

**NEW MEXICO OIL CONSERVATION COMMISSION**  
**MULTIPOINT A ONE POINT BACK PRESSURE TEST OR GAS WELL**

*file*  
*12*  
*gates*  
 Form C-122  
 Revised 9-1-65

|                                                                                                                           |            |                                  |                           |                                               |                           |                                                       |                 |                                           |  |
|---------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------|---------------------------|-----------------------------------------------|---------------------------|-------------------------------------------------------|-----------------|-------------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |            |                                  |                           |                                               |                           | Test Date<br>8-29-79                                  |                 | <b>RECEIVED</b><br><br><b>OCT 16 1979</b> |  |
| Company<br>Yates Petroleum Corp.                                                                                          |            |                                  |                           | Connection<br>Transwestern Pipeline Company   |                           |                                                       |                 |                                           |  |
| Pool<br>Wilcat Canyon                                                                                                     |            |                                  |                           | Formation<br>Canyon                           |                           |                                                       |                 | Unit<br>O.C.C.<br>ARTESIA, OFFICE         |  |
| Completion Date<br>8-15-79                                                                                                |            | Total Depth<br>9715'             |                           | Plug Back TD<br>9345 KB                       |                           | Elevation<br>3556 KB                                  |                 | Farm or Lease Name<br>Federal "FC"        |  |
| Csq. Size<br>5-1/2"                                                                                                       | Wt.<br>17# | d<br>4.892                       | Set At<br>9658 KB         | Perforations:<br>From 7608 To 7748            |                           | Well No.<br>1                                         |                 |                                           |  |
| Tbg. Size<br>2-3/8"                                                                                                       | Wt.<br>4.7 | d<br>1.995                       | Set At<br>7578 KB         | Perforations:<br>From                      To |                           | Unit    Sec.    Twp.    Rge.<br>O    19    20S    25E |                 |                                           |  |
| Type Well - Single - Bradenhead - G.C. or G.O. Multiple<br>Single                                                         |            |                                  |                           | Packer Set At<br>7578 KB                      |                           | County<br>Eddy Co.                                    |                 |                                           |  |
| Producing Thru<br>Tubing                                                                                                  |            | Reservoir Temp. °F<br>134 @ 7676 |                           | Mean Annual Temp. °F<br>62                    |                           | Baro. Press. - P <sub>a</sub><br>13.2                 |                 | State<br>New Mexico                       |  |
| L<br>7676                                                                                                                 | H<br>7676  | G <sub>g</sub><br>0.642          | % CO <sub>2</sub><br>0.23 | % N <sub>2</sub><br>1.41                      | % H <sub>2</sub> S<br>Nil | Prover<br>---                                         | Meter Run<br>2" | Taps<br>Flange                            |  |

  

| FLOW DATA |                  |   |              |                 |                      |          | TUBING DATA     |          | CASING DATA     |          | Duration of Flow<br>Days |
|-----------|------------------|---|--------------|-----------------|----------------------|----------|-----------------|----------|-----------------|----------|--------------------------|
| 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. | Temp. °F |                          |
| SI        |                  |   |              |                 |                      |          | 2120            | 74       |                 |          |                          |
| 1.        | 2.067            | X | 0.375        | 270             | 3                    | 78       | 1991            | 75       |                 |          | 1 hr                     |
| 2.        | 2.067            | X | 0.375        | 270             | 6                    | 78       | 1905            | 76       |                 |          | 1 hr                     |
| 3.        | 2.067            | X | 0.375        | 270             | 12                   | 78       | 1801            | 77       |                 |          | 1 hr                     |
| 4.        | 2.067            | X | 0.375        | 270             | 22                   | 78       | 1692            | 78       |                 |          | 1 hr                     |
| 5.        |                  |   |              |                 |                      |          |                 |          |                 |          |                          |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | .6689                 | 29.15            | 283.2                   | .9831                            | 1.248                         | 1.0249                                  | 25                   |
| 2                         | .6689                 | 41.22            | 283.2                   | .9831                            | 1.248                         | 1.0249                                  | 35                   |
| 3                         | .6689                 | 58.30            | 283.2                   | .9831                            | 1.248                         | 1.0249                                  | 49                   |
| 4                         | .6689                 | 78.93            | 283.2                   | .9831                            | 1.248                         | 1.0249                                  | 66                   |
| 5                         |                       |                  |                         |                                  |                               |                                         |                      |

  

| NO. | P <sub>t</sub> | Temp. °R | T <sub>f</sub> | Z    | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.             |  |
|-----|----------------|----------|----------------|------|---------------------------------------------------------|--|
| 1.  | 0.42           | 538      | 1.458          | .952 | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.        |  |
| 2.  | 0.42           | 538      | 1.458          | .952 | Specific Gravity Separator Gas _____ 0.642              |  |
| 3.  | 0.42           | 538      | 1.458          | .952 | Specific Gravity Flowing Fluid _____ X X X X X          |  |
| 4.  | 0.42           | 538      | 1.458          | .952 | Critical Pressure _____ 676 P.S.I.A. _____ 715 P.S.I.A. |  |
| 5.  |                |          |                |      | Critical Temperature _____ 369 R _____ 385 R            |  |

  

| $P_c = 2653.2$ $P_c^2 = 7039$ |                             |                |                             |                                                           | $(1) \frac{P_c^2}{P_c^2 - R_w^2} = 2.7167$ | $(2) \left[ \frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 2.7167$ |
|-------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------|
| NO.                           | P <sub>t</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                             |                             |                | 6209                        | 830                                                       |                                            |                                                             |
| 2                             |                             |                | 5672                        | 1367                                                      |                                            |                                                             |
| 3                             |                             |                | 5062                        | 1977                                                      |                                            |                                                             |
| 4                             |                             |                | 4448                        | 2591                                                      |                                            |                                                             |
| 5                             |                             |                |                             |                                                           |                                            |                                                             |

  

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 179$$

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|                                                  |  |                                 |                            |
|--------------------------------------------------|--|---------------------------------|----------------------------|
| Absolute Open Flow _____ 179 _____ Mcfd @ 15.025 |  | Angle of Slope @ _____ 45 _____ | Slope, n _____ 1.000 _____ |
|--------------------------------------------------|--|---------------------------------|----------------------------|

  

Remarks: Static Pressures by Bennett Wireline, flowing pressures by D.W.T. calculations worksheet c-122D attached.

  

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