		
						0.2				Hard brown shale.		
						1.9	0.7					

Henry E Winter

708A 2-41 10M
TED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-24-41		5-5/8" Barrett Robishaw	4565	4575	1.8	0.1				Hard brown shale		
							0.7			Fine mushy brown oil sand. Good odor and amber cut.		
						1.0				Pieces of hard brown shale, badly broken by coring. Coring became hard at 4572'.		
						1.1	0.7					
			4575	5112						DRILLED INTERVAL		
3-28-41		"	5112	5117	0.3	0.3				Hard calcareous shale		
3-28-41		"	5117	5122	2.9	0.6				Hard brown shale. Very poor possible dip of 45°.		
							2.0			Fine brown oil sand, fair odor, good greenish cut.		
						0.3				Firm brown shale.		
						0.9	2.0					
3-28-41		"	5122	5132	3.7	0.4				Sandy brown shale.		
							2.5			Soft mushy fine to medium brown oil sand; fair odor, greenish amber cut. Mushiness could be from rain.		
						0.3				Sandy brown shale		
						0.5				Chunks of oily brown shale.		
						1.2	2.5					
3-28-41		"	5132	5142	0					NO RECOVERY		
3-28-41		"	5142	5147	4.5	0.4				Hard slightly calcareous brownish-black shale.		
							4.1			Hard to firm, fine to medium, brown oil sand. Fair odor, good amber cut.		
						0.4	4.1			Trade free oil on core.		
3-28-41		"	5147	5155	2.6	0.1			X	Sandy brown shale (Shell by driller at 5148').		
							1.1			Fine light brown oil sand, fair odor, dark greenish amber cut.		
						1.4				Firm brownish-black shale, possible suggestion of 40° dip (?).		
						1.5	1.1					
3-28-41		"	5155	5156	0.0					No recovery.		
3-29-41		"	5156	5166	0.7	0.3				Chunks brown shale scattered through 6' of mud.		
						0.4				Sandy brown shale.		
3-29-41		"	5166	5171	0.5	0.5	X			Chunks sandy brown shale with 2 seams fine brown oil sand. Greenish amber cut, free oil in fractures.		

Henry E Winter

708A 2-41 10M
NTED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-29-41		5-5/8" Barrett-Robishaw	5171	5175	1.0	1.0				Hard brown shale.		
3-29-41		"	5175	5185	2.6		1.0			Medium to slightly coarse with pebbles, firm, light brown oil sand, good greenish-amber cut.		
						0.8				Hard brownish-black sandy shale.		
						0.1				Medium hard brown sandy shale.		
							0.2			Soft, fine, light brown oil sand. Good odor, good greenish cut.		
						0.1				Medium hard brownish-black shale. Suggestion of 45° dip. Possible fracture at 60°.		
						0.2				Firm brown sandy shale.		
							0.2			Soft fine light brown oil sand. Good odor.		
						1.2	1.4					
3-29-41		"	5185	5192	4.4		0.6			Fine to medium, firm to soft, light brown oil sand; fair odor.		
							0.6			Fine, firm, light brown oil sand. Dark amber cut. (Looks residual).		
							1.7			Fine to medium with few pebbles, firm to soft, light brown oil sand, fair odor, light greenish amber ether cut.		
									0.1	Hard gray sandstone shell		
							0.7			Fine to medium with few pebbles, firm to soft, light brown oil sand, fair odor, light greenish-amber cut.		
									0.7	Hard gray sandstone shell.		
							3.6		0.8			
3-29-41		"	5192	5199	2.8		2.8			Firm, fine to medium, light brown oil sand, poor odor, dark greenish-amber cut.		
3-29-41		"	5199	5205	0.3		0.3	X		Firm, fine, light brown oil sand with streaks gray sand. Poor odor, dark amber cut. (Looks residual).		
3-29-41		"	5205	5211	6.0		3.0			Soft to firm, fine, light brown oil sand, poor odor, dark greenish cut.		
							3.0			Firm, biscuity, fine light brown oil sand, fair odor, dark cut.		
							6.0					

Henry E Winter

708A 2-41 10M
NTED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-29-41		5-5/8" Barrett-Robishaw	5211	5217	4.5			0.2		Firm to soft, fine to medium-fine gray sand. No odor.		
						0.3				Hard black shale with possible fractures at 45° and 60°.		
							1.4			Firm, fine, light brown oil sand with gray cast. No odor.		
							2.6			Firm, fine to medium, light brown oil sand with fair odor. Good greenish-amber cut.		
						0.3	4.0	0.2				
3-29-41		"	5217	5223	1.0		1.0	X		Soft to firm, fine to medium-coarse with pebbles, brown oil sand with small streaks gray sand.		
3-29-41		"	5223	5229	2.1		2.0			Firm, fine to medium, brown oil sand with grayish cast. Dark cut.		
						0.1				Hard brownish-black shale.		
3-30-41		"	5229	5235	1.0		1.0			Firm to soft, fine to medium fine, brown oil sand with grayish cast. Medium amber cut. Free oil on core and in breaks.		
3-30-41		"	5235	5241	5.0		2.3			Firm to soft, fine to medium-fine, brown oil sand with dark ether cut. Fair odor. Free oil on core and in breaks.		
						0.1				Hard brownish-black slightly sandy shale.		
							0.4			Firm, fine to medium brown oil sand with free oil on core.		
						0.6				Hard brownish-black shale		
							0.6			Soft, mushy, fine, light brown oil sand.		
						0.2				Hard brownish black shale		
							0.4			Soft fine light brown oil sand.		
						0.4				Hard, burnt, black shale.		
						1.3	3.7					
3-30-41		"	5241	5245	2.0	0.4		X		Firm gray sandy shale with narrow seams gray sand at 40°.		
						0.4				Hard brownish-black shale with fracture at 45°.		
						0.9				Mud with hunks dark brown shale.		
						0.3				Hard dark brown burnt shale.		
						2.0						
3-30-41		"	5245	5246	0.9	0.9				Hard dark brownish-black shale.		

Henry E Winter

708A 2-41 10M
NTED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

~~Long Beach~~ FIELD ~~Union Oil~~ COMPANY ~~Oil Operators~~ LEASE ~~No. 4~~ WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-30-41		5-5/8" Barrett-Robishaw	5246	5251	1.0	1.0				Hard brownish-black shale with small hunks and pieces of undergage core.		
3-30-41		"	5251	5253	0.9	0.9		X		Firm brownish-black shale with a narrow seam of fine gray sand.		
3-30-41		"	5253	5259	4.0	1.5 2.5				Mud with hunks fairly soft brownish-black shale. Hard, well-cut, dark brownish-black shale.		
3-30-41		"	5259	5264	5.0	5.0				Hard well-cut dark brownish-black shale. Shows no bedding but gives consistent fracture at 45° when broken.		
3-30-41		"	5264	5270	3.0	3.0				Mud interspersed with soft pieces dark brownish-black shale. Slightly sandy in spots.		
3-31-41		"	5270	5276	0.0					No recovery.		
3-31-41		"	5276	5280	0.0					No recovery.		
3-31-41		"	5280	5281	0.0					No recovery.		

Henry E Winter

708A 2-41 10M
NTED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-31-41		5-5/8" Barrett-Robishaw	5281	5282	0.0					No recovery.		
3-31-41		5-5/8" Gauthey	5282	5295	12.2	2.8				Hard brownish-black shale with slickensides on 23° fractures. Apparent bedding approximately 45°.		
							0.2			Soft to firm, fine light brown oil sand streaked with drilling mud. Good amber cut.		
						0.5				Soft to firm brown sandy shale.		
							6.5	X		Firm, fine, argillaceous light brown oil sand; good odor, dark greenish-amber cut. Occasional fine striations of sandy shale with bedding dip of approximately 35°. (At 5287', a streak of 0.05' firm gray sand and black shale. Sand had light amber cut and strong gassy odor).		
						0.3				Hard brown shale, slightly sandy.		
							0.3			Firm, fine light brown oil sand. Good odor.		
						0.3				Hard brownish-black shale. Sand shale contact at approximately 35°.		
							0.2			Firm, fine light brown oil sand. Dark greenish amber cut. Good odor.		
						1.1				Hard brownish-black shale.		
						5.0	7.2					
4-1-41		"	5295	5310	1.1	(6.0)			X	(Drilling mud with fragments hard brown black shale scattered through it. One fragment gray sandstone shell recovered).		
						0.7				Soft muddy dark brown shale.		
						0.4		X		Firm sandy shale with inter-bedded lenses of gray sand. May be burnt.		
						1.1						
4-1-41		"	5310	5325	1.2	0.1				Hard brownish-black shale, broken up by coring.		
							0.1			Firm, fine to medium-fine light brown oil sand. Good greenish-amber ether cut, fair odor.		
						0.1				Soft to firm, muddy, black shale.		
							0.3			Soft, mushy, fine to medium light brown oil sand.		
							0.1			Firm, fine to medium-fine light brown oil sand.		
									0.2	Hard gray sandstone shell.		
							0.3	X		Soft, medium light brownish-gray sand with mud striations.		
						0.2	0.8		0.2			

Henry E Winter

708A 2-41 10M
TED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
4-1-41		5-5/8" Gauthey	5325	5340	0.0					No recovery		
4-1-41		"	5340	5346	5.7		1.3			Firm, fine to medium-fine, with pebbles, light brown oil sand. Fair odor, good greenish-amber cut.		
							0.5			Firm, fine to medium-fine, brown oil sand. Good odor, good greenish-amber cut.		
							1.2			Firm, fine to medium with pebbles, light brown oil sand. Fair odor, good greenish-amber cut.		
							1.4			Firm, fine to medium-fine with few pebbles, light brown oil sand. Good greenish-amber cut. Fracture at 5344' showed slickensides at 12° dip.		
							1.1			Firm, fine to medium, slightly coarse with many pebbles, light brown oil sand.		
							0.2			Firm, fine to medium, brown oil sand. Good odor, dark greenish-amber cut.		
							5.7					
4-2-41		5-5/8" Hughes	5346	5364	2.6	(5)		X		Rotary mud with a few streaks soft black shale and gray sand.		
							0.5			Firm, medium-fine, light brown oil sand. Good odor, good greenish-amber ether cut.		
							0.3			Soft, fine to medium, brown oil sand.		
									1.8	Hard gray sandstone shell.		
4-2-41		"	5364	5379	1.5		1.5			Soft-firm, fine-medium brown oil sand. (Grayish cast). Fair, but burnt odor, dark greenish cut. Whole core slightl burnt.		

Henry E Winter

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

No. 8394

DIVISION OF OIL AND GAS

LOS ANGELES Calif. 4/22 19 41

Union Oil Co of Calif
Name of Operator

LOS ANGELES
Address

This is to acknowledge the receipt of logs and similar records of wells on Sec. 13 T. 4S
R. 13W *San Bernardino* B. & M., *as herewith enumerated by well numbers.*

Logs

History

Core record

Subsequent work

Elsinore - All operators 4/22/41

R. D. BUSH, *State Oil and Gas Supervisor*

By E Hugueneau *Deputy*

DUPLICATE

FORM 127. 67887 6-40 3500 TRIP

CALIFORNIA STATE PRINTING OFFICE

AH

FORM 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-39382

Los Angeles, Calif. April 25, 1941.

Mr. W. S. Eggleston,
Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4S., R. 13W. S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Chas. Corwin, Inspector, representative of the supervisor, on April 14, 1941. There was also present E. G. Trostel, Engineer, W. A. Meginnis, Driller.

Casing Record	Junk
13-3/8" cem. 757', 8-5/8" cem. 4005' W. S. O.; 6-5/8" liner ld. 3843'-4408', c. p. 4344', perf. 4408'-4348', 4130'-4070' and 4028'-4005'; 4-3/4" liner cem. 3804'-5376'. T. D. 5379', plugged with cement 5376'-5361'.	None

The operations were performed for the purpose of demonstrating that no fluid has access to the well between the 4-3/4" and 8-5/8" casings,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 5:00 P. M. AND MR. TROSTEL REPORTED THE FOLLOWING:

1. The hole was cleaned out to 4408'.
2. A 6-5/8" rotary hole was drilled from 4408' to 5379'.
3. Mud fluid was circulated 3-1/2 hr. before cementing the casing.
4. Electrical core readings showed the top of the Brown Zone 4630'.
5. On April 10, 1941, 1572' of 4-3/4" - 16 lb. casing was cemented at 5376' with 200 sacks of Colton cement.
6. Cement was drilled out of the 8-5/8" casing from 3680' to 3804' and out of the 4-3/4" casing from 3804' to 5361', equivalent to 35 and 118 sacks, respectively. = 153' ins. 1a = 118 sx 4-1/2 2c
7. On April 14, 1941, at 9:00 a. m. the fluid in the hole was bailed to 3039'.

THE INSPECTOR NOTED THE FOLLOWING:

1. No fluid entered the well while standing 8 hr. for test.
2. The hole was open below 3915'.

The test was completed at 5:50 p. m.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT fluid does not have access to the well between the 4-3/4" and 8-5/8" casings.

cc- H. E. Winter
Long Beach
CC:G

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA -
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-35934

Los Angeles, Calif. January 13, 1941.

MR. W. S. Eggleston,

Los Angeles, Calif.

121

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR: "OIL OPERATORS"

Your proposal to deepen Well No. 4,

Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County,

dated Jan. 9, 1941, received Jan. 10, 1941, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice:

THE NOTICE STATES:

"The present condition of the well is as follows:
Total depth 4408' - Plug 4305'
13-3/8" C 757'
8-5/8" C 4005' O.K.
565' 6-5/8" L 4408', inc. 60' perf. C.P. 4344'
Reperf. 4348-4399' and perf. 4005-4028 and 4070-4130'.
It is proposed to deepen the well as a lease offset to Hilldon F.C. #4.
Last production - 1472 oil, 19,124 water - 31 days."

PROPOSAL:

"The proposed work is as follows:
1. Clean out to 4408' and deepen to approximately 5400'.
2. Cement 4-3/4" blank liner on bottom and gun perforate the top of the "S" zone and the top of the "T" Zone for production.
3. Test on production."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Any hole to be sidetracked in any oil zone shall be filled with cement, if possible.
3. This division shall be notified to examine cores and/or electrical log before running the 4-3/4" casing.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) A test after drilling out the cement to within 50' of the cementing point to demonstrate that no fluid has access to the well between the 4-3/4" and 6-5/8" casings.
   (b) A production test within 10 days after the well has been placed on production.

cc- H. E. Winter
Long Beach
WJC:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Haynsworth Deputy

FORM 107. 14408 8-34 10M
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL & GAS
RECEIVED
JAN 10 1941
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

This notice must be given fifteen days before work begins when possible

Santa Fe Springs Cal. January 9 19 41

MR. E. HUGUENIN,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of deepening, ~~redrilling, plugging or altering casing of~~ well No. Oil Operators 4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Oil Field, Los Angeles County.

The present condition of the well is as follows:

Total depth 4408' - Plug 4305'

13-3/8" C 757'
8-5/8" C 4005' O.K.
565' 6-5/8" L 4408', inc. 60' perf. C.P. 4344'
Reperf. 4348-4399' and perf. 4005-4028 and 4070-4130'

It is proposed to deepen the well as a lease offset to Hilldon F.C. #4.
Last production - 1472 oil, 19,124 water - 31 days

The proposed work is as follows:

1. Clean out to 4408' and deepen to approximately 5400'.
2. Cement 4-3/4" blank liner on bottom and gun perforate the top of the "S" Zone and the top of the "T" Zone for production.
3. Test on production.

deepen

Respectfully yours

UNION OIL COMPANY OF CALIFORNIA
Name of Company or Operator

By Henry E Winter
Division Engineer.

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

FORM 102. 47744 8-37 9500
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL AND GAS
RECEIVED
APR 19 1938
LOS ANGELES, CALIFORNIA

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, SB B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated March 21, 1938, was filed.

SIGNED Henry E Winter

Date April 4, 1938 Title District Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

CASING RECORD AT START OF WORK:

Depth - 4408'
13-3/8" C 757'
8-5/8" C 4005' OK
565' 6-5/8" L 4408', inc. 60' perf.
C. P. 4344'. Reperf. 4399-4348

CASING RECORD AT END OF WORK:

Depth - 4408, Plugged to 4305'
13-3/8" C 757'
8-5/8" C 4005'
565' 6-5/8" L 4408', inc. 60' perf.
C. P. 4344'. Reperf. 4399-4348'
Perf. 4130-4070 & 4028-4005

1938	Depth	Eff. Depth	Remarks			
3-17	4408		Took out pumping unit and pulled rods and tubing.			
3-19	4408		Cleaned out liner to 4397'. Dumped 24 sacks of Victor construction cement in stages from 4397'.			
3-20	4408	Plug 4305	Located top of cement plug at 4305'. Perforated 6-5/8" casing from 4130 to 4070 with 83 holes and 4028 to 4005 with 36 holes, using Lane-Wells 5-3/4" 12 shot gun with .45 caliber shells.			
3-21	4408	" 4305	Landed 3" upset tubing at 3979.27'. Put well on pump at 1:00 PM 3-21-38.			
			180 gross, 127 net, 21.7 grav., 29.4% cut - P 11 hrs.			
3-22	452	" 360 "	22.1	20.4	P 24	"
3-23	523	506	22.1	3.2	P 24	"
3-24	545	534	23.6	2.0	P 24	"
3-25	563	556	23.6	1.2	P 24	"
3-26	531	525	23.6	1.1	P 24	"
3-27	506	499	23.6	1.4	P 24	"
3-28	493	488	23.6	1.1	P 24	"
3-29	477	472	23.6	1.0	P 24	"
3-30	465	459	23.6	1.2	P 24	"
3-31	449	445	23.6	1.0	P 24	"

SUBMIT LOG IN DUPLICATE

FILL TH .NK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAI ILY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

Sun oil Co

LOG OF OIL OR GAS WELL

Operator Union Oil Company of California Field Long Beach

Well No. Oil Operators #4 NWLBU#8-4 Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Location 348' S.W.'ly along the prolongation of the center line of San Antonio Drive from its intersection with the center line of Riverside Drive, thence N.W.'ly at right angles 653'. Elevation 53.88

In compliance with the provisions of Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 3-21-38 Signed Henry E. Wintz

(Engineer or Geologist) (Superintendent) Title DISTRICT ENGINEER (President, Secretary or Agent)

Reference to file of data

Cards	Forms	
	114	121

Commenced drilling January 1, 1938 Completed drilling Drilling tools Cable X Rotary

Total depth 4408 Plugged depth

Junk

GEOLOGICAL MARKERS	DEPTH
Wilber Shale	3586-3653
Alamitos Shale	3784-3842
H	3971
I	4005
J	4306
K	4348

Commenced producing 2-26-38 (date) Flowing, gas lift, pumping (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	30	21.2	7.8			
Production after 16/~~30~~ days	15	21.7	16.5			

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 Casing landed in	Number of Sacks of Cement	Depth of Cementing if through perforations
13-3/8	757	Surface	45.97#	New	Seamless	Slip-joint	17"	350	
8-5/8	4005	"	32# & 36#	New & Used	"	C	12¼"	400	
6-5/8	4408	3843	26#	New	"	C	7-5/8 O.R. 8½	125	4344

Perforations

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
6-5/8	4348 ft.	4408 ft.	120 mesh	16	6	Kobe
	ft.	ft.	Reperf. 4348-4399 - 60	holes L. & W. gun		
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

Electrical Log Depths Schlumberger from 757 to 4408 (Attach Copy of Log)

FORM 101. 1450 3-33 30M
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD Union Oil Company of California COMPANY Long Beach

Sec. 13, T. 4-S, R. 13-W, S.B. B. & M. Well No. Oil Operators #4

FORMATIONS PENETRATED BY WELL

Henry E Winter

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
0	170	170	Surface clay
170	364	194	Sand and gravel
364	388	24	Sand and clay
388	713	325	Hard sand
713	760	47	Shale
760	1577	817	Shale and streaks of sand
1577	1883	306	Hard sand
1883	2775	892	Shale and streaks of sand
2775	2863	88	Sand
2863	2990	127	Shale and streaks of sand
2990	3112	122	Sand and streaks of shale
3112	3114	2	Shell
3114	3193	79	Sand and streaks of shale
3193	3195	2	Shell
3195	3230	35	Shale and streaks of sand
3230	3231	1	Shell
3231	3371	140	Shale and streaks of sand
3371	3372	1	Shell
3372	3525	153	Shale and sand
3525	3530	5	Hard sand
3530	3560	30	Shale and sand
3560	3644	84	Sand and streaks of shale
3644	3730	86	Shale and streaks of sand
3730	3880	150	Hard sand
3880	3951	71	Shale and streaks of sand
3951	3953	2	Shell
3953	4015	62	Shale and streaks of sand (See Core Record)
4015	4408	393	Shale and sand (See Core Record)

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED 3
MAR 24 1938
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Signed Henry E Winter

Date 3-21-38 Title DISTRICT ENGINEER
(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. **Use this form in reporting the history of all important operations at the well, together with the dates thereof, prior to the first production.** Include in your report such information as size of hole drilled to cementing or landing depth of casings, number of sacks of cement used in the plugging, number of sacks or number of feet of cement drilled out of casing, depth at which cement plugs started, and depth at which hard cement encountered. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date 1938

CASING RECORD AT START OF WORK
New Well

Water Shut-off Test	Cementing Record	Perforations	
		134	121
			✓

CASING RECORD AT END OF WORK
13-3/8 C. 757
8-5/8 C. 4005 O.K.
565 - 6-5/8 L. 4408, incl. 60' perf. C.P. 4344
Reperf 4309 - 4548

Date	Depth	Eff. Depth	Remarks
1-1	50		Spudded in with 18-5/8" rotary bit and drilled to 50'. Cemented 18-5/8 conductor pipe at 50' with 46 sax Velo cement.
1-4	758		Drilled with 17" rotary bits to 758. Cemented new 13-3/8-45.97# National Seamless slip-joint casing at 757 with 350 sax Velo treated cement. Cementing operations witnessed and approved by Karmelich of D.O.G.
1-5	911		Found top of cement at 754. Cleaned out cement and plugs and drilled ahead with 12¼ bits.
1-22	4015		Drilled with 12¼ bits to 3955 and cored with 7-5/8 core barrels to 4015. Ran Schlumberger Survey.
1-23	4015		Reamed out core hole with 12¼ bit to 4005. Cemented 8-5/8 - 32# Grade C (1263 of 8-5/8 - 36# on bottom) 8 thread rounded seamless casing at 4005 with 400 sax cement (200 sax Victor Oil Well and 200 sax Victor Construction)
1-28	4070		Found top of cement at 3978. Drilled out cement and plugs to 4005 and cleaned out to 4010. Water Shut Off test on 8-5/8 casing at 4005 witnessed and approved by Corwin of D.O.G. Drilled with 7-5/8 bit to 4070.
2-3	4408		Cored with 7-5/8 core barrels to 4408. Ran Schlumberger Survey.
2-5	4408		Under-reamed hole to 8½" from 4007 to 4408. Landed 565' of 6-5/8 - 26# Grade C casing at 4408 including 60' of (16-2-6) 120 mesh Kobe perforated on bottom. Cemented liner through ports of Baker Whirler basket at 4344 with 125 sax of Victor Oil Well cement.

H408/60/4348 H408/565/1843

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STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

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Date 1938	Depth	Eff. Depth	Remarks
2-10	4408	4270	Found top of cement at 3676. Drilled out cement inside of 6-5/8 liner to 3932. Bailed fluid to 2535. Water Shut Off Test on 6-5/8 spliced liner, cemented thru perforations at 4344, witnessed and approved by Karmelich of D.O.G. No rise in 8 hours. Drilled out cement to 4270.
2-11	4408	4408	Drilled out cement to 4343 and cleaned out to bottom of liner, Landed 3" upset tubing at 4318 including 521' of Baash-Ross insert tubing on bottom.
2-17	"	"	Changed from mud to water and swabbed fluid to 3000'. Very little oil or gas. Pulled tubing. Alternated between running 6-5/8 swab past perforations as agitator, and bailing mud from bottom. Landed 3" upset tubing at 4324. Installed pumping unit and started well pumping at 7 P.M., 2-17-38.

	43 gross	42 net		2.8% cut	P10 hrs.
2-18	15	14	21.2 grav.	1.4	P24
2-19	17	16	"	1.0	P24
2-20	3	2	"	1.1	P24
2-21	31	30	"	1.0	P24
2-22	28	27	"	1.0	P24
2-23	1	1	"	1.0	P3 hrs. Pulled R&T

2-28	4408	Open 4402	Cleaned out sand to 4402. Reperforated 6-5/8 liner from 4399 to 4348 with 60 holes, using Lane-Wells 5½" - 12 shot gun with .45 caliber shells. Landed 3" upset tubing at 4323. Installed pumping unit and started well pumping at 10 P.M., 2-28-38)		
	128 gross	0 net		100.0% cut	P7 hrs.
3-1	33	30	21.2 grav.	7.8	P24
3-2	27	25	"	7.8	P24
3-3	25	24	21.2	2.6	P24
3-4	23	20	21.2	13.3	P24

FORM 103.
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STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

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History of Oil or Gas Well

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

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Date 1938	Depth	Eff. Depth	Remarks				
3-5	4408	Open 4402	21 gross	19 net	21.2 grav.	10.2% cut	P24 hrs.
3-6			21	19	21.2	8.2	P24
3-7			19	16	21.2	15.3	P24
3-8			18	13	21.7	27.5	P24
3-9			18	13	21.7	25.6	P24
3-10			18	14	21.7	24.2	P24
3-11			18	14	21.7	24.2	P24
3-12			17	14	21.7	17.2	P24
3-13			17	14	21.7	17.8	P24
3-14			18	15	21.7	16.5	P24
3-15			17	14	21.7	18.4	P22 hrs. Eng.
3-16			17	14	21.7	18.4	P24
3-17			7	6	21.7	17.2	P10

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-21-38	1	7-5/8" Soll	3955	3970	7.3			2.5		Firm Soft Fine Gray Sand		
						1.8				Hard Dark Brown Shale, sandy in parts		
								0.2		Firm, very Fine Silty Gray Sand		
								1.3		Firm Soft Fine to Medium Gray Sand Dip 23°		
						0.1				Hard Dark Brown Shale		
								1.4		Firm Soft Fine to Medium Gray Sand		
						1.9		5.4				
1-21-38	2	"	3970	3985	13.3			0.2		Firm Soft Fine Gray Sand		
						0.2				Hard Dark Brown Shale. Dip 16°		
								0.3		Firm Soft Fine Gray Sand		
						6.1	0.1			Hard Dark Brown Shale with partings of Fine Brown Oil Sand. Streak (0.1) of Fine Brown Oil Sand 1.8' from top. Shale sandy towards bottom Fractures of 48° and 24°		
							1.2			Firm Soft Fine Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown Shale		
							0.6			Firm Soft Fine Brown Oil Sand		
						0.6				Hard Dark Brown Shale		
							0.9			Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.5				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						0.1	2.3			Firm Soft Fine Brown Oil Sand. Streak of Brown Shale (0.1) 1.2' from top. Good Odor and Dark Amber Cut		
						7.7	5.1	0.5				
1-22-38	3	"	3985	4000	10.3		1.1			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.3				Hard Dark Brown Shale. Oil in fracture joints		
							0.8			Firm Soft Medium Brown Oil Sand. Good Odor		
						0.6				Hard Dark Brown Shale with inclusions of Fine Gray Sand. Sandy in spots		
						6.0				Hard Dark Brown Shale, badly broken and mixed with mud		
							0.6			Firm Soft, very Fine Argillaceous Silty Oil Sand, slightly mixed with mud. Fair Odor and Amber Cut		
						0.9				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						7.8	2.5					

Henry E Winter

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL
LOCATION 53.88 ELEVATION
CORE RECORD
UNION OIL COMPANY OF CALIFORNIA
08A 11-37 8M

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-21-38	1	7-5/8" Soll	3955	3970	7.3			2.5		Firm Soft Fine Gray Sand		
						1.8				Hard Dark Brown Shale, sandy in parts		
								0.2		Firm, very Fine Silty Gray Sand		
								1.3		Firm Soft Fine to Medium Gray Sand Dip 23°		
						0.1				Hard Dark Brown Shale		
								1.4		Firm Soft Fine to Medium Gray Sand		
						1.9		5.4				
1-21-38	2	"	3970	3985	13.3			0.2		Firm Soft Fine Gray Sand		
						0.2				Hard Dark Brown Shale. Dip 16°		
								0.3		Firm Soft Fine Gray Sand		
						6.1	0.1			Hard Dark Brown Shale with partings of Fine Brown Oil Sand. Streak (0.1) of Fine Brown Oil Sand 1.8' from top. Shale sandy towards bottom Fractures of 48° and 24°		
							1.2			Firm Soft Fine Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown Shale		
							0.6			Firm Soft Fine Brown Oil Sand		
						0.6				Hard Dark Brown Shale		
							0.9			Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.5				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						0.1	2.3			Firm Soft Fine Brown Oil Sand. Streak of Brown Shale (0.1) 1.2' from top. Good Odor and Dark Amber Cut		
						7.7	5.1	0.5				
1-22-38	3	"	3985	4000	10.3		1.1			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.3				Hard Dark Brown Shale. Oil in Fracture joints		
							0.8			Firm Soft Medium Brown Oil Sand. Good Odor		
						0.6				Hard Dark Brown Shale with inclusions of Fine Gray Sand. Sandy in spots		
						6.0				Hard Dark Brown Shale, badly broken and mixed with mud		
							0.6			Firm Soft, very Fine Argillaceous Silty Oil Sand, slightly mixed with mud. Fair Odor and Amber Cut		
						0.9				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						7.8	2.6					

Henry E Wintes

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-22-38	4	7-5/8" Soll	4000	4015	10.2	5.3				Hard Dark Brown, slightly Silty Shale with inclusions of Fine Gray Sand		
							0.3			Firm Fine Silty Argillaceous Brown Oil Sand with thin Streaks and partings of Dark Brown Shale		
						1.2				Hard Dark Brown Silty Shale. Streak of Fine Brown Oil Sand 0.8' from top		
							2.0			Firm Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Dark Brown Shale		
							1.3			Firm Soft Fine Brown Oil Sand. Good		
						6.6	3.6			Odor and Dark Amber Cut		
			4015	4070						Drilled interval		
1-29-38	5	7-5/8" Barrett-Robishaw	4070	4078	2.2	0.2				Hard Dark Brown Shale		
									0.6	Hard Shale Shell. Top 0.4 badly broken in coring		
						1.0				Hard Dark Brown Silty Shale with small inclusions of Fine Gray Sand		
						0.1				Hard Brown Shale		
							0.3			Fine Brown Oil Sand mixed with mud		
						1.3	0.3		0.6	and cavings		
1-29-38	6	"	4078	4083	0					No Recovery		
1-29-38	7	"	4083	4092	3.2		0.4			Firm Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Dark Brown Shale		
							0.4			Firm Soft Fine Silty Argillaceous Brown Oil Sand with Streaks of Brown Shale		
						0.2				Hard Dark Brown Silty Shale		
							0.3			Firm Soft Fine Silty Argillaceous Brown Oil Sand with thin Streaks of Brown Shale		
						0.5				Hard Dark Brown Shale with thin Streaks of Fine Silty Grayish-Brown Sand		
						0.2				Hard Dark Brown Shale with Streaks of Fine Silty Brown Oil Sand		
							0.2			Firm Soft Fine Silty Argillaceous Brown Oil Sand		
						0.2				Hard Silty Brown Shale		
							0.4			Firm Soft Fine Silty Brown Oil Sand with partings of Brown Shale (Burnt in coring)		
						0.3				Hard Dark Brown Silty Shale		
						1.5	1.7					

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-29-38	8	7-5/8" Barrett-Robishaw	4092	4100	1.5	0.2				Hard Dark Brown Shale		
							0.8			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
							0.5			Firm Fine Silty Argillaceous Brown		
						0.2	1.3			Oil Sand. Good Odor and Amber Cut. Parting 31°		
1-29-38	9	"	4100	4109	0.1	0.1				Hard Dark Brown Silty Shale		
1-29-38	10	7-5/8" Soil	4109	4124	14.2		2.0			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
							1.1			Firm Soft coarse Pebbly Brown Oil Sand		
							3.0			Firm Soft Medium to coarse Brown Oil Sand		
							0.5			Firm Fine Silty Argillaceous Brown Oil Sand. Good Odor and Dark Amber Cut. Dip 18°		
							1.1			Firm Soft Medium to coarse Brown Oil Sand		
						0.2				Hard Dark Brown Shale		
							0.2			Firm Fine Silty Argillaceous Brown Oil Sand - Dip 17°		
							1.4			Firm Soft coarse Brown Oil Sand		
							0.3			Firm Fine Silty Argillaceous Brown Oil Sand - Dip 17°		
							0.6			Soft coarse Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1	1.0			Firm Fine Silty Argillaceous Brown Oil Sand with streaks of Hard Brown Shale. Bottom 0.3 mixed with mud		
									0.3	Hard, slightly Calcareous Shale Shell		
							1.7			Firm Soft Fine Brown Oil Sand, grading to Medium at bottom. Good Odor and Dark Amber Cut		
						0.2				Hard Dark Brown Shale		
							0.5			Firm Soft Fine Silty Argillaceous Brown Oil Sand. Streak of Hard Brown		
						0.5	13.4		0.3	Shale 0.3 from top		

Henry E Wirth

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD — UNION OIL COMPANY — OIL OPERATORS LEASE — 4 WELL

LOCATION — 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	11	7-5/8" Soll	4124	4139	13.6		1.4			Firm Soft Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						1.2	0.3			Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand		
							2.2			Firm Soft Fine to Medium Brown Oil Sand. Good Odor		
						0.5				Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand in bottom 0.3		
							3.3			Soft Fine to Medium Brown Oil Sand		
						0.4				Hard Dark Brown Shale		
							0.2			Soft Fine Brown Oil Sand		
						2.1	0.3			Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand		
							0.7			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud. Good Odor and Dark Amber Cut		
						0.9	0.1			Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand		
						5.1	8.5					
1-30-38	12	"	4139	4155	16.0		0.5			Firm Soft Fine Brown Oil Sand, mixed with mud		
							5.8			Firm Soft Fine to Medium Brown Oil Sand, mixed with mud		
						0.1	2.7			Firm Soft Fine Silty Argillaceous Brown Oil Sand - Streaks of Hard Brown Shale 0.2 and 0.5 from top		
							6.9			Firm Soft Fine to Medium Brown Oil Sand, badly mud washed and streaked with mud		
						0.1	15.9					
1-30-38	13	"	4155	4170	6.5		0.7			Soft Fine Brown Oil Sand, badly mixed with mud		
							5.8			Firm Soft Medium to coarse, slightly Pebbly, Brown Oil Sand. Fair Odor and Dark Amber Cut		
							6.5					

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	14	7-5/8" Soll	4170	4185	11.9	0.2				Hard Dark Brown Silty Shale		
							0.2			Firm Soft Coarse Brown Oil Sand		
						0.2	0.1			Hard Dark Brown Silty Shale with streaks and partings of Fine Brown Oil Sand		
							2.1			Firm Soft Medium to coarse Brown Oil Sand		
						0.2				Hard Dark Brown Shale Contact to Sand below approximately 20°		
							1.7			Firm Soft Medium to coarse Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.8				Hard Dark Brown Silty Shale with many thin streaks of Fine Brown Oil Sand - Contact to Sand above 24°		
							0.9			Firm Soft Fine Brown Oil Sand. Bottom 0.4 Hard and contains inclusions of Black Carbonaceous Material Dip 13°-16°		
						0.4				Hard Dark Brown Silty Shale		
							1.6			Firm Fine, slightly Argillaceous Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.4				Hard Dark Brown Silty Shale		
							3.0			Firm Soft Fine Brown Oil Sand, grading to Medium in bottom 1.0'.		
						2.3	9.6			Good Odor		

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	15	7-5/8" Soil	4185	4200	14.4		2.1			Firm Soft Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						1.1				Hard Dark Brown Silty Shale with partings of Fine Brown Oil Sand Dip 22°. Fracture of 10°		
									0.8	Hard, slightly Calcareous Shale Shell, badly fractured 0.1' from top		
							0.3			Firm Soft Fine Silty Argillaceous Brown Oil Sand with Streaks of Brown Shale		
						0.2				Hard Dark Brown Silty Shale. Dip 22°		
							1.4			Firm Soft Fine Silty Argillaceous Brown Oil Sand. Thin streaks of Brown Shale		
						0.3	0.1			Hard Dark Brown Silty Shale with streaks of Fine Brown Oil Sand		
						0.5	1.0			Firm Fine Silty Argillaceous Brown Oil Sand with streaks of Dark Brown Shale		
						0.3				Hard Dark Brown Silty Shale. Dip 25°		
							0.5			Firm Soft Fine Silty Argillaceous Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown Silty Shale		
						0.2	1.7			Firm Soft Fine Silty Argillaceous Brown Oil Sand with streaks of Brown Shale. Good Odor and Dark Amber Cut		
						0.5	0.1			Hard Dark Brown Silty Shale with streaks of Fine Brown Oil Sand		
							0.2			Soft Fine Silty Argillaceous Brown Oil Sand		
						0.9				Hard Dark Brown Silty Shale		
							0.4			Firm Soft Fine Brown Oil Sand		
						0.4				Hard Dark Brown Silty Shale. Dip 25°		
							0.2			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud		
						0.3				Hard Dark Brown Silty Shale		
						0.1	0.6			Firm Fine Brown Oil Sand with streaks of Brown Shale		
						5.0	8.6		0.8			

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	16	7-5/8" Soll	4200	4215	15.0		2.2			Firm Soft Medium to coarse Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.3	0.5			Firm Fine Silty Argillaceous Brown Oil Sand with Streaks of Dark Brown Shale		
							2.3			Firm Soft Fine to Medium Brown Oil Sand. Good Odor - Dip 25°		
						0.2				Hard Dark Brown Silty Shale		
							0.4			Firm Soft Fine Silty Argillaceous Brown Oil Sand		
						0.7	0.2			Hard Dark Brown Silty Shale with streaks of Medium to coarse Brown Oil Sand. Fracture of 39° with Slickensides along dip		
						0.2	1.0			Firm Soft Fine Silty Argillaceous Brown Oil Sand with streaks of Dark Brown Shale		
						0.3				Hard Dark Brown Silty Shale		
							6.7			Fine to Medium Brown Oil Sand with streaks of Fine Silty Argillaceous Oil Sand. Good Odor and Dark Amber Cut		
						1.7	13.3					

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-31-38	17	7-5/8" Soll	4215	4230	15.0	0.1	1.9			Firm Soft Fine Brown Oil Sand with streaks and inclusions of Fine Gray Sand. Streak of Brown Shale (0.1) 0.3 from bottom. Fair Odor and Amber Cut		
						0.5				Hard Dark Brown Silty Shale Contact to Sand above irregular and at angle of 45° Apparent Dip of Shale -34°		
						1.0				Hard Dark Brown Silty Shale, badly broken and mixed with mud		
							0.5			Firm Soft Fine Brown Oil Sand Fair Odor		
						0.6	0.2			Hard Dark Brown Silty Shale with streaks and partings of Fine Brown Oil Sand - Parting Planes 18°		
						0.2	0.7			Soft Fine Brown Oil Sand with streaks of Shale. Top mixed with mud		
						2.4	0.2			Hard Dark Brown Silty Shale with inclusions of Fine Gray Sand. Also streaks and partings of Fine Brown Oil Sand		
							2.5			Firm Soft Medium to coarse Brown Oil Sand. Fair Odor and Amber Cut. Sand looks poor		
						0.3				Hard Dark Brown Silty Shale. Fracture of 39° with Slickensides along Dip		
							0.3			Firm Soft Fine Brown Oil Sand		
						0.4				Hard Dark Brown crushed and Flaky Shale		
									1.0	Hard, slightly Calcareous Shale Shell		
						0.8				Hard Dark Brown Silty Shale		
								0.2		Soft Fine Gray Sand, mixed with mud		
						0.2				Hard Dark Brown Silty Shale		
								1.0		Soft Loose Fine Gray Sand. No Odor and light Straw Cut		
						6.5	6.3	1.2	1.0			

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD — UNION OIL COMPANY — OIL OPERATORS LEASE — 4 WELL

LOCATION — 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-31-38	18	7-5/8" Soll	4230	4245	12.6			0.8		Firm Soft Fine to Medium Gray Sand		
						0.4				Hard Dark Brown Silty Shale		
								1.2		Firm Soft Fine Dark Gray Sand		
						0.5				Hard Dark Brown Silty Shale with streaks of Fine Gray Sand in bottom 0.2 - Good Dip of 21°		
								4.5		Firm Soft Fine Gray Sand. Top 0.8 Fine Silty Dark Gray, slightly Argillaceous		
						1.5		0.2		Hard Dark Brown Silty Shale with streaks of Fine Gray Sand		
								2.5		Firm Soft Fine Gray Sand. Top 0.4 Fine Silty Dark Gray, slightly Argillaceous		
						0.7		0.3		Hard Dark Brown Silty Shale and Fine Silty, slightly Argillaceous Dark Gray Sand. Shale and Sand badly broken and mixed with mud		
						3.1		9.5				
1-31-38	19	"	4245	4260	13.8			13.8		Firm Soft Massive Medium to coarse Gray Sand. Sand poorly sorted and slightly Pebbly in spots		
1-31-38	20	"	4260	4275	13.0			13.0		Firm to Firm Soft Massive Fine to coarse, poorly sorted Gray Sand - Pebbly in spots		
1-31-38	21	"	4275	4290	14.2			14.1	0.1	Firm Soft to Soft Massive Fine to coarse Gray Sand. Top 0.9 badly mixed with mud. Hard Calcareous Sandstone Shell 3.6 from top		
2-1-38	22	"	4290	4305	15.0			12.2		Firm Soft Massive Fine to coarse Gray Sand. Several fairly Hard, slightly Calcareous spots. Bottom 1.0 Fine and mixed with mud		
								1.9		Firm Soft Medium Gray Sand. Inclusion of Silty Brown Shale 0.8 from top		
						0.9				Hard Sandy Dark Brown Shale with inclusions of Gray Sand - Streaks of Gray Sand 0.5 from top		
						0.9		14.1		Note--Bottom 2.8 of this Core was recovered in next Core bbl.		

Henry E Wentz

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
2-1-38	23	7-5/8" Soll	4305	4310	5.0			0.3		Firm Soft Coarse Gray Sand		
						1.4				Hard Silty Dark Brown Shale Dips 17° and 28°		
						0.8				Hard Broken Black Silty Shale		
						0.8				Hard Black Shale		
						1.7				Hard Silty Dark Brown Shale - Shale		
						4.7		0.3		badly broken and Burnt in Coring		
2-1-38	24	"	4310	4319	2.4	2.4				Hard broken and fractured Black Shale, badly mixed with mud Inclusions of Fine Gray Sand in bottom 0.4		
2-1-38	25	"	4319	4329	10.0	9.0				Hard Broken and fractured, Dark Brown to Black Shale. Top 2.3 badly fractured with vertical Fractures. Dip approximately 20°		
						1.0				Hard Dark Brown to Black Silty Shale		
						10.0						
2-2-38	26	" Barrett-Robishaw	4329	4337	6.8	5.8				Hard Dark Brown to Black Silty Shale, sandy towards bottom. Inclusions of Fine Brown Oil Sand in bottom 0.8 Dip 20°		
							0.9			Soft Mushy Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Dark Brown Silty Shale with inclusions of Fine Brown Oil Sand		
						5.9	0.9					
2-2-38	27	"	4337	4346	8.2	0.2				Hard Dark Brown Silty Shale		
							1.8			Soft Mushy Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Fractured Dark Brown Silty Shale		
							2.1			Soft Mushy Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						4.0				Hard Dark Brown Silty Shale. Nearly vertical Fractures 2.5 from bottom		
						4.3	3.9			Dip 22°		
2-2-38	28	"	4346	4355	7.7	0.6				Hard Black Shale. Dip 23°. Fracture of 15° at bottom		
							1.4			Soft Mushy Fine Silty Argillaceous Brown Oil Sand, mixed with mud. Fair Odor and Amber Cut		
							5.7			Soft Medium to coarse Brown Oil Sand. Fair Odor and Dark Amber Cut		
						0.6	7.1					
2-2-38	29	"	4355	4364	0					No Recovery		

Henry E Wintz

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
2-2-38	30	7-5/8" Barrett-Robishaw	4364	4373	4.3		0.2			Soft Medium to coarse Brown Oil Sand		
						0.2				Hard Fractured and crushed Black Shale		
							0.3			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud		
						0.2				Hard Fractured Black Shale		
							0.3			Oil Sand as above		
						0.2				Firm, very Silty Brown Shale		
							0.6			Oil Sand as above. Fair Odor and Dark Amber Cut		
						0.4				Hard Fractured Silty Black Shale with streaks of Fine Brown Oil Sand. Fractures of 21° and 37°		
							0.3			Silty Oil Sand, as above		
						0.3	0.1			Hard Fractured Silty Black Shale with streaks of Fine Brown Oil Sand		
							0.5			Firm Soft Fine to Medium Brown Oil Sand. Fair Odor and Amber Cut		
						0.7				Hard Silty Black Shale		
						2.0	2.3			Fracture of 36° 0.3 from top		
2-2-38	31	"	4373	4382	0.6	0.6				Hard Black Silty Shale		
2-2-38	32	" Soli	4382	4397	15.0	0.6				Hard Dark Brown to Black Shale		
							0.4			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud		
						1.0	0.2			Hard Fractured and Broken Dark Brown to Black Silty Shale. Streaks of Fine Silty Argillaceous Oil Sand		
							0.3			Soft Fine Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown to Black Silty Shale. Dip 24°		
							1.5			Firm Soft Fine Brown Oil Sand. Good Odor		
							10.8			Firm Soft to Firm, Medium to coarse Brown Oil Sand, grading to coarse Pebbly in bottom 4.0. Bottom 4.0 has a Grayish cast, probably due to Gray Pebbles. Good Odor and Amber Cut		
						1.8	13.2					
			4397	4398						Hole corrected for depth		
2-3-38	33	"	4398	4408	8.8		8.8			Firm Soft coarse Pebbly Brown Oil Sand with streaks of Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
							Total Depth			- 4408		

Henry E Wentz

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T1-33997

Los Angeles, Calif. March 30, 1938.

Mr. W. S. Eggleston,
Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F. J. Karmelich, Inspector, representative of the supervisor, on March 20, 1938. There was also present H. Winter, Engineer, and L. O. Mitchell, Driller.

Casing Record	Junk
13-3/8" cem. 757'; 8-5/8" cem. 4005', W. S. O.; 6-5/8" liner landed 3843'-4408', c. p. 4344'; perf. 4348'-4408'; T.D. 4408', plugged with cement 4397'-4305'.	None.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 4408' to 4320' in the process of plugging back, and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 9:00 A. M. AND MR. WINTER REPORTED THE FOLLOWING:

1. The 6-5/8" liner was cleaned out to 4397'.
2. On March 18 and 19, 1938, 24 sacks of Victor oil well cement was dumped, beginning at 4397'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 4305' and brought up a sample of set cement.

The test was completed at 9:30 a. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 4305' ARE APPROVED.

cc- H. E. Winter
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenbuch Deputy

FORM 111
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-32183

Los Angeles, Calif. March 21, 1938

Mr. Ed Jussen, Jr.,

Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

Dear Sir:

Your supplementary proposal to drill Well No. "OIL OPERATORS" 4, Section 13, T. 4S., R. 13W., S. B. B. & M., Long Beach Field, Los Angeles County, dated Mar. 18, 1938, received Mar. 21, 1938, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:
"The present condition of the well is as follows:
4408 deep
13-3/8" C 757'
8-5/8" C 4005' OK
565' 6-5/8" L 4408', inc. 60' perf. C. P. 4344'
Reperf. 4348-4399
The well has been tested on the pump since March 1, 1938 with an average daily production of 18 gross, 16 net, 21.7 gravity."

PROPOSAL:
"The proposed work is as follows:
1. C. O. to 4408 and plug with cement under hydrostatic head to 4320'.
2. Test plug by Division of Oil & Gas.
3. Perforate 6-5/8" casing 4133-4005.
4. Test on production."

DECISION:
THE PROPOSAL IS APPROVED.

cc- H. E. Winter
Long Beach
WJC:G
SHR.

R. D. BUSH
State Oil and Gas Supervisor

By [signature] Deputy

FORM 107. 14408 8-34 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

This notice must be given fifteen days before work begins when possible

Santa Fe Springs, Cal. March 18, 1938

MR. E. Huguenin,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling,~~ plugging or altering casing at well No. Oil Operators #4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Oil Field, Los Angeles County.

The present condition of the well is as follows:

4408 deep
13-3/8" C 757'
8-5/8" C 4005' OK
565' 6-5/8" L 4408', inc. 60' perf. C.P. 4344'
Reperf. 4348-4399

The well has been tested on the pump since March 1, 1938 with an average daily production of 18 gross, 16 net, 21.7 gravity.

The proposed work is as follows:

1. C.O. to 4408 and plug with cement under hydrostatic head to 4320'.
2. Test plug by Division of Oil & Gas.
3. Perforate 6-5/8" casing 4133-4005.
4. Test on production.

Ltr. & Sup. Dill.

Respectfully yours

UNION OIL COMPANY OF CALIFORNIA
Name of Company or Operator

By Henry E Winter
District Engineer.

