



**ThruBit**  
A Schlumberger Company

**ARRAY INDUCTION  
GAMMA RAY  
MEMORY LOG**

|                        |                                |                |                        |
|------------------------|--------------------------------|----------------|------------------------|
| Company                | SANDRIDGE ENERGY, INC.         | Company        | SANDRIDGE ENERGY, INC. |
| Well                   | JONES 3506 1-13H               | Well           | JONES 3506 1-13H       |
| Field                  | WAKITA                         | Field          | WAKITA                 |
| County                 | HARPER                         | County         | HARPER                 |
| State                  | KANSAS                         | State          | KANSAS                 |
| Location:              | API #: 15-077-21946-00-00      | Other Services | THRUBIT<br>PORTAL BIT  |
|                        | SURF LOC: 200' FSL + 1320' FEL |                |                        |
|                        | SEC 13 TWP 35S RGE 6W          |                |                        |
| Permanent Datum        | G.L.                           | Elevation      | 1240'                  |
| Log Measured From      | D.F. 15' ABOVE PERM DATUM      | K.B.           | 1255'                  |
| Drilling Measured From | D.F.                           | D.F.           | 1255'                  |
|                        |                                | G.L.           | 1240'                  |

|                              |                   |
|------------------------------|-------------------|
| Date                         | 19 JUL 2013       |
| Run Number                   | ONE               |
| Depth Driller                | 9906'             |
| Depth Logger                 | 9871'             |
| Bottom Logged Interval       | 9860'             |
| Top Log Interval             | 2500'             |
| Casing Driller               | 7" @ 5858'        |
| Casing Logger                | 7" @ 5853'        |
| Bit Size                     | 6.125"            |
| Type Fluid in Hole           | WATER             |
| Density / Viscosity          | 8.4 / 27          |
| pH / Fluid Loss              | 8.5 / 60          |
| Source of Sample             | SENSOR            |
| Rim @ Meas. Temp             | 0.10 OHMS@65 DEGF |
| Rinf @ Meas. Temp            | 0.08 OHMS@65 DEGF |
| Rmc @ Meas. Temp             | 0.12 OHMS@65 DEGF |
| Source of Rinf / Rmc         | CALCULATED        |
| Rim @ BHT                    | 0.05OHMS@142 DEGF |
| Time Circulation Stopped     | 13:15 19 JUL 2013 |
| Time Logger on Bottom        | 14:45 19 JUL 2013 |
| Maximum Recorded Temperature | 142 DEGF          |
| Equipment Number             | T004              |
| Location                     | OKC, OK           |
| Recorded By                  | B. FRANTOM        |
| Witnessed By                 | M. KULCHISKY      |

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

**Comments**

**SERVICE: LEVEL 4, HORIZONTAL MEMORY PUMPDOWN, BIT DEPTH: 9814' LOG TO: 2500'**  
**ALL SCALES AND PRESENTATIONS PER CLIENT REQUEST**  
**LIMESTONE MATRIX, 2.71 G/CC, USED TO MEASURE POROSITIES**  
**TOOL STRING RAN WITH S. DECENTRALIZER, SWIVEL, NO STANDOFFS**  
**TBHV = TOTAL BOREHOLE VOLUME, FT3**  
**ABHV = ANNULAR BOREHOLE VOLUME, FT3, CALCULATED FOR 4.50" CSG**  
**RIGMINDER LITE AND PASON USED TO CREATE LOG DEPTH**  
**LOG DEPTH CORRELATED MWD GAMMA AT CUSTOMERS REQUEST**

**CREW: B. FRANTOM/J. DOTY/J.HIRST**  
**RIG: UNIT #310**

|                    |      |         |                    |         |             |
|--------------------|------|---------|--------------------|---------|-------------|
| Service Ticket No. | 2038 | API No. | 15-077-21946-00-00 | PGM Ver | WARRIOR 7.0 |
|--------------------|------|---------|--------------------|---------|-------------|

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

**EQUIPMENT DATA**

|           |         |         |           |
|-----------|---------|---------|-----------|
| GAMMA RAY | NEUTRON | DENSITY | INDUCTION |
|-----------|---------|---------|-----------|

|            |        |            |        |            |        |            |        |
|------------|--------|------------|--------|------------|--------|------------|--------|
| Run No.    | ONE    | Run No.    | ONE    | Run No.    | ONE    | Run No.    | ONE    |
| Serial No. | PS21T  | Serial No. | PS6N   | Serial No. | PS32D  | Serial No. | PS10R  |
| Model No.  | PS     | Model No.  | PS     | Model No.  | PS     | Model No.  | PS     |
| Diameter   | 2.125" | Diameter   | 2.125" | Diameter   | 2.125" | Diameter   | 2.125" |

LOGGING DATA

General Data

|      |        |       |           |        |                      |
|------|--------|-------|-----------|--------|----------------------|
| Pass | Depths |       | Well Head | Speed  | Logging Run Comments |
| No.  | From   | To    | Pressure  | Ft/Min |                      |
| ONE  | 9860'  | 2500' |           | 30     |                      |

|      |           |         |         |       |         |       |           |            |
|------|-----------|---------|---------|-------|---------|-------|-----------|------------|
|      | GAMMA RAY |         | NEUTRON |       | DENSITY |       | INDUCTION |            |
| Pass | Scale     |         | Scale   |       | Scale   |       | Scale     |            |
| No.  | L         | R       | L       | R     | L       | R     | L         | R          |
| ONE  | 0 API     | 150 API | 30 %    | -10 % | 30 %    | -10 % | 0.2 OHM-M | 2000 OHM-M |

DIRECTIONAL INFORMATION

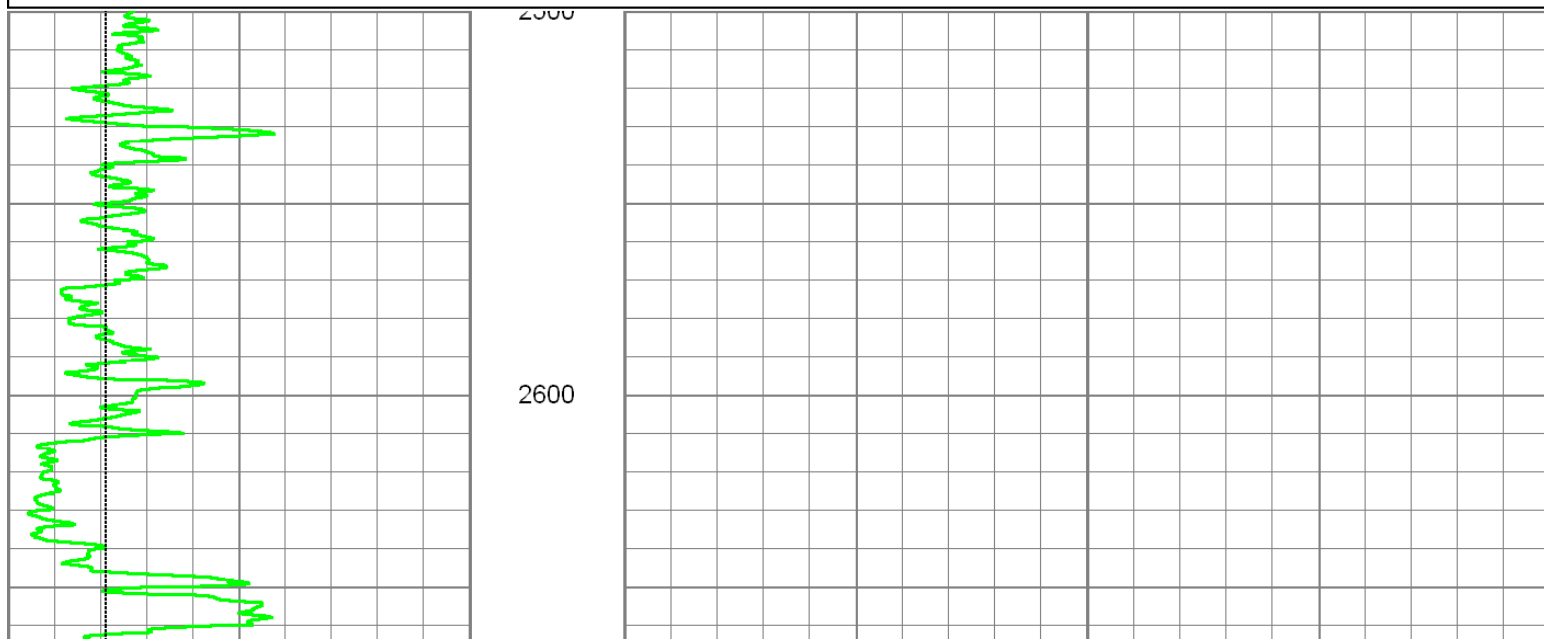
|                   |       |        |       |     |       |
|-------------------|-------|--------|-------|-----|-------|
| Maximum Deviation | 92.74 | deg. @ | 9699' | KOP | 4293' |
|-------------------|-------|--------|-------|-----|-------|

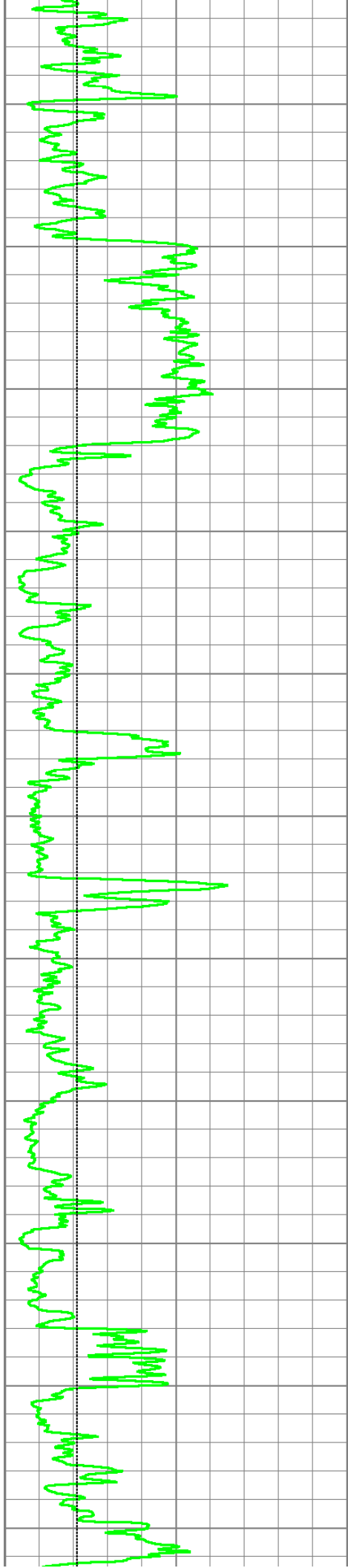


# MAIN PASS

Database File: jones\_mem.db  
 Dataset Pathname: proc1/pass1.4  
 Presentation Format: 6\_2r\_chk  
 Dataset Creation: Fri Jul 19 23:30:45 2013  
 Charted by: Depth in Feet scaled 1:600

|    |             |     |      |                      |     |
|----|-------------|-----|------|----------------------|-----|
| 0  | GR (GAPI)   | 150 | 50   | 20in 2ft Res (Ohm-m) | 500 |
| 4  | DCAL (in)   | 14  | 50   | 90in 2ft Res (Ohm-m) | 500 |
| -5 | ACCY        | 5   | 1000 | DEEP COND (mmho/m) 0 |     |
| 4  | BOREID (in) | 14  | 0    | 20in 2ft Res (Ohm-m) | 50  |
|    | GRTEMP      |     | 0    | 90in 2ft Res (Ohm-m) | 50  |
|    | (degF)      |     |      |                      |     |





2700

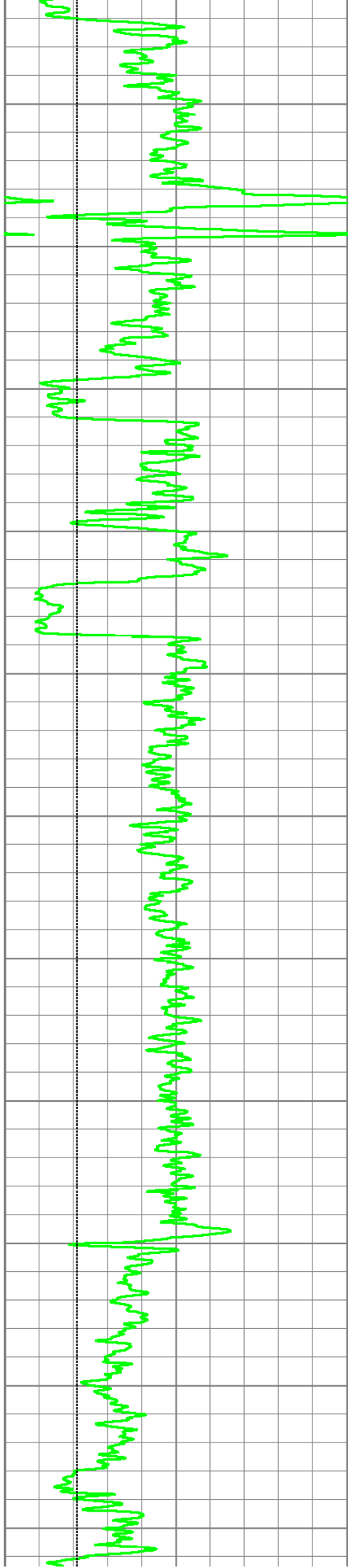
2800

2900

3000

3100

3200



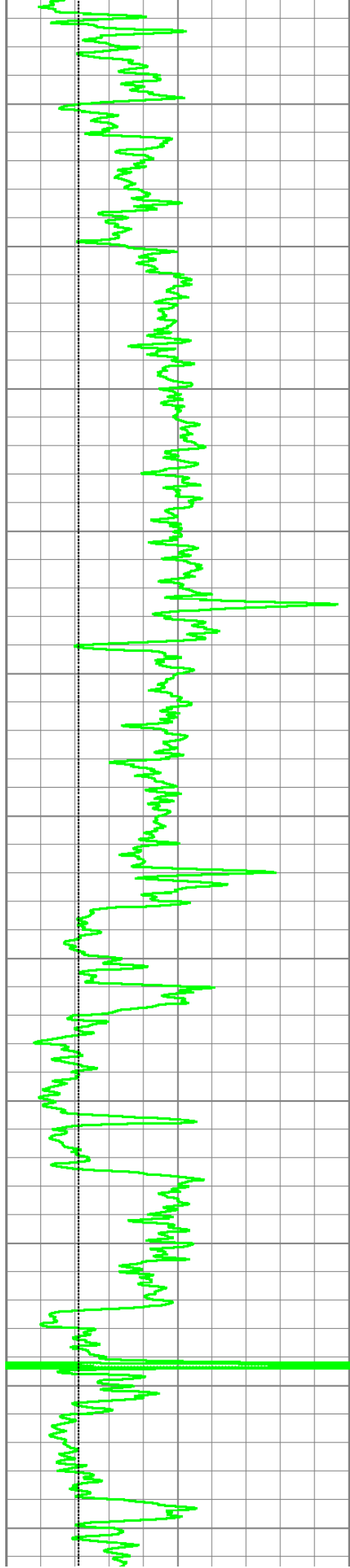
3300

3400

3500

3600

3700



3800

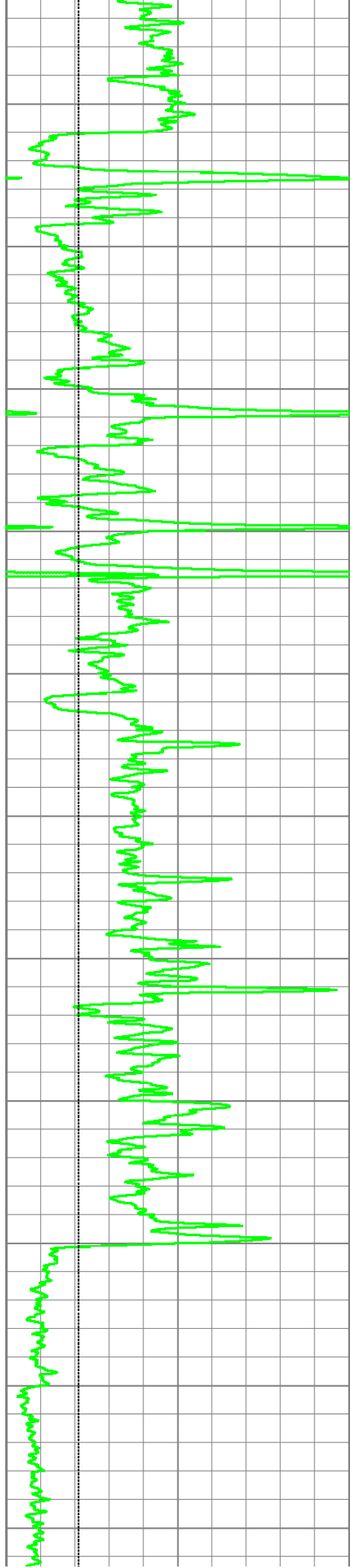
3900

4000

4100

4200

4300



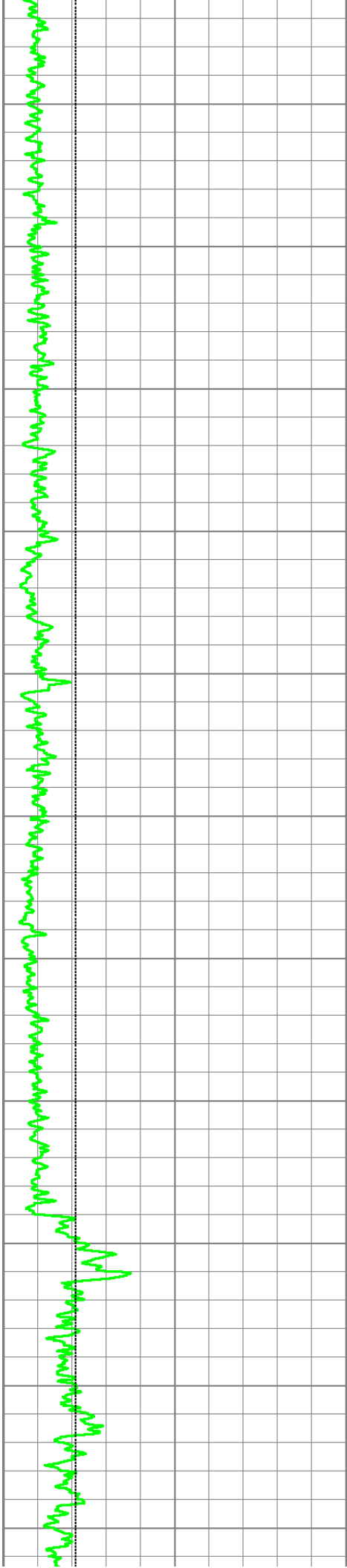
4400

4500

4600

4700

4800



4900

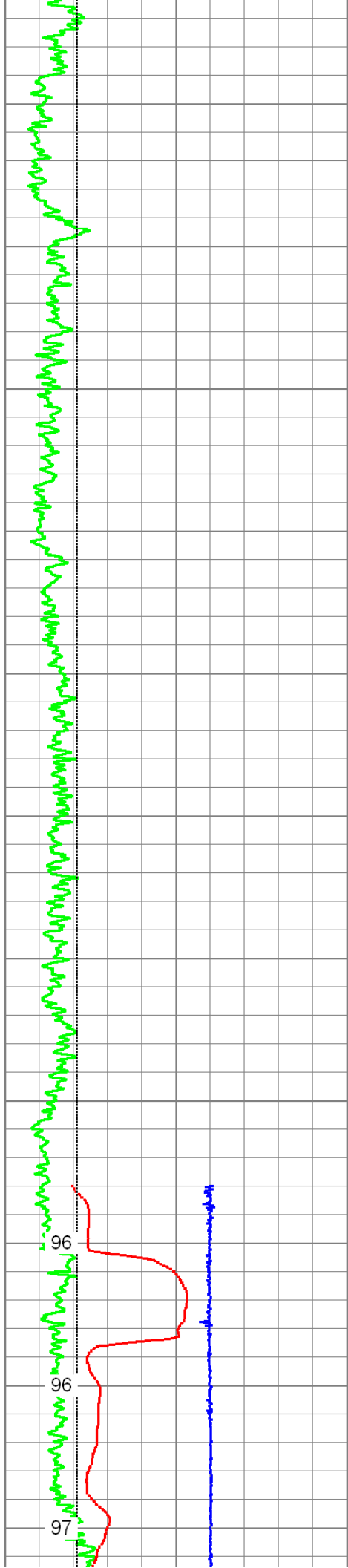
5000

5100

5200

5300

5400



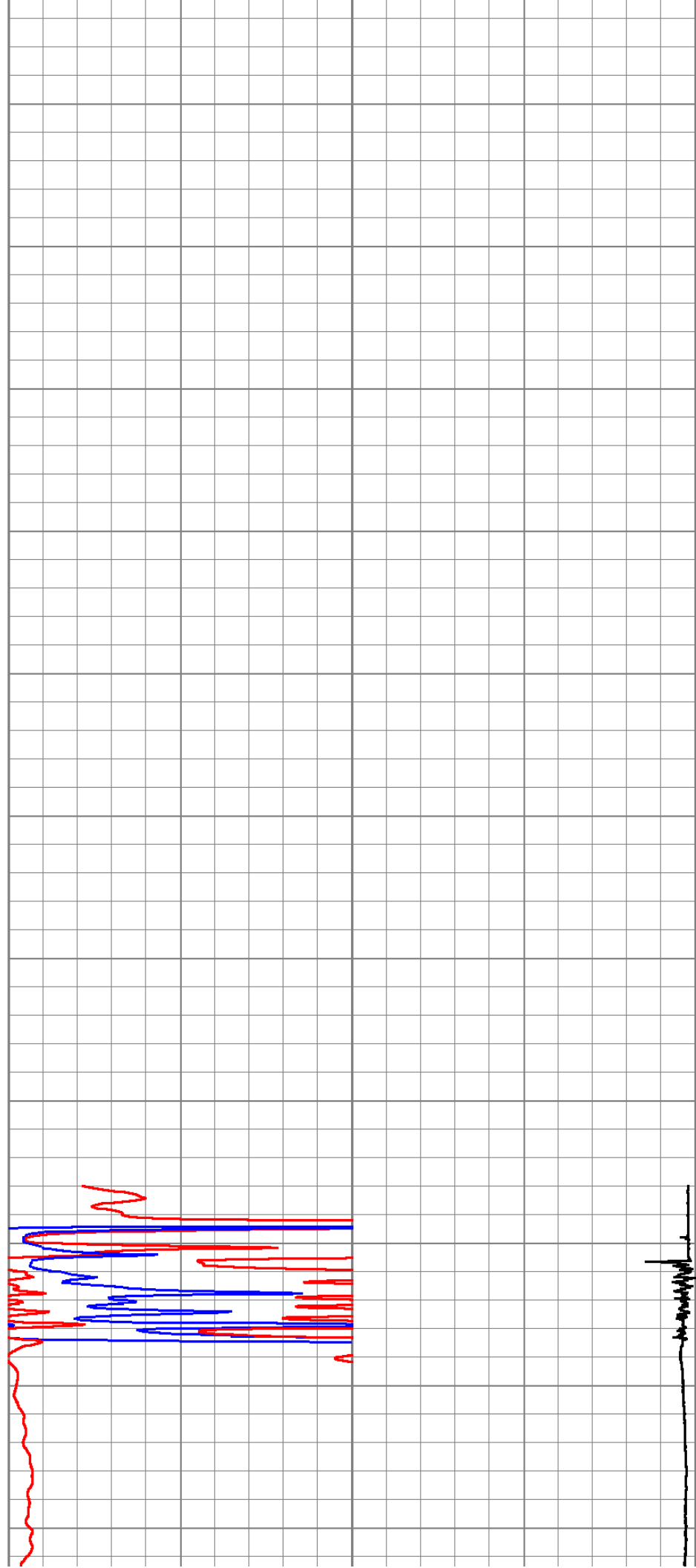
5500

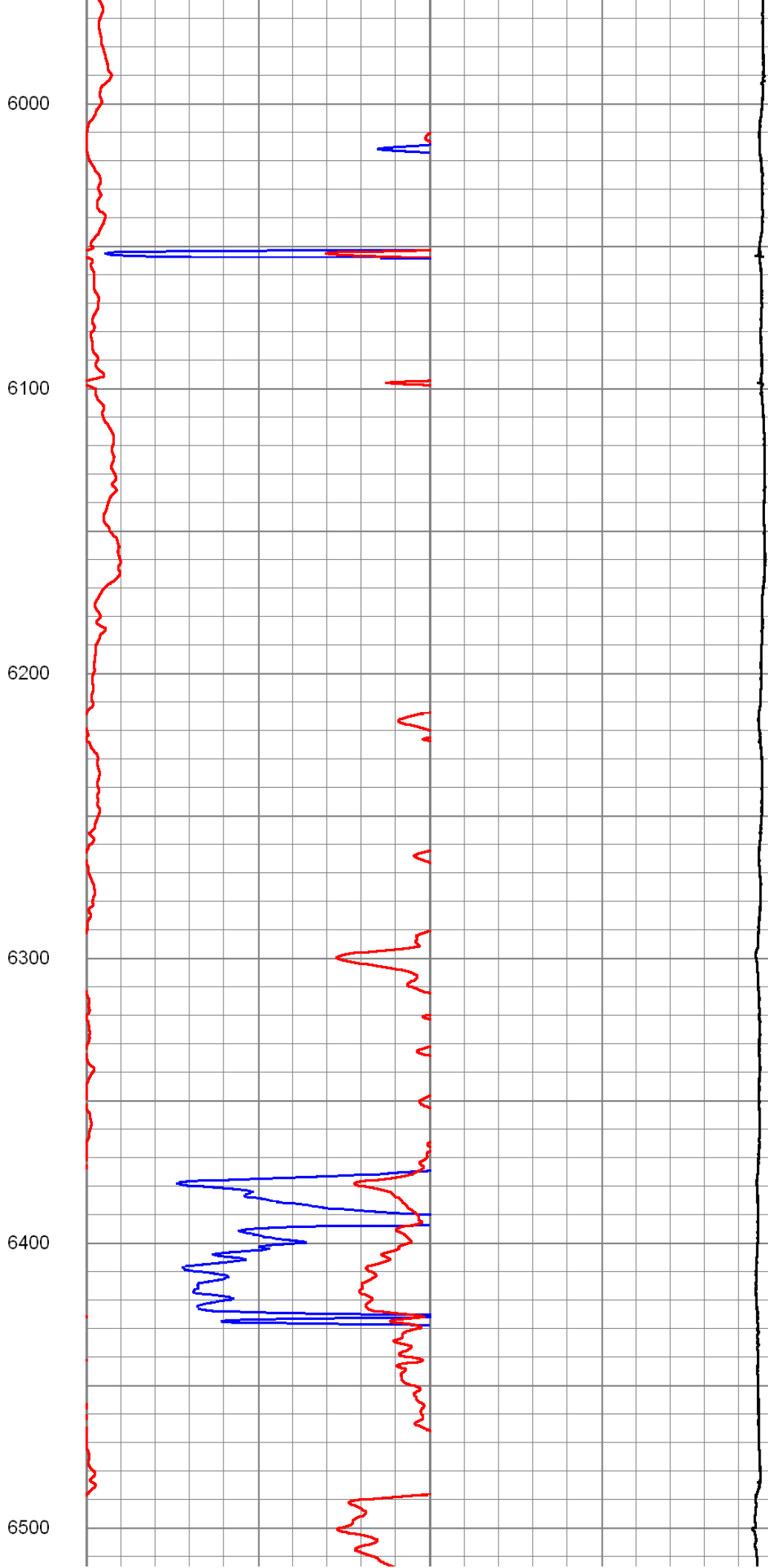
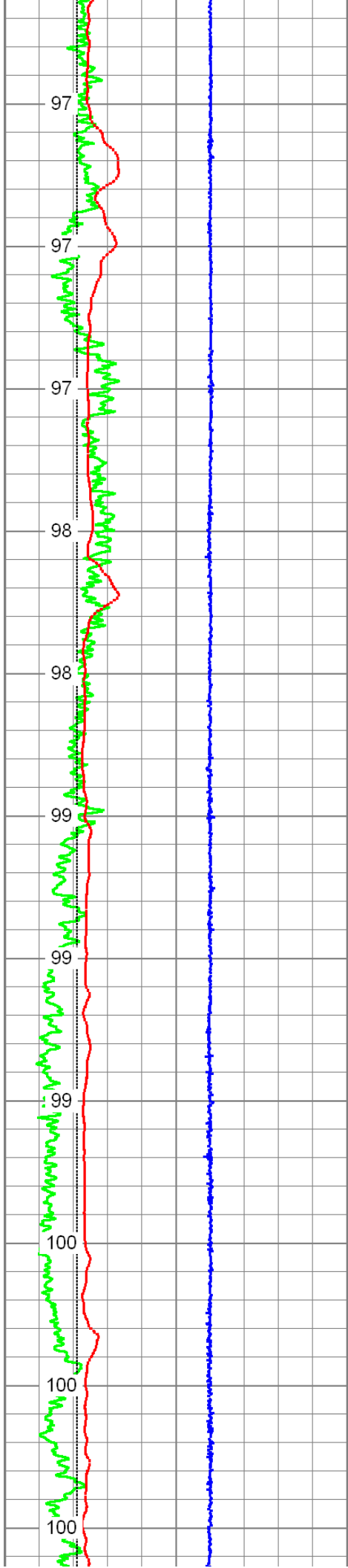
5600

