NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Revised 9-1-65

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C-122 File

RECEIVED
OCT 21 1980
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 10-7-80	
Company: Mesa Petroleum Co.		Connection: To be determined			
Pool: Undesignated Abo		Formation: Abo			Unit:
Completion Date: 9-16-80	Total Depth: 3500'	Plug Back TD: 3460'	Elevation: 4143' GL	Farm or Lease Name: Rock Fed	
Csg. Size: 4 1/2" / Wt.: 10.5# / d: / Set At: 3500'		Perforations: From 2876' To 3351'		Well No.: 5	
Tbg. Size: 2 3/8" / Wt.: 4.7# / d: / Set At: 2806'		Perforations: From Open ended To		Unit: B / Sec.: 18 / Twp.: 8S / Rge.: 23E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: None		County: Chaves	
Producing Thru: Tubing	Reservoir Temp. °F: 95° @ 3500'	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2	State: New Mexico	

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
2806	2806	.615	1	2		2	Orifice well tester	

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					1058		1058		72 hr SI
1.	2" orifice 3/4"	6	-	75	1002	-	1002	-	3/4 hr SI
2.	well 3/4"	14	-	75	958	-	958	-	3/4 hr SI
3.	tester 1"	15	-	75	790	-	792	-	3/4 hr SI
4.	1 1/4"	9	-	75	660	-	665	-	3/4 hr SI
5.									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	181	2" orifice well		.9859	.9877	1	176
2.	299	tester		.9859	.9877	1	291
3.	568			.9859	.9877	1	553
4.	708			.9859	.9877	1	689
5.							

NO.	P_t	Temp. °R	T_f	Z
1.				
2.				
3.				
4.				
5.				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas _____ XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX _____
Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
Critical Temperature _____ R _____ R

P_c 1058 P_c^2 1119

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		1002	1004	115
2		958	918	201
3		792	627	492
4		665	442	677
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 5.5672$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.3261$

Pool ID-2
Comp Book
10-24-80

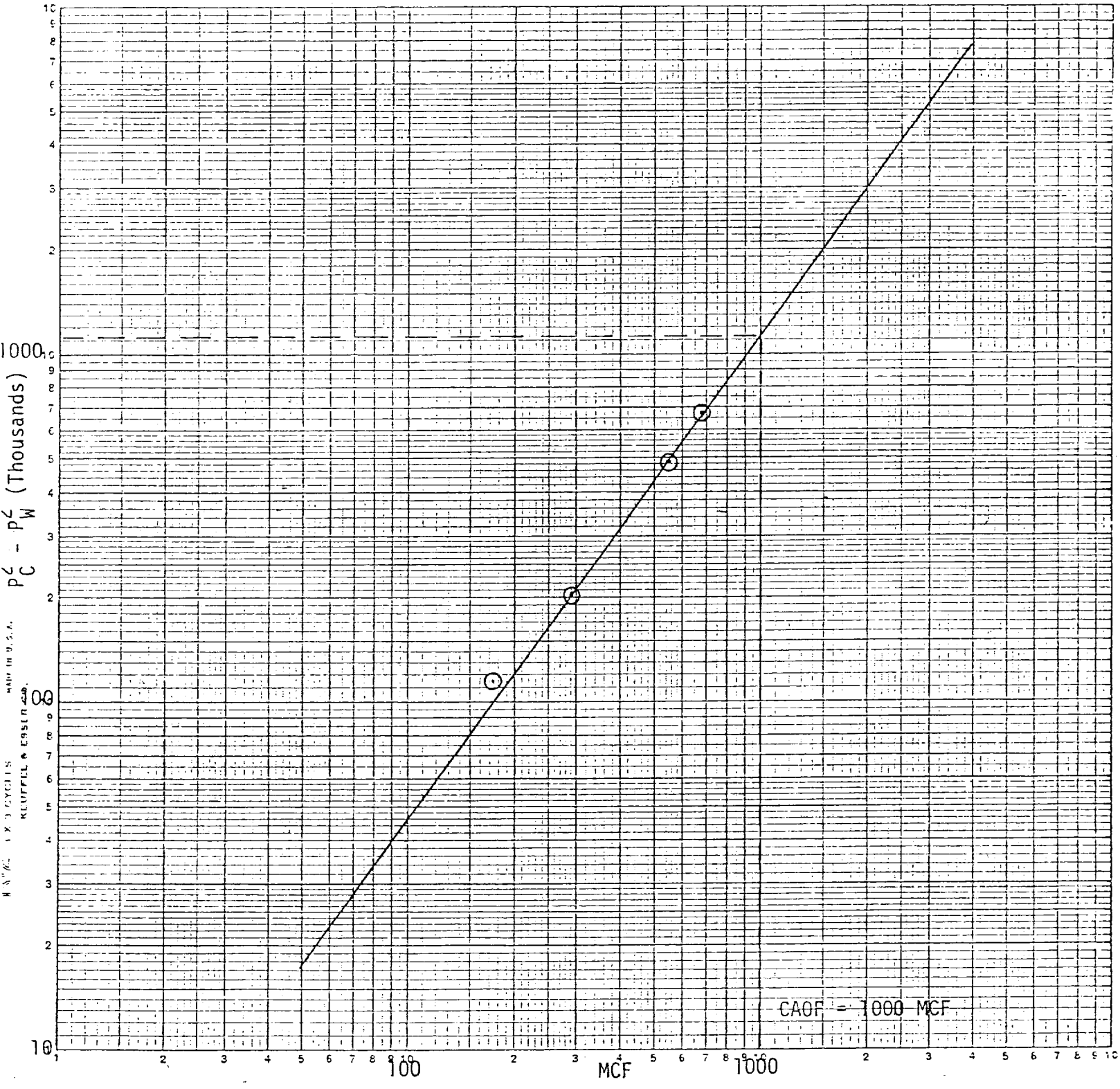
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1,000$

Absolute Open Flow 1,000 Mcfd @ 15.025 | Angle of Slope θ 55.0° | Slope, n .70

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	E. L. Buttross, Jr.	E. L. Buttross, Jr.	

Rock Federal No. 5
Sec 18, T8S, R23E
Chaves Co., New Mexico
10-7-80



$$1/\text{slope} = N = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{cycle}} = \frac{\text{Log } 900 - \text{Log } 178}{\text{cycle}} = 2.95 - 2.25 = .70$$

$$\theta = 55.0°$$