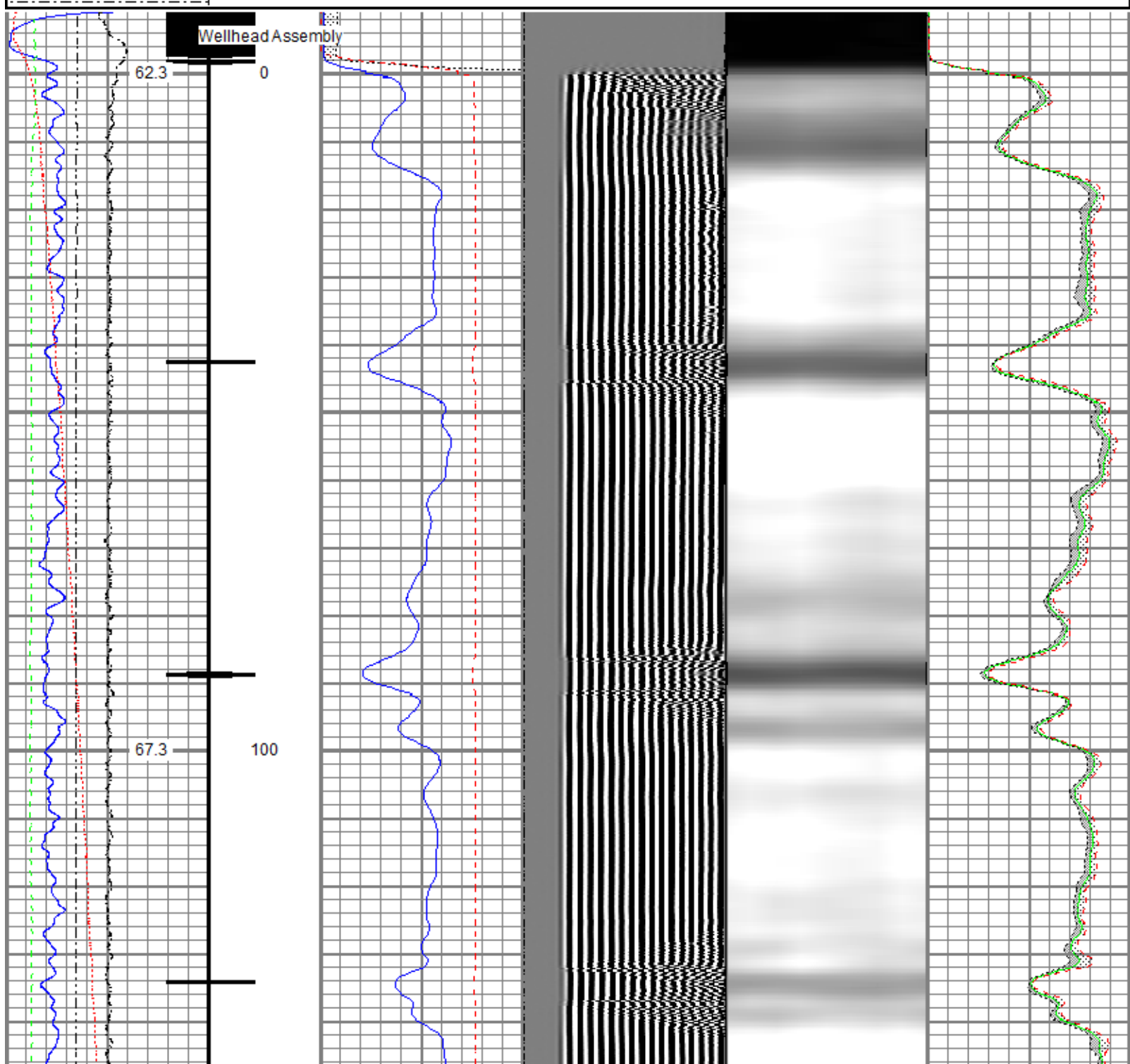


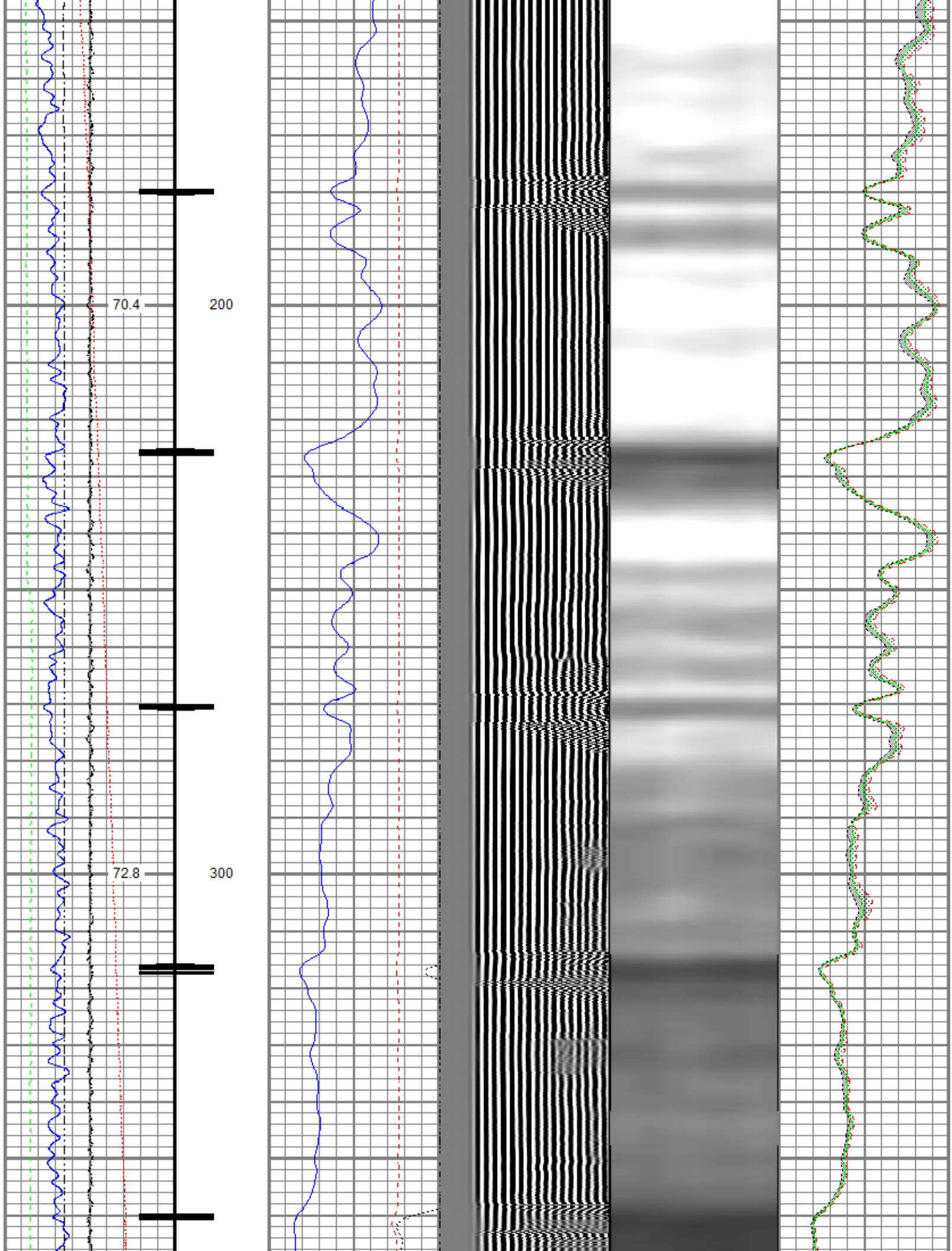


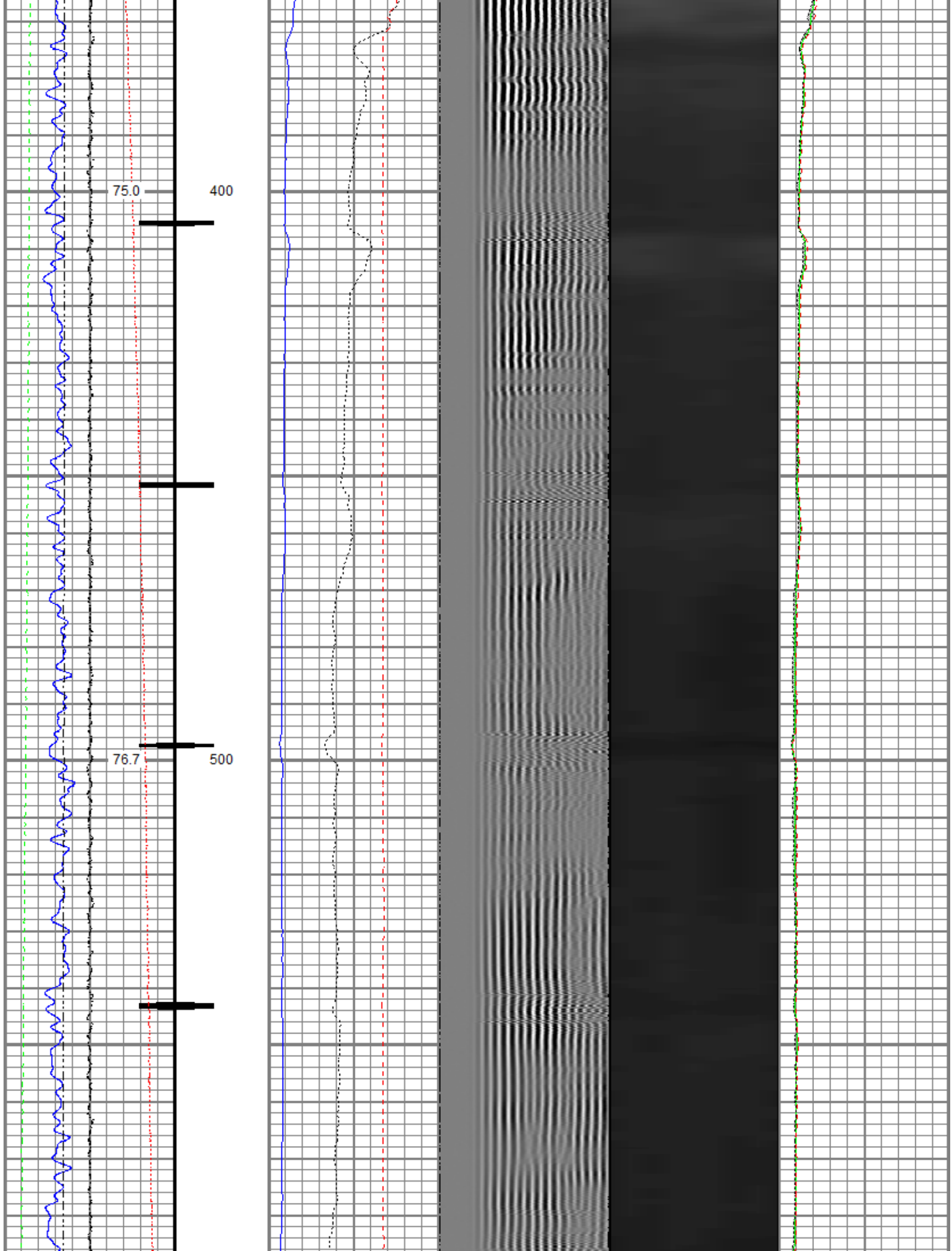
| |
|--|
| <<< Fold Here >>> |
| All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable 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 |
| <p>Log ran as per customer request Depth referenced to Marker Joint at 6161.5 FT Adjusted -4 FT to correlate with Marker Joint Log ran with 2500 PSI Surface Induced Pressure Logging tools were clean and free of debris upon completion of operations</p> <p>Thank you for choosing Reliance Oilfield Services, LLC!!</p> |

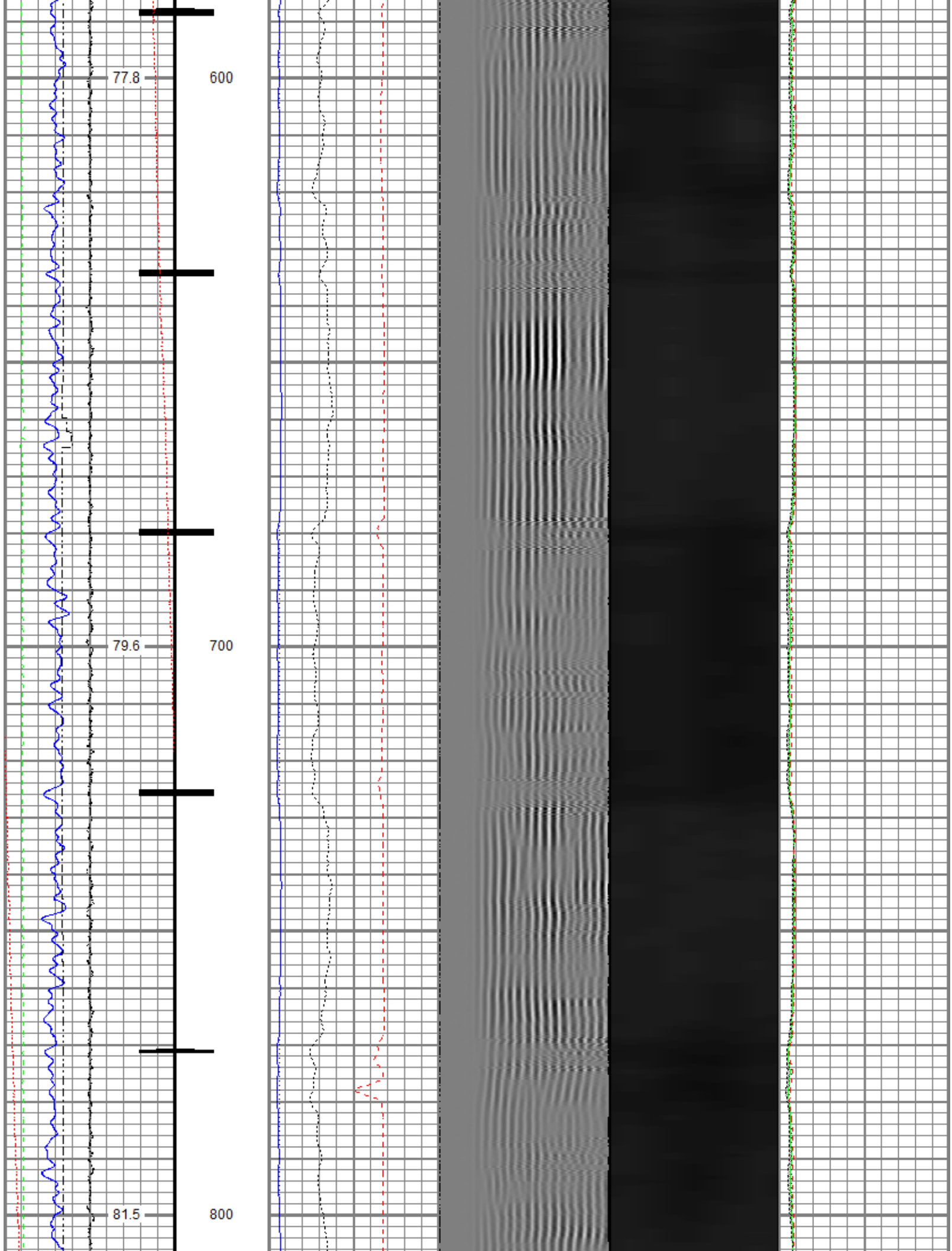
Database File noble_guttersen d09 755\noble_guttersen d09 755_rbl_12-19-20.db
 Dataset Pathname pass4.2
 Presentation Format ros_radri_noble
 Dataset Creation Sat Dec 19 19:04:44 2020
 Charted by Depth in Feet scaled 1:240

