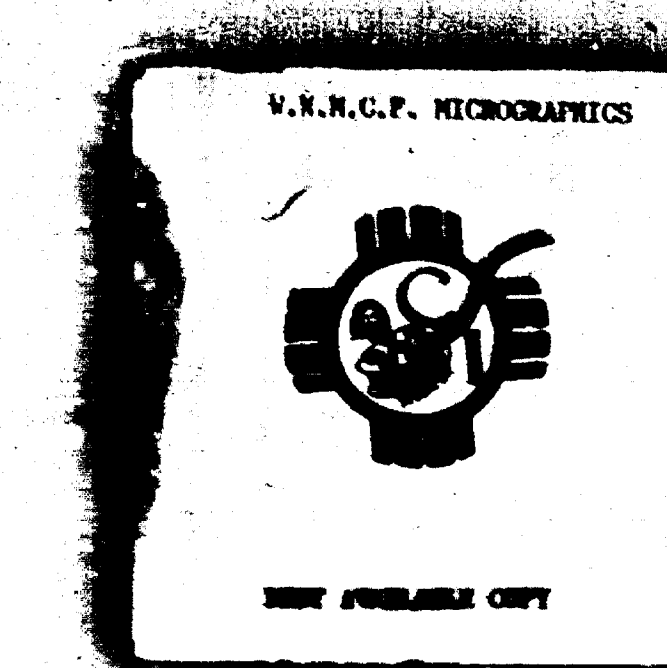


Case No.

3356

Large Exhibits



U.S. AIR FORCE

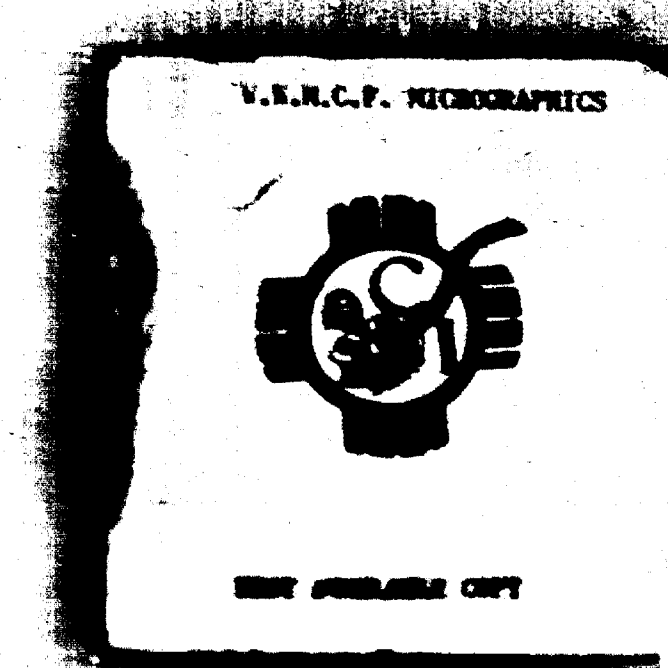
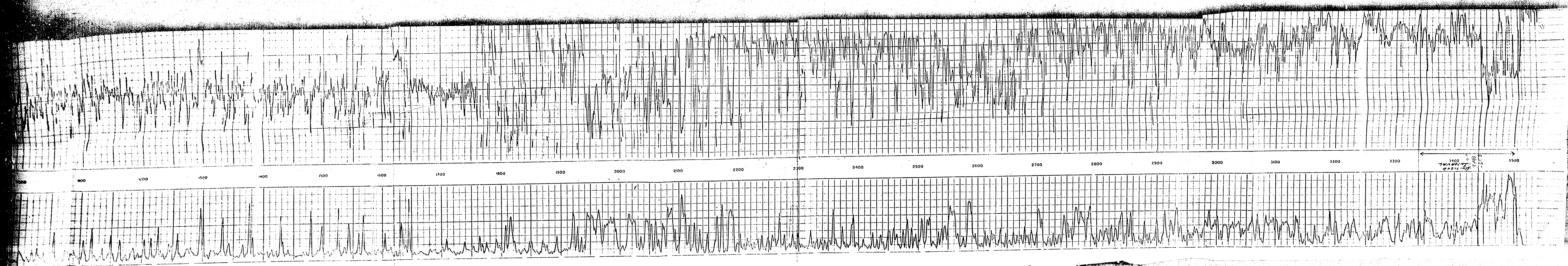


