



**Weatherford**

**MICRORESISTIVITY LOG**

|                                         |                |              |                             |          |  |
|-----------------------------------------|----------------|--------------|-----------------------------|----------|--|
| COMPANY                                 |                |              | MCCOY PETROLEUM CORPORATION |          |  |
| WELL                                    |                |              | SEALEY "A" #1-15            |          |  |
| FIELD                                   |                |              | ALFORD                      |          |  |
| PROVINCE/COUNTY                         |                |              | SCOTT                       |          |  |
| COUNTRY/STATE                           |                |              | U.S.A. / KANSAS             |          |  |
| LOCATION                                |                |              | 990' FSL & 1980' FEL        |          |  |
| PERMIT NUMBER                           |                |              | N2 SW SE                    |          |  |
| SEC 15                                  | TWP 30S        | RGE 19W      | Other Services              |          |  |
| Latitude                                |                | MPD/MDN      |                             |          |  |
| Longitude                               |                | 15-097-21809 |                             |          |  |
| API Number                              |                | 15-097-21809 |                             |          |  |
| Permanent Datum GL, Elevation 2264 feet |                |              | Elevations:                 |          |  |
| Log Measured From KB                    |                |              | KB 2273.00                  |          |  |
| Drilling Measured From KB @ 9 FEET      |                |              | DF 2271.00                  |          |  |
|                                         |                |              | GL 2264.00                  |          |  |
| Date                                    | 18-OCT-2013    |              |                             |          |  |
| Run Number                              | ONE            |              |                             |          |  |
| Service Order                           | 7036-100817902 |              |                             |          |  |
| Depth Driller                           | 5225.00        |              | feet                        |          |  |
| Depth Logger                            | 5225.00        |              | feet                        |          |  |
| First Reading                           | 5191.76        |              | feet                        |          |  |
| Last Reading                            | 3900.00        |              | feet                        |          |  |
| Casing Driller                          | 644.00         |              | feet                        |          |  |
| Casing Logger                           | 646.00         |              | feet                        |          |  |
| Bit Size                                | 7.875          |              | inches                      |          |  |
| Hole Fluid Type                         | WBM            |              |                             |          |  |
| Density / Viscosity                     | 9.40           | lb/USg       | 88.00                       | CP       |  |
| PH / Fluid Loss                         | 10.50          |              | 12.00                       | ml/30Min |  |
| Sample Source                           | MUDPIT         |              |                             |          |  |
| Rm @ Measured Temp                      | 0.31 @ 75.0    |              | ohm-m                       |          |  |
| Rmf @ Measured Temp                     | 0.25 @ 75.0    |              | ohm-m                       |          |  |
| Rmc @ Measured Temp                     | 0.37 @ 75.0    |              | ohm-m                       |          |  |
| Source Rmf / Rmc                        | CALC           |              | CALC                        |          |  |
| Rm @ BHT                                | 0.21 @113.0    |              | ohm-m                       |          |  |
| Time Since Circulation                  | 4 HOURS        |              |                             |          |  |
| Max Recorded Temp                       | 113.00         |              | deg F                       |          |  |
| Equipment / Base                        | 13096          |              | LIB                         |          |  |
| Recorded By                             | DEREK CARTER   |              |                             |          |  |
| Witnessed By                            | ZACH WIELE     |              |                             |          |  |
| IOB #                                   | LB14-323       |              |                             |          |  |

**BOREHOLE RECORD**

Last Edited: 18-OCT-2014 09:17

|                    |                    |                  |
|--------------------|--------------------|------------------|
| Bit Size<br>inches | Depth From<br>feet | Depth To<br>feet |
| 7.875              | 644.00             | 5225.00          |

**CASING RECORD**

|         |                |                    |                    |                     |
|---------|----------------|--------------------|--------------------|---------------------|
| Type    | Size<br>inches | Depth From<br>feet | Shoe Depth<br>feet | Weight<br>pounds/ft |
| SURFACE | 8.625          | 0.00               | 644.00             | 24.00               |

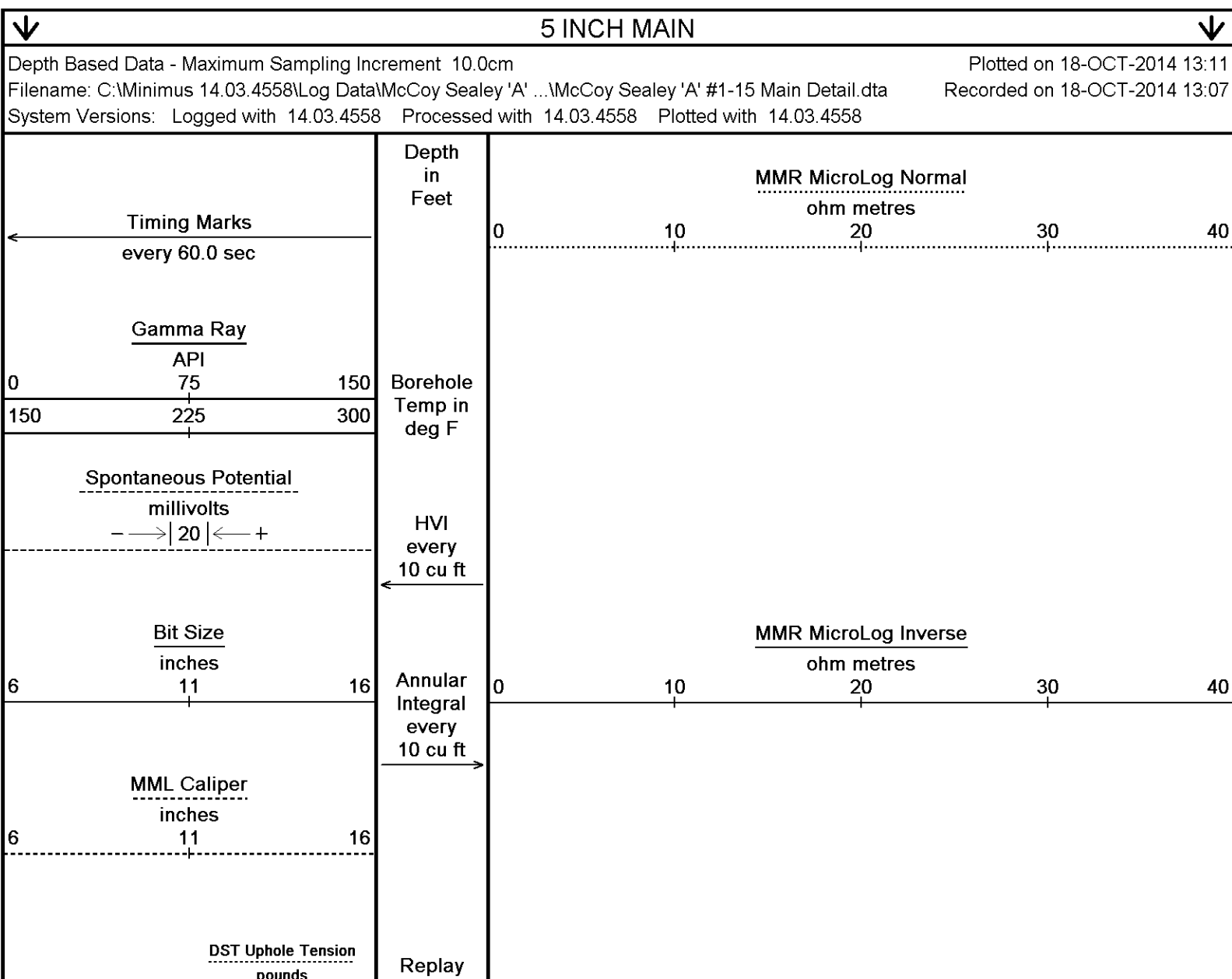
**REMARKS**

- SOFTWARE ISSUE: WLS 14.03.4558
- TOOL STRING: MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION
- HARDWARE:
  - MDN: DUAL BOWSPRING ECCENTRALIZER
  - MFE: 1 X 0.5 INCH STANDOFF
  - MAI: 2 X 0.5 INCH STANDOFF
- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY
- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY
- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST
- HIGH RESOLUTION LOGGED FOR CUSTOMER FROM TD TO 4975 FT.

- TOTAL HOLE VOLUME FROM TD TO 3900 FT = 450 CU FT

- CHLORIDE LEVEL: 12.000 PPM

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.



5000 feet 0

Scale  
1:240

3900

103°

3950

103°

4000

104°

4050

400

104°

4100

MINV →

MNRL →

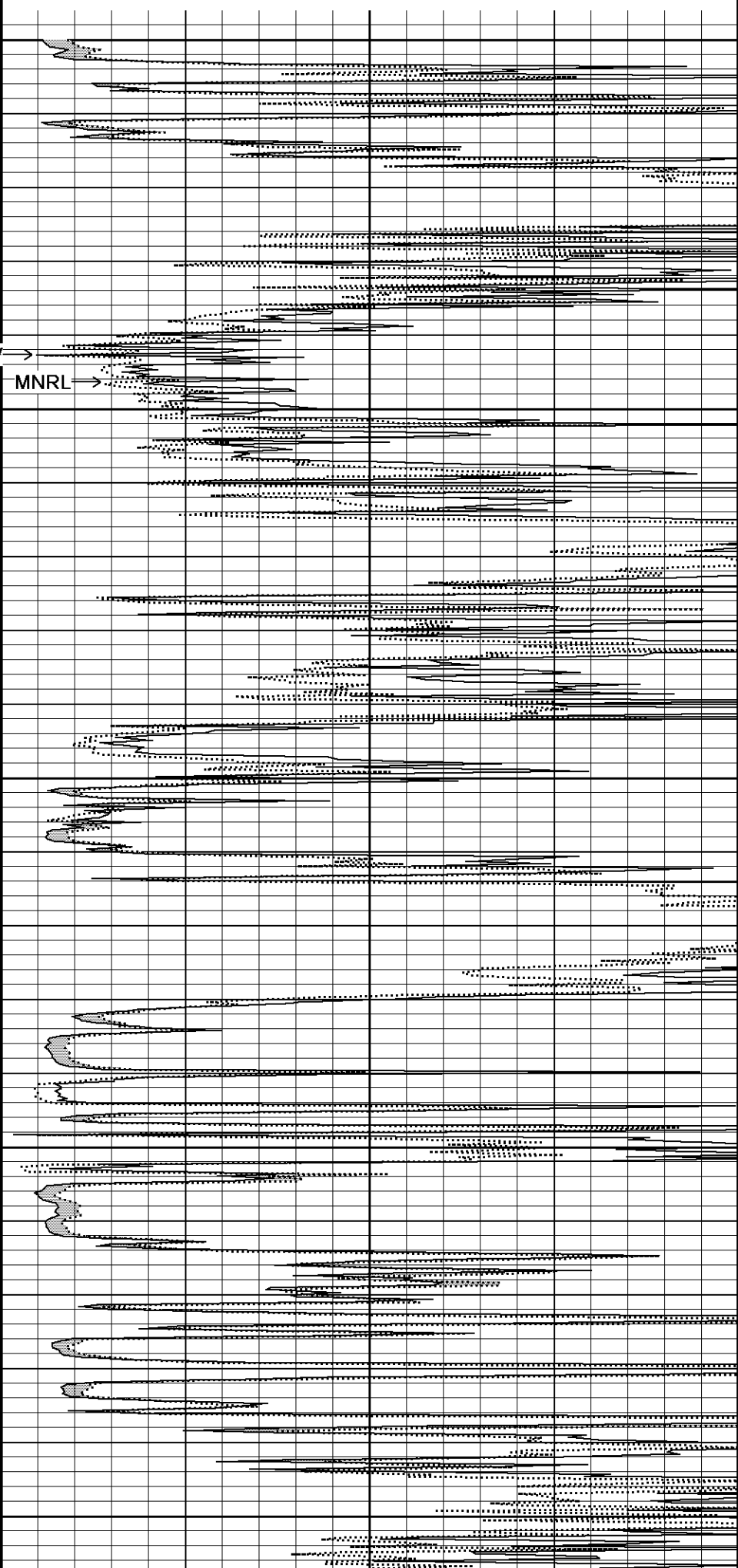
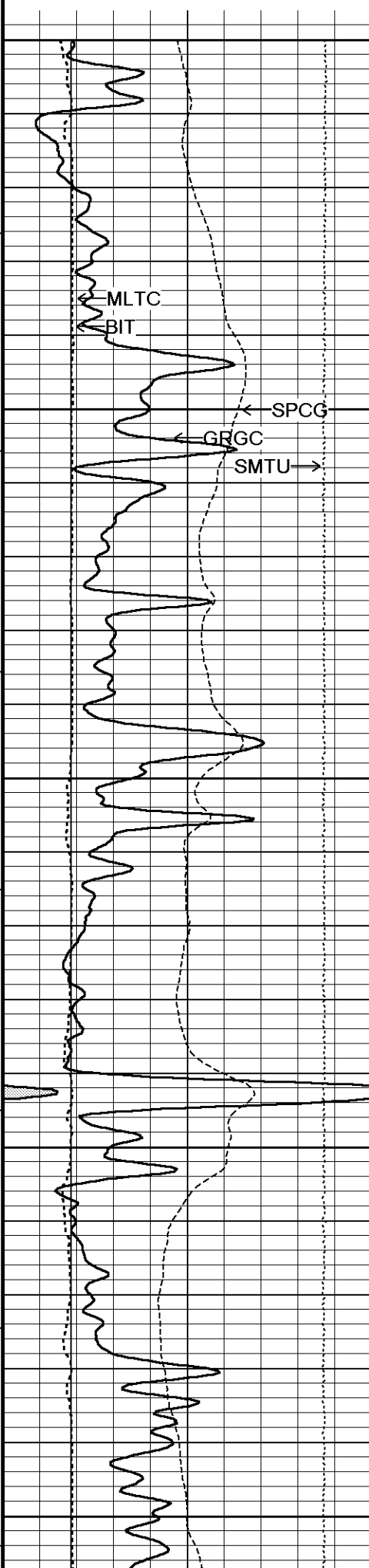
MLTC

