

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

Form C-122

RECEIVED

NOV 14 1991

|                                                 |                |                                |                    |                                             |              |                                  |                     |
|-------------------------------------------------|----------------|--------------------------------|--------------------|---------------------------------------------|--------------|----------------------------------|---------------------|
| Type Test<br>[x] Initial [ ] Annual [ ] Special |                |                                |                    | Test Date<br>2/11/91                        |              | O. C. D.<br>ARTESIA OFFICE       |                     |
| Company<br>Yates Petroleum Corporation          |                |                                |                    | Connection<br>Transwestern Pipeline Company |              | Unit                             |                     |
| Pool<br>Morrow                                  |                |                                |                    | Formation<br>West Sand Dunes                |              | Unit                             |                     |
| Completion Date<br>10/11/90                     |                | Total Depth<br>14886.0'        |                    | Plug Back TD<br>14200.0'                    |              | Elevation<br>3345.0'             |                     |
| Farm or Lease Name<br>Medano VA State           |                |                                |                    | Well No.<br>2                               |              |                                  |                     |
| Csg Size<br>7.000"                              | Wt.<br>26.000# | d<br>6.276"                    | Set At<br>11852.0' | Perforations:<br>From 14011.0' To 14092.0'  |              | Unit Sec Twp Rge<br>E 16 23S 31E |                     |
| Tbg Size<br>2.375"                              | Wt.<br>4.700#  | d<br>1.995"                    | Set At<br>13916.0' | Perforations:<br>From 0.0' To 0.0'          |              | County<br>Eddy                   |                     |
| Type Well<br>Single                             |                |                                |                    | Packer Set At<br>13916.0'                   |              | State<br>New Mexico              |                     |
| Producing Thru<br>Tubing                        |                | Resv. Temp. °F<br>192 @ 14016' |                    | Mean Temp. °F<br>62.0                       |              | Baro. Press. - Pa<br>13.2 psia.  |                     |
| L<br>13916.0'                                   | H<br>13916.0'  | Gg<br>.584                     | %CO2<br>8.66       | %N2<br>6.50                                 | %H2S<br>0.00 | Prover<br>0.000"                 | Meter Run<br>2.000" |
| Taps<br>Flange                                  |                |                                |                    |                                             |              |                                  |                     |

| FLOW DATA |                               |                |             |             | TUBING DATA    |             | CASING DATA    |             | Duration<br>of<br>Flow |
|-----------|-------------------------------|----------------|-------------|-------------|----------------|-------------|----------------|-------------|------------------------|
| NO        | Prover Orifice<br>Size X Size | Press.<br>psig | Diff.<br>hw | Temp.<br>°F | Press.<br>psig | Temp.<br>°F | Press.<br>psig | Temp.<br>°F |                        |
| SI        | 0.000 X 0.000                 | 0              | 0.0         | 50          | 6411           | 0           | 0              | 0           | 0 hrs.                 |
| 1.        | 2.067 X 1.375                 | 790            | 18.0        | 46          | 4700           | 62          | 0              | 0           | 24 hrs.                |
| 2.        | 2.067 X 1.375                 | 820            | 20.3        | 49          | 4476           | 62          | 0              | 0           | 24 hrs.                |
| 3.        | 2.067 X 1.375                 | 830            | 25.6        | 43          | 3662           | 62          | 0              | 0           | 24 hrs.                |
| 4.        | 2.067 X 1.375                 | 830            | 32.0        | 50          | 3579           | 62          | 0              | 0           | 24 hrs.                |
| 5.        | 0.000 X 0.000                 | 0              | 0.0         | 0           | 0              | 0           | 0              | 0           | 0 hrs.                 |

RATE OF FLOW CALCULATIONS

| NO | Coefficient<br>(24 HOUR) | √hwPm  | Pressure<br>Pm | Flow Temp<br>Factor<br>Ft. | Gravity<br>Factor<br>Fg | Super<br>Compress.<br>Fact. Fpv | Rate of Flow<br>Q, Mcfd |
|----|--------------------------|--------|----------------|----------------------------|-------------------------|---------------------------------|-------------------------|
| 1. | 10.204                   | 120.24 | 803.20         | 1.014                      | 1.309                   | 1.048                           | 1705                    |
| 2. | 10.204                   | 130.05 | 833.20         | 1.011                      | 1.309                   | 1.048                           | 1840                    |
| 3. | 10.204                   | 146.92 | 843.20         | 1.017                      | 1.309                   | 1.051                           | 2097                    |
| 4. | 10.204                   | 164.26 | 843.20         | 1.010                      | 1.309                   | 1.048                           | 2322                    |
| 5. | 0.000                    | 0.00   | 0.00           | 0.000                      | 0.000                   | 0.000                           | 0                       |

| NO | Pr   | Temp.<br>°R | Tr   | Z     | Gas Liquid Hydrocarbon Ratio Dry Mcf/bbl. | A.P.I. Gravity of Liquid Hydrocarbons 0.000 Deg. | Specific Gravity Separator Gas .584 xxxxxxxxxxxxxx | Specific Gravity Flowing Fluid .584 | Critical Pressure 699.2 PSIA 699.2 PSIA | Critical Temperature 318.0°R 318.0°R |
|----|------|-------------|------|-------|-------------------------------------------|--------------------------------------------------|----------------------------------------------------|-------------------------------------|-----------------------------------------|--------------------------------------|
| 1. | 1.15 | 506         | 1.59 | .911  |                                           |                                                  |                                                    |                                     |                                         |                                      |
| 2. | 1.19 | 509         | 1.60 | .910  |                                           |                                                  |                                                    |                                     |                                         |                                      |
| 3. | 1.21 | 503         | 1.58 | .905  |                                           |                                                  |                                                    |                                     |                                         |                                      |
| 4. | 1.21 | 510         | 1.60 | .910  |                                           |                                                  |                                                    |                                     |                                         |                                      |
| 5. | 0.00 | 0           | 0.00 | 0.000 |                                           |                                                  |                                                    |                                     |                                         |                                      |

Pc 6424.2 Pc<sup>2</sup> 41270.3  
 NO Pt<sup>2</sup> Pw Pw<sup>2</sup> Pc<sup>2</sup>-Pw<sup>2</sup> (1) Pc<sup>2</sup> = 1.4654 (2) Pc<sup>2</sup> = 1.3477

1. 22214.25424 4D.D" | "  
 4727.2 |  
 22346.3252961 4D.D" | "  
 18924 4D.D |  
 | Pc<sup>2</sup>-Pw<sup>2</sup> | Pc<sup>2</sup>-Pw<sup>2</sup> |  
 2. 20152.91664 4D.D" | "  
 4506.0 |  
 20303.8557604 4D.D" | "  
 20966.5 4D.D |  
 | r | n | L | J |  
 3. 13507.09504 4D.D" | "  
 3700.1 |  
 13691.0360196 4D.D" | "