NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
FEB 24 1982
O. C. D.
ARTESIA, OFFICE

C/SF C-122

Type Test: [X] Initial [ ] Annual [ ] Special	Test Date: 1-23-82		
Company: MESA PETROLEUM CO.	Connection: Unconnected		
Pool: ~~Undesignated~~ ABO	Formation: ABO	Unit:	
Completion Date: 1-23-82	Total Depth: 4174'	Plug Back TD: 4114'	Elevation: 3982'
Farm or Lease Name: Huggins Federal			
Csg. Size: 4 1/2" / Wt.: 10.5# / d: / Set At: 4174'	Perforations: From 3576' To 3824.5	Well No.: 3	
Tbg. Size: 2 3/8 / Wt.: 4.7# / d: / Set At: 3482'	Perforations: From open ended To	Unit: F / Sec.: 15 / Twp.: 5 / Rge.: 24	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: single	Packer Set At: None	County: Chaves	
Producing Thru: tubing	Reservoir Temp. °F: 101°@ 4174	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2
State: New Mexico			
L:	H:	Gg: .65	% CO_2: 1
% N_2: 1	% H_2S:	Prover: 2" Orifice Well Tester	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							865		860		72 hr SI
1.	2" Orifice		1¼	8	30		800	58	780		1 hr
2.	Well		1¼	14.5	40		690	60	695		1 hr
3.	Tester		1¼	26	36		540	64	630		1 hr
4.			1¼	28	40		400	64	590		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.	661	2" Orifice Well		1.0302	.9608		654
2.	944	Tester		1.0198	.9608		925
3.	1485			1.0239	.9608		1461
4.	1538			1.0198	.9608		1507
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 XXXXXX _____
Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
Critical Temperature _____ R _____ R

P_c 873 P_c^2 762

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		793	629	133
2		708	501	261
3		643	413	349
4		608	370	392
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.9439$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.7133$

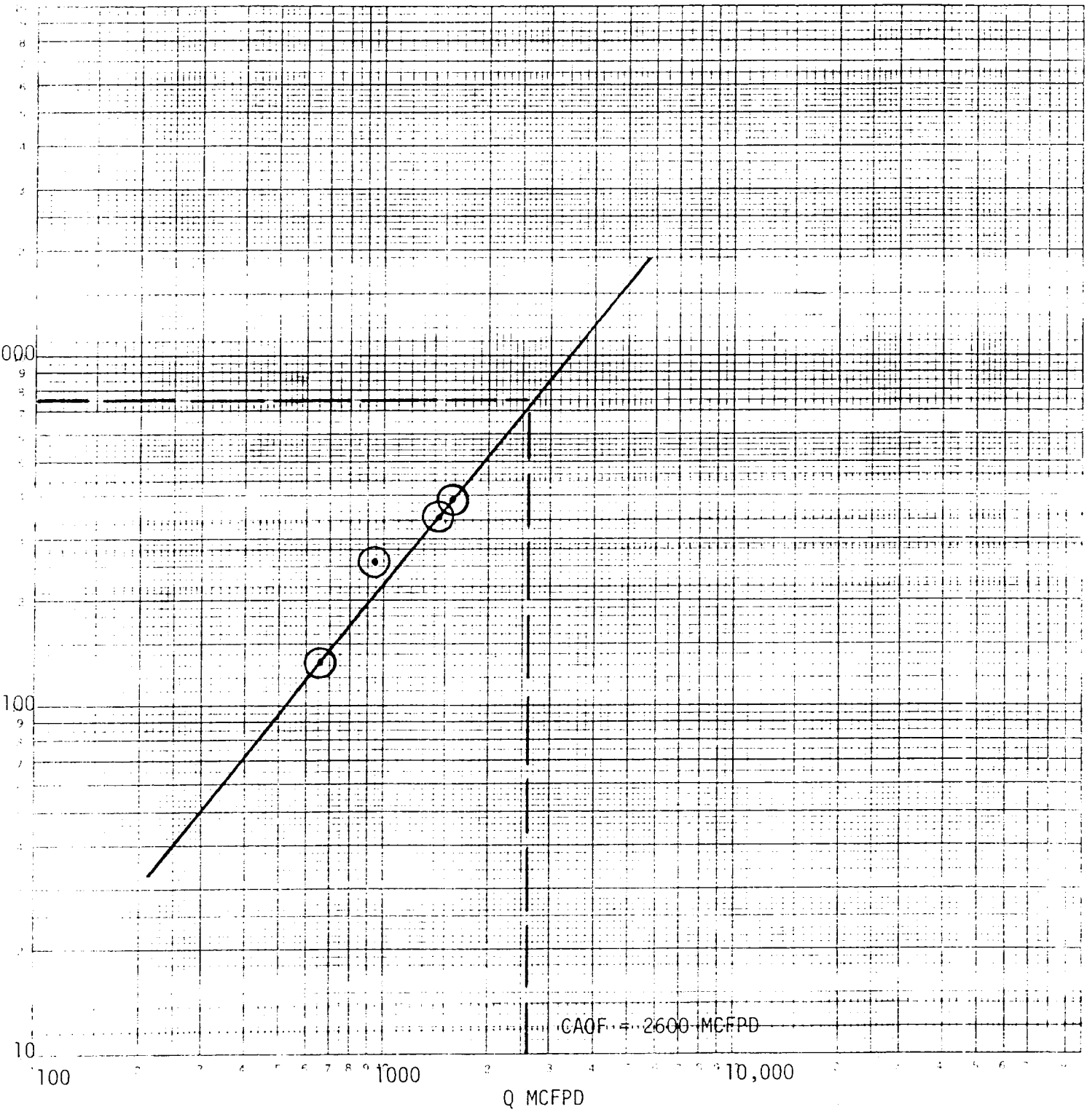
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2600$

Absolute Open Flow 2600 Mcfd @ 15.025 Angle of Slope θ 50.9° Slope, n .81

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	James Craig	E.L. Buttross, Jr. EBB 1-27-82	

'uggins Federal #3
.haves Co., NM
1-23-82



$$N = 1/\text{slope} = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{Cycle}} = \frac{\text{Log } 3400 - \text{Log } 520}{\text{Cycle}} = 3.53 - 2.72 = .81$$

$\theta = 50.9°$

Huggins