1-C-122 file
1-file

NEW MEXICO OIL CONSERVATION COMMISSION
# MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
FEB 13 1978
O. C. C.
ARTESIA, OFFICE

| | | | | | |
|---|---|---|---|---|---|
| Type Test: ☐ Initial ☐ Annual ☒ Special | | | | Test Date: 2-8-78 | |
| Company: R.L. Foree | | Connection: Phillips | | | Unit |
| Pool: Sams Ranch Grayburg | | Formation: Premier Grayburg | | | |
| Completion Date: 11-10-73 | Total Depth: 1873 | | Plug Back TD: 1873 | Elevation: 3605 | Farm or Lease Name: McClellan |
| Csg. Size: 4.5 / Wt.: 11.6 / d: 4.0 / Set At: 1848 | | | Perforations: From 1848 To 1873 | | Well No.: # 2 |
| Tbg. Size: 2 3/8 / Wt.: 4.9 / d: 1.995 / Set At: 1840 | | | Perforations: From To | | Unit: G / Sec.: 14 / Twp.: 14S / Rge.: 28E |
| Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single Gas Well | | | Packer Set At: None | | County: Chaves |
| Producing Thru: Tubing | Reservoir Temp. °F: 83°@ Perfs | 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 |
|---|---|---|---|---|---|---|---|---|
| 1840 | 1840 | .733 | | 24.00 | | | Four-Inch | Flange |

| 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 | | | | | | | 1076 | | 1076 | | |
| 1. | 4 | X | 1 | 247 | 4.5 | 60 | 998 | | 1003 | | 1 hr |
| 2. | 4 | X | 1 | 247 | 9.2 | 60 | 914 | | 917 | | 1 hr |
| 3. | 4 | X | 1 | 247 | 18.0 | 60 | 875 | | 880 | | 1 hr |
| 4. | 4 | X | 1 | 257 | 42.3 | 60 | 742 | | 750 | | 1 hr |
| 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 | 4.753 | 34.22 | 260.2 | 1.0 | 1.168 | 1.018 | 193. |
| 2. | 4.753 | 48.93 | 260.2 | 1.0 | 1.168 | 1.018 | 277. |
| 3. | 4.753 | 68.44 | 260.2 | 1.0 | 1.168 | 1.018 | 387. |
| 4. | 4.753 | 106.90 | 270.2 | 1.0 | 1.168 | 1.021 | 606. |
| 5. | | | | | | | |

| NO. | $P_t$ | Temp. °R | $T_t$ | Z |
|---|---|---|---|---|
| 1. | .42 | 520 | 1.55 | .9615 |
| 2. | .42 | 520 | 1.55 | .9615 |
| 3. | .42 | 520 | 1.55 | .9615 |
| 4. | .43 | 520 | 1.55 | .9610 |
| 5. | | | | |

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas .733 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 668 - 41 = 627 P.S.I.A. _____ P.S.I.A.
Critical Temperature 401 - 66 335 R _____ R

$P_c$ 1086.2 $P_c^2$ 1180.

| NO | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1 | | 1016.2 | 1012. | 168 |
| 2 | | 930.2 | 865. | 315 |
| 3 | | 893.2 | 798. | 382 |
| 4 | | 763.2 | 583. | 597 |
| 5 | | | | |

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.98$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.79$

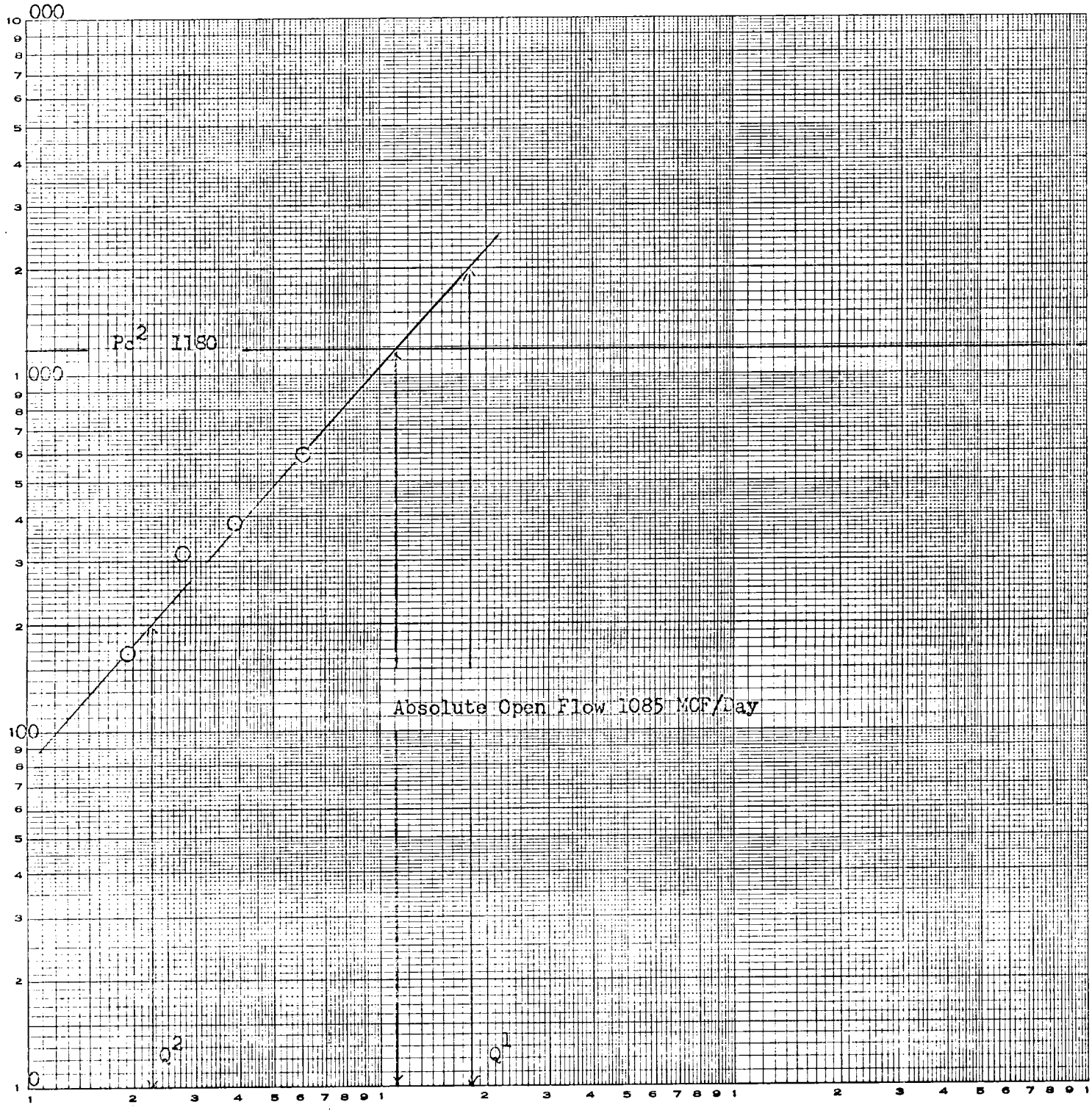
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1085$

Absolute Open Flow 1085 Mcfd @ 15.025 Angle of Slope θ 42.8 Slope, n .903

Remarks: _____

| Approved By Commission: | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | John Davis | Larry Davis | |

Company: A.F. Force
Lease: McClellan
Well No: # 2
Field: Sams Ranch
County: Chaves
Date: 2-8-78




EUGENE DIETZGEN CO. MADE IN U.S.A.
NO. 340R-L33 DIETZGEN GRAPH PAPER LOGARITHMIC 3 CYCLES X 3 CYCLES

Q = MCF

$Q^1$ = 1800; Log Of $Q^1$ = 3.2552725
$Q^2$ = 225; Log Of $Q^2$ = 2.3521825

N = .90309

MACLELLAN #2

PHILLIPS PETROLEUM COMPANY
GAS CHROMATOGRAPH ANALYSIS - VAPOR
PROGRAM 6335

#2 well

SAMPLE OF — GAS TO LUSK PLT
SECURED FROM--STA #76544 — R.L. FOREE PRODUCER
LOCATION--LUSK AREA — CO.-- — STATE--NEW MEX
ATMOS T--58 — GAS T--46 — LINE P--250# — FTP-- — PURP--N2-CO2 CK
TRAP T-- — TRAP-- — RX GVTY-- — .738 — CHOKE-- — TRAP P--

RUN NO N-957
DATE RUN 11-23-77
DATE SEC 11-17-77
TIME
SEC BY BROCK
RUN BY RM-JB

| | MOL % UNCORR | MOL % FINAL |
|---|---|---|
| O2 | 0.0 | 0.0 |
| HE | 0.0 | 0.0 |
| CO2 | | 0.0 |
| H2S | | 0.0 |
| N2 | 23.1916 | 23.5629 |
| C1 | 65.4648 | 66.5130 |
| C2 | 5.6060 | 5.6958 |
| C3 | 2.4204 | 2.4592 |
| IC4 | 0.3010 | 0.3058 |
| NC4 | 0.7419 | 0.7538 |
| IC5 | 0.2020 | 0.2052 |
| NC5 | 0.2138 | 0.2172 |
| C6 | 0.1926 | 0.1957 |
| C7+ | 0.0899 | 0.0914 |
| TOTAL | 98.4240 | 99.9999 |

MISCELLANEOUS DATA

Z FACTOR = 0.9980

| | PRESSURE BASES @ 60 F 14.696 PSI | 14.65 PSI |
|---|---|---|
| C2 GPM | 1.519 | 1.514 |
| C3 GPM | 0.675 | 0.673 |
| IC4 GPM | 0.100 | 0.099 |
| NC4 GPM | 0.237 | 0.236 |
| C5+ GPM | 0.276 | 0.275 |
| C2+ GPM | 2.807 | 2.798 |
| BTU-CF-SB | 886.23 | 880.69 |
| CALC SG | 0.735 | 0.733 |
| H2S + CO2 | 0.0 | |
| H2S GRS | 0.0 | |
| N VALUE | 1.29 | |
| | 14.7345 PSI | 14.7350 PSI |
| BTU-CF-SB | 890.83 | 890.92 |

DISTRIBUTION

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ADDITIONAL INFORMATION

BTU REPORTED ON (SB) SATURATED BASIS
SUPER-COMP. FACTORS INCLUDED IN CALCULATIONS
BARO NONE — H2S STLA

R L Foree Maclellan #2-G-14-14-28

OA-1848-73