



Radial Cement Bond
Gamma Ray CCL
Log

| | | | |
|---|-----------------|----------------------|-----------------|
| Company | Petroshare Corp | Company | Petroshare Corp |
| Well | SHOOK 3-10-2NAH | Well | SHOOK 3-10-2NAH |
| Field | WATTENBERG | Field | WATTENBERG |
| County | ADAMS | County | ADAMS |
| State | COLORADO | State | COLORADO |
| Location: | | API # : 05-001-09972 | Other Services |
| Permanent Datum | | G.L. | Elevation |
| Log Measured From | | K.B. | 5098' |
| Drilling Measured From | | K.B. | Elevation |
| | | K.B. 5111' | D.F. N/A |
| | | G.L. 5098' | |
| NWSE SEC.03-T1S-R67W 2058' FSL & 2124' FEL | | | |
| Date | MARCH 5, 2018 | | |
| Run Number | ONE | | |
| Depth Driller | 14126' | | |
| Depth Logger | 7702' | | |
| Bottom Logged Interval | 7690' | | |
| Top Log Interval | 44' | | |
| Open Hole Size | N/A | | |
| Type Fluid | H2O | | |
| Density / Viscosity | 8.4 | | |
| Max. Recorded Temp. | N/A | | |
| Estimated Cement Top | 2214' | | |
| Time Well Ready | 00:30 | | |
| Time Logger on Bottom | 01:15 | | |
| Equipment Number | 200121 | | |
| Location | GREENEY CO | | |
| Recorded By | MIKE NOWICKI | | |
| Witnessed By | HAROLD POWELL | | |
| Borehole Record | | Tubing Record | |
| Run Number | Bit | From | To |
| | | Size | Weight |
| | | From | To |
| | | | |
| | | | |
| | | | |
| Casing Record | Size | Wgt/Ft | Top |
| Surface String | 9-5/8" | 36 PPF | SURFACE |
| Prot. String | 5-1/2 | 20 PPF | SURFACE |
| Production String | | | |
| Liner | | | |

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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


Depth correlated to marker joint
Marker joint at 6783" - 6805'

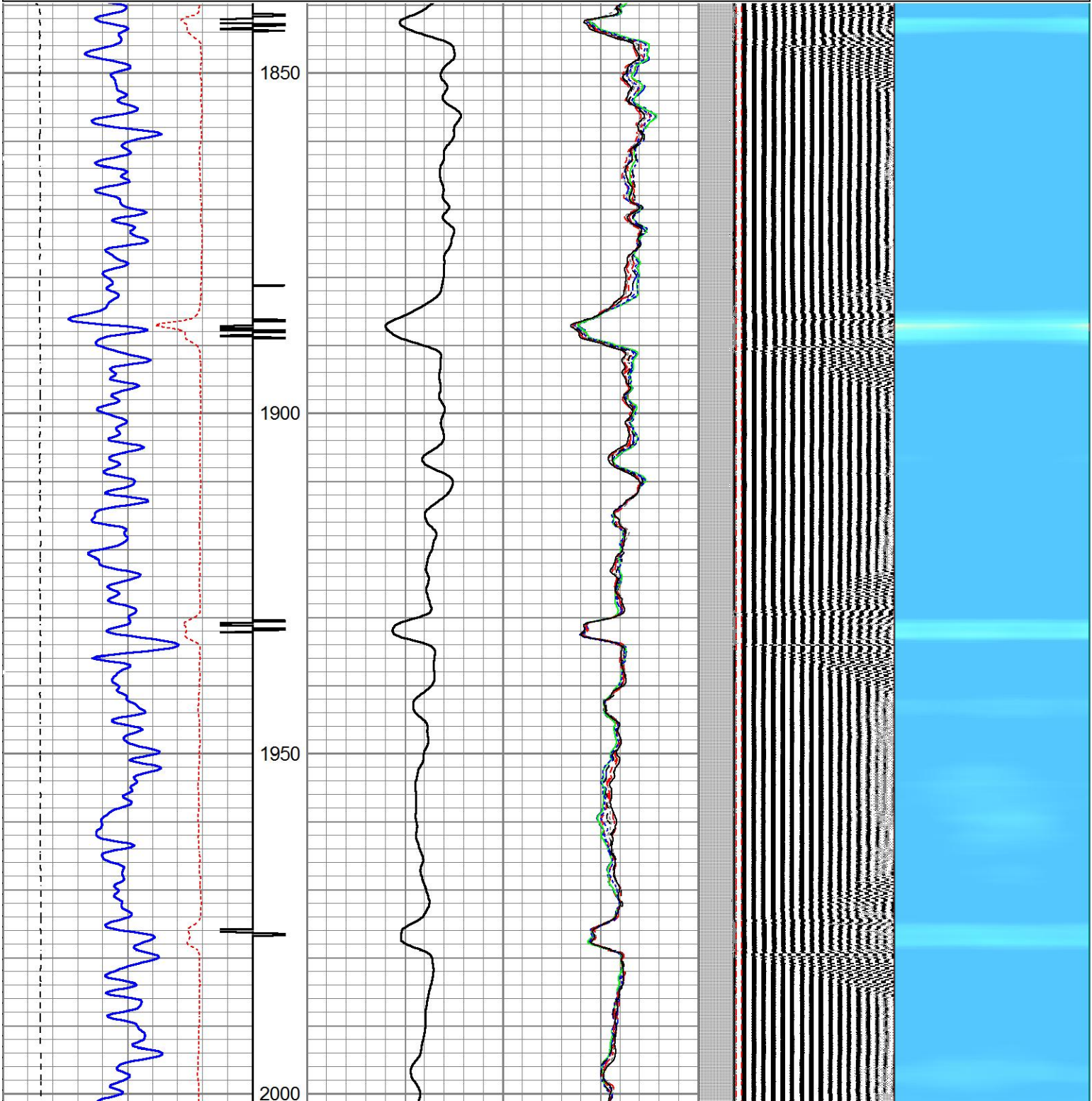
THANK YOU FOR USING C&J CASEDHOLE SOLUTIONS

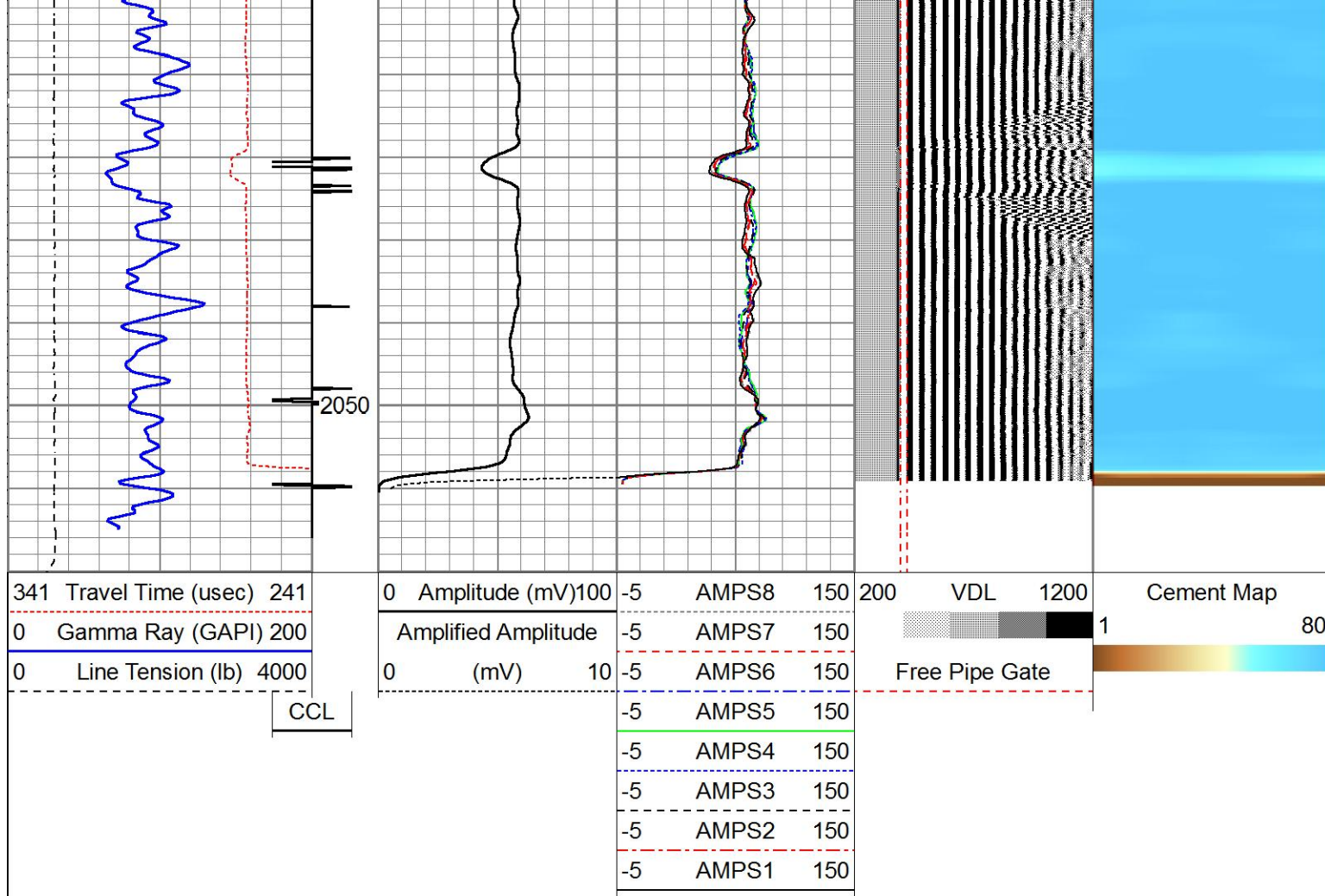
M. NOWICKI, B. SISSON, S. BARNETT



Free Pipe Pass (0) PSI

| | | | | | | | | | | | | |
|-----|--------------------|------|---|---------------------|-----|----|-------|-----|---|-----|------|------------|
| 341 | Travel Time (usec) | 241 | 0 | Amplitude (mV) | 100 | -5 | AMPS8 | 150 | 200 | VDL | 1200 | Cement Map |
| 0 | Gamma Ray (GAPI) | 200 | | Amplified Amplitude | | -5 | AMPS7 | 150 |  | | 1 | 80 |
| 0 | Line Tension (lb) | 4000 | 0 | (mV) | 10 | -5 | AMPS6 | 150 | Free Pipe Gate | | | |
| | | | | | | -5 | AMPS5 | 150 | | | | |
| | | | | | | -5 | AMPS4 | 150 | | | | |
| | | | | | | -5 | AMPS3 | 150 | | | | |
| | | | | | | -5 | AMPS2 | 150 | | | | |
| | | | | | | -5 | AMPS1 | 150 | | | | |





