



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.				Company Kerr-McGee Oil & Gas Onshore, L.P.				
Well Grenemyer 35C-3HZ				Well Grenemyer 35C-3HZ				
Field Wattenberg				Field Wattenberg				
County Weld				County Weld				
State CO				State CO				
Location:				API # : 05-123-38341		Other Services		
Lat / Long: 40.013615 / -104.880377				Gauge Run		CIL		
SEC 34 TWP 1N RGE 67W				Elevation				
Permanent Datum		Ground Level		Elevation		K.B. 5063'		
Log Measured From		Kelly Bushing (16 FT)		Elevation		D.F. 5062'		
Drilling Measured From		Kelly Bushing		Elevation		G.L. 5047'		
Date		27-Feb-2014						
Run Number		Two						
Depth Driller		16902 FT						
Depth Logger		7157 FT						
Bottom Logged Interval		7152 FT						
Top Log Interval		Surface						
Open Hole Size		8.750"						
Type Fluid		Water						
Density / Viscosity		8.34 lbm/gal						
Max. Recorded Temp.		242°						
Estimated Cement Top		590.2 FT						
Time Well Ready		8:00						
Time Logger on Bottom		9:30						
Equipment Number		HD 0134						
Location		Fort Lupton, CO						
Recorded By		Erick Vaughn						
Witnessed By		Trevor Daniel						
Borehole Record				Tubing Record				
Run Number		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	1048 FT		
Intermediate #1		7"	26#	HCP-110	Surface	8137 FT		
Intermediate #2								
Liner		4.5"	11.6#	P-110	7039 FT	16890 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

Casing Inspection Log/Radial Cement Bond Log is first recorded log in hole.
Depth reference to casing tally reported Top of Liner at 7039 FT.
Run CIL/RCBL from as deep as possible in curve to surface ~ reached 7157 FT.
CIL/RCBL recorded with 2600 PSI surface induced pressure.
Estimated Top of Cement recorded at 590.2 FT.

Thank you for choosing FMC Technologies Completion Services, Inc.!!



Main Pass: 7" Casing

Database File: 0512338341_anadarko_grenemyer 35c-3hz_rcbl_cil_02-27-14.db

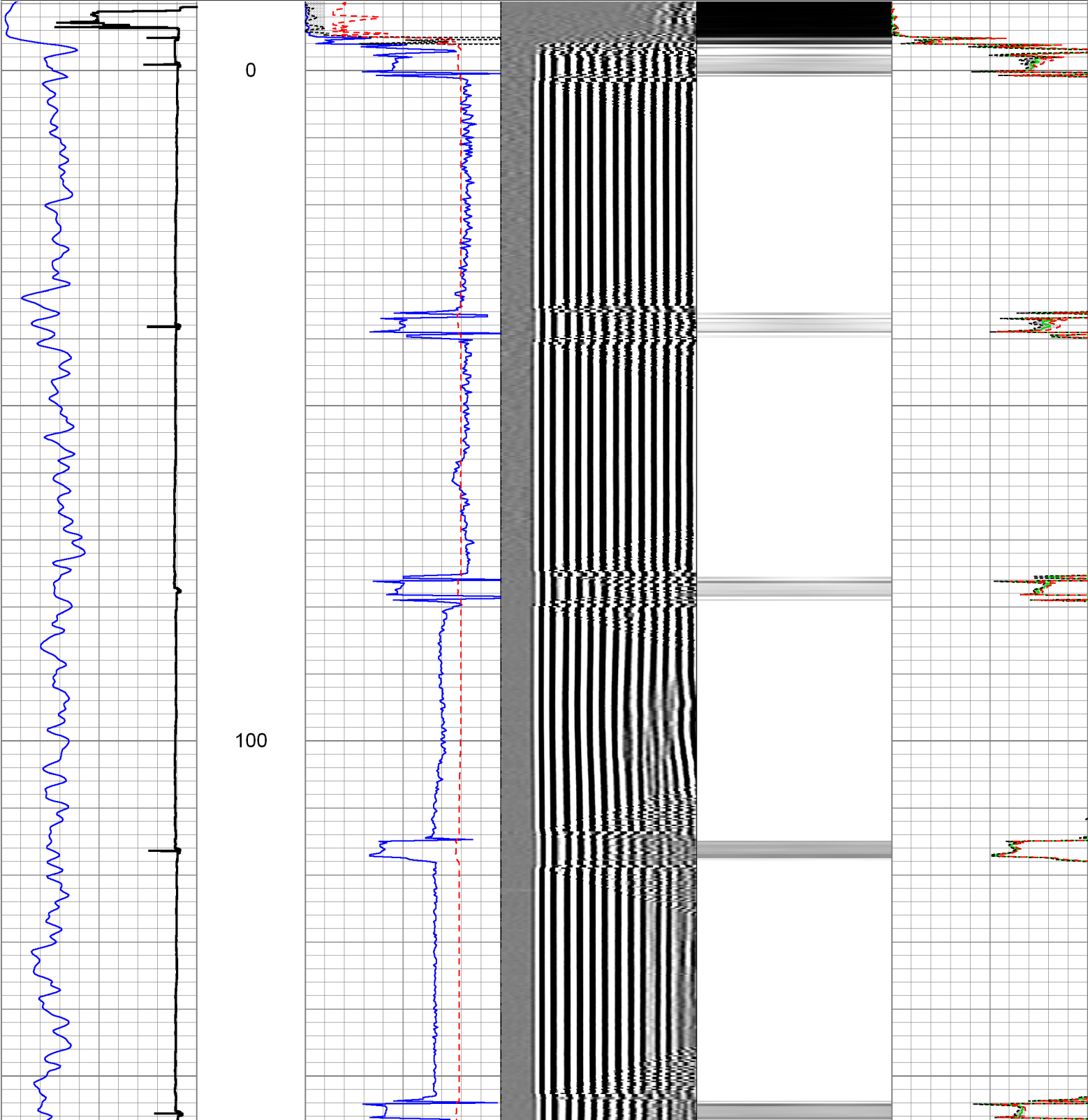
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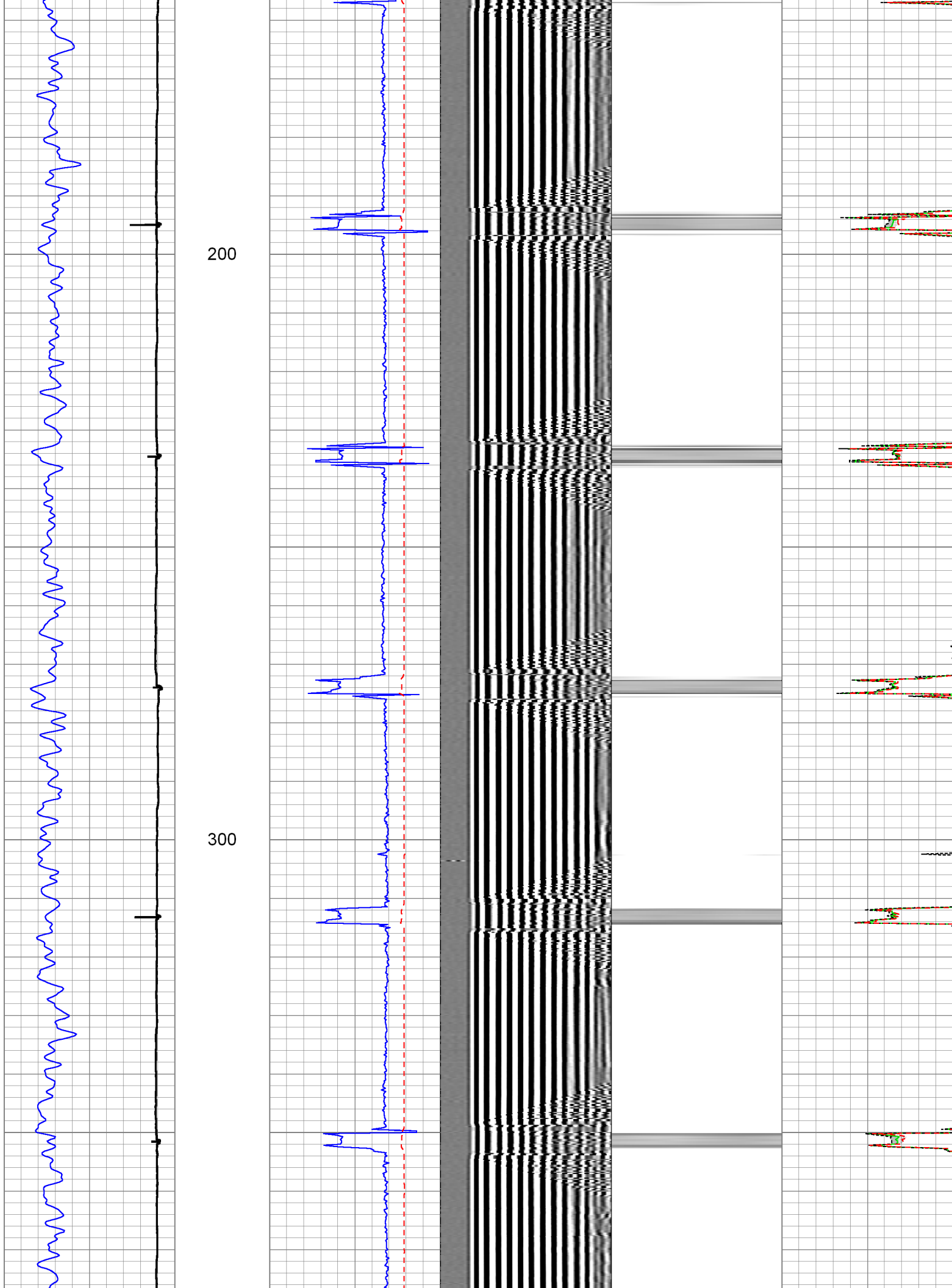
Presentation Format: rbt007

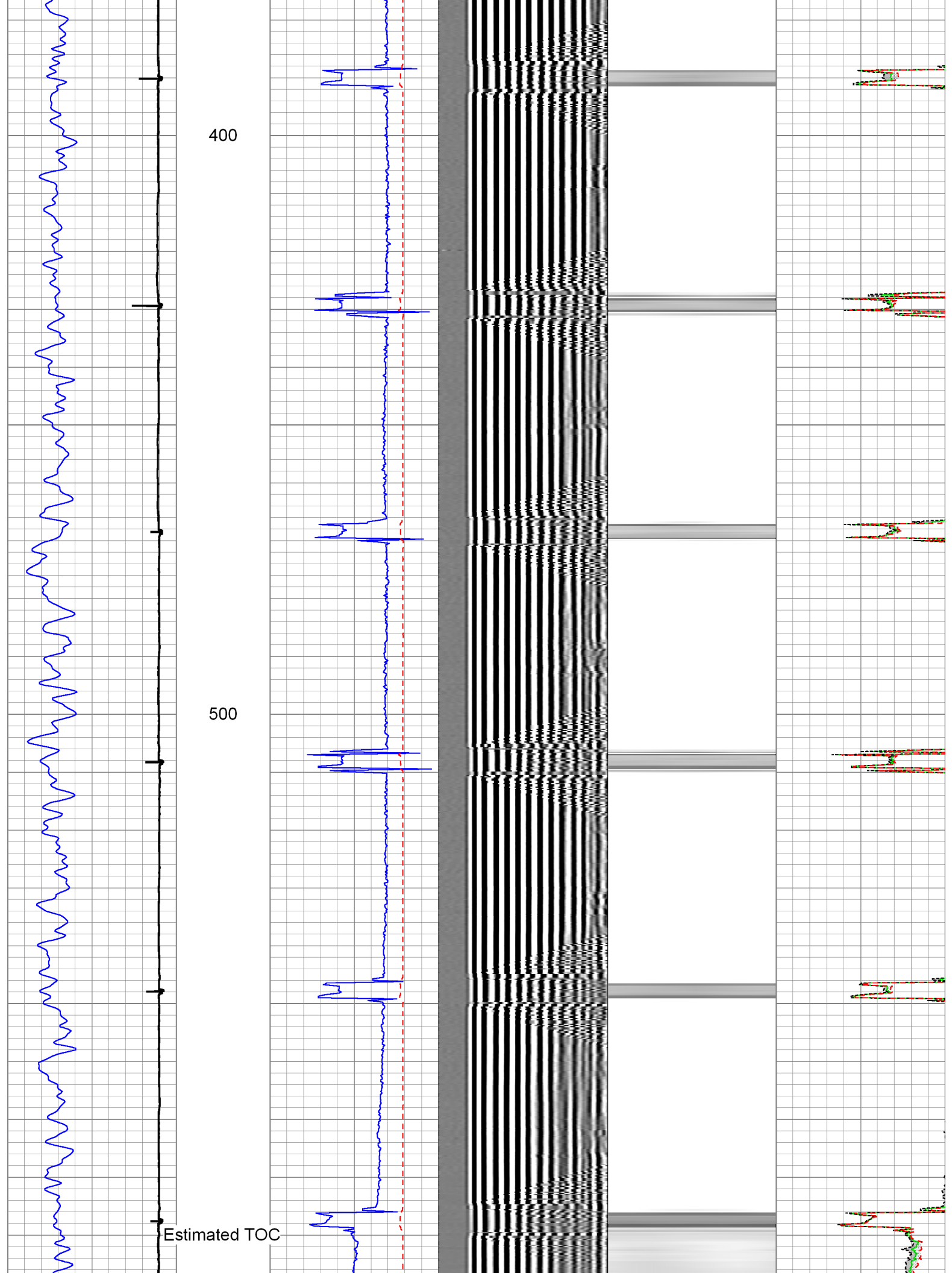
Dataset Creation: Thu Feb 27 10:25:26 2014 by Log Sondex V7.03

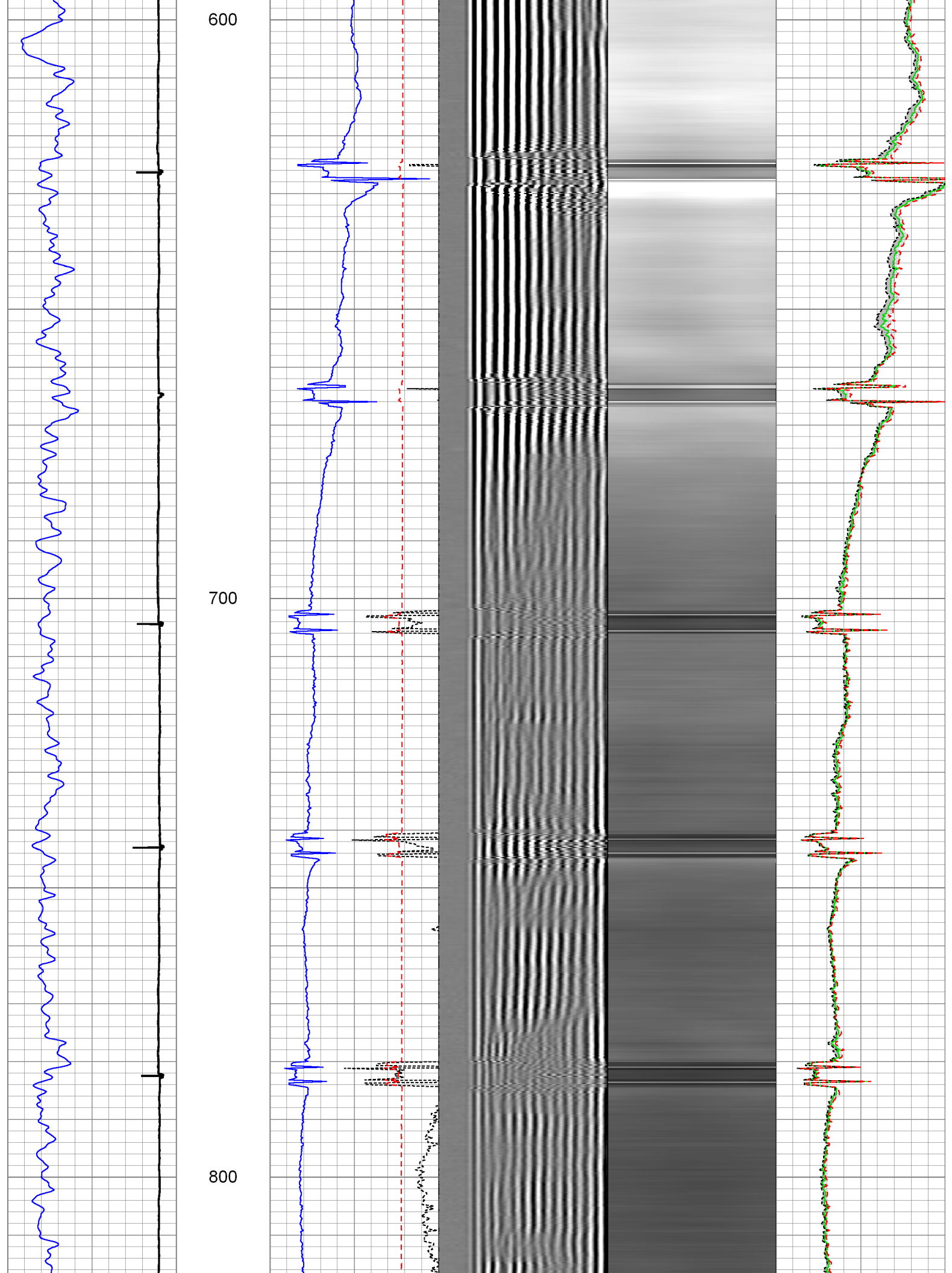
Charted by: Depth in Feet scaled 1:240

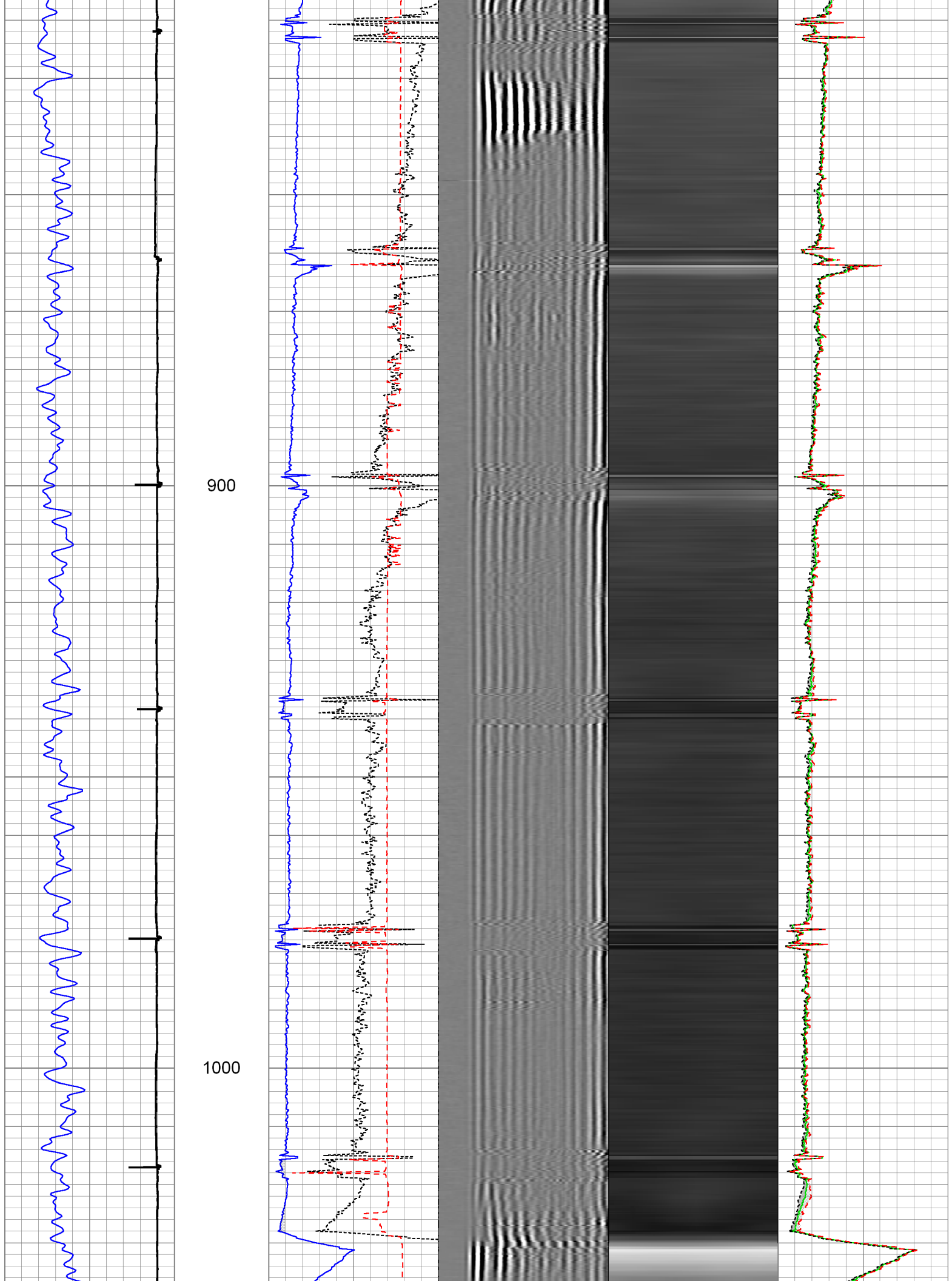
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120		0 (mV) 100	200 1200		0 100
Collar Locator		3' Amplitude x 5			Minimum Amplitude
		0 (mV) 20			0 100
		3' Travel Time			Maximum Amplitude
		650 (usec) 150			0 100

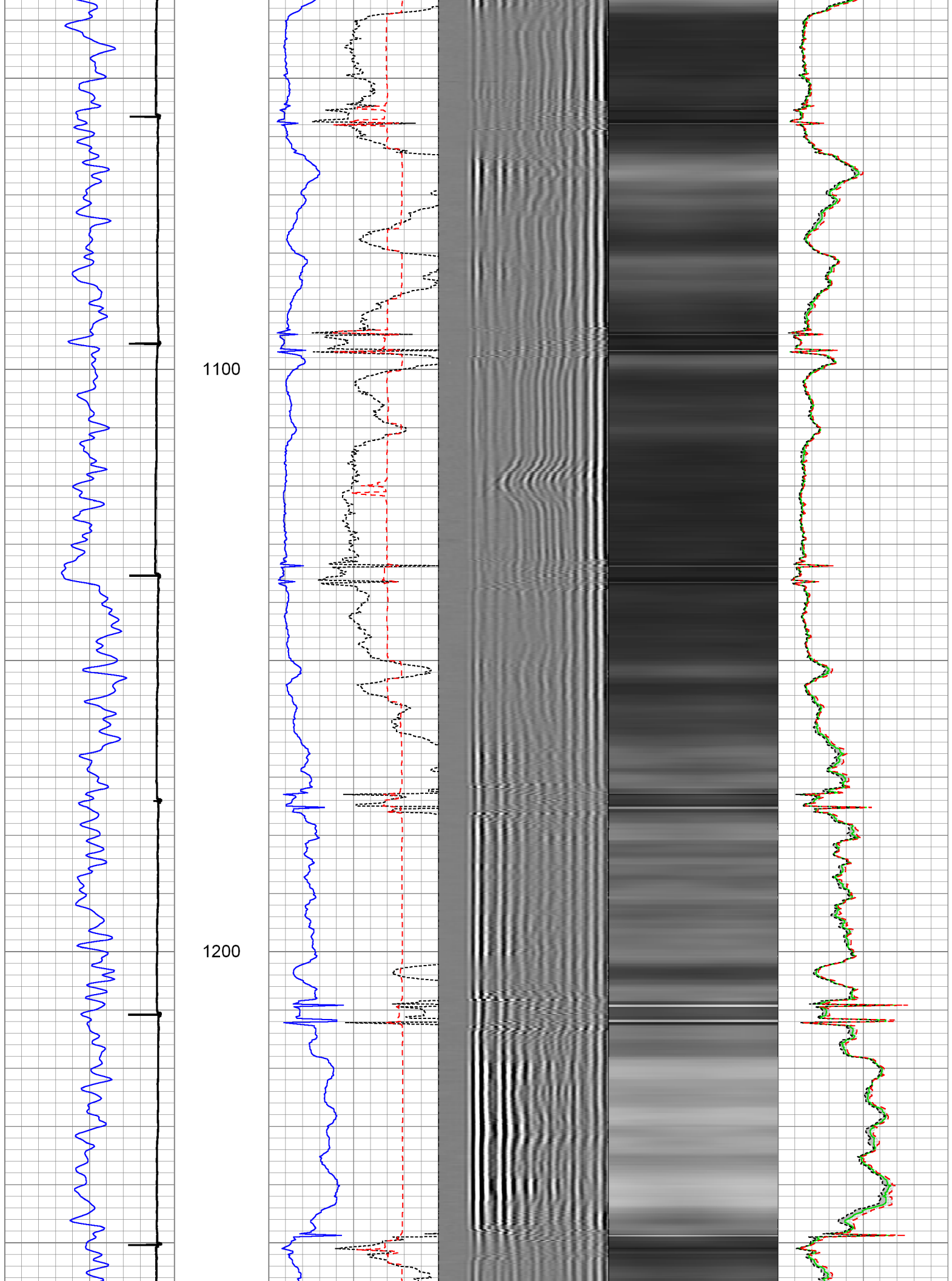


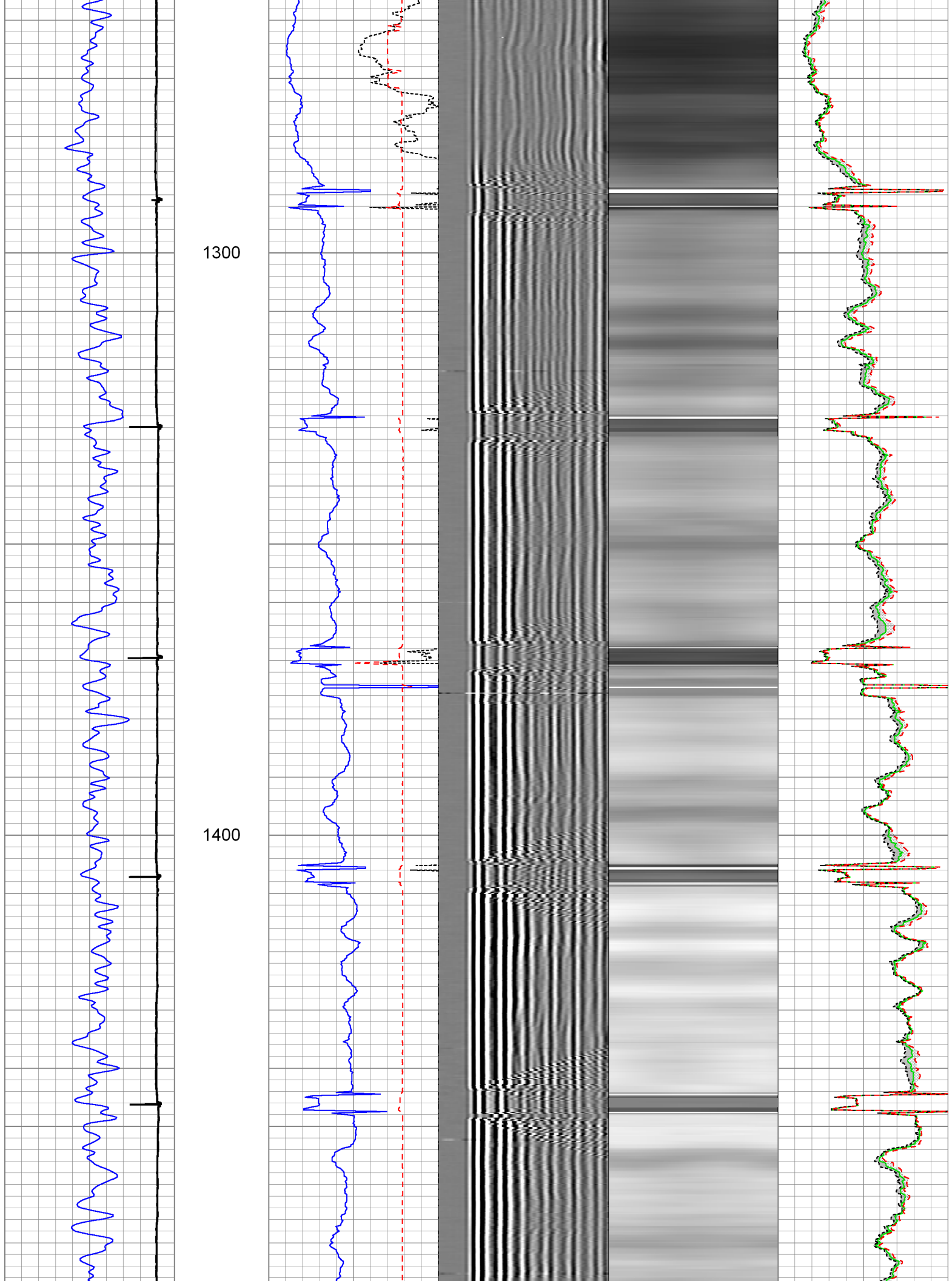


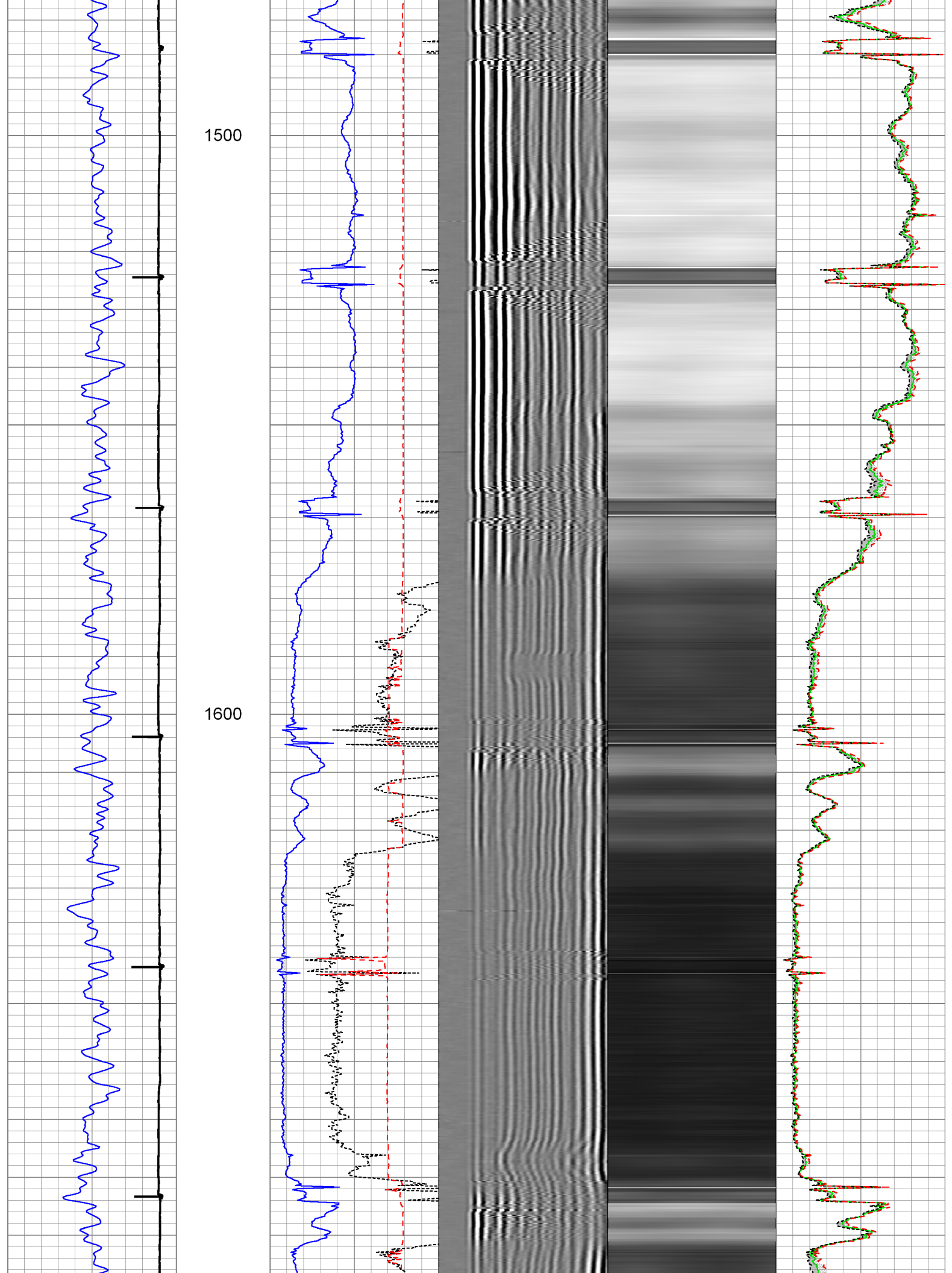


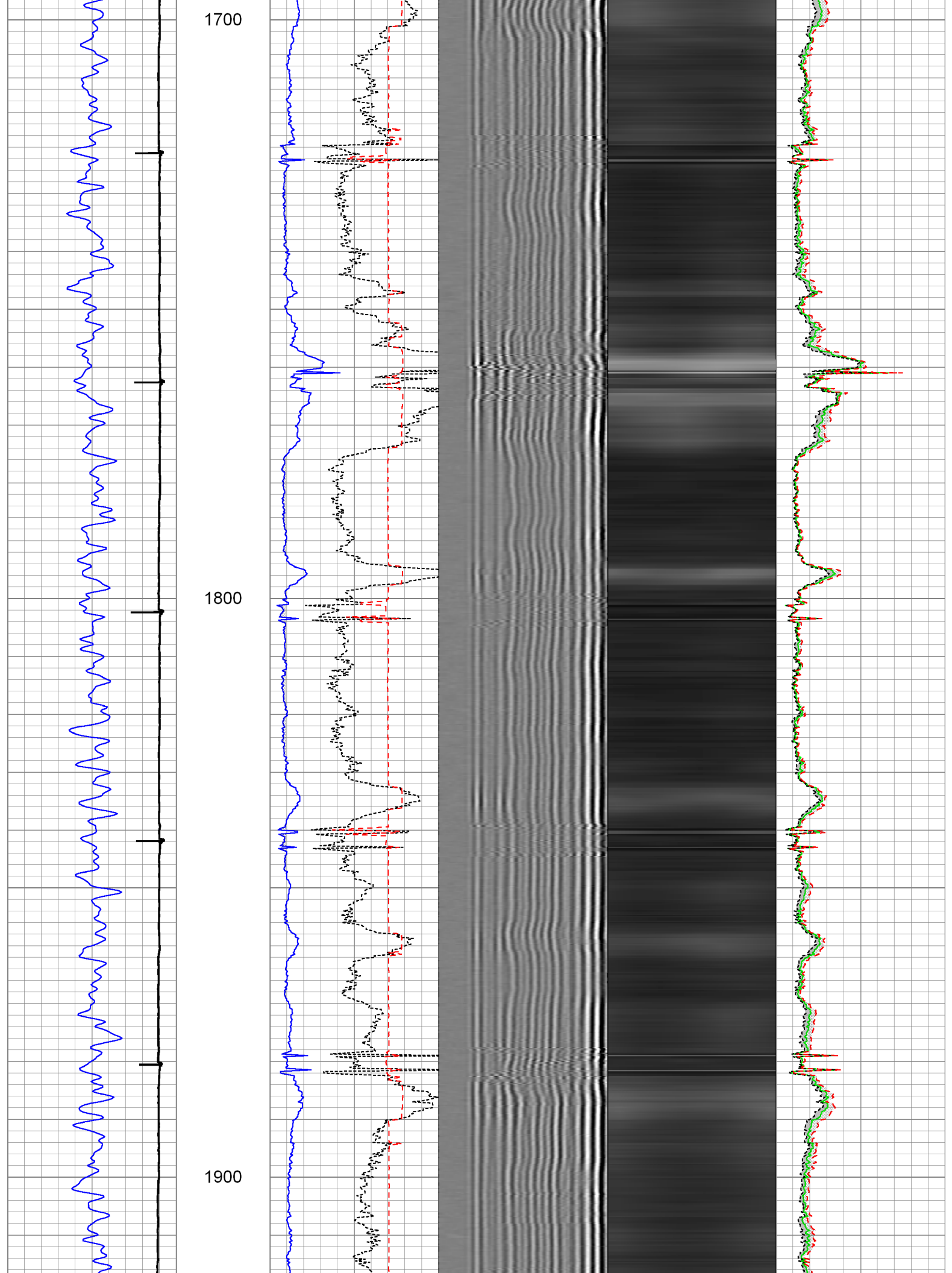


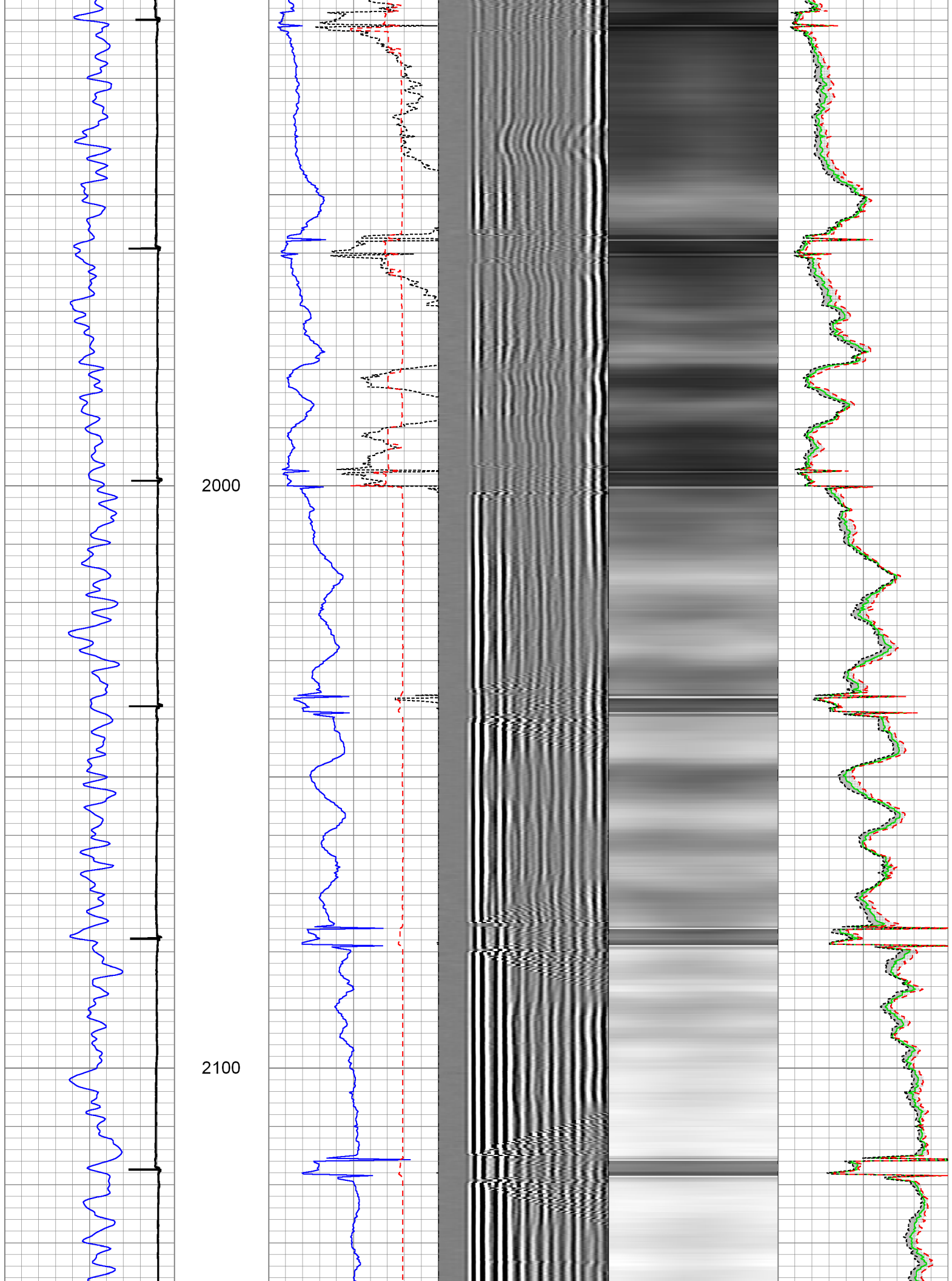


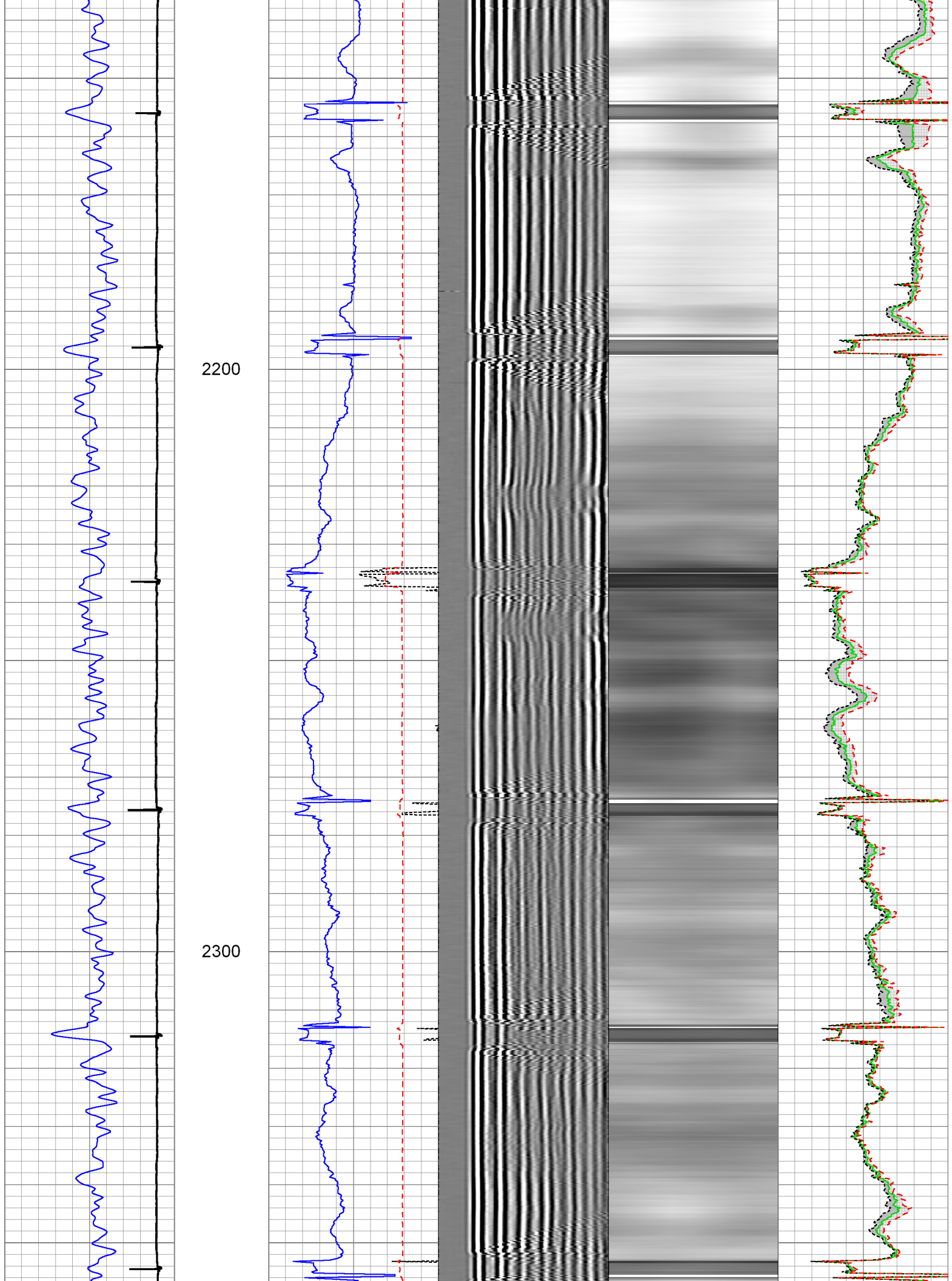






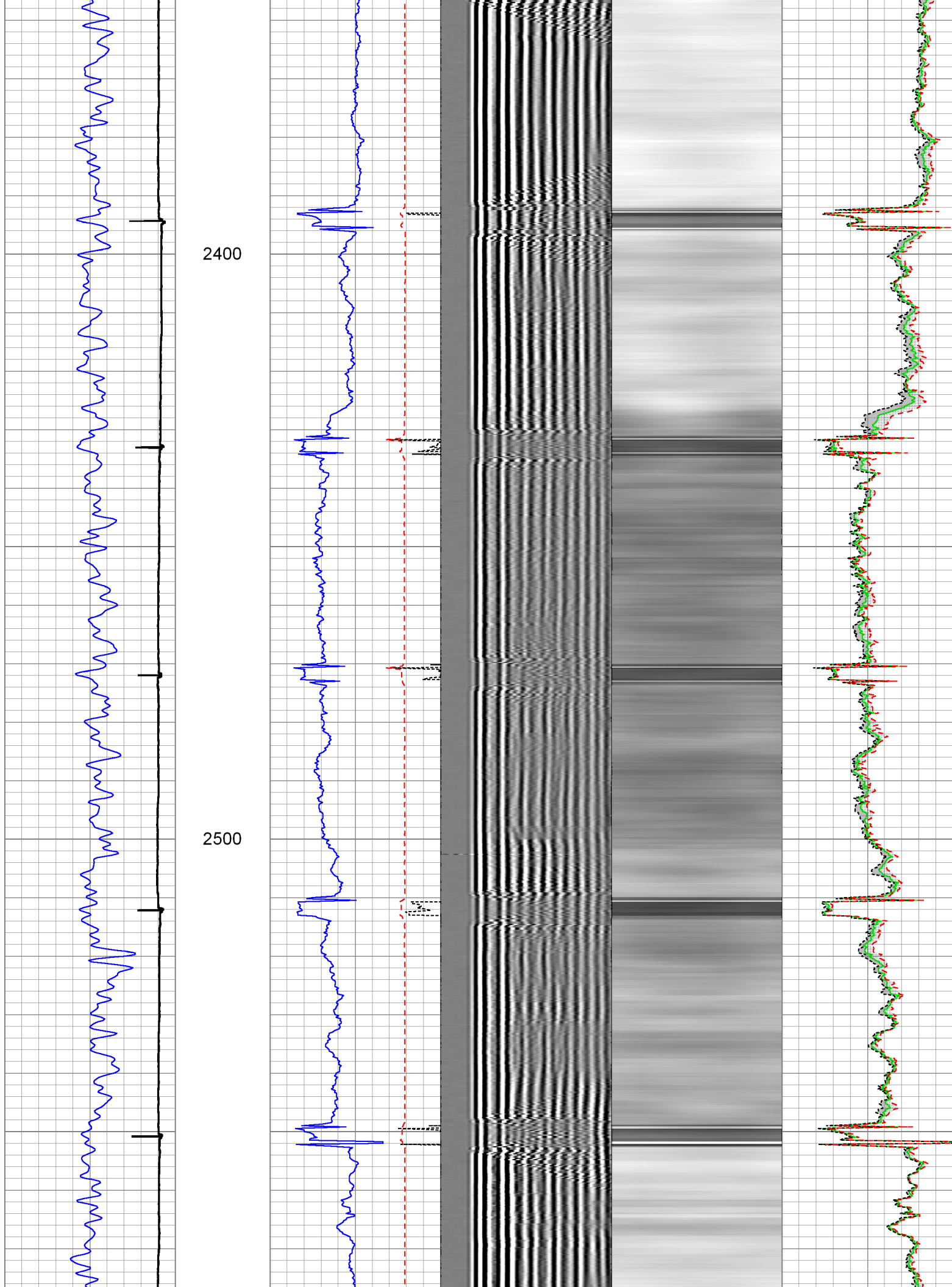






