

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 10-11-82		RECEIVED NOV 17 1982	
Company Mesa Petroleum Co. ✓				Connection unconnected			
Pool Pecos Slope ABO				Formation ABO		Unit O.C.O.	
Completion Date 10-11-82		Total Depth 4000'		Plug Back TD 3584'		Elevation 3559'	
Casing Size 4 1/2"		Wt. 10.5#		Set At 3630'		Perforations: From 3389' To 3493'	
Tub. Size 2 3/8		Wt. 4.7#		Set At 3426'		Perforations: open ended From To	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single				Packer Set At None		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 102 @ 4000'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L		H		C _g .65		% CO ₂ 1 % N ₂ 1 % H ₂ S	
				Prover 2" Critical Flow Prover		Meter Run Critical Flow Prover	

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							745		745		72 hr SI
1.	2" x .5"			91		74	155	72	295		1 hr
2.											
3.											
4.											
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	4.279	Flow prover	104	.9868	1.24		545
2.							
3.							
4.							
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 758	P _c ² 575	
NO.	P _w	P _w ²
1	308	95
2		
3		
4		
5		

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.1979$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1979$$

$$AQF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 650$$

Absolute Open Flow 650	Mcfd @ 15.025	Angle of Slope θ 45°	Slope, n 1
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Remarks: Unable to run four flow rates due to low delivery of well. Assumed N=1 and based calculations on one point test.

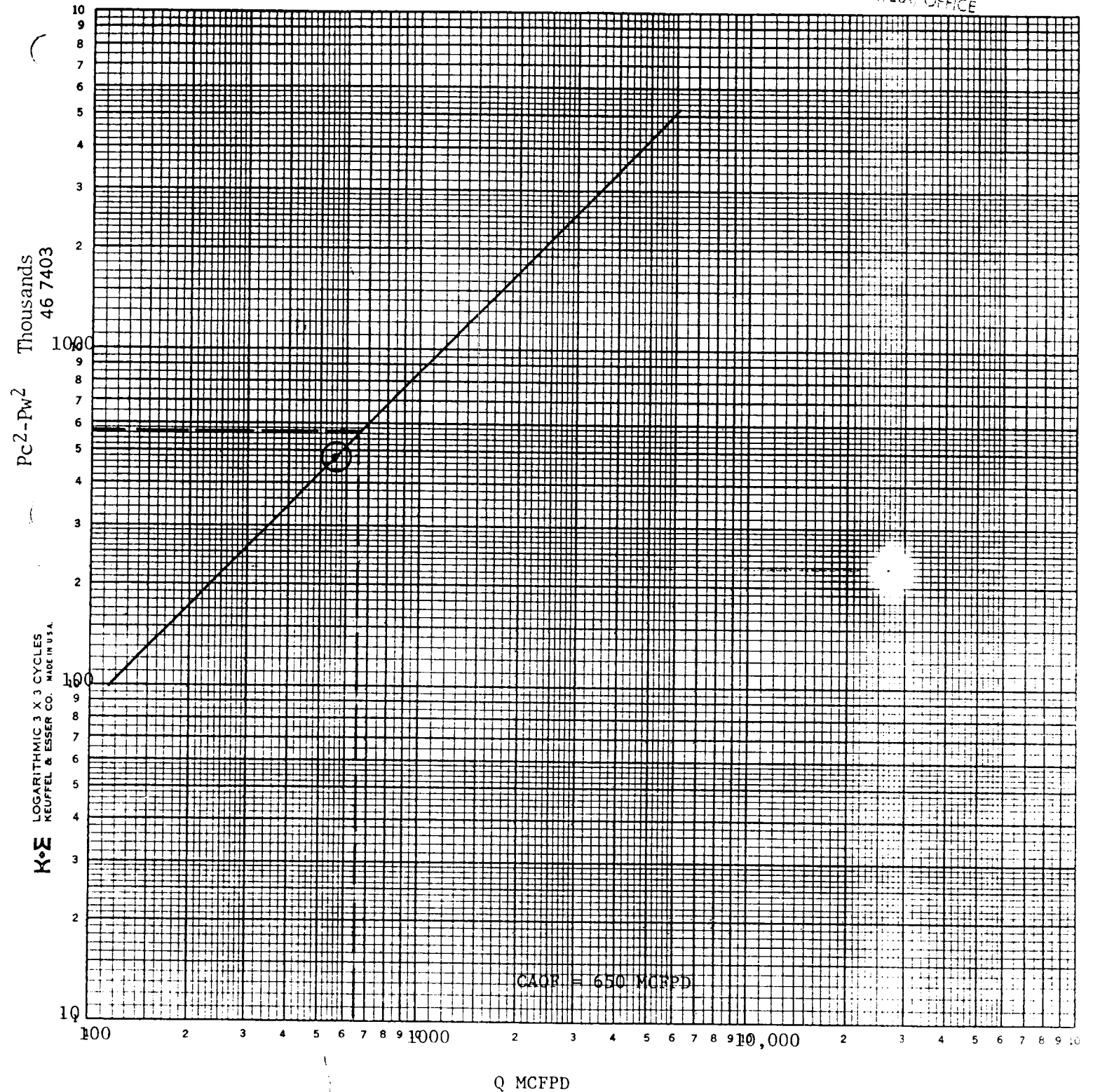
Approved By Division	Conducted By: James Craig	Calculated By: <u>EAB 11-14-82</u> E.L. Buttross, Jr.	Checked By:
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MESA PETROLEUM CO.
 Erma No. 1
 Chaves County, New Mexico
 10-11-82

RECEIVED

NOV 17 1982

C. S. D.
 ARTESA OFFICE



Assumed $N=1$ and $\theta=45^\circ$