

Form 3160-1  
(August 1999)UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED  
ONIR NO. 1001-0137  
Expires: November 30, 20001a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry Otherb. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.  
Other

2. Name of Operator

TMBR/Sharp Drilling, Inc.

3. Address P. O. Drawer 10970

Midland, TX 79702

3a. Phone No. (include area code)

(915) 699-5050

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*

At surface 1980' FSL &amp; 990' FWL, Sec. 21, T-18S, R-32E

At top prod. interval reported below

At total depth

14. Date Spudded

11/30/00

15. Date P.D. Reached

1/24/01

16. Date Completed

☐ P & A ☒ Ready to Prod.  
6/29/01

18. Total Depth: MD 13,043

TVD

19. Plug Back T.D.

MD 12,865

TVD

20. Depth Bridge Plug Set:

MD 12,900

TVD

21. Type Electric &amp; Other Mechanical Logs Run (Submit copy of each)

CNL-Density-GR, DLL, Micro-Log

22. Was well cored? ☒ No ☐ Yes (Submit analysis)  
Was DST run? ☐ No ☒ Yes (Submit report)  
Directional Survey? ☒ No ☐ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

| Hole Size | Size/Grade | Wt. (lb/ft) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sk. & Type of Cement | Slurry Vol. (BBL) | Cement Top | Amount Pulled |
|-----------|------------|-------------|----------|-------------|----------------------|-----------------------------|-------------------|------------|---------------|
| 17 1/2    | 133/RH-40  | 48          | Surface  | 1136        |                      | 800 C                       | 255               | Surface    | 0             |
| 12 1/4    | 9.5/RH-35  | 40          | Surface  | 4267        |                      | 1890 65/35                  | 398               | Surface    | 0             |
| 8 1/2     | 5 1/2      | 17          | Surface  | 13046       | 10008                | 975 H                       | 205               | 10008      | 0             |
|           | (P-110)    |             |          |             |                      | 1785 C & H                  | 521               | 1780       |               |
|           | (N-80)     |             |          |             |                      |                             |                   |            |               |

24. Tubing Record

| Size  | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|-------|----------------|-------------------|------|----------------|-------------------|------|----------------|-------------------|
| 2 7/8 | 12,686         | 12,686            |      |                |                   |      |                |                   |

25. Producing Intervals

| Formation | Top    | Bottom | Perforation Interval | Size | No. Holes | Perf. Status |
|-----------|--------|--------|----------------------|------|-----------|--------------|
| A) MORROW | 12,475 | 12,993 | 12,933-12,959        |      | 16        | P&A          |
| B)        |        |        | 12,762-12,782        |      | 72        | Producing    |
| C)        |        |        |                      |      |           |              |
| D)        |        |        |                      |      |           |              |

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

| Depth Interval | Amount and Type of Material                                                                                         |
|----------------|---------------------------------------------------------------------------------------------------------------------|
| 12,933-12,959  | 750 gal 7 1/2% Morrow acid w/25% methonal                                                                           |
| 12,762-12,782  | 1000 gal 7 1/2% Morrow acid w/25% methonal                                                                          |
|                | Frac w/8200 gal gelled H <sub>2</sub> O + 52 tons CO <sub>2</sub> + 390,000 SCF N <sub>2</sub> + 24,000 lbs Bauxite |

28. Production - Interval A

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
| 6/29/01             | 7/4/01               | 24           | →               | 63      | 1282    | 0         | 51.2                  | .672        | Flowing           |
| Choke Size          | Thp. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas : Oil Ratio       | Well Status |                   |
| 8 1/2               | 3250                 | 0            | →               | 63      | 1282    | 0         | 20349                 |             | Producing         |

28a. Production - Interval B

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |              | →               |         |         |           |                       |             |                   |
| Choke Size          | Thp. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas : Oil Ratio       | Well Status |                   |
|                     |                      |              | →               |         |         |           |                       |             |                   |

(See instructions and spaces for additional data on reverse side)

## 28b. Production - Interval C

| Date First Produced | Test Date           | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|---------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
| Choke Size          | Thg. Press. Flow SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas : Oil Ratio       | Well Status |                   |

## 28c. Production - Interval D

| Date First Produced | Test Date           | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|---------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
| Choke Size          | Thg. Press. Flow SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas : Oil Ratio       | Well Status |                   |

29. Disposition of Gas (Sold, used for fuel, vented, etc.)  
Sold

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

| Formation    | Top   | Bottom | Descriptions, Contents, etc.                                       | Name         | Top Meas. Depth |
|--------------|-------|--------|--------------------------------------------------------------------|--------------|-----------------|
| Bone Springs | 8740  | 8760   | Dolomite w/oil stain & cut                                         | Salt         | 1,200           |
| Wolfcamp     | 10570 | 10604  | Limestone w/blue-white & yellow flour.                             | Yates        | 2,700           |
| Morrow       | 12762 | 12782  | Sandstone - fine to med grain sand w/good inter-grannular porosity | Seven Rivers | 3,141           |
|              |       |        |                                                                    | Queen        | 3,820           |
|              |       |        |                                                                    | Grayburg     | 4,350           |
|              |       |        |                                                                    | San Andres   | 4,740           |
|              |       |        |                                                                    | Delaware     | 5,828           |
|              |       |        |                                                                    | Bone Springs | 6,894           |
|              |       |        |                                                                    | Wolfcamp     | 10,135          |
|              |       |        |                                                                    | Penn         | 10,743          |
|              |       |        |                                                                    | Strawn       | 11,632          |
|              |       |        |                                                                    | Atoka        | 11,840          |

See attached for DST information.

## 32. Additional remarks (include plugging procedure):

## 33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.) 2. Geologic Report 3. DST Report 4. Directional Survey  
5. Sundry Notice for plugging and cement verification 6. Core Analysis 7. Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Lonnie Arnold

Title Production Manager

Signature

Date 7/10/01

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**30. Summary of Porous Zones (Include Aquifers) continued****TMBR/SHARP "21" FEDERAL NO. 1****DST #1, 8704-8816'**

|     |         |              |
|-----|---------|--------------|
| IF  | 10 min  | 608-375 psig |
| ISI | 60 min  | 3381 psig    |
| FF  | 60 min  | 842-783 psig |
| FSI | 240 min | 3008 psig    |

Recovery: 1300' gas cut oil (8 BBL)

Sampler: 2.09 cu.ft. gas, 500 cc oil, 500 cc drlg mud, oil gravity 37° @ 60° F, 783 psi, GOR  
665 cu.ft./BBL

**DST #2, 10,305-10,385'**

|     |         |             |
|-----|---------|-------------|
| IF  | 10 min  | 104-21 psig |
| ISI | 60 min  | 41 psig     |
| FF  | 60 min  | 21-10 psig  |
| FSI | 240 min | 10 psig     |

Recovery: 11' drlg fluid w/trace of oil

Sampler: 1800 cc mud, 155,000 chlorides

**DST #3, 10,559-10,606**

|     |         |                |
|-----|---------|----------------|
| IF  | 10 min  | 1126-1371 psig |
| ISI | 60 min  | 4462 psig      |
| FF  | 60 min  | 1418-2861 psig |
| FSI | 240 min | 3747 psig      |

Recovery: Had oil to surface 180 min into FSI. Rec 119 BO.

