

## OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088  
SANTA FE, NEW MEXICO 87501Form C-122  
Revised 10-1-78

## MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL RECEIVED

|                                                                                                                           |                             |                               |                             |                                                           |                                                               |                                         |                      |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-----------------------------|-----------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------|----------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                             |                               |                             | Test Date<br>10-31-88                                     |                                                               | DEC 29 '88                              |                      |
| Company<br>MEWBOURNE OIL CO. ✓                                                                                            |                             |                               |                             | Connection<br>Shut-in Waiting on Pipeline Conn.           |                                                               | O. C. D.                                |                      |
| Pool<br>Hackberry Hills (Canyon)                                                                                          |                             |                               |                             | Formation<br>CANYON                                       |                                                               | Unit<br>ARTESIA, OFFICE                 |                      |
| Completion Date<br>10/20/88                                                                                               |                             | Total Depth<br>11,500'        |                             | Plug Back TD<br>11,478'                                   |                                                               | Elevation                               |                      |
| Farm or Lease Name<br>FEDERAL "N"                                                                                         |                             | Well No.<br>#1                |                             | Unit<br>M                                                 |                                                               | Sec. 6                                  |                      |
| Twp. 22S                                                                                                                  |                             | Rye. 26E                      |                             | County<br>Eddy                                            |                                                               | State<br>New Mexico                     |                      |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                         |                             |                               |                             | Packer Set At<br>9709'                                    |                                                               | County                                  |                      |
| Producing Thru<br>Tubing                                                                                                  |                             | Reservoir Temp. °F<br>60      |                             | Baro. Press. - P <sub>a</sub><br>13.2                     |                                                               | State<br>New Mexico                     |                      |
| L<br>9709                                                                                                                 |                             | H<br>9709                     |                             | G <sub>g</sub><br>0.695                                   |                                                               | % CO <sub>2</sub><br>0.37               |                      |
| % N <sub>2</sub><br>1.19                                                                                                  |                             | % H <sub>2</sub> S<br>0       |                             | Prover                                                    |                                                               | Meter Run<br>3"                         |                      |
| Taps<br>Flg.                                                                                                              |                             |                               |                             |                                                           |                                                               |                                         |                      |
| FLOW DATA                                                                                                                 |                             |                               |                             | TUBING DATA                                               |                                                               | CASING DATA                             |                      |
| NO.                                                                                                                       | Prover Line Size            | X                             | Orifice Size                | Press. p.s.i.g.                                           | Diff. h <sub>w</sub>                                          | Temp. °F                                | Press. p.s.i.g.      |
| SI                                                                                                                        |                             |                               |                             |                                                           |                                                               |                                         | Temp. °F             |
| 1.                                                                                                                        | 3. x 1.50                   |                               |                             | 461                                                       | 21                                                            | 67                                      | 750                  |
| 2.                                                                                                                        | 3. x 1.50                   |                               |                             | 461                                                       | 32                                                            | 65                                      | 670                  |
| 3.                                                                                                                        | 3. x 1.50                   |                               |                             | 470                                                       | 44                                                            | 67                                      | 600                  |
| 4.                                                                                                                        | 3. x 1.50                   |                               |                             | 470                                                       | 48                                                            | 69                                      | 570                  |
| 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.                                                                                                                        | 11.13                       | 98.4                          | 474.2                       | 0.9933                                                    | 1.20                                                          | 0.900                                   | 1,175                |
| 2.                                                                                                                        | 11.13                       | 121.5                         | 474.2                       | 0.9952                                                    | 1.20                                                          | 0.900                                   | 1,453                |
| 3.                                                                                                                        | 11.13                       | 143.8                         | 483.2                       | 0.9933                                                    | 1.20                                                          | 0.900                                   | 1,717                |
| 4.                                                                                                                        | 11.13                       | 150.2                         | 483.2                       | 0.9915                                                    | 1.20                                                          | 0.900                                   | 1,790                |
| 5.                                                                                                                        |                             |                               |                             |                                                           |                                                               |                                         |                      |
| NO.                                                                                                                       | R <sub>t</sub>              | Temp. °R                      | T <sub>t</sub>              | Z                                                         | Gas Liquid Hydrocarbon Ratio 305 Mcf/bbl.                     |                                         |                      |
|                                                                                                                           |                             |                               |                             |                                                           | A.P.I. Gravity of Liquid Hydrocarbons 67 Deg.                 |                                         |                      |
| 1.                                                                                                                        | 0.7098                      | 527                           | 1.37                        | 0.870                                                     | Specific Gravity Separator Gas 0.695                          |                                         | XXXXXXX              |
| 2.                                                                                                                        | 0.7098                      | 525                           | 1.36                        | 0.882                                                     | Specific Gravity Flowing Fluid XXXXX                          |                                         | 0.704                |
| 3.                                                                                                                        | 0.7233                      | 527                           | 1.37                        | 0.891                                                     | Critical Pressure 668 P.S.I.A.                                |                                         | 668 P.S.I.A.         |
| 4.                                                                                                                        | 0.7233                      | 529                           | 1.37                        | 0.895                                                     | Critical Temperature 385 R                                    |                                         | 385 R                |
| 5.                                                                                                                        |                             |                               |                             |                                                           |                                                               |                                         |                      |
| P <sub>c</sub> 953.2 P <sub>c</sub> <sup>2</sup> 980.6                                                                    |                             |                               |                             |                                                           | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.105$                     |                                         |                      |
| NO.                                                                                                                       | P <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> | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.105$    |                                         |                      |
| 1.                                                                                                                        | 613.4                       |                               | 659.2                       | 249.4                                                     | Post ID-2                                                     |                                         |                      |
| 2.                                                                                                                        | 466.8                       |                               | 538.2                       | 370.4                                                     | 2-3-89                                                        |                                         |                      |
| 3.                                                                                                                        | 376.0                       |                               | 477.0                       | 431.6                                                     | comp & BK                                                     |                                         |                      |
| 4.                                                                                                                        | 340.1                       |                               | 450.7                       | 457.9                                                     | AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3615$ |                                         |                      |
| 5.                                                                                                                        |                             |                               |                             |                                                           |                                                               |                                         |                      |
| Absolute Open Flow 3,615 Mcfd @ 15.025                                                                                    |                             |                               |                             |                                                           | Angle of Slope @ 45°                                          |                                         | Slope, n 1.0         |
| Remarks:                                                                                                                  |                             |                               |                             |                                                           |                                                               |                                         |                      |
| Approved By Division                                                                                                      |                             | Conducted By:<br>W. H. Cravey |                             | Calculated By:                                            |                                                               | Checked By:<br>Kelly Ryan               |                      |