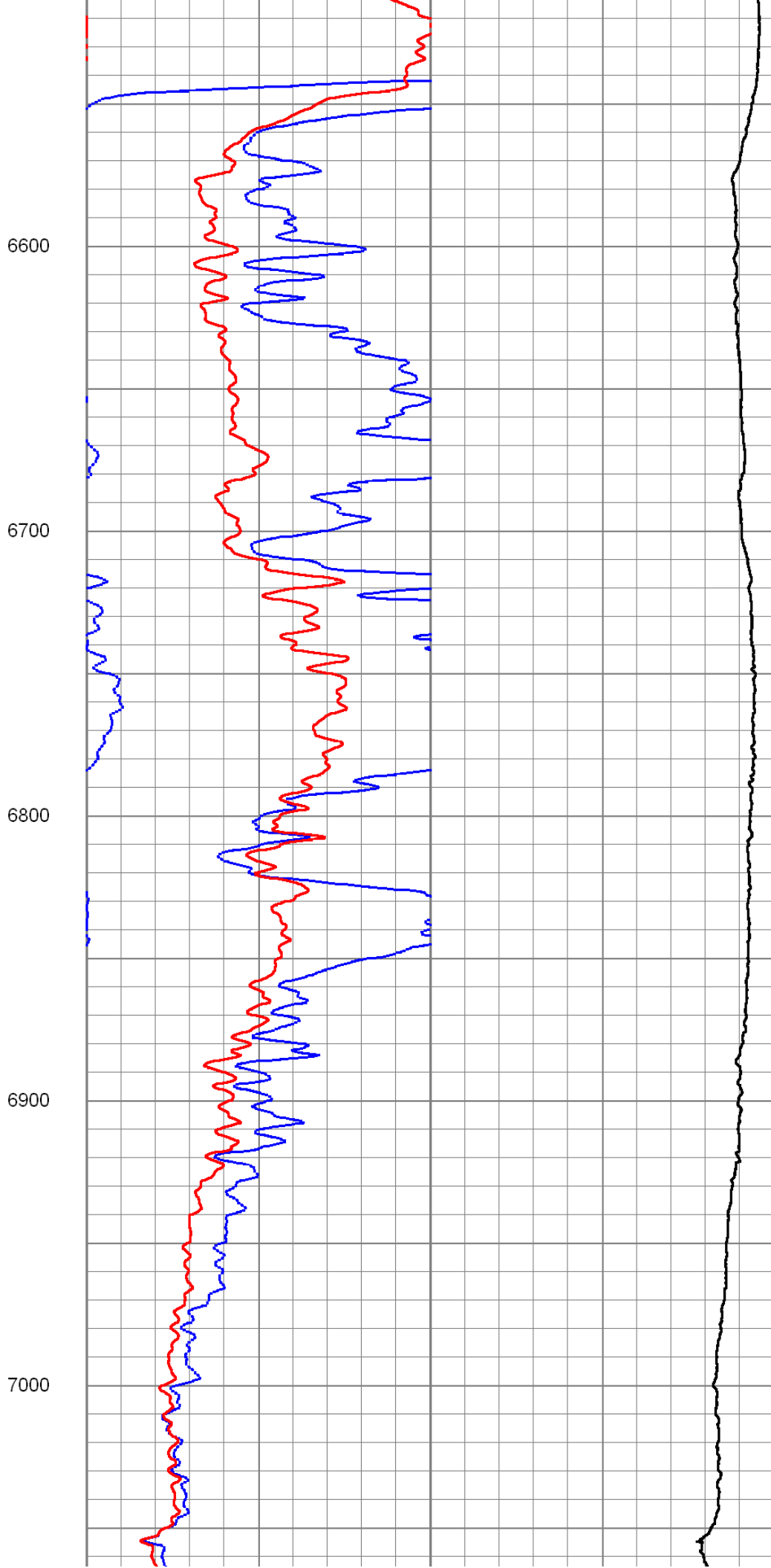
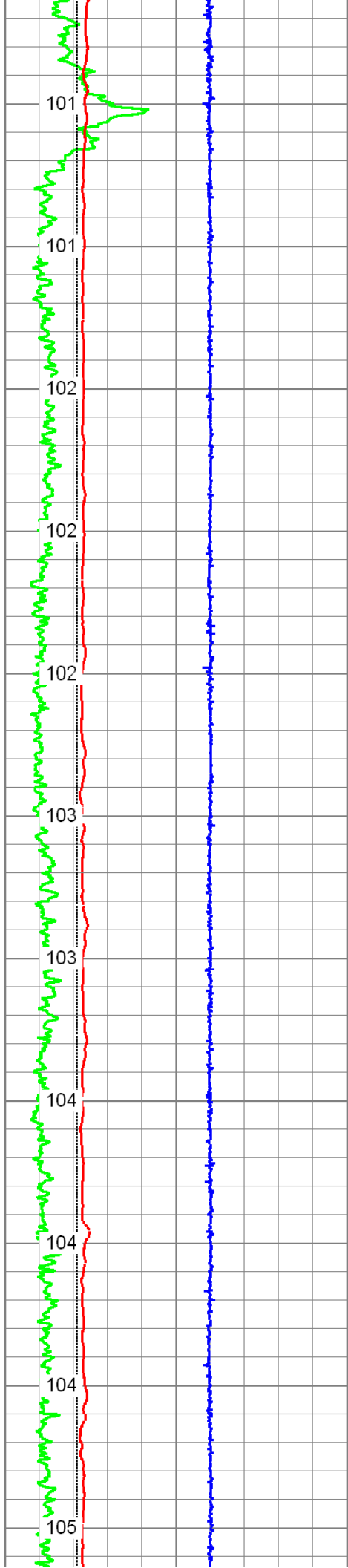
5700

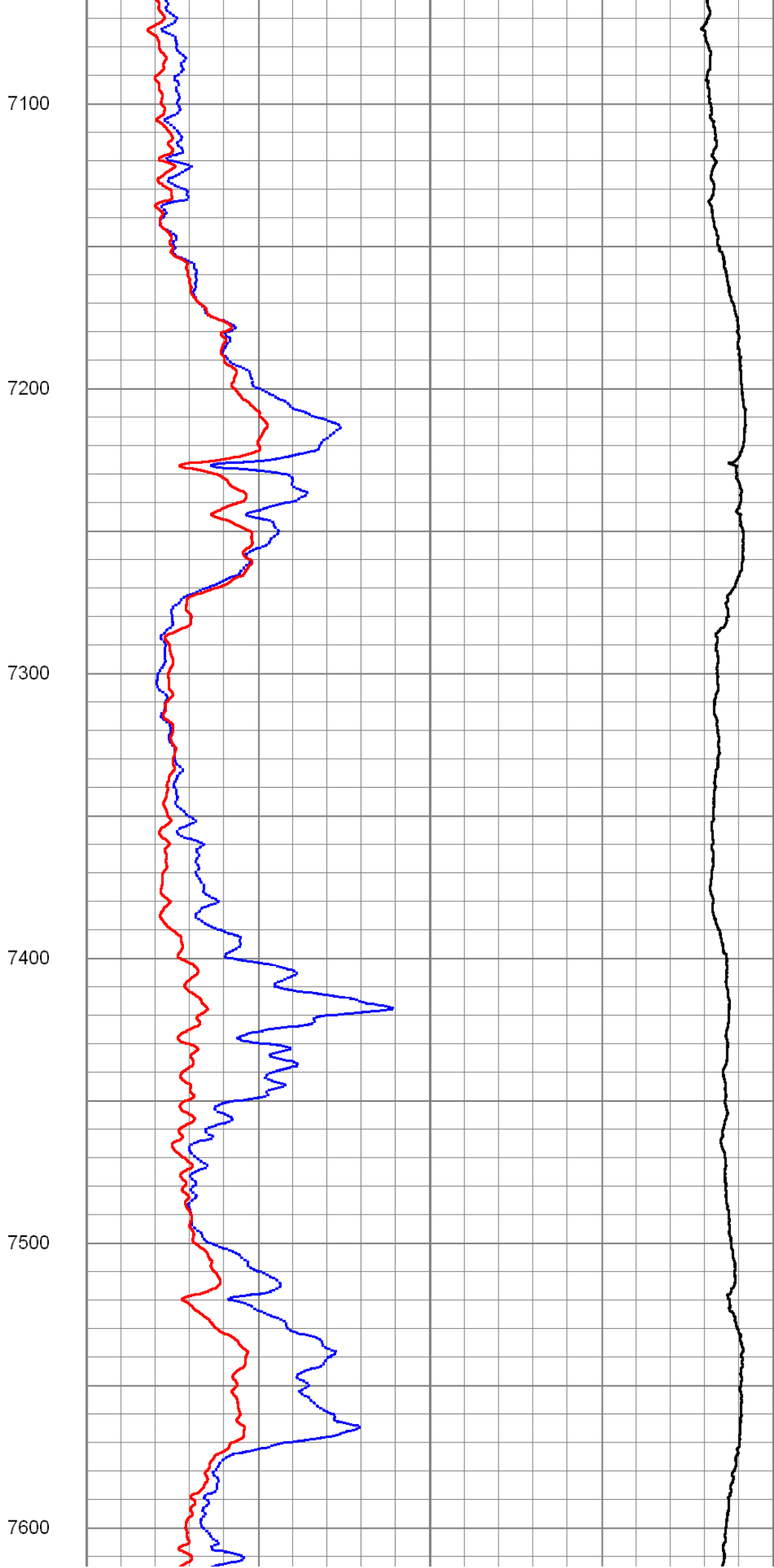
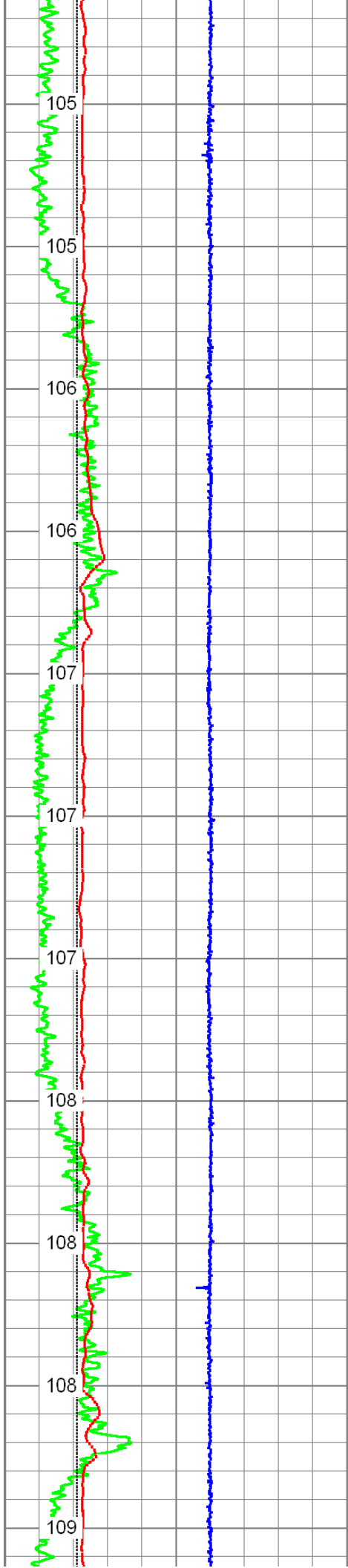
5800

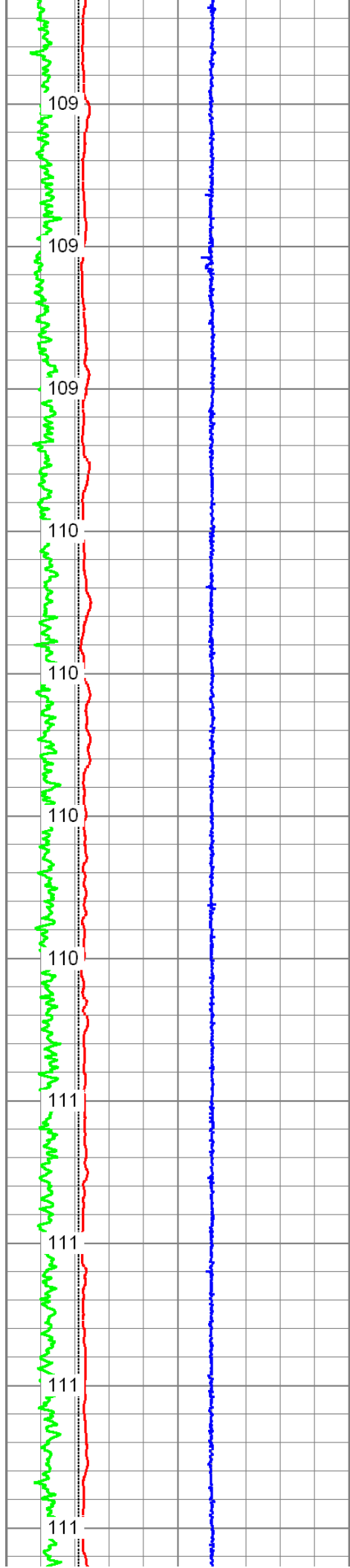
5900











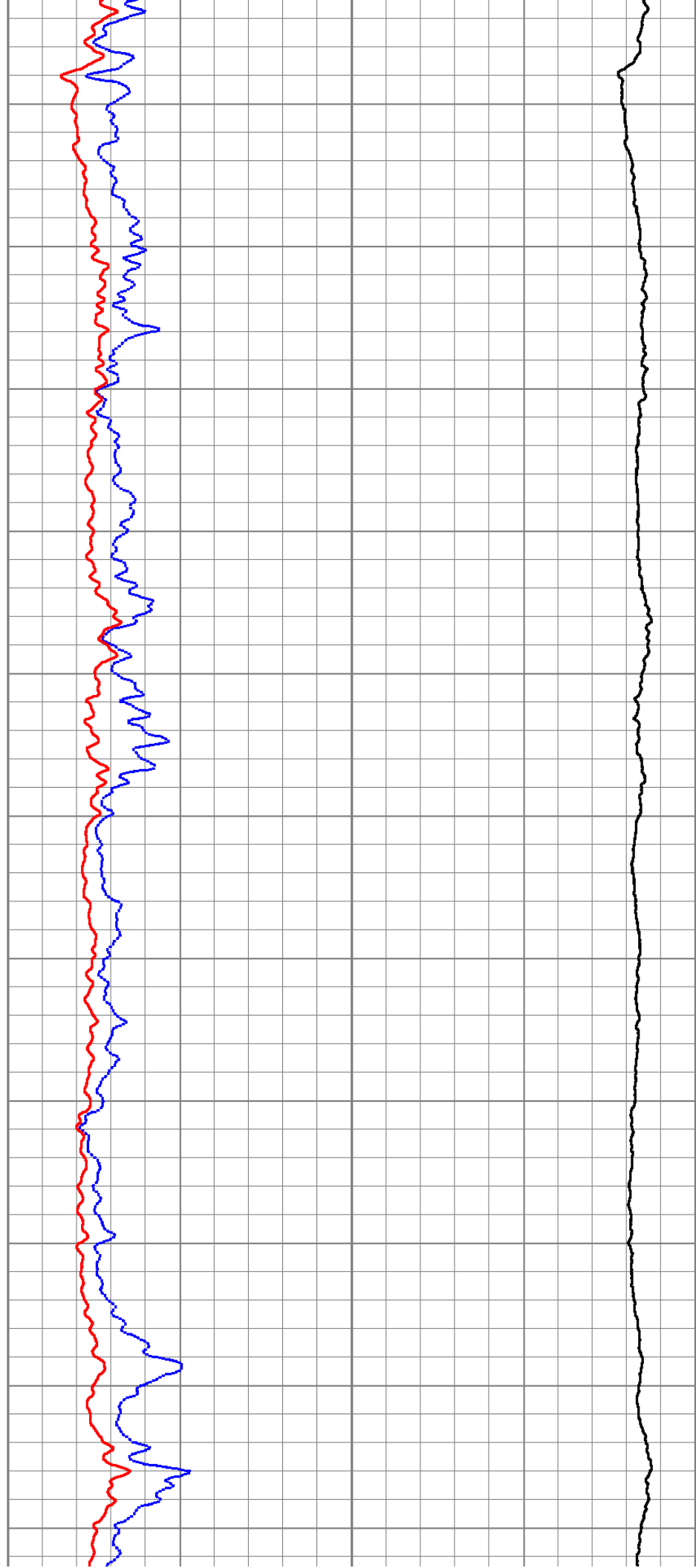
7700

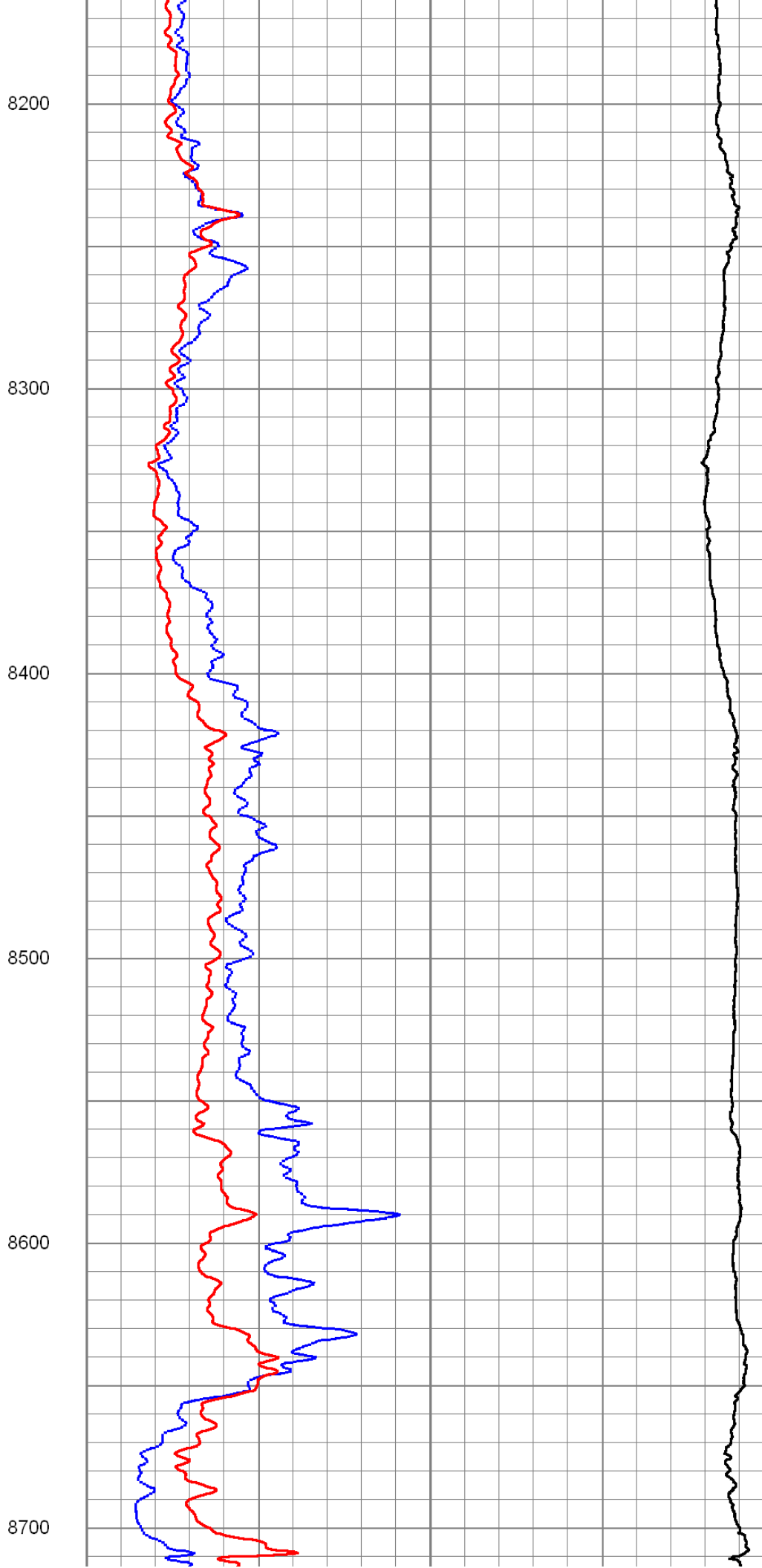
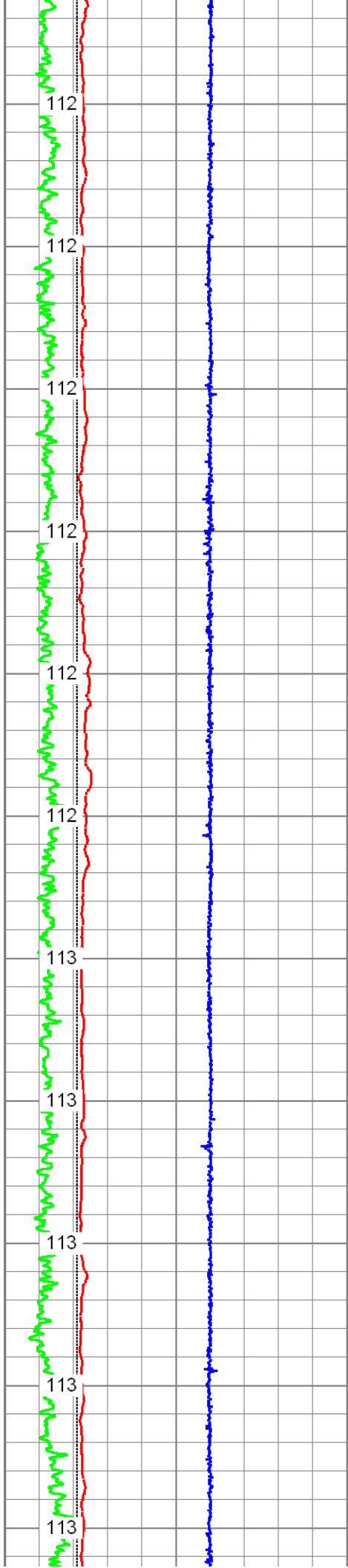
7800

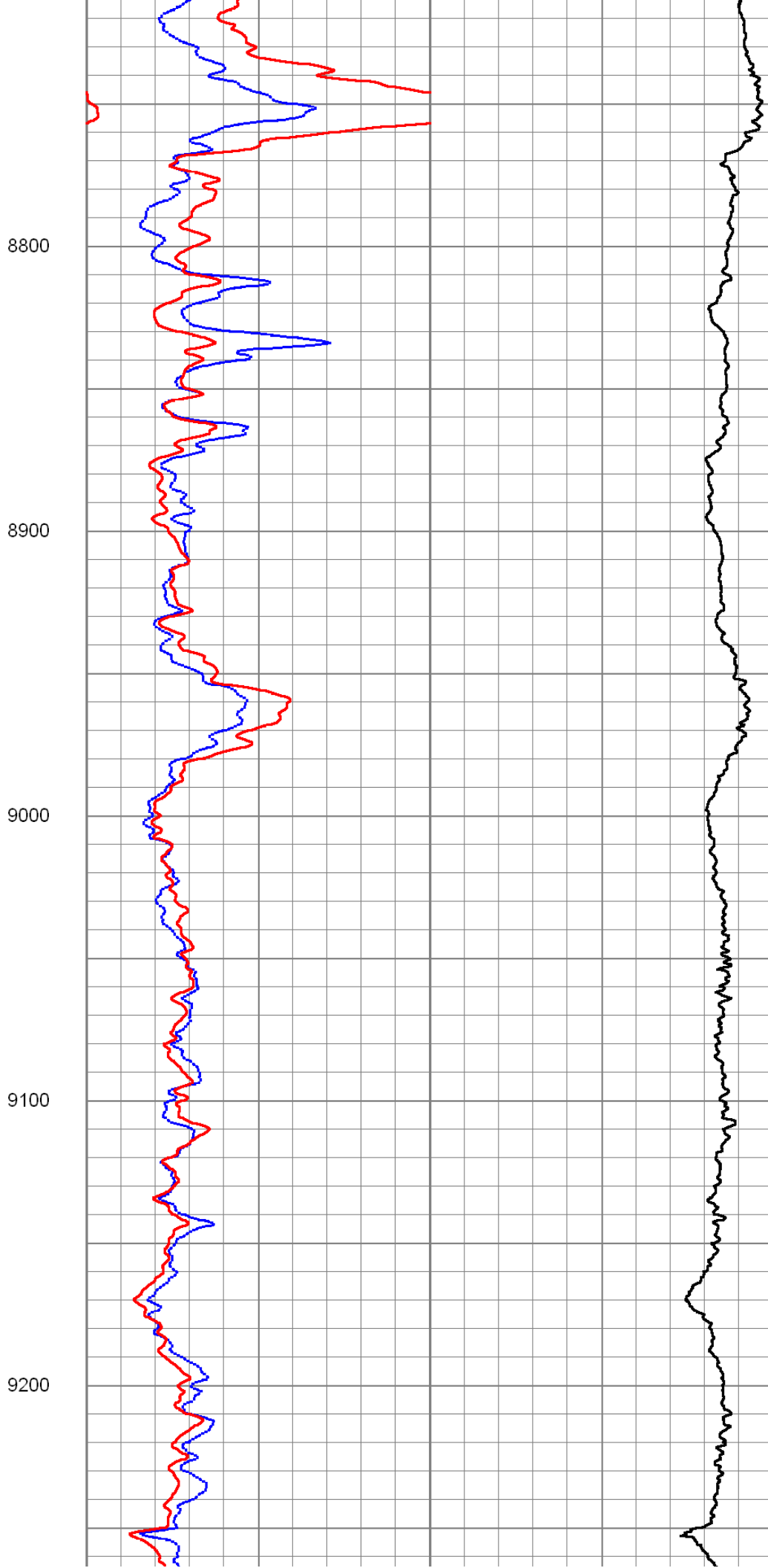
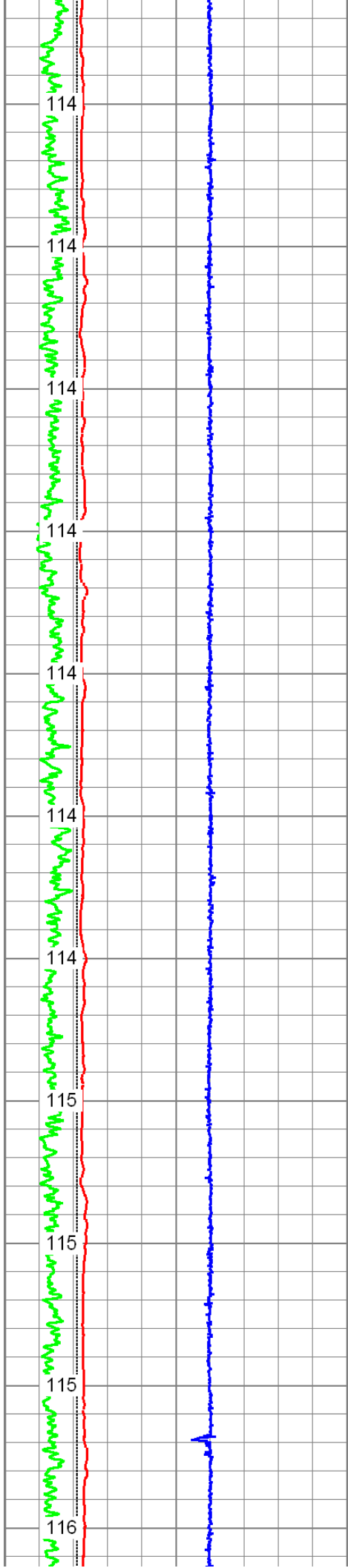
7900

