

NEW MEXICO OIL CONSERVATION COMMISSION  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122  
Revised 9-1-65

**RECEIVED**

|                                                                                                                           |                  |                                   |                                      |                                      |                           |                                       |                 |
|---------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------|--------------------------------------|--------------------------------------|---------------------------|---------------------------------------|-----------------|
| Type Test<br><input type="checkbox"/> Initial <input checked="" type="checkbox"/> Annual <input type="checkbox"/> Special |                  |                                   |                                      | Test Date<br>4-25-73                 |                           | MAY 1 1973                            |                 |
| Company<br>The Superior Oil Company                                                                                       |                  |                                   |                                      | Connection<br>Llano, Inc. - 1-31-73  |                           | O. C. C.<br>ARTESIA, OFFICE           |                 |
| Pool Undesignated<br>South Carlsbad (Morrow)                                                                              |                  |                                   |                                      | Formation<br>Morrow                  |                           | Unit                                  |                 |
| Completion Date<br>12-30-72                                                                                               |                  | Total Depth<br>11915              |                                      | Plug Back TD<br>11825                |                           | Elevation<br>KB: 3196                 |                 |
| Farm or Lease Name<br>Ryan Com                                                                                            |                  | Well No.<br>1                     |                                      | Unit Sec. Twp. Rge.<br>D 5 23-S 27-E |                           |                                       |                 |
| Csg. Size<br>7"                                                                                                           | Wt.<br>26# & 23# | Set At<br>11915                   | Perforations:<br>From 11750 To 11760 |                                      |                           |                                       |                 |
| Tbg. Size<br>2-7/8                                                                                                        | Wt.<br>6.5       | Set At<br>11638                   | Perforations:<br>From To             |                                      |                           |                                       |                 |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Dual - G.G.                                                    |                  |                                   |                                      | Packer Set At<br>11610               |                           | County<br>Eddy                        |                 |
| Producing Thru<br>Tbg                                                                                                     |                  | Reservoir Temp. °F<br>180 @ 11760 |                                      | Mean Annual Temp. °F<br>60° F        |                           | Baro. Press. - P <sub>a</sub><br>13.2 |                 |
| State<br>New Mexico                                                                                                       |                  |                                   |                                      |                                      |                           |                                       |                 |
| L<br>11638                                                                                                                | H<br>11638       | Gg<br>.595                        | % CO <sub>2</sub><br>---             | % N <sub>2</sub><br>---              | % H <sub>2</sub> S<br>--- | Prover<br>---                         | Meter Run<br>3" |
|                                                                                                                           |                  |                                   |                                      |                                      |                           | Taps<br>Flange                        |                 |

  

| 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        |                  |   |              |                 |                      |             | 3603            | 60          | Pkr             | --               |              |
| 1.        | 3 x 1.00         |   |              | 563             | 3.8                  | 70          | 3457            | 60          | --              | --               | 1 hr         |
| 2.        | 3 x 1.00         |   |              | 563             | 9.5                  | 75          | 3302            | 60          | --              | --               | 1 hr 40 min. |
| 3.        | 3 x 1.00         |   |              | 563             | 15.0                 | 73          | 3156            | 60          | --              | --               | 1 hr 20 min. |
| 4.        | 3 x 1.00         |   |              | 557             | 20.5                 | 66          | 2980            | 60          | --              | --               | 1 hr 30 min. |
| 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>pv</sub> | Rate of Flow Q, Mc/d |
| 1                         | 4.789                 | 46.793           | 576.2                   | .9905                            | 1.296                         | 1.045                                   | 300.6                |
| 2                         | 4.789                 | 73.986           | 576.2                   | .9859                            | 1.296                         | 1.044                                   | 472.6                |
| 3                         | 4.789                 | 92.968           | 576.2                   | .9877                            | 1.296                         | 1.044                                   | 594.9                |
| 4                         | 4.789                 | 108.116          | 570.2                   | .9943                            | 1.296                         | 1.045                                   | 697.2                |
| 5                         |                       |                  |                         |                                  |                               |                                         |                      |

  

|     |                |          |                |      |                                       |               |
|-----|----------------|----------|----------------|------|---------------------------------------|---------------|
| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio          | 700 Mc/d/bbl. |
| 1.  | .86            | 530      | 1.50           | .916 | A.P.I. Gravity of Liquid Hydrocarbons | 51.8 Deg.     |
| 2.  | .86            | 535      | 1.51           | .917 | Specific Gravity Separator Gas        | .595          |
| 3.  | .86            | 533      | 1.51           | .917 | Specific Gravity Flowing Fluid        | X X X X X     |
| 4.  | .85            | 526      | 1.49           | .915 | Critical Pressure                     | 672 P.S.I.A.  |
| 5.  |                |          |                |      | Critical Temperature                  | 354 R         |

  

|     |                             |                |                             |                                                           |                                           |                                                           |
|-----|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------|
| 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) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.187$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.95$ |
| 1   | 3451.2                      | 11910.8        | 1166.1                      |                                                           |                                           |                                                           |
| 2   | 3317.2                      | 11003.8        | 2073.1                      |                                                           |                                           |                                                           |
| 3   | 3154.2                      | 9949.0         | 3127.9                      |                                                           |                                           |                                                           |
| 4   | 2996.2                      | 8977.2         | 4099.7                      |                                                           |                                           |                                                           |
| 5   |                             |                |                             |                                                           |                                           |                                                           |

  

|                                       |  |                                |  |                                 |  |               |  |
|---------------------------------------|--|--------------------------------|--|---------------------------------|--|---------------|--|
| Absolute Open Flow 1360 Mc/d @ 15.025 |  |                                |  | Angle of Slope θ                |  | Slope, n .576 |  |
| Remarks:                              |  |                                |  |                                 |  |               |  |
|                                       |  |                                |  |                                 |  |               |  |
| Approved By Commission:               |  | Conducted By:<br>J. C. Willner |  | Calculated By:<br>J. C. Willner |  | Checked By:   |  |