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

No. 2967

DIVISION OF OIL AND GAS

LOS ANGELES Calif. 7/16 1938

Union Oil Company of Calif.
Name of Operator

LOS ANGELES
Address

This is to acknowledge the receipt of logs and similar records of wells on Sec. 13 T. 4S R. 13W - Long Beach B. & M., *as herewith enumerated by well numbers.*

Logs

History

Core record

Subsequent work Electrical Log - "Oil Operators" 4 - 7/13/38

R. D. BUSH, *State Oil and Gas Supervisor*

DUPLICATE

By E Hugueneau *Deputy*

FORM 127. 46818 7-37 3M

CALIFORNIA STATE PRINTING OFFICE

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-33847

Los Angeles, Calif. February 24, 1938

Mr. Ed Jussen, Jr.,
Los Angeles, Calif.
Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4S., R. 13W., S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F. J. Karmelich, Inspector, representative of the supervisor, on Feb. 10, 1938. There was also present R. Rampton, Engineer, and H. Robinson, Superintendent.

Casing Record	Junk
13-3/8" cem. 757'; 8-5/8" cem. 4005', W. S. O.; 6-5/8" ld. 3837'-4408', c. p. 4344', perf. 4344'-4408', T. D. 4408', plugged with cement 4344'-3951'.	None.

The operations were performed for the purpose of demonstrating that fluid does not have access to the well between the 8-5/8" and 6-5/8" casings,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 11:00 A. M. AND MR. RAMPTON REPORTED THE FOLLOWING:

1. A 7-5/8" rotary hole was drilled from 4005' to 4408'.
2. On February 5, 1938, 565' of 6-5/8" - 26 lb. casing, including 60' of perforated, was landed at 4408' and was cemented through perforations at 4344' with 125 sacks of Victor oil well cement.
3. Cement was drilled out of the 8-5/8" and 6-5/8" casings from 3676' to 3951' (equivalent to 62 sacks) and the casing was cleaned out to 3951'.
4. On February 11, 1938, at 3:00 a. m., the fluid was bailed to 2535'.

THE INSPECTOR NOTED THE FOLLOWING:

1. No fluid entered the well while standing 8 hr. for test.
2. The fluid was located at 2535'.
3. The sample of fluid from bottom tasted fresh.
4. The hole was open to 3951'.

The test was completed at 12:00 noon.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED as indicating that fluid does not have access to the well between the 8-5/8" and 6-5/8" casings.

cc- H. E. Winter
Long Beach
FJK:G
S.H.R.

R. D. BUSH
State Oil and Gas Supervisor
By E. Huguenin Deputy

FORM 109-B. 46392 7-37 8750.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

No. T 1-33775

Los Angeles, Calif. February 9, 1938.

Mr. Ed. Jussen, Jr.,
Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Your well No. "OIL OPERATORS" 4, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.,
Long Beach Field, in Los Angeles County, was tested for
shut-off of water on January 28 (Time and date), 1938. Mr Chas. Corwin,
designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present R. Rampton, Engineer,
H. Robinson, Superintendent.

Location of water tested above 4005' and normal fluid level not determined

Depth and manner of water shut-off: 1263 ft. of 8-5/8 in. 36 lb. / 2742 ft. of 8-5/8 in. 32 lb. casing was {cemented / landed} 1-23-38 in shale Formation

at 4005 ft. with 200 sacks Victor construction 200 sacks " oil well cement by casing method.

Water string was landed in 12¼" rotary (Size, rotary or cable tool) hole.

Casing record of well 13-3/8" cem. 757'; 8-5/8" as above.

Reported total depth of hole 4015 ft. Hole bridged from xx ft. to xx ft. Hole cleaned out to xx ft. for this test.

At time of test depth of hole measured See below ft. and bailer brought up sample of xxxx

At See below (Time and date) oil bailed to xxx ft., drilling fluid {bailed / swabbed} to xxx ft.

At " " (Time and date) top of oil found at xxx ft., top of fluid found at xxx ft.

THE INSPECTOR ARRIVED AT THE WELL AT 3:15 p. m. AND MR. RAMPTON REPORTED THE FOLLOWING:

1. A 12¼" rotary hole was drilled from 757' to 4015'.
2. Mud fluid was circulated for 1/2 hr. before cementing the casing.
3. Electrical core readings showed shale 3971' - 4005' (H I)
4. No casing test was made.
5. 27' of set coment was drilled out of the 8-5/8" casing (equivalent to 8 sacks).
6. The Johnston tester was run into the hole on 4" drill pipe.
7. The wall packer was set at 3991'.
8. The tester valve was opened at 1:58 p. m. and remained open for 30 minutes. During this interval there was a good, steady blow throughout the test.

THE INSPECTOR NOTED THE FOLLOWING:

1. When the drill pipe was removed 1550' of fluid was found in the drill pipe above the tester, consisting of the following: 20' drilling fluid, 1230' gas and oil, 100' oil sand, equivalent to 22 bbl.

R. D. BUSH
State Oil and Gas Supervisor

By (CONTINUED ON PAGE 2) Deputy

FORM 109-X. 46010 6-37 4M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
OR
Special Report on Operations Witnessed

No. T 1-33775
Page 2

UNION OIL COMPANY OF CALIFORNIA

Well No. "OIL OPERATORS" 4, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.,

2. The fluid sample taken from the bottom of the drill pipe tasted fresh.
3. The recording pressure bomb chart was torn, but could observe that the valve had been opened.

The test was completed at 4:20 p. m.

THE SHUT-OFF IS APPROVED.

cc- H. E. Winter
Long Beach

CC:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

629 South Hill Street
Los Angeles, California
January 18, 1938.

Union Oil Company of California,
Santa Fe Springs, Calif.

Gentlemen: Attention Mr. Henry E. Winter.

This will acknowledge receipt of and thank you for your letter of January 13, 1938, giving the elevation of well No. "Oil Operators" 4, Sec. 13, T. 4 S., R. 13 W., S. B. B. & M., Long Beach field, as 53.88' U. S. G. S.

We are correcting our records accordingly.

Yours truly,

Deputy Supervisor.

WJC:EMS

CC - Mr. R. D. Bush (2)
Long Beach

Corrections Made as Follows	By Whom
Weekly Gas Statements	
121	
Prod. and Loss Cards	
Production Reports	
Well Records { Folders	
Well Records { Reports	
Log Books	
Structure	
Field Maps	

FORM 402 7-37 300M
PRINTED IN U.S.A.

IN REPLY GIVE NO.

Union Oil Company of California

CARBON COPY

Santa Fe Springs, Calif. Jan. 13, 1938

Mr. E. Huguenin, Deputy Supv.,
Division of Oil & Gas,
Los Angeles, Calif.

Dear Sir:

The elevation of the Union Oil Company well "Oil Operators #4", in the Long Beach Field, (Section 13, 4-S, 13-W), is 53.88 U.S.G.S.

The location is the same as in the original notice to drill.

Very truly yours,
Henry E Wintz
District Engineer.

HEW:S

FORM 401 9-36 70M
PRINTED IN U. S. A.

DIVISION OF OIL AND GAS
RECEIVED
JAN 14 1938
LOS ANGELES, CALIFORNIA

Union Oil Company of California

PRODUCERS AND REFINERS OF
CRUDE OIL, FUEL OIL, ROAD OIL AND ASPHALT,
UNION GASOLINE, KEROSENE AND DISTILLATE,
'RED LINE' LUBRICATING OILS AND GREASES.

Santa Fe Springs, Calif. Jan. 13, 1938

Mr. E. Huguenin, Deputy Supv.,
Division of Oil & Gas,
Los Angeles, Calif.

Dear Sir:

The elevation of the Union Oil Company well "Oil Operators #4", in the Long Beach Field, (Section 13, 4-S, 13-W), is 53.88 U.S.G.S.

The location is the same as in the original notice to drill.

Very truly yours,
Henry E Winter
District Engineer.

HEW:S

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-33680

Los Angeles, Calif. January 20, 1938.

Mr. Ed. Jussen, Jr.,
Los Angeles, Calif.

121

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4 S., R. 13 W., S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F. J. KARMELICH, representative of the supervisor, on January 4, 1938. There was also present R. Rampton, Engineer, F. T. Shores, Driller.

Casing Record	Junk
18-5/8" cem. 50'; 13-3/8" cem. 757'; T. D. 758'.	xxxx

The operations were performed for the purpose of demonstrating that the known surface waters are adequately protected,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 4:00 P. M. AND MR. RAMPTON REPORTED THE FOLLOWING:

1. A 17" rotary hole was drilled from 50' to 758'.
2. 757' of 13-3/8" - 45 lb. casing was run into the hole to 757'.

THE INSPECTOR NOTED THE FOLLOWING:

1. The 13-3/8" casing was cemented at the reported depth of 757' with 350 sacks of Velo 24 hour cement.
2. The cement was displaced from the casing with 673 cubic feet of drilling fluid.
3. The final pressure was 500 lb.

The operations were completed at 4:42 a. m.

THE CEMENTING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT THE KNOWN SURFACE WATERS ARE ADEQUATELY PROTECTED.

cc- H. E. Winter
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenlein Deputy

FORM 111. 46011 6-37 20M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P1-31816

Los Angeles, Calif. December 23, 1937.

MR. Ed. Jussen, Jr.,
Los Angeles, Calif.
Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Your "OIL OPERATORS" proposal to drill Well No. 4,
Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County,
dated Dec. 20, 1937, received Dec. 21, 1937, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 965 feet N-W'ly along the center line of Pacific Electric R.R. from the intersection with the center line of Bixby Road (Proj.) and thence 289' S-Wly at right angles. The elevation of the derrick floor above sea level will be determined later (Approx. ~~54'~~ *). We estimate that the first productive oil or gas sand should be encountered at a depth of about ~~xxxxx~~ feet."

*53.88 ' U.S.G.S. (Correction letter 1-18-38)

PROPOSAL:

"We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
13-3/8	46#	New	700	Cemented
8-5/8	36#	New	4000	Cemented
6-5/8 liner	26#	New	4400	Cemented

The 6-5/8" liner to be a combination splice liner to be cemented through perforations at the base of the "JK" shale

Well is to be drilled with rotary tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. (a) Mud fluid of not less than 70 lb. per cubic foot shall be used in the drilling of the well and the column of mud fluid shall be maintained at all times to the surface, particularly while pulling the drill pipe.
   (b) Adequate blow-out prevention equipment shall be provided and ready for operation at all times.
2. Any hole to be sidetracked at any time during the drilling of this well shall be completely filled with cement.
3. The formations to be left back of the 8-5/8" casing shall be mudded in a manner consistent with good drilling practice.
4. This division shall be notified to examine cores and/or electrical log before running the 8-5/8" casing.
5. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) The cementing of the 13-3/8" surface casing.
   (b) A test of the effectiveness of the 8-5/8" shut-off.
   (c) A test after drilling out the cement to within 50' of the cementing point to demonstrate that no fluid has access to the well between the 8-5/8" and 6-5/8" casings.

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagestein Deputy

cc- H. E. Winter
Long Beach
WJC:CH

FORM 105. 45230 6-37 10M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
DEC 21 1937
LOS ANGELES, CALIFORNIA

3

Notice of Intention to Drill New Well

This notice must be given and surety bond filed before drilling begins

037-06415

General Exploration Co.

Santa Fe Springs, Calif. Dec. 20, 1937

DIVISION OF OIL AND GAS

Los Angeles Calif.

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. "Oil Operators" 4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M., Long Beach Field, Los Angeles County.

Lease consists of N-W'ly along the center line of Pacific Electric R.R. from the intersection with the center line of Bixby Road (Proj.)

The well is 965 feet ~~N. or S.~~, and and thence 289' S-Wly at right angles feet E. or W. from

(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the ~~ground~~ derrick floor above sea level is ~~Will be determined later (Approx. 54')~~ 53.88' U.S.G.S. (Correction letter 1-18-38) feet.

We estimate that the first productive oil or gas sand should be encountered at a depth of about feet.

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
13-3/8	46#	New	700	Cemented
8-5/8	36#	New	4000	Cemented
6-5/8 liner	26#	New	4400	Cemented
The 6-5/8" liner to be a combination splice liner to be cemented through perforations at the base of the "JK" shale				

Well is to be drilled with ~~cable~~ rotary tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

Address Santa Fe Springs

UNION OIL COMPANY OF CALIFORNIA,
(Name of Operator)

Telephone number Whittier 426-87

By Henry E Winter
District Engineer

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

20
SHR

Book.
S.H.R.
12-21-37.

SCHLUMBERGER ELECTRICAL LOGS

COMPANY ESSO EXP. & PROD. NIGERIA LTD.
WELL Tuber No. 1
FIELD
ARE. CO. (map) Rev. 23-Oct-64

Log rec. depth 8200 ft. Driller
Dril. depth reached by bore-shoe 8200 ft. Driller
Dril. footage measured by D. P. 8194 ft. Driller
Footage recorded on log 8194 ft.

Sampler run from 8200 ft. to 8200 ft.
Flow cut obtained by sampler 28 %
Flow cutting at rig floor 28 %
Mileage measured by rig floor 18 ft.
Time fluid was observed by rig floor 9 hrs.

MUD CHARACTERISTICS

NATURE Bentonite VISCOSITY 58
DENSITY 10 WATER LOSS 6.4 LEVEL

DIAMETER OF HOLE

TAILSET

REMARKS

Declinaison 20°

SCHLUMBERGER ELECTRICAL LOGS

COMPANY DATE
FIELD LOCATION
WELL ELEVATION

Log rec. depth ft. Driller
Dril. depth reached by bore-shoe ft. Driller
Dril. footage measured by D. P. ft. Driller
Footage recorded on log ft.

Sampler run from ft. to ft.
Flow cut obtained by sampler %
Flow cutting at rig floor %
Mileage measured by rig floor ft.
Time fluid was observed by rig floor hrs.

MUD CHARACTERISTICS

NATURE VISCOSITY
DENSITY WATER LOSS LEVEL

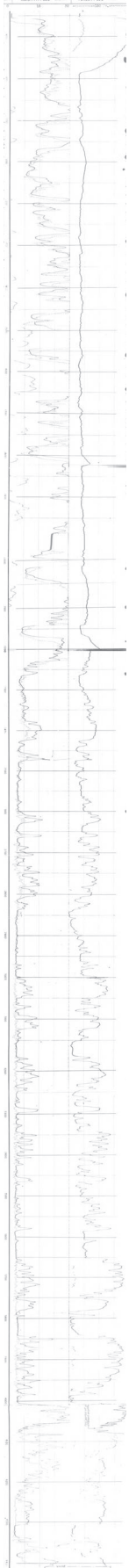
DIAMETER OF HOLE

REMARKS

Witnessed By

DESIGNED

DEPTH RESISTIVITY LOG POROSITY LOG



SCHLUMBERGER

WELL SURVEYING CORPORATION

APR 8 - 1941

279

COMPANY C.R.G. Properties, Ltd.

FIELD: [illegible] CALIFORNIA

WELL: Kuhlo 84 (Oil Operators) (037-06415)

SEC. 13 Sec. 13-4S-13W.

COUNTY Los Angeles STATE: LONG BEACH

ELEV.: 60

COMPANY UNION OIL CO.
WELL Kuhlo Ranch Oil Operators #4
FIELD
COUNTY Los Angeles
STATE CALIFORNIA

RUN	1-D
Date	4-2-41
Csg. shoe	1406'
Total depth	5379'
Depth rchd	5375'
Fr Meas.	965'
Mud	Natural
Dens	74
Visc	41
Res	4.0 @ 74.0°
Max. Temp.	
Meas from	
Tension	2000#
Rig Time	4 hrs.
Mileage	10
Observer	R.Forsythe
Witnessed by	Mr. H. Winter

DIAMETER OF HOLE
5-5/8" to 5379'

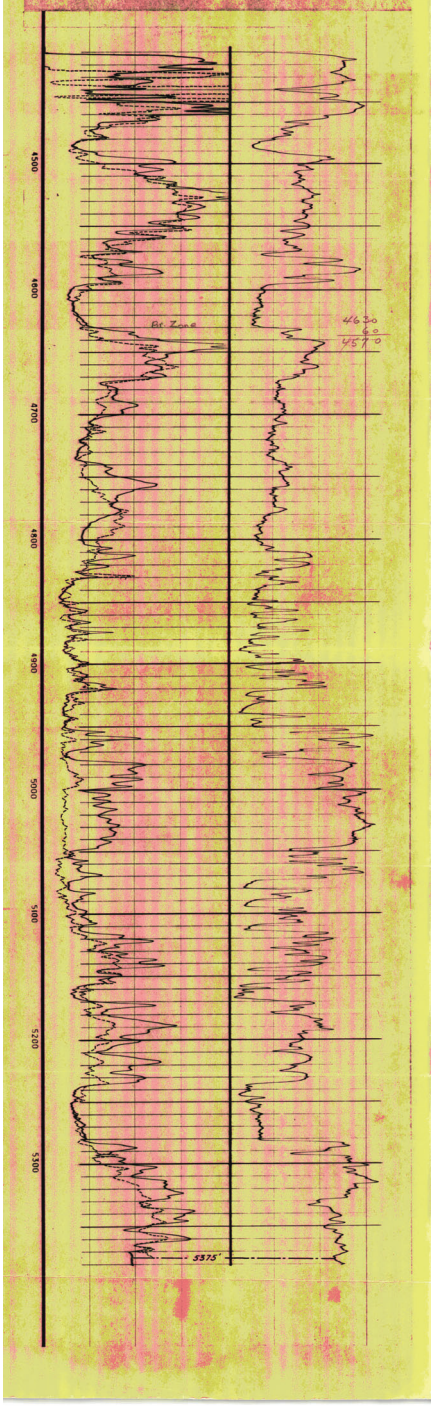
REMARKS
Device: Standard

Mud sample taken while drilling at 5374' (1 only)

DEPTH in Ft.

RESISTIVITY — NORMAL CURVE ..... THIRD CURVE
0 ← ohms m/m → 30

SELF-POTENTIAL
← 100 millivolts →





PACIFIC PROCESS SYSTEMS, INC.
Ph: 661.589.8844
Fax: 661.589.8330

Temperature Survey

WELL: B-4

COMPANY: CRG Properties, LTD.
FIELD: Long Beach
COUNTY: Los Angeles STATE: CA

WELL DATA

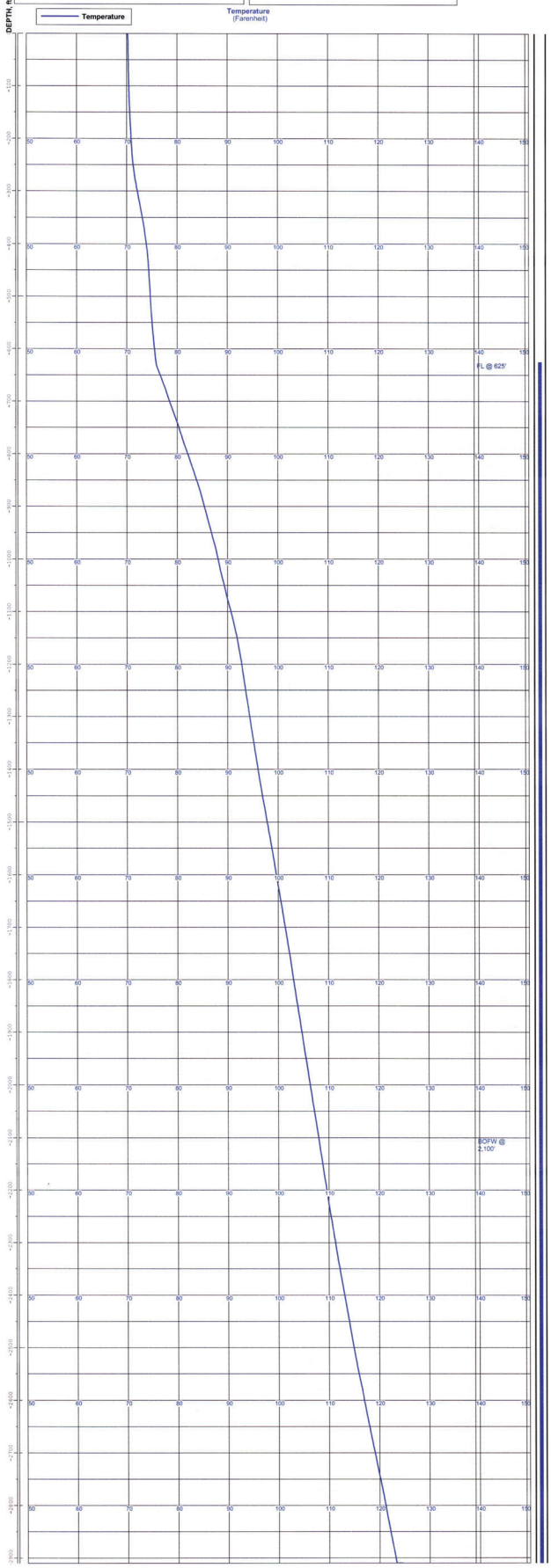
DATE: 4-26-2005
TYPE LOG: TEMP
TOTAL DEPTH:
GDA: 2,910'
TOP LOGGED INTERVAL: 0'
FLUID LEVEL: 625'
PKR DEPTH:
PLUG BACK DEPTH:
RECORDED BY: John Reece

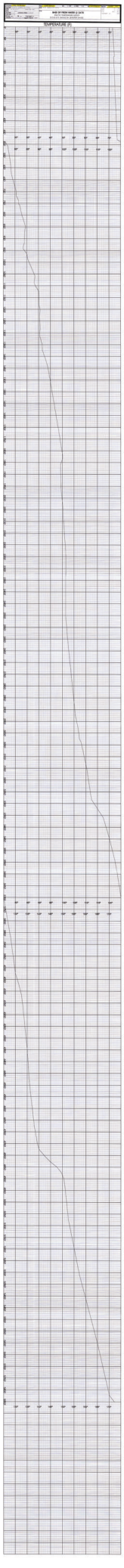
CASING: 8.625"
TUBING:
TOP PERFORATION: 4,435'
BOFW: 2,100'
LINE SPEED: 30 ft/min
DF above Mat:
API: 03706415

EQUIPMENT AND TEST DATA

PRESSURE TBG psi:
PRESSURE CSG psi: 11
WELL STATUS: Static
TRUCK No: 1
TOOL SIZE: 1 1/4"

TOOL DATA
CALIBRATED TEMP RANGE:-0.9-253.9deg F
ACCURACY RESOLUTION: 0.25% FS
RESOLUTION: 0.002% FS
COMMENTS: MAX BH TEMP 124.56 F




TEMPERATURE (F)

DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 100 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

REPORT OF WELL ABANDONMENT

Cypress, California
August 28, 2015

Mr Mark Pender
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Your report of abandonment of well **"Nwlbu" 8-4**, A.P.I. No. **037-06415**, Section **13**, T. **04S**, R. **13W**, **SB** B.&M., **Long Beach** field, **Los Angeles** County, dated **2/9/2014**, received **3/6/2014**, has been examined in conjunction with records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and filing of well records.

NOTE: 1. Surface plugging completed on 2/11/2014.

2. Site inspection made and approved on 3/21/2014.

3. This well has been abandoned in compliance with Division permit number 113-0597 issued on 7/19/2013.

Blanket Bond

Steven Bohlen
State Oil and Gas Supervisor

EM:vm

cc:

By
Daniel J. Dudak, *District Deputy*

OG159

NATURAL RESOURCES AGENCY OF CALIFORN
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 100 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

No. T **115-0587**

REPORT ON OPERATIONS

Mr Mark Pender
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Cypress, California
July 13, 2015

Your operations at well **"Nwlbu" 8-4**, A.P.I. No. **037-06415**, Sec. **13**, T. **04S**, R. **13W**, **SB** B.&M., **Long Beach** field, in **Los Angeles** County, were witnessed on **2/11/2014**, by **Michael Okafor**, a representative of the supervisor.

The operations were performed for the purpose of **plugging and abandonment**.

DECISION: **APPROVED**

NOTE: The required Class II2M blowout prevention equipment was inspected and approved on **1/23/2014**.

DEFICIENCIES NOTED AND CORRECTED: None

EXPIRED
CANCELLED
MAILED
EMAILED

MO/epm

Steven Bohlen
State Oil and Gas Supervisor

By
For Daniel J. Dudak, *District Deputy*

OG109 (Rev. 10/2011)

FRM 7/13/2015

115-0587

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CEMENTING/PLUGGING MEMO

Operator C.R.G Properties Well No. "Nwlbu" 8-4

API No. 037-06415 Sec. 13 T. 4S R. 13W , SB B&M

Field Long Beach , County Los Angeles . On 2/11/15 ,

Mr. / Ms. Michael N. Okafor representative of the supervisor, was present from 1000 to 1200 .

There were also present

Casing record of well: 18 5/8" cem 50'; 13 3/8 cem 757'; 8 5/8" cem 4005' WSO, drilled thru 3165', cp 2465', pulled fr 220'; 5-1/2" cem 3017'- 5924', perf 4375' WSO, perfs 5712'-5776'. TD (present hole) 5925'. Plugged w/cem 5925'-2805', w/245 cf cem below 2217', w/cem 2217'-2117'±, 210'-0.

The operations were performed for the purpose of: Abandon (1)

☒ The plugging cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ ' are approved.

Hole size: 17 " fr. 50 ' To 757 ', 12 1/4 " to 4005 ' & 7 5/8 " To 5925 '

Casing				Cemented			Top of Fill		Squeezed Away	Final Pressure	Perforations
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			
5-1/2"	15.5#	3017'	5924'	1/17/14	T@ 5878'	446cf	5878'	2805'	0	400 psi	Prod perfs
8-5/8"	32/36#	0	4005'	1/29/14	T@ 2475'	245 cf	2080'	2217'	159 cf	1000 psi	2475'-2465'

Casing/tubing recovered: 8-5/8 " Shot/cut at 220 ', ', ', Pulled fr. 220 ';

" Shot/cut at ', ', ', Pulled fr. '.

" Shot/cut at ', ', ', Pulled fr. '.

Junk (in hole):

Hole fluid (bailed to) at '. Witnessed by

Mudding	Date	bbls	Displaced	Poured	Fill	Engineer
80/30	1/28/14	25	2805'		2400	C.L.Cullum
72/30	1/30/14	120	2117		100	J. Collender

Note: BOPI Class IIM 1/23/14 CLC c/o 5875'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engineer	Depth	Wt/Sample	Date & Time	Engineer
1/27/2014	446 cf	T@ 5875'	1000	C.L.Cullum	2805'	3000#	1/28/14 0715	C.L.Cullum
1/29/2014	245 cf	T@ 2475'	0800	Z. Amilhussin	2217'	3000#	1/30/14 0910	J. Collender
1/30/2014	34 cf	T@ 2217'	1100	J. Collender	2117±	----	-----	-----
2/3/2014	225 cf	T@ 210'	1100	C. Wicker	20'	ATW	2/10/14 1400	P. Kaufman
2/10/2014	23 cf	T@ 20'	1530	P. Kaufman	0	----	2/11/14 1200	M. Okafor

CONTRACTOR:

allenco

UNCORRECTABLE DEFICIENCIES:

None

DEFICIENCIES NOTED AND CORRECTED:

None

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**C.R.G. Properties,LTD**	Well: **NWLBU 8-4**
API#:	**037-06415**	Sec. **13**, T. **4S**, R.**13W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**3/6/2014 (2)**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS

Active	☐	Drilling	☐
Abandoned	☐	Idle	☐
Reabandoned	☐	Other	☐

WELL TYPE

Oil	☐	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 2-12-14

REMARKS:

	ENGINEERS CHECK LIST	CLERICAL CHECK LIST
☐	Summary, History & Core Record (Dupl.)	Location change
☐	Electric Log	Elevation change
☒	Operator's Name	Form OGD121
☒	Signature	Form OGD150b (Release of Bond)
☒	Well Designation	Duplicate logs to archives
☐	Location	Notice of Records Due
☐	Elevation	EDP
☒	Notices	District Date Base
☐	"T" Reports	Final Letter (OG159) 8/26/15 vm
☐	Casing Record	Update Center
☒	Plugs	
☐	Directional Survey	
☒	Production/Injection (FAP Codes: 4/2/03/00)	
☐	E Well on Prod., enter EDP	**FIELD CHECK LIST**
☒	Surface Inspection Required 3/21/14 ABOK	Date Surface Inspection Completed: 3/21/14 - AB
☐	Surface inspection Waived (Island)	Other:
☐	Well site restoration deferred (common cellar)	
☒	Final Letter Required AB: ☒ REAB: ☐	
☐	Other:	

RECORDS NOT APPROVED	RECORDS APPROVED
(Reason:)	*(Signature)* 7/28/15
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK

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

HISTORY OF OIL OR GAS WELL

Operator C.R.G. Properties, LTD Field Long Beach County Los Angeles

Well "NWLBU" 8-4 Sec. 13 T. 04S R. 13w sbB.&M.

A.P.I. No. 037-06415 Name Mick Beyer (Person submitting report) Title Operations Manager (President, Secretary, or Agent)

Date 02-09-14 (Month, day, year)

Signature Mr. B

Address 2109 Gundry Ave. Signal Hill, Ca. 90755 Telephone Number 562 989-6100

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.

01-23-14	M.I.R.U. – Installed and tested BOPE–Witnessed by C. Cullumr w/DOGGR - Secured Well
01-24-14	R.I.H. W/5 ½" Scraper on 2 7/8" Tubing tagged fill at 5850' - Circ.with water w/returns of oily water and gas - P.O.H. - Witnessed by E. Tabor w/ DOGGR – Secured well
01-27-14	R.I.H.W/Tbg. Tagged at 5875' - Mixed and pumped 446 cu/ft. (391 sxs) class G cement Witnessed by Z. Amilhussin w/DOGGR - Secured well.
01-28-14	R.I.H. Tagged cement at 2805' – Pumped 25 bbls. 73# mud Prs. Tested casing at 500 psi good P.O.H. R.I.H. W/ 8 5/8" scraper to 2800' – P.O.H. – R.I.H. W/CBL – Perforated from 2475' to 2465' – P.O.H. Witnessed by C. Cullum w/DOGGR – Secured well
01-29-14	R.I.H. w/tbg.tail at 2475' mixed and pumped 245 cu/ft.(215 sxs) class G cement – Squeezed away 134 cu/ft prs. At 1000 psi. – Witnessed by Z. Amilhussin w/ DOGGR - secured well
01-30-14	R.I.H. Tagged cement at 2217' = 67' low – Pumped 120 bbls. 73# mud – prs. Tested csg. 500# good – mixed and pumped 34 cu/ft.(30 sxs) class G cement – P.O.H.- R.I.H. Cut 8 5/8" at 220' Witnessed by J. Collender w/DOGGR –secured well
01-31-14	Removed B.O.P.E. Pulled 220' of 8 5/8 " casing – Witnessed by Z. Amilhussin w/DOGGR – secured well
02-03-14	R.I.H. W/tbg. Tail at 210' mixed and pumped 225 cu/ft.(197 sxs) class G cement – cement to surface – P.O.H.- Witnessed by C. Collum w/DOGGR – R.D.M.O.
02-10-14	Dug down around well and cut casing 5' below surface – Topped off surface plug w/ 23 cu/ft.(20sxs) class G cement Witnessed by P. Kaufman w/DOGGR – Secured well
02-12-14	Z. Amilhussin w/DOGGR witnessed surface tag and welding of I.D.Plate - Backfilled well location - Job complete.

DOGGR
Received
MAR – 6 2014

OG103 (6/97/GSR/5M)
Printed on recycled paper.

SUBMIT IN DUPLICATE

API No. 037-06415 D ION OF OIL, GAS, AND GEOTHERMAL RE IRCES T

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator C.R.G. Properties, LTD Well "NWLBU" 8-4 Sec. 13 T. 4S R. 13W
Field Long Beach County L.A. Spud Date

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	1/23/14	Callie L. Cullum	(1515 to 1530)		
2nd			(to)		

Contractor Allenco Rig # 2 Contractor's Rep. & Title Derick Beyer, Driller (Allenco)
Casing record of well: memo

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y ☒ N ☐
DECISION: The blowout prevention equipment and its installation on the 8 5/8 " casing are approved.

Proposed Well Opns: Abandonment . MACP: psi
Hole size: " fr. ' to ', " to ' & " to '

REQUIRED BOPE CLASS: II3M

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus
8 5/8"	32#		1262'				

BOP STACK							TEST DATA						
API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul	Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
Rd	2 7/8	Townsend	81	9	3M		1						
Rd	CSO	Townsend	81	9	3M		1						

TOTAL: 2

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure psi
Total Rated Pump Output gpm Fluid Level
Distance from Well Bore 25 ft. ok

	Accum. Manufacturer	Capacity	Precharge
1		gal.	psi
2		gal.	psi

CONTROL STATIONS	Elec.	Hyd.	Pneu.
Manifold at accumulator unit			
Remote at Driller's station			
Other: hand pump		x	

EMERG. BACKUP SYSTEM			Press.	Wkg.Fluid
N_2 Cylinders	1	L= 55 "	1825 psi	4 gal.
Other:	2	L= "		gal.
	3	L= "		gal.
	4	L= "		gal.
	5	L= "		gal.
	6	L= "		gal.
	TOTAL: 4			gal.

AUXILIARY EQUIPMENT

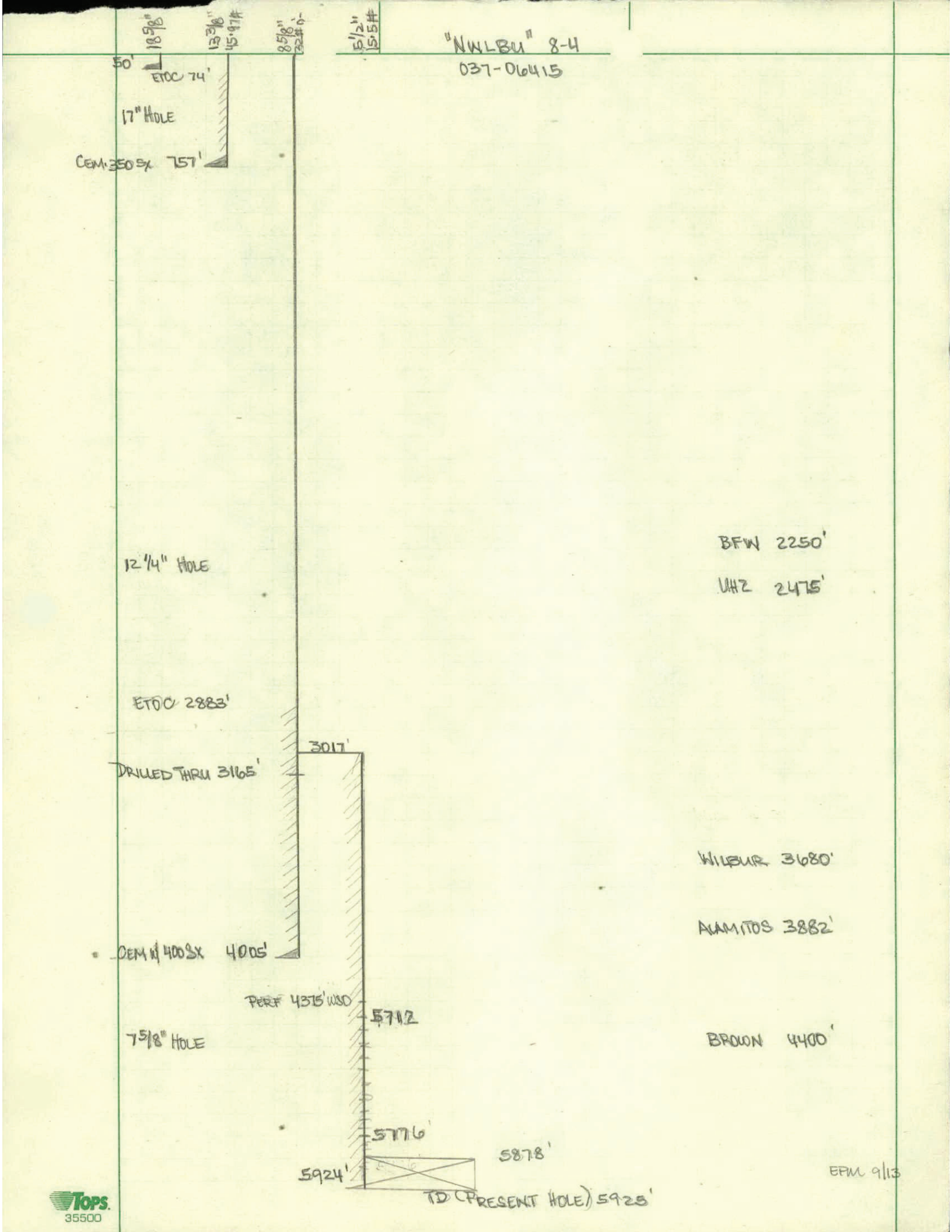
		No.	Size (in.)	Rated Press	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line							
x	Kill Line		2	3M			X	
x	Control Valve(s)	3		3M			X	
	Check Valve(s)							
	Aux. Pump Cnnct.							
	Choke Line							
	Control Valve(s)							
	Pressure Gauge							
	Adjstble Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Stndpipe Pres. Gau.							
x	Pipe Safety Valve		27/8	3M				
	Internal Preventer							

HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Alarm Type: Visual	Class
Calibrated Mud Pit			A
Pit Level Indicator			B
Pump Stroke Counter			
Pit Level Recorder			
Flow Sensor			C
Mud Totalizer			
Calibrated Trip Tank			
Other:			

Hole Fluid Type	Weight	Storage Pits (Type & Size)
no fluid has been added		70 bbl Mud Tank
(fluid in well unknown)		2,500 bbl storage tanks

REMARKS AND DEFICIENCIES: two of the valves on the kill line need handles.

OGD9 (9/06)


18 5/8"
13 3/8" 54.5#
8 5/8" 32#
5 1/2" 15.5#
"NWLBU" 8-4
037-06415
50'
ETOC 74'
17" HOLE
CEM. 350 SX 757'
12 1/4" HOLE
BFW 2250'
UHZ 2475'
ETOC 2883'
3017'
DRILLED THRU 3165'
WILBUR 3680'
ALAMITOS 3882'
CEM W/ 400 SX 4005'
PERF 4375' WSO
5712'
7 5/8" HOLE
BROWN 4400'
5776'
5878'
5924'
TD (PRESENT HOLE) 5925'
EPM 9/13
TOPS
35500

NATURAL RESOURCES AGENCY OF CALIFOR
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630 - 4731

No. P 113-0597

Old	New
412	412
FIELD CODE	
03	03
AREA CODE	
00	--
POOL CODE	

PERMIT TO CONDUCT WELL OPERATIONS

CRITICAL WELL
CORRECTED COPY

Cypress, California
July 19, 2013

Mr Mark Pender, Agent
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Your proposal to **Abandon** well **"NWLBU" 8-4**, A.P.I. No. **037-06415**, Section **13**, T. **04S**, R. **13W**, **SB** B. & M., **Long Beach** field, **Northwest Extension** area, **Brown** pool, **Los Angeles** County, dated **7/10/2013**, received **7/10/2013** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
   a. Class **II3M,** with hydraulic controls, during **abandonment** operations.
   b. A **3M lubricator** for **wireline** operations.
2. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
3. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of **72** lbs/cu.ft and a minimum gel shear strength of **25** lbs./100 sq. ft.
5. The proposed cement plug from **5878'** to **3480'** shall extend from **5878'** to at least **2817'**.
6. Prior to shooting any perforations braidenhead squeezes, a pressure test of the **8-5/8"** casing shall be made to ensure casing integrity. If casing integrity is not demonstrated, a retainer or packer is required for squeeze operations.
7. The well location shall be surveyed prior to burying the well, and the survey shall be filed with this office. Latitude and longitude shall be in decimal degrees, to six decimal places, in NAD83.
8. All casing must be removed from between 5' and 10' below ground level.
9. Well site restoration shall be completed within 60 days following the completion of plugging operations.
10. No program changes are made without prior Division approval.
11. **THIS DIVISION SHALL BE NOTIFIED TO:**
    a. Inspect the installed blowout prevention equipment prior to commencing **downhole** operations.

(Continued on page 2)

No Bond Required Bond
cc: Update
EDP
AllenCo.
DOGGR – Dist. 1 (Cypress)

Tim Kustic
State Oil and Gas Supervisor

Engineer Ellen Plaza Moser
Office (714) 816-6847

By _____
For: Daniel J. Dudak, *District Deputy*

EPM/epm

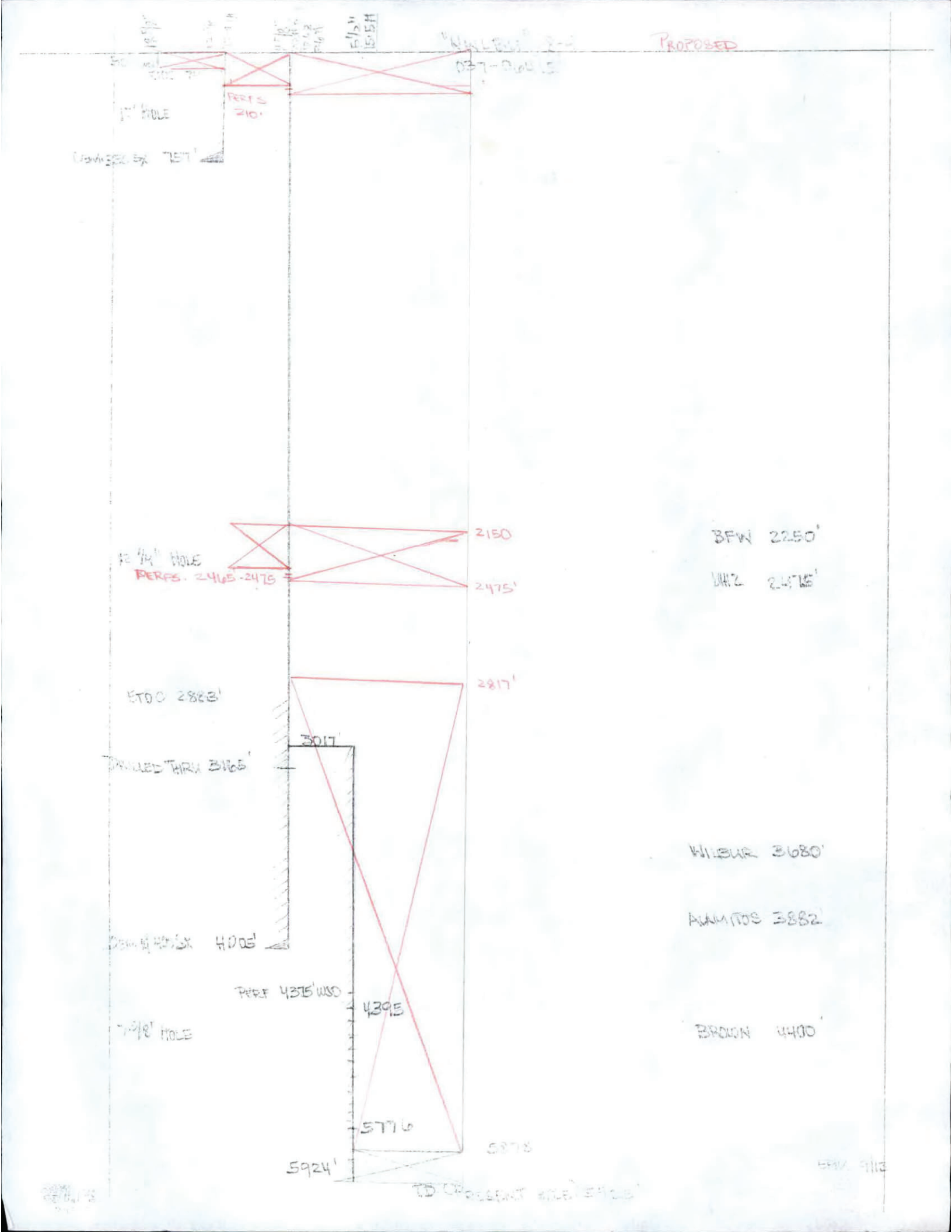
A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

b. Witness the clean-out depth at **5878'**.
c. Witness the placing, location and hardness of the cement plug from **5878'** to **2817'**.
d. Witness the mudding operations.
e. Witness a pressure test of the **8-5/8"** casing.
f. Witness the cement squeeze through the **perforations** at **2465'** or through a retainer or packer (if casing integrity is not demonstrated).
g. Witness the placing, location and hardness of the cement plug from **2475'** to **2150'**.
h. Witness the cement squeeze through the **perforations** at **200'** through a retainer or packer (if casing integrity is not demonstrated).
i. Witness the placing, location and hardness of the cement plug from **210'** to **surface'**, including all annular spaces.
j. Inspect the restored well site.

NOTE:

1. Upon completion of the proposed work, a History of Oil or Gas Well (form OG103) shall be submitted to this office.
2. The well abandonment history (History of Oil or Gas Well - form OG103), must include a description of the removal or abandonment of the well flowline and any associated piping.
3. Hydrogen sulfide gas (H_2S) is known to be present in this area, adequate safety precautions shall be taken prior to and during well operations.
4. The operator shall isolate the following zones:
   a. **Base of the Freshwater Sand at 2250'.**
   b. **Top of the Upper Gas Zone at 2475'.**
   c. **Top of the Wilbur Zone at 3680'.**
   d. **Top of the Alamitos Zone at 3882'.**
   e. **Top of the Brown Zone at 4400'.**

   Failure to achieve adequate zonal isolation may have negative impacts on current and future operations. In addition, failure to achieve adequate zonal isolation will also be noted on the Report of Operations (OG 109).


PROPOSED
PERFS
210'
17" HOLE
TEST
2150
2475'
BFW 2250'
UM2 2478'
2817'
3017'
WILBUR 3680'
AMMITOS 3882'
4395
BROWN 4400'
5776
5924'

URAL RESOURCES AGENCY OF CALIFOR
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630 - 4731

No. P 113-0597

Old	New
412	412
FIELD CODE	
03	03
AREA CODE	
00	--
POOL CODE	

PERMIT TO CONDUCT WELL OPERATIONS

CRITICAL WELL
CORRECTED COPY

Cypress, California
July 19, 2013

Mr Mark Pender, Agent
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Your proposal to **Abandon** well **"NWLBU" 8-4**, A.P.I. No. **037-06415**, Section **13**, T. **04S**, R. **13W**, **SB** B. & M., **Long Beach** field, **Northwest Extension** area, **Brown** pool, **Los Angeles** County, dated **7/10/2013**, received **7/10/2013** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
   a. Class **II3M,** with hydraulic controls, during **abandonment** operations.
   b. A **3M lubricator** for **wireline** operations.
2. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
3. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of **72** lbs/cu.ft and a minimum gel shear strength of **25** lbs./100 sq. ft.
5. The proposed cement plug from **5878'** to **3480'** shall extend from **5878'** to at least **2817'**.
6. Prior to shooting any perforations braidenhead squeezes, a pressure test of the **8-5/8"** casing shall be made to ensure casing integrity. If casing integrity is not demonstrated, a retainer or packer is required for squeeze operations.
7. The well location shall be surveyed prior to burying the well, and the survey shall be filed with this office. Latitude and longitude shall be in decimal degrees, to six decimal places, in NAD83.
8. All casing must be removed from between 5' and 10' below ground level.
9. Well site restoration shall be completed within 60 days following the completion of plugging operations.
10. No program changes are made without prior Division approval.
11. **THIS DIVISION SHALL BE NOTIFIED TO:**
    a. Inspect the installed blowout prevention equipment prior to commencing **downhole** operations.

(Continued on page 2)

No Bond Required Bond
cc: Update
EDP
AllenCo.
DOGGR – Dist. 1 (Cypress)

Tim Kustic
State Oil and Gas Supervisor

Engineer Ellen Plaza Moser
Office (714) 816-6847

By _____
For: Daniel J. Dudak, *District Deputy*

EPM/epm

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

b. Witness the clean-out depth at **5878'**.
c. Witness the placing, location and hardness of the cement plug from **5878'** to **2817'**.
d. Witness the mudding operations.
e. Witness a pressure test of the **8-5/8"** casing.
f. Witness the cement squeeze through the **perforations** at **2465'** or through a retainer or packer (if casing integrity is not demonstrated).
g. Witness the placing, location and hardness of the cement plug from **2475'** to **2150'**.
h. Witness the cement squeeze through the **perforations** at **200'** through a retainer or packer (if casing integrity is not demonstrated).
i. Witness the placing, location and hardness of the cement plug from **210'** to **surface'**, including all annular spaces.
j. Inspect the restored well site.

NOTE:

1. Upon completion of the proposed work, a History of Oil or Gas Well (form OG103) shall be submitted to this office.
2. The well abandonment history (History of Oil or Gas Well - form OG103), must include a description of the removal or abandonment of the well flowline and any associated piping.
3. Hydrogen sulfide gas (H_2S) is known to be present in this area, adequate safety precautions shall be taken prior to and during well operations.
4. The operator shall isolate the following zones:
   a. **Base of the Freshwater Sand at 2250'.**
   b. **Top of the Upper Gas Zone at 2475'.**
   c. **Top of the Wilbur Zone at 3680'.**
   d. **Top of the Alamitos Zone at 3882'.**
   e. **Top of the Brown Zone at 4400'.**

   Failure to achieve adequate zonal isolation may have negative impacts on current and future operations. In addition, failure to achieve adequate zonal isolation will also be noted on the Report of Operations (OG 109).

TURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630 - 4731

No. P 113-0597

Old	New
412	412
FIELD CODE	
03	03
AREA CODE	
00	--
POOL CODE	

PERMIT TO CONDUCT WELL OPERATIONS

CRITICAL WELL

Cypress, California
July 19, 2013

Mr Mark Pender, Agent
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Your proposal to **Abandon** well **"Nwlbu" 8-4**, A.P.I. No. **037-06415**, Section **13**, T. **04S**, R. **13W**, **SB** B. & M., **Long Beach** field, **Northwest Extension** area, **Brown** pool, **Los Angeles** County, dated **7/10/2013**, received **7/10/2013** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
   a. Class **II3M**, with hydraulic controls, during **abandonment** operations.
   b. A **3M lubricator** for **wireline** operations.
2. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
3. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of **72** lbs/cu.ft and a minimum gel shear strength of **25** lbs./100 sq. ft.
5. Prior to shooting any perforations braidenhead squeezes, a pressure test of the **8-5/8"** casing shall be made to ensure casing integrity. If casing integrity is not demonstrated, a retainer or packer is required for squeeze operations.
6. The well location shall be surveyed prior to burying the well, and the survey shall be filed with this office. Latitude and longitude shall be in decimal degrees, to six decimal places, in NAD83.
7. All casing must be removed from between 5' and 10' below ground level.
8. Well site restoration shall be completed within 60 days following the completion of plugging operations.
9. No program changes are made without prior Division approval.
10. **THIS DIVISION SHALL BE NOTIFIED TO:**
    a. Inspect the installed blowout prevention equipment prior to commencing **downhole** operations.
    b. Witness the clean-out depth at **5878'**.

(Continued on page 2)

No Bond Required Bond
cc: Update
EDP
AllenCo
DOGGR – Dist. 1 (Cypress)

Tim Kustic
State Oil and Gas Supervisor

Engineer Ellen Plaza Moser
Office (714) 816-6847

By _____
For: Daniel J. Dudak, *District Deputy*

EPM/epm

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

c. Witness the placing, location and hardness of the cement plug from **5878'** to **3480'**.
d. Witness the mudding operations.
e. Witness a pressure test of the **8-5/8"** casing.
f. Witness the cement squeeze through the **perforations** at **2465'** or through a retainer or packer (if casing integrity is not demonstrated).
g. Witness the placing, location and hardness of the cement plug from **2475'** to **2150'**.
h. Witness the cement squeeze through the **perforations** at **200'** through a retainer or packer (if casing integrity is not demonstrated).
i. Witness the placing, location and hardness of the cement plug from **210'** to **surface'**, including all annular spaces.
j. Inspect the restored well site.

NOTE:

1. Upon completion of the proposed work, a History of Oil or Gas Well (form OG103) shall be submitted to this office.
2. The well abandonment history (History of Oil or Gas Well - form OG103), must include a description of the removal or abandonment of the well flowline and any associated piping.
3. Hydrogen sulfide gas (H_2S) is known to be present in this area, adequate safety precautions shall be taken prior to and during well operations.
4. The operator shall isolate the following zones:
   a. **Base of the Freshwater Sand at 2250'.**
   b. **Top of the Upper Gas Zone at 2475'.**
   c. **Top of the Wilbur Zone at 3680'.**
   d. **Top of the Alamitos Zone at 3882'.**
   e. **Top of the Brown Zone at 4400'.**

   Failure to achieve adequate zonal isolation may have negative impacts on current and future operations. In addition, failure to achieve adequate zonal isolation will also be noted on the Report of Operations (OG 109).

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

OIL, GAS & GEOTHERMAL

API # 113-05991

FOR DIVISION USE ONLY			
	Forms		
Bond	OGD114	OGD121	
BB	7/13/13	7/10/13	DG

NOTICE OF INTENTION TO ABANDON / RE-ABANDON WELL

Detailed instructions can be found at: www.conservation.ca.gov/dog

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon ☒ / re-abandon ☐ well "Nwlbu" 8-4 , API No. 037-06415 ,
(Check one)

Sec. 13 , T. 4s , R. 13w , S.B. B.&M., Long Beach Field, Los Angeles County.

The complete casing record of the well (present hole), including plugs and perforations, is as follows: (Attach wellbore schematics diagram also.)
See Attachment

The total depth is: 5925 feet. The effective depth is: 5878 feet.

Present completion zone(s): see attachment (Name). Present zone pressure: N/A psi.

Oil or gas shows: see attachment (Name and depth) feet. Depth to base of fresh water: 2250 feet.

Top of uppermost hydrocarbon zone (which may be behind unperforated casing): see attachment (Depth of interval) feet.

Is this a critical well as defined in the California Code of Regulations, Title 14, Section 1720(a) (see next page)? Yes☒ No☐

The proposed work is as follows: (A complete program is preferred and may be attached.)
See Attachment.

The Division must be notified immediately of changes to the proposed operations. Failure to provide a true and accurate representation of the well and proposed operations may cause rescission of the permit.

Name of Operator			
C.R.G. Properties, Ltd			
Address: 2109 GUNDRY AVE.		City/State: SIGNAL HILL	Zip Code: 90755
Name of Person Filing Notice: MICK BEYER	Telephone Number: 562 989-6100	Signature: M. B	Date: 07-10-13
Individual to contact for technical questions: MICK BEYER	Telephone Number: 310 505-9787	E-Mail Address: Mbeyer@allencoca.com	

This notice must be filed, and approval given, before plugging and abandonment operations begin. If operations have not commenced within one year of the Division's receipt of the notice, this notice will be considered cancelled.

DOGGR Received
JUL 10 2013
to Elox 7/10/13

OG108 (1/09)

CRITICAL WELL DEFINITION

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

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

This form may be printed from the DOGGR website at www.conservation.ca.gov/dog/

EXHIBIT A – Attachment II (continued)
WELL CONDITIONS AND ABANDONMENT SPECIFICATIONS

C.R.G. Properties, Ltd. Well "Nwlbu" 8-4 (037-06415), Sec.13, Twn. 4S, Rge. 13W, S.B. B&M, Long Beach Oil Field

According to Division records, the present condition of the well is as follows:

1. **Location:** See map Exhibit A - Attachment II
2. **Accessibility:**
3. **Status:** Idle deserted
4. **Total Depth:** 5925'. **Effective Depth:** 5878'. **Elevation of Kelly Bushing (KB) above sea level:** 60'.
5. **Casing: 18-5/8"**casing cemented 50'; **13-3/8" 36#** casing cemented 757' with estimated top of cement behind pipe at 124' +/-; **8-5/8"** cemented 4005' with estimated top of cement behind pipe at 2890', WSO; 5-1/2" cemented 3017'-5925'.perfs. 4375' WSO, 5712'-5730', 5734'-5754', 5761'-5776'.
8. **Tubing:** Unknown **Rods:** Unknown
7. **Base of Fresh Water (BFW):** 2250'
8. **Producing Zone(s):** Brown
9. **Hole Fluid:** Unknown
10. **Junk:** Unknown
11. **Plugs:** 5878 to 5925,
12. **Comments:** Top of Brown zone 4400', top of Alamitos zone 3882', top of Wilbur zone 3680', and top of Upper Gas zone 2475'.

The following operations are necessary to plug and abandon the well:

1. A Notice of Intention to Abandon (form OG 108) is to be filed with this Division at least 10 days prior to commencing work. Work is not to begin until a Permit to Conduct Well Operations (Form OG 111) has been issued. All well operations are to be witnessed by a representative of this Division as directed in the Permit to Conduct Well Operations.

2. The abandonment contractor will review job safety programs (JSP) with all crewmembers prior to work startup and/or if conditions change. Monitor well for any leaking gas. Position gas monitors and ventilation fans, if warranted before moving in any other equipment or personnel.

3. Adequate blowout prevention equipment, as defined in Division's publication No. M07, shall be installed and maintained in operating condition at all times. The minimum requirements are:

   a. A 3M rod Reagan or equivalent BOPE for pulling rods and pump operations.
   b. A Class II3M, with hydraulic controls, during abandonment operations.
   c. A 3M lubricator for wire line operations.

4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of 72 lbs/cu.ft and a minimum gel shear strength of 25 lbs. /100 sq. ft. All cement plugs are to have a minimum compressive strength of 1000 psi and maximum liquid permeability of 0.1 md. All depths noted are from the KB.

5. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.

6. Kill well. Install and function test rod Reagan or equivalent BOPE. Pull out of the hole with rods and pump.

EXHIBIT A – Attachment II (continued)
WELL CONDITIONS AND ABANDONMENT SPECIFICATIONS

7. Remove rod Reagan. Install and function test Class II3M BOPE (function test BOPE each day thereafter).
8. Pull out all production tubing.
9. Use appropriate combination tools to clean out to 5878'.
10. Run in scraper. Scrape the 8-5/8" and 5 ½" casings.
11. Run in hole with tubing (if tag high, clean out fill to 5878').
12. The well shall be plugged with cement from 5878' to 3480'
13. Prior to shooting any perforations for braidenhead squeezes, a pressure test of the casing shall be made to ensure casing integrity. If casing integrity is not demonstrated, a packer is required for squeeze operations.
14. The 8-5/8" casing shall be perforated from 2475 to 2465'. Get an injection rate or a breakdown.
15. Sufficient cement shall be squeezed into the perforations to fill to 2150' outside the 8-5/8" casing.
16. The well shall be plugged with cement from 2475' to 2150'.
17. The 8-5/8" casing shall be cut and pulled from 210'.
18. The 13" casing shall be perforated from 210' to 200'. Sufficient cement shall be squeezed into the perforations to fill to surface.
19. The well shall be plugged with cement from 210' to surface.
20. All casing must be removed from between 5' and 10' below ground level.
21. A steel plate, at least as thick as the outer well casing and bearing the last five digits of the API number, shall be tack welded around the top of the outer casing.
22. Cellar, production pads and pipelines shall be removed and the resulting excavations filled with earth and compacted properly to prevent settling.
23. Remaining buried pipelines that cannot be removed shall be purged with clean water. Abandon line by pumping approved cement slurry mixture, weld steel cap on both ends of the line and bury.
24. All equipment, casing, or junk that requires removal to implement restoration to lawful conditions shall be removed and properly disposed of in accordance with environmental laws and in accordance with instructions from the Division of Oil and Gas. All liquid wastes shall be removed and properly disposed.
25. A well History (Form OG 103) shall be filed in duplicate with the Division within 60 days of completing the work and must include a description of the removal or abandonment of the well flow line and any associated piping.

DEPARTMENT OF CONSERVATION
Division of Oil, Gas, and Geothermal Resources
5816 Corporate Avenue, Suite 200
Cypress, California 90630
Telephone (714) 816-6847
Facsimile (714) 816-6853

STATE OF CALIFORNIA

NATURAL RESOURCES AGENCY

DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REVISED

FORMAL ORDER TO: PLUG AND ABANDON WELLS & RESTORE LEASE CONDITIONS

NO. 1032

Dated: October 18, 2012

Operator: C.R.G. Properties, Ltd. (C0250)

BY

Tim Kustic

STATE OIL AND GAS SUPERVISOR

DEPARTMENT OF CONSERVATION
Legal Office
801 K Street
Sacramento, California
Telephone (916) 323-6733
Facsimile (916) 445-9916

STATE OF CALIFORNIA

NATURAL RESOURCES AGENCY

DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

FORMAL ORDER TO: PLUG AND ABANDON WELLS & RESTORE LEASE CONDITIONS

NO. 1032

Dated: October 17, 2012

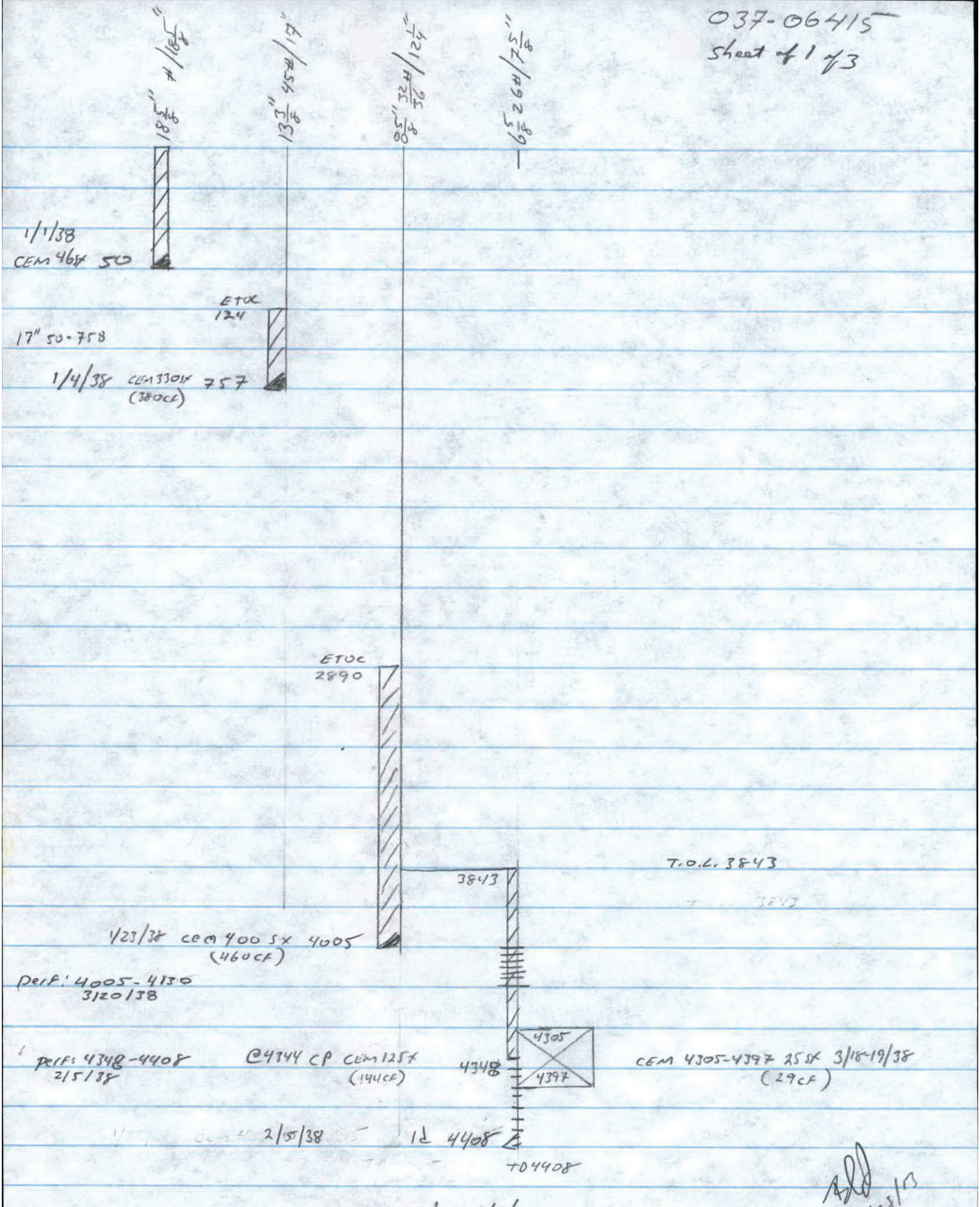
Operator: C.R.G. Properties, Ltd. (C0250)

BY

Tim Kustic

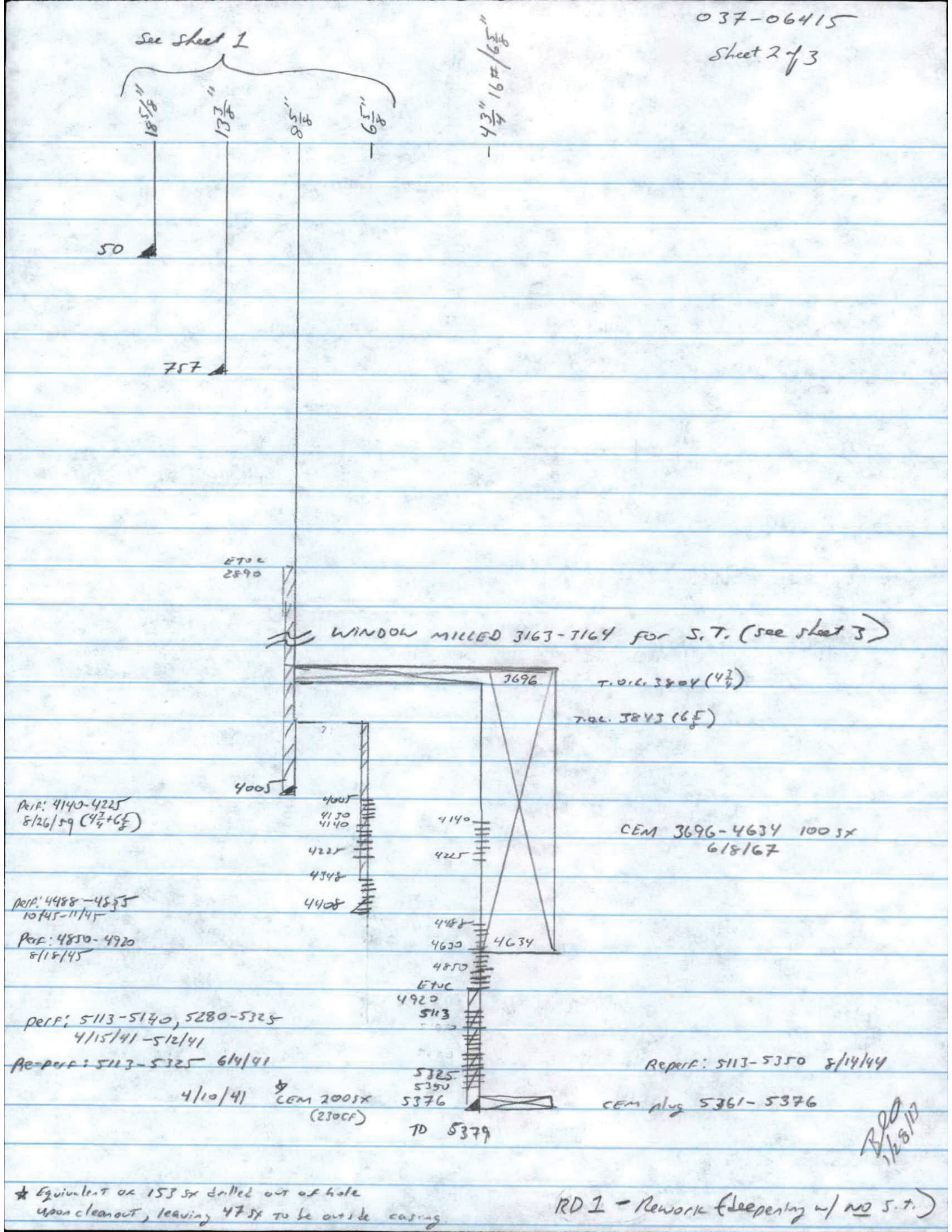
STATE OIL AND GAS SUPERVISOR

037-06415
Sheet of 1 of 3



037-06415

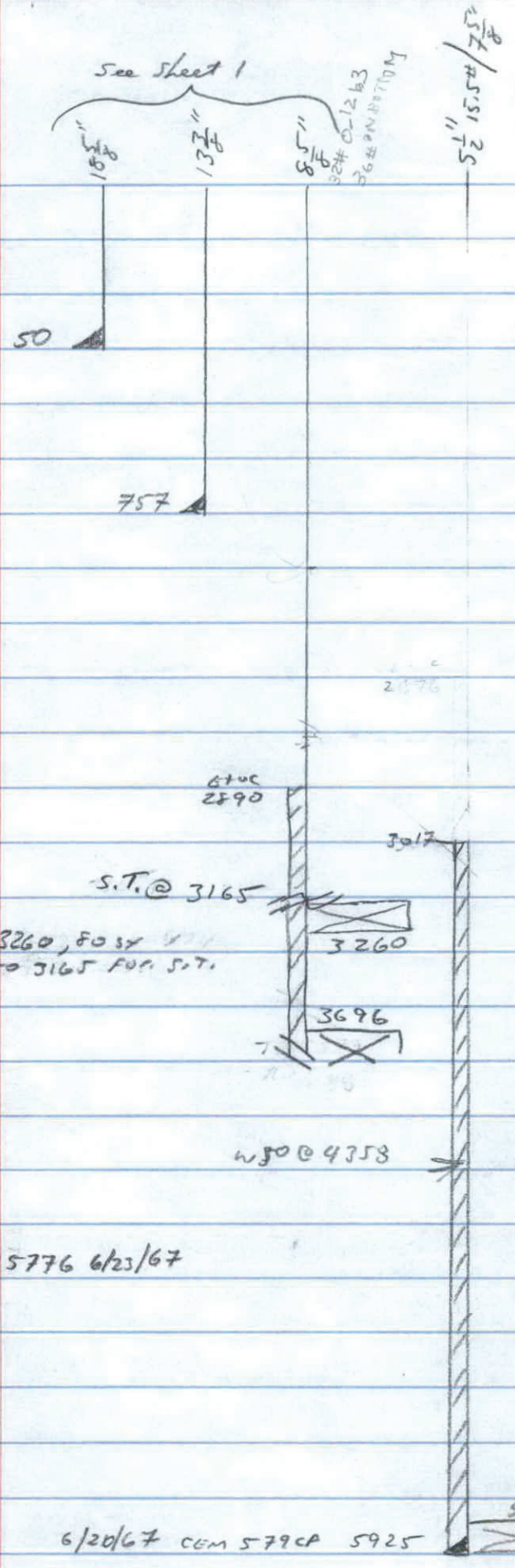
Sheet 2 of 3



★ Equivalent of 153 SX drilled out of hole upon cleanout, leaving 47 SX to be outside casing

RD 1 - Rework (deepening w/ NO S.T.)

037-06415
Sheet 3 of 3



BFW 2250'

UPPER CLAS (A) 2476'

(C) UPPER WILBUR 3880'

ALAMITOS LOWER 3882'

BROWN 4400'

T.O.C. 3017 (6/20/67)

PERFS: 5712 - 5776 6/23/67

RDZ

BDL 1/28/10

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

REPORT OF PROPERTY AND WELL TRANSFER

Field or County		District
Long Beach		District 1 (Cypress, California)
Former owner		Date
Pacific Energy Res.	P0252	July 26, 2000

Well Name	API Number	Section Township Range
"Nwlbu" 5-2	037-00397	Sec. 13-4S-13W
"Nwlbu" 5-3	037-09796	Sec. 13-4S-13W
"Nwlbu" 5-4	037-09797	Sec. 13-4S-13W
"Nwlbu" 8-3	037-06496	Sec. 13-4S-13W
"Nwlbu" 8-4	037-06415	Sec. 13-4S-13W
"Nwlbu" 8-7	037-22512	Sec. 13-4S-13W
"Nwlbu" 9-2	037-13525	Sec. 13-4S-13W
"Nwlbu" 9-3	037-09791	Sec. 13-4S-13W
"Nwlbu" 9-4	037-00392	Sec. 13-4S-13W
"Nwlbu" 9-5	037-00142	Sec. 13-4S-13W
"Nwlbu" 9-6	037-00393	Sec. 13-4S-13W

Description of the land upon which the well (s) is (are) located.
See above

Date of transfer	New owner		Type of organization
May 9, 2000		C.R.G. Properties, Ltd. C0250	Corp./Ltd.
	Address:	15332 Antioch Street, Suite 338 Pacific Palisades, CA 90272	Telephone (310) 808-9071

Reported by	OG34A received 6/2/2000 signed by both parties
Confirmed by	Same as above
New operator new status **PA**	Designation of Agent Mark Pender
Old operator new status **PA**	Remarks See operator file for C.R.G. Properties, Ltd. for details

OPERATOR STATUS ABBREVIATIONS

PA – Producing Active

NPA- No potential, Active

PI- Potential Inactive

NPI-No potential, Inactive

Ab-Abandoned or No More Wells

cc: Update; Envir Dsk; File
Conservation Committee
Harold W. Bertholf, Inc.
LA County Assessor
Sacramento EDP
Cypress EDP

Deputy Supervisor
R. K. Baker

Signature
Floyd M. Leeson
Operations Engineer

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	N/A		Map and Book		
Operator Card			Notice cancellations	N/A	
Well Records	SR	7/27/2000	Bond Status BB/FML	SR	7/26/2000
Log Records	SR	7/31/2000	EDP	SR	7/27/2000
Production Repts	N/A		Data Base	SR	7/27/2000

WELL TRANSFER NOTICE

EFFEC MAY 9, 1994, PETRO RESOURCES, INC.
TRANS LONG BEACH NWLBU WELLS
TO PACIFIC ENERGY ~~CORP~~ Resources
SEE OGD156 DATED 5-13-94

FORM OGD156 (5-80)

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

REPORT OF PROPERTY AND WELL TRANSFER

Field or county	District
Long Beach	1
Former owner	**Date**
Sun Exploration & Production Co.	June 15, 1983

Name and location of well(s)

Sec. 13-4S-13W S.B.B.&M.

NWLBU 5-1 (037-09795)	NWLBU 8-1 (037-09792)	NWLBU 9-3 (037-09791)
NWLBU 5-2 (037-00397)	NWLBU 8-2 (037-09793)	NWLBU 9-4 (037-00392)
NWLBU 5-3 (037-09796)	NWLBU 8-3 (037-06496)	NWLBU 9-5 (037-00142)
NWLBU 5-4 (037-09797)	NWLBU 8-4 (037-06415)	NWLBU 9-6 (037-00393)
NWLBU 6-1 (037-09788)	NWLBU 8-7 (037-22512)	
NWLBU 6-2 (037-09789)	NWLBU 9-2 (037-13525)	

Description of the land upon which the well(s) is (are) located

Date of transfer, sale, assignment, conveyance, or exchange	New owner / Address	Type of organization / Telephone No.
May 1, 1983	Petro Resources, Inc. 4200 Easton Drive, Suite 16 Bakersfield, CA 94309	Corp. 805/323-4118

Reported by
Letter from Sun Exploration & Production Co. dated 5-16-83.

Confirmed by
Letter form Petro Resources, Inc., dated 5-18-83.

New operator new status (status abbreviation)	Request designation of agent
PA	Joe D. Rose, same address.
Old operator new status (status abbreviation)	**Remarks**
PA	

Deputy Supervisor: V. F. Gaede

Signature: Richard L. Mansell

OPERATOR STATUS ABBREVIATIONS

PA – Producing Active
NPA – No Potential, Active
PI – Potential Inactive
NPI – No Potential, Inactive
Ab – Abandoned or No More Wells

FORM AND RECORD CHECK LIST

Form or record	Initials	Date	Form or record	Initials	Date
Form OGD121	CP	7-7-83	Map and book	137 ✓	7/12/83
Form OGD140	NONE		Notice to be cancelled		
New well cards	CP	7-7-83	Bond status		
Well records	CP	7-7-83	EDP files	Update	
Electric logs	CP	7-7-83	Conservation Committee		
Production reports			L. A. Assessors		

Name change from Sun Oil Co. to SUN EXPLORATION & PRODUCTION CO.

1-1-82, Form 156 dated 1-21-82. See ownership file.

FORM 157

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Long Beach, California

Oct. 4, 1979

Mr. L. B. Carroll, Jr., Agent
Sun Oil Co.
23928 Lyons Ave.
Newhall, CA 91321

DEAR SIR:

Your request dated March 19, 1979, relative to change in designation of well(s) in Sec. 13, T. 4S, R 13W, S.B B. & M., Long Beach field, Los Angeles County, District No. 1, has been received; and in accordance with Section 3203, Public Resources Code, reading in part as follows:

> "° ° ° The number or designation by which any well heretofore drilled has been known, and the number or designation specified for any well in a notice filed as required by Section 3203, shall not be changed without first obtaining a written consent of the Supervisor."

the proposed change in designation is hereby authorized as follows:

Old Designation		API	New Designation
"Oil Operators"	1 (See)	037-09792	NWLBU 8-1
" "	2	037-09793	NWLBU 8-2
" "	3	037-06496	NWLBU 8-3
" "	4	037-06415	NWLBU 8-4
"Pool"	1	037-09795	NWLBU 5-1
"	2	037-00397	NWLBU 5-2
"	3	037-09796	NWLBU 5-3
"	4	037-09797	NWLBU 5-4
"Amebco"	1	037-09788	NWLBU 6-1
"	2	037-09789	NWLBU 6-2
"Flood Control"	2	037-13525	NWLBU 9-2
" "	3	037-09791	NWLBU 9-3
" "	4	037-00392	NWLBU 9-4
" "	5	037-00142	NWLBU 9-5
" "	6	037-00393	NWLBU 9-6

Mag. 137 & Book pnc 11/2/79

M. G. Mefford

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

RWS:sc

cc: Update Center
EDP
Conservation Committee

By Richard W. Stoll for
Acting *Deputy Supervisor*
R. A. Ybarra

87998-705 11-71 3M ① OSP

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

REPORT OF PROPERTY AND WELL TRANSFER

Field or county	District
Long Beach	1
Former owner	**Date**
General Exploration Co.	February 15, 1979

Name and location of well(s)

Sec. 11-4S-13W

"Dominguez" 2-10 (037-11859)

Sec. 13-4S-13W

"Amebco" 1 (037-09788)
"Amebco" 2 (037-09789)
"Flood Control" 2 (037-13525)
"Flood Control" 3 (037-09791)
"Flood Control" 4 (037-00392)
"Flood Control" 5 (037-00142)
"Flood Control" 6 (037-00393)
"Oil Operators" 1 (037-09792)
"Oil Operators" 2 (037-09793)
"Oil Operators" 3 (037-06496)
"Oil Operators" 4 (037-06415)
"Pool" 1 (037-09795)
"Pool" 2 (037-00397)
"Pool" 3 (037-09796)
"Pool" 4 (037-09797)

Description of the land upon which the well(s) is (are) located

Sec. 14-4S-13W

"Dominguez" 1 (037-11858)

Date of transfer, sale, assignment conveyance, or exchange	New owner / Address	Type of organization / Telephone No
Dec. 1, 1978	Sun Oil Company 23928 Lyons Avenue Newhall, CA 91321	Corporation

Reported by: Former operator

Confirmed by: New operator

New operator new status (status abbreviation)	Request designation of agent
PA	
Old operator new status (status abbreviation)	**Remarks**
AB	

OPERATOR STATUS ABBREVIATIONS

PA – Producing Active
NPA – No Potential, Active
PI – Potential Inactive
NPI – No Potential, Inactive
Ab – Abandoned or No More Wells

Deputy Supervisor: for M. B. Albright

Signature: Eleanor Bickel

FORM AND RECORD CHECK LIST

Form or record	Initials	Date	Form or record	Initials	Date
Form OGD121			Map and book	FR	2-16-79
Form OGD148			Notice to bonding co.		
New well cards			Bond status		
Well records		✓	EDP cards		
Electric logs					
Production reports					

cc: EDP Update
Conservation Committee
Update Center

OGD15b (12-77 OSR1-2M)

WORK PERFORMED:

Drill_____ Redrill ✓ Deepen_____

Plug_____ Alter casing_____

Water flood_____ Water disposal_____

Abandon_____

Other_____

STATUS: (Date)

Producing_____

Recomp. prod. ✓ 6-24-67

Water flood_____

Water disposal_____

Abandoned_____

Other_____

MAP AND BOOK NC

RECORDS FILED & DATE: Clerk mc AT

Summary (dup.)_____

Log & Core (dup.)_____

✓ History (dup.) 10/4/67

✓ E-log (2) 3162-5902 7/5/67

Radio log_____

D. Survey_____

Other_____

(Check records for signature and correct name of operator or well, S.T.R. and field.)

Location_____ Notice states_____

Elevation_____ Notice states_____

Production Reports_____

(If production reports not received, make notation and inform Sr. Steno. when rec'd.)

If stimulation or disposal well:
Form 121_____ Folder_____

Form 19-A

RECORDS & REQUIREMENTS CHECKED: Eng. WH2

✓ WH2

✓ WH2

Surface inspection —

Data needed none

Request records —

Correct records —
(Specify)

CARDS NC
#1410633 dated 6-1-67

BOND:

Hold__ Reason_____

Release ✓ Date elig. 10-4-67

End premium year___

5/14/68 per Ingram Release requested ✓ (Check one)

Bond superseded___

Well abandoned___

FINAL LETTER_____

and

FILE CLEARED_____

Clerk:

F 170___

F 165___

165A___

F 150b AB Use (a)(1) and 2 on Form 150b)

F 159___

F 121___

FORM 103 SUBMIT IN DUPLICATE △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR General Exploration Company of California FIELD Long Beach

Well No. "Oil Operators" 4, Sec. 13, T. 4 S, R. 13 W, S.B. B. & M.

Date September 11, 1967 Signed R. S. Ballantyne, Jr.

417 S. Hill St., Los Angeles 628-2156 Title Vice President
(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	
1967	
8/8	Flowed 50 bbl. net 26.2° oil, 0.2% cut, 40-55#/pkr.
8/9	Moved in Blackwell & Sunde production rig. Opened bypass on packer and filled hole with salt water. Pulled tubing and packer (laid down 53 joints of 2-7/8" tubing). Go-Western jet perforated four 1/2" holes per foot as follows: 4612-4560', 4489-4449' and 4435-4395'.
8/10	Ran 127 joints of 2-7/8" Armco seal lock tubing with pump shoe and gas anchor - 3960' and 3990', respectively. Ran rods and put well on pump. (Production not separated from other wells until 9/5).
8/12	45 bbl. net.
8/14	50 bbl. net.
9/5	36 bbl. net, 24.1°, 0.5%.
9/12	32 bbl. net, 24°, 0.5%.
9/13	Moved in Blackwell & Sunde production rig. Ran 100 bbl. salt water into annulus. Installed BOPE. Pulled rods and tubing. Go Western found sticky bottom at 5845' and jet perforated four 1/2" holes per foot from 4805-4760'. Ran 139 joints of Armco 2-7/8" seal lock tubing with pump shoe and gas anchor at 4335' and 4365', respectively. Put well on pump.
9/14	56 bbl. gross, 38 bbl. net, 32.2%.
9/17	53 bbl. gross, 47 bbl. net, 11.3%.
9/26	67 bbl. gross, 66 bbl. net, 1.5%, 24.7°.

CASING RECORD AT COMPLETION OF WORK:
(Depths from present KB of 60') T.D. 5925'.
13-3/8" C 763'
8-5/8" C 3163'
5-1/2" C 5924, top 3017' (splice OK). Perfs. 4375' (WSO), 4395-4435', 4449-4489', 4560-4612', 4760-4805', 5712-5730', 5734-5754', 5761-5776'. Plug 5878'.

Sidetracked:
8-5/8" C 4011', top 3194'. Plug 3194' (and open hole up to 3165')
4-3/4" C 5382', top 3810'. Plug 3810'. Perfs: 4494-4534', 4571-4597', 4636-4676', 4811-4841', 4856-4926', 5119-5164', 5174-5241', 5286-5356'.
(6-5/8" L 4414' incl. 60' pfs, C 4350, top 3849', Perfs 4011-4034', 4076-4136', Reperf 4354-4405', cemented off behind 4-3/4".)
4-3/4" & 6-5/8" Perf 4146-4231'

DIVISION OF OIL AND GAS
RECEIVED
OCT 4 1967
INGLEWOOD, CALIFORNIA

FORM 103

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

26535-705 7-64 25M △ OSP

DIVISION OF OIL AND GAS
RECEIVED
JUL 7 1967
INGLEWOOD, CALIFORNIA

19

History of Oil or Gas Well

OPERATOR General Exploration Company of Calif. FIELD Long Beach

Well No. "Oil Operators" 4, Sec. 13, T. 4 S, R. 13 W, S.B. B. & M.

Date July 3, 19 67 Signed R. S. Ballantyne, Jr.

417 S. Hill St., Los Angeles 628-2156 Title Vice President
(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	
1967	**Note: Depth measurements taken from present K.B. elevation of 60' which is 6' higher than original datum. Ground elevation is 48'.**
6/6-7	Moved in, rigged up drilling equipment, installed base flange and B.O.P.E. (Graham Drilling Company).
6/8	Ran 7-5/8" bit on 3-1/2" drill pipe, located top of 4-3/4" liner at 3804' and filled hole with mud. Ran 940' stinger of 2-3/8" tubing on drill pipe and circulated from 4550' to solid fill at 4650'. Laid 100-sack class G cement plug from 4634'. Ran 7-5/8" bit and found cement at 3696' (witnessed by D.O.G.). Tested 8-5/8" casing and B.O.P.E. satisfactorily at 1050# for 15 minutes.
6/9-10	Ran two Yann mills and cut section in 8-5/8" casing from 3163' to 3168'. Ran two Servco mills and cut section to 3194'. Opened interval 3163'-3194' to 12-3/4". Ran 310' stinger of 2-7/8" tubing on drill pipe to 3260' and laid 80 sacks of class G cement (including 20% sand) treated with 0.5% CFR-2. Pulled tubing to 2720', back-scuttled, squeezed cement with 1100# and pressure dropping to 950# in 5 minutes.
6/11	Ran 7-5/8" bit and 8-5/8" casing scraper, found cement at 2992' and drilled out to 3165'. Drilled 7-5/8" hole to 3296' with DynaDrill.
6/12-16	Drilled 7-5/8" hole to 4845' using a Dyna Drill from 4299'-4463'. Ran Schlumberger I.E.S. from 4844' to 3163'.
6/16-19	Drilled 7-5/8" hole to 5900'. Ran Schlumberger I.E.S. from 5900' to 4844' and C.D.M. from 5900' to 4000'.
6/20	Drilled 7-5/8" hole to 5925' (T.D.). Ran 2907' (including Burns liner hanger), 68 joints, 5-1/2", 15.5#, J-55 casing on drill pipe. Cemented at 5924' with 579 C.F. of 1:1 class G cement pozmix with 2% gel and 0.5% CFR-2 and 12% salt in mix water. Backscuttled small amount of cement from inside top of 5-1/2" liner. Ran 7-5/8" bit and 8-5/8" casing scraper to top of liner at 3017'.
6/21	Pressure tested casing at 1000# and lap took fluid. Ran Baker shoe squeeze tool on drill pipe and set at 2925'. Squeezed 52 sacks of 75 sacks class G cement mixed into lap at 3017' with a final pressure of 2000#. Ran 7-5/8" bit and 8-5/8" casing scraper, found top of cement at 2940' and drilled out to 3017'.
6/22	Ran 4-3/4" bit and 5-1/2" casing scraper on 2949' of 2-7/8" Armco (seal lok) tubing below drill pipe. Cleaned out cement to 3037' and ran to float collar at 5878'. Satisfactorily pressure tested lap with 1000#. Ran Johnston tester and set packer at 2992' with tail to 3008'. Open 63 minutes. Recovered 10' of drilling fluid. Charts showed tester open. W.S.O. on lap approved by D.O.G. Ran Go-Western cement bond log from 5878' to 3900' and perforated four 1/2" jet holes at 4375'. Ran Johnston tester and set packer at 4342' with tail to 4358'. Open 1 hour. Recovered 45' of drilling fluid. Charts showed tester open. W.S.O. at 4375' approved by D.O.G.
6/23	Ran open end tubing to 5874'. Changed over to 68# salt water. Laid down drill pipe. Ran Go-Western 4" steel carrier and jet perforated four 1/2" holes per foot as follows: 5776'-5761', 5754'-5734' and 5730'-5712'. Ran Guiberson packer on 179 joints of 2-7/8" Armco (seal lok) tubing and set at 5615'. Landed tubing with 16,000# on packer.

FORM 103 SUBMIT IN DUPLICATE 26535-705 7-64 25M △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR General Exploration Company of Calif. FIELD Long Beach

Well No. "Oil Operators" 4, Sec. 13, T. 4 S, R. 13 W, S.B. B. & M.

Date July 3, 1967 Signed R. S. Ballantyne, Jr.

417 S. Hill St., Los Angeles 628-2156 Title Vice Resident
(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

6/24 Removed B.O.P.E. Installed surface equipment. Swabbed well into production at 10:00 A.M. Flowed 74 bbl. net/20 hrs., 81 BD rate, 27.2°, 0.1%, 65 McfD, 20-230#/pkr. 22/64" bean.

6/25 80 bbl. net, 27.2°, 0.1%, 65 Mcf, 20-160#/pkr., 22/64".

6/26 82 bbl. net, 27.2°, 0.1%, 58 Mcf, 20-150#/pkr., 22/64".

6/27 80 bbl. net, 27.2%, 0.2%, 63 Mcf, 20-170# pkr., 22/64".

CASING RECORD AT COMPLETION OF WORK:

(Depths from present KB of 60') T.D. 5925'.
13-3/8" C 763'
8-5/8" C 3163'
5-1/2" C 5924, top 3017' (splice OK). Perfs. 4375' (WSO), 5712-5730', 5734-5754', 5761-5776'. Plug 5878'.

Sidetracked:
8-5/8" C 4011', top 3194'. Plug 3194' (and open hole up to 3165')
4-3/4" C 5382', top 3810'. Plug 3810'. Perfs: 4494-4534', 4571-4597', 4636-4676', 4811-4841', 4856-4926', 5119-5164', 5174-5241', 5286-5356'.
(6-5/8" L 4414' incl. 60' pfs, C 4350, top 3849', Perfs 4011-4034', 4076-4136', Reperf 4354-4405', cemented off behind 4-3/4".)
4-3/4" @ 6-5/8" Perf 4146-4231'.

DIVISION OF OIL AND GAS
RECEIVED
JUL 7 1967
INGLEWOOD, CALIFORNIA

FORM 109-A

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

(FORMATION TESTER)

No. T 167-576

Mr. C. G. Willis
417 So. Hill Street
Los Angeles, California 90013
Agent for GENERAL EXPLORATION CO. OF CALIF.

Inglewood, Calif.
June 28, 1967

DEAR SIR: (037-06415)

Your well No. "Oil Operators" 4, Sec. 13, T. 4 S, R. 13 W, S.B. B & M. Long Beach Field, in Los Angeles County, was tested for water shut-off on June 22, 1967. Mr. R. Johnson, Engineer, designated by the supervisor was present from 8:00 p.m. to 9:00 p.m. as prescribed by law; there were also present R. Willis, Engineer

Shut-off data: 5½ in. 15.5 lb. casing was -- cemented from 3017' to xx 5925 ft. on June 20, 1967 in 7-5/8 in. hole with 579 cu. ft. ~~xxxx~~ of cement slurry (1:1 pozzmix, 2% gel) filling ~~xxxxxxxxxxxx~~ behind casing to 3017 ft. below surface.

Casing record of well: 18-5/8" cem. 50'; 13-3/8" cem. 757'; 8-5/8" cem. 4005', window 3163'-3194' sidetracked @ 3165'; 5-1/2" cem. 3017'-5925', perf. 4358' WSO, TD 1st hole 5379'.

Present depth 5925 ft. cmt. bridge 5925 ft. to 5880 ft. Cleaned out cmt. ---- ft. to ---- ft. for test. A Johnston tester was run into the hole on 3½ & 2-7/8 in. drill pipe ~~tubing~~ with ----- ft. of water-mud cushion, and packer --set at 4342 ft. with tailpiece to 4358 ft. Tester valve, with 3/4 in. bean, was open for 1 hr. and --- min. During this interval there was a light blow for 2 minutes & no blow thereafter.

Mr. Willis reported ~~x~~ that the 5-1/2" casing was jet-perforated with four, 3/8" holes at 4358'.

THE ENGINEER NOTED:
1. When the drill pipe was removed, 45' of drilling fluid was found above the tester.
2. The pressure charts indicated the tester tool functioned properly.

THE 5-1/2" SHUT-OFF AT 4358' IS APPROVED.

RJ:nw

cc Company

E. R. MURRAY-AARON
State Oil and Gas Supervisor

By Wm. C. Bailey, Deputy

26536-705 7-64 20M ② OSP

FORM 109-D

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 167-575

Mr. C. G. Willis
417 So. Hill Street
Los Angeles, California 90013
Agent for GENERAL EXPLORATION CO. OF CALIF.

Inglewood, Calif.
June 28, 1967

DEAR SIR: (037-06415)

Operations at well No. "Oil Operators" 4, Sec. 13, T. 4 S, R. 13 W, S.B. B & M. Long Beach Field, in Los Angeles County, were witnessed on June 22, 1967. Mr. S. Cordova, Engineer, representative of the supervisor was present from 11:30 a.m. to 12:15 p.m. There were also present R. Willis, Engineer & C. D. Martin, Drilling Foreman

Present condition of well: 18-5/8" cem. 50'; 13-3/8" cem. 757'; 8-5/8" cem. 4005' window 3163'-3194', sidetracked @ 3165'; 5-1/2" cem. 3017'-5925'. TD 5925'. TD 1st hole 5379'.

The operations were performed for the purpose of demonstrating the effectiveness of the seal between the 8-5/8" and 5-1/2" casings.

Mr. Willis reported:

1. A window was milled in the 8-5/8" casing from 3163' to 3194' and the hole was opened to 13" in that interval.
2. On June 10, 1967, 80 sacks of cement mixed with 20% sand was pumped into the hole through 3-1/2" drill pipe hanging at 3260'.
3. Cement was drilled out of the hole from 2992' to 3165'.
4. A 7-5/8" hole was redrilled from 3165' to 5925'.
5. On June 20, 1967, 2908' of 5-1/2", 15.5 lb. casing was cemented from 3017' to 5925' with 579 cubic feet of cement slurry (1:1 pozzmix, 2% gel), filling behind the 5-1/2" casing to 3017'.
6. Excess cement was backscuttled from above the 5-1/2" casing.
7. On June 21, 1967, the annulus between the 8-5/8" and 5-1/2" casings was recemented with 75 sacks of cement of which 50 sacks was squeezed away under a final pressure of 2000 Psi.
8. The hole was cleaned out to the float collar at 5880'.
9. A Johnston tester was run into the hole on 3-1/2" drill pipe, and packer set at 2993', with tailpiece to 3008'.
10. The tester valve with 3/4" bean was open for 1 hr. During this interval there was a light blow for 3 minutes and no blow thereafter.

THE ENGINEER NOTED:

1. When the drill pipe was removed, 10' of drilling fluid was found above the tester.
2. The pressure charts indicated the tester tool functioned properly.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED and indicate that no fluid has access to the well from the annulus between the 8-5/8" and 5-1/2" casings.

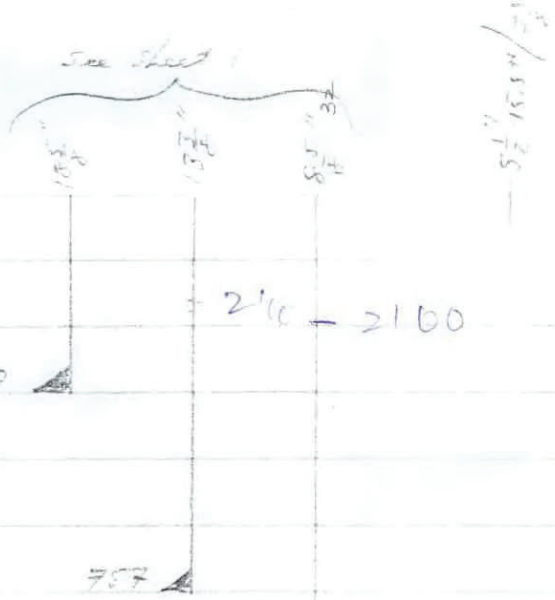
SC:nw

cc Company

E. R. MURRAY-AARON
State Oil and Gas Supervisor

By Chas. C. Bailey Deputy

90947-705 3-67 15M ② OSP



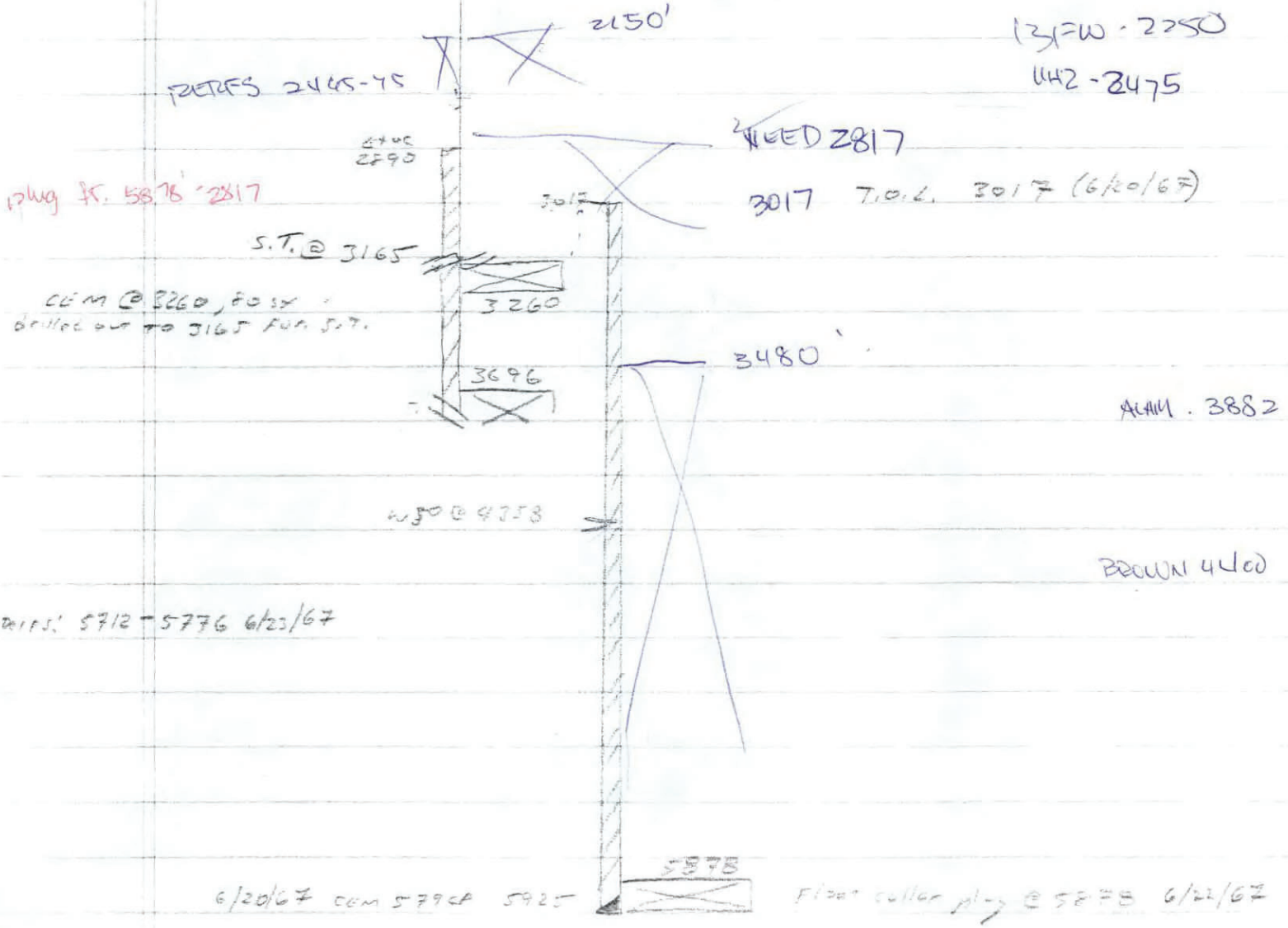
BFW 2250'

UPPER CLAS (A) 2475'

(C) UPPER WILBUR 3880'

PALAEITO'S ~~LOWER~~ " 3882'

BROWN " 4400'



RDZ

FORM 109-D

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 167-526

Mr. C. G. Willis
417 So. Hill Street
Los Angeles, California 90013

Inglewood, Calif.
June 14, 1967

Agent for GENERAL EXPLORATION CO. OF CALIF.

