

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

Form C-122  
Revised 9-1-65

RECEIVED

|                                                                                                                           |  |                                     |  |                             |  |                                       |  |                                                          |  |
|---------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------|--|-----------------------------|--|---------------------------------------|--|----------------------------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                     |  |                             |  | Test Date<br>2-9-81                   |  | <b>FEB 20 1981</b>                                       |  |
| Company<br>Cities Service Company                                                                                         |  |                                     |  |                             |  | To Air                                |  |                                                          |  |
| Pool<br>Otis Loving <i>N. LOVING</i>                                                                                      |  |                                     |  |                             |  | Atoka                                 |  | Unit<br>O. C. D.                                         |  |
| Completion Date<br>2-9-81                                                                                                 |  |                                     |  |                             |  | Total Depth<br>11,706                 |  | Farm or Lease Name<br>VILLA "B" Com.                     |  |
| Csg. Size<br>7"                                                                                                           |  | Wt.<br>23#                          |  | Set At<br>6.366"            |  | Perforations:<br>From 10987 To 11706  |  | Well No.<br>1                                            |  |
| Thq. Size<br>2/78                                                                                                         |  | Wt.<br>6.4#                         |  | Set At<br>2.441"            |  | Perforations:<br>From Open Ended To   |  | Unit    Sec.    Twp.    Rge.<br>B       8       23    28 |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple                                                                   |  |                                     |  |                             |  | Packer Set At<br>10,925               |  | County<br>EDDY                                           |  |
| Producing Thru<br>Tubing                                                                                                  |  | Reservoir Temp. °F<br>188° @ 10,960 |  | Mean Annual Temp. °F<br>60° |  | Baro. Press. - P <sub>a</sub><br>13.2 |  | State<br>N. Mex                                          |  |
| L<br>10,960                                                                                                               |  | H<br>10,960                         |  | G <sub>g</sub><br>.6188     |  | % CO <sub>2</sub><br>.435             |  | % H <sub>2</sub> S<br>-0-                                |  |
|                                                                                                                           |  |                                     |  |                             |  | Prover                                |  | Meter Run<br>4"                                          |  |
|                                                                                                                           |  |                                     |  |                             |  |                                       |  | Taps<br>flg.                                             |  |

  

| 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 |
| 1.        | 4                |   | 1.5"         | 520             | 15"                  | 60          | 5785            | 50°         | PKR             | Choke            | 95 hrs.  |
| 2.        | 4                |   | 1.5"         | 520             | 30"                  | 80          | 4458            | 52°         |                 | 5/64             | 1 hr.    |
| 3.        | 4                |   | 1.5"         | 520             | 46"                  | 60          | 4215            | 54°         |                 | 6.5/64           | 1 hr.    |
| 4.        | 4                |   | 1.5"         | 520             | 62"                  | 64          | 4037            | 53°         |                 | 8/64             | .75 hr.  |
| 5.        |                  |   |              |                 |                      |             | 3850            |             |                 | 9/64             | .75 hr.  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | 9.071                 | 89.43            | 533.2                   | 1.000                            | 1.271                         | 1.048                                   | 1.080                |
| 2                         | 9.071                 | 126.48           | 533.2                   | .9813                            | 1.271                         | 1.042                                   | 1.491                |
| 3                         | 9.071                 | 156.61           | 533.2                   | 1.000                            | 1.271                         | 1.048                                   | 1.892                |
| 4                         | 9.071                 | 181.82           | 533.2                   | .9962                            | 1.271                         | 1.047                                   | 2.186                |
| 5                         |                       |                  |                         |                                  |                               |                                         |                      |

  

|     |                |          |                |      |                                                  |              |
|-----|----------------|----------|----------------|------|--------------------------------------------------|--------------|
| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio                     | Mcf/bbl.     |
| 1.  | .79            | 520      | 1.45           | .911 | 57.32                                            |              |
| 2.  | .79            | 540      | 1.50           | .921 | A.P.L. Gravity of Liquid Hydrocarbons 59.7 @ 60° |              |
| 3.  | .79            | 520      | 1.45           | .911 | Specific Gravity Separator Gas                   | XXXXXXX      |
| 4.  | .79            | 524      | 1.46           | .913 | Specific Gravity Flowing Fluid                   | XXXXX        |
| 5.  |                |          |                |      | Critical Pressure 672                            | 670 P.S.I.A. |
|     |                |          |                |      | Critical Temperature 359                         | 379 R        |

  

|     |                             |                |                             |                                                           |                                          |                                                           |
|-----|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|------------------------------------------|-----------------------------------------------------------|
| 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) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.80$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.80$ |
| 1   |                             | 4482.3         | 20,091                      | 13,528                                                    |                                          |                                                           |
| 2   |                             | 4244.6         | 18,016                      | 15,603                                                    |                                          |                                                           |
| 3   |                             | 4058.6         | 16,472                      | 17,147                                                    |                                          |                                                           |
| 4   |                             | 3871.0         | 14,986                      | 18,633                                                    |                                          |                                                           |
| 5   |                             |                |                             |                                                           |                                          |                                                           |

  

|                          |  |                |                    |               |
|--------------------------|--|----------------|--------------------|---------------|
| Absolute Open Flow 3,934 |  | Mcf/d @ 15.025 | Angle of Slope 45° | Slope, n 1.00 |
|--------------------------|--|----------------|--------------------|---------------|

  

Remarks: Use 45° Thru High Rate.  
Made 3 Bbs. condensate during Test.

  

|                         |                     |                      |                   |
|-------------------------|---------------------|----------------------|-------------------|
| Approved By Commission: | Conducted By:<br>MB | Calculated By:<br>MK | Checked By:<br>MK |
|-------------------------|---------------------|----------------------|-------------------|