NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
AUG 26 1981
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 8-13-81	
Company: Mesa Petroleum Co.	Connection: UNCONNECTED			Unit:
Pool: UNDESIGNATED ABO	Formation: ABO			
Completion Date: 8-13-81	Total Depth: 4431'	Plug Back TD: 4371'	Elevation: 3962	Farm or Lease Name: DORIS FEDERAL
Csg. Size: 4 1/2" / Wt.: 10.5 / d: / Set At: 4431		Perforations: From 3645 To 3932		Well No.: 1
Tbg. Size: 2 3/8" / Wt.: 4.7 / d: / Set At: 3575		Perforations: From OPENED ENDED To		Unit: O / Sec.: 14 / Twp.: 5S / Rge.: 24E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE		Packer Set At: NONE		County: CHAVES
Producing Thru: TUBING	Reservoir Temp. °F: 105° @ 4431	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
3575	3575	.65	1	2		CHOKE		

	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						960		820		72hrs. SI
1.	CHOKE	16/64	900	--	75	900	75	785		1hr.
2.	COEFFICIENT	20/64	845	--	75	845	75	758		1hr.
3.		23/64	640	--	75	640	75	723		1hr.
4.		26/64	530	--	75	530	75	707		1hr.
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	1.050	CHOKE	900	.9859	1.240	--	1155
2.	1.645	CHOKE	845	.9859	1.240	--	1699
3.	2.189	CHOKE	640	.9859	1.240	--	1713
4.	2.794	CHOKE	530	.9859	1.240	--	1810
5.							

NO.	P_r	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 _____ XXXXXXXX
Specific Gravity Flowing Fluid XXXXX _____
Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
Critical Temperature _____ R _____ R

P_c 820 P_c^2 672

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		785	616	56
2		758	575	97
3		723	523	149
4		707	500	172
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.9070$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.9776$

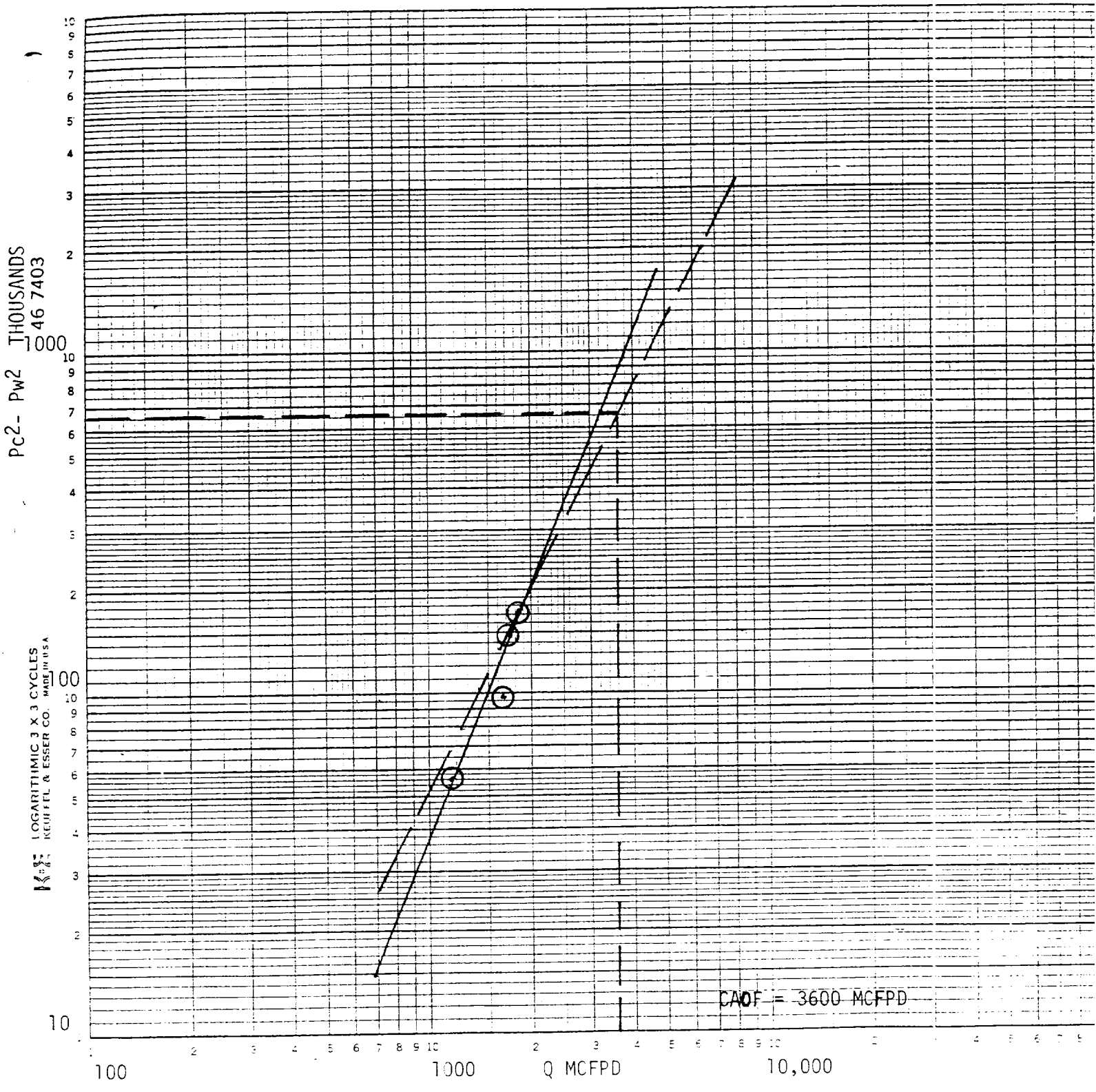
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3,600$

Absolute Open Flow 3,600 Mcfd @ 15.025 Angle of Slope θ 63.5° Slope, n .5

Remarks: PLOT OF $P_c^2 - P_w^2$ vs. Q YIELDED A STRAIGHT LINE WITH A θ GREATER THAN 63.5°
- DREW 63.5° LINE THROUGH HIGHEST POINT.

Approved By Commission: | Conducted By: | Calculated By: E&B | Checked By:

MESA PETROLEUM CO.
DORRIS FEDERAL NO. 1
SEC. 14, T5S, R24E
CHAVES CO., NEW MEXICO
8-13-81



ASSUMED θ =63.5° and N=.5. ACTUAL θ GREATER THAN 63.5°.