

HALLIBURTON

CEMENT BOND LOG  
GR-CCL

|                                    |  |  |  |  |  |  |  |
|------------------------------------|--|--|--|--|--|--|--|
| Company                            |  |  |  | URSA OPERATING COMPANY                           |  |  |  |
| Well                               |  |  |  | BMC D 32B-18-07-95                               |  |  |  |
| Field                              |  |  |  | WILDCAT  |  |  |  |
| County                             |  |  |  | GARFIELD State CO                                |  |  |  |
| Company                            |  |  |  | URSA OPERATING COMPANY                           |  |  |  |
| Well                               |  |  |  | BMC D 32B-18-07-95                               |  |  |  |
| Field                              |  |  |  | WILDCAT  |  |  |  |
| County                             |  |  |  | GARFIELD State CO                                |  |  |  |
| API No.: 0504523270000             |  |  |  | Serv #: 904057344                                |  |  |  |
| Location: SHL: 1260' FNL 2323' FWL |  |  |  | Other Services                                   |  |  |  |
| BHL:1929' FNL & 1993' FWL          |  |  |  | JB-GR<br>CBL-M                                   |  |  |  |
| Permanent Datum                    |  |  |  | Ground Level Elevation 5268'                     |  |  |  |
| Log Measured From                  |  |  |  | KB , 17 Ft. above perm. datum                    |  |  |  |
| Drilling Measured From             |  |  |  | KB   |  |  |  |
| Date @ Time Logged                 |  |  |  | 28-MAY-2017                                      |  |  |  |
| Run No.                            |  |  |  | ONE  |  |  |  |
| Depth - Driller                    |  |  |  | 6752 FT  |  |  |  |
| Depth - Logger                     |  |  |  | 6304 FT  |  |  |  |
| Bottom - Logged Interval           |  |  |  | 6296 FT  |  |  |  |
| Top - Log Interval                 |  |  |  | 1700 FT  |  |  |  |
| Max. Recorded Temp.                |  |  |  | 192 °F   |  |  |  |
| CEMENTING DATA                     |  |  |  | Surface Protection String                        |  |  |  |
| Date / Time Cemented               |  |  |  | String   |  |  |  |
| Primary / Squeeze                  |  |  |  | String   |  |  |  |
| Expected Compressive Strength      |  |  |  | psi@ hrs   |  |  |  |
| Cement Volume                      |  |  |  | psi@ hrs   |  |  |  |
| Cement Type / Weight               |  |  |  | /  |  |  |  |
| Formulation                        |  |  |  | /  |  |  |  |
| Mud Type / Mud Wgt.                |  |  |  | /  |  |  |  |
| Borehole Record                    |  |  |  | Casing & Tubing Record                           |  |  |  |
| Run Number                         |  |  |  | Bit From To Size Weight From To                  |  |  |  |
| ONE                                |  |  |  | 24" SURFACE 60" 16" 75 SURFACE 60"               |  |  |  |
| TWO                                |  |  |  | 12.25" SURFACE 1748.9' 8.625" 32 SURFACE 1700'   |  |  |  |
| THREE                              |  |  |  | 7.875" SURFACE 6756.2' 4.5" 11.6 SURFACE 6752.2' |  |  |  |

<<< Fold Here >>>

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

HES Reservoir Monitor Log First run in to the Hole  
Log Correlated By the KB 17'  
Log Interval per customer Request  
Log Ran in combo with RMT-i tool

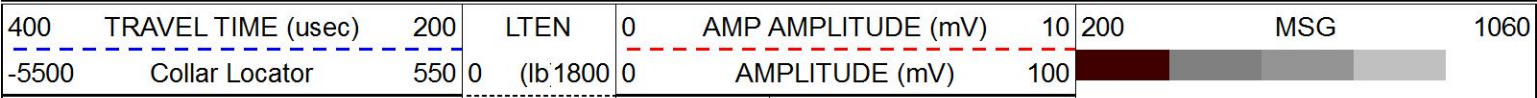
**\*\*THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES ROCK SPRING WY\*\***

HALLIBURTON

MAIN PASS

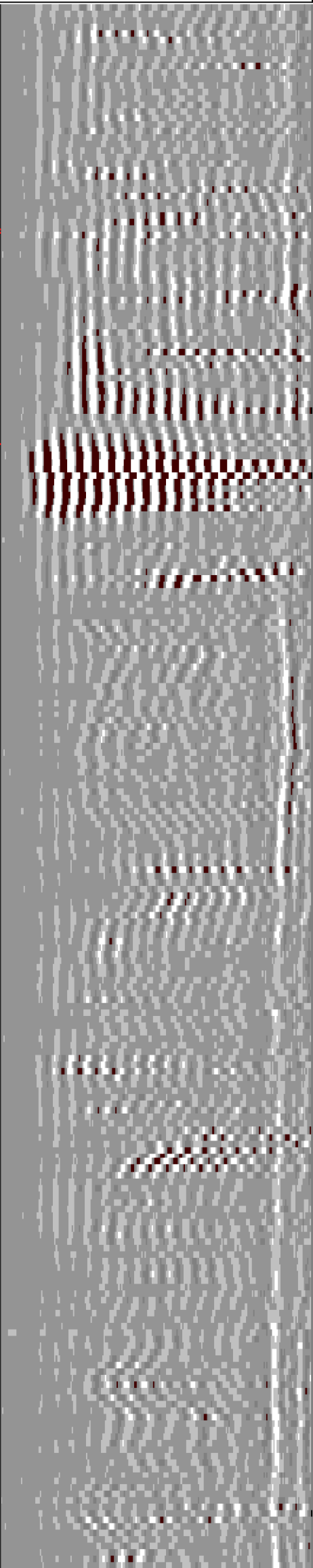
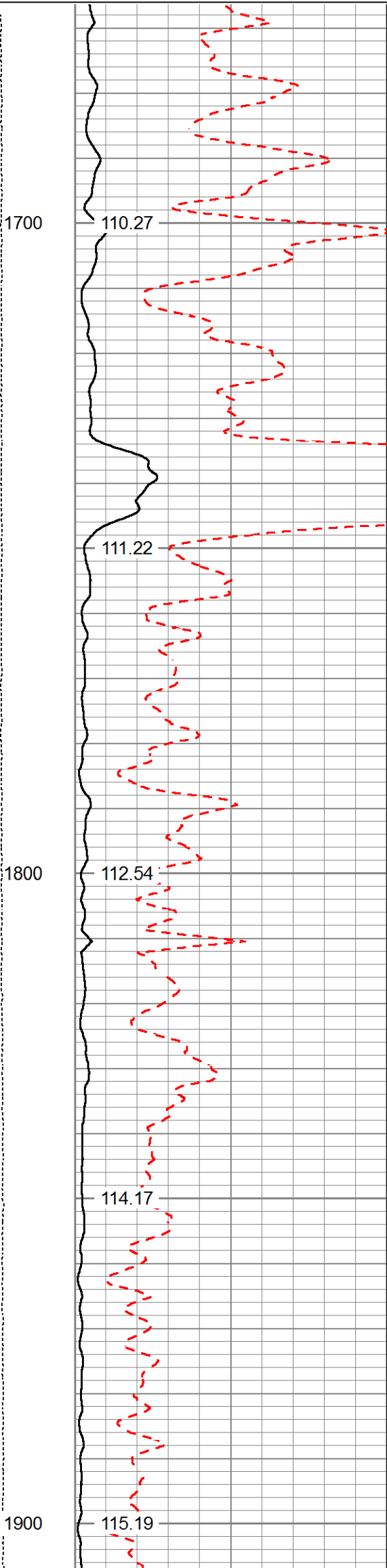
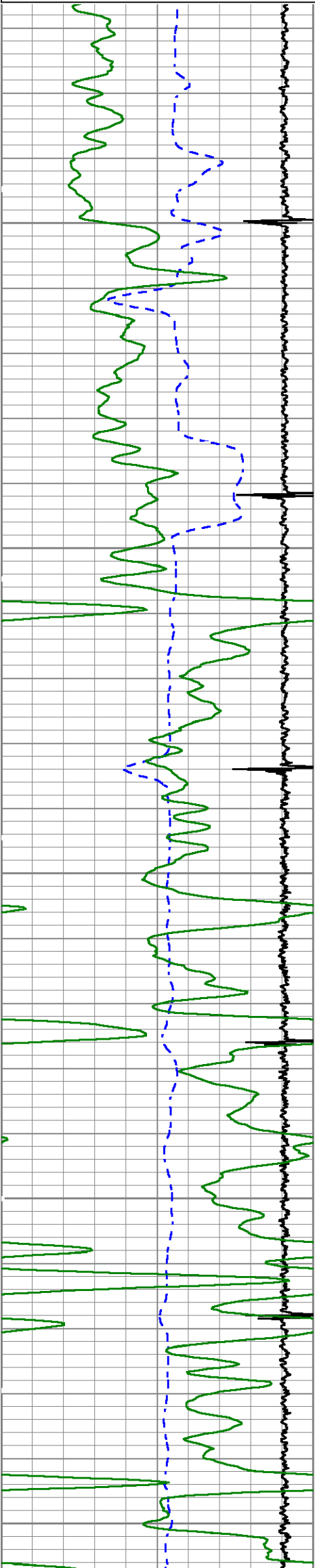
5"=100'

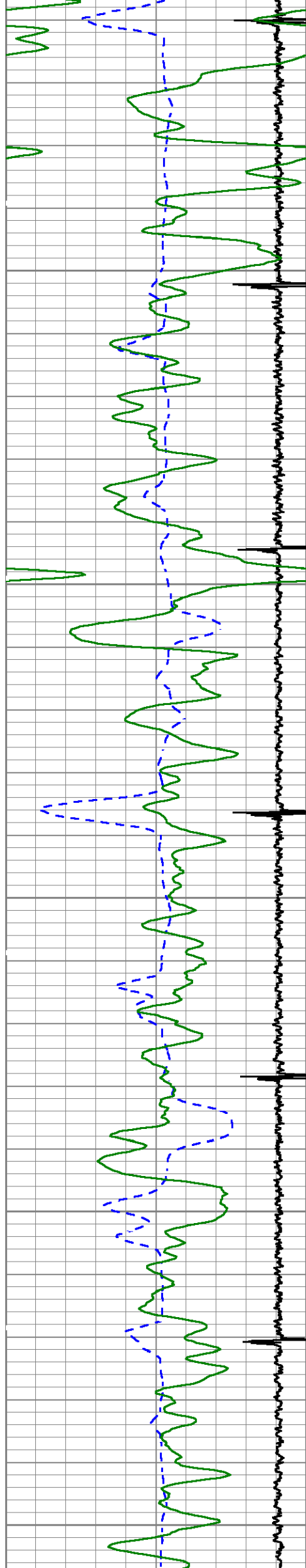
|                     |                                 |
|---------------------|---------------------------------|
| Database File       | bmc d 32b-18-07-95.db           |
| Dataset Pathname    | WC/BMC_D_32B-18-07-95/run1/MAIN |
| Presentation Format | cbl_main                        |
| Dataset Creation    | Sun May 28 00:35:12 2017        |
| Charted by          | Depth in Feet scaled 1:240      |



Gamma Ray (GAPI) 150

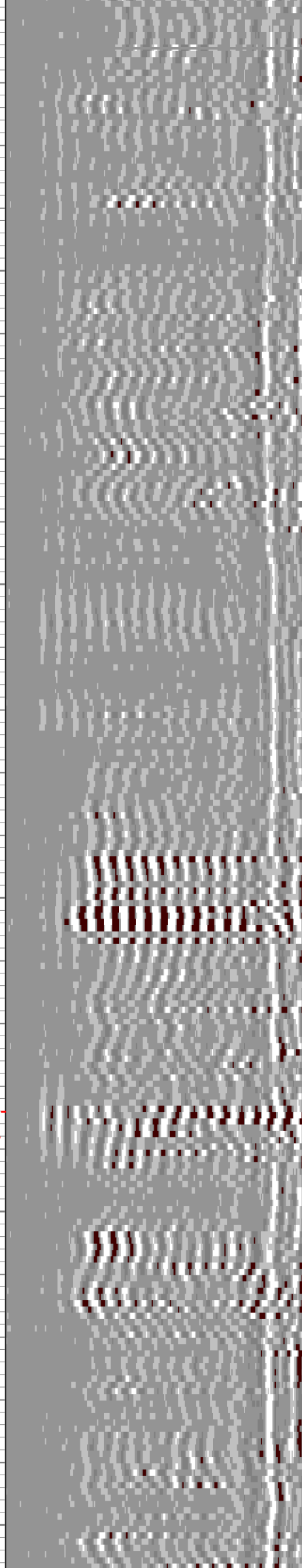
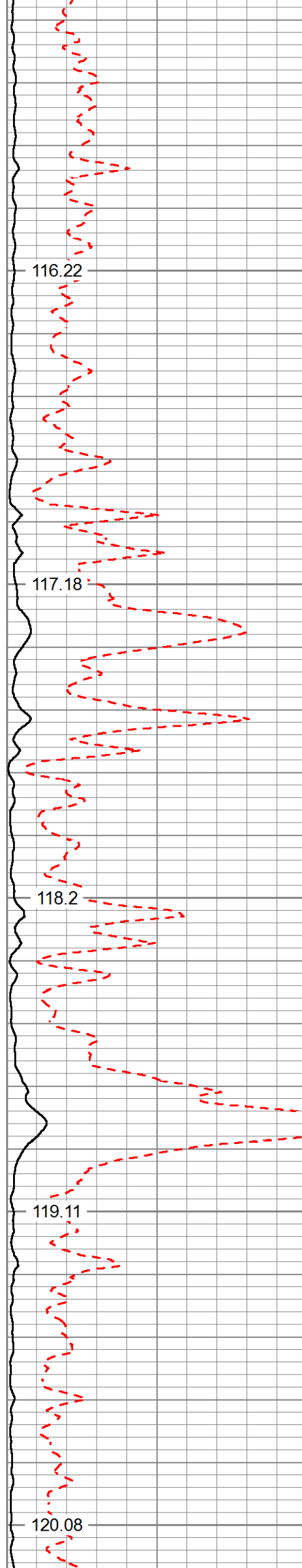
Cbit temp  
(degF)

