

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-10-81		MAR 10 1981	
Company Mesa Petroleum Co. ✓				Connection Unconnected			
Pool Undesignated				Formation Abo		Unit ARTESIA OFFICE	
Completion Date 3-10-81		Total Depth 4350		Plug Back TD 4261		Elevation 3899	
Farm or Lease Name Camack Federal				Well No. 3			
Csg. Size 4 1/2	Wt. 10.5	d	Set At 4347	Perforations: From 3683 To 3926		Unit Sec. Twp. Rye. K 12 5S 24E	
Tbg. Size 2 3/8	Wt. 4.7	d	Set At 3857	Perforations: From Open Ended			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At None		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 105 @ 4350		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
State New Mexico							
L 3857	H 3857	G _g .65	% CO ₂ 1	% N ₂ 6	% H ₂ S	Prover 2" Orifice Well Tester	Meter Run Taps

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							920		955		72 hr
1.	2" Orifice		1 1/4	22		50	800	80	835		3/4 hr
2.	Well		1 1/4	31		50	680	80	725		3/4 hr
3.	Tester		1 1/4	32		50	550	80	675		1/2 hr
4.			1 1/4	41		50	515	80	630		1/2 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, Mcfd
1	1320	2" Orifice Well Tester		1.0098	.9608		1281
2.	1653			1.0098	.9608		1604
3.	1812			1.0098	.9608		1758
4.	2011			1.0098	.9608		1951
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

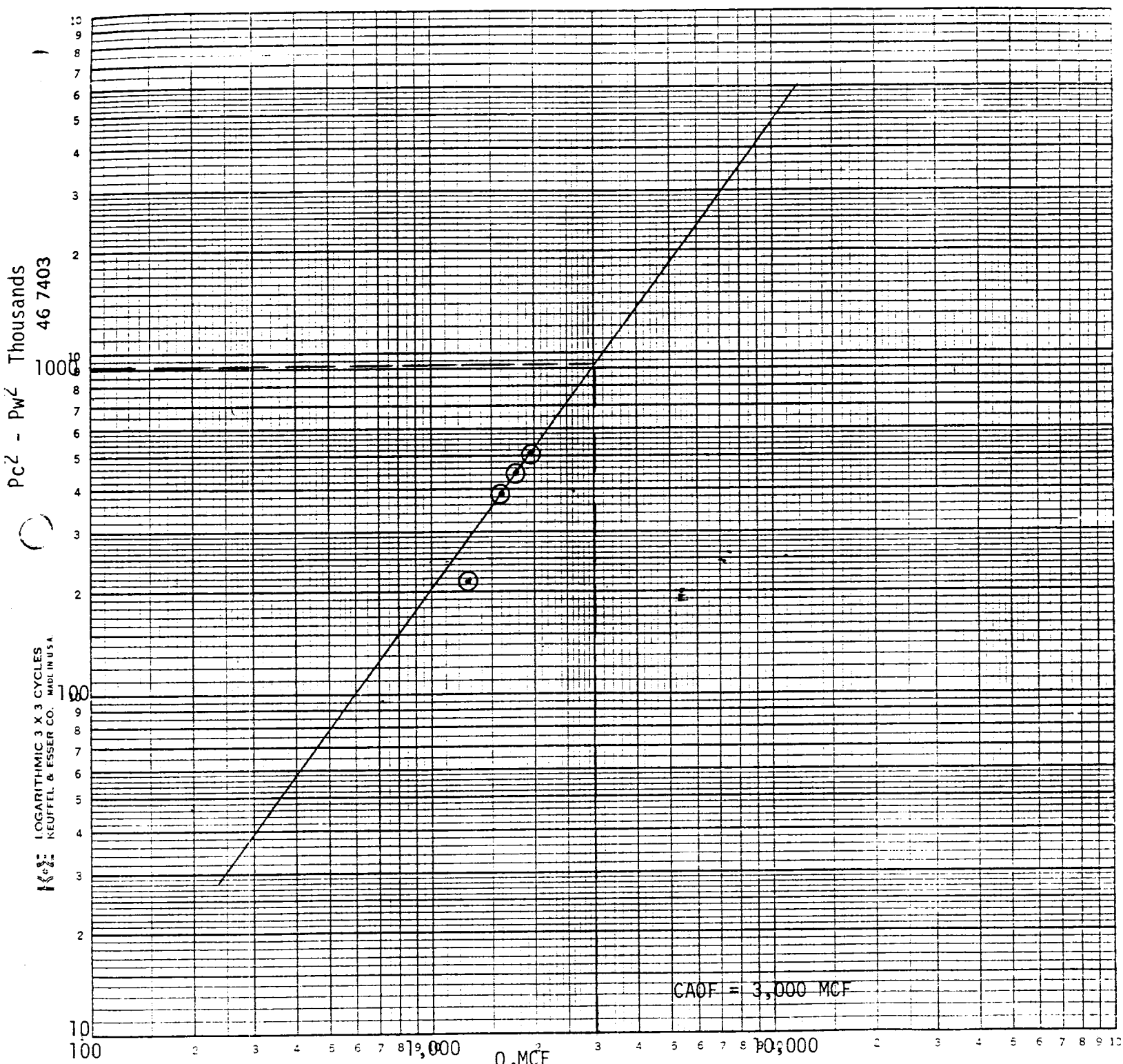
P _c 955 P _c ² 912		(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.3627$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.8732$	
NO	P _t ²	P _w	P _w ²	P _c ² - P _w ²	
1		835	697	215	
2		725	526	386	
3		675	456	456	
4		630	397	515	
5					

Absolute Open Flow	3,000	Mcfd @ 15.025	Angle of Slope α	53.9°	Slope, n	.73
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Remarks: _____

Approved By Commission:	Conducted By: <i>ELB</i>	Calculated By: <i>ELB</i>	Checked By:
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Mesa Petroleum Co.
 Camack Federal #3
 Sec 12, T5S, R24E
 Chaves County, New Mexico
 3-10-81



$$n = 1/\text{slope} = \frac{\log Q_2 - \log Q_1}{\log \text{Cycle}_2 - \log \text{Cycle}_1} = \frac{\log 3200 - \log 600}{\log 3 - \log 2} = \frac{3.51 - 2.78}{.73}$$

$$\theta = 53.9^\circ$$