NEW MEXICO OIL CONSERVATION COMMISSION

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
AUG 4 1975
O. C. C.
ARTESIA, OFFICE

| | | | | | |
|---|---|---|---|---|---|
| Type Test: [X] Initial [ ] Annual [ ] Special | | | | Test Date: 6/5/74 | |
| Company: Penroc Oil Corporation | | | Connection: None | | Unit |
| Pool: Wildcat | | | Formation: Delaware | | |
| Completion Date: 5/15/74 | Total Depth: 4951 | | Plug Back TD: 2920 | Elevation: 3305 GR | Farm or Lease Name: Combs Federal |
| Csg. Size: 4 1/2 / Wt.: 11.6# / d: 4.000 / Set At: 2950 | | | Perforations: From 2822 To 2844 | | Well No.: 1 |
| Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 2764 | | | Perforations: From To | | Unit: P / Sec.: 15 / Twp.: 20 S / Rge.: 27 E |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single | | | Packer Set At: 2764 | | County: Eddy |
| Producing Thru: Tubing | Reservoir Temp. °F: 83 @ 2800 | 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 |
|---|---|---|---|---|---|---|---|---|
| 2764 | 2764 | .760 | — | — | — | 2" | | |

| | FLOW DATA | | | | | TUBING DATA | | CASING DATA | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 | Duration of Flow |
| SI | | | | | | | 819 | | Choke | | 72 |
| 1. | 2 | x | .75 | 10.8 | | 95 | 753 | 81 | 10/64 | | 1 |
| 2. | 2 | x | .75 | 29.0 | | 98 | 630 | 80 | 12/64 | | 1 |
| 3. | 2 | x | 1.25 | 5.9 | | 99 | 471 | 81 | 14/64 | | 1 |
| 4. | 2 | x | 1.25 | 8.4 | | 99 | 351 | 81 | 16/64 | | 1 |
| 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 | 9.453 | | 24.0 | .9680 | 1.147 | 1.000 | 252 |
| 2. | 9.453 | | 42.2 | .9653 | 1.147 | 1.000 | 442 |
| 3. | 27.63 | | 19.1 | .9645 | 1.147 | 1.000 | 584 |
| 4. | 27.63 | | 21.6 | .9645 | 1.147 | 1.000 | 660 |
| 5. | | | | | | | |

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

Gas Liquid Hydrocarbon Ratio: TSTM Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .760 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 667 P.S.I.A. P.S.I.A.
Critical Temperature: 411 R R

$P_c$ 832.2 $P_c^2$ 692.6

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 766.2 | 587.1 | 105.5 |
| 2 | | 643.2 | 413.7 | 278.9 |
| 3 | | 484.2 | 234.4 | 458.2 |
| 4 | | 364.2 | 132.6 | 560.0 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.237$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.129$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 745$

Absolute Open Flow: 745 Mcfd @ 15.025 Angle of Slope θ: 60° 16' Slope, n: .571

Remarks: Friction Negligible – see Attached C-122D for Rate No. 1

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | | | |