

## OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088  
SANTA FE, NEW MEXICO 87501Form 1-127  
Revised 10-1-78C/SF MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL  
C-122

| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            | Test Date<br>4/12/82           |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------|--------------------------------|-----------------------------------------------------------|------------------------------|---------------------------------------|--------------------------------|--------------------------------|-------------------|------------------------|---|-----------------|--------------------|-------------|-------------|-----------------------|-------------|--------------------|-------------|-----|-------|--------|---------|---------|------|------|--------|---------|---------|---|---|-------|------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|----|--|--|---|-------|--------|------|-----|------|------|------|----|--|--|---|-------|------|-----|-----|----|----|------|----|--|--|---|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|------|----|--|--|
| Company<br>Pogo Producing Company                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            | Connection<br>None             |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Well<br>Undesignated <i>Atoka</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            | Formation<br>Atoka             |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Completion Date<br>4/12/82                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            | Total Depth<br>12003'          | Flag Back ID<br>11426'                |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Elevation<br>3225'GL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            | Farm or Lease Name<br>State 58 |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Cas. Size<br>5"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Wt.<br>18.0                | d<br>4.276                     | Set At<br>8702'/11468'                |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Perforations:<br>From 11248' To 11263'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            | Well No.<br>1                  |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Tub. Size<br>2 3/8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Wt.<br>4.7                 | d<br>1.995                     | Set At<br>11231'                      |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Perforations:<br>Open Ended                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            | Unit<br>H                      |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            | Packer Set At<br>11231'        | County<br>Eddy                        |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Producing Thru<br>Tubing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Reservoir Temp. °F<br>195° | Mean Annual Temp. °F<br>60°    | Baro. Press. - P <sub>a</sub><br>13.2 |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Prover<br>11256                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            | Meter Run<br>4.026 X           | Days<br>1.000                         |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| <table border="1"> <thead> <tr> <th colspan="4">FLOW DATA</th> <th colspan="2">TUBING DATA</th> <th colspan="2">CASING DATA</th> <th rowspan="2">Duration<br/>of<br/>Flow</th> </tr> <tr> <th>NO</th> <th>Prover<br/>Line<br/>Size</th> <th>X</th> <th>Orifice<br/>Size</th> <th>Press.<br/>p.s.i.g.</th> <th>Diff.<br/>hw</th> <th>Temp.<br/>°F</th> <th>Press.<br/>p.s.i.g.DWT</th> <th>Temp.<br/>°F</th> <th>Press.<br/>p.s.i.g.</th> <th>Temp.<br/>°F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4.026</td> <td>3.5/64</td> <td>1.0</td> <td>510</td> <td>8</td> <td>96</td> <td>6155</td> <td>60</td> <td colspan="2">PACKER</td> </tr> <tr> <td>2</td> <td>4.026</td> <td>5/64</td> <td>1.0</td> <td>510</td> <td>34</td> <td>80</td> <td>5979</td> <td>60</td> <td colspan="2"></td> </tr> <tr> <td>3</td> <td>4.026</td> <td>6.5/64</td> <td>1.0</td> <td>510</td> <td>58</td> <td>70</td> <td>5545</td> <td>60</td> <td colspan="2"></td> </tr> <tr> <td>4</td> <td>4.026</td> <td>8/64</td> <td>1.0</td> <td>510</td> <td>88</td> <td>66</td> <td>5012</td> <td>60</td> <td colspan="2"></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>4335</td> <td>60</td> <td colspan="2"></td> </tr> </tbody> </table> |                            |                                |                                       | 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>hw | Temp.<br>°F | Press.<br>p.s.i.g.DWT | Temp.<br>°F | Press.<br>p.s.i.g. | Temp.<br>°F | 1   | 4.026 | 3.5/64 | 1.0     | 510     | 8    | 96   | 6155   | 60      | PACKER  |   | 2 | 4.026 | 5/64 | 1.0  | 510                                                                                                                                                                                                                    | 34   | 80   | 5979 | 60 |  |  | 3 | 4.026 | 6.5/64 | 1.0  | 510 | 58   | 70   | 5545 | 60 |  |  | 4 | 4.026 | 8/64 | 1.0 | 510 | 88 | 66 | 5012 | 60 |  |  | 5 |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  | 4335 | 60 |  |  |
| 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>hw                         | Temp.<br>°F                                   | Press.<br>p.s.i.g.DWT          |                                                           | Temp.<br>°F                  | Press.<br>p.s.i.g.                    | Temp.<br>°F                    |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.026                      | 3.5/64                         | 1.0                                   | 510                                                                                                                                                                            | 8                                   | 96                                            | 6155                           | 60                                                        | PACKER                       |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.026                      | 5/64                           | 1.0                                   | 510                                                                                                                                                                            | 34                                  | 80                                            | 5979                           | 60                                                        |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.026                      | 6.5/64                         | 1.0                                   | 510                                                                                                                                                                            | 58                                  | 70                                            | 5545                           | 60                                                        |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.026                      | 8/64                           | 1.0                                   | 510                                                                                                                                                                            | 88                                  | 66                                            | 5012                           | 60                                                        |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |                                |                                       |                                                                                                                                                                                |                                     |                                               | 4335                           | 60                                                        |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| RATE OF FLOW CALCULATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                            |                                |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Coefficient<br>(24 Hour)   | $\sqrt{h_w P_m}$               | Pressure<br>P <sub>m</sub>            | Flow Temp.<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, Mcf/d       |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.753                      | 64.70                          | 523.2                                 | 0.9671                                                                                                                                                                         | 1.304                               | 1.030                                         | 399.45                         |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.753                      | 133.37                         | 523.2                                 | 0.9813                                                                                                                                                                         | 1.304                               | 1.034                                         | 838.74                         |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.753                      | 174.20                         | 523.2                                 | 0.9905                                                                                                                                                                         | 1.304                               | 1.036                                         | 1107.92                        |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4.753                      | 214.57                         | 523.2                                 | 0.9943                                                                                                                                                                         | 1.304                               | 1.039                                         | 1373.88                        |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |                                |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| <table border="1"> <thead> <tr> <th>NO</th> <th>P<sub>t</sub></th> <th>Temp. °R</th> <th>T<sub>r</sub></th> <th>Z</th> <th>Gas/Liquid Hydrocarbon Ratio</th> <th>A.P.L. Gravity of Liquid Hydrocarbons</th> <th>Specific Gravity Separator Gas</th> <th>Specific Gravity Flowing Fluid</th> <th>Critical Pressure</th> <th>Critical Temperature</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.78</td> <td>556</td> <td>1.62</td> <td>.943</td> <td>Dry Gas</td> <td>-</td> <td>0.5880</td> <td>XXXXXX</td> <td>673</td> <td>343</td> </tr> <tr> <td>2</td> <td>0.78</td> <td>540</td> <td>1.57</td> <td>.935</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>0.78</td> <td>530</td> <td>1.55</td> <td>.931</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>0.78</td> <td>526</td> <td>1.53</td> <td>.927</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>                                                                                                                                                  |                            |                                |                                       | NO                                                                                                                                                                             | P <sub>t</sub>                      | Temp. °R                                      | T <sub>r</sub>                 | Z                                                         | Gas/Liquid Hydrocarbon Ratio | A.P.L. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature   | 1 | 0.78            | 556                | 1.62        | .943        | Dry Gas               | -           | 0.5880             | XXXXXX      | 673 | 343   | 2      | 0.78    | 540     | 1.57 | .935 |        |         |         |   |   |       | 3    | 0.78 | 530                                                                                                                                                                                                                    | 1.55 | .931 |      |    |  |  |   |       | 4      | 0.78 | 526 | 1.53 | .927 |      |    |  |  |   |       | 5    |     |     |    |    |      |    |  |  |   |  | <p>Gas/Liquid Hydrocarbon Ratio <u>Dry Gas</u> Mcf/bbl.</p> <p>A.P.L. Gravity of Liquid Hydrocarbons <u>-</u> Deg.</p> <p>Specific Gravity Separator Gas <u>0.5880</u> XXXXXXXXXX</p> <p>Specific Gravity Flowing Fluid <u>XXXXXX</u></p> <p>Critical Pressure <u>673</u> P.S.I.A</p> <p>Critical Temperature <u>343</u> °R</p> |  |  |  |  |      |    |  |  |
| NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | P <sub>t</sub>             | Temp. °R                       | T <sub>r</sub>                        | Z                                                                                                                                                                              | Gas/Liquid Hydrocarbon Ratio        | A.P.L. Gravity of Liquid Hydrocarbons         | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid                            | Critical Pressure            | Critical Temperature                  |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.78                       | 556                            | 1.62                                  | .943                                                                                                                                                                           | Dry Gas                             | -                                             | 0.5880                         | XXXXXX                                                    | 673                          | 343                                   |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.78                       | 540                            | 1.57                                  | .935                                                                                                                                                                           |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.78                       | 530                            | 1.55                                  | .931                                                                                                                                                                           |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.78                       | 526                            | 1.53                                  | .927                                                                                                                                                                           |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |                                |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| <table border="1"> <thead> <tr> <th>NO</th> <th>P<sub>t</sub></th> <th>P<sub>w</sub></th> <th>P<sub>w</sub><sup>2</sup></th> <th>P<sub>t</sub><sup>2</sup> - P<sub>w</sub><sup>2</sup></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7452.2*</td> <td>55535.3</td> <td></td> <td></td> </tr> <tr> <td>1</td> <td></td> <td>7271.2</td> <td>52870.3</td> <td>2665.0</td> </tr> <tr> <td>2</td> <td></td> <td>6843.2</td> <td>46829.4</td> <td>8705.9</td> </tr> <tr> <td>3</td> <td></td> <td>6226.2</td> <td>38765.6</td> <td>16769.7</td> </tr> <tr> <td>4</td> <td></td> <td>5591.2</td> <td>31261.5</td> <td>24273.8</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                                |                                       | NO                                                                                                                                                                             | P <sub>t</sub>                      | P <sub>w</sub>                                | P <sub>w</sub> <sup>2</sup>    | P <sub>t</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | 1                            | 7452.2*                               | 55535.3                        |                                |                   | 1                      |   | 7271.2          | 52870.3            | 2665.0      | 2           |                       | 6843.2      | 46829.4            | 8705.9      | 3   |       | 6226.2 | 38765.6 | 16769.7 | 4    |      | 5591.2 | 31261.5 | 24273.8 | 5 |   |       |      |      | <p>(1) <math>\frac{P_t^2}{P_t^2 - P_w^2} = 2.288</math></p> <p>(2) <math>\left[ \frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 1.584</math></p> <p>ACF = <math>\left[ \frac{P_t^2}{P_t^2 - P_w^2} \right]^n = 2177</math></p> |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | P <sub>t</sub>             | P <sub>w</sub>                 | P <sub>w</sub> <sup>2</sup>           | P <sub>t</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>                                                                                                                      |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 7452.2*                    | 55535.3                        |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            | 7271.2                         | 52870.3                               | 2665.0                                                                                                                                                                         |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            | 6843.2                         | 46829.4                               | 8705.9                                                                                                                                                                         |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            | 6226.2                         | 38765.6                               | 16769.7                                                                                                                                                                        |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            | 5591.2                         | 31261.5                               | 24273.8                                                                                                                                                                        |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                            |                                |                                       |                                                                                                                                                                                |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| <p>Atmos. Open Flow <u>2177</u> Mcf/d @ 15.025</p> <p>Angle of Slope <u>60° 55'</u></p> <p>Slope, n <u>ARRESTA OFFICE</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                            |                                |                                       | <p>Remarks: * BOTTOM HOLE PRESSURE @ (-8031)11256' USED FOR PRESSURE CALCULATIONS</p> <p>WELL PRODUCED NO FLUID DURING TEST</p> <p>7 5/8" CSG, 26.4#, 6.969'd, Set @ 9128'</p> |                                     |                                               |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
| Approved By Division                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            | Conducted By:                  |                                       | Calculated By:                                                                                                                                                                 |                                     | Checked By:                                   |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            | JARREL SERVICES, INC.          |                                       | D. Dickerson                                                                                                                                                                   |                                     | Joe A. Coleman                                |                                |                                                           |                              |                                       |                                |                                |                   |                        |   |                 |                    |             |             |                       |             |                    |             |     |       |        |         |         |      |      |        |         |         |   |   |       |      |      |                                                                                                                                                                                                                        |      |      |      |    |  |  |   |       |        |      |     |      |      |      |    |  |  |   |       |      |     |     |    |    |      |    |  |  |   |  |                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |      |    |  |  |

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