

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 checked="" type="checkbox"/> Special |             |                             |                   |                                               |                    | Test Date<br>7/15/85                  |  |                                                            |      |
| Company<br>Northwest Pipeline Corporation                                                                                            |             |                             |                   | Connection<br>New Completion                  |                    |                                       |  |                                                            |      |
| Pool<br>Basin                                                                                                                        |             |                             |                   | Formation<br>Dakota                           |                    |                                       |  | Unit<br>Rosa                                               |      |
| Completion Date<br>8/22/84                                                                                                           |             | Total Depth<br>8166'        |                   | Plug Back TD<br>8140'                         |                    | Elevation<br>6415' GR                 |  | Farm or Lease Name<br>Rosa Unit                            |      |
| Csg. Size<br>4.500                                                                                                                   | Wt.<br>11.6 | d<br>4.052                  | Set At<br>8166'   | Perforations:<br>From 7948' To 8110'          |                    |                                       |  | Well No.<br>#102 (DK)                                      |      |
| Tbg. Size<br>2.375                                                                                                                   | Wt.<br>4.7  | d<br>1.995                  | Set At<br>7367'   | Perforations:<br>From                      To |                    |                                       |  | Unit    Sec.    Twp.    Rge.<br>I       30       31N    5W |      |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Gas - Dual                                                                |             |                             |                   |                                               |                    | Packer Set At<br>7367' 7403'          |  | County<br>Rio Arriba                                       |      |
| Producing Thru<br>Tubing                                                                                                             |             | Reservoir Temp. °F<br>@     |                   | Mean Annual Temp. °F                          |                    | Baro. Press. - P <sub>a</sub><br>12.0 |  | State<br>New Mexico                                        |      |
| L                                                                                                                                    | H           | G <sub>g</sub> Est.<br>.600 | % CO <sub>2</sub> | % N <sub>2</sub>                              | % H <sub>2</sub> S | Prover<br>Choke                       |  | Meter Run                                                  | Taps |

  

| FLOW DATA |                        |   |                 |                    |                         | TUBING DATA     |                    | CASING DATA     |                    | Duration<br>of<br>Flow |             |
|-----------|------------------------|---|-----------------|--------------------|-------------------------|-----------------|--------------------|-----------------|--------------------|------------------------|-------------|
| NO.       | Prover<br>Line<br>Size | X | Orifice<br>Size | Press.<br>p.s.i.g. | Diff.<br>h <sub>w</sub> | Temp.<br>°F     | Press.<br>p.s.i.g. | Temp.<br>°F     | Press.<br>p.s.i.g. |                        | Temp.<br>°F |
| SI        | SIP                    |   |                 |                    |                         |                 | 2566               |                 |                    |                        |             |
| 1.        | 2" X .750"             |   |                 |                    |                         | 79 <sup>0</sup> | 254                | 79 <sup>0</sup> |                    |                        | 3 Hrs.      |
| 2.        |                        |   |                 |                    |                         |                 |                    |                 |                    |                        |             |
| 3.        |                        |   |                 |                    |                         |                 |                    |                 |                    |                        |             |
| 4.        |                        |   |                 |                    |                         |                 |                    |                 |                    |                        |             |
| 5.        |                        |   |                 |                    |                         |                 |                    |                 |                    |                        |             |

  

| RATE OF FLOW CALCULATIONS |                          |                  |                            |                                        |                                     |                                               |                         |
|---------------------------|--------------------------|------------------|----------------------------|----------------------------------------|-------------------------------------|-----------------------------------------------|-------------------------|
| NO.                       | Coefficient<br>(24 Hour) | $\sqrt{h_w P_m}$ | Pressure<br>P <sub>m</sub> | Flow Temp.<br>Factor<br>F <sub>t</sub> | Gravity<br>Factor<br>F <sub>g</sub> | Super<br>Compress.<br>Factor, F <sub>pv</sub> | Rate of Flow<br>Q, Mcfd |
| 1                         | 9.604                    |                  | 266                        | .982                                   | 1.291                               | 1.022                                         | 3310                    |
| 2.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 3.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 4.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 5.                        |                          |                  |                            |                                        |                                     |                                               |                         |

  

| NO. | P <sub>t</sub> | Temp. °R | T <sub>f</sub> | Z | Gas Liquid Hydrocarbon Ratio         | Mcf/bbl.   |
|-----|----------------|----------|----------------|---|--------------------------------------|------------|
| 1.  |                |          |                |   | A.P.I. Gravity of Liquid Hydrocarbon | _____ Deg. |
| 2.  |                |          |                |   | Specific Gravity Separation Gas      | XXXXXXX    |
| 3.  |                |          |                |   | Specific Gravity Flowing Fluid       | XXXXX      |
| 4.  |                |          |                |   | Critical Pressure _____ P.S.I.A.     | P.S.I.A.   |
| 5.  |                |          |                |   | Critical Temperature _____ R         | R          |

  

| P <sub>c</sub> 2578 | P <sub>c</sub> <sup>2</sup> 6646084 |                |                             |                                                           |
|---------------------|-------------------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| 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                   |                                     | 581            | 337561                      | 6308523                                                   |
| 2                   |                                     | (Calc.)        |                             |                                                           |
| 3                   |                                     |                |                             |                                                           |
| 4                   |                                     |                |                             |                                                           |
| 5                   |                                     |                |                             |                                                           |

  

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.0535$$

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3442$$

$$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0399$$

  

|                                             |  |                               |  |              |  |
|---------------------------------------------|--|-------------------------------|--|--------------|--|
| Absolute Open Flow 3442 _____ Mcfd @ 15.025 |  | Angle of Slope $\theta$ _____ |  | Slope, n .75 |  |
|---------------------------------------------|--|-------------------------------|--|--------------|--|

  

|                                                                                  |       |                               |                |                               |                                             |
|----------------------------------------------------------------------------------|-------|-------------------------------|----------------|-------------------------------|---------------------------------------------|
| Remarks: Unloaded solid stream of water clearing to medium mist. Vented 414 MCF. |       |                               |                |                               |                                             |
| G <sub>l</sub>                                                                   | i-e-s | F <sub>c</sub> O <sub>2</sub> | R <sup>2</sup> | P <sub>t</sub> <sup>2</sup>   | R <sup>2</sup> +P <sub>t</sub> <sup>2</sup> |
| 4420                                                                             | .275  | 968493                        | 266336         | 70756                         | 337092                                      |
| Approved By Commission:                                                          |       | Conducted By:<br>Gip Aulbert  |                | Calculated By:<br>S.K. Liese  |                                             |
|                                                                                  |       |                               |                | Checked By:<br>M.J. Turnbaugh |                                             |