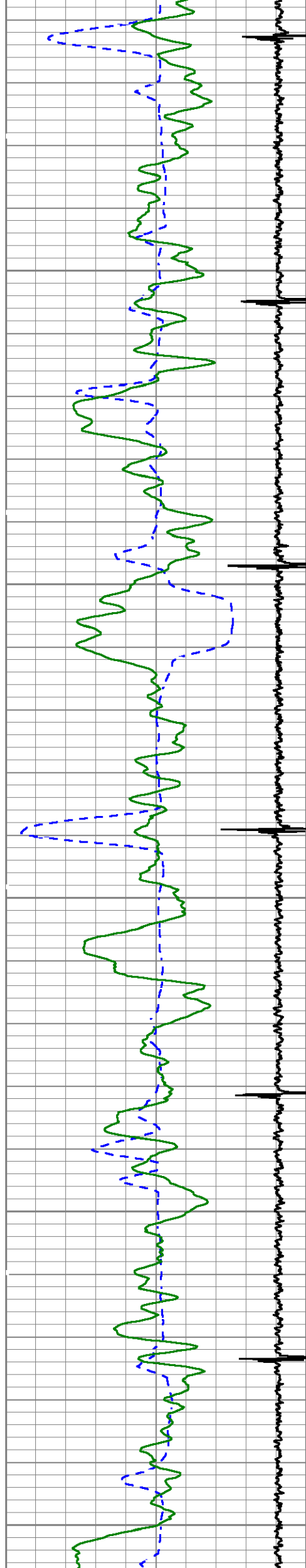




2000

2100

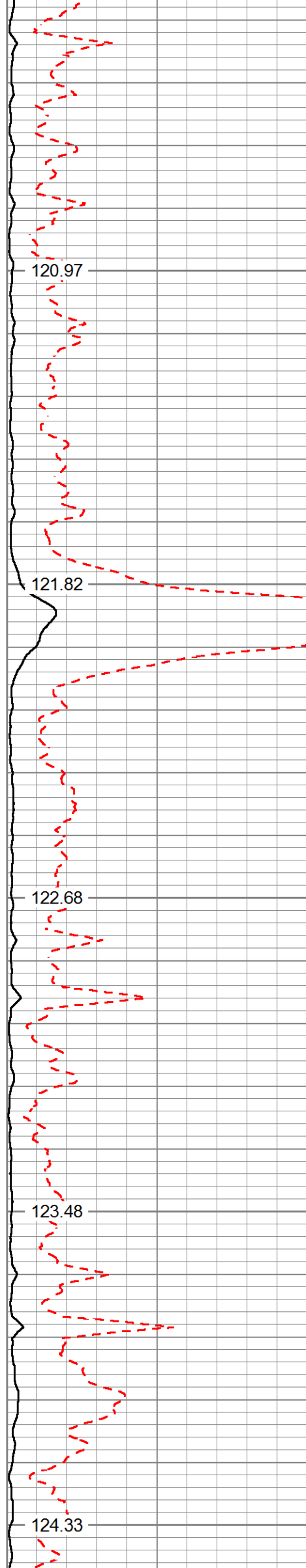




2200

2300

2400



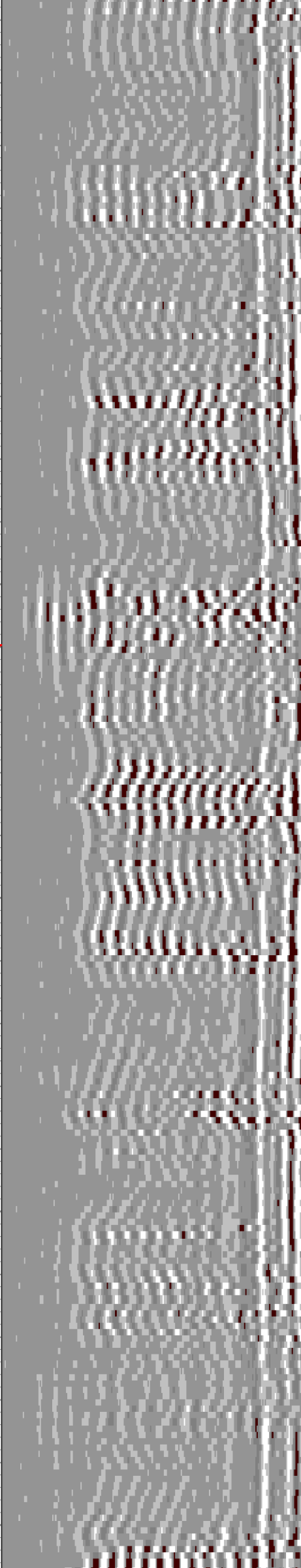
120.97

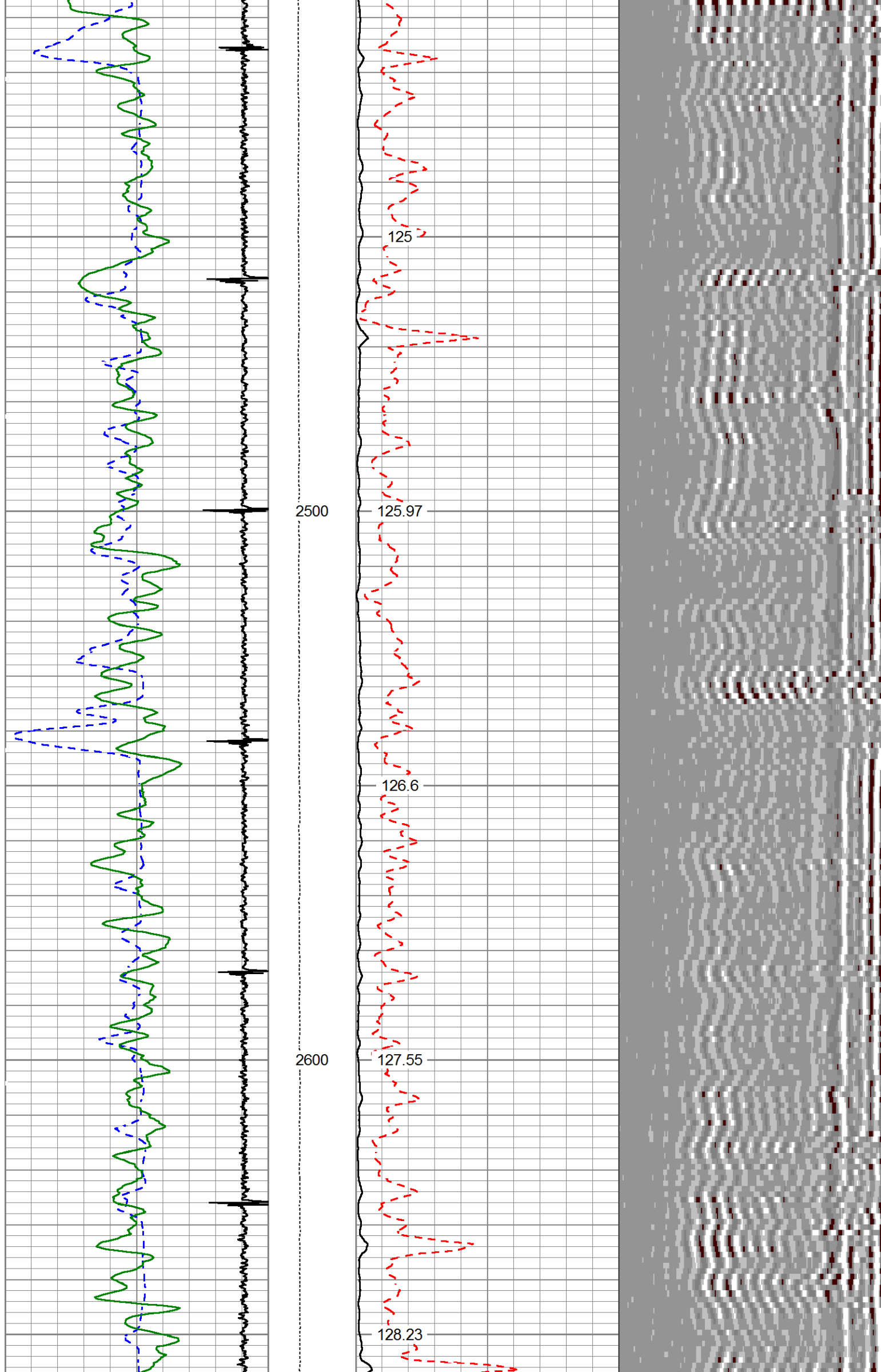
121.82

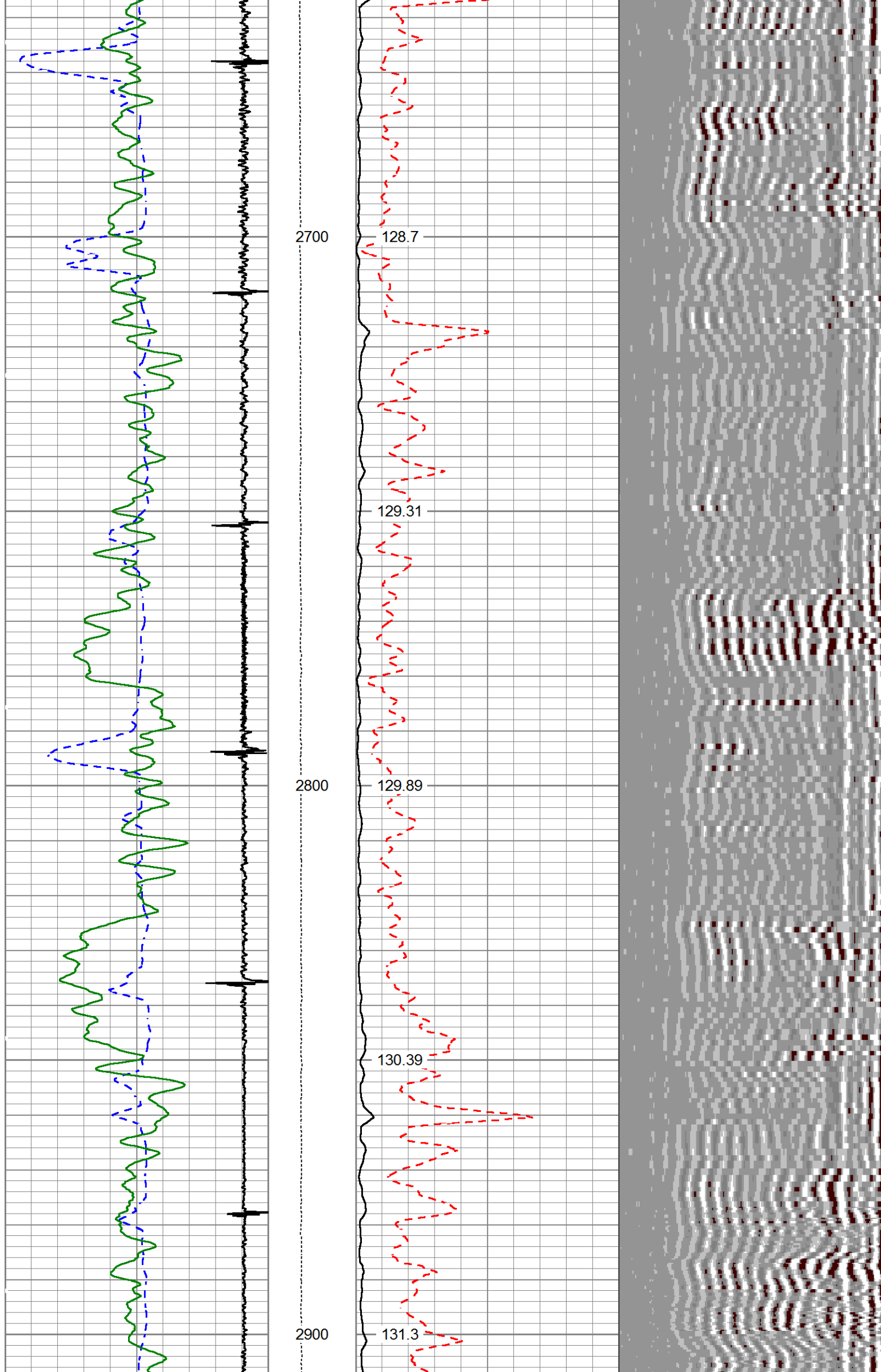
