



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company				Kerr-McGee Oil & Gas Onshore, L.P.			
Well				Badding 15N-35HZ			
Field				Wattenberg			
County				Weld			
State				Colorado			
Location:				API # : 05-123-38410			
SHL: 350' FSL 1927' FEL				Other Services			
Lat/Long: 40.102988/-104.741758				Gauge Ring			
SEC 26 TWP 2N RGE 66W				CIL			
Permanent Datum		Ground Level		Elevation		5114'	
Log Measured From		Kelly Bushing		17 FT		K.B. 5131'	
Drilling Measured From		Kelly Bushing				D.F. 5130'	
						G.L. 5114'	
Date				29-MAR-2014			
Run Number				Two			
Depth Driller				---			
Depth Logger				Not Tagged			
Bottom Logged Interval				6802 FT			
Top Log Interval				Surface			
Open Hole Size				8.750"			
Type Fluid				Water			
Density / Viscosity				8.4 lbm/gal			
Max. Recorded Temp.				228°F			
Estimated Cement Top				36.5 FT			
Time Well Ready				ROA			
Time Logger on Bottom				1430			
Equipment Number				HD 0311			
Location				Fort Lupton, CO			
Recorded By				C. Bryan			
Witnessed By				E. Wenzel			
Borehole Record				Tubing Record			
Run Number		Bit		From		To	
Casing Record		Size (in)		Wgt (lbs/Ft)		Grade	
Surface Casing		9-5/8"		36#		J-55	
Intermediate #1		7"		26#		HCP-110 LTC	
Intermediate #2							
Liner		4-1/2"		11.6#		P-110	
						6773 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.  
Log correlated to reported casing tally at top of liner @ 6773 FT  
RCBL-CIL ran at 2200 PSI surface induced pressure.  
Estimated Cement Top recorded at 36.5 FT

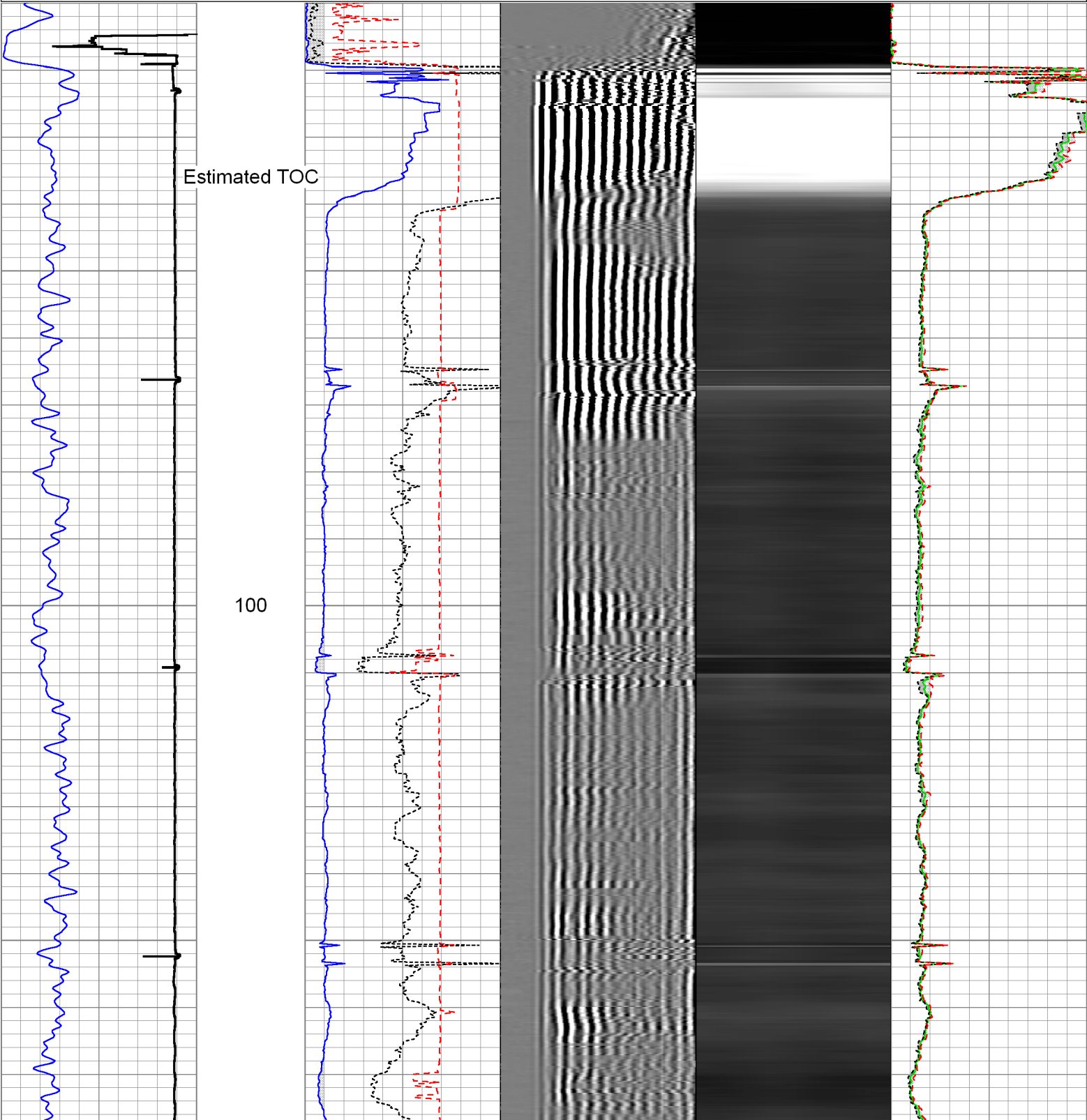
Thank you for choosing FMC Technologies Completion Services, Inc.

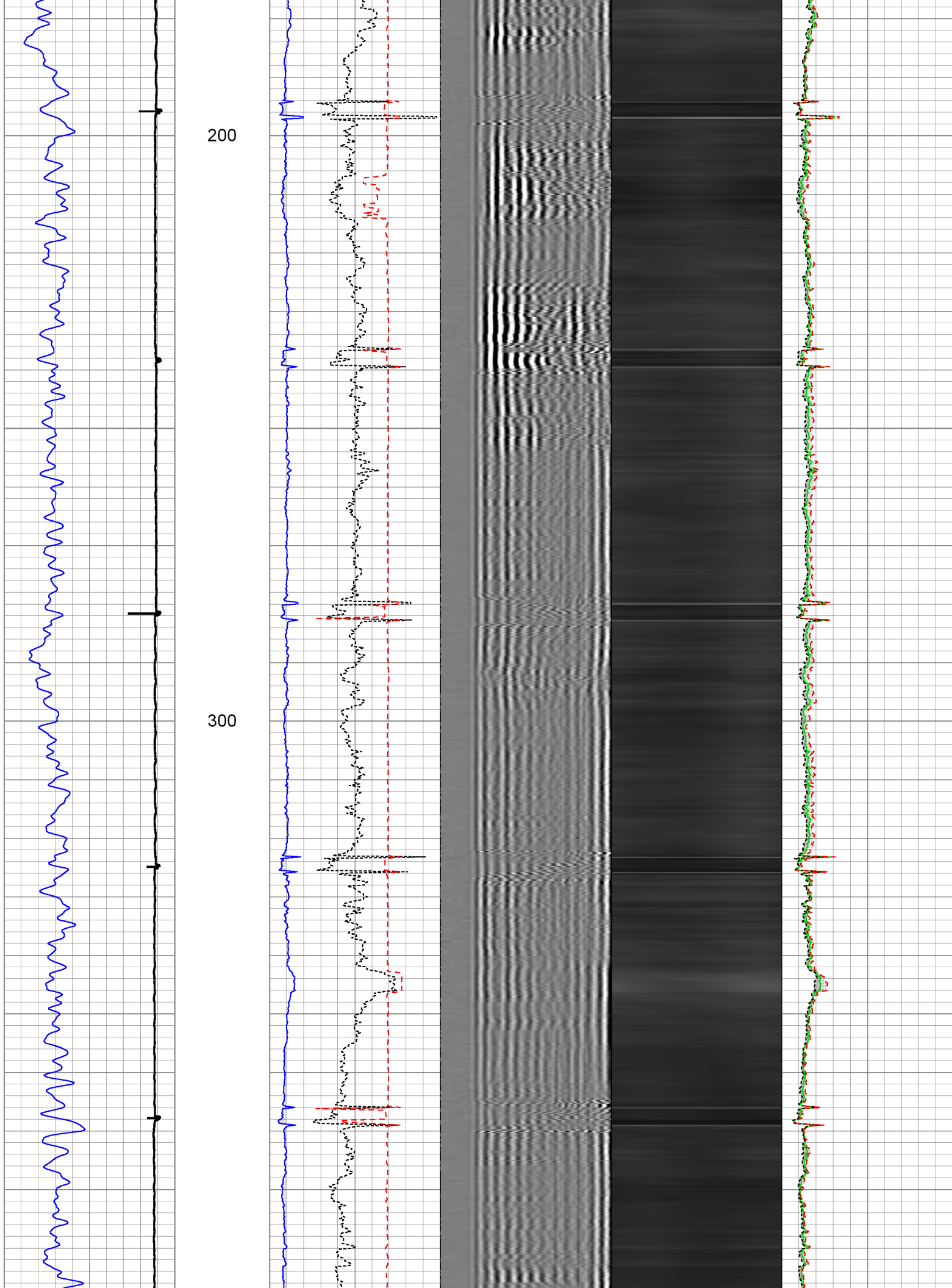


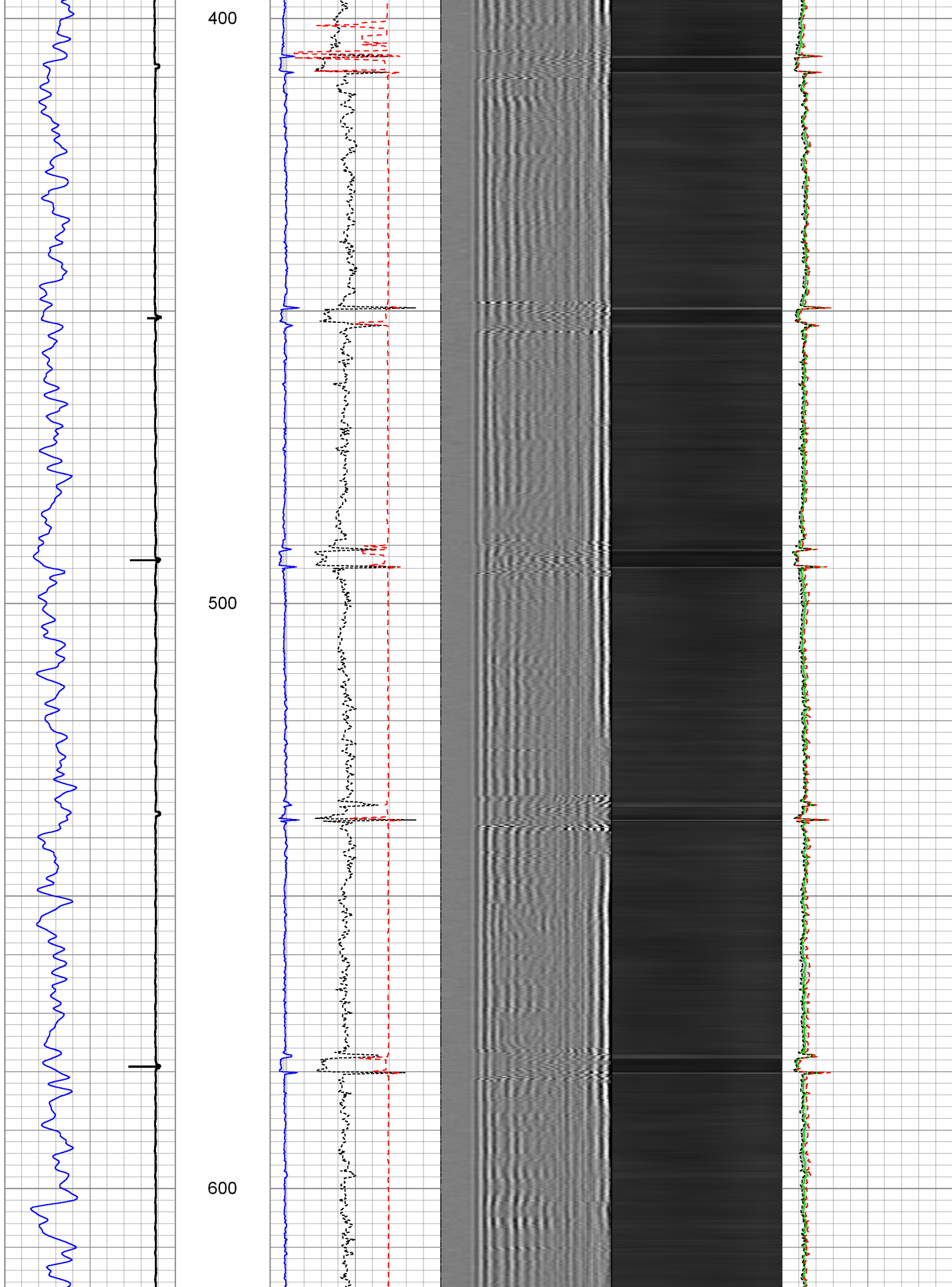
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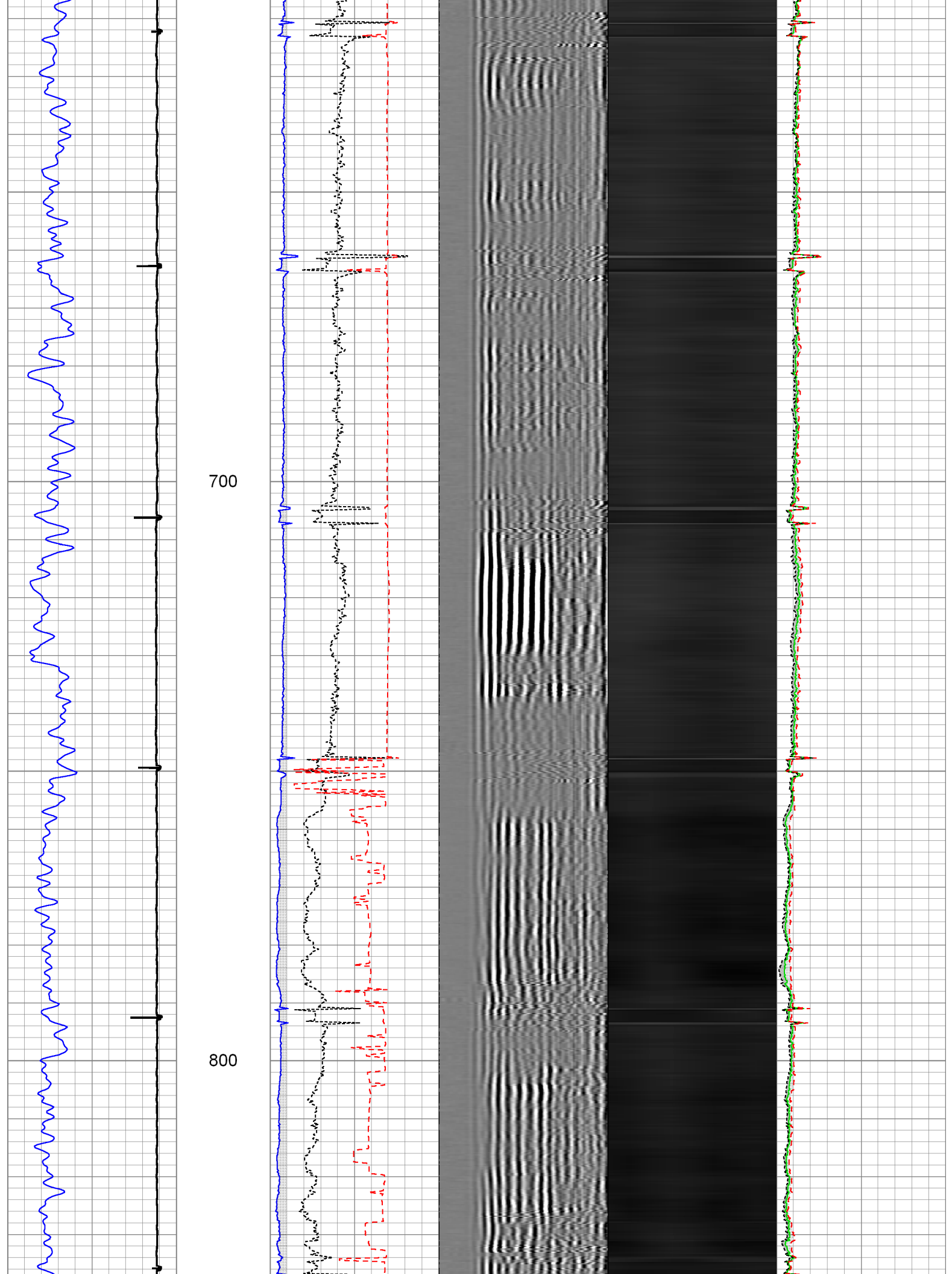
Recorded With 2200 PSI Surface Induced Pressure

