

# Drainage Radius Calculations

Darcies Law

$$q = .007082 \frac{kh (P_e - P_w)}{B u \ln (r_e / r_w)}$$

$$870 = \frac{.007082 (43)(74)(2473 - 2258)}{1.38 (.49) (\ln(r_e / .20625))}$$

$$\ln (r_e / .20625) = 8.2357$$

$$r_e / .20625 = 3773$$

$$r_e = 780'$$

k - 43 md

h - 74 ft

P<sub>e</sub> = 2473 psia

~~P<sub>w</sub> = 2258 psia~~

B = 1.38 RBL/STD

u = .49 cp

r<sub>e</sub> = ? ft

r<sub>w</sub> = .20625 ft

q = 870 BOPD

Permeant  
B<sub>o</sub> = 1.42  
Done only to illustrate  
the difference in outcome  
of r<sub>e</sub>

TXO PRODUCTION CORP.  
Case No. 8719  
10/9/85 Examiner Hearing  
Exhibit No. 15