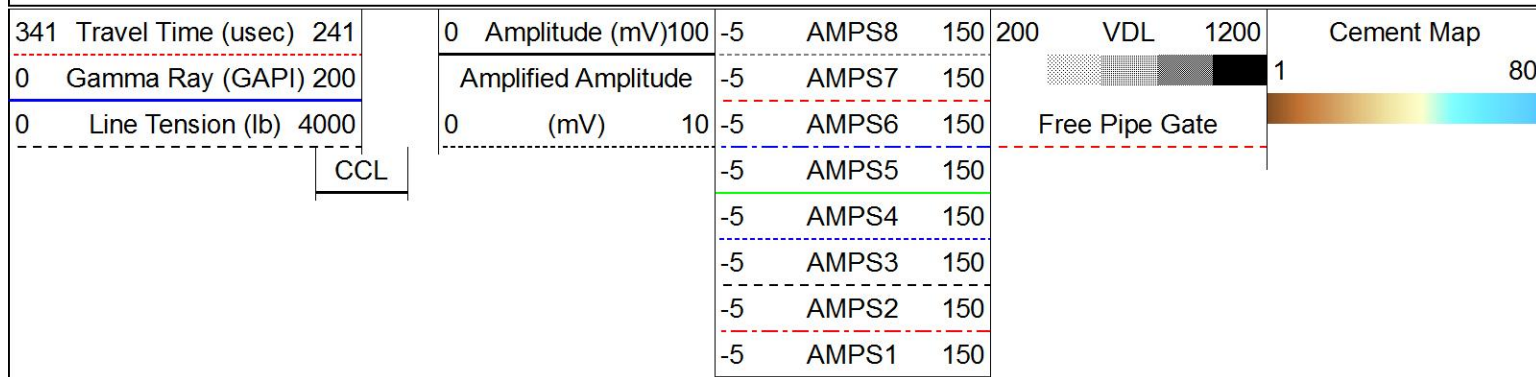
C&J ENERGY SERVICES

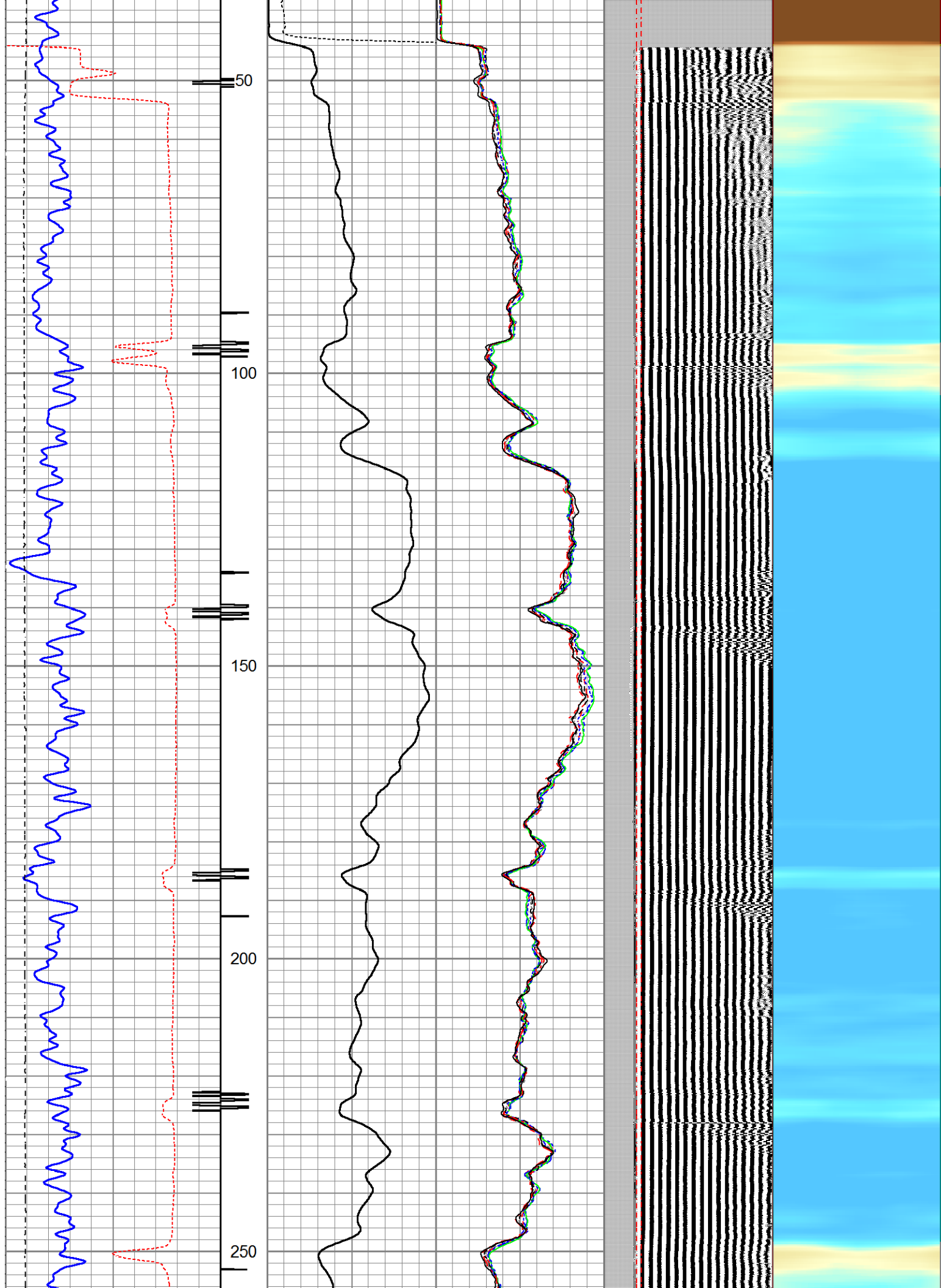
Free Pipe Pass (0) PSI

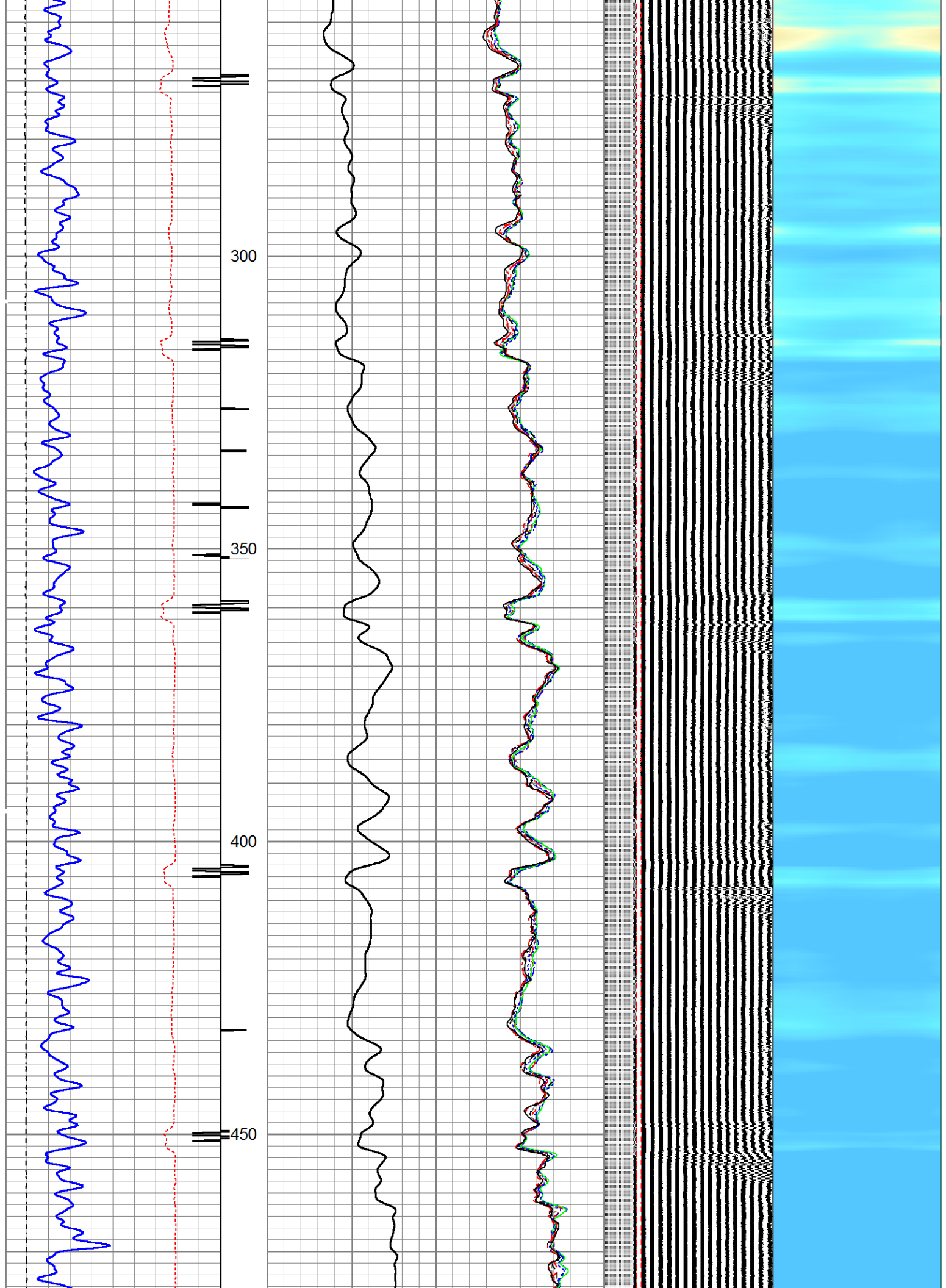
C&J ENERGY SERVICES

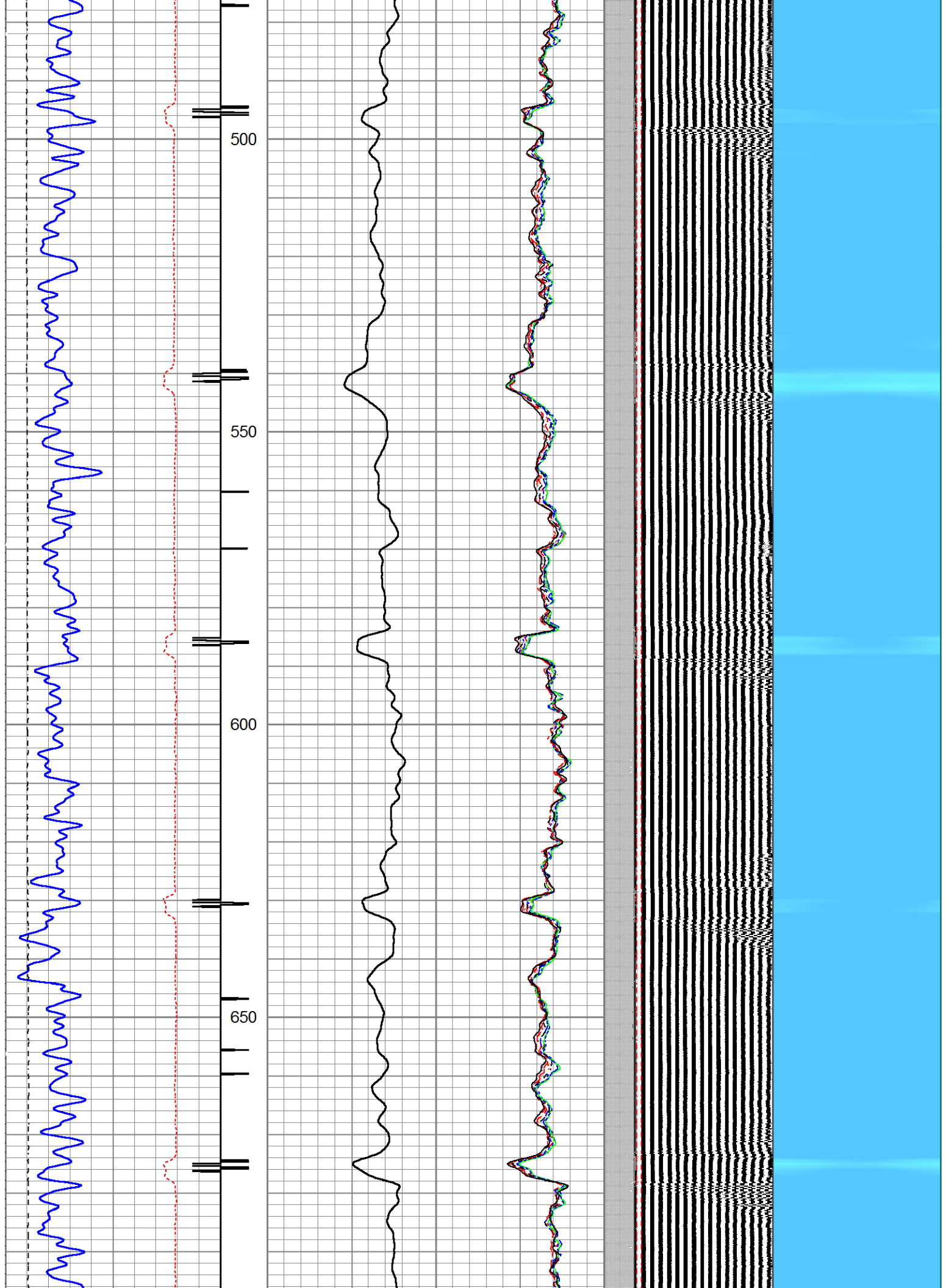
Main Pass (0) PSI

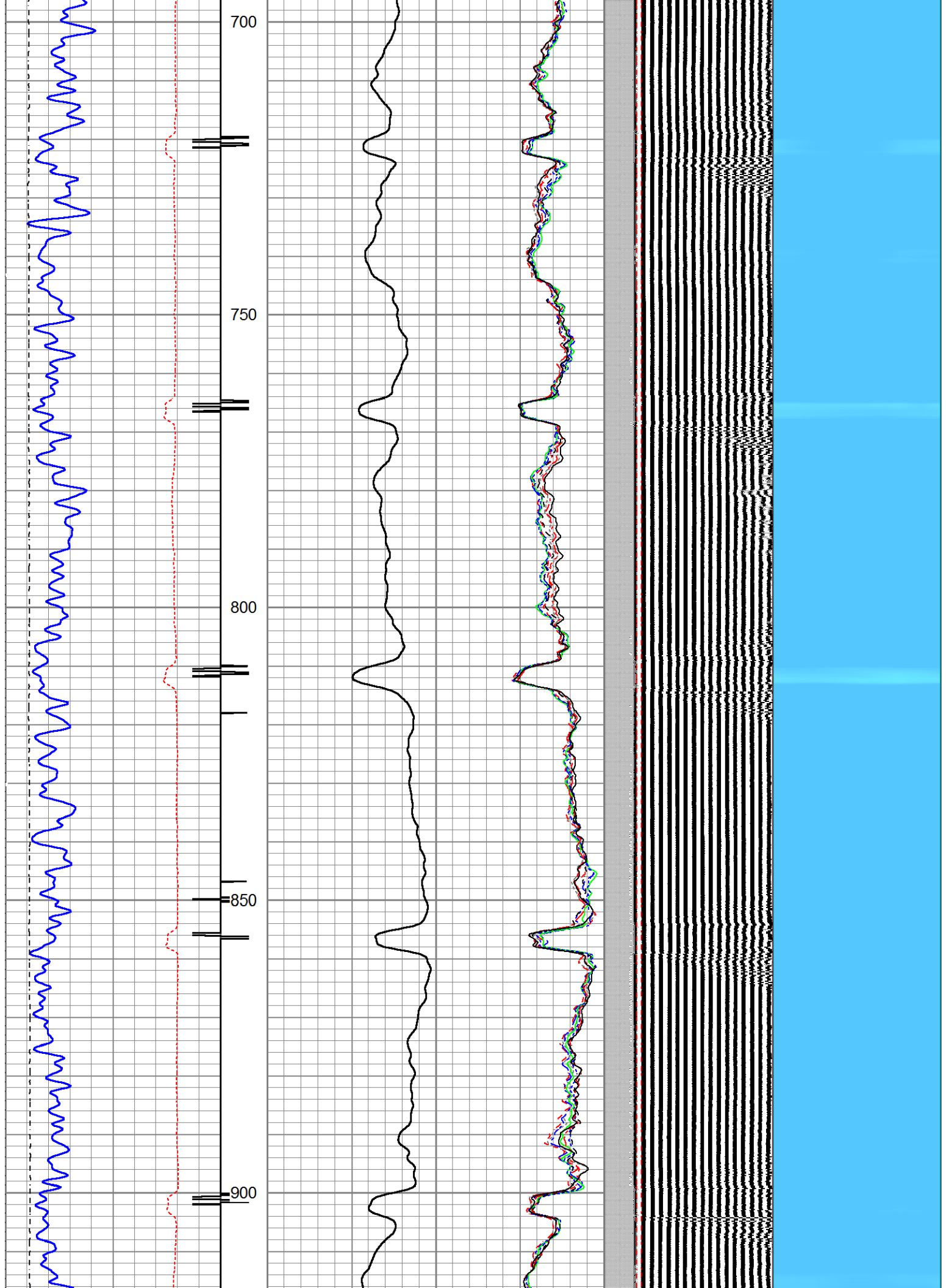
Database File e:\petroshare corp shook pad\db\s\fs0216 ps shook 3-10-2nah cbl.db
 Dataset Pathname Shook3-10-2NAH/run1/main1
 Presentation Format scbl5_5
 Dataset Creation Mon Mar 05 01:23:25 2018
 Charted by Depth in Feet scaled 1:240

