

AMBASSADOR OIL CORPORATION

AMBASSADOR BUILDING
3109 WINTHROP P. O. Box 9338
FORT WORTH 7, TEXAS

C. HARRISON COOPER
PRESIDENT
CHIEF EXECUTIVE OFFICER

June 25, 1964

CABLE ADDRESS
FRANK FORT WORTH

Oil Conservation Commission
P.O. Box 871
Santa Fe, New Mexico

Attention: Mr. D. S. Nutter

Re: Langlie-Mattix Penrose Sand Unit
Lea County, New Mexico

Gentlemen:

Please find enclosed one copy of an application to expand our pilot waterflood in the subject Unit. Listed below is the information requested:

- (1) Waterflood Application Data sheet
- (2) Exhibit "A" - area map
- (3) Exhibit "B" - map indicating Unit boundary
- (4) Exhibit "C" - Injection well casing diagram

The offset producing well, No. 37-2, is currently producing 17 barrels of oil per day and 41 barrels of water per day.

Injection will be through tubing and under a packer.

As previously stated this well was inadvertently omitted from our previous application; therefore we request that you please approve at your earliest convenience.

Very truly yours,

E. A. Riley
Assistant Vice-President
Manager of Secondary Recovery Div.

BGW/hb
CC: State Engineer
P.O. Box 1079
Santa Fe, New Mexico

NEW MEXICO OIL AND GAS COMMISSION
WATERFLOOD APPLICATION DATA

MAIN OFFICE 000

FIELD LANGLIE-MATTIX COUNTY LEA 1964 JUN 29 AM 7 53
OPERATOR AMBASSADOR OIL CORPORATION
LEASES LANGLIE-MATTIX PENROSE SAND UNIT
RESERVOIR PENROSE SAND (QUEEN) DISCOVERY DATE SEPTEMBER, 1935

I. RESERVOIR AND FLUID CHARACTERISTICS

A. INFORMATION ON ENTIRE RESERVOIR

1. NAME OF FORMATION PENROSE SAND
2. ESTIMATED PRODUCTIVE AREA OF ENTIRE RESERVOIR 20,000 ACRES
3. COMPOSITION (SAND, LIMESTONE, DOLOMITE, ETC.) SAND
4. TYPE OF STRUCTURE STRATIGRAPHIC TRAP
(INCLUDE CROSS-SECTION AND STRUCTURAL MAPS)
5. TYPE DRIVE DURING PRIMARY PRODUCTION SOLUTION GAS
6. ORIGINAL RESERVOIR PRESSURE 1500 PSI
7. WAS GAS CAP PRESENT ORIGINALLY NO AT PRESENT? NO

B. INFORMATION ON PROPOSED PROJECT AREA

(INCLUDE PLAT OF LEASE (S) TO BE FLOODED, SHOWING PRODUCING WELLS, PROPOSED INJECTION WELLS, AND OFFSET WELLS.)

1. NUMBER OF PRODUCTIVE ACRES IN LEASE (S) TO BE FLOODED, 3,920
2. AVERAGE DEPTH TO TOP OF PAY (FEET) 3,400
3. AVERAGE EFFECTIVE PAY THICKNESS (FEET) 25
4. AVERAGE POROSITY (%) 13
5. AVERAGE HORIZONTAL PERMEABILITY (MDS.) 5 RANGE 1-20
6. CONNATE WATER CONTENT (% OF PORE SPACE) 40
7. GRAVITY OF OIL (API) 37 VISCOSITY NO AVAILABLE

II. PRIMARY PRODUCTION HISTORY

1. DATE FIRST WELL COMPLETED ON LEASE (S) JANUARY, 1936
2. OIL, GAS, WATER PRODUCTION BY MONTHS SINCE DISCOVERY. (GRAPHICALLY AS WELL AS IN TABULAR FORM.)
3. STATE OF DEPLETION OF PROJECT AREA STRIPPED
4. NUMBER OF PRODUCING WELLS ON EACH LEASE IN PROJECT AREA 70
5. AVERAGE DAILY OIL PRODUCTION PER WELL AT PRESENT TIME 4 BARRELS
6. CUMULATIVE OIL PRODUCTION TO DATE FROM LEASE (S) 6,363,944

