



| |
|---|
| <<< Fold Here >>> |
| <p>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.</p> |
| Comments |
| <p>Log ran as per customer request Depth referenced to Casing Tally reported Liner Top at 6,213 FT Adjusted -22 FT to correlate to liner top Gauge Ring/Junk Basket ran to 7,312 FT Log ran from as deep as possible in heel to surface Log ran with 2800 PSI surface induced pressure Logging tools were clean and free of debris upon completion of operations</p> <p>Thank you for choosing FMC Technologies Completion Services, Inc.!!</p> |



Reorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341653_anadarko_viper pyro 41n-14hzzr_10-13-15_mit_rbl_cnl\0512341653_anadarko_viper pyro 41n-14hzzr_10-13-15_mit_rbl_cnl

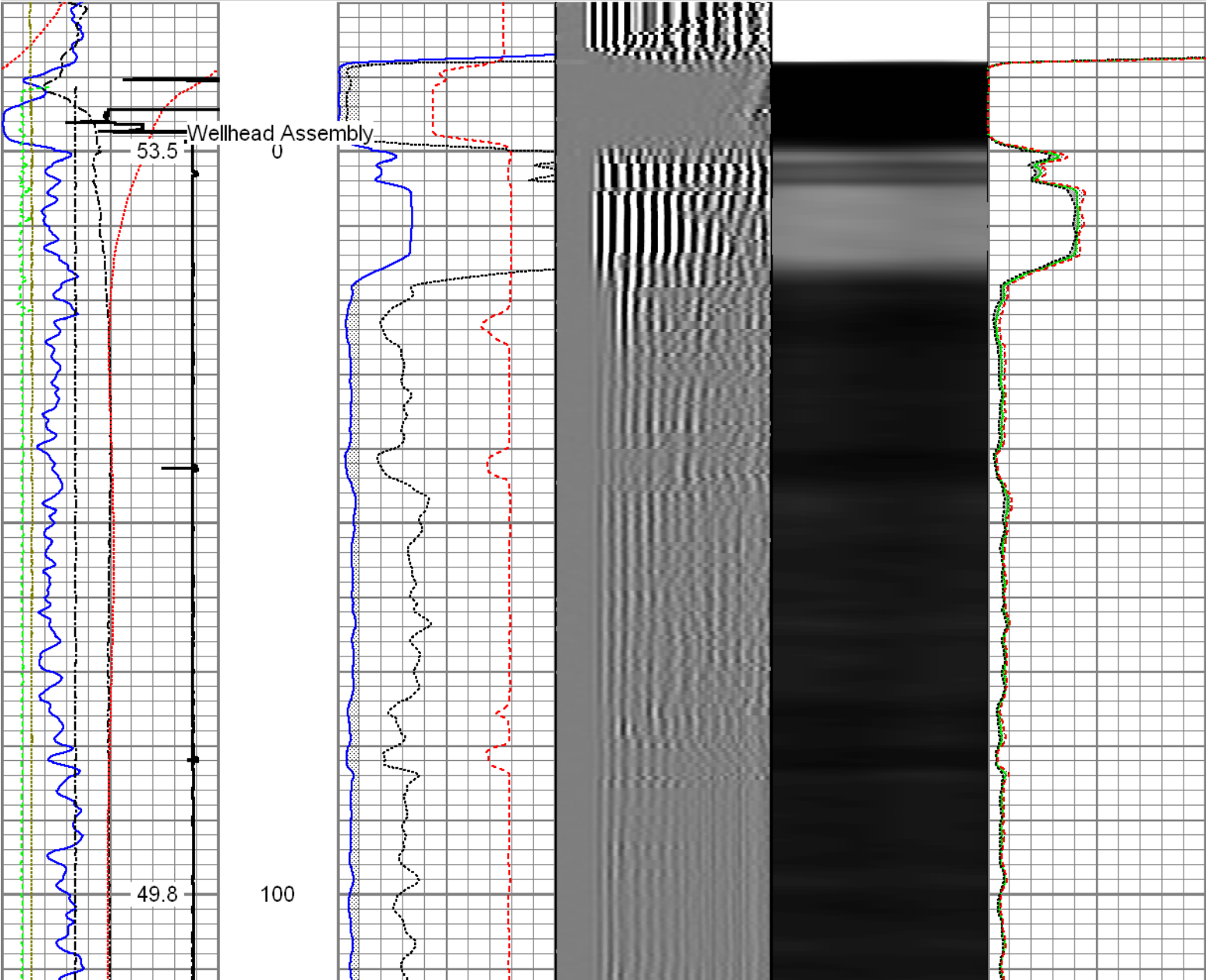
Dataset Pathname: 5.1

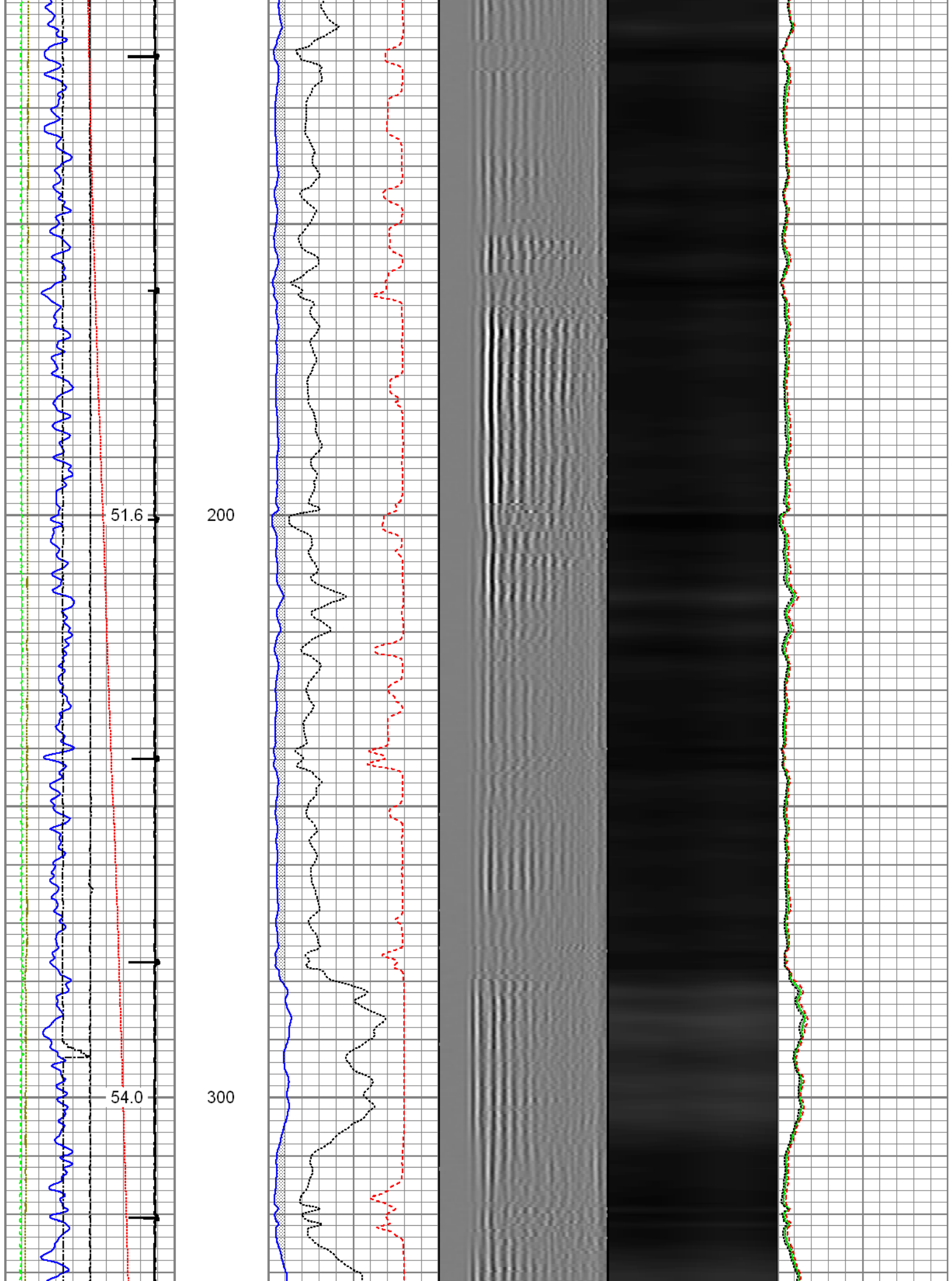
Presentation Format: rbt4_mit

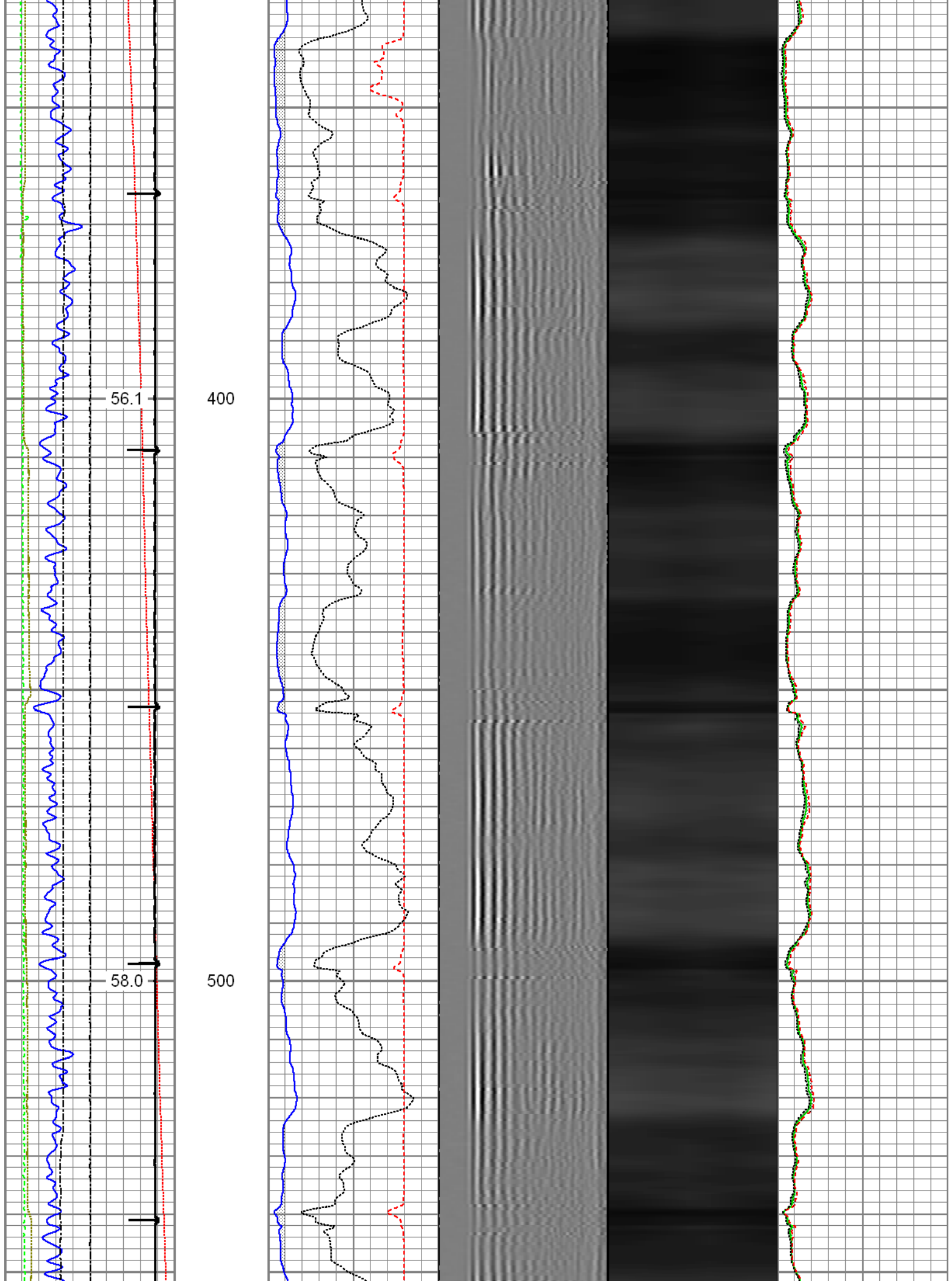
Dataset Creation: Tue Oct 13 14:28:47 2015

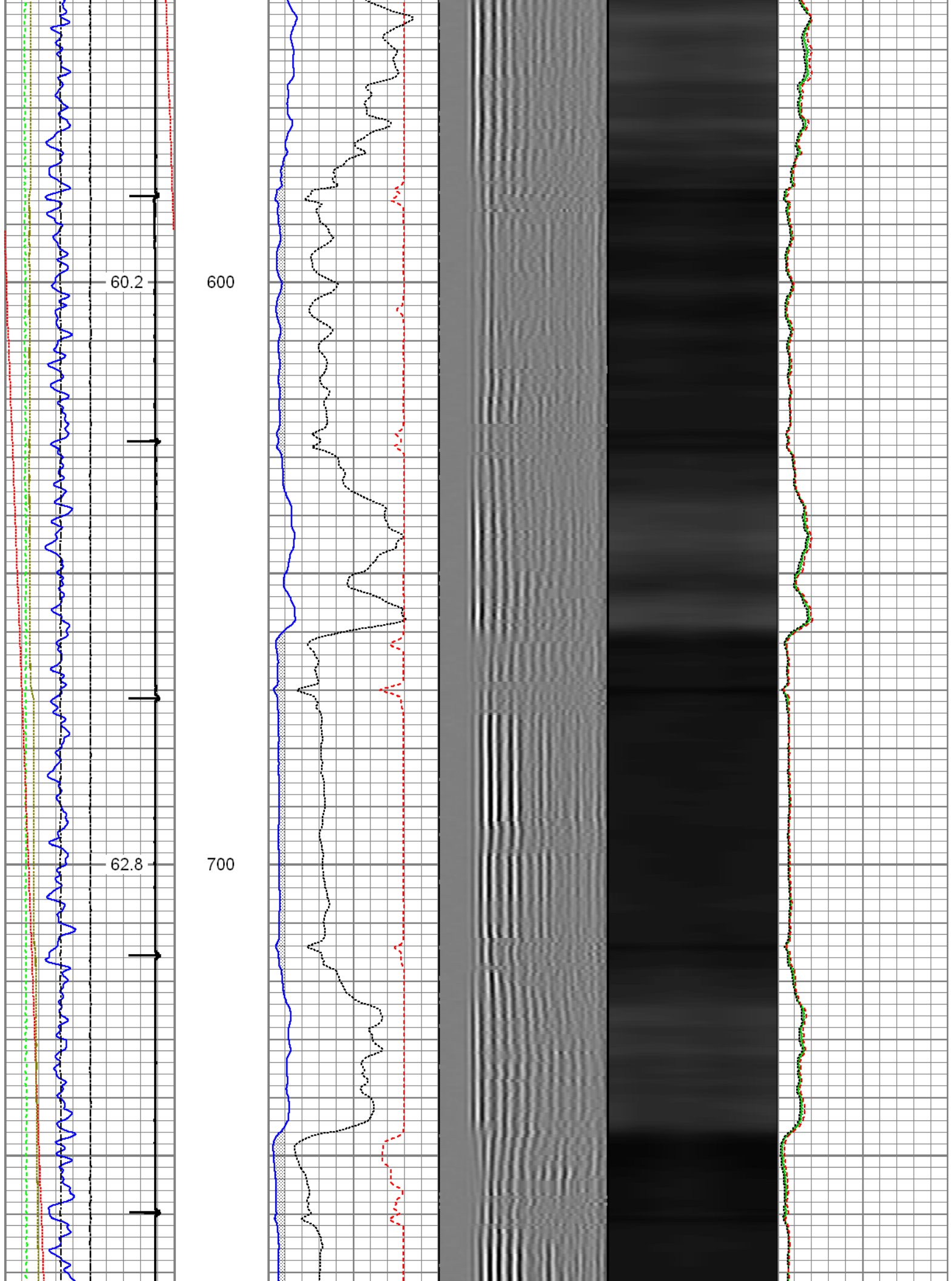
Charted by: Depth in Feet scaled 1:240

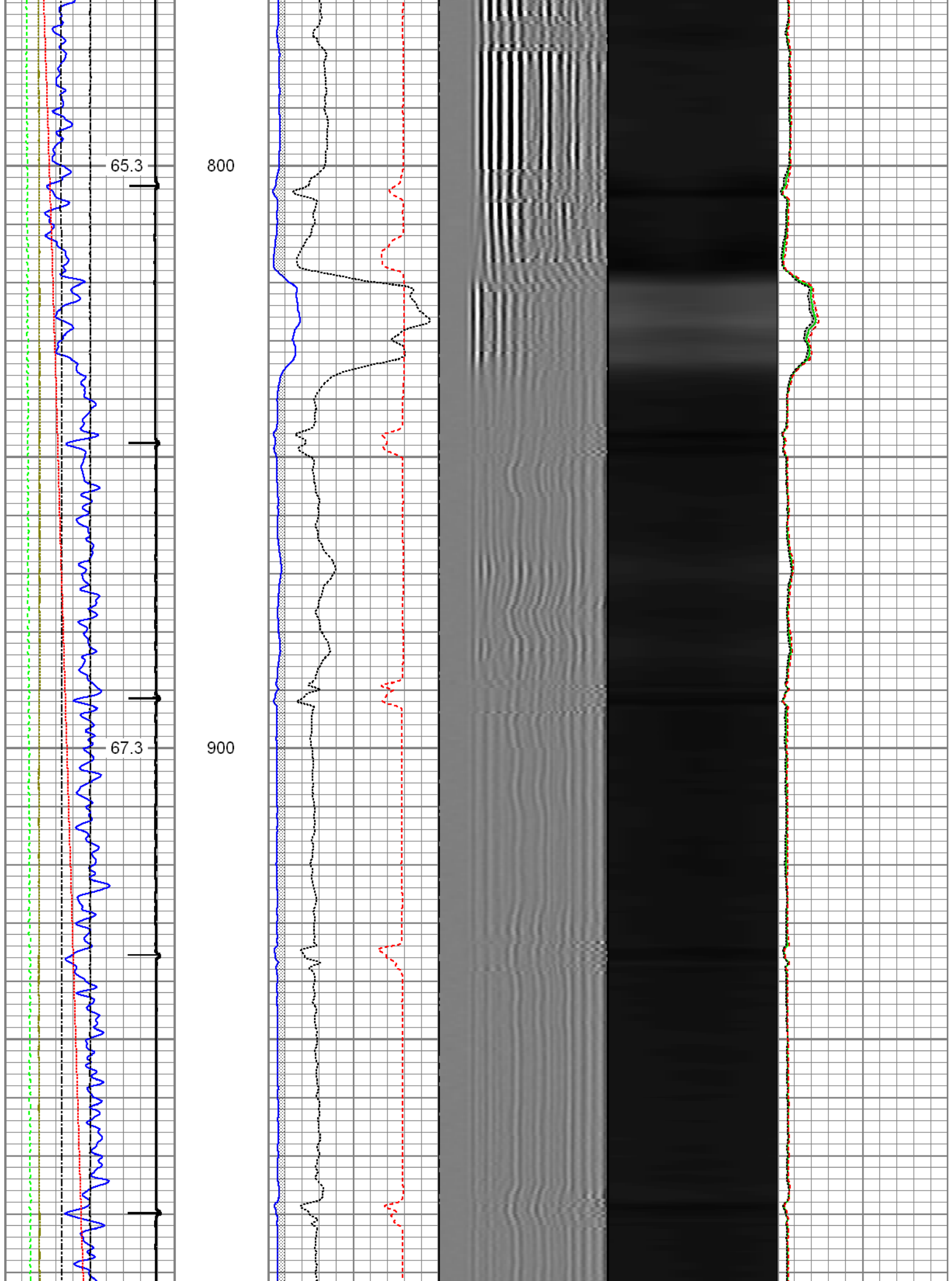
| | | | | |
|--------------------------|------------------|-------------------------|------------|-------------------|
| Gamma Ray | 3' Amplitude | 5' Variable Density Log | Sector Map | Average Amplitude |
| 0 (GAPI) 120 | 0 (mV) 100 | 200 1200 | | 0 100 |
| Line Speed | 3' Amplitude x 5 | | | Mimimum Amplitude |
| -100 (ft/min) 100 | 0 (mV) 20 | | | 0 100 |
| Line Tension | 3' Travel Time | | | Maximum Amplitude |
| 0 (lb) 2000 | 650 (usec) 150 | | | 0 100 |
| Differential Temperature | | | | |
| -2 (degF) 2 | | | | |
| Temperature | | | | |
| 0 (degF) 20 | | | | |
| -10 Deviation (°) 90 | | | | |
| Casing Collar Locator | | | | |

