



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company		Kerr-McGee Oil & Gas Onshore, L.P.					
Well		USA Fed 03N-36HZ					
Field		Wattenberg					
County		Weld					
State		Colorado					
Location:		API # : 05-123-36847					
Permanent Datum		Ground Level		Elevation			
Log Measured From		Kelly Bushing (13 FT)		5005'			
Drilling Measured From		Kelly Bushing					
Date		31-Aug-2013					
Run Number		One					
Depth Driller		11792 FT					
Depth Logger		6741 FT					
Bottom Logged Interval		6736 FT					
Top Log Interval		Surface					
Open Hole Size		8.750"					
Type Fluid		Water					
Density / Viscosity		8.34 lbm/gal					
Max. Recorded Temp.		237 degF					
Estimated Cement Top		Surface					
Time Well Ready		06:00					
Time Logger on Bottom		07:00					
Equipment Number		HD-0119					
Location		Fort Lupton, CO.					
Recorded By		Sam Hopper					
Witnessed By		Rick Duntford					
Run Number		Borehole Record		Tubing Record			
Bit		From	To	Size	Weight	From	To
Casing Record		Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom	
Surface Casing		9-5/8"	36#	J-55	Surface	961 FT	
Intermediate #1		7"	26#	HCP-110	Surface	7645 FT	
Intermediate #2							
Liner		4-1/2"	11.6#	P-110	6655 FT	11777 FT	

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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

Radial Cement Bond Log - Casing Inspection Log is first recorded log in hole.
Depth reference to Casing Tally reported Top of Liner at 6655'.
Adjusted -8' to Top of Liner at 6655' from a 13' KB zero.
RCBL-CIL ran with 2500 PSI surface induced pressure.
Estimated Cement Top recorded to surface.

Thank you for choosing FMC Technologies Completion Services!!

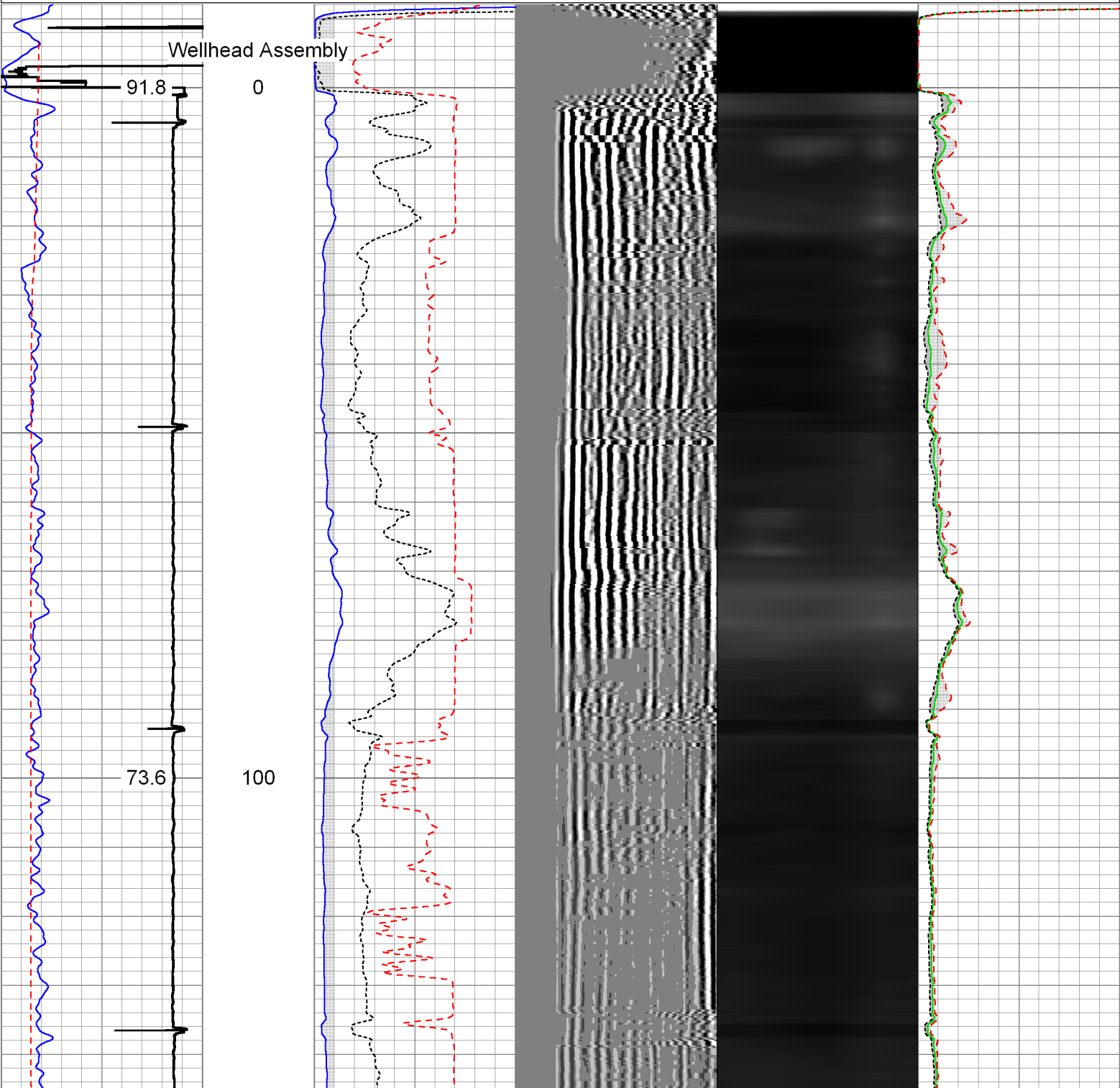


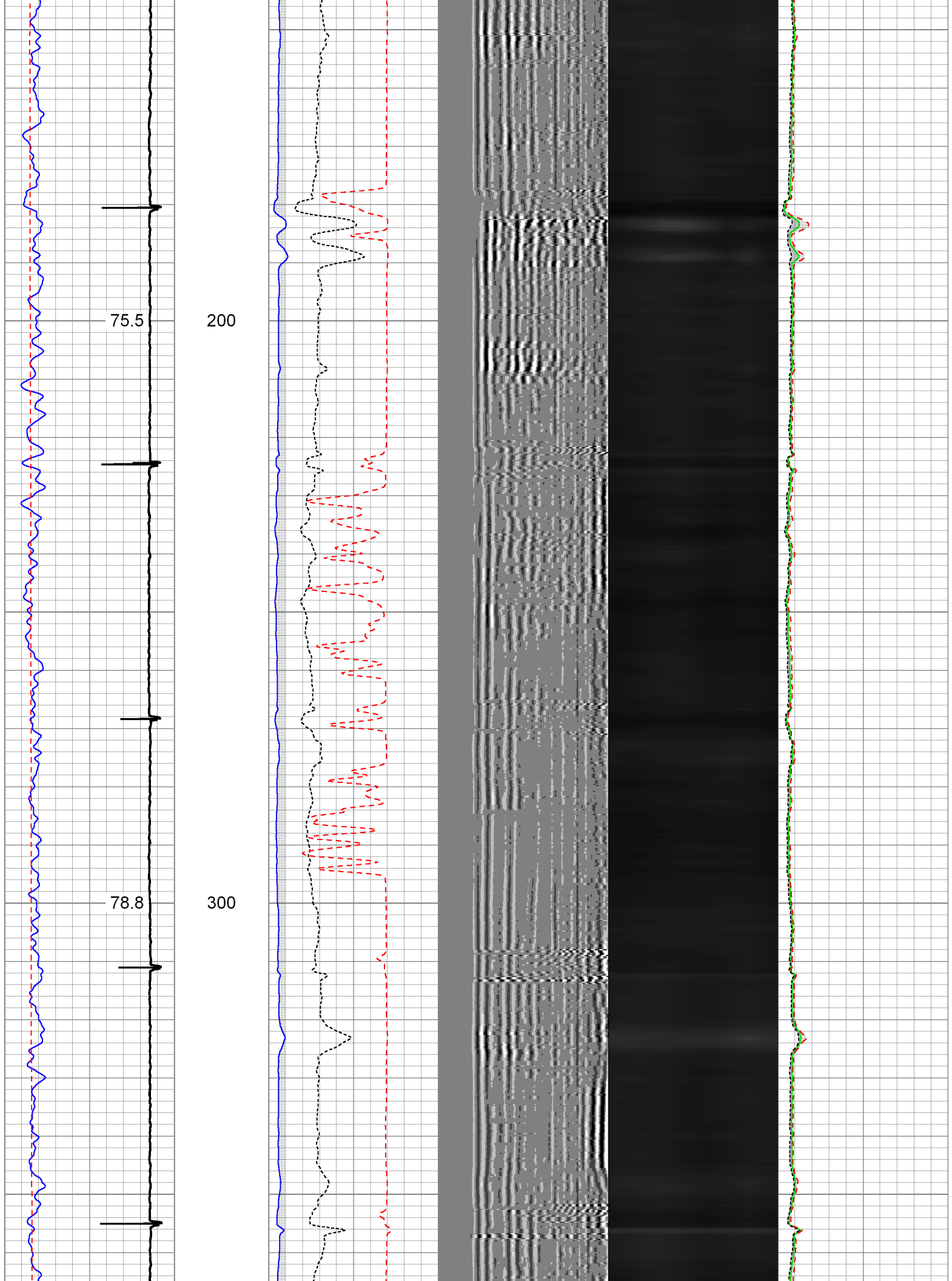
Main Pass

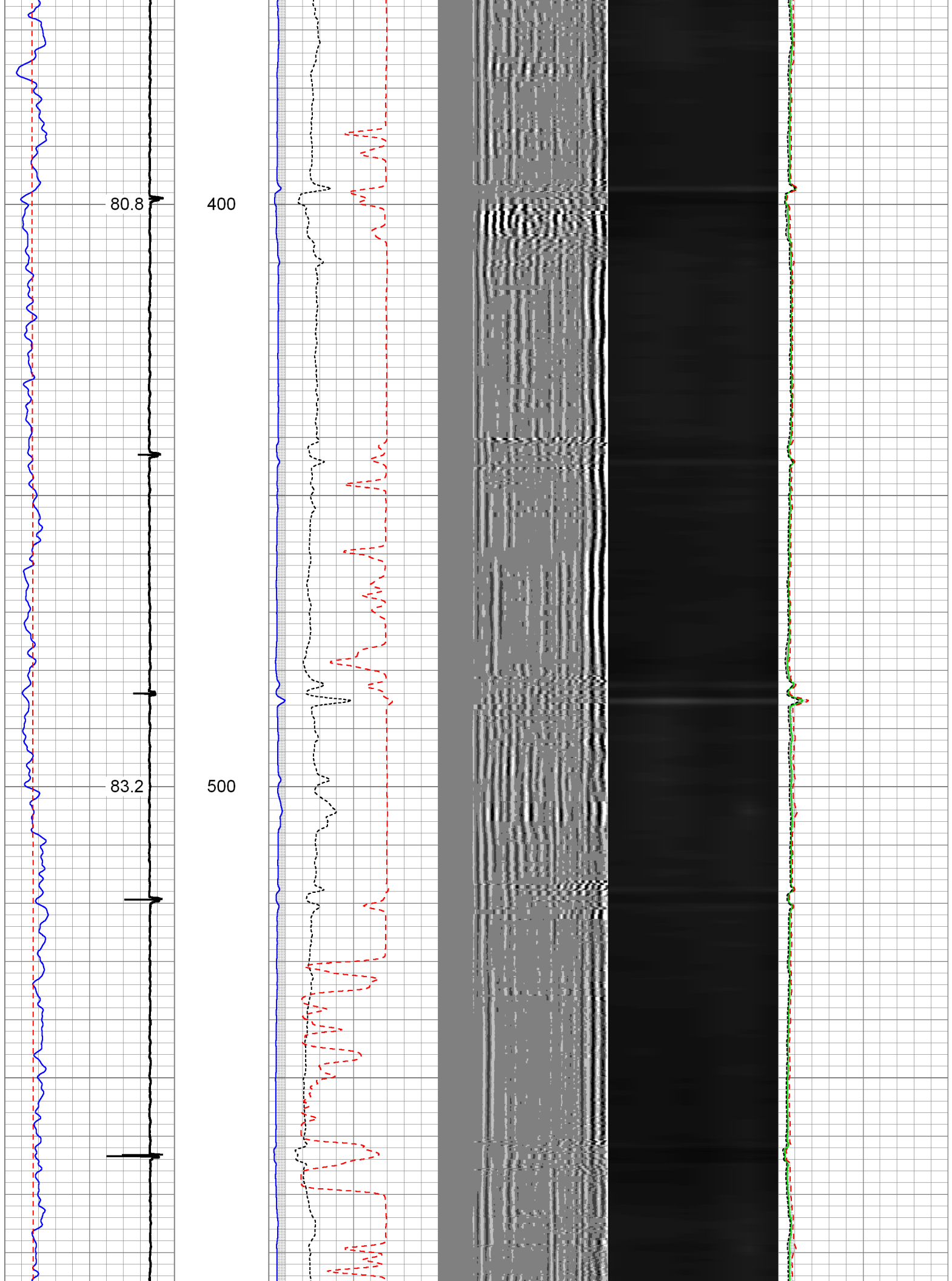
Recorded with 2500 PSI Surface Induced Pressure

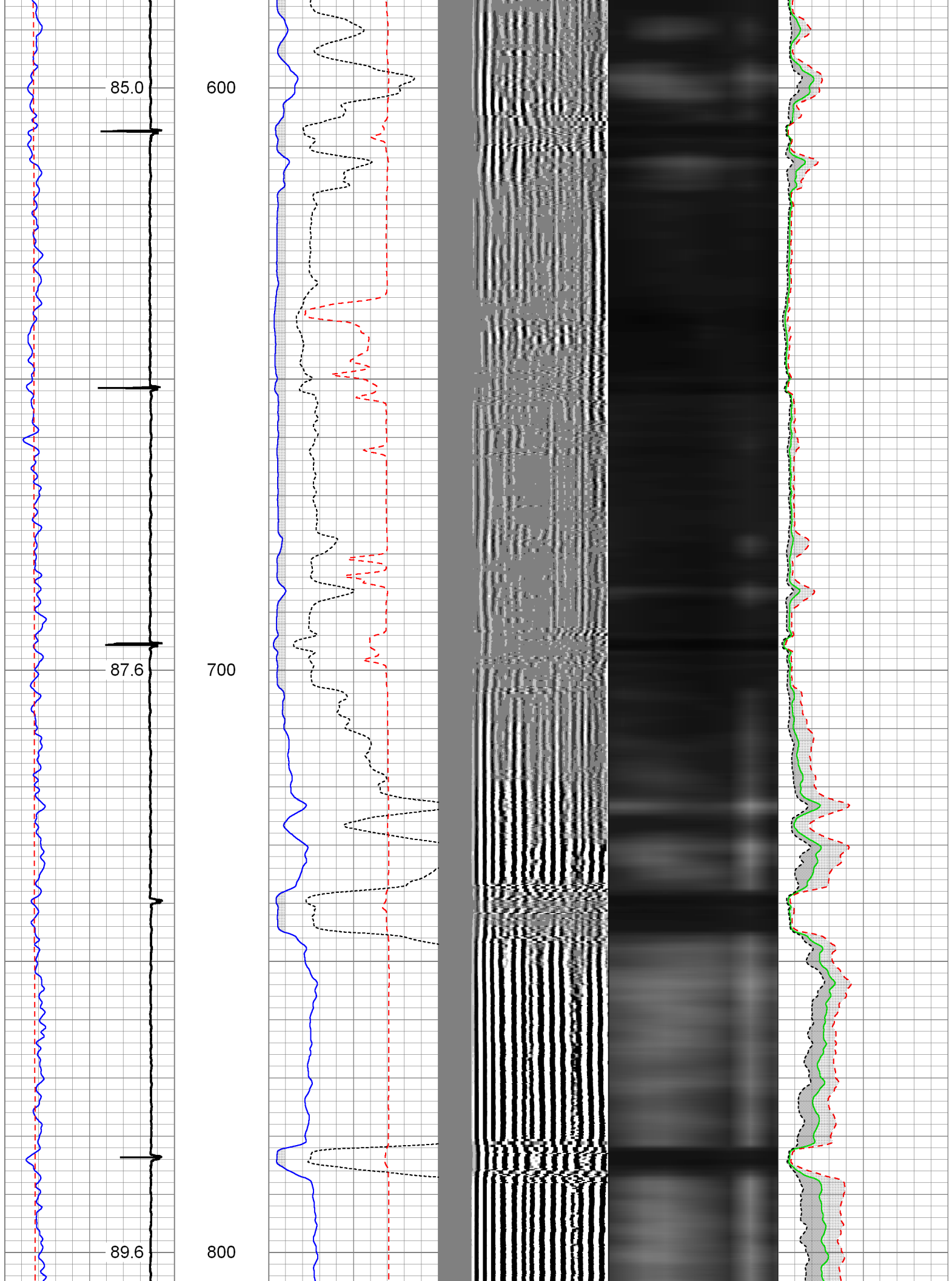
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Dataset Pathname: main.2
Presentation Format: rcblsdx
Dataset Creation: Sat Aug 31 08:33:21 2013 by Log Sondex V7.03
Charted by: Depth in Feet scaled 1:240

