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State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-122  
Revised 4-1-91

# OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

## MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |                    |                               |                                  |                                                    |                    |                                             |                           |                                                      |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|----------------------------------|----------------------------------------------------|--------------------|---------------------------------------------|---------------------------|------------------------------------------------------|--|--|--|
| Operator<br><b>EXXON CO. U.S.A.</b>                                                                                       |                    |                               |                                  |                                                    |                    | Lease or Unit Name<br><b>A.J. AKINS</b>     |                           |                                                      |  |  |  |
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                    |                               |                                  |                                                    |                    | Test Date<br><b>12-5-95</b>                 |                           | Well No.<br><b>2</b>                                 |  |  |  |
| Completion Date<br><b>11-30-95</b>                                                                                        |                    | Total Depth<br><b>3675</b>    |                                  | Plug Back TD<br><b>3340</b>                        |                    | Elevation<br><b>2601</b>                    |                           | Unit Ltr. - Sec. - TWP - Rge.<br><b>0-10-21S-36E</b> |  |  |  |
| Csg. Size<br><b>5 1/2</b>                                                                                                 | Wt.<br><b>14#</b>  | d<br><b>5.012</b>             | Set At<br><b>3675</b>            | Perforations:<br>From: <b>2752</b> To: <b>3280</b> |                    |                                             |                           | County<br><b>LEA</b>                                 |  |  |  |
| Tbg. Size<br><b>2-3/8</b>                                                                                                 | Wt.<br><b>4.7#</b> | d<br><b>1.995</b>             | Set At<br><b>2687</b>            | Perforations:<br>From:                      To:    |                    |                                             |                           | Pool                                                 |  |  |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>SINGLE</b>                                                  |                    |                               |                                  | Packer Set At<br><b>2687</b>                       |                    |                                             |                           | Formation<br><b>7 RIVERS QUEEN</b>                   |  |  |  |
| Producing Thru<br><b>TBG</b>                                                                                              |                    | Reservoir Temp. °F            |                                  | Mean Annual Temp. °F<br><b>60°</b>                 |                    | Baro. Press - P <sub>a</sub><br><b>13.2</b> |                           | Connection<br><b>SALES</b>                           |  |  |  |
| L<br><b>2687</b>                                                                                                          | H<br><b>2687</b>   | G <sub>g</sub><br><b>.828</b> | % CO <sub>2</sub><br><b>1.56</b> | % N <sub>2</sub><br><b>50.01</b>                   | % H <sub>2</sub> S | Prover<br><b>-0-</b>                        | Meter Run<br><b>4.026</b> | Taps<br><b>FLG.</b>                                  |  |  |  |

  

| 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 |                  |
| SI        | 327                |              |                 |                      |          | 327             |          | 105             |          | 24 hr.           |
| 1.        | 4.026 X 1.625      |              | 38              | 2"                   | 50°      | 313             |          |                 |          | 1 hr.            |
| 2.        | 4.026 X 1.625      |              | 40              | 12"                  | 51°      | 256             |          |                 |          | 1 hr.            |
| 3.        | 4.026 X 1.625      |              | 39              | 22"                  | 52°      | 206             |          |                 |          | 1 hr.            |
| 4.        | 4.026 X 1.625      |              | 39              | 28"                  | 52°      | 106             |          |                 |          | 1 hr.            |
| 5.        |                    |              |                 |                      |          |                 |          |                 |          |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | COEFFICIENT (24 HOUR) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>sp</sub> | Rate of Flow Q, Mcfd |
| 1.                        | 12.79                 | 10.12            | 51.2                    | 1.010                            | 1.099                         | 1.037                                   | 149                  |
| 2.                        | 12.79                 | 25.26            | 53.2                    | 1.009                            | 1.099                         | 1.037                                   | 371                  |
| 3.                        | 12.79                 | 33.88            | 52.2                    | 1.008                            | 1.099                         | 1.037                                   | 497                  |
| 4.                        | 12.79                 | 38.23            | 52.2                    | 1.008                            | 1.099                         | 1.037                                   | 561                  |
| 5.                        |                       |                  |                         |                                  |                               |                                         |                      |

  

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio              | Mcf/bbl.   |
|-----|----------------|----------|----------------|------|-------------------------------------------|------------|
| 1.  | .05            | 510      | 1.47           | .930 | DRV                                       |            |
| 2.  | .06            | 511      | 1.47           | .930 | A.P. L Gravity of Liquid Hydrocarbons DRV | Deg.       |
| 3.  | .05            | 512      | 1.47           | .930 | Specific Gravity Separator Gas .828       | XXXXXXXXXX |
| 4.  | .05            | 512      | 1.47           | .930 | Specific Gravity Flowing Fluid DRV        | XXXXXX     |
| 5.  |                |          |                |      | Critical Pressure 889 P.S.I.A.            | P.S.I.A.   |
|     |                |          |                |      | Critical Temperature 346 R                | R          |

  

| P <sub>c</sub> 340.2 |                             | P <sub>c</sub> <sup>2</sup> 115.7 |                             |
|----------------------|-----------------------------|-----------------------------------|-----------------------------|
| NO.                  | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub>                    | P <sub>w</sub> <sup>2</sup> |
| 1.                   | 51.2                        | 226.9                             | 51.5                        |
| 2.                   | 72.5                        | 272.6                             | 74.3                        |
| 3.                   | 48.0                        | 226.6                             | 51.4                        |
| 4.                   | 14.2                        | 135.9                             | 18.5                        |
| 5.                   |                             |                                   |                             |

  

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.190$$

$$2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.091$$

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 612$$

  

|                                  |              |                                     |                      |
|----------------------------------|--------------|-------------------------------------|----------------------|
| Absolute Open Flow<br><b>612</b> | Mcf @ 15.025 | Angle of Slope $\Theta$ <b>63.5</b> | Slope, n <b>.500</b> |
|----------------------------------|--------------|-------------------------------------|----------------------|

  

Remarks: **NO FLUID MADE DURING TEST**

  

|                      |                                         |                             |                          |
|----------------------|-----------------------------------------|-----------------------------|--------------------------|
| Approved By Division | Conducted By:<br><b>PRO WELL TESTER</b> | Calculated By:<br><b>MB</b> | Checked By:<br><b>BM</b> |
|----------------------|-----------------------------------------|-----------------------------|--------------------------|