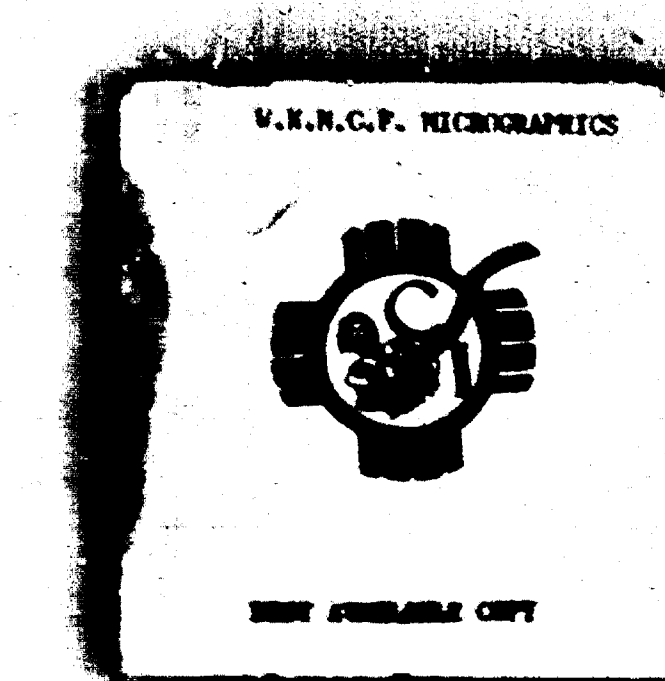
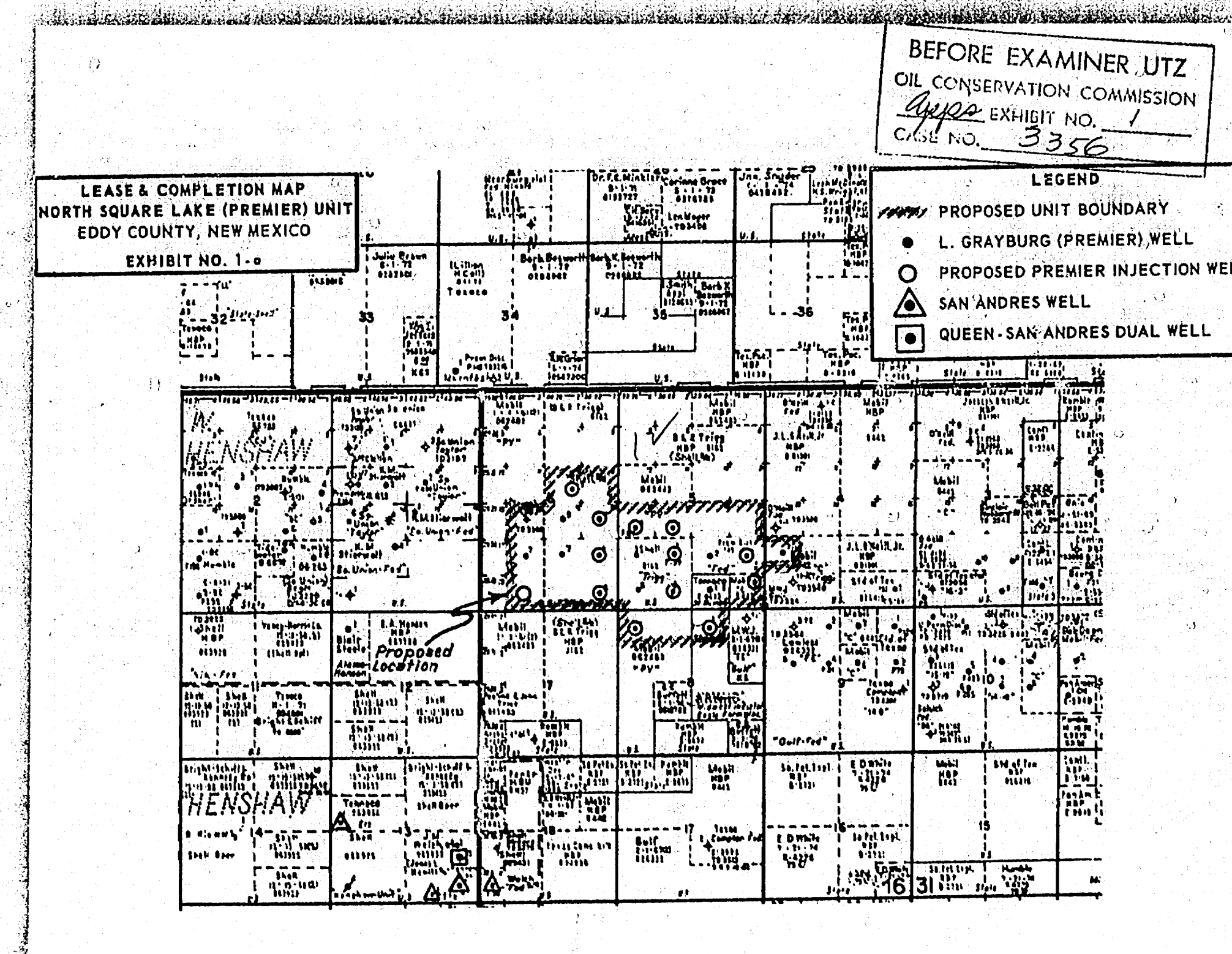
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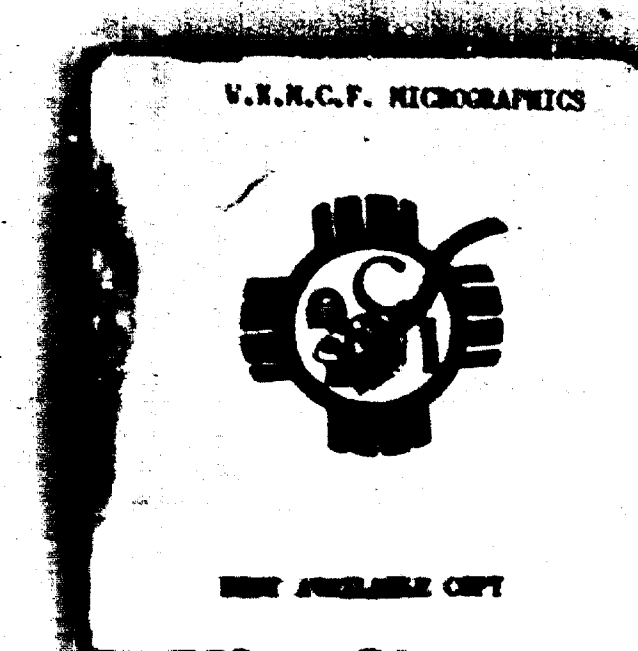
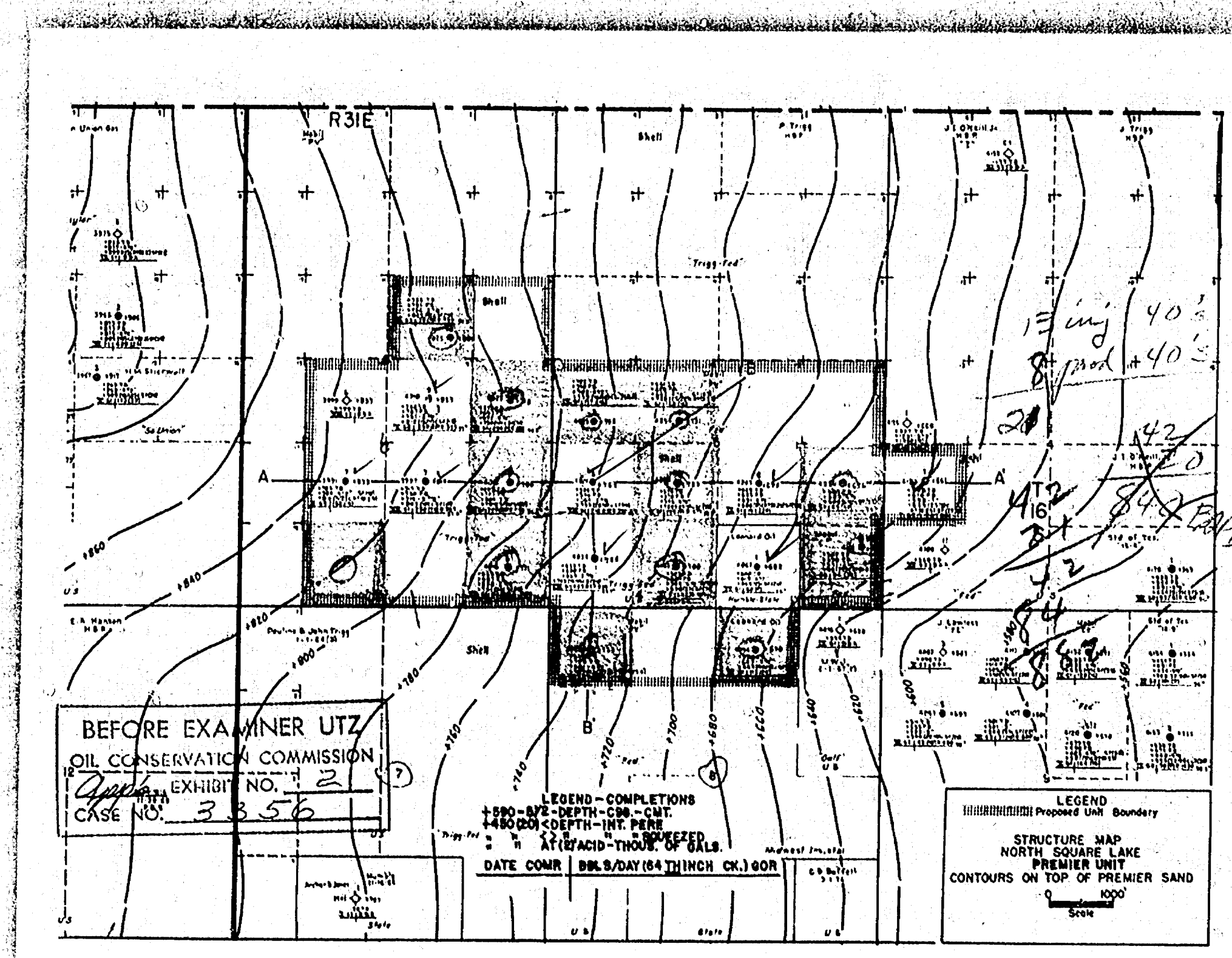
SAFETY INFORMATION

