

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 6-21-80			
Company Southland Royalty Company				Connection Southern Union Gathering					
Pool Basin				Formation Dakota				Unit	
Completion Date 6-14-80		Total Depth 6255'		Plug Back TD 6213'		Elevation 5398'		Farm or Lease Name Mangum	
Csq. Size 5.5000	Wt. 15.5#	d 4.950	Set At 6255'	Perforations: From To		Well No. #5E			
Tbg. Size 1.9000	Wt. 2.90#	d 1.610	Set At 6118'	Perforations: From 5999' To 6123'		Unit A	Sec. 29	Twp. 29N	Rge. 11W
Type Well - Single - Bradenhead - G.G. or G.O. Multiple GG- Multiple						Packer Set At 2705'		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.	Temp. °F	
SI							1004	55°			
1.	2" X 3/4"						65	54°			1 Hour
2.							61	54°			2 Hours
3.							56	53°			3 Hours
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		68.2	1.004	.9258	1.0000	784
2.							
3.							
4.							
5.							

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

P _c 1016.2 P _c ² 1032662.4				(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0045$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0034$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²			
1		68.2	4651.2	1028011.2			
2							
3							
4							
5							

Absolute Open Flow 787 _____ Mcfd @ 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
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