

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

Form C-122  
Revised 9-1-65

RECEIVED

C/SF  
5-12-82

|                                                                                                                           |  |                                  |  |                                   |  |                                       |  |
|---------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--|-----------------------------------|--|---------------------------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                                  |  | Test Date<br>4-22-82              |  | MAY - 7 1982                          |  |
| Company<br>Mesa Petroleum Co.                                                                                             |  |                                  |  | Connection<br>UNCONNECTED         |  | O. C. D.                              |  |
| Pool<br>PECOS SLOPE ABO                                                                                                   |  |                                  |  | Formation<br>ABO                  |  | Unit<br>ARTESIA, OFFICE               |  |
| Completion Date<br>4-22-82                                                                                                |  | Total Depth<br>4109'             |  | Plug Back TD<br>3822'             |  | Elevation<br>3879'                    |  |
| Csg. Size<br>4 1/2"                                                                                                       |  | Wt.<br>10.5#                     |  | Set At<br>4109'                   |  | Perforations:<br>From 3620' To 3830'  |  |
| Trg. Size<br>2 3/8"                                                                                                       |  | Wt.<br>4.7#                      |  | Set At<br>3544'                   |  | Perforations:<br>From OPEN ENDED To   |  |
| Type Well - Single - Broadhead - G.G. or G.O. Multiple<br>SINGLE                                                          |  |                                  |  | Packer Set At<br>NONE             |  | Form or Lease Name<br>CAMACK FED COM  |  |
| Producing Thru<br>TUBING                                                                                                  |  | Reservoir Temp. °F<br>101 @ 4109 |  | Mean Annual Temp. °F<br>60        |  | Baro. Press. - P <sub>a</sub><br>13.2 |  |
| L                                                                                                                         |  | H                                |  | G <sub>g</sub><br>.65             |  | % CO <sub>2</sub><br>1                |  |
|                                                                                                                           |  |                                  |  | % N <sub>2</sub><br>1             |  | % H <sub>2</sub> S                    |  |
|                                                                                                                           |  |                                  |  | Prover<br>2" CRITICAL FLOW PROVER |  |                                       |  |
|                                                                                                                           |  |                                  |  | Meter Run                         |  |                                       |  |
|                                                                                                                           |  |                                  |  | Taps                              |  |                                       |  |

| FLOW DATA |                  |   |              |                 |                      |          | TUBING DATA     |          | CASING DATA     |          | Duration of Flow |
|-----------|------------------|---|--------------|-----------------|----------------------|----------|-----------------|----------|-----------------|----------|------------------|
| NO.       | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h <sub>w</sub> | Temp. °F | Press. p.s.i.g. | Temp. °F | Press. p.s.i.g. | Temp. °F |                  |
| SI        |                  |   |              |                 |                      |          | 940             |          | 820             |          | 72 HR ST         |
| 1.        | 2" X 1"          |   |              | 20              |                      | 18       | 905             | 55       | 802             |          | 1 HR             |
| 2.        | 2" X 1"          |   |              | 52              |                      | 24       | 820             | 58       | 767             |          | 1 HR             |
| 3.        | 2" X 1"          |   |              | 88              |                      | 35       | 700             | 60       | 716             |          | 1 HR             |
| 4.        | 2" X 1"          |   |              | 105             |                      | 44       | 595             | 62       | 668             |          | 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, Mcfd |
| 1                         | 17.09                 | FLOW PROVER      | 33                      | 1.043                            | 1.24                          |                                         | 729                  |
| 2                         | 17.09                 | FLOW PROVER      | 65                      | 1.037                            | 1.24                          |                                         | 1428                 |
| 3                         | 17.09                 | FLOW PROVER      | 101                     | 1.025                            | 1.24                          |                                         | 2193                 |
| 4                         | 17.09                 | FLOW PROVER      | 118                     | 1.016                            | 1.24                          |                                         | 2540                 |
| 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                 |