122.68

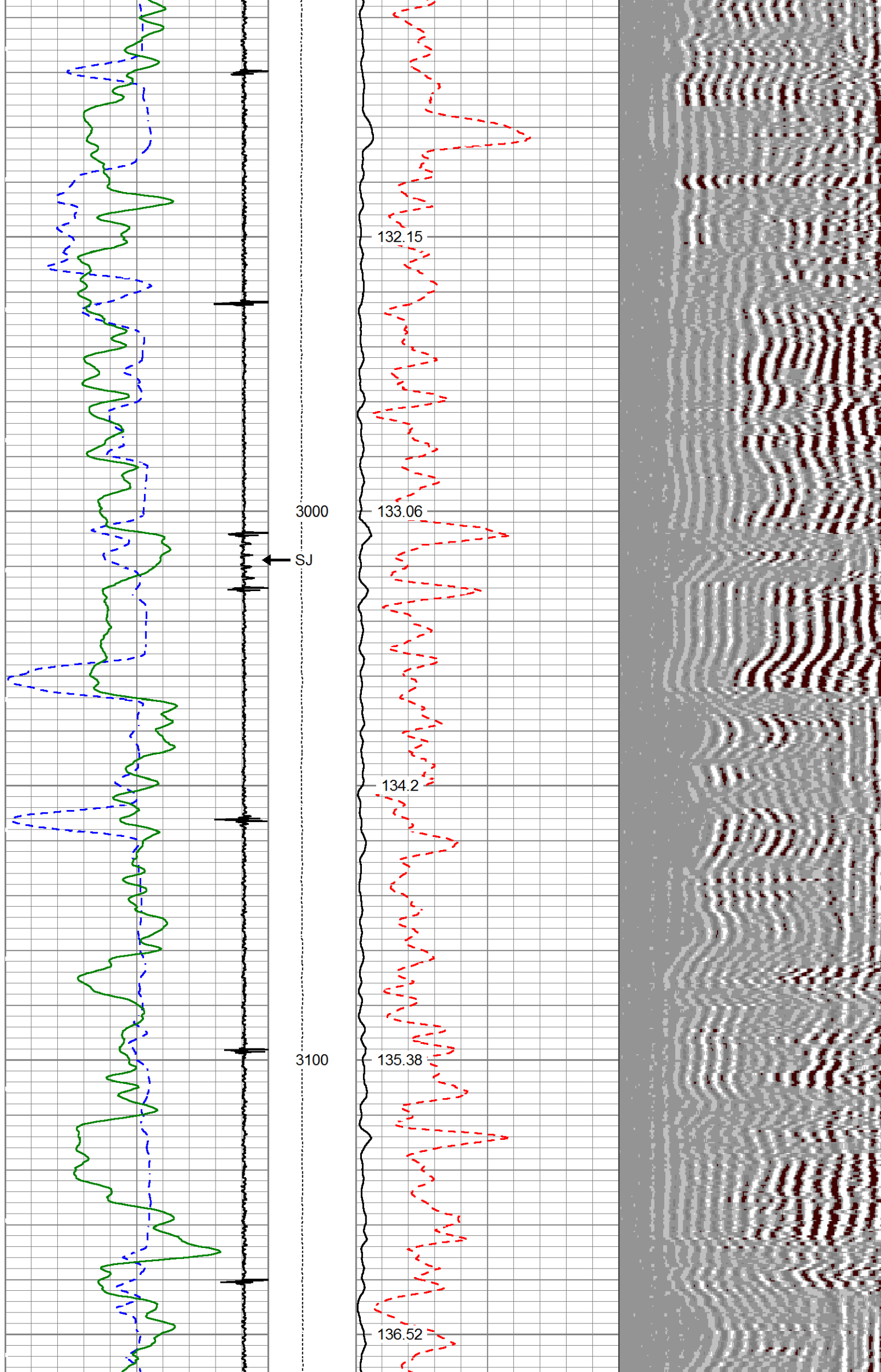
123.48

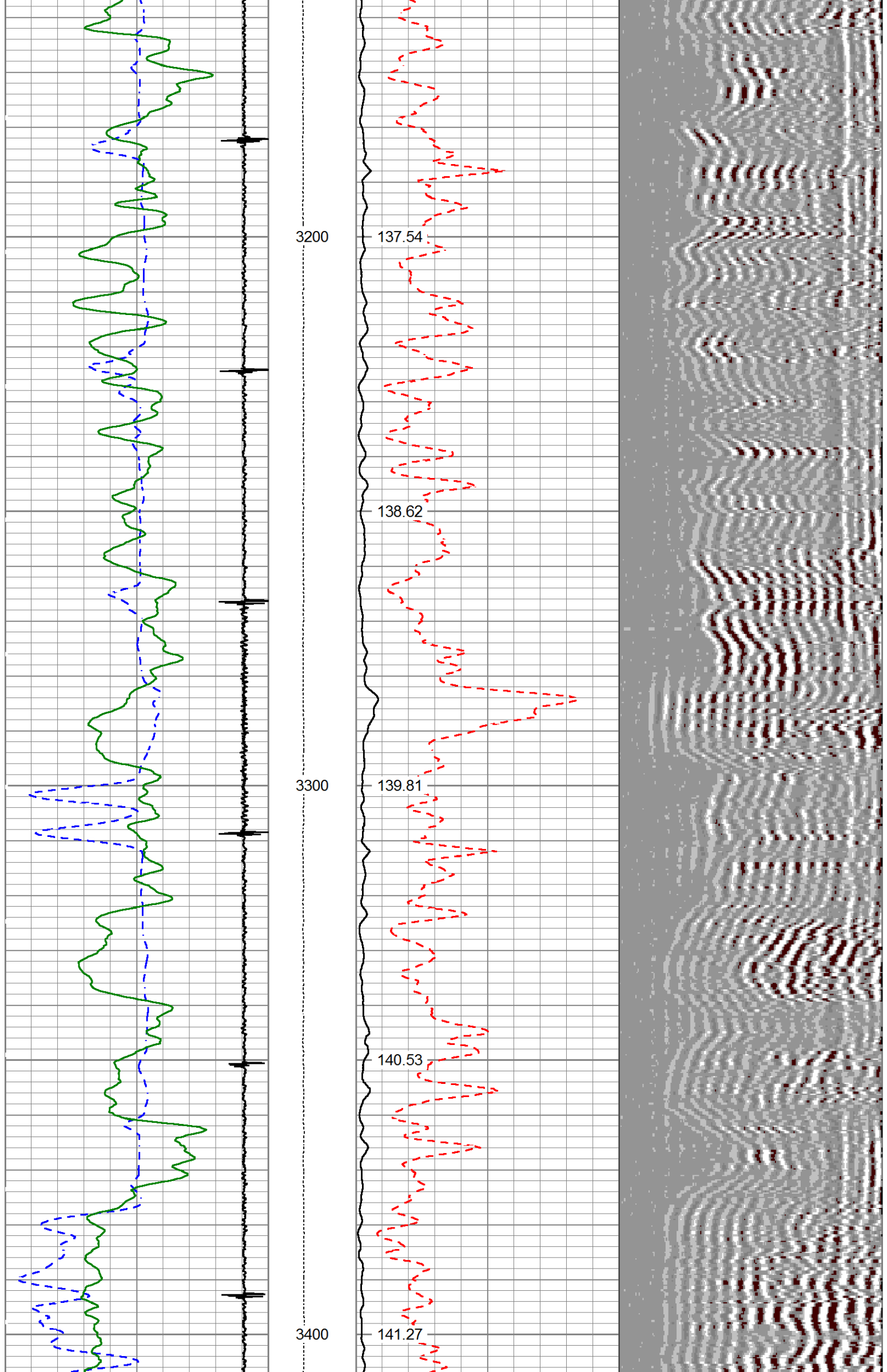
124.33

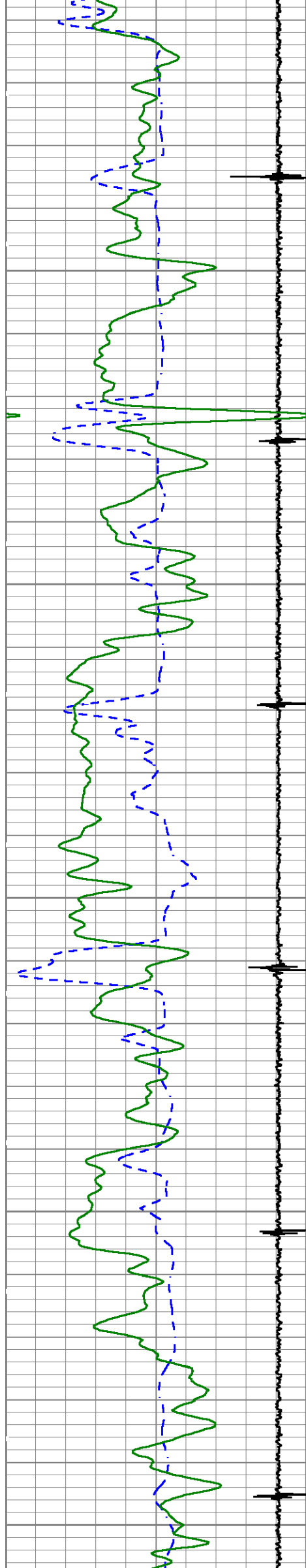






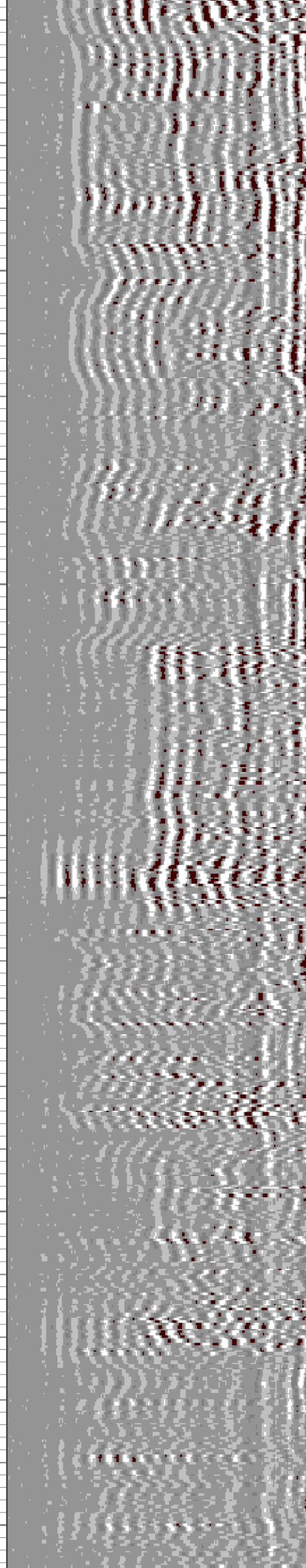
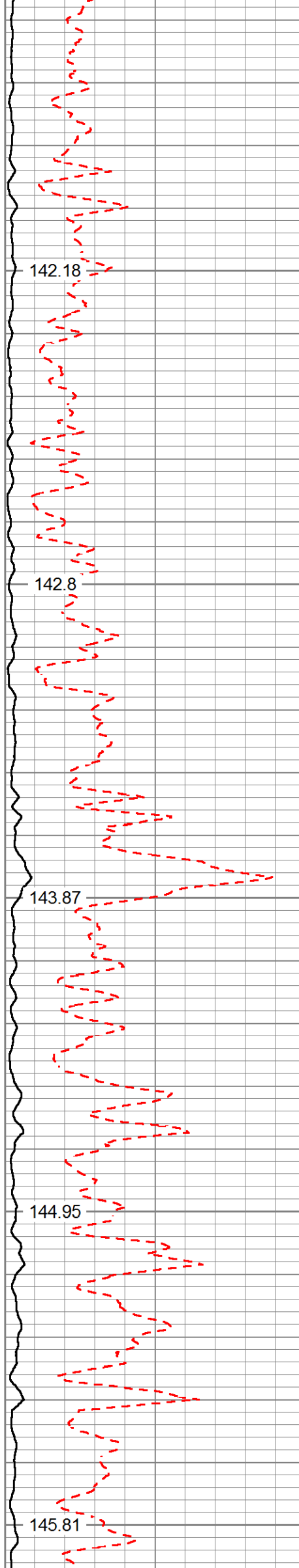


