

**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 checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |            |                         |                                           | Test Date<br>6/16/77                  |                           |
| Company<br>Atlantic Richfield Company                                                                                     |            |                         | Connection<br>El Paso Natural Gas Company |                                       |                           |
| Pool<br>Jalmat                                                                                                            |            |                         | Formation<br>Jalmat                       |                                       |                           |
| Completion Date<br>6/1/77                                                                                                 |            | Total Depth<br>3656     |                                           | Elevation<br>3261                     |                           |
| Form or Lease Name<br>W H Harrison D WN                                                                                   |            |                         | Unit<br>N                                 |                                       |                           |
| Csq. Size<br>4 1/2                                                                                                        | Wt.<br>9.5 | d<br>4.09               | Set At<br>3656                            | Perforations:<br>From 2951 To 3259    |                           |
| Tbg. Size<br>2 3/8                                                                                                        | Wt.<br>4.7 | d<br>1.995              | Set At<br>3195                            | Perforations:<br>From open To ended   |                           |
| Type Well - Single - Brodenhead - G.G. or G.O. Multiple<br>Single                                                         |            |                         |                                           | Packer Set At<br>None                 |                           |
| Producing thru<br>Tbg.                                                                                                    |            | Reservoir Temp. °F<br>@ |                                           | Baro. Press. - P <sub>a</sub><br>13.2 |                           |
| Mean Annual Temp. °F<br>60°                                                                                               |            | County<br>Lea           |                                           | State<br>New Mexico                   |                           |
| L<br>3195                                                                                                                 | H<br>3195  | G <sub>g</sub><br>.648  | % CO <sub>2</sub><br>---                  | % N <sub>2</sub><br>---               | % H <sub>2</sub> S<br>--- |
| Prover<br>3195                                                                                                            |            |                         | Meter Run<br>4                            |                                       |                           |
| Taps<br>Flg.                                                                                                              |            |                         |                                           |                                       |                           |

  

| 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. |                  |
| SI        |                  |   |              |                 |                      |             |                 |             |                 |                  |
| 1.        | 4                | x | 1.750        | 8               | 4.00                 | 78          | 238             |             | 238             |                  |
| 2.        | 4                | x | 1.750        | 9               | 14.44                | 75          | 230             |             | 230             |                  |
| 3.        | 4                | x | 1.750        | 10              | 30.25                | 72          | 219             |             | 220             |                  |
| 4.        | 4                | x | 1.750        | 11              | 54.76                | 72          | 197             |             | 205             |                  |
| 5.        |                  |   |              |                 |                      |             | 160             |             | 182             |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | 14.93                 | 9.21             | 21.2                    | .9831                            | 1.242                         | Nil                                     | 168                  |
| 2                         | 14.93                 | 17.90            | 22.2                    | .9859                            | 1.242                         | Nil                                     | 327                  |
| 3                         | 14.93                 | 26.49            | 23.2                    | .9887                            | 1.242                         | Nil                                     | 486                  |
| 4                         | 14.93                 | 36.40            | 24.2                    | .9887                            | 1.242                         | Nil                                     | 667                  |
| 5                         |                       |                  |                         |                                  |                               |                                         |                      |

  

|     |                |          |                |     |                                       |              |            |
|-----|----------------|----------|----------------|-----|---------------------------------------|--------------|------------|
| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z   | Gas Liquid Hydrocarbon Ratio          | Dry Mcf/bbl. |            |
| 1.  | .03            | 538      | 1.43           | Nil | A.P.I. Gravity of Liquid Hydrocarbons | Deq.         |            |
| 2.  | .03            | 535      | 1.43           | Nil | Specific Gravity Separator Gas        | .648         | XXXXXXXXXX |
| 3.  | .03            | 532      | 1.42           | Nil | Specific Gravity Flowing Fluid        | XXXXXX       |            |
| 4.  | .04            | 532      | 1.42           | Nil | Critical Pressure                     | 670          | P.S.I.A.   |
| 5.  |                |          |                |     | Critical Temperature                  | 375          | R          |

  

|                |                             |                             |                             |
|----------------|-----------------------------|-----------------------------|-----------------------------|
| P <sub>c</sub> | 251.2                       | P <sub>c</sub> <sup>2</sup> | 63.10                       |
| NO.            | P <sub>r</sub> <sup>2</sup> | P <sub>w</sub>              | P <sub>w</sub> <sup>2</sup> |
| 1              |                             | 243.2                       | 59.15                       |
| 2              |                             | 233.2                       | 54.38                       |
| 3              |                             | 218.2                       | 47.61                       |
| 4              |                             | 195.2                       | 38.10                       |
| 5              |                             |                             |                             |

  

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.524$$

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1,250$$

$$(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.873$$

  

|                    |       |                |                  |    |          |      |
|--------------------|-------|----------------|------------------|----|----------|------|
| Absolute Open Flow | 1,250 | Mcf/d @ 15.025 | Angle of Slope ° | 56 | Slope, n | .678 |
| Remarks:           |       |                |                  |    |          |      |

  

|                        |                             |                              |                            |
|------------------------|-----------------------------|------------------------------|----------------------------|
| Approved By Commission | Conducted By:<br>Rick Pagan | Calculated By:<br>Rick Pagan | Checked By:<br>L. C. Hudry |
|------------------------|-----------------------------|------------------------------|----------------------------|

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11/21/77

OIL CONSERVATION COMM.  
HOBBS, N M