

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

Form C-122  
Revised 9-1-65

RECEIVED

2-122

|                                                                                                                           |  |                                   |  |                        |  |                                      |  |
|---------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------|--|------------------------|--|--------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                   |  | Test Date<br>8-22-74   |  | SEP 03 1974                          |  |
| Company<br>Cities Service Oil Company                                                                                     |  |                                   |  | Correction<br>None     |  | O. C. C.<br>ARTESIA, OFFICE          |  |
| Pool<br>La Huerta                                                                                                         |  |                                   |  | Formation<br>Morrow    |  | Unit                                 |  |
| Completion Date<br>8/22/74                                                                                                |  | Total Depth<br>11750              |  | Plug Back TD<br>11703  |  | Elevation<br>3227 ft.                |  |
| Csq. Size<br>5"                                                                                                           |  | Wt.<br>18#                        |  | Set At<br>11749        |  | Perforations:<br>From 11382 To 11411 |  |
| Tbg. Size<br>2 7/8                                                                                                        |  | Wt.<br>4.7 & 6.5                  |  | Set At<br>11279        |  | Perforations:<br>From open To ended  |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                         |  |                                   |  | Packer Set At<br>11248 |  | Well No.<br>1                        |  |
| Producing Thru<br>Tbg.                                                                                                    |  | Reservoir Temp. °F<br>188 @ 11427 |  | Mean Annual Temp. °F   |  | State<br>New Mexico                  |  |
| L<br>13852 *                                                                                                              |  | H<br>.589                         |  | % CO <sub>2</sub>      |  | % H <sub>2</sub> S                   |  |
| Prover                                                                                                                    |  | Meter Run<br>4"                   |  | Taps<br>FLR.           |  |                                      |  |

| 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        |                  |   |              |                 |                      |          | 3742            |          |                 |          | 40 hr.           |
| 1.        | 4                | x | 2.50         | 600             | 13.0                 | 75       | 3345            |          |                 |          | 1 hr.            |
| 2.        | 4                | x | 2.50         | 600             | 18.2                 | 73       | 3195            |          |                 |          | 45 Min.          |
| 3.        | 4                | x | 2.50         | 615             | 27.0                 | 70       | 2969            |          |                 |          | 1 hr.            |
| 4.        | 4                | x | 2.50         | 595             | 37.5                 | 65       | 2758            |          |                 |          | 1 hr.            |
| 5.        |                  |   |              |                 |                      |          |                 |          |                 |          |                  |

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                      |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor FL | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | 32.64                 | 89.28            | 613.2                   | .9859                | 1.303                         | 1.047                                   | 3920                 |
| 2                         | 32.64                 | 105.64           | 613.2                   | .9877                | 1.303                         | 1.047                                   | 4646                 |
| 3                         | 32.64                 | 130.24           | 628.2                   | .9905                | 1.303                         | 1.049                                   | 5755                 |
| 4                         | 32.64                 | 151.02           | 608.2                   | .9952                | 1.303                         | 1.051                                   | 6718                 |
| 5                         |                       |                  |                         |                      |                               |                                         |                      |

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.      |
|-----|----------------|----------|----------------|------|--------------------------------------------------|
| 1   | .91            | 535      | 1.51           | .912 | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg. |
| 2   | .91            | 533      | 1.51           | .912 | Specific Gravity Separator Gas _____             |
| 3   | .93            | 530      | 1.50           | .908 | Specific Gravity Flowing Fluid _____             |
| 4   | .91            | 525      | 1.48           | .905 | Critical Pressure _____ P.S.I.A.                 |
| 5   |                |          |                |      | Critical Temperature _____ R                     |

|                                                 |                |                |                             |                                                           |  |                                                            |  |
|-------------------------------------------------|----------------|----------------|-----------------------------|-----------------------------------------------------------|--|------------------------------------------------------------|--|
| P <sub>c</sub> 3755.2    P <sub>w</sub> 14101.5 |                |                |                             | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.387$                 |  | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.035$ |  |
| NO.                                             | P <sub>r</sub> | 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                                               |                | 3334.5         | 11118.9                     | 2982.6                                                    |  |                                                            |  |
| 2                                               |                | 5210.8         | 10309.2                     | 3792.3                                                    |  |                                                            |  |
| 3                                               |                | 3025.9         | 9156.1                      | 4945.5                                                    |  |                                                            |  |
| 4                                               |                | 2852.4         | 8193.3                      | 5908.2                                                    |  |                                                            |  |
| 5                                               |                |                |                             |                                                           |  |                                                            |  |

|                                                                                                                   |  |                             |  |                              |  |                                   |  |
|-------------------------------------------------------------------------------------------------------------------|--|-----------------------------|--|------------------------------|--|-----------------------------------|--|
| Absolute Open Flow 13,674 Mcfd @ 15.025                                                                           |  |                             |  | Angle of Slope 50.75°        |  | Slope, n 817                      |  |
| Remarks: * Equivalent length figured for 2.441 ID. Flow string consists of 1348 ft.<br>No fluid made during test. |  |                             |  |                              |  |                                   |  |
| Approved by Commission:                                                                                           |  | Conducted By:<br>Rick Pagan |  | Calculated By:<br>Rick Pagan |  | Checked By:<br><i>[Signature]</i> |  |