

OIL CONSERVATION CO. DIVISION  
MULTIPOINT AND POINT BACK PRESSURE TEST FORM NO. 1 WELL

COPY TO SP  
FILE  
10-1-12  
Rev. 10-1-65  
1222  
RECEIVED

|                                                                                                                           |               |                                   |                           |                                      |                            |                                       |                      |                                 |
|---------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------|---------------------------|--------------------------------------|----------------------------|---------------------------------------|----------------------|---------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |               |                                   |                           |                                      | Test Date<br>10-25-76      |                                       | NOV 12 1976          |                                 |
| Company<br>MESA PETROLEUM CO. ✓                                                                                           |               |                                   |                           |                                      | Connection<br>AIR          |                                       | D.D.D.               |                                 |
| Pool<br>10-22-76                                                                                                          |               |                                   |                           |                                      | Formation<br>ATOKA         |                                       | Unit ARTEZIA, OFFICE |                                 |
| Completion Date<br>10-22-76                                                                                               |               | Total Depth<br>13280              |                           | Plug Back TD<br>12930                |                            | Elevation<br>2977 Gr.                 |                      | Farm or Lease Name<br>NASH UNIT |
| Well Size<br>5.50"                                                                                                        | Wt.<br>20.00# | d<br>4.778"                       | Set At<br>13280           | Perforations:<br>From 12314 To 12576 |                            | Well No.<br>3                         |                      |                                 |
| Well Size<br>2.875 EUE                                                                                                    | Wt.<br>6.50#  | d<br>2.441"                       | Set At<br>12273           | Perforations:<br>From To             |                            | Unit Sec. Twp. Rge.<br>EK 12 23S 20E  |                      |                                 |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single Completion                                              |               |                                   |                           |                                      | Packer Set At<br>12273     |                                       | County<br>EDDY       |                                 |
| Producing Thru<br>Tubing                                                                                                  |               | Reservoir Temp. °F<br>180 ° 12445 |                           | Mean Annual Temp. °F<br>60           |                            | Baro. Press. - P <sub>a</sub><br>13.2 |                      | State<br>NEW MEXICO             |
| L<br>12445                                                                                                                | H<br>12445    | G <sub>g</sub><br>0.600           | % CO <sub>2</sub><br>0.00 | % N <sub>2</sub><br>0.00             | % H <sub>2</sub> S<br>0.00 | Prover                                | Meter Run<br>X       | 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         | of Flow   |
| 1.        | 4.00             |   | 2.50         | 895             | 33.00"               | 88          | 2300            | 69          |                 |                  | 1.50 Hrs. |
| 2.        | 4.00             |   | 2.50         | 860             | 28.00"               | 78          | 2820            | 75          |                 |                  | 1.00 Hr.  |
| 3.        | 4.00             |   | 2.50         | 845             | 23.00"               | 81          | 3580            | 72          |                 |                  | 1.00 Hr.  |
| 4.        | 4.00             |   | 2.50         | 835             | 17.00"               | 81          | 4500            | 72          |                 |                  | 1.00 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.                        | 32.64                 | 173.120          | 908.20                  | 0.9741                | 1.2910                        | 1.0660                                  | 7575                 |
| 2.                        | 32.64                 | 156.364          | 873.20                  | 0.9831                | 1.2910                        | 1.0680                                  | 6918                 |
| 3.                        | 32.64                 | 140.494          | 858.20                  | 0.9804                | 1.2910                        | 1.0650                                  | 6181                 |
| 4.                        | 32.64                 | 120.081          | 848.20                  | 0.9804                | 1.2910                        | 1.0650                                  | 5283                 |
| 5.                        |                       |                  |                         |                       |                               |                                         |                      |

  

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio | A.P.I. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature |
|-----|----------------|----------|----------------|-------|------------------------------|---------------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|
| 1.  | 1.35           | 548      | 1.53           | 0.872 | 109738                       | 0.78                                  | 0.600                          | XXXXXX                         | 671               | 358                  |
| 2.  | 1.30           | 538      | 1.50           | 0.876 |                              |                                       |                                | 0.721                          | P.S.I.A. 668      | R 398                |
| 3.  | 1.28           | 541      | 1.51           | 0.878 |                              |                                       |                                |                                |                   |                      |
| 4.  | 1.26           | 541      | 1.51           | 0.879 |                              |                                       |                                |                                |                   |                      |
| 5.  |                |          |                |       |                              |                                       |                                |                                |                   |                      |

  

| NO. | P <sub>r</sub> | P <sub>w</sub> | P <sub>r</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | (1) $\frac{P_r^2}{P_r^2 - P_w^2} = 1.17539$ | (2) $\left[ \frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 1.11525$ |
|-----|----------------|----------------|-----------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------|
| 1.  | 6363.2         | 2458.2         | 34448                                                     |                                             |                                                              |
| 2.  | 40490          | 2945.3         | 31816                                                     |                                             |                                                              |
| 3.  |                | 3673.7         | 26994                                                     |                                             |                                                              |
| 4.  |                | 4568.4         | 19620                                                     |                                             |                                                              |
| 5.  |                |                |                                                           |                                             |                                                              |

  

|                                       |  |  |  |                   |  |              |  |
|---------------------------------------|--|--|--|-------------------|--|--------------|--|
| Absolute Open Flow 8448 Mcfd @ 15.025 |  |  |  | Angle of Slope 56 |  | Slope, n 675 |  |
|---------------------------------------|--|--|--|-------------------|--|--------------|--|

  

Remarks: THIS TEST WAS RUN IN REVERSE ORDER BECAUSE OF EXCESSIVE  
FACE PRESSURE.

  

|             |              |               |            |
|-------------|--------------|---------------|------------|
| Surveyed By | Conducted By | Calculated By | Checked By |
|-------------|--------------|---------------|------------|