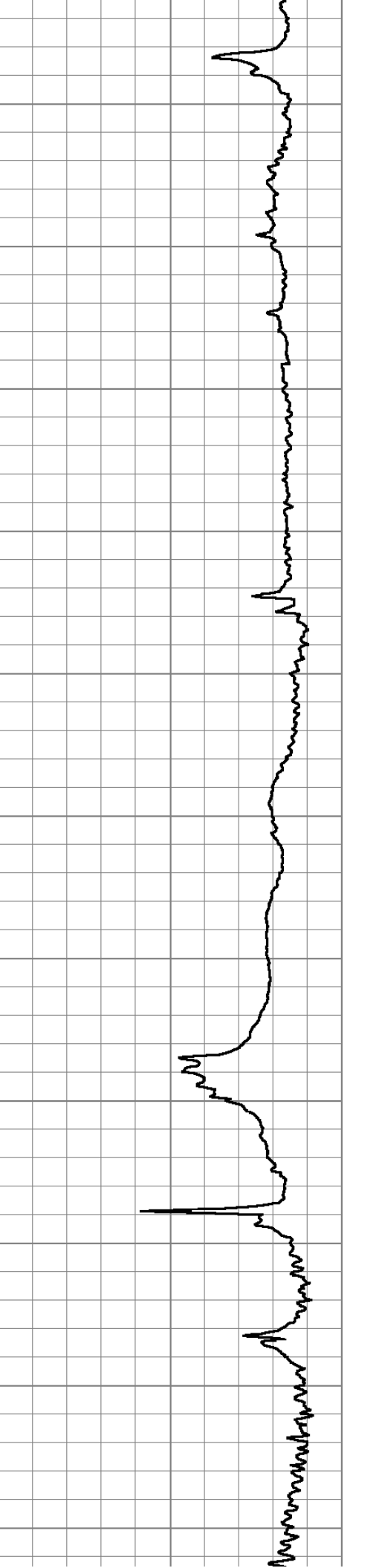
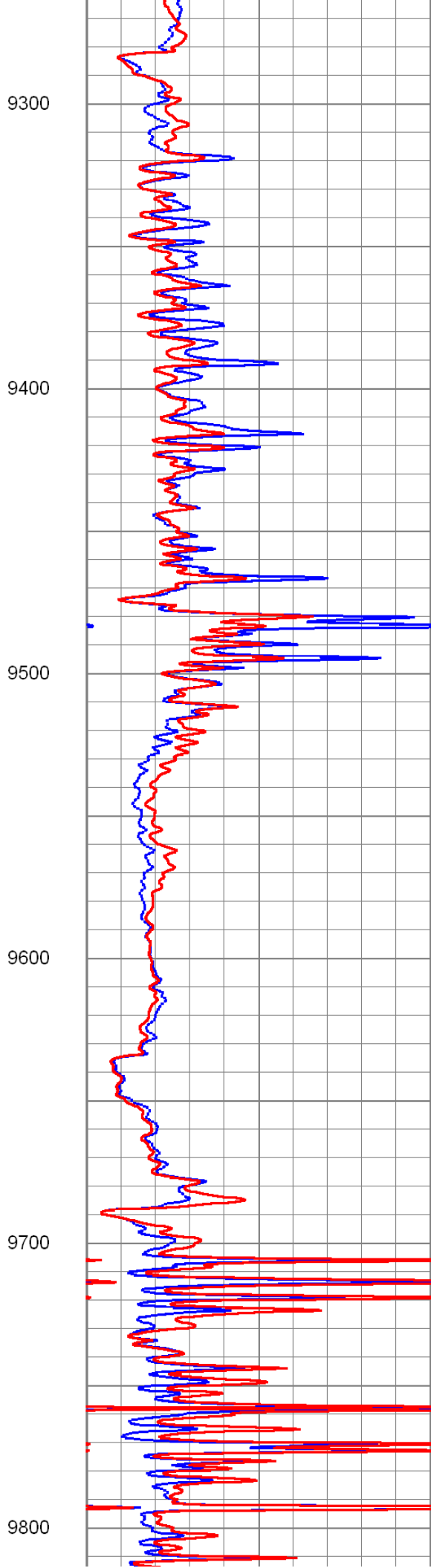
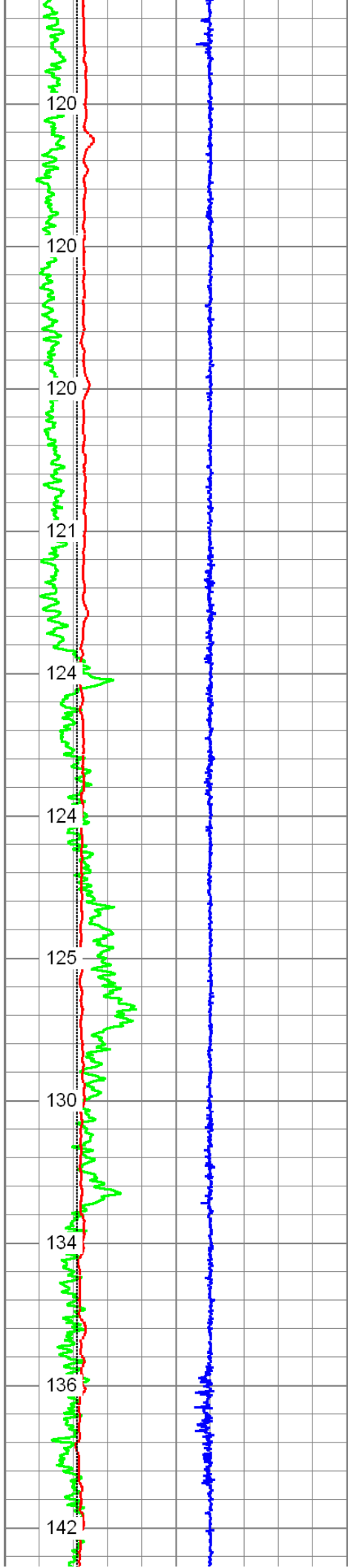
8000

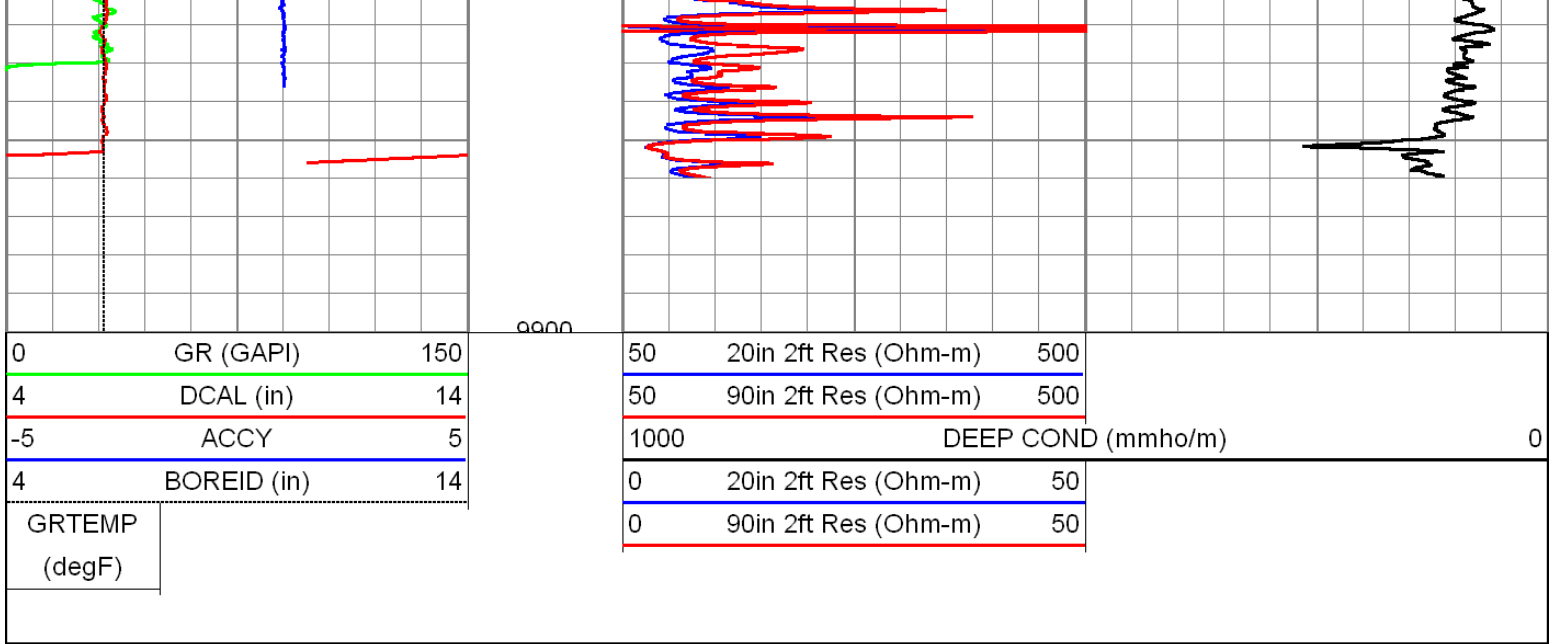
8100







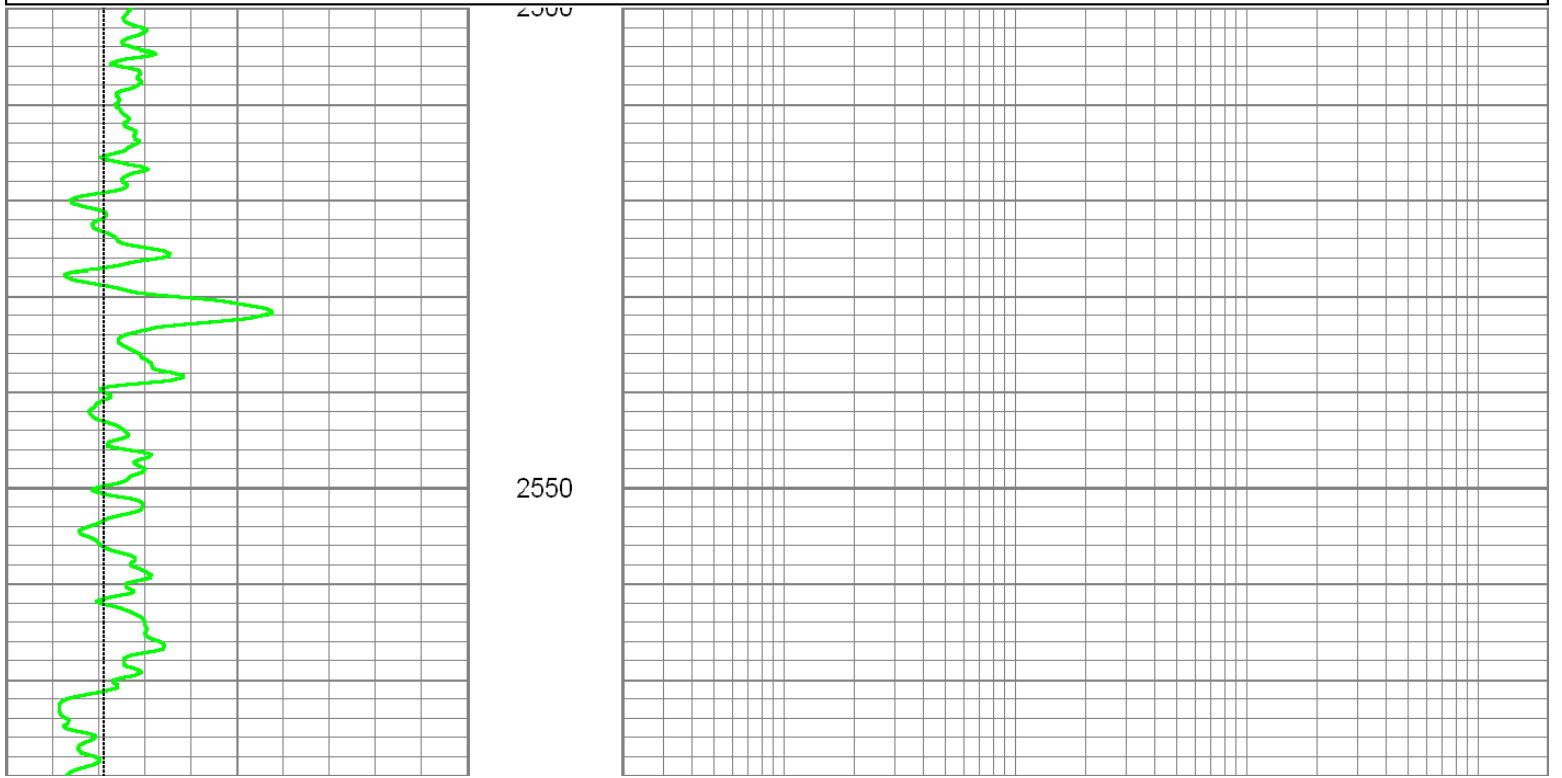


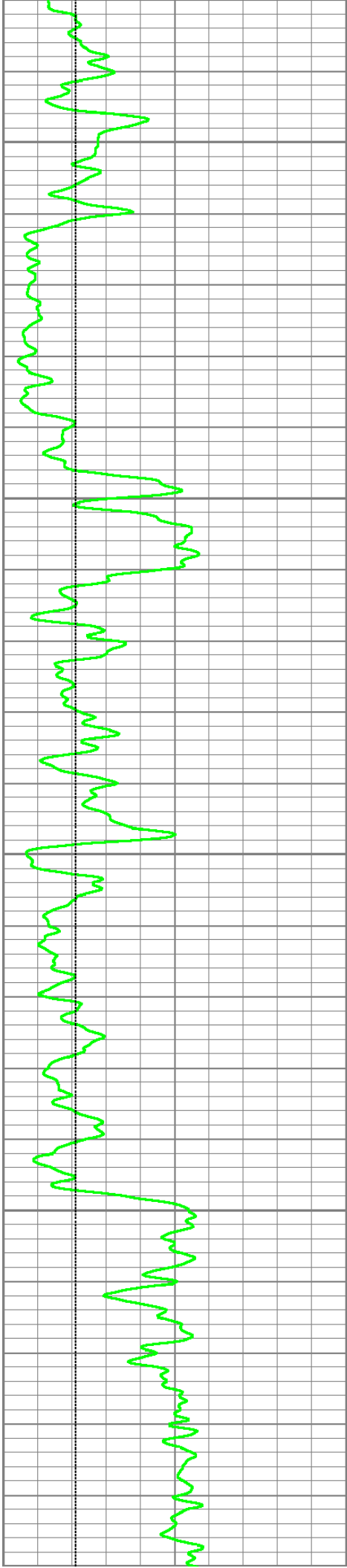


# MAIN PASS

Database File: jones\_mem.db  
 Dataset Pathname: proc1/pass1.4  
 Presentation Format: 6\_5r\_chk  
 Dataset Creation: Fri Jul 19 23:30:45 2013  
 Charted by: Depth in Feet scaled 1:240

|               |             |     |     |                    |      |
|---------------|-------------|-----|-----|--------------------|------|
| 0             | GR (GAPI)   | 150 | 0.2 | 60inRadial (Ohm-m) | 2000 |
| 4             | BOREID (in) | 14  | 0.2 | 90inRadial (Ohm-m) | 2000 |
| 4             | DCAL (in)   | 14  | 0.2 | 20inRadial (Ohm-m) | 2000 |
| -5            | ACCY        | 5   | 0.2 | 30inRadial (Ohm-m) | 2000 |
| GRTEMP (degF) |             |     |     |                    |      |





