

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-6-80			
Company Southland Royalty Company				Connection Southern Union Gathering					
Pool Basin				Formation Dakota				Unit	
Completion Date 9-13-80		Total Depth 7450'		Plug Back TD 7405'		Elevation 6231' GR		Farm or Lease Name Richardson	
Csg. Size 4.500	Wt. 23# 10.5#	% 3.66 4.052	Set At 4988' 4707'-7450'	Perforations: From To		Well No. #10E			
Tng. Size 2.375	Wt. 4.7#	d 1.995	Set At 7332'	Perforations: From 7268' To 7388'		Unit Sec. Twp. Rge. L 10 31N 12W			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple GG-Multiple						Packer Set At 2682'		County San Juan	
Producing Thru Tubing		Reservoir Temp. °F #		Mean Annual Temp. °F		Baro. Press. - P _a 12.2		State NM	
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							311				
1.	2" X 3/4"						0				1 Hour
2.							0				2 Hours
3.							0				3 Hours
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, Fpv	Rate of Flow Q, Mcfd
1	12.365		12.2	1.0000	.9258	1.0000	140
2.							
3.							
4.							
5.							

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

P _c 323.2 P _c ² 104458.2					(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0014$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0010$	
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²				
1		12.2	148.8	104309.4				
2								
3								
4								
5								

Absolute Open Flow 140 Mcfd @ 15.025			Angle of Slope θ .75		
Remarks:					

Approved By Division	Conducted By: Tom Wagner	Calculated By: James Smith	Checked By: L. O. Van Ryan
----------------------	-----------------------------	-------------------------------	-------------------------------