

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

Form C-122  
 Revised 9-1-63

|                                                                                                                           |                         |                                 |                       |                                                 |                  |                                                   |                            |
|---------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------|-----------------------|-------------------------------------------------|------------------|---------------------------------------------------|----------------------------|
| Type test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                         |                                 |                       | Test Date<br><b>8/14/98</b>                     |                  | API Number<br><b>30-059-20369</b>                 |                            |
| Company<br><b>Amoco Exploration &amp; Production</b>                                                                      |                         |                                 |                       | Connection<br><b>Bravo Dome CO2 Plant</b>       |                  | RTU Number<br><b>1004</b>                         |                            |
| Pool<br><b>N/A</b>                                                                                                        |                         |                                 |                       | Formation<br><b>Tubb</b>                        |                  | Unit<br><b>BDCDGU</b>                             |                            |
| Completion Date<br><b>6/10/98</b>                                                                                         |                         | Total Depth<br><b>2430</b>      |                       | Plug Back Depth<br><b>2415</b>                  |                  | Elevation<br><b>4830 KB</b>                       |                            |
| Csg. Size<br><b>5.50</b>                                                                                                  | Wt.<br><b>14.0</b>      | Csg. Inside Dia<br><b>5.012</b> | Set At<br><b>2426</b> | Perforations<br>From <b>2231</b> To <b>2368</b> |                  | Well Number<br><b>1934-342-E</b>                  |                            |
| Tbg. Size<br><b>3.50</b>                                                                                                  | Wt.<br><b>FG</b>        | Tbg. Inside Dia<br><b>2.95</b>  | Set At<br><b>2224</b> | Perforations<br>From <b>n/a</b> To <b>n/a</b>   |                  | Unit Sec. Twp. Rge.<br><b>SEC. 34, T-19, R-34</b> |                            |
| Type well -Single-Bradenhead-G.G. or G.O. Multiple<br><b>Single</b>                                                       |                         |                                 |                       | Packer Set At<br><b>2220</b>                    |                  | County<br><b>Union</b>                            |                            |
| Producing Through<br><b>Tubina</b>                                                                                        |                         | Reservoir Temp. F<br><b>95</b>  |                       | Mean Annual Temp. F<br><b>60</b>                |                  | Baro. Press. - PSIA<br><b>12.2</b>                |                            |
| State<br><b>New Mexico</b>                                                                                                |                         |                                 |                       |                                                 |                  |                                                   |                            |
| Flow Channel, L<br><b>2415</b>                                                                                            | Depth, H<br><b>2415</b> | Gg<br><b>1.5192</b>             | %CO2<br><b>100</b>    | %N2<br><b>0</b>                                 | %H2S<br><b>0</b> | Prover<br><b>ORIFICE</b>                          | Meter Run<br><b>4 inch</b> |
|                                                                                                                           |                         |                                 |                       |                                                 |                  | Taps<br><b>FLANGE</b>                             |                            |

  

| FLOW DATA |             |   |                  |                 | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |
|-----------|-------------|---|------------------|-----------------|-------------|-----------------|-------------|-----------------|------------------|
| NO.       | Prover Size | X | Stat. Press psig | Diff. Press. Hw | Temp. °F    | Press. p.s.i.g. | Temp. °F    | Press. p.s.i.g. |                  |
| SI        |             |   |                  |                 |             | 182             |             |                 |                  |
| 1.        |             |   |                  |                 |             | 180             |             |                 | 24 hour          |
| 2.        |             |   |                  |                 |             | 170             |             |                 | 60 MIN           |
| 3.        |             |   |                  |                 |             | 152             |             |                 | 60 MIN           |
| 4.        |             |   |                  |                 |             | 119             |             |                 | 60 MIN           |
| 5.        |             |   |                  |                 |             | 0               |             |                 |                  |