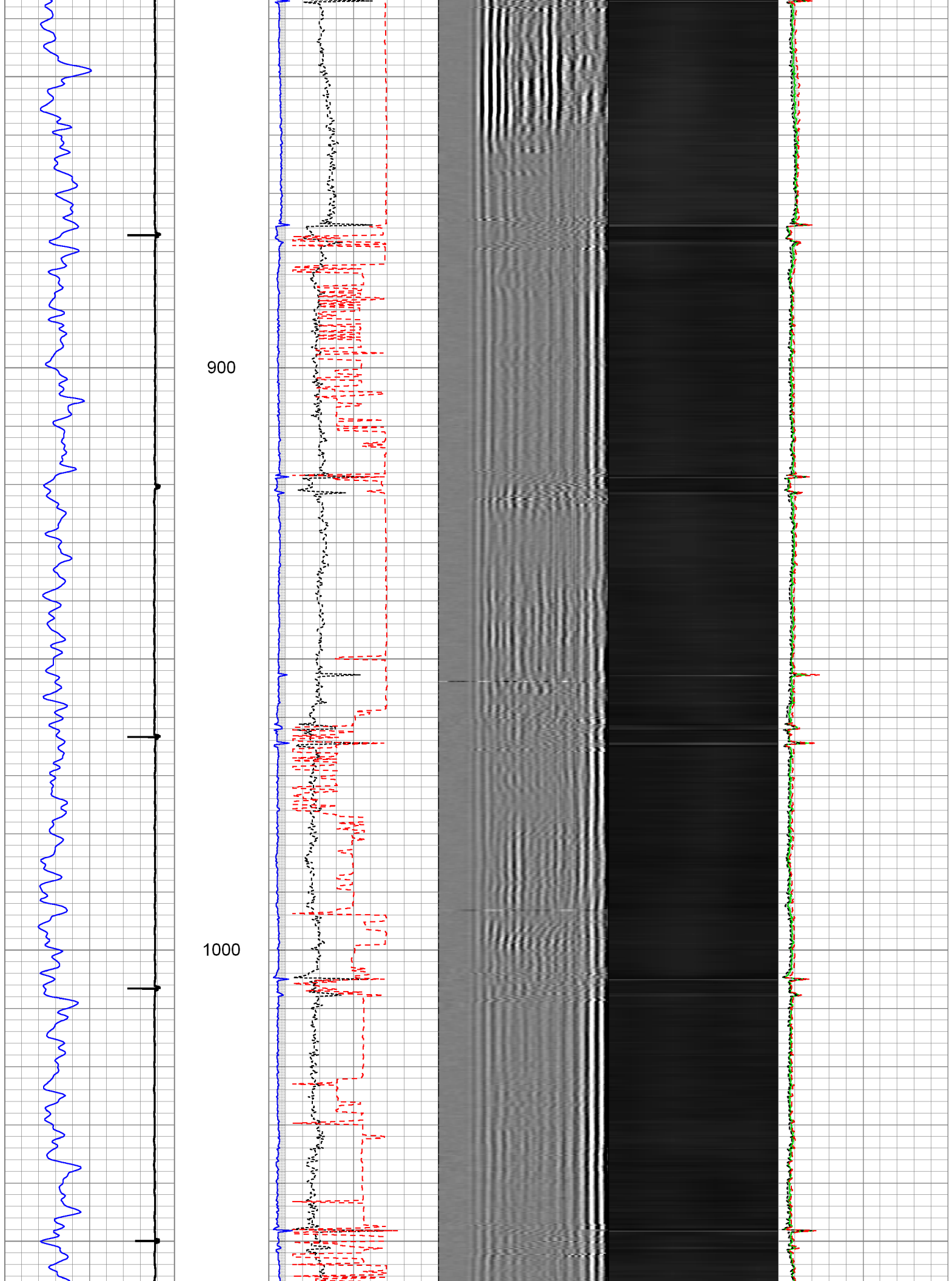
Gamma Ray			3' Amplitude		5' Variable Density Log	Sector Map	Average Amplitude		
0	(GAPI)	120	0	(mV)			100	0	100
Collar Locator			3' Amplitude x 5				Minimum Amplitude		
			0	(mV)			20	0	100
			3' Travel Time				Maximum Amplitude		
			650	(usec)			150	0	100

