

County Weld State Colorado

Other Services	
Gauge Ring	
CCL	
MIT	
Elevation	

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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.

Log ran as per Customer request  
Depth reference to Casing Tally reported Liner Top at 67501 FT.  
Adjusted - 28 FT from KB zero to correlate with Liner Top  
Gauge Ring / Junk Basket ran to 6941 FT prior to log run.  
Log ran from 6821 FT to surface.  
Log ran with 2800 PSI surface induced pressure.

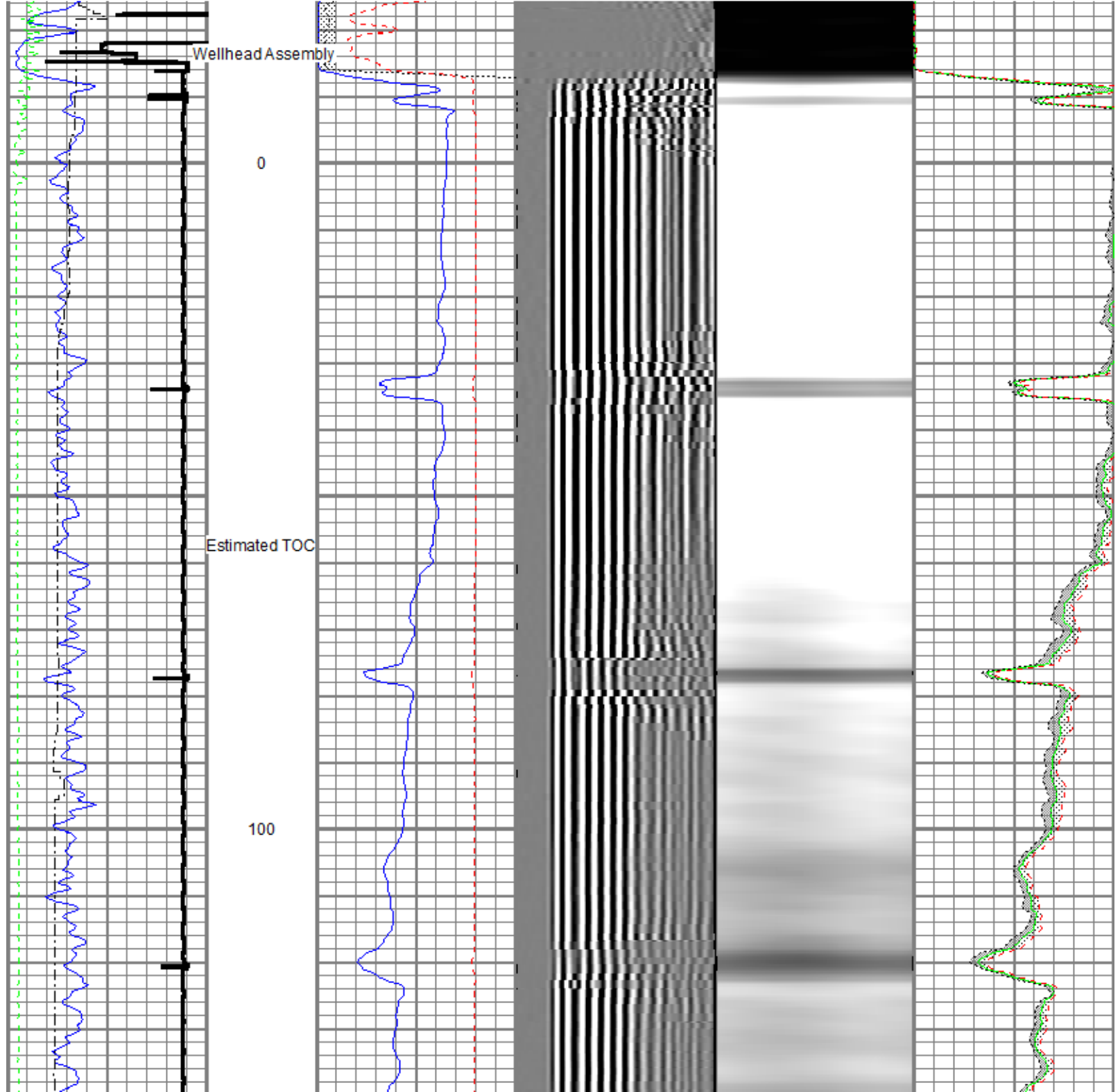
**Thank you for choosing FMC Technologies Completion Services!!**

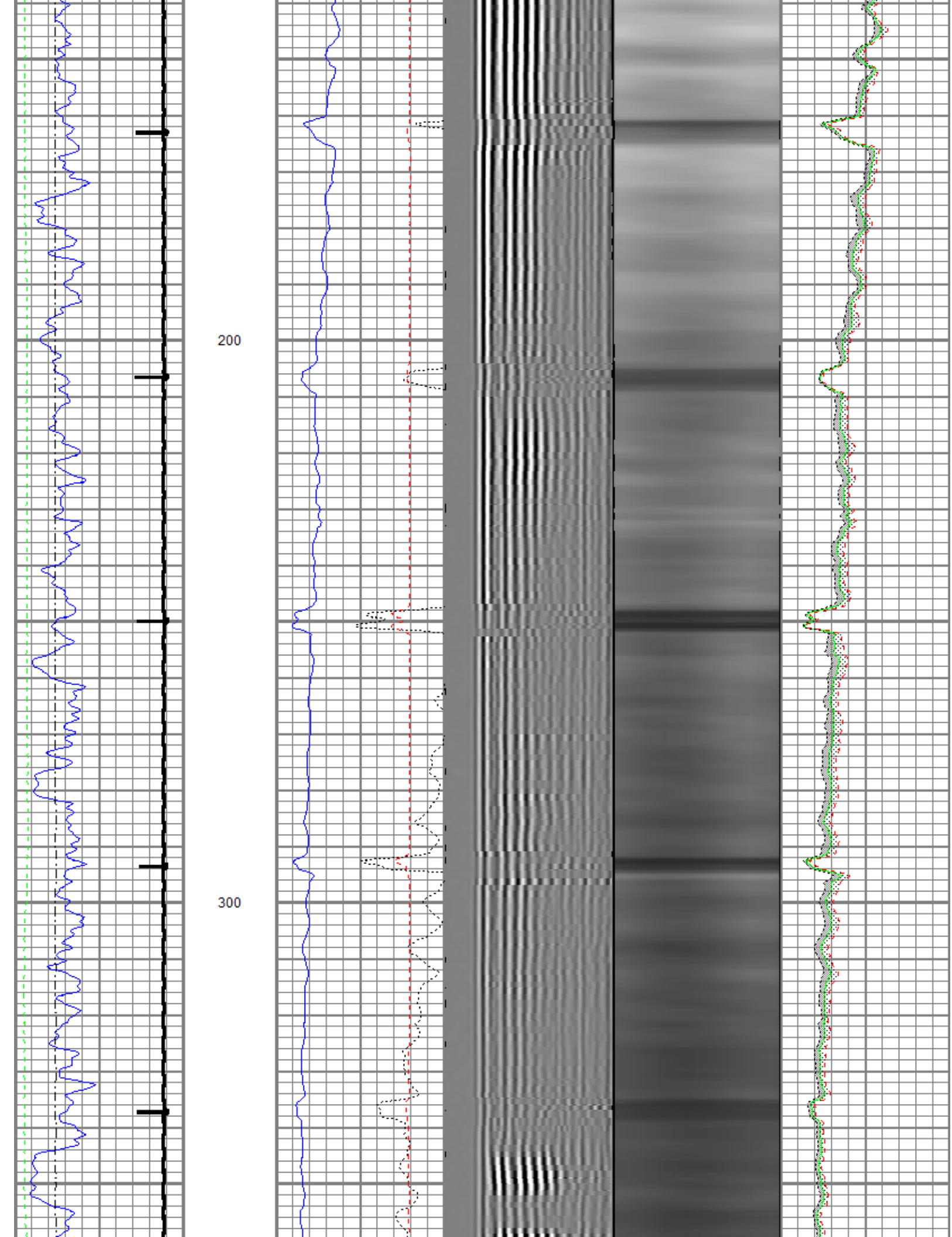


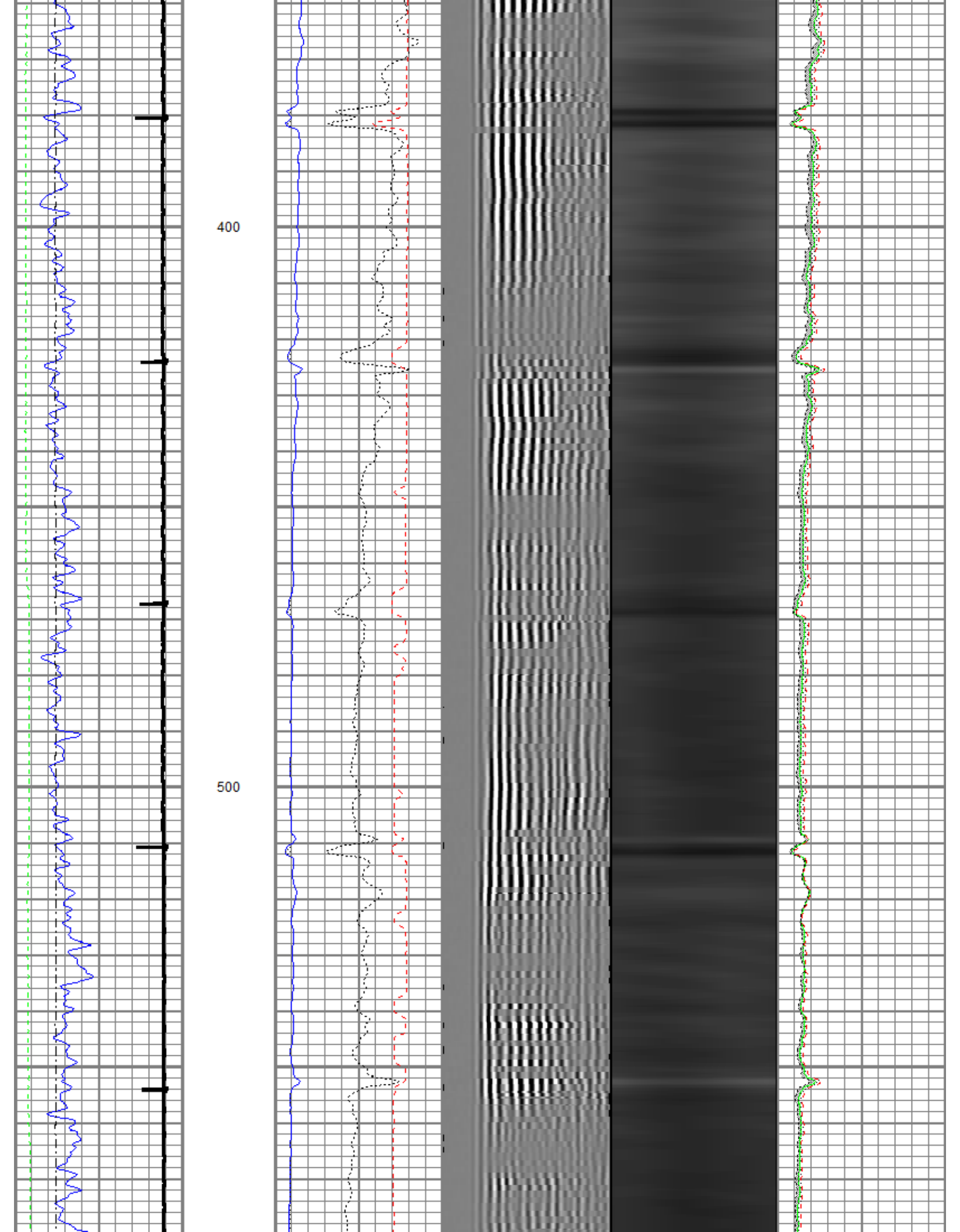
Learned With 2800 DCL At Surface

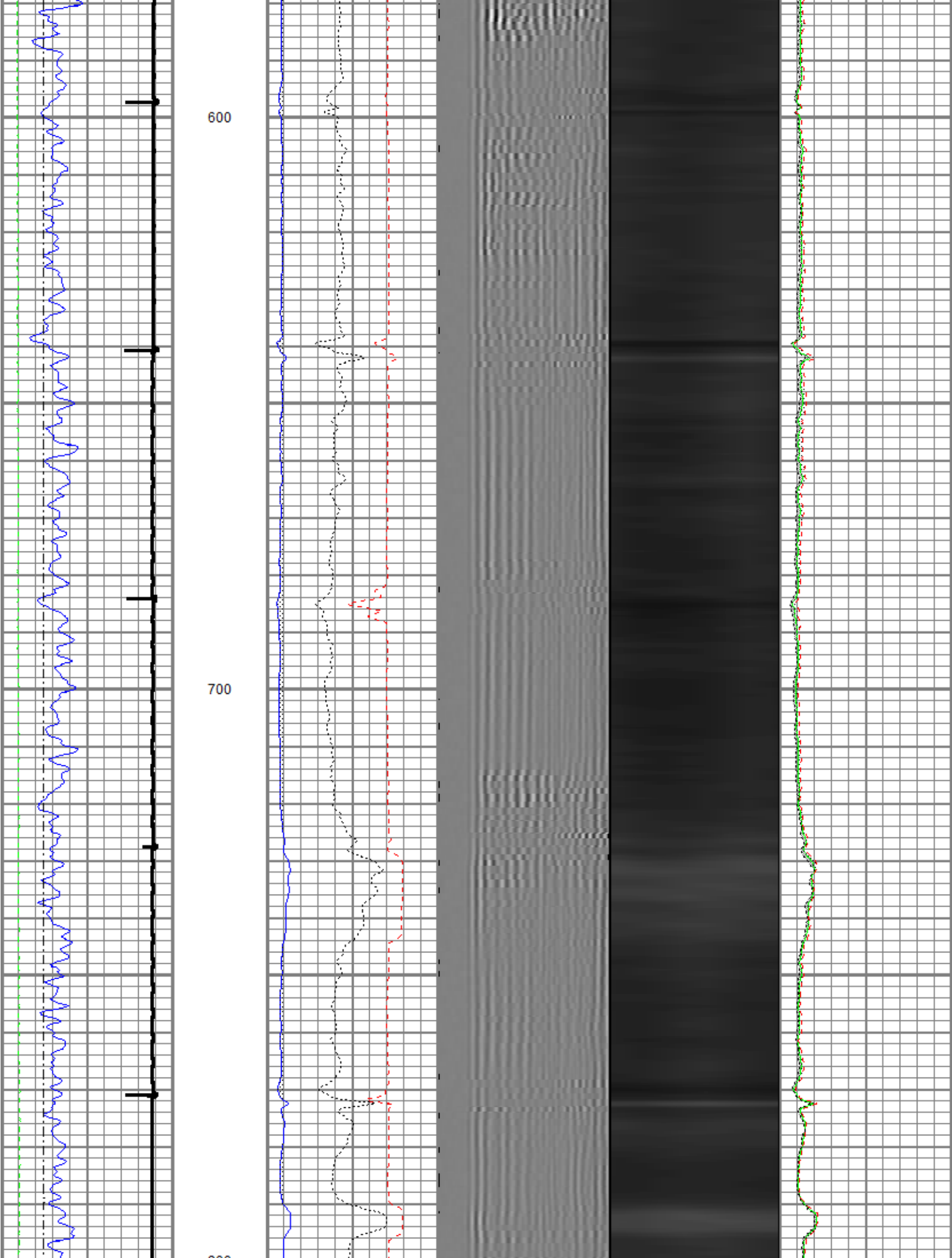
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 Dataset Pathname: main  
 Presentation Format: rbt4\_mit  
 Dataset Creation: Thu Aug 07 10:35:40 2014 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240

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

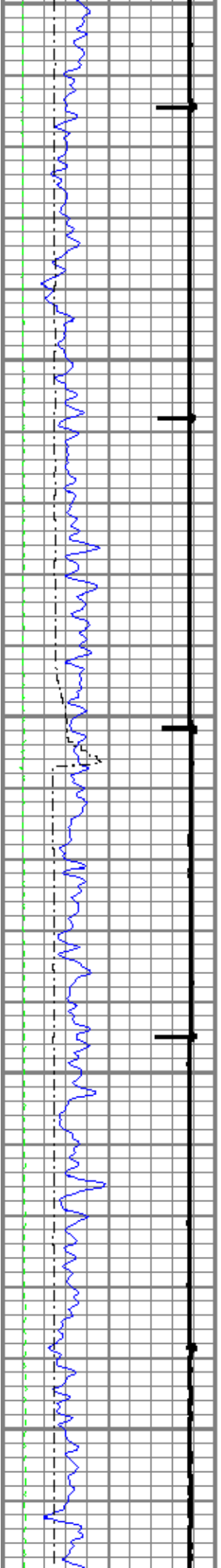




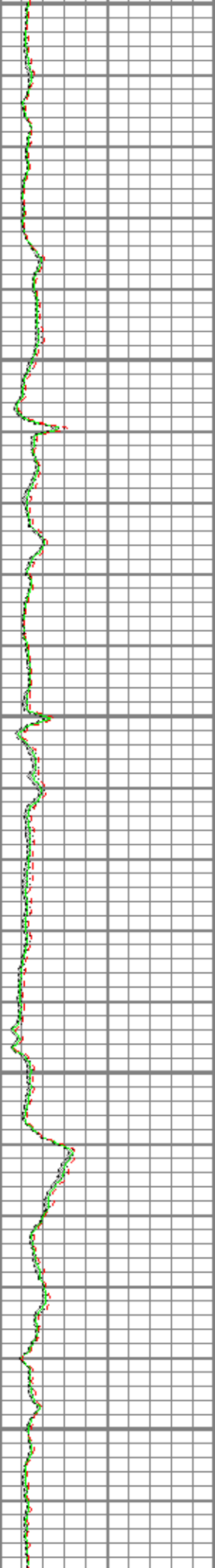
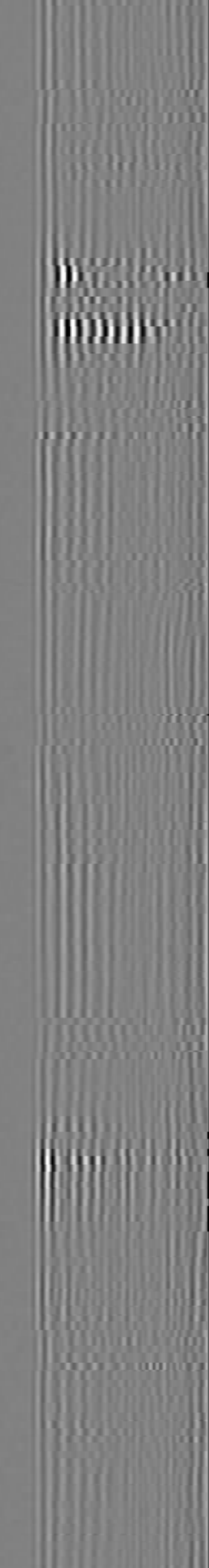
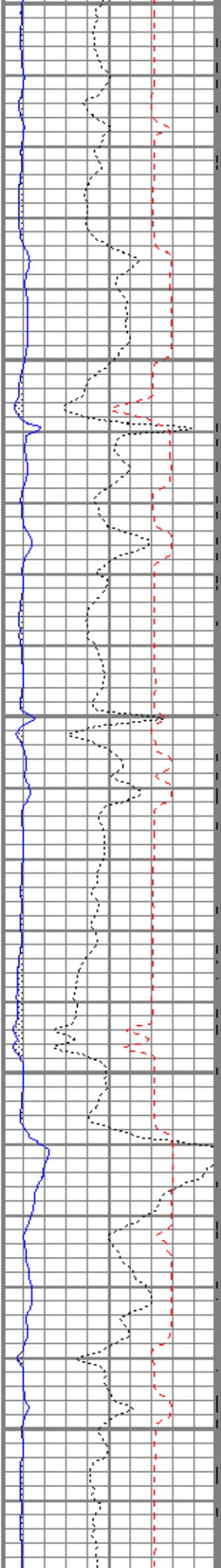


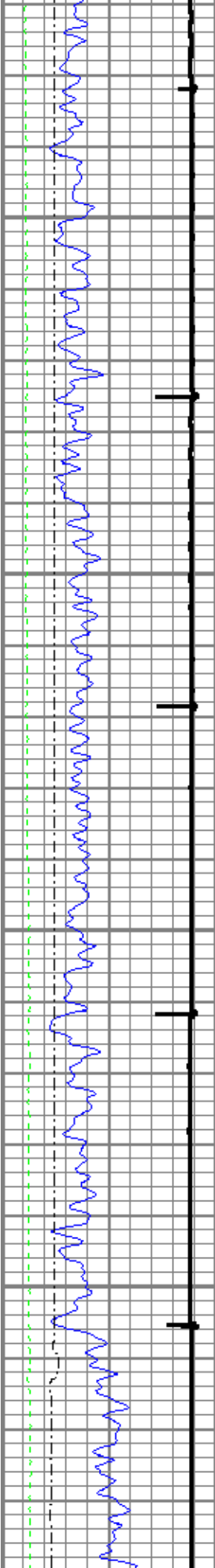






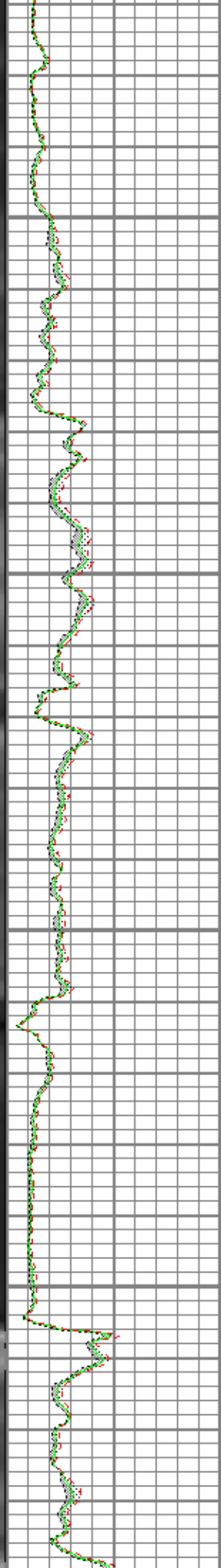
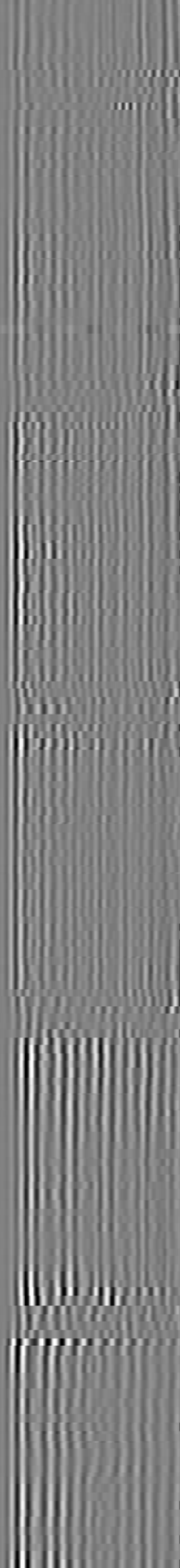
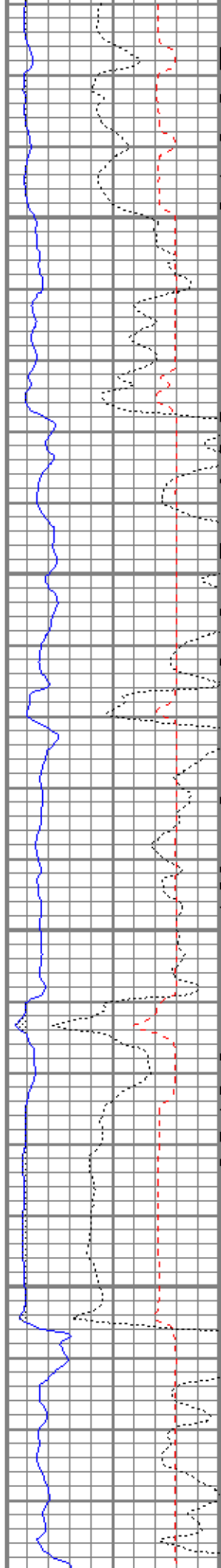
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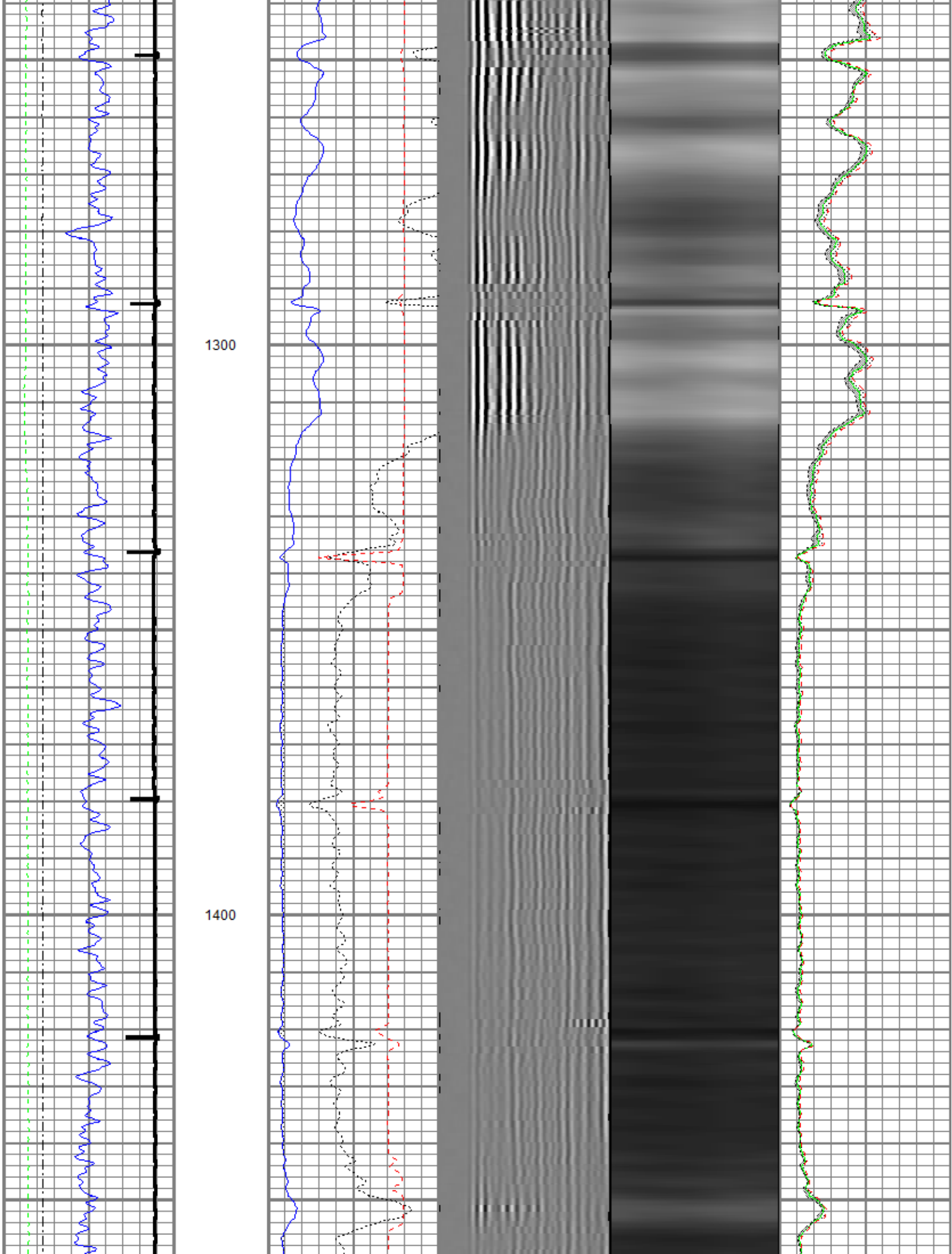




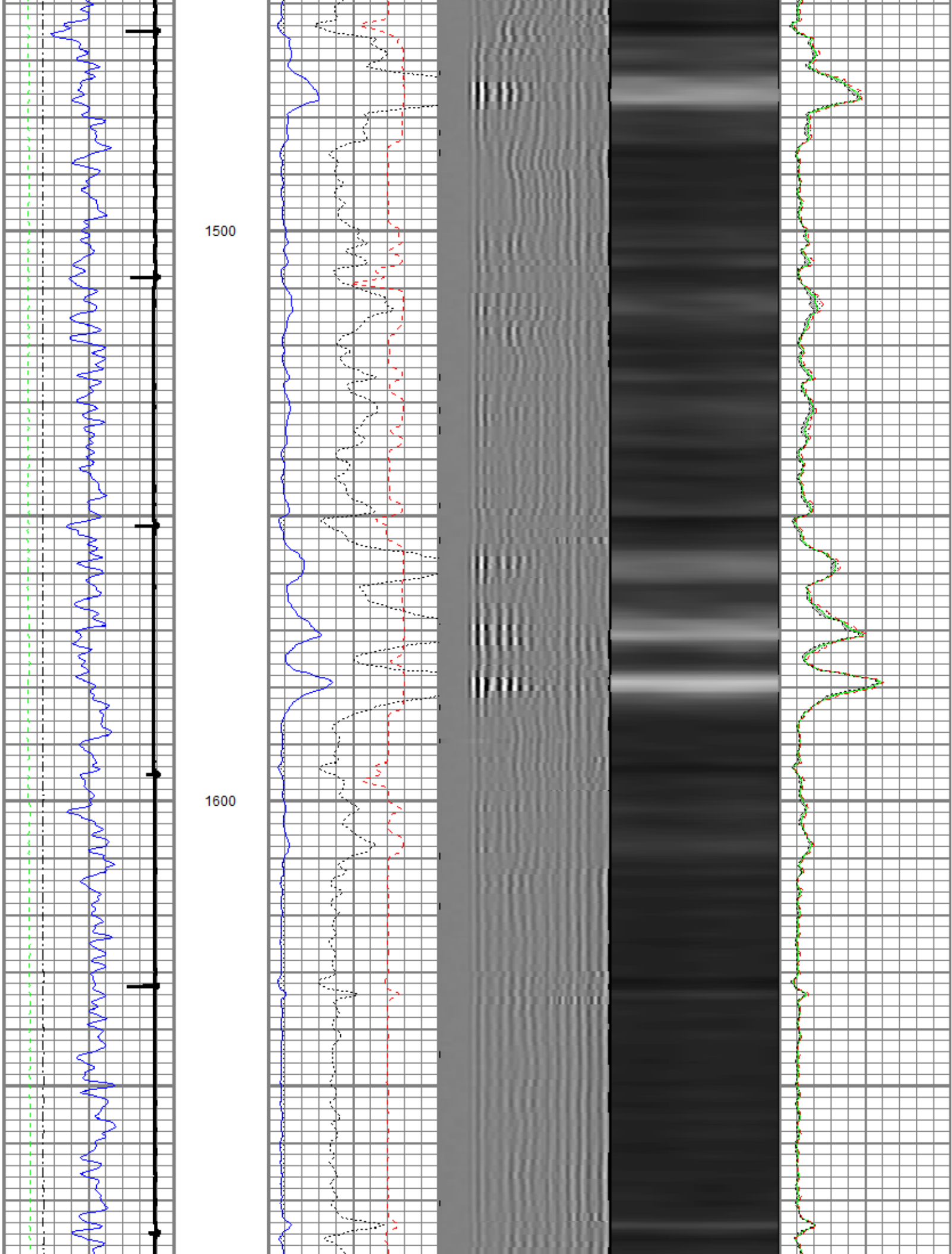
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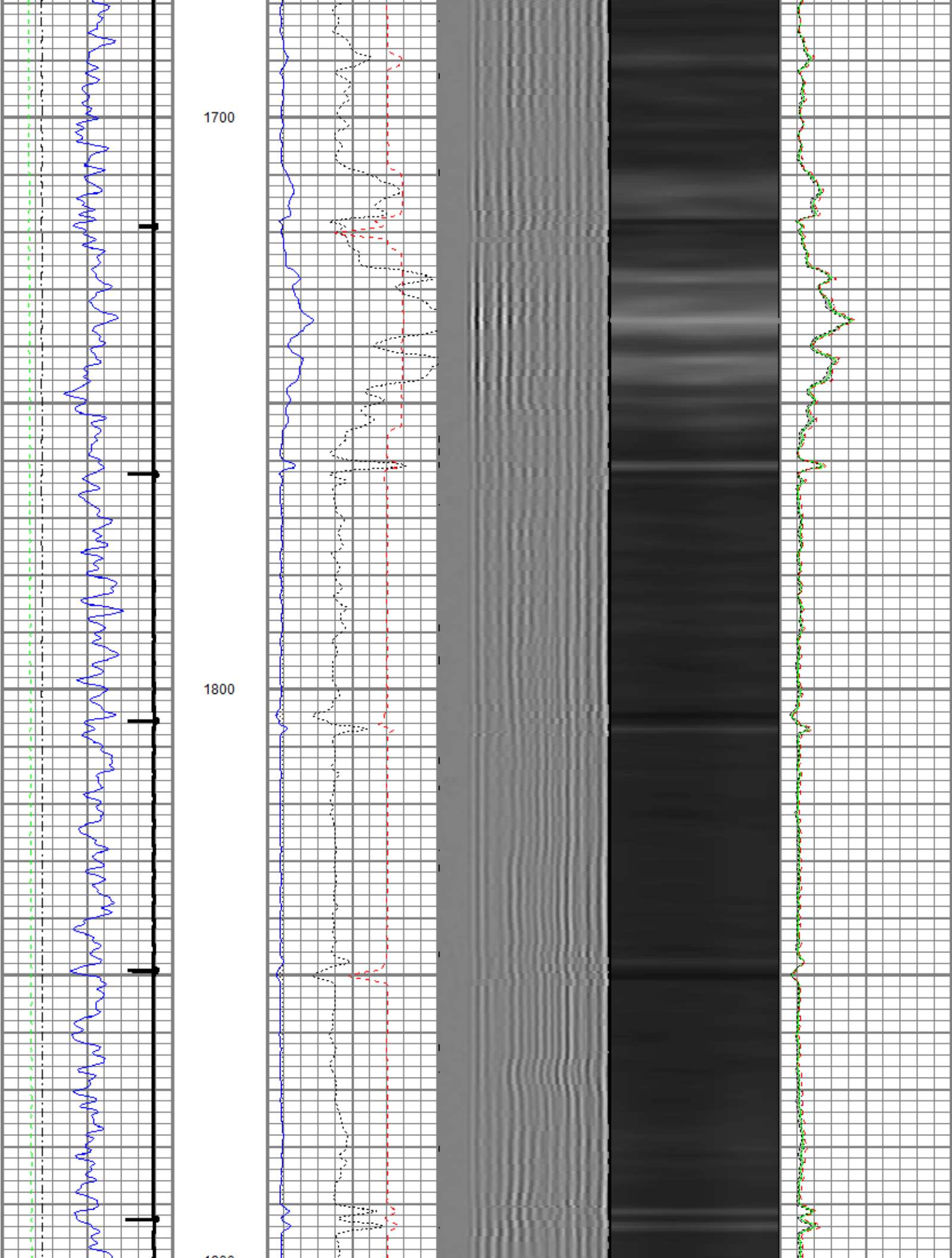
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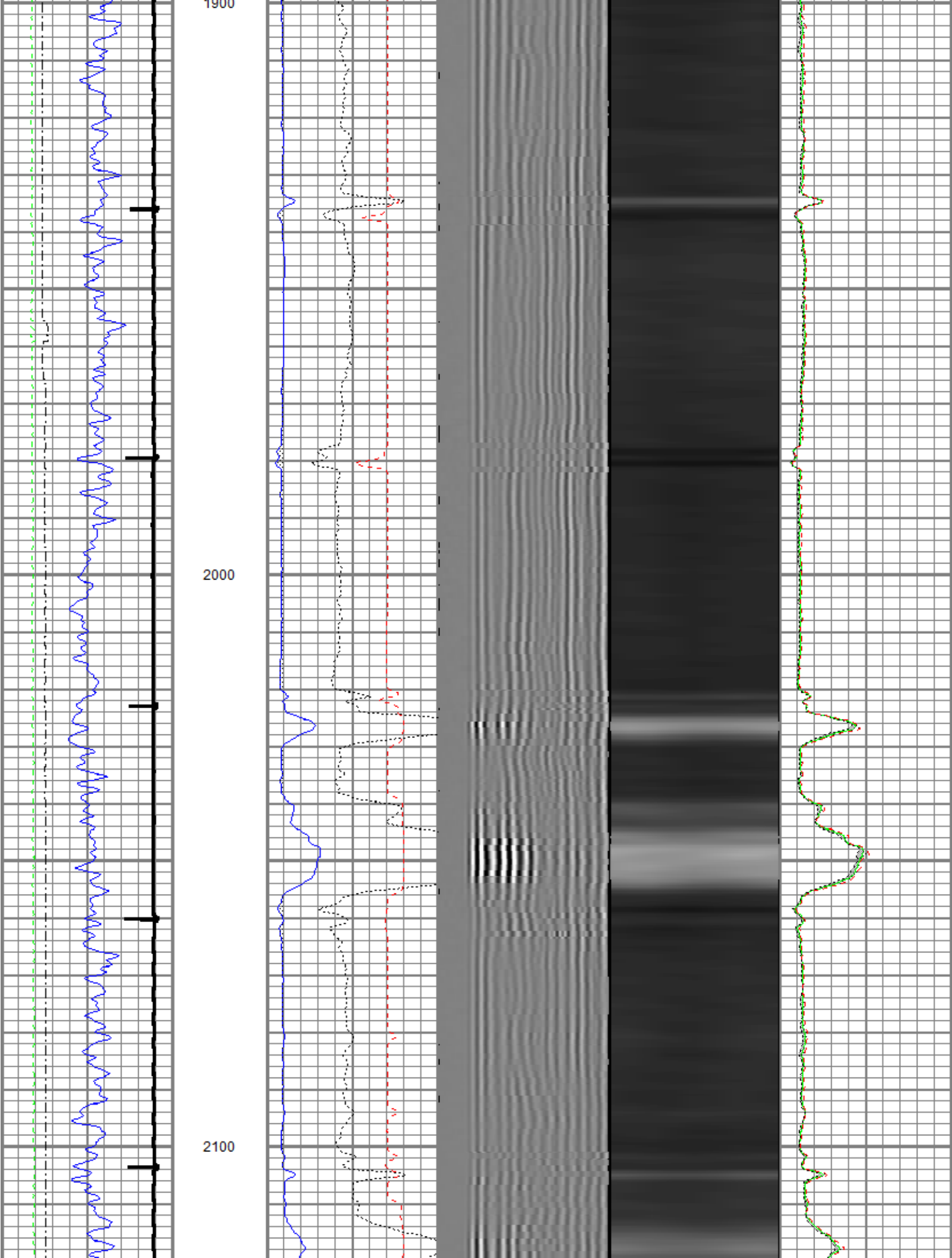