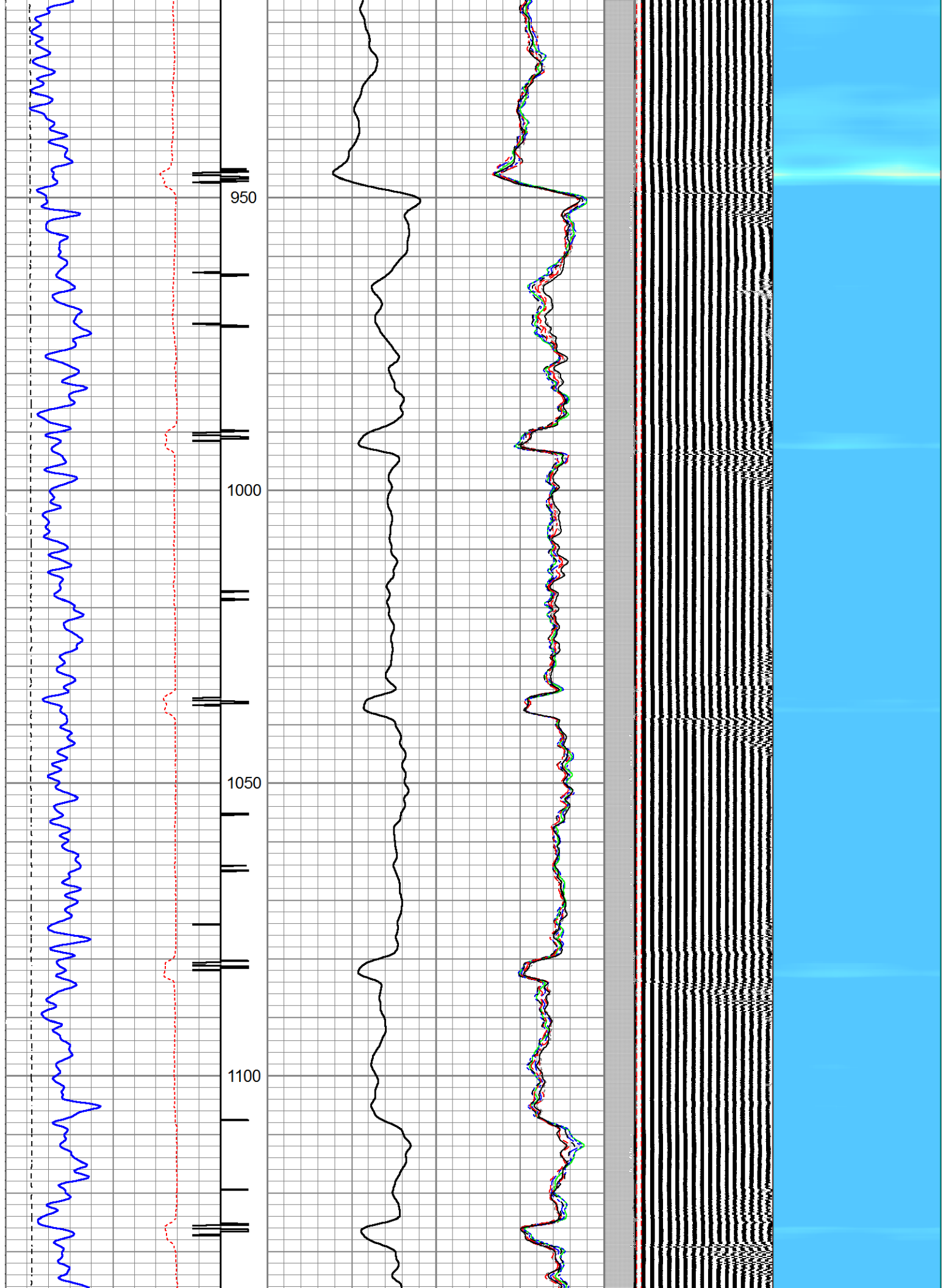


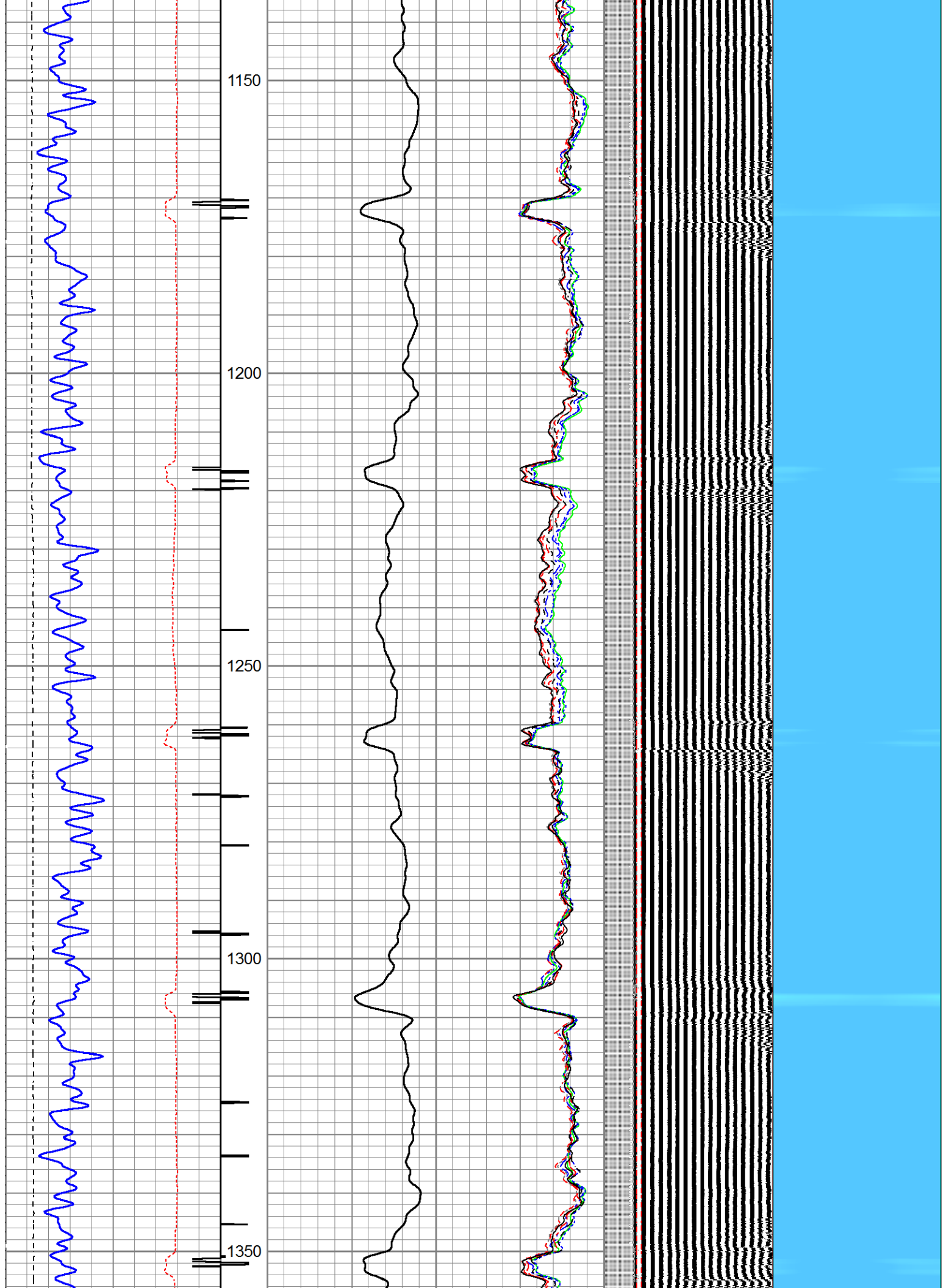


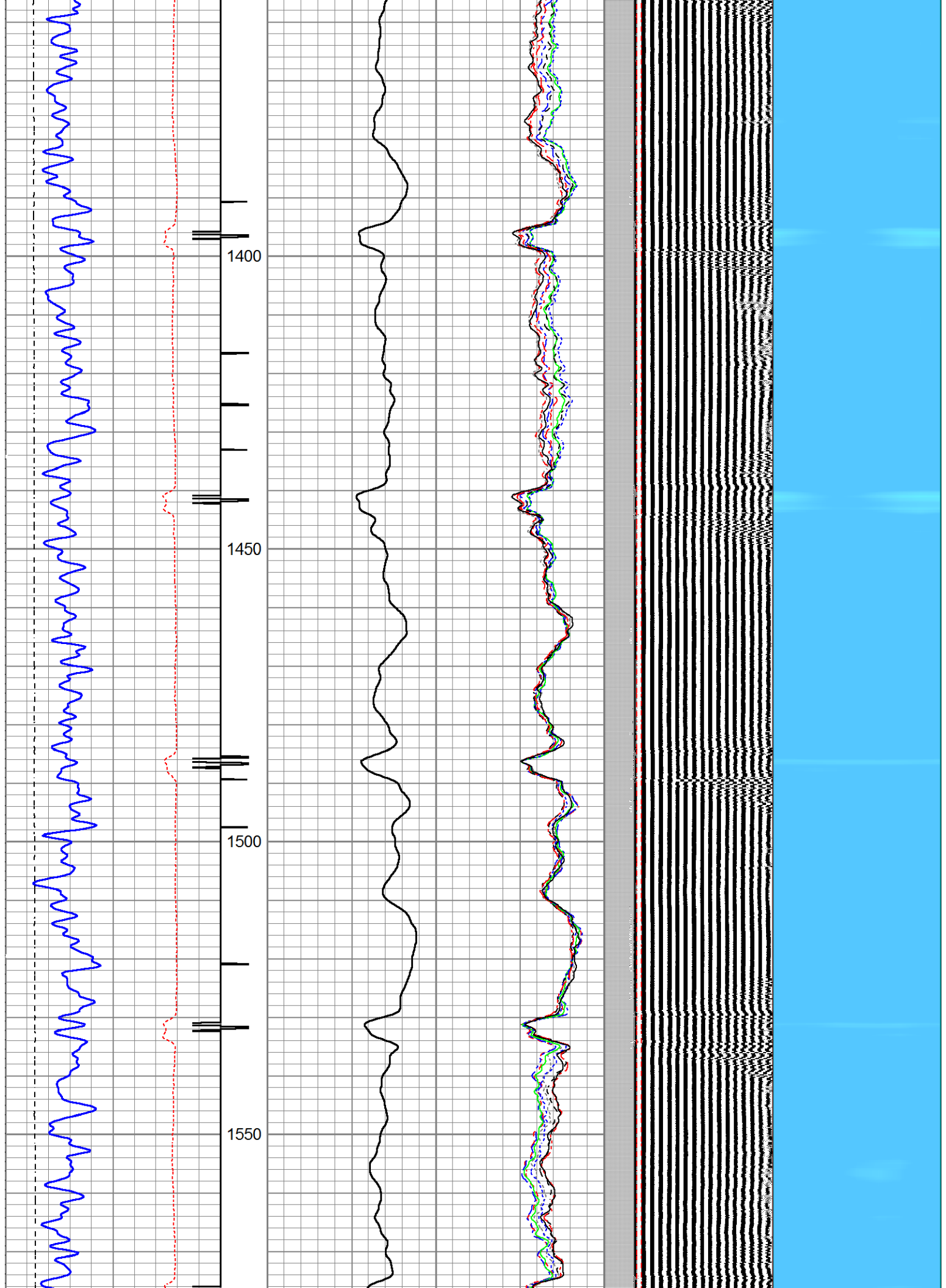


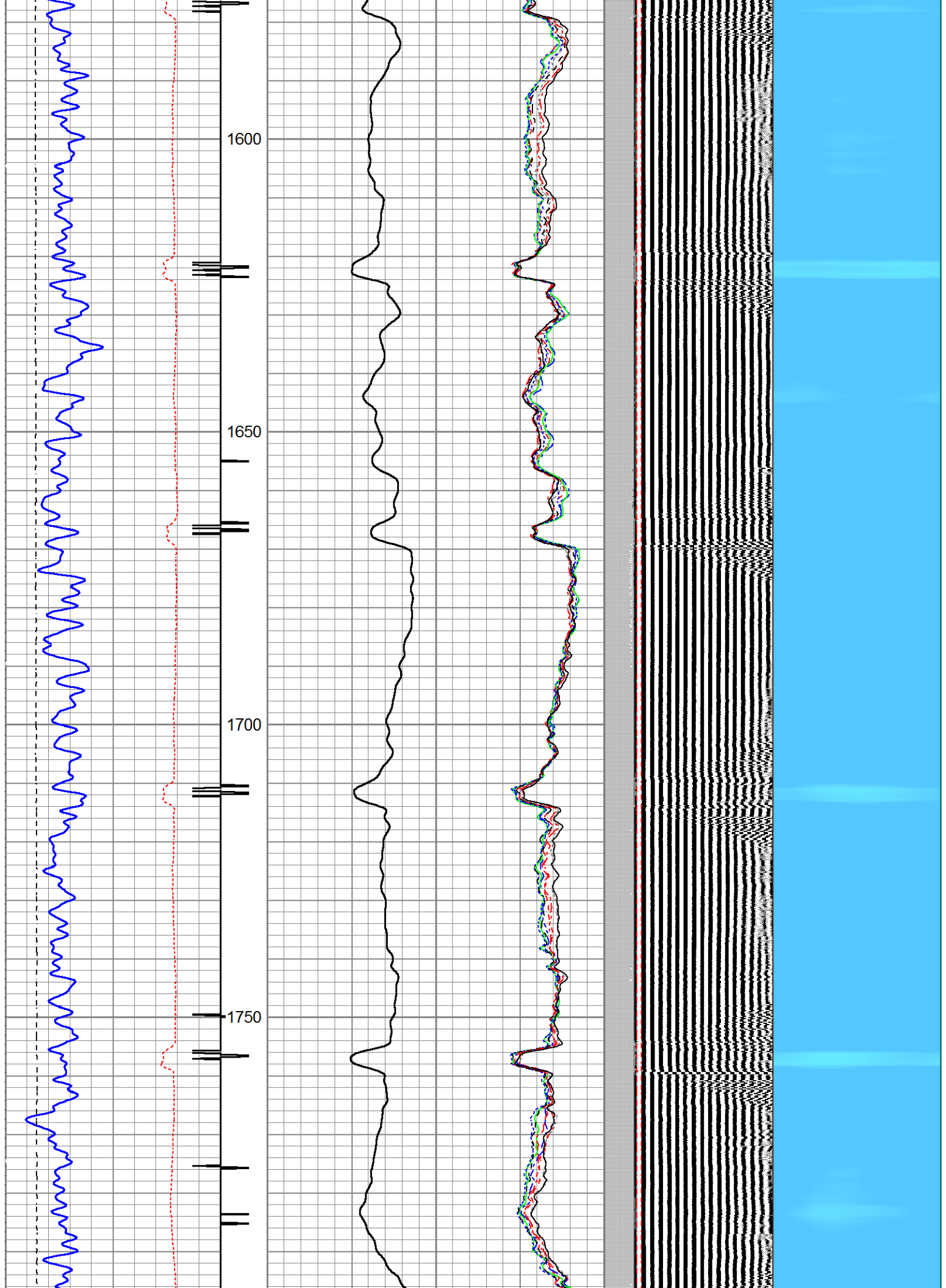


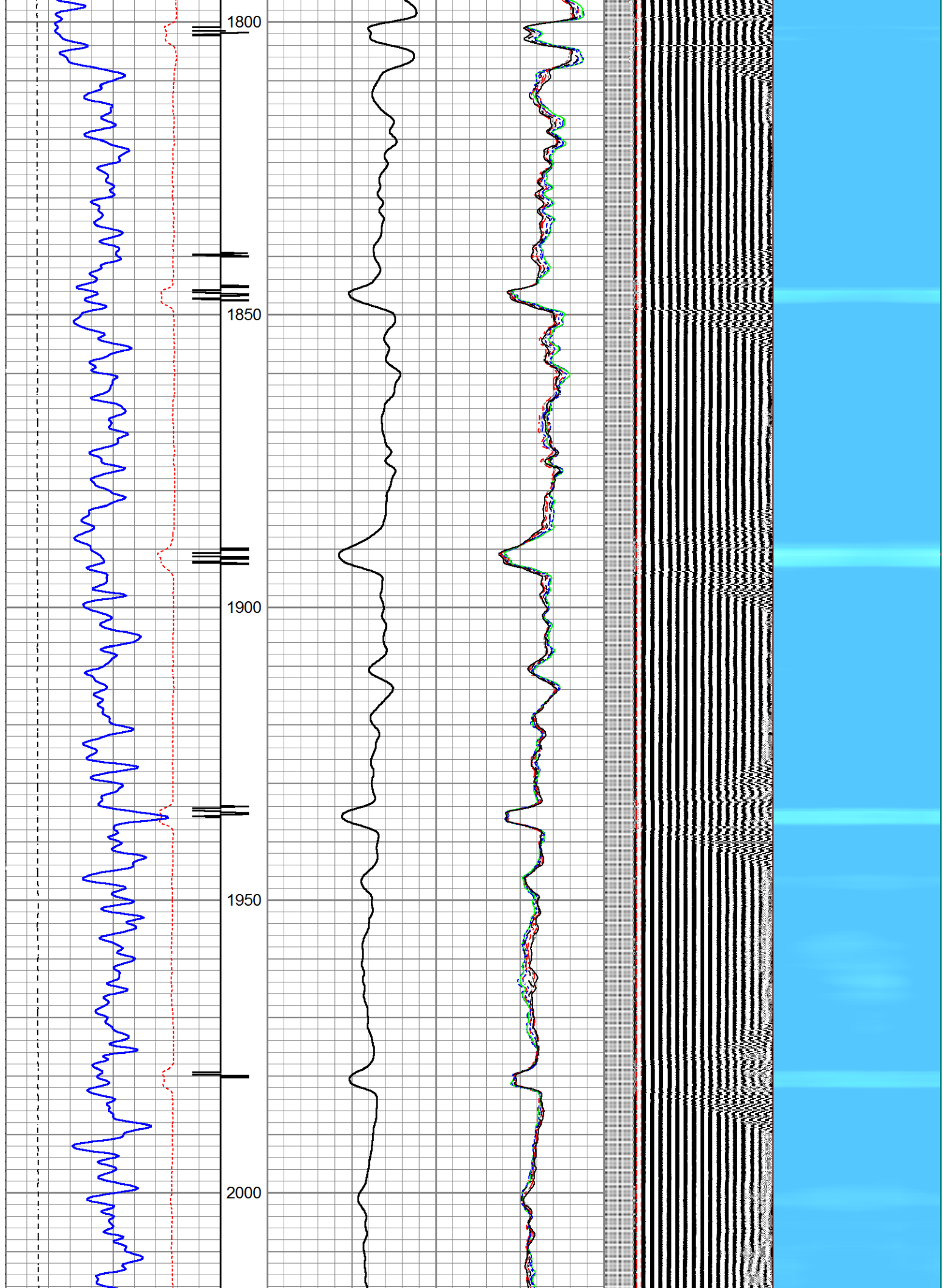


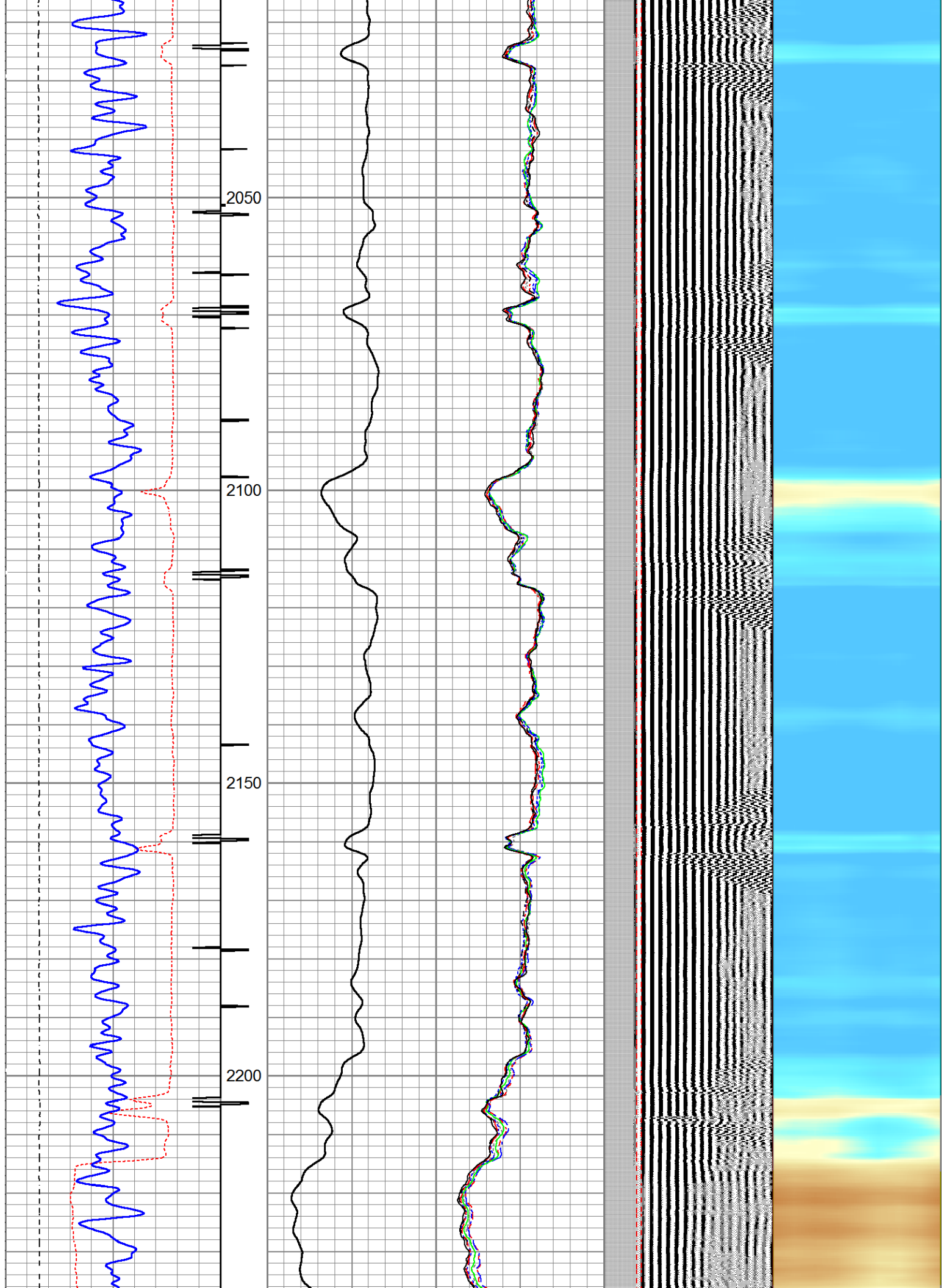


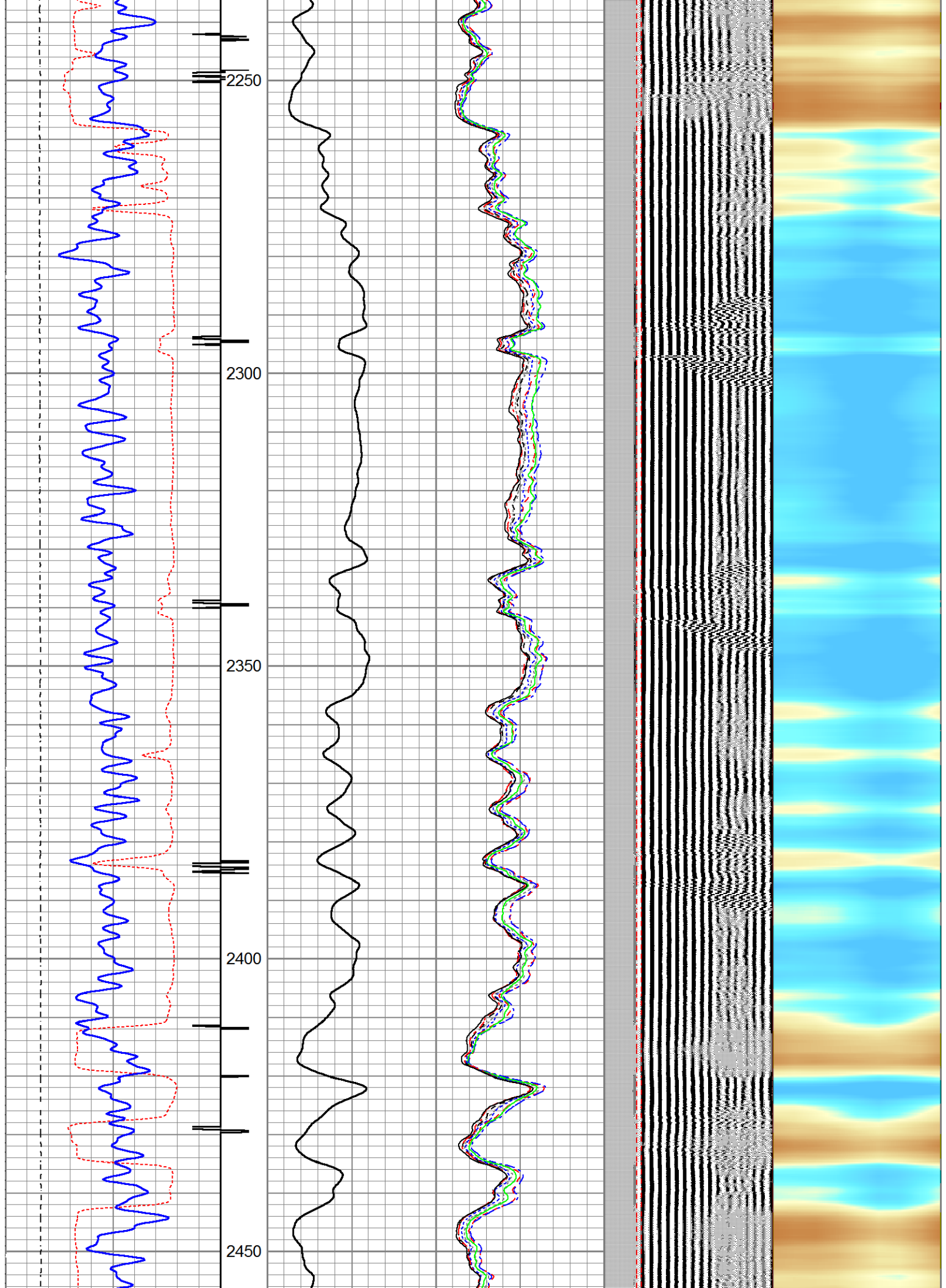


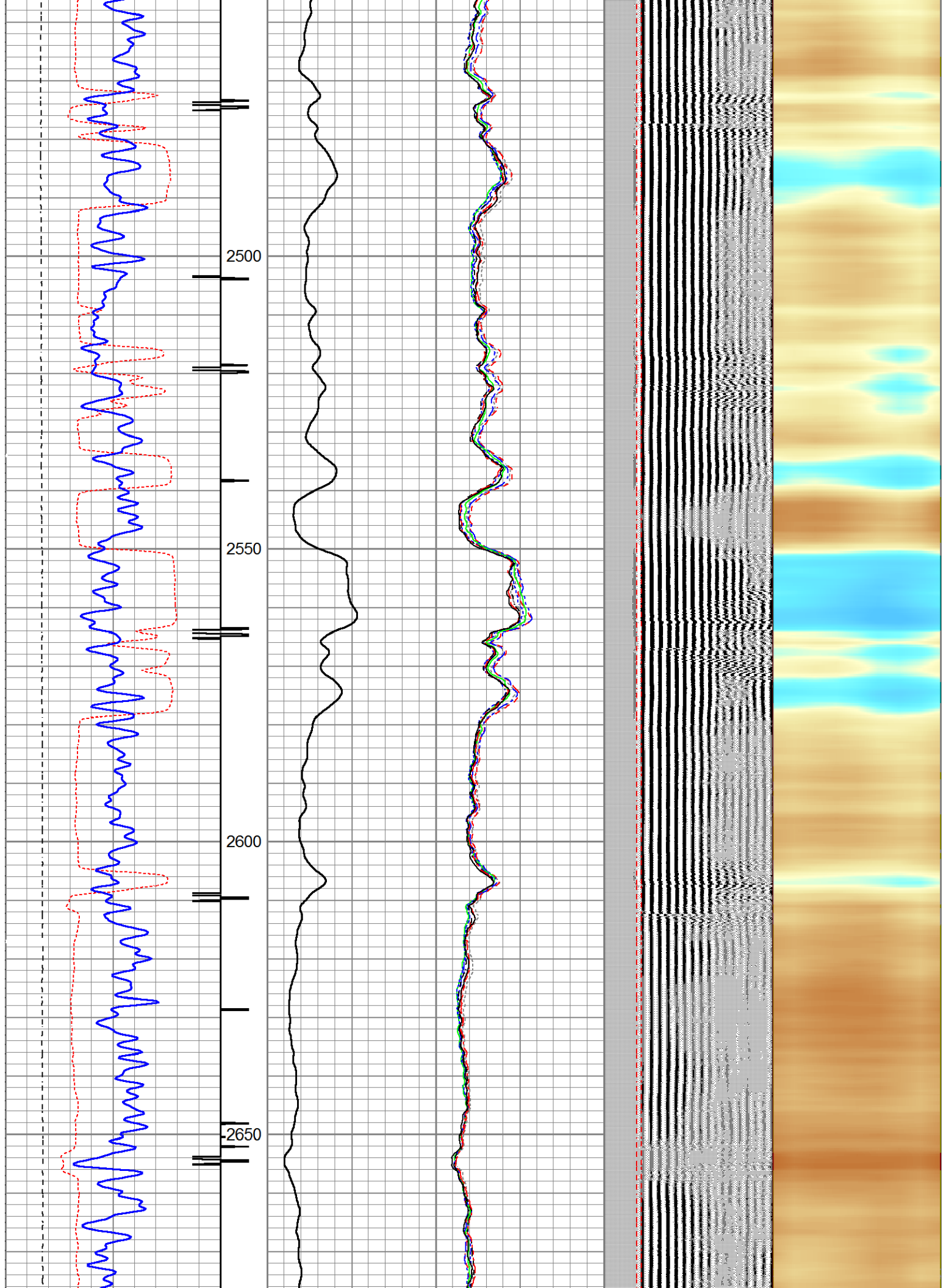


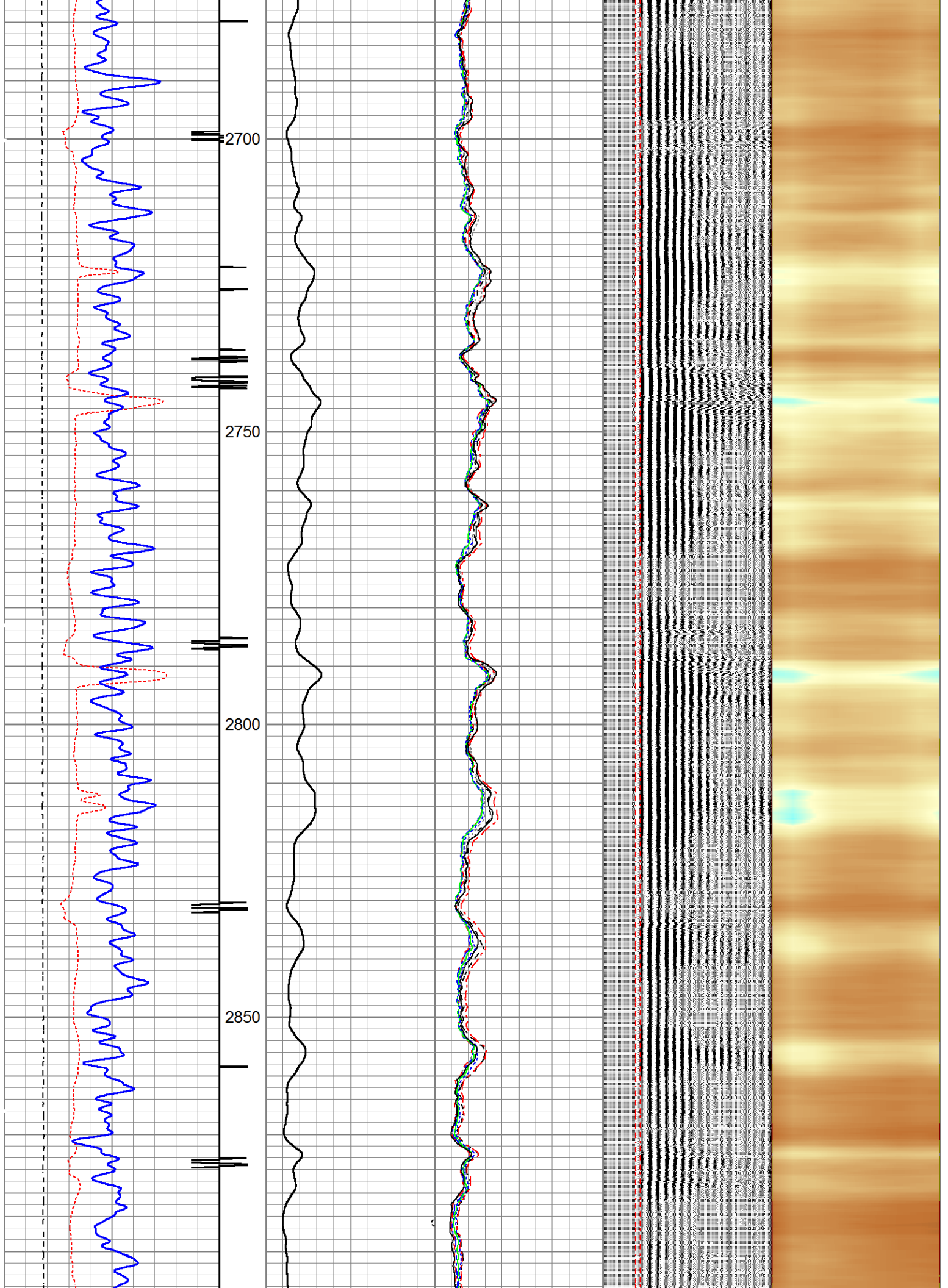


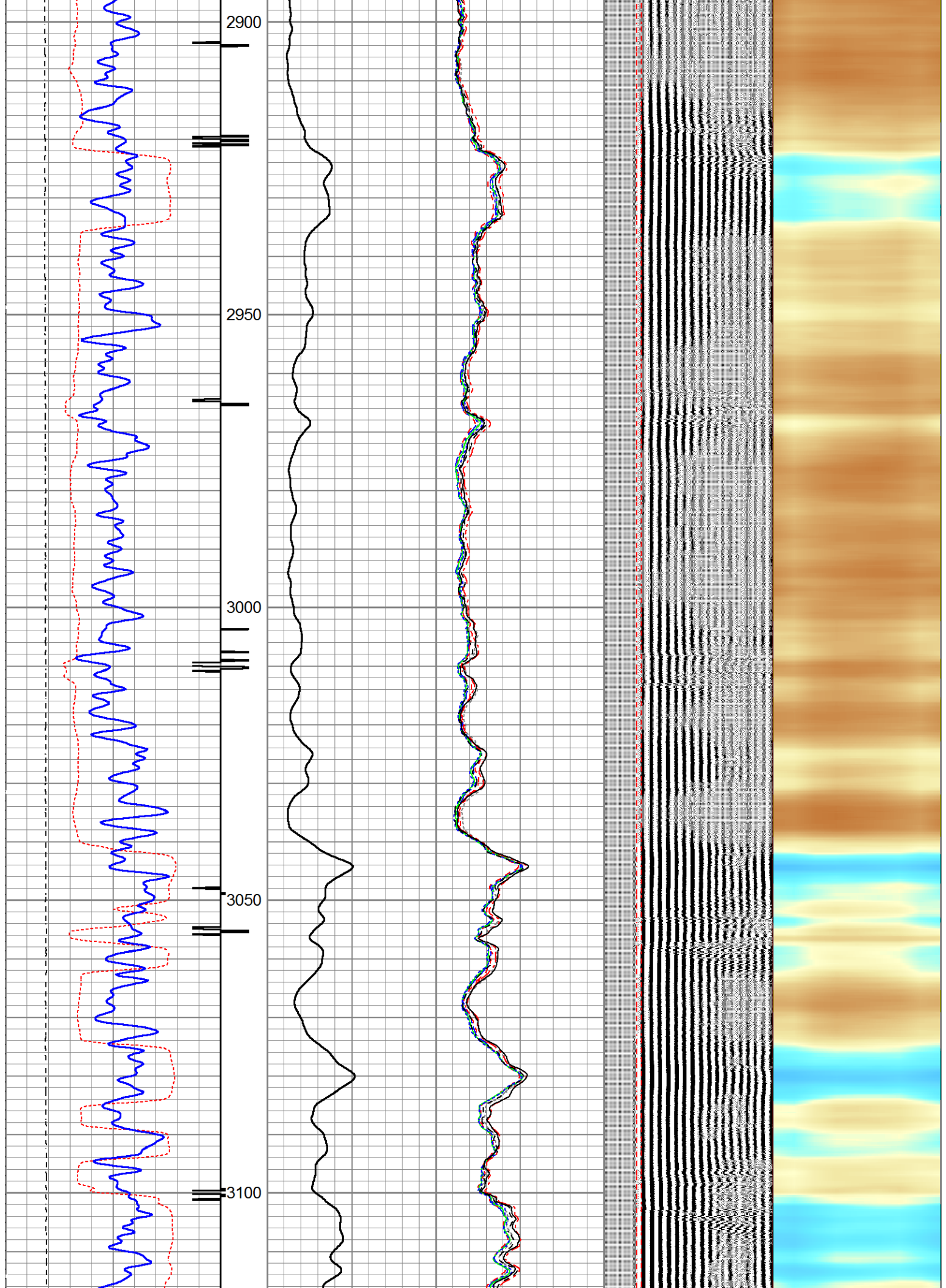


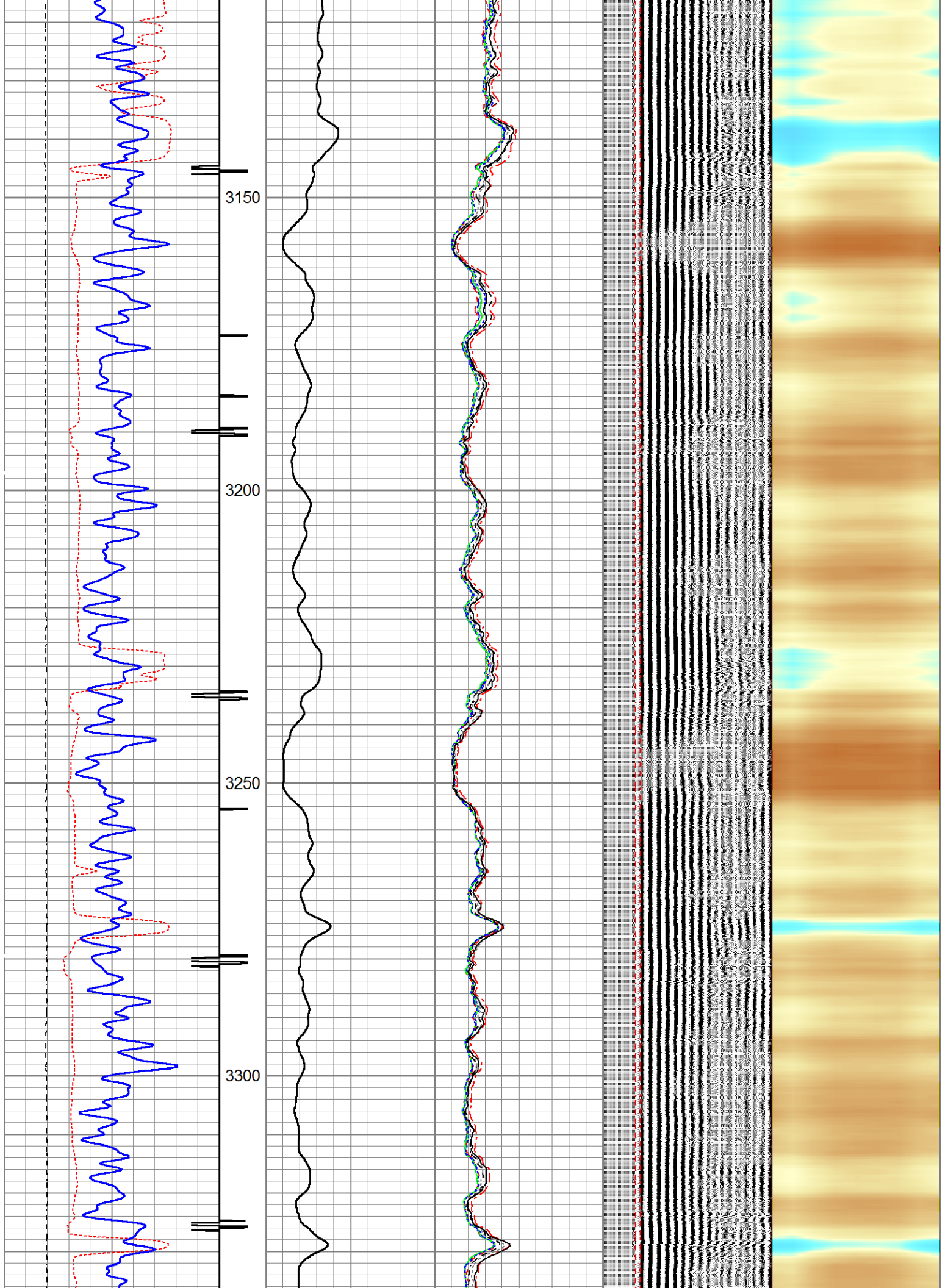


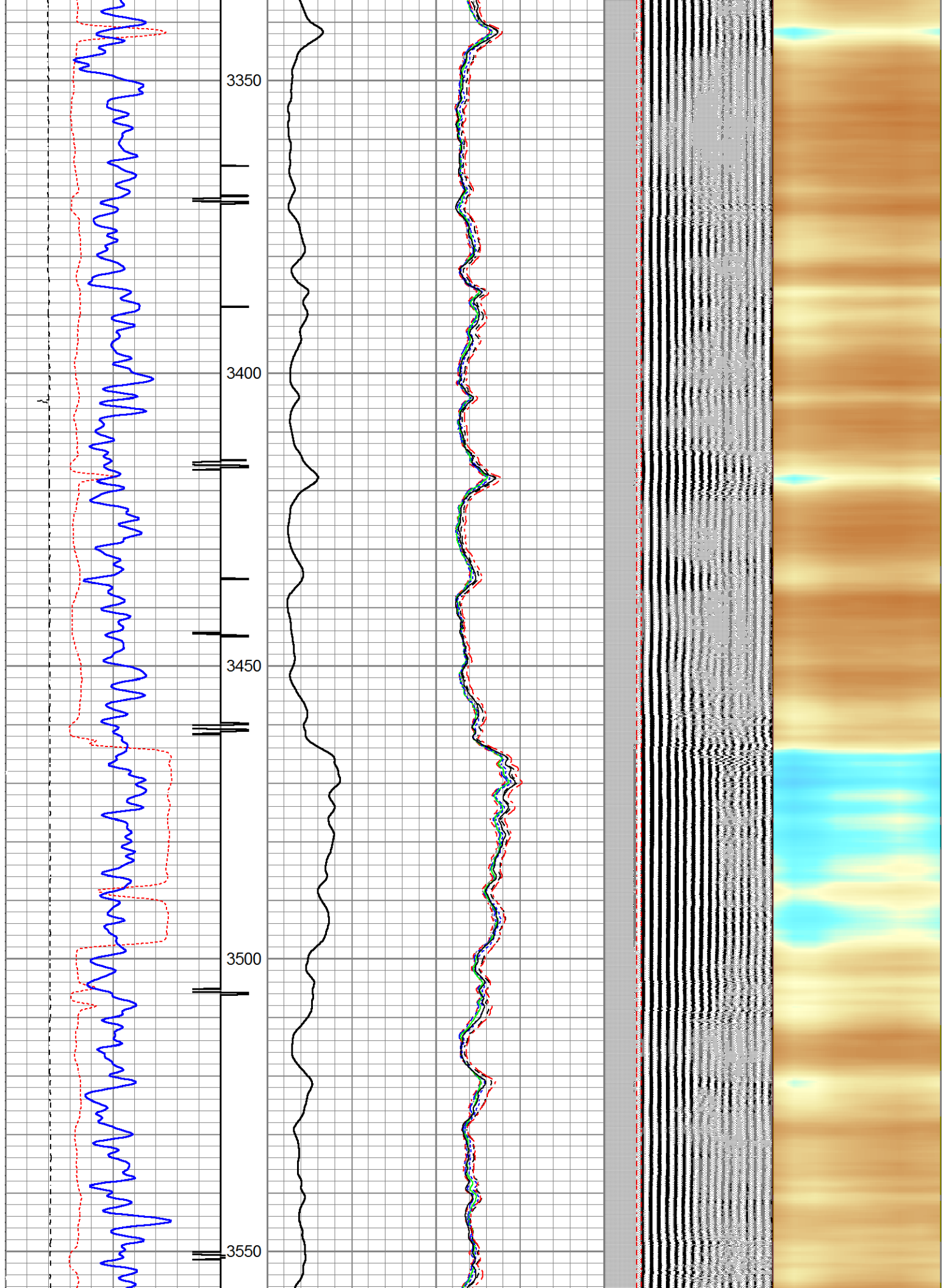


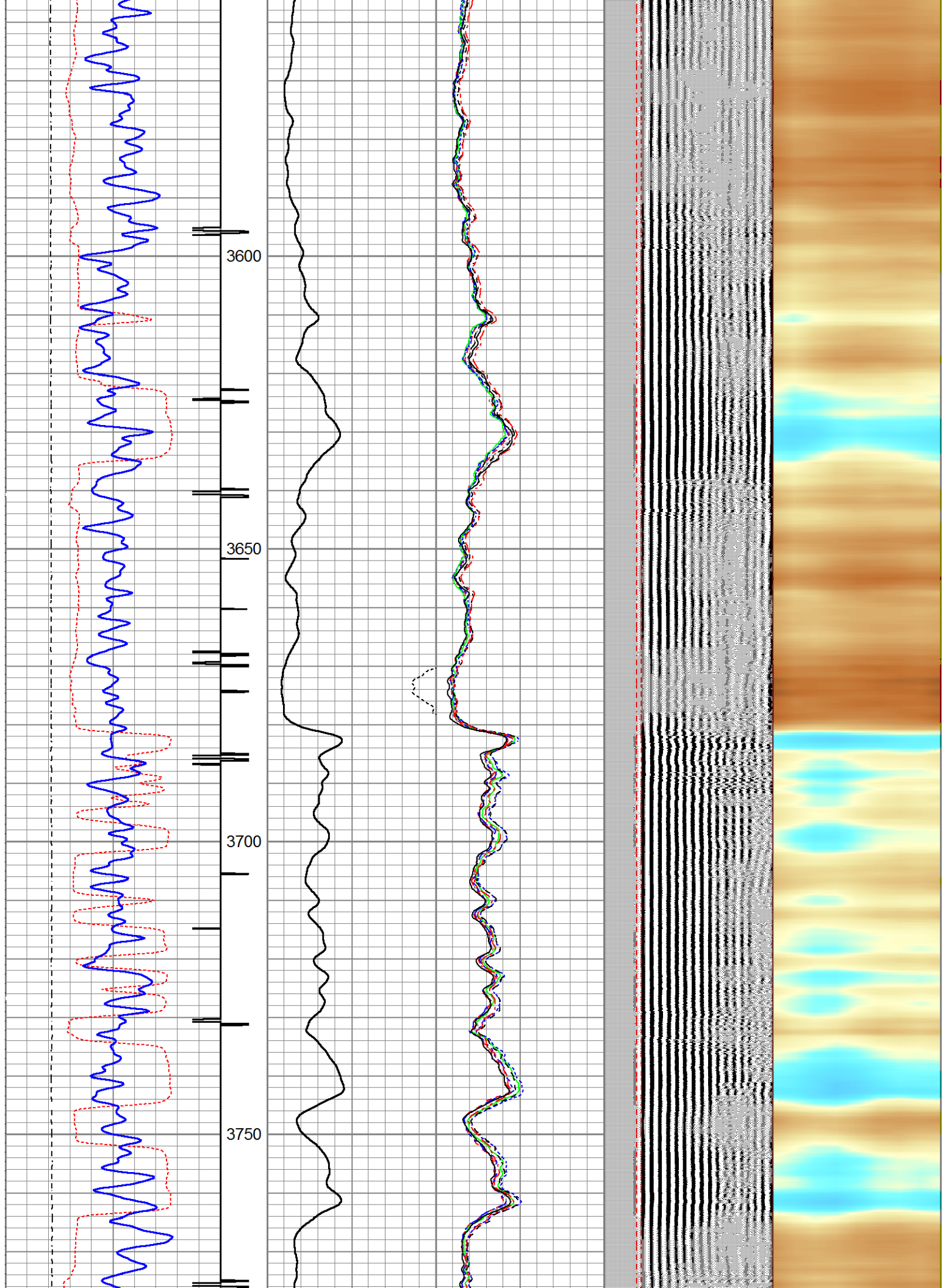


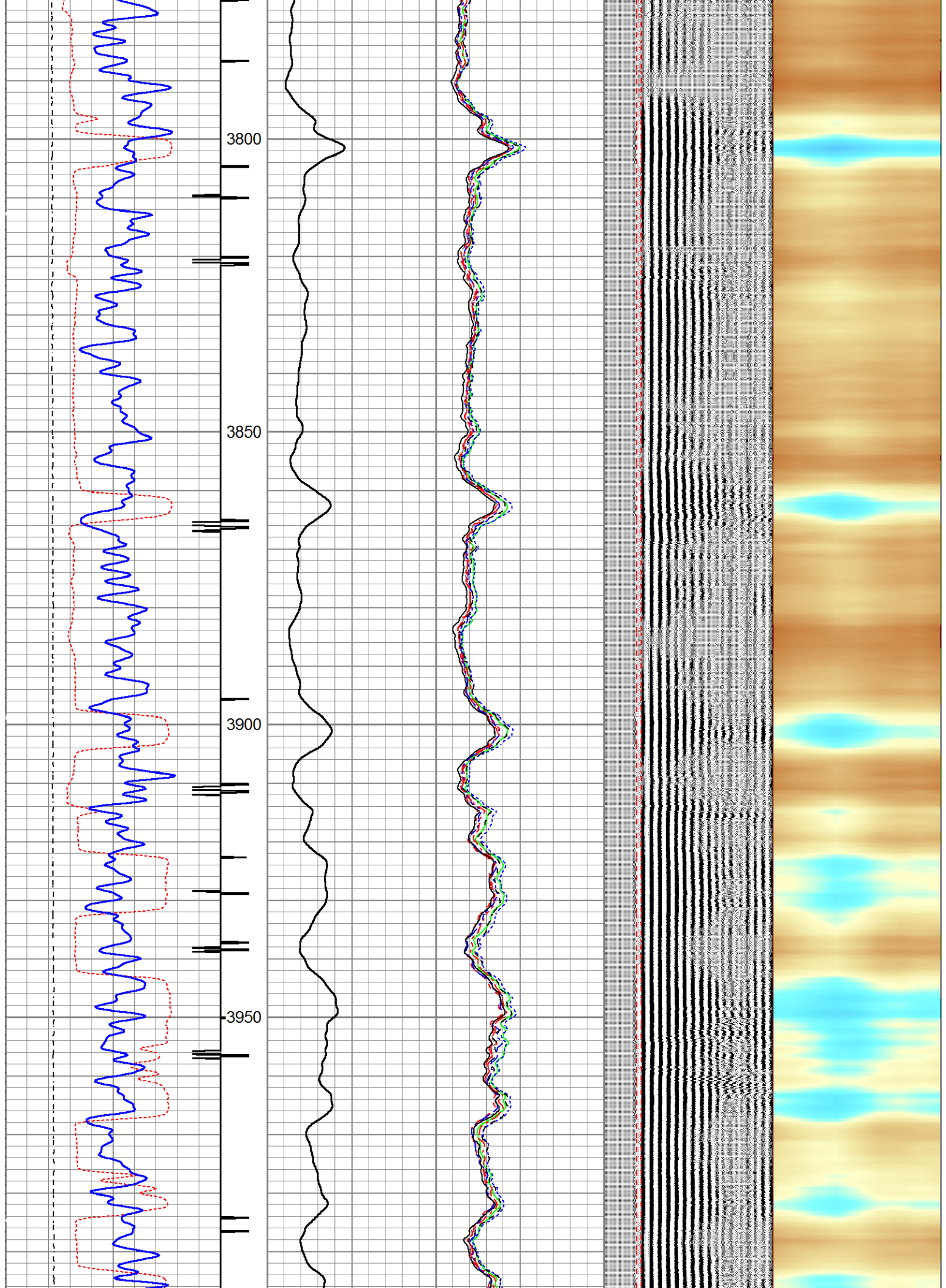


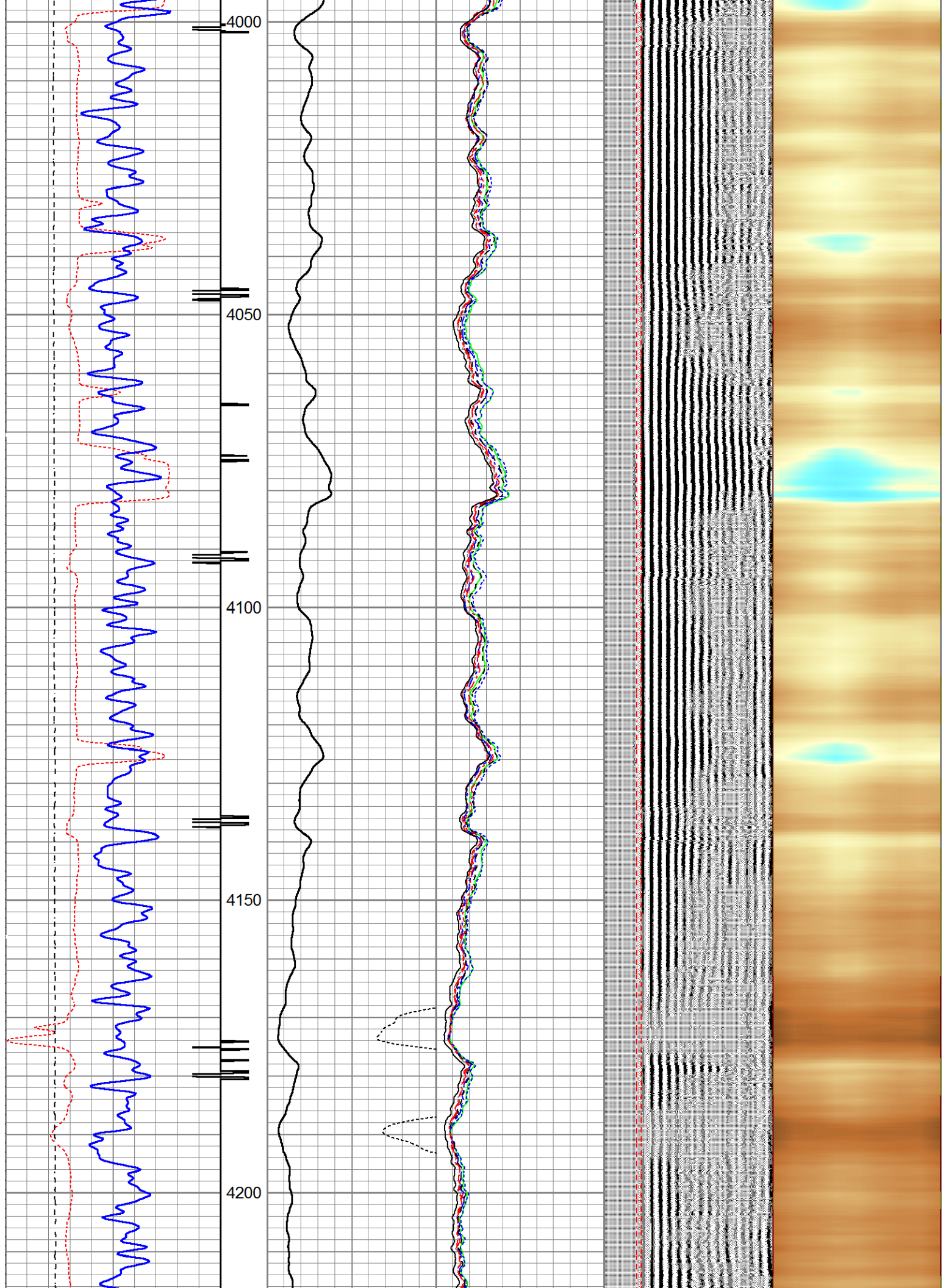


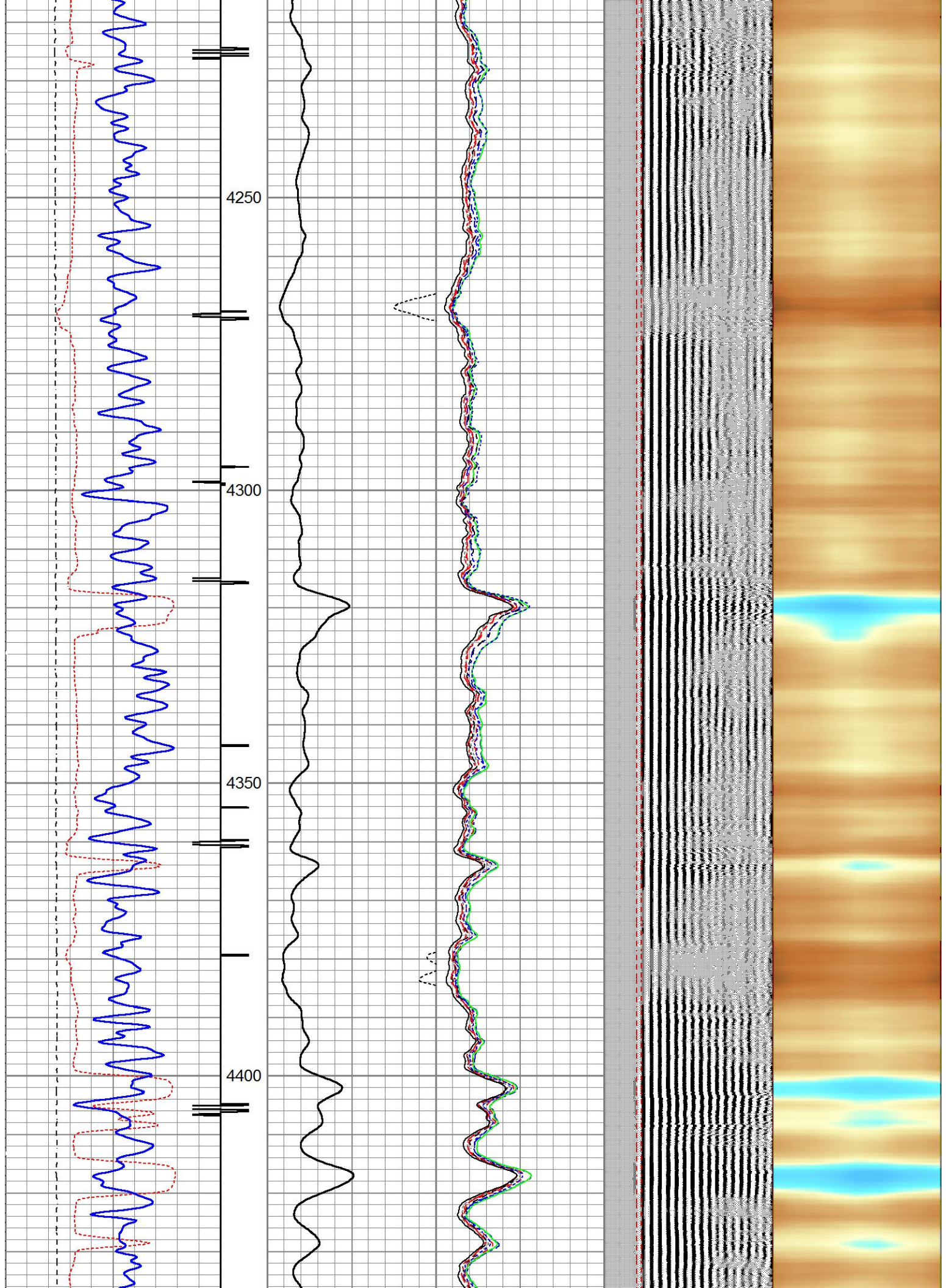


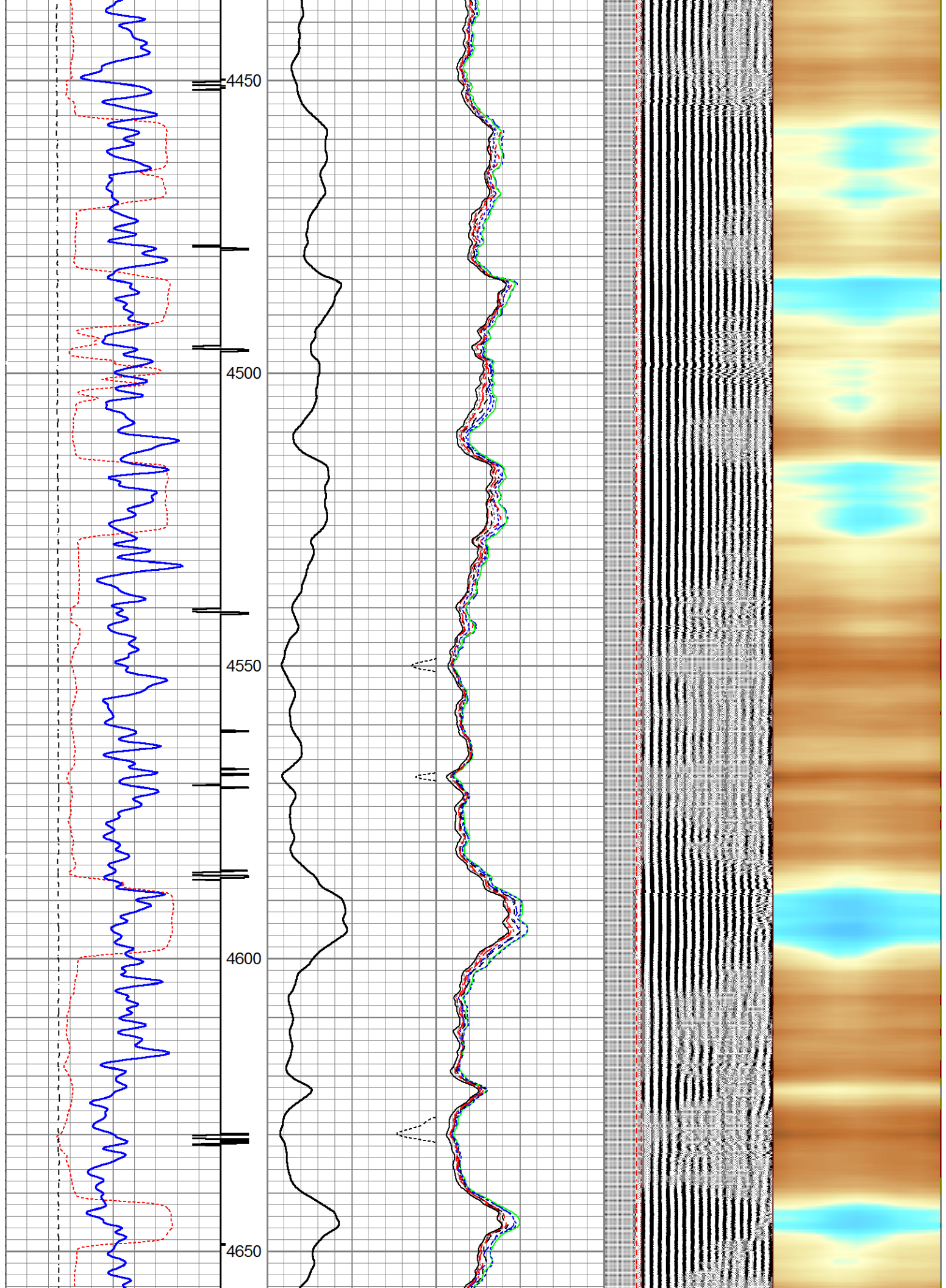


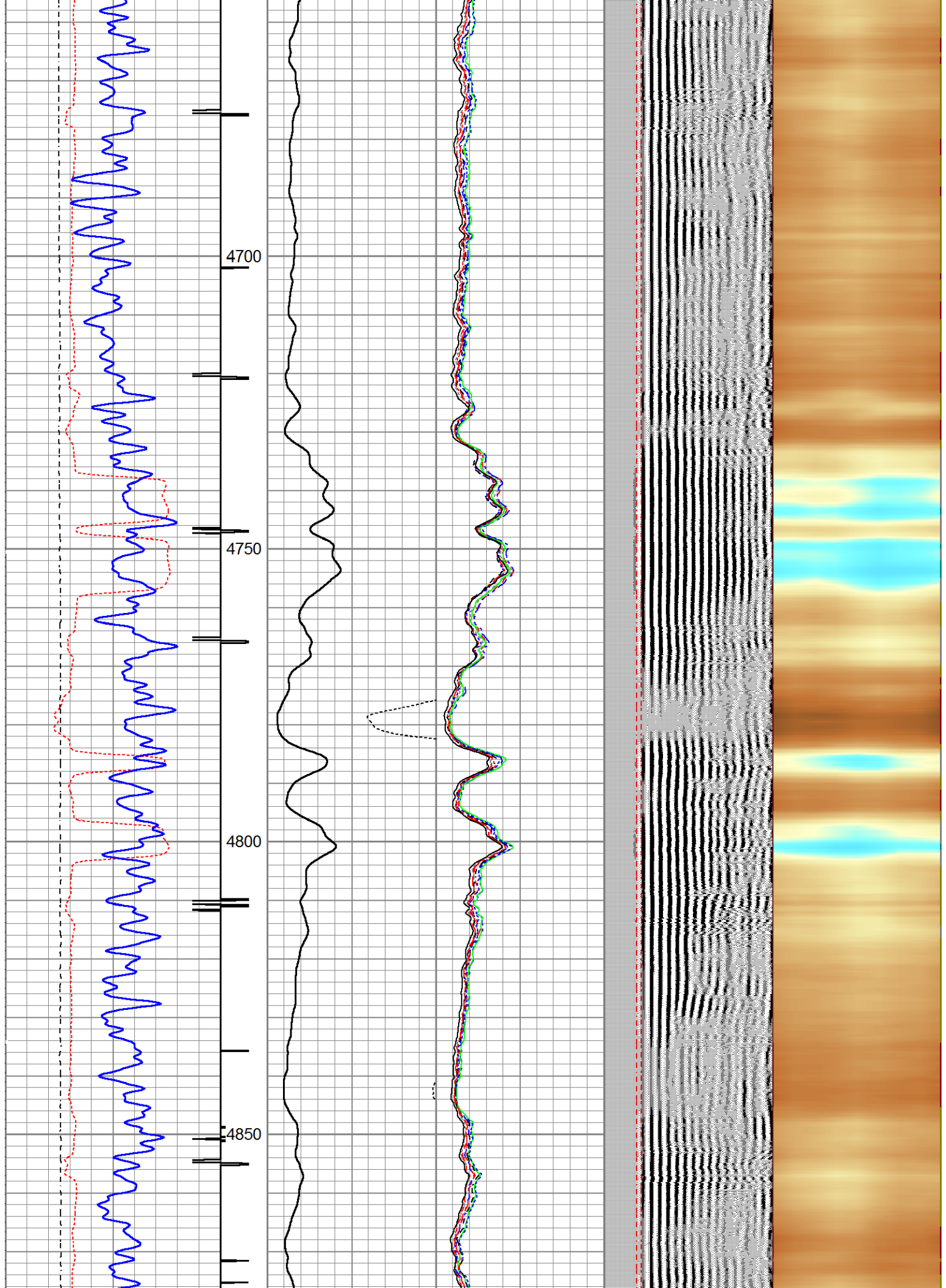


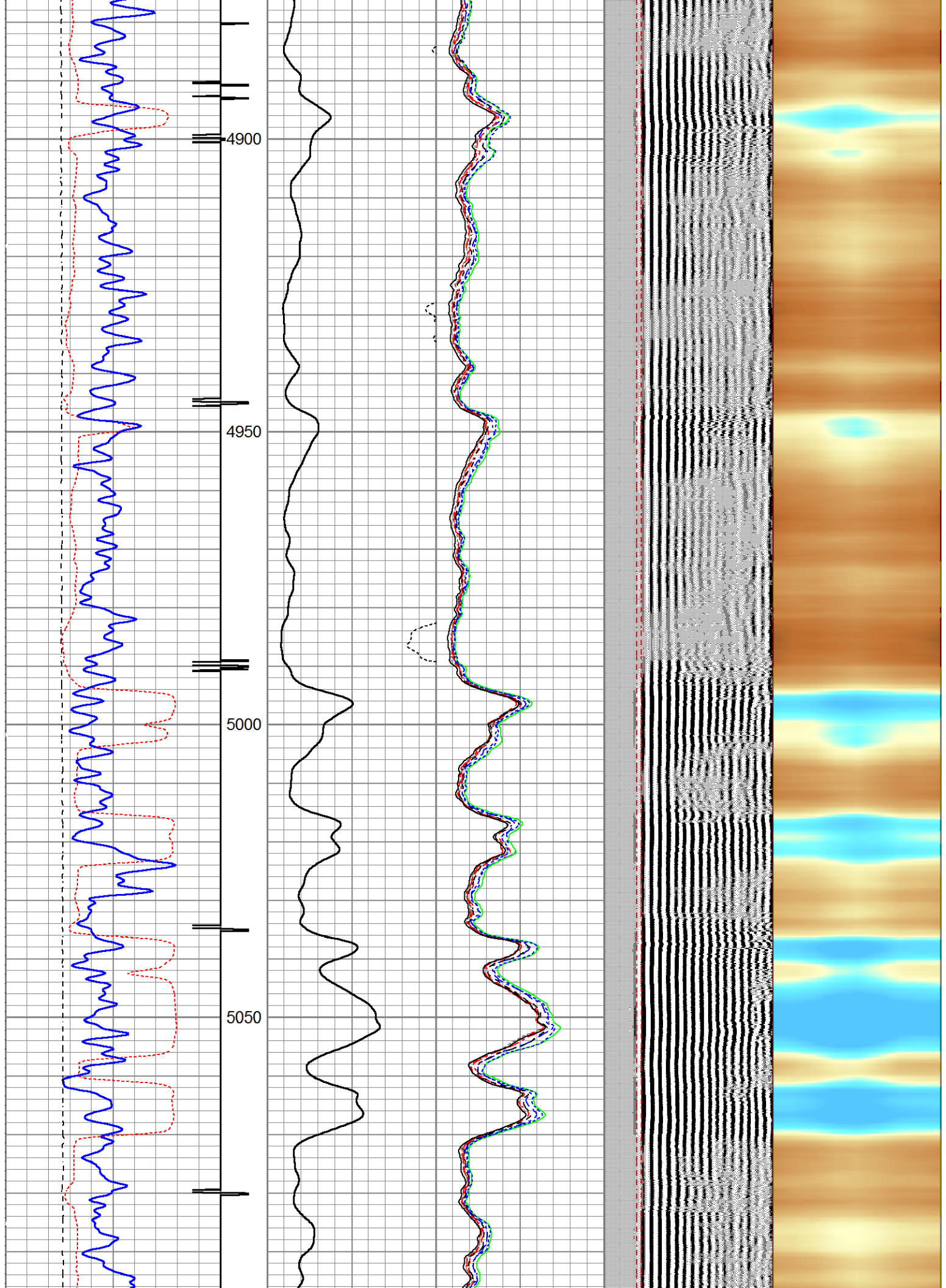


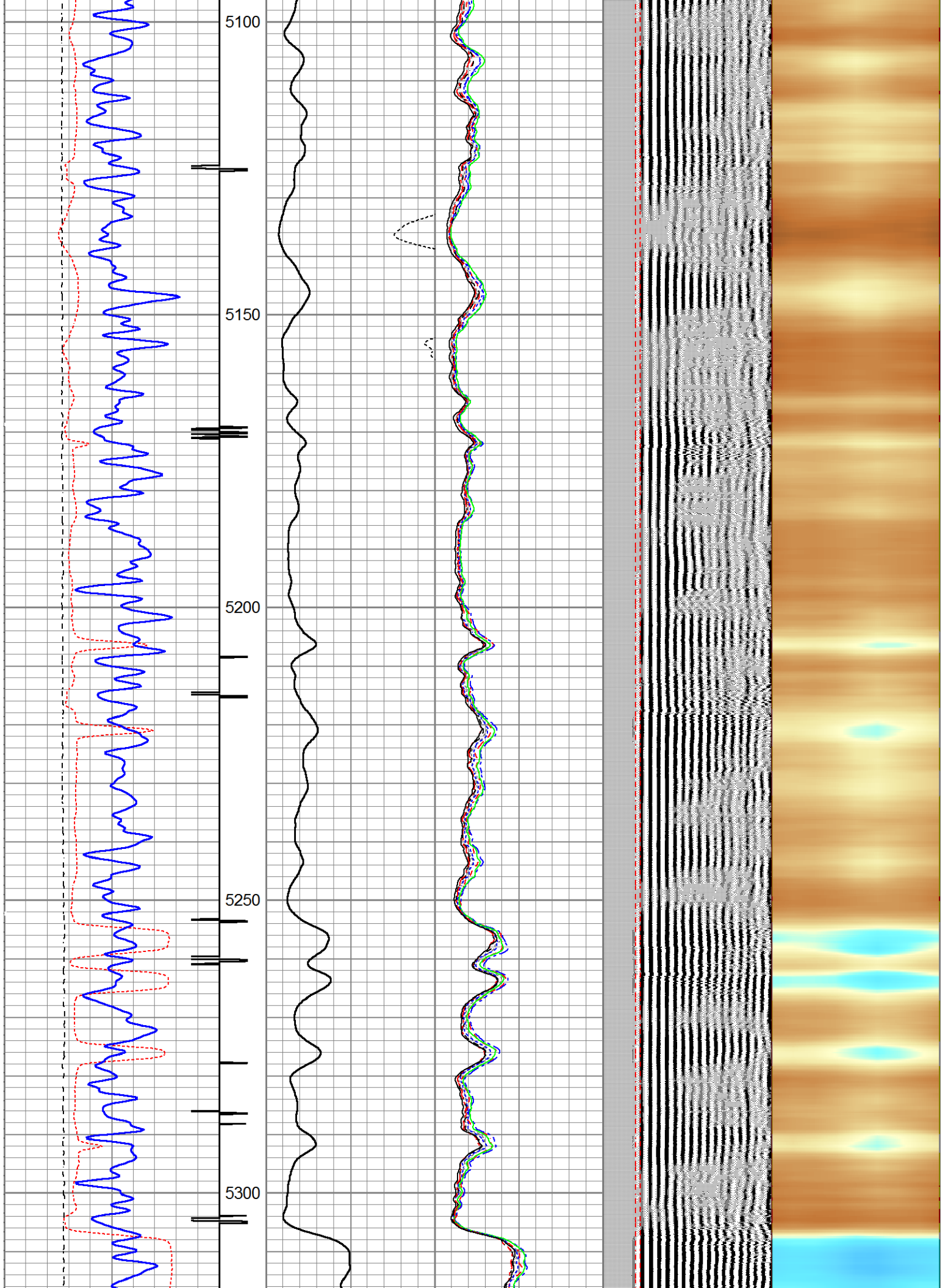


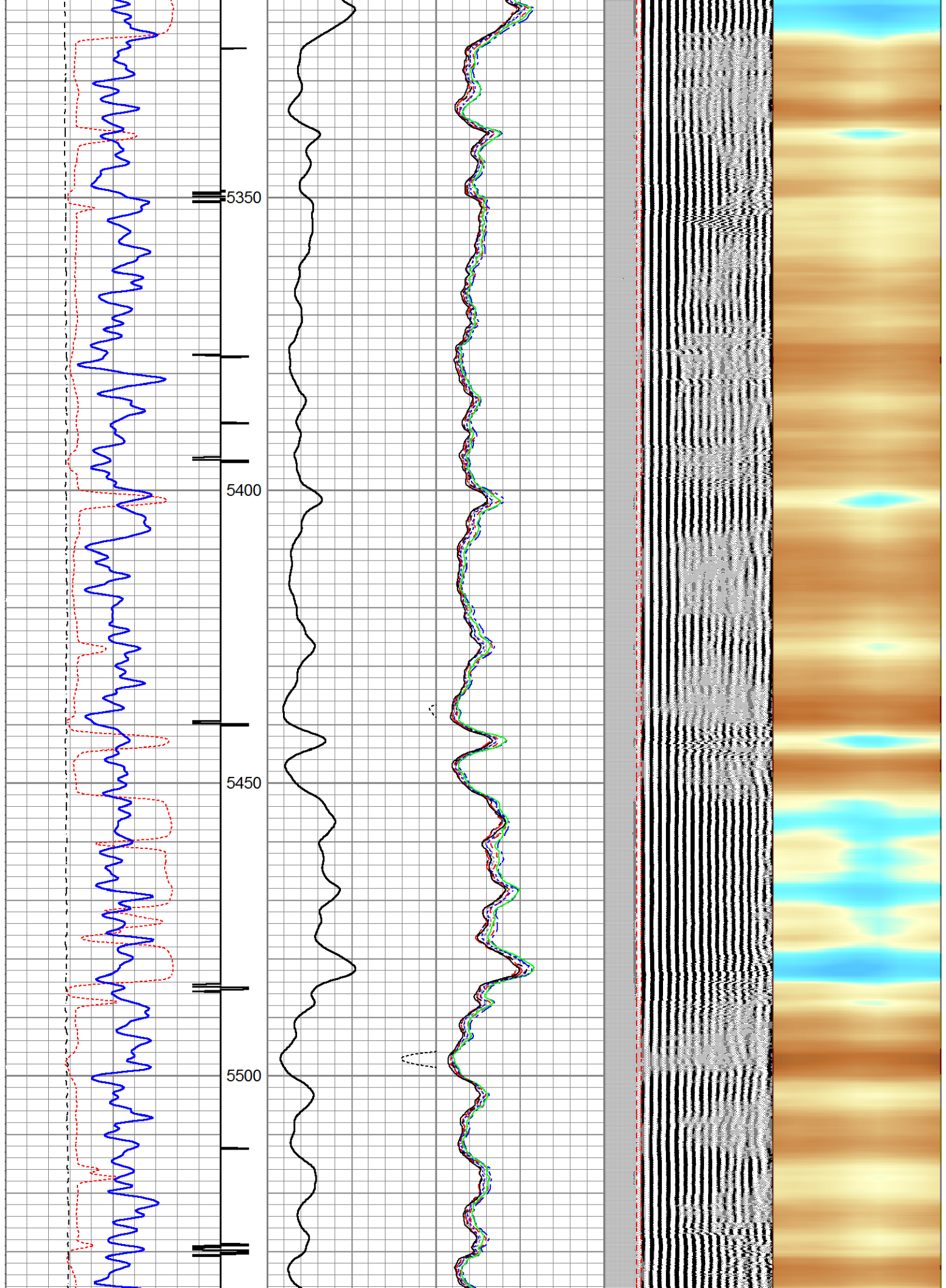


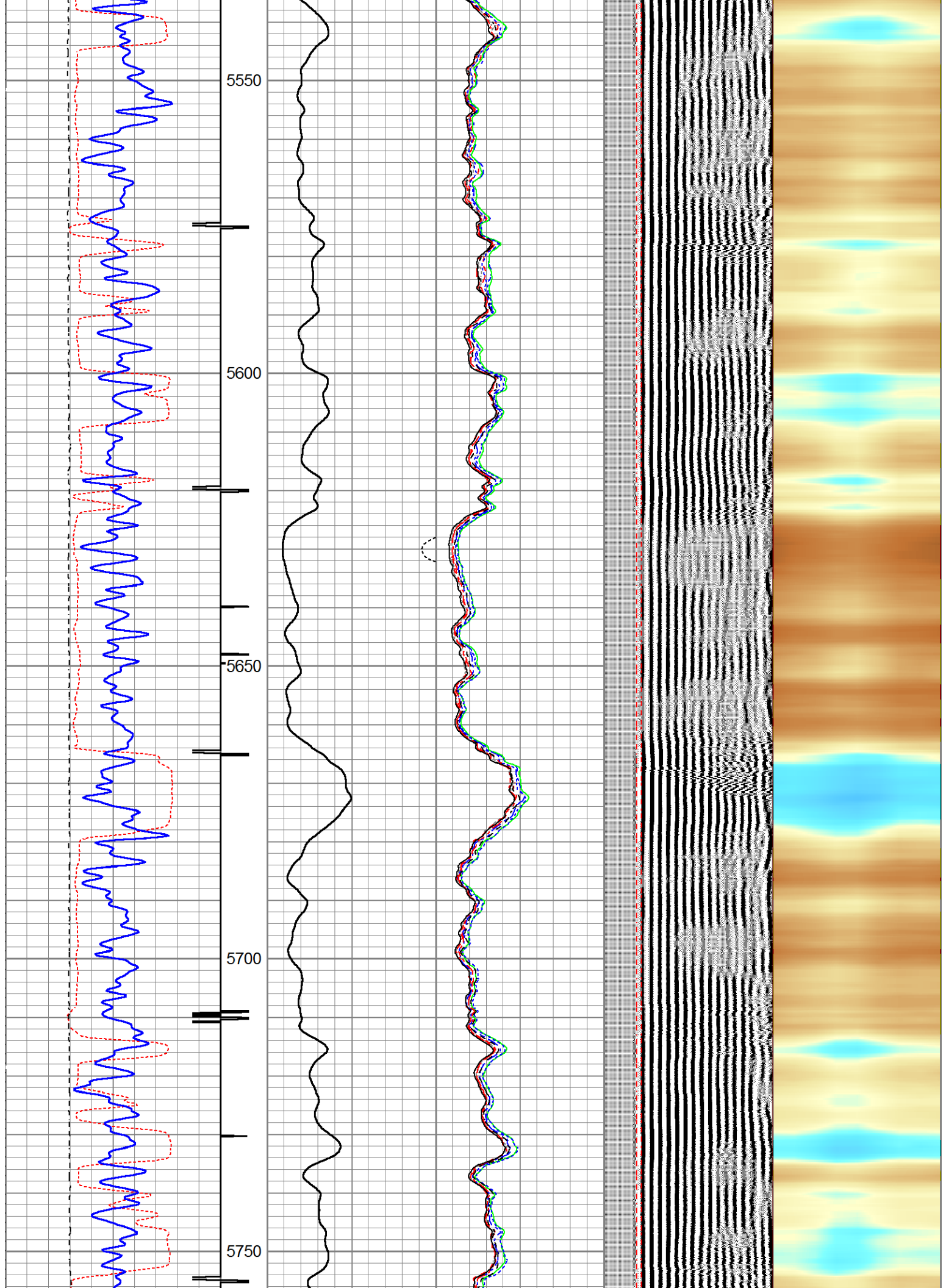


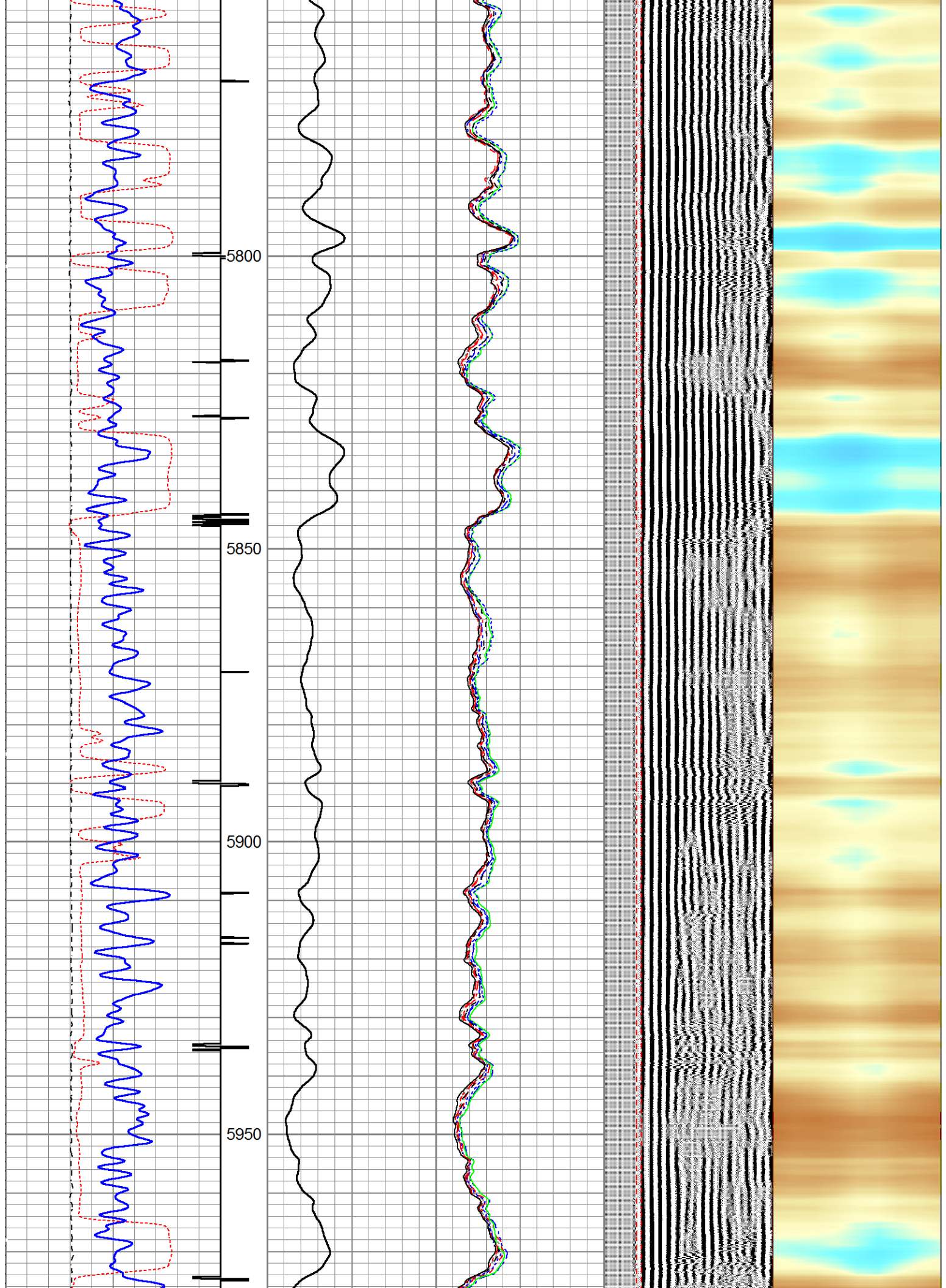


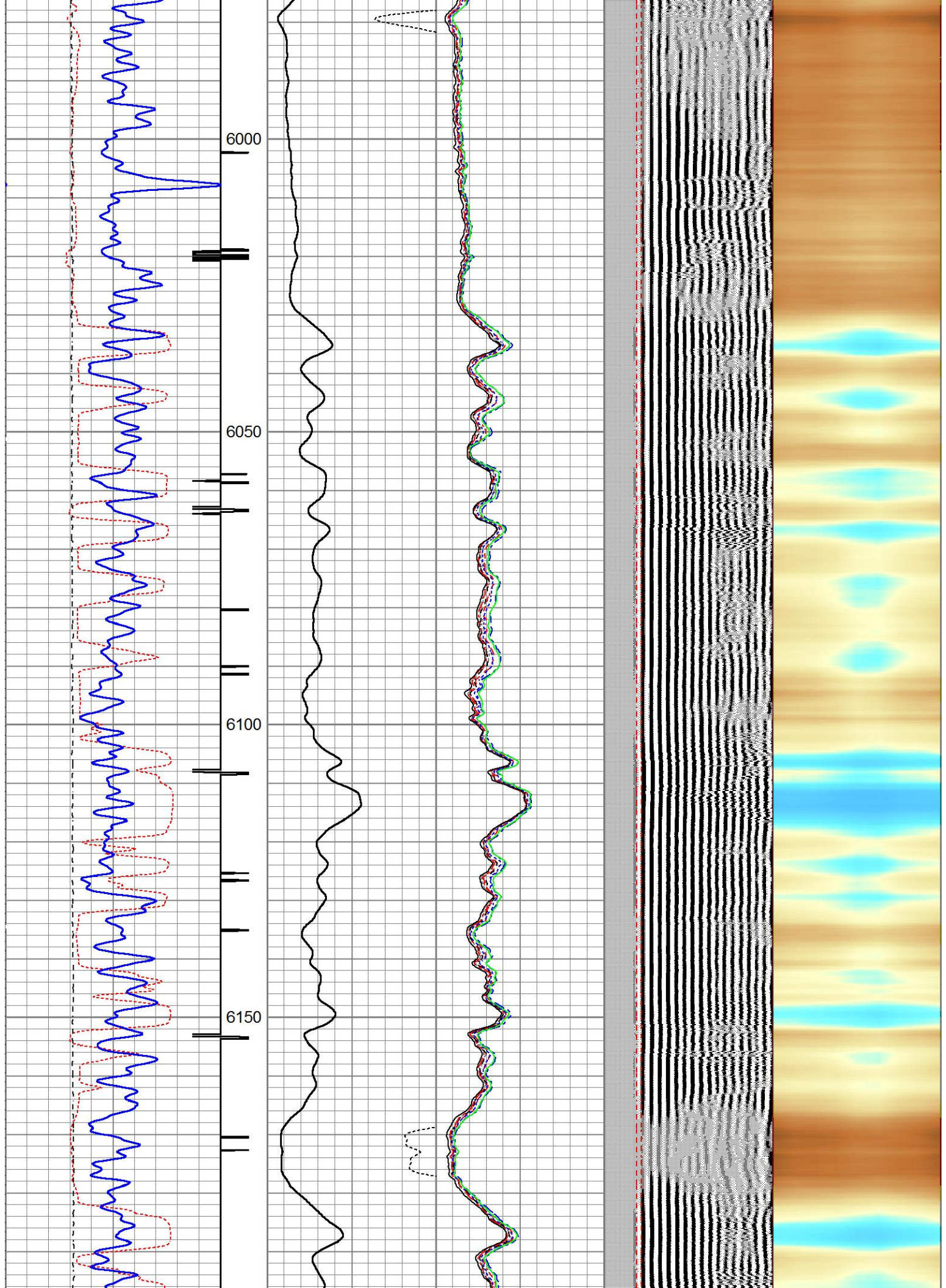


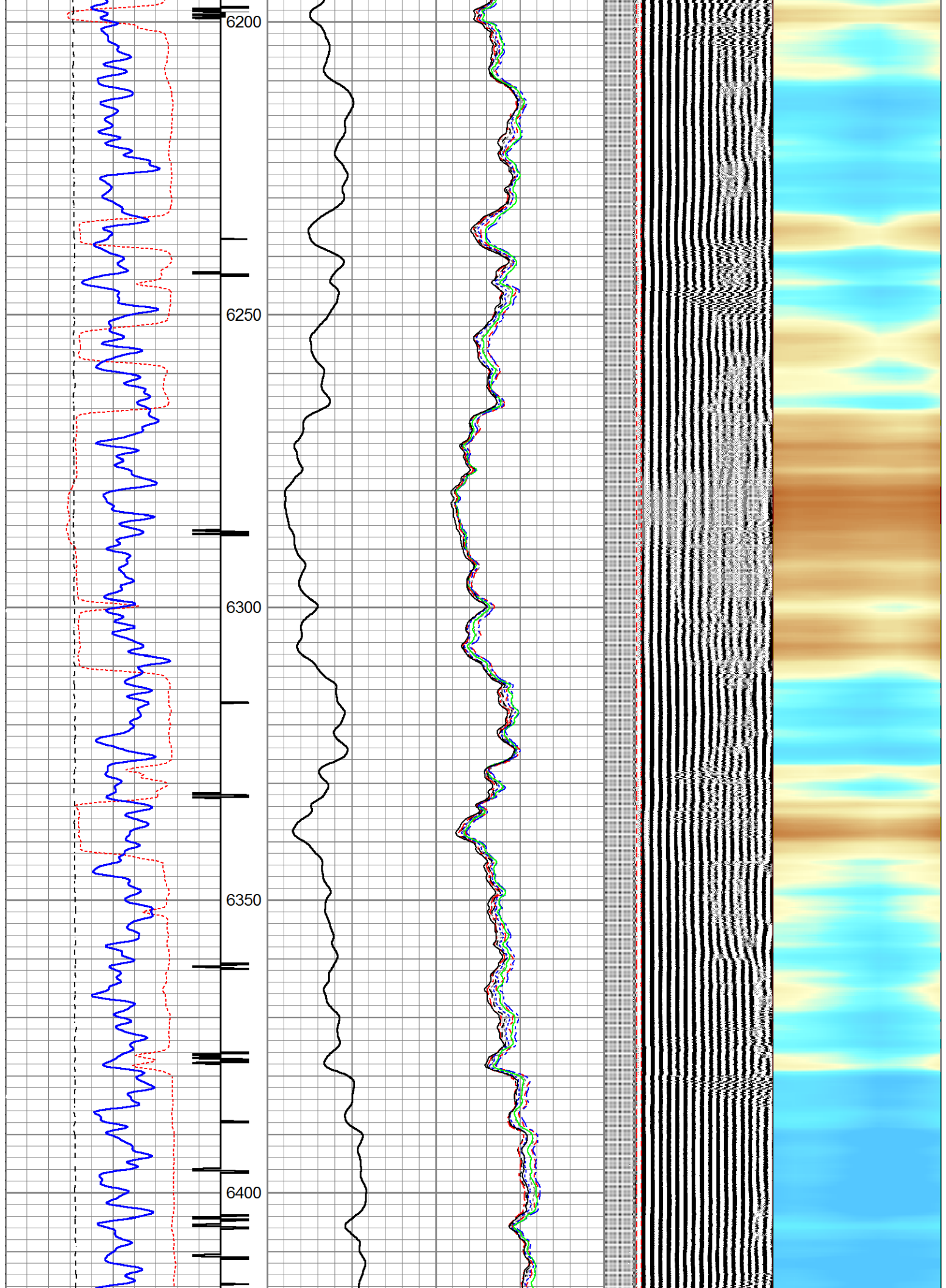


