

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |            |                         |                   |                                        |                    |                                     |                |
|---------------------------------------------------------------------------------------------------------------------------|------------|-------------------------|-------------------|----------------------------------------|--------------------|-------------------------------------|----------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |            |                         |                   | Test Date<br>2-5-81                    |                    |                                     |                |
| Company<br>El Paso Natural Gas Company                                                                                    |            |                         |                   | Connection<br>Northwest Pipeline Corp. |                    |                                     |                |
| Pool<br>Blanco                                                                                                            |            |                         |                   | Formation<br>Mesa Verde                |                    | Unit<br>San Juan 28-5               |                |
| Completion Date<br>1-29-81                                                                                                |            | Total Depth<br>6172     |                   | Plug Back TD<br>6156                   |                    | Elevation<br>6685 GR                |                |
| Farm or Lease Name<br>San Juan 28-5 Unit                                                                                  |            |                         |                   |                                        |                    |                                     |                |
| Csg. Size<br>7.000                                                                                                        | Wt.<br>20  | d<br>6.456              | Set At<br>3866    | Perforations:<br>From * 5216 To 6052   |                    | Well No.<br>#11A                    |                |
| Tbg. Size<br>2.375                                                                                                        | Wt.<br>4.7 | d<br>1.995              | Set At<br>6023    | Perforations:<br>From To               |                    | Unit Sec. Twp. Rge.<br>I 33 28 5    |                |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                         |            |                         |                   | Packer Set At                          |                    | County<br>Rio Arriba                |                |
| Producing Thru<br>Tbg.                                                                                                    |            | Reservoir Temp. °F<br>p |                   | Mean Annual Temp. °F                   |                    | Baro. Press. - P <sub>a</sub><br>12 |                |
| State<br>New Mexico                                                                                                       |            |                         |                   |                                        |                    |                                     |                |
| L                                                                                                                         | H          | G <sub>g</sub>          | % CO <sub>2</sub> | % N <sub>2</sub>                       | % H <sub>2</sub> S | Prover                              | 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        |                        |   |                 |                    |                         |             | 682                |             | 832                |                        | 7 Days      |
| 1.        |                        |   |                 |                    |                         |             |                    |             |                    |                        |             |
| 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> | Rate of Flow<br>Q, Mcfd |
| 1                         |                          |                  |                            |                                        |                                     |                         |
| 2                         |                          |                  |                            |                                        |                                     |                         |
| 3                         |                          |                  |                            |                                        |                                     |                         |
| 4                         |                          |                  |                            |                                        |                                     |                         |
| 5                         |                          |                  |                            |                                        |                                     |                         |

  

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

  

| NO. | P <sub>c</sub> | P <sub>c</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   |                |                             |                |                             |                                                           |
| 2   |                |                             |                |                             |                                                           |
| 3   |                |                             |                |                             |                                                           |
| 4   |                |                             |                |                             |                                                           |
| 5   |                |                             |                |                             |                                                           |

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = \underline{\hspace{2cm}}$       (2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{\hspace{2cm}}$

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

  

|                                        |  |                        |                |
|----------------------------------------|--|------------------------|----------------|
| Absolute Open Flow _____ Mcfd @ 15.025 |  | Angle of Slope θ _____ | Slope, n _____ |
|----------------------------------------|--|------------------------|----------------|

  

Remarks: \*4.500" Liner From 3693 to 6172  
After Frac Gauge - 1120 MCF/D For Sizing Equipment Only!

  

|                      |                              |                                  |             |
|----------------------|------------------------------|----------------------------------|-------------|
| Approved By Division | Conducted By:<br>Mel Wileman | Calculated By:<br>H. E. McAnally | Checked By: |
|----------------------|------------------------------|----------------------------------|-------------|