

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

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**AUG 3 - 1987**

**O. C. D.**

Form C-122  
Revised 9-1-85

|                                                                                                                        |  |                        |                                          |                       |  |                                                      |  |                                                                |                                           |                               |  |
|------------------------------------------------------------------------------------------------------------------------|--|------------------------|------------------------------------------|-----------------------|--|------------------------------------------------------|--|----------------------------------------------------------------|-------------------------------------------|-------------------------------|--|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                        |                                          |                       |  | Test Date <b>ARVIESA, OFFICE</b>                     |  |                                                                |                                           |                               |  |
| Company <b>BTA OIL PRODUCERS</b>                                                                                       |  |                        |                                          |                       |  | Connection <b>El Paso Gas Transportation Company</b> |  |                                                                |                                           |                               |  |
| Pool <b>Baldrige Canyon Gas Pool</b> <i>Morrow</i>                                                                     |  |                        |                                          |                       |  | Formation <b>Morrow</b>                              |  |                                                                |                                           |                               |  |
| Completion Date <b>2-20-87</b>                                                                                         |  |                        | Total Depth <b>10,494'</b>               |                       |  | Plug Back TD <b>10,141'</b>                          |  |                                                                | Elevation <b>3,943' KB</b>                |                               |  |
| Farm or Lease Name <b>Rock Tank, 8612 JV-P</b>                                                                         |  |                        |                                          |                       |  | Well No. <b>1</b>                                    |  |                                                                |                                           |                               |  |
| Csg. Size <b>5-1/2</b>                                                                                                 |  | Wt. <b>17#</b>         |                                          | Set At <b>10,494'</b> |  | Perforations: <b>From 10,062' To 10,076'</b>         |  |                                                                |                                           |                               |  |
| Tbg. Size <b>2-7/8</b>                                                                                                 |  | Wt. <b>6.5#</b>        |                                          | Set At <b>9,833</b>   |  | Perforations: <b>From To</b>                         |  | Unit <b>I</b> Sec. <b>35</b> Twp. <b>23-S</b> Rge. <b>24-E</b> |                                           |                               |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple <b>Single</b>                                                  |  |                        |                                          |                       |  | Packer Set At <b>9,833'</b>                          |  |                                                                | County <b>Eddy</b>                        |                               |  |
| Producing Thru <b>Tubing</b>                                                                                           |  |                        | Reservoir Temp. °F <b>169° @ 10,481'</b> |                       |  | Mean Annual Temp. °F <b>60</b>                       |  |                                                                | Baro. Press. - P <sub>a</sub> <b>13.2</b> |                               |  |
| State <b>New Mexico</b>                                                                                                |  |                        |                                          |                       |  |                                                      |  |                                                                |                                           |                               |  |
| L <b>9,833</b>                                                                                                         |  | H <b>9,833</b>         |                                          | Gg <b>.605</b>        |  | % CO <sub>2</sub> <b>0.80</b>                        |  | % N <sub>2</sub> <b>0.29</b>                                   |                                           | % H <sub>2</sub> S <b>0.0</b> |  |
| Prover                                                                                                                 |  | Meter Run <b>3.068</b> |                                          | Taps <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. hw  | Temp. °F    | Press. p.s.i.g. | Temp. °F    | Press. p.s.i.g. |                  | Temp. °F        |
| SI        |                       |   |              |                 |           |             | <b>3120</b>     |             | <b>Pkr</b>      | <b>65</b>        | <b>SI hours</b> |
| 1.        | <b>3.068 X 1.000"</b> |   |              | <b>306</b>      | <b>60</b> | <b>68</b>   | <b>1230</b>     | <b>75</b>   | <b>Pkr</b>      |                  | <b>60 min.</b>  |
| 2.        | <b>3.068 X 1.000"</b> |   |              | <b>306</b>      | <b>64</b> | <b>68</b>   | <b>780</b>      |             | <b>Pkr</b>      |                  | <b>60 min.</b>  |
| 3.        | <b>3.068 X 1.000"</b> |   |              | <b>315</b>      | <b>70</b> | <b>68</b>   | <b>470</b>      |             | <b>Pkr</b>      |                  | <b>60 min.</b>  |
| 4.        | <b>3.068 X 1.250"</b> |   |              | <b>207</b>      | <b>44</b> | <b>68</b>   | <b>290</b>      |             | <b>Pkr</b>      |                  | <b>60 min.</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 F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | <b>4.789</b>          | <b>138.39</b>    | <b>319.2</b>            | <b>0.9924</b>         | <b>1.286</b>                  | <b>1.025</b>                            | <b>867</b>           |
| 2.                        | <b>4.789</b>          | <b>142.93</b>    | <b>319.2</b>            | <b>0.9924</b>         | <b>1.286</b>                  | <b>1.025</b>                            | <b>895</b>           |
| 3.                        | <b>4.789</b>          | <b>151.57</b>    | <b>328.2</b>            | <b>0.9924</b>         | <b>1.286</b>                  | <b>1.026</b>                            | <b>950</b>           |
| 4.                        | <b>7.561</b>          | <b>98.43</b>     | <b>220.2</b>            | <b>0.9924</b>         | <b>1.286</b>                  | <b>1.017</b>                            | <b>966</b>           |
| 5.                        |                       |                  |                         |                       |                               |                                         |                      |

