

REPORT NO.  
139396

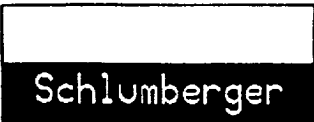
PAGE NO. 1

TEST DATE:  
27-AUG-94

S T A R

Schlumberger Testing Data Report

Pressure Data Report



COMPANY: FORCENERGY

WELL: SHOEBAR 14 STATE COM #2

TEST IDENTIFICATION

TEST LOCATION

Test Type ..... OH DST

Field ..... WILDCAT

Test No. .... TWO

County ..... LEA

Formation ..... LEONARD

State ..... NEW MEXICO

Test Interval (ft) ..... 6860 to 6930

Sec/Twn/Rng ..... 14-17S-35E

Depth Reference ..... GL

Elevation (ft) ..... 3927

HOLE CONDITIONS

MUD PROPERTIES

Total Depth (MD/TVD) (ft) .... 6930/6930

Mud Type ..... FRESH WATER

Hole Size (in) ..... 8.50

Mud Weight (lb/gal) ..... 8.3

Casing/Liner I.D. (in) ..... 9.625 x 4937

Mud Resistivity (ohm.m) ..... 1.7 x 80F

Perf'd Interval/Net Pay (ft) .. / 17

Filtrate Resistivity (ohm.m) ..

Shot Density/Diameter (in) ...

Filtrate Chlorides (ppm) ..... 3000

INITIAL TEST CONDITIONS

TEST STRING CONFIGURATION

Initial Hydrostatic (psi) .... 2968.50

Pipe Length (ft)/I.D. (in) ... 5859 / 3.64

Gas Cushion Type .....

Collar Length (ft)/I.D. (in) .. 965 / 2.25

Surface Pressure (psi) .....

Packer Depths (ft) ..... 6854,6860,

Liquid Cushion Type .....

Bottomhole Choke Size (in) ... 1.00

Cushion Length (ft) .....

Gauge Depth (ft)/Type ..... 6887/SB-20297

NET PIPE RECOVERY

NET SAMPLE CHAMBER RECOVERY

| Volume  | Fluid Type  | Properties        |
|---------|-------------|-------------------|
| .15 bbl | GAS CUT OIL | API 31.4x60F      |
| 1.1 bbl | WATER       | Rwl.7x82F 3000ppm |
|         |             |                   |
|         |             |                   |
|         |             |                   |

| Volume   | Fluid Type | Properties   |
|----------|------------|--------------|
| .31 cuft | Gas        |              |
| 1200 cc  | Oil        | API 28.3x60F |
| 50 cc    | Water      |              |
|          |            |              |
|          |            |              |

Pressure:55

GOR:41

GLR:39

INTERPRETATION RESULTS

ROCK/FLUID/WELLBORE PROPERTIES

Model of Behavior .....

Oil Density (deg. API) .....

Fluid Type Used for Analysis..

Basic Solids (%) .....

Reservoir Pressure (psi) .....

Gas Gravity .....

Transmissibility (md.ft/cp) ..

GOR (scf/STB) .....

Effective Permeability (md) ..

Water Cut (%) .....

Skin Factor/Damage Ratio .....

Viscosity (cp) .....

Storativity Ratio, Omega .....

Total Compressibility (1/psi) ..

Interporos.Flow Coef.,Lambda..

Porosity (%) .....

Distance to an Anomaly (ft) ..

Reservoir Temperature (F) .... 122

Radius of Investigation (ft) ..

Form.Vol.Factor (bbl/STB) .....

Potentiometric Surface (ft) ..

PRODUCTION RATE DURING TEST: Data Report

COMMENTS:

DST #2 was mechanically successful. The formation produced 248' of fluid. There was not enough water in the sample chamber to get a good chlorides check. Thank you for using SCHLUMBERGER.

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|                                         |                    |                     |
|-----------------------------------------|--------------------|---------------------|
| WELL TEST INTERPRET ION REPORT #:139396 |                    | PAGE: 2,            |
| CLIENT : FORCENERGY                     |                    | 29-AUG-94           |
| REGION :CSD                             | SEQUENCE OF EVENTS | FIELD:WILDCAT       |
| DISTRICT:HOBBS                          |                    | ZONE :LEONARD       |
| BASE :MIDLAND                           |                    | WELL :SHOEBAR 14 #2 |
| ENGINEER:KIRK BEASLEY                   |                    | LOCATION:14-17S-35E |

| DATE   | TIME<br>(HR:MIN) | DESCRIPTION              | ET<br>(MINS) | BHP<br>(PSIA) | WHP<br>(PSIG) |
|--------|------------------|--------------------------|--------------|---------------|---------------|
| =====  |                  |                          |              |               |               |
| 27-AUG | 10:45            | SET PACKER               | -3           |               |               |
|        |                  | OPEN TO BUBBLE HOSE ONLY |              |               |               |
|        | 10:48            | START FLOW               | 0            | 29            |               |
|        | 10:50            |                          | 2            |               | 1"            |
|        | 10:52            | END FLOW & START SHUTIN  | 4            | 47            |               |
|        | 11:22            | END SHUTIN               | 34           | 2470          |               |
|        | 11:24            | START FLOW               | 36           | 59            |               |
|        | 11:28            |                          | 40           |               | 1"            |
|        | 11:35            | BLOW INCREASING          | 47           |               | 1.5"          |
|        | 11:45            |                          | 57           |               | 6"            |
|        | 11:55            | BOTTOM OF BUCKET         | 67           |               |               |
|        | 12:00            |                          | 72           |               | 9 oz          |
|        | 12:10            |                          | 82           |               | 12 oz         |
|        | 12:20            |                          | 92           |               | 15 oz         |
|        | 12:25            | END FLOW & START SHUTIN  | 97           | 103           | 1*            |
|        | 14:25            | END SHUTIN               | 217          | 2561          |               |
|        | 14:27            | PULLED LOOSE             | 219          |               |               |
|        |                  | PULLED TO FLUID          |              |               | .5*           |

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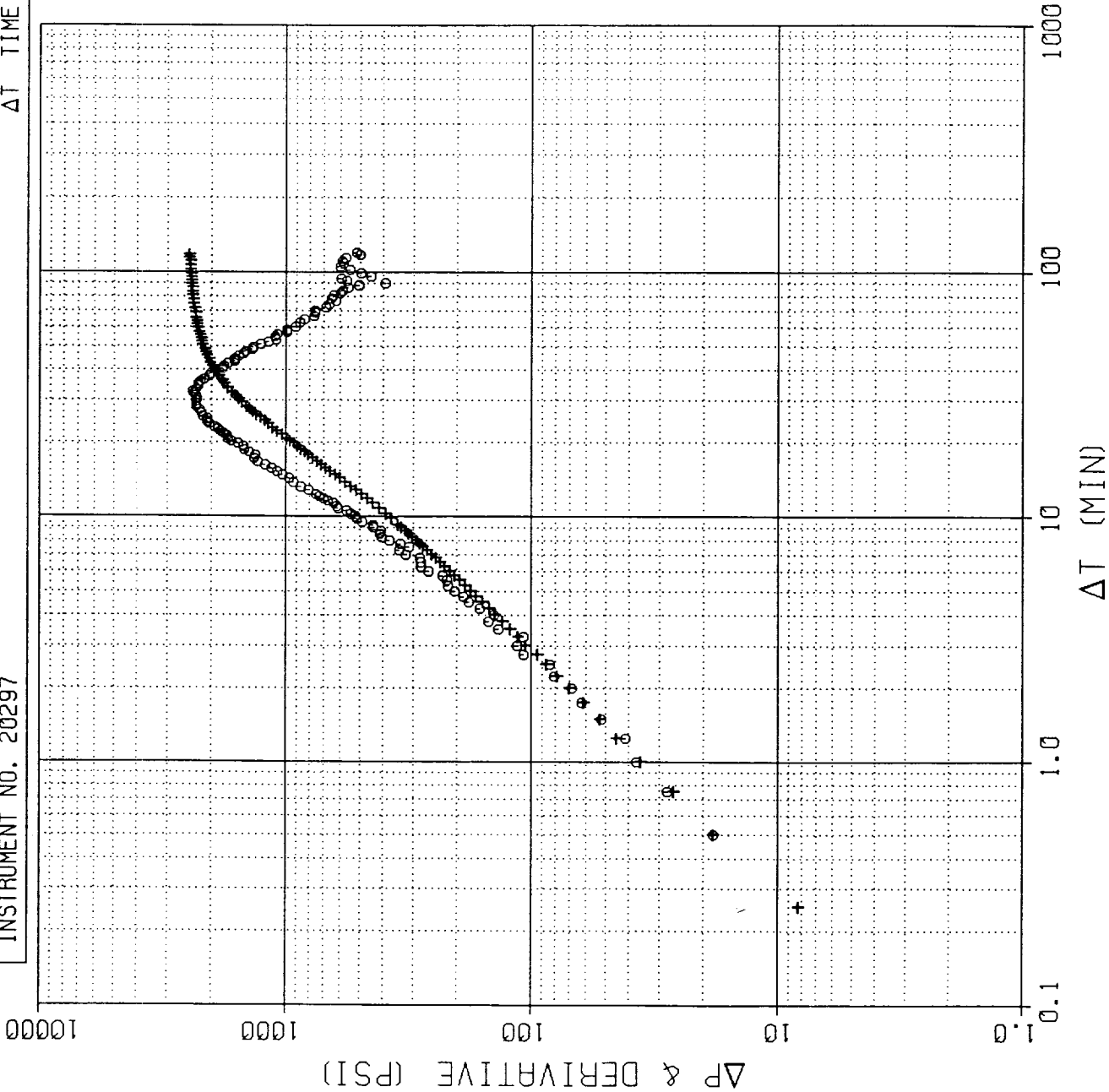
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LOG LOG PLOT

COMPANY : FORCENERGY  
WELL : SHOEBAR 14 STATE COM #2  
FIELD REPORT NO. 139396  
INSTRUMENT NO. 20297

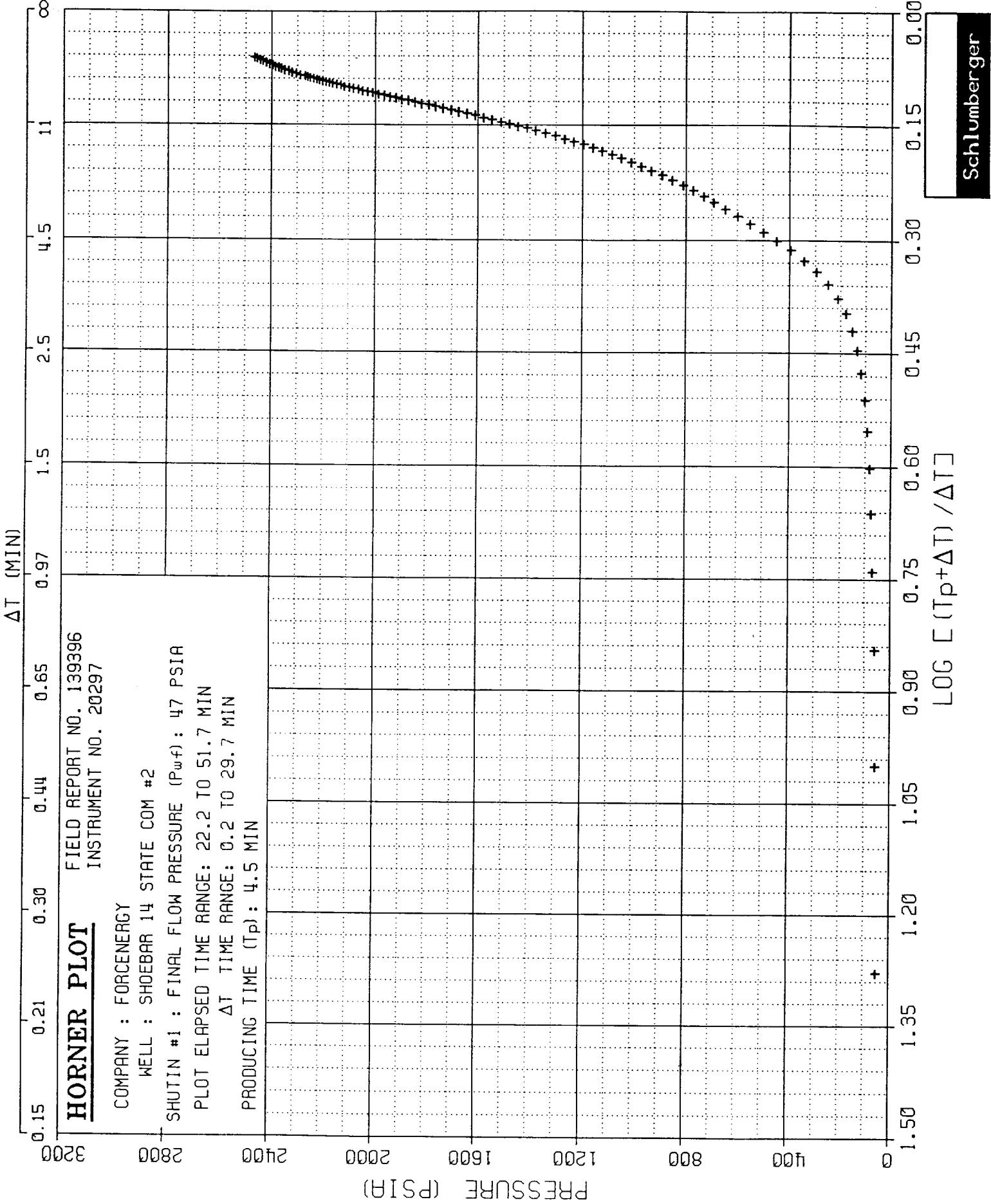
SHUTIN #2 : PRODUCING TIME (Tp): 65.0 MIN  
FINAL FLOW PRESSURE (Pwf): 103 PSIA  
PLOT ELAPSED TIME RANGE: 115.0 TO 234.5 MIN  
ΔT TIME RANGE: 0.2 TO 119.7 MIN



