



Radial Cement Bond  
w/Variable Density  
Gamma Ray/CCL/Temp Log  
FINAL PRINT

Company Great Western Oil & Gas Company  
Well Rio LC 12-366HNX  
Field Wattenberg  
County Adams State Colorado

Location: API #: 05-001-10467  
NW 1/4  
SEC 6 TWP 1S RGE 67W  
Permanent Datum GL Elevation 5068'  
Log Measured From KB  
Drilling Measured From KB  
Other Services  
Gauge Ring  
Elevation  
K.B. 5088'  
D.F.  
G.L. 5068'

Date Sep 14 2019

Run Number One  
Depth Driller 17780'  
Depth Logger 7964'  
Bottom Logged Interval 7962'  
Top Log Interval Surface  
Open Hole Size 8 1/2"  
Type Fluid H2O  
Density / Viscosity  
Max. Recorded Temp. 229 Deg F  
Estimated Cement Top  
Time Well Ready 8:50  
Time Logger on Bottom 9:30  
Equipment Number 59  
Location Plattville, CO  
Recorded By S Cornett  
Witnessed By Dave Pozas

Borehole Record  
Run Number Bit From To Size Weight From To

Casing Record  
Surface String Size 9 5/8" Wgt/Ft 36# J-55 Top Surface Bottom 1790'

Prot. String  
Production String 5 1/2" 17# P-110 Surface 17780'

Liner

<<< 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

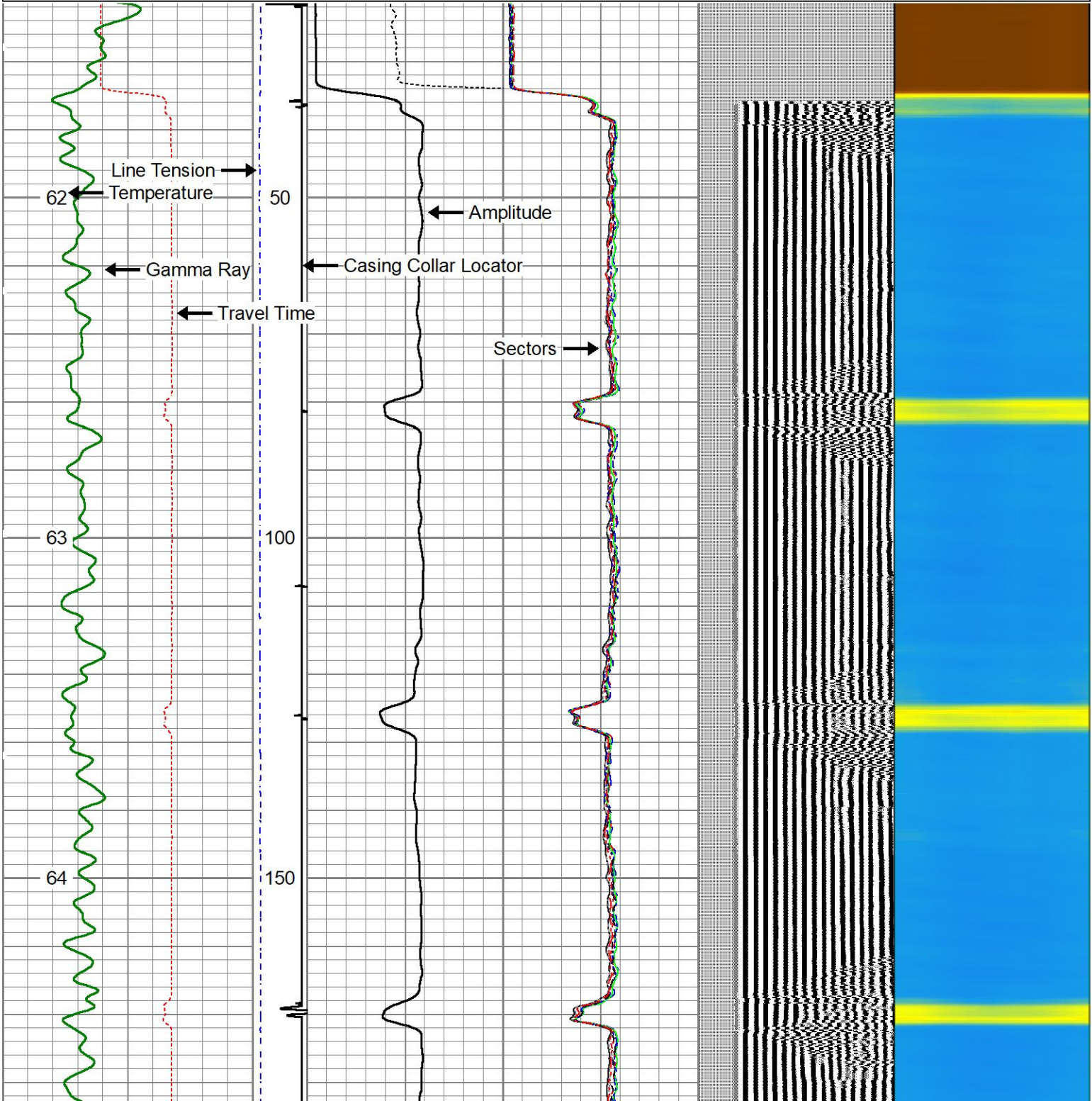
Logged with 0 PSI  
Log Correlated to Short Joint @ 7355'-7365'  
Tool Ran with 3 Gemco Centerlizers  
Thank You For Choosing KLX Energy Services.



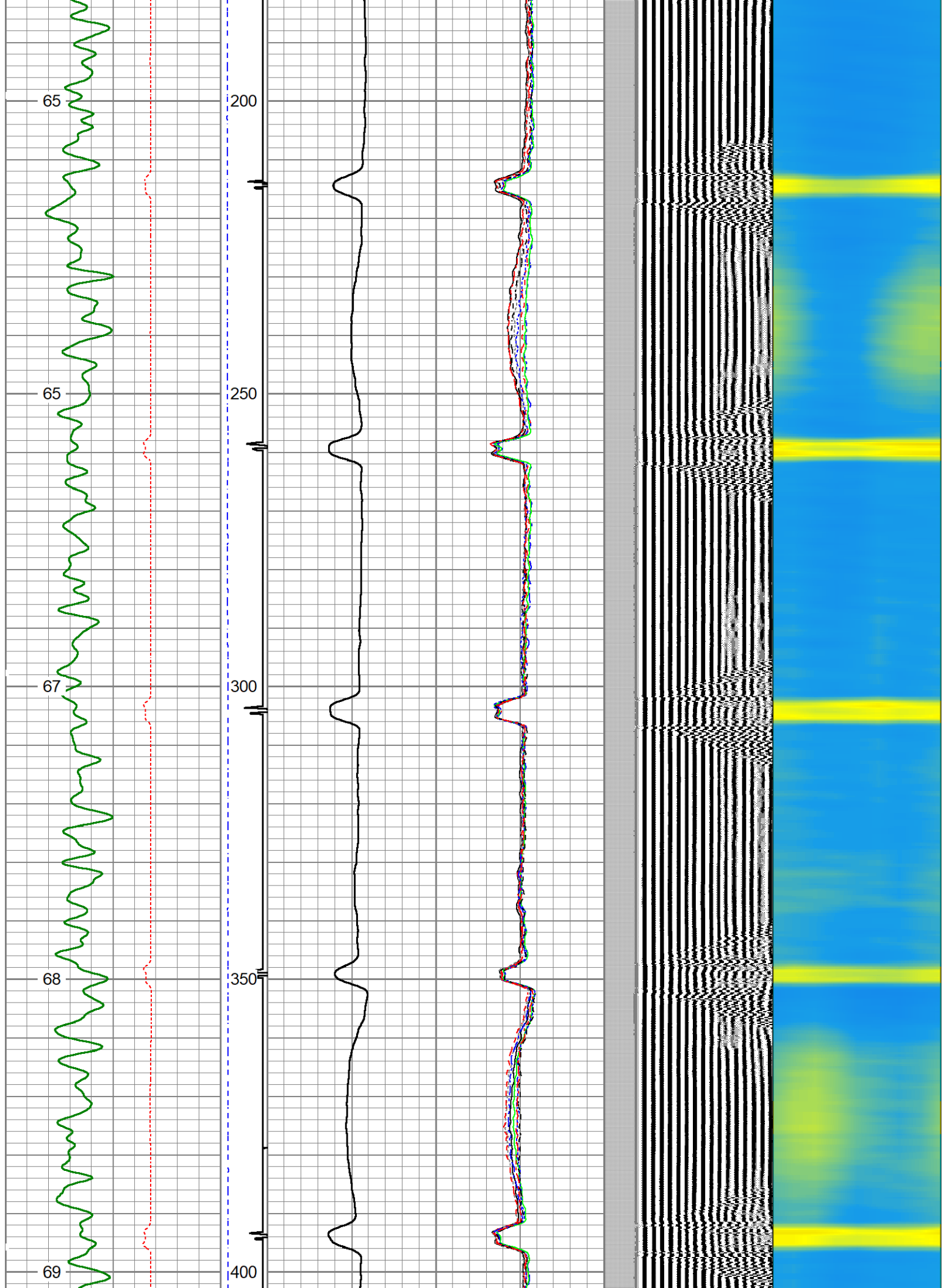
Main Pass 0 PSI

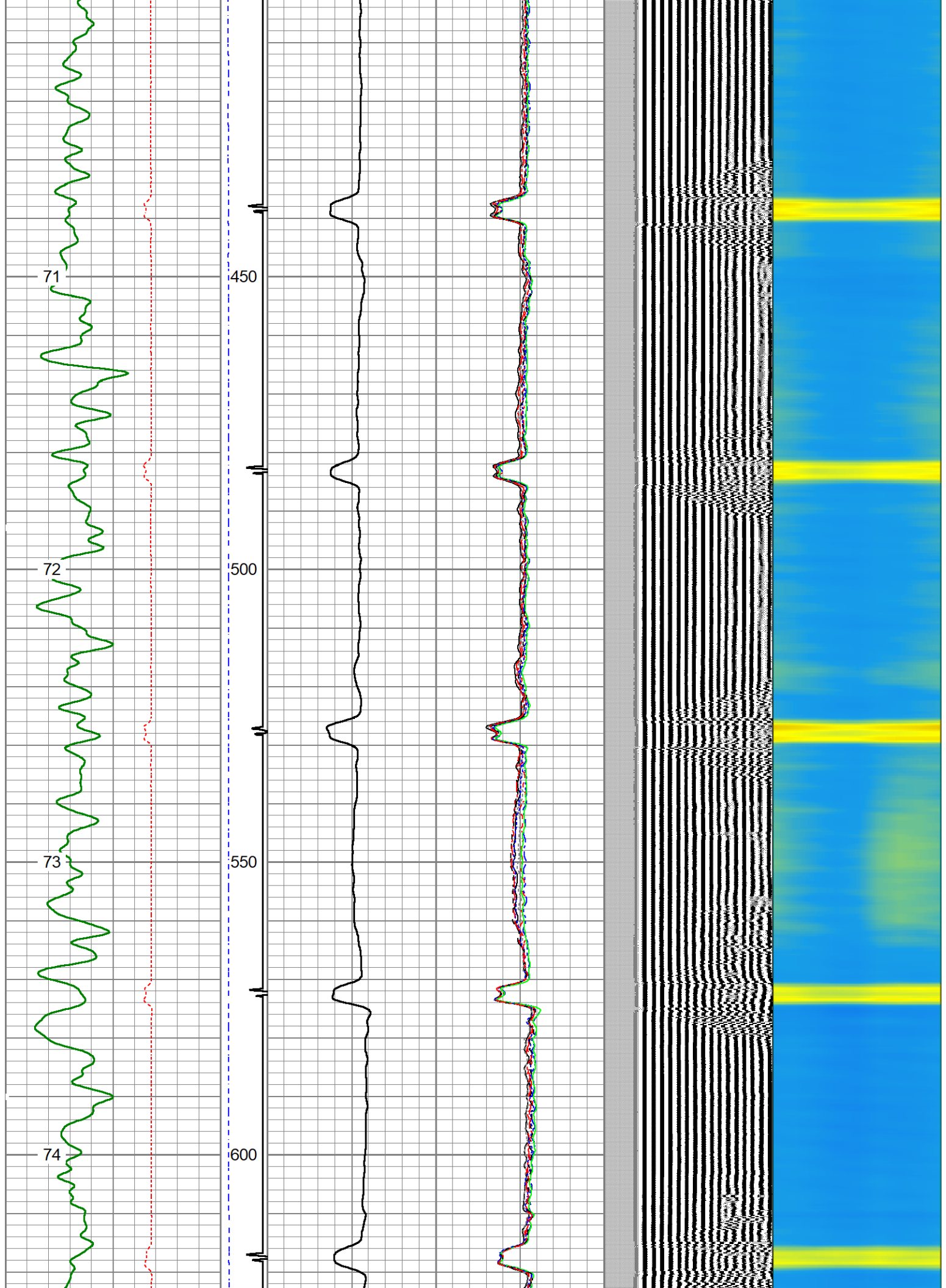
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|---------------------|--|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Database File       |  | 366hnx_rcbl_91419.db       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dataset Pathname    |  | pass3                      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Presentation Format |  | scbl03                     |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Dataset Creation    |  | Sat Sep 14 09:38:50 2019   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Charted by          |  | Depth in Feet scaled 1:240 |  |  |  |  |  |  |  |  |  |  |  |  |  |

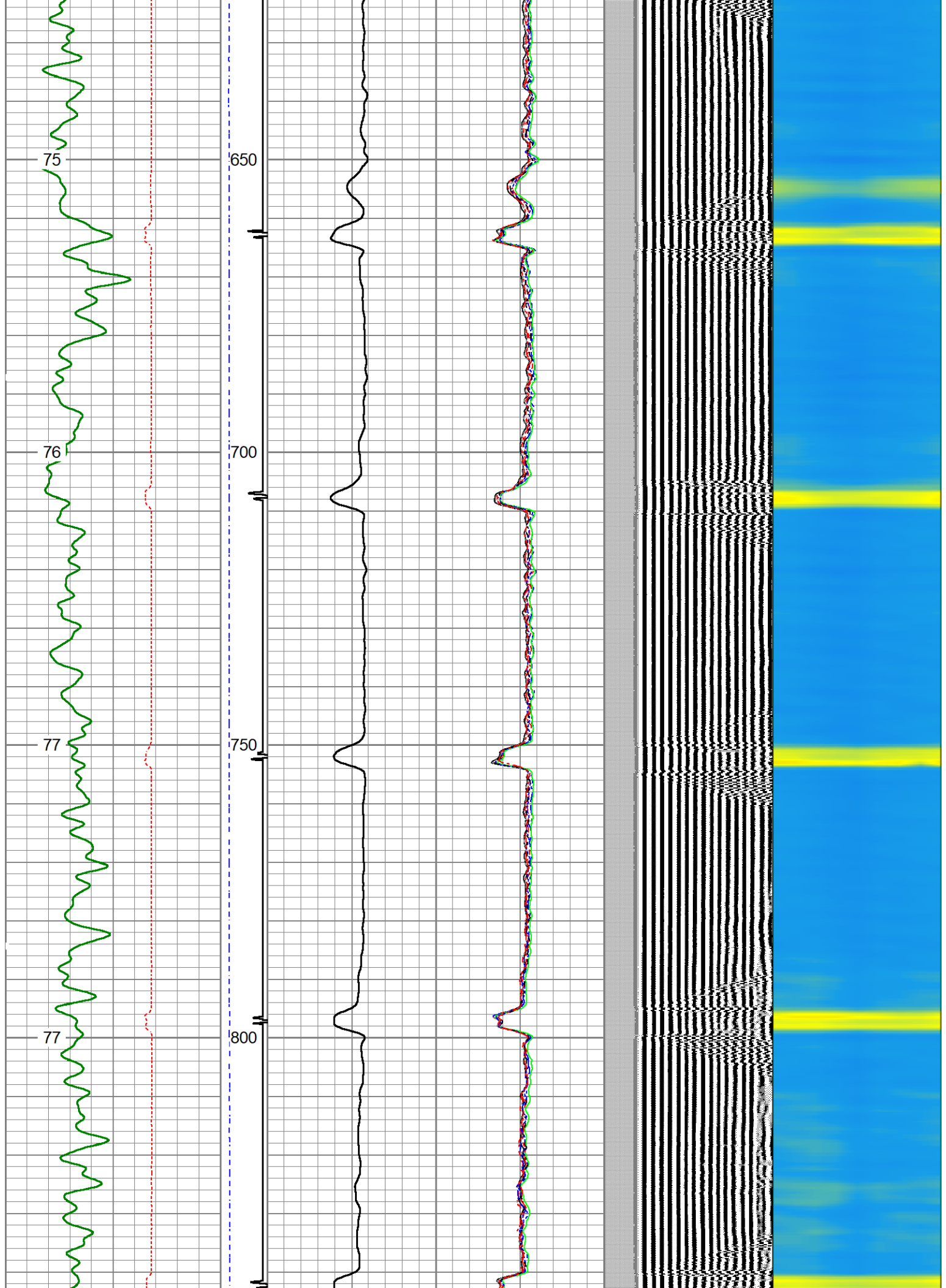
|        |                    |     |       |   |                     |     |    |          |     |                  |        |      |   |   |
|--------|--------------------|-----|-------|---|---------------------|-----|----|----------|-----|------------------|--------|------|---|---|
| 400    | Travel Time (usec) | 200 | CCL   | 0 | Amplitude (mV)      | 100 | -5 | Sector 1 | 150 | Variable Density |        | 1    | Cement Map  | 8 |
| 0      | Gamma Ray (GAPI)   | 150 | 9 -1  |   | Amplified Amplitude |     | -5 | Sector 2 | 150 | 200              | (usec) | 1200 |  |   |
| TEMP   |                    |     | LTEN  | 0 | (mV)                | 10  | -5 | Sector 3 | 150 |                  |        |      |   |   |
| (degF) |                    |     | (lb   |   |                     |     | -5 | Sector 4 | 150 |                  |        |      |   |   |
|        |                    |     | (2000 |   |                     |     | -5 | Sector 5 | 150 |                  |        |      |   |   |
|        |                    |     |       |   |                     |     | -5 | Sector 6 | 150 |                  |        |      |   |   |
|        |                    |     |       |   |                     |     | -5 | Sector 7 | 150 |                  |        |      |   |   |
|        |                    |     |       |   |                     |     | -5 | Sector 8 | 150 |                  |        |      |   |   |