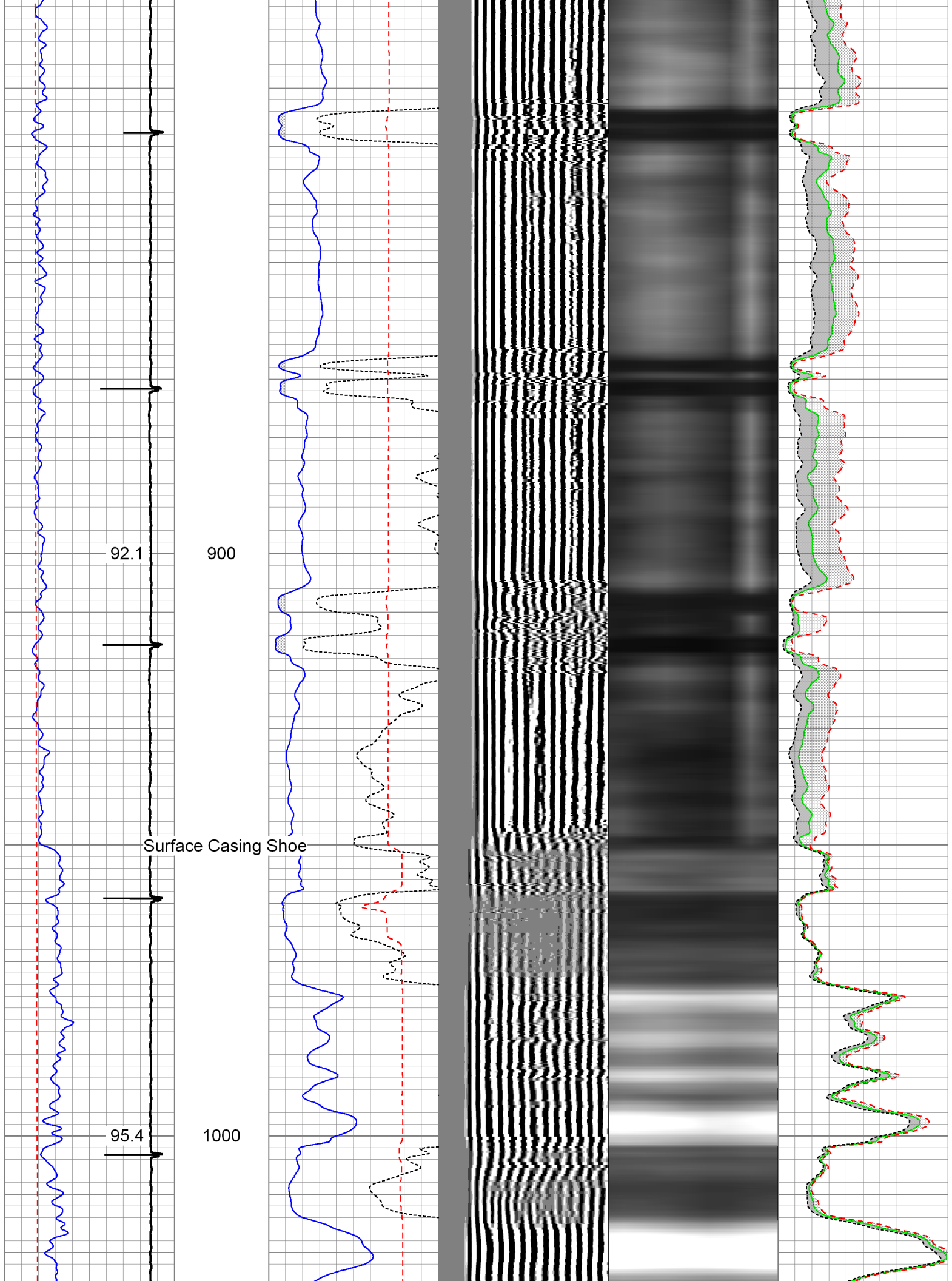
Gamma Ray	3' Amplitude	5' Variable Density Log	Cement Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
Temperature	3' Travel Time			Maximum Amplitude
0 (degF) 500	650 (usec) 150			0 100
Temperature (degF)				