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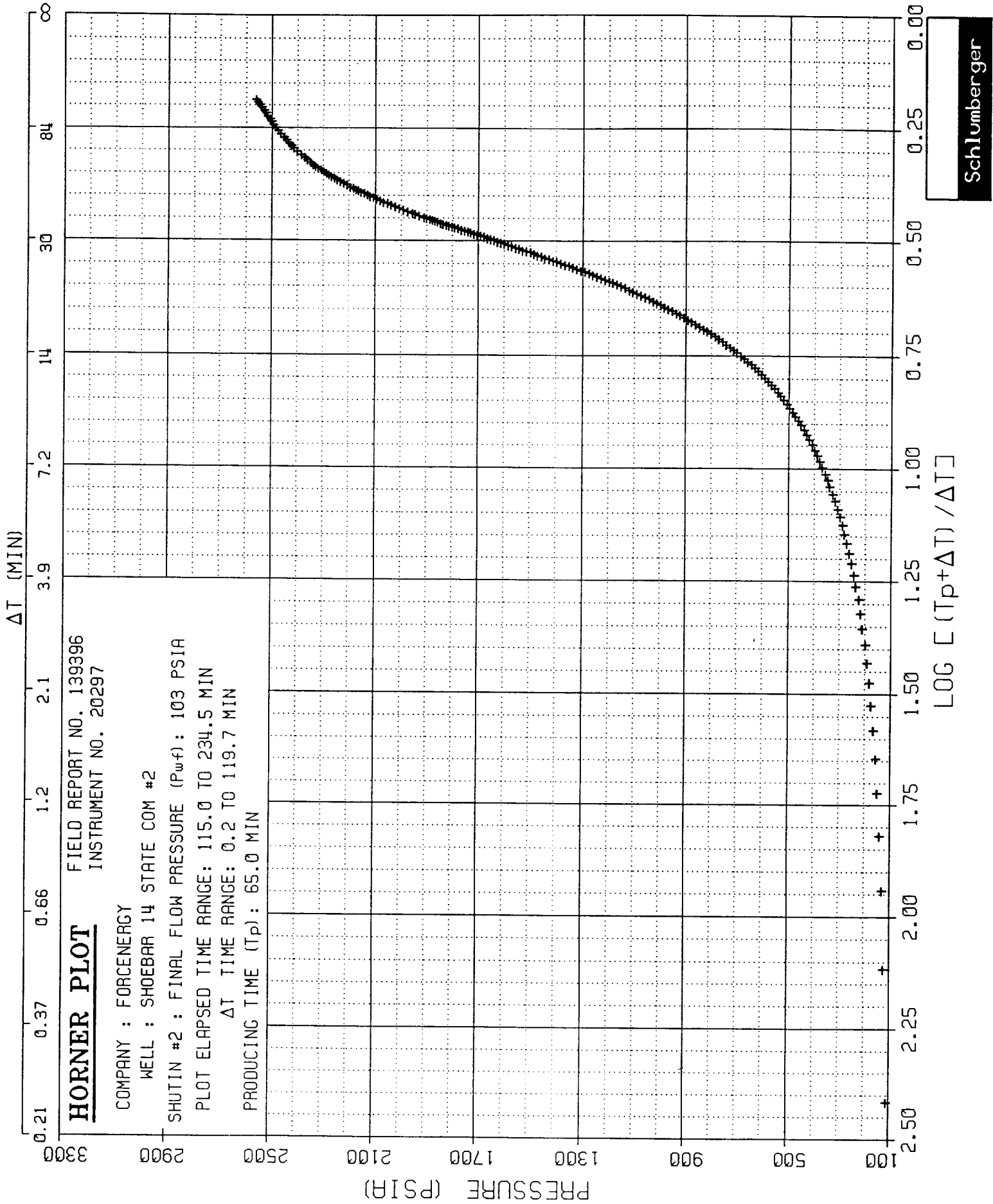


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# BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 139396