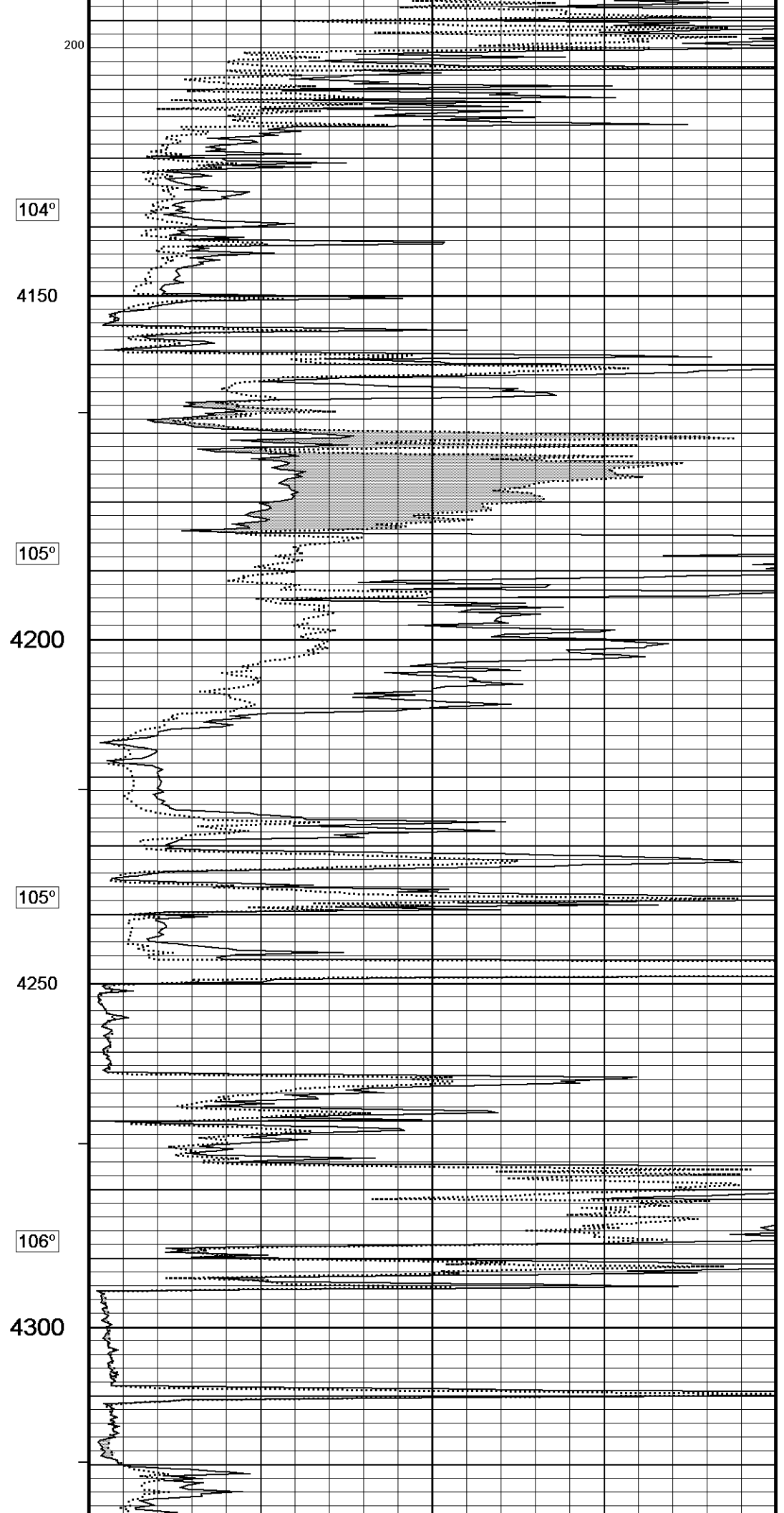
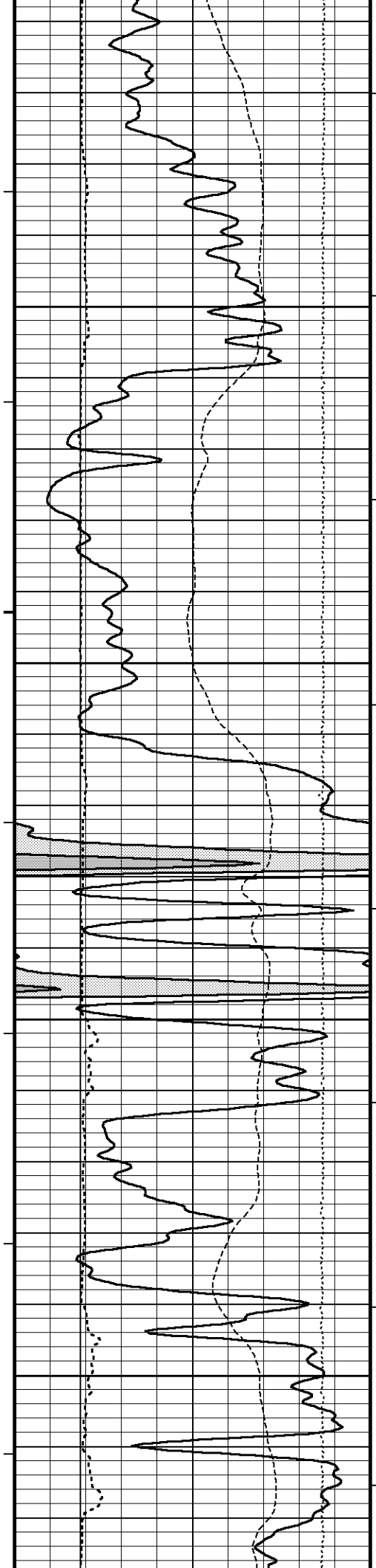
BIT

