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

State of New Mexico
Energy, Minerals and Natural Resources Department

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: TEXACO EXPLORATION | | | | | | Lease or Unit Name: SKELLY B STATE COMM | | | |
| Type Test: [X] Initial [ ] Annual [ ] Special | | | | | | Test Date: 11-7-94 | | Well No.: 3 | |
| Completion Date | | Total Depth: 3700 | | Plug Back TD: 3648 | | Elevation | | Unit Ltr. - Sec. - TWP - Rge.: 16 21S 36E | |
| Csg. Size: 5½ | Wt.: 15.5 | d: 4.950 | Set At: 3700 | Perforations: From: 3458 | To: 3595 | | | County: LEA | |
| Tbg. Size: 2-3/8 | Wt.: 4.7 | d: 1.995 | Set At: 3400 | Perforations: From: | To: | | | Pool: | |
| Type Well - Single - Bradenhead - G.G. or G.O. Multiple: single | | | | Packer Set At: none | | | | Formation: PENROSE | |
| Producing Thru: TBG. | Reservoir Temp. °F: 90 | | Mean Annual Temp. °F: 60 | Baro, Press - $P_a$: 13.2 | | | | Connection: AIR | |
| L: 3526.5 | H: 3526.5 | Gg: .722 | % $CO_2$: 5.47 | % $N_2$: 1.86 | % $H_2S$: | Prover: | | Meter Run: 2.067 | Taps: 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 | | | | | 200 | | | | |
| 1. | 2.067 X 1.500 | 33 | 48 | 60 | 100 | | N/A | | 24 hrs. |
| 2. | | | | | | | | | |
| 3. | | | | | | | | | |
| 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, F pv. | Rate of Flow Q, Mcfd |
|---|---|---|---|---|---|---|---|
| 1. | 12.76 | 47.10 | 46.2 | 1.000 | 1.177 | 1.005 | 711 |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

| NO. | $P_r$ | Temp. °R | $T_r$ | Z |
|---|---|---|---|---|
| 1. | .07 | 520 | 1.35 | .990 |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |

Gas Liquid Hydrocarbon Ratio: DRY GAS Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: DRY Deg.
Specific Gravity Separator Gas: .722 XXXXXXXXX
Specific Gravity Flowing Fluid: DRY XXXXX
Critical Pressure: 688 P.S.I.A. P.S.I.A.
Critical Temperature: 386 R R

$P_c$ 215.2 $P_c^2$ 46,315

| NO. | $P_t^2$ | $P_w$ | $P_w^2$ | $P_c^2 - P_w^2$ |
|---|---|---|---|---|
| 1. | 12.8 | 141.8 | 20.1 | 25.4 |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | | | | |

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.793$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.793$

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1,275$

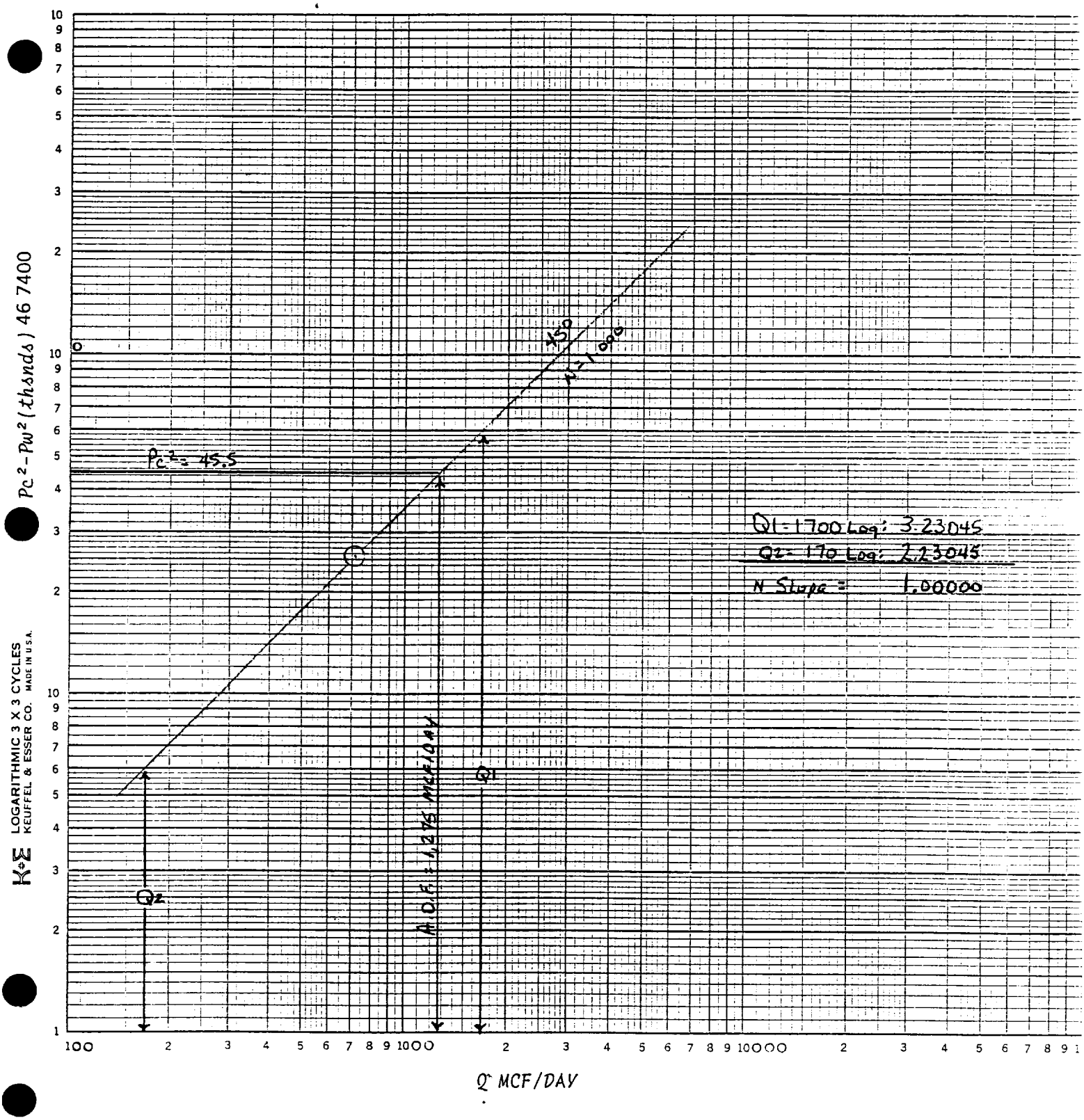
Absolute Open Flow: 1,275 Mcfd @ 15.025 | Angle of Slope θ: 45° | Slope, n: 1.000

