

EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

DATE October 16, 1968

|                                                  |                      |                                    |                          |
|--------------------------------------------------|----------------------|------------------------------------|--------------------------|
| Operator<br>El Paso Natural Gas Company          |                      | Lease<br>San Juan 27-4 Unit No. 54 |                          |
| Location<br>810'N, 910'E, Sec. 32, T-27-N, R-4-W |                      | County<br>Rio Arriba               | State<br>New Mexico      |
| Formation<br>Dakota                              |                      | Pool<br>Basin                      |                          |
| Casing: Diameter<br>4.500                        | Set At: Feet<br>8415 | Tubing: Diameter<br>2.375          | Set At: Feet<br>8150     |
| Pay Zone: From<br>8170                           | To<br>8406           | Total Depth:<br>8415               | Shut In<br>9-26-68       |
| Stimulation Method<br>Sand Water Frac            |                      | Flow Through Casing                | Flow Through Tubing<br>X |

|                                               |                                   |                              |                                              |                                      |                         |
|-----------------------------------------------|-----------------------------------|------------------------------|----------------------------------------------|--------------------------------------|-------------------------|
| Choke Size, Inches<br>2.750" Plate; 4" M.R.   |                                   | Choke Constant: C<br>41.9208 |                                              | Tested through 2 3/4" variable choke |                         |
| Shut-In Pressure, Casing, PSIG<br>2347        | + 12 = PSIA<br>2359               | Days Shut-In<br>20           | Shut-In Pressure, Tubing PSIG<br>2176        | + 12 = PSIA<br>2188                  |                         |
| Flowing Pressure: P PSIG<br>98 M.R.; 410 W.H. | + 12 = PSIA<br>110 M.R.; 422 W.H. |                              | Working Pressure: P <sub>w</sub> PSIG<br>927 | + 12 = PSIA<br>939                   |                         |
| Temperature:<br>T = 85 °F                     | n =<br>.75                        |                              | F <sub>pv</sub> (From Tables)<br>1.010       | Gravity<br>.700                      | F <sub>g</sub> = 1.1952 |

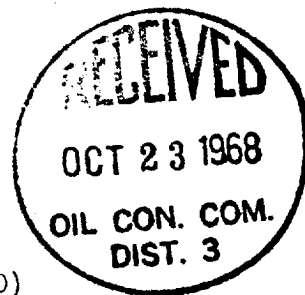
CHOKE VOLUME = Q = C x P<sub>i</sub> x F<sub>i</sub> x F<sub>g</sub> x F<sub>pv</sub>

Q = Calculated from orifice meter readings = 3202 MCF/D

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

$$A_{of} = \left( \frac{5564881}{4683160} \right)^n = (3202)(1.1882)^{.75} = (3202)(1.1380)$$

Note: The well produced 49.23 bbls. of 51.6 API Gravity Oil and 32.82 bbls. of water into the tank during the three hour test.

A<sub>of</sub> = 3644 MCF/D

TESTED BY D. Roberts & B. Broughton

Calculated  
WITNESSED BY Hermon E. McAnally

Checked by George A. Lippman
  
H. L. Kendrick