

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

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Form C-122  
Revised 9-1-65

**RECEIVED**

|                                                                                                                           |                             |                             |                             |                                                           |                                                                                                      |                                         |                      |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------|
| Type Test<br><input type="checkbox"/> Initial <input type="checkbox"/> Annual <input checked="" type="checkbox"/> Special |                             |                             |                             | Test Date<br>9-22-1972                                    |                                                                                                      | OCT 4 1972                              |                      |
| Company<br>Pennzoil Company                                                                                               |                             |                             |                             | Connection<br>Trans Western Pipeline                      |                                                                                                      |                                         |                      |
| Pool<br>South Carlsbad (Strawn)                                                                                           |                             |                             |                             | Formation<br>Strawn                                       |                                                                                                      | Unit<br>ARTESIAN OFFICE                 |                      |
| Completion Date<br>2-4-1972                                                                                               |                             | Total Depth<br>11,833'      |                             | Plug Back TD<br>11,762'                                   |                                                                                                      | Elevation<br>3232 KB                    |                      |
| Farm or Lease Name<br>Gulf Federal                                                                                        |                             | Well No.<br>2               |                             |                                                           |                                                                                                      |                                         |                      |
| Csg. Size<br>5-1/2"                                                                                                       | Wt.<br>17                   | d<br>4.892                  | Set At<br>11,830            | Perforations:<br>From 10,375 To 10,392                    |                                                                                                      |                                         |                      |
| Tbg. Size<br>2-1/16                                                                                                       | Wt.<br>3.25                 | d<br>1.750                  | Set At<br>10,298            | Perforations:<br>From To                                  |                                                                                                      | Unit Sec. Twp. Rge.<br>L 6 23-S 27-E    |                      |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>GG Dual                                                        |                             |                             |                             | Packer Set At<br>10,290"                                  |                                                                                                      | County<br>Eddy                          |                      |
| Producing Thru<br>Tubing                                                                                                  |                             | Reservoir Temp. °F<br>60    |                             | Baro. Press. - P <sub>a</sub><br>13.2                     |                                                                                                      | State<br>New Mexico                     |                      |
| L<br>10,384                                                                                                               | H<br>10,384                 | G <sub>g</sub><br>.644      | % CO <sub>2</sub><br>.0033  | % N <sub>2</sub><br>.0074                                 | % H <sub>2</sub> S                                                                                   | Prover<br>X                             | Meter Run<br>Taps    |
| FLOW DATA                                                                                                                 |                             |                             |                             | TUBING DATA                                               |                                                                                                      | CASING DATA                             |                      |
| NO.                                                                                                                       | Prover Line Size            | X                           | Orifice Size                | Press. p.s.i.g.                                           | Diff. h <sub>w</sub>                                                                                 | Temp. °F                                | Duration of Flow     |
| SI                                                                                                                        |                             |                             |                             |                                                           |                                                                                                      |                                         |                      |
| 1.                                                                                                                        | 4.0                         |                             | 1.00                        | 498                                                       | 42                                                                                                   | 68                                      | 2 hrs.               |
| 2.                                                                                                                        | 4.0                         |                             | 1.00                        | 510                                                       | 10.0                                                                                                 | 68                                      | 2 hrs.               |
| 3.                                                                                                                        | 4.0                         |                             | 1.00                        | 520                                                       | 24.5                                                                                                 | 70                                      | 2 hrs.               |
| 4.                                                                                                                        | 4.0                         |                             | 1.00                        | 530                                                       | 57                                                                                                   | 70                                      | 2 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                                                                                                                         | 4.753                       | 46.3                        | 511.2                       | .9924                                                     | 1.246                                                                                                | 1.051                                   | 286                  |
| 2                                                                                                                         | 4.753                       | 72.3                        | 523.2                       | .9924                                                     | 1.246                                                                                                | 1.053                                   | 447                  |
| 3                                                                                                                         | 4.753                       | 114.3                       | 533.2                       | .9905                                                     | 1.246                                                                                                | 1.054                                   | 707                  |
| 4                                                                                                                         | 4.753                       | 175.9                       | 543.2                       | .9905                                                     | 1.246                                                                                                | 1.054                                   | 1,088                |
| 5.                                                                                                                        |                             |                             |                             |                                                           |                                                                                                      |                                         |                      |
| NO.                                                                                                                       | F <sub>r</sub>              | Temp. °R                    | T <sub>r</sub>              | Z                                                         | Gas Liquid Hydrocarbon Ratio 15.24 Mcf/bbl.                                                          |                                         |                      |
| 1.                                                                                                                        | .76                         | 528                         | 1.41                        | .905                                                      | A.P.I. Gravity of Liquid Hydrocarbons 61 Deg.                                                        |                                         |                      |
| 2.                                                                                                                        | .78                         | 528                         | 1.41                        | .902                                                      | Specific Gravity Separator Gas .644 X X X X X X X X                                                  |                                         |                      |
| 3.                                                                                                                        | .80                         | 530                         | 1.42                        | .901                                                      | Specific Gravity Flowing Fluid X X X X X                                                             |                                         |                      |
| 4.                                                                                                                        | .81                         | 530                         | 1.42                        | .900                                                      | Critical Pressure P.S.I.A. P.S.I.A.                                                                  |                                         |                      |
| 5.                                                                                                                        |                             |                             |                             |                                                           | Critical Temperature R R                                                                             |                                         |                      |
| P <sub>c</sub> 3360.2 P <sub>c</sub> <sup>2</sup> 11,291                                                                  |                             |                             |                             |                                                           |                                                                                                      |                                         |                      |
| NO.                                                                                                                       | P <sub>t</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) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.540$ (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.876$ |                                         |                      |
| 1                                                                                                                         |                             | 3273.2                      | 10714                       | 577                                                       |                                                                                                      |                                         |                      |
| 2                                                                                                                         |                             | 3193.2                      | 10197                       | 1094                                                      |                                                                                                      |                                         |                      |
| 3                                                                                                                         |                             | 3010.2                      | 9061                        | 2230                                                      |                                                                                                      |                                         |                      |
| 4                                                                                                                         |                             | 2616.2                      | 6845                        | 4446                                                      | AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,041$                                       |                                         |                      |
| 5                                                                                                                         |                             |                             |                             |                                                           |                                                                                                      |                                         |                      |
| Absolute Open Flow 2,041 Mcfd @ 15.025                                                                                    |                             |                             |                             |                                                           | Angle of Slope 56%                                                                                   |                                         | Slope, n 675         |
| Remarks: P <sub>f</sub> Substituted for P <sub>w</sub> Measured with Amerada RPG-3 Instrument @ 10,384'                   |                             |                             |                             |                                                           |                                                                                                      |                                         |                      |
| Approved By Commission:                                                                                                   |                             | Conducted By:<br>J. Spruell |                             | Calculated By:<br>Massey                                  |                                                                                                      | Checked By:                             |                      |