DEAR SIR: (037-06415)

Operations at well No. "Oil Operators" 4, Sec. 13, T. 4 S, R. 13 W, S.B. B & M. Long Beach Field, in Los Angeles County, were witnessed on June 8, 1967. Mr. M. Mefferd, Engineer, representative of the supervisor was present from 9:30 p.m. to 10:30 p.m. There were also present C. Martin, Drilling Foreman & L.Saxton, Driller

Present condition of well: 18-5/8" cem. 50'; 13-3/8" cem. 757'; 8-5/8" cem. 4005', WSO; 6-5/8" ld. 3843'-4408', cp 4344', perf. 4005'-4028', 4070'-4130' & 4140'-4225'; 4-3/4" cem. 3804'-5376', perfs. 4140'-4225', 4488'-4528', 4565'-4591', 4630'-4670', 4805'-4835', 4850'-4920', 5113'-5158', 5168'-5235' & 5280'-5350'. TD 5379', plugged w/cem. 5376'-5361' & 4634'-3696'.

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 4634' to 3696' in the process of plugging back to redrill.

Mr. Martin reported:

1. The hole was cleaned out to solid fill at 4650'.
2. On June 8, 1967, 100 sacks of cement was pumped into the hole through 2-3/8" tubing hanging at 4634', filling to 3696'.

THE ENGINEER NOTED THAT the cement plug at the reported depth of 3696' supported 1/4 of the weight of the drill pipe.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 3696' ARE APPROVED.

MM:nw

cc Company

E. R. MURRAY-AARON
State Oil and Gas Supervisor

By [signature] Deputy

57152-705 10-65 15M ② OSP

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 167-601

Mr. C. G. Willis
417 So. Hill Street
Los Angeles, California 90013

Inglewood, Calif.
June 6, 1967

Agent for GENERAL EXPLORATION CO. OF CALIF.

DEAR SIR:

Your proposal to redrill (037-06415) Well No. "Oil Operators" 4, Section 13, T. 4 S, R. 13 W, S.B. B. & M., Long Beach Field, Los Angeles County, dated June 2, 1967, received June 2, 1967, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE.
Plugged w/cem. 5376'-5361'.

THE NOTICE STATES
"The present condition of the well is as follows:
1. Total depth. 5379'
2. Complete casing record, including plugs:
   13-3/8" C 757'
   8-5/8" C 4005' OK
   4-3/4" C 5376', top 3804', Pfs. 4488-4528', 4565-4591', 4630-4670', 4805-4835', 4850-4920', 5113-5158', 5168-5235' and 5280-5350'. Pl. 5365'. Sand bridge 4650'.
   (6-5/8" L 4408' incl. 60' pfs. C 4344', top 3843', Pf 4005-4028', 4070-4130'; Repf 4348-4399', cemented off behind 4-3/4".)
   4-3/4" & 6-5/8" Pf 4140-4225'.
3. Last produced 10/14/64 (Date) 2 (Oil, B/D) 546 (Water, B/D) - (Gas)"

PROPOSAL
"The proposed work is as follows:
1. Move in drilling equipment, install B.O.P.E. and fill hole with mud.
2. Lay cement plug from top of sand at approximately 4650' back to 3700' (top 4-3/4" liner at 3804'). Locate top of plug. Pressure test 8-5/8" casing and B.O.P.E. with 1000#.
3. Mill out 30-foot section of 8-5/8" casing near 3100', underream the window to 13", lay cement plug from 100' below section back above top of window and level off plug 5' into section.
4. Sidetrack cased hole through section and drill 7-5/8" hole to approximately 4800'.
5. Run and cement 5-1/2" liner, effect W.S.O. at lap of 8-5/8" casing and above productive horizon.
6. Complete well."

DECISION
THE PROPOSAL IS APPROVED PROVIDED:
1. Fluid consistent with good drilling practice shall be used, and the column of fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Adequate blowout prevention equipment shall be installed and maintained in operating condition at all times.
3. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   a. The location and hardness of the cement plug at 3700'.
   b. A test, after cleaning out below the top of the liner to demonstrate that no fluid has access to the well from the annulus between the 8-5/8" and 5-1/2" casings.
   c. A test of the effectiveness of the 5½" shut-off.

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By _____ Deputy

Dated

WLI:nw Bond No. 1410633, 6/1/67

BLANKET BOND

18755-703 3-64 50M ©1964

FORM 107

STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS
RECEIVED
JUN 2 1967
INGLEWOOD, CALIFORNIA

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. June 2 1967

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. "Oil Operators" 4 (037-06415)

(Cross out unnecessary words)

, Sec. 13 , T. 4S , R. 13W , S.B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 5379'

2. Complete casing record, including plugs:

13-3/8" C 757'
8-5/8" C 4005' OK
4-3/4" C 5376', top 3804', Pfs. 4488-4528', 4565-4591', 4630-4670', 4805-4835', 4850-4920', 5113-5158', 5168-5235' and 5280-5350'. Pl. 5365'. Sand bridge 4650'.
(6-5/8" L 4408' incl. 60' pfs. C 4344', top 3843', Pf 4005-4028', 4070-4130'; Repf 4348-4399', cemented off behind 4-3/4".)
4-3/4" & 6-5/8" Pf 4140-4225'.

3. Last produced. 10/14/64 (Date) | 2 (Oil, B/D) | 546 (Water, B/D) | - (Gas)

The proposed work is as follows:

1. Move in drilling equipment, install B.O.P.E. and fill hole with mud.
2. Lay cement plug from top of sand at approximately 4650' back to 3700' (top 4-3/4" liner at 3804'). Locate top of plug. Pressure test 8-5/8" casing and B.O.P.E. with 1000#.
3. Mill out 30-foot section of 8-5/8" casing near 3100', underream the window to 13", lay cement plug from 100' below section back above top of window and level off plug 5' into section.
4. Sidetrack cased hole through section and drill 7-5/8" hole to approximately 4800'.
5. Run and cement 5-1/2" liner, effect W.S.O. at lap of 8-5/8" casing and above productive horizon.
6. Complete well.

Redrill

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			No. 1410633 6-1-67	a2	a2

417 S. Hill St., Los Angeles 90013
(Address)

628-2156
(Telephone No.)

GENERAL EXPLORATION COMPANY OF CALIFORNIA
(Name of Operator)

By R. S. Ballantyne
R. S. Ballantyne, Vice President

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

71443 8-62 10M ② SFO

FORM 156

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

REPORT OF PROPERTY AND WELL TRANSFER

Field or County: Long Beach — District: 1

Former Owner: Union Oil Co. of California — Date: January 17, 1961

Description of Property: Sec. 13, T. 4 S., R. 13 W., S. B. B. & M.

List of Wells: "Oil Operators" 1, "Oil Operators" 2, "Oil Operators" 3 and "Oil Operators" 4. ("Oil Operators" 1, idle; other wells are active)

Date of Transfer: January 1, 1961
New Owner: General Exploration Co. of California
Address: 730 Subway Terminal Building, 417 South Hill Street, Los Angeles 13, Calif.

Telephone No.

Type of Organization: Corporation
Reported by: Union Oil Co. of California (Letter of January 6, 1961)
Confirmed by: General Exploration Co. of California (Letter of January 11, 1961)
New Operator New Status PA, Old Operator New Status PA
Request designation of agent No

Remarks:

ab
CC- Mr. D. H. Hussar
Prod. Dept.
Conservation Committee

Wm. C. Bird
Deputy Supervisor

	INITIALS	DATE
Form 121		
New Well Cards		
Well Records		
Electric Logs		
Production Reports		
Map and Book		
Form 148		
Notice to be cancelled		

LEGEND
PA—Producing Active
NPA—Non Potential Active
PI—Potential Inactive
NPI—Non Potential Inactive
Ab—Abandoned or No More Wells
NOTE—If Transfer Does Not Change Overall Status Enter "No Change"

96785 4-59 4500 ② SPO

Form 10

CLERK

(13)

RECEIPT FOR

Date Received 11-6-54 Form 100 ___ 101 ___ 103 ___ ___ New Well Records

Elec. Log ___ Radio Log ___ ___ Subsequent Work

Direct. Surv. ___ Other Data Here Well Summary ___ (100)

Location ___ Drillers Log ___ (101)

___ Core Record ___ (101)

Elevation ___ Clerk Scott History ✓ (103)

Prod. Repts. ___ Clerk ___ Elec.Log ___

COMPLETED PRODUCING ON 8-27-54 ENGINEER Other ___

ABANDONED ON ___

BOND Blanket Release ___ Date Elig. ___ 150b ___

End Prem. year ___ Release Requested ___ Superseded ___

Aband. ___ Redrill ___

HOLD BOND ___ Reason ___ Deepen ___

___ Plug ___

Data Needed ___ Alter Csg. ✓

___ Final Letter ___ Eng. RC Abandon ___

IN U.S.A.

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
NOV 6 1959
INGLEWOOD, CALIFORNIA

17
13

WELL NO. "Oil Operators" #4

Long Beach
(FIELD)

Los Angeles
(COUNTY)

SEC. 13, T. 4-S, R. 13-W, S.B. B. & M.

UNION OIL COMPANY of Calif

History of Oil or Gas Well
REPAIR REPORT

Portable Hoist-Contract
(TOOLS)

August 27, 1959
(PERIOD ENDING)

CASING RECORD

See below

(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1959	DEPTH	EFFECTIVE DEPTH	REMARKS
				CHARGE: BR-AFE 56900 Job 528 PROPOSED WORK: Add perforations in the Alamitos Zone. PRODUCTION BEFORE REPAIR: Idle ZERO POINT for this Job: 8.5' above pad.
	CASING RECORD AT START OF WORK: 13-3/8" C 757' 8-5/8" C 4005' OK 1572' 4-3/4" C 5376'. Pfs 4488-4528', 4565-4591', 4630-4670', 4805-4835', 4850-4920', 5113-5158', 5168-5235', 5280-5350'. (565' 6-5/8" L 4408' incl. 60' pfs. Cr 4344'. Pf 4005-4028', 4070-4130'; Repf 4348-4399', cemented off behind 4¾")			CASING RECORD AT COMPLETION OF WORK: 13-3/8" C 757' : 8-5/8" C 4005' OK 1572' 4-3/4" C 5376'. Pfs 4488-4528', 4565-4591', 4630-4670', 4805-4835', 4850-4920', 5113-5158', 5168-5235', 5280-5350'. (565' 6-5/8" L 4408' incl. 60' pfs. Cr 4344'. Pf 4005-4028', 4070-4130'; Repf 4348-4399', cemented off behind 4¾") 4-3/4" & 6-5/8" perfs., 4140-4225'.
2	8-25	5379	Plug 5361	Contractor moved in and rigged up. Pulled rods and pump. Pulled tubing. Ran in with 7-1/2" impression block to top of 4-3/4" liner at 3807'. Ran 3-5/8" impression block to 4250'. Installed blow-out preventer.
2	8-26	"	" "	Perforated 4-3/4" and 6-5/8" liners from 4225-4140' with two 1/2" jet holes per foot and two 1/2" bullets per foot. Fluid level (mud) rose from 3600' at start to 1400' at end. Light blow while shooting. Ran in with 2-7/8" Cavins sand pump and bailed at 5331'. Started running tubing.
2	8-27	"	" "	Ran in and landed tubing with gas anchor at 4200'. Ran rods and pump. Put well on production. Contractor moved out.

NAMES OF DRILLERS/HEAD WELL PULLERS:
Terminal Drilling Co. - Contractor

Vaughn L. Moyer
DISTRICT ENGINEER

IN U.S.A.

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

UNION OIL COMPANY

History of Oil or Gas Well

REPAIR REPORT

WELL NO. Oil Operators #4

Long Beach
(FIELD)

Los Angeles
(COUNTY)

SEC. 13, T. 4-S, R. 13-W S.B. B. & M.

Port. Hoist - Contract
(TOOLS)

September 24, 1959
(PERIOD ENDING)

CASING RECORD

13-3/8" C 757'; 8-5/8" C 4005' OH 1572'; 4½" C 5376', lfs 4488-4528, 4565-4591', 4630-4670, 4805-4839, 4850-4920, 5113-5158, 5168-5235', 5280-5350'

(565' 6-5/8" L 4408' incl. 60' pfs
(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1959	DEPTH	EFFECTIVE DEPTH	REMARKS
		5379	Plug 5361	Of 4344'. Pf 4005-4028, 4070-4130'; repfs 4348-4399', cmtd off behind 4-3/4") 4-3/4" & 6-5/8" pfs 4140-4225'.

PRODUCTION DATA

	Hrs	Gross	Net	Cut	Grav.	MCF	Remarks
8-28	24	64	0	100.0			
8-29	24	104	0	100.0			
8-30	24	124	0	100.0			
8-31	24	103	0	100.0			
9-1	24	120	0	100.0			
9-2	24	107	0	100.0			
9-3	24	120	0	100.0			
9-4	24	80	0	100.0			
9-5	24	100	0	100.0			
9-6	24	95	0	100.0			
9-7	24	103	0	100.0			
9-8	24	91	0	100.0			
9-9	24	101	0	100.0			
9-10	13	325	0	100.0			Pulled rods.
9-11	6	85	0	100.0			Pulled tubing. Ran tbg & rods.
9-12	11	115	0	100.0			Pump stuck.
9-13	24	222	0	100.0			
9-14	24	224	22	90.0			
9-15	24	316	35	89.0			
9-16	24	246	27	89.0	23.2	0	
9-17	24	270	27	90.0	23.2	Tr.	
9-18	-	Well down due to bad leak in the oil line.					
9-19	-	" " " " "			" " "	" "	
9-20	-	" " " " "			" " "	" "	
9-21	17	175	18	90.0	23.2	0	
9-22	24	252	25	90.0	23.2	10	
9-23	24	251	25	90.0	23.2	4	
9-24	24	377	38	90.0	23.2	4	

DIVISION OF OIL AND GAS
RECEIVED
NOV 6 1959
INGLEWOOD, CALIFORNIA

rjh

NAMES OF DRILLERS/HEAD WELL PULLERS:
Terminal Drilling Co. - Contractor

Vaughn S. Hoyer
DISTRICT ENGINEER

FORM 111

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P 159-744

Mr. C. F. Bowden
P. O. Box 7600
Los Angeles 54, California
Agent for UNION OIL COMPANY OF CALIFORNIA

Inglewood 3, Calif.
September 1, 1959

DEAR SIR:

Your proposal to alter casing Well No. "Oil Operators" 4,

Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County,

dated August 25, 1959 received August 28, 1959 has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE.
18-5/8" cem. 50'; 8-5/8" cem. 4005', W.S.O.; 6-5/8" perf. 4348'-4408', plugged with cement 5376'-5361'.

THE NOTICE STATES
"The present condition of the well is as follows:

1. Total depth. 5379'
   Plug 5361'
2. Complete casing record.
   13-3/8" C 757'
   8-5/8" C 4005' OK
   565' 6-5/8" L 4408' inc. 60' perf.; CP 4344'; Pf. 4005-4028, 4070-4130, 4348-4399'----Cemented off behind 4-3/4".
   1572' 4-3/4" C 5376', plug 5361'; Pf 4488-4525, 4565-4591, 4630-4670, 4805-4835, 4830-4920, 5113-5235, 5280-5350'.
3. Last produced. January, 1958 (Date) | 2 (Net Oil) | 21.1 (Gravity) | 75.0% (Cut)"

PROPOSAL
"The proposed work is as follows:

1. Pull rods and tubing. Install blow-out preventer equipment.
2. Check condition of casing.
3. Bullet and jet perforate 4-3/4" and 6-5/8" casings with four holes per foot from 4140-4225'.
4. Run tubing, pump and rods.
5. Test well on production."

DECISION
THE PROPOSAL IS APPROVED.

RC:yk

cc- Mr. Vaughn S. Moyer

E. H. MUSSER, State Oil and Gas Supervisor

By _____, Deputy

Blanket Bond

58444 7-57 60M SPO

FORM 107.

DIVISION OF OIL AND GAS
RECEIVED
AUG 28 1959
INGLEWOOD, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

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 Fe Springs, Calif. August 25, 19 59

DIVISION OF OIL AND GAS

Inglewood, Calif.

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. Oil Operators #4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 5379'
   Plug 5361'

2. Complete casing record.

13-3/8" C 757'
8-5/8" C 4005' OK
565' 6-5/8" L 4408' inc. 60' perf.; CP 4344'; Pf. 4005-4028, 4070-4130, 4348-4399' ---- Cemented off behind 4-3/4".
1572' 4-3/4" C 5376', plug 5361'; Pf 4488-4525, 4565-4591, 4630-4670, 4805-4835, 4830-4920, 5113-5235, 5280-5350'.

3. Last produced. January, 1958 (Date) | 2 (Net Oil) | 21.1 (Gravity) | 75.0% (Cut)

The proposed work is as follows:

1. Pull rods and tubing. Install blow-out preventer equipment.
2. Check condition of casing.
3. Bullet and jet perforate 4-3/4" and 6-5/8" casings with four holes per foot from 4140-4225'.
4. Run tubing, pump and rods.
5. Test well on production.

Alter casing

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			Blanket	EB	EB

Union Oil Co. of Calif.
(Name of Operator)

By Vaughn S. Moyer
Vaughn S. Moyer, Division Engr.

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

COMPLETED PRODUCING ON 8-27-59

ABANDONED ON

STENOGRAPHER

Date Received 2-26-49 Form 100 ____ 101 ____ 103 ____

Elec. Log ____ Radio Log ____

Direct. Surv. ____ Other Data Hudson gather Casing

Location ____

Elevation ____ Steno. EO

ENGINEER

BOND Blanket Release ____ Date Elig. ____ 150b ____

End Prem.Yr. ____ Release Requested ____ Superseded ____ Aban. ____

HOLD BOND ____ Reason ____

Data Needed /

Final Letter ____ Eng. SMR 3-1-49

Note: This work done without filing notice.

STENOGRAPHER

Date Received 12-2-48 Form 100 ____ 101 ____ 103 ____

Elec. Log. ____ Radio Log ____

Direct. Surv. ____ Other Data Lost of allen cag

Location ____ ____

Elevation ____ Steno. J

ENGINEER

BOND Blanket Release ____ Date Elig. ____ 150b ____

End Prem. Yr. ____ Release Requested ____ Superseded ____ Aban. ____

HOLD BOND ____ Reason ____

____

Data Needed None

____ Final Letter ____ Eng. SHR

12-6-48

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

15

WELL NO. Oil Operators #4

Long Beach
(FIELD)

Los Angeles
(COUNTY)

SEC. 13, T. 4-S, R. 13-W S.B. B. & M.

UNION OIL COMPANY
History of Oil or Gas Well

REPAIR REPORT

Portable Hoist - Contract
(TOOLS)

Oct. 30, 1948
(PERIOD ENDING)

CASING RECORD
13-3/8" @ 791'
8-5/8" @ 4005' O.K.
1572' 4½" @ 5376', pf 4630-70', 4805-35', 4850-4920', 5113-58', 5168-5235', 5280-5350'.
(565' 6-5/8" L 4408' inc. 60' pf, C.P. 4344' behind 4-3/4")
(NOTE INEFFECTIVE CASING)

RECEIVED
DEC - 2 1948
DIVISION OF OIL AND GAS
LOS ANGELES, CALIFORNIA

NO. TOURS	DATE 1948	DEPTH	EFFECTIVE DEPTH	REMARKS
				Proposed Work: Perforate interval from 4805' to 4835' with two ½" holes per foot.
				Production: 7 B/D net - 18.7% - 21.5°
1	10-18	5379	Plug 5361	California Production Service - Contractors, moved in and pulled rods, pump and tubing. Ran 2-7/8" Cavins sand pump bailer to 5350'.
1	10-19	"	"	Cleaned out with ditto bailer to 5360'. Ran 3-3/4" impression block to 5130'. Indicated rough perforation holes. Ran 3-1/2" impression block to 5360'. O.K. Ran in and shot 4-3/4" casing at intervals from 4630-4670', 4805-4835' with 140 1/2" McCullough bullets, using 3-1/2" o.d. x 10' (20-shot) gun. Checked top of 4-3/4" casing at 3802'. Fluid level at start 3590'. Fluid level at finish 3520'. Evidence of fine sand and mud on guns and sand line during shooting from 4630-4670'. Light gas blow during entire period of shooting.
1	10-20	"	"	Ran tubing to 4600'. Put well on production.

PRODUCTION DATA

	Hours	Gross	Net	Cut	Grav.	Remarks
10-21	24	28	26	8.0	21.5	
10-22	24	20	18	10.0		
10-23	24	15	14	6.0		
10-24	24	18	17	5.0		
10-25	24	15	14	6.0		
10-26	24	15	14	6.0		
10-27	24	7	6	14.0		
10-28	24	6	6	-		
10-29	24	7	6	14.0		
10-30	24	6	6	-		

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

NAMES OF DRILLERS/HEAD WELL PULLERS: Calif. Prod. Serv. - Contr.

John R. Grasse
DISTRICT ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

WELL NO. 011 Operators #4

Long Beach
(FIELD)

Los Angeles
(COUNTY)

SEC. 13 T. 4-S R. 13-W S.B. B. & M.

UNION ~~OIL~~ COMPANY

History of Oil or Gas Well

REPAIR REPORT

Portable Hoist - Contract
(TOOLS)

Dec. 9, 1948
(PERIOD ENDING)

CASING RECORD
13-3/8" C 757'; 8-5/8" C 4005'
O.K.: 1572' 4-3/4" C 5376', pf. 4488-4528', 4565-4591, 4630-4670' 4805-4835', 4850-4920', 5113-58', 5168-5235, 5280-5350'; (565' 6-5/8" L 4408' inc. 60' pfs., C.P. 4344' behind 4-3/4")
(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1948	DEPTH	EFFECTIVE DEPTH	REMARKS
				Proposed Work: Perforate interval from 4565' to 4591' with two 1/2" holes per foot. Test on the pump. Productions: 6 B/D net - 11.4% cut
2	11-23	5379	Plug 5361	Pulled rods, pump and tubing. Made up 2-5/8" Cavins sand pump baile
2	11-24	5379	"	Checked bottom with bailer at 5360'. Gun perforated 4-3/4" casing from 4488-4528', 4565-4591' with 132' McCullough 1/2" bullets using 3-1/2" o.d. x 20 shot gun (120 grain loads). Had strong gas blow after shooting first gun. Blow continued throughout shooting. Unable to check fluid level with gun. Guns contained some sand. Casing pressure 225# while shooting. Used 8.5' above concrete pad as zero measurement.
3	11-25	5379	"	Checked bottom at 5360'. Unable to determine fluid level. Ran tubing, pump and rods. Contractors moved out.
1	11-26 to 11-29	5379	"	Installed gas trap

PRODUCTION DATA

	Hours	Gross	Net	Cut	Remarks
11-30	16	12	11	21.5	
12-1	0	-			Pump change.
12-2	0	-			
12-3	0	-			Bailed 5315-5360'
12-4	0	-			Bailing
12-5	0	-			Bailing
12-6	24	47	26	40.0	
12-7	24	8	5	40.0	
12-8	24	12	7	40.0	
12-9	24	9	5	40.0	

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
					ED

RECEIVED
FEB 26 1949
LOS ANGELES, CALIFORNIA

CB NAMES OF DRILLERS/HEAD WELL PULLERS: CALIF. PROD. SERV. - Contr.

John R. Fraser
DISTRICT ENGINEER

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-45682

Los Angeles 15, Calif. October 5, 1948

Mr. W. S. Eggleston
Los Angeles 14, Calif.
Agent for UNION OIL COMPANY OF CALIFORNIA

Dear Sir:

Your proposal to alter casing Well No. "Oil Operators" 4, Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Sept. 30, 1948, received Oct. 1, 1948, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice.

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Complete casing record.
   Total Depth 5379' - Plug 5365'
   18-5/8" C 50'
   13-3/8" C 757'
   8-5/8" C 4005' O.K.
   565' 6-5/8" L 4408' inc. 60' perf., C.P. 4344' - drilled through bottom.
   (Perf. & cmtd. 4005-4028', 4070-4130')
   1572' 4-3/4" C 5376', perf. 4850-4920', 5113-5158', 5168-5235', 5282-5350'
   2 Dup @ 3802'
2. Last produced Aug. 1948 (Date) | 8 B/D Ave. (Net Oil) | 21.5° (Gravity) | 15.5% (Cut)"

PROPOSAL:

"The proposed work is as follows:

1. Add perforations with two 1/2 bullet perforations per foot in the intervals from 4630-4672', 4805-4835'.
2. Test on production."

DECISION:

THE PROPOSAL IS APPROVED.

SHR:OH

cc- John R. Fraser
Long Beach

Records Filed
100
101
103 12-2-48
E. Log

See also history of attorney dy. filed 2-26-49. work not proposed.

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Musser Deputy

W 8 48

Blanket bond.

FORM 107. 36343 7-44 17,500
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL AND GAS
RECEIVED
OCT 1 - 1948
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

This notice must be given fifteen days before work begins when possible

Whittier, Calif. Sept. 30, 1948

DIVISION OF OIL AND GAS

Los Angeles, Calif.

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. Oil Operators #4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S. B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Complete casing record.

Total Depth 5379' - Plug 5365'
18-5/8" C 50'
13-3/8" C 757'
8-5/8" C 4005' O.K.
565' 6-5/8" L 4408' inc. 60' perf., C.P. 4344' - drilled through bottom.
(perf. & cmtd. 4005-4028', 4070-4130')
1572' 4-3/4" C 5376', perf. 4850-4920', 5113-5158', 5168-5235', 5282-5350'

2. Last produced Aug. 1948 (Date) 8 B/D Ave. (Net Oil) 21.5° (Gravity) 15.5% (Cut)

The proposed work is as follows:

1. Add perforations with two 1/2" bullet perforations per foot in the intervals from 4630-4672', 4805-4835'.

2. Test on production.

alter casing

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			Blanket		

UNION OIL COMPANY OF CALIF.
(Name of Operator)

By John R. Fraser
John R. Fraser, Division Engr.

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

STENOGRAPHER

Forms ed 103

Date Rec'd. 11-14-45

Electric Log —

Location —

Elevation —

ENGINEER

Form Needed —

Map Correction —

Form 150b (Date of Release)

At Request of Operator Blanket
Because Abandoned
Because Request by Oper.

Remarks sub work report of alter casing

ERM

FORM 103. 39946 11-44 25M
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
NOV 14 1945
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators 4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Signed Henry E Winter

Date November 8, 1945 Title Division Engineer.
(President, Secretary or Agent)

Use this form in reporting all important operations at the well, together with the dates thereof, in the order of their performance. Such operations include drilling, redrilling, deepening, plugging, or altering casing as by perforating, shooting, or pulling. Include in your report size of hole drilled, redrilled, or deepened; size, weight and length of casing landed, cemented, or removed, amount and location of perforations; number of sacks of cement used in cementing or plugging operations, number of feet of cement drilled out of casing, location of top and bottom of cement plugs. If the well was dynamited, give date, dimensions and weight of all shots. If tests were made give interval tested and results of tests, such as, amount and nature of fluids recovered.

Casing Record at Beginning of Work:

13-3/8" C 757'
8-5/8" C 4005' O.K.
565' 6-5/8" L 4408', inc. 60' perf.
C.P. 4344' - Reperf. 4348-4399'
1572' 4-3/4" C 5376'
Perf. and reperf. 5113-5158, 5168-5235 and 5280-5350'

Casing Record at End of Work:

13-3/8" C 757'
8-5/8" C 4005' O.K.
565' 6-5/8" L 4408', inc. 60' perf.
C.P. 4344 - Reperf. 4348-99
1572' 4-3/4" C 5376'
Perf. and reperf. 4850-4920, 5113-5158, 5168-5235 and 5280-5350'

Date 1945	Depth	Eff. Depth	Remarks
8-16	5379	Plug 5361	Pulled rods and tubing. Rigged up to add perforations.
8-17		C.O. 5361	Cleaned out sand from 5355 to 5361'. Fluid level 4410'.
8-18			Perforated 4-3/4" casing from 4850 to 4920' with 138 Lane-Wells 1/2" bullets.
8-22			Ran rods and 2-1/2" upset tubing to 5029' over-all. Put well to pumping.

Production Data:

	Hours	Gross	Net	Grav.	Cut
8-23	24	21	16	26.2	13.1
8-25	24	21	16	26.2	13.1
8-27	24	19	16	26.2	13.1
8-29	24	21	18	26.2	13.1
8-31	24	17	15	26.2	13.1

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

No. 732

Los Angeles, Calif. 10-10, 1944

Union Oil Co. of Calif.
Name of Operator

Address

This is to acknowledge the receipt of logs and similar records of wells on Sec. 13
T. 4S R. 13W, SB B. & M., as herewith enumerated by well numbers.

DIVISION OF OIL & GAS
RECEIVED
OCT 20 1944
SAN FRANCISCO, CALIF.

Logs Long Beach

History

Core record

Subsequent work "All operators" 4 10-4-44

R. D. BUSH, *State Oil and Gas Supervisor*

By G. H. Musser *Deputy*

FORM 127
36195 7-44 3500 TRIP SPO

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-41022

Los Angeles 14, Calif. August 14, 1945

Mr. W. S. Eggleston
Los Angeles 14, Calif.
Agent for UNION OIL COMPANY OF CALIFORNIA

Dear Sir:

Your proposal to alter casing Well No. "Oil Operators" 4, Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Aug. 6, 1945, received Aug. 10, 1945, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

Records in addition to, or at variance with those shown in the notice:
The 6-5/8" casing is perforated 4348'-4408', 4130'-4070', and 4028'-4005', (sealed off by 4-3/4" casing).

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Complete casing record.
Total Depth 5379' Plug 5361'
13-3/8" Cmtd. 757'
8-5/8" Cmtd. 4005' OK
1572' 4-3/4" Cmtd. 5376' Perf. 5113-5158', 5168-5235', 5280-5350'.
(565' 6-5/8" L 4408' inc. 60' perf. CP 4344' - Drilled through)

Production has not been satisfactory since reperforating in August, 1944.

2. Last produced June, 1945 (Date) 172 (Net Oil) 26.2° (Gravity) 26.2% (Cut) 29 days"

PROPOSAL:

"The proposed work is as follows:
1. Leave present perforations (RS-T) open and add perforations 4850-4920'.
2. Test on production."

DECISION:

THE PROPOSAL IS APPROVED.

ERMA:OH

Records Filed
100
101
403 11-14-45
E. Log

cc- P. A. W.
H. E. Winter
Long Beach

R. D. BUSH
State Oil and Gas Supervisor
By E. H. Meussen Deputy

Blanket bond No. 99071

FORM 107. 29275 11-43 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
AUG 10 1945
LOS ANGELES, CALIFORNIA

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

This notice must be given fifteen days before work begins when possible

Santa Fe Springs, Calif. August 6, 1945

DIVISION OF OIL AND GAS

Los Angeles, Calif.

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. Oil Operators #4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Complete casing record.

Total Depth 5379' Plug 5361'
13-3/8" Cmtd. 757'
8-5/8" Cmtd. 4005' OK
1572' 4-3/4" Cmtd. 5376' Perf. 5113-5158', 5168-5235', 5280-5350'.
(565' 6-5/8" L 4408' inc. 60' perf. CP 4344' - Drilled through)

Production has not been satisfactory since reperforating in August, 1944.

2. Last produced June, 1945 (Date) 172 (Net Oil) 26.2° (Gravity) 26.2% (Cut) 29 days

The proposed work is as follows:

1. Leave present perforations (RS-T) open and add perforations 4850-4920'.

2. Test on production.

alter casing

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			Blanket 99071	Ends	Ends

UNION OIL COMPANY OF CALIFORNIA
(Name of Operator)

By Henry E Winter
Division Engineer

cc: P.A.W.

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

STENOGRAPHER

Forms Filed 102

Date Rec'd. 10-4-44

Electric Log ✓

Location

Elevation ✓

ENGINEER

Form Needed none

Map Correction none

Form 150b (Date of Release)

At Request of Operator

Because Abandoned

Because Request by Oper.

Remarks Rec. for Subsequent work report

FORM 102.

13

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
OCT 4 1944
LOS ANGELES, CALIFORNIA

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated July 18, 1941, was filed.

SIGNED Henry E Winter

Date September 27, 1944 Title Division Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Casing Record at Beginning of Work:

13-3/8" C 757'
8-5/8" C 4005' O.K.
1572' 4-3/4" C 5376' -
Perf. and Reperf. 5113-5158,
5168-5175' and 5280-5350'
(565' 6-5/8" L 4408', inc 60' Perf.
(Behind 4-3/4")
C.P. 4344' - Reperf. 4348-4399')

Casing Record at End of Work:

13-3/8" C 757'
8-5/8" C 4005' O.K.
1572' 4-3/4" C 5376'
Perf. and Reperf. 5113-5158',
5168-5235' and 5280-5350'
(565' 6-5/8" L 4408', inc. 60'
Perf. (Behind 4-3/4")
C.P. 4344' - Reperf. 4348-4399')

Date 1944	Depth	Effective Depth	Remarks
8-7	5379	Plug 5361	Moved in and rigged up to reperforate.
8-12	5379	C.O. 5360	Cleaned out sand from 5325 to 5360' with 2-7/8" bailer. Fluid level 3561'
8-14	5379		Perforated and reperforated 4-3/4" casing with 1/2" Lane-Wells gun holes as follows: 5350-5282' with 34 holes, 5235-5168' with 120 holes, and 5158-5113' with 21 holes.
8-22	5379	C.O. 5361	Checked top of oil at 3520'; top of water at 5325' and hole open to 5361
8-25	5379		Ran rods and 2-1/2" plain and upset tubing to 5329' overall. Put well to pumping.

PRODUCTION DATA

Date	Hours	Gross	Net	Gravity	Cut	Remarks
8-27	24	1	1	26.2	4.4	
8-29	24	1	1	26.2	4.4	
8-31	0					Changed pump
9-4	24	57	54	26.2	4.4	
9-9	8	12	10	26.2	16.0	
9-11	24	17	14	26.2	16.0	
9-13	24	15	9	26.2	20.0	
9-15	24	14	9	26.2	38.0	
9-17	24	14	9	26.2	38.0	

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-39835

Los Angeles 14, Calif. July 18, 1944

Mr. W. S. Eggleston

Los Angeles 14, Calif.

121

Agent for UNION OIL COMPANY OF CALIFORNIA

Dear Sir:

Your proposal to plug & alter casing Well No. "Oil Operators" 4, Section 13, T. 4 S., R 13 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated July 15, 1944, received July 17, 1944, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice.

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Complete casing record.
   Total depth 5379' - plug 5361'
   13-3/8" cmtd. 757'
   8-5/8" cmtd. 4005' O.K.
   (565' 6-5/8" landed 4408', inc. 60' perf. C.P. 4344'. Perf. 4005-4028, 4070-4130' - deepened through)
   1572' 4-3/4" cmtd. 5376' - perf. and re-perf. 5113-5158', 5168-5175', 5280-5350'
2. July, 1944 (Date) produced 87 (Net Oil) 26.2 (Gravity) 40.0 - 29 days. (Cut)"

PROPOSAL:

"The proposed work is as follows:

1. Add perforations 5175-5235' and re-perforate present perforations.
2. If wet or no fluid, plug to 5090' and test by Division of Oil and Gas.
3. Perforate 4850-4920' and test. If unsuccessful, test higher.
4. If any test is unsuccessful, plug to 20' above perforations and test by Division of Oil and Gas."

DECISION:

THE PROPOSAL IS APPROVED.

ERMA:OH

cc- P. A. W.
H. E. Winter
Long Beach

WS

R. D. BUSH
State Oil and Gas Supervisor

By E H Musser ERMA Deputy

Blanket bond No. 99071

FORM 107. 29275 11-43 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
JUL 17 1944
LOS ANGELES, CALIFORNIA

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

This notice must be given fifteen days before work begins when possible

Santa Fe Springs Calif. July 15 19 44

DIVISION OF OIL AND GAS

Los Angeles Calif.

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. Oil Operators #4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Complete casing record.

Total depth 5379' - plug 5361'
13-3/8" cmtd. 757'
8-5/8" cmtd. 4005' O.K.
(565' 6-5/8" landed 4408', inc. 60' perf. C.P. 4344'. Perf. 4005-4028, 4070-4130' - deepened through)
1572' 4-3/4" cmtd. 5376' - perf. and re-perf. 5113-5158', 5168-5175', 5280-5350'

2. July, 1944 ~~Discontinued~~ Produced (Date) 87 (Net Oil) 26.2 (Gravity) 40.0 - 29 days. (Cut)

The proposed work is as follows:

1. Add perforations 5175-5235' and re-perforate present perforations.
2. If wet or no fluid, plug to 5090' and test by Division of Oil and Gas.
3. Perforate 4850-4920' and test. If unsuccessful, test higher.
4. If any test is unsuccessful, plug to 20' above perforations and test by Division of Oil and Gas.

plug + alter casing

MAP | MAP BOOK | CARDS | BOND | FORMS 114 | 121

Blanket Bond #99071 | M | M

UNION OIL COMPANY OF CALIFORNIA
(Name of Operator)

By Henry L White
Division Engineer.

cc: P.A.W.

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

FORM 102.

DIVISION OF OIL & GAS
RECEIVED
JUL 22 1941
LOS ANGELES, CALIFORNIA

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators No. 4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 3-21-38

_____, was filed.

SIGNED Henry E Winter

Date July 18, 1941 Title DIVISION ENGINEER
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

CASING RECORD AT START OF WORK
13-3/8" C. 757'
8-5/8" C. 4005', O.K.
565' 6-5/8L. 4408', inc. 60' perf.
CP. 4344'
Reperf: 4348-4399', Perf: 4005-4028', 4070-4130'.

CASING RECORD AT END OF WORK
13-3/8C757'
8-5/8C4005', O.K.
1572' 4-3/4 C. 5376'
Perf. and Reperf: 5113-58'; 5168-75'; 5280-5350'
(565' 6-5/8 L. 4408', inc. 60' perf. behind 4-3/4". CP 4344', Reperf: 4348-4399'; Perf: 4005-4028'; 4070-4130').

1941	Depth	Eff. Depth	Remarks
3-19	4408	Plg. 4305	Pulled rods and tubing.
3-21	4407		Drilled out cement plug.
3-22	4408		Drilled out lead seal and bottom of liner.
3-23	4500		Drilled with 5-5/8" bits.
3-24	4555		Cored with 5-5/8" wire line core barrel.
3-28	5112		Drilled with 5-5/8" bits.
4-2	5379		Cored with 5-5/8" core barrel. Ran Schlumberger electric log and inclinometer from 4408' to 5375'. Co-ordinates at 5370', 155'S, 195'E.
4-9	5379		Under-reamed with Grant hydraulic under-reamer from 4112' to 5377'.
4-10	5379		Ran in 1572' 4-3/4" 16#, Grade "C" seamless second-hand liner, including 8-5/8" x 4-3/4" Burns liner hanger and adapter. Landed at 5376' with Baker float shoe on bottom and Baker float collar at 5361'. Cemented with 200 sacks by displacement method.
4-11	5379		Found top of cement at 3680' and drilled out to 3804' with 7-5/8" bit.

5376 / 13 / 8

FORM 102.

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators No. 4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 3-21-38, was filed.

SIGNED Henry E Winter

Date July 18, 1941 Title DIVISION ENGINEER
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date 1941	Depth	Eff. Depth	Remarks
4-13	5379	Plg. 5361	Drilled out cement with 3-7/8" bit and 4-3/4" casing scraper from 3804' to 3814' and from 5305' to 5361'.
4-14	5379		Bailed mud with 6-5/8" bailer to 3093' and checked bottom with bailer. After 8 hours no rise in fluid as witnessed by Corwin of Division of Oil & Gas, and casing splice approved.
4-15	"		Perforated 4-3/4" casing with Lane-Wells gun, shooting .45 caliber bullets from 5113-5137' with 48 holes. 5280-5322' with 85 holes.
4-16	"		Landed 2½ upset tubing at 5167'.
4-18	"		Swabbed fluid, ran in pump and rods, installed pumping unit, and put on production.

PRODUCTION DATA

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Produced
4-18	72	54	-	24.7	19
4-19	36	34	23.2	6.1	24
4-20	38	36	23.2	6.4	24
4-21	39	37	23.2	6.4	24
4-22	36	34	23.2	6.4	24
4-23	31	29	23.2	6.4	18
4-24	33	31	23.2	6.0	24
4-25	31	29	23.2	6.0	24
4-26	32	30	23.2	6.0	24
4-27	32	30	23.2	6.0	24
4-28	32	30	23.2	6.0	24
4-29	20	19	23.2	6.0	10

FORM 102.

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 3-21-38, was filed.

SIGNED Henry E Winter

Date July 18, 1941 Title DIVISION ENGINEER
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date 1941	Depth	Eff. Depth	Remarks
4-29	5379	Plg. 5361	Pulled rods and tubing.
5-1	"		Bailed and swabbed perforations.
5-2	"		Reperforated 4-3/4" liner with Lane-Wells gun, shooting .45 caliber bullets from 5114' to 5140', with 26 holes. 5280' to 5325', with 45 holes. Ran 2½" tubing to 5290'. Ran in pump and rods. Connected pumping unit. Put on production.

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Produced	
5-2	37	18	23.2	50.0	4	
5-3	71	69	23.2	2.4	24	
5-4	34	33	23.2	2.5	24	
5-5	23	22	23.2	2.5	24	
5-6	27	26	23.2	2.5	18	
5-7	31	30	23.2	2.5	24	
5-8	6	6	23.2	2.5	4	
5-9	37	36	23.2	2.5	12	(Run pressure bomb)
5-10	29	28	23.2	2.5	24	
5-11	29	28	23.2	2.5	24	
5-12	30	29	23.2	2.5	24	
5-13	40	39	23.2	2.5	17	(Pull pressure bomb)
5-14	26	25	23.2	2.5	24	
5-15	29	28	23.2	2.5	24	
5-18	28	27	23.2	2.5	24	
5-20	20	20	23.2	2.5	24	
5-22	28	27	23.2	2.5	24	
5-24	26	25	23.2	2.5	24	
5-26	41	40	23.2	2.5	18	
5-28	27	26	23.2	2.5	24	
5-30	25	24	23.2	2.5	24	
6-2	3	3	23.2	2.5	3	

FORM 102.

10

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated 3-21-38, was filed.

SIGNED Henry E Winter

Date July 18, 1941 Title DIVISION ENGINEER
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date 1941	Depth	Eff. Depth	Remarks
6-2	5379	Plg. 5361	Pulled rods and tubing.
6-4	"		Ran Lane-Wells gun perforator, shooting .45 caliber bullets. Reperforated: 5113-5140', 28 holes; Perforated: 5140-5148', 38 holes; Perforated: 5168-5175', 15 holes; Reperforated: 5280-5325', 46 holes; Perforated: 5325-5350', 50 holes. Fluid level at 1830' by bailer after perforating.
6-5	"		Ran 2½" tubing to 5100'.
6-6	"		Swabbing through tubing. Well flows by heads part time.

PRODUCTION DATA

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Produced	
	52	51	23.2	2.4	19	(Flowing and swabbing)
6-7	99	97	26.0	2.4	17	(Ran in rods and put on pump)
6-8	103	101	26.0	2.4	24	
6-9	60	59	21.5	2.4	24	
6-10	49	48	26.0	2.4	24	
6-11	47	46	26.0	2.4	24	
6-12	45	44	26.4	1.8	19	
6-13	60	59	26.4	1.8	24	
6-14	59	58	26.4	1.8	24	
6-15	58	57	26.4	1.8	24	
6-18	54	53	26.4	1.8	24	
6-21	54	53	26.4	1.8	24	
6-24	7	7	26.4	1.8	3	(Pull rods)

6-27	Perforations washed with Yowell Type "S" washer.
6-28	Ran 2½" upset tubing to 5384', ran in rods and pump, and put on production.

FORM 102.

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

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SIGNED Henry E Winter

Date July 18, 1941

Title DIVISION ENGINEER
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date 1941	Depth	Eff. Depth	Remarks
	5379	Plg. 5361	

PRODUCTION DATA

	Bbls. Gross	Bbls. Net	A.P.I. Gravity	Cut	Hours Pumped	
6-28	96	65	26.4	32.0	10	
6-29	72	57	26.4	20.3	24	
6-30	0	0	-	-	0	(Pump sanded)
7-1						(Pulled rods & tubing)
7-2	110	95	26.4	14.0	13	(Ran tubing, rods & pump)
7-3	81	62	26.4	14.0		
7-4	53	47	26.4	10.5		
7-5	54	51	26.4	5.9		
7-6	54	51	26.4	5.4		
7-7	52	49	26.4	5.4		
7-10	50	48	26.4	3.8		
7-11	49	48	26.4	3.0	24	
7-12	30	29	26.4	3.3	19	(Sanded)
7-13						(Pulled rods & tubing)
7-14	85	81	26.4	4.8	24	(and re-ran)
7-15	64	61	26.4	4.8	24	
7-16	54	52	26.4	4.2	24	
7-17	52	50	26.4	3.0	24	
7-18						

MEASUREMENT DATUM

All measurements from top of rotary table which is 18" above top of derrick floor, or 31" above top of cement foundation piers.

M 101.

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL & GAS
RECEIVED
JUL 22 1941
LOS ANGELES, CALIFORNIA

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator Union Oil Company of California Field Long Beach

Well No. Oil Operators No. 4 Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

FORMATIONS PENETRATED BY WELL

Henry E Winter

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Drilled or Cored	Recovery	DESCRIPTION
4408	4545	137	Drilled		Sand and shale.
4545	4555	10	Cored		Sand. (See Core Record)
4555	5112	557	Drilled		Sand and shale.
5112	5379	267	Cored		Sand and shale. (See Core Record)
		TOTAL DEPTH - 5379'			

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UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

DIVISION OF OIL & GAS
RECEIVED
JUL 22 1941
LOS ANGELES, CALIFORNIA

33

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-23-41		5-5/8" Barrett Robishaw	4500	4510	0.8	0.4	0.4			Mixed burnt shale and oil sand.		
3-23-41		"	4510	4520	2.6		0.5			Hard fine to medium oil sand. Carbon particles. Good odor and fair cut.		
						0.1				Hard burnt shale		
							2.0			Mixed mud and fine oil sand. Slight odor and fair amber cut.		
3-23-41		"	4520	4530	1.3				0.9	Hard sandstone shell (probably at 4527' by driller)		
							0.4			Loose mixed oil sand and mud. Fair odor and cut.		
3-23-41		"	4530	4535	0.7		0.7			Pieces of hard calcareous fine to medium grayish brown oil sand (carbonaceous). Fair odor and light amber cut. One piece has irregular vertical shale sand contact (possibly fault gouge).		
3-23-41		"	4535	4545	2.0		0.5			Hard slightly calcareous grayish brown oil sand. Fair odor and light cut.		
							1.5			1/2" pieces of firm fine to medium oil sand. Fair odor and amber cut.		
							2.0			Oil sand has few grayish spots.		
3-24-41		"	4545	4555	0.6		0.3			Pieces of hard calcareous grayish brown oil sand. One piece has small shale streak at approximately 75°. Possibly fault gouge. Fair odor and light cut.		
							0.3			Soft fine brown oil sand. (Mud striations). Good odor and light amber ether cut.		
							0.6					
3-24-41		"	4555	4565	2.6	1.0				Pieces of hard brown shale. One apparent dip of 20°.		
						0.7	0.7			Mixed shale and oil sand and mud. (free oil)		
						0.2				Hard brown shale.		
						1.9	0.7					

Henry E Winter

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UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-24-41		5-5/8" Barrett Robishaw	4565	4575	1.8	0.1				Hard brown shale		
							0.7			Fine mushy brown oil sand. Good odor and amber cut.		
						1.0				Pieces of hard brown shale, badly broken by coring. Coring became hard at 4572'.		
						1.1	0.7					
			4575	5112						DRILLED INTERVAL		
3-28-41		"	5112	5117	0.3	0.3				Hard calcareous shale		
3-28-41		"	5117	5122	2.9	0.6				Hard brown shale. Very poor possible dip of 45°.		
							2.0			Fine brown oil sand, fair odor, good greenish cut.		
						0.3				Firm brown shale.		
						0.9	2.0					
3-28-41		"	5122	5132	3.7	0.4				Sandy brown shale.		
							2.5			Soft mushy fine to medium brown oil sand; fair odor, greenish amber cut. Mushiness could be from rain.		
						0.3				Sandy brown shale		
						0.5				Chunks of oily brown shale.		
						1.2	2.5					
3-28-41		"	5132	5142	0					NO RECOVERY		
3-28-41		"	5142	5147	4.5	0.4				Hard slightly calcareous brownish-black shale.		
							4.1			Hard to firm, fine to medium, brown oil sand. Fair odor, good amber cut.		
						0.4	4.1			Trade free oil on core.		
3-28-41		"	5147	5155	2.6	0.1			X	Sandy brown shale (Shell by driller at 5148').		
							1.1			Fine light brown oil sand, fair odor, dark greenish amber cut.		
						1.4				Firm brownish-black shale, possible suggestion of 40° dip (?).		
						1.5	1.1					
3-28-41		"	5155	5156	0.0					No recovery.		
3-29-41		"	5156	5166	0.7	0.3				Chunks brown shale scattered through 6' of mud.		
						0.4				Sandy brown shale.		
3-29-41		"	5166	5171	0.5	0.5	X			Chunks sandy brown shale with 2 seams fine brown oil sand. Greenish amber cut, free oil in fractures.		