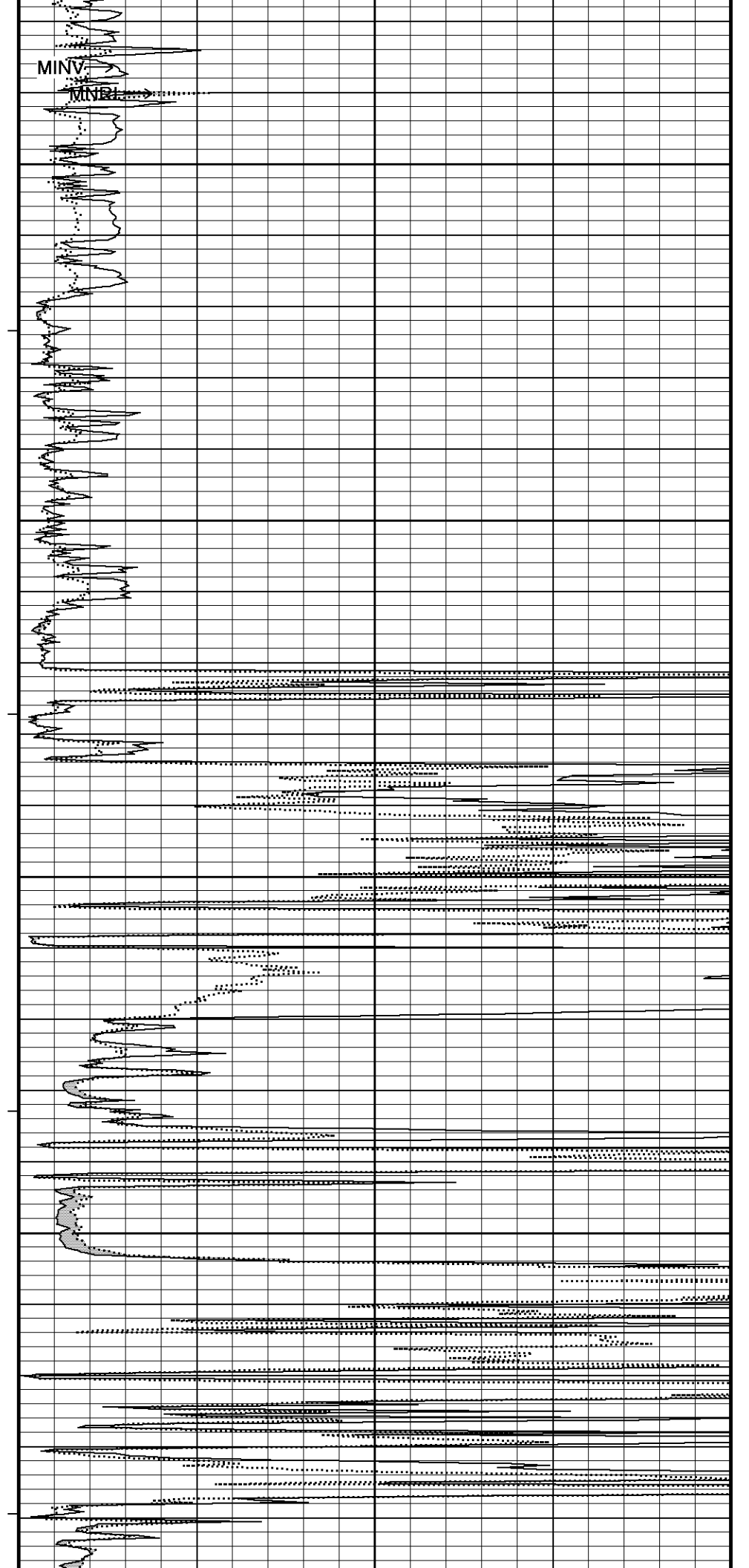
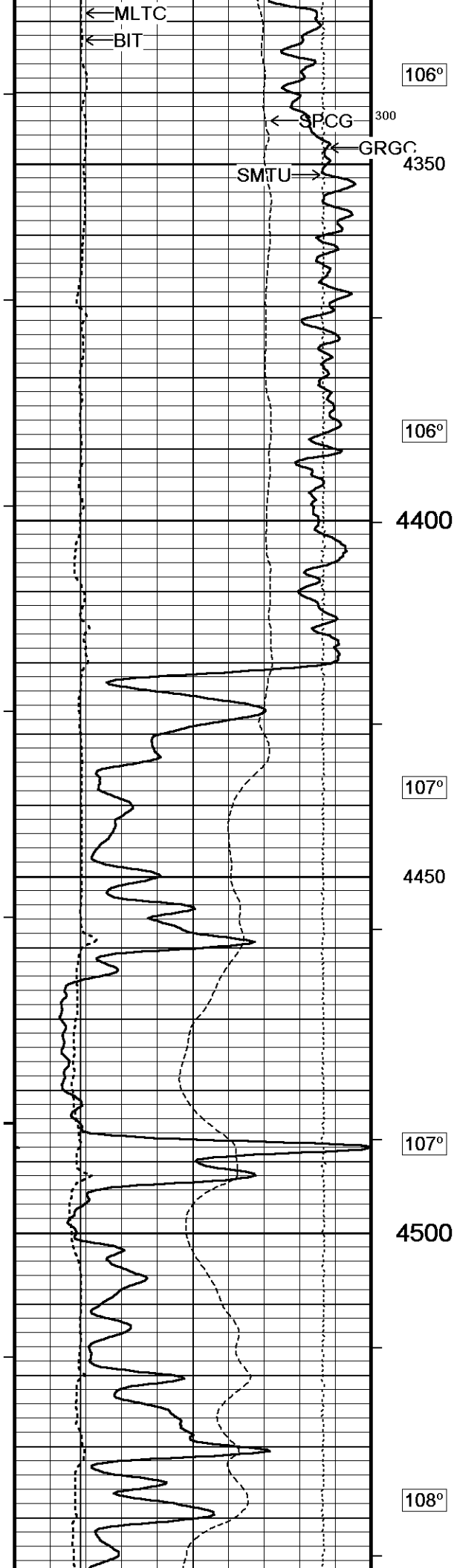
← SPCG