COMPANY : FORCEENERGY

INSTRUMENT NO. 20297

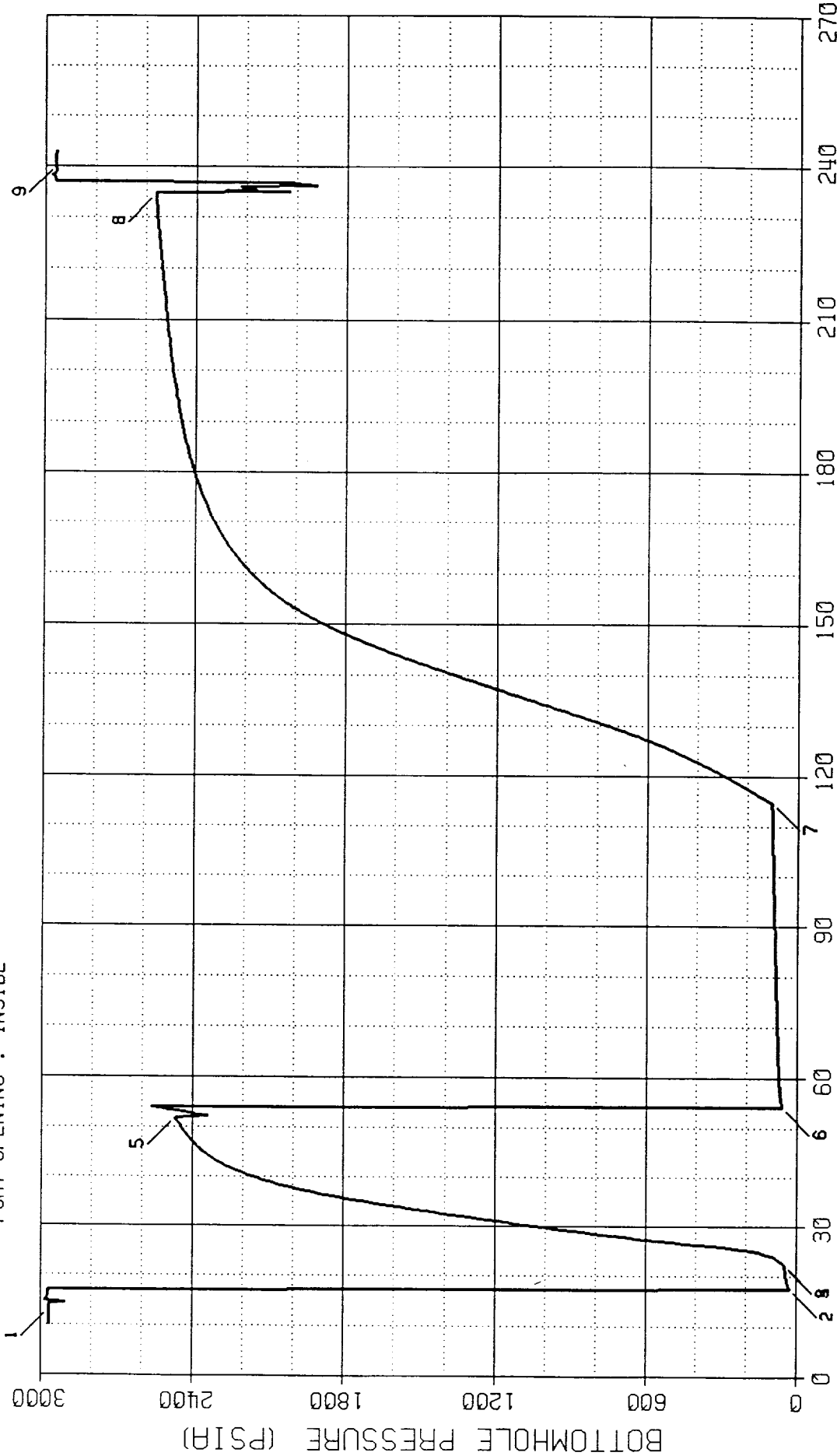
WELL : SHOEBAR 14 STATE COM #2

DEPTH : 6887 FT

CAPACITY : 11014 PSI

PORT OPENING : INSIDE

Electronic Pressure Data



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# BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 139396

