

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

copy 6-5  
Form C-122  
Revised 9-1-65  
12-13-2  
13.5.8

RECEIVED

DEC 10 1975

|                                                                                                                           |                   |                                    |                           |                             |                                        |                                       |                                      |
|---------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------|---------------------------|-----------------------------|----------------------------------------|---------------------------------------|--------------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                   |                                    |                           | Test Date<br>4-28-75        |                                        | DEC 10 1975                           |                                      |
| Company<br>Cities Service Oil Company                                                                                     |                   |                                    |                           | Connection<br>To Air        |                                        | O. C. C.<br>ARTERIA, OFFICE           |                                      |
| Pool<br>South Carlsbad                                                                                                    |                   |                                    |                           | Formation<br>Lower Morrow   |                                        | Unit                                  |                                      |
| Completion Date<br>April 18, 1975                                                                                         |                   | Total Depth<br>11,827              |                           | Plug Back TD<br>None        |                                        | Elevation                             |                                      |
| Farm or Lease Name<br>Tracy B                                                                                             |                   |                                    |                           | Well No.<br>1               |                                        |                                       |                                      |
| Csg. 5" 7"                                                                                                                | Wt. 17.00# 26.40# | d 4.892" 6.969"                    | 0-8540 ft. 8540-11824 ft. |                             | Perforations:<br>from 11,597 To 11,744 |                                       |                                      |
| Thg. Size 2 7/8"                                                                                                          | Wt. 6.40#         | d 2.441                            | Set At 11,540             |                             | Perforations:<br>From Open Ended       |                                       | Unit Sec. Twp. Rge.<br>1 18 22 S 27E |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                         |                   |                                    |                           | Packer Set At<br>11,540     |                                        | County<br>Eddy                        |                                      |
| Producing Thru<br>Tubing                                                                                                  |                   | Reservoir Temp. °F<br>194° 11,470' |                           | Mean Annual Temp. °F<br>60° |                                        | Baro. Press. - P <sub>g</sub><br>13.2 |                                      |
| State<br>New Mexico                                                                                                       |                   |                                    |                           |                             |                                        |                                       |                                      |
| L 11540                                                                                                                   | H 11540           | G <sub>g</sub> 0.5888              | % CO <sub>2</sub> 0.92    | % N <sub>2</sub> 0.88       | % H <sub>2</sub> S - 0-                | Prover                                | Meter Run 6" Taps 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        |                  |   |              |                 |                      |          | 3731.0          |          | Packer          | Choke    |                  |
| 1.        | 6" x 1.75"       |   |              | 690.0           | 7.5                  | 100      | 3379.0          | 73       |                 | 9/64"    | 60 min.          |
| 2.        | 6" x 1.75"       |   |              | 690.0           | 17.5                 | 78       | 3069.0          | 74       |                 | 12/64"   | 60 min.          |
| 3.        | 6" x 1.75"       |   |              | 690.0           | 28.0                 | 74       | 2812.0          | 74       |                 | 14/64"   | 60 min.          |
| 4.        | 6" x 1.75"       |   |              | 670.0           | 53.0                 | 80       | 2329.0          | 74       |                 | 18/64"   | 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                         | 14.61                 | 72.62            | 703.2                   | .9636                 | 1.303                         | 1.043                                   | 1392                 |
| 2                         | 14.61                 | 110.93           | 703.2                   | .9831                 | 1.303                         | 1.054                                   | 2188                 |
| 3                         | 14.61                 | 140.32           | 703.2                   | .9868                 | 1.303                         | 1.054                                   | 2778                 |
| 4                         | 14.61                 | 190.29           | 683.2                   | .9813                 | 1.303                         | 1.054                                   | 3747                 |
| 5.                        |                       |                  |                         |                       |                               |                                         |                      |

  

| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio TSTM Mcf/bbl. | A.P.I. Gravity of Liquid Hydrocarbons Deg. | Specific Gravity Separator Gas 0.5888 | Specific Gravity Flowing Fluid X X X X X | Critical Pressure 672 P.S.I.A. | Critical Temperature 350 R |
|-----|----------------|----------|----------------|------|--------------------------------------------|--------------------------------------------|---------------------------------------|------------------------------------------|--------------------------------|----------------------------|
| 1.  | 1.05           | 560      | 1.60           | .920 |                                            |                                            |                                       |                                          |                                |                            |
| 2.  | 1.05           | 538      | 1.54           | .900 |                                            |                                            |                                       |                                          |                                |                            |
| 3.  | 1.05           | 534      | 1.53           | .900 |                                            |                                            |                                       |                                          |                                |                            |
| 4.  | 1.02           | 540      | 1.54           | .900 |                                            |                                            |                                       |                                          |                                |                            |
| 5.  |                |          |                |      |                                            |                                            |                                       |                                          |                                |                            |

  

| P <sub>t</sub> 4734.2    P <sub>t</sub> <sup>2</sup> 22413 |                             |                |                             |                                                           |
|------------------------------------------------------------|-----------------------------|----------------|-----------------------------|-----------------------------------------------------------|
| NO.                                                        | P <sub>t</sub> <sup>2</sup> | P <sub>s</sub> | P <sub>s</sub> <sup>2</sup> | P <sub>t</sub> <sup>2</sup> - P <sub>s</sub> <sup>2</sup> |
| 1                                                          | 11507                       | 4340.2         | 18837                       | 3576                                                      |
| 2                                                          | 9500                        | 3991.2         | 15930                       | 6483                                                      |
| 3                                                          | 7982                        | 3690.2         | 13618                       | 8795                                                      |
| 4                                                          | 5486                        | 3184.2         | 10139                       | 12274                                                     |
| 5                                                          |                             |                |                             |                                                           |

  

$$(1) \frac{P_t^2}{P_t^2 - P_s^2} = \frac{1.8261}{1} = 1.8261$$

$$AOF = Q \left[ \frac{P_t^2}{P_t^2 - P_s^2} \right]^n = 6236$$

$$(2) \left[ \frac{P_t^2}{P_t^2 - P_s^2} \right]^n = \frac{1.6643}{1} = 1.6643$$

  

|                                                                   |  |                     |  |                    |  |
|-------------------------------------------------------------------|--|---------------------|--|--------------------|--|
| Absolute Open Flow 6236 Mcfd @ 15.025                             |  | Angle of Slope 0    |  | Slope, n           |  |
| Remarks: Bottom Hole Pressures measured with bomb at 11,470 feet. |  |                     |  |                    |  |
| Approved By Commission:                                           |  | Conducted By: Tyson |  | Checked By: J.W.W. |  |