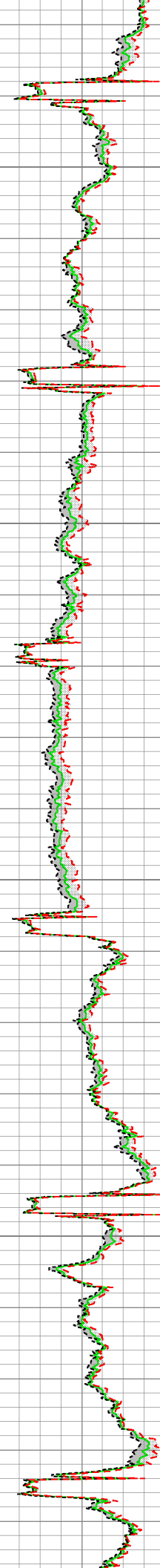
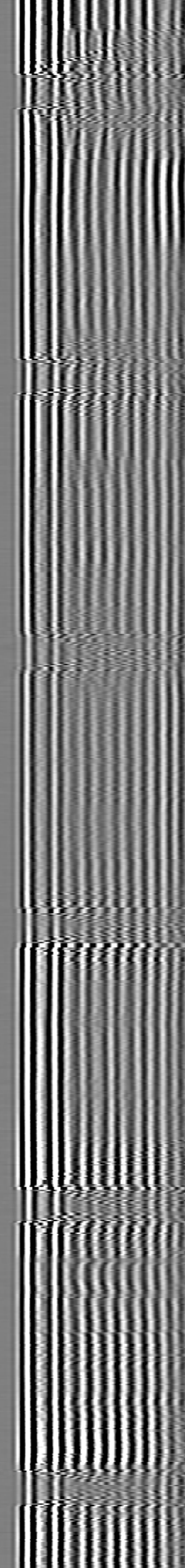
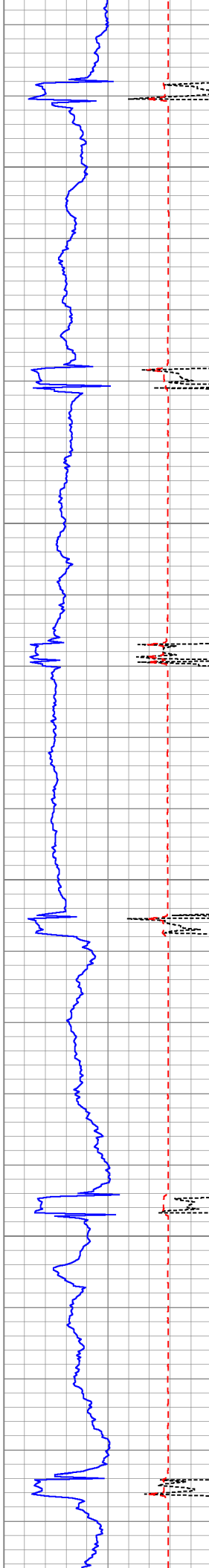
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2500



2600

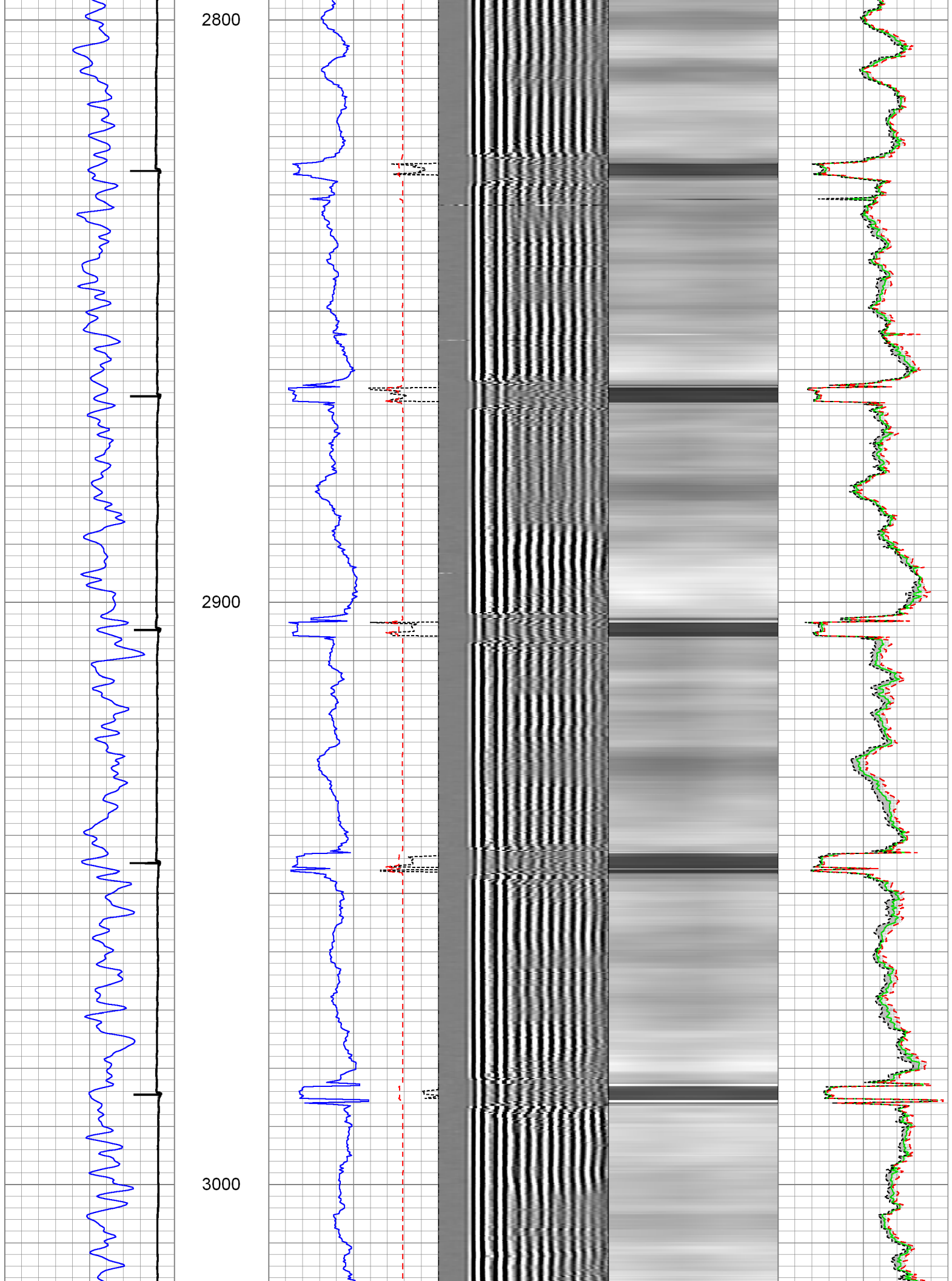
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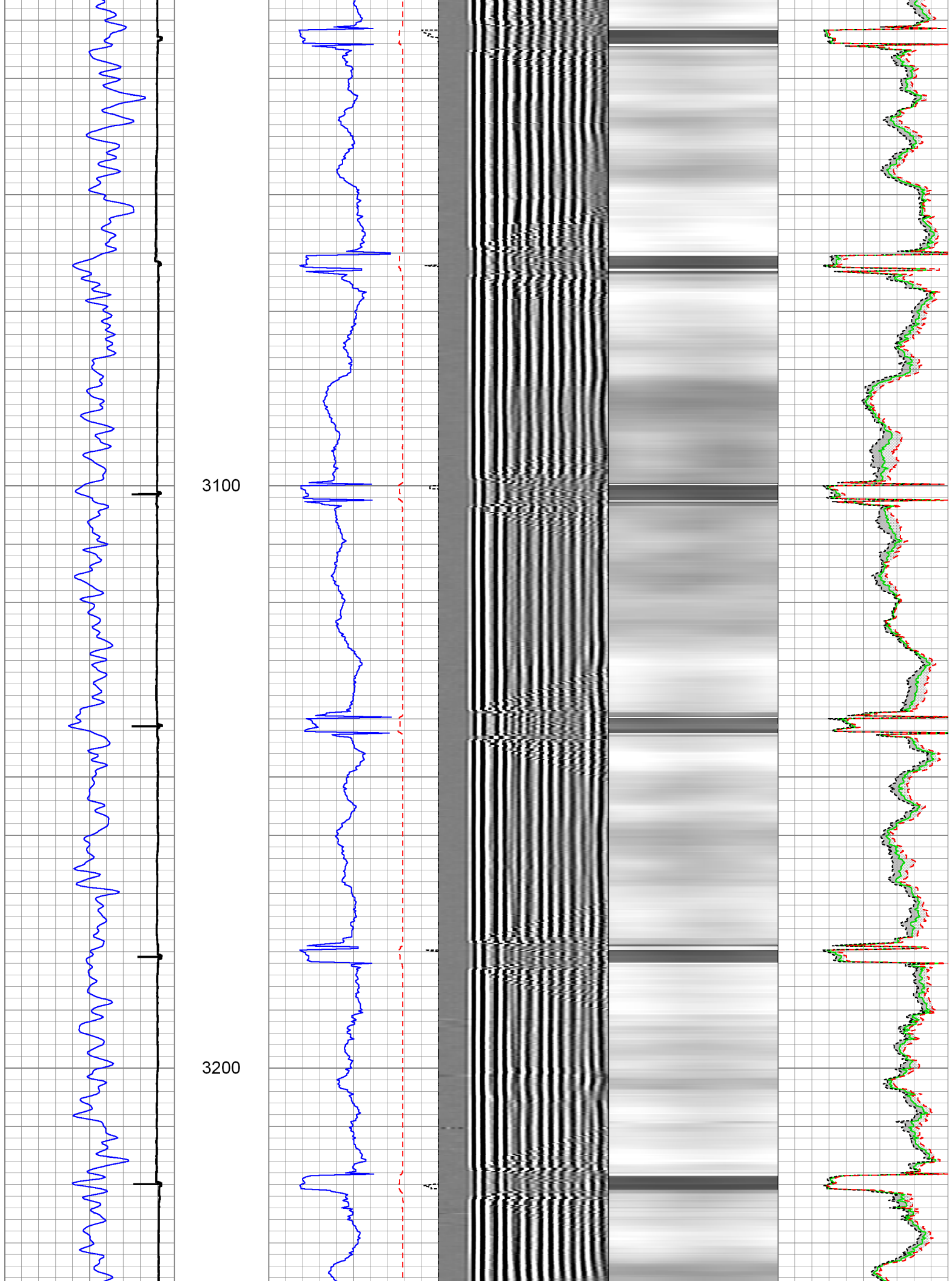


