



County Weld State Colorado

K.B.	4995
D.F.	---
G.L.	4974

3	---
4 1/2	11.6

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.

Log ran as per customer request
Depth referenced to Casing Tally reported Liner Top at 5771 FT
Adjusted -2 FT to correlate with Liner Top
Gauge Ring/Junk Basket ran to 7715 FT with no debris
Log ran from as deep as possible in heel to Surface
Recorded with 2800 PSI Surface Induced Pressure
Logging tools were clean and free of any debris upon completion of operations

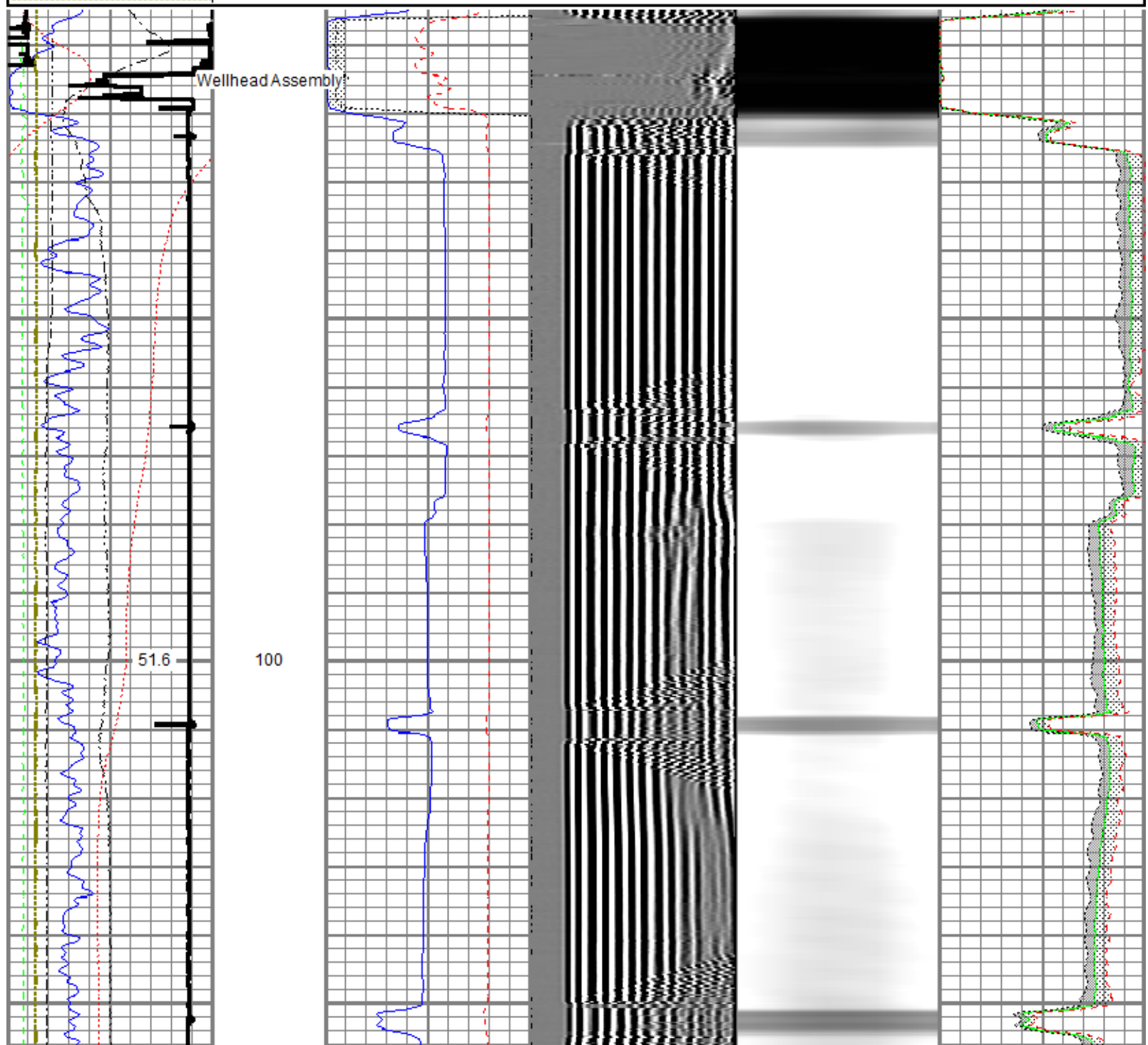
Thank you for choosing Reliance Oilfield Services, LLC!!

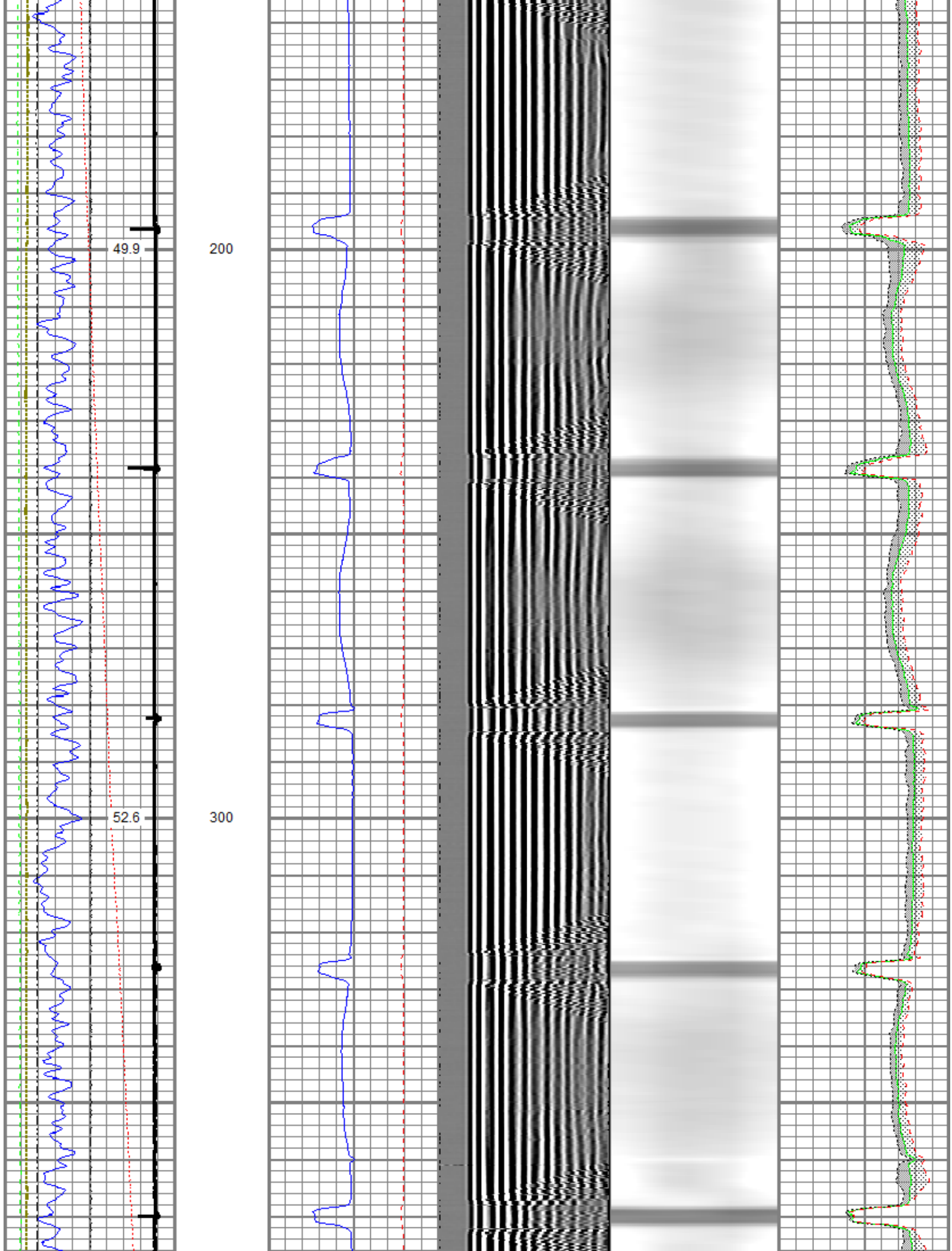
Main Pass

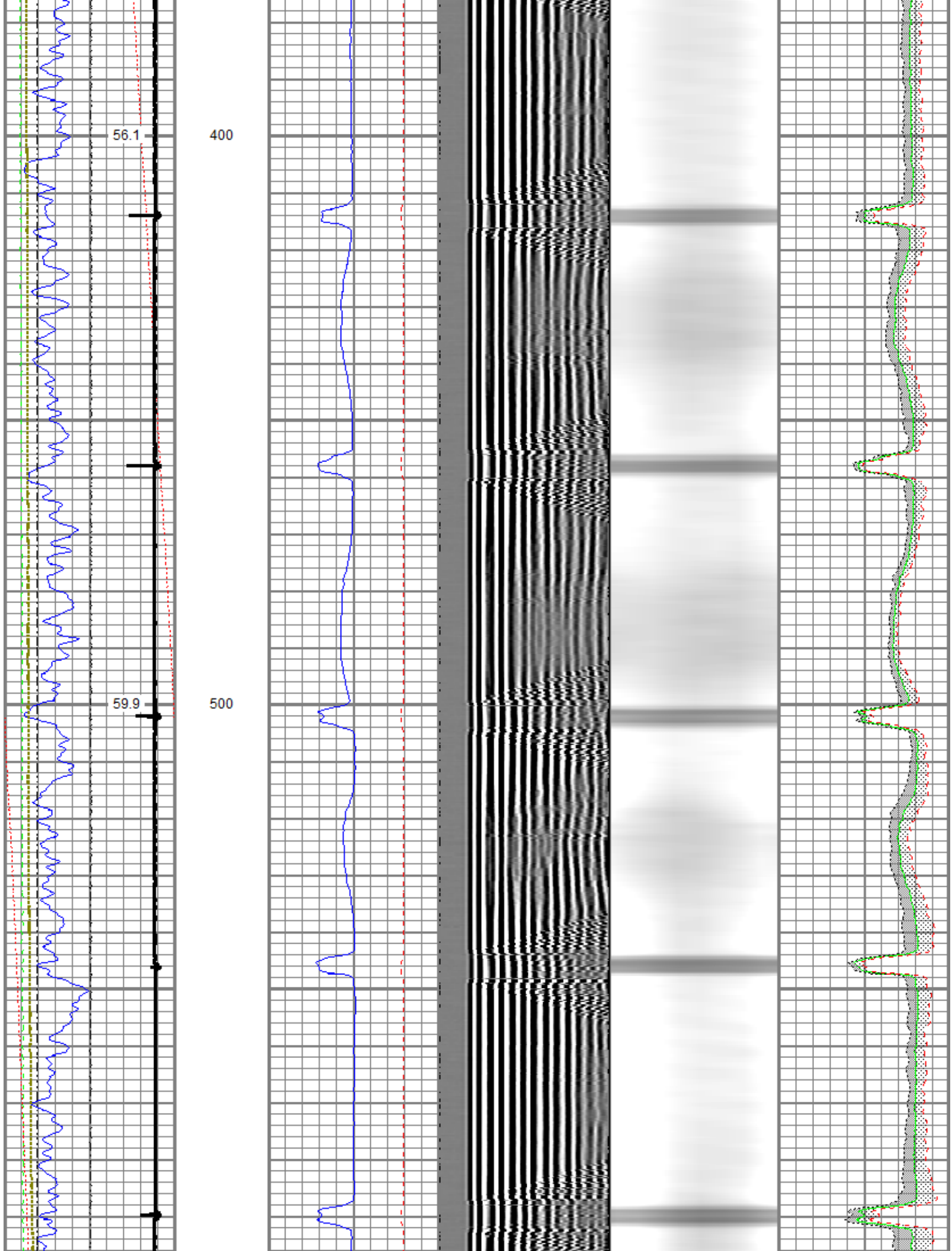


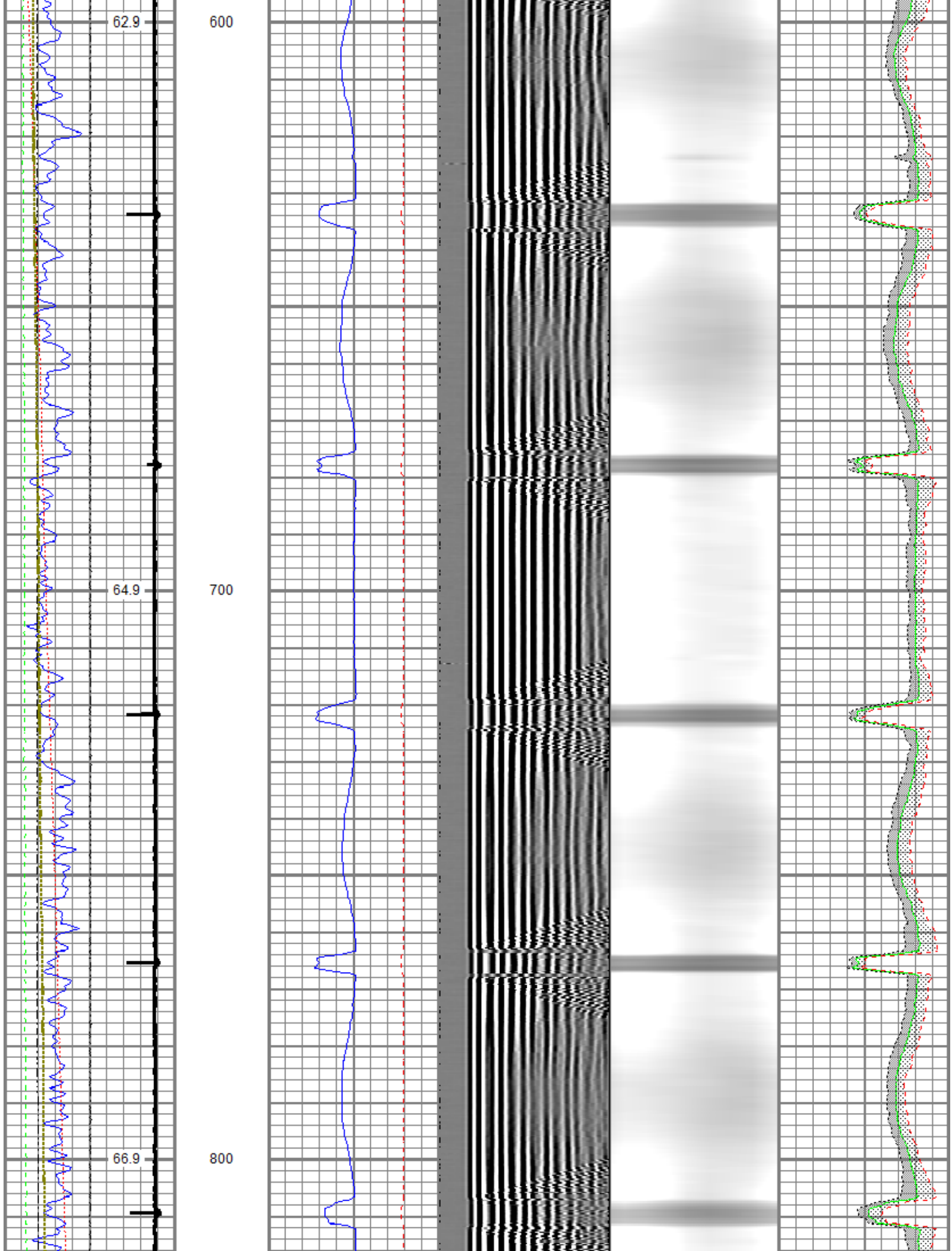
Database File	0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17\processed_0512343469_anadarko_wagner 28n-e10hz_mit_rbl
Dataset Pathname	pass4.2
Presentation Format	ros_rbt_mit_sx
Dataset Creation	Sat Dec 30 22:07:46 2017
Charted by	Depth in Feet scaled 1:240

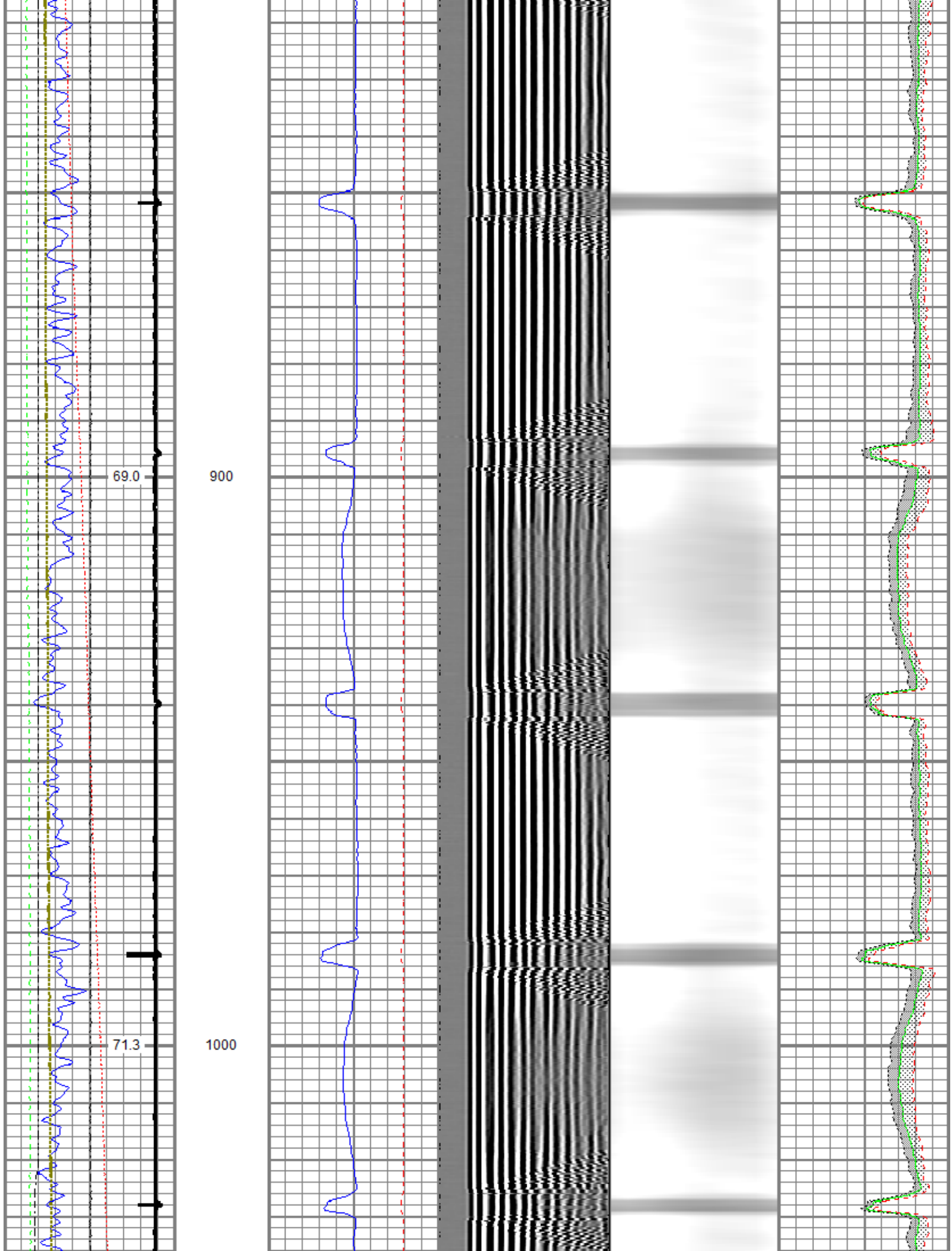
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Line Speed	0	(mV) 20			0	100
(ft/min) 100		3' Travel Time				Maximum Amplitude
Line Tension (lb) 2000	0	650 (usec) 150			0	100
Differential Temperature			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

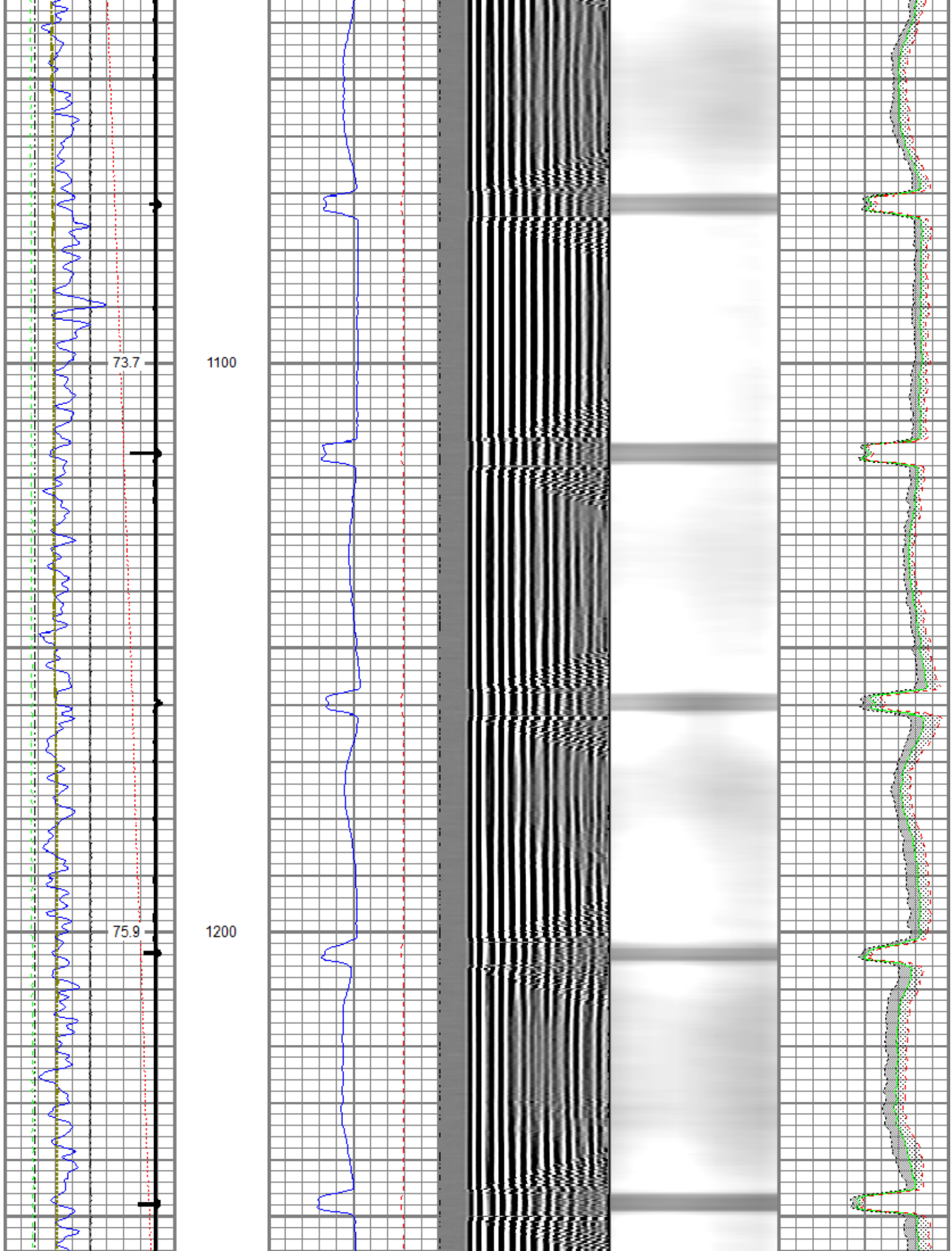


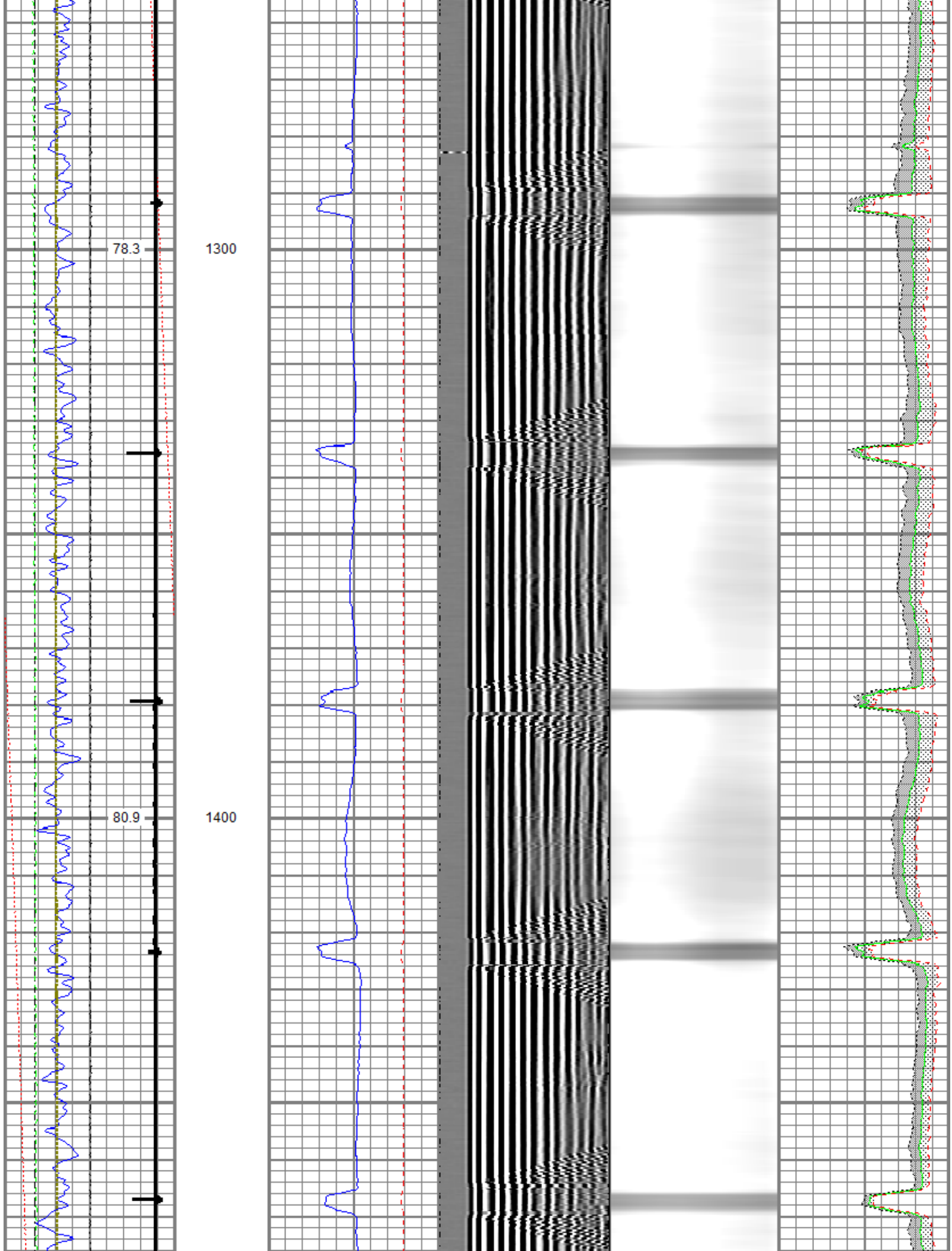


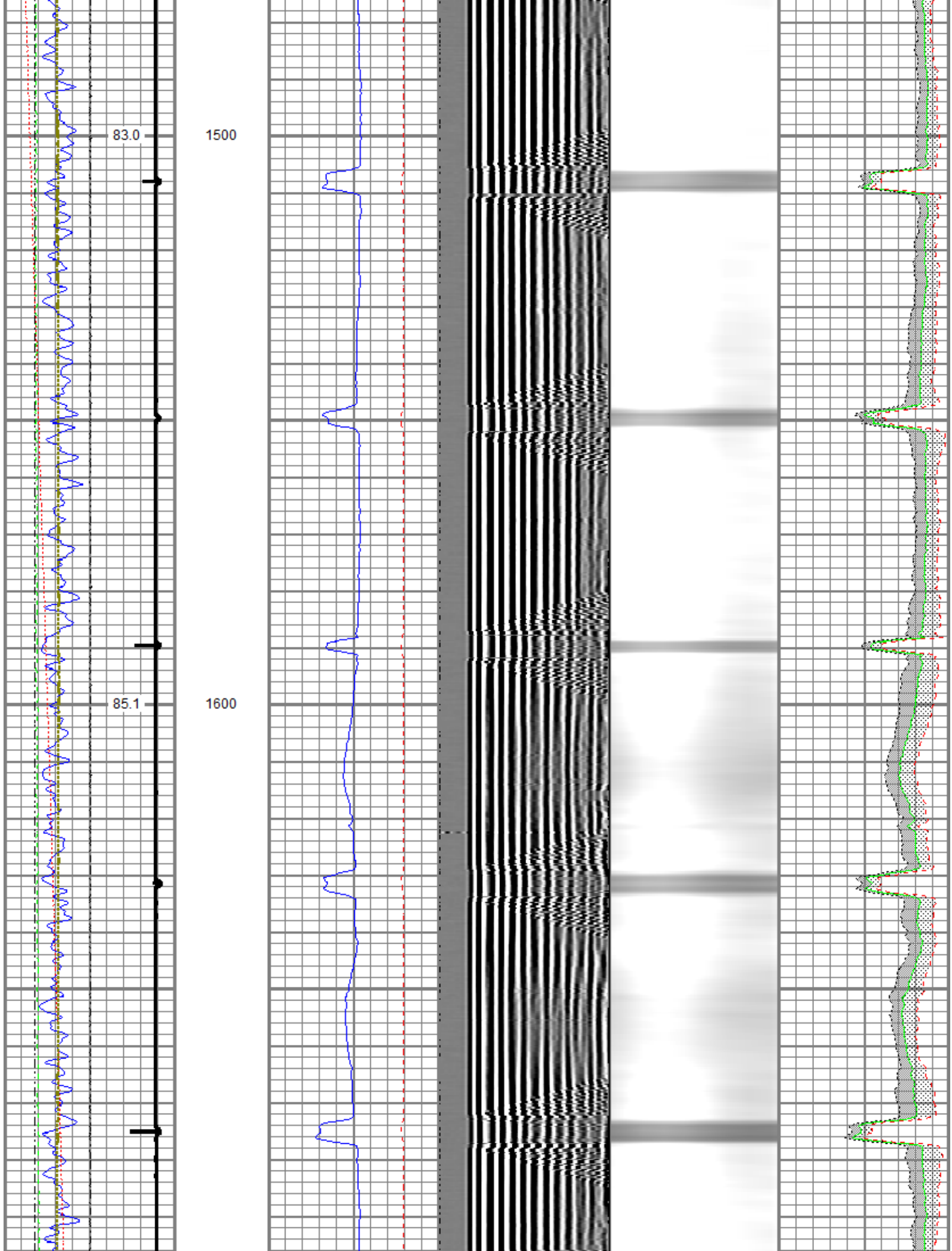


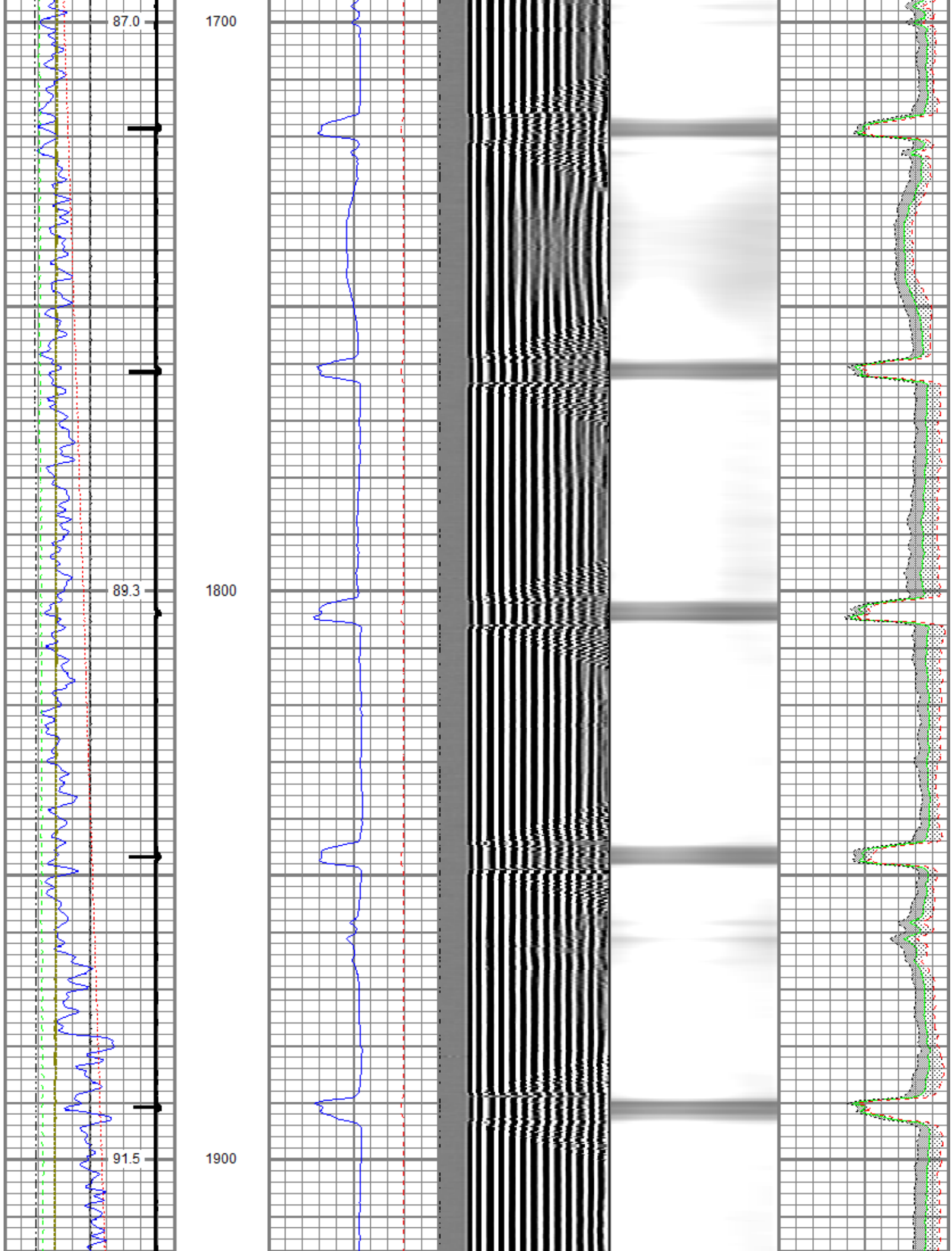


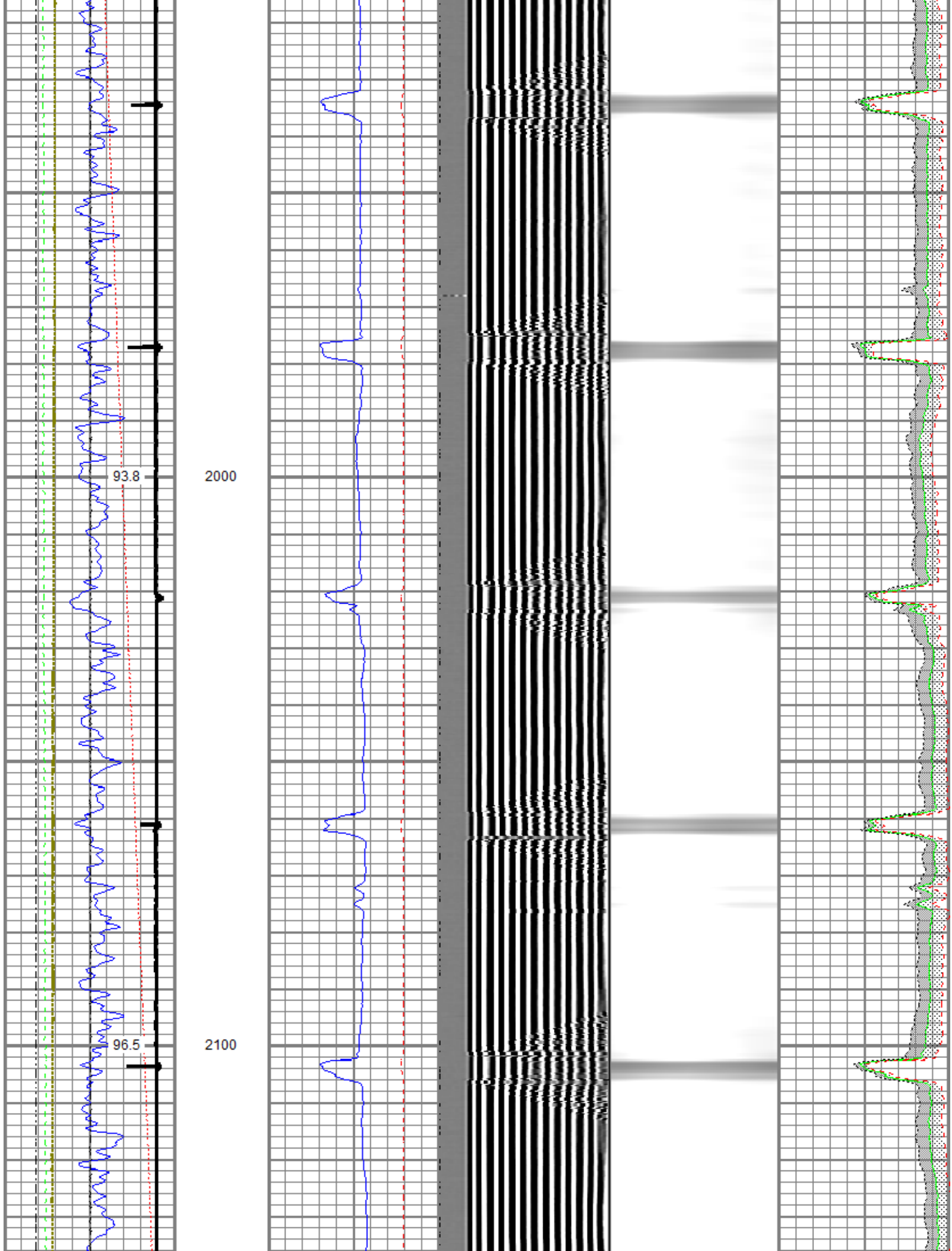


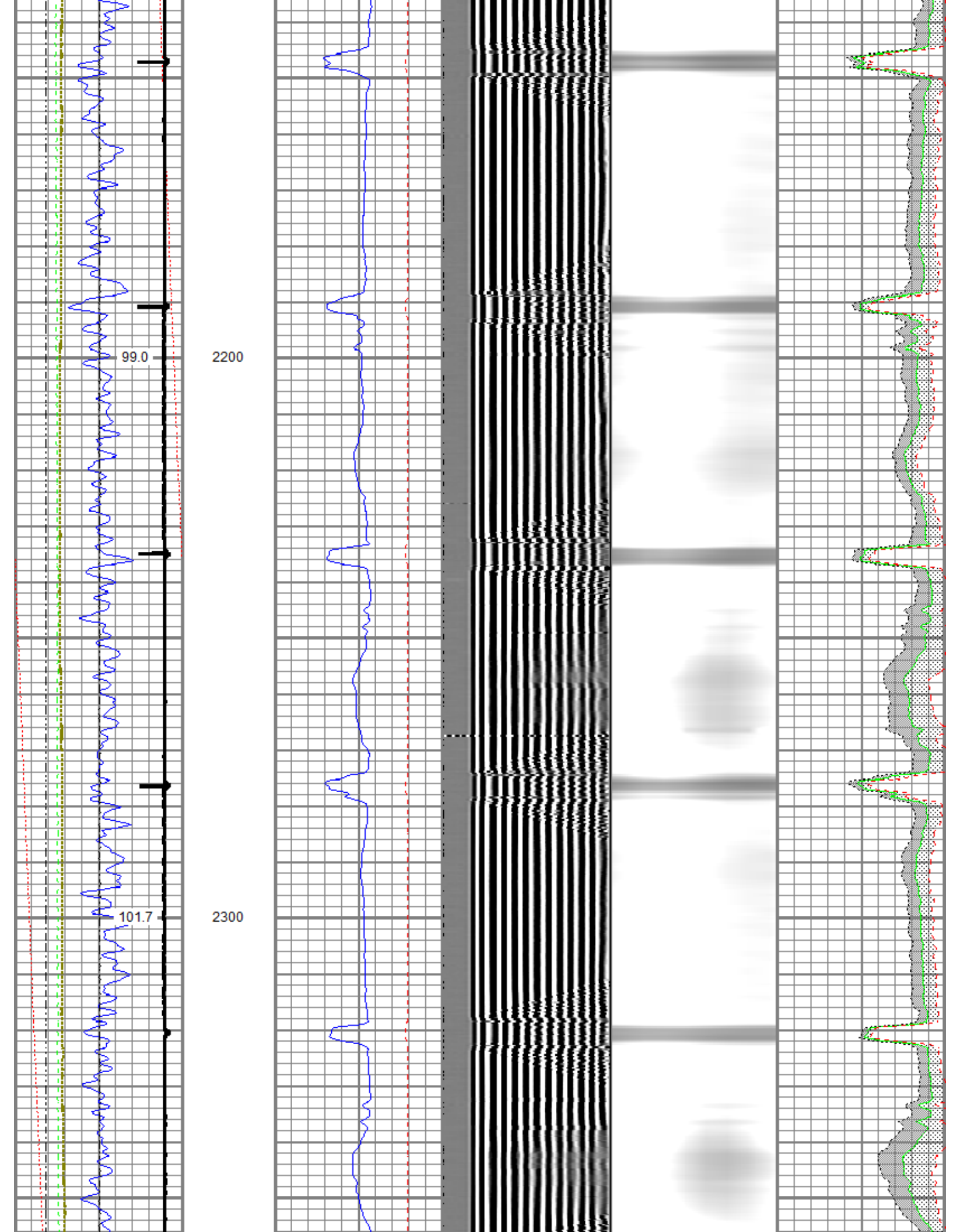