**30. Summary of Porous Zones (Include Aquifers) continued****TMBR/SHARP "21" FEDERAL NO. 1****DST #4, 11,590-11,643'**

|     |        |            |
|-----|--------|------------|
| IF  | 15 min | 31-33 psig |
| ISI | 60 min | 34 psig    |
| FF  | 35 min | 32-32 psig |
| FSI | 60 min | 44 psig    |

Recovery: 15' drlg mud

Sampler: 1600 cc drlg mud @ 32 psi, chl 160,000 ppm

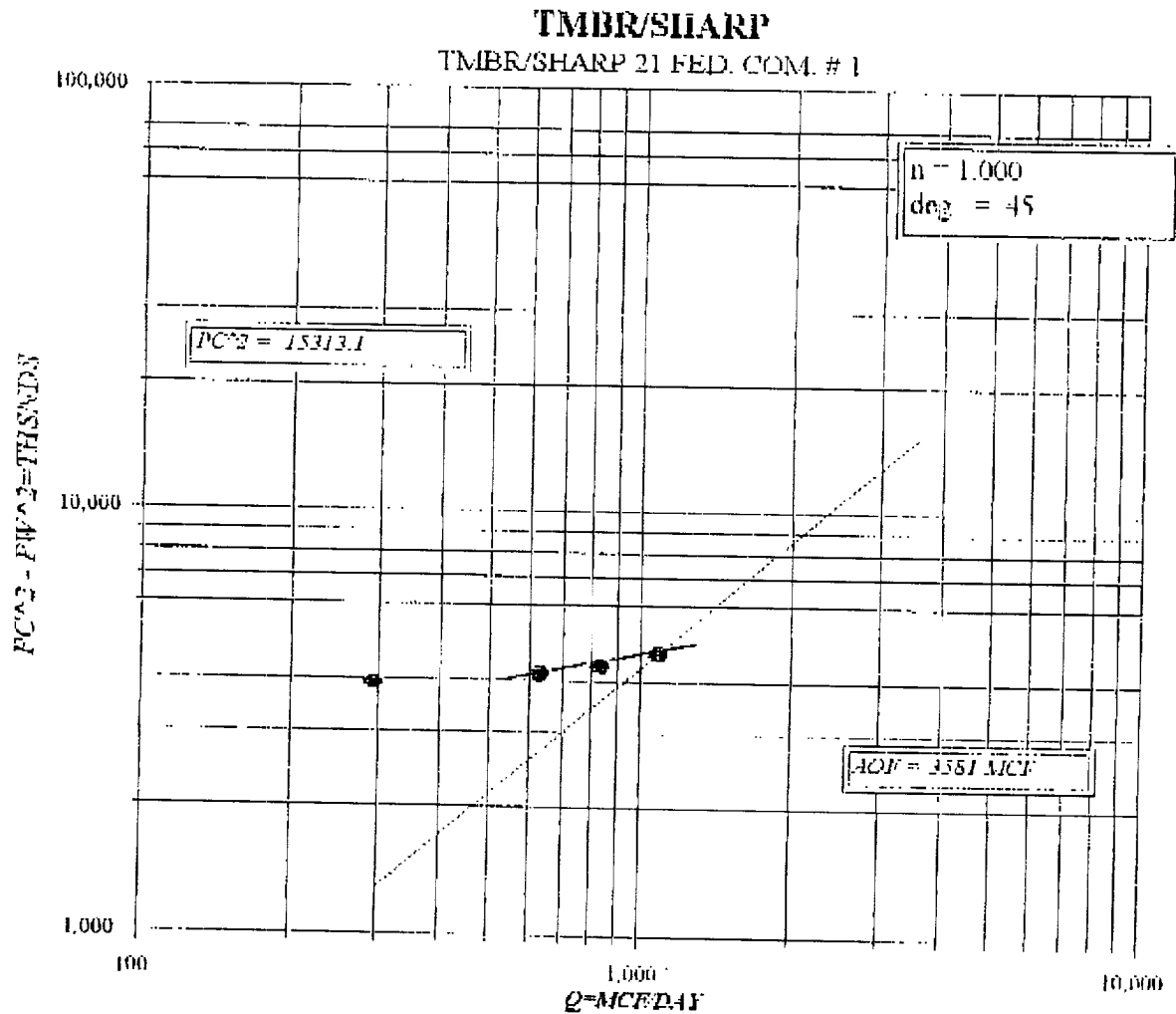
**DST #5, 12,648-12,695'**

|     |         |              |
|-----|---------|--------------|
| IF  | 30 min  | 876-879 psig |
| ISI | 90 min  | 3609 psig    |
| FF  | 90 min  | 878-894 psig |
| FSI | 360 min | 5814 psig    |

Recovery: 946' 4.6 BBL formation H<sub>2</sub>O + 2000' wtr cushion

Sampler: 1400 cc drlg mud, 1.43 cu.ft. gas @ 894 psi

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AUG. -20' 01 (MON) 12:50

TMBR/SHARP

TEL: 9156995085

P. 008

COMPANY : TMBR/SHARP

LEAS. PS 21 PRD. COM.

WELL NO. : 1

Pc = 3913.2 / Pc2 = 15313.1

UNIT :

SECTION 12

TOWNSHIP : 10

L : 12686

H : 12686

L/H :

G/GHIX : 0.690

Pt2 = \*\*\*\*\* Pw = 3378.4

PO2 : 0.364

W2 : 0.024

W2S :

DATE : 7-16-01

\*\*\*\*\* 3339.0

d : 2.441

Fr : 0.010763

GH : 8854.0

RANGE : 32

\*\*\*\*\* 3314.7

\*\*\*\*\* 3265.7

VOL 1 : 293 psig 1 : 3370.2

RESV. TEMP 102.0

Pc2-Pw2 = 3899.7 Pw2 = 11413.4

VOL 2 : 632 psig 2 : 3330.2

4164.0 11149.2

VOL 3 : 831 psig 3 : 3313.2

SHUT-IN PR= 3913.2

4326.2 10966.9

VOL 4 : 1087 psig 4 : 3263.2

4648.3 10664.9

PCR : 669

TCR : 388

n = 1.000

Pc2/(Pc2-Pw2) = 3.927

1.678

3.540

3.294

[Pc2/(Pc2-Pw2)] n = 3.927

3.678

3.540

3.294

AGF = Q

1.151

2.324

2.941

3.501

| TIME         | RATE 1   |          | RATE 2   |          | RATE 3   |          | RATE 4   |           |
|--------------|----------|----------|----------|----------|----------|----------|----------|-----------|
|              | 1ST      | 2ND      | 1ST      | 2ND      | 1ST      | 2ND      | 1ST      | 2ND       |
| 1 QM         | 0.293    | 0.293    | 0.632    | 0.632    | 0.831    | 0.831    | 1.087    | 1.087     |
| 2 TW         | 534      | 534      | 534      | 534      | 534      | 534      | 534      | 534       |
| 3 TS         | 642.0    | 642.0    | 642.0    | 642.0    | 642.0    | 642.0    | 642.0    | 642.0     |
| 4 T          | 588.0    | 588.0    | 588.0    | 588.0    | 588.0    | 588.0    | 588.0    | 588.0     |
| PR (est)     | 5.05     |          | 4.99     |          | 4.95     |          | 4.88     |           |
| 5 Z (est)    | 0.800    | 0.852    | 0.797    | 0.848    | 0.796    | 0.846    | 0.793    | 0.842     |
| 6 TZ         | 470.2    | 501.1    | 468.7    | 498.9    | 467.8    | 497.5    | 466.1    | 491.9     |
| 7 GH/TZ      | 18.833   | 17.672   | 18.892   | 17.749   | 18.928   | 17.797   | 18.999   | 17.893    |
| 8 eS         | 2.026    | 1.940    | 2.031    | 1.946    | 2.034    | 1.949    | 2.039    | 1.956     |
| 9 I-a-S      | 0.507    | 0.485    | 0.500    | 0.486    | 0.508    | 0.487    | 0.510    | 0.489     |
| 10 Pt        | 3370.2   | 3370.2   | 3330.2   | 3330.2   | 3313.2   | 3313.2   | 3263.2   | 3263.2    |
| 11 Pt2 /1000 | 11412.2  | 11412.2  | 11143.6  | 11143.6  | 10977.3  | 10977.3  | 10618.5  | 10618.5   |
| 12 Fr        | 0.010763 | 0.010763 | 0.010763 | 0.010763 | 0.010763 | 0.010763 | 0.010763 | 0.010763  |
| 13 Pc-FrTZ   | 5.060    | 5.393    | 5.045    | 5.370    | 5.035    | 5.355    | 5.016    | 5.326     |
| 14 FcQm      | 1.48     | 1.58     | 3.19     | 3.39     | 4.18     | 4.45     | 5.45     | 5.79      |
| 15 I/H(FcQm) | 2.2      | 2.5      | 10.2     | 11.5     | 17.5     | 19.8     | 29.7     | 33.5      |
| 16 Fw        | 1.113532 | 1.209890 | 5.159769 | 5.597439 | 8.898351 | 9.643492 | 15.15075 | 16.385108 |
| 17 Pw2       | 11413.3  | 11413.4  | 11148.7  | 11149.2  | 10986.2  | 10986.9  | 10663.6  | 10664.9   |
| 18 Ps2       | 23127.8  | 22142.0  | 22641.3  | 21692.1  | 22341.5  | 21415.0  | 21743.2  | 20862.4   |
| 19 Pw        | 4809.1   | 4705.5   | 4758.3   | 4657.5   | 4726.7   | 4627.6   | 4663.0   | 4567.5    |
| 20 P         | 4093.7   | 4041.9   | 4048.2   | 3997.8   | 4019.9   | 3970.4   | 3963.1   | 3915.4    |
| 21 Pr        | 6.12     | 6.04     | 6.05     | 5.90     | 6.01     | 5.93     | 5.92     | 5.85      |
| 22 Tr        | 1.52     | 1.52     | 1.52     | 1.52     | 1.52     | 1.52     | 1.52     | 1.52      |
| 23 Z         | 0.852    | 0.848    | 0.848    | 0.844    | 0.846    | 0.842    | 0.842    | 0.838     |

