

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

**RECEIVED**  
**NOV 15 1999**  
**OIL CON. DIV.**

|                                                        |   |                             |                               |                              |                                            |                                             |                        |                                                            |  |
|--------------------------------------------------------|---|-----------------------------|-------------------------------|------------------------------|--------------------------------------------|---------------------------------------------|------------------------|------------------------------------------------------------|--|
| Operator<br><b>Williams Production Company</b>         |   |                             |                               |                              | Lease or Unit Name<br><b>Rosa Unit Com</b> |                                             |                        |                                                            |  |
| Test Type<br><b>X Initial      Annual      Special</b> |   |                             | Test Date<br><b>11/7/1999</b> |                              | Well Number<br><b>#75</b>                  |                                             |                        |                                                            |  |
| Completion Date<br><b>10/29/1999</b>                   |   | Total Depth<br><b>7097'</b> |                               | Plug Back TD<br><b>7070'</b> |                                            | Elevation<br><b>6455'</b>                   |                        | Unit    Sec    Twp    Rng<br><b>O      04    31N    6W</b> |  |
| Casing Size<br><b>4-1/2"</b>                           |   | Weight<br><b>10.5#</b>      |                               | Set At<br><b>7097'</b>       |                                            | Perforations:<br><b>From 5651' To 6518'</b> |                        | County<br><b>San Juan</b>                                  |  |
| Tubing Size<br><b>2-3/8"</b>                           |   | Weight<br><b>4.7#</b>       |                               | Set At<br><b>6891'</b>       |                                            | Perforations:<br><b>From 6615' To 6993'</b> |                        | Pool<br><b>Blanco MV</b>                                   |  |
| Type Well - Single-Bradenhead-GG or GO Multiple        |   |                             |                               |                              | Packer Set At                              |                                             | Formation<br><b>MV</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 Line Size | X Orifice Size | Pressure p.s.i.q | Temperature oF | Pressure p.s.i.q | Temperature oF | Pressure p.s.i.q | Temperature oF | Duration of Flow |
| SI        | <b>2" X 3/4"</b> |                |                  |                | <b>1137</b>      |                | <b>1138</b>      |                | <b>0</b>         |
| 1         |                  |                |                  |                | <b>364</b>       | <b>57</b>      | <b>1002</b>      |                | <b>0.5 hr</b>    |
| 2         |                  |                |                  |                | <b>349</b>       | <b>58</b>      | <b>964</b>       |                | <b>1.0 hr</b>    |
| 3         |                  |                |                  |                | <b>338</b>       | <b>59</b>      | <b>933</b>       |                | <b>1.5 hrs</b>   |
| 4         |                  |                |                  |                | <b>331</b>       | <b>60</b>      | <b>904</b>       |                | <b>2.0 hrs</b>   |
| 5         |                  |                |                  |                | <b>316</b>       | <b>62</b>      | <b>853</b>       |                | <b>3.0 hrs</b>   |

  

| RATE OF FLOW CALCULATION |                        |  |  |  |      |             |                      |                   |                             |                      |
|--------------------------|------------------------|--|--|--|------|-------------|----------------------|-------------------|-----------------------------|----------------------|
| NO                       | Coefficient (24 Hours) |  |  |  | hwPm | Pressure Pm | Flow Temp. Factor FI | Gravity Factor Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
| 1                        | <b>9.604</b>           |  |  |  |      | <b>328</b>  | <b>0.9981</b>        | <b>1.29</b>       | <b>1.03</b>                 | <b>4178</b>          |
| 2                        |                        |  |  |  |      |             |                      |                   |                             |                      |
| 3                        |                        |  |  |  |      |             |                      |                   |                             |                      |
| 4                        |                        |  |  |  |      |             |                      |                   |                             |                      |

  

|    |    |          |    |   |                                            |  |  |  |                |
|----|----|----------|----|---|--------------------------------------------|--|--|--|----------------|
| NO | Pr | Temp. oR | Tr | Z | Gas Liquid Hydrocarbon Ration              |  |  |  | Mcf/bbl.       |
| 1  |    |          |    |   | A.P.I Gravity of Liquid Hydrocabrons _____ |  |  |  | Deq.           |
| 2  |    |          |    |   | Specific Gravity Separator _____           |  |  |  | XXXXXX         |
| 3  |    |          |    |   | Specific Gravity Flowing Fluid xxxxxxxxxx  |  |  |  |                |
| 4  |    |          |    |   | Critical Pressure _____ p.s.i.a.           |  |  |  | _____ p.s.i.a. |
| 5  |    |          |    |   | Critical Temperature _____ R               |  |  |  | _____ R        |

  

|    |             |            |                |               |
|----|-------------|------------|----------------|---------------|
| Pc | <b>1150</b> | Pc2        | <b>1322500</b> |               |
| NO | Pt1         | Pw         | Pw2            | Pc2-Pw2       |
| 1  |             | <b>865</b> | <b>748225</b>  | <b>574275</b> |
| 2  |             |            |                |               |
| 3  |             |            |                |               |
| 4  |             |            |                |               |

  

|                                                                  |  |                                                                   |  |
|------------------------------------------------------------------|--|-------------------------------------------------------------------|--|
| (1) $\frac{Pc2}{Pc2 - Pw2} = \underline{\underline{2.3029037}}$  |  | (2) $\frac{Pc2^n}{Pc2 - Pw2} = \underline{\underline{1.8694198}}$ |  |
| AOF = Q $\frac{Pc2^n}{Pc2 - Pw2} = \underline{\underline{7810}}$ |  |                                                                   |  |

  

|                    |             |              |                      |          |             |
|--------------------|-------------|--------------|----------------------|----------|-------------|
| Absolute Open Flow | <b>7810</b> | Mcf @ 15.025 | Angle of Slope _____ | Slope, n | <b>0.75</b> |
|--------------------|-------------|--------------|----------------------|----------|-------------|

  

|                         |                                      |                                     |                                   |
|-------------------------|--------------------------------------|-------------------------------------|-----------------------------------|
| Remarks:                |                                      |                                     |                                   |
| Approved By Commission: | Conducted By:<br><b>Chic Charley</b> | Calculated By:<br><b>Tracy Ross</b> | Checked By:<br><b>David Spitz</b> |