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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 Redhawk "32" State			
Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 4/21/93		Well No. 1	
Completion Date 4/20/93		Total Depth 13660		Plug Back TD 13528		Elevation 3643'	
Csg. Size 5 1/2	Wt. 17	d 4.892	Set At 13660	Perforations: From: 13298 To: 13338		Unit Ltr. - Sec. - TWP - Rge. 32 - 19 - 34	
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 13250	Perforations: From: To:		County Lea	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single				Packer Set At 13250		Pool Quail Ridge (Morrow)	
Producing Thru tbg		Reservoir Temp. °F 206.5 @ 13250		Mean Annual Temp. °F 60		Formation Morrow	
L 13320	H 13320	Gg .721	% CO ₂ .61	% N ₂ .51	% H ₂ S 0	Connection Vented	
Prover						Meter Run 3.0"	Taps pipe

FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow <i>hr</i>
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI									
1.	3 x	1.75		550	5	88	0	0	24 hr
2.	3 x	1.75		585	8	100	0	0	1 hr
3.	3 x	1.75		600	23	81	0	0	1 hr
4.	3 x	1.75		660	39	61	0	0	1 hr
5.									1 hr

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	15.61	53.07	563.2	.9741	1.1777	1.0598	1015
2.	15.61	69.18	598.2	.9636	1.1777	1.0585	1301
3.	15.61	118.76	613.2	.9804	1.1777	1.0689	2297
4.	15.61	162.03	673.2	.9990	1.1777	1.0891	3250
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	Critical Temperature	P.S.I.A.	R
1.	.84	548	1.39	.89	17.2	50.4	.721	XXXXXX	668	394	661	441
2.	.90	560	1.42	.892								
3.	.92	541	1.37	.875								
4.	1.01	521	1.32	.843								
5.												

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1.	42266	4489	20148	698
2.	41605	4443	19741	1106
3.	40529	4368	19080	1767
4.	40503	4366	19064	1782
5.				

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = 11.6954$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 11.6954$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 38010$$

Absolute Open Flow **38010** Mcfd @ 15.025 Angle of Slope Θ **45°** Slope, n **1**

Remarks:

APPROVED BY JERRY SEXTON Conducted By: ProWell Testers
Checked By: James Blount

[illegible]

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MAY 19 1993

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