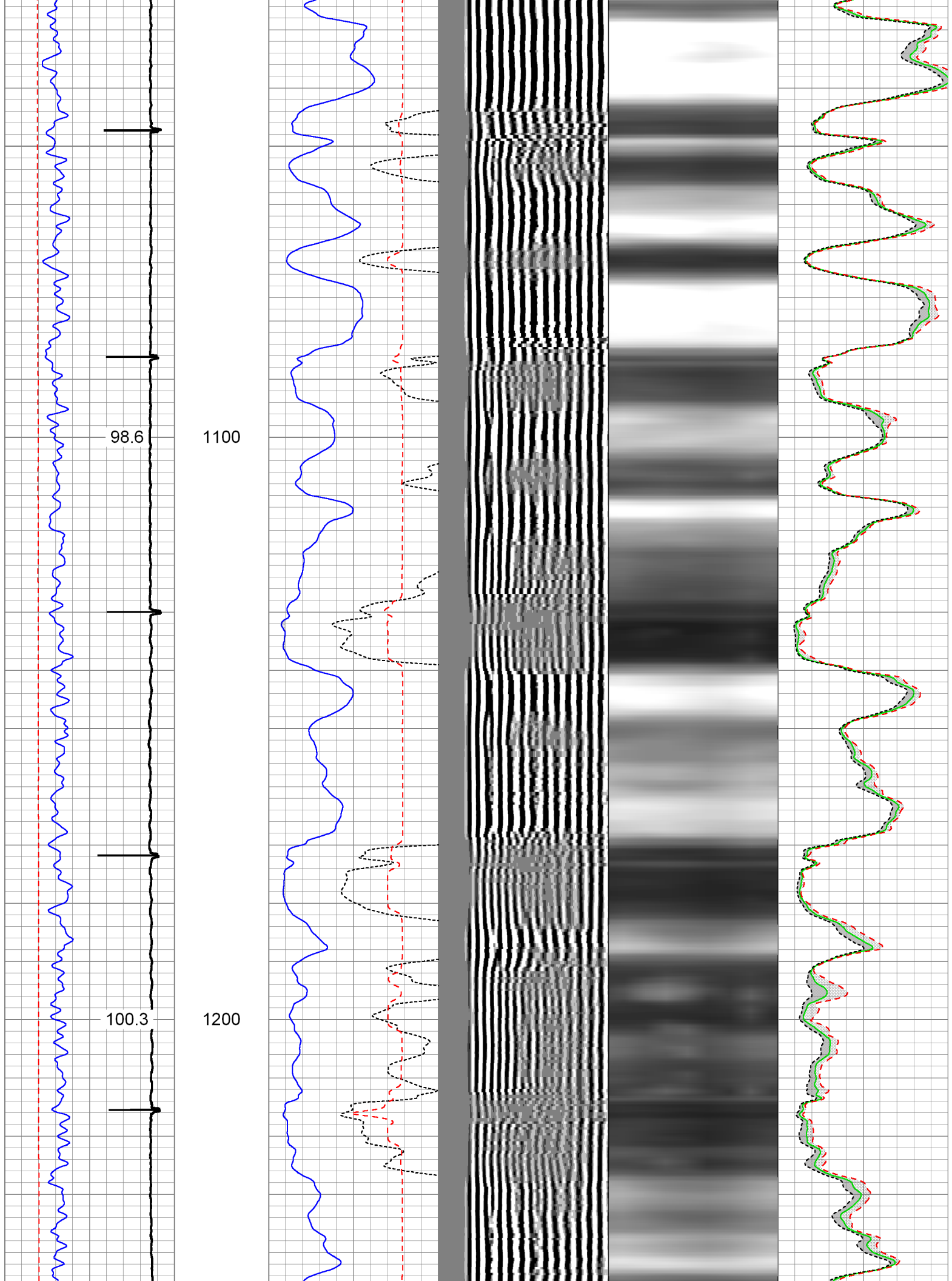


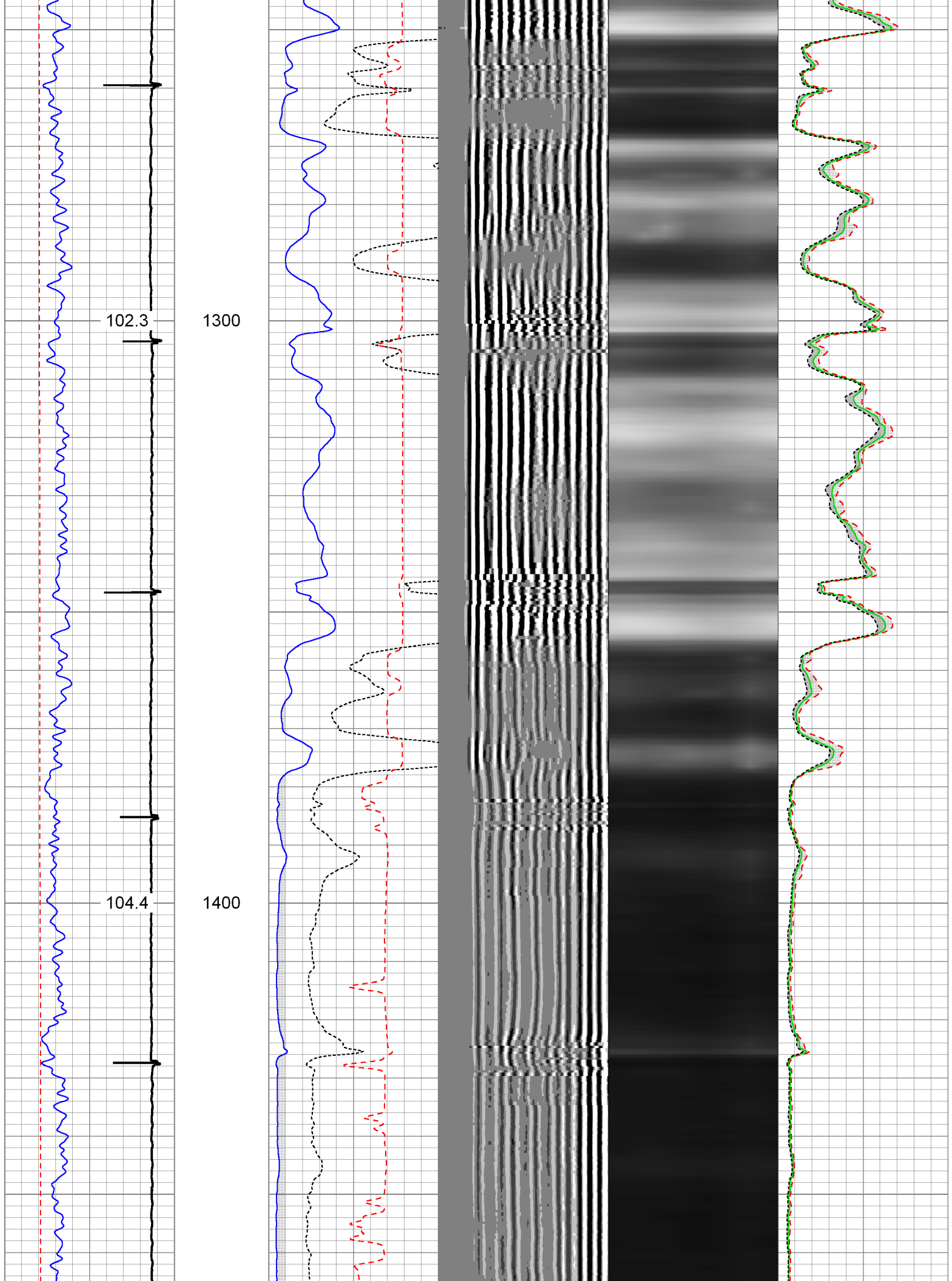


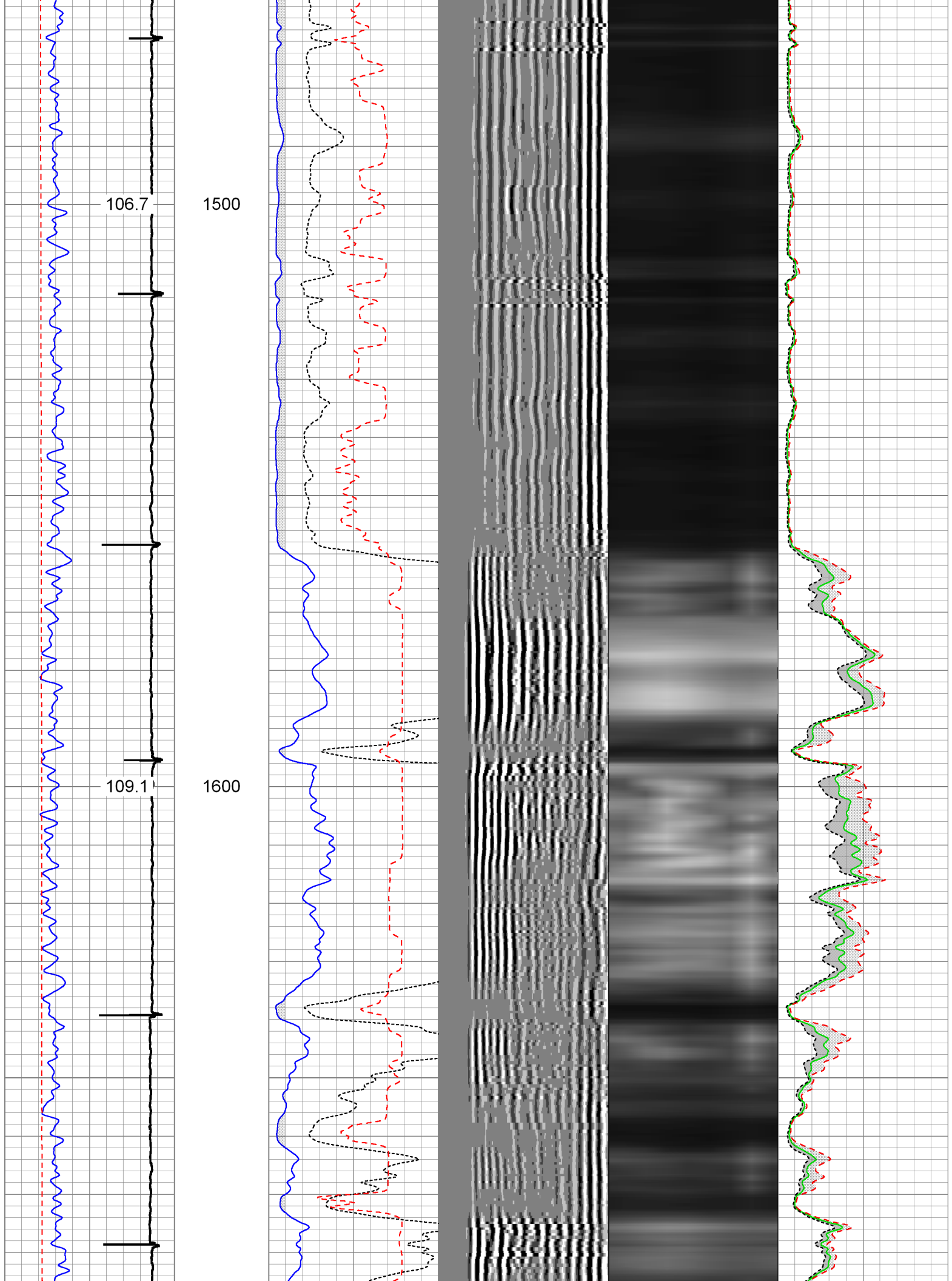


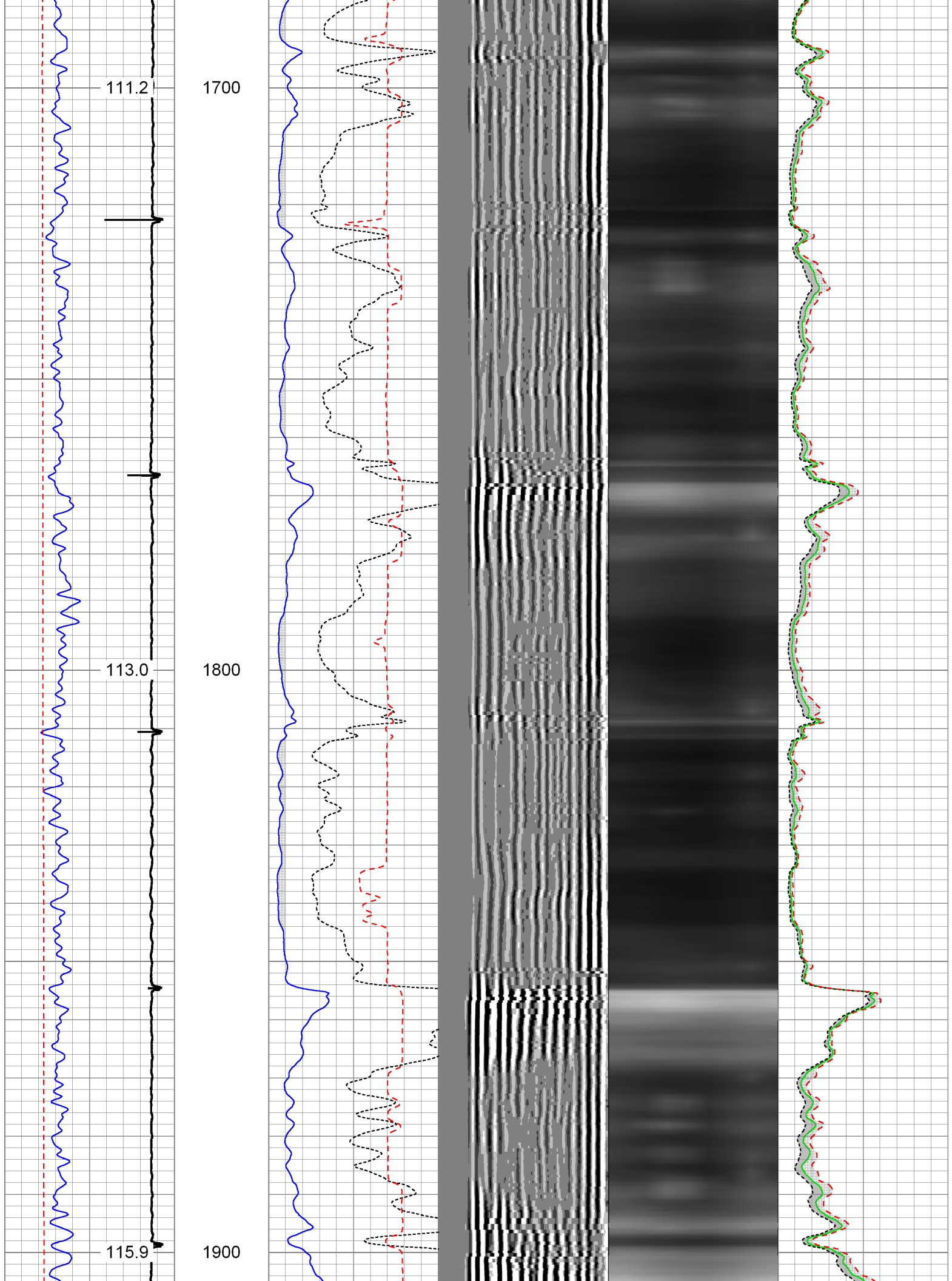


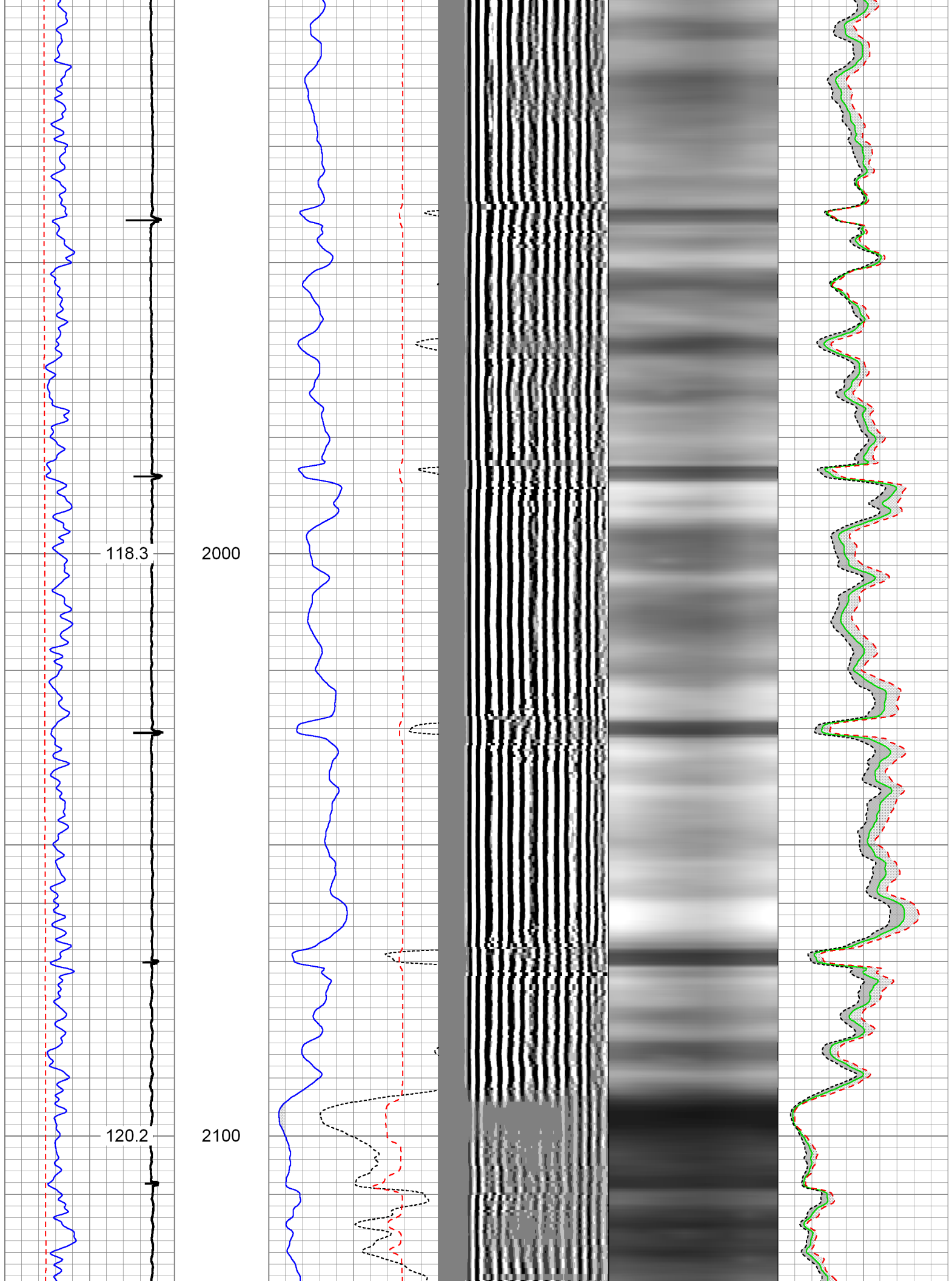


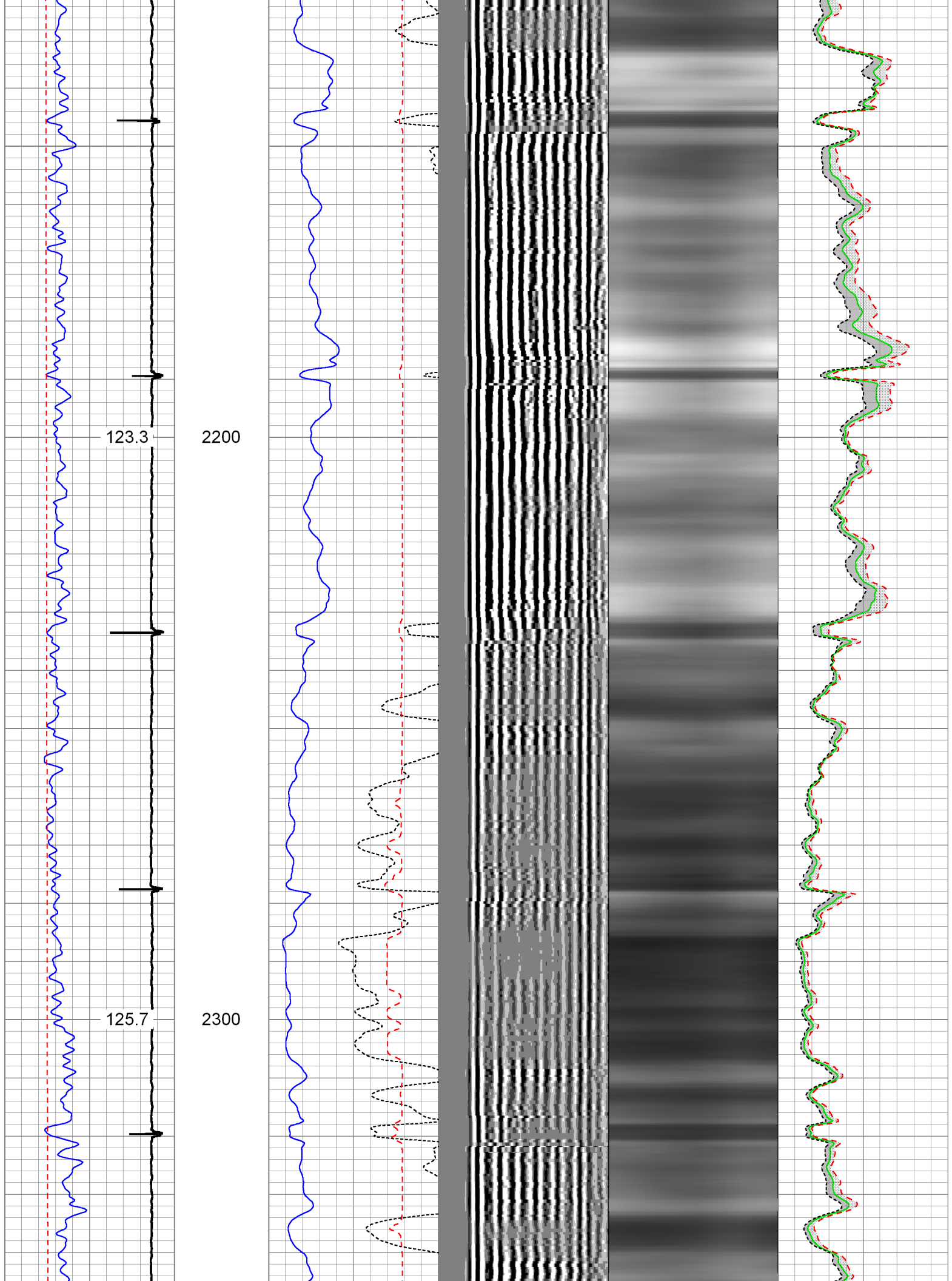


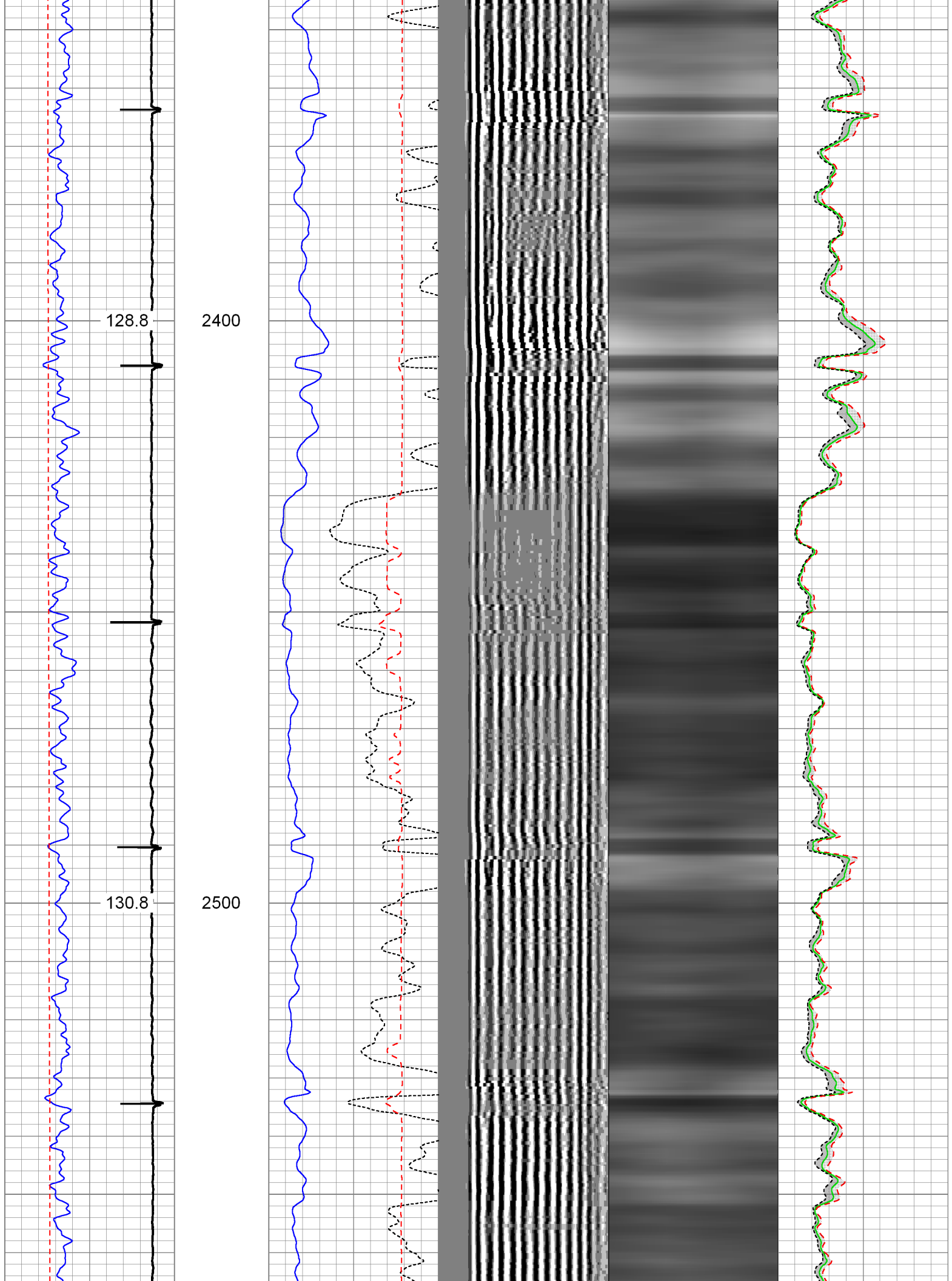