III. RESULTS EXPECTED

1. ESTIMATED ORIGINAL OIL IN PLACE (BBLs.) 49,000,000
2. ESTIMATE OIL SATURATION AT PRESENT TIME (% OF PORE SPACE) 43
3. ESTIMATED RESIDUAL OIL SATURATION AT ABANDONMENT 31%
4. ESTIMATE ULTIMATE ADDITIONAL OIL THAT WILL BE RECOVERED AS A DIRECT RESULT OF INJECTION (BBLs.) 5,000,000

IV. INJECTION

1. SOURCE OF INJECTED WATER (FORMATION, DEPTHS) SANTA ROSA 8800'
2. FRESH OR SALT WATER BRACKISH (NOT POTABLE)
3. FLOOD PATTERN AND SPACING 80 ACRE 5 SPOT
4. INITIAL INJECTION PRESSURE TO BE USED (PSI) 1850
5. ESTIMATE INITIAL PER WELL RATE OF INJECTION (BBL5.) 300

R 37 E

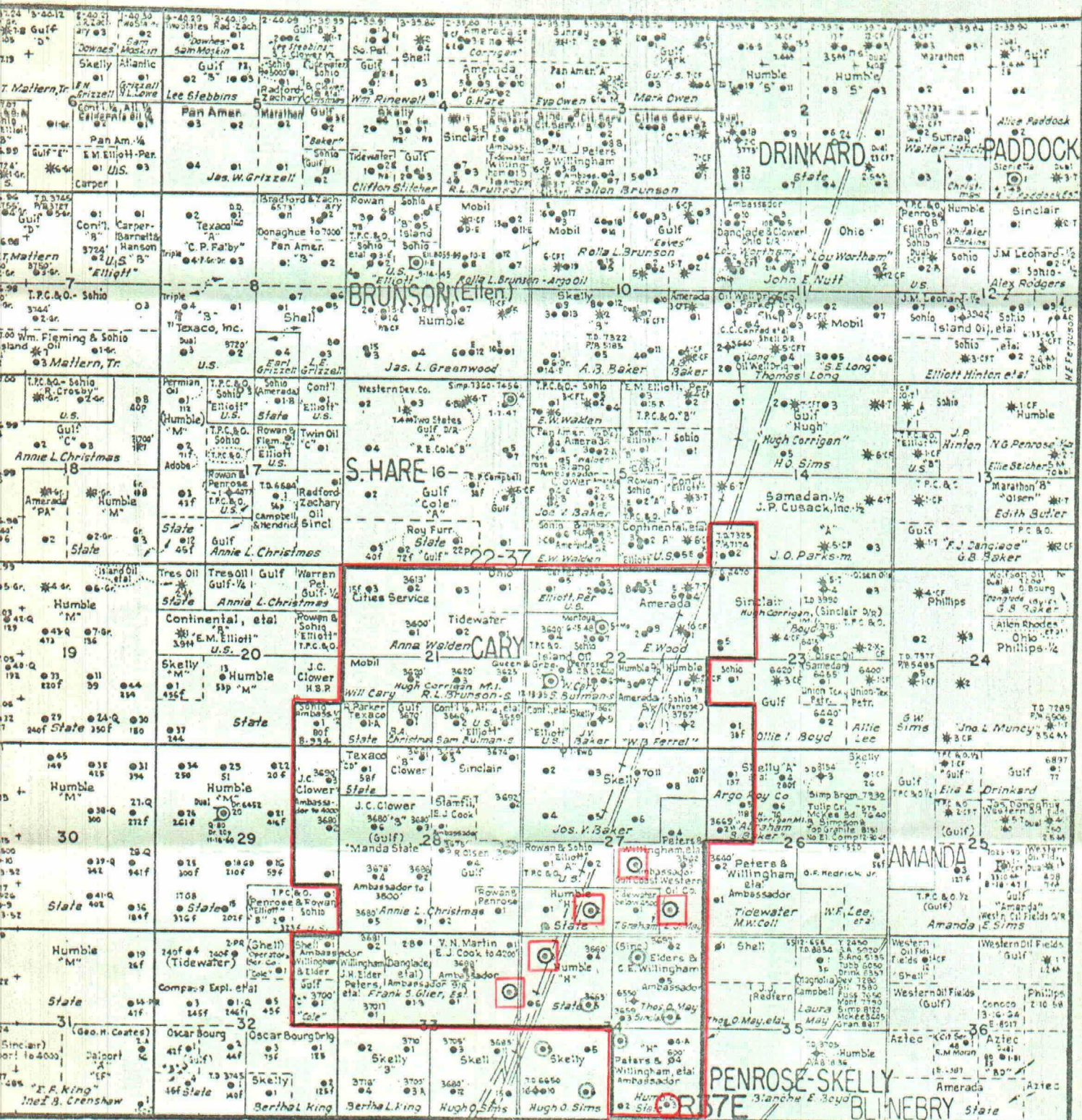


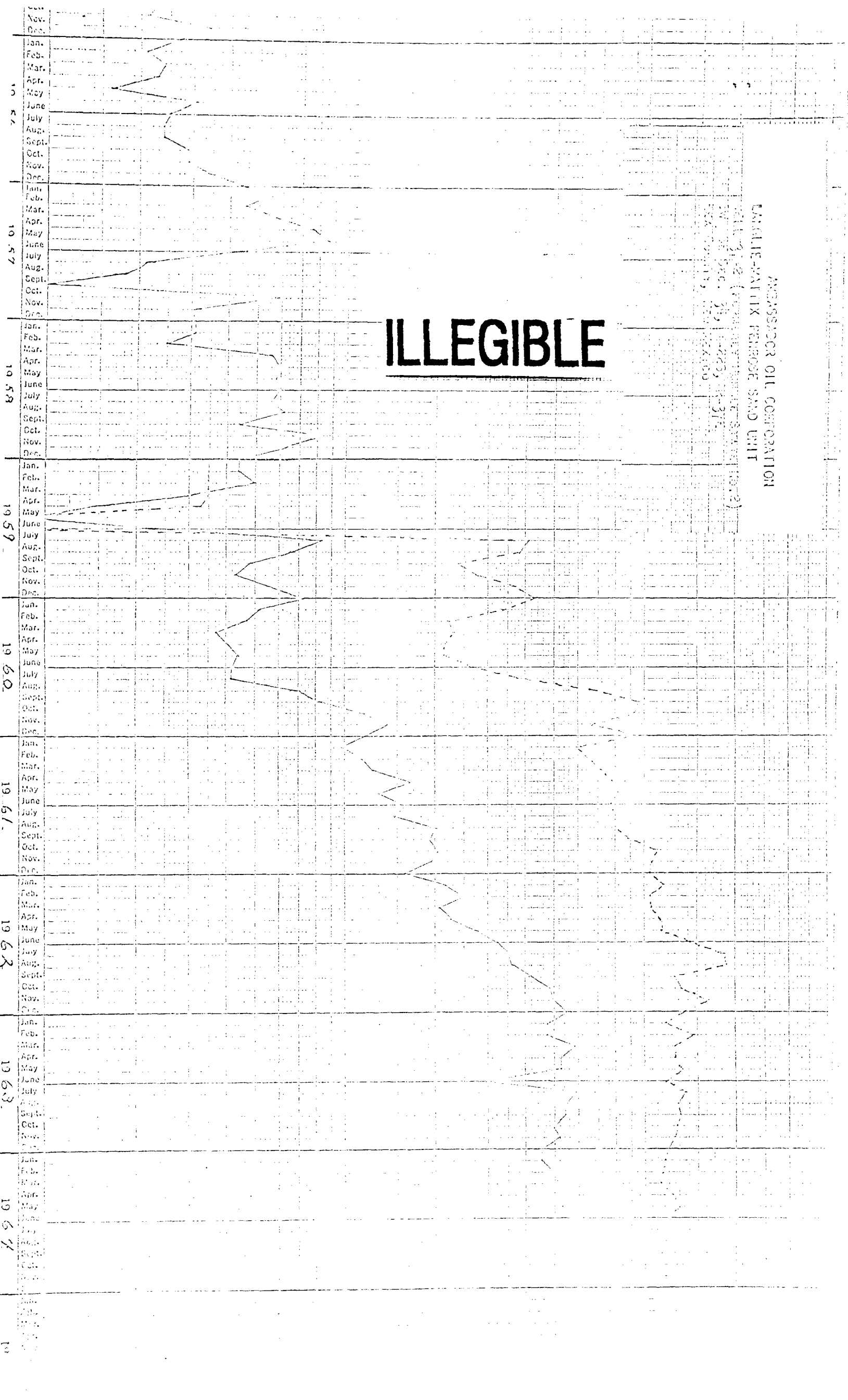
EXHIBIT "A"
MAP SHOWING WELLS IN TWO MILE RADIUS
FROM PROPOSED INJECTION WELLS

-  Injection Well Approved by Ord R-199
-  Inj. well approved by order R-2633
-  Proposed Injection Well

ARCSADOCK OIL CORPORATION
LADLE-PAVILIX PERMITE SAND UNIT

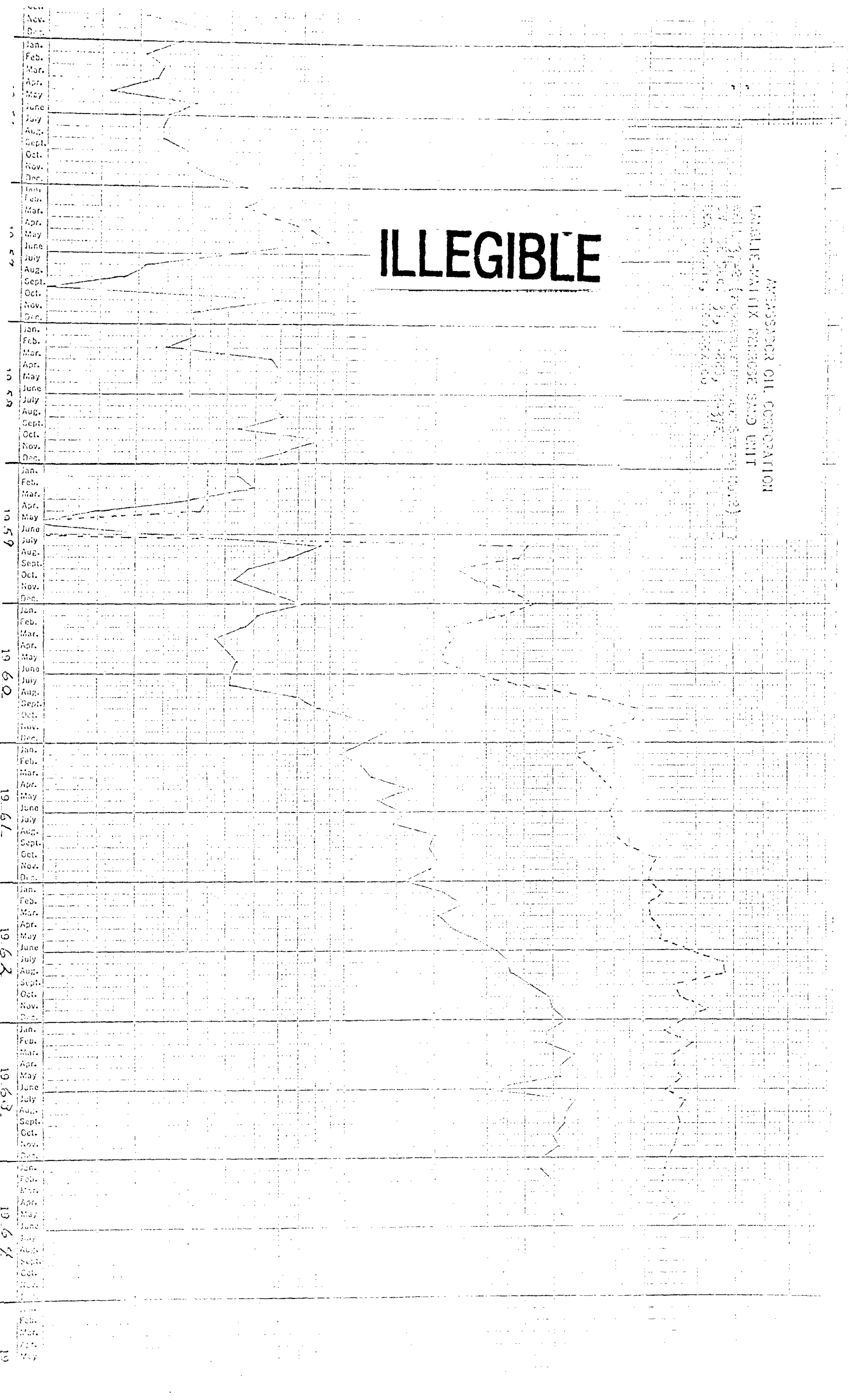
Well 3-12 (from 1-12 to 1-2)
1-12 Dec. 20, 1955, 1-31
1-2 Jan. 1, 1956, 1-31