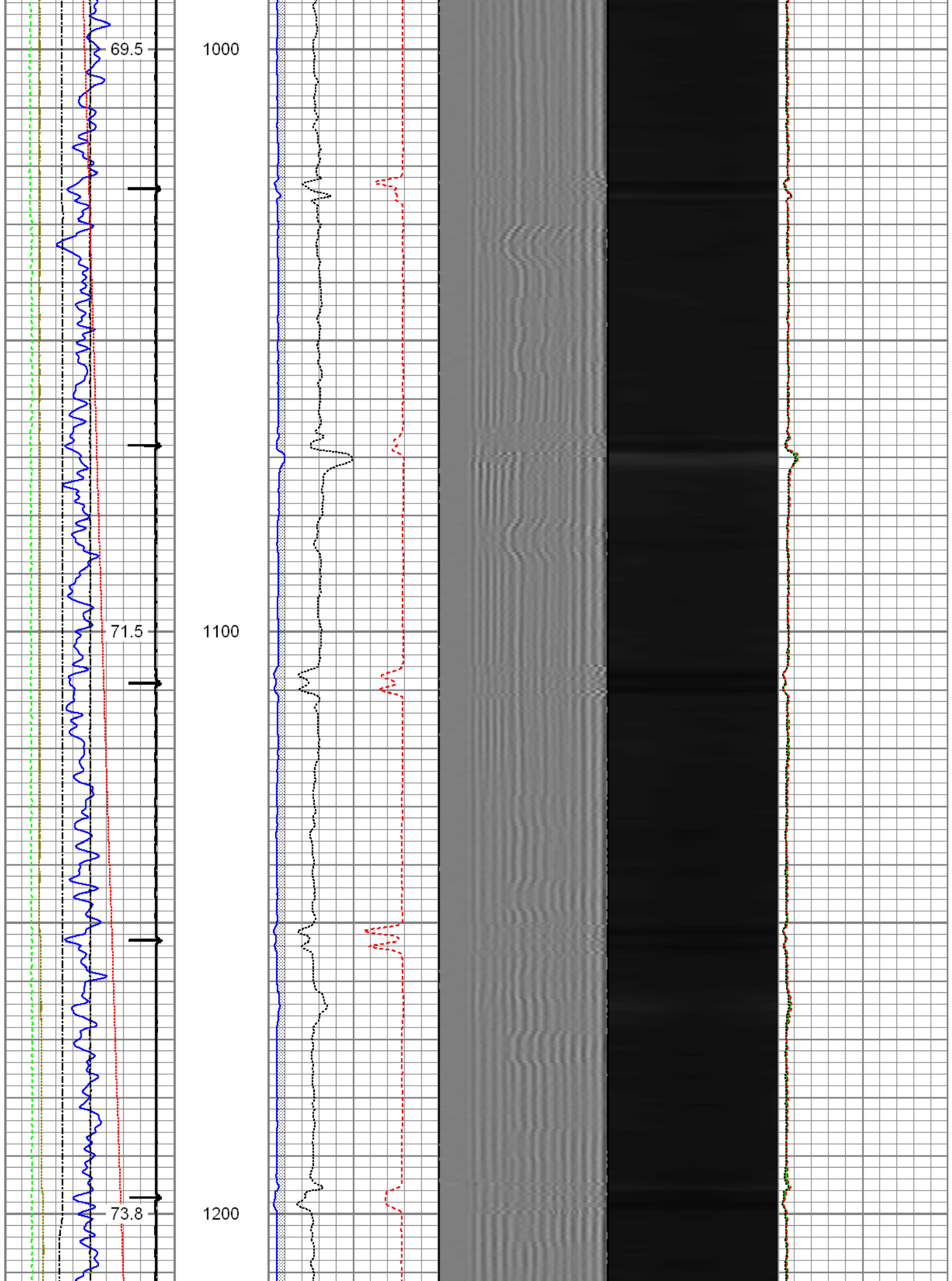


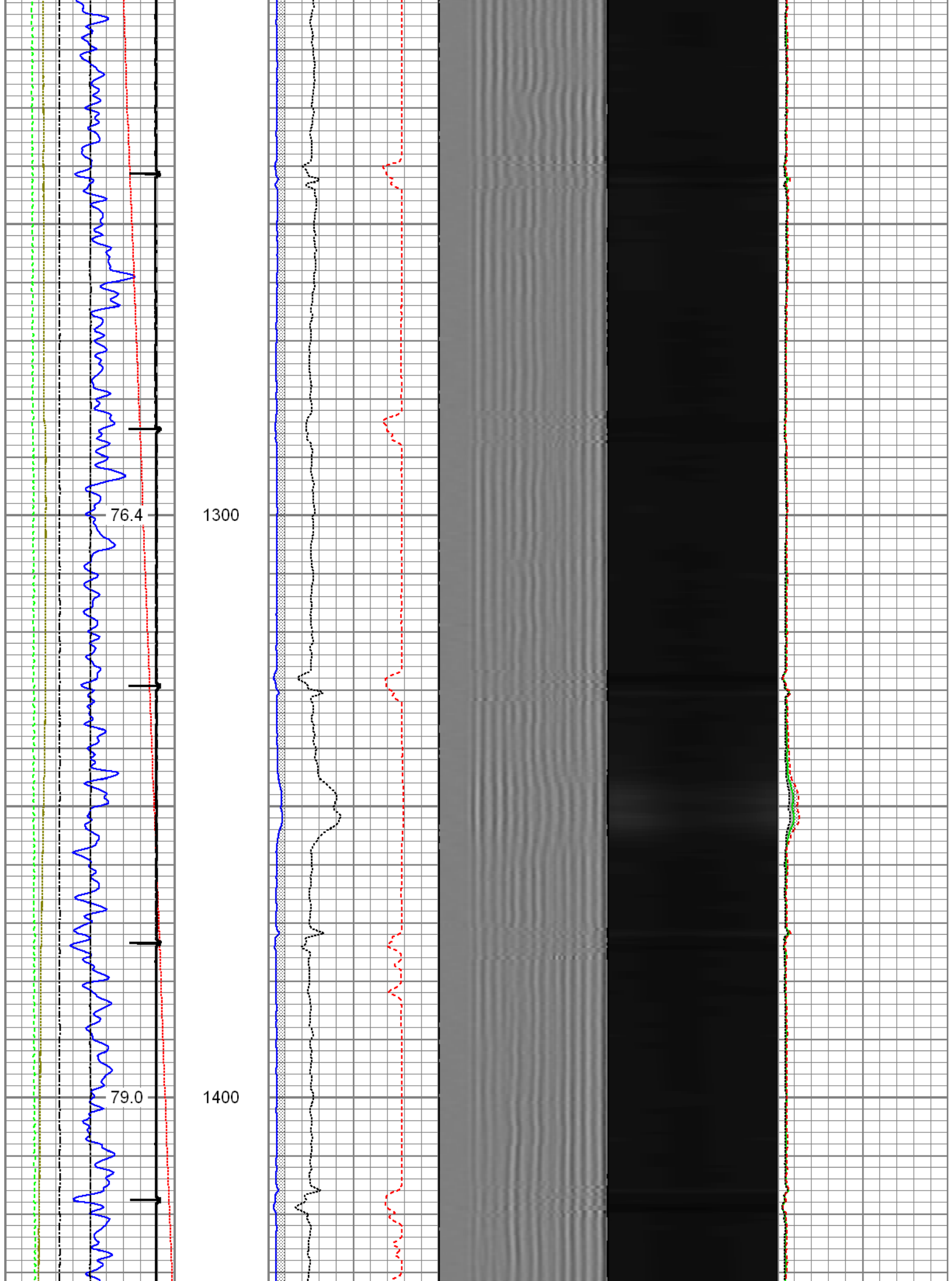


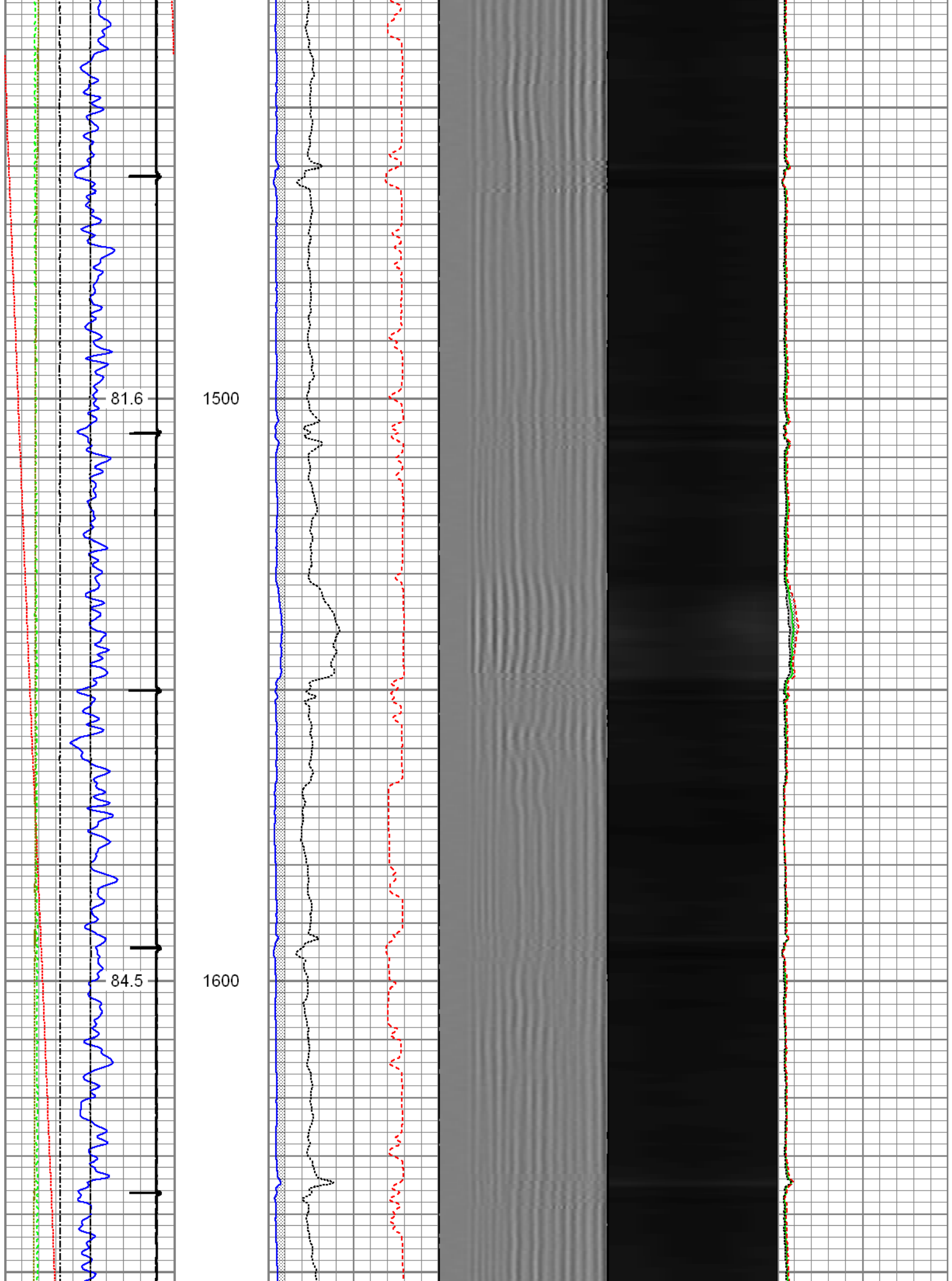


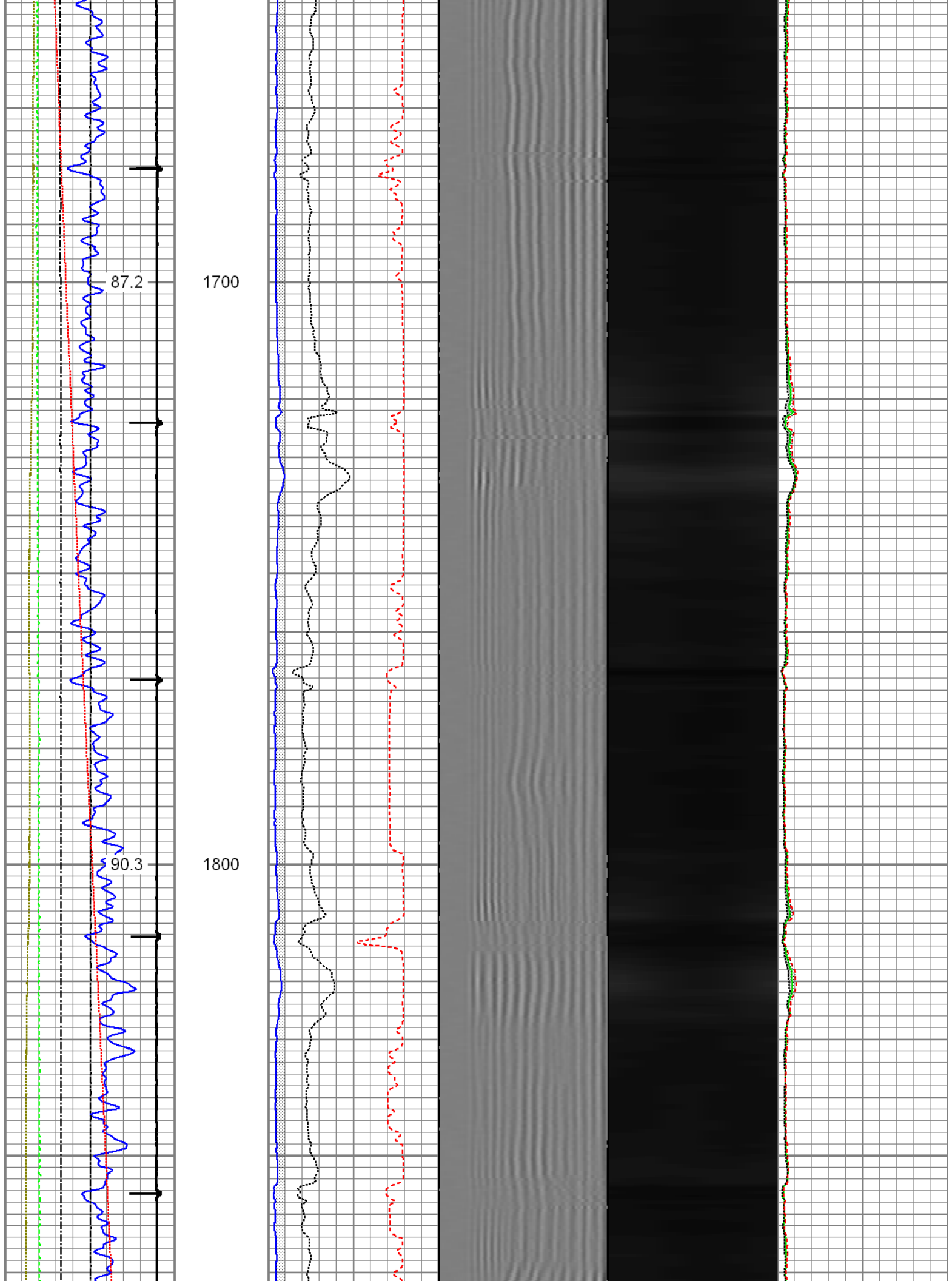


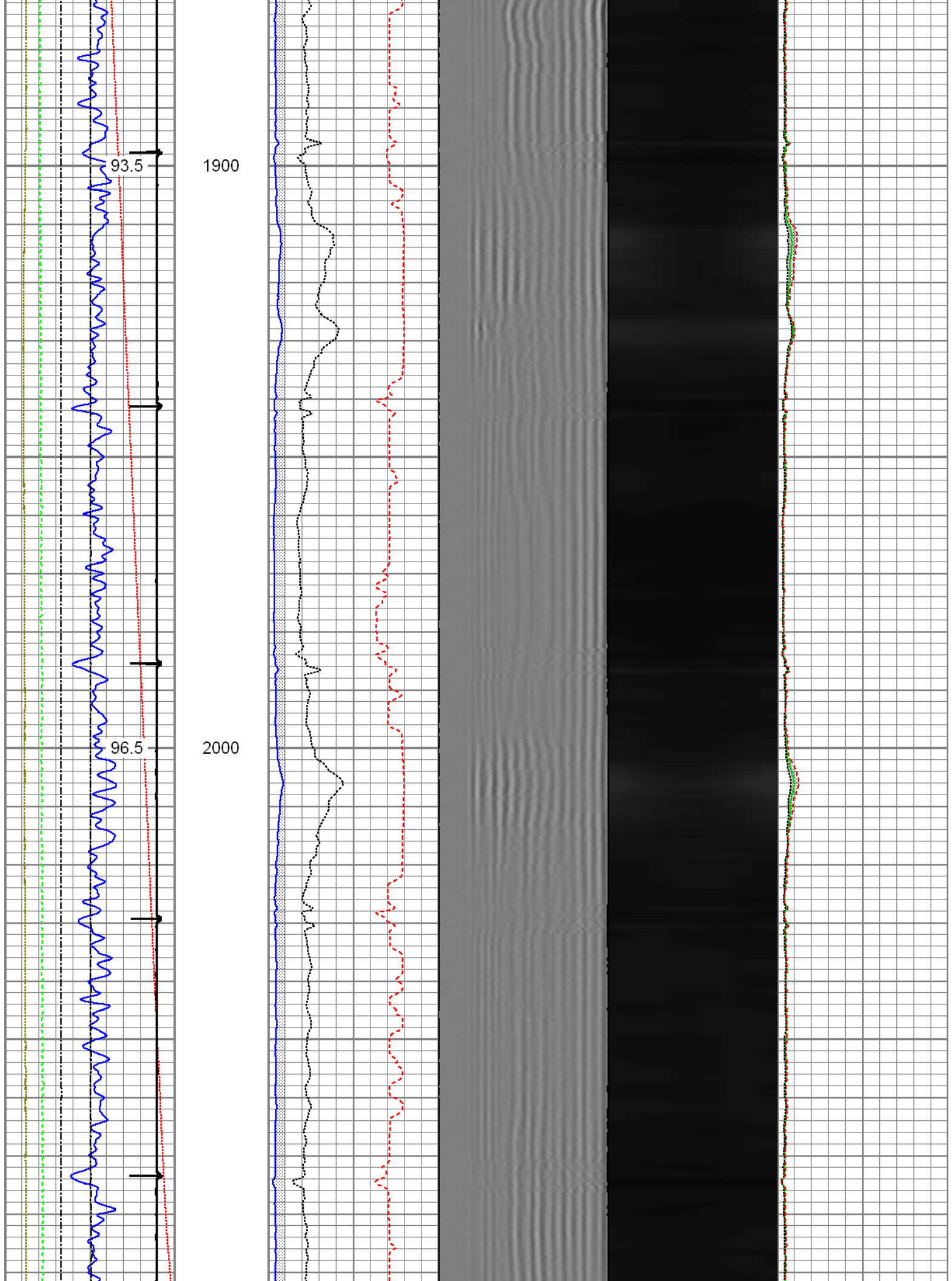


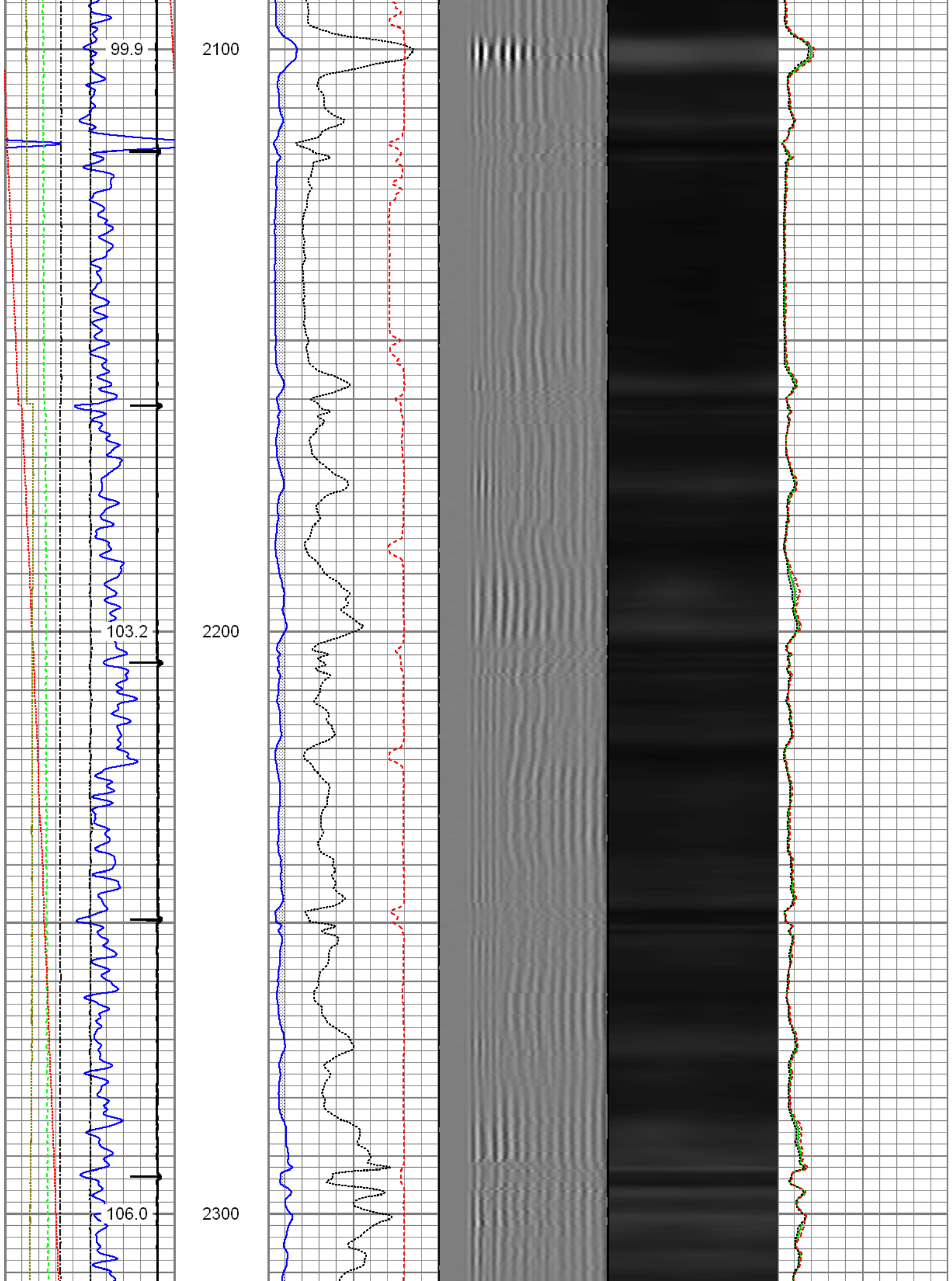


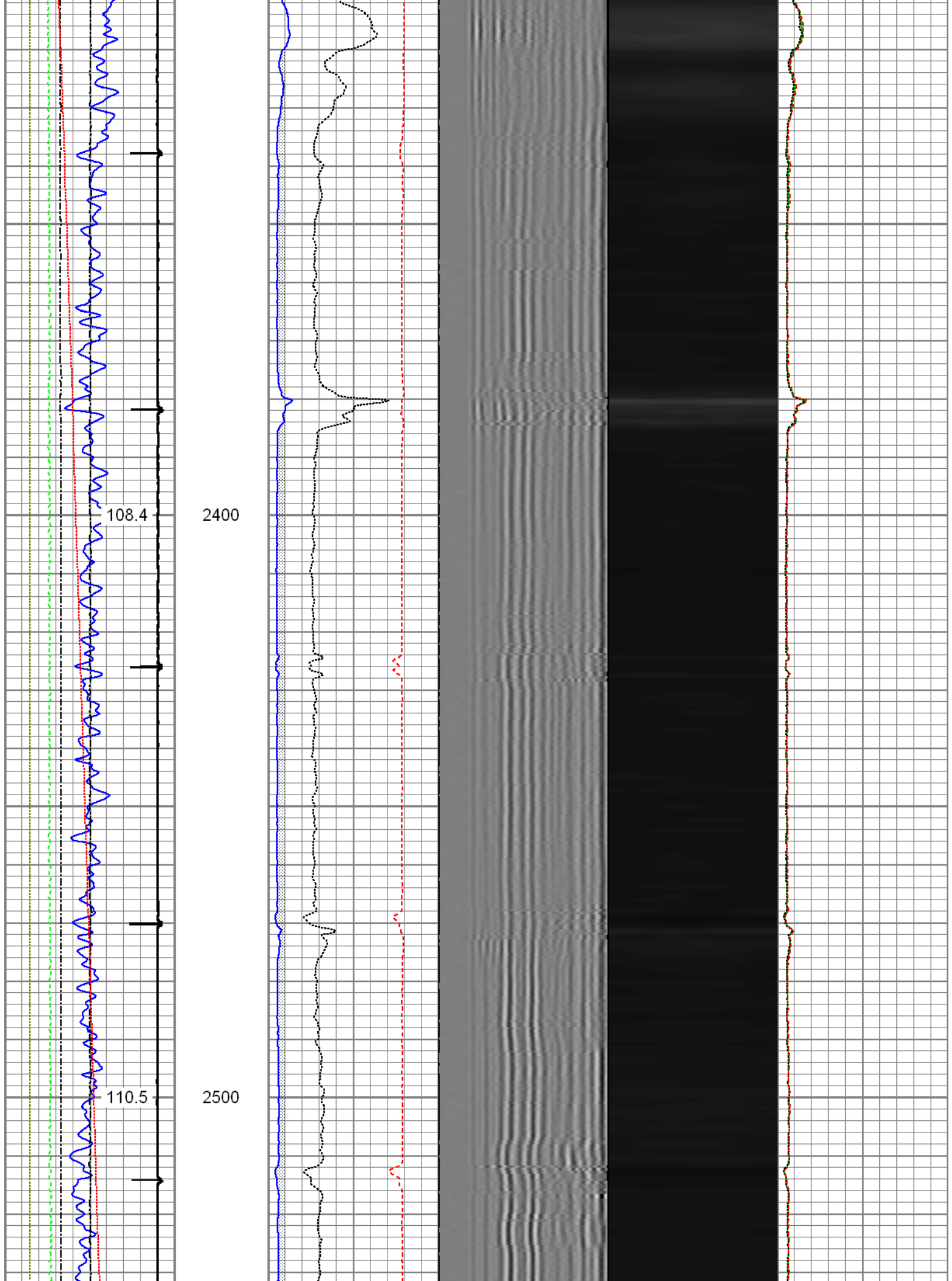


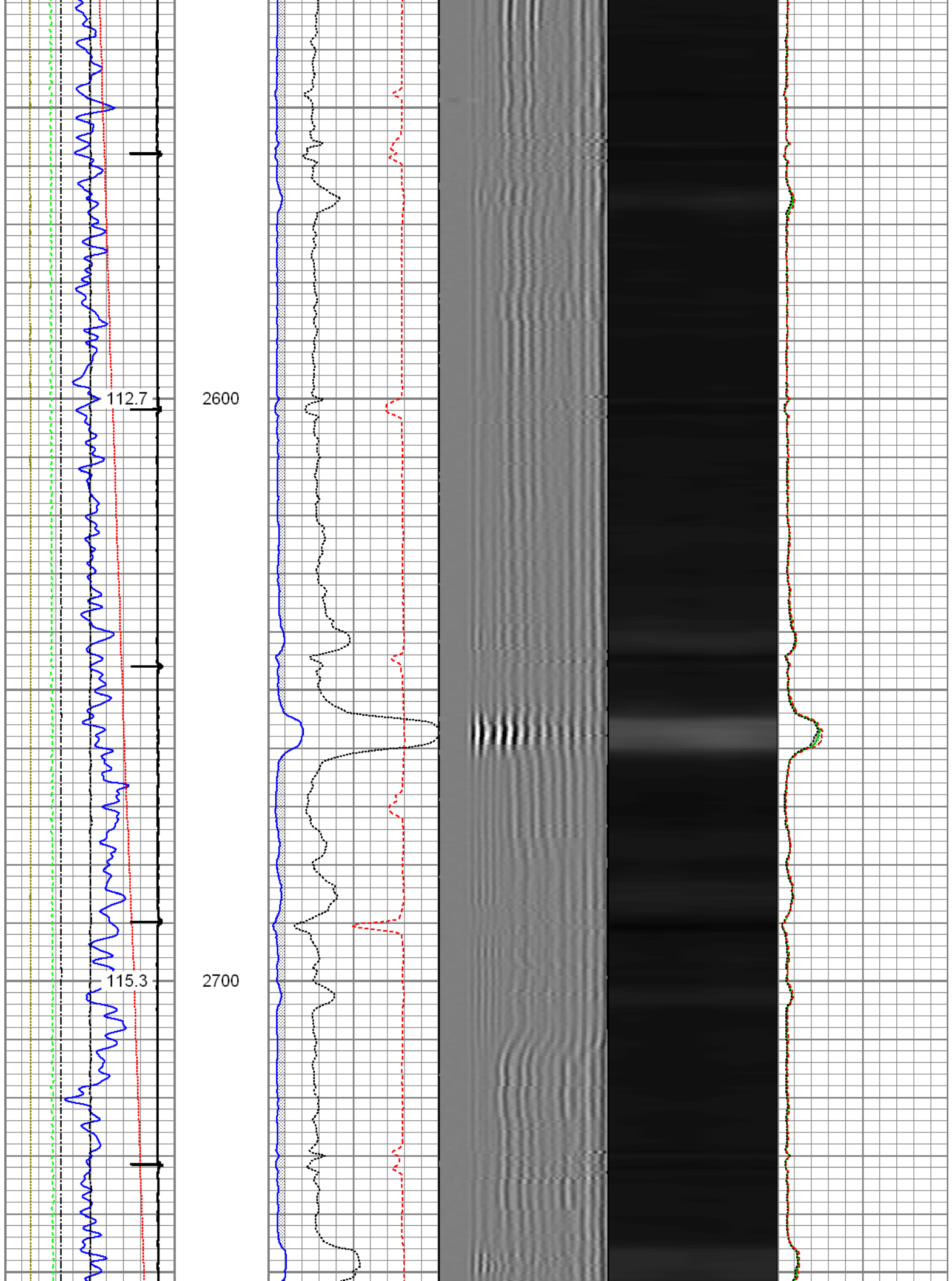


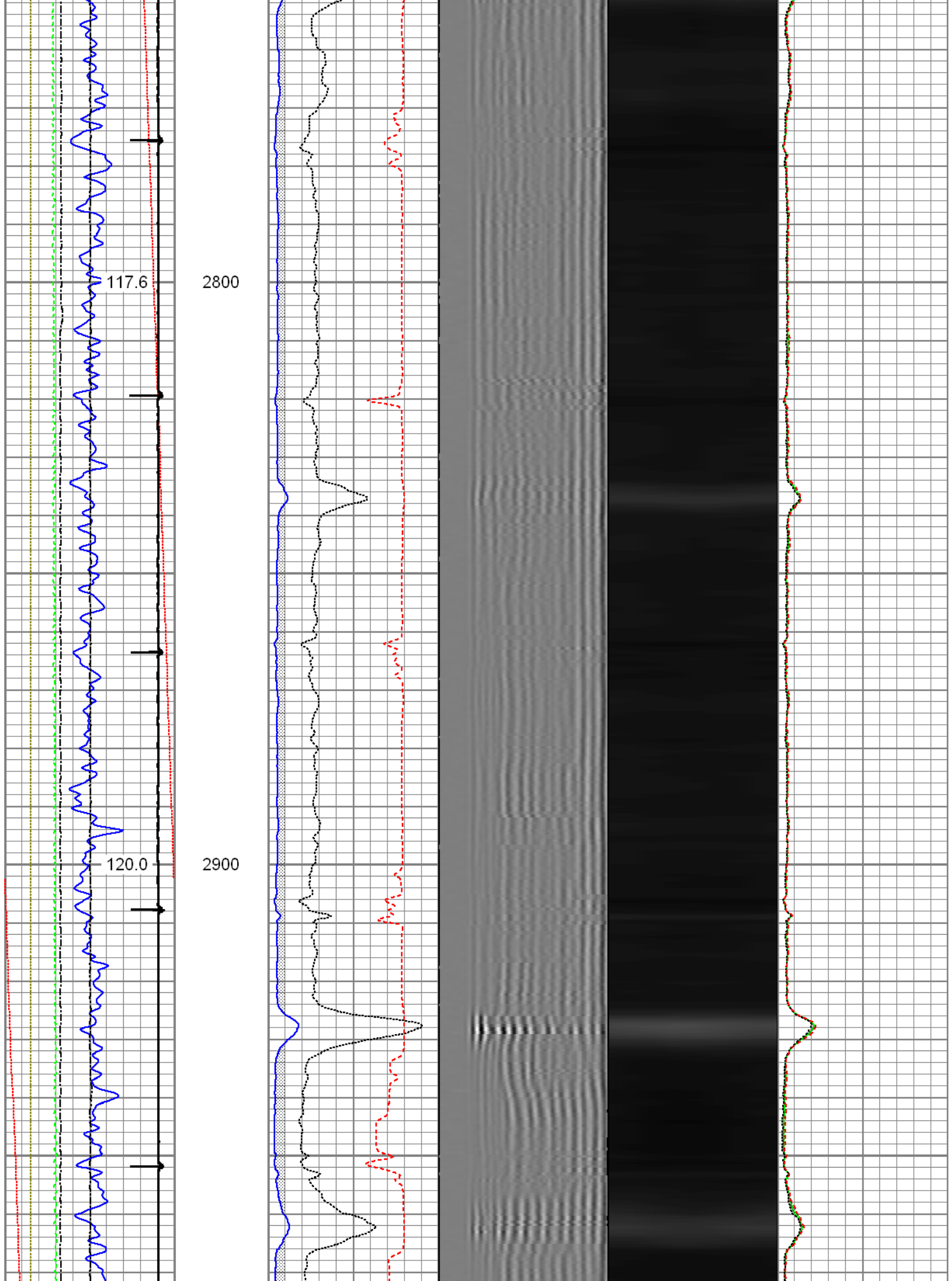


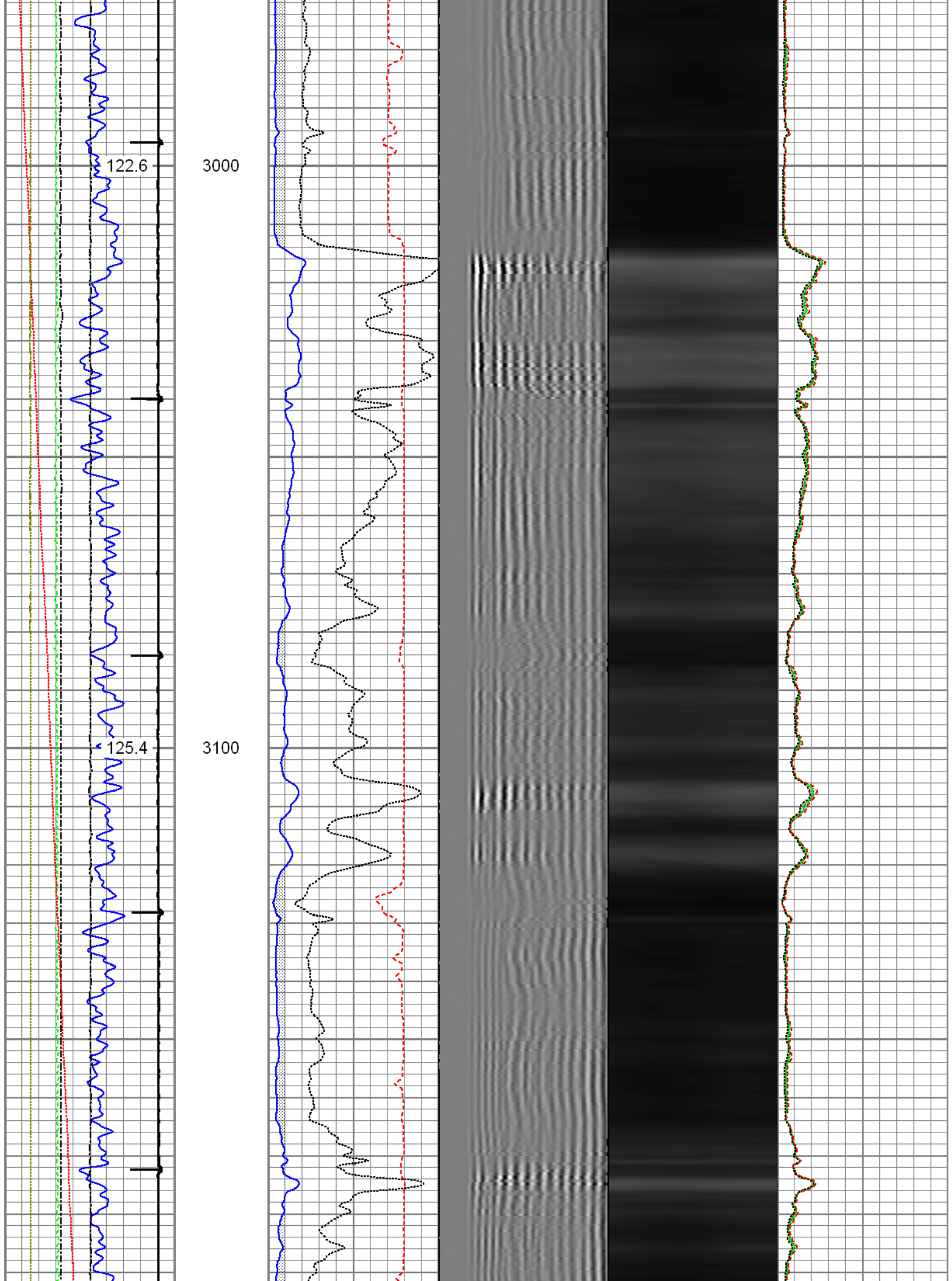


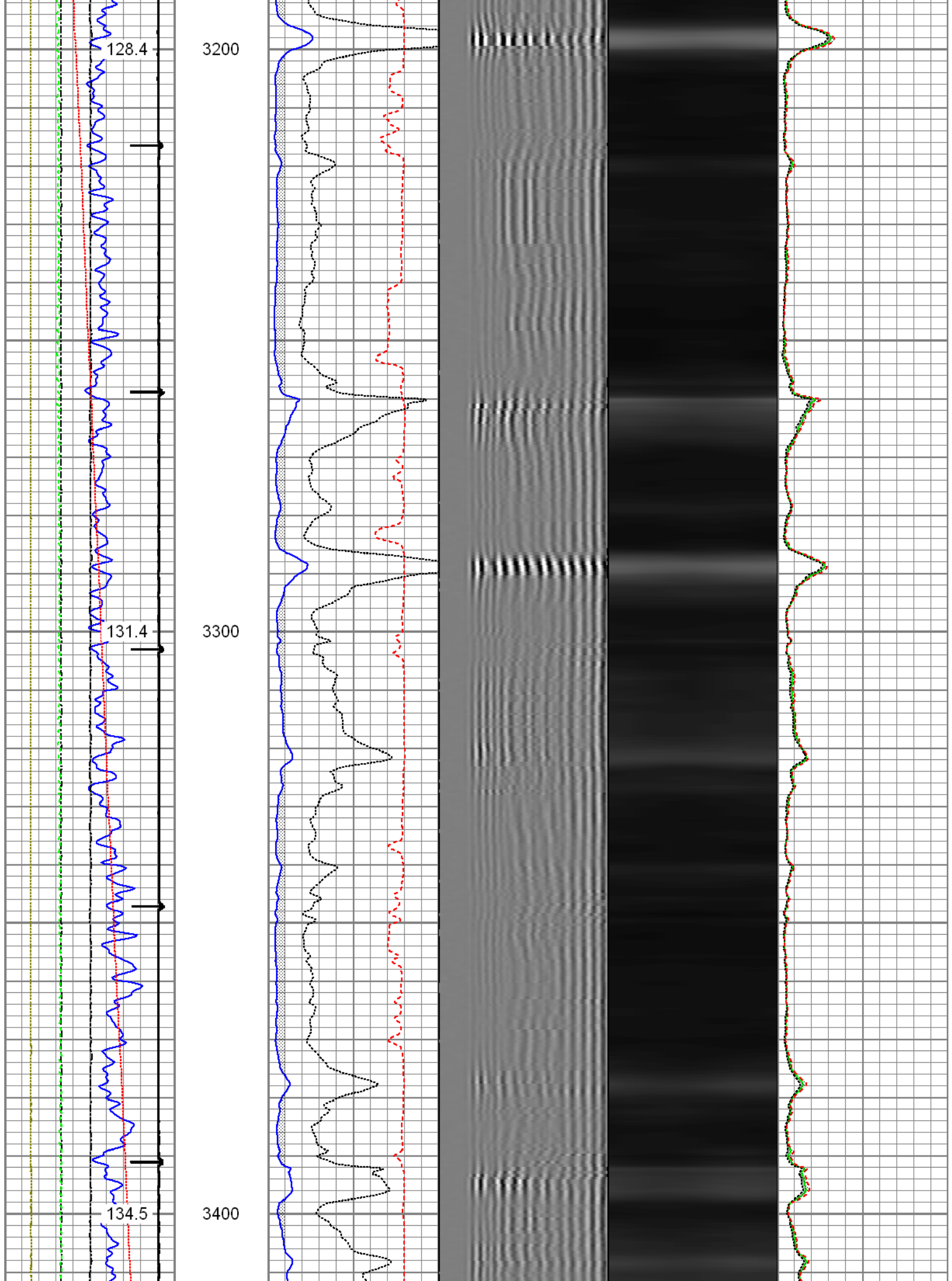


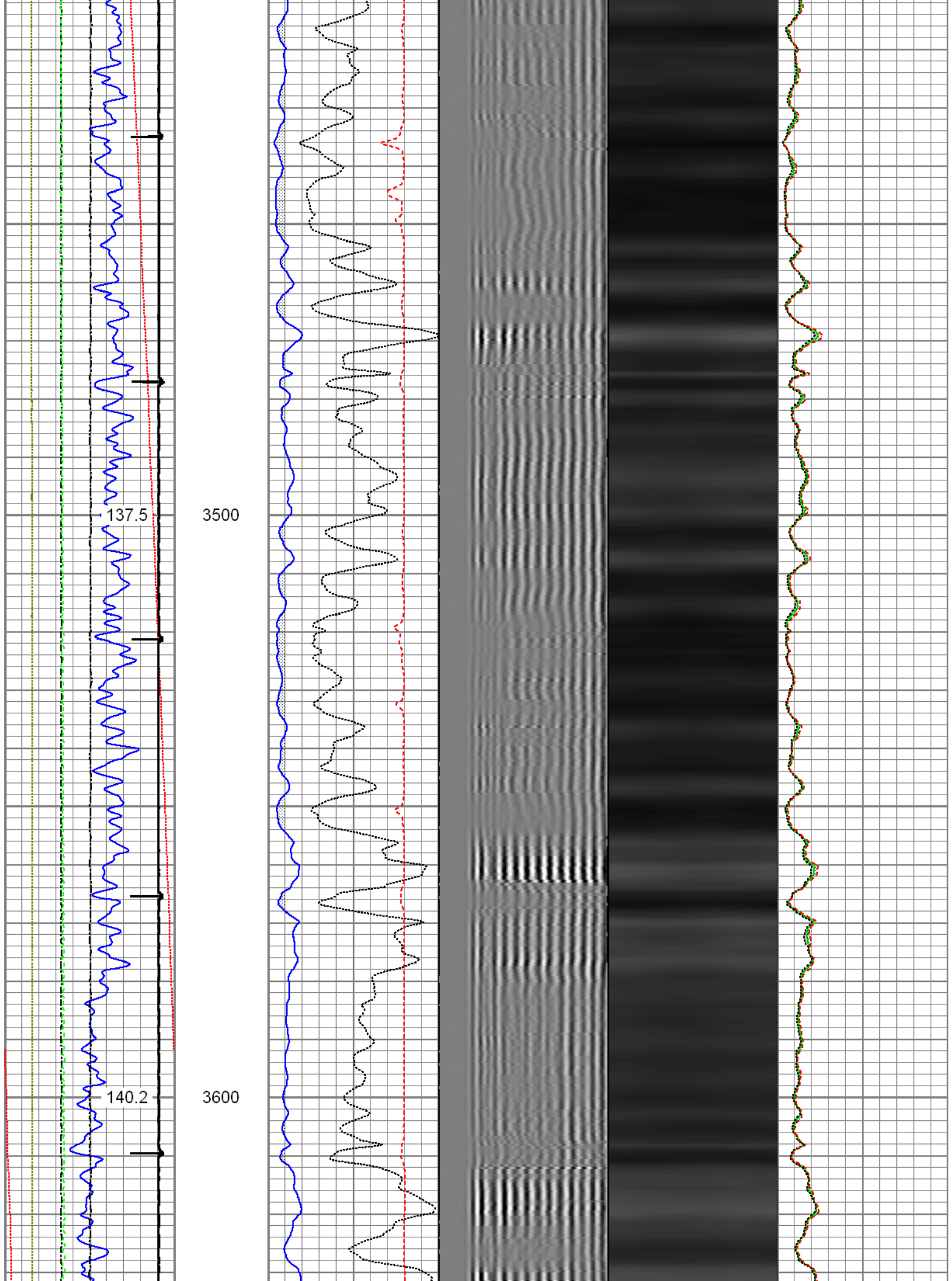


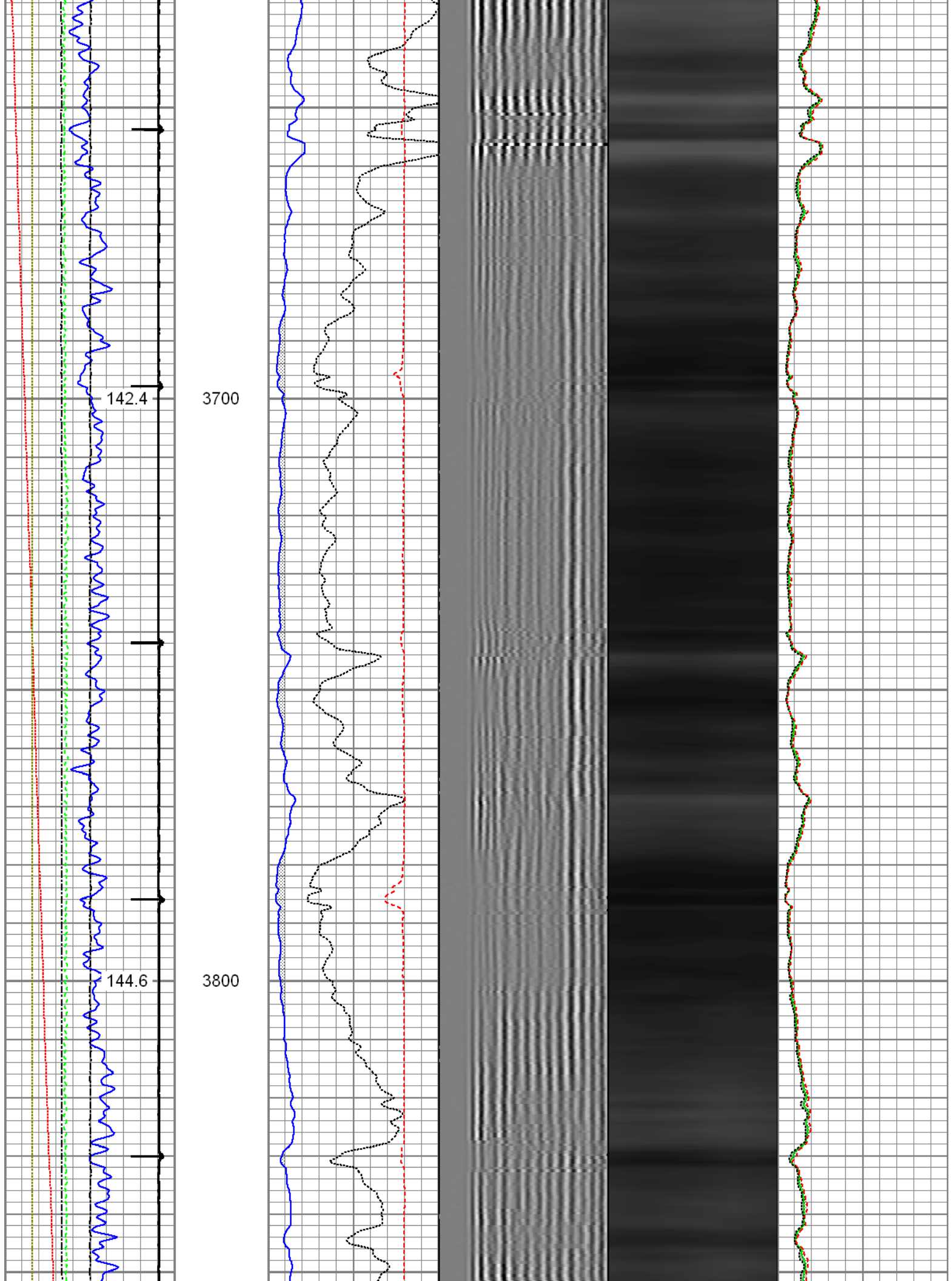


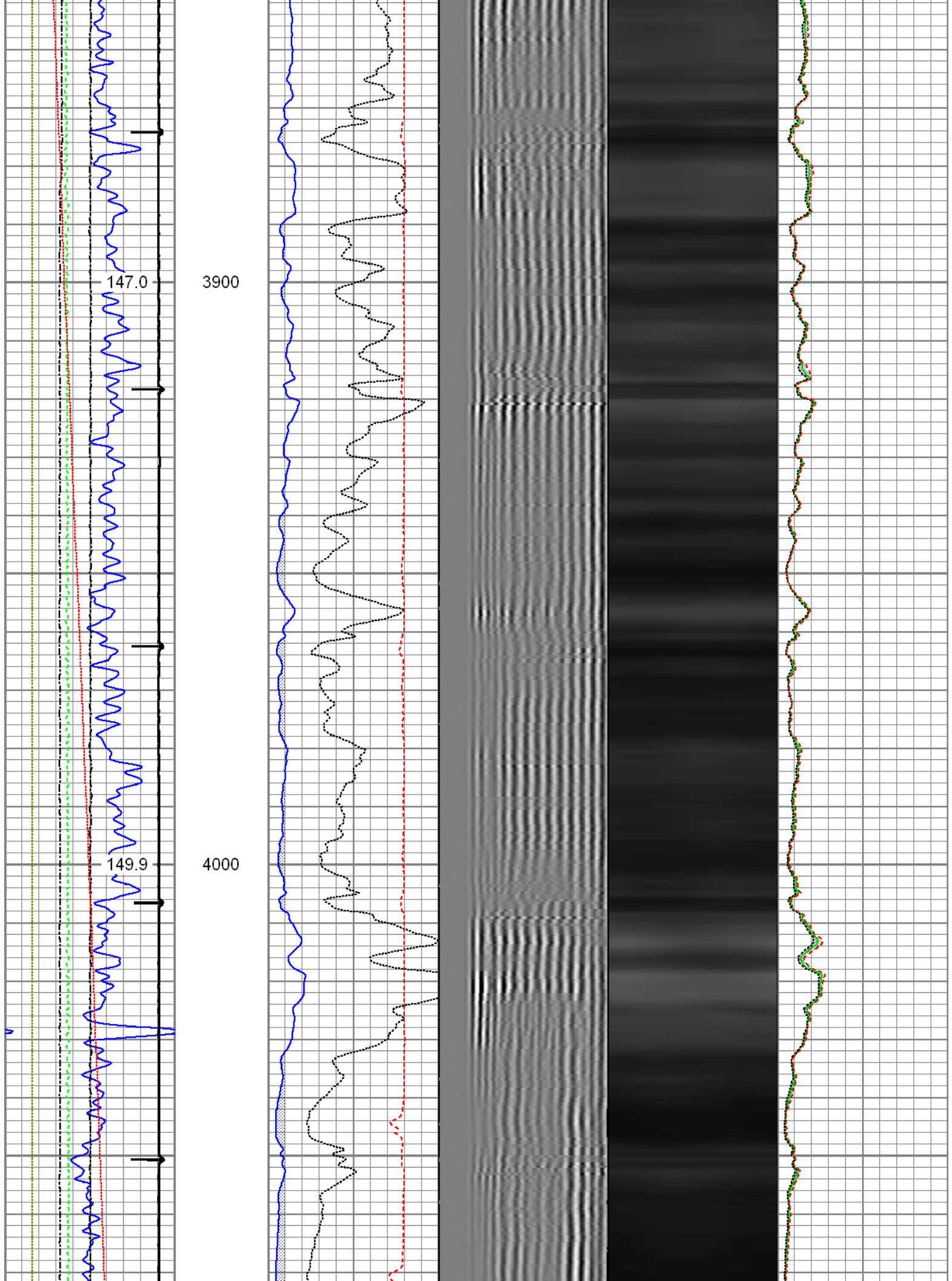


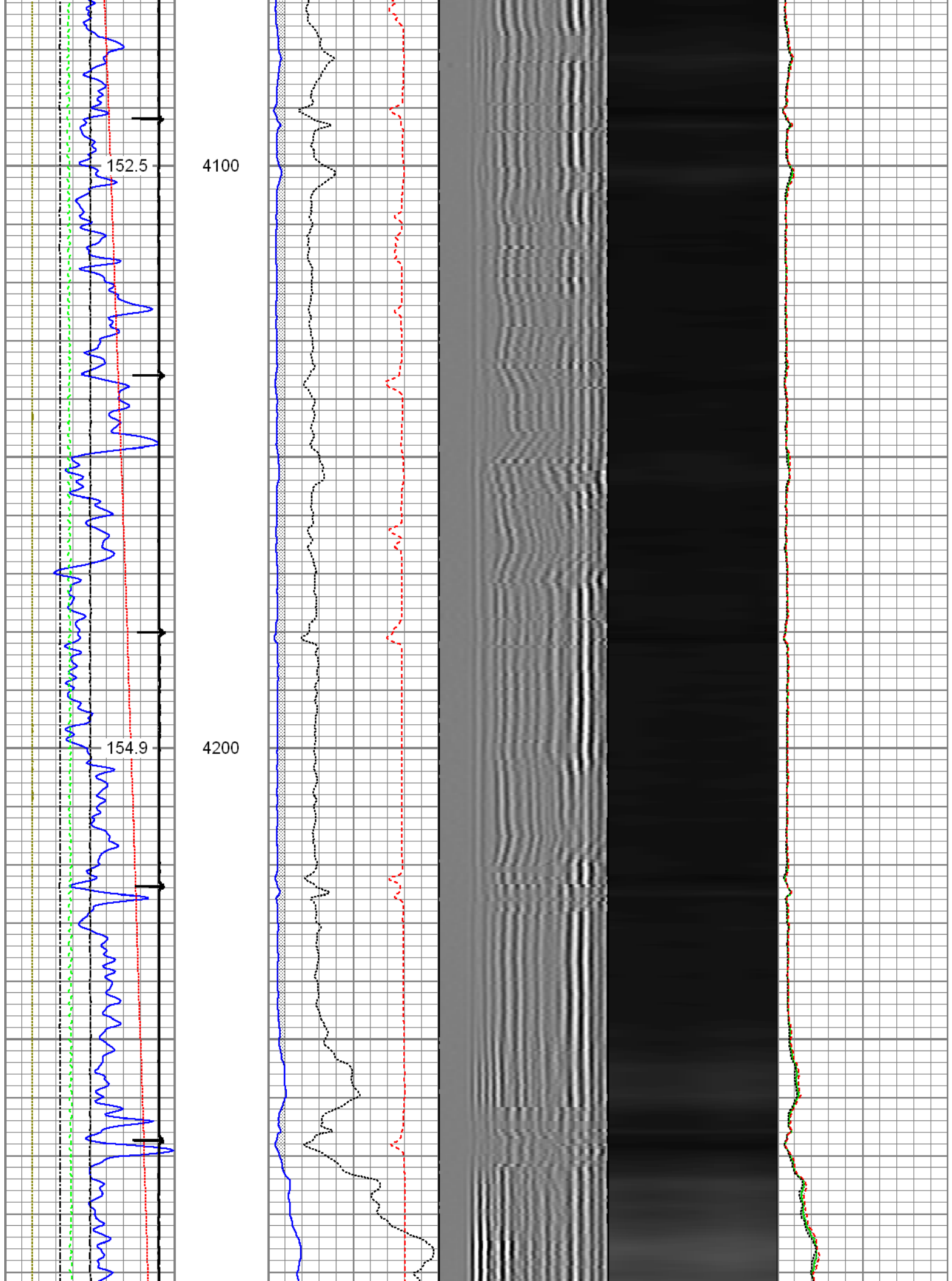


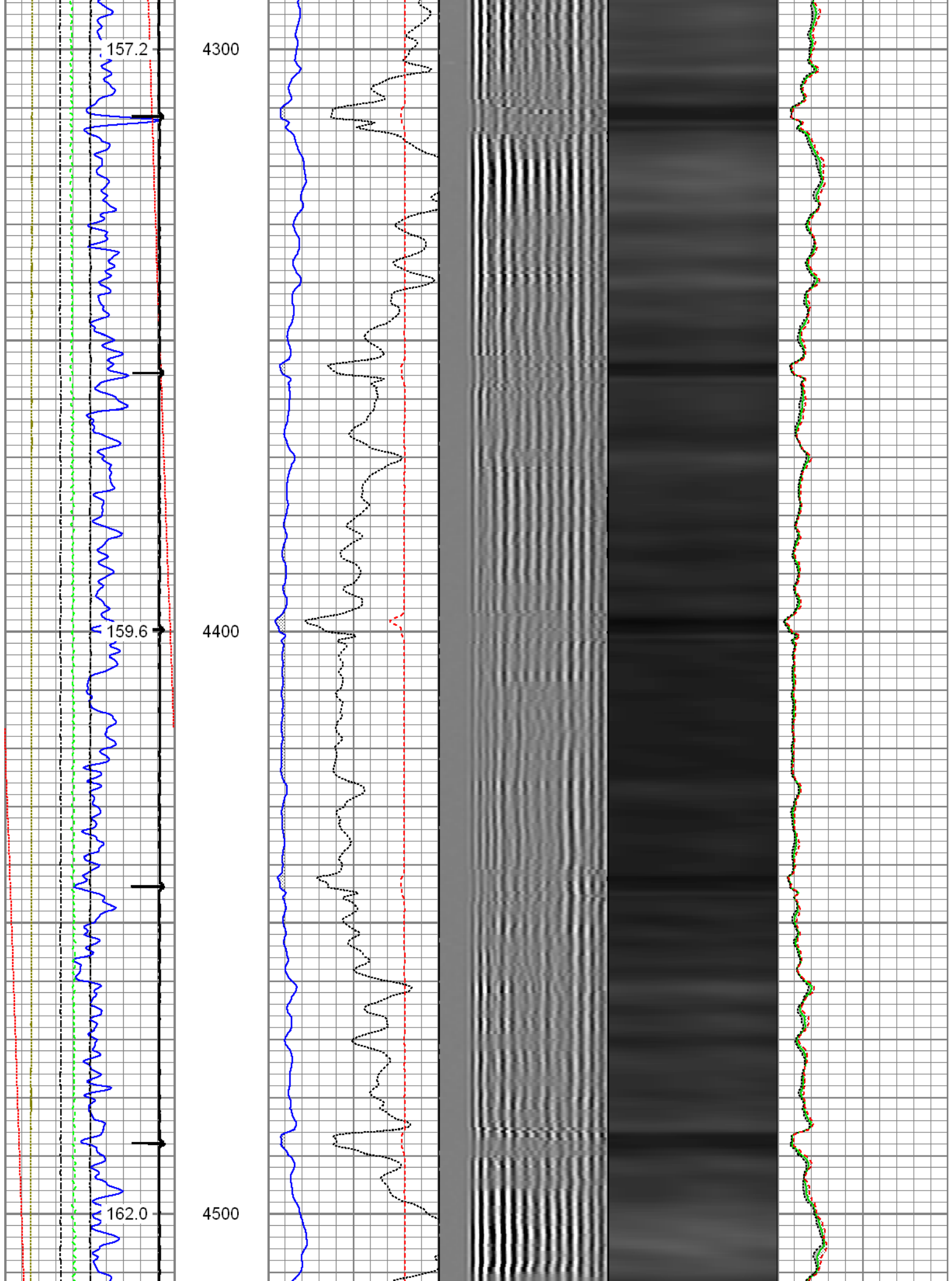


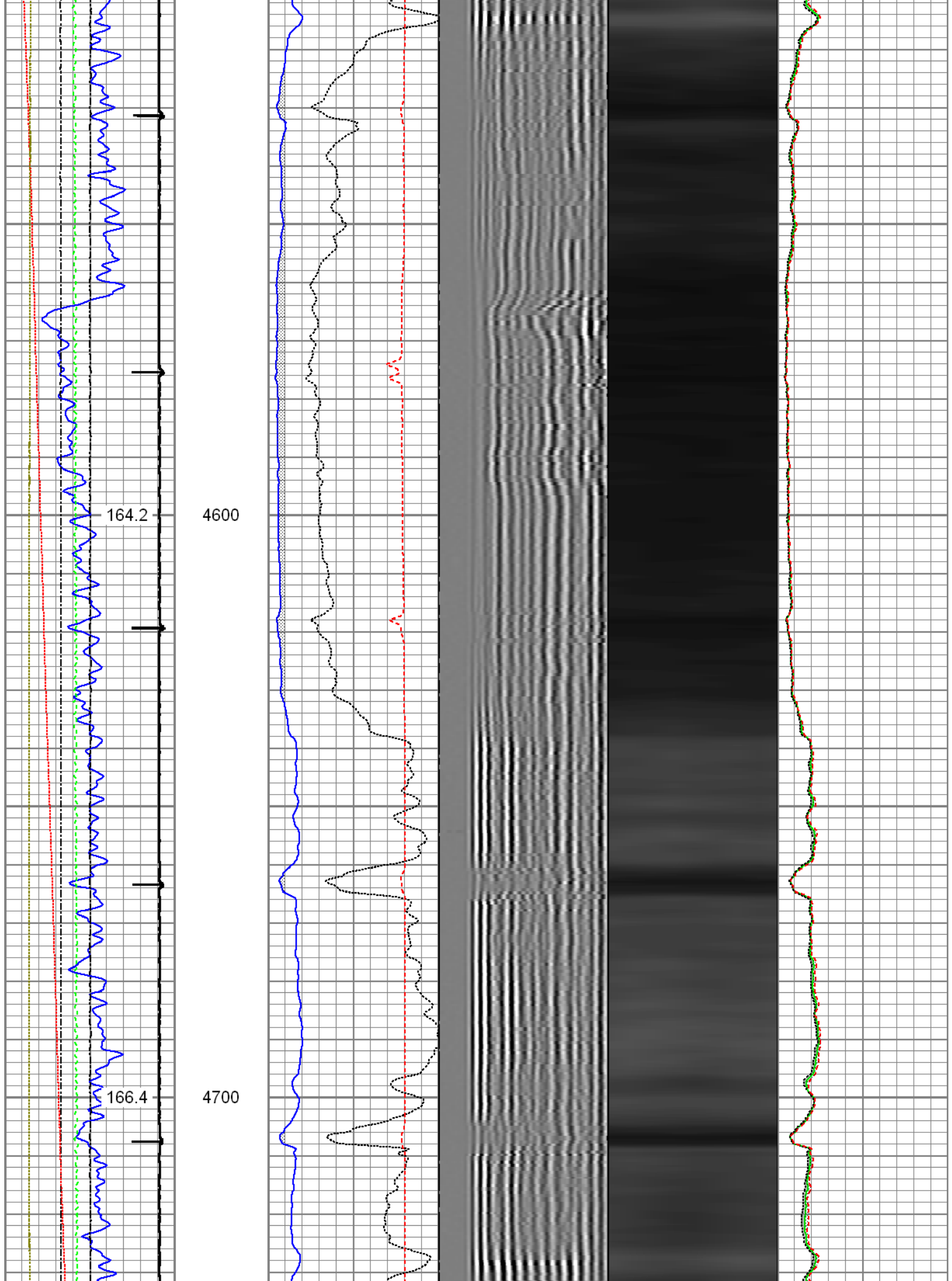


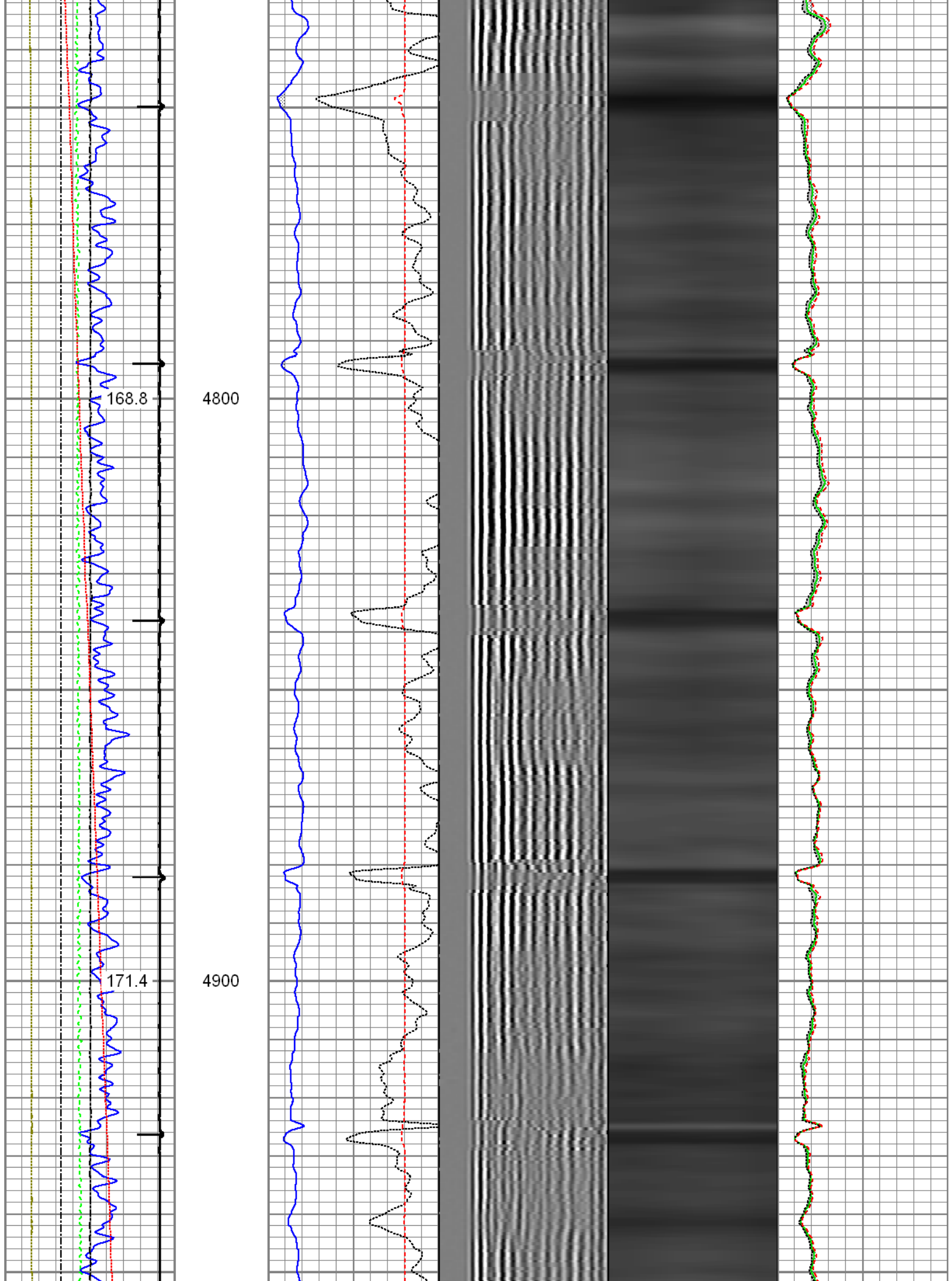


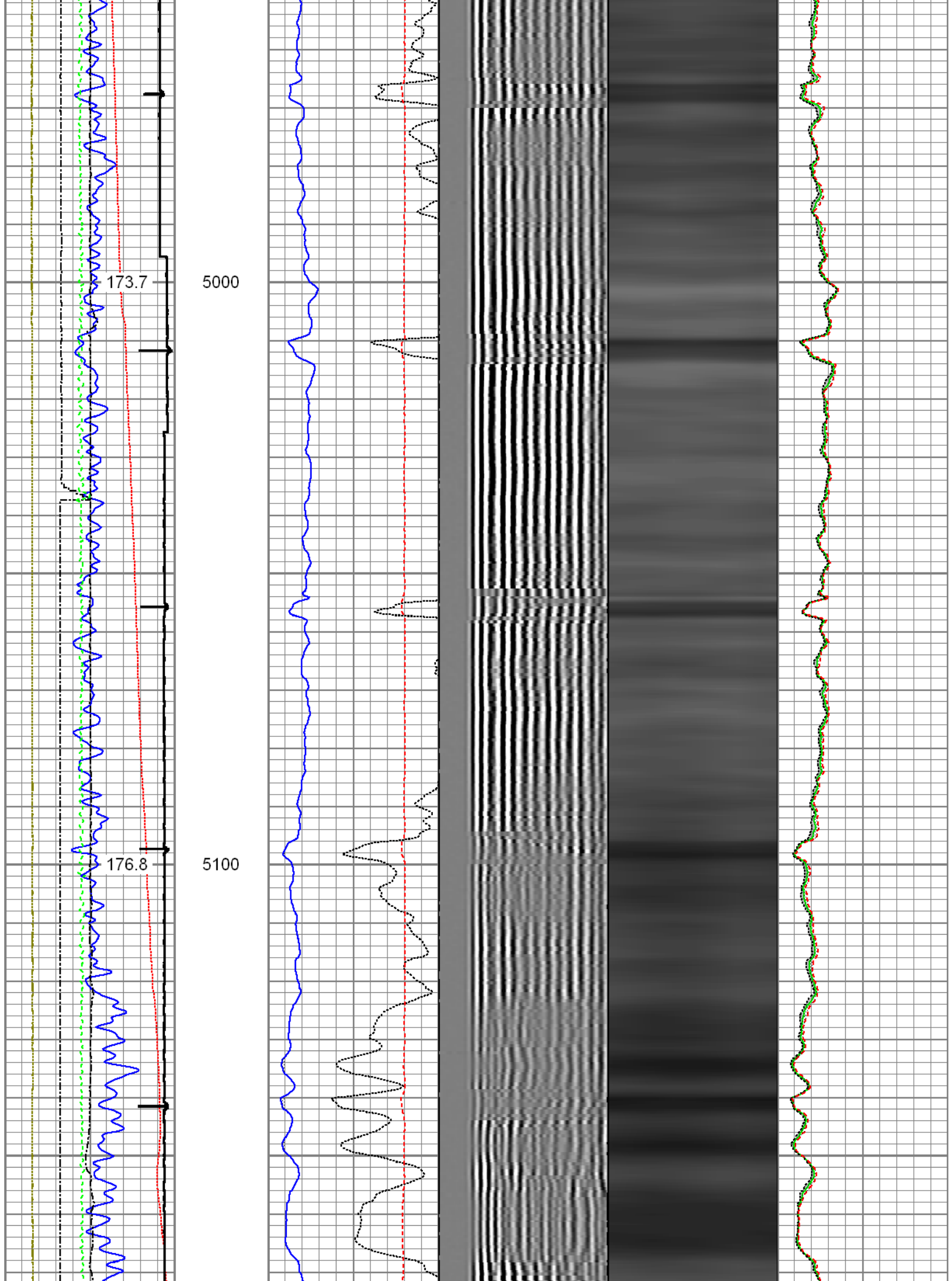


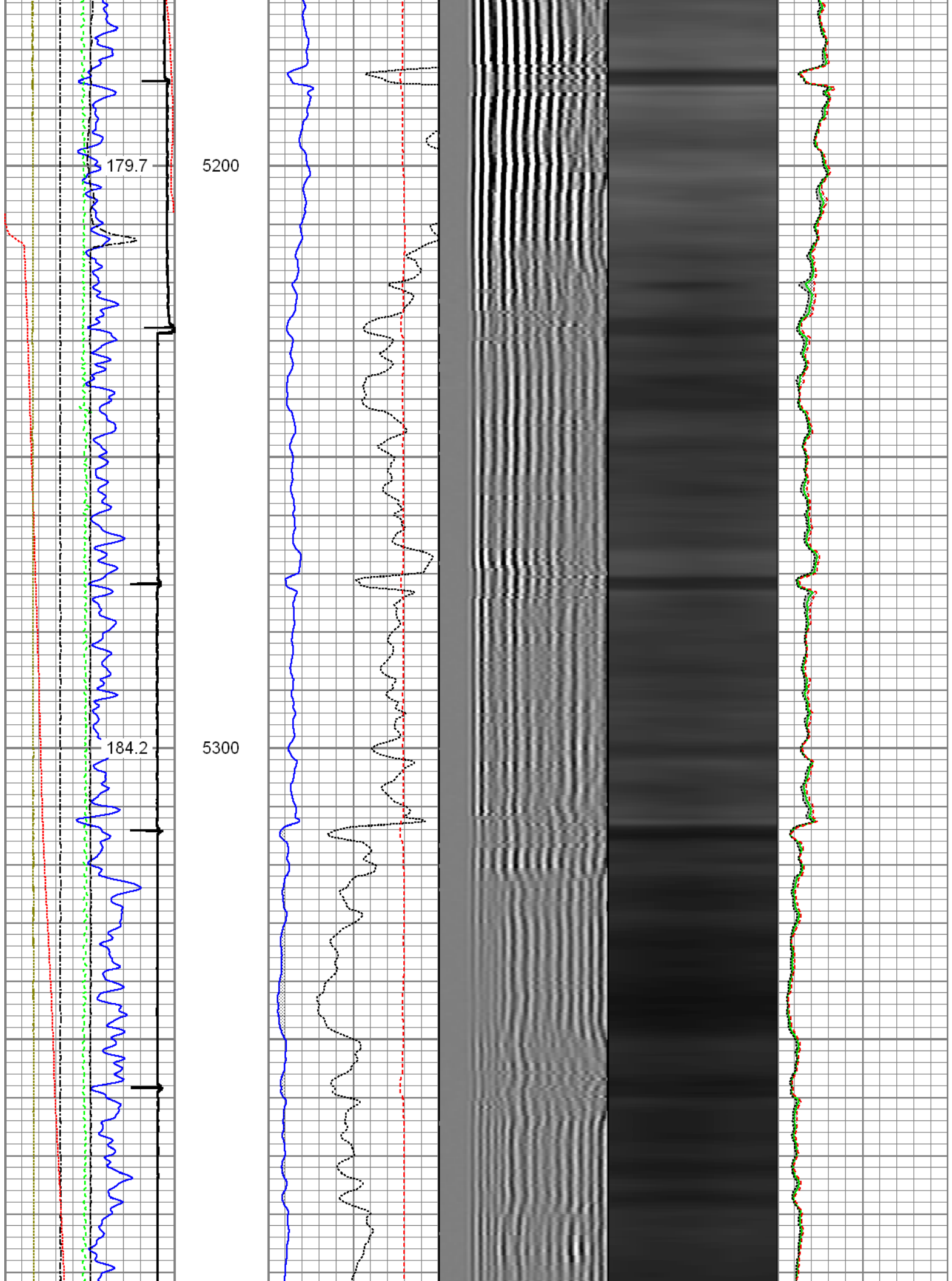


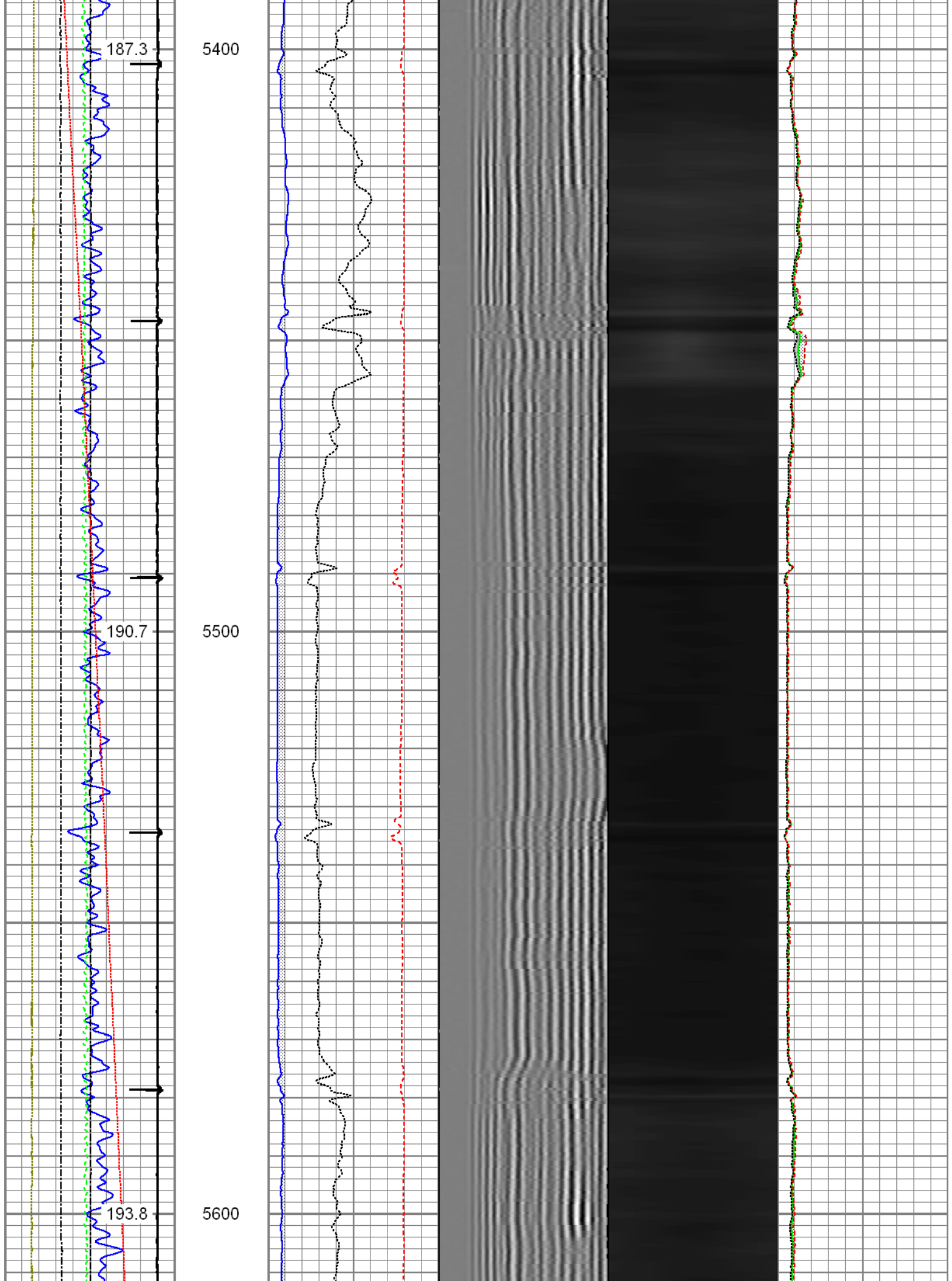


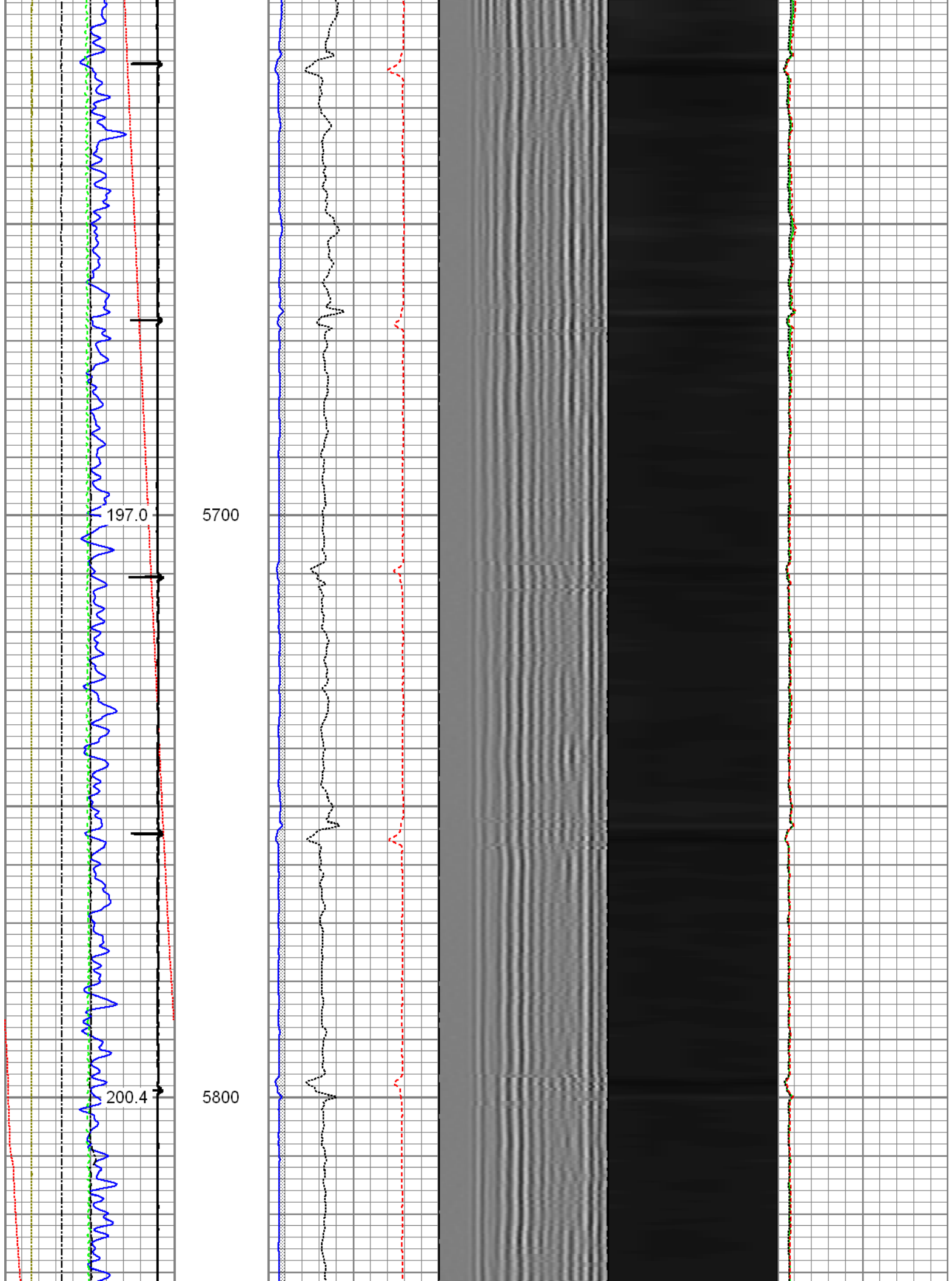


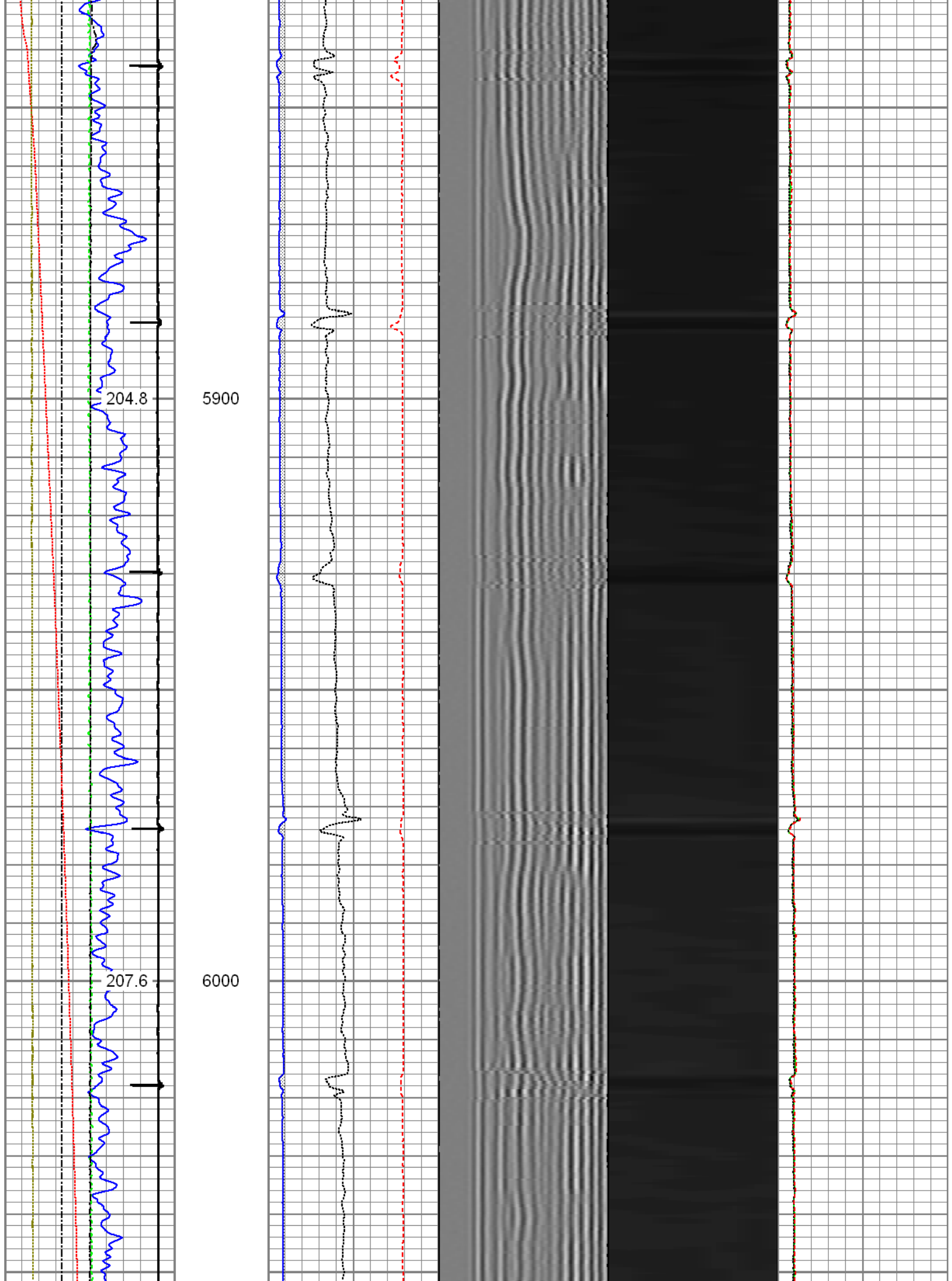


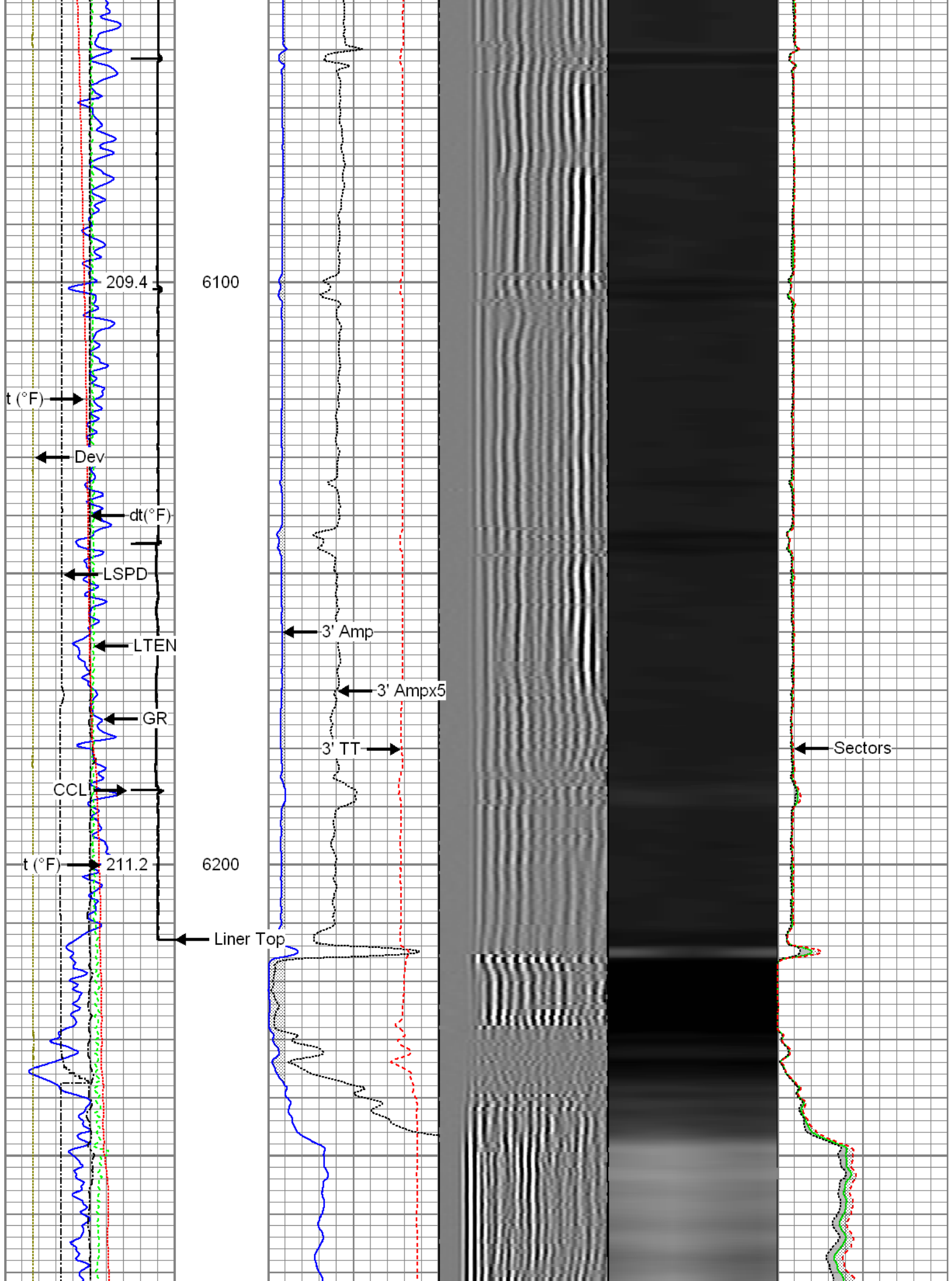


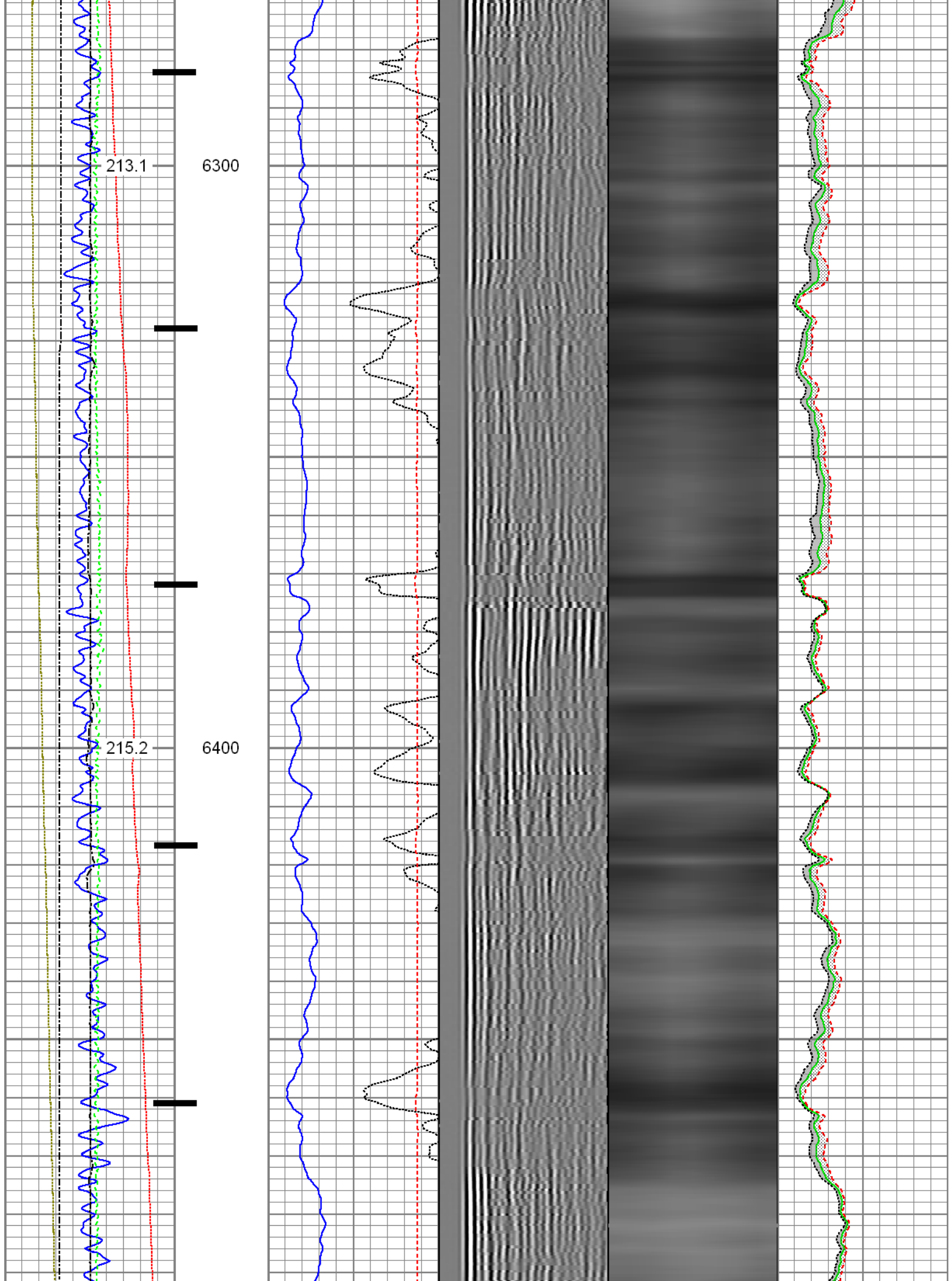


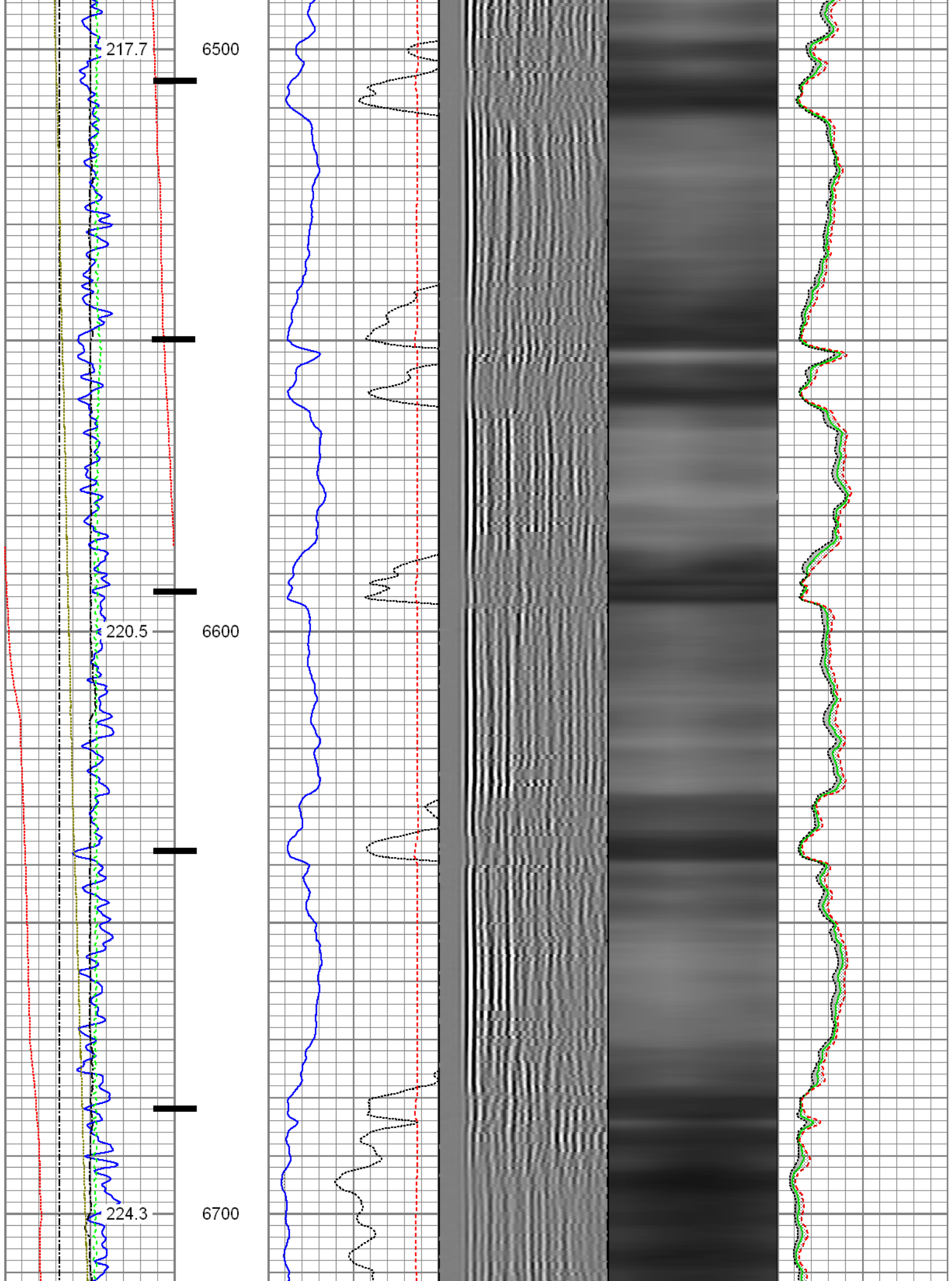


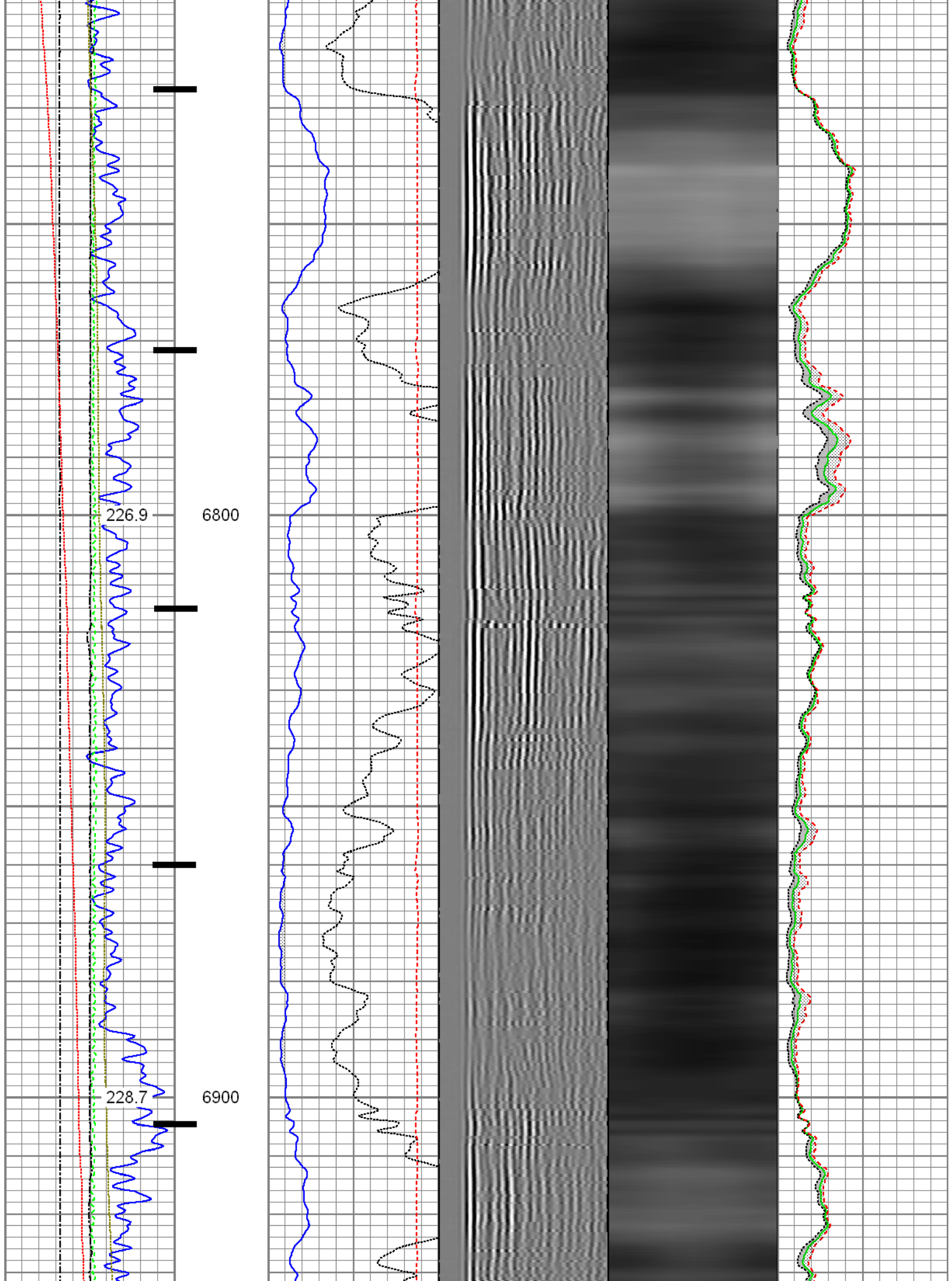


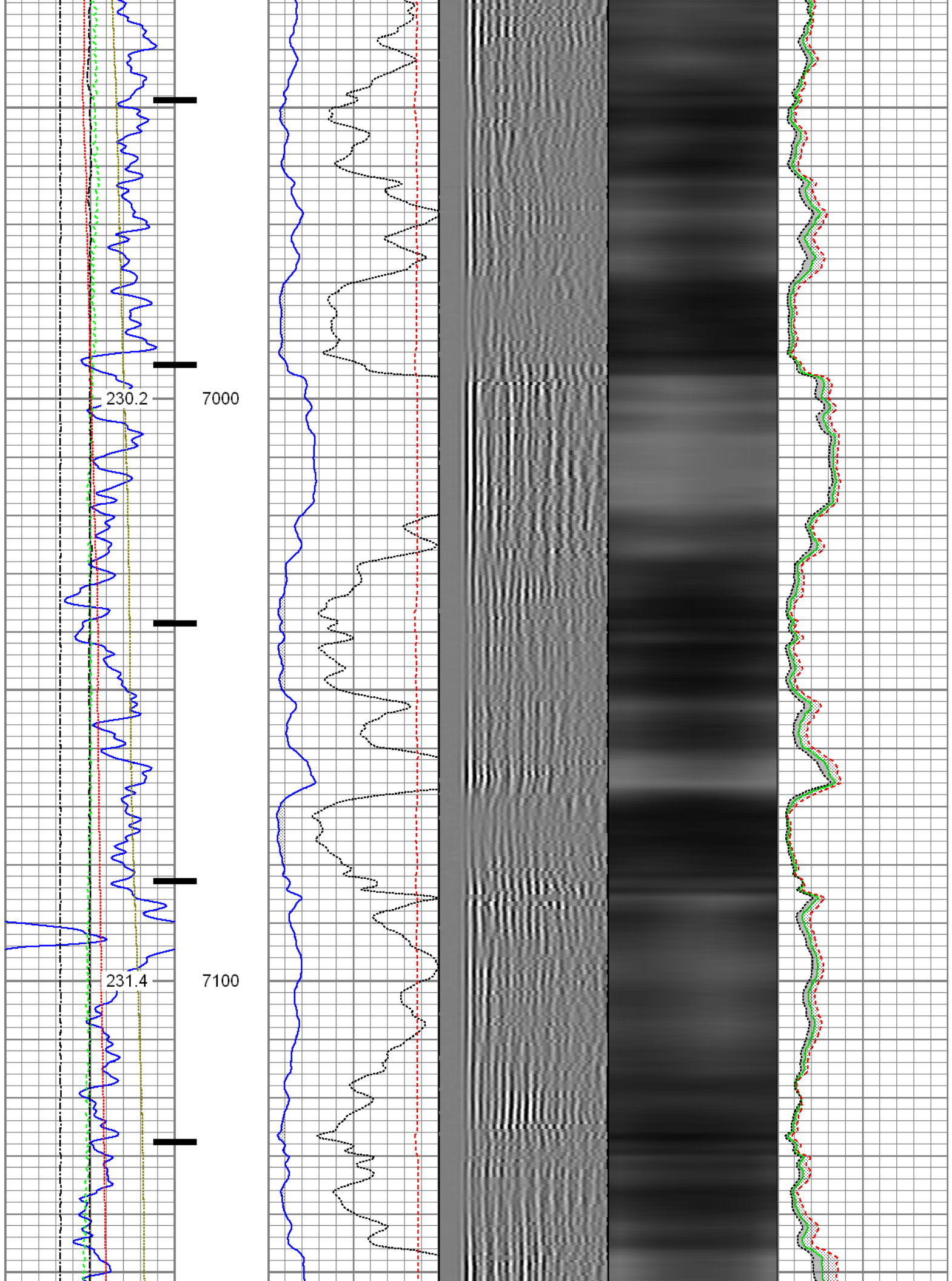




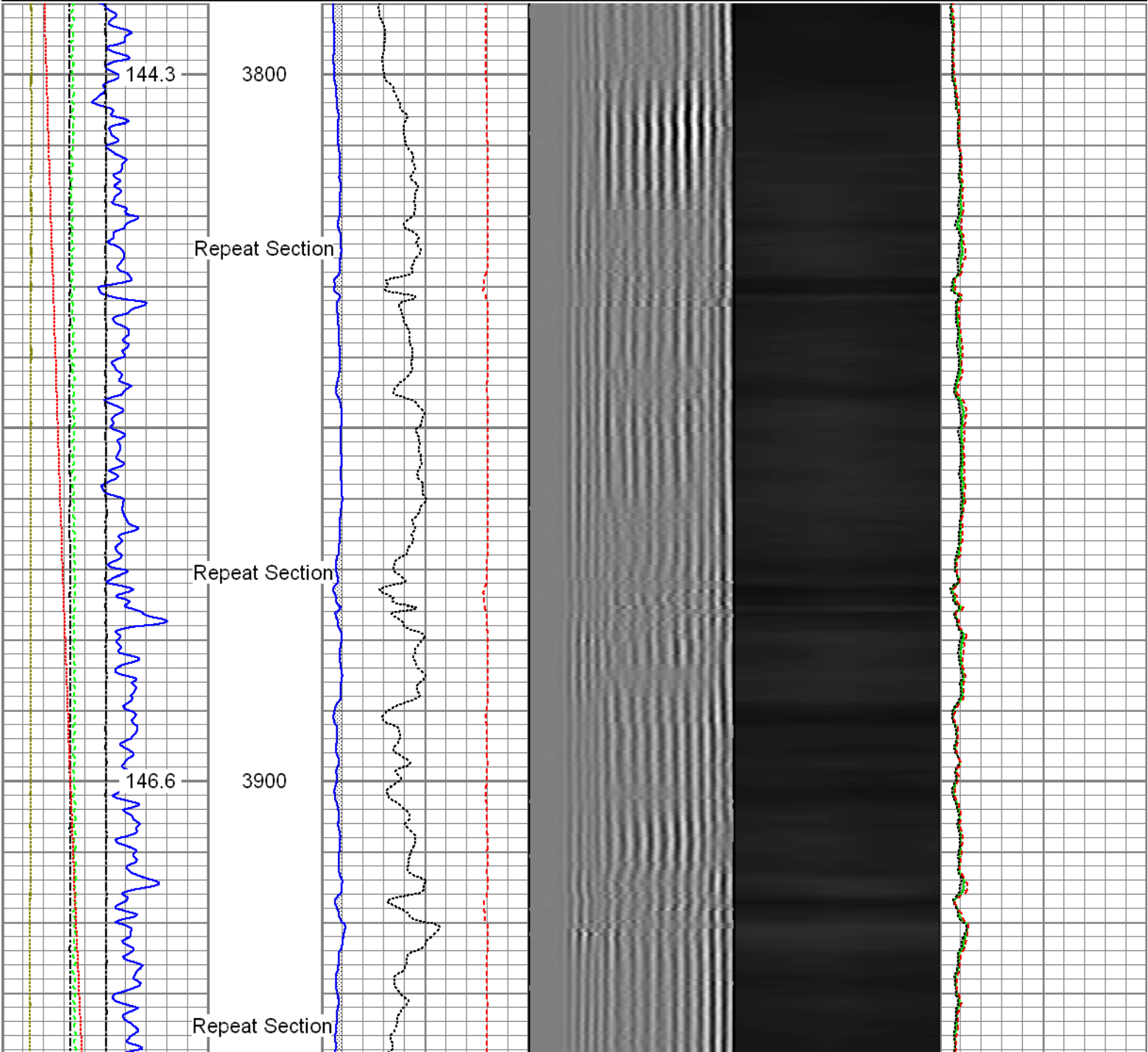


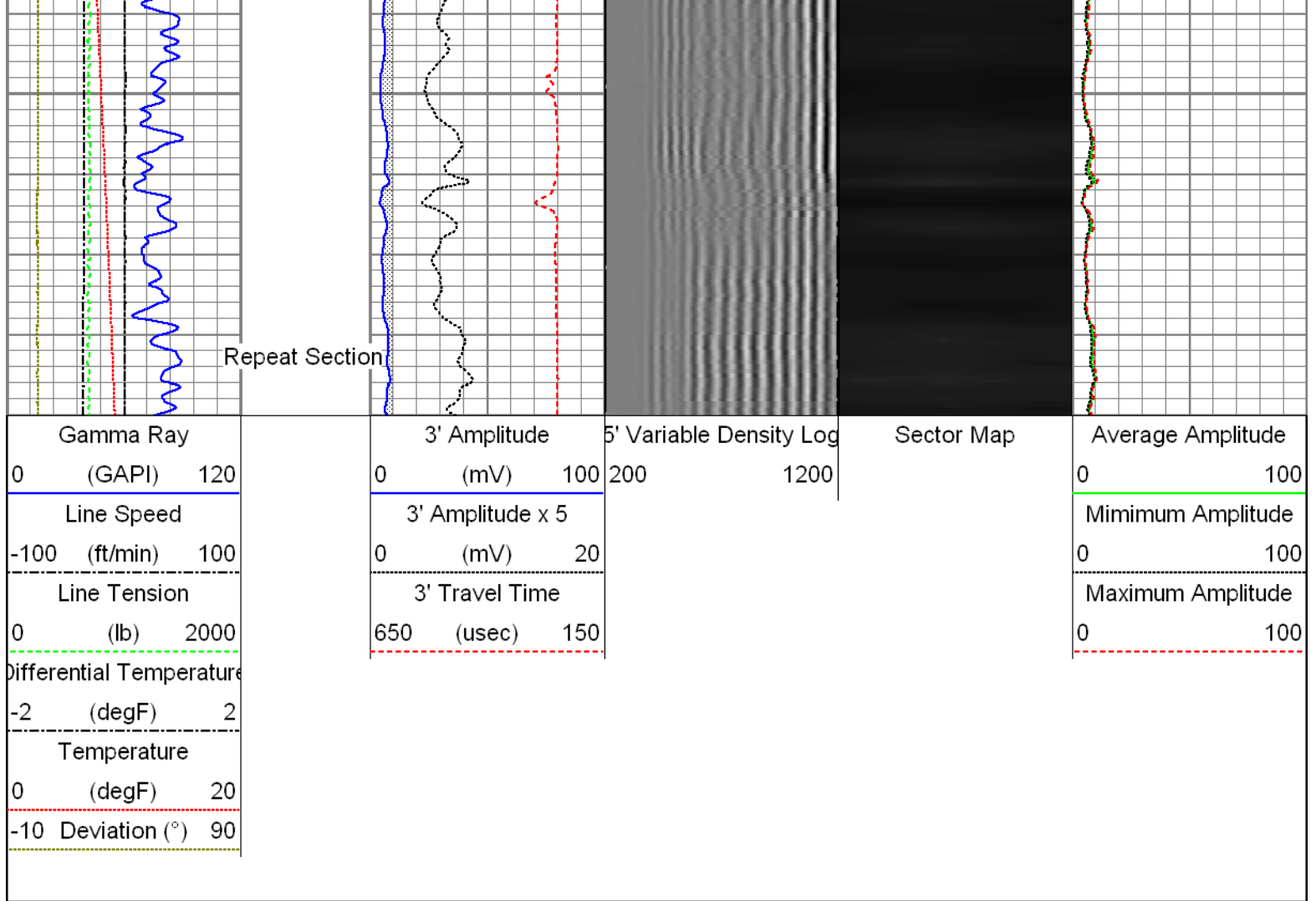




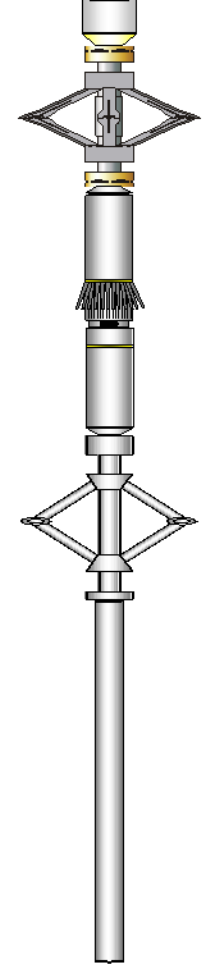


| | | | | |
|--------------------------|------------------|-------------------------|------------|-------------------|
