

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

Form C-122  
Revised 9-1-65

RECEIVED

|                                                                                                                           |                  |                                    |                             |                                       |                                     |
|---------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------|-----------------------------|---------------------------------------|-------------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                  | Test Date<br>9-28-73               |                             | OCT 3 1973                            |                                     |
| Company<br>MOBIL OIL CORP.                                                                                                |                  |                                    | Connection                  |                                       |                                     |
| Pool<br>SOUTH CARLS RD                                                                                                    |                  |                                    | Formation<br>MORROW         |                                       | Unit<br>O. C. C.<br>388             |
| Completion Date<br>8-16-73                                                                                                |                  | Total Depth<br>12,090              | Plug Back TD<br>11,958      | Elevation<br>3241 G.L.                | Farm or Lease Name<br>FEDERAL L.L.  |
| Csg. Size<br>7"                                                                                                           | Wt.<br>26 #/ft.  | d<br>6.276                         | Set At<br>12,088'           | Perforations:<br>From 11468 To 11,728 | Well No.<br>#1                      |
| Tub. Size<br>2 3/8"                                                                                                       | Wt.<br>4.7 #/ft. | d<br>1.995                         | Set At<br>11,387'           | Perforations:<br>From — To —          | Unit Sec. Twp. Rye.<br>N 13 23S 26E |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>DUAL                                                           |                  |                                    |                             | Packer Set At<br>11,375'              | County<br>EDDY                      |
| Producing Thru<br>TUBING                                                                                                  |                  | Reservoir Temp. °F<br>150 @ 12,090 | Mean Annual Temp. °F<br>60° | Baro. Press. - P <sub>a</sub><br>13.2 | State<br>NEW MEXICO                 |
| L<br>11,387                                                                                                               | H<br>11,468      | G <sub>g</sub><br>0.578            | % CO <sub>2</sub><br>1.01   | % N <sub>2</sub><br>0.62              | % H <sub>2</sub> S<br>—             |
| Prover<br>—                                                                                                               |                  | Meter Run<br>4"                    |                             | Taps<br>FLANGE                        |                                     |

  

| FLOW DATA |                  |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |          |
|-----------|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|----------|
| 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        |                  |   |              |                 |                      |             | 3564            | 70          | 0               | —                | 4816 SL  |
| 1.        | 4 X 1.5          |   |              | 690             | 20                   | 69          | 3202            | 70          | 0               | —                | 1 HR.    |
| 2.        | 4 X 1.5          |   |              | 690             | 35                   | 68          | 2960            | 70          | 0               | —                | 1 HR.    |
| 3.        | 4 X 1.5          |   |              | 695             | 54                   | 68          | 2610            | 70          | 0               | —                | 1 HR.    |
| 4.        | 4 X 1.5          |   |              | 705             | 70                   | 68          | 2107            | 70          | 0               | —                | 1 HR.    |
| 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, Mcfd |
| 1                         | 10.84                 | 118.59           | 703.2                   | .9915                 | 1.315                         | 1.051                                   | 1762                 |
| 2                         | 10.84                 | 156.88           | 703.2                   | .9924                 | 1.315                         | 1.051                                   | 2332                 |
| 3                         | 10.84                 | 195.55           | 708.2                   | .9924                 | 1.315                         | 1.052                                   | 2910                 |
| 4                         | 10.84                 | 224.24           | 718.2                   | .9924                 | 1.315                         | 1.052                                   | 3337                 |
| 5.                        |                       |                  |                         |                       |                               |                                         |                      |

  

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio ——— Mcf/bbl.           |
|-----|----------------|----------|----------------|------|-----------------------------------------------------|
| 1.  | 1.04           | 529      | 1.53           | .905 | A.P.I. Gravity of Liquid Hydrocarbons ——— Deg.      |
| 2.  | 1.04           | 528      | 1.53           | .905 | Specific Gravity Separator Gas .578 X X X X X X X X |
| 3.  | 1.05           | 528      | 1.53           | .904 | Specific Gravity Flowing Fluid X X X X X            |
| 4.  | 1.06           | 528      | 1.53           | .903 | Critical Pressure 675 P.S.I.A. 675 P.S.I.A.         |
| 5.  |                |          |                |      | Critical Temperature 346 R 346 R                    |

  

| P <sub>c</sub> 3577 P <sub>c</sub> <sup>2</sup> 12,795 |                             |                |                             | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.2626$                | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.599$ |  |
|--------------------------------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|------------------------------------------------------------|--|
| NO.                                                    | F <sub>t</sub> <sup>2</sup> | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> |                                                            |  |
| 1                                                      | 10336                       | 3230           | 10434                       | 2361                                                      |                                                            |  |
| 2                                                      | 8839                        | 3002           | 9010                        | 3785                                                      |                                                            |  |
| 3                                                      | 6880                        | 2672           | 7140                        | 5655                                                      |                                                            |  |
| 4                                                      | 4494                        | 2120           | 4827                        | 7968                                                      |                                                            |  |
| 5                                                      |                             |                |                             |                                                           |                                                            |  |

  

ACF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4653$

perfor 10-5-73

Absolute Open Flow 4,653 Mcfd @ 15.025

Angle of Slope 60° 7'

Slope, n 1575

  

|                         |                                                                |                            |                             |
|-------------------------|----------------------------------------------------------------|----------------------------|-----------------------------|
| Remarks:                |                                                                |                            |                             |
| Approved By Commission: | Conducted By: T.D. NEWTON<br>A.E. ALAMEDDINE<br>W.H. BRADFIELD | Calculated By: T.D. NEWTON | Checked By: A.E. ALAMEDDINE |