

Initial  
Deliverability Test

# NEW MEXICO OIL CONSERVATION COMMISSION WELL DELIVERABILITY TEST REPORT FOR 19 69

Form C122-A  
Revised 1-1-68

|                           |                         |                            |                           |
|---------------------------|-------------------------|----------------------------|---------------------------|
| POOL NAME<br><b>Basin</b> | POOL SLOPE<br>$n = .75$ | FORMATION<br><b>Dakota</b> | COUNTY<br><b>San Juan</b> |
|---------------------------|-------------------------|----------------------------|---------------------------|

75-899

|                                                              |                                      |                                               |                                                      |                                                           |                                          |
|--------------------------------------------------------------|--------------------------------------|-----------------------------------------------|------------------------------------------------------|-----------------------------------------------------------|------------------------------------------|
| COMPANY<br><b>El Paso Natural Gas Company</b>                |                                      |                                               | WELL NAME AND NUMBER<br><b>Huerfano Unit No. 150</b> |                                                           |                                          |
| UNIT LETTER<br><b>0</b>                                      | SECTION<br><b>12</b>                 | TOWNSHIP<br><b>25</b>                         | RANGE<br><b>10</b>                                   | PURCHASING PIPELINE<br><b>El Paso Natural Gas Company</b> |                                          |
| CASING O.D. - INCHES<br><b>4.500</b>                         | CASING I.D. - INCHES<br><b>4.052</b> | SET AT DEPTH - FEET<br><b>6915</b>            | TUBING O.D. - INCHES<br><b>2.375</b>                 | TUBING I.D. - INCHES<br><b>1.995</b>                      | TOP - TUBING PERF. - FEET<br><b>6746</b> |
| GAS PAY ZONE<br>FROM <b>6774</b> TO <b>6814</b>              |                                      | WELL PRODUCING THRU<br>CASING TUBING <b>X</b> |                                                      | GAS GRAVITY<br><b>.725</b>                                | GRAVITY X LENGTH<br><b>4891</b>          |
| DATE OF FLOW TEST<br>FROM <b>12-11-68</b> TO <b>12-19-68</b> |                                      |                                               | DATE SHUT-IN PRESSURE MEASURED<br><b>10-9-68</b>     |                                                           |                                          |

## 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.)                         |
|------------------------------------|----------------------------------------|-----------------------------------|-----------------------------------|----------------------------------------|-------------------------------------------------|--------------------------------------------------------------|
|                                    |                                        |                                   |                                   | <b>0</b>                               | <b>0</b>                                        | <b>484</b>                                                   |
| (h) Corrected Meter Pressure (g+e) | (i) Avg. Wellhead Press. $P_t = (h+f)$ | (j) Shut-in Casing Pressure (DWt) | (k) Shut-in Tubing Pressure (DWt) | (l) $P_s$ = higher value of (i) or (k) | (m) Del. Pressure $P_d = \frac{50}{793} \% P_c$ | (n) Separator or Dehydrator Pr. (DWt) for critical flow only |
| <b>484</b>                         | <b>484</b>                             | <b>1585</b>                       | <b>1579</b>                       | <b>1585</b>                            |                                                 |                                                              |

## 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                     |
|---------------------------|---------------------------------------------------|----------------------------------------------|--------------------------------------|
| <b>390</b>                | <b>1.0000</b>                                     | <b>1.0000</b>                                | $Q = \frac{390}{1.0000} = 390$ MCF/D |

## WORKING PRESSURE CALCULATION

| $(1-e^{-s})$ | $(F_c Q_m)^2 (1000)$ | $R^2 = (1-e^{-s}) (F_c Q_m)^2 (1000)$ | $P_t^2$       | $P_w^2 = P_t^2 + R^2$ | $P_w = \sqrt{P_w^2}$ |
|--------------|----------------------|---------------------------------------|---------------|-----------------------|----------------------|
| <b>.299</b>  | <b>13447</b>         | <b>4021</b>                           | <b>234256</b> | <b>238277</b>         | <b>488</b>           |

## DELIVERABILITY CALCULATION

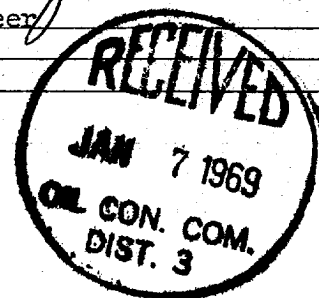
$$D = Q \left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \frac{390}{\left[ \frac{1883376}{2273948} \right]^n} = \frac{390}{(.8282)^n} = \frac{390}{.8681} = 339 \text{ MCF/D}$$

REMARKS: New Well First Delivered 11-6-68.

## SUMMARY

Item h 484 Psia  
 $P_c$  1585 Psia  
 $Q$  390 MCF/D  
 $P_w$  488 Psia  
 $P_d$  793 Psia  
 $D$  339 MCF/D

Company EL PASO NATURAL GAS COMPANY  
 By H. E. McAnally H. E. McAnally  
 Title Well Test Engineer  
 Witnessed By \_\_\_\_\_  
 Company \_\_\_\_\_



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