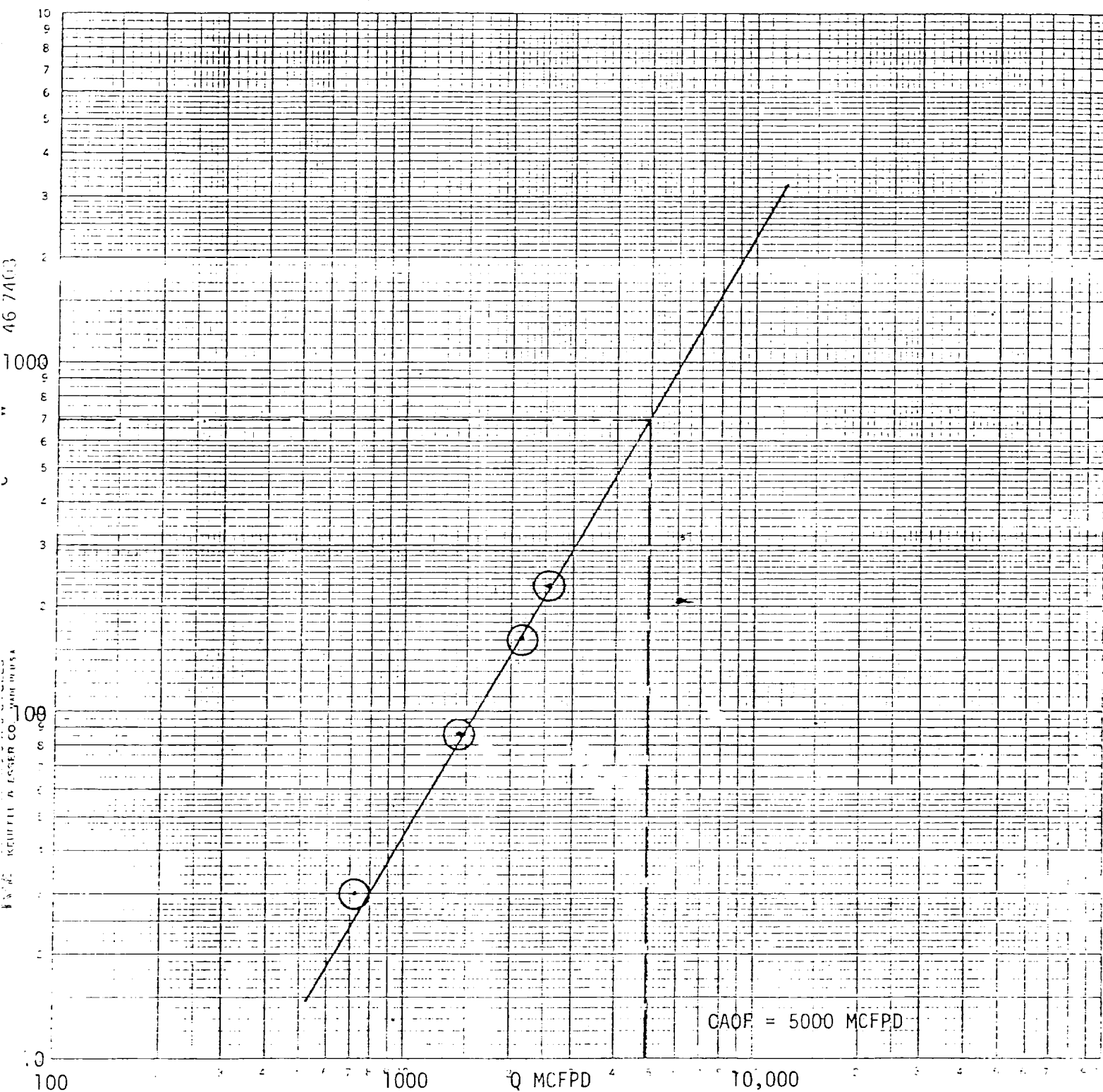
|                    |                                 |                |                             |                                                           |                                          |                                                             |
|--------------------|---------------------------------|----------------|-----------------------------|-----------------------------------------------------------|------------------------------------------|-------------------------------------------------------------|
| P <sub>c</sub> 833 | P <sub>c</sub> <sup>2</sup> 694 |                |                             |                                                           | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.47$ | (2) $\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.0835$ |
| NO.                | P <sub>r</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                         | 30                                                        |                                          |                                                             |
| 2                  |                                 | 780            | 608                         | 86                                                        |                                          |                                                             |
| 3                  |                                 | 729            | 531                         | 163                                                       |                                          |                                                             |
| 4                  |                                 | 681            | 464                         | 230                                                       |                                          |                                                             |
| 5                  |                                 |                |                             |                                                           |                                          |                                                             |

$$AOF = Q \left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5000$$

*Tested II-2  
+ Comp. Error  
5-14-82*

|                          |               |                              |                       |              |
|--------------------------|---------------|------------------------------|-----------------------|--------------|
| Absolute Oper. Flow 5000 |               | Mcf/d @ 15.025               | Angle of Slope @ 59.5 | Slope, n .59 |
| Remarks:                 |               |                              |                       |              |
| Approved By Commission:  | Conducted By: | Calculated By: <i>5-4-82</i> | Checked By:           |              |
|                          |               | E. I. RUTTIROSS, JR.         |                       |              |

MESA PETROLEUM CO.  
 CAMACK FEDERAL NO. 7  
 CHAVES CO., NM  
 4-22-82



$$N = 1/\text{SLOPE} = \frac{\text{LOG } Q_2 - \text{LOG } Q_1}{\text{CYCLE}} = \frac{\text{LOG } 6200 - \text{LOG } 1600}{\text{CYCLE}} = 3.79 - 3.20 = .59$$

$$\theta = 59.5^\circ$$