

NEW MEXICO OIL CONSERVATION COMMISSION  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122  
Revised 9-1-65

RECEIVED

|                                                                                                                           |  |                                        |  |                                    |  |                                                  |  |
|---------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------|--|------------------------------------|--|--------------------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                        |  | Test Date<br><b>7/24/75</b>        |  | <b>AUG 6 1975</b>                                |  |
| Company<br><b>Penroec Oil Corporation</b>                                                                                 |  |                                        |  | Connection<br><b>None</b>          |  | <b>O. C. C.</b><br><b>ARTESIA, OFFICE</b>        |  |
| Pool<br><b>Wilcoat</b>                                                                                                    |  |                                        |  | Formation<br><b>Delaware</b>       |  |                                                  |  |
| Completion Date<br><b>7/20/75</b>                                                                                         |  | Total Depth<br><b>2835</b>             |  | Plug Back TD<br><b>2834</b>        |  | Elevation<br><b>3259 GR</b>                      |  |
| Csg. Size<br><b>4 1/2</b>                                                                                                 |  | Wt.<br><b>10.5</b>                     |  | Set At<br><b>2835</b>              |  | Perforations:<br>From <b>2745</b> To <b>2810</b> |  |
| Tbg. Size<br><b>2 3/8</b>                                                                                                 |  | Wt.<br><b>4.7</b>                      |  | Set At<br><b>2651</b>              |  | Perforations:<br>From                      To    |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Single</b>                                                  |  |                                        |  | Packer Set At<br><b>2651</b>       |  | County<br><b>Eddy</b>                            |  |
| Producing Thru<br><b>Tubing</b>                                                                                           |  | Reservoir Temp. °F<br><b>83 @ 2750</b> |  | Mean Annual Temp. °F<br><b>60°</b> |  | Baro. Press. - P <sub>a</sub><br><b>13.2</b>     |  |
| L<br><b>2651</b>                                                                                                          |  | H<br><b>2651</b>                       |  | Gg<br><b>.688</b>                  |  | % CO <sub>2</sub><br><b>---</b>                  |  |
|                                                                                                                           |  |                                        |  | % N <sub>2</sub><br><b>---</b>     |  | % H <sub>2</sub> S<br><b>---</b>                 |  |
|                                                                                                                           |  |                                        |  | Prover<br><b>*</b>                 |  | Meter Run<br>Taps                                |  |

  

| FLOW DATA |                  |   |              |                 |                      |          | TUBING DATA     |          | CASING DATA     |              | Duration of Flow |
|-----------|------------------|---|--------------|-----------------|----------------------|----------|-----------------|----------|-----------------|--------------|------------------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F | Press. p.s.i.g. | Temp. °F | Press. p.s.i.g. | Temp. °F     |                  |
| SI        |                  |   |              |                 |                      |          | <b>1165</b>     |          |                 | <b>Choke</b> | <b>72 hrs</b>    |
| 1.        | 2                | x | 1.00         |                 | 8" Hg                | 66       | 1128            | 76       |                 | 8/64         | 1 hr             |
| 2.        | 2                | x | 1.00         |                 | 25" Hg               | 62       | 1080            | 76       |                 | 10/64        | 1 hr             |
| 3.        | 2                | x | 1.25         |                 | 20" Hg               | 54       | 996             | 76       |                 | 12/64        | 1 hr             |
| 4.        | 2                | x | 1.25         |                 | 32" Hg               | 52       | 896             | 76       |                 | 15/64        | 1 hr             |
| 5.        |                  |   |              |                 |                      |          |                 |          |                 |              |                  |

  

| RATE OF FLOW CALCULATIONS |                             |                  |                            |                                        |                                     |                                               |                         |
|---------------------------|-----------------------------|------------------|----------------------------|----------------------------------------|-------------------------------------|-----------------------------------------------|-------------------------|
| NO.                       | Coefficient<br>** (24 Hour) | $\sqrt{h_w P_m}$ | Pressure<br>P <sub>m</sub> | Flow Temp.<br>Factor<br>F <sub>t</sub> | Gravity<br>Factor<br>F <sub>g</sub> | Super<br>Compress.<br>Factor, F <sub>pv</sub> | Rate of Flow<br>Q, Mcfd |
| 1                         | 262.1                       |                  |                            | .9943                                  | .9339                               | 1.000                                         | 243                     |
| 2                         | 502.2                       |                  |                            | .9981                                  | .9339                               | 1.000                                         | 468                     |
| 3                         | 745.4                       |                  |                            | 1.006                                  | .9339                               | 1.000                                         | 700                     |
| 4                         | 993.2                       |                  |                            | 1.008                                  | .9339                               | 1.000                                         | 935                     |
| 5                         |                             |                  |                            |                                        |                                     |                                               |                         |

  

| NO. | P <sub>t</sub>        | Temp. °F | T <sub>g</sub> | Z | Gas Liquid Hydrocarbon Ratio          | TSTM      | Mcf/bbl.        |
|-----|-----------------------|----------|----------------|---|---------------------------------------|-----------|-----------------|
| 1   | Below limits of table |          |                |   | A.P.I. Gravity of Liquid Hydrocarbons |           | Deg.            |
| 2   |                       |          |                |   | Specific Gravity Separator Gas        |           | X X X X X X X X |
| 3   |                       |          |                |   | Specific Gravity Flowing Fluid        | X X X X X |                 |
| 4   |                       |          |                |   | Critical Pressure                     | 669       | P.S.I.A.        |
| 5   |                       |          |                |   | Critical Temperature                  | 385       | R               |

  

| NO. | P <sub>c</sub> | P <sub>w</sub> | P <sub>c</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> |
|-----|----------------|----------------|-----------------------------|-----------------------------|-----------------------------------------------------------|
| 1   | 1178.2         | 1388.2         |                             |                             |                                                           |
| 1   |                | 1141.2         |                             | 1302.3                      | 85.9                                                      |
| 2   |                | 1093.2         |                             | 1195.1                      | 193.1                                                     |
| 3   |                | 1009.2         |                             | 1018.5                      | 369.7                                                     |
| 4   |                | 909.2          |                             | 826.6                       | 561.6                                                     |
| 5   |                |                |                             |                             |                                                           |

  

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 2.472$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1650$

(2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.759$

  

|                    |             |                |                |                |          |             |
|--------------------|-------------|----------------|----------------|----------------|----------|-------------|
| Absolute Open Flow | <b>1650</b> | Mcf/d @ 15.025 | Angle of Slope | <b>57° 53'</b> | Slope, n | <b>.628</b> |
|--------------------|-------------|----------------|----------------|----------------|----------|-------------|

  

|                                                                 |                                   |
|-----------------------------------------------------------------|-----------------------------------|
| Remarks: <b>* 2" Orifice Well Tester</b>                        |                                   |
| <b>** From Manual for Gas-Oil Ratio Determination</b>           |                                   |
| <b>Friction negligible - see attached C-122D for Rate No. 1</b> |                                   |
| Approved By Commission:                                         | Conducted By: <b>E. G. Cooper</b> |
| Calculated By: <b>Donna Holler</b>                              | Checked By:                       |