NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 9-1-65

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

FEB 23 1981

O. C. D.

ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 2-4-81	
Company: MESA PETROLEUM CO.	Connection: TO BE DETERMINED			
Pool: UNDESIGNATED ABO	Formation: ABO			Unit
Completion Date: 2-4-81	Total Depth: 4500'	Plug Back TD: 4457'	Elevation: 4031'	Farm or Lease Name: STANCEL FEDERAL
Csg. Size: 4 1/2 / Wt.: 10.5 / d / Set At: 4500'		Perforations: From 3667' To 3932'		Well No.: 3
Tbg. Size: 2 3/8" / Wt.: 4.7 / d / Set At: 3802'		Perforations: From OPEN ENDED To		Unit: K / Sec.: 22 / 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: 100° @ 4500	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: New Mexico
L: 3802 / H: 3802	Gg: .68	% CO_2: -	% N_2: 7	% H_2S:
Prover: CHOKE	Meter Run:	Taps:		

	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					900		890		72 HR.
1.	CHOKE 22/64	750	-	70	750	70	780	-	1 HR.
2.	COEFFICIENTS 24/64	690	-	70	690	70	720	-	1/2 HR.
3.	28/64	600	-	70	600	70	650	-	3/4 HR.
4.	31/64	560	-	70	560	70	620	-	1/2 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	1.999	CHOKE	750	.9905	1.213	-	1801
2.	2.388	CHOKE	690	.9905	1.213	-	1980
3.	3.231	CHOKE	600	.9905	1.213	-	2329
4.	3.942	CHOKE	560	.9905	1.213	-	2652
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 890 P_c^2 792

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		780	608	184
2		720	518	274
3		650	423	369
4		620	384	408
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.8905$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.1022$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4,100$

Absolute Open Flow 4,100 Mcfd @ 15.025

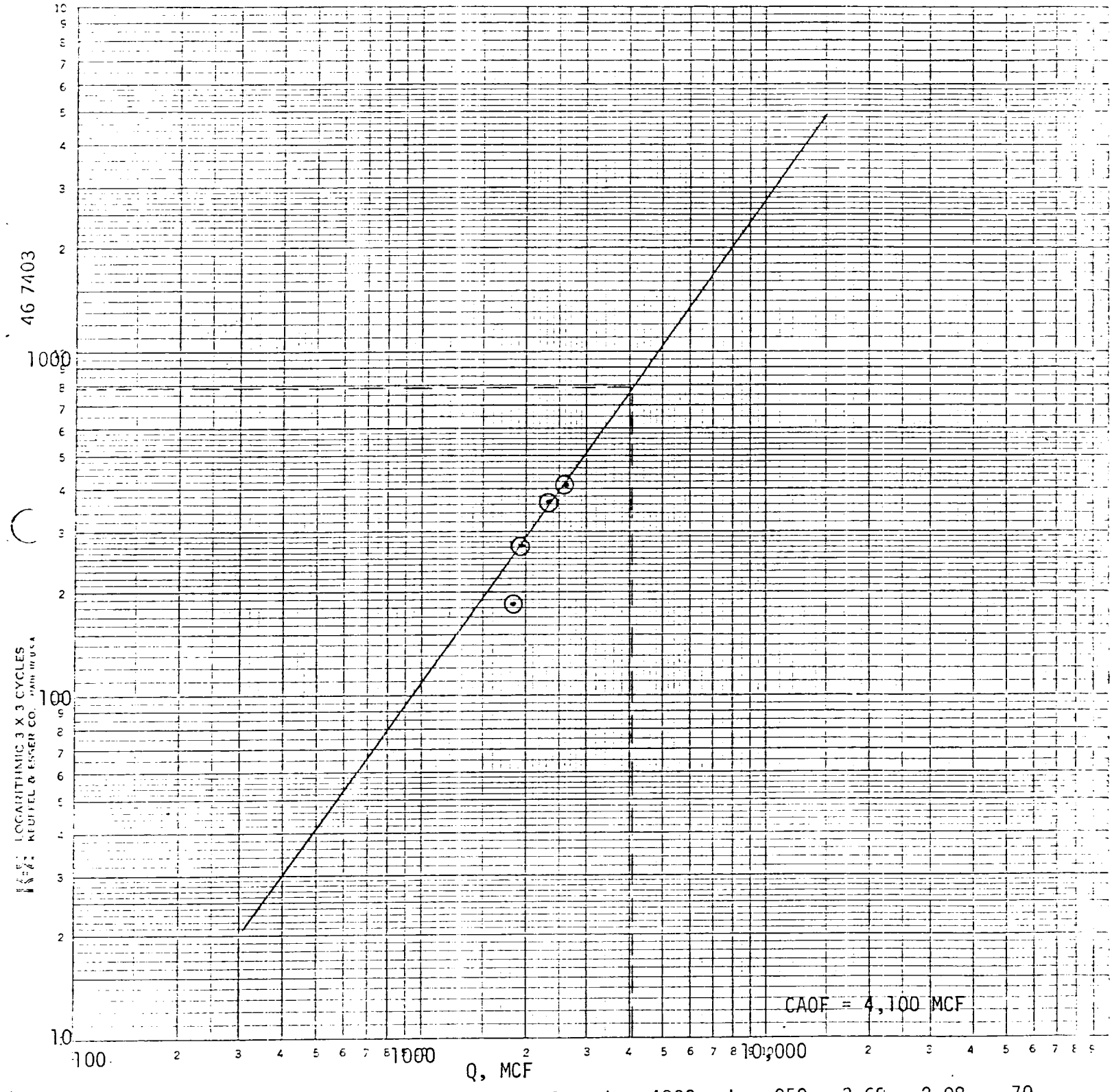
Angle of Slope θ 55°

Slope, n .70

Remarks: _____

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

Mesa Petroleum Co.
Stancel Federal #3
22, T5S, R24E
Chaves County, New Mexico
2-4-81



$$1/\text{slope} = N = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{Cycle}} = \frac{\text{Log } 4800 - \text{Log } 950}{\text{Cycle}} = 3.68 - 2.98 = .70$$

$\theta = 55°$