

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

RECEIVED BY

Form C-122

JAN 28 1985

O. C. D.

ARTESIA, OFFICE

|                                                 |               |                               |                   |                                          |                                             |                                 |                         |                     |                      |
|-------------------------------------------------|---------------|-------------------------------|-------------------|------------------------------------------|---------------------------------------------|---------------------------------|-------------------------|---------------------|----------------------|
| Type Test<br>[x] Initial [ ] Annual [ ] Special |               |                               |                   |                                          | Test Date<br>8/29/84                        |                                 |                         |                     |                      |
| Company<br>Yates Petroleum Corporation          |               |                               |                   |                                          | Connection<br>Transwestern Pipeline Company |                                 |                         |                     |                      |
| Pool<br>Pecos Slope                             |               |                               |                   |                                          | Formation<br>Abo                            |                                 |                         |                     |                      |
| Completion Date<br>3/22/83                      |               |                               |                   |                                          | Total Depth<br>4325.0'                      |                                 | Plug Back TD<br>4223.0' |                     | Elevation<br>3627.0' |
| Farm or Lease Name<br>Binnion "TT" Fed          |               |                               |                   |                                          |                                             |                                 |                         |                     |                      |
| Csg Size<br>4.500"                              | Wt.<br>9.500# | d<br>4.090"                   | Set At<br>4311.0' | Perforations:<br>From 3678.0' To 3938.0' |                                             | Well No.<br>6                   |                         |                     |                      |
| Tbg Size<br>2.375"                              | Wt.<br>4.700# | d<br>1.995"                   | Set At<br>3597.0' | Perforations:<br>From 0.0' To 0.0'       |                                             | Unit Sec Twp Rge<br>I 24 7S 25E |                         |                     |                      |
| Type Well<br>Single                             |               |                               |                   |                                          | Packer Set At<br>3597.0'                    |                                 | County<br>Chaves        |                     |                      |
| Producing Thru<br>Tubing                        |               | Resv. Temp. °F<br>101 @ 3803' |                   | Mean Temp. °F<br>62.0                    |                                             | Baro. Press. - Pa<br>13.2 psia. |                         | State<br>New Mexico |                      |
| L<br>3597.0'                                    | H<br>3597.0'  | Gg<br>.641                    | %CO2<br>.03       | %N2<br>5.76                              | %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<br>Size | Orifice<br>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         | 70          | 995            | 0           | 0              | 0                      | 0 hrs.      |
| 1.        | 2.067          | X 1.000           | 330            | 12.1        | 70          | 652            | 62          | 0              | 0                      | 24 hrs.     |
| 2.        | 2.067          | X 1.000           | 300            | 17.1        | 70          | 570            | 62          | 0              | 0                      | 24 hrs.     |
| 3.        | 2.067          | X 1.000           | 220            | 30.8        | 70          | 519            | 62          | 0              | 0                      | 24 hrs.     |
| 4.        | 2.067          | X 1.000           | 195            | 36.0        | 70          | 400            | 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.                        | 4.947                    | 64.44 | 343.20         | .991                       | 1.249                   | 1.026                           | 405                     |
| 2.                        | 4.947                    | 73.18 | 313.20         | .991                       | 1.249                   | 1.024                           | 459                     |
| 3.                        | 4.947                    | 84.75 | 233.20         | .991                       | 1.249                   | 1.017                           | 528                     |
| 4.                        | 4.947                    | 86.57 | 208.20         | .991                       | 1.249                   | 1.015                           | 538                     |
| 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. |
| 1. | .52  | 530         | 1.50 | .950  | A.P.I. Gravity of Liquid Hydrocarbons | 0.000   | Deg.     |
| 2. | .47  | 530         | 1.50 | .954  | Specific Gravity Separator Gas        | .641    | xxxxxxx  |
| 3. | .35  | 530         | 1.50 | .967  | Specific Gravity Flowing Fluid        | .641    | xxxxxxx  |
| 4. | .31  | 530         | 1.50 | .971  | Critical Pressure                     | 661.1   | PSIA     |
| 5. | 0.00 | 0           | 0.00 | 0.000 | Critical Temperature                  | 353.4°R | 353.4°R  |

|                      |       |       |       |             |
|----------------------|-------|-------|-------|-------------|
| Pc 1008.2 Pc² 1016.5 |       |       |       |             |
| NO                   | Pt²   | Pw    | Pw²   | Pc²-Pw² (1) |
| 1.                   | 442.5 | 666.7 | 444.5 | 572.0       |
| 2.                   | 340.1 | 585.4 | 342.7 | 673.7       |
| 3.                   | 283.2 | 535.5 | 286.7 | 729.7       |
| 4.                   | 170.7 | 417.7 | 174.4 | 842.0       |
| 5.                   | 0.0   | 0.0   | 0.0   | 0.0         |