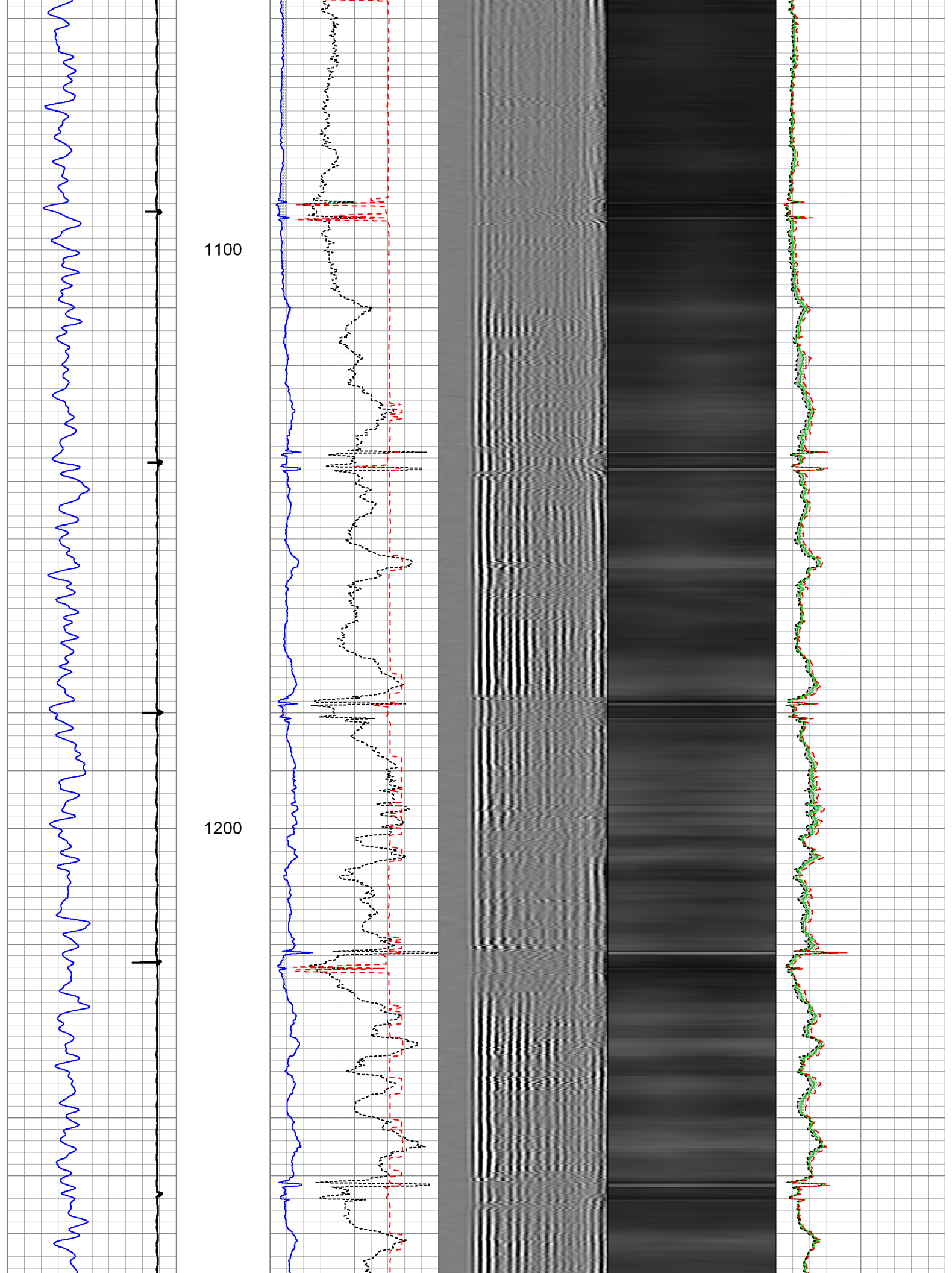


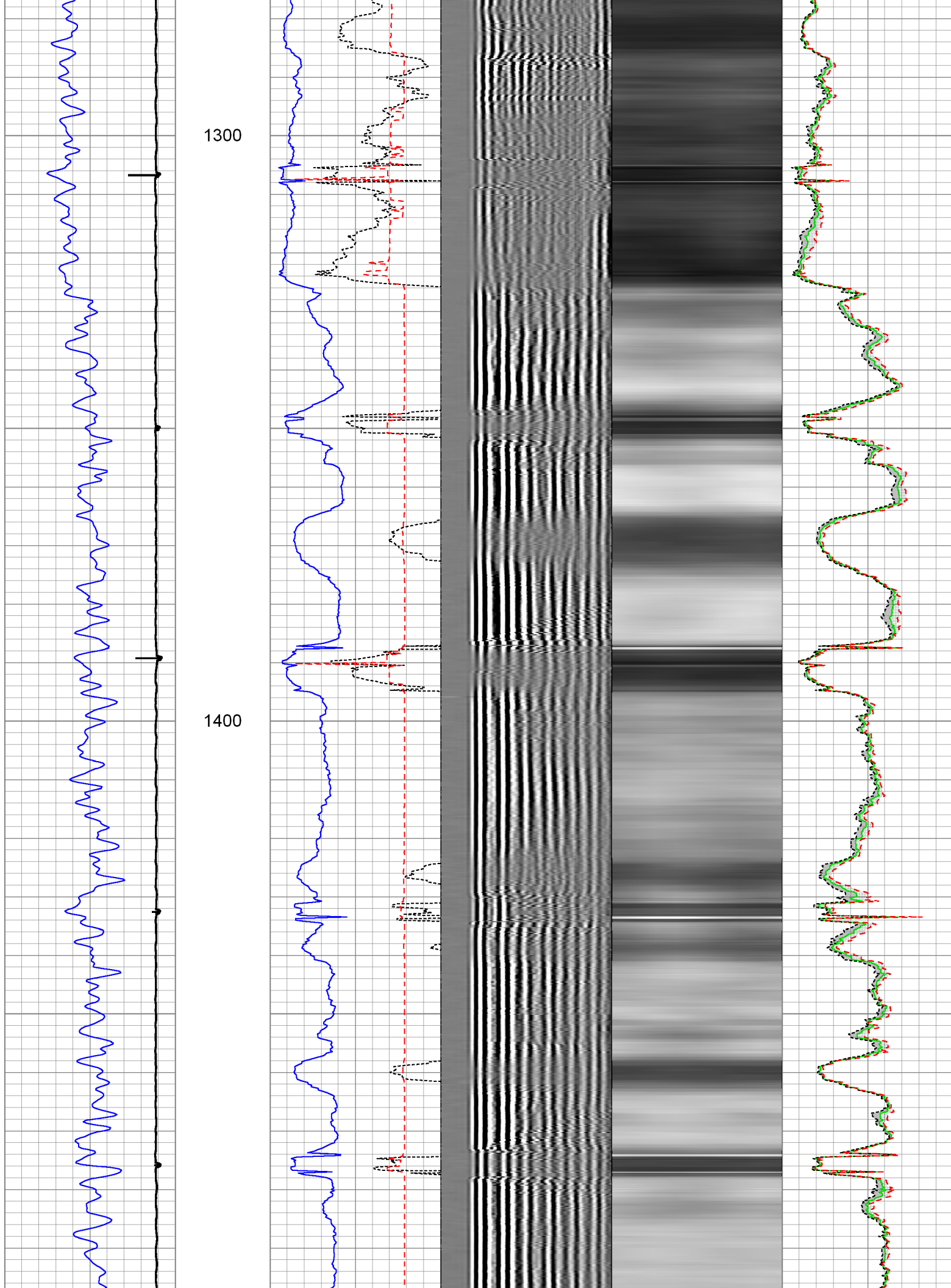








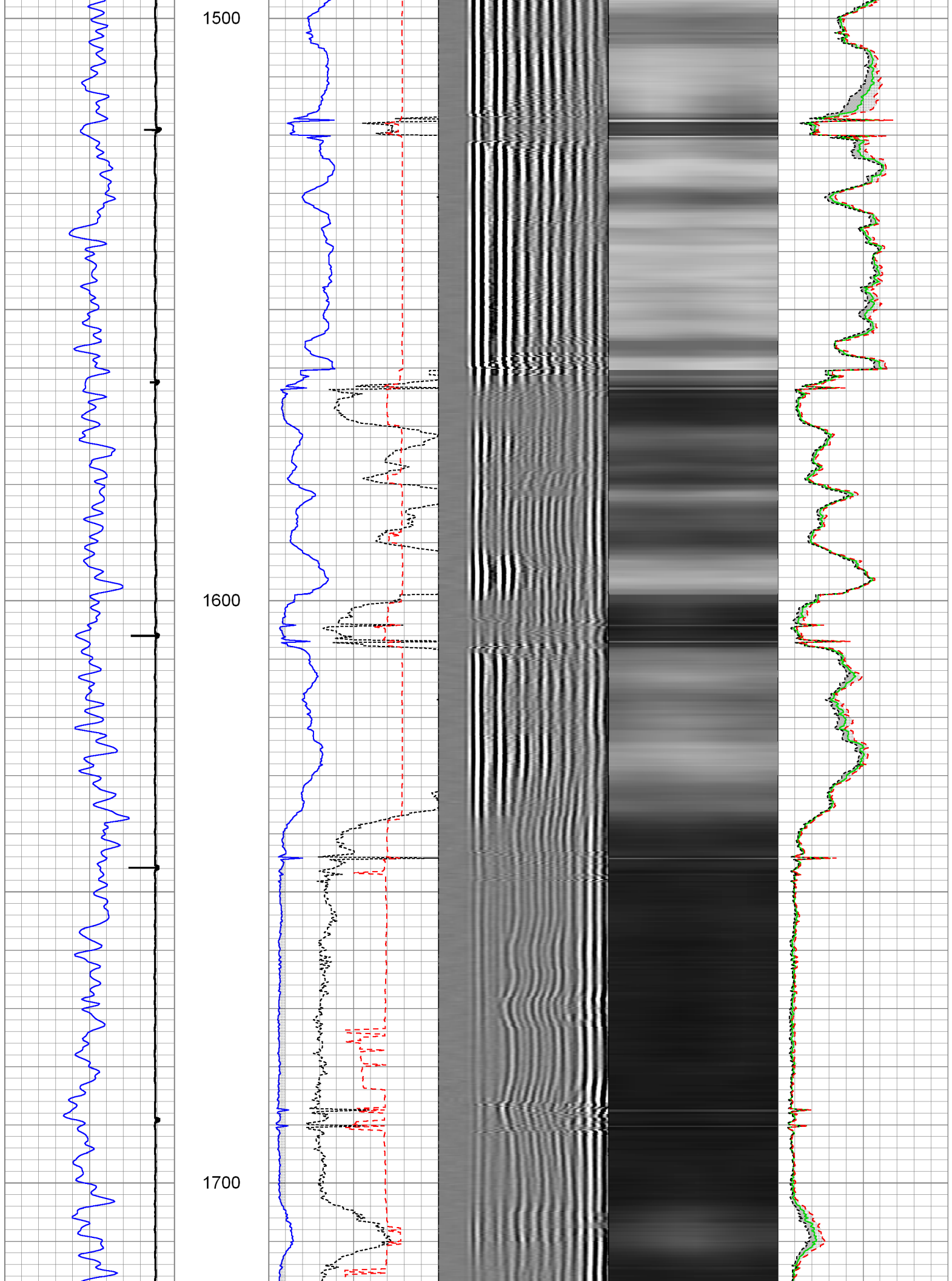


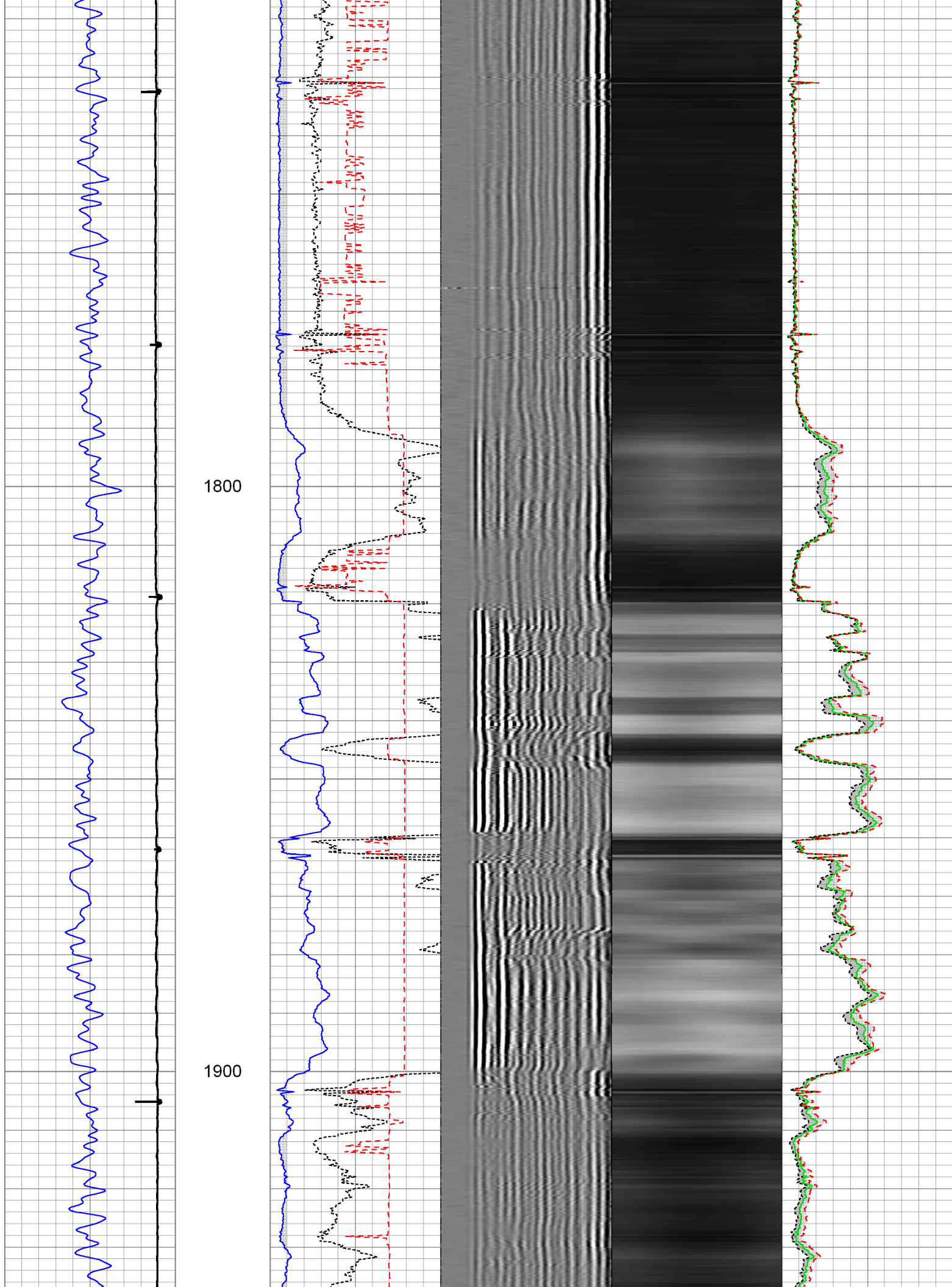


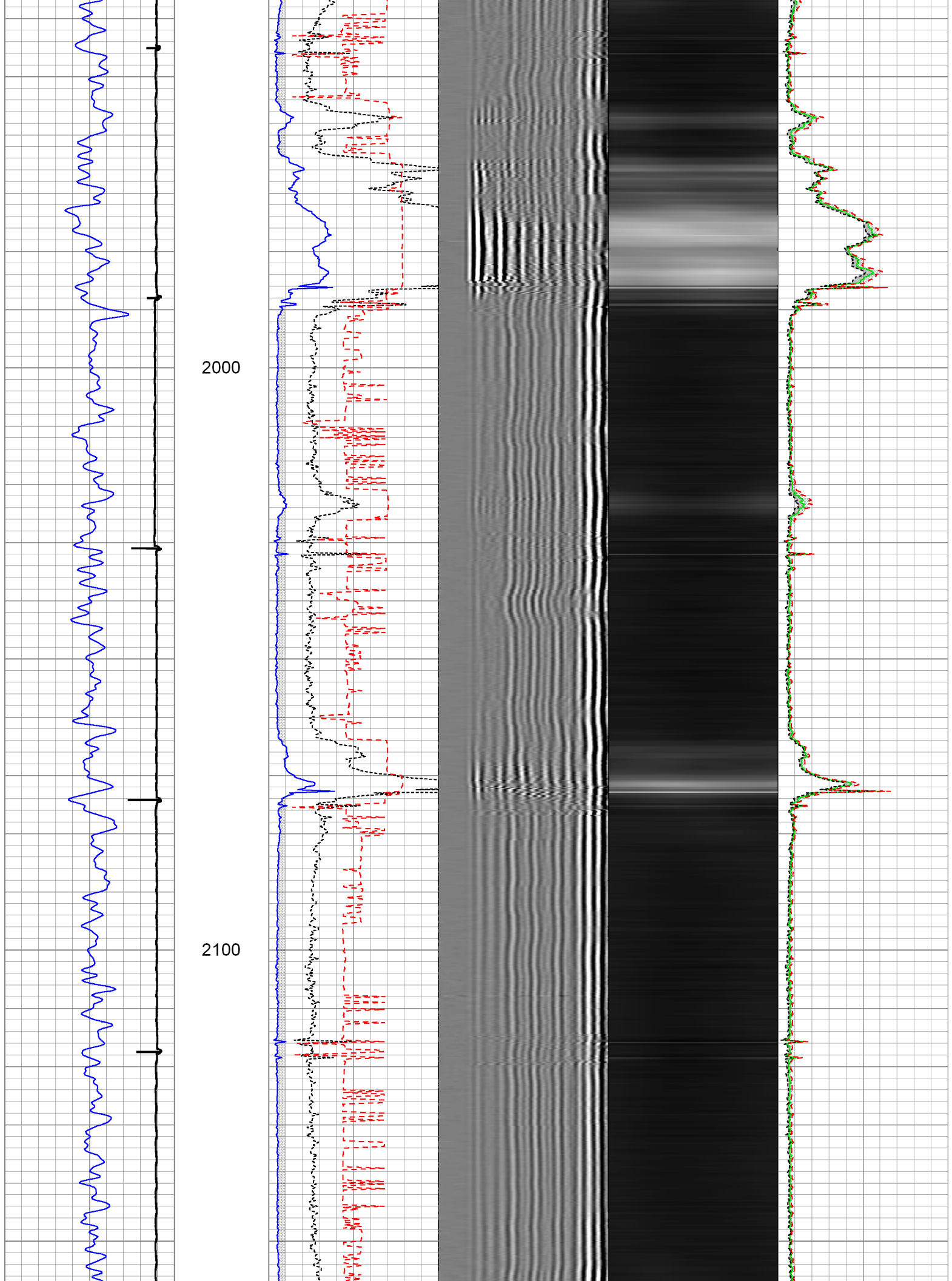
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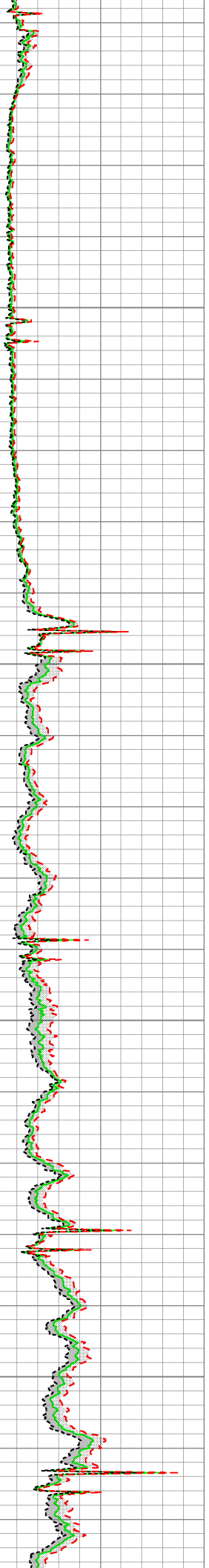
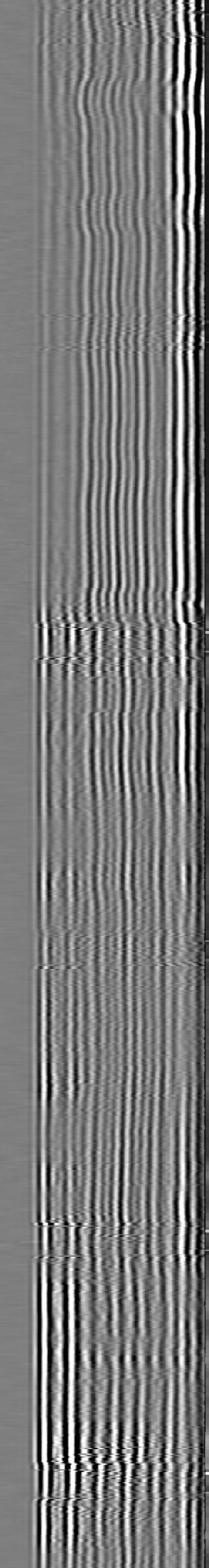
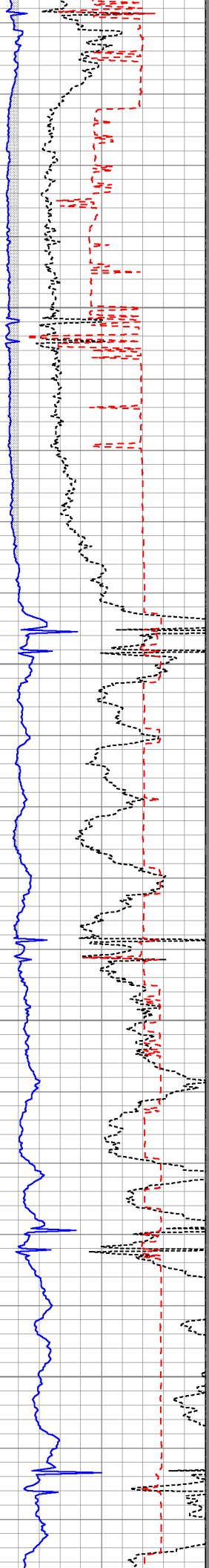
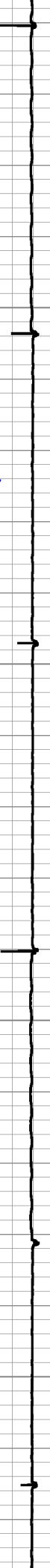


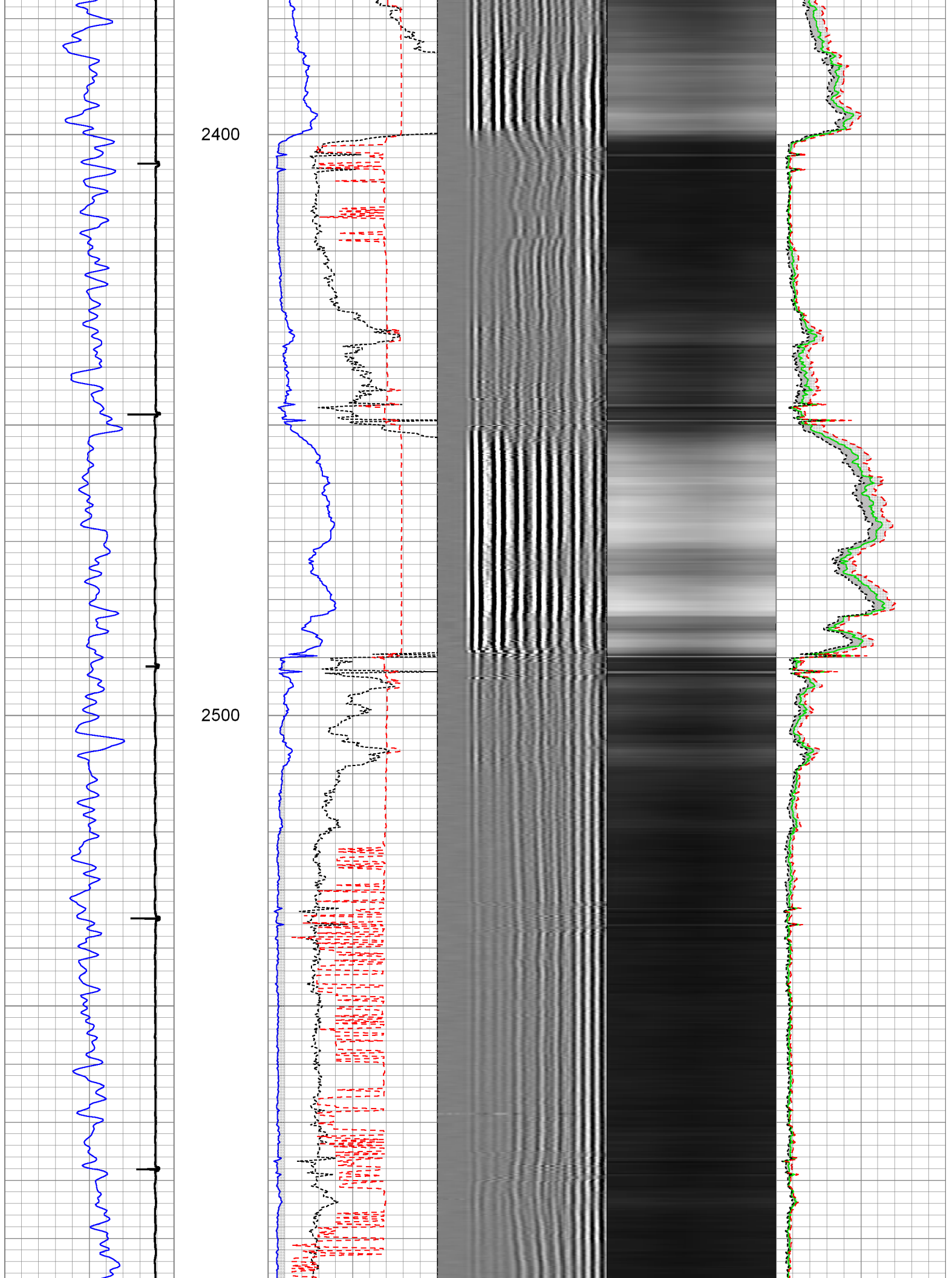




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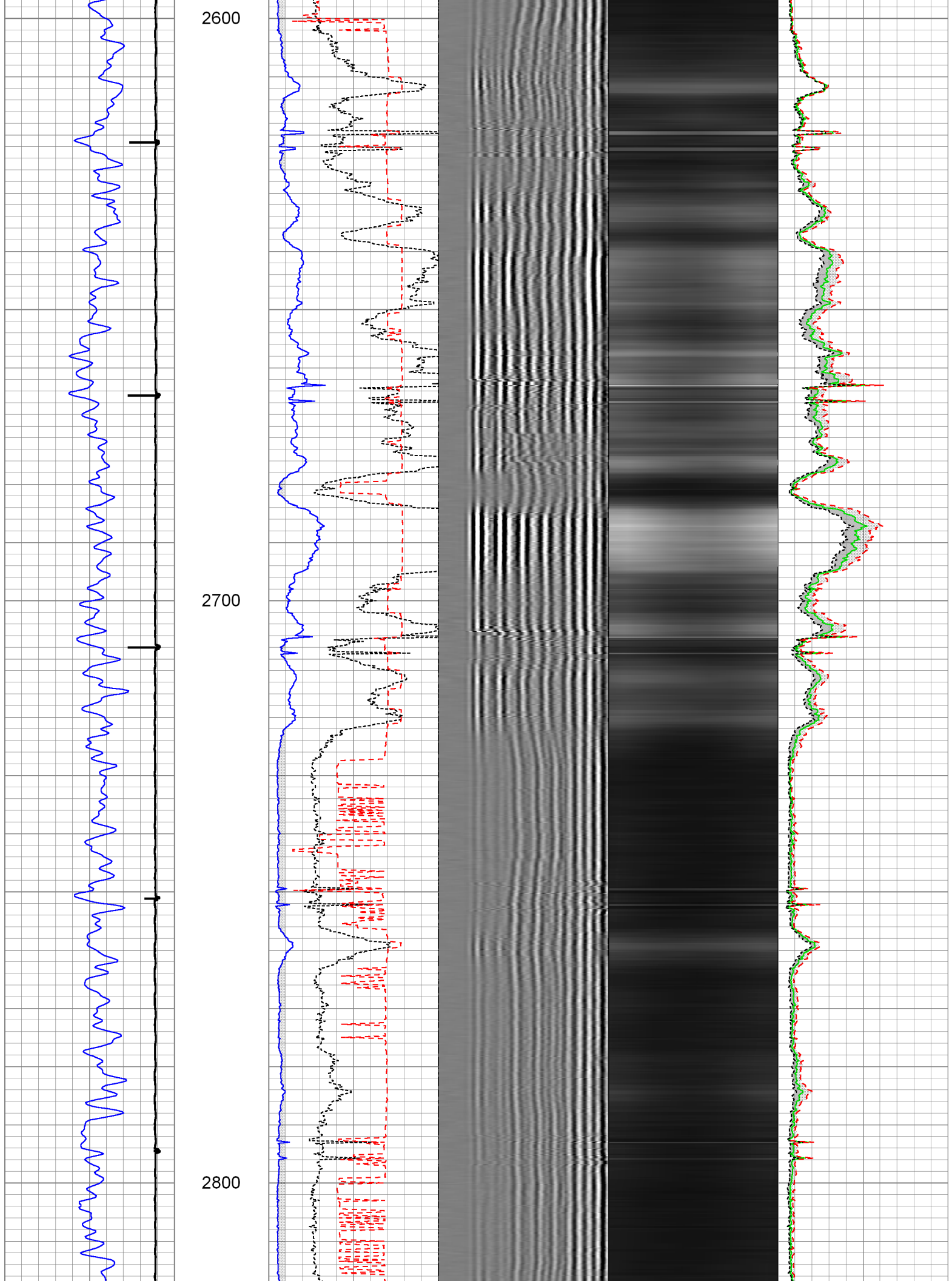




