

## OPEN FLOW TEST DATA

DATE October 13, 1977

|                                         |                       |                           |                       |
|-----------------------------------------|-----------------------|---------------------------|-----------------------|
| Operator<br>El Paso Natural Gas Company |                       | Lease<br>Lucerne A #3-A   |                       |
| Location<br>Unit I Sec. 3, T31N, R10W   |                       | County<br>San Juan        | State<br>New Mexico   |
| Formation<br>Pictured Cliffs            |                       | Pool<br>Blanco            |                       |
| Casing: Diameter<br>7.000               | Set At: Feet<br>3222' | Tubing: Diameter<br>1.660 | Set At: Feet<br>2878' |
| Pay Zone: From<br>2814'                 | To<br>2882'           | Total Depth:<br>PB 5493   | Shut In<br>9-29-77    |
| Stimulation Method<br>Sandwater Frac    |                       | Flow Through Casing<br>XX | Flow Through Tubing   |

|                                           |                    |                              |                                              |                                             |  |
|-------------------------------------------|--------------------|------------------------------|----------------------------------------------|---------------------------------------------|--|
| Choke Size, Inches<br>.750                |                    | Choke Constant: C<br>12.3650 |                                              |                                             |  |
| Shut-In Pressure, Casing, PSIG<br>700     | + 12 = PSIA<br>712 | Days Shut-In<br>14           | Shut-In Pressure, Tubing PSIG<br>701         | + 12 = PSIA<br>713                          |  |
| Flowing Pressure: P PSIG<br>236           | + 12 = PSIA<br>248 |                              | Working Pressure: P <sub>w</sub> PSIG<br>241 | + 12 = PSIA<br>253                          |  |
| Temperature:<br>T = 62 °F      Fr = .9990 | n =<br>.85         |                              | F <sub>pv</sub> (From Tables)<br>1.024       | Gravity<br>.650      F <sub>g</sub> = .9608 |  |

$$\text{CHOKE VOLUME} = Q = C \times P_t \times F_t \times F_g \times F_{pv}$$

$$Q = 12.365(248)(.9990)(.9608)(1.024) = \underline{3014} \text{ MCF/D}$$

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

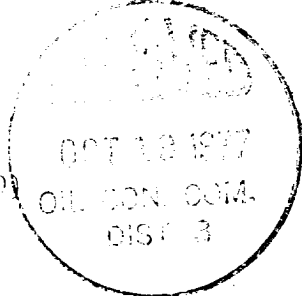
$$Aof = Q \left( \frac{508369}{444360} \right)^n = 3014(1.1440)^{.85} = 3014(1.1219)$$

$$Aof = \underline{3381} \text{ MCF/D}$$

Note: Well blew dry gas throughout test.  
Well vented 466 MCF of gas to atmosphere during the test.

TESTED BY J. Thurstonson

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



C.R. Skaggs  
Well Test Engineer