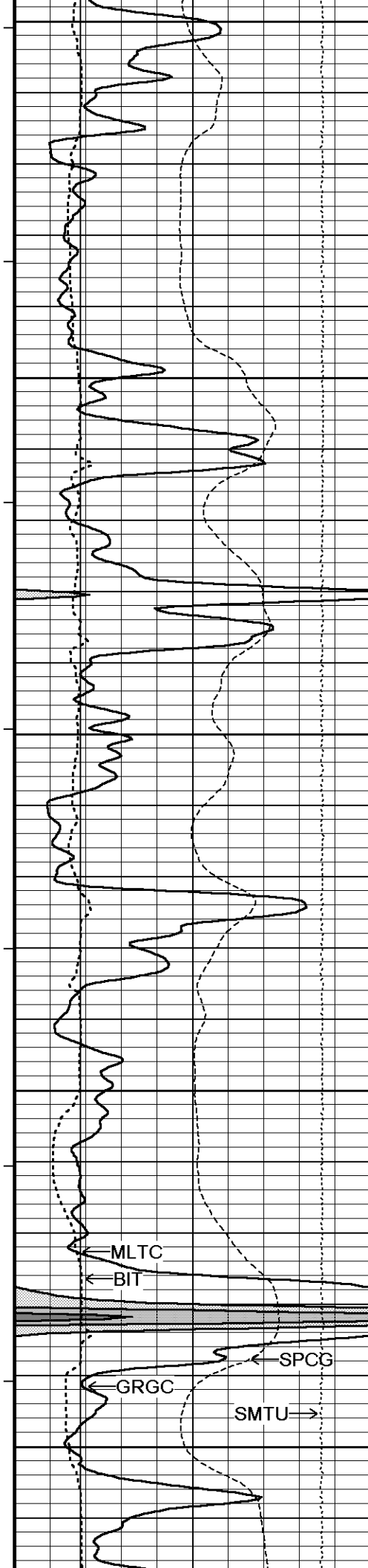
← GRGC

SMTU →

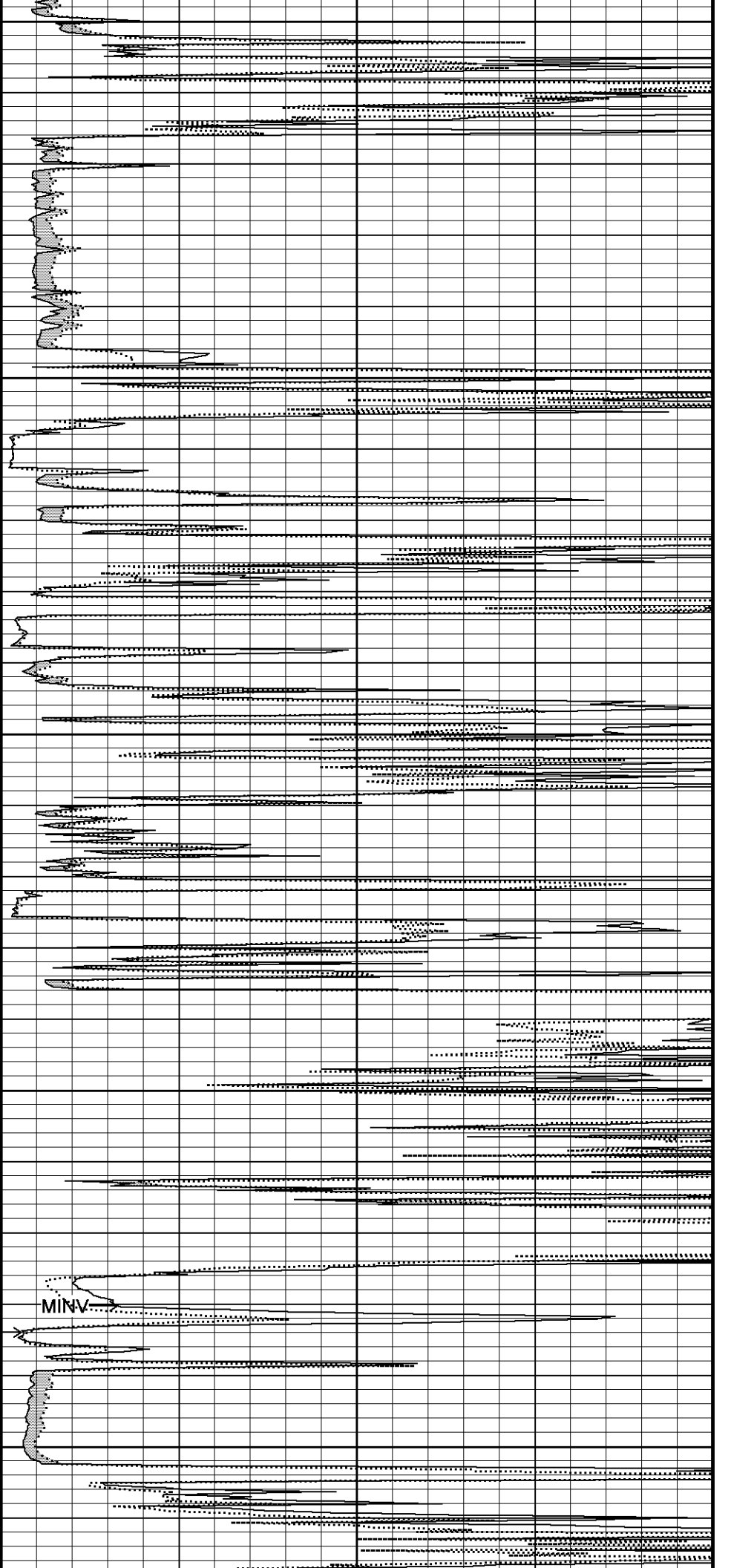




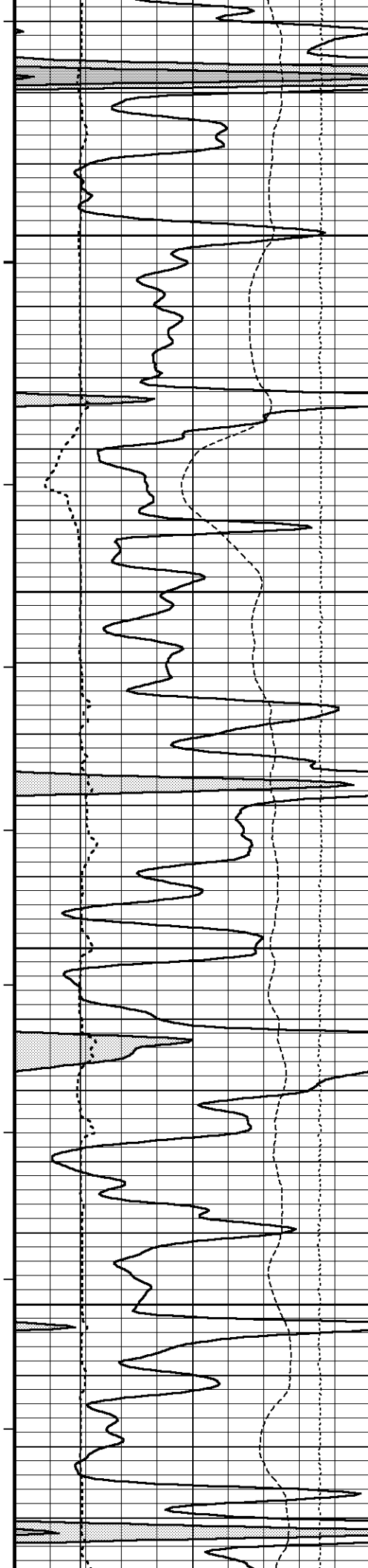




4550  
107°  
4600  
200  
107°  
4650  
100  
107°  
4700  
4750



MINV  
MNRL  
108°



108°

4800

109°

4850

109°

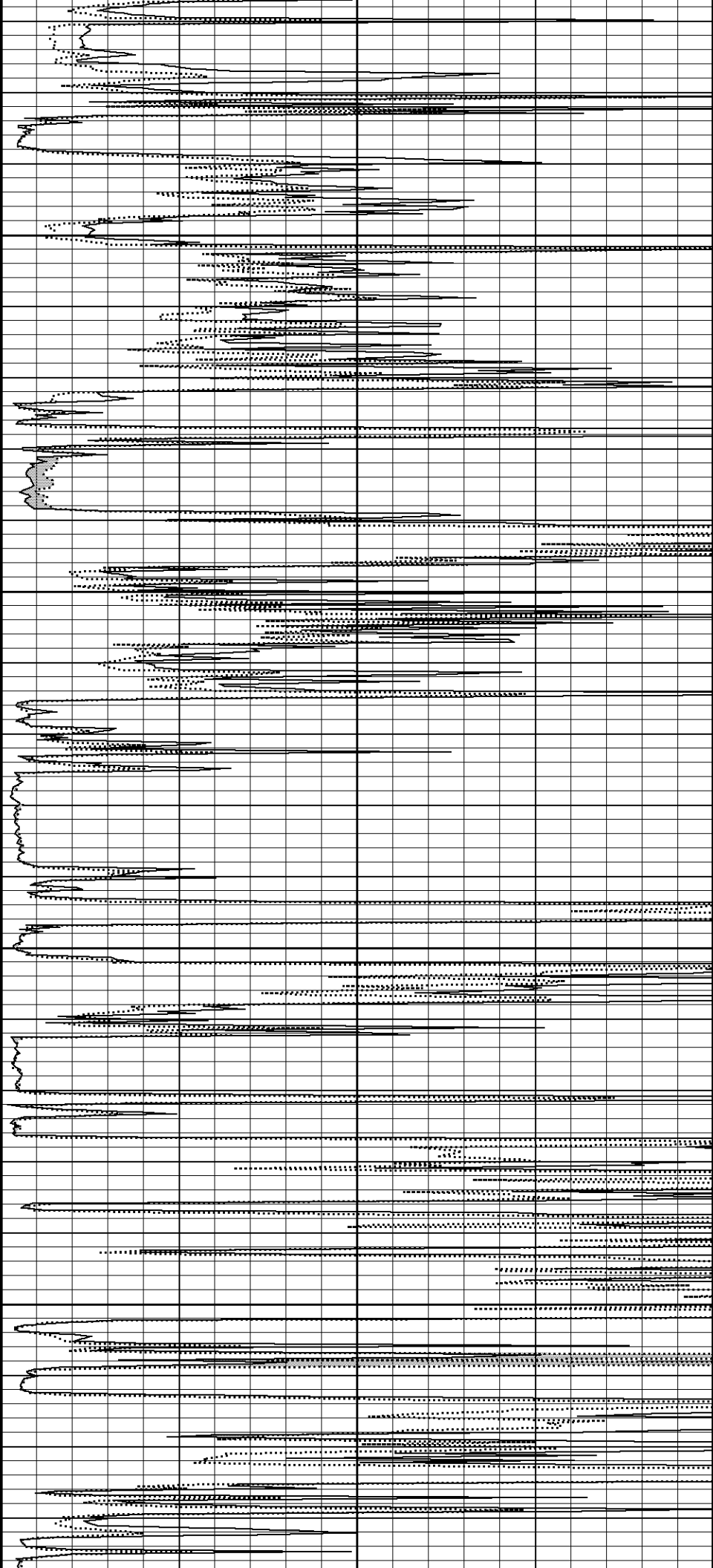
4900

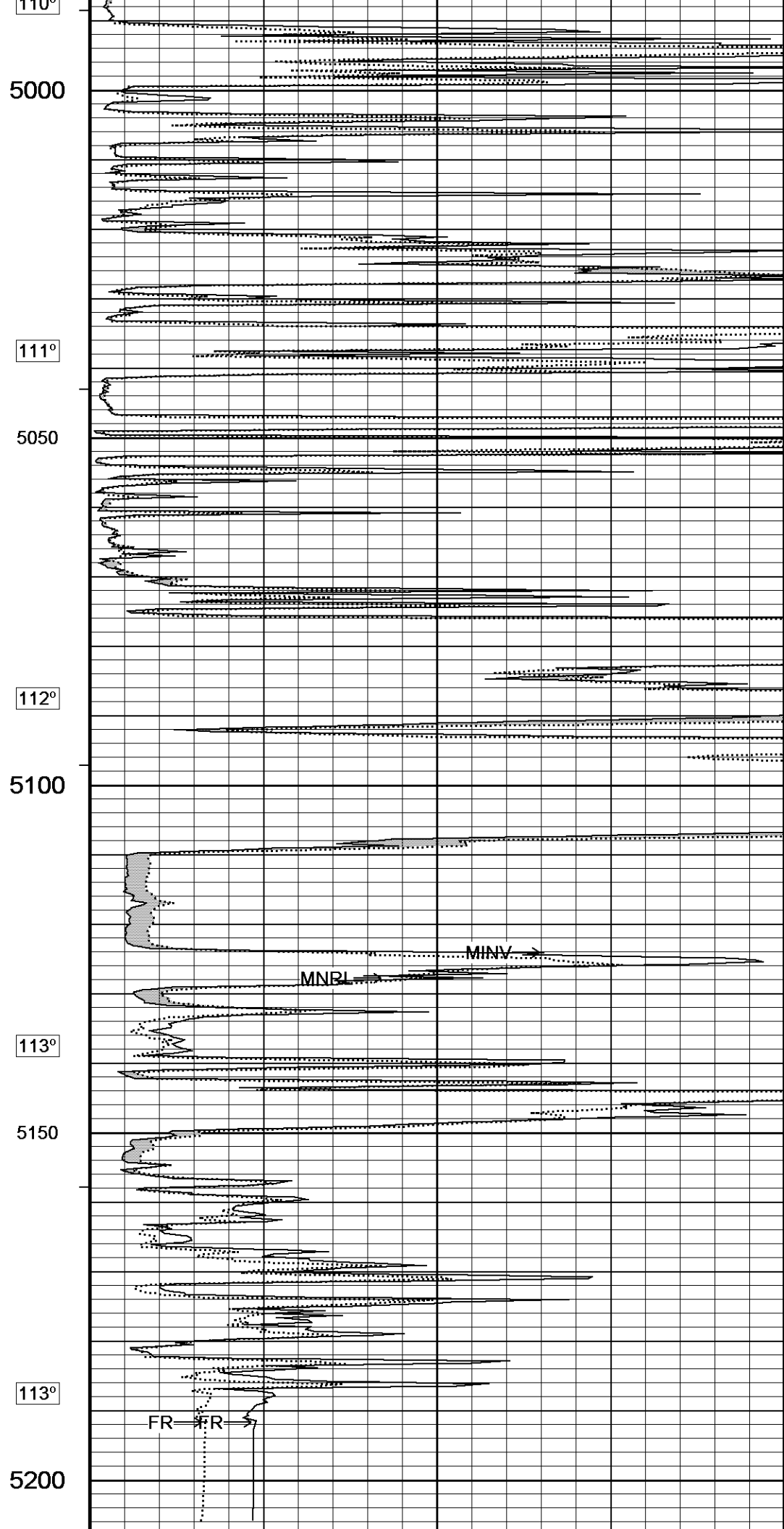
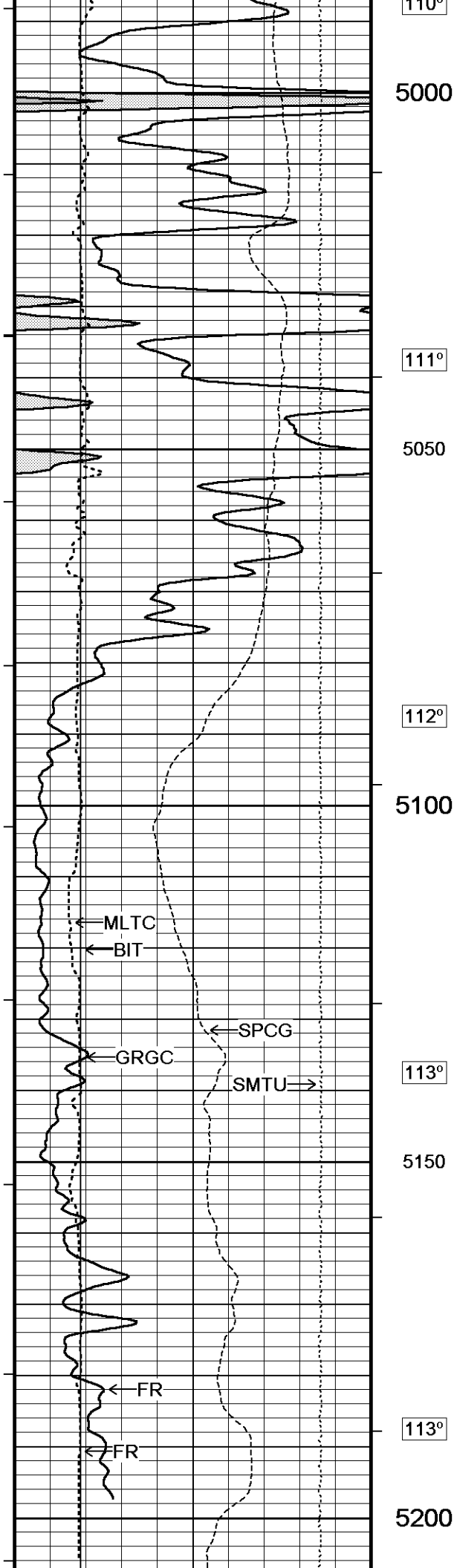
100