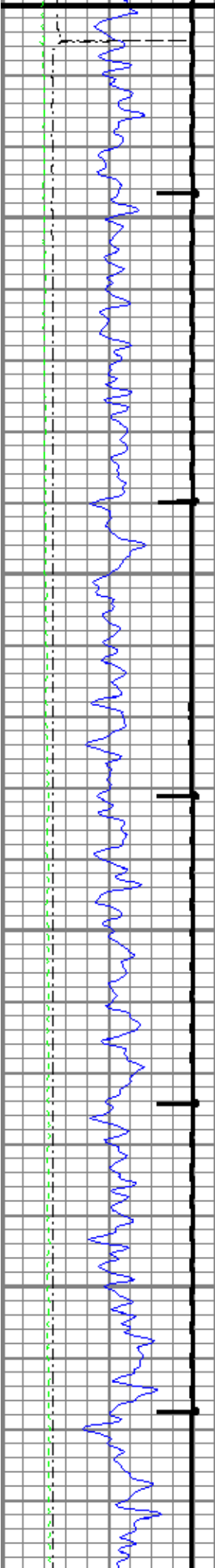






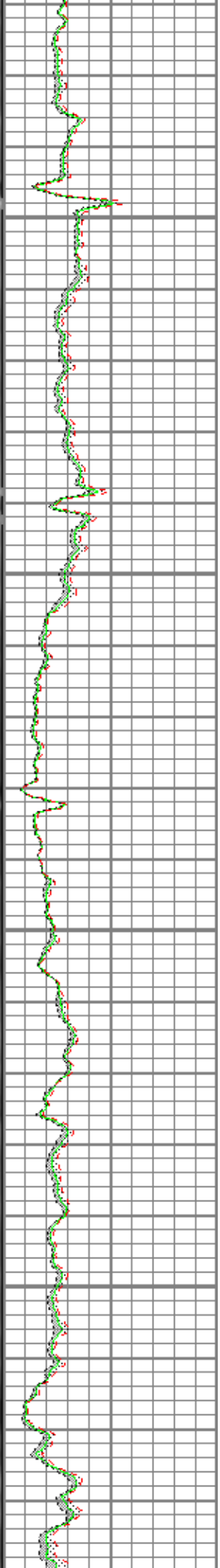
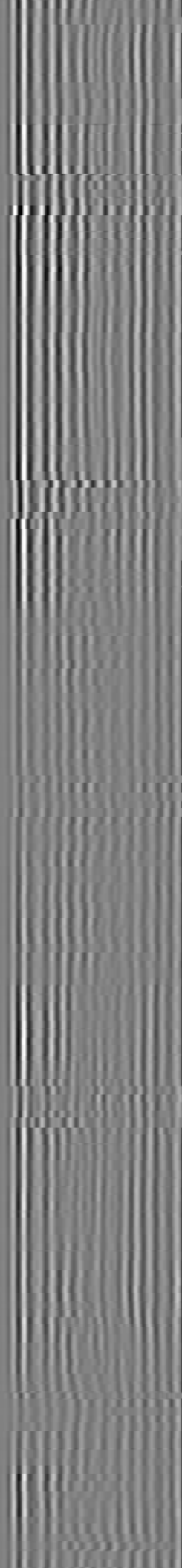
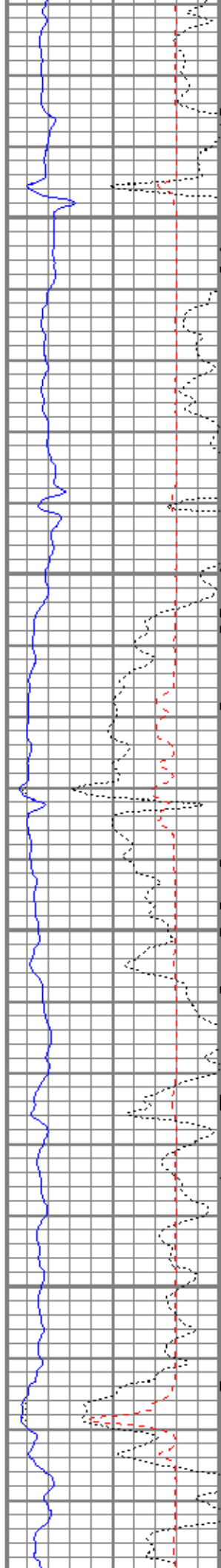


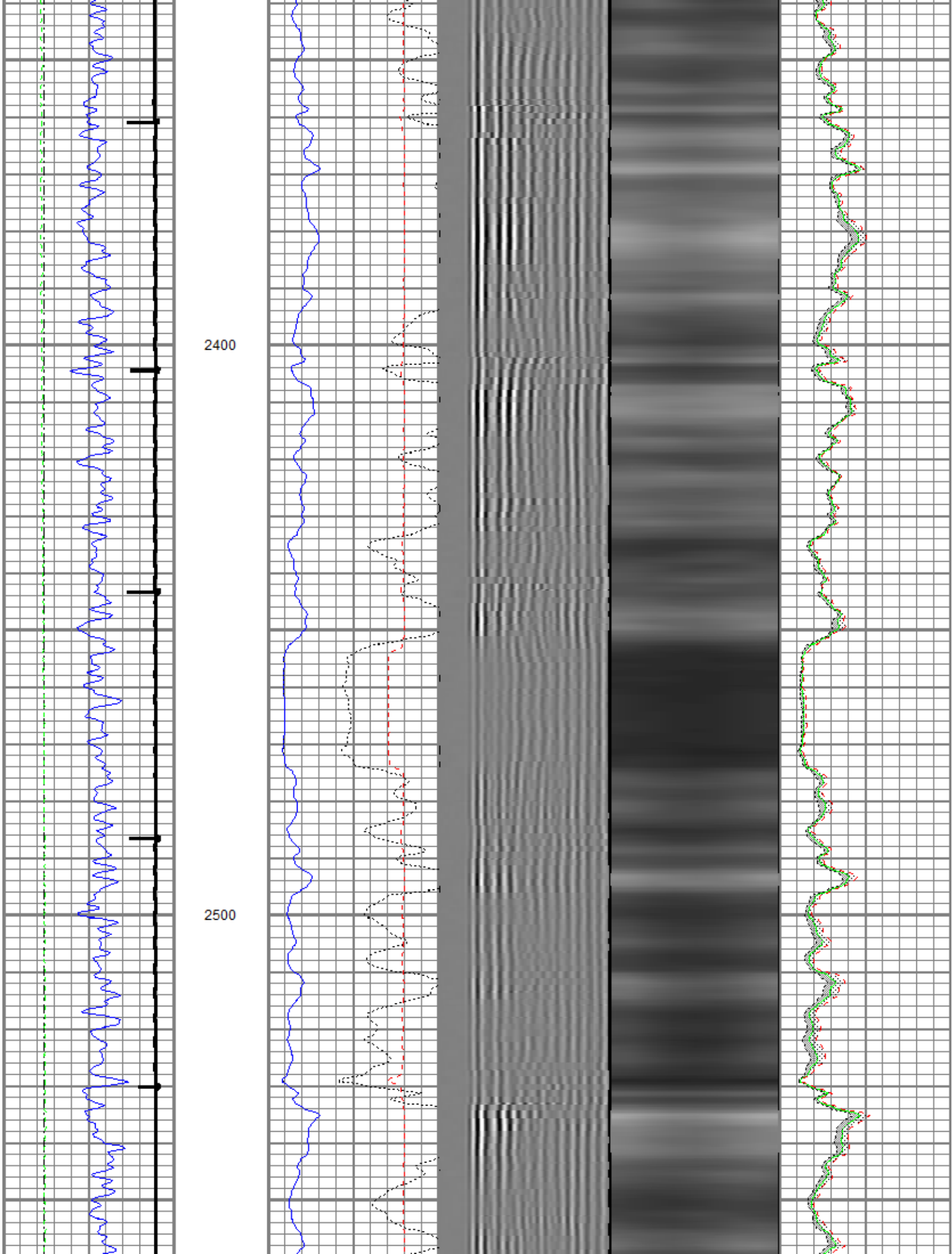




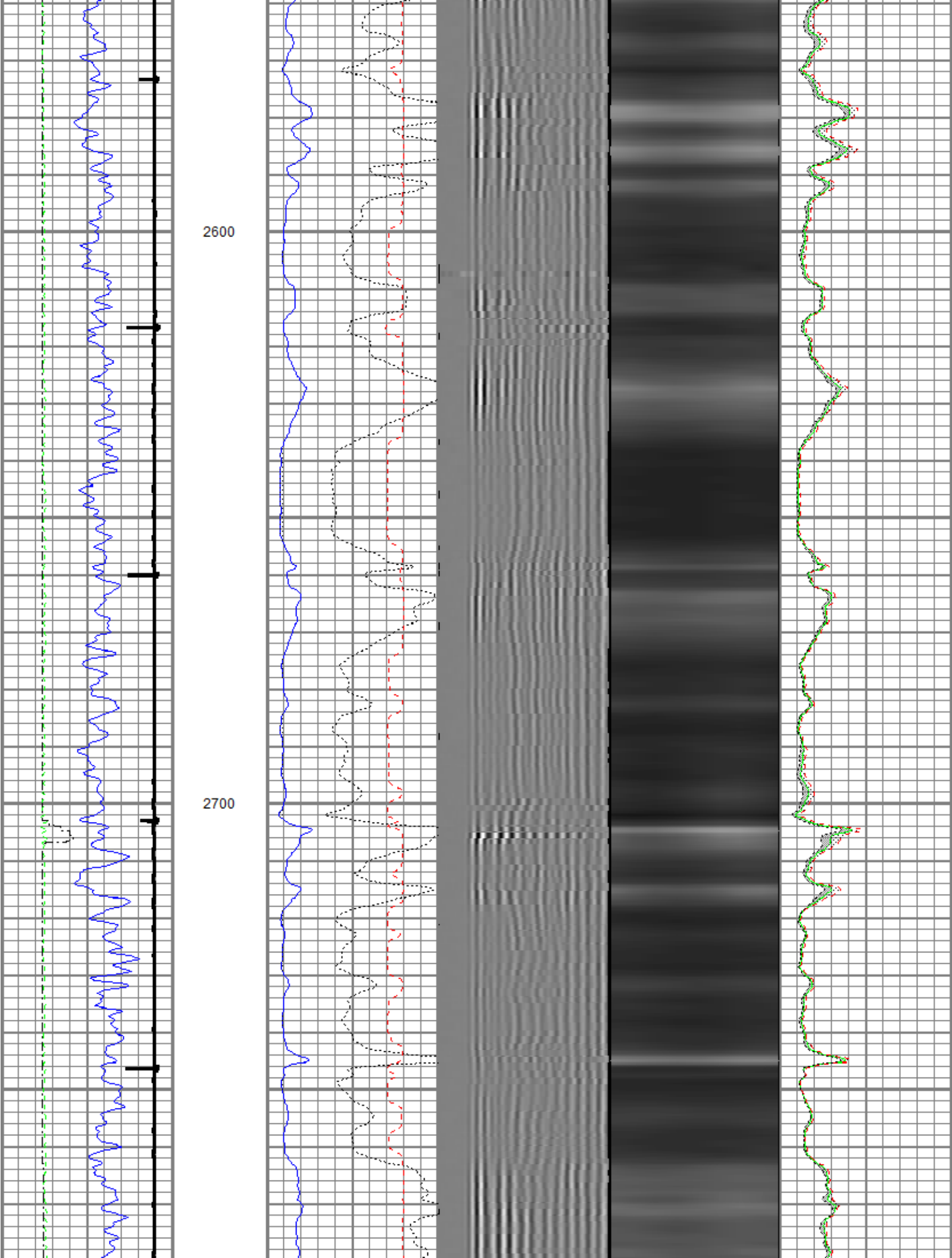
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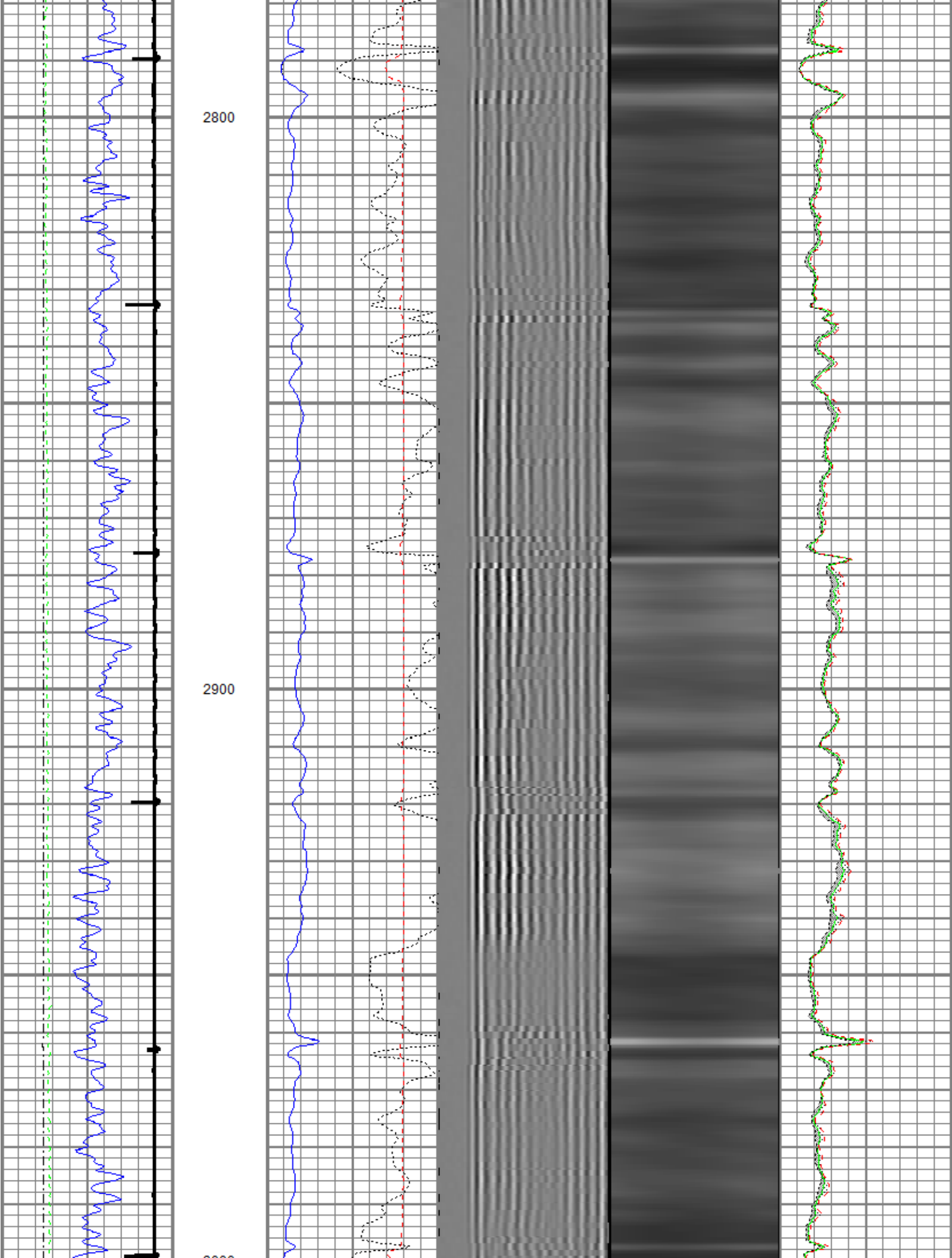
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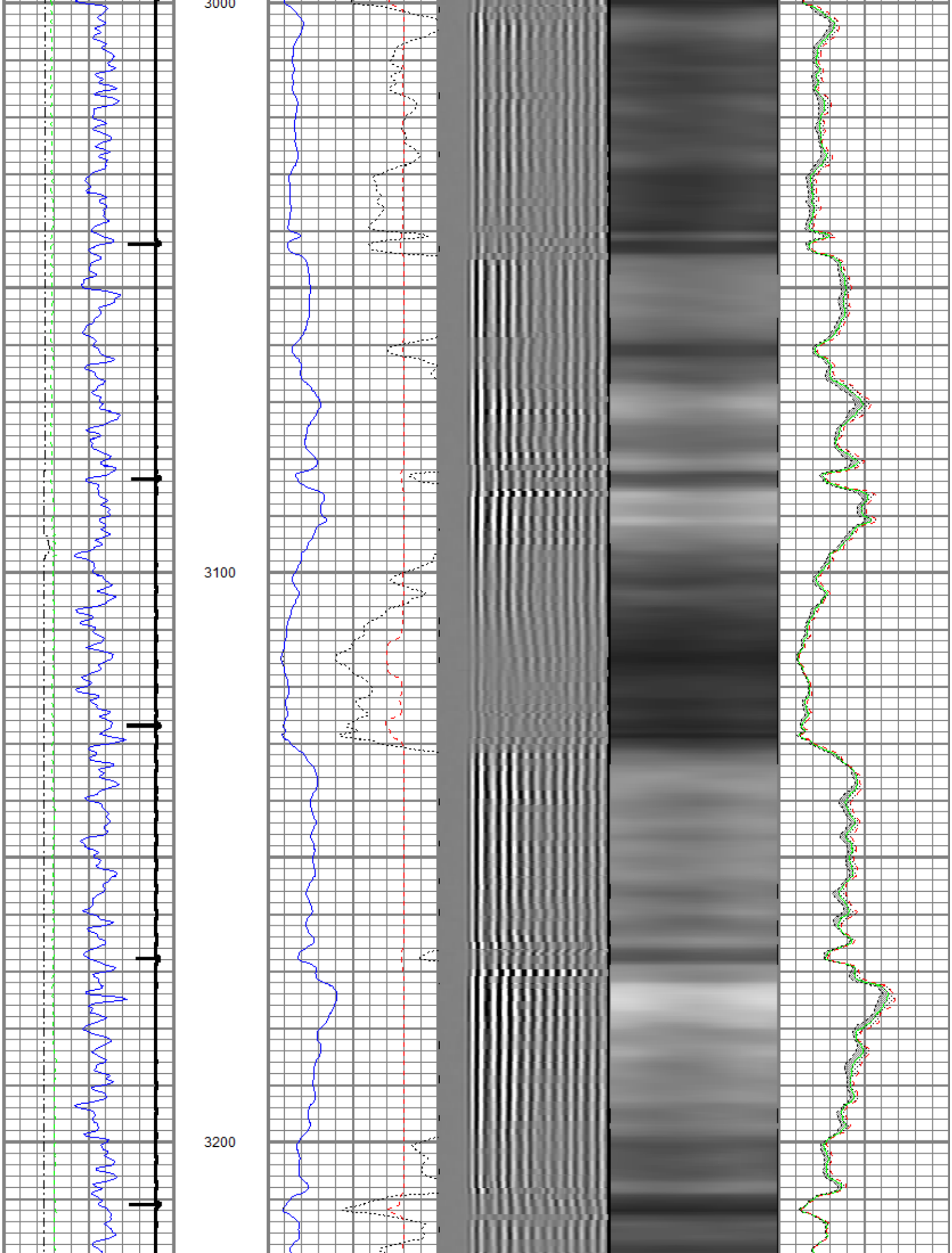


