

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

Form C-122
Revised 9-1-79

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6-5-82		JUN 18 1982	
Company MESA PETROLEUM CO. ✓				Connection UNCONNECTED		O. C. D.	
Pool PECOS SLOPE ABO				Formation ABO		Unit ARTESIA, OFFICE	
Completion Date 6-5-82		Total Depth 4260'		Plug Back TD 4188'		Elevation 3569'	
Csg. Size 4 1/2"		Wt. 10.5#		Set At 4144'		Perforations: From 3835' To 3977'	
Tub. Size 2 3/8"		Wt. 4.7#		Set At 3738'		Perforations: From OPEN ENDED	
Type Well - Single - Provenhead - G.G. or G.O. Multiple SINGLE				Packer Set At NONE		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 97° @ 4260'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L		H		G _g .65		% CO ₂ 1	
				% N ₂ 1		% H ₂ S 1	
						Prover 2" CRITICAL FLOW PROVER	
						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. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
5!							902		907		57 HRS ST
1.	2" x .5"			165		62	560	86	700		1 HR
2.	2" x .5"			207		70	470	87	615		1 HR
3.	2" x .5"			213		73	420	88	550		1 HR
4.	2" x .5"			220		76	375	90	510		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 F _g	Super Compress. Factor, F _{sp}	Rate of Flow O. Mcd
1	4.279	FLOW PROVER	178	.9981	1.24		943
2	4.279	FLOW PROVER	220	.9905	1.24		1156
3	4.279	FLOW PROVER	226	.9877	1.24		1184
4	4.279	FLOW PROVER	233	.9850	1.24		1218
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.										
2.										
3.										
4.										
5.										

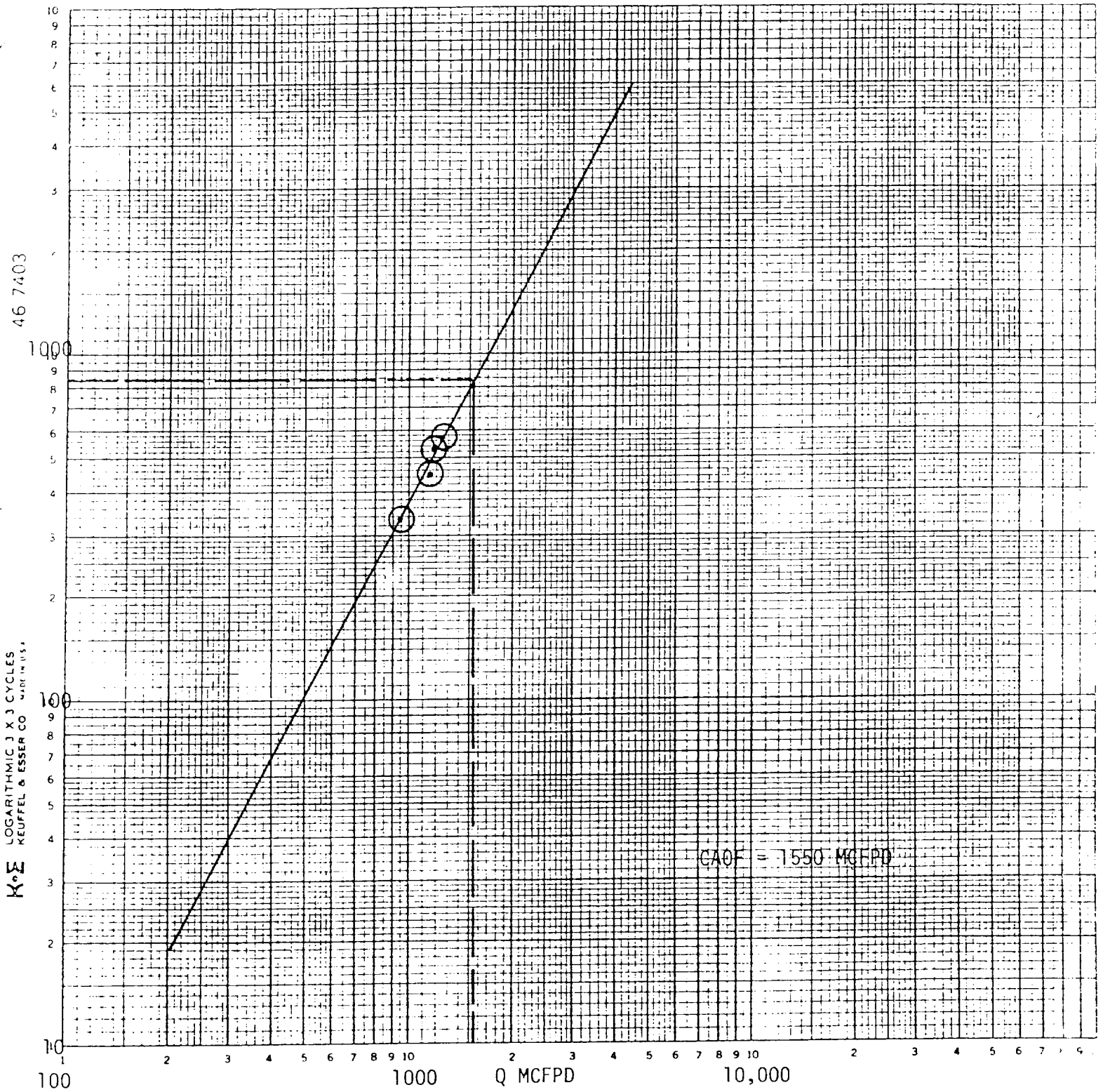
P _c 920	P _c ² 846	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.5029$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0412$
NO.	P _c ²	P _w ²	P _c ² - P _w ²
1	713	508	205
2	628	394	234
3	563	317	246
4	523	274	249
5			

ADP = 0 $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.550$

Posted by 1.0412
Comp 6-25-82

Absolute Open Flow	1,550	Mcd @ 15.025	Angle of Slope θ	61.6°	Slope, n	.54
Remarks:						

Approved By Construction:	Conducted By: JAMES CRAIG	Calculated By: E.L. BUTTROSS, JR	Checked By: 2.L.A
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$$N = 1/\text{SLOPE} = \frac{\text{LOG } Q_2 - \text{LOG } Q_1}{\text{CYCLE}} = \frac{\text{LOG } 1700 - \text{LOG } 490}{\text{CYCLE}} = 3.23 - 2.69 = .54$$

$$\theta = 61.6^\circ$$