

EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

DATE December 27, 1977

|                                                |                              |                                           |                              |
|------------------------------------------------|------------------------------|-------------------------------------------|------------------------------|
| Operator<br><b>El Paso Natural Gas Company</b> |                              | Lease<br><b>S.J. 28-5 Unit #33 (OWWO)</b> |                              |
| Location<br><b>SW/4 Sec. 17, T28N, R5W</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>5.00</b>                | Set At: Feet<br><b>8174'</b> | Tubing: Diameter<br><b>1 1/4</b>          | Set At: Feet<br><b>5861'</b> |
| Pay Zone: From<br><b>5361</b>                  | To<br><b>5892</b>            | Total Depth: <b>PBTD</b><br><b>8100</b>   | Shut In                      |
| Stimulation Method<br><b>Sandwater Frac</b>    |                              | Flow Through Casing<br><b>XX</b>          | Flow Through Tubing          |

|                                              |                           |                                                       |                               |                               |  |
|----------------------------------------------|---------------------------|-------------------------------------------------------|-------------------------------|-------------------------------|--|
| Choke Size, Inches<br><b>.750</b>            |                           | Choke Constant: C<br><b>12.365</b>                    |                               |                               |  |
| Shut-In Pressure, Casing, PSIG<br><b>544</b> | + 12 = PSIA<br><b>556</b> | Days Shut-In<br><b>15</b>                             | Shut-In Pressure, Tubing PSIG | + 12 = PSIA                   |  |
| Flowing Pressure: P PSIG<br><b>90</b>        | + 12 = PSIA<br><b>102</b> | Working Pressure: P <sub>w</sub> PSIG<br><b>Calc.</b> | + 12 = PSIA                   |                               |  |
| Temperature:<br>T = <b>52 °F</b>             | n =<br><b>.75</b>         | F <sub>pv</sub> (From Tables)<br><b>1.010</b>         | Gravity<br><b>.650</b>        | F <sub>g</sub> = <b>.9608</b> |  |

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

$$Q = 12.365(102)(1.0078)(.9608)(1.010) = \underline{\quad 1233 \quad} \text{ MCF/D}$$

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

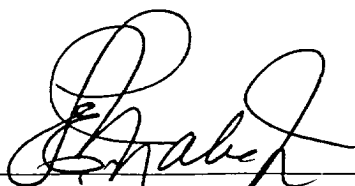
$$Aof = Q \left( \frac{309136}{297472} \right)^n = 1233(1.039)^{.75} = (1233)(1.029)$$

$$Aof = \underline{\quad 1269 \quad} \text{ MCF/D}$$

Note: 190 MCF gas vented during test.

TESTED BY John Easley

WITNESSED BY \_\_\_\_\_

  
Well Test Engineer

