

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

Form C-122
Revised 9-1-65

Copy 6 of 7
C-122

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 2-15-74		REC'D 2-15-74	
Company The Superior Oil Company				Connection Natural Gas Pipeline Co. of America			
Pool Atoka, West				Formation Morrow		Unit	
Completion Date 11-1-73		Total Depth 8650'		Plug Back TD 8552'		Elevation KB: 3483'	
Casing Size 5-1/2" Wt. 14#				Set At 8650'		Perforations: From 8380' To 8423'	
Teg. Size 2-7/8" Wt. 6.5				Set At 8201'		Perforations: From None To	
Type Well - Single - Broadhead - G.G. or G.O. Multiple Single Gas Well				Packer Set At 8193'		Well No. 1	
Producing Thru Tubing		Reservoir Temp. *F 140 @ 8640		Mean Annual Temp. *F 60		Baro. Press. - P _a 13.2	
L 8201		H 8201		Gg .638		% CO ₂ ---	
				% N ₂ ---		% H ₂ S ---	
				Prover		Meter Run 3"	
						Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration	
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	Flow
1	3.068 x 2.125			748	2.2	80	2194	60	--	--	5 Hr.
2	3.068 x 2.125			748	5.1	82	1897	60	--	--	13 Hr.
3	3.068 x 2.125			778	8.0	81	1534	60	--	--	22 Hr.
4	3.068 x 2.125			772	12	83	972	60	--	--	29 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. Compens. Factor, Fpv	Rate of Flow Q, Mcfd
1	24.76	40.617	748	.9813	1.267	1.062	1328
2	24.76	61.892	748	.9795	1.267	1.061	2018
3	24.76	78.886	778	.9804	1.267	1.064	2581
4	24.76	96.068	772	.9786	1.267	1.063	3143
5							

NO.	P _r	Temp. *R	T _r	Z	Gas Liquid Hydrocarbon Ratio	200	Mcf/bbl.
					A.P.I. Gravity of Liquid Hydrocarbons	54.4	Deg.
1	1.115	540	1.479	.886	Specific Gravity Separator Gas	0.623	XXXXXXX
2	1.115	542	1.485	.888	Specific Gravity Flowing Fluid	XXXXX	.638
3	1.159	541	1.482	.883	Critical Pressure	671	P.S.I.A. 670
4	1.151	543	1.488	.885	Critical Temperature	365	R 368
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P _c	2387.2	P _c ²	5698.7
NO.	P _t ²	P _w	P _w ²
1	4871.7	--	4885.8
2	3648.9	--	3688.8
3	2393.8	--	2448.5
4	970.62	--	1058.1
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.835$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3509$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.739$

Absolute Open Flow	3509	Mcf/d @ 15.025	Angle of Slope θ	Slope, n	.5253
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Remarks: Flow rates calculated from square root meter, differential and static pressures converted from meter readings.

Approved By Commission:	Conducted By: J. C. Willner	Calculated By: J. C. Willner	Checked By:
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