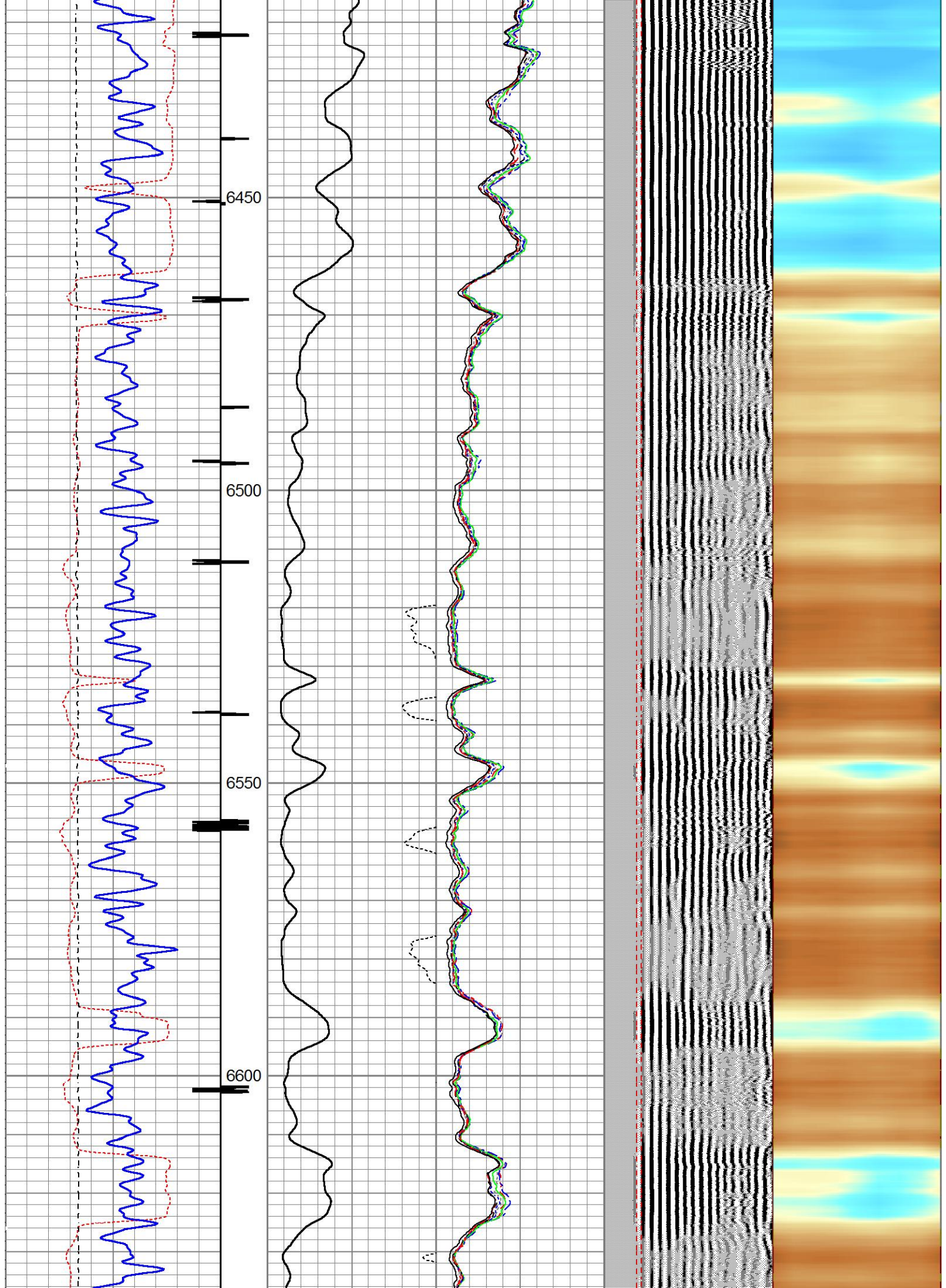


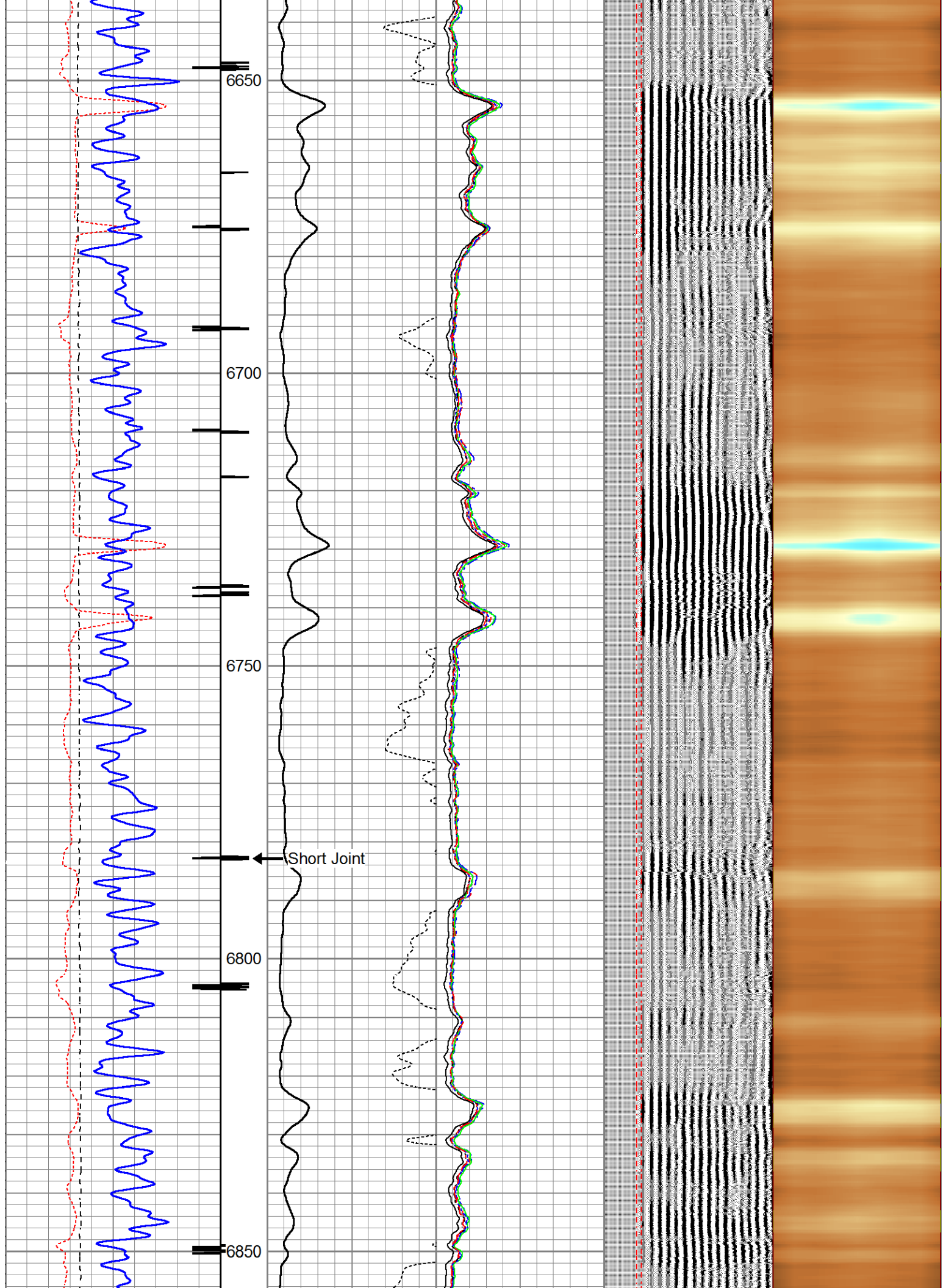


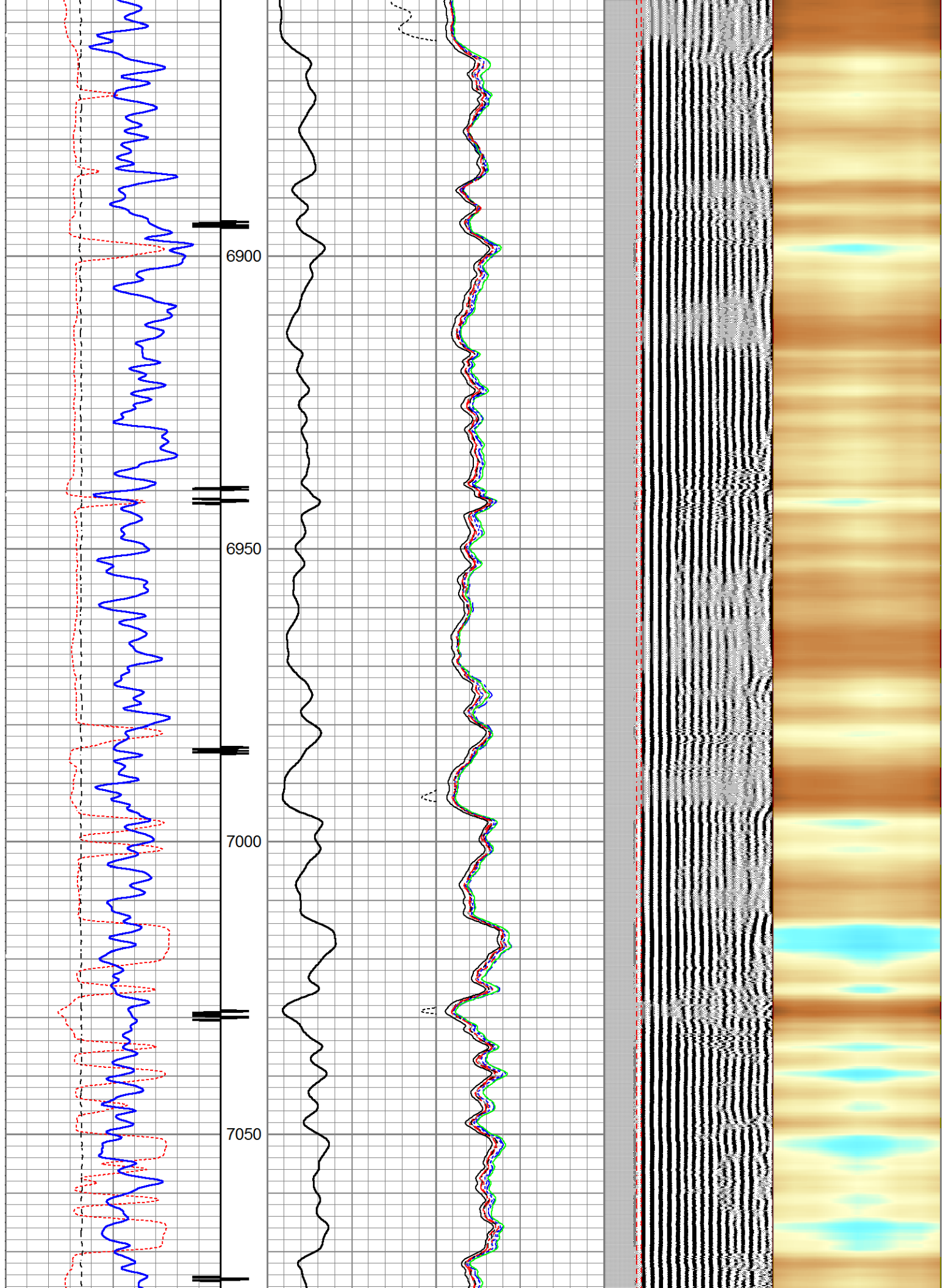


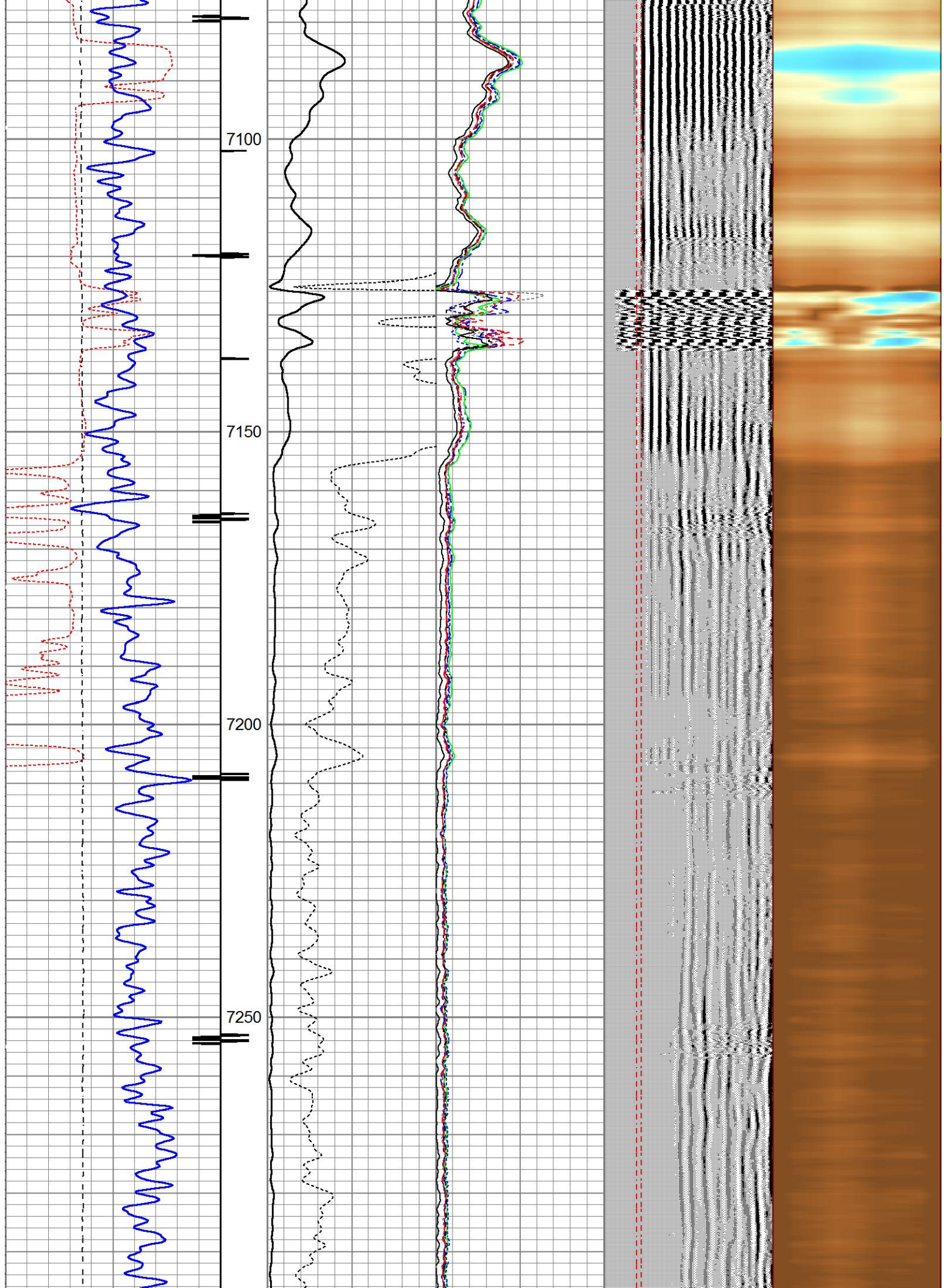


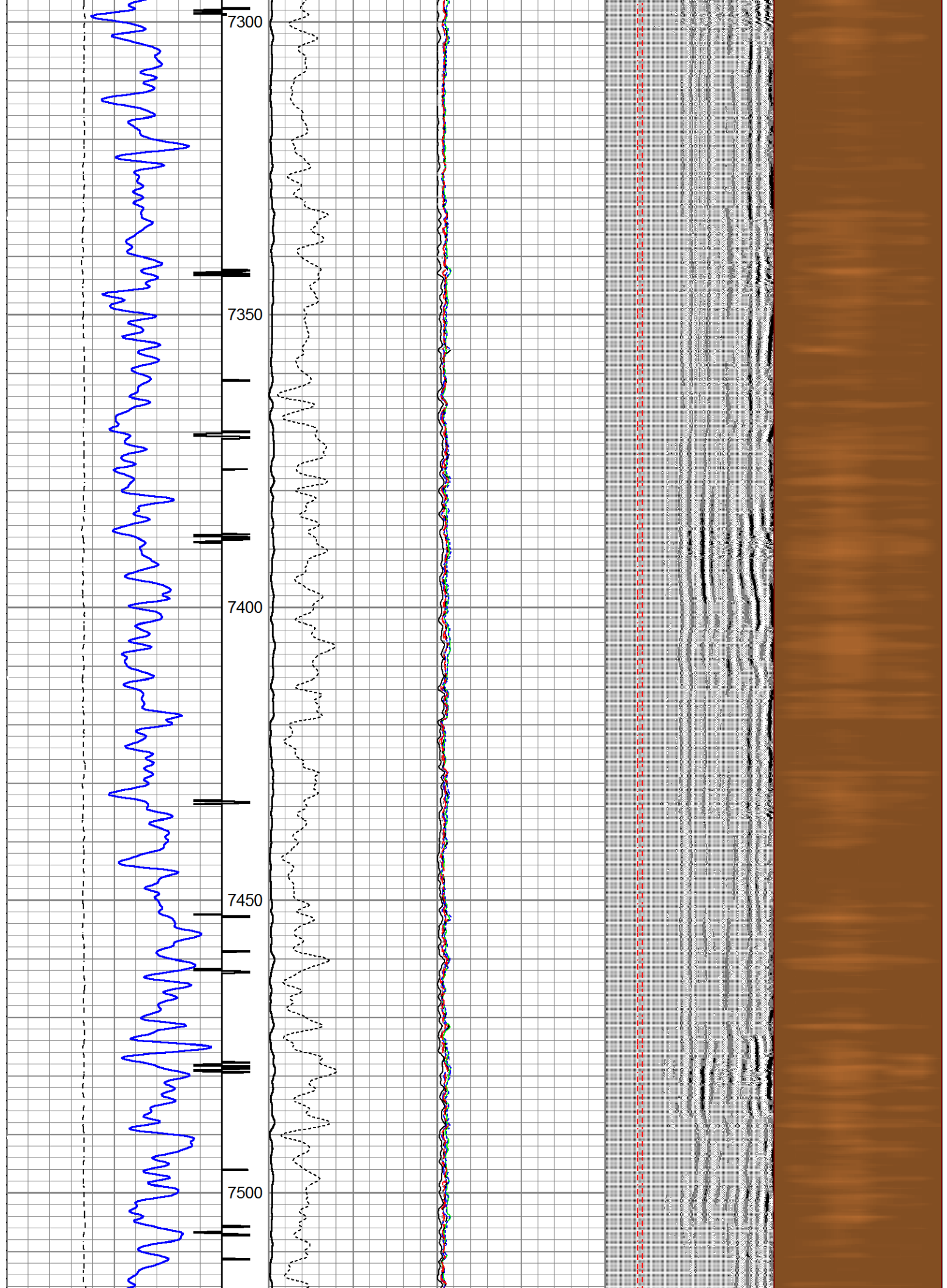


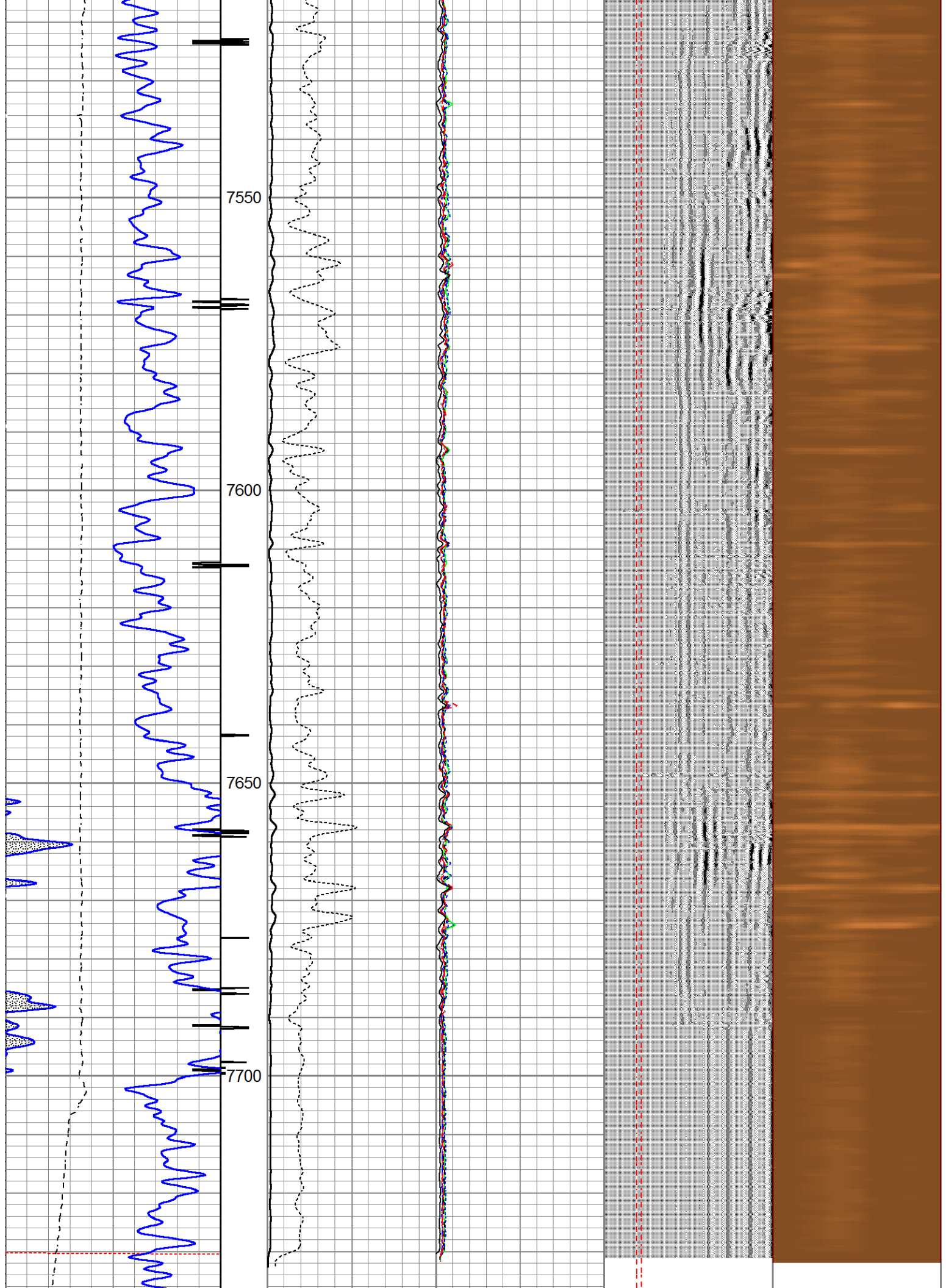


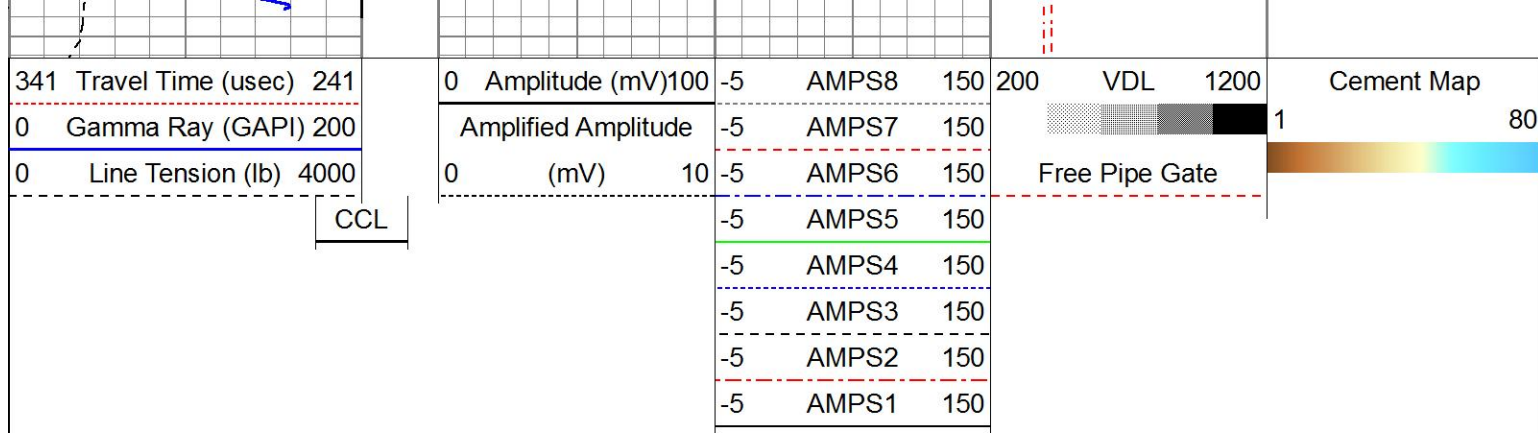












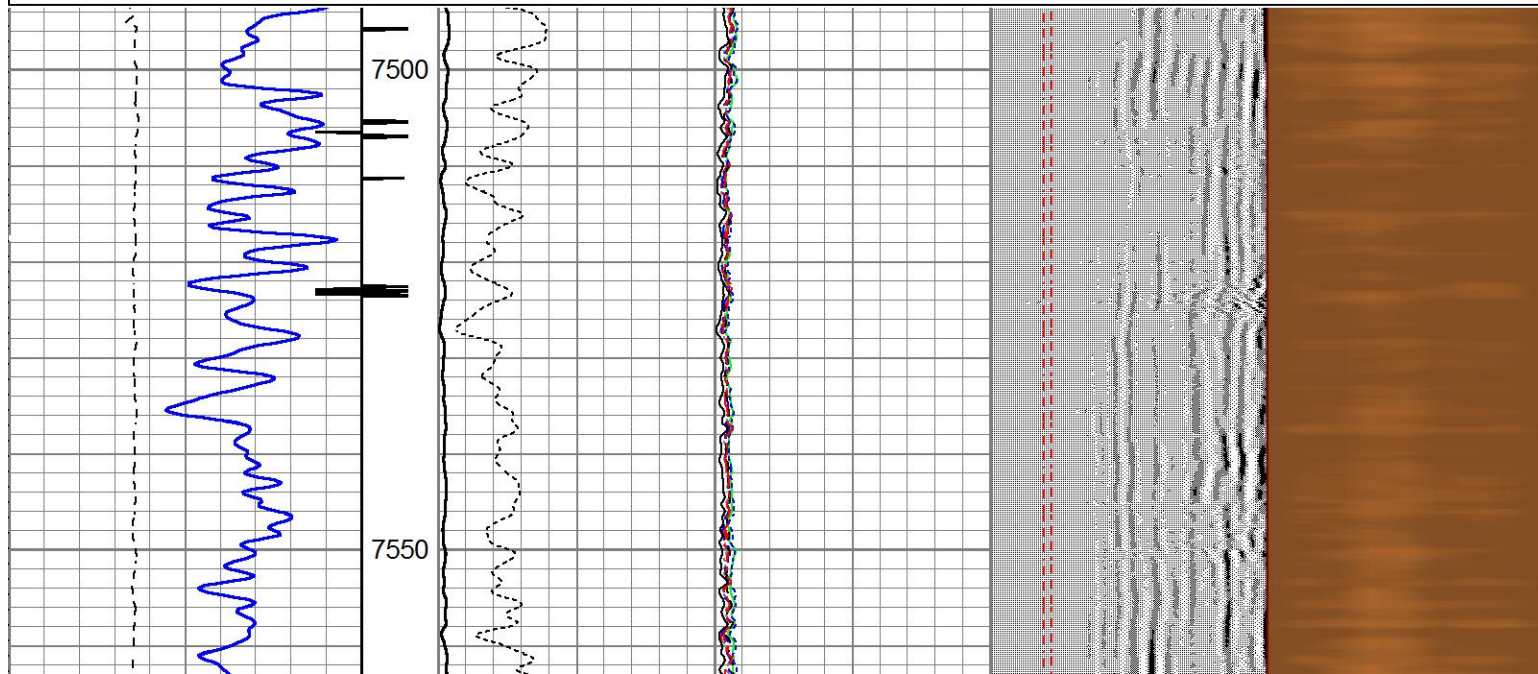
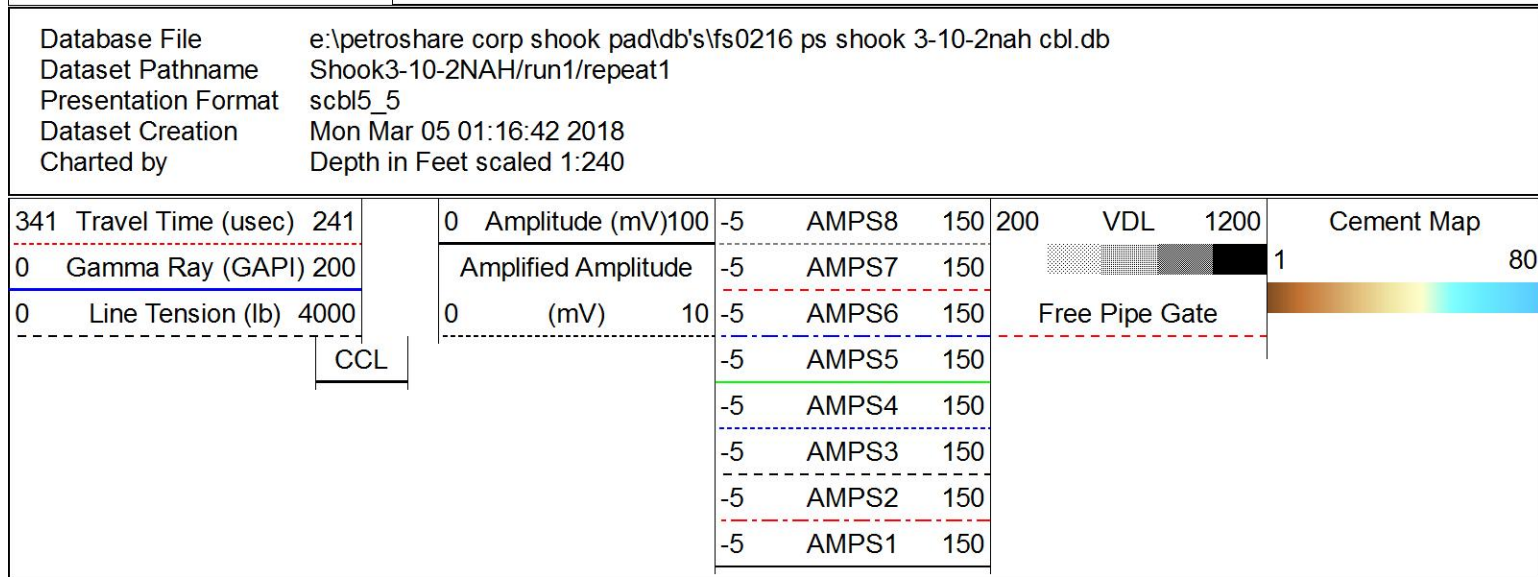


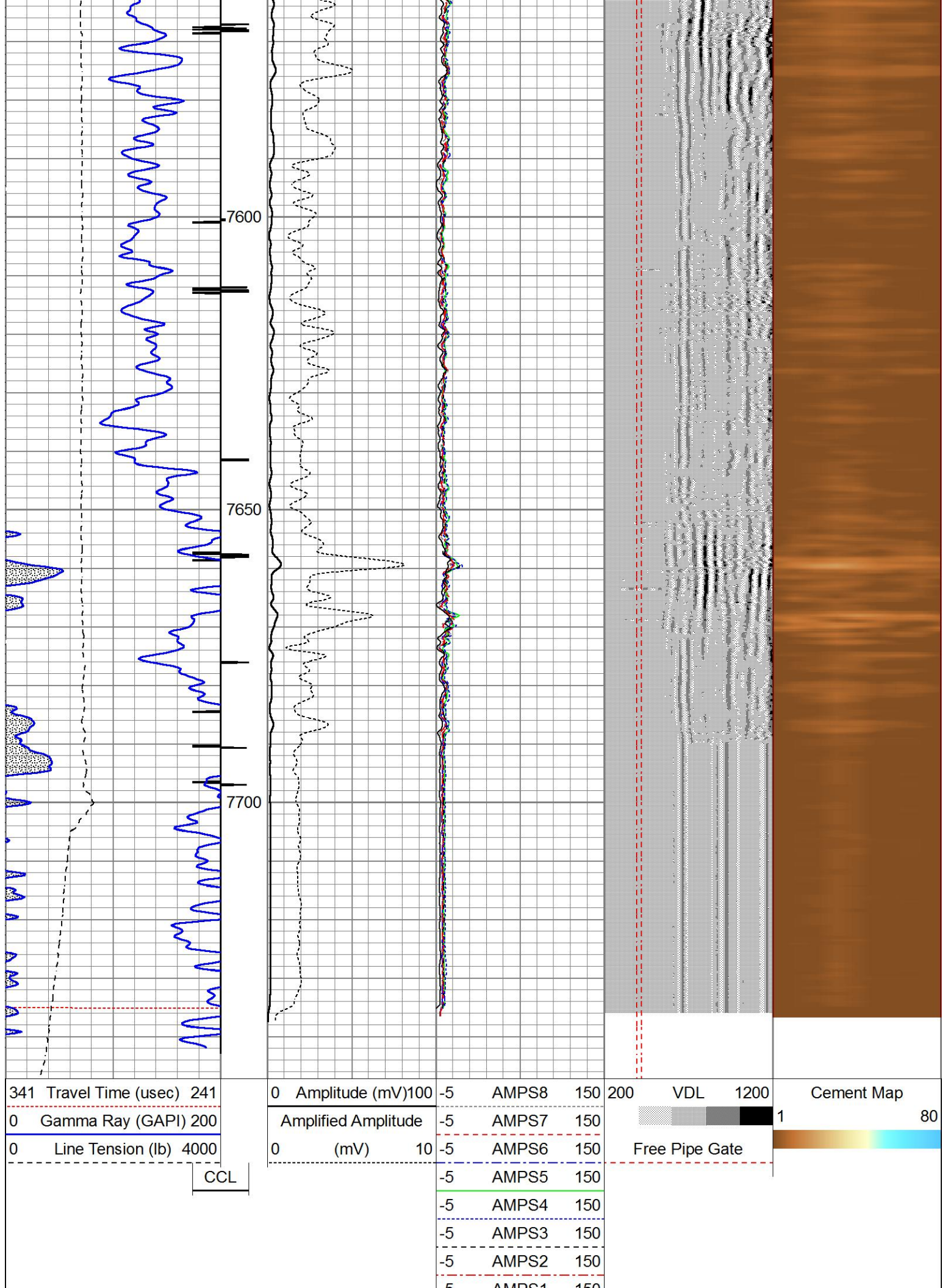


Main Pass (0) PSI



Repeat Pass (0) PSI







Repeat Pass (0) PSI

Log Variables

DatabaseE:\Petroshare Corp Shook Pad\DB's\fs0216 ps shook 3-10-2nah cbl.db
Dataset field/Shook3-10-2NAH/run1/main1/_vars_

Top - Bottom

| | | | | | | | |
|-----------------------|------------------------|----------------------|---------------------|-------------------------|---------------------|--------------------|-------------------------|
| BOREID in 7.875 | BOTTEMP degF 100 | CASEOD in 5.5 | CASETHCK in 0 | CASEWGHT lb/ft 20 | MAXAMPL mV 72 | MINAMPL mV 1 | MINATTN db/ft 0.8 |
