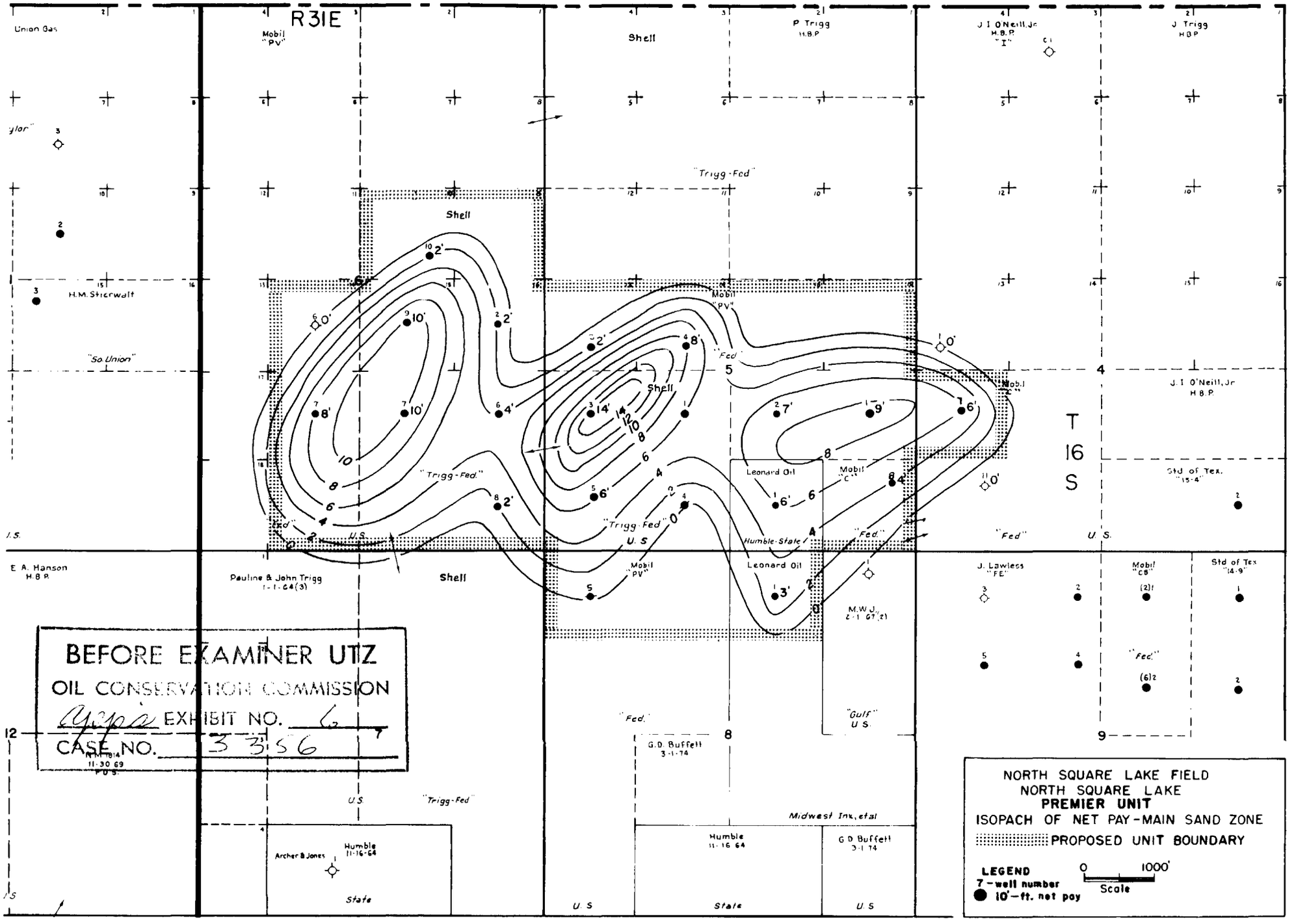
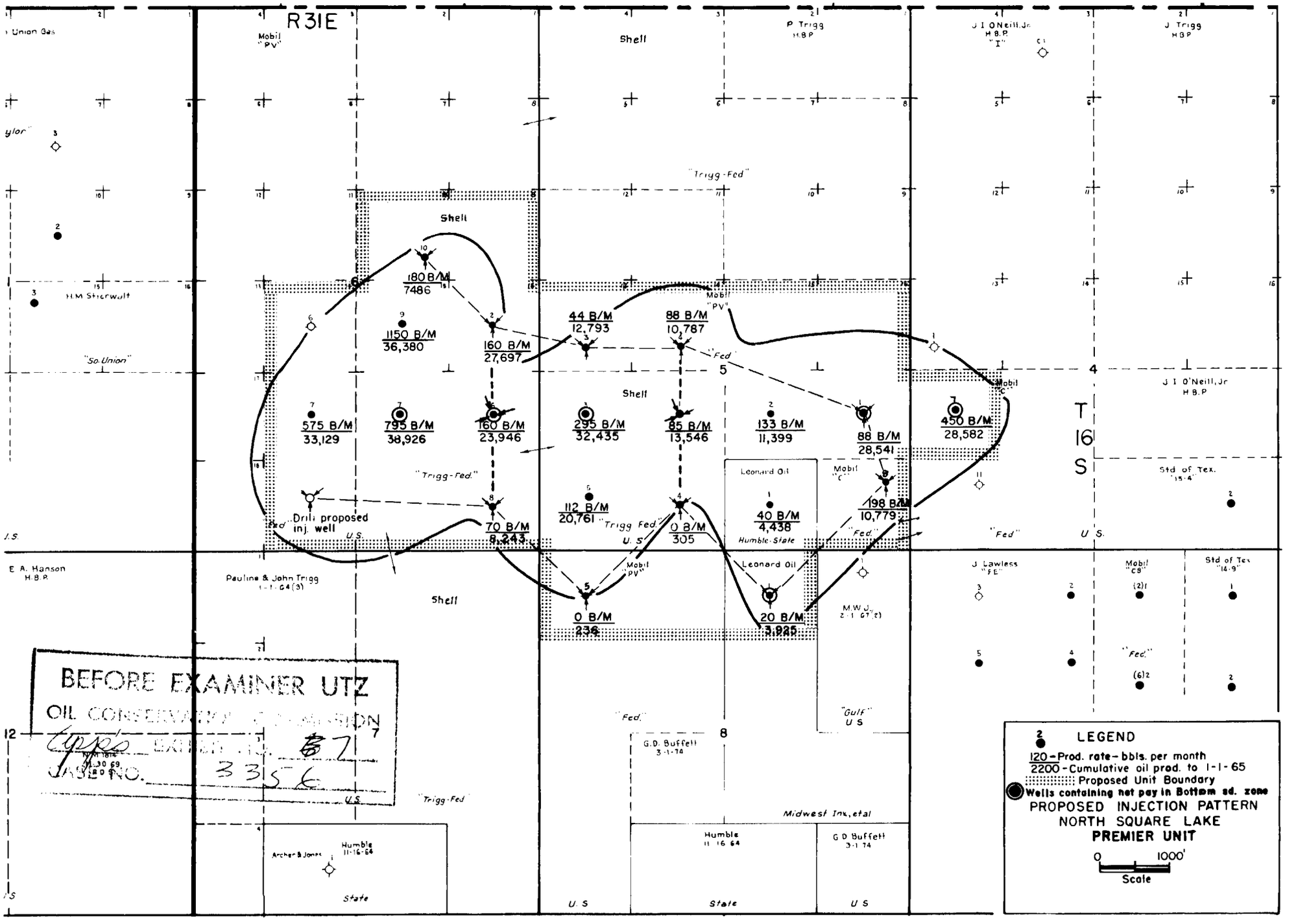
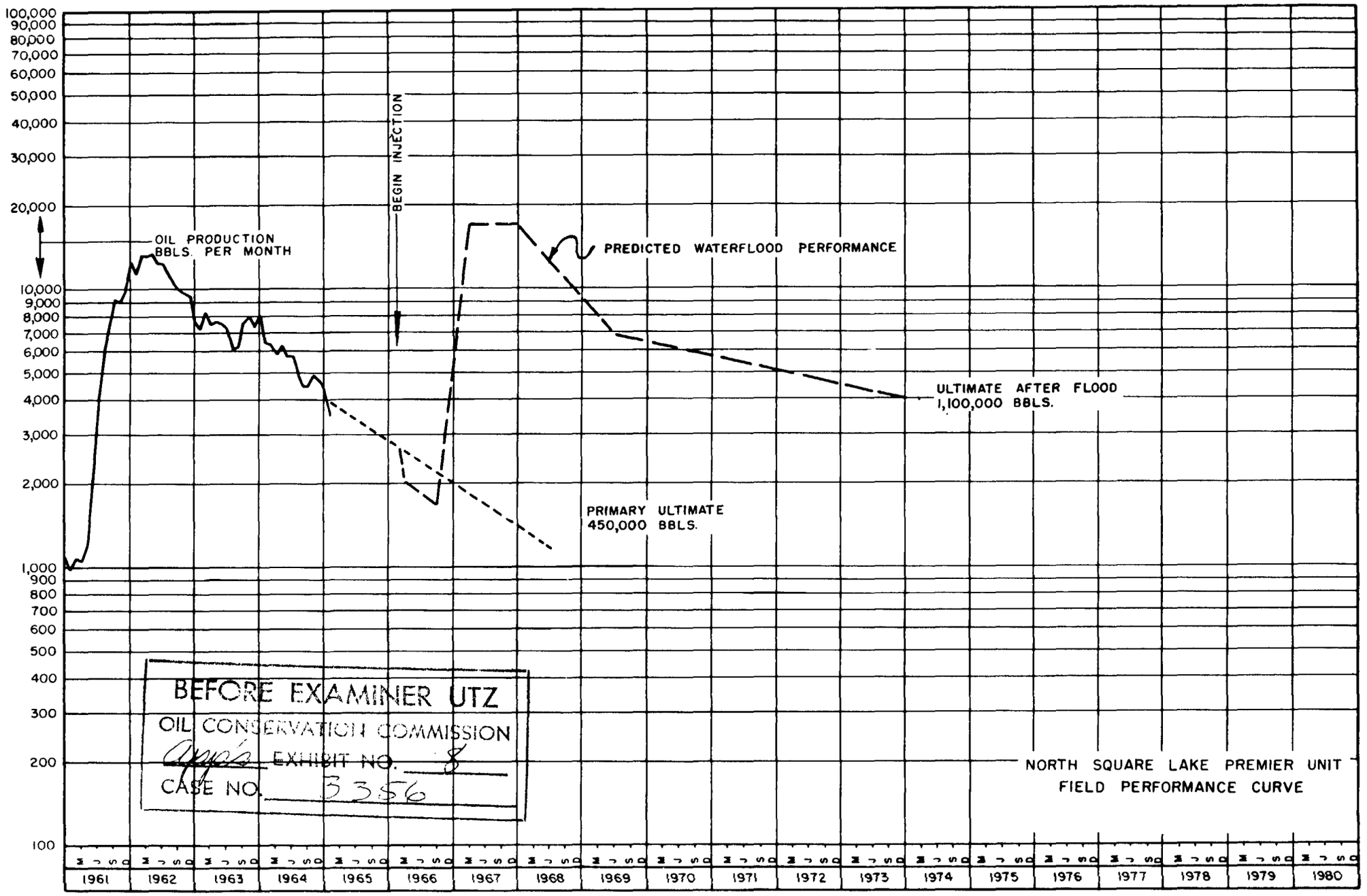


BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 3356



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE NO. 3356


100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
900
800
700
600
500
400
300
200
100
BEGIN INJECTION
OIL PRODUCTION BBLS. PER MONTH
PREDICTED WATERFLOOD PERFORMANCE
ULTIMATE AFTER FLOOD 1,100,000 BBLS.
PRIMARY ULTIMATE 450,000 BBLS.
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 8
CASE NO. 3356
NORTH SQUARE LAKE PREMIER UNIT
FIELD PERFORMANCE CURVE
1961
1962
1963
1964
1965
1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980

WATERFLOOD CALCULATIONS
NORTH SQUARE LAKE PREMIER UNIT

Recovery

a) Oil Saturation at end of Primary

$$S_o = B_o \left(\frac{1 - S_w}{Boi} - \frac{Np}{\text{Pore Volume}}\right)$$

$$S_o = 1.122 \left(\frac{.65}{1.176}\right) - \frac{451,000}{5,880,000}) \simeq .54$$

b) Saturation of floodable area after flood (assuming 80% over-all sweep)

$$S_{or} = 0.2\ (.65) + 0.8\ (.29) = .36$$

c) Waterflood Recovery = (Floodable Area Void Space) $\left(\frac{S_o - S_{or}}{B_o}\right)$

Waterflood Recovery = $4,070,000 \times \frac{.54 - .36}{1.122} \simeq 650,000$ barrels

d) Ratio Primary to Secondary = $\frac{650,000}{450,000} = 1.45$

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Appls. EXHIBIT NO. 9
CASE NO. 3356

COUNTY
FIELD or
LOCATION
WELL
COMPANY

COMPANY	JOHN H. TRIGG	Other Surveys: —
WELL	FEDERAL A #8-5	Location of Well: 330' FEL, 990' FSL
FIELD	N. SQUARE LAKE	
LOCATION	SEC. 5-16S-31E	
COUNTY	EDDY	Elevation: K.B.: 4098
STATE	NEW MEXICO	D.F.:
		or G.L.: 4086.4

Log Depths Measured From K.B. 11.6 Ft. above G.L.

RUN No.	ONE		
Date	12-31-61		
First Reading	3535		
Last Reading	100 (G.R.)		
Feet Measured	3435		
Csg. Schlum.	—		
Csg. Driller	859		
Depth Reached	3539		
Bottom Driller	3535		
Mud Nat.	SALT-STARCH-GEL		
Dens. Visc.	10 34		
Mud Resist.	.087 @ 61 F	@ F	@ F
" Res. BHT	@ F	@ F	@ F
" pH	6 @ F	@ F	@ F
" Wtr. Loss	10 CC 30 min	CC 30 min	CC 30 min
" Rmf	@ F	@ F	@ F
Bit Size	7 7/8 - 7 13/16 - 7 3/4		
Spacing:			
T3R1R	2600 To F.R.	To	To
T3R3R	100 To 2600	To	To
Opr. Rig Time	2 HRS.		
Truck No.	2522 - BRNFLD.		
Recorded By	KNAPP		

FOLD HERE

REMARKS
VLC No.: 102 BACKGROUND G.R. 50-480-82.5-400
VLS No.: 102 T.C. 1/2 SENS. 200 SPEED 30/60
VLP No.: 95

Velocity (feet per second) = 1,000,000 / Interval Transit Time (microseconds per foot)

SPONTANEOUS-POTENTIAL millivolts	DEPTHS	INTERVAL TRANSIT TIME microseconds per foot ← increases
− ↔ +		T3R3R CSG TO 2600: 100 — 70
GAMMA RAY API UNITS: 0 — 100; 100 — 200		T3R1R2 2600' TO F.R.: 100 — 70