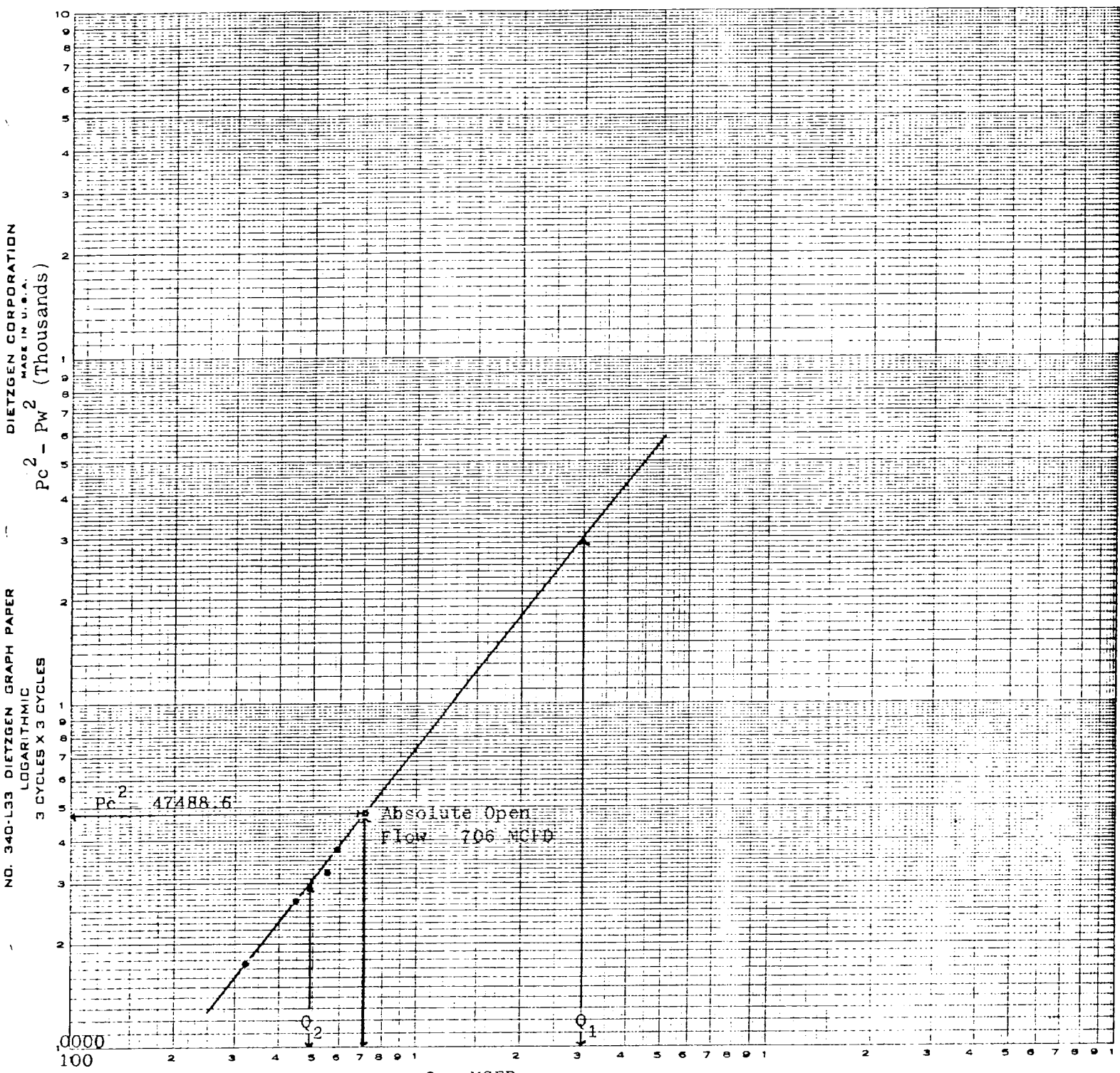


MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 8/24/82	
Company Pogo Producing Company				Connection None			
Foot Bootleg Ridge				Formation Morrow			
Completion Date 8/21/82		Total Depth 15300'		Plug Back TD 14997'		Elevation 3631' GL	
Casing Size 5"		WT. 18#		Set At 15040'		Perforations: From 14702' To 14941'	
Trq. Size 2 3/8"		WT. 4.7#		Set At 14600'		Perforations: Open Ended From To	
Type Well - Single - Prdenhead - G.G. or G.O. Multiple Single						Packer Set At 14600'	
Producing Thru Tubing		Reservoir Temp. °F 204		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 14822'		H -		Cg 0.6603		Prover 4.026	
				% CO ₂ 0.970		% N ₂ 1.176	
				% H ₂ S -		Prover 4.026	
						Meter Run F	
						Taps F	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g. DWT
SI							60
1.	4.026	4.5 / 64	1.00	495	6	99	3000
2.	4.026	6.5 / 64	1.00	505	11	93	2372
3.	4.026	9 / 64	1.00	510	16	84	1864
4.	4.026	10.5 / 64	1.00	515	18	80	1325
5.							
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mscf/d
1	4.753	55.22	508.2	0.9645	1.231	1.039	323.77
2	4.753	75.50	518.2	0.9697	1.231	1.042	446.35
3	4.753	91.49	523.2	0.9777	1.231	1.045	546.92
4	4.753	97.51	528.2	0.9813	1.231	1.047	586.17
5							
NO.	R	T _{emp.} °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 11.836 Mcf/bbl.		
1	0.76	559	1.51	0.926	A.P.L. Gravity of Liquid Hydrocarbons 52.8 Deg.		
2	0.77	553	1.49	0.921	Specific Gravity Separator Gas 0.6603 X X X X X X X X		
3	0.78	544	1.47	0.916	Specific Gravity Flowing Fluid X X X X X		
4	0.79	540	1.46	0.913	Critical Pressure 671 P.S.I.A.		
5					Critical Temperature 371 °R		
P _c 6891.2 P _w 47488.6					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.268$		
					(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.205$		
NO.	P _i ²	P _w *	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 706$		
1		5480.2	30032.6	17456.0			
2		4559.2	20786.3	26702.3			
3		3910.2	15289.7	32198.9			
4		3166.2	10024.8	37463.8			
5							
Absolute Open Flow 706 Mcf/d @ 15.025					Angle of Slope 51° 48'		Slope, n 0.787
Remarks: * BHP @ (-11191)14822' USED FOR PRESSURE CALCULATIONS							
WELL PRODUCED 6.70 BBLS CONDENSATE IN 4.0 HRS = 40.20 BC/D							
Approved By Division		Conducted By BARREL WELL TESTING, INC		Calculated By D. Dickerson		Checked By: PE #2208 Joe A. Coleman	

ANY: Pogo Producing Com
 WELL: NBR, No. 2
 LOCATION: F 18 22s 33e
 COUNTY: Lea
 DATE: August 24, 1982



$Q = \text{MCFD}$
 $Q_1 = 3000 \text{ MCFD}; \text{Log } Q_1 = 3.47712$
 $Q_2 = 490 \text{ MCFD}; \text{Log } Q_2 = 2.69020$
 $N = \frac{3.47712 - 2.69020}{0.78692} = 0.787$

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NOV 16 1982
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FEDERAL OFFICE