

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

Form C-122  
Revised 9-1-65

|                                                                                                                |  |                                                      |  |                              |  |                                       |  |                                       |  |
|----------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|--|------------------------------|--|---------------------------------------|--|---------------------------------------|--|
| Type Test<br><input type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                                      |  |                              |  | Test Date<br>3-15-74                  |  |                                       |  |
| Company<br>PENROCK OIL CORPORATION                                                                             |  |                                                      |  |                              |  | Connection<br>TO AIR                  |  |                                       |  |
| Pool<br>ANTELOPE RIDGE                                                                                         |  |                                                      |  |                              |  | Formation<br>MORROW                   |  |                                       |  |
| Completion Date<br>1-24-74                                                                                     |  | Total Depth<br>14,060                                |  | Plug Back TD<br>13,918       |  | Elevation                             |  | Farm or Lease Name<br>MADERA FED. Com |  |
| Csg. Size 7 5/8" I.D.<br>5 1/2"                                                                                |  | Wt.<br>26.40                                         |  | d<br>12,099<br>11,666-14,060 |  | Perforations:<br>13524 To 13744       |  | Well No.<br>1                         |  |
| Tbg. Size<br>2 3/8                                                                                             |  | Wt.<br>4.70                                          |  | d<br>13,405                  |  | Perforations:<br>From To              |  | Unit Sec. Twp. Rge.<br>C 11 24S 34E   |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>SINGLE                                              |  |                                                      |  |                              |  | Packer Set At<br>13,405               |  | County<br>LEA                         |  |
| Producing Thru<br>TUBING                                                                                       |  | Reservoir Temp. °F<br>108 @ 4488<br>EST. 184 @ 13405 |  | Mean Annual Temp. °F<br>60   |  | Baro. Press. - P <sub>a</sub><br>13.2 |  | State<br>NEW MEXICO                   |  |
| L<br>13405                                                                                                     |  | H<br>13405                                           |  | G <sub>g</sub><br>0.604      |  | % CO <sub>2</sub><br>0.45             |  | % N <sub>2</sub><br>1.22              |  |
|                                                                                                                |  |                                                      |  |                              |  | % H <sub>2</sub> S<br>0.4GR/100       |  | Prover                                |  |
|                                                                                                                |  |                                                      |  |                              |  |                                       |  | Meter Run                             |  |
|                                                                                                                |  |                                                      |  |                              |  |                                       |  | Taps                                  |  |

  

| 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        |                  |   |              |                 |                      |          | 4259.0          |          | PACKER-CHOKE    |          |                  |
| 1.        | 3"               | x | 1.25"        | 555.0           | 3.5                  | 82       | 3527.0          | 69       |                 | 7/64"    | 1.0 HR.          |
| 2.        | 3"               | x | 1.25"        | 555.0           | 10.5                 | 80       | 2897.0          | 69       |                 | 9/64"    | 1.0 HR.          |
| 3.        | 3"               | x | 1.25"        | 560.0           | 24.0                 | 78       | 2270.0          | 70       |                 | 11/64"   | 1.0 HR.          |
| 4.        | 3"               | x | 1.25"        | 560.0           | 26.0                 | 78       | 1652.0          | 70       |                 | 13/64"   | 1.0 HR.          |
| 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 Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
| 1                         | 7.577                 | 44.49            | 568.2                   | .9795                 | 1.287             | 1.041                       | 443                  |
| 2                         | 7.577                 | 77.24            | 568.2                   | .9813                 | 1.287             | 1.043                       | 771                  |
| 3                         | 7.577                 | 117.29           | 573.2                   | .9831                 | 1.287             | 1.043                       | 1173                 |
| 4                         | 7.577                 | 122.08           | 573.2                   | .9831                 | 1.287             | 1.043                       | 1221                 |
| 5.                        |                       |                  |                         |                       |                   |                             |                      |

  

|     |                |          |                |      |                                       |                 |
|-----|----------------|----------|----------------|------|---------------------------------------|-----------------|
| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio          | 19.316 Mcf/bbl. |
| 1   | .85            | 542      | 1.53           | .922 | A.P.I. Gravity of Liquid Hydrocarbons | 45.9 Deg.       |
| 2.  | .85            | 540      | 1.52           | .920 | Specific Gravity Separator Gas        | 0.604           |
| 3.  | .86            | 538      | 1.52           | .919 | Specific Gravity Flowing Fluid        | X X X X X       |
| 4.  | .86            | 538      | 1.52           | .919 | Critical Pressure                     | 670 P.S.I.A.    |
| 5.  |                |          |                |      | Critical Temperature                  | 355 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) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.1791$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1791$ |
| 1   | 12533                       |                |                             | 5719                                                      |                                            |                                                             |
| 2   | 8469                        |                |                             | 9783                                                      |                                            |                                                             |
| 3   | 5213                        | 2295.1         | 5267                        | 13039                                                     |                                            |                                                             |
| 4   | 2773                        |                |                             | 15479                                                     |                                            |                                                             |
| 5   |                             |                |                             |                                                           |                                            |                                                             |

  

|                    |  |  |  |                    |                         |          |
|--------------------|--|--|--|--------------------|-------------------------|----------|
| Absolute Open Flow |  |  |  | 1440 Mcfd @ 15.025 | Angle of Slope $\theta$ | Slope, n |
|--------------------|--|--|--|--------------------|-------------------------|----------|

  

|                                                                                                                                        |                                   |                |             |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------|-------------|
| Remarks:<br>POINT ALIGNMENT BUT BARELY IN EXCESS OF 1.000<br>CALCULATED FRICTION ON 3RD RATE OF FLOW NEGLIGIBLE - USED PT FOR PLOTTING |                                   |                |             |
| Approved By Commission:                                                                                                                | Conducted By:<br>West Engineering | Calculated By: | Checked By: |