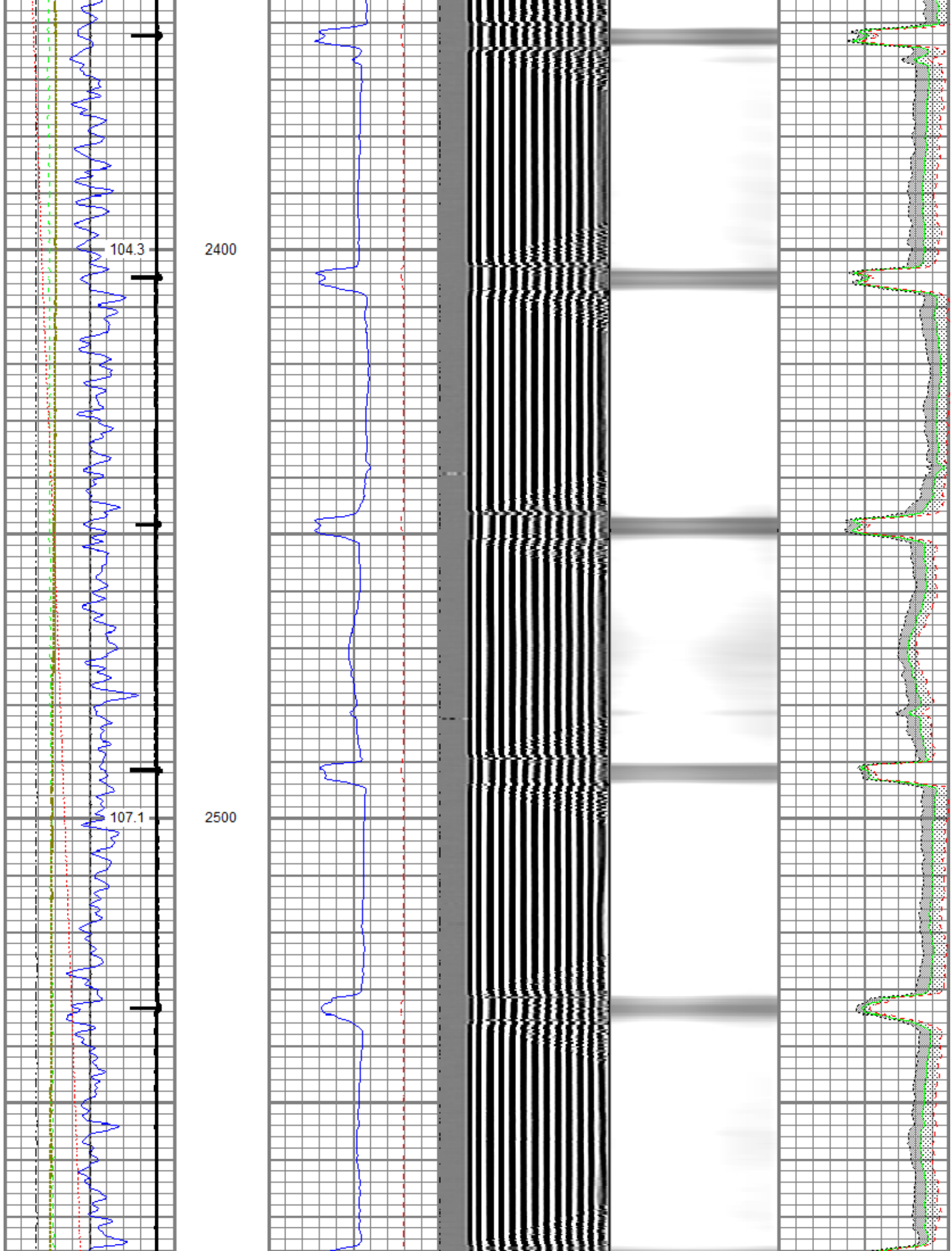


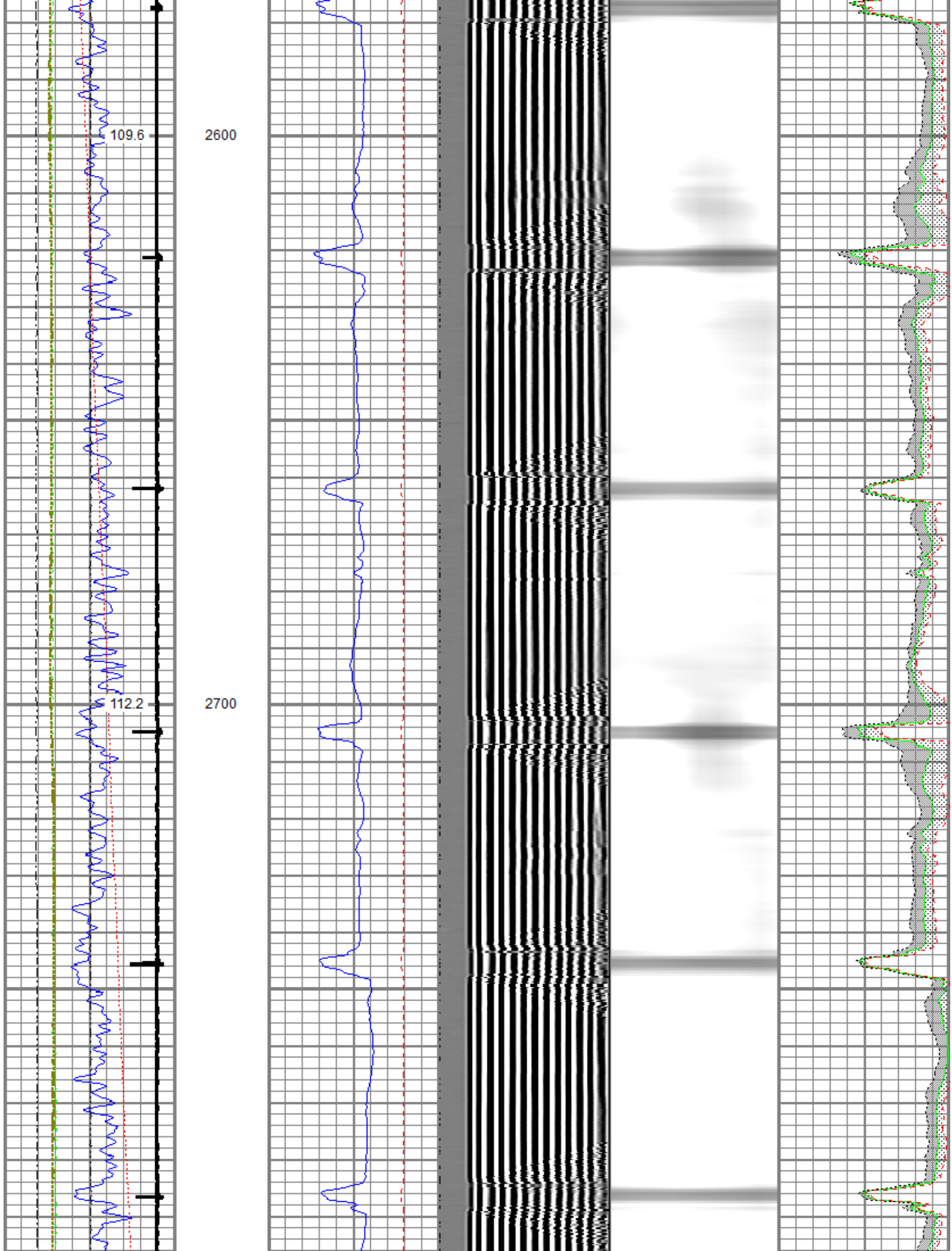


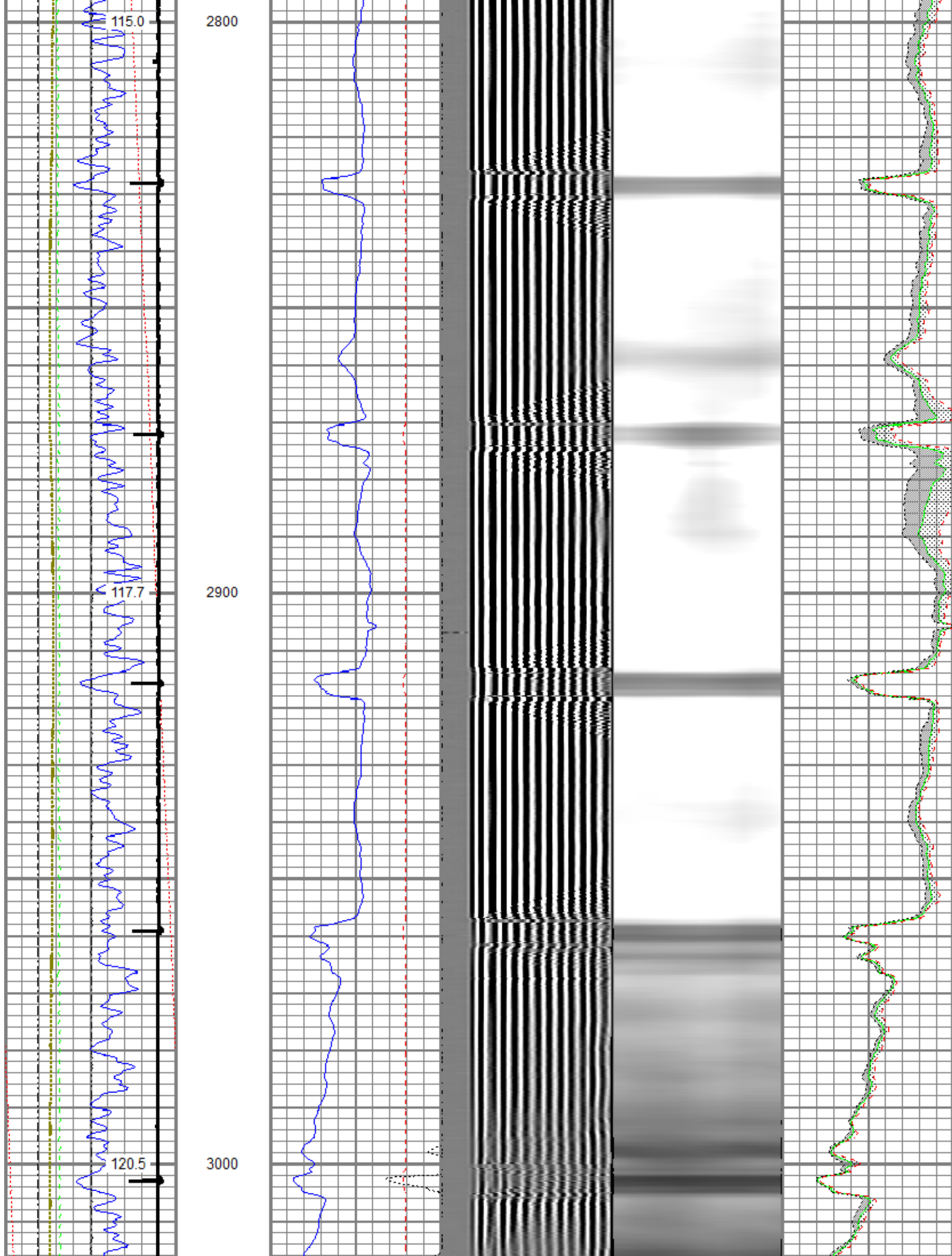


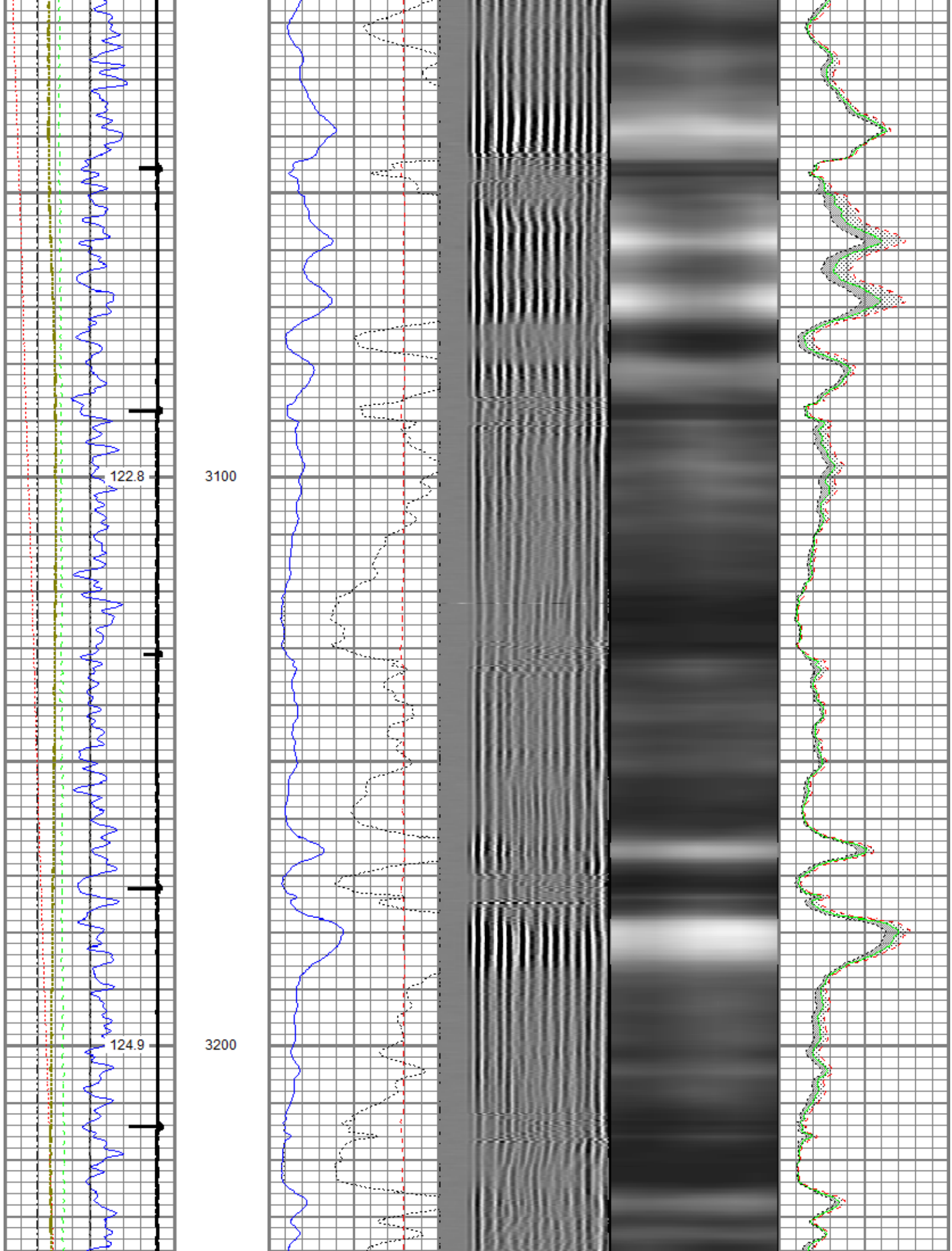


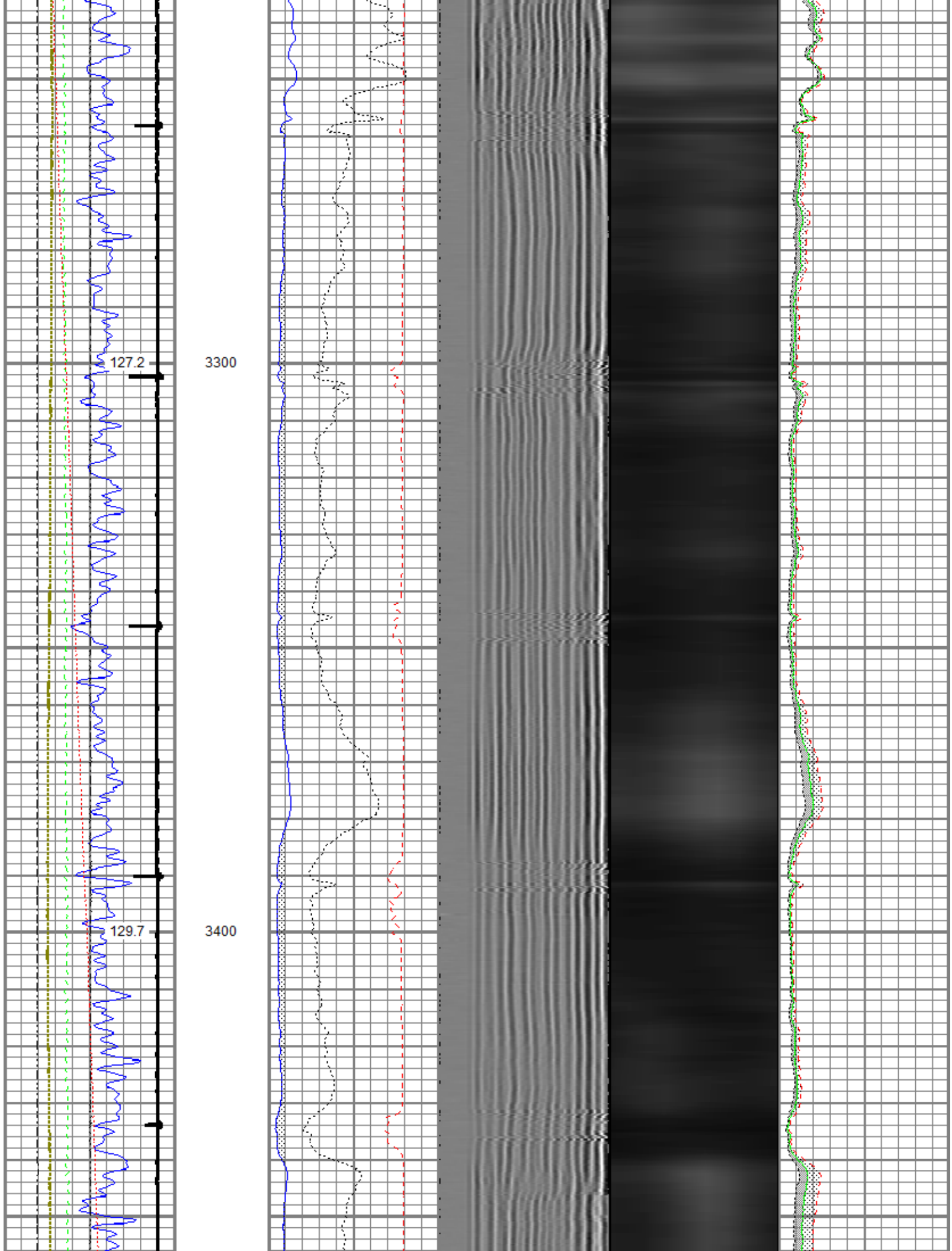


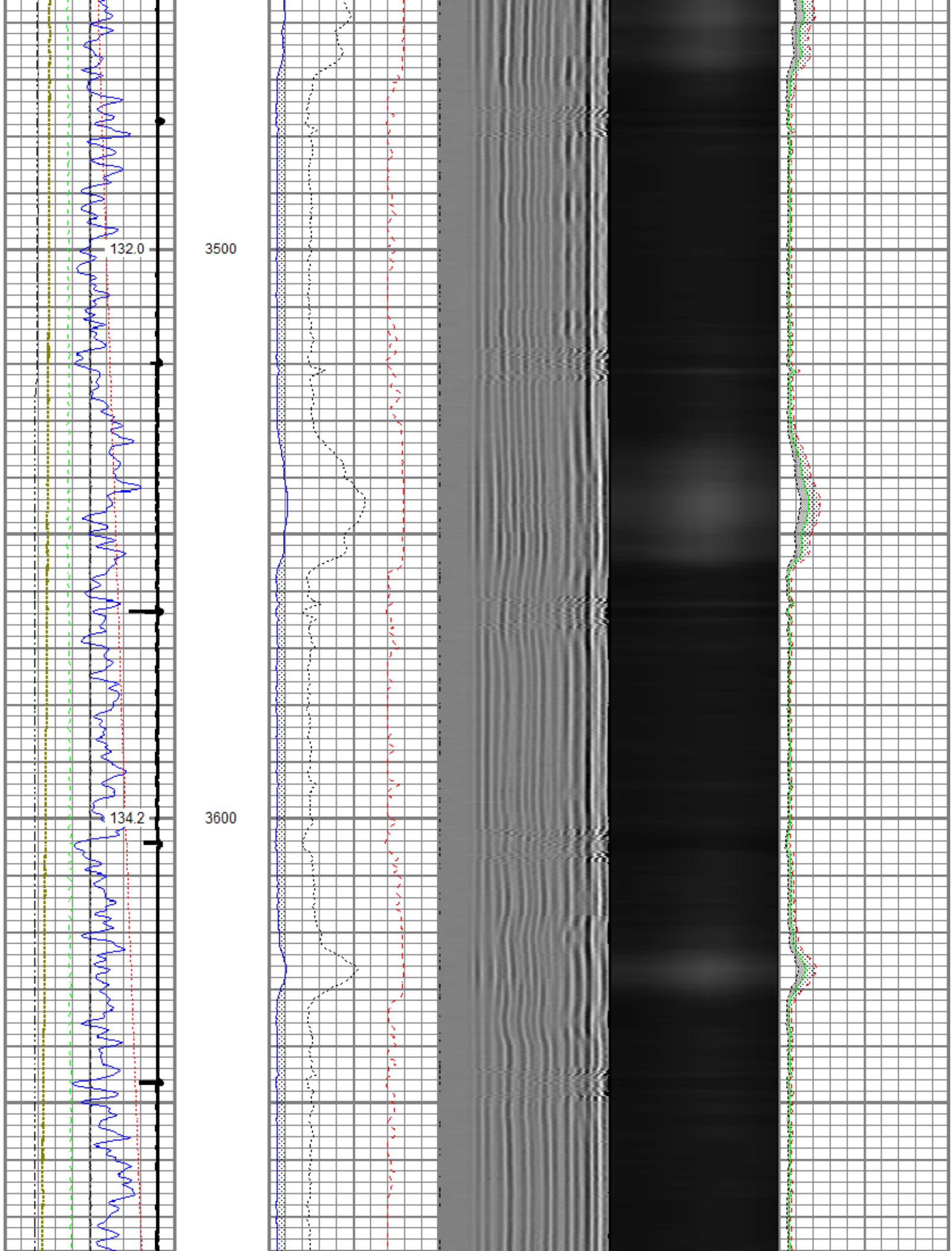


