

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

Form C-122
 Revised 9-1-65

C/SF
 C-122

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 1-19-82		FEB 4 1982	
Company McClellan Oil Corporation				Connection To Atmosphere			
Pool Undesignated				Formation ABO		Unit O. C. D.	
Completion Date 1-14-82				Total Depth 4255		Elevation 3533 G.L.	
Casing Size 4 1/2"		Wt. 10.5#		Set At 4222		Perforations: From 3890 To 4036	
Tubing Size 2 3/8		Wt. 4.6#		Set At 3959		Perforations: From OPENED	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple SINGLE				Packer Set At NONE		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 91° @ 4000'		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
L 4000'		H 4000'		C _g .7475		Prover 2"	
		% CO ₂ 10.69		% N ₂ 8.76		% H ₂ S -0-	
						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	S.I.						971		977		120 HRS
1.	2"	X	3/32"	947		70	947	63	953		1 HR.
2.	2"	X	1/8	912		70	912	63	931		1 HR.
3.	2"	X	5/16	617		70	617	62	656		1 HR.
4.	2"	X	3/8	332		71	332	60	468		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 F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	.1410		960.2	.9905	1.156	1.068	166
2	.2648		925.2	.9905	1.156	1.065	299
3	1.672		630.2	.9905	1.156	1.045	1261
4	2.378		345.2	.9896	1.156	1.025	963
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio T.S.T.M.	Mcf/bbl.
1	1.39	530	1.53	.877	A.P.I. Gravity of Liquid Hydrocarbons	Deg.
2.	1.34	530	1.53	.881	Specific Gravity Separator Gas .7475	XXXXXXXXXX
3.	.91	530	1.53	.916	Specific Gravity Flowing Fluid XXXXX	
4.	.50	531	1.53	.952	Critical Pressure 693 P.S.I.A.	P.S.I.A.
5.					Critical Temperature 347 °R	°R

* * P_r 989.8 P_c² 979.7

NO	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1		966.1	933.3	46.4
2		932.8	870.12	109.6
3		657.1	431.8	547.9
4		475.6	226.2	753.5
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3002$

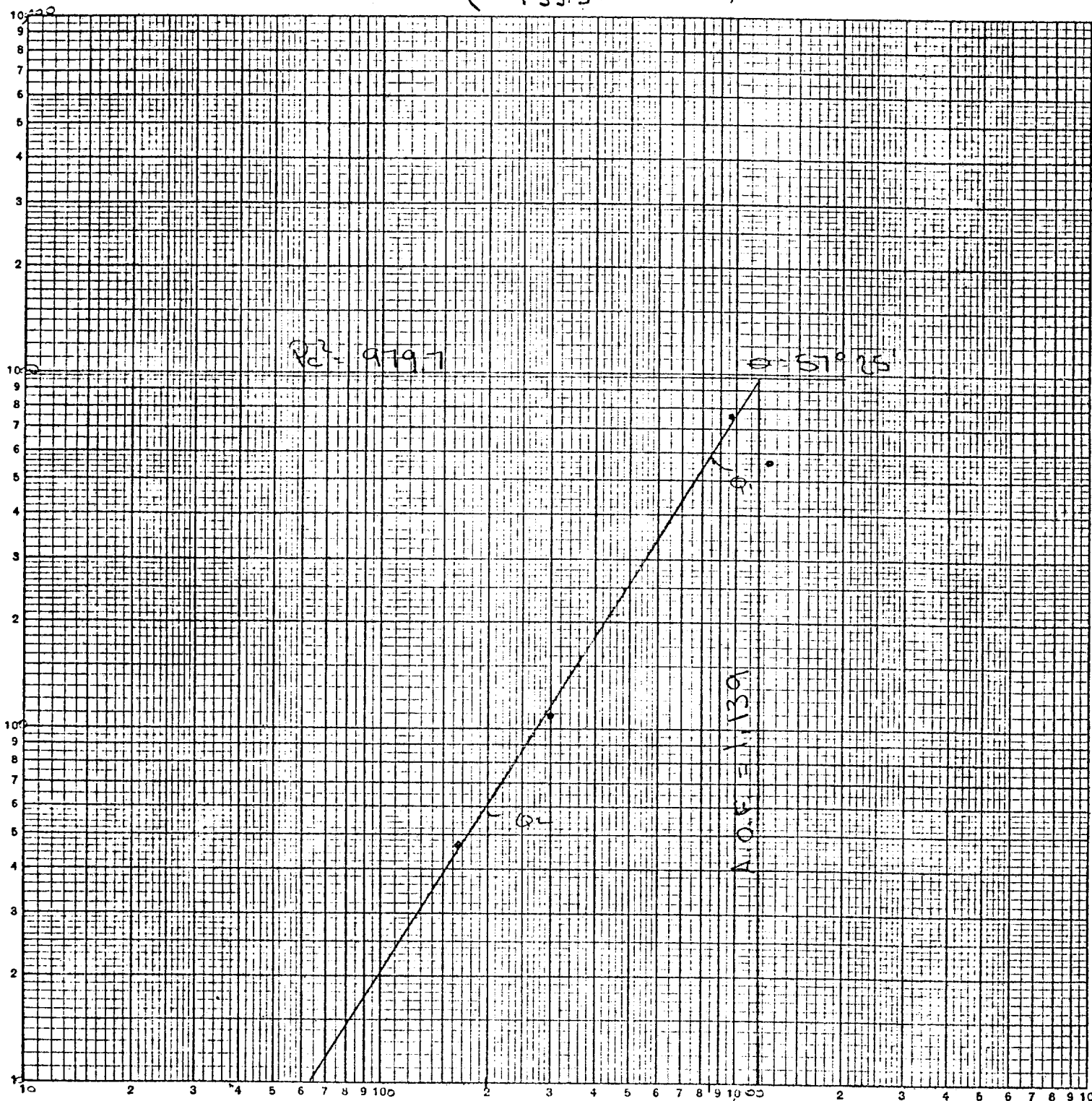
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.18272$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1,139$