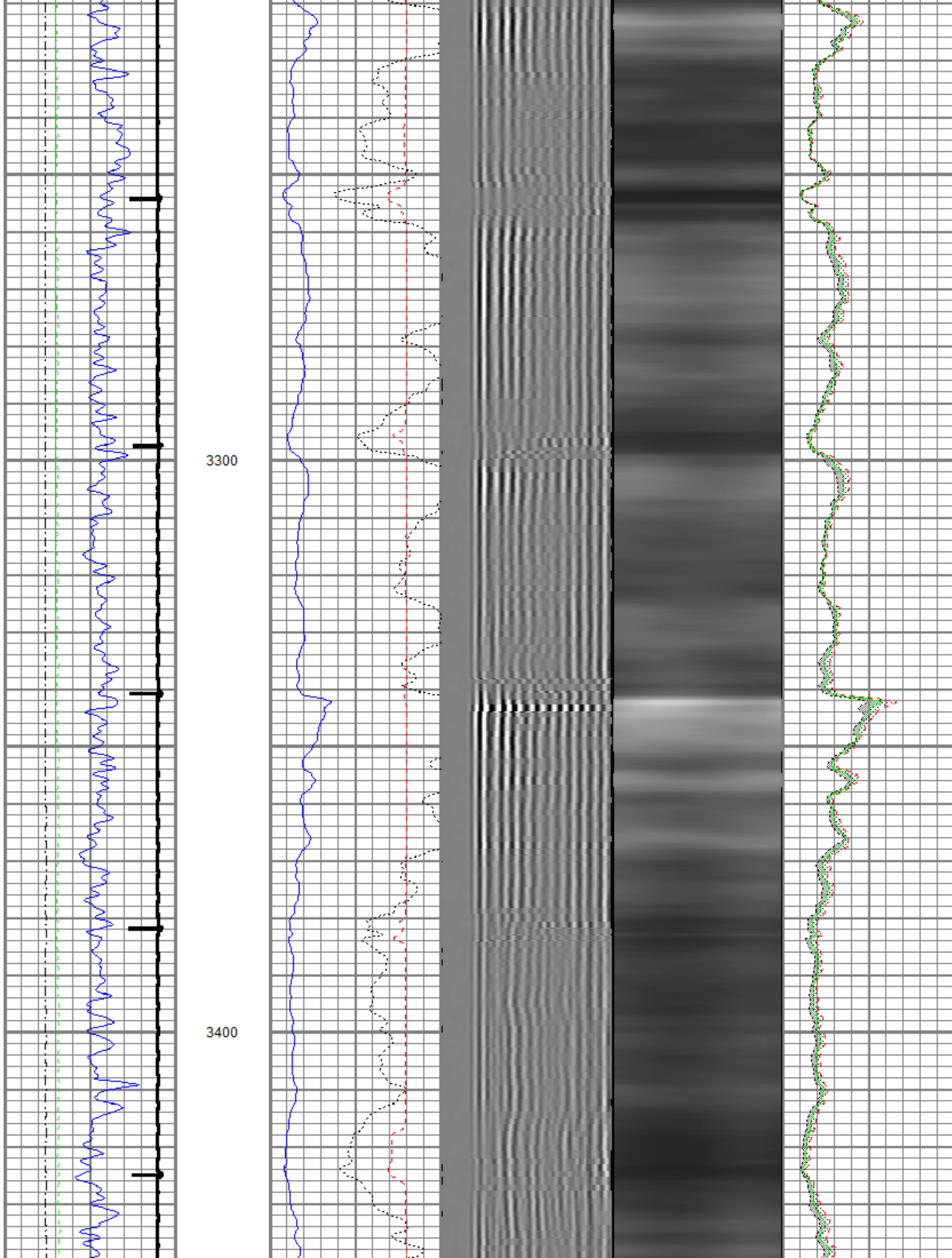


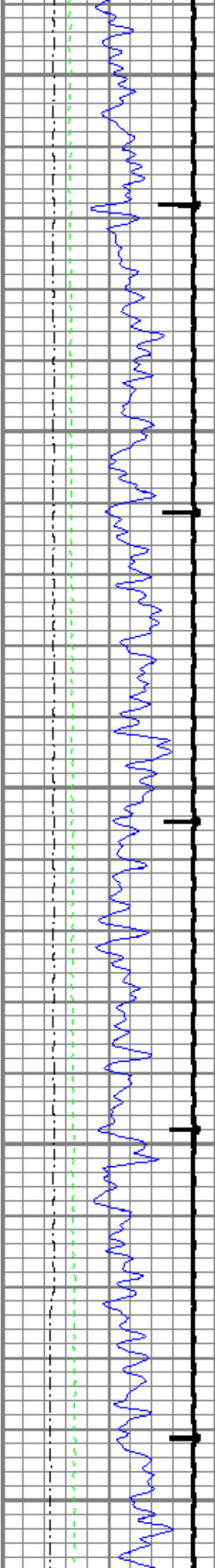






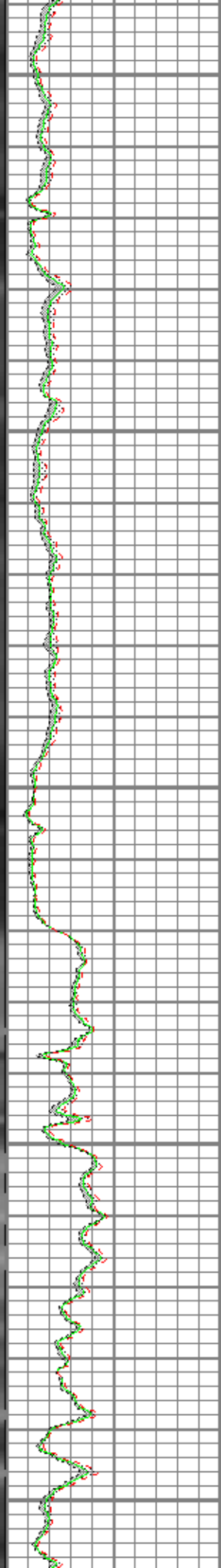
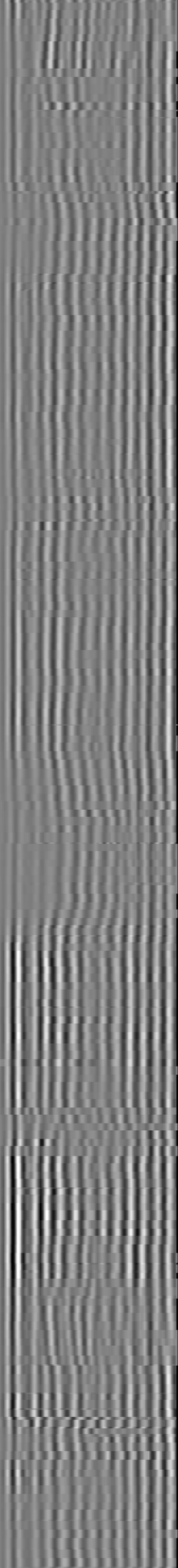
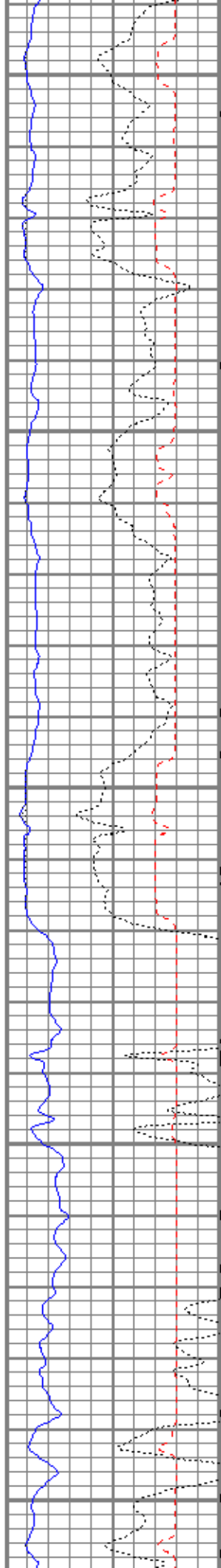




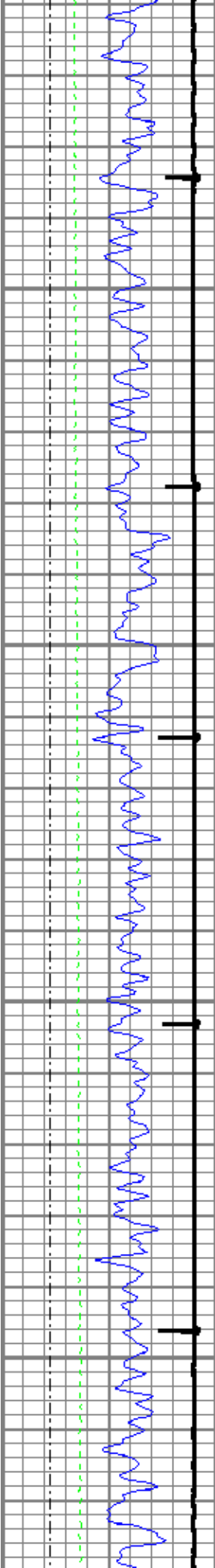


3500

3600

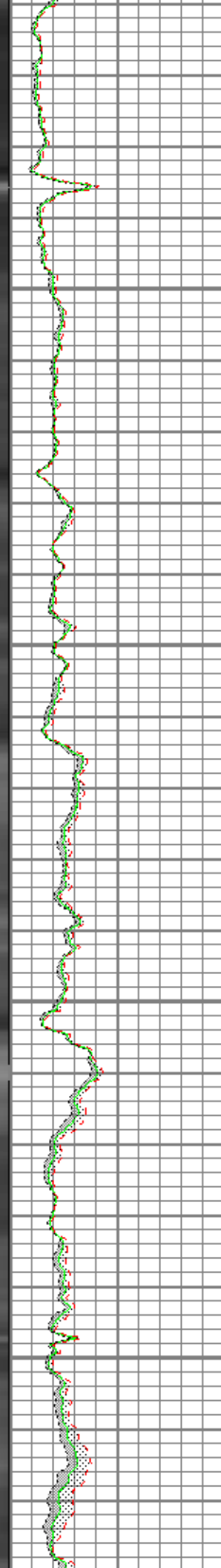
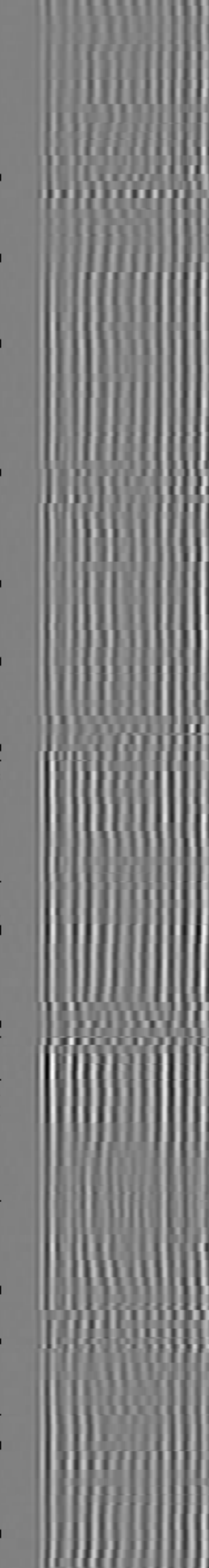
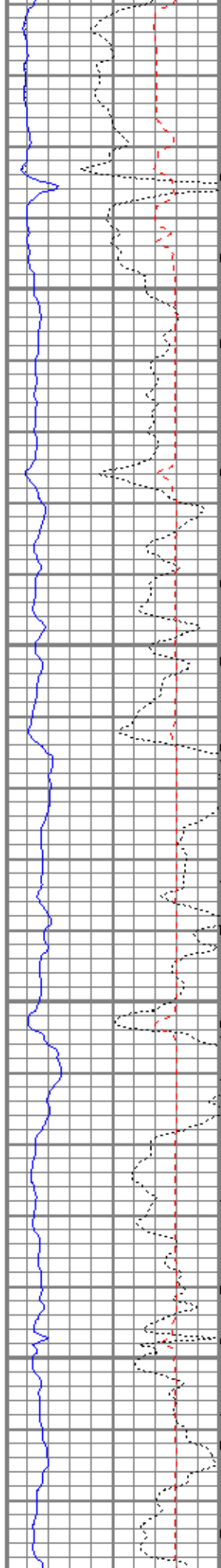