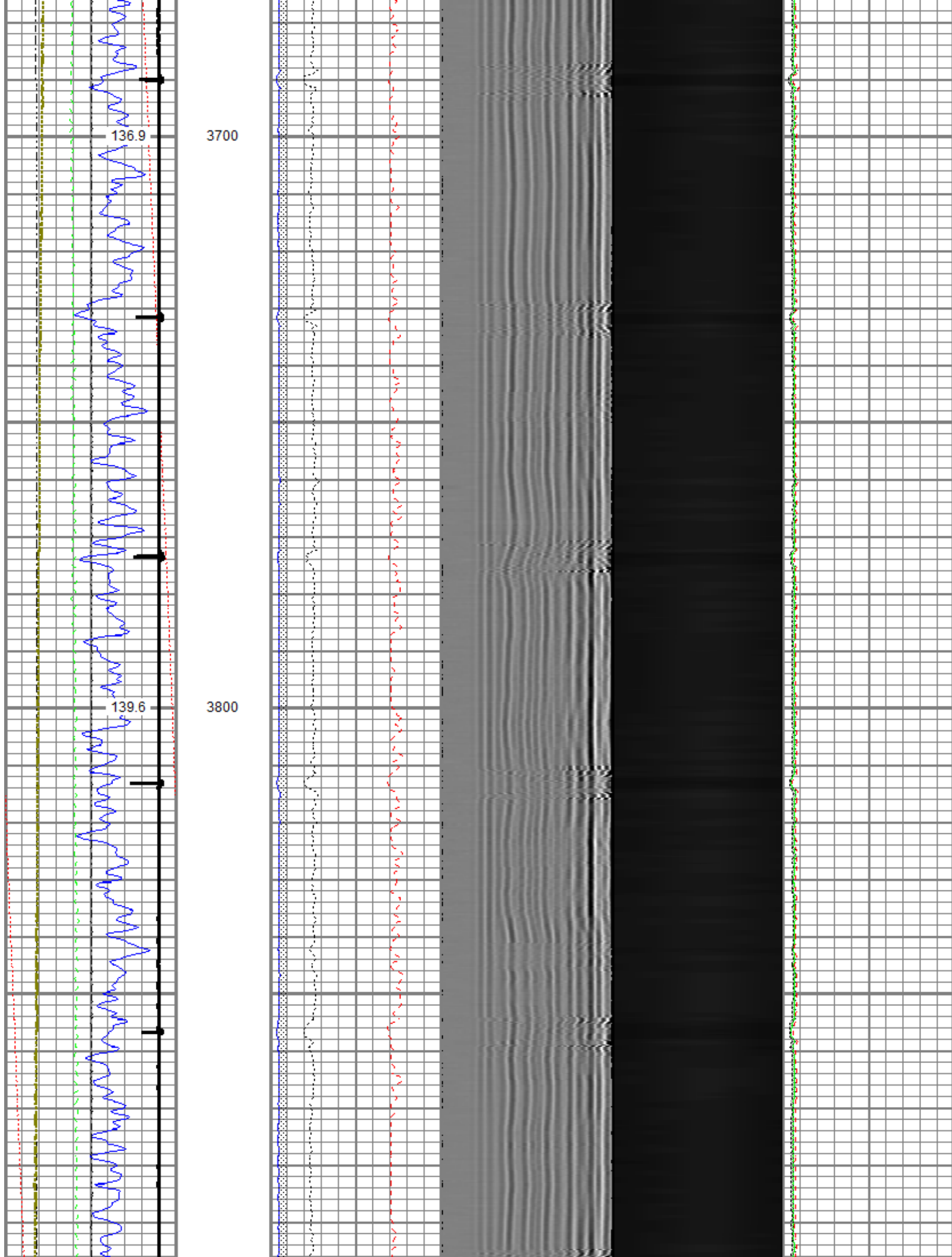


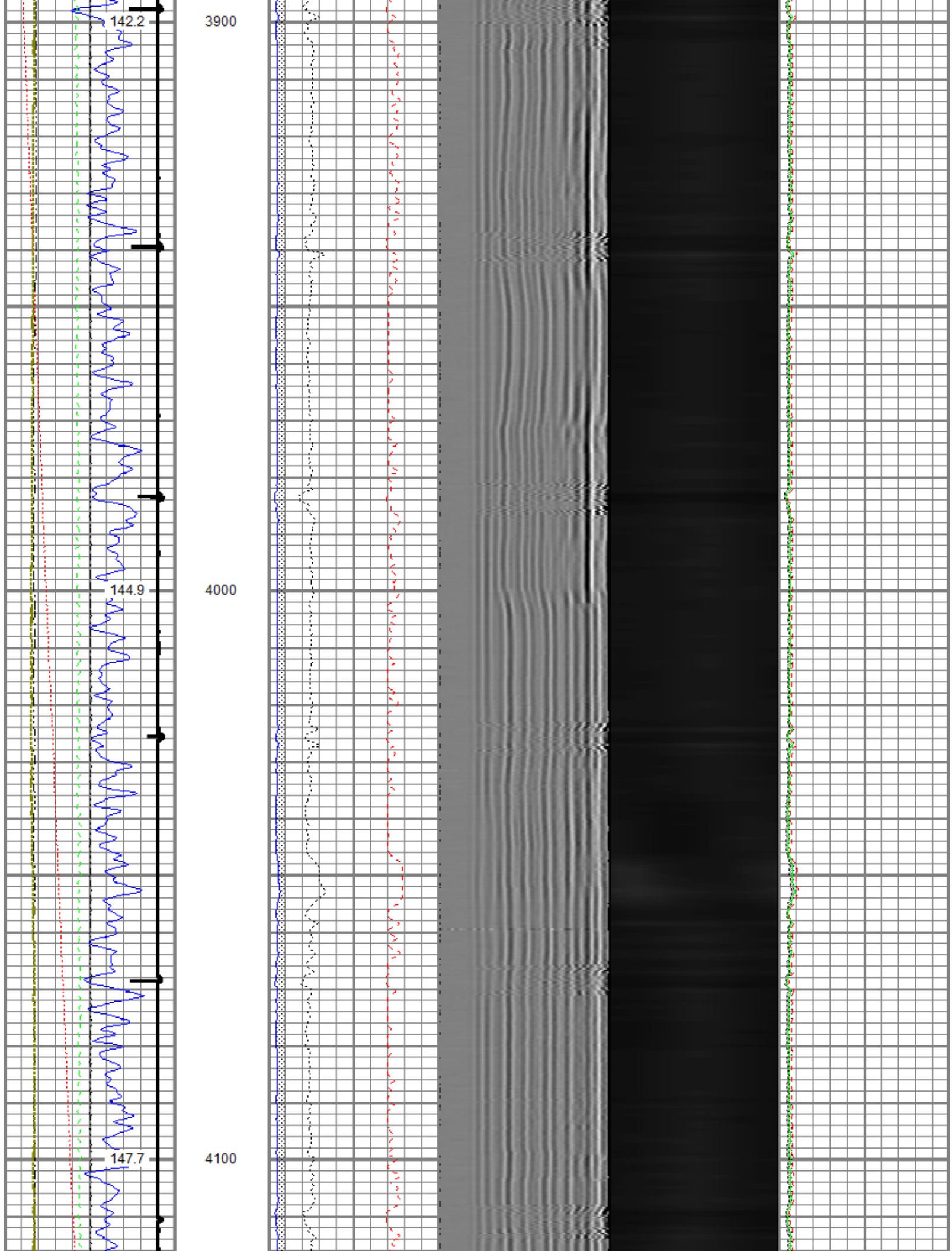


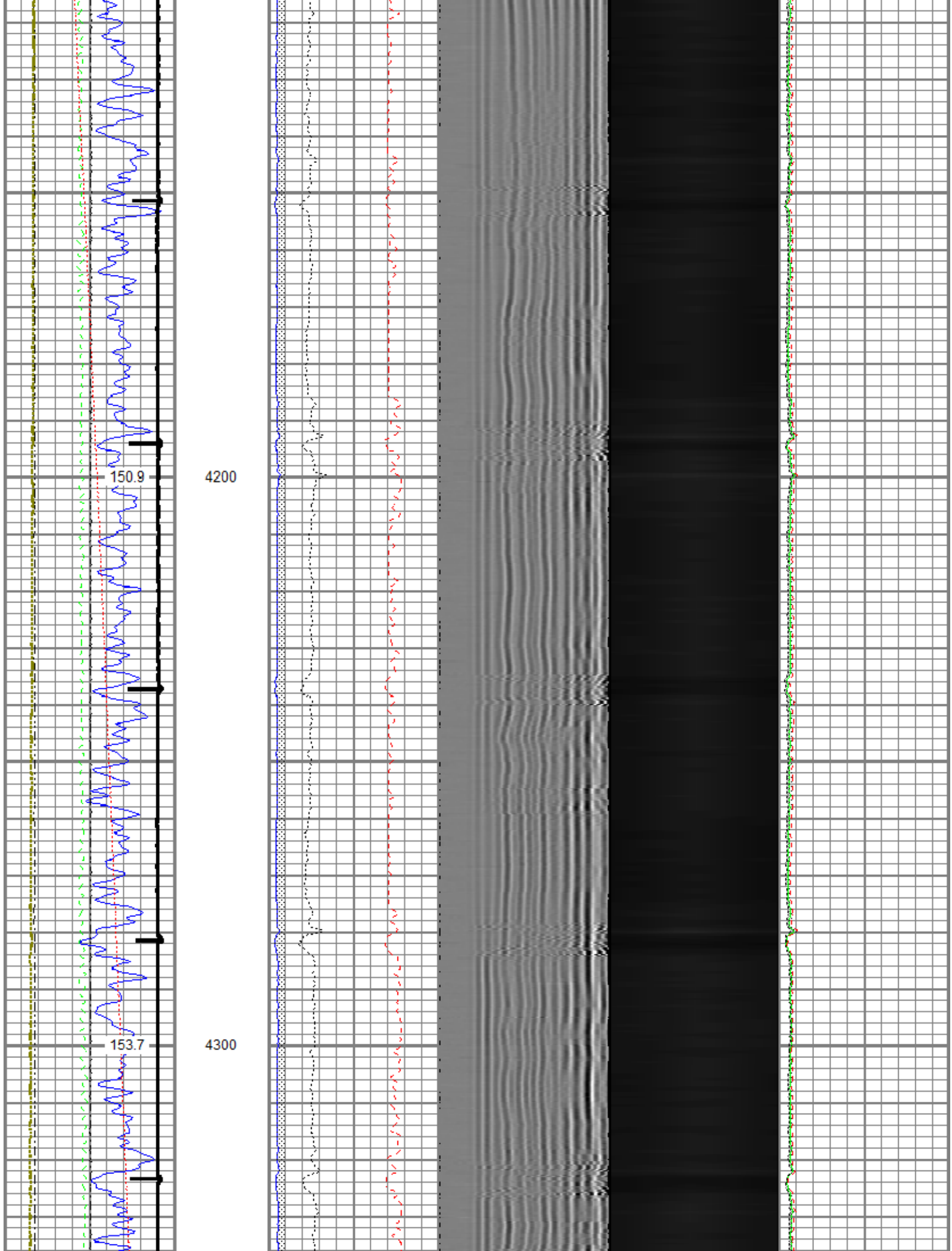


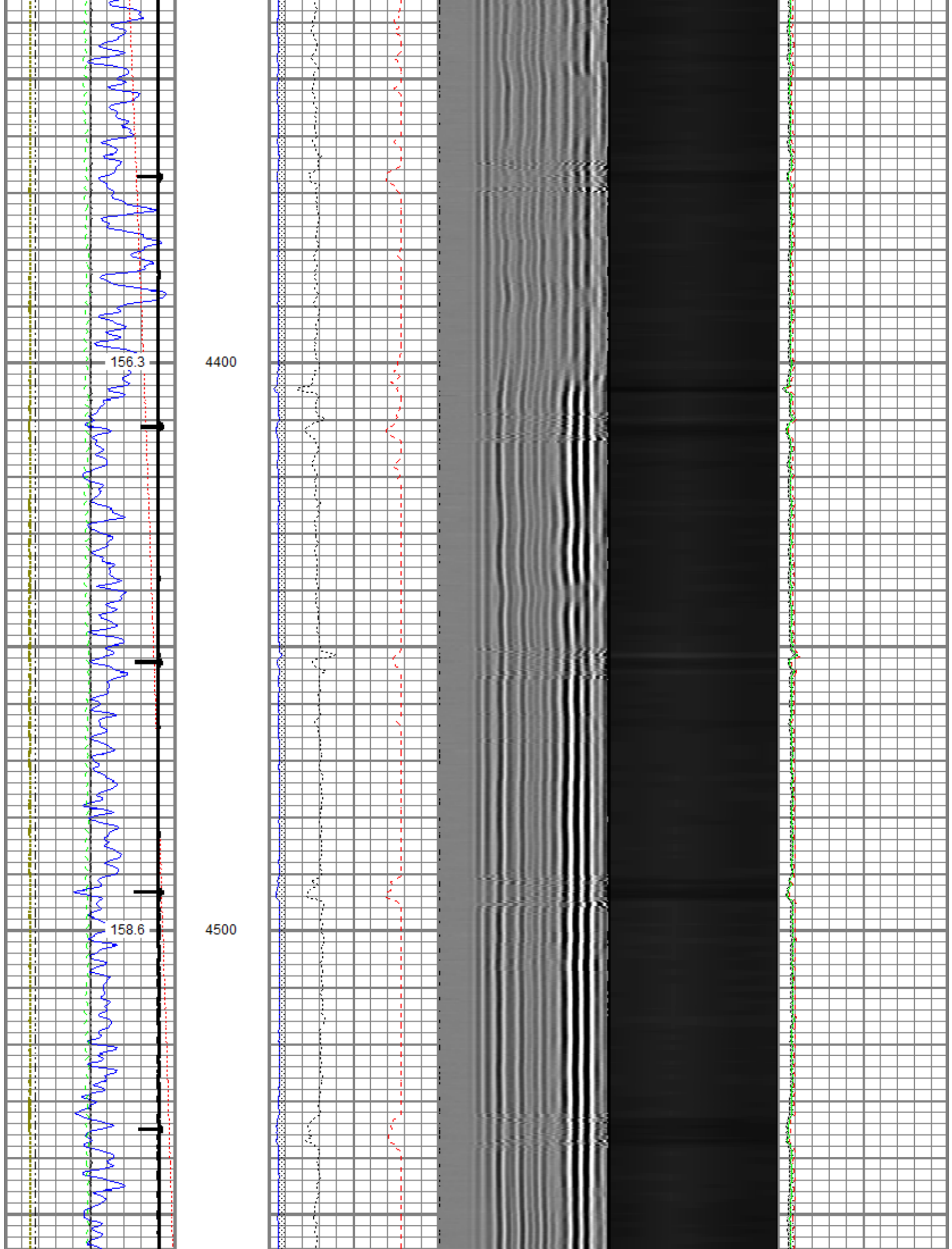


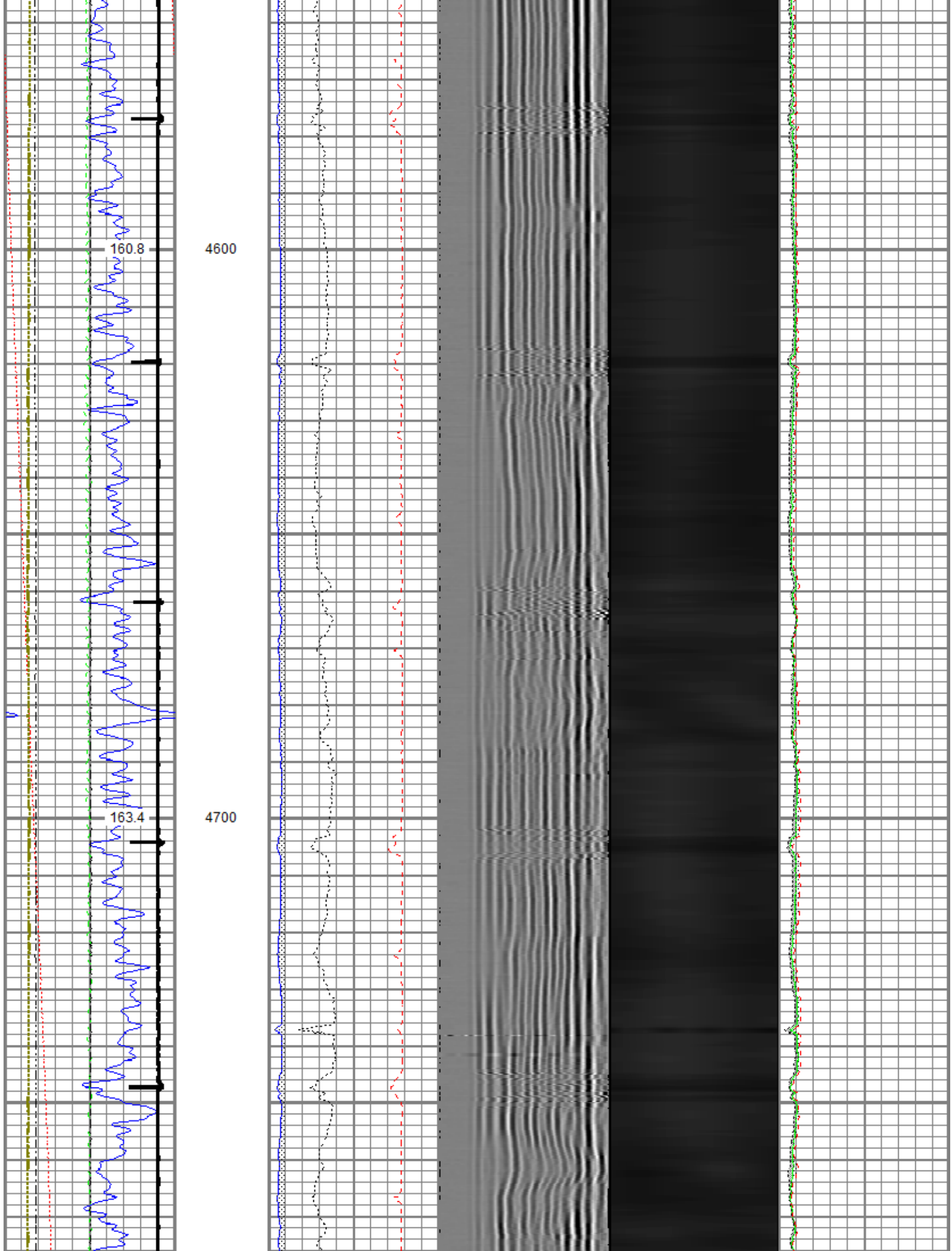


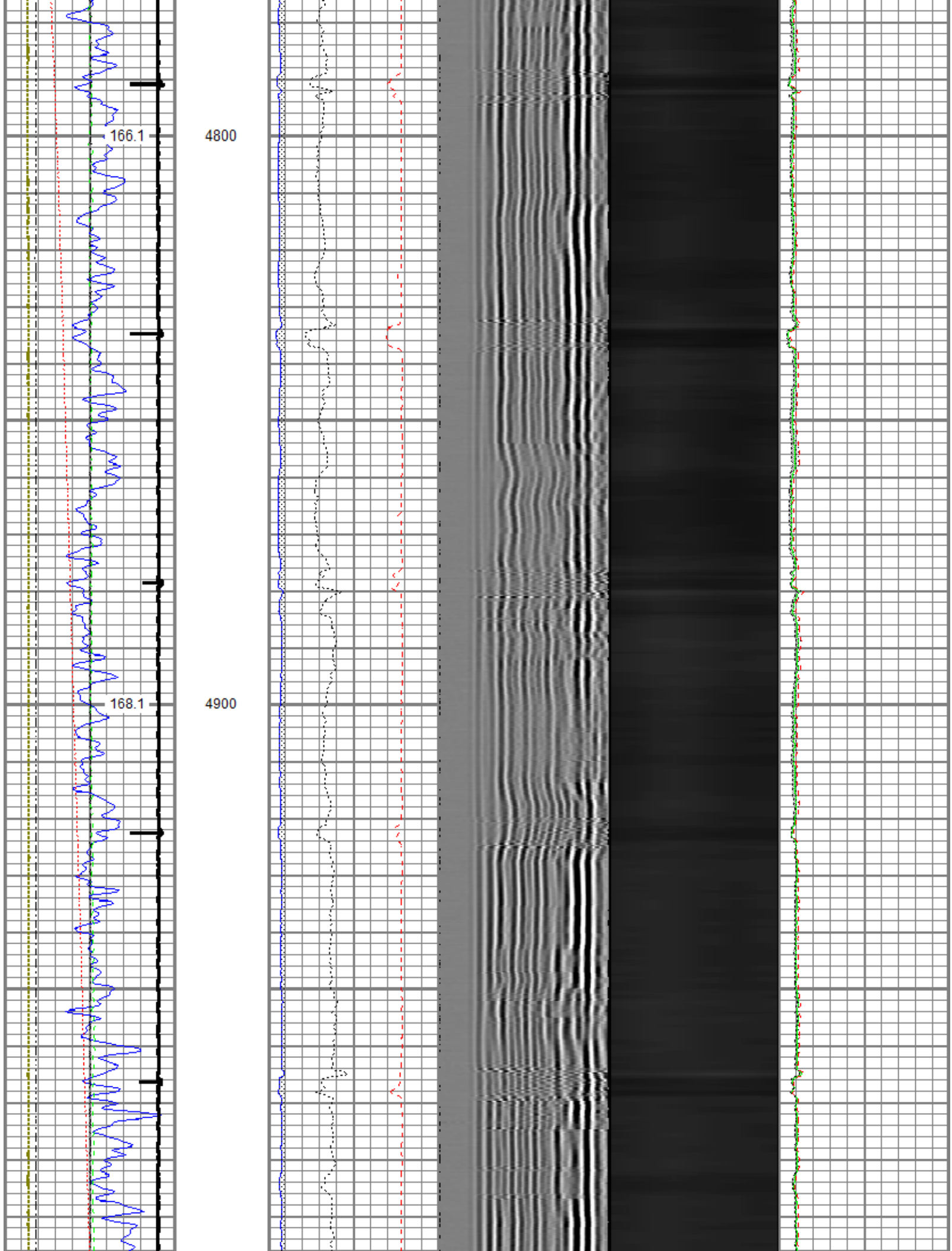


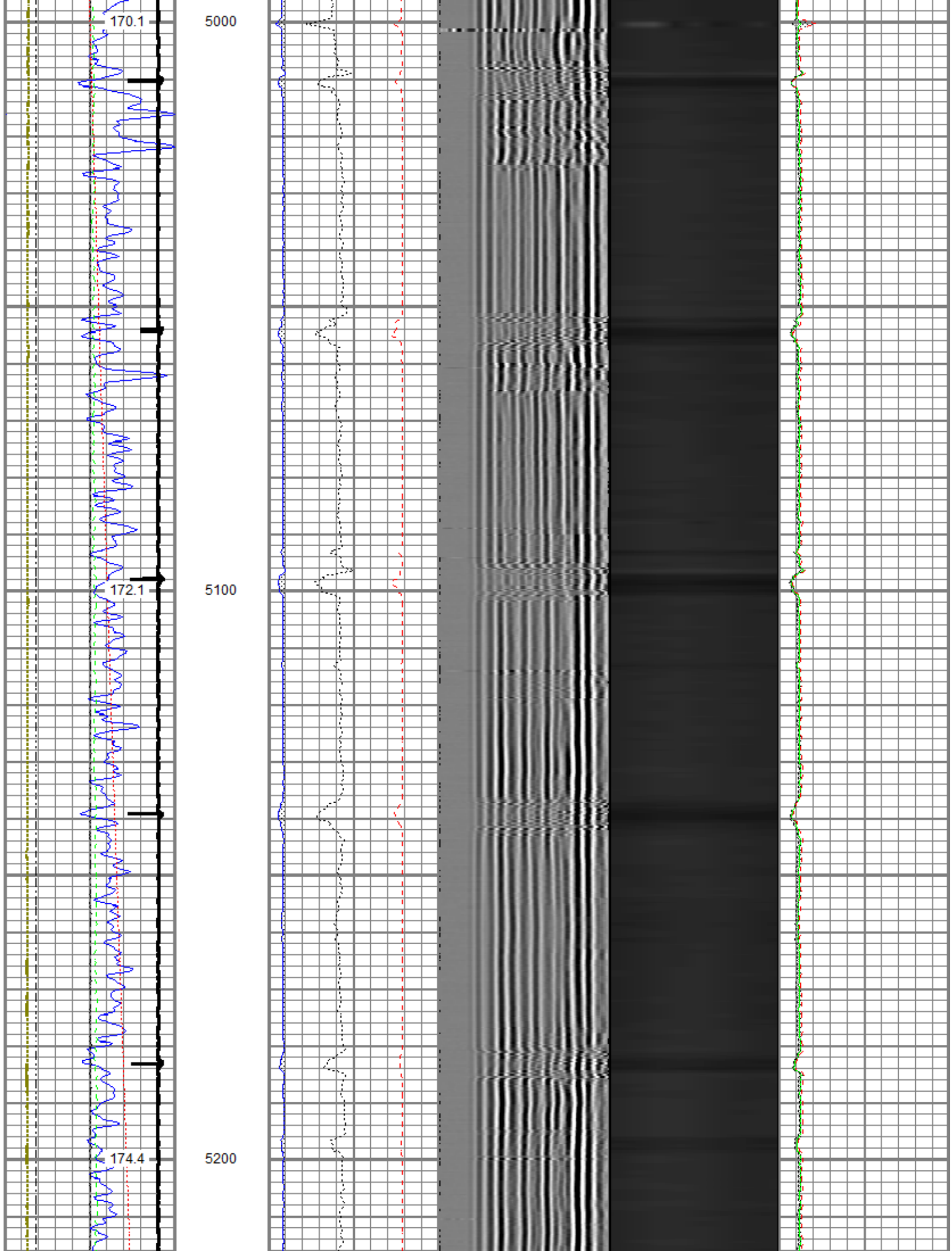


