

NEW MEXICO OBSERVATION POINT  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-121  
Revised 9-65

CORRECTED COPY \*

|                                                                                                                           |  |                     |  |                       |  |
|---------------------------------------------------------------------------------------------------------------------------|--|---------------------|--|-----------------------|--|
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |  |                     |  | Test Date<br>7-11-72  |  |
| Company<br>J. M. HUBER CORPORATION                                                                                        |  |                     |  | Connection<br>None    |  |
| Pool<br>Washington Ranch) <del>now</del>                                                                                  |  |                     |  | Formation<br>Morrow   |  |
| Completion Date<br>7-2-72                                                                                                 |  | Total Depth<br>8200 |  | Plug Back TD<br>7723  |  |
| Csg. Size<br>1 1/2                                                                                                        |  | WT.<br>10.5         |  | Elevation<br>7136     |  |
| Tub. Size<br>2 7/8                                                                                                        |  | WT.<br>6.5          |  | Well No.<br>1         |  |
| Type Well - Single - Broadhead - G.G. or G.O. Multiple<br>Single                                                          |  |                     |  | Packer Set At<br>7085 |  |
| Producing Thru<br>Tbg.                                                                                                    |  |                     |  | State<br>New Mexico   |  |
| L                                                                                                                         |  | H                   |  | Prover<br>2"          |  |
| Gg                                                                                                                        |  | .570                |  | Meter Run<br>Taps     |  |

  

| FLOW DATA |             |   |              |                 |                      | TUBING DATA |                 | CASING DATA |                 | Duration of Flow |          |
|-----------|-------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|----------|
| NO        | Prover 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         |          |
| 1         | 2           | X | 1/2          | 138             |                      | 110         | 2516            | 74          |                 |                  | 120 min. |
| 2         | 2           | X | 1/2          | 251             |                      | 99          | 2432            |             |                 |                  | 90 min.  |
| 3         | 2           | X | 1/2          | 382             |                      | 90          | 2300            |             |                 |                  | 90 min.  |
| 4         | 2           | X | 1/2          | 599             |                      | 87          | 2065            |             |                 |                  | 90 min.  |
| 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, F <sub>sp</sub> | Rate of Flow Q, Mcfd |
| 1                         | 1.279                 |                  | 151.2                   | .9551                 | 1.325             | 1.008                                    | 825                  |
| 2                         | 1.279                 |                  | 251.2                   | .9545                 | 1.323             | 1.015                                    | 1,466                |
| 3                         | 1.279                 |                  | 385.2                   | .9722                 | 1.325             | 1.025                                    | 2,232                |
| 4                         | 1.279                 |                  | 612.2                   | .9750                 | 1.323             | 1.139                                    | 3,655 *              |
| 5                         |                       |                  |                         |                       |                   |                                          |                      |

  

| NO. | P <sub>t</sub> | Temp. °R | T <sub>r</sub> | Z   | Gas Liquid Hydrocarbon Ratio | A.P.I. Gravity of Liquid Hydrocarbons | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature |
|-----|----------------|----------|----------------|-----|------------------------------|---------------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|
| 1   | .23            | 570      | 1.65           | .85 | Dry                          |                                       | .570                           | X X X X X X X X                |                   |                      |
| 2   | .33            | 552      | 1.62           | .87 |                              |                                       | X X X X X                      |                                |                   |                      |
| 3   | .59            | 550      | 1.59           | .88 |                              |                                       |                                |                                | P.S.I.A.          | P.S.I.A.             |
| 4   | .91            | 547      | 1.58           | .88 |                              |                                       |                                |                                | 672               | 386                  |
| 5   |                |          |                |     |                              |                                       |                                |                                |                   |                      |

  

| NO. | P <sub>t</sub> | P <sub>w</sub> | P <sub>w</sub> <sup>2</sup> | P <sub>t</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> | (1) $\frac{P_t^2}{P_t^2 - P_w^2} =$ | (2) $\left[ \frac{P_t^2}{P_t^2 - P_w^2} \right]^n =$ |
|-----|----------------|----------------|-----------------------------|-----------------------------------------------------------|-------------------------------------|------------------------------------------------------|
| 1   | 2520.1         | 6401.5         | 500.3                       |                                                           | 2.720                               | 2.720                                                |
| 2   | 2448.2         | 5933.7         | 471.1                       |                                                           |                                     |                                                      |
| 3   | 2320.6         | 5385.0         | 430.8                       |                                                           |                                     |                                                      |
| 4   | 2102.6         | 4400.9         | 352.0                       |                                                           |                                     |                                                      |
| 5   |                |                |                             |                                                           |                                     |                                                      |

  

|                                         |  |                                             |  |                              |  |                           |  |
|-----------------------------------------|--|---------------------------------------------|--|------------------------------|--|---------------------------|--|
| Absolute Open Flow 10,484 Mcfd @ 15.025 |  |                                             |  | Angle of Slope 45            |  | Slope, n 1.000            |  |
| Remarks: Dry gas all four (4) rates.    |  |                                             |  |                              |  |                           |  |
| Approved By Commission:                 |  | Conducted By: PAUL POTERS Leonard Spolansky |  | Calculated By: J. C. Roberts |  | Checked By: J. E. M... .. |  |