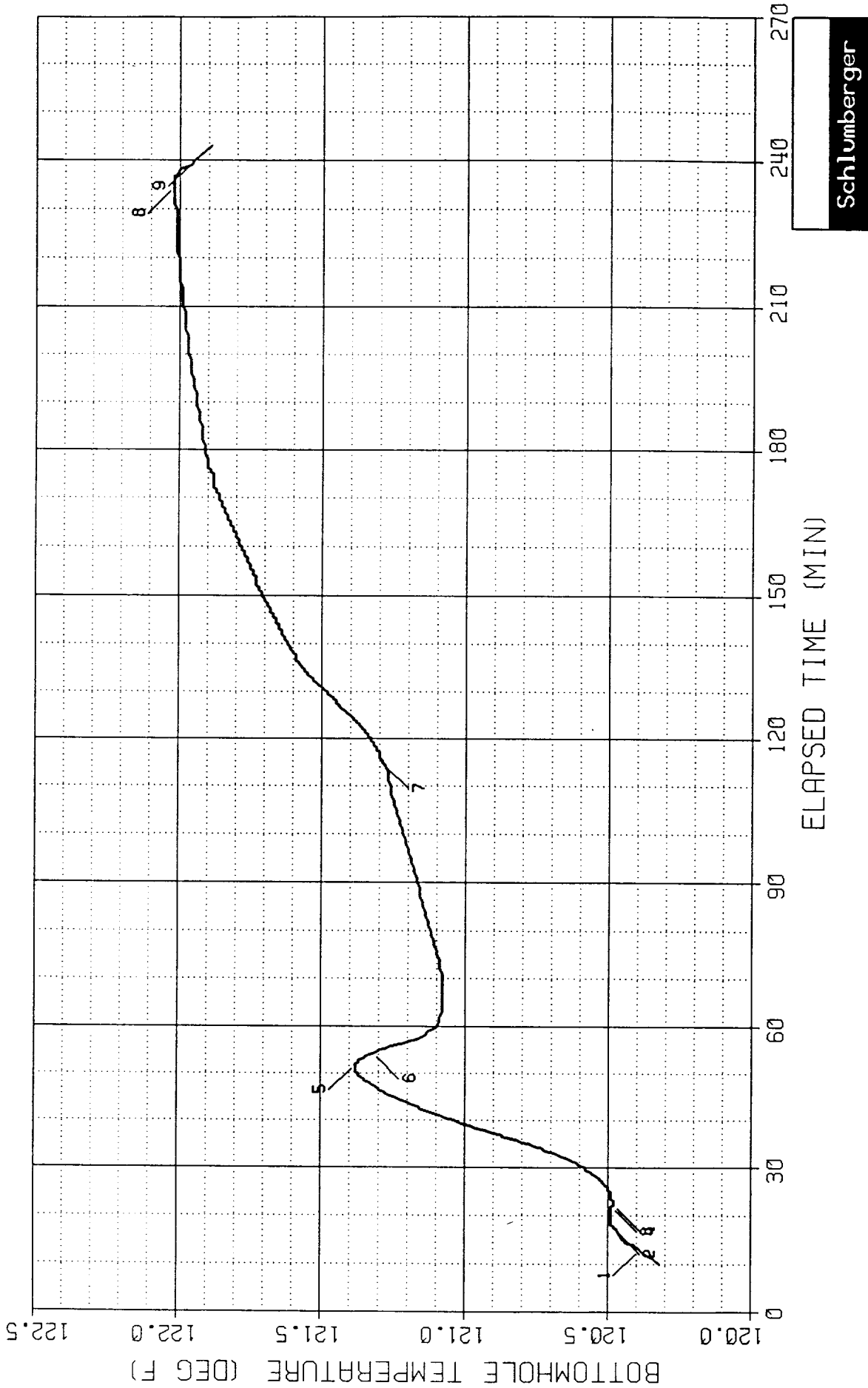
INSTRUMENT NO. 20297

DEPTH : 6887 FT

COMPANY : FORCENERGY

WELL : SHOEBAR 14 STATE COM #2

Electronic Temperature Data



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\*\* WELL TEST DATA PRINTOUT \*\*  
\*\*\*\*\*

COMPANY: FORCENERGY  
WELL: SHOEBAR 14 STATE COM #2

FIELD REPORT NO. 139396  
INSTRUMENT NO. 20297

RECORDER CAPACITY: 11014 PSI    PORT OPENING: INSIDE    DEPTH: 6887 FT

LABEL POINT INFORMATION  
\*\*\*\*\*

| # | TIME OF DAY |        | DATE                     | EXPLANATION | ELAPSED<br>TIME, MIN | BOT HOLE         |                |
|---|-------------|--------|--------------------------|-------------|----------------------|------------------|----------------|
|   | HH:MM:SS    | DD-MMM |                          |             |                      | PRESSURE<br>PSIA | TEMP.<br>DEG F |
| 1 | 10:43:00    | 27-AUG | HYDROSTATIC MUD          |             | 13.00                | 2968.50          | 120.39         |
| 2 | 10:47:30    | 27-AUG | START FLOW               |             | 17.50                | 29.27            | 120.48         |
| 3 | 10:52:00    | 27-AUG | END FLOW & START SHUT-IN |             | 22.00                | 47.24            | 120.49         |
| 4 | 10:52:15    | 27-AUG | FLOW POINT               |             | 22.25                | 46.83            | 120.48         |
| 5 | 11:21:45    | 27-AUG | END SHUT-IN              |             | 51.75                | 2469.80          | 121.38         |
| 6 | 11:24:15    | 27-AUG | START FLOW               |             | 54.25                | 59.42            | 121.32         |
| 7 | 12:24:45    | 27-AUG | END FLOW & START SHUT-IN |             | 114.75               | 102.84           | 121.29         |
| 8 | 14:24:30    | 27-AUG | END SHUT-IN              |             | 234.50               | 2561.21          | 122.02         |
| 9 | 14:30:00    | 27-AUG | HYDROSTATIC MUD          |             | 240.00               | 2958.35          | 121.95         |

