

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator SANTA FE ENERGY						Lease or Unit Name FORT SEDWICK					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9-3-96		Well No. 14			
Completion Date 8-30-96		Total Depth 11,350		Plug Back TD 11,280		Elevation		Unit Ltr. - Sec. - TWP - Rge. 26-19S-28E			
Csg. Size	Wt.	d	Set At	Perforations:				Country			
5 1/2	17	4.892	11,350	From: 10,760 To: 11,218				EDDY			
Csg. Size	Wt.	d	Set At	Perforations:				Pool			
2-3/8	4.7	1.995	10,697	From: To:				<i>Wine Tester Morrow</i>			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single						Packer Set At 10,678		Formation MORROW			
Producing Thru tbq.		Reservoir Temp. °F 167		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		Connection AIR			
L 10,697	H 10,697	Gg .639	% CO ₂ 1.10	% N ₂ 1.20	% H ₂ S -0-	Prover -0-	Meter Run 4.026	Taps 6lg			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice X 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						2305				12 hr.
1.	4.026 X	1.500	95	2	92°	2090	82°	PKR		60 min
2.	4.026 X	1.500	95	8	94°	1900	84°	"		60 min
3.	4.026 X	1.500	105	29	94°	1500	88°	"		60 min
4.	4.026 X	1.500	205	30	90°	950	88°	"		60 min
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.	10.84	14.71	108.2	.9706	1.251	1.009	195
2.	10.84	29.42	108.2	.9688	1.251	1.009	389
3.	10.84	58.54	118.2	.9688	1.251	1.009	776
4.	10.84	80.90	218.2	.9723	1.251	1.017	1085
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.L. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	.1607	552	1.516	.983	N/A	N/A	.639	N/A	673	364
2.	.1607	554	1.521	.982						
3.	.1756	554	1.521	.982						
4.	.3242	550	1.510	.967						
5.										

P _c 2318.2		-P _c ² 5374.1	
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NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.	4423.5	2103.5	4424.6	949.4
2.	3660.3	1914.4	3664.9	1709.1
3.	2289.8	1519.4	2308.5	3065.6
4.	927.8	983.2	966.7	4407.3
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.219$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.323$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.219$

Absolute Open Flow 1.323	Mcf/d @ 15.025	Angle of Slope θ 45°	Slope, n 1.000
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Remarks: **NO FLUID MADE DURING TEST**

Approved By Division	Conducted By: PRO WELL TESTER	Calculated By: MB	Checked By: BM
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