

## OPEN FLOW TEST DATA

DATE August 24, 1977

|                                         |                       |                                  |                       |
|-----------------------------------------|-----------------------|----------------------------------|-----------------------|
| Operator<br>El Paso Natural Gas Company |                       | Lease<br>San Juan 27-4 Unit #123 |                       |
| Location <u>27</u><br>NE 7-28-04        |                       | County<br>Rio Arriba             | State<br>New Mexico   |
| Formation<br>Pictured Cliffs            |                       | Pool<br>Tapacito PC Extension    |                       |
| Casing: Diameter<br>4 1/2               | Set At: Feet<br>6412' | Tubing: Diameter<br>1 1/4"       | Set At: Feet<br>5904' |
| Pay Zone: From<br>3826                  | To<br>3896            | Total Depth:<br>6412             | Shut In<br>7-23-77    |
| Stimulation Method<br>Sandwater Frac    |                       | Flow Through Casing<br>XX        | Flow Through Tubing   |

|                                                      |                             |                                     |                                              |                                      |                        |
|------------------------------------------------------|-----------------------------|-------------------------------------|----------------------------------------------|--------------------------------------|------------------------|
| Meter<br>Choke Size, Inches orifice<br>4" M.R. 2.750 |                             | Meter<br>Choke Constant: C<br>41.10 |                                              | Well tested thru 3/4" variable choke |                        |
| Shut-In Pressure, Casing, PSIG<br>1003               | + 12 = PSIA<br>1015         | Days Shut-In<br>32                  | Shut-In Pressure, Tubing PSIG<br>1005        | + 12 = PSIA<br>1017                  |                        |
| Flowing Pressure: P<br>MR 56 WH 149                  | + 12 = PSIA<br>MR 68 WH 161 |                                     | Working Pressure: P <sub>w</sub> PSIG<br>166 | + 12 = PSIA<br>178                   |                        |
| Temperature:<br>T = 47 °F                            | n =<br>.85                  |                                     | F <sub>pv</sub> (From Tables)<br>1.010       | Gravity<br>.650                      | F <sub>g</sub> = 1.240 |

$$\text{CHOKE VOLUME} = Q = C \times P_1 \times F_1 \times F_g \times F_{pv}$$

$$Q = \text{Calculated from orifice meter readings} = 2173 \text{ MCF/D}$$

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

$$Aof = Q \left( \frac{1034289}{1002605} \right)^n = 2173(1.0316)^{.85} = 2173(1.0268)$$

$$Aof = 2231 \text{ MCF/D}$$

Note: Well vented 406 MCF of dry gas to atmosphere during test.

TESTED BY F. Johnson- D. Howell

WITNESSED BY

C. R. Wagner  
Well Test Engineer