

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

Form C-122-152  
Revised 9-1-65

**RECEIVED**

|                                                                                                                         |                                   |                                          |                                   |                                                    |                                  |                                              |                        |                                            |  |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------|----------------------------------------------------|----------------------------------|----------------------------------------------|------------------------|--------------------------------------------|--|
| Type Test: <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                                   |                                          |                                   |                                                    |                                  | Test Date<br><b>4-18-75</b>                  |                        | <b>MAY 28 1975</b>                         |  |
| Company<br><b>Cities Service Oil Company</b>                                                                            |                                   |                                          |                                   | Connection<br><b>To Air EPG</b>                    |                                  |                                              |                        |                                            |  |
| Pool<br><b>Burton Flat Snow</b>                                                                                         |                                   |                                          |                                   | Formation<br><b>Morrow</b>                         |                                  |                                              |                        | Unit<br><b>O. C. C. ARTESIA, OFFICE</b>    |  |
| Completion Date<br><b>4-18-75</b>                                                                                       |                                   | Total Depth<br><b>11,447</b>             |                                   | Plug Back TD<br><b>11,386</b>                      |                                  | Elevation<br><b>3571 ft.</b>                 |                        | Farm or Lease Name<br><b>Government AB</b> |  |
| Csg. Size<br><b>5 1/2</b>                                                                                               | 17# 0-10339<br><b>20# to T.D.</b> | 4.892<br><b>4.778</b>                    | Set At<br><b>11447</b>            | Perforations:<br>From <b>11093</b> To <b>11319</b> |                                  | Well No.<br><b>1</b>                         |                        |                                            |  |
| Tbg. Size<br><b>2 7/8</b>                                                                                               | Wt.<br><b>6.4#</b>                | d<br><b>2.441</b>                        | Set At<br><b>10949</b>            | Perforations:<br>From <b>Open</b> To <b>Ended</b>  |                                  | Unit Sec. Twp. Rge.<br><b>K 11 20 S 28 E</b> |                        |                                            |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br><b>Single</b>                                                |                                   |                                          |                                   | Packer Set At<br><b>10945</b>                      |                                  | County<br><b>Eddy</b>                        |                        |                                            |  |
| Producing Thru                                                                                                          |                                   | Reservoir Temp. °F<br><b>186 @ 11206</b> |                                   | Mean Annual Temp. °F                               |                                  | Baro. Press. - P <sub>a</sub><br><b>13.2</b> |                        | State<br><b>New Mexico</b>                 |  |
| L<br><b>10949</b>                                                                                                       | H<br><b>10949</b>                 | Gg<br><b>0.6207</b>                      | % CO <sub>2</sub><br><b>0.822</b> | % N <sub>2</sub><br><b>0.485</b>                   | % H <sub>2</sub> S<br><b>-0-</b> | Prover                                       | Meter Run<br><b>4"</b> | Taps<br><b>Flange</b>                      |  |

  

| 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        |                  |   |              | L-10 Readings   |                      |          | 3267.0          |          | Packer          | Choke    |                  |
| 1.        | 4" x 1.75        |   |              | 6.85            | 1.5                  | 70       | 3011.0          | 60       |                 | 8/64"    | 60 min.          |
| 2.        | 4" x 1.75        |   |              | 6.90            | 2.75                 | 63       | 2727.0          | 61       |                 | 10/64"   | 60 min.          |
| 3.        | 4" x 1.75        |   |              | 6.90            | 4.25                 | 61       | 2387.0          | 61       |                 | 12/64"   | 60 min.          |
| 4.        | 4" x 1.75        |   |              | 6.95            | 5.60                 | 62       | 1985.0          | 63       |                 | 15/64"   | 60 min.          |
| 5.        |                  |   |              |                 |                      |          |                 |          |                 |          |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                   |                         |                       |                   |                             |                      |
|---------------------------|-----------------------|-------------------|-------------------------|-----------------------|-------------------|-----------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | L-10 Meter Factor | Pressure P <sub>m</sub> | Flow Temp. Factor Ft. | Gravity Factor Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
| 1                         | 14.93                 | 3.162             | 469.2                   | 0.9905                | 1.269             | 1.042                       | 635                  |
| 2                         | 14.93                 | 3.162             | 476.1                   | 0.9971                | 1.269             | 1.045                       | 1184                 |
| 3                         | 14.93                 | 3.162             | 476.1                   | 0.9990                | 1.269             | 1.045                       | 1834                 |
| 4                         | 14.93                 | 3.162             | 483.0                   | 0.9981                | 1.269             | 1.045                       | 2432                 |
| 5.                        |                       |                   |                         |                       |                   |                             |                      |

  

| NO. | P <sub>f</sub> | Temp. °R | T <sub>f</sub> | Z    | Gas Liquid Hydrocarbon Ratio <b>TSTM</b> Mcf/bbl.            |  |
|-----|----------------|----------|----------------|------|--------------------------------------------------------------|--|
| 1.  | 0.70           | 530      | 1.45           | .921 | A.P.I. Gravity of Liquid Hydrocarbons                        |  |
| 2.  | 0.71           | 523      | 1.43           | .916 | Specific Gravity Separator Gas <b>0.6207</b> X X X X X X X X |  |
| 3.  | 0.71           | 521      | 1.43           | .916 | Specific Gravity Flowing Fluid X X X X X                     |  |
| 4.  | 0.72           | 522      | 1.43           | .915 | Critical Pressure <b>671</b> P.S.I.A. P.S.I.A.               |  |
| 5.  |                |          |                |      | Critical Temperature <b>365</b> R R                          |  |

  

| NO. | 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> | $(1) \frac{P_f^2}{P_f^2 - P_s^2} = 1.6596$ $(2) \left[ \frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 1.5969$ $AOF = Q \left[ \frac{P_f^2}{P_f^2 - P_s^2} \right]^n = 3884$ |       |
|-----|-----------------------------|-----------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1   | 9146                        | 3928.2                      | 15431                                                     |                                                                                                                                                                      | 2481  |
| 2   | 7509                        | 3606.2                      | 13005                                                     |                                                                                                                                                                      | 4907  |
| 3   | 5761                        | 3180.2                      | 10114                                                     |                                                                                                                                                                      | 7798  |
| 4   | 3993                        | 2668.2                      | 7119                                                      |                                                                                                                                                                      | 10793 |
| 5   |                             |                             |                                                           |                                                                                                                                                                      |       |

  

|                                              |  |                             |                       |
|----------------------------------------------|--|-----------------------------|-----------------------|
| Absolute Open Flow <b>3884</b> Mcfd @ 15.025 |  | Angle of Slope <b>47.3°</b> | Slope, n <b>0.924</b> |
|----------------------------------------------|--|-----------------------------|-----------------------|

  

|                                                                               |  |
|-------------------------------------------------------------------------------|--|
| Remarks: <b>Bottom hole pressures measured with Amerada Gage @ 11206 feet</b> |  |
| <b>100" - 1000# L-10 Meter Range</b>                                          |  |

  

|                         |                                  |                                  |                                |
|-------------------------|----------------------------------|----------------------------------|--------------------------------|
| Approved By Commission: | Conducted By:<br><b>D. Tyson</b> | Calculated By:<br><b>R. West</b> | Checked By:<br><b>J. W. W.</b> |
|-------------------------|----------------------------------|----------------------------------|--------------------------------|