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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

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 Willis Federal			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 6/14/00		Well No. 2	
Completion Date 4/1/00		Total Depth 9665		Plug Back TD 9440		Elevation 3486' GL	
Csg. Size 5 1/2		Wt. 17#		d 4.892		Set At 9665	
Tbg. Size 2 3/8		Wt. 4.7#		d 1.995		Set At 9277	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 9277		Formation Morrow	
Producing Thru Tbg		Reservoir Temp. °F 149.2@9277		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2	
L 9277		H 9277		Gg 0.663		% CO ₂ 4.841	
				% N ₂ 0.334		% H ₂ S	
				Prover		Meter Run 2.067	
						Taps FLG	

FLOW DATA

NO.	Prover Line Size	On/Off 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	Duration of Flow
SI						1855		PACKER		5 Days
1.	2.067 x 0.625		319.8	12.6	93.3	1788		"		1 Hr
2.	2.067 x 0.625		331.4	48.9	85.9	1692		"		1 Hr
3.	2.067 x 0.625		351.0	99.8	84.8	1539		"		1 Hr
4.	2.067 x 0.625		354.2	182.5	82.8	1345		"		1 Hr
5.										

RATE OF FLOW CALCULATIONS

NO.	COEFFICIENT (24 HOUR)	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.	1.866	64.77	330.0	.9697	1.228	1.026	148
2.	1.866	129.81	344.6	.9759	1.228	1.029	299
3.	1.866	190.13	362.2	.9768	1.228	1.030	438
4.	1.866	258.94	367.4	.9786	1.228	1.031	599
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P. I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure * 687	Critical Temperature * 371
1.	.48	553	1.49	.950	Dry Gas	Dry	.663	XXXXXX		
2.	.50	546	1.47	.945						
3.	.51	545	1.46	.942						
4.	.53	543	1.46	.940						
5.										

P _c 1868.2 P _c ² 3490.2				1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.134$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.734$	
NO.	P _i ²	P _w	P _w ²	P _c ² · P _w ²			
1.	1801.4	3244.9	245.3				
2.	1705.9	2910.1	580.1				
3.	1553.9	2414.5	1075.6				
4.	1361.9	1854.7	1635.5				
5.							

Absolute Open Flow	1,039	Mcfd @ 15.025	Angle of Slope Θ	54.0	Slope, n	.7263
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Remarks: Well produced no fluid during test
corrected to 4.84% CO₂

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