

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

Form C-122  
Revised 9-1-65

*\* Corrected report*

**RECEIVED**

|                                                                                                                           |  |                                 |  |                             |  |                                       |  |
|---------------------------------------------------------------------------------------------------------------------------|--|---------------------------------|--|-----------------------------|--|---------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                 |  | Test Date<br>3-29-78        |  | SEP - 5 1978                          |  |
| Company<br>Beard Oil Co.                                                                                                  |  |                                 |  | Connection<br>Air           |  | O. C. C.                              |  |
| Pool<br>Wildcat                                                                                                           |  |                                 |  | Formation<br>Atoka          |  | Unit<br>K                             |  |
| Completion Date<br>3-14-78                                                                                                |  | Total Depth<br>7200             |  | Plug Back TD<br>7112        |  | Elevation<br>3808 GL                  |  |
| Csg. Size<br>4 1/2                                                                                                        |  | Wt.<br>10.5                     |  | Set At<br>7160              |  | Perforations: 7032 To 7044'           |  |
| Thg. Size<br>2 3/8                                                                                                        |  | Wt.<br>J55                      |  | Set At<br>6975              |  | Perforations: From 7022 32 To 7094 44 |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                         |  |                                 |  | Packer Set At<br>6975       |  | County<br>Eddy                        |  |
| Producing Thru<br>Tubing                                                                                                  |  | Reservoir Temp. °F<br>144° 6975 |  | Mean Annual Temp. °F<br>60° |  | Baro. Press. - P <sub>a</sub><br>13.2 |  |
| L<br>6975                                                                                                                 |  | H<br>6975                       |  | G <sub>g</sub><br>.606      |  | % CO <sub>2</sub><br>.69              |  |
|                                                                                                                           |  |                                 |  | % N <sub>2</sub><br>1.77    |  | % H <sub>2</sub> S                    |  |
|                                                                                                                           |  |                                 |  | Prover                      |  | Meter Run<br>3"                       |  |
|                                                                                                                           |  |                                 |  |                             |  | 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    |  |             |  |                  |
| 1.        | 3                | X | 1.000        | 355             | 6.5                  | 75       | 1590            |          |                 |             |  | 72 hr       |  |                  |
| 2.        | 3                | X | 1.000        | 365             | 14.0                 | 80       | 1500            |          |                 |             |  | 1 hr        |  |                  |
| 3.        | 3                | X | 1.000        | 375             | 26.0                 | 81       | 1430            |          |                 |             |  | 1 hr        |  |                  |
| 4.        | 3                | X | 1.000        | 380             | 50.0                 | 79       | 1320            |          |                 |             |  | 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.                        | 4.789                 | 48.92            | 368.2                   | .9859                 | 1.285                         | 1.031                                   | 306                  |
| 2.                        | 4.789                 | 72.77            | 378.2                   | .9813                 | 1.285                         | 1.030                                   | 453                  |
| 3.                        | 4.789                 | 100.46           | 388.2                   | .9804                 | 1.285                         | 1.032                                   | 626                  |
| 4.                        | 4.789                 | 140.21           | 393.2                   | .9822                 | 1.285                         | 1.033                                   | 875                  |
| 5.                        |                       |                  |                         |                       |                               |                                         |                      |

  

| NO. | P <sub>f</sub> | Temp. °R | T <sub>f</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.  | .55            | 535      | 1.48           | .941 | Dry                          |                                       | .606                           | X X X X X X X X                | 671               | 362                  |
| 2.  | .56            | 540      | 1.49           | .942 |                              |                                       |                                |                                |                   |                      |
| 3.  | .58            | 541      | 1.49           | .939 |                              |                                       |                                |                                |                   |                      |
| 4.  | .59            | 539      | 1.49           | .938 |                              |                                       |                                |                                |                   |                      |
| 5.  |                |          |                |      |                              |                                       |                                |                                |                   |                      |

  

| NO. | P <sub>i</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.  | 1513.9                      | 2291.8         | 278.5                       |                                                           |
| 2.  | 1444.7                      | 2087.2         | 483.1                       |                                                           |
| 3.  | 1336.3                      | 1785.8         | 784.5                       |                                                           |
| 4.  | 1140.6                      | 1301.0         | 1269.3                      |                                                           |
| 5.  |                             |                |                             |                                                           |

  

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 2.025$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.424$

(2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.627$

  

|                    |       |               |                  |       |          |      |
|--------------------|-------|---------------|------------------|-------|----------|------|
| Absolute Open Flow | 1,424 | Mcfd @ 15.025 | Angle of Slope @ | 55.5° | Slope, n | .690 |
| Remarks:           |       |               |                  |       |          |      |

  

|                         |                              |                               |             |
|-------------------------|------------------------------|-------------------------------|-------------|
| Approved By Commission: | Conducted By:<br>Larry Davis | Calculated By:<br>Larry Davis | Checked By: |
|-------------------------|------------------------------|-------------------------------|-------------|