

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

RECEIVED C-122
JAN 23 1981

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Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 12-18-81		O. C. O.	
Company Yates Petroleum Corporation				Connection Transwestern Pipeline Co.		ARTESIA, OFFICE	
Pool Pecos Slope - Abo Gas Undesignated Abo				Formation Abo		Unit EG-155	
Completion Date 11-24-80		Total Depth 5500 KB		Plug Back TD 4945 KB		Elevation 3911 KB	
Casing Size 4 1/2		Wt. 9.5#		Set At 4.090		5487 KB	
Thq. Size 2 3/8		Wt. 4.7#		Set At 1.995		3600'	
Type Well - Single - Brdenhead - G.G. or G.O. Multiple Single				Packer Set At 3597		County Chaves	
Producing Thru Tubing		Reservoir Temp. °F 96		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2	
L 3705		H 3705		Cg 0.676		% CO ₂ 7.08	
				% N ₂ 5.18		% H ₂ S Nil	
				Prover ----		Meter Run 2"	
						Taps Flanged	

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							941	63			Days
1.	2.076 x 0.625			392	13	65	859	64			7 hrs.
2.	2.076 x 0.625			393	22	65	820	66			15 hrs.
3.	2.076 x 0.625			395	40	65	611	68			8 hrs.
4.	2.076 x 0.625			397	71	65	409	70			14 hrs.
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	1.866	72.58	405.2	0.9952	1.216	1.0338	170
2	1.866	94.53	406.2	0.9952	1.216	1.0340	221
3	1.866	127.78	408.2	0.9952	1.216	1.0341	298
4	1.866	170.66	410.2	0.9952	1.216	1.0342	398
5							

NO.	P _i	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	0.587	525	1.471	.9356	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2	0.589	525	1.471	.9354	Specific Gravity Separator Gas 0.676 XXXXXXXXXX
3	0.592	525	1.471	.9351	Specific Gravity Flowing Fluid XXXXX 0.676
4	0.594	525	1.471	.9349	Critical Pressure 690 P.S.I.A. 697 P.S.I.A.
5					Critical Temperature 357 R 359.5 R

F _c 1055.2 F _c ² 1113				
NO.	P _i ²	P _w	R _w ²	P _e ² - R _w ²
1			929	184
2			847	266
3			688	425
4			465	648
5				

(1) $\frac{P_e^2}{P_e^2 - R_w^2} = 1.7176$

AOF = Q $\left[\frac{R_e^2}{P_e^2 - R_w^2} \right]^n = 570$

(2) $\left[\frac{R_e^2}{P_e^2 - R_w^2} \right]^n = 1.4338$

Absolute Open Flow 570 Mcfd @ 15.025	Angle of Slope 56.33	Slope, n 0.66610
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Remarks: Static pressures by Bennett Wireline flowing pressures by DWT.
Calculations worksheet C122D attached.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
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