

NE MEXICO OIL CONSERVATION COMM ON
MULTIPOINT & ONE POINT BACK PRESSURE TESTS FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-26-81		OCT 13 1981			
Company Mesa Petroleum Co.						Connection UNCONNECTED				O. C. D. ARTESIA, OFFICE	
Pool UNDESIGNATED ABO						Formation ABO				Unit	
Completion Date 9-26-81			Total Depth 4350'		Plug Back TD 4009'		Elevation 3927'		Farm or Lease Name DORIS FEDERAL		
Csg. Size 4 1/2"	Wt. 10.5#	d	Set At 4033'	Perforations: From 3614' To 3909'				Well No. 3			
Thq. Size 2 3/8"	Wt. 4.7#	d	Set At 3493'	Perforations: From OPEN ENDED TO				Unit G	Sec. 14	Twp. 5S	Rye. 24E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At NONE		County CHAVES			
Producing Thru TUBING		Reservoir Temp. °F 102 @ 4350		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State NEW MEXICO			
L 3493	H 3493	G _g .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	Prover CHOKE		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	
SI							915		860		72 HR SI
1.	CHOKE		16/64	850	-	76	850	76	815		1 HR
2.	CO EFF.		19/64	775	-	80	775	80	760		1 HR
3.			22/64	650	-	82	650	82	675		1 HR
4.			25/64	560	-	82	560	82	590		1 HR
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	1.050	CHOKE	863.2	.9850	1.240		1107
2	1.484	CHOKE	788.2	.9813	1.240		1423
3	1.999	CHOKE	663.2	.9795	1.240		1610
4	2.587	CHOKE	573.2	.9795	1.240		1801
5.							

NO.	P _t	Temp. °R	T _f	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

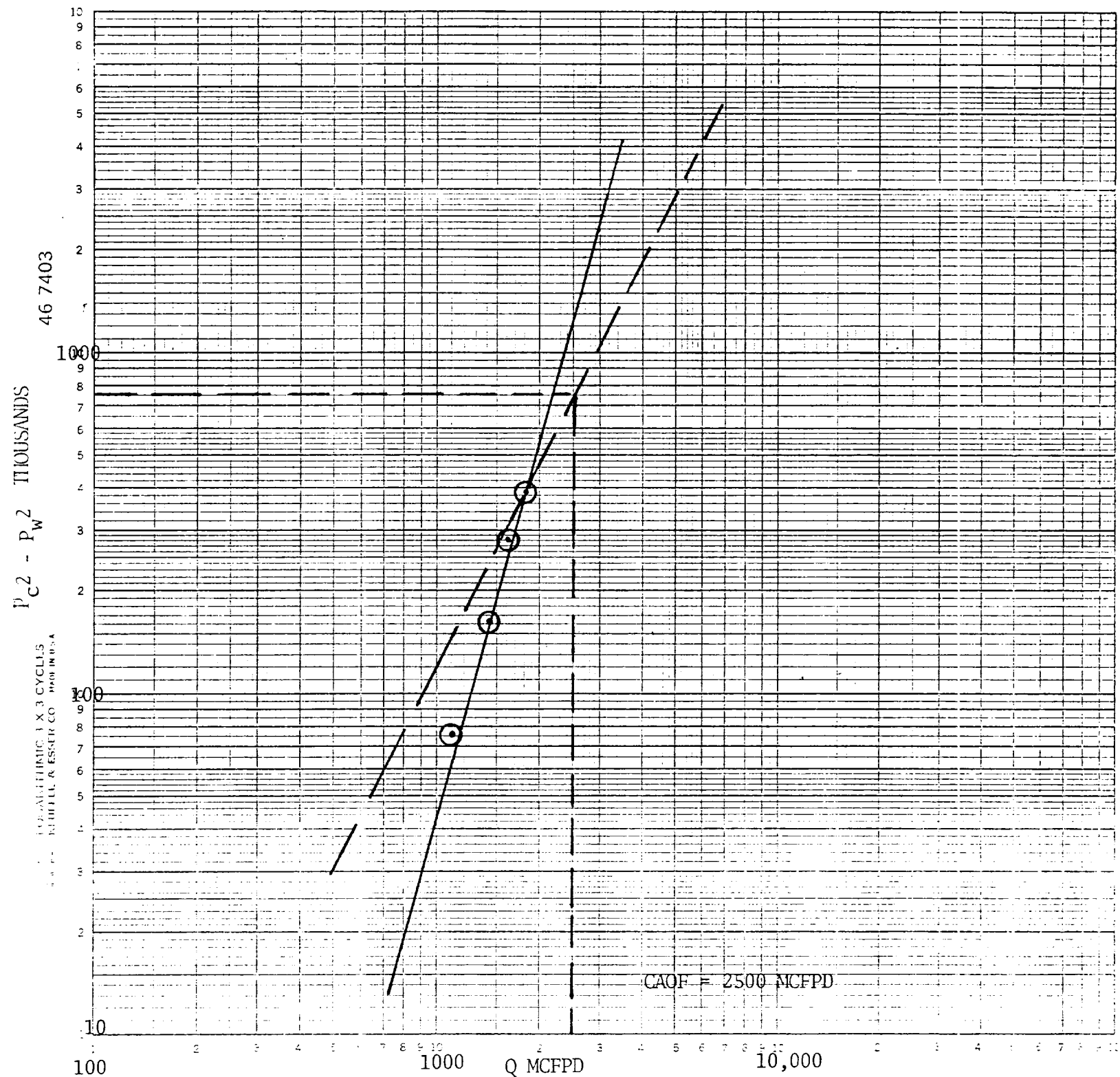
P _c 873 P _c ² 762					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.9146$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3837$
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2500$	
1		828	686	76		
2		773	598	164		
3		688	473	289		
4		603	364	398		
5						

Absolute Open Flow 2500 Mcfd @ 15.025			Angle of Slope θ 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: E. L. BUTTROSS, JR.	Checked By:
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MESA PETROLEUM CO.
 DORIS FEDERAL NO. 3
 SEC 14, T5S, R24E
 CHAVES CO., NM
 9-26-81



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