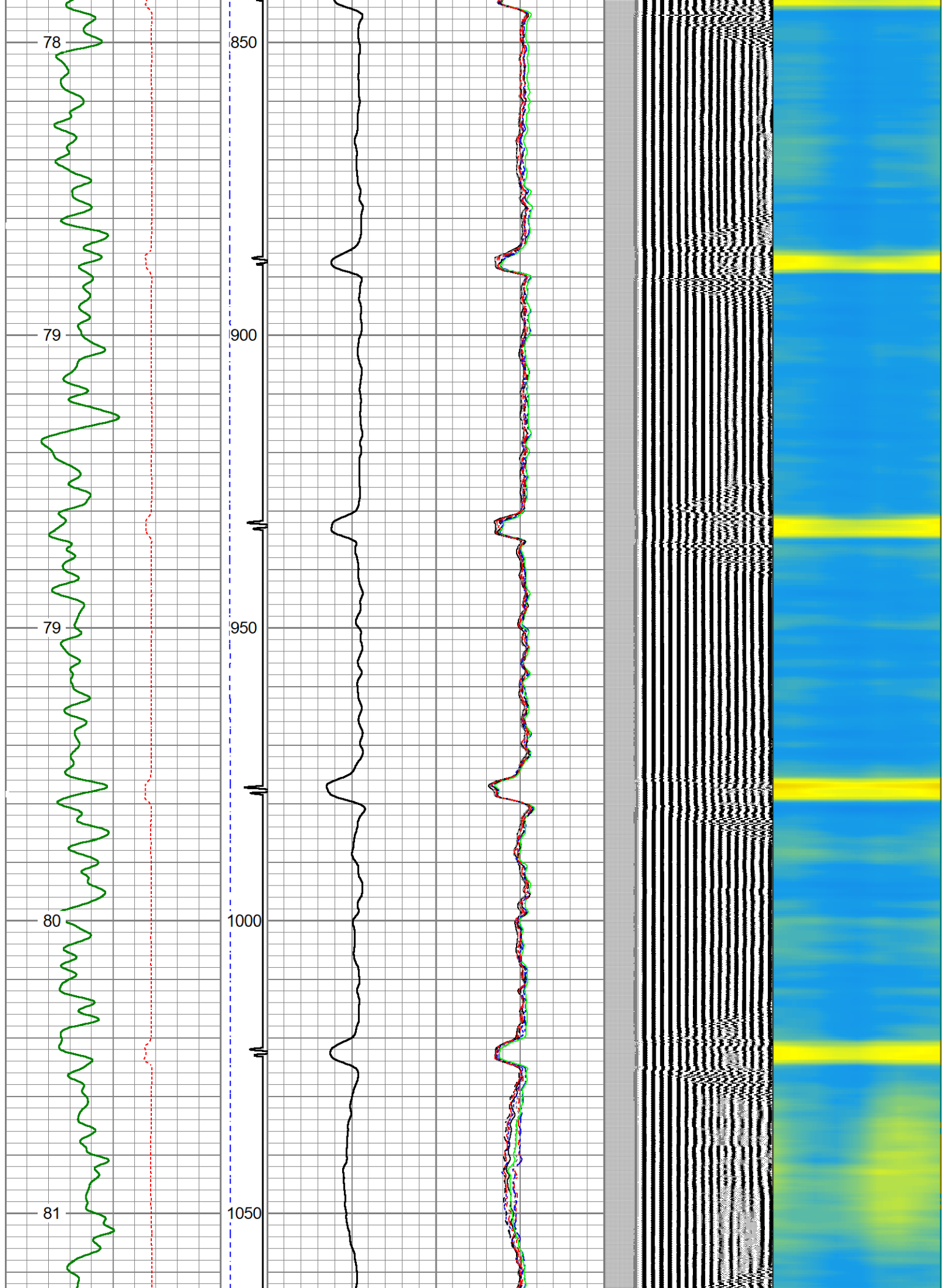


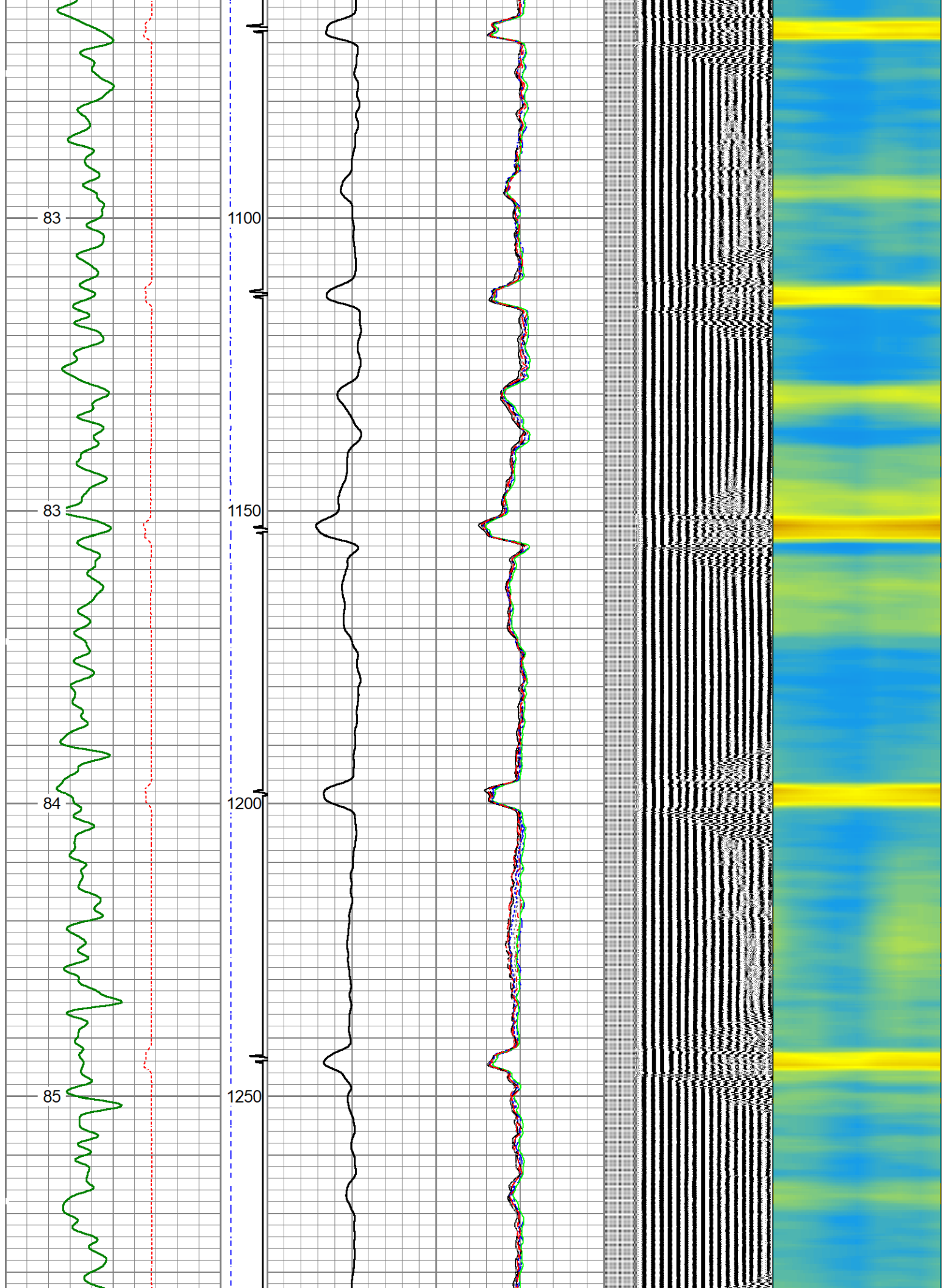


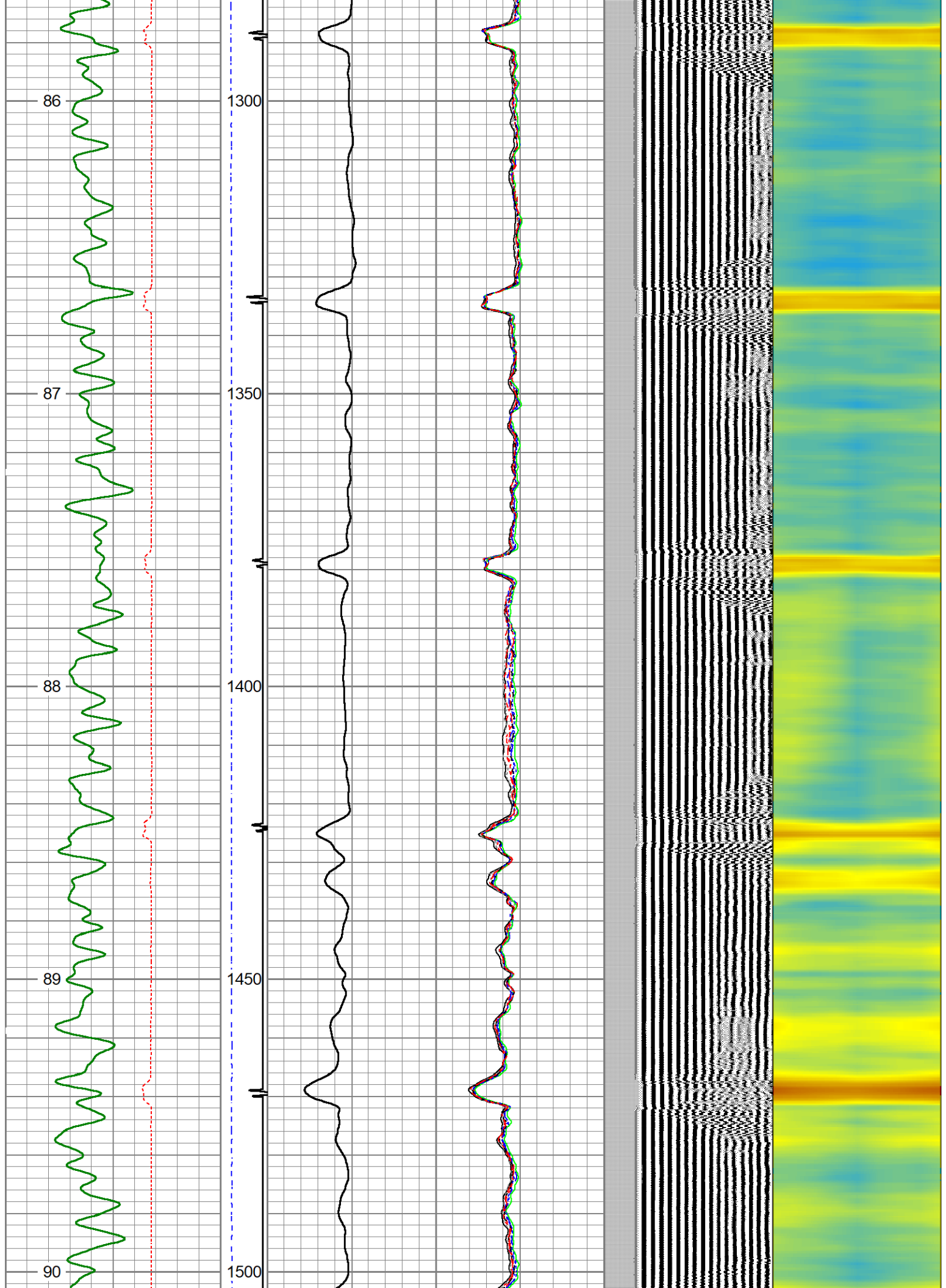




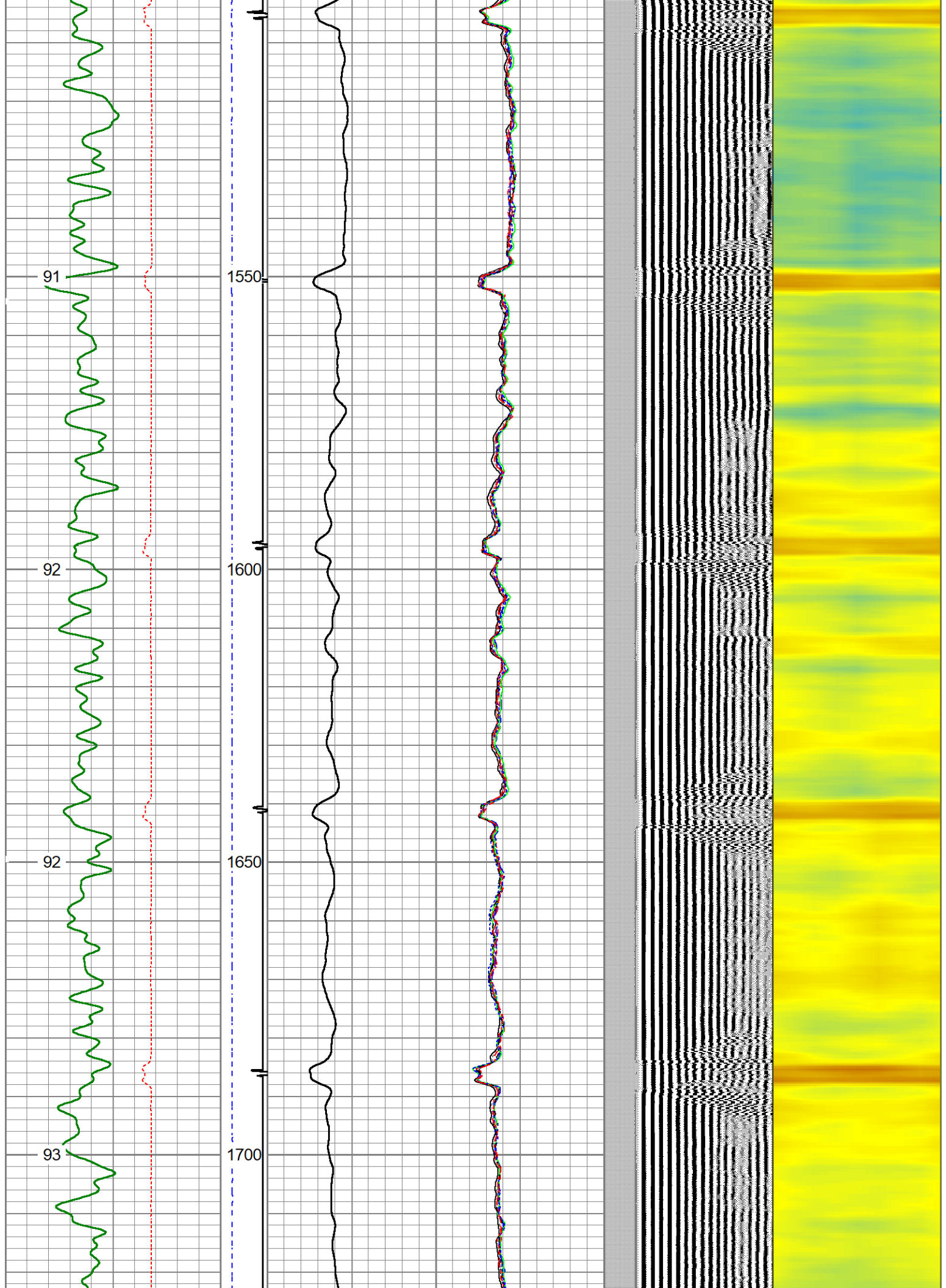


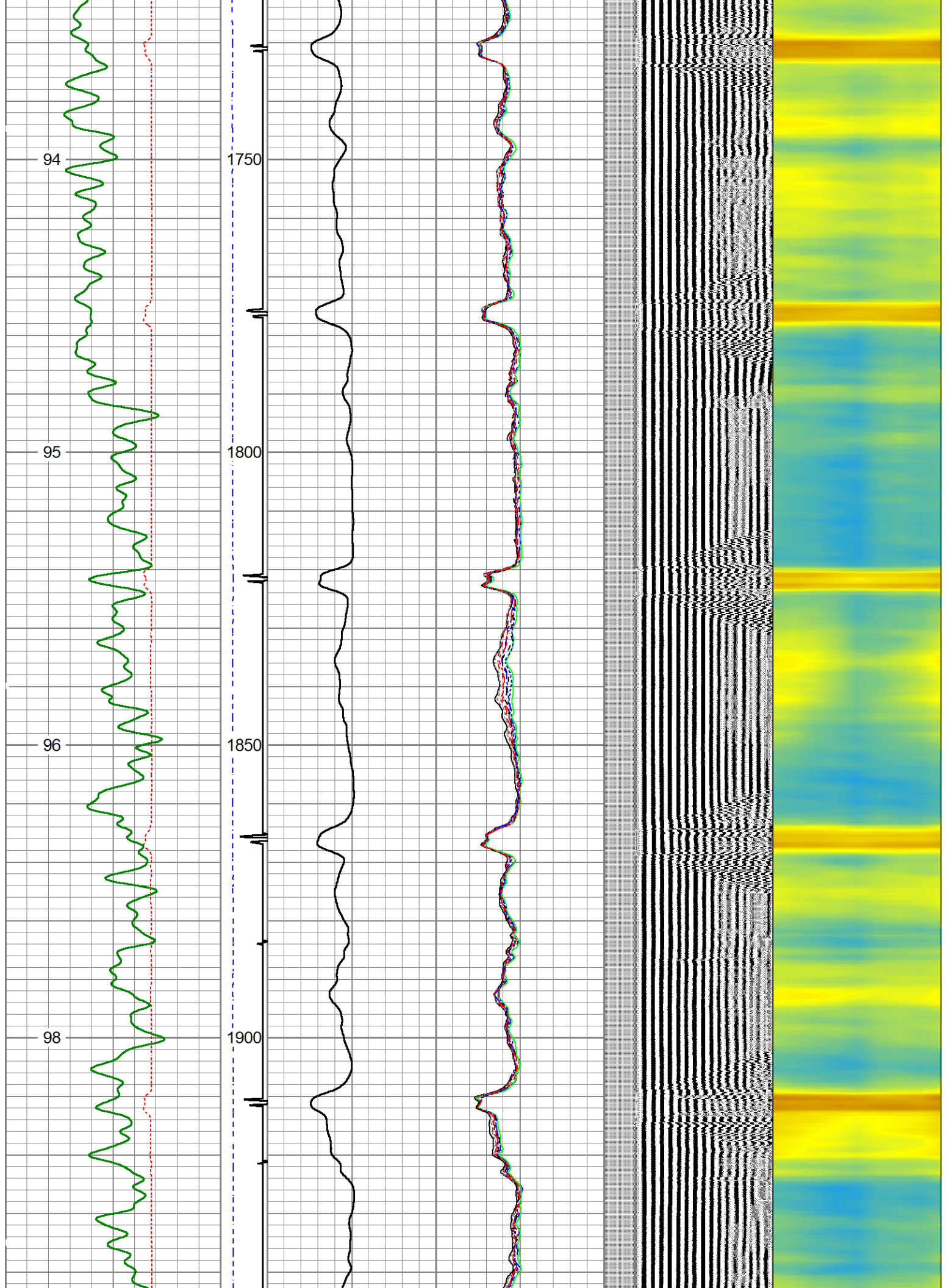


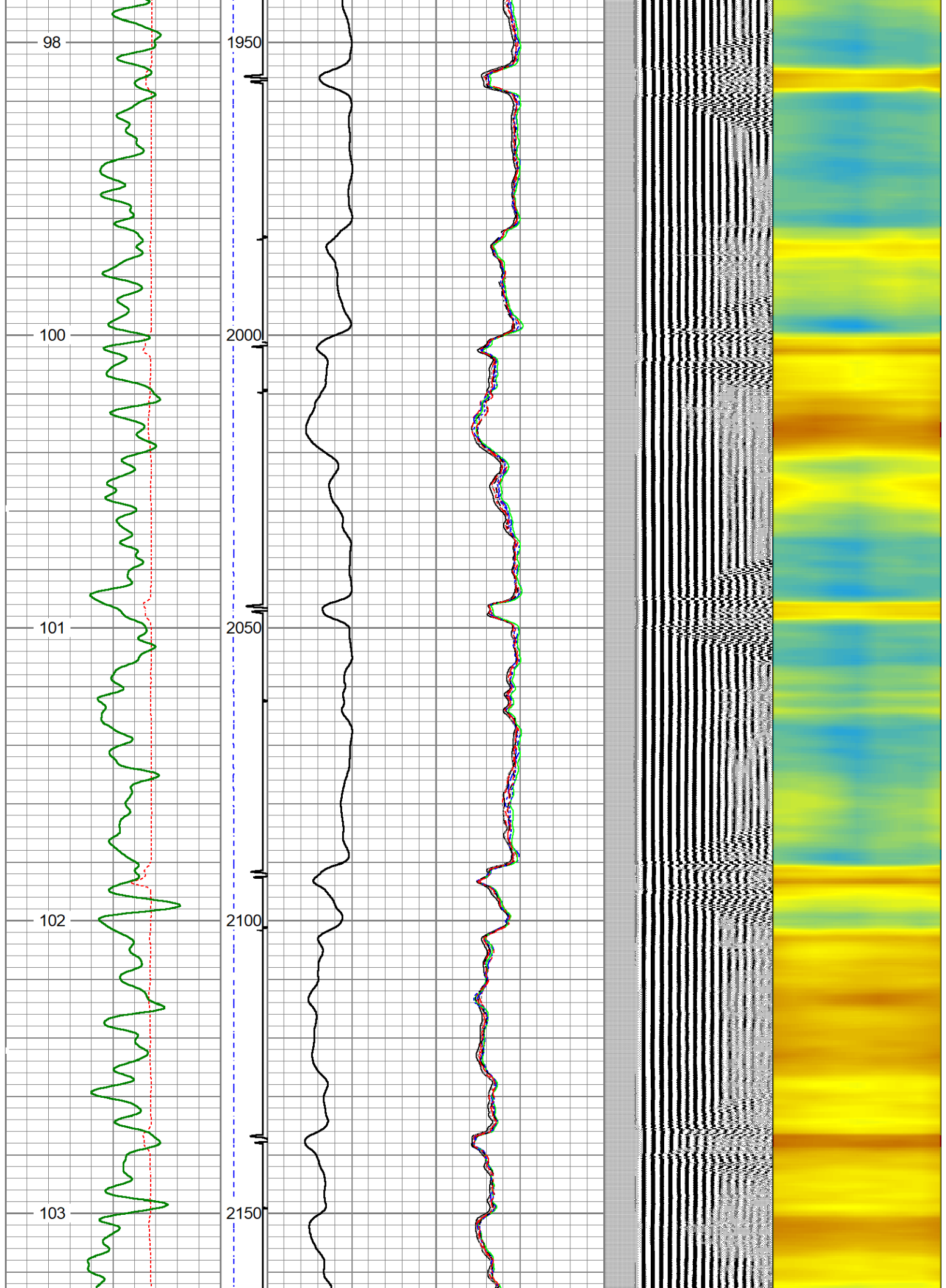




