

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 1

CASE NO. 1294

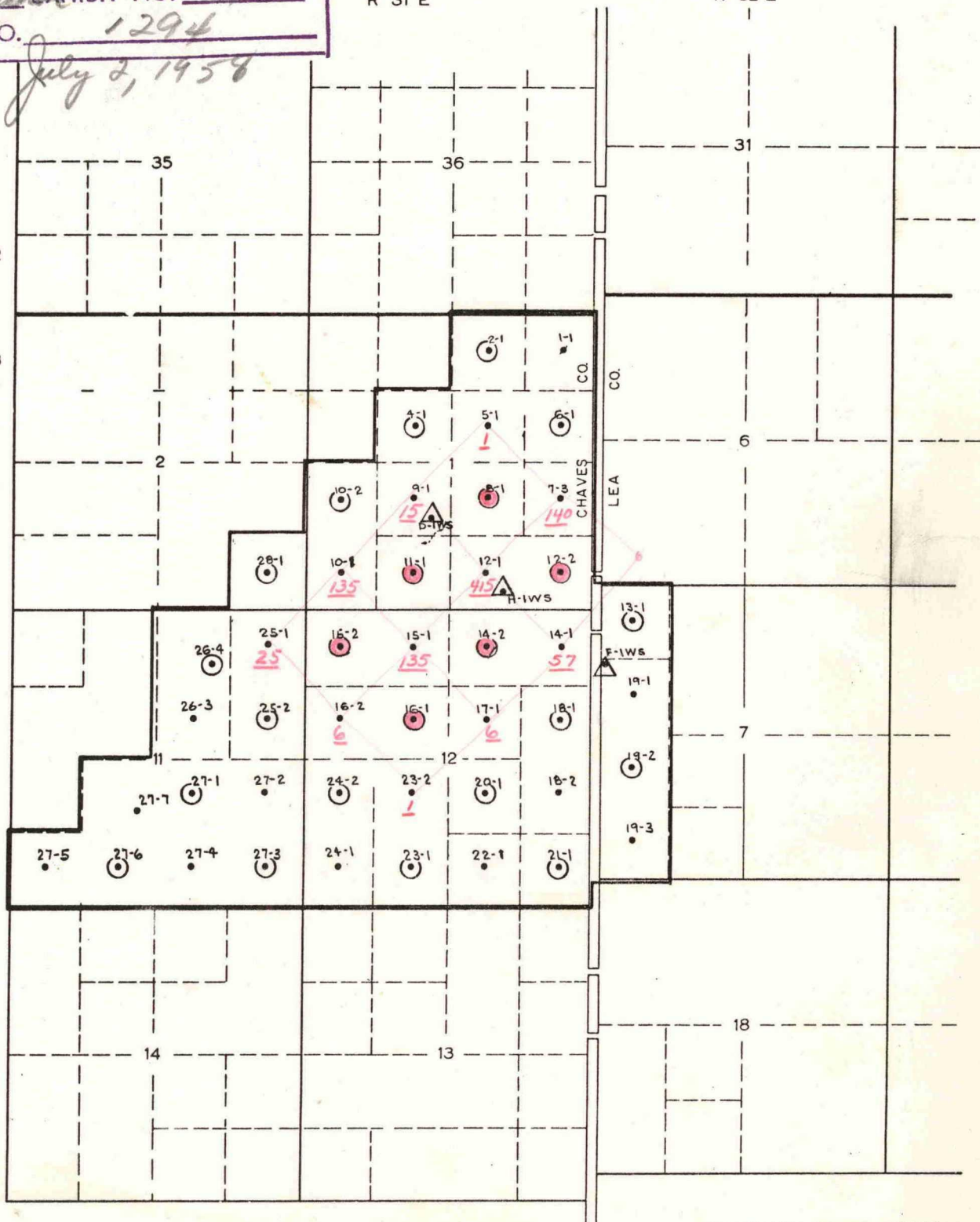
July 2, 1958

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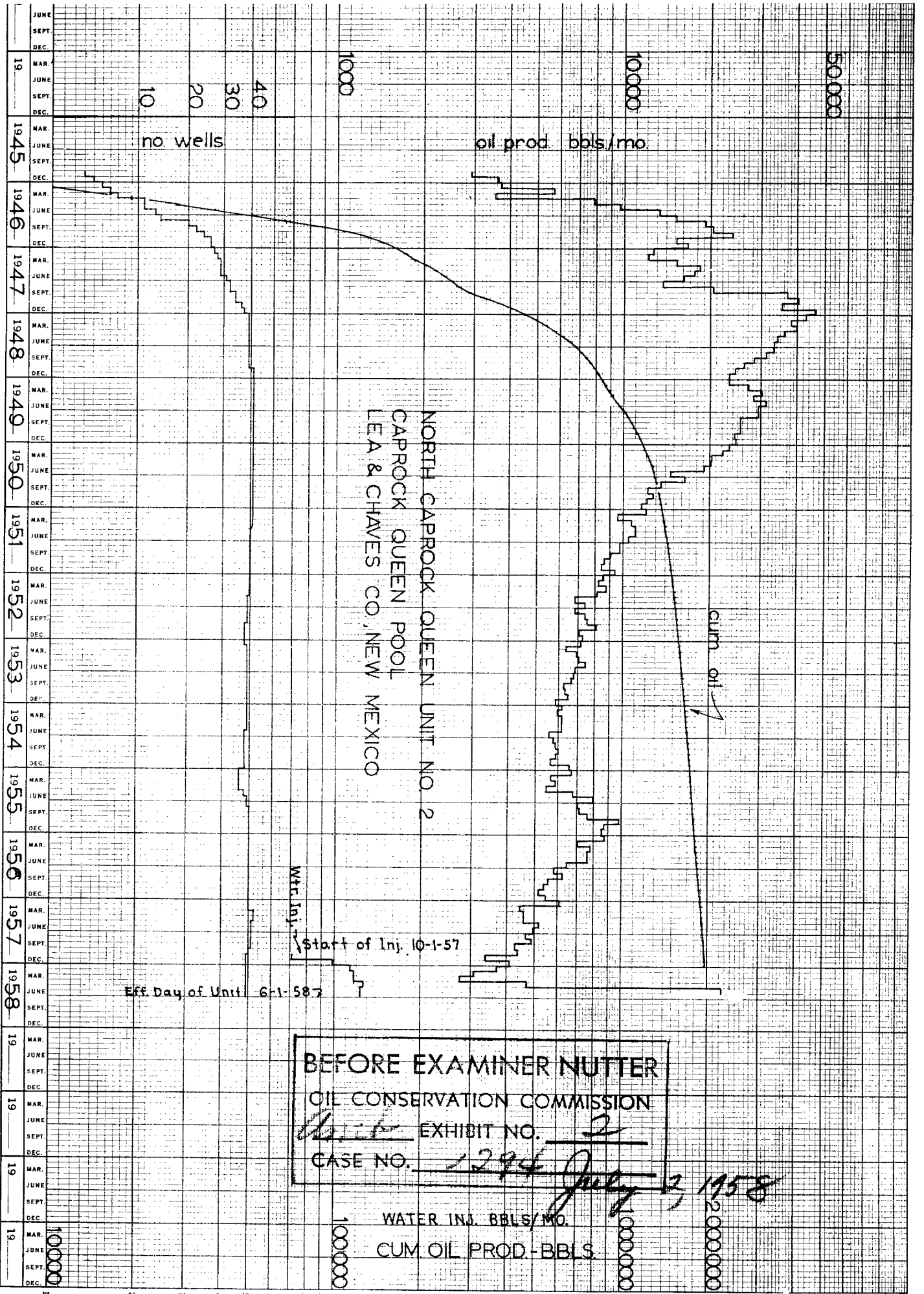
AMBASSADOR OIL CORP.

PLAT OF NORTH CAPROCK QUEEN UNIT NO. 2,
CAPROCK QUEEN POOL, LEA AND CHAVES
COUNTIES, NEW MEXICO.

EXHIBIT A

- PRESENT INJECTION WELLS
- PROPOSED INJECTION WELLS
- PRESENT PRODUCERS
- ▲ WATER SUPPLY WELLS

415 Production B.O.P.D. (6-30-58)



AMBASSADOR OIL CORPORATION
MONTHLY FLOOD PERFORMANCE REPORT
MAY, 1958

FLOOD No. 27 FLOOD NAME CAPROCK

LEASE: ALL

EFFECTIVE DATE OF FLOOD: NOVEMBER 1, 1957

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Ames EXHIBIT NO. 3

CASE NO. 1294

June 2, 1958

WATER INJECTION (BARRELS)					PRODUCTION			
WELL No.	DAILY MONTHLY AVERAGE	MAX. PRESS.	CUMULATIVE	WELL No.	MONTHLY OIL	MONTHLY WATER	CUMULATIVE OIL	CUMULATIVE WATER
<u>STATE "E"</u>								
1	22,575	728	VAC.	141,893	B-1	SHUT IN		
					C-1	T. A.		
<u>STATE "H"</u>								
2	20,801	671	VAC.	138,420	D-1	105	0	234
					F-1	161	0	1,194
<u>STATE "J"</u>								
2	21,382	690	VAC.	141,174	F-2	16	0	189
					F-3	135	0	964
<u>STATE "M"</u>								
1	11,025	355	600	61,116	G-1	216	0	653
					G-2	26	0	222
<u>GULF STATE "A"</u>								
2	22,878	738	VAC.	151,222	H-1	11,123	0	14,412
					J-1	170	0	980
					K-1	44	0	332
<u>GRARIDGE MAXWELL STATE "A"</u>								
1	22,880	738	380	141,900	L-1	3,650	0	6,019
					L-2	SHUT IN		
					M-2	124	0	1,116
					N-1	T.A.		
					O-2	143	0	619
					P-1	47	0	312