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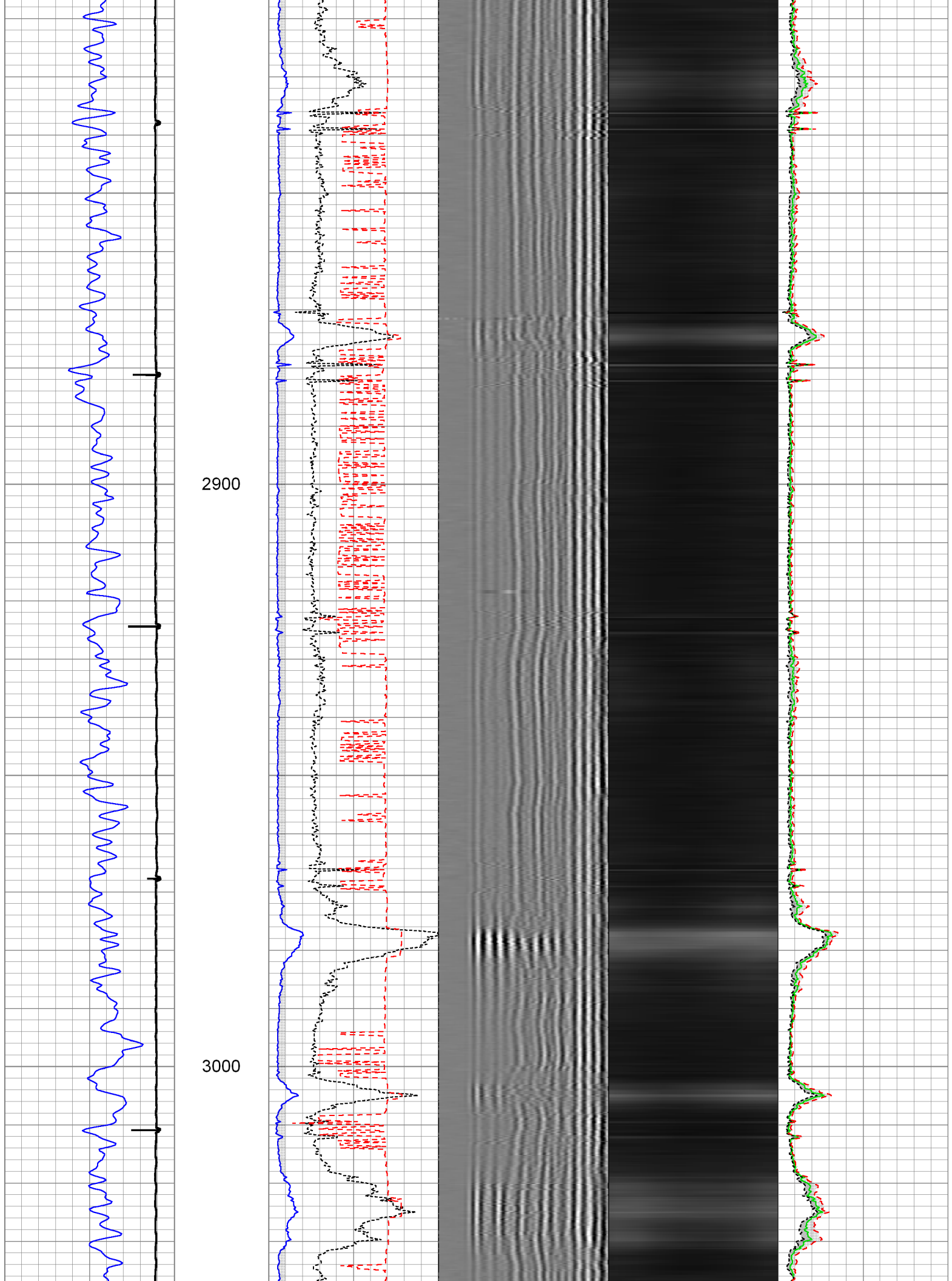
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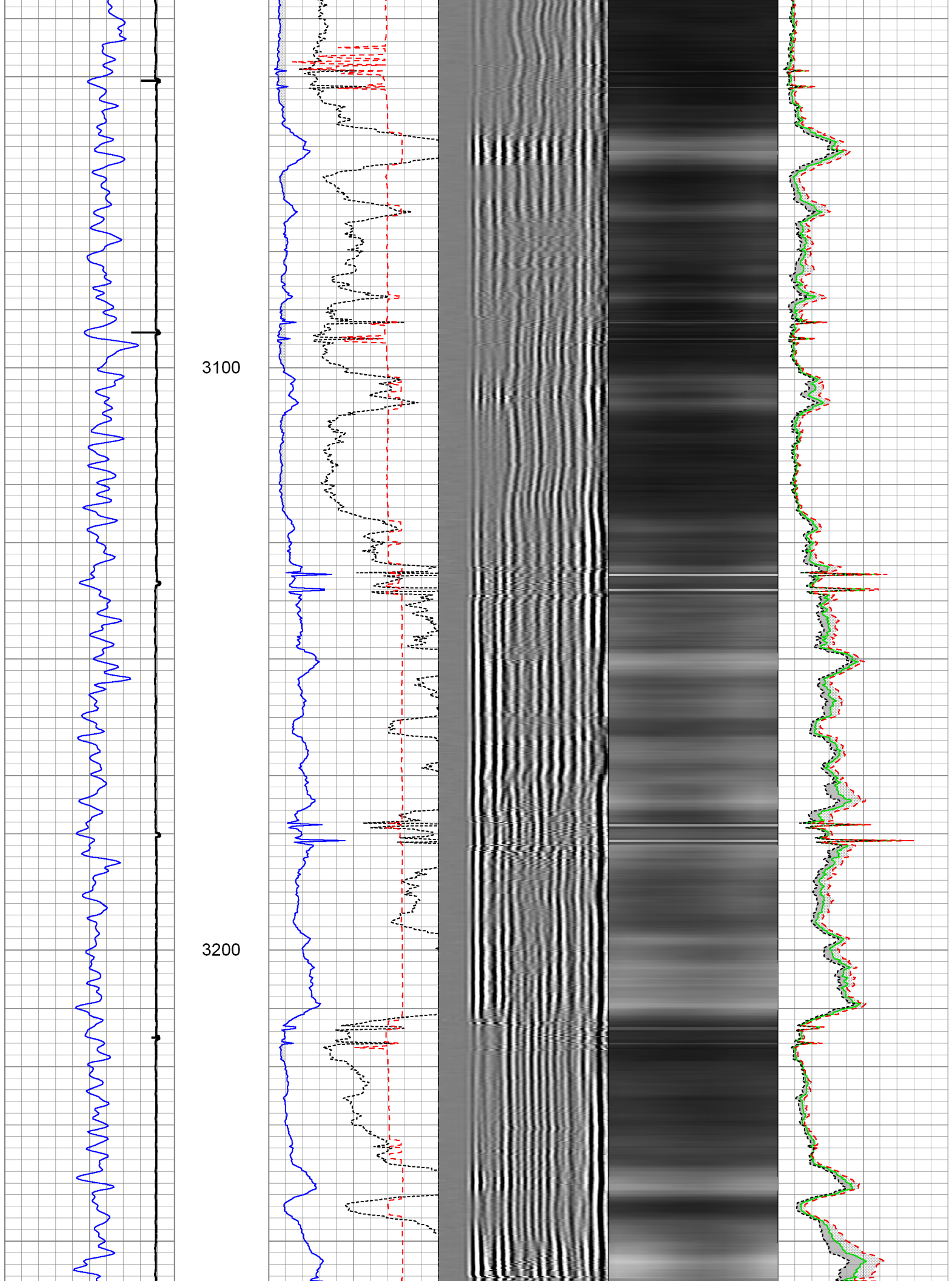
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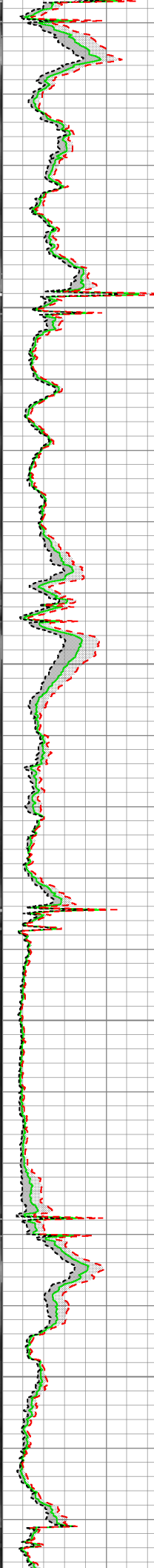
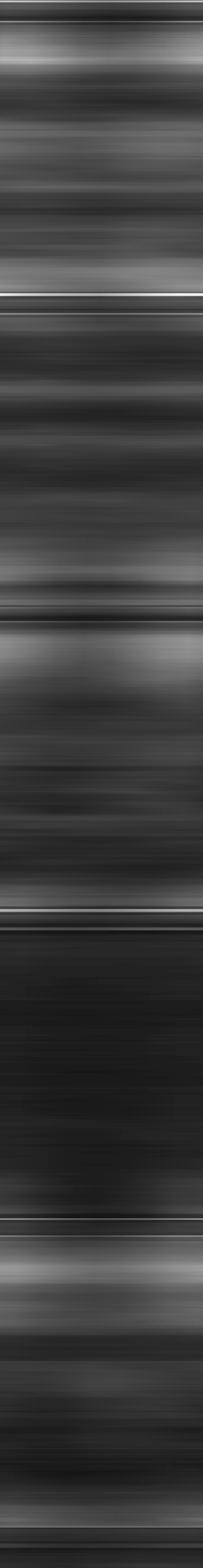
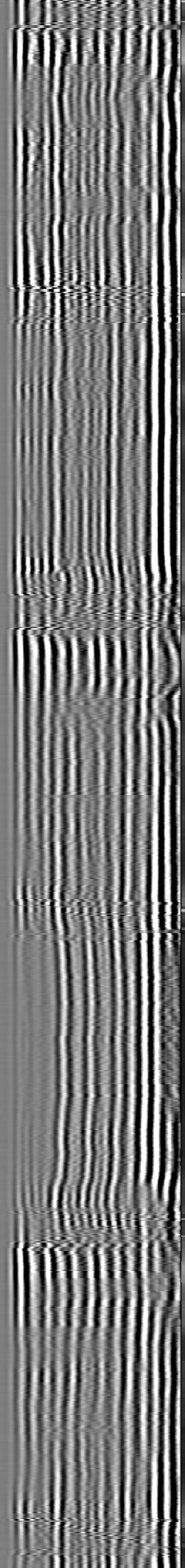
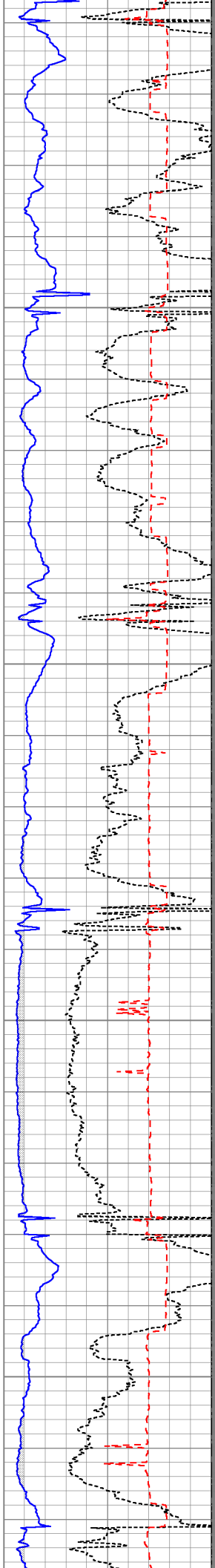
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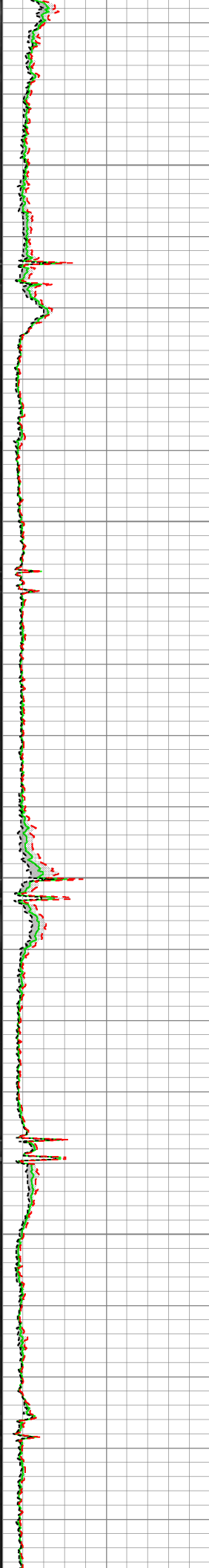
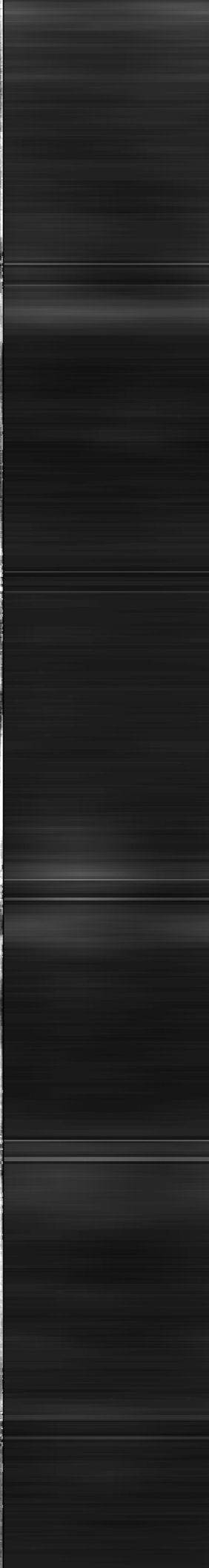
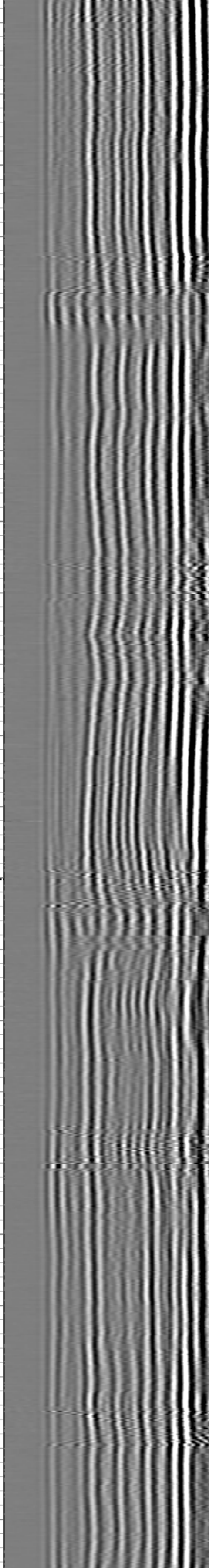
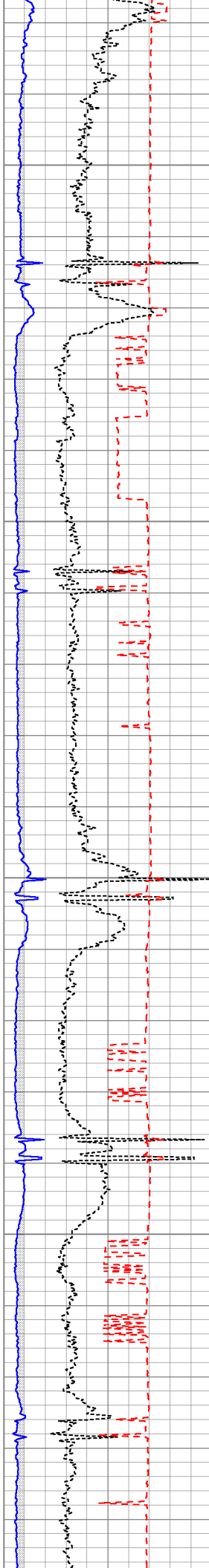
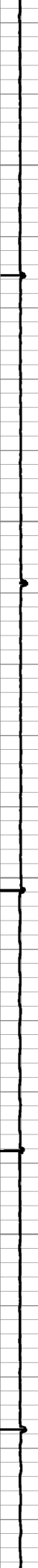
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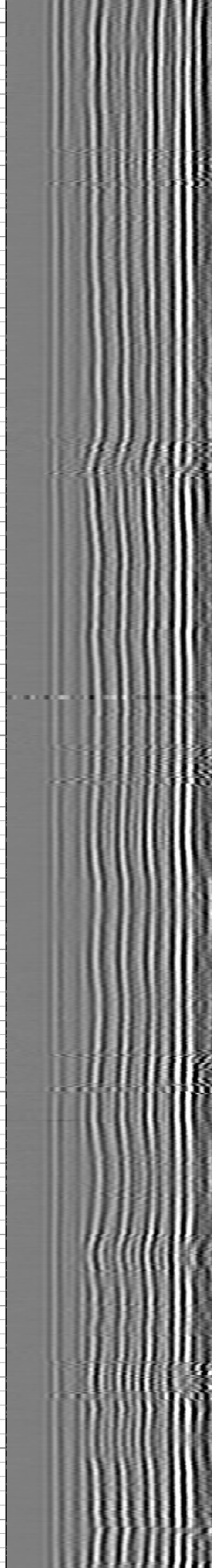
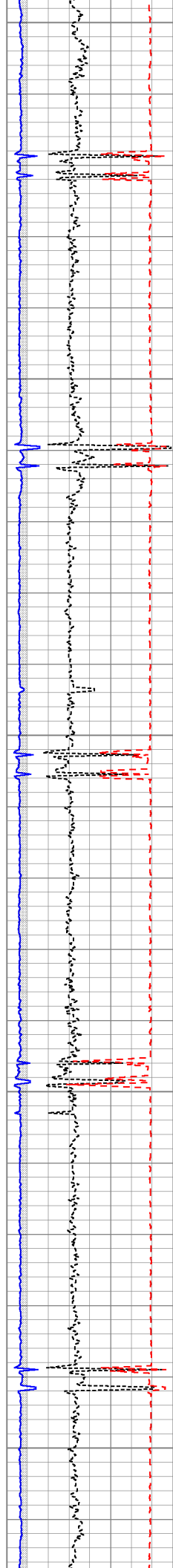
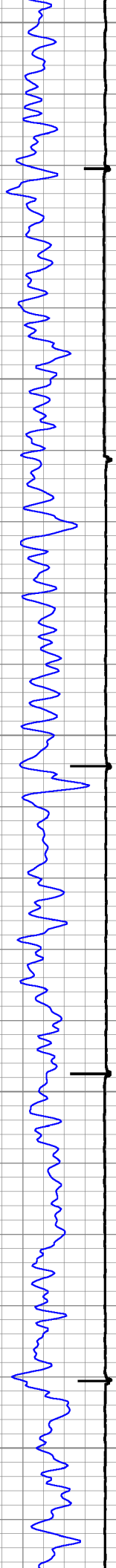
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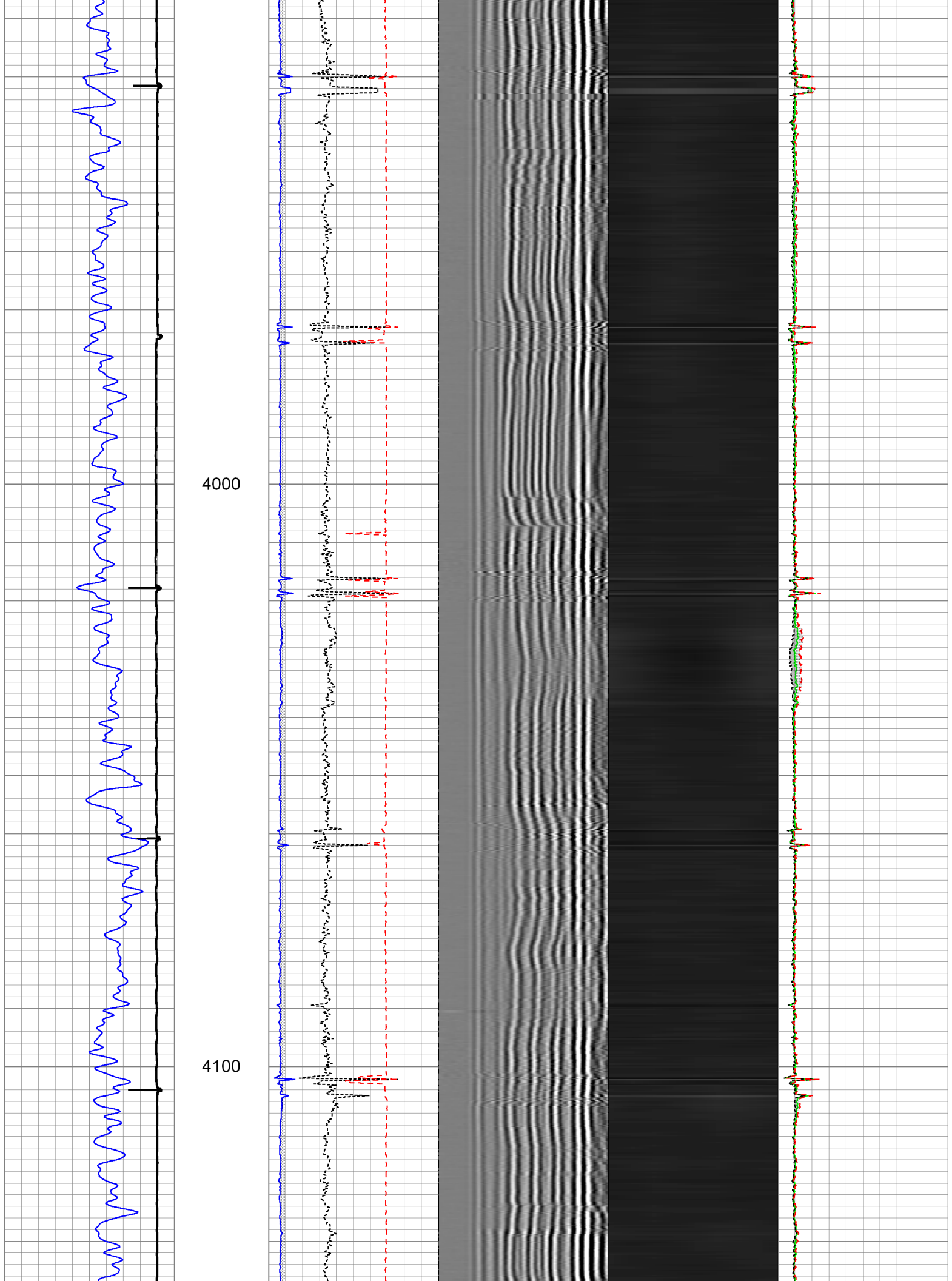


