

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

Form C-122  
Revised 9-1-65

*0-122-16*

**RECEIVED**

|                                                                                                                           |                   |                                          |                                  |                                                       |                                  |                                                |                            |                                         |                    |
|---------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------|----------------------------------|-------------------------------------------------------|----------------------------------|------------------------------------------------|----------------------------|-----------------------------------------|--------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                   |                                          |                                  |                                                       |                                  | Test Date<br><b>3-17-77</b>                    |                            |                                         |                    |
| Company<br><b>Yates Petroleum Corporation</b>                                                                             |                   |                                          |                                  |                                                       |                                  | Connection<br><b>Transwestern Pipeline Co.</b> |                            |                                         |                    |
| Pool<br><b>Cemetery</b>                                                                                                   |                   |                                          |                                  |                                                       |                                  | Formation<br><b>Morrow</b>                     |                            |                                         |                    |
| Completion Date<br><b>5-3-76</b>                                                                                          |                   | Total Depth<br><b>9750' KB</b>           |                                  | Plug Back TD<br><b>9534' KB</b>                       |                                  | Elevation<br><b>3579' KB</b>                   |                            | Farm or Lease Name<br><b>Moore "EQ"</b> |                    |
| Csg. Size<br><b>5 1/2"</b>                                                                                                | Wt.<br><b>17#</b> | d<br><b>4.892</b>                        | Set At<br><b>9735'</b>           | Perforations:<br>From <b>9397'</b> To <b>9404' KB</b> |                                  | Well No.<br><b>1</b>                           |                            |                                         |                    |
| Tbg. Size<br><b>2-3/8"</b>                                                                                                | Wt.<br><b>4.7</b> | d<br><b>1.995</b>                        | Set At<br><b>9396'</b>           | Perforations:<br>From <b>9329'</b> To <b>9331' KB</b> |                                  | Unit<br><b>F</b>                               | Sec.<br><b>19</b>          | Twp.<br><b>20S</b>                      | Rge.<br><b>25E</b> |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Single</b>                                                  |                   |                                          |                                  |                                                       |                                  | Packer Set At<br><b>9323' KB</b>               |                            | County<br><b>Eddy</b>                   |                    |
| Producing Thru<br><b>Tubing</b>                                                                                           |                   | Reservoir Temp. °F<br><b>165 @ 9400'</b> |                                  | Mean Annual Temp. °F<br><b>62</b>                     |                                  | Baro. Press. - P <sub>a</sub><br><b>13.2</b>   |                            | State<br><b>New Mexico</b>              |                    |
| L<br><b>9385</b>                                                                                                          | H<br><b>9385</b>  | Gg<br><b>0.593</b>                       | % CO <sub>2</sub><br><b>0.76</b> | % N <sub>2</sub><br><b>0.29</b>                       | % H <sub>2</sub> S<br><b>Nil</b> | Prover<br><b>2"</b>                            | Meter Run<br><b>Flange</b> | Taps<br><b>Flange</b>                   |                    |

  

| 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>3025</b>     | <b>62</b>   |                 |                  | <b>Months</b> |
| 1.        | <b>2.067</b>     | <b>x</b> | <b>1.375</b> | <b>350</b>      | <b>15</b>            | <b>68</b>   | <b>2916</b>     | <b>69</b>   |                 |                  | <b>1 hour</b> |
| 2.        |                  |          |              | <b>352</b>      | <b>28</b>            | <b>68</b>   | <b>2811</b>     | <b>67</b>   |                 |                  | <b>1 hour</b> |
| 3.        |                  |          |              | <b>353</b>      | <b>48</b>            | <b>68</b>   | <b>2675</b>     | <b>64</b>   |                 |                  | <b>1 hour</b> |
| 4.        |                  |          |              | <b>355</b>      | <b>90</b>            | <b>68</b>   | <b>2414</b>     | <b>60</b>   |                 |                  | <b>1 hour</b> |
| 5.        |                  |          |              |                 |                      |             |                 |             |                 |                  |               |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                       |                   |                             |                      |
|---------------------------|-----------------------|------------------|-------------------------|-----------------------|-------------------|-----------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft. | Gravity Factor Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
| 1                         | <b>10.20</b>          | <b>73.81</b>     | <b>363.2</b>            | <b>.9924</b>          | <b>1.299</b>      | <b>1.0298</b>               | <b>1000</b>          |
| 2.                        |                       | <b>101.12</b>    | <b>365.2</b>            | <b>.9924</b>          | <b>1.299</b>      | <b>1.0297</b>               | <b>1369</b>          |
| 3.                        |                       | <b>132.58</b>    | <b>366.2</b>            | <b>.9924</b>          | <b>1.299</b>      | <b>1.0296</b>               | <b>1795</b>          |
| 4.                        |                       | <b>182.04</b>    | <b>368.2</b>            | <b>.9924</b>          | <b>1.299</b>      | <b>1.0295</b>               | <b>2464</b>          |
| 5.                        |                       |                  |                         |                       |                   |                             |                      |

  

| NO. | P <sub>r</sub> | Temp. °R   | T <sub>r</sub> | Z            | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.                                            |
|-----|----------------|------------|----------------|--------------|----------------------------------------------------------------------------------------|
| 1.  | <b>0.537</b>   | <b>528</b> | <b>1.487</b>   | <b>.9430</b> | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.                                       |
| 2.  | <b>0.540</b>   | <b>528</b> | <b>1.487</b>   | <b>.9432</b> | Specific Gravity Separator Gas <b>.593</b> <span style="float:right">XXXXXXXXXX</span> |
| 3.  | <b>0.542</b>   | <b>528</b> | <b>1.487</b>   | <b>.9434</b> | Specific Gravity Flowing Fluid <span style="float:right">XXXXX</span>                  |
| 4.  | <b>0.544</b>   | <b>528</b> | <b>1.487</b>   | <b>.9436</b> | Critical Pressure <b>676</b> P.S.I.A. <span style="float:right">P.S.I.A.</span>        |
| 5.  |                |            |                |              | Critical Temperature <b>355</b> R <span style="float:right">R</span>                   |

  

|                                                                       |                             |                |                             |                                                           |
|-----------------------------------------------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| P <sub>c</sub> <b>3761.5</b> P <sub>c</sub> <sup>2</sup> <b>14149</b> |                             |                |                             |                                                           |
| NO.                                                                   | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> |
| 1                                                                     |                             |                | <b>13177</b>                | <b>972</b>                                                |
| 2                                                                     |                             |                | <b>12332</b>                | <b>1817</b>                                               |
| 3                                                                     |                             |                | <b>11278</b>                | <b>2871</b>                                               |
| 4                                                                     |                             |                | <b>9367</b>                 | <b>4782</b>                                               |
| 5                                                                     |                             |                |                             |                                                           |

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.9588$$

$$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.9172$$

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4824$$

  

|                                              |                             |                        |
|----------------------------------------------|-----------------------------|------------------------|
| Absolute Open Flow <b>4824</b> Mcfd @ 15.025 | Angle of Slope $\phi$ _____ | Slope, n <b>0.6000</b> |
|----------------------------------------------|-----------------------------|------------------------|

Remarks: **Pressures by DWT. Calculation worksheet form C-122-D attached.**

|                         |                                    |                                        |             |
|-------------------------|------------------------------------|----------------------------------------|-------------|
| Approved By Commission: | Conducted By:<br><b>Don Weaver</b> | Calculated By:<br><b>Eddie Mahfood</b> | Checked By: |
|-------------------------|------------------------------------|----------------------------------------|-------------|