

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

well file  
Form C-122  
Revised 9-1-65

**RECEIVED**

|                                                                                                                           |                     |                                           |                         |                                                      |                    |                                                            |                                       |
|---------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------|-------------------------|------------------------------------------------------|--------------------|------------------------------------------------------------|---------------------------------------|
| Type Test<br><input type="checkbox"/> Initial <input type="checkbox"/> Annual <input checked="" type="checkbox"/> Special |                     |                                           |                         | Test Date<br><b>5-7-73</b>                           |                    | <b>MAY 16 1973</b>                                         |                                       |
| Company<br><b>El Paso Natural Gas Company</b>                                                                             |                     |                                           |                         | Connection<br><b>None</b>                            |                    | <b>O. C. C.</b>                                            |                                       |
| Pool<br><b>West Sand Run - Morrow</b>                                                                                     |                     |                                           |                         | Location<br><b>Morrow</b>                            |                    | <b>ARTESIA, OFFICE</b>                                     |                                       |
| Completion Date<br><b>2-16-73</b>                                                                                         |                     | Total Depth<br><b>14,890</b>              |                         | Plug Back TD<br><b>14,768</b>                        |                    | Elevation<br><b>3351.5 G.L.</b>                            |                                       |
| Farm or Lease Name<br><b>Mobil Federal</b>                                                                                |                     |                                           |                         |                                                      |                    |                                                            |                                       |
| Csg. Size<br><b>5 1/2</b>                                                                                                 | Wt.<br><b>20</b>    | d<br><b>14,890</b>                        | Set At<br><b>14,890</b> | Perforations:<br>From <b>14,376</b> To <b>14,599</b> |                    | Well No.<br><b>1</b>                                       |                                       |
| Tbg. Size<br><b>3 1/2</b>                                                                                                 | Wt.<br><b>9.2</b>   | d<br><b>2.932</b>                         | Set At<br><b>12,015</b> | Perforations:<br>From <b>open</b> To <b>end</b>      |                    | Unit    Sec.    Twp.    Rge.<br><b>J    29    23    31</b> |                                       |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Single</b>                                                  |                     |                                           |                         | Packer Set At<br><b>12,015</b>                       |                    | County<br><b>Eddy</b>                                      |                                       |
| Producing Thru<br><b>TBG</b>                                                                                              |                     | Reservoir Temp. °F<br><b>225 @ 14,499</b> |                         | Mean Annual Temp. °F<br><b>6</b>                     |                    | State<br><b>New Mexico</b>                                 |                                       |
| L<br><b>12,190*</b>                                                                                                       | H<br><b>12,190*</b> | Gg<br><b>.578</b>                         | % CO <sub>2</sub>       | % N <sub>2</sub>                                     | % H <sub>2</sub> S | Prover                                                     | Meter Run    Taps<br><b>4"    FLG</b> |

  

| 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>4615.2</b>   | <b>74</b>   |                 |                  | <b>72Hr</b> |
| 1.        | <b>4</b>         | <b>x</b> | <b>2.000</b> | <b>654</b>      | <b>35.40</b>         | <b>68</b>   | <b>1965.2</b>   |             |                 |                  | <b>24Hr</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>19.81</b>          | <b>153.68</b>    | <b>667.2</b>            | <b>.9924</b>         | <b>1.315</b>      | <b>1.053</b>               | <b>4,184</b>         |
| 2.                        |                       |                  |                         |                      |                   |                            |                      |
| 3.                        |                       |                  |                         |                      |                   |                            |                      |
| 4.                        |                       |                  |                         |                      |                   |                            |                      |
| 5.                        |                       |                  |                         |                      |                   |                            |                      |

  

| NO. | P <sub>t</sub> | Temp. °F   | T <sub>r</sub> | Z           | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.                  |
|-----|----------------|------------|----------------|-------------|--------------------------------------------------------------|
| 1.  | <b>.99</b>     | <b>528</b> | <b>1.53</b>    | <b>.902</b> | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.             |
| 2.  |                |            |                |             | Specific Gravity Separator Gas <b>.578</b> <b>XXXXXXXXXX</b> |
| 3.  |                |            |                |             | Specific Gravity Flowing Fluid <b>XXXXXX</b>                 |
| 4.  |                |            |                |             | Critical Pressure <b>672</b> P.S.I.A.    P.S.I.A.            |
| 5.  |                |            |                |             | Critical Temperature <b>346</b> R    R                       |

  

| $P_c = 4615.2$ $P_c^2 = 21,300.1$ |                             |                |                             |                                                           |
|-----------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| 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                                 |                             | <b>1985.8</b>  | <b>3943.4</b>               | <b>17,356.7</b>                                           |
| 2.                                |                             |                |                             |                                                           |
| 3.                                |                             |                |                             |                                                           |
| 4.                                |                             |                |                             |                                                           |
| 5.                                |                             |                |                             |                                                           |

  

$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.227$

$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.131$

  

$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.732$

  

|                                 |              |                            |                      |
|---------------------------------|--------------|----------------------------|----------------------|
| Absolute Open Flow <b>4,732</b> | Mcf @ 15.025 | Angle of Slope <b>59.0</b> | Slope, n <b>.601</b> |
|---------------------------------|--------------|----------------------------|----------------------|

  

Remarks: \* Cal. equiv. length for a combination string = 12,015' of 3 1/2" I.D. = 2,932' & 2361' 5 1/2" ID = 4,778' Converted all to 3 1/2" = 12,190'. Made 11.33 BBL H<sub>2</sub>O through out test.

  

|                         |                                     |                                       |             |
|-------------------------|-------------------------------------|---------------------------------------|-------------|
| Approved By Commission: | Conducted By:<br><b>Randy Kiker</b> | Calculated By:<br><b>J. B. Murray</b> | Checked By: |
|-------------------------|-------------------------------------|---------------------------------------|-------------|