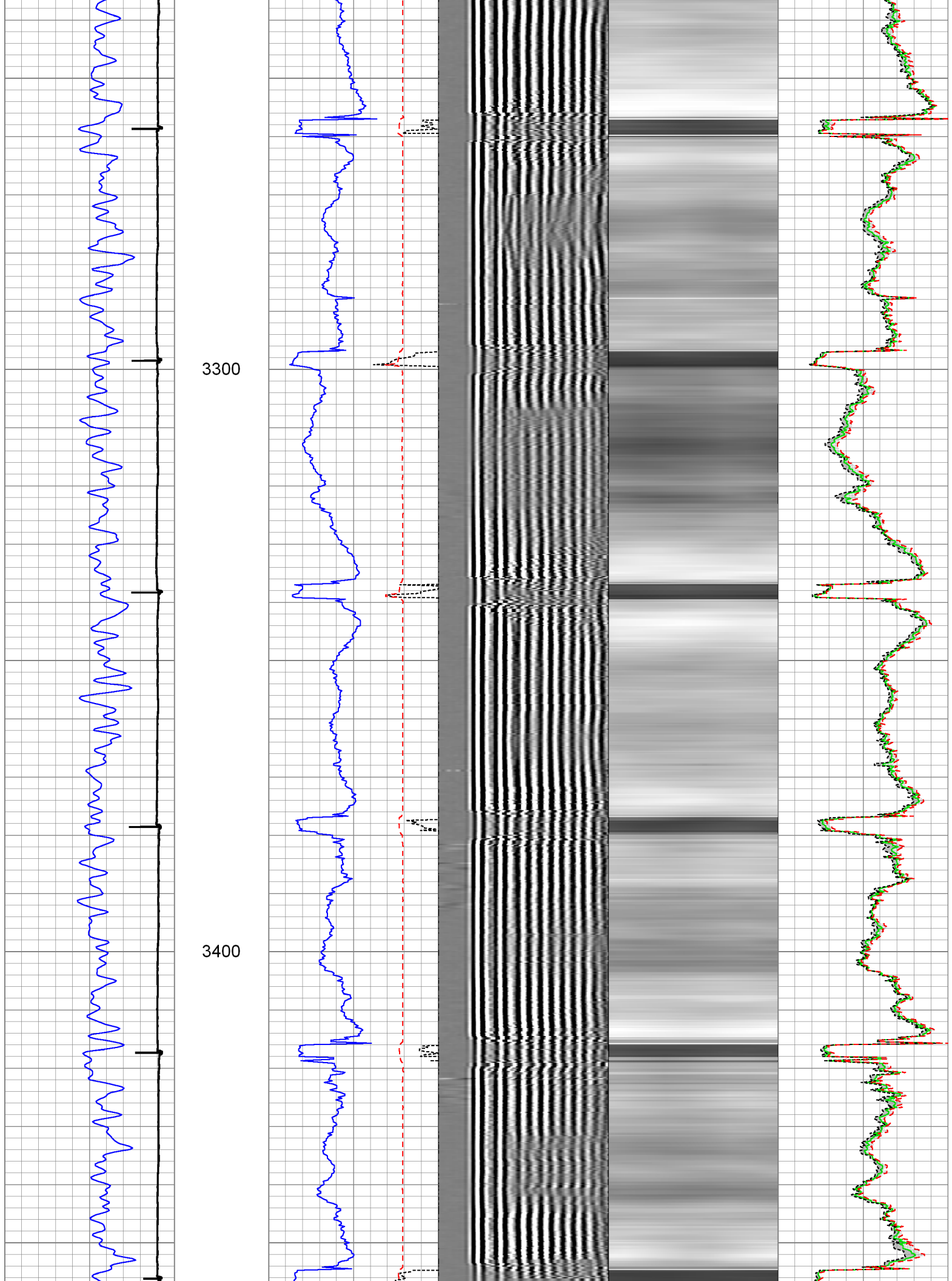
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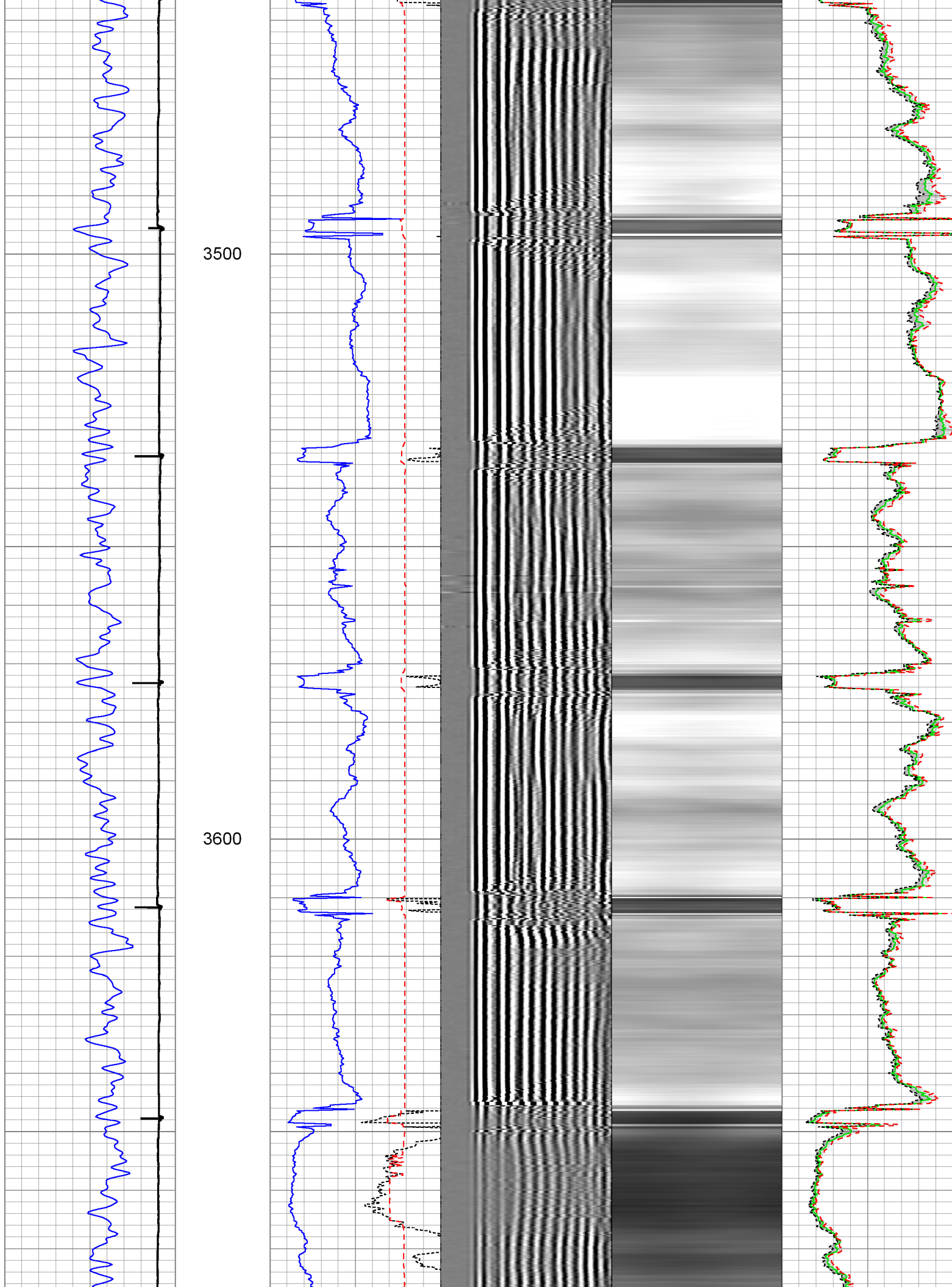






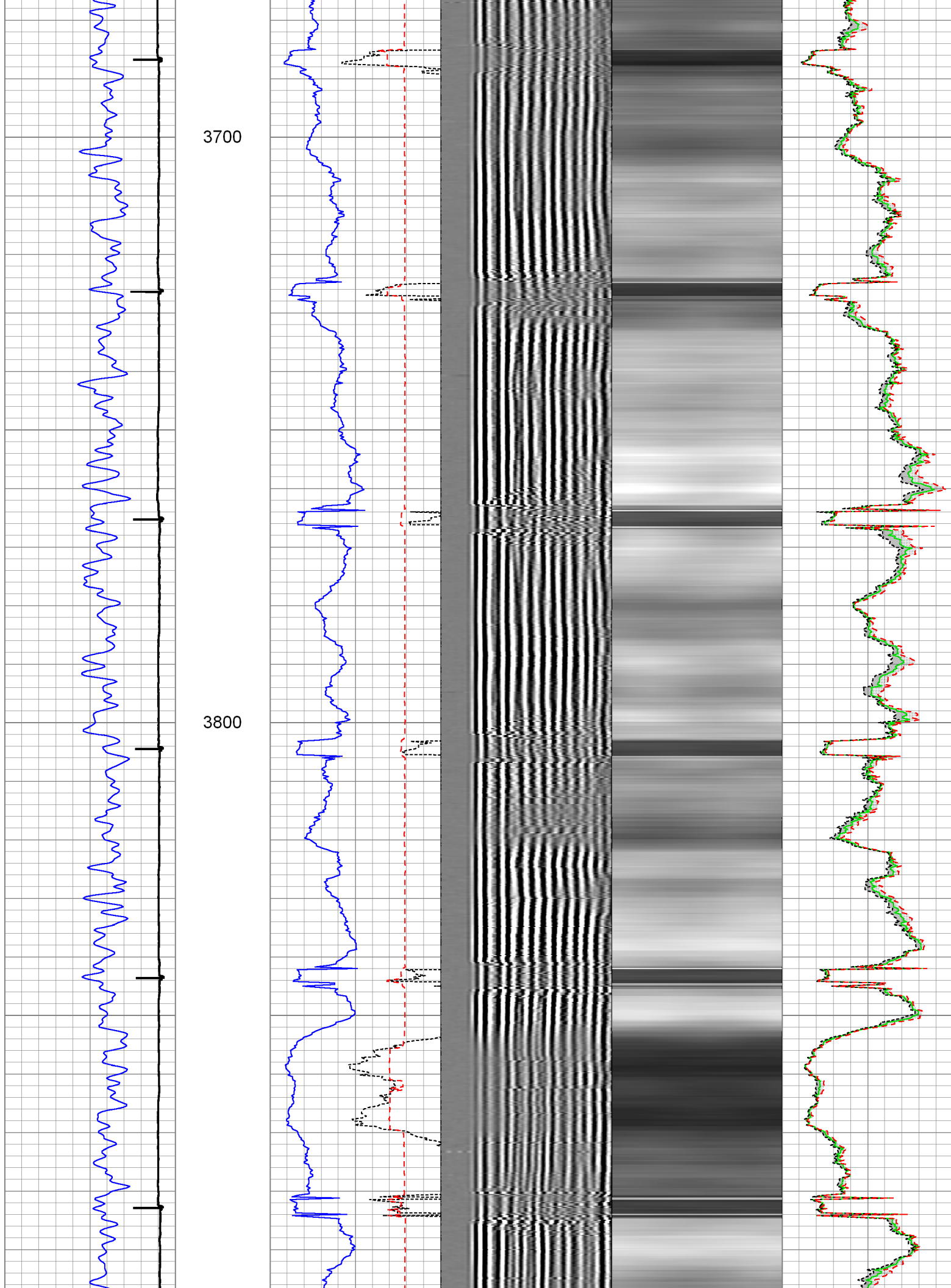
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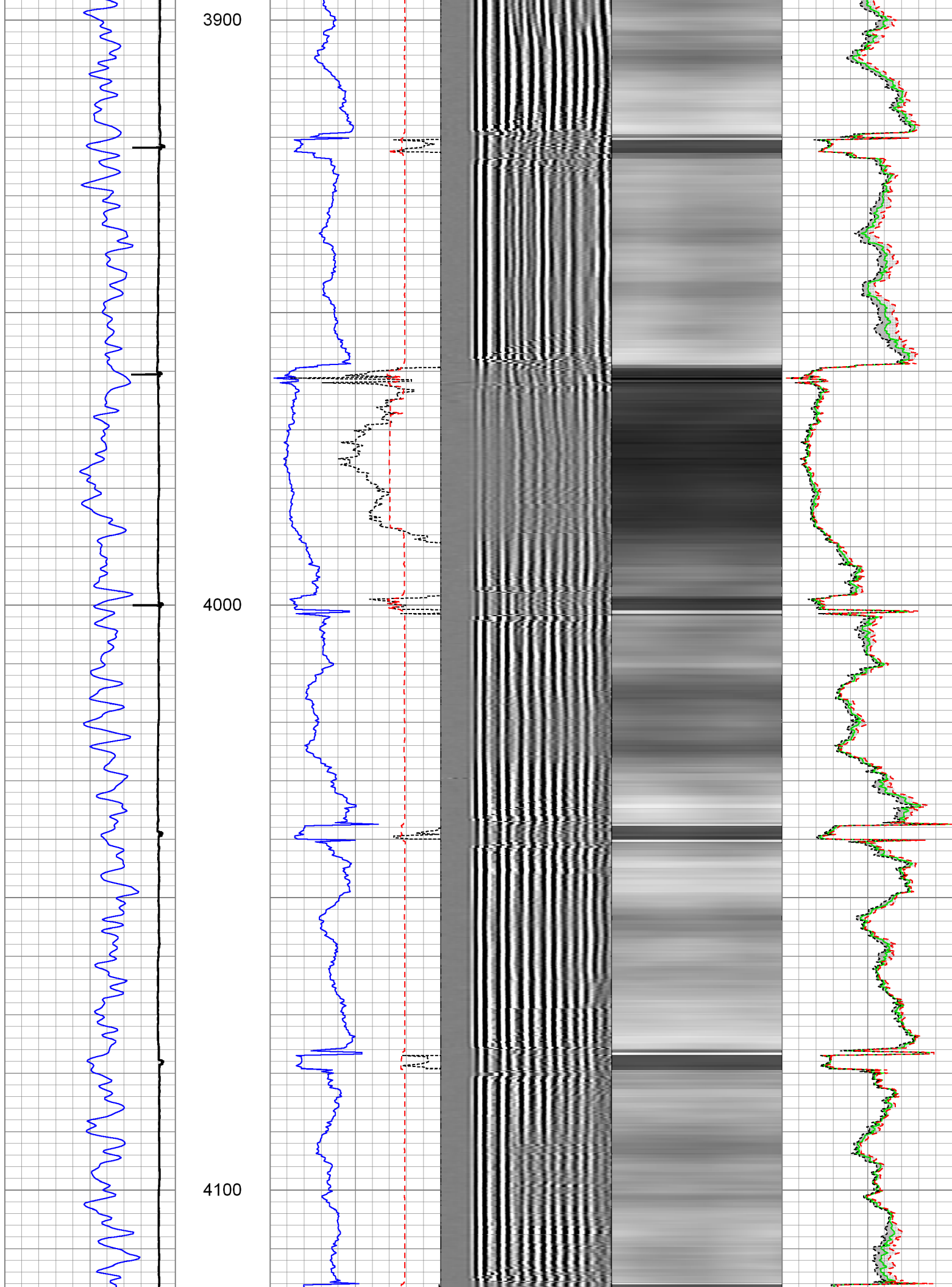
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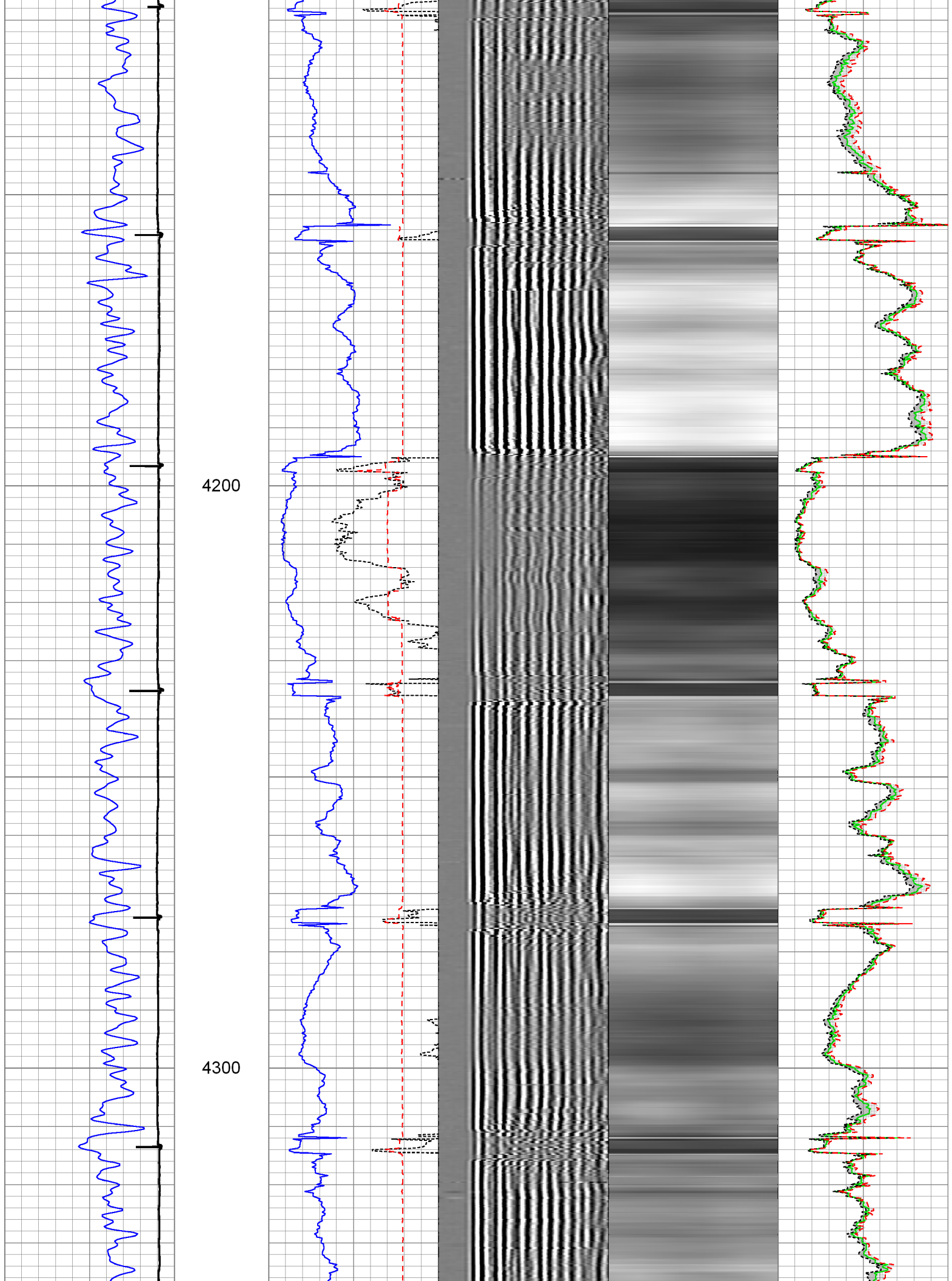