| Gamma Ray | 3' Amplitude | 5' Variable Density Log | Sector Map | Average Amplitude |
| 0 (GAPI) 120 | 0 (mV) 100 | 200 1200 | | 0 100 |
| Line Speed | 3' Amplitude x 5 | | | Minimum Amplitude |
| -100 (ft/min) 100 | 0 (mV) 20 | | | 0 100 |
| Line Tension | 3' Travel Time | | | Maximum Amplitude |
| 0 (lb) 2000 | 650 (usec) 150 | | | 0 100 |
| Differential Temperature | | | | |
| -2 (degF) 2 | | | | |
| Temperature | | | | |
| 0 (degF) 20 | | | | |
| -10 Deviation (°) 90 | | | | |





| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|--|---|-----------|--|----------|---------|---------|
| GR TEMP | 30.24 28.84 | | T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck | 1.03 | 1.44 | 4.00 |
| | | | UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin | 0.21 | 1.69 | 1.00 |
| | | | UW_XTU-UW_XTU_002 (219135) Crossover Ultrawire Toolbus to Ultralink | 1.58 | 1.69 | 6.50 |
| | | | UW_PGR-UW_PGR_020 (10013902) Production Gamma Ray | 1.93 | 1.69 | 9.50 |
| | | | UW_PRT-UW_PRT_016 (10025100) Platinum Resistance Thermometer | 1.04 | 1.69 | 5.20 |
| | | | UW_PRC-DSSRAC (081) 2-3/4" DSS 5 Arm Roller Centralizer | 2.55 | 2.75 | 32.00 |
| WVF3FT WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 | 21.81 21.81 21.81 21.81 21.81 21.81 21.81 | | UW_RBT-UW_RBT_004 (1063) Sondex Ultrawire 3-1/8" Radial Bond Tool | 9.47 | 3.13 | 140.00 |

| | | | | | | |
|---|-------|---|---|------|------|-------|
| WVFS7 | 21.81 |  | UW_PRC-DSSRAC (082) 2-3/4" DSS 5 Arm Roller Centralizer | 2.55 | 2.75 | 32.00 |