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Amb. EXHIBIT NO. 4

CASE NO. 1294

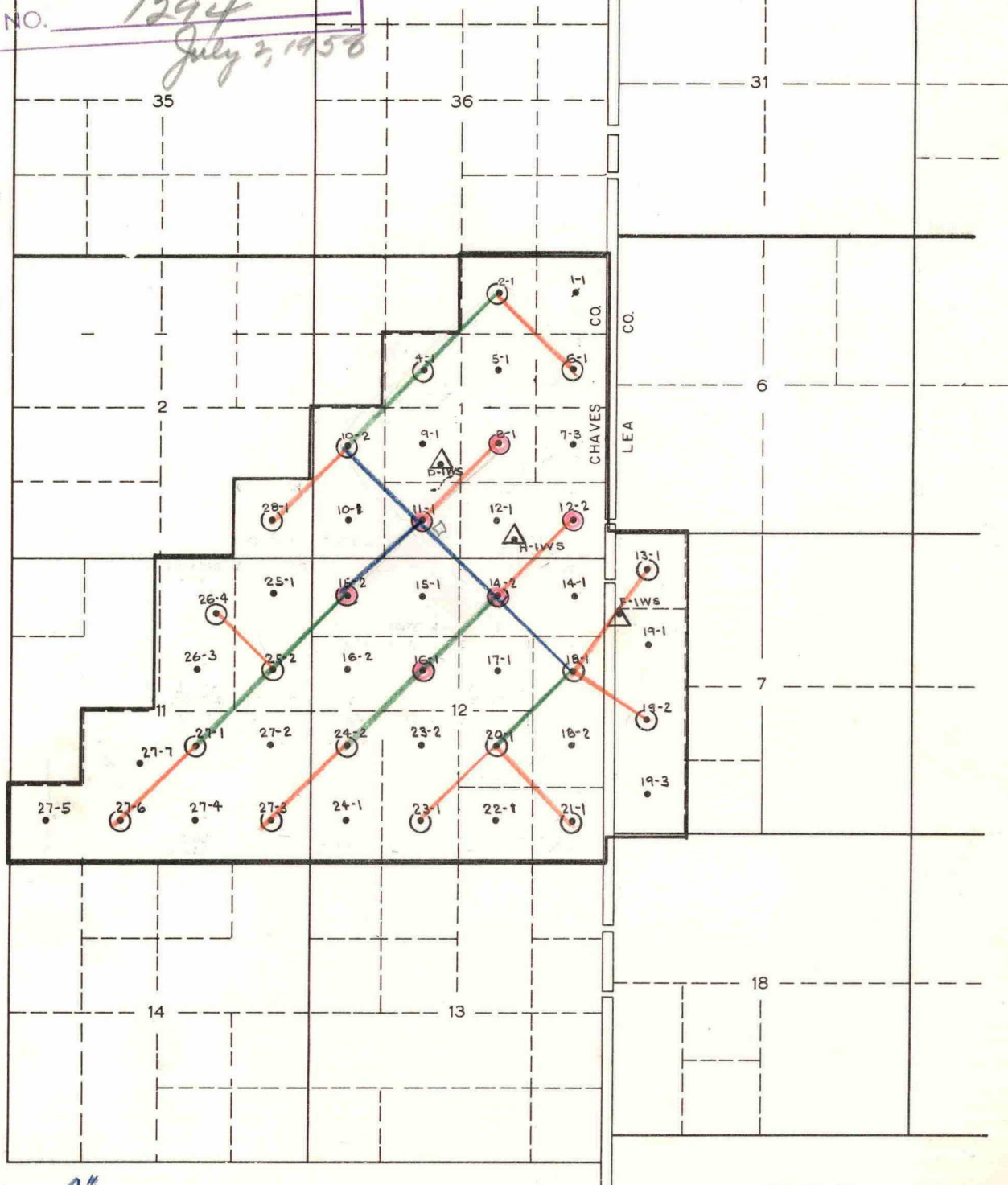
July 2, 1958

R 31 E

R 32 E

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— 4"
— 3"
— 2"

Injection System.

AMBASSADOR OIL CORP.

PLAT OF NORTH CAPROCK QUEEN UNIT NO. 2,
CAPROCK QUEEN POOL, LEA AND CHAVES
COUNTIES, NEW MEXICO.

EXHIBIT A

- PRESENT INJECTION WELLS
- ⊙ PROPOSED INJECTION WELLS
- PRESENT PRODUCERS
- △ WATER SUPPLY WELLS

FIG. 2

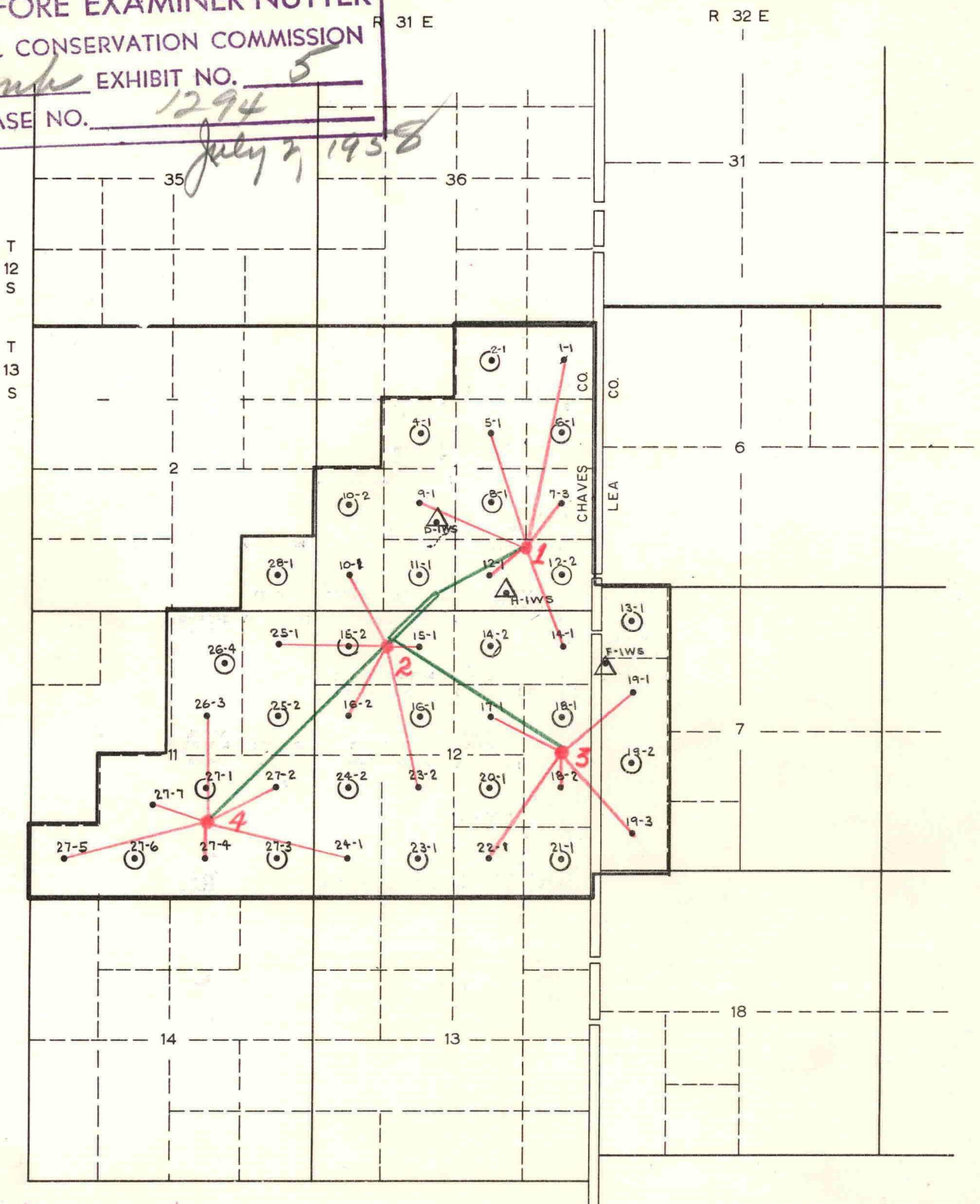
BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 5

CASE NO. 1294

July 7, 1938



Oil Gathering System

● Battery location

— 3" C.L.

— 3" C.L.

— 4" C.L.

AMBASSADOR OIL CORP.

PLAT OF NORTH CAPROCK QUEEN UNIT NO. 2,
CAPROCK QUEEN POOL, LEA AND CHAVES
COUNTIES, NEW MEXICO.

EXHIBIT A

● PRESENT INJECTION WELLS

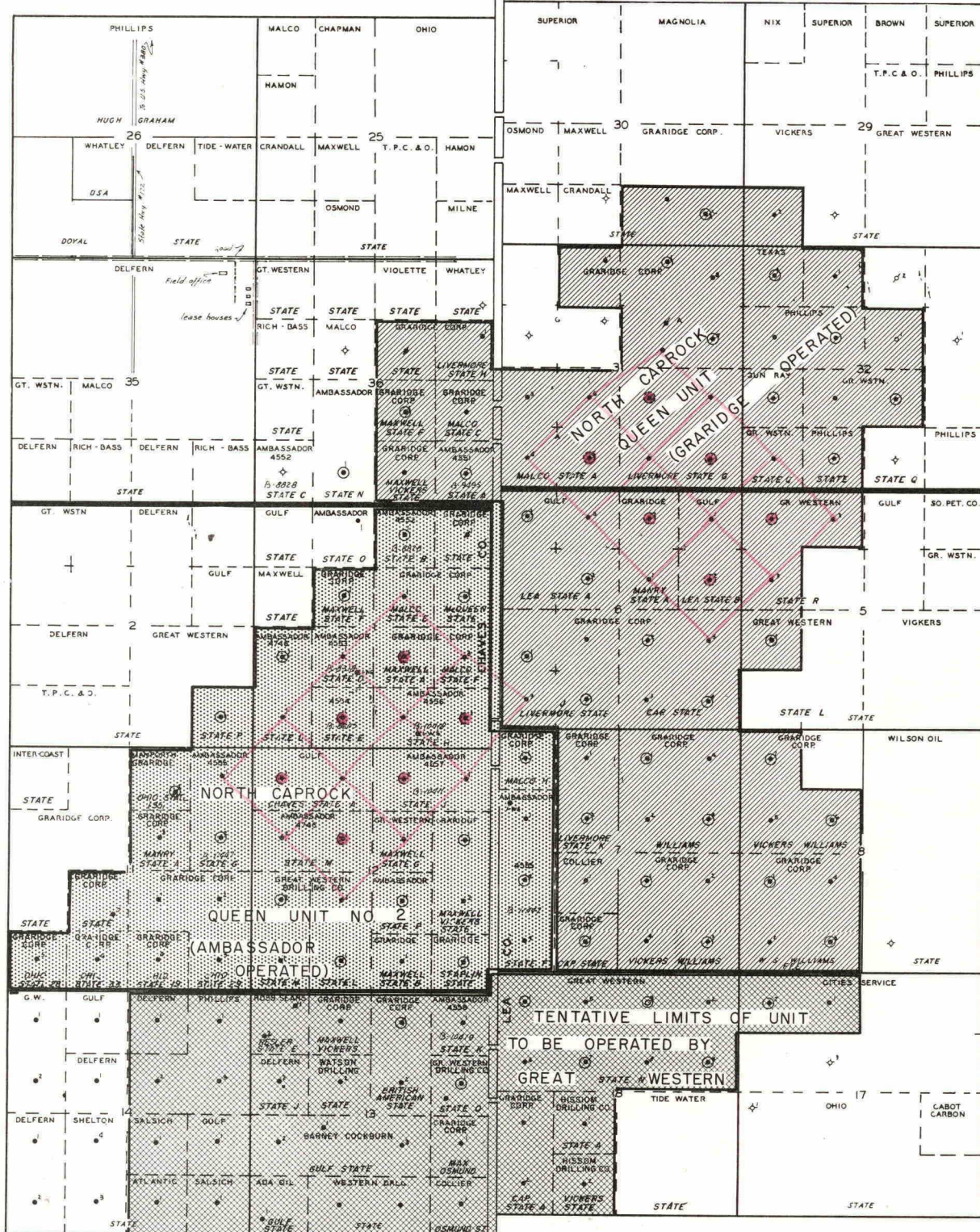
● PROPOSED INJECTION WELLS

● PRESENT PRODUCERS

△ WATER SUPPLY WELLS

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BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION

EXHIBIT NO. 6

CASE NO. 1294

EXHIBIT NO. 3

UNIT BOUNDARIES
CAPROCK AREA
CHAVES & LEA CO'S, NEW MEXICO

ONE MILE

2-12-55 BR

STATE OF OKLAHOMA

SUMMARY OF "TRUE" WATERFLOOD PROJECTS

	<u>March, 1957</u>	<u>January, 1958</u>
Total State Allowable, B/D	625,000	562,000
True Waterflood Prod., B/D	115,570	127,771
True Waterflood Prod. - Percent of Total Allowable	18.5	22.7
Total True Waterflood Projects	344	357
Area under Authorized Waterflood, Acres	208,758	244,668
Total Water, Injected, B/D	1,516,359	1,630,086
Total Water, Produced, B/D	?	863,910
Number of Oil Wells	15,427	16,053
Number of Water Input Wells	10,881	10,865
Number of Oil and Input Wells	26,308	26,918
Average Oil Production per Oil Well, B/D	7.49	7.96
Average Oil Production per Total of Oil and Input Wells, B/D	4.39	4.76

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 18

CASE NO. 1244

1/ "True" waterflood projects are those containing two (2) or more input wells. Those containing less than two (2) inputs were considered to be salt water disposal projects, and were deleted from the summary.