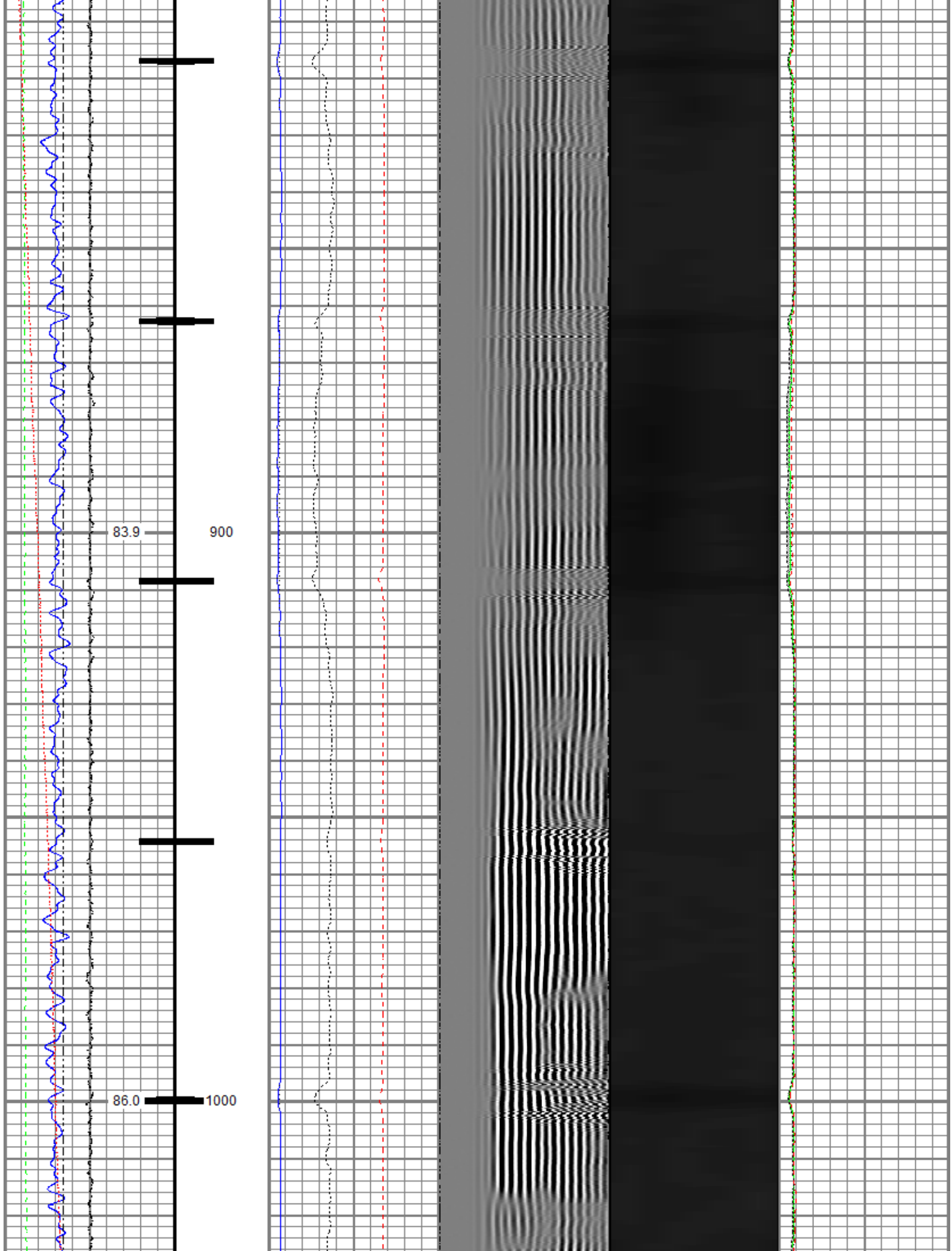
| | | | | | | |
|--------------------------|-----|-----------------------|-------------------------|------------|---|-----------------------|
| Gamma Ray | 0 | 3' Amplitude (mV) 100 | 5' Variable Density Log | Sector Map | 0 | Average Amplitude 100 |
| (GAPI) 120 | | 3' Amplitude x 5 | 200 (usec) 1200 | | | Minimum Amplitude |
| Casing Collar Log | 0 | (mV) 20 | | | 0 | 100 |
| Temperature (degF) 20 | | 3' Travel Time | | | | Maximum Amplitude |
| Line Speed | 650 | (usec) 150 | | | 0 | 100 |
| -150 (ft/min) 150 | | | | | | |
| Line Tension (lb) 2000 | | | | | | |
| Differential Temperature | | | | | | |
| -2 (degF) 2 | | | | | | |

