

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

Form C-1  
Revised

DEC 15 1980

|                                                                                                                           |  |                                  |  |                                         |  |                                       |  |
|---------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--|-----------------------------------------|--|---------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                  |  | Test Date<br>10-15-80                   |  | O. C. O.                              |  |
| Company<br>Yates Petroleum Corporation                                                                                    |  |                                  |  | Connection<br>Transwestern Pipeline Co. |  | ARTESIA OFFICE                        |  |
| Pool<br>Eagle Creek Permo Penn                                                                                            |  |                                  |  | Formation<br>Cisco                      |  | Unit<br>NM 15664                      |  |
| Completion Date<br>5-7-80                                                                                                 |  | Total Depth<br>8440 KB           |  | Plug Back To<br>6508 KB                 |  | Elevation<br>3646 GL                  |  |
| Casing Size<br>4 1/2                                                                                                      |  | Wt.<br>10.5#                     |  | d<br>4012                               |  | Set At<br>8197 KB                     |  |
| Perforations:<br>From 6306                                                                                                |  | To 6495                          |  | Well No.<br>2                           |  | Unit Sec. Twp. Rge.<br>L 31 17S 25E   |  |
| Thg. Size<br>2 3/8                                                                                                        |  | Wt.<br>4.7#                      |  | d<br>1995                               |  | Set At<br>6288 KB                     |  |
| Type Well - Single - Bradenhead - G.G. or G.C. Multiple<br>Single                                                         |  |                                  |  | Packer Set At<br>6288 KB                |  | County<br>Eddy                        |  |
| Producing Thru<br>Tubing                                                                                                  |  | Reservoir Temp. °F<br>118 @ 6515 |  | Mean Annual Temp. °F<br>62              |  | Baro. Press. - P <sub>g</sub><br>13.2 |  |
| L<br>6393                                                                                                                 |  | H<br>6393                        |  | G <sub>g</sub><br>0.676                 |  | % CO <sub>2</sub><br>0.97             |  |
|                                                                                                                           |  |                                  |  | % N <sub>2</sub><br>0.95                |  | % H <sub>2</sub> S<br>N.7             |  |
|                                                                                                                           |  |                                  |  | Prover<br>-----                         |  | Meter Run<br>2"                       |  |
|                                                                                                                           |  |                                  |  |                                         |  | Taps<br>Flanged                       |  |

| FLOW DATA |                  |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow<br>Weeks |
|-----------|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|---------------------------|
| 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. |                           |
| SI        |                  |   |              |                 |                      |             | 1803            | 64          |                 |                           |
| 1.        | 2.067 x 0.750    |   |              | 340             | 6                    | 56          | 1586            | 67          |                 |                           |
| 2.        | 2.067 x 0.750    |   |              | 340             | 12                   | 56          | 1386            | 69          |                 |                           |
| 3.        | 2.067 x 0.750    |   |              | 340             | 22                   | 56          | 1142            | 70          |                 |                           |
| 4.        | 2.067 x 0.750    |   |              | 340             | 41                   | 56          | 379             | 71          |                 |                           |
| 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 F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mc/d |
| 1                         | 2.709                 | 46.03            | 353.2                   | 1.004                 | 1.216                         | 1.034                                   | 157                  |
| 2                         | 2.709                 | 65.10            | 353.2                   | 1.004                 | 1.216                         | 1.034                                   | 223                  |
| 3                         | 2.709                 | 88.15            | 353.2                   | 1.004                 | 1.216                         | 1.034                                   | 301                  |
| 4                         | 2.709                 | 120.34           | 353.2                   | 1.004                 | 1.216                         | 1.034                                   | 412                  |
| 5                         |                       |                  |                         |                       |                               |                                         |                      |

|     |                |          |                |       |                                                  |
|-----|----------------|----------|----------------|-------|--------------------------------------------------|
| NO. | R <sub>1</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.      |
| 1   | 0.526          | 516      | 1.358          | 0.935 | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg. |
| 2   | 0.526          | 516      | 1.358          | 0.935 | Specific Gravity Separator Gas 0.676             |
| 3   | 0.526          | 516      | 1.358          | 0.935 | Specific Gravity Flowing Fluid XXXXX .676        |
| 4   | 0.526          | 516      | 1.358          | 0.935 | Critical Pressure 672 P.S.I.A. 788 P.S.I.A.      |
| 5   |                |          |                |       | Critical Temperature 380 °R 422.5 °R             |

|     |                             |                |                             |                                                           |                                           |                                                              |
|-----|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------|
| NO. | P <sub>1</sub> <sup>2</sup> | P <sub>w</sub> | R <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - R <sub>w</sub> <sup>2</sup> | (1) $\frac{P_c^2}{P_c^2 - R_w^2} = 1.043$ | (2) $\left[ \frac{R_c^2}{R_c^2 - R_w^2} \right]^n = 1.03125$ |
| 1   |                             |                | 3984                        | 1251                                                      |                                           |                                                              |
| 2   |                             |                | 2983                        | 2252                                                      |                                           |                                                              |
| 3   |                             |                | 1978                        | 3257                                                      |                                           |                                                              |
| 4   |                             |                | 216                         | 5019                                                      |                                           |                                                              |
| 5   |                             |                |                             |                                                           |                                           |                                                              |

|                                      |  |                          |  |                 |  |
|--------------------------------------|--|--------------------------|--|-----------------|--|
| Absolute Open Flow 425 Mc/d @ 15.025 |  | Angle of Slope 53.8 deg. |  | Slope, n 0.7309 |  |
|--------------------------------------|--|--------------------------|--|-----------------|--|

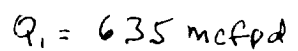
Remarks: Static pressures by Bennett Wireline. Flowing pressures by DWT.  
Calculations worksheet Cl22D attached.

|                         |                             |                                 |             |
|-------------------------|-----------------------------|---------------------------------|-------------|
| Approved By Commission: | Conducted By:<br>Don Weaver | Calculated By:<br>Eddie Mahfood | Checked By: |
|-------------------------|-----------------------------|---------------------------------|-------------|



YPC - Federal EF Com. No 2

L-31-17s-25E, Eagle Creek - Permo Penn, Eddy Co, N.M.


$$Q_2 = 118 \text{ mefp.l.}$$

$$\log Q_1 = 2.8028$$

$$\log Q_2 = 2.0719$$

$$n = 0.7309$$