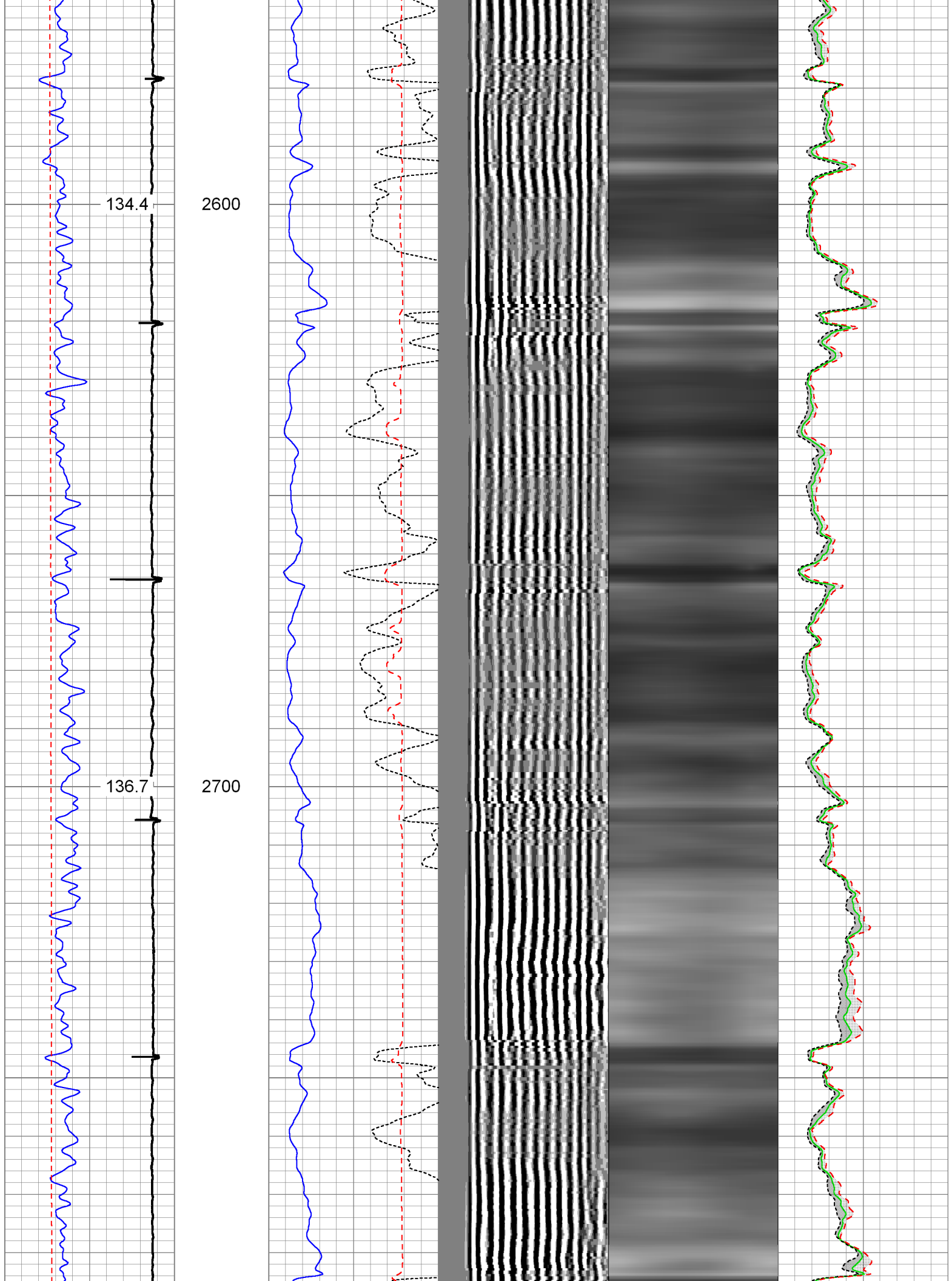


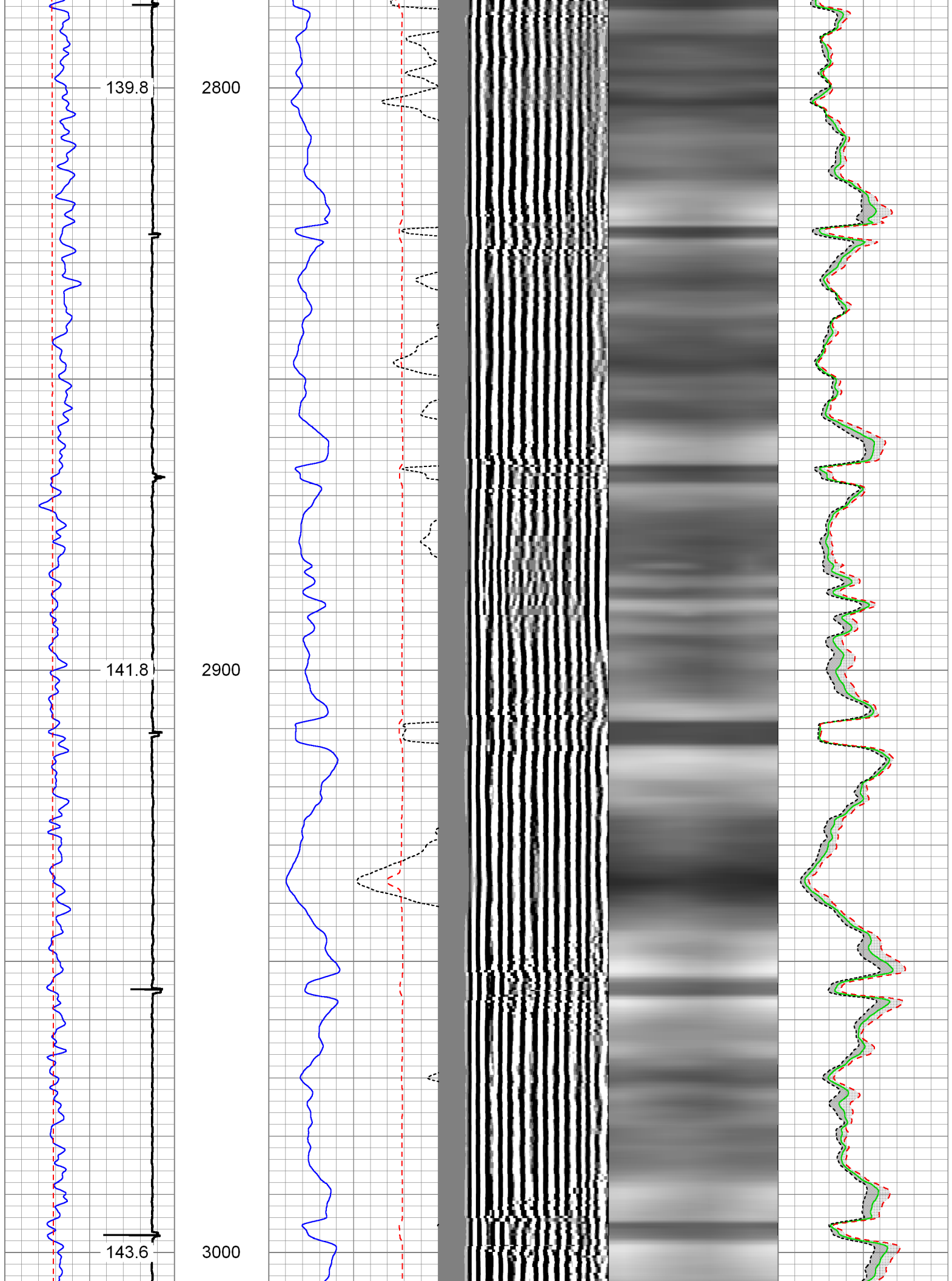


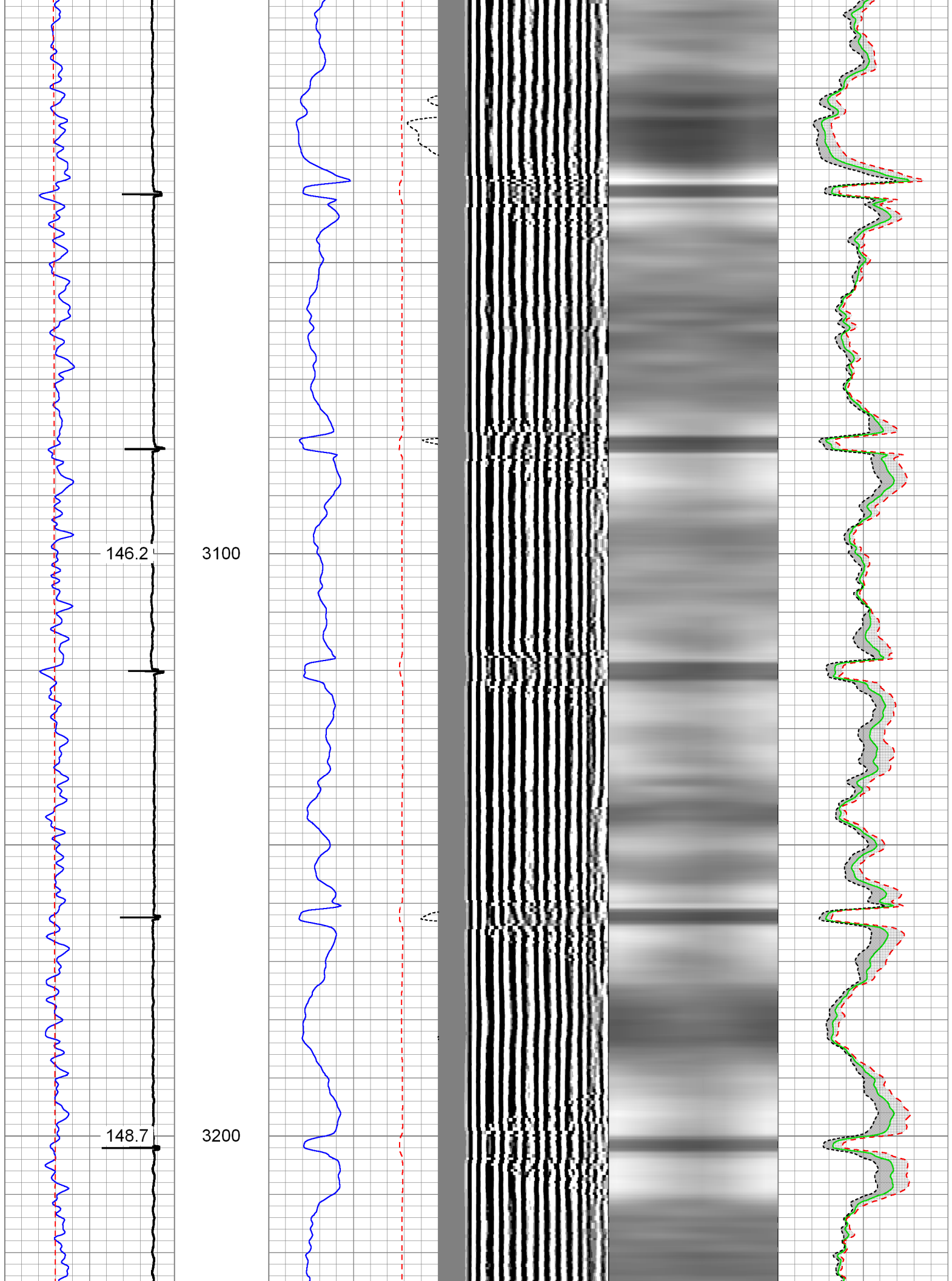


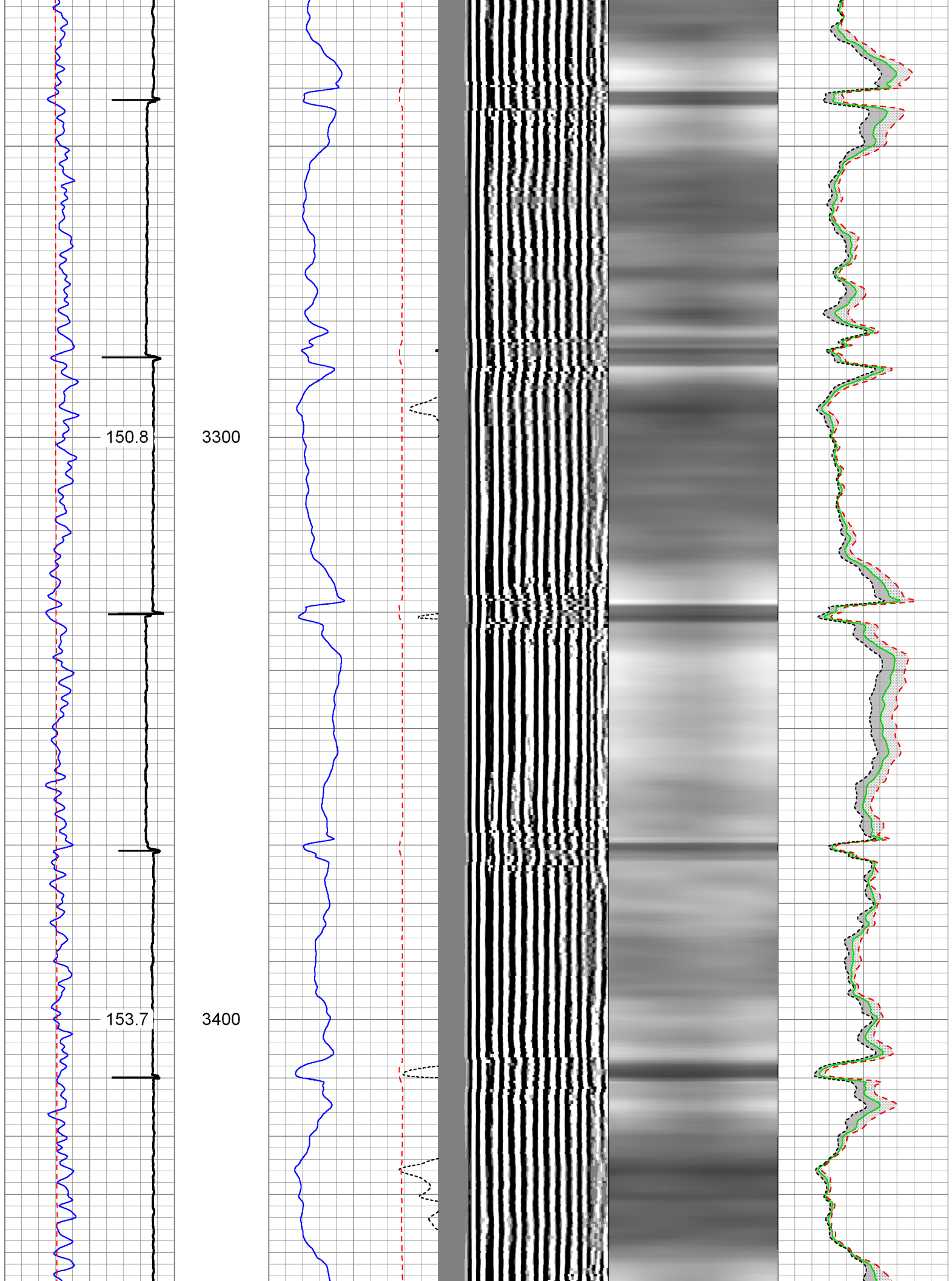


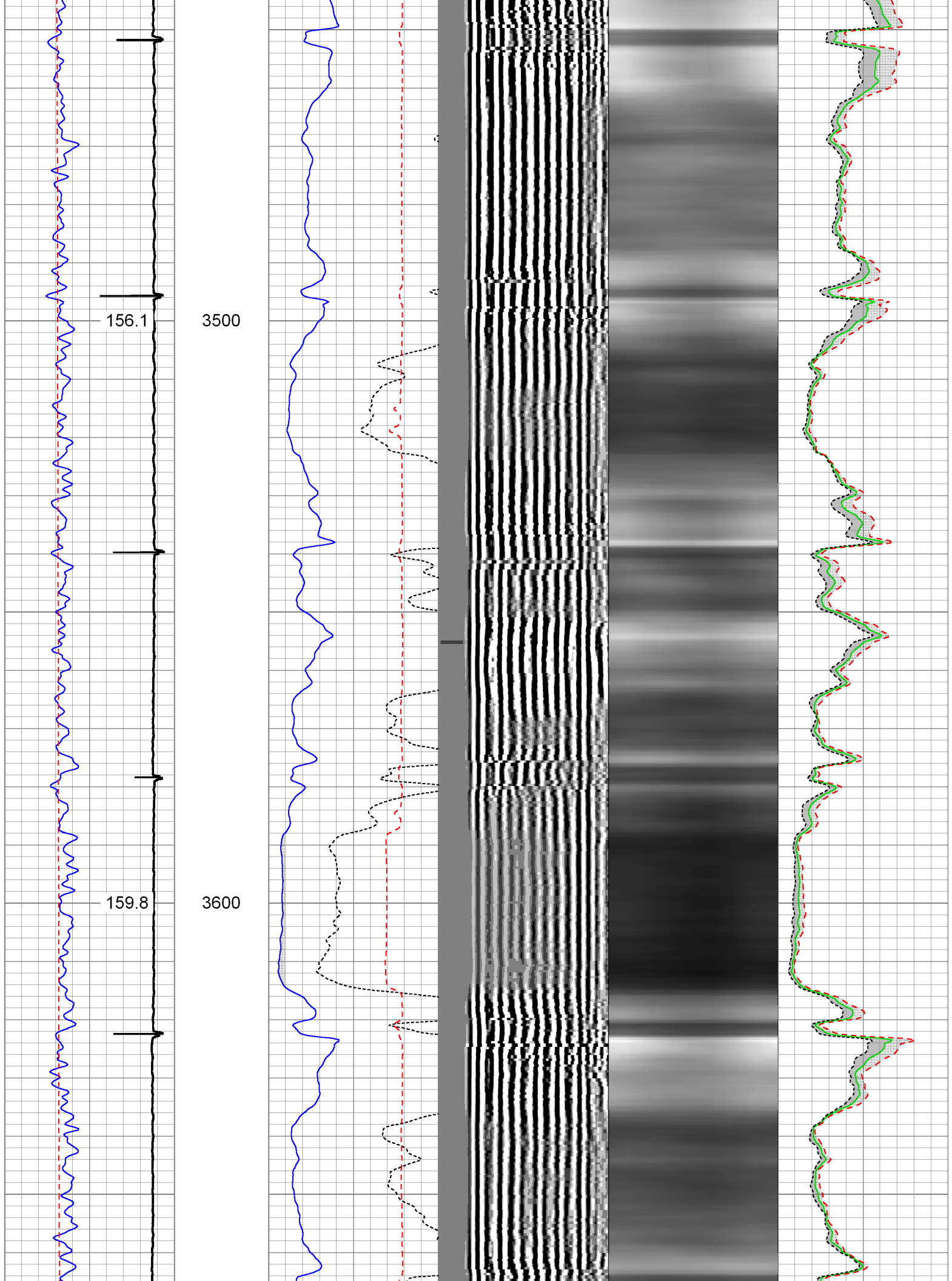


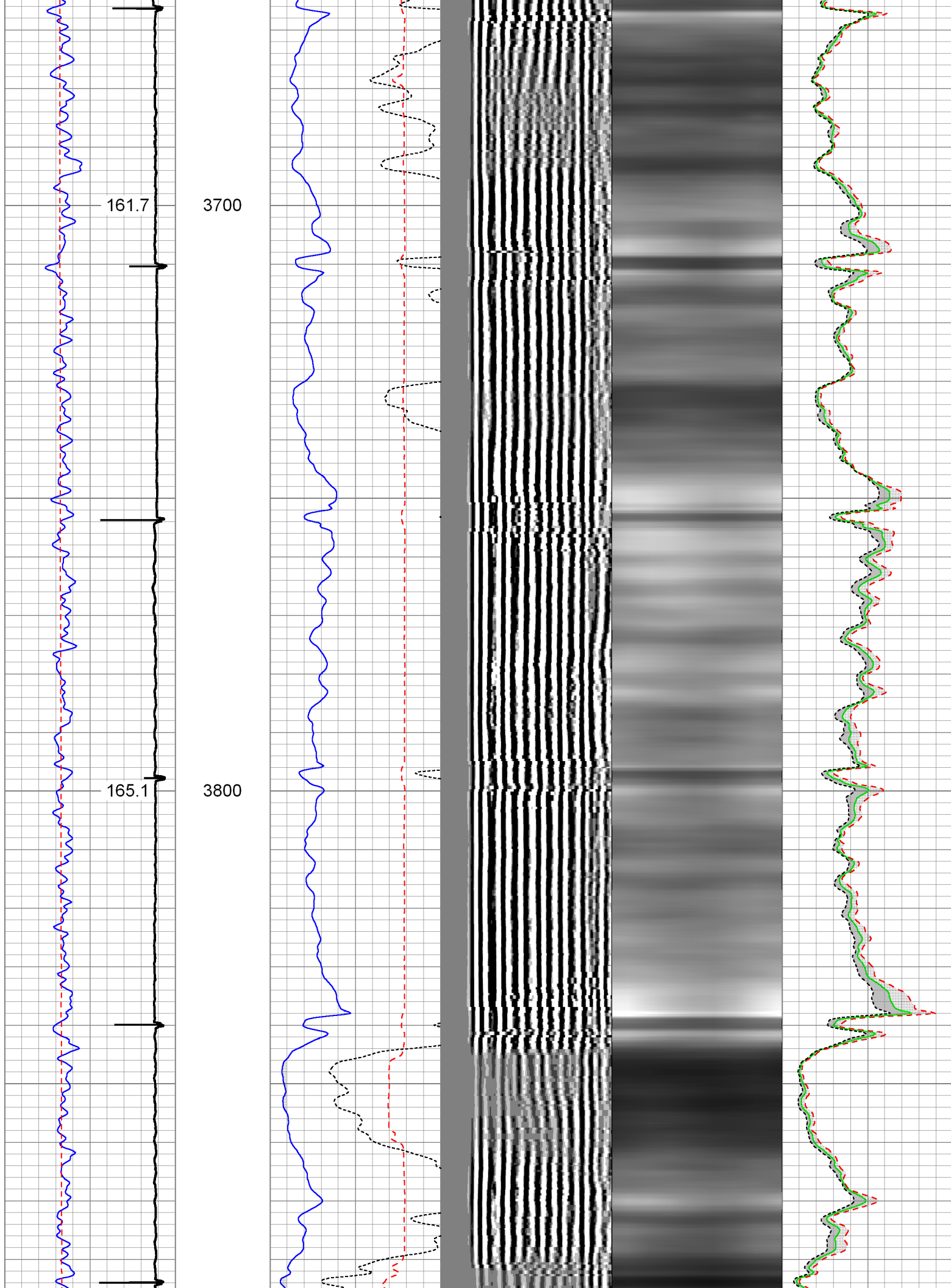


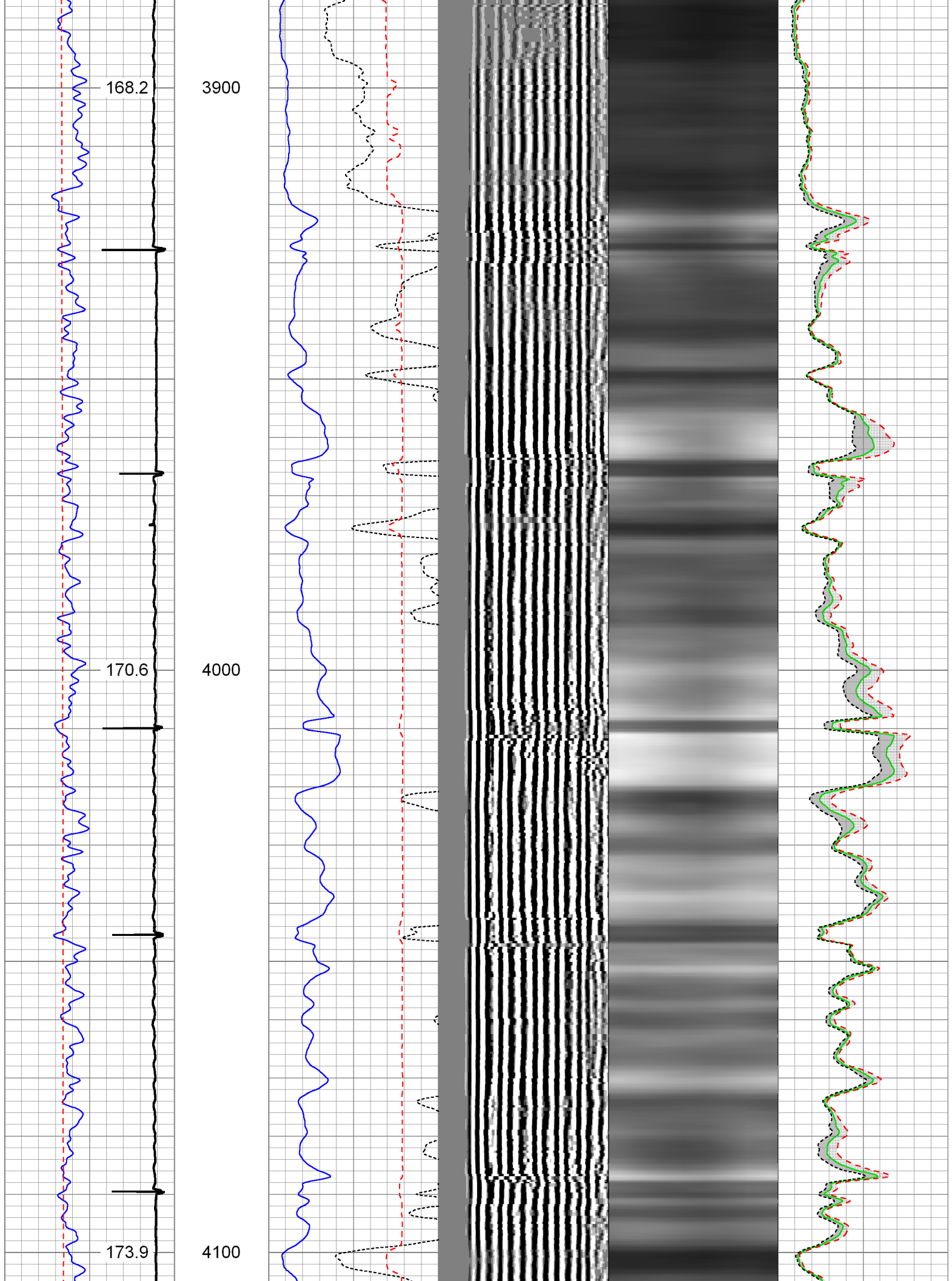


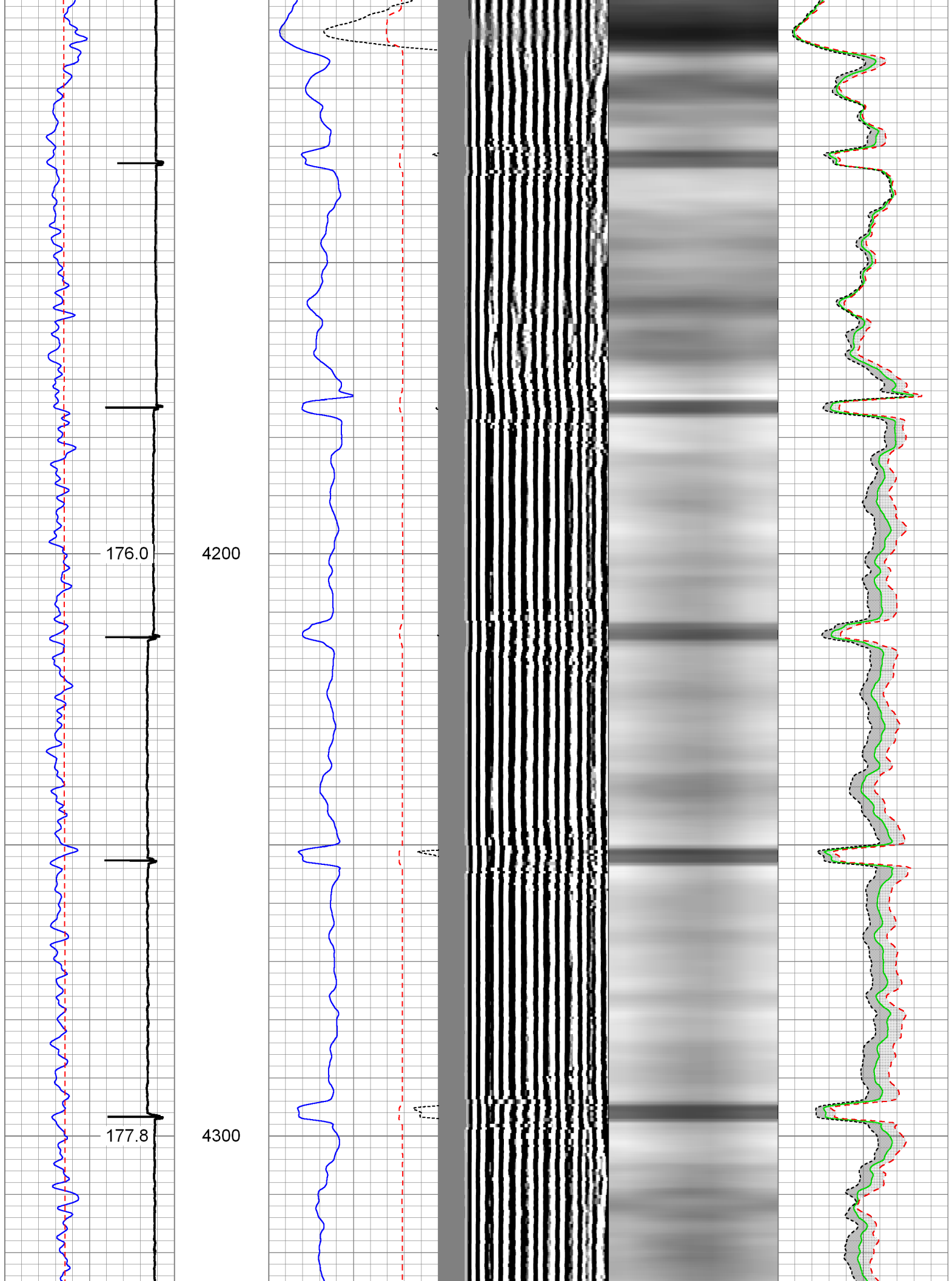


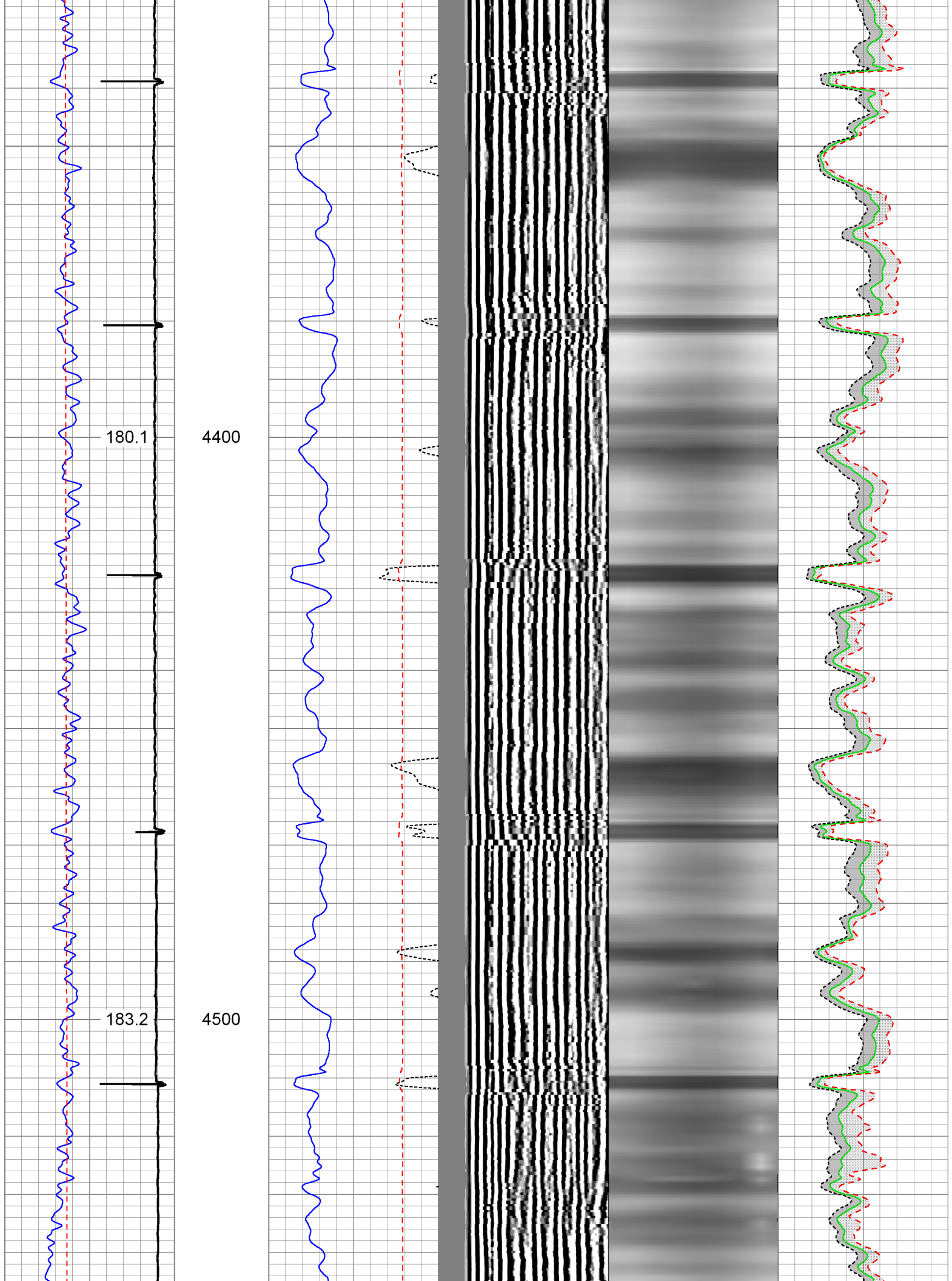


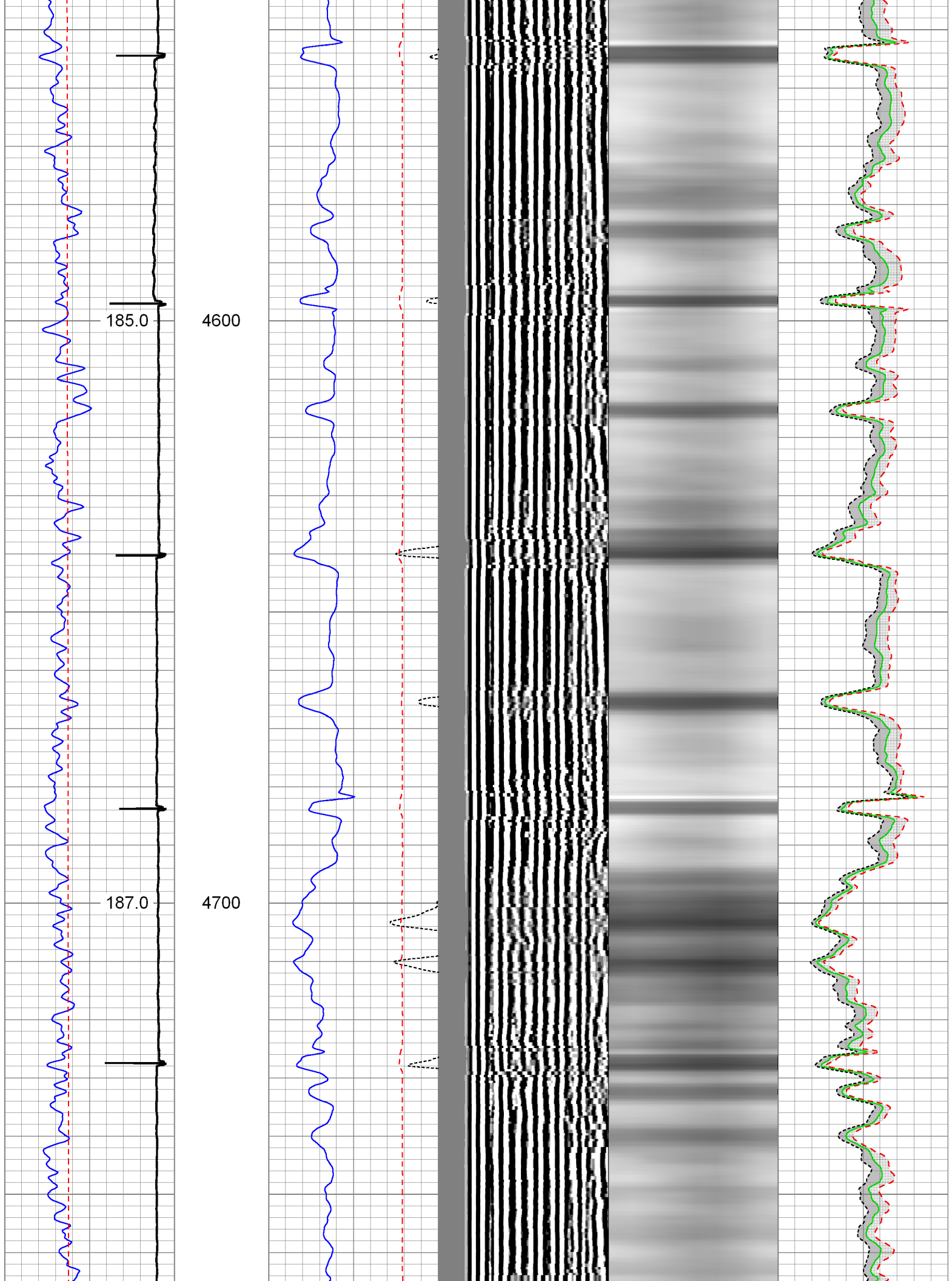


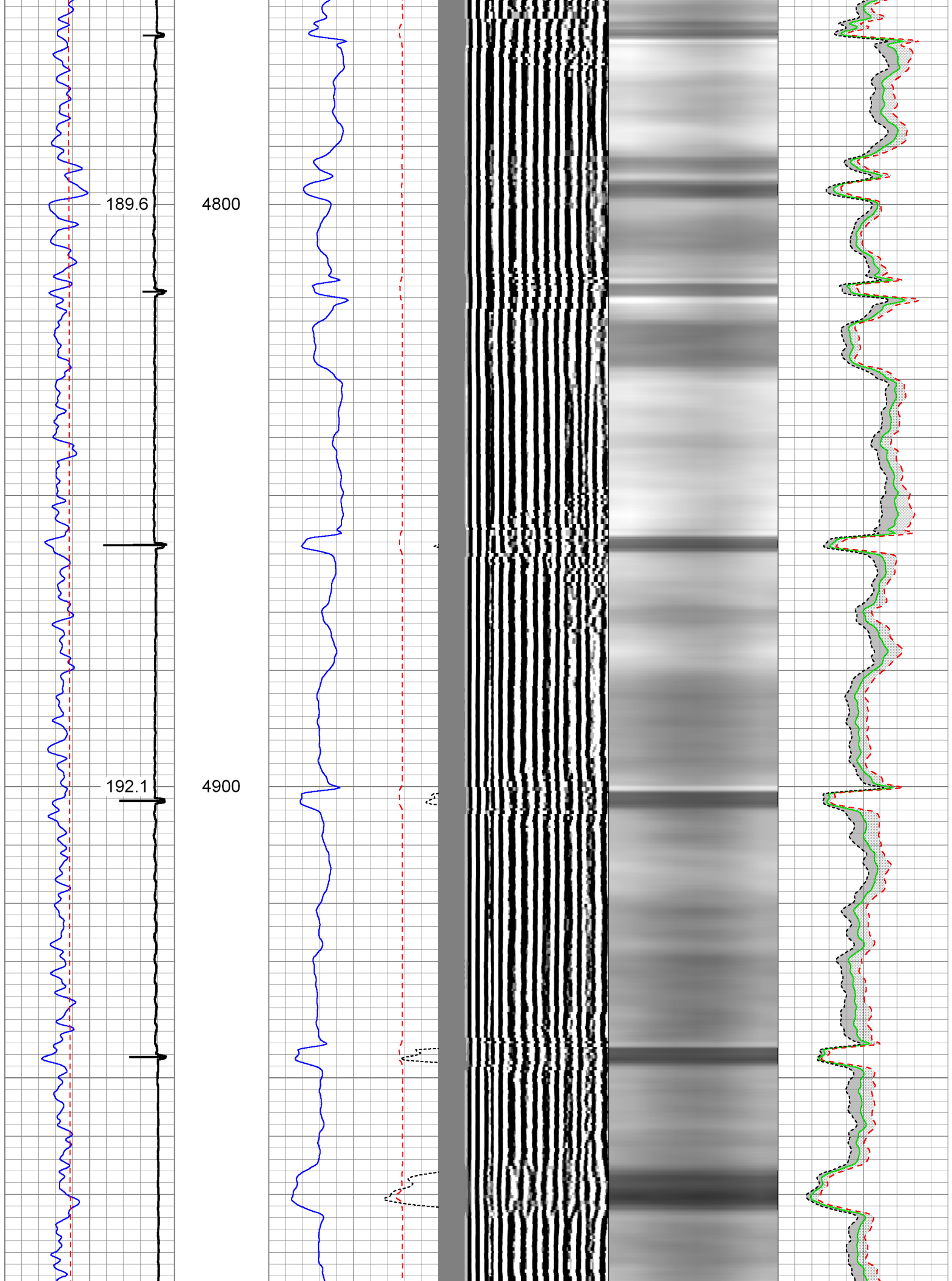


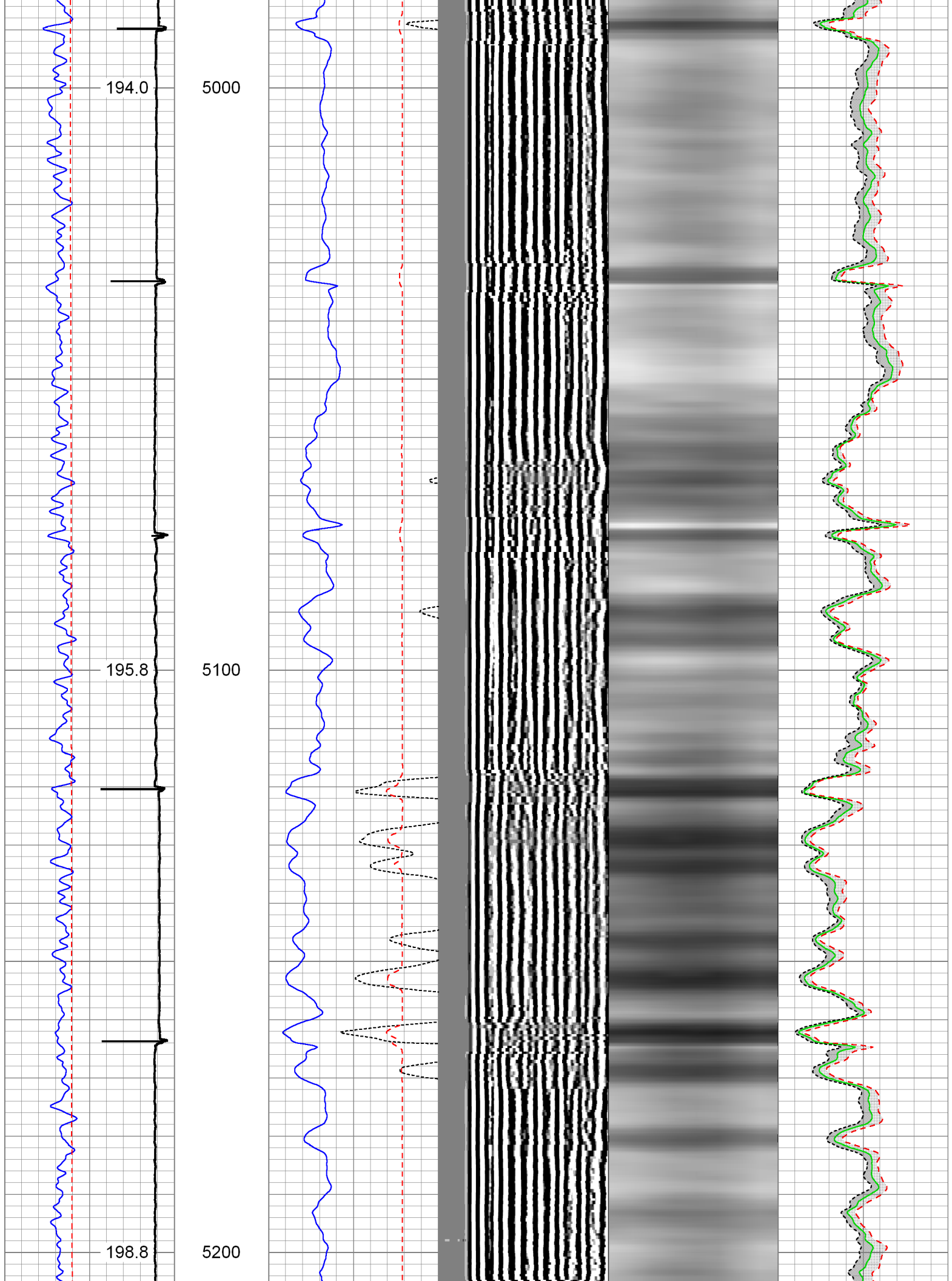


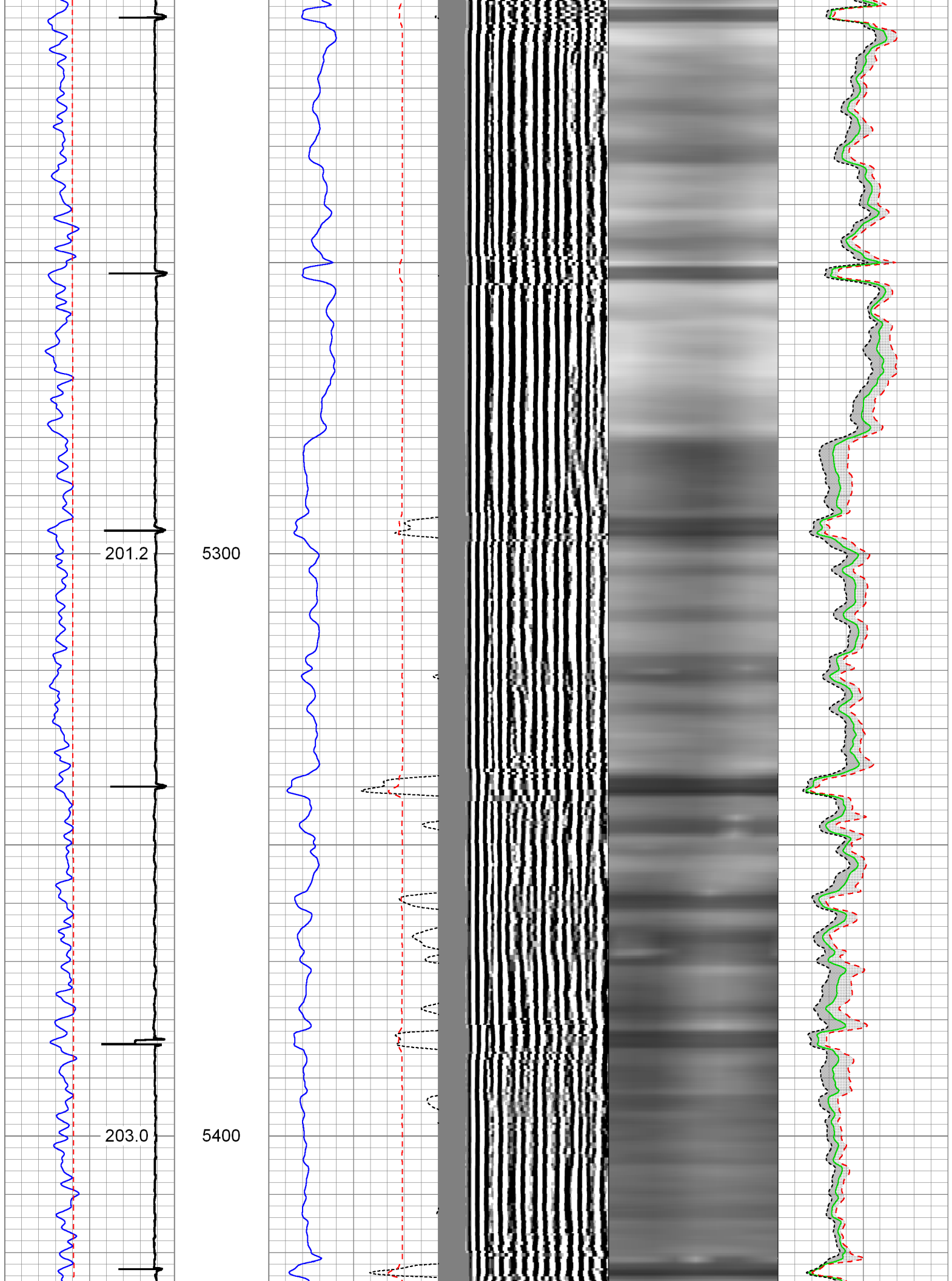


