

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

Form C-122  
Revised 9-1-65

|                                                                                                                           |                                            |                                           |                                              |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------|----------------------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                                            | Test Date<br><b>8-22-80</b>               |                                              |
| Company<br><b>CONOCO, INC.</b>                                                                                            |                                            | Connection<br><b>EL PASO NATURAL GAS</b>  |                                              |
| Pool<br><b>CUSTER ELLENBURGER</b>                                                                                         |                                            | Formation<br><b>ELLENBURGER</b>           |                                              |
| Completion Date<br><b>6-30-80</b>                                                                                         |                                            | Total Depth<br><b>12,915'</b>             | Plug Back TD<br><b>12,873'</b>               |
|                                                                                                                           |                                            | Elevation<br><b>3236' GAL</b>             | Farm or Lease Name<br><b>WELLS B-1</b>       |
| Csg. Size<br><b>4 1/2"</b>                                                                                                | Wt.<br><b>11.6 #</b>                       | d<br><b>4.000</b>                         | Set At<br><b>12,914'</b>                     |
| Perforations:<br>From <b>12,456'</b> To <b>12,826'</b>                                                                    |                                            | Well No.<br><b>5</b>                      |                                              |
| Tbg. Size<br><b>2 7/8"</b>                                                                                                | Wt.<br><b>4.6 #</b>                        | d<br><b>1.995</b>                         | Set At<br><b>12,337'</b>                     |
| Perforations:<br>From <b>OPEN</b> To <b>ENDED</b>                                                                         |                                            | Unit Soc. Twp. Rge.<br><b>H 1 25S 36E</b> |                                              |
| Type Well - Single - Bradenhead - G.C. or G.O. Multiple<br><b>DUAL - G. G.</b>                                            |                                            | Packer Set At<br><b>12,300'</b>           | County<br><b>LEA</b>                         |
| Producing Thru<br><b>TB4.</b>                                                                                             | Reservoir Temp. °F<br><b>199 @ 12,456'</b> | Mean Annual Temp. °F<br><b>60°</b>        | Baro. Press. - P <sub>a</sub><br><b>13.2</b> |
| State<br><b>NEW MEXICO</b>                                                                                                |                                            |                                           |                                              |
| L<br><b>12,456'</b>                                                                                                       | H<br><b>12,456'</b>                        | G <sub>g</sub><br><b>.595</b>             | % CO <sub>2</sub><br><b>.98</b>              |
| % N <sub>2</sub><br><b>1.04</b>                                                                                           |                                            | % H <sub>2</sub> S<br><b>.484</b>         | Prover<br><b>—</b>                           |
| Meter Run<br><b>4"</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>1385</b>     | <b>99</b>   |                 |                  | <b>67.5 HRS.</b>            |
| 1.        | <b>4"</b>        | <b>X</b> | <b>2.250"</b> | <b>337</b>      | <b>2.25</b>          | <b>86</b>   | <b>1370</b>     | <b>78</b>   |                 |                  | <b>(STABILIZED) 45 MIN.</b> |
| 2.        | <b>4"</b>        | <b>X</b> | <b>2.250"</b> | <b>335</b>      | <b>6.74</b>          | <b>87</b>   | <b>1343</b>     | <b>78</b>   |                 |                  | <b>30 MIN.</b>              |
| 3.        | <b>4"</b>        | <b>X</b> | <b>2.250"</b> | <b>335</b>      | <b>12.96</b>         | <b>74</b>   | <b>1292</b>     | <b>78</b>   |                 |                  | <b>60 MIN.</b>              |
| 4.        | <b>4"</b>        | <b>X</b> | <b>2.250"</b> | <b>335</b>      | <b>13.69</b>         | <b>81</b>   | <b>1006</b>     | <b>78</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>25.64</b>          | <b>28.070</b>    | <b>350.2</b>            | <b>.9759</b>         | <b>1.296</b>                  | <b>1.024</b>                            | <b>932</b>           |
| 2                         | <b>25.64</b>          | <b>48.516</b>    | <b>348.2</b>            | <b>.9750</b>         | <b>1.296</b>                  | <b>1.024</b>                            | <b>1610</b>          |
| 3                         | <b>25.64</b>          | <b>67.176</b>    | <b>348.2</b>            | <b>.9868</b>         | <b>1.296</b>                  | <b>1.027</b>                            | <b>2262</b>          |
| 4                         | <b>25.64</b>          | <b>69.042</b>    | <b>348.2</b>            | <b>.9804</b>         | <b>1.296</b>                  | <b>1.026</b>                            | <b>2308</b>          |
| 5                         |                       |                  |                         |                      |                               |                                         |                      |

  

|     |                |            |                |             |                                                            |
|-----|----------------|------------|----------------|-------------|------------------------------------------------------------|
| NO. | P <sub>t</sub> | Temp. °R   | T <sub>r</sub> | Z           | Gas Liquid Hydrocarbon Ratio <b>NONE</b> Mcf/bbl.          |
| 1   | <b>.52</b>     | <b>546</b> | <b>1.55</b>    | <b>.953</b> | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.           |
| 2   | <b>.52</b>     | <b>547</b> | <b>1.55</b>    | <b>.953</b> | Specific Gravity Separator Gas <b>.595</b> X X X X X X X X |
| 3   | <b>.52</b>     | <b>534</b> | <b>1.51</b>    | <b>.948</b> | Specific Gravity Flowing Fluid X X X X X                   |
| 4   | <b>.52</b>     | <b>541</b> | <b>1.53</b>    | <b>.950</b> | Critical Pressure <b>671</b> P.S.I.A. _____ P.S.I.A.       |
| 5   |                |            |                |             | Critical Temperature <b>353</b> R _____ R                  |

  

|                              |                                           |                |                             |
|------------------------------|-------------------------------------------|----------------|-----------------------------|
| P <sub>c</sub> <b>1398.2</b> | P <sub>c</sub> <sup>2</sup> <b>1955.0</b> |                |                             |
| NO.                          | P <sub>t</sub> <sup>2</sup>               | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> |
| 1                            | <b>1913.2</b>                             | <b>1394.9</b>  | <b>1945.7</b>               |
| 2                            | <b>1839.3</b>                             | <b>1391.7</b>  | <b>1936.8</b>               |
| 3                            | <b>1703.5</b>                             | <b>1377.0</b>  | <b>1896.1</b>               |
| 4                            | <b>1038.8</b>                             | <b>1115.4</b>  | <b>1244.1</b>               |
| 5                            |                                           |                |                             |

  

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{210.215}{1955.0 - 1945.7} = 210.215$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 13512.9$

(2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 14.499$

  

|                                                              |                                        |                                         |
|--------------------------------------------------------------|----------------------------------------|-----------------------------------------|
| Absolute Open Flow <b>13,513</b> Mcfd @ 15.025               | Angle of Slope $\theta$ <b>63.5°</b>   | Slope, n <b>.500</b>                    |
| Remarks: <b>WELL PRODUCED 0 BBL'S. OF FLUID DURING TEST.</b> |                                        |                                         |
| Approved By Commission<br><b>Jerry Sexton</b>                | Conducted By:<br><b>TOM C. ADUDDLE</b> | Calculated By:<br><b>TOM C. ADUDDLE</b> |
| Checked By:                                                  |                                        |                                         |