

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL DELIVERABILITY TEST REPORT FOR 1969Form C122-A  
Revised 1-1-68

|                           |                       |                     |                      |
|---------------------------|-----------------------|---------------------|----------------------|
| POOL NAME<br>Undesignated | POOL SLOPE<br>n = .75 | FORMATION<br>Chacra | COUNTY<br>Rio Arriba |
|---------------------------|-----------------------|---------------------|----------------------|

75-909

|                                             |                               |                                  |                                                       |                                            |                           |
|---------------------------------------------|-------------------------------|----------------------------------|-------------------------------------------------------|--------------------------------------------|---------------------------|
| COMPANY<br>El Paso Natural Gas              |                               |                                  | WELL NAME AND NUMBER<br>Southern Petroleum Com. No. 4 |                                            |                           |
| UNIT LETTER<br>K                            | SECTION<br>32                 | TOWNSHIP<br>26                   | RANGE<br>6                                            | PURCHASING PIPELINE<br>El Paso Natural Gas |                           |
| CASING O.D. - INCHES<br>2.875               | CASING I.D. - INCHES<br>2.441 | SET AT DEPTH - FEET<br>3869      | TUBING O.D. - INCHES<br>No tubing                     | TUBING I.D. - INCHES                       | TOP - TUBING PERF. - FEET |
| GAS PAY ZONE<br>FROM 3702 TO 3812           |                               | WELL PRODUCING THRU<br>CASING XX |                                                       | GAS GRAVITY<br>.728                        | GRAVITY X LENGTH<br>2695  |
| DATE OF FLOW TEST<br>FROM 1-6-69 TO 1-14-69 |                               |                                  | DATE SHUT-IN PRESSURE MEASURED<br>10-17-68            |                                            |                           |

## 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                                            | 198                                                          |
| (h) Corrected Meter Pressure (g+e) | (i) Avg. Wellhead Press. $P_f = (h+f)$ | (j) Shut-in Casing Pressure (DWt) | (k) Shut-in Tubing Pressure (DWt) | (l) $P_c$ = higher value of (i) or (k) | (m) Del. Pressure $P_d = \frac{80}{605} P_c$ | (n) Separator or Dehydrator Pr. (DWt) for critical flow only |
| 198                                | 198                                    | 756                               | -                                 | 756                                    |                                              |                                                              |

## FLOW RATE CORRECTION (METER ERROR)

|                                  |                                                             |                                                        |                                   |
|----------------------------------|-------------------------------------------------------------|--------------------------------------------------------|-----------------------------------|
| Integrated Volume - MCF/D<br>812 | Quotient of $\frac{\text{Item c}}{\text{Item d}}$<br>1.0000 | $\sqrt{\frac{\text{Item c}}{\text{Item d}}}$<br>1.0000 | Corrected Volume<br>Q = 812 MCF/D |
|----------------------------------|-------------------------------------------------------------|--------------------------------------------------------|-----------------------------------|

## WORKING PRESSURE CALCULATION

|                      |                               |                                               |                  |                                |                             |
|----------------------|-------------------------------|-----------------------------------------------|------------------|--------------------------------|-----------------------------|
| $(1-e^{-s})$<br>.178 | $(F_c Q_m)^2 (1000)$<br>20313 | $R^2 = (1-e^{-s}) (F_c Q_m)^2 (1000)$<br>3616 | $P_t^2$<br>39204 | $P_w^2 = P_t^2 + R^2$<br>42820 | $P_w = \sqrt{P_w^2}$<br>207 |
|----------------------|-------------------------------|-----------------------------------------------|------------------|--------------------------------|-----------------------------|

## DELIVERABILITY CALCULATION

|                                                                |     |                                            |       |     |       |       |
|----------------------------------------------------------------|-----|--------------------------------------------|-------|-----|-------|-------|
| $D = Q \left[ \frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n =$ | 812 | $\left( \frac{205511}{528716} \right)^n =$ | .3886 | $=$ | .4919 | MCF/D |
|----------------------------------------------------------------|-----|--------------------------------------------|-------|-----|-------|-------|

## REMARKS:

New well first delivered 12-02-68

## SUMMARY

|        |     |       |
|--------|-----|-------|
| Item h | 198 | Psia  |
| $P_c$  | 756 | Psia  |
| Q      | 812 | MCF/D |
| $P_w$  | 207 | Psia  |
| $P_d$  | 605 | Psia  |
| D      | 399 | MCF/D |

Company EL PASO NATURAL GAS COMPANY  
by H. L. Kendrick  
Title Regional Well Test Engineer  
Witnessed By \_\_\_\_\_  
Company \_\_\_\_\_