

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

Form C-122

APR 10 '89

|                                                                                                                           |  |                                    |  |                                             |  |                                 |  |
|---------------------------------------------------------------------------------------------------------------------------|--|------------------------------------|--|---------------------------------------------|--|---------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                    |  | Test Date<br>5/13/88                        |  | APR 10 '89                      |  |
| Company<br>Yates Petroleum Corporation                                                                                    |  |                                    |  | Connection<br>Transwestern Pipeline Company |  | C.O.D.<br>ARTESIA, OFFICE       |  |
| Pool <u>FOOR RAUCH</u><br>Pre-Permian Gas                                                                                 |  |                                    |  | Formation<br>Foore Ranch                    |  | Unit<br>East Wind State Ut      |  |
| Completion Date<br>1/23/88                                                                                                |  | Total Depth<br>6530.0'             |  | Plug Back TD<br>6490.0'                     |  | Elevation<br>3829.4'            |  |
| Csg Size<br>5.500"                                                                                                        |  | Wt.<br>14.000#                     |  | d<br>5.012"                                 |  | Set At<br>6530.0'               |  |
| Tbg Size<br>2.875"                                                                                                        |  | Wt.<br>6.500#                      |  | d<br>2.441"                                 |  | Set At<br>6135.0'               |  |
| Perforations:<br>From 6180.0' To 6214.0'                                                                                  |  | Perforations:<br>From 0.0' To 0.0' |  | Well No.<br>1                               |  | Unit Sec Twp Rge<br>G 17 9S 27E |  |
| Type Well<br>Single                                                                                                       |  |                                    |  | Packer Set At<br>6135.0'                    |  | County<br>Chaves                |  |
| Producing Thru<br>Tubing                                                                                                  |  | Resv. Temp. °F<br>144 @ 6197'      |  | Mean Temp. °F<br>62.0                       |  | Baro. Press. - Pa<br>13.2 psia. |  |
| L<br>6135.0'                                                                                                              |  | H<br>6135.0'                       |  | Gg<br>.648                                  |  | %CO2<br>1.08                    |  |
| %N2<br>4.06                                                                                                               |  | %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         | 84          | 1020           | 0           | 0              | 0           | 0 hrs.                 |
| 1.        | 2.067 X 1.500                 | 160            | 2.8         | 82          | 619            | 62          | 0              | 0           | 24 hrs.                |
| 2.        | 2.067 X 1.500                 | 160            | 3.6         | 82          | 432            | 62          | 0              | 0           | 24 hrs.                |
| 3.        | 2.067 X 1.500                 | 155            | 4.8         | 84          | 366            | 62          | 0              | 0           | 24 hrs.                |
| 4.        | 2.067 X 1.500                 | 135            | 6.0         | 83          | 290            | 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. | 12.748                   | 22.02 | 173.20         | .979                       | 1.242                   | 1.013                           | 346                     |
| 2. | 12.748                   | 24.97 | 173.20         | .979                       | 1.242                   | 1.013                           | 392                     |
| 3. | 12.748                   | 28.41 | 168.20         | .978                       | 1.242                   | 1.012                           | 445                     |
| 4. | 12.748                   | 29.82 | 148.20         | .979                       | 1.242                   | 1.011                           | 467                     |
| 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 | A.P.I. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature |
|----|------|-------------|------|-------|------------------------------|---------------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|
| 1. | .26  | 542         | 1.51 | .975  | 36.700 Mcf/bbl.              | 39.900 Deg.                           | .648                           | xxxxxxx                        | 668.2 PSIA        | 358.7°R              |
| 2. | .26  | 542         | 1.51 | .975  |                              |                                       |                                | xxxxxxx                        | 665.0 PSIA        | 388.6°R              |
| 3. | .25  | 544         | 1.52 | .976  |                              |                                       |                                |                                |                   |                      |
| 4. | .22  | 543         | 1.51 | .979  |                              |                                       |                                |                                |                   |                      |
| 5. | 0.00 | 0           | 0.00 | 0.000 |                              |                                       |                                |                                |                   |                      |

|    |                 |                 |                 |                                  |                                                                               |                                            |     |                                                             |  |  |
|----|-----------------|-----------------|-----------------|----------------------------------|-------------------------------------------------------------------------------|--------------------------------------------|-----|-------------------------------------------------------------|--|--|
| Pc | 1033.2          | Pc <sup>2</sup> | 1067.5          |                                  |                                                                               |                                            |     |                                                             |  |  |
| NO | Pt <sup>2</sup> | Pw              | Pw <sup>2</sup> | Pc <sup>2</sup> -Pw <sup>2</sup> | (1)                                                                           | $\frac{Pc^2}{Pc^2-Pw^2} = \frac{1.0932}{}$ | (2) | $\left[ \frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{1.0728}{}$ |  |  |
| 1. | 399.7           | 632.9           | 400.6           | 666.9                            | ROF = Q $\left[ \frac{Pc^2}{Pc^2-Pw^2} \right]^n = \frac{501 \text{ Mcfd}}{}$ |                                            |     |                                                             |  |  |
| 2. | 198.2           | 446.6           | 199.5           | 868.0                            |                                                                               |                                            |     |                                                             |  |  |
| 3. | 143.8           | 381.4           | 145.5           | 922.0                            |                                                                               |                                            |     |                                                             |  |  |
| 4. | 91.9            | 306.3           | 93.8            | 973.7                            |                                                                               |                                            |     |                                                             |  |  |
| 5. | 0.0             | 0.0             | 0.0             | 0.0                              |                                                                               |                                            |     |                                                             |  |  |

Absolute Open Flow      501 Mcfd @ 15.025      Angle of Slope, 0      38      Slope, n .789

Remarks:

|              |                               |                                    |             |
|--------------|-------------------------------|------------------------------------|-------------|
| Approved By: | Conducted By:<br>David Weaver | Calculated By:<br>Andrea Carpenter | Checked By: |
|--------------|-------------------------------|------------------------------------|-------------|