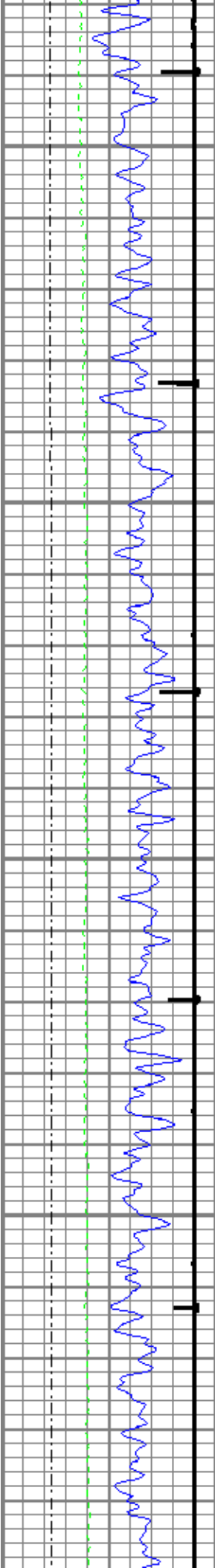




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3800

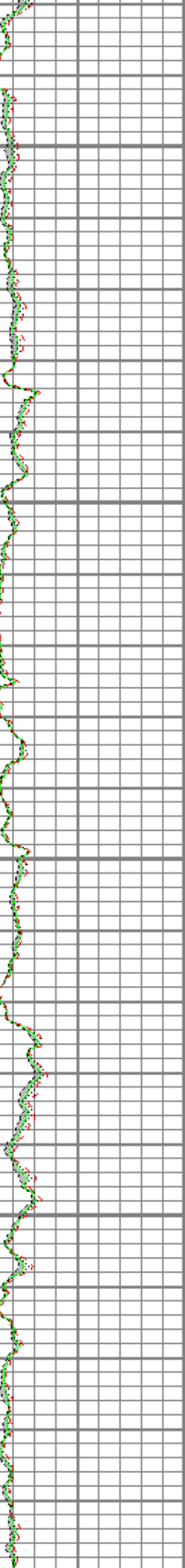
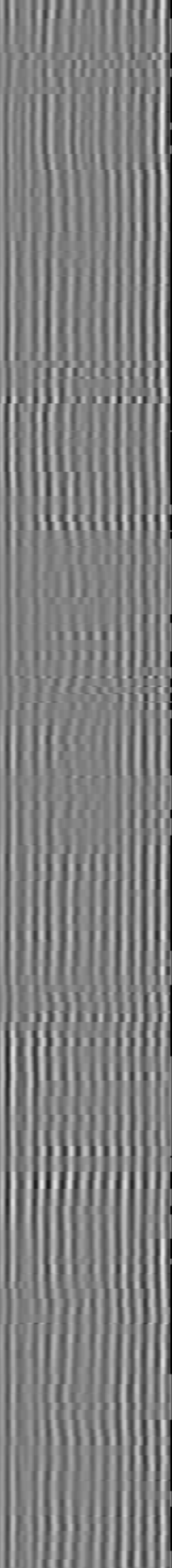
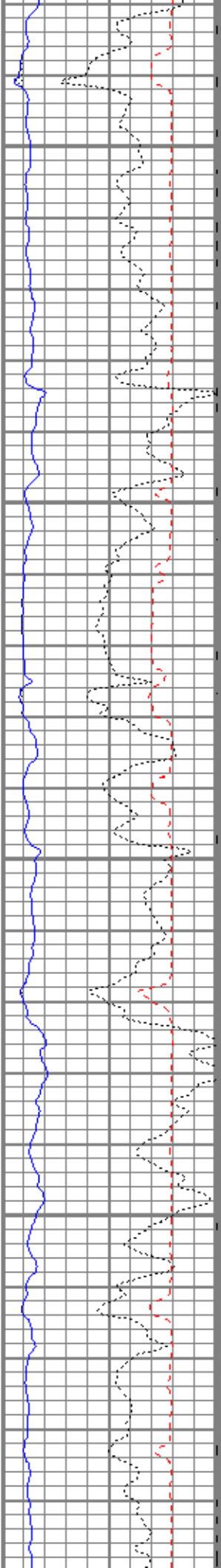


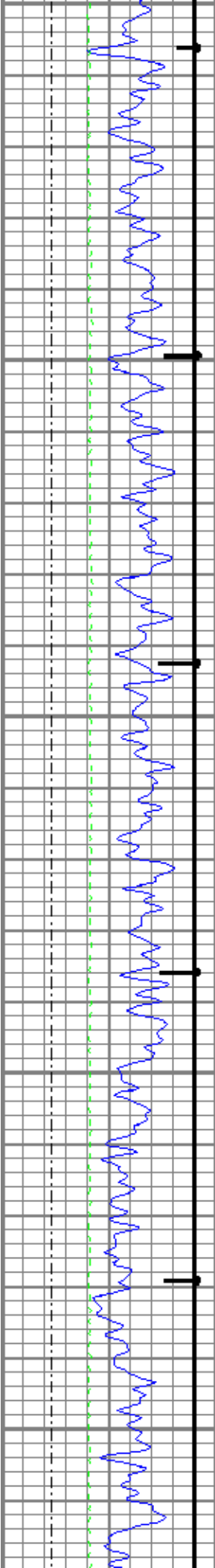


3900

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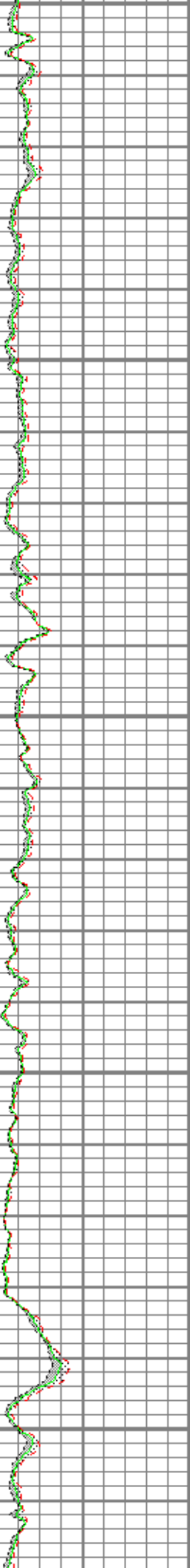
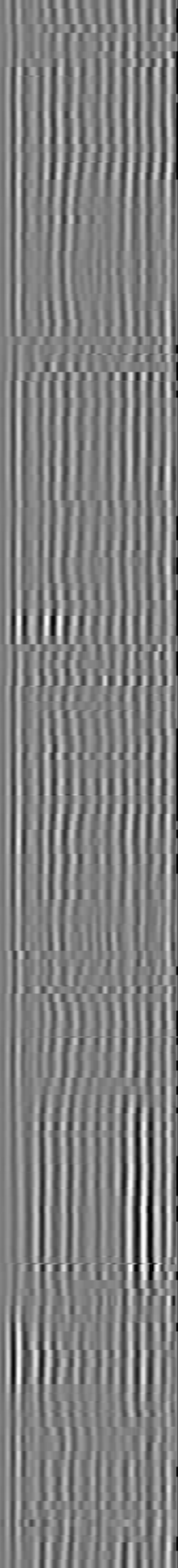
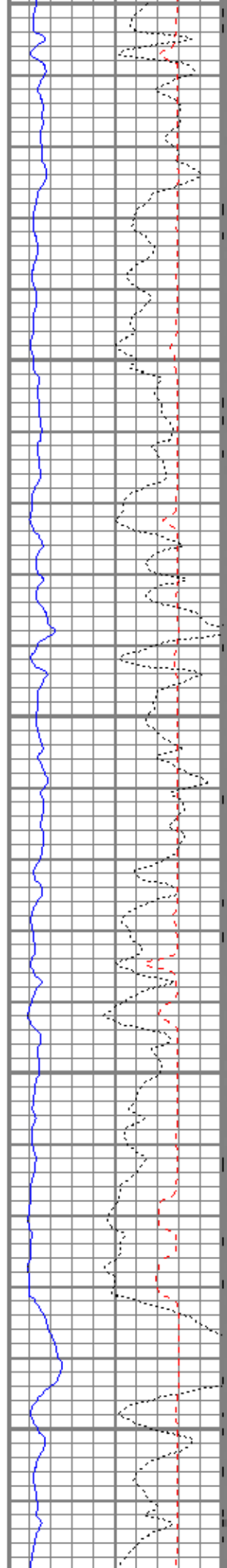


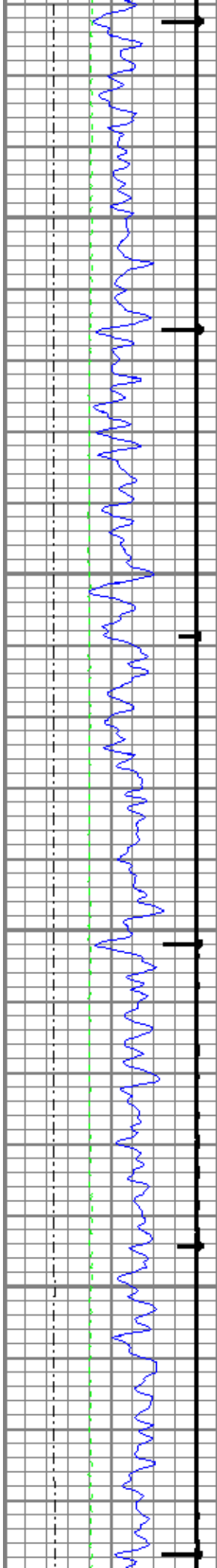


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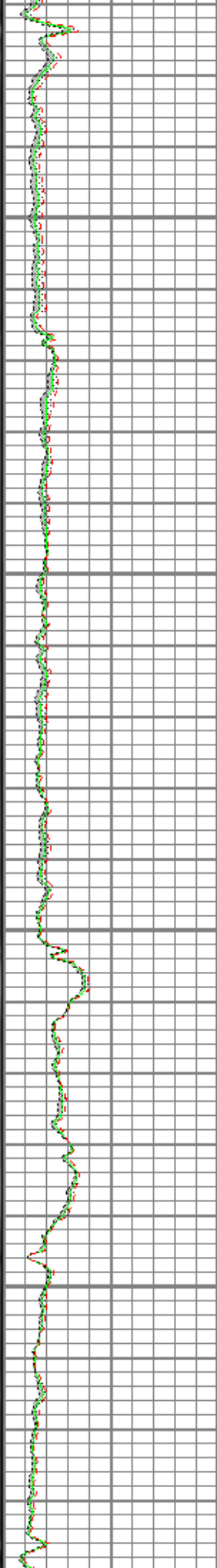
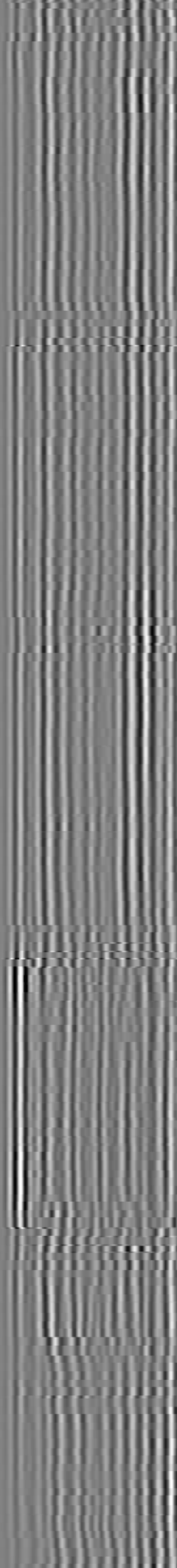
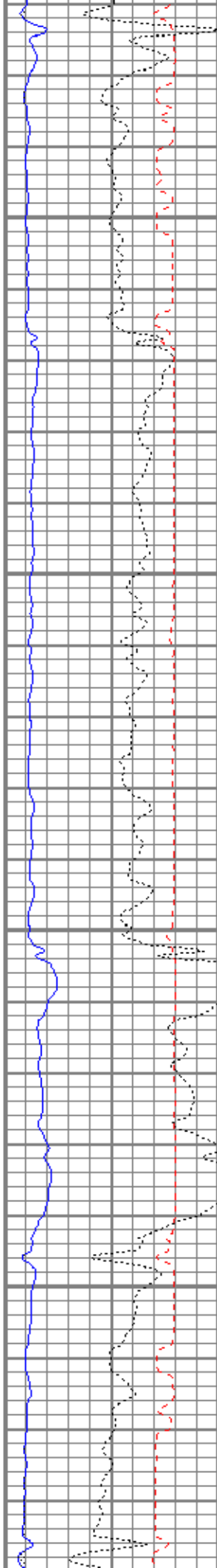
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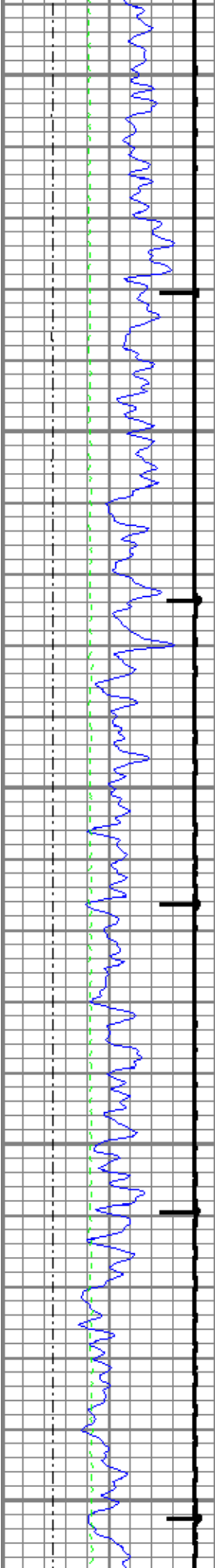




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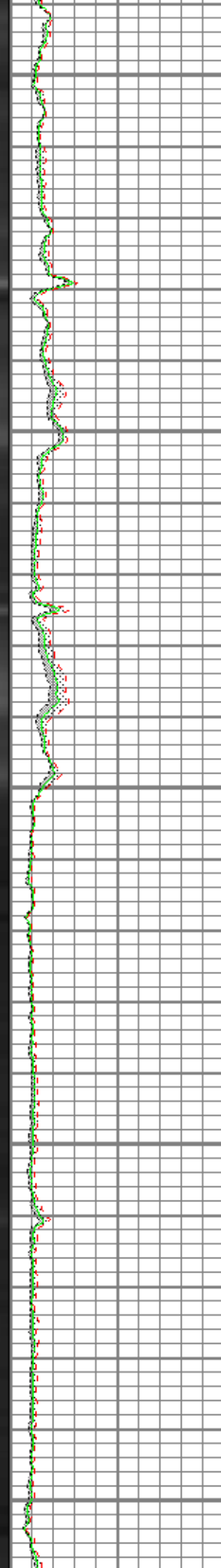
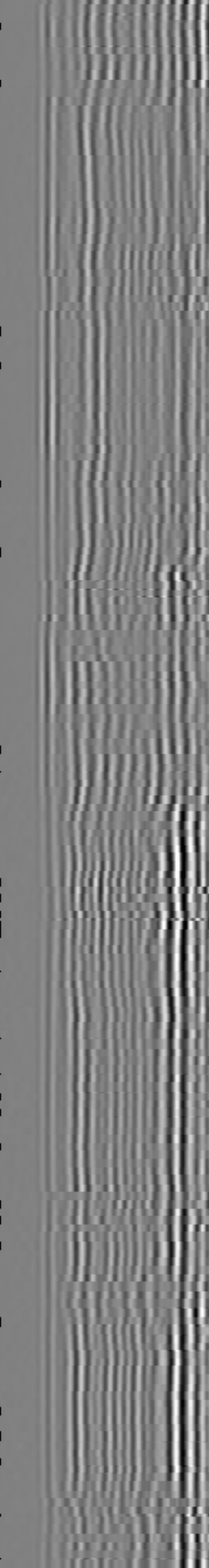
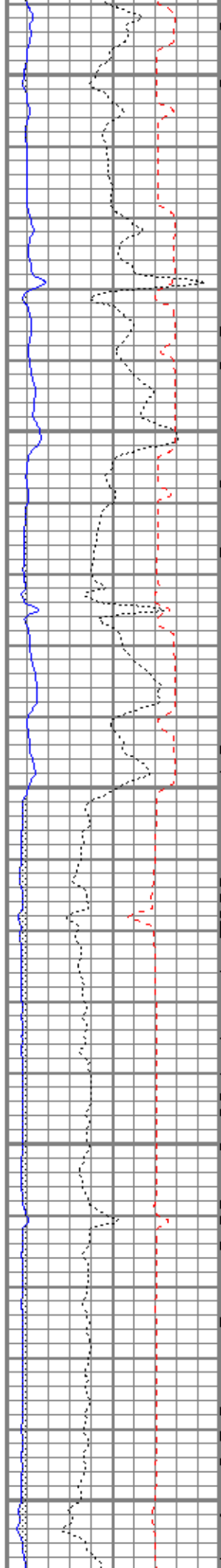
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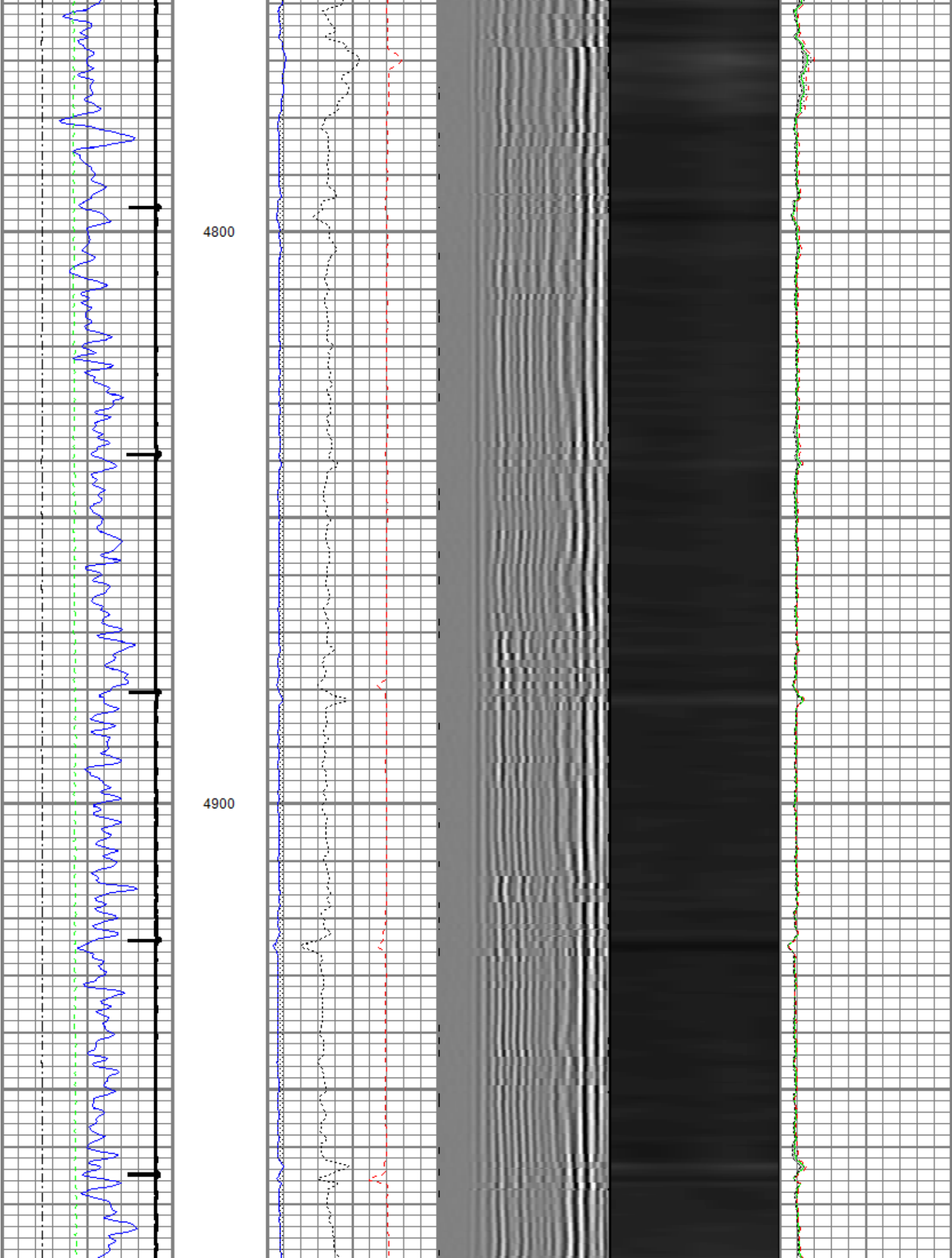


