

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |  |                         |  |                           |  |                                                                                                                                                                                                                                      |  |                                  |  |
|---------------------------------------------------------------------------------------------------------------------------|--|-------------------------|--|---------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                         |  | Test Date<br>Jan. 9, 1986 |  | <div style="font-size: 1.2em; font-weight: bold;">JAN 27 1986</div> <div style="font-size: 1.5em; font-weight: bold; transform: rotate(-15deg);">OIL CON. DIV.</div> <div style="font-size: 1.2em; font-weight: bold;">DIST. 3</div> |  |                                  |  |
| Company<br>ARCO Oil & Gas Co. Div.<br>of Atlantic Richfield Co.                                                           |  |                         |  | Connection<br>None        |  |                                                                                                                                                                                                                                      |  |                                  |  |
| Pool<br>Blanco Mesa Verde                                                                                                 |  |                         |  | Formation<br>Mesa Verde   |  |                                                                                                                                                                                                                                      |  |                                  |  |
| Completion Date<br>Dec. 20, 1985                                                                                          |  | Total Depth<br>4866     |  | Plug Back TD<br>4768      |  | Elevation<br>6293KB<br>6281GL                                                                                                                                                                                                        |  | Farm or Lease Name<br>Hammond    |  |
| Csg. Size<br>8-5/8, 5-1/2                                                                                                 |  | Wt.<br>24# 15.5         |  | Set At<br>507.10<br>4776  |  | Perforations<br>From 4620 To 4708                                                                                                                                                                                                    |  | Well No.<br>#3                   |  |
| Thg. Size<br>2-3/8                                                                                                        |  | Wt.<br>4.7 J55          |  | Set At<br>1.995<br>4599   |  | Perforations<br>From To                                                                                                                                                                                                              |  | Unit Sec. Twp. Rge.<br>34 27N 8W |  |
| Type Well - Single - Dradhead - G.C. or G.O. Multiple<br>Single                                                           |  |                         |  |                           |  | Packer Set At<br>None                                                                                                                                                                                                                |  | County<br>San Juan               |  |
| Producing Thru<br>Tubing                                                                                                  |  | Reservoir Temp. °F<br># |  | Mean Annual Temp. °F      |  | Base Press. - P <sub>g</sub><br>12.0                                                                                                                                                                                                 |  | State<br>New Mexico              |  |
| L<br>4599                                                                                                                 |  | H<br>4599               |  | G <sub>g</sub><br>.742    |  | % CO <sub>2</sub>                                                                                                                                                                                                                    |  | % N <sub>2</sub>                 |  |
|                                                                                                                           |  |                         |  |                           |  | % H <sub>2</sub> S                                                                                                                                                                                                                   |  | Prover<br>2"                     |  |
|                                                                                                                           |  |                         |  |                           |  |                                                                                                                                                                                                                                      |  | Meter Run                        |  |
|                                                                                                                           |  |                         |  |                           |  |                                                                                                                                                                                                                                      |  | Taps                             |  |

| FLOW DATA |                        |   |                 |                    |                         |             | TUBING DATA        |             | CASING DATA        |             | Duration<br>of<br>Flow |
|-----------|------------------------|---|-----------------|--------------------|-------------------------|-------------|--------------------|-------------|--------------------|-------------|------------------------|
| NO.       | Prover<br>Line<br>Size | X | Orifice<br>Size | Press.<br>p.s.i.g. | Diff.<br>h <sub>w</sub> | Temp.<br>°F | Press.<br>p.s.i.g. | Temp.<br>°F | Press.<br>p.s.i.g. | Temp.<br>°F |                        |
| SI        |                        |   |                 |                    |                         |             | 968                |             | 968                |             | S.I. 16 Days           |
| 1.        | 2" x 0.750"            |   |                 | 118                |                         | 62          | 225                |             | 477                |             | 3 Hrs.                 |
| 2.        |                        |   |                 |                    |                         |             |                    |             |                    |             |                        |
| 3.        |                        |   |                 |                    |                         |             |                    |             |                    |             |                        |
| 4.        |                        |   |                 |                    |                         |             |                    |             |                    |             |                        |
| 5.        |                        |   |                 |                    |                         |             |                    |             |                    |             |                        |

| RATE OF FLOW CALCULATIONS |                          |                  |                            |                                        |                                     |                                               |                         |
|---------------------------|--------------------------|------------------|----------------------------|----------------------------------------|-------------------------------------|-----------------------------------------------|-------------------------|
| NO.                       | Coefficient<br>(24 Hour) | $\sqrt{h_w P_m}$ | Pressure<br>P <sub>m</sub> | Flow Temp.<br>Factor<br>F <sub>t</sub> | Gravity<br>Factor<br>F <sub>g</sub> | Super<br>Compress.<br>Factor, F <sub>sp</sub> | Rate of Flow<br>Q, Mcfd |
| 1                         | 9.453                    |                  | 130                        | 0.9896                                 | 1.161                               | 1.016                                         | 1447                    |
| 2.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 3.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 4.                        |                          |                  |                            |                                        |                                     |                                               |                         |
| 5.                        |                          |                  |                            |                                        |                                     |                                               |                         |

| NO. | P <sub>t</sub> | Temp. °R | T <sub>t</sub> | Z     | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.      |
|-----|----------------|----------|----------------|-------|--------------------------------------------------|
| 1   | .20            |          | 1.29           | 0.968 | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg. |
| 2.  |                |          |                |       | Specific Gravity Separator Gas .742 XXXXXXXXXX   |
| 3.  |                |          |                |       | Specific Gravity Flowing Fluid XXXXX             |
| 4.  |                |          |                |       | Critical Pressure 671 P.S.I.A. _____ P.S.I.A.    |
| 5.  |                |          |                |       | Critical Temperature 358 R _____ R               |

| P <sub>c</sub> 879    P <sub>c</sub> 2 960400 |                             |                             |                                                           |
|-----------------------------------------------|-----------------------------|-----------------------------|-----------------------------------------------------------|
| NO.                                           | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> |
| 1                                             | 56169                       | 311                         | 96888                                                     |
| 2                                             |                             |                             |                                                           |
| 3                                             |                             |                             |                                                           |
| 4                                             |                             |                             |                                                           |
| 5                                             |                             |                             |                                                           |

(1)  $\frac{P_c^2}{P_t^2 - P_w^2} = 1.1122$       (2)  $\left[ \frac{P_c^2}{P_t^2 - P_w^2} \right]^n = 1.0830$

AOF = Q  $\left[ \frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 1567$

|                                       |  |                                 |  |                                    |  |
|---------------------------------------|--|---------------------------------|--|------------------------------------|--|
| Absolute Open Flow 1567 Mcfd @ 15.025 |  | Angle of Slope θ _____          |  | Slope, n 0.750                     |  |
| Remarks _____                         |  |                                 |  |                                    |  |
| Approved by Division                  |  | Conducted By:<br>Bobby Watchman |  | Calculated By:<br>Bobby Watchman   |  |
|                                       |  |                                 |  | Checked By:<br><i>Sam F. Doran</i> |  |