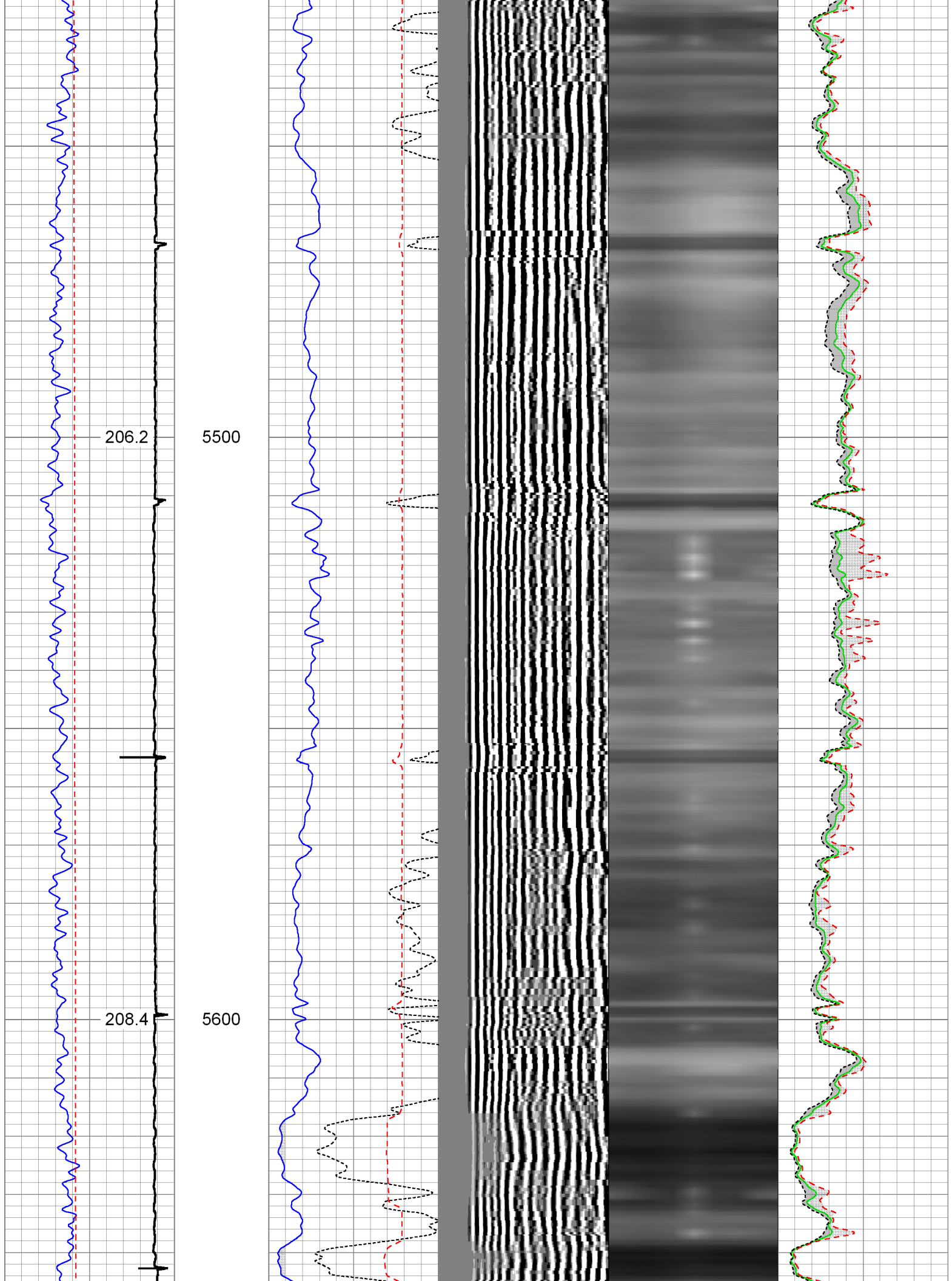


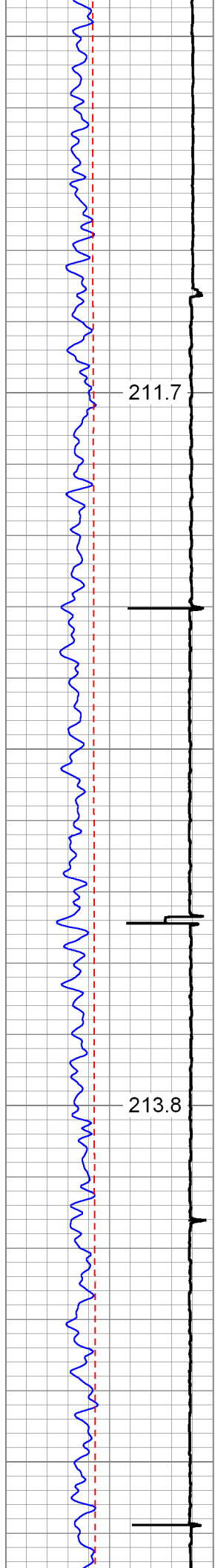










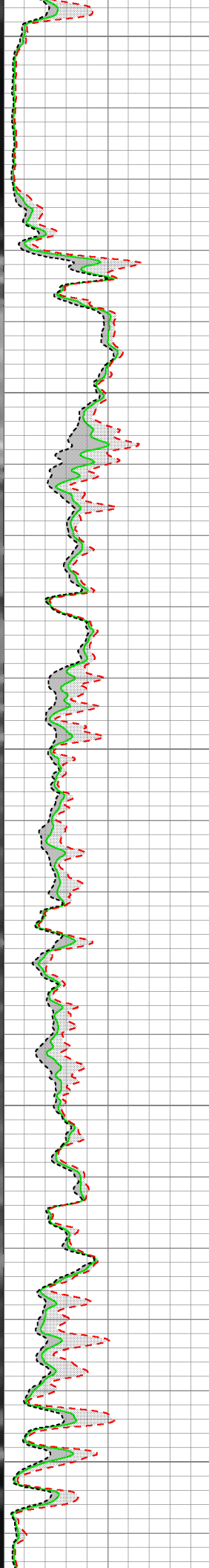
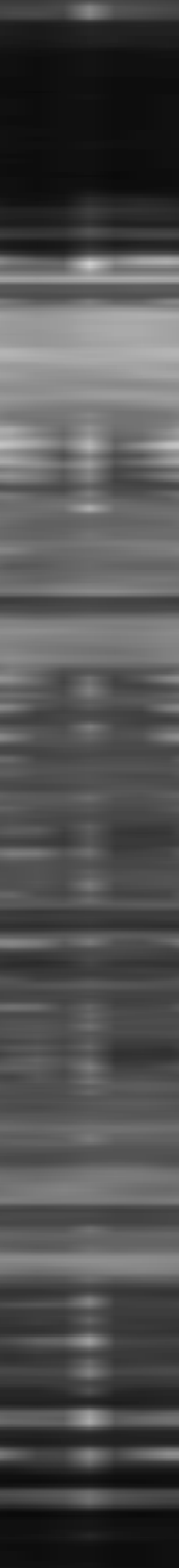
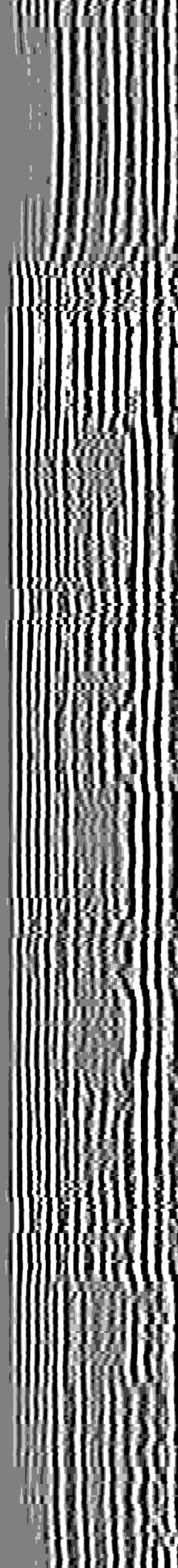
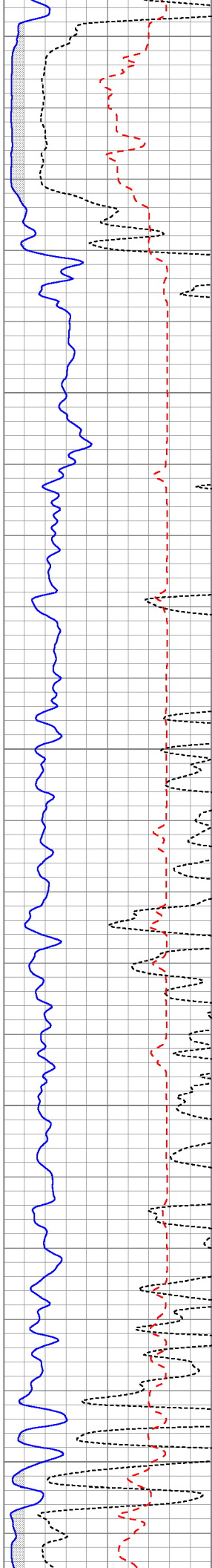


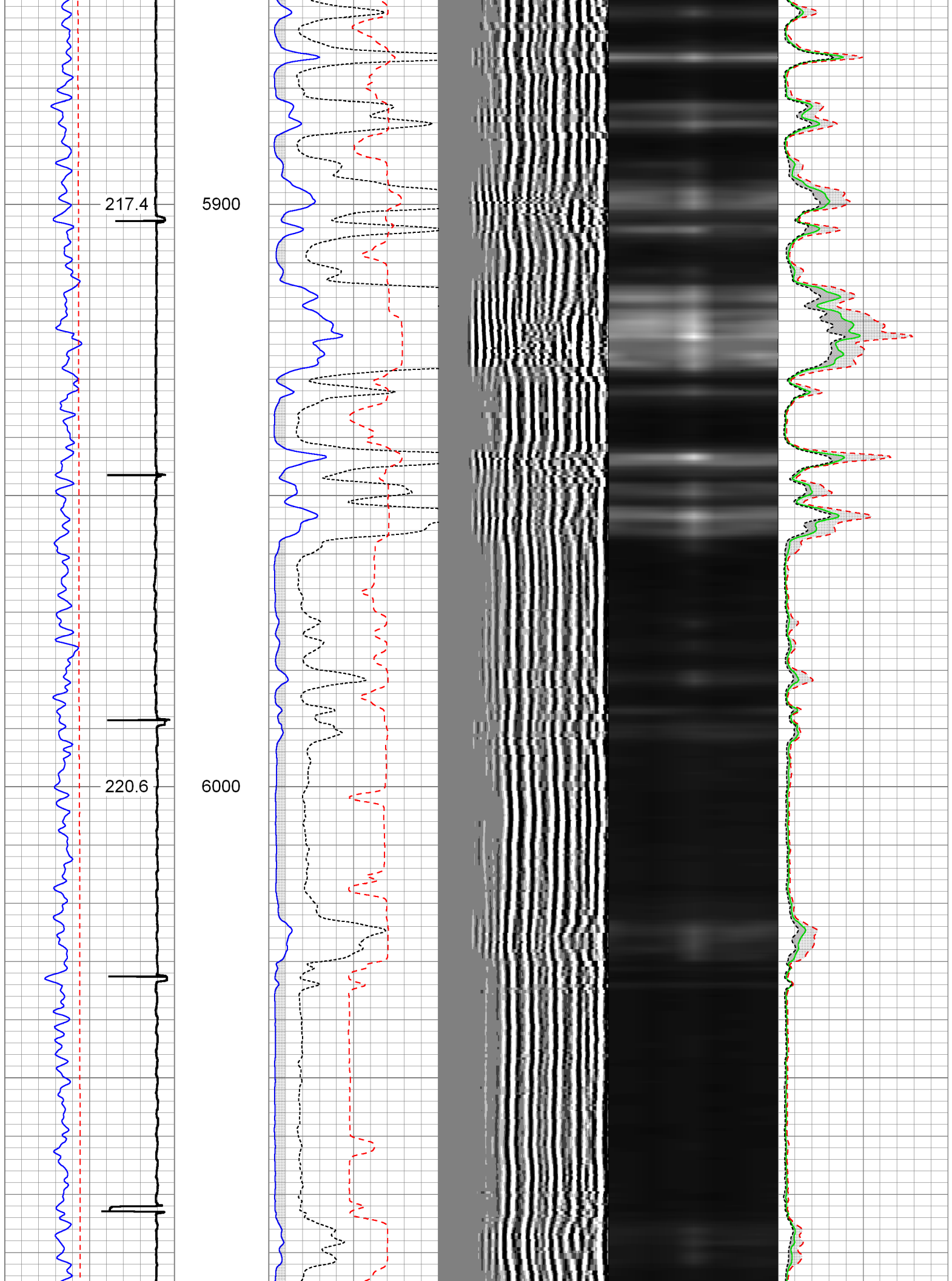
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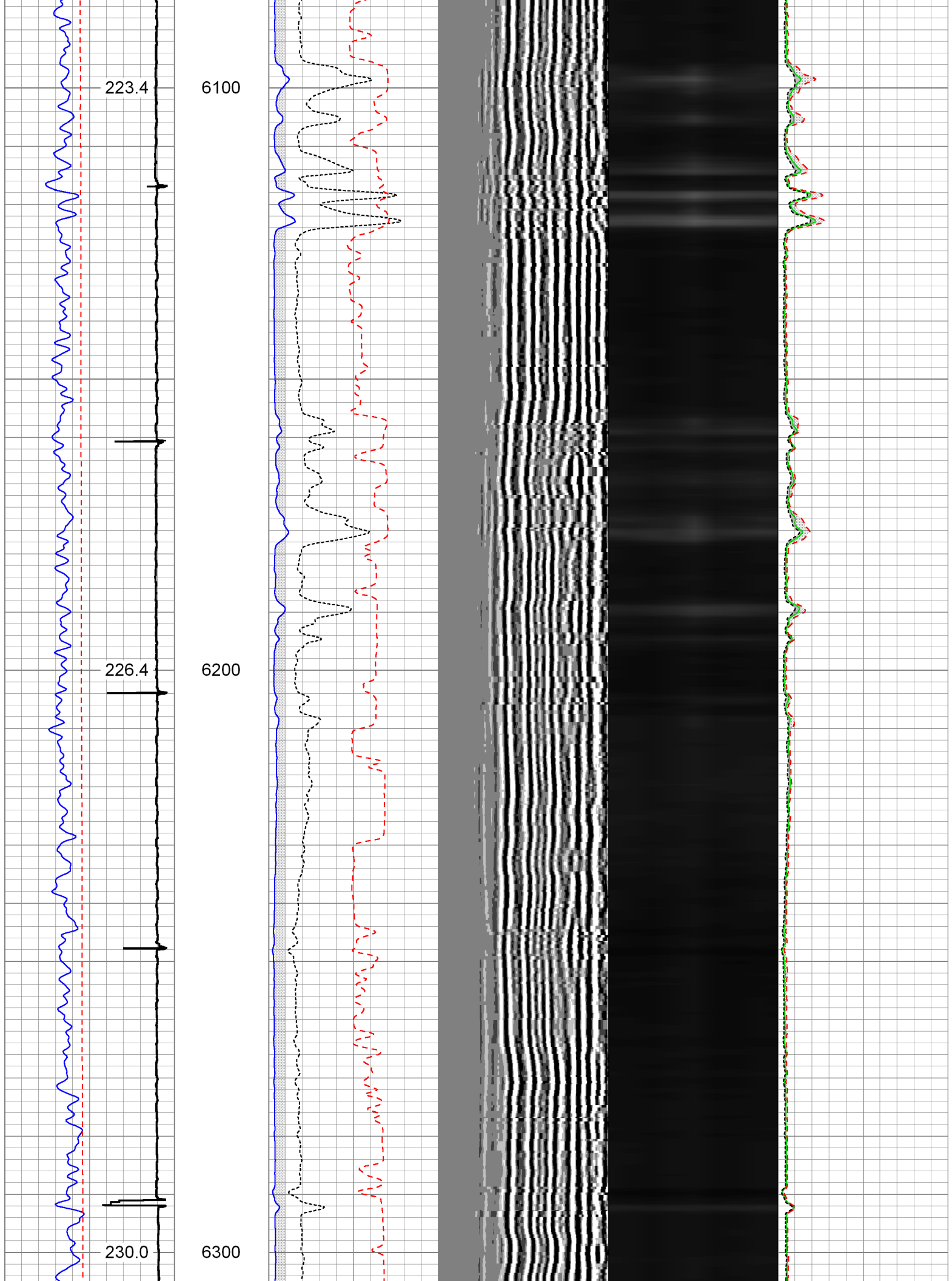
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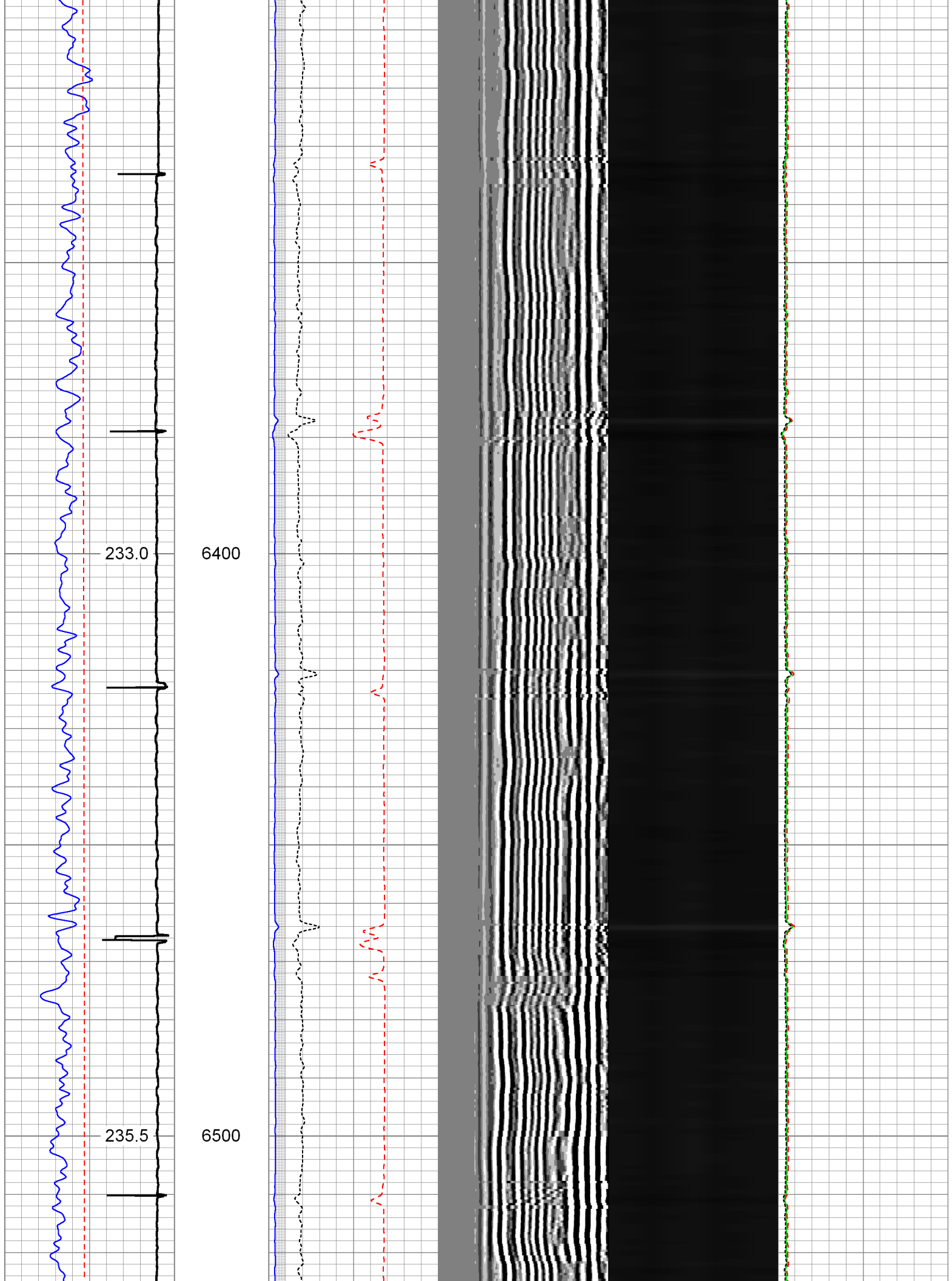
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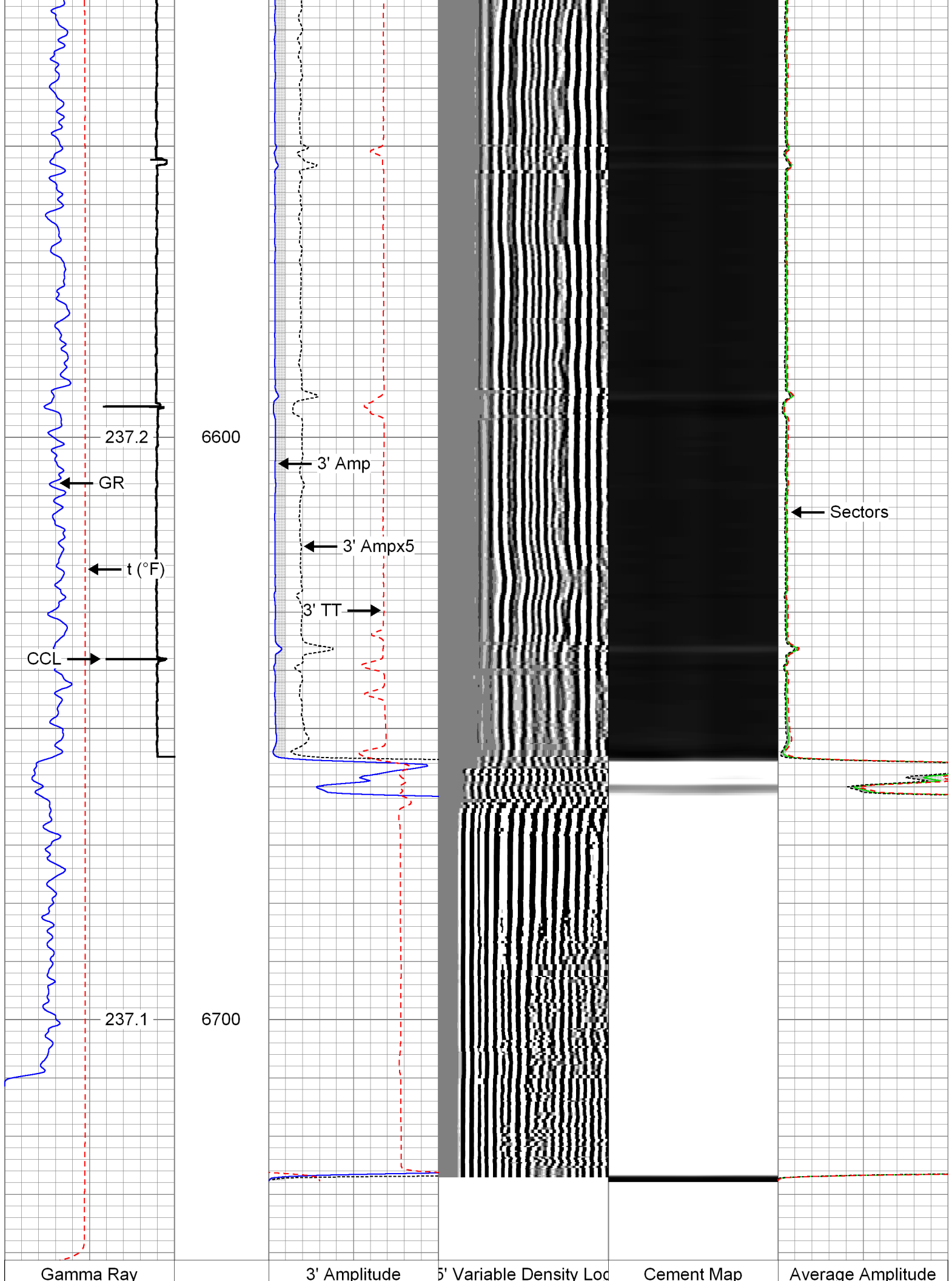
5800











