

**OIL CONSERVATION DIVISION**  
**P.O. BOX 2088**  
**SANTA FE, NEW MEXICO 87501**

**RECEIVED**  
**AUG - 4 1994**

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT

**OIL CON. DIV.**  
**DIST. 3**

**MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL**

|                                                                                                                                  |  |                             |  |                      |  |                                            |  |                                                      |                                     |                                                                |  |
|----------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------|--|----------------------|--|--------------------------------------------|--|------------------------------------------------------|-------------------------------------|----------------------------------------------------------------|--|
| <b>Operator</b><br>Mendian Oil, Inc.                                                                                             |  |                             |  |                      |  | <b>Lease or Unit Name</b><br>San Juan-32-9 |  |                                                      |                                     |                                                                |  |
| <b>Type Test</b><br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                             |  |                      |  | <b>Test Date</b><br>08-01-94               |  | <b>Well No.</b><br>#115                              |                                     |                                                                |  |
| <b>Completion Date</b><br>07-12-94                                                                                               |  | <b>Total Depth</b><br>3 700 |  | <b>TVD</b><br>MD     |  | <b>Plug Back TD</b><br>3.660               |  | <b>Elevation</b><br>6 587                            |                                     | <b>Unit Letter - Sec. - TWN - RNG</b><br>L    01    31N    10W |  |
| <b>Csg. Size</b><br>4 1/2"                                                                                                       |  | <b>WT.</b><br>10.5#         |  | <b>d</b><br>K-55     |  | <b>Set At</b><br>3.700                     |  | <b>Perforations:</b><br>From 3.552 To 3.392          |                                     | <b>County</b><br>San Juan                                      |  |
| <b>Tbg. Size</b><br>2 3/8"                                                                                                       |  | <b>WT.</b><br>4.7           |  | <b>d</b><br>J-55     |  | <b>Set At</b><br>3.306                     |  | <b>Perforations:</b><br>From                      To |                                     | <b>Pool</b><br>Blanco Pictured Cliffs                          |  |
| <b>Type Well - Single - Bradenhead - G.O. or G.O. Multiple</b><br>Single                                                         |  |                             |  |                      |  | <b>Packer Set At</b><br>None               |  |                                                      | <b>Formation</b><br>Pictured Cliffs |                                                                |  |
| <b>Prod Thru Tubing</b>                                                                                                          |  | <b>Resv Temp °F</b>         |  | <b>Mean Ann T °F</b> |  | <b>Baro. Press. Pd</b><br>12.20            |  |                                                      | <b>Connection</b>                   |                                                                |  |
| <b>L</b>                                                                                                                         |  | <b>H</b>                    |  | <b>Gg</b><br>0.691   |  | <b>% CO2</b><br>0.000                      |  | <b>% N2</b><br>0.000                                 |                                     | <b>% H2S</b>                                                   |  |
|                                                                                                                                  |  |                             |  |                      |  |                                            |  | <b>Prover</b>                                        |                                     | <b>Meter Run</b>                                               |  |
|                                                                                                                                  |  |                             |  |                      |  |                                            |  |                                                      |                                     | <b>Taps</b>                                                    |  |

  

| FLOW DATA |                  |   |              |                 |          |          | TUBING DATA     |          |                 |          | CASING DATA |         | Duration of Flow |
|-----------|------------------|---|--------------|-----------------|----------|----------|-----------------|----------|-----------------|----------|-------------|---------|------------------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. hw | Temp. F° | Press. p.s.i.g. | Temp. F° | Press. p.s.i.g. | Temp. F° |             |         |                  |
| SI        | 2 x 6            |   | 0.750        |                 |          |          | 345             |          | 355             |          |             | SI      |                  |
| 1.        |                  |   |              |                 |          |          | 141             | 71       | 295             |          |             | 1 Hour  |                  |
| 2.        |                  |   |              |                 |          |          | 140             | 74       | 275             |          |             | 2 Hours |                  |
| 3.        |                  |   |              |                 |          |          | 139             | 76       | 261             |          |             | 3 Hours |                  |
| 4.        |                  |   |              |                 |          |          |                 |          |                 |          |             |         |                  |
| 5.        |                  |   |              |                 |          |          |                 |          |                 |          |             |         |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |             |                       |                   |                              |                      |
|---------------------------|-----------------------|------------------|-------------|-----------------------|-------------------|------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w F_m}$ | Pressure Pm | Flow Temp. Factor Ft. | Gravity Factor Fg | Super. Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
| 1.                        | 11.000                |                  | 151.2       | 0.9850                | 1.2030            | 1.0000                       | 1.970.70             |
| 2.                        |                       |                  |             |                       |                   |                              |                      |
| 3.                        |                       |                  |             |                       |                   |                              |                      |
| 4.                        |                       |                  |             |                       |                   |                              |                      |
| 5.                        |                       |                  |             |                       |                   |                              |                      |

  

| NO. | Pr | Temp. °R | Tr | Z | Gas Liquid Hydrocarbon Ratio | API Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature | Mcft/bbl. Deg.       |
|-----|----|----------|----|---|------------------------------|------------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|----------------------|
| 1.  |    |          |    |   |                              |                                    |                                |                                |                   |                      | XXXXXXXXXXXXXXXXXXXX |
| 2.  |    |          |    |   |                              |                                    |                                |                                |                   |                      | XXXXXXXX             |
| 3.  |    |          |    |   |                              |                                    |                                |                                | P.S.I.A           |                      | P.S.I.A              |
| 4.  |    |          |    |   |                              |                                    |                                |                                | R                 |                      | R                    |
| 5.  |    |          |    |   |                              |                                    |                                |                                |                   |                      |                      |

  

| <b>Pc</b> 367.20 |     | <b>Pc2</b> 134,835.84 |           |
|------------------|-----|-----------------------|-----------|
| NO.              | Pt2 | Pw                    | Pw2       |
| 1.               |     | 273.20                | 74,638.24 |
| 2.               |     |                       |           |
| 3.               |     |                       |           |
| 4.               |     |                       |           |
| 5.               |     |                       |           |

  

(1)  $\frac{Pc2}{Pc2 - Pw2} = 2.2399$

AOF = Q  $\left[ \frac{Pc2}{Pc2 - Pw2} \right]^n = 3.911.23$

(2)  $\left[ \frac{Pc2}{Pc2 - Pw2} \right]^n = 1.9847$

  

|                                               |                       |                      |
|-----------------------------------------------|-----------------------|----------------------|
| <b>Absolute Open Flow</b> 3.911 Mcfd @ 15.025 | <b>Angle of Slope</b> | <b>Slope, n</b> 0.85 |
|-----------------------------------------------|-----------------------|----------------------|

  

**Remarks:** Dry Gas Throughout Test

  

|                             |                                             |                                              |                                    |
|-----------------------------|---------------------------------------------|----------------------------------------------|------------------------------------|
| <b>Approved By Division</b> | <b>Conducted By:</b> Stanley E. Terwilliger | <b>Calculated By:</b> Stanley E. Terwilliger | <b>Checked By:</b> Gary L. Osborne |
|-----------------------------|---------------------------------------------|----------------------------------------------|------------------------------------|