

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF ANADARKO PRODUCTION COMPANY
FOR AUTHORITY TO EXPAND AND
COMPLETE WATERFLOOD DEVELOPMENT
OF THE LANGLIE-MATTIX PENROSE
SAND UNIT, LOCATED IN TOWNSHIP 22
SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO

CASE NO. WFX-261
Due May 19
8 wells

A P P L I C A T I O N

COMES NOW the Applicant and alleges that:

1. It is the Operator of the Langlie-Mattix Penrose Sand Unit located within Township 22 South, Range 37 East, N.M.P.M., Lea County, New Mexico, and as such Operator makes this application for authority to expand and complete development of waterflood operations within said Unit.

2. It seeks approval to complete waterflood development in said Unit in three stages, the first stage to be accomplished upon this Commission entering an order approving this application, the second and third stages to be accomplished at 12-month intervals on or about July 1, 1968 and July 1, 1969 respectively.

3. Wells to be converted to and drilled and completed as water injection wells in the Penrose Sand common source of supply in said Langlie-Mattix Penrose Sand Unit in Township 22 South, Range 37 East, N.M.P.M., Lea County, New Mexico in said first stage are as follows:

<u>Well Number</u>	<u>Location</u>	<u>Section</u>	<u>Unit Letter Designation</u>
9-1	SE SE	20 ✓	P
13C-5	SE NW	27	F
13C-7	NW NE	27	B
18-2	NW SW	26	L
19-4	SE NE	27	H
22-1	NW SW	27	L
24-4	NW SE	28	J
28-1	SE SW	28 ✓	N
28-4	NW SW	28 ✓	L
29-2	SE NE	29 ✓	H
31-1	SE NE	32 ✓	H
32-2	NW NW	33 ✓	D
33-1	SE NW	33	F
35-3	NW NE	33	B
38-1	NW NW	28	D
39-1	SE SE	29	P

8 for hearing
8 for adm approval
16

With the exception of Well No. 24-4, it is proposed that all of the above listed wells will be converted from producing wells to water injection wells in said Penrose Sand at an approximate depth of 3,550 feet below surface. It is proposed that Well No. 24-4 be permitted to be drilled and completed as a water injection well in said Penrose Sand at an unorthodox location 1,330 feet from the east line and 1,330 feet from the south line (Unit J) of the above described Section 28. The water to be injected into the Penrose Sand is non-potable received from Skelly Oil Company's Jal Water System to be injected at the approximate rate of 500 barrels per well per day.

4. It is requested that of the above listed wells, Well Nos. 13C-5, 13C-7, 18-2, 19-4, 22-1, 24-4, 33-1 and 35-3 be granted administrative approval for conversion to water injection wells pursuant to this Commission's Rule 701-E-5, because the direct or diagonally offsetting wells have experienced response to water injection. It is proposed that Well Nos. 9-1, 28-1, 28-4, 29-2, 31-1, 32-2, 38-1 and 39-1 be permitted to be converted to water injection wells to meet obligations to Humble Oil & Refining Company and Skelly Oil Company, the operators of adjoining waterflood units.

5. The proposed plan of development of the balance of said Langlie-Mattix Penrose Sand Unit in two stages (the second on or about July 1, 1968 and the third on or about July 1, 1969), is outlined on Exhibit "F" attached hereto and made a part hereof, and it is requested that this procedure be approved as to staging and that wells to be utilized for water injection purposes be administratively approved as each stage is developed.

6. This Commission, by its Order No. R-2617 originally authorized the creation of the Langlie-Mattix Penrose Sand Unit as a waterflood project, and the expansion and completion of waterflood development within said Unit is necessary to allow Applicant to prevent waste and promote the conservation of oil and gas.

7. Attached hereto and made a part hereof are the following Exhibits:

- (a) Exhibit "A", a plat showing the location of the proposed first stage injection wells and all other wells within a two-mile radius.
- (b) Exhibit "B", this Commission's Form C-116 (Gas-Oil Ratio Tests) executed by Applicant.
- (c) Exhibit "C", a diagrammatic sketch showing casing and tubing data for the proposed injection wells.
- (d) Exhibit "D", Casing and Cementing Record of wells to be converted to injection.
- (f) Exhibit "F", a map of the Unit Area showing injection wells in each proposed stage of development.

WHEREFORE, Applicant prays:

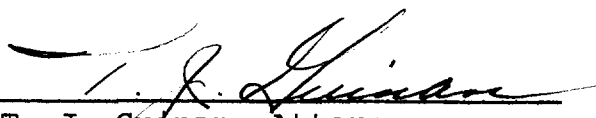
- 1. That this matter be set down for hearing before the

2. That notice thereof be given as required by law;

3. That upon such hearing, this Commission enter an order authorizing the expansion and completion of said Langlie-Mattix Penrose Sand Unit and permit the requisite conversion of wells to injection wells and the drilling of the aforesaid well as a water injection well, and the injection of water into said Unit as herein set out.

