

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 12-16-81		Well No. 21 1982	
Company MESA PETROLEUM CO.				Connection UNCONNECTED				
Well UNDESIGNATED ABO				Formation ABO				Unit
Completion Date 12-16-81		Total Depth 4217'		Plug Back TD 4160'		Elevation 3843.6'		Point of Lease Line
Csg. Size 4 1/2		Wt. 10.5#		Set At 4217'		Perforations: From 3652' To 3680'		Well No. 3
Tub. Size 2 3/8		Wt. 4.7#		Set At 3563'		Perforations: From OPEN ENDED To		Unit Sec. Twp. Rge. K 17 5 25
Type Well - Single - Protobhead - G.G. or G.O. Multiple SINGLE						Packer Set At NONE		County CHAVES
Producing Thru TUBING		Reservoir Temp. °F 100 @ 4217		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State NEW MEXICO
L	H	G _g .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	Prover 2" orifice well tester		

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			10.5		54	860	70	820		24 hr. S
2.	well			23		53	760	68	730		1 hr.
3.	tester			29		50	615	68	605		1 hr.
4.				31		50	490	68	500		1 hr.
5.							390	68	415		

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. Compens. Factor, F _{pv}	Rate of Flow Q, Mgd
1	776	2" orifice		1.0058	.9608		750
2	1348	well tester		1.0068	.9608		1304
3	1578			1.0098	.9608		1531
4	1653			1.0098	.9608		1604
5							

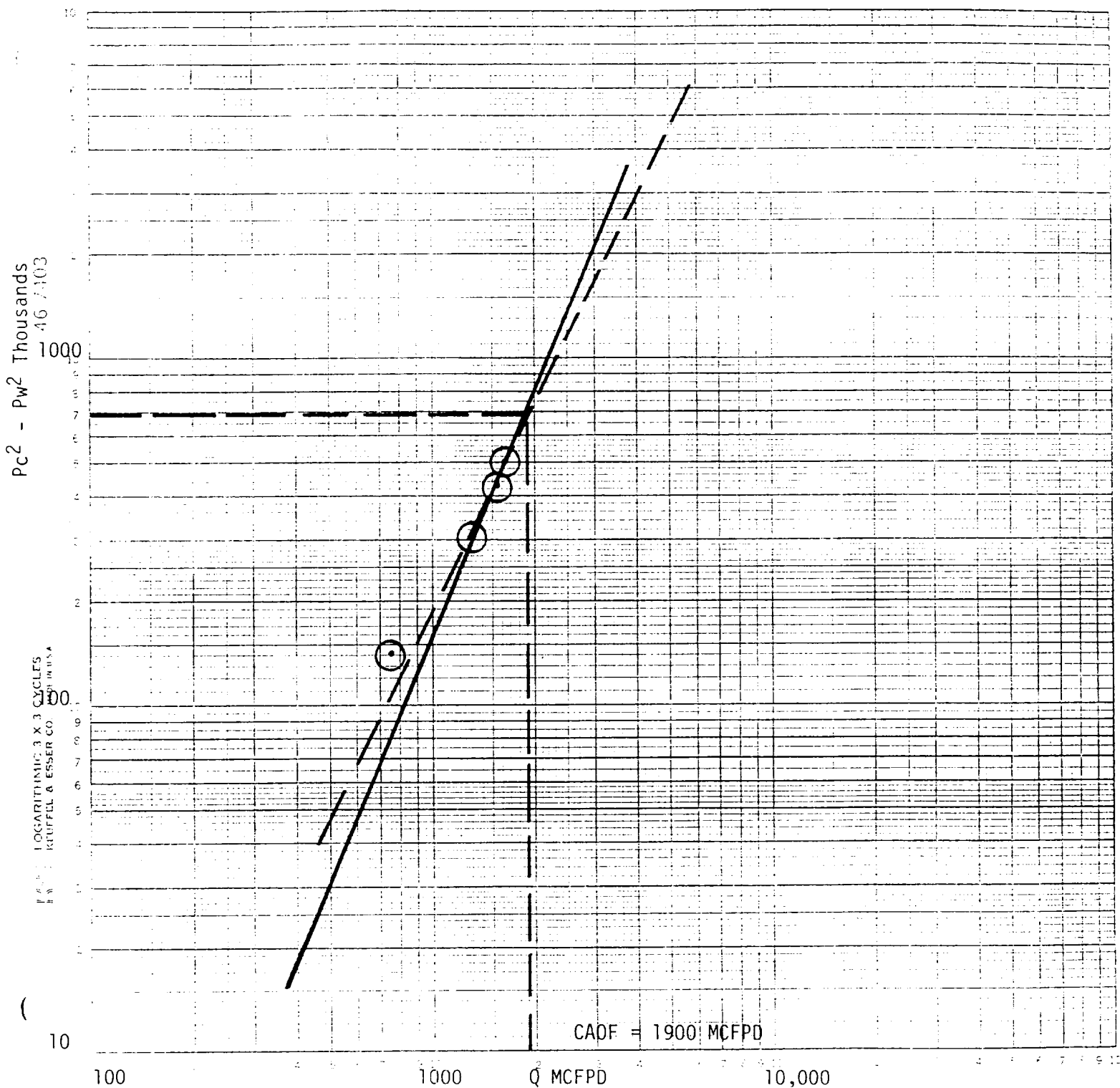
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ X X X X X X X X
3					Specific Gravity Flowing Fluid _____ X X X X X
4					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5					Critical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

P _c 833	P _w 694	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3581$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1654$	
NO.	P _c	P _w	P _c ² - P _w ²		
1		743	552		
2		618	382		
3		513	263		
4		428	183		
5					

Absolute Open Flow _____ 1900 _____ Mgd @ 15.025 Angle of Slope θ _____ 63.5° Slope, n _____ .5
 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: _____	Conducted By: _____ James Craig	Calculated By: _____ E. L. Buttross, Jr.	Checked By: _____
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MESA PETROLEUM CO.
 LODEWICK FEDERAL #3
 12-16-81



Assumed N = .5 and $\theta = 63.5^\circ$