

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 4-29-81			
Company Southland Royalty Company				Connection Southern Union Gathering					
Pool Basin				Formation Dakota				Unit	
Completion Date 4-13-81		Total Depth 6514'		Plug Back TD 6480'		Elevation 5694' GR		Farm or Lease Name Beck "A"	
Csq. Size 4.500	Wt. 10.50#	d 4.052	Set At 6514'	Perforations: From To		Well No. 1-E			
Thq. Size 2.375	Wt. 4.70#	d 1.995	Set At 6415'	Perforations: From 6277' To 6454'		Unit Sec. Twp. Rge. B 10 29N 12W			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single - G						Packer Set At -----		County San Juan	
Producing Thru Tubing		Reservoir Temp. °F #		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.	
SI							908		1104	
1.	2"	X 3/4"					72		183	1 hr
2.							46		159	2 hrs
3.							42		147	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		54.2	1.0000	.9258	1.0000	620
2.							
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _t	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. Deg.
1.											
2.											
3.											
4.											
5.											

P_c 1116.2 P_c² 1245902.4

NO. P_t² P_w P_w² P_c² - P_w²

1		159.2	25344.6	1220557.8
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0208$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0155$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 630$

Absolute Open Flow	630	Mcf/d @ 15.025	Angle of Slope θ	Slope, n .75
Remarks:				
Approved By Division	Conducted By: Kelly Maxwell	Calculated By: James Smith	Checked By: L.O. Van Ryan	