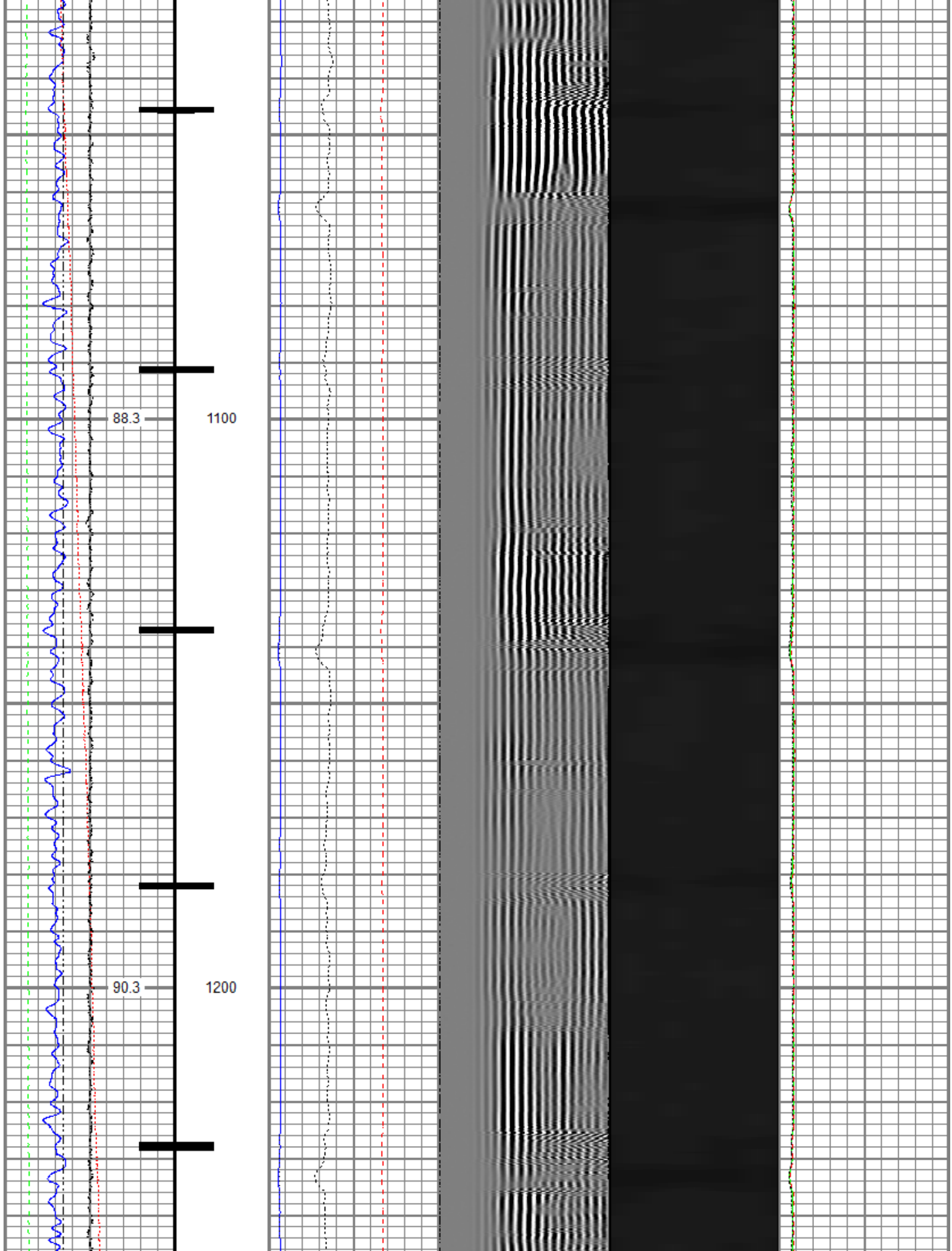


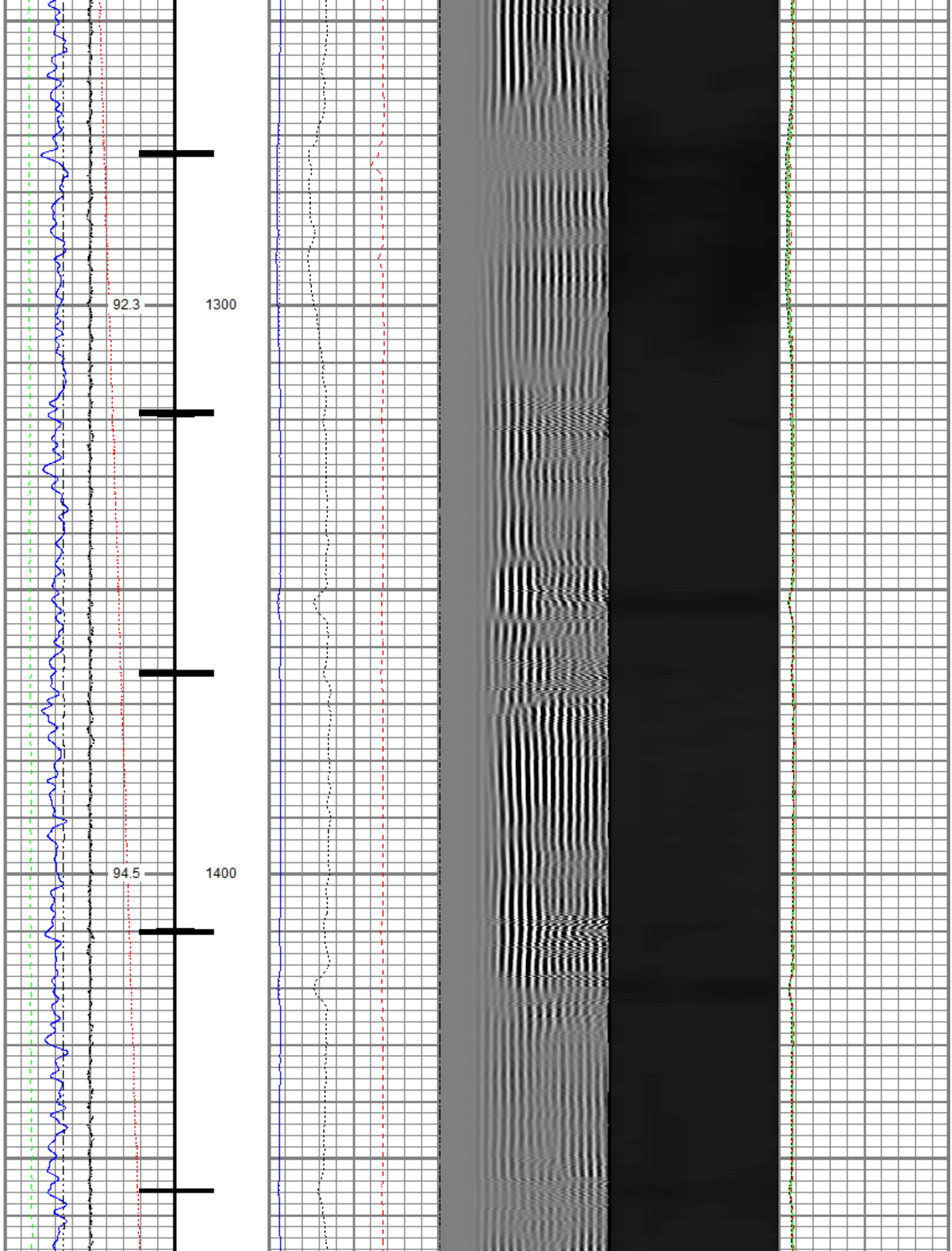


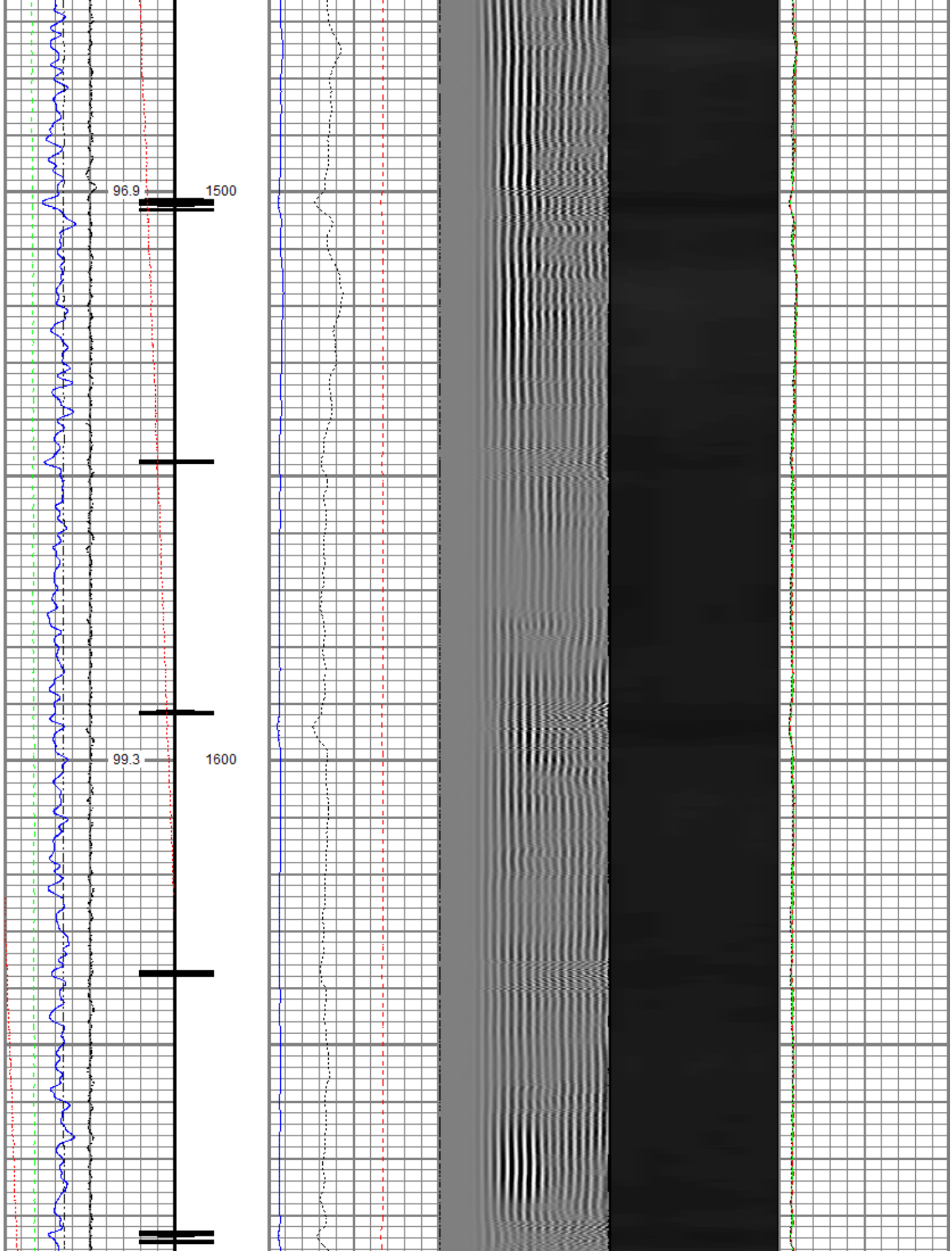


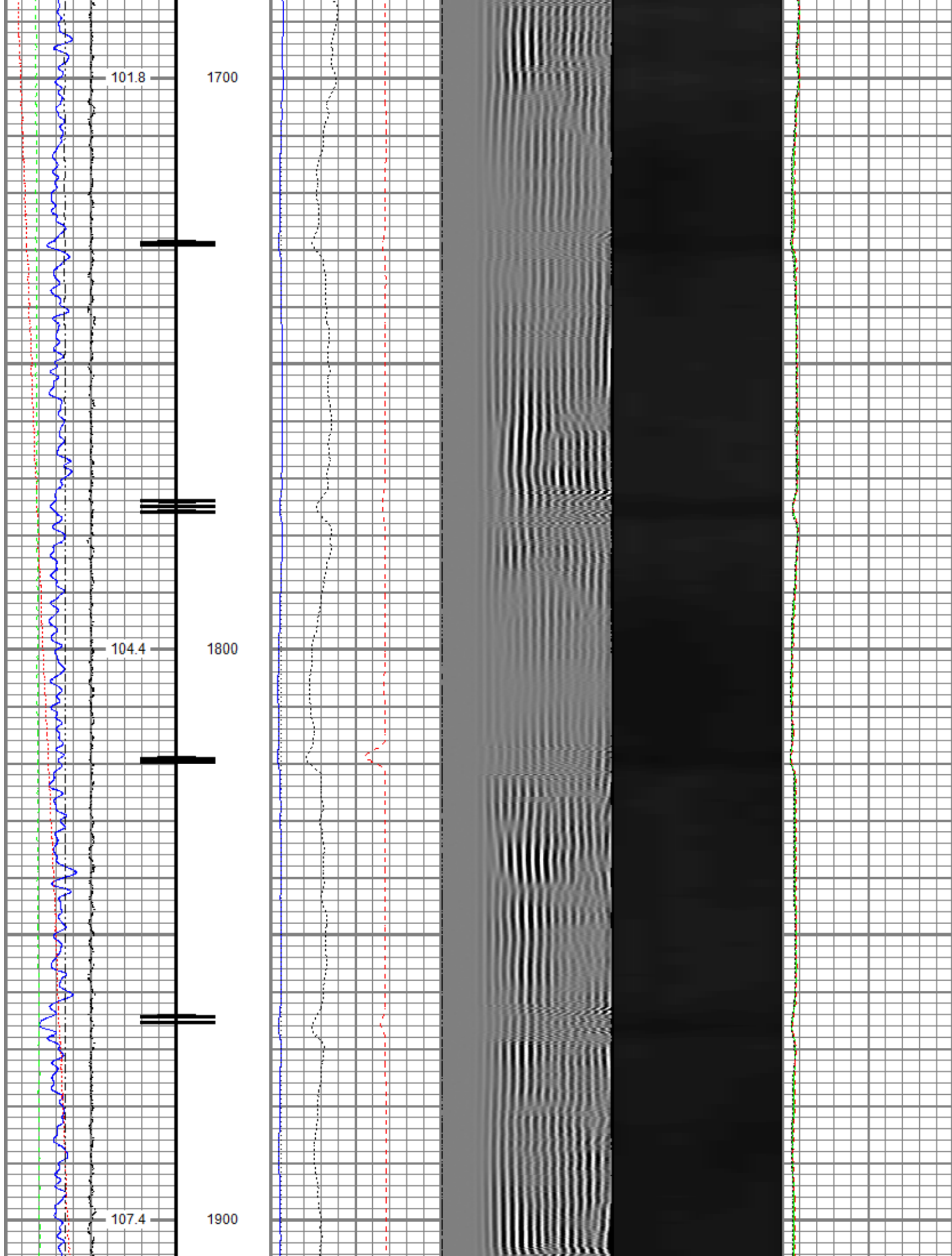


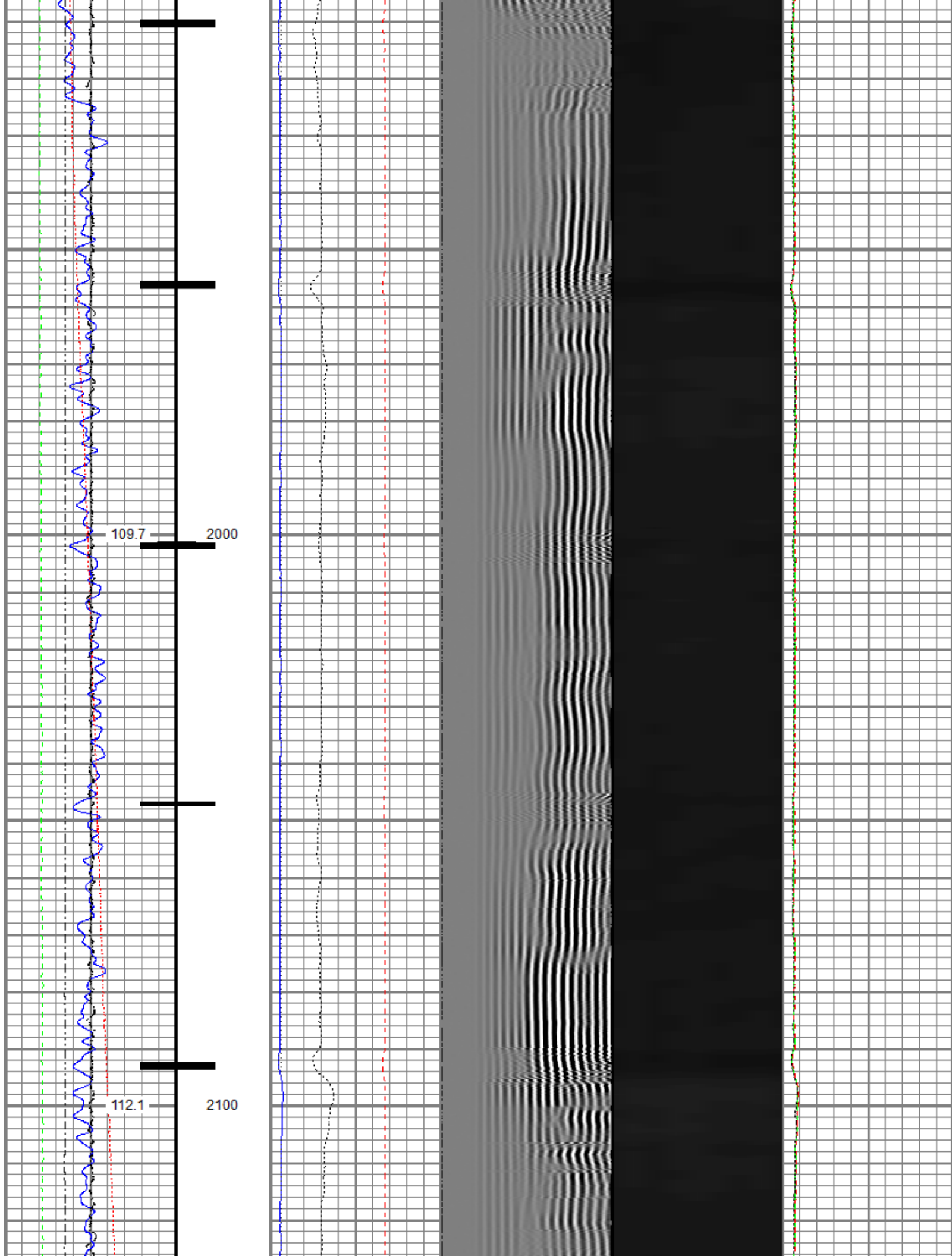


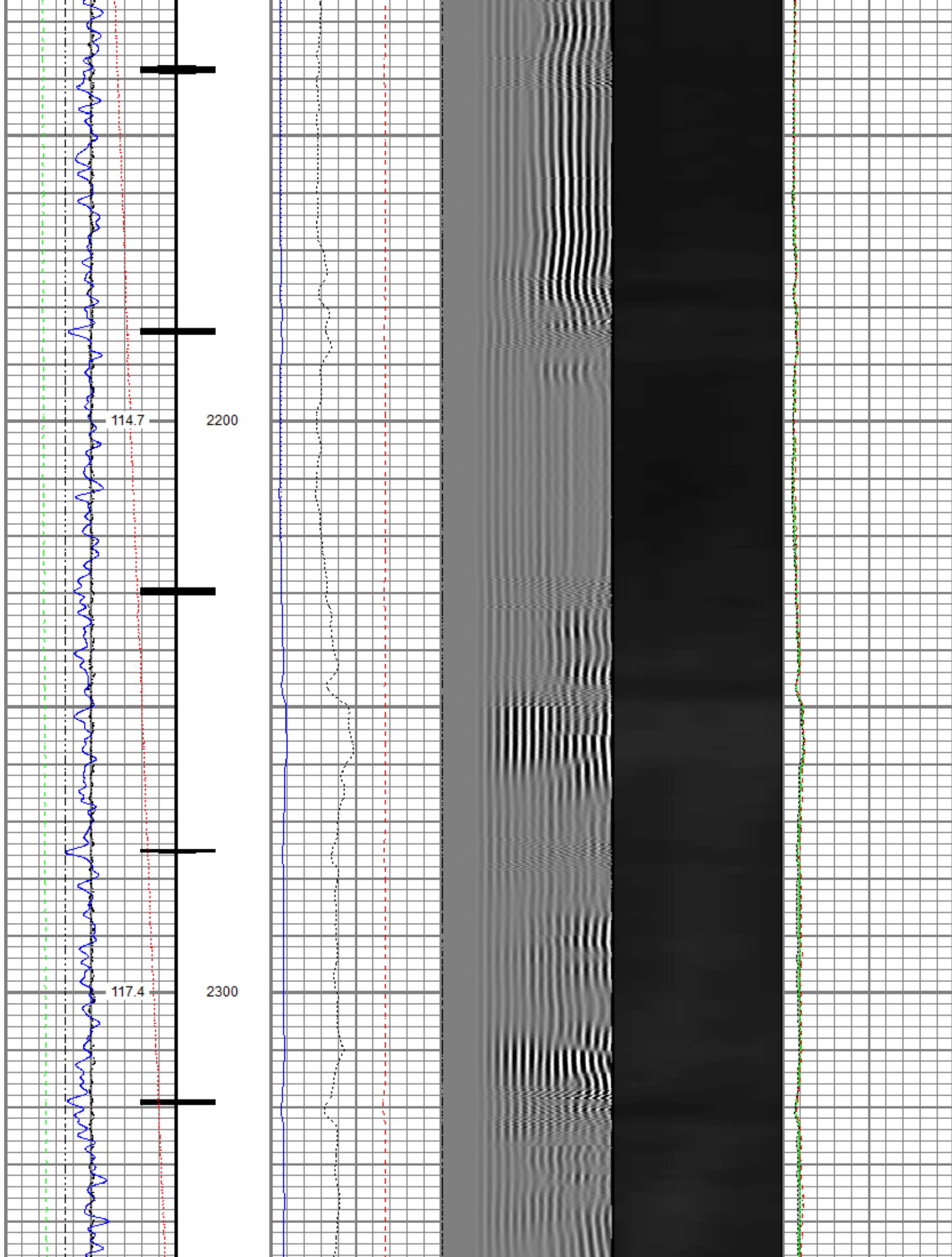


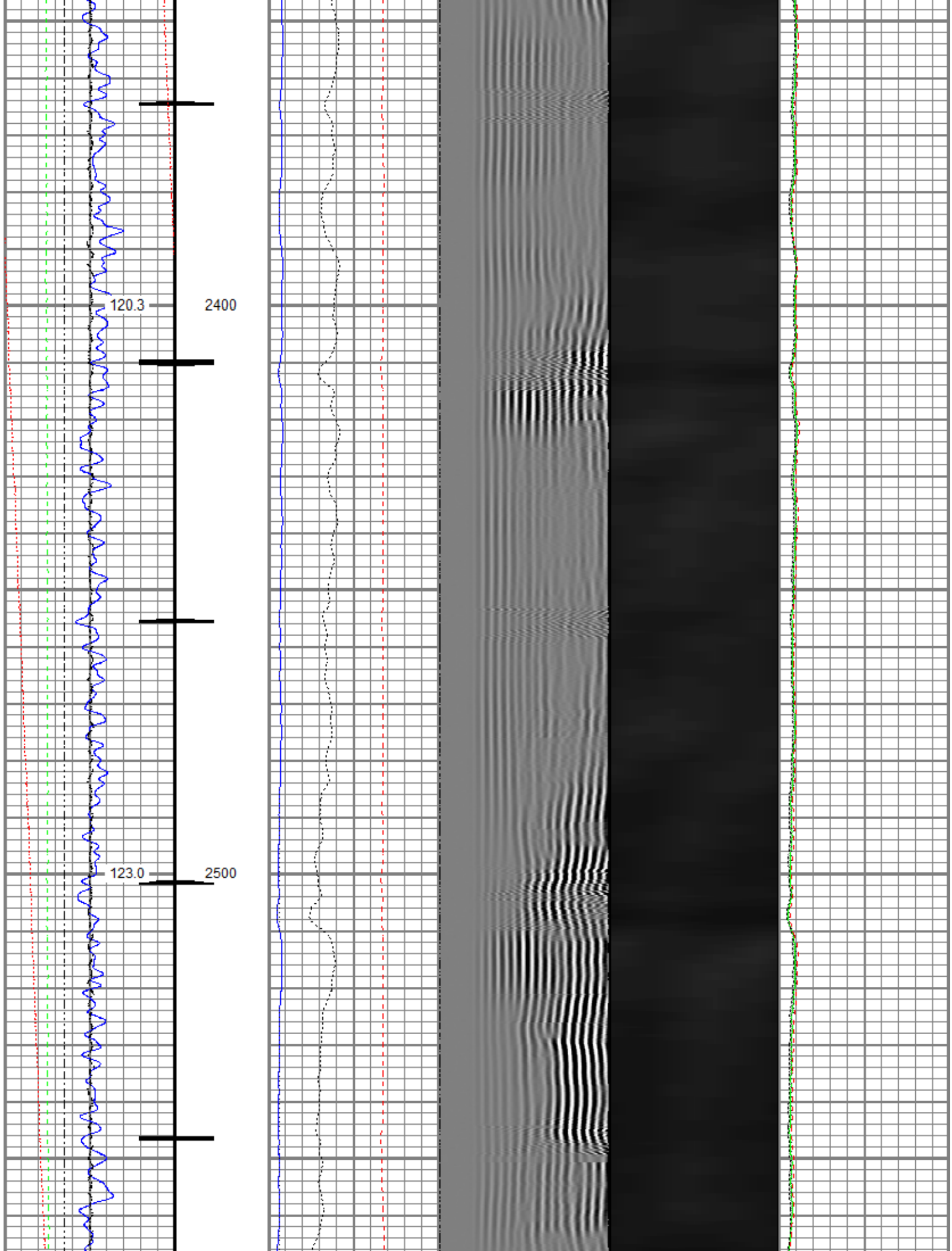


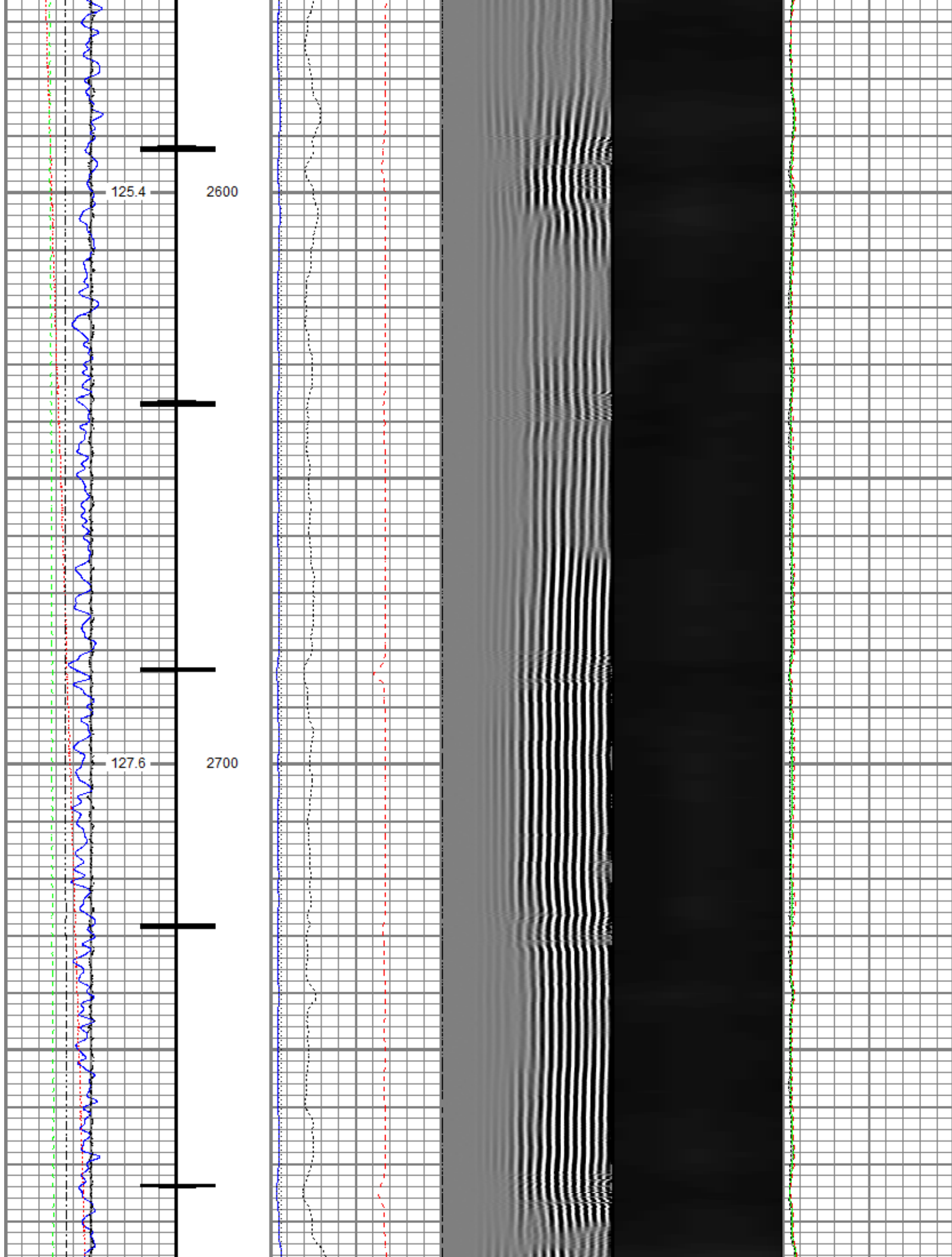


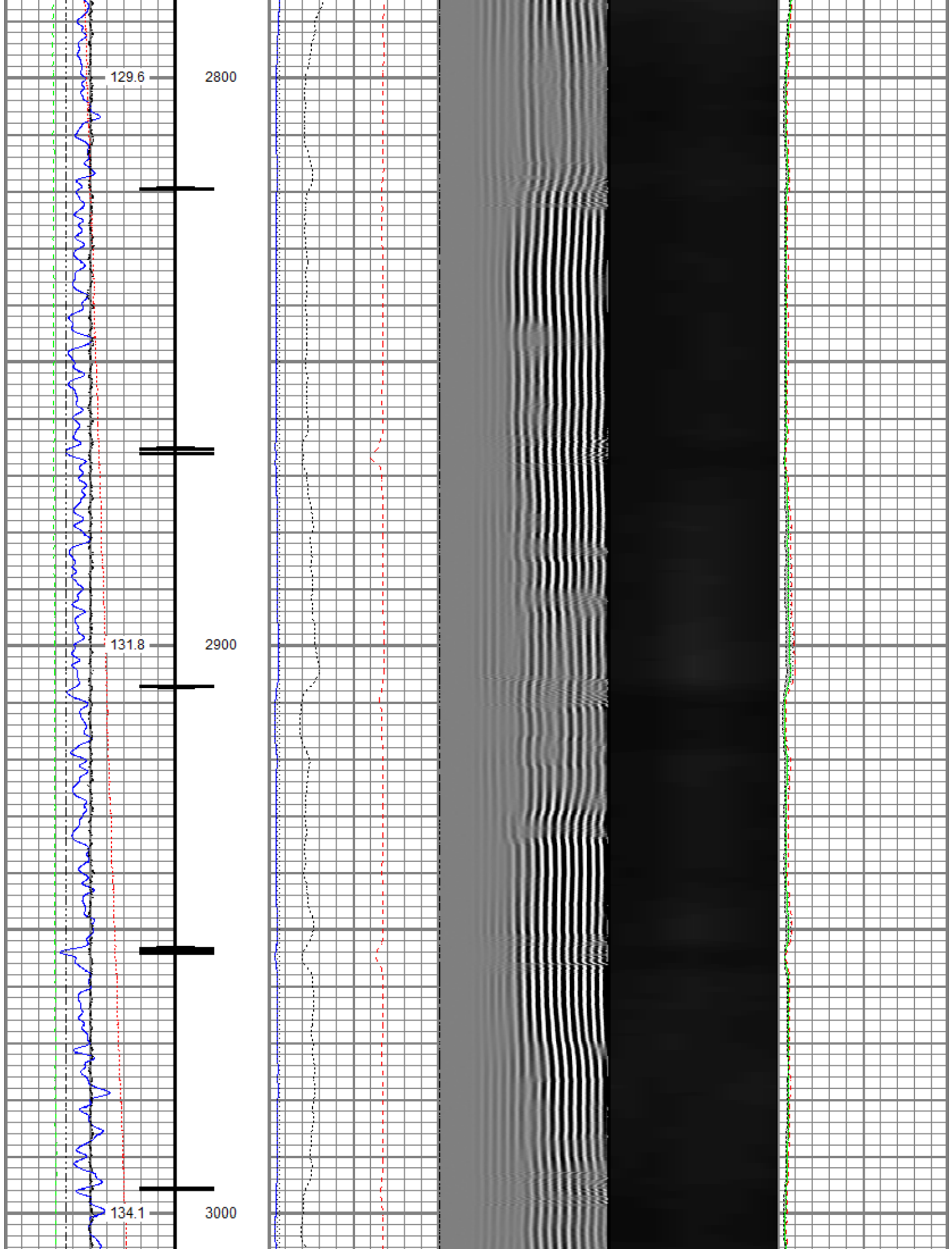


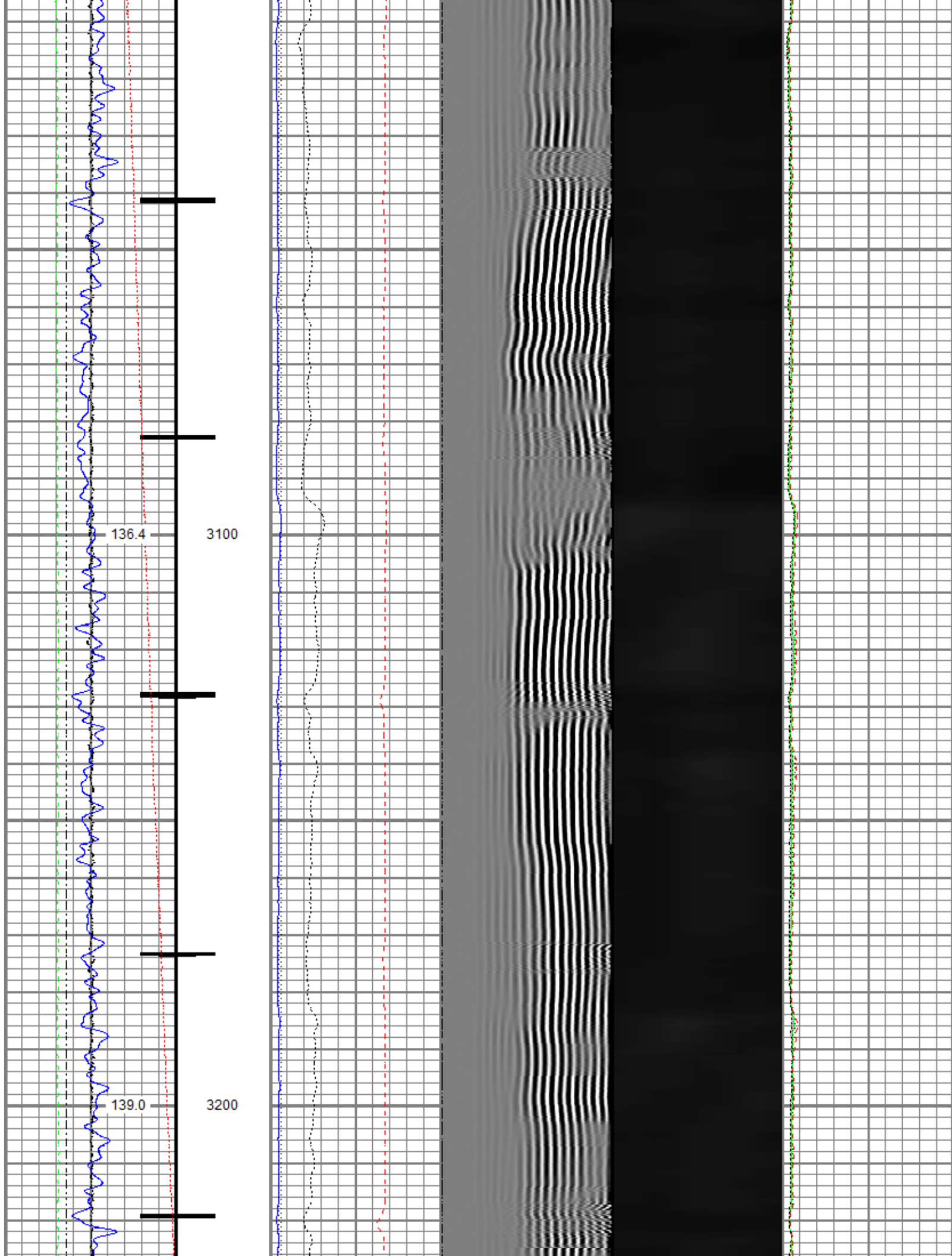


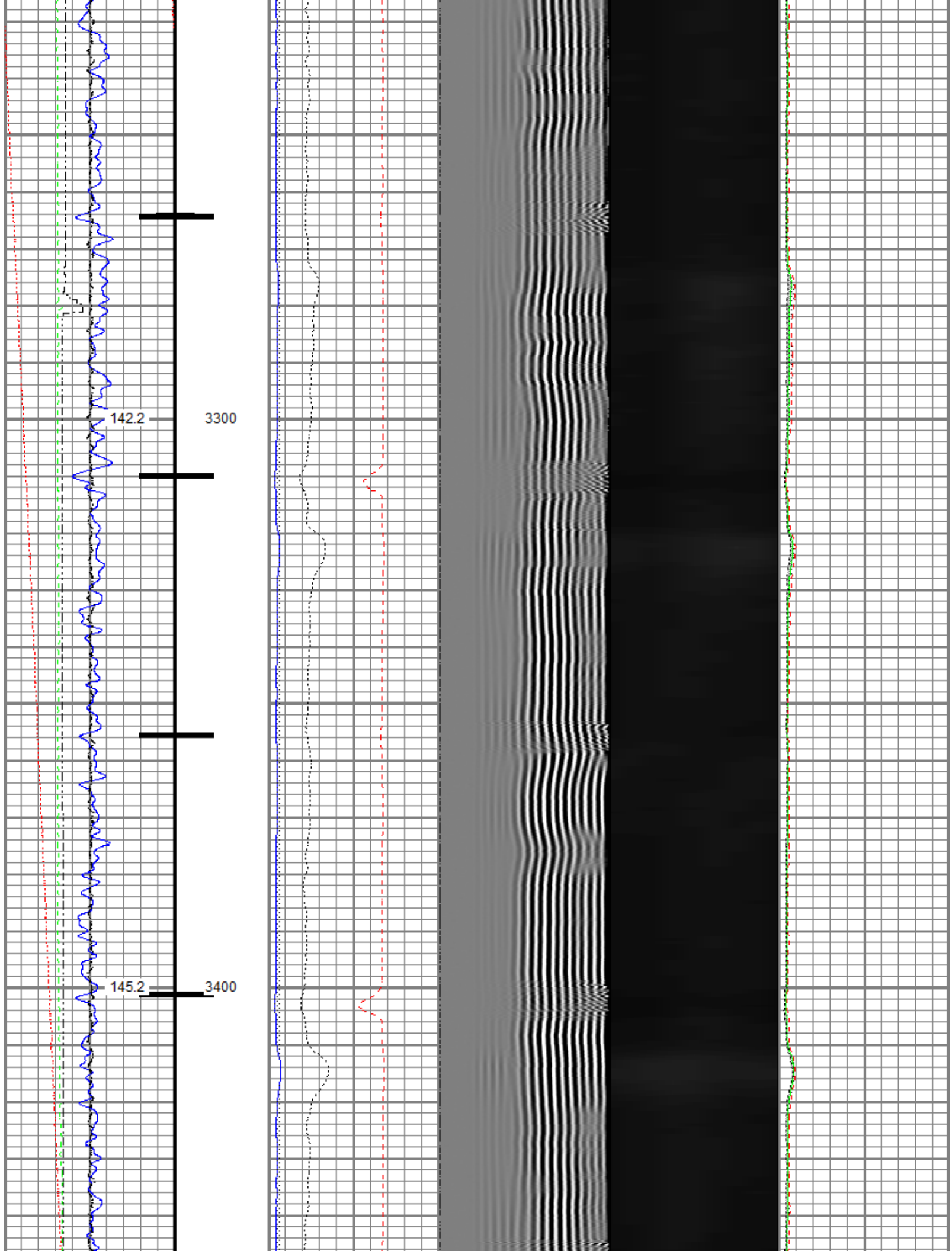


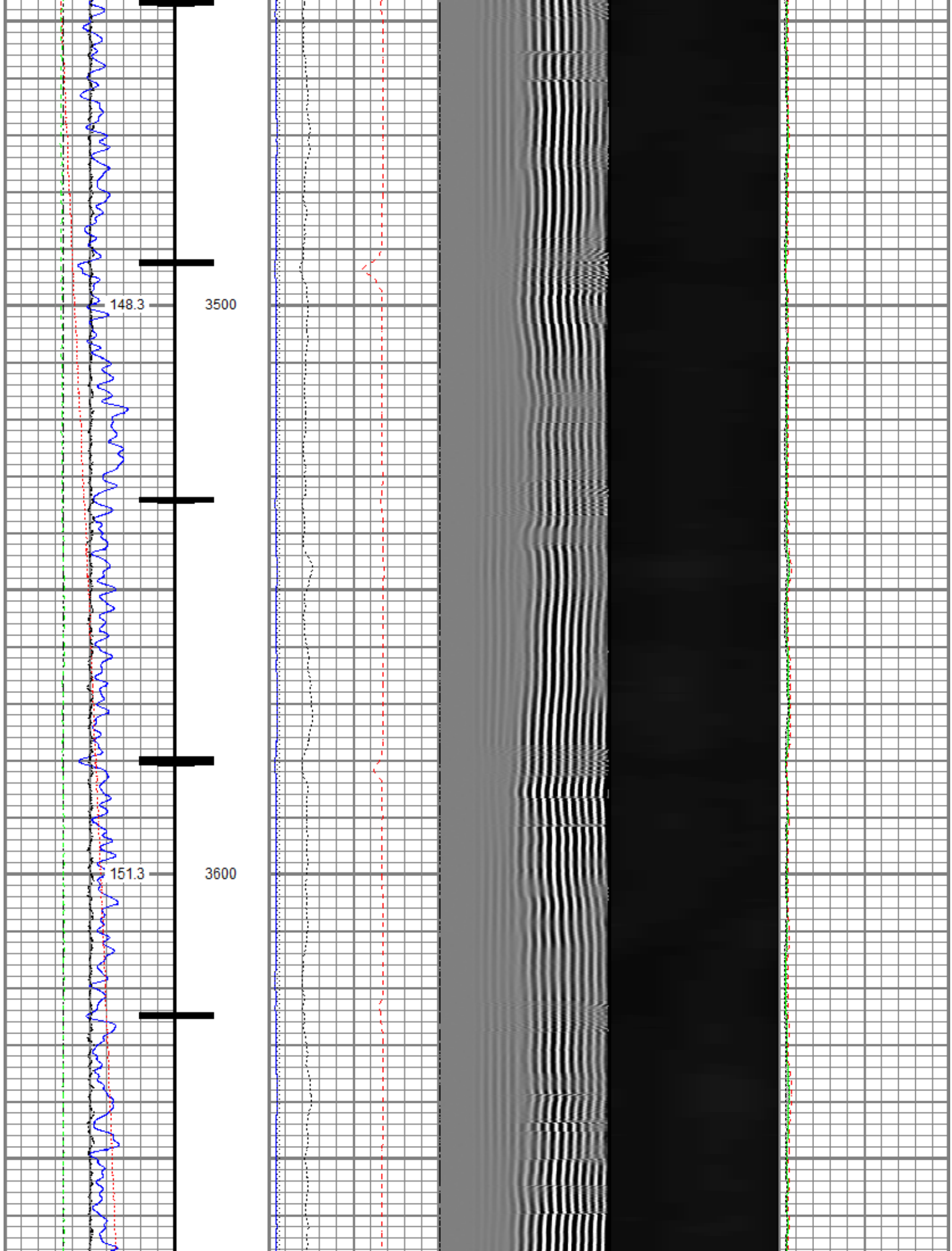


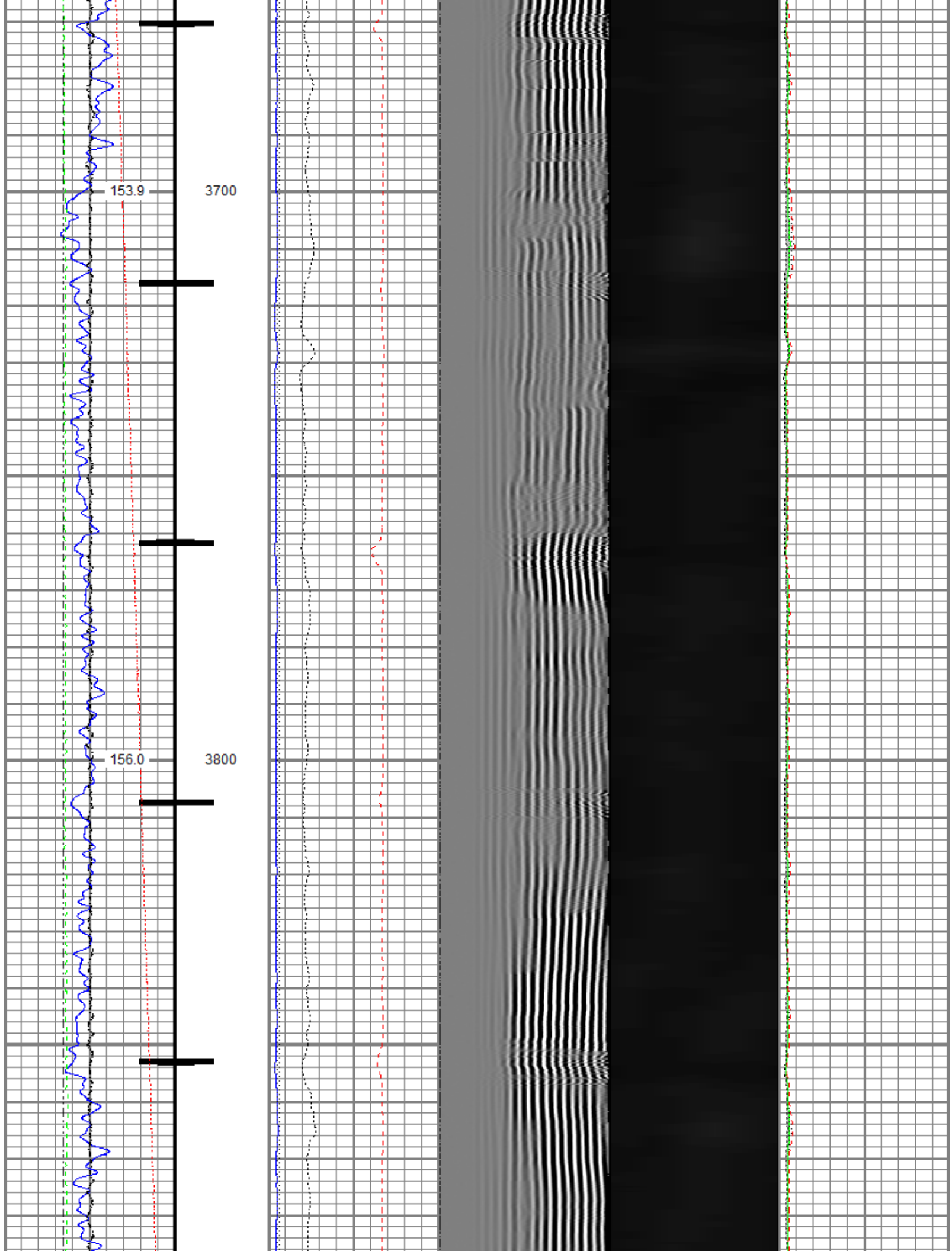


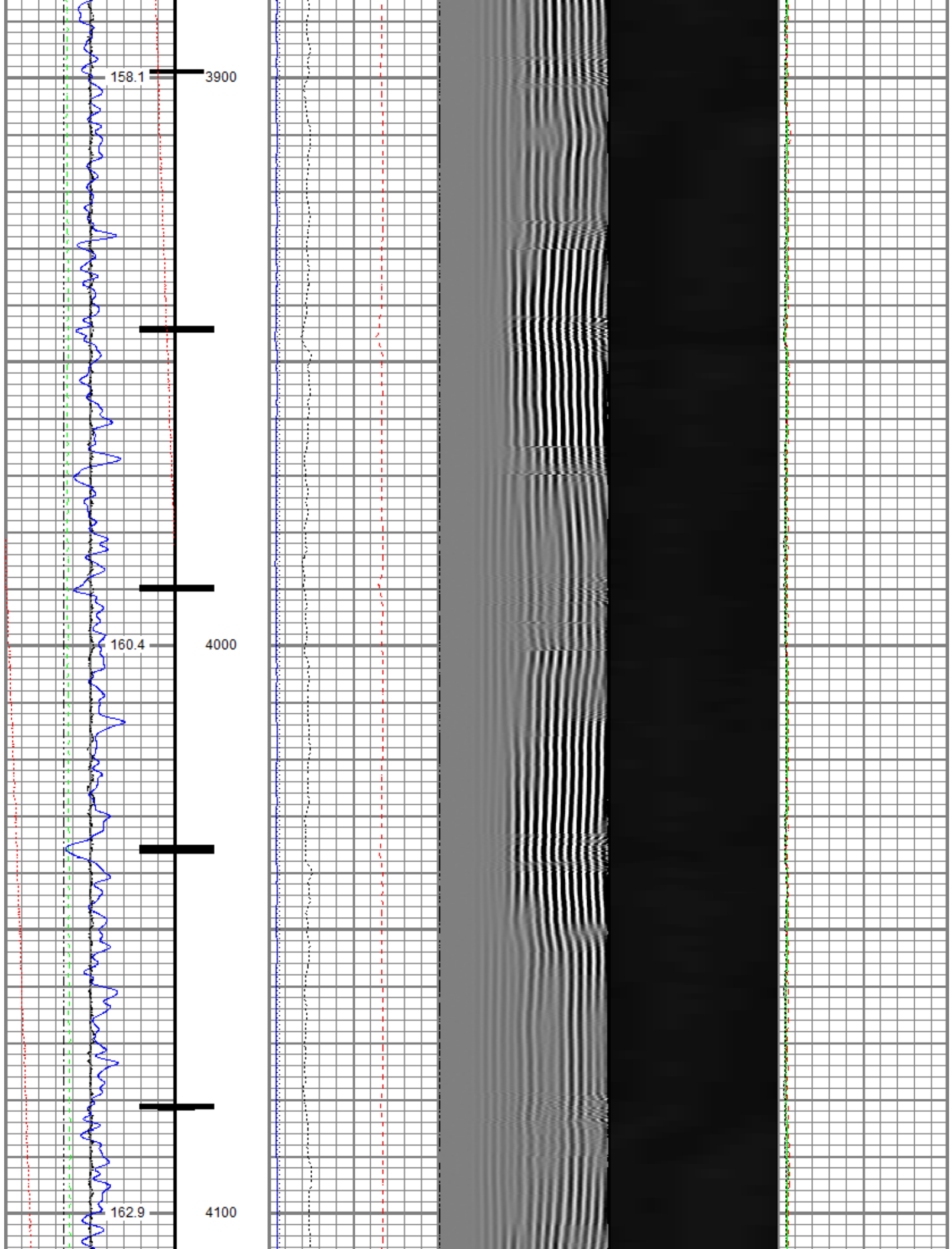


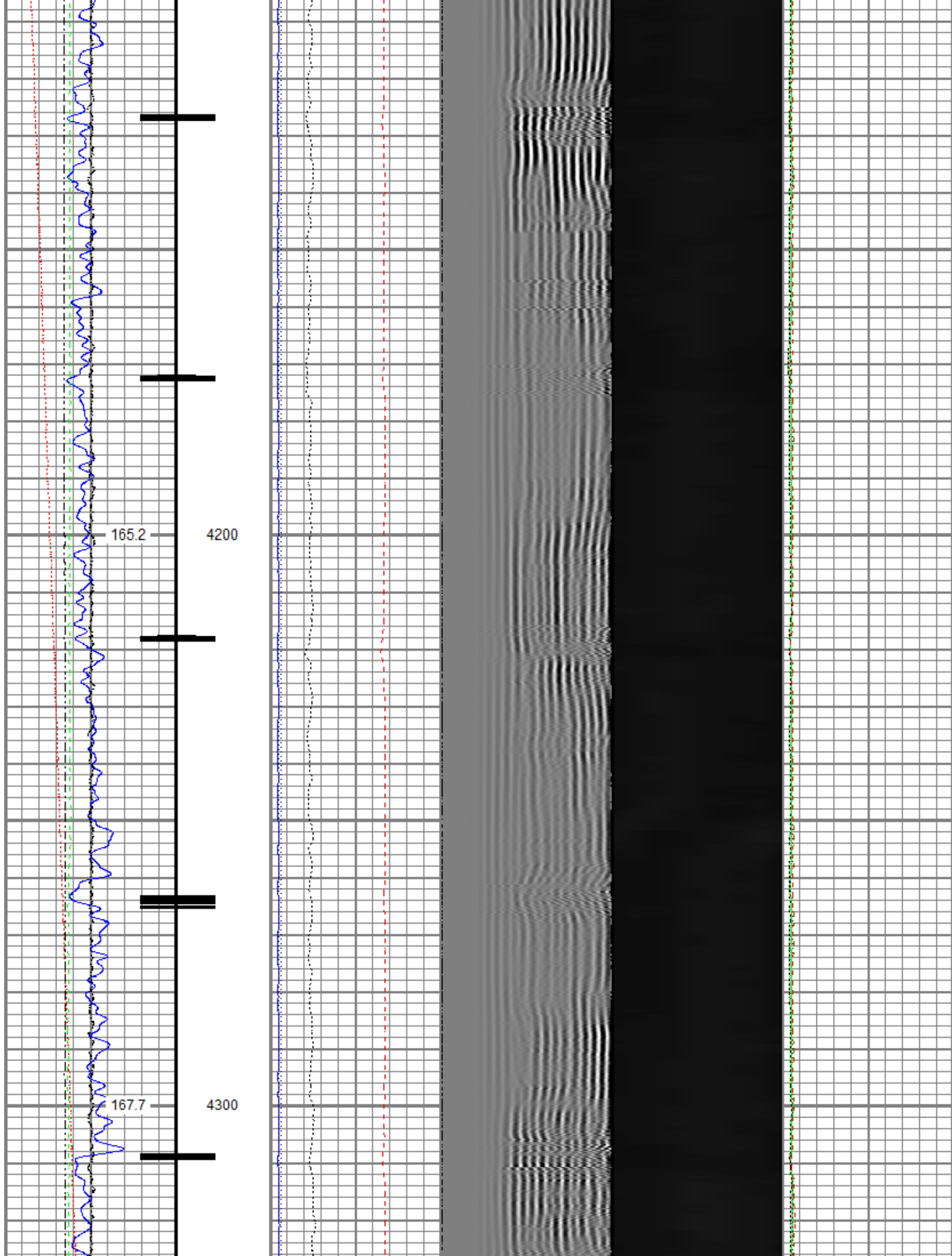


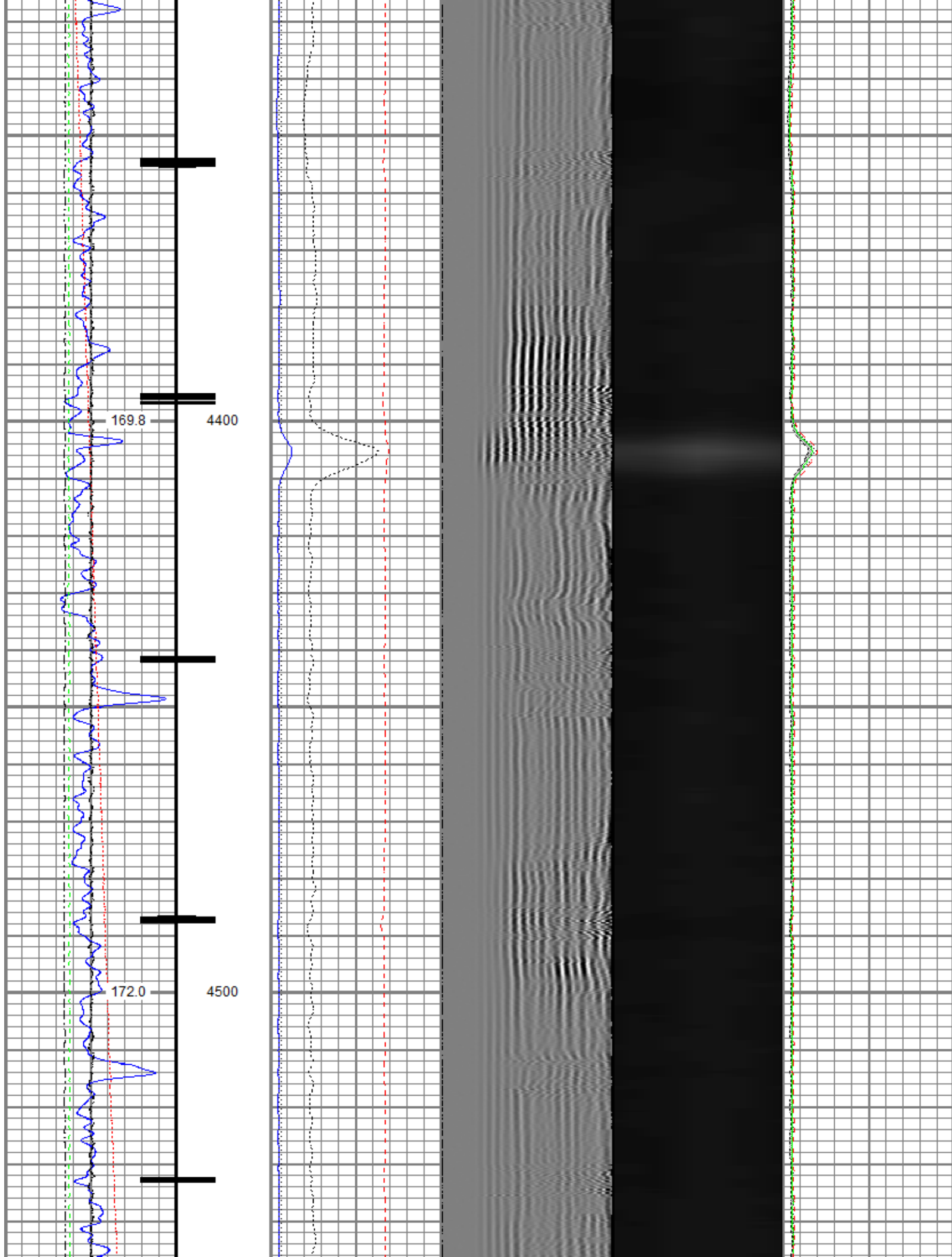


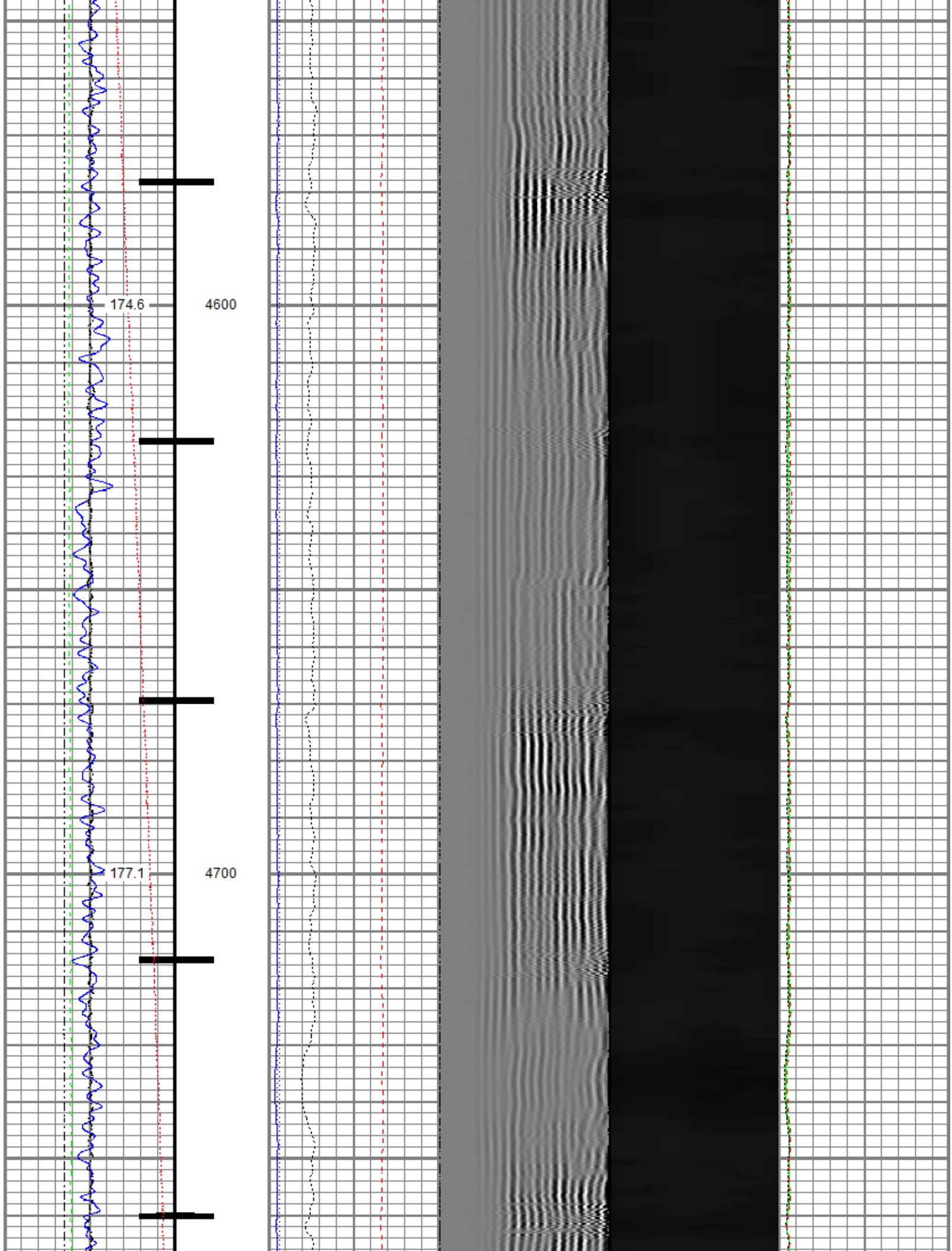


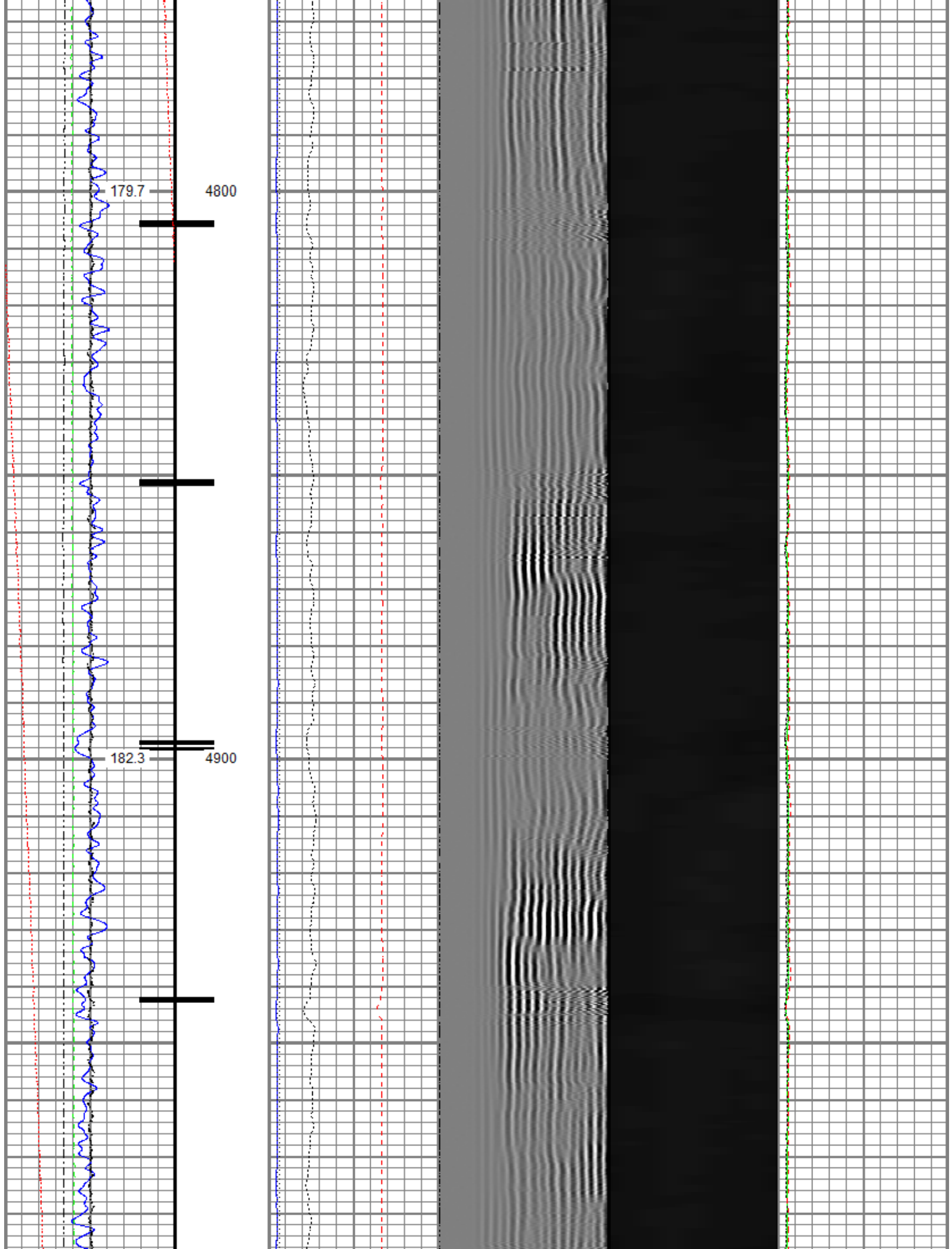


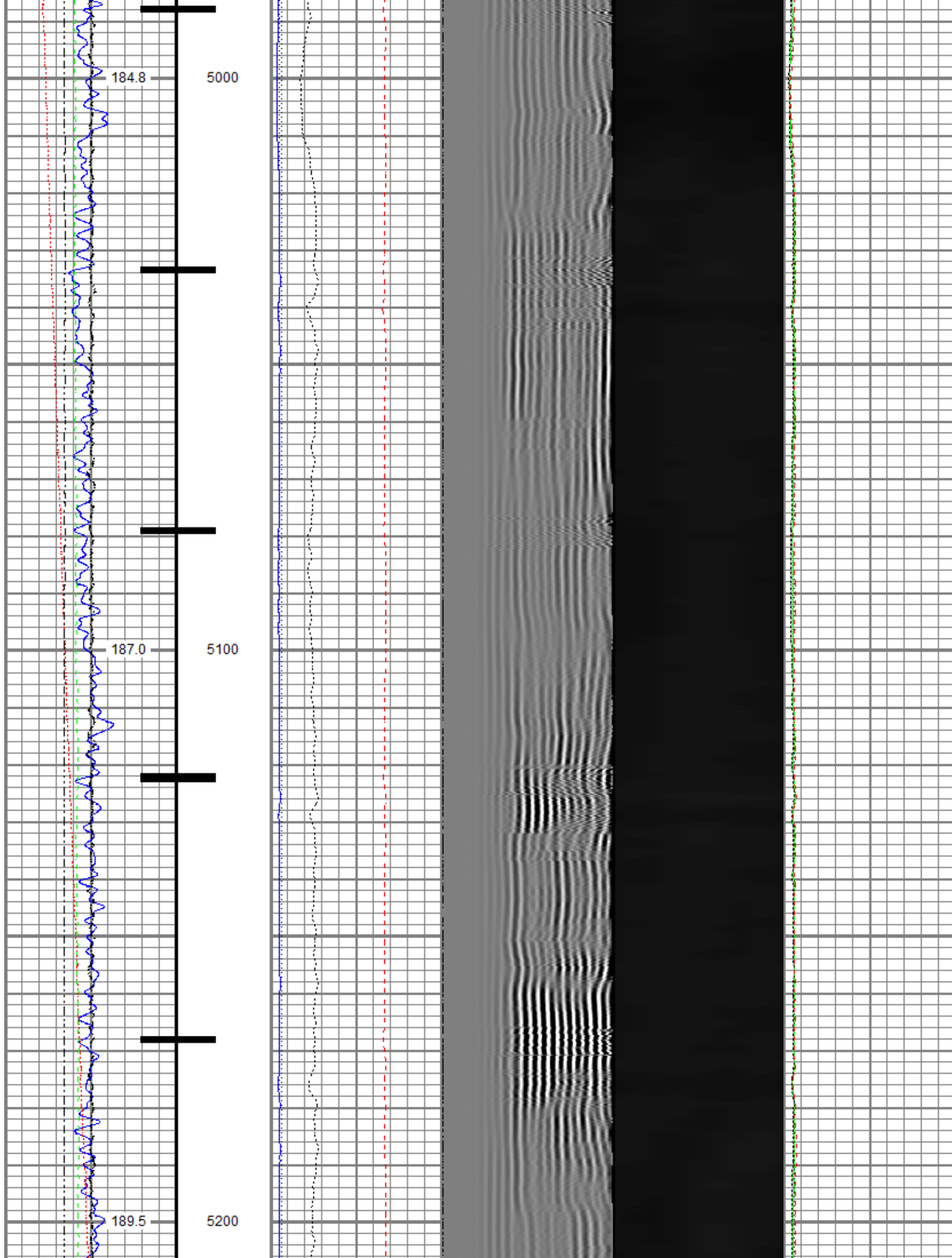


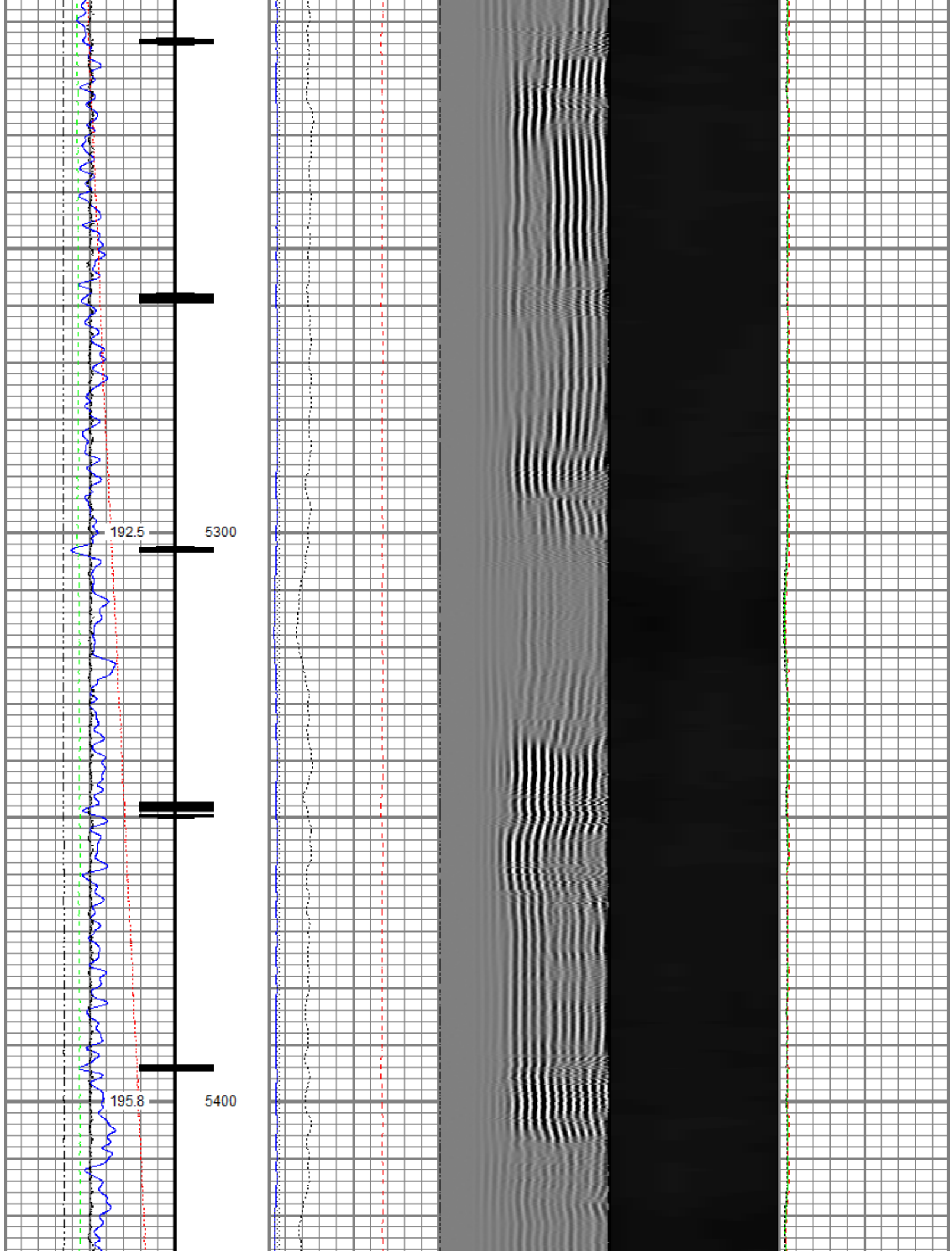


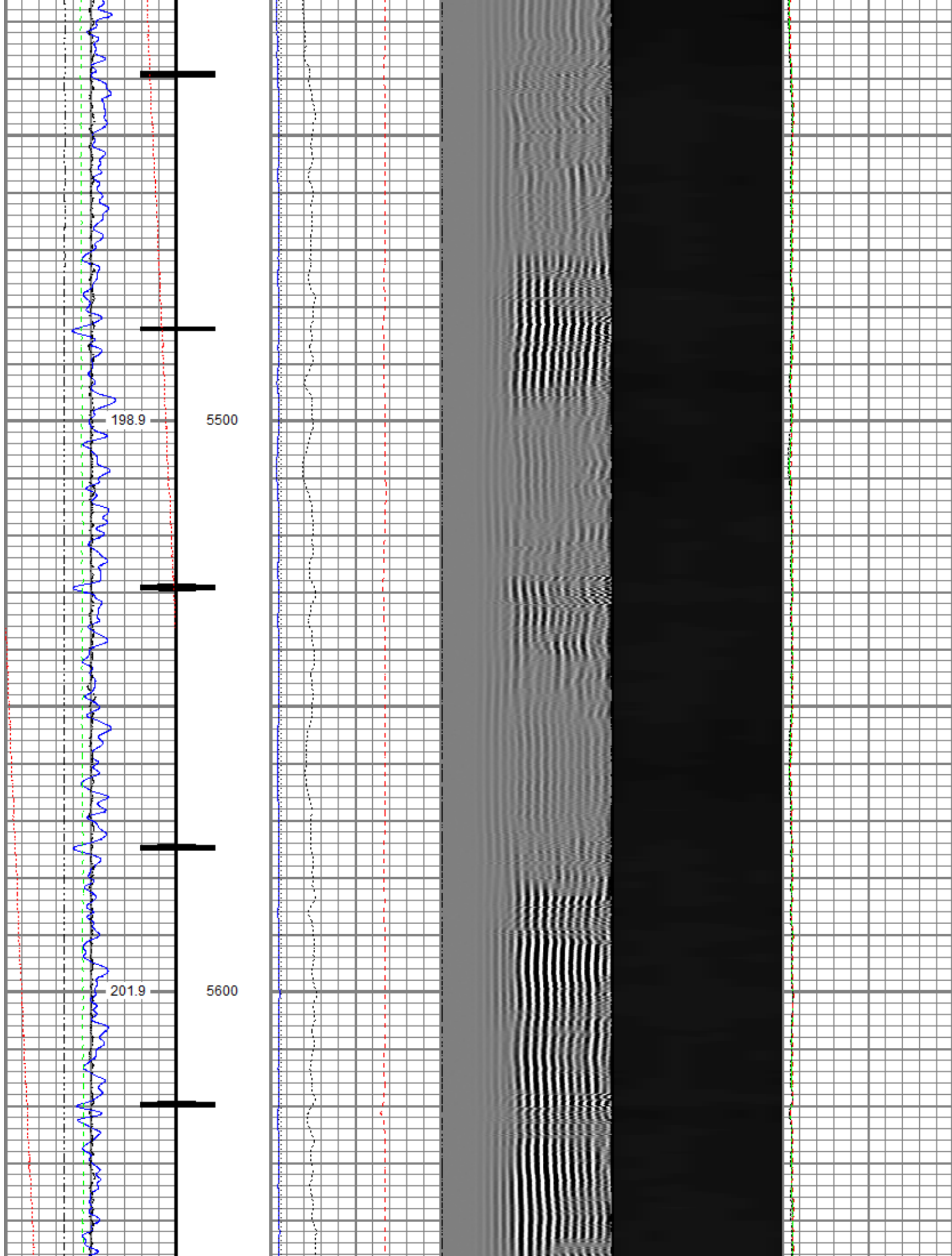


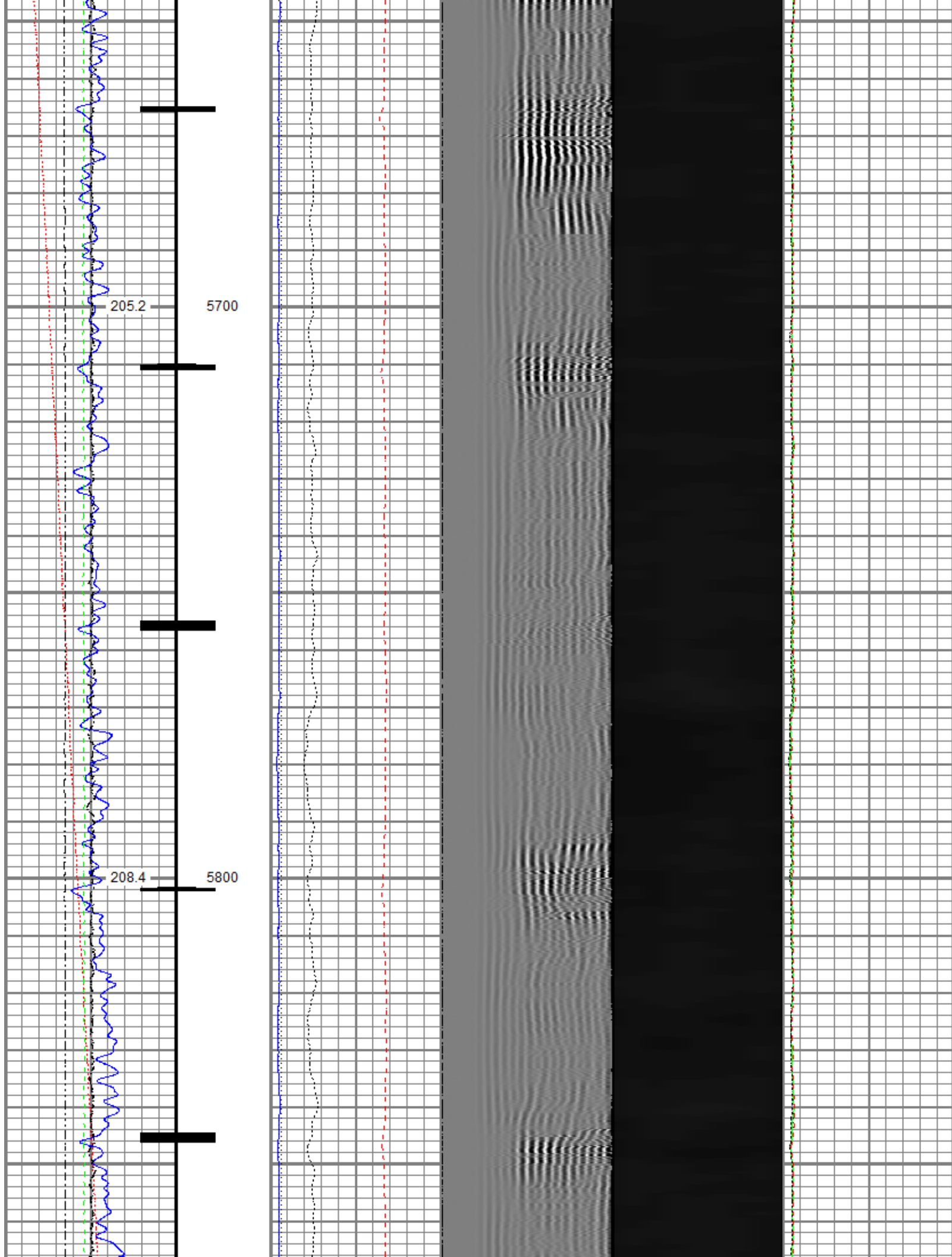


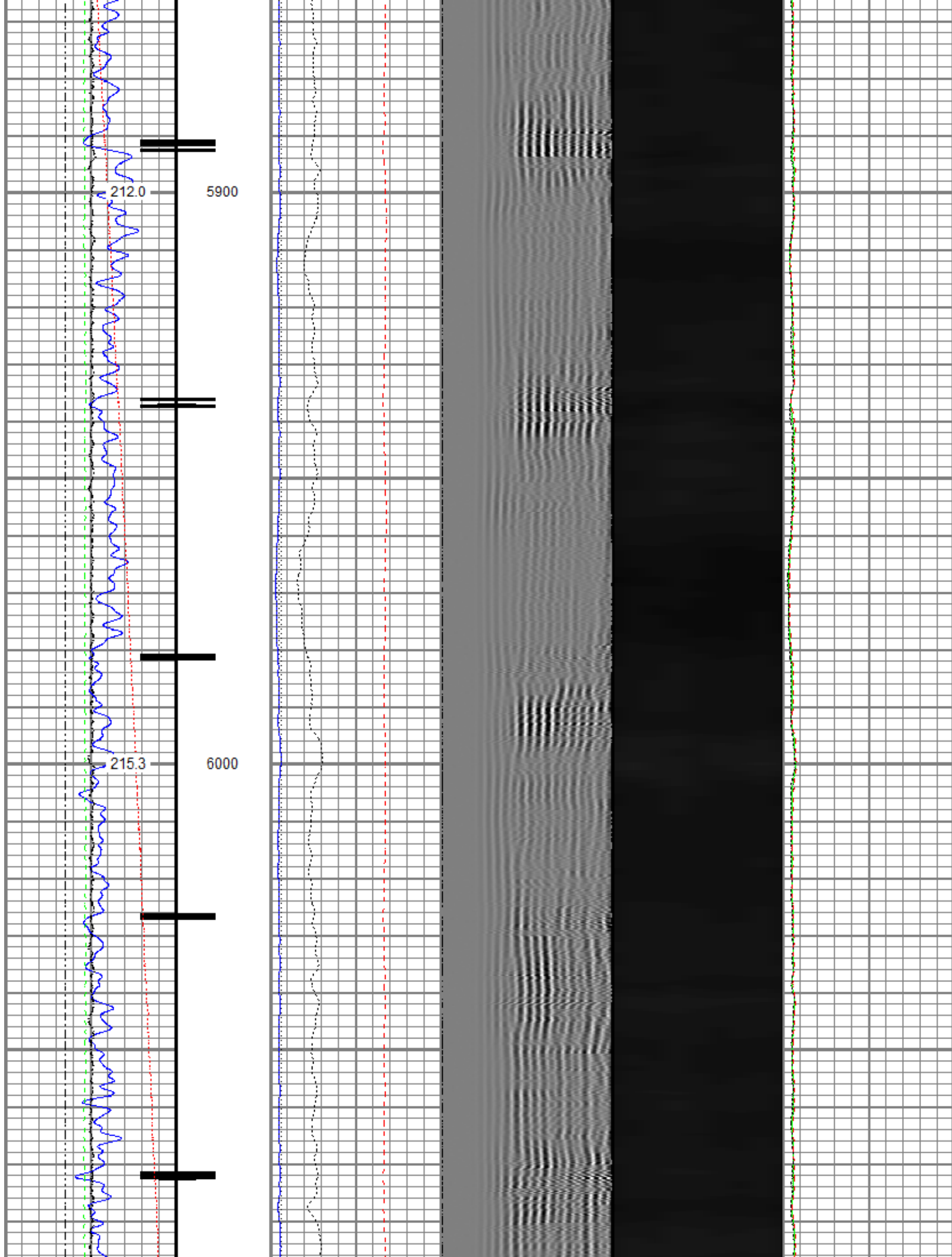


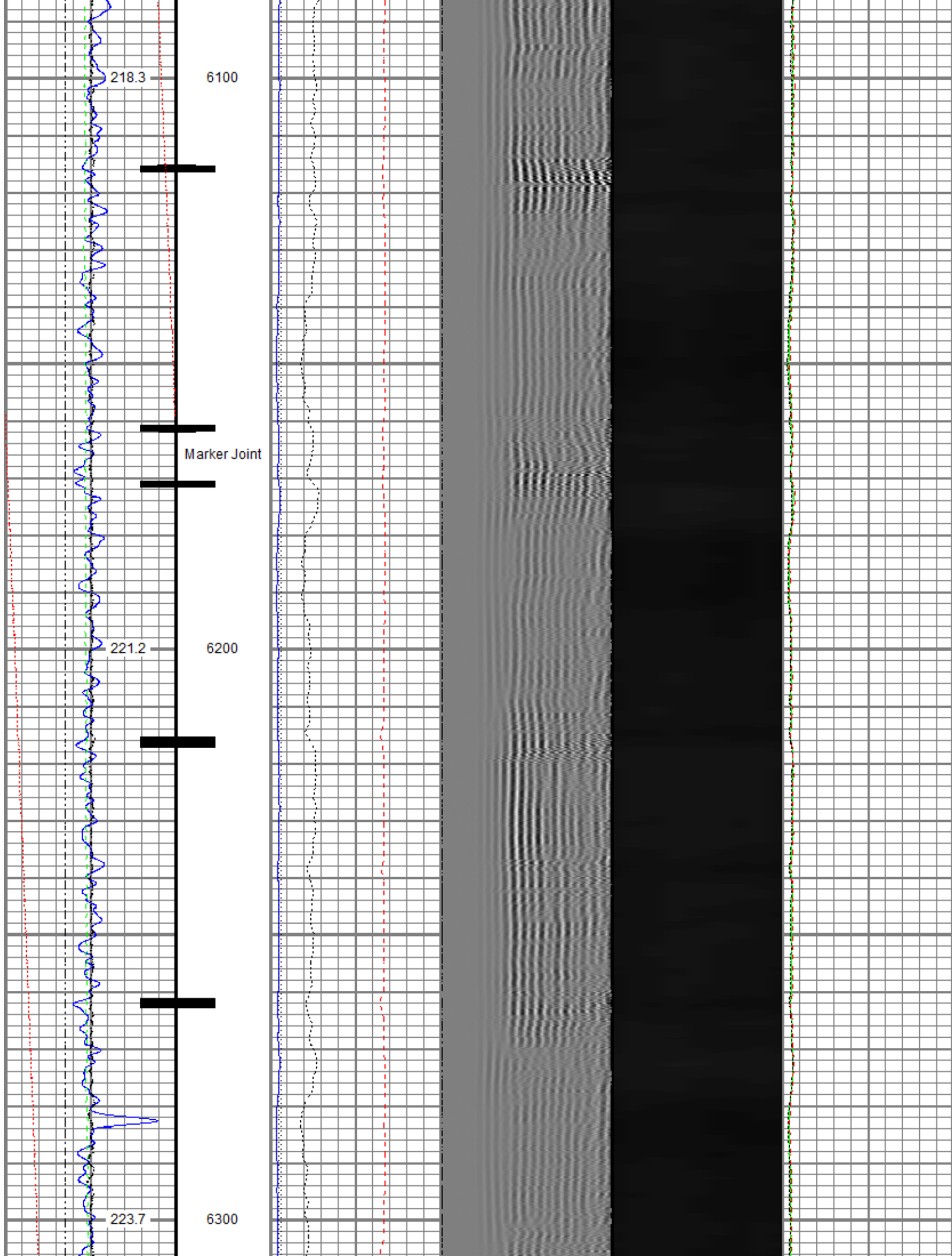


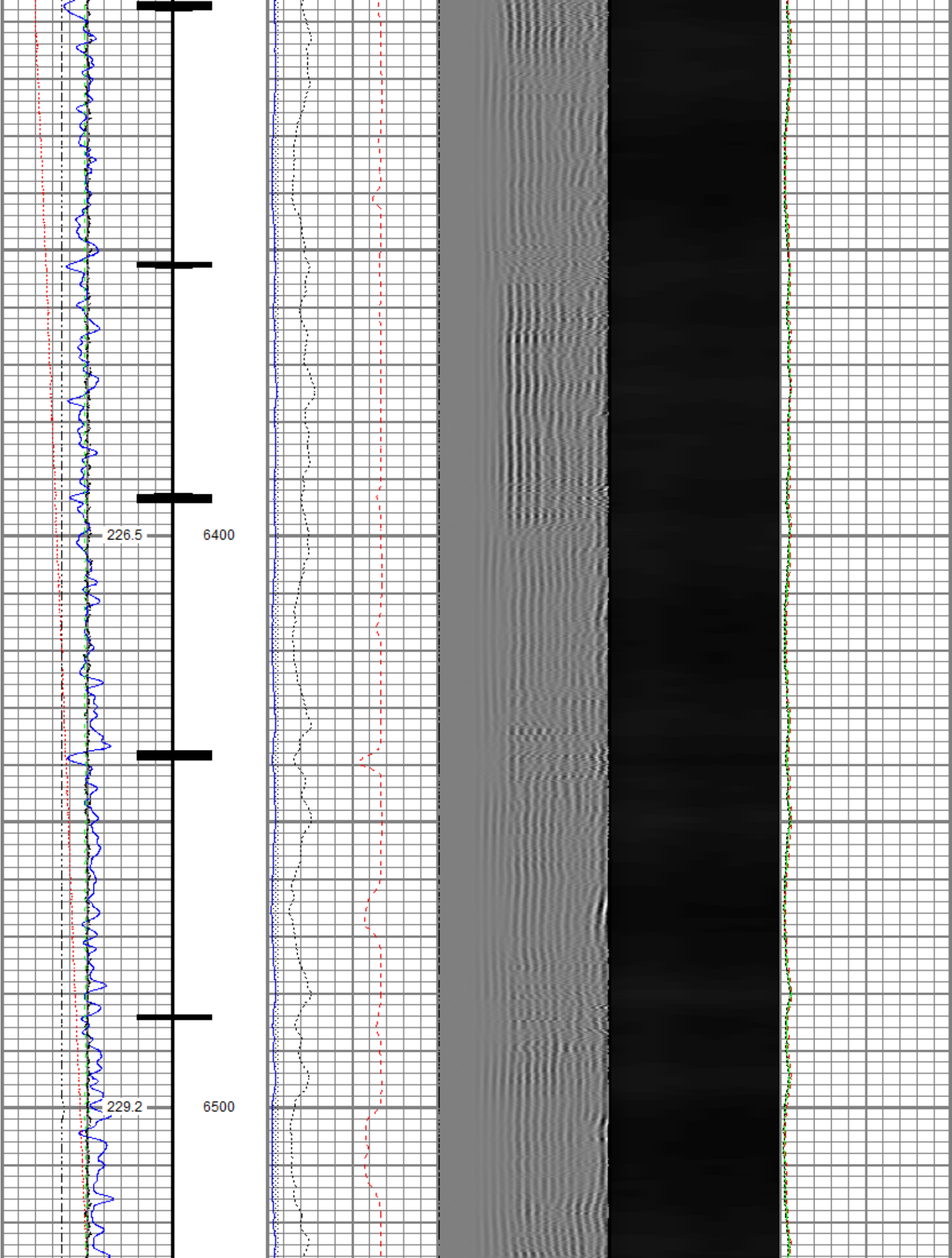


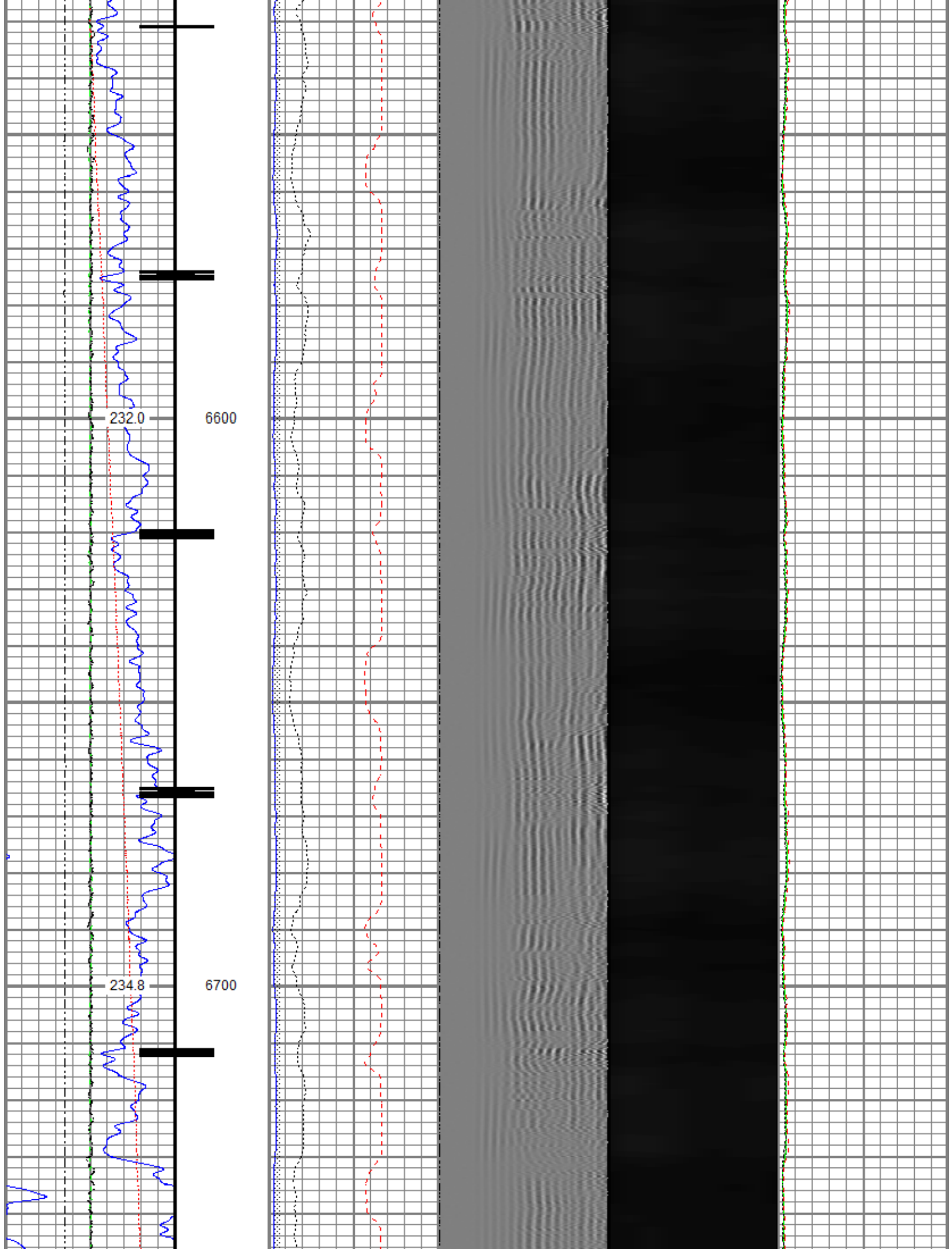


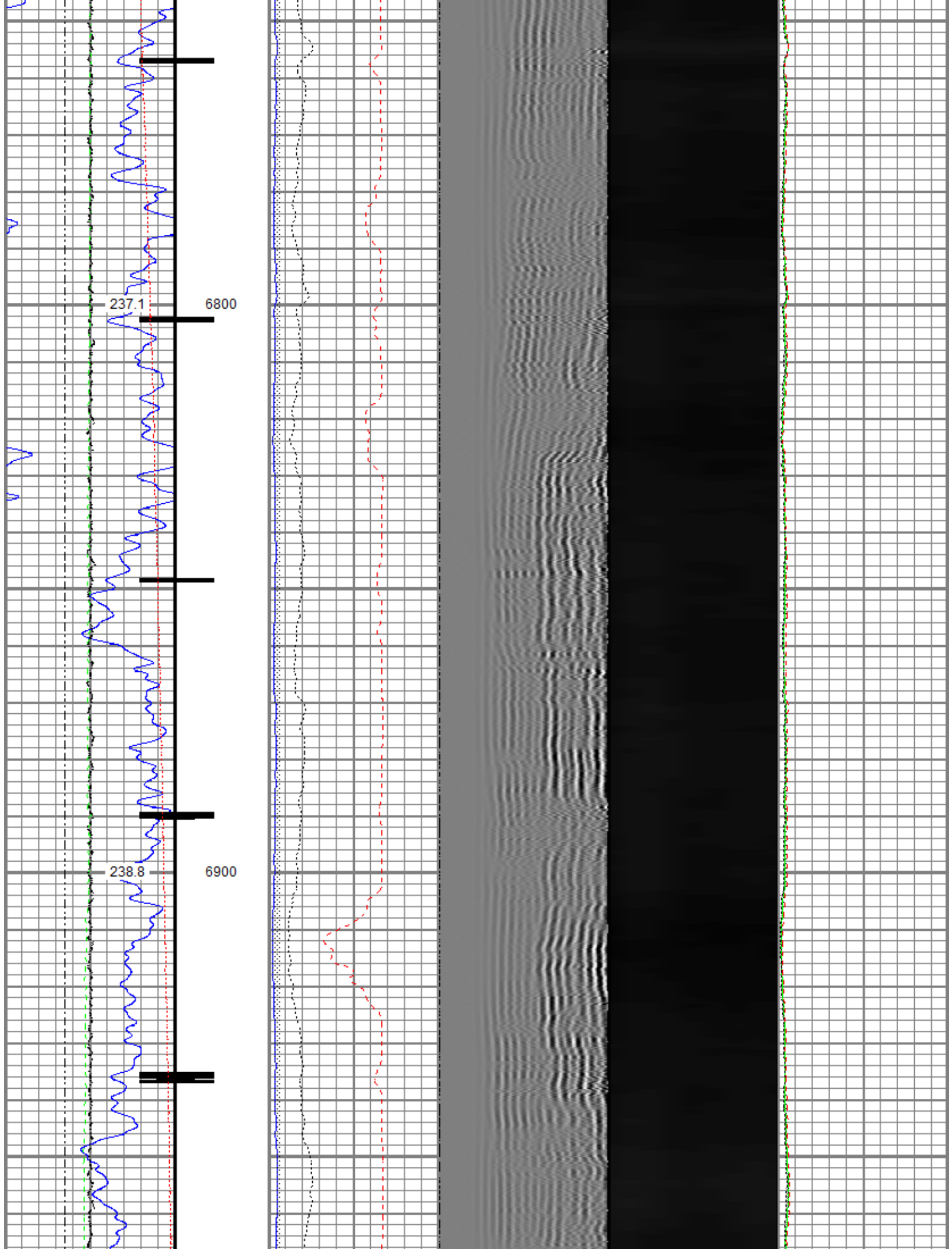


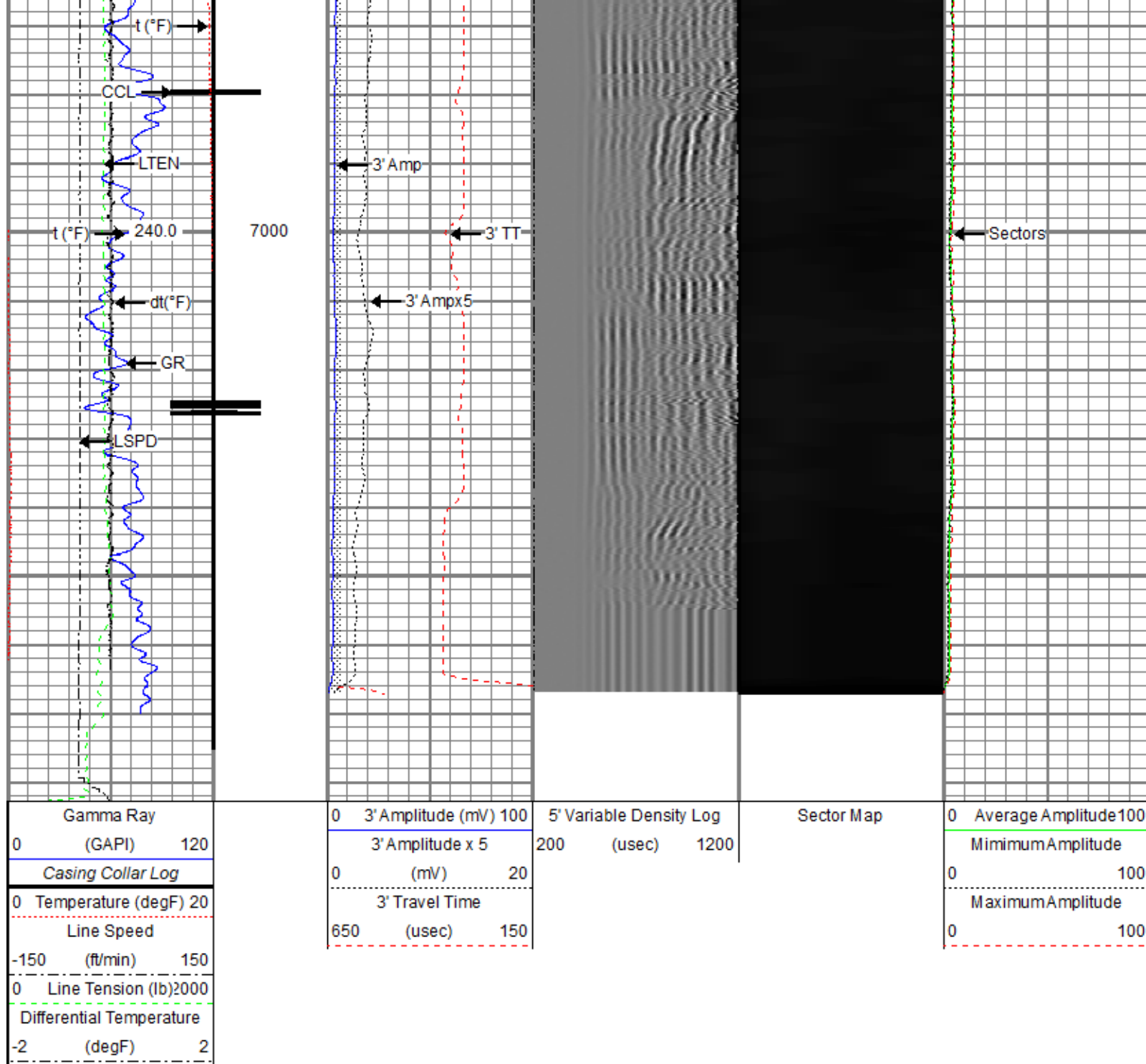








