

**MEXICO OIL CONSERVATION COMM. ON  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL**

Form C-122  
Revised 9-1-65

RECEIVED

|                                                                                                                           |  |                                         |  |                                |  |                                                                         |  |
|---------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|--|--------------------------------|--|-------------------------------------------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                         |  | Test Date<br><b>3-8-72</b>     |  | <b>MAR 10 1972</b>                                                      |  |
| Company<br><b>David Fasken</b>                                                                                            |  |                                         |  | Connection<br><b>None</b>      |  |                                                                         |  |
| Pool<br><b>Boyd (Morrow)</b>                                                                                              |  |                                         |  | Formation<br><b>Morrow</b>     |  |                                                                         |  |
| Completion Date<br><b>3-1-72</b>                                                                                          |  | Total Depth<br><b>9250</b>              |  | Plug Back TD<br><b>9054</b>    |  | Elevation<br><b>3527 Gr.</b>                                            |  |
| Csg. Size<br><b>4 1/2</b>                                                                                                 |  | Wt.<br><b>13.50</b>                     |  | Set At<br><b>3.920"</b>        |  | Perforations: <b>8970</b> to <b>8994</b>                                |  |
| Csg. Size<br><b>4 1/2</b>                                                                                                 |  | Wt.<br><b>11.60</b>                     |  | Set At<br><b>4.000"</b>        |  | Perforations: <b>9012</b> to <b>9032</b>                                |  |
| Csg. Size<br><b>2 3/8</b>                                                                                                 |  | Wt.<br><b>4.70</b>                      |  | Set At<br><b>1.995"</b>        |  | Perforations: <b>8832</b> to <b>8832</b>                                |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Single - Gas</b>                                            |  |                                         |  | Packer Set At<br><b>8835'</b>  |  | Farm or Lease Name<br><b>Arco "9" Morrison</b>                          |  |
| Producing Thru<br><b>Tubing</b>                                                                                           |  | Reservoir Temp. °F<br><b>168 @ 8801</b> |  | Mean Annual Temp. °F           |  | Baro. Press. - P <sub>a</sub>                                           |  |
| L<br><b>9001</b>                                                                                                          |  | H<br><b>9001</b>                        |  | G <sub>g</sub><br><b>0.595</b> |  | % CO <sub>2</sub> % N <sub>2</sub> % H <sub>2</sub> S                   |  |
| Prover<br><b>2"</b>                                                                                                       |  | Meter Run                               |  | Taps                           |  | Unit      Sec.      Twp.      Rge.<br><b>B      9      19S      25E</b> |  |
| County<br><b>Eddy</b>                                                                                                     |  |                                         |  | State<br><b>New Mexico</b>     |  |                                                                         |  |

| FLOW DATA |                  |   |              |                 |          |          | TUBING DATA     |          | CASING DATA     |          | Duration of Flow |
|-----------|------------------|---|--------------|-----------------|----------|----------|-----------------|----------|-----------------|----------|------------------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. hw | Temp. °F | Press. p.s.i.g. | Temp. °F | Press. p.s.i.g. | Temp. °F |                  |
| 1.        | 2"               | X | 1/16"        | 2775            |          | 68       | 2775            | 68       | Pkr.            |          | 1 hr             |
| 2.        | 2"               | X | 3/32"        | 2717            |          | 67       | 2717            | 67       | "               |          | 1 hr             |
| 3.        | 2"               | X | 1/8"         | 2590            |          | 66       | 2590            | 66       | "               |          | 1 hr             |
| 4.        | 2"               | X | 3/16"        | 2318            |          | 64       | 2318            | 64       | "               |          | 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.  | 0.06405               |                  | 2766.2                  | 0.9924                | 1.296                         | 1.137                                   | 259.1                |
| 2.  | 0.1410                |                  | 2730.2                  | 0.9933                | 1.296                         | 1.139                                   | 564.4                |
| 3.  | 0.2648                |                  | 2603.2                  | 0.9943                | 1.296                         | 1.142                                   | 1014.4               |
| 4.  | 0.6082                |                  | 2331.2                  | 0.9962                | 1.296                         | 1.149                                   | 2103.3               |
| 5.  |                       |                  |                         |                       |                               |                                         |                      |

| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio          | Dry Gas | Mcf/bbl. |
|-----|----------------|----------|----------------|-------|---------------------------------------|---------|----------|
| 1.  | 4.12           | 528      | 1.49           | 0.773 | A.P.I. Gravity of Liquid Hydrocarbons |         | Deg.     |
| 2.  | 4.06           | 527      | 1.49           | 0.771 | Specific Gravity Separator Gas        | 0.595   | XXXXXXX  |
| 3.  | 3.87           | 526      | 1.49           | 0.767 | Specific Gravity Flowing Fluid        | XXXXX   |          |
| 4.  | 3.47           | 524      | 1.48           | 0.758 | Critical Pressure                     | 672     | P.S.I.A. |
| 5.  |                |          |                |       | Critical Temperature                  | 354     | R        |

P<sub>f</sub> 3468.2    P<sub>f</sub><sup>2</sup> 12028

| NO. | P <sub>t</sub> <sup>2</sup> | P <sub>s</sub> | P <sub>s</sub> <sup>2</sup> | P <sub>f</sub> <sup>2</sup> - P <sub>s</sub> <sup>2</sup> |
|-----|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| 1.  |                             | 3440.2         | 11835                       | 193                                                       |
| 2.  |                             | 3395.2         | 11527                       | 501                                                       |
| 3.  |                             | 3309.2         | 10951                       | 1077                                                      |
| 4.  |                             | 3074.2         | 9451                        | 2577                                                      |
| 5.  |                             |                |                             |                                                           |

(1)  $\frac{P_c^2}{R^2 - R_w^2} = \frac{P_s^2}{R^2 - R_w^2}$       (2)  $\left[ \frac{R_c^2}{R^2 - R_w^2} \right]^n = \frac{P_s^2}{P_f^2 - P_w^2}$

AOF = Q  $\left[ \frac{R^2}{R^2 - R_w^2} \right]^n = \frac{P_f^2 - P_w^2}{P_s^2 - P_w^2}$

Absolute Open Flow **7500** Mcfd @ 15.025      Angle of Slope **51°**      Slope, n **0.81094**

Remarks: **BHP measured w/Amerada RpG-3 gauge.**

|                         |                                          |                                       |             |
|-------------------------|------------------------------------------|---------------------------------------|-------------|
| Approved By Commission: | Conducted By:<br><b>Teffteller, Inc.</b> | Calculated By:<br><b>F. Tefteller</b> | Checked By: |
|-------------------------|------------------------------------------|---------------------------------------|-------------|