

MAY 25 1983

Revised 9-1-83

O. C. D.

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c/sf
File

Type Test ☒ Initial ☐ Annual		☐ ARTESIA, OFFICE ☐ SPECIAL		7-29-82	
Company MESA PETROLEUM CO.		Connection UNCONNECTED			
Pool W. Paces Slope No. UNDESIGNATED ABO		Formation ABO		Unit	
Completion Date 7-29-82		Total Depth 3204'		Plug Back TD 2957'	
Elevation 4047.9'		Farm or Lease Name MACHO FED COM			
Csg. Size 4 1/2"	Wt. 10.5#	Set At 3002'	Perforations: From 2785' To 2903'		Well No. 10
Tub. Size 2 3/8"	Wt. 4.7#	Set At 2854'	Perforations: From OPEN ENDED		Unit Sec. Twp. Rge. G 7 7S 23E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE			Packer Set At NONE		County CHAVES
Producing Thru TUBING		Reservoir Temp. °F 98° @ 3180'	Mean Annual Temp. °F 60	Baro. Press. - P ₀ 13.2	State NEW MEXICO
L	H	G _g .65	% CO ₂ 1	% N ₂ 1	% H ₂ S 1
Prover		2" CRITICAL FLOW PROVER			

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	
51							765		775		72 HRS \$1
1.	2" x 1"			21		44	680	80	690		1 HR
2.	2" x 1"			38		52	570	84	595		1 HR
3.	2" x 1"			49		58	440	87	480		1 HR
4.	2" x 1"			53		62	340	88	390		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	17.09	FLOW PROVER	34	1.016	1.24		732
2	17.09	FLOW PROVER	51	1.008	1.24		1089
3	17.09	FLOW PROVER	62	1.002	1.24		1317
4	17.09	FLOW PROVER	66	.9981	1.24		1396
5.							

NO.	P ₁	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/Sbl.
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

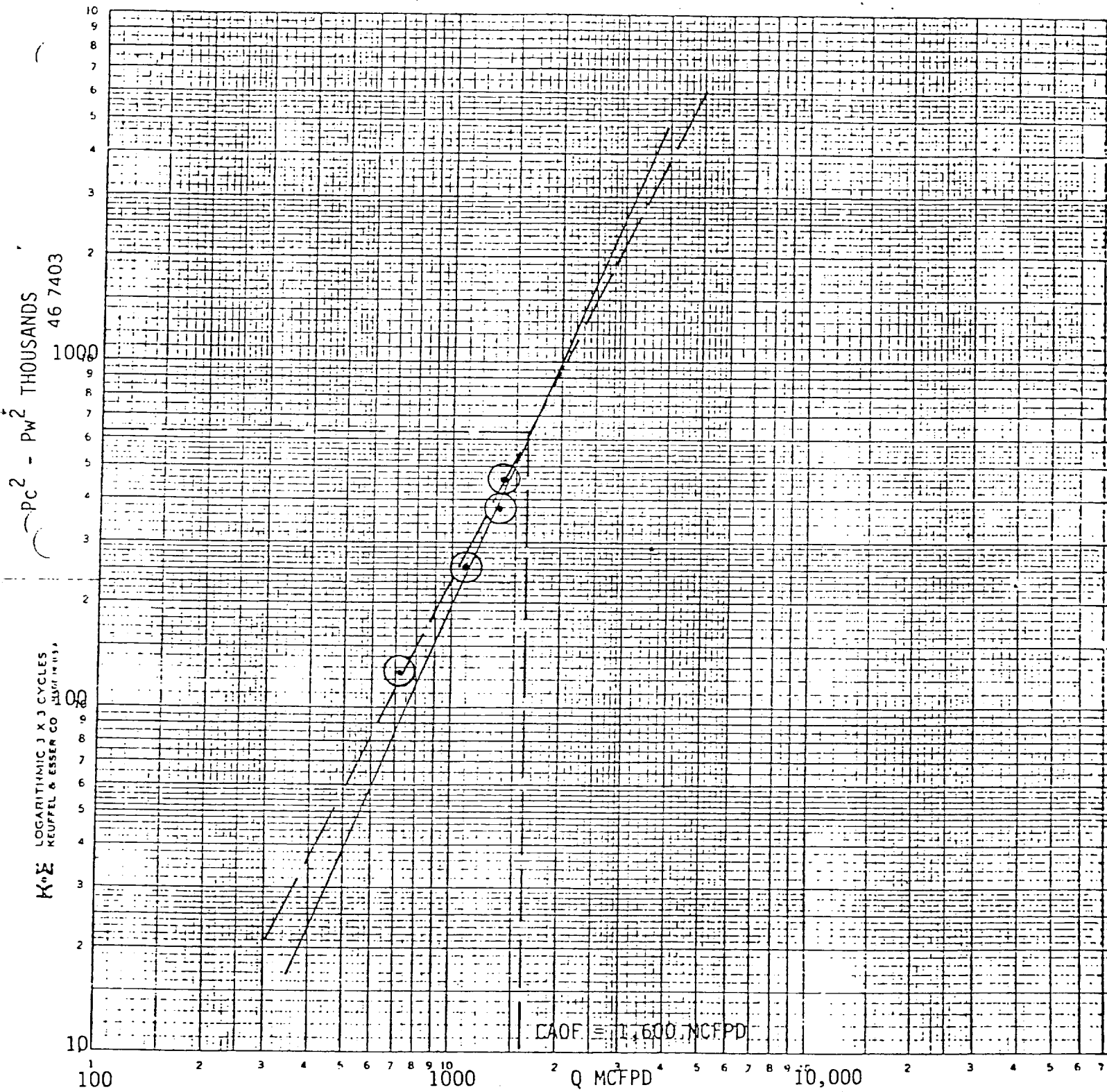
P _c	788	P _c ²	621
NO.	P ₁ ²	P _w ²	P _c ² - P _w ²
1		703	494
2		608	370
3		493	243
4		403	162
5			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.3529 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1632$$

$$ACF = 0 \quad \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.600$$

Absolute Open Flow	1,600	Mcf @ 15.025	Angle of Slope θ	63.5°	Slope, n	.5
Remarks: Plot of P _c ² - P _w ² vs Q yield 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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Assumed N = .5 and $\theta = 63.5^\circ$