FORM C122-D

| NEW MEXICO G.O.R./G. MIX                                                     |   |         |
|------------------------------------------------------------------------------|---|---------|
| NO. OF BBLs PRODUCED                                                         | = | 1.0     |
| API GRAVITY @ 60 DEG.                                                        | = | 51.2    |
| SPECIFIC GRAVITY OF GAS                                                      | = | 0.6720  |
| XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |   |         |
| TOTAL GAS PRODUCED                                                           | = | 118     |
| G.O.R.                                                                       | = | 118.458 |
| G.MIX                                                                        | = | 0.698   |

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

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 87305

Form C-122  
Revised October, 1990

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

|                                                                                                                           |                   |             |             |            |                                  |                 |          |                                     |          |                           |          |              |                     |             |                      |                    |          |                    |          |                                    |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|-------------|------------|----------------------------------|-----------------|----------|-------------------------------------|----------|---------------------------|----------|--------------|---------------------|-------------|----------------------|--------------------|----------|--------------------|----------|------------------------------------|--|--|--|--|
| Operator                                                                                                                  |                   |             |             |            |                                  |                 |          |                                     |          | Lease or Unit Name        |          |              |                     |             |                      |                    |          |                    |          |                                    |  |  |  |  |
| Type Test<br><input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special |                   |             |             |            |                                  |                 |          |                                     |          | Test Date                 |          |              |                     |             | Well No.             |                    |          |                    |          |                                    |  |  |  |  |
| Completion Date<br>4/25/01                                                                                                |                   |             |             |            | Total Depth                      |                 |          |                                     |          | Plug Back ID<br>12463     |          |              |                     |             | Elevation            |                    |          |                    |          | Unit/LR Sec. TWP - Rge<br>21 1N 3E |  |  |  |  |
| Tbg. Size<br>5 1/2                                                                                                        |                   | Wt<br>17W   |             | d<br>4.892 |                                  | Set At<br>13048 |          | Perforations<br>From 12762 To 12782 |          |                           |          |              | County<br>LEA       |             |                      |                    |          | Pool               |          |                                    |  |  |  |  |
| Tbg. Size<br>2 7/8                                                                                                        |                   | Wt<br>6.4 W |             | d<br>2.441 |                                  | Set At<br>12686 |          | Perforations<br>From To             |          |                           |          |              | Formation<br>MORROW |             |                      |                    |          | Connection<br>VENT |          |                                    |  |  |  |  |
| Type Well: Single-Gradient or Multiple                                                                                    |                   |             |             |            |                                  |                 |          |                                     |          | Packer Set At<br>12686    |          |              |                     |             | Formation            |                    |          |                    |          | Connection                         |  |  |  |  |
| Producing Thru<br>Tbg. Size                                                                                               |                   |             |             |            | Reservoir Temp °F<br>102 @ 12772 |                 |          |                                     |          | Mean Annual Temp °F<br>60 |          |              |                     |             | Flow Press °F<br>117 |                    |          |                    |          | Connection                         |  |  |  |  |
| 12772                                                                                                                     |                   | H           |             | 12772      |                                  | Gg<br>0.672     |          | GGL<br>0.672                        |          | GNN<br>0.384              |          | GHS<br>13048 |                     | Flow        |                      | Meter Run<br>3.068 |          | Taps<br>FLC        |          |                                    |  |  |  |  |
| FLOW DATA                                                                                                                 |                   |             |             |            |                                  |                 |          |                                     |          | TUBING DATA               |          |              |                     |             | CASING DATA          |                    |          |                    |          | Duration of Flow                   |  |  |  |  |
| No.                                                                                                                       | Product Line Size | Inside Size | Press. psig | Depth ft   | Temp. °F                         | Press. psig     | Temp. °F | Press. psig                         | Temp. °F | Press. psig               | Temp. °F | Press. psig  | Temp. °F            | Press. psig | Temp. °F             | Press. psig        | Temp. °F | Press. psig        | Temp. °F |                                    |  |  |  |  |
| 1                                                                                                                         | 3 X 7.50          |             | 421         | 4          | 118                              |                 |          | 3000                                |          | PKR                       |          |              |                     | PKR         |                      |                    |          |                    | 88 HRS   |                                    |  |  |  |  |
| 2                                                                                                                         | 3 X 7.50          |             | 424         | 21.16      | 134                              |                 |          | 3300                                |          | PKR                       |          |              |                     | PKR         |                      |                    |          |                    | 1 HR     |                                    |  |  |  |  |
| 3                                                                                                                         | 3 X 7.50          |             | 449         | 75.7       | 136                              |                 |          | 3045                                |          | PKR                       |          |              |                     | PKR         |                      |                    |          |                    | -        |                                    |  |  |  |  |
| 4                                                                                                                         | 3 X 1.250         |             | 483         | 33.6       | 90                               |                 |          | 2475                                |          | PKR                       |          |              |                     | PKR         |                      |                    |          |                    | -        |                                    |  |  |  |  |
| 5                                                                                                                         |                   |             |             |            |                                  |                 |          |                                     |          |                           |          |              |                     |             |                      |                    |          |                    | -        |                                    |  |  |  |  |

| RATE OF FLOW CALCULATIONS |                       |                |                |                         |                      |                                 |                      |
|---------------------------|-----------------------|----------------|----------------|-------------------------|----------------------|---------------------------------|----------------------|
| No.                       | COEFFICIENT (24 Hour) | $\sqrt{1/F_w}$ | Pressure $P_w$ | Flow Temp. Factor $T_c$ | Gravity Factor $T_g$ | Super Compress. Factor $T_{sc}$ | Rate of Flow Q, Mcfd |
| 1                         | 2.672                 | 41.67          | 434.2          | 0.9485                  | 1.22                 | 1.033                           | 133                  |
| 2                         | 2.672                 | 96.18          | 417.2          | 0.9356                  | 1.22                 | 1.032                           | 303                  |
| 3                         | 2.672                 | 187.05         | 402.2          | 0.9469                  | 1.22                 | 1.036                           | 5998                 |
| 4                         | 7.577                 | 120.12         | 496.2          | 0.723                   | 1.22                 | 1.049                           | 1217                 |
| 5                         |                       |                |                |                         |                      |                                 |                      |

| No. | $P_r$ | Temp. °F | $T_c$ | Z     | Gas-Liquid Hydrocarbon Ratio | API Gravity of Liquid Hydrocarbon | Specific Gravity Separator Gas | Specific Gravity Flowing Fluid | Critical Pressure | Critical Temperature |
|-----|-------|----------|-------|-------|------------------------------|-----------------------------------|--------------------------------|--------------------------------|-------------------|----------------------|
| 1   | 0.64  | 578      | 1.51  | 0.937 | 15.8                         | 51.2 @ 60                         | 0.672                          | XXXXXX                         | 664               | 282                  |
| 2   | 0.63  | 594      | 1.55  | 0.939 |                              |                                   |                                |                                |                   |                      |
| 3   | 0.69  | 580      | 1.51  | 0.932 |                              |                                   |                                |                                |                   |                      |
| 4   | 0.74  | 550      | 1.43  | 0.908 |                              |                                   |                                |                                |                   |                      |
| 5   |       |          |       |       |                              |                                   |                                |                                |                   |                      |

| No. | $P_r^2$ | $P_w^2$ | $P_w^2 - P_r^2$ |
|-----|---------|---------|-----------------|
| 1   | 4079.2  | 16630.9 | 2827.6          |
| 2   | 3810.2  | 14517.6 | 4949.9          |
| 3   | 3468.8  | 12032.6 | 7434.9          |
| 4   | 2880.2  | 8295.6  | 11171.9         |
| 5   |         |         |                 |

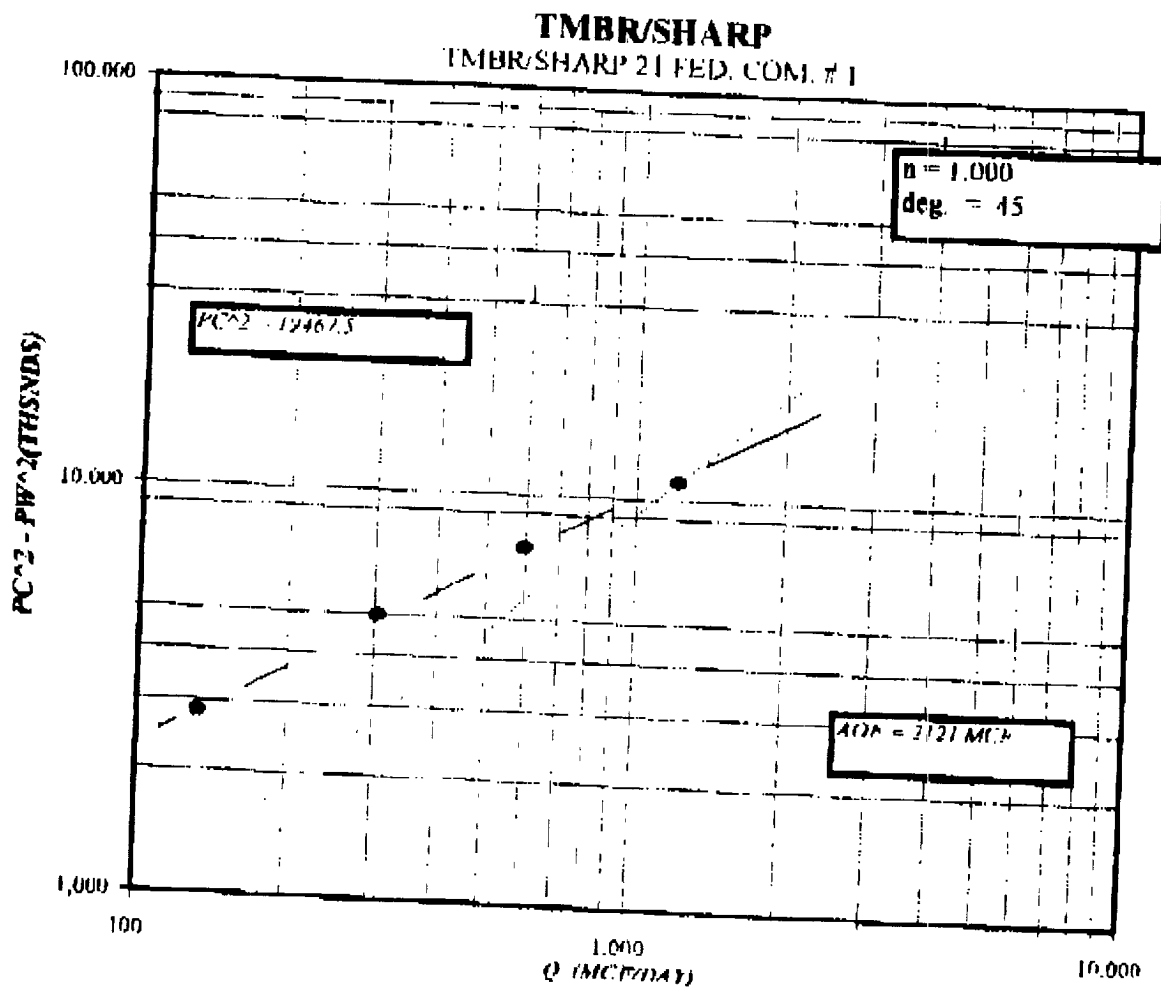
  

|                    |  |       |  |               |  |                |  |    |  |         |  |   |  |
|--------------------|--|-------|--|---------------|--|----------------|--|----|--|---------|--|---|--|
| Absolute Open Flow |  | 2.121 |  | Mcfd @ 15.025 |  | Angle of Slope |  | 45 |  | Slope n |  | 1 |  |
|--------------------|--|-------|--|---------------|--|----------------|--|----|--|---------|--|---|--|

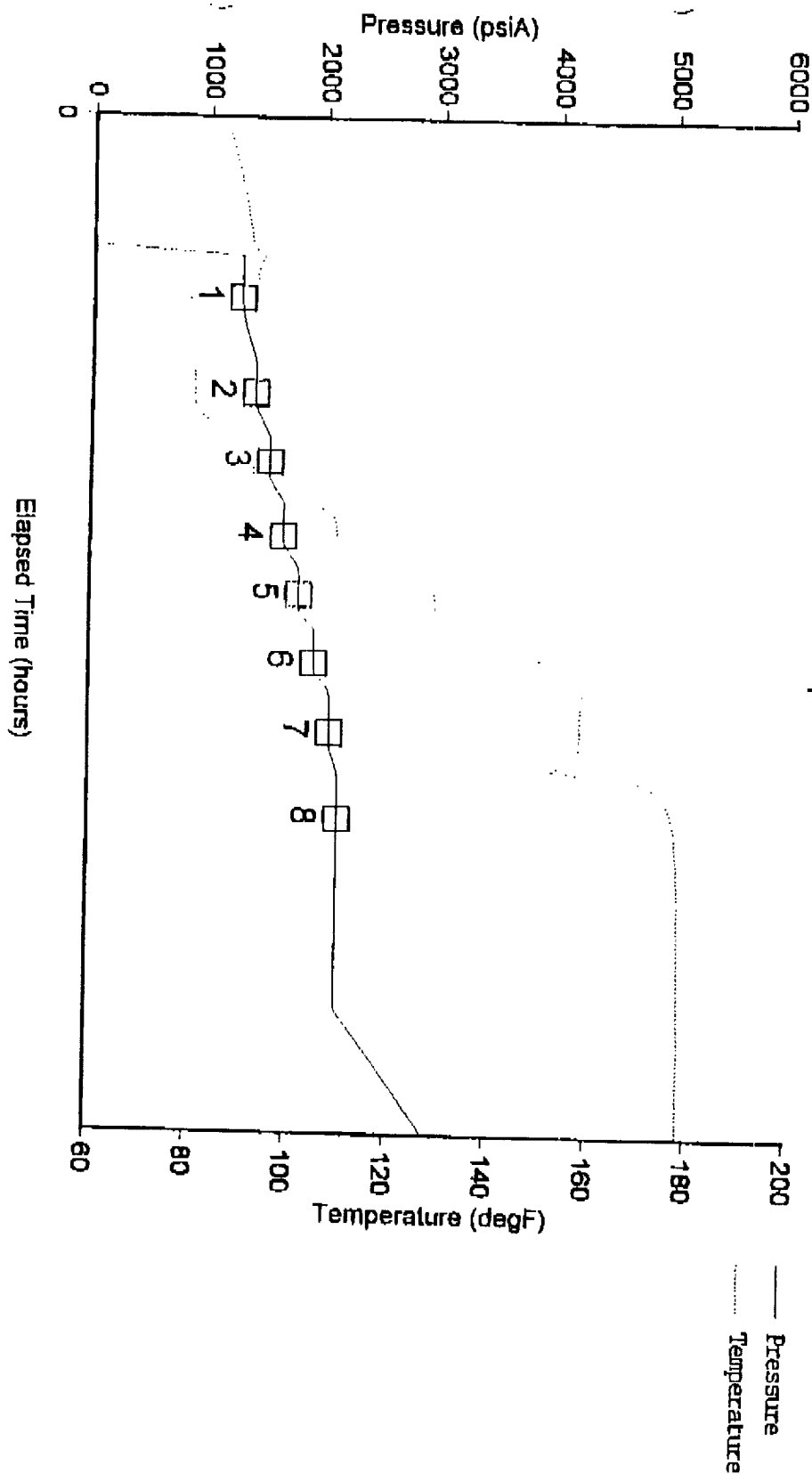
Remarks: \*Shut-in and flowing bottom hole pressure from GRC - Ems 2000 - Elec. Gauge

|                       |                                |                   |                |
|-----------------------|--------------------------------|-------------------|----------------|
| Approved By: Division | Conducted By: SIGNAL WIRE LINE | Calculated By: BM | Checked By: BM |
|-----------------------|--------------------------------|-------------------|----------------|



TMBR/Sharp  
21 Fed Com #1  
FLOWING BOTTOM HOLE PRESSURE

Data Graph



**SIGNAL WIRELINE AND TESTING**

3426 Lovington Hwy @ Hobbs, NM

Office: (505) 392-2048 @ Toll Free: 866-766-SWAT @ Fax: (505) 392-6349

**TMBR/Sharp  
21 Fed Com #1****FLOWING GRADIENT**

| DEPTH  | PRESSURE | DIFFERENTIAL | GRADIENT |
|--------|----------|--------------|----------|
| 0'     | 1278.95  |              |          |
| 2000'  | 1404.49  | 126          | .063     |
| 4000'  | 1539.49  | 135          | .067     |
| 6000'  | 1667.51  | 129          | .065     |
| 8000'  | 1798.87  | 131          | .060     |
| 10000' | 1936.50  | 138          | .069     |
| 12000' | 2076.35  | 139          | .070     |
| 12772' | 2146.58  | 71           | .091     |

**STATIC GRADIENT**

|        |         |     |      |
|--------|---------|-----|------|
| 0'     | 3946.09 |     |      |
| 2000'  | 4246.49 | 301 | .150 |
| 4000'  | 4536.15 | 289 | .144 |
| 6000'  | 4829.89 | 294 | .147 |
| 8000'  | 5124.51 | 295 | .147 |
| 10000' | 5420.41 | 295 | .148 |
| 12000' | 5702.41 | 282 | .141 |
| 12772' | 5824.35 | 122 | .158 |

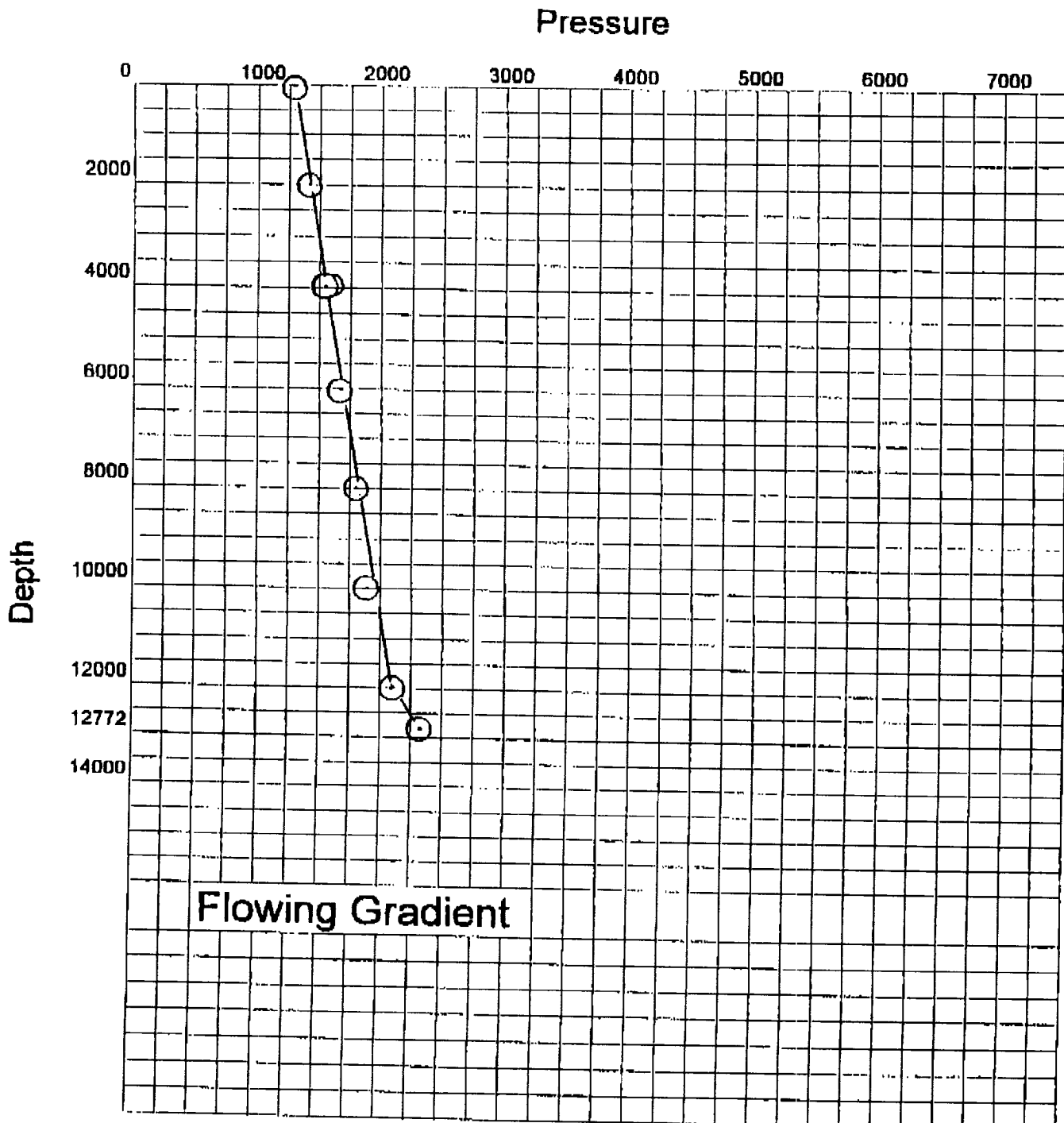
Signal Wireline And Test  
**SWAT**  
In Office Service Attached

