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**RECEIVED** CONSERVATION DIVISION  
P.O. Box 2088

Santa Fe, New Mexico 87504-2088

MAY 11 1995

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

|                                                                                                                                |  |                        |                               |                  |  |                                                 |  |                             |                                          |                    |  |
|--------------------------------------------------------------------------------------------------------------------------------|--|------------------------|-------------------------------|------------------|--|-------------------------------------------------|--|-----------------------------|------------------------------------------|--------------------|--|
| Operator <b>TEXACO EXPLORATION CON. DIV.</b>                                                                                   |  |                        |                               |                  |  | Lease or Unit Name <b>WHITE CITY 31 FEDERAL</b> |  |                             |                                          |                    |  |
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> <b>DIST. 2</b> <input type="checkbox"/> Special |  |                        |                               |                  |  | Test Date <b>5-5-95</b>                         |  |                             | Well No. <b>7</b>                        |                    |  |
| Completion Date <b>4-13-95</b>                                                                                                 |  |                        | Total Depth <b>11901</b>      |                  |  | Plug Back TD <b>11740</b>                       |  |                             | Elevation                                |                    |  |
| Csg. Size <b>4 1/2</b>                                                                                                         |  |                        | Wt. <b>13.5</b>               |                  |  | d <b>3.920</b>                                  |  |                             | Set At <b>11901</b>                      |                    |  |
| Tbg. Size <b>2 3/8</b>                                                                                                         |  |                        | Wt. <b>4.7</b>                |                  |  | d <b>1.995</b>                                  |  |                             | Set At <b>11197</b>                      |                    |  |
| Perforations: From: <b>11326</b> To: <b>11500</b>                                                                              |  |                        |                               |                  |  | County <b>EDDY</b>                              |  |                             |                                          |                    |  |
| Perforations: From: To:                                                                                                        |  |                        |                               |                  |  | Pool                                            |  |                             |                                          |                    |  |
| Type Well - Single - Bradenhead - G.G. or F.O. Multiple <b>single</b>                                                          |  |                        |                               |                  |  | Packer Set At <b>11197'</b>                     |  |                             | Formation <b>MORROW</b>                  |                    |  |
| Producing Thru <b>TBG</b>                                                                                                      |  |                        | Reservoir Temp. °F <b>175</b> |                  |  | Mean Annual Temp. °F <b>60</b>                  |  |                             | Baro. Press - P <sub>a</sub> <b>13.2</b> |                    |  |
| Connection <b>PIPELINE</b>                                                                                                     |  |                        |                               |                  |  |                                                 |  |                             |                                          |                    |  |
| L <b>11326</b>                                                                                                                 |  | H <b>11326</b>         |                               | Gg <b>.584</b>   |  | % CO <sub>2</sub> <b>1.66</b>                   |  | % N <sub>2</sub> <b>.79</b> |                                          | % H <sub>2</sub> S |  |
| Prover                                                                                                                         |  | Meter Run <b>4.026</b> |                               | Taps <b>FLG.</b> |  |                                                 |  |                             |                                          |                    |  |

  

| FLOW DATA |                  |              |                 |                      | TUBING DATA |                 |          | CASING DATA     |          |  | Duration of Flow |
|-----------|------------------|--------------|-----------------|----------------------|-------------|-----------------|----------|-----------------|----------|--|------------------|
| NO.       | Prover Line Size | 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        |                  |              |                 |                      |             | 3313            |          |                 |          |  |                  |
| 1.        | 4.026 X 2.000    |              | 4.44            | 40.0                 | 79          | 3163            |          | pk.             |          |  |                  |
| 2.        | 4.026 X 2.000    |              | 7.05            | 160.0                | 71          | 1853            |          |                 |          |  |                  |
| 3.        | 4.026 X 2.000    |              | 20.44           | 102.4                | 72          | 1310            |          |                 |          |  |                  |
| 4.        | 4.026 X 2.000    |              | 20.44           | 144.4                | 74          | 1098            |          |                 |          |  |                  |
| 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 Fg. | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1.                        | 19.81                 | 26.56            | 17.64                   | .9822                 | 1.309              | 1.002                                   | 678                  |
| 2.                        | 19.81                 | 56.92            | 20.25                   | .9896                 | 1.309              | 1.002                                   | 1464                 |
| 3.                        | 19.81                 | 58.69            | 33.64                   | .9887                 | 1.309              | 1.003                                   | 1509                 |
| 4.                        | 19.81                 | 69.70            | 33.64                   | .9868                 | 1.309              | 1.003                                   | 1789                 |
| 5.                        |                       |                  |                         |                       |                    |                                         |                      |

  

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio                      | Mcf/bbl.   |
|-----|----------------|----------|----------------|------|---------------------------------------------------|------------|
| 1.  | .026           | 530      | 1.54           | .997 | DRY GAS                                           |            |
| 2.  | .030           | 531      | 1.52           | .996 | A.P. I. Gravity of Liquid Hydrocarbons <b>DRY</b> | Deg.       |
| 3.  | .050           | 532      | 1.52           | .994 | Specific Gravity Separator Gas <b>.584</b>        | XXXXXXXXXX |
| 4.  | .050           | 534      | 1.52           | .994 | Specific Gravity Flowing Fluid <b>DRY</b>         | XXXXXX     |
| 5.  |                |          |                |      | Critical Pressure <b>*676</b>                     | P.S.I.A.   |
|     |                |          |                |      | Critical Temperature <b>*349</b>                  | R          |

  

P<sub>c</sub> **3326.2**    P<sub>c</sub><sup>2</sup> **11063.6**

| NO. | P <sub>i</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.  |                             | 3178.6         | 10103.3                     | 960.3                                                     |
| 2.  |                             | 1884.0         | 3549.5                      | 7514.1                                                    |
| 3.  |                             | 1350.5         | 1823.9                      | 9239.7                                                    |
| 4.  |                             | 1157.3         | 1339.2                      | 9724.4                                                    |
| 5.  |                             |                |                             |                                                           |

1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 1.138$       (2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.101$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1,969$

|                                |                |                             |                        |
|--------------------------------|----------------|-----------------------------|------------------------|
| Absolute Open Flow <b>1969</b> | Mcf/d @ 15.025 | Angle of Slope Θ <b>53°</b> | Slope, n <b>.74473</b> |
|--------------------------------|----------------|-----------------------------|------------------------|

Remarks: **\* CORRECTED TO 1% CO<sub>2</sub>**

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