Henry E Winter

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UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-29-41		5-5/8" Barrett-Robishaw	5171	5175	1.0	1.0				Hard brown shale.		
3-29-41		"	5175	5185	2.6		1.0			Medium to slightly coarse with pebbles, firm, light brown oil sand, good greenish-amber cut.		
						0.8				Hard brownish-black sandy shale.		
						0.1				Medium hard brown sandy shale.		
							0.2			Soft, fine, light brown oil sand. Good odor, good greenish cut.		
						0.1				Medium hard brownish-black shale. Suggestion of 45° dip. Possible fracture at 60°.		
						0.2				Firm brown sandy shale.		
							0.2			Soft fine light brown oil sand. Good odor.		
						1.2	1.4					
3-29-41		"	5185	5192	4.4		0.6			Fine to medium, firm to soft, light brown oil sand; fair odor.		
							0.6			Fine, firm, light brown oil sand. Dark amber cut. (Looks residual).		
							1.7			Fine to medium with few pebbles, firm to soft, light brown oil sand, fair odor, light greenish amber ether cut.		
									0.1	Hard gray sandstone shell		
							0.7			Fine to medium with few pebbles, firm to soft, light brown oil sand, fair odor, light greenish-amber cut.		
									0.7	Hard gray sandstone shell.		
							3.6		0.8			
3-29-41		"	5192	5199	2.8		2.8			Firm, fine to medium, light brown oil sand, poor odor, dark greenish-amber cut.		
3-29-41		"	5199	5205	0.3		0.3	X		Firm, fine, light brown oil sand with streaks gray sand. Poor odor, dark amber cut. (Looks residual).		
3-29-41		"	5205	5211	6.0		3.0			Soft to firm, fine, light brown oil sand, poor odor, dark greenish cut.		
							3.0			Firm, biscuity, fine light brown oil sand, fair odor, dark cut.		
							6.0					

Henry E Winter

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UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-29-41		5-5/8" Barrett-Robishaw	5211	5217	4.5			0.2		Firm to soft, fine to medium-fine gray sand. No odor.		
						0.3				Hard black shale with possible fractures at 45° and 60°.		
							1.4			Firm, fine, light brown oil sand with gray cast. No odor.		
							2.6			Firm, fine to medium, light brown oil sand with fair odor. Good greenish-amber cut.		
						0.3	4.0	0.2				
3-29-41		"	5217	5223	1.0		1.0	X		Soft to firm, fine to medium-coarse with pebbles, brown oil sand with small streaks gray sand.		
3-29-41		"	5223	5229	2.1		2.0			Firm, fine to medium, brown oil sand with grayish cast. Dark cut.		
						0.1				Hard brownish-black shale.		
3-30-41		"	5229	5235	1.0		1.0			Firm to soft, fine to medium fine, brown oil sand with grayish cast. Medium amber cut. Free oil on core and in breaks.		
3-30-41		"	5235	5241	5.0		2.3			Firm to soft, fine to medium-fine, brown oil sand with dark ether cut. Fair odor. Free oil on core and in breaks.		
						0.1				Hard brownish-black slightly sandy shale.		
							0.4			Firm, fine to medium brown oil sand with free oil on core.		
						0.6				Hard brownish-black shale		
							0.6			Soft, mushy, fine, light brown oil sand.		
						0.2				Hard brownish black shale		
							0.4			Soft fine light brown oil sand.		
						0.4				Hard, burnt, black shale.		
						1.3	3.7					
3-30-41		"	5241	5245	2.0	0.4		X		Firm gray sandy shale with narrow seams gray sand at 40°.		
						0.4				Hard brownish-black shale with fracture at 45°.		
						0.9				Mud with hunks dark brown shale.		
						0.3				Hard dark brown burnt shale.		
						2.0						
3-30-41		"	5245	5246	0.9	0.9				Hard dark brownish-black shale.		

Henry E Winter

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UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

~~Long Beach~~ FIELD ~~Union Oil~~ COMPANY ~~Oil Operators~~ LEASE ~~No. 4~~ WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-30-41		5-5/8" Barrett-Robishaw	5246	5251	1.0	1.0				Hard brownish-black shale with small hunks and pieces of undergage core.		
3-30-41		"	5251	5253	0.9	0.9		X		Firm brownish-black shale with a narrow seam of fine gray sand.		
3-30-41		"	5253	5259	4.0	1.5 2.5				Mud with hunks fairly soft brownish-black shale. Hard, well-cut, dark brownish-black shale.		
3-30-41		"	5259	5264	5.0	5.0				Hard well-cut dark brownish-black shale. Shows no bedding but gives consistent fracture at 45° when broken.		
3-30-41		"	5264	5270	3.0	3.0				Mud interspersed with soft pieces dark brownish-black shale. Slightly sandy in spots.		
3-31-41		"	5270	5276	0.0					No recovery.		
3-31-41		"	5276	5280	0.0					No recovery.		
3-31-41		"	5280	5281	0.0					No recovery.		

Henry E Winter

708A 2-41 10M
NTED IN U.S.A.

UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
3-31-41		5-5/8" Barrett-Robishaw	5281	5282	0.0					No recovery.		
3-31-41		5-5/8" Gauthey	5282	5295	12.2	2.8				Hard brownish-black shale with slickensides on 23° fractures. Apparent bedding approximately 45°.		
							0.2			Soft to firm, fine light brown oil sand streaked with drilling mud. Good amber cut.		
						0.5				Soft to firm brown sandy shale.		
							6.5	X		Firm, fine, argillaceous light brown oil sand; good odor, dark greenish-amber cut. Occasional fine striations of sandy shale with bedding dip of approximately 35°. (At 5287', a streak of 0.05' firm gray sand and black shale. Sand had light amber cut and strong gassy odor).		
						0.3				Hard brown shale, slightly sandy.		
							0.3			Firm, fine light brown oil sand. Good odor.		
						0.3				Hard brownish-black shale. Sand shale contact at approximately 35°.		
							0.2			Firm, fine light brown oil sand. Dark greenish amber cut. Good odor.		
						1.1				Hard brownish-black shale.		
						5.0	7.2					
4-1-41		"	5295	5310	1.1	(6.0)			X	(Drilling mud with fragments hard brown black shale scattered through it. One fragment gray sandstone shell recovered).		
						0.7				Soft muddy dark brown shale.		
						0.4		X		Firm sandy shale with inter-bedded lenses of gray sand. May be burnt.		
						1.1						
4-1-41		"	5310	5325	1.2	0.1				Hard brownish-black shale, broken up by coring.		
							0.1			Firm, fine to medium-fine light brown oil sand. Good greenish-amber ether cut, fair odor.		
						0.1				Soft to firm, muddy, black shale.		
							0.3			Soft, mushy, fine to medium light brown oil sand.		
							0.1			Firm, fine to medium-fine light brown oil sand.		
									0.2	Hard gray sandstone shell.		
							0.3	X		Soft, medium light brownish-gray sand with mud striations.		
						0.2	0.8		0.2			

Henry E Winter

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UNION OIL COMPANY OF CALIFORNIA
CORE RECORD

Long Beach FIELD Union Oil COMPANY Oil Operators LEASE No. 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
4-1-41		5-5/8" Gauthey	5325	5340	0.0					No recovery		
4-1-41		"	5340	5346	5.7		1.3			Firm, fine to medium-fine, with pebbles, light brown oil sand. Fair odor, good greenish-amber cut.		
							0.5			Firm, fine to medium-fine, brown oil sand. Good odor, good greenish-amber cut.		
							1.2			Firm, fine to medium with pebbles, light brown oil sand. Fair odor, good greenish-amber cut.		
							1.4			Firm, fine to medium-fine with few pebbles, light brown oil sand. Good greenish-amber cut. Fracture at 5344' showed slickensides at 12° dip.		
							1.1			Firm, fine to medium, slightly coarse with many pebbles, light brown oil sand.		
							0.2			Firm, fine to medium, brown oil sand. Good odor, dark greenish-amber cut.		
							5.7					
4-2-41		5-5/8" Hughes	5346	5364	2.6	(5)		X		Rotary mud with a few streaks soft black shale and gray sand.		
							0.5			Firm, medium-fine, light brown oil sand. Good odor, good greenish-amber ether cut.		
							0.3			Soft, fine to medium, brown oil sand.		
									1.8	Hard gray sandstone shell.		
4-2-41		"	5364	5379	1.5		1.5			Soft-firm, fine-medium brown oil sand. (Grayish cast). Fair, but burnt odor, dark greenish cut. Whole core slightl burnt.		

Henry E Winter

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

No. 8394

DIVISION OF OIL AND GAS

LOS ANGELES Calif. 4/22 19 41

Union Oil Co of Calif
Name of Operator

LOS ANGELES
Address

This is to acknowledge the receipt of logs and similar records of wells on Sec. 13 T. 4S
R. 13W *San Bernardino* B. & M., *as herewith enumerated by well numbers.*

Logs

History

Core record

Subsequent work

Elsinore - All operators 4/22/41

R. D. BUSH, *State Oil and Gas Supervisor*

By E Hugueneau *Deputy*

DUPLICATE

FORM 127. 67887 6-40 3500 TRIP

CALIFORNIA STATE PRINTING OFFICE

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FORM 109-D.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-39382

Los Angeles, Calif. April 25, 1941.

Mr. W. S. Eggleston,
Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4S., R. 13W. S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by Chas. Corwin, Inspector, representative of the supervisor, on April 14, 1941. There was also present E. G. Trostel, Engineer, W. A. Meginnis, Driller.

Casing Record	Junk
13-3/8" cem. 757', 8-5/8" cem. 4005' W. S. O.; 6-5/8" liner ld. 3843'-4408', c. p. 4344', perf. 4408'-4348', 4130'-4070' and 4028'-4005'; 4-3/4" liner cem. 3804'-5376'. T. D. 5379', plugged with cement 5376'-5361'.	None

The operations were performed for the purpose of demonstrating that no fluid has access to the well between the 4-3/4" and 8-5/8" casings,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 5:00 P. M. AND MR. TROSTEL REPORTED THE FOLLOWING:

1. The hole was cleaned out to 4408'.
2. A 6-5/8" rotary hole was drilled from 4408' to 5379'.
3. Mud fluid was circulated 3-1/2 hr. before cementing the casing.
4. Electrical core readings showed the top of the Brown Zone 4630'.
5. On April 10, 1941, 1572' of 4-3/4" - 16 lb. casing was cemented at 5376' with 200 sacks of Colton cement.
6. Cement was drilled out of the 8-5/8" casing from 3680' to 3804' and out of the 4-3/4" casing from 3804' to 5361', equivalent to 35 and 118 sacks, respectively. = 153' ins. 1a = 118 sx 4-1/2 2c
7. On April 14, 1941, at 9:00 a. m. the fluid in the hole was bailed to 3039'.

THE INSPECTOR NOTED THE FOLLOWING:

1. No fluid entered the well while standing 8 hr. for test.
2. The hole was open below 3915'.

The test was completed at 5:50 p. m.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT fluid does not have access to the well between the 4-3/4" and 8-5/8" casings.

cc- H. E. Winter
Long Beach
CC:G

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA -
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-35934

Los Angeles, Calif. January 13, 1941.

MR. W. S. Eggleston,

Los Angeles, Calif.

121

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR: "OIL OPERATORS"

Your proposal to deepen Well No. 4,

Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County,

dated Jan. 9, 1941, received Jan. 10, 1941, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice:

THE NOTICE STATES:

"The present condition of the well is as follows:
Total depth 4408' - Plug 4305'
13-3/8" C 757'
8-5/8" C 4005' O.K.
565' 6-5/8" L 4408', inc. 60' perf. C.P. 4344'
Reperf. 4348-4399' and perf. 4005-4028 and 4070-4130'.
It is proposed to deepen the well as a lease offset to Hilldon F.C. #4.
Last production - 1472 oil, 19,124 water - 31 days."

PROPOSAL:

"The proposed work is as follows:
1. Clean out to 4408' and deepen to approximately 5400'.
2. Cement 4-3/4" blank liner on bottom and gun perforate the top of the "S" zone and the top of the "T" Zone for production.
3. Test on production."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Any hole to be sidetracked in any oil zone shall be filled with cement, if possible.
3. This division shall be notified to examine cores and/or electrical log before running the 4-3/4" casing.
4. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) A test after drilling out the cement to within 50' of the cementing point to demonstrate that no fluid has access to the well between the 4-3/4" and 6-5/8" casings.
   (b) A production test within 10 days after the well has been placed on production.

cc- H. E. Winter
Long Beach
WJC:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Haynsworth Deputy

FORM 107. 14408 8-34 10M
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL & GAS
RECEIVED
JAN 10 1941
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

This notice must be given fifteen days before work begins when possible

Santa Fe Springs Cal. January 9 19 41

MR. E. HUGUENIN,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of deepening, ~~redrilling, plugging or altering casing of~~ well No. Oil Operators 4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Oil Field, Los Angeles County.

The present condition of the well is as follows:

Total depth 4408' - Plug 4305'

13-3/8" C 757'
8-5/8" C 4005' O.K.
565' 6-5/8" L 4408', inc. 60' perf. C.P. 4344'
Reperf. 4348-4399' and perf. 4005-4028 and 4070-4130'

It is proposed to deepen the well as a lease offset to Hilldon F.C. #4.
Last production - 1472 oil, 19,124 water - 31 days

The proposed work is as follows:

1. Clean out to 4408' and deepen to approximately 5400'.
2. Cement 4-3/4" blank liner on bottom and gun perforate the top of the "S" Zone and the top of the "T" Zone for production.
3. Test on production.

deepen

Respectfully yours

UNION OIL COMPANY OF CALIFORNIA
Name of Company or Operator

By Henry E Winter
Division Engineer.

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

FORM 102. 47744 8-37 9500
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL AND GAS
RECEIVED
APR 19 1938
LOS ANGELES, CALIFORNIA

SUBMIT IN DUPLICATE
STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Subsequent Work Report

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, SB B. & M.

In compliance with the provisions of Chapter 718, Statutes 1915, as amended, the information given herewith is a complete and correct record of all work done on the well since the previous record, dated March 21, 1938, was filed.

SIGNED Henry E Winter

Date April 4, 1938 Title District Engineer
(President, Secretary or Agent)

Outline in the order of performance, together with the dates thereof, all important operations which alter the condition of the well. Include such information as depth at which redrilling operations were started, size of hole redrilled or deepened; size of pipe, amount of perforations in casing, weight and length of casing landed or cemented or removed; number of sacks of cement used in cementing or plugging operations and exact position thereof. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date

CASING RECORD AT START OF WORK:

Depth - 4408'
13-3/8" C 757'
8-5/8" C 4005' OK
565' 6-5/8" L 4408', inc. 60' perf.
C. P. 4344'. Reperf. 4399-4348

CASING RECORD AT END OF WORK:

Depth - 4408, Plugged to 4305'
13-3/8" C 757'
8-5/8" C 4005'
565' 6-5/8" L 4408', inc. 60' perf.
C. P. 4344'. Reperf. 4399-4348'
Perf. 4130-4070 & 4028-4005

1938	Depth	Eff. Depth	Remarks			
3-17	4408		Took out pumping unit and pulled rods and tubing.			
3-19	4408		Cleaned out liner to 4397'. Dumped 24 sacks of Victor construction cement in stages from 4397'.			
3-20	4408	Plug 4305	Located top of cement plug at 4305'. Perforated 6-5/8" casing from 4130 to 4070 with 83 holes and 4028 to 4005 with 36 holes, using Lane-Wells 5-3/4" 12 shot gun with .45 caliber shells.			
3-21	4408	" 4305	Landed 3" upset tubing at 3979.27'. Put well on pump at 1:00 PM 3-21-38.			
			180 gross, 127 net, 21.7 grav., 29.4% cut - P 11 hrs.			
3-22	452	" 360 "	22.1	20.4	P 24	"
3-23	523	506	22.1	3.2	P 24	"
3-24	545	534	23.6	2.0	P 24	"
3-25	563	556	23.6	1.2	P 24	"
3-26	531	525	23.6	1.1	P 24	"
3-27	506	499	23.6	1.4	P 24	"
3-28	493	488	23.6	1.1	P 24	"
3-29	477	472	23.6	1.0	P 24	"
3-30	465	459	23.6	1.2	P 24	"
3-31	449	445	23.6	1.0	P 24	"

SUBMIT LOG IN DUPLICATE

FILL TH .NK IN WITH TYPEWRITER. WRITE ON ONE SIDE OF PAI ILY

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

Sun oil Co

LOG OF OIL OR GAS WELL

Operator Union Oil Company of California Field Long Beach

Well No. Oil Operators #4 NWLBU#8-4 Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Location 348' S.W.'ly along the prolongation of the center line of San Antonio Drive from its intersection with the center line of Riverside Drive, thence N.W.'ly at right angles 653'. Elevation 53.88

In compliance with the provisions of Chapter 718, Statutes of 1915, as amended, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date 3-21-38 Signed Henry E. Wintz

(Engineer or Geologist) (Superintendent) Title DISTRICT ENGINEER (President, Secretary or Agent)

Reference to file of data

Cards	Forms	
	114	121

Commenced drilling January 1, 1938 Completed drilling Drilling tools Cable X Rotary

Total depth 4408 Plugged depth

Junk

GEOLOGICAL MARKERS	DEPTH
Wilber Shale	3586-3653
Alamitos Shale	3784-3842
H	3971
I	4005
J	4306
K	4348

Commenced producing 2-26-38 (date) Flowing, gas lift, pumping (cross out unnecessary words)

	Clean Oil bbl. per day	Gravity Clean Oil	Per Cent Water including emulsion	Gas Mcf. per day	Tubing Pressure	Casing Pressure
Initial production	30	21.2	7.8			
Production after 16/~~30~~ days	15	21.7	16.5			

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 Casing landed in	Number of Sacks of Cement	Depth of Cementing if through perforations
13-3/8	757	Surface	45.97#	New	Seamless	Slip-joint	17"	350	
8-5/8	4005	"	32# & 36#	New & Used	"	C	12¼"	400	
6-5/8	4408	3843	26#	New	"	C	7-5/8 O.R. 8½	125	4344

Perforations

Size of Casing	From	To	Size of Perforations	Number of Rows	Distance Between Centers	Method of Perforations
6-5/8	4348 ft.	4408 ft.	120 mesh	16	6	Kobe
	ft.	ft.	Reperf. 4348-4399 - 60	holes L. & W. gun		
	ft.	ft.				
	ft.	ft.				
	ft.	ft.				

Electrical Log Depths Schlumberger from 757 to 4408 (Attach Copy of Log)

FORM 101. 1450 3-33 30M
CALIFORNIA STATE PRINTING OFFICE

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG OF OIL OR GAS WELL—CONTINUED

FIELD Union Oil Company of California COMPANY Long Beach

Sec. 13, T. 4-S, R. 13-W, S.B. B. & M. Well No. Oil Operators #4

FORMATIONS PENETRATED BY WELL

Henry E Winter

DEPTH TO Top of Formation	DEPTH TO Bottom of Formation	Thickness	Name of Formation
0	170	170	Surface clay
170	364	194	Sand and gravel
364	388	24	Sand and clay
388	713	325	Hard sand
713	760	47	Shale
760	1577	817	Shale and streaks of sand
1577	1883	306	Hard sand
1883	2775	892	Shale and streaks of sand
2775	2863	88	Sand
2863	2990	127	Shale and streaks of sand
2990	3112	122	Sand and streaks of shale
3112	3114	2	Shell
3114	3193	79	Sand and streaks of shale
3193	3195	2	Shell
3195	3230	35	Shale and streaks of sand
3230	3231	1	Shell
3231	3371	140	Shale and streaks of sand
3371	3372	1	Shell
3372	3525	153	Shale and sand
3525	3530	5	Hard sand
3530	3560	30	Shale and sand
3560	3644	84	Sand and streaks of shale
3644	3730	86	Shale and streaks of sand
3730	3880	150	Hard sand
3880	3951	71	Shale and streaks of sand
3951	3953	2	Shell
3953	4015	62	Shale and streaks of sand (See Core Record)
4015	4408	393	Shale and sand (See Core Record)

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED 3
MAR 24 1938
LOS ANGELES, CALIFORNIA

History of Oil or Gas Well

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Signed Henry E Winter

Date 3-21-38 Title DISTRICT ENGINEER
(President, Secretary or Agent)

It is of the greatest importance to have a complete history of the well. **Use this form in reporting the history of all important operations at the well, together with the dates thereof, prior to the first production.** Include in your report such information as size of hole drilled to cementing or landing depth of casings, number of sacks of cement used in the plugging, number of sacks or number of feet of cement drilled out of casing, depth at which cement plugs started, and depth at which hard cement encountered. If the well was dynamited, give date, size, position and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position and results of pumping or bailing.

Date 1938

CASING RECORD AT START OF WORK
New Well

Water Shut-off Test	Cementing Record	Perforations	
		134	121
			✓

CASING RECORD AT END OF WORK
13-3/8 C. 757
8-5/8 C. 4005 O.K.
565 - 6-5/8 L. 4408, incl. 60' perf. C.P. 4344
Reperf 4309 - 4548

Date	Depth	Eff. Depth	Remarks
1-1	50		Spudded in with 18-5/8" rotary bit and drilled to 50'. Cemented 18-5/8 conductor pipe at 50' with 46 sax Velo cement.
1-4	758		Drilled with 17" rotary bits to 758. Cemented new 13-3/8-45.97# National Seamless slip-joint casing at 757 with 350 sax Velo treated cement. Cementing operations witnessed and approved by Karmelich of D.O.G.
1-5	911		Found top of cement at 754. Cleaned out cement and plugs and drilled ahead with 12¼ bits.
1-22	4015		Drilled with 12¼ bits to 3955 and cored with 7-5/8 core barrels to 4015. Ran Schlumberger Survey.
1-23	4015		Reamed out core hole with 12¼ bit to 4005. Cemented 8-5/8 - 32# Grade C (1263 of 8-5/8 - 36# on bottom) 8 thread rounded seamless casing at 4005 with 400 sax cement (200 sax Victor Oil Well and 200 sax Victor Construction)
1-28	4070		Found top of cement at 3978. Drilled out cement and plugs to 4005 and cleaned out to 4010. Water Shut Off test on 8-5/8 casing at 4005 witnessed and approved by Corwin of D.O.G. Drilled with 7-5/8 bit to 4070.
2-3	4408		Cored with 7-5/8 core barrels to 4408. Ran Schlumberger Survey.
2-5	4408		Under-reamed hole to 8½" from 4007 to 4408. Landed 565' of 6-5/8 - 26# Grade C casing at 4408 including 60' of (16-2-6) 120 mesh Kobe perforated on bottom. Cemented liner through ports of Baker Whirler basket at 4344 with 125 sax of Victor Oil Well cement.

H408/60/4348 H408/565/1843

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Signed Henry E Winter

Date 3-21-38 Title DISTRICT ENGINEER
(President, Secretary or Agent)

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Date 1938	Depth	Eff. Depth	Remarks
2-10	4408	4270	Found top of cement at 3676. Drilled out cement inside of 6-5/8 liner to 3932. Bailed fluid to 2535. Water Shut Off Test on 6-5/8 spliced liner, cemented thru perforations at 4344, witnessed and approved by Karmelich of D.O.G. No rise in 8 hours. Drilled out cement to 4270.
2-11	4408	4408	Drilled out cement to 4343 and cleaned out to bottom of liner, Landed 3" upset tubing at 4318 including 521' of Baash-Ross insert tubing on bottom.
2-17	"	"	Changed from mud to water and swabbed fluid to 3000'. Very little oil or gas. Pulled tubing. Alternated between running 6-5/8 swab past perforations as agitator, and bailing mud from bottom. Landed 3" upset tubing at 4324. Installed pumping unit and started well pumping at 7 P.M., 2-17-38.

	43 gross	42 net		2.8% cut	P10 hrs.
2-18	15	14	21.2 grav.	1.4	P24
2-19	17	16	"	1.0	P24
2-20	3	2	"	1.1	P24
2-21	31	30	"	1.0	P24
2-22	28	27	"	1.0	P24
2-23	1	1	"	1.0	P3 hrs. Pulled R&T

2-28	4408	Open 4402	Cleaned out sand to 4402. Reperforated 6-5/8 liner from 4399 to 4348 with 60 holes, using Lane-Wells 5½" - 12 shot gun with .45 caliber shells. Landed 3" upset tubing at 4323. Installed pumping unit and started well pumping at 10 P.M., 2-28-38)		
	128 gross	0 net		100.0% cut	P7 hrs.
3-1	33	30	21.2 grav.	7.8	P24
3-2	27	25	"	7.8	P24
3-3	25	24	21.2	2.6	P24
3-4	23	20	21.2	13.3	P24

FORM 103.
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR Union Oil Company of California FIELD Long Beach

Well No. Oil Operators #4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Signed Henry E Winter

Date 3-21-38 Title DISTRICT ENGINEER
(President, Secretary or Agent)

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Date 1938	Depth	Eff. Depth	Remarks				
3-5	4408	Open 4402	21 gross	19 net	21.2 grav.	10.2% cut	P24 hrs.
3-6			21	19	21.2	8.2	P24
3-7			19	16	21.2	15.3	P24
3-8			18	13	21.7	27.5	P24
3-9			18	13	21.7	25.6	P24
3-10			18	14	21.7	24.2	P24
3-11			18	14	21.7	24.2	P24
3-12			17	14	21.7	17.2	P24
3-13			17	14	21.7	17.8	P24
3-14			18	15	21.7	16.5	P24
3-15			17	14	21.7	18.4	P22 hrs. Eng.
3-16			17	14	21.7	18.4	P24
3-17			7	6	21.7	17.2	P10

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-21-38	1	7-5/8" Soll	3955	3970	7.3			2.5		Firm Soft Fine Gray Sand		
						1.8				Hard Dark Brown Shale, sandy in parts		
								0.2		Firm, very Fine Silty Gray Sand		
								1.3		Firm Soft Fine to Medium Gray Sand Dip 23°		
						0.1				Hard Dark Brown Shale		
								1.4		Firm Soft Fine to Medium Gray Sand		
						1.9		5.4				
1-21-38	2	"	3970	3985	13.3			0.2		Firm Soft Fine Gray Sand		
						0.2				Hard Dark Brown Shale. Dip 16°		
								0.3		Firm Soft Fine Gray Sand		
						6.1	0.1			Hard Dark Brown Shale with partings of Fine Brown Oil Sand. Streak (0.1) of Fine Brown Oil Sand 1.8' from top. Shale sandy towards bottom Fractures of 48° and 24°		
							1.2			Firm Soft Fine Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown Shale		
							0.6			Firm Soft Fine Brown Oil Sand		
						0.6				Hard Dark Brown Shale		
							0.9			Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.5				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						0.1	2.3			Firm Soft Fine Brown Oil Sand. Streak of Brown Shale (0.1) 1.2' from top. Good Odor and Dark Amber Cut		
						7.7	5.1	0.5				
1-22-38	3	"	3985	4000	10.3		1.1			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.3				Hard Dark Brown Shale. Oil in fracture joints		
							0.8			Firm Soft Medium Brown Oil Sand. Good Odor		
						0.6				Hard Dark Brown Shale with inclusions of Fine Gray Sand. Sandy in spots		
						6.0				Hard Dark Brown Shale, badly broken and mixed with mud		
							0.6			Firm Soft, very Fine Argillaceous Silty Oil Sand, slightly mixed with mud. Fair Odor and Amber Cut		
						0.9				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						7.8	2.5					

Henry E Winter

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL
LOCATION 53.88 ELEVATION
CORE RECORD
UNION OIL COMPANY OF CALIFORNIA
08A 11-37 8M

DIVISION OF OIL AND GAS
RECEIVED
MAR 24 1938
LOS ANGELES, CALIFORNIA

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-21-38	1	7-5/8" Soll	3955	3970	7.3			2.5		Firm Soft Fine Gray Sand		
						1.8				Hard Dark Brown Shale, sandy in parts		
								0.2		Firm, very Fine Silty Gray Sand		
								1.3		Firm Soft Fine to Medium Gray Sand Dip 23°		
						0.1				Hard Dark Brown Shale		
								1.4		Firm Soft Fine to Medium Gray Sand		
						1.9		5.4				
1-21-38	2	"	3970	3985	13.3			0.2		Firm Soft Fine Gray Sand		
						0.2				Hard Dark Brown Shale. Dip 16°		
								0.3		Firm Soft Fine Gray Sand		
						6.1	0.1			Hard Dark Brown Shale with partings of Fine Brown Oil Sand. Streak (0.1) of Fine Brown Oil Sand 1.8' from top. Shale sandy towards bottom Fractures of 48° and 24°		
							1.2			Firm Soft Fine Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown Shale		
							0.6			Firm Soft Fine Brown Oil Sand		
						0.6				Hard Dark Brown Shale		
							0.9			Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.5				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						0.1	2.3			Firm Soft Fine Brown Oil Sand. Streak of Brown Shale (0.1) 1.2' from top. Good Odor and Dark Amber Cut		
						7.7	5.1	0.5				
1-22-38	3	"	3985	4000	10.3		1.1			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.3				Hard Dark Brown Shale. Oil in Fracture joints		
							0.8			Firm Soft Medium Brown Oil Sand. Good Odor		
						0.6				Hard Dark Brown Shale with inclusions of Fine Gray Sand. Sandy in spots		
						6.0				Hard Dark Brown Shale, badly broken and mixed with mud		
							0.6			Firm Soft, very Fine Argillaceous Silty Oil Sand, slightly mixed with mud. Fair Odor and Amber Cut		
						0.9				Hard Dark Brown Shale with inclusions of Fine Gray Sand		
						7.8	2.6					

Henry E Wintes

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-22-38	4	7-5/8" Soll	4000	4015	10.2	5.3				Hard Dark Brown, slightly Silty Shale with inclusions of Fine Gray Sand		
							0.3			Firm Fine Silty Argillaceous Brown Oil Sand with thin Streaks and partings of Dark Brown Shale		
						1.2				Hard Dark Brown Silty Shale. Streak of Fine Brown Oil Sand 0.8' from top		
							2.0			Firm Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Dark Brown Shale		
							1.3			Firm Soft Fine Brown Oil Sand. Good		
						6.6	3.6			Odor and Dark Amber Cut		
			4015	4070						Drilled interval		
1-29-38	5	7-5/8" Barrett-Robishaw	4070	4078	2.2	0.2				Hard Dark Brown Shale		
									0.6	Hard Shale Shell. Top 0.4 badly broken in coring		
						1.0				Hard Dark Brown Silty Shale with small inclusions of Fine Gray Sand		
						0.1				Hard Brown Shale		
							0.3			Fine Brown Oil Sand mixed with mud		
						1.3	0.3		0.6	and cavings		
1-29-38	6	"	4078	4083	0					No Recovery		
1-29-38	7	"	4083	4092	3.2		0.4			Firm Soft Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Dark Brown Shale		
							0.4			Firm Soft Fine Silty Argillaceous Brown Oil Sand with Streaks of Brown Shale		
						0.2				Hard Dark Brown Silty Shale		
							0.3			Firm Soft Fine Silty Argillaceous Brown Oil Sand with thin Streaks of Brown Shale		
						0.5				Hard Dark Brown Shale with thin Streaks of Fine Silty Grayish-Brown Sand		
						0.2				Hard Dark Brown Shale with Streaks of Fine Silty Brown Oil Sand		
							0.2			Firm Soft Fine Silty Argillaceous Brown Oil Sand		
						0.2				Hard Silty Brown Shale		
							0.4			Firm Soft Fine Silty Brown Oil Sand with partings of Brown Shale (Burnt in coring)		
						0.3				Hard Dark Brown Silty Shale		
						1.5	1.7					

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-29-38	8	7-5/8" Barrett-Robishaw	4092	4100	1.5	0.2				Hard Dark Brown Shale		
							0.8			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
							0.5			Firm Fine Silty Argillaceous Brown		
						0.2	1.3			Oil Sand. Good Odor and Amber Cut. Parting 31°		
1-29-38	9	"	4100	4109	0.1	0.1				Hard Dark Brown Silty Shale		
1-29-38	10	7-5/8" Soil	4109	4124	14.2		2.0			Firm Soft Fine to Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
							1.1			Firm Soft coarse Pebbly Brown Oil Sand		
							3.0			Firm Soft Medium to coarse Brown Oil Sand		
							0.5			Firm Fine Silty Argillaceous Brown Oil Sand. Good Odor and Dark Amber Cut. Dip 18°		
							1.1			Firm Soft Medium to coarse Brown Oil Sand		
						0.2				Hard Dark Brown Shale		
							0.2			Firm Fine Silty Argillaceous Brown Oil Sand - Dip 17°		
							1.4			Firm Soft coarse Brown Oil Sand		
							0.3			Firm Fine Silty Argillaceous Brown Oil Sand - Dip 17°		
							0.6			Soft coarse Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1	1.0			Firm Fine Silty Argillaceous Brown Oil Sand with streaks of Hard Brown Shale. Bottom 0.3 mixed with mud		
									0.3	Hard, slightly Calcareous Shale Shell		
							1.7			Firm Soft Fine Brown Oil Sand, grading to Medium at bottom. Good Odor and Dark Amber Cut		
						0.2				Hard Dark Brown Shale		
							0.5			Firm Soft Fine Silty Argillaceous Brown Oil Sand. Streak of Hard Brown		
						0.5	13.4		0.3	Shale 0.3 from top		

Henry E Wirth

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD — UNION OIL COMPANY — OIL OPERATORS LEASE — 4 WELL

LOCATION — 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	11	7-5/8" Soll	4124	4139	13.6		1.4			Firm Soft Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						1.2	0.3			Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand		
							2.2			Firm Soft Fine to Medium Brown Oil Sand. Good Odor		
						0.5				Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand in bottom 0.3		
							3.3			Soft Fine to Medium Brown Oil Sand		
						0.4				Hard Dark Brown Shale		
							0.2			Soft Fine Brown Oil Sand		
						2.1	0.3			Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand		
							0.7			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud. Good Odor and Dark Amber Cut		
						0.9	0.1			Hard Dark Brown Shale with Streaks and partings of Fine Brown Oil Sand		
						5.1	8.5					
1-30-38	12	"	4139	4155	16.0		0.5			Firm Soft Fine Brown Oil Sand, mixed with mud		
							5.8			Firm Soft Fine to Medium Brown Oil Sand, mixed with mud		
						0.1	2.7			Firm Soft Fine Silty Argillaceous Brown Oil Sand - Streaks of Hard Brown Shale 0.2 and 0.5 from top		
							6.9			Firm Soft Fine to Medium Brown Oil Sand, badly mud washed and streaked with mud		
						0.1	15.9					
1-30-38	13	"	4155	4170	6.5		0.7			Soft Fine Brown Oil Sand, badly mixed with mud		
							5.8			Firm Soft Medium to coarse, slightly Pebbly, Brown Oil Sand. Fair Odor and Dark Amber Cut		
							6.5					

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	14	7-5/8" Soll	4170	4185	11.9	0.2				Hard Dark Brown Silty Shale		
							0.2			Firm Soft Coarse Brown Oil Sand		
						0.2	0.1			Hard Dark Brown Silty Shale with streaks and partings of Fine Brown Oil Sand		
							2.1			Firm Soft Medium to coarse Brown Oil Sand		
						0.2				Hard Dark Brown Shale Contact to Sand below approximately 20°		
							1.7			Firm Soft Medium to coarse Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.8				Hard Dark Brown Silty Shale with many thin streaks of Fine Brown Oil Sand - Contact to Sand above 24°		
							0.9			Firm Soft Fine Brown Oil Sand. Bottom 0.4 Hard and contains inclusions of Black Carbonaceous Material Dip 13°-16°		
						0.4				Hard Dark Brown Silty Shale		
							1.6			Firm Fine, slightly Argillaceous Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.4				Hard Dark Brown Silty Shale		
							3.0			Firm Soft Fine Brown Oil Sand, grading to Medium in bottom 1.0'.		
						2.3	9.6			Good Odor		

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	15	7-5/8" Soil	4185	4200	14.4		2.1			Firm Soft Medium Brown Oil Sand. Good Odor and Dark Amber Cut		
						1.1				Hard Dark Brown Silty Shale with partings of Fine Brown Oil Sand Dip 22°. Fracture of 10°		
									0.8	Hard, slightly Calcareous Shale Shell, badly fractured 0.1' from top		
							0.3			Firm Soft Fine Silty Argillaceous Brown Oil Sand with Streaks of Brown Shale		
						0.2				Hard Dark Brown Silty Shale. Dip 22°		
							1.4			Firm Soft Fine Silty Argillaceous Brown Oil Sand. Thin streaks of Brown Shale		
						0.3	0.1			Hard Dark Brown Silty Shale with streaks of Fine Brown Oil Sand		
						0.5	1.0			Firm Fine Silty Argillaceous Brown Oil Sand with streaks of Dark Brown Shale		
						0.3				Hard Dark Brown Silty Shale. Dip 25°		
							0.5			Firm Soft Fine Silty Argillaceous Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown Silty Shale		
						0.2	1.7			Firm Soft Fine Silty Argillaceous Brown Oil Sand with streaks of Brown Shale. Good Odor and Dark Amber Cut		
						0.5	0.1			Hard Dark Brown Silty Shale with streaks of Fine Brown Oil Sand		
							0.2			Soft Fine Silty Argillaceous Brown Oil Sand		
						0.9				Hard Dark Brown Silty Shale		
							0.4			Firm Soft Fine Brown Oil Sand		
						0.4				Hard Dark Brown Silty Shale. Dip 25°		
							0.2			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud		
						0.3				Hard Dark Brown Silty Shale		
						0.1	0.6			Firm Fine Brown Oil Sand with streaks of Brown Shale		
						5.0	8.6		0.8			

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-30-38	16	7-5/8" Soll	4200	4215	15.0		2.2			Firm Soft Medium to coarse Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.3	0.5			Firm Fine Silty Argillaceous Brown Oil Sand with Streaks of Dark Brown Shale		
							2.3			Firm Soft Fine to Medium Brown Oil Sand. Good Odor - Dip 25°		
						0.2				Hard Dark Brown Silty Shale		
							0.4			Firm Soft Fine Silty Argillaceous Brown Oil Sand		
						0.7	0.2			Hard Dark Brown Silty Shale with streaks of Medium to coarse Brown Oil Sand. Fracture of 39° with Slickensides along dip		
						0.2	1.0			Firm Soft Fine Silty Argillaceous Brown Oil Sand with streaks of Dark Brown Shale		
						0.3				Hard Dark Brown Silty Shale		
							6.7			Fine to Medium Brown Oil Sand with streaks of Fine Silty Argillaceous Oil Sand. Good Odor and Dark Amber Cut		
						1.7	13.3					

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-31-38	17	7-5/8" Soll	4215	4230	15.0	0.1	1.9			Firm Soft Fine Brown Oil Sand with streaks and inclusions of Fine Gray Sand. Streak of Brown Shale (0.1) 0.3 from bottom. Fair Odor and Amber Cut		
						0.5				Hard Dark Brown Silty Shale Contact to Sand above irregular and at angle of 45° Apparent Dip of Shale -34°		
						1.0				Hard Dark Brown Silty Shale, badly broken and mixed with mud		
							0.5			Firm Soft Fine Brown Oil Sand Fair Odor		
						0.6	0.2			Hard Dark Brown Silty Shale with streaks and partings of Fine Brown Oil Sand - Parting Planes 18°		
						0.2	0.7			Soft Fine Brown Oil Sand with streaks of Shale. Top mixed with mud		
						2.4	0.2			Hard Dark Brown Silty Shale with inclusions of Fine Gray Sand. Also streaks and partings of Fine Brown Oil Sand		
							2.5			Firm Soft Medium to coarse Brown Oil Sand. Fair Odor and Amber Cut. Sand looks poor		
						0.3				Hard Dark Brown Silty Shale. Fracture of 39° with Slickensides along Dip		
							0.3			Firm Soft Fine Brown Oil Sand		
						0.4				Hard Dark Brown crushed and Flaky Shale		
									1.0	Hard, slightly Calcareous Shale Shell		
						0.8				Hard Dark Brown Silty Shale		
								0.2		Soft Fine Gray Sand, mixed with mud		
						0.2				Hard Dark Brown Silty Shale		
								1.0		Soft Loose Fine Gray Sand. No Odor and light Straw Cut		
						6.5	6.3	1.2	1.0			

Henry E Winter

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD — UNION OIL COMPANY — OIL OPERATORS LEASE — 4 WELL

LOCATION — 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
1-31-38	18	7-5/8" Soll	4230	4245	12.6			0.8		Firm Soft Fine to Medium Gray Sand		
						0.4				Hard Dark Brown Silty Shale		
								1.2		Firm Soft Fine Dark Gray Sand		
						0.5				Hard Dark Brown Silty Shale with streaks of Fine Gray Sand in bottom 0.2 - Good Dip of 21°		
								4.5		Firm Soft Fine Gray Sand. Top 0.8 Fine Silty Dark Gray, slightly Argillaceous		
						1.5		0.2		Hard Dark Brown Silty Shale with streaks of Fine Gray Sand		
								2.5		Firm Soft Fine Gray Sand. Top 0.4 Fine Silty Dark Gray, slightly Argillaceous		
						0.7		0.3		Hard Dark Brown Silty Shale and Fine Silty, slightly Argillaceous Dark Gray Sand. Shale and Sand badly broken and mixed with mud		
						3.1		9.5				
1-31-38	19	"	4245	4260	13.8			13.8		Firm Soft Massive Medium to coarse Gray Sand. Sand poorly sorted and slightly Pebbly in spots		
1-31-38	20	"	4260	4275	13.0			13.0		Firm to Firm Soft Massive Fine to coarse, poorly sorted Gray Sand - Pebbly in spots		
1-31-38	21	"	4275	4290	14.2			14.1	0.1	Firm Soft to Soft Massive Fine to coarse Gray Sand. Top 0.9 badly mixed with mud. Hard Calcareous Sandstone Shell 3.6 from top		
2-1-38	22	"	4290	4305	15.0			12.2		Firm Soft Massive Fine to coarse Gray Sand. Several fairly Hard, slightly Calcareous spots. Bottom 1.0 Fine and mixed with mud		
								1.9		Firm Soft Medium Gray Sand. Inclusion of Silty Brown Shale 0.8 from top		
						0.9				Hard Sandy Dark Brown Shale with inclusions of Gray Sand - Streaks of Gray Sand 0.5 from top		
						0.9		14.1		Note--Bottom 2.8 of this Core was recovered in next Core bbl.		

Henry E Wentz

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
2-1-38	23	7-5/8" Soll	4305	4310	5.0			0.3		Firm Soft Coarse Gray Sand		
						1.4				Hard Silty Dark Brown Shale Dips 17° and 28°		
						0.8				Hard Broken Black Silty Shale		
						0.8				Hard Black Shale		
						1.7				Hard Silty Dark Brown Shale - Shale		
						4.7		0.3		badly broken and Burnt in Coring		
2-1-38	24	"	4310	4319	2.4	2.4				Hard broken and fractured Black Shale, badly mixed with mud Inclusions of Fine Gray Sand in bottom 0.4		
2-1-38	25	"	4319	4329	10.0	9.0				Hard Broken and fractured, Dark Brown to Black Shale. Top 2.3 badly fractured with vertical Fractures. Dip approximately 20°		
						1.0				Hard Dark Brown to Black Silty Shale		
						10.0						
2-2-38	26	" Barrett-Robishaw	4329	4337	6.8	5.8				Hard Dark Brown to Black Silty Shale, sandy towards bottom. Inclusions of Fine Brown Oil Sand in bottom 0.8 Dip 20°		
							0.9			Soft Mushy Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Dark Brown Silty Shale with inclusions of Fine Brown Oil Sand		
						5.9	0.9					
2-2-38	27	"	4337	4346	8.2	0.2				Hard Dark Brown Silty Shale		
							1.8			Soft Mushy Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						0.1				Hard Fractured Dark Brown Silty Shale		
							2.1			Soft Mushy Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
						4.0				Hard Dark Brown Silty Shale. Nearly vertical Fractures 2.5 from bottom		
						4.3	3.9			Dip 22°		
2-2-38	28	"	4346	4355	7.7	0.6				Hard Black Shale. Dip 23°. Fracture of 15° at bottom		
							1.4			Soft Mushy Fine Silty Argillaceous Brown Oil Sand, mixed with mud. Fair Odor and Amber Cut		
							5.7			Soft Medium to coarse Brown Oil Sand. Fair Odor and Dark Amber Cut		
						0.6	7.1					
2-2-38	29	"	4355	4364	0					No Recovery		

Henry E Wintz

08A 11-37 8M

UNION OIL COMPANY OF CALIFORNIA

CORE RECORD

LONG BEACH FIELD UNION OIL COMPANY OIL OPERATORS LEASE 4 WELL

LOCATION 53.88 ELEVATION

DATE	CORE NO.	DRILLER SIZE & TYPE BARREL	FROM	TO	TOTAL RECRY.	SHALE	OIL SAND	GRAY SAND	SHELL	DESCRIPTION OF CORE	APPT. DIP	ANGLE OF HOLE
2-2-38	30	7-5/8" Barrett-Robishaw	4364	4373	4.3		0.2			Soft Medium to coarse Brown Oil Sand		
						0.2				Hard Fractured and crushed Black Shale		
							0.3			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud		
						0.2				Hard Fractured Black Shale		
							0.3			Oil Sand as above		
						0.2				Firm, very Silty Brown Shale		
							0.6			Oil Sand as above. Fair Odor and Dark Amber Cut		
						0.4				Hard Fractured Silty Black Shale with streaks of Fine Brown Oil Sand. Fractures of 21° and 37°		
							0.3			Silty Oil Sand, as above		
						0.3	0.1			Hard Fractured Silty Black Shale with streaks of Fine Brown Oil Sand		
							0.5			Firm Soft Fine to Medium Brown Oil Sand. Fair Odor and Amber Cut		
						0.7				Hard Silty Black Shale		
						2.0	2.3			Fracture of 36° 0.3 from top		
2-2-38	31	"	4373	4382	0.6	0.6				Hard Black Silty Shale		
2-2-38	32	" Soli	4382	4397	15.0	0.6				Hard Dark Brown to Black Shale		
							0.4			Soft Fine Silty Argillaceous Brown Oil Sand, mixed with mud		
						1.0	0.2			Hard Fractured and Broken Dark Brown to Black Silty Shale. Streaks of Fine Silty Argillaceous Oil Sand		
							0.3			Soft Fine Brown Oil Sand. Good Odor		
						0.2				Hard Dark Brown to Black Silty Shale. Dip 24°		
							1.5			Firm Soft Fine Brown Oil Sand. Good Odor		
							10.8			Firm Soft to Firm, Medium to coarse Brown Oil Sand, grading to coarse Pebbly in bottom 4.0. Bottom 4.0 has a Grayish cast, probably due to Gray Pebbles. Good Odor and Amber Cut		
						1.8	13.2					
			4397	4398						Hole corrected for depth		
2-3-38	33	"	4398	4408	8.8		8.8			Firm Soft coarse Pebbly Brown Oil Sand with streaks of Fine Brown Oil Sand. Good Odor and Dark Amber Cut		
							Total Depth			- 4408		

Henry E Wentz

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T1-33997

Los Angeles, Calif. March 30, 1938.

Mr. W. S. Eggleston,
Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F. J. Karmelich, Inspector, representative of the supervisor, on March 20, 1938. There was also present H. Winter, Engineer, and L. O. Mitchell, Driller.

Casing Record	Junk
13-3/8" cem. 757'; 8-5/8" cem. 4005', W. S. O.; 6-5/8" liner landed 3843'-4408', c. p. 4344'; perf. 4348'-4408'; T.D. 4408', plugged with cement 4397'-4305'.	None.

The operations were performed for the purpose of testing the location and hardness of a cement plug proposed to be placed from 4408' to 4320' in the process of plugging back, and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 9:00 A. M. AND MR. WINTER REPORTED THE FOLLOWING:

1. The 6-5/8" liner was cleaned out to 4397'.
2. On March 18 and 19, 1938, 24 sacks of Victor oil well cement was dumped, beginning at 4397'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 4305' and brought up a sample of set cement.