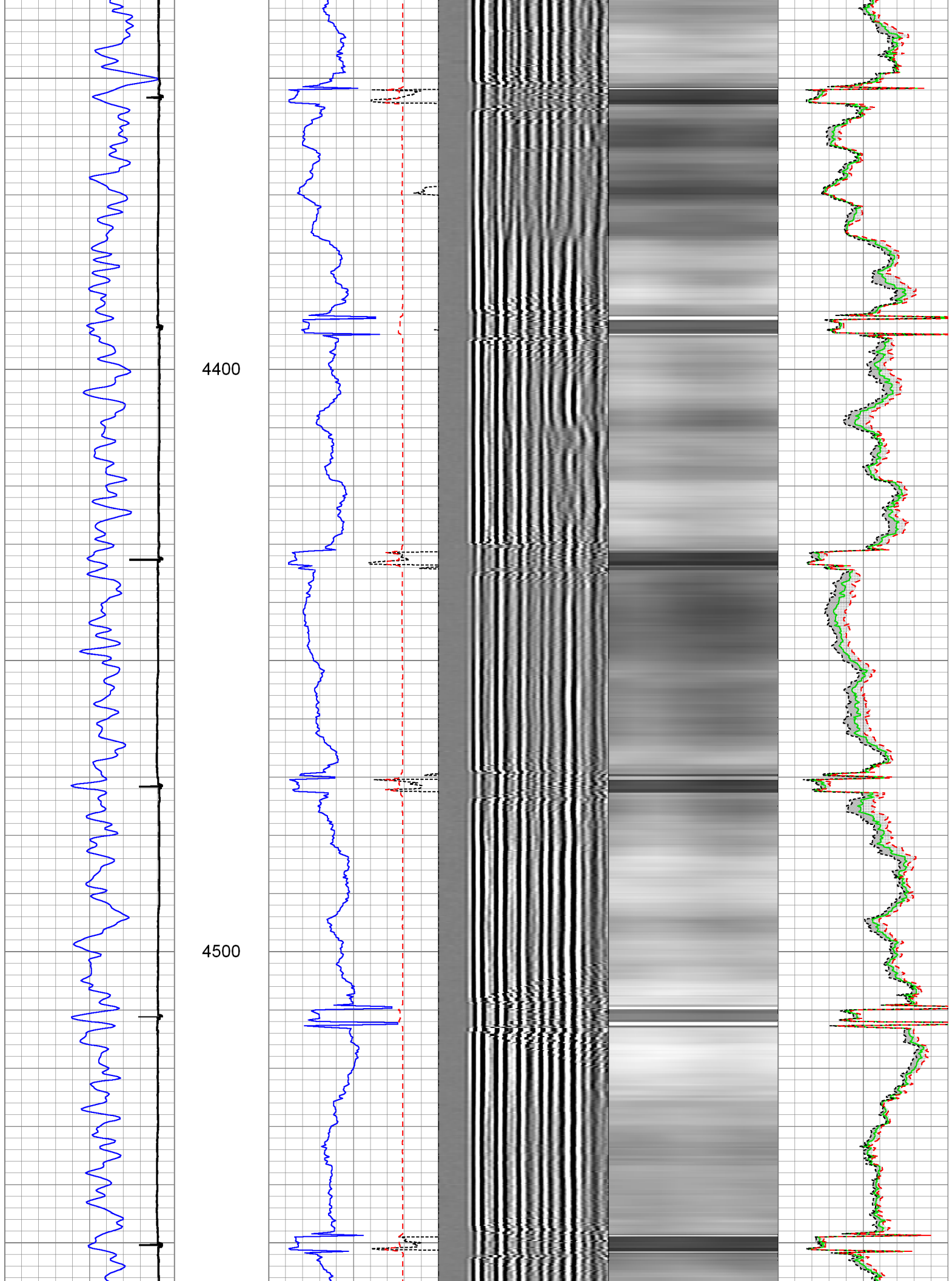
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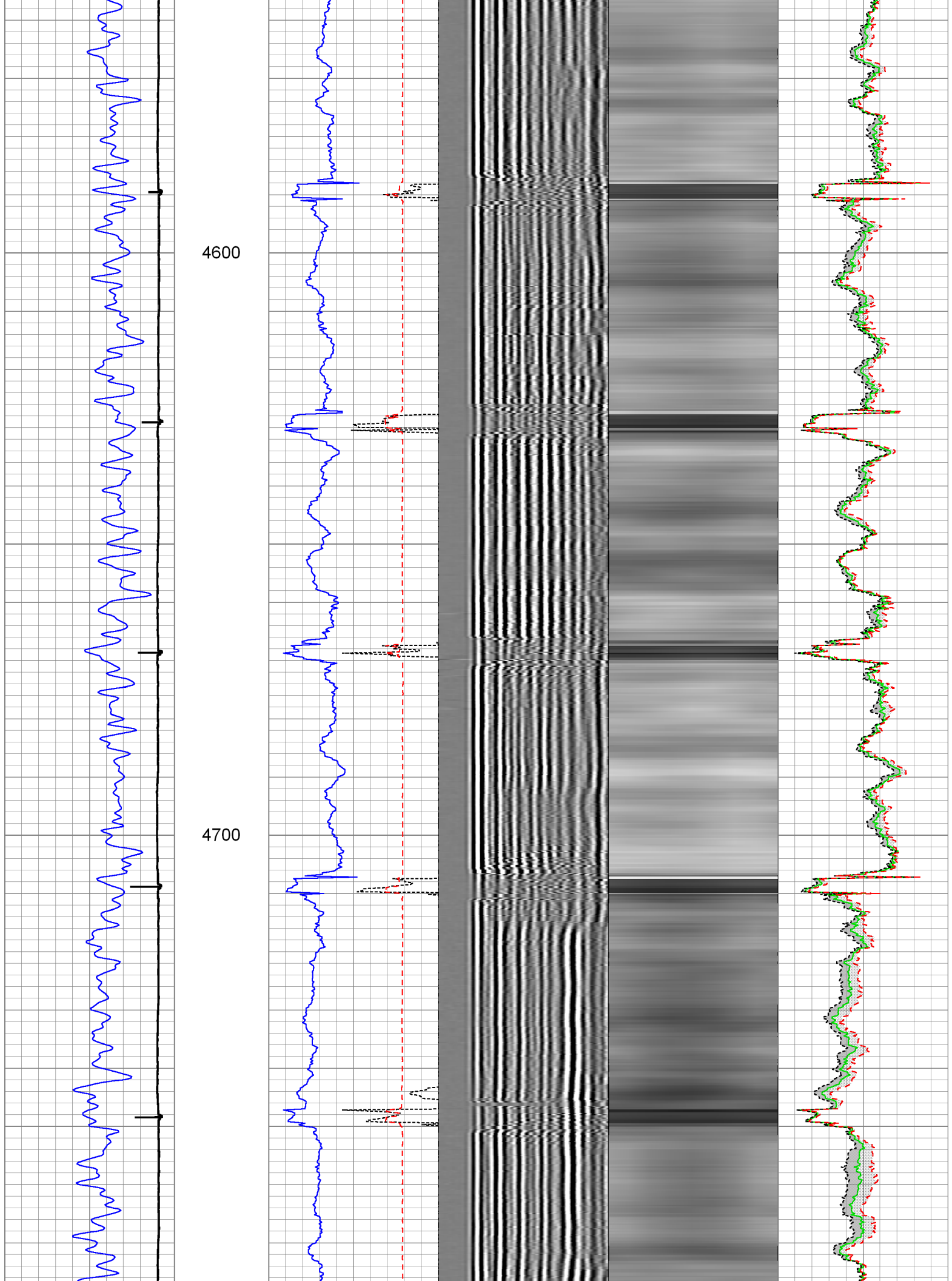
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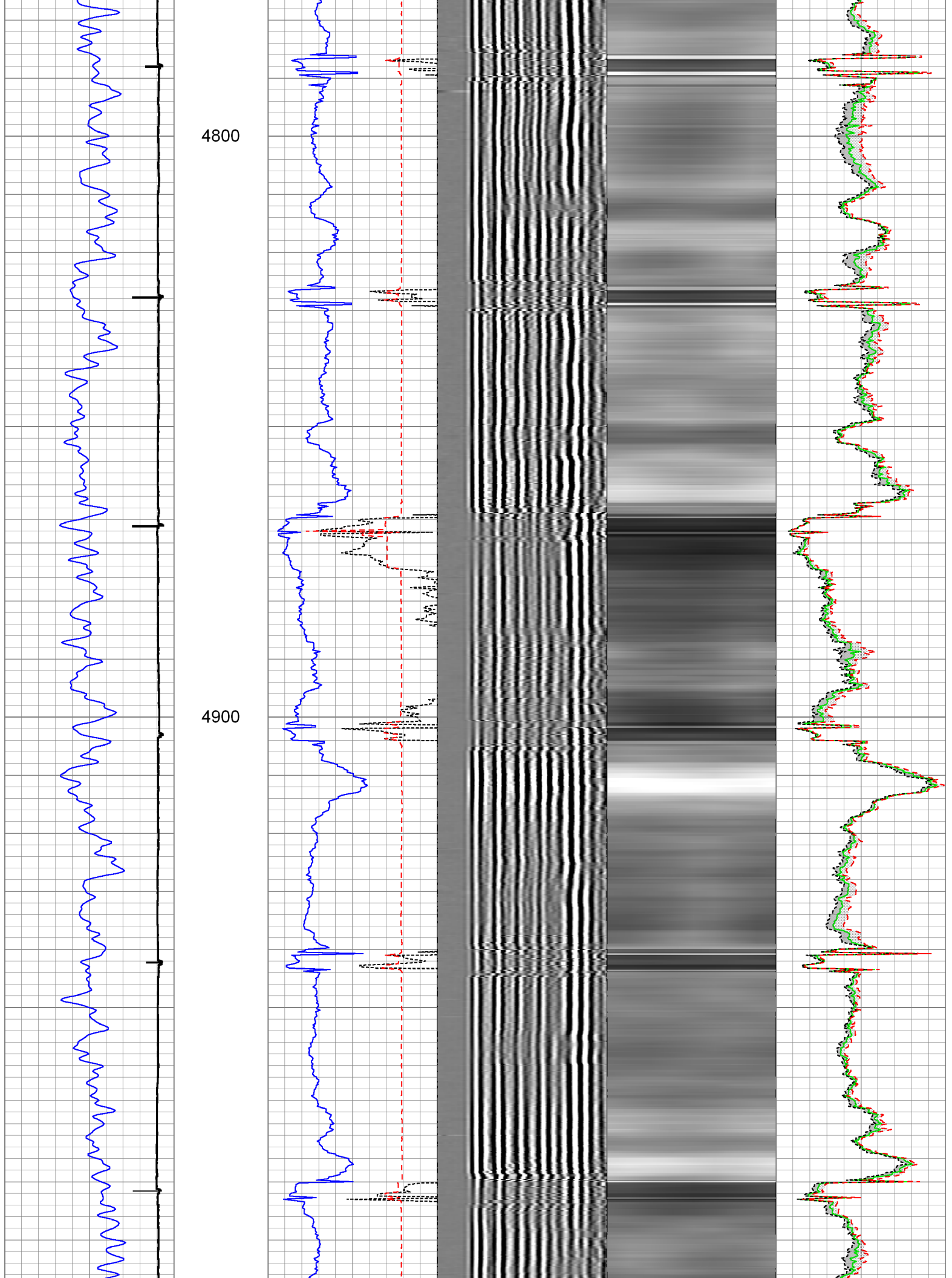
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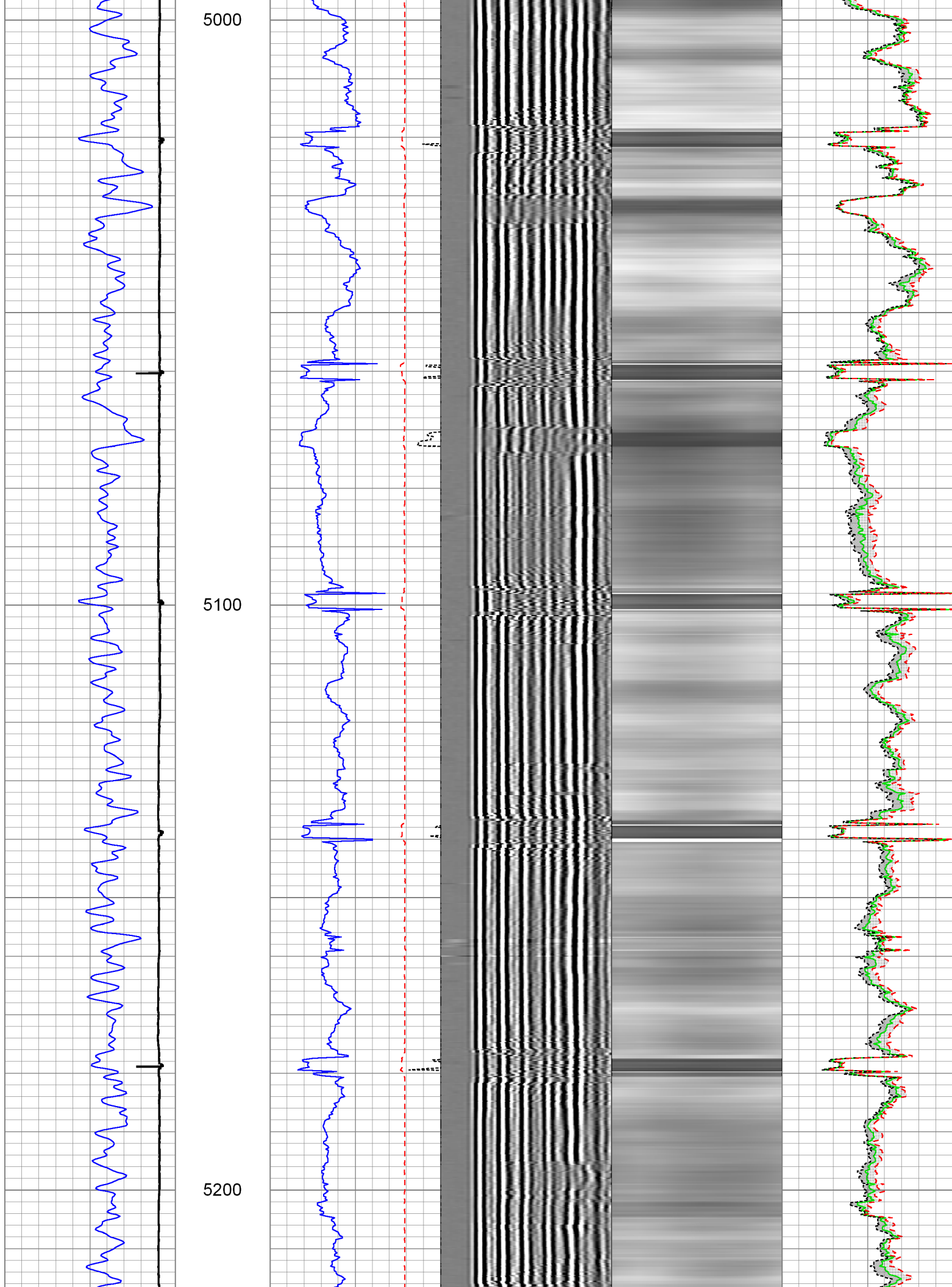




