STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

C/SF
C-122 USGS

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
MAR 12 1982
O. C. D.
ARTESIA, OFFICE

Test: ☒ Initial ☐ Annual ☐ Special — Test Date: 2-9-82

Company: Tenneco Oil Company
Connection: None
Pool: Turkey Track
Formation: Morrow

| Completion Date | Total Depth | Plug Back TD | Unit |
|---|---|---|---|
| 2-5-82 | 11589' | 11252' | |

| Csg. Size | Wt. | d | Set At | Perforations |
|---|---|---|---|---|
| 5½" | 17 | 4.892 | 11589' | From 11120' To 11234' |

| Tbg. Size | Wt. | d | Set At | Perforations |
|---|---|---|---|---|
| 2 3/8" | 4.7 | 1.995 | 11084' | From Open End |

Lease: State NL
Well No.: 1Y
Unit: P
Sec.: 2
Twp.: 18S
Rge.: 28E

Type Well: Single - Bradenhead - G.C. or G.O. Multiple: Single
Packer Set At: 11084'
County: Eddy
State: New Mexico

| Producing Thru | Reservoir Temp. °F | Mean Annual Temp. °F | Baro. Press. - $P_a$ |
|---|---|---|---|
| Tbg | 185 @ 11084' | 60 | 13.2 |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run |
|---|---|---|---|---|---|---|---|
| 11084 | 11084 | .6804 | .749 | .658 | | | 2.900 |

## FLOW DATA

| NO | Prover Line Size | X | Orifice Size | Press. p.s.i.g. | Diff. $h_w$ | Temp. °F | TUBING DATA Press. p.s.i.g. | TUBING DATA Temp. °F | CASING DATA Press. p.s.i.g. | CASING DATA Temp. °F | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SI | | | | | | | 3220 | | PACKER | | 69.0 HR |
| 1. | 2.9 | 4/64 | 1.00 | 315 | 8 | 77 | 2855 | 60 | | | 1.0 hr. |
| 2. | 2.9 | 5.5/64 | 1.00 | 330 | 16 | 74 | 2632 | 60 | | | 1.0 hr. |
| 3. | 2.9 | 6.5/64 | 1.00 | 310 | 25 | 65 | 2325 | 60 | | | 1.0 hr. |
| 4. | 2.9 | 9/64 | 1.00 | 330 | 60 | 60 | 1810 | 60 | | | 1.0 hr. |
| 5. | | | | | | | | | | | |

## RATE OF FLOW CALCULATIONS

| NO. | Coefficient (24 Hour) | $\sqrt{h_w P_m}$ | Pressure $P_m$ | Flow Temp. Factor $F_t$ | Gravity Factor $F_g$ | Super Compress. Factor, $F_{pv}$ | Rate of Flow Q, Mcfd |
|---|---|---|---|---|---|---|---|
| 1 | 4.801 | 51.24 | 328.2 | .9840 | 1.213 | 1.032 | 303 |
| 2 | 4.801 | 74.10 | 343.2 | .9868 | 1.215 | 1.033 | 440 |
| 3 | 4.801 | 89.89 | 323.2 | .9952 | 1.213 | 1.034 | 539 |
| 4 | 4.801 | 143.50 | 343.2 | .9905 | 1.213 | 1.035 | 857 |
| 5 | | | | | | | |

| NO | $P_r$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1 | .49 | 537 | 1.41 | .939 |
| 2 | .51 | 534 | 1.40 | .937 |
| 3 | .48 | 525 | 1.38 | .935 |
| 4 | .51 | 530 | 1.39 | .934 |
| 5 | | | | |

Gas Liquid Hydrocarbon Ratio: 37.135 Mcf/bbl
A.P.I. Gravity of Liquid Hydrocarbons: 60.6 @ 60 Deg.
Specific Gravity Separator Gas: .680 XXXXXX (1-e^-s)
Specific Gravity Flowing Fluid: XXXXX .721 G-Mix
Critical Pressure: 672 P.S.I.A. 668 P.S.I.A.
Critical Temperature: 381 R 398 R

$P_c$ 3235.2 $P_c^2$ 10463.6

| NO | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|
| 1 | 2870.2 | 8238.0 | 2215.6 |
| 2 | 2648.0 | 7011.9 | 3441.7 |
| 3 | 2341.7 | 5483.6 | 4970.0 |
| 4 | 1827.8 | 3340.9 | 7112.7 |
| 5 | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.470 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.206

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1,205

Absolute Open Flow: 1,205 Mcfd @ 15.025
Angle of Slope θ: 48.5
Slope, n: .885

Remarks: WELL MADE 2.4 BBLS CONDENSATE DURING TEST = 14.40 BC/D

Approved by Division: L. W. Wilson
Conducted By: JARREL WELL TESTING INC
Calculated By: R. Reston
Checked By: Joe A. Coleman PE #2208