

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 2-27-81																															
Company Southland Royalty Company				Connection Southern Union Gathering																																
Pool Undesignated Bloomfield				Formation Chacra		Unit																														
Completion Date 2-20-81		Total Depth 6447'		Plug Back TD 6404'		Elevation 5557' GR																														
Farm or Lease Name Cozzens "C"						Well No. 1E																														
Csq. Size 5.500	Wt. 15.5#	d 4.050	Set At 6445'	Perforations: From To		Unit Sec. Twp. Rye. E 20 29 11																														
Tbg. Size 1.900	Wt. 2.76	d 1.610	Set At 2814'	Perforations: From 2712' To 2820'		County San Juan																														
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Multiple - GG				Packer Set At 2915'		State New Mexico																														
Producing Thru Tbg.		Reservoir Temp. °F P		Mean Annual Temp. °F 12.2		Baro. Press. - P _a																														
L	H	G _g .700	% CO ₂	% N ₂	% H ₂ S	Prover																														
FLOW DATA			TUBING DATA		CASING DATA																															
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F																														
SI																																				
1.	2" x 3/4"					1 hr																														
2.						2 hrs																														
3.						3 hrs																														
4.																																				
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}																														
1	12.365		178.2	1.0000	9258	1.0000																														
2.																																				
3.																																				
4.																																				
5.																																				
NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio _____ Mcl/bbl.																															
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.																															
2.					Specific Gravity Separator Gas _____																															
3.					Specific Gravity Flowing Fluid _____																															
4.					Critical Pressure _____ P.S.I.A.																															
5.					Critical Temperature _____ R																															
P_c 962.2 P_c² 925828.8 <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>NO.</th> <th>P_t²</th> <th>P_w</th> <th>P_w²</th> <th>P_c² - P_w²</th> </tr> <tr> <td>1</td> <td></td> <td>471.2</td> <td>222029.4</td> <td>703799.4</td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3155$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2625$ AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2575$							NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	1		471.2	222029.4	703799.4	2					3					4					5				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²																																
1		471.2	222029.4	703799.4																																
2																																				
3																																				
4																																				
5																																				
Absolute Open Flow _____ Mcl/d @ 15.025				Angle of Slope θ _____		Slope, n .85																														
Remarks: _____																																				
Approved By Division		Conducted By: Kelly Maxwell		Calculated By: James Smith		Checked By:																														