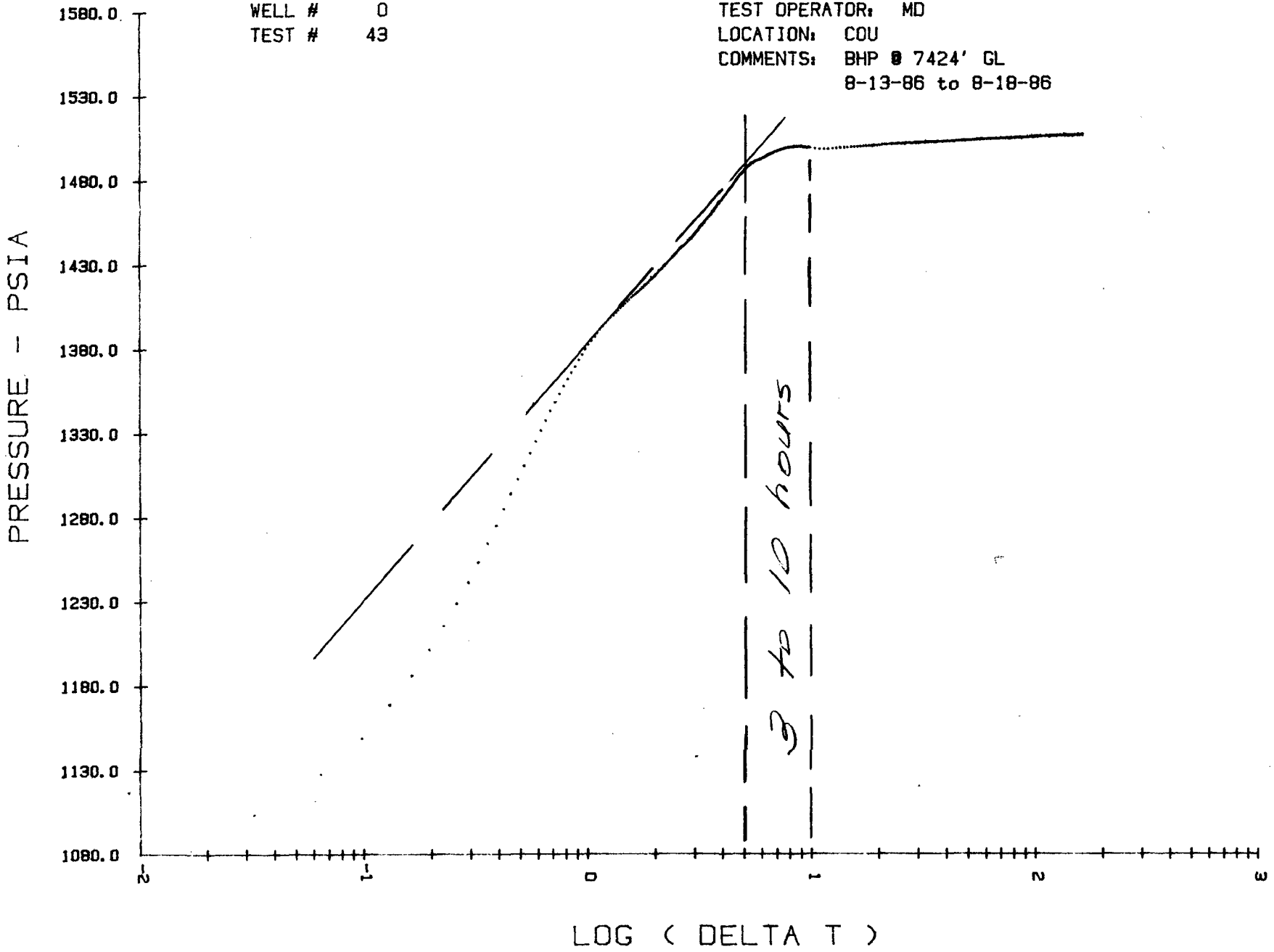
DATE: 8/11/86
START TIME: 18/29/52
GAUGE #69160
WELL # 0
TEST # 43