| PERFS 0 | PPT usec 0 | SRFTEMP degF 0 | TDEPTH ft 0 | | | | |

Variable Description

| | | |
|-----------------------------------|-------------------------------|-------------------------------|
| BOREID : Borehole I.D. | CASEWGHT : Casing Weight | PERFS : Perforation Flag |
| BOTTEMP : Bottom Hole Temperature | MAXAMPL : Maximum Amplitude | PPT : Predicted Pipe Time |
| CASEOD : Casing O.D. | MINAMPL : Minimum Amplitude | SRFTEMP : Surface Temperature |
| CASETHCK : Casing Thickness | MINATTN : Minimum Attenuation | TDEPTH : Total Depth |

Calibration Report

Database File E:\Petroshare Corp Shook Pad\DB's\fs0216 ps shook 3-10-2nah cbl.db
Dataset Pathname Shook3-10-2NAH/run1/main1
Dataset Creation Mon Mar 05 01:23:25 2018

Gamma Ray Calibration Report

| | | |
|---------------------|-----------------|----------|
| Serial Number: | pr120363 | |
| Tool Model: | Probe275dig | |
| Performed: | (Not Performed) | |
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 1.0000 | GAPI/cps |

Radial Cement Bond Calibration Report

| | | |
|------------------------------|----------|----|