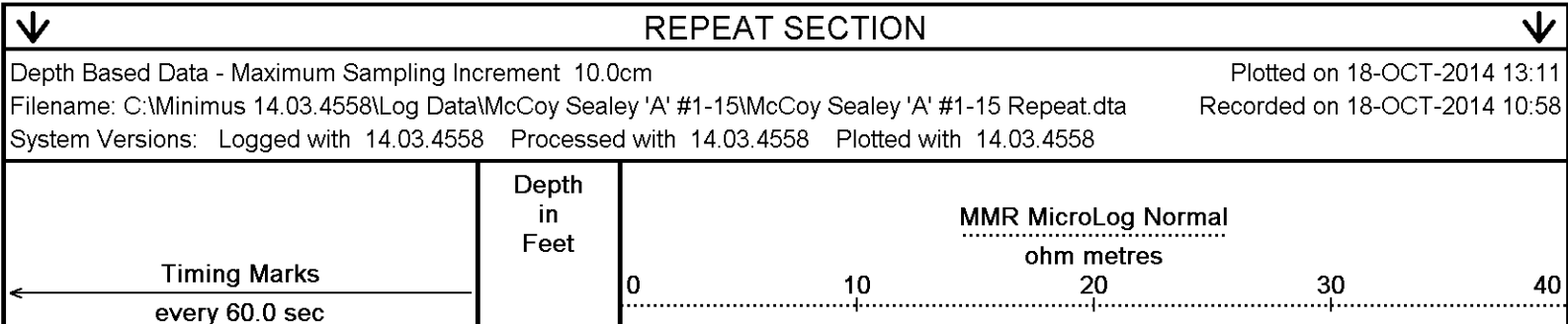
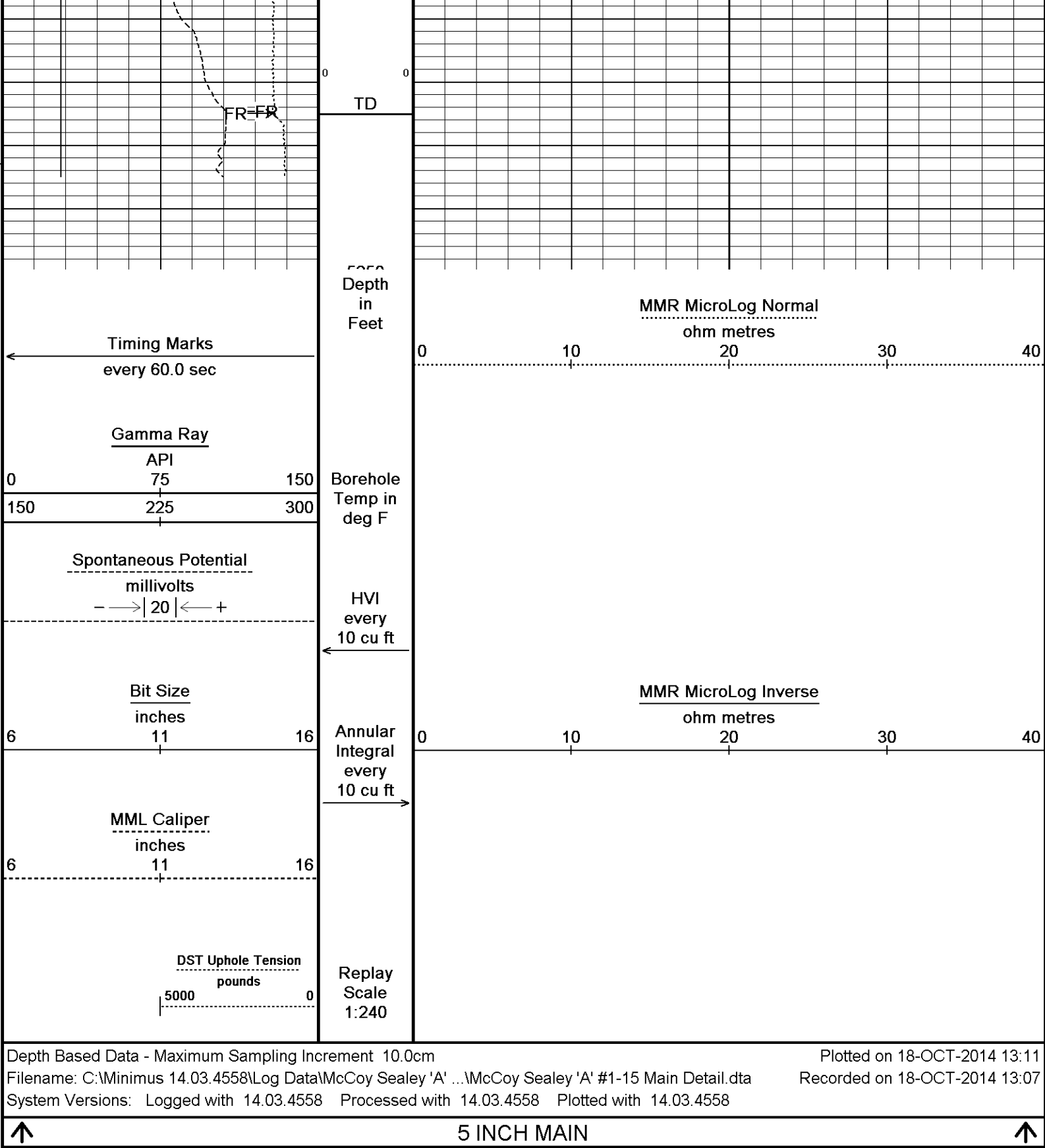
110°

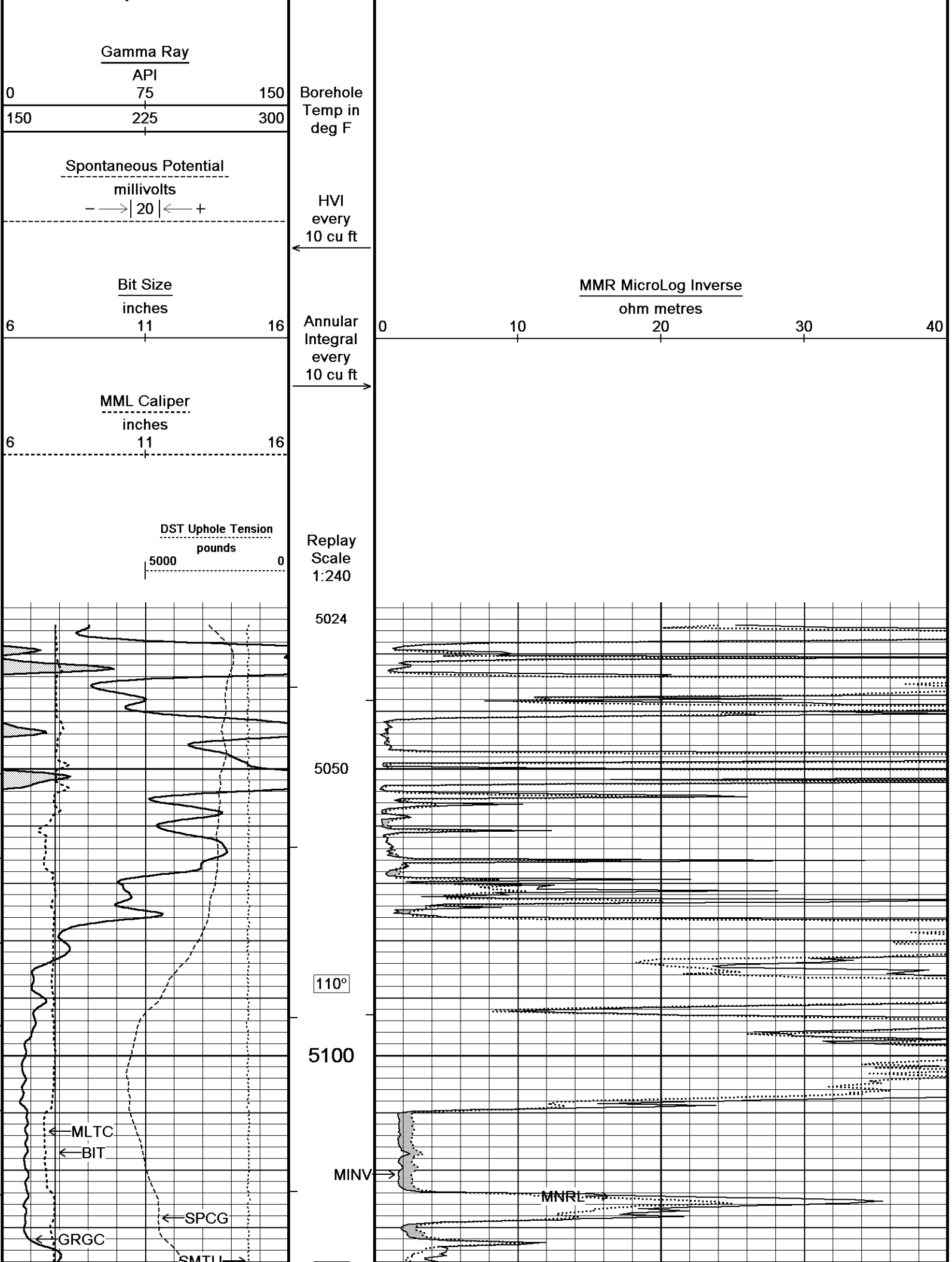
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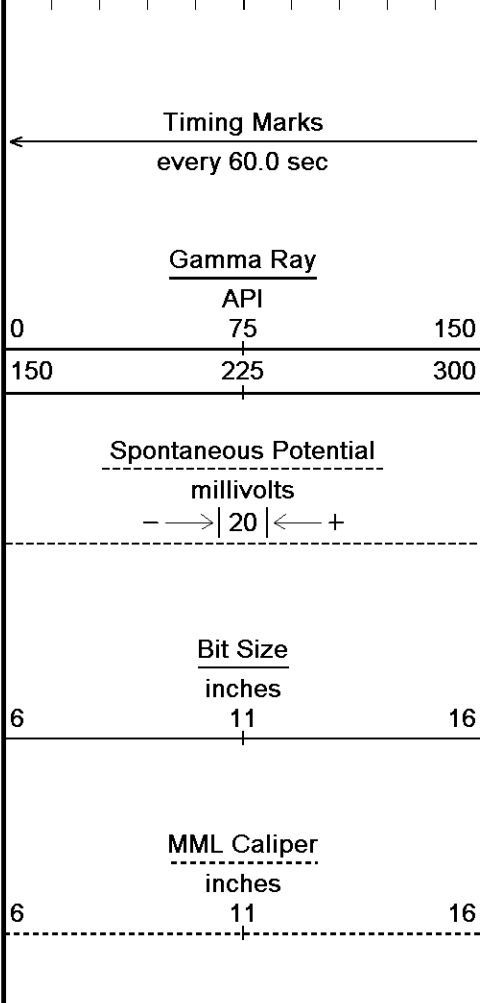
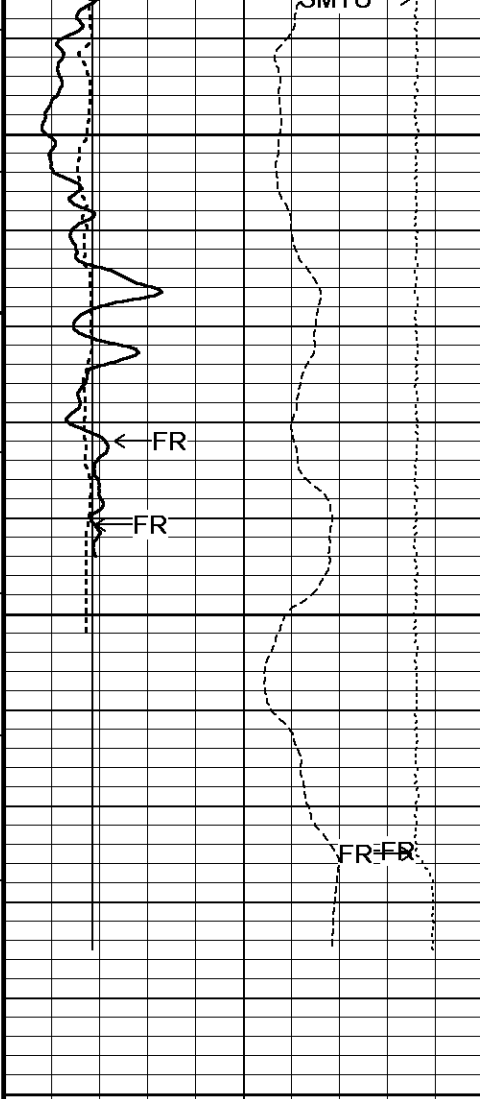
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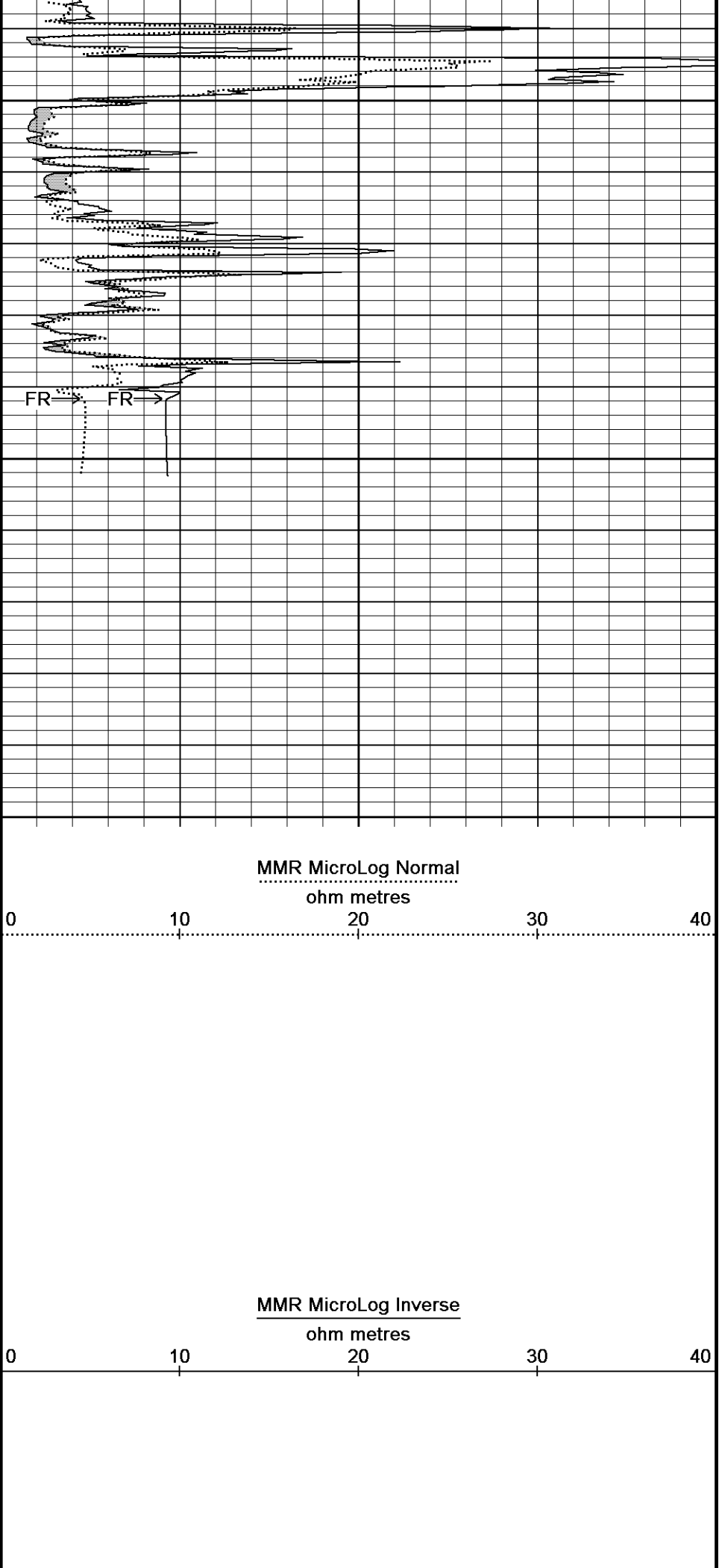