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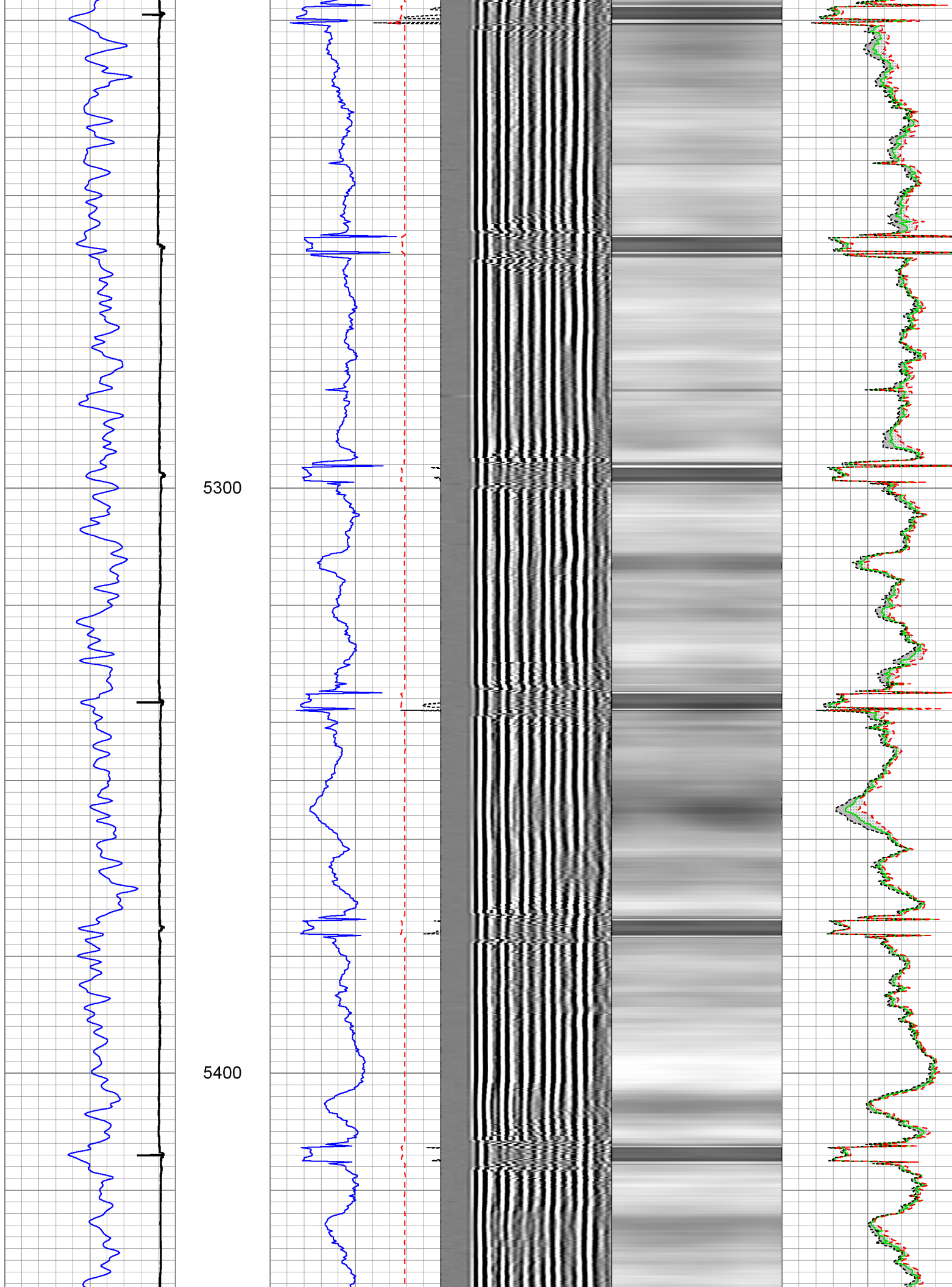
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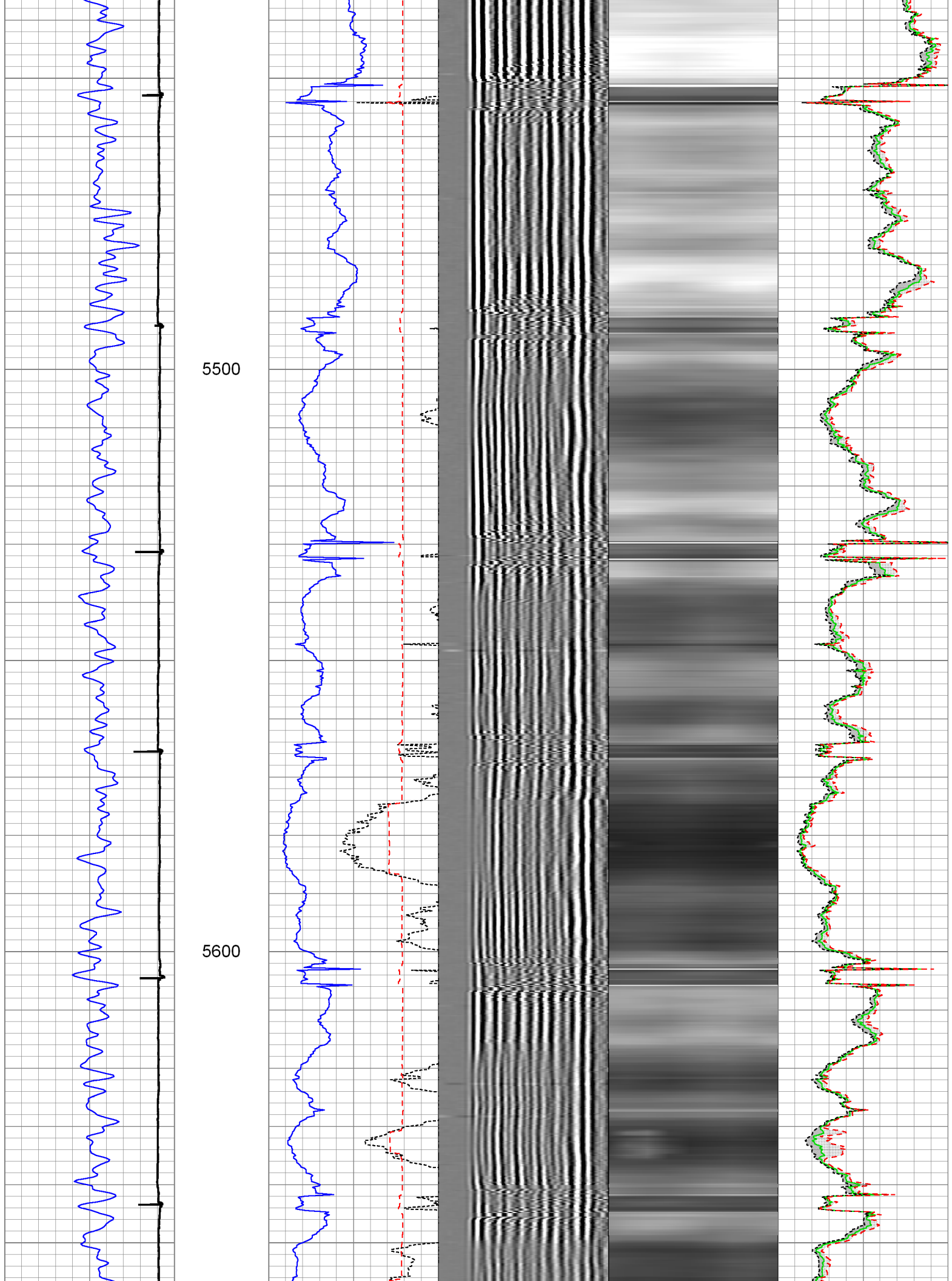
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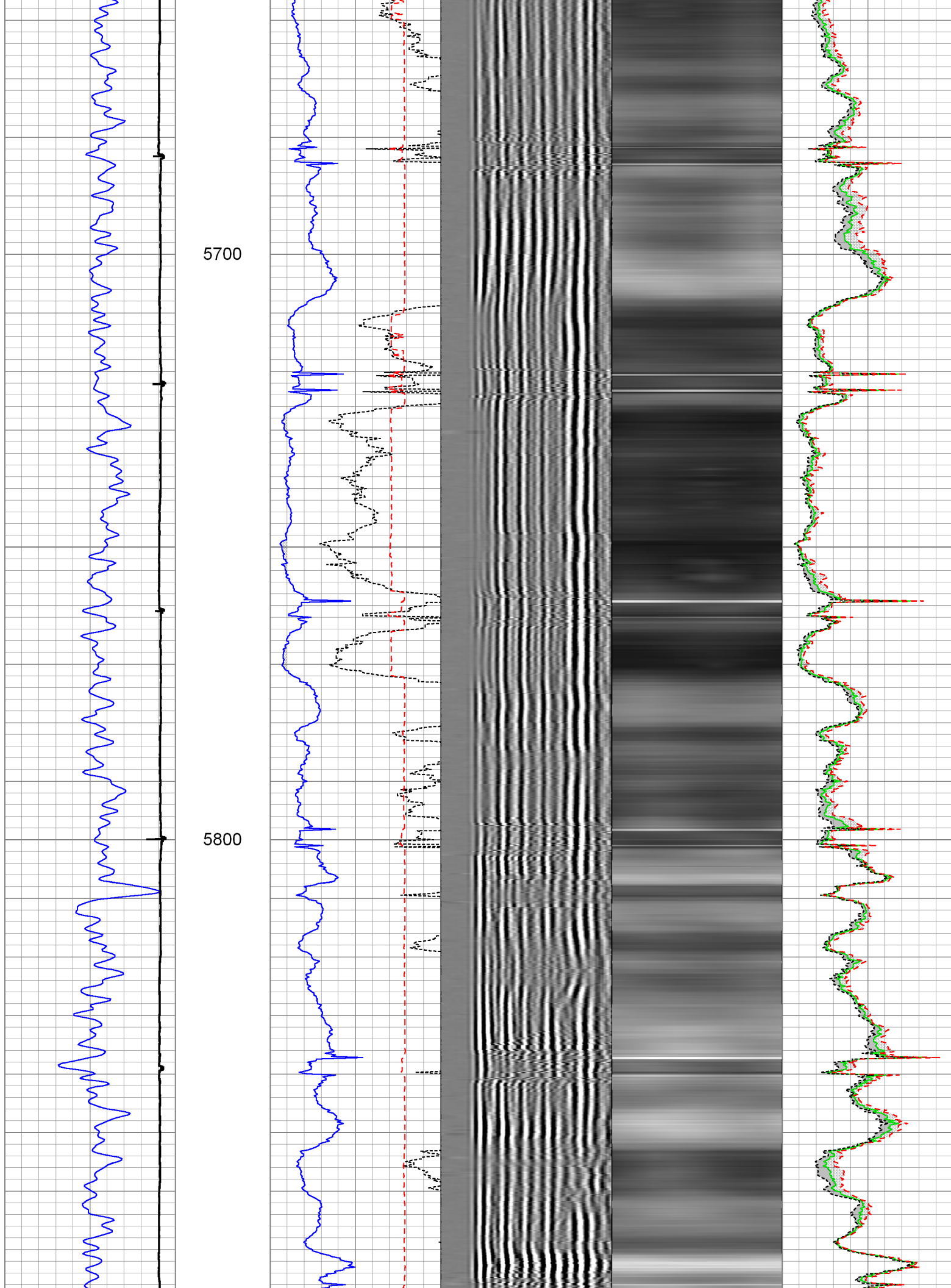
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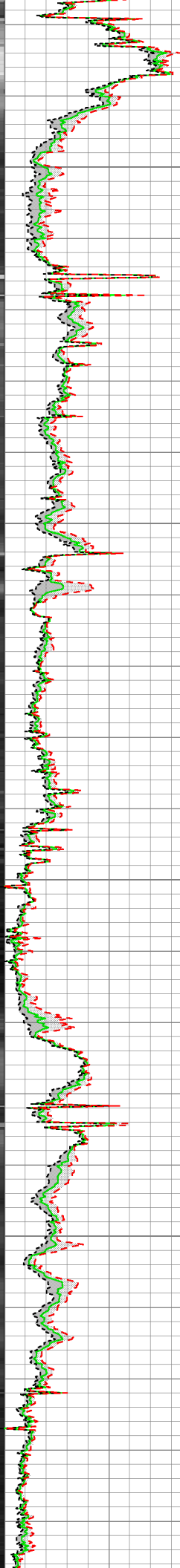
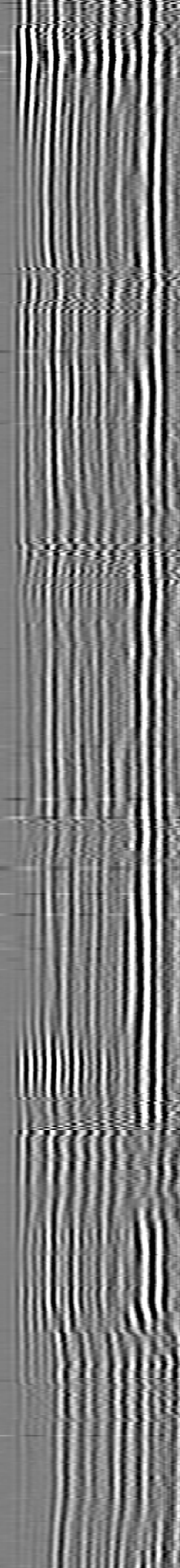
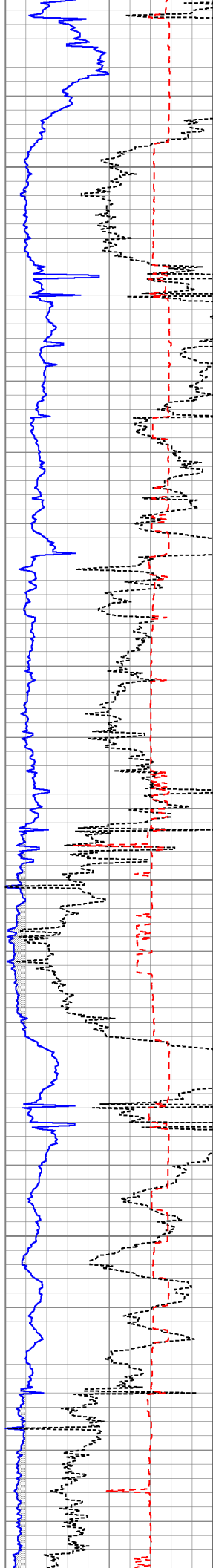
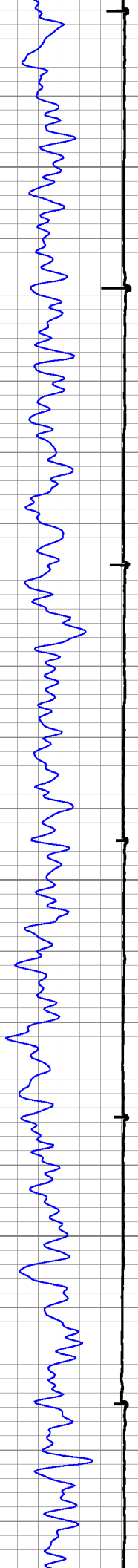
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5800



5900

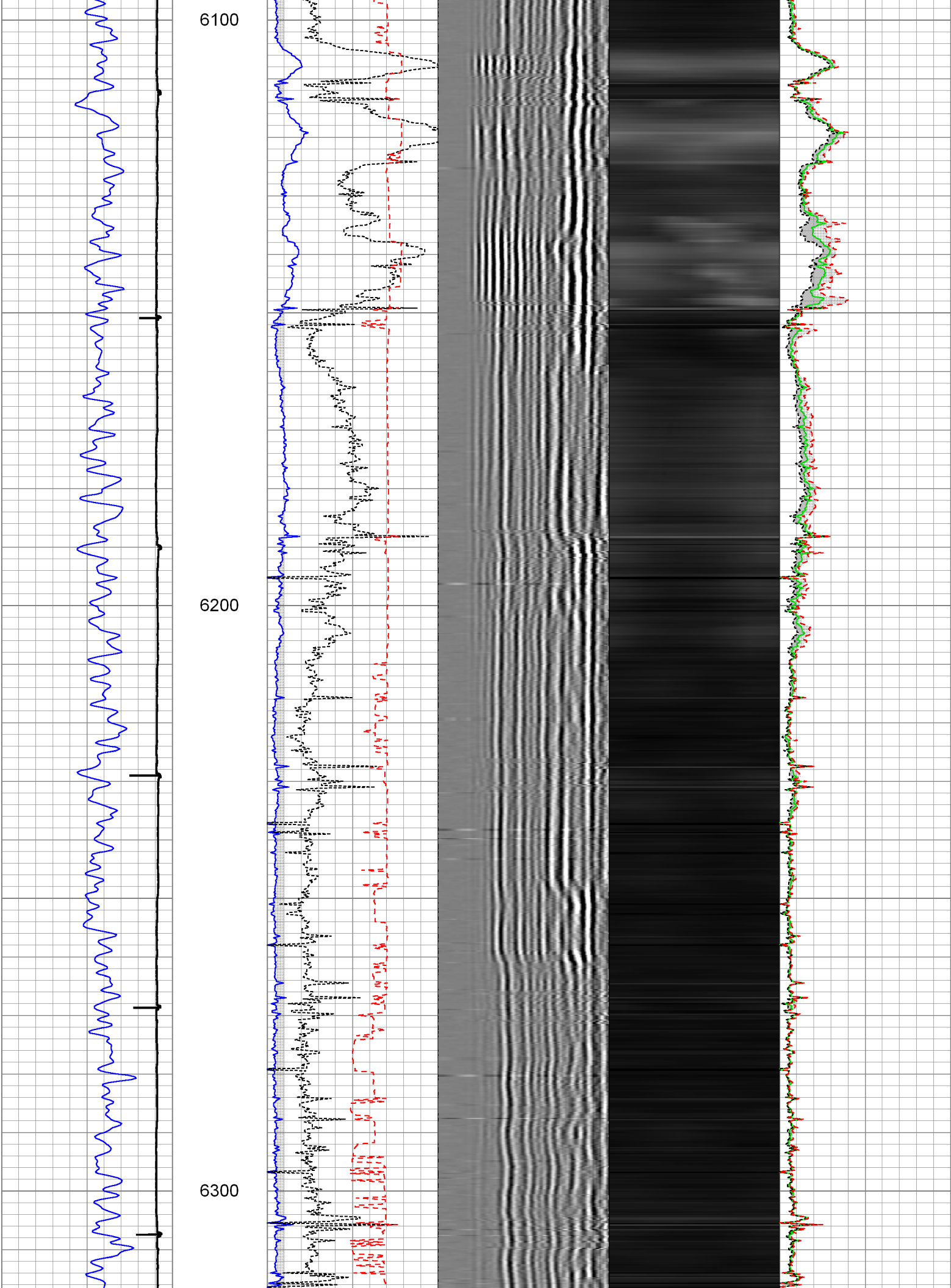
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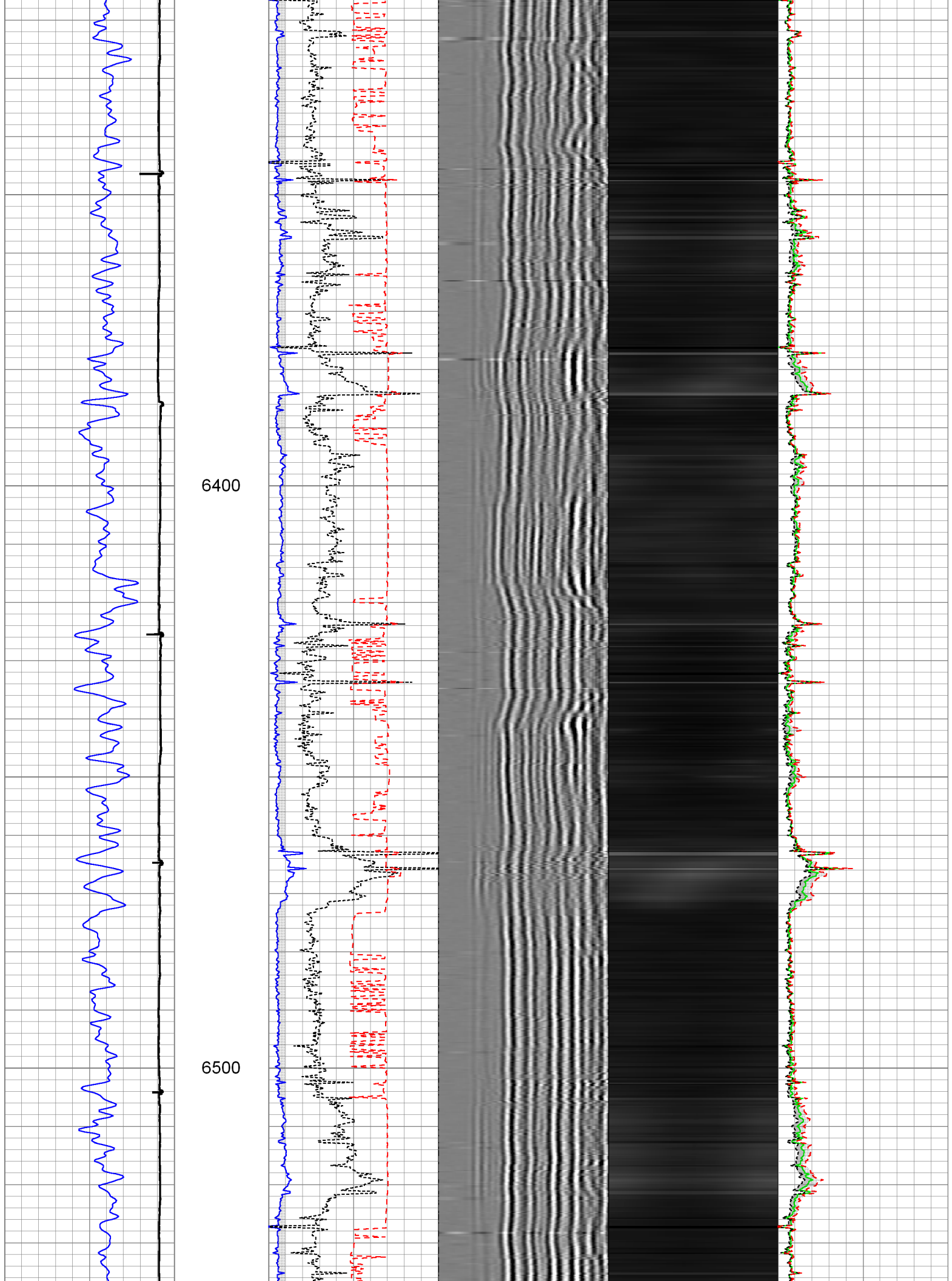