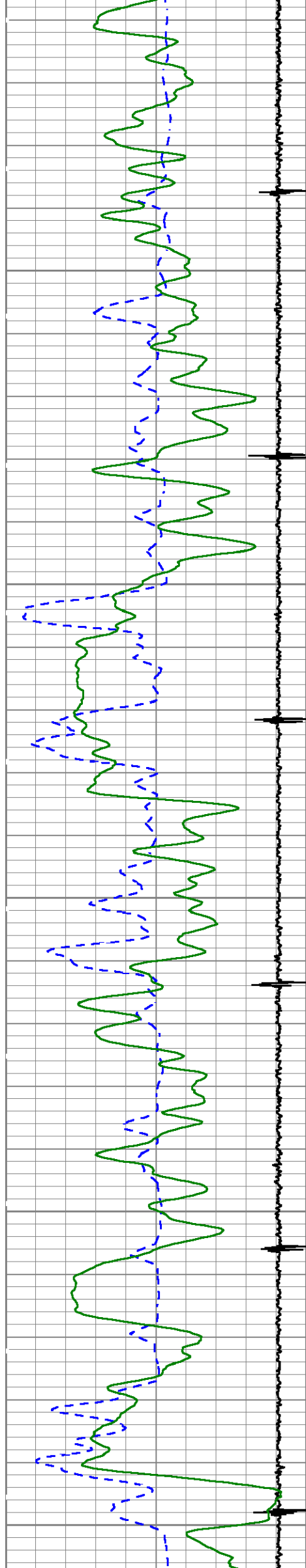




3500

3600

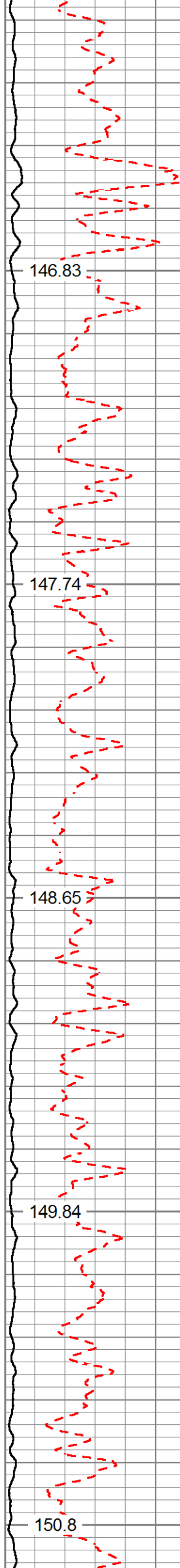




3700

3800

3900



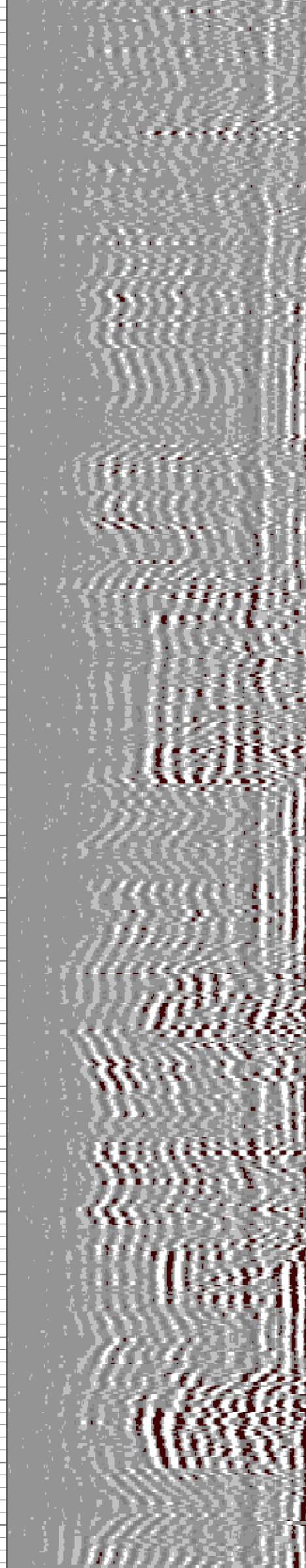
146.83

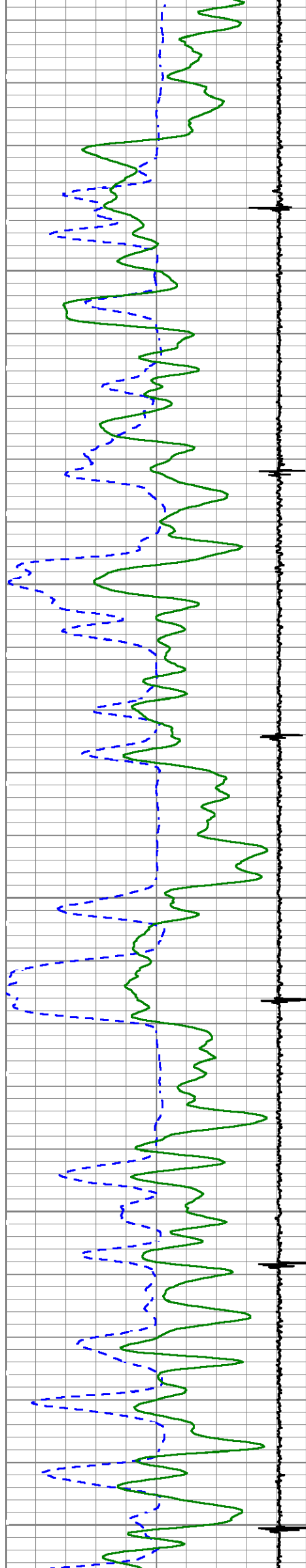
147.74

148.65

149.84

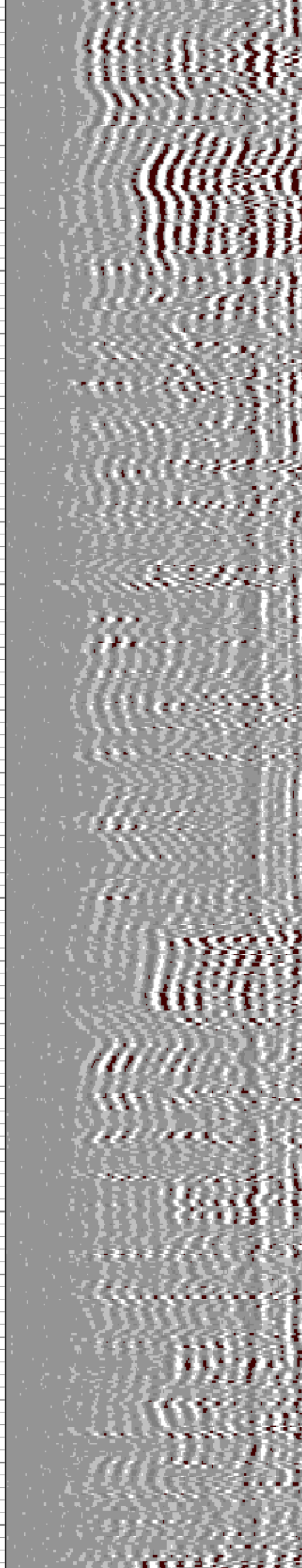
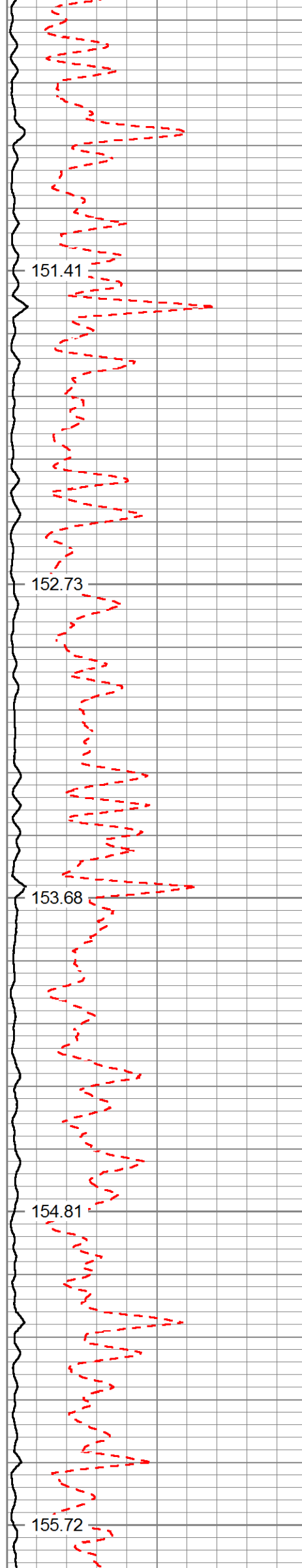
150.8