  

| RATE OF FLOW CALCULATIONS |                        |                          |             |                       |                    |                                   |                      |
|---------------------------|------------------------|--------------------------|-------------|-----------------------|--------------------|-----------------------------------|----------------------|
| NO.                       | Coefficient (24 Hours) | $\frac{1}{hw} \cdot P_m$ | Pressure Pm | Flow Temp. Factor, Ft | Gravity Factor, Fg | Super Compressibility Factor, Fpv | Rate of Flow Q, Mcfd |
|                           |                        |                          |             |                       |                    |                                   | Values      Log(10)  |
| SI                        |                        |                          |             |                       |                    |                                   | 0                    |
| 1.                        |                        |                          |             |                       |                    |                                   | 460      2.6628      |
| 2.                        |                        |                          |             |                       |                    |                                   | 1050      3.0212     |
| 3.                        |                        |                          |             |                       |                    |                                   | 1656      3.2191     |
| 4.                        |                        |                          |             |                       |                    |                                   | 2450      3.3892     |
| 5.                        |                        |                          |             |                       |                    |                                   | 4997      AOF        |

  

|     |     |          |     |   |                                        |               |
|-----|-----|----------|-----|---|----------------------------------------|---------------|
| NO. | P r | Temp. °R | T r | Z | Gas Liquid Hydrocarbon Ratio           | N/A Mcf/bbl   |
| 1.  |     |          |     |   | A. P. I. Gravity of Liquid Hydrocarbon | N/A Deg.      |
| 2.  |     |          |     |   | Specific Gravity Separator Gas         | N/A           |
| 3.  |     |          |     |   | Specific Gravity Flowing Fluid         | 1.5192        |
| 4.  |     |          |     |   | Critical Pressure                      | 1072 P.S.I.A. |
| 5.  |     |          |     |   | Critical Temperature                   | 548 R         |

  

|                      |       |                      |        |              |              |
|----------------------|-------|----------------------|--------|--------------|--------------|
| Pc = <b>225.3346</b> |       | Pc^2 = <b>50,776</b> |        |              |              |
| NO.                  | P w^2 | Pw                   | P w^2  | Pc^2 - P w^2 | Pc^2 - P w^2 |
| SI                   |       | 225.3                | 50,776 | 0            | 0            |
| 1.                   |       | 224.2                | 50,283 | 492          | 2,6923       |
| 2.                   |       | 218.5                | 47,755 | 3,021        | 3,4801       |
| 3.                   |       | 209.3                | 43,823 | 6,953        | 3,8422       |
| 4.                   |       | 195.6                | 38,274 | 12,502       | 4,0970       |
| 5.                   |       |                      |        |              |              |

  

|                    |                            |                    |              |
|--------------------|----------------------------|--------------------|--------------|
| (1) 4th test point |                            | (2) 4th test point |              |
| Pc^2               | <b>4.061</b>               | Pc^2               | <b>2.039</b> |
| Pc^2 - Pw^2        |                            | Pc^2 - Pw^2        |              |
| 4th test point     |                            |                    |              |
| Q                  | $\frac{Pc^2 - Pw^2}{Pw^2}$ |                    |              |
|                    | <b>4,997</b>               |                    |              |
| = AOF              |                            |                    |              |

  

|                                    |               |                                |                                        |
|------------------------------------|---------------|--------------------------------|----------------------------------------|
| Absolute Open Flow<br><b>4,997</b> | Mcfd @ 15.025 | Angle of Slope<br><b>63.05</b> | Slope, n =<br><b>0.508</b> (Cotangent) |
|------------------------------------|---------------|--------------------------------|----------------------------------------|

  

|                         |                                    |                                      |                                       |
|-------------------------|------------------------------------|--------------------------------------|---------------------------------------|
| Remarks:                |                                    |                                      |                                       |
|                         |                                    |                                      |                                       |
| Approved By Commission: | Conducted By:<br><b>Automation</b> | Calculated By:<br><b>Spreadsheet</b> | Checked By:<br><b>Michael Preston</b> |