

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>12-1-73</b>                                            |                     |
| Company<br><b>El Paso Natural Gas Company</b>                                                                             |                    |                                |                       | Connection<br><b>None</b>                        |                    |                                                                        |                     |
| Pool<br><b>Rhodes</b>                                                                                                     |                    |                                |                       | Formation<br><b>Yates</b>                        |                    | Unit<br><b>D</b>                                                       |                     |
| Completion Date<br><b>12-1-73</b>                                                                                         |                    | Total Depth<br><b>3170</b>     |                       | Plug Back TD<br><b>3136</b>                      |                    | Elevation<br><b>3996.6 Gr</b>                                          |                     |
| Csq. Size<br><b>4 1/2</b>                                                                                                 | Wt.<br><b>10.5</b> | d                              | Set At<br><b>3172</b> | Perforations:<br>From <b>2853</b> To <b>3073</b> |                    | Well No.<br><b>#6</b>                                                  |                     |
| Tbg. Size<br><b>2 3/8</b>                                                                                                 | Wt.<br><b>4.7</b>  | d                              | Set At<br><b>2755</b> | Perforations:<br>From                      To    |                    | Unit      Sec.      Twp.      Rge.<br><b>D      15      26      37</b> |                     |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Single</b>                                                  |                    |                                |                       | Packer Set At                                    |                    | County<br><b>Lea</b>                                                   |                     |
| Producing Thru<br>Tbg.                                                                                                    |                    | Reservoir Temp. °F<br><b>@</b> |                       | Mean Annual Temp. °F                             |                    | State<br><b>New Mexico</b>                                             |                     |
| L                                                                                                                         | H                  | Gg<br><b>.650 Assumed</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 Size<br><b>X</b> | Orifice Size<br><b>Positive Chokes</b> | Press. p.s.i.g. | Diff. hw | Temp. °F  | Press. p.s.i.g. | Temp. °F  | Press. p.s.i.g. | Temp. °F |                  |
| SI        |                         |                                        |                 |          |           | <b>483</b>      |           | <b>483</b>      |          | <b>15 hrs.</b>   |
| 1.        | <b>3/16</b>             |                                        | <b>452</b>      |          | <b>58</b> | <b>452</b>      | <b>58</b> | <b>454</b>      |          | <b>45 M</b>      |
| 2.        | <b>1/4</b>              |                                        | <b>429</b>      |          | <b>61</b> | <b>429</b>      | <b>61</b> | <b>432</b>      |          | <b>45 M</b>      |
| 3.        | <b>5/16</b>             |                                        | <b>355</b>      |          | <b>64</b> | <b>355</b>      | <b>64</b> | <b>380</b>      |          | <b>1 H</b>       |
| 4.        | <b>3/8</b>              |                                        | <b>271</b>      |          | <b>70</b> | <b>271</b>      | <b>70</b> | <b>375</b>      |          | <b>1 H</b>       |
| 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>.6101</b>          |                  | <b>465.2</b>            | <b>1.002</b>          | <b>1.240</b>      | <b>1.047</b>                | <b>369</b>           |
| 2                         | <b>1.112</b>          |                  | <b>441.2</b>            | <b>.9990</b>          | <b>1.240</b>      | <b>1.045</b>                | <b>635</b>           |
| 3                         | <b>1.771</b>          |                  | <b>368.2</b>            | <b>.9962</b>          | <b>1.240</b>      | <b>1.037</b>                | <b>806</b>           |
| 4                         | <b>2.591</b>          |                  | <b>284.2</b>            | <b>.9905</b>          | <b>1.240</b>      | <b>1.028</b>                | <b>930</b>           |
| 5                         |                       |                  |                         |                       |                   |                             |                      |

  

| NO. | P <sub>r</sub> | Temp. °R   | T <sub>r</sub> | Z           | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.                       |
|-----|----------------|------------|----------------|-------------|-------------------------------------------------------------------|
| 1.  | <b>.69</b>     | <b>518</b> | <b>1.38</b>    | <b>.912</b> | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.                  |
| 2.  | <b>.66</b>     | <b>521</b> | <b>1.39</b>    | <b>.916</b> | Specific Gravity Separator Gas <b>.650</b> <b>X X X X X X X X</b> |
| 3.  | <b>.55</b>     | <b>524</b> | <b>1.40</b>    | <b>.930</b> | Specific Gravity Flowing Fluid <b>X X X X X</b>                   |
| 4.  | <b>.42</b>     | <b>530</b> | <b>1.41</b>    | <b>.947</b> | Critical Pressure <b>670</b> P.S.I.A.      P.S.I.A.               |
| 5.  |                |            |                |             | Critical Temperature <b>375</b> R      R                          |

  

| $P_c$ <b>496.2</b> | $P_c^2$ <b>246.2</b> |              |              |
|--------------------|----------------------|--------------|--------------|
| NO.                | $P_t^2$              | $P_w$        | $P_w^2$      |
| 1                  |                      | <b>467.2</b> | <b>218.3</b> |
| 2                  |                      | <b>445.2</b> | <b>198.2</b> |
| 3                  |                      | <b>393.2</b> | <b>154.6</b> |
| 4                  |                      | <b>388.2</b> | <b>150.7</b> |
| 5                  |                      |              |              |

  

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.578$$

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.899$$

$$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.042$$

  

|                                               |                                   |                      |
|-----------------------------------------------|-----------------------------------|----------------------|
| Absolute Open Flow <b>1,899</b> Mcfd @ 15.025 | Angle of Slope $\theta$ <b>53</b> | Slope, n <b>.754</b> |
|-----------------------------------------------|-----------------------------------|----------------------|

  

Remarks: **Started making large amount of water on last 30 M of fourth rate.**

  

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