

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

Form C-122  
Revised 5-78  
**RECEIVED**

C/SF  
C-122

**APR 2 1982**

|                                                                                                                |  |                                    |  |                                             |  |                                       |  |
|----------------------------------------------------------------------------------------------------------------|--|------------------------------------|--|---------------------------------------------|--|---------------------------------------|--|
| Type Test<br><input type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                    |  | Test Date<br>2-14-82                        |  | APR 2 1982                            |  |
| Company<br>Yates Petroleum Corporation                                                                         |  |                                    |  | Connection<br>Transwestern Pipeline Company |  | O. C. D.<br>ARTESIA, OFFICE           |  |
| Well<br>Pecos Slope Abo Gas                                                                                    |  |                                    |  | Formation<br>Abo Gas                        |  | Unit<br>LG-567                        |  |
| Completion Date<br>12-14-81                                                                                    |  | Total Length<br>4250'              |  | Plug Back TD<br>4219'                       |  | Elevation<br>3872' KB<br>3864' GR     |  |
| Casing Size<br>4-1/2"                                                                                          |  | ID<br>9.5#                         |  | Set At<br>4258' KB                          |  | Perforations<br>From 3668 To 3916     |  |
| Tubing Size<br>2-3/8"                                                                                          |  | ID<br>4.7#                         |  | Set At<br>3906'                             |  | Perforations<br>From - To -           |  |
| Type Well - Single - Protthead - G.O. or G.O. Multiple<br>Single                                               |  |                                    |  | Packer Set At<br>None                       |  | County<br>Chaves                      |  |
| Producing thru<br>Tubing                                                                                       |  | Reservoir Temp. °F<br>102° @ 3900' |  | Mean Annual Temp. °F<br>60                  |  | Baro. Press. - P <sub>a</sub><br>13.2 |  |
| L<br>3906                                                                                                      |  | H<br>3906                          |  | G <sub>g</sub><br>.664                      |  | Prover<br>---                         |  |
|                                                                                                                |  |                                    |  | % CO <sub>2</sub><br>2.11                   |  | % N <sub>2</sub><br>5.73              |  |
|                                                                                                                |  |                                    |  | % H <sub>2</sub> S<br>0                     |  | Meter Run<br>2"                       |  |
|                                                                                                                |  |                                    |  |                                             |  | Flange                                |  |

  

| 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 |
| 51        |                        |   |                 |                    |                         |             | 971                |             |                    |                        | days        |
| 1.        | 2.067 x 1.250          |   |                 | 220                | 30                      | 65          | 863                | 71          |                    |                        | 24 hrs      |
| 2.        | 2.067 x 1.250          |   |                 | 240                | 38                      | 64          | 835                | 70          |                    |                        | 24 hrs      |
| 3.        | 2.067 x 1.250          |   |                 | 260                | 48                      | 62          | 800                | 68          |                    |                        | 24 hrs      |
| 4.        | 2.067 x 1.250          |   |                 | 255                | 66                      | 65          | 760                | 69          |                    |                        | 24 hrs      |
| 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> | Super<br>Compress.<br>Factor, F <sub>pv</sub> | Rate of Flow<br>Q, Mcfd |
| 1                         | 8.120                    | 83.64            | 233.2                      | 0.9952                                 | 1.227                               | 1.021                                         | 847                     |
| 2                         | 8.120                    | 98.09            | 253.2                      | 0.9962                                 | 1.227                               | 1.023                                         | 992                     |
| 3                         | 8.120                    | 114.51           | 273.2                      | 0.9981                                 | 1.227                               | 1.025                                         | 1167                    |
| 4                         | 8.120                    | 133.05           | 268.2                      | 0.9952                                 | 1.227                               | 1.024                                         | 1351                    |
| 5.                        |                          |                  |                            |                                        |                                     |                                               |                         |

  

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio _____ Mcf/boil.     |
|-----|----------------|----------|----------------|-------|--------------------------------------------------|
| 1   | 0.350          | 525      | 1.458          | 0.960 | A.P.L. Gravity of Liquid Hydrocarbons _____ Deg. |
| 2   | 0.380          | 524      | 1.456          | 0.956 | Specific Gravity Separator Gas 0.664             |
| 3   | 0.410          | 522      | 1.450          | 0.952 | Specific Gravity Flowing Fluid X X X X X         |
| 4   | 0.402          | 525      | 1.458          | 0.954 | Critical Pressure 667 P.S.I.A.                   |
| 5   |                |          |                |       | Critical Temperature 360 R                       |

  

|                      |                      |                                           |                                                                 |                                                               |  |
|----------------------|----------------------|-------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|--|
| P <sub>r</sub> 984.2 | P <sub>w</sub> 968.6 | $(1) \frac{P_r^2}{P_r^2 - P_w^2} = 1.699$ |                                                                 | $(2) \left[ \frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.511$    |  |
| NO. 1                | P <sub>r</sub> 767.7 | P <sub>w</sub> 777.7                      | P <sub>r</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> 190.9 | $ACF = Q \left[ \frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 3000$ |  |
| 2                    | 719.4                | 733.2                                     | 235.4                                                           |                                                               |  |
| 3                    | 661.3                | 680.5                                     | 288.1                                                           |                                                               |  |
| 4                    | 597.8                | 623.5                                     | 345.1                                                           |                                                               |  |
| 5                    |                      |                                           |                                                                 |                                                               |  |

  

|                                                                                                                   |                               |                                   |                |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------|----------------|
| Absolute Open Flow 3000                                                                                           | Mcf/d @ 15.025                | Angle of Slope @ _____            | Slope, n 0.778 |
| Remarks: Static pressures by Bennett Wireline, flowing pressures by DWT calculations<br>Worksheet C122D attached. |                               |                                   |                |
| Approved By Completion:                                                                                           | Conducted By:<br>David Weaver | Calculated By:<br>Albert R. Stall | Checked By:    |