

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

|                                                                                                                           |   |                         |                   |                          |                      |                                    |
|---------------------------------------------------------------------------------------------------------------------------|---|-------------------------|-------------------|--------------------------|----------------------|------------------------------------|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |   |                         |                   |                          | Test Date<br>10-5-82 |                                    |
| Company<br>Caulkins Oil Company                                                                                           |   |                         |                   | Connection               |                      |                                    |
| Pool<br>Blanco Mesa Verde                                                                                                 |   |                         |                   | Formation<br>Mesa Verde  |                      | Unit<br>P                          |
| Completion Date<br>9-28-82                                                                                                |   | Total Depth<br>7700'    |                   | Plug Back TD<br>7700'    |                      | Elevation<br>6661                  |
| Csg. Size<br>5 1/2"                                                                                                       |   | Wt. 17#<br>15.5 #       |                   | Set At<br>4.950<br>4.892 |                      | Well No.<br>11-M                   |
| Thq. Size<br>1 1/4"                                                                                                       |   | Wt.<br>2.3#             |                   | Set At<br>1.380<br>5545  |                      | Perforations:<br>From 5608 To 4946 |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Gas and Gas Multiple                                           |   |                         |                   | Packer Set At<br>5806    |                      | County<br>Rio Arriba               |
| Producing Thru<br>Tubing                                                                                                  |   | Reservoir Temp. °F<br># |                   | Mean Annual Temp. °F     |                      | State<br>New Mexico                |
| L                                                                                                                         | H | Gg                      | % 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        |                  |   |              |                 |                      |          | 894             |          | 898             |          | 7 Days           |
| 1.        |                  |   |              |                 |                      |          | 61              |          | 537             |          | 3 Hrs.           |
| 2.        |                  |   |              |                 |                      |          |                 |          |                 |          |                  |
| 3.        |                  |   |              |                 |                      |          |                 |          |                 |          |                  |
| 4.        |                  |   |              |                 |                      |          |                 |          |                 |          |                  |
| 5.        |                  |   |              |                 |                      |          |                 |          |                 |          |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>py</sub> | Rate of Flow Q, Mcfd |
| 1                         | 14.1605               |                  | 73                      | 1.000                            | 1.000                         | 1.000                                   | 1,033                |
| 2.                        |                       |                  |                         |                                  |                               |                                         |                      |
| 3.                        |                       |                  |                         |                                  |                               |                                         |                      |
| 4.                        |                       |                  |                         |                                  |                               |                                         |                      |
| 5.                        |                       |                  |                         |                                  |                               |                                         |                      |

  

|     |                |          |                |   |                                                  |
|-----|----------------|----------|----------------|---|--------------------------------------------------|
| NO. | P <sub>t</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 _____ XXXXXXXXXX  |
| 3.  |                |          |                |   | Specific Gravity Flowing Fluid _____ XXXXX       |
| 4.  |                |          |                |   | Critical Pressure _____ P.S.I.A. _____ P.S.I.A.  |
| 5.  |                |          |                |   | Critical Temperature _____ R _____ R             |

  

|     |                             |                             |                             |                                                           |                                           |                                                            |
|-----|-----------------------------|-----------------------------|-----------------------------|-----------------------------------------------------------|-------------------------------------------|------------------------------------------------------------|
| NO. | P <sub>t</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | (1) $\frac{P_c^2}{P_t^2 - P_w^2} = 1.572$ | (2) $\left[ \frac{P_c^2}{P_t^2 - P_w^2} \right]^n = 1.404$ |
| 1   |                             | 549                         | 301,401                     | 526,699                                                   |                                           |                                                            |
| 2   |                             |                             |                             |                                                           |                                           |                                                            |
| 3   |                             |                             |                             |                                                           |                                           |                                                            |
| 4   |                             |                             |                             |                                                           |                                           |                                                            |
| 5   |                             |                             |                             |                                                           |                                           |                                                            |

  

|                                                                                       |  |  |  |                           |  |                |
|---------------------------------------------------------------------------------------|--|--|--|---------------------------|--|----------------|
| Absolute Open Flow _____ 1,450 _____ Mcfd @ 13.025                                    |  |  |  | Angle of Slope @ _____ 75 |  | Slope, n _____ |
| Remarks: _____                                                                        |  |  |  |                           |  |                |
| Approved By Division _____ Conducted By: _____ Calculated By: _____ Checked By: _____ |  |  |  |                           |  |                |