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appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

Box 2088
Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator ☒ Murchison Oil & Gas, Inc.				Lease or Unit Name Maralo Federal			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6/14/00		Well No. 4	
Completion Date 4/12/00		Total Depth 9720		Plug Back TD 9555		Elevation 3458' GL	
Csg. Size 5 1/2		Wt. 17#		Set At 4.892		Perforations: From: 9445 To: 9590	
Tbg. Size 2 3/8		Wt. 4.7#		Set At 1.995		Perforations: From: Open To: Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 9350		Formation Morrow	
Producing Thru Tbg		Reservoir Temp. °F 150.8@9350		Mean Annual Temp. °F 60		Baro. Press. - P. 13.2	
L 9350		H 9350		Gg 0.652		% CO ₂ 2.963	
				% N ₂ 0.395		% H ₂ S Prover	
						Meter Run 2.067	
						Taps FLG	

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							1274		PACKER		5 Days
1.	2.067	x	0.750	576.5	2.0	82.7	1222		"		1 Hr
2.	2.067	x	0.750	590.9	9.3	87.6	1134		"		1 Hr
3.	2.067	x	0.750	588.8	19.0	85.9	1029		"		1 Hr
4.	2.067	x	0.750	563.2	32.2	83.6	896		"		1 Hr
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.	2.709	34.34	589.7	.9786	1.238	1.052	118
2.	2.709	74.95	604.1	.9741	1.238	1.052	257
3.	2.709	106.95	602.0	.9759	1.238	1.052	368
4.	2.709	136.24	576.4	.9777	1.238	1.050	469
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcft/bbl.
1.	.86	543	1.45	.904	A.P. I. Gravity of Liquid Hydrocarbons	Dry	Deg.
2.	.89	548	1.47	.903	Specific Gravity Separator Gas	.652	XXXXXXXXXX
3.	.88	546	1.46	.903	Specific Gravity Flowing Fluid	XXXXXX	
4.	.85	544	1.46	.907	Critical Pressure	* 678	P.S.I.A. P.S.I.A.
5.					Critical Temperature	* 372	R R

P _i	1287.2	P _c	1656.9		1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.011$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.602$
NO.	P _i	P _w	P _w ²	P _c ² · P _w ²	$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .751$	
1.		1235.4	1526.1	130.8		
2.		1148.0	1317.9	338.9		
3.		1044.1	1090.1	566.8		
4.		912.8	833.1	823.8		
5.						

Absolute Open Flow	751	Mcfd @ 15.025	Angle of Slope θ	55.96	Slope, n	.6753
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Remarks Well produced no fluid during test
corrected to 2.963% CO₂

Approved By Division	Conducted By: Jarrel Services, Inc.	Calculated By: Bob Murray	Checked By: Bob Murray
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