SUMMARY OF FLOW PERIODS  
\*\*\*\*\*

| PERIOD | START<br>ELAPSED<br>TIME, MIN | END<br>ELAPSED<br>TIME, MIN | DURATION<br>MIN | START<br>PRESSURE<br>PSIA | END<br>PRESSURE<br>PSIA | INITIAL<br>PRESSURE<br>PSIA |
|--------|-------------------------------|-----------------------------|-----------------|---------------------------|-------------------------|-----------------------------|
|        | -----                         | -----                       |                 | -----                     | -----                   | -----                       |
| 1      | 17.50                         | 22.00                       | 4.50            | 29.27                     | 47.24                   | 29.27                       |
| 2      | 54.25                         | 114.75                      | 60.50           | 59.42                     | 102.84                  | 59.42                       |

SUMMARY OF SHUTIN PERIODS  
\*\*\*\*\*

| PERIOD | START<br>ELAPSED<br>TIME, MIN | END<br>ELAPSED<br>TIME, MIN | DURATION<br>MIN | START<br>PRESSURE<br>PSIA | END<br>PRESSURE<br>PSIA | FINAL FLOW<br>PRESSURE<br>PSIA | PRODUCING<br>TIME, MIN |
|--------|-------------------------------|-----------------------------|-----------------|---------------------------|-------------------------|--------------------------------|------------------------|
|        | -----                         | -----                       |                 | -----                     | -----                   | -----                          |                        |
| 1      | 22.00                         | 51.75                       | 29.75           | 47.24                     | 2469.80                 | 47.24                          | 4.50                   |
| 2      | 114.75                        | 234.50                      | 119.75          | 102.84                    | 2561.21                 | 102.84                         | 65.00                  |



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TEST PHASE: FLOW PERIOD # 1

| TIME<br>OF DAY | DATE   | ELAPSED  | DELTA    | BOT HOLE<br>TEMP. | BOT HOLE<br>PRESSURE |
|----------------|--------|----------|----------|-------------------|----------------------|
| HH:MM:SS       | DD-MMM | TIME,MIN | TIME,MIN | DEG F             | PSIA                 |
| 10:47:30       | 27-AUG | 17.50    | 0.00     | 120.48            | 29.27                |
| 10:52:00       | 27-AUG | 22.00    | 4.50     | 120.49            | 47.24                |