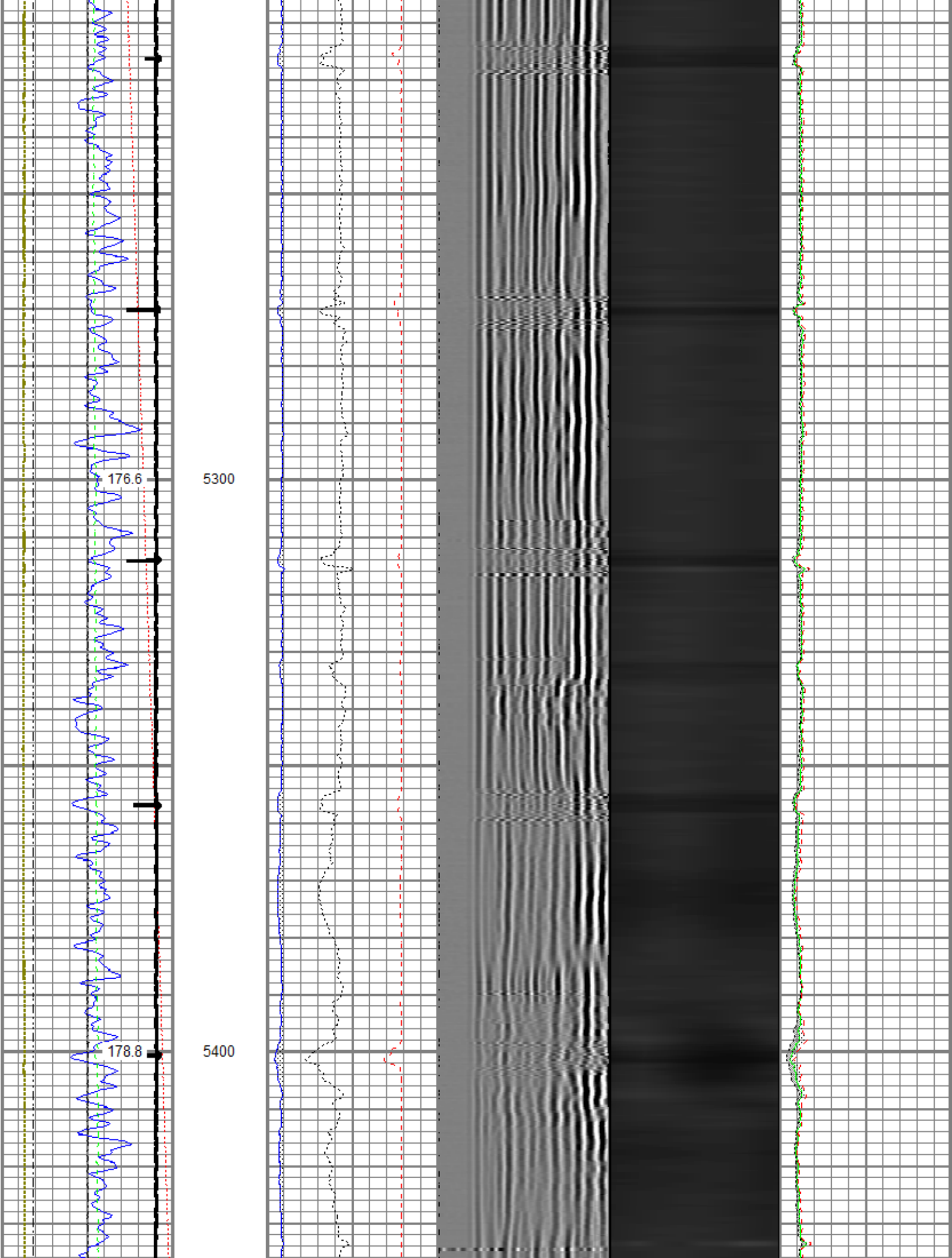


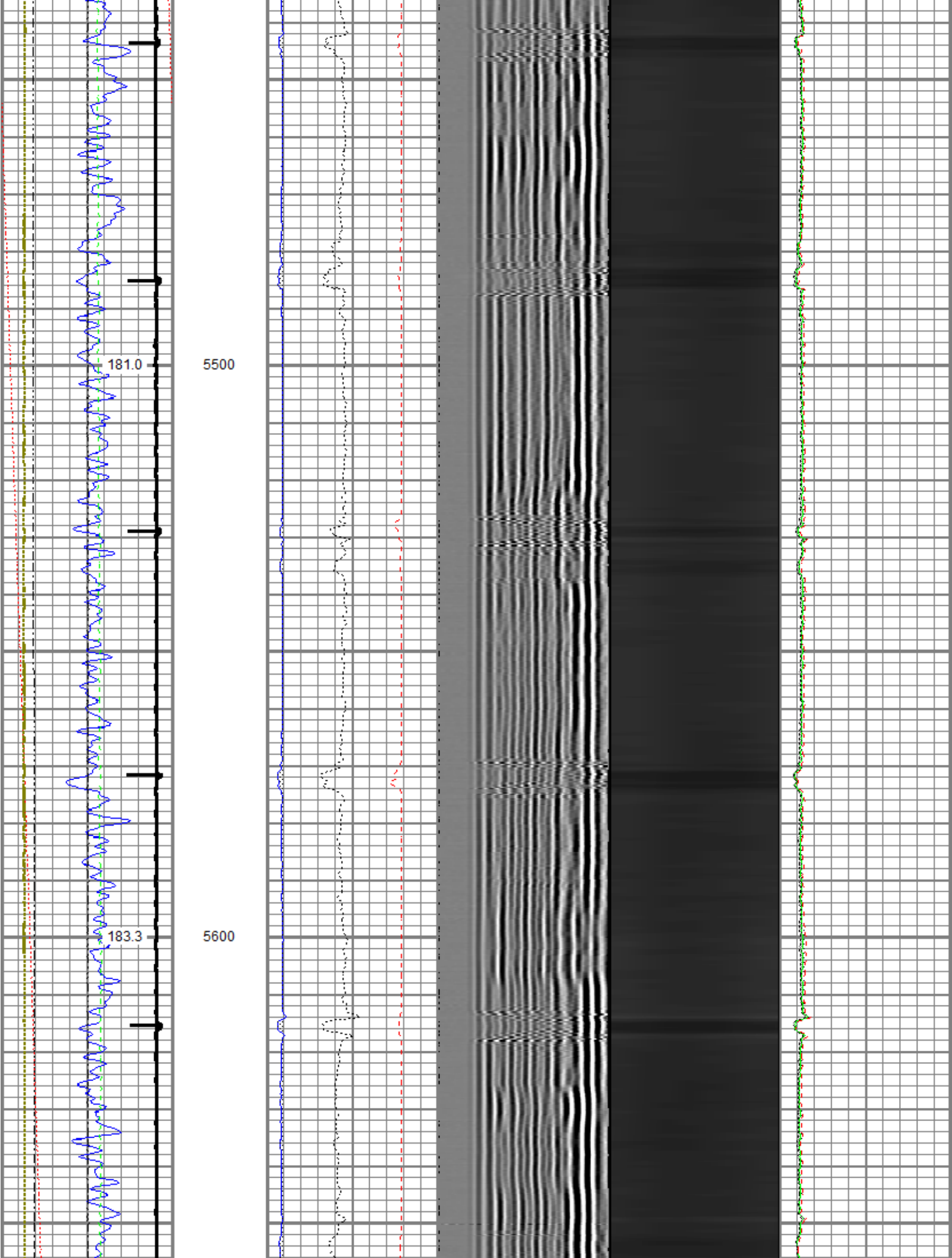


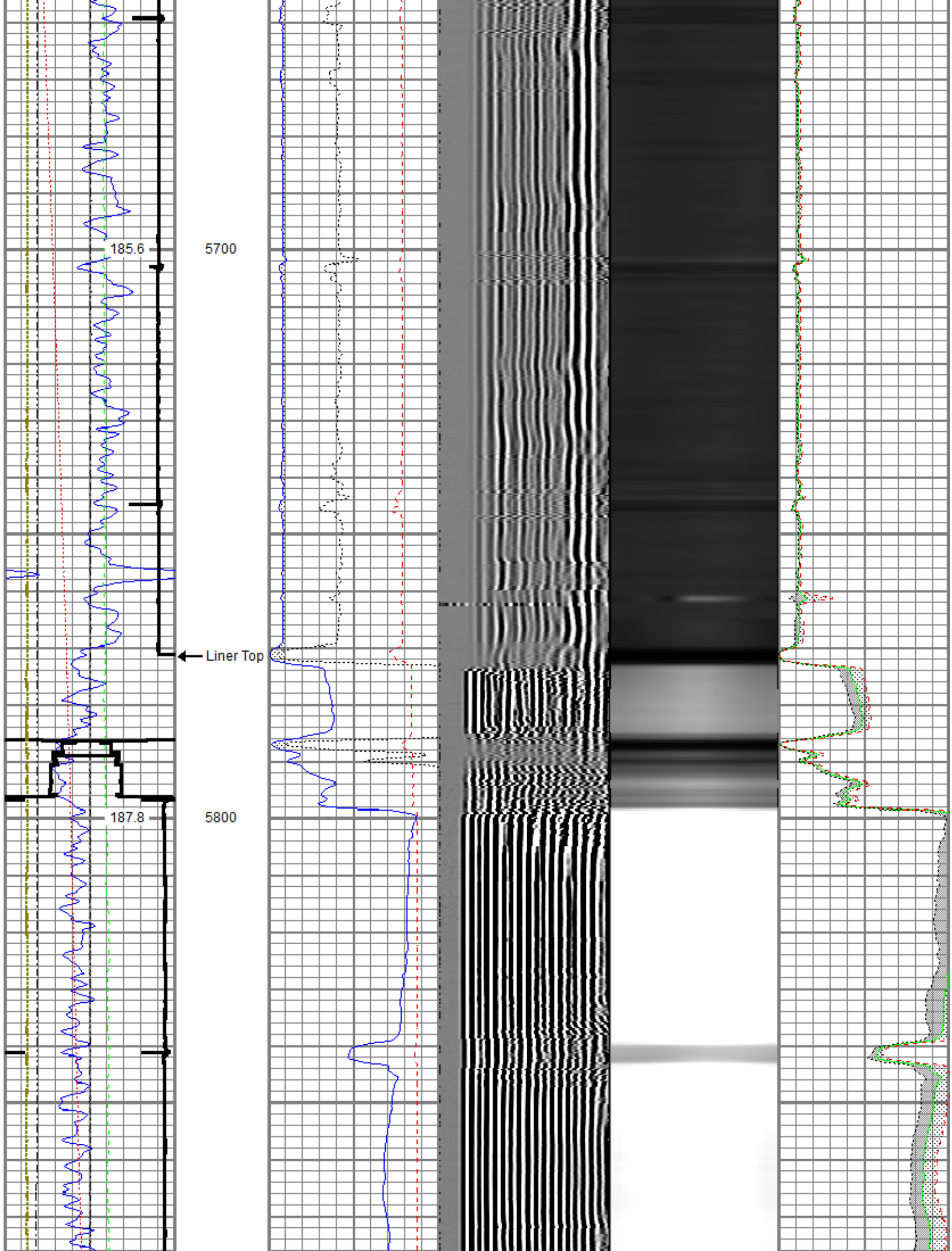


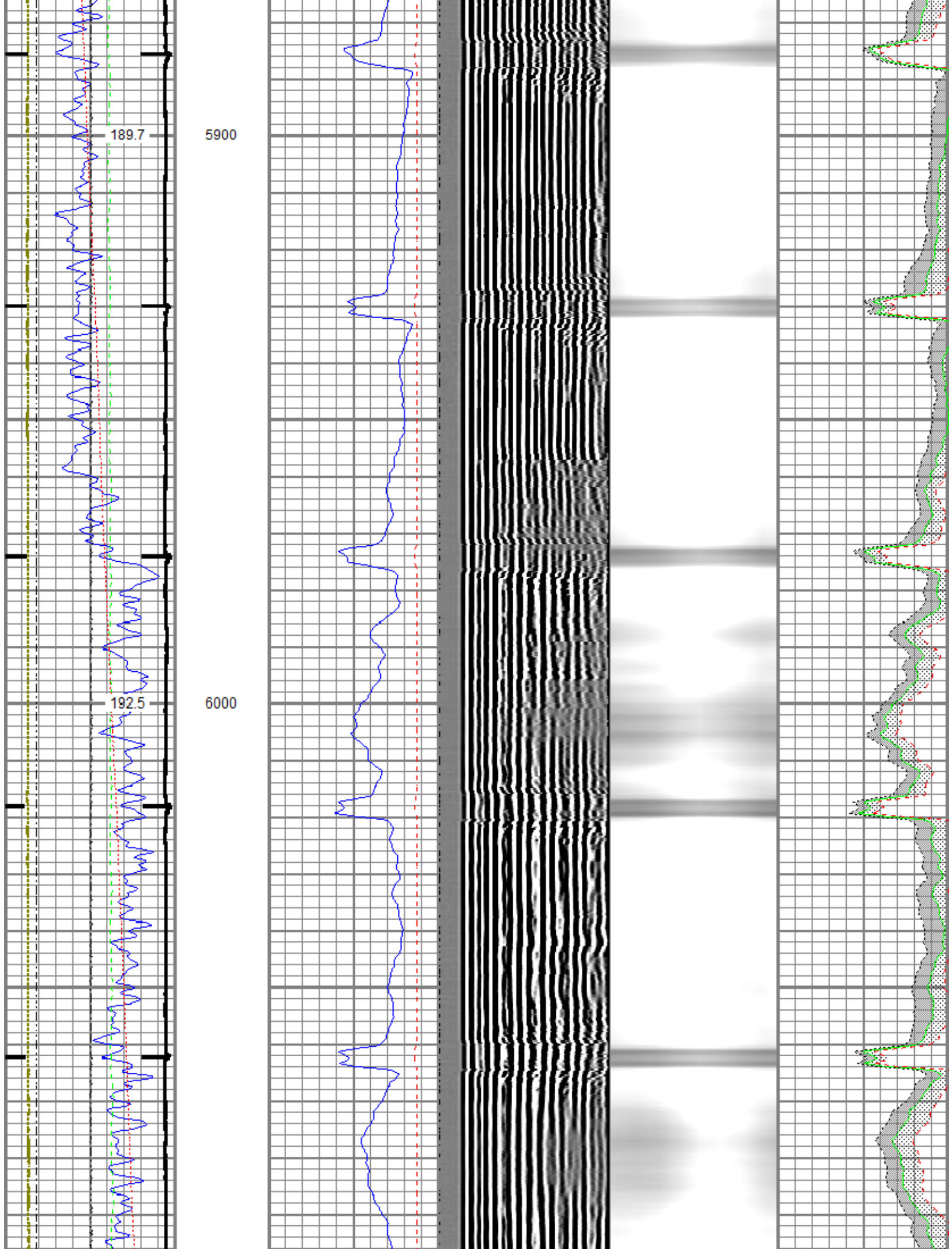


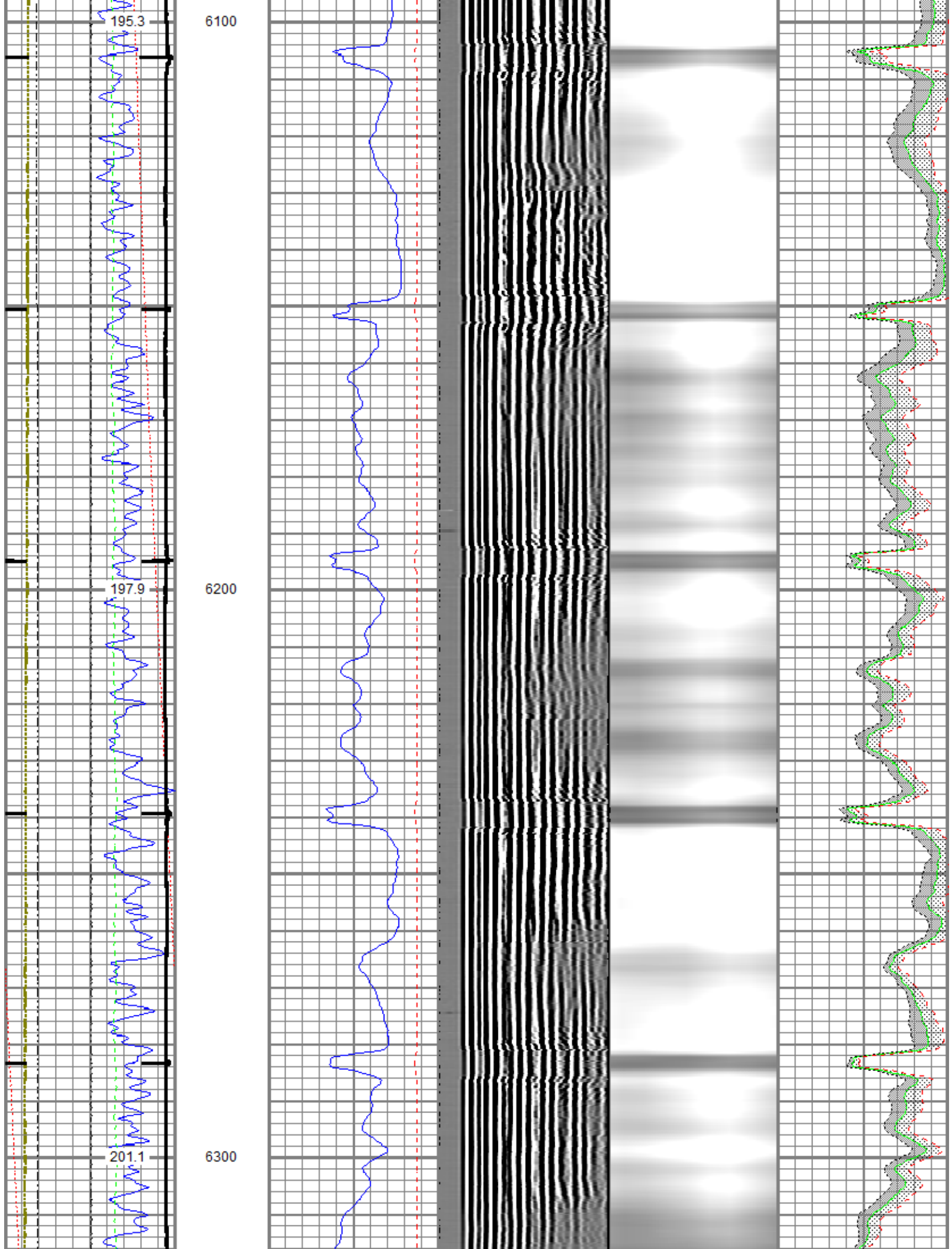


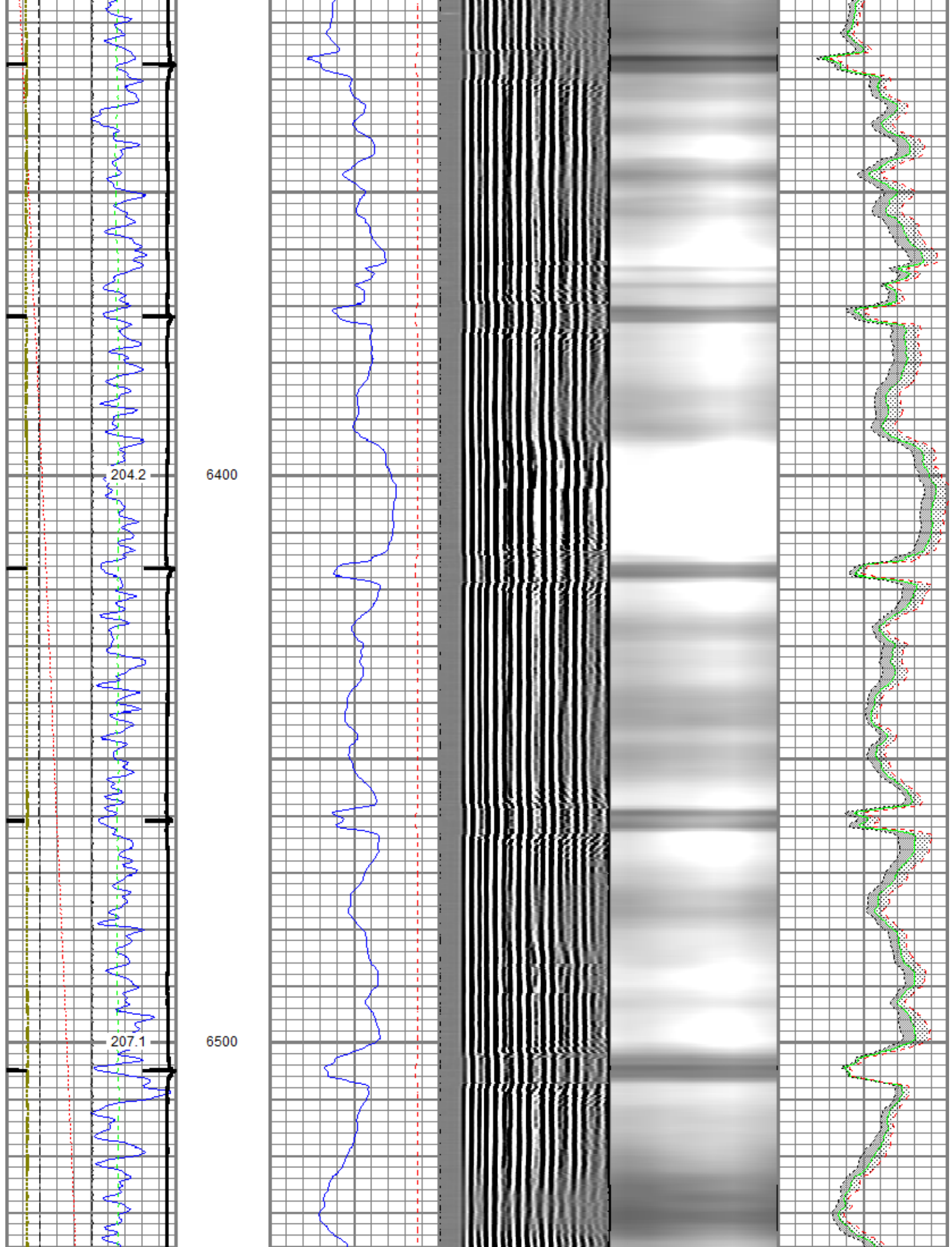


