

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 4-28-81	
Company Southland Royalty Company		Connection Southern Union Gathering	
Pool Basin		Formation Dakota	
Completion Date 4-15-81		Total Depth 6425'	
Csg. Size 5.500		Plug Back TD 6382'	
Wt. 15.5#		Elevation 5618'	
Perforations: From To		Farm or Lease Name McDaniel "C"	
Perforations: From 6170' To 6375'		Well No. 1-E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single - G		Unit Sec. Twp. Rge. E 19 29N 11W	
Producing Thru Tubing		County San Juan	
Reservoir Temp. °F #		State New Mexico	
Mean Annual Temp. °F #		Baro. Press. - P _a 12.2	
L H Gg .700		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.	
1.	2" X 3/4"						870		1140	
2.							229		611	1 hr
3.							158		497	2 hrs
4.							123		447	3 hrs
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, F _{pv}	Rate of Flow Q, Mcfd
1	12.365		135.2	1.0000	.9258	1.0000	1548
2.							
3.							
4.							
5.							

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

P _c 1152.2 P _c ² 1327564.8	
NO.	P _t ² P _w P _w ² P _c ² - P _w ²
1	459.2 210864.6 1116700.2
2	
3	
4	
5	

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.1888$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1762$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1385$

Absolute Open Flow	1762	Mcfd @ 15.025	Angle of Slope θ	Slope, n .75
Remarks:				

Approved By Division	Conducted By: Kelly Maxwell	Calculated By: James Smith	Checked By: L. O. Van Ryan
----------------------	--------------------------------	-------------------------------	-------------------------------