

N MEXICO OIL CONSERVATION COMM ON
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

C/SF
C-122

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-11-82		APR 2 1982	
Company MESA PETROLEUM CO. ✓				Connection UNCONNECTED		O. C. D. ARTESIA OFFICE	
Pool PECOS SLOPE ABO				Formation AEO		Unit	
Completion Date 3-11-82		Total Depth 4150'		Plug Back TD 4070'		Elevation 3970'	
Csg. Size 4 1/2"		Set At 4141'		Perforations: From 3702' To 3964'		Well No. 4	
Tub. Size 2 3/8"		Set At 3590'		Perforations: From OPEN ENDED		Unit Sec. Twp. Rge. A 23 5S 24E	
Type Well - Single - Protobend - G.G. or G.O. Multiple SINGLE				Packer Set At NONE		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 101 @ 4150		Mean Annual Temp. °F 60		Buro. Press. - P _g 13.2	
L		H		G _g .65		Provor CHOKE	
				% CO ₂ 1		% H ₂ S 1	
						Meter Run	
						Faps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Provor 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
51							925		835		72 HR SI
1.	CHOKE		15/64	855		73	855	73	794		1 HR
2.	COEFF		18/64	767		76	767	76	735		1 HR
3.			22/64	660		78	660	78	675		1 HR
4.			25/64	550		80	625	80	625		1 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, Mgd
1	.9165	CHOKE	858	.9877	1.240		974
2	1.3310	CHOKE	730	.9850	1.240		1268
3	1.9990	CHOKE	673	.9831	1.240		1640
4	2.5870	CHOKE	553	.9813	1.240		1772
5							

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

P _c 848	P _c ² 719		
NO.	P _w ²	P _w	P _c ² - P _w ²
1	807	651	68
2	748	560	159
3	688	473	246
4	638	407	312
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.3045$

ADP = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2700$

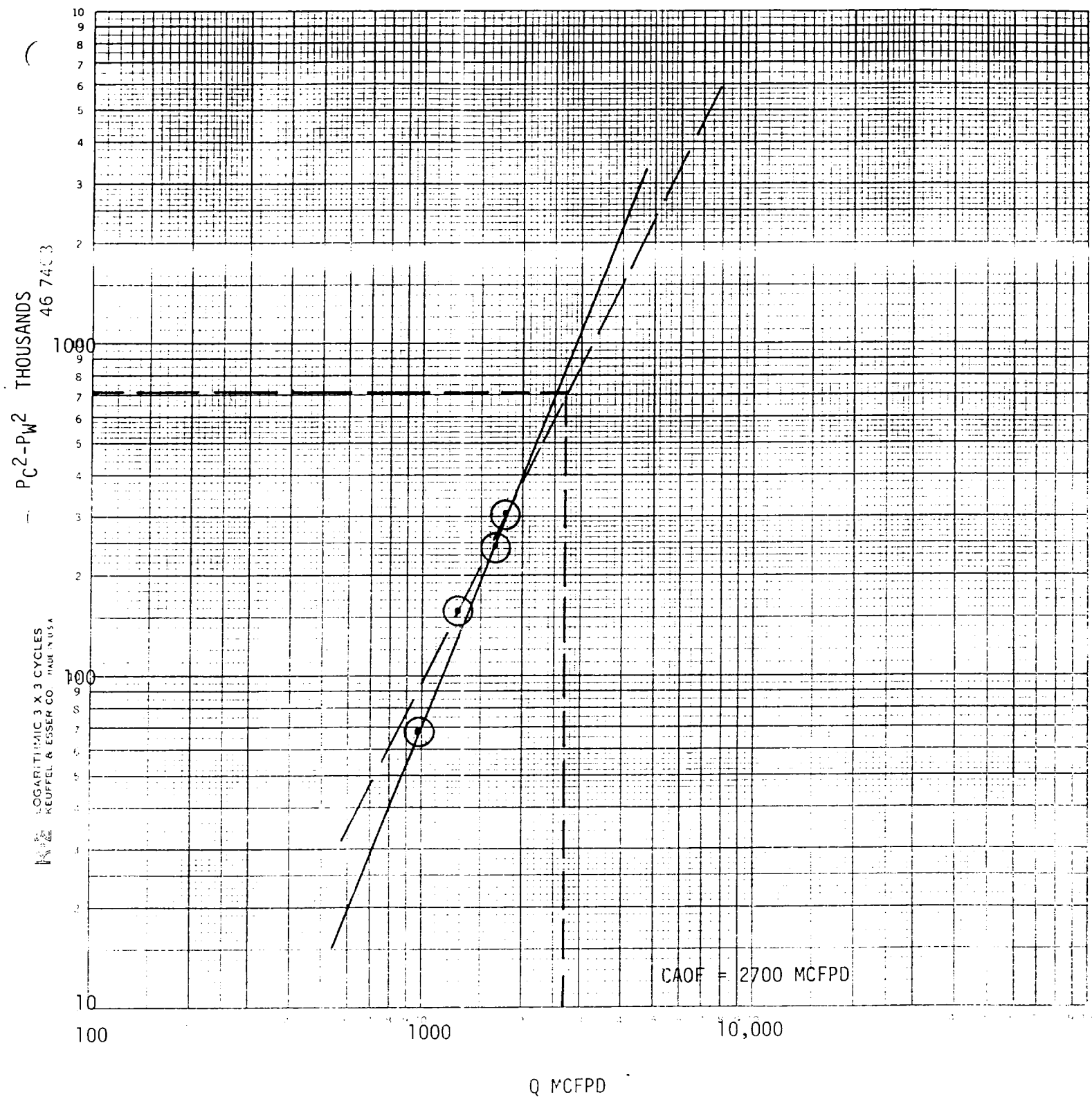
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5181$

Absolute Open Flow 2700	Mold @ 15.025	Angle of Slope @ 63.5	Slope, n .5
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Remarks: PLOT OF P_c²-P_w² VS Q YIELDED A STRAIGHT LINE WITH A θ GREATER THAN 63.5°. DREW 63.5° LINE THROUGH HIGHEST POINT.

Approved By Commission:	Conducted By: JAMES CRAIG	Calculated By: <u>ELS 3-12-82</u> E. L. BUTTROSS, JR.	Checked By:
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ESA PETROLEUM CO.
STANFORD FEDERAL NO. 4
CHAVES CO., NM
3-11-82



ASSUMED $N = .5$ AND $\theta = 63.5^\circ$