

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 1-25-79		FEB 5 1979	
Company Wm. N. Beach				Connection not connected		O. C. C.	
Pool E. No. 100 Q-6				Formation Queen-Penrose		Unit	
Completion Date 12-22-78		Total Depth 2322'		Plug Back TD 1840 CIBP		Elevation 3622 RKB	
Csg. Size 2 1/8		Wt. 10.5		d 3.977		Set At 2322	
Perforations: From 1664		To 1674		Well No. 1		Form or Lease Name New Mexico "36"	
Tub. Size 2-3/8		Wt. 4.7		d 1.995		Set At 1620	
Perforations: From 0E		To ---		Unit F		Sec. 36	
Type well - Single - Bradenhead - G.G. or G.O. Multiple Single-Gas		Packer Set At 1590		County Eddy		State N. Mexico	
Producing Thru Tubing		Reservoir Temp. °F 80 @ 1669		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 1669		H 1669		G _g 0.801		% CO ₂ Nil	
				% N ₂ 43		% H ₂ S Nil	
				Prover ----		Meter Run 2.067	
						Taps F	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							486	54	PKR	-	24 hrs.
1.	2.067	X	1.000	102	9	58	388	60	-	-	1 hr.
2.	2.067	X	1.000	105	13	60	355	63	-	-	1 hr.
3.	2.067	X	1.000	110	20	64	331	62	-	-	1 hr.
4.	2.067	X	1.000	115	28	58	304	60	-	-	1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mc/d
1	4.946	32.20	115.2	1.002	1.117	1.007	179.5
2	4.946	39.20	118.2	1.000	1.117	1.007	218.1
3	4.946	49.64	123.2	0.9962	1.117	1.007	275.1
4	4.946	59.91	128.2	1.002	1.117	1.007	334.0
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	None Produced	Mc/d/bbl.
1.	0.19	518	1.69	0.987	A.P.I. Gravity of Liquid Hydrocarbons	-----	Deg.
2.	0.20	520	1.69	0.987	Specific Gravity Separator Gas	0.801	X X X X X X X X X
3.	0.21	524	1.71	0.987	Specific Gravity Flowing Fluid	X X X X X	-----
4.	0.21	518	1.69	0.987	Critical Pressure	601	----- P.S.I.A.
5.					Critical Temperature	307	----- R

NO.	P _t ²	P _w ²	P _w ²	P _t ² - P _w ²
1	161.0	401.6	161.3	87.9
2	135.6	368.2	136.0	113.2
3	118.5	344.2	119.1	130.1
4	100.6	317.2	101.5	147.7
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.835$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.098$

AOI = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 700.7$ MCF/day

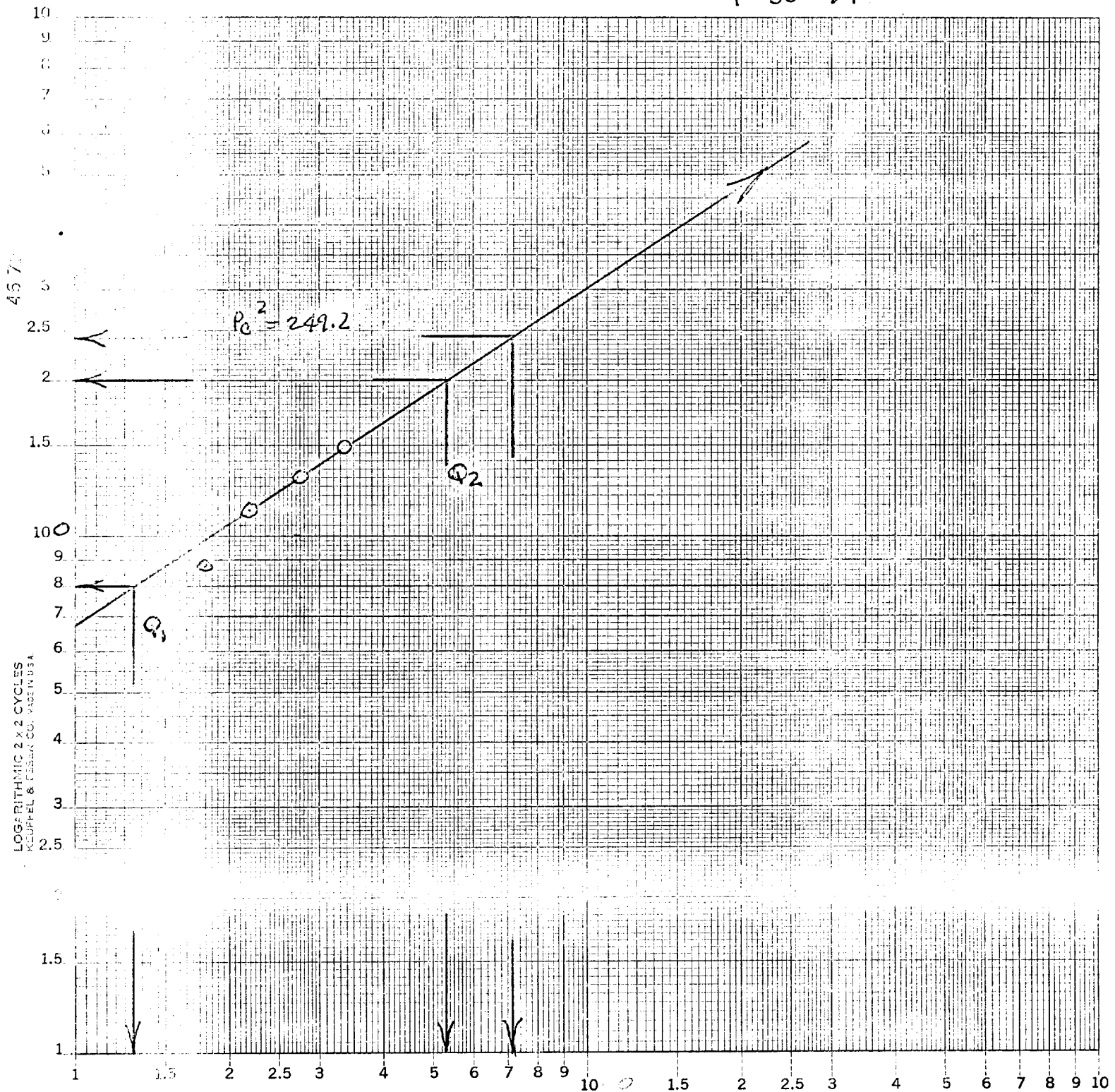
Absolute Open Flow	700.7	Mcf/d @ 15.025	Angle of Slope θ	Slope, n	0.711
Approved by: _____ Checked by: _____ Calculated by: _____ Reviewed by: _____					

New Mexico STATE 36

Well #1

Eddy County

1-30-29



$$\Delta P_{c_2}^2 = 200 \quad Q_2 = 530$$

$$\Delta P_{c_1}^2 = 80 \quad Q_1 = 103$$

$$\log Q_2 = 2.7248$$

$$\log Q_1 = 2.01284$$

$$n = 0.711$$