

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

Form C-122

|                                                                                                                           |   |                      |                  |                                           |                   |                                         |                 |                                           |  |
|---------------------------------------------------------------------------------------------------------------------------|---|----------------------|------------------|-------------------------------------------|-------------------|-----------------------------------------|-----------------|-------------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |   |                      |                  |                                           |                   | Test Date<br>9/08/94 <b>SEP 15 1994</b> |                 |                                           |  |
| Company<br>NORTHWEST PIPELINE CORPORATION                                                                                 |   |                      |                  | Connection<br>WILLIAMS PRODUCTION COMPANY |                   |                                         |                 | <b>OIL (CONV. DATA)</b><br><b>DATE: 8</b> |  |
| Pool<br>BLANCO                                                                                                            |   |                      |                  | Formation<br>MESAVERDE                    |                   |                                         |                 |                                           |  |
| Completion Date<br>08/29/94                                                                                               |   | Total Depth<br>5955' |                  | Plug Back TD<br>5932'                     |                   | Elevation<br>6474' GR                   |                 | Farm or Lease Name<br>ROSA UNIT           |  |
| Casing Size<br>4-1/2"                                                                                                     |   | Weight<br>10.5#      |                  | d<br>4.052"                               |                   | Set At<br>5955'                         |                 | Perforations:<br>From 3139' To 3225'      |  |
| Tubing Size<br>1-1/2"                                                                                                     |   | Weight<br>2.9#       |                  | d<br>1.610"                               |                   | Set at<br>3214'                         |                 | Perforations:<br>From To                  |  |
| Type Well - Single - Bradenhead - GG or GO Multiple<br>MULTIPLE                                                           |   |                      |                  | Packer Set At<br>3880'                    |                   |                                         |                 | County<br>RIO ARRIBA                      |  |
| Producing Thru<br>TUBING                                                                                                  |   | Reservoir Temp. °F   |                  | Mean Annual Temp. °F                      |                   | Barometer Pressure - P <sub>a</sub>     |                 | State<br>NEW MEXICO                       |  |
| L                                                                                                                         | H | Gg                   | %CO <sub>2</sub> | %N <sub>2</sub>                           | %H <sub>2</sub> S | Prover                                  | Meter Run<br>2" | Taps                                      |  |

  

| FLOW DATA |                  |                |                   |                | TUBING DATA       |                | CASING DATA       |                |                  |
|-----------|------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|------------------|
| NO.       | Prover Line Size | X Orifice Size | Pressure p.s.i.g. | Temperature °F | Pressure p.s.i.g. | Temperature °F | Pressure p.s.i.g. | Temperature °F | Duration of Flow |
| 1.        | 2" X 3/4"        |                |                   |                | 982               |                |                   |                | 0                |
| 2.        |                  |                |                   |                | 197               | 56             |                   |                | 0.5 HRS          |
| 3.        |                  |                |                   |                | 195               | 58             |                   |                | 1.0 HRS          |
| 4.        |                  |                |                   |                | 195               | 59             |                   |                | 1.5 HRS          |
| 5.        |                  |                |                   |                | 191               | 60             |                   |                | 2.0 HRS          |
| 6.        |                  |                |                   |                | 189               | 60             |                   |                | 3.0 HRS          |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_u P_u}$ | Pressure P <sub>t</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1.                        | 9.604                 |                  | 201                     | 1.000                            | 1.270                         | 1.021                                   | 2503                 |
| 2.                        |                       |                  |                         |                                  |                               |                                         |                      |
| 3.                        |                       |                  |                         |                                  |                               |                                         |                      |
| 4.                        |                       |                  |                         |                                  |                               |                                         |                      |
| 5.                        |                       |                  |                         |                                  |                               |                                         |                      |

  

| 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 GAS .62      XXXXXXXX<br>Specific Gravity Flowing Fluid xxxxxx<br>Critical Pressure _____ p.s.i.a.      p.s.i.a.<br>Critical Temperature _____ R      R |  |  |
|-----|----------------|----------|----------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| 1.  |                |          |                |   |                                                                                                                                                                                                                                                                                       |  |  |
| 2.  |                |          |                |   |                                                                                                                                                                                                                                                                                       |  |  |
| 3.  |                |          |                |   |                                                                                                                                                                                                                                                                                       |  |  |
| 4.  |                |          |                |   |                                                                                                                                                                                                                                                                                       |  |  |
| 5.  |                |          |                |   |                                                                                                                                                                                                                                                                                       |  |  |

  

| 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) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{1.0426}{1.0426 - 1.0317} = 1.0317$<br>(2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0317$<br>AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.582$ |
|-----|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  |                             | 201            | 40,401                      | 947,635                                                   |                                                                                                                                                                                                              |
| 2.  |                             |                |                             |                                                           |                                                                                                                                                                                                              |
| 3.  |                             |                |                             |                                                           |                                                                                                                                                                                                              |
| 4.  |                             |                |                             |                                                           |                                                                                                                                                                                                              |

  

|                                            |  |                             |  |                                  |  |
|--------------------------------------------|--|-----------------------------|--|----------------------------------|--|
| Absolute Open Flow 2582      Mcfd @ 15.025 |  | Angle of Slope °            |  | Slope, n 0.75                    |  |
| Remarks:                                   |  |                             |  |                                  |  |
| Approved By Commission:                    |  | Conducted By:<br>C. CHARLEY |  | Calculated By:<br>STERG KATIRGIS |  |
|                                            |  |                             |  | Checked By: <i>[Signature]</i>   |  |