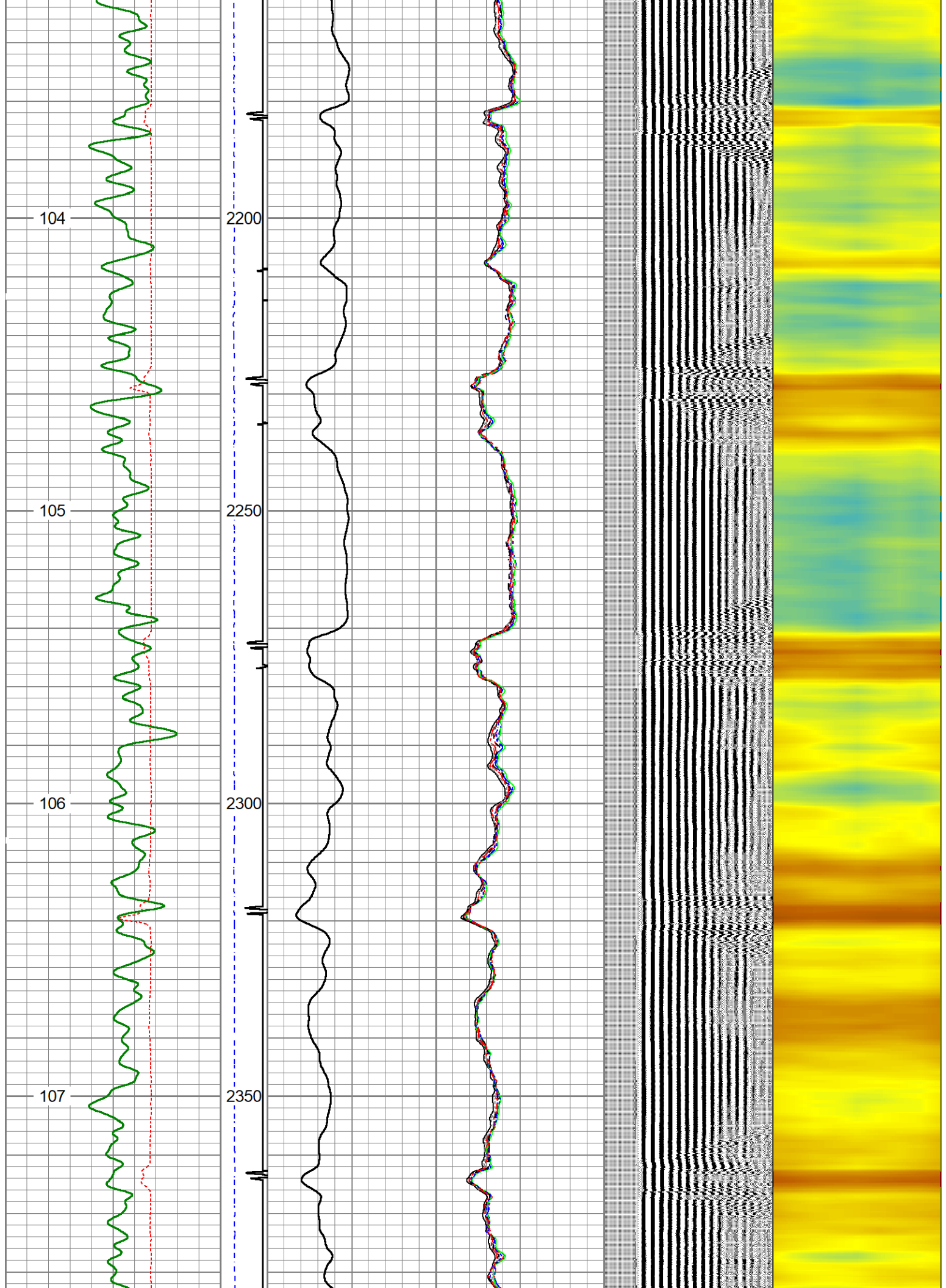


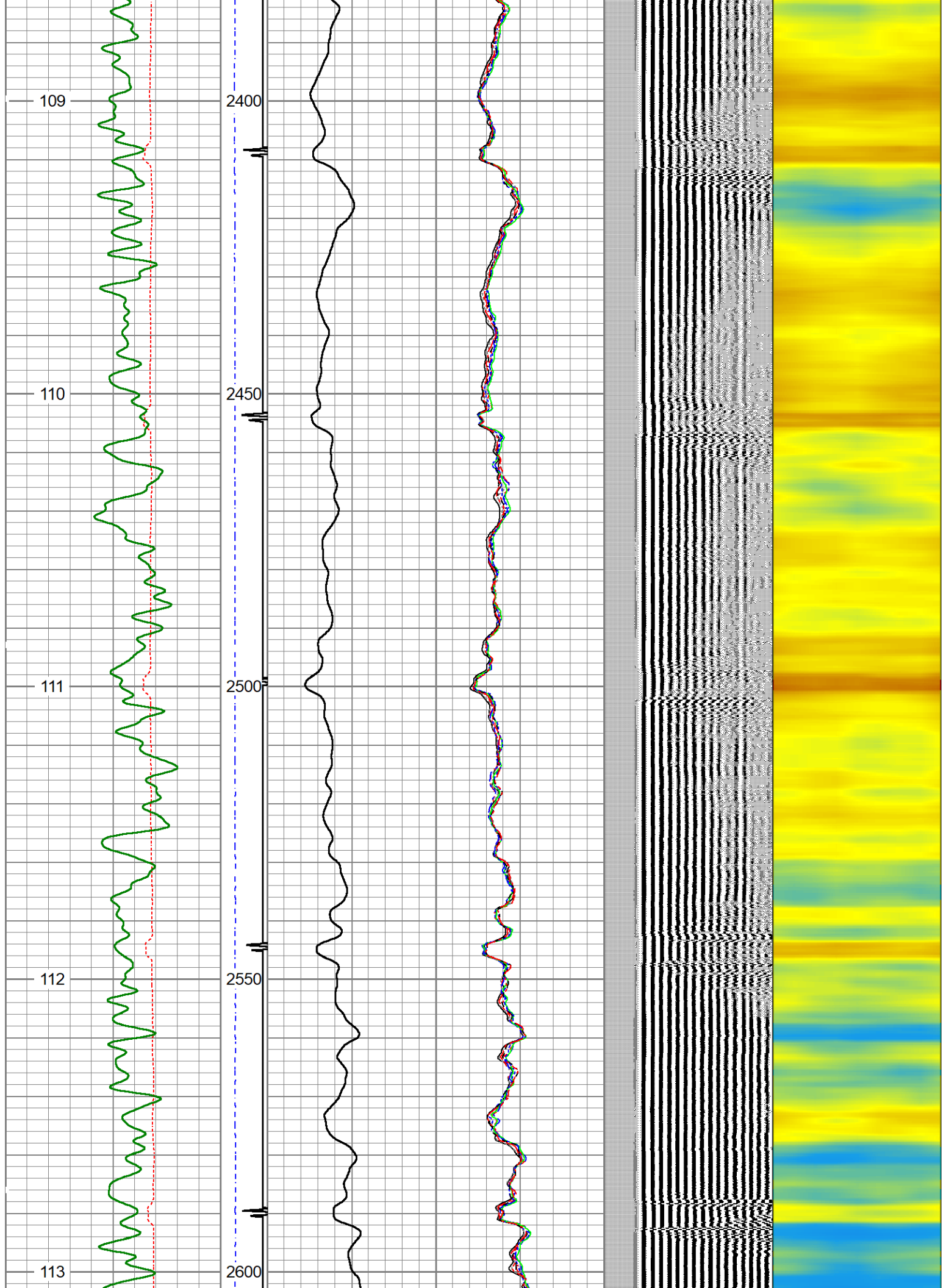


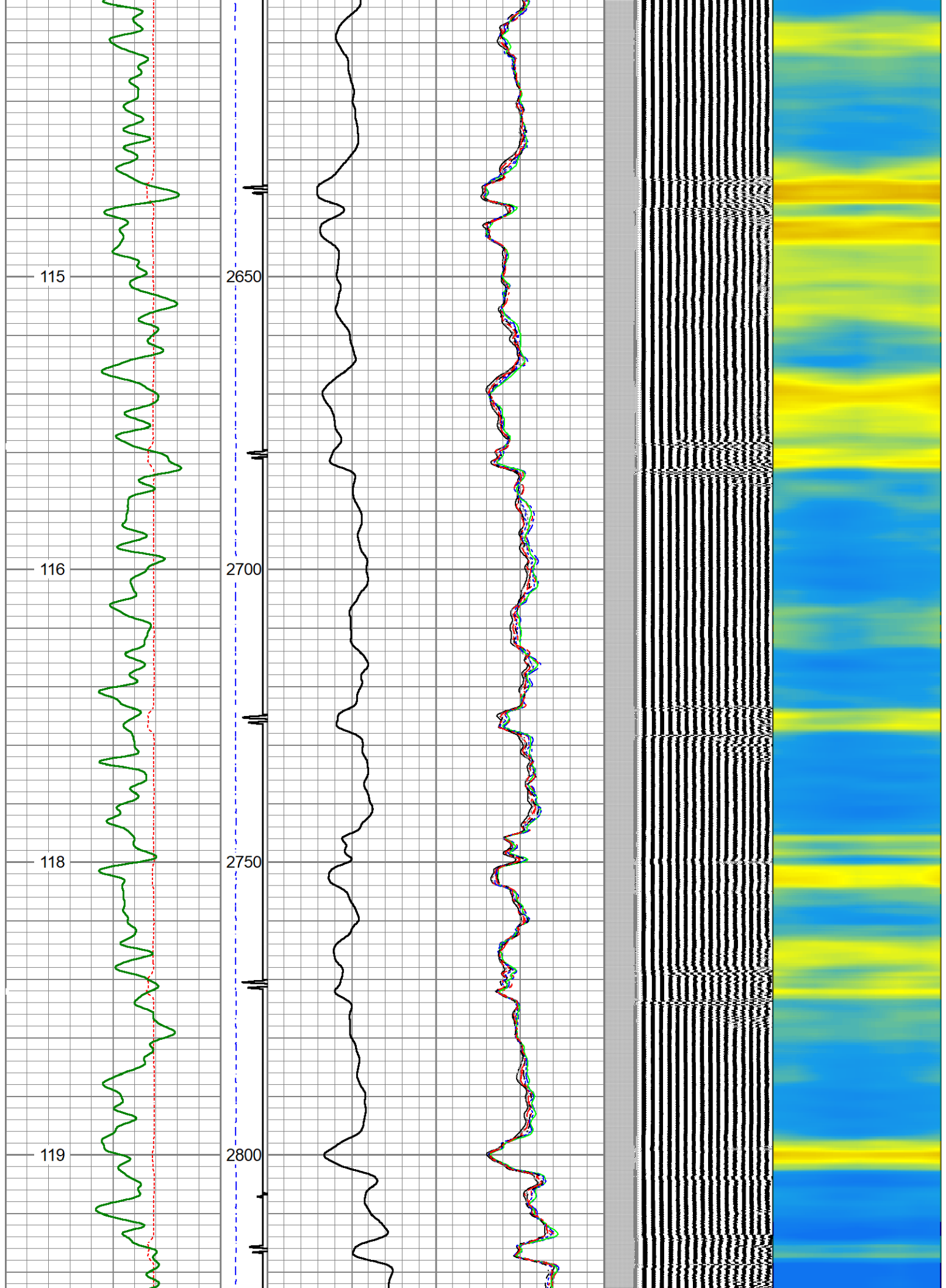




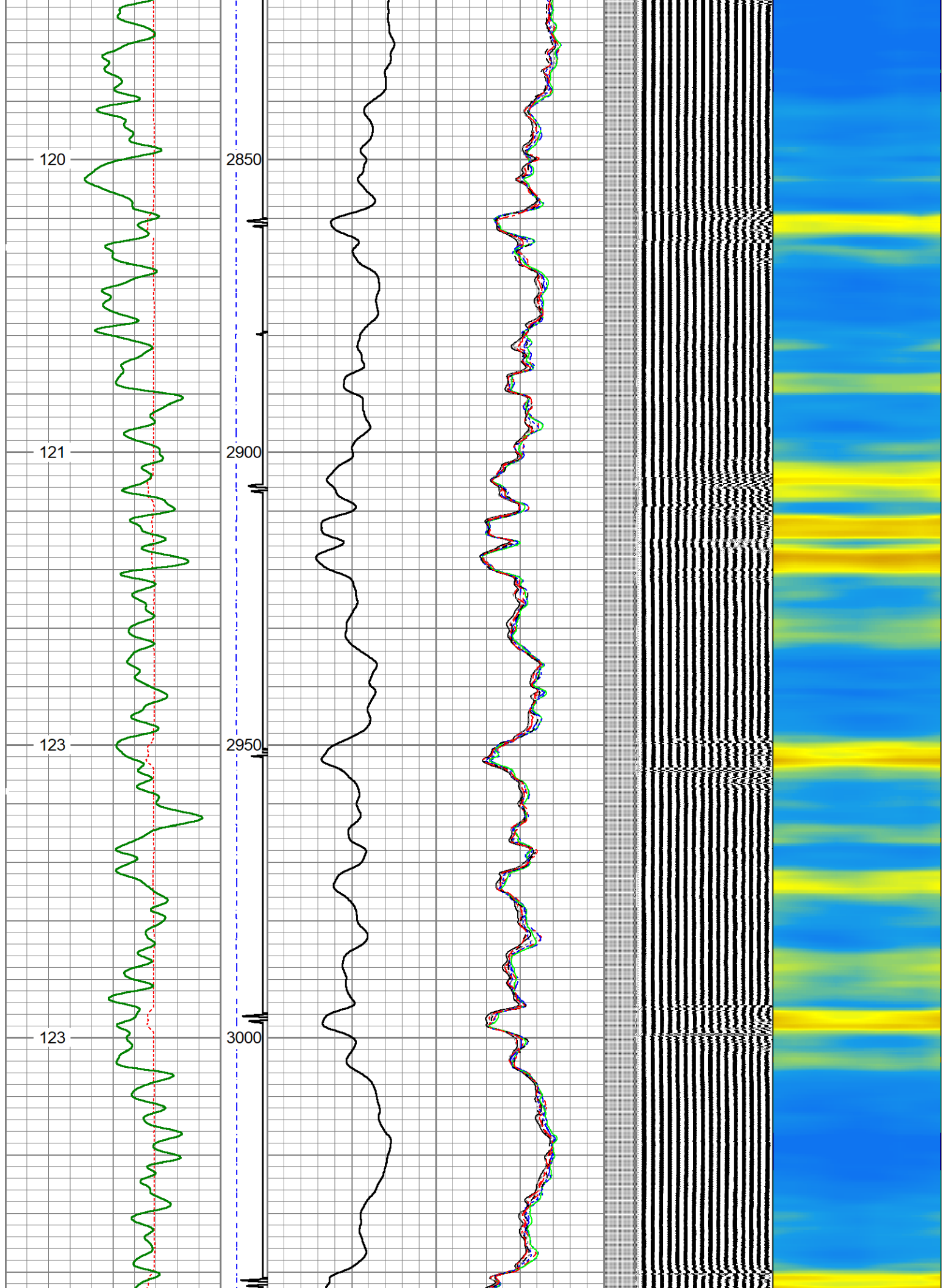


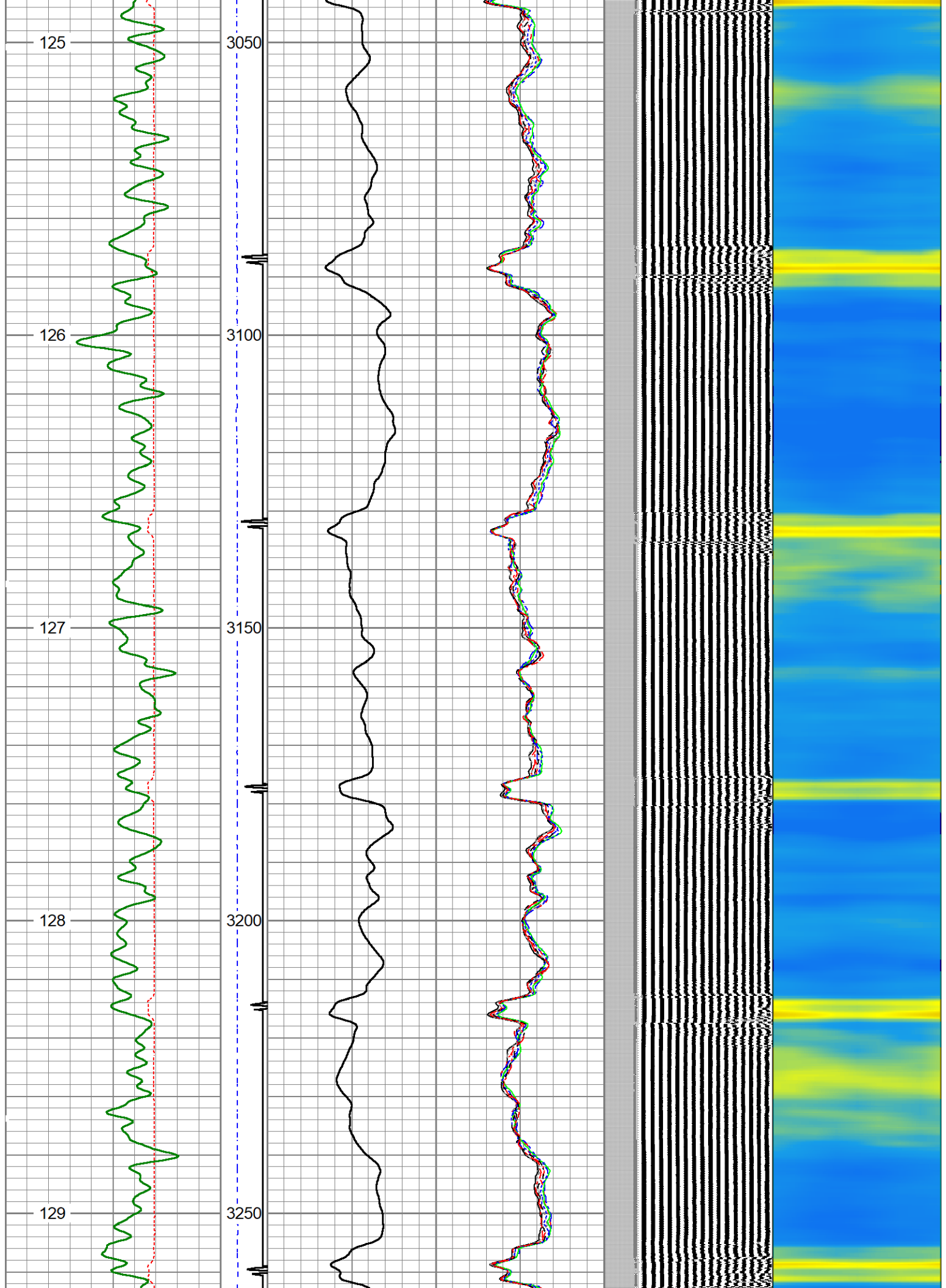


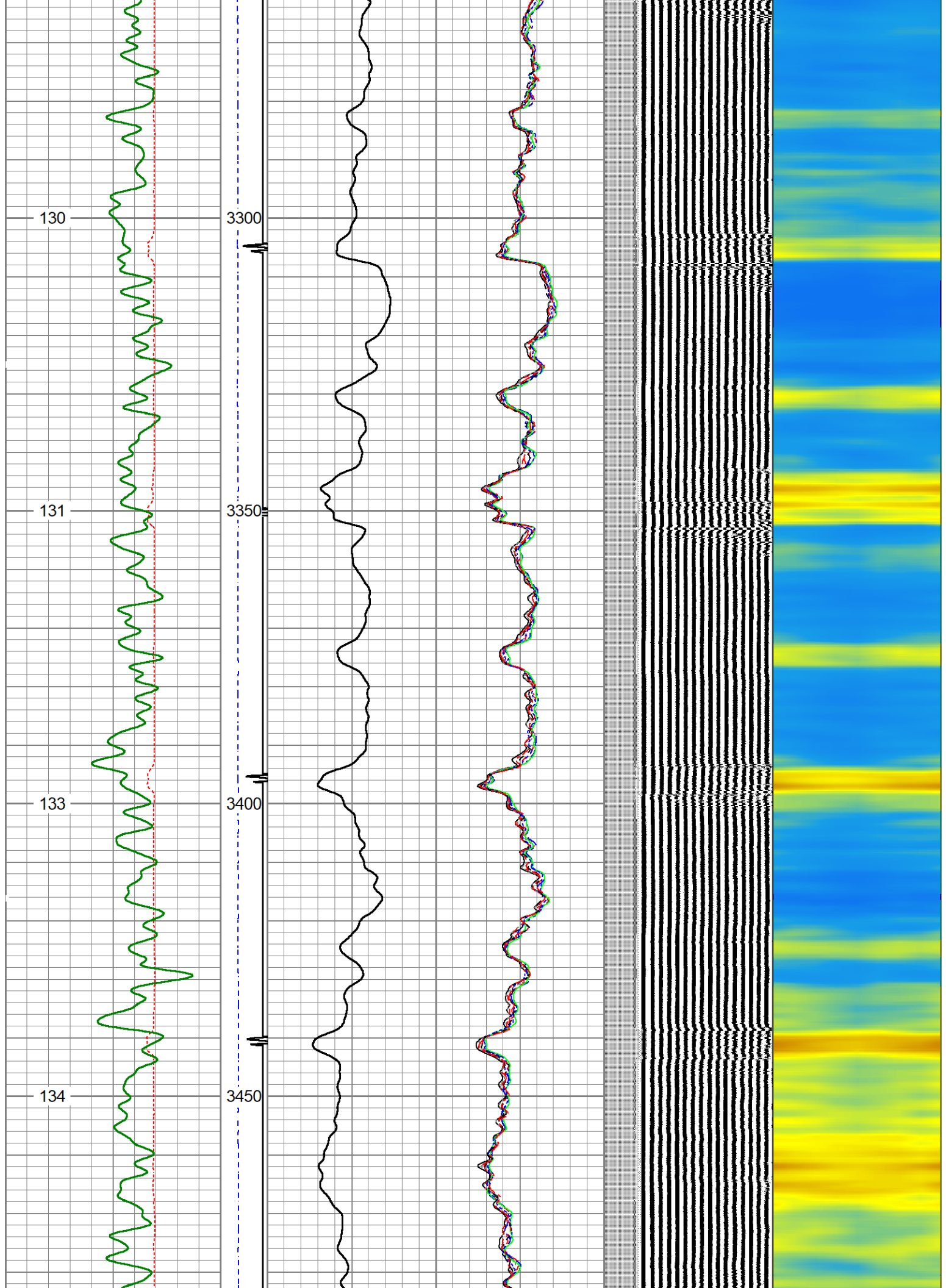