In March, 1957; 123 (26.3%) of the projects were deleted from the summary.

In January, 1958; 123 (25.6%) of the projects were deleted from the summary.

Exhibit No. _____

W. E. Stiles Engineering

STATE OF OKLAHOMA
TRUE WATERFLOOD PROJECTS PRODUCING IN EXCESS
OF 20 B/D/TOTAL WELLS (OIL AND INPUT WELLS)

Oil Producing Rate B/D/Total Well	MARCH, 1957		JANUARY, 1958	
	No. of Projects	Daily Oil Rate in Excess of 20 B/D/Well	No. of Projects	Daily Oil Rate in Excess of 20 B/D/Well
80-89			1	1,035
70-79				
60-69				
50-59			3	2,913
40-49	4	1,295		
30-39	6	2,552	3	1,313
20-29	17	1,908	10	5,098
TOTALS	27	5,755	17	10,359
Percentage of all "true" waterfloods	(7.8%)	(5.0%)	(4.8%)	(8.1%)

Exhibit No. _____

W. E. Stiles Engineering

Approved

DAILY OIL PRODUCTION-BY DEPTH GROUP*

<u>DEPTH GROUP</u>	<u>DAILY OIL PRODUCTION</u>	<u>% OF TOTAL</u>
0 - 5000'	123,335	45.6
5 - 6000'	8,221	3.0
6 - 7000'	14,019	5.2
7 - 8000'	6,158	2.3
8 - 9000'	6,710	2.5
9 - 10,000'	25,630	9.5
10 - 11,000'	14,683	5.4
11 - 12,000'	32,713	12.1
12 - 13,000'	30,743	11.4
13 - 14,000'	8,228	3.0
 TOTALS	 270,440	 100.0

* Lea, Eddy, Chaves and Roosevelt Counties only.

Table 1

BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
<i>App</i>	EXHIBIT NO. <u>20</u>
CASE NO.	<u>1294</u>

Exhibit No. _____

NUMBER OF WELLS-BY DEPTH GROUP*

<u>DEPTH GROUP</u>	<u>NUMBER OF WELLS</u>	<u>% OF TOTAL</u>
0 - 5000'	7633	76.8
5 - 6000'	311	3.3
6 - 7000'	679	6.8
7 - 8000'	245	2.5
8 - 9000'	95	1.0
9 - 10,000'	367	3.7
10 - 11,000'	177	1.8
11 - 12,000'	212	2.1
12 - 13,000'	158	1.6
13 - 14,000'	41	0.4
TOTALS	9,918	100.0

* Lea, Eddy, Chaves and Roosevelt Counties only.

Table 2

Exhibit No. _____

MARGINAL AND NON-MARGINAL DAILY PRODUCTION*

<u>DEPTH GROUP</u>	<u>MARGINAL PRODUCTION</u>		<u>NON-MARGINAL PRODUCTION</u>	
	<u>Barrels/Day</u>	<u>% of Total</u>	<u>Barrels/Day</u>	<u>% of Total</u>
0 - 5000'	59,879	53.0	62,395	39.9
5 - 6000'	4,745	4.2	3,476	2.2
6 - 7000'	10,977	9.7	3,042	1.9
7 - 8000'	4,926	4.3	1,232	0.8
8 - 9000'	1,536	1.4	5,174	3.3
9 - 10,000'	12,703	11.2	12,927	8.3
10 - 11,000'	6,006	5.3	8,677	5.6
11 - 12,000	7,243	6.4	25,470	16.3
12 - 13,000'	3,364	3.0	27,379	17.5
13 - 14,000'	1,674	1.5	6,554	4.2
TOTALS	113,053	100.0	156,326	100.0

* Lea, Eddy, Chaves, and Roosevelt Counties only.

Table 3

Exhibit No. _____

MARGINAL AND NON-MARGINAL WELLS*

<u>DEPTH GROUP</u>	<u>MARGINAL WELLS</u>		<u>NON-MARGINAL WELLS</u>	
	<u>Number</u>	<u>% of Total</u>	<u>Number</u>	<u>% of Total</u>
0 - 5000'	5741	77.5	1892	75.4
5 - 6000'	232	3.1	79	3.2
6 - 7000'	641	8.7	38	1.5
7 - 8000'	229	3.1	16	0.6
8 - 9000'	43	0.6	52	2.1
9 - 10,000'	268	3.6	99	3.9
10 - 11,000	124	1.7	53	2.1
11 - 12,000'	81	1.1	131	5.2
12 - 13,000'	32	0.4	126	5.0
13 - 14,000'	17	0.2	24	1.0
 TOTALS	 7408	 100.0	 2510	 100.0

Marginal and Non-Marginal Wells total 9918, of which

74.7% are marginal

25.3% are non-marginal

* Lea, Eddy, Chaves and Roosevelt Counties only.

Table 4

Exhibit No. _____

AVERAGE DAILY PRODUCTION PER WELL*

<u>DEPTH GROUP</u>	<u>MARGINAL WELLS</u>	<u>NON-MARGINAL WELLS</u>
0 - 5000'	10.4	33.0
5 - 6000'	20.5	44.0
6 - 7000'	17.1	80.0 <u>1/</u>
7 - 8000'	21.5	77.0
8 - 9000'	35.7	99.5 <u>3/</u>
9 - 10,000'	47.4	130.6 <u>3/</u>
10 - 11,000'	48.4	163.7 <u>2/</u>
11 - 12,000'	89.4	194.4 <u>3/</u>
12 - 13,000'	105.1	217.3
13 - 14,000'	98.5	273.1 <u>3/</u>

1/ 25 (or 66%) of the 38 non-marginal wells in this depth group are in Dollarhide-Drinkard Pool operating under a special allowable of 91 B/D.

2/ 14 (or 26%) of the 53 non-marginal wells in this depth group are in Bagley Siluro-Devonian Pool operating under a special allowable of 188 B/D.

3/ Allocation by acreage adjustment.

* Lea, Eddy, Chaves and Roosevelt Counties only.

Table 5

Exhibit No. _____

WELLS INCAPABLE OF PRODUCING THE DEPTH ALLOWABLE
PERCENT OF ALL WELLS IN DEPTH GROUP*

<u>DEPTH GROUP</u>	<u>NUMBER OF WELLS</u>	<u>PERCENT</u>
0 - 5000'	7633	75.2
5 - 6000'	311	74.6
6 - 7000'	679	94.4
7 - 8000'	245	93.5
8 - 9000'	95	45.3
9 - 10,000'	367	73.0
10 - 11,000'	177	70.1
11 - 12,000'	212	38.2
12 - 13,000'	158	20.3
13 - 14,000'	41	41.5
	<hr/> 9,918	

* Lea, Eddy, Chaves and Roosevelt Counties only.

Table 6

Exhibit No. _____

WATERFLOOD ALLOWABLES

STATE OF TEXAS

<u>Railroad Commission District</u>	<u>Number Producing Wells</u>	<u>Cal. Day Allowable Barrels</u>	<u>Avg. /Well Per Cal.Day Barrels</u>
1	101	1,279	17.7
2	39	680	17.4
3	19	183	9.6
4	628	8,987	14.3
5	105	1,466	14.0
6	103	1,276	12.4
7-B	1,043	9,461	9.1
7-C	55	1,226	22.3
8	2,378	69,802	29.4
9	2,477	26,560	10.7
10	48	395	8.2
	<hr/>	<hr/>	<hr/>
Total	6,996	121,315	17.35

F. KIRK JOHNSON
WATER FLOOD DIVISION

MONTHLY FLOOD PERFORMANCE REPORT

MONTH: February 1959

EXAMINED BY
VALUATION CLERK
EXHIBIT NO. D
1294

Flood No. 27 Flood Name No. Caprock Queen Unit #2

Lease: A11

Effective date of Flood: 1 November 1951

Water Injection (Barrels)					PRODUCTION				
Well No.	Monthly	Daily Average	Max. Press.	Cumulative	Well No.	Monthly Oil	Monthly Water	Cumulative Oil	Cumulative Water
2-1	2910	556	0	2710	1-1	P.P.A.			
4-1	4230	551	800	11425	1-2	S.I.W.			
6-1	17644	631	300	52973	3-2	12	0	12	0
8-1	5374	531	600	190,020	5-1	1721	0	5294	0
10-2	1493	53	800	2578	7-3	6284	4859	43887	7284
11-1	17613	629	120	312,525	7-1	2064	0	15429	0
12-2	15579	556	410	248,126	10-1	3343	6585	46,861	16,432
12-1	18128	647	500	85,420	12-1	2044	11,513	91,513	41,539
14-2	14,802	527	200	300,641	14-1	13789	0	48,940	0
15-2	3506	275	800	272,844	15-1	2506	2242	38,075	5230
16-1	11,618	415	800	140,444	16-2	2076	4575	22,439	14,353
18-1	16650	600	720	16,879	17-1	10224	0	23,199	0
20-1	16259	581	700	84,823	18-2	455	0	2179	0
22-2	6445	230	800	24,195	18-1	1047	0	3539	0
25-2	2429	87	800	11,210	19-2	0	0	372	0
26-4	2222	70	800	7969	19-3	210	0	2384	0
28-1	16467	588	500	82,701	21-1	5140		102	0
					22-1	9	0	546	0
					23-1	192	0	4553	0
					23-2	2898	0	8085	0
					24-1	100	0	642	0
					25-1	1771	1068	9043	1544
					26-3	52	0	738	0
					27-1	51	0	2302	0
					27-2	114	0	3009	0
					27-3	S.I.		0	0
					27-4	121	0	2547	0
					27-5	27	0	827	0
					27-6	90	0	2068	0
					27-7	108	0	2346	0

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29-1 T.A.