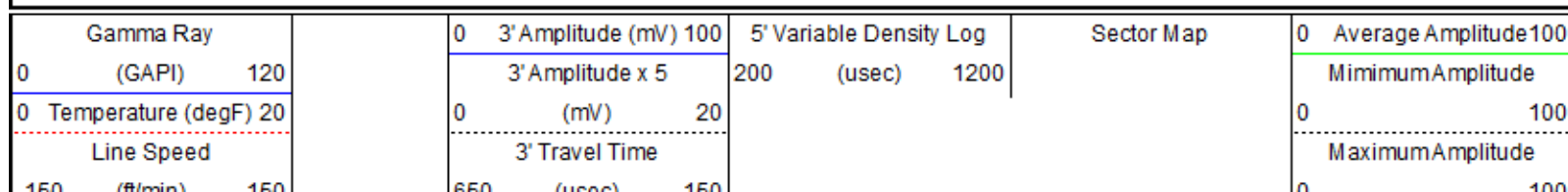




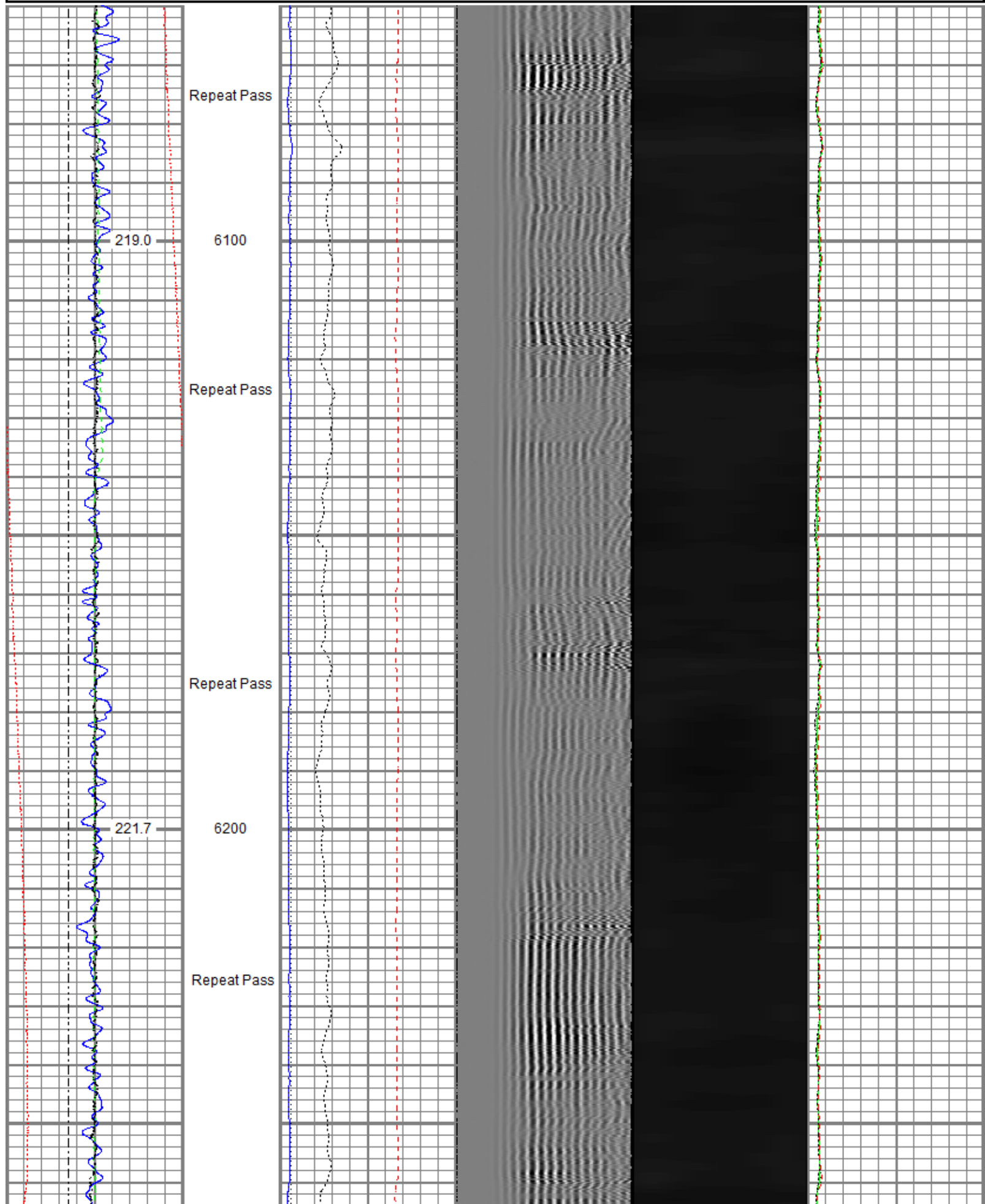
Repeat Pass

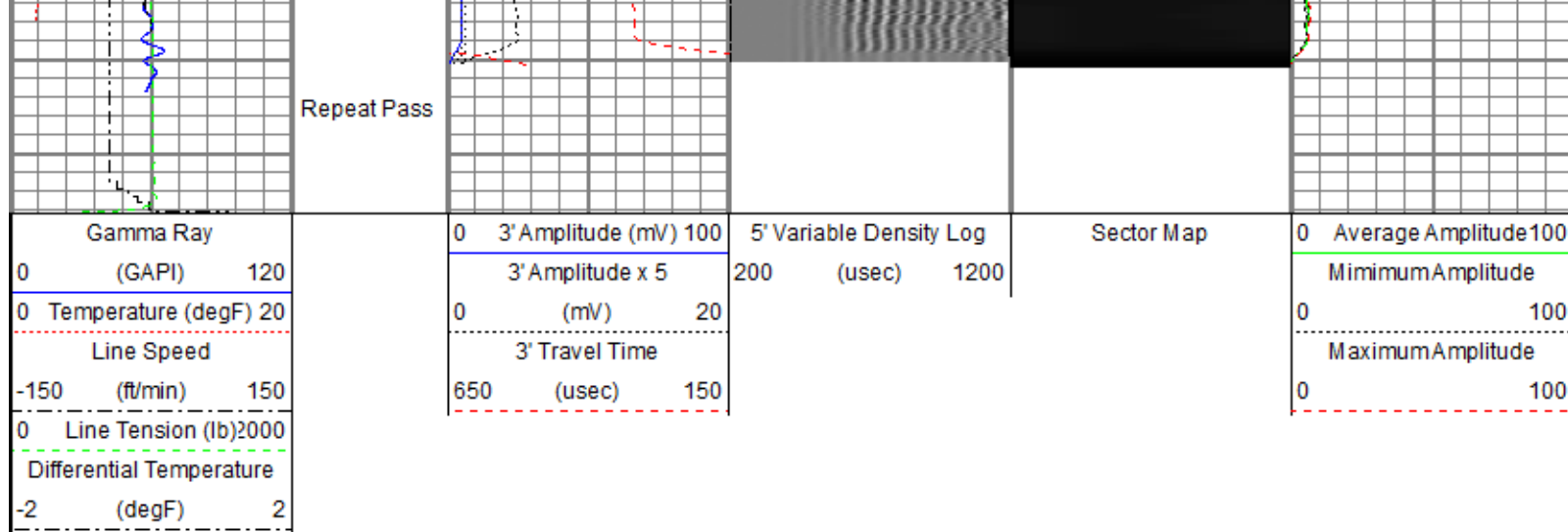
Recorded With 2500 PSI Surface Induced Pressure

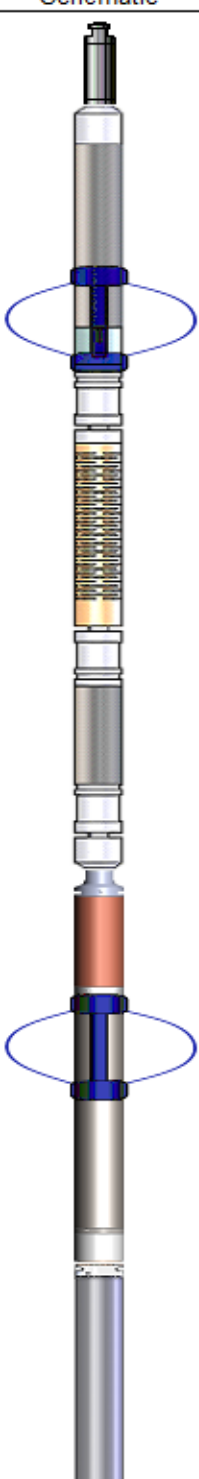
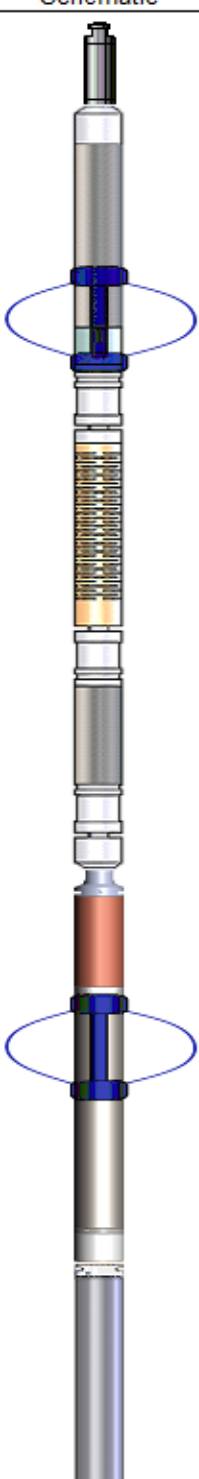
Database File noble_guttersen d09 755\noble_guttersen d09 755_rbl_12-19-20.db
 Dataset Pathname pass2.1
 Presentation Format ros_radil_noble
 Dataset Creation Sat Dec 19 19:14:32 2020
 Charted by Depth in Feet scaled 1:240

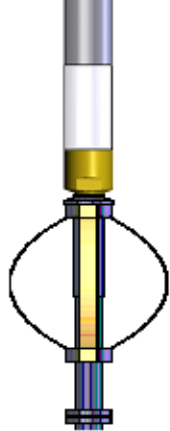
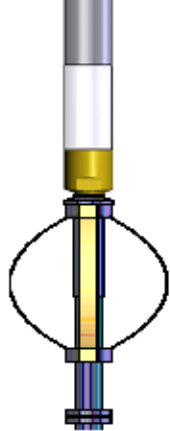


| | | | | | | | |
|-----|--------------------------|------|------|--------|-----|---|-----|
| 150 | (in/min) | 150 | 0.50 | (usec) | 150 | 0 | 100 |
| 0 | Line Tension (lb) | 2000 | | | | | |
| | Differential Temperature | | | | | | |
| -2 | (degF) | 2 | | | | | |





| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb) |
|----------|-------------|--|---|-------------|-----------|-------------|
| ErrCt | 23.14 |  | Titan CHD-16875 GO | 1.03 | 1.69 | 5.40 |
| RBT_HV | 22.10 | | Titan 1-11/16" Assembled Electric Cable Head with 1" Fishing Neck | | | |
| TEMP | 19.20 | | SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer | 1.33 | 3.25 | 10.00 |