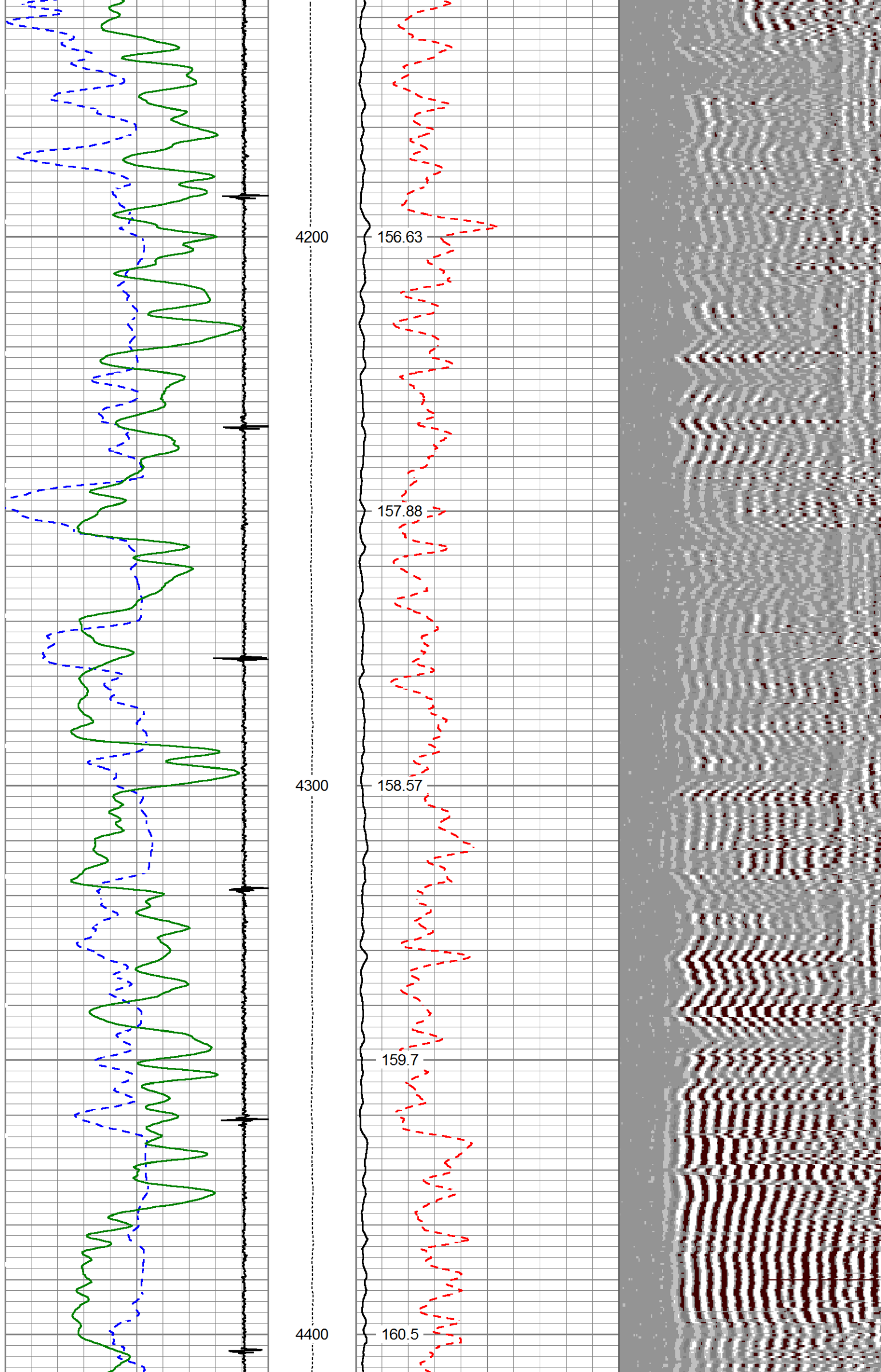


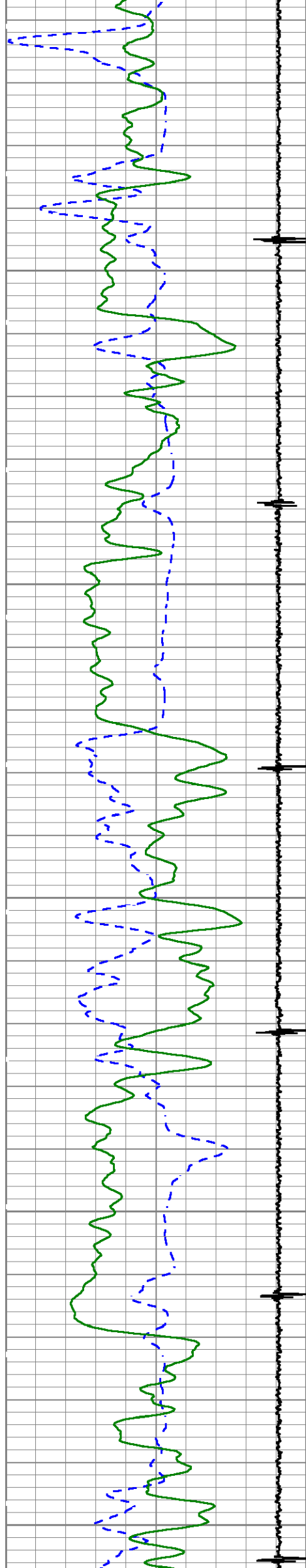


4000

4100

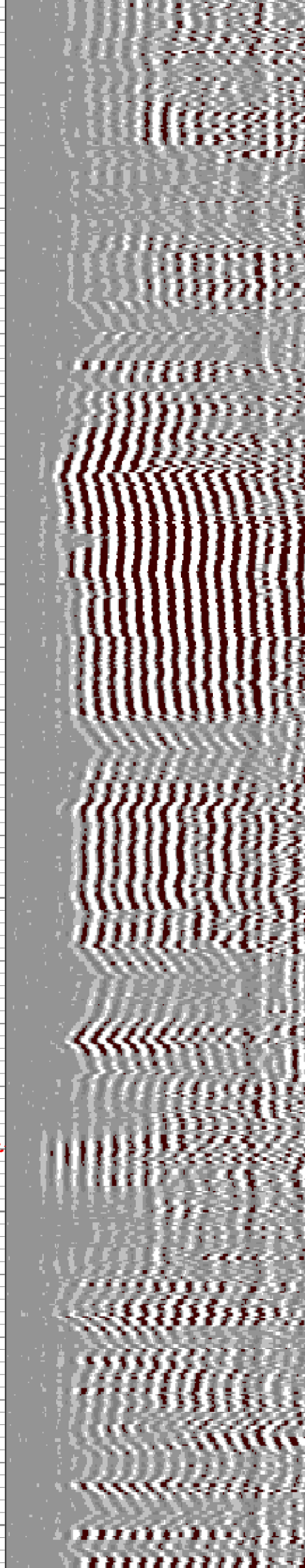
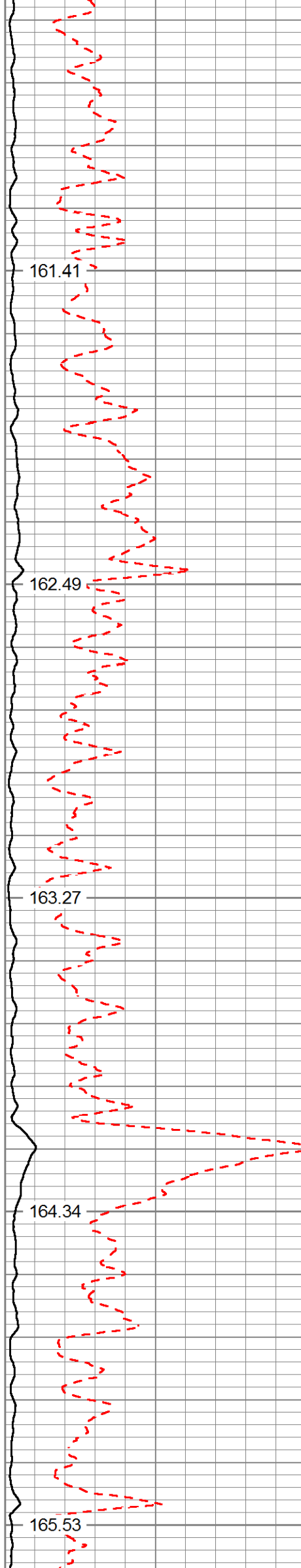


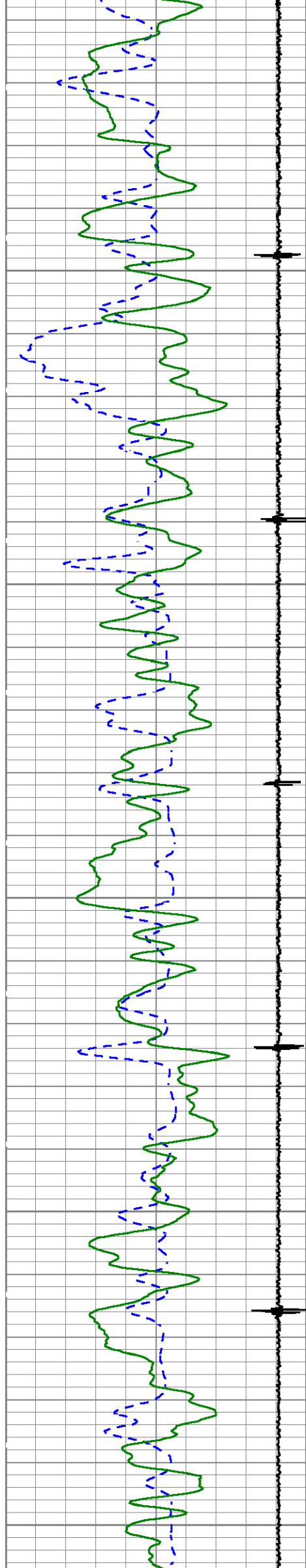




4500

4600

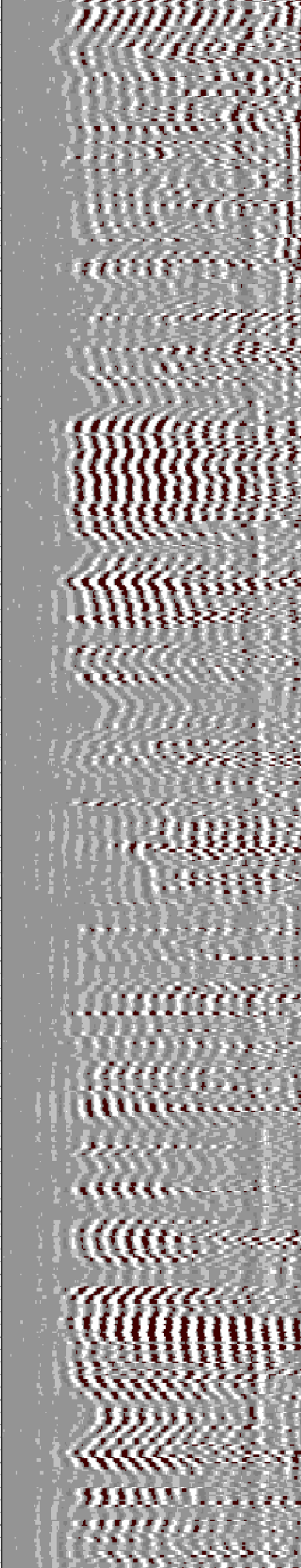
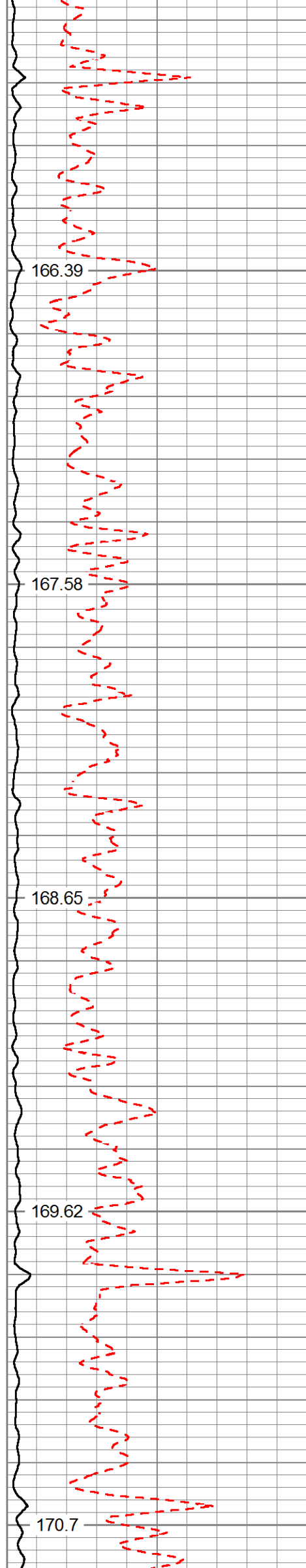


