

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-29-81		OCT 13 1981	
Company Mesa Petroleum Co. ✓				Connection UNCONNECTED				O. C. D. ARTESIAL, G. G. G.	
Pool UNDESIGNATED ABO				Formation ABO				Unit	
Completion Date 9-29-81		Total Depth 4300'		Plug Back TD 4227'		Elevation 4172'		Farm or Lease Name JESS FEDERAL	
Csg. Size 4 1/2	Wt. 10.5#	d	Set At 4300'	Perforations: From 3703' To 3873'		Well No. 3			
Tbg. Size 2 3/8	Wt. 4.7#	d	Set At 3599'	Perforations: From OPEN ENDED To		Unit Sec. Twp. Rge. 0 1 6S 24E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE						Packer Set At NONE		County CHAVES	
Producing Thru TUBING		Reservoir Temp. °F 101 @ 4300		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State NEW MEXICO	
L 3599	H 3599	Gg .65	% CO ₂ 1	% N ₂ 1	% H ₂ S	Prover 2" ORIFICE WELL TESTER	Meter Run	Taps	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
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
SI							600		580		65 HR SI
1.	2" ORIFICE	3/4	15			75	530	84	515		1 HR
2.	WELL	3/4	28			80	450	85	445		1 HR
3.	TESTER	3/4	33			80	390	87	380		1 HR
4.		3/4	36			80	320	88	315		1 HR
5.											

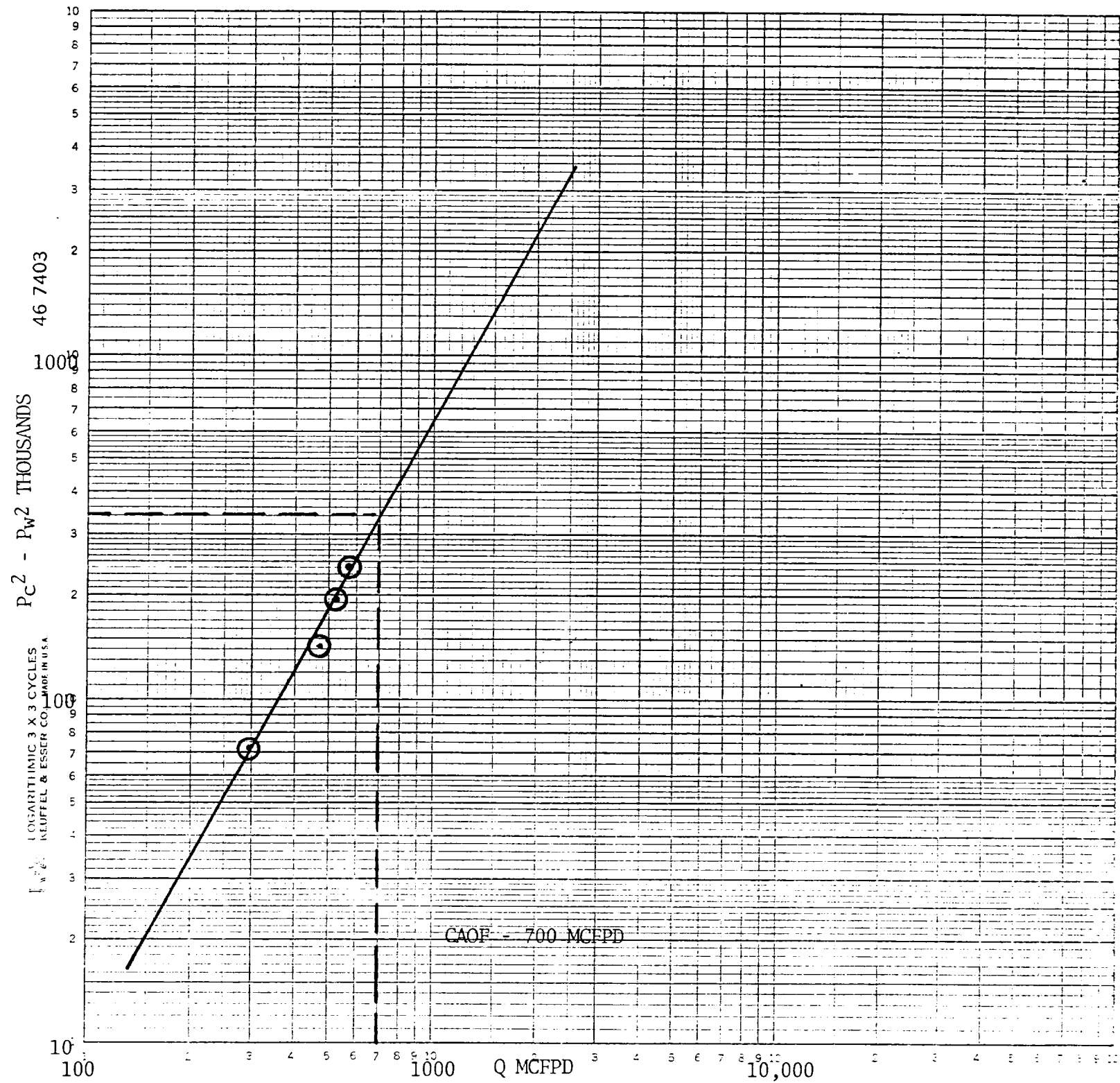
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	312	2" ORIFICE		.9859	.9608		296
2.	497	WELL TESTER		.9813	.9608		469
3.	557			.9813	.9608		525
4.	595			.9813	.9608		561
5.							

NO.	P _t	Temp. °R	T _f	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
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 593	P _c ² 352	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.4426$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2188$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		528	279	73
2		458	210	142
3		393	154	198
4		328	108	244
5				

Absolute Open Flow 700 _____ Mcfd @ 15.025		Angle of Slope @ 61.6°	Slope, n .54
Remarks: _____			
Approved By Commission:		Conducted By: JAMES CRAIG	Calculated By: E. L. BUTTROSS, JR.
		Checked By:	

M A PETROLEUM CO.
 J SS FEDERAL NO. 3
 SEC 1, T6S, R24E
 CHAVES COUNTY, NEW MEXICO
 9-29-81



$$N = 1/\text{SLOPE} = \frac{\text{LOG } Q_2 - \text{LOG } Q_1}{\text{CYCLE}} = \frac{\text{LOG } 1270 - \text{LOG } 360}{\text{CYCLE}} = 3.10 - 2.56 = .54$$

$$\theta = 61.6^\circ$$