

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED BY
 SEP 09 1983
 O. C. D.
 ARTESIA, OFFICE

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 9-6-83	
Company MESA PETROLEUM CO.		Connection UNCONNECTED	
Pool WEST PECOS SLOPE ABO		Formation ABO	
Completion Date 9-2-83	Total Depth 3,163'	Plug Back TD 3,090'	Elevation 4,120'
Coq. Size 4 1/2	Wt. 10.5#	Set At 3163	Perforations: From 2804 To 2952
Trq. Size 2 3/8	Wt. 4.7#	Set At 2975	Perforations: From Open Ended To
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE		Packer Set At NONE	County CHAVES
Producing Thru TUBING	Reservoir Temp. *F 95° @ 3163	Mean Annual Temp. *F 60	Baro. Press. - P ₀ 13.2
L 2975	H 2975	G _g .65	% CO ₂ 1
		% N ₂ 1	% H ₂ S
		Prover 2" CRITICAL FLOW PROVER	Meter Run Taps
Farm or Lease Name CAROL FEDERAL		Well No. 5	
Unit F	Soc. 1	Twp. 7S	Rye. 22E
State NEW MEXICO		County CHAVES	

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	Duration of Flow
SI							840		865		72 hr SI
1.	2" x 1"			65	-	45	740	88	760	-	1 hr
2.	2" x 1"			85	-	54	535	88	635	-	1 hr
3.	2" x 1"			87	-	58	400	90	500	-	1 hr
4.	2" x 1"			90	-	67	300	85	400	-	1 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	17.09	Flow Prover	78	1.015	1.24		1677
2	"	"	98	1.006	1.24		2089
3	"	"	100	1.002	1.24		2123
4	"	"	103	.9981	1.24		2178
5							

NO.	P ₁	Temp. *R	T ₁	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ X 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

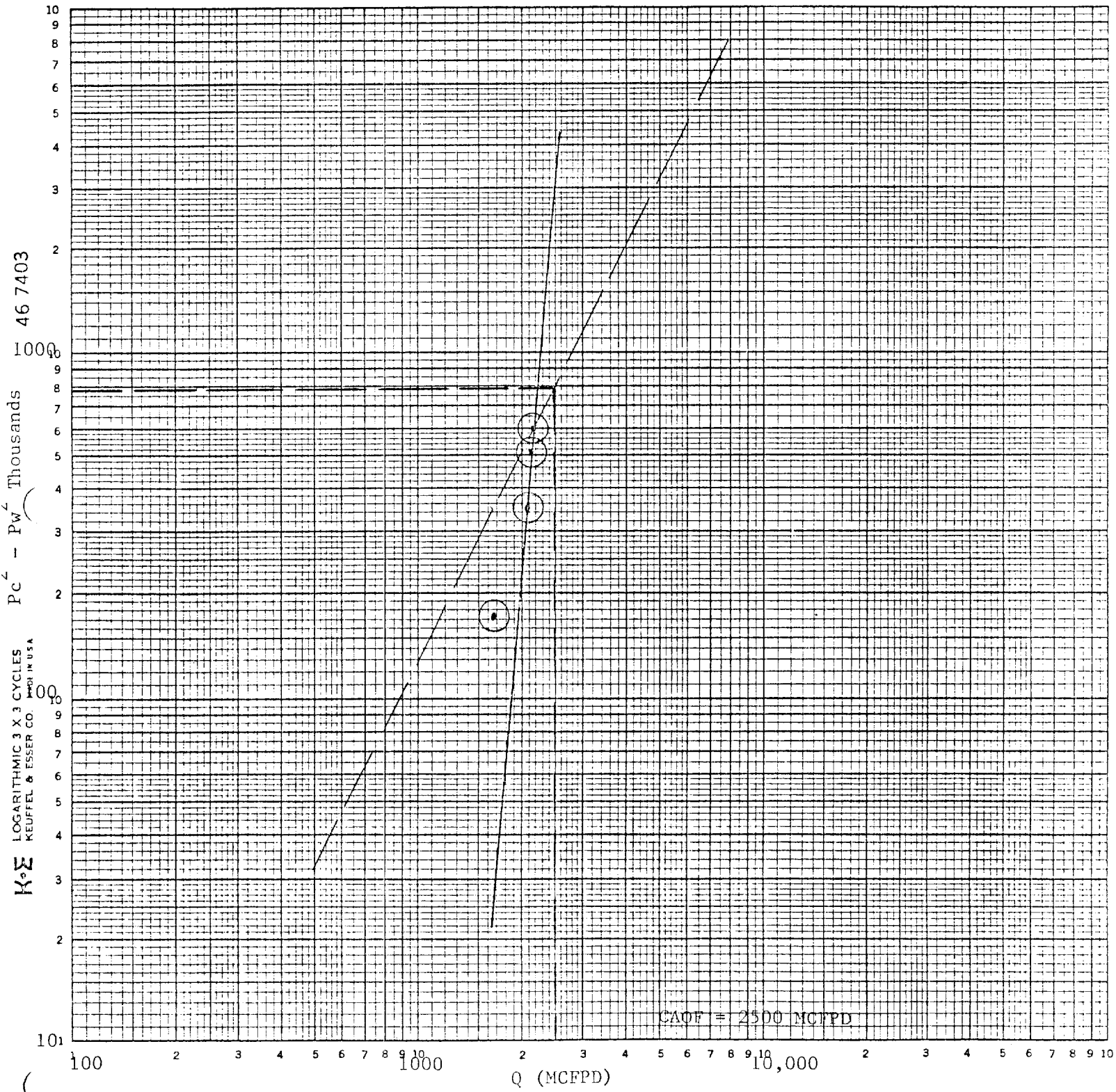
P _c 878	P _c ² 771	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.285$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1335$
NO.	P _w	P _w ²	P _c ² - P _w ²
1	773	598	173
2	648	420	351
3	513	263	508
4	413	171	600
5			

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,500$

Absolute Open Flow 2,500 Mcfd @ 15.025 Angle of Slope 63.5° Slope, n .5

Remarks: Plot of P_c² - P_w² vs Q yielded a straight line with a θ greater than 63.5°. Drew 63.5° line through highest point.

Approved By Division	Conducted by: JAMES CRAIG	Calculated By: E. L. BUTTROSS, JR.	Checked by:
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CAOF = 2500 MCFPD

Assumed $N = .5$ and $\theta = 63.5^\circ$

K-02 LOGARITHMIC 3 X 3 CYCLES KEUFFEL & ESSER CO. MADE IN U.S.A.
 Pc - Pw Thousands 46 7403