ANADARKO PRODUCTION COMPANY

By


T. J. Guinan, Attorney
P. O. Box 9317
Fort Worth, Texas 76107

CERTIFICATE OF MAILING

STATE OF TEXAS)
) SS
COUNTY OF TARRANT)

T. J. Guinan, being first duly sworn, on oath deposes and states:

That he is attorney for Applicant herein and that, according to his best information and belief, the parties of interest and the addresses of such parties are as follows:

The State of New Mexico
State Engineer Office
State Capitol
Santa Fe, New Mexico 87501

Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma 73101

Humble Oil and Refining Company
Box 1600
Midland, Texas 79701

Mobil Oil Company
Box 3128
Houston, Texas 77001

That on May 3, 1967, a true and complete copy of the foregoing application, together with all exhibits, was mailed to such persons or firms at the addresses shown above, with postage thereon fully paid.


T. J. Guinan

Subscribed and sworn to before me this 3rd day of May, 1967.


Notary Public

My Commission Expires:

6-1-67

**NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS**

C-116
Revised 1-1-65

Operator		Pool		County		Lea									
Anadarko Production Company		Langlie-Mattix													
Address P. O. Box 9317, Fort Worth, Texas 76107				TYPE OF TEST - (X)		Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>									
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU. FT./BBL.		
		U	S	T						R	WATER BBL.	GRAV. OIL		OIL BBL.	GAS M.C.F.
Langlie-Mattix Penrose Sand Unit															
Tract 13E	6	G	27	22S	37E	2-26-65	P	-	3	24	0	36.7	2.57	4.3	1670
Tract 13E	6	G	27	22S	37E	6-27-67	P	-	3	24	0	36.9	8.51	TSTM	
Tract 18	1	N	26	22S	37E	2-8-62	P	-	4	24	0	37.4	3.4	7.1	2090
Tract 18	1	M	26	22S	37E	2-4-67	P	-	11	24	0	38.1	10.74	TSTM	
Tract 21	1	M	27	22S	37E	1-13-65	P	-	5	24	1.2	38.5	4.87	5.4	1100
Tract 21	1	M	27	22S	37E	3-21-67	P	-	5	24	6.0	38.7	35.41	TSTM	
Tract 23	1	P	28	22S	37E	3-4-65	P	-	4	24	0	38.1	2.57	12.8	5000
Tract 23	1	P	28	22S	37E	2-24-67	P	-	4	24	0	38.8	7.05	TSTM	
Tract 22	2	K	27	22S	37E	1-15-66	P	-	1	24	0	37.1	1.64	TSTM	-
Tract 22	2	K	27	22S	37E	3-1-67	P	-	0	24	0	37.4	5.21	TSTM	
Tract 34	1	G	33	22S	37E	2-2-65	P	-	1	24	0	36.7	.44	4.2	8650
Tract 34	1	G	33	22S	37E	7-15-66	P	-	1	24	0	36.7	1.75	TSTM	
Tract 35	1	B	33	22S	37E	1-6-65	P	-	2	24	0	36.4	1.78	TSTM	-
Tract 35	1	B	33	22S	37E	3-24-67	P	-	2	24	55.0	36.5	37.14	TSTM	

No well will be assigned an allowable greater than the amount of oil produced on the official test.
 During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.
 Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.
 Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

EXHIBIT "B"

Langlie-Mattix Penrose Sand Unit
 Lea County, New Mexico
 Production History Wells Responding to Water Injection

