

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

Form C-122
Revised 9-1-65

C/SF
C-122
MSGS

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 1-23-82		FEB 2 1982	
Company MESA PETROLEUM CO. ✓						Connection Unconnected			
Pool Name Pecos Steps like Gas Undesignated - ABO						Formation ABO		Unit O.C.D. ARTESIA, OFFSHORE	
Completion Date 1-23-82		Total Depth 4093		Plug Back To 4041'		Elevation 3885'		Farm or Lease Name Horse Creek Com	
Csg. Size 4 1/2"	Wt. 10.5#	d 	Set At 4090'	Perforations: From 3540' To 3680'		Well No. 1			
Tub. Size 2 3/8"	Wt. 4.7#	d 	Set At 3532'	Perforations: From open ended To		Unit B		Sec. 11	Twp. 5
Type Well - Single - Brokenhead - G.G. or G.O. Multiple single						Packer Set At None		County Chaves	
Producing Thru tubing		Reservoir Temp. °F 100° @ 4093'		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 2" ORIFICE WELL TESTER		Meter Run 	

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
5.							890		875		72 hr SI
1.	2" ORIFICE	1 1/4	6			36	810	51	800		1 hr
2.	Well	1 1/4	17.5			40	590	55	685		1 hr
3.	Tester	1 1/4	20			46	440	60	595		1 hr
4.		1 1/4	21			46	320	60	510		1 hr
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _L	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mhd
1.	561	2" ORIFICE WELL		1.0239	.9608		552
2.	1063	TESTER		1.0198	.9608		1042
3.	1160			1.0137	.9608		1130
4.	1250			1.0137	.9608		1217
5.							

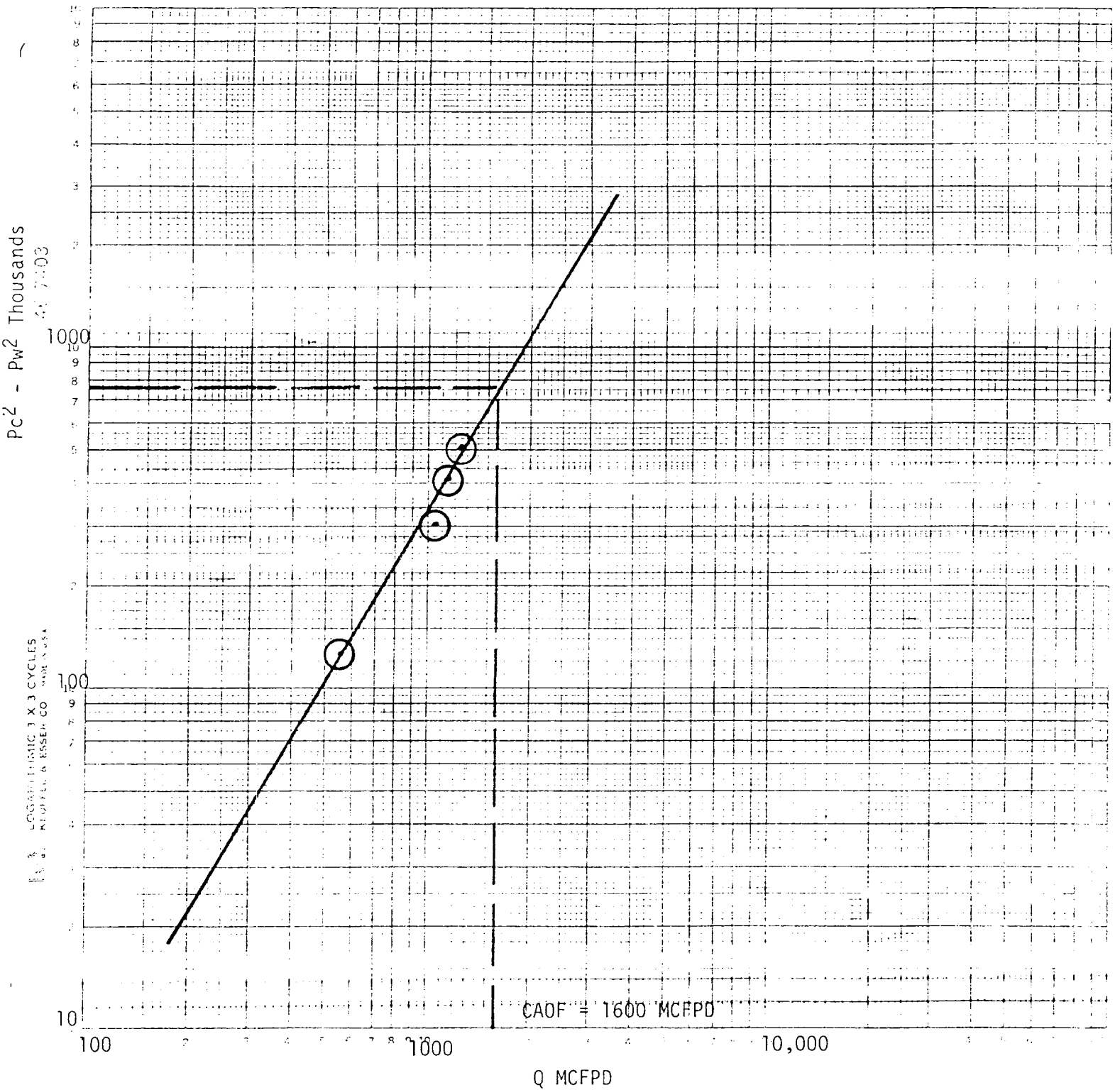
NO.	P _c	Temp. °R	T _c	Z	Gas Liquid Hydrocarbon Ratio _____ Mhd/bbl.
1.					A.P.L. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.				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

P _c 888	P _c ² 789	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5320$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2753$
NO.	P _w	P _w ²	P _c ² - P _w ²
1.	813	661	128
2.	698	487	302
3.	608	370	419
4.	523	274	515
5.			

Absolute Open Flow 1600 Mhd @ 15.025		Angle of Slope α 60.3°	Slope, n .57
Remarks: _____			
Approved By Commission: _____		Conducted By: James Craig	Calculated By: E.B. 1-29-82 E.L. Buttross, Jr.
Checked By: _____			

Posted ID-2
 + Comp Book
 SI
 2-12-82

Hess Petroleum Co.
 Horse Creek #1
 Chaves Co., NM
 1-23-82



$$N = 1/\text{slope} = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{Cycle}} = \frac{\text{Log } 1800 - \text{Log } 490}{\text{Cycle}} = \frac{3.26 - 2.69}{\text{Cycle}} = .57$$

$$\theta = 60.3^\circ$$