

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-19-80			
Company SOUTHLAND ROYALTY COMPANY				Connection El Paso Natural Gas Company					
Pool Basin				Formation Dakota				Unit	
Completion Date 12-1-80		Total Depth 6766'		Plug Back TD 6724'		Elevation 6155' GR		Farm or Lease Name FRONTIER "E"	
Gas. Size 7.000	Wt. 23#	d 6.366	Set At 6766'	Perforations: From To		Well No. #1E			
Trg. Size 2.375	Wt. 4.70#	c 1.995	Set At 6641'	Perforations: From 6556' To 6644'		Unit G	Sec. 4	Twp. 27N	Rge. 11W
Type Well - Single - Erdenehead - G.G. or G.O. Multiple Multiple - GO						Packer Set At 6145'		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							1211				
1.	2" X 5/8"						329				1 Hr.
2.							254				2 Hrs.
3.							201				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 _{sp}	Rate of Flow Q, Mcfd
1	8.5417		213.2	1.0000	.9258	1.0000	1686
2.							
3.							
4.							
5.							

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

P _i 1223.2 P _e 1496218.2			
NO.	P _i ²	P _w	P _e ² - P _w ²
1		213.2	45454.2
2			
3			
4			
5			

$$(1) \frac{P_e^2}{P_e^2 - P_w^2} = 1.0313$$

$$AOF = Q \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1725$$

$$(2) \left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^n = 1.0234$$

Absolute Open Flow	1725	Mcfd @ 15.025	Angle of Slope ϕ	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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