

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 2-24-82		APR 2 1982		
Company MESA PETROLEUM CO.					Connection Unconnected				
Pool Pecos Slope ABO					Formation ABO		Unit O. C. D. ARTESIA, OFFICE		
Completion Date 2-24-82		Total Depth 4412'		Plug Back TD 4315'		Elevation 3702'		Farm or Lease Name Helen Federal Com	
Csg. Size 4 1/2"	Wt. 10.5#	Set At 4412'	Perforations: From 3669 To 3847		Well No. 1				
Trq. Size 2 3/8"	Wt. 4.7#	Set At 3563'	Perforations: From Open ended To		Unit D 1 7S 25E				
Type Well - Single - Provenhead - G.O. or G.O. Multiple single					Packer Set At none		County Chaves		
Producing Thru tubing		Reservoir Temp. °F 101 @ 4412		Mean Annual Temp. °F 60		Buro. 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. hw	Temp. °F	Press. p.s.i.g.	Temp. °F		Press. p.s.i.g.	Temp. °F
SI							960		846		72 Hr SI
1.			14/64	920		56	920	56	820		1 hr.
2.	Choke		19/64	830		60	830	60	770		1 hr.
3.	COEFF		22/64	755		63	755	63	730		1 hr.
4.			25/64	640		64	640	64	670		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, Mscf
1	.7924	Choke	933	1.004	1.24		920
2	1.484	choke	843	1.000	1.24		1551
3	1.999	choke	768	.9971	1.24		1898
4	2.587	choke	653	.9962	1.24		2087
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mscf/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

NO.	P _r ²	P _w ²	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 3.9677$ (2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.9919$ AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 3,800$
1	833	694	44		
2	783	613	125		
3	743	552	186		
4	683	466	272		

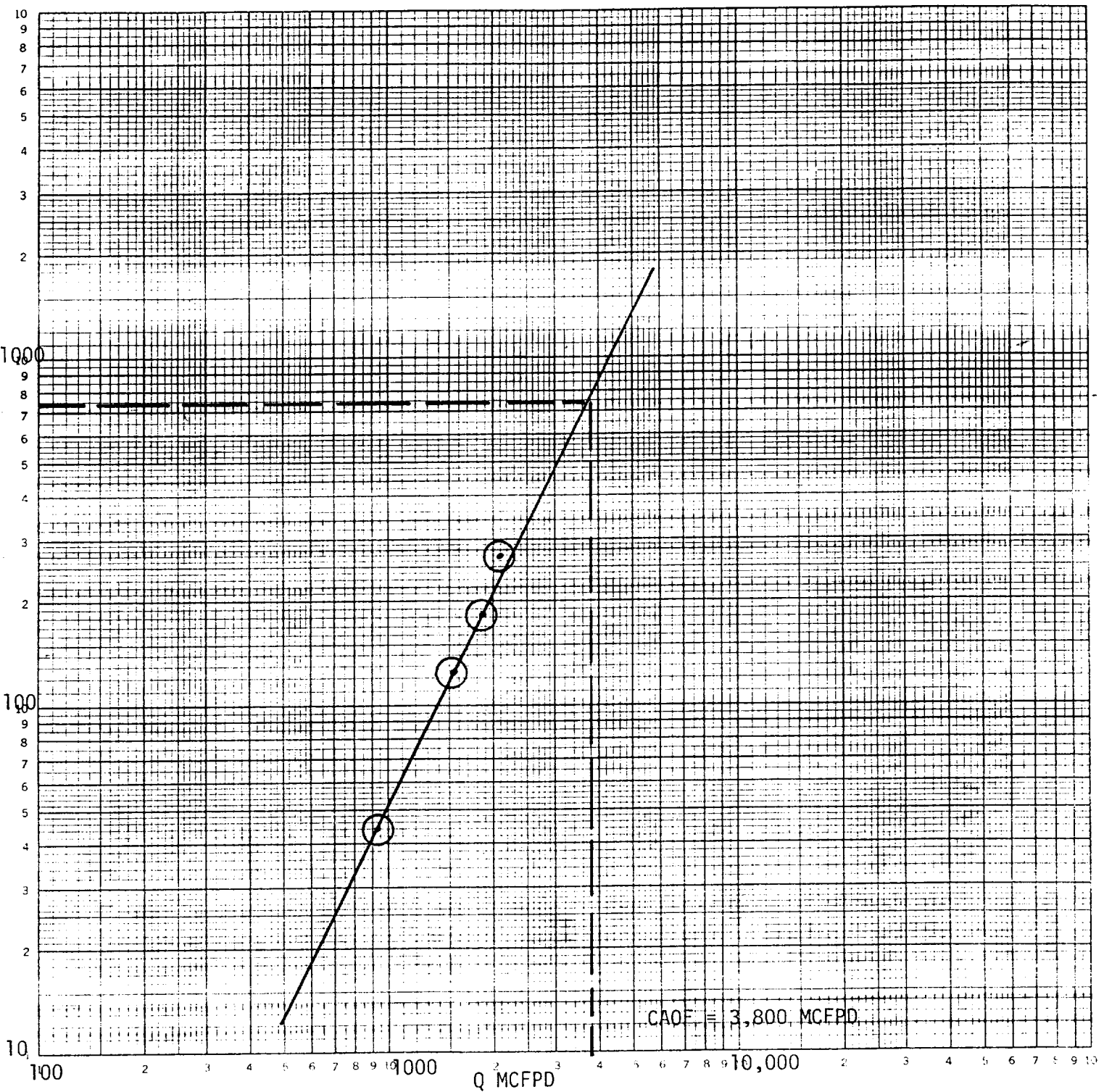
Absolute Open Flow	3,800	Mscf @ 15,025	Angle of Slope θ	63.5	Slope, n	.5
Remarks:						

Approved By Commission:	Conducted By: James Craig	Calculated By: E.L. Buttross, Jr.	Checked By:
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Mesa Petroleum Co.
 Helt Federal Com #1
 Chaves Co., NM
 2-24-82

Pc2-Pw2 Thousands
 46 7403

LOGARITHMIC 3 X 3 CYCLES
 KEUFFEL & ESSER CO. MADE IN U.S.A.



$$N = 1/\text{slope} = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{Cycle}} = \frac{\text{Log } 4300 - \text{Log } 1375}{\text{Cycle}} = 3.63 - 3.13 = .5$$

$$\theta = 63.5^\circ$$