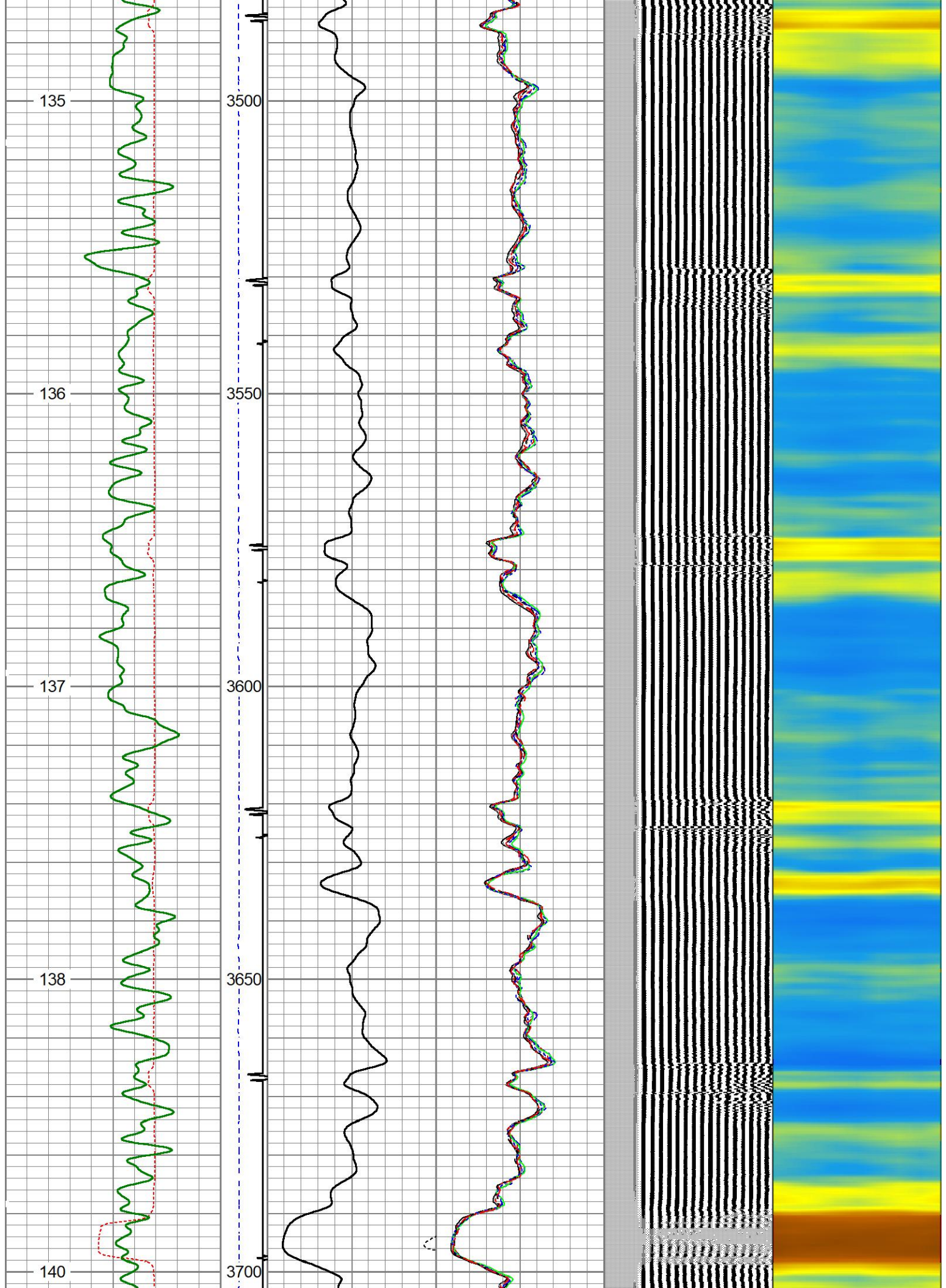


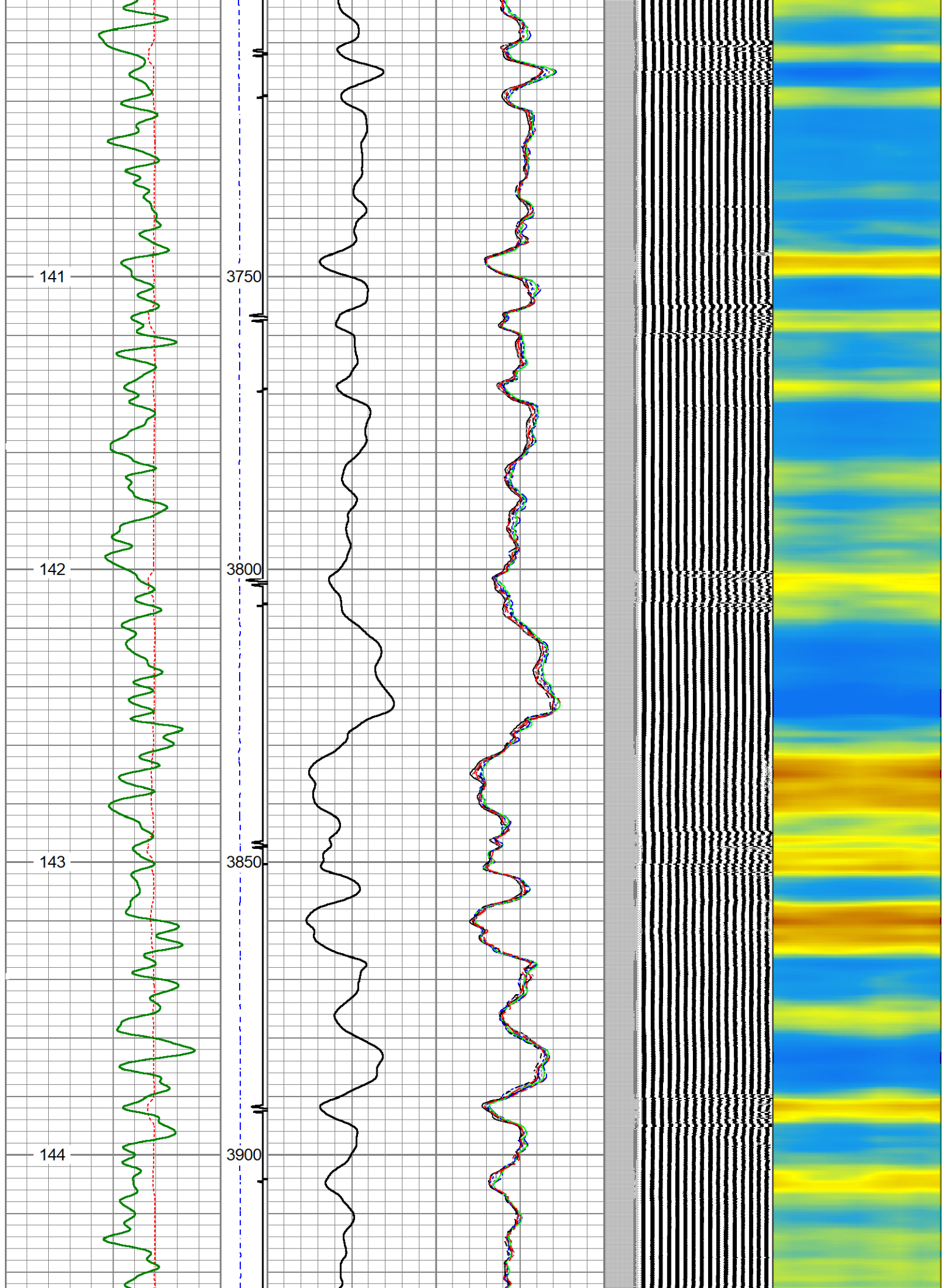




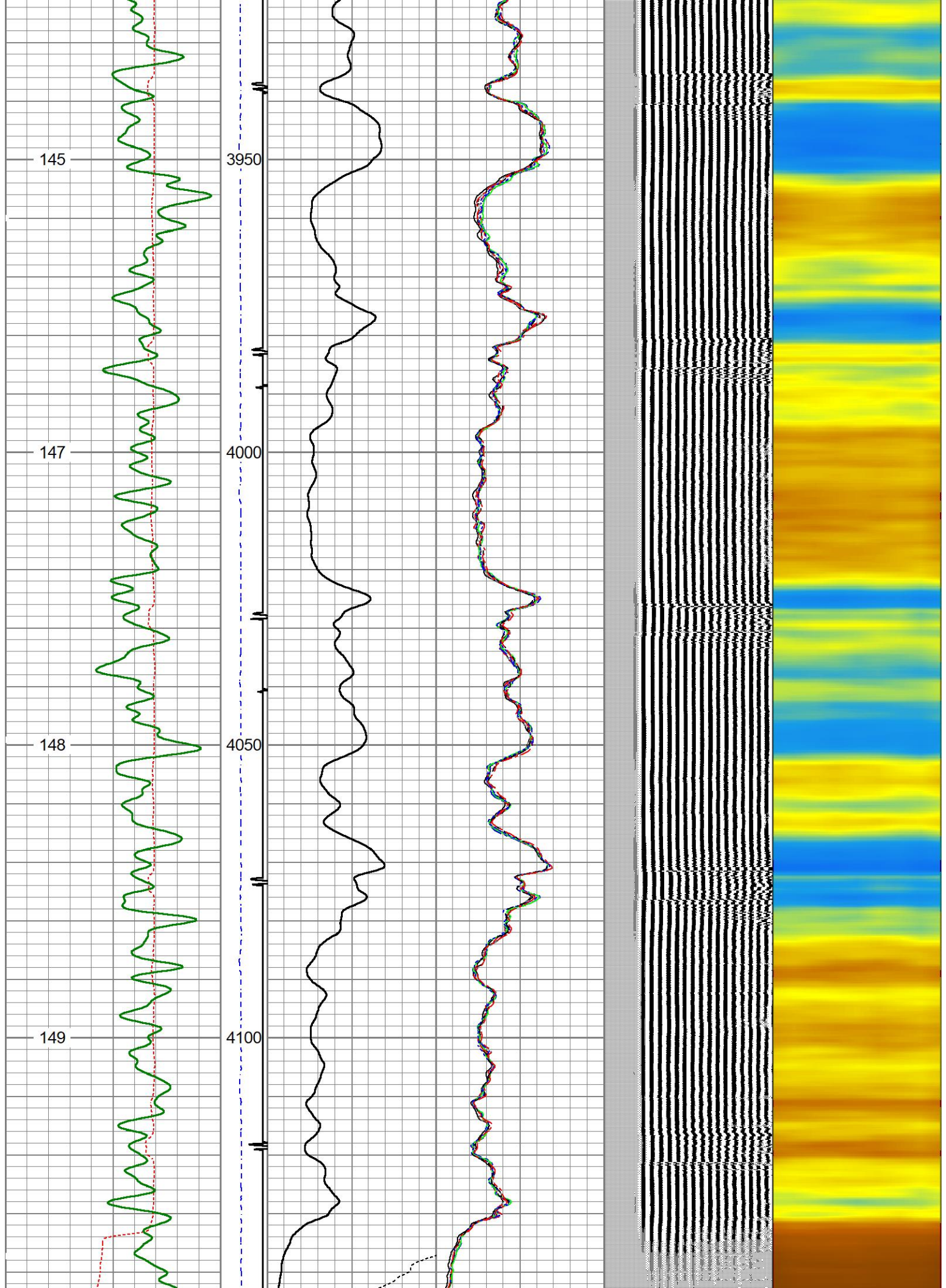




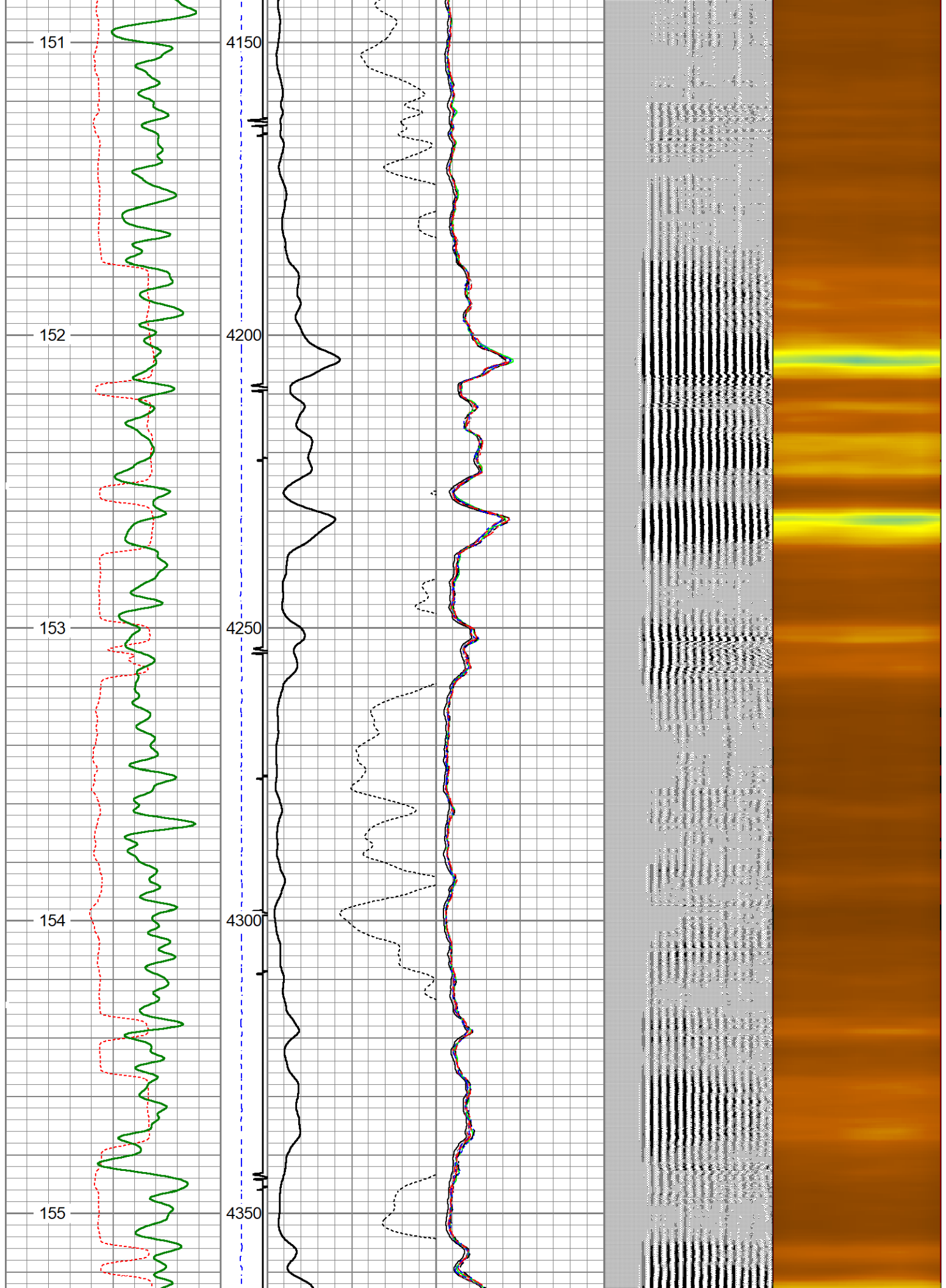


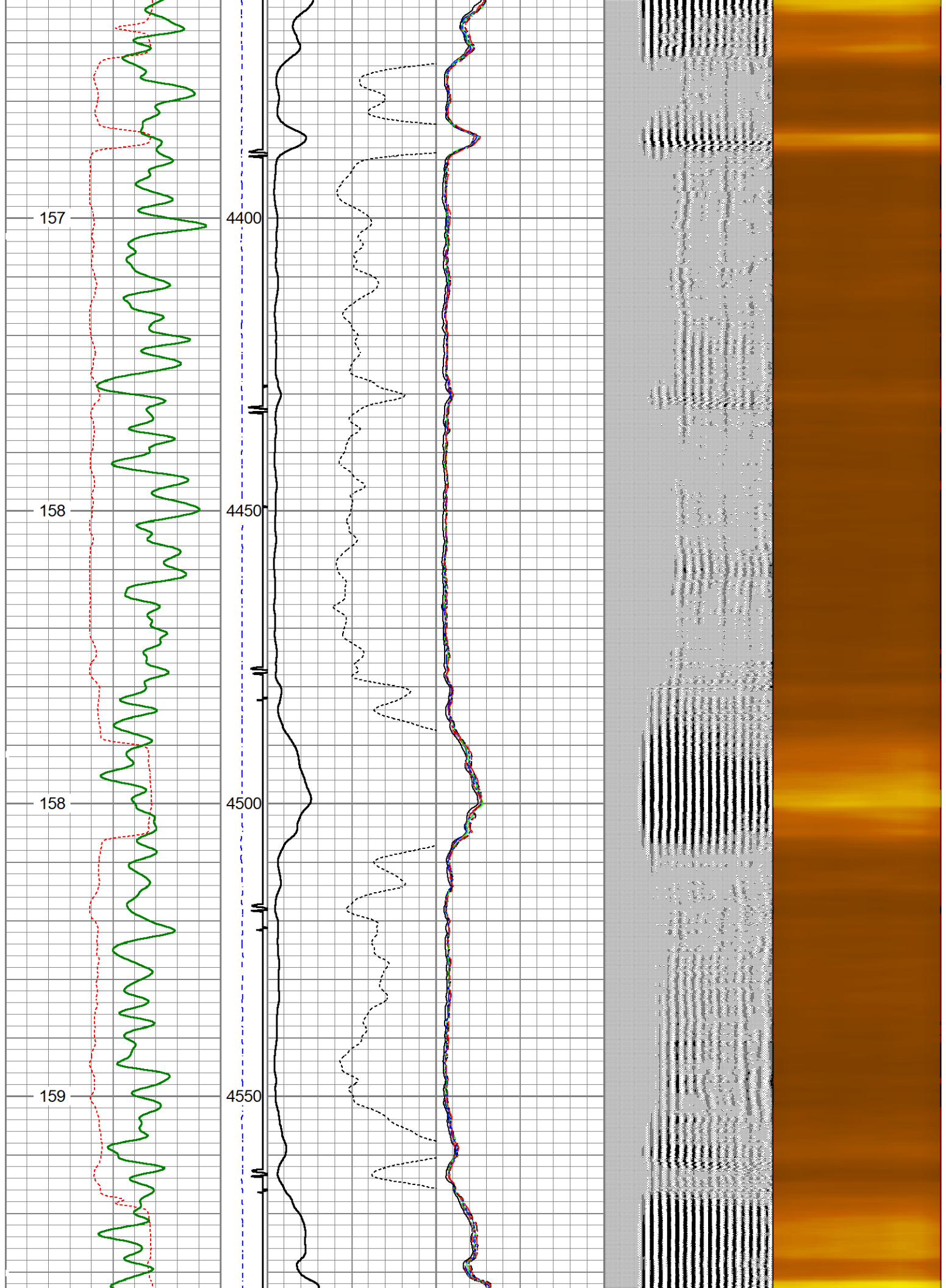


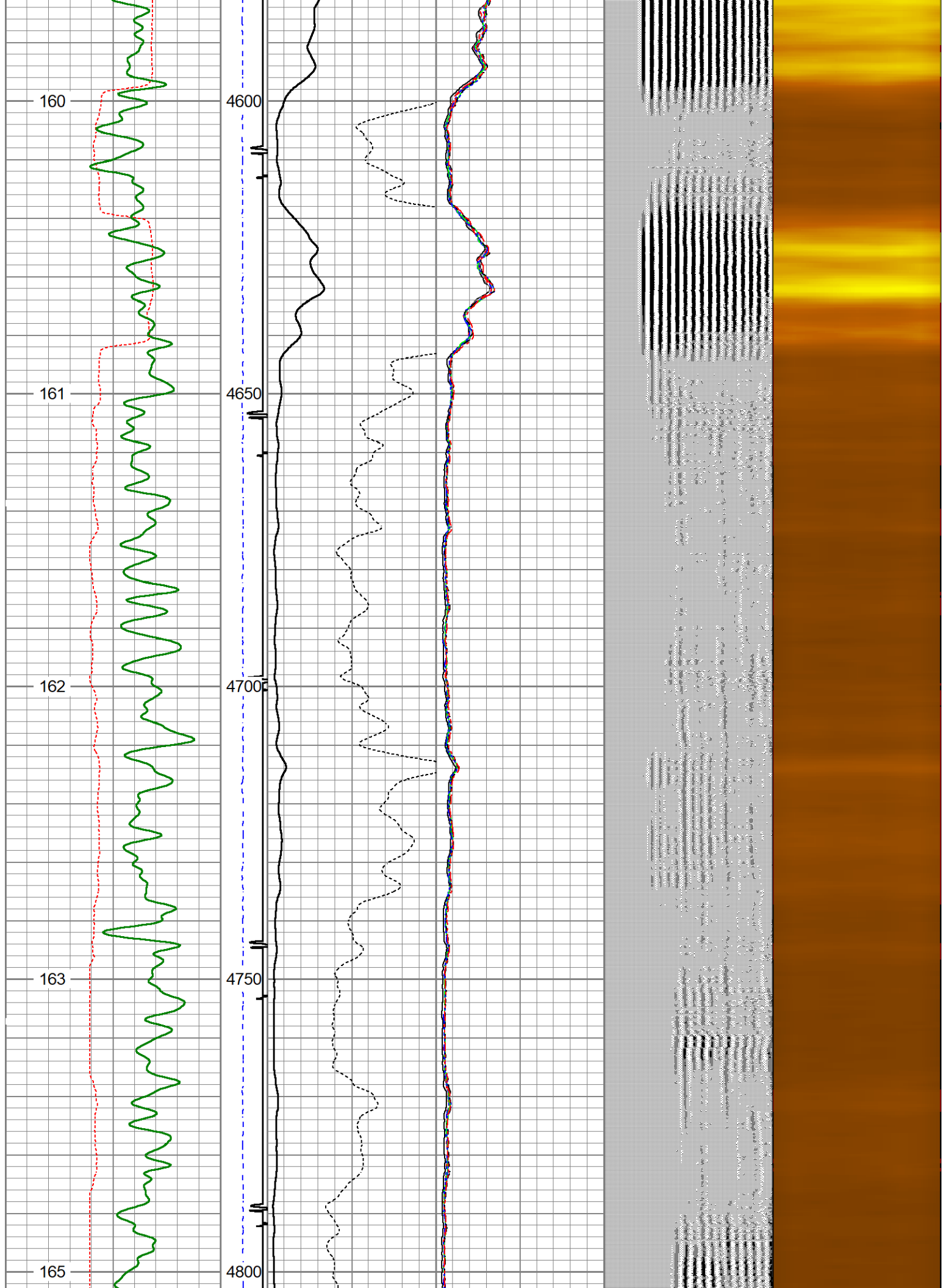




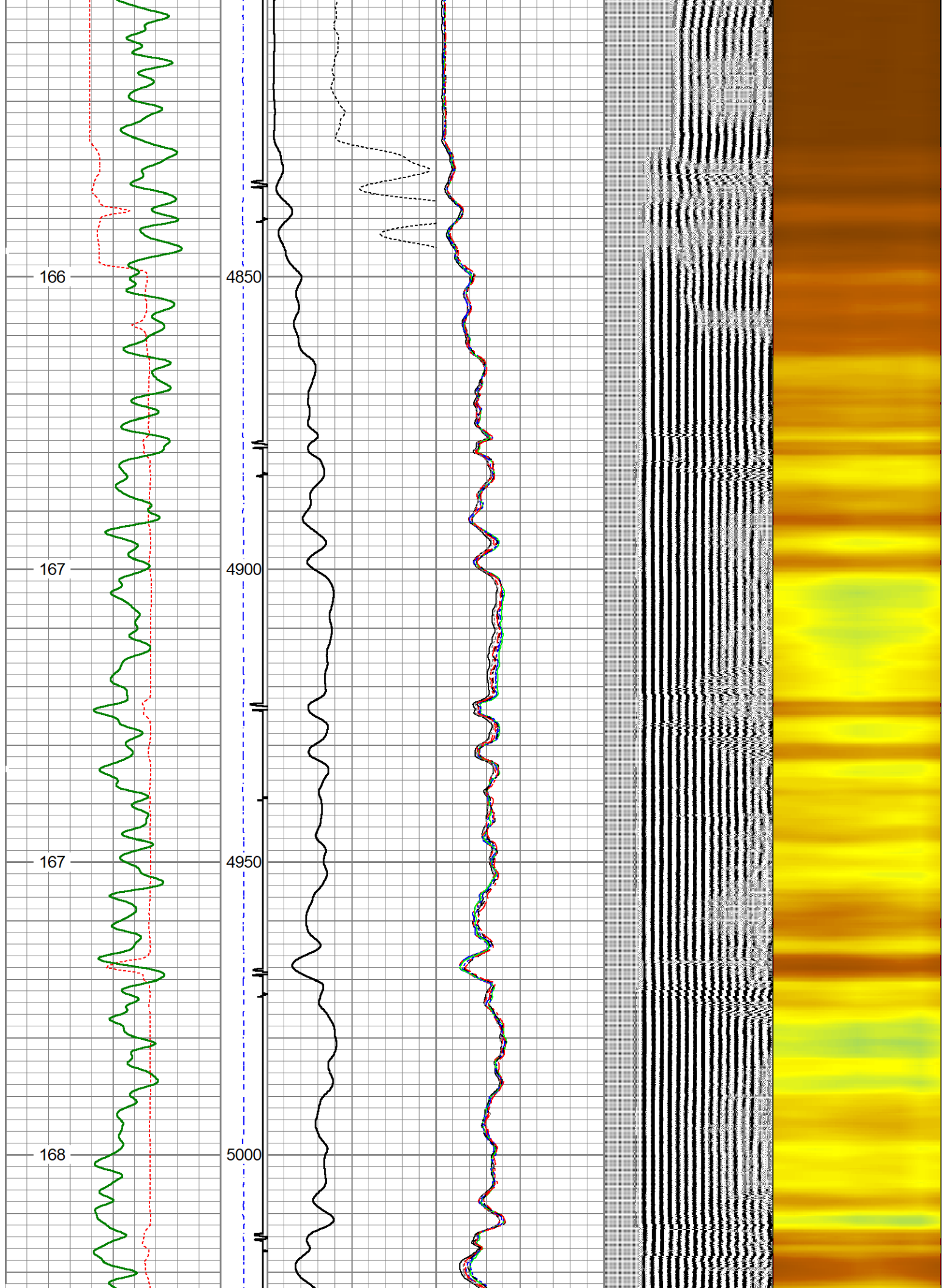


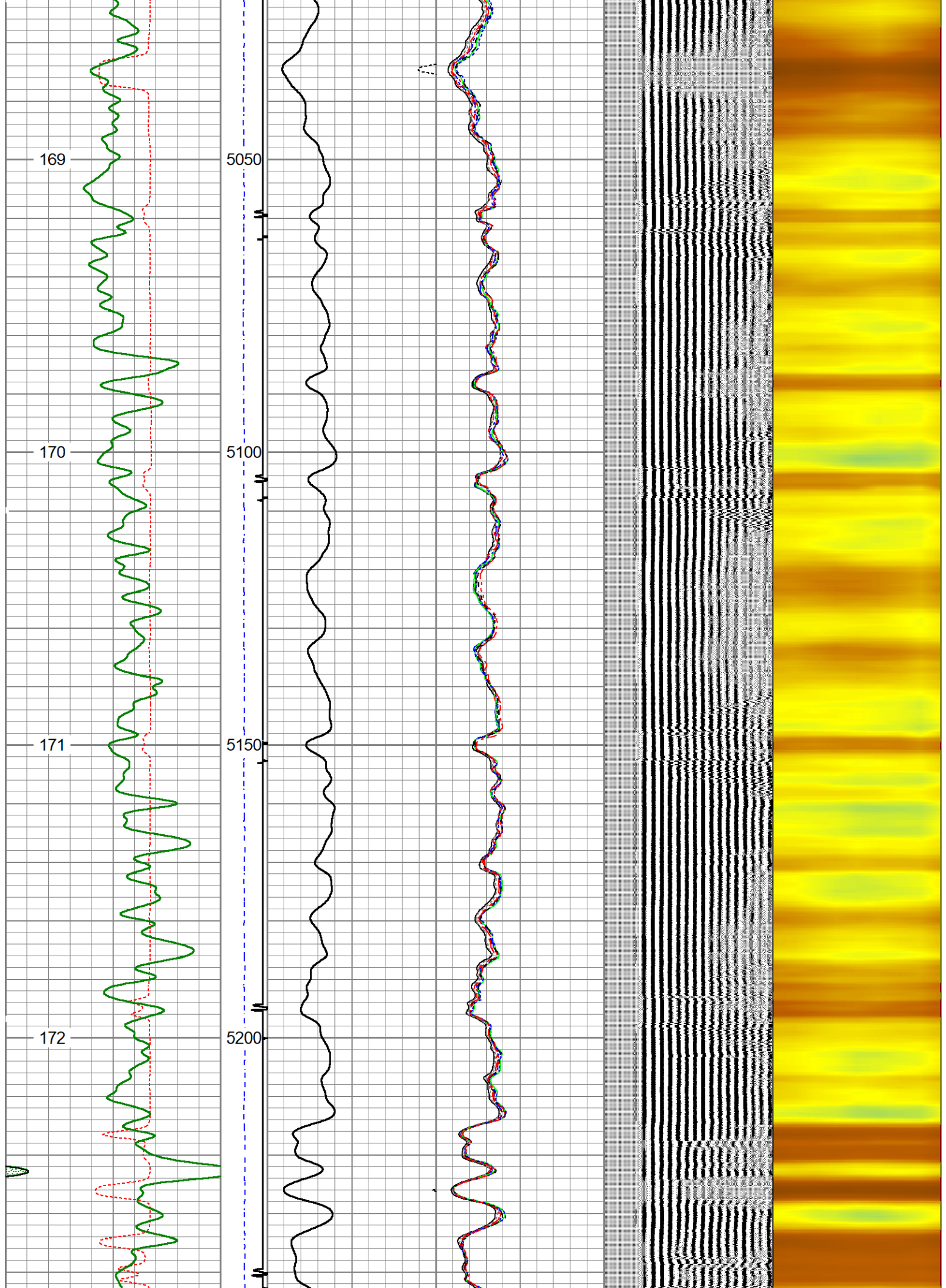


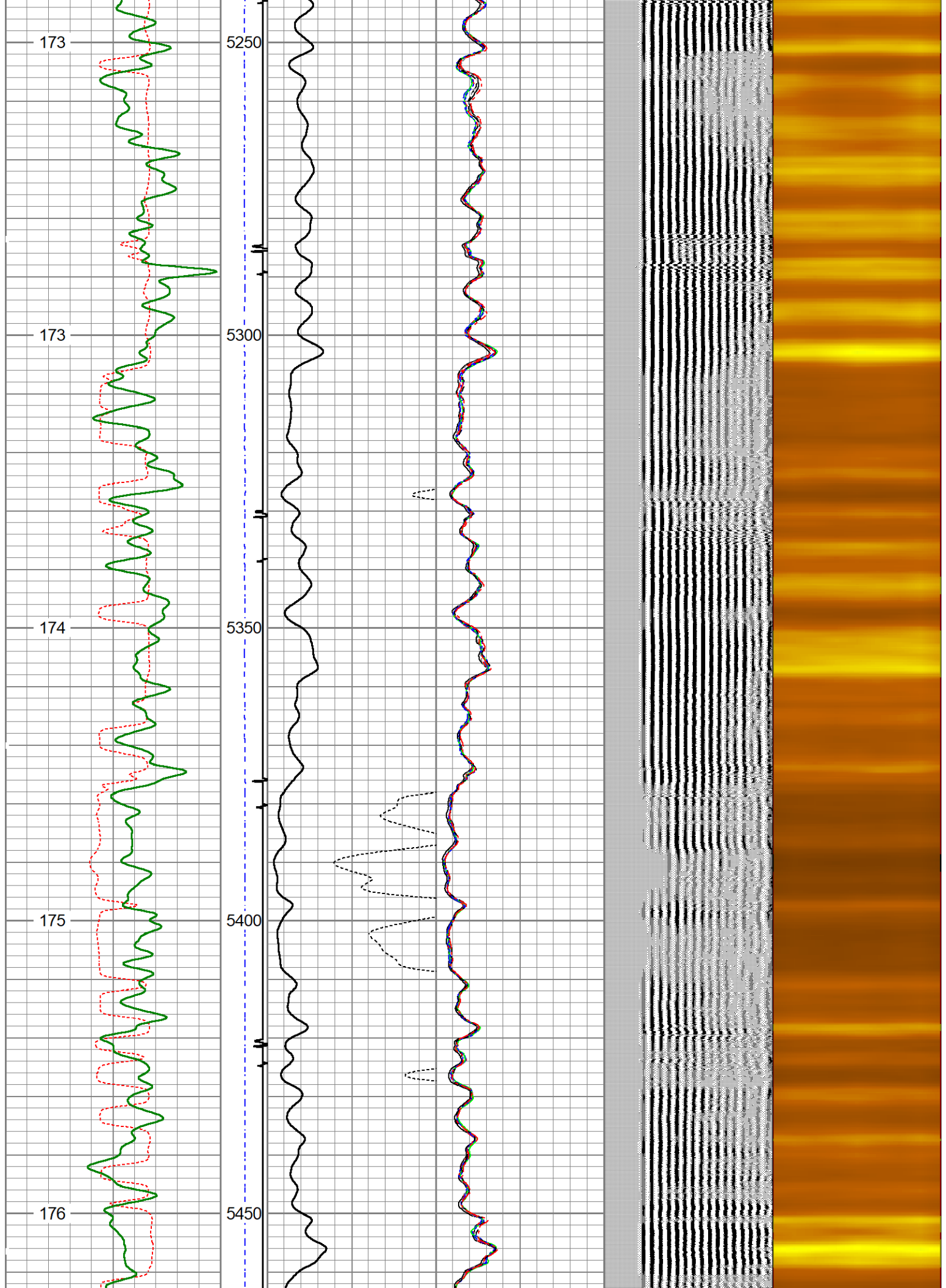




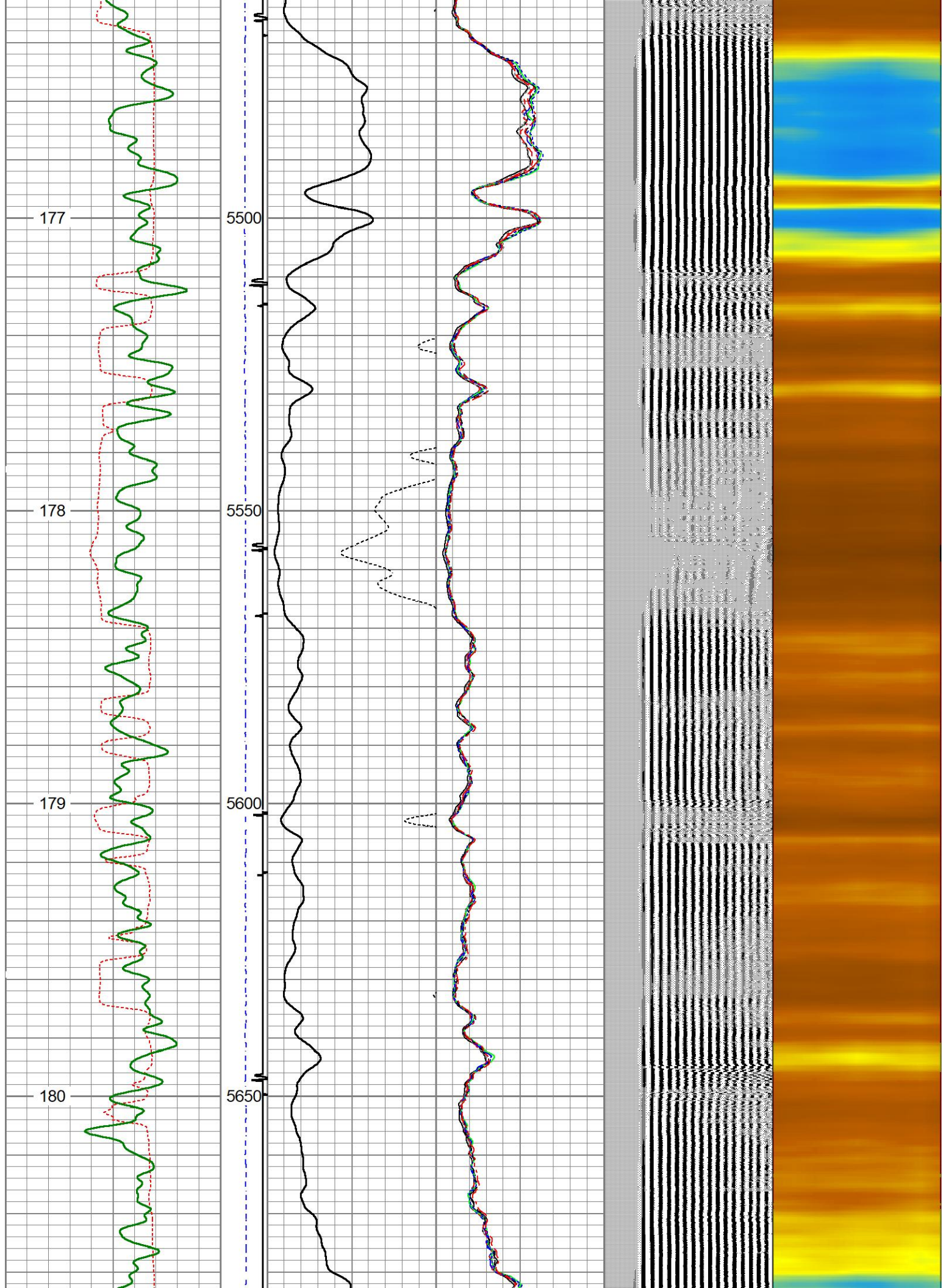


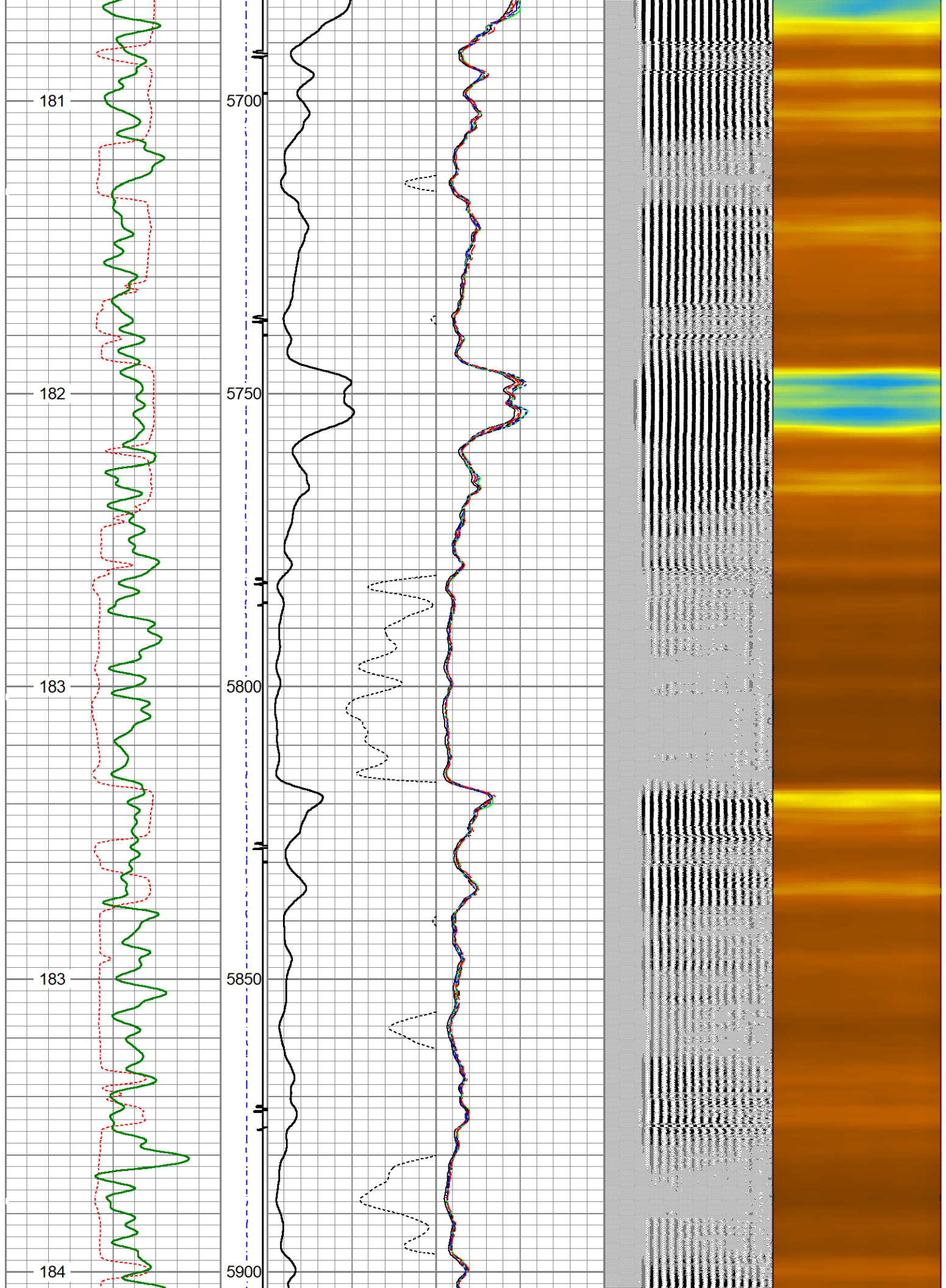




