

in Deliverability

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL DELIVERABILITY TEST REPORT FOR 19 70

Form 1110-A  
Revised 1-1-68

|                    |                       |                 |              |
|--------------------|-----------------------|-----------------|--------------|
| POOL NAME<br>Aztec | POOL SLOPE<br>n = .85 | FORMATION<br>PC | COUNTY<br>SJ |
|--------------------|-----------------------|-----------------|--------------|

87-188

|                                               |                               |                             |                                           |                             |                           |
|-----------------------------------------------|-------------------------------|-----------------------------|-------------------------------------------|-----------------------------|---------------------------|
| COMPANY<br>El Paso Natural Gas Co             |                               |                             | WELL NAME AND NUMBER<br>Heaton No. 24     |                             |                           |
| UNIT LETTER<br>E                              | SECTION<br>30                 | TOWNSHIP<br>31              | RANGE<br>11                               | PURCHASING PIPELINE<br>EPNG |                           |
| CASING O.D. - INCHES<br>2.875                 | CASING I.D. - INCHES<br>2.441 | SET AT DEPTH - FEET<br>2580 | TUBING O.D. - INCHES<br>no tubing         | TUBING I.D. - INCHES        | TOP - TUBING PENF. - FEET |
| GAS PAY ZONE<br>FROM 2386 TO 2416             |                               |                             | WELL PRODUCING THRU<br>CASING XX TUBING   |                             | GAS GRAVITY<br>.667       |
| DATE OF FLOW TEST<br>FROM 11-29-70 TO 12-7-70 |                               |                             | DATE SHUT-IN PRESSURE MEASURED<br>10-8-70 |                             |                           |

PRESSURE DATA - ALL PRESSURES IN PSIA

|                                    |                                         |                                   |                                   |                                      |                                    |                                                              |
|------------------------------------|-----------------------------------------|-----------------------------------|-----------------------------------|--------------------------------------|------------------------------------|--------------------------------------------------------------|
| (a) Flowing Casing Pressure (DWt)  | (b) Flowing Tubing Pressure (DWt)       | (c) Flowing Meter Pressure (DWt)  | (d) Flow Chart Static Reading     | (e) Meter Error (Item c - Item d)    | (f) Friction Loss (a-c) or (b-c)   | (g) Average Meter Pressure (Integr.)                         |
| -                                  | -                                       | -                                 | -                                 | 0                                    | 0                                  | 192                                                          |
| (h) Corrected Meter Pressure (g+e) | (i) Avg. Well head Press. $P_t = (h+f)$ | (j) Shut-in Casing Pressure (DWt) | (k) Shut-in Tubing Pressure (DWt) | (l) $P =$ higher value of (j) or (k) | (m) Del. Pressure $P_d = 80\% P_c$ | (n) Separator or Dehydrator Pr. (DWt) for critical flow only |
| 192                                | 192                                     | 644                               | -                                 | 644                                  | 515                                |                                                              |

FLOW RATE CORRECTION (METER ERROR)

|                           |                                                   |                                              |                  |
|---------------------------|---------------------------------------------------|----------------------------------------------|------------------|
| Integrated Volume - MCF/D | Quotient of $\frac{\text{Item c}}{\text{Item d}}$ | $\sqrt{\frac{\text{Item c}}{\text{Item d}}}$ | Corrected Volume |
| 367                       | 1.0000                                            | 1.0000                                       | Q = 367 MCF/D    |

WORKING PRESSURE CALCULATION

|              |                      |                                       |         |                       |                      |
|--------------|----------------------|---------------------------------------|---------|-----------------------|----------------------|
| $(1-e^{-s})$ | $(F_c Q_m)^2 (1000)$ | $R^2 = (1-e^{-s}) (F_c Q_m)^2 (1000)$ | $P_t^2$ | $P_w^2 = P_t^2 + R^2$ | $P_w = \sqrt{P_w^2}$ |
| .109         | 4150                 | 452                                   | 36864   | 37316                 | 193                  |

DELIVERABILITY CALCULATION

|                                                                |       |                                                              |               |
|----------------------------------------------------------------|-------|--------------------------------------------------------------|---------------|
| $D = Q \left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n =$ | $367$ | $\left[ \frac{149514}{377420} \right]^n = (.3961)^n = .4552$ | $= 167$ MCF/D |
|----------------------------------------------------------------|-------|--------------------------------------------------------------|---------------|

REMARKS:

New well, 1st del. 11-12-70.

SUMMARY

Item h 192 Psia  
P<sub>c</sub> 644 Psia  
Q 367 MCF/D  
P<sub>w</sub> 193 Psia  
P<sub>d</sub> 515 Psia  
D 167 MCF/D

Company EL PASO NATURAL GAS CO

By

Title

Witnessed By

Company

DEC 23 1970

CON. COM

F. 3