STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

# OIL CONSERVATION DIVISION

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

Form C-122
Revised 10-1-78

45F File

## MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

RECEIVED BY
JUL 15 1987
O. C. D.
ARTESIA, OFFICE

| | | | | | |
|---|---|---|---|---|---|
| Type Test: [X] Initial [ ] Annual [ ] Special | | | | Test Date: 4/28/87 | |
| Company: McClellan Oil Corp. | | Connection: Air | | | |
| Pool: Pecos Slope Abo | | Formation: Abo | | Unit: | |
| Completion Date: 4/17/87 | Total Depth: 4710' | Plug Back TD: 4658' | Elevation: 3789' G.L. | Farm or Lease Name: Penjack Fed. | |
| Csg. Size: 4½" / Wt.: 9.5 / d: / Set At: 4658' | | Perforations: From 4381' To 4421' | | Well No.: 2 | |
| Tbg. Size: 2-3/8" / Wt.: 4.7 / d: / Set At: 4361' | | Perforations: From To | | Unit: P / Sec.: 12 / Twp.: 10S / Rge.: 25E | |
| Type Well – Single – Bradenhead – G.C. or G.O. Multiple: Single | | Packer Set At: None | | County: Chaves | |
| Producing Thru: Tubing | Reservoir Temp. °F: 101@4400 | Mean Annual Temp. °F: 60 | Baro. Press. – $P_a$: 15.025 | State: NM | |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run | Taps |
|---|---|---|---|---|---|---|---|---|
| | | .647 | .03 | 4.12 | | 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 | | | | | | | 979.7 | 57 | 979.7 | 57 | |
| 1. | 2 | X | .375 | | - | | 781.9 | 63 | 835.4 | 63 | ½ hour |
| 2. | 2 | X | .375 | | - | | 693.8 | 74 | 746.1 | 74 | 1 |
| 3. | 2 | X | .375 | | - | | 647.3 | 66 | 704.1 | 66 | 2 |
| 4. | 2 | X | .375 | | - | | 388.3 | 69 | 459.3 | 69 | 24.75 |
| 5. | 2 | X | .375 | | - | | 386.8 | 69 | 458.6 | 69 | 25.50 |

### 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 | 2.378 | - | | .9971 | 1.243 | 1.073 | 2520 |
| 2. | 2.378 | - | | .9868 | 1.243 | 1.060 | 2191 |
| 3. | 2.378 | - | | .9943 | 1.243 | 1.059 | 2060 |
| 4. | 2.378 | - | | .9915 | 1.243 | 1.035 | 1223 |
| 5. | 2.378 | - | | .9915 | 1.243 | 1.035 | 1218 |

| NO. | $P_t$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1. | | 361 | 1.45 | .869 |
| 2. | | 361 | 1.48 | .890 |
| 3. | | 361 | 1.46 | .892 |
| 4. | | 361 | 1.47 | .933 |
| 5. | | 361 | 1.47 | .933 |

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

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 796 | 592 | 266 |
| 2 | | 708 | 502 | 410 |
| 3 | | 662 | 438 | 472 |
| 4 | | 403 | 162 | 764 |
| 5 | | 401 | 161 | 765 |

$P_c$ _____ $P_c^2$

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.69$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.69$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1600$

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Absolute Open Flow 1600 Mcfd @ 15.025 Angle of Slope θ 45 Slope, n

Remarks:

Approved By Division | Conducted By: | Calculated By: | Checked By: