

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

Form C-122
Revised 9-1-80

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 2-10-82		FEB 15 1982	
Company MESA PETROLEUM CO. ✓						Connection Unconnected		O. C. D.	
Pool Undesignated ABO						Formation ABO		ARTESIA, OFFICE	
Completion Date 2-10-82		Total Depth 4354'		Flow back To 4069'		Elevation 3588'		Farm or Lease Name Charlotte Federal	
Csg. Size 4 1/2"	Wt. 10.5#	d	Set At 4350'	Perforations: From 3879' To 3971'		Well No. 3			
Tbg. Size 2 3/8"	Wt. 4.7#	d	Set At 3773'	Perforations: From open ended To		Unit B		Sec. 30	Twp. 7S
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At None		County Chaves	
Producing Thru tubing		Reservoir Temp. °F 102 @ 4354		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L	R	Gg	% CO ₂	% N ₂	% H ₂ S	Prover CHOKE		Meter Run	Days
		.65	1	1					

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							915		835		65 hr. SI
1.			14/64	860		60	860	60	790		1 hr.
2.	Choke		18/64	690		66	690	66	700		1 hr.
3.	Coeff		23/64	550		68	550	68	595		1 hr.
4.			27/64	440		68	440	68	515		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, Mhd
1	.7924	Choke	873	1.000	1.240		858
2	1.3310	Choke	703	.9943	1.240		1154
3	2.1890	Choke	563	.9924	1.240		1517
4	3.0090	Choke	453	.9924	1.240		1677
5							

NO.	P _t	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/Sbl.
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

NO.	P _t ²	P _w	P _w ²	P _e ² - P _w ²
1	848	803	645	74
2	719	713	508	211
3	608	608	370	349
4	528	528	279	440
5				

(1) $\frac{P_e^2}{P_e^2 - P_w^2} = 1.6341$

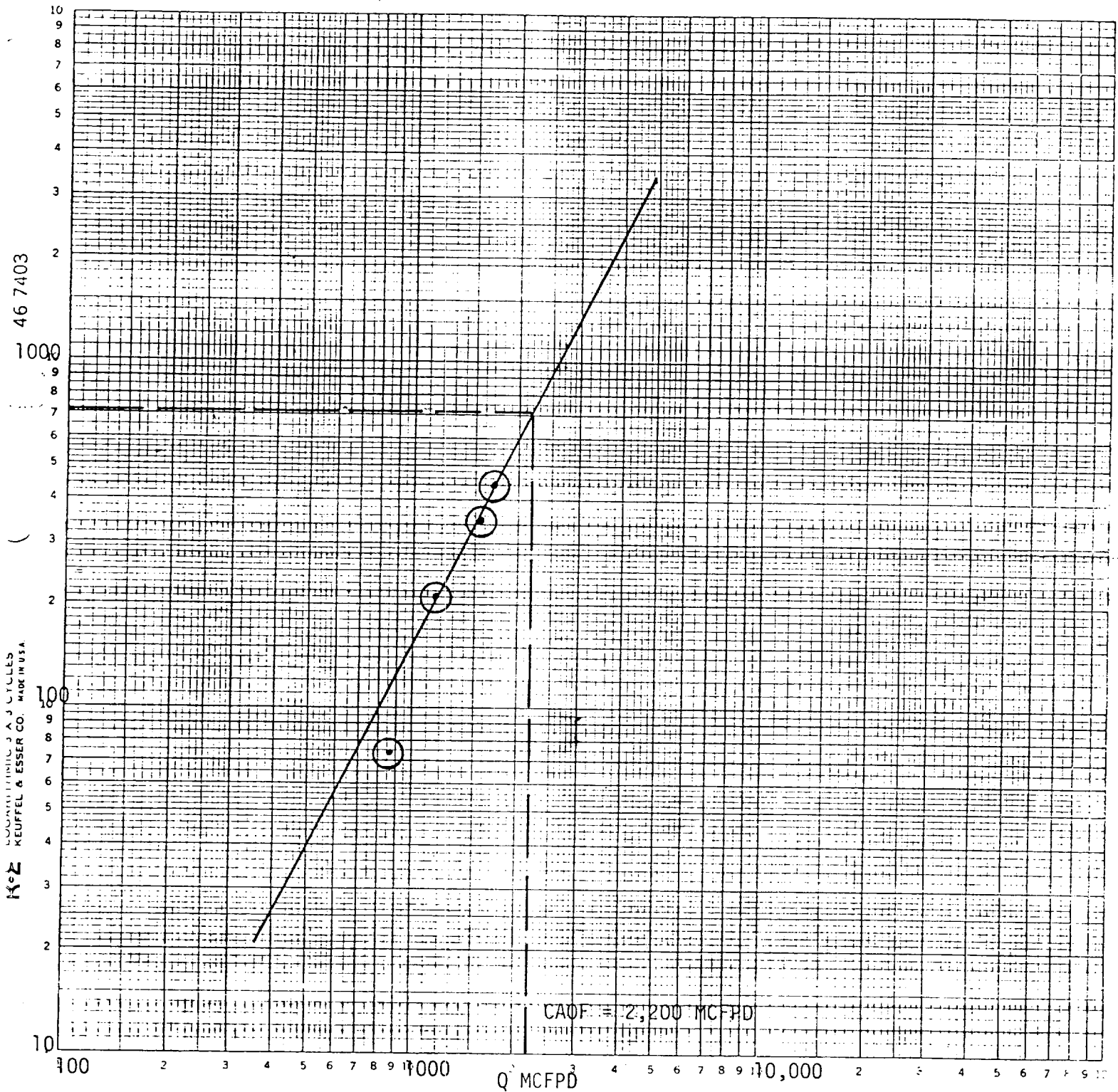
ADP = Q $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 2,200$

(2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.2846$

Posted ID's
& Comp. Book
SI
2-19-82

Absolute Open Flow <u>2,200</u>	Mhd @ 15.025	Angle of Slope θ <u>63°</u>	Slope, n <u>.51</u>
Remarks:			
Approved By Commission:		Conducted By: James Craig	Calculated By: <u>Eug 2-12-82</u> E.L. Buttross, Jr.
		Checked By:	

Mesa Petroleum Co.
Charlotte Federal #3
Chaves Co., NM
2-12-82



$$N=1/\text{Slope} = \frac{\log Q_2 - \log Q_1}{\log \text{Cycle} - \log \text{Cycle}} = \frac{\log 2600 - \log 800}{\log \text{Cycle} - \log \text{Cycle}} = 3.41 - 2.90 = .51$$

$$\theta = 63^\circ$$