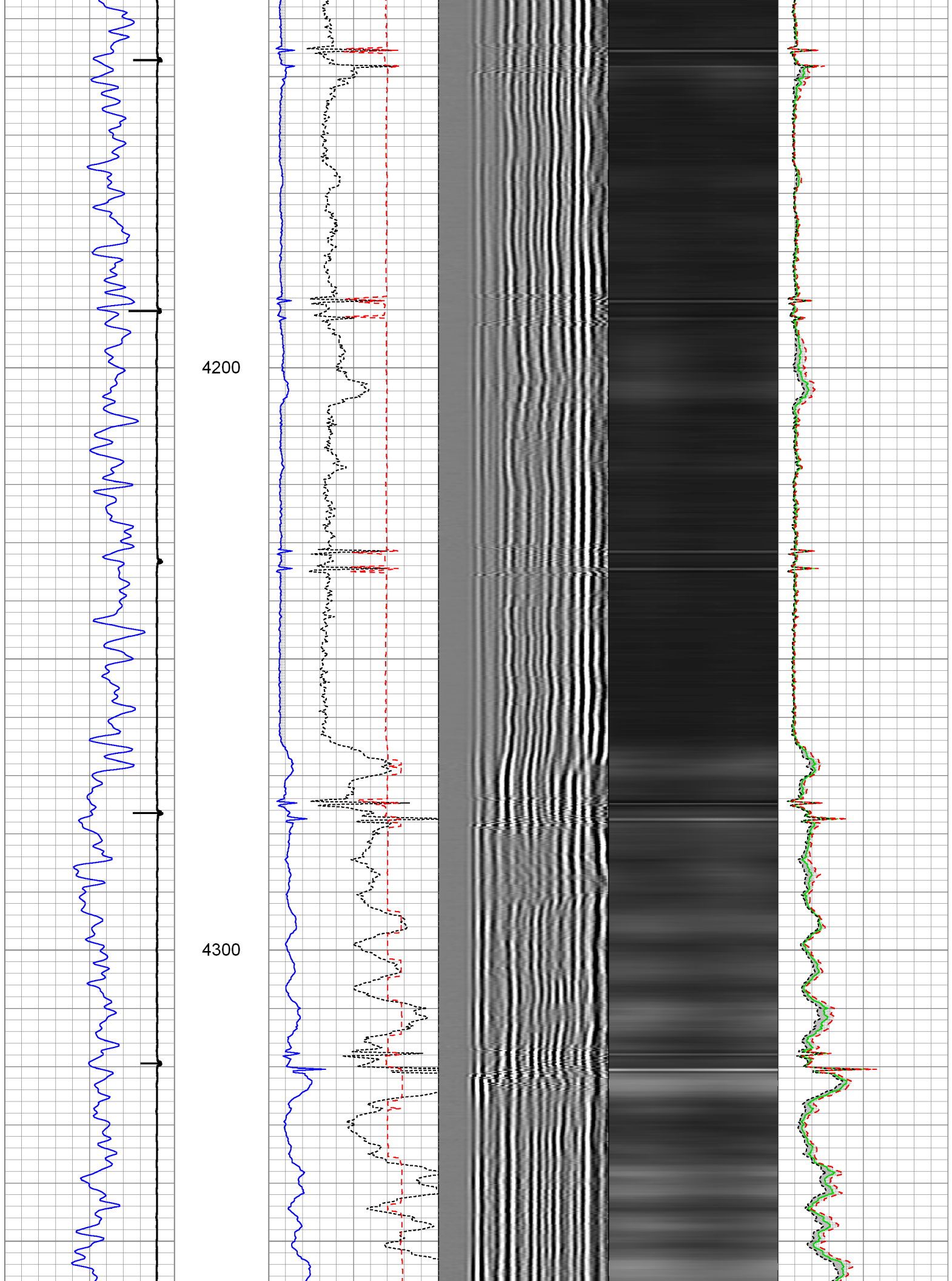
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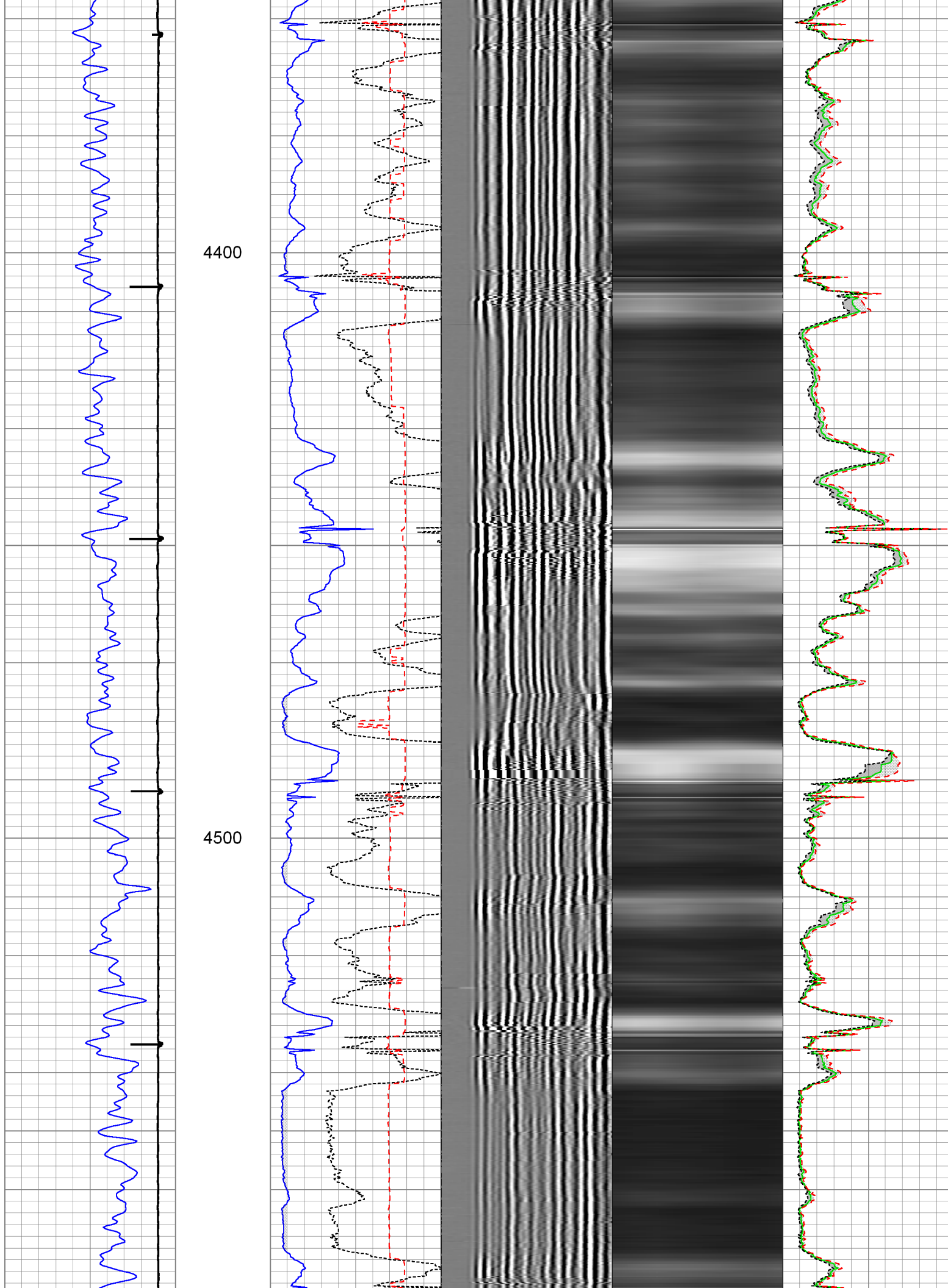