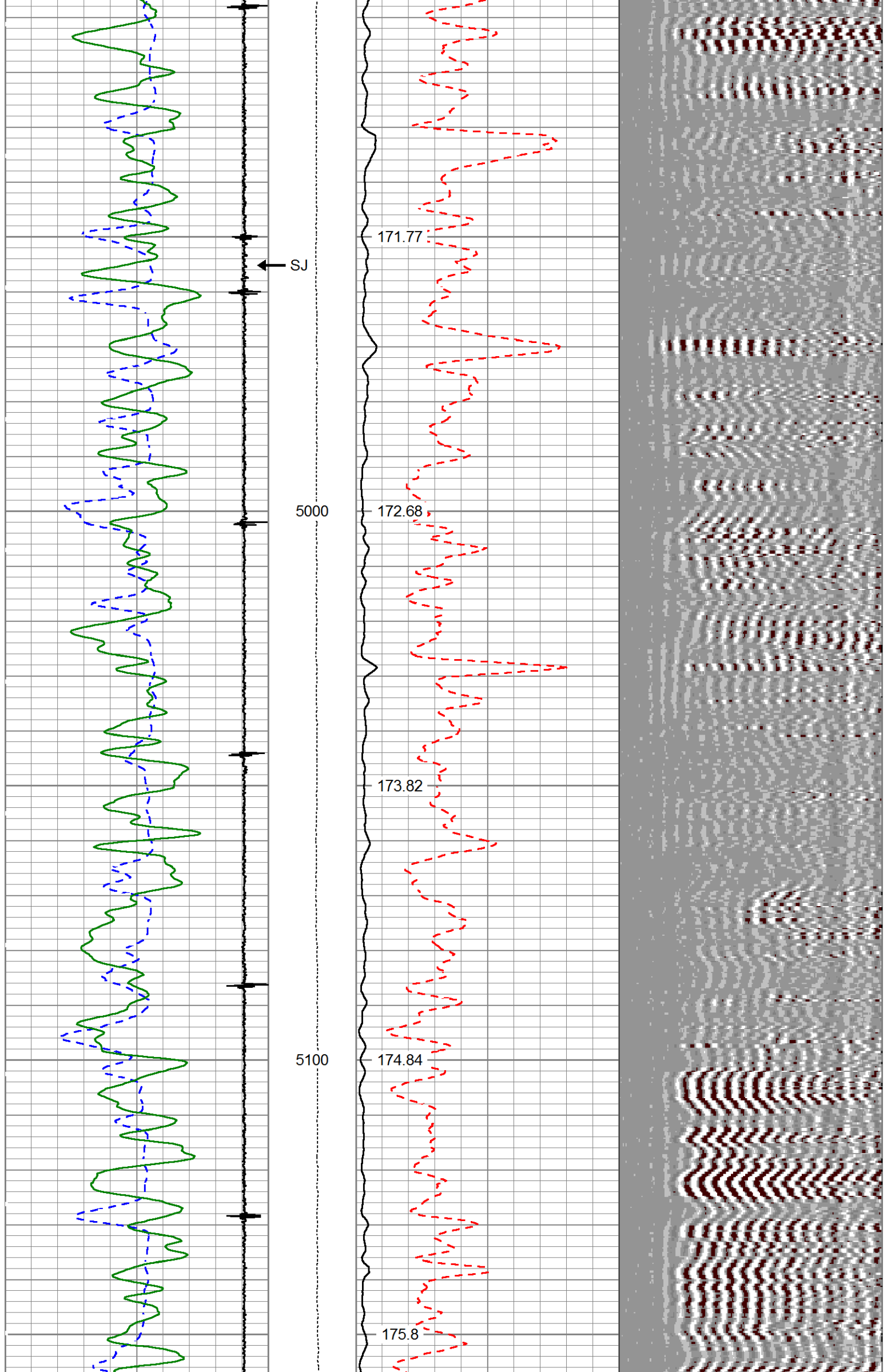


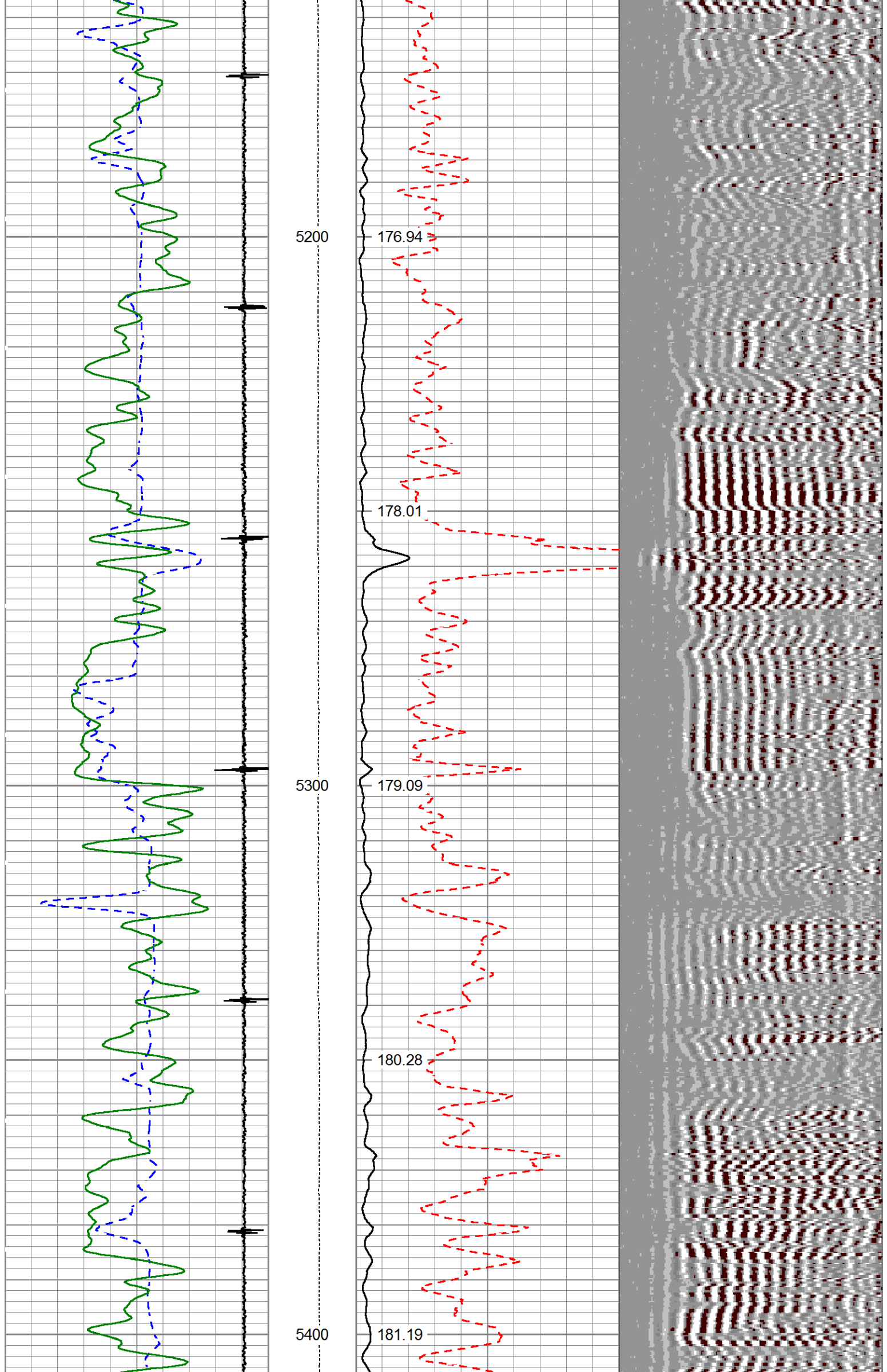
4700

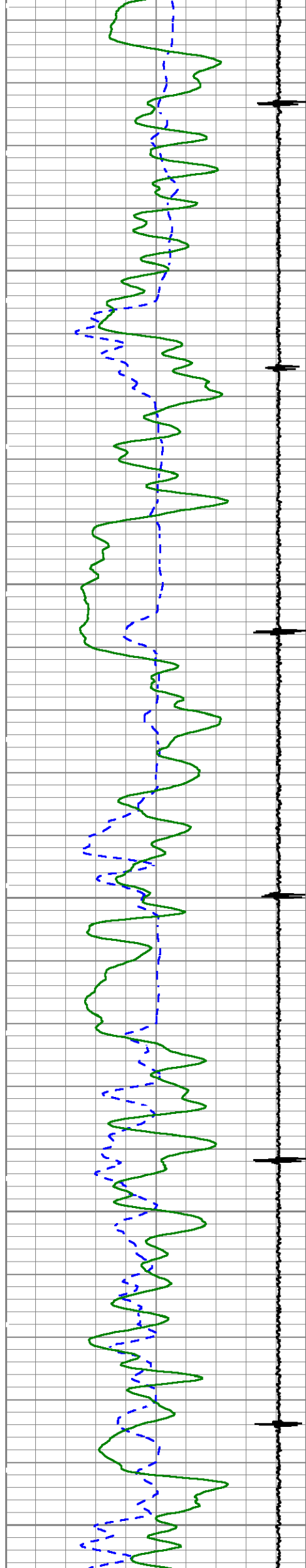
4800

4900



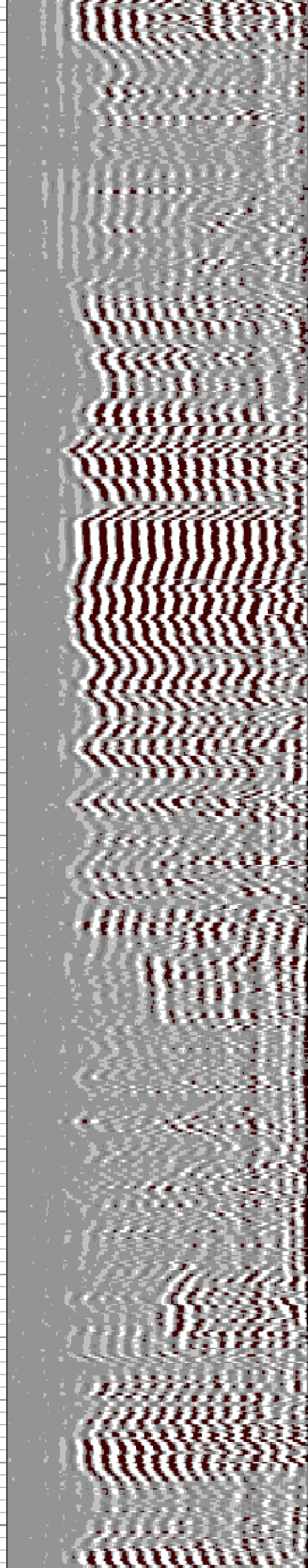
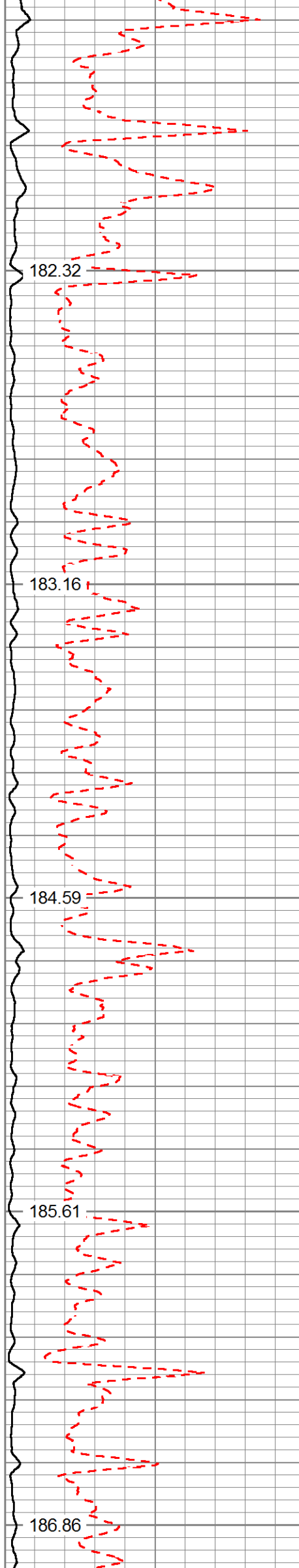


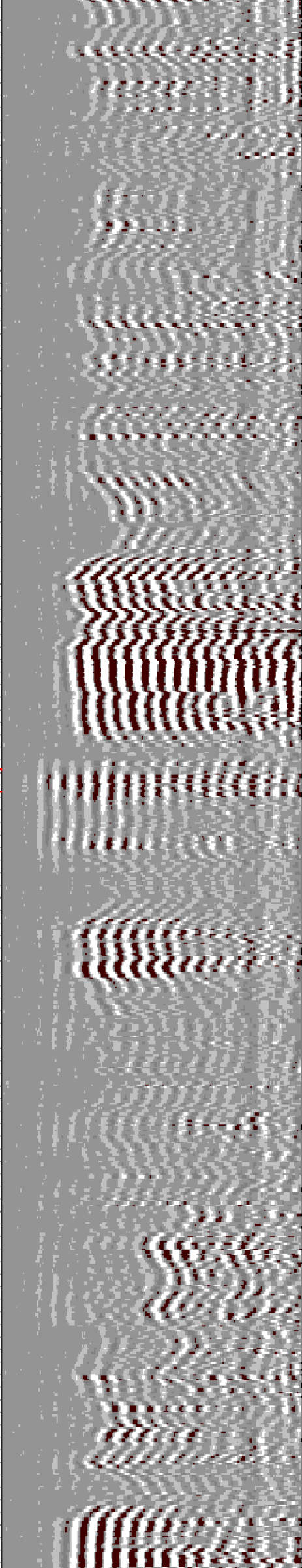
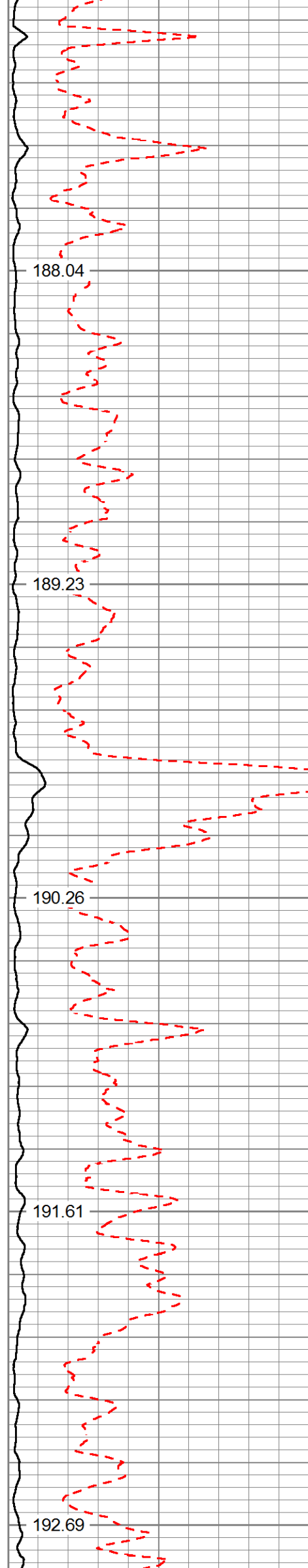
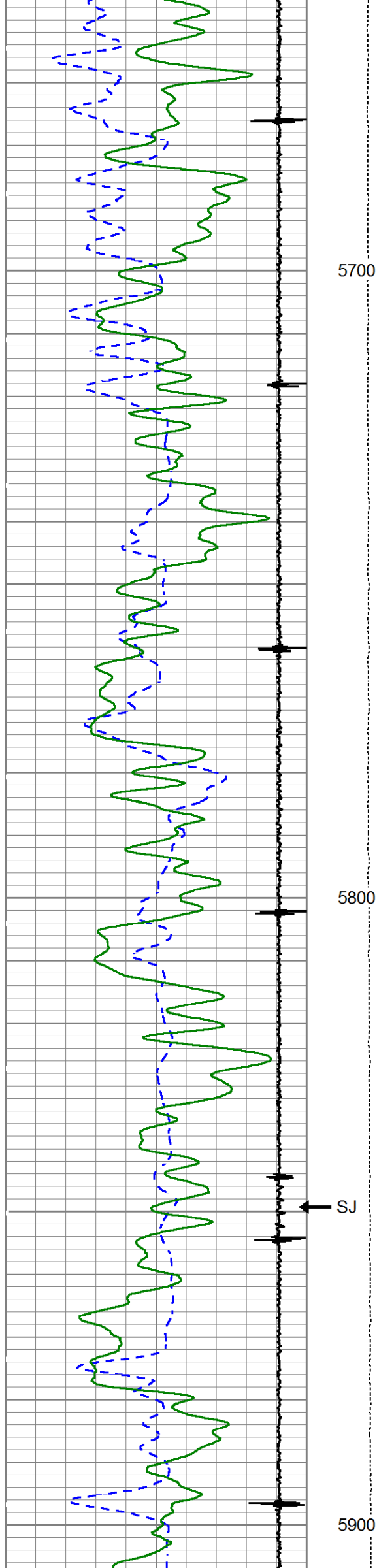


