NE IEXICO OIL CONSERVATION COMMS N

# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

C/SF
C-122

RECEIVED
APR 8 1982
O. C. D.
ARTESIA, OFFICE

| | | | | | |
|---|---|---|---|---|---|
| Type Test: [X] Initial [ ] Annual [ ] Special | | | | Test Date: 3-27-82 | |
| Company: AMOCO PRODUCTION COMPANY ✓ | | Connection: PCA | | | |
| Pool: ~~DOS HERMANOS~~ Wolfcamp Penn Strawn | | Formation: STRAWN | | Unit: F | |
| Completion Date: 2-15-82 | Total Depth: 13605. | Plug Back TD: 11405. | Elevation: 3343. | Farm or Lease Name: EMPEROR OIL CO. Fed Gas Com. | |
| Csg. Size: 7.000 / Wt.: 26.0 / d: 6.276 / Set At: 13375. | | Perforations: From 11078. To 11149. | | Well No.: 1 | |
| Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 10963. | | Perforations: From 0. To 0. | | Unit F Sec. 28 Twp. 20 S Rge. 30 E | |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE | | Packer Set At: 10900. | | County: EDDY | |
| Producing Thru: TUBING | Reservoir Temp. °F: 162. @ 11113. | Mean Annual Temp. °F: 60.0 | Baro. Press. – $P_a$: 13.2 | State: NEW MEXICO | |
| L: 11113. | H: 11113. | Gg: 0.679 | % $CO_2$: 0.44 | % $N_2$: 1.07 | % $H_2S$: 0. |
| Prover: 0. | Meter Run: 4.0 FLANGE | Taps: | | | |

## FLOW DATA / TUBING DATA / CASING DATA

| NO. | Prover Line Size | X Orifice Size | Press. p.s.i.g. | Diff. $h_w$ | Temp. °F | Tubing Press. p.s.i.g. | Tubing Temp. °F | Casing Press. p.s.i.g. | Casing Temp. °F | Duration of Flow |
|---|---|---|---|---|---|---|---|---|---|---|
| SI | | | | | | 2478. | 61. | | | 46.0 |
| 1. | 4.00 | x 2.250 | 120. | 2.9 | 82. | 2412. | 66. | 0. | 0. | 1.0 |
| 2. | 4.00 | x 2.250 | 231. | 9.0 | 87. | 2355. | 73. | 0. | 0. | 0.7 |
| 3. | 4.00 | x 2.250 | 432. | 17.6 | 69. | 2000. | 75. | 0. | 0. | 1.0 |
| 4. | 4.00 | x 2.250 | 640. | 25.0 | 70. | 1550. | 76. | 0. | 0. | 0.4 |
| 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 | 25.68 | 19.62 | 133.2 | 0.9795 | 1.2137 | 1.0124 | 607. |
| 2. | 25.68 | 46.88 | 244.2 | 0.9750 | 1.2137 | 1.0226 | 1457. |
| 3. | 25.68 | 88.62 | 445.2 | 0.9915 | 1.2137 | 1.0459 | 2865. |
| 4. | 25.68 | 127.79 | 653.2 | 0.9905 | 1.2137 | 1.0681 | 4215. |
| 5. | | | | | | | |

| NO. | $P_r$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1. | 0.20 | 542. | 1.43 | 0.976 |
| 2. | 0.37 | 547. | 1.44 | 0.956 |
| 3. | 0.67 | 529. | 1.39 | 0.914 |
| 4. | 0.98 | 530. | 1.40 | 0.877 |
| 5. | | | | |

Gas Liquid Hydrocarbon Ratio 0. Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 0. Deg.
Specific Gravity Separator Gas 0.679 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.679
Critical Pressure 669. P.S.I.A. 669. P.S.I.A.
Critical Temperature 379. R 379. R

$P_c$ 2491.2 $P_c^2$ 6206.

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | 5882. | 2420. | 5857. | 349. |
| 2 | 5608. | 2363. | 5586. | 620. |
| 3 | 4053. | 2049. | 4199. | 2007. |
| 4 | 2444. | 1699. | 2887. | 3319. |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.8700$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.7074$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 7196.$

Absolute Open Flow 7196. Mcfd @ 15.025 Angle of Slope θ 49.5 Slope, n 0.855

Remarks:

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | John West | Barbara Wagner | Larry Sheppard |