112°  
5150  
111°  
5200  
0  
0  
TD  
5250  
Depth  
in  
Feet  
Timing Marks  
every 60.0 sec  
Gamma Ray  
API  
0 75 150  
150 225 300  
Spontaneous Potential  
millivolts  
- -> | 20 | <- +  
HVI  
every  
10 cu ft  
Bit Size  
inches  
6 11 16  
Annular  
Integral  
every  
10 cu ft  
MML Caliper  
inches  
6 11 16



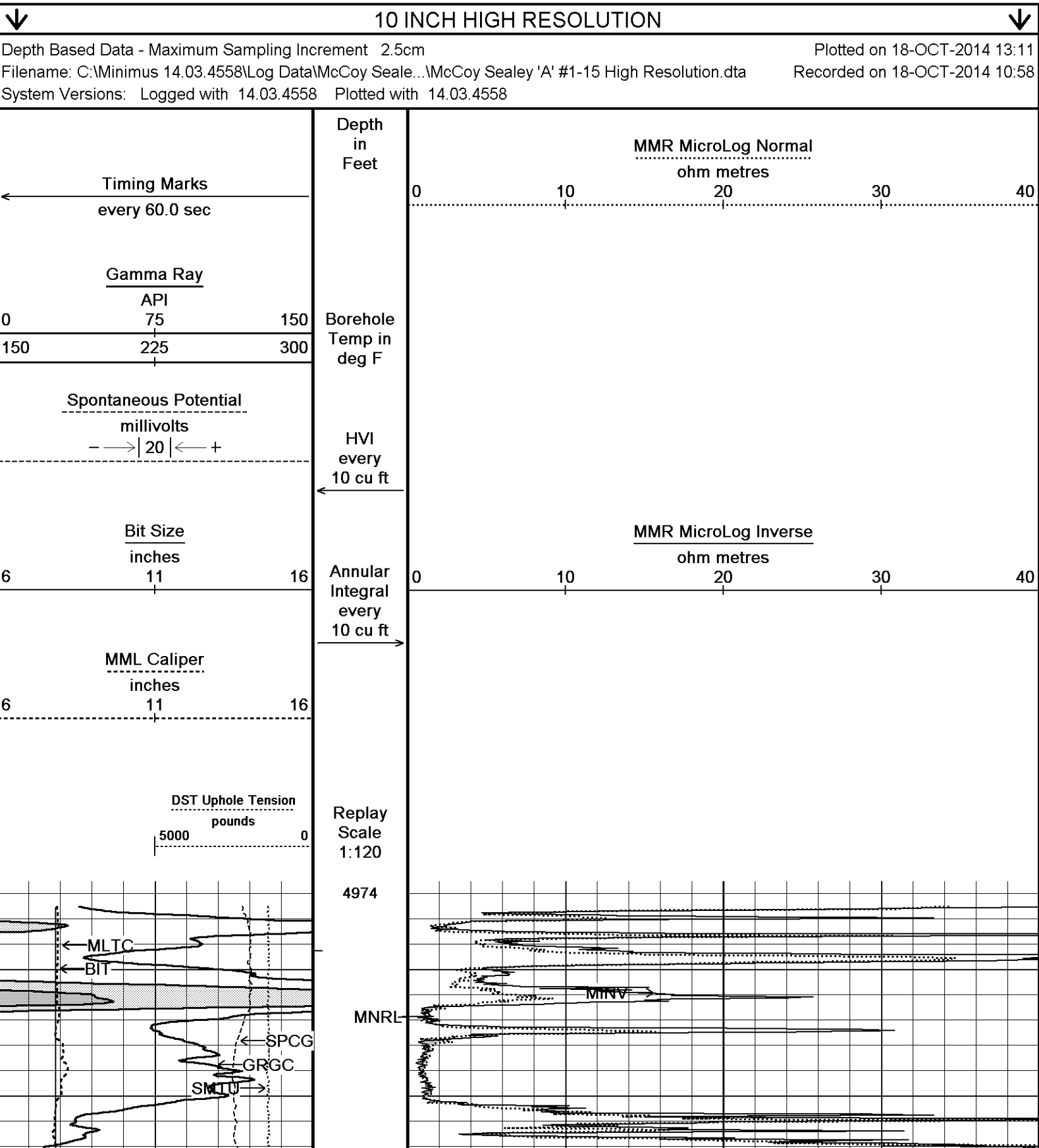
DST Uphole Tension  
pounds

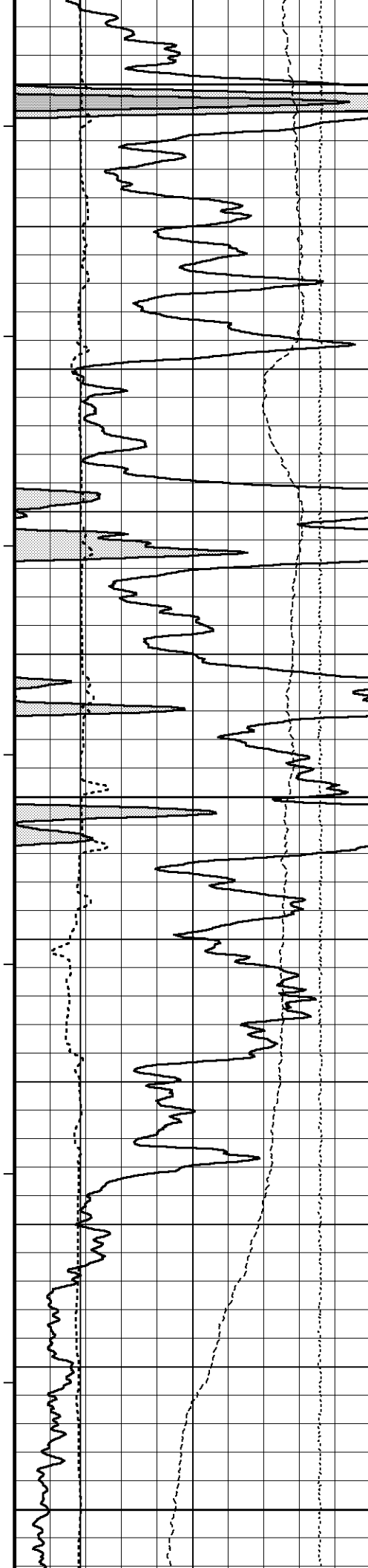
50000

Replay  
Scale  
1:240

Depth Based Data - Maximum Sampling Increment 10.0cm  
Filename: C:\Minimus 14.03.4558\Log Data\McCoy Sealey 'A' #1-15\McCoy Sealey 'A' #1-15 Repeat.dta  
System Versions: Logged with 14.03.4558 Processed with 14.03.4558 Plotted with 14.03.4558

