

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 1-1-81				
Company Southland Royalty Company				Connection Southern Union Gathering					
Pool Basin				Formation Dakota				Unit	
Completion Date 11-21-80		Total Depth 6715'		Plug Back TD 6669'		Elevation 6069' GR		Farm or Lease Name HUBBELL "A"	
Csg. Size 5.500	Wt. 15.5#	d 4.950	Set At 6715'	Perforations: From To		Well No. #1E			
Tbg. Size 2.375	Wt. 4.70#	d 1.995	Set At 6643'	Perforations: From 6459' To 6648'		Unit Sec. Twp. Rge. F 29 28N 10W			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single - G					Packer Set At --		County San Juan		
Producing Thru Tubing		Reservoir Temp. °F P		Mean Annual Temp. °F		Baro. Press. - P _a 12.2		State New Mexico	
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. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI							490		988	
1.	2" X 5/8"						470		703	1 Hour
2.							140		413	2 Hours
3.							35		461	3 Hours
4.										
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, Mcfd
1	8.5417		47.2	1.0000	.9258	1.0000	373
2.							
3.							
4.							
5.							

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

P _c 1000.2 P _c ² 1000400.0				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1				
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2884$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 451$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2093$

Absolute Open Flow 451 Mcfd @ 15.025	Angle of Slope @	Slope, n .75
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Remarks: 12 bbls oil, 4-5 bbls water

Approved By Division	Conducted By: Steve Kellenaers	Calculated By: James Smith	Checked By: L. O. Van Ryan
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