

OIL CONSERVATION DIVISIO.

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Murchison O & L Inc				Lease or Unit Name Black River Fed#1			
Test Type ☐ Initial ☐ Annual ☐ Special				Test Date 11-14-00		Well No. #1	
Completion Date 11-12-00		Total Depth 11378		Plug Back TD 11378		Elevation 3152	
Csg. Size 5.500		Wt. 20.000		d 4.778		Set At 11378	
Tbg. Size 2.375		Wt. 4.700		d 1.995		Set At 10800	
Type Well-Single-Bradenhead-G.G. or G.O. Multiple single				Packer Set At 10800		County eddy	
Producing Thru tubing		Reservoir Temp.F		Mean Annual Temp.F 46		Baro. Pressure 13.20	
L 11378		H 11378		Gg .575		% CO ₂ 1.07	
				% N ₂ .27		% H ₂ S	
				Prover meter		Meter Run 4.026	
						Taps flange	

Flow Data				Tubing Data		Casing Data		SIP/Flow Duration (HRS.)
No.	(Prover) Line Size x Orifice Size	Press. PSIG	Diff. h _w	Temp. F	Press. PSIG	Temp. F	Press. PSIG	
Shut-in Pressure					1575	48	48	72
1.	4.03 x 1.38	50.00	14.00	60	1490	45		1
2.	4.03 x 1.38	90.00	34.00	84	1380	43		1
3.	4.03 x 1.38	105.00	69.00	96	1260	43		1
4.	4.03 x 1.38	265.00	48.00	82	1135	41		1

RATE OF FLOW CALCULATIONS

No.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. FACTOR F _t	Gravity FACTOR F _g	Super Compress. FACTOR F _{pv}	Rate of Flow (Q) MCFD
1.	12.200	29.746	63.2	1.0000	1.3188	1.0046	480.8
2.	12.200	59.235	103.2	.9777	1.3188	1.0065	937.8
3.	12.200	90.309	118.2	.9671	1.3188	1.0070	1414.9
4.	12.200	115.558	278.2	.9795	1.3188	1.0180	1853.8

No.	P _r	TEMP.	T _r	Z
1.	.093	520	1.501	.9908
2.	.152	544	1.570	.9871
3.	.174	556	1.605	.9862
4.	.411	542	1.565	.9650

Gas-Liquid Hydrocarbon Ratio		Mcf/bbl	
API Gravity of Liquid Hydrocarbons		Deg.	
Specific Gravity Separator Gas	.575		
Specific Gravity Flowing Fluid	.575		
Critical Pressure	677 PSIA	677	PSIA
Critical Temperature	346 R	346	R

$P_C = 1588.2$ $P_C^2 = 2522.4$

No.	P _w	P _w ²	P _C ² - P _w ²
1.	1505.9	2267	254.600
2.	1403.7	1970	551.943
3.	1299.1	1687	834.715
4.	1197.3	1433	1088.940

(1) $\frac{P_C^2}{P_C^2 - P_W^2} = \frac{2.316}{\dots}$ (2) $\left[\frac{P_C^2}{P_C^2 - P_W^2} \right]^n = \frac{2.179}{\dots}$

AOF = Q $\left[\frac{P_C^2}{P_C^2 - P_W^2} \right]^n = \frac{4038}{\dots}$

Absolute Open Flow	4038	Mcf/d @ 15.025	Angle of Slope -	47.2	Slope, n	.927
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Remarks			
Approved By Division:	Conducted By: larry rackley	Calculated By: BPT System/Guardian	Checked By: lr