| Serial Number: | 120768C | |
| Tool Model: | Probe | |
| Calibration Casing Diameter: | 5.500 | in |
| Calibration Depth: | 1924.133 | ft |

Master Calibration, performed Mon Mar 05 00:50:18 2018:

| | Raw (v) | | Calibrated (mv) | | Results | |
|-----|---------|-------|-----------------|--------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3' | 0.003 | 0.400 | 1.000 | 71.921 | 178.781 | 0.459 |
| CAL | 0.003 | 0.836 | | | | |
| 5' | 0.003 | 0.303 | 1.000 | 71.921 | 236.567 | 0.344 |
| SUM | | | | | | |

| | | | | | | |
|-----|-------|-------|-------|---------|---------|--------|
| SUM | | | | | | |
| S1 | 0.037 | 0.415 | 0.000 | 100.000 | 264.096 | -9.649 |
| S2 | 0.004 | 0.413 | 0.000 | 100.000 | 244.545 | -0.878 |
| S3 | 0.006 | 0.408 | 0.000 | 100.000 | 248.808 | -1.397 |
| S4 | 0.006 | 0.400 | 0.000 | 100.000 | 253.764 | -1.567 |
| S5 | 0.004 | 0.392 | 0.000 | 100.000 | 257.464 | -0.933 |
| S6 | 0.004 | 0.389 | 0.000 | 100.000 | 259.956 | -1.117 |
| S7 | 0.004 | 0.396 | 0.000 | 100.000 | 255.306 | -1.081 |