Remarks: NO FLUID MADE DURING TEST

| Approved By Division | Conducted By: | Calculated By: | Checked By: |
|---|---|---|---|
| | PRO WELL TESTER | KS | |

NOV 16 1994

Skelly B State Comm, Well # 3
16-21S-36E
Lea County, New Mexico
11-7-94



# Laboratory Services, Inc.

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713


FOR: Pro Well Testing & Wireline
Attention: Mr. Leonard Abney
P. O. Box 791
Hobbs, New Mexico 88241

SAMPLE IDENTIFICATION: Skelly "B" #3
COMPANY: Texaco E. & P. Inc.
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 11-08-94 10:15AM GAS (XX) LIQUID ( )
ANALYSIS DATE: 11-08-94 SAMPLED BY: Pro Well
PRESSURE - PSIG ANALYSIS BY: Rolland Perry
SAMPLE TEMP. °F
ATMOS. TEMP. °F 75.00

REMARKS:

## COMPONENT ANALYSIS

| COMPONENT | | MOL PERCENT | GPM |
|---|---|---|---|
| Hydrogen Sulfide | (H2S) | | |
| Nitrogen | (N2) | 1.86 | |
| Carbon Dioxide | (CO2) | 5.47 | |
| Methane | (C1) | 80.31 | |
| Ethane | (C2) | 6.42 | 1.713 |
| Propane | (C3) | 3.47 | 0.954 |
| I-Butane | (IC4) | 0.49 | 0.160 |
| N-Butane | (NC4) | 1.02 | 0.321 |
| I-Pentane | (IC5) | 0.29 | 0.106 |
| N-Pentane | (NC5) | 0.24 | 0.087 |
| Hexane Plus | (C6) | 0.43 | 0.176 |
| | | 100.00 | 3.517 |

| | | | | |
|---|---|---|---|---|
| BTU/CU.FT. - | DRY | 1103 | MOLECULAR WT. | 20.9018 |
| AT 14.650 | DRY | 1100 | | |
| AT 14.650 | WET | 1080 | | |
| AT 14.73 | DRY | 1105 | | |
| AT 14.73 | WET | 1086 | | |