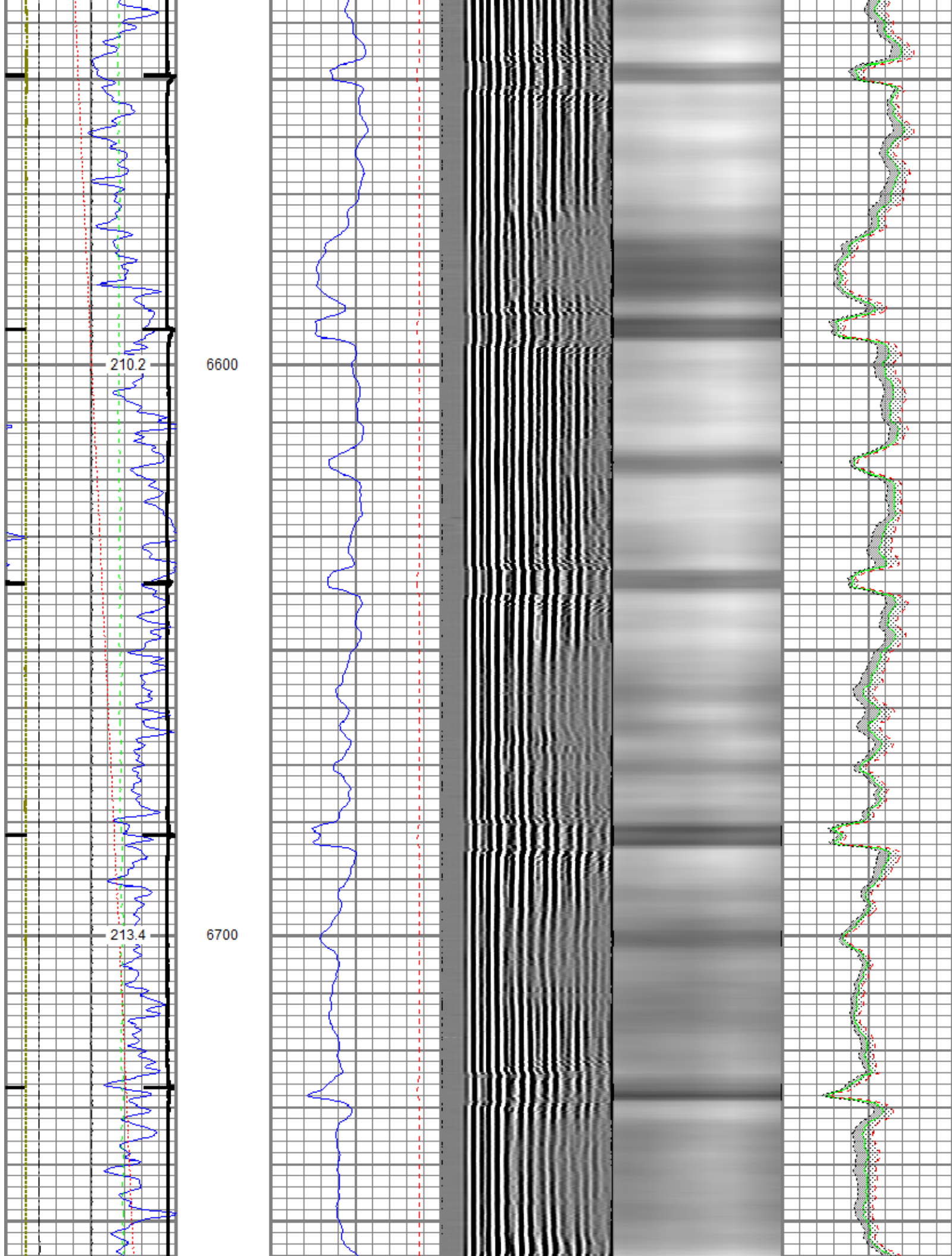


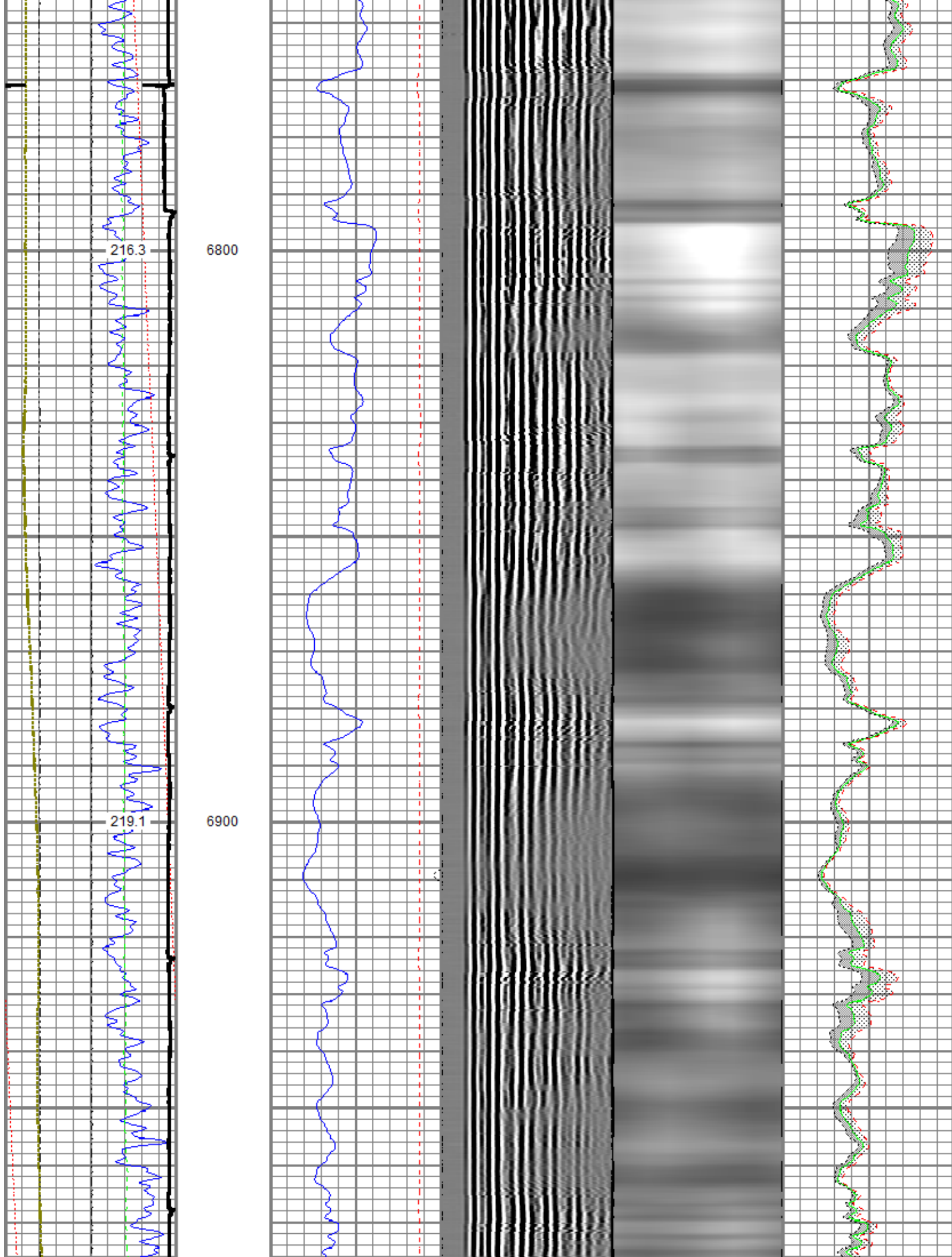


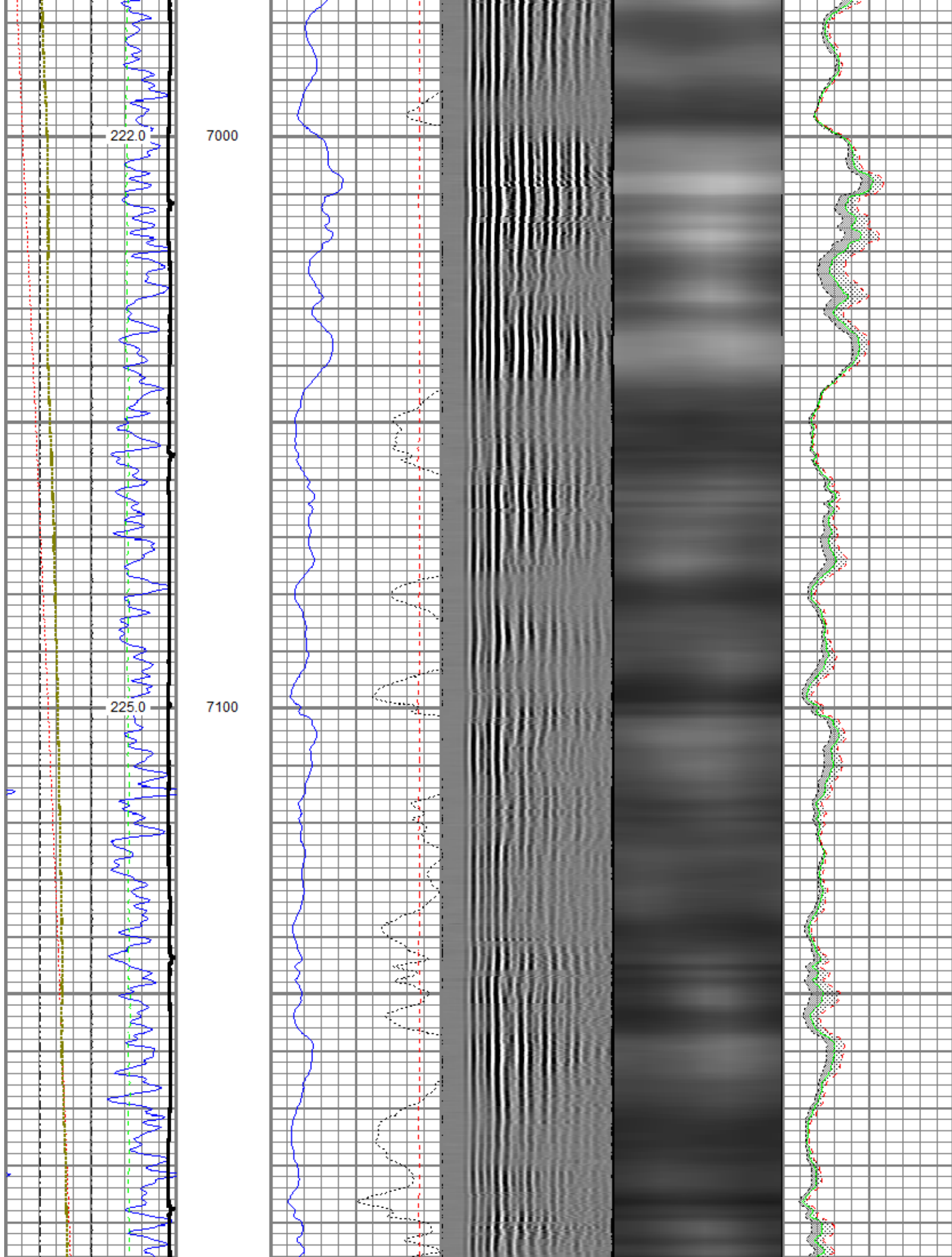


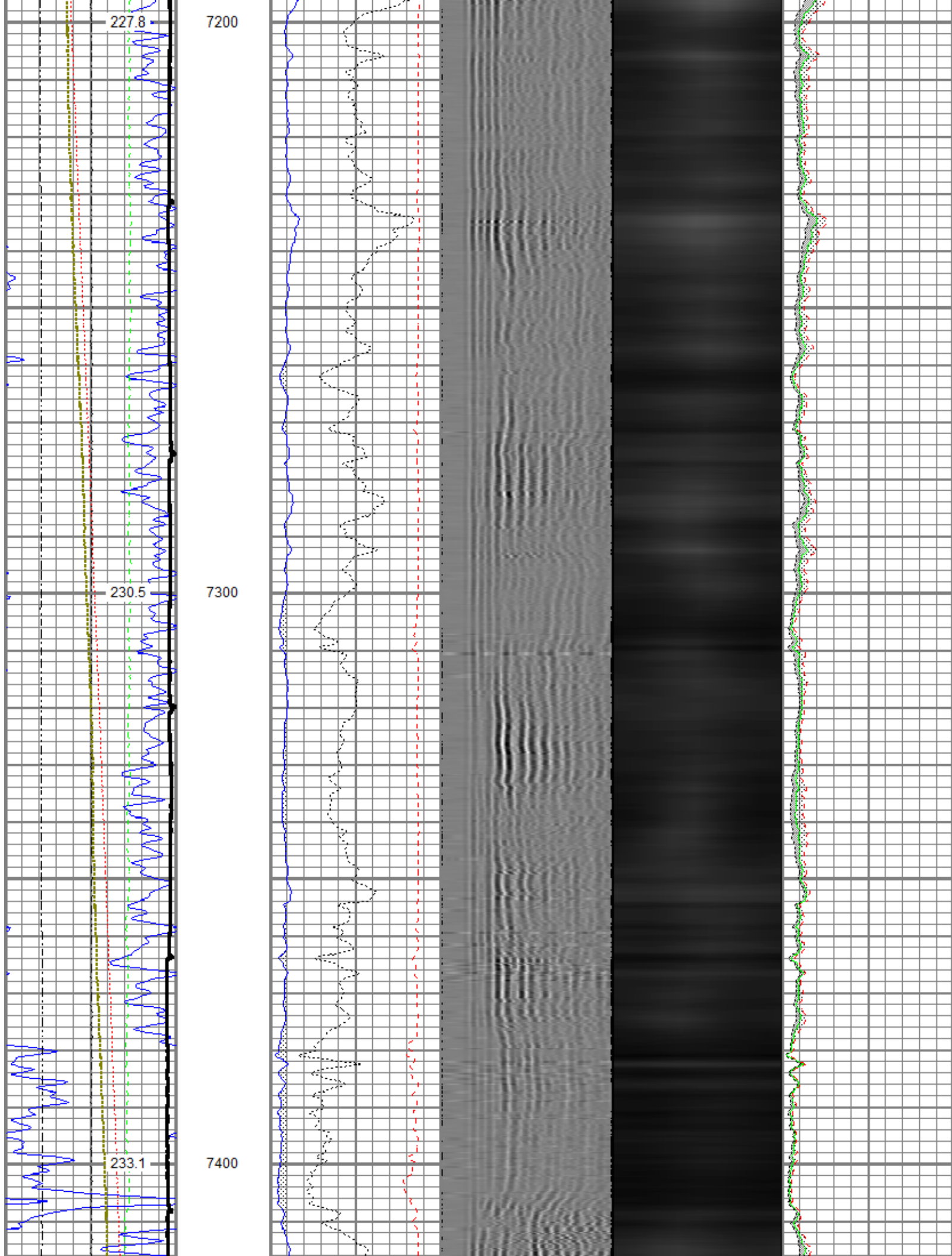


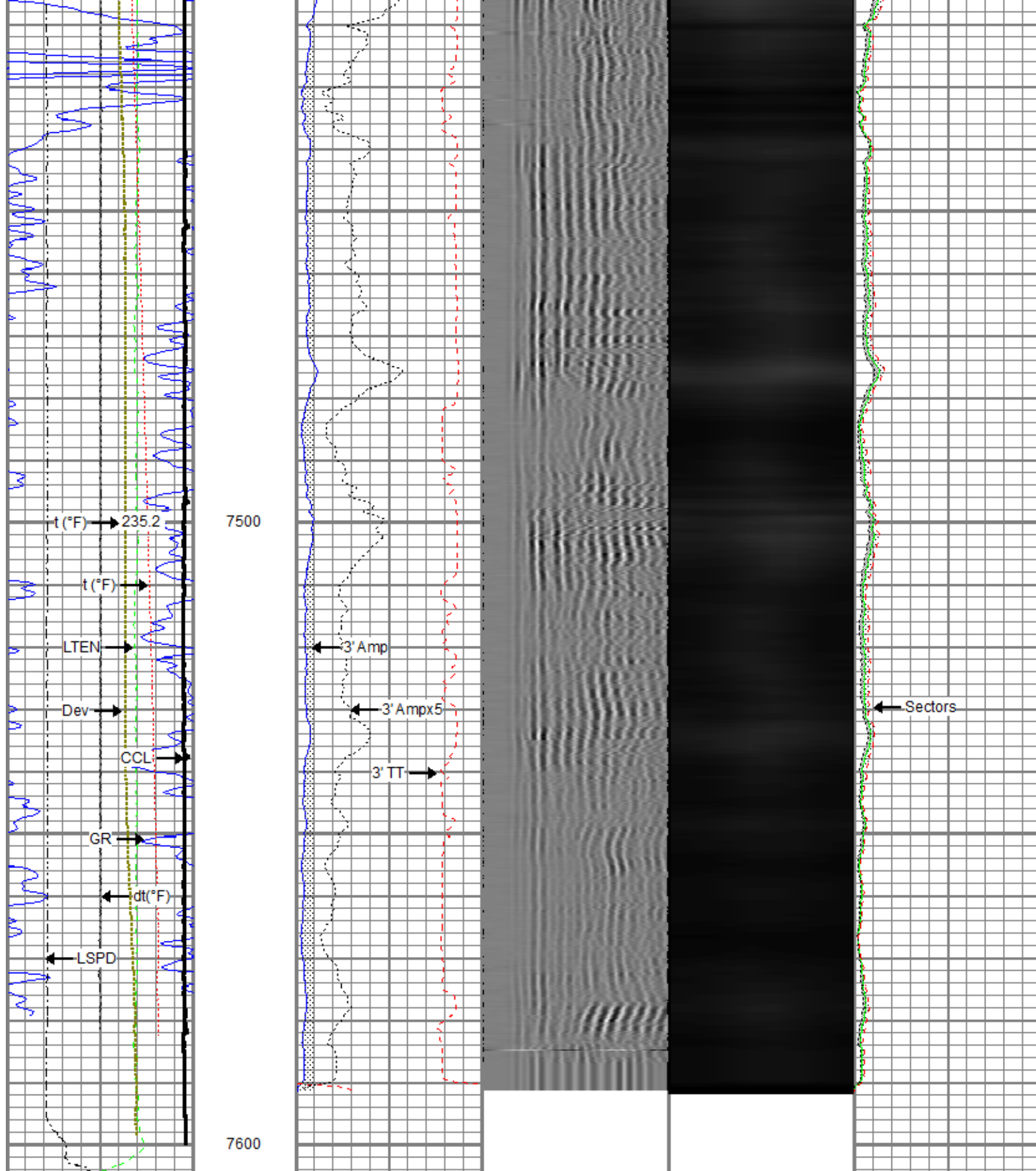













Gamma Ray (GAPI)	0	120
Line Speed (ft/min)	-100	100
Line Tension (lb)	0	2000
Differential Temperature (degF)	-2	2
3' Amplitude (mV)	0	100
3' Amplitude x 5 (mV)	0	20
3' Travel Time (uSec)	650	150
5' Variable Density Log	200	1200
Sector Map		
Average Amplitude	0	100
Minimum Amplitude		
Maximum Amplitude		