| WVFS8 | 21.81 | | | | | |
| CBLTEMP | 21.81 | | | | | |
| CBLROT | 21.81 | | | | | |
| WVF5FT | 20.81 | | | | | |
| MIT | 11.80 | | UW_MIT-UW_MIT40_027 (218949) 40 Multifinger Imaging Tool | 4.54 | 2.75 | 61.10 |
| | | | UW_PRC #4 -UW_PRC_057 (1038) Sondex 2-3/4" 4-Arm Production Roller Centraliser | 2.98 | 2.75 | 32.00 |
| | | | CNL-007 (1004) Compensated Neutron Logging Tool | 6.61 | 1.69 | 30.00 |
| CNLSC | 1.53 | | | | | |
| CNSSC | 1.12 | | | | | |
| TSTAMP | 0.00 | | | | | |
| Dataset: 0512341653_Anadarko_Viper Pyro 41N-14HZR_10-13-15_MIT_RBL_CNL.db: field/well/run1/pass5 Total Length: 34.48 ft Total Weight: 353.30 lb O.D. 3.13 in | | | | | | |

| | | | |
|--|--|----------------|--|
| Calibration Report | | | |
| Database File: | c:\warrior\data\0512341653_anadarko_viper pyro 41n-14hzh_10-13-15_mit_rbl_cnl\0512341653_anada | | |
| Dataset Pathname: | 5.1 | | |
| Dataset Creation: | Tue Oct 13 14:28:47 2015 | | |
| Compensated Neutron Calibration Report | | | |
| Serial Number: | 1004 | | |
| Tool Model: | 007 | | |
| Master Calibration | Tue Jun 03 14:35:57 2014 | | |
| Detector | Readings | | |
| Short Space | 241.46 | cps | |
| Long Space | 300.95 | cps | |
| Ratio | Measured | Reference | |
| CNRAT Gain K | 0.8150 | Sleeve: 1.0000 | |
| | 1.0158 | | |
| Before Survey | | | |
| Detector | Readings | | |
| Short Space | | cps | |
| Long Space | | cps | |
| | Measured | Reference | |

| | | |
|--------------|----------|-----------|
| Ratio | Measured | Reference |
| After Survey | | |
| Detector | Readings | |
| Short Space | | cps |
| Long Space | | cps |
| | Measured | Reference |
| Ratio | | |

Multi-finger Imaging Tool Calibration Report

| | |
|--------------------|--------------|
| Serial Number: | 218949 |
| Number of Fingers: | 40 |
| Tool Model: | UW_MIT40_027 |

| | | | |
|---------------------------------|----------------------------|-------|--|
| Inclinometer Calibration Report | | | |
| Performed: | Mon, Oct, 06 14:03:04 2008 | | |
| Calibration Angle: | 45 | | |
| | Inc X | Inc Y | |
| Vertical: | 1996 | 1984 | |
| Finger 1 up: | 1780 | 1738 | |
| Finger 31 up: | 2235 | 1756 | |
| Finger 21 up: | 2216 | 2228 | |
| Finger 11 up: | 1736 | 2196 | |
| Sensitivity ratio: | 1.0062 | | |
| X-axis angle: | 131.534 | | |
| Deviation const.: | 331.322 | | |

| | | | | | | | |
|---------------------------|------|-------|------|--------------------------|------|-------|------|
| Finger Calibration Report | | | | | | | |
| Performed: | | | | Tue Oct 13 09:09:28 2015 | | | |
| Ring size: | 4 | 5 | 6 | 7 | | | |
| (in) | | | | | | | |
| | Sens | Sens | Sens | | | | |
| Finger 01: | 1370 | 270.0 | 1640 | 295.0 | 1935 | 312.0 | 2247 |
| Finger 02: | 1436 | 266.0 | 1702 | 288.0 | 1990 | 312.0 | 2302 |
| Finger 03: | 1647 | 270.0 | 1917 | 282.0 | 2199 | 292.0 | 2491 |
| Finger 04: | 1656 | 268.0 | 1924 | 279.0 | 2203 | 285.0 | 2488 |
| Finger 05: | 1523 | 252.0 | 1775 | 268.0 | 2043 | 282.0 | 2325 |
| Finger 06: | 1513 | 252.0 | 1765 | 262.0 | 2027 | 273.0 | 2300 |
