

EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

DATE January 23, 1976

|                                             |                             |                                  |                                  |
|---------------------------------------------|-----------------------------|----------------------------------|----------------------------------|
| Operator<br><b>Koch Industries</b>          |                             | Lease<br><b>Lamb #7</b>          |                                  |
| Location<br><b>SE 21-31-10</b>              |                             | County<br><b>San Juan</b>        | State<br><b>New Mexico</b>       |
| Formation<br><b>Pictured Cliffs</b>         |                             | Pool<br><b>Blanco</b>            |                                  |
| Casing: Diameter<br><b>4.500</b>            | Set At: Feet<br><b>3006</b> | Tubing: Diameter<br><b>2.375</b> | Set At: Feet<br><b>2873'</b>     |
| Pay Zone: From<br><b>2875</b>               | To<br><b>2911</b>           | Total Depth:<br><b>3006'</b>     | Shut In<br><b>1-6-76</b>         |
| Stimulation Method<br><b>Sandwater Frac</b> |                             | Flow Through Casing              | Flow Through Tubing<br><b>XX</b> |

|                                              |                           |                                    |                                               |                           |                        |
|----------------------------------------------|---------------------------|------------------------------------|-----------------------------------------------|---------------------------|------------------------|
| Choke Size, Inches<br><b>.750</b>            |                           | Choke Constant: C<br><b>12.365</b> |                                               |                           |                        |
| Shut-In Pressure, Casing, PSIG<br><b>912</b> | + 12 = PSIA<br><b>924</b> | Days Shut-In<br><b>7</b>           | Shut-In Pressure, Tubing PSIG<br><b>912</b>   | + 12 = PSIA<br><b>924</b> |                        |
| Flowing Pressure: P PSIG<br><b>86</b>        | + 12 = PSIA<br><b>98</b>  |                                    | Working Pressure: Pw PSIG<br><b>154</b>       | + 12 = PSIA<br><b>166</b> |                        |
| Temperature:<br><b>65 °F</b>                 | F <sub>r</sub> = .9952    | n =<br><b>.85</b>                  | F <sub>pv</sub> (From Tables)<br><b>1.009</b> | Gravity<br><b>.670</b>    | F <sub>g</sub> = .9463 |

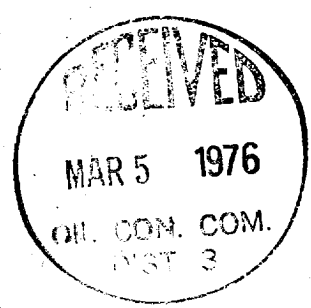
CHOKE VOLUME = Q = C x P<sub>r</sub> x F<sub>r</sub> x F<sub>g</sub> x F<sub>pv</sub>

Q = 12.365(98)(.9952)(.9463)(1.009) = 1151 MCF/D

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

Aof = Q  $\left( \frac{853776}{826220} \right)^n = 1151(1.0334)^{.85} = 1151(1.0283)$

Aof = 1184 MCF/D



Note: Well blew dry gas throughout test.

TESTED BY Jackson (Koch Ind.)

WITNESSED BY J. Goodwin (EPNG)

Charles W. Dain  
Well Test Engineer