

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 04/07/80 | |
| Company Amoco Prod. Company | | | Connection Northern Natural Gas Com | | |
| Pool Eumont | | | Formation Queen | | Unit |
| Completion Date 09/28/79 | | Total Depth 3600. | Plug Back TD 3562. | Elevation 3541. | Farm or Lease Name Gillully Federal Gas Com |
| Csg. Size 5.500 | Wt. 14.0 | d 5.021 | Set At 3605. | Perforations: From 3294. To 3501. | |
| Thq. Size 2.375 | Wt. 4.6 | d 1.995 | Set At 3469. | Perforations: From 0. To 0. | |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single | | | | Packer Set At 0 | |
| Producing Thru Tubing L | | Reservoir Temp. *F 94 # 3398. | Mean Annual Temp. *F 60.0 | Baro. Press. - P _a 13.2 | State New Mexico |
| L 3398. | H 3398. | G _q 0.680 | % CO ₂ 3.09 | % N ₂ 1.94 | % H ₂ S 0.66 |
| | | | Prover 0. | Meter Run 4.0 | Taps Flange |

| NO. | FLOW DATA | | | | | TUBING DATA | | CASING DATA | | Duration of Flow | |
|-----|------------------|---|--------------|-----------------|----------------------|-------------|-----------------|-------------|-----------------|------------------|----------|
| | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. h _w | Temp. *F | Press. p.s.i.g. | Temp. *F | Press. p.s.i.g. | | Temp. *F |
| S. | | | | | | | 195. | 68. | 0. | 0. | 46.0 |
| 1. | 4.03 x 1.750 | | | 65. | 1.0 | 42. | 190. | 68. | 0. | 0. | 0.5 |
| 2. | 4.03 x 1.750 | | | 65. | 3.0 | 43. | 187. | 70. | 0. | 0. | 0.5 |
| 3. | 4.03 x 1.750 | | | 75. | 5.0 | 44. | 182. | 72. | 0. | 0. | 0.5 |
| 4. | 4.03 x 1.750 | | | 80. | 7.0 | 44. | 177. | 74. | 0. | 0. | 0.5 |
| 5. | | | | | | | | | | | |

| NO. | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure P _m | Flow Temp. Factor Ft. | Gravity Factor F _g | Super Compress. Factor, F _{pv} | Rate of Flow Q, Mcfd |
|-----|-----------------------|------------------|-------------------------|-----------------------|-------------------------------|---|----------------------|
| | | | | | | | |
| 2 | 14.93 | 15.32 | 78.2 | 1.0168 | 1.2127 | 1.0087 | 284. |
| 3 | 14.93 | 21.00 | 88.2 | 1.0157 | 1.2127 | 1.0097 | 390. |
| 4 | 14.93 | 25.54 | 93.2 | 1.0157 | 1.2127 | 1.0103 | 474. |
| 5. | | | | | | | |

| NO. | P _i | Temp. *F | T _r | Z | Gas Liquid Hydrocarbon Ratio | | Rate of Flow Q, Mcfd |
|-----|----------------|----------|----------------|-------|--------------------------------|---------------|----------------------|
| | | | | | Mcf/bbl. | Deg. | |
| 1. | 0.11 | 502. | 1.34 | 0.983 | 0. | | 164. |
| 2. | 0.11 | 503. | 1.35 | 0.983 | 0. | | 284. |
| 3. | 0.13 | 504. | 1.35 | 0.981 | Specific Gravity Separator Gas | 0.680 | 390. |
| 4. | 0.14 | 504. | 1.35 | 0.980 | Specific Gravity Flowing Fluid | X X X X X | 474. |
| 5. | | | | | Critical Pressure | 683. P.S.I.A. | |
| | | | | | Critical Temperature | 374. R | |

| P _c 208.0 | | P _c ² 43 | | (1) $\frac{P_c^2}{P_c^2 - P_w^2} = 10.5808$ | | (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6.7023$ | |
|----------------------|-----------------------------|--------------------------------|-----------------------------|---|---|---|--|
| NO. | P _i ² | P _w | P _w ² | P _c ² - P _w ² | AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3180$ | | |
| 1 | 41 | 204 | 42 | 2 | | | |
| 2 | 40 | 203 | 41 | 2 | | | |
| 3 | 38 | 200 | 40 | 3 | | | |
| 4 | 36 | 198 | 39 | 4 | | | |
| 5 | | | | | | | |

Absolute Gas Flow 3180 Mcfd @ 15.025 Angle of Slope θ 51.1 Slope, n 0.806

Remarks:

| | | | |
|---|-----------------------------------|--------------------------------|-----------------------------|
| Approved By Commission: <i>John W. Whitten</i> | Conducted By: John West Engrg. | Calculated By: R.M. Whitten | Checked By: W.D. Magness |
|---|-----------------------------------|--------------------------------|-----------------------------|