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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

C/SF

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |  |                                |  |                                             |  |                                                        |  |
|---------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|--|---------------------------------------------|--|--------------------------------------------------------|--|
| Operator<br><b>OXY USA, INC.</b>                                                                                          |  |                                |  | Lease or Unit Name<br><b>CHAMPION STATE</b> |  |                                                        |  |
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                |  | Test Date<br><b>22-JUL-1997</b>             |  | Well No.<br><b>1</b>                                   |  |
| Completion Date<br><b>23-JUN-1997</b>                                                                                     |  | Total Depth<br><b>11,482</b>   |  | Plug Back TD                                |  | Elevation                                              |  |
| Csg. Size<br><b>4.5</b>                                                                                                   |  | Wt. d<br><b>11.6</b>           |  | Set At<br><b>11,482</b>                     |  | Perforations:<br>From: <b>11,231</b> To: <b>11,356</b> |  |
| Tbg. Size<br><b>2.375</b>                                                                                                 |  | Wt. d<br><b>4.7</b>            |  | Set At<br><b>11,166</b>                     |  | Perforations:<br>From: To:                             |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>SINGLE GAS WELL</b>                                         |  |                                |  | Packer Set At<br><b>11,172</b>              |  | Formation<br><b>MORROW</b>                             |  |
| Producing Thru<br><b>TUBING</b>                                                                                           |  |                                |  | Reservoir Temp. °F<br><b>179</b>            |  | Mean Annual Temp. °F<br><b>11293</b>                   |  |
| Baro. Press. - P <sub>a</sub><br><b>13.2</b>                                                                              |  |                                |  | Connection<br><b>CONOCO</b>                 |  | Meter Run<br><b>4.0</b>                                |  |
| L<br><b>11,293</b>                                                                                                        |  | H<br><b>11,293</b>             |  | Gg<br><b>0.644</b>                          |  | % CO <sub>2</sub><br><b>0.33</b>                       |  |
| % N <sub>2</sub><br><b>0.32</b>                                                                                           |  | % H <sub>2</sub> S<br><b>0</b> |  | Prover                                      |  | Taps<br><b>FLANGE</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        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 1.        | 4.03             | X | 2.0          | 139             | 13.6                 | 71          |                 |             | 4466            | 179              | 98       |
| 2.        | 4.03             | X | 2.0          | 147             | 25.5                 | 67          |                 |             | 4159            | 179              | 1.0      |
| 3.        | 4.03             | X | 2.0          | 158             | 48.8                 | 53          |                 |             | 4015            | 179              | 1.0      |
| 4.        | 4.03             | X | 2.0          | 168             | 90.5                 | 37          |                 |             | 3788            | 179              | 1.0      |
| 5.        |                  |   |              |                 |                      |             |                 |             | 3510            | 179              | 1.0      |

| RATE OF FLOW CALCULATIONS |                       |           |                         |                      |                   |                                         |                      |
|---------------------------|-----------------------|-----------|-------------------------|----------------------|-------------------|-----------------------------------------|----------------------|
| NO.                       | COEFFICIENT (24 HOUR) | $h_w P_m$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft | Gravity Factor Fg | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1.                        |                       | 45.42     | 151.7                   | 0.9893               | 1.2461            | 1.0137                                  | 1085                 |
| 2.                        |                       | 63.91     | 160.2                   | 0.9933               | 1.2461            | 1.0149                                  | 1553                 |
| 3.                        |                       | 91.27     | 170.7                   | 1.0070               | 1.2461            | 1.0174                                  | 2255                 |
| 4.                        |                       | 127.88    | 180.7                   | 1.0229               | 1.2461            | 1.0205                                  | 3207                 |

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z     | Gas Liquid Hydrocarbon Ratio | Mcf/bbl. | Deg.     |
|-----|----------------|----------|----------------|-------|------------------------------|----------|----------|
| 1.  | 0.23           | 531      | 1.43           | 0.973 | 50.6                         |          |          |
| 2.  | 0.24           | 527      | 1.42           | 0.971 | 57.4                         |          |          |
| 3.  | 0.25           | 513      | 1.38           | 0.966 | 0.644                        | XXXXXXX  | 0.696    |
| 4.  | 0.27           | 497      | 1.34           | 0.960 | 671                          | PSIA     | 669 PSIA |
| 5.  |                |          |                |       | 371                          | R        | 387 R    |

| P <sub>c</sub> 3303.7      P <sub>c</sub> <sup>2</sup> 10,914 |                             |                |                             |                                                           |
|---------------------------------------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| NO.                                                           | P <sub>c</sub> <sup>2</sup> | 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> |
| 1.                                                            | 17405                       | 3050           | 9303                        | 1612                                                      |
| 2.                                                            | 16227                       | 2933           | 8604                        | 2310                                                      |
| 3.                                                            | 14452                       | 2752           | 7573                        | 3341                                                      |
| 4.                                                            | 12413                       | 2535           | 6428                        | 4486                                                      |
| 5.                                                            |                             |                |                             |                                                           |

$$1) \frac{P_c^2}{P_c^2 - P_w^2} = \underline{2.4329}$$

$$AOF = Q \quad \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{7802}$$

$$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \underline{2.4329}$$

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AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 7802$

Absolute Open Flow **7802** Mcfd @ 15.025 Angle of Slope  $\theta$  **45.0** Slope, n **1.0**

Remarks: **BASED ON BOTTOMHOLE PRESSURE**

Approved By Division Conducted By *Larry Davis by RHA* Calculated By *Walter Beckhammer* Checked By: