Submit in duplicate to appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Depa...ent

Form C-122
Revised 4-1-91

# OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

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

| | | | | | |
|---|---|---|---|---|---|
| Operator: Manzano Oil Corporation | | | | Lease or Unit Name: Appleseed Federal Com. | |
| Type Test: [X] Initial [ ] Annual [ ] Special | | | | Test Date: 6-4-96 | Well No.: 1 |
| Completion Date | Total Depth | | Plug Back TD | Elevation | Unit Ltr. - Sec. - TWP - Rge.: 17-20-35 |
| Csg. Size | Wt. | d | Set At | Perforations: From: 13610 To: 13730 | County: Lea |
| Tbg. Size: 2-7/8 | Wt. | d | Set At | Perforations: From: To: | Pool |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Single | | | Packer Set At: 13594 | | Formation: Morrow |
| Producing Thru: Tbg. | Reservoir Temp. °F: 184.5@13695 | Mean Annual Temp. °F: 60 | Baro. Press - $P_a$: 13.2 | | Connection: Vented |

| L | H | Gg | % $CO_2$ | % $N_2$ | % $H_2S$ | Prover | Meter Run | Taps |
|---|---|---|---|---|---|---|---|---|
| 13695 | 13695 | .683 | .56 | .53 | | | 4" | Flg. |

*

| | 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 | | | | | | | 3225 | | Pkr | | 24 Hrs. |
| 1. | 4 | X | 1.500 | 510 | 22.00 | 69 | 2500 | | " | | 1 Hr. |
| 2. | 4 | X | 1.500 | 510 | 48.00 | 75 | 2090 | | " | | 1 Hr. |
| 3. | 4 | X | 1.500 | 510 | 70.00 | 76 | 1730 | | " | | 1 Hr. |
| 4. | 4 | X | 1.500 | 510 | 80.00 | 78 | 1467 | | " | | 2 Hrs. |
| 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, F pv. | Rate of Flow Q, Mcfd |
|---|---|---|---|---|---|---|---|
| 1. | 10.84 | 107.29 | 523.2 | .9915 | 1.210 | 1.061 | 1,480 |
| 2. | 10.84 | 158.47 | 523.2 | .9859 | 1.210 | 1.060 | 2,172 |
| 3. | 10.84 | 191.37 | 523.2 | .9850 | 1.210 | 1.059 | 2,618 |
| 4. | 10.84 | 204.59 | 523.2 | .9831 | 1.210 | 1.059 | 2,794 |
| 5. | | | | | | | |

| NO. | $P_r$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1. | .78 | 529 | 1.37 | .889 |
| 2. | .78 | 535 | 1.38 | .890 |
| 3. | .78 | 536 | 1.39 | .891 |
| 4. | .78 | 538 | 1.39 | .891 |
| 5. | | | | |

Gas Liquid Hydrocarbon Ratio 9.551 Mcf/bbl.
A.P. I. Gravity of Liquid Hydrocarbons 55.1 @ 60° Deg.
Specific Gravity Separator Gas .683 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX G Mix=.970
Critical Pressure 669 P.S.I.A. P.S.I.A.
Critical Temperature 385 R R

$P_c$ ____ $P_c^2$ ____

| NO. | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1. | ** | 3062.9 | 9381.2 | 5163.9 |
| 2. | ** | 2606.6 | 6794.4 | 7750.7 |
| 3. | ** | 2198.0 | 4831.2 | 9713.9 |
| 4. | ** | 1893.6 | 3585.7 | 10959.4 |
| 5. | | | | |

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.497$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.431$

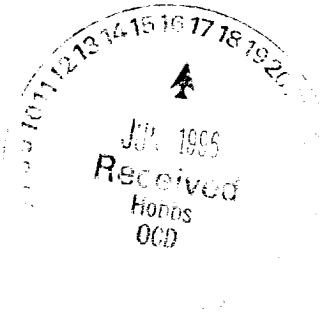
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.746$

Absolute Open Flow 3,746 Mcfd @ 15.025 | Angle of Slope θ 48.5 | Slope, n .8878

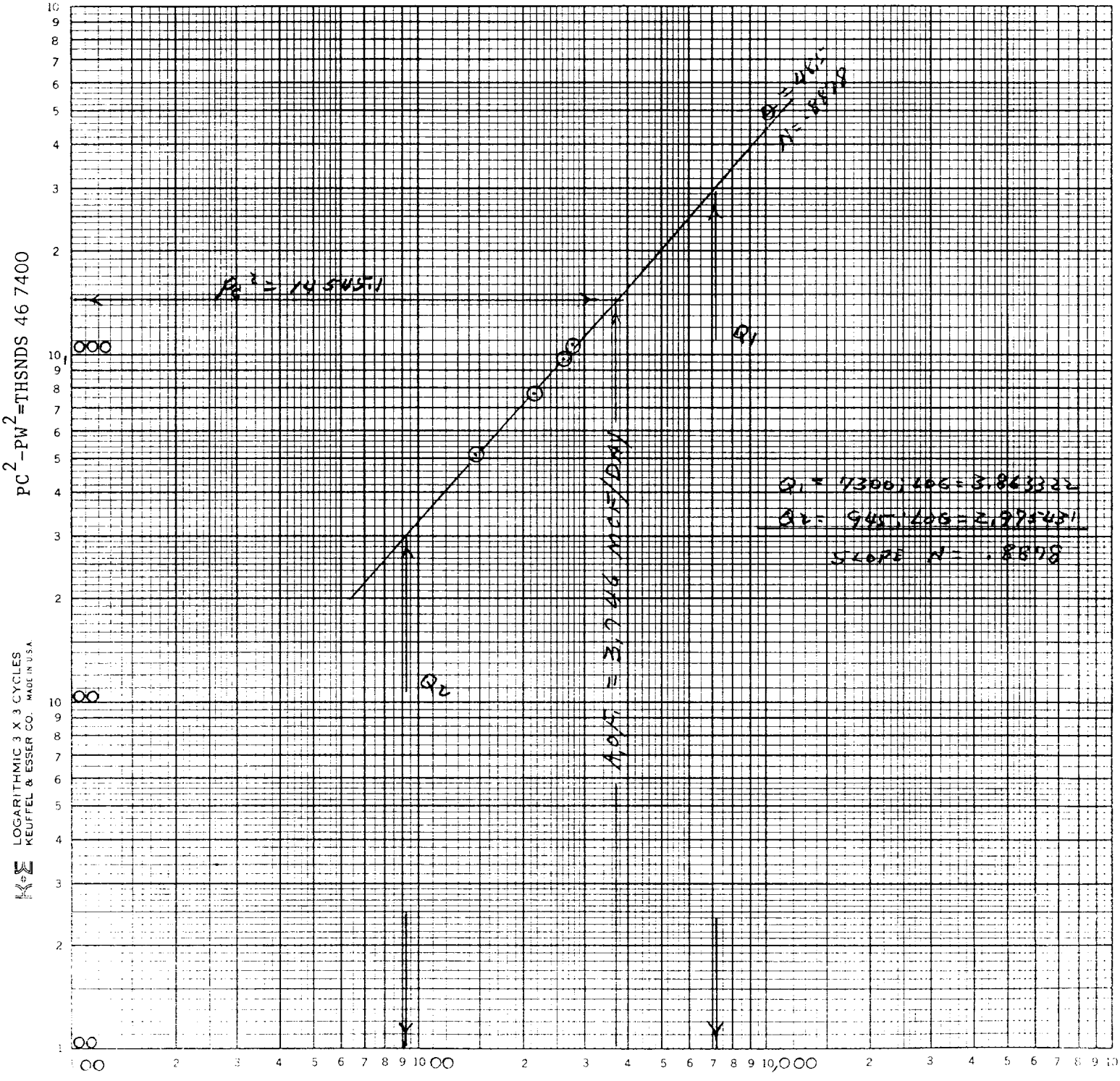
Remarks: * BHP INSTR. SET @ THIS DEPTH
**BHP's CORRECTED BACK TO SURFACE PRESSURES

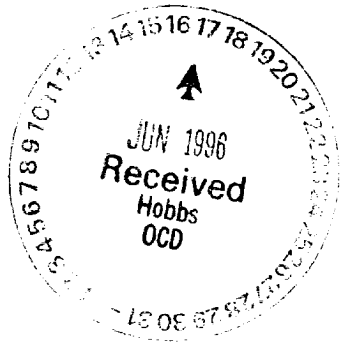
| Approved By Division | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | West-Test, Inc. | B.M. | B.M. |

WELL PRODUCED 46.0 BBLS 55.1 API GR. CONDENSATE.


JUL 1995
Received
Hobbs
OCD

MANZANO OIL CORPORATION
APPLESEED FEDERAL COM. NO.1
17-20-35
LEA COUNTY, NEW MEXICO
JUNE 4, 1996

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