NEW MEXICO OIL CONSERVATION COMMISSION

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

| | | | | |
|---|---|---|---|---|
| Type Test: [X] Initial [ ] Annual [ ] Special | | | Test Date: 9-9-73 | |
| Company: El Paso Natural Gas Company | Connection: None | | | |
| Pool: Jalmat | Formation: Yates | | | Unit: |
| Completion Date: 9-13-73 | Total Depth: 3049 | Plug Back TD: | Elevation: 2951.1 Gr. | Farm or Lease Name: Rhodes Storage G.U. |

| Csg. Size | Wt. | d | Set At | Perforations: | Well No. |
|---|---|---|---|---|---|
| 4 1/2 | 10.5 | | 3046' | From 2714 To 3012 | 1 |

| Tbg. Size | Wt. | d | Set At | Perforations: | Unit | Sec. | Twp. | Rge. |
|---|---|---|---|---|---|---|---|---|
| 2 3/8 | | | 2956' | From To | | 9 | 26 | 37 |

| Type Well – Single – Bradenhead – G.G. or G.O. Multiple | Packer Set At | County |
|---|---|---|
| Single | | Lea |

| Producing Thru | Reservoir Temp. °F | Mean Annual Temp. °F | Baro. Press. – $P_a$ | State |
|---|---|---|---|---|
| Tbg. | @ | | | New Mexico |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run | Taps |
|---|---|---|---|---|---|---|---|---|
| | | Assumed .655 | | | | 2" | | |

| FLOW DATA | | | | | TUBING DATA | | CASING DATA | | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|
| NO. | 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 | |
| SI | | | | | 310 | | 310 | | 40 Hr. |
| 1. | 2 x 3/16 | 303 | | 68 | 303 | | 304 | | 45 Min. |
| 2. | 2 x 1/4 | 299 | | 68 | 299 | | 302 | | 45 Min. |
| 3. | 2 x 5/16 | 290 | | 69 | 290 | | 298 | | 45 Min. |
| 4. | 2 x 3/8 | 271 | | 71 | 271 | | 285 | | 1 hr. |
| 5. | 2 x 7/16 | 207 | | 71 | 207 | | 272 | | 1 hr. |

## RATE OF FLOW CALCULATIONS

| NO. | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure $P_m$ | Flow Temp. Factor Ft. | Gravity Factor Fg | Super Compress. Factor, Fpv | Rate of Flow Q, Mcfd |
|---|---|---|---|---|---|---|---|
| 1 | .6082 | | 316.2 | .9924 | 1.236 | 1.031 | 243 |
| 2. | 1.087 | | 312.2 | .9924 | 1.236 | 1.031 | 429 |
| 3. | 1.672 | | 303.2 | .9915 | 1.236 | 1.030 | 639 |
| 4. | 2.378 | | 284.2 | .9896 | 1.236 | 1.028 | 850 |
| 5. | 3.408 | | 220.2 | .9896 | 1.236 | 1.022 | 938 |

| NO. | $P_t$ | Temp. °R | $T_t$ | Z |
|---|---|---|---|---|
| 1. | .47 | 528 | 1.41 | .941 |
| 2. | .47 | 528 | 1.41 | .941 |
| 3. | .45 | 529 | 1.41 | .943 |
| 4. | .42 | 531 | 1.42 | .947 |
| 5. | .33 | 531 | 1.42 | .958 |

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .655 | XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 670 P.S.I.A. | P.S.I.A.
Critical Temperature: 375 R | R

$P_c$ 323.2 $P_c^2$ 104.5

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 317.2 | 100.6 | 3.9 |
| 2 | | 315.2 | 99.4 | 5.1 |
| 3 | | 311.2 | 96.8 | 7.7 |
| 4 | | 298.2 | 88.9 | 15.6 |
| 5 | | 285.2 | 81.4 | 23.1 |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.523$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.127$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.995$

Absolute Open Flow: 1995 Mcfd @ 15.025 | Angle of Slope θ: 63.5 | Slope, n: .500

Remarks: Fluid mist made on last rate.

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | J. C. Roberts | Randy Kiker | |