

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

Form C-122
Revised 9-1-65

RECEIVED

C/SF C-122

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 12-2-81		JAN 6 1982	
Company Mesa Petroleum Co. ✓		Connection Unconnected		O. C. D.	
Pool Pecos Slope - Abo Gas Undesignated ABO		Formation ABO		Unit ARTESIA, OFFICE	
Completion Date 12-2-81		Total Depth 4160		Plug Back TD 4100'	
Elevation 3810'		Farm or Lease Name Savage Federal		Well No. 3	
Csg. Size 4 1/2	Wt. 10.5#	Set At 4152'	Perforations: From 3632 To 3947		Unit Sec. Twp. Rge. I 4 7S 25E
Thq. Size 2 3/8	Wt. 4.7#	Set At 3530'	Perforations: From open ended To		County Chaves
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single				Packer Set At none	
Producing Thru tubing		Reservoir Temp. °F 101 @ 4160	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2	
State New Mexico		Prover Choke		Meter Run	Taps
L	H	Gg .65	% CO ₂ 1	% N ₂ 1	% H ₂ S

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							910		830		72 hr SI
1.	Choke	15/64		880		52	880	52	800		1 hr
2.	COEFF.	20/64		800		62	800	62	750		1 hr
3.		24/64		680		64	680	64	670		1 hr
4.		28/64		555		67	555	67	595		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	.9165	Choke	893	1.008	1.240		1023
2	1.645	Choke	813	.9981	1.240		1655
3	2.388	Choke	693	.9962	1.240		2044
4	3.231	Choke	568	.9933	1.240		2260
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 843	P _c ² 711	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.0850$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4439$	
NO.	P _r ²	P _w	P _w ²	P _c ² - P _w ²
1	813	661	50	
2	763	582	129	
3	683	466	245	
4	608	370	341	
5				

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3300$

Absolute Open Flow 3300	Mcf/d @ 15.025	Angle of Slope @ 63.5°	Slope, n .5
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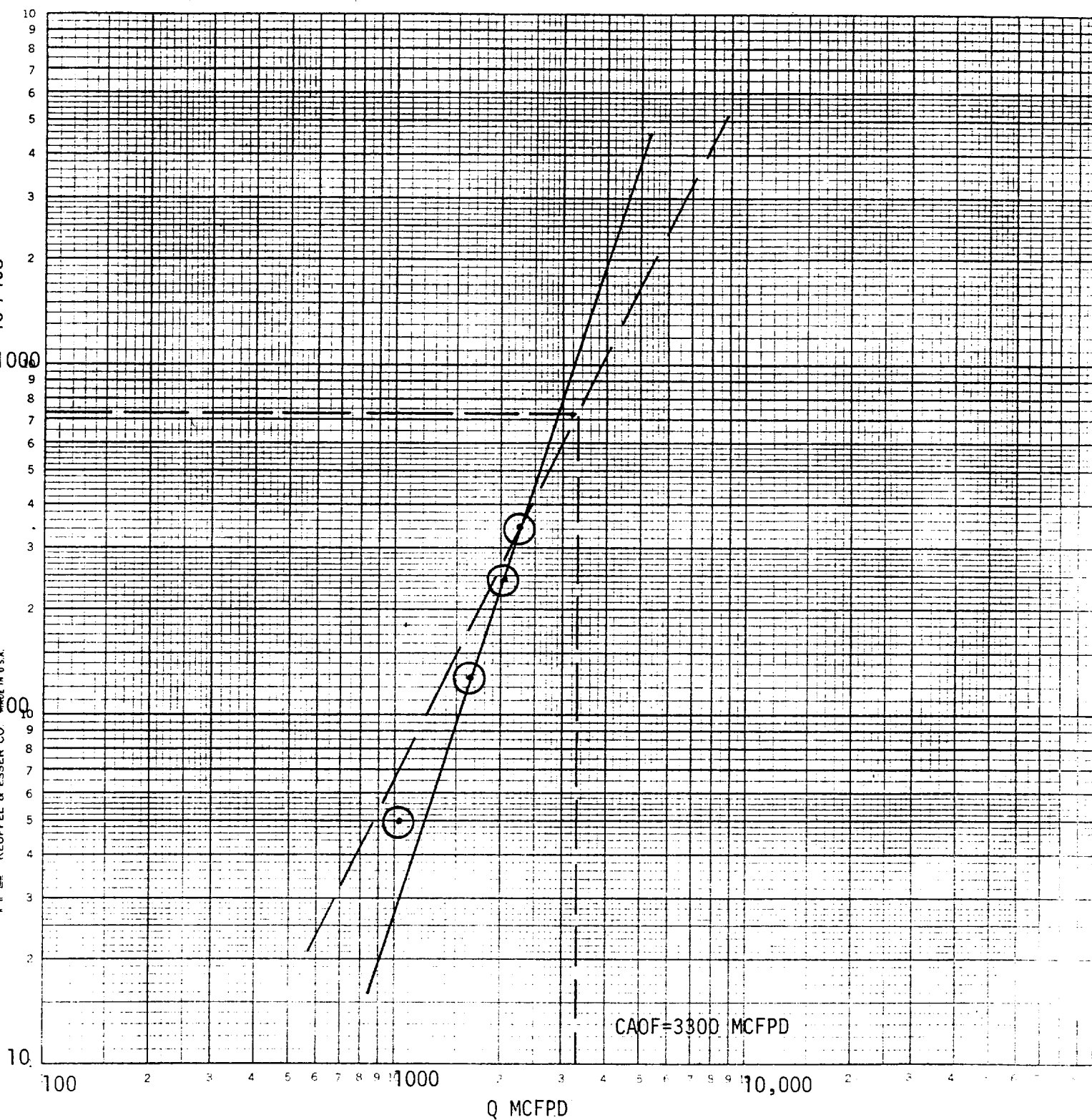
Remarks: Plot of P_c² - P_w² vs. Q yielded a straight line with a θ greater than 63.5°.
Drew 63.5° line through highest point.

Approved By Commission:	Conducted By: James Craig	Calculated By: E.L. Buttross	Checked By:
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PCZ - PWZ Thousands

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LOGARITHMIC 3 X 3 CYCLES
 KEUFFEL & ESSER CO.
 MADE IN U.S.A.



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