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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

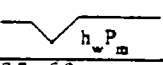
OIL CONSERVATION DIVISION

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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator <u>Santa Fe Energy</u>						Lease or Unit Name <u>Foal 20 Federal</u>					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date <u>8-22-96</u>		Well No. <u>1</u>			
Completion Date		Total Depth <u>12450</u>		Plug Back TD <u>12420</u>		Elevation		Unit Ltr. - Sec. - TWP - Rge. <u>20 22-5 23-E</u>			
Csg. Size	Wt.	d	Set At	Perforations:				County			
<u>4 1/2</u>	<u>13.5</u>	<u>3.920</u>	<u>12450</u>	From: <u>11804</u> To: <u>12230</u>				<u>Eddy</u>			
Tbg. Size	Wt.	d	Set At	Perforations:				Pool			
<u>2 3/8</u>	<u>4.7</u>	<u>1.995</u>	<u>11734</u>	From: To:							
Type Well - Single - Bradenhead - G.G. or G.O. Multiple <u>Single</u>						Packer Set At <u>11716</u>		Formation <u>Morrow</u>			
Producing Thru <u>TBG</u>		Reservoir Temp. °F <u>173°</u>		Mean Annual Temp. °F <u>60</u>		Baro. Press - P _a <u>13.2</u>		Connection <u>Atmosphere</u>			
L <u>11804</u>	H <u>11804</u>	G _g <u>.577</u>	% CO ₂ <u>1.49</u>	% N ₂ <u>.15</u>	% H ₂ S <u>N/A</u>	Prover <u>0</u>	Meter Run <u>4.026</u>	Taps <u>Flange</u>			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI							<u>3450</u>		<u>PKR</u>	
1.	<u>4.026 x 1.50</u>			<u>130</u>	<u>9</u>	<u>80</u>	<u>3270</u>			<u>1 hr</u>
2.	<u>4.026 x 1.50</u>			<u>130</u>	<u>20</u>	<u>85</u>	<u>3200</u>			<u>1 hr</u>
3.	<u>4.026 x 1.50</u>			<u>130</u>	<u>40</u>	<u>84</u>	<u>3150</u>			<u>1 hr</u>
4.	<u>4.026 x 1.50</u>			<u>140</u>	<u>79</u>	<u>82</u>	<u>3025</u>			<u>1 hr</u>
5.										

RATE OF FLOW CALCULATIONS							
NO.	COEFFICIENT (24 HOUR)		Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	<u>10.84</u>	<u>35.89</u>	<u>143.2</u>	<u>.9813</u>	<u>1.316</u>	<u>1.010</u>	<u>507</u>
2.	<u>10.84</u>	<u>53.51</u>	<u>143.2</u>	<u>.9768</u>	<u>1.316</u>	<u>1.009</u>	<u>752</u>
3.	<u>10.84</u>	<u>75.68</u>	<u>143.2</u>	<u>.9777</u>	<u>1.316</u>	<u>1.009</u>	<u>1.065</u>
4.	<u>10.84</u>	<u>110.01</u>	<u>153.2</u>	<u>.9795</u>	<u>1.316</u>	<u>1.010</u>	<u>1552</u>
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio <u>N/A</u>	Mcf/bbl.
1.	<u>.212</u>	<u>540</u>	<u>1.57</u>	<u>.980</u>	A.P. L Gravity of Liquid Hydrocarbons <u>N/A</u>	Deg.
2.	<u>.212</u>	<u>545</u>	<u>1.59</u>	<u>.982</u>	Specific Gravity Separator Gas <u>.577</u>	<u>XXXXXXXXXX</u>
3.	<u>.212</u>	<u>544</u>	<u>1.59</u>	<u>.982</u>	Specific Gravity Flowing Fluid <u>N/A</u>	<u>XXXXXX</u>
4.	<u>.226</u>	<u>542</u>	<u>1.58</u>	<u>.981</u>	Critical Pressure <u>675</u>	P.S.I.A. <u>N/A</u> P.S.I.A. <u>N/A</u>
5.					Critical Temperature <u>342</u>	R <u>N/A</u> R <u>N/A</u>

P_c 3463.2 - P_w 11993.8

NO.	P _c ²	P _w	P _w ²	P _c ² - P _w ²
1.		<u>3283.2</u>	<u>10779.4</u>	<u>1214.4</u>
2.		<u>3213.2</u>	<u>10324.7</u>	<u>1669.1</u>
3.		<u>3163.2</u>	<u>10005.8</u>	<u>1987.9</u>
4.		<u>3038.2</u>	<u>9230.7</u>	<u>2763.1</u>
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{4.341}$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{6.737}$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{4.341}$

Absolute Open Flow <u>6.737</u>	Mcf @ 15.025	Angle of Slope Θ <u>45°</u>	Slope, n <u>1.000</u>
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Remarks: No Fluid Made During Test

Approved By Division	Conducted By: <u>PRO WELL TESTER</u>	Calculated By: <u>MB</u>	Checked By: <u>BM</u>
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