

C/OT
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C-122 File

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Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 10-7-80		OCT 21 1980	
Company MESA PETROLEUM CO. ✓				Connection To Be Determined			O. C. D.	
Pool Undesignated <i>Wc</i>				Formation ABO			Unit ARTESIA, OFFICE	
Completion Date 8-7-80		Total Depth 3500		Plug Back TD 3428		Elevation 4103' GL		Farm or Lease Name Rock Federal
Csg. Size 4 1/2	Wt. 10.5	d	Set At 3499	Perforations: From 2810 To 2819		Well No. 2		
Tng. Size 2 3/8	Wt. 4.7	d	Set At 2713	Perforations: From open ended To		Unit C 7 8S 23E		
Type Well - Single - Brodenhead - G.G. or G.O. Multiple Single				Packer Set At None		County Chaves		
Producing Thru Tubing		Reservoir Temp. °F 102 @ 3500		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico
L 2713	H 2713	Gg .610	% CO ₂ 1	% N ₂ 2	% H ₂ S	Prover 2	Meter Run Orifice Well Tester	

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							990		979		72 hr. SI
1.	2" orifice	1/2"	5	-	70		930	-	930	-	1 hr.
2.	well	1/2"	16	-	70		890	-	900	-	3/4 hr.
3.	tester	3/4"	12	-	70		740	-	750	-	1 hr.
4.		3/4"	20	-	70		570	-	575	-	3/4 hr.
5.											

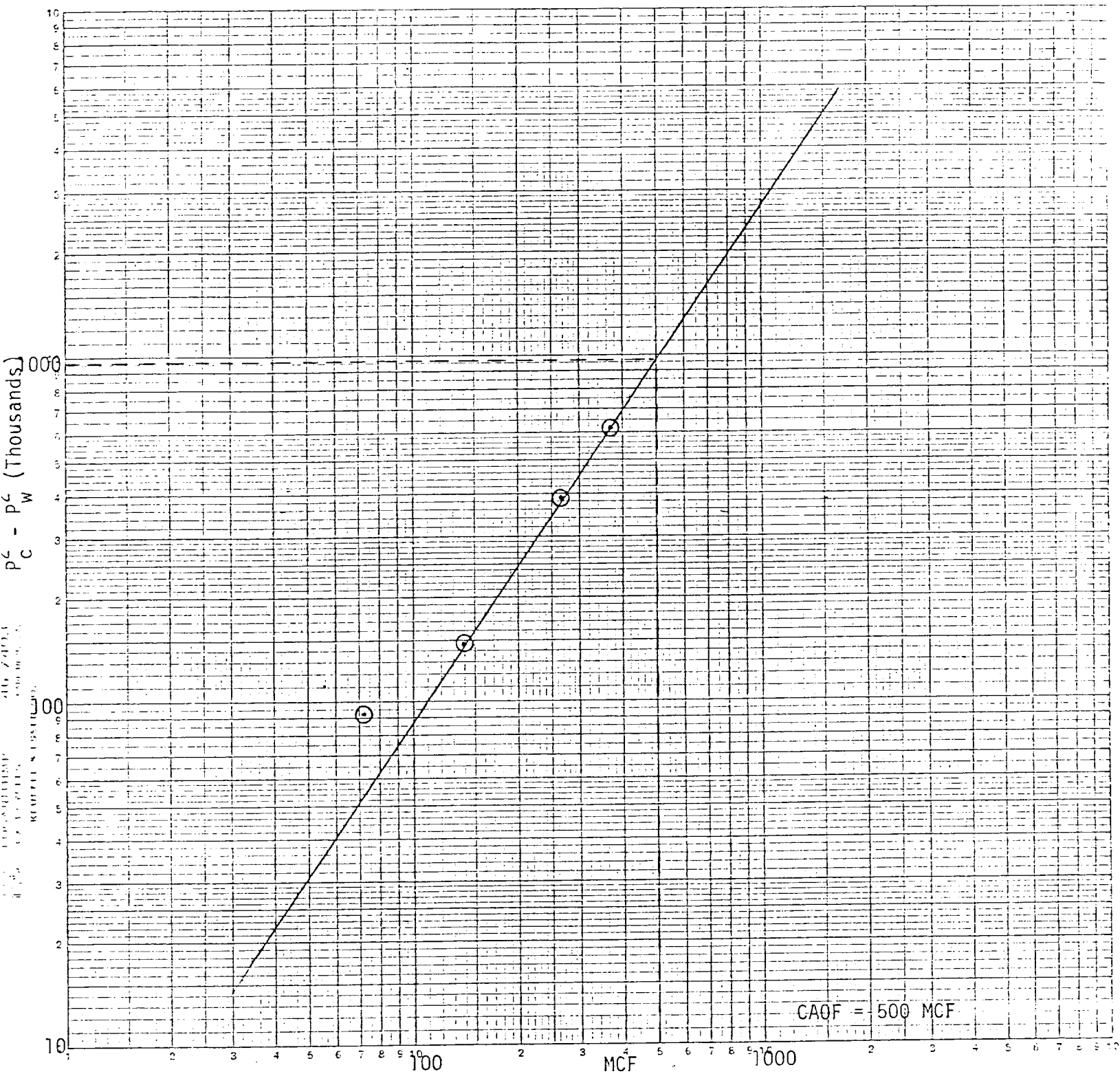
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	73	2" orifice	well	.9905	.9918	1	72
2	144	tester		.9905	.9918	1	141
3	272			.9905	.9918	1	267
4	375			.9905	.9918	1	368
5							

NO.	P _r	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 979	P _c ² 958	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.4730$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.4949$
NO.	P _i ²	P _w	P _w ²
1		930	865
2		900	810
3		750	563
4		575	331
5			

Absolute Oper. Flow 500		Mcf @ 15.025	Angle of Slope @ 56.1°	Slope, n = .67
Remarks:				
Approved By Commission:		Conducted By: <i>ELB</i> E. L. Buttross Jr.	Calculated By: <i>ELB</i> E. L. Buttross Jr.	Checked By:

Rock Federal No. 2
 Sec 7, T8S, R23E
 Chaves Co., New Mexico
 10-7-80



$$1/\text{slope} = N = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{cycle}} = \frac{\text{Log } 510 - \text{Log } 110}{\text{cycle}} = 2.71 - 2.04 = .67$$

$$\theta = 56.1^\circ$$