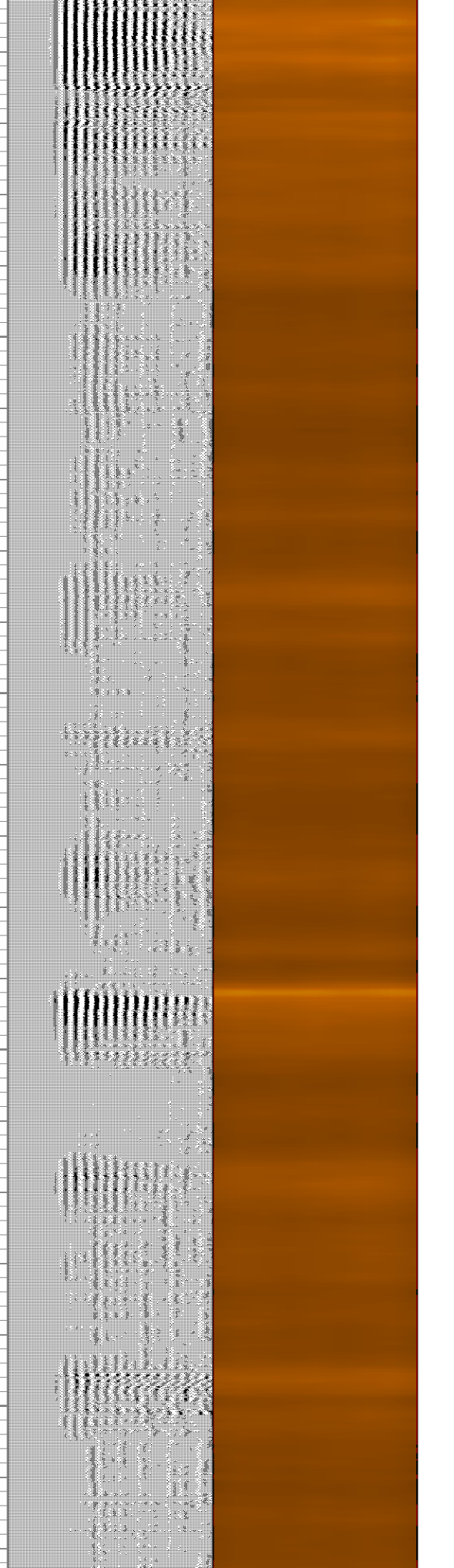
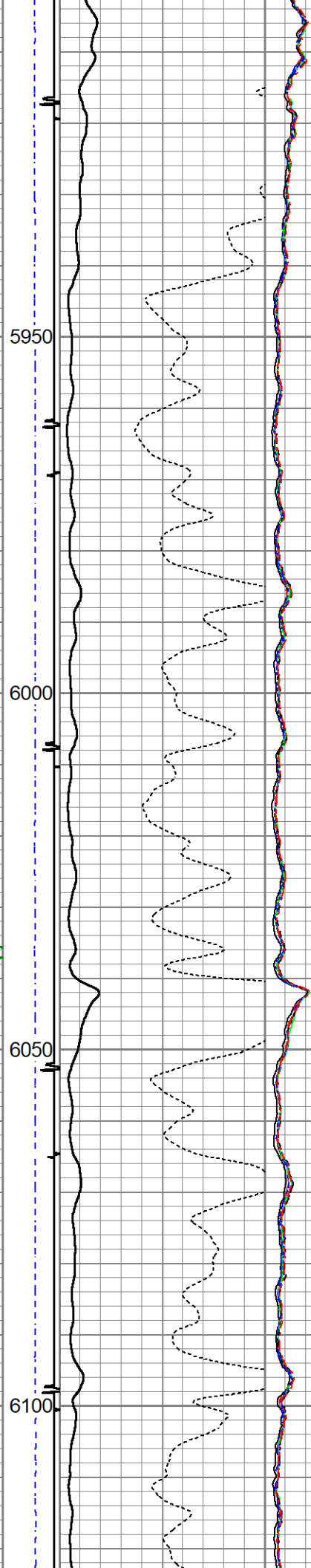
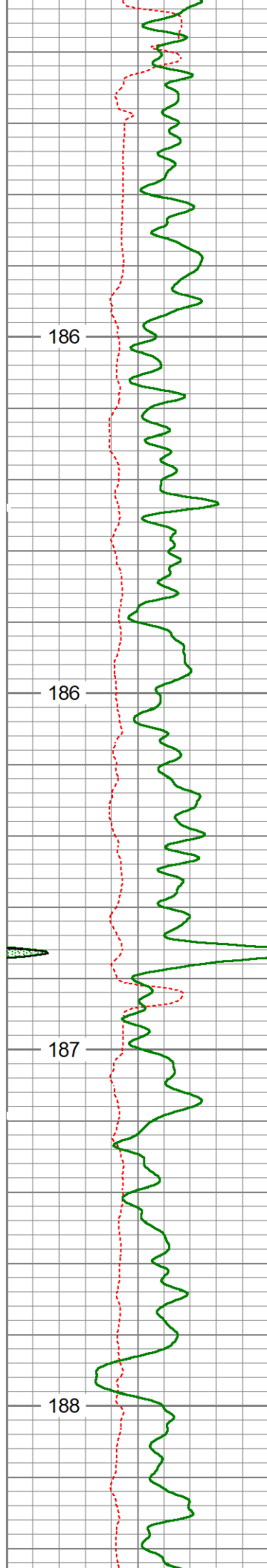




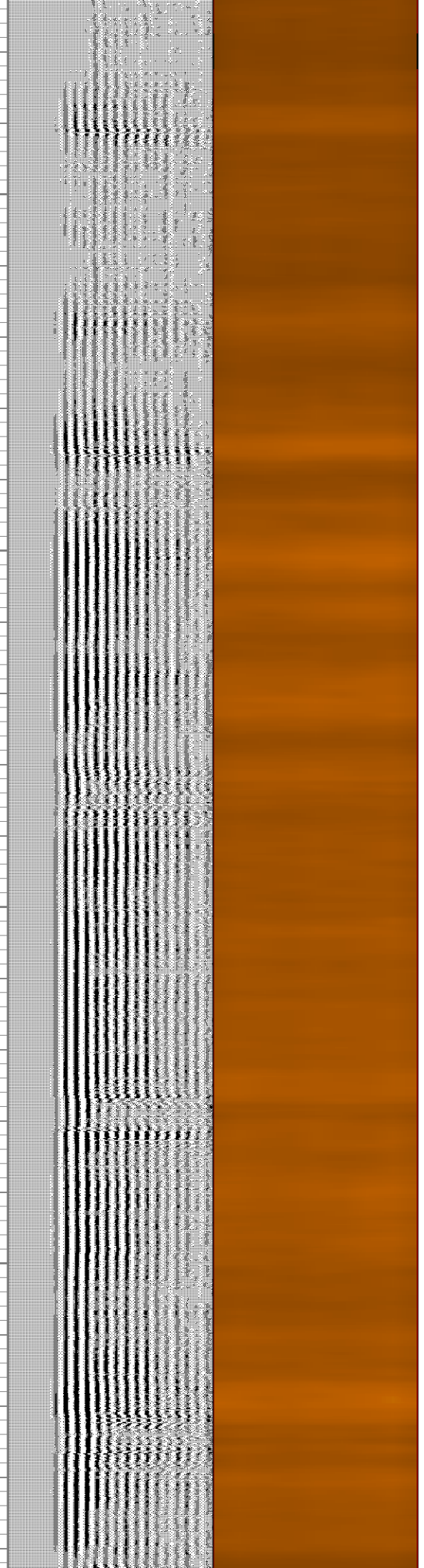
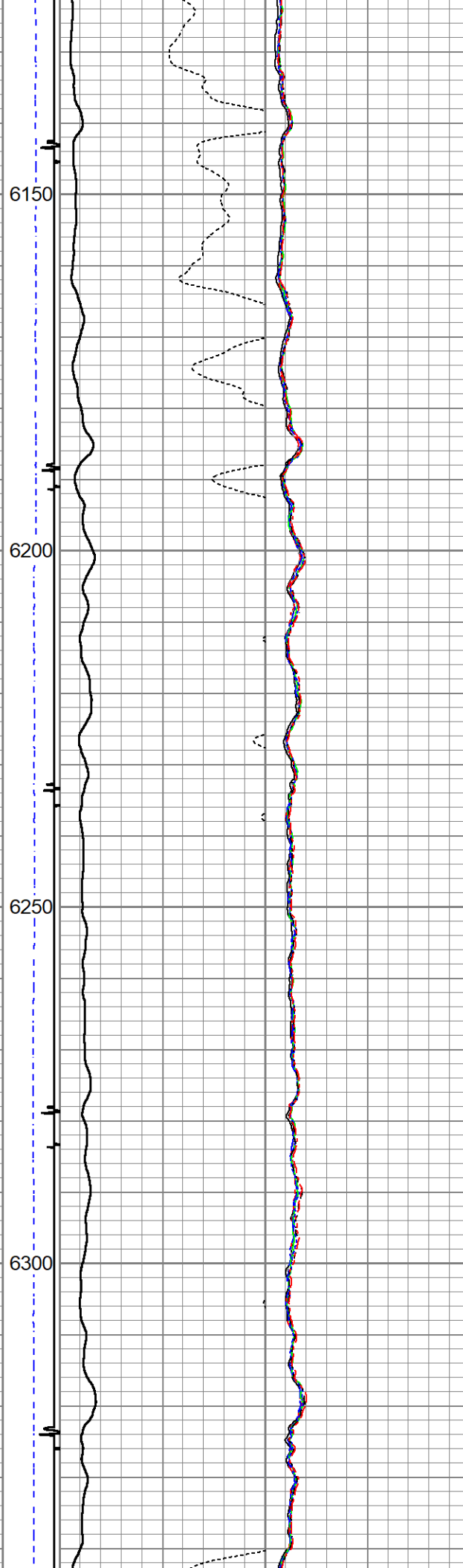
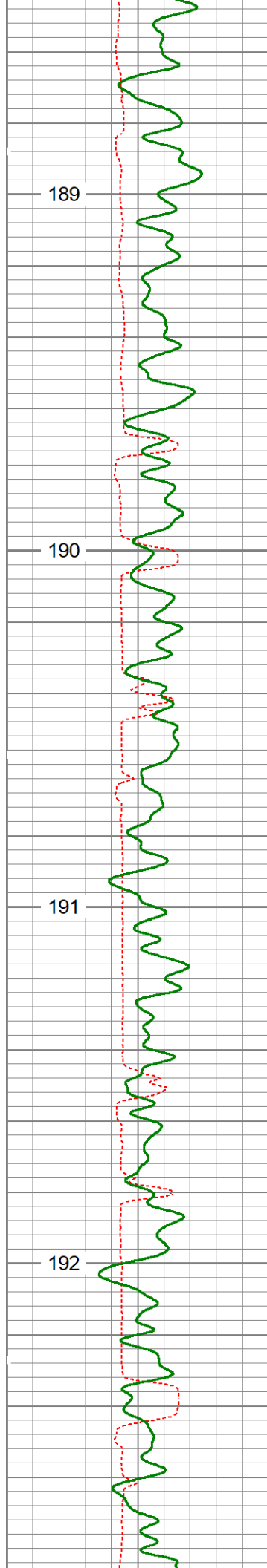