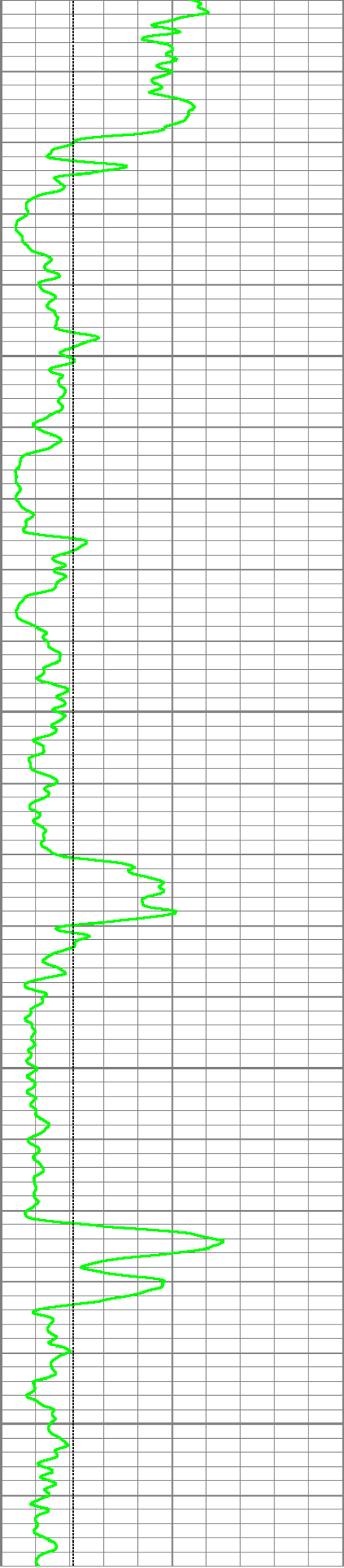
2600

2650

2700

2750

2800



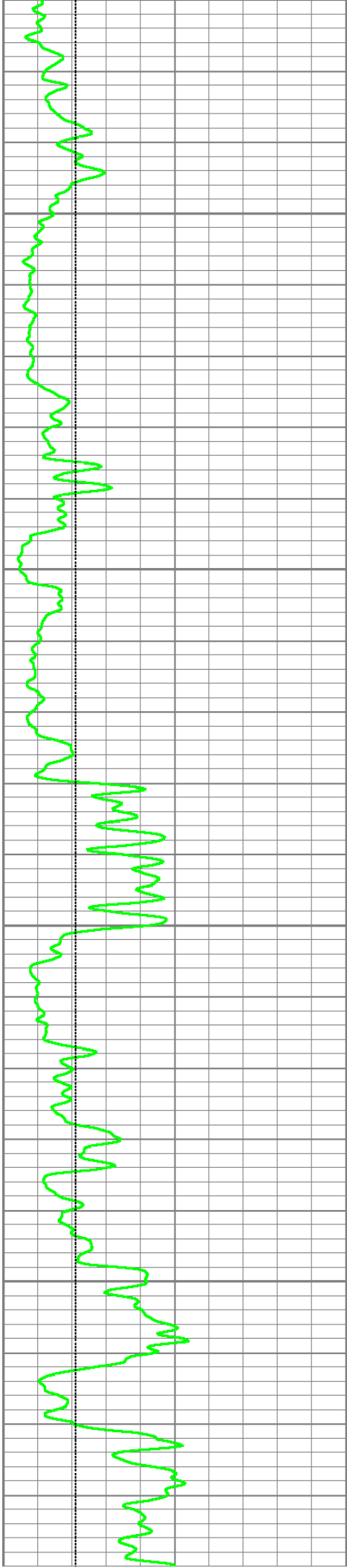
2800

2850

2900

2950

3000

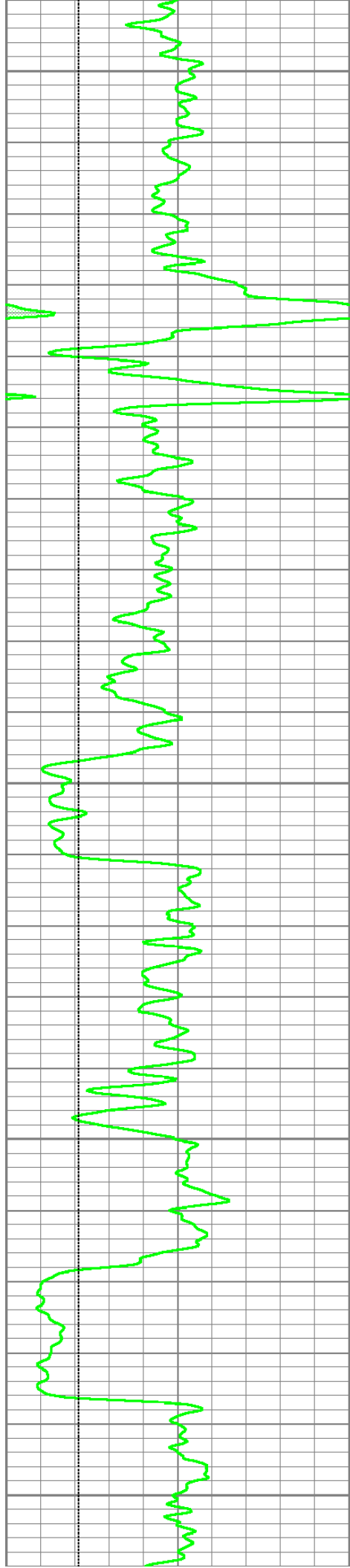


3050

3100

3150

3200



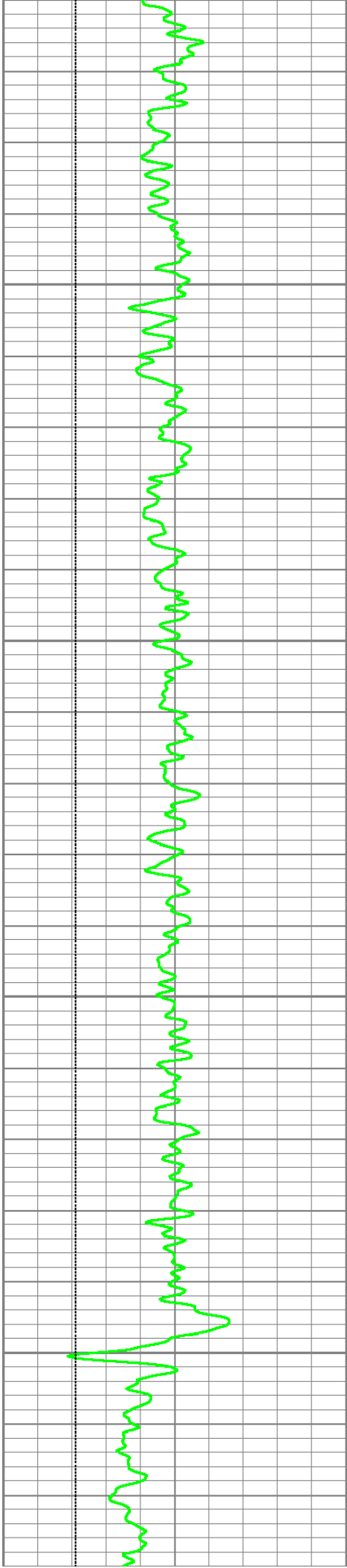
3250

3300

3350

3400

3450

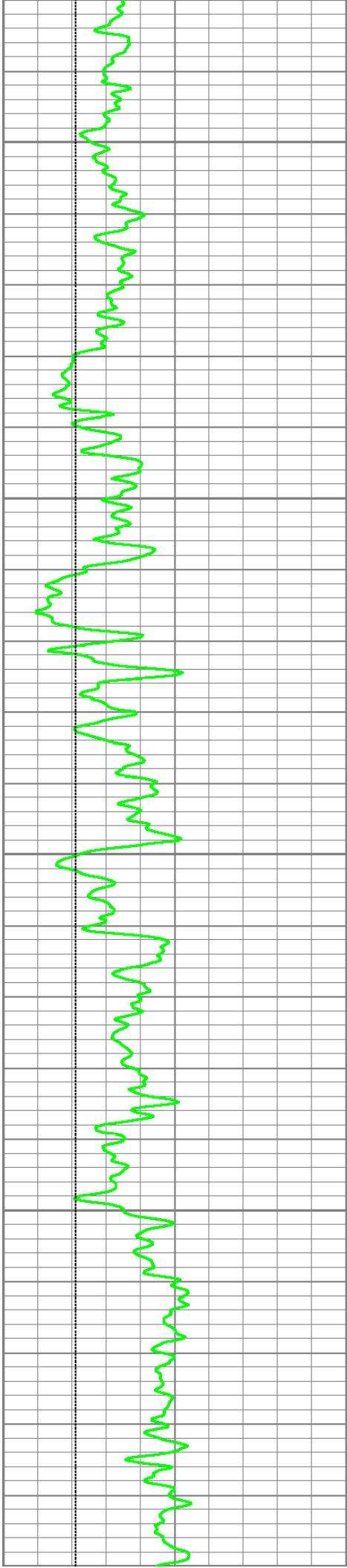


3500

3550

3600

3650



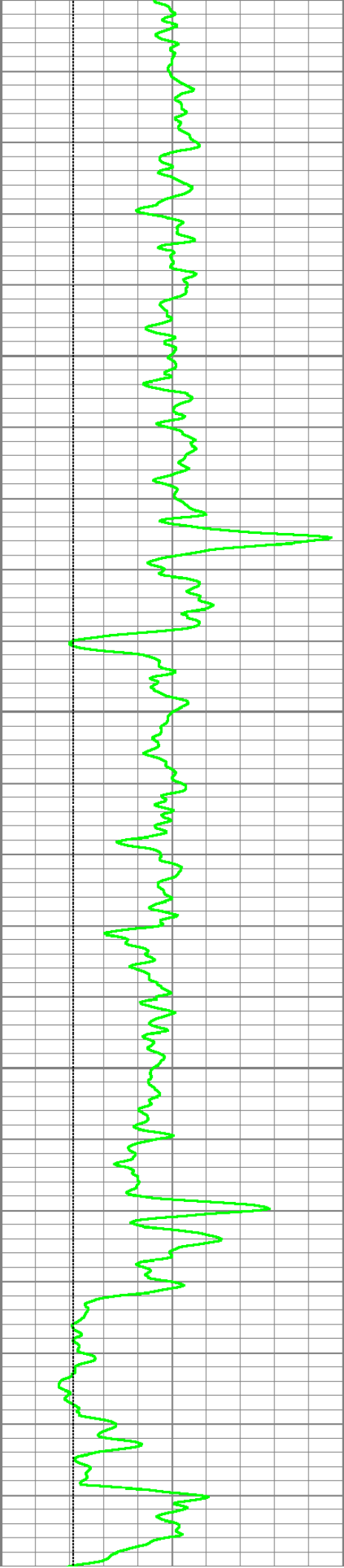
3700

3750

3800

3850

3900



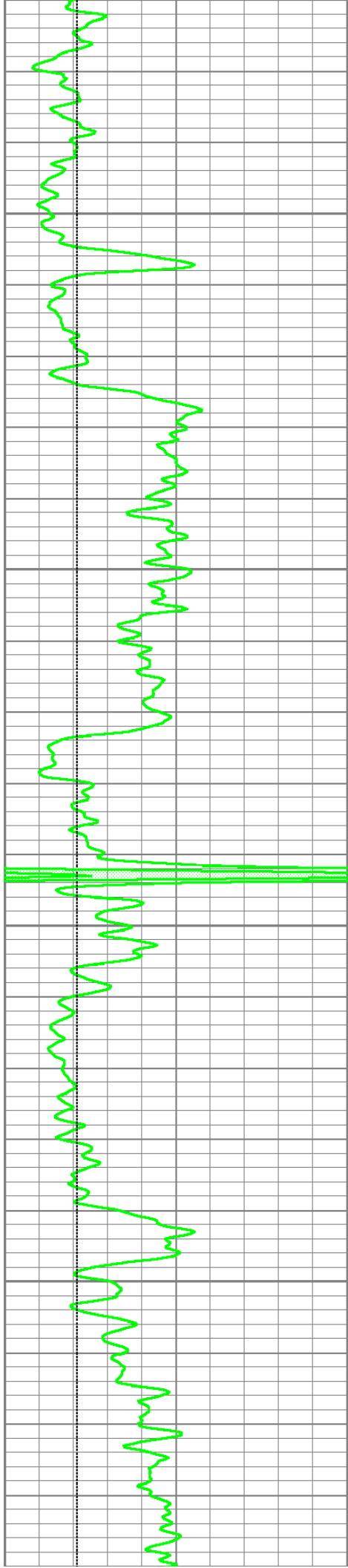
3900

3950

4000

4050

4100

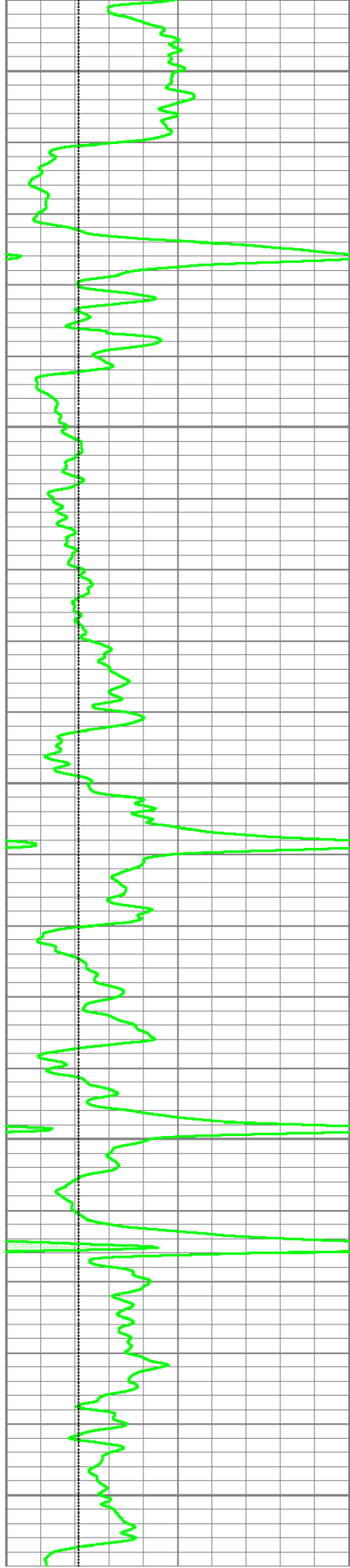


4150

4200

4250

4300



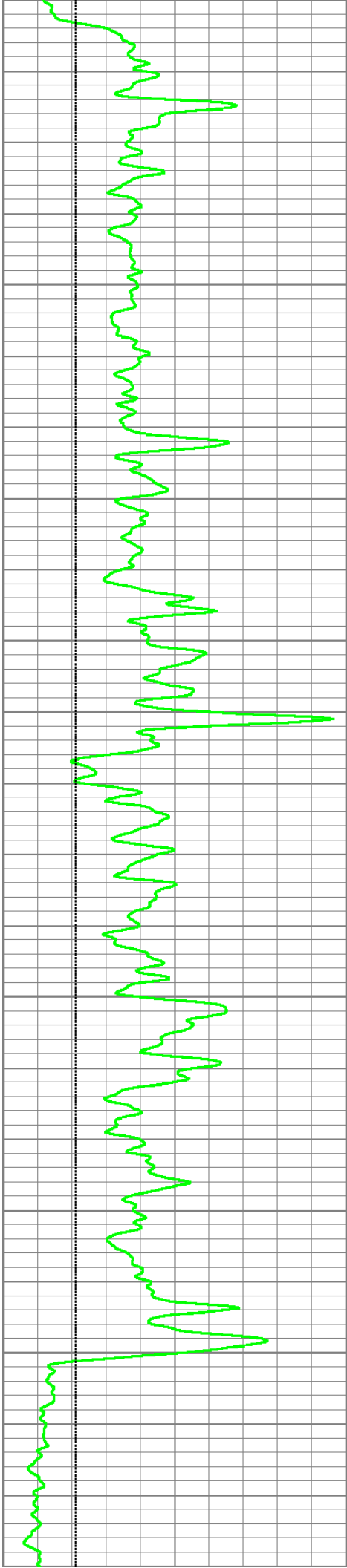
4350

4400

4450

4500

4550

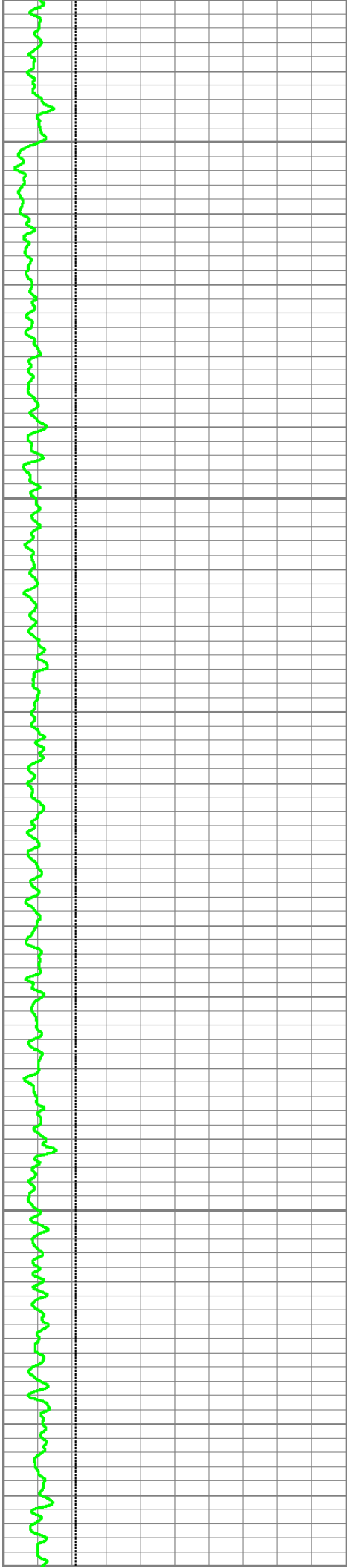


4600

4650

4700

4750



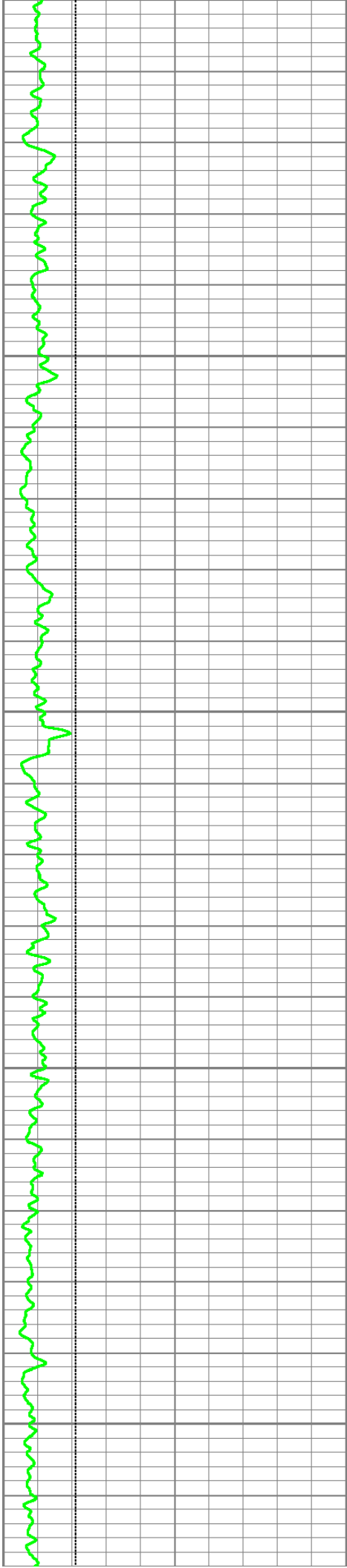
4800

4850

4900

4950

5000



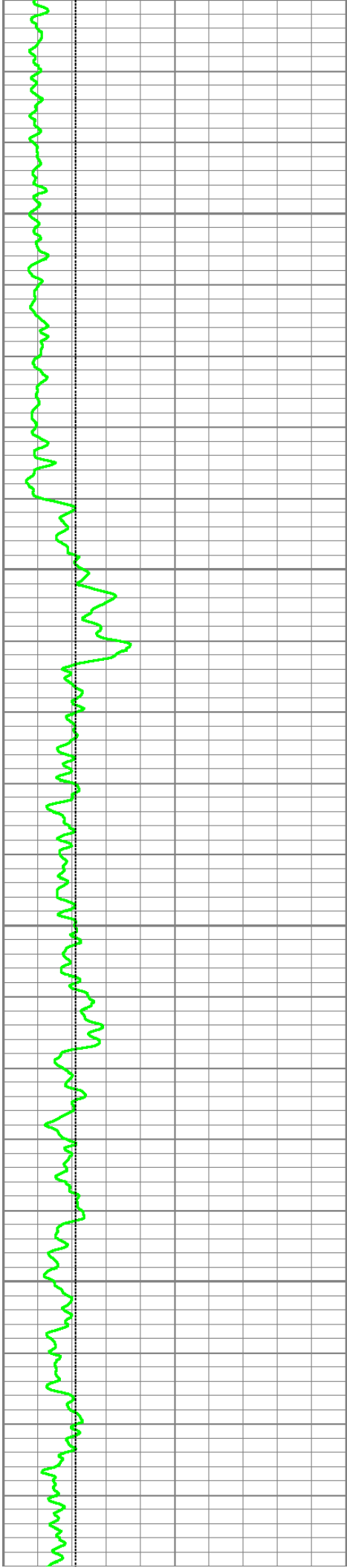
5000

5050

5100

5150

5200

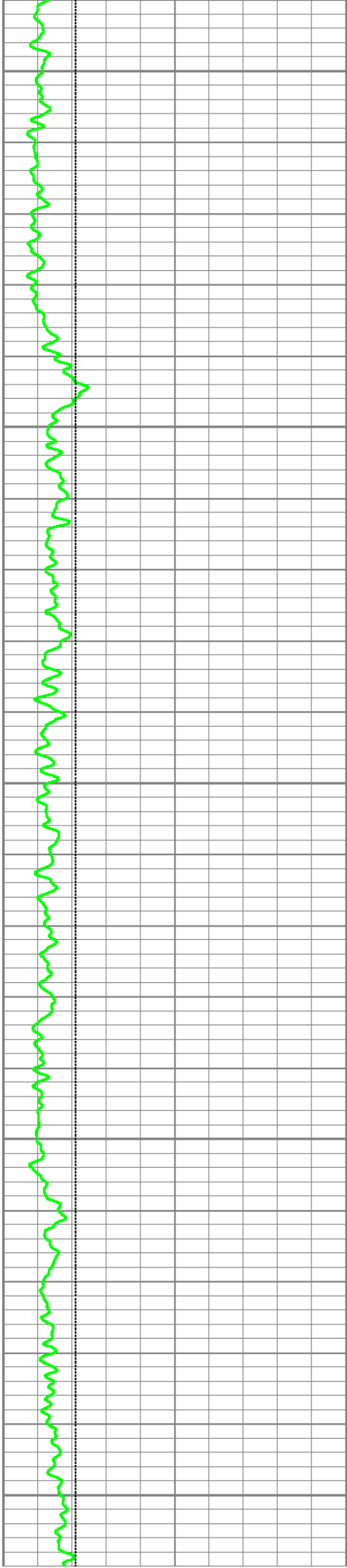


5250

5300

5350

5400



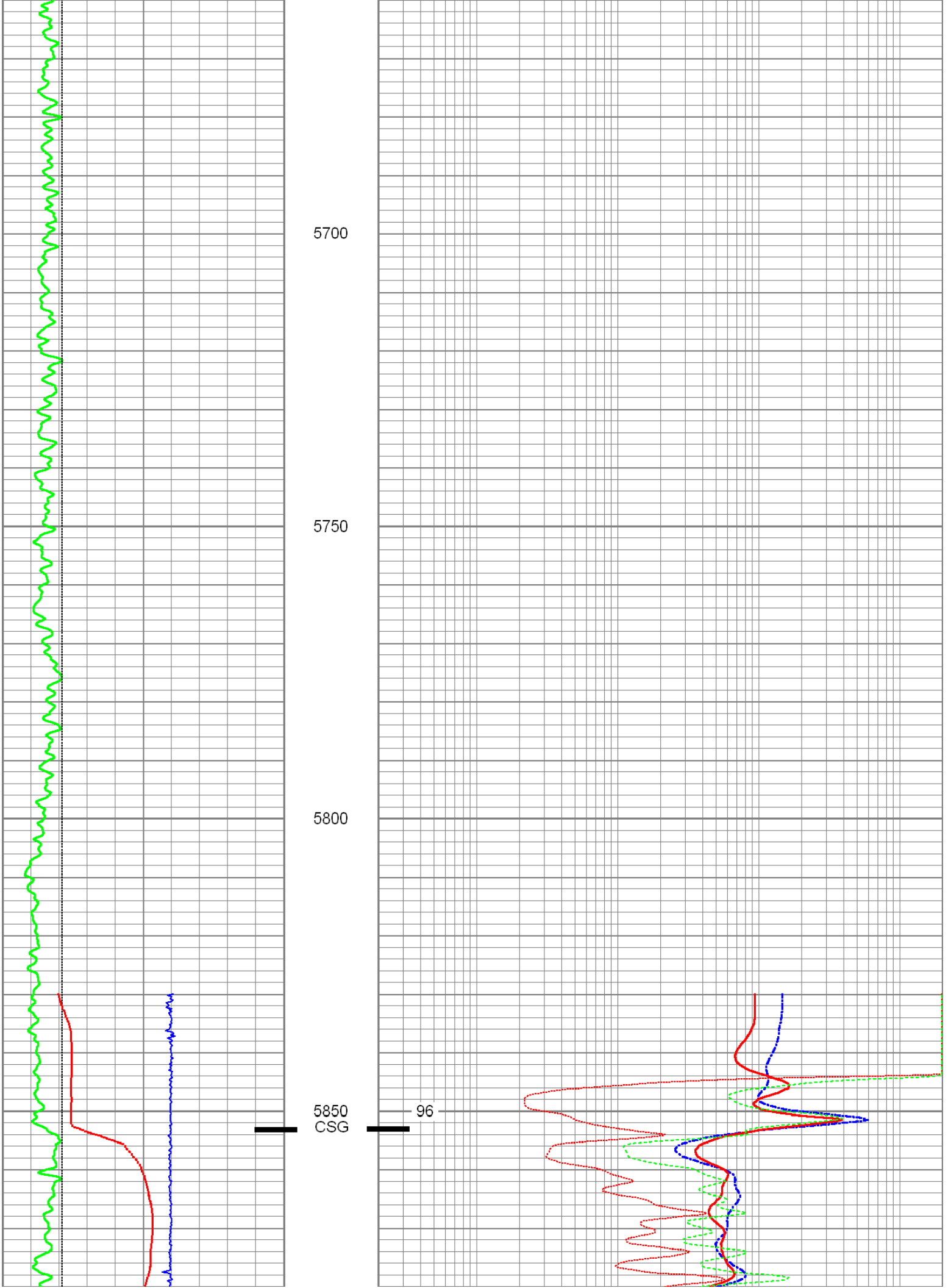
5450

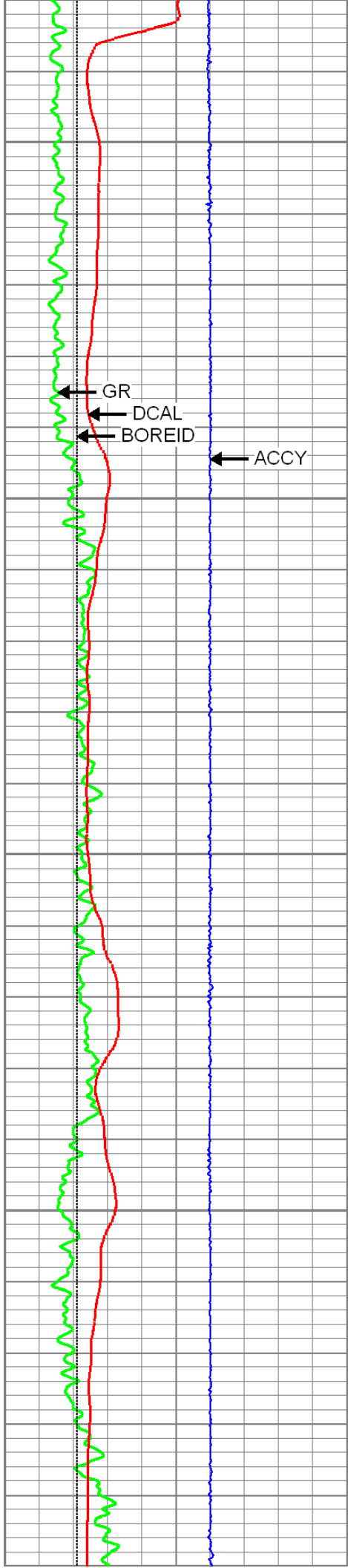
5500

5550

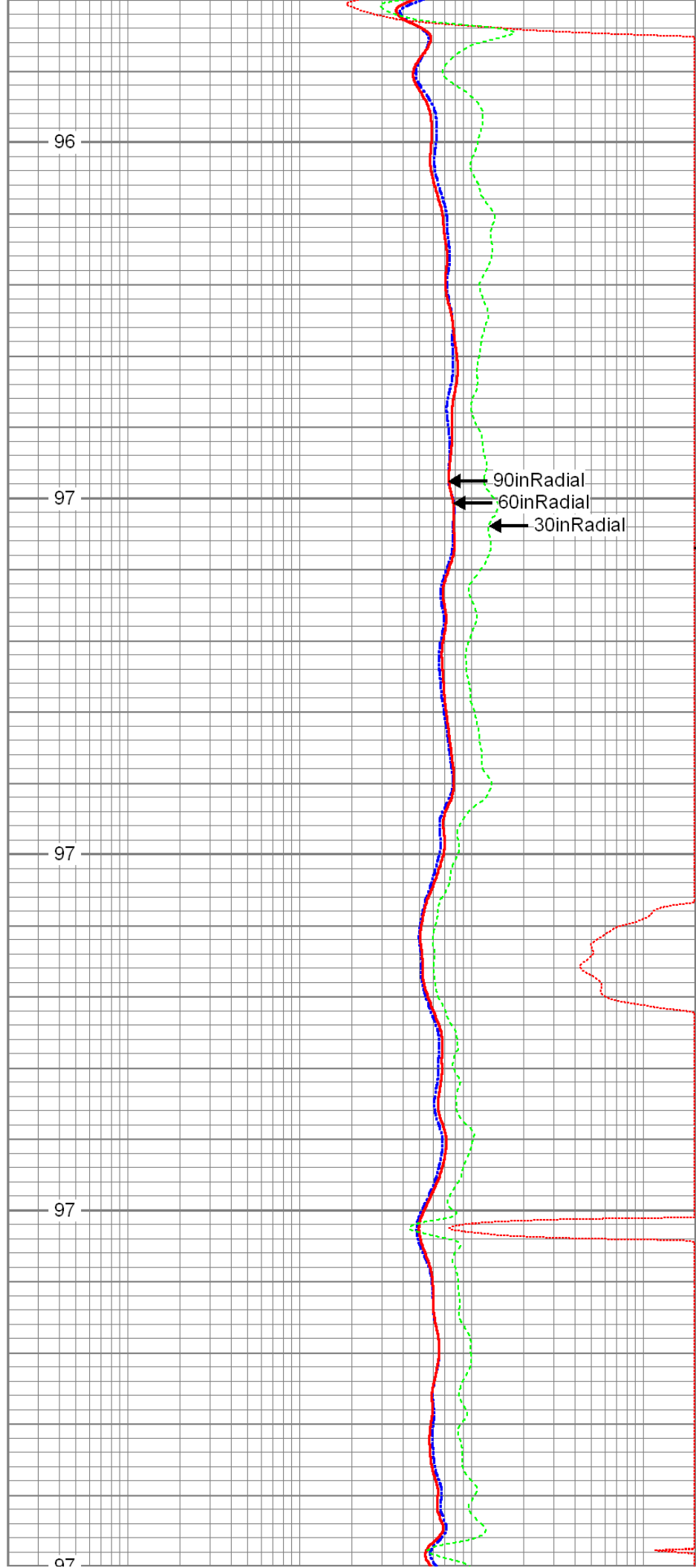
5600

5650





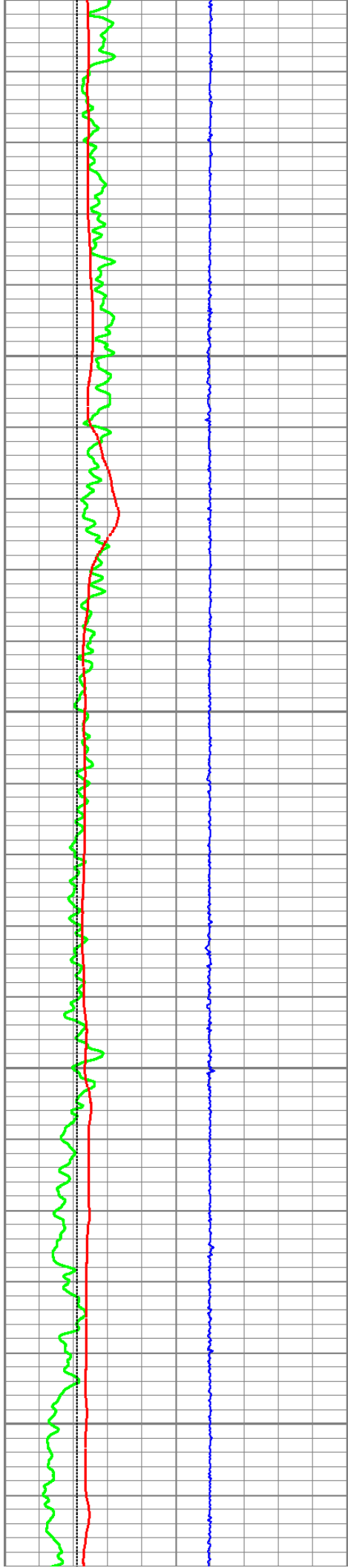
5900  
5950  
6000  
6050  
6100



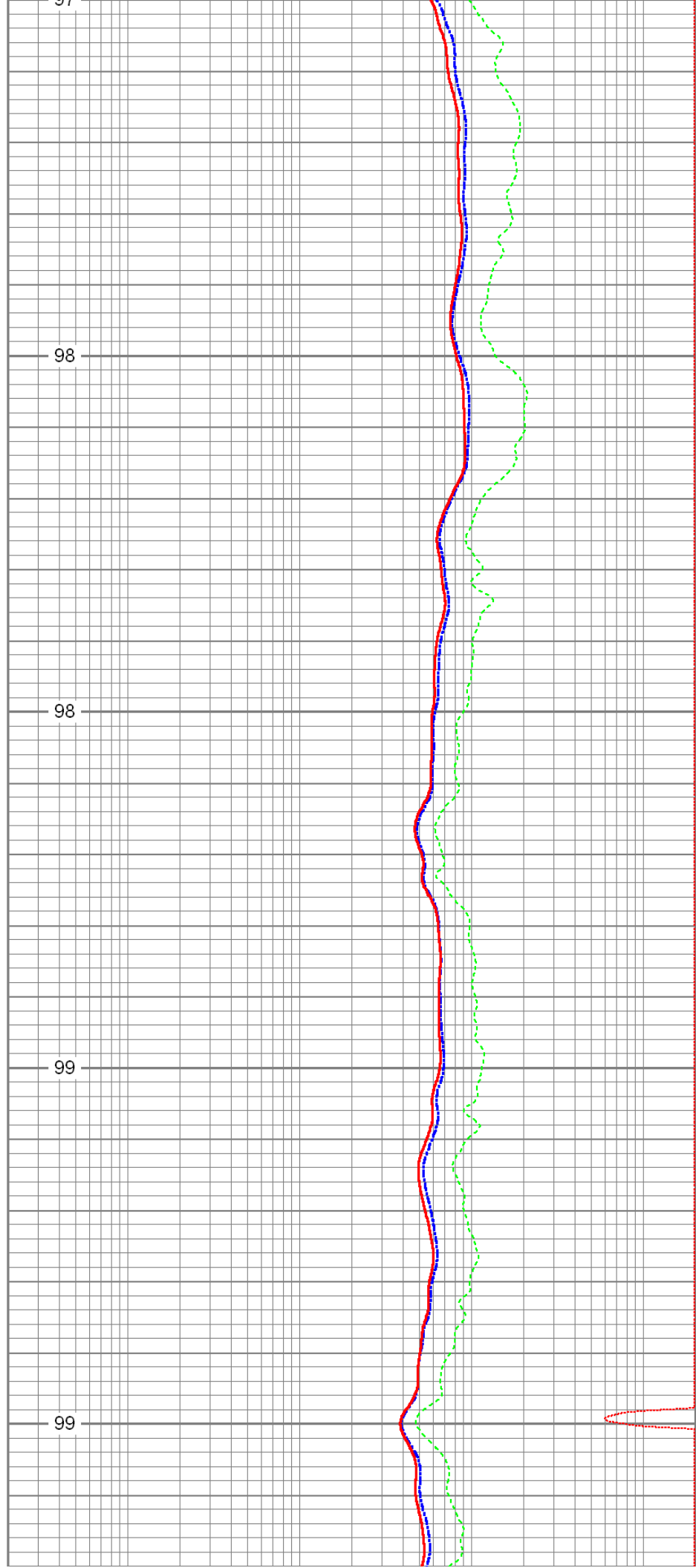
96  
97  
97  
97  
97

GR  
DCAL  
BOREID  
ACCY

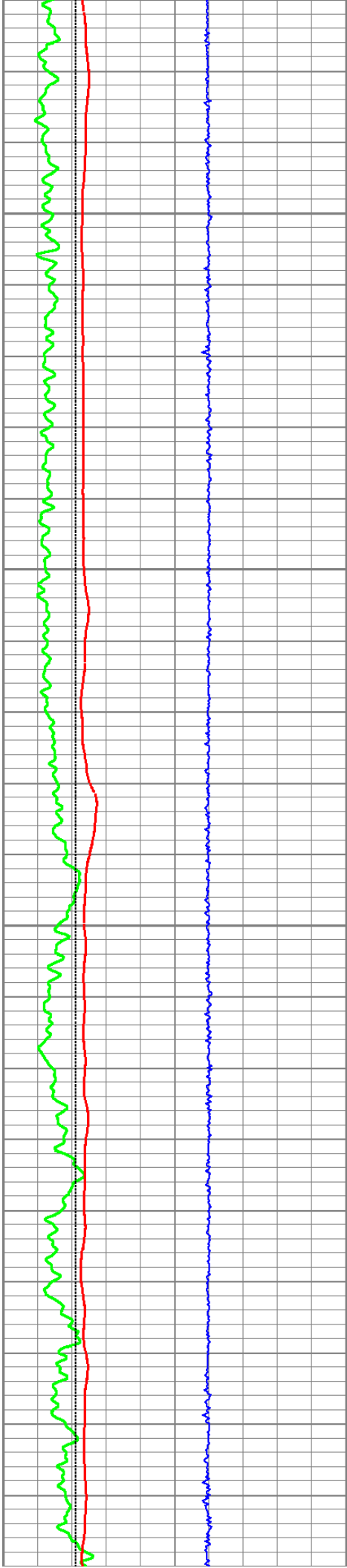
90inRadial  
60inRadial  
30inRadial



6100  
6150  
6200  
6250  
6300



97  
98  
98  
99  
99

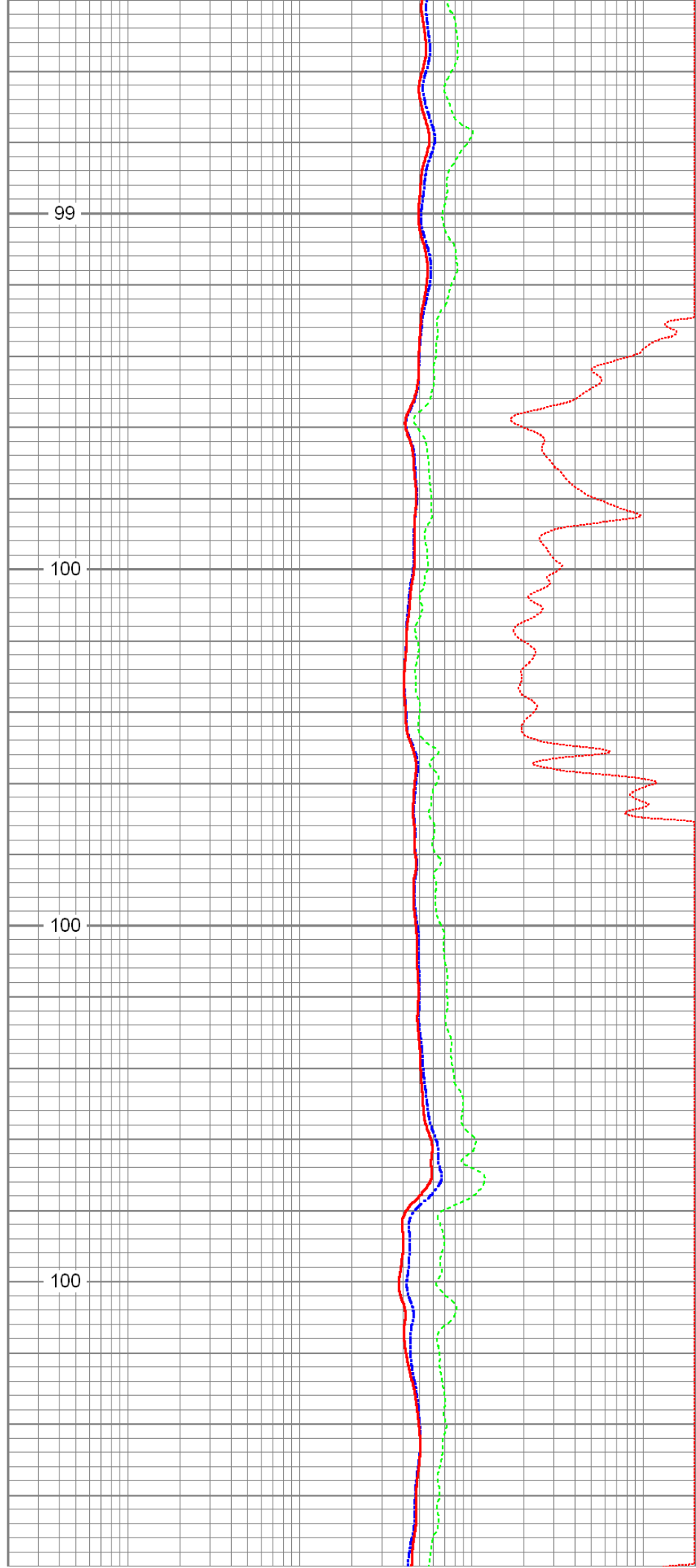


6350

6400

6450

6500

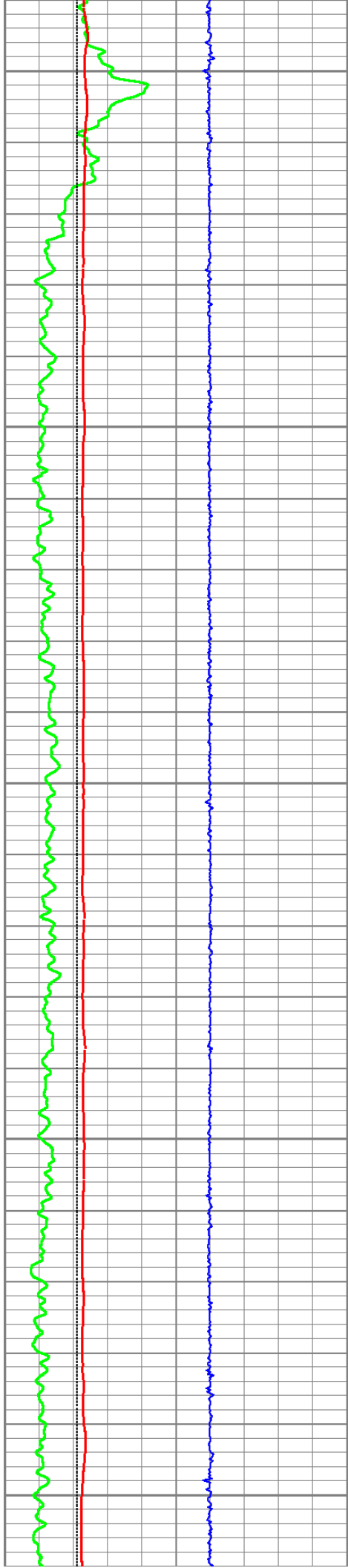


99

100

100

100



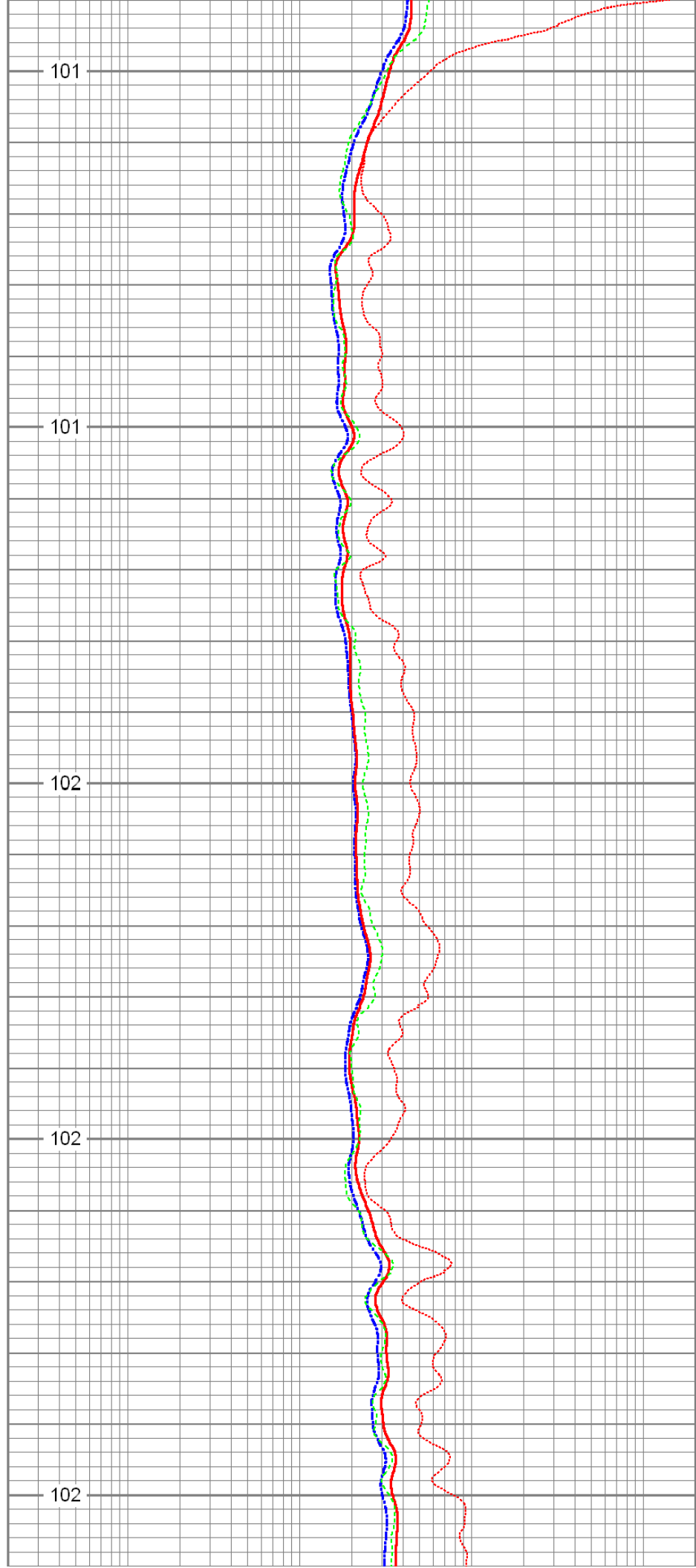
6550

6600

6650

6700

6750



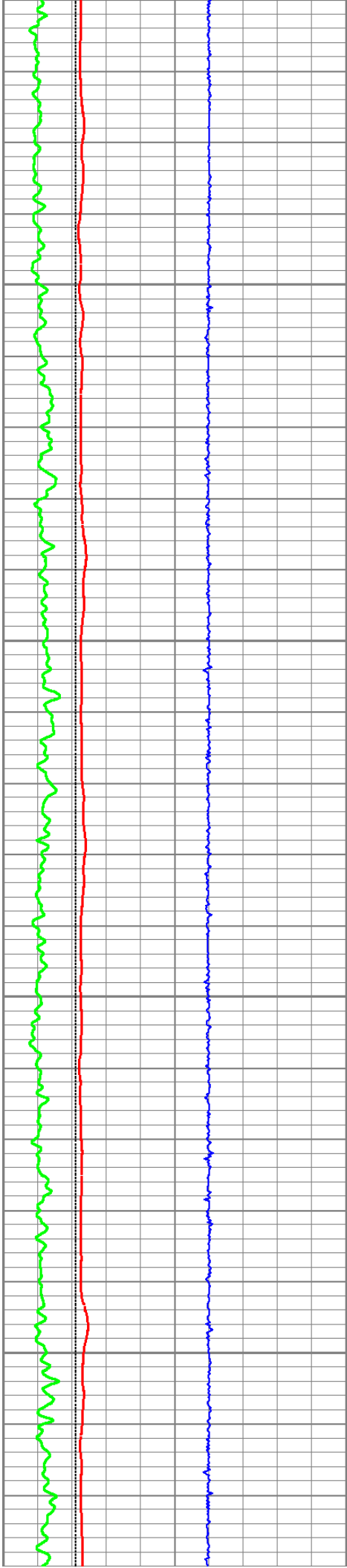
101

101

102

102

102



6800

103

6850

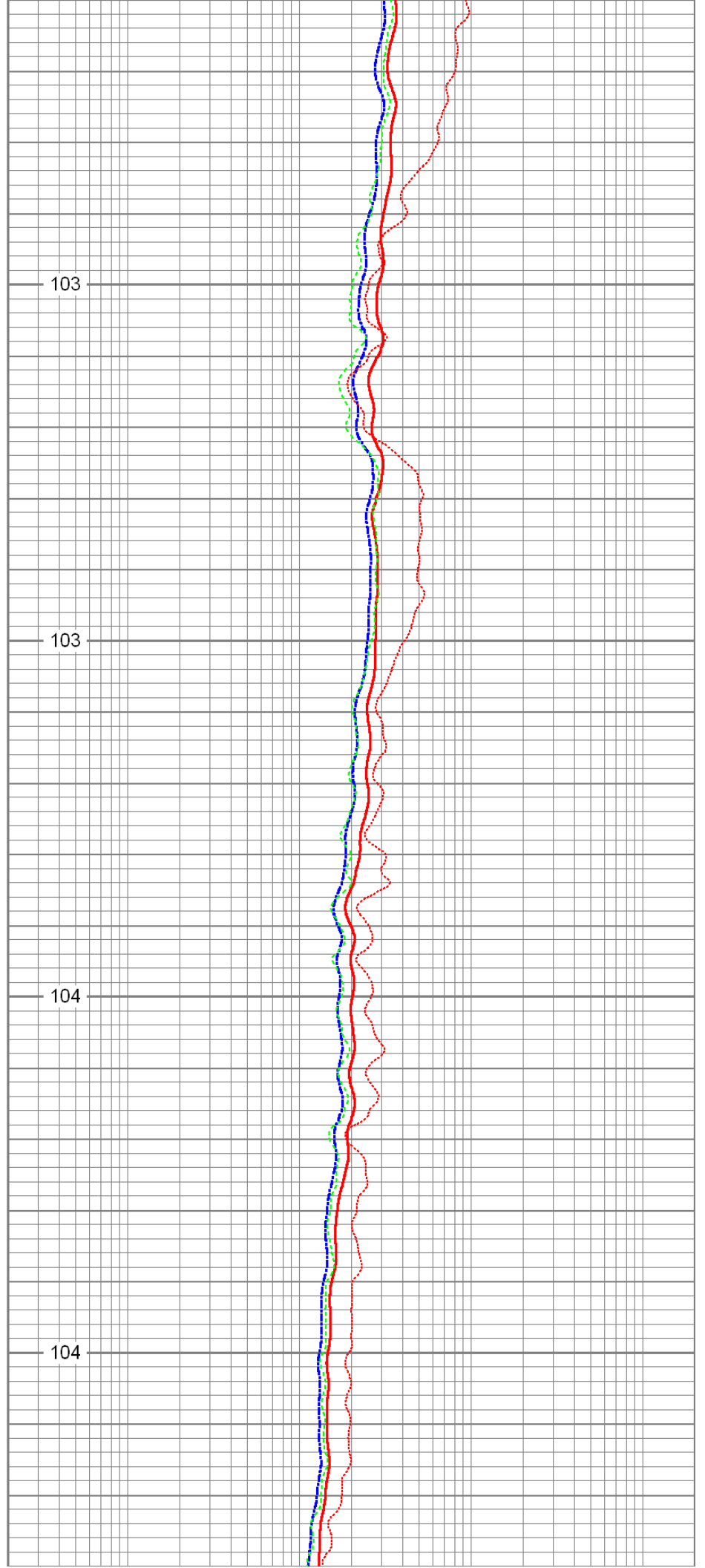
103

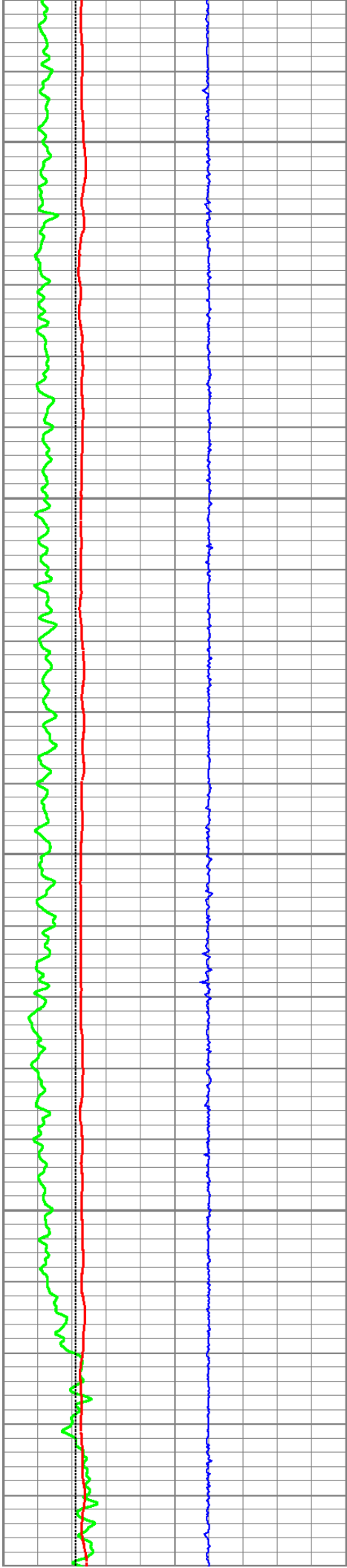
6900

104

6950

104





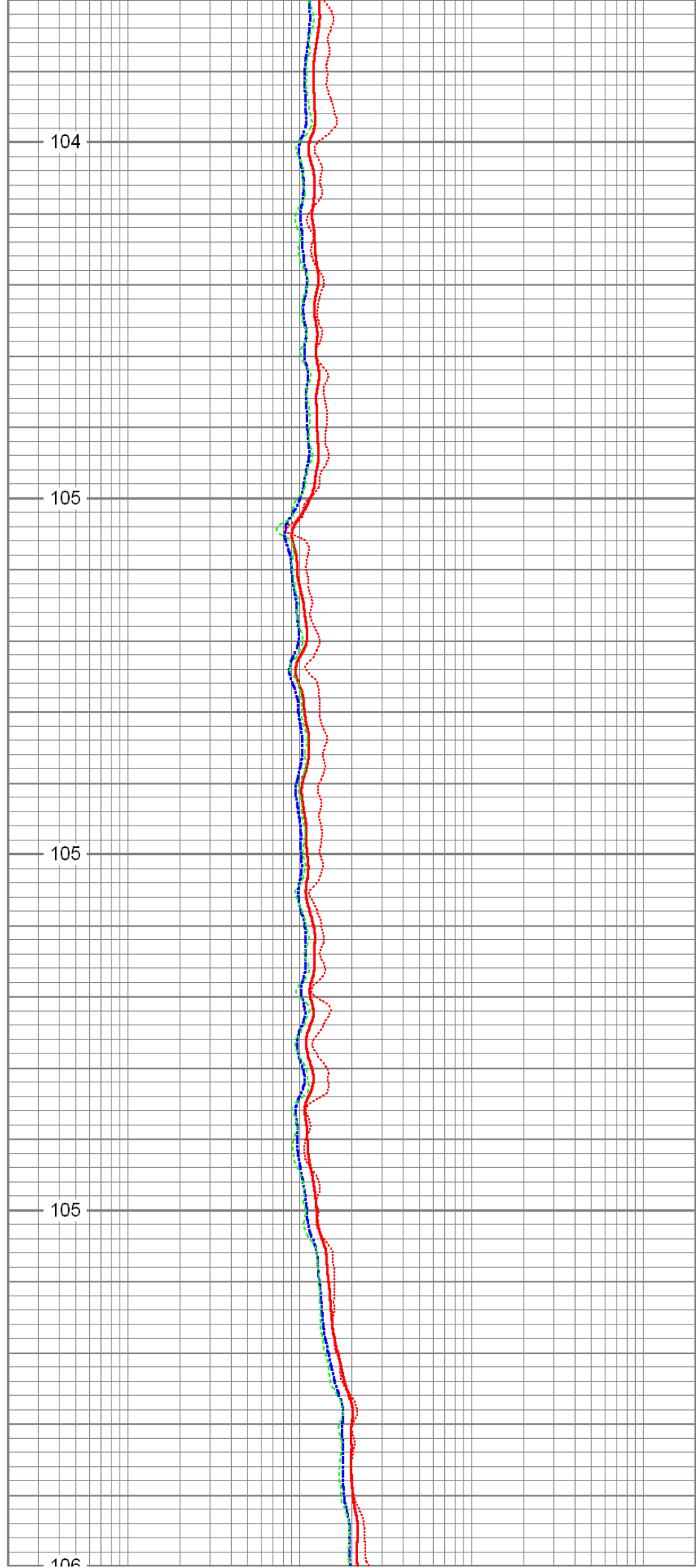
7000

7050

7100

7150

7200



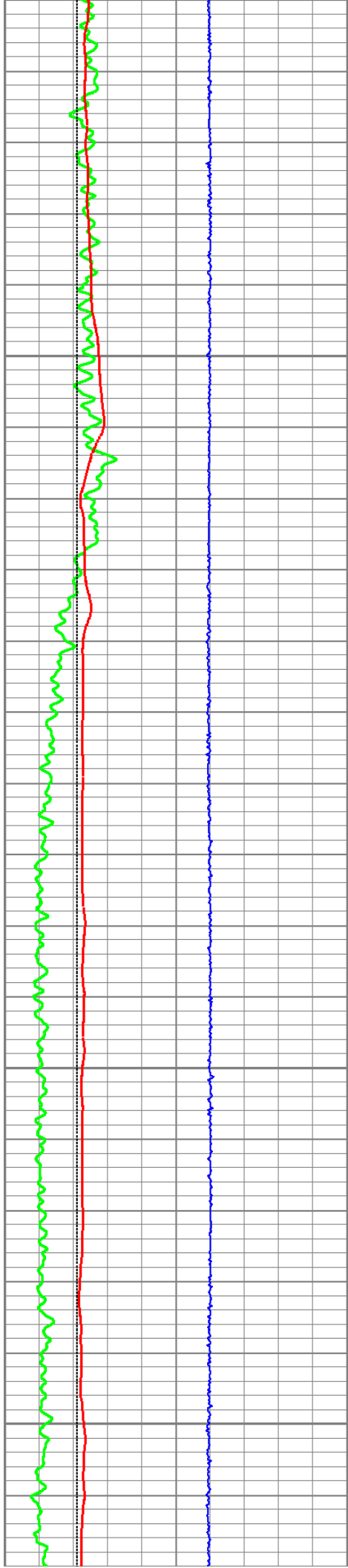
104

105

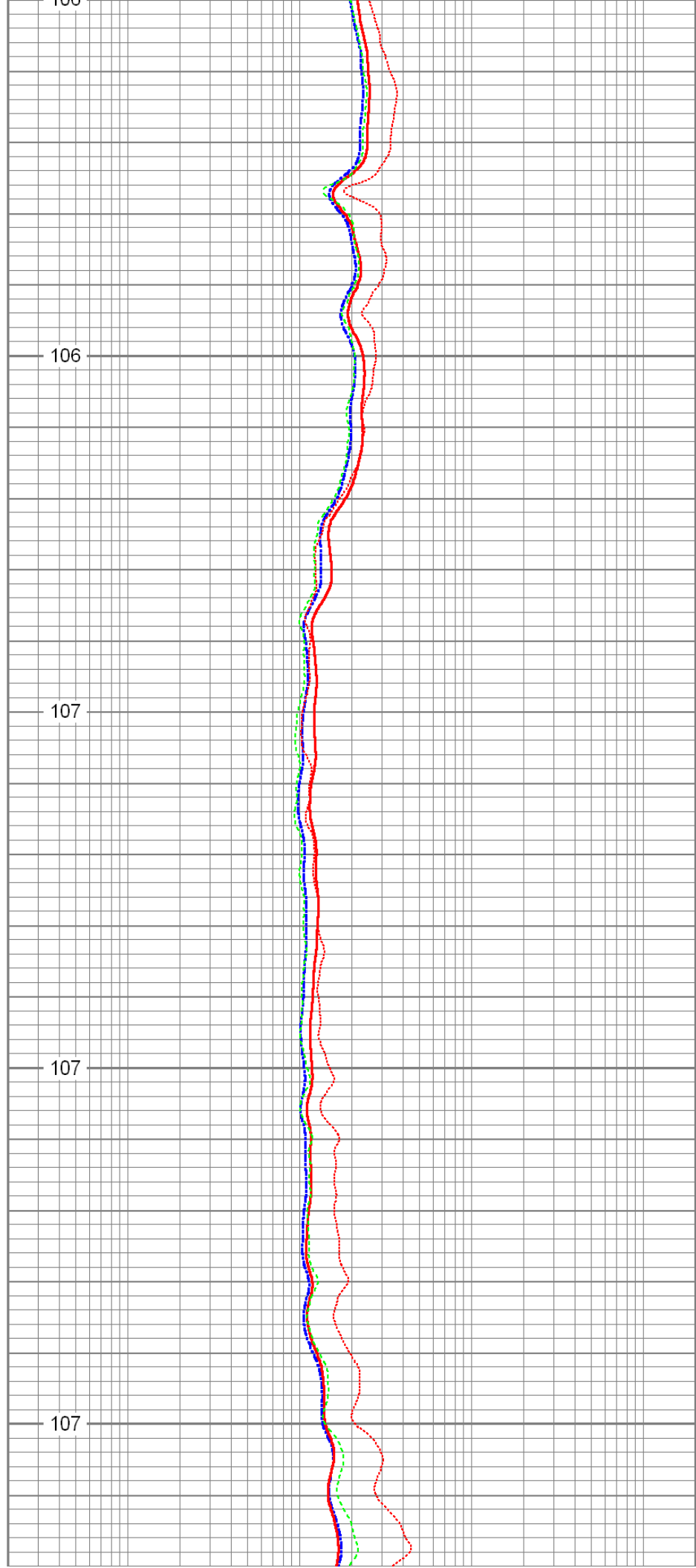
105

105

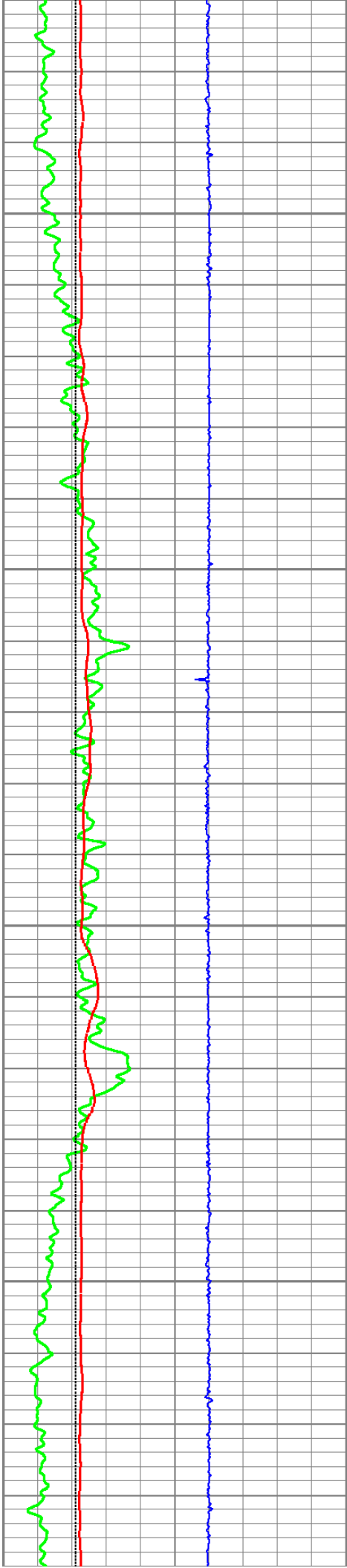
106



7200  
7250  
7300  
7350  
7400



100  
106  
107  
107  
107



7450

7500

7550

7600

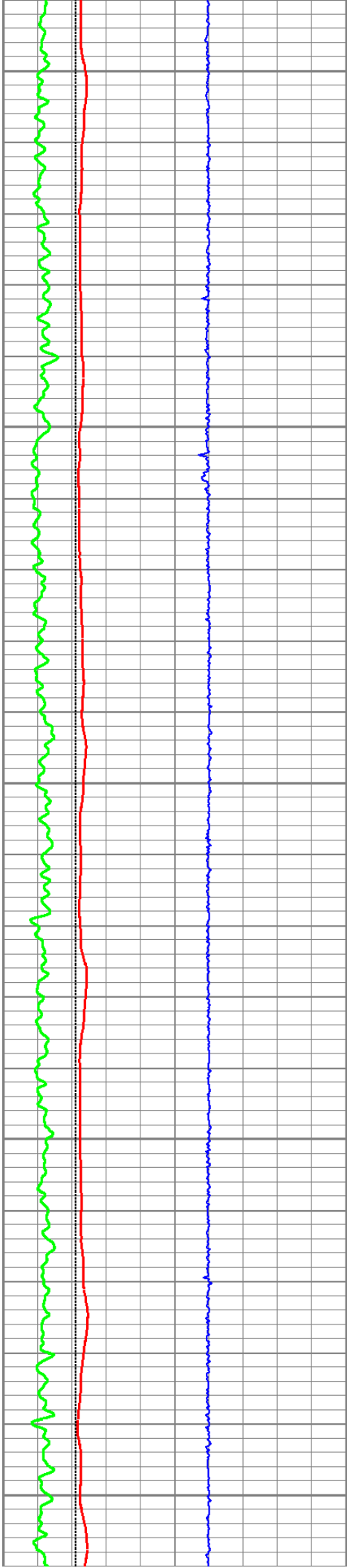


108

108

108

109



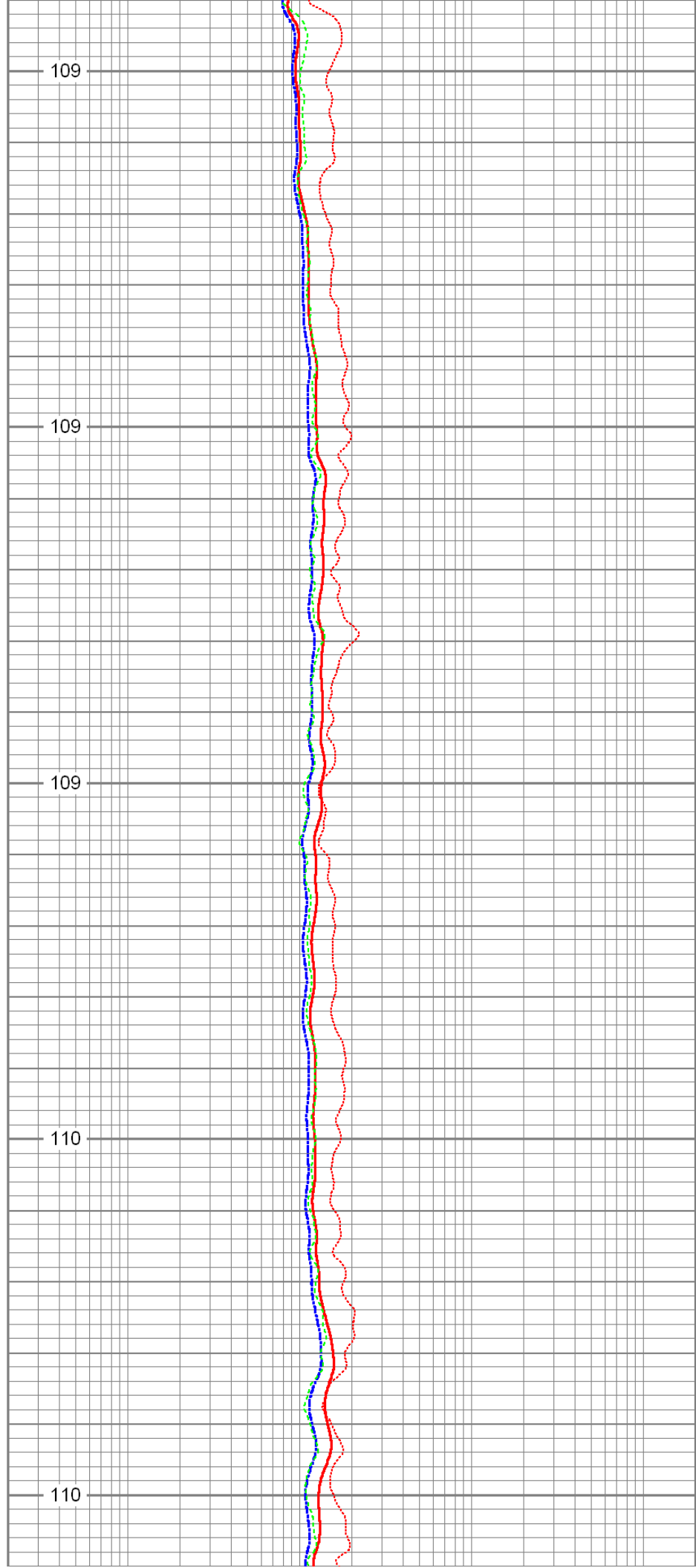
7650

7700

7750

7800

7850



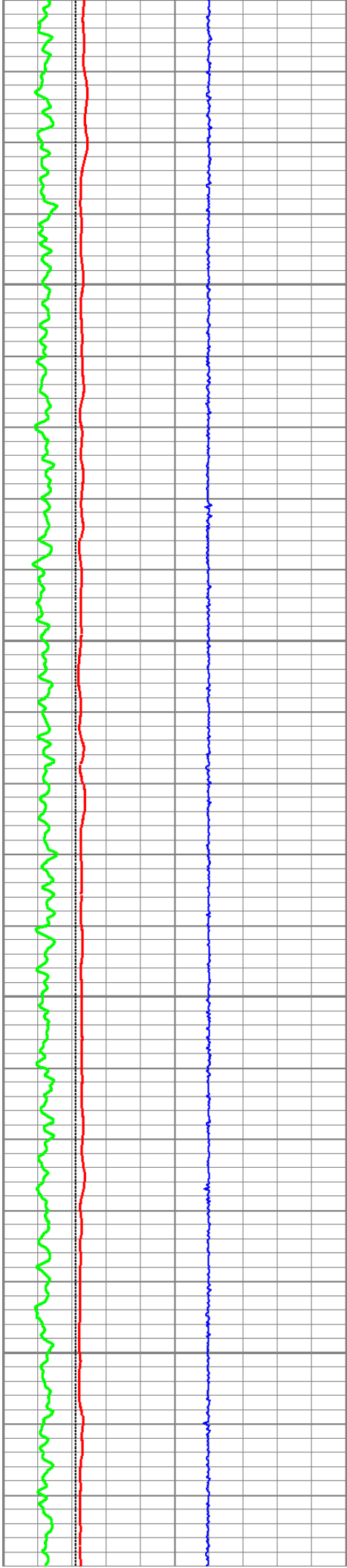
109

109

109

110

110

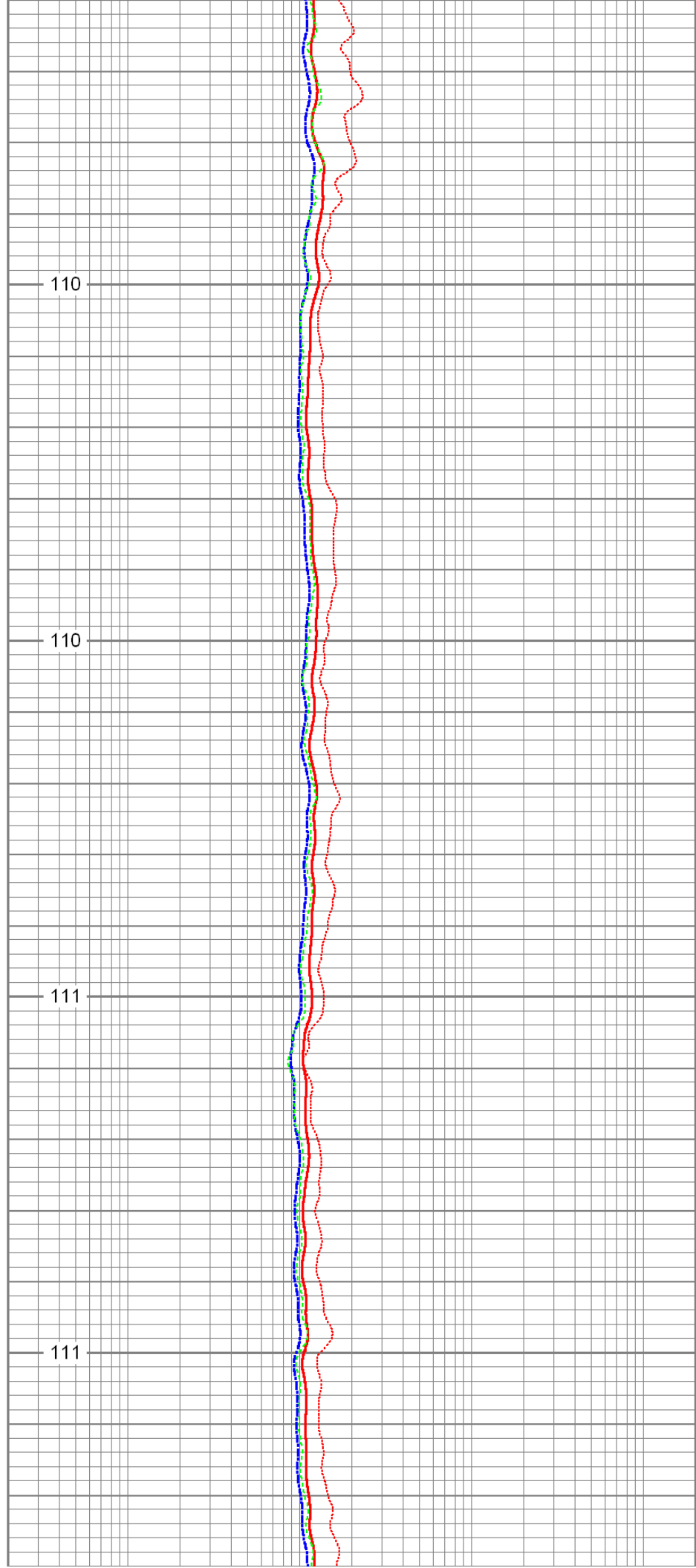


7900

7950

8000

8050

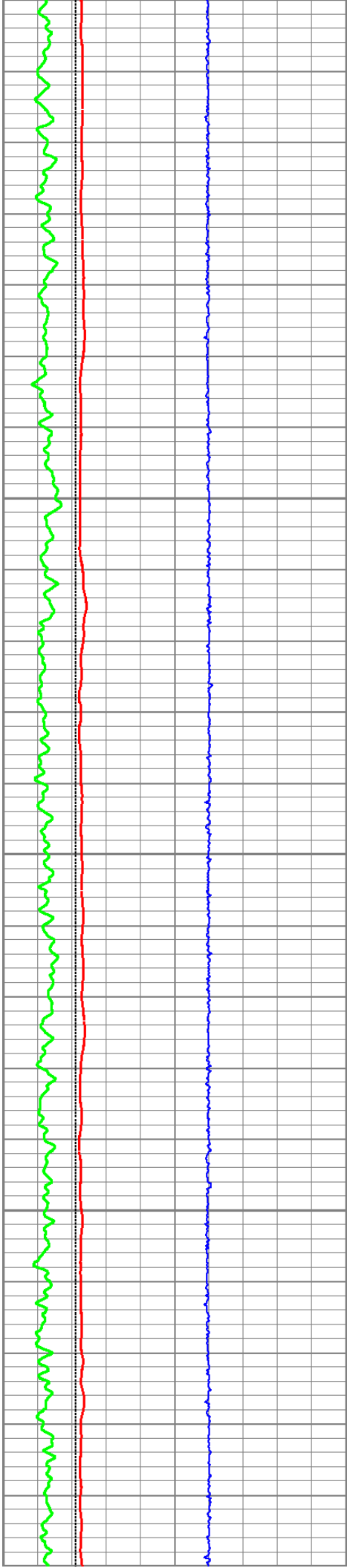


110

110

111

111



8100

111

8150

111

8200

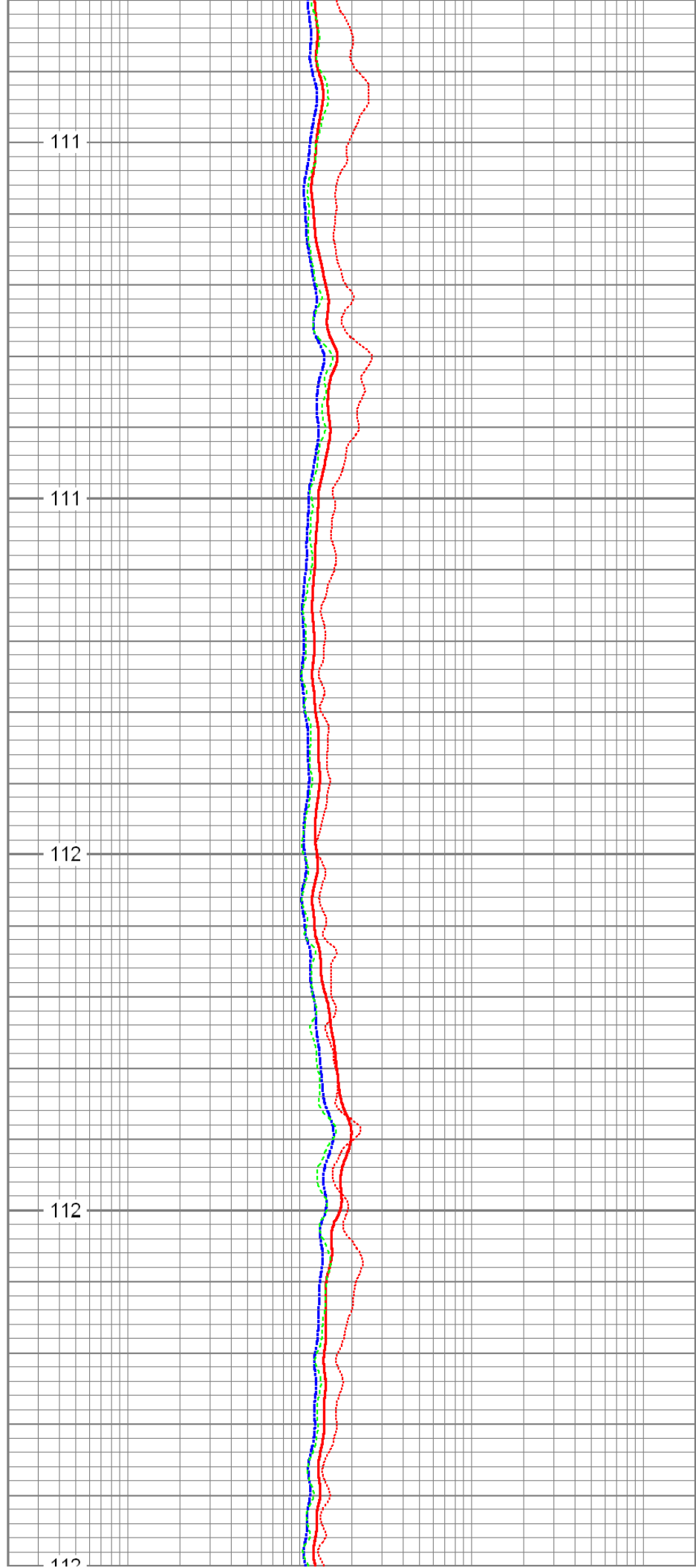
112

8250

112

8300

112



8300

112

8350

112

8400

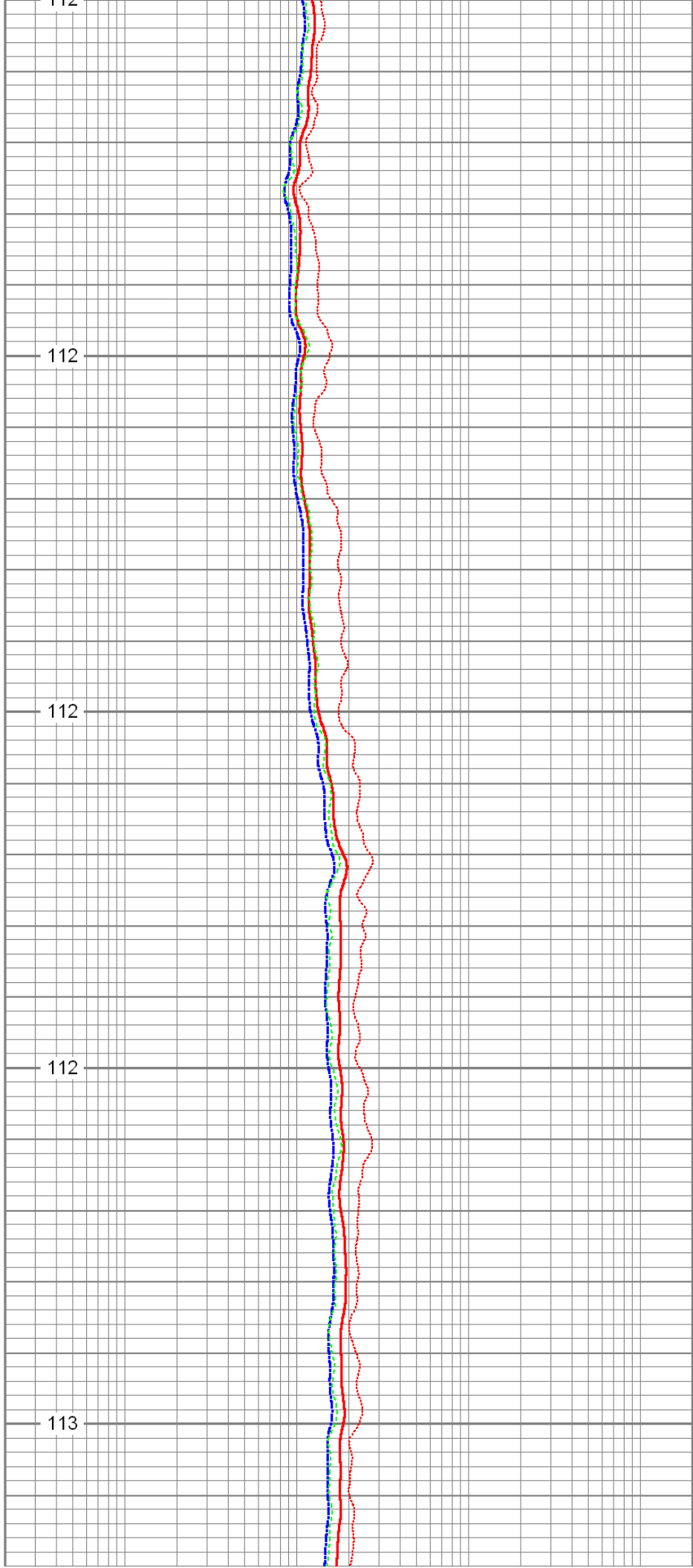
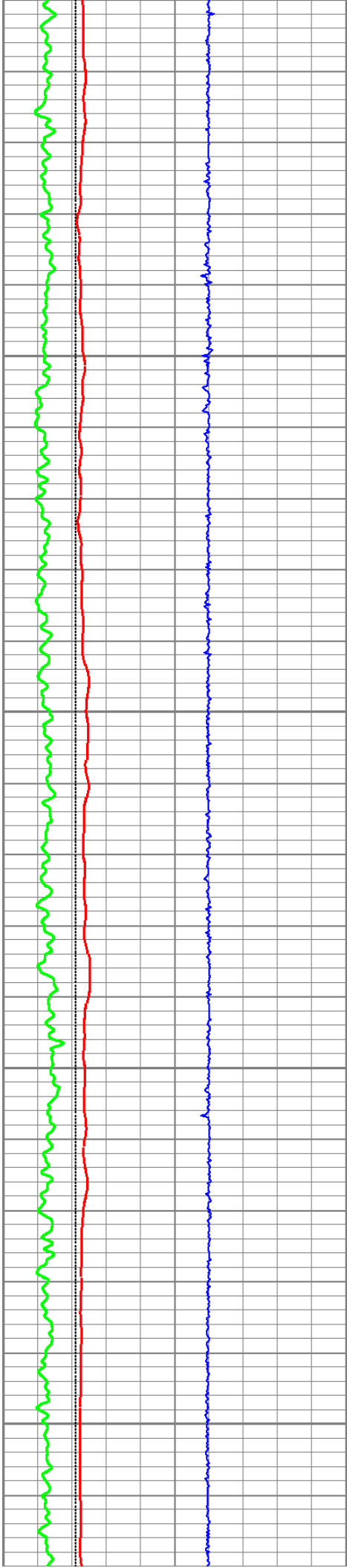
112

