

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 11-21-70		DEC 29 1978	
Company SOUTHLAND ROYALTY ✓				Connection UNDESIGNATED			
Pool HUTCHES				Formation MORROW		Unit E.B.B. ARTESIA, OFFICE	
Completion Date 11-16-70		Total Depth 11785.		Plug Back TD 11718.		Elevation 3319.	
Csg. Size 2 7/8"		Set At 11785.		Perforations: From 11600. To 11691.		Well No. 1	
Tub. Size 2 7/8"		Set At 11314.		Perforations: From 0. To 0.		Unit Sec. Twp. Rge. J 27 19 29	
Type Well - Single - Standhead - G.G. or G.O. Multiple Single				Packer Set At 11316.		County EDDY	
Producing Time 700		Reservoir Temp. °F 150 @ 11485.		Mean Annual Temp. °F 60.0		Baro. Press. - P _a 13.2	
L 11485.		H 11485.		Gg 0.483		% CO ₂ 0.	
				% N ₂ 0.		% H ₂ S 0.	
				Prover 0.		Meter Run 2.1	
						Taps FLANGE	

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							3455.	68.			72.0
1.	2.87 X 1.250			310.	8.4	73.	2895.	66.	0.	0.	1.0
2.	2.87 X 1.250			310.	19.2	94.	2700.	66.	0.	0.	1.0
3.	2.87 X 1.250			315.	32.6	96.	2320.	67.	0.	0.	1.0
4.	2.87 X 1.250			315.	57.6	83.	1786.	48.	0.	0.	1.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcd
1.	6.31	58.72	323.2	0.9077	1.2471	1.0000	740.
2.	3.16	78.77	323.2	0.9689	1.2471	1.0264	793.
3.	2.51	103.46	328.2	0.9723	1.2471	1.0277	1047.
4.	2.24	137.49	328.2	0.9786	1.2471	1.0294	1403.
5.							

NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/Lbl.
1.	9000.	540.	1.45	0.941	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	7341.	540.	1.49	0.949	Specific Gravity Separator Gas _____
3.	6000.	540.	1.48	0.947	Specific Gravity Flowing Fluid _____
4.	5000.	540.	1.56	0.948	Critical Pressure _____ P.S.I.A.
5.					Critical Temperature _____ R

NO.	P _t ²	P _w ²	P _w ²	P _t ² - P _w ²	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.3724$ $(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3724$ $AQF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1925.$
1.	81000.	72900.	9027.	3539.	
2.	73410.	65610.	7347.	4616.	
3.	60000.	54000.	6000.	5417.	
4.	50000.	45000.	5000.	6718.	

Absolute Q _{sc} on Flow _____ Mcfd @ 15.025		Angle of Slope θ _____ 05.0		Slope, n _____ 1.000	
Remarks: _____					
Approved By: _____ Conducted By: B-J Testers					
Calculated By: Don Craig					
Checked By: Don Craig					