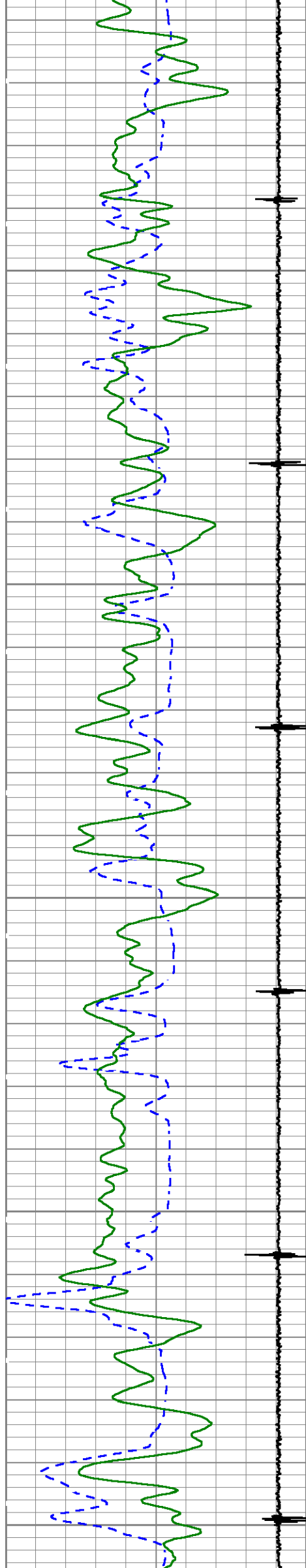


5500

5600

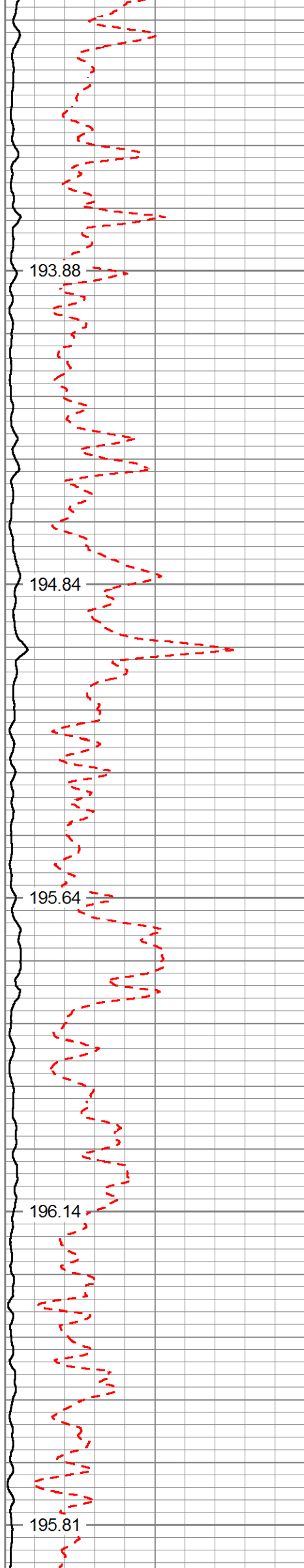






6000

6100



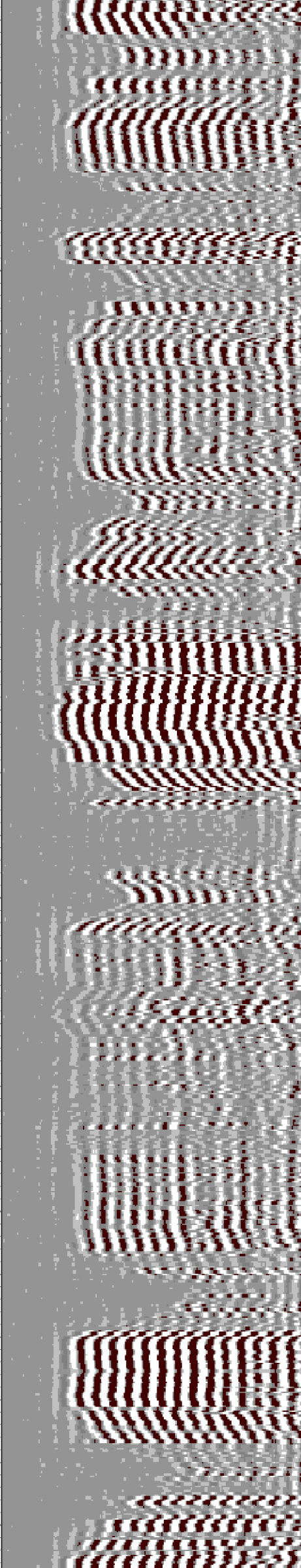
193.88

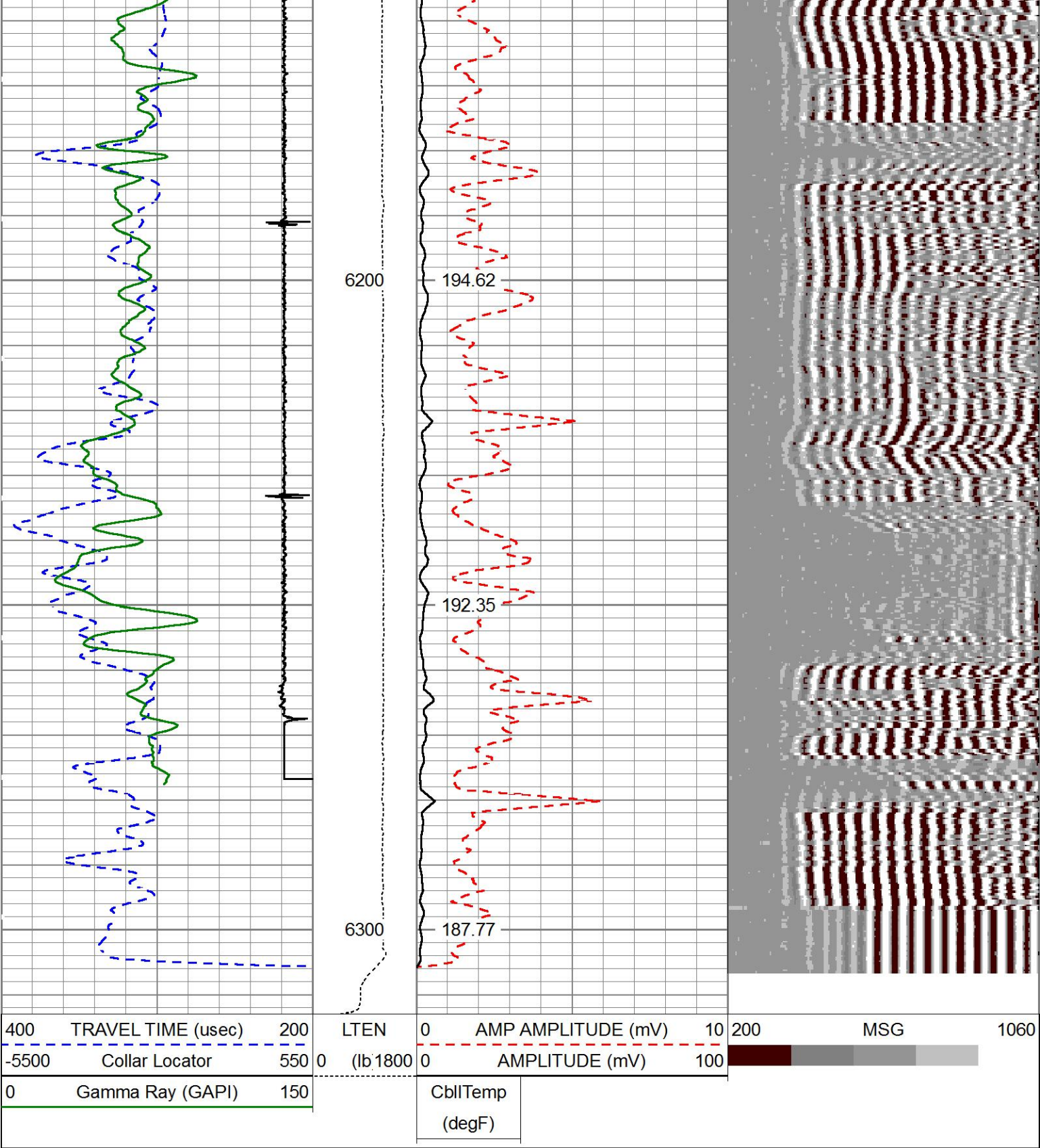
194.84

195.64

196.14

195.81





MAIN PASS

HALLIBURTON

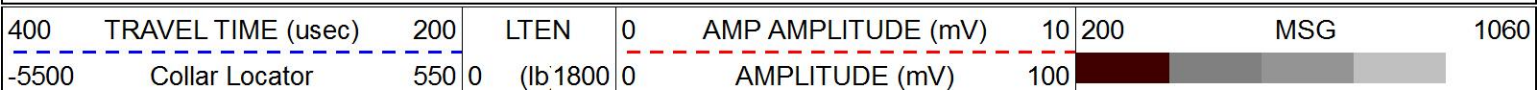
5"=100'

REPEAT PASS

HALLIBURTON

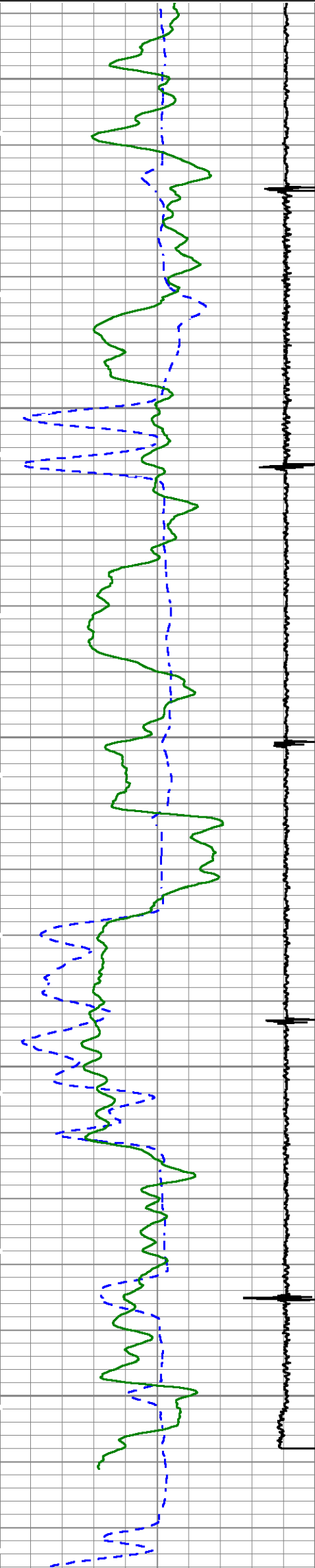
5"=100'

|                     |                                   |
|---------------------|-----------------------------------|
| Database File       | bmc d 32b-18-07-95.db             |
| Dataset Pathname    | WC/BMC_D_32B-18-07-95/run1/REPEAT |
| Presentation Format | cbl_main                          |
| Dataset Creation    | Sun May 28 00:06:52 2017          |
| Charted by          | Depth in Feet scaled 1:240        |



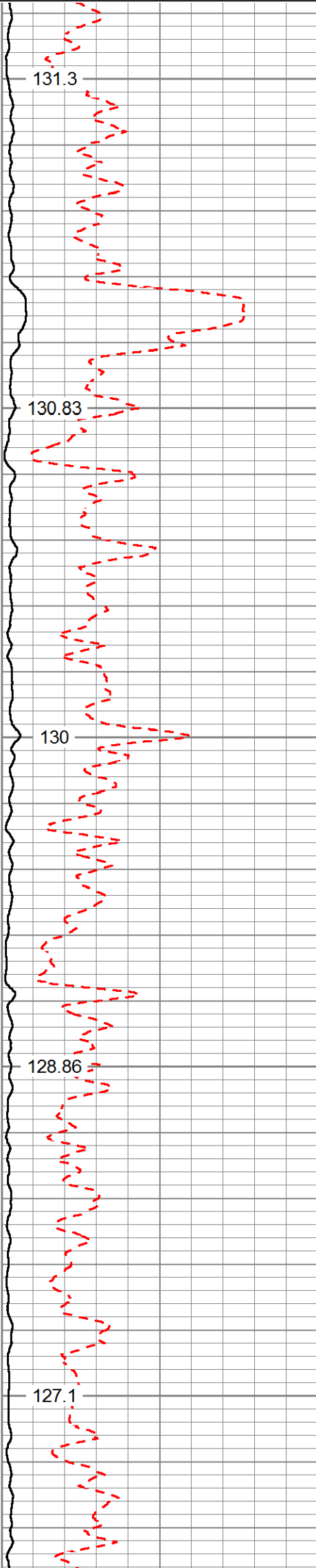
0      Gamma Ray (GAPI)      150

CbllTemp  
(degF)