Temperature (degF)	20
Casing Collar Locator	
-10 Deviation (deg)	90

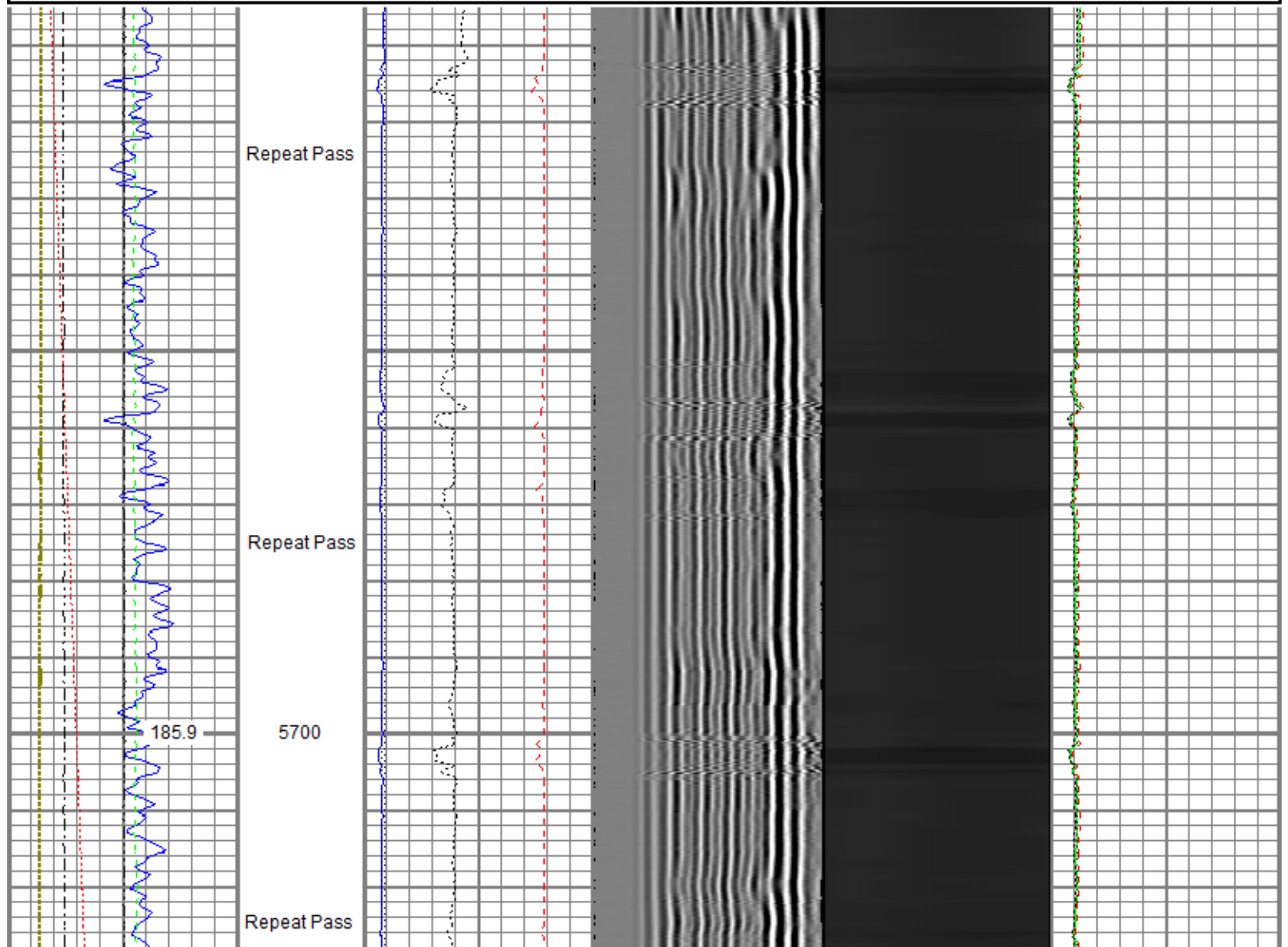


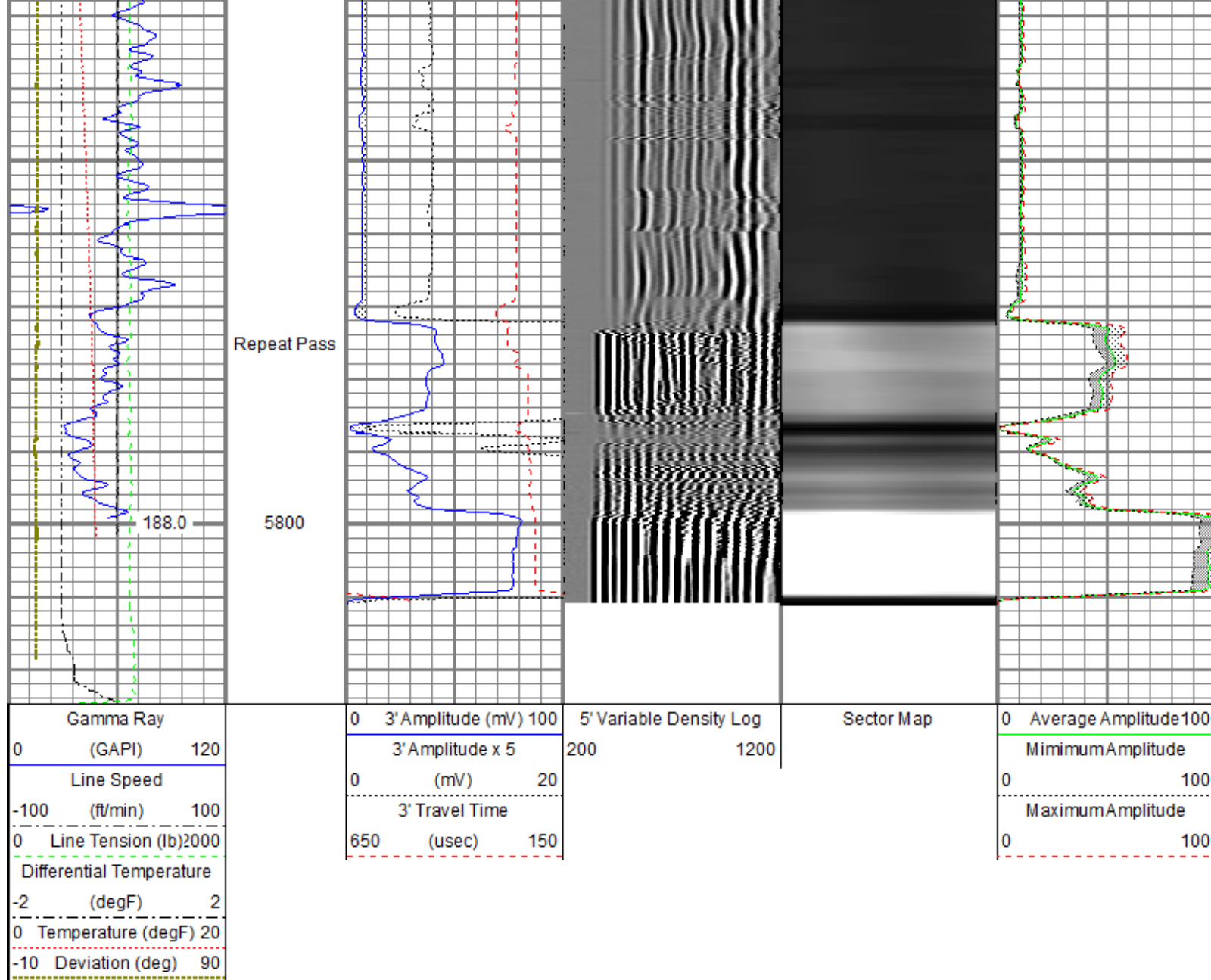
Repeat Pass

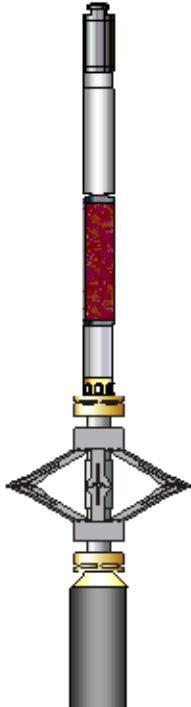
Recorded With 2800 PSI Surface Induced Pressure

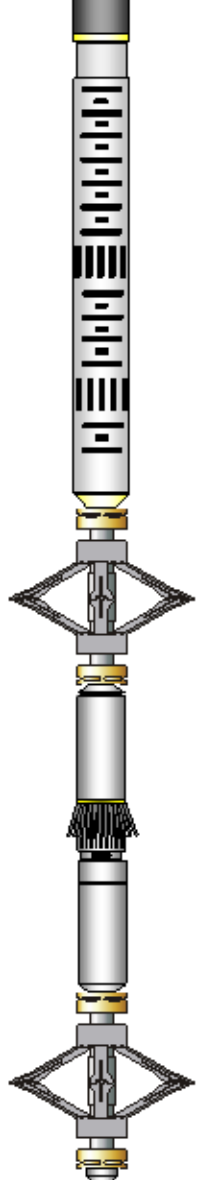
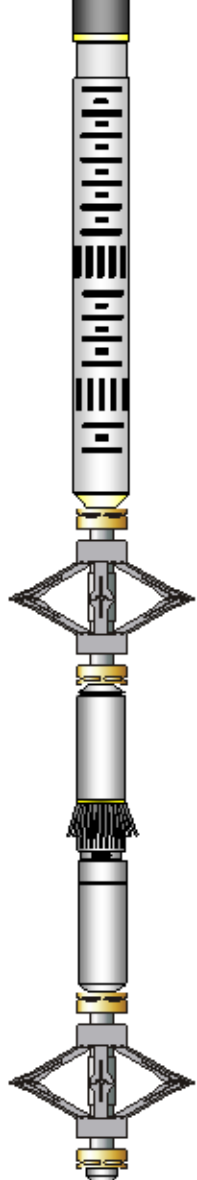
Database File	0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17\processed_0512343469_anadarko_wagner 28n-e10hz_mit_rbl
Dataset Pathname	pass2.1
Presentation Format	ros_rbt_mit_sx
Dataset Creation	Sat Dec 30 22:17:11 2017
Charted by	Depth in Feet scaled 1:240

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





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	23.41		Titan_Electric_Cable_Heads-Titan_1-11/16" Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			UW_AGS-UW_AGS_001 (219135) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (051219) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10013902) Production Gamma Ray	1.92	1.69	9.50
			UW_PRT-PRT_016 (10025097) Platinum Resistance Thermometer	1.04	1.69	5.20
TEMP	22.02		DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00

CBLROT	14.99		UW_RBT-UW_RBT_004 (10022773) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
WVFS8	14.99					
WVFS7	14.99					
WVFS6	14.99					
WVFS5	14.99					
WVFS4	14.99					
WVFS3	14.99					
WVFS2	14.99					
WVFS1	14.99					
WVF3FT	14.99					
WVF5FT	13.99					
CBLTEMP	9.85					
			DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
MIT	5.11		UW_MIT-UW_MIT40_042 (10012912) 40 Multifinger Imaging Tool Ext.	4.54	2.75	65.00
			DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
HVOLTX	0.00		UW_BUL-UW_BUL_006 (10019616) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
ITEMPX	0.00					
TSTAMP	0.00					
Dataset: processed_0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17.db: field/well/run1/pass4.2 Total length: 27.66 ft Total weight: 329.80 lb O.D.: 3.13 in						

Calibration Report			
Database File	c:\programdata\warrior\data\0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17\processed_0512343469_anadarko_v		
Dataset Pathname	pass4.2		
Dataset Creation	Sat Dec 30 22:07:46 2017		
Multifinger Imaging Tool Calibration Report			
Serial Number:		10012912	
Number of Fingers:		40	
Tool Model:		UW_MIT40_042	
Inclinometer Calibration Report			
Performed:		Mon Jul 15 09:39:36 2013	
Calibration Angle:		45	
		Inc X	Inc Y
Vertical:		1968	1974
Finger 1 up:		1740	1744
Finger 31 up:		2215	1741
Finger 21 up:		2205	2224
Finger 11 up:		1731	2217
Sensitivity ratio:	0.992868		
X-axis angle:	134.307		
Deviation const:	335.589		

Finger Calibration Report							
Performed:				Fri Dec 29 11:09:13 2017			
Ring size:	4		5		6		7
(in)		Sens		Sens		Sens	
Finger 01:	1065	340.0	1405	395.0	1800	405.0	2205
Finger 02:	1206	347.0	1553	396.0	1949	397.0	2346
Finger 03:	1079	355.0	1434	413.0	1847	424.0	2271
Finger 04:	1113	349.0	1462	402.0	1864	414.0	2278
Finger 05:	1120	354.0	1474	400.0	1874	417.0	2291
Finger 06:	1111	357.0	1468	408.0	1876	416.0	2292
Finger 07:	1098	362.0	1460	406.0	1866	418.0	2284
Finger 08:	1130	357.0	1487	397.0	1884	417.0	2301
Finger 09:	1115	361.0	1476	399.0	1875	412.0	2287
Finger 10:	1124	362.0	1486	395.0	1881	414.0	2295
Finger 11:	1124	363.0	1487	389.0	1876	408.0	2284
Finger 12:	1127	361.0	1488	388.0	1876	414.0	2290
Finger 13:	1138	363.0	1501	381.0	1882	402.0	2284
Finger 14:	1133	365.0	1498	390.0	1888	420.0	2308
Finger 15:	1079	376.0	1455	400.0	1855	431.0	2286
Finger 16:	1092	369.0	1461	401.0	1862	429.0	2291
Finger 17:	999	355.0	1354	383.0	1737	433.0	2170
Finger 18:	1134	373.0	1507	377.0	1884	415.0	2299
Finger 19:	1103	371.0	1474	385.0	1859	419.0	2278
Finger 20:	1091	373.0	1464	393.0	1857	430.0	2287
Finger 21:	1093	377.0	1470	389.0	1859	412.0	2271
Finger 22:	1069	375.0	1444	394.0	1838	431.0	2269
Finger 23:	1019	374.0	1393	403.0	1796	443.0	2239
Finger 24:	1102	371.0	1473	380.0	1853	401.0	2254
Finger 25:	1040	373.0	1413	401.0	1814	441.0	2255
Finger 26:	1165	355.0	1520	371.0	1891	397.0	2288
Finger 27:	1098	365.0	1463	392.0	1855	422.0	2277
Finger 28:	1130	357.0	1487	381.0	1868	406.0	2274
Finger 29:	1061	361.0	1422	401.0	1823	426.0	2249
Finger 30:	1089	357.0	1446	394.0	1840	419.0	2259
Finger 31:	1124	352.0	1476	393.0	1869	409.0	2278
Finger 32:	1189	379.0	1568	416.0	1984	435.0	2419
Finger 33:	1176	351.0	1527	380.0	1907	391.0	2298
Finger 34:	1113	354.0	1467	405.0	1872	419.0	2291
Finger 35:	988	325.0	1313	385.0	1698	407.0	2105
Finger 36:	1083	350.0	1433	407.0	1840	422.0	2262
Finger 37:	1128	348.0	1476	404.0	1880	407.0	2287
Finger 38:	1148	347.0	1495	389.0	1884	396.0	2280
Finger 39:	1161	342.0	1503	389.0	1892	397.0	2289
Finger 40:	1111	351.0	1462	405.0	1867	413.0	2280

Segmented Cement Bond Log Calibration Report
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Serial Number:	10022773
Tool Model:	UW_RBT_004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	-76.502 ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.001	0.861	0.800	62.165	71.309	0.735
5FT	0.000	0.910	0.800	62.165	67.459	0.781
S1	0.002	0.759	0.000	100.000	132.097	-0.221
S2	-0.000	0.824	0.000	100.000	121.385	0.022
S3	0.000	0.918	0.000	100.000	108.930	-0.008
S4	0.000	0.961	0.000	100.000	104.115	-0.008
S5	0.001	0.916	0.000	100.000	109.243	-0.092
S6	0.000	0.865	0.000	100.000	115.643	-0.015
S7	0.001	0.787	0.000	100.000	127.154	-0.090
S8	0.001	0.746	0.000	100.000	134.069	-0.078

Temperature Calibration Report

Serial Number: 10025097
 Tool Model: PRT_016
 Performed: Sun Oct 11 12:34:58 2015

Point #	Reading		Reference	
1	13053.00	cps	68.00	degF
2	18014.00	cps	104.00	degF
3	29668.00	cps	176.00	degF
4	41181.00	cps	248.00	degF
5	52983.00	cps	320.00	degF
6	58931.00	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: (Not Performed)

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 Wagner 28N-E10HZ
Field Wattenberg
County Weld
State Colorado