

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

Form C-122
Revised 9-1-65

RECEIVED

C-122 file

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 10-13-81		DEC 15 1981		
Company Mesa Petroleum Co.				Connection Unconnected				O. C. D.	
Pool Undesignated ABO				Formation ABO				Unit ARTESIA, OFFICE	
Completion Date 10-13-81		Total Depth 3518		Plug Back TD 3477		Elevation 4090		Form or Lease Name China Federal	
Case Size 4 1/2"	Wt. 10.5	Set At 3718	Perforations: From 2874 To 2989			Well No. 1			
Tub. Size 2 3/8"	Wt. 4.7	Set At 2720	Perforations: From open ended			Unit B	Sec. 18	Twp. 7S	Rge. 23E
Type well - Single - Prodenhead - G.G. or G.O. Multiple Single					Packer Set At None		County Chaves		
Producing Thru tubing		Reservoir Temp. °F 100 @ 3518	Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico		
L 2720	H 2720	G _g .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	Prover Choke	Meter Run	Cops	

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							820		750		50 hr. SI
1.	Choke		16/64	780	-	87	780	87	715		1 hr.
2.	COEFF		21/64	675	-	73	675	73	670		1 hr.
3.			26/64	560	-	68	560	68	630		1 hr.
4.			32/64	435	-	66	435	66	575		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, Mgd
1	1.050	Choke	793	.9750	1.240		1007
2	1.817	Choke	688	.9877	1.240		1531
3	2.794	Choke	573	.9924	1.240		1970
4	4.194	Choke	448	.9943	1.240		2316
5.							

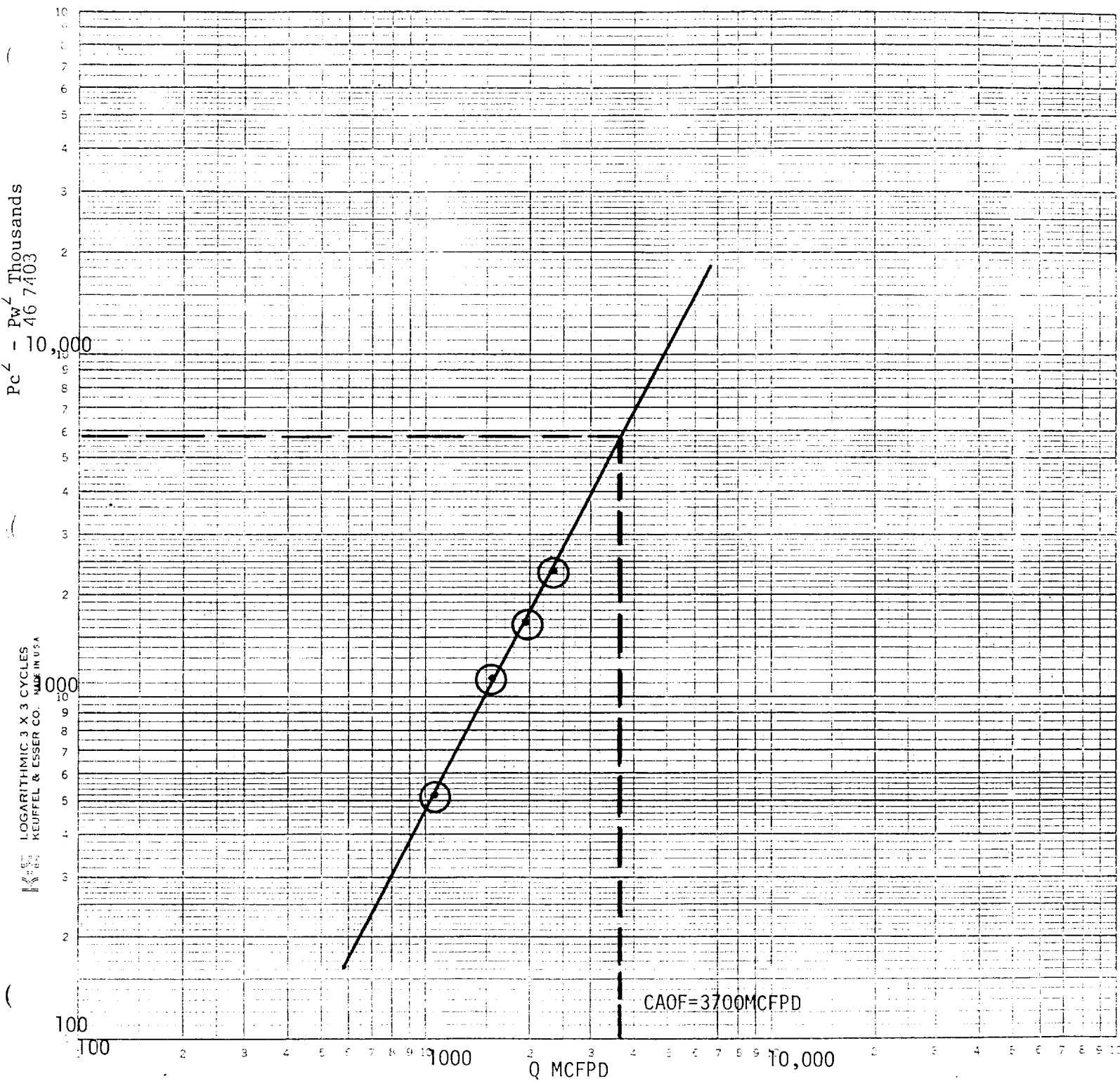
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mol/Lbl.
1.					A.P.L. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

P _r 763	P _w 582	$(1) \frac{P_r^2}{P_r^2 - P_w^2} = 2.4661$		$(2) \left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.5990$	
NO.	P _r ²	P _w ²	P _r ² - P _w ²	AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 3,700$	
1	728	530	52		
2	683	466	116		
3	643	413	169		
4	588	346	236		
5					

Absolute Open Flow 3,700	Mold @ 15.025	Angle of Slope @ 62.50	Slope, n .52
Remarks:			

Approved by Commission:	Conducted by: James Craig	Calculated by: E.L. Buttross, Jr.	Checked by:
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Mesa Petroleum Co.
 China Federal No. 1
 Sec. 18, T7S, R23E
 Chaves Co., New Mexico
 10-13-81



$$N = \frac{1/\text{slope} = \log Q_2 - \log Q_1}{\text{Cycle}} = \frac{\log 4900 - \log 1480}{\text{Cycle}} = \frac{3.69 - 3.17}{\text{Cycle}} = .52$$

$$\theta = 62.5$$