

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5-12-81			
Company Southland Royalty Company				Connection Southern Union Gathering					
Pool Basin				Formation Dakota				Unit	
Completion Date 3-02-81		Total Depth 6385'		Plug Back TD 6341'		Elevation 5495' GR		Farm or Lease Name Mangum	
Csq. Size 5.500	Wt. 15.50#	d 4.950	Set At 6385'	Perforations: From To		Well No. 4-E			
Tbg. Size 1.900	Wt. 2.90#	d 1.610	Set At 6264'	Perforations: From 6122' To 6261'		Unit 0	Soc. 28	Twp. 29N	Rge. 11W
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Multiple - G.G.						Packer Set At 2869'		County San Juan	
Producing Thru Tubing		Reservoir Temp. °F #		Mean Annual Temp. °F		Baro. Press. - P _a 12.2		State New Mexico	
L	H	Cg .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							995				
1.	2"	X	3/4"				124				1 hr
2.							106				2 hrs
3.							87				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		99.2	1.0000	.9258	1.0000	1136
2.							
3.							
4.							
5.							

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

P _c 1007.2 P _c ² 1014451.8				
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1		99.2	9840.6	1004611.2
2				
3				
4				
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.0098$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1144$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0073$$

Absolute Open Flow _____ 1144 _____ Mcfd @ 15.025	Angle of Slope @ _____	Slope, n _____ .75
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Remarks: _____

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