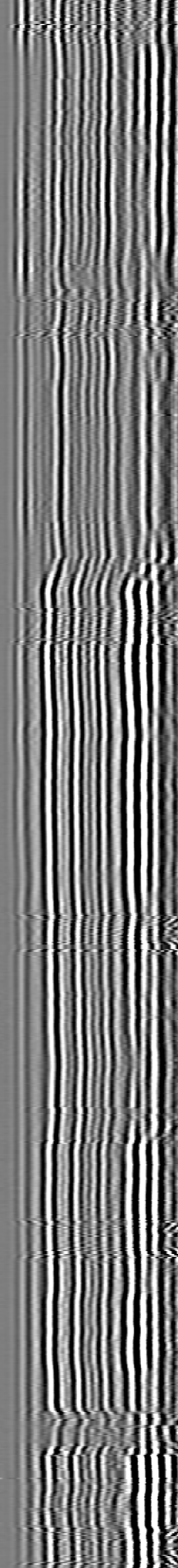
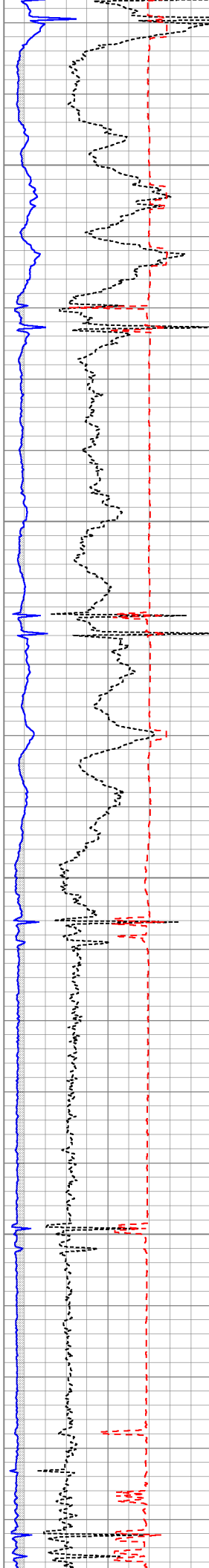
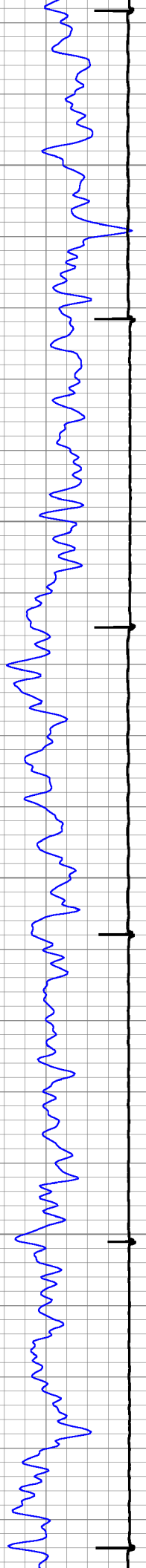
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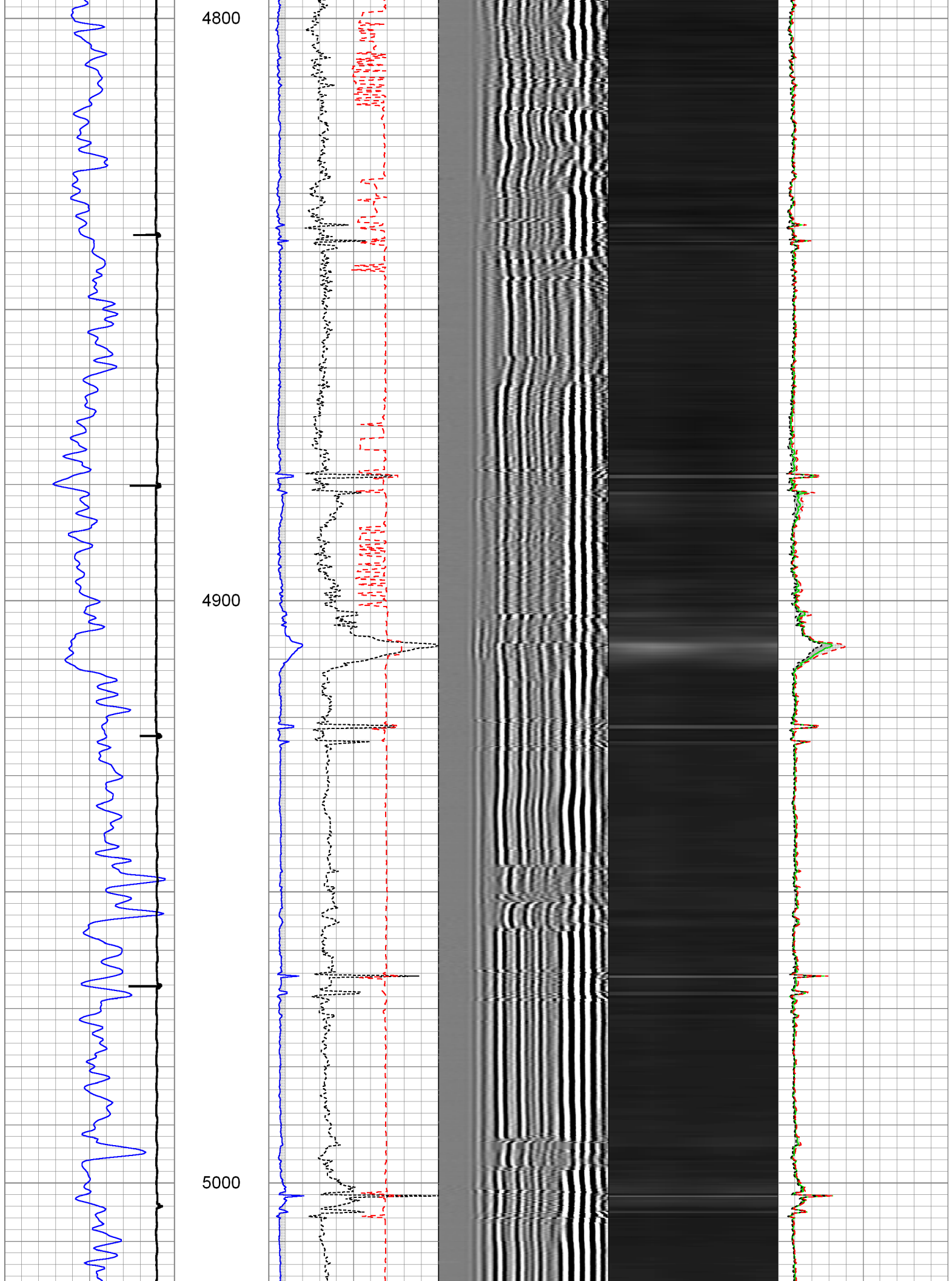
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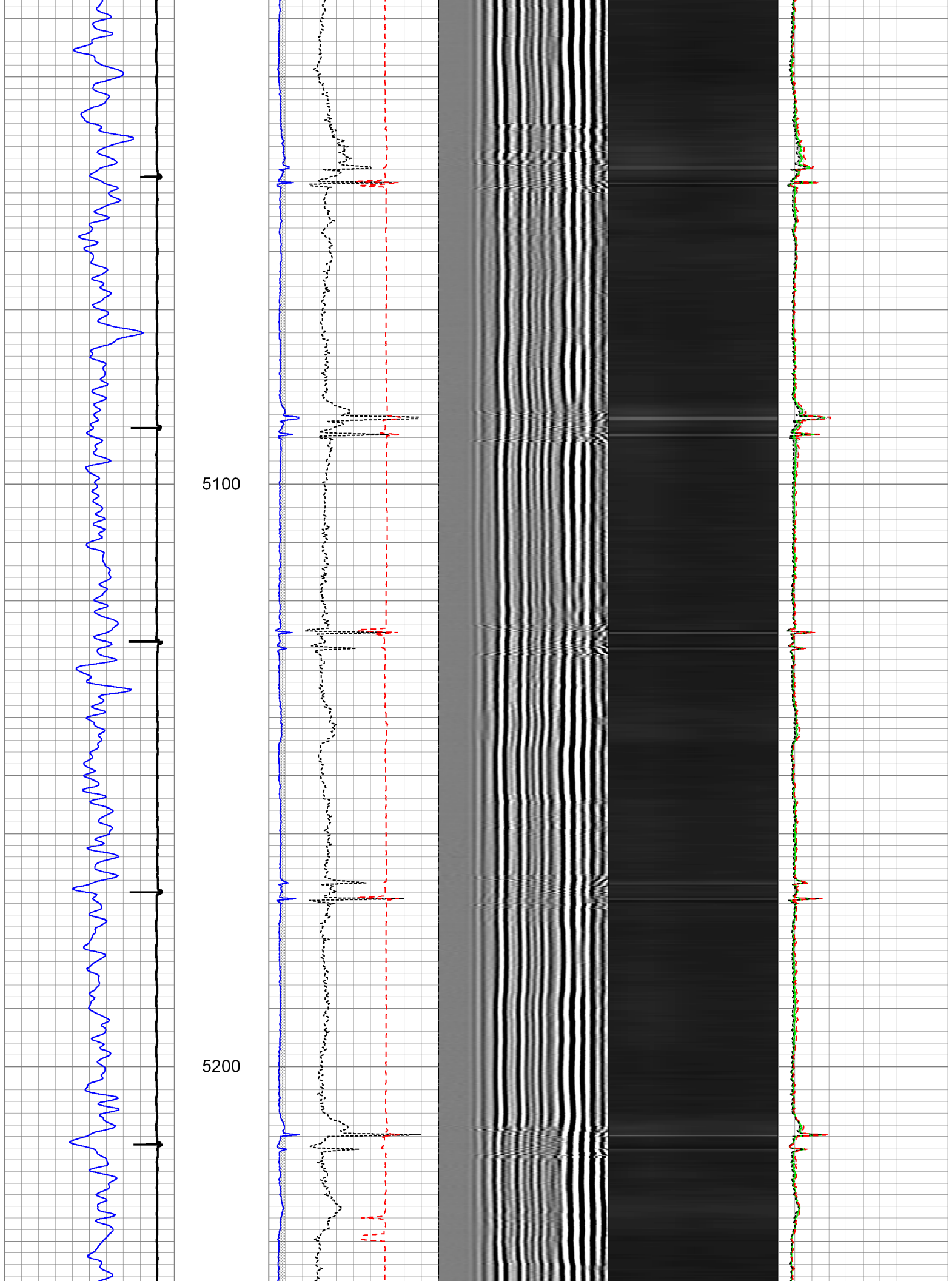