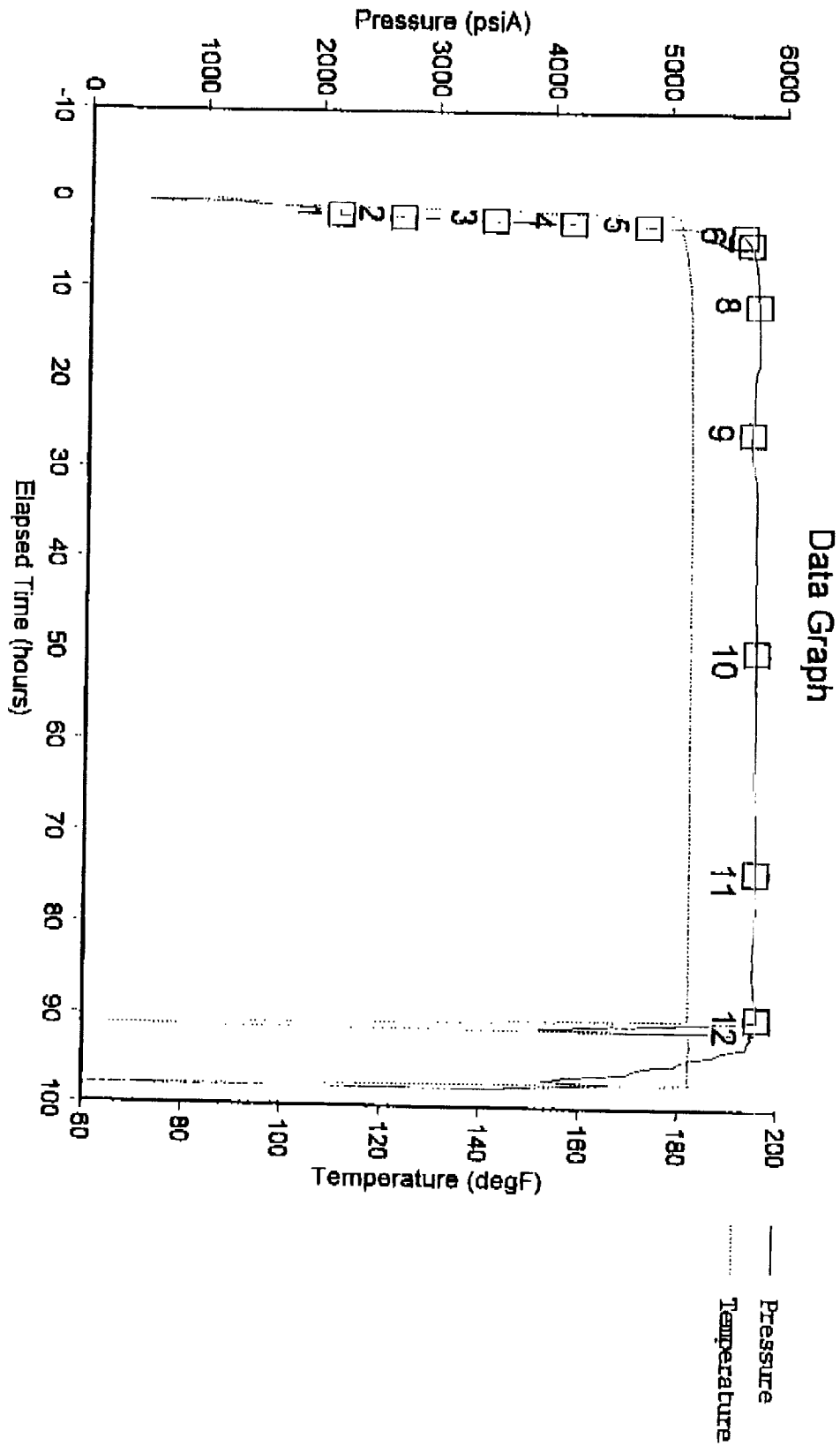


## Signal Wireline And Testing

Company: TMBR/Sharp

Lease: 21 Fed Com #1





SIGNAL WIRELINE AND TESTING

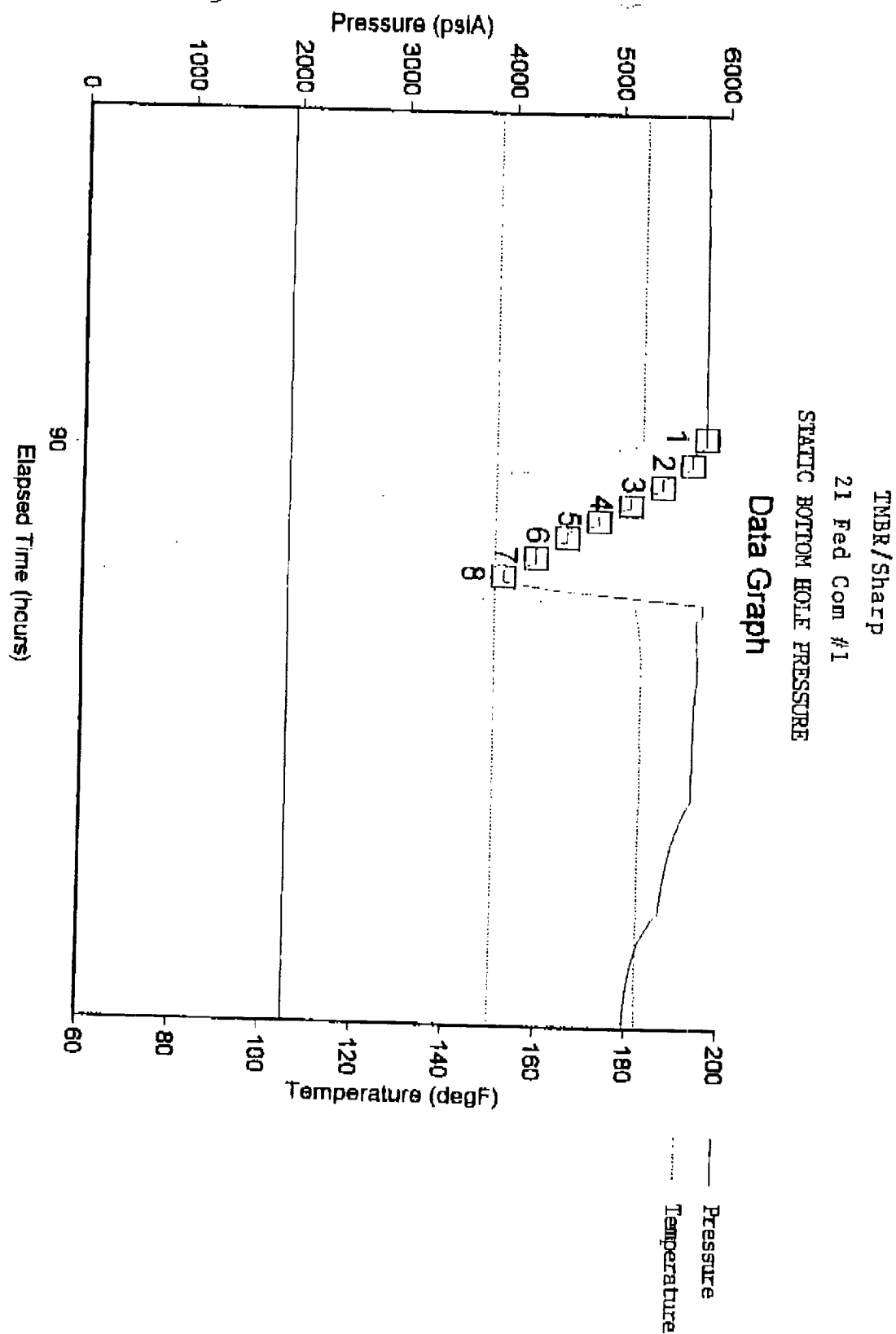
3426 Lovington Hwy ♦ Hobbs, NM 88240

Office: (505) 392 2048 ♦ Toll Free: 866-766-SWAT ♦ Fax: (505) 392-6349

**TMBR/Sharp  
21 Fed Com #1****72-HOUR BUILD-UP**

| Pressure | Temperature | Remarks        |
|----------|-------------|----------------|
| 2145.98  | 178.47      | Shut well in   |
| 2687.88  | 178.58      | 15 min shut in |
| 3484.55  | 178.63      | 30 min shut in |
| 4159.18  | 179.14      | 45 min shut in |
| 4803.33  | 178.99      | 1 hr shut in   |
| 5641.24  | 179.19      | 2 hr shut in   |
| 5699.82  | 179.70      | 3 hr shut in   |
| 5778.32  | 181.14      | 10 hr shut in  |
| 5732.29  | 181.57      | 24 hr shut in  |
| 5790.43  | 181.83      | 48 hr shut in  |
| 5803.86  | 181.95      | 72 hr shut in  |
| 5824.08  | 182.01      | 88 hr shut in  |
|          |             | End build up   |

Signal Wireline And Testing  
**SWAT**  
An Offshore Service Attachment



**SIGNAL WIRELINE AND TESTING**

3426 Lovington Hwy @ Hobbs, NM

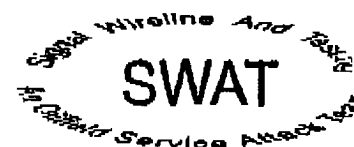
Office: (505) 392-2048 @ Toll Free: 866-766-SWAT @ Fax: (505) 392-6349

**TMBR/Sharp  
21 Fed Com #1****FLOWING GRADIENT**

| DEPTH  | PRESSURE | DIFFERENTIAL | GRADIENT |
|--------|----------|--------------|----------|
| 0'     | 1278.95  |              |          |
| 2000'  | 1404.49  | 126          | .063     |
| 4000'  | 1539.49  | 135          | .067     |
| 6000'  | 1667.51  | 129          | .065     |
| 8000'  | 1798.87  | 131          | .060     |
| 10000' | 1936.50  | 138          | .069     |
| 12000' | 2076.35  | 139          | .070     |
| 12772' | 2146.58  | 71           | .091     |

**STATIC GRADIENT**

|        |         |     |      |
|--------|---------|-----|------|
| 0'     | 3946.09 |     |      |
| 2000'  | 4246.49 | 301 | .150 |
| 4000'  | 4536.15 | 289 | .144 |
| 6000'  | 4829.89 | 294 | .147 |
| 8000'  | 5124.51 | 295 | .147 |
| 10000' | 5420.41 | 295 | .148 |
| 12000' | 5702.41 | 282 | .141 |
| 12772' | 5824.35 | 122 | .158 |

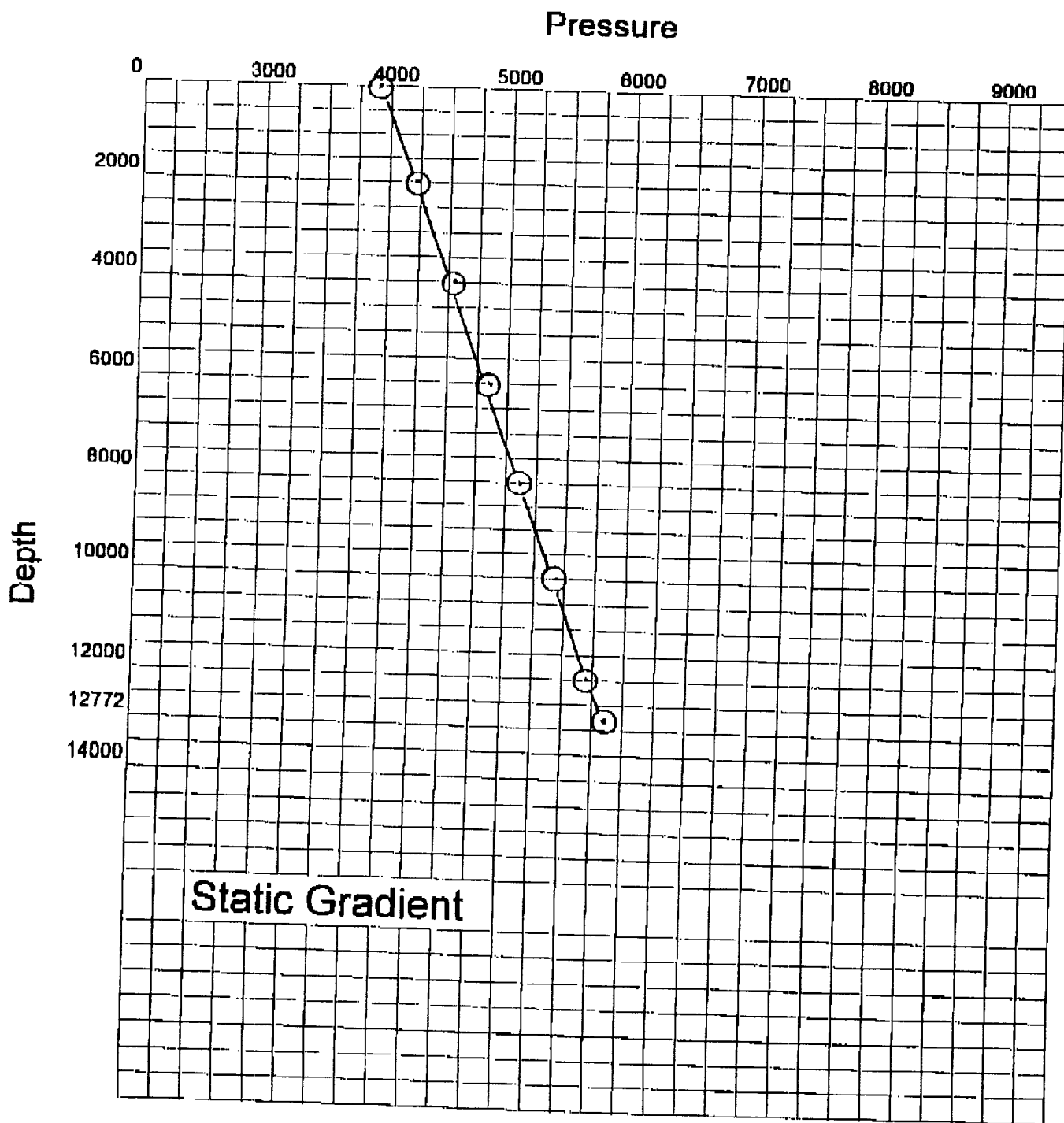


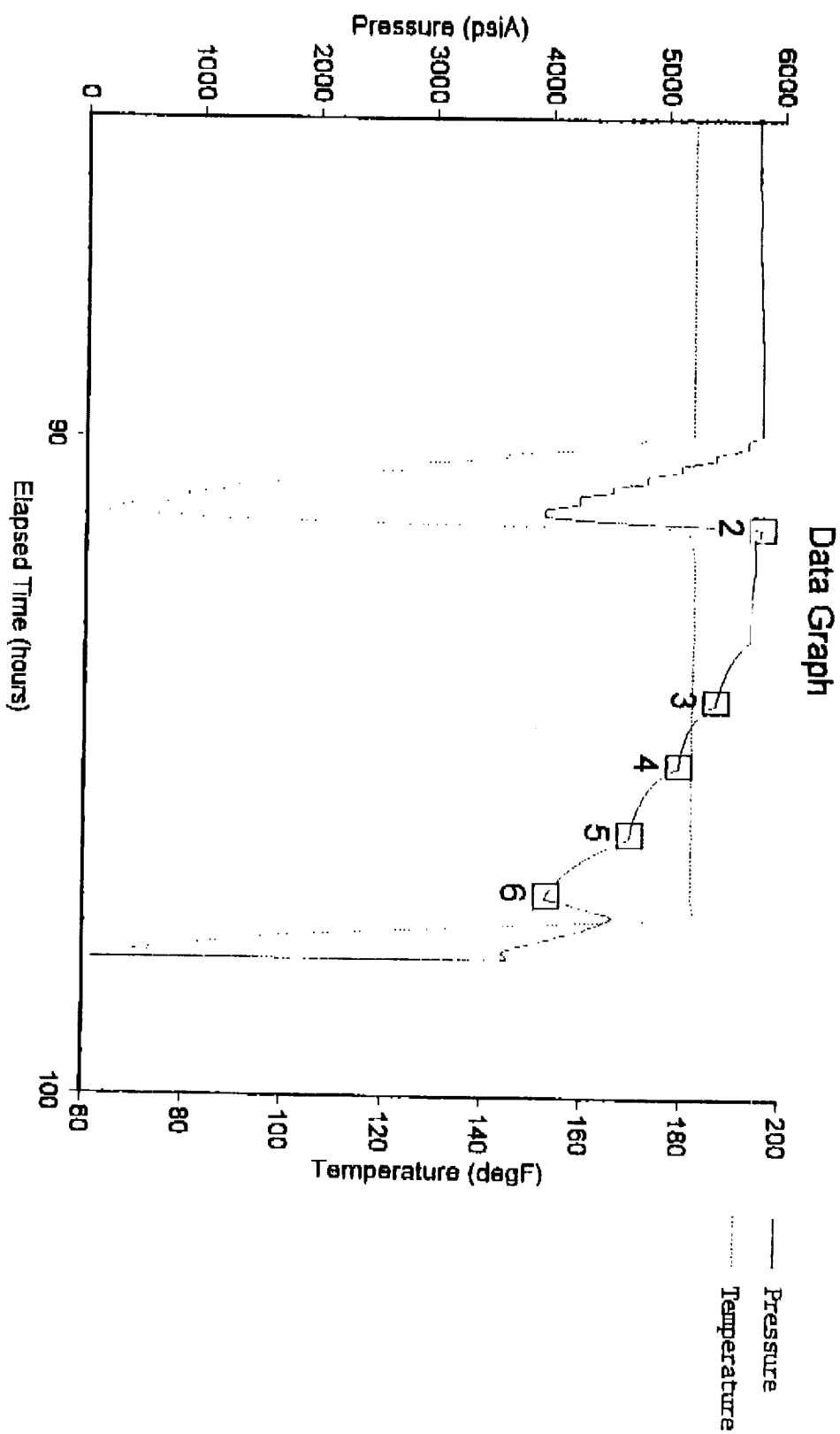


## Signal Wireline And Testing

Company: TMBR/Sharp

Lease: 21 Fed Com #1







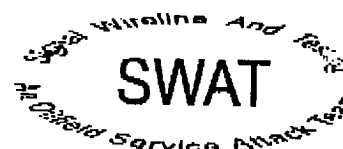
 SIGNAL WIRELINE AND TESTING

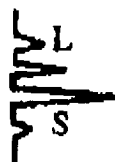
3426 Lovington Hwy ♦ Hobbs, NM 88240

Office: (505) 392-2048 ♦ Toll Free: 866-766-SWAT ♦ Fax: (505) 392-6349

**TMBR/Sharp  
21 Fed Com #1****4-POINT BOTTOM HOLE PRESSURES**

| Pressure | Temperature | Remarks         |
|----------|-------------|-----------------|
| 5828.76  | 176.88      | Start 4-point   |
| 5442.47  | 182.22      | End of 1st rate |
| 5126.08  | 182.18      | End of 2nd rate |
| 4707.49  | 182.27      | End of 3rd rate |
| 3986.26  | 182.12      | End of 4th rate |



**Laboratory Services, Inc.**

4018 Fiesta Drive  
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: TMBR/Sharp Drilling Inc.  
P. O. Box 10970  
Midland, Texas 79702

SAMPLE: TMBR/Sharp  
IDENTIFICATION: 21 Fed. Com. #1  
COMPANY: TMBR/Sharp  
LEASE:  
PLANT:

SAMPLE DATA: DATE SAMPLED: 5/4/01 4:00 pm  
ANALYSIS DATE: 5/7/01  
PRESSURE - PSIG 200  
SAMPLE TEMP. °F  
ATMOS. TEMP. °F

GAS (XX) LIQUID ( )  
SAMPLED BY: R. Taylor-Signal  
ANALYSIS BY: Vickie Biggs

REMARKS:

**COMPONENT ANALYSIS**

| COMPONENT              | MOL<br>PERCENT | GPM   |
|------------------------|----------------|-------|
| Hydrogen Sulfide (H2S) |                |       |
| Nitrogen (N2)          | 0.824          |       |
| Carbon Dioxide (CO2)   | 0.384          |       |
| Methane (C1)           | 84.950         |       |
| Ethane (C2)            | 7.888          | 2.131 |
| Propane (C3)           | 3.645          | 1.002 |
| I-Butane (C4)          | 0.468          | 0.151 |
| N-Butane (NC4)         | 1.006          | 0.318 |
| I-Pentane (C5)         | 0.232          | 0.065 |
| N-Pentane (NC5)        | 0.237          | 0.066 |
| Hexane Plus (C6+)      | 0.270          | 0.117 |
|                        | 100.000        | 3.868 |
| BTU/CU.FT. - DRY       | 1171           |       |
| AT 14.650 DRY          | 1167           |       |
| AT 14.650 WET          | 1147           |       |
| AT 14.73 DRY           | 1173           |       |
| AT 14.73 WET           | 1153           |       |
| SPECIFIC GRAVITY -     |                |       |
| CALCULATED             | 0.672          |       |
| MEASURED               |                |       |

MOLECULAR WT. 19.4774

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE ( $P_w$ )  
FROM KNOWN BOTTOM HOLE PRESSURE ( $P_b$ )

FORM C-1227

COMPANY TMBR/SHARP

UNIT

L

12772

LEASE : P/S 2) FOWELL NO. : 1

DATE 5 4 01

SECTION : 21

TOWNSHIP : 18

RANGE : 32

R : 12772

L/R : 1

G/GWA : 0.6720

COT : 0.384

N2 : 0.824

H2S :

