

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122  
Revised 9-1-65

|   |                          |                                   |  |
|---|--------------------------|-----------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                          | Test Date<br>6-26-87              |  |
| Company<br>Amoco Production Company   |                          | Connection                        |  |
| Pool<br>Bravo Dome  |                          | Formation<br>Tubb                 |  |
| Completion Date<br>1-26-84  |                          | Total Depth<br>2615'              | Plug Back TD<br>2183'  |
|   |                          | Elevation<br>4505'                | Farm or Lease Name   |
| Csg. Size<br>7.0  | Wt.<br>20                | d<br>6.331                        | Set At<br>2615   |
| Perforations:<br>From 2046 To 2206  |                          | Well No.<br>1935-351G             |  |
| Tub. Size<br>3.5  | Wt.<br>9.5               | d<br>3.000                        | Set At<br>2015   |
| Perforations:<br>From To  |                          | Unit Sec. Twp. Rge.<br>G 35 19 35 |  |
| Type well - Single - Fractured - G.G. or G.O. Multiple<br>Single  |                          | Packer Set At<br>2015             | County<br>Union  |
| Producing thru<br>Tubing  | Reservoir Temp. °F<br>90 | Mean Annual Temp. °F<br>50        | Baro. Press. - P <sub>g</sub><br>12.25                                   |
| State<br>New Mexico   |                          | Meter Run<br>4.0                  |  |
| L   | H                        | G <sub>g</sub>                    | % CO <sub>2</sub> 100      % N <sub>2</sub> 0      % H <sub>2</sub> S. 0 |
| Prover  |                          | 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. |                  |
| 1.        | 4.026 x 2.00     |   | 231          | 35              | 61                   | 229         | 61              | 0           |                 | 24 hrs           |
| 2.        | 4.026 x 2.00     |   | 237          | 28              | 61                   | 235         | 61              | 0           |                 | 24 hrs           |
| 3.        | 4.026 x 2.00     |   | 246          | 13              | 61                   | 243         | 61              | 0           |                 | 24 hrs           |
| 4.        | 4.026 x 2.00     |   | 255          | 4               | 60                   | 252         | 60              | 0           |                 | 24 hrs           |
| 5.        |                  |   |              |                 |                      |             |                 |             |                 |                  |

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |   |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|---|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>L</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow O, Mcfd |
| 1.                        |                       |                  |                         |                                  |                               |   | 1595                 |
| 2.                        |                       |                  |                         |                                  |                               |   | 1423                 |
| 3.                        |                       |                  |                         |                                  |                               |   | 1036                 |
| 4.                        |                       |                  |                         |                                  |                               |   | 731                  |
| 5.                        |                       |                  |                         |                                  |                               |   |                      |

|     |                |          |                |   |  |
|-----|----------------|----------|----------------|---|--|
| NO. | P <sub>f</sub> | Temp. °R | T <sub>f</sub> | Z | Gas Liquid Hydrocarbon Ratio _____ Mcl/bbl.      |
| 1.  |                |          |                |   | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg. |
| 2.  |                |          |                |   | Specific Gravity Separator Gas 1.529             |
| 3.  |                |          |                |   | Specific Gravity Flowing Fluid _____ X X X X X   |
| 4.  |                |          |                |   | Critical Pressure 1072 _____ P.S.I.A.            |
| 5.  |                |          |                |   | Critical Temperature 496 _____ P.S.I.A.          |

|                       |                       |  |   |   |   |
|-----------------------|-----------------------|--|---|---|---|
| P <sub>c</sub> 293.25 | P <sub>w</sub> 85.995 | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.0940$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.0139$ |   |   |
| NO.                   | F <sub>f</sub>        | 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> | AOF = O $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4807$ |
| 1.                    |                       | 241.25                                     | 58,201  | 27,794  |   |
| 2.                    |                       | 247.25                                     | 61,132  | 24,863  |   |
| 3.                    |                       | 255.25                                     | 65,152  | 20,843  |   |
| 4.                    |                       | 264.25                                     | 69,828  | 16,167  |   |

|                         |               |                        |                |
|-------------------------|---------------|------------------------|----------------|
| Absolute Open Flow 4807 | Mcfd @ 15.025 | Angle of Slope @ 44.32 | Slope, n .9768 |
|-------------------------|---------------|------------------------|----------------|

Remarks: Test was run from a low flowing tubing pressure to a high flowing tubing pressure to minimize liquid loading effects.

|                         |                                 |                                 |             |
|-------------------------|---------------------------------|---------------------------------|-------------|
| Approved by Commission: | Conducted By:<br>RANDY MAHANNAH | Calculated By:<br>RICHARD ROETH | Checked By: |
|-------------------------|---------------------------------|---------------------------------|-------------|