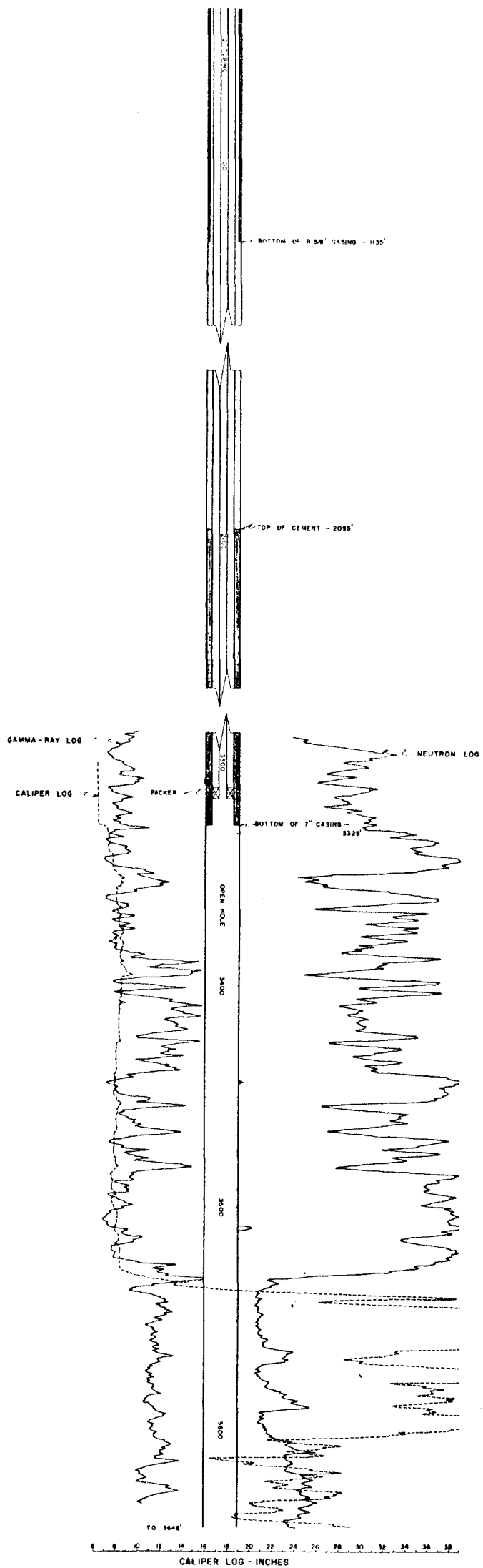
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

C. W. Stunhoffer

C. W. Stunhoffer

(Signature)

Superintendent Secondary Recovery Div.
 May 3, 1967 (Date)

