NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

C-105 C-122 USGS

RECEIVED
JAN 15 1982
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special		Test Date: 1-3-82	
Company: MESA PETROLEUM CO.	Connection: UNCONNECTED		Unit
Pool: ~~UNDESIGNATED~~ Pecos Slope ABO	Formation: ABO		
Completion Date: 1-3-82	Total Depth: 4100'	Plug Back TD: 4041'	Elevation: 3728'
Farm or Lease Name: DAVIS			
Csg. Size: 4-1/2" / Wt.: 10.5# / d: / Set At: 4097'		Perforations: From 3706' To 3954'	Well No.: 3
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: / Set At: 3606'		Perforations: From OPEN ENDED To	Unit: D / Sec.: 12 / Twp.: 7 / Rge.: 25
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE		Packer Set At: NONE	County: CHAVES
Producing Thru: TUBING	Reservoir Temp. °F: 100 @ 4100	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
		.65	1	1		CHOKE		

FLOW DATA / TUBING DATA / CASING DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI							910		855		72 hr. SI
1.	CHOKE		14/64	860		50	860	50	815		1 hr.
2.	COEFF		20/64	710		54	710	50	690		1 hr.
3.			23/64	610		57	610	57	625		1 hr.
4.			29/64	390		58	390	58	600		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	.7924	CHOKE	873	1.010	1.240		866
2	1.645	CHOKE	723	1.006	1.240		1483
3.	2.189	CHOKE	623	1.003	1.240		1696
4.	3.460	CHOKE	403	1.002	1.240		1723
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 _____ XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX _____
Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
Critical Temperature _____ R _____ R

P_c 868 P_c^2 753

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		828	686	67
2		703	494	259
3		638	407	346
4		613	376	377
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.9973$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.4429$

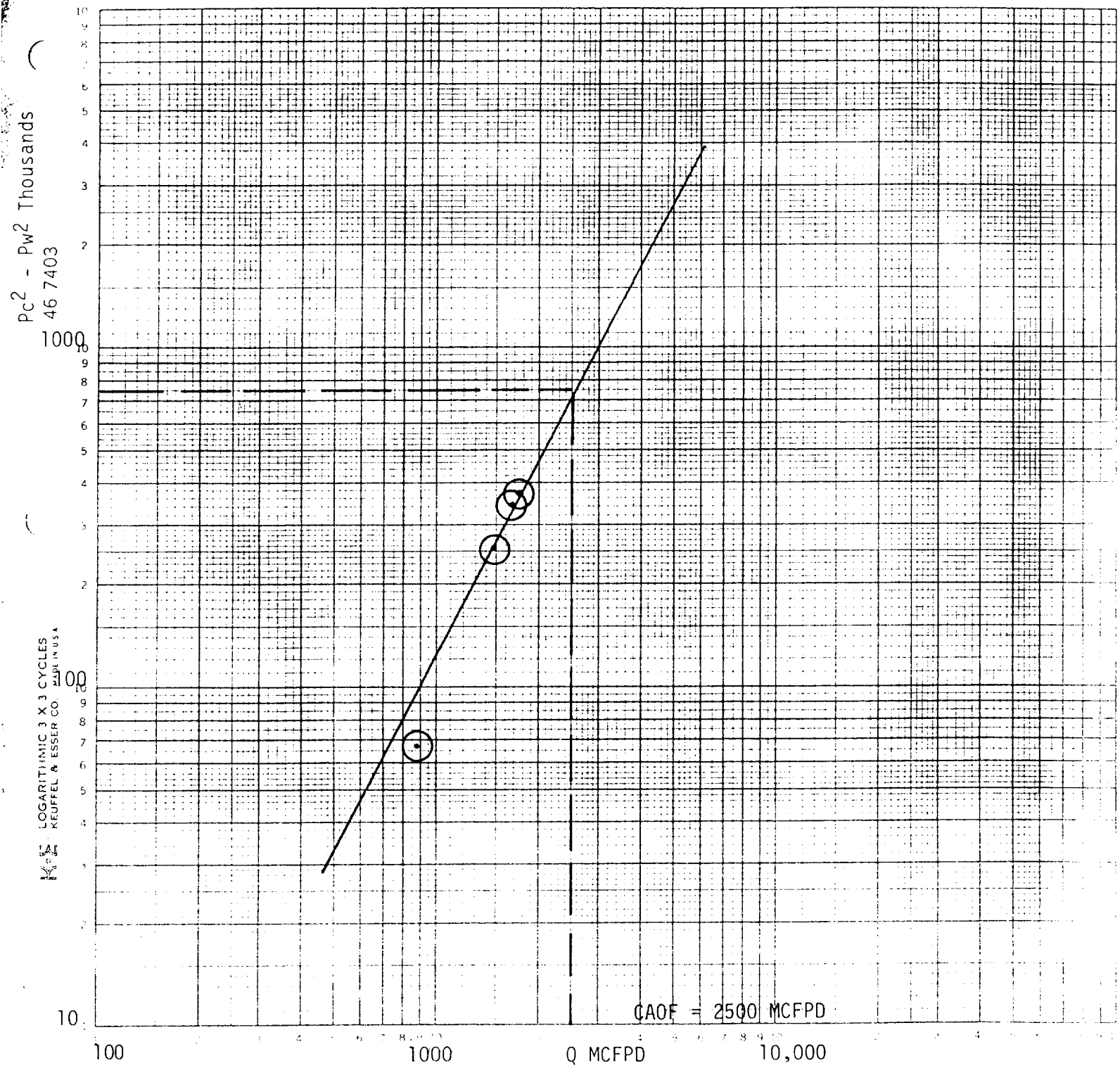
$AOF = Q\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2500$

Absolute Open Flow 2500 Mcfd @ 15.025 Angle of Slope θ 62.1° Slope, n .53

Remarks:

Approved By Commission:	Conducted By:	Calculated By: EB 1-6-82	Checked By:
	JAMES CRAIG	E.L. BUTTROSS, JR.	

MESA PETROLEUM CO.
DAVIS #3
1-3-82



$$N = 1/\text{SLOPE} = \frac{\text{LOG } Q_2 - \text{LOG } Q_1}{\text{CYCLE}} = \frac{\text{LOG } 3000 - \text{LOG } 900}{\text{CYCLE}} = 3.48 - 2.95 = .53$$

$\theta = 62.1°$