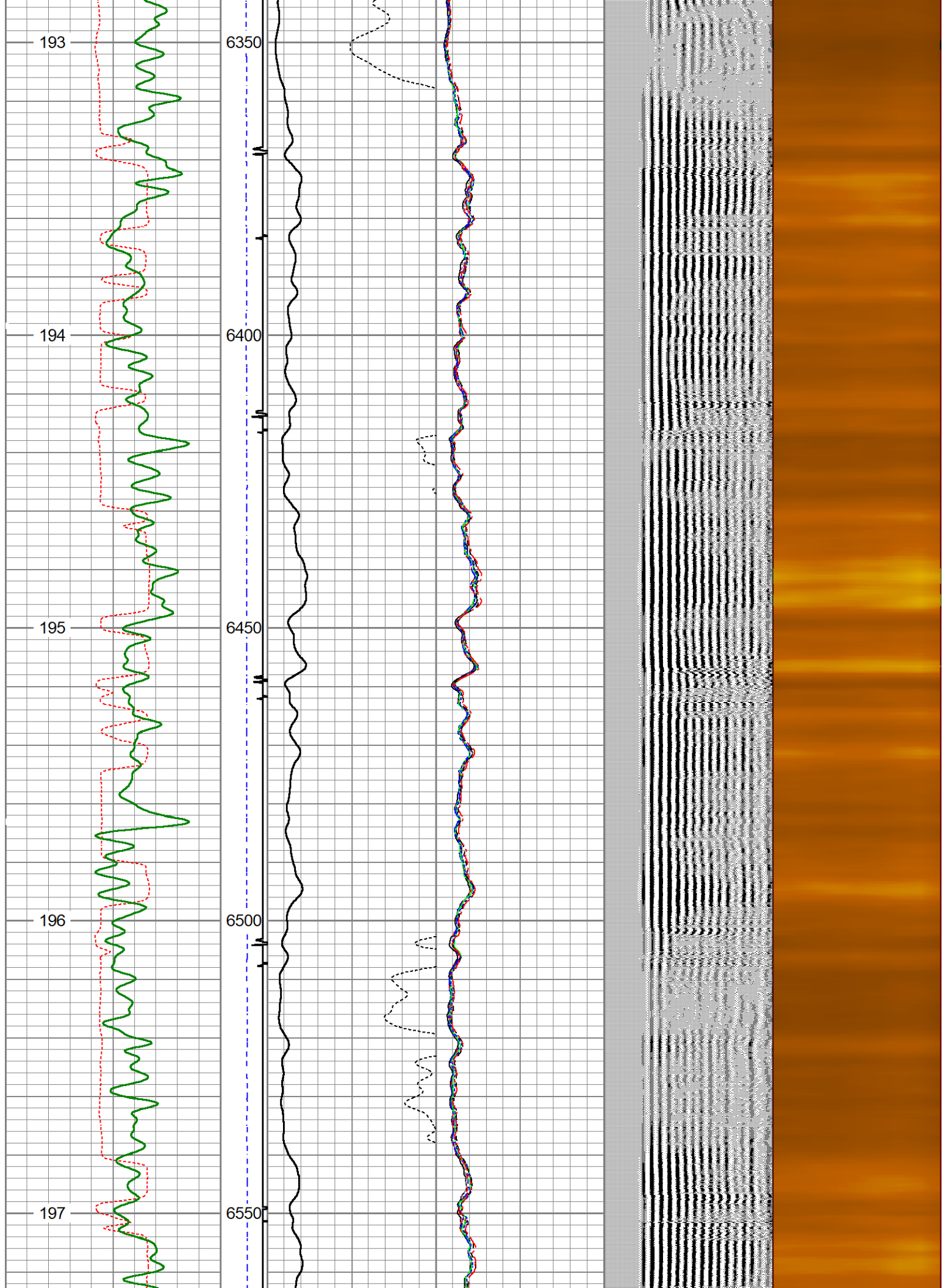




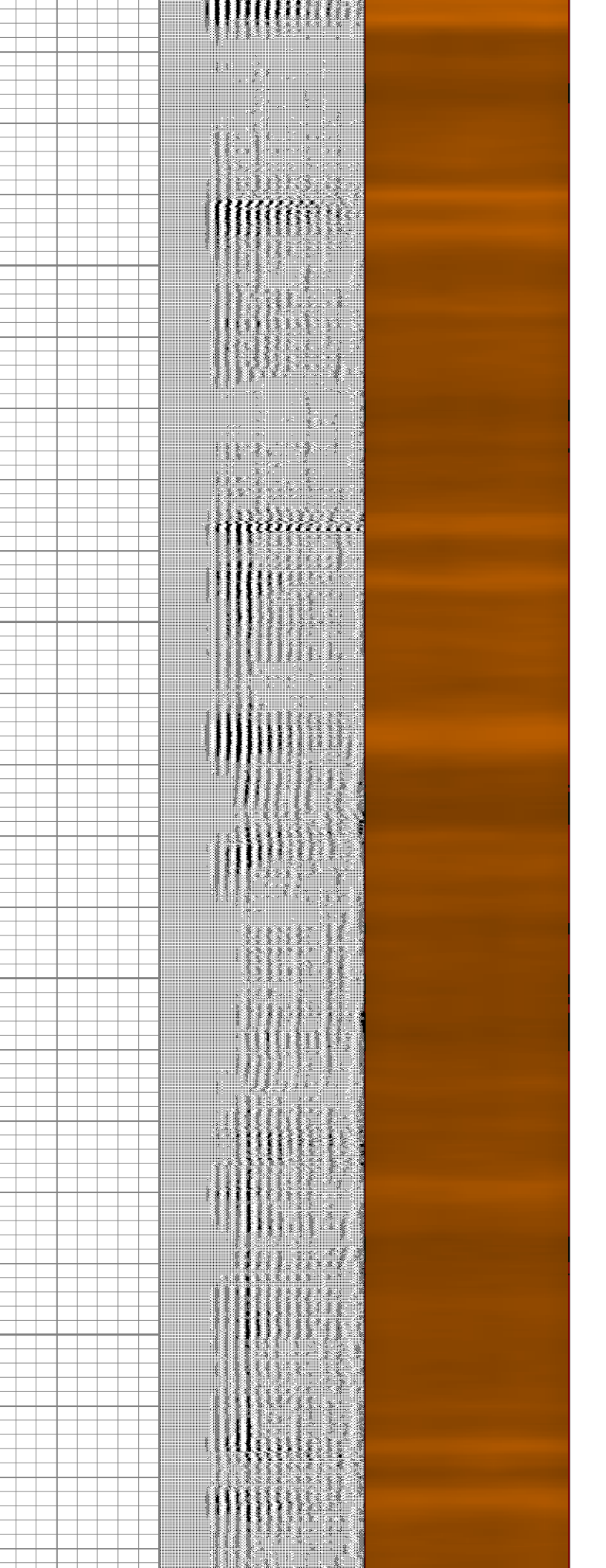
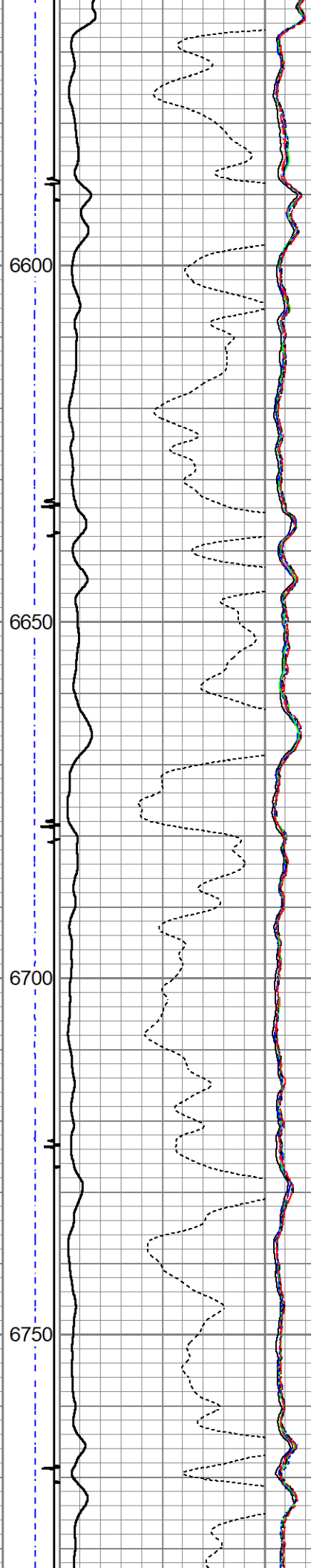
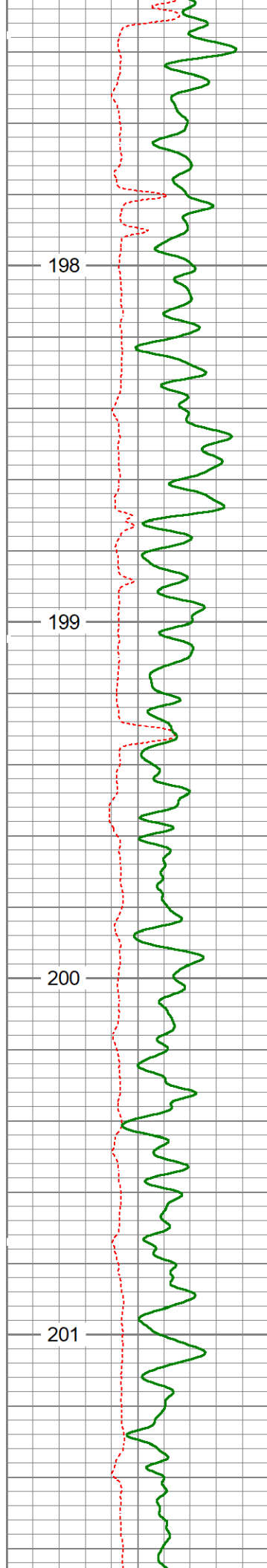








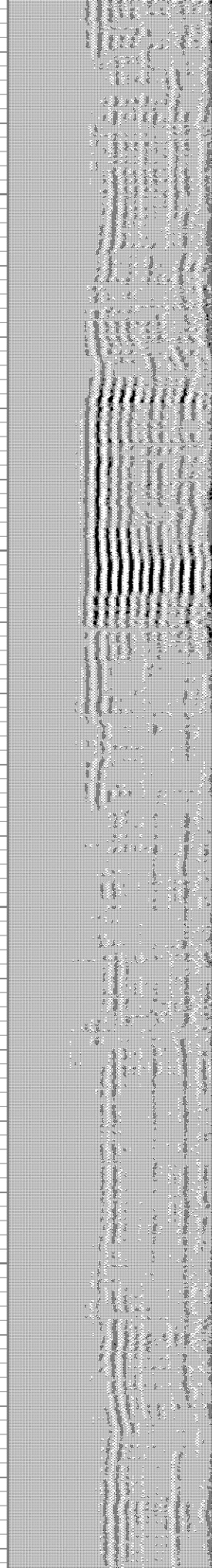
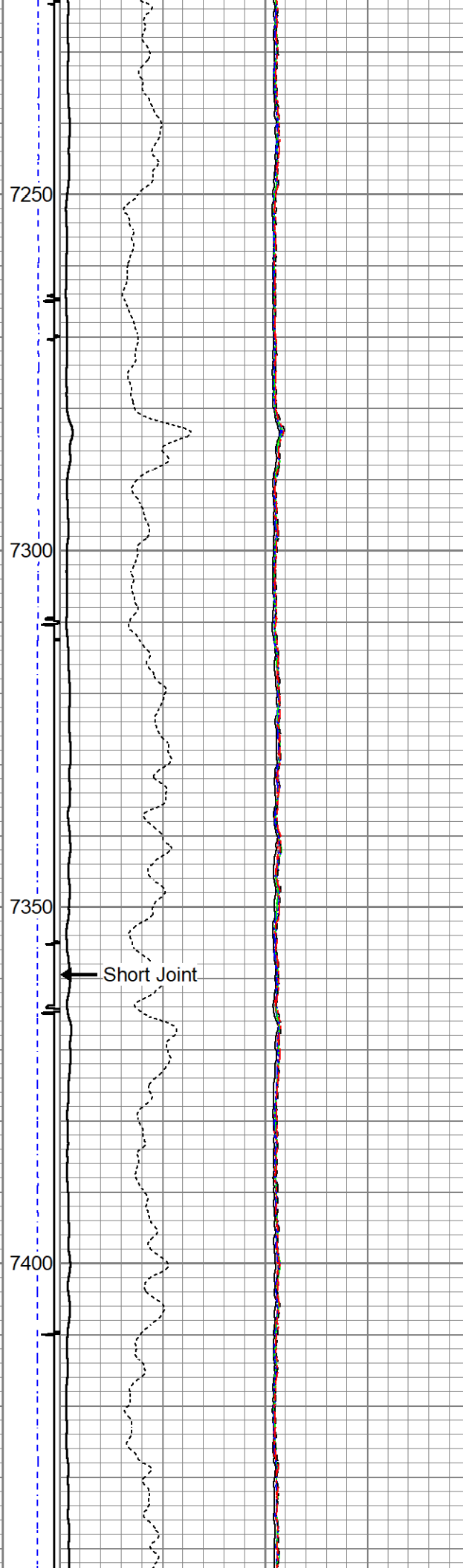
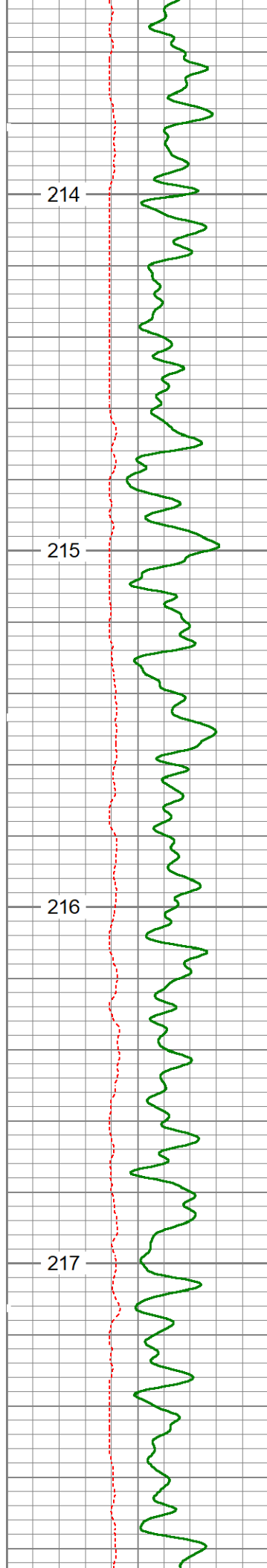






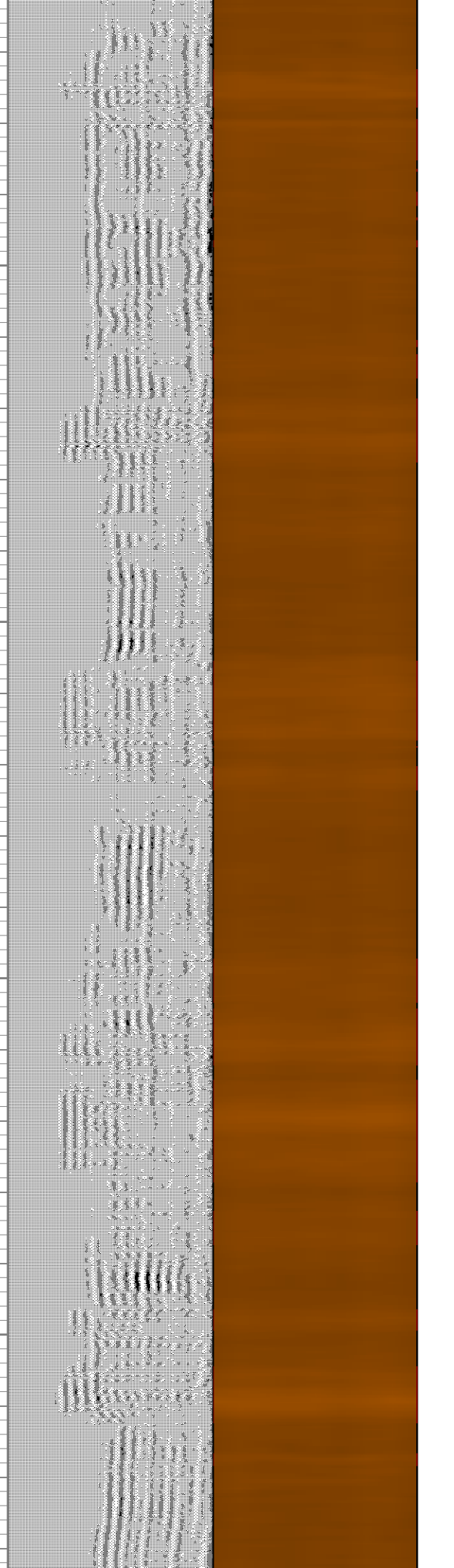
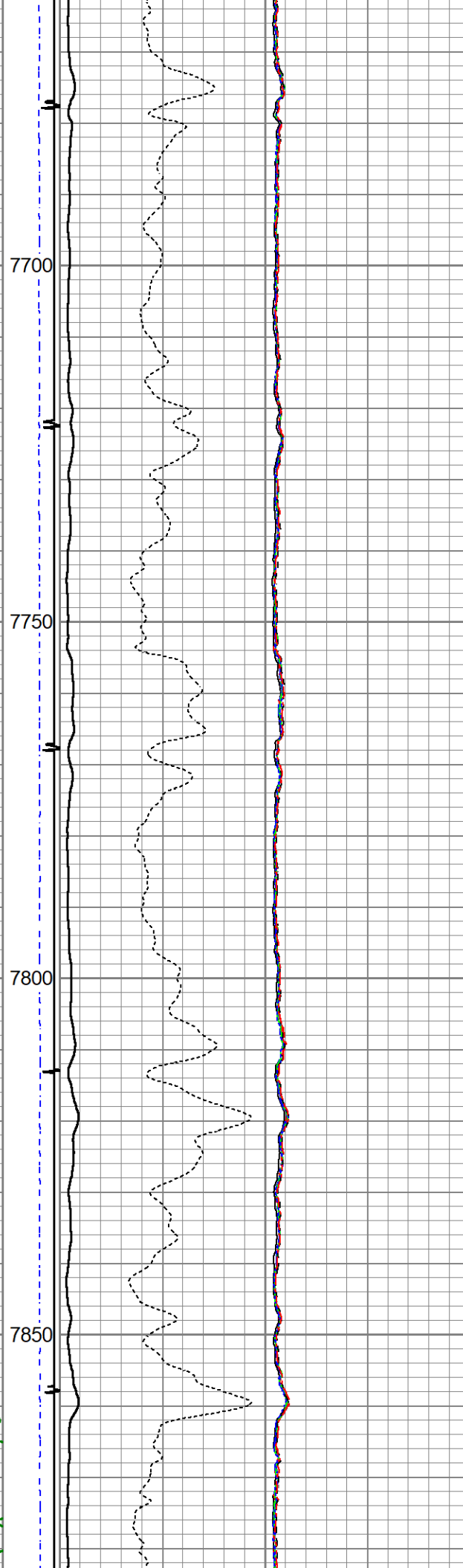
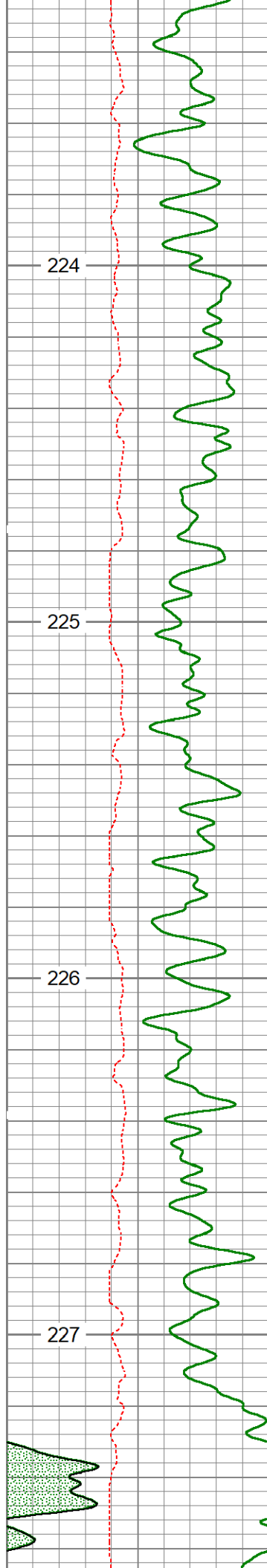




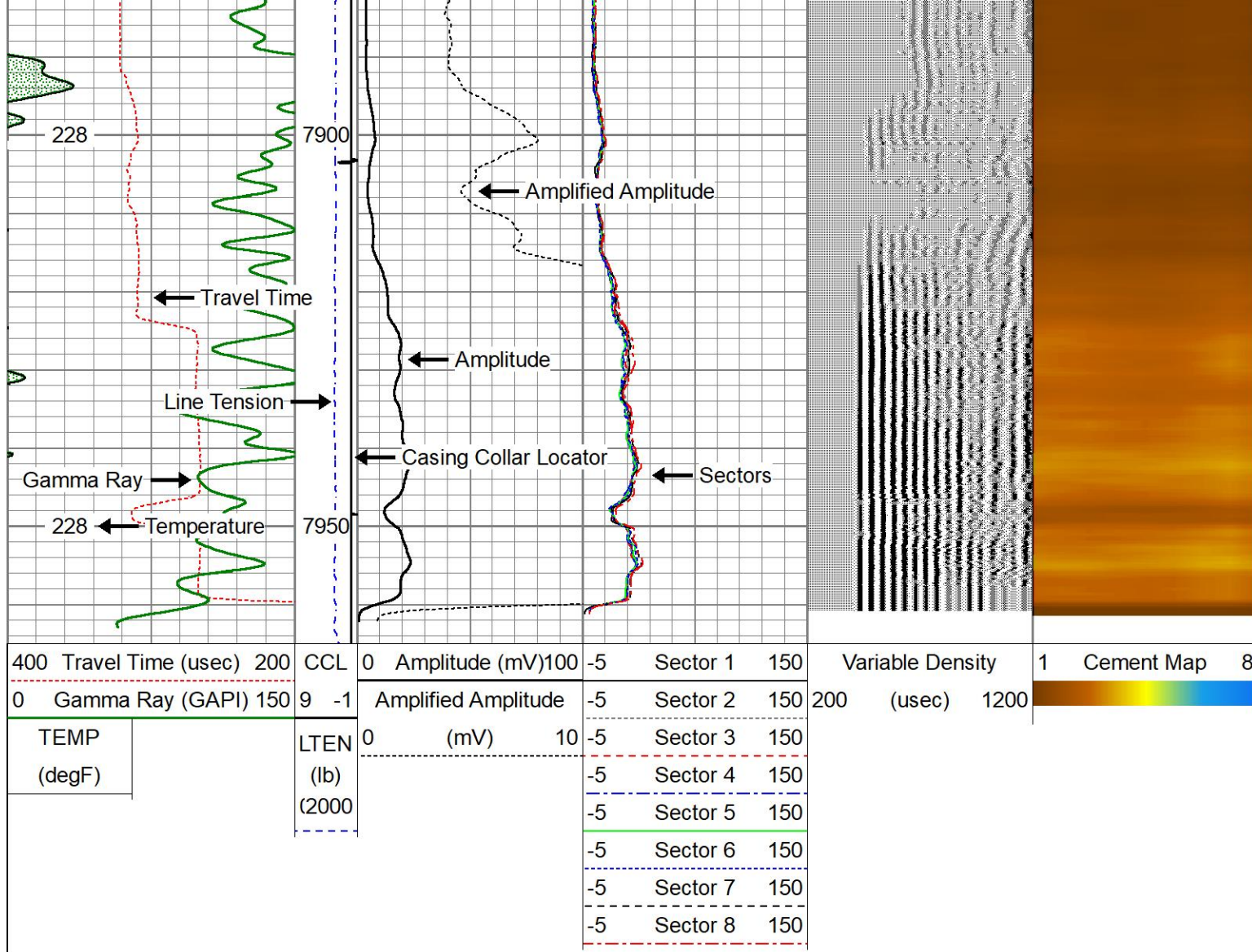






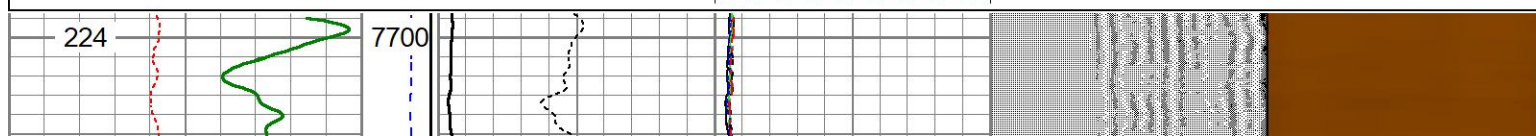
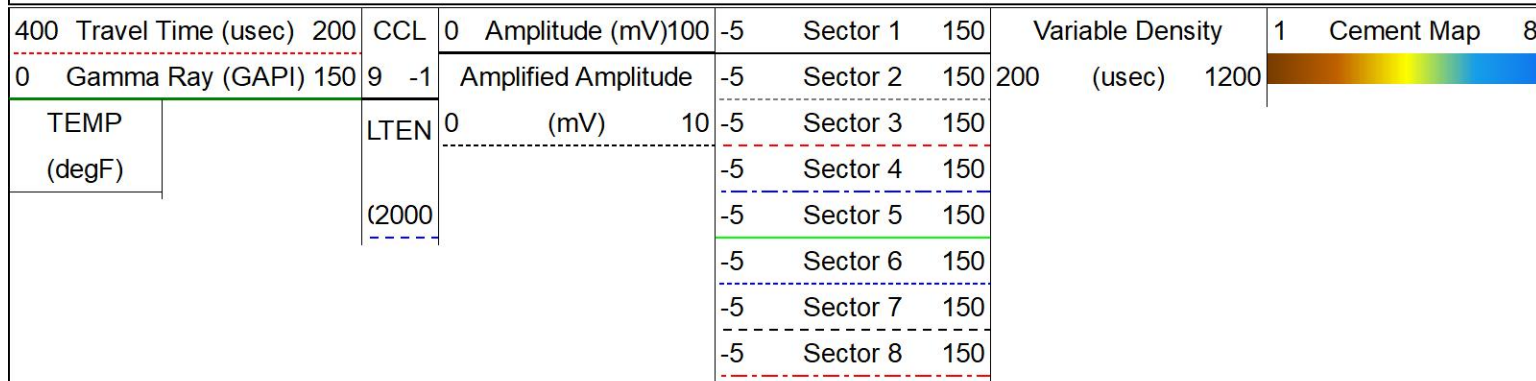


