

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

Form C-122  
Revised 9-1-65

RECEIVED

451  
file

|                                                                                                                                                   |  |                                                                                  |  |                                                             |  |                                           |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------|--|-------------------------------------------------------------|--|-------------------------------------------|--|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special    Test Date <b>6-8-82</b> |  |                                                                                  |  |                                                             |  | <b>SEP 29 1982</b>                        |  |
| Company <b>MESA PETROLEUM CO.</b>                                                                                                                 |  |                                                                                  |  | Connection <b>UNCONNECTED</b>                               |  | <b>O. C. D.</b>                           |  |
| Pool <b>UNDESIGNATED ABO</b>                                                                                                                      |  |                                                                                  |  | Formation <b>ABO</b>                                        |  | Well <b>ARTESIA, OFFICE</b>               |  |
| Completion Date <b>6-8-82</b>                                                                                                                     |  | Total Depth <b>3350'</b>                                                         |  | Plug Back TD <b>3116'</b>                                   |  | Elevation <b>4037'</b>                    |  |
| Farm or Lease Name <b>CHINA FEDERAL</b>                                                                                                           |  | Well No. <b>4</b>                                                                |  | Unit <b>K</b> Sec. <b>17</b> Twp. <b>7S</b> Rye. <b>23E</b> |  | County <b>CHAVES</b>                      |  |
| Csg. Size <b>4 1/2"</b> Wt. <b>10.5#</b>                                                                                                          |  | Set At <b>3150'</b>                                                              |  | Perforations: From <b>2879'</b> To <b>2994'</b>             |  | State <b>NEW MEXICO</b>                   |  |
| Trq. Size <b>2 3/8"</b> Wt. <b>4.7#</b>                                                                                                           |  | Set At <b>2762'</b>                                                              |  | Perforations: From <b>OPEN ENDED</b>                        |  | State <b>NEW MEXICO</b>                   |  |
| Type Well - Single - Prodnhead - G.G. or G.O. Multiple <b>SINGLE</b>                                                                              |  |                                                                                  |  | Packor Set At <b>NONE</b>                                   |  | State <b>NEW MEXICO</b>                   |  |
| Producing Thru <b>TUBING</b>                                                                                                                      |  | Reservoir Temp. °F <b>95° @ 3350'</b>                                            |  | Mean Annual Temp. °F <b>60</b>                              |  | Baro. Press. - P <sub>a</sub> <b>13.2</b> |  |
| L <b>0</b> H <b>0</b> Gg <b>.65</b>                                                                                                               |  | % CO <sub>2</sub> <b>1</b> % N <sub>2</sub> <b>1</b> % H <sub>2</sub> S <b>0</b> |  | Prover <b>2" CRITICAL FLOW PROVER</b>                       |  | Meter Run <b>0</b> Taps <b>0</b>          |  |

  

| FLOW DATA |                  |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |          |
|-----------|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|----------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F    | Press. p.s.i.g. | Temp. °F    | Press. p.s.i.g. |                  | Temp. °F |
| 51        |                  |   |              |                 |                      |             | 810             |             | 810             |                  | 72 HRS   |
| 1.        | 2" x 1"          |   |              | 27              |                      | 46          | 625             | 74          | 635             |                  | 1 HR     |
| 2.        | 2" x 1"          |   |              | 28              |                      | 58          | 415             | 76          | 470             |                  | 1 HR     |
| 3.        | 2" x 1"          |   |              | 29              |                      | 60          | 310             | 80          | 420             |                  | 1 HR     |
| 4.        | 2" x 1"          |   |              | 32              |                      | 60          | 235             | 82          | 380             |                  | 1 HR     |
| 5.        |                  |   |              |                 |                      |             |                 |             |                 |                  |          |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                                  |                               |                                        |                     |
|---------------------------|-----------------------|------------------|-------------------------|----------------------------------|-------------------------------|----------------------------------------|---------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor F <sub>t</sub> | Gravity Factor F <sub>g</sub> | Super Compress. Factor F <sub>pv</sub> | Rate of Flow Q, Mhd |
| 1                         | 17.09                 | FLOW PROVER      | 40                      | 1.014                            | 1.24                          |                                        | 860                 |
| 2                         | 17.09                 | FLOW PROVER      | 41                      | 1.002                            | 1.24                          |                                        | 871                 |
| 3                         | 17.09                 | FLOW PROVER      | 42                      | 1.000                            | 1.24                          |                                        | 890                 |
| 4                         | 17.09                 | FLOW PROVER      | 45                      | 1.000                            | 1.24                          |                                        | 954                 |
| 5                         |                       |                  |                         |                                  |                               |                                        |                     |

  

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

  

| P <sub>c</sub> <b>823</b> P <sub>c</sub> <sup>2</sup> <b>677</b> |                             | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2945$ |                             | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1377$ |  |
|------------------------------------------------------------------|-----------------------------|--------------------------------------------|-----------------------------|-------------------------------------------------------------|--|
| NO.                                                              | F <sub>t</sub> <sup>2</sup> | P <sub>w</sub>                             | P <sub>w</sub> <sup>2</sup> | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>   |  |
| 1                                                                |                             | 648                                        | 420                         | 257                                                         |  |
| 2                                                                |                             | 483                                        | 233                         | 444                                                         |  |
| 3                                                                |                             | 433                                        | 187                         | 490                                                         |  |
| 4                                                                |                             | 393                                        | 154                         | 523                                                         |  |
| 5                                                                |                             |                                            |                             |                                                             |  |

  

|                                                                                                                                                                                        |  |                                  |  |                                                     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--|-----------------------------------------------------|--|
| Absolute Open Flow <b>1,100</b> Mhd @ 15.025                                                                                                                                           |  | Angle of Slope @ <b>63.5°</b>    |  | Slope, n <b>.5</b>                                  |  |
| Remarks: <b>Plot of P<sub>c</sub><sup>2</sup> - P<sub>w</sub><sup>2</sup> vs Q yield a straight line with a 0 greater than 63.5°.</b><br><b>Drew 63.5° line through highest point.</b> |  |                                  |  |                                                     |  |
| Approved By Commission:                                                                                                                                                                |  | Conducted By: <b>JAMES CRAIG</b> |  | Calculated By: <b>E.L. BUTTROSS, JR</b> Checked By: |  |

Posted ID 2  
10-1-82  
Camp + BK