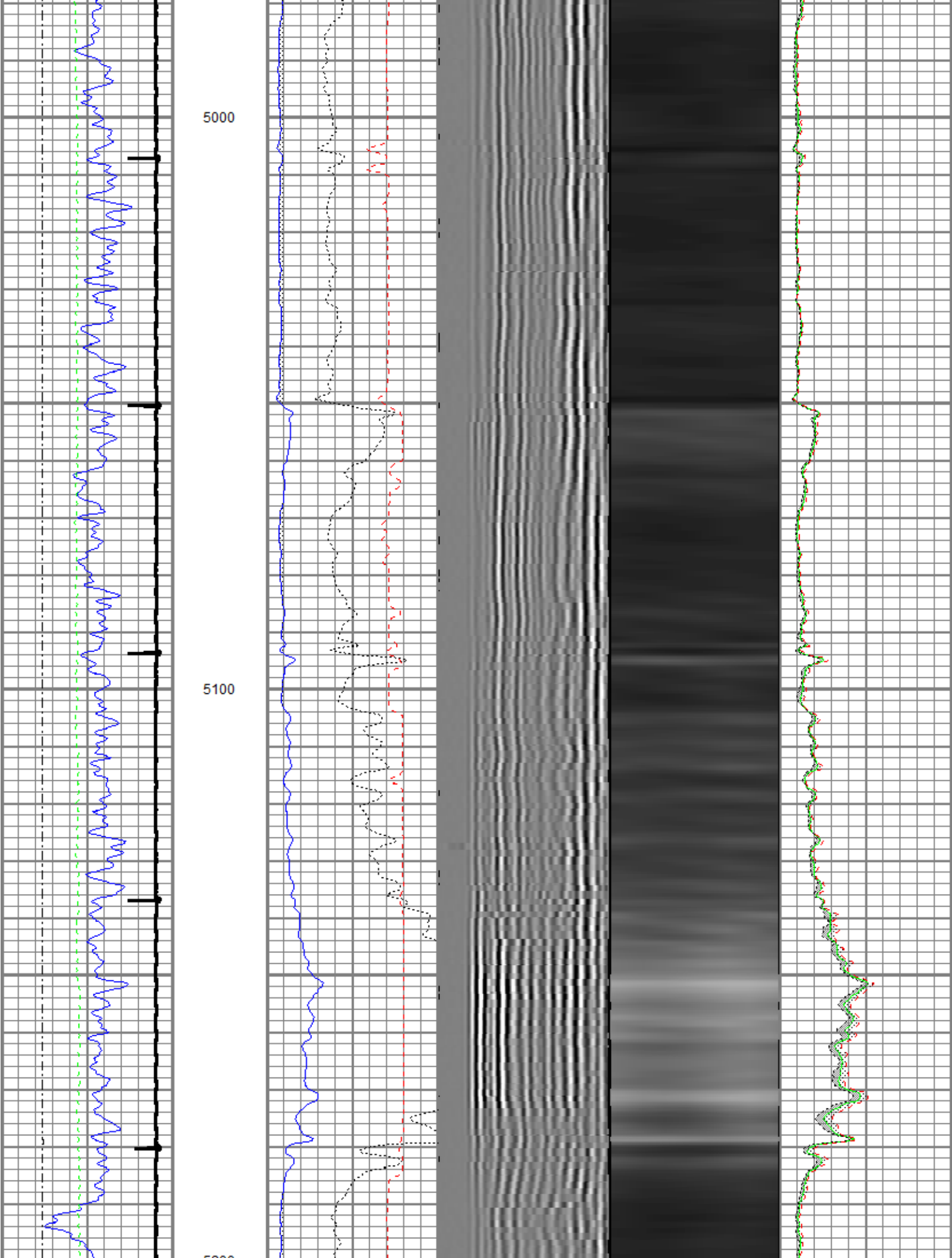
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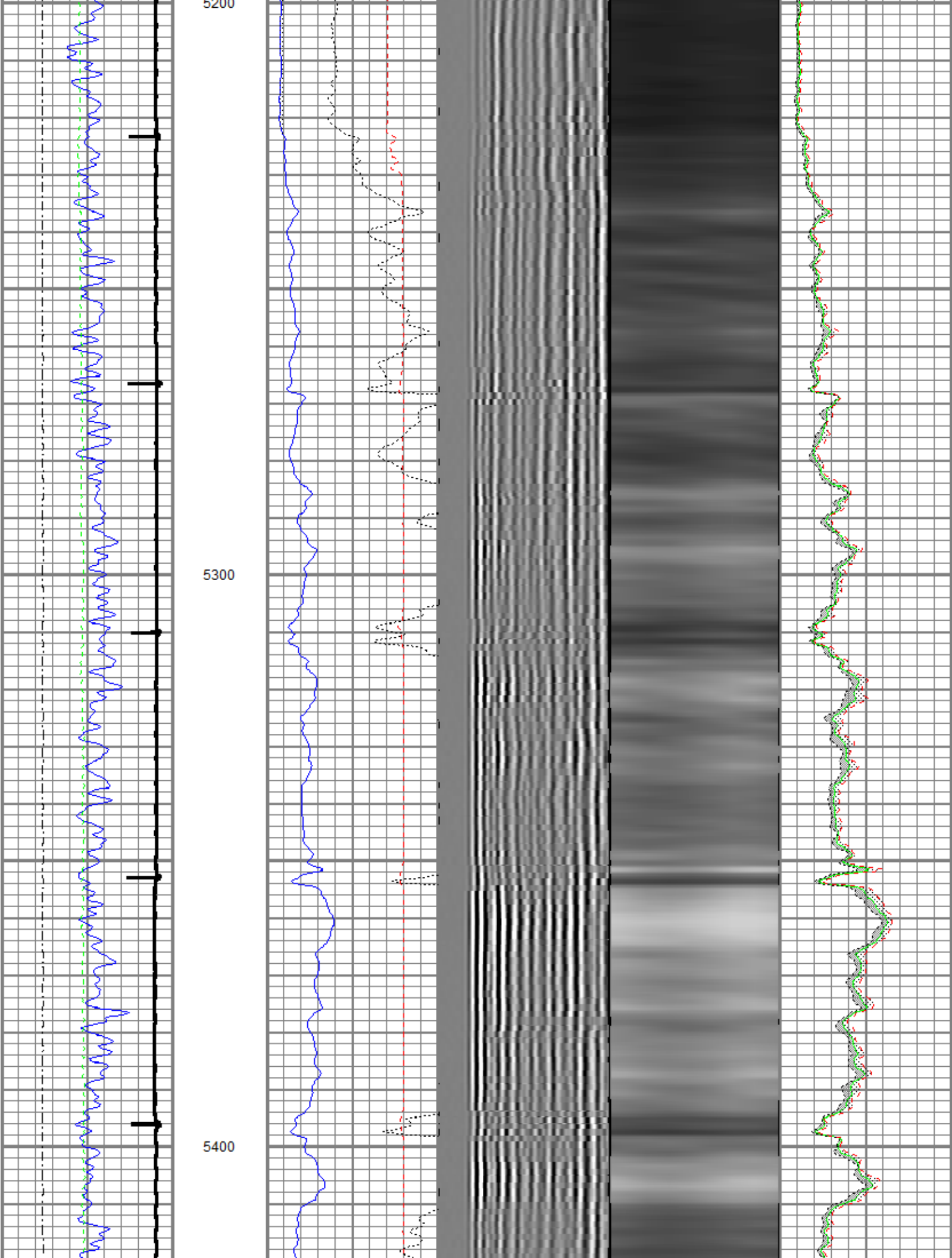
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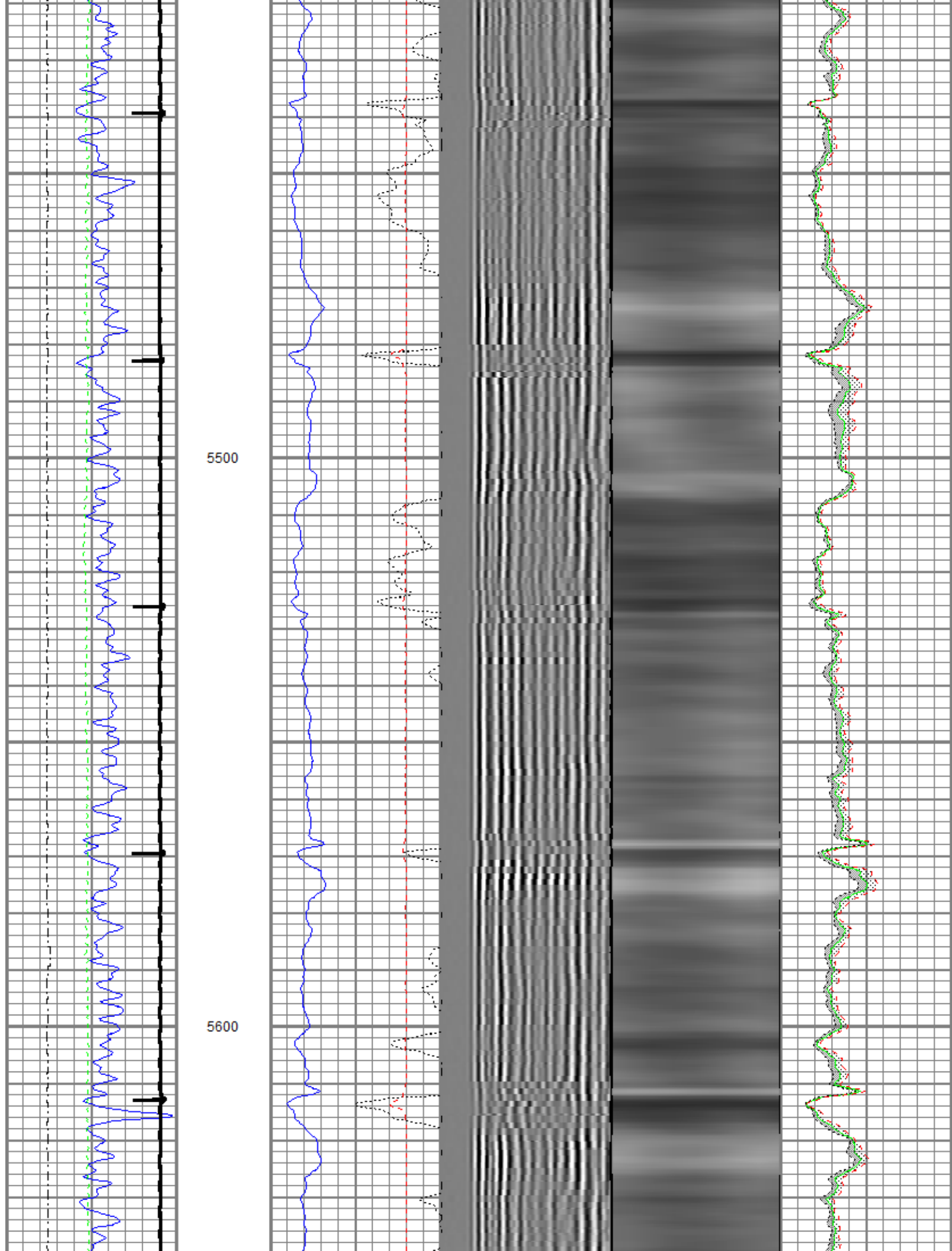