| S8 | 0.006 | 0.400 | 0.000 | 100.000 | 253.937 | -1.463 |

Internal Reference Calibration, performed Sat Mar 03 18:58:32 2018:


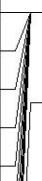
| | Raw (v) | | Calibrated (v) | | Results | |
|-----|---------|-------|----------------|-------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| CAL | 0.000 | 0.000 | 0.003 | 0.836 | 1.000 | 0.000 |

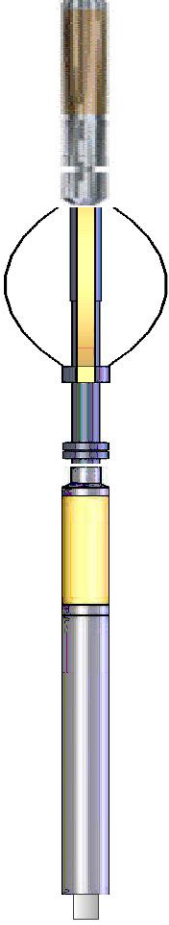
Temperature Calibration Report


Serial Number: 120768C
Tool Model: Probe
Performed: Tue Oct 09 13:55:20 2012

| | Reference | Reading |
|-----------------|-----------|---------|
| Low Reference: | 100.000 | 109.429 |
| High Reference: | 350.000 | 407.272 |

Gain: 0.839
Offset: 8.149

| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb) |
|--------|-------------|---|---|-------------|-----------|-------------|
| ExTemp | 14.41 |  | CHD-1.4375CHD Titan Cable Head 1 7/16 | 1.00 | 1.44 | 10.00 |
| | | | CENT-Probe Probe 2 3/4 Centralizer | 2.88 | 2.75 | 20.00 |
| | | | CLT-RBT-Probe (120768C) Probe 2.75" Radial Bond Tool w/Temperature | 9.21 | 2.75 | 93.00 |
