

NORTH AMERICAN OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

SEP 29 1982

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 7-5-82	
Company MESA PETROLEUM CO. ✓		Connection ARTESIA, OFFICE UNCONNECTED	
Pool PECOS SLOPE ABO		Formation ABO	
Completion Date 7-5-82	Total Depth 3400'	Plug Back TD 3105'	Elevation 4044'
Form or Lease Name MACHO FEDERAL		Well No. 3	
Csg. Size 4 1/2"	Wt. 10.5#	Set At 3153'	Perforations: From 2826' To 2968'
Tiq. Size 2 3/8"	Wt. 4.7#	Set At 2967'	Perforations: From OPEN ENDED°
Type Well - Single - Prodenhead - G.G. or G.O. Multiple SINGLE		Packer Set At NONE	County CHAVES
Producing Thru TUBING	Reservoir Temp. °F 102°@ 3400'	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
State NEW MEXICO		Prover 2" CRITICAL FLOW PROVER	
L	H	Gg	% CO ₂ % N ₂ % H ₂ S
		.65	1 1 1

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							890		885		72 HRS SI
1.	2" x 1"			42		34	810	75	830		1 HR
2.	2" x 1"			74		40	680	80	755		1 HR
3.	2" x 1"			83		46	535	80	695		1 HR
4.	2" x 1"			88		50	420	79	655		1 HR
5.											

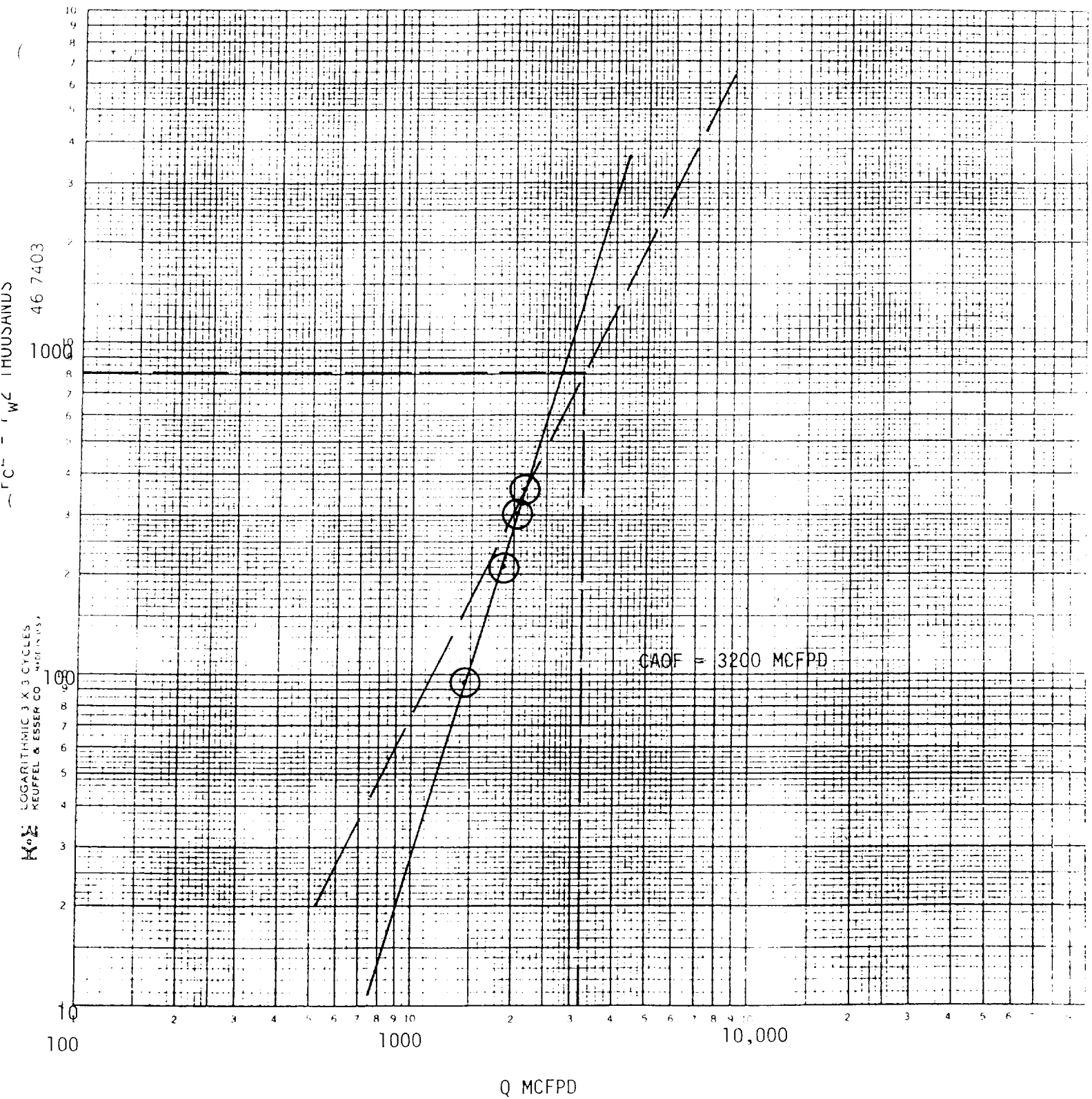
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	17.09	FLOW PROVER	65	1.026	1.24		1413
2	17.09	FLOW PROVER	87	1.020	1.24		1881
3	17.09	FLOW PROVER	96	1.014	1.24		2063
4	17.09	FLOW PROVER	101	1.010	1.24		2162
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 898	P _c ² 806	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.2389$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4963$
NO.	P _w ²	P _w	P _c ² - P _w ²
1	843	711	95
2	768	590	216
3	708	501	305
4	668	446	360
5			

Absolute Open Flow 3,200		Mold @ 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 Conductor:	Conducted By: JAMES CRAIG	Calculated By: <u>28 7-15-82</u> E.L. BUTTROSS, JR	Checked By:
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ASSUMED $N = .5$ AND $\theta = 63.5^\circ$