

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 2-16-82			
Company Southland Royalty Company				Connection Southern Union Gathering			
Pool Basin				Formation Dakota		Unit	
Completion Date 2-2-82		Total Depth 6670'		Plug Back TD 6625'		Elevation 5711' GL	
Farm or Lease Name Cain							
Csq. Size 5.500	Wt. 15.5#	d 4.950	Set At 6670'	Perforations: From To		Well No. 22	
Tbg. Size 1.900	Wt. 2.90#	d 1.610	Set At 6665'	Perforations: From 6408' To 6596'		Unit Sec. Twp. Rge. C 31 29N 9W	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple G. G. - Multiple				Packer Set At 4471'		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	G _g .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							1312				
1.	2"	X	3/4"				52				1 hr
2.							40				2 hrs
3.							30				3 hrs
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	12.365		42.2	1.0000	.9258	1.0000	483
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 _____ 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

$P_c = 1324.2$ $P_c^2 = 1753505.6$				
NO.	P _r	P _w	P _w ²	P _c ² - P _w ²
1		42.7	1780.8	1751724.8
2				
3				
4				
5				

$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{1.0010}{1.0008}$

$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{1.0008}{1.0008}$

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 483$

Absolute Open Flow _____ 483 _____ Mcfd @ 15.025	Angle of Slope @ _____	Slope, n _____ .75
Remarks: _____		

Approved by Division	Conducted By: Richard Ramos	Calculated By: James Smith	Checked By: C. C. Parsons
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