

N. M. O. C. C. COPY  
NEW MEXICO OIL CONSERVATION COMMISSION  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122  
Revised 9-1-65

|                                                                                                                        |             |                                  |                          |                                    |                         |                                       |
|------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------|--------------------------|------------------------------------|-------------------------|---------------------------------------|
| Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |             |                                  |                          |                                    | Test Date<br>8-17-70    |                                       |
| Company<br>McGrath & Smith, Inc.                                                                                       |             |                                  |                          | Connection<br>None                 |                         |                                       |
| Pool<br>Wildcat                                                                                                        |             |                                  |                          | Formation<br>Queen                 |                         | Unit<br>J. S. GORDON                  |
| Completion Date<br>8-17-70                                                                                             |             | Total Depth<br>2800'             |                          | Plug Back TD<br>2272               |                         | Elevation<br>3924 G.L.                |
| Farm or Lease Name<br>Chorney Federal                                                                                  |             |                                  |                          |                                    |                         | Well No.<br>1                         |
| Csg. Size<br>4 1/2"                                                                                                    | Wt.<br>9.5  | d<br>4.090                       | Set At<br>2299           | Perforations:<br>From 2175 To 2184 |                         | Unit Sec. Twp. Rge.<br>0 15 13S 30E   |
| Tbg. Size<br>2" EUE                                                                                                    | Wt.<br>4.70 | d<br>1.995                       | Set At<br>2187.82        | Perforations:<br>From - To -       |                         | County<br>Chaves                      |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple<br>Single                                                      |             |                                  |                          | Packer Set At<br>None              |                         | State<br>New Mexico                   |
| Producing Thru<br>Tubing                                                                                               |             | Reservoir Temp. *F<br>2184 @ 890 |                          | Mean Annual Temp. *F<br>60.0       |                         | Baro. Press. - P <sub>a</sub><br>13.2 |
| L<br>2187                                                                                                              | H<br>2187   | Gg<br>0.940                      | % CO <sub>2</sub><br>.15 | % N <sub>2</sub><br>73.35          | % H <sub>2</sub> S<br>- | Prover<br>2.000"                      |
| Meter Run<br>-                                                                                                         |             | Taps<br>-                        |                          |                                    |                         |                                       |

| 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        |                  |   |              | 734             |                      |             | 734             |             | 762             |                  | 96       |
| 1.        | 2.000            |   | 1/16         | 648             | -                    | 60          | 648             |             | 674             |                  | 2 - 1/4  |
| 2.        | 2.000            |   | 3/32         | 554             | -                    | 68          | 554             |             | 576             |                  | 2 - 1/2  |
| 3.        | 2.000            |   | 1/8          | 465             | -                    | 72          | 465             |             | 479             |                  | 2 - 1/2  |
| 4.        | 2.000            |   | 3/16         | 257             | -                    | 78          | 257             |             | 285             |                  | 2 - 1/2  |
| 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 Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
| 1                         | .06405                | -                | 661.2                   | 1.000                 | 1.031             | 1.024                       | 45                   |
| 2                         | .1410                 | -                | 567.2                   | .9924                 | 1.031             | 1.017                       | 83                   |
| 3                         | .2648                 | -                | 478.2                   | .9887                 | 1.031             | 1.016                       | 131                  |
| 4                         | .6082                 | -                | 270.2                   | .9831                 | 1.031             | 1.014                       | 169                  |
| 5                         |                       |                  |                         |                       |                   |                             |                      |

|     |                |          |                |      |                                         |           |
|-----|----------------|----------|----------------|------|-----------------------------------------|-----------|
| NO. | P <sub>t</sub> | Temp. *R | T <sub>r</sub> | Z    | Gas Liquid Hydrocarbon Ratio<br>Dry Gas | Mcf/bbl.  |
| 1.  | 1.05           | 520      | 1.13           | .690 | A.P.I. Gravity of Liquid Hydrocarbons   | Deq.      |
| 2.  | .90            | 528      | 1.15           | .761 | Specific Gravity Separator Gas          | 0.940     |
| 3.  | .76            | 532      | 1.16           | .810 | Specific Gravity Flowing Fluid          | X X X X X |
| 4.  | .43            | 538      | 1.17           | .899 | Critical Pressure                       | 538       |
| 5.  |                |          |                |      | Critical Temperature                    | 273       |

|                |                             |                             |                             |
|----------------|-----------------------------|-----------------------------|-----------------------------|
| P <sub>c</sub> | *840.2                      | P <sub>c</sub> <sup>2</sup> | 705.9                       |
| NO.            | P <sub>t</sub> <sup>2</sup> | * P <sub>w</sub>            | R <sub>w</sub> <sup>2</sup> |
| 1              | 437.2                       | 749.2                       | 561.3                       |
| 2              | 321.7                       | 656.2                       | 430.6                       |
| 3              | 228.7                       | 528.2                       | 279.0                       |
| 4              | 73.0                        | 316.2                       | 100.0                       |
| 5              |                             |                             |                             |