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DEVISON Monthly Progress Report

WFO 100 100.11

Project No. 27 Project Name Ab. Cogrock Queen Unit #2
 County Chavez State New Mexico Field Cogrock Queen
 Lease Names _____

Report No. 85
 Field Supervisor Don Layton
 Report Area 1
 Report Date 3-2-59

Effective Date of Report 2-28-59
 Estimated No. of Ac. Under Flood in Report Area 1200
 Total No. of Acres in Report Area 1200
 Data for Report Curves: Report Area 1

Rate Curves BBL/MO & MCF/MO

PRODUCTION			INJECTION		INJ. PRESS.			NO. OF ACTIVE WELLS		
OIL	WATER	GAS	WATER	GAS	MAX.	MIN.	AVE.	INJ.	PROD.	SUP'Y.
56,667.31	30,842	0	173,387	0	800	650	600	16	75	3

CUMULATIVE CURVES BBL & MCF

CUMULATIVE PRODUCTION				CUMULATIVE INJECTION	
W. F. OIL	PRIN. OIL	WATER	GAS	GAS	WATER
362,587.55	1,956,831	86,446	0	0	2,104,823

RATIO & FACTOR CURVES

RATIO DATA				W. F. RECOVERY	
C.I.N.J.W./C.W.F.R.	C.P.W./C.W.F.R.	F.W./W.F.P.	C.P.R./W.F.R.	B.B.L./A.C.	B.B.L./W.P.
6/1	1/4	1/1.6	5.4/1	30.3	14.136

(See Notes in OP Memo 100.11 for Abbrev. Above)
 Description of Development & Operations:
 (Use Additional Sheets if Necessary.)

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AMBASSADOR OIL CORPORATION

PROJECT NO. 27 LEASE No. Caprock Queen Unit #2

WELL TESTS

February 1959

ILLEGIBLE

WELL	PUMP DIA.	DATE	PERIOD	SPM	STROKE	OIL BBLS.	WATER BBLS.	WATER CUT
5-1	1 $\frac{1}{2}$	8	24	12	30	73	0	0
		20				75	0	0
7-3	2 $\frac{1}{4}$	10	24	14	64	225	191	45
		12				224	191	45
		14				227	191	44
		16				236	173	42
		25				230	173	42
		27				246	170	40
		1				249	167	40
9-1	1 $\frac{1}{2}$	9	24	14	34	71	0	0
		20				83	0	0
10-1	2 $\frac{1}{4}$	8	24	14	64	143	271	65
		13				142	270	65
		19				141	274	65
		25				156	263	62
12-1	2 $\frac{1}{4}$	6	24	17	64	67	425	86
		10				60	421	83
		12				72	432	86
		14				72	435	85
		17				99	413	80
		26				119	389	76
14-1	2 $\frac{1}{4}$	11	24	17	64	589	0	0
		12				542	0	0

AMBASSADOR OIL CORPORATION

PROJECT NO. 27 LEASE No. Caprock Green Unit #2

WELL TESTS

February 1959

WELL	PUMP DIA.	DATE	PERIOD	SPM	STROKE	OIL BBLs.	WATER BBLs.	WATER CUT
14-1	2 $\frac{1}{4}$	18	24	17	64	542	0	0
		1				595	0	0
15-1	2 $\frac{1}{4}$	12	24	14	64	100	100	50
		18				84	85	50
		24				73	89	53
		1				74	87	53
16-2	2 $\frac{1}{4}$	5	24	14	64	71	185	72
		14				85	187	69
		27				81	220	73
17-1	2 $\frac{1}{4}$	8	24	14	64	449	0	0
		15				410	0	0
		23				423	0	0
18-1	1 $\frac{1}{2}$	9	24	15	30	6	0	0
		19				28	0	0
		28				40	0	0
19-1	1 $\frac{1}{2}$	10	24	14	34	7	0	0
		13				21	0	0
		14				36	0	0
		16				48	0	0
		17				60	0	0
		22				79	0	0
		24				83	0	0
		27				96	0	0

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PROJECT NO. 27 LEASE No. Caprock Queen Unit #2

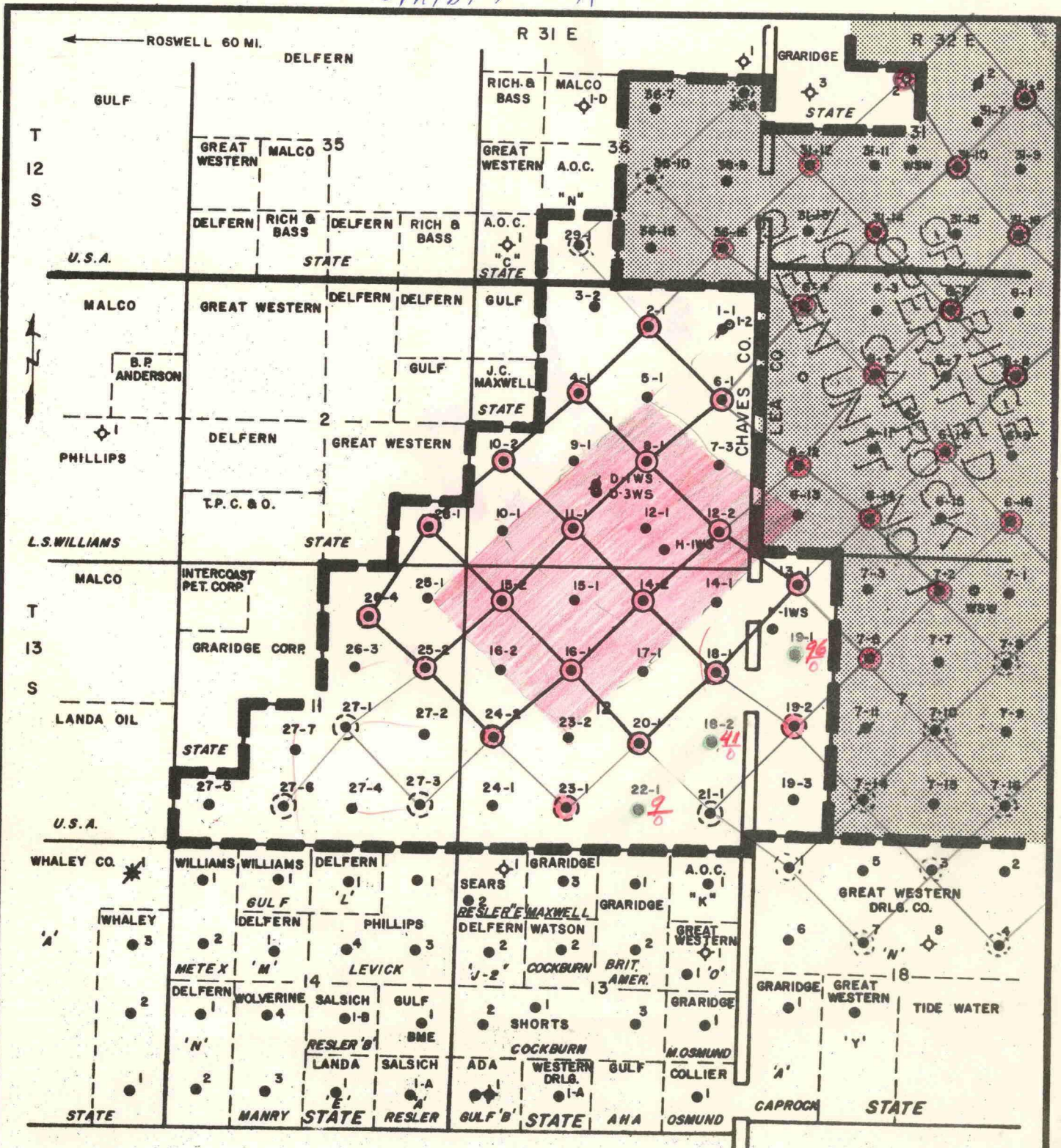
WELL TESTS

February 1959

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Exhibit "A"



LEGEND

- PRODUCING WELLS
- ⊙ INJECTION WELL
- ⊙ PROPOSED INJECTION WELL

Initial Plot Flood Area Granted Capacity
 Allowable under OGC Order R-1053-A.
 60/0 Present oil water Production on wells Capacity Allowable is being requested for

AMBASSADOR OPERATED

NORTH CAPROCK QUEEN UNIT NO. 2-FLOOD NO. 27

CAPROCK QUEEN POOL, LEA AND
 CHAVES COUNTIES, NEW MEXICO.

SCALE
 1/2 MI. 1 MI.

C.B.M.	7-15-58
B.R.	11-25-58

BEFORE EXAMINER NUTTER	
EDUCATION COMMISSION	
<i>Amfrank</i>	EXHIBIT NO. <u>7</u>
CASE NO.	<u>1294</u>

AMBASSADOR OIL CORPORATION
MONTHLY FLOOD PERFORMANCE REPORT
JANUARY - 1959

FLOOD No. 27 FLOOD NAME: No. CAPROCK QUEEN UNIT No. 2

LEASES: ALL

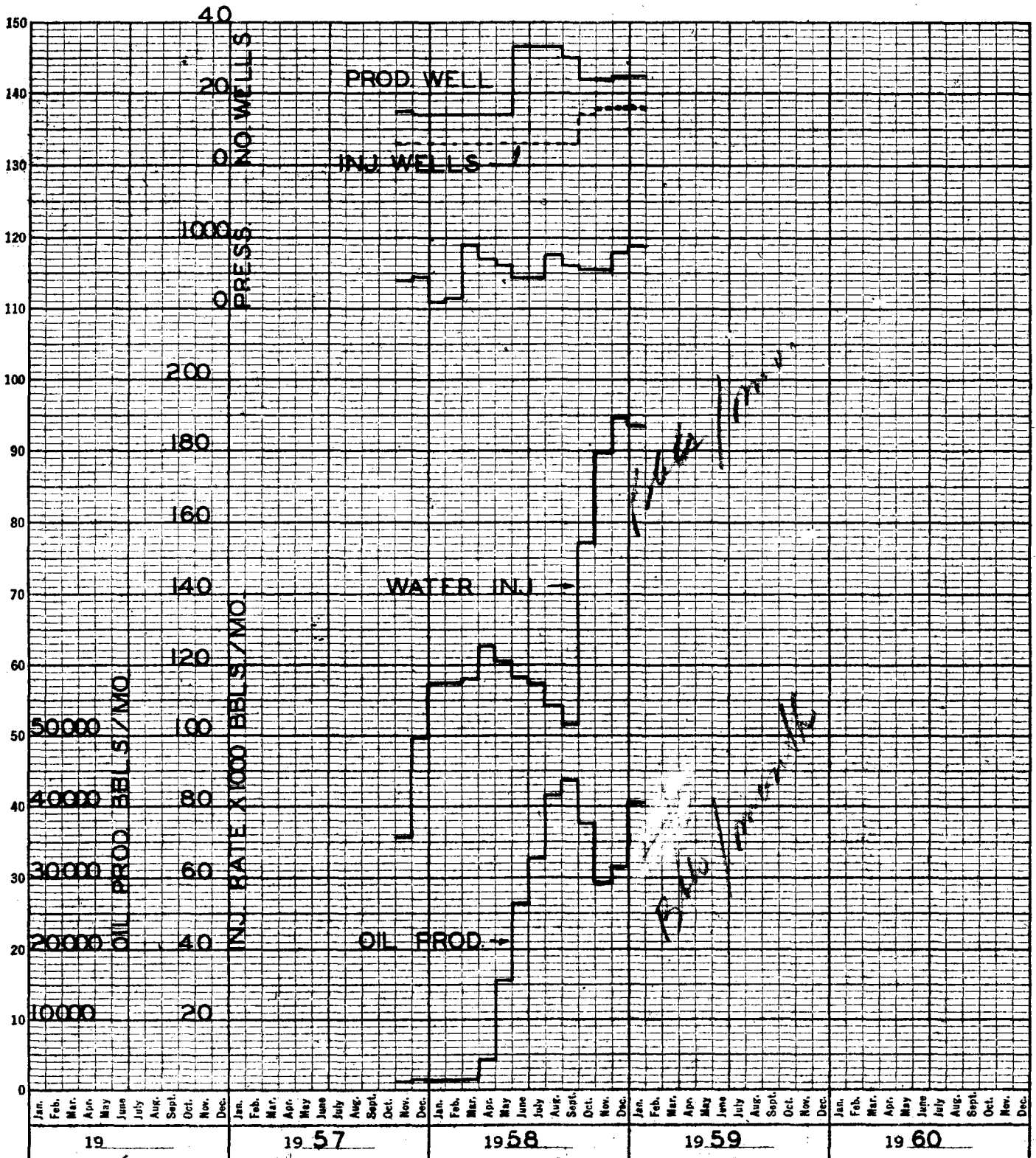
EFFECTIVE DATE OF FLOOD: NOVEMBER 1, 1957