The test was completed at 9:30 a. m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 4305' ARE APPROVED.

cc- H. E. Winter
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenbuch Deputy

FORM 111
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-32183

Los Angeles, Calif. March 21, 1938

Mr. Ed Jussen, Jr.,

Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

Dear Sir:

Your supplementary proposal to drill Well No. "OIL OPERATORS" 4, Section 13, T. 4S., R. 13W., S. B. B. & M., Long Beach Field, Los Angeles County, dated Mar. 18, 1938, received Mar. 21, 1938, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:
"The present condition of the well is as follows:
4408 deep
13-3/8" C 757'
8-5/8" C 4005' OK
565' 6-5/8" L 4408', inc. 60' perf. C. P. 4344'
Reperf. 4348-4399
The well has been tested on the pump since March 1, 1938 with an average daily production of 18 gross, 16 net, 21.7 gravity."

PROPOSAL:
"The proposed work is as follows:
1. C. O. to 4408 and plug with cement under hydrostatic head to 4320'.
2. Test plug by Division of Oil & Gas.
3. Perforate 6-5/8" casing 4133-4005.
4. Test on production."

DECISION:
THE PROPOSAL IS APPROVED.

cc- H. E. Winter
Long Beach
WJC:G
SHR.

R. D. BUSH
State Oil and Gas Supervisor

By [signature] Deputy

FORM 107. 14408 8-34 10M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

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

This notice must be given fifteen days before work begins when possible

Santa Fe Springs, Cal. March 18, 1938

MR. E. Huguenin,

Deputy State Oil and Gas Supervisor

Los Angeles, Cal.

DEAR SIR:

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of ~~deepening, redrilling,~~ plugging or altering casing at well No. Oil Operators #4
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Oil Field, Los Angeles County.

The present condition of the well is as follows:

4408 deep
13-3/8" C 757'
8-5/8" C 4005' OK
565' 6-5/8" L 4408', inc. 60' perf. C.P. 4344'
Reperf. 4348-4399

The well has been tested on the pump since March 1, 1938 with an average daily production of 18 gross, 16 net, 21.7 gravity.

The proposed work is as follows:

1. C.O. to 4408 and plug with cement under hydrostatic head to 4320'.
2. Test plug by Division of Oil & Gas.
3. Perforate 6-5/8" casing 4133-4005.
4. Test on production.

Ltr. & Sup. Dill.

Respectfully yours

UNION OIL COMPANY OF CALIFORNIA
Name of Company or Operator

By Henry E Winter
District Engineer.

ADDRESS NOTICE TO DEPUTY STATE OIL AND GAS SUPERVISOR IN CHARGE OF DISTRICT WHERE WELL IS LOCATED

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

No. 2967

DIVISION OF OIL AND GAS

LOS ANGELES Calif. 7/16 1938

Union Oil Company of Calif.
Name of Operator

LOS ANGELES
Address

This is to acknowledge the receipt of logs and similar records of wells on Sec. 13 T. 4S R. 13W - Long Beach B. & M., *as herewith enumerated by well numbers.*

Logs

History

Core record

Subsequent work Electrical Log - "Oil Operators" 4 - 7/13/38

R. D. BUSH, *State Oil and Gas Supervisor*

DUPLICATE

By E Hugueneau *Deputy*

FORM 127. 46818 7-37 3M

CALIFORNIA STATE PRINTING OFFICE

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-33847

Los Angeles, Calif. February 24, 1938

Mr. Ed Jussen, Jr.,
Los Angeles, Calif.
Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4S., R. 13W., S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F. J. Karmelich, Inspector, representative of the supervisor, on Feb. 10, 1938. There was also present R. Rampton, Engineer, and H. Robinson, Superintendent.

Casing Record	Junk
13-3/8" cem. 757'; 8-5/8" cem. 4005', W. S. O.; 6-5/8" ld. 3837'-4408', c. p. 4344', perf. 4344'-4408', T. D. 4408', plugged with cement 4344'-3951'.	None.

The operations were performed for the purpose of demonstrating that fluid does not have access to the well between the 8-5/8" and 6-5/8" casings,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 11:00 A. M. AND MR. RAMPTON REPORTED THE FOLLOWING:

1. A 7-5/8" rotary hole was drilled from 4005' to 4408'.
2. On February 5, 1938, 565' of 6-5/8" - 26 lb. casing, including 60' of perforated, was landed at 4408' and was cemented through perforations at 4344' with 125 sacks of Victor oil well cement.
3. Cement was drilled out of the 8-5/8" and 6-5/8" casings from 3676' to 3951' (equivalent to 62 sacks) and the casing was cleaned out to 3951'.
4. On February 11, 1938, at 3:00 a. m., the fluid was bailed to 2535'.

THE INSPECTOR NOTED THE FOLLOWING:

1. No fluid entered the well while standing 8 hr. for test.
2. The fluid was located at 2535'.
3. The sample of fluid from bottom tasted fresh.
4. The hole was open to 3951'.

The test was completed at 12:00 noon.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED as indicating that fluid does not have access to the well between the 8-5/8" and 6-5/8" casings.

cc- H. E. Winter
Long Beach
FJK:G
S.H.R.

R. D. BUSH
State Oil and Gas Supervisor
By E. Huguenin Deputy

FORM 109-B. 46392 7-37 8750.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

No. T 1-33775

Los Angeles, Calif. February 9, 1938.

Mr. Ed. Jussen, Jr.,
Los Angeles, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Your well No. "OIL OPERATORS" 4, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.,
Long Beach Field, in Los Angeles County, was tested for
shut-off of water on January 28 (Time and date), 1938. Mr Chas. Corwin,
designated by the supervisor, was present as prescribed in Section 19, Chapter 718, Statutes 1915, as amended, and there were also present R. Rampton, Engineer,
H. Robinson, Superintendent.

Location of water tested above 4005' and normal fluid level not determined

Depth and manner of water shut-off: 1263 ft. of 8-5/8 in. 36 lb. / 2742 ft. of 8-5/8 in. 32 lb. casing was {cemented / landed} 1-23-38 in shale Formation

at 4005 ft. with 200 sacks Victor construction 200 sacks " oil well cement by casing method.

Water string was landed in 12¼" rotary (Size, rotary or cable tool) hole.

Casing record of well 13-3/8" cem. 757'; 8-5/8" as above.

Reported total depth of hole 4015 ft. Hole bridged from xx ft. to xx ft. Hole cleaned out to xx ft. for this test.

At time of test depth of hole measured See below ft. and bailer brought up sample of xxxx

At See below (Time and date) oil bailed to xxx ft., drilling fluid {bailed / swabbed} to xxx ft.

At " " (Time and date) top of oil found at xxx ft., top of fluid found at xxx ft.

THE INSPECTOR ARRIVED AT THE WELL AT 3:15 p. m. AND MR. RAMPTON REPORTED THE FOLLOWING:

1. A 12¼" rotary hole was drilled from 757' to 4015'.
2. Mud fluid was circulated for 1/2 hr. before cementing the casing.
3. Electrical core readings showed shale 3971' - 4005' (H I)
4. No casing test was made.
5. 27' of set coment was drilled out of the 8-5/8" casing (equivalent to 8 sacks).
6. The Johnston tester was run into the hole on 4" drill pipe.
7. The wall packer was set at 3991'.
8. The tester valve was opened at 1:58 p. m. and remained open for 30 minutes. During this interval there was a good, steady blow throughout the test.

THE INSPECTOR NOTED THE FOLLOWING:

1. When the drill pipe was removed 1550' of fluid was found in the drill pipe above the tester, consisting of the following: 20' drilling fluid, 1230' gas and oil, 100' oil sand, equivalent to 22 bbl.

R. D. BUSH
State Oil and Gas Supervisor

By (CONTINUED ON PAGE 2) Deputy

FORM 109-X. 46010 6-37 4M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off
OR
Special Report on Operations Witnessed

No. T 1-33775
Page 2

UNION OIL COMPANY OF CALIFORNIA

Well No. "OIL OPERATORS" 4, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.,

2. The fluid sample taken from the bottom of the drill pipe tasted fresh.
3. The recording pressure bomb chart was torn, but could observe that the valve had been opened.

The test was completed at 4:20 p. m.

THE SHUT-OFF IS APPROVED.

cc- H. E. Winter
Long Beach

CC:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hugenin Deputy

629 South Hill Street
Los Angeles, California
January 18, 1938.

Union Oil Company of California,
Santa Fe Springs, Calif.

Gentlemen: Attention Mr. Henry E. Winter.

This will acknowledge receipt of and thank you for your letter of January 13, 1938, giving the elevation of well No. "Oil Operators" 4, Sec. 13, T. 4 S., R. 13 W., S. B. B. & M., Long Beach field, as 53.88' U. S. G. S.

We are correcting our records accordingly.

Yours truly,

Deputy Supervisor.

WJC:EMS

CC - Mr. R. D. Bush (2)
Long Beach

Corrections Made as Follows	By Whom
Weekly Gas Statements	
121	
Prod. and Loss Cards	
Production Reports	
Well Records { Folders	
Well Records { Reports	
Log Books	
Structure	
Field Maps	

FORM 402 7-37 300M
PRINTED IN U.S.A.

IN REPLY GIVE NO.

Union Oil Company of California

CARBON COPY

Santa Fe Springs, Calif. Jan. 13, 1938

Mr. E. Huguenin, Deputy Supv.,
Division of Oil & Gas,
Los Angeles, Calif.

Dear Sir:

The elevation of the Union Oil Company well "Oil Operators #4", in the Long Beach Field, (Section 13, 4-S, 13-W), is 53.88 U.S.G.S.

The location is the same as in the original notice to drill.

Very truly yours,
Henry E Wintz
District Engineer.

HEW:S

FORM 401 9-36 70M
PRINTED IN U. S. A.

DIVISION OF OIL AND GAS
RECEIVED
JAN 14 1938
LOS ANGELES, CALIFORNIA

Union Oil Company of California

PRODUCERS AND REFINERS OF
CRUDE OIL, FUEL OIL, ROAD OIL AND ASPHALT,
UNION GASOLINE, KEROSENE AND DISTILLATE,
'RED LINE' LUBRICATING OILS AND GREASES.

Santa Fe Springs, Calif. Jan. 13, 1938

Mr. E. Huguenin, Deputy Supv.,
Division of Oil & Gas,
Los Angeles, Calif.

Dear Sir:

The elevation of the Union Oil Company well "Oil Operators #4", in the Long Beach Field, (Section 13, 4-S, 13-W), is 53.88 U.S.G.S.

The location is the same as in the original notice to drill.

Very truly yours,
Henry E Winter
District Engineer.

HEW:S

FORM 109-D. 47172 7-37 15M
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 1-33680

Los Angeles, Calif. January 20, 1938.

Mr. Ed. Jussen, Jr.,
Los Angeles, Calif.

121

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Operations at your well No. "OIL OPERATORS" 4 Sec. 13, T. 4 S., R. 13 W., S. B. B. & M., Long Beach Field, in Los Angeles County, were witnessed by F. J. KARMELICH, representative of the supervisor, on January 4, 1938. There was also present R. Rampton, Engineer, F. T. Shores, Driller.

Casing Record	Junk
18-5/8" cem. 50'; 13-3/8" cem. 757'; T. D. 758'.	xxxx

The operations were performed for the purpose of demonstrating that the known surface waters are adequately protected,

and the data and conclusions are as follows:

THE INSPECTOR ARRIVED AT THE WELL AT 4:00 P. M. AND MR. RAMPTON REPORTED THE FOLLOWING:

1. A 17" rotary hole was drilled from 50' to 758'.
2. 757' of 13-3/8" - 45 lb. casing was run into the hole to 757'.

THE INSPECTOR NOTED THE FOLLOWING:

1. The 13-3/8" casing was cemented at the reported depth of 757' with 350 sacks of Velo 24 hour cement.
2. The cement was displaced from the casing with 673 cubic feet of drilling fluid.
3. The final pressure was 500 lb.

The operations were completed at 4:42 a. m.

THE CEMENTING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED AS INDICATING THAT THE KNOWN SURFACE WATERS ARE ADEQUATELY PROTECTED.

cc- H. E. Winter
Long Beach
FJK:OH

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagenlein Deputy

FORM 111. 46011 6-37 20M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P1-31816

Los Angeles, Calif. December 23, 1937.

MR. Ed. Jussen, Jr.,
Los Angeles, Calif.
Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Your "OIL OPERATORS" proposal to drill Well No. 4,
Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County,
dated Dec. 20, 1937, received Dec. 21, 1937, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES:

"The well is 965 feet N-W'ly along the center line of Pacific Electric R.R. from the intersection with the center line of Bixby Road (Proj.) and thence 289' S-Wly at right angles. The elevation of the derrick floor above sea level will be determined later (Approx. ~~54'~~ *). We estimate that the first productive oil or gas sand should be encountered at a depth of about ~~xxxxx~~ feet."

*53.88 ' U.S.G.S. (Correction letter 1-18-38)

PROPOSAL:

"We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing	Weight	Grade and Type	Depth	Landed or Cemented
13-3/8	46#	New	700	Cemented
8-5/8	36#	New	4000	Cemented
6-5/8 liner	26#	New	4400	Cemented

The 6-5/8" liner to be a combination splice liner to be cemented through perforations at the base of the "JK" shale

Well is to be drilled with rotary tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. (a) Mud fluid of not less than 70 lb. per cubic foot shall be used in the drilling of the well and the column of mud fluid shall be maintained at all times to the surface, particularly while pulling the drill pipe.
   (b) Adequate blow-out prevention equipment shall be provided and ready for operation at all times.
2. Any hole to be sidetracked at any time during the drilling of this well shall be completely filled with cement.
3. The formations to be left back of the 8-5/8" casing shall be mudded in a manner consistent with good drilling practice.
4. This division shall be notified to examine cores and/or electrical log before running the 8-5/8" casing.
5. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   (a) The cementing of the 13-3/8" surface casing.
   (b) A test of the effectiveness of the 8-5/8" shut-off.
   (c) A test after drilling out the cement to within 50' of the cementing point to demonstrate that no fluid has access to the well between the 8-5/8" and 6-5/8" casings.

R. D. BUSH
State Oil and Gas Supervisor

By E. Hagestein Deputy

cc- H. E. Winter
Long Beach
WJC:CH

FORM 105. 45230 6-37 10M.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
DEC 21 1937
LOS ANGELES, CALIFORNIA

3

Notice of Intention to Drill New Well

This notice must be given and surety bond filed before drilling begins

037-06415

General Exploration Co.

Santa Fe Springs, Calif. Dec. 20, 1937

DIVISION OF OIL AND GAS

Los Angeles Calif.

In compliance with Section 17, Chapter 718, Statutes of 1915, as amended, notice is hereby given that it is our intention to commence the work of drilling well No. "Oil Operators" 4, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M., Long Beach Field, Los Angeles County.

Lease consists of N-W'ly along the center line of Pacific Electric R.R. from the intersection with the center line of Bixby Road (Proj.)

The well is 965 feet ~~N. or S.~~, and and thence 289' S-Wly at right angles feet E. or W. from

(Give location in distance from section corners or other corners of legal subdivision)

The elevation of the ~~ground~~ derrick floor above sea level is ~~Will be determined later (Approx. 54')~~ 53.88' U.S.G.S. (Correction letter 1-18-38) feet.

We estimate that the first productive oil or gas sand should be encountered at a depth of about feet.

We propose to use the following strings of casing, either cementing or landing them as herein indicated:

Size of Casing, Inches	Weight, Lb. Per Foot	Grade and Type	Depth	Landed or Cemented
13-3/8	46#	New	700	Cemented
8-5/8	36#	New	4000	Cemented
6-5/8 liner	26#	New	4400	Cemented
The 6-5/8" liner to be a combination splice liner to be cemented through perforations at the base of the "JK" shale				

Well is to be drilled with ~~cable~~ rotary tools.

It is understood that if changes in this plan become necessary we are to notify you before cementing or landing casing.

Address Santa Fe Springs

UNION OIL COMPANY OF CALIFORNIA,
(Name of Operator)

Telephone number Whittier 426-87

By Henry E Winter
District Engineer

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

20
SHR

Book.
S.H.R.
12-21-37.

SCHLUMBERGER ELECTRICAL LOG

COMPANY Mobil Oil Libya Ltd. Date 1964 Run No. One

FIELD - Sarir Area LOCATION

WELL C.R.O. Inspection Ltd. Elev. K.B. 1614 ft

Casing shoe Other Services: CDM

Bottom Dec. 13-14-15th, 1964 Elev. 1603 ft

Max. depth 2870 ft

Max. temp. measured 200 °F Recorded by Sutherland

Fluid in hole Type Fluid in hole Salinity, ppm Cl

MUD CHARACTERISTICS

NATURE Natural VISCOSITY 47 LEVEL

DENSITY 70 RESISTIVITY .34 @ 70 °F

DIAMETER OF HOLE

8.5" to 2870'

REMARKS

Logging 0K"

Witnessed By Mr. Registrad Mr. Stather

ORIGINAL

SCHLUMBERGER ELECTRICAL LOG

COMPANY Mobil Oil Co. Date 1964 Run No. One

FIELD - Sarir Area LOCATION

WELL C.R.O. Inspection Ltd. ELEVATION K.B. 1614 ft

Casing shoe depth Date Recorded Dec. 13-14-15th, 1964 Elev. 1603 ft

Bottom Depth Driller 2870 ft Logged Dec. 13-14-15th, 1964 Elev. 1603 ft

Max. depth reached by Sonic Run 2870 ft Time well circulated before Logging 5 hrs

Max. temp. measured 200 °F Time since circulation stopped 5 hrs

Fluid in hole Salinity, ppm Cl Time logger on bottom 0 hrs

MUD CHARACTERISTICS

NATURE Natural VISCOSITY LEVEL

DENSITY 70 RESISTIVITY

DIAMETER OF HOLE

8.5" to 2870'

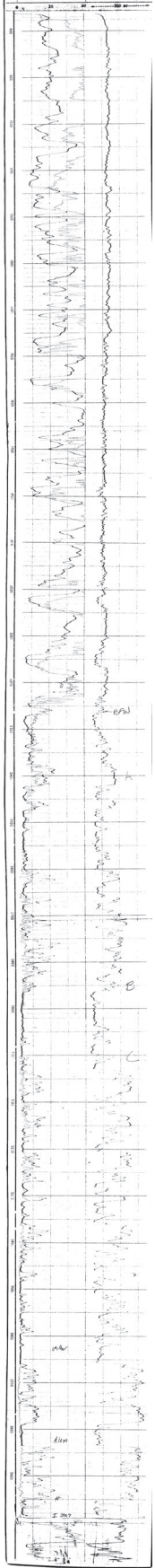
REMARKS

Logging 0K"

Witnessed By Mr. Registrad Mr. Stather

ORIGINAL

RESISTIVITY LOG ohms m/m POROSITY LOG



SCHLUMBERGER

WELL SURVEYING CORPORATION

COMPANY Union Oil Co. of California

FIELD Long Beach

WELL Oil Operators #3

SEC. T. R.

COUNTY Los Angeles STATE California

ELEV.: 53.85 U.S.G.S.

C.R.G. Properties, Ltd.

Oil Operators #3 (037-06496)

Sec. 13-4S-13W.

RECEIVED
AUG 28 1941
LOS ANGELES, CALIFORNIA

RUN	No. 1	No. 2	3	4	5
Date	8-21-41	8-25-41			
Csg. shoe	3986'	3986'			
Total depth	5800'	5450'			
Depth rchd.	5198'	5450'			
Ft. Meas.	1212'	252'			
Mud - Nat	Chemical	Chemical			
Dens	73#	74			
Visc	43	41			
Res.	2.66 @ 66°F	3.16 @ 70°F			
Max. Temp.	166°F	144°F			
Meas. from	table	table			
Tension	1700#				
Rig Time	15 hrs.	1-3/4 hr.			
Mileage	10	10			
Observer	V.T.Pant	V.T.Pant			
Witnessed by:	Winter	Winter			

DIAMETER OF HOLE
7-5/8"

REMARKS
Device: Standard 3rd curve --------
Long device 3rd curve .....

DEPTH

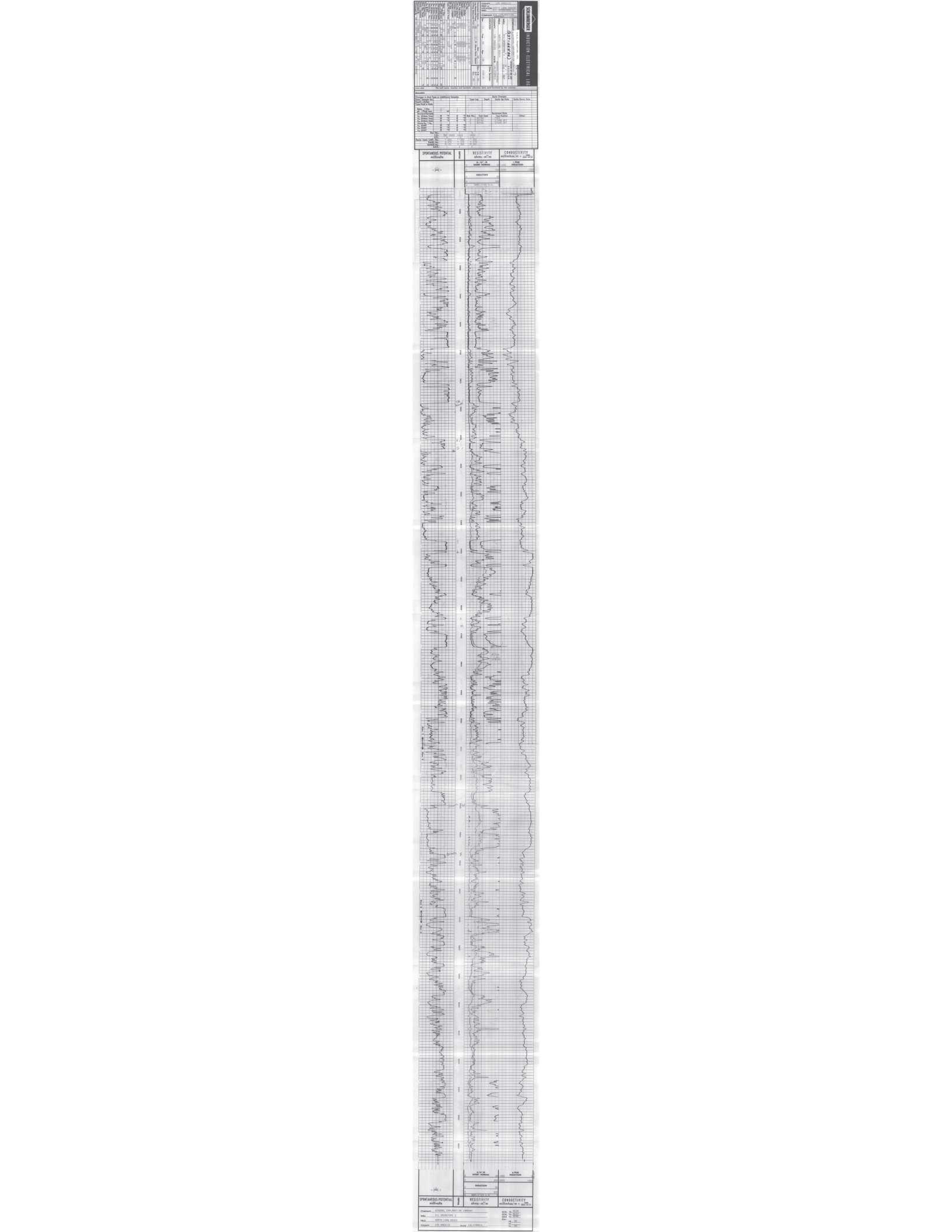
RESISTIVITY
100 NORMAL CURVE ---- THIRD CURVE
0 ohms m/m 30

SELF-POTENTIAL
100 millivolts

4650

5450'

Union Oil Co.
Oil Operators #3
Long Beach


SCHLUMBERGER
INDUCTION ELECTRICAL LOG
COMPANY GENERAL EXPLORATION COMPANY
WELL FIL OPERATING 1
FIELD NORTH LONG BEACH
COUNTY LOS ANGELES
STATE CALIFORNIA
API SERIAL NO. 037-21940
SPONTANEOUS POTENTIAL millivolts
RESISTIVITY ohms - m²/m
CONDUCTIVITY millimhos/m
A-16"-N SHORT NORMAL
A-64"-N LONG NORMAL
INDUCTION
6 FOOT INDUCTION
SCALE 10 - 0 - 10
SCALE 0 - 25 - 100
SCALE 0 - 2000
SCALE 0 - 50

PACIFIC PROCESS SYSTEMS, INC.
Ph: 661.589.8844
Fax: 661.589.8330

Temperature Survey

WELL: 8-3

COMPANY: CRG Properties, LTD.
FIELD: Long Beach
COUNTY: Los Angeles STATE: CA

WELL DATA

DATE: 4-26-2005
TYPE LOG: TEMP
TOTAL DEPTH:
GDA: 2,943'
TOP LOGGED INTERVAL: 0'
FLUID LEVEL: 775'
PKR DEPTH:
PLUG BACK DEPTH:
RECORDED BY: John Reece

CASING: 8.625"
TUBING:
TOP PERFORATION: 4,091'
BOFW: 2,100'
LINE SPEED: 30 ft/min
DF above Mat: 0'

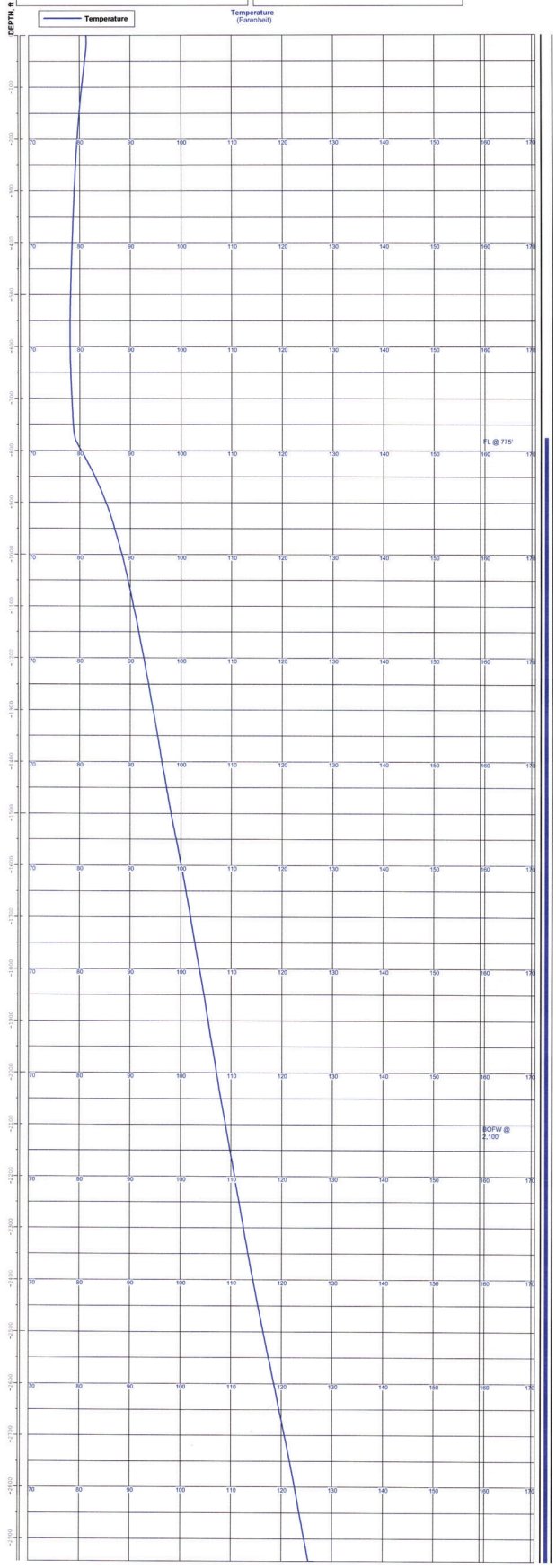
API: 03706496

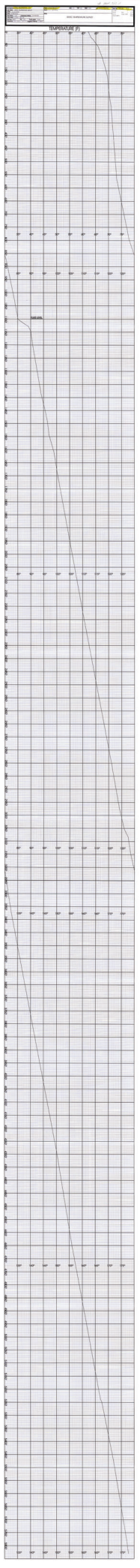
EQUIPMENT AND TEST DATA

PRESSURE TBG psi:
PRESSURE CSG psi: 43
WELL STATUS: Static

TRUCK No: 1
TOOL SIZE: 1 1/4"

TOOL DATA
CALIBRATED TEMP RANGE:-0.9-253.9deg F
ACCURACY RESOLUTION: 0.25% FS
RESOLUTION: 0.002% FS
COMMENTS: MAX BH TEMP 126.44 F




TEMPERATURE (F)
120°
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100°
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80°
70°
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50°
40°
30°
20°
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DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 100 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

REPORT OF WELL ABANDONMENT

Cypress, California
March 27, 2017

Mr. Mark Pender
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Your report of abandonment of well **"Nwlbu" 8-3**, A.P.I. No. **037-06496**, Section **13**, T. **04S**, R. **13W**, **SB** B.&M., **Long Beach** field, **Los Angeles** County, dated **12/15/2013**, received **1/8/2014**, has been examined in conjunction with records filed in this office. We have determined that the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and filing of well records. The plugging and abandonment of the well is **approved**.

The determination of this well plugging and abandonment is based on the following information, consistent with California Public Resources Code (PRC), and the California Code of Regulations (CCR):

1. Surface plugging completed on 12/2/2013.

2. Site inspection made and approved on 12/19/2013.

Kenneth A. Harris Jr.
State Oil and Gas Supervisor

By Scott Walker
For Daniel J. Dudak, *District Deputy*

EPM:epm

cc: Long Beach Dept. of Gas & Oil

DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

REPORT OF WELL ABANDONMENT

Cypress, California
May 21, 2014

Mr Mark Pender
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Your report of abandonment of well **"Nwlbu" 8-3**, A.P.I. No. **037-06496**, Section **13**, T. **04S**, R. **13W**, SB B.&M., **Long Beach** field, **Los Angeles** County, dated **12/12/2013**, received **2/4/2014**, has been examined in conjunction with records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and filing of well records.

NOTE: 1. Surface plugging completed on 12/2/2013.

2. Site inspection made and approved on 12/19/2013.

Pat Perez
Acting State Oil and Gas Supervisor

By _____
Daniel J. Dudak, *District Deputy*

EM:kj

cc:Update

OG159

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

SITE RESTORATION MEMO

Operator C.R.G Properties, Ltd Well "NWLBU" 8-3

API No. 037-06496 Sec. 13 T. 045 R. 13W , SB B&M

Field Long Beach , County Los Angeles Date 3/21/2014

Mr. / Ms. Abdulmageed (AB) Abdulrahman representative of the supervisor, was present 1000 to 1200

There were also present: Mick Beyer of AllenCo Contact Number: (310) 505-9787

Email:

Surface location description: The property at 712 W. Baker Street (Baker Street / Golden Street.) The property can be accessed near intersection of Magnolia Ave. and Wardlow Rd.

Date of Abandonment/Re-Abandonment: 11/01/2013

	Approved	Not Approved	Corrected	Comments
Well Accessibility	X			Not obstruction as of the date of the inspection
Oil & Gas Field Equipment Removed	X			
Oil Field Related Waste/Refuse Removed	X			
Well Cellar Removed	X			
Operation Sumps Removed				Not Applicable
Visible Surface Oil Contamination Removed	X			
Oil Field Related Power Pole(s) Removed	X			
Tank(s) Removed	X			
Surface Pipeline(s) Removed	X			
Pad(s) Removed	X			

Photos Taken For the Final Inspection:
See the following photos.

Number of deficiencies: N/A **Deficiency Letter Date:** ____ **Deficiency Letter Number:** ____

Photos attached to well file: Yes ■ No ☐

The inspection as witnessed and reported is approved. Yes ■ No ☐

By: Abdulmageed G. Abdulrahman **Date:** 6/17/2014

Dist 1, Rev 5/2014

All equipment, pipeline, casing or junk were removed from the site. All liquid wastes were removed and properly disposed. Excavations filled with earth and compacted properly to prevent settling.

Additional description of site restoration: _____

_____

_____

Discription: _____

_____

11/07/2013 09:04


NWI BU
83
06496
12-13
12/04/2013 11:15


03/21/2014 10:50


03/21/2014 10:47

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

Company:	**C.R.G. Properties,LTD**	Well: **NWLBU 8-3**
API#:	**037-06496**	Sec. **13**, T. **4S**, R.**13W**. S. B. B. & M.
County:	**Los Angeles**	Field: **Long Beach**

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	**2/4/2014 (2)**
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Date final records received.	
Electric Logs:	
Other:	

STATUS

Active	☐	Drilling	☐
Abandoned	☒	Idle	☐
Reabandoned	☐	Other	☐

WELL TYPE

Oil	☒	Waterflood	☐
Gas	☐	Water Disposal	☐
Water Source	☐	Cyclic Steam	☐
Observation	☐	Steam Flood	☐
Exploratory	☐	Fire Flood	☐
Dry Hole	☐	Other	☐

EFFECTIVE DATE: 12/2/13

REMARKS: Abandoned

	ENGINEERS CHECK LIST	CLERICAL CHECK LIST
☑	Summary, History & Core Record (Dupl.)	Location change
☐	Electric Log	Elevation change
☑	Operator's Name	Form OGD121
☑	Signature	Form OGD150b (Release of Bond)
☑	Well Designation	Duplicate logs to archives
☐	Location	Notice of Records Due
☐	Elevation	EDP MC 5-15-14
☒	Notices	District Date Base
☒	"T" Reports	Final Letter (OG159) 5-21-2014
☒	Casing Record	Update Center MC 5-15-14
☒	Plugs	
☐	Directional Survey	
☐	Production/Injection (FAP Codes: 412-03-00)	
☐	E Well on Prod., enter EDP	**FIELD CHECK LIST**
☒	Surface Inspection Required 12/19/13 ok	Date Surface Inspection Completed: 12/19/13 BFok
☐	Surface inspection Waived (Island)	Other:
☐	Well site restoration deferred (common cellar)	
☒	Final Letter Required AB: ☒ REAB: ☐	
☐	Other:	

RECORDS NOT APPROVED	RECORDS APPROVED 5/14/14
(Reason:)	*(Signature)* S.M. Andrews
	RELEASE BOND
	Date Eligible
	(Use date last needed records received.)
	MAP AND MAP BOOK

a

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

HISTORY OF OIL OR GAS WELL

Operator C.R.G. Properties, LTD Field Long Beach County Los Angeles

Well "NWLBU" 8-3 Sec. 13 T. 04S R. 13w sbB.&M.

A.P.I. No. 037-06496 Name Mick Beyer (Person submitting report) Title Operations Manager (President, Secretary, or Agent)

Date 12-12-13 (Month, day, year)

Signature Mr. B

Address 2109 Gundry Ave. Signal Hill, Ca. 90755 Telephone Number 562 989-6100

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.

11-08-13	M.I.R.U. – Installed and tested BOPE–Witnessed by C. Cullum w/DOGGR - Secured Well
11-11-13	R.I.H.5 ½" Scraper tagged dn.@ 5842' = 104' above clean out depth - Circ.with water w/returns of oily water and gas - P.O.H. Witnessed by M. Okafor & Z. Amilhussin w/ DOGGR - Secured well
11-12-13	R.I.H.W/Tbg. cleaned out scale and fine sand from 5842' to 5900' unable to work deeper – Secured well
11-13-13	W/Tail at 5900' mixed and pumped 247 cu/ft (217 sxs) class G cement – P.O.H.– Witness by Secured well
11-14-13	R.I.H. Tagged cement plug at 4067'.- Pumped 15 bbls. 73# mud – R.I.H. W/8 5/8" Scraper to 3043'= TLH – P.O.H. – R.I.H.- Tbg. – Witnessed by Secured well
11-15-13	W/tbg. Tail at 3875' Mixed and pumped 212 cu/ft. (186 sxs) class G cement – P.O.H. Witnessed by T. Tyler w/DOGGR - Secured well.
11-18-13	R.I.H. Tagged cement plug at 2773' – Tested casing at 1000 psi – Good – Pumped 25 bbls. of 73# mud P.O.H. – R.I.H. Shot perforations from 2450' to 2440' – P.O.H.- R.I.H.w/ Tbg. Tail at 2450' Estabilised break down at 1.5 bbls/min.@ 800 psi.Mixed and Pumped 203 cu/ft (178 sxs) class G cement Squeezed away 107 cu/ft.(94 sxs) Witnessed by W/ DOGGR - secured well
11-19-13	R.I.H. Tagged cement 2171' – Pumped 120 bbls, 73# mud – P.O.H. – Shot perforation from 210' to 200' – R.I.H. W/tbg. Tail at 210' mixed and pumped 209 cu/ft.(183 sxs) class G cement – cement returns from 8 5/8" & 13 3/8" csg. – cement to surface inside and outside – P.O.H.- Witnessed by T. Tyler– R.D.M.O.
11-25-13	Dug down around well and cut casing 5' below surface – Found cement low inside 10' and outside 20' – Secured well
12-03-13	Topped off casing's with 36 c.f.(31 sxs) class G cement- E. Tabor w/DOGGR witnessed
12-04-13	Surface tag and welding of I.D.Plate Witnessed by P.Kaufman - Backfilled well location - Job complete.

DOGGR
Received
FEB 04 2014

OG103 (6/97/GSR/5M)
Printed on recycled paper.

SUBMIT IN DUPLICATE

F

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

HISTORY OF OIL OR GAS WELL

Operator C.R.G. Properties, LTD Field Long Beach County Los Angeles
Well "NWLBU" 8-3 Sec. 13 T. 04S R. 13w sbB.&M.
A.P.I. No. 037-06496 Name Mick Beyer (Person submitting report) Title Operations Manager (President, Secretary, or Agent)
Date 12-12-13 (Month, day, year) Signature M. B
Address 2109 Gundry Ave. Signal Hill, Ca. 90755 Telephone Number 562 989-6100

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11-15-13	W/tbg. Tail at 3875' Mixed and pumped 212 cu/ft. (186 sxs) class G cement – P.O.H. Witnessed by T. Tyler w/DOGGR - Secured well.
11-18-13	R.I.H. Tagged cement plug at 2773' – Tested casing at 1000 psi – Good – Pumped 25 bbls. of 73# mud P.O.H. – R.I.H. Shot perforations from 2450' to 2440' – P.O.H.- R.I.H.w/ Tbg. Tail at 2450' Estabilised break down at 1.5 bbls/min.@ 800 psi.Mixed and Pumped 203 cu/ft (178 sxs) class G cement Squeezed away 107 cu/ft.(94 sxs) Witnessed by W/ DOGGR - secured well
11-19-13	R.I.H. Tagged cement 2171' – Pumped 120 bbls, 73# mud – P.O.H. – Shot perforation from 210' to 200' – R.I.H. W/tbg. Tail at 210' mixed and pumped 209 cu/ft.(183 sxs) class G cement – cement returns from 8 5/8" & 13 3/8" csg. – cement to surface inside and outside – P.O.H.- Witnessed by T. Tyler– R.D.M.O.
11-25-13	Dug down around well and cut casing 5' below surface – Found cement low inside 10' and outside 20' – Secured well
12-03-13	Topped off casing's with 36 c.f.(31 sxs) class G cement- E. Tabor w/DOGGR witnessed
12-04-13	Surface tag and welding of I.D.Plate Witnessed by P.Kaufman - Backfilled well location - Job complete.

DOGGR
Received–
FEB 04 2014

SUBMIT IN DUPLICATE

D ON OF OIL, GAS, AND GEOTHERMAL RESOUR(

T 114-0060 KMA 12/3/13

CEMENTING/PLUGGING MEMO

Operator CRG Properties Well No. "Nwlbu" 8-3
API No. 037-06496 Sec. 13 T. 04S R. 13W , S.B. B&M
Field Long Beach , County Los Angeles . On 12-4-13 ,
Mr. / Ms. J. Collender , representative of the supervisor, was present from 1115 to 1130 .

There were also present Mr. Tim Parker (Allenco)

Casing record of well: 13 3/8" cem 765', cp 200'; 8 5/8" cem 3986', drilled thru 3139', cp 2,440'; 5 ½" ld 3043'-5964', cp 4393',
perfs 4407-5827'. TD (present hole) 6540'. Plugged w/ cem 6540'-5964', 5878'-4067', 3875'-2773', 2450'-2171', 210'-6.5'.

The operations were performed for the purpose of Abandonment (1)

☒ The plugging/cementing operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____ ' are approved.

Hole size: 17 " fr. 0 ' to 765 ', 12 ¼ " to 3139 ' & 7 5/8 " to 6540 '

Casing				Cemented			Top of Fill		Squeezed Away	Final Pressure	Perforations
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			
8 5/8"	36#	0'	3,986'	11/18/13	tbg@ 2,450'	200 cf	2174'	2171'	114 cf	700 psi	2,440'-2,450'
13 3/8"	46#	0'	210'	11/19/13	tbg@200'	103 cf	0	29.5'	26 cf	--	200'-210'

Casing/tubing recovered: _____ " Shot/cut at _____ ', _____ ', _____ ' Pulled fr. _____ ';
_____ " Shot/cut at _____ ', _____ ', _____ ' Pulled fr. _____ '.

Junk (in hole): _____

Hole fluid (bailed to) at _____ '. Witnessed by _____

Mudding	Date	bbls	Displaced	Poured	Fill	Engineer
83/25	11/14/13	25	4067'		3,875'	C. L. Cullum
73/ 26	11/18/13	27	2,773'		2,318'	Z. Amilhussin
73/40	11/19/13	120	2,018'		1,971'	T. Tyler

Note (12) Class II 3M; 11/08/13; C. Welty C/O 5900' w/ 20,000# @ 1200 11/12/13 PK

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engineer	Depth	Wt/Sample	Date & Time	Engineer
11-13-13	247 cf	Tbg 5878'*	0900	WM Flores	4067'	4000#	11/14/13 0715	C.L.Cullum
11-15-13	212 cf	Tbg@ 3875'	0830-1045	T. Tyler	2,773'	2,000#	11/18/13 0715	Z. Amilhussin
11-18-13	210 cf	Tbg@ 2450'	1300	Z. Amilhussin	2171'	2,000#	11/19/13 0715	T. Tyler
11-19-13	73sx/84 cf	Tbg@200'	1425-1500	T. Tyler	29.5	---	----	-----
12/2/13	36 cf	Top 29.5	1030	E. Tabor	6.5'	visual	12/4/13 1115	J. Collender

* 6 stages with tbg raised from 5878' through 4313'

OGD1(1/(01/07)

Andrews, Kathleen@DOC

From: Moser, Ellen@DOC
Sent: Tuesday, November 12, 2013 12:53 PM
To: Andrews, Kathleen@DOC
Subject: FW: Well Abandonment Nwlbu 8-3

Mick wants a variance to start cementing at 5900'.

From: Mick Beyer [mailto:mbeyer@allencoca.com]
Sent: Tuesday, November 12, 2013 12:34 PM
To: Moser, Ellen@DOC
Subject: Well Abandonment Nwlbu 8-3

Ellen,

We tagged fill at 5842' cleaned out with water down to 5900' (we had no solid returns to surface, it seemed like cement steamers) we are hitting hard at this depth. Well history is showing cement plug at 5964' it seems we are hitting it at 5900'. We would like approval to start are cement plug at 5900'

Note; On well 9-4 we tagged hard at 9125' when clean out depth was 9151' DOGGR Allowed us to cement at 9125'
Note; On well 9-5 we tagged fill at 9410' cleaned out hard to 9420' when clean out depth was at 9454' DOGGR Allowed us to cement at 9420'

Sincerely,

Mick

Mick Beyer, Operations Manager
mbeyer@allencoca.com
AllenCo
2109 Gundry Avenue
Signal Hill, CA 90755
Phone: 562-989-6100
FAX: 562-989-6104
Cell: 310-505-9787
www.allenco-oilwellservice.com

Telecon w/M. Beyer – gravel-sized chunks of cement had been brought up for some time with well fluids when circulating. Then brought up chunks of cement. Fill at 5900' is hard, push on w/20K#. Okayed to cement. Allenco will use 8⅝" scraper to liner top, then circulate before placing mud. KMA 11/12/13.

11/14/13 Okayed change in program to place one plug from 3875' to 2800'. KMA

NATURAL RESOURCES AGENCY OF CALIFORNIA
EPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

No. T **114-0060**

REPORT ON OPERATIONS

Mr Mark Pender
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Cypress, California
January 24, 2014

Your operations at well **"Nwlbu" 8-3**, A.P.I. No. **037-06496**, Sec. **13**, T. **04S**, R. **13W**, **SB** B.&M., **Long Beach** field, in **Los Angeles** County, were witnessed on **11/8/2013**, by **Jack Collender**, a representative of the supervisor.

The operations were performed for the purpose of **plugging and abandonment**.

DECISION: **APPROVED**

NOTE: The required Class 112M blowout prevention equipment was inspected and approved on 12/4/2013.

DEFICIENCIES NOTED AND CORRECTED: NONE

KMA:dt

cc: Update

Tim Kustic
State Oil and Gas Supervisor

By: _____
For: Daniel J. Dudak, *District Deputy*

OG109 (Rev. 10/2011)

API No. 037-06496 DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES T

BLOWOUT PREVENTION EQUIPMENT MEMO

Operator C.R.G. Properties, LTD Well "NWLBU" 8-3 Sec. 13 T. 4S R. 13W
Field Long Beach County L.A. Spud Date

VISITS:	Date	Engineer	Time	Operator's Rep.	Title
1st	11/08/13	C. Welty	(1500 to 1530)		
2nd	& Quang Than, Dale Peterson		(to)		

Contractor Allenco Rig # 2 Contractor's Rep. & Title Derick Beyer, Driller
Casing record of well: memo

OPERATION: Testing (inspecting) the blowout prevention equipment and installation. Critical well? Y ☒ N ☐
DECISION: The blowout prevention equipment and its installation on the 8.625 " casing are approved.

Proposed Well Opns: Abandonment . MACP: psi
Hole size: " fr. ' to ', " to ' & " to '

REQUIRED BOPE CLASS: II3M C. Welty 11/8/13

CASING RECORD OF BOPE ANCHOR STRING					Cement Details	Top of Cement	
Size	Weight(s)	Grade(s)	Shoe at	CP at		Casing	Annulus

BOP STACK

API Symb.	Ram Size (in.)	Manufacturer	Model or Type	Vert. Bore Size (in.)	Press. Rtg.	Date Last Overhaul
Rd	2 7/8	Shaffer	Chasoy	7.125	5M	
Rd	cso	Shaffer	Chasoy	7.125	5M	

TEST DATA

Gal. to Close	Recov. Time (Min.)	Calc. GPM Output	psi Drop to Close	Secs. to Close	Test Date	Test Press.
1						
1						

ACTUATING SYSTEM

Accumulator Unit(s) Working Pressure 1,400 psi
Total Rated Pump Output gpm Fluid Level
Distance from Well Bore 30 ft. ok

	Accum. Manufacturer	Capacity	Precharge
1	Koomey type	20gal.	1000psi
2		gal.	psi

	CONTROL STATIONS	Elec.	Hyd.	Pneu.
	Manifold at accumulator unit		X	
	Remote at Driller's station			
	Other: hand pump			

	EMERG. BACKUP SYSTEM			Press.	Wkg.Fluid
	N_2 Cylinders	1	L= 51 "	2280psi	7 gal.
	Other:	2	L= 51 "	2280psi	7gal.
		3	L= "		gal.
		4	L= "		gal.
		5	L= "		gal.
		6	L= "		gal.
			TOTAL: 14		gal.