8450

112

8500

113





8550

113

8600

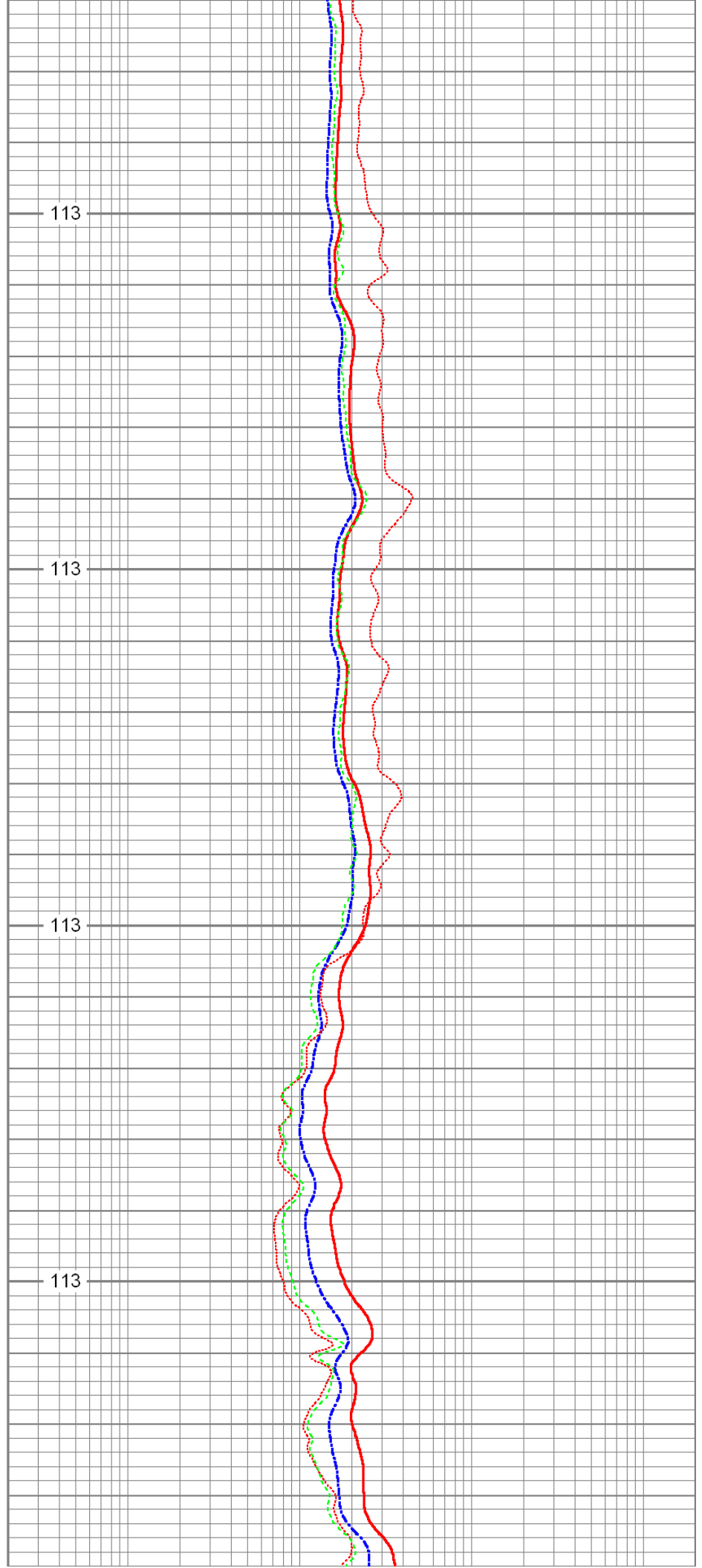
113

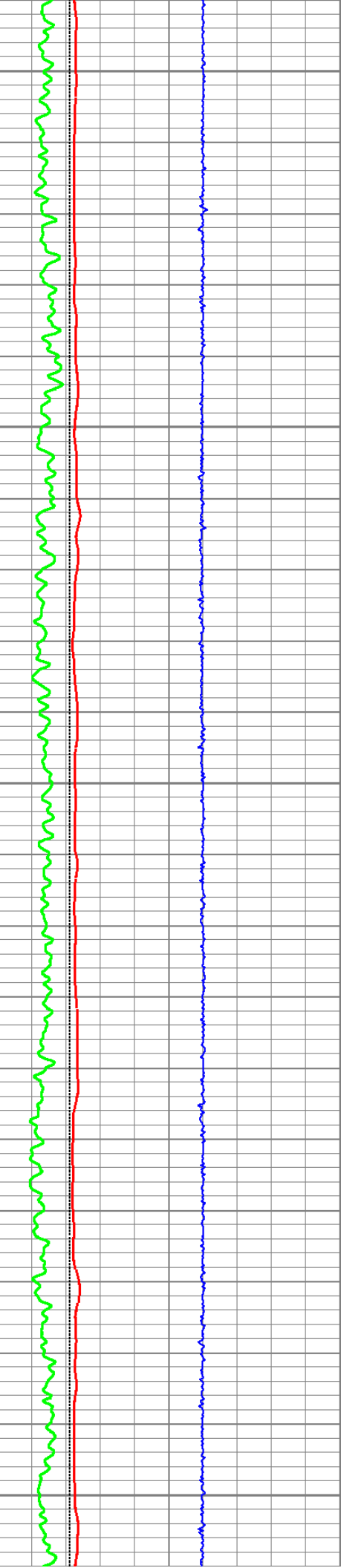
8650

113

8700

113





8750

114

8800

114

8850

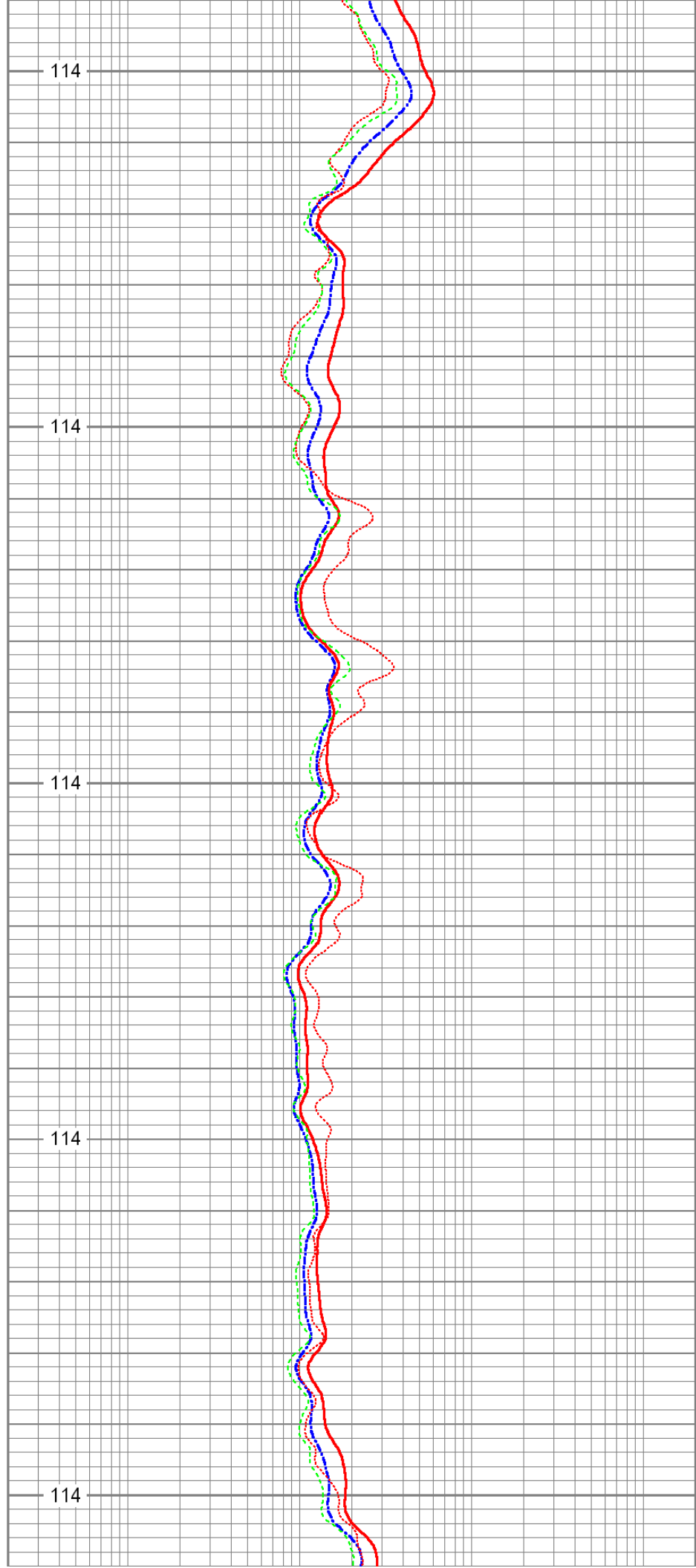
114

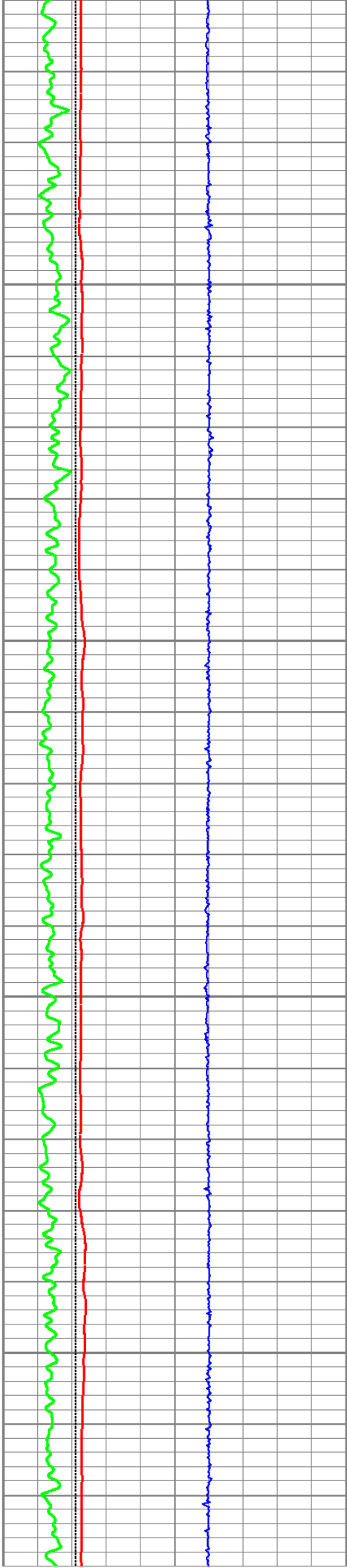
8900

114

8950

114





9000

114

9050

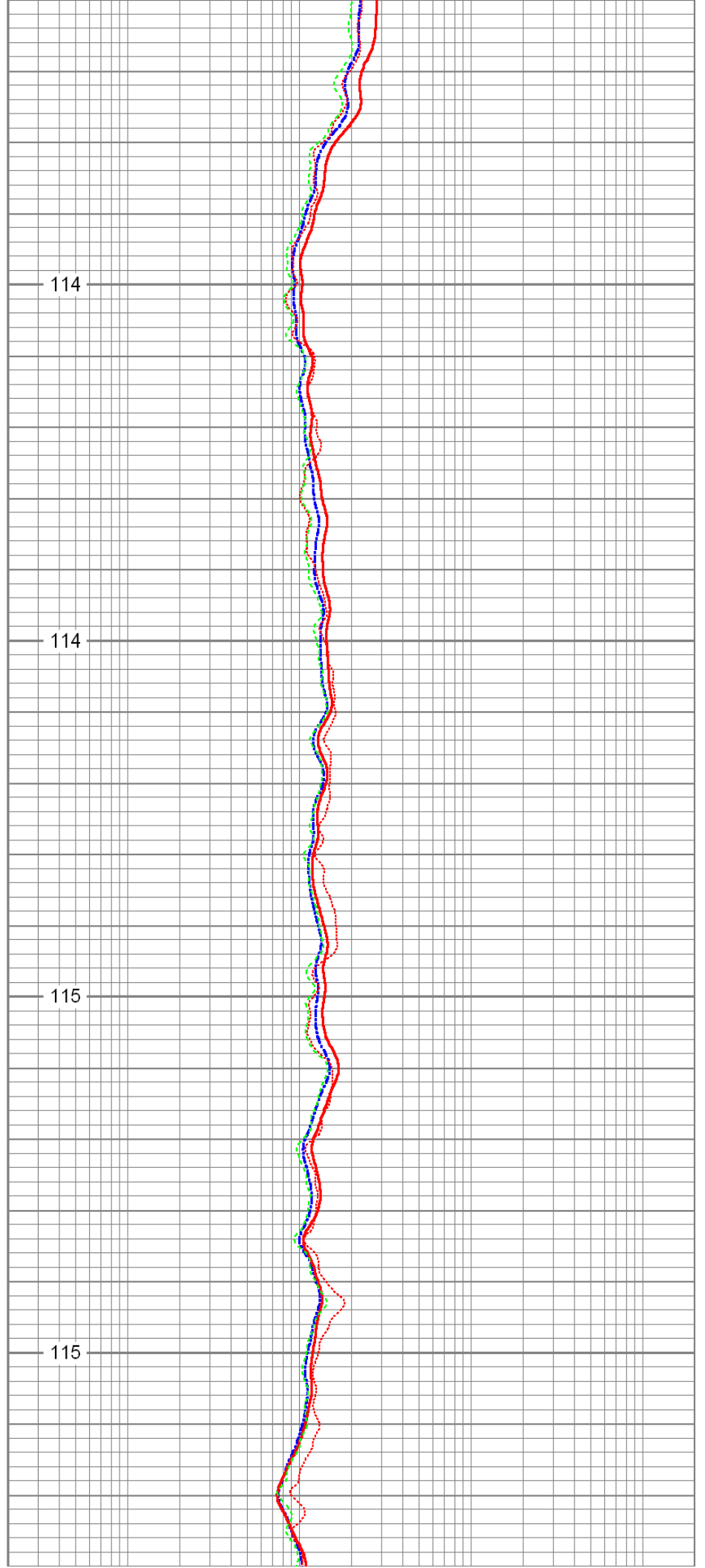
114

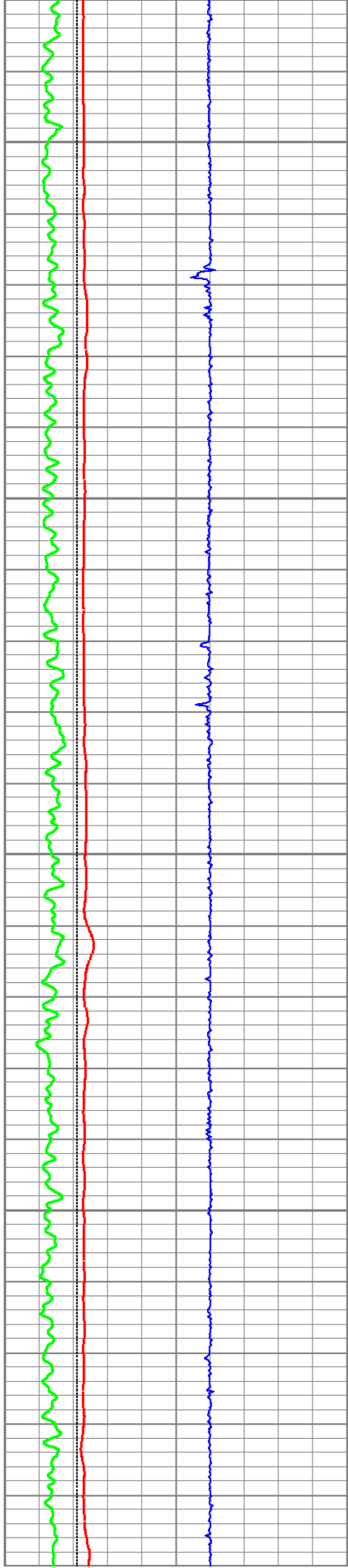
9100

115

9150

115





9200

115

9250

116

9300

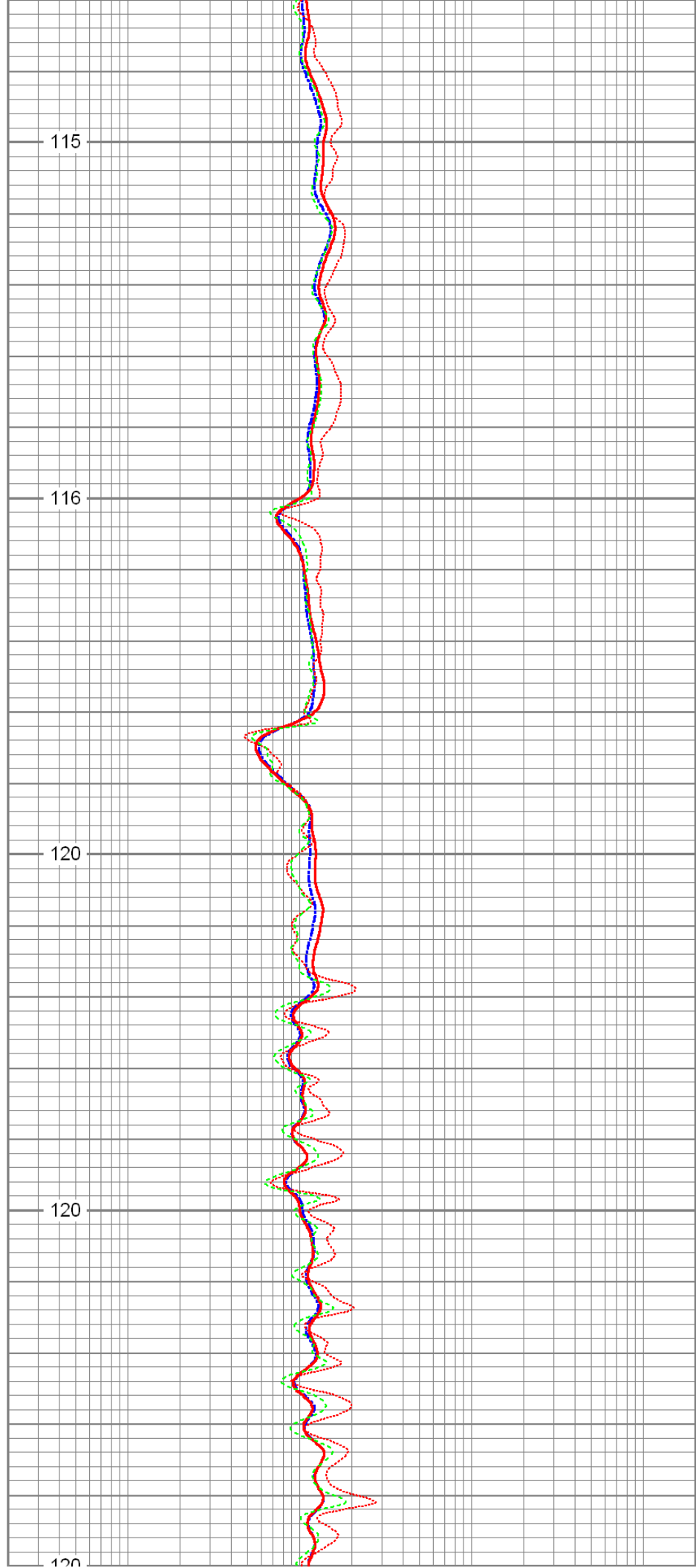
120

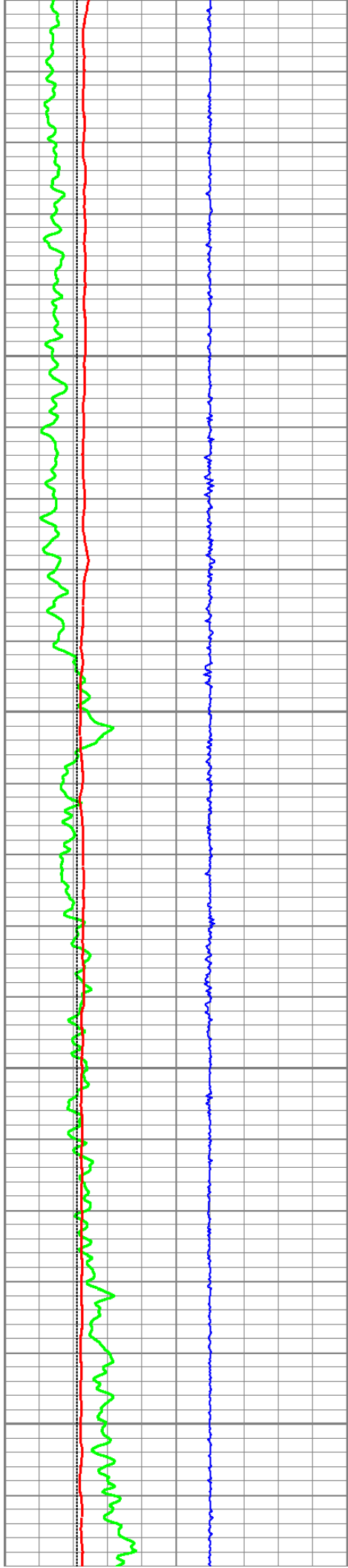
9350

120

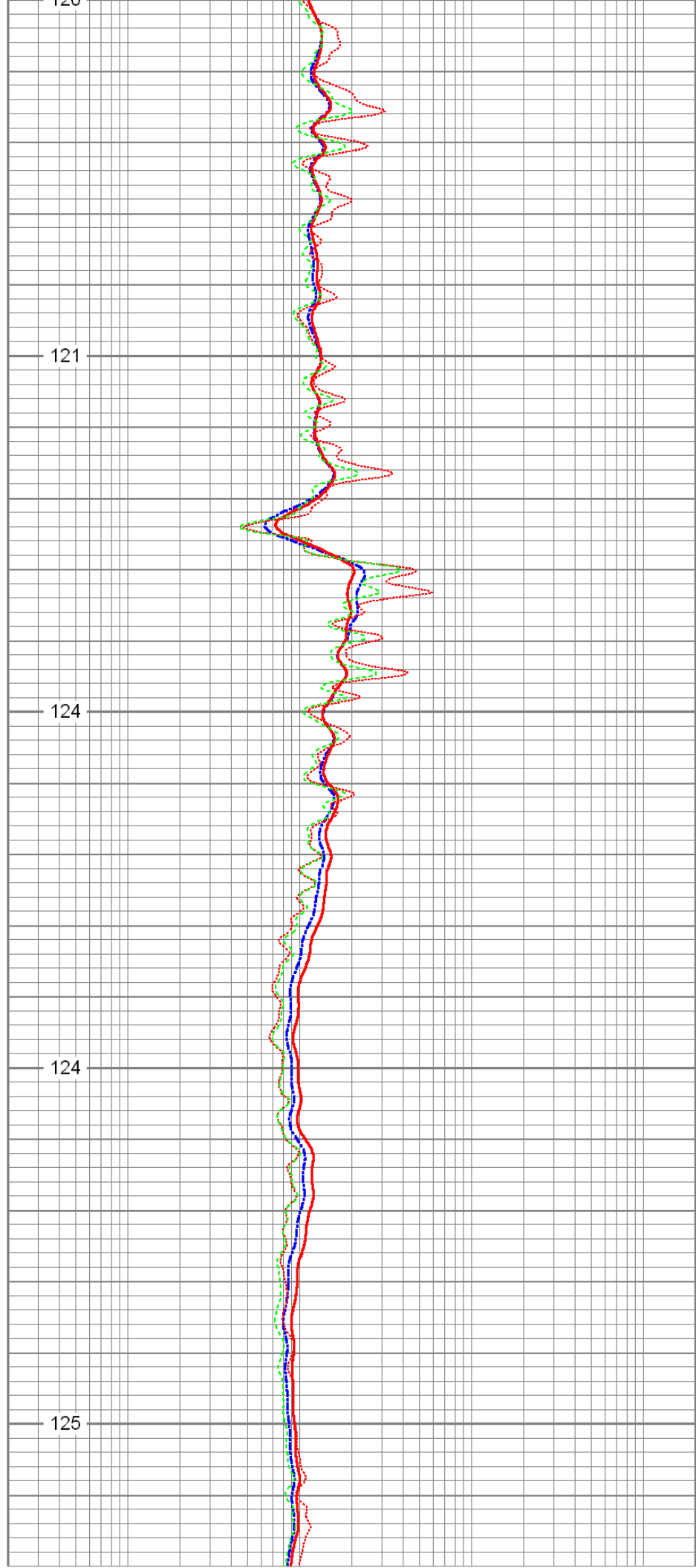
9400

120

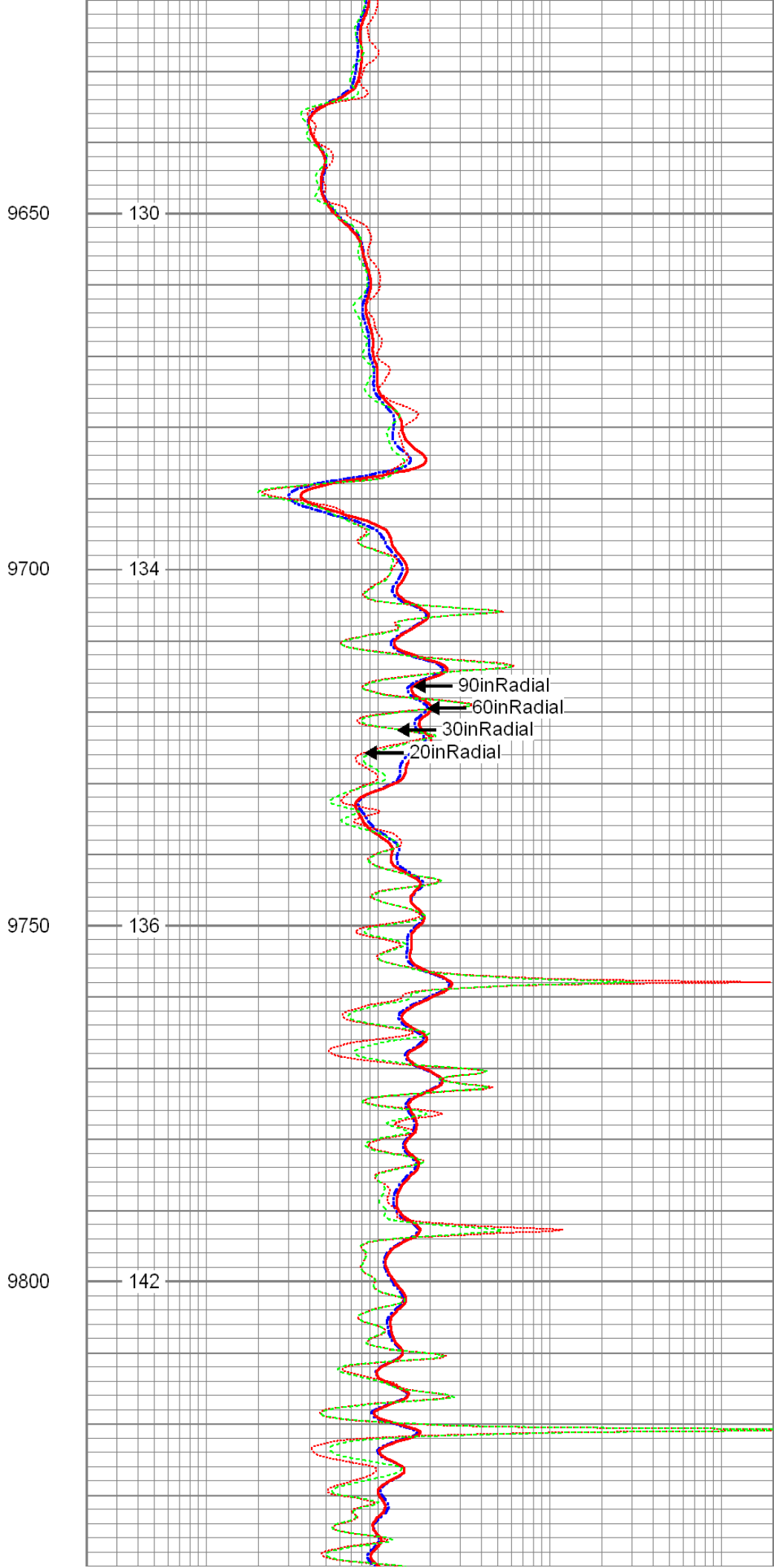
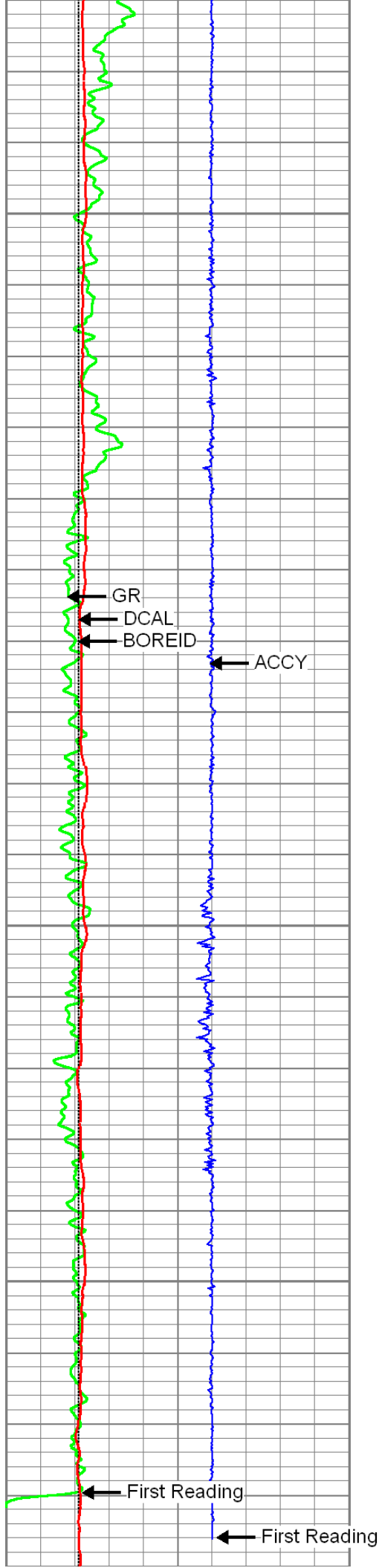


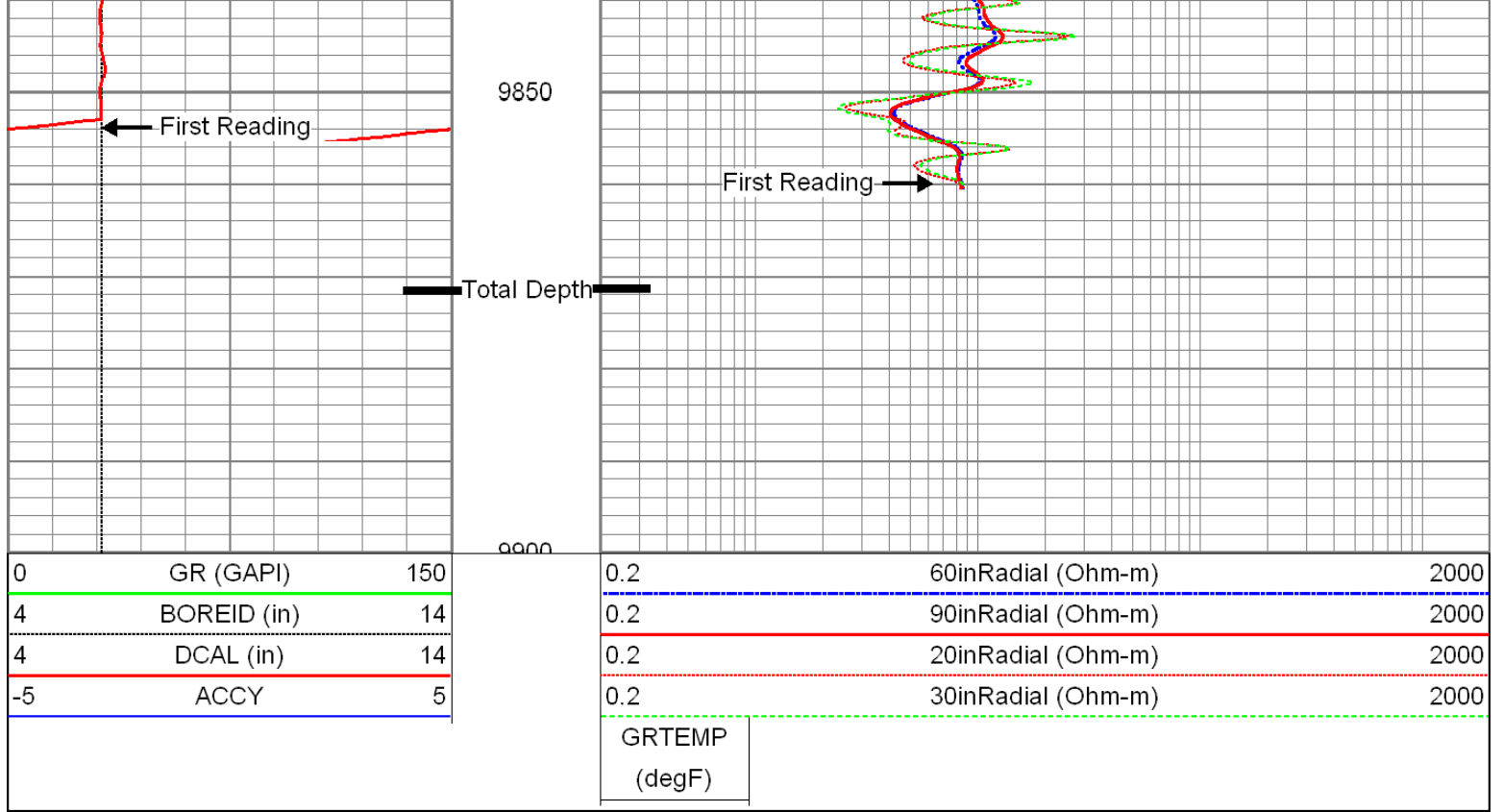


9400  
9450  
9500  
9550  
9600



120  
121  
124  
124  
125





## Log Variables

Database: C:\Warrior\Data\jones\_mem.db  
 Dataset: field/well/proc1/pass1.4

### Top - Bottom

|                  |                  |                  |                  |                    |                  |                  |
|------------------|------------------|------------------|------------------|--------------------|------------------|------------------|
| A                | BHCOR            | BHFL_TYPE        | BHFLRES<br>Ohm-m | BHFLRESSRC         | BHIDSRC          | BOREID<br>in     |
| 1                | On               | WBM              | 1                | MUDCELL            | CURVE            | 6.125            |
| BOTTEMP<br>degF  | CASED?           | CASEOD<br>in     | CASETHCK<br>in   | CEMWATERSA<br>kppm | CMNTTHCK<br>in   | DNBHC?           |
| 142              | No               | 4.5              | 0                | 0                  | 0                | NO               |
| DPORSEL          | FLUIDDEN<br>g/cc | FRMSALIN<br>kppm | LATNOR           | M                  | MATRXDEN<br>g/cc | MUDSALIN<br>kppm |
| RHOB             | 1                | 0                | Off              | 2                  | 2.71             | 0.8              |
| MudWgt<br>lb/gal | NPORSEL          | PEBHC?           | PERFS            | RESTMP SRC         | SO<br>in         | SRFTEMP<br>degF  |
| 8.4              | Limestone        | YES              | 0                | INTERNAL           | 0.5              | 65               |
| SZCOR            | TDEPTH<br>ft     | TMPCOR           | TOOLPOS          |                    |                  |                  |
| On               | 9894             | On               | Ec-centered      |                    |                  |                  |

### Calibration Report

Database File: jones\_mem.db  
 Dataset Pathname: proc1/pass1.4  
 Dataset Creation: Fri Jul 19 23:30:45 2013

### ThruBit Induction Calibration Report

Tool Model-Serial Number: PS-PS10R  
 Shop Calibration Performed: Thu Apr 25 13:32:52 2013

BASELINE

|        | R         | Expected           | X         | Expected          |
|--------|-----------|--------------------|-----------|-------------------|
| Freq 1 |           |                    |           |                   |
| A1     | -461.0270 | [-500.00, -400.00] | 56.6075   | [-500.00, 500.00] |
| A2     | -158.2710 | [-180.00, -100.00] | 17.5356   | [-500.00, 500.00] |
| A3     | -28.1828  | [-50.00, -10.00]   | -24.1976  | [-500.00, 500.00] |
| A4     | -15.9512  | [-30.00, -10.00]   | 228.7500  | [-500.00, 500.00] |
| A5     | -13.6283  | [-30.00, -10.00]   | 83.3784   | [-500.00, 500.00] |
| Freq 2 |           |                    |           |                   |
| A1     | -239.4930 | [-280.00, -180.00] | 7.6437    | [-500.00, 500.00] |
| A2     | -101.9710 | [-130.00, -50.00]  | -15.3668  | [-500.00, 500.00] |
| A3     | -20.6605  | [-50.00, -10.00]   | -67.3545  | [-500.00, 500.00] |
| A4     | -19.2090  | [-30.00, -10.00]   | 62.8732   | [-500.00, 500.00] |
| A5     | -18.5613  | [-30.00, -10.00]   | -43.4806  | [-500.00, 500.00] |
| Freq 3 |           |                    |           |                   |
| A1     | -151.7520 | [-180.00, -80.00]  | -66.7762  | [-500.00, 500.00] |
| A2     | -76.9346  | [-130.00, -30.00]  | -52.4590  | [-500.00, 500.00] |
| A3     | -16.9558  | [-50.00, -10.00]   | -107.3930 | [-500.00, 500.00] |
| A4     | -20.8968  | [-30.00, -10.00]   | -48.5169  | [-500.00, 500.00] |
| A5     | -21.4073  | [-30.00, -10.00]   | -139.7200 | [-500.00, 500.00] |
| Freq 4 |           |                    |           |                   |
| A1     | -80.6134  | [-120.00, -40.00]  | -200.7310 | [-500.00, 500.00] |
| A2     | -54.2909  | [-110.00, -10.00]  | -119.7920 | [-500.00, 500.00] |
| A3     | -13.3738  | [-50.00, -10.00]   | -179.0530 | [-500.00, 500.00] |
| A4     | -23.8747  | [-30.00, -10.00]   | -214.8970 | [-500.00, 500.00] |
| A5     | -26.8928  | [-30.00, -10.00]   | -307.2270 | [-500.00, 500.00] |

CALIBRATION COEFFICIENTS

|             | R            | Expected     | X       | Expected      |
|-------------|--------------|--------------|---------|---------------|
| Freq 1      |              |              |         |               |
| A1          | 0.9951       | [0.95, 1.05] | 0.0030  | [-0.05, 0.05] |
| A2          | 0.9924       | [0.95, 1.05] | 0.0036  | [-0.05, 0.05] |
| A3          | 0.9990       | [0.95, 1.05] | -0.0033 | [-0.05, 0.05] |
| A4          | 0.9957       | [0.95, 1.05] | 0.0066  | [-0.05, 0.05] |
| A5          | 1.0014       | [0.95, 1.05] | 0.0027  | [-0.05, 0.05] |
| Freq 2      |              |              |         |               |
| A1          | 0.9898       | [0.95, 1.05] | -0.0059 | [-0.05, 0.05] |
| A2          | 0.9868       | [0.95, 1.05] | -0.0051 | [-0.05, 0.05] |
| A3          | 0.9875       | [0.95, 1.05] | -0.0049 | [-0.05, 0.05] |
| A4          | 0.9911       | [0.95, 1.05] | -0.0022 | [-0.05, 0.05] |
| A5          | 0.9959       | [0.95, 1.05] | -0.0072 | [-0.05, 0.05] |
| Freq 3      |              |              |         |               |
| A1          | 0.9938       | [0.95, 1.05] | -0.0053 | [-0.05, 0.05] |
| A2          | 0.9913       | [0.95, 1.05] | -0.0045 | [-0.05, 0.05] |
| A3          | 0.9912       | [0.95, 1.05] | -0.0047 | [-0.05, 0.05] |
| A4          | 0.9951       | [0.95, 1.05] | -0.0017 | [-0.05, 0.05] |
| A5          | 1.0000       | [0.95, 1.05] | -0.0069 | [-0.05, 0.05] |
| Freq 4      |              |              |         |               |
| A1          | 1.0004       | [0.95, 1.05] | 0.0002  | [-0.05, 0.05] |
| A2          | 0.9973       | [0.95, 1.05] | 0.0007  | [-0.05, 0.05] |
| A3          | 0.9995       | [0.95, 1.05] | -0.0014 | [-0.05, 0.05] |
| A4          | 1.0021       | [0.95, 1.05] | 0.0035  | [-0.05, 0.05] |
| A5          | 1.0136       | [0.95, 1.05] | -0.0023 | [-0.05, 0.05] |
| Temperature | 32.8123 degC |              |         |               |

Tool Model-Serial Number: PS-PS32D  
 Source Number:  
 Shop Calibration Performed: Mon Jul 08 12:27:03 2013

REFERENCE

|           | Density | Units |
|-----------|---------|-------|
| Aluminium | 2.607   | g/cc  |
| Magnesium | 1.752   | g/cc  |

READINGS

| Outputs        | Counts  | Units | Expected           |
|----------------|---------|-------|--------------------|
| SS1 Background | 140.98  | cps   | [130.00, 170.00]   |
| LS1 Background | 142.39  | cps   | [130.00, 170.00]   |
| LS4 Background | 29.26   | cps   | [27.00, 35.00]     |
| SS1 Aluminium  | 4478.43 | cps   | [4500.00, 5500.00] |
| LS1 Aluminium  | 808.62  | cps   | [750.00, 950.00]   |
| LS4 Aluminium  | 912.65  | cps   | [843.00, 1068.00]  |
| SS1 Magnesium  | 7369.04 | cps   | [7000.00, 9000.00] |
| LS1 Magnesium  | 5165.24 | cps   | [5250.00, 6250.00] |
| LS1 Al + Fe    | 709.22  | cps   | [650.00, 800.00]   |
| LS4 Al + Fe    | 432.19  | cps   | [382.00, 471.00]   |

RESULTS

|              |        |                  |
|--------------|--------|------------------|
| SS Slope     | 1.67   | [1.52, 1.77]     |
| LS Slope     | 0.42   | [0.38, 0.45]     |
| PEF K Factor | 4.901  | [3.510, 6.170]   |
| PEF B Factor | -0.609 | [-0.700, -0.410] |