↑REPEAT SECTION↑





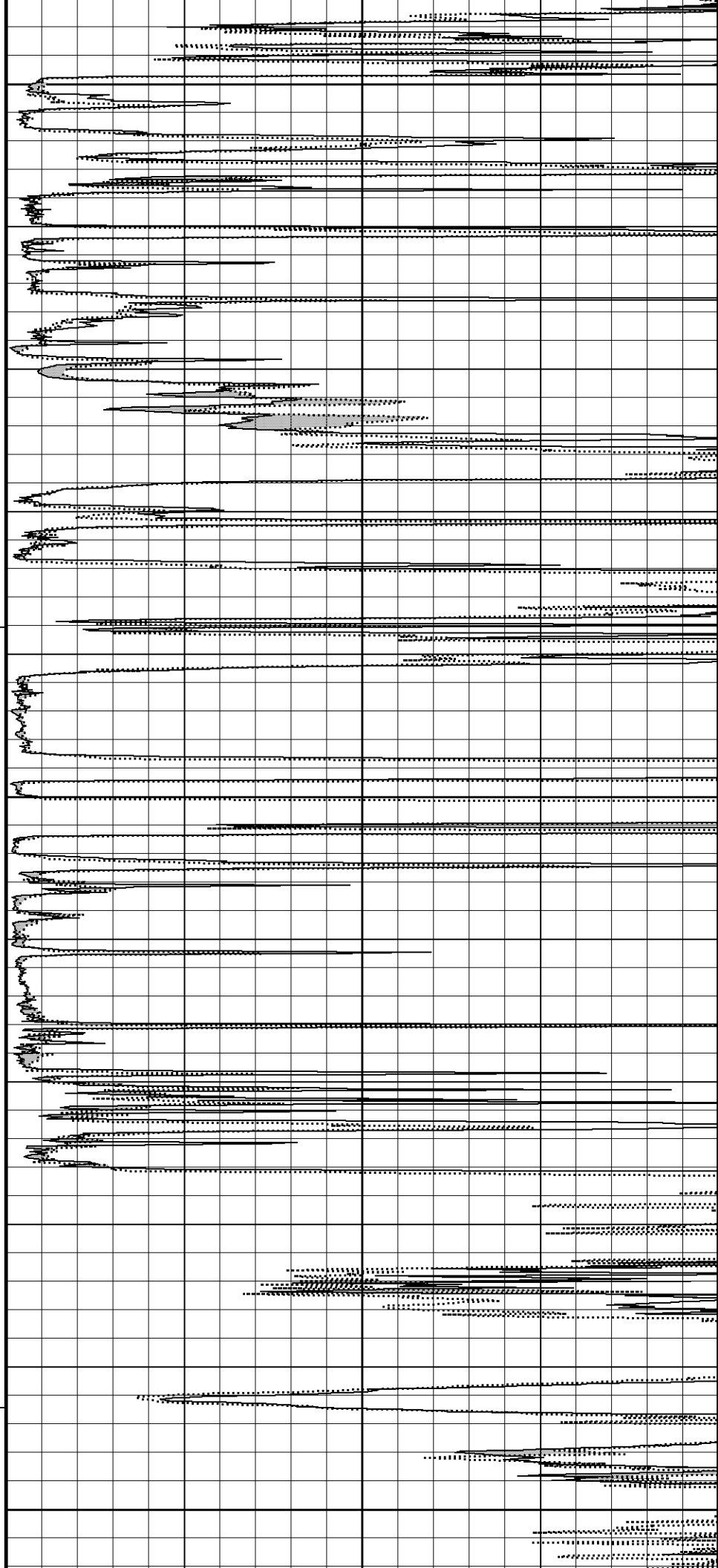
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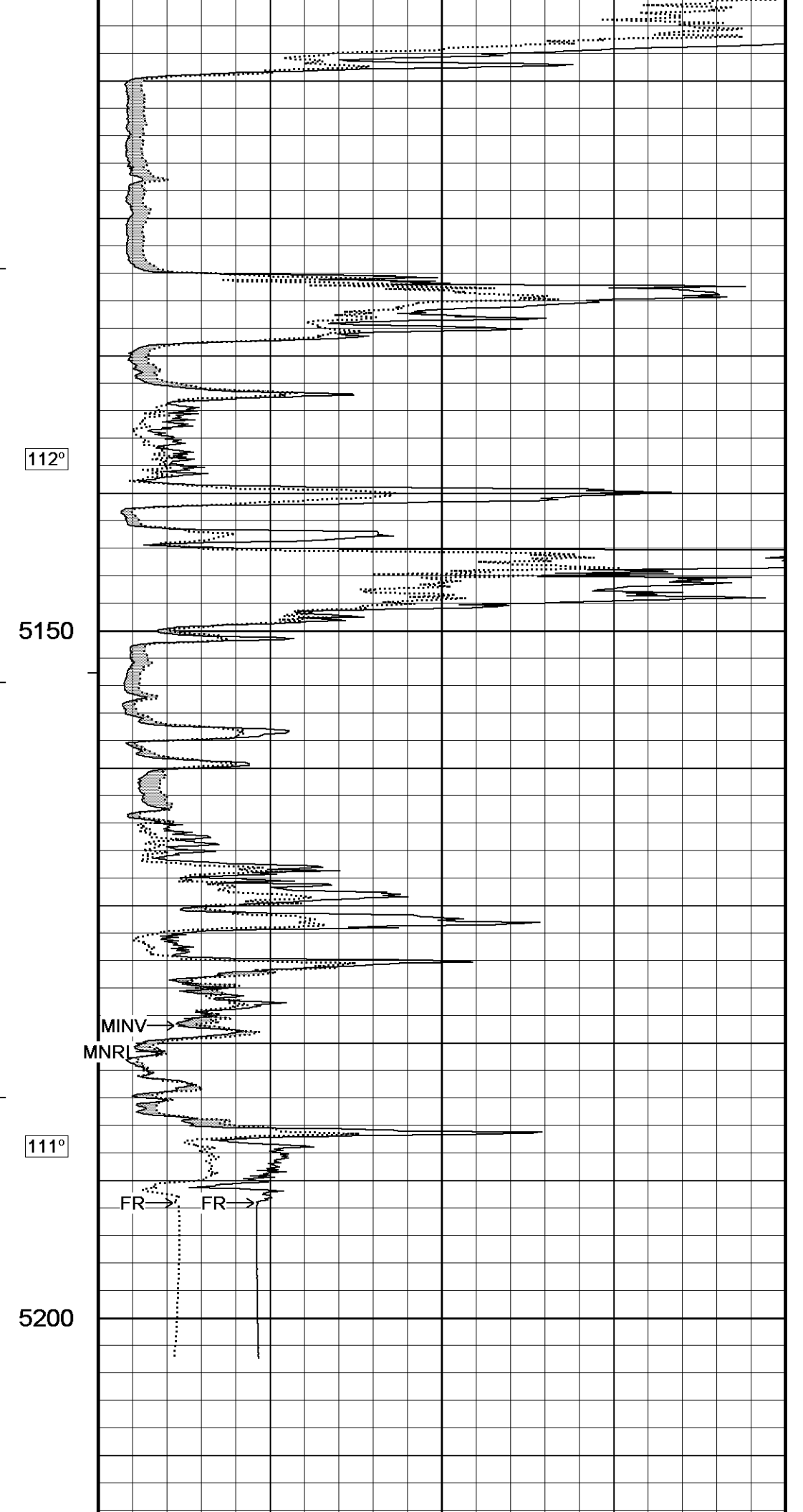
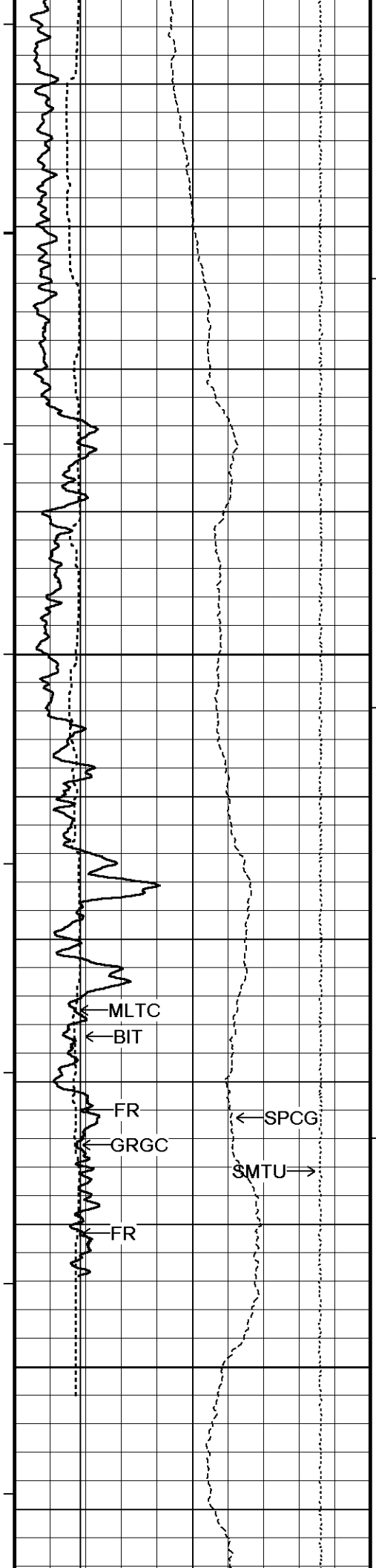
109°

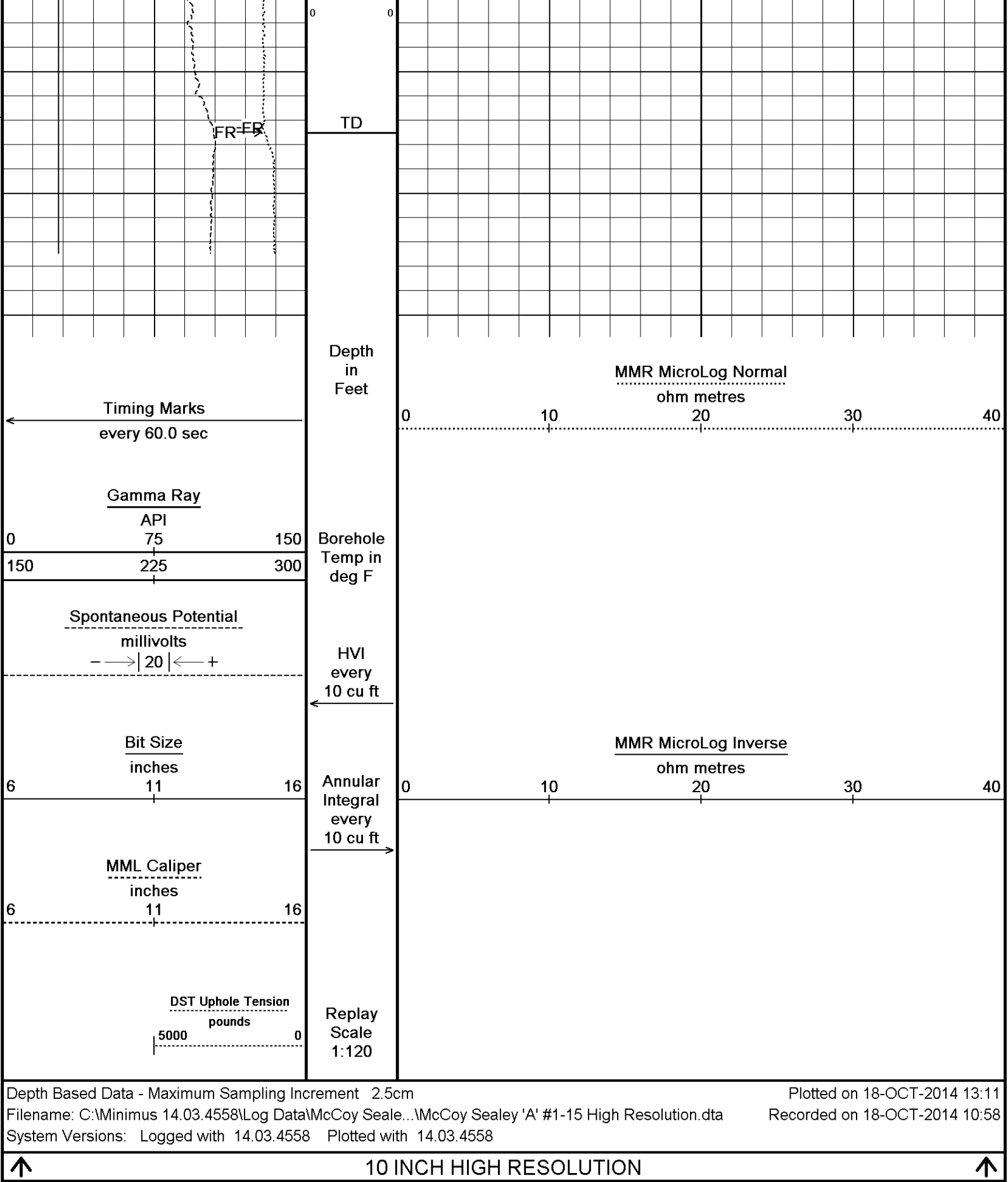
5050

110°

5100







|                             |          |            |
|-----------------------------|----------|------------|
| Mud Resistivity             | 0.310    | ohm-metres |
| Mud Resistivity Temperature | 75.000   | degrees F  |
| Water Level                 | 0.000    | feet       |
| Borehole Fluid Processing   | Wet Hole |            |

|                                                         |                 |        |
|---------------------------------------------------------|-----------------|--------|
| Hole/Annular Volume and Differential Caliper Parameters |                 |        |
| HVOL Method                                             | Single Caliper  |        |
| HVOL Caliper 1                                          | Density Caliper |        |
| HVOL Caliper 2                                          | N/A             |        |
| Annular Volume Diameter                                 | 5.500           | inches |
| Caliper for Differential Caliper                        | None            |        |

|                     |                       |  |
|---------------------|-----------------------|--|
| Rwa Parameters      |                       |  |
| Porosity used       | Crossplot Porosity    |  |
| Resistivity used    | Array Ind. One Res Rt |  |
| RWA Constant A      | 0.610                 |  |
| RWA Constant M      | 2.150                 |  |
| SW/APOR Tool Source | 0.000                 |  |