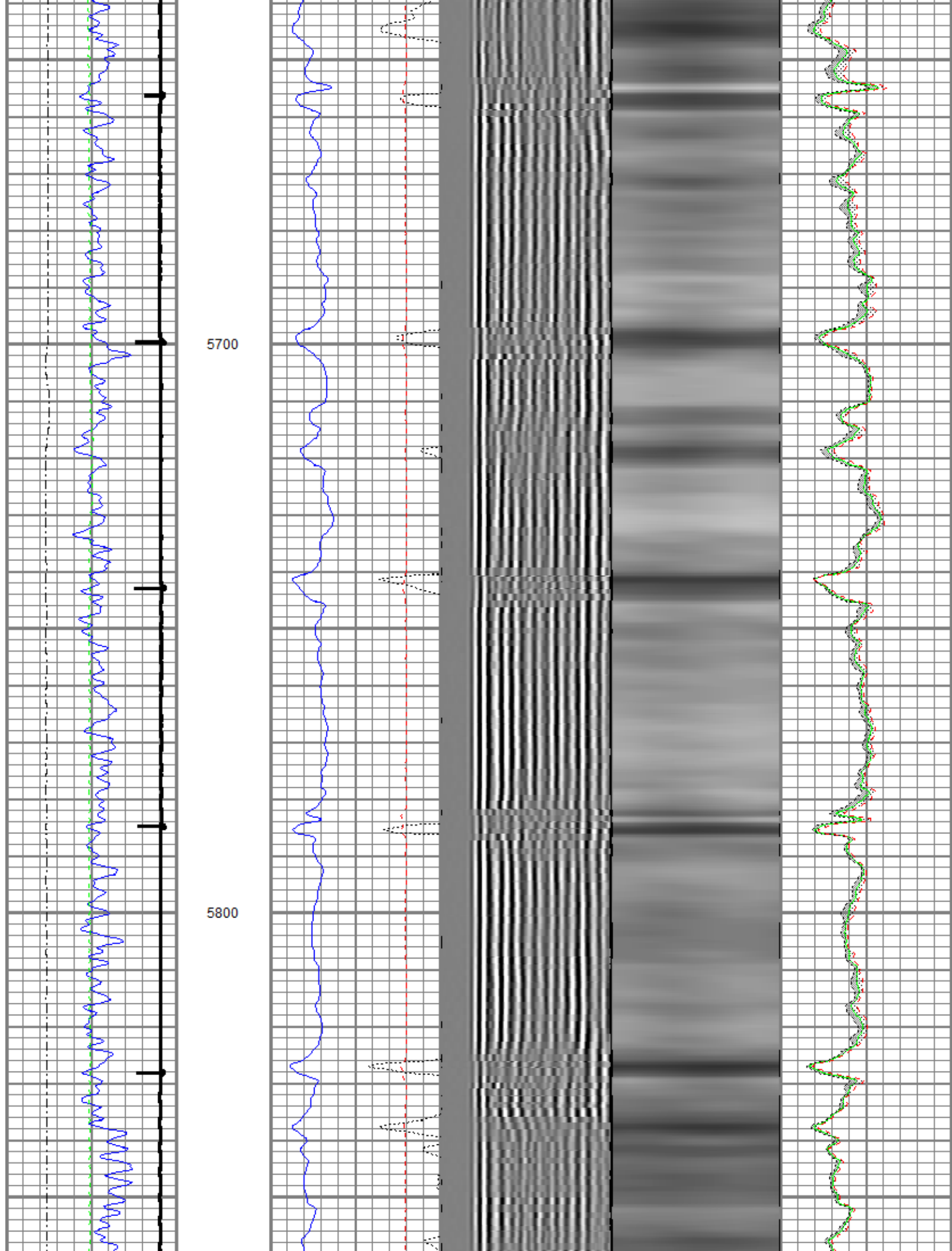




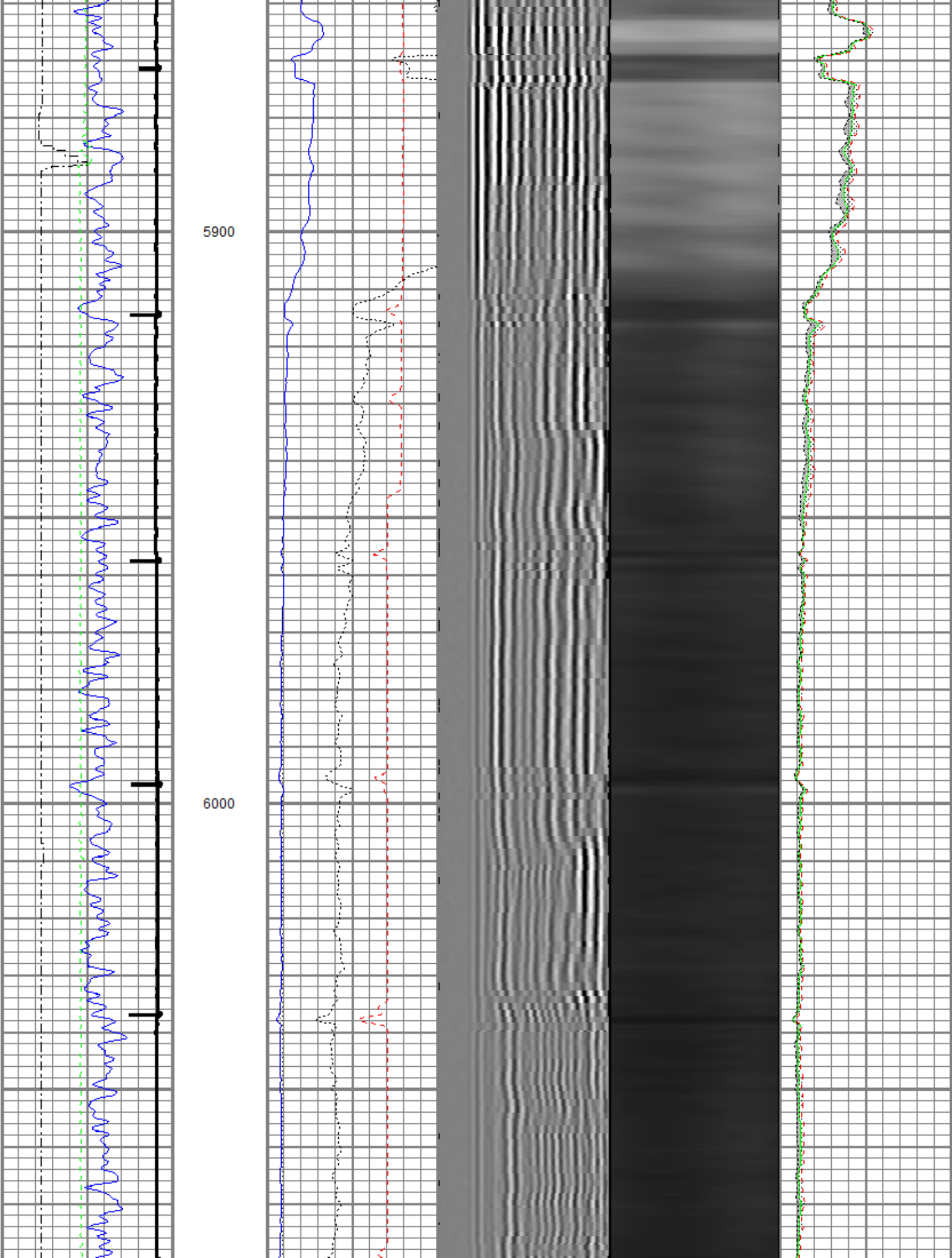


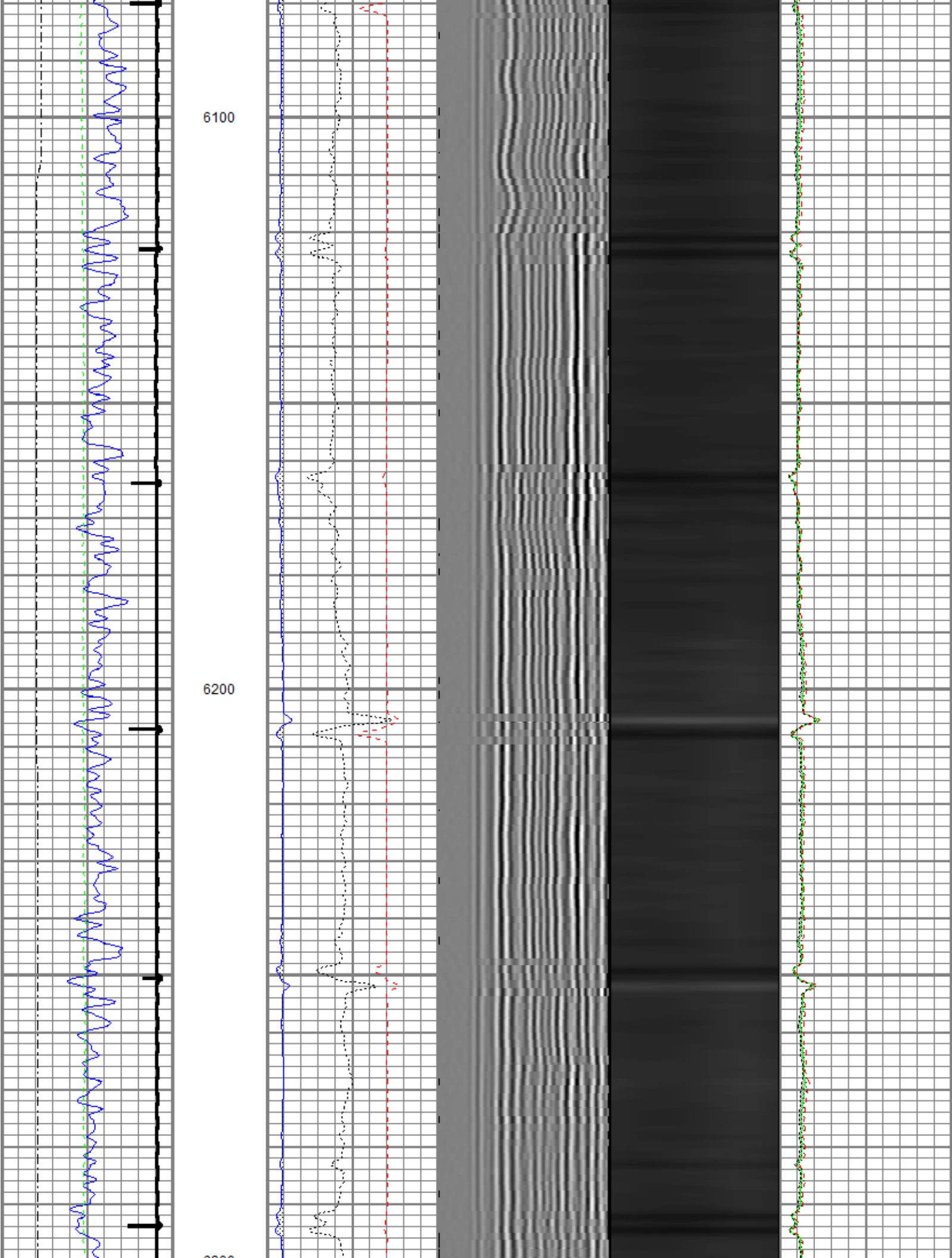


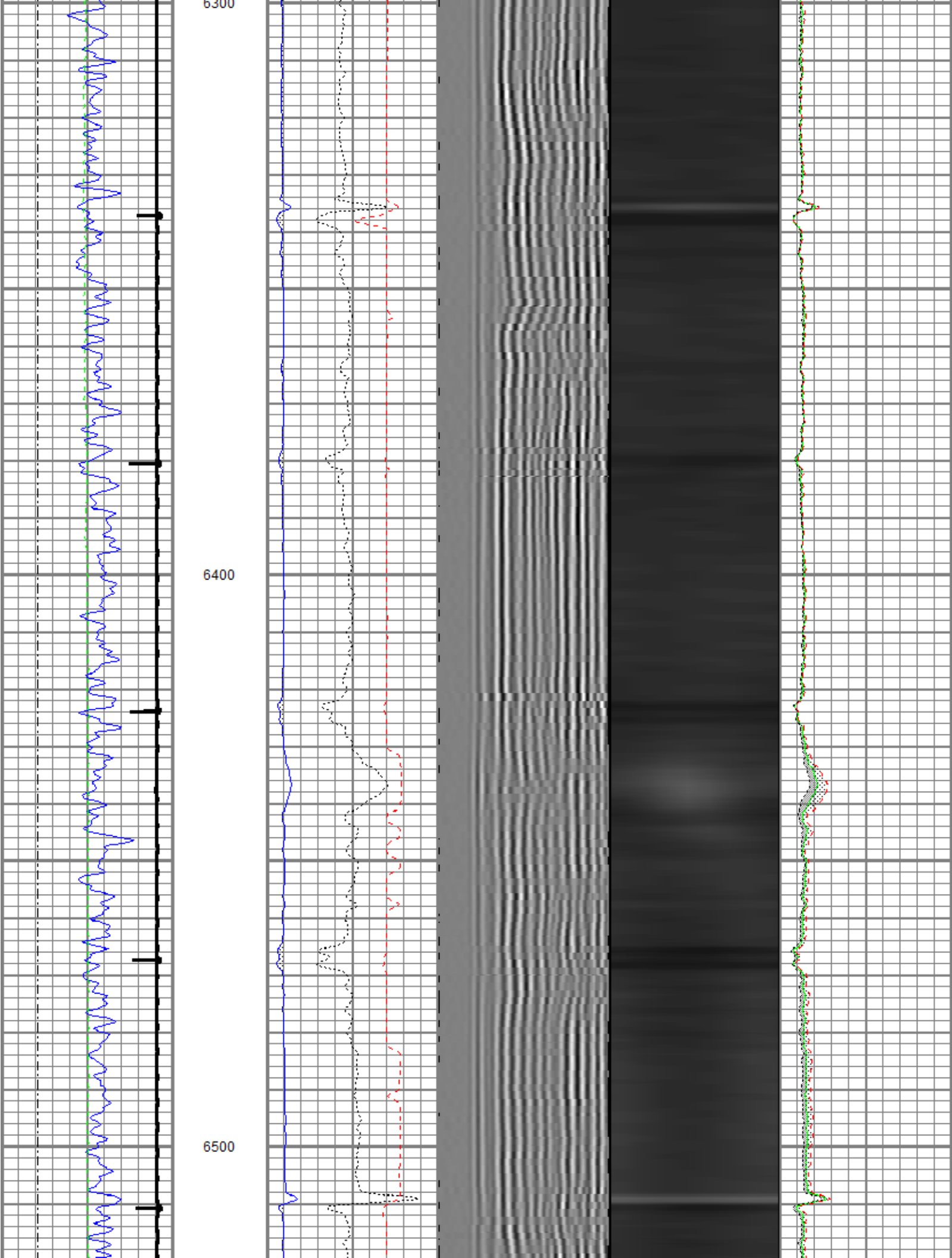


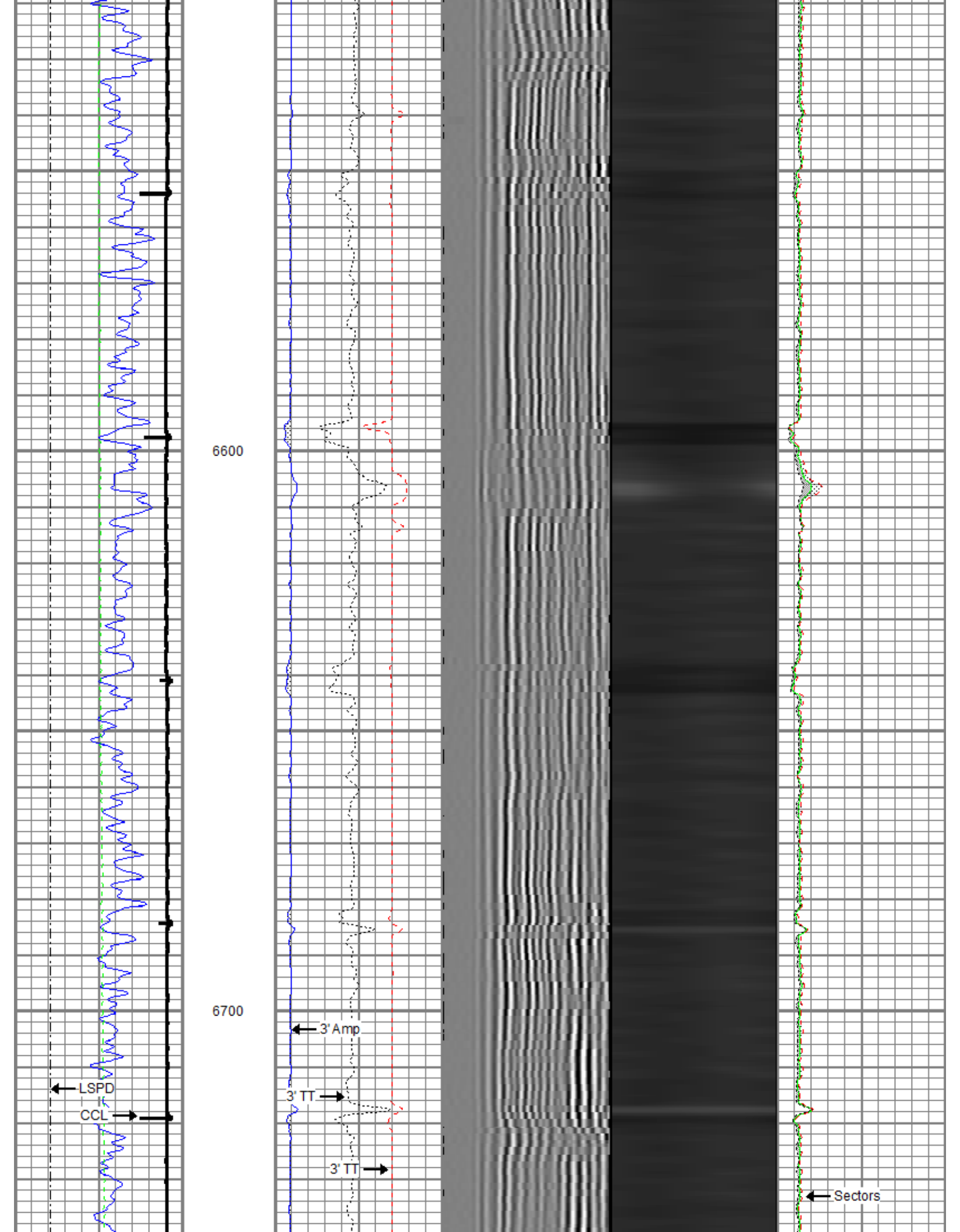


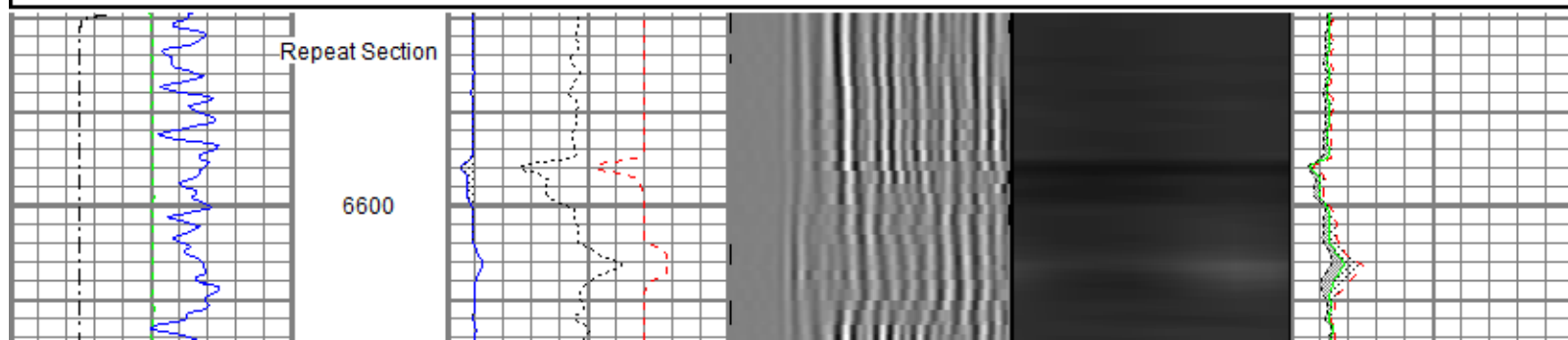
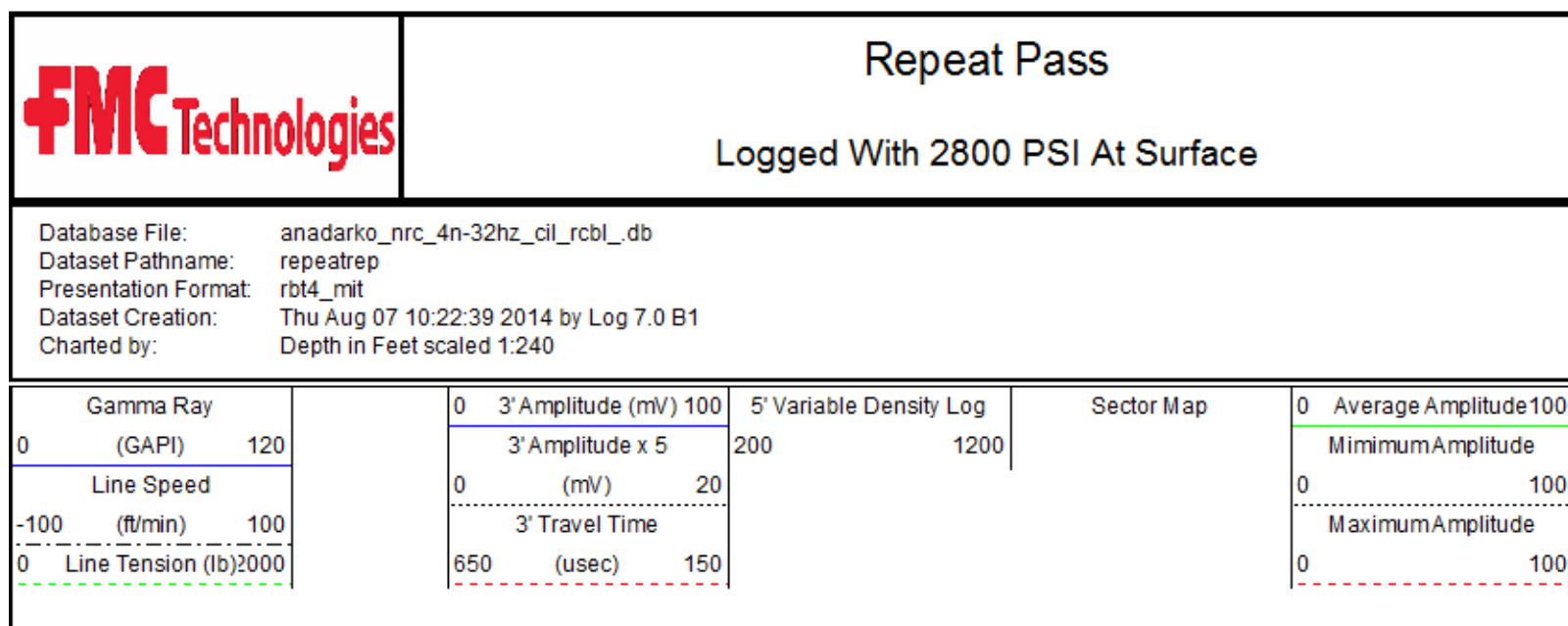
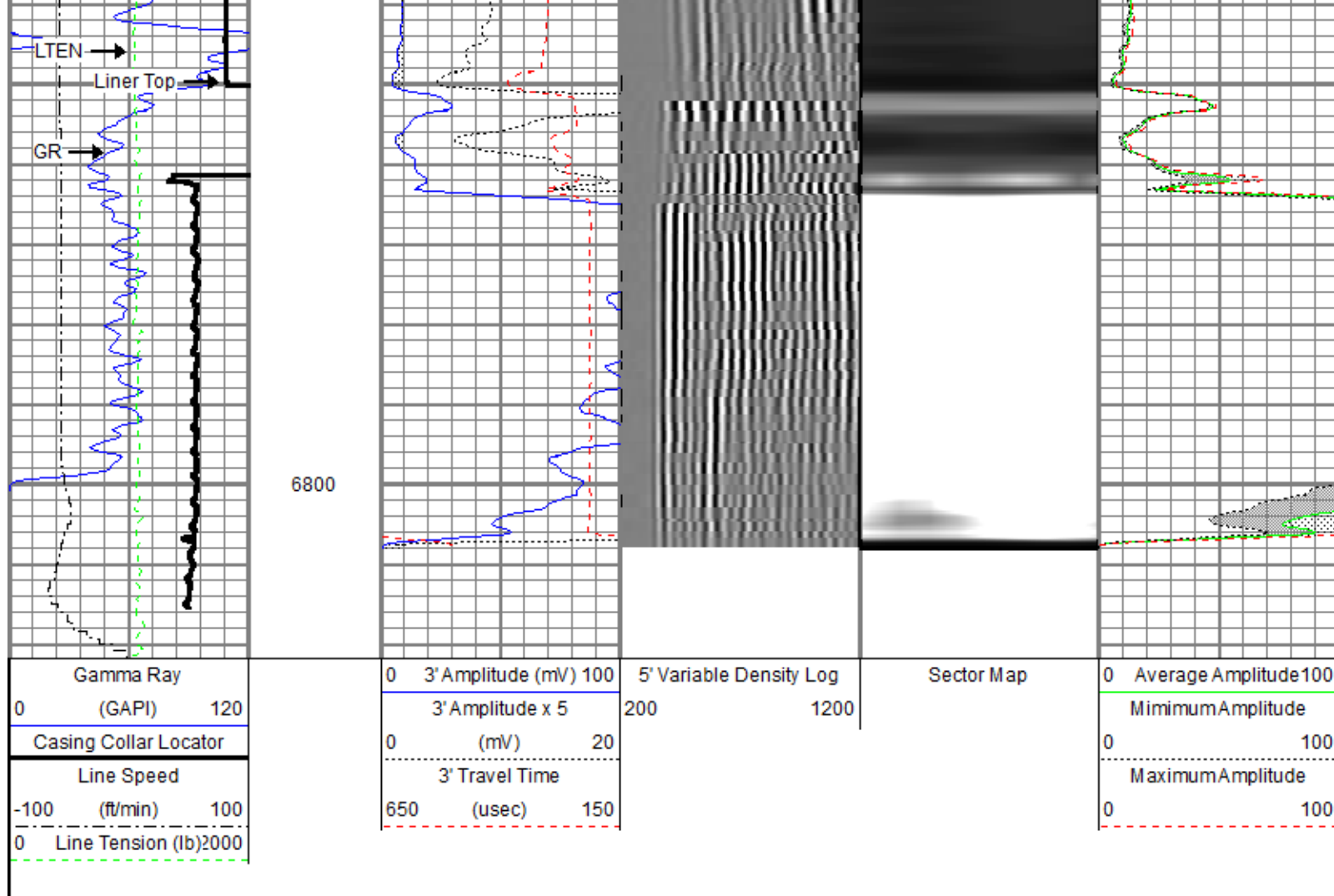


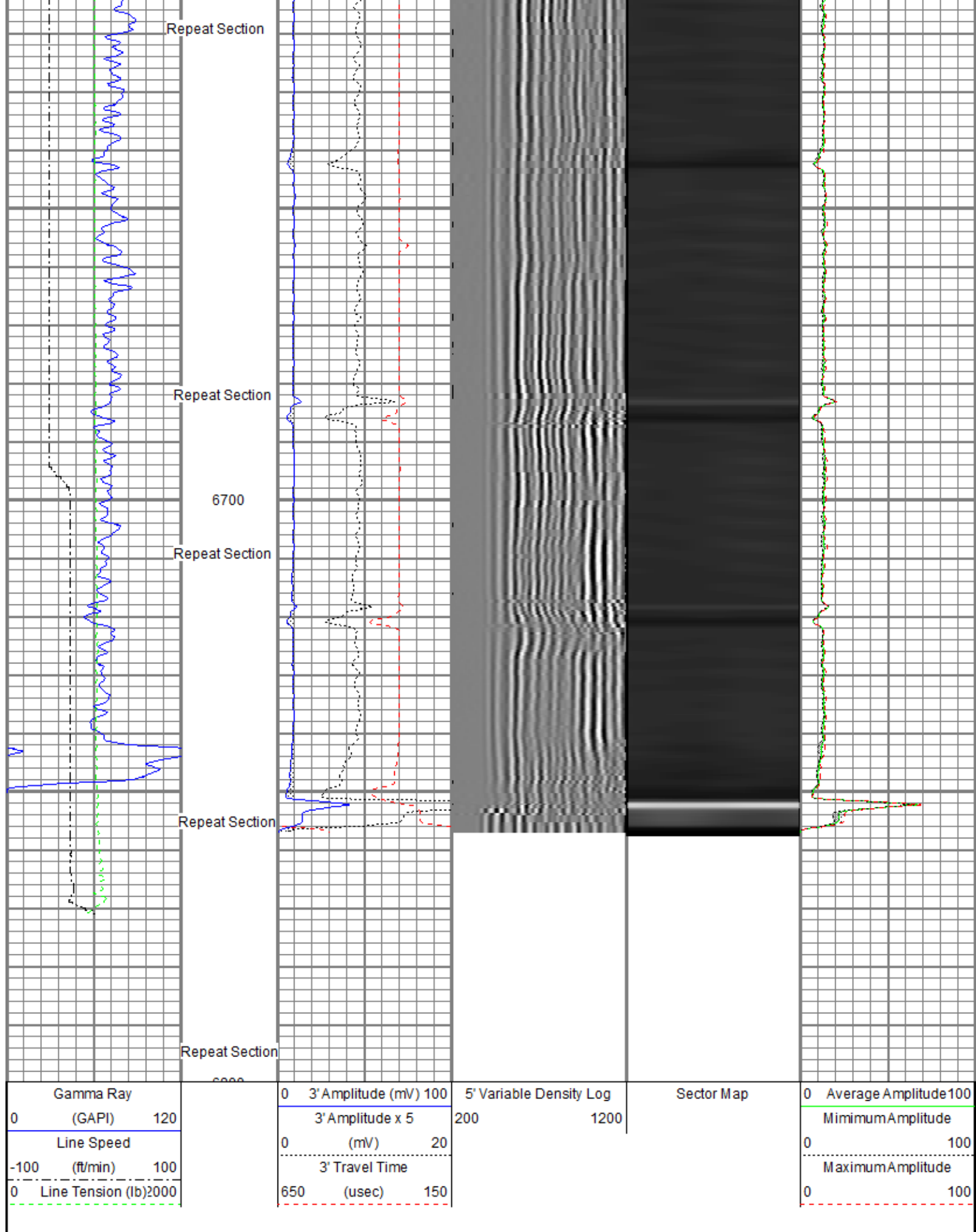












Sensor	Offset (ft)	Schematic	Description	Log (ft)	OD (in)	Wt (lb)
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# Calibration Report

Database File: anadarko\_nrc\_4n-32hz\_cil\_rcbl\_.db  
Dataset Pathname: postcal  
Dataset Creation: Thu Aug 07 13:19:22 2014 by Log 7.0 B1

## Multi-finger 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: Thu Aug 07 09:19:05 2014

Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1071	361.0	1432	387.0	1819	408.0	2227
Finger 02:	1197	371.0	1568	388.0	1956	401.0	2357
Finger 03:	1089	378.0	1467	401.0	1868	427.0	2295
Finger 04:	1102	362.0	1464	390.0	1854	419.0	2273
Finger 05:	1112	369.0	1481	397.0	1878	421.0	2299
Finger 06:	1105	366.0	1471	395.0	1866	419.0	2285
Finger 07:	1098	367.0	1465	400.0	1865	421.0	2286
Finger 08:	1107	358.0	1465	395.0	1860	418.0	2278
Finger 09:	1107	365.0	1472	391.0	1863	416.0	2279
Finger 10:	1101	359.0	1460	394.0	1854	416.0	2270
Finger 11:	1111	362.0	1473	390.0	1863	412.0	2275
Finger 12:	1104	355.0	1459	391.0	1850	414.0	2264
Finger 13:	1114	355.0	1469	388.0	1857	406.0	2263
Finger 14:	1086	360.0	1446	397.0	1843	417.0	2260
Finger 15:	1051	365.0	1416	413.0	1829	429.0	2258
Finger 16:	1063	362.0	1425	404.0	1829	430.0	2259
Finger 17:	1029	355.0	1384	405.0	1789	437.0	2226
Finger 18:	1110	353.0	1463	390.0	1853	415.0	2268
Finger 19:	1070	355.0	1425	392.0	1817	415.0	2232
Finger 20:	1038	357.0	1395	403.0	1798	428.0	2226
Finger 21:	1056	365.0	1421	402.0	1823	413.0	2236
Finger 22:	1019	363.0	1382	404.0	1786	427.0	2213
Finger 23:	993	364.0	1357	411.0	1768	436.0	2204
Finger 24:	1047	361.0	1408	392.0	1800	401.0	2201
Finger 25:	1007	364.0	1371	411.0	1782	428.0	2210
Finger 26:	1133	357.0	1490	380.0	1870	392.0	2262
Finger 27:	1076	365.0	1441	402.0	1843	413.0	2256
Finger 28:	1105	361.0	1466	387.0	1853	401.0	2254
Finger 29:	1058	371.0	1429	408.0	1837	424.0	2261
Finger 30:	1075	367.0	1442	398.0	1840	413.0	2253
Finger 31:	1100	368.0	1468	392.0	1860	408.0	2268
Finger 32:	1089	376.0	1465	408.0	1873	418.0	2291
Finger 33:	1149	368.0	1517	379.0	1896	386.0	2282
Finger 34:	1126	363.0	1489	388.0	1877	406.0	2283
Finger 35:	1054	391.0	1445	416.0	1861	437.0	2298
Finger 36:	1085	376.0	1461	401.0	1862	419.0	2281
Finger 37:	1124	375.0	1499	392.0	1891	411.0	2302
Finger 38:	1151	366.0	1517	391.0	1908	391.0	2299
Finger 39:	1147	365.0	1512	384.0	1896	401.0	2297
Finger 40:	1098	380.0	1478	399.0	1877	417.0	2294

Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	3.997	-0.001	5.005	0.002	6.001	0.000	7.000	-0.000
Finger 02:	3.995	-0.002	5.001	0.000	5.995	-0.002	7.003	0.002
Finger 03:	3.996	-0.002	4.994	-0.003	5.998	-0.001	7.000	-0.000
Finger 04:	3.996	-0.002	5.005	0.003	6.006	0.003	7.001	0.001
Finger 05:	3.988	-0.006	4.999	-0.000	6.000	0.000	6.993	-0.003
Finger 06:	3.986	-0.007	5.010	0.005	6.007	0.003	7.001	0.000
Finger 07:	3.995	-0.003	5.002	0.001	6.001	0.000	7.000	0.000
