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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

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Mitchell Energy Corporation						Lease or Unit Name McKittrick "30" Fed					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12/5/94		Well No. 1			
Completion Date 11/29/94		Total Depth 11,660'		Plug Back TD 11,225'		Elevation 3609' KB		Unit Ltr. - Sec. - TWP - Rge. C, Sec 30, 22S, 26E			
Csg. Size 5 1/2"	Wt. 17#	d 4.892"	Set At 10,151'	Perforations: From: 10,540' To: 10,547'				County Eddy			
Tbg. Size 2 3/8"	Wt. 4.7	d 1.995"	Set At 10,438'	Perforations: From: 10,584' To: 10,594'				Pool Wildcat (Atoka)			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 10,438'		Formation Atoka			
Producing Thru tubing 166		Reservoir Temp. °F 60		Mean Annual Temp. °F 60		Baro, Press - P _a 13.2		Connection vented			
L 10,567'	H 10,567'	Gg .596	% CO ₂ 0.58	% N ₂ 0.61	% H ₂ S -0-	Prover		Meter Run 4.026"		Taps flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	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						3290	74	Pkr		72 hrs.
1.	4.03 x 0.75		500	3.0	30	2900	50	Pkr		1 hr
2.	4.03 x 0.75		500	9.0	30	2580	58	"		1 hr
3.	4.03 x 0.75		500	14.0	30	2100	58	"		1 hr
4.	4.03 x 0.75		500	16.0	25	1020	58	"		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.	2.66	39.24	513.2	1.0302	1.2953	1.0551	147
2.	2.66	67.96	513.2	1.0302	1.2953	1.0551	255
3.	2.66	84.76	513.2	1.0302	1.2953	1.0551	318
4.	2.66	90.62	513.2	1.0302	1.2953	1.0573	342
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.76	490	1.38	.898	Dry	
2.	.76	490	1.38	.898	A.P. I. Gravity of Liquid Hydrocarbons --	Deg.
3.	.76	490	1.38	.898	Specific Gravity Separator Gas 0.596	XXXXXXXXXX
4.	.76	485	1.37	.895	Specific Gravity Flowing Fluid XXXXX	--
5.					Critical Pressure 674 P.S.I.A.	P.S.I.A.
					Critical Temperature 355 R	R

P _c 3288.5		P _c ² 10814	
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NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.		2929	8578	2236
2.		2598	6749	4065
3.		2118	4485	6329
4.		1036	1074	9740
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.709$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .460$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.446$

Absolute Open Flow 460	Mcf/d @ 15.025	Angle of Slope θ 53.1	Slope, n 0.75
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Remarks:

Approved By Division	Conducted By: Pro Well Testers	Calculated By: Greg Colburn	Checked By: Greg Colburn
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