NE MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

C/SP
D...
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RECEIVED
FEB 23 1981
O. C. D
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 2-3-81	
Company: MESA PETROLEUM CO.		Connection: TO BE DETERMINED			Unit
Pool: UNDESIGNATED ABO		Formation: ABO			
Completion Date: 2-3-81	Total Depth: ~~3440'~~ 3450		Plug Back TD: 3320'	Elevation: 4104'	Farm or Lease Name: BARN FED
Csg. Size: 4 1/2 / Wt.: 10.5 / d: / Set At: 3440'			Perforations: From 2771' To 2891'		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: / Set At: 2854			Perforations: From OPEN ENDED To		Unit: I / Sec.: 12 / Twp.: 8S / Rge.: 22E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: NONE		County: CHAVES
Producing Thru: TUBING	Reservoir Temp. °F: 95° @ 3440	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
2854	2854	.62	1	2	-	2"	ORIFICE WELL TESTER	

	FLOW DATA				TUBING DATA		CASING DATA		
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	Duration of Flow
SI						1000		1000		72 hr.
1.	2" ORIFICE	1 1/4	9.5	-	50	920	80	930	-	1 hr.
2.	WELL	1 1/4	13	-	50	860	80	865	-	1/2 hr.
3.	TESTER	1 1/4	17.5	-	50	800	80	805	-	1/2 hr.
4.		1 1/4	23	-	50	670	80	685		3/4 hr.
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	731	2" ORIFICE WELL TESTER		1.0098	.9837	-	726
2.	882			1.0098	.9837	-	876
3.	1063			1.0098	.9837	-	1056
4.	1348			1.0098	.9837	-	1339
5.							

NO.	P_t	Temp. °R	T_r	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 1000 P_c^2 1000

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		930	865	135
2		865	748	252
3		805	648	352
4		685	469	531
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.9683$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.3182$

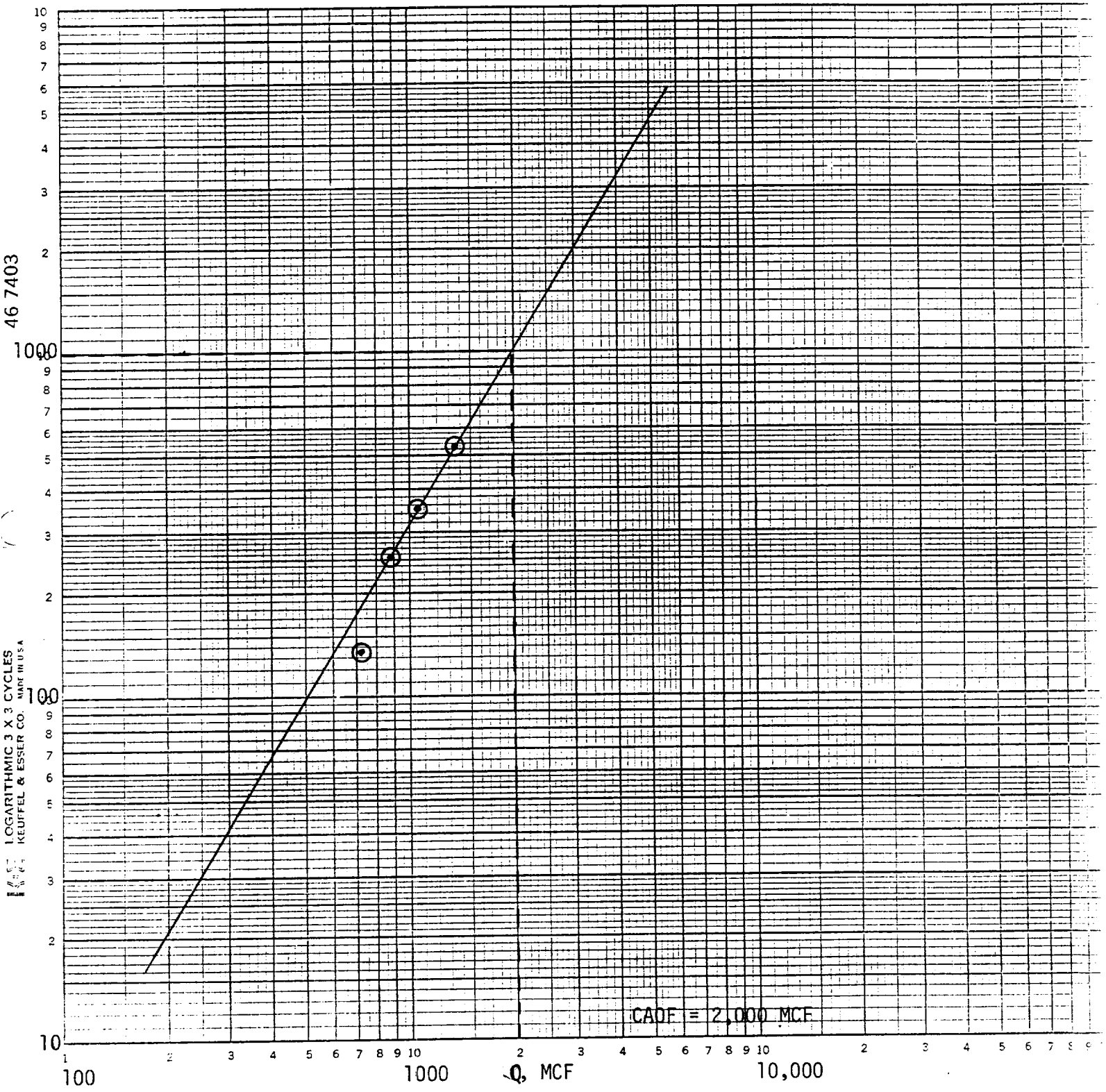
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2,000$

Absolute Open Flow 2,000 Mcfd @ 15.025 Angle of Slope θ 58.6° Slope, n .61

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	E. L. BUTTROSS, JR.	E. L. BUTTROSS, JR.	

BARN FEDERAL NO.1
S . 12, T8S, R22E
CHAVES CO., NEW MEXICO
2-3-81



$$n = 1/\text{Slope} = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{Cycle}} = \frac{\text{Log } 2000 - \text{Log } 500}{\text{Cycle}} = 330 - 2.69 = .61$$

$$\theta = 58.6°$$