  

|     |                |            |                |              |                                                           |
|-----|----------------|------------|----------------|--------------|-----------------------------------------------------------|
| NO. | P <sub>r</sub> | Temp. °R   | T <sub>r</sub> | Z            | Gas Liquid Hydrocarbon Ratio <b>219</b> Mcf/bbl.          |
| 1.  | <b>.48</b>     | <b>528</b> | <b>1.50</b>    | <b>0.951</b> | A.P.I. Gravity of Liquid Hydrocarbons <b>50.4°</b> Deg.   |
| 2.  | <b>.48</b>     | <b>528</b> | <b>1.50</b>    | <b>0.951</b> | Specific Gravity Separator Gas <b>.605</b> XXXXXXXXX      |
| 3.  | <b>.49</b>     | <b>528</b> | <b>1.50</b>    | <b>0.950</b> | Specific Gravity Flowing Fluid <b>.619</b> XXXXXX         |
| 4.  | <b>.33</b>     | <b>528</b> | <b>1.50</b>    | <b>0.966</b> | Critical Pressure <b>671</b> P.S.I.A. <b>671</b> P.S.I.A. |
| 5.  |                |            |                |              | Critical Temperature <b>360</b> R <b>365</b> R            |

  

|                              |                                           |                |                             |
|------------------------------|-------------------------------------------|----------------|-----------------------------|
| P <sub>c</sub> <b>3133.2</b> | P <sub>c</sub> <sup>2</sup> <b>9816.9</b> |                |                             |
| NO.                          | P <sub>i</sub> <sup>2</sup>               | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> |
| 1                            | <b>1545.5</b>                             |                | <b>1554.5</b>               |
| 2                            | <b>629.2</b>                              |                | <b>638.8</b>                |
| 3                            | <b>233.5</b>                              |                | <b>244.2</b>                |
| 4                            | <b>91.9</b>                               |                | <b>103.2</b>                |
| 5                            |                                           |                |                             |

  

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 1.033$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 998$

(2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.033$

  

|                                             |                          |                        |
|---------------------------------------------|--------------------------|------------------------|
| Absolute Open Flow <b>998</b> Mcfd @ 15.025 | Angle of Slope <b>45</b> | Slope, n <b>1.0000</b> |
|---------------------------------------------|--------------------------|------------------------|

  

Remarks: **SI Bottom hole pressure measured w/Bomb**

  

|                         |                                        |                                      |             |
|-------------------------|----------------------------------------|--------------------------------------|-------------|
| Approved By Commission: | Conducted By: <b>BTA OIL PRODUCERS</b> | Calculated By: <b>T. J. Williams</b> | Checked By: |
|-------------------------|----------------------------------------|--------------------------------------|-------------|