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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 <u>Stevens and Tull</u>					Lease or Unit Name <u>Little Box STATE</u>					
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date <u>8-31-98</u>		Well No. <u>2</u>			
Completion Date <u>8-25-98</u>		Total Depth <u>8254</u>		Plug Back TD <u>8120</u>		Elevation		Unit Ltr. - Soc. - TWP - Rge.		
Csg. Size <u>5 1/2</u>		Wt. <u>17</u>		Set At <u>8254</u>		Perforations: From: <u>7927</u> To: <u>7974</u>		County <u>Eddy</u>		
Tbg. Size <u>2 3/8</u>		Wt. <u>4.7</u>		Set At <u>1.995</u>		Perforations: From: To:		Pool <u>LITTLE BOX CANYON</u>		
Type Well - Single - Bradenhead - G.G. or G.C. Multiple <u>Single</u>					Packer Set At <u>7810</u>		Formation <u>Morrow</u>			
Producing Thru <u>Tbg</u>		Reservoir Temp. °F <u>60°</u>		Mean Annual Temp. °F <u>60°</u>		Baro. Press. - P _a <u>13.2</u>		Connection <u>Air</u>		
L <u>7950.5</u>	II <u>7950.5</u>	Gg <u>.633</u>	% CO ₂ <u>.194</u>	% N ₂ <u>.448</u>	% H ₂ S	Prover	Meter Run <u>3.026</u>	Taps <u>F/G</u>		
FLOW DATA					TUBING DATA			CASING DATA		
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	Duration of Flow
SI						2260		PKR		72 hrs.
1.	3.068 X 2.250		130	8"	92°	2250				60 min
2.	3.068 X 2.250		180	16"	100°	2200				60 min
3.	3.068 X 2.250		200	50"	22°	2070				60 min
4.	3.068 X 2.250		260	68"	70°	1910				60 min
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.	28.78	33.84	143.2	.9706	1.257	1.043	1239			
2.	28.78	55.59	193.2	.9636	1.257	1.043	2021			
3.	28.78	103.24	213.2	.9887	1.257	1.036	3825			
4.	28.78	136.29	273.2	.9905	1.257	1.047	5113			
5.										
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>N/A</u>		Mc/bbl			
1.	.82	552	1.51	.920	A.P. I. Gravity of Liquid Hydrocarbons <u>N/A</u>		Deg.			
2.	.83	560	1.53	.920	Specific Gravity Separator Gas		XXXXXXXXXX			
3.	.79	532	1.46	.931	Specific Gravity Flowing Fluid <u>N/A</u>		XXXXXX			
4.	.78	530	1.45	.912	Critical Pressure <u>673</u>		P.S.I.A.		P.S.I.A.	
5.					Critical Temperature <u>364</u>		R		R	
P _c <u>2322.6</u> P _c ² <u>5394.5</u>										
NO.	P _i ²	P _w	P _w ²	P _c ² - P _w ²	1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{6.70}{3.60}$					
1.	2301.3	5295.9	98.6		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.60$					
2.	2278.1	5189.7	204.8							
3.	2205.1	4862.4	532.1		AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 18406.8$					
4.	2142.3	4589.4	805.1							
5.										
Absolute Open Flow <u>18406.8</u>					Mcfd @ 15.025		Angle of Slope θ <u>55.9</u>		Slope, n <u>.674</u>	
Remarks: * Calculated from known bottom hole pressure.										
* No fluid made during test.										
Approved By Division			Conducted By: <u>Pro Well Testing</u>			Calculated By: <u>M.B.</u>			Checked By: <u>B.M.</u>	