

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

Form C-122

|                                                                                                                        |   |                      |                  |                                                               |                   |                                                                 |           |                                                           |  |
|------------------------------------------------------------------------------------------------------------------------|---|----------------------|------------------|---------------------------------------------------------------|-------------------|-----------------------------------------------------------------|-----------|-----------------------------------------------------------|--|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |   |                      |                  |                                                               |                   | Test Date<br><div style="text-align: right;">July 7, 1995</div> |           |                                                           |  |
| Company<br>Williams Production Company                                                                                 |   |                      |                  | Connection                                                    |                   |                                                                 |           |                                                           |  |
| Pool<br>Blanco                                                                                                         |   |                      |                  | Formation<br><div style="text-align: center;">Mesaverde</div> |                   | Unit<br><div style="text-align: center;">Rosa</div>             |           |                                                           |  |
| Completion Date<br>6-28-95                                                                                             |   | Total Depth<br>5980' |                  | Plug Back TD<br>5956'                                         |                   | Elevation<br>6286'                                              |           | Farm or Lease Name                                        |  |
| Casing Size                                                                                                            |   | Weight    d          |                  | Set At                                                        |                   | Perforations:<br>From                      To                   |           | Well No.<br><div style="text-align: right;">149</div>     |  |
| Tubing Size                                                                                                            |   | Weight    d          |                  | Set at                                                        |                   | Perforations:<br>From                      To                   |           | Unit    Sec    Twp    Rng<br>G       12    31N   6W       |  |
| Type Well - Single - Bradenhead - GG or GO Multiple                                                                    |   |                      |                  | Packer Set At                                                 |                   | County<br><div style="text-align: right;">Rio Arriba</div>      |           |                                                           |  |
| Producing Thru<br>Tubing                                                                                               |   | Reservoir Temp. °F   |                  | Mean Annual Temp. °F                                          |                   | Barometer Pressure - P <sub>a</sub>                             |           | State<br><div style="text-align: right;">New Mexico</div> |  |
| L                                                                                                                      | H | G <sub>q</sub><br>.6 | %CO <sub>2</sub> | %N <sub>2</sub>                                               | %H <sub>2</sub> S | Prover<br>3/4"                                                  | Meter Run | Taps                                                      |  |

  

| FLOW DATA |                  |                 |                      | TUBING DATA       |                      | CASING DATA       |                      |                   |                |
|-----------|------------------|-----------------|----------------------|-------------------|----------------------|-------------------|----------------------|-------------------|----------------|
| NO.       | Prover X<br>Line | Orifice<br>Size | Pressure<br>p.s.i.q. | Temperature<br>°F | Pressure<br>p.s.i.q. | Temperature<br>°F | Pressure<br>p.s.i.q. | Temperature<br>°F | Duration<br>of |
| SI        |                  | 2" X 3/4"       |                      |                   | 1136                 |                   | 1136                 |                   | 0              |
| 1.        |                  |                 |                      |                   | 387                  | 61°               | 1025                 |                   | 0.5 hr         |
| 2.        |                  |                 |                      |                   | 393                  | 65°               | 947                  |                   | 1.0 hr         |
| 3.        |                  |                 |                      |                   | 356                  | 65°               | 936                  |                   | 1.5 hrs        |
| 4.        |                  |                 |                      |                   | 353                  | 65°               | 902                  |                   | 2.0 hrs        |
| 5.        |                  |                 |                      |                   | 344                  | 65°               | 852                  |                   | 3.0 hrs        |

  

| RATE OF FLOW CALCULATIONS |                                                |                            |                      |                   |                    |                 |  |
|---------------------------|------------------------------------------------|----------------------------|----------------------|-------------------|--------------------|-----------------|--|
| NO.                       | COEFFICIENT<br>(24 Hour)<br>C <sub>1</sub> = 3 | Pressure<br>P <sub>m</sub> | Flow Temp.<br>Factor | Gravity<br>Factor | Super<br>Compress. | Rate of<br>Flow |  |
| 1.                        | 9.604                                          | 356                        | .9952                | 1.29              | 1.041              | 4.569           |  |
| 2.                        |                                                |                            |                      |                   |                    |                 |  |
| 3.                        |                                                |                            |                      |                   |                    |                 |  |
| 4.                        |                                                |                            |                      |                   |                    |                 |  |

  

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.<br>A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.<br>Specific Gravity Separator _____ XXXXXX<br>Specific Gravity Flowing Fluid _____ xxxxx<br>Critical Pressure _____ p.s.i.a. _____ p.s.i.a.<br>Critical Temperature _____ R _____ R |  |
|-----|----------------|----------|----------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1.  |                |          |                |   |                                                                                                                                                                                                                                                                                     |  |
| 2.  |                |          |                |   |                                                                                                                                                                                                                                                                                     |  |
| 3.  |                |          |                |   |                                                                                                                                                                                                                                                                                     |  |
| 4.  |                |          |                |   |                                                                                                                                                                                                                                                                                     |  |
| 5.  |                |          |                |   |                                                                                                                                                                                                                                                                                     |  |

  

| P <sub>c</sub> 1138 |                             | P <sub>c</sub> <sup>2</sup> 1295044 |                                                                                       |
|---------------------|-----------------------------|-------------------------------------|---------------------------------------------------------------------------------------|
| NO.                 | P <sub>i</sub> <sup>1</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.                  |                             | 864                                 | 746496    5485485                                                                     |
| 2.                  |                             |                                     |                                                                                       |
| 3.                  |                             |                                     |                                                                                       |
| 4.                  |                             |                                     |                                                                                       |

  

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{2.3609}{1.9046}$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 8702$

(2)  $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{1.9046}{1.9046}$

  

|                                             |  |                  |  |              |  |
|---------------------------------------------|--|------------------|--|--------------|--|
| Absolute Open Flow    8702    Mcfd @ 15.025 |  | Angle of Slope ° |  | Slope, n .75 |  |
|---------------------------------------------|--|------------------|--|--------------|--|

  

|                         |               |                                        |             |
|-------------------------|---------------|----------------------------------------|-------------|
| Remarks:                |               |                                        |             |
| Approved By Commission: | Conducted By: | Calculated By: Susan Griguin <i>SG</i> | Checked By: |