

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 6/25/86			
Company Marathon Oil Co.				Connection El Paso					
Pool				Formation Tubb				Unit	
Completion Date 11/29/85		Total Depth 7250		Plug Back TD 7250		Elevation		Farm or Lease Name J.L. Muncy	
Csg. Size 7"	Wt. 23 & 26	d 6.276	Set At 7250	Perforations: From 6003 To 6104				Well No. 6	
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 5863	Perforations: From Open To End				Unit Sec. Twp. Rge. I 24 22S 37E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Dual						Packer Set At 5863		County Lea	
Producing Thru Tbg.		Reservoir Temp. °F 133 @ 5863		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 5863	H 5863	G _g .693	% CO ₂ .045	% N ₂ 1.73	% H ₂ S	Prover	Meter Run 3.826	Taps Flg.	

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							470				72 hrs.
1.	3.826 X .750			60	8	75	462		90		1 Hr.
2.	3.826 X .750			60	26	78	458		90		1 Hr.
3.	3.826 X .750			60	56	80	455		90		1 Hr.
4.	3.826 X 1.00			60	37	75	440		90		1 Hr.
5.	3.826 X 1.00			60	74	75	430		90		1 Hr.

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	2.662	24.20	73.2	.9859	1.201	NIL	76
2	2.662	43.63	73.2	.9831	1.201	NIL	137
3	2.662	64.02	73.2	.9813	1.201	NIL	201
4	4.758	52.04	73.2	.9859	1.201	NIL	293
5	4.758	73.60	73.2	.9859	1.201	NIL	415

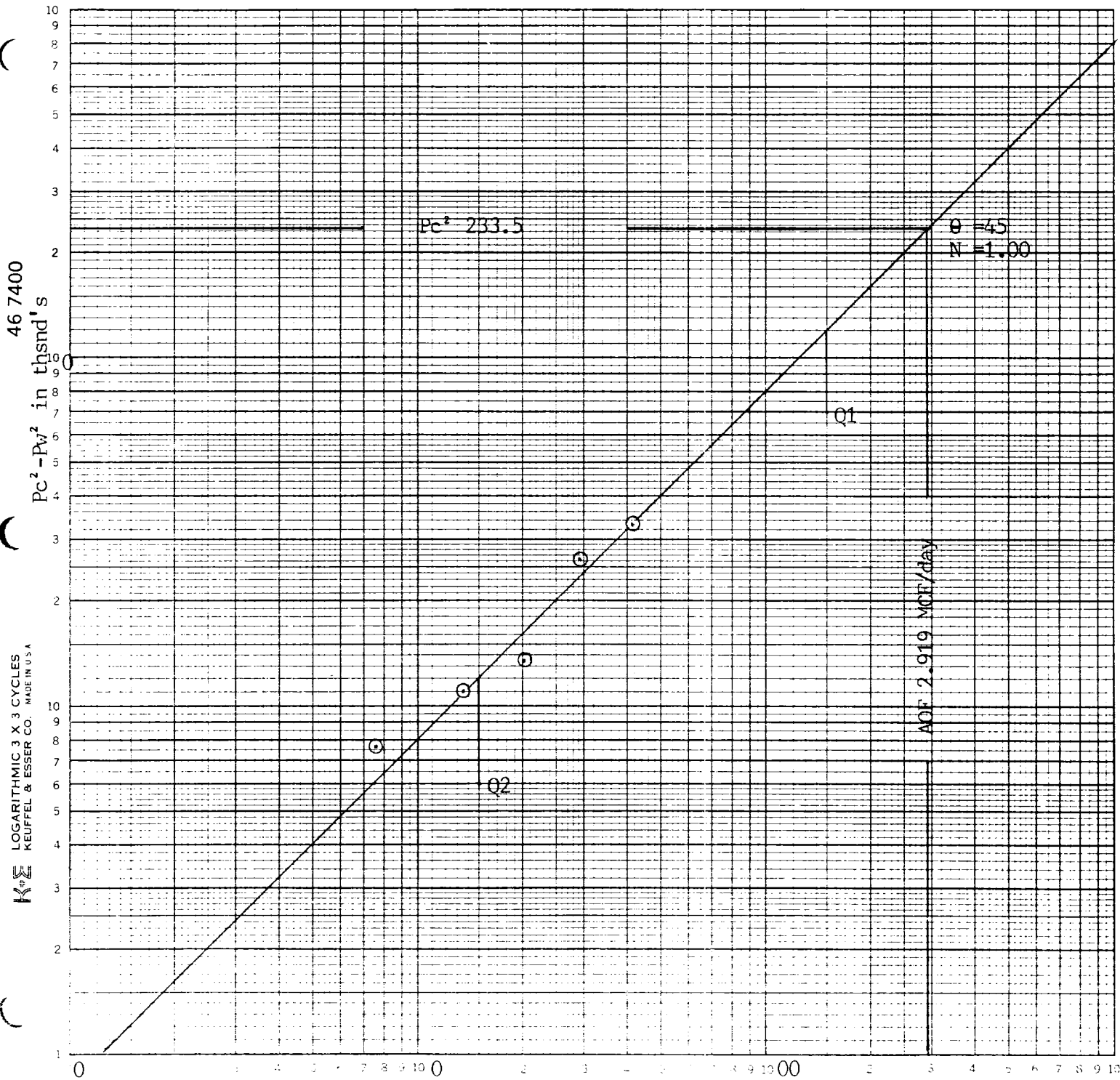
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Dry _____ Mcf/bbl.		
1	.11	535	1.39	Nil	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.		
2	.11	538	1.40	Nil	Specific Gravity Separator Gas .693 XXXXXXXXXX		
3	.11	540	1.40	Nil	Specific Gravity Flowing Fluid XXXXX		
4	.11	535	1.39	Nil	Critical Pressure 668 P.S.I.A. _____ P.S.I.A. _____		
5	.11	535	1.39	Nil	Critical Temperature 385 R _____ R _____		

P _c 483.2 P _c ² 233.5				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 7.033$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 7.033$	
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.919$		
1		475.3	225.9	7.6			
2		471.7	222.5	11.0			
3		469.1	220.1	13.4			
4		455.3	207.3	26.2			
5		447.5	200.3	33.2			

Absolute Open Flow 2,919 Mcfd @ 15.025		Angle of Slope 45		Slope, n 1.00	
Remarks:					

Approved By Division ORIGINAL SIGNED BY JERRY SEXTON DISTRICT 1 SUPERVISOR	Conducted By: Duke Services, Inc.	Calculated By: R. Reston	Checked By: <i>[Signature]</i>
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Company: Marathon Oil Co.
 Lease: J.L. Muncy #6
 Date: 6/25/86
 County: Lea



Q = MCF/Day

$$Q1 = 1500 = \text{Log } 3.176091$$

$$Q2 = 150 = \text{Log } 2.176091$$

$$N = 1.000000$$

$$CAOF = 415 \left(\frac{233.5}{33.2} \right) = 2,919 \text{ MCF/Day}$$