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1 File

## OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

P. O. BOX 2088

ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

Form C-122  
Revised 10-1-78

## 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>5-3-85 |                                     |                    |                                   |  |
| Company<br>Dugan Production Corp.                                                                                         |             |                         |                   | Connection                        |                     |                                     |                    |                                   |  |
| Pool<br>Bisti - Farmington                                                                                                |             |                         |                   | Formation<br>Farmington           |                     |                                     |                    | Unit<br>DIST. 3 Dwy.              |  |
| Completion Date<br>4-26-85                                                                                                |             | Total Depth             |                   | Plug Back TD<br>946'              |                     | Elevation<br>6120' GL               |                    | Farm or Lease Name<br>Old Hickory |  |
| Csq. Size<br>2-7/8"                                                                                                       | Wt.<br>6.5# | d<br>2.441              | Set At<br>1193    | Perforations:<br>From 533 To 662  |                     | Well No.<br>1                       |                    |                                   |  |
| Tbg. Size<br>1 1/2"                                                                                                       | Wt.<br>2.4# | d<br>1.380              | Set At            | Perforations:<br>From Open End To |                     | Unit Sec. Twp. Rge.<br>F 33 26N 12W |                    |                                   |  |
| Type Well - Single - Brdenhead - G.G. or G.O. Multiple<br>Single - Gas                                                    |             |                         |                   |                                   | Packer Set At       |                                     | County<br>San Juan |                                   |  |
| Producing Thru<br>tubing                                                                                                  |             | Reservoir Temp. °F<br>8 |                   | Mean Annual Temp. °F              |                     | Baro. Press. - P <sub>g</sub>       |                    | State<br>New Mexico               |  |
| L                                                                                                                         | H           | Gg<br>.62 est.          | % CO <sub>2</sub> | % N <sub>2</sub>                  | % H <sub>2</sub> S  | 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        |                  |   |              |                 |                      |             | 190             |             | 290             |                  | 7 days   |
| 1.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 2.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 3.        | 7/16" choke      |   |              | 1               |                      | 70°         |                 |             | 15              |                  | 3 hrs    |
| 4.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 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 F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         |                       |                  |                         |                       |                               |                                         |                      |
| 2                         |                       |                  |                         |                       |                               |                                         |                      |
| 3                         | 4.1712                |                  | 13                      | .9905                 | .9837                         | 1.000                                   | 53                   |
| 4                         |                       |                  |                         |                       |                               |                                         |                      |
| 5                         |                       |                  |                         |                       |                               |                                         |                      |

| NO. | P <sub>r</sub> | Temp. °R | T <sub>r</sub> | Z | Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.      |
|-----|----------------|----------|----------------|---|--------------------------------------------------|
| 1.  |                |          |                |   | A.P.I. Gravity of Liquid Hydrocarbons _____ Deg. |
| 2.  |                |          |                |   | Specific Gravity Separator Gas _____ XXXXXXXXXX  |
| 3.  |                |          |                |   | Specific Gravity Flowing Fluid _____ XXXXXX      |
| 4.  |                |          |                |   | Critical Pressure _____ P.S.I.A. _____ P.S.I.A.  |
| 5.  |                |          |                |   | Critical Temperature _____ R _____ R             |

P<sub>c</sub> 302    P<sub>c</sub><sup>2</sup> 91,204

| 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   |                             |                |                             |                                                           |
| 2   |                             |                |                             |                                                           |
| 3   |                             | 27             | 729                         | 90,475                                                    |
| 4   |                             |                |                             |                                                           |
| 5   |                             |                |                             |                                                           |

(1)  $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0081$     (2)  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0069$

AOF = Q  $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 53$

|                                        |                     |                               |              |
|----------------------------------------|---------------------|-------------------------------|--------------|
| Absolute Open Flow _____ Mcfd @ 15.025 |                     | Angle of Slope $\theta$ _____ | Slope, n .85 |
| Remarks: _____                         |                     |                               |              |
|                                        |                     |                               |              |
| Approved By Division                   | Conducted By: Brown | Calculated By: Jacobs         | Checked By:  |