3300

3400



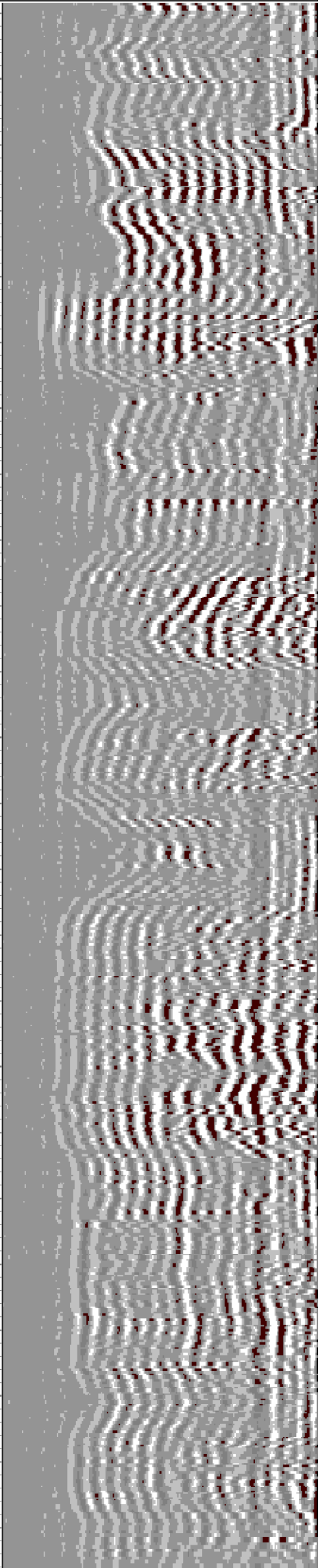
131.3

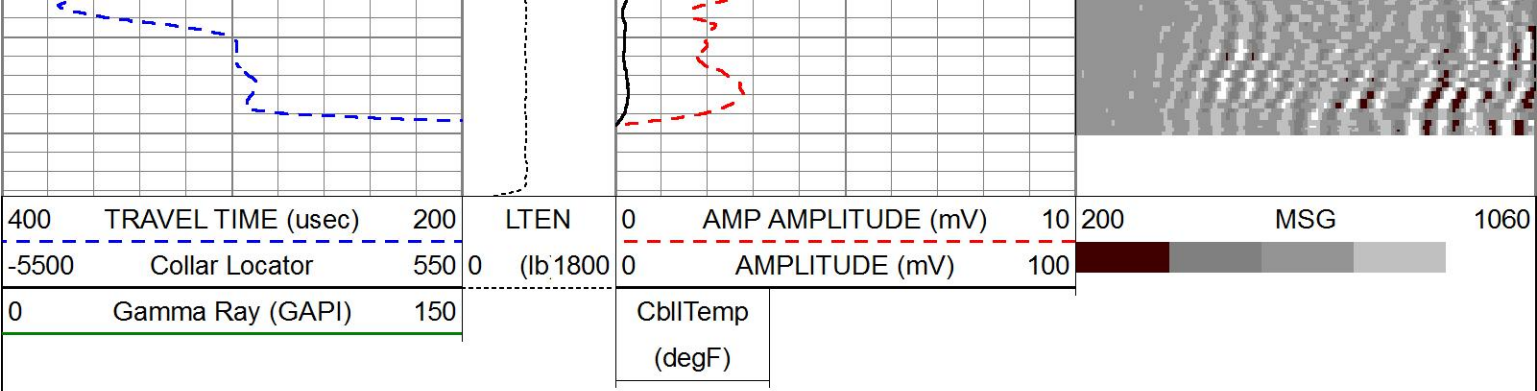
130.83

130

128.86

127.1





REPEAT PASS

HALLIBURTON

5"=100'

| Calibration Report                          |                                 |
|---|---------------------------------|
| Database File                               | bmc d 32b-18-07-95.db           |
| Dataset Pathname                            | WC/BMC_D_32B-18-07-95/run1/MAIN |
| Dataset Creation                            | Sun May 28 00:35:12 2017        |
| Cement Bond Log Shop Calibration Report     |                                 |
| Serial-Model:                               | 12091451-A                      |
| Calibration Performed:                      | Sat May 27 23:52:18 2017        |
| Free Pipe Calibration                       |                                 |
| TT  | Measured 245.0 Units usec       |
| Amplitude                                   | 394.0 mV                        |
| Log Base Line                               | 19.1 mV                         |
| Calibration References and Gain             |                                 |
| Name  | Value Units                     |
| Pipe O.D.                                   | 4.500 in                        |
| Pipe Weight                                 | 11.6 lb/ft                      |
| Pipe Ref. Amp.                              | 81.2 mV                         |
| Amp. Gain                                   | 0.211                           |
| Reservoir Monitor Tool I Calibration Report |                                 |
| Serial-Model:                               | 12376244-A                      |
| Shop Calibration Performed:                 | Mon May 22 10:29:12 2017        |

| Carbon/Oxygen Mode |         |                |           |          |       |
|--------------------|---------|----------------|-----------|----------|-------|
| Stabilization      |         |                |           |          |       |
| Result             | Logged  | Expected Value | Diff.     | Tol.     | Units |
| GENV               | 85.00   | 80.00          | 5.00      | +/-15.00 | V     |
| ITCR2              | 3094    | 3250           | -156      | +/-250   | cps   |
| Near Detector      |         |                |           |          |       |
|                    | Channel | Expected Value | Amplitude | FWHM     | Tol.  |
| H                  | 60      | 60 +/-2        | 0.0297    | 5.30     | <6.00 |
| Fe                 | 207     | 206 +/-2       | 0.0985    | ----     | ----  |
| NGAIN = 0.993      |         | NZOFF = 0.8    |           |          |       |
| Far Detector       |         |                |           |          |       |
|                    | Channel | Expected Value | Amplitude | FWHM     | Tol.  |
| H                  | 60      | 60 +/-2        | 0.0332    | 6.30     | <6.50 |

|                   |             |                |        |         |       |
|-------------------|-------------|----------------|--------|---------|-------|
| N                 | 0.0002      | 0.0002         | 0.0002 | 0.00    | 0.00  |
| Fe                | 209         | 208 +/-2       | 0.0907 | -----   | ----- |
| FGAIN = 0.991     | FZOFF = 0.5 |                |        |         |       |
| Flask Temperature | 50.6 degF   |                |        |         |       |
| Result            | Logged      | Expected Value | Diff.  | Tol.    | Units |
| COIR2             | 0.45        | 0.45           | -0.00  | +/-0.02 |       |
| LIRI2             | 1.36        | 1.36           | 0.00   | +/-0.05 |       |
| TCCR2             | 4834        | 4000           | 834    | +/-1000 | cps   |
| ITCR2             | 3081        | 3200           | -119   | +/-250  | cps   |

|                       |        |                |       |          |       |
|-----------------------|--------|----------------|-------|----------|-------|
| Sigma Mode            |        |                |       |          |       |
| Stabilization         |        |                |       |          |       |
| Result                | Logged | Expected Value | Diff. | Tol.     | Units |
| GENV                  | 87.00  | 80.00          | 7.00  | +/-15.00 | V     |
| FCAP                  | 9885   | 10000          | -115  | +/-500   | cps   |
| Horizontal Water Tank |        |                |       |          |       |
| Result                | Logged | Expected Value | Diff. | Tol.     | Units |
| N/F Normalizer        | 0.96   | 0.95           | 0.01  |          |       |
| N/F Inel Norm         | 0.62   | 0.61           | 0.01  |          |       |
| RNF                   | 1.05   | 1.07           | -0.02 | +/-0.12  |       |
| RINC                  | 1.62   | 1.64           | -0.02 | +/-0.18  |       |
| SGFN                  | 24.10  | 24.00          | 0.10  | +/-0.50  | cu    |
| SGFF                  | 22.95  | 22.85          | 0.10  | +/-0.50  | cu    |
| FSIN                  | 23623  | 24000          | -377  | +/-2000  | cps   |
| FCAP                  | 9982   | 10000          | -18   | +/-1000  | cps   |
| NFTR                  | 0.83   |                |       | <5.00    |       |
| FFTR                  | 0.92   |                |       | <5.00    |       |
| NBKG                  | 178    |                |       | <500     | cps   |
| FBKG                  | 99     |                |       | <500     | cps   |
| RTN                   | 0.41   | 0.40           | 0.01  | +/-0.10  | usec  |
| RTF                   | 0.43   | 0.40           | 0.03  | +/-0.10  | usec  |

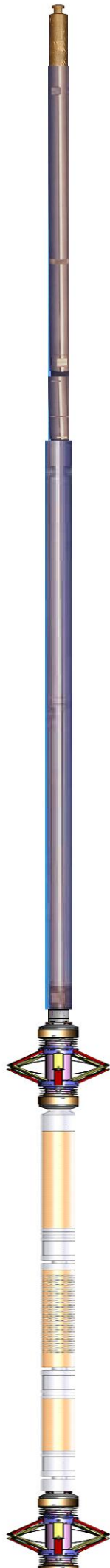
|                                       |              |
|---------------------------------------|--------------|
| Calibration Software Modules          |              |
| HRMTI Module                          | 2015.5.4.0   |
| RMTI Module                           | 2015.10.16.1 |
| Log Data Acquisition Software Modules |              |
| HRMTI Module                          | 2015.5.4.0   |
| RMTI Module                           | 2015.10.16.1 |


|                              |
|------------------------------|
| Gamma Ray Calibration Report |
|------------------------------|

|                |                |
|----------------|----------------|
| Type / Serial: | 002 / 11527445 |
|----------------|----------------|

|                            |             |                          |        |       |          |
|----------------------------|-------------|--------------------------|--------|-------|----------|
| SHOP CALIBRATION           |             | Mon May 22 11:40:46 2017 |        |       |          |
|                            | Counts/Sec. | Gain                     | Offset | Jig   | Units    |
| Background                 | 22.8        |                          |        |       | cps      |
| Calibrator                 | 291.4       |                          |        |       | cps      |
|                            |             | 1.3703                   |        |       | GAPI/cps |
| PRIMARY VERIFICATION       |             |                          |        |       |          |
| Background                 | 32.5        |                          |        |       | cps      |
| Calibrator                 | 395.1       |                          |        |       | cps      |
| Difference                 |             |                          |        | 362.6 | GAPI     |
| BEFORE SURVEY VERIFICATION |             |                          |        |       |          |
| Background                 | 0.0         |                          |        |       | cps      |
| Calibrator                 | 0.0         |                          |        |       | cps      |
| Difference                 |             |                          |        | 0.0   | GAPI     |

|                           |     |     |  |      |
|---------------------------|-----|-----|--|------|
| AFTER SURVEY VERIFICATION |     |     |  |      |
| Background                | 0.0 |     |  | cps  |
| Calibrator                | 0.0 |     |  | cps  |
| Difference                |     | 0.0 |  | GAPI |

| Sensor                               | Offset (ft)             | Schematic  | Description  | Length (ft) | O.D. (in) | Weight (lb) |
|--------------------------------------|-------------------------|--|--|-------------|-----------|-------------|
| CCL                                  | 35.86                   |  | STNDCH-STND_CH<br>1.4375 IN CABLE HEAD                                 | 1.50        | 1.44      | 1.00        |
|                                      |                         |  |  |             |           |             |
| GR                                   | 33.60                   |  | TTTCU-002 (11527445)<br>Through Tubing Telemetry Cartridge - Ultrawire | 7.65        | 1.69      | 37.00       |
|                                      |                         |  |  |             |           |             |
|                                      |                         |  | XHU-003 (12461937)<br>Crossover Halliburton 1553 to Ultrawire          | 1.58        | 1.69      | 7.00        |
|                                      |                         |  |  |             |           |             |
| RmtTFGT<br>RmtTNGT                   | 22.95<br>22.45          |  | RMTI-A (12376244)<br>Halliburton RMTI Tool                             | 14.00       | 2.13      | 77.00       |
|                                      |                         |  |  |             |           |             |
|                                      |                         |  |  |             |           |             |
| RmtFP5V<br>RmtNFwvMcsP<br>RmtCommFWa | 14.70<br>14.70<br>14.70 |  | X-OVER-SondexxGo<br>Sondex Box x Go Pin Cross Over                     | 0.31        | 1.69      | 1.00        |
|                                      |                         |  | CENT-CASTM-CENT<br>CAST M INLINE CENTRALIZER                           | 2.16        | 3.13      | 25.00       |
| Temp                                 | 9.57                    |  |  |             |           |             |
| TT3FT<br>AMP3FT<br>WVF5FT            | 7.32<br>7.32<br>6.36    |  | HCBLM-A (12091451)<br>Halliburton HCBLM Tool                           | 9.38        | 2.75      | 116.00      |
|                                      |                         |  |  |             |           |             |
| WVF3FT                               | 2.84                    |  | CENT-CASTM-CENT<br>CAST M INLINE CENTRALIZER                           | 2.16        | 3.13      | 25.00       |
|                                      |                         | AUH-001 (11734726)<br>Adaptor Ultrawire/Halliburton                                | 0.38   | 1.69        | 3.00      |             |
|                                      |                         |  |  |             |           |             |

|   |      |  |                              |      |      |      |
|---|------|--|------------------------------|------|------|------|
| LLMTEN  | 0.00 |  | BUL-001 (000001)<br>Bullnose | 0.30 | 1.69 | 1.50 |
| Dataset: bmc d 32b-18-07-95.db: WC/BMC_D_32B-18-07-95/run1/MAIN<br>Total length: 39.43 ft<br>Total weight: 293.50 lb<br>O.D.: 3.13 in |      |  |                              |      |      |      |

|             |                           |  |       |    |  |
|-------------|---------------------------|--|-------|----|--|
| Company     | URSA OPERATING COMPANY    |  |       |    |  |
| Well        | BMC D 32B-18-07-95        |  |       |    |  |
| Field       | WILDCAT                   |  |       |    |  |
| County      | GARFIELD                  |  | State | CO |  |
| HALLIBURTON | CEMENT BOND LOG<br>GR-CCL |  |       |    |  |