

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

RECEIVED

JUN 1 1976

|                                                                                                                        |             |                                    |                           |                                                                  |                           |                                                        |                 |                                             |             |
|------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------|---------------------------|------------------------------------------------------------------|---------------------------|--------------------------------------------------------|-----------------|---------------------------------------------|-------------|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |             |                                    |                           |                                                                  |                           | Test Date<br>May 21, 1976                              |                 | <b>O. C. C.</b><br><b>ARTESIA, OFFICE</b>   |             |
| Company<br><b>CITIES SERVICE OIL COMPANY</b>                                                                           |             |                                    |                           |                                                                  |                           | Connection<br><b>TO AIR</b>                            |                 |                                             |             |
| Pool<br><b>North BURTON FLAT Wolfcamp</b>                                                                              |             |                                    |                           |                                                                  |                           | Formation<br><b>Upper &amp; Lower Canyon Limestone</b> |                 | Unit                                        |             |
| Completion Date<br>May 15, 1976                                                                                        |             | Total Depth<br>11,425'             |                           | Plug Back TD<br>10,550'                                          |                           | Elevation<br>3252.8 gr.                                |                 | Farm or Lease Name<br>State "CT" <b>COM</b> |             |
| Cog. Size<br>5 1/2"                                                                                                    | Wt.<br>17#  | d                                  | Set At<br>11,301'         | Perforations:<br>From 9499' To 9509' we<br>9825' To 9864' Canyon |                           | Well No.<br>1                                          |                 |                                             |             |
| Teg. Size<br>2 7/8"                                                                                                    | Wt.<br>6.5# | d                                  | Set At<br>9831'           | Perforations:<br>From Open To Ended                              |                           | Unit<br>1                                              |                 | Sec.<br>16                                  | Twp.<br>20S |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Single</b>                                               |             |                                    |                           |                                                                  |                           | Packer Set At<br>9429' & 9800'                         |                 | County<br>Eddy                              |             |
| Producing Thru<br>Tubing                                                                                               |             | Reservoir Temp. °F<br>178° @ 9504' |                           | Mean Annual Temp. °F<br>60.0°                                    |                           | Baro. Press. - P <sub>a</sub><br>13.2                  |                 | State<br>New Mexico                         |             |
| L<br>9504'                                                                                                             | H<br>9504'  | G <sub>g</sub><br>0.699            | % CO <sub>2</sub><br>.127 | % N <sub>2</sub><br>1.461                                        | % H <sub>2</sub> S<br>-0- | Prover<br>-----                                        | Meter Run<br>4" | 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        |                  |   |              |                 |                      |             | 1913            |             | Packer          | Choke            | 66 Hrs.  |
| 1.        | 4" X 1.250"      |   |              | 500             | 47                   | 78          | 1182            | 85          |                 | 16/64"           | 120 Min. |
| 2.        | 4" X 1.250"      |   |              | 500             | 24                   | 92          | 1151            | 86          |                 | 14/64"           | 60 Min.  |
| 3.        | 4" X 1.250"      |   |              | 500             | 22                   | 93          | 1182            | 88          |                 | 12/64"           | 60 Min.  |
| 4.        | 4" X 1.250"      |   |              | 500             | 8                    | 88          | 1226            | 88          |                 | 10/64"           | 60 Min.  |
| 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                         | 7.469                 | 155.31           | 513.2                   | .9831                 | 1.196                         | 1.053                                   | 1436                 |
| 2                         | 7.469                 | 110.98           | 513.2                   | .9706                 | 1.196                         | 1.049                                   | 1009                 |
| 3                         | 7.469                 | 106.26           | 513.2                   | .9697                 | 1.196                         | 1.048                                   | 965                  |
| 4                         | 7.469                 | 64.07            | 513.2                   | .9741                 | 1.196                         | 1.051                                   | 586                  |
| 5.                        |                       |                  |                         |                       |                               |                                         |                      |

  

|     |                |          |                |      |                              |                                       |                                |                                |                   |                      |
|-----|----------------|----------|----------------|------|------------------------------|---------------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|
| NO. | P <sub>r</sub> | Temp. °F | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio | A.P.I. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature |
| 1   | .77            | 538      | 1.39           | .902 | 4.116                        | 52.6 @ 60                             | .699                           | X X X X X                      | 669               | 388                  |
| 2   | .77            | 552      | 1.42           | .908 |                              |                                       |                                | X X X X X                      |                   |                      |
| 3   | .77            | 553      | 1.43           | .910 |                              |                                       |                                |                                |                   |                      |
| 4   | .77            | 548      | 1.41           | .905 |                              |                                       |                                |                                |                   |                      |
| 5   |                |          |                |      |                              |                                       |                                |                                |                   |                      |

  

|     |                |                |                             |                             |                                                           |                                           |                                                            |
|-----|----------------|----------------|-----------------------------|-----------------------------|-----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------|
| NO. | P <sub>f</sub> | P <sub>s</sub> | P <sub>f</sub> <sup>2</sup> | P <sub>s</sub> <sup>2</sup> | P <sub>f</sub> <sup>2</sup> - P <sub>s</sub> <sup>2</sup> | (1) $\frac{P_f^2}{P_f^2 - P_s^2} = 1.772$ | (2) $\left[ \frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1.772$ |
| 1   |                | 1271.2         | 1615.9                      | 2094.3                      |                                                           |                                           |                                                            |
| 2   |                | 1262.2         | 1593.1                      | 2117.1                      |                                                           |                                           |                                                            |
| 3   |                | 1281.6         | 1642.5                      | 2067.7                      |                                                           |                                           |                                                            |
| 4   |                | 1331.0         | 1771.6                      | 1938.6                      |                                                           |                                           |                                                            |
| 5   |                |                |                             |                             |                                                           |                                           |                                                            |

  

|                                                                        |  |                        |  |                      |  |                       |  |
|------------------------------------------------------------------------|--|------------------------|--|----------------------|--|-----------------------|--|
| Absolute Open Flow                                                     |  | 2544 Mcfd @ 15.025     |  | Angle of Slope @ 45° |  | Slope, n 1.00 Limited |  |
| Remarks: Bottom hole pressures measured with Kuster gauge @ 9504 feet. |  |                        |  |                      |  |                       |  |
|                                                                        |  |                        |  |                      |  |                       |  |
| Approved By Commission:                                                |  | Conducted By: D. Tyson |  | Calculated By: R.R.  |  | Checked By: J.W.W.    |  |