WATER INJECTION (BARRELS)					PRODUCTION				
WELL No.	MONTHLY	DAILY AVERAGE	MAX. PRESS.	CUMULATIVE	WELL No.	MONTHLY OIL	MONTHLY WATER	CUMULATIVE OIL	CUMULATIVE WATER
4-1	3,421	110	800	7,195	1-1	P.P.A.			
6-1	18,058	583	VAC.	35,309	2-1	S.I.			
8-1	14,756	476	650	284,646	5-1	1,365	0	3,573	0
					7-3	4,809	1,852	37,603	2,389
11-1	18,671	603	0	297,942	9-1	2,615	0	13,365	0
12-2	13,288	428	VAC.	283,147	10-1	4,608	6,474	43,518	9,847
13-1	14,881	480	250	67,792	12-1	4,940	9,291	89,469	30,026
14-2	15,839	511	VAC.	285,839	14-1	8,854	0	35,151	0
15-2	12,440	401	750	289,338	15-1	4,101	1,884	35,569	3,088
16-1	11,781	380	900	129,326	16-2	2,735	5,273	20,893	9,778
18-1	15,818	510	VAC.	70,229	17-1	2,395	0	12,975	0
20-1	17,469	563	600	68,574	18-2	153	0	1,724	0
24-2	6,235	201	800	23,350	19-1	328	0	2,492	0
26-4	2,954	95	900	7,747	19-2	12	0	372	0
25-2	2,235	72	900	8,781	19-3	280	0	2,164	0
28-1	17,775	573	350	66,234	21-1	S.I.	0	102	0
10-2	1,751	56	900	6,025	22-1	37	0	537	0
					23-1	263	0	4,361	0
					24-1	42	0	542	0
					23-2	1,240	0	5,187	0
					25-1	1,448	476	7,272	476
					26-3	53	0	686	0
					27-1	51	0	2,251	0
					27-2	195	0	2,895	0
					27-3	S.I.			
					27-4	166	0	2,419	0
					27-5	60	0	800	0
					27-6	133	0	1,978	0
					27-7	129	0	2,238	0

AMBASSADOR OIL CORPORATION
PROJECT NO. 27 LEASE No. CAPROCK QUEEN UNIT #2
WELL TESTS
JANUARY 1959

WELL	PUMP DIA.	DATE	PERIOD	SPM	STROKE	OIL BBLs.	WATER BBLs.
5-1	1 $\frac{1}{2}$	29	24 Hrs.	12	30	565	0
7-3	2 $\frac{1}{4}$	28	"	14	64	195	166
9-1	1 $\frac{1}{2}$	27	14	14	44	50	0
10-1	2 $\frac{1}{4}$	9	24	"	64	104	223
		15				179	270
		23				113	256
		28				129	280
12-1	2 $\frac{1}{4}$	30	24	17	64	72	467
14-1	2 $\frac{1}{4}$	27	"	14	"	487	0
		29		17		565	0
		31				550	0
15-1	2 $\frac{1}{4}$	14	24	14	64	170	65
		20				136	70
		24				112	70
		29				125	97
16-2	2 $\frac{1}{4}$	15	24	14	64	79	176
		17				122	249
17-1	1 $\frac{1}{2}$	30	24	12	44	119	0
19-1	1 $\frac{1}{4}$	28	24	14	34	13	0
23-2	1 $\frac{1}{4}$	16	24	12	34	59	0
	1 $\frac{1}{2}$	31			44	119	0
25-1	1 $\frac{1}{4}$	12	24	14	34	24	18
		18				26	20
		22				62	22
		27			44	74	27
	1 $\frac{1}{2}$	30				102	26

FLOOD N° 27 CAPROCK CHAVES & LEA CO. NEW MEXICO



6

RATE CURVE

FLOOD NO. 27

NORTH CAPROCK QUEEN UNIT #2

CHAVES & LEA COUNTIES
NEW MEXICO

PROGRESS REPORT NO. 44

SUMMARY

JANUARY 1959

1. OIL PRODUCTION FOR THE MONTH TOTALED 40,981 BARRELS, AN INCREASE OF 303 B/D OVER DECEMBER.
2. WATER PRODUCTION TOTALED 25,250 BARRELS.
3. WATER INJECTION TOTALED 187,372 BARRELS.
4. DEVELOPMENT WORK FOR THE PRESENT HAS BEEN COMPLETED.
5. THREE WELL TEST UNITS WERE PUT IN OPERATION DURING THE MONTH AND ARE PERFORMING SATISFACTORILY.

LAND AND LEGAL

APPLICATION HAS BEEN MADE TO THE CONSERVATION COMMISSION FOR CONVERSION OF FOUR ADDITIONAL WELLS TO INJECTION STATUS FOLLOWING RESPONSE IN ADJACENT PRODUCING WELLS. APPLICATION HAS ALSO BEEN MADE FOR CAPACITY ALLOWABLE FOR WELLS OUTSIDE THE ORIGINAL FLOOD AREA. AMBASSADOR STATE "K" #1 WAS COMMITTED TO THE NORTH CENTRAL CAPROCK QUEEN UNIT ON JANUARY 1 AND OPERATION OF THIS WELL WAS ASSUMED BY GREAT WESTERN DRILLING CO., THE UNIT OPERATOR.

ENGINEERING

IN AN ATTEMPT TO DETERMINE THE CAUSE OF PREMATURE AND EXCESSIVE WATER PRODUCTION ON THE FOUR PRODUCING WELLS IMMEDIATELY SURROUNDING INJECTION WELL #15-2, A GAMMA RAY-NEUTRON LOG WAS RUN. FOLLOWING THE LOGGING, AN ISO-FLOW LOG WAS RUN TO DETERMINE THE POINT AT WHICH INJECTED WATER WAS ENTERING THE FORMATION. IT WAS DETERMINED BY THIS METHOD THAT APPROXIMATELY 50% OF THE INJECTED WATER WAS ENTERING THE RED SHALE ZONE ABOVE THE PAY ADJACENT TO THE 5½" CASING SHOE. THIS WELL IS EQUIPPED WITH A SLOTTED LINER SET ON BOTTOM BUT WAS NEVER CEMENTED. IT WOULD APPEAR THAT THIS SITUATION COULD BE REMEDIED BY SETTING A CEMENTED LINER TO CASE OFF THIS ZONE AND THIS SHOULD ALLEVIATE WATER PRODUCTION CONSIDERABLY. THE LOG ALSO INDICATED HOWEVER THAT HIGH PERMEABLE ZONE IS PRESENT IN THE PAY SECTION THAT MAY WELL ACCOUNT FOR A PORTION OF THE PRODUCED WATER IN SURROUNDING WELLS BUT INASMUCH AS THE THIEF ZONE HAS BEEN ESTABLISHED THIS SITUATION DOES NOT APPEAR AS SERIOUS AS IT MIGHT OTHERWISE. ONCE THE THIEFING IS ELIMINATED THE RESULTING INCREASED WELL HEAD PRESSURES SHOULD PERMIT MORE UNIFORM INJECTION THROUGHOUT THE PAY SECTION AND IF WATER CUT STILL REMAINS RELATIVELY HIGH IT IS BELIEVED THAT THE PERMEABLE ZONE CAN BE SELECTIVELY PLUGGED EFFECTIVELY SINCE THE ISO-FLOW LOG INDICATED IT TO BE ONLY APPROXIMATELY ONE FOOT IN THICKNESS. THERE WAS ALSO A SLIGHT INDICATION OF THIEFING AT A POINT IMMEDIATELY ABOVE THE ANHYDRITE CAPROCK BUT DID NOT APPEAR SERIOUS. IN VIEW OF THIS HOWEVER, IT WILL BE NECESSARY TO EXERCISE EXTREME CARE IN SETTING THE LINER.

EXAMINANT'S SIGNATURE
DATE: 10/13/11

OPERATIONS

FIELD OPERATIONS IN GENERAL WERE NORMAL. THE LACT SYSTEM AND THE CENTRAL BATTERY CONTINUE TO PERFORM SATISFACTORILY WITH NOTHING MORE THAN OPERATIONAL MAINTENANCE. NO TROUBLE HAS BEEN ENCOUNTERED IN TREATING THE PRODUCED CRUDE. ALL OF THE PRODUCING WELLS IN THE UNIT ARE NOW BEING PRODUCED INTO THE CENTRAL BATTERY. INITIAL RESPONSE ON 3 WELLS AND INCREASING RESPONSE ON OTHERS HAS RAISED TOTAL PRODUCTION CONSIDERABLY AND RESULTED IN A 303 B/D INCREASE OVER DECEMBER. THE DAILY AVERAGE FOR THE MONTH WAS 1322 B/D BUT DAILY PRODUCTION AT THE END OF THE MONTH WAS RUNNING OVER 1600 B/D AND SHOULD SHOW A SIZABLE INCREASE AGAIN NEXT MONTH. LARGER PUMPS WERE RUN IN TWO WELLS AND WELL #17-1 WILL BE EQUIPPED WITH A LARGER PUMPING UNIT, TUBING, RODS, AND PUMP AS SOON AS POSSIBLE AS PRODUCTION HAS REACHED CAPACITY OF THE EXISTING EQUIPMENT. THREE WELL TEST UNITS WERE PUT IN ACTIVE OPERATION THIS MONTH AND ARE WORKING VERY WELL. THE DEGREE OF ACCURACY APPEARS TO BE VERY GOOD AND FREE WATER IS SEPARATING IN THE VESSELS TO SUPPORT THE ACCURACY OF TESTS ON WELLS WITH WATER PRODUCTION.

DON LAYTON

PROJECT SUPERVISOR

EXHIBITS FOR HEARING BEFORE
OIL CONSERVATION COMMISSION

August 15, 1957

AMBASSADOR OIL CORP.

LIST OF EXHIBITS

1. Plat showing location of input wells, location of all oil and gas wells, and names of Lessees in the general vicinity of the proposed project.
2. Agreement between Ambassador Oil Corp., Gulf Oil Corp., and Garridge Corp.
3. Tabulation of Engineering Data.
4. Gamma Ray-Neutron logs of the four Ambassador Oil Corp. injection wells.
5. Permits from State Engineer to appropriate underground water in Lea County basin.
6. Chart showing casing program in each of the proposed input wells.