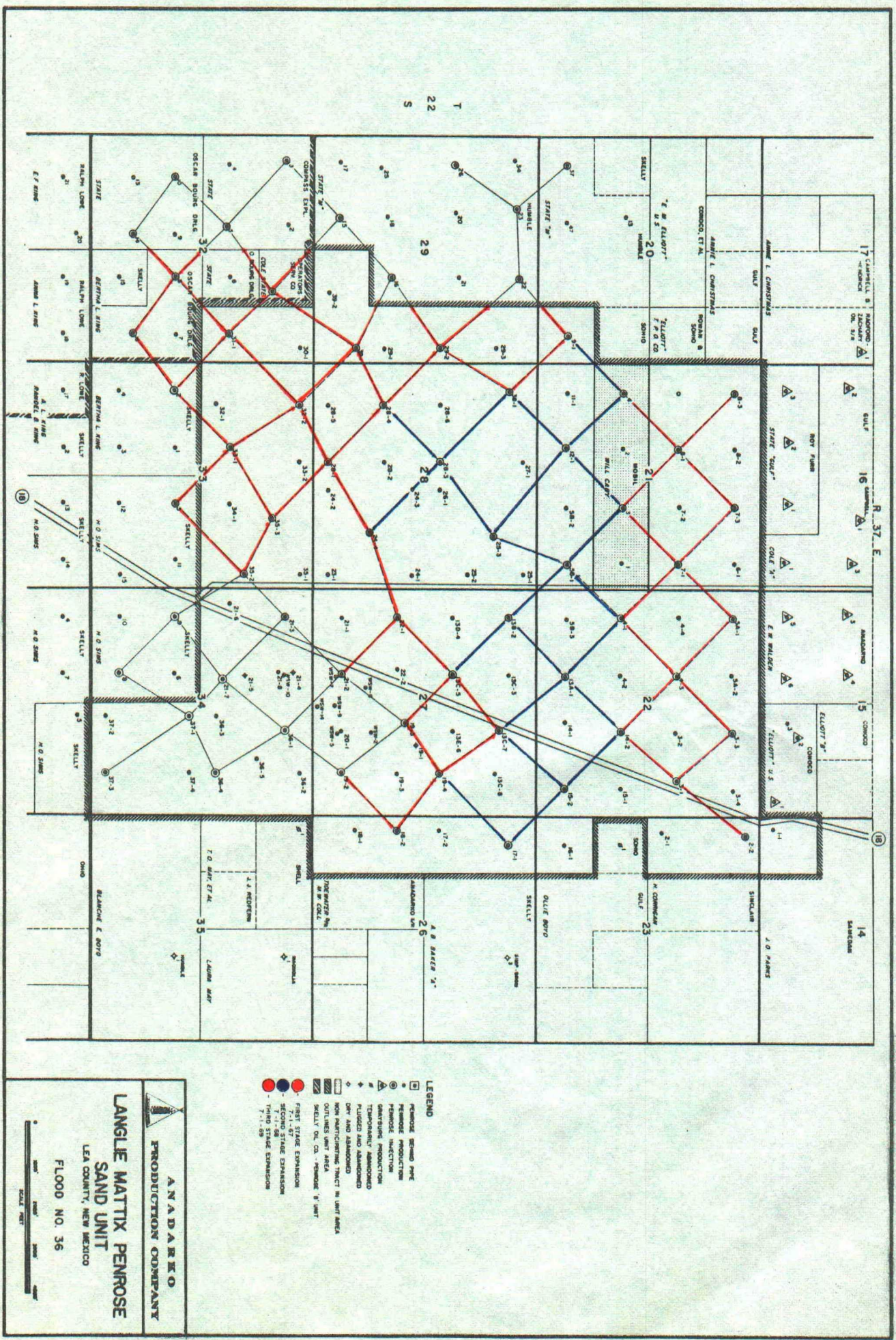


	ANADARKO PRODUCTION COMPANY
EXHIBIT "C" TYPICAL OPEN HOLE COMPLETION WATER INJECTION WELL LANGLIE MATTIX PENROSE SAND UNIT LEA COUNTY, NEW MEXICO	

ANADARKO PRODUCTION COMPANY
 LANGLEE-MATTIX PENROSE SAND UNIT
 LEA COUNTY, NEW MEXICO
 CASING AND CEMENTING RECORD
 OF WELLS TO BE CONVERTED TO INJECTION

TRACT NO. & WELL NO.	DATE OF COMPLETION	SURFACE CASING			LONG STRING CASING			TOP OF CEMENT	TOTAL DEPTH
		SIZE	DEPTH	SX. CMT.	SIZE	DEPTH	SX. CMT.		
9-1	12-13-59	8 5/8"	315	Circ.	5½	3715	200 sx.	2150	3746
13C-5	8-31-37	9 5/8	1123	250	7	3399	200	2070	3620
13C-7	3-29-39	16	114	65	7	3433	200	2005	3655
18-2	5-27-39	8 5/8	1135	100	7	3349	175	2095	3646
19-4	10-5-38	10 8 5/8	95 1140	75 150	7	3360	150	2050	3635
22-1	10-12-37	8 5/8	1167	500	7	3378	150	2080	3665
28-1	5-23-39	15½	135	100	7	3412	150	2105	3690
28-4	11-23-39	15½	114	100	7	3419	150	2095	3618
29-2	7-27-40	16	119	100	7	3424	150	2150	3682
31-1	11-25-56	9 5/8	251	200	6	3400	350	2025	3700
32-2	7-12-41	15	121	125	7	3402	150	2005	3681
33-1	2-12-39	15½	132	100	7	3395	150	2085	3691
35-3	5-25-40	15½	128	50	7	3395	200	2015	3680
38-1	7-25-57	8 5/8	1160	600	4½	3725	300	2075	3725
39-1	8-30-40	10 3/4	292	125	7	3412	550	1090	3616

EXHIBIT "D"



- LEGEND**
- PERMISE GRANT PLOT
 - PERMISE PRODUCTION
 - △ PERMISE INJECTION
 - ◇ GASTRINE PRODUCTION
 - ◇ TEMPORARILY ABANDONED
 - ◇ DRY AND ABANDONED
 - ◇ NOW PARTICIPATING TRACT IN UNIT AREA
 - ◇ SHELL OIL CO. - PERMISE "B" UNIT
 - FIRST STAGE EXPANSION
 - SECOND STAGE EXPANSION
 - THIRD STAGE EXPANSION
 - OUTLINE UNIT AREA
 - 7-1-68
 - 7-1-69

ANADARKO
PRODUCTION COMPANY

LANGLE MATTIX PENROSE
SAND UNIT

LEA COUNTY, NEW MEXICO

FLOOD NO. 36

SCALE: 1" = 100'

EXHIBIT F
PROPOSED EXPANSION
Langle - Mattix Penrose Sand Unit
LEA COUNTY, NEW MEXICO
Showing
Proposed Complete Waterflood Development

PROPOSED EXPANSION
Langlie-Mattix Penrose Sand Unit
Lea County, New Mexico
Showing
Unit and Surrounding Area



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

**S. E. REYNOLDS
STATE ENGINEER**

May 19, 1967

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, NEW MEXICO 87501

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Anadarko Production Company which seeks to expand their waterflood project in the Langlie-Mettix Penrose Sand Unit which was granted under Oil Conservation Commission Order No. R-2617.

Since Exhibit C is not legible, except for the identification, and does not purport to represent actual completion of any specific well, it is of no value in determining whether protection will be accomplished. However, I assume that the Commission will ascertain that there will be no loss or commingling of fluids or gases if the application is approved.

FEI/na
cc-T. J. Guinar
F. H. Hennighausen

Yours truly,

S. E. Reynolds
State Engineer

By:

Frank E. Irby
Chief
Water Rights Div.