

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

Form C-122
Revised 9-1-65

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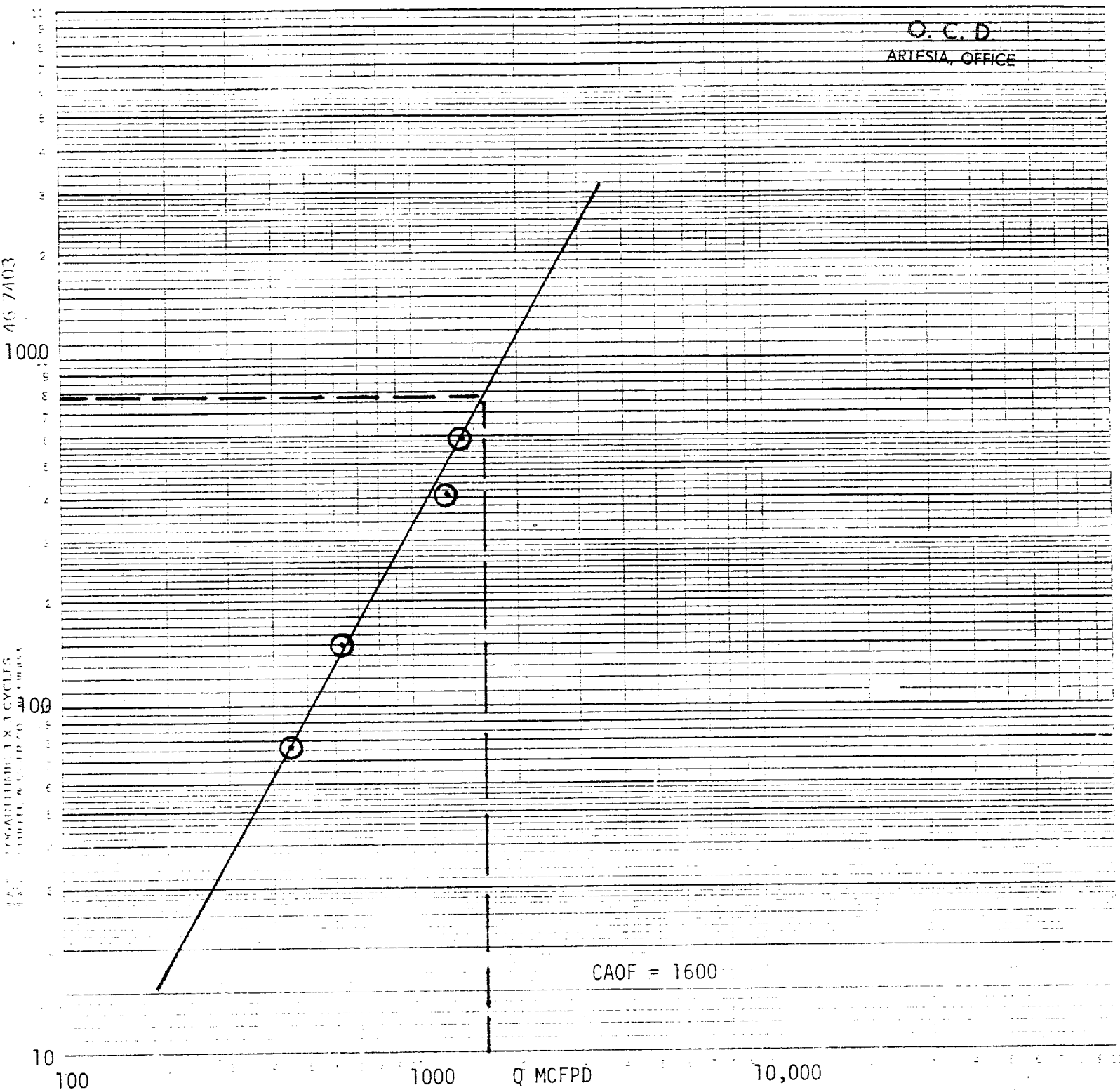
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 8-22-81		SEP 9 1981	
Company Mesa Petroleum Co.				Connection UNCONNECTED		O. C. D. ARTESIA, OFFICE	
Pool UNDESIGNATED ABO				Formation ABO		Unit	
Completion Date 8-22-81		Total Depth 3505'		Plug Back TD 3178'		Elevation 3997'	
Csg. Size 4 1/2"		Wt. 10.5#		Set At 3218'		Perforations: From 2930' To 3142'	
Tub. Size 2 3/8"		Wt. 4.7#		Set At 2837'		Perforations: From OPEN ENDED To	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE				Packer Set At NONE		Farm or Lease Name ROUND TOP STATE	
Producing Thru TUBING		Reservoir Temp. °F 102° @ 3505		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
2837'		2837'		.65		2" ORIFICE WELL TESTER	
L		H		G _g		Prover	
2837'		2837'		.65		2" ORIFICE WELL TESTER	
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Duration of Flow
1.	2" ORIFICE	1 1/4	4.5	-	78	845	80
2.	WELL	1 1/4	8	-	78	790	80
3.	TESTER	1 1/4	22.5	-	78	595	80
4.		1 1/4	26	-	78	415	80
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		.9831	.9608		452
2.	661	WELL TESTER		.9831	.9608		624
3.	1337			.9831	.9608		1263
4.	1463			.9831	.9608		1382
5.							
NO.	P _r	Temp. °F	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mol % H ₂		
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 _____ °F _____ °F		
NO.	F _c	F _w	F _c ²	F _w ²	(1) $\frac{F_c^2}{F_c^2 - F_w^2} = 1.3112$ $\left[\frac{F_c^2}{F_c^2 - F_w^2} \right]^n = 1.1576$		
1.	833	694	77				
2.	788	621	150				
3.	603	364	407				
4.	428	183	588				
5.							
Absolute Open Flow 1600					Mcf @ 15.025		Angle of Slope 61.6°
					Slope, n .54		
Remarks:							
Approved By Commission:		Conducted By: JAMES CRAIG		Calculated By: E. L. BUTTROSS, JR.		Checked By:	

MESA PETROLEUM CO.
 JUND TOP STATE NO. 2
 SEC 9, T7S, R23E
 CHAVES COUNTY, NEW MEXICO
 8-22-81

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O. C. D.
 ARTESIA, OFFICE



$$N = 1/\text{SLOPE} = \frac{\text{LOG } Q_2 - \text{LOG } Q_1}{\text{CYCLE}} = \frac{\text{LOG } 1830 - \text{LOG } 520}{\text{CYCLE}} = 3.26 - 2.72 = .54$$

$$\theta = 61.6^\circ$$