

State of New Mexico
Submit in duplicate to: EXAMINER CATER Energy, Minerals and Natural Resources Department
appropriate district office
See Rule 401 & Rule 1122
OIL CONSERVATION DIVISION

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

EXHIBIT NO. 2-B

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator: <u>MANZANO</u>					Lease or Unit Name: <u>NEUNAUSE 14 FED.</u>						
Type Test: ☒ Initial ☐ Annual ☐ Special					Test Date: <u>7-14-93</u>		Well No.: <u>2</u>				
Completion Date: <u>7-14-93</u>		Total Depth: <u>11606</u>		Plugging TD: <u>11566</u>		Elevation:		Unit Ltr. - Sec. - TWP - Rge. <u>14-20-35-</u>			
Csg. Size: <u>5 1/2</u>		Wt.: <u>17#</u>		Set At: <u>11606</u>		Perforations: From: <u>11362</u> To: <u>11444</u>		County:			
Tbg. Size: <u>2 7/8</u>		Wt.: <u>6.7</u>		Set At: <u>11243</u>		Perforations: From: To:		Pool:			
Type Well - Single - Bradenhead - G.C. or G.O. Multiple <u>SINCE</u>					Packer Set At: <u>11243</u>		Formation:				
Producing Thru: <u>766</u>		Reservoir Temp. °F: <u>128 (no 11403)</u>		Mean Annual Temp. °F: <u>60</u>		Baro. Press. - P.: <u>13.2</u>		Connection:			
L: <u>11403</u>		H: <u>11403</u>		Qg: <u>734</u>		% CO2: <u>2.18</u>		% N2: <u>1.26</u>			
				% H2S:		Prover:		Meter Run: <u>41028</u>			
								Taps: <u>126</u>			
FLOW DATA					TUBING DATA		CASING DATA		Duration of Flow		
NO.	Prover Line Size	X	Orifice Size	Press. P.s.i.g.	Diff. h.	Temp. °F	Press. P.s.i.g.	Temp. °F	Press. P.s.i.g.	Temp. °F	Duration of Flow
SI							<u>1428</u>		<u>PKR</u>		<u>29</u>
1.	<u>4</u>	<u>X</u>	<u>1.500</u>	<u>260</u>	<u>2.00</u>	<u>128</u>	<u>1420</u>		<u>"</u>		<u>45</u>
2.	<u>4</u>	<u>X</u>	<u>1.500</u>	<u>262</u>	<u>8.00</u>	<u>106</u>	<u>1466</u>		<u>"</u>		<u>45</u>
3.	<u>4</u>	<u>X</u>	<u>1.500</u>	<u>253</u>	<u>30.00</u>	<u>81</u>	<u>1260</u>		<u>"</u>		<u>1 HR</u>
4.	<u>4</u>	<u>X</u>	<u>1.500</u>	<u>275</u>	<u>53.00</u>	<u>55</u>	<u>1100</u>		<u>"</u>		<u>1 HR</u>
5.											
RATE OF FLOW CALCULATIONS											
NO.	COEFFICIENT (24 HOUR)	$\sqrt{P_1 - P_2}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd				
1.	<u>10.84</u>	<u>23.38</u>	<u>273.2</u>	<u>.9588</u>	<u>1.167</u>	<u>1.027</u>	<u>291</u>				
2.	<u>10.80</u>	<u>46.92</u>	<u>275.2</u>	<u>.9583</u>	<u>1.167</u>	<u>1.027</u>	<u>584</u>				
3.	<u>10.84</u>	<u>89.36</u>	<u>266.2</u>	<u>.9813</u>	<u>1.167</u>	<u>1.030</u>	<u>1143</u>				
4.	<u>10.84</u>	<u>128.59</u>	<u>282.2</u>	<u>.9768</u>	<u>1.167</u>	<u>1.032</u>	<u>1576</u>				
5.											
NO.	P ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio <u>70.3</u> Molal						
1.	<u>.40</u>	<u>568</u>	<u>1.43</u>	<u>.949</u>	A.P. I. Gravity of Liquid Hydrocarbons <u>51.4 @ 60°</u> Deg.						
2.	<u>.40</u>	<u>566</u>	<u>1.43</u>	<u>.949</u>	Specific Gravity Separator Gas <u>.734</u>			<u>XXXXXXXXXX</u>			
3.	<u>.39</u>	<u>540</u>	<u>1.36</u>	<u>.949</u>	Specific Gravity Flowing Fluid <u>XXXXX</u>			<u>GMA = .776</u>			
4.	<u>.42</u>	<u>545</u>	<u>1.37</u>	<u>.939</u>	Critical Pressure <u>XX</u> <u>675</u> PSIA			<u>XX</u> <u>673</u> PSIA			
5.					Critical Temperature <u>XX</u> <u>553</u> °R			<u>XX</u> <u>469</u> °R			
P ₁ <u>1441.2</u> P ₂ <u>3027.1</u>											
NO.	P ₁	P ₂	P ₃	P ₄	1) $\frac{P_1^2}{P_2^2 - P_1^2} = \frac{83.42}{13.9}$		2) $\left[\frac{P_1^2}{P_2^2 - P_1^2} \right] = \frac{9.093}{22.5}$				
1.	<u>1440.6</u>	<u>1438.3</u>	<u>2082.2</u>	<u>24.9</u>							
2.	<u>1438.5</u>	<u>1414.6</u>	<u>2082.2</u>	<u>2610</u>							
3.	<u>1432.7</u>	<u>1279.3</u>	<u>1886.5</u>	<u>440.6</u>							
4.	<u>1433.3</u>	<u>1126.8</u>	<u>1269.8</u>	<u>807.8</u>							
5.			<u>4134.3</u>								
Absolute Open Flow <u>2.647</u> Mcfd @ 15.025					Angle of Slope <u>68.1°</u>		Slope, n <u>.499</u>				
Remarks: <u>See RHP Test Report</u>											
<u>Well M.I.D. 54.00 803 N 20 W 2.04 800 E 1.26 802 1/2</u>											
Approved By Division			Conducted By:			Calculated By:			Checked By:		