GR : 8582.8

PCR : 669

TCR : 362

LINE

|    | 1                          | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----|----------------------------|---|---|---|---|---|---|---|
| 1  | PW(M.R. R)                 |   |   |   |   |   |   |   |
| 2  | Ts(B.H. R)                 |   |   |   |   |   |   |   |
| 3  | T = (Tw+Ts/2)              |   |   |   |   |   |   |   |
| 4  | Z (85%.)                   |   |   |   |   |   |   |   |
| 5  | PZ                         |   |   |   |   |   |   |   |
| 6  | GR/PZ                      |   |   |   |   |   |   |   |
| 7  | eS (TABLE XIV)             |   |   |   |   |   |   |   |
| 8  | Pf or Ps                   |   |   |   |   |   |   |   |
| 9  | Pf2 or Ps2                 |   |   |   |   |   |   |   |
| 10 | Pc2 = Pf/eS or Ps2/eS      |   |   |   |   |   |   |   |
| 11 | Pc or Ps                   |   |   |   |   |   |   |   |
| 12 | P = (Pw+Ps/2) or (Pc+Pf/2) |   |   |   |   |   |   |   |
| 13 | Pr = (P/PCR)               |   |   |   |   |   |   |   |
| 14 | Tr (T/TCR)                 |   |   |   |   |   |   |   |
| 15 | Z (TABLE XI)               |   |   |   |   |   |   |   |

PW 1 : 4079.2

PW 2 : 3810.2

PW 3 : 3462.8

PW 4 : 2880.2

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURE ( $P_c$  or  $P_s$ )FROM KNOWN BOTTOM HOLE PRESSURE ( $P_f$  or  $P_w$ )

FORM C-122P

COMPANY TMBR/SHARP

UNIT

L

12772

LEASE : 7/5 21 PEDWILL NO. :

1

DATE 5 4 01

SECTION : 21

TOWNSHIP : 18

RANGE : 32

N : 12772

L/R : 1

G/GMIX : 0.5720

CO2 : 0.384

N2 : 0.574

H2S :

GR : 8582.8

TCR :

569

TCR : 382

LTHW

|    |                                        | 1       | 2       | 3     | 4     | 5     | 6     | 7     | 8     |
|----|----------------------------------------|---------|---------|-------|-------|-------|-------|-------|-------|
| 1  | TW(W.B. R)                             | 534     | 534     | 534   | 534   | 534   | 534   | 534   | 534   |
| 2  | TS(B.B. R)                             | 661.7   | 661.7   | 661.7 | 661.7 | 661.7 | 661.7 | 661.7 | 661.7 |
| 3  | $T = (TW + TS / 2)$                    | 597.9   | 597.9   | 597.9 | 597.9 | 597.9 | 597.9 | 597.9 | 597.9 |
| 4  | Z (EST.)                               | 1.093   | 0.960   | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 5  | TZ                                     | 654     | 574     | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 6  | GH/TZ                                  | 13.132  | 14.957  | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 7  | eS(TABLE XIV)                          | 1.636   | 1.752   | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 8  | Pf or Ps                               | 5841.2  | 5841.2  | 0     | 0     | 0     | 0     | 0     | 0     |
| 9  | Pf2 or Ps2                             | 34119.6 | 34119.6 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 10 | $Pc2 = Pf/eS$ or $Pw2 = Ps2/eS$        | 20451.7 | 19472.0 | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 11 | Pc or Pw                               | 4566    | 4413    | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 12 | $P = (Pw + Ps / 2)$ or $(Pc + Pf / 2)$ | 5204    | 5127    | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 13 | $P_r = (P / P_{cr})$                   | 7.78    | 7.66    | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 14 | $T_r(T/T_{cr})$                        | 1.57    | 1.57    | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |
| 15 | Z (TABLE XI)                           | 0.960   | 0.953   | ERR   | ERR   | ERR   | ERR   | ERR   | ERR   |

PW 1 : 4112.7

PW 2 :

ERR

PW 3 :

ERR

PW 4 :

ERR