TEST PHASE: SHUTIN PERIOD # 1      FINAL FLOW PRESSURE = 47.24 PSIA  
PRODUCING TIME = 4.50 MIN

| TIME<br>OF DAY | DATE   | ELAPSED  | DELTA    | BOT HOLE<br>TEMP. | BOT HOLE<br>PRESSURE | DELTA P | LOG<br>HORNER |
|----------------|--------|----------|----------|-------------------|----------------------|---------|---------------|
| HH:MM:SS       | DD-MMM | TIME,MIN | TIME,MIN | DEG F             | PSIA                 | PSI     | TIME          |
| 10:52:00       | 27-AUG | 22.00    | 0.00     | 120.49            | 47.24                | 0.00    |               |
| 10:53:00       | 27-AUG | 23.00    | 1.00     | 120.48            | 66.34                | 19.10   | 0.7404        |
| 10:54:00       | 27-AUG | 24.00    | 2.00     | 120.49            | 100.94               | 53.70   | 0.5119        |
| 10:55:00       | 27-AUG | 25.00    | 3.00     | 120.49            | 177.71               | 130.47  | 0.3979        |
| 10:56:00       | 27-AUG | 26.00    | 4.00     | 120.50            | 341.20               | 293.96  | 0.3274        |
| 10:57:00       | 27-AUG | 27.00    | 5.00     | 120.52            | 550.23               | 502.99  | 0.2788        |
| 10:58:00       | 27-AUG | 28.00    | 6.00     | 120.54            | 730.45               | 683.21  | 0.2430        |
| 10:59:00       | 27-AUG | 29.00    | 7.00     | 120.56            | 890.22               | 842.98  | 0.2156        |
| 11:00:00       | 27-AUG | 30.00    | 8.00     | 120.58            | 1046.95              | 999.71  | 0.1938        |
| 11:01:00       | 27-AUG | 31.00    | 9.00     | 120.61            | 1193.30              | 1146.06 | 0.1761        |
| 11:02:00       | 27-AUG | 32.00    | 10.00    | 120.65            | 1338.74              | 1291.50 | 0.1614        |
| 11:04:00       | 27-AUG | 34.00    | 12.00    | 120.73            | 1610.26              | 1563.02 | 0.1383        |
| 11:06:00       | 27-AUG | 36.00    | 14.00    | 120.84            | 1844.82              | 1797.58 | 0.1210        |
| 11:08:00       | 27-AUG | 38.00    | 16.00    | 120.94            | 2026.16              | 1978.92 | 0.1076        |
| 11:10:00       | 27-AUG | 40.00    | 18.00    | 121.04            | 2160.73              | 2113.49 | 0.0969        |
| 11:12:00       | 27-AUG | 42.00    | 20.00    | 121.14            | 2258.18              | 2210.94 | 0.0881        |
| 11:14:00       | 27-AUG | 44.00    | 22.00    | 121.21            | 2326.40              | 2279.16 | 0.0808        |
| 11:16:00       | 27-AUG | 46.00    | 24.00    | 121.28            | 2378.18              | 2330.94 | 0.0746        |
| 11:18:00       | 27-AUG | 48.00    | 26.00    | 121.33            | 2414.44              | 2367.20 | 0.0693        |
| 11:20:00       | 27-AUG | 50.00    | 28.00    | 121.37            | 2447.55              | 2400.31 | 0.0647        |
| 11:21:45       | 27-AUG | 51.75    | 29.75    | 121.38            | 2469.80              | 2422.56 | 0.0612        |

TEST PHASE: FLOW PERIOD # 2

| TIME<br>OF DAY | DATE   | ELAPSED  | DELTA    | BOT HOLE<br>TEMP. | BOT HOLE<br>PRESSURE |
|----------------|--------|----------|----------|-------------------|----------------------|
| HH:MM:SS       | DD-MMM | TIME,MIN | TIME,MIN | DEG F             | PSIA                 |
| 11:24:15       | 27-AUG | 54.25    | 0.00     | 121.32            | 59.42                |
| 11:40:00       | 27-AUG | 70.00    | 15.75    | 121.08            | 78.72                |
| 11:55:00       | 27-AUG | 85.00    | 30.75    | 121.15            | 87.52                |
| 12:10:00       | 27-AUG | 100.00   | 45.75    | 121.22            | 95.72                |
| 12:24:45       | 27-AUG | 114.75   | 60.50    | 121.29            | 102.84               |

TEST PHASE: SHUTIN PERIOD # 2      FINAL FLOW PRESSURE = 102.84 PSIA  
PRODUCING TIME = 65.00 MIN

| TIME<br>OF DAY | DATE   | ELAPSED  | DELTA    | BOT HOLE<br>TEMP. | BOT HOLE<br>PRESSURE | DELTA P | LOG<br>HORNER |
|----------------|--------|----------|----------|-------------------|----------------------|---------|---------------|
| HH:MM:SS       | DD-MMM | TIME,MIN | TIME,MIN | DEG F             | PSIA                 | PSI     | TIME          |
| 12:24:45       | 27-AUG | 114.75   | 0.00     | 121.29            | 102.84               | 0.00    |               |
| 12:25:45       | 27-AUG | 115.75   | 1.00     | 121.30            | 138.71               | 35.87   | 1.8195        |
| 12:26:45       | 27-AUG | 116.75   | 2.00     | 121.30            | 172.44               | 69.60   | 1.5250        |
| 12:27:45       | 27-AUG | 117.75   | 3.00     | 121.31            | 207.86               | 105.02  | 1.3554        |
| 12:28:45       | 27-AUG | 118.75   | 4.00     | 121.32            | 242.30               | 139.46  | 1.2368        |

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| WELL TEST INTERPRETATION REPORT #: 139396 |                         | PAGE: 12,<br>29-AUG-94 |
| CLIENT : FORCENERGY                       | DISTRIBUTION OF REPORTS | FIELD: WILDCAT         |
| REGION : CSD                              |                         | ZONE : LEONARD         |
| DISTRICT: HOBBS                           |                         | WELL : SHOEBAR 14 #2   |
| BASE : MIDLAND                            |                         | LOCATION: 14-17S-35E   |
| ENGINEER: KIRK BEASLEY                    |                         |                        |

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