ILLEGIBLE



ARABIAN OIL CORPORATION
LAMELLE-PALMIX PERIODIC SAND UNIT
Well 31-2 (Production) at Station No. 2
31-2 Dec. 31, 1963, 1037
Perforation, 100 meters

ILLEGIBLE



AMBASSADOR OIL CORPORATION

MAIN OFFICE 000

AMBASSADOR BUILDING

909 WINTHROP P. O. Box 9338

FORT WORTH 7, TEXAS

JULY 20, 1964

C. HARRISON COOPER
PRESIDENT

CHIEF EXECUTIVE OFFICER

CABLE ADDRESS
FRANJO, FORT WORTH

STATE ENGINEER'S OFFICE
STATE CAPITOL
SANTA FE, NEW MEXICO

ATTENTION: MR. FRANK E. IRBY, CHIEF
WATER RIGHTS DIVISION

GENTLEMEN:

EXCUSE THIS BELATED REPLY TO YOUR JULY 1 LETTER CONCERNING OUR APPLICATION TO EXPAND OUR PILOT WATERFLOOD IN THE LANGLIE-MATTIX PENROSE SAND UNIT OF LEA COUNTY, NEW MEXICO. VACATION TIME REALLY CAUGHT US SHORTHANDED.

IN REPLY TO YOUR REQUEST WE OFFER THE FOLLOWING:

INJECTION WILL BE THROUGH TUBING UNDER PACKER SET AT APPROXIMATELY 3304 FT. (SEE ENCLOSED SKETCH) WHICH IS WELL BELOW THE TOP OF THE CEMENT BEHIND THE 5½" CASING WHICH IS SET AT 3348 FT. AND CEMENTED WITH 150 SACKS CEMENT.

WE TRUST THIS IS SUFFICIENT ANSWER FOR YOU TO GIVE A WAIVER TO THE OIL CONSERVATION COMMISSION.

INCIDENTALLY, WE ARE BY COPY OF THIS LETTER SENDING THE OIL CONSERVATION COMMISSION COPIES OF THE REVISED SKETCH SHOWING THE CASING PROGRAM.