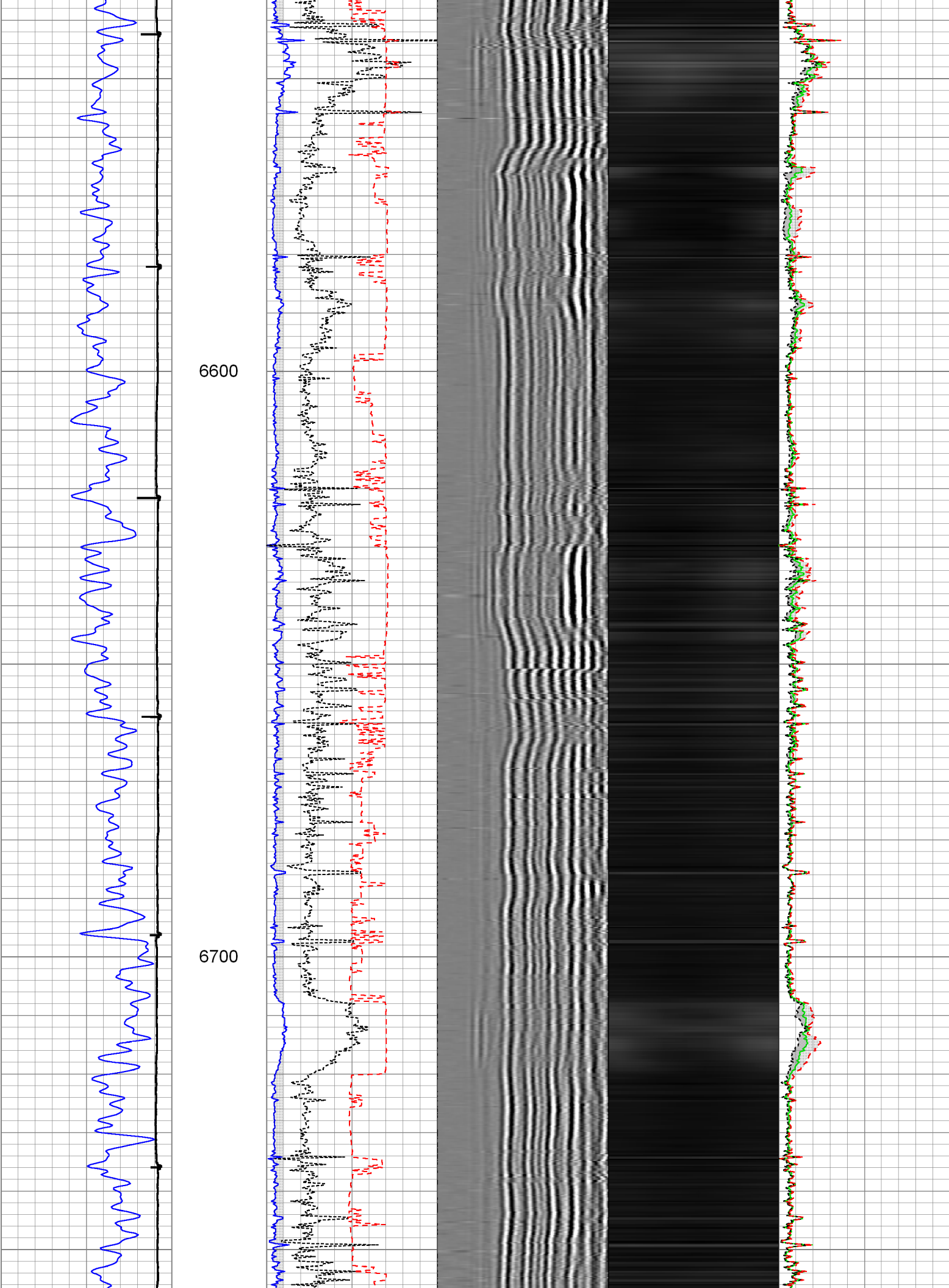
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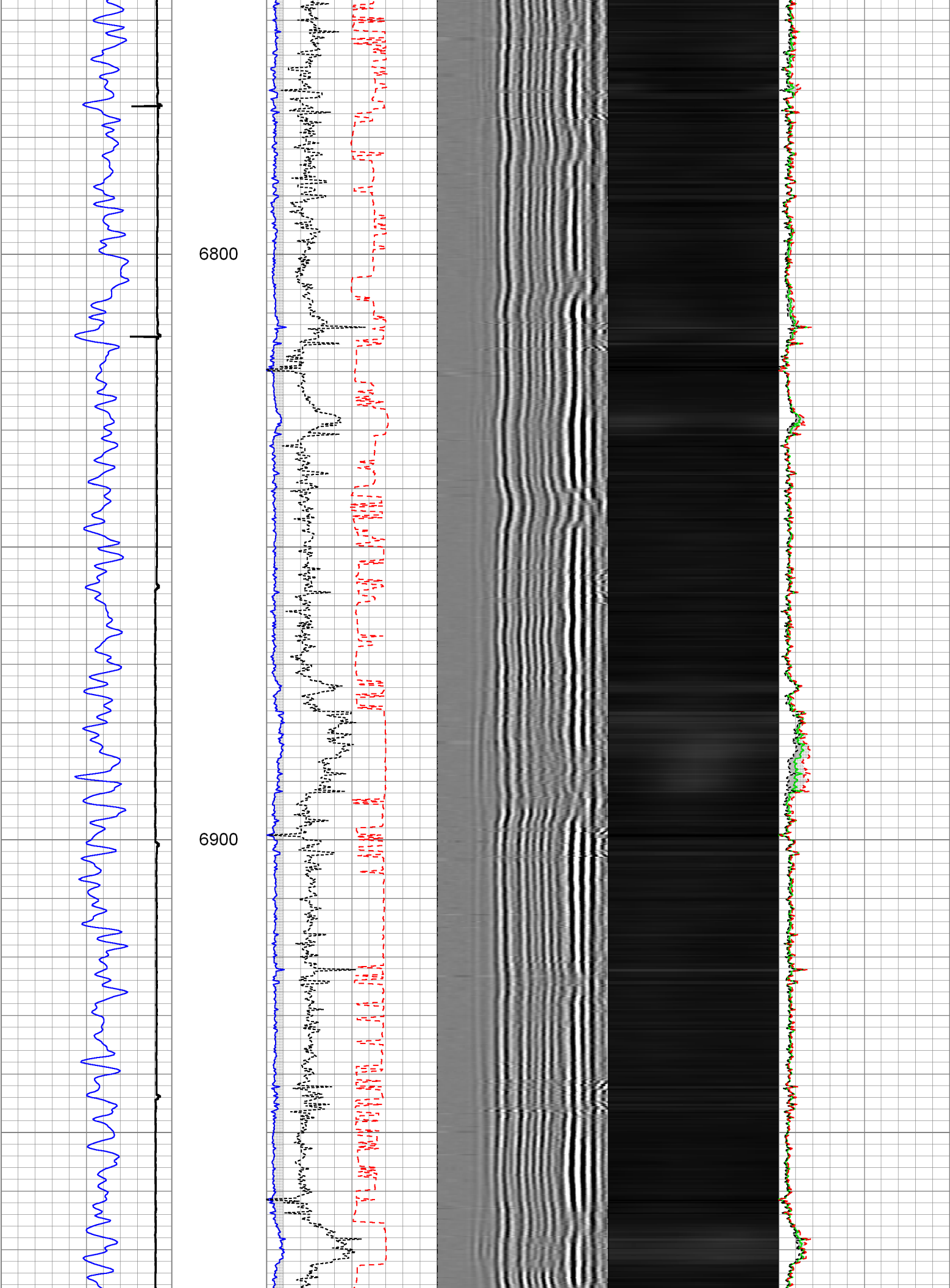
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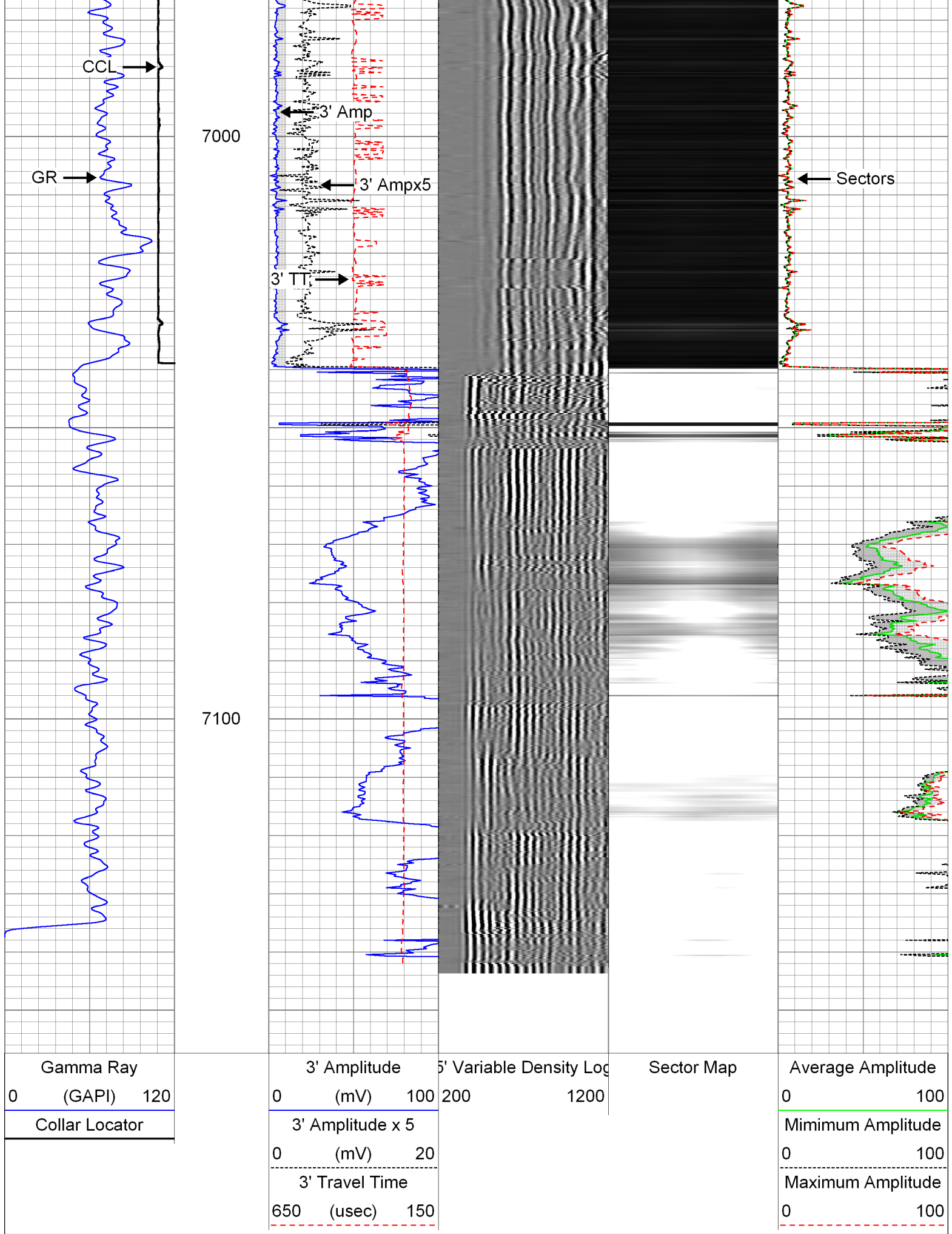
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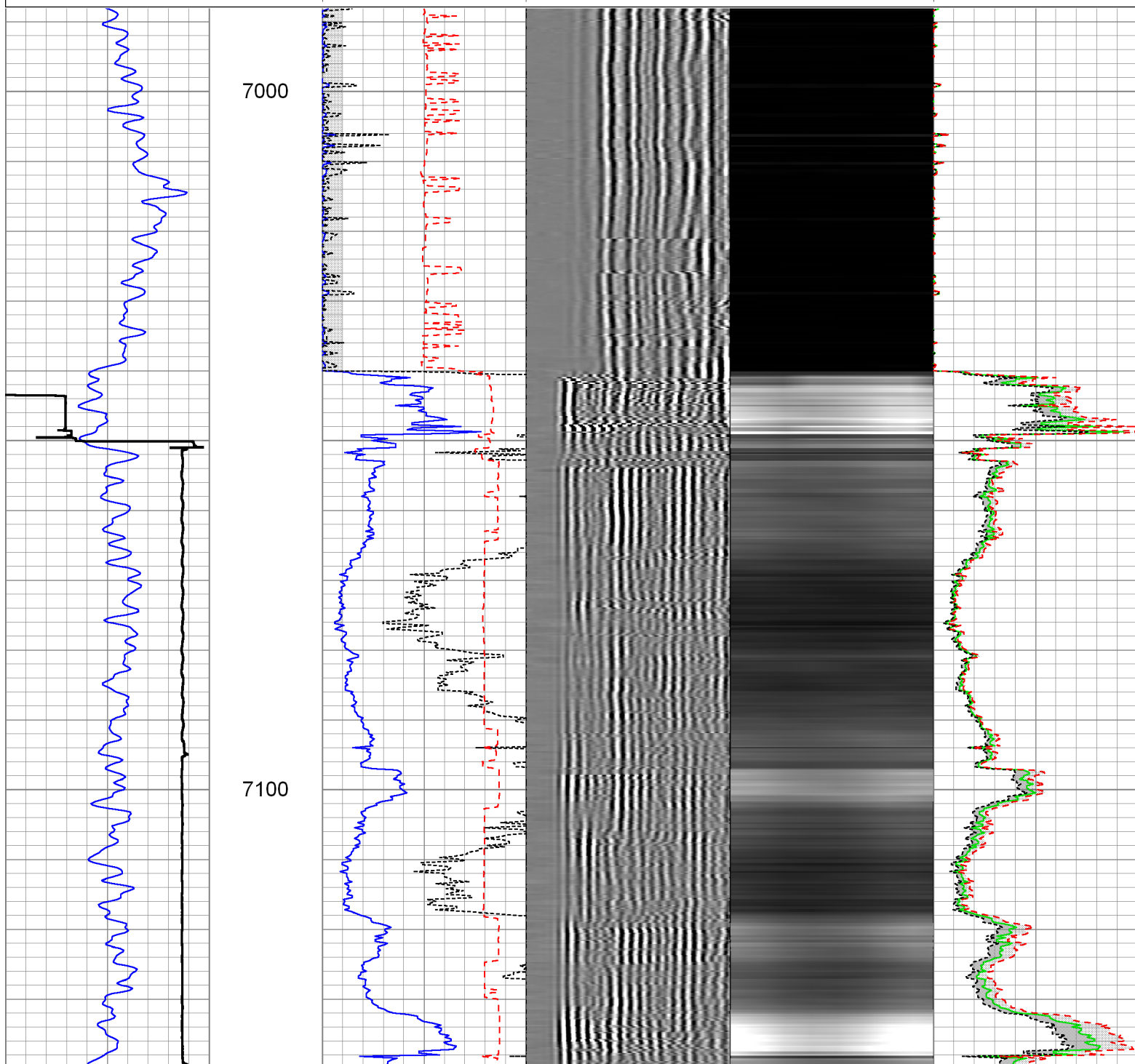


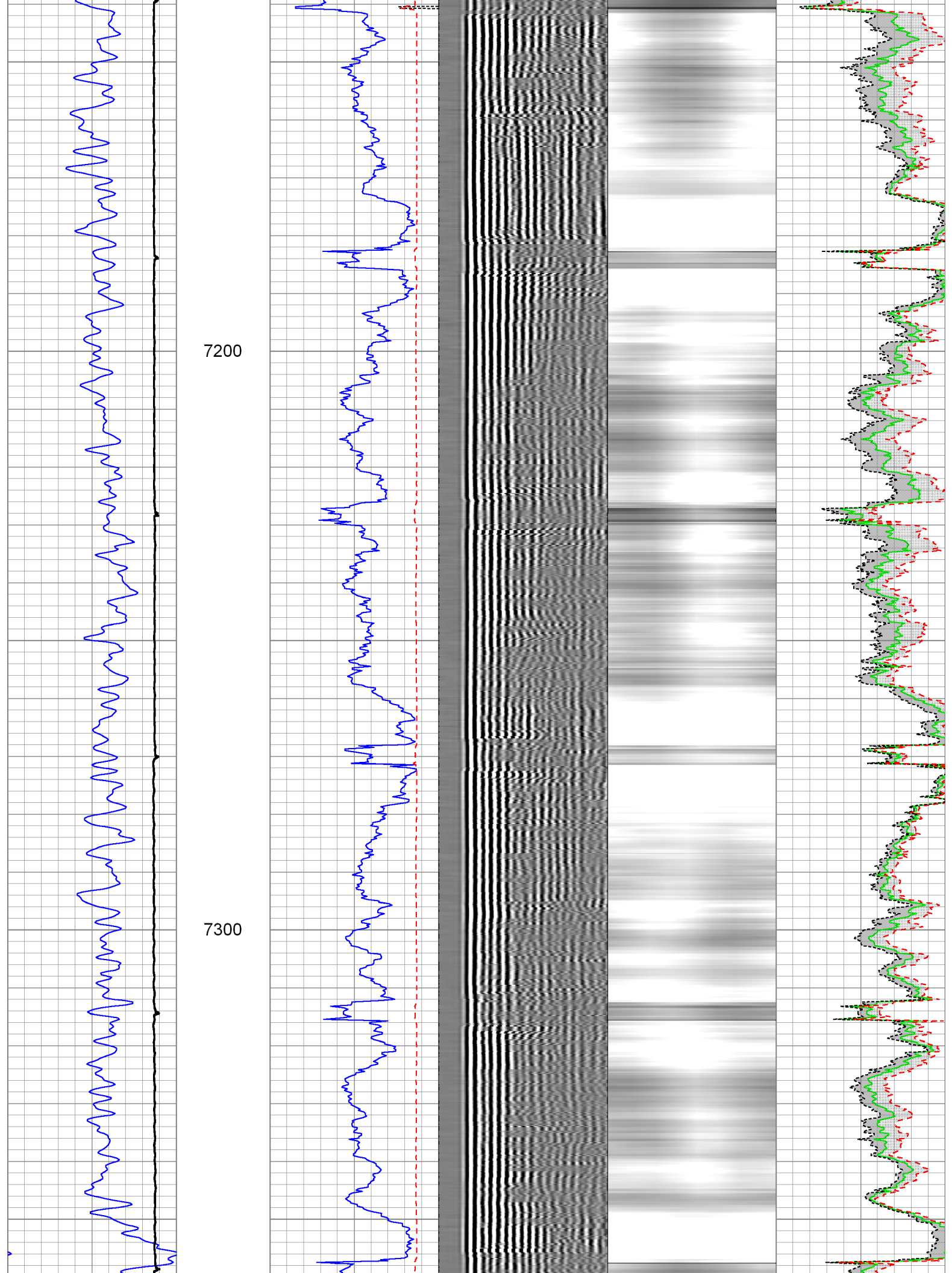


Main Pass: 4.5" Liner

Database File: 0512338341_anadarko_grenemyer 35c-3hz_rcbl_cil_02-27-14.db
 Dataset Pathname: lwrmain
 Presentation Format: rbt007
 Dataset Creation: Thu Feb 27 09:57:27 2014 by Log Sondex V7.03
 Charted by: Depth in Feet scaled 1:240