| RBT_ACCZ | 16.96 | | Probe Radii ACC-2750 RBTa (FW1302-002) | 9.39 | 2.75 | 105.00 |
| RBT_ACCY | 16.96 | | Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub and Accelerometer | | | |
| RBT_ACCX | 16.96 | | | | | |
| WVFSYNC | 16.96 | | | | | |
| WVFS8 | 16.96 | | | | | |
| WVFS7 | 16.96 | | | | | |
| WVFS6 | 16.96 | | | | | |
| WVFS5 | 16.96 | | | | | |
| WVFS4 | 16.96 | | | | | |
| WVFS3 | 16.96 | | | | | |
| WVFS2 | 16.96 | | | | | |
| WVFS1 | 16.96 | | | | | |
| WVFCAL | 16.96 | | | | | |
| WVF3FT | 16.96 | | | | | |
| WVF5FT | 15.96 | | SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer | 1.33 | 3.25 | 10.00 |
| CCL\$2 | 11.83 |  | Probe GR-CCL-2750 6PB (FW1810-001) | 4.80 | 2.75 | 55.00 |
| CCL\$1 | 11.83 | | Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT | | | |
| GR | 10.50 | | | | | |
| | | | Probe CN-2750 BL (FW1308-020_A1483) | 5.03 | 2.75 | 60.00 |

| | | | | | | |
|---|------|---|---|------|------|-------|
| CNLSC | 4.53 |  | Probe 2-3/4" Compensated Neutron with Bottom Load | | | |
| CNSSC | 4.12 | | | | | |
| LOCTIM | 0.00 |  | Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer | 2.88 | 2.75 | 20.00 |
| UTCTIM | 0.00 | | | | | |
