Amoco Production Company

ENGINEERING CHART

SHEET NO. OF

FILE

APPN

DATE 6-3-83

BY LWS

SUBJECT Estimated Time For Static Reservoir Pressure Equalization Between Zones

I. BHP of Lower = BHP of Upper :

$(10267-9331)(.32) + 990 = 1290$ psi

II. Producing Rate of Lower at P* = 1290 :

$k = 5$ md $\quad \mu_o = 0.78$ cp $\quad r_e = 745'$ $\quad P_e = 1290$ psi

$h = 16'$ $\quad \beta_o = 1.29$ RB/STB $\quad r_w = 0.365'$ $\quad P_w = 100$ psi

$$q_o = \frac{7.08\,Kh(P_e-P_w)}{\mu_o B_o \ln(r_e/r_w)} = \frac{7.08(.005)(16)(1290-100)}{(.78)(1.29)\ln(745/.365)}$$

$q_o = 88$ BOPD

III. Time to Reach 88 BOPD from Lower :

$q_i = 130$ BOPD $\quad D = 1.18$

$q_f = 88$ BOPD

$$t = \frac{\ln(q_i/q_f)}{D} = \frac{\ln(130/88)}{1.18}$$

$t = 0.33$ yrs or 4 months

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION
Amoco EXHIBIT NO. 8
CASE NO. 7897
6-8-83

Form 371 2-71