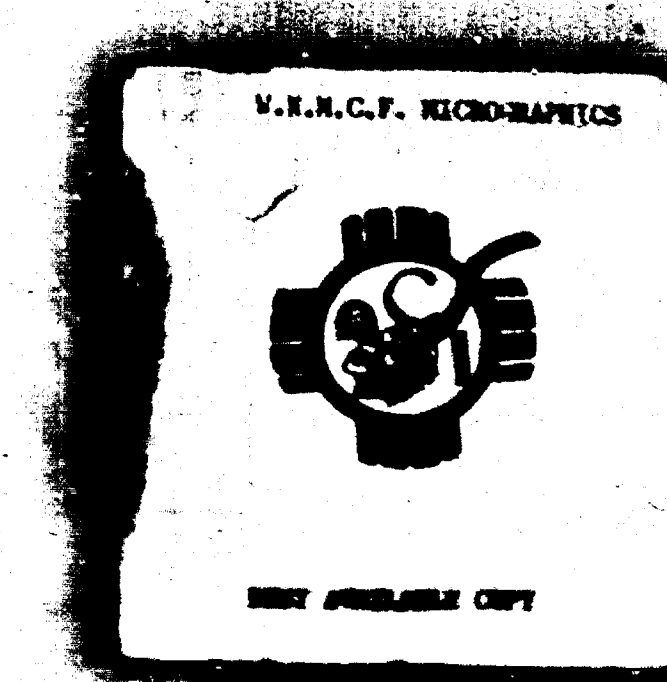
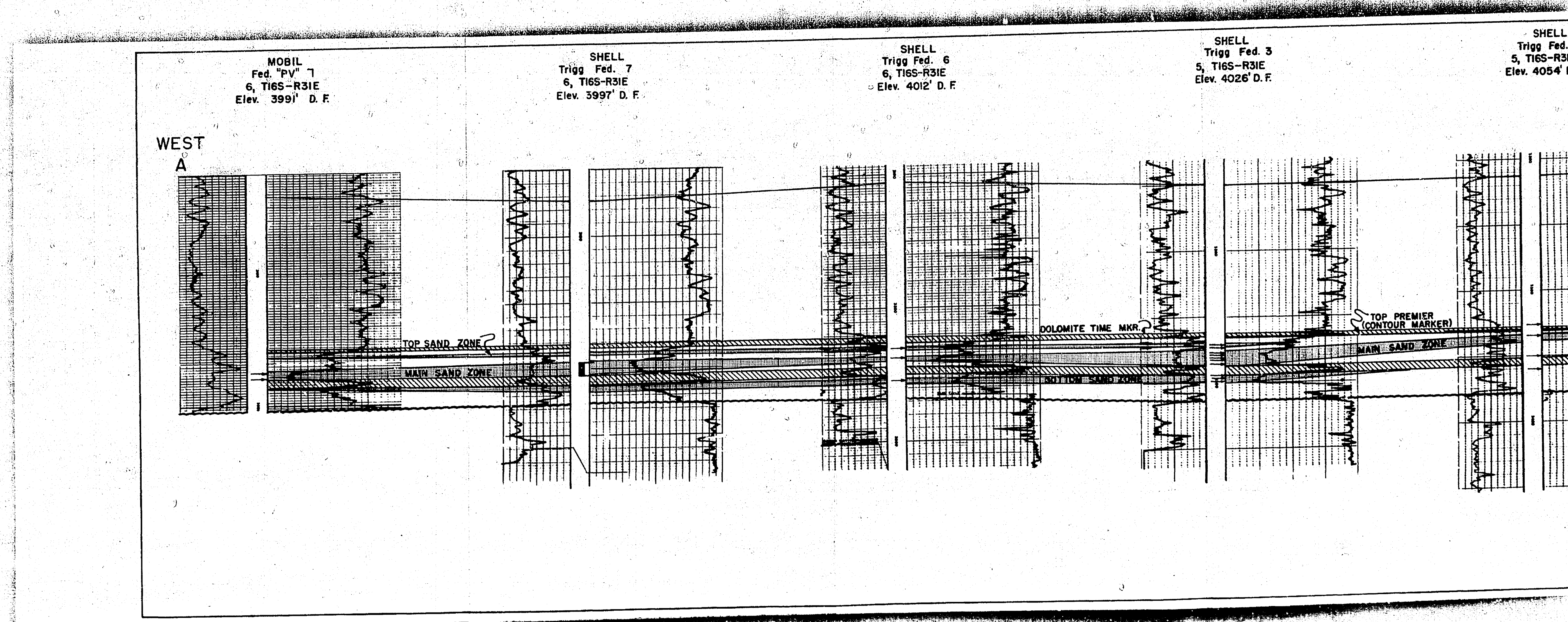