$$\frac{Pc^2}{Pc^2 - Pw^2} = 1.2092 \quad (2) \left[ \frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 1.1497$$

$$ROF = Q \left[ \frac{Pc^2}{Pc^2 - Pw^2} \right]^n = 618 \text{ Mcfd}$$

|                    |  |                   |                   |    |          |      |
|--------------------|--|-------------------|-------------------|----|----------|------|
| Absolute Open Flow |  | 618 Mcfd @ 15.025 | Angle of Slope, θ | 36 | Slope, n | .734 |
| Remarks:           |  |                   |                   |    |          |      |

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

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

Adopted 9-1-65

DATE 12/28/84

COMPANY Yates Petroleum Corporation LEASE Binnion "TT" Fed WELL NO. 6

LOCATION: Unit I Section 24 Township 7S Range 25E

L 3597.0 H 3597.0 L/H 1.000 G .641 %CO<sub>2</sub> .03 %N<sub>2</sub> 5.76 %H<sub>2</sub>S 0.00

d 1.995 Fr .017777 GH 2305.7 Pcr 661.1 Tcr 353.4

| LINE                                               | 1st Rate | 2nd Rate | 3rd Rate | 4th Rate | 5th Rate |
|----------------------------------------------------|----------|----------|----------|----------|----------|
| 1 Qm                                               | .405     | .459     | .528     | .538     | 0.000    |
| 2 Tw(W.H.°R)                                       | 522.0    | 522.0    | 522.0    | 522.0    | 0.0      |
| 3 Ts(B.H.°R)                                       | 561.0    | 561.0    | 561.0    | 561.0    | 0.0      |
| 4 T=(Tw+Ts)/2                                      | 541.5    | 541.5    | 541.5    | 541.5    | 0.0      |
| 5 Z(Est.)                                          | .906     | .917     | .924     | .941     | 0.000    |
| 6 TZ                                               | 490.7    | 496.7    | 500.5    | 509.5    | 0.0      |
| 7 GH/TZ                                            | 4.699    | 4.642    | 4.607    | 4.525    | 0.000    |
| 8 e <sup>s</sup> (Table XIV)                       | 1.193    | 1.190    | 1.189    | 1.185    | 0.000    |
| 9 1-e <sup>-s</sup> (Table XIV)                    | .162     | .160     | .159     | .156     | 0.000    |
| 10 Pt                                              | 665.2    | 583.2    | 532.2    | 413.2    | 0.0      |
| 11 Pt <sup>2</sup> /1000                           | 442.5    | 340.1    | 283.2    | 170.7    | 0.0      |
| 12 Fr(Table XV)                                    | .017777  | .017777  | .017777  | .017777  | 0.000000 |
| 13 Fc=FrTZ                                         | 8.723    | 8.829    | 8.899    | 9.059    | 0.000    |
| 14 FcQm                                            | 3.530    | 4.048    | 4.695    | 4.872    | 0.000    |
| 15 L/H(FcQm) <sup>2</sup>                          | 12.462   | 16.390   | 22.043   | 23.740   | 0.000    |
| 16 Fw=L/H(FcQm) <sup>2</sup> (1-e <sup>-s</sup> )  | 2.013    | 2.619    | 3.497    | 3.705    | 0.000    |
| 17 Pw <sup>2</sup> =Pt <sup>2</sup> +Fw            | 444.5    | 342.7    | 286.7    | 174.4    | 0.0      |
| 18 Ps <sup>2</sup> =e <sup>s</sup> Pw <sup>2</sup> | 530.2    | 407.9    | 340.8    | 206.7    | 0.0      |
| 19 Ps                                              | 728.1    | 638.7    | 583.8    | 454.6    | 0.0      |
| 20 P=(Pt+Ps)/2                                     | 696.7    | 610.9    | 558.0    | 433.9    | 0.0      |
| 21 Pr=(P/Pcr)                                      | 1.05     | .92      | .84      | .66      | 0.00     |
| 22 Tr=(T/Tcr)                                      | 1.53     | 1.53     | 1.53     | 1.53     | 0.00     |
| 23 Z(Table XI)                                     | .906     | .917     | .924     | .941     | 0.000    |

|          |                             |
|----------|-----------------------------|
| Company  | Yates Petroleum Corporation |
| Well     | Binnion "TT" Fed No. 6      |
| Location | I, 24-7S-25E                |
| County   | Chaves                      |
| Date     | 12/28/84                    |