#### Gamma Calibration MCG-B 39

Field Calibration on 16-OCT-2014 00:23

|                    | Measured | Calibrated (API) |
|--------------------|----------|------------------|
| Background         | 68       | 45               |
| Calibrator (Gross) | 1152     | 770              |
| Calibrator (Net)   | 1084     | 725              |

#### Gamma Calibration Tolerances MCG-B 39

|       |       |                                                                                   |            |
|-------|-------|-----------------------------------------------------------------------------------|------------|
| Ratio | 1.495 |  | Counts/API |
|-------|-------|-----------------------------------------------------------------------------------|------------|

#### Gamma Constants MCG-B 39

Last Edited on 18-OCT-2014,09:18

|                                 |                 |       |
|---------------------------------|-----------------|-------|
| Gamma Calibrator Number         | GRC038          |       |
| GRC-M Calibrator Jig in Use?    | NO              |       |
| Inactive Background Jig in Use? | NO              |       |
| Mud Density                     | 1.13            | gm/cc |
| Caliper Source for Processing   | Density Caliper |       |
| Tool Position                   | Eccentred       |       |
| Concentration of KCl            |                 | kppm  |
| K Mud Type                      | Chloride        |       |
| K Mud Concentration             | 0.00            | %     |

#### High Resolution Temperature Calibration MCG-B 39

Field Calibration on 02-MAY-2014,08:37

|       | Measured | Calibrated(Deg F) |
|-------|----------|-------------------|
| Lower | 10.00    | 10.00             |
| Upper | 100.00   | 100.00            |

#### High Resolution Temperature Constants MCG-B 39

Last Edited on 28-AUG-2014,01:02

|                   |    |
|-------------------|----|
| Pre-filter Length | 11 |
|-------------------|----|

#### Caliper Calibration MML-A 3

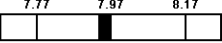
Base Calibration on 16-SEP-2014 15:24

Field Calibration on 16-OCT-2014 00:07

| Base Calibration |          |                      |
|------------------|----------|----------------------|
| Reading No       | Measured | Calibrator Size (in) |
| 1                | 15130    | 5.98                 |
| 2                | 18353    | 7.97                 |
| 3                | 21569    | 9.86                 |
| 4                | 25528    | 11.92                |
| 5                | 0        | 0.00                 |
| 6                | N/A      | N/A                  |

| Field Calibration |                       |                     |
|-------------------|-----------------------|---------------------|
|                   | Measured Caliper (in) | Actual Caliper (in) |
|                   | 7.93                  | 7.97                |

#### Caliper Calibration Tolerances MML-A 3

|                      |      |                                                                                     |    |
|----------------------|------|-------------------------------------------------------------------------------------|----|
| Short Arm Field Cal. | 7.93 |  | in |
|----------------------|------|-------------------------------------------------------------------------------------|----|

#### Micro Normal and Micro Inverse Calibration MML-A 3

Base Calibration on 16-SEP-2014 15:32

Field Check on 16-OCT-2014 00:12

### Base Calibration

| Channel       | Measured   |            | Calibrated (ohm-m) |            |
|---------------|------------|------------|--------------------|------------|
|               | Resistor 1 | Resistor 2 | Resistor 1         | Resistor 2 |
| Micro Normal  | 10.0       | 50.0       | 5.1                | 25.6       |
| Micro Inverse | 10.0       | 49.9       | 3.4                | 16.9       |

| Channel       | Base Check (ohm-m) | Field Check (ohm-m) |
|---------------|--------------------|---------------------|
|               |                    |                     |
| Micro Normal  | 77.3               | 77.3                |
| Micro Inverse | 51.2               | 51.2                |

### Micro Normal & Micro Inverse Calibration Tolerance MML-A 3

|                           |      |                                                         |       |                      |      |                                                        |     |
|---------------------------|------|---------------------------------------------------------|-------|----------------------|------|--------------------------------------------------------|-----|
| Micro Normal Res. 1       | 10.0 | <div><div>-5%</div><div>10.0</div><div>+5%</div></div>  | ohm   | Micro Normal Res. 2  | 50.0 | <div><div>-5%</div><div>50.0</div><div>+5%</div></div> | ohm |
| Micro Inverse Res. 1      | 10.0 | <div><div>-5%</div><div>10.0</div><div>+5%</div></div>  | ohm   | Micro Inverse Res. 2 | 49.9 | <div><div>-5%</div><div>50.0</div><div>+5%</div></div> | ohm |
| Micro Normal Base Check   | 77.3 | <div><div>-2%</div><div>77.22</div><div>+2%</div></div> | ohm-m |                      |      |                                                        |     |
| Micro Inverse Base Check  | 51.2 | <div><div>-2%</div><div>51.16</div><div>+2%</div></div> | ohm-m |                      |      |                                                        |     |
| Micro Normal Field Check  | 77.3 | <div><div>-2%</div><div>77.3</div><div>+2%</div></div>  | ohm-m |                      |      |                                                        |     |
| Micro Inverse Field Check | 51.2 | <div><div>-2%</div><div>51.2</div><div>+2%</div></div>  | ohm-m |                      |      |                                                        |     |

### Micro Normal and Micro Inverse Constants MML-A 3

Last Edited on 16-OCT-2014,02:05

|                        |                                             |        |  |
|------------------------|---------------------------------------------|--------|--|
| Pad Type               | 8-12 in Soft Rubber Inflatable 006-9011-159 |        |  |
| Micro Normal K Factor  | 0.5110                                      |        |  |
| Micro Inverse K Factor | 0.3380                                      |        |  |
| Standoff Offset        | N/A                                         | inches |  |

### Caliper Calibration MPD-C.A 216

Base Calibration on 02-OCT-2014 09:56  
Field Calibration on 16-OCT-2014 00:00

| Base Calibration |          | Calibrator Size (in) |
|------------------|----------|----------------------|
| Reading No       | Measured |                      |
| 1                | 18336    | 3.99                 |
| 2                | 28304    | 5.98                 |
| 3                | 38368    | 7.97                 |
| 4                | 48128    | 9.86                 |
| 5                | 59280    | 11.92                |
| 6                | N/A      | N/A                  |

| Field Calibration |                       | Actual Caliper (in) |
|-------------------|-----------------------|---------------------|
|                   | Measured Caliper (in) |                     |
|                   | 7.94                  | 7.97                |

### Caliper Calibration Tolerances MPD-C.A 216

|                      |      |                                                          |    |
|----------------------|------|----------------------------------------------------------|----|
| Short Arm Field Cal. | 7.94 | <div><div>7.77</div><div>7.97</div><div>8.17</div></div> | in |
|----------------------|------|----------------------------------------------------------|----|

## DOWNHOLE EQUIPMENT

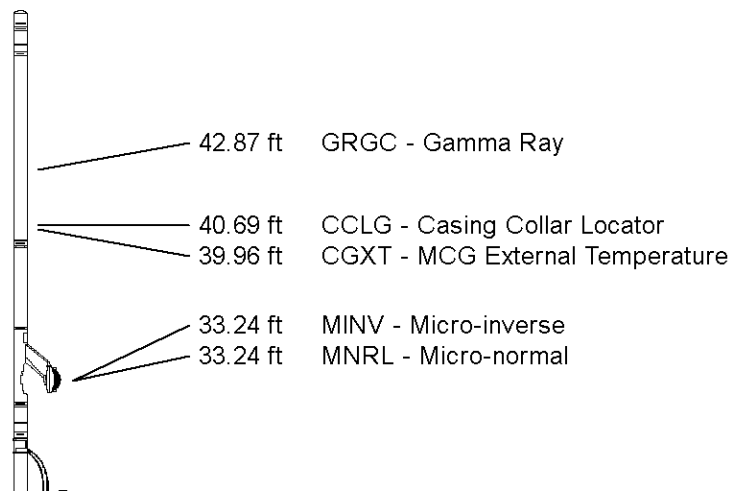
C:\Minimus 14.03.4558\Log Data\McCoy Sealey 'A' #1-15\McCoy Sealey 'A' #1-15 Main.dta

3/8" Triple Cone Cable Head (MCB C A)  
MCB-C.A 234 LG: 1.58 ft WT: 15.4 lb OD: 2.240 in

Compact Comms Gamma  
MCG-B 39 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Micro-log  
MML-A 3 LG: 7.97 ft WT: 81.6 lb OD: 2.240 in

Compact Neutron  
MDN-A.B 66 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

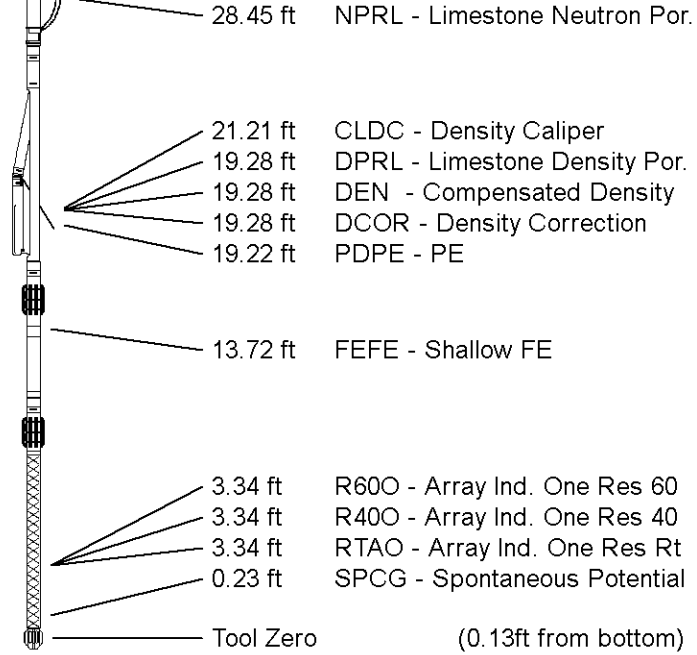


Compact Density/Caliper  
MPD-C.A 216 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Focussed Electric  
MFE-B.J 353 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Induction  
MAI-A.A 111 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 49.73 ft Weight: 399.0 lb



|                 |                             |
|-----------------|-----------------------------|
| COMPANY         | MCCOY PETROLEUM CORPORATION |
| WELL            | SEALEY "A" #1-15            |
| FIELD           | ALFORD                      |
| PROVINCE/COUNTY | SCOTT                       |
| COUNTRY/STATE   | U.S.A. / KANSAS             |

|                         |         |      |               |         |      |
|-------------------------|---------|------|---------------|---------|------|
| Elevation Kelly Bushing | 2273.00 | feet | First Reading | 5191.76 | feet |
| Elevation Drill Floor   | 2271.00 | feet | Depth Driller | 5225.00 | feet |
| Elevation Ground Level  | 2264.00 | feet | Depth Logger  | 5225.00 | feet |



MICRORESISTIVITY LOG

**Weatherford®**