| Finger 07: | 1329 | 263.0 | 1592 | 284.0 | 1876 | 302.0 | 2178 |
| Finger 08: | 1522 | 250.0 | 1772 | 262.0 | 2034 | 275.0 | 2309 |
| Finger 09: | 1393 | 266.0 | 1659 | 280.0 | 1939 | 300.0 | 2239 |
| Finger 10: | 1471 | 258.0 | 1729 | 274.0 | 2003 | 286.0 | 2289 |
| Finger 11: | 1457 | 253.0 | 1710 | 271.0 | 1981 | 284.0 | 2265 |
| Finger 12: | 1301 | 271.0 | 1572 | 294.0 | 1866 | 311.0 | 2177 |
| Finger 13: | 1560 | 276.0 | 1836 | 287.0 | 2123 | 295.0 | 2418 |
| Finger 14: | 1435 | 281.0 | 1716 | 298.0 | 2014 | 307.0 | 2321 |
| Finger 15: | 1521 | 261.0 | 1782 | 273.0 | 2055 | 286.0 | 2341 |
| Finger 16: | 1388 | 280.0 | 1668 | 295.0 | 1963 | 311.0 | 2274 |
| Finger 17: | 1628 | 272.0 | 1900 | 279.0 | 2179 | 286.0 | 2465 |
| Finger 18: | 1367 | 289.0 | 1656 | 307.0 | 1963 | 326.0 | 2289 |
| Finger 19: | 1632 | 262.0 | 1894 | 261.0 | 2155 | 266.0 | 2421 |
| Finger 20: | 1501 | 269.0 | 1770 | 275.0 | 2045 | 295.0 | 2340 |
| Finger 21: | 1588 | 256.0 | 1844 | 260.0 | 2104 | 270.0 | 2374 |
| Finger 22: | 1460 | 272.0 | 1732 | 304.0 | 2036 | 274.0 | 2310 |
| Finger 23: | 1348 | 282.0 | 1630 | 292.0 | 1922 | 305.0 | 2227 |
| Finger 24: | 1683 | 269.0 | 1952 | 274.0 | 2226 | 279.0 | 2505 |
| Finger 25: | 1365 | 298.0 | 1663 | 311.0 | 1974 | 324.0 | 2298 |
| Finger 26: | 1538 | 297.0 | 1835 | 300.0 | 2135 | 309.0 | 2444 |
| Finger 27: | 1484 | 268.0 | 1752 | 274.0 | 2026 | 283.0 | 2309 |
| Finger 28: | 1642 | 280.0 | 1922 | 287.0 | 2209 | 291.0 | 2500 |