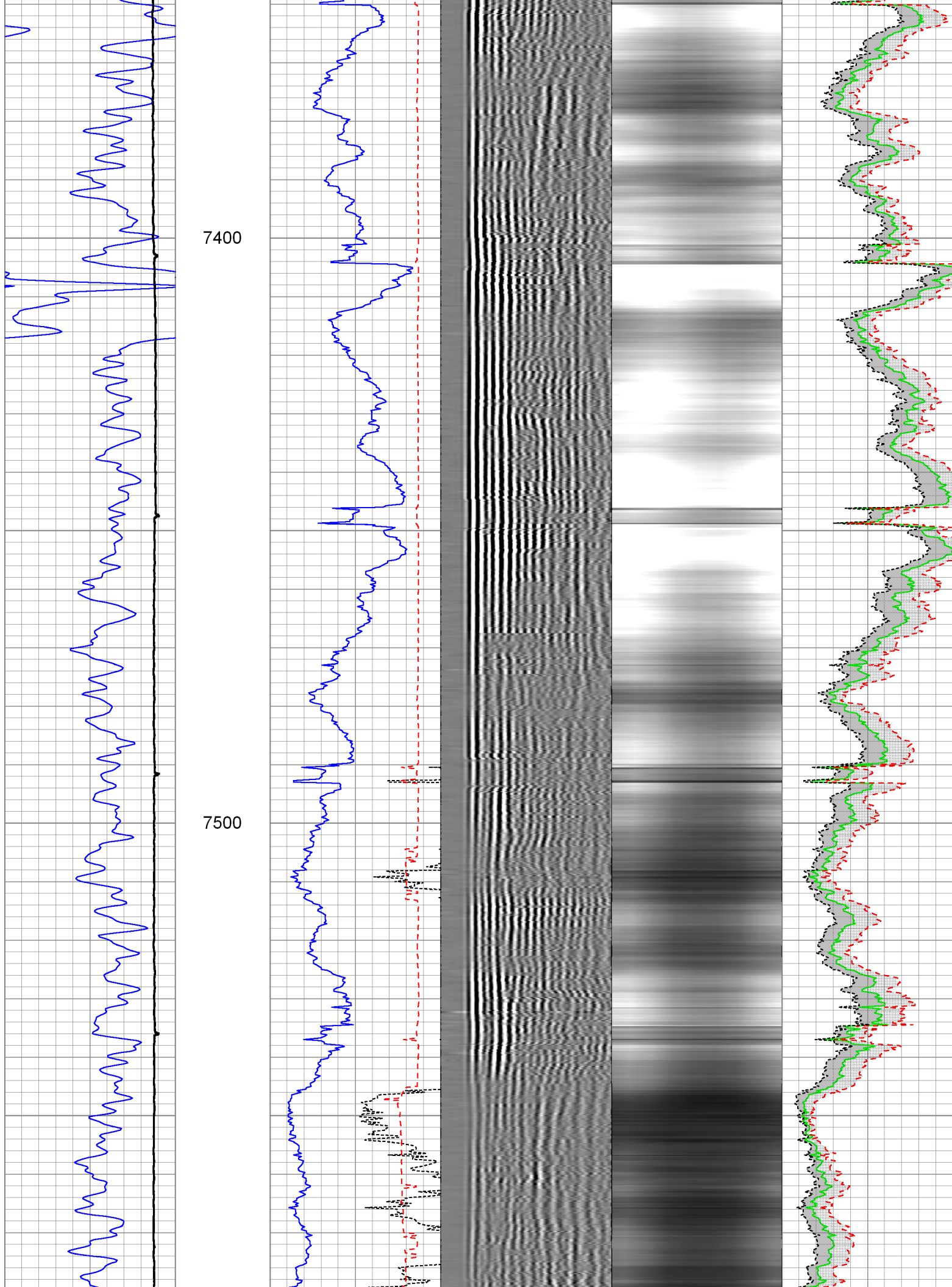
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
	3' Travel Time			Maximum Amplitude
	650 (usec) 150			0 100





7400

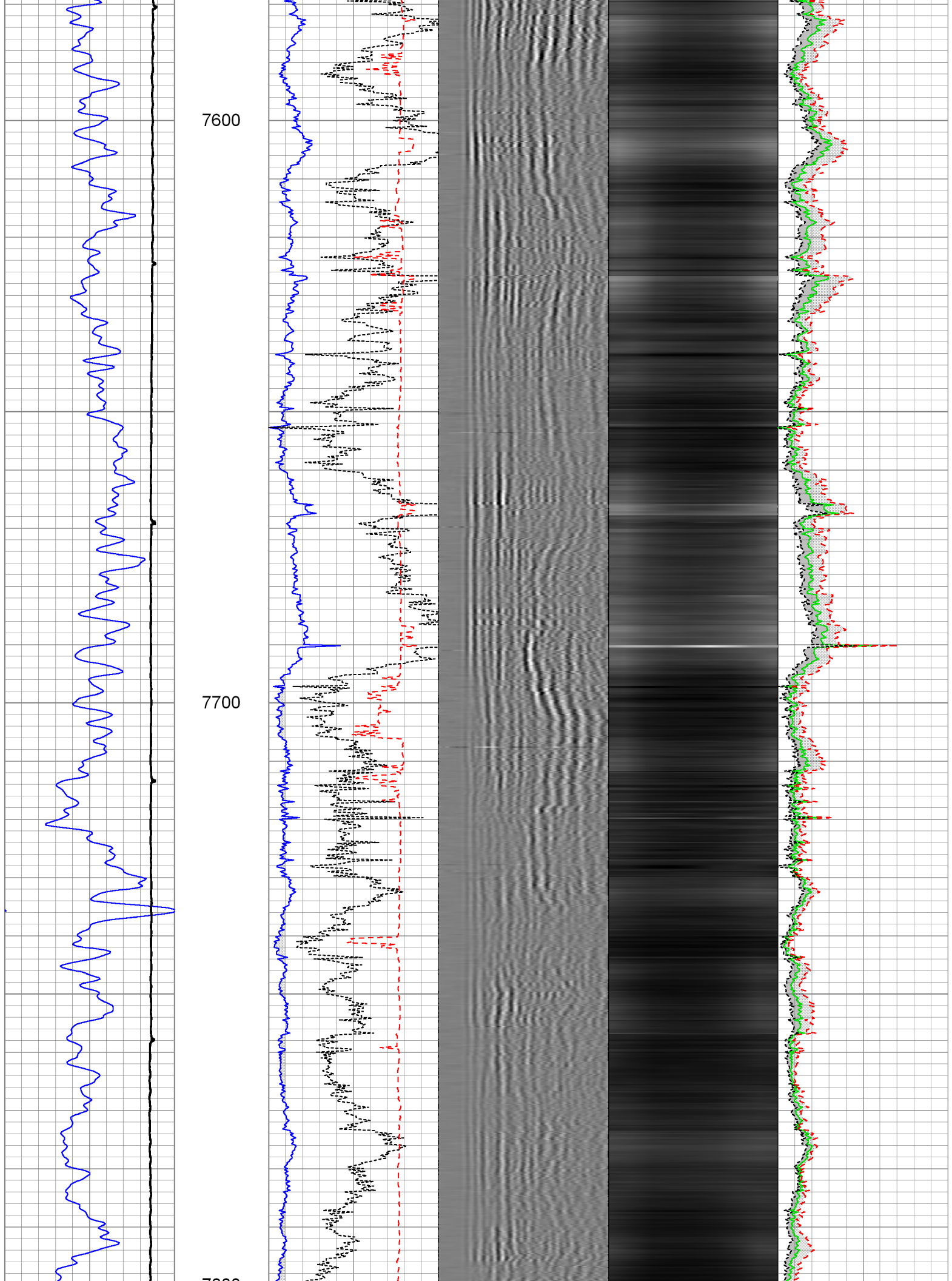
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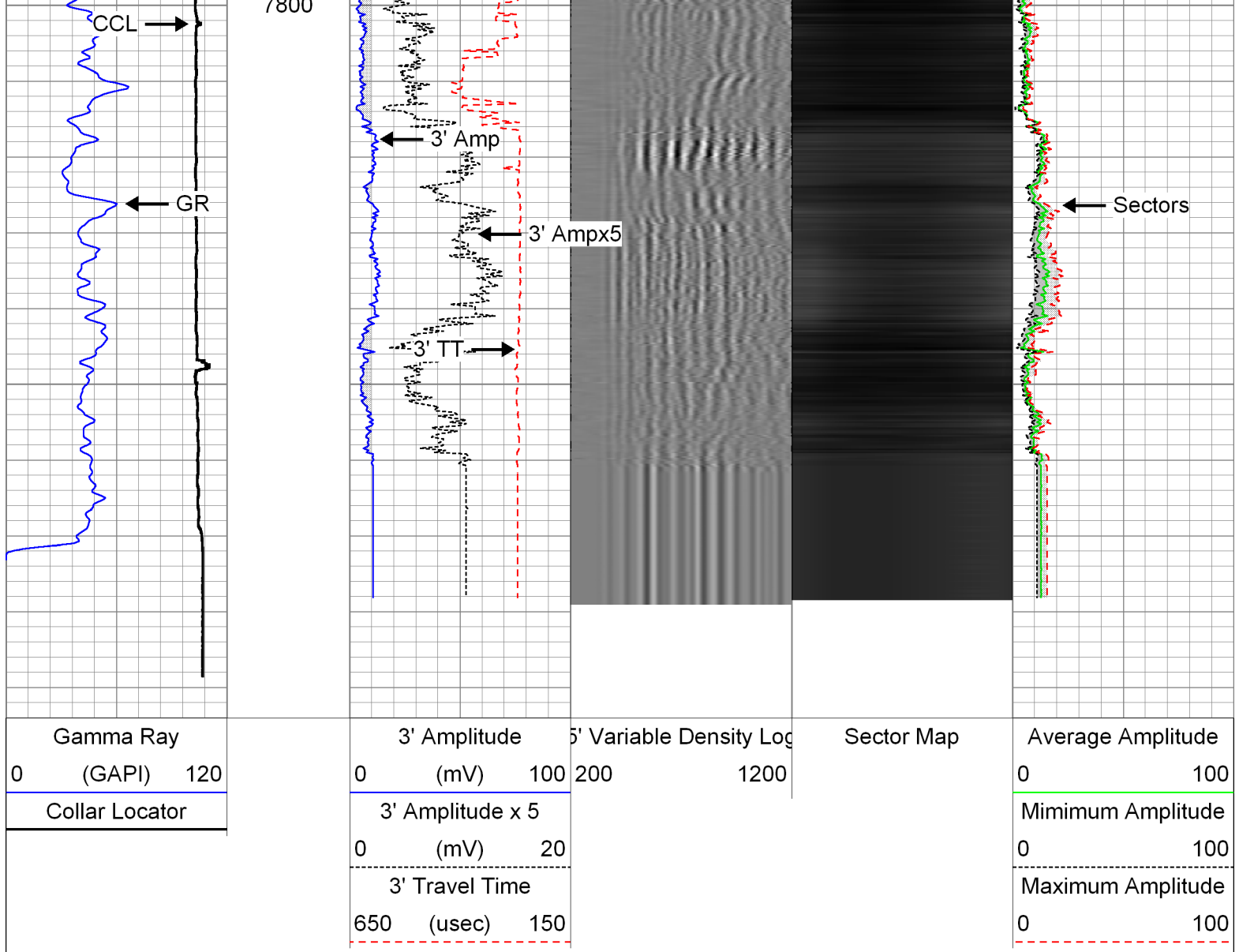


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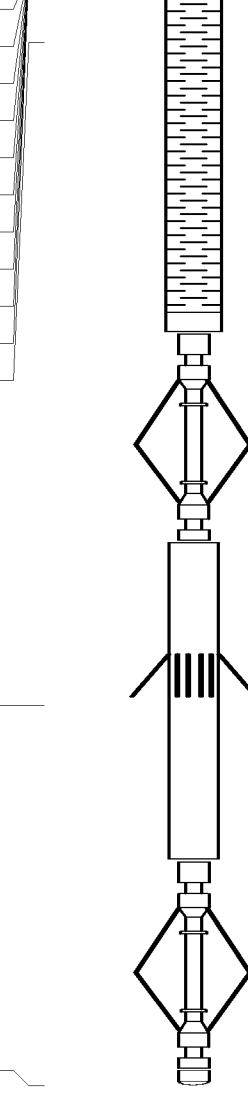
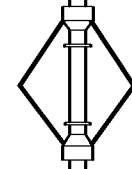
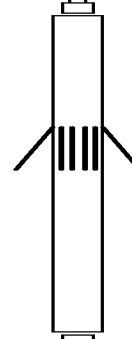
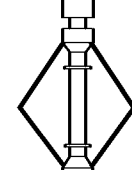

7700

7800





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	22.61		AES 1-7/16" Cablehead	1.08	1.44	1.00
			AGS-001 (219135) Adaptor GO to Sondex	0.21	1.69	1.00
			XTU-002 (219135) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			PGR-020 (10013902) Production Gamma Ray	1.93	1.69	9.50
			PRC-001 (218411) 1-11/16" 3-Arm Production Roller Centraliser	1.92	1.69	7.00
WVF3FT	15.85		BRT-004 (10013454in7)	9.47	3.13	140.00

WVFS1	15.85		RBT-004 (10015434117) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
WVFS2	15.85					
WVFS3	15.85					
WVFS4	15.85					
WVFS5	15.85					
WVFS6	15.85					
WVFS7	15.85					
WVFS8	15.85					
CBLTEMP	15.85					
CBLROT	15.85		PRC-057 (1102) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
WVF5FT	14.85					
MIT	5.41		MIT-027 (218950) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			PRC-057 (1038) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
TSTAMP	0.00		BUL-006 (219229) Bullnose Terminator	0.22	1.69	1.20
Dataset:		0512338341_anadarko_grenemyer 35c-3hz_rcbl_cil_02-27-14.db: field/well/run1/upermain				
Total Length:		26.91 ft				
Total Weight:		291.30 lb				
O.D.		3.13 in				

Calibration Report			
Database File:	0512338341_anadarko_grenemyer 35c-3hz_rcbl_cil_02-27-14.db		
Dataset Pathname:	upermain		
Dataset Creation:	Thu Feb 27 10:25:26 2014 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 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:

Thu Feb 27 08:02:30 2014

Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1358	266.0	1624	273.0	1897	312.0	2209
Finger 02:	1531	255.0	1786	253.0	2039	287.0	2326
Finger 03:	1457	279.0	1736	283.0	2019	320.0	2339
Finger 04:	1477	266.0	1743	259.0	2002	302.0	2304
Finger 05:	1529	256.0	1785	249.0	2034	282.0	2316
Finger 06:	1519	263.0	1782	260.0	2042	291.0	2333
Finger 07:	1504	273.0	1777	268.0	2045	293.0	2338
Finger 08:	1576	251.0	1827	243.0	2070	263.0	2333
Finger 09:	1511	284.0	1795	280.0	2075	300.0	2375
Finger 10:	1585	278.0	1863	264.0	2127	279.0	2406
Finger 11:	1539	276.0	1815	269.0	2084	282.0	2366
Finger 12:	1517	292.0	1809	283.0	2092	301.0	2393
Finger 13:	1522	281.0	1803	277.0	2080	278.0	2358
Finger 14:	1523	282.0	1805	283.0	2088	290.0	2378
Finger 15:	1523	287.0	1810	291.0	2101	291.0	2392
Finger 16:	1530	283.0	1813	297.0	2110	287.0	2397
Finger 17:	1506	287.0	1793	299.0	2092	295.0	2387
Finger 18:	1564	274.0	1838	284.0	2122	269.0	2391
Finger 19:	1593	262.0	1855	273.0	2128	265.0	2393
Finger 20:	1519	284.0	1803	307.0	2110	293.0	2403
Finger 21:	1497	287.0	1784	318.0	2102	307.0	2409
Finger 22:	1513	285.0	1798	314.0	2112	298.0	2410
Finger 23:	1564	267.0	1831	290.0	2121	274.0	2395
Finger 24:	1561	265.0	1826	299.0	2125	289.0	2414
Finger 25:	1524	280.0	1804	311.0	2115	302.0	2417
Finger 26:	1461	285.0	1746	318.0	2064	314.0	2378
Finger 27:	1510	275.0	1785	305.0	2090	301.0	2391
Finger 28:	1470	282.0	1752	316.0	2068	312.0	2380
Finger 29:	1464	283.0	1747	310.0	2057	312.0	2369
Finger 30:	1464	279.0	1743	312.0	2055	316.0	2371
Finger 31:	1585	246.0	1831	266.0	2097	265.0	2362
Finger 32:	1495	278.0	1773	301.0	2074	305.0	2379
Finger 33:	1488	276.0	1764	295.0	2059	298.0	2357
Finger 34:	1452	280.0	1732	300.0	2032	316.0	2348
Finger 35:	1461	277.0	1738	296.0	2034	314.0	2348
Finger 36:	1644	262.0	1906	269.0	2175	285.0	2460
Finger 37:	1284	268.0	1552	281.0	1833	313.0	2146
Finger 38:	1471	270.0	1741	281.0	2022	310.0	2332
Finger 39:	1438	279.0	1717	277.0	1994	311.0	2305
Finger 40:	1558	271.0	1829	277.0	2106	302.0	2408

Segmented Cement Bond Log Calibration Report

Serial Number: 10013454in7
Tool Model: 004

Calibration Casing Diameter: 7.000 in
Calibration Depth: 234.060 ft

Master Calibration, performed Thu Feb 27 08:28:39 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.011	0.563	0.800	62.165	111.247	-0.414
5FT	0.015	0.669	0.800	62.165	93.825	-0.592
S1	0.010	0.557	0.000	100.000	182.743	-1.785
S2	0.007	0.554	0.000	100.000	182.809	-1.339
S3	0.010	0.558	0.000	100.000	182.414	-1.781

S3	0.010	0.558	0.000	100.000	182.414	-1.781
S4	0.008	0.567	0.000	100.000	179.061	-1.473
S5	0.010	0.575	0.000	100.000	176.846	-1.703
S6	0.009	0.579	0.000	100.000	175.384	-1.550
S7	0.010	0.570	0.000	100.000	178.363	-1.705
S8	0.009	0.565	0.000	100.000	179.985	-1.615

Gamma Ray Calibration Report

Serial Number:	10013902		
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	Grenemyer 35C-3HZ
Field	Wattenberg
County	Weld
State	CO