

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

Form C-122
Revised 5-1-65

RECEIVED

C/SF
C-122

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 4-23-82		MAY - 7 1982	
Company Mesa Petroleum Co.				Connection UNCONNECTED			
Pool PECOS SLOPE ABO				Formation ABO		Unit O. C. D. ARTESIA, OFFICE	
Completion Date 4-23-82		Total Depth 4406'		Plug Sock TD 4336'		Elevation 3676'	
Csg. Size 4 1/2"	Wt. 10.5#	d 	Set At 4399'	Perforations: From 3668' To 3837'		Form or Lease Name HELEN FED COM	
Thq. Size 2 3/8"	Wt. 4.7#	d 	Set At 3572'	Perforations: From OPEN ENDED To		Well No. 2	
Type Well - Single - Brodenhead - G.C. or G.O. Multiple SINGLE				Packer Set At NONE		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 102 @ 4406		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 		H 		G _g .65		State NEW MEXICO	
				% CO ₂ 1			
				% N ₂ 1			
				% H ₂ S 		Prover 2" CRITICAL FLOW PROVER	
						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	
SI							915		810		72 HR SI
1.	2" X 1"			25		22	857	54	720		1 HR
2.	2" X 1"			49		28	795	56	675		1 HR
3.	2" X 1"			55		38	625	59	600		1 HR
4.	2" X 1"			70		44	470	59	550		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 _{sp}	Rate of Flow Q, Mcfd
1	17.09	FLOW PROVER	38	1.039	1.24		837
2	17.09	FLOW PROVER	62	1.032	1.24		1356
3	17.09	FLOW PROVER	68	1.022	1.24		1473
4	17.09	FLOW PROVER	83	1.016	1.24		1787
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

F _c 823 P _c ² 611					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.7700$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.3607$	
NO.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²	$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2800$			
1		733	537	140				
2		688	473	204				
3		613	360	317				
4		563	303	374				
5								

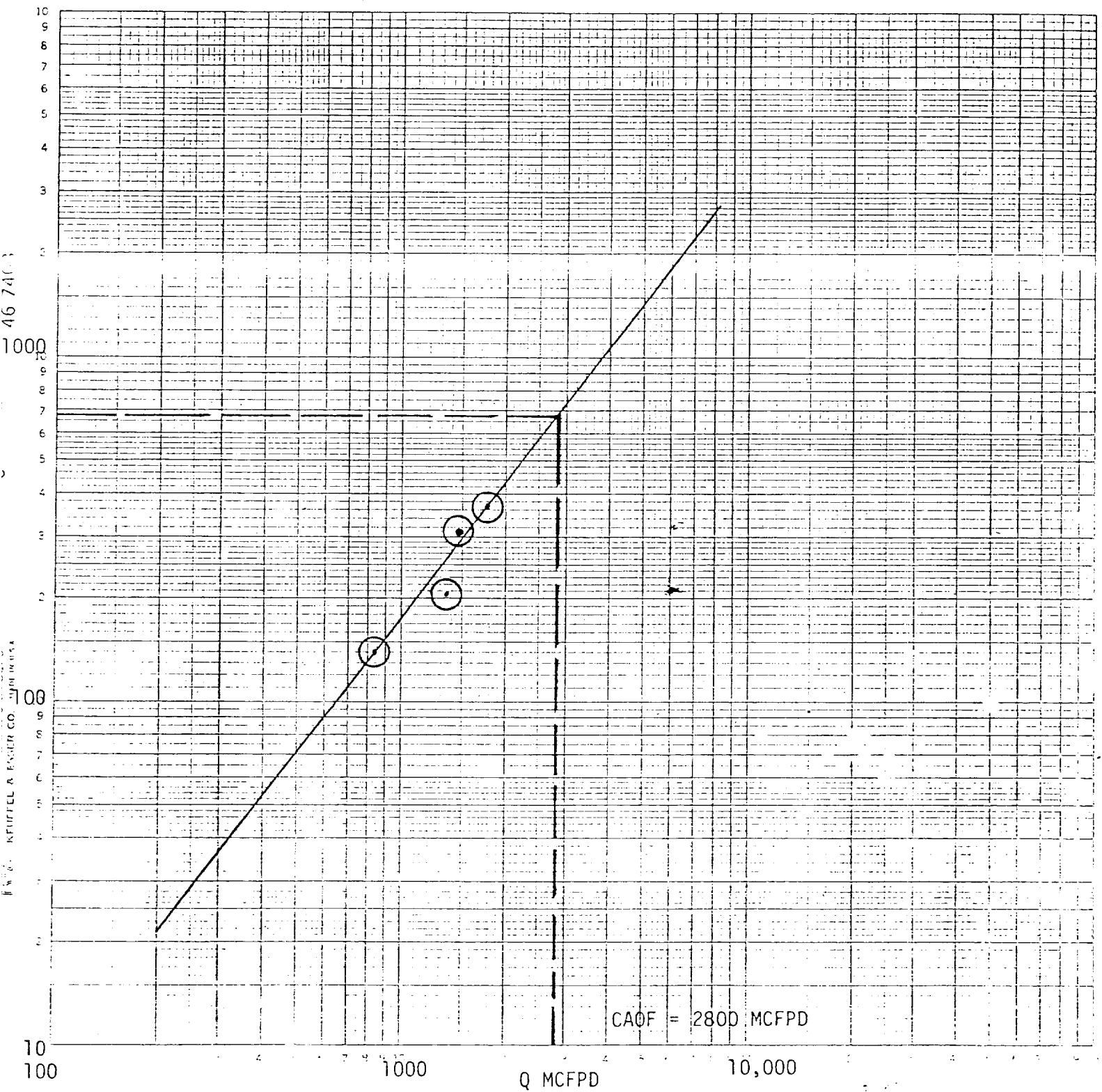
Absolute Open Flow	2800	Mcf @ 15.025	Angle of Slope @	52.4°	Slope, n	.77
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Remarks:						
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Approved By Commission:	Conducted By: JAMES COATE	Calculated By: E. J. RITTROSS JR.	Checked By:
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*Posted ID 2
+ Comp Bank
5-14-82*

MESA PETROLEUM CO.
 LEN FED COM NO. 2
 CHAVES CO., NM
 4-23-82



$$N = 1/\text{SLOPE} = \frac{\text{LOG } Q_2 - \text{LOG } Q_1}{\text{CYCLE}} = \frac{\text{LOG } 3800 - \text{LOG } 650}{\text{CYCLE}} = \frac{3.58 - 2.81}{\text{CYCLE}} = .77$$

$$\theta = 52.4^\circ$$