

DATE June 30, 1977

|                                         |  |                         |  |                              |  |                           |  |                           |  |                                            |  |
|-----------------------------------------|--|-------------------------|--|------------------------------|--|---------------------------|--|---------------------------|--|--------------------------------------------|--|
| Operator<br>El Paso Natural Gas Company |  | Location<br>SE 19-25-05 |  | Formation<br>Pictured Cliffs |  | Casing: Diameter<br>2 7/8 |  | Pay Zone: From<br>2634    |  | Stimulation Method<br>Sandwater Frac       |  |
| Loose<br>Jicarilla 67 #18               |  | County<br>Rio Arriba    |  | Pool<br>So. Blanco Ext.      |  | Tubing: Diameter<br>T/C   |  | Total Depth: PRTD<br>2743 |  | Flow Through Casing<br>Flow Through Tubing |  |
| State<br>New Mexico                     |  | Set At: Feet<br>2753'   |  | Set At: Feet<br>2651         |  | Shut In<br>6-23-77        |  | Shut In<br>6-23-77        |  |                                            |  |

|                                         |  |                   |  |                                               |  |                   |  |                                              |  |                                          |  |                                |  |                  |  |
|-----------------------------------------|--|-------------------|--|-----------------------------------------------|--|-------------------|--|----------------------------------------------|--|------------------------------------------|--|--------------------------------|--|------------------|--|
| Choke Size, Inches                      |  | Choke Constant: C |  | Shut-In Pressure, Casing,<br>PSIG + 12 = PSIA |  | Days Shut-In<br>7 |  | Shut-In Pressure, Tubing<br>PSIG + 12 = PSIA |  | Working Pressure: Pw<br>PSIG + 12 = PSIA |  | Flow Through Casing<br>Gravity |  | Fg =             |  |
| Flowing Pressure: P<br>PSIG + 12 = PSIA |  | PSIG + 12 = PSIA  |  | PSIG + 12 = PSIA                              |  | PSIG + 12 = PSIA  |  | PSIG + 12 = PSIA                             |  | PSIG + 12 = PSIA                         |  | PSIG + 12 = PSIA               |  | PSIG + 12 = PSIA |  |
| Temperature:<br>T =                     |  | F =               |  | n =                                           |  | Fpv (From Tables) |  | Gravity                                      |  | Fg =                                     |  |                                |  |                  |  |

CHOKE VOLUME = Q = C x P<sub>1</sub> x F<sub>1</sub> x F<sub>g</sub> x F<sub>pv</sub>

Q =

MCF/D

$$\text{OPEN FLOW} = Aof = Q \left( \frac{P_c^2}{P_w^2} - \frac{P_c^2}{P_w^2} \right)^{\frac{1}{n}}$$

$$Aof = \left( \frac{Q}{C} \right)^{\frac{1}{n}}$$

No after frac gauge.

Aof = MCF/D

TESTED BY Mechanically

WITNESSED BY

Well Test Engineer