| | | | | | | |
| WVFS8 | 12.11 |  | | | | |
| WVFS7 | 12.11 | | | | | |
| WVFS6 | 12.11 | | | | | |
| WVFS5 | 12.11 | | | | | |
| WVFS4 | 12.11 | | | | | |

| | | | | | |
|--|-------|---|------|------|-------|
| WVFS3 | 12.11 |  | | | |
| WVFS2 | 12.11 | | | | |
| WVFS1 | 12.11 | | | | |
| WVFCAL | 12.11 | | | | |
| WVF3FT | 12.11 | | | | |
| WVF5FT | 11.11 | | | | |
| | | CENT-Probe Probe 2 3/4 Centralizer | 2.88 | 2.75 | 20.00 |
| CCL | 4.14 | | | | |
| GR | 2.81 | CLT-GR-Probe275dig (pr120363) Probe Digital Gamma CCL | 4.78 | 2.75 | 57.00 |
| | | Titan-1.375_Cap Titan 1 3/8" Cap | 0.27 | 1.38 | 1.00 |
| Dataset: fs0216 ps shook 3-10-2nah cbl.db: field/Shook3-10-2NAH/run1/main1 Total length: 21.01 ft Total weight: 201.00 lb O.D.: 2.75 in | | | | | |

| | | | | | |
|--|-----------------|--|----------|--|--|
| Company | Petroshare Corp | | | | |
| Well | SHOOK 3-10-2NAH | | | | |
| Field | WATTENBERG | | | | |
| County | ADAMS | State | COLORADO | | |
|  | | Radial Cement Bond Gamma Ray CCL Log | | | |