

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

Form O-122  
 Revised 9-1-65

|                                                                                                                         |  |                                          |  |
|-------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|--|
| <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input checked="" type="checkbox"/> Special |  | Test Date<br>4/24/81                     |  |
| Producing Company<br>Arctic Production Company                                                                          |  | Connection<br>Southern Union Gas Company |  |
| Well Name<br>The Dome                                                                                                   |  | Formation<br>Dakota                      |  |
| Completion Date<br>12/81                                                                                                |  | Total Depth<br>2799                      |  |
| Plug Back TD<br>2760                                                                                                    |  | Elevation<br>6230                        |  |
| Perforations:<br>From 2564 To 2705                                                                                      |  | Form or Lease Name<br>Ute Indians "A"    |  |
| Well No.<br>20                                                                                                          |  | Unit<br>J 2 31N 14W                      |  |
| Type of Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                    |  | Packer Set At<br>None                    |  |
| Counting Time<br>10.5                                                                                                   |  | Reservoir Temp. °F<br>4.052              |  |
| Mean Annual Temp. °F<br>2799                                                                                            |  | Burn. Press. - P <sub>2</sub><br>2722    |  |
| State<br>New Mexico                                                                                                     |  | County<br>San Juan                       |  |
| L<br>1.375                                                                                                              |  | H<br>4.7                                 |  |
| G <sub>q</sub><br>1.995                                                                                                 |  | % CO <sub>2</sub><br>2722                |  |
| % H <sub>2</sub><br>2722                                                                                                |  | Prover<br>2722                           |  |
| Meter Run<br>2722                                                                                                       |  | Taps<br>2722                             |  |

  

| FLOW DATA      |              |                 |                      |          |                 | TUBING DATA |                 | CASING DATA |        | Duration of Flow |
|----------------|--------------|-----------------|----------------------|----------|-----------------|-------------|-----------------|-------------|--------|------------------|
| Flow Line Size | 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    |        |                  |
| 12 Days        | .750         |                 |                      |          | 675             |             | 708             |             |        |                  |
| 1.375          |              |                 |                      |          | 78              |             | 218             |             | 3 Hrs. |                  |
|                |              |                 |                      |          |                 |             |                 |             |        |                  |
|                |              |                 |                      |          |                 |             |                 |             |        |                  |
|                |              |                 |                      |          |                 |             |                 |             |        |                  |
|                |              |                 |                      |          |                 |             |                 |             |        |                  |

  

| RATE OF FLOW CALCULATIONS |                  |                         |                      |                               |                                         |                       |  |
|---------------------------|------------------|-------------------------|----------------------|-------------------------------|-----------------------------------------|-----------------------|--|
| Coefficient (24 Hour)     | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Fl | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcf/D |  |
| 12.365                    |                  | 90                      | 1.000                | .9258                         | 1.010                                   | 1041                  |  |
|                           |                  |                         |                      |                               |                                         |                       |  |
|                           |                  |                         |                      |                               |                                         |                       |  |
|                           |                  |                         |                      |                               |                                         |                       |  |
|                           |                  |                         |                      |                               |                                         |                       |  |

  

| P <sub>2</sub> | Temp. °R | T <sub>2</sub> | Z | Gas Liquid Hydrocarbon Ratio | A.P.L. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure P.S.I.A. | Critical Temperature °R |
|----------------|----------|----------------|---|------------------------------|---------------------------------------|--------------------------------|--------------------------------|----------------------------|-------------------------|
| 723            | 518.400  |                |   |                              |                                       |                                |                                |                            |                         |
|                |          |                |   |                              |                                       |                                |                                |                            |                         |
|                |          |                |   |                              |                                       |                                |                                |                            |                         |
|                |          |                |   |                              |                                       |                                |                                |                            |                         |
|                |          |                |   |                              |                                       |                                |                                |                            |                         |

  

|                                                                            |                                                                                             |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| $(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{1.1136}{1.1136 - 0.230} = 1.1136$ | $(2) \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{1.0840}{1.1136 - 0.230} = 1.0840$ |
| $AOI = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1129$              |                                                                                             |

  

|                                     |                        |
|-------------------------------------|------------------------|
| Flowing Rate<br>1129 Mcf/D @ 15.025 | Angle of Slope θ<br>75 |
| Flowed dry.                         |                        |

  

|                     |                                |                             |
|---------------------|--------------------------------|-----------------------------|
| Conducted By<br>JJB | Calculated By<br>J. J. BARRETT | Checked By<br>J. J. BARRETT |
|---------------------|--------------------------------|-----------------------------|