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See Rule 401 & Rule 1122

State of New Mexico
Geology, 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 <i>Louis Dreyfus</i>						Lease or Unit Name <i>Toro 21. State Com</i>					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date <i>2-28-99</i>		Well No. <i>17</i>			
Completion Date		Total Depth <i>13222</i>		Plug Back PD <i>12350</i>		Elevation		Unit Loc. - Sec. - TWP - Rge. <i>H-21-19s-35e</i>			
Csg. Size		Wt.	d	Set At	Perforations:		From:		To:		Country <i>Lea</i>
<i>7"</i>		<i>28</i>	<i>6.214</i>	<i>13222</i>							Pool
Tbg. Size		Wt.	d	Set At	Perforations:		From:		To:		
<i>2 7/8</i>		<i>6.7</i>	<i>2.441</i>	<i>10515</i>							
Type Well - Single - Bradenhead - G.G. ☒ Multiple						Packer Set At <i>10515</i>		Formation <i>Wolfcamp</i>			
Producing Thru Tbg		Reservoir Temp. °F <i>179.2</i>		Mean Annual Temp. °F <i>60°</i>		Baro. Press - P _a <i>13.2</i>		Connection <i>Air</i>			
L	II	G _g	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps			
<i>10515</i>	<i>10515</i>	<i>.907</i>	<i>.07</i>	<i>2.29</i>	<i>0</i>	<i>0</i>	<i>3.067</i>	<i>F/G</i>			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	Orifice X 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	
1.	<i>3.067 X 1.000</i>		<i>50</i>	<i>30"</i>	<i>62°</i>	<i>245</i>	<i>N/A</i>	<i>PKR</i>		<i>124 hrs.</i>
2.										
3.										
4.										
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)	$\sqrt{P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mscf/d
1.	<i>14.789</i>	<i>56.2</i>	<i>63.2</i>	<i>.9987</i>	<i>1.050</i>	<i>1.117</i>	<i>315</i>
2.							
3.							
4.							
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Miscible
1.	<i>1.78</i>	<i>522</i>	<i>1.16</i>	<i>.801</i>	<i>1.175</i>	<i>39@ 60°</i>
2.						
3.						
4.						
5.						

NO.	P _r	P _w	P _c	P _c ² - P _w ²
1.	<i>64.1</i>	<i>256.3</i>	<i>65.7</i>	<i>1517.4</i>
2.				
3.				
4.				
5.				

P_r *1258.2* P_c *1583.0*

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.043$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^2 = 1.043$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^2 = .329$

Absolute Open Flow *.329* Mscf @ 15.025

Angle of Slope θ *45°* Slope, n *1.000*

Remarks: **Well made 268 BBLs of 39@ 60° API gravity oil*

Approved By Division	Conducted By: <i>Pro Well Testing</i>	Calculated By: <i>M.B.</i>	Checked By: <i>B.M.</i>
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