

BEFORE EXAMINER QUINTANA	
OIL CONSERVATION DIVISION	
<u>Pennzoil</u>	EXHIBIT NO. <u>18</u>
CASE NO.	<u>8727</u>

EXHIBIT  
RESERVIOR PARAMETERS & DRAINAGE CALCULATIONS  
VIERSEN #1

Permeability:  $K = .043$  Darcies\*

Thickness:  $H = 74$  Feet

Static Reservoir Pressure:  $P_e = 2473$  PSIG\*

Flowing Pressure:  $P_w = 2258$  PSIG

Oil Viscosity:  $\mu = .38$  Centipoise

Formation Volume Factor:  $B_o = 1.42$   $\frac{\text{Reservoir Barrel}}{\text{Stock Tank Barrel}}$

Well Bore Radius:  $r_w = .33$  Feet

Flow rate:  $q = 878$  Barrels/day

$$\ln \frac{r_e}{r_w} = \frac{7.08 K h (P_e - P_w)}{\mu B_o q}$$

$$\ln \frac{r_e}{.33} = \frac{7.08 (.043) (74) (2473 - 2258)}{.38 (1.42) (878)}$$

$$R_e = 9,090 \text{ Ft.}$$

\* From pressure build up - Hoerner analysis