

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

Form C-122
Revised 9-1-65

C/SF
C-122

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 2-11-82		FEB 22 1982	
Company MESA PETROLEUM CO.		Connection UNCONNECTED			
Pool UNDESIGNATED PECOS SLOPE ABO-GAS		Formation ABO		O. C. D. ARTESIA, OFFICE	
Completion Date 2-11-82		Total Depth 4100'			
Elevation 3699' GR		Form or Lease Name MEADOWS COM		Well No. 2	
Csg. Size 4 1/2"	Wt. 10.5#	Set At 4000'	Perforations: From 3702 To 3958		Unit D
Tbg. Size 2 3/8"	Wt. 4.7#	Set At 3584'	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 101 @ 4100	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 CHOKE				Meter Run	Taps

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.			15/64	900		62	935	62	840		72 HRS SI
2.	CHOKE		19/64	830		64	900	64	814		1 hr
3.	COEFF		23/64	715		60	830	60	730		1 hr
4.			28/64	585		59	715	60	700		1 hr
5.							585	59	625		1 hr

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, Mscf/d
1.	.9165	CHOKE	913	.9981	1.240		1035
2.	1.484	CHOKE	843	.9962	1.240		1545
3.	2.189	CHOKE	728	1.0000	1.240		1976
4.	3.231	CHOKE	598	1.001	1.240		2398
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 853	P _c ² 728		
NO.	P _w ²	P _w	P _c ² - P _w ²
1.	827	684	44
2.	783	613	115
3.	713	508	220
4.	638	407	321
5.			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.2679$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3600$$

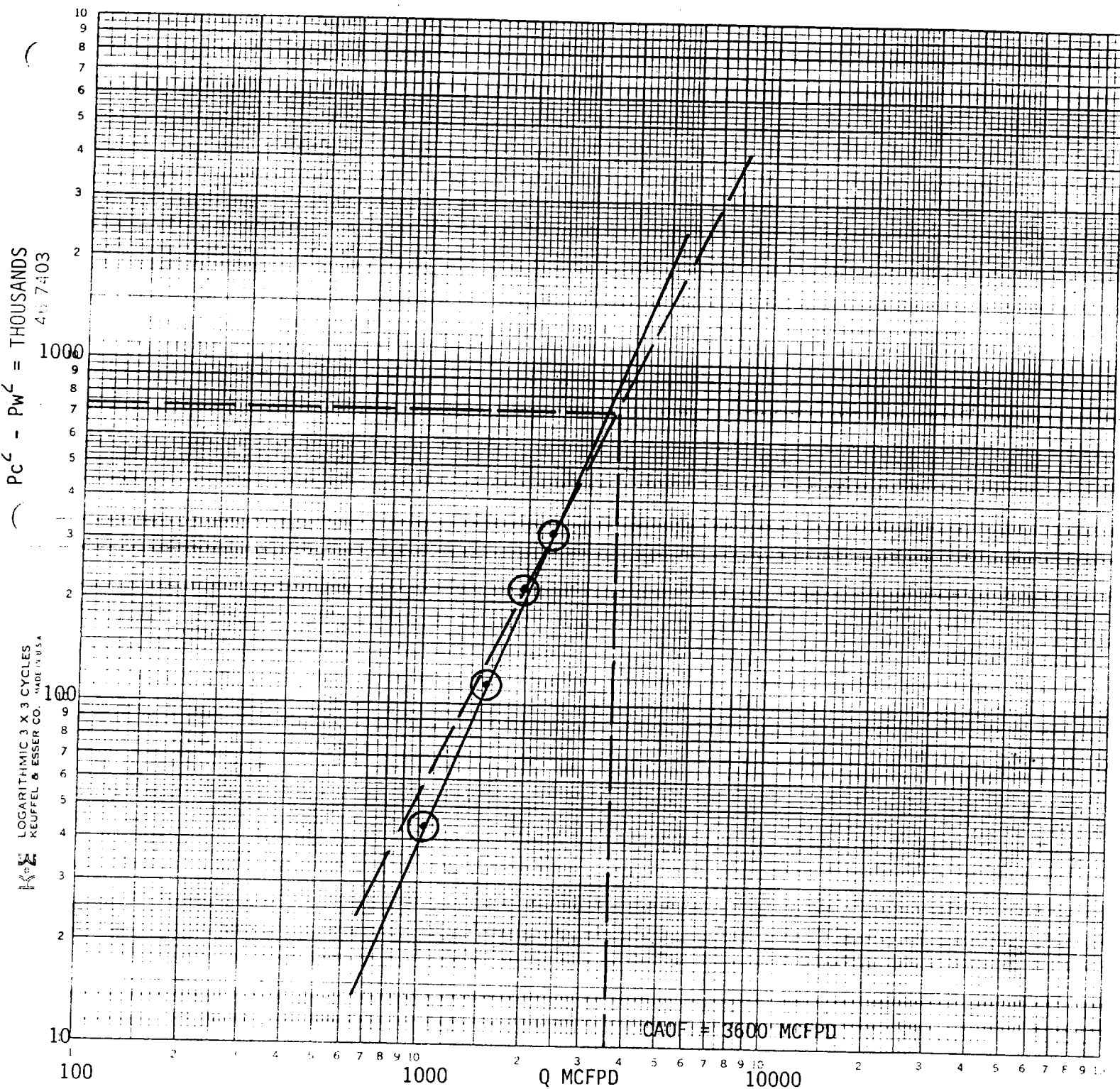
$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5059$$

Absolute Open Flow 3600	Mscf @ 15.025	Angle of Slope θ 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: <u>2-18-82</u> E. L. BUTTROSS, JR.	Checked By:
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MESA PETROLEUM CO.
MEADOWS COM NO. 2
CHAVES COUNTY, NEW MEXICO
FEBRUARY 11, 1982



ASSUMED $N = .5$ AND $\phi = 63.5^\circ$