**AGREEMENT FOR COOPERATIVE WATER FLOODING
OF QUEEN SAND FORMATION IN THE CAPROCK
FIELD OF CHAVES COUNTY, NEW MEXICO**

This Agreement, made and entered into on this the 8th day of July, 1957, by and between AMBASSADOR OIL CORPORATION, hereinafter referred to as "Ambassador", and GULF OIL CORPORATION, hereinafter referred to as "Gulf", and GRARIDGE CORPORATION, hereinafter referred to as "Graridge";

W I T N E S S E T H:

WHEREAS, Ambassador is the owner of oil and gas leases covering, among other lands, the following described tracts of land situated in Township 13 South, Range 31 East, in Chaves County, New Mexico, to-wit:

SE/4 of SE/4 of Section 1, upon which an oil well, known as State "H" No.2 Well, is situated;

SE/4 of SW/4 of Section 1, upon which an oil well, known as State "E" No.1 Well, is situated;

NW/4 of NE/4 of Section 12, upon which an oil well, known as State "J" No.2 Well, is situated;

SE/4 of NW/4 of Section 12, upon which an oil well, known as State "M" No.1 (Polis) is situated; and,

WHEREAS, Gulf is the owner of an oil and gas lease covering, among other land, the NW/4 of NW/4 of Section 12, Township 13 South, Range 31 East, in Chaves County, New Mexico, upon which an oil well, known as Chaves State "A" No.2 Well, is situated; and,

WHEREAS, Graridge is the owner of an oil and gas lease covering the NW/4 of SE/4 of Section 1, Township 13 South, Range 31 East, upon which an oil well, known as Livermore State "A" No.1 Well, is situated; and,

WHEREAS, all of the above described wells are producing oil from the Queen Sand formation; and,

WHEREAS, the parties hereto desire to provide for the conversion of the above identified and described wells into water input wells, to the end that said wells may be used for cooperative water flood project purposes in the Queen Sand formation:

NOW, THEREFORE, for and in consideration of the premises, the parties hereto agree as follows:

I.

That Ambassador shall, within thirty (30) days from the effective date of this agreement, commence operations for the conversion and equipping for water input purposes its wells located on the SE/4 of SE/4 and SE/4 of SW/4 of Section 1, and the NW/4 of NE/4 and SE/4 of NW/4 of Section 12, all in Township 13 South, Range 31 East, in Chaves County, New Mexico. The cost and expense of converting, equipping and operating said input wells shall be borne by Ambassador.

II.

That Gulf shall, within thirty (30) days from the effective date of this agreement, commence operations for the conversion and equipping for water input purposes its well located on the NW/4 of NW/4 of Section 12, Township 13 South, Range 31 East, in Chaves County, New Mexico. The cost and expense of converting, equipping and operating said input well shall be borne by Gulf.

III.

That Graridge shall, within thirty (30) days from the effective date of this agreement, commence operations for the conversion and equipping for water input purposes its well located on the NW/4 of SE/4 of Section 1, Township 13 South, Range 31 East, in Chaves County, New Mexico. The cost and expense of converting, equipping and operating said input well shall be borne by Graridge.

IV.

Each party agrees that after commencing operations for the conversion and equipping for water input purposes of its well or wells, it will thereafter prosecute such operations with due diligence and in accordance with good engineering practices until each party's well or wells are satisfactorily converted for water input purposes. In the event Ambassador and Gulf should for any reason be unable to convert satisfactorily the well or wells which the parties hereto agree to convert into water input wells, then such party shall drill a substitute well or wells at its own cost and expense, and as near as practicable to the well or wells it is unable to convert, to be used as a water input well in lieu of the well or wells that it was unable to convert. If Graridge is unable to convert

satisfactorily its well located in the NW/4 of SE/4 of Section 1, Township 13 South, Range 31 East, into a water input well, it shall not be required to drill a substitute water input well, and if it should elect not to drill such substitute well, it shall immediately notify Ambassador in writing of its election not to drill such substitute well, and Ambassador shall then have the right and option to drill such substitute well on the above described quarter-quarter section of land. If Ambassador drills the substitute water input well on the above described quarter-quarter section of land, it shall be paid the proceeds derived from Graridge's interest in the production attributable to said quarter-quarter section until it has recouped from such source an amount equal to the total of all sums expended by Ambassador in drilling, equipping and operating such substitute water input well. Any existing well that a party is unable to convert satisfactorily into a water input well shall be plugged and abandoned at the cost and expense of such party.

V.

The rate of injection of water into each of said wells, when so converted or drilled, shall be approximately equal, the number of barrels injected per day to be mutually agreed upon between the parties. The injection wells shall be kept in proper repair and records shall be maintained of the volume of water injected and the injection pressures required. Each party hereto shall, on the 20th day of each month, furnish to the other parties hereto a report covering the previous month, setting out the number of barrels of water injected into each injection well on its lease or leases and the well-head pressure of each such well.

VI.

Ambassador agrees that it will use every reasonable effort in developing or obtaining water in sufficient quantities to carry on the water flood project, and that it will either drill such water well or wells as may be necessary to supply the requirements of the project, or it will obtain sufficient water for the project from other source or sources. Ambassador will also install, maintain, and operate all pumps, tanks, plants, pipe lines and other facilities which are necessary to deliver the water to each party's lease. Ambassador agrees to furnish to Gulf and Graridge all necessary injection water at convenient delivery points located on their

respective lease lines and through meters which will accurately measure the volume of water delivered to each particular lease. Gulf shall install and maintain the water meter on its lease, and it shall pay to Ambassador a pumping charge of two cents (2¢) per barrel for each barrel delivered to its lease. Likewise, Graridge shall install and maintain a water meter on its lease and it shall pay to Ambassador a pumping charge of two cents (2¢) per barrel for each barrel of water delivered to its lease. The water pumping charge payments shall be made to Ambassador on or before the 20th day of each month for water deliveries made during the previous month.

VII.

It is further understood that this agreement may be extended to include additional leases adjacent to the area covered hereby and additional operators under terms and conditions mutually agreed upon between the parties hereto and parties seeking to participate in water flooding the Queen Sand formation.

VIII.

This contract shall in no way affect the obligation of any party hereto to produce the oil from its own output wells, and each party shall be entitled to all production from its own wells and leases. The duties, liabilities and obligation of the parties hereto are intended to be several and not joint or collective and nothing herein contained shall ever be construed to impose a partnership obligation or liability with regard to any of the parties hereto. Each party shall be individually responsible for only its obligations as set out herein and shall be liable only for its proportionate share of the cost and expenses as herein stipulated.

IX.

It is believed that it will require approximately eighteen (18) months of actual water injection before the value of water flooding operations can be fully determined. For such reason, this Agreement shall be and remain in full force and effect for a period of eighteen (18) months from and after its effective date and thereafter subject to the right of any party to terminate the agreement as to its participation in the project by thirty (30) days written notice to the other parties, provided that, if before the end of said eighteen (18) months the injection of water into the Queen Sand reasonably appears to be of no benefit to any party, such party

shall have the right to stop water injection into its wells and be relieved of further participation in the project after thirty (30) days written notice to the other parties.

X.



The effective date of this agreement shall be the date upon which approval of the water flood project is obtained from the governmental authority or authorities of the State of New Mexico, having jurisdiction in the premises.

XI.

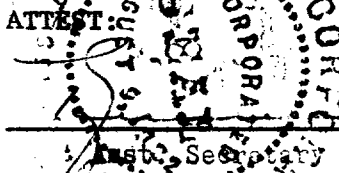
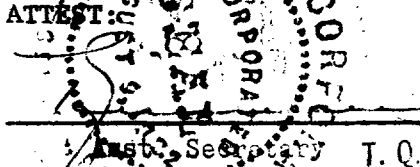
The terms, covenants and conditions hereof shall run in favor of and be binding upon the parties hereto, their successors and assigns.

SIGNED the day and year first above written.

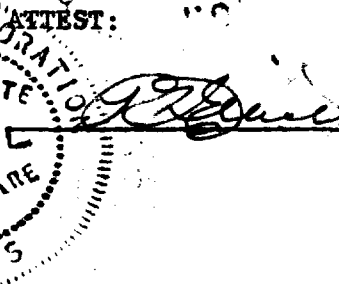
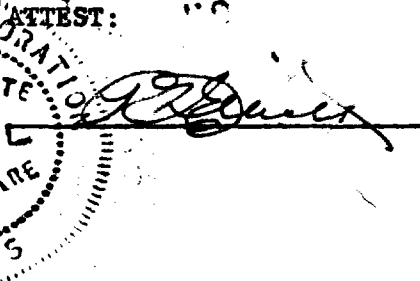
ATTEST:



T. Q. WILLIAMS


ATTEST:



T. Q. WILLIAMS


ATTEST:



T. Q. WILLIAMS

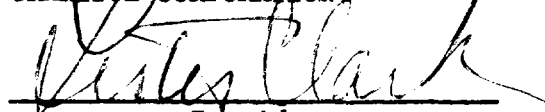
AMBASSADOR OIL CORPORATION


C. Harrison Cooper
Executive Vice President

GULF OIL CORPORATION


R. E. Thompson
Attorney-in-Fact

GRANIDGE CORPORATION


Vester Clark
President

ENGINEERING DATA

Name of sand to be flooded - Queen Sand of Permian System.

Other producing formations in area - NONE.

Average Depth to the Top of the Queen Sand - 3030'

1. Structural Features

- a. Structure - Stratigraphic trap trending NNE - SSW, with a dip of approximately 25°/Mile to the ESE.
- b. Gas Cap - None.
- c. Water - Oil contact has not been definitely established. In general, an insignificant amount of water has been produced.
- d. Estimated average effective pay thickness - 12'.

2. Physical properties of the reservoir rock (From core Anal. of 2 wells__

- a. Average porosity - 20%.
- b. Average permeability - 175-250 Mos.
- c. Average connate water content - 19%.

3. Characteristics of reservoir fluids.

- a. Average API Gravity - 34°.
- b. Undersaturated, paraffin base, with relatively high salt content (4.08 pounds per 1000 BBS.)

4. Primary producing History.

- a. Discovery Date - November, 1940.
- b. Type drive during primary producing life - Solution gas.
- c. Cumulative production - Average approximately 56,000 BBLs. per well for the 18 wells in project area.
- d. Stage of depletion - Stripper stage with wells averaging approximately 3 or 4 BBLs/Well/Day.
- e. Development - Midpoint of 40 acre units.

5. Water source and treatment.

- a. Source - Shallow sands encountered to a depth of approximately 230'. A water lease was secured from the State Land Commission and permission obtained from the State Engineer to drill 3 water supply wells and appropriate a maximum total of 495 acre-feet per year (approximately 10,500 BBLs/Day). Two of the three wells have been drilled, completed and tested for a total maximum capacity of 10,600 BBLs. per day.
- b. Treatment - An Analysis of the water has not as yet been obtained. Initially, the water will be filtered with individual filters at each injection well.

6. Injection rates and pressure.

- a. Pattern and spacing - 80 acre, 5-spot by conversion of alternate wells on 40 acre units to injection service.
- b. Rates and pressures - Estimated initial injection rate - 500 - 800 BBLs/Day.
Estimated initial injection pressure - Gravity



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

S. E. REYNOLDS
STATE ENGINEER

ADDRESS: ROOSEVELT UNIVERSITY
CHICAGO, ILL.
SW 100 NEW MEXICO

May 16, 1957

Files: L-3460, L-3461, L-3462

Ambassador Oil Corporation
General Delivery
Caprock New Mexico

Attention: Mr. H. L. McCracken

Gentlemen:

Enclosed is your copy of application for permit to appropriate for secondary recovery of oil by water flooding, numbered L-3462 which has been approved.

