

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

Form C-122
Revised 9-1-65

RECEIVED

SEP 30 1982

O. C. D.
ARTESIA, OFFICE

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8-17-82	
Company MESA PETROLEUM CO. ✓		Connection UNCONNECTED	
Pool WIND PECOS SLOPE ABO		Formation ABO	
Completion Date 8-17-82		Total Depth 3950'	Plug Back TD 3763'
Casing Size 4 1/2" 10.5#		Set At 3812'	Perforations: From 3435' To 3533'
Tubing Size 2 3/8" 4.7#		Set At 3340'	Perforations: From OPEN ENDED ^{TO}
Type Well - Single - Prodenhead - G.G. or G.O. Multiple SINGLE		Packer Set At NONE	Farm or Lease Name SHELLY FEDERAL
Producing Thru TUBING		Reservoir Temp. °F 99° @ 3950'	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		Meter Run	
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	Duration of Flow
SI							902		910		72 HRS \$I
1.	2" x 1"			24		48	730	85	750		1 HR
2.	2" x 1"			33		58	490	88	550		1 HR
3.	2" x 1"			38		60	350	89	400		1 HR
4.	2" x 1"			40		66	240	90	300		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	37	1.012	1.24		793
2.	17.09	FLOW PROVER	46	1.002	1.24		977
3.	17.09	FLOW PROVER	51	1.000	1.24		1081
4.	17.09	FLOW PROVER	53	.9943	1.24		1117
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 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 _r 923 P _w 852		(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 1.1299$		(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.0630$	
NO.	F ₁ ⁴	P _w	P _w ²	P _r ² - P _w ²	
1		763	582	270	
2		563	317	535	
3		413	171	681	
4		313	98	754	
5					

ADP = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1,200$

Absolute Open Flow	1,200	Mcf @ 15.025	Angle of Slope θ	63.5°	Slope, n	.5
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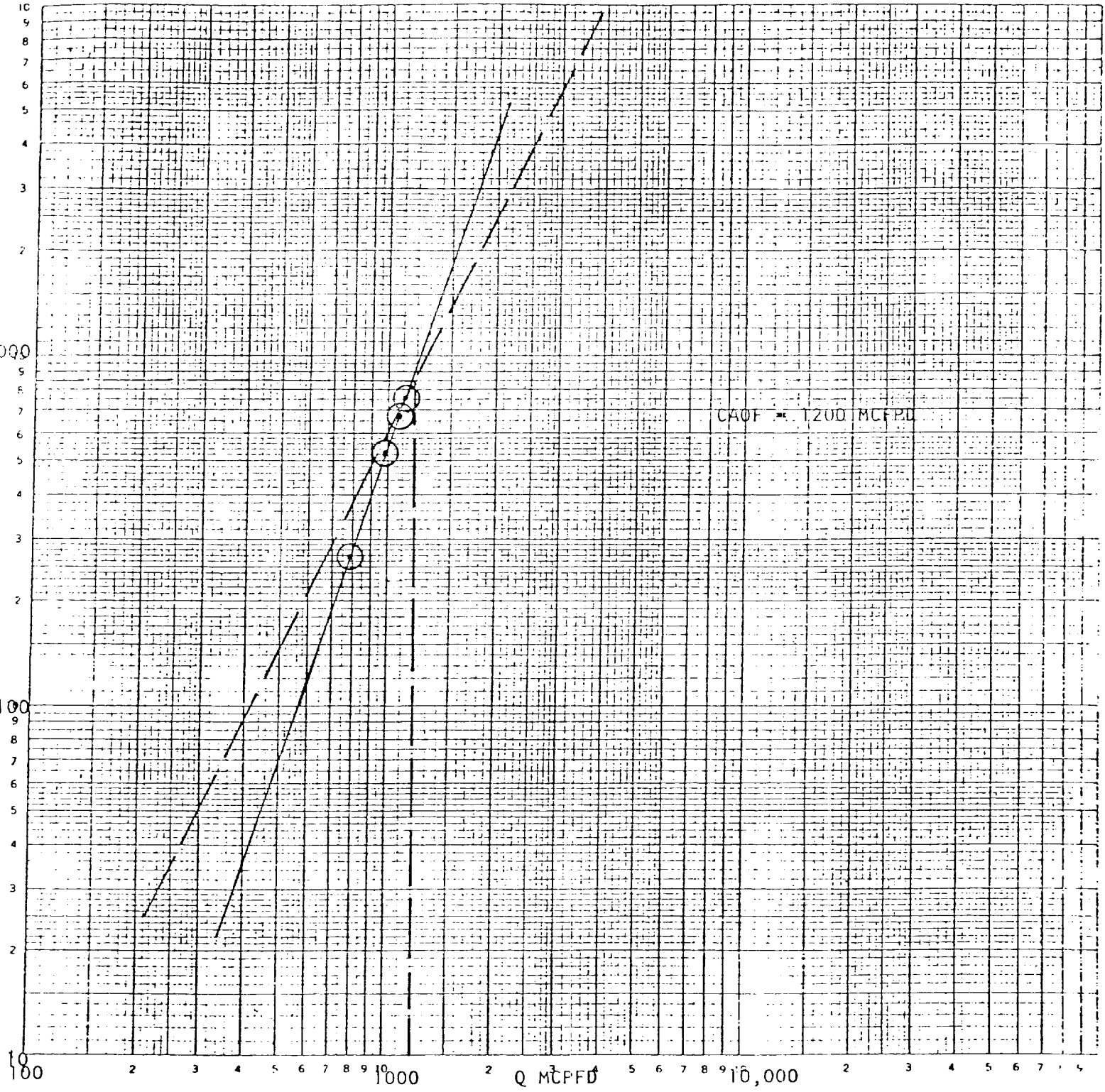
Remarks: Plot of P_r² - P_w² vs Q yield a straight line with a Q greater than 63.5°.
Drew 63.5° line through highest point.

Approved By Conventions:	Conducted By: JAMES CRAIG	Calculated By: E.L. BUTTROSS, JR	Checked By:
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Post ID-2
10-1-82
Jamp & BK

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REUFFEL & ESSEN CO. MADE IN U.S.A.



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