

## MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

|                                                                                                                           |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|-----------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------------------------|--------------|--------------------|-------------|------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                             | Test Date<br>6-29-83           |                             | <b>RECEIVED</b>                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| Company<br>Dugan Production Corp.                                                                                         |                             | Connection                     |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| Pool<br>WAW Fruitland P.C.                                                                                                |                             | Formation<br>Pictured Cliffs   |                             | Unit                                                      |                                                                                                        |                                               |                         |              |                    |             |                        |
| Completion Date<br>6-22-83                                                                                                |                             | Total Depth<br>1295'           |                             | Plug Back TD<br>1275'                                     |                                                                                                        |                                               |                         |              |                    |             |                        |
| Elevation<br>5912'                                                                                                        |                             | Farm or Lease Name<br>Kennebec |                             | Well No.<br>1                                             |                                                                                                        |                                               |                         |              |                    |             |                        |
| Csg. Size<br>2-7/8"                                                                                                       |                             | Wt.<br>6.4#                    |                             | Set At<br>1294'                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| Perforations:<br>From 1199' To 1210'                                                                                      |                             | Perforations:<br>From To       |                             | Unit<br>0 32 27N 12W                                      |                                                                                                        |                                               |                         |              |                    |             |                        |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single - Gas                                                   |                             | Packer Set At                  |                             | County<br>San Juan                                        |                                                                                                        |                                               |                         |              |                    |             |                        |
| Producing Thru<br>Casing                                                                                                  |                             | Reservoir Temp. °F<br>#        |                             | Mean Annual Temp. °F                                      |                                                                                                        |                                               |                         |              |                    |             |                        |
| Baro. Press. - P <sub>a</sub>                                                                                             |                             | State<br>New Mexico            |                             | Prover                                                    |                                                                                                        |                                               |                         |              |                    |             |                        |
| L                                                                                                                         |                             | H                              |                             | G <sub>g</sub> .62                                        |                                                                                                        |                                               |                         |              |                    |             |                        |
| % CO <sub>2</sub>                                                                                                         |                             | % N <sub>2</sub>               |                             | % H <sub>2</sub> S                                        |                                                                                                        |                                               |                         |              |                    |             |                        |
| Meter Run                                                                                                                 |                             | Taps                           |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| FLOW DATA                                                                                                                 |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| NO.                                                                                                                       | Prover<br>Line<br>Size      | X                              | Orifice<br>Size             | Press.<br>p.s.i.g.                                        | Diff.<br>h <sub>w</sub>                                                                                | Temp.<br>°F                                   | Press.<br>p.s.i.g.      | Temp.<br>°F  | Press.<br>p.s.i.g. | Temp.<br>°F | Duration<br>of<br>Flow |
| SI                                                                                                                        |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              | 155                |             | 7 days                 |
| 1.                                                                                                                        |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 2.                                                                                                                        |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 3.                                                                                                                        | 1/2 Pos. Choke              |                                |                             |                                                           |                                                                                                        |                                               |                         |              | 1                  | 75°         | 3 hrs.                 |
| 4.                                                                                                                        |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 5.                                                                                                                        |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| RATE OF FLOW CALCULATIONS                                                                                                 |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| NO.                                                                                                                       | Coefficient<br>(24 Hour)    | $\sqrt{h_w P_m}$               | Pressure<br>P <sub>m</sub>  | Flow Temp.<br>Factor<br>F <sub>t</sub>                    | Gravity<br>Factor<br>F <sub>g</sub>                                                                    | Super<br>Compress.<br>Factor, F <sub>pv</sub> | Rate of Flow<br>Q, Mcfd |              |                    |             |                        |
| 1                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 2                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 3                                                                                                                         | 5.4315                      |                                | 13                          | .9859                                                     | .9837                                                                                                  | 1.000                                         | 68                      |              |                    |             |                        |
| 4                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 5                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| NO.                                                                                                                       | P <sub>t</sub>              | Temp. °R                       | T <sub>t</sub>              | Z                                                         | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.                                                            |                                               |                         |              |                    |             |                        |
| 1                                                                                                                         |                             |                                |                             |                                                           | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.                                                       |                                               |                         |              |                    |             |                        |
| 2                                                                                                                         |                             |                                |                             |                                                           | Specific Gravity Separator Gas _____ X X X X X X X X                                                   |                                               |                         |              |                    |             |                        |
| 3                                                                                                                         |                             |                                |                             |                                                           | Specific Gravity Flowing Fluid _____ X X X X X                                                         |                                               |                         |              |                    |             |                        |
| 4                                                                                                                         |                             |                                |                             |                                                           | Critical Pressure _____ P.S.I.A. _____ P.S.I.A.                                                        |                                               |                         |              |                    |             |                        |
| 5                                                                                                                         |                             |                                |                             |                                                           | Critical Temperature _____ R _____ R                                                                   |                                               |                         |              |                    |             |                        |
| P <sub>c</sub> 167 P <sub>c</sub> <sup>2</sup> 27889                                                                      |                             |                                |                             |                                                           | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0061$ (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0052$ |                                               |                         |              |                    |             |                        |
| 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> | AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 68$                                            |                                               |                         |              |                    |             |                        |
| 1                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 2                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 3                                                                                                                         |                             | 13                             | 169                         | 27720                                                     |                                                                                                        |                                               |                         |              |                    |             |                        |
| 4                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| 5                                                                                                                         |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| Absolute Open Flow 68 Mcfd @ 15.025                                                                                       |                             |                                |                             |                                                           | Angle of Slope @                                                                                       |                                               |                         | Slope, n .85 |                    |             |                        |
| Remarks:                                                                                                                  |                             |                                |                             |                                                           |                                                                                                        |                                               |                         |              |                    |             |                        |
| Approved By Division                                                                                                      |                             |                                | Conducted By:<br>C. Hall    |                                                           |                                                                                                        | Calculated By:<br>C. Hall                     |                         |              | Checked By:        |             |                        |