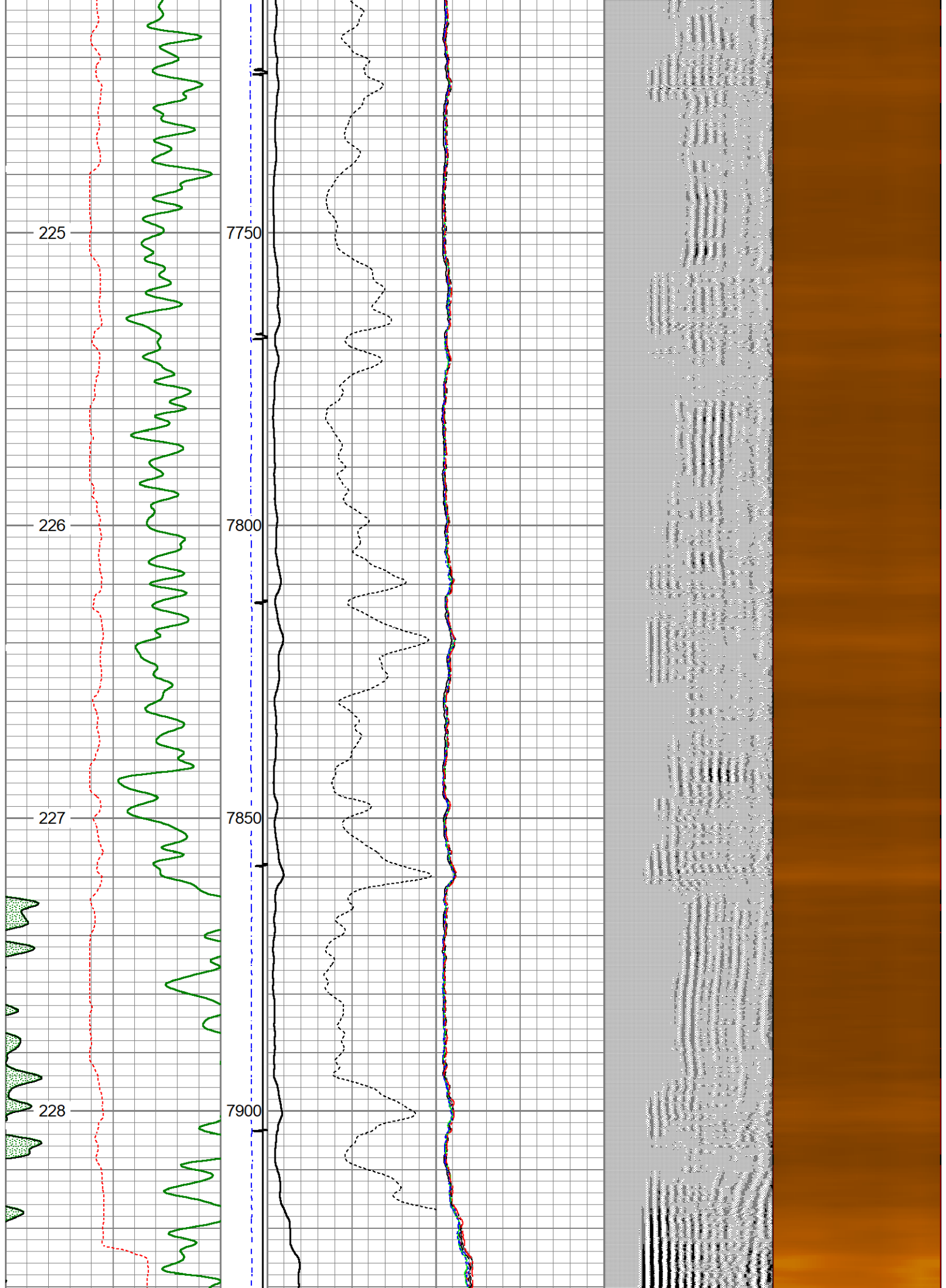




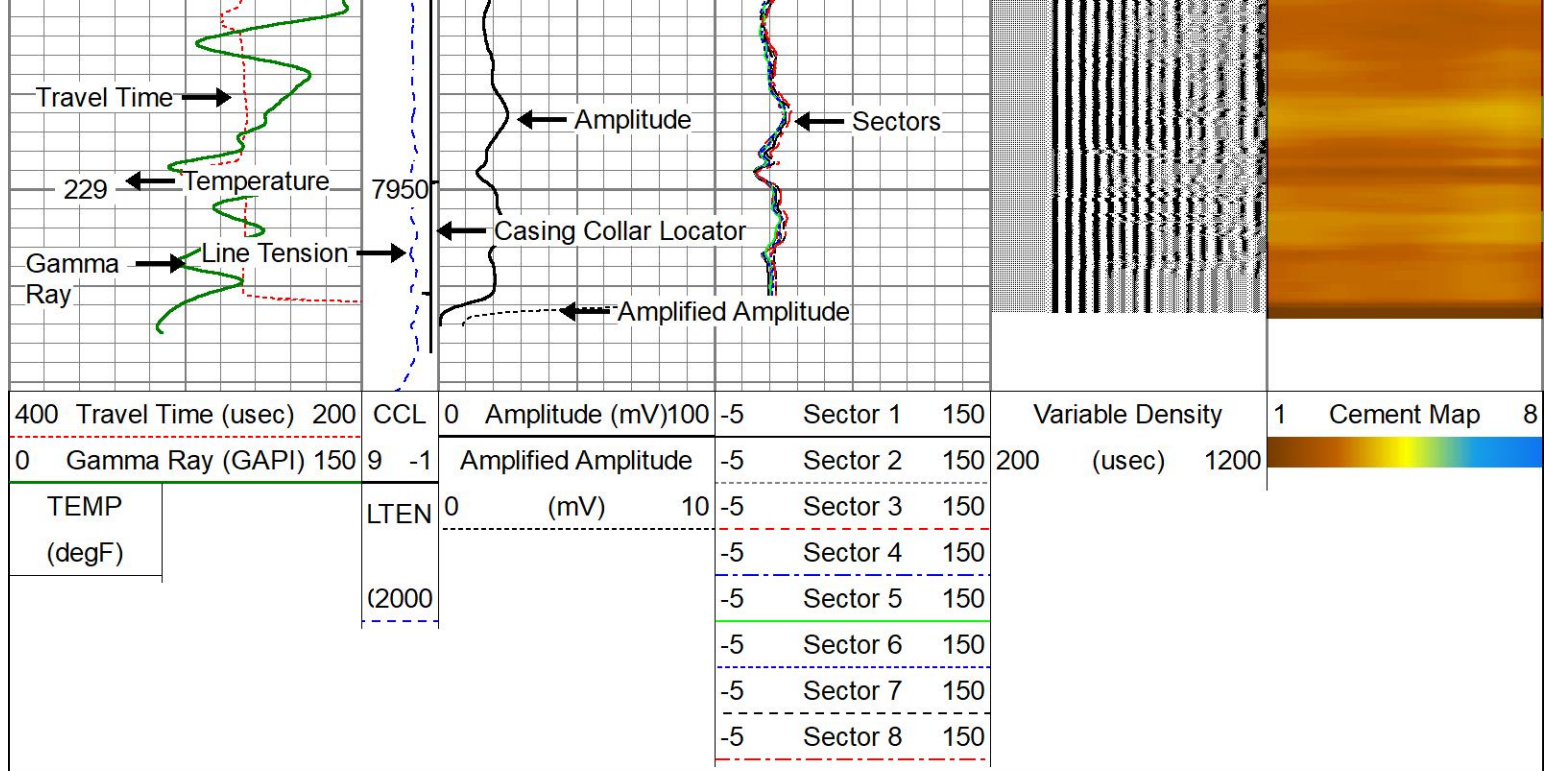
# Repeat Pass 0 PSI

Database File 366hnx\_rcbl\_91419.db  
 Dataset Pathname pass2  
 Presentation Format scbl03  
 Dataset Creation Sat Sep 14 09:33:42 2019  
 Charted by Depth in Feet scaled 1:240







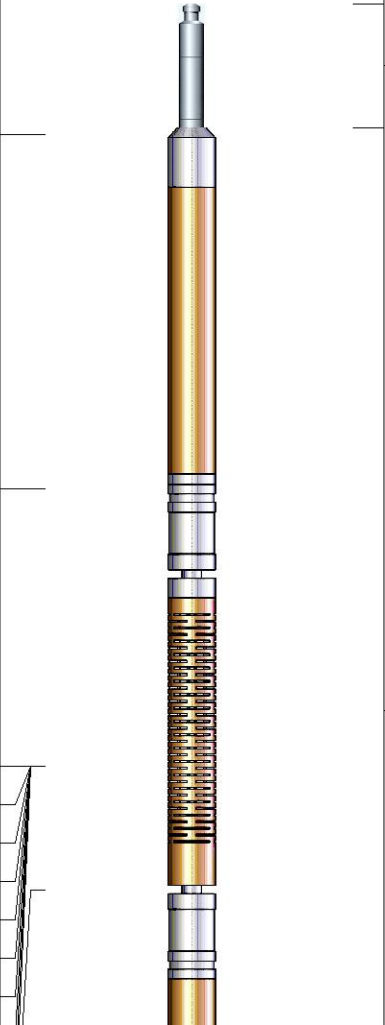


| Calibration Report                                      |                          |          |                 |         |          |        |
|---|--------------------------|----------|-----------------|---------|----------|--------|
| Database File   | 366hnx_rcbl_91419.db     |          |                 |         |          |        |
| Dataset Pathname  | pass3                    |          |                 |         |          |        |
| Dataset Creation  | Sat Sep 14 09:38:50 2019 |          |                 |         |          |        |
| Gamma Ray Calibration Report                            |                          |          |                 |         |          |        |
| Serial Number:  | FW1304-44                |          |                 |         |          |        |
| Tool Model:   | Probe275                 |          |                 |         |          |        |
| Performed:  | (Not Performed)          |          |                 |         |          |        |
| Calibrator Value:                                       | 1.0                      | GAPI     |                 |         |          |        |
| Background Reading:                                     | 0.0                      | cps      |                 |         |          |        |
| Calibrator Reading:                                     | 1.0                      | cps      |                 |         |          |        |
| Sensitivity:  | 1.0000                   | GAPI/cps |                 |         |          |        |
| Segmented Cement Bond Log Calibration Report            |                          |          |                 |         |          |        |
| Serial Number:  | 121043                   |          |                 |         |          |        |
| Tool Model:   | Probe 2.75 Radii W/Temp  |          |                 |         |          |        |
| Calibration Casing Diameter:                            | 5.500                    | in       |                 |         |          |        |
| Calibration Depth:                                      | 2838.242                 | ft       |                 |         |          |        |
| Master Calibration, performed Sat Sep 14 10:05:46 2019: |                          |          |                 |         |          |        |
|   | Raw (v)                  |          | Calibrated (mv) |         | Results  |        |
|   | Zero                     | Cal      | Zero            | Cal     | Gain     | Offset |
| 3'  | 0.000                    | 0.280    | 1.000           | 71.921  | 253.938  | 0.888  |
| CAL   | 0.000                    | 0.365    |                 |         |          |        |
| 5'  | -0.001                   | 0.013    | 1.000           | 71.921  | 5364.590 | 3.947  |
| SUM   |                          |          |                 |         |          |        |
| S1  | 0.010                    | 0.288    | 0.000           | 100.000 | 359.046  | -3.432 |
| S2  | 0.002                    | 0.290    | 0.000           | 100.000 | 347.398  | -0.585 |
| S3  | 0.001                    | 0.287    | 0.000           | 100.000 | 349.443  | -0.375 |
| S4  | 0.002                    | 0.281    | 0.000           | 100.000 | 357.698  | -0.620 |

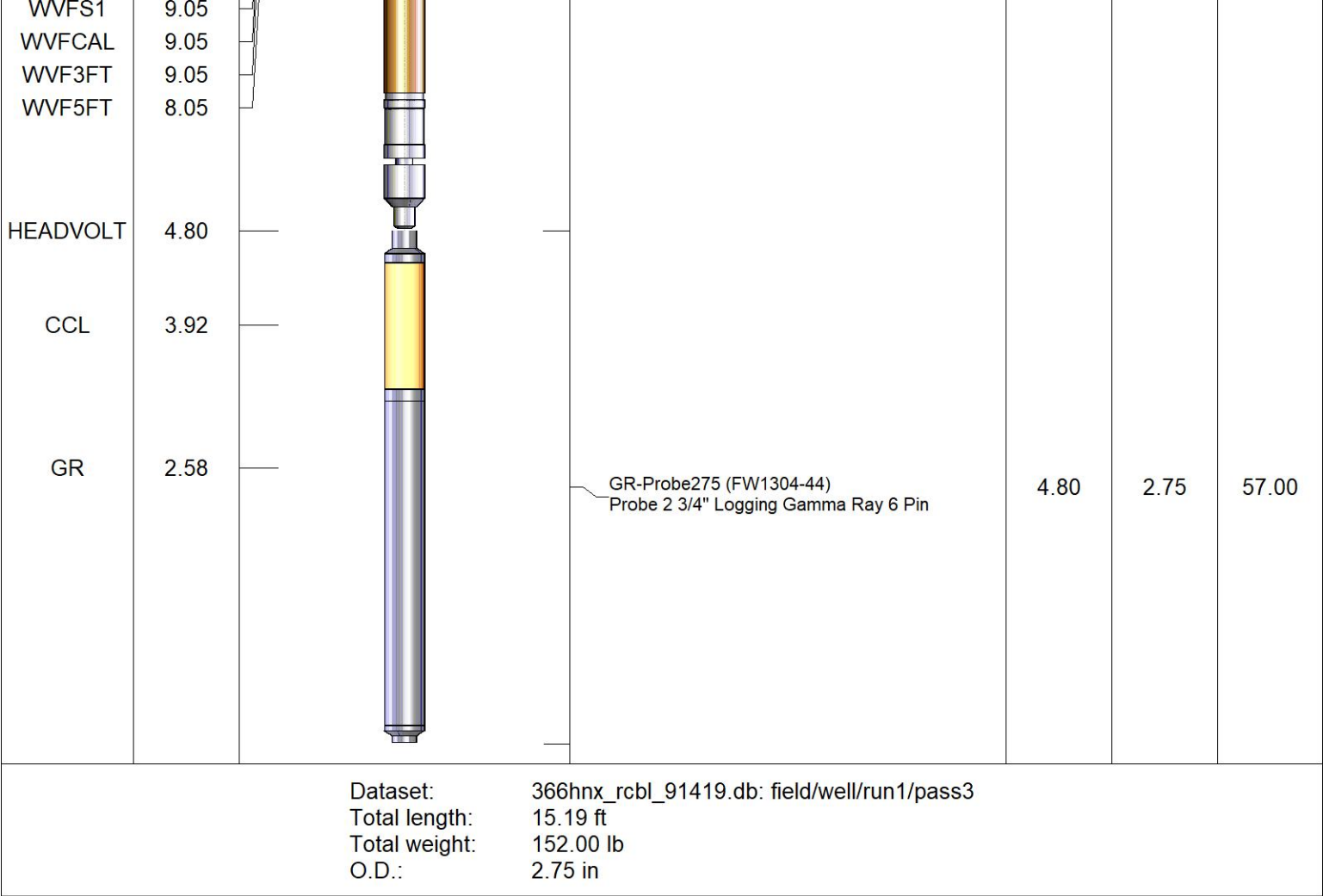
|    |       |       |       |         |         |        |
|----|-------|-------|-------|---------|---------|--------|
| S5 | 0.001 | 0.277 | 0.000 | 100.000 | 363.088 | -0.483 |
| S6 | 0.002 | 0.281 | 0.000 | 100.000 | 358.105 | -0.616 |
| S7 | 0.001 | 0.278 | 0.000 | 100.000 | 361.279 | -0.419 |
| S8 | 0.001 | 0.278 | 0.000 | 100.000 | 360.484 | -0.361 |

|  |         |       |                |       |         |        |
|--|---------|-------|----------------|-------|---------|--------|
| Internal Reference Calibration, performed (Not Performed): |         |       |                |       |         |        |
|  | Raw (v) |       | Calibrated (v) |       | Results |        |
|  | Zero    | Cal   | Zero           | Cal   | Gain    | Offset |
| CAL  | 0.000   | 0.000 | 0.000          | 0.365 | 1.000   | 0.000  |

|   |         |  |                |  |         |  |
|---|---------|--|----------------|--|---------|--|
| Air Zero Calibration, performed Thu Sep 05 16:44:52 2019: |         |  |                |  |         |  |
|   | Raw (v) |  | Calibrated (v) |  | Results |  |
|   | Zero    |  | Zero           |  | Offset  |  |
| 3'  | 0.000   |  | 0.000          |  | 0.000   |  |
| 5'  | 0.000   |  | 0.000          |  | 0.000   |  |
| SUM   |         |  |                |  |         |  |
| S1  | 0.000   |  | 0.000          |  | 0.000   |  |
| S2  | 0.000   |  | 0.000          |  | 0.000   |  |
| S3  | 0.000   |  | 0.000          |  | 0.000   |  |
| S4  | 0.000   |  | 0.000          |  | 0.000   |  |
| S5  | 0.000   |  | 0.000          |  | 0.000   |  |
| S6  | 0.000   |  | 0.000          |  | 0.000   |  |
| S7  | 0.000   |  | 0.000          |  | 0.000   |  |
| S8  | 0.000   |  | 0.000          |  | 0.000   |  |

| Sensor   | Offset (ft) | Schematic   | Description  | Length (ft) | O.D. (in) | Weight (lb) |
|----------|-------------|---|--|-------------|-----------|-------------|
| HeadVolt | 14.13       |  | CHD-Titan<br>Titan 1 7/16" GO Cablehead  | 1.00        | 1.44      | 5.00        |
| Temp     | 11.28       |   |  |             |           |             |
|          |             |   |  |             |           |             |
|          |             |   |  |             |           |             |
|          |             |   |  |             |           |             |
|          |             |   |  |             |           |             |
|          |             |   |  |             |           |             |
|          |             |   |  |             |           |             |
|          |             |   |  |             |           |             |
|          |             |   |  |             |           |             |
| WVFS8    | 9.05        |   | RBT-Probe 2.75 Radii W/Temp (121043)<br>Probe 2.75" Radial with Integral Temperature Sub | 9.39        | 2.75      | 90.00       |
| WVFS7    | 9.05        |   |  |             |           |             |
| WVFS6    | 9.05        |   |  |             |           |             |
| WVFS5    | 9.05        |   |  |             |           |             |
| WVFS4    | 9.05        |   |  |             |           |             |
| WVFS3    | 9.05        |   |  |             |           |             |
| WVFS2    | 9.05        |   |  |             |           |             |





|  |  |         |                                 |  |         |
|--|--|---------|---------------------------------|--|---------|
|  |  | Company | Great Western Oil & Gas Company |  |         |
|  |  | Well    | Rio LC 12-366HNX                |  |         |
|  |  | Field   | Wattenberg                      |  |         |
|  |  | County  | Adams                           |  |         |
|  |  | State   | Colorado                        |  | Country |