| Dataset: noble_guttersen d09 755_rbl_12-19-20.db: field/well/run1/pass4.2 Total length: 23.14 ft Total weight: 276.40 lb O.D.: 3.25 in | | | | | | |

| | | | | |
|--|---|--------------------------|--------------------|---------------|
| Calibration Report | | | | |
| Database File | c:\programdata\warrior\data\noble_guttersen d09 755\noble_guttersen d09 755_rbl_12-19-20.db | | | |
| Dataset Pathname | pass2.1 | | | |
| Dataset Creation | Sat Dec 19 19:14:32 2020 | | | |
| Compensated Neutron Calibration Report | | | | |
| | | Model: | Probe CN - 2750 BL | |
| | | Serial Number: | FW1308-020_A1483 | |
| SHOP CALIBRATION | | Tue Dec 03 09:24:53 2019 | | |
| | Cal Tube | Units | | |
| Tank Ratio | 6.7797 | SS/LS | | |
| LS Detector | 452.04 | cps | | |
| SS Detector | 3241.60 | cps | | |
| Tool Ratio | 7.1710 | SS/LS | | |
| Tool Gain | 0.9454 | --- | | |
| PRE-SURVEY VERIFICATION | | | | |
| | SS Detector | LS Detector | Measured (p.u.) | Target (p.u.) |
| POST-SURVEY VERIFICATION | | | | |
| | SS Detector | LS Detector | Measured (p.u.) | Target (p.u.) |
| Gamma Ray Calibration Report | | | | |
| Serial Number: | FW1810-001 | | | |
| Tool Model: | 2750 6PB | | | |
| Performed: | Tue Dec 03 09:24:53 2019 | | | |
| Calibrator Value: | 637.0 | GAPI | | |
| Background Reading: | 100.1 | cps | | |
| Calibrator Reading: | 1264.5 | cps | | |
| Sensitivity: | 0.5471 | GAPI/cps | | |

Serial Number: FW1302-002
Tool Model: 2750 RBTa

Calibration Casing Diameter: 5.500 in
Calibration Depth: -6.608 ft

Master Calibration, performed Sat Dec 19 07:46:30 2020:

| | Raw (v) | | Calibrated (mv) | | Results | |
|-----|---------|-------|-----------------|---------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3' | 0.002 | 0.679 | 0.800 | 71.921 | 104.962 | 0.640 |
| CAL | 0.006 | 0.665 | | | | |
| 5' | 0.001 | 0.664 | 0.800 | 71.921 | 107.184 | 0.741 |
| SUM | | | | | | |
| S1 | 0.001 | 0.646 | 0.000 | 100.000 | 155.068 | -0.166 |
| S2 | 0.001 | 0.702 | 0.000 | 100.000 | 142.835 | -0.210 |
| S3 | 0.002 | 0.772 | 0.000 | 100.000 | 129.826 | -0.236 |
| S4 | 0.002 | 0.743 | 0.000 | 100.000 | 134.904 | -0.242 |
| S5 | 0.001 | 0.710 | 0.000 | 100.000 | 141.137 | -0.176 |
| S6 | 0.001 | 0.671 | 0.000 | 100.000 | 149.317 | -0.156 |
| S7 | 0.001 | 0.643 | 0.000 | 100.000 | 155.681 | -0.147 |
| S8 | 0.001 | 0.625 | 0.000 | 100.000 | 160.204 | -0.164 |

Internal Reference Calibration, performed (Not Performed):

| | Raw (v) | | Calibrated (v) | | Results | |