| Finger 29: | 1473 | 283.0 | 1755 | 291.0 | 2046 | 294.0 | 2350 |

| | | | | | | | |
|------------|------|-------|------|-------|------|-------|------|
| Finger 29: | 1473 | 282.0 | 1733 | 291.0 | 2046 | 304.0 | 2330 |
| Finger 30: | 1430 | 279.0 | 1709 | 296.0 | 2005 | 303.0 | 2308 |
| Finger 31: | 1533 | 272.0 | 1805 | 281.0 | 2086 | 289.0 | 2375 |
| Finger 32: | 1350 | 272.0 | 1622 | 285.0 | 1907 | 299.0 | 2206 |
| Finger 33: | 1612 | 307.0 | 1919 | 312.0 | 2231 | 321.0 | 2552 |
| Finger 34: | 1543 | 273.0 | 1816 | 279.0 | 2095 | 288.0 | 2383 |
| Finger 35: | 1445 | 263.0 | 1708 | 282.0 | 1990 | 296.0 | 2286 |
| Finger 36: | 1591 | 277.0 | 1868 | 292.0 | 2160 | 300.0 | 2460 |
| Finger 37: | 1604 | 267.0 | 1871 | 284.0 | 2155 | 298.0 | 2453 |
| Finger 38: | 1489 | 271.0 | 1760 | 284.0 | 2044 | 300.0 | 2344 |
| Finger 39: | 1456 | 271.0 | 1727 | 292.0 | 2019 | 311.0 | 2330 |
| Finger 40: | 1580 | 274.0 | 1854 | 293.0 | 2147 | 310.0 | 2457 |

Segmented Cement Bond Log Calibration Report

Serial Number:

1063

Tool Model:

UW_RBT_004

Calibration Casing Diameter:

7.000

in

Calibration Depth:

-0.550

ft

Master Calibration, performed Tue Oct 13 09:00:25 2015:

| | Raw (v) | | Calibrated (mv) | | Results | |
|-----|---------|-------|-----------------|---------|---------|--------|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3FT | -0.003 | 1.000 | 0.800 | 62.165 | 61.173 | 0.992 |
| 5FT | -0.006 | 1.000 | 0.800 | 62.165 | 60.993 | 1.172 |