HOLE FLUID MONITORING EQUIPMENT	Alarm Type: Audible	Alarm Type: Visual	Class
Calibrated Mud Pit			A
Pit Level Indicator			B
Pump Stroke Counter			
Pit Level Recorder			
Flow Sensor			C
Mud Totalizer			
Calibrated Trip Tank			
Other:			

TOTAL: 2

AUXILIARY EQUIPMENT

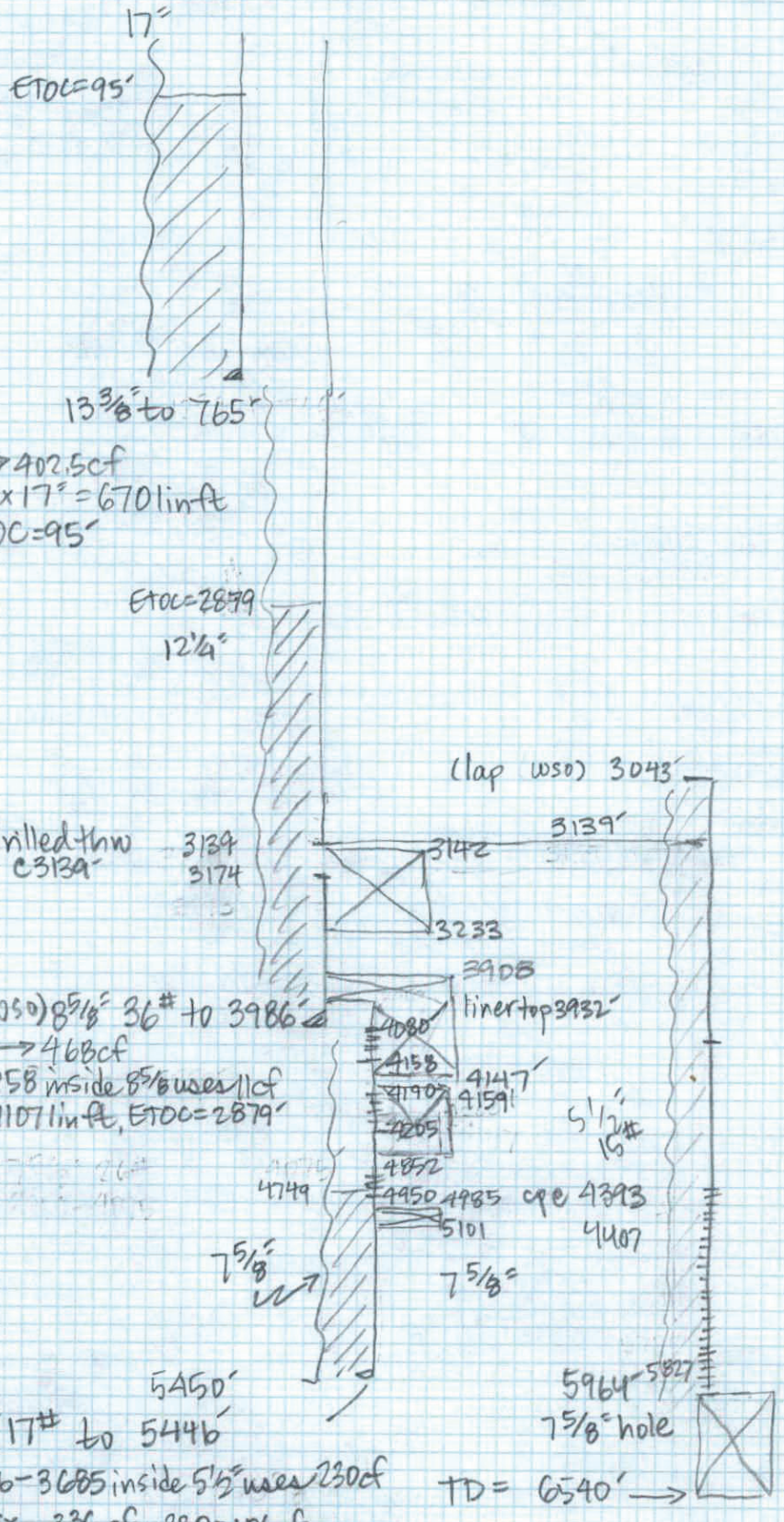
		No.	Size (in.)	Rated Press	Connections: Weld	Connections: Flange	Connections: Thread	Test Press.
	Fill-up Line							
x	Kill Line		2	5M				
x	Control Valve(s)	2		5M				
	Check Valve(s)							
	Aux. Pump Cnnct.							
	Choke Line							
	Control Valve(s)							
	Pressure Gauge							
	Adjstble Choke(s)							
	Bleed Line							
	Upper Kelly Cock							
	Lower Kelly Cock							
	Standpipe Valve							
	Stndpipe Pres. Gau.							
x	Pipe Safety Valve		2.88	5M				
	Internal Preventer							

Hole Fluid Type	Weight	Storage Pits (Type & Size)
Lease water.		

REMARKS AND DEFICIENCIES:

OGD9 (9/06)

037-06496
"NWlbu" 8-3



KMA
11-6-13

TOPS FORM 33101
MADE IN U. S. A.

,TURAL RESOURCES AGENCY OF CALIFOI
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630 - 4731

No. P 113-0596

Old	New
412	412
FIELD CODE	
03	03
AREA CODE	
00	--
POOL CODE	

PERMIT TO CONDUCT WELL OPERATIONS

CRITICAL WELL

Cypress, California
July 15, 2013

Mr Mark Pender, Agent
C.R.G. Properties, LTD (C0250)
149 S. Barrington Ave. #804
Los Angeles, CA 90049

Your proposal to **Abandon** well **"Nwlbu" 8-3**, A.P.I. No. **037-06496**, Section **13**, T. **04S**, R. **13W**, **SB** B. & M., **Long Beach** field, **Northwest Extension** area, **Brown** pool, **Los Angeles** County, dated **7/10/2013**, received **7/10/2013** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
   a. Class **II3M,** with hydraulic controls, during **abandonment** operations.
   b. A **3M lubricator** for **wireline** operations.
2. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
3. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of **72** lbs/cu.ft and a minimum gel shear strength of **25** lbs./100 sq. ft.
5. Prior to shooting any perforations for braidenhead squeezes, a pressure test of the **8-5/8"** casing shall be made to ensure casing integrity. If casing integrity is not demonstrated, a retainer or packer is required for squeeze operations.
6. The well location shall be surveyed prior to burying the well, and the survey shall be filed with this office. Latitude and longitude shall be in decimal degrees, to six decimal places, in NAD83.
7. All casing must be removed from between 5' and 10' below ground level.
8. Well site restoration shall be completed within 60 days following the completion of plugging operations.
9. No program changes are made without prior Division approval.
10. **THIS DIVISION SHALL BE NOTIFIED TO:**
    a. Inspect the installed blowout prevention equipment prior to commencing **downhole** operations.
    b. Witness the clean-out depth at **6540'**.

(Continued on page 2)

No Bond Required
cc: Update
EDP
AllenCo.
DOGGR – Dist. 1 (Cypress)

Tim Kustic
State Oil and Gas Supervisor

By _____
For: Daniel J. Dudak, *District Deputy*

Engineer Ellen Plaza Moser
Office (714) 816-6847

EPM/epm

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

c. Witness the placing, location and hardness of the cement plug from **6540'** to **4193'**.
d. Witness the mudding operations.
e. Witness the placing, location and hardness of the cement plug from **3875'** to **3675'**.
f. Witness the placing, location and hardness of the cement plug from **3043'** to **2800'**.
g. Witness a pressure test of the **8-5/8"** casing.
h. Witness the cement squeeze through the **perforations** at **2440'** through a retainer or packer (if casing integrity is not demonstrated).
i. Witness the placing, location and hardness of the cement plug from **2450'** to **2190'**.
j. Witness the cement squeeze through the **perforations** at **210'** through a retainer or packer (if casing integrity is not demonstrated).
k. Witness the placing, location and hardness of the cement plug from **210'** to **surface'**, including all annular spaces.
l. Inspect the restored well site.

NOTE:

1. Upon completion of the proposed work, a History of Oil or Gas Well (form OG103) shall be submitted to this office.
2. The well abandonment history (History of Oil or Gas Well - form OG103), must include a description of the removal or abandonment of the well flowline and any associated piping.
3. Hydrogen sulfide gas (H_2S) is known to be present in this area, adequate safety precautions shall be taken prior to and during well operations.
4. The operator shall isolate the following zones:
   a. **Base of the Freshwater Sand at 2260'.**
   b. **Top of the Upper Gas Zone at 2400'.**
   c. **Top of the Wilbur Zone at 3000'.**
   d. **Top of the Alamitos Zone at 3875'.**
   e. **Top of the Brown Zone at 4680'.**

   Failure to achieve adequate zonal isolation may have negative impacts on current and future operations. In addition, failure to achieve adequate zonal isolation will also be noted on the Report of Operations (OG 109).

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

OIL, GAS & GEOTHERMAL

API 037-0596

FOR DIVISION USE ONLY			
	Forms		
Bond	OGD114	OGD121	
BB	7/13/13	7/10/13	

NOTICE OF INTENTION TO ABANDON / RE-ABANDON WELL

Detailed instructions can be found at: www.conservation.ca.gov/dog

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon ☒ / re-abandon ☐ (Check one) well "Nwlbu" 8-3, API No. 037-06496,

Sec. 13, T. 4s, R. 13w, S.B. B.&M., Long Beach Field, Los Angeles County.

The complete casing record of the well (present hole), including plugs and perforations, is as follows: (Attach wellbore schematics diagram also.)
See Attachment

The total depth is: 6540 feet. The effective depth is: 5964 feet.

Present completion zone(s): see attachment (Name). Present zone pressure: N/A psi.

Oil or gas shows: see attachment (Name and depth) feet. Depth to base of fresh water: 2260 feet.

Top of uppermost hydrocarbon zone (which may be behind unperforated casing): see attachment (Depth of interval) feet.

Is this a critical well as defined in the California Code of Regulations, Title 14, Section 1720(a) (see next page)? Yes☒ No☐

The proposed work is as follows: (A complete program is preferred and may be attached.)
See Attachment.

The Division must be notified immediately of changes to the proposed operations. Failure to provide a true and accurate representation of the well and proposed operations may cause rescission of the permit.

Name of Operator			
C.R.G. Properties, Ltd			
Address: 2109 GUNDRY AVE.		City/State: SIGNAL HILL	Zip Code: 90755
Name of Person Filing Notice: MICK BEYER	Telephone Number: 562 989-6100	Signature: M. B	Date: 07-10-13
Individual to contact for technical questions: MICK BEYER	Telephone Number: 310 505-9787	E-Mail Address: Mbeyer@allencoca.com	

This notice must be filed, and approval given, before plugging and abandonment operations begin. If operations have not commenced within one year of the Division's receipt of the notice, this notice will be considered cancelled.

DOGGR Received JUL 10 2013

to Blow 7/10/13

OG108 (1/09)

CRITICAL WELL DEFINITION

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

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

This form may be printed from the DOGGR website at www.conservation.ca.gov/dog/

1967 Post-Wintow

13 3/8 45.97#
cem 765'
350sx
17" hole

350sx x 1.18 =
413 cf
4" in csg .8812 cf/lf = 3.52 cf/lf
409 cf annulus

.6006 csg/hole
.8817 cf/lf

ETOC 84'

765'

CP 5'
200' 8 5/8
200'

2200
P+SQ
2450
-BPW 2260'
-UHZ 2400'

ETOC 2865

8 5/8" 32#
cem 3986
400 sx / 472 cf
ETOC: 2843'
12 1/4 BIT
472 cf - 9.3 = 463 cf
cem in csg 28 lf
= 9 cf
463 cf / .4127 = 1121'

.3339 cf/lf
csg/hole = .4127

drilled thru 3139'

3986' WSO

mud

2800
P+SQ
3000
-UW 3000'

3043' WSO

mud

3675
P+SQ
mud
3875
-TA 3875'
4193'

15.5#
5 1/2" / 7 5/8" hole
cem 5964 - 3043
743 cf

perf 4393 WSO

4393' CP

Perfs

-TB 4680'

7 5/8" 26.4#

5827'

5964'

TD 6540'

cp

TOPS
35500

EXHIBIT A – Attachment II (continued)
WELL CONDITIONS AND ABANDONMENT SPECIFICATIONS

C.R.G. Properties, Ltd. Well "Nwlbu" 8-3 (037-06496), Sec.13, Twn. 4S, Rge. 13W,S.B. B&M, Long Beach Oil Field.

According to Division records, the present condition of the well is as follows:

1. **Location:** West of Pacific Place just North of the 710 freeway on ramp. See map Exhibit A - Attachment II
2. **Accessibility:**
3. **Status:** Idle deserted
4. **Total Depth:** 6540' **Effective Depth:** 5964' **Elevation of Kelly Bushing (KB) above sea level:** 60'
5. **Casing: 13-3/8" 45.97#** casing cemented 765' with estimated top cement behind pipe at 84'+/-; **8-5/8" 36#** casing cemented 3986' with estimated top of cement behind pipe at 2865' +/-, drilled thru 3139'; **5-1/2" 15.5#** ld 3043' – 5964', cp 4393, estimated top of cement behind pipe at 3043, perforated from 4458' to 5827'.
6. **Tubing:** Unknown **Rods:** Unknown
7. **Base of Fresh Water (BFW):** 2260'
8. **Producing Zone(s):** Alamitos
9. **Hole Fluid:** Unknown
10. **Junk:** Unknown
11. **Plugs:** 6540' to 5964'.
12. **Comments:** Top of Brown zone 4680', top of Alamitos zone 3875', top of Wilbur zone 3000', and top of Upper Gas zone 2400'.

The following operations are necessary to plug and abandon the well:

1. A Notice of Intention to Abandon (form OG 108) is to be filed with this Division at least 10 days prior to commencing work. Work is not to begin until a Permit to Conduct Well Operations (Form OG 111) has been issued. All well operations are to be witnessed by a representative of this Division as directed in the Permit to Conduct Well Operations.

2. The abandonment contractor will review job safety programs (JSP) with all crewmembers prior to work startup and/or if conditions change. Monitor well for any leaking gas. Position gas monitors and ventilation fans, if warranted before moving in any other equipment or personnel.

3. Adequate blowout prevention equipment, as defined in Division's publication No. M07, shall be installed and maintained in operating condition at all times. The minimum requirements are:

   a. A 3M rod Reagan or equivalent BOPE for pulling rods and pump operations.
   b. A Class II3M, with hydraulic controls, during abandonment operations.
   c. A 3M lubricator for wire line operations.

4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of 72 lbs/cu ft and a minimum gel shear strength of 25 lbs. /100 sq. ft. All cement plugs are to have a minimum compressive strength of 1000 psi and maximum liquid permeability of 0.1 md. All depths noted are from the KB.

5. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.

EXHIBIT A – Attachment II (continued)
WELL CONDITIONS AND ABANDONMENT SPECIFICATIONS

6. Kill well. Install and function test rod Reagan or equivalent BOPE. Pull out of the hole with rods and pump.
7. Remove rod Reagan. Install and function test Class II3M BOPE (function test BOPE each day thereafter).
8. Pull out all production tubing.
9. Use appropriate combination tools to clean out to 6540'.
10. Run in scraper. Scrape the 8 5/8" and the 5 ½" casings.
11. Run in hole with tubing (if tag high, clean out fill to 6540').
12. The well shall be plugged with cement from 6540' to 4193'
13. The well shall be plugged with cement from 3875' to 3675'.
14. The well shall be plugged with cement from 3043' to 2800'
15. Prior to shooting any perforations for braidenhead squeezes, a pressure test of the casing shall be made to ensure casing integrity. If casing integrity is not demonstrated, a retainer or packer is required for squeeze operations.
16. The 8-5/8" casing shall be perforated from 2440 to 2450'. Get an injection rate or a breakdown.
17. Sufficient cement shall be squeezed into the perforations to fill to 2190' outside the 8-5/8" casing.
18. The well shall be plugged with cement from 2450' to 2190'.
19. The 8-5/8" casing shall be perforated from 210 to 200'. Get an injection rate or a breakdown.
20. Sufficient cement shall be squeezed into the perforations to fill to surface.
21. The well shall be plugged with cement from 210' to surface.
22. The 13-3/8" X 17" annulus shall be plug with cement from 84' to surface.
23. All casing must be removed from between 5' and 10' below ground level.
24. A steel plate, at least as thick as the outer well casing and bearing the last five digits of the API number, shall be tack welded around the top of the outer casing.
25. Cellar, production pads and pipelines shall be removed and the resulting excavations filled with earth and compacted properly to prevent settling.
26. Remaining buried pipelines that cannot be removed shall be purged with clean water. Abandon line by pumping approved cement slurry mixture, weld steel cap on both ends of the line and bury.

EXHIBIT A – Attachment II (continued)
WELL CONDITIONS AND ABANDONMENT SPECIFICATIONS

27. All equipment, casing, or junk that requires removal to implement restoration to lawful conditions shall be removed and properly disposed of in accordance with environmental laws and in accordance with instructions from the Division of Oil and Gas. All liquid wastes shall be removed and properly disposed.

28. A well History (Form OG 103) shall be filed in duplicate with the Division within 60 days of completing the work and must include a description of the removal or abandonment of the well flow line and any associated piping.

DEPARTMENT OF CONSERVATION
Division of Oil, Gas, and Geothermal Resources
5816 Corporate Avenue, Suite 200
Cypress, California 90630
Telephone (714) 816-6847
Facsimile (714) 816-6853

STATE OF CALIFORNIA

NATURAL RESOURCES AGENCY

DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REVISED

FORMAL ORDER TO: PLUG AND ABANDON WELLS & RESTORE LEASE CONDITIONS

NO. 1032

Dated: October 18, 2012

Operator: C.R.G. Properties, Ltd. (C0250)

BY

Tim Kustic

STATE OIL AND GAS SUPERVISOR

RESOURCES AGENCY OF CALIFORNI/
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF PROPERTY AND WELL TRANSFER

Field or County		District
Long Beach		District 1 (Cypress, California)
Former owner		Date
Pacific Energy Res.	P0252	July 26, 2000

Well Name	API Number	Section Township Range
"Nwlbu" 5-2	037-00397	Sec. 13-4S-13W
"Nwlbu" 5-3	037-09796	Sec. 13-4S-13W
"Nwlbu" 5-4	037-09797	Sec. 13-4S-13W
"Nwlbu" 8-3	037-06496	Sec. 13-4S-13W
"Nwlbu" 8-4	037-06415	Sec. 13-4S-13W
"Nwlbu" 8-7	037-22512	Sec. 13-4S-13W
"Nwlbu" 9-2	037-13525	Sec. 13-4S-13W
"Nwlbu" 9-3	037-09791	Sec. 13-4S-13W
"Nwlbu" 9-4	037-00392	Sec. 13-4S-13W
"Nwlbu" 9-5	037-00142	Sec. 13-4S-13W
"Nwlbu" 9-6	037-00393	Sec. 13-4S-13W

Description of the land upon which the well (s) is (are) located.
See above

Date of transfer	New owner		Type of organization
May 9, 2000		C.R.G. Properties, Ltd. C0250	Corp./Ltd.
	Address:	15332 Antioch Street, Suite 338 Pacific Palisades, CA 90272	Telephone (310) 808-9071
Reported by	OG34A received 6/2/2000 signed by both parties		
Confirmed by	Same as above		
New operator new status **PA**	Designation of Agent Mark Pender		
Old operator new status **PA**	Remarks See operator file for C.R.G. Properties, Ltd. for details		

OPERATOR STATUS ABBREVIATIONS
PA – Producing Active
NPA- No potential, Active
PI- Potential Inactive
NPI-No potential, Inactive
Ab-Abandoned or No More Wells

cc: Update; Envir Dsk; File
Conservation Committee
Harold W. Bertholf, Inc.
LA County Assessor
Sacramento EDP
Cypress EDP

Deputy Supervisor
R. K. Baker

Signature
Floyd M. Leeson
Operations Engineer

FORM AND RECORD CHECK LIST

Form or Record	Initials	Date	Form or Record	Initials	Date
Form OGD121	N/A		Map and Book		
Operator Card			Notice cancellations	N/A	
Well Records	SR	7/27/2000	Bond Status BB/FML	SR	7/26/2000
Log Records	SR	7/31/2000	EDP	SR	7/27/2000
Production Repts	N/A		Data Base	SR	7/27/2000

OGD156 12-2-98 Cypress

WELL TRANSFER NOTICE

EFFEC MAY 9, 1994, PETRO RESOURCES, INC.
TRANS LONG BEACH NWLBU WELLS
TO PACIFIC ENERGY ~~CORP~~ Resources
SEE OGD156 DATED 5-13-94

FORM OGD156 (5-80)

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

REPORT OF PROPERTY AND WELL TRANSFER

Field or county	District
Long Beach	1
Former owner	**Date**
Sun Exploration & Production Co.	June 15, 1983

Name and location of well(s)

Sec. 13-4S-13W S.B.B.&M.

NWLBU 5-1 (037-09795)	NWLBU 8-1 (037-09792)	NWLBU 9-3 (037-09791)
NWLBU 5-2 (037-00397)	NWLBU 8-2 (037-09793)	NWLBU 9-4 (037-00392)
NWLBU 5-3 (037-09796)	NWLBU 8-3 (037-06496)	NWLBU 9-5 (037-00142)
NWLBU 5-4 (037-09797)	NWLBU 8-4 (037-06415)	NWLBU 9-6 (037-00393)
NWLBU 6-1 (037-09788)	NWLBU 8-7 (037-22512)	
NWLBU 6-2 (037-09789)	NWLBU 9-2 (037-13525)	

Description of the land upon which the well(s) is (are) located

Date of transfer, sale, assignment, conveyance, or exchange	New owner	Type of organization
May 1, 1983	Petro Resources, Inc. Address: 4200 Easton Drive, Suite 16 Bakersfield, CA 94309	Corp. Telephone No. 805/323-4118

Reported by
Letter from Sun Exploration & Production Co. dated 5-16-83.

Confirmed by
Letter form Petro Resources, Inc., dated 5-18-83.

New operator new status (status abbreviation)	Request designation of agent
PA	Joe D. Rose, same address.
Old operator new status (status abbreviation)	**Remarks**
PA	

Deputy Supervisor	Signature
V. F. Gaede	Richard L. Mansell

OPERATOR STATUS ABBREVIATIONS

PA – Producing Active
NPA – No Potential, Active
PI – Potential Inactive
NPI – No Potential, Inactive
Ab – Abandoned or No More Wells

FORM AND RECORD CHECK LIST

Form or record	Initials	Date	Form or record	Initials	Date
Form OGD121	CP	7-7-83	Map and book	137 ✓	7/12/83
Form OGD140	NONE		Notice to be cancelled		
New well cards	CP	7-7-83	Bond status		
Well records	CP	7-7-83	EDP files	Update	
Electric logs	CP	7-7-83	Conservation Committee		
Production reports			L. A. Assessors		

Name change from Sun Oil Co. to SUN EXPLORATION & PRODUCTION CO.

1-1-82, Form 156 dated 1-21-82. See ownership file.

FORM 137

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Long Beach, California

Oct. 4, 1979

Mr. L. B. Carroll, Jr., Agent
Sun Oil Co.
23928 Lyons Ave.
Newhall, CA 91321

DEAR SIR:

Your request dated March 19, 1979, relative to change in designation of well(s) in Sec. 13, T. 4S, R 13W, S.B B. & M., Long Beach field, Los Angeles County, District No. 1, has been received; and in accordance with Section 3203, Public Resources Code, reading in part as follows:

> "• • • The number or designation by which any well heretofore drilled has been known, and the number or designation specified for any well in a notice filed as required by Section 3203, shall not be changed without first obtaining a written consent of the Supervisor."

the proposed change in designation is hereby authorized as follows:

Old Designation		API	New Designation
"Oil Operators"	1	037-09792 (See)	NWLBU 8-1
" "	2	037-09793	NWLBU 8-2
" "	3	037-06496	NWLBU 8-3
" "	4	037-06415	NWLBU 8-4
"Pool"	1	037-09795	NWLBU 5-1
"	2	037-00397	NWLBU 5-2
"	3	037-09796	NWLBU 5-3
"	4	037-09797	NWLBU 5-4
"Amebco"	1	037-09788	NWLBU 6-1
"	2	037-09789	NWLBU 6-2
"Flood Control"	2	037-13525	NWLBU 9-2
" "	3	037-09791	NWLBU 9-3
" "	4	037-00392	NWLBU 9-4
" "	5	037-00142	NWLBU 9-5
" "	6	037-00393	NWLBU 9-6

map '37 & Book pmc 11/2/79

M. G. Mefferd

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

RWS:sc

cc: Update Center
EDP
Conservation Committee

By Richard W. Stoble for
Acting *Deputy Supervisor*
R. A. Ybarra

57998-705 11-71 2M ⓘ OSP

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

REPORT OF PROPERTY AND WELL TRANSFER

Field or county	District
Long Beach	1
Former owner	**Date**
General Exploration Co.	February 15, 1979

Name and location of well(s)

Sec. 11-4S-13W

"Dominguez" 2-10 (037-11859)

Sec. 13-4S-13W

"Amebco" 1 (037-09788)
"Amebco" 2 (037-09789)
"Flood Control" 2 (037-13525)
"Flood Control" 3 (037-09791)
"Flood Control" 4 (037-00392)
"Flood Control" 5 (037-00142)
"Flood Control" 6 (037-00393)
"Oil Operators" 1 (037-09792)
"Oil Operators" 2 (037-09793)
"Oil Operators" 3 (037-06496)
"Oil Operators" 4 (037-06415)
"Pool" 1 (037-09795)
"Pool" 2 (037-00397)
"Pool" 3 (037-09796)
"Pool" 4 (037-09797)

Description of the land upon which the well(s) is (are) located

Sec. 13-4S-13W

Sec. 14-4S-13W

"Dominguez" 1 (037-11858)

Date of transfer, sale, assignment, conveyance, or exchange	New owner	Type of organization
Dec. 1, 1978	Sun Oil Company	Corporation
	Address: 23928 Lyons Avenue, Newhall, CA 91321	Telephone No

Reported by: Former operator

Confirmed by: New operator

New operator new status (status abbreviation)	Request designation of agent
PA	
Old operator new status (status abbreviation)	**Remarks**
AB	

OPERATOR STATUS ABBREVIATIONS

PA – Producing Active
NPA – No Potential, Active
PI – Potential Inactive
NPI – No Potential, Inactive
Ab – Abandoned or No More Wells

Deputy Supervisor: for M. B. Albright

Signature: Eleanor Richie

FORM AND RECORD CHECK LIST

Form or record	Initials	Date	Form or record	Initials	Date
Form OGD121			Map and book	FR	2-16-79
Form OGD148			Notice to be posted		
New well cards			Bond status		
Well records		✓	EDP cards		
Electric logs			ara		
Production reports			cc: EDP Update, Conservation Committee, Update Center		

OGD156 (12-77 GSR1-250)

DIVISION OF OIL AND GAS

CHECK T - RECORDS RECEIVED AND WELL STATUS

Company GENERAL EXPLORATION Co Well No. "OIL OPERATORS" 3

API No. 037-06496 Sec. 13, T. 4S, R. 13W, SB B.&M.

County L A Field LONG BEACH

RECORDS RECEIVED	DATE
Well Summary (Form OG100)	
History (Form OG103)	5-27-77
Core Record (Form OG101)	
Directional Survey	
Sidewall Samples	
Other	
Date final records received	
Electric logs:	

STATUS		STATUS	
Producing - Oil	X	Water Disposal	
Idle - Oil		Water Flood	
Abandoned - Oil		Steam Flood	
Drilling - Idle		Fire Flood	
Abandoned - Dry Hole		Air Injection	
Producing - Gas		Gas Injection	
Idle - Gas		CO_2 Injection	
Abandoned - Gas		LPG Injection	
Gas-Open to Oil Zone		Observation	
Water Flood Source			

DATE 4-24-77

RECOMPLETED

REMARKS

ENGINEER'S CHECK LIST

1. Summary, History, & Core record (dupl.) ✓
2. Electric Log
3. Operator's Name
4. Signature
5. Well Designation
6. Location
7. Elevation
8. Notices
9. "T" Reports
10. Casing Record
11. Plugs
12. Surface Inspection
13. Production
14. E Well on Prod. Dir. Sur.

CLERICAL CHECK LIST

1. Location change ____ (F-OGD165)
2. Elevation change ____ (F-OGD165)
3. Form OGD121
4. Form OG159 (Final Letter)
5. Form OGD150b (Release of Bond)
6. Duplicate logs to archives
7. Notice of Records due (F-OGD170)

sent to LB Blueprint 6-3-77

BB

RECORDS NOT APPROVED

Reason:

RECORDS APPROVED RC

RELEASE BOND

Date Eligible 5-27-77

(Use date last needed records were received.)

MAP AND MAP BOOK NC

LONG BEACH OFFICE - USE REVERSE SIDE

OGD2 (3-77-GSR1-4M)

FORM 103 SUBMIT IN DUPLICATE 62802-705 5-72 20M ② OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR GENERAL EXPLORATION CO. FIELD NORTH LONG BEACH

~~037-06496~~ (037-06496)

Well No. OIL OPERATORS 3, Sec. 13, T. 4S, R. 13W, SB B. & M.

Date 5-25, 19 77 Signed Robert Graves
Production Superintendent

4021 N. PACIFIC LONG BEACH Title 213-636-1629
(Address) (Telephone Number) (President, Secretary or Agent)

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

Date	
4-16-77	Rigged up well servicing unit. Pulled rods & tubing. Ran bailer and tagged fill at 5870'. Installed BOP.
4-17-77	Ran Baker scraper and brushes in hole. Tested tubing to 5000psi. Rigged up Dresser Atlas. Ran correlation log and perforated 2 hpf as follows: 4740'-4765'; 4775' - 4707'; 4792' - 4810'.
4-18-77	Ran scraper through new perfs. Ran wash tool with retrievomatic packer to top of liner.
4-19-77	Washed perfs with acid mixture A. 10 gal/ft 15% BJ One shot (15% solvent) B. 15 gal/ft 12-3 4CL-HF One shot (10% Solvent) C. 10 gal/ft #1 Diesel Fuel containing 10% EGMBE Mutual Solvent
4-20-77	Continued washing perfs. Surged perfs with wash tool, pulled out, ran in hole with suction washer.
4-21-77	Suction washed perfs. Ran bailer, tagged fill at 5849!
4-22-77	Ran tubing and rods. Put well on production.
4-23-77	Well did not pump up.
4-24-77	Pulled rods and pump. Barrel unscrewed, ran new pump. Put well back on production.
	32.2 BOPD 25.7 BWPD 45.1% CUT

RECEIVED
MAY 27 12 45 PM '77
DIV. OF OIL AND GAS
LONG BEACH, CA.

FORM 103

SUBMIT IN DUPLICATE

62802-705 5-72 20M ③ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR GENERAL EXPLORATION CO. FIELD NORTH LONG BEACH

Well No. OIL OPERATORS #3, Sec. 13, T. 4S, R. 13W, SB B. & M.

Date 5-25, 1977 Signed Robert Graves

4021 N. PACIFIC 213-636-1629 Title Production Superintendent
(Address) LONG BEACH (Telephone Number) (President, Secretary or Agent)

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

Date

OIL OPERATORS 3 CONTINUED

Well condition at completion of work:

TD 1st hole; 5450': TD 2nd hole 5833' (redrilled from 3142' through 8 5/8" casing window 3139' - 3174'); TD 3rd hole, 6540' (redrilled from cem plug 5094')

Casing Detail:
13-3/8" C 765'
8-5/8" C 3139'
5-1/2" C 5964', top 3043' (lap wso), CP 4393'

Perfs 4394-95 wsd
4407'-4444'; 4458' - 4498'; 4563' - 4616';
4740'-4765'; 4775' - 4787'; 4792' - 4810';
5397'-5430'; 5692' - 5707'; 5711' - 5728';
5733'-5752'; 5794' - 5808'; 5812' - 5827'

RECEIVED
MAY 27 12 45 PM '77
DIV. OF OIL AND GAS
LONG BEACH, CA.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 176-432

Mr. R. L. Graves, Agent
GENERAL EXPLORATION CO.
4021 N. Pacific Place
Long Beach, CA 90806

Long Beach, Calif.
June 17, 1976

DEAR SIR:

Your proposal to rework Well No. (037-06496) "Oil Operators" 3, Section 13, T. 4S, R. 13W, S.B. B. & M., Long Beach Field, Los Angeles County, dated 4/15/76, received 6/15/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment with a minimum 2000 psi working pressure shall be installed and maintained in operating condition during all stages of perforating.

2. Well records, under Sec. 3215 of the Public Resources Code, are received 60 days after recompletion of the well.

RFC:dr

Blanket Bond

5/25/77
Graves/Crowder
Work done history
will be filed

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

By M.B. Allred, Deputy

25476-705 7-74 50M ①D OSP
OG 111

STATE OF CALIFORNIA

DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Long Beach, California May 4, 1976

Mr. Robert L. Graves, Agent
General Exploration Co.
4021 N. Pacific Place
Long Beach, CA 90806

Gentlemen:
Dear Sir:

I have received your ~~notice~~ dated notices dated April 15, 1976, of

notice of intention to rework Well Nos "Pool" 2 & "Oil Operators" 3

Sec. 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach field.

Your notices to rework cannot be considered until a surety bond in the sum of $5,000.00 has been filed for each well. Operations should not be started until the approval of this Division has been received. This will ensure that you have notice of our requirements.

The notices are being returned to you for signatures. Please return these signed notices with the bond.

HAROLD W. BERTHOLF
~~[illegible]~~
State Oil and Gas Supervisor

By M. B. Arwright
Deputy Supervisor

ag
Enc.
(2nd request 6-3-76)

OG113 (12-73-GSR1-1M)

FORM 107

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

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

Long Beach Calif. April 15 1976

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. "Oil Operators" 3
(Cross out unnecessary words)

Lease, Sec. 13, T. 4S, R. 13 W, SB B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. - 6540' PBTD - 5964'

2. Complete casing record, including plugs:

13 3/8" c 765'
8 5/8" c 3139' (Milled for Window)
5 1/2", 15.5#, J-55 c 3043' to 5964'
Perfs 4394-95 (WSO); 4407-4444'; 4458-4498'; 4562-4616';
5397'-5430'; 5692'-5707'; 5711'-5728'; 5733'-5752';
5794'-5808'; 5812-5827'

3. Last produced. 4/15/76 (Date) 9.2 (Oil, B/D) 14.9 (Water, B/D) — (Gas, Mcf/D)

The proposed work is as follows:

1. Pull Pump, Rods, & Tubing
2. Perforate following intervals
   4740'-4765'
   4775'-4787'
   4792'-4810'
3. Return well to production

Remarks

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			B	✓	✓

4821 Pacific Place
(Address) Long Beach
213-424-8025
(Telephone No.)

General Exploration Co
(Name of Operator)

By Robert Graves

48086-705 11-70 15M OSP

RECEIVED
JUN 15 12 10 PM '76
DIV. OF OIL AND GAS
LONG BEACH, CA.

RECEIVED
MAY 4 11 21 AM '76
DIV. OF OIL AND GAS
LONG BEACH, CA.

WORK PERFORMED:

Drill_____ Redrill_____ Deepen_____

Plug_____ Alter casing ✓

Water flood_____ Water disposal_____

Abandon_____

Other_____

STATUS: (Date)

Producing_____

Recomp. prod. ✓ 6-13-68

Water flood_____

Water disposal_____

Abandoned_____

Other_____

MAP AND BOOK NC

RECORDS FILED & DATE: Clerk Lee

Summary (dup.)_____

Log & Core (dup.)_____

History (dup.) 7/3/68 ✓

E-log_____

Radio log_____

D. Survey_____

Other_____

(Check records for signature and correct name of operator or well, S.T.R. and field.)

Location_____ Notice states_____

Elevation_____ Notice states_____

Production Reports_____

(If production reports not received, make notation and inform Sr. Steno. when rec'd.)

If stimulation or disposal well:
Form 121_____ Folder_____

RECORDS & REQUIREMENTS CHECKED: Eng. WA

Surface inspection —

Data needed none Clerk:

Request records — F 170__

Correct records — F 165__
(Specify) 165A__

CARDS NC

BOND: No Bond required

Hold__ Reason_____

Release__ Date elig._____ F 150b__

End premium year_____
Release requested_____ (Check)
Bond superseded_____ (one)
Well abandoned_____

FINAL LETTER_____ F 159__
and
FILE CLEARED_____ F 121__

Form 19-A

FORM 103 SUBMIT IN DUPLICATE Δ OSP 18

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR General Exploration Co. of Calif. FIELD Long Beach

Well No. "Oil Operators" 3, Sec. 13, T. 4S, R. 13W, SB B. & M.

Date July 2, 1968 Signed R. S. Ballantyne, Jr.

417 S. Hill Street
Los Angeles, 90013 628-2156 Title Vice President

(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 1968	
4/30	Pumped 34 bbl. net 24.3° oil and 2 bbl. water with 60 Mcf gas.
5/1	Blew down gas off well. Moved in production unit and pulled rods and tubing. Ran bailer and found fill at 4875'. Bailed sticky mud to 5890'. Installed B.O.P.E.
5/2	With bailer found fluid level at 3030' and bottom at 5890'. Pumped 100 bbl. salt water into casing - equivalent to 1700' inside the 8-5/8" casing. McCullough jet perforated (omega jets) three holes per foot 5827-5812' and 5808-5794' sticking the second gun. While working gun loose, fluid surfaced and pressure built up to 900# on lubricator before recovering gun. Closed off preventor, removed lubricator and tubing stripper, and installed blank flange on top of preventor. Installed needle bean in flow line from 2" outlet in casing head. Flowed 27 net bbl. oil in 19 hrs. on 14/64" bean, 640 Mcfd. 860#.
5/3	840 Mcf, 770#, 15/64", Laid down tubing and rods. Moved out pulling unit.
5/4-6/9	Well flowed gas with occasional slugs of oil which increased in volume as the pressure declined. The well was practically dead 6/9 and salt water was pumped into the well. During the interval from 5/2 to 6/9 the well produced 235 net bbl. of 25.0° oil and 17,000 Mcf. gas. There was no appreciable cut.
6/10-11	Pumped salt water into well at intervals. Well dead.
6/12-13	Moved in production unit. Rigged up bailing gate above B.O.P.E. Continued pumping water into casing as required to keep hole nearly full throughout this operation. Ran bailer and located fill at 5885'. Rigged up lubricator and McCullough reperforated two holes per foot: 5752-5733', 5728-5712' and 5707-5692', and perforated three holes per foot: 5430-5397'. Omega jets in 4" steel carrier were used throughout. Ran pump on 2-7/8" tubing to 4312' with gas anchor extending to 4348'. Ran rods. Moved out unit.
6/13	Well pumped water and 50 bbl. oil in 16 hrs with casing pressure building to 90#.
6/17	Pumped 29 bbl. oil and 26 bbl. water, 20#/300-540#.
6/22	Pumped 11 bbl. oil and 8 bbl. water, 20#/120-130#, 315 Mcf.
6/27	Pumped 22 bbl. oil and 6 bbl. water, 20#/110-120#, 296 Mcf.

DIVISION OF OIL AND GAS
RECEIVED
JUL 3 1968
INGLEWOOD, CALIFORNIA

WELL CONDITION AT COMPLETION OF WORK:

TD 1st hole 5450', TD 2nd hole 5833' (redrilled from 3142' through 8-5/8" casing window 3139-3174'), TD 3rd hole 6540' (redrilled from cem. plug 5094').

CASING CONDITION:
13-3/8" C 765'
8-5/8" C 3139'
5-1/2" C 5964', top 3043' (lap WSO), CP 4393'. Perfs. 4393-4394' (WSO), 4407-4444', 4458-4498', 4562-4616', 5397-5430', 5692-5707', 5711-5728',

FORM 103 SUBMIT IN DUPLICATE Δ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR General Exploration Co. of Cal. FIELD Long Beach

Well No. "Oil Operators" 3, Sec. 13, T. 4S, R. 13W, SB B. & M.

Date July 2, 1968 Signed R. S. Ballantyne, Jr.

417 S. Hill Street
Los Angeles, 90013 628-2156 Title Vice President

(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

5733-5752', 5794-5808' and 5812-5827'. Plug 5964-5922' w/cem. and 5922-5890' w/sand.

Sidetracked:
8-5/8" C 3986', top 3174'. Plug 3174' (and open hole up to 3142')
5-1/2" C 5446', top 3928' (lap WSO). Bad 4195 and 5107', plgd.
Perf. & plgd. 4080-4158', 4190-4205', 4852-4950', 5140-5180', 5190-5200' and 5306-5355'. Plug 3928'.

DIVISION OF OIL AND
RECEIVED
JUL 3 1968
INGLEWOOD, CALIFORNIA

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 168-562

Mr. C. G. Willis
417 So. Hill Street
Los Angeles, California 90013

Inglewood, Calif.
April 30, 1968

Agent for GENERAL EXPLORATION COMPANY OF CALIFORNIA

DEAR SIR:

Your proposal to alter casing (037-06496) Well No. "Oil Operators" 3, Section 13, T. 4 S, R. 13 W S.B. B. & M., Long Beach Field, Los Angeles County, dated Apr. 25, 1968, received Apr. 26, 1968, has been examined in conjunction with records filed in this office.

~~Present conditions as shown by the records and the proposal are as follows:~~
RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE.
5-1/2" cp 4393'. TD 1st hole 5450', TD 2nd hole 5833'.

With reference to your proposal our decision is as follows:

DECISION
THE PROPOSAL IS APPROVED.

WLI:nw

cc Company

No Bond Required

W/S

F. E. KASLINE –
E. R. MURRAY-AARON, State Oil and Gas Supervisor

By _____, Deputy

75567-705 7-66 50M ① △ OSP

FORM 107

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS
RECEIVED
APR 26 1968
INGLEWOOD, CALIFORNIA

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 25, 1968

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. "Oil Operators" 3 (037-06496)

(Cross out unnecessary words)

_____, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 6540'.

2. Complete casing record, including plugs:

(Depths from present KB of 60')
13-3/8" C 765'
8-5/8" C 3139'
5-1/2" C 5964', top 3043' (lap WSO). Perfs. 4393-4394' (WSO), 4407-4444', 4458-4498', 4562-4616', 5692-5707', 5711-5728' and 5733-5752'.

Sidetracked:
8-5/8" C 3986', top 3174'. Plug 3174' (and open hole up to 3142')
5-1/2" C 5446', top 3928' (lap WSO). Bad 4195 and 5107', plgd. Perf. & plgd. 4080-4158', 4190-4205', 4852-4950', 5140-5180', 5190-5200' and 5306-5355'. Plug 3928'.

3. Last produced. 4/25/68 (Date) | 34 (Oil, B/D) | 2 (Water, B/D) | 60 (Gas Mcf/D)

The proposed work is as follows:

1. Take well off production.
2. Starting May 1, 1968, pull rods and tubing.
3. Rig up B.O.P.E. and lubricator and pump 100 bbl. of salt water into casing.
4. Perforate 5397-5430', 5794-5808' and 5812-5827'. Reperforate 5692-5707', 5712-5728' and 5733-5752'.
5. Return well to production.

Alter casing

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			✓	ARG	ARG

NO WW

417 S. Hill St., Los Angeles 90013
(Address)

628-2156
(Telephone No.)

GENERAL EXPLORATION COMPANY OF CALIFORNIA
(Name of Operator)

By R. S. Ballantyne, Jr., Vice President

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

20501-705 4-64 15M ② OSP

WORK PERFORMED:

Drill____ Redrill ✓ Deepen____

Plug____ Alter casing____

Water flood____ Water disposal____

Abandon____

Other____

STATUS: (Date)

Producing____

Recomp. prod. ✓ 7-28-67

Water flood____

Water disposal____

Abandoned____

Other____

MAP AND BOOK NC

RECORDS FILED & DATE: Clerk M.T.

Summary (dup.)____

✓ Log & Core (dup.) 8/3/67

✓ History (dup.) 8/3/67

✓ E-log (2 copies) 3138'—6536' 8/3/67

Radio log____

D. Survey____

Other____

(Check records for signature and correct name of operator or well, S.T.R. and field.)

Location____ Notice states____

Elevation____ Notice states____

Production Reports____

Dated 8-4-67 mf

(If production reports not received, make notation and inform Sr. Steno. when rec'd.)

If stimulation or disposal well:
Form 121____ Folder____

RECORDS & REQUIREMENTS CHECKED: Eng. WJR

✓

✓

✓

Surface inspection —

Data needed none

Request records —

Correct records — (Specify)

CARDS NC

BOND: No. 1411161 dated 6-27-67

Hold__ Reason____

Release ✓ Date elig. 10-17-67

End premium year ✓
Release requested____ (Check)
Bond superseded____ (one)
Well abandoned____

FINAL LETTER and FILE CLEARED____

Clerk:

F 170__

F 165__
165A__

F 150b ab

F 159__

F 121__

Form 19-A

FORM 103 SUBMIT IN DUPLICATE 26535-705 7-64 25M △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR General Exploration Company of California FIELD Long Beach

Well No. "Oil Operators" 3, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.

Date July 31, 1967 Signed R. S. Ballantyne, Jr.

417 South Hill St., Los Angeles 90013 628-2156 Title Vice President
(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	
1967	Note: Depth measurements taken from present K.B. elevation of 60' which is 6' higher than original datum. Ground elevation is 48'.
6/30	Moved in, rigged up drilling equipment, pulled and laid down tubing, installed B.O.P.E. (Graham Drilling Company).
7/1-2	Ran 7-5/8" bit and made up 3-1/2" drill pipe. Found top of 5-1/2" liner at 3932'. Ran Servco section mill, located casing collars at 3190', 3145' and 3101', milled section in 8-5/8" casing from 3139' to 3174'. Opened window to 12-3/4". Ran 284' of 2-3/8" tubing stinger on drill pipe. Cleaned out sand inside 5-1/2" liner to 4165'. Laid 30-sack class G cement plug with 2% $CaCl_2$ from 4147'. (Estimated top of plug at 3908'.) Laid 70-sack class G plus 20% sand with 0.5% CFR-2 from 3233' with rotating tubing scratchers opposite window. Pulled to 2850' and circulated pipe clean. Held 1200# for 5 minutes - no pressure drop. Found top of cement at 3077' and cleaned out to 3142'.
7/3-13	Drilled 7-5/8" hole to 5833'. 5" Dynadrills were used as follows: 3142-3240', 4257-4378' and 4487-4575'. The interval 4468-4487' was cored.
7/13	Ran Schlumberger I.E.S. 5833-3139' and C.D.M. 5833-3700'. Laid 182 CF (160 sacks class G, 30 sacks sand, 5 sacks salt, 0.5% CFR-2) plug through 461' stinger of tubing on drill pipe from 5460'.
7/14	Ran 7-5/8" bit and hit bridge at 4135', cleaned out to 4174' and lost circulation. Pulled up inside 8-5/8" casing to 3123' and regained circulation. Ran to top of cement at 4997' and cleaned out to 5012' without circulation. Pulled up again to 3123' and introduced rubber and fibrous lost circulation material into mud system. Regained circulation and ran to 5012' circulating in stages. Drilled out cement to 5094' with full returns.
7/15-18	Drilled 7-5/8" hole to 6008'. A 5" Dynadrill was used from 5094' to 5147'. Ran Schlumberger I.E.S. 6008-4850'.
7/18-20	Drilled 7-5/8" hole to 6540' (T.D.). Ran Schlumberger I.E.S. 6540-6008'.
7/20	Ran to T.D. and conditioned mud. Ran 76 joints of 5-1/2", 15.5#, J-55 liner with Burns liner hanger (2921', including hanger) on 3-1/2" drill pipe. With liner hanging at 5964', (top at 3043') cemented with 743 C.F. 1:1 class G cement pozmix slurry with 2% gel and 0.5% CFR-2 and 10% salt in mix water. 500 gal. mud flush and 20 C.F. water preceded the slurry. Displaced with 530 CF mud (509 CF estimated) and plug was not observed to hit baffle. Pulled stinger up to 2980' and backscuttled 180 CF (127 CF in drill pipe) without cement returns.

DIVISION OF OIL AND GAS
RECEIVED
AUG 8 1967
INGLEWOOD, CALIFORNIA

FORM 103 SUBMIT IN DUPLICATE 26535-705 7-64 25M △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR General Exploration Company of California FIELD Long Beach

Well No. "Oil Operators" 3, Sec. 13, T. 4 S., R. 13 W., S.B. B. & M.

Date July 31, 1967 Signed R. S. Ballantyne, Jr.

417 South Hill St., Los Angeles 90013 628-2156 Title Vice President
(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	
7/21	Ran 7-5/8" bit and 8-5/8" casing scraper. Encountered 10' soft cement bridge at 1000' and drilled out same. Pushed plug to top of hard cement at 2832'. Drilled out cement to top of liner at 3043'. Conditioned mud and held 1380# on casing for 5 minutes. Ran 4-3/4" bit and 5-1/2" casing scraper. Drilled out cement inside liner from 3043' to 3083'. Ran to 5922', top of float collar, pushing something (probably rubber liner wiper plug) ahead the last 1000'. Conditioned mud and held 1530# on casing for 5 minutes.
7/22	Ran Cook tester on drill pipe and set packer at 3009' with tail to 3022'. Open 1 hour. 2 minute initial light blow and dead thereafter Recovered net rise of 45' drilling fluid. Lap test approved by D.O.G. Ran McCullough gamma-bond cement log 5910-3900' and perforated four 1/2" jet holes 4394-4393'. Ran Cook tester on 1411' of 2-7/8" tubing below drill pipe. Set packer at 4366' with tail piece to 4377'. Open 1 hour. Medium, slightly diminishing blow throughout test. Recovered 1470' slightly muddy water down to salty (476 g/g) water.
7/23	Ran Baker shoe squeeze tool on tubing and set packer at 4094' with tail to 4187'. Broke down formation with 3500# and squeezed 33 sacks of 50 sacks class G cement mixed at a final pressure of 3000# through perforations. Found top of cement at 4243' and drilled out cement running out of it at 4425'. Perforated four 1/2" jet holes 4394-4395' with McCullough steel carrier. Ran Cook tester on tubing/drill pipe and set packer at 4366' with tail to 4377'. Open 1 hour-initial 2 minute weak blow and dead thereafter. Recovered a rise of 40' drilling fluid. W.S.O. approved by D.O.G.
7/24	Ran 4-3/4" bit to 5922' and changed mud over to 67# salt water. Laid down 3-1/2" drill pipe. Ran McCullough 4" jet carrier and perforated four 1/2" jet holes per foot as follows: 5752-5733', 5728-5711' and 5707-5692.
7/25	Ran Guiberson packer on combination string of 2-7/8" tubing and set with bottom of packer at 4337'. Removed B.O.P.E. and rigged up surface equipment. Swabbed well and when pulling from 2200' the sand line pulled out of socket and swab dropped. Opened valve in packer and equalized fluid. Ran overshot but could not recover swab. Installed B.O.P.E., pulled and broached tubing. Recovered swab on bottom.
7/26	Re-ran Guiberson packer as above. Swabbed well working down to 4000'. After swabbing 67 bbl. of water with trace of oil and with well gassing, placed on a 22/64" bean at 9:00 p.m.
7/27	Rigged up lubricator and McCullough perforated four holes per foot with 2-1/8" JRL Ceram-jets as follows: 4616-4562', 4498-4458' and 4444-4407'. Completed perforating at 10:00 p.m.