Please see that the driller files logs of wells in this office within 10 days after completion of drilling.

Proof of Completion of Works should be filed in this office as soon as possible after completion of the well and installation of equipment, but in no event later than May 30, 1959. Forms are enclosed for your convenience to be executed in triplicate, notarized and returned to this office.

Proof of Application of Water to Beneficial Use will be due in this office on May 30, 1959. This proof must be signed by some engineer or land surveyor who is registered in the State of New Mexico, and who must be designated and paid by you. As soon as you are ready to have final inspection made, but in no event later than March 30, 1959, you should send this office the name of the engineer or land surveyor you wish to employ, so that we may send him necessary authorization and instructions.

Your rights under this permit will expire on May 30, 1959, unless proofs are filed or an application for extension of time is received in this office on or before above date.

Approved applications for permits to appropriate water for waterflooding purposes, L-3460 and L-3461 were handed to Mr. McCracken on May 10, 1957. It was noted that in the stipulation on the back of these permits, the total appropriation of water from wells L-3460, L-3461 and L-3462 was limited to 485 acre feet per year. This figure is in error and should

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Ambassador Oil Corporation

(2)

May 16, 1957

have read 495 acre feet per year. The records in this office and in the Santa Fe office will be corrected to indicate that a limit of 495 acre feet per year is to be appropriated from L-3460, L-3461 and L-3462 and when this is done you will be so advised.

Very truly yours,

Fred W. Hennighausen
District Supervisor

By:

William D. L. Brown
Basin Supervisor

BB jt

cc: State Engineer

encl: Application (1)

Forms-Proof of Works (3)

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APPLICATION FOR PERMIT

To appropriate the Underground Waters of the State of New Mexico

LEA COUNTY SOUTHERN BASIN

Application No. 2-3486 Filed 10-13 Date Received March 21, 1957

- Name of applicant Ambassador Oil Corporation
Post-office address Omaha, Nebraska City or Town Caprock
County of Lea State of New Mexico
- Source of water supply Shallow sands
(If the water is taken from shallow ground water basins)
located in Lea County Basin
(Name of underground stream, valley, or other basin, etc.)
- The well is to be located in the SE 1/4 of 34
of section 1 Township 13 South Range 31 East, N.M.P.M.
and owned by State of New Mexico, leased by Ambassador Oil Corporation
- Description of well: driller W.D. No. depth to be drilled est. 350 feet
diameter outside of casing 8-5/8 inches; type of pump and power plant to be used
Amalona turbine, electric.
- Quantity of water to be appropriated and beneficially used 70.5 acre feet per year for pilot,
maximum 165 acre feet per year, expanded,
for secondary recovery of oil by waterflooding purposes
- Acres to be irrigated waterflood acres
located and described as follows (describe only lands to be irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner
-------------	------	------	-------	-----------------	-------

See attached letter and plat.

(Note: location of area to be irrigated must be shown on plat on reverse side.)

- Time required to commence construction Three weeks.
Time required to complete the works Two months.
Time required to fully apply water to beneficial use Two months.
- Additional statements or explanations (including data on any other water rights appurtenant to above lands):
This well will be used to supplement water obtained from wells on accompany-
ing applications. Total for pilot project from all wells would be 211 acre
feet per year, with maximum total of 495 acre feet for expanded project.
Please refer to attached letter.

I, A. L. McCracken, being first duly sworn upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein and that the same are true to the best of my knowledge and belief.

A. L. McCracken applicant

Subscribed and sworn to before me this 20th day of March, A.D. 1957.

My Commission expires March 23, 1960
 Notary Public

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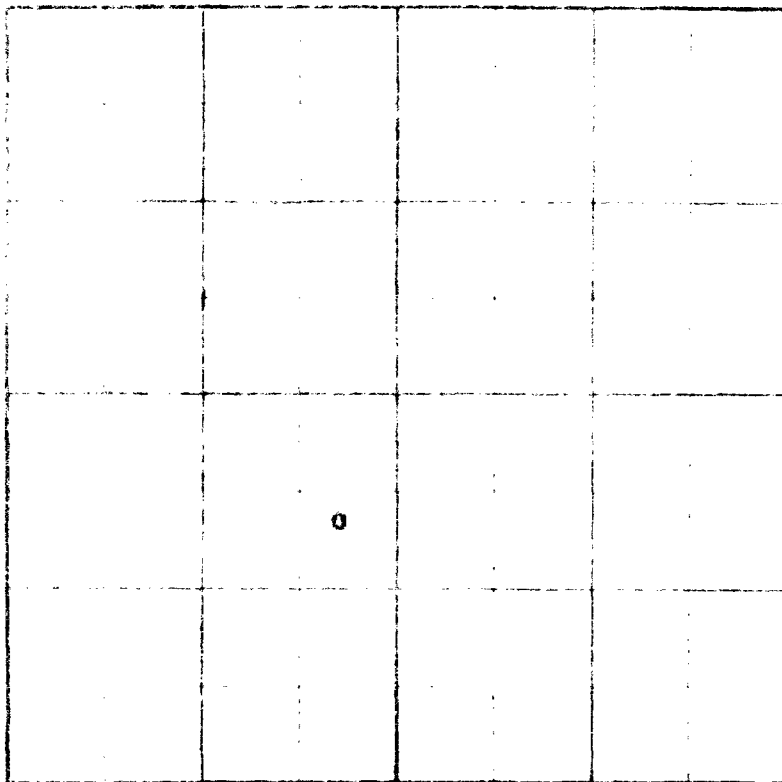
APPROVAL OF THE STATE ENGINEER

Number of this permit **L-3480** Date received corrected
 Recorded in Book **10 13** Distribution of copies required
 Page **2460** Name of paper
 Application received **March 21, 1957** Affidavit of publication filed
 Date returned for correction **May 2, 1957** Date of approval

This application is approved for **463** acre feet of water subject to all prior valid and existing rights in the use of the waters of said underground source and provided that the applicant complies with the rules and regulations of the State Engineer pertaining to the drilling of wells. **Well shall be drilled by a drilling contractor licensed by the State Engineer of New Mexico. Appropriation of water to be limited to 463 acre feet per annum from Wells Nos. L-3480, L 3481 and L 3482 and not to exceed the amount produced by three wells only. A totalizing water meter is to be installed in the line between each well and the place of use, so as to measure the amount of water appropriated from each well.**

Works shall be completed and plans filed on or before **April 30, 1959**
 Water shall be applied to uniform use and plans filed on or before **April 30, 1959**
 This is to be left in force and unexpired the area appropriated is permitted to appropriate the underground waters of the State of New Mexico and the applicant is hereby advised of the following provisions and conditions:
 Witness my hand and the seal of the State Engineer at Santa Fe, New Mexico, this **2nd** day of **May** A.D. 19 **57**
S. B. REYNOLDS
 State Engineer

LOCATE WELL AND SURVEY TO BE IRRIGATED AS ACCURATELY AS POSSIBLE ON FOLLOWING PLAT:
 Section **1** Township **13-S** Range **51-E** N.M.P.M.



By: *D. E. Gray*
D. E. Gray, Engineer
 Water Rights Division

INSTRUCTIONS

This form shall be filled out by the applicant and shall be accompanied by a filing fee of \$5.00. Each of the plates contained herein must be properly signed and dated.
 A separate application for a permit must be filed for each well used.
 Secs. 1-4 Fill out as fully and accurately as possible.
 Sec. 5 Irrigation use shall be stated in feet depth of water feet of water per acre to be applied on the land. If for domestic, municipal, or other purposes, state total quantity in acre feet to be used annually. Domestic use may include the irrigation of not more than one acre of lawn and garden for noncommercial use.
 Sec. 6 Describe only the lands to be irrigated. If on unsurveyed lands, describe by legal subdivision, as projected from the nearest permanent survey corners, or describe by meter and bounds and tie survey to some permanent easily located natural object.
 Sec. 7 Estimate time reasonably required to commence and to complete project.
 Sec. 8 If lands are irrigated from any other source, explain in this section. Give any other data necessary to fully describe water rights sought.
 If additional space is necessary use a separate sheet or sheets and attach securely hereto.

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APPLICATION FOR PERMIT

To appropriate the Underground Waters of the State of New Mexico

LEA COUNTY GROUND WATER BASIN

Application No. L-3461 Book LC-13 Date Received March 21, 1957

1. Name of applicant Ambassador Oil Corporation
Postoffice address General Delivery City or Town Caprock
County of Lea State of New Mexico

2. Source of water supply Shallow Sands
(State whether artesian or shallow ground water basin.)
Located in Lea County Basin
(Specify if underground stream valley, artesian basin, etc.)

3. The well is to be located in the SE SW NE SE of section 1, Township 13 South, Range 31 East, N.M.P.M.
on land owned by State of New Mexico

4. Description of well: driller WD No. Est. 350 feet.
diameter (outside) of casing 8-5/8 inches; type of pump and power plant to be used
Powerless Turbines, electric

5. Quantity of water to be appropriated and beneficially used Est. 211 acre feet per year
(Specify acre feet depth or acre feet per acre)
for secondary recovery of oil by waterflooding purposes.

6. Acreage to be irrigated See attached letter and plat. acres
located and described as follows (describe only lands to be irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner
-------------	------	------	-------	-----------------	-------

See attached letter and plat.

(Note: location of well and acreage to be irrigated must be shown on plat on reverse side.)

7. Time required to commence construction Three weeks.
Time required to complete the work Two months.
Time required to fully apply water to beneficial use Two months.

8. Additional statements or explanations (including data on any other water rights appurtenant to above lands)
This well will be used to supplement water obtained from wells on accompanying applications. Total for pilot project from all wells would be 211 acre feet per year, with maximum total of 495 acre feet for expanded project. Please refer to attached letter.

I, H. L. McCracken, being first duly sworn upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein, and that the same are true to the best of my knowledge and belief.

H. L. McCracken applicant

Subscribed and sworn to before me this 20th day of March, A. D., 1957.

My Commission expires March 22, 1960. Arthur J. [Signature] Notary Public.

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WELL PERMIT OF THE STATE ENGINEER

Number of this permit L-3461 Date received corrected _____
 Recorded in Book LC 13 Publication or notice ordered _____
 Page 3471 Name of paper _____
 Application received March 21, 1957 Affidavit of publication filed _____
 Date returned for correction _____ Date of approval May 2, 1957

This application is approved for 465 acre feet of water
 subject to all prior valid and existing rights to the use of the waters of said underground source and provided that
 the applicant complies with all rules and regulations of the State Engineer pertaining to the drilling of wells
Well shall be drilled by a drilling contractor licensed by the State Engineer
of New Mexico. Appropriation of water to be limited to 465 acre feet per
annum from Wells Nos. L-3460, L-3461 and L-3462 and not to exceed the amount
produced by three wells only. A totalizing water meter is to be installed in
the line between each well and the place of use, so as to measure the amount
of water appropriated from each well.