Caliper Shop Calibration performed: Mon Jul 08 12:27:03 2013

RESULTS

| Reference | Reading | Units |
|-----------|---------|-------|
| 12.00     | 1845.37 | in    |
| 9.00      | 2013.25 | in    |
| 6.00      | 2180.38 | in    |

DENSITY PRE-SURVEY CHECK Performed: Tue Jul 16 10:22:53 2013

| Outputs        | Counts | Units | Expected         |
|----------------|--------|-------|------------------|
| SS1 Background | 142.18 | cps   | [136.75, 145.21] |
| LS1 Background | 141.01 | cps   | [138.12, 146.66] |
| LS4 Background | 29.32  | cps   | [27.51, 31.02]   |

CALIPER PRE-SURVEY CHECK Performed: Tue Jul 16 10:23:28 2013

| Reference | Readings | Units | Expected     |
|-----------|----------|-------|--------------|
| 9.00      | 9.10     | in    | [8.80, 9.20] |

|                               |                          |
|-------------------------------|--------------------------|
| Tool Model-Serial Number:     | PS-PS06N                 |
| Source Number:                |                          |
| Calibration Tank Temperature: | 85.5 degF                |
| Shop Calibration Performed:   | Mon Jul 08 13:55:27 2013 |

## BACKGROUND MEASUREMENT

| Outputs   | Measured | Units | Expected |
|-----------|----------|-------|----------|
| SS Counts | 0.0      | cps   | <10      |
| LS Counts | 0.1      | cps   | <4       |

## WATER TANK REFERENCE

| Outputs         | Measured | Units | Expected     |
|-----------------|----------|-------|--------------|
| SS Counts       | 2679.6   | cps   |              |
| LS Counts       | 90.3     | cps   |              |
| Tank Ratio Ref  | 30.9580  | SS/LS |              |
| Tank Ratio      | 29.6590  | SS/LS |              |
| Tank Ratio Gain | 1.0438   |       | [0.85, 1.15] |

## ALUMINUM SLEEVE REFERENCE

| Outputs         | Measured | Units | Expected     |
|-----------------|----------|-------|--------------|
| SS Counts       | 29793.6  | cps   |              |
| LS Counts       | 2858.7   | cps   |              |
| Al Ratio Ref    | 10.797   | SS/LS |              |
| Al Ratio        | 10.878   | SS/LS |              |
| Al Ratio Gain   | 0.99     |       | [0.90, 1.10] |
| Sleeve Porosity | 14.46    | pu    |              |

PRE-SURVEY BACKGROUND CHECK Performed: Fri Jul 05 16:13:04 2013

| Outputs   | Measured | Units | Expected |
|-----------|----------|-------|----------|
| SS Counts | 0.0      | cps   | <10      |
| LS Counts | 0.1      | cps   | <4       |

## Gamma Ray Calibration Report

|                           |                          |
|---------------------------|--------------------------|
| Tool Model-Serial Number: | PS-PS21T                 |
| Performed:                | Mon Jul 08 14:18:30 2013 |
| Calibrator Value:         | 176.8 GAPI               |
| Background Reading:       | 66.2 cps                 |
| Calibrator Reading:       | 457.2 cps                |
| Sensitivity:              | 0.3850 GAPI/cps          |

## Inclinometer Calibration Report

Performed:

Sun Jun 13 14:33:21 1993

|                 | Low Read. | High Read. | Low Ref. | High Ref. |     |
|-----------------|-----------|------------|----------|-----------|-----|
| X Accelerometer | 0.00      | 1.00       | 0.00     | 1.00      | gee |
| Y Accelerometer | 0.00      | 1.00       | 0.00     | 1.00      | gee |
| Z Accelerometer | 0.00      | 1.00       | 0.00     | 1.00      | gee |

| Sensor               | Offset (ft)             | Schematic | Description                                   | Len (ft) | OD (in) | Wt (lb) |
|----------------------|-------------------------|-----------|---|----------|---------|---------|
| ThruBit              | 67.59                   |           | Cablehead-S<br>Solid Weakpoint                | 2.31     | 2.13    | 5.00    |
| ThruBit              | 65.28                   |           | PSBDOT  | 3.87     | 2.25    | 35.00   |
| ThruBit              | 61.41                   |           | HangOff_Tool                                  | 5.00     | 2.38    | 60.00   |
| ThruBit              | 56.41                   |           | Swivel  | 2.25     | 2.06    | 25.00   |
| ThruBit              | 54.16                   |           | 10-1  | 0.75     | 2.13    | 3.95    |
| TBBAT                | 53.41                   |           | TBBAT-A (PS07B)<br>ThruBit Battery            | 6.13     | 2.13    | 38.20   |
| TBBAT2               | 47.29                   |           | TBBAT2-A (PS40B)<br>ThruBit Battery           | 6.13     | 2.13    | 40.00   |
| TMG<br>GR<br>GRTEMP  | 41.16<br>41.04<br>40.20 |           | TMG-PS (PS21T)<br>ThruBit Telemetry Gamma Ray | 6.13     | 2.13    | 45.00   |
| ThruBit              | 35.04                   |           | Decentralizer<br>Decentralizer (Small)        | 4.50     | 2.13    | 70.00   |
| CNLSC                | 28.60                   |           | TBN-PS (PS06N)<br>ThruBit Neutron             | 4.77     | 2.13    | 63.00   |
| LSW1<br>DCAL         | 18.04<br>17.13          |           | TBD-PS (PS32D)<br>ThruBit Density             | 10.48    | 2.13    | 91.00   |
| A1_P<br>A2_P<br>A3_P | 10.60<br>10.10<br>9.35  |           | TBI-PS (PS10R)                                | 15.29    | 2.13    | 94.00   |

A4\_P 8.35  
A5\_P 6.60

ThruBit Induction

Dataset: jones\_mem.db: field/well/proc1/pass1.4  
 Total Length: 67.59 ft  
 Total Weight: 570.15 lb  
 O.D.: 2.38 in



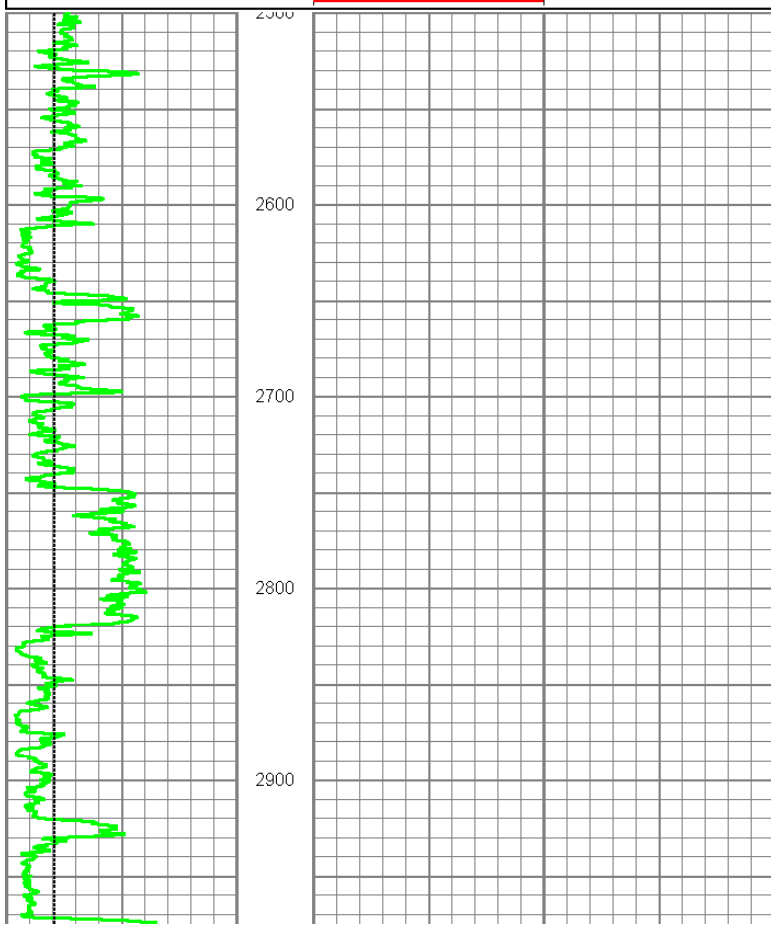
Company SANDRIDGE ENERGY, INC.  
 Well JONES 3506 1-13H  
 Field WAKITA  
 County HARPER  
 State KANSAS

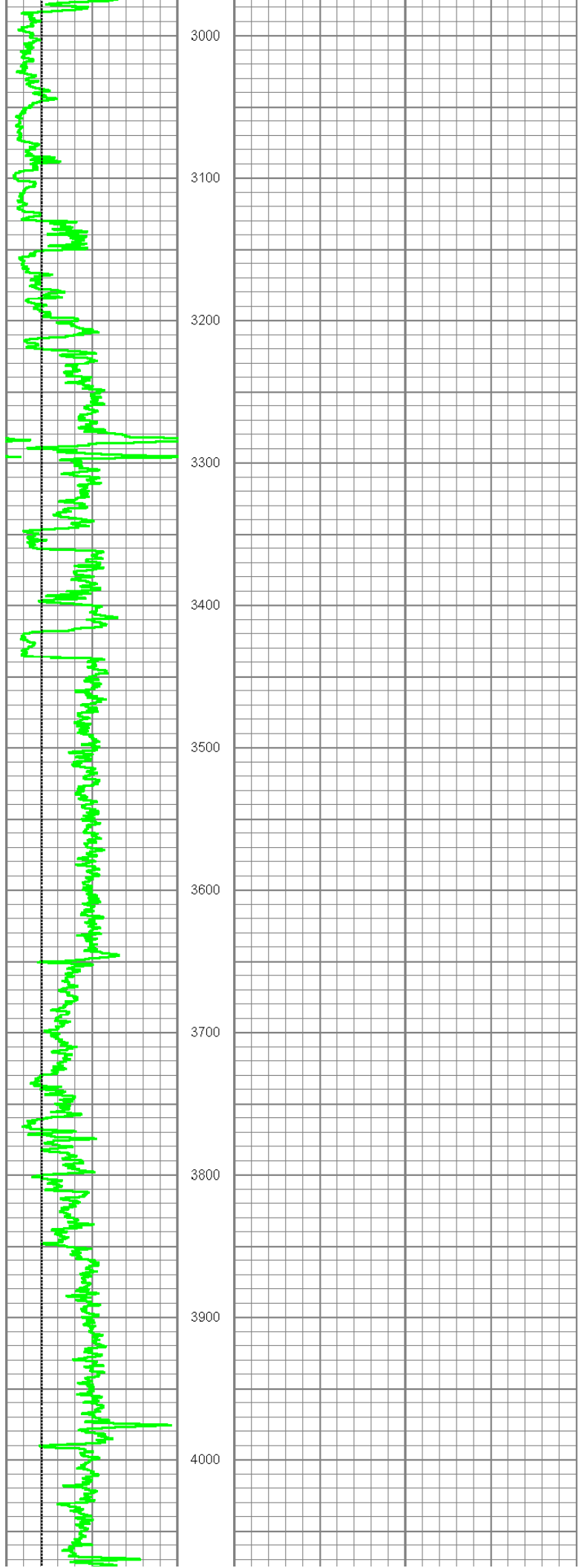
**ThruBit**  
A Schlumberger Company

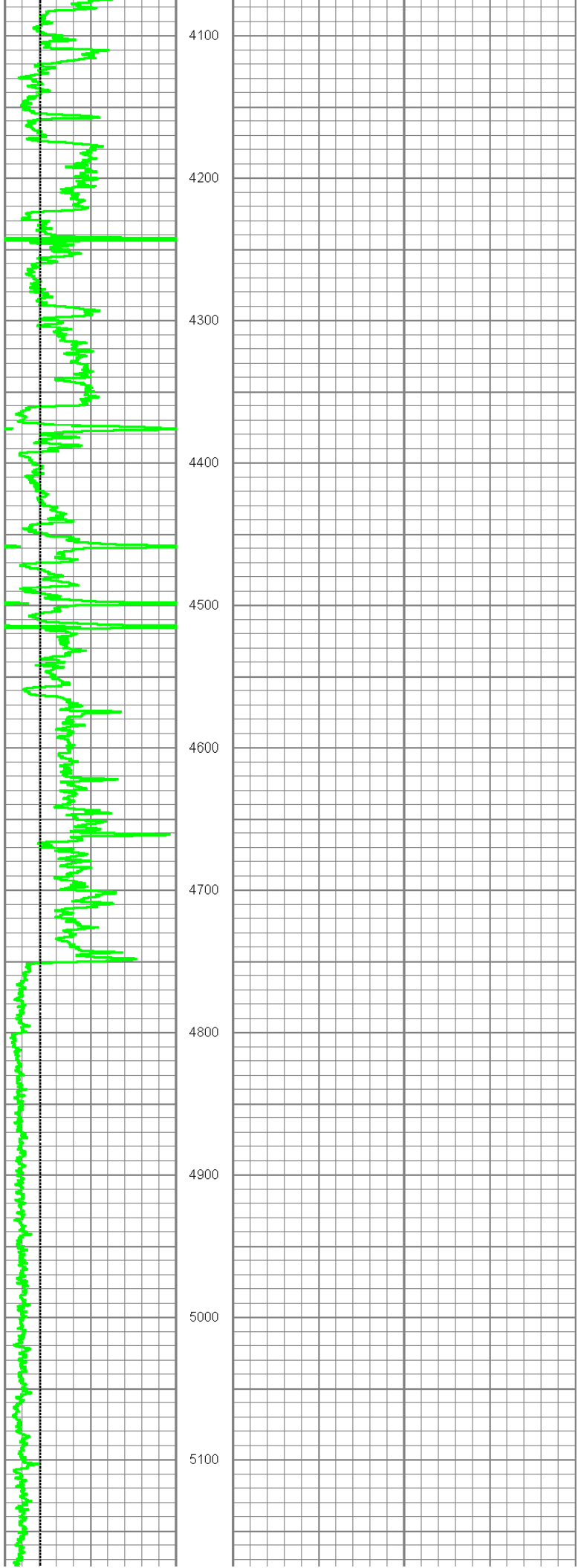
## MAIN PASS

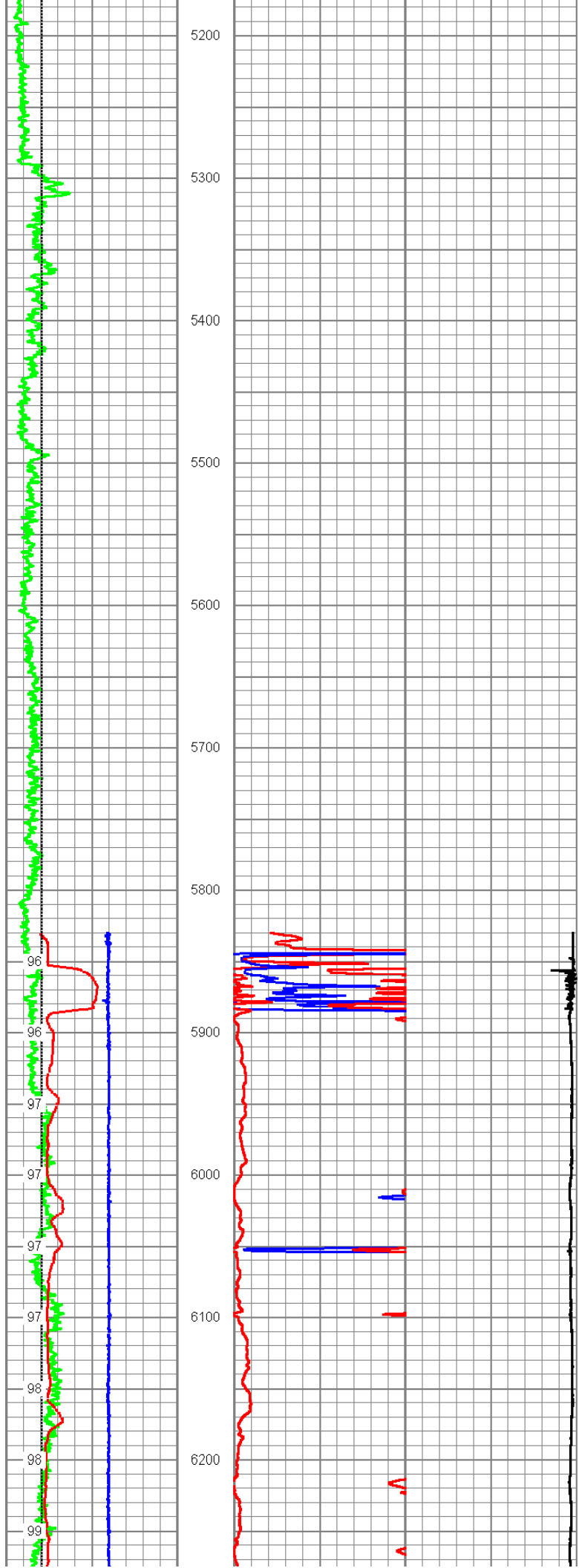
Database File: jones\_mem.db  
 Dataset Pathname: proc1/pass1.4  
 Presentation Format: 6\_2r\_chk  
 Dataset Creation: Fri Jul 19 23:30:45 2013  
 Charted by: Depth in Feet scaled 1:1200

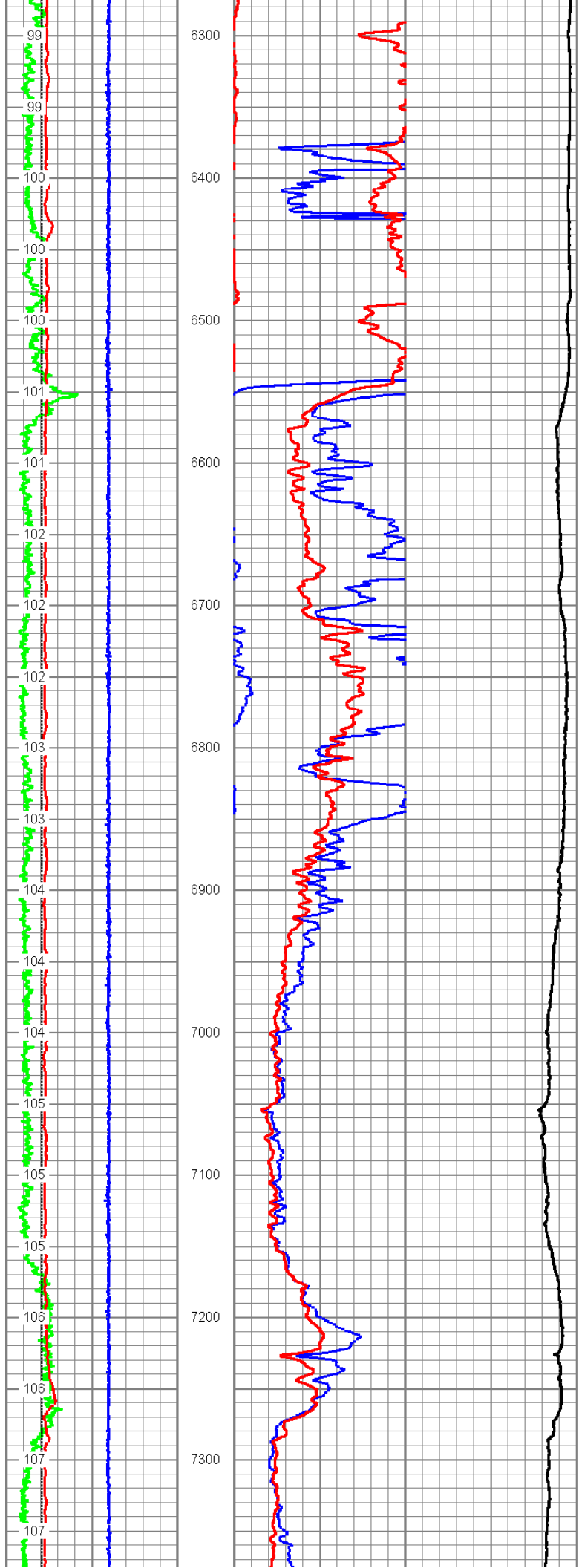
|               |                         |     |   |
|---------------|-------------------------|-----|---|
| 0             | GR (GAPI)               | 150 |   |
| 4             | DCAL (in)               | 14  |   |
| -5            | ACCY                    | 5   |   |
| 4             | BOREID (in)             | 14  |   |
| GRTEMP (degF) |                         |     |   |
|               | 20in 2ft Res            |     |   |
|               | 50 (Ohm-m)              | 500 |   |
|               | 90in 2ft Res            |     |   |
|               | 50 (Ohm-m)              | 500 |   |
|               | 1000 DEEP COND (mmho/m) |     | 0 |
|               | 0 20in 2ft Res (Ohm-m)  | 50  |   |
|               | 0 90in 2ft Res (Ohm-m)  | 50  |   |

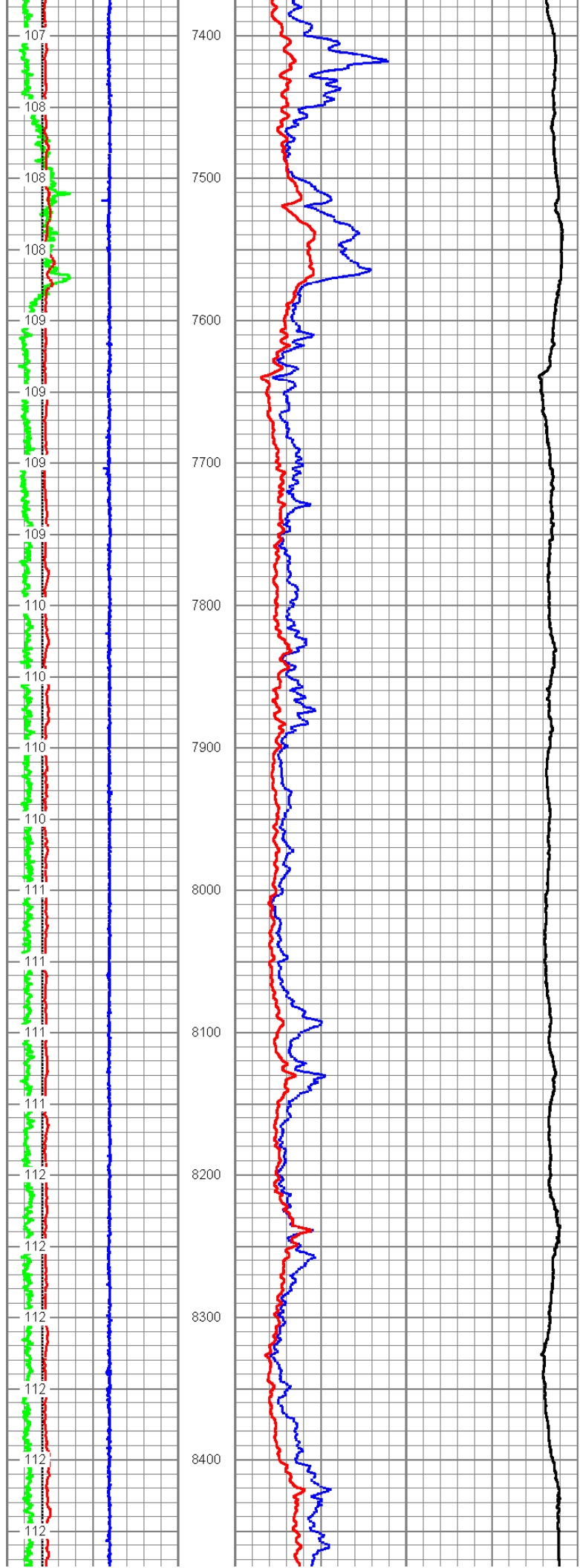


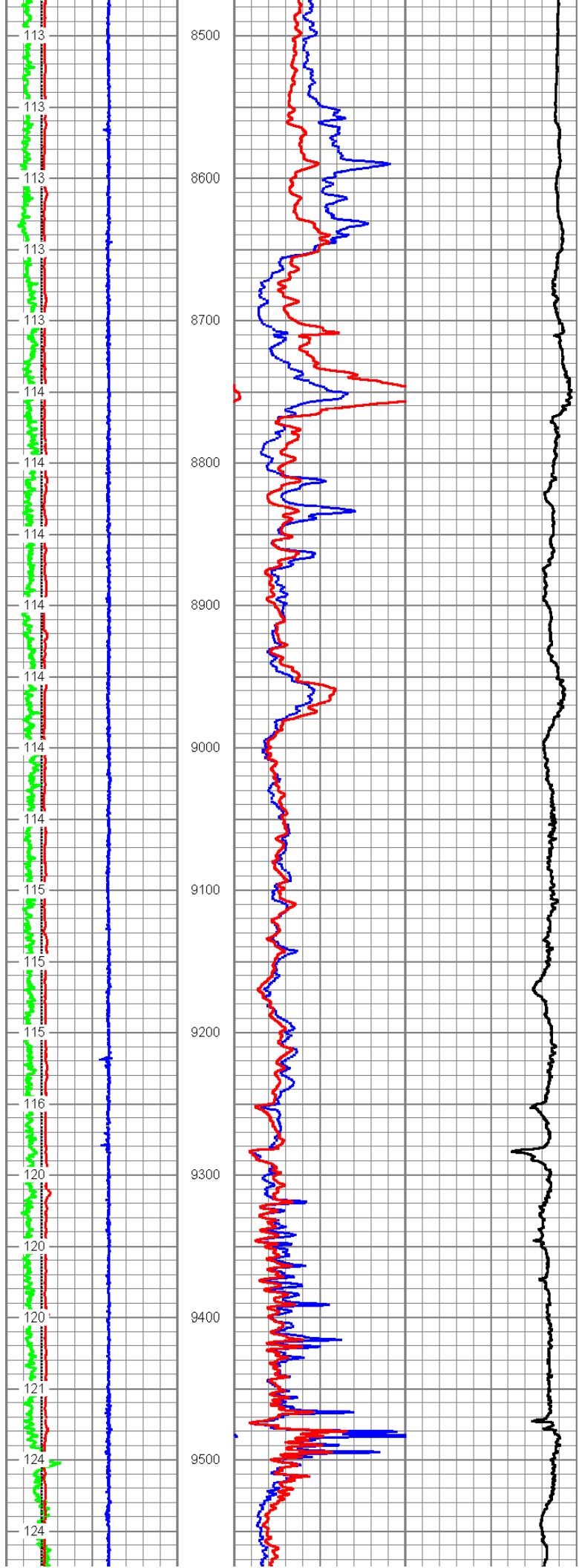


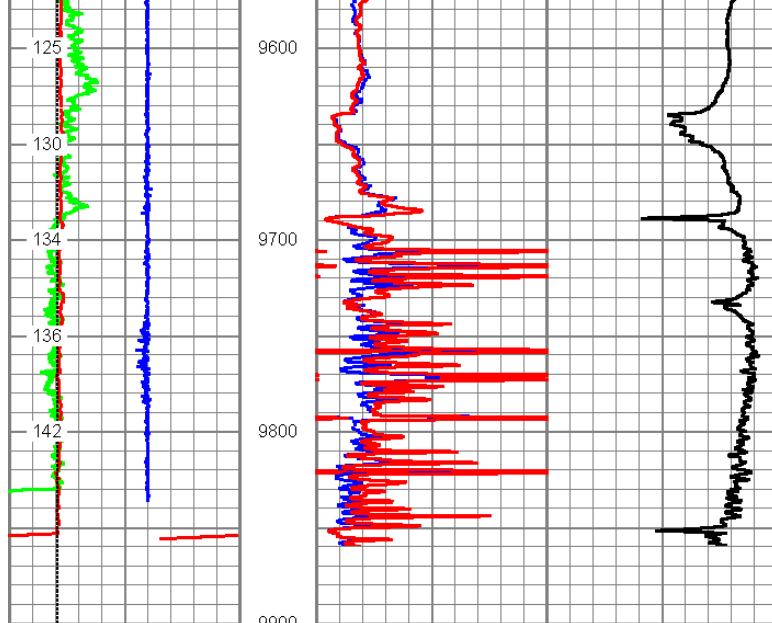












|    |             |     |
|----|-------------|-----|
| 0  | GR (GAPI)   | 150 |
| 4  | DCAL (in)   | 14  |
| -5 | ACCY        | 5   |
| 4  | BOREID (in) | 14  |

GRTEMP  
(degF)

|                         |     |
|-------------------------|-----|
| 20in 2ft Res            |     |
| 50 (Ohm-m)              | 500 |
| 90in 2ft Res            |     |
| 50 (Ohm-m)              | 500 |
| 1000 DEEP COND (mmho/m) | 0   |

|                        |    |
|------------------------|----|
| 0 20in 2ft Res (Ohm-m) | 50 |
| 0 90in 2ft Res (Ohm-m) | 50 |