

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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457
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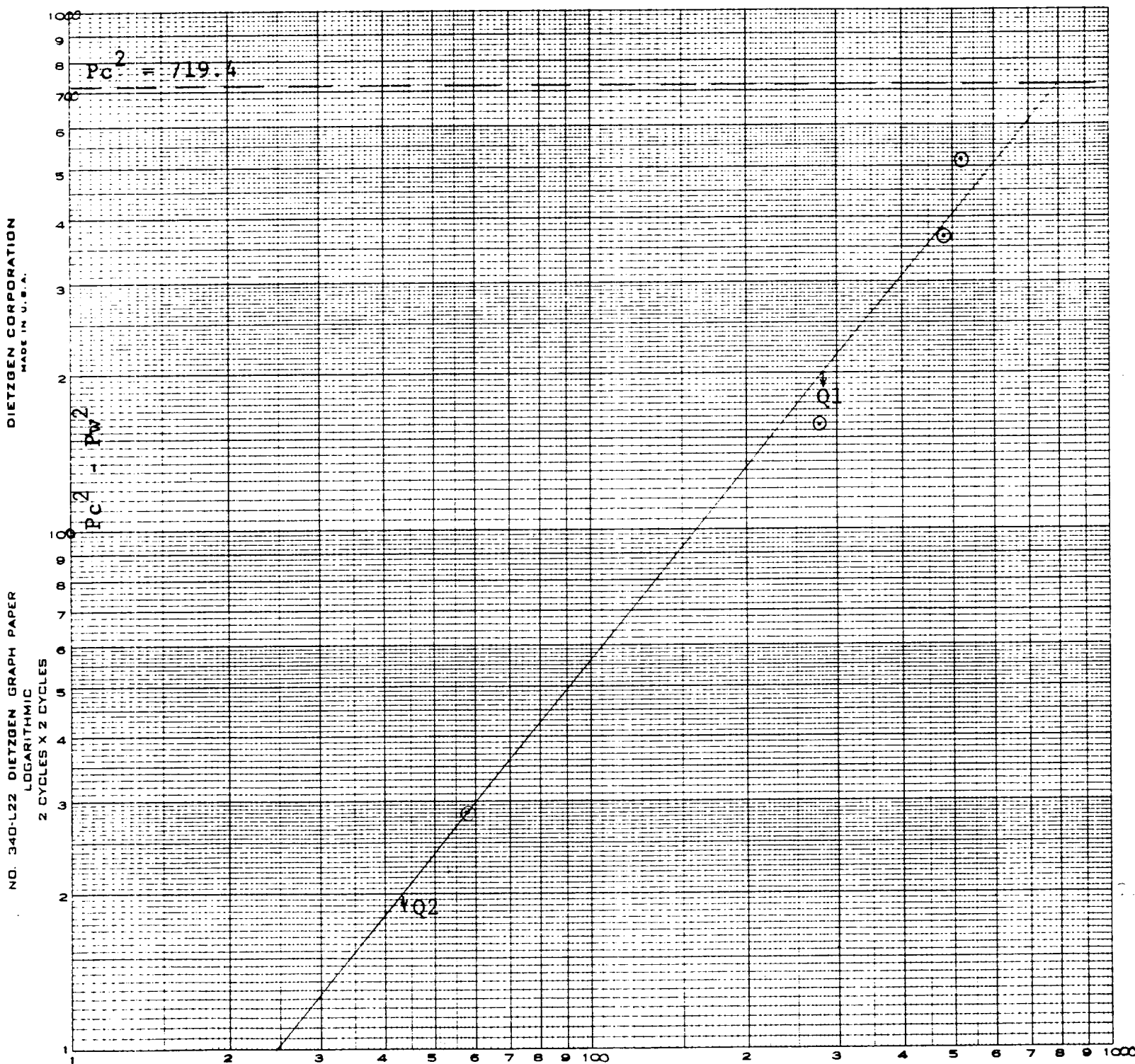
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 4-4-88			
Company MCKAY OIL CORPORATION				Connection AIR		MAY 04 '88	
Pool WEST PECOS SLOPE ABO				Formation ABO		Unit O. C. D. ARTESIA OFFICE	
Completion Date 4-4-88		Total Depth 4170'		Plug Back TD 3167'		Elevation 4195 KB	
Casing Size 4-1/2"		Well No. 10.5#		Set At 4.090		3251'	
Perforations: From 2685' To 2697		Well No. #1					
Thg. Size 2-3/8"		Well No. 4.7#		Set At 1.995		2651'	
Perforations: From -- To --		Unit J		Sec. 20		Twp. 6S	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At 2654'		County Chaves		State NM	
Producing Thru Tubing		Reservoir Temp. °F 90		Mean Annual Temp. °F 60		Baro. Press. - P _g 13.2	
L 2691		H 2691		G _g 0.636		% CO ₂ 0.00	
				% N ₂ 6.698		% H ₂ S 0.00	
Prover 2.00		Meter Run --		Taps --			
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.
SI							835
1.	2.000		0.125	160	--	60	818
2.	2.000		0.250	187	--	60	736
3.	2.000		0.375	144	--	60	580
4.	2.000		0.375	156	--	60	438
5.							
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	0.2648	--	173.2	1.000	1.254	1.014	58
2	1.087	--	200.2	1.000	1.254	1.016	277
3	2.378	--	157.2	1.000	1.254	1.026	481
4	2.378	--	169.2	1.000	1.254	1.028	519
5.							
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio -- Mcf/bbl.		
1.	0.26	520	1.49	.973	A.P.I. Gravity of Liquid Hydrocarbons -- Deg.		
2.	0.30	520	1.49	.969	Specific Gravity Separator Gas 0.636 XXXXX		
3.	0.24	520	1.49	.975	Specific Gravity Flowing Fluid XXXXX		
4.	0.26	520	1.49	.973	Critical Pressure 658 P.S.I.A. P.S.I.A.		
5.					Critical Temperature 348 R R		
P _c 848.2 P _c ² 719.4					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 25.242$		
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 13.881$		
1	690.9	831.0	690.9	28.5	Post ID-2		
2	559.8	749.7	560.6	158.8	5-13-88		
3	350.5	594.8	352.7	366.7	Comp 4 BK		
4	203.4	453.9	206.0	513.4	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 805.1$		
5							
Absolute Open Flow 805				Mcf/d @ 15.025		Angle of Slope @ 50.82	
				Slope, n 0.815			
Remarks:							
Approved By Division		Conducted By: D. Kelton		Calculated By: C. Sanders		Checked By: P. Stewart	