COMPANY: BMG
CLIENT:
WELL NAME: E6
TEST OPERATOR: MD
LOCATION: COU
COMMENTS: BHP @ 7424' GL
8-13-86 to 8-18-86



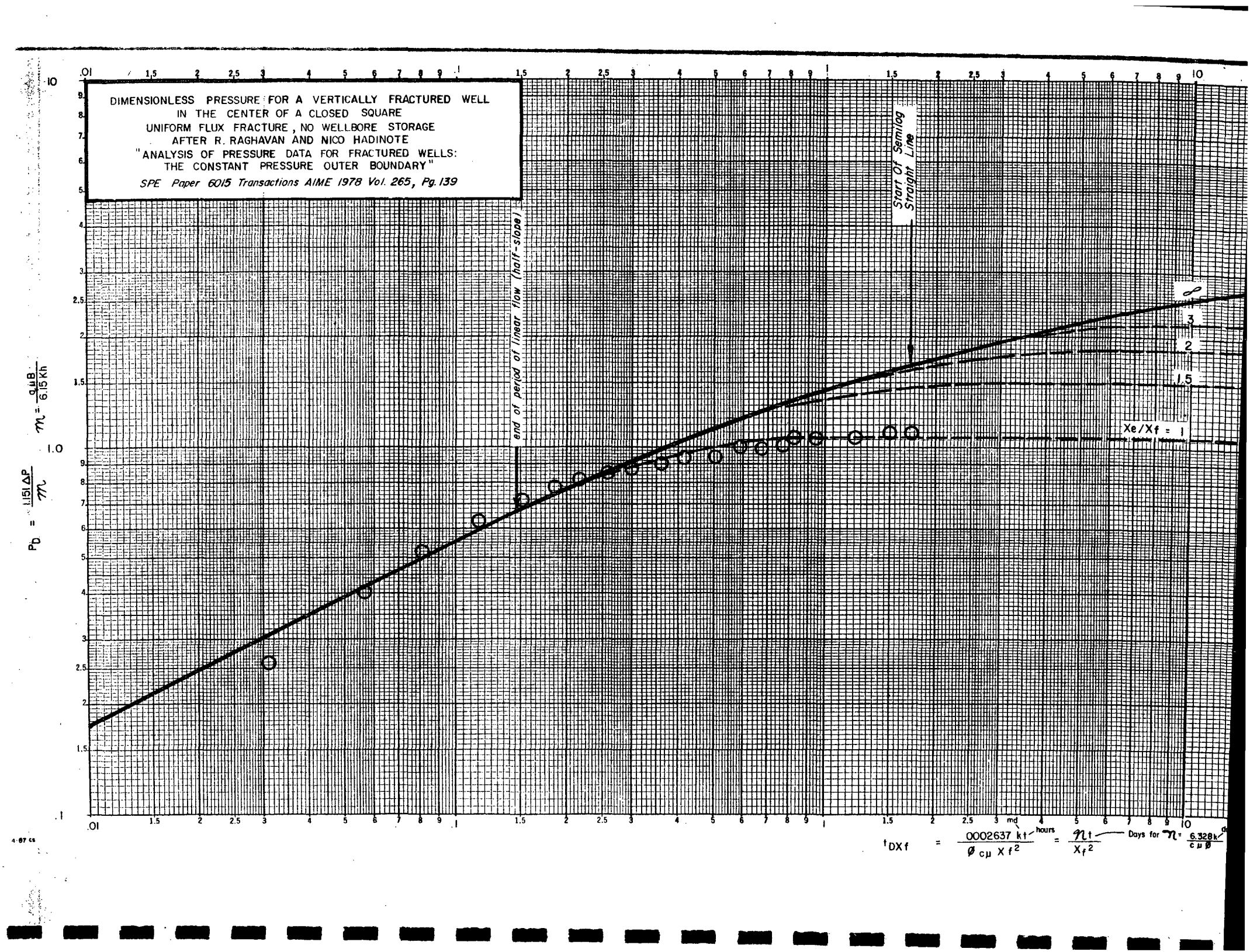
*** SEMI-LOG PLOT ***

ANALYSIS OF PRESSURE BUILD-UP TEST
CANADA OJITOS UNIT E-6
AUGUST 13, 1986

On the facing page is semi-log plot of pressure build-up of the Canada Ojitos Unit E-6 commencing August 13, 1986.

The pressures leveled off in the period between 3 and 10 hours suggesting the well is completed in a tight block with constant pressure at the boundary. On the following pages are analyses of this build-up which demonstrates the flow system to be that of constant pressure at the boundary with a very small tight block and the fracture extending through the tight block and into the fracture system.

Clearly the character of the build-up prior to the 10th hour has no significance with respect to properties of the reservoir beyond the tight block area, which is estimated to be no more than 3 or 4 acres.


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
Start Of Semilog Straight Line
end of period of linear flow (half-slope)
Xe/Xf = 1
1.5
2
3
$P_D = \frac{1.151 \Delta P}{m}$
$m = \frac{q \mu B}{6.15 Kh}$
$t_{DXf} = \frac{.0002637\ kt}{\phi c \mu X_f^2}$ hours $= \frac{mt}{X_f^2}$ Days for $m = \frac{6.328k}{c \mu \phi}$

COY E-6 PRESSURE BUILD UP
8-13-86

MATCH POINT $t_D = 1.0$