|-----|---------|-------|----------------|-------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| CAL | 0.000 | 0.000 | 0.006 | 0.665 | 1.000 | 0.000 |

Air Zero Calibration, performed Sat Dec 19 07:44:50 2020:

| | 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 | |

Inclinometer Calibration Report

| | | | | | |
|-----------------|--------------------------|------------|----------|-----------|-----|
| Performed: | Tue Dec 03 09:24:53 2019 | | | | |
| | Low Read. | High Read. | Low Ref. | High Ref. | |
| X Accelerometer | -891.00 | 891.00 | -1.00 | 1.00 | gee |
| Y Accelerometer | -899.00 | 877.00 | -1.00 | 1.00 | gee |
| Z Accelerometer | -7.47 | 873.36 | 0.00 | 1.00 | gee |

Temperature Calibration Report

Serial Number: FW1302-002
Tool Model: 2750 RBTa
Performed: Tue Dec 03 09:24:53 2019

| | Reference | Reading |
|-----------------|-------------|-------------|
| Low Reference: | 100.00 degF | 110.72 degF |
| High Reference: | 350.00 degF | 409.18 degF |
| Gain: | 0.84 | |
| Offset: | 7.26 | |
| Delta Spacing | 1 | |



| | |
|---------|-------------------|
| Company | Noble Energy Inc |
| Well | Guttersen D09-755 |
| Field | Wattenberg |
| County | Weld |
| State | Colorado |