

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test 4 Pt. ☒ Initial ☐ Annual ☐ Special				Test Date 1-8-82		MAR 15 1982					
Company SOUTHLAND ROYALTY COMPANY ✓				Connection EL PASO NATURAL GAS COMPANY		O. C. D. ARTESIA, OFFICE					
Pool Turkey Track <i>Atoka</i>				Formation Atoka		Unit F					
Completion Date 10-8-81		Total Depth 10848		Plug Back TD 10800		Elevation					
Casing Size 5 1/2		Wt. 17.0		Set At 10848		Perforations: From 10750 To 10760					
Tubing Size 2 3/8		Wt. 4.7		Set At 10694		Perforations: Open Ended					
Type well - Single - Broadhead - G.C. or G.O. Multiple Single		Packer Set At 10694		County Eddy		Form or Lease Name Parkway State & Conn					
Producing Thru Tbg.		Reservoir Temp. °F 182 @ 10755		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2					
L 10755		H 10755		Gg .652		% CO ₂ .29%					
				% N ₂ 1.48%		% H ₂ S .02 Gr.					
				Prover		Meter Run 4.0"					
						Taps Flg.					
FLOW DATA				TUBING DATA		CASING DATA					
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	Duration of Flow
SI							2692		PKR		24 hr.
1.	4.0 X .750			422	1.96"	48°	2422		"		1 hr.
2.	4.0 X .750			512	4.0"	61°	2202		"		1 hr.
3.	4.0 X .750			512	7.84"	69°	1962		"		1 hr.
4.	4.0 X .750			531	16.0"	67°	1682		"		1 hr.
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	2.661	29.21	435.2	1.012	1.238	1.051	102				
2	2.661	45.83	525.2	.9990	1.238	1.054	159				
3	2.661	64.17	525.2	.9915	1.238	1.054	221				
4	2.661	93.31	544.2	.9933	1.238	1.055	322				
5.											
NO.	$\bar{n}$	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio ----- Mcf/bbl.						
1	.65	508	1.35	.905	A.P.I. Gravity of Liquid Hydrocarbons ----- Deg.						
2	.78	521	1.39	.901	Specific Gravity Separator Gas .652 X X X X X X X X						
3	.78	529	1.41	.901	Specific Gravity Flowing Fluid X X X X X						
4	.81	527	1.41	.898	Critical Pressure 670 P.S.I.A. P.S.I.A.						
5					Critical Temperature 375 R R						
P_c 2705.2 P_c^2 7318.1											
NO.	P_c	P_w	P_c^2	$P_c^2 - P_w^2$	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.648$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.648$						
1			5930.5	1387.6	AOF = 0 $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .531$						
2			4907.9	2410.2							
3			3903.0	3415.1							
4			2877.1	4441.0							
5											
Absolute Open Flow 531				Mcf @ 15.025				Angle of Slope @ 45		Slope, n 1.000	
Remarks: Made no fluid during test.											
Approved by Division											
Conducted by: McMurray & Rea				Calculated by: EL PASO EXPLORATION CO. Joe B. Murray				Checked by:			