

OIL CONSERVATION DIVISION

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST - GAS WELL

Operator Murchison Oil & Gas, Inc.				Lease or Unit Name Maraca			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 5-27-94			
Completion Date		Total Depth 9554		Plug Back TD 9328		Elevation	
Log. Size 5 1/2		WT. 17		Set At 4.892		Perforations: From: 9266 To: 9322	
Log. Size 2 7/8		WT. 6.5		Set At 2.441		Perforations: From: To:	
Type Well - Single - Bradenhead - G.G. or G.C. Multiple Single				Packer Set At 9178		Formation Logan Draw Morrow	
Producing Thru Tbg		Reservoir Temp. °F 156.5		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2	
L 9178		H 9178		G _g .669		% CO ₂ 5.229	
				% N ₂ .966		% H ₂ S N/A	
				Prover 0		Meter Run 4.026	
						Taps F/g	

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										
1.	4.026	X	1.750	289.8	4	90°	2599.8	N/A	PKR	N/A
2.	4.026	X	1.750	449.8	14	81°	2379.8			60 min
3.	4.026	X	1.750	622.8	35	81°	2177.8			60 min
4.	4.026	X	1.750	669.8	82	86°	1919.8			60 min
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$h_w P_m$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1.	14.93	34.8	303	.9723	1.223	1.041	643
2.	14.93	80.5	463	.9804	1.223	1.044	1504
3.	14.93	149.1	636	.9804	1.223	1.044	2786
4.	14.93	236.6	683	.9759	1.223	1.042	4393
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Model
1.	.79	550	1.51	.923	155.433	Model
2.	.78	541	1.48	.918	A.P. I. Gravity of Liquid Hydrocarbons 58.8	Des.
3.	.78	541	1.48	.918	Specific Gravity Separator Gas .669	XXXXXXXXXX
4.	.79	546	1.50	.921	Specific Gravity Flowing Fluid N/A	XXXXXX
5.					Critical Pressure 690	P.S.I.A. P.S.I.A.
					Critical Temperature 364	R R

P _r 2665.5	P _e 7104.9						
NO.	P _i ²	P _w	P _e ²	P _e ² - P _w ²	1) $\frac{P_e^2}{P_e^2 - P_w^2} = 2.53$	(2) $\left[\frac{P_e^2}{P_e^2 - P_w^2} \right]^2 = 2.09$	
1.		2617.9	6853.4	251.5			
2.		2531.3	6407.5	697.4			
3.		2357.7	5558.7	1546.2			
4.		2074.2	4302.3	2802.6			
5.							

Absolute Open Flow	9181.3	Mcfd @ 15.025	Angle of Slope θ	51.5	Slope, n	.7942
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Remarks: *Calculated from known bottom hole pressure.
*Well made 2 1/2 bbls of 58.8° API gravity condensate during test.

Approved By Division	Conducted By: Guardian	Calculated By: M.B. Pro Well Testing	Checked By: B.M. Pro Well
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