

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 type="checkbox"/> Special |                     |                                            |                       | Test Date<br><b>1/18/77</b>                      |                    |
| Company<br><b>Southern Union Production Co.</b>                                                                           |                     |                                            |                       | Connection<br><b>El Paso Natural Gas Company</b> |                    |
| Pool<br><b>Blanco</b>                                                                                                     |                     |                                            |                       | Formation<br><b>Mesaverde</b>                    |                    |
| Completion Date<br><b>1/5/77</b>                                                                                          |                     | Total Depth<br><b>5426</b>                 |                       | Plug Back TD<br><b>5400</b>                      |                    |
| Elevation<br><b>6339 GR</b>                                                                                               |                     | Farm or Lease Name<br><b>Helms Federal</b> |                       |                                                  |                    |
| Case Size<br><b>7.000</b>                                                                                                 | Wt.<br><b>23.00</b> | d<br><b>31.51</b>                          | Set At<br><b>5426</b> | Perforations:<br>From <b>4621</b> To <b>5300</b> |                    |
| Tbg. Size<br><b>2.0625</b>                                                                                                | Wt.<br><b>3.25</b>  | d<br><b>4573</b>                           | Set At<br><b>4573</b> | Perforations:<br>From <b>NO PERFORATIONS</b>     |                    |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Dual - Gas - Gas</b>                                        |                     |                                            |                       | Packer Set At<br><b>4570</b>                     |                    |
| Producing Thru<br><b>Tubing</b>                                                                                           |                     | Reservoir Temp. °F<br>@                    |                       | Baro. Press. - P <sub>a</sub><br><b>12</b>       |                    |
| Mean Annual Temp. °F<br><b>4562</b>                                                                                       |                     | County<br><b>San Juan</b>                  |                       | State<br><b>New Mexico</b>                       |                    |
| L<br><b>4562</b>                                                                                                          | H                   | Gg<br><b>0.700</b>                         | % CO <sub>2</sub>     | % N <sub>2</sub>                                 | % H <sub>2</sub> S |
| Prover                                                                                                                    |                     | Meter Run                                  |                       | Taps                                             |                    |

| FLOW DATA |                  |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |                |
|-----------|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|----------------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F    | Press. p.s.i.g. | Temp. °F    | Press. p.s.i.g. |                  | Temp. °F       |
| SI        | <b>2"</b>        |   | <b>3/4"</b>  |                 |                      |             | <b>815</b>      |             |                 |                  | <b>7 Days</b>  |
| 1.        |                  |   |              |                 |                      |             | <b>110</b>      | <b>59°</b>  |                 |                  | <b>3 Hours</b> |
| 2.        |                  |   |              |                 |                      |             |                 |             |                 |                  |                |
| 3.        |                  |   |              |                 |                      |             |                 |             |                 |                  |                |
| 4.        |                  |   |              |                 |                      |             |                 |             |                 |                  |                |
| 5.        |                  |   |              |                 |                      |             |                 |             |                 |                  |                |

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                      |                   |                             |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------|-------------------|-----------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft | Gravity Factor Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
| 1                         | <b>12.3650</b>        |                  | <b>122</b>              | <b>1.0010</b>        | <b>0.9258</b>     | <b>1.014</b>                | <b>1418</b>          |
| 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                 |

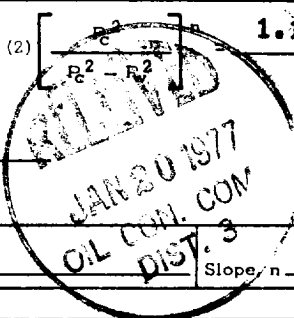
  

| P <sub>c</sub> <b>827</b> | P <sub>c</sub> <sup>2</sup> <b>683,929</b> |                |                             |
|---------------------------|--------------------------------------------|----------------|-----------------------------|
| NO.                       | P <sub>c</sub> <sup>2</sup>                | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> |
| 1                         |                                            |                | <b>87,836</b>               |
| 2                         |                                            |                | <b>596,093</b>              |
| 3                         |                                            |                |                             |
| 4                         |                                            |                |                             |
| 5                         |                                            |                |                             |

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 1.1474$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1572$

(2)  $\left[ \frac{P_c^2 - P_w^2}{P_c^2} \right]^n = 1.1086$



|                                              |                                       |
|----------------------------------------------|---------------------------------------|
| Absolute Open Flow <b>1572</b> Mcfd @ 15.025 | Angle of Slope $\theta$ <b>0.75</b>   |
| Remarks: _____                               |                                       |
| Approved By Commission:                      | Conducted By: <b>Kenneth E. Roddy</b> |
| Calculated By: <b>Kenneth E. Roddy</b>       | Checked By:                           |