MCKAY OIL CORPORATION

Homestead #1

Sec. 20, T6S, R22E

April 4, 1988



Q, MCFPD

Q1 = 282 ; log = 2.45025

Q2 = 43.2 ; log = 1.63548

0.81477

n = 0.815

AOF = 805 MCFPD

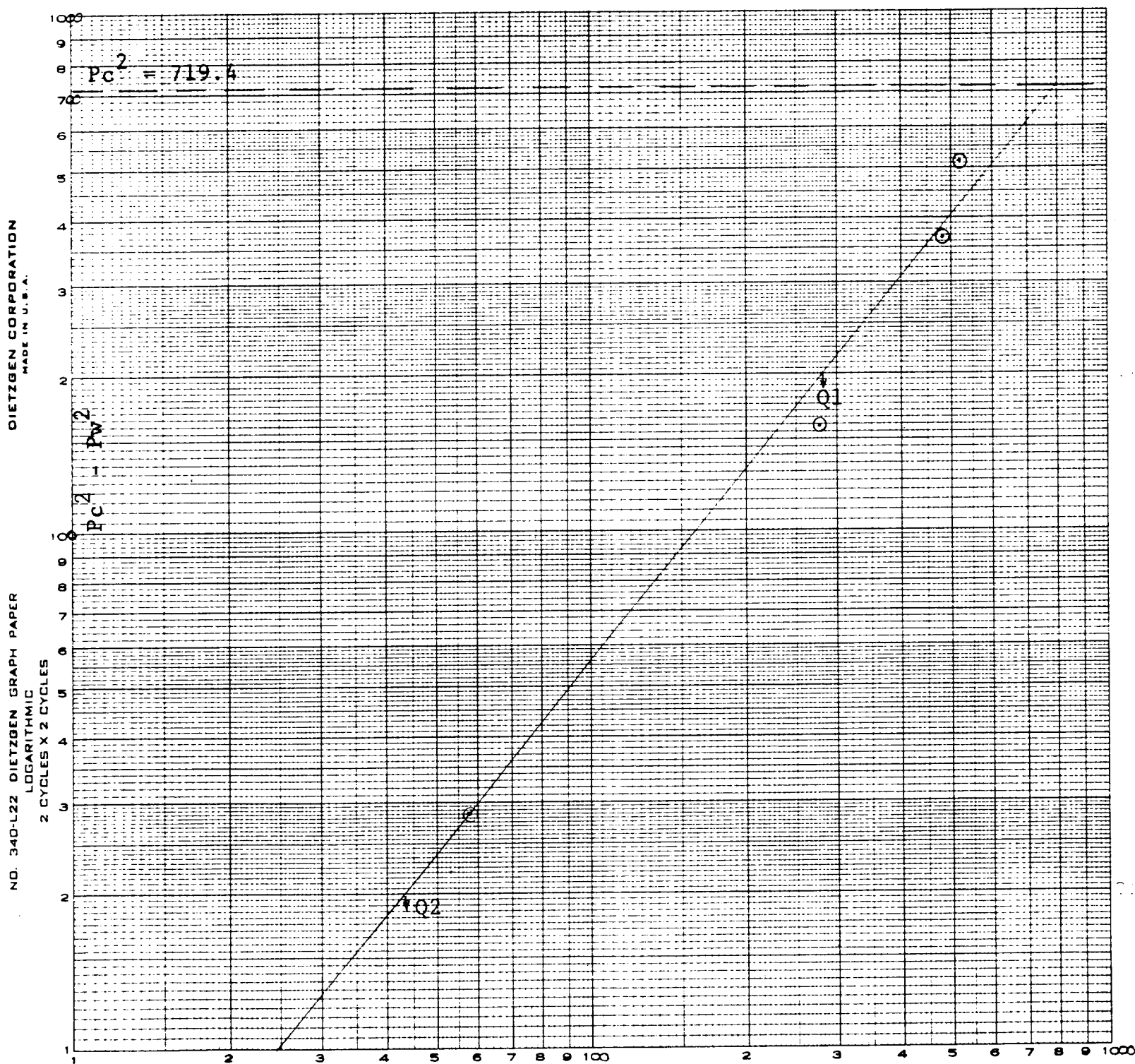
$\theta = 50.82$

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