

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

|  |   |                             |                             |                        |                                   |                                      |                        |   |  |
|--|---|-----------------------------|-----------------------------|------------------------|-----------------------------------|--------------------------------------|------------------------|---|--|
| Operator<br><b>Williams Production Company</b>         |   |                             |                             |                        | Lease or Unit Name<br><b>ROSA</b> |                                      |                        |   |  |
| Test Type<br><b>X Initial      Annual      Special</b> |   |                             | Test Date<br><b>8/2/001</b> |                        | Well Number<br><b>#359</b>        |                                      |                        |   |  |
| Completion Date<br><b>7/24/2001</b>                    |   | Total Depth<br><b>3104'</b> |                             | Plug Back TD           |                                   | Elevation<br><b>6192'</b>            |                        | Unit    Sec    Twp    Rng<br><b>K      04    31N    05W</b> |  |
| Casing Size<br><b>5.5"</b>                             |   | Weight<br><b>17#</b>        |                             | Set At<br><b>3013'</b> |                                   | Perforations:<br>From 2884' To 3005' |                        | County<br><b>RIO ARRIBA</b>                                 |  |
| Tubing Size<br><b>2-3/8"</b>                           |   | Weight<br><b>4.7#</b>       |                             | Set At<br><b>2972'</b> |                                   | Perforations:<br>From      To        |                        | Pool<br><b>BASIN</b>  |  |
| Type Well - Single-Bradenhead-GG or GO Multiple        |   |                             |                             |                        | Packer Set At                     |                                      | Formation<br><b>FC</b> |   |  |
| Producing Thru<br><b>Tubing</b>                        |   | Reservoir Temp. oF          |                             | Mean Annual Temp. oF   |                                   | Barometer Pressure - Pa              |                        | Connection  |  |
| L  | H | Gq<br><b>0.6</b>            | %CO2                        | %N2                    | %H2S                              | Prover<br><b>3/4"</b>                | Meter Run              | Taps  |  |

  

| FLOW DATA |                        |                   |                     | TUBING DATA       |                     | CASING DATA       |                     |                   |                     |
|-----------|------------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|
| NO        | Prover<br>Line<br>Size | X Orifice<br>Size | Pressure<br>p.s.i.q | Temperature<br>oF | Pressure<br>p.s.i.q | Temperature<br>oF | Pressure<br>p.s.i.q | Temperature<br>oF | Duration of<br>Flow |
| SI        | <b>2" X 3/4"</b>       |                   |                     |                   | <b>0</b>            | <b>55</b>         | <b>1285</b>         |                   | <b>0</b>            |
| 1         |                        |                   |                     |                   | <b>0</b>            | <b>68</b>         | <b>1185</b>         |                   | <b>0.5 hr</b>       |
| 2         |                        |                   |                     |                   | <b>0</b>            | <b>70</b>         | <b>1145</b>         |                   | <b>1.0 hr</b>       |
| 3         |                        |                   |                     |                   | <b>680</b>          | <b>65</b>         | <b>1090</b>         |                   | <b>1.5 hrs</b>      |
| 4         |                        |                   |                     |                   | <b>420</b>          | <b>68</b>         | <b>960</b>          |                   | <b>2.0 hrs</b>      |
| 5         |                        |                   |                     |                   | <b>210</b>          | <b>68</b>         | <b>740</b>          |                   | <b>3.0 hrs</b>      |

  

| RATE OF FLOW CALCULATION |                           |                 |                 |                                  |   |                |                            |                         |                                   |   |
|--------------------------|---------------------------|-----------------|-----------------|----------------------------------|---|----------------|----------------------------|-------------------------|-----------------------------------|---|
| NO                       | Coefficient<br>(24 Hours) |                 |                 |                                  | hwPm  | Pressure<br>Pm | Flow Temp.<br>Factor<br>Fl | Gravity<br>Factor<br>Fq | Super<br>Compress.<br>Factor, Fpv | Rate of<br>Flow<br>Q, Mcfd                                |
| 1                        | <b>9.604</b>              |                 |                 |                                  |   | <b>222</b>     | <b>0.9924</b>              | <b>1.29</b>             | <b>1.028</b>                      | <b>2806</b>   |
| 2                        |                           |                 |                 |                                  |   |                |                            |                         |                                   |   |
| 3                        |                           |                 |                 |                                  |   |                |                            |                         |                                   |   |
| 4                        |                           |                 |                 |                                  |   |                |                            |                         |                                   |   |
| NO                       | Pr                        | Temp. oR        | Tr              | Z                                | Gas Liquid Hydrocarbon Ration _____<br>A.P.I Gravity of Liquid Hydrocabrons _____<br>Specific Gravity Separator _____<br>Specific Gravity Flowing Fluid <u>xxxxxxxxxx</u><br>Critical Pressure _____ p.s.i.a.<br>Critical Temperature _____ R |                |                            |                         |                                   | Mcf/bbl.<br>Deq.<br><br>XXXXXX<br>____ p.s.i.a.<br>____ R |
| Pc                       | <b>1297</b>               | Pc <sup>2</sup> | <b>1682209</b>  |                                  |   |                |                            |                         |                                   |   |
| NO                       | Pt1                       | Pw              | Pw <sup>2</sup> | Pc <sup>2</sup> -Pw <sup>2</sup> | (1) $\frac{Pc^2}{Pc^2 - Pw^2} = \underline{1.5064041}$ (2) $\frac{Pc^{2n}}{Pc^2 - Pw^2} = \underline{1.3597}$   |                |                            |                         |                                   |   |
| 1                        |                           | <b>752</b>      | <b>565504</b>   | <b>1116705</b>                   |   |                |                            |                         |                                   |   |
| 2                        |                           |                 |                 |                                  |   |                |                            |                         |                                   |   |
| 3                        |                           |                 |                 |                                  |   |                |                            |                         |                                   |   |
| 4                        |                           |                 |                 |                                  |   |                |                            |                         |                                   |   |
| Absolute Open Flow       |                           |                 |                 |                                  | <b>3815</b>   | Mcf @ 15.025   | Angle of Slope _____       |                         | Slope, n <b>0.75</b>              |   |

  

|                         |                                     |                                     |             |
|-------------------------|-------------------------------------|-------------------------------------|-------------|
| Remarks:                |                                     |                                     |             |
| Approved By Commission: | Conducted By:<br><b>Mark Lepich</b> | Calculated By:<br><b>Tracy Ross</b> | Checked By: |