

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 7-29-81		AUG 1 1981		
Company Mesa Petroleum Co. ✓				Connection UNCONNECTED				O. C. O.	
Pool UNDESIGNATED ABO				Formation ABO				Unit ARTESIA, GRP.	
Completion Date 7-29-81		Total Depth 4311		Plug Back TD 4208		Elevation 4059		Farm or Lease Name FOREMAN FEDERAL	
Csg. Size 4 1/2	Wt. 10.5	d	Set At 4247	Perforations: From 3738 To 4093				Well No. 2	
Thg. Size 2 3/8	Wt. 4.7	d	Set At 3636	Perforations: From OPEN END TO				Unit Sec. Twp. Rge. 1 8 6S 25E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE					Packer Set At NONE		County CHAVES		
Producing Thru TUBING		Reservoir Temp. °F 105° 4311		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State NEW MEXICO	
L 3636	H 3636	G _g .65	% CO ₂ 1	% N ₂ 2	% H ₂ S	Prover 2" ORIFICE WELL TESTER		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
1.	2" orifice	1 1/4	4.5	-	80	765	690	80	730	665	72 hr. SI
2.	Well	1 1/4	16	-	80	570	555	80	555	555	1 hr.
3.	Tester	1 1/4	20.5	-	80	455	445	80	445	445	1 hr.
4.		1 1/4	22	-	80	366	360	80	360	360	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, Mcfd
1	479	2" Orifice		.9813	.9608	-	452
2	1004	Well Tester		.9813	.9608	-	947
3	1250			.9813	.9608	-	1179
4	1320			.9813	.9608	-	1245
5							

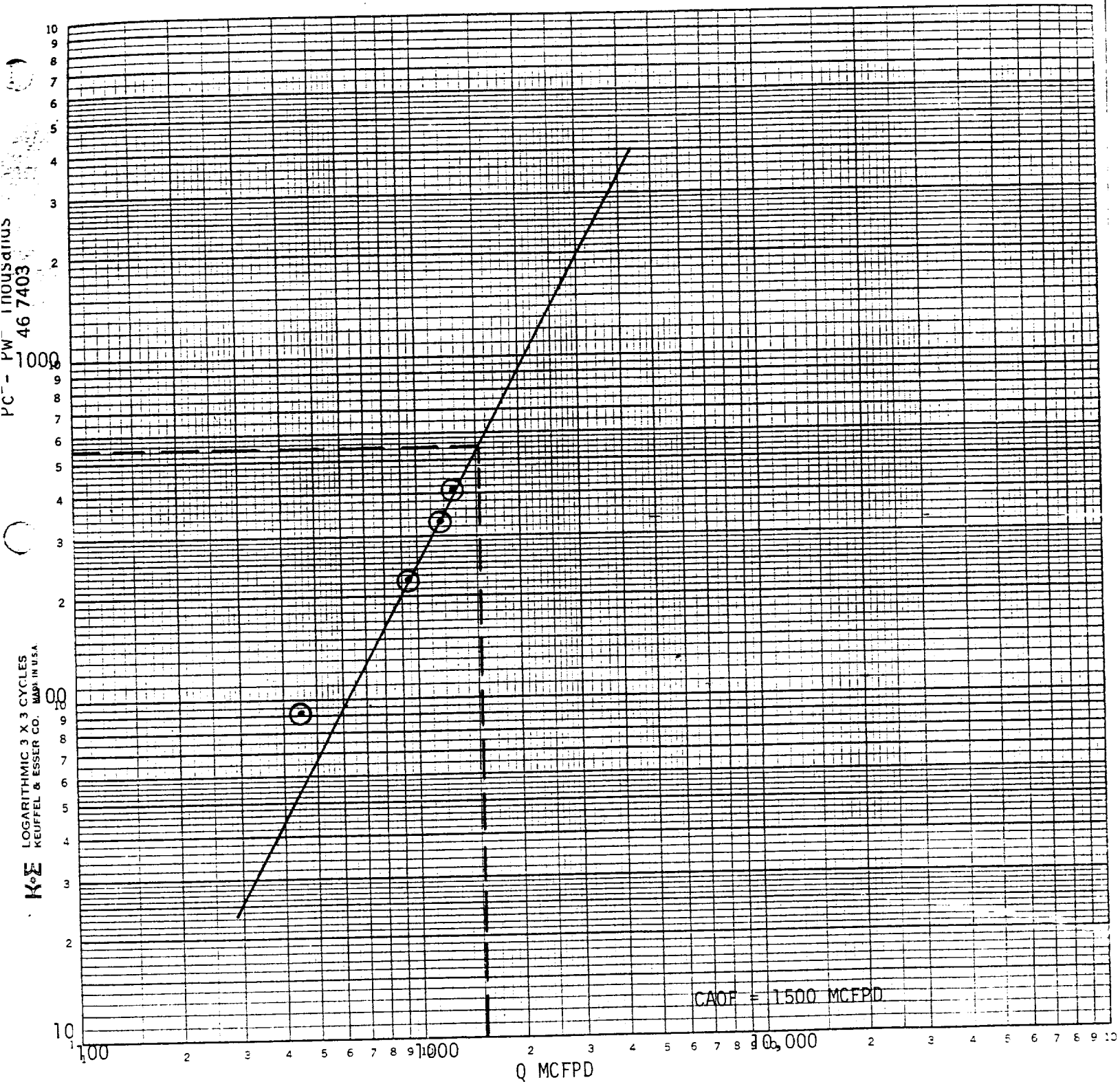
NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ X X X X X X X X
3					Specific Gravity Flowing Fluid _____ X X X X X
4					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5					Critical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

P _c 730	P _c ² 533	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5910$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2731$
NO. 1	P _t ²	P _w	P _w ²
1		665	442
2		555	308
3		445	198
4		360	130
5			

Absolute Open Flow 1,500 Mcfd @ 15.025		Angle of Slope @ 62.5°	Slope, n .52
Remarks:			

Approved By Commission:	Conducted By: JAMES CRAIG	Calculated By: E.L. BUTTROSS, JR	Checked By:
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MESA PETROLEUM CO.
 FOREMAN FEDERAL NO. 2
 SEC 8, T6S, R25E
 CHAVES COUNTY, NEW MEXICO
 7-29-81



$$n = 1/\text{slope} = \frac{\log Q_2 - \log Q_1}{\text{cycle}} = \frac{\log 2100 - \log 630}{\text{cycle}} = 3.32 - 2.8 = .52$$

$$\theta = 62.5^\circ$$