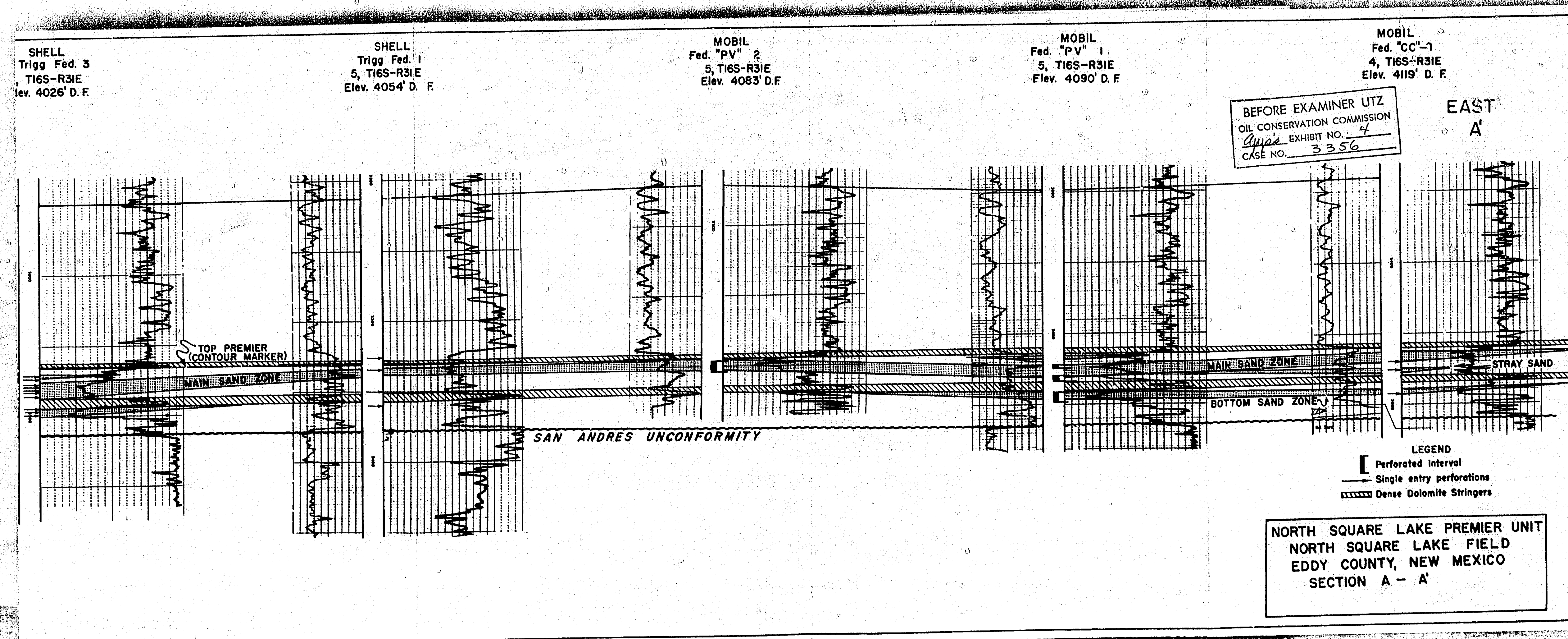
BEST AVAILABLE COPY

