C/S r File

OIL CONSERVATION DIVISIO

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
DEC 9 1982
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 12-5-82	
Company: Mesa Petroleum Co.	Connection: Unconnected			
Pool: ~~Undesignated~~ W. Pecos Slope Abo	Formation: ABO			Unit
Completion Date: 12-5-82	Total Depth: 3200'	Plug Back TD: 3121'	Elevation: 3912'	Farm or Lease Name: Iris State
Csg. Size: 4 1/2 / Wt.: 10.5# / d: / Set At: 3200'	Perforations: From 2819' To 2854'			Well No.: 3
Tbg. Size: 2 3/8 / Wt.: 4.7# / d: / Set At: 2802'	Perforations: From open ended To			Unit: 0 Sec.: 21 Twp.: 7S Rge.: 23E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: None			County: Chaves
Producing Thru: Tubing	Reservoir Temp. °F: 99 @ 3200	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		2" Critical Flow Prover		

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					775		777		72 hr. SI
1.	2" X 1"	21		38	725	54	735		1 hr.
2.	2" X 1"	49		42	640	64	665		1 hr.
3.	2" X 1"	68		49	540	67	590		1 hr.
4.	2" X 1"	81		54	445	71	520		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	34	1.022	1.24		736
2.	17.09	Flow Prover	62	1.018	1.24		1337
3.	17.09	Flow Prover	81	1.011	1.24		1735
4.	17.09	Flow Prover	94	1.006	1.24		2003
5.							

NO.	P_t	Temp. °R	T_t	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 790 P_c^2 624

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		748	560	64
2		678	460	164
3		603	364	260
4		513	263	361
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.7285$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.3292$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2,700$

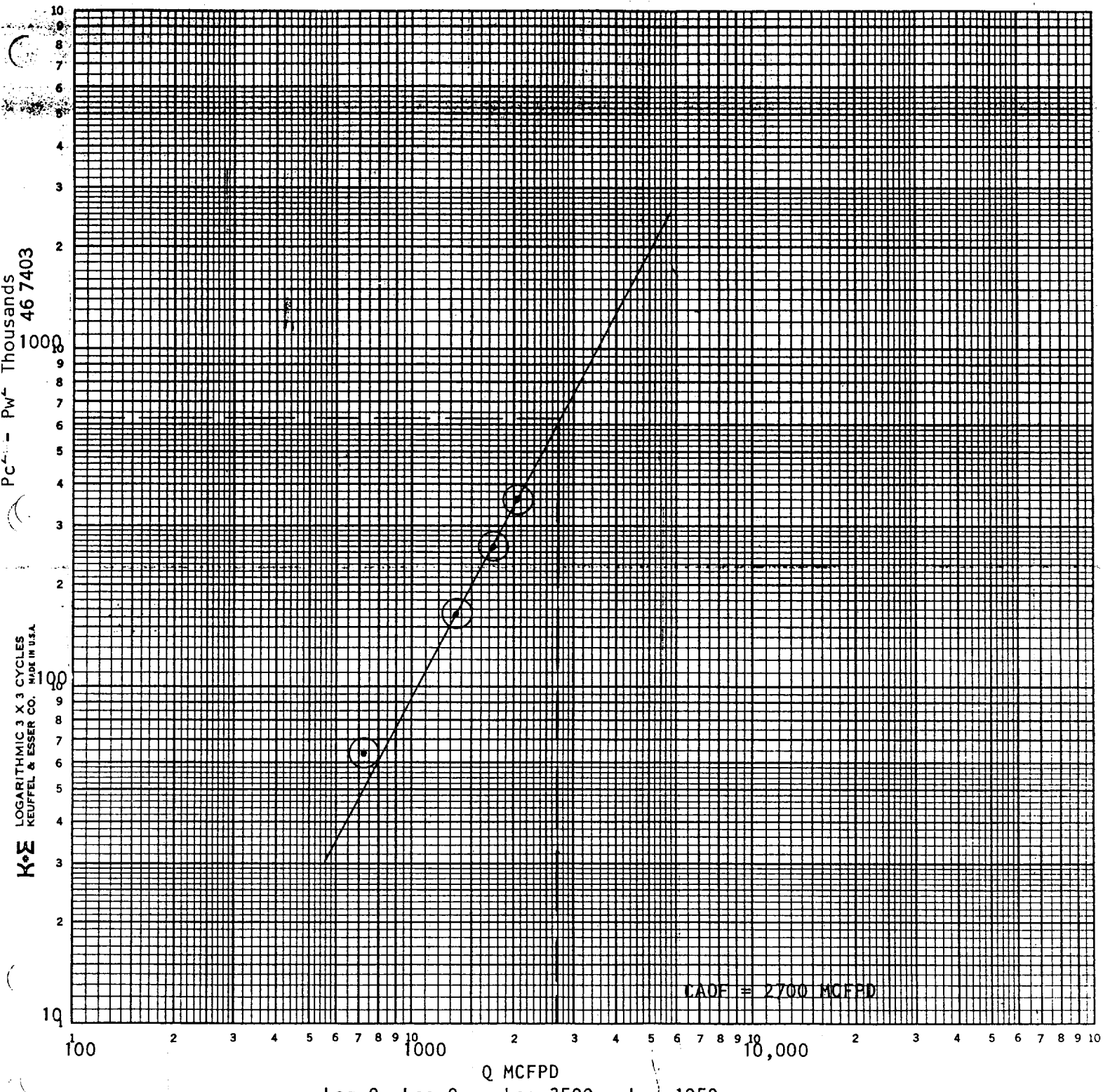
Post ID-2
12-17-82
Comp & BK

Absolute Open Flow 2,700 Mcfd @ 15.025 | Angle of Slope θ 62.5° | Slope, n .52

Remarks:

Approved By Division	Conducted By:	Calculated By:	Checked By:
	James Craig	E. L. Buttross, Jr.	

Mesa Petroleum Co.
Iris State No. 3
Chaves Co., NM
12-5-82



$$N = 1/\text{Slope} = \frac{\text{Log } Q_2 - \text{Log } Q_1}{\text{Cycle}} = \frac{\text{Log } 3500 - \text{Log } 1050}{\text{Cycle}} = 3.54 - 3.02 = .52$$

$\theta = 62.5^{\circ}$