NEW MEXICO OIL CONSERVATION COMMSSION

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

| | | | | | |
|---|---|---|---|---|---|
| Type Test: ☒ Initial ☐ Annual ☐ Special | | | | Test Date: 2/20/76 | 63-219 |
| Company: Atlantic Richfield Company | | Connection: El Paso Natural Gas Company | | | |
| Pool: Jalmat Yates Gas | | Formation: Yates | | | Unit |
| Completion Date: 12/22/75 | Total Depth: 3650' | | Plug Back TD: 3335' | Elevation: 3290' GR | Farm or Lease Name: W. H. Harrison A WN |
| Csg. Size: 7" / Wt.: 24 / d: 6.336 / Set At: 3356' | | | Perforations: From 2931' To 3333' | | Well No.: 2 |
| Tbg. Size: 2 7/8" / Wt.: 6.50 / d: 2.441 / Set At: 3274' | | | Perforations: From Open To Ended | | Unit: D / Sec.: 29 / Twp.: 24S / Rge.: 37E |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single | | | Packer Set At: None | | County: Lea |
| Producing Thru: Tbg | Reservoir Temp. °F: 85° | Mean Annual Temp. °F: 60 | Baro. Press. – $P_a$: 13.2 | | State: New Mexico |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run | Taps |
|---|---|---|---|---|---|---|---|---|
| 3274 | 3274 | .653 | --- | --- | --- | --- | 4" | Flg. |

| NO. | FLOW DATA: Prover Line Size X Orifice Size | Press. p.s.i.g. | Diff. $h_w$ | Temp. °F | TUBING DATA: Press. p.s.i.g. | Temp. °F | CASING DATA: Press. p.s.i.g. | Temp. °F | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|
| SI | | | | | 238 | | 238 | | 72 Hr. |
| 1. | 4 x 1.750 | 11 | 4.5 | 71 | 224 | | 224 | | 1 Hr. |
| 2. | 4 x 1.750 | 14 | 11.5 | 72 | 209 | | 215 | | 45 Min. |
| 3. | 4 x 1.750 | 18 | 20.5 | 72 | 183 | | 202 | | 45 Min. |
| 4. | 4 x 1.750 | 24 | 37.4 | 70 | 130 | | 176 | | 45 Min. |
| 5. | | | | | | | | | |

## 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 | 14.93 | 10.44 | 24.2 | .9896 | 1.237 | Nil | 191 |
| 2 | 14.93 | 17.69 | 27.2 | .9887 | 1.237 | Nil | 323 |
| 3 | 14.93 | 25.29 | 31.2 | .9887 | 1.237 | Nil | 462 |
| 4 | 14.93 | 37.30 | 37.2 | .9905 | 1.237 | Nil | 682 |
| 5 | | | | | | | |

| NO. | $P_t$ | Temp. °R | $T_t$ | Z |
|---|---|---|---|---|
| 1 | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5 | | | | |

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Dry Deg.
Specific Gravity Separator Gas: .653 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX 0.653
Critical Pressure: 670 P.S.I.A. 670 P.S.I.A.
Critical Temperature: 375 R 375 R

$P_c$ 251.2 $P_c^2$ 63.101

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 237.2 | 56.264 | 6.837 |
| 2 | | 228.2 | 52.075 | 11.026 |
| 3 | | 215.2 | 46.311 | 16.790 |
| 4 | | 189.2 | 35.797 | 27.304 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.311$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.988$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1,355$

Absolute Open Flow: 1,355 Mcfd @ 15.025 | Angle of Slope θ: 50.65° | Slope, n: .820

Remarks:

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | Rick Pagan | Rick Pagan | L. C. Hudry |