

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 11-3-81	
Company Southland Royalty Company		Connection El Paso Natural Gas Company	
Pool Basin		Formation Dakota	
Completion Date 10-02-81	Total Depth 7775'	Plug Back TD 7730'	Elevation 6474' GL
Farm or Lease Name Vasaly		Well No. 2-E	
Csg. Size 7.000 4.500	Wt. 20# 10.5# 11.6#	d 6.456 4.052 4.000	Set At 3338' 3185-7775'
Perforations: From To		Well No. 2-E	
Perforations: From 7549' To 7732'		Unit Sec. Twp. Rwy. D 31 32N 11W	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At -----	
Producing Thru Tubing		County San Juan	
Reservoir Temp. °F 8		State New Mexico	
Mean Annual Temp. °F 12.2		Baro. Press. - P _a	
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. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							1608		607		
1.	2"	X	3/4"				122		614		1 hr
2.							80		614		2 hrs
3.							38		614		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		50.2	1.0000	.9258	1.0000	575
2.							
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Specific Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.										
2.										
3.										
4.										
5.										

P_c 1620.2 P_c^2 2625048.						
NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{1.1756}$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{1.1290}$
1		626.2	392126.4	2232921.6	6	
2						
3						
4						
5						
AOF = Q					$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{649}$	

Absolute Open Flow	649	Mcfd @ 15.025	Angle of Slope θ	Slope, n .75
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Remarks:

Approved by Division	Conducted By: Dick Irvin	Calculated By: James Smith	Checked By: L. O. Van Ryan
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