SPECIFIC GRAVITY -
CALCULATED 0.722
MEASURED

Equivalent Diameter Program
Author: Bob Murray
Date: December 26, 1990

| | | | | | |
|---|---|---|---|---|---|
| L1 = | 3400 ft. | L5 = | 0 ft. | Lt = | 3526.5 ft. |
| D1 = | 1.995 in. | D5 = | 1 in. | C = | 0.10797 |
| L2 = | 126.5 ft. | L6 = | 0 ft. | | |
| D2 = | 4.95 in. | D6 = | 1 in. | | |
| | | | | Deff = | 2.009 in. |
| L3 = | 0 ft. | L7 = | 0 ft. | Fr = | 0.01746 |
| D3 = | 1 in. | D7 = | 1 in. | | |
| L4 = | 0 ft. | L8 = | 0 ft. | | |
| D4 = | 1 in. | D8 = | 1 in. | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UNIT : | | SECTION : | 16 | TOWNSHIP : | 21 | | | | | | |
| L : | 3526 | H : | 3526 | L/H : | 1 | G/GMIX : | 0.722 | | Pt2 = | 12.8 | Pw = 141.8 |
| %CO2 : | 5.47 | %N2 : | 1.86 | H2S : | | DATE : | 11-08-94 | | | 0.0 | ERR |
| d : | 2.009 | Fr : | 0.017901 | GH : | 2546.1 | RANGE : | 36 | | | 0.0 | ERR |
| | | | | | | | | | | 0.0 | ERR |
| VOL 1 : | 711 | PSIA 1 : | 113.2 | | | RESV.TEMP | 90.0 | | Pc2-Pw2= | 25.4 | Pw2 = 20.1 |
| VOL 2 : | | PSIA 2 : | | | | | | | | ERR | ERR |
| VOL 3 : | | PSIA 3 : | | | | SHUT-IN PR= | 213.2 | | | ERR | ERR |
| VOL 4 : | | PSIA 4 : | | | | | | | | ERR | ERR |
| | | PCR : | 688 | | | | | | | n = | 1.000 |
| | | TCR : | 386 | | | | | | | | |
| | | | | | | | | | Pc2/(Pc2-Pw2) = | | 1.793 |
| | | | | | | | | | | | ERR |
| | | | | | | | | | | | ERR |
| | | | | | | | | | | | ERR |
| | | | | | | | | | [Pc2/Pc2-Pw2]n = | | 1.793 |
| | | | | | | | | | | | ERR |
| | | | | | | | | | | | ERR |
| | | | | | | | | | | | ERR |
| | | | | | | | | | AOF= Q | | 1.275 |
| | | | | | | | | | | | ERR |
| | | | | | | | | | | | ERR |
| | | | | | | | | | | | ERR |

| LINE | RATE 1 | | RATE 2 | | RATE 3 | | RATE 4 | |
|---|---|---|---|---|---|---|---|---|
| | 1ST | 2ND | 1ST | 2ND | 1ST | 2ND | 1ST | 2ND |
| 1 QM | 0.711 | 0.711 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2 TW | 534 | 534 | 534 | 534 | 534 | 534 | 534 | 534 |
| 3 Ts | 550.0 | 550.0 | 550.0 | 550.0 | 550.0 | 550.0 | 550.0 | 550.0 |
| 4 T | 542.0 | 542.0 | 542.0 | 542.0 | 542.0 | 542.0 | 542.0 | 542.0 |
| PR (est) | 0.16 | | 0.00 | | 0.00 | | 0.00 | |
| 5 Z(est) | 0.956 | 0.952 | ERR | ERR | ERR | ERR | ERR | ERR |
| 6 TZ | 518.0 | 516.0 | ERR | ERR | ERR | ERR | ERR | ERR |
| 7 GH/TZ | 4.915 | 4.935 | ERR | ERR | ERR | ERR | ERR | ERR |
| 8 eS | 1.202 | 1.203 | ERR | ERR | ERR | ERR | ERR | ERR |
| 9 1-e-S | 0.168 | 0.169 | ERR | ERR | ERR | ERR | ERR | ERR |
| 10 Pt | 113.2 | 113.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 11 Pt2 /1000 | 12.8 | 12.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 Fr | 0.017901 | 0.017901 | 0.017901 | 0.017901 | 0.017901 | 0.017901 | 0.017901 | 0.0179011 |
| 13 Fc=FrTZ | 9.273 | 9.237 | ERR | ERR | ERR | ERR | ERR | ERR |
| 14 FcQm | 6.59 | 6.57 | ERR | ERR | ERR | ERR | ERR | ERR |
| 15 L/H(FcQm) | 43.5 | 43.1 | ERR | ERR | ERR | ERR | ERR | ERR |
| 16 Fw | 7.316957 | 7.285970 | ERR | ERR | ERR | ERR | ERR | ERR |
| 17 Pw2 | 20.1 | 20.1 | ERR | ERR | ERR | ERR | ERR | ERR |
| 18 Ps2 | 24.2 | 24.2 | ERR | ERR | ERR | ERR | ERR | ERR |
| 19 Ps | 155.6 | 155.5 | ERR | ERR | ERR | ERR | ERR | ERR |
| 20 P | 134.4 | 134.4 | ERR | ERR | ERR | ERR | ERR | ERR |
| 21 Pr | 0.20 | 0.20 | ERR | ERR | ERR | ERR | ERR | ERR |
| 22 Tr | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 | 1.40 |
| 23 Z | 0.952 | 0.952 | ERR | ERR | ERR | ERR | ERR | ERR |

FORM C122-D