| S1 | -0.004 | 1.000 | 0.000 | 100.000 | 99.635 | 0.365 |
| S2 | -0.003 | 1.000 | 0.000 | 100.000 | 99.652 | 0.348 |
| S3 | -0.004 | 1.000 | 0.000 | 100.000 | 99.635 | 0.365 |
| S4 | -0.004 | 1.000 | 0.000 | 100.000 | 99.635 | 0.365 |
| S5 | -0.003 | 1.000 | 0.000 | 100.000 | 99.686 | 0.314 |
| S6 | -0.003 | 1.000 | 0.000 | 100.000 | 99.680 | 0.320 |
| S7 | -0.003 | 1.000 | 0.000 | 100.000 | 99.737 | 0.263 |
| S8 | -0.003 | 1.000 | 0.000 | 100.000 | 99.687 | 0.313 |

Temperature Calibration Report

Serial Number:

10025100

Tool Model:

UW_PRT_016

Performed:

Wed Feb 11 13:47:59 2015

| Point # | Reading | | | Reference | |
|---------|----------|-----|--|-----------|------|
| 1 | 13249.00 | cps | | 68.00 | degF |
| 2 | 18454.00 | cps | | 104.00 | degF |
| 3 | 29735.00 | cps | | 176.00 | degF |
| 4 | 41457.00 | cps | | 248.00 | degF |
| 5 | 52851.00 | cps | | 320.00 | degF |
| 6 | 59128.00 | cps | | 356.00 | degF |
| 7 | | cps | | | degF |
| 8 | | cps | | | degF |
| 9 | | cps | | | degF |
| 10 | | cps | | | degF |

Gamma Ray Calibration Report

Serial Number:

10013902

Tool Model:

UW_PGR_020

Performed:

Sun Jun 13 13:33:21 1993

Calibrator Value:

1.0

GAPI

| | | |
|---------------------|--------|----------|
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 1.0000 | GAPI/cps |

| | | |
|--|---------|------------------------------------|
|  | Company | Kerr-McGee Oil & Gas Onshore, L.P. |
| | Well | Viper Pyro 41N-14HZR |
| | Field | Wattenberg |
| | County | Weld |
| | State | Colorado |