Finger 08:	3.990	-0.005	5.006	0.003	5.991	-0.005	6.985	-0.008
Finger 09:	3.997	-0.002	4.999	-0.000	5.998	-0.001	6.998	-0.001
Finger 10:	3.999	-0.001	5.010	0.005	5.999	-0.001	6.994	-0.003
Finger 11:	4.003	0.001	5.001	0.000	5.995	-0.002	6.999	-0.001
Finger 12:	3.991	-0.004	5.001	0.000	5.995	-0.003	7.006	0.003
Finger 13:	3.999	-0.000	5.006	0.003	5.994	-0.003	6.997	-0.001
Finger 14:	3.996	-0.002	5.001	0.001	5.996	-0.002	7.000	0.000
Finger 15:	4.005	0.002	5.006	0.003	5.986	-0.007	6.989	-0.005
Finger 16:	4.000	0.000	5.002	0.001	6.001	0.000	7.000	0.000
Finger 17:	3.993	-0.003	5.012	0.006	6.002	0.001	6.995	-0.002
Finger 18:	4.003	0.001	5.010	0.005	5.999	-0.000	6.986	-0.007
Finger 19:	3.999	-0.001	4.997	-0.002	5.998	-0.001	7.005	0.002
Finger 20:	3.992	-0.004	4.996	-0.002	5.999	-0.001	6.999	-0.000
Finger 21:	3.997	-0.001	5.017	0.008	5.999	-0.000	6.995	-0.002
Finger 22:	3.999	-0.000	5.001	0.000	6.001	0.001	7.001	0.001
Finger 23:	3.993	-0.003	5.000	0.000	5.997	-0.001	7.004	0.002
Finger 24:	3.996	-0.002	5.002	0.001	6.001	0.001	7.001	0.000
Finger 25:	3.998	-0.001	5.005	0.002	5.997	-0.001	6.999	-0.000
Finger 26:	3.995	-0.003	5.002	0.001	6.000	0.000	7.002	0.001
Finger 27:	3.997	-0.002	5.005	0.003	5.997	-0.002	6.998	-0.001
Finger 28:	3.993	-0.003	5.000	-0.000	5.996	-0.002	6.999	-0.000
Finger 29:	3.992	-0.004	5.010	0.005	5.998	-0.001	6.995	-0.002
Finger 30:	3.999	-0.000	5.002	0.001	5.999	-0.001	7.000	-0.000
Finger 31:	4.000	0.000	4.997	-0.002	5.997	-0.001	6.994	-0.003
Finger 32:	3.990	-0.005	5.016	0.008	6.001	0.000	6.996	-0.002
Finger 33:	3.993	-0.004	4.999	-0.000	5.992	-0.004	6.992	-0.004
Finger 34:	3.990	-0.005	5.001	0.001	5.998	-0.001	6.992	-0.004
Finger 35:	4.012	0.006	5.009	0.004	5.998	-0.001	6.991	-0.005
Finger 36:	3.995	-0.002	4.998	-0.001	5.996	-0.002	6.997	-0.002
Finger 37:	3.997	-0.002	4.997	-0.002	5.996	-0.002	6.991	-0.005
Finger 38:	3.995	-0.003	5.016	0.008	5.994	-0.003	7.023	0.012
Finger 39:	3.996	-0.002	5.008	0.004	5.997	-0.002	6.989	-0.006
Finger 40:	4.021	0.010	5.006	0.003	5.996	-0.002	7.000	-0.000
Average:	3.997	-0.002	5.004	0.002	5.998	-0.001	6.998	-0.001

## Segmented Cement Bond Log Calibration Report

Serial Number: 1066  
Tool Model: UW\_RBT\_004  
  
Calibration Casing Diameter: 7.000 in  
Calibration Depth: 94.175 ft

## Master Calibration, performed Thu Aug 07 09:33:31 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.001	0.773	0.800	62.165	79.235	0.890
5FT	-0.006	0.746	0.800	62.165	81.633	1.280
S1	0.000	0.742	0.000	100.000	134.735	-0.005
S2	-0.001	0.753	0.000	100.000	132.598	0.138
S3	-0.001	0.766	0.000	100.000	130.318	0.145
S4	-0.001	0.782	0.000	100.000	127.606	0.156
S5	0.000	0.791	0.000	100.000	126.432	0.000
S6	-0.001	0.796	0.000	100.000	125.452	0.153
S7	-0.001	0.795	0.000	100.000	125.621	0.153
S8	-0.001	0.767	0.000	100.000	130.262	0.154

## Gamma Ray Calibration Report

Serial Number:	211727	
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

The logo for FMC Technologies, featuring the letters 'FMC' in a large, bold, red font, followed by the word 'Technologies' in a smaller, black, sans-serif font.

Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	NRC 4N-32HZ
Field	Wattenberg
County	Weld
State	Colorado
Country	