$$m = \frac{1.151\ \Delta P}{P_D}$$

$$P_D = \frac{1.151\ \Delta P}{m}$$

$$= \frac{7.08\ \Delta P}{q\ \mu\ B}\ Kh$$

$$Kh = \frac{q\ u\ B}{7.08}\ \frac{P_D}{\Delta P}$$

$$\eta = \frac{6.328\ K}{c\ \mu\ \phi}$$

$$m = \frac{q\ \mu\ b}{6.15\ Kh}$$

q = BOPD

μ = c p

B = RB/STB

K = darcys

h = feet

C = ΔV/V/psi

X_f = fracture half-length

X_e = distance to outer boundary

t = days

4-87 cs

DIMENSIONLESS PRESSURE FOR A VERTICALLY FRACTURED WELL
IN THE CENTER OF A CLOSED SQUARE
UNIFORM FLUX FRACTURE, NO WELLBORE STORAGE
AFTER R. RAGHAVAN AND NICO HADINOTE
"ANALYSIS OF PRESSURE DATA FOR FRACTURED WELLS:
THE CONSTANT PRESSURE OUTER BOUNDARY"
SPE Paper 6015 Transactions AIME 1978 Vol. 265, Pg. 139

$P_D = \frac{1.151\ \Delta P}{m}$ $m = \frac{q\mu B}{6.15\ Kh}$

Start Of Semilog Straight Line

end of period of linear flow (half-slope)

X_e/X_f = ∞, 10, 5, 3, 2, 1.5, 1

DRAINAGE AREA
$A = (2x_e)^2$
$2x_f$
$2x_e$

$^tDXf = \frac{0.0002637\ kt}{\phi\ c\mu\ X_f^2}$ hours $= \frac{\eta t}{X_f^2}$ Days for $\eta = \frac{6.328k}{c\ \mu\ \phi}$ darcys