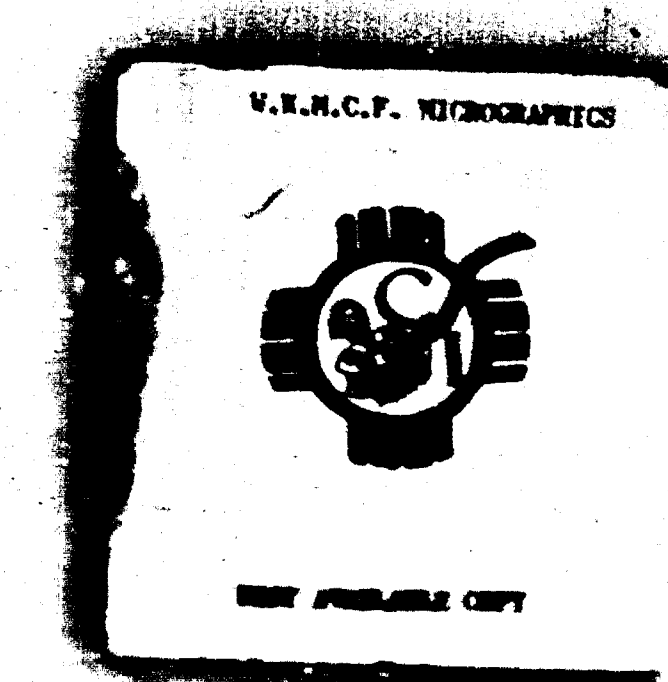
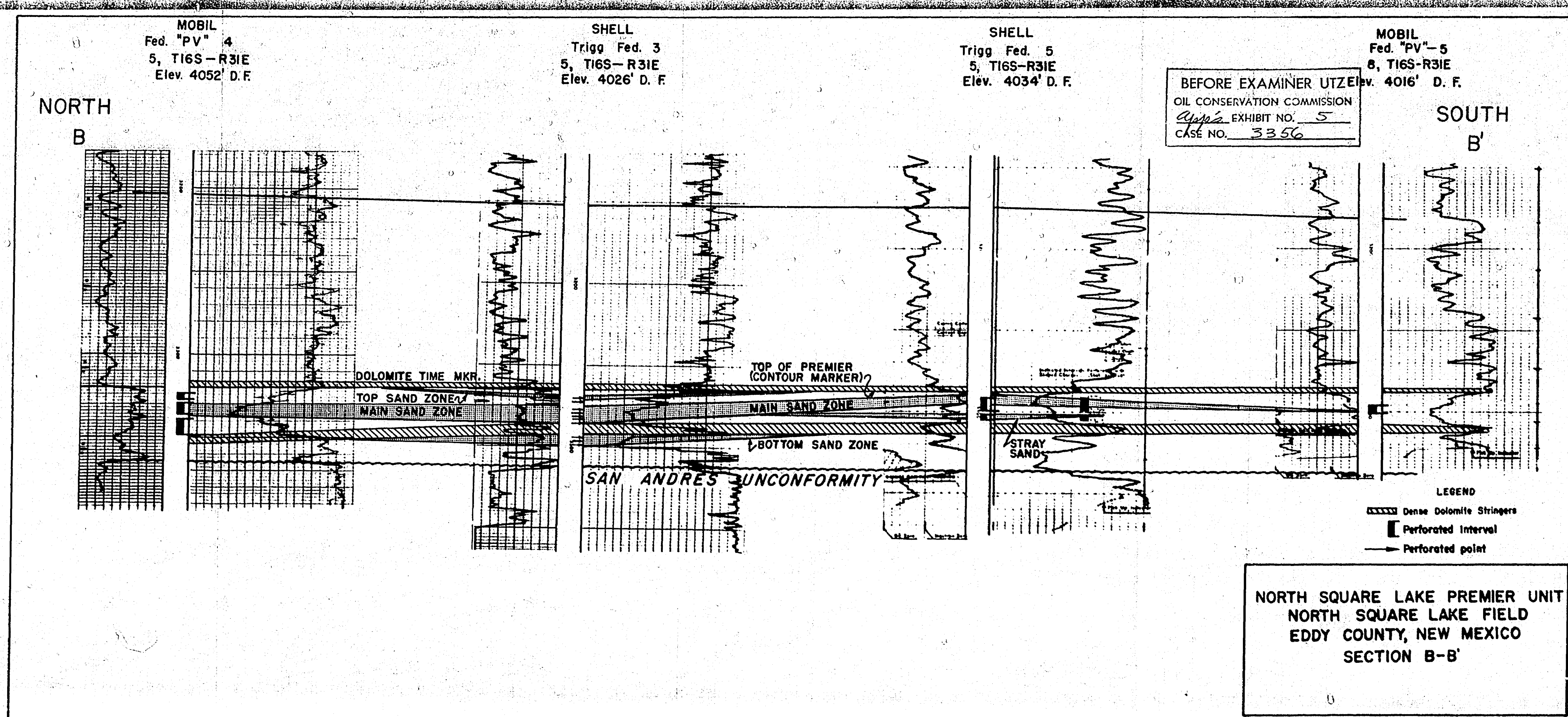


