

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3-17-81			
Company Southland Royalty Company				Connection Southern Union Gathering					
Pool Basin				Formation Dakota				Unit	
Completion Date 2-3-81		Total Depth 6942'		Plug Back TD 6886'		Elevation 5862' GR		Farm or Lease Name Hare	
Csq. Size 5.500	Wt. 15.5#	d 4.892	Set At 6932'	Perforations: From 6756' To 6908'		Well No. 15-M			
Thq. Size 1.900	Wt. 2.90#	d 1.610	Set At 6907'	Perforations: From --- To ---		Unit Sec. Twp. Rye. 0 3 29N 10W			
Type Well - Single - Brodenhead - G.C. or G.O. Multiple GG Multiple						Packer Set At 4814'		County San Juan	
Producing Thru Tubing		Reservoir Temp. °F 8		Mean Annual Temp. °F		Baro. Press. - P _a 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							1314				
1.	2"		3/4"				108				1 hr
2.							104				2 hrs
3.							96				3 hrs
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	12.365		108.2	1.0000	.9258	1.0000	1239
2.							
3.							
4.							
5.							

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

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P _c 1326.2	P _c ² 1758806.4		
NO	P _t ²	P _w	P _w ²
1		108.2	11707.2
2			
3			
4			
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0067$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1245$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0050$

Absolute Open Flow	1245	Mcf/d @ 15.025	Angle of Slope @	Slope, n .75
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Remarks:

Approved By Division	Conducted By: Dean Lingo	Calculated By: James Smith	Checked By: L.O. Van Ryan
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