

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 9-22-81	
Company Southland Royalty Company			Connection Northwest Pipeline Corporation		
Pool Undesignated			Formation Gallup		Unit
Completion Date 9-11-81		Total Depth 8720'		Plug Back TD 8300'	Elevation 7023' GL
Farm or Lease Name Simms Federal					
Csq. Size 5.500	Wt. 15.5#	d 4.950	Set At 8731'	Perforations: From To	
Well No. 1					
Tbg. Size 2.375	Wt. 4.7#	d 1.995	Set At 7588'	Perforations: From 7560' To 7634'	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single			Packer Set At -----		County Rio Arriba
Producing Thru Tubing		Reservoir Temp. *F 8		Mean Annual Temp. *F 12.2	
State New Mexico					
L	H	Gg .700	% CO ₂	% N ₂	% H ₂ S
Prover		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							2420		2431		
1.	2"	X	3/4"				354		758		1 hr
2.							209		750		2 hrs
3.							90		703		3 hrs
4.											
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, F _{pv}	Rate of Flow Q, Mcfd
1	12.365		102.2	1.0000	.9258	1.0000	1170
2.							
3.							
4.							
5.							

NO.	P _t	Temp. *R	T _f	Z	Gas Liquid Hydrocarbon Ratio
1.					A.P.I. Gravity of Liquid Hydrocarbons
2.					Specific Gravity Separator Gas
3.					Specific Gravity Flowing Fluid
4.					Critical Pressure
5.					Critical Temperature

P _c 2443.2 P _c ² 5969226.2				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		715.2	511511.0	5457715
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0937$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0695$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1251$

Absolute Open Flow	1251	Mcfd @ 15.025	Angle of Slope θ	Slope, n .75
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Remarks:

Approved By Division	Conducted By: Abe Saiz	Calculated By: James Smith	Checked By: L.O. Van Ryan
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