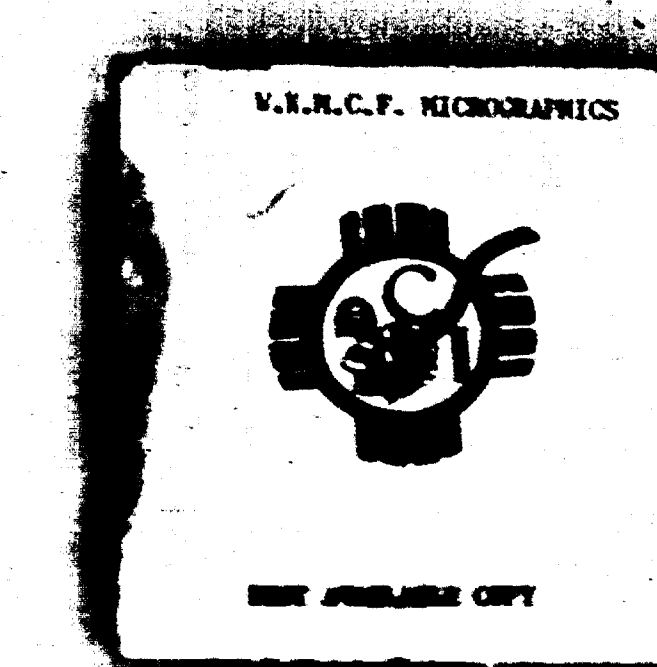
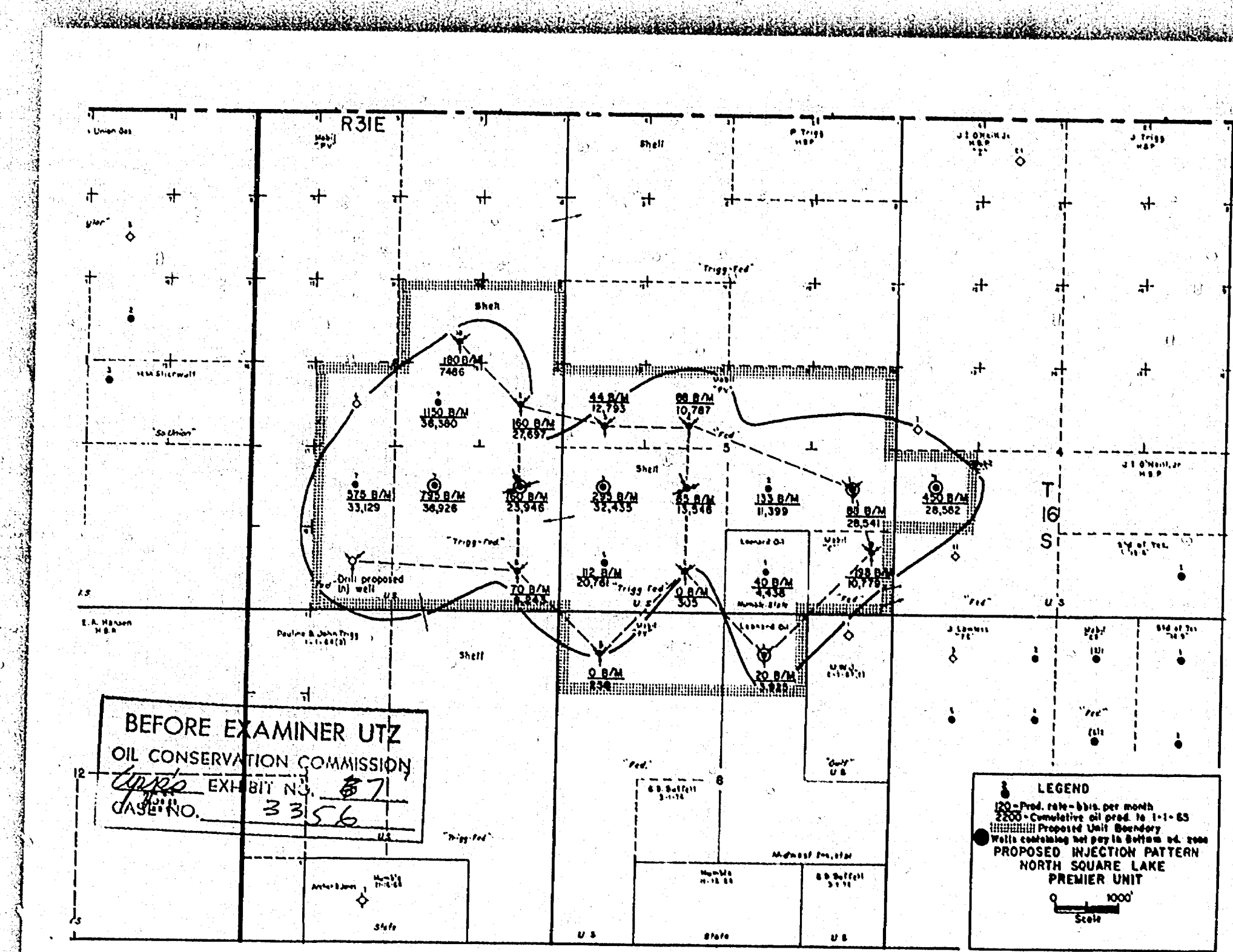