$t = 8.8$ hrs

$P_D = 1.05$
$\Delta P = 420$
$q = 680$ BOPD
GOR = 1044
$B_T = 2.27$

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

$Kh/\mu = 1.0$ (from graph)

$= \frac{680 \times 2.27 \times 1.05}{7.08 \quad 420}$

$= .54$ Darcy feet

(NOTE: Using semi log plot for slope between 1 & 10 hours would show $Kh/\mu = 2.0$)

$$\eta = \frac{6.328 \left(\frac{Kh}{\mu}\right)}{C_T \phi h} = \frac{6.328 \times .54}{350 \times 10^{-6} \phi h}$$

$= \frac{9760}{\phi h}$

$$r_f^2 = \frac{\eta t}{t_D} = \frac{\eta \times \frac{8.8}{24}}{1.0} = .37\eta$$

$$r_f^2 = \frac{.37 \times 9760}{\phi h} = \frac{3600}{\phi h}$$

ϕh	r_f	Acres $= (2r_f)^2 \div 43{,}560$
.2	~~40~~ 134'	~~22~~ 1.6
.1	~~60~~ 190'	~~23~~ 2.3
.05	~~85~~ 270'	~~46~~ 6.7
.01	~~200~~ 600'	~~462~~ 33

CANADA OJITOS UNIT E-6
BOTTOM HOLE PRESSURE BUILD-UP
AUGUST 11, 1986

Bomb Hours Δt	Hours Δt (S.I.)	Pressure	ΔP
9.416	0.00	1066	0
9.576	0.16	1168	102
9.704	0.29	1229	163
9.832	0.42	1275	209
9.992	0.58	1318	252
10.184	0.77	1353	287
10.376	0.96	1377	311
10.536	1.12	1390	324
10.696	1.28	1399	333
10.952	1.54	1410	344
11.272	1.86	1420	354
11.624	2.21	1430	364
12.008	2.59	1440	374
12.456	3.04	1450	384
12.904	3.49	1460	394
13.384	3.97	1470	404
13.896	4.48	1480	414
14.216	4.80	1485	419
14.632	5.22	1490	424
15.560	6.14	1495	429
17.288	7.87	1500	434
18.088	8.67	1500.48	434.5
20.000	10.58	1498.71	432.7