

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

Form C-122  
Revised 9-1-65

|                                                                                                                           |  |                                |  |                            |  |                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|--|----------------------------|--|-------------------------------------------------------------------------------------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                |  | Test Date<br>7-24-81       |  | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> RECEIVED<br/><br/> AUG 06 1981 </div> |  |
| Company<br>MESA PETROLEUM CO. /                                                                                           |  |                                |  | Connection<br>UNCONNECTED  |  |                                                                                                                   |  |
| Pool<br>UNDESIGNATED ABO                                                                                                  |  |                                |  | Formation<br>ABO           |  | Unit<br>O. C. D.<br>ARTESIA, CENTRE                                                                               |  |
| Completion Date<br>7-24-81                                                                                                |  | Total Depth<br>4410            |  | Plug Back TD<br>4240       |  | Elevation<br>3732                                                                                                 |  |
| Csg. Size<br>4 1/2                                                                                                        |  | Wt.<br>10.5                    |  | Set At<br>4277             |  | Perforations:<br>From 3692 To 3724                                                                                |  |
| Thq. Size<br>2 3/8                                                                                                        |  | Wt.<br>4.7                     |  | Set At<br>3592             |  | Perforations:<br>From OPEN ENDED                                                                                  |  |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>SINGLE                                                         |  |                                |  | Packer Set At<br>NONE      |  | County<br>CHAVES                                                                                                  |  |
| Producing Thru<br>TUBING                                                                                                  |  | Reservoir Temp. *F<br>105 4410 |  | Mean Annual Temp. *F<br>60 |  | Baro. Press. - P <sub>a</sub><br>13.2                                                                             |  |
| L<br>3592                                                                                                                 |  | H<br>3592                      |  | G <sub>g</sub><br>.65      |  | % CO <sub>2</sub><br>1                                                                                            |  |
|                                                                                                                           |  |                                |  | % N <sub>2</sub><br>2      |  | % H <sub>2</sub> S                                                                                                |  |
|                                                                                                                           |  |                                |  | Prover<br>CHOKE            |  | Meter Run                                                                                                         |  |
|                                                                                                                           |  |                                |  |                            |  | Taps                                                                                                              |  |

  

| FLOW DATA |                  |   |              |                 |                      |          | TUBING DATA     |          | CASING DATA     |          | Duration of Flow |
|-----------|------------------|---|--------------|-----------------|----------------------|----------|-----------------|----------|-----------------|----------|------------------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. *F | Press. p.s.i.g. | Temp. *F | Press. p.s.i.g. | Temp. *F |                  |
| SI        |                  |   |              |                 |                      |          | 960             |          | 860             |          | 72 hr. S         |
| 1.        | Choke            |   | 18/64        | 880             | -                    | 80       | 880             | 80       | 815             |          | 1 hr.            |
| 2.        | Coefficients     |   | 23/64        | 770             | -                    | 80       | 770             | 80       | 740             |          | 1 hr.            |
| 3.        |                  |   | 28/64        | 610             | -                    | 80       | 610             | 80       | 675             |          | 1 hr.            |
| 4.        |                  |   | 32/64        | 530             | -                    | 80       | 530             | 80       | 640             |          | 1 hr.            |
| 5.        |                  |   |              |                 |                      |          |                 |          |                 |          |                  |

  

| RATE OF FLOW CALCULATIONS |                       |                  |                         |                       |                               |                                         |                      |
|---------------------------|-----------------------|------------------|-------------------------|-----------------------|-------------------------------|-----------------------------------------|----------------------|
| NO.                       | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P <sub>m</sub> | Flow Temp. Factor Ft. | Gravity Factor F <sub>g</sub> | Super Compress. Factor, F <sub>pv</sub> | Rate of Flow Q, Mcfd |
| 1                         | 1.331                 | CHOKE            | 880                     | .9813                 | 1.240                         | -                                       | 1425                 |
| 2                         | 2.189                 | CHOKE            | 770                     | .9813                 | 1.240                         | -                                       | 2051                 |
| 3                         | 3.231                 | CHOKE            | 610                     | .9813                 | 1.240                         | -                                       | 2398                 |
| 4                         | 4.194                 | CHOKE            | 530                     | .9813                 | 1.240                         | -                                       | 2705                 |
| 5                         |                       |                  |                         |                       |                               |                                         |                      |

  

| NO. | P <sub>t</sub> | Temp. *R | T <sub>t</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> 860 | P <sub>c</sub> <sup>2</sup> 740 | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.2424$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5592$ |                                                           |
|--------------------|---------------------------------|--------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------|
| NO.                | P <sub>t</sub> <sup>2</sup>     | P <sub>w</sub>                             | P <sub>w</sub> <sup>2</sup>                                 | P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> |
| 1                  |                                 | 815                                        | 664                                                         | 76                                                        |
| 2                  |                                 | 740                                        | 548                                                         | 192                                                       |
| 3                  |                                 | 675                                        | 456                                                         | 284                                                       |
| 4                  |                                 | 640                                        | 410                                                         | 330                                                       |
| 5                  |                                 |                                            |                                                             |                                                           |

  

$ACF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4,200$

$ACF = Q = 4,200$

  

|                                                    |                                          |                          |
|----------------------------------------------------|------------------------------------------|--------------------------|
| Absolute Open Flow _____ 4,200 _____ Mcfd @ 15.025 | Angle of Slope $\theta$ _____ 61.2 _____ | Slope, n _____ .55 _____ |
|----------------------------------------------------|------------------------------------------|--------------------------|

  

Remarks: \_\_\_\_\_

  

|                               |                                 |                                         |                   |
|-------------------------------|---------------------------------|-----------------------------------------|-------------------|
| Approved By Commission: _____ | Conducted By: _____ JAMES CRAIG | Calculated By: _____ E.L. BUTTROSS, JR. | Checked By: _____ |
|-------------------------------|---------------------------------|-----------------------------------------|-------------------|