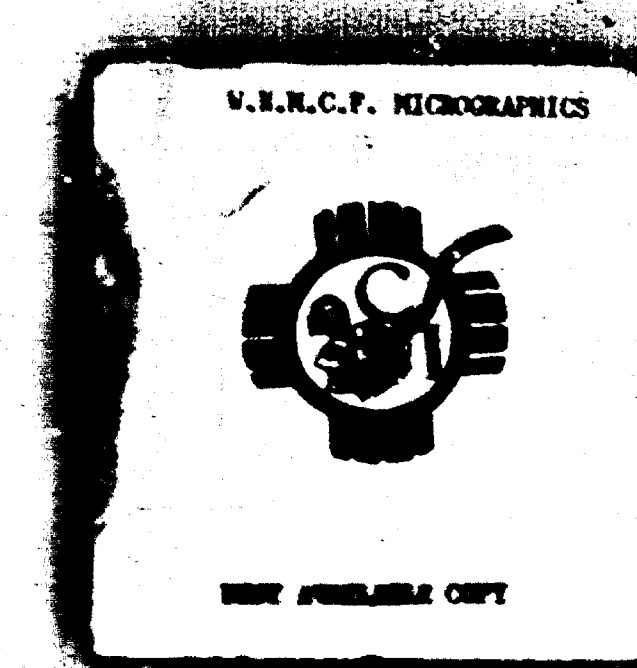
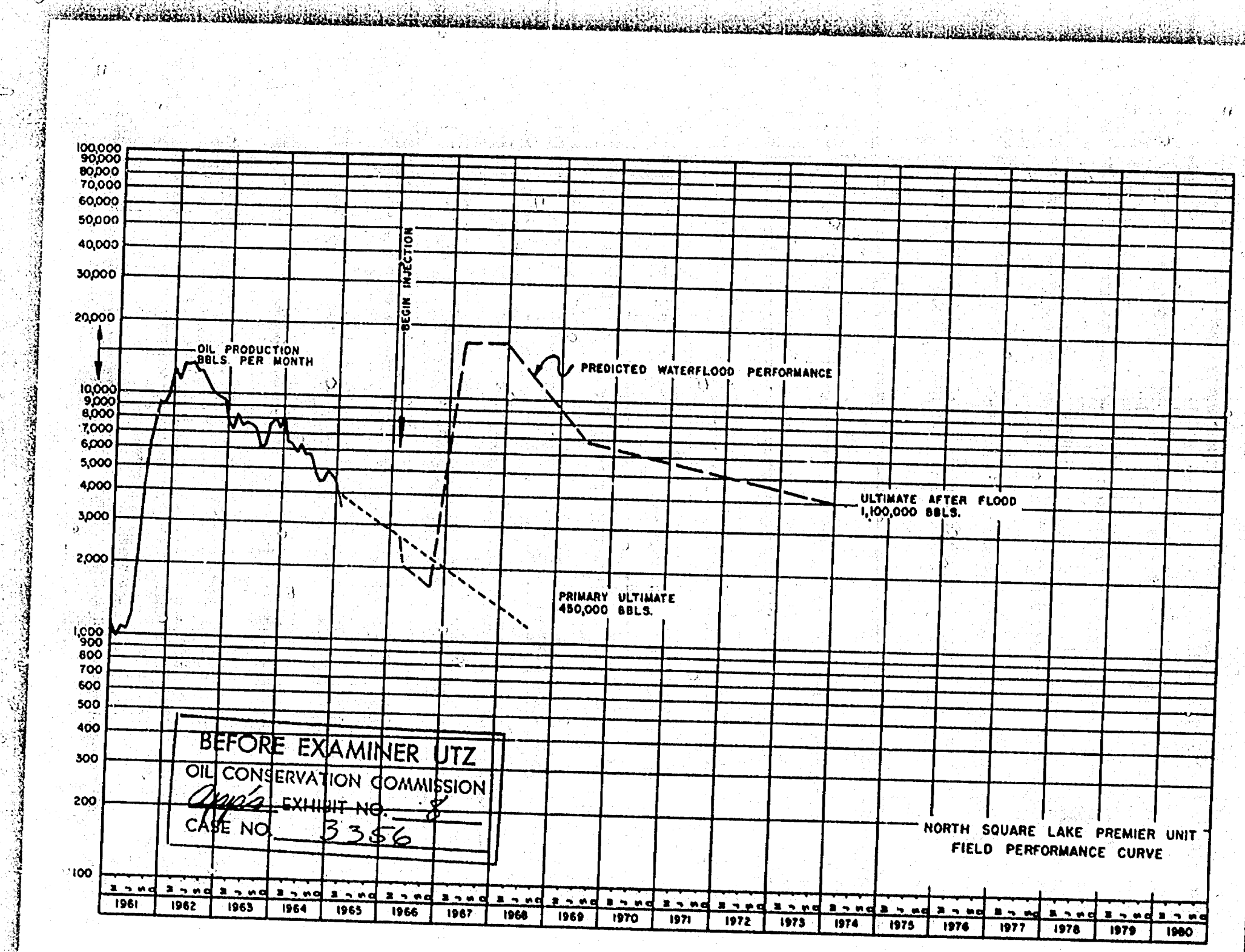












WATERFLOOD CALCULATIONS
NORTH SQUARE LAKE PRIMER UNIT

RECOVERY

- a) Oil Saturation at end of Primary

$$S_o = S_o \left(\frac{1 - S_w}{S_{oi}} - \frac{N_p}{\text{Pore Volume}} \right)$$

$$S_o = 1.122 \left(\frac{1 - .65}{1.176} - \frac{451,000}{5,880,000} \right) = .54$$

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

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

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

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

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

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

