

EL PASO NATURAL GAS COMPANY  
OPEN FLOW TEST DATA

DATE April 30, 1974

|                                              |                       |                                 |                           |
|----------------------------------------------|-----------------------|---------------------------------|---------------------------|
| Operator<br>El Paso Natural Gas Company      |                       | Lease<br>Canyon Largo Unit #238 |                           |
| Location<br>890/N, 800/E, Sec. 12, T25N, R6W |                       | County<br>Rio Arriba            | State<br>New Mexico       |
| Formation<br>Mesa Verde                      |                       | Pool<br>Gonzales ext.           |                           |
| Casing: Diameter<br>4.500                    | Set At: Feet<br>5241' | Tubing: Diameter<br>2.375       | Set At: Feet<br>5196'     |
| Pay Zone: From<br>4946                       | To<br>5198'           | Total Depth: PBD<br>5241'       | Shut In<br>4-10-74        |
| Stimulation Method<br>Sandwater Frac         |                       | Flow Through Casing             | Flow Through Tubing<br>XX |

|                                                       |                   |                           |                                      |                             |
|-------------------------------------------------------|-------------------|---------------------------|--------------------------------------|-----------------------------|
| Meter -<br>Casing Size, Inches Orifice<br>4" NR 2.500 |                   | Flow Constant: C<br>32.64 | Well test thru 3/4" variable choke   |                             |
| Shut-In Pressure, Casing, PSIG<br>1225                | 12 = PSIA<br>1237 | Days Shut-In<br>20        | Shut-In Pressure, Tubing PSIG<br>942 | 12 = PSIA<br>954            |
| Flowing Pressure: P PSIG<br>86                        | 12 = PSIA<br>98   |                           | Working Pressure: Pw PSIG<br>347     | 12 = PSIA<br>359            |
| Temperature:<br>T = 70 °F                             | n =<br>.75        |                           | Fpv (From Tables)<br>1.008           | Gravity<br>.650 Fg = 1.2403 |

$$\text{CHOKE VOLUME} = Q = C \times P_1 \times F_t \times F_g \times F_{pv}$$

$$Q = \text{Calculated from meter readings} = 792 \text{ MCF/D}$$

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

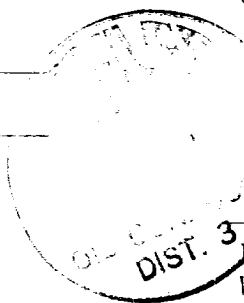
$$Aof = Q \left( \frac{1530169}{1401358} \right)^n = 792(1.0920)^{.75} = 792(1.0682)$$

$$Aof = 865 \text{ MCF/D}$$

Note: The well produced 23.96 BBL of an oil/water emulsion with a gravity of 43.6.

TESTED BY Hardie & Fothergill

WITNESSED BY



Koren W. Fothergill  
Well Test Engineer