(1)  $\frac{P_c^2}{P_c^2 - R_w^2} =$

ACF = Q  $\left[ \frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 196$

(2)  $\left[ \frac{P_c^2}{P_c^2 - R_w^2} \right]^n =$

|                    |     |                |                         |       |          |       |
|--------------------|-----|----------------|-------------------------|-------|----------|-------|
| Absolute Open Flow | 196 | Mcf/d @ 15.025 | Angle of Slope $\theta$ | 46.50 | Slope, n | 0.949 |
|--------------------|-----|----------------|-------------------------|-------|----------|-------|

Remarks: \* Used Amerada Bomb

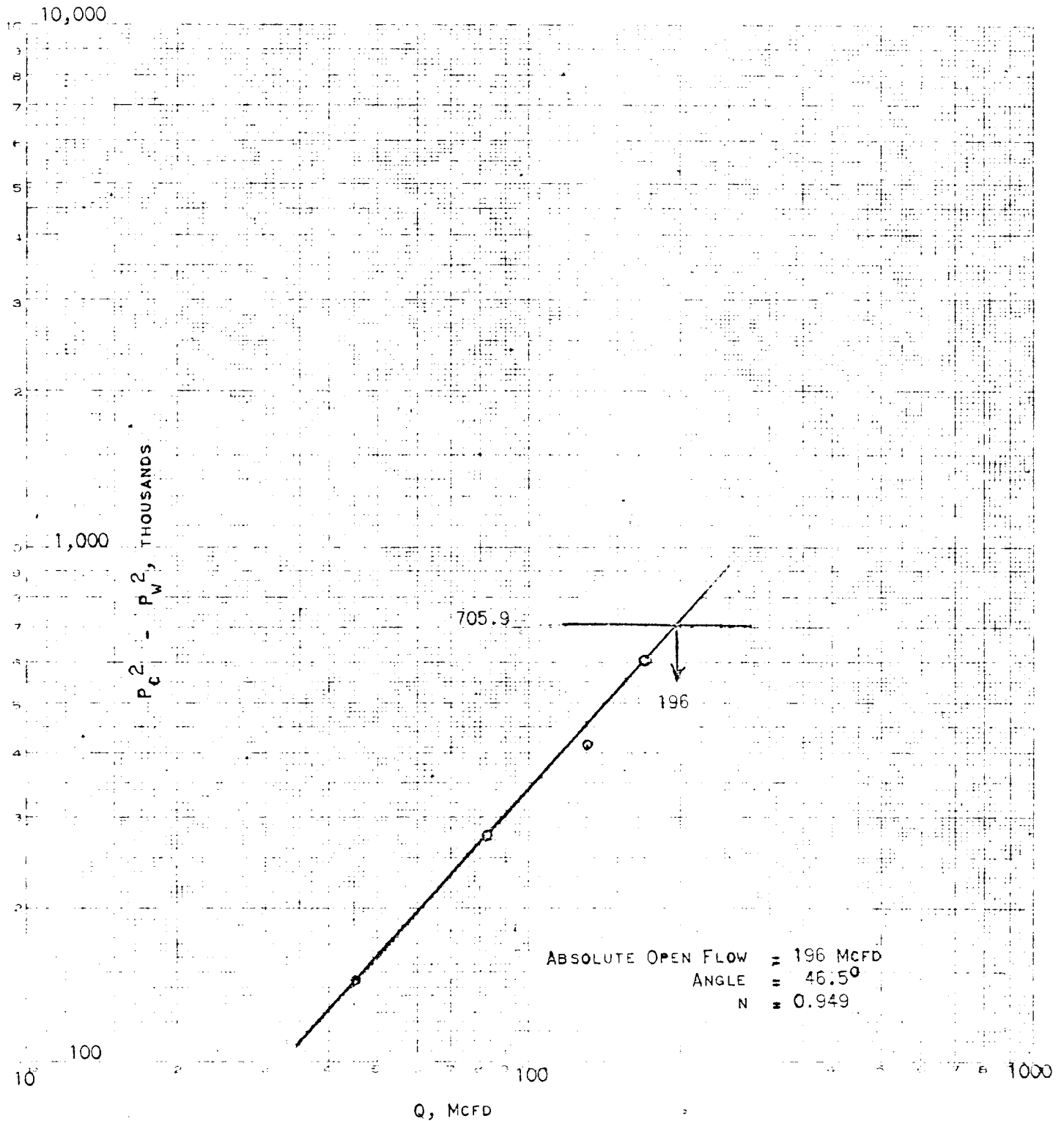
|                         |                              |                               |                             |
|-------------------------|------------------------------|-------------------------------|-----------------------------|
| Approved By Commission: | Conducted By:<br>H. LeGendre | Calculated By:<br>H. LeGendre | Checked By:<br>J. B. Taylor |
|-------------------------|------------------------------|-------------------------------|-----------------------------|

RECEIVED

SEP 1 1970

OIL CONSERVATION COMM.

COMPANY McGRATH & SMITH  
 WELL CHORNEY-FEDERAL #1  
 LOCATION 0, 15-135-30E  
 COUNTY CHAVES  
 DATE 8-17-70



BY: APEX ENGINEERING CO.  
 MIDLAND, TEXAS

RECEIVED

SEP 1 1970

OIL CONSERVATION COMM.