AS TO YOUR REQUEST FOR AN ANALYSIS OF THE SOURCE OF WATER, WE RESPECTFULLY CALL YOUR ATTENTION TO THE FACT THAT THIS WAS PREVIOUSLY SUPPLIED IN OUR LETTERS OF AUGUST 12, 1963 AND AUGUST 15, 1963 AND RECEIPT ACKNOWLEDGED IN YOUR AUGUST 16, 1963 LETTER. IF YOU NEED ADDITIONAL COPIES LET US KNOW.

VERY TRULY YOURS,

E. A. RILEY
ASSISTANT VICE-PRESIDENT
MANAGER OF SECONDARY RECOVERY DIV.

EAR/HB

CC: OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

SANTA FE, NEW MEXICO

DECLARATION OF INTEREST

STATE OF NEW YORK

IN SENATE

JANUARY 1, 1911

STATE OF NEW YORK

IN SENATE
JANUARY 1, 1911

STATE OF NEW YORK

IN SENATE

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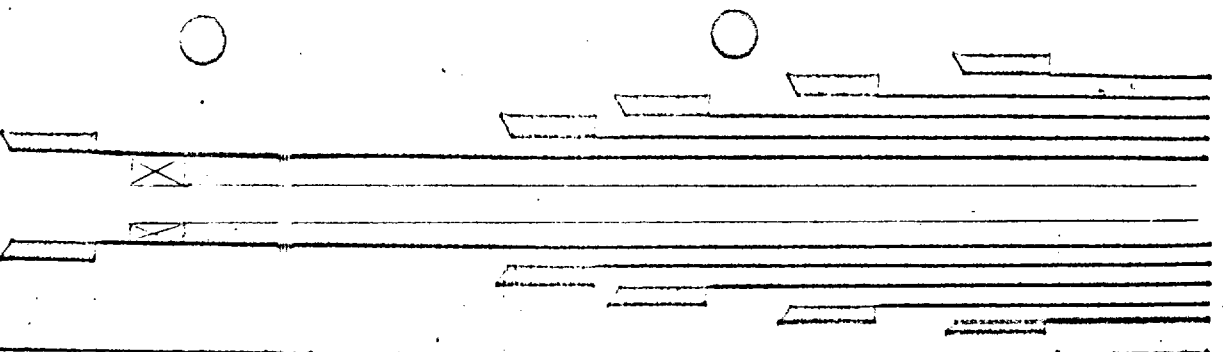
IN SENATE

JANUARY 1, 1911

STATE OF NEW YORK

JANUARY 1, 1911

STATE OF NEW YORK



150' - 15 1/2"
50 sacks cement

550' - 12 1/2"

702' - 10"

1,160' - 8"
150 sacks cement

3300' - 2 3/8" TUBING
WITH PACKER SET AT 3304'
3,348' - 5 1/2"
150 sacks cement

MAIN OFFICE OCC

1964 JUL 6 AM 7 43

July 1, 1964

C
O
P
Y

Mr. E. A. Riley
Assistant Vice-President
Manager of Secondary Recovery
Ambassador Oil Corporation
Fort Worth 7, Texas

Dear Mr. Riley:

A copy of your application to the Oil Conservation Commission dated June 25, 1964 which seeks to expand your pilot water flood in the Langlie-Mattix Penrose Sand Unit of Lea County, New Mexico has been received. The diagrammatic sketch (your Exhibit C) does not give cement tops on any of the casing strings shown thereon. Although your transmittal letter states injection will be through tubing under packer, no tubing is shown on the diagrammatic sketch and none is mentioned in the application. Since neither the packer setting nor the top of cement surrounding the 5½" casing is shown on the diagram, I am unable to determine what position I must take with respect to your application and therefore cannot give a waiver to the Commission.

(Oil Conservation Commission Rule 701-B-3)

Please furnish analyses of source of water (Santa Rosa at 800').

Yours truly,

S. E. Reynolds
State Engineer

FEI/ma
cc-A. L. Porter, Jr.
F. H. Hennighausen

By:
Frank E. Irby
Chief
Water Rights Division

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