Posted ID 51
& Comp. Book 51
2-12-82

Absolute Open Flow 1,139 Mcfd @ 15.025		Angle of Slope @ 57° 25'		Slope, n 63912	
Remarks: * Calculated from known Bottom Hole Pressures.					
Approved By Commission:		Conducted By: M.T.		Calculated By: M.K.	
				Checked By: M.K.	

$$963 \left(\frac{979.7}{753.5} \right)^{.63912} = 1,139$$



ALF 104

FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

COMPANY McClellan Oil Co. LEASE Pecos Ranch Fed WELL NO. 1 DATE 1-26-82

LOCATION: Unit K Section 23 Township 9S Range 2SE

L 4000 H 4000 L/H 1,000 G 7475 % CO₂ 10.69 % N₂ 8.76 % H₂S -0-

GH 2990 P_{cr} 693 T_{cr} 347

S.T. 131 240 380 440

LINE	1	2	3	4	5	6	7	8
1 $T_w(W.H. \text{ or } R)$	530	530	530	530	531			
2 $T_s(E.H. \text{ or } R)$	551	551	551	551	551			
3 $T = \frac{T_w + T_s}{2}$	540.5	540.5	540.5	540.5	541			
4 Z (Est.)	.876	.878	.882	.913	.937			
5 TZ	473.478	474.56	476.72	493.48	506.92			
6 GH/TZ	6.31497	6.300	6.2720	6.0590	5.8984			
7 e^S (Table XIV)	1.26720	1.2665	1.26516	1.25509	1.24756			
8 P_f or P_s	1114.2	1087.2	1049.2	736.2	531.2			
9 P_f^2 or P_s^2	1241.4	1182.0	1100.8	541.99	282.17			
10 $P_c^2 - P_f^2/es$ or $P_w^2 - P_w^2 = P_s^2/es$	979.7	933.3	870.1	431.8	226.18			
11 P_c or P_w	989.8	966.1	932.8	657.1	475.6			
12 $P \cdot \left(\frac{F_w + P_s}{2} \right)$ or $\left(\frac{P_c + P_f}{2} \right)$	1046.9	1026.7	991	696.7	503.4			
13 $P_r = (P/P_{cr})$	1.52	1.48	1.43	1.01	.726			
14 $T_r = (T/T_{cr})$	1.56	1.56	1.56	1.56	1.56			
15 Z (Table XI)	.876	.878	.882	.913	.937			