

|                                                                                                                           |             |                         |                   |                                    |                    |                                                   |  |                                      |      |
|---------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------|-------------------|------------------------------------|--------------------|---------------------------------------------------|--|--------------------------------------|------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |             |                         |                   |                                    |                    | Test Date<br>11-17-77                             |  |                                      |      |
| Company<br>Dugan Production Corp.                                                                                         |             |                         |                   | Connection                         |                    |                                                   |  |                                      |      |
| Pool<br>Gobernador P.C.                                                                                                   |             |                         |                   | Formation<br>Pictured Cliffs       |                    |                                                   |  | Unit                                 |      |
| Completion Date<br>10-25-77                                                                                               |             | Total Depth<br>5758'    |                   | Plug Back TD<br>5720               |                    | Elevation<br>6401 GR                              |  | Farm or Lease Name<br>Sherman Edward |      |
| Csg. Size<br>5-1/2                                                                                                        | Wt.<br>15.5 | d                       | Set At<br>5728    | Perforations:<br>From 3212 To 3380 |                    | Well No.<br>2B                                    |  |                                      |      |
| Tbg. Size<br>1-1/4                                                                                                        | Wt.<br>2.4  | d                       | Set At<br>3373    | Perforations:<br>From 3360 To 3373 |                    | Unit    Sec.    Twp.    Rye.<br>O    3    29    5 |  |                                      |      |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Dual - Gas - Gas                                               |             |                         |                   |                                    |                    | Packer Set At<br>5200'                            |  | County<br>Rio Arriba                 |      |
| Producing Thru<br>Tbg                                                                                                     |             | Reservoir Temp. °F<br>@ |                   | Mean Annual Temp. °F               |                    | Baro. Press. - P <sub>g</sub>                     |  | State<br>New Mexico                  |      |
| L                                                                                                                         | H           | Gg<br>.62               | % CO <sub>2</sub> | % N <sub>2</sub>                   | % H <sub>2</sub> S | Prover                                            |  | Meter Run                            | Taps |

  

| FLOW DATA |                        |   |                 |                    |                         | TUBING DATA |                    | CASING DATA |                    | Duration<br>of<br>Flow |             |
|-----------|------------------------|---|-----------------|--------------------|-------------------------|-------------|--------------------|-------------|--------------------|------------------------|-------------|
| 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 |
| SI        |                        |   |                 |                    |                         |             | 1065               |             | 1090               |                        | 7 Days      |
| 1.        |                        |   |                 |                    |                         |             |                    |             |                    |                        |             |
| 2.        |                        |   |                 |                    |                         |             |                    |             |                    |                        |             |
| 3.        | 3/4 Pos. Choke         |   |                 |                    |                         |             | 57                 | 56          | 490                |                        | 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                         | 12.365                   |                  | 69                         | 1.004                                  | .9837                               | 1.007                                         | 849                     |
| 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> 1102 | P <sub>c</sub> <sup>2</sup> 1214404 | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2618$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3001$ |
| NO.                 | P <sub>t</sub> <sup>2</sup>         | P <sub>w</sub>                             | P <sub>w</sub> <sup>2</sup>                                 |
| 1                   |                                     |                                            |                                                             |
| 2                   |                                     |                                            |                                                             |
| 3                   | 502                                 | 252004                                     | 962400                                                      |
| 4                   |                                     |                                            |                                                             |
| 5                   |                                     |                                            |                                                             |

  

|                                             |  |                               |
|---------------------------------------------|--|-------------------------------|
| Absolute Open Flow 1103 _____ Mcfd @ 15.025 |  | Angle of Slope $\theta$ _____ |
| Remarks: _____                              |  |                               |

  

|                         |                               |                                |                           |
|-------------------------|-------------------------------|--------------------------------|---------------------------|
| Approved By Commission: | Conducted By:<br>Charles Hall | Calculated By:<br>Charles Hall | Checked By:<br>Jim Jacobs |
|-------------------------|-------------------------------|--------------------------------|---------------------------|