

EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

DATE March 31, 1960

|                                               |                             |                                         |                                 |
|-----------------------------------------------|-----------------------------|-----------------------------------------|---------------------------------|
| Operator<br><b>Frank A. Schultz</b>           |                             | Lease<br><b>San Juan 32-5 No. 14-32</b> |                                 |
| Location<br><b>1490N, 1140E; 32-32-5</b>      |                             | County<br><b>Rio Arriba</b>             | State<br><b>New Mexico</b>      |
| Formation<br><b>Mesa Verde</b>                |                             | Pool<br><b>Blanco</b>                   |                                 |
| Casing: Diameter<br><b>5-1/2</b>              | Set At: Feet<br><b>6329</b> | Tubing: Diameter<br><b>2</b>            | Set At: Feet<br><b>6254</b>     |
| Pay Zone: From<br><b>5862</b>                 | To<br><b>6202</b>           | Total Depth:<br><b>c/o 6300</b>         | Shut In<br><b>10/21/59</b>      |
| Stimulation Method<br><b>Sand Water Frac.</b> |                             | Flow Through Casing                     | Flow Through Tubing<br><b>X</b> |

|                                               |                               |                                    |                                                       |                                |                               |
|-----------------------------------------------|-------------------------------|------------------------------------|-------------------------------------------------------|--------------------------------|-------------------------------|
| Choke Size, Inches<br><b>.75</b>              |                               | Choke Constant: C<br><b>12.365</b> |                                                       | <b>7-5/8 intermediate</b>      |                               |
|                                               |                               |                                    |                                                       | <b>5-1/2 liner 3830 - 6329</b> |                               |
| Shut-In Pressure, Casing, PSIG<br><b>1250</b> | 12 PSIA<br><b>1262</b>        | Days Shut-In<br><b>162</b>         | Shut-In Pressure, Tubing, PSIG<br><b>247</b>          | 12 PSIA<br><b>259</b>          |                               |
| Flowing Pressure: P, PSIG<br><b>122</b>       | 12 PSIA<br><b>134</b>         |                                    | Working Pressure: P <sub>w</sub> , PSIG<br><b>581</b> | 12 PSIA<br><b>593</b>          |                               |
| Temperature:<br>T = <b>70</b> °F              | F <sub>g</sub> = <b>.9905</b> |                                    | F <sub>pv</sub> (From Tables)<br><b>1.009</b>         | Gravity<br><b>.600</b>         | F <sub>g</sub> = <b>1.000</b> |

CHOKE VOLUME =  $Q \cdot C \cdot P_i \cdot F_i \cdot F_g \cdot F_{pv}$ 

$$Q = 12.365 \times 134 \times .9905 \times 1.000 \times 1.009 = 1656 \text{ MCF/D}$$

$$\text{OPEN FLOW} = Aof = Q \left( \frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

$$Aof = \left( \frac{1592644}{1240995} \right)^n = 1.2833^{.78} \times 1656 = 1.2056 \times 1656$$

$$Aof = 1996 \text{ MCF/D}$$

TESTED BY Tom GrantWITNESSED BY Virgil Stoabs (BMC)

*Lewis D. Galloway*  
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