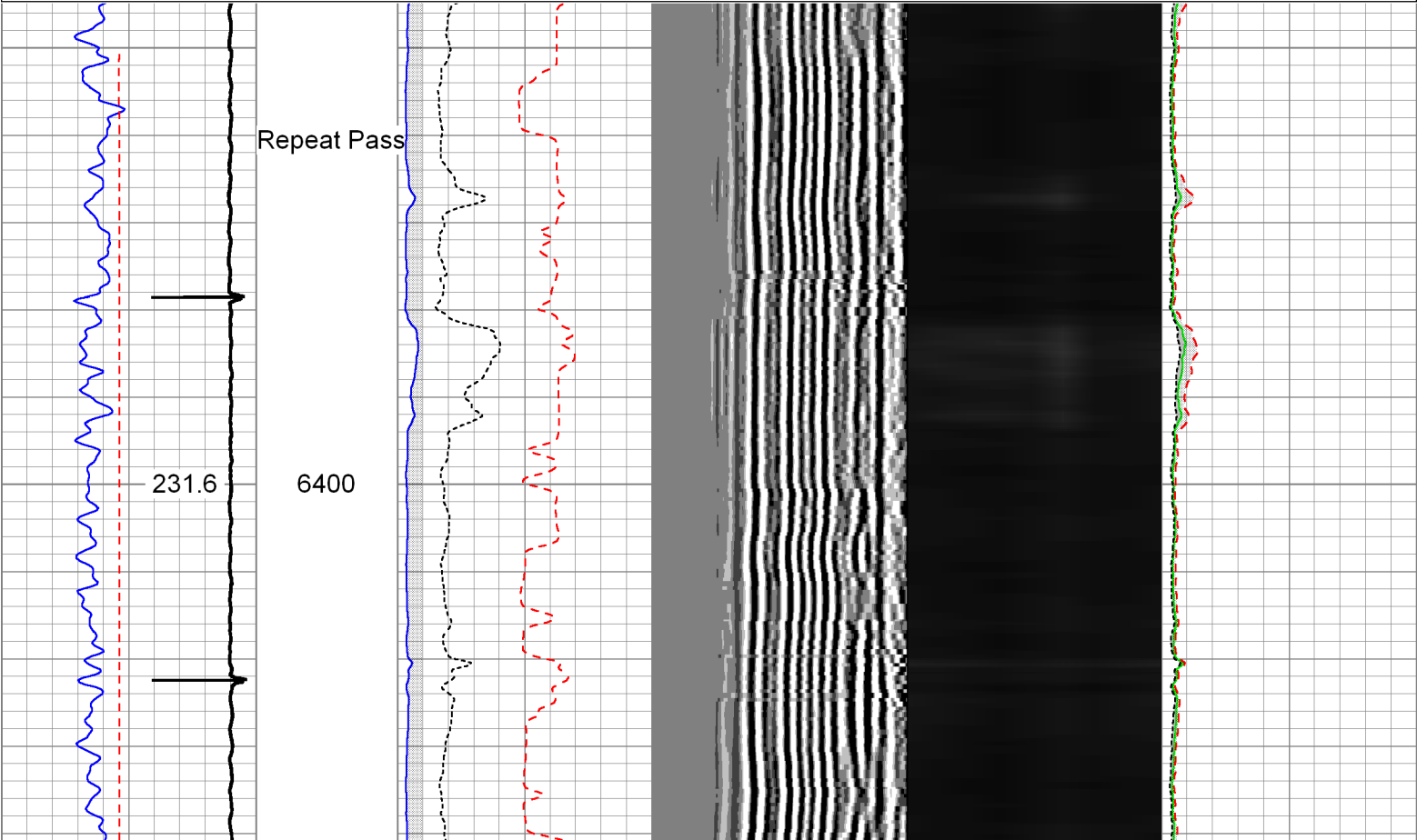
0 (GAPI) 120	0 (mV) 100	200	1200	0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
	0 (mV) 20			0 100
Temperature	3' Travel Time			Maximum Amplitude
0 (degF) 500	650 (usec) 150			0 100
Temperature (degF)				

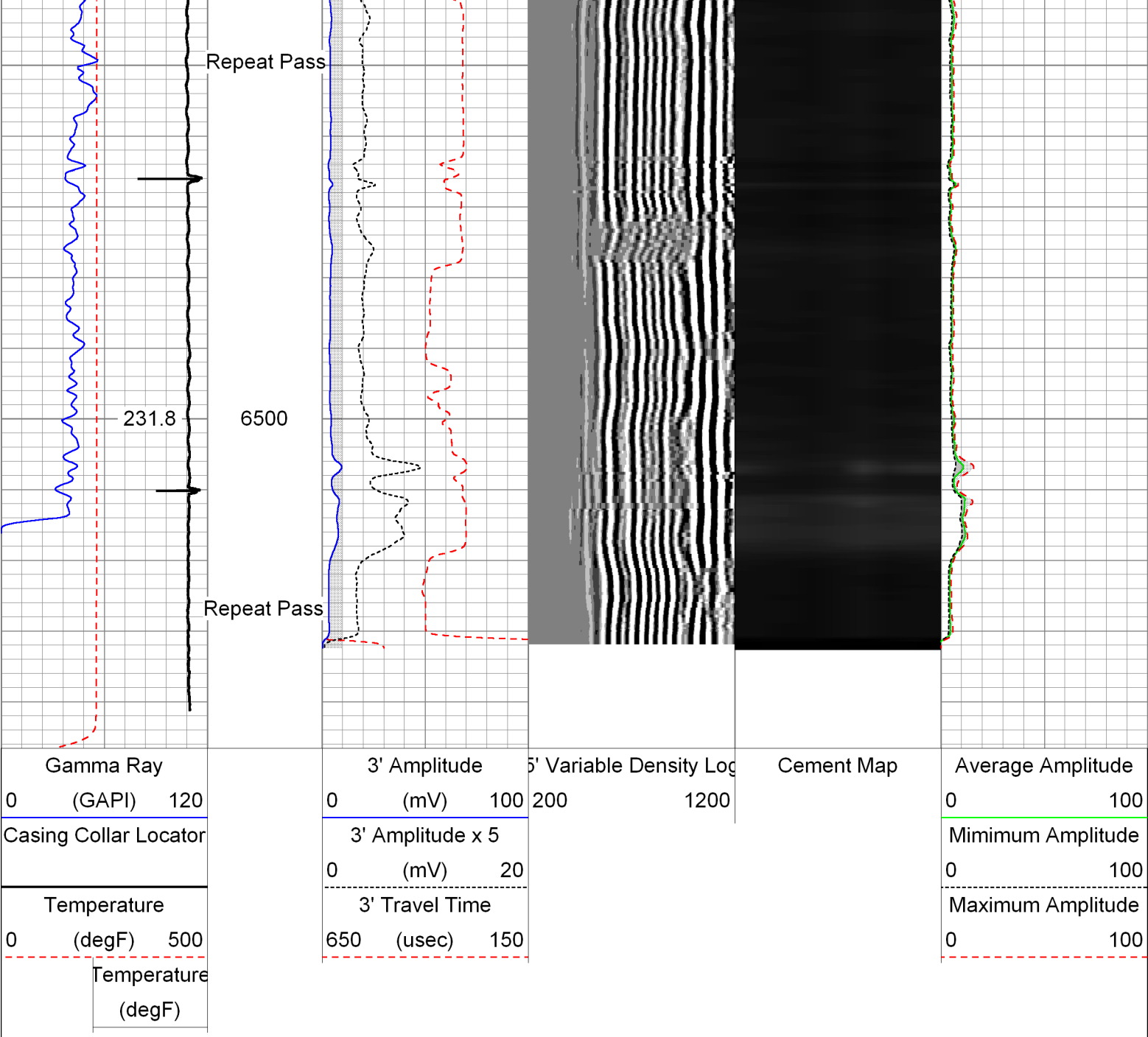


Repeat Pass


Database File: anadarko_usa fed 03n-36hz_rcbl_cil_31-aug-2013_w7.db
 Dataset Pathname: repeat
 Presentation Format: rcblsdx
 Dataset Creation: Sat Aug 31 07:21:43 2013 by Log Sondex V7.03
 Charted by: Depth in Feet scaled 1:240

Gamma Ray	3' Amplitude	5' Variable Density Log	Cement Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200	1200	0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
	0 (mV) 20			0 100
Temperature	3' Travel Time			Maximum Amplitude
0 (degF) 500	650 (usec) 150			0 100
Temperature (degF)				





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	32.07		CHD-AES (000001) Cable Head	1.04	1.69	2.00
			XTU-001 (000001) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			PGR-020 (000001) Production Gamma Ray	1.93	1.69	9.50
			PRC-001 (000001) Production Roller Centraliser (3 Arm)	1.92	1.69	7.00
MTT	25.81		MTT-002 (000001) Magnetic Thickness Tool	6.86	1.69	30.00

				PRC-034 (000005) Production Roller Centraliser (4 Arm)	2.91	1.69	13.00
WVF3FT	15.54						
WVFS1	15.54			RBT-004 (2639) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
WVFS2	15.54						
WVFS3	15.54						
WVFS4	15.54						
WVFS5	15.54						
WVFS6	15.54						
WVFS7	15.54						
WVFS8	15.54						
CBLTEMP	15.54			PRC-034 (000006) Production Roller Centraliser (4 Arm)	2.91	1.69	13.00
CBLROT	15.54						
WVF5FT	14.54						
MIT	5.30			MIT-027 (218950) Multifinger Imaging Tool (UW 40F)	4.54	2.75	61.10
				PRC-057 (000007) Production Roller Centraliser (4 Arm)	2.74	2.75	32.00
TSTAMP	0.00			BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20
Dataset: anadarko_usa fed 03n-36hz_rcbl_cil_31-aug-2013_w7.db: field/well/run1/main.2 Total Length: 36.11 ft Total Weight: 315.30 lb O.D. 3.13 in							

Calibration Report			
Database File:	anadarko_usa fed 03n-36hz_rcbl_cil_31-aug-2013_w7.db		
Dataset Pathname:	calreport		
Dataset Creation:	Sat Aug 31 13:13:03 2013 by Log Sondex V7.03		
Multi-finger Imaging Tool Calibration Report			
Serial Number:		218950	
Number of Fingers:		40	
Tool Model:		027	
Inclinometer Calibration Report			
Performed:		Fri, Oct, 10 10:41:51 2008	
Calibration Angle:		45	
		Inc X	Inc Y
Vertical:		1996	1975
Finger 1 up:		2238	2226
Finger 24		1722	2212

Finger 31 up:	1760	2216
Finger 21 up:	1769	1745
Finger 11 up:	2250	1738
Sensitivity ratio:	1.00023	
X-axis angle:	314.283	
Deviation const.:	339.139	

Finger Calibration Report
Performed: Fri Aug 30 16:22:18 2013

Ring size:	4		5		6		7
(in)		Sens		Sens		Sens	
Finger 01:	1453	245.0	1698	311.0	2009	299.0	2308
Finger 02:	1492	236.0	1728	296.0	2024	282.0	2306
Finger 03:	1448	260.0	1708	331.0	2039	315.0	2354
Finger 04:	1454	245.0	1699	310.0	2009	297.0	2306
Finger 05:	1513	240.0	1753	293.0	2046	277.0	2323
Finger 06:	1496	247.0	1743	299.0	2042	289.0	2331
Finger 07:	1498	265.0	1763	311.0	2074	296.0	2370
Finger 08:	1559	240.0	1799	275.0	2074	267.0	2341
Finger 09:	1510	273.0	1783	308.0	2091	298.0	2389
Finger 10:	1536	268.0	1804	287.0	2091	275.0	2366
Finger 11:	1504	273.0	1777	292.0	2069	287.0	2356
Finger 12:	1497	288.0	1785	299.0	2084	298.0	2382
Finger 13:	1538	284.0	1822	283.0	2105	283.0	2388
Finger 14:	1527	290.0	1817	280.0	2097	288.0	2385
Finger 15:	1522	293.0	1815	278.0	2093	291.0	2384
Finger 16:	1506	294.0	1800	273.0	2073	290.0	2363
Finger 17:	1495	301.0	1796	275.0	2071	296.0	2367
Finger 18:	1535	290.0	1825	257.0	2082	276.0	2358
Finger 19:	1559	279.0	1838	242.0	2080	268.0	2348
Finger 20:	1490	301.0	1791	264.0	2055	293.0	2348
Finger 21:	1461	311.0	1772	271.0	2043	307.0	2350
Finger 22:	1477	304.0	1781	265.0	2046	298.0	2344
Finger 23:	1534	283.0	1817	246.0	2063	277.0	2340
Finger 24:	1531	284.0	1815	253.0	2068	289.0	2357
Finger 25:	1501	295.0	1796	267.0	2063	300.0	2363
Finger 26:	1445	293.0	1738	267.0	2005	304.0	2309
Finger 27:	1447	290.0	1737	272.0	2009	303.0	2312
Finger 28:	1479	289.0	1768	275.0	2043	306.0	2349
Finger 29:	1448	279.0	1727	274.0	2001	301.0	2302
Finger 30:	1454	280.0	1734	280.0	2014	307.0	2321
Finger 31:	1527	249.0	1776	255.0	2031	273.0	2304
Finger 32:	1450	266.0	1716	287.0	2003	305.0	2308
Finger 33:	1447	266.0	1713	289.0	2002	298.0	2300
Finger 34:	1416	265.0	1681	298.0	1979	310.0	2289
Finger 35:	1430	257.0	1687	298.0	1985	305.0	2290
Finger 36:	1424	252.0	1676	299.0	1975	301.0	2276
Finger 37:	1495	245.0	1740	293.0	2033	286.0	2319
Finger 38:	1430	252.0	1682	315.0	1997	305.0	2302
Finger 39:	1406	251.0	1657	315.0	1972	306.0	2278
Finger 40:	1412	251.0	1663	321.0	1984	310.0	2294

Post Survey Calibration Check
Performed: Sat Aug 31 13:12:49 2013

Ring size:	4	Nom.	5	Nom.	6	Nom.	7	Nom.
(in)		wear		wear		wear		wear
Finger 01:	4.010	0.005	5.000	-0.000	6.015	0.007	7.006	0.003
Finger 02:	4.004	0.002	4.999	-0.001	6.010	0.005	7.002	0.001
Finger 03:	4.009	0.005	4.999	-0.001	6.012	0.006	7.007	0.004
Finger 04:	4.008	0.004	4.998	-0.001	6.006	0.003	7.006	0.003
Finger 05:	4.005	0.002	4.997	-0.001	6.008	0.004	7.004	0.002
Finger 06:	4.015	0.007	5.004	0.002	6.011	0.006	7.004	0.002
Finger 07:	4.017	0.008	5.002	0.001	6.008	0.004	7.007	0.003
Finger 08:	4.006	0.003	5.004	0.002	6.009	0.004	7.001	0.000

Finger 09:	4.003	0.001	5.004	0.002	6.007	0.004	7.008	0.004
Finger 10:	4.015	0.007	5.005	0.002	6.002	0.001	7.003	0.001
Finger 11:	4.009	0.004	5.000	-0.000	6.000	0.000	7.006	0.003
Finger 12:	4.004	0.002	5.002	0.001	6.002	0.001	7.008	0.004
Finger 13:	4.004	0.002	5.006	0.003	6.003	0.002	6.999	-0.001
Finger 14:	4.022	0.011	5.003	0.001	6.006	0.003	7.006	0.003
Finger 15:	4.014	0.007	5.002	0.001	6.004	0.002	7.003	0.002
Finger 16:	4.011	0.005	5.005	0.003	6.006	0.003	7.010	0.005
Finger 17:	4.011	0.005	5.005	0.002	6.010	0.005	7.013	0.007
Finger 18:	4.013	0.007	5.006	0.003	6.014	0.007	7.006	0.003
Finger 19:	3.997	-0.001	4.989	-0.005	5.996	-0.002	6.996	-0.002
Finger 20:	4.012	0.006	5.001	0.001	6.010	0.005	7.013	0.007
Finger 21:	4.010	0.005	5.002	0.001	6.007	0.004	7.008	0.004
Finger 22:	4.017	0.008	5.000	0.000	6.011	0.006	7.003	0.002
Finger 23:	4.007	0.004	4.991	-0.005	6.003	0.002	6.996	-0.002
Finger 24:	4.015	0.007	5.005	0.002	6.010	0.005	7.010	0.005
Finger 25:	4.014	0.007	5.006	0.003	6.010	0.005	7.005	0.002
Finger 26:	4.005	0.002	5.001	0.001	6.008	0.004	7.004	0.002
Finger 27:	4.007	0.003	4.999	-0.000	6.003	0.002	7.009	0.005
Finger 28:	3.999	-0.001	4.996	-0.002	6.006	0.003	7.005	0.003
Finger 29:	4.007	0.004	5.003	0.001	6.006	0.003	7.010	0.005
Finger 30:	4.009	0.004	4.998	-0.001	6.005	0.002	7.004	0.002
Finger 31:	4.012	0.006	5.006	0.003	6.007	0.004	6.998	-0.001
Finger 32:	4.012	0.006	5.011	0.006	6.010	0.005	7.007	0.004
Finger 33:	4.011	0.006	5.005	0.002	6.006	0.003	7.001	0.000
Finger 34:	4.015	0.008	5.005	0.002	6.006	0.003	7.002	0.001
Finger 35:	4.008	0.004	5.001	0.001	6.003	0.001	7.007	0.003
Finger 36:	4.013	0.007	5.001	0.001	6.002	0.001	7.010	0.005
Finger 37:	4.016	0.008	5.005	0.003	6.004	0.002	7.005	0.002
Finger 38:	4.008	0.004	4.997	-0.001	6.001	0.000	7.003	0.002
Finger 39:	4.012	0.006	5.001	0.001	6.003	0.001	7.012	0.006
Finger 40:	4.008	0.004	4.999	-0.000	6.004	0.002	7.009	0.004
Average:	4.010	0.005	5.002	0.001	6.006	0.003	7.005	0.003

Segmented Cement Bond Log Calibration Report

Serial Number:	2639		
Tool Model:	004		
Calibration Casing Diameter:	7.000	in	
Calibration Depth:	4599.603	ft	

Master Calibration, performed Thu Aug 22 08:44:36 2013:							
	Raw (v)		Calibrated (mv)		Results		
	Zero	Cal	Zero	Cal	Gain	Offset	
3FT	0.006	0.706	0.800	62.165	87.623	0.262	
5FT	0.001	0.756	0.800	62.165	81.256	0.701	
S1	0.010	0.726	0.000	100.000	139.527	-1.349	
S2	0.005	0.649	0.000	100.000	155.140	-0.750	
S3	0.003	0.616	0.000	100.000	163.110	-0.526	
S4	0.002	0.628	0.000	100.000	159.985	-0.391	
S5	0.006	0.685	0.000	100.000	147.320	-0.921	
S6	0.008	0.767	0.000	100.000	131.662	-1.008	
S7	0.004	0.822	0.000	100.000	122.209	-0.430	
S8	0.001	0.802	0.000	100.000	124.721	-0.073	

Gamma Ray Calibration Report

Serial Number:	000001
Tool Model:	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	USA Fed 03N-36HZ
	Field	Wattenberg
	County	Weld
	State	Colorado