FORM 103 SUBMIT IN DUPLICATE 26535-705 7-64 25M △ OSP

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR General Exploration Company of California FIELD Long Beach

Well No. "Oil Operators" 3, Sec. 13, T. 4 S, R. 13 W, S.B. B. & M.

Date July 31, 1967 Signed R. S. Ballantyne, Jr.

417 South Hill St., Los Angeles 90013 (Address) (Telephone Number) Title Vice President (President, Secretary or Agent)

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

Date

7/28 Moved out drilling equipment. Flowed 94 bbl. 25.3° oil, 4.0%, 140#/pkr., 570 Mcf.
7/30 103 bbl. 25.2°, 6.5%, 120#/pkr., 555 Mcf.

Casing Record at Completion of Work:
(Depths from present KB of 60') T.D. 6540
13-3/8" C 765'
8-5/8" C 3139'
5-1/2" C 5964', top 3043' (lap WSO). Perfs. 4393-4394' (WSO), 4407-4444', 4458-4498', 4562-4616', 5692-5707', 5711-5728' and 5733-5752'.

Sidetracked:
8-5/8" C 3986', top 3174'. Plug 3174' (and open hole up to 3142')
5-1/2" C 5446', top 3928' (lap WSO). Bad 4195 and 5107', plgd.
Perf. & plgd. 4080-4158', 4190-4205', 4852-4950', 5140-5180', 5190-5200' and 5306-5355'. Plug 3928'.

Orig abandoned well

FORM 101
CALIFORNIA STATE PRINTING OFFICE

SUBMIT IN DUPLICATE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

LOG AND CORE RECORD OF OIL OR GAS WELL

Operator General Exploration Company of Calif. Field Long Beach

Well No. "Oil Operators" #3 Redrill Sec. 13, T. 4S, R. 13W, S.B. B. & M.

FORMATIONS PENETRATED BY WELL

DEPTH TO		Thickness	Drilled or Cored	Recovery	DESCRIPTION
Top of Formation	Bottom of Formation				
					CORE #1
4468'	4487'	21'		12.5	Oil sand, unbroken, firm to soft, mostly fine to medium fine poorly sorted. Locally finely pebbly, light brown with grayish cast on broken surfaces light gold to medium buff fluorescence, pepper and salt on broken surfaces (mud penetration?). In top 0.2' two 1/16" ribbons gray sand at 50-55° under gray spot with pebbles. No fluorescence. Probably related to turbidity bedding. At 4.0', one 1/64" ribbon of non-fluorescent clay at about 40°, could be bedding parting. Dip not reliable. (No samples taken)
				12.5	

DIVISION OF OIL AND GAS
RECEIVED
AUG 3 1967
INGLEWOOD, CALIFORNIA

FORM 109-A

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Report on Test of Water Shut-off

(FORMATION TESTER)

No. T 167-670

Mr. C. G. Willis
417 S. Hill Street
Los Angeles, California 90013

Inglewood, Calif.
July 27, 1967

Agent for GENERAL EXPLORATION CO. OF CALIF.

DEAR SIR: (037-06496)

Your well No. "Oil Operators" 3, Sec. 13, T. 4 S, R. 13 W, S.B. B & M.
Long Beach Field, in Los Angeles County, was tested for water shut-off
on July 23, 1967. Mr. S. Cordova, Engineer, designated by the supervisor was present
from 8:30 p.m. to 9:30 p.m. as prescribed by law; there were also present J. Dedmon, Drilling Foreman & R. Morgan, Driller

Shut-off data: 5-1/2 in. 15.5 lb. casing was recemented through perforations at 4393 ft.
on July 23, 1967 in 7-5/8 in. hole with 50 ~~sacks~~ sacks of cement
of which 33 sacks was squeezed away under a final pressure of 3000 Psi
calculated to fill behind casing to ------ ft. below surface.

Casing record of well: 13-3/8" cem. 765'; 8-5/8" cem. 3986', window 3139'-3174', sidetracked @ 3142'; 5-1/2" cem. 3043'-5964', cp 4393', perf. 4393' WSO. TD 1st ~~hole~~ hole 5450'. TD 2nd hole 5833'.

Present depth 6540 ft. cmt. bridge 5964 ft. to 5922 ft. Cleaned out cmt. 4243 ft. to 4425 ft. for test.
A Cook tester was run into the hole on 2-7/8 in. ~~tail pipe~~-tubing,
with ---- ft. of water-mud cushion, and packer ~~--~~set at 4366 ft. with tailpiece to 4377 ft.
Tester valve, with 5/8 in. bean, was open for 1 hr. and ----- min. During this interval there was a
weak blow for 2 minutes & no blow thereafter.

Mr. ---------- reported:

MR. S. CORDOVA, ENGINEER, WAS PRESENT AT THE WELL FROM 5:00 P.M. TO 6:00 P.M. ON JULY 22, 1967 AND MR. L. STANDER REPORTED THAT the 5-1/2" casing was jet-perforated with four, 1/2" holes at 4393' for the water shut-off test.
THE ENGINEER NOTED THAT when the tubing was removed, 1470' of watery drilling fluid and salt water was found above the tester.

MR. S. CORDOVA, ENGINEER, WAS PRESENT AT THE WELL FROM 8:30 P.M. TO 9:30 P.M. ON JULY 23, 1967 AND MR. DEDMON REPORTED:
1. The 5-1/2" casing was recemented as noted above.
2. The 5-1/2" casing was jet-perforated with four, 1/2" holes at 4393'.

THE ENGINEER NOTED:
1. When the tubing was removed, 40' of drilling fluid was found above the tester.
2. The pressure charts indicated the tester tool functioned properly.

THE 5-1/2" SHUT-OFF AT 4393' IS APPROVED.

SC:nw

cc Company

E. R. MURRAY-AARON
State Oil and Gas Supervisor

By [signature] Deputy

9/2

26536-705 7-64 20M ② OSP

FORM 109-D

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 167-669

Mr. C. G. Willis
417 S. Hill Street
Los Angeles, California 90013

Inglewood, Calif.
July 27, 1967

Agent for GENERAL EXPLORATION CO. OF CALIF.

DEAR SIR: (037-06496)

Operations at well No. "Oil Operators" 3, Sec. 13, T. 4 S, R. 13 W, S.B. B & M. Long Beach Field, in Los Angeles County, were witnessed on July 22, 1967. Mr. S. Cordova, Engineer, representative of the supervisor was present from 7:30 a.m. to 8:20 a.m. There were also present R. Ballantyne, Engineer & J. Dedmon, Drilling Foreman

Present condition of well: 13-3/8" cem. 765'; 8-5/8" cem. 3986' window 3139'-3174', sidetracked @ 3142'; 5-1/2" cem. 3043'-5964'. TD 6540'. TD 1st hole 5450'. TD 2nd hole 5833'.

The operations were performed for the purpose of demonstrating the effectiveness of the seal between the 8-5/8" and 5-1/2" casings.

Mr. Ballantyne reported:

1. A window was milled in the 8-5/8" casing from 3139' to 3174', and the hole was opened to 12-3/4" in that interval.
2. Sand fill was cleaned out of the 5-1/2" casing to 4165'.
3. On July 2, 1967, 30 sacks of cement was pumped into the hole through drill pipe and tubing hanging at 4147', calculated to fill to 3908'.
4. On July 2, 1967, 70 sacks of cement mixed with 20% sand was pumped into the hole through drill pipe and tubing hanging at 3233'.
5. Cement was drilled out of the hole from 3077' to 3142'.
6. A 7-5/8" hole was redrilled from 3142' to 5833'.
7. On July 13, 1967, 160 sacks of cement mixed with 20% sand was pumped into the hole through drill pipe and tubing hanging at 5460'.
8. Cement was drilled out of the hole from 4997' to 5094'.
9. A 7-5/8" hole was redrilled from 5094' to 6540'.
10. On July 20, 1967, 5-1/2", 15.5 lb. casing was cemented from 3043' to 5964' with 743 cubic feet of cement slurry (1:1 pozmix, 2% gel).
11. Cement was drilled out of the 8-5/8" casing to 3043' and the 5-1/2" casing was cleaned out to 5922'.
12. A Cook tester was run into the hole on 3-1/2" drill pipe and packer set at 3009', with tailpiece to 3020'.
13. The tester valve with 5/8" bean was open for 1 hr. During this interval there was a weak blow for 2 minutes and no blow thereafter.

THE ENGINEER NOTED:

1. When the drill pipe was removed, 45' of drilling fluid was found above the tester.
2. The pressure charts indicated the tester tool functioned properly.

THE OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED and indicate that no fluid has access to the well from the annulus between the 8-5/8" and 5-1/2" casings.

E. R. MURRAY-AARON
State Oil and Gas Supervisor

By [signature] Deputy

SC:nw
cc Company

90947-705 3-67 15M ② OSP

FORM 111

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 167-705

Mr. C. G. Willis
417 S. Hill Street
Los Angeles, California 90013

Inglewood, Calif.
July 5, 1967

Agent for GENERAL EXPLORATION CO. OF CALIF.

DEAR SIR:

Your proposal to redrill (037-06496) Well No. "Oil Operators" 3, Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated June 27, 1967 received June 29, 1967 has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES

"The present condition of the well is as follows:

1. Total depth. 5450
2. Complete casing record, including plugs:
   13-3/8" C 765'
   8-5/8" C 3986' WSO
   5-1/2" C 5446', top 3928', WSO on splice. Bad 4195 & 5107', plgd. perf. & plgd. 4190-4205', 4852-4950', 5140-5180', 5190-5200', 5306-5355'.
   Plug 4159'. Perf. 4080-4158'.
3. Last produced.

12/12/66	10	182	-
(Date)	(Oil, B/D)	(Water, B/D)	(Gas) "

PROPOSAL

"The proposed work is as follows:

1. Move in drilling equipment, pull tubing, install BOPE and fill hole with mud.
2. Mill out 30-foot section of 8-5/8" casing near 3100', underream the window to 12-3/4" lay cement plug from 4150' to 3900' (sufficient to cover perforations without having to wait and feel for top) and another plug from 100' below section back above top of window and level off plug 2' into section.
3. Sidetrack cased hole through section and drill 7-5/8" hole to approximaely 5900'.
4. Run and cement 5-1/2" liner, effect. W.S.O. at lap of 8-5/8" casing and above productive horizon.
5. Complete well."

DECISION

THE PROPOSAL IS APPROVED PROVIDED:

1. Fluid consistent with good drilling practice shall be used, and the column of fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Adequate blowout prevention equipment shall be installed and maintained in operating condition at all times.
3. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
   a. A test, after cleaning out below the top of the liner to demonstrate that no fluid has access to the well from the annulus between the 8-5/8" and 5-1/2" casings.
   b. A test of the effectiveness of the 5-1/2" shut-off above the zone to be produced.

WLI:nw
cc Company

Bond No. 1411161
Dated 6-27-67

E. R. MURRAY-AARON, State Oil and Gas Supervisor

By _____, Deputy

①T OSP

DIVISION OF OIL AND GAS
RECEIVED
JUN 29 1967
INGLEWOOD, CALIFORNIA

FORM 107

STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

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. June 27, 1967

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 (037-06496)

commence the work of ~~deepening~~ redrilling, ~~plugging or altering casing~~ at Well No. "Oil Operators" 3
(Cross out unnecessary words)

, Sec. 13, T. 4 S, R. 13 W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 5450

2. Complete casing record, including plugs:

13-3/8" C 765'
8-5/8" C 3986' WSO
5-1/2" C 5446', top 3928', WSO on splice. Bad 4195 & 5107', plgd.
Perf. & plgd. 4190-4205', 4852-4950', 5140-5180',
5190-5200', 5306-5355'.
Plug 4159'. Perf. 4080-4158'.

3. Last produced. 12/12/66 (Date) | 10 (Oil, B/D) | 182 (Water, B/D) | - (Gas)

The proposed work is as follows:

1. Move in drilling equipment, pull tubing, install BOPE and fill hole with mud.
2. Mill out 30-foot section of 8-5/8" casing near 3100', underream the window to 12-3/4" lay cement plug from 4150' to 3900' (sufficient to cover perforations without having to wait and feel for top) and another plug from 100' below section back above top of window and level off plug 2' into section.
3. Sidetrack cased hole through section and drill 7-5/8" hole to approximately 5900'.
4. Run and cement 5½" liner, effect W.S.O. at lap of 8-5/8" casing and above productive horizon.
5. Complete well.

Redrill

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
			#1411161 6-27-67	ab	ab

417 S. Hill Street, Los Angeles
(Address)

628-2156
(Telephone No.)

GENERAL EXPLORATION COMPANY OF CALIFORNIA
(Name of Operator)

By R. S. Ballantyne, Vice President

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

71443 8-62 10M (2) SFO

FORM 156

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

REPORT OF PROPERTY AND WELL TRANSFER

Field or County: Long Beach — District: 1

Former Owner: Union Oil Co. of California — Date: January 17, 1961

Description of Property: Sec. 13, T. 4 S., R. 13 W., S. B. B. & M.

List of Wells: "Oil Operators" 1, "Oil Operators" 2, "Oil Operators" 3 and "Oil Operators" 4. ("Oil Operators" 1, idle; other wells are active)

Date of Transfer: January 1, 1961
New Owner: General Exploration Co. of California
Address: 730 Subway Terminal Building, 417 South Hill Street, Los Angeles 13, Calif.

Telephone No.

Type of Organization: Corporation
Reported by: Union Oil Co. of California (Letter of January 6, 1961)
Confirmed by: General Exploration Co. of California (Letter of January 11, 1961)
New Operator New Status PA, Old Operator New Status PA
Request designation of agent No

Remarks:

eb
CC- Mr. E. H. Nusser
Prod. Dept.
Conservation Committee

Deputy Supervisor

	INITIALS	DATE
Form 121		
New Well Cards		
Well Records		
Electric Logs		
Production Reports		
Map and Book		
Form 148		
Notice to be cancelled		

LEGEND
PA—Producing Active
NPA—Non Potential Active
PI—Potential Inactive
NPI—Non Potential Inactive
Ab—Abandoned or No More Wells
NOTE—If Transfer Does Not Change Overall Status Enter "No Change"

96785 4-59 4500 SPO

Form 10

CLERK

RECEIPT FOR

Date Received 1-13-60 Form 100 ____ 101 ____ 103 ____

Elec. Log ____ Radio Log ____

Direct. Surv. ____ Other Data History

Location ____

____

Elevation ____ Clerk Scott

Prod. Repts. ____ Clerk ____

COMPLETED PRODUCING ON 12-10-59

ENGINEER

ABANDONED ON ____

BOND Blanket Release ____ Date Elig. ____ 150b ____

End Prem. year ____ Release Requested ____ Superseded ____

Aband. ____

HOLD BOND ____ Reason ____

____

Data Needed ____

____ Final Letter ____ Eng. RL

____ New Well Records

____ Subsequent Work

Well Summary ____ (100)

Drillers Log ____ (101)

Core Record ____ (101)

History ✓ (103)

Elec.Log ____

Other ____

____

Redrill ____

Deepen ____

Plug ____

Alter Csg. ✓

Abandon ____

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

(20) DIVISION OF OIL AND GAS RECEIVED JAN 1 1960 INGLEWOOD, CALIFORNIA

13

UNION OIL COMPANY of Calif

History of Oil or Gas Well

REPAIR REPORT

WELL NO. Oil Operators #3

Long Beach (FIELD)

Los Angeles (COUNTY)

SEC. 13, T. 4-S, R. 13-W S.B. B. & M.

Prod. Hoist - Contract (TOOLS)

December 7, 1959 (PERIOD ENDING)

CASING RECORD

See below

(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1959	DEPTH	EFFECTIVE DEPTH	REMARKS
				CHARGE: BR-AFE 59359 Job 540 PROPOSED WORK: Add perforations in the Alamitos Zone. PRODUCTION BEFORE WORK: Idle ZERO POINT FOR THIS JOB: 9.1' above concrete pad.
				CASING RECORD AT START OF WORK: TD 4076' : Dpnd 5450' : Plug 4985' 13-3/8" C 765' 8-5/8" C 3986' WSO ~~1161' 6-5/8" H-4075' incl. 89' pf's.~~ Pulled. 1518' 5-1/2" F & C 5446'. Bad 4195 & 5107'. WSO test on splice OK. Bullet pf 4190-4205, 4852-4950'. " " & plgd ~~5140-5180, 5190-5200, 5306-5355'~~.
				CASING RECORD AT COMPLETION OF WORK: TD 4076' : Dpnd 5450' : Plug 4159' 13-3/8" C 765' 8-5/8" C 3986' WSO ~~1161' 6-5/8" H-4075' incl. 89' pf.~~ Pulled 1518' 5½" F & C 5446'. ~~Bad 4195 & 5107'~~ Plgd. WSO test on splice OK. Bullet pf & plgd ~~4190-4205, 4852-4950'~~ ~~5140-5180, 5190-5200, 5306-5355'~~. Bullet pf 4080-4158'.
1	12-2	Dpnd 5450	Plug 4985	Contractor moved in and rigged up. Pulled rods and pump. Dia-Loyed tubing.
1	12-3	"	" "	Pulled tubing. Strung in with 2-5/8" Cavins sand pump to 4201', top of fill. 4-5/8" impression block stopped at 3927'. 4-1/4" block stopped at 3927'. 3-3/4" block stopped at 3927'. Ran in with 2-5/8" Cavins sand pump, went to 4201'. Fluid level at 500'.
2	12-4	"	" "	Ran in with 1-7/8" x 4-1/8" x 2.59' Baash-Ross tapered mill on 3-1/2" bumper sub on 2-1/2" tubing on 3" tubing. Ran in to top of liner at 3927'. Pipe did not appear to be bad. Ran in to 4166' where mill stopped. Pulled back up to top of liner and worked mill through liner hanger repeatedly. Pulled out. Ran L-W Cemoton and Chlorinilog
1	12-5	"	" "	Finished running L-W Cemoton and Chlorinilog.
	12-6			Crew off.
2	12-7	"	" 4200	Ran in with 7½" impression block to top of liner at 3928'. No impression. Reran impression block to top of liner. Bailed sand and shale at 4201' with 2-5/8" Cavins sand pump. Bailer sticking badly at 4201'. Recovered small loads. Bright spot on bottom of bailer indicates possible tight pipe. Dumped 13 sacks construction cement at 4201' at 2:30 p.m. Felt for cement at 5:30 p.m. Top of cement at 4200'.

NAMES OF DRILLERS/HEAD WELL PULLERS:

California Production Service - Contractor

Vaughn S. Moyer

DISTRICT ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

REPAIR REPORT

UNION OIL COMPANY

WELL NO. Oil Operators #3

Long Beach (FIELD)

Los Angeles (COUNTY)

SEC. 13, T. 4-S, R. 13-W, S.B. B. & M.

Prod. Hoist - Contract (TOOLS)

December 20, 1959 (PERIOD ENDING)

CASING RECORD

13-3/8" C 765' : 8-5/8" C 3986
11616-5/8" H-4075'-1no.801-pfa, Fild
1518' 5½" F & C 5446. Bud-4195-&-5207,
Plgd. W30 test on splice OK
bullet pf & plgd 4199-4205,-4852-4950
5140-5180,-5190-5200,-5306-5355
bullet pf 4080-4158'.
(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1959	DEPTH	EFFECTIVE DEPTH	REMARKS
1	12-8	Dpnd 5450	Plug 4200	Ran in with Cavins off bottom cement dump bailer and dumped 2 sacks construction cement at 4200' at 9:30 a.m. Felt for top of cement with bailer jars at 12:30 p.m. No fill. Dumped 2 sacks construction cement at 4200' at 1:30 p.m. Felt for top of cement at 4:30 p.m. No fill. Dumped 2 sacks of construction cement at 4200' at 5:45 p.m.
1	12-9	"	" 4159	Ran in with jars and found top of cement at 4200'. Mixed 4 sacks of construction cement and dumped in 2 runs at 4200'. Finished dumping cement at 9:00 a.m. Felt for plug at 12:00 noon. Located top of plug at 4174'. Rigged up to shoot.
2	12-10	"	" 4159	Perforated 5-1/2" liner from 4158-4080' with two 1/2" bullets per foot. Used L-W 4" x 50 shot wire line gun. Checked collars and reset odometer according to collars. Located top of plug at 4159'. Fluid level stayed at 540' during shooting job. No blow. All guns came from hole covered with oil. Had 2 scattered missfires. Checked bottom at 4159' after shooting. Removed blow-out preventer. Ran in and landed tubing. Ran rods. Put well on production. Contractor moved out.

PRODUCTION DATA

	Hrs	Gross	Net	Cut	Grav.	MCF	Remarks
12-10	12	132					No cut obtained.
12-11	24	175	107	39.0	23.3	Tr.	
12-12	24	134	82	39.0	23.3	"	
12-13	24	168	102	39.0	23.3	"	
12-14	24	167	90	46.0	23.3	20	
12-15	24	107	66	38.0	23.3	20	
12-16	24	98	61	38.0	23.3	20	1020' fluid over pump by Sonic
12-17	24	95	57	40.0	23.3	20	
12-18	24	118	71	40.0	23.3	20	
12-19	24	131	79	40.0	23.3	20	
12-20	24	134	80	40.0	23.3	20	

rjh

NAMES OF DRILLERS/HEAD WELL PULLERS:

California Production Service - Contractor

Vaughn S. Moyer
DISTRICT ENGINEER

COMPLETED PRODUCING ON 12-10-59

ABANDONED ON _____

Cordova/Ballantyne 7-2-67
Solid sand at 4000'.
O.K. to P/C 4000'–3878', using 100%
excess per conversation with Ingram
on 6-29-67.

Ballantyne/Ingram 6-29-67
will use 100% excess on zone plug
in lieu of feeling for top - ok. wcz

FORM 111

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P 159-888

Mr. C. F. Bowden
P. O. Box 7600
Los Angeles 54, California
Agent for UNION OIL COMPANY OF CALIFORNIA

Inglewood 3, Calif.
October 22, 1959

DEAR SIR:

Your proposal to alter casing Well No. "Oil Operators" 3,

Section 13, T. 4 S, R. 13 W, S B B. & M., Long Beach Field, Los Angeles County,

dated Oct. 19, 1959, received Oct. 21, 1959, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE.
Plugged with cement 5446'-5428' and 5101-4984'.

THE NOTICE STATES
"The present condition of the well is as follows:
1. Total depth. 4076' Dpnd 5450' Plug 4985'
2. Complete casing record.
13-3/8" C 765'
8-5/8" C 3986' WSO
~~116'-6-5/8"-H-4075' incl.-89'-pfs.~~, pulled.
1518' 5-1/2" F & C 5446'. Bad 4195' & 5107'.
WSO test on splice OK.
Bullet pf. 4190-4205' & 4852'4950'.
Bullet pf. & plgd. ~~5140-5180'~~,~~-5190-5200'~~,-5306-5355'.
3. Last produced. April 1958 (Date) 2 B/D (Net Oil) 23.7° (Gravity) 98.0% (Cut)"

PROPOSAL
"The proposed work is as follows:
1. Pull rods and tubing.
2. Check hole open to top of plug at 4985'.
3. Check condition of 5-1/2" liner with impression blocks.
4. Perforate 5-1/2" liner from 4080-4185' with two 1/2" bullets per foot.
5. Check hole open to top of plug at 4985'.
6. Run rods and tubing.
7. Test on production."

12-1-59 Holler/Crowder } N. ward bkw - w/ Atlantic
may have trouble below 4195±'
will plug fr as deep as possible
DOG to witness top

DECISION
THE PROPOSAL IS APPROVED.

RC:omh

cc Vaughn S. Moyer Div. Eng.
9645 South Santa Fe Springs Rd.
Santa Fe Springs, California

E. H. MUSSER, State Oil and Gas Supervisor

By Wm. C. Bailey, Deputy

Blanket Bond
58444 7-57 60M SPO

FORM 107.

DIVISION OF OIL AND GAS
RECEIVED
OCT 21 1959
INGLEWOOD, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

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 Fe Springs, Calif. October 19, 1959

DIVISION OF OIL AND GAS

Inglewood, Calif.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
		Alter casing	Blanket	EB	Eg

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. OIL OPERATORS #3

(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S.B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 4076' Dpnd 5450' Plug 4985'

2. Complete casing record.

13-3/8" C 765'
8-5/8" C 3986' WSO
~~116' 6-5/8" H 4075' incl. 89' pfs.~~, pulled.
1518' 5-1/2" F & C 5446'. Bad 4195' & 5107'.
WSO test on splice OK.
Bullet pf. 4190-4205' & 4852-4950'.
Bullet pf. & plgd. ~~5140-5180', 5190-5200', 5306-5355'~~.

3. Last produced. April 1958 (Date) 2 B/D (Net Oil) 23.7° (Gravity) 98.0% (Cut)

The proposed work is as follows:

1. Pull rods and tubing.
2. Check hole open to top of plug at 4985'.
3. Check condition of 5-1/2" liner with impression blocks.
4. Perforate 5-1/2" liner from 4080-4185' with two 1/2" bullets per foot.
5. Check hole open to top of plug at 4985'.
6. Run rods and tubing.
7. Test on production.

Union Oil Company of California
(Name of Operator)

By V. S. Moyer R.J.H.
Vaughn S. Moyer, Division Engineer

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

rjh

STENOGRAPHER

Date Received 7-30-[redacted] Form 100 ___ 101 ___ 103 [redacted]

Elec. Log ___ Radio Log ___

Direct. Surv. ___ Other Data History

Location ___

Elevation ___ Steno. Scott

ENGINEER

BOND Blanket Release ___ Date Elig. ___ 150b ___

End Prem.Yr. ___ Release Requested ___ Superseded ___ Aban. ___

HOLD BOND ___ Reason ___

Data Needed None

Final Letter ___ Eng. 7-30-53 JLW

: RECEIPT FOR

: Well Summary ___

: Drillers Log ___

: Core Record ___

: History ✓

: Elec. Log ___

: Radio Log ___

: Direct. Surv. ___

: ___

: Redrill ___

: Deepen ___

: Plug ✓

: Alter Csg. ✓

: Abandon ___

10

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND G[AS]

DIVISION OF OIL AND GAS
RECEIVED
JUL 8 1953
LOS ANGELES, CALIFORNIA

WELL NO. Oil Operators #3

Long Beach
(FIELD)
Los Angeles
(COUNTY)
SEC. 13, T. 4-S, R. 13-W S.B. B. & M.

UNION OIL COMPANY of California
History of Oil or Gas Well

REPAIR REPORT

Prod. Hoist - Contract
(TOOLS)
July 8, 1953
(PERIOD ENDING)

CASING RECORD
See below
(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1953	DEPTH	EFFECTIVE DEPTH	REMARKS
				CHARGE: B.R.-A.F.E. 51528 Job 231-D
				PROPOSED WORK: Cement off bottom perforations with plug from 5107' to 5000'. Test on production. If upper perforations not causing sand, gun perforate 5-1/2" casing from 4950' to 4852' with four 1/2" holes/ft.
				PRODUCTION BEFORE REPAIR: 57 B/D Gross - 14 B/D Net - 75.0% Cut
				ZERO POINT for this job: 9' 1" above concrete pad.
				CASING RECORD AT START OF WORK: ~~9-D-4976'~~ Dpm 5450' 13-3/8" C 765' 8-5/8" C 3986' WSO ~~136'-6-5/8"-H-4975'-ins-89'-perf.~~ Pulled 1518' 5-1/2" F & C 5446' Bad 4195' & 5107' WSO test on splice OK Bullet perf. 4190-4205' Bullet perf. & plugged ~~5240-5280, 5190-5200,~~ 5306-5355'
				CASING RECORD AT COMPLETION OF WORK: ~~9-D-4976'~~ Dpm 5450' Plug 4985' 13-3/8" C 765' 8-5/8" C 3986' WSO ~~136'-6-5/8"-H-4975'-ins-89'-perf.~~ Pulled 1518' 5-1/2" F & C 5446' Bad 4195' & 5107' WSO test on splice OK Bullet perf. 4190-4205' and 4852-4950' Bullet perf. & plugged ~~5240-5280, 5190-5200,~~ 5306-5355'
1	7-6	5450	Plug 4955	California Production Service, Contractors, moved in and set up equipment. Tested tubing - OK. Pulled tubing and rods. Tubing measured 4179.72'. Ran 2-5/8" Cavins bailer. Checked fill at 4938'. Fluid level at 3685'. Cleaned out to 4955'.
1	7-7	5450	Plug 4985	Continued cleaning out sand to 4985'. Installed Shaffer blow-out preventer. Ran in with Lane-Wells 4" x 13' type A-2 bullet gun, shot four 1/2" holes/foot from 4950' to 4852'. Had light blow and rapid fluid rise. Fluid level at start of shooting 3425'; fluid level at finish 3220'.
1	7-8	5450	Plug 4985	Bled off 35# casing pressure. Ran 2-5/8" Cavins sand pump. Checked fill at 4963'. Fluid level at 3170'. Cleaned out to 4985'. Ran in and landed 4788' of mixed 2-1/2" and 3" tubing. Ran rods and pump. Contractor moved out July 8, 1953. Well on production at 5:30 P.M.
3				

NAMES OF DRILLERS/HEAD WELL PULLERS:
Calif. Prod. Service, Contractors

Chas. F. Bowden
DISTRICT ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND G.

DIVISION OF OIL AND GAS
RECEIVED
JUL 31 1953
of California
LOS ANGELES, CALIFORNIA

12

WELL NO. Oil Operators #3

Long Beach
(FIELD)

Los Angeles
(COUNTY)

SEC. 13, T. 4-S, R. 13-W S.B. B. & M.

UNION OIL COMPANY
History of Oil or Gas Well

REPAIR REPORT

Prod. Hoist - Contract
(TOOLS)

July 26, 1953
(PERIOD ENDING)

CASING RECORD

See previous sheet

(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE	DEPTH	EFFECTIVE DEPTH	REMARKS
		5450	Plug 4985	

PRODUCTION DATA

Date	Hours	Gross	Net	Cut	Grav.	MCF	Remarks
7-8	13	35	0	100.0			
7-9	24	78	0	100.0			
7-10	24	95	34	63.0			
7-11	24	76	32	58.0		25	
7-12	24	76	27	64.0		22	
7-13	24	66	17	75.0		8	
7-14	24	72	37	48.0	23.1	8	
7-15	0						Sanded up
7-16							Union Oil production crew pulled rods and tubing.
7-17							Cleaned out 4725-4757' with 3-1/8" Cavins sand pump.
7-18							Cleaned out 4757-4820' with 3-1/8" Cavins sand pump.
7-19							Cleaned out 4820-4985' with 3-1/8" Cavins sand pump. Recovered shale and pieces of iron. Fluid level 3300'. Ran tubing to 4200'.
7-20							Cleaned out off bottom with 3-1/8" Cavins sand pump. Ran tubing to 1900'.
7-21	17	69	44	36.0			Ran rods. Put well on prod.
7-22	24	91	46	49.0			
7-23	24	91	61	33.0	23.8		
7-24	24	82	45	45.0	23.6	2	
7-25	24	73	37	49.0		2	
7-26	24	69	35	49.0	23.7	2	

fg

NAMES OF DRILLERS/HEAD WELL PULLERS:
Calif. Prod. Service, Contractors, to 7-8-53.
Union Oil Prod. Crew 7-16-53 to 7-21-53

Chas. F. Bowden
DISTRICT ENGINEER

STENOGRAPHER

Date Received 7-3-53 Form 100 ___ 101 ___ 103 ___

Elec. Log ___ Radio Log ___

Direct. Surv. ___ Other Data History

Location ___

Elevation ___ Steno. EB

ENGINEER

EB BOND Blanket Release ___ Date Elig. ___ 150b ___

End Prem.Yr. ___ Release Requested ___ Superseded ___ Aban. ___

HOLD BOND ___ Reason ___

___

Data Needed None

___ Final Letter ___ Eng. VLW

7-6-53

RECEIPT FOR

Well Summary ___

Drillers Log ___

Core Record ___

History ✓

Elec. Log ___

Radio Log ___

Direct. Surv. ___

___

Redrill ___

Deepen ___

Plug ✓

Alter Csg. ✓

Abandon ___

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND G

DIVISION OF OIL AND GAS
RECEIVED
JUL 3 1953
LOS ANGELES, CALIFORNIA

UNION OIL COMPANY of California

History of Oil or Gas Well

REPAIR REPORT

WELL NO. Oil Operators #3

Long Beach
(FIELD)

Los Angeles
(COUNTY)

SEC. 13, T. 4-S, R. 13-W S.B. B. & M.

Prod. Hoist - Contract
(TOOLS)

June 21, 1953
(PERIOD ENDING)

CASING RECORD

See below
(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1953	DEPTH	EFFECTIVE DEPTH	REMARKS
				CHARGE: B.R.-A.F.E. 51528 Job 231-D
				PROPOSED WORK: Plug back all existing perforations in R, S and T Zones and test well on production.
				PRODUCTION BEFORE REPAIR: 41 B/D Gross - 13 B/D Net - 22.8° - 67.3%.
				ZERO POINT for this job: 9'1"
				CASING RECORD AT START OF WORK: ~~T.D. 4976'~~ Dpm 5450' : 13-3/8" C 765' 8-5/8" C 3986' WSO : ~~126' 6-5/8" H 4975' 4nc 89' perf~~, pulled : 1518' 5-1/2" F & C 5446' : Bad 4195' & 5107' WSO test on splice OK : Bullet pf 4190-4205', 5140-5180', 5190-5200', 5306-5355'.
				CASING RECORD AT COMPLETION OF WORK: ~~T.D. 4976'~~ Dpm 5450' : 13-3/8" C 765' 8-5/8" C 3986' WSO : ~~126' 6-5/8" H 4975' 4nc 89' perf~~, pulled. : 1518' 5-1/2" F & C 5446' : Bad 4195' & 5107' : WSO test on splice OK : Bullet pf 4190'-4205'. Bullet pf & plgd ~~5140-5180', 5190-5200' 5306-5355'~~.
1	6-8	5450	Plug 5428 Bad 5101	California Production Service, Contractor, moved in and installed blow-out preventer. Checked bottom with 2-5/8" Cavins sand pump at 5101'. Fluid level at 810'. Ran in with 7-1/2" impression block. Checked 5-1/2" liner hanger at 3925'. Ran in with 4" impression block - went to 5100' - no marks.
1	6-9	"	Plug 4983 Bad 5101	Ran in with Cavins continuous dump bottom bailer. Dumped 11 sacks of construction cement in 5-1/2" casing, starting at 5101'. Let stand 4 hours. Felt top of plug at 4983'.
1	6-10	"	Plug 4985	Ran in with 2-5/8" Cavins sand pump. Bailed loose cement at 4983' to hard cement at 4985'. Witnessed and approved by Division of Oil and Gas. Started running tubing.
1	6-11	"	Plug 4985	Ran tubing and started running rods.
1	6-12	"	" "	Finished running rods. Put well on pump. Contractor released.

PRODUCTION DATA

	Hours	Gross	Net	Cut	Grav.
6-12	16½	113	0	100.0	
6-13	23	96	0	100.0	
6-14	24	67	0	100.0	
6-15	24	82	0	100.0	
6-16	24	78	1	97.0	23.8
6-17	24	75	22	71.0	23.2
6-18	24	66	18	73.0	
6-19	24	56	15	73.0	
6-20	24	57	14	75.0	
6-21	24	57	14	75.0	

NAMES OF DRILLERS/HEAD WELL PULLERS:
California Production Service, Contractor.

Chas. F. Bowden
DISTRICT ENGINEER

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 153-737

Los Angeles 15, Calif. June 18, 19 53

Mr W S Eggleston
~~Mr~~ 1109 Union Oil Building
LOS ANGELES 17 Calif.
Agent for UNION OIL CO OF CALIFORNIA

DEAR SIR:

Operations at your well No. "Oil Operators" 3 Sec. 13, T. 4 S, R. 13 W, S B B. & M., Long Beach Field, in Los Angeles County, were witnessed by J. R. Thomas, Inspector, representative of the supervisor, on June 10, 19 53. There was also present R. J. Wilson, Driller; Ray Hothan, Helper.

Casing Record 13-3/8" cem. 765'; 8-5/8" cem. 3986', W.S.O.; 5½" ld. 3928'-5446', perf. 4190'-4205', 5140'-5180', 5190'-5200', and 5306'-5355'. T.D. 5450', plugged with cement 5446'-5428' and 5101'-4984'.

Junk None

The operations were performed for the purpose of testing the location and hardness of a cement plug placed from 5101' to 4984' in the process of plugging back.

The inspector arrived at the well at 10:45 a.m. and Mr. Wilson reported: that on June 9, 1953, 11 sacks of cement was dumped into the hole beginning at 5101'.

THE INSPECTOR NOTED THAT the bailer could not be spudded below 4984' and brought up a sample of set cement.

The test was completed at 11:30 a.m.

THE LOCATION AND HARDNESS OF THE CEMENT PLUG AT 4984' ARE APPROVED.

JRT:OH

cc Long Beach

Mr C F Bowden Div Engineer
Union Oil Co of California
9645 South Santa Fe Springs Road
WHITTIER California

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Meesser Deputy

44226 5-51 14,250 ② SPO

FORM 111 (1-49)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P 153-666

Los Angeles 15 Calif. May 28 1953

Mr. W S Eggleston

121

Los Angeles 17 Calif.

Agent for UNION OIL CO OF CALIFORNIA

DEAR SIR: "Oil Operators"

Your proposal to plug & alter casing Well No. 3,

Section 13, T. 4 S, R. 13 W, S B B. & M., Long Beach Field, Los Angeles County,

dated May 26 1953, received May 27 1953, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS IN ADDITION TO, OR AT VARIANCE WITH, THOSE SHOWN IN THE NOTICE

The hole is plugged with cement 5446'-5428'.

Records Filed
100
101
103 ✓ 7-3-53 JLW
E. Log 7-30-53 JLW

THE NOTICE STATES

"The present condition of the well is as follows:

1. Total depth - 4076'
   Deepen - 5450'

2. Complete casing record.
   13-3/8" C 765'
   8-5/8" C 3986' W.S.O.
   ~~1161-6-5/8" H-4075' inc. 89' perf., pulled~~
   1518' 5-1/2" F & C 5446', Bad 4195' & 5107'
   W.S.O. test on splice O.K.
   Bullet perf: 4190-4205, 5140-5180, 5190-5200, 5306-5355'

3. Last produced. April 1953 (Date) — 13 B/D (Net Oil) — 22.8° (Gravity) — 67.3% (Cut)"

PROPOSAL

"The proposed work is as follows:

1. Plug 5-1/2" casing with cement from 5107' to 5000'.
2. Test on production.
3. Gun perforate 5-1/2" casing from 4950-4852'. → done 7-7-53
4. Test on production."

DECISION

THE PROPOSAL IS APPROVED PROVIDED THAT

1. Plugging operations shall start from as deep as possible.
2. THIS DIVISION SHALL BE NOTIFIED TO WITNESS the location and hardness of cement plug at 5000'.

JLW:OH

cc W S Eggleston
C F Bowden
Long Beach

M/A

R. D. BUSH
State Oil and Gas Supervisor

By E. H. Meesser Deputy

Blanket bond.

FORM 107. 36140 11-50 10M SPO

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
MAY 27 1953
LOS ANGELES, CALIFORNIA

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

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

Whittier Calif. May 26 19 53

DIVISION OF OIL AND GAS

Los Angeles Calif.

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. Oil Operators #3
(Cross out unnecessary words)

, Sec. 13, T. 4-S, R. 13-W, S. B. B. & M.

Long Beach Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. - 4076'
   Deepen - 5450'

2. Complete casing record.
   13-3/8" C 765'
   8-5/8" C 3986' W.S.O.
   ~~116'-6-5/8"-H-4075'-ine.-89'-perf.,-pulled~~
   1518' 5-1/2" F & C 5446', Bad 4195' & 5107'
   W.S.O. test on splice O.K.
   Bullet perf: 4190-4205, 5140-5180, 5190-5200, 5306-5355'

3. Last produced. April 1953 (Date) | 13 B/D (Net Oil) | 22.8° (Gravity) | 67.3% (Cut)

The proposed work is as follows:

1. Plug 5-1/2" casing with cement from 5107' to 5000'.
2. Test on production.
3. Gun perforate 5-1/2" casing from 4950-4852'.
4. Test on production.

Plug + alter casing

MAP | MAP BOOK | CARDS | BOND | FORMS 114 | 121

Blanket Bond

UNION OIL CO. OF CALIFORNIA
(Name of Operator)

By C. F. Bowden
C. F. BOWDEN, Division Engineer.

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

STENOGRAPHER Transferred to Hartwell

Date Received 7-29-48 Form 100 ____ 101 ____ 103 ____

Elec. Log ____ Radio Log ____

Direct.Surv. ____ Other Data ____

Location ____

Elevation ____ Steno. Dean

ENGINEER

BOND Blanket Release ___ Date Elig. ____ 150b ____

End Prem.Yr. ____ Release Requested ___ Superseded ____ Aban. ___

HOLD BOND ____ Reason ____

Data Needed None

____ Final Letter ___ Eng. SHR 8-2-48

STENOGRAPHER

Date Received 5-1-48 Form 100 ____ 101 ____ 103 ____

Elec. Log ____ Radio Log ____

Direct.Surv. ____ Other Data ____

Location ____

Elevation ____ Steno. Scott

ENGINEER

BOND Blanket Release ____ Date Elig. ____ 150b ____

End Prem.Yr. ____ Release Requested ____ Superseded ____ Aban. ____

HOLD BOND ____ Reason ____

Data Needed None

Final Letter ____ Eng. DMR 5-13-48

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

8

WELL NO. Oil Operators #3

Long Beach
(FIELD)

Los Angeles
(COUNTY)

SEC. 13 T. 4-S R. 13-W S.B. B. & M.

UNION OIL COMPANY
History of Oil or Gas Well

REPAIR REPORT

Portable Hoist
(TOOLS)

February 24, 1948
(PERIOD ENDING)

13-3/8" CASING RECORD
8-5/8" @ 3986' O.K.
1518' 5-1/2" @ 5426'
(Pf. 5140-5180', 5190-5200', 5306-5355') Plgd with bridge plug
Perf. 4190-4205'.
(NOTE INEFFECTIVE CASING)

MAP | MAP BOOK | CARDS | BOND | FORMS 114 121

NO. TOURS	DATE 1948	DEPTH	EFFECTIVE DEPTH	REMARKS
		Proposed work:		Plug off present perforations with temporary bridge plug. Test H-I Zone.
		Production:		November, 1947 8 B/D net - 23.0° - 64.1%
2	2-10	5450	Plg 5428	Rigged up. Pulled rods and tubing. Cleaned out from 5391' to 5428' with 3-1/8" Cavins bailer. Ran 4-1/2" impression block to 5426'.
			"	
2	2-11	"	B.P. 4318	Set Baker bridge plug at 4327' - no fluid above plug. Dumped one sack cement at 4327'. Installed 6" control gate. Checked top of cement at 4318'. Dumped in 500 gallons of stove oil. Gun perforated 5-1/2" liner from 4190' to 4205' with two McCullough 1/2" holes per foot. Fluid level rose from 3918' to 3050' during shooting. Had a good gas blow.
2	2-12	"	"	Located top of sand at 4283'. Cleaned out with 3-1/8" bailer to 4303'. Ran 4-1/2" impression block to 4210'. Ran 2-1/2" tubing to 4177'. Ran rods.
			"	
1	2-13	"	"	Hooked up flow line. Put well on pump.
			"	

PRODUCTION DATA

	Hours	Gross	Net	Cut	Grav.	Remarks
2-14	24	44	19	56.0	23.0	Average Cut (old).
2-15	24	19	8	56.0	23.0	
2-16	24	10	4	56.0	23.0	
2-17	24	17	7	56.0	23.0	
2-18	24	14	6	56.0	23.0	
2-19	0					Lowered tubing, changed pump.
2-20	21	40	18	4.1	22.8	
2-21	24	29	28	4.1	22.8	
2-22	24	21	20	2.2	22.8	
2-23	24	21	21	2.2	22.8	
2-24	24	21	21	2.2	22.8	

DIVISION OF OIL AND GAS
RECEIVED
MAY 1 - 1948
LOS ANGELES, CALIFORNIA

NAMES OF DRILLERS/HEAD WELL PULLERS:
Santa Fe Springs Production

John R. Fraser
DISTRICT ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

UNION ~~OIL~~ COMPANY

History of Oil or Gas Well

REPAIR REPORT

WELL NO. Oil Operators #3

Long Beach

(FIELD) Los Angeles

(COUNTY)

SEC. 13 T. 4-S R. 13-W S.B. B. & M.

Portable Hoist (TOOLS)

April 15, 1948 (PERIOD ENDING)

CASING RECORD
13-3/8" C 765'
8-5/8" C 3986' O.K.
1518' 5-1/2 C 5446'
Pf. 5140-5180, 5190-5200,
5306-5355' & 4190-4205'

RECEIVED
JUL 29 1948

(NOTE INEFFECTIVE CASING)

NO. TOURS	DATE 1948	DEPTH	EFFECTIVE DEPTH	REMARKS
				Proposed Work: Clean out bridge plug and return to production. Production: 20 B/D net - 22.8° - 2.2%
1	3-24	5450	Plug 5428 Bridge plug 4318	Pulled rods and tubing. Shut well in.
1	3-25	5450	" "	Cleaned out from 4308' to 4316' with 2-5/8" bailer. Fluid level 3100'.
2	3-26	5450	Plug 5428	Ran in with chisel shoe and drilled out bridge plug. Cleaned out with bailer to 5428'. Recovered metal and sand.
1	3-27	5450	Plug 5428	Checked hole open to bottom. Ran tubing and rods. Put well on production.

PRODUCTION DATA

Hrs.	Gross	Net	Cut	Grav.	Remarks
3-28	18	27	27	1.1	22.8
3-29	18	30	30	1.1	22.8
3-30	24	30	30	1.1	22.8
3-31	24	48	47	1.1	22.8
4-1	24	30	30	1.5	22.8
4-2					Pulled rods and tubing.
4-3					Cleaned out sand from 5368' to 5428' with 2-5/8" Cavins bailer. Ran tbg.
4-4					Ran rods & pump. Put well on prod.
4-5	24	68	67	1.5	22.8
4-6	24	68	67	1.5	22.8
4-7	24	43	42	1.5	22.8
4-8	24	4	4	1.5	22.8
4-9	24	45	44	1.5	22.8
4-10	24	33	33	1.5	22.8
4-11	24	3	3	1.5	22.8
4-12	24	2	2	1.5	22.8
4-13	24	28	28	1.5	22.8
4-14	24	40	39	1.5	22.8
4-15	24	66	65	1.5	22.8

MAP	MAP S.O.	CARDS	BOND	FORMS 114	FORMS 121

NAMES OF DRILLERS/HEAD WELL PULLERS:

John R. Fraser
DISTRICT ENGINEER

[redacted] Sol [redacted] Frazer
12/24/47
ABH.

Hunt Oil Co.

"Oil Operators" #3

To perf. 4205' – 4190'

later on if not enough to perf.
up as high as 4050'

To temp. bridge off lower perfs.
and if O.K. to take both
zones together

FORM 111.
CALIFORNIA STATE PRINTING OFFICE

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Report on Proposed Operations

No. P 1-44335

Los Angeles 15, Calif. December 26, 1947

MR. W. S. Eggleston

Los Angeles 14, Calif.

Agent for UNION OIL COMPANY OF CALIFORNIA

DEAR SIR:

Your proposal to alter casing Well No. "Oil Operators" 3, Section 13, T. 4 S., R. 13 W., S.B. B. & M., Long Beach Field, Los Angeles County, dated Dec. 22, 1947, received Dec. 23, 1947, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

RECORDS: The condition of the well is as stated in the notice.

THE NOTICE STATES:

"The present condition of the well is as follows:

1. Complete casing record.
   Total depth 5450' - Plug 5428'
   13-3/8" C 765'
   8-5/8" C 3986'
   1518' 5-1/2" F & C 5446' Perf. 5140-5180', 5190-5200' & 5306-5355'

2. Last produced Nov., 1947 (Date) | 8 B/D Ave. (Net Oil) | 23.0° (Gravity) | 64.1% (Cut)"

PROPOSAL:

"The proposed work is as follows:

1. Plug off perforations from 5140' to 5355' with a bridge plug.
2. Test H-I Zones by stages from 4200' to 4050'.
3. If O.K., knock out bridge plug and put on production."

DECISION:

THE PROPOSAL IS APPROVED PROVIDED THAT

1. It is understood that the bridge plug above the perforations 5355'-5140', does not fulfill the requirements of this division for the abandonment of the lower portion of the hole.
2. This division shall be kept informed of the results of tests after each stage of perforating, and will designate any requirements at that time.

SHR:OH

cc- John R. Fraser
Long Beach

Records Filed
100
101
103 5-1-48 & 7-29-48
E. Log

R/B

R. D. BUSH
State Oil and Gas Supervisor

By E A Musser Deputy

Blanket bond.