Works shall be completed and proofs filed on or before April 30, 1959

Water shall be applied to beneficial use and proofs filed on or before April 30, 1959

This is to certify that I have examined the above application for permit to appropriate the underground waters
 of the State of New Mexico and hereby approve the same subject to the foregoing provisions and conditions

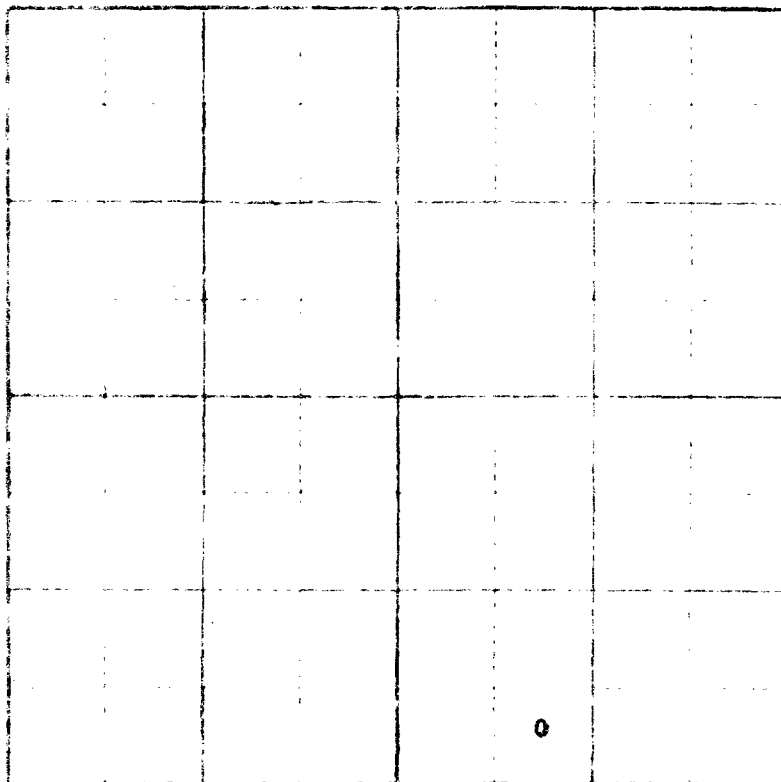
Witness my hand and seal this 2nd day of May, A.D., 1957

S. E. REYNOLDS

State Engineer

LOCATE WELL AND ACREAGE TO BE IRRIGATED AS ACCURATELY AS POSSIBLE ON FOLLOWING PLAT:

Section (s) 1 Township 13-S Range 31-E N.M.P.M.



By: D. E. Gray
D. E. Gray, Engineer,
Water Rights Division

INSTRUCTIONS

This form shall be filled out in duplicate and shall be accompanied by a filing fee of \$5.00
 Each of triplicate copies shall be properly initialed and dated.

A separate report shall be submitted for each well.

Secs. 1-4 - Fill out as truthfully and accurately.

Sec. 5 - Irrigation shall be stated in feet depth or acre feet of water per acre to be applied on the land. If for
 domestic municipal or stock purposes, state total quantity of acre feet to be used annually. Domestic use may include
 the irrigation of no more than one acre of lawn and garden for noncommercial use.

Sec. 6 - Describe any lands to be irrigated. If of unsurveyed lands describe by legal subdivision as pro-
 jected from the nearest government survey corners or describe by metes and bounds and the survey to some perma-
 nent easily located natural landmark.

Sec. 7 - Estimate time reasonably required to commence and to complete project.

Sec. 8 - If land is irrigated from any other source explain in this section. Give any other data necessary to
 fully describe water rights involved.

If additional space is necessary use a separate sheet or sheets and attach securely hereto.

ILLEGIBLE

APPLICATION FOR PERMIT

To Appropriation the Underground Waters of the State of New Mexico

LEA COUNTY GROUND WATER BASIN

- Application No. L-3463 Book LC-13 Date Received March 21, 1937
- Name of applicant Amesbury Oil Corporation
Postoffice address General Delivery City or Town Caprock
County of Lea State of New Mexico
 - Source of water supply Shallow Sands
(state whether artesian or shallow ground water basin)
located in Lea County Basin
(name of underground stream, valley, artesian basin, etc.)
 - The well is to be located in the NE $\frac{1}{4}$ of SE $\frac{1}{4}$ W $\frac{1}{2}$ N of section 7 Township 13 South Range 32 East, N.M.P.M.
on land owned by State of New Mexico
 - Description of well: driller _____ W.D. No. _____; depth to be drilled Est. 350 feet;
diameter (outside) of casing 8-5/8 inches; type of pump and power plant to be used
Peerless Turbine, electric
 - Quantity of water to be appropriated and beneficially used 70.5 acre feet per year for pilot
maximum of 165 acre feet per year, expanded, (feet depth or acre feet per acre)
for secondary recovery of oil by waterflooding purposes.
 - Acreage to be irrigated _____ acres
located and described as follows (describe only lands to be irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner
<u>See attached letter and plat.</u>					

(Note: location of well and acreage to be irrigated must be shown on plat on reverse side.)

- Time required to commence construction Three weeks.
Time required to complete the works Two months.
Time required to fully apply water to beneficial use Two months.
- Additional statements or explanations (including data on any other water rights appurtenant to above lands)
This well will be used to supplement water obtained from wells on accompanying applications. Total for pilot project from all wells would be 211 acre feet per year, with maximum total of 495 acre feet for expanded project.
Please refer to attached letter.

I, H. L. McCracken, being first duly sworn upon my oath, depose and say that I have carefully read the foregoing statement and each and all of the items contained therein, and that the same are true to the best of my knowledge and belief.

H. L. McCracken, applicant

Subscribed and sworn to before me this 21th day of March, A. D., 19 37.

My Commission expires March 22, 1940.

Clarkine Gibbons
Notary Public.

MAY 15 1937

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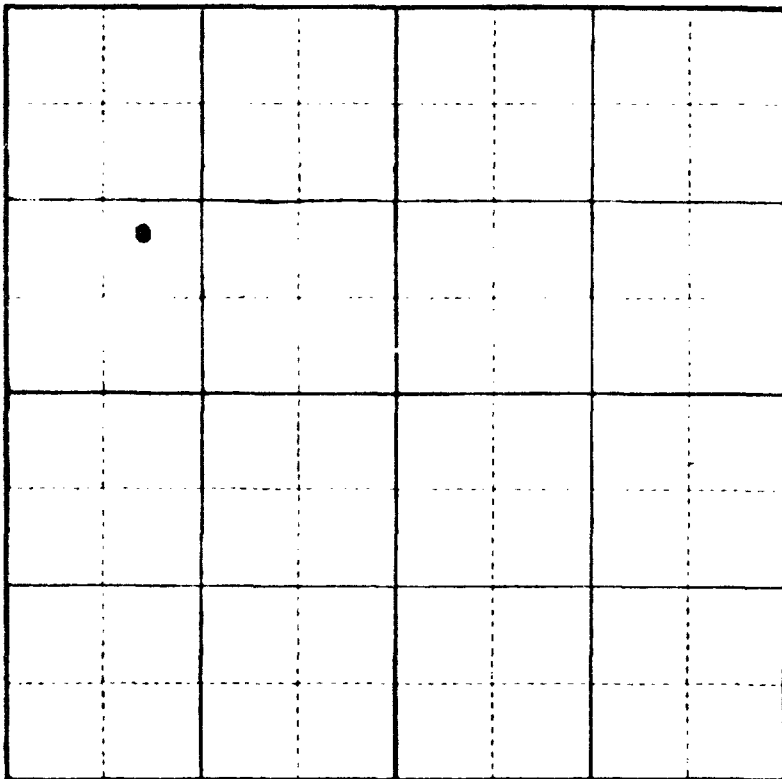
APPROVAL OF THE STATE ENGINEER

Number of this permit L-3463 Date received corrected _____
Recorded in Book LG-13 Publication of notice ordered April 4, 1937
Page 3463 Name of paper The Lovington Daily Leader
Application received March 21, 1937 Affidavit of publication filed April 20, 1937
Date returned for correction _____ Date of approval May 14, 1937

This application is approved for 185 acre feet of water
subject to all prior valid and existing rights to the use of the waters of said underground source and provided that
the applicant complies with all rules and regulations of the State Engineer pertaining to the drilling of wells.
Well shall be drilled by a drilling contractor licensed by the State
Engineer of New Mexico. Appropriation of water not to exceed 185 acre
feet per annum from Well No. L-3463.

Works shall be completed and proofs filed on or before May 30, 1937
Water shall be applied to beneficial use and proofs filed on or before May 30, 1937
This is to certify that I have examined the above application for permit to appropriate the underground waters
of the State of New Mexico and hereby approve the same subject to the foregoing provisions and conditions.
Witness my hand and seal this 14th day of May, A.D., 1937
S. E. KETTER
State Engineer

LOCATE WELL AND ACREAGE TO BE IRRIGATED AS ACCURATELY AS POSSIBLE ON FOLLOWING PLAT:
Section (s) 7 Township 13-S Range 20-E N.M.P.M.



By: D. E. Gray
D. E. Gray, Engineer
Water Rights Division

INSTRUCTIONS

This form shall be executed, preferably typewritten, in triplicate and shall be accompanied by a filing fee of \$5.00.
Each of triplicate copies must be properly signed and attested.
A separate application for permit must be filed for each well used.
Secs. 1-4- Fill out all blanks fully and accurately.
Sec. 5-Irrigation use shall be stated in feet depth or acre feet of water per acre to be applied on the land. If for
domestic, municipal, or other purposes, state total quantity in acre feet to be used annually. Domestic use may include
the irrigation of not more than one acre of lawn and garden for noncommercial use.
Sec. 6-Describe only the lands to be irrigated. If on unsurveyed lands describe by legal subdivision "as pro-
jected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some perma-
nent, easily located natural object.
Sec. 7-Estimate time reasonably required to commence and to complete project.
Sec. 8-If lands are irrigated from any other source, explain in this section. Give any other data necessary to
fully describe water right sought.
If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

ILLEGIBLE

CASING PROGRAM FOR INJECTION WELLS

SURFACE CASING				OIL STRING			
SIZE	WT	COND.	NO. FT.	SACKS CEMENT	WT.	COND.	REMEDIAL WORK 1957
AMBASSADOR, STATE "E" #1	8-5/8"	New	298	150	5 1/2"	15.5#	Ran 95' of 4 1/2" 12.6# J-55 Liner with Base of Liner @ 3029' cemented with 80 sacks
" " "H" #2	8-5/8"	New	295	150	5 1/2"	15.5#	Ran 94' of 4 1/2" 12.6# J-55 Liner with Base of Liner @ 3019' cemented with 150 sacks
" " "J" #2	8-5/8"	New	295	150	5 1/2"	15.5#	Ran 128' of 4 1/2" 12.6# J-55 Liner with Base of Liner @ 3028' cemented with 75 sacks
" " " " #1	9-5/8"	S.H.	276	175	7"	24#	Ran 3029' of 4 1/2", 9.5# H-40 Casing inside 7" and cemented with 150 sacks
CHARIDGE, MAXWELL-STATE 1-A							
" " " " #2	8-5/8"	New	298	150	5 1/2"	15.5#	Liner will probably be set.
GULF, CHAVES STATE	9-5/8"	New	244	180	5 1/2"	14#	Liner will probably be set.