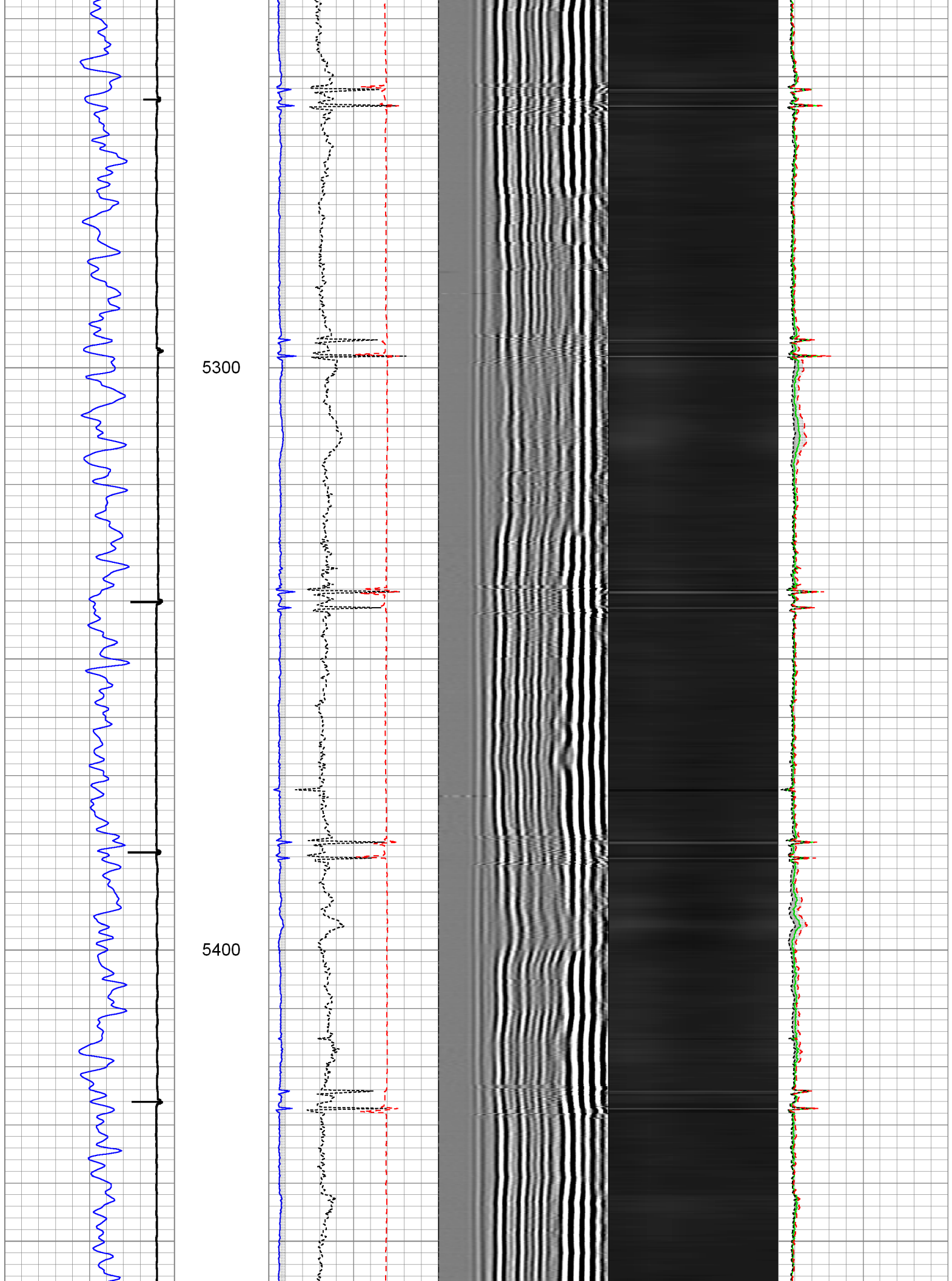
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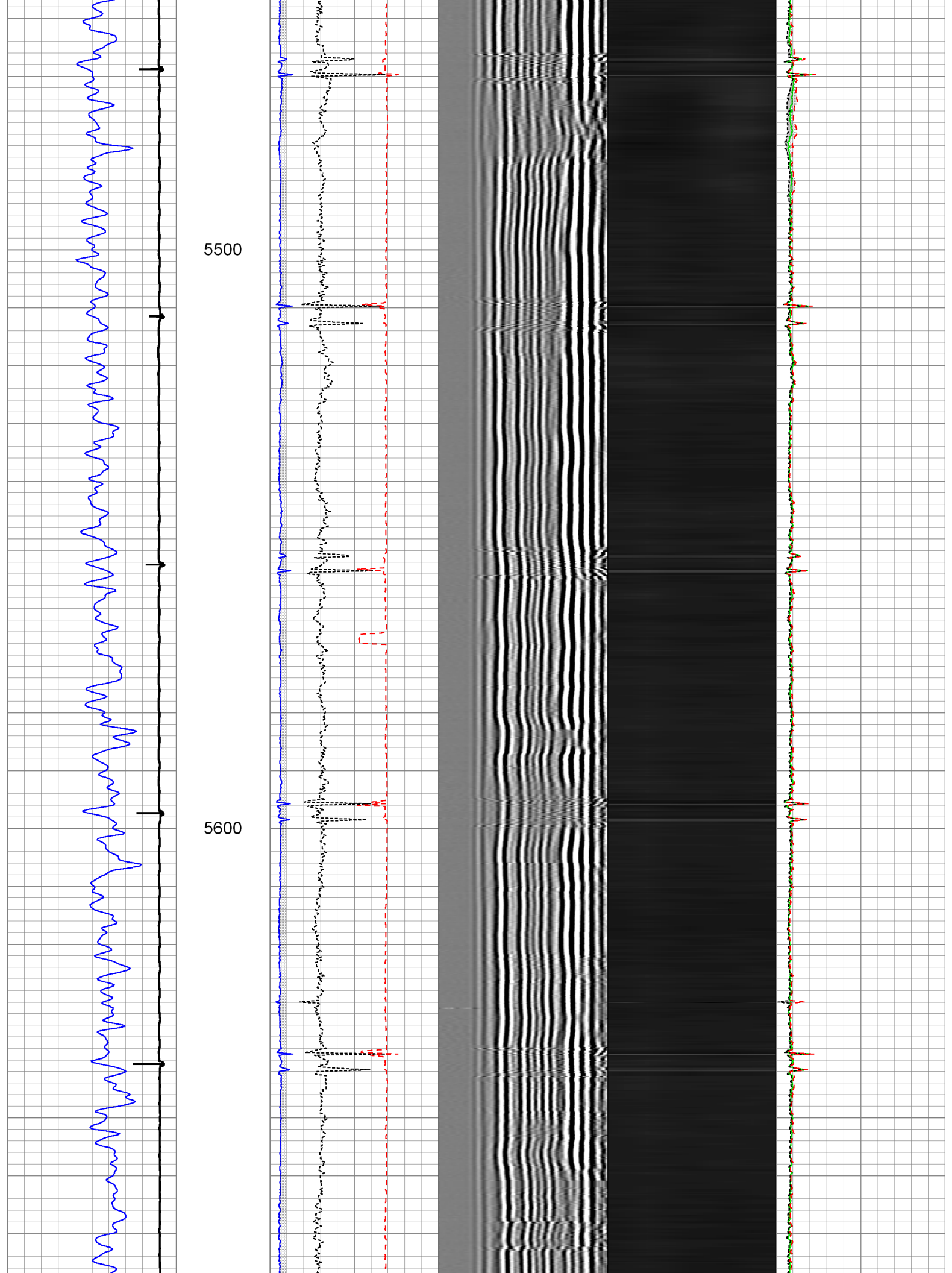
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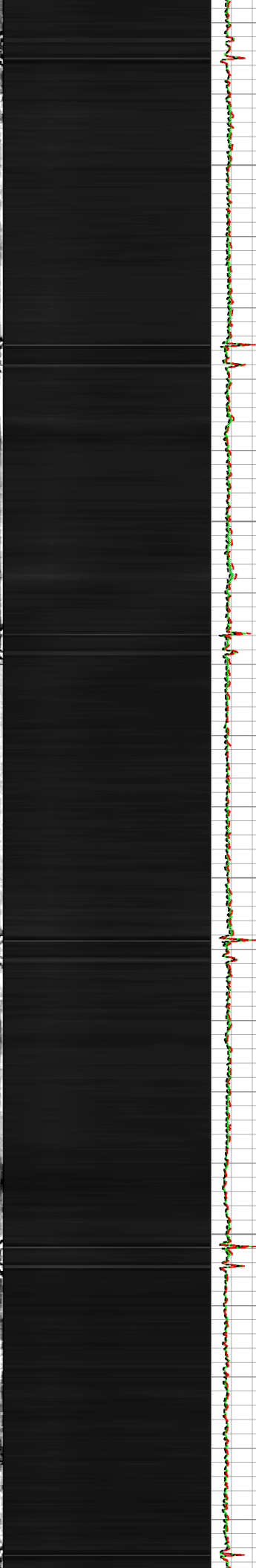
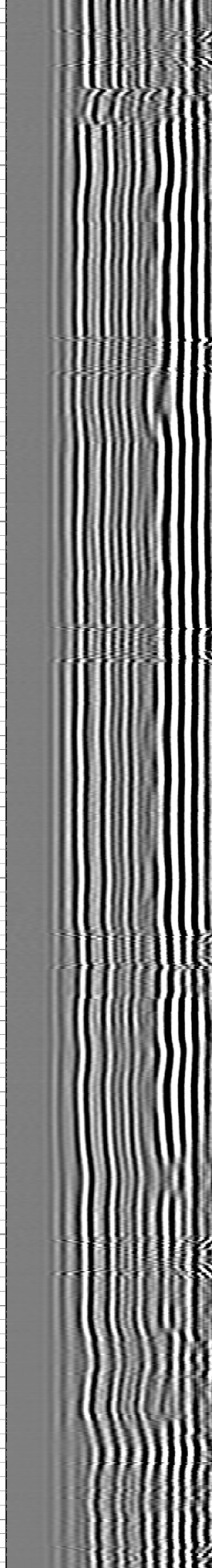
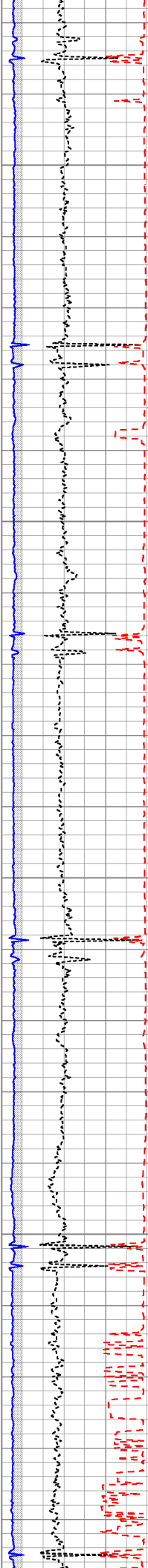






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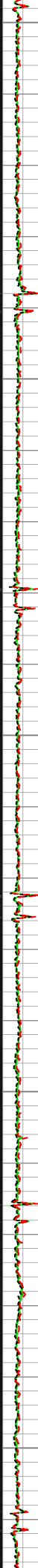
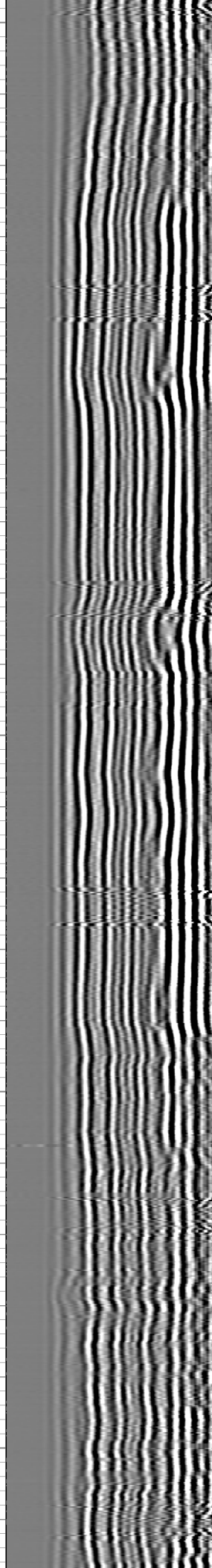
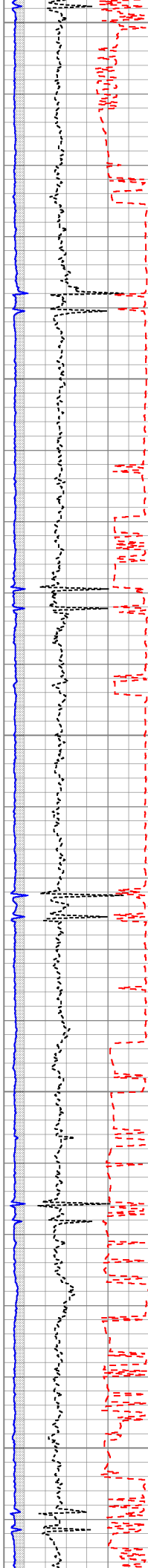
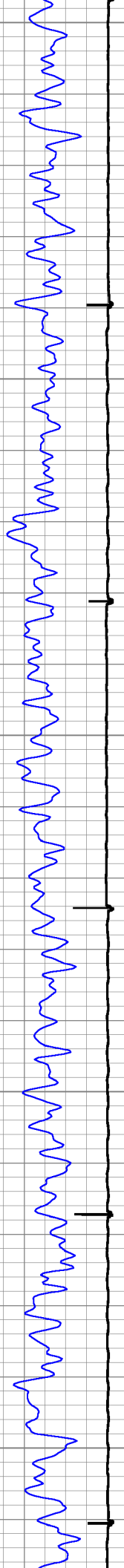
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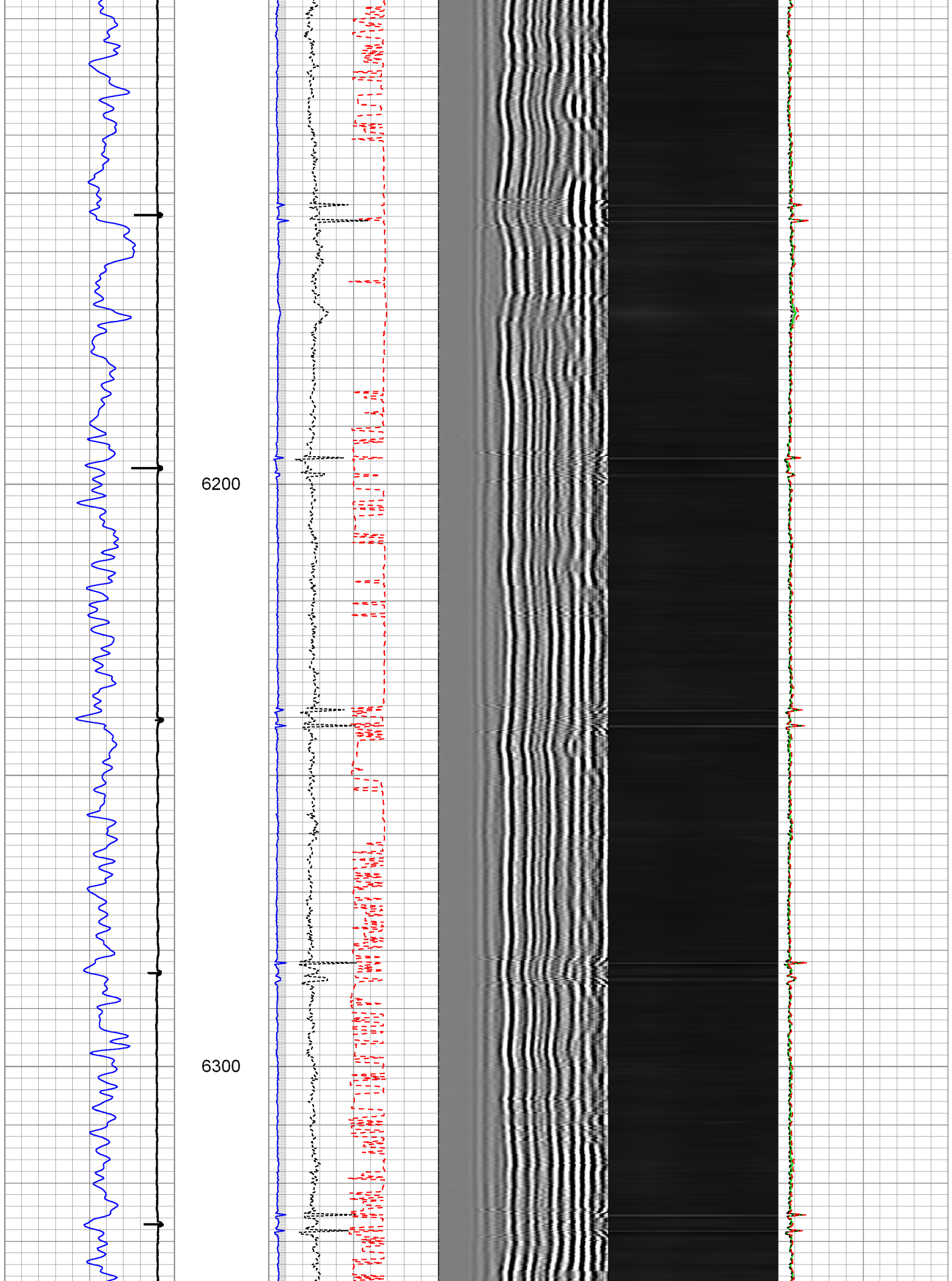


