ESTIMATES OF OIL RESERVES
(Volumetric Method)
East Saunders Permo-Penn Pool
Lea County, New Mexico

Case No. 2678
Exhibit No.7 (Rev.)
10/30/63

BASIC DATA:

Porosity	8.3% (Average of cores in #2 and #3 wells)
Net Pay	18.3 ft. (Average of pay in #1, #2 and #3 wells)
Water Saturation	32.1% (Average of cores in #2 and #3 wells)
Formation Volume Factor	1.527 bbl. of reservoir oil/bbl. of stock-tank oil (reservoir fluid analysis)
Recovery Factor	25.2% (Material balance - Schilthius Method)

CALCULATIONS:

$$\text{Ultimate Oil Recovery} = \frac{(7758)\ (\emptyset)\ (1-Sw)\ (R)}{Boi}$$

$$\text{Ultimate Oil Recovery} = \frac{(7758)\ (0.083)\ (0.679)\ (0.252)}{1.527}$$

Ultimate Oil Recovery = 72.1 bbl/acre foot

Where:
7758 bbl = equivalent of 1 acre foot
$\emptyset$ = porosity as a fraction of bulk volume
Sw = water saturation as a fraction of pore volume
R = recovery factor as a fraction of original oil in place
Boi = formation volume factor

For a net thickness of 18.3 feet -

Ultimate Oil Recovery = (72.1 bbl/acre foot) (18.3 feet) = 1319 bbl/acre

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7-R
CASE NO. 2678