

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

Form C-122  
Revised 9-1-65

|                                                                                                                        |             |                         |                   |                                      |                    |                               |                                     |                              |      |
|------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------|-------------------|--------------------------------------|--------------------|-------------------------------|-------------------------------------|------------------------------|------|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |             |                         |                   |                                      |                    | Test Date<br>3-3-77           |                                     |                              |      |
| Company<br>Dugan Production Corp.                                                                                      |             |                         |                   | Connection                           |                    |                               |                                     |                              |      |
| Pool<br>West Kutz - Pictured Cliffs                                                                                    |             |                         |                   | Formation<br>Pictured Cliffs         |                    |                               |                                     | Unit                         |      |
| Completion Date<br>2-24-77                                                                                             |             | Total Depth<br>1850'    |                   | Plug Back TD<br>1800'                |                    | Elevation<br>6054' GR         |                                     | Farm or Lease Name<br>Tonkin |      |
| Csg. Size<br>2-7/8"                                                                                                    | Wt.<br>6.5# | d                       | Set At<br>1830'   | Perforations:<br>From 1695' To 1719' |                    |                               | Well No.<br>3R                      |                              |      |
| Tbg. Size<br>1-1/4"                                                                                                    | Wt.<br>2.3# | d<br>1.380              | Set At<br>1738'   | Perforations:<br>From Open End To    |                    |                               | Unit Sec. Twp. Rge.<br>F 13 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>Tubing                                                                                               |             | Reservoir Temp. °F<br>@ |                   | Mean Annual Temp. °F                 |                    | Baro. Press. - P <sub>a</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        |                  |   |              |                 |                      |             | 187             |             | 210             |                  | 7 days   |
| 1.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 2.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |
| 3.        | 9/16" Pos Choke  |   |              | 30              |                      |             |                 |             | 157             |                  | 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 Fg | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         |                       |                  |                         |                       |                   |                                         |                      |
| 2.                        |                       |                  |                         |                       |                   |                                         |                      |
| 3.                        | 6.8294                |                  | 42                      | 1.016                 | .9882             | 1.000                                   | 288                  |
| 4.                        |                       |                  |                         |                       |                   |                                         |                      |
| 5.                        |                       |                  |                         |                       |                   |                                         |                      |

| NO. | P <sub>f</sub> | Temp. °R | T <sub>f</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> 222 | P <sub>c</sub> <sup>2</sup> 49,284 |                |                             |                                                           |                                                              |                                                             |
|--------------------|------------------------------------|----------------|-----------------------------|-----------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|
| 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) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.3782$                   | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0884$ |
| 1                  |                                    |                |                             |                                                           |                                                              |                                                             |
| 2                  |                                    |                |                             |                                                           |                                                              |                                                             |
| 3                  |                                    | 169            | 28,561                      | 20,723                                                    | AOF = Q $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 601$ |                                                             |
| 4                  |                                    |                |                             |                                                           |                                                              |                                                             |
| 5                  |                                    |                |                             |                                                           |                                                              |                                                             |

|                                             |                               |                               |              |
|---------------------------------------------|-------------------------------|-------------------------------|--------------|
| Absolute Open Flow 601 Mcfd @ 15.025        |                               | Angle of Slope $\theta$ _____ | Slope, n .85 |
| Remarks: Medium spray of water during test. |                               |                               |              |
|                                             |                               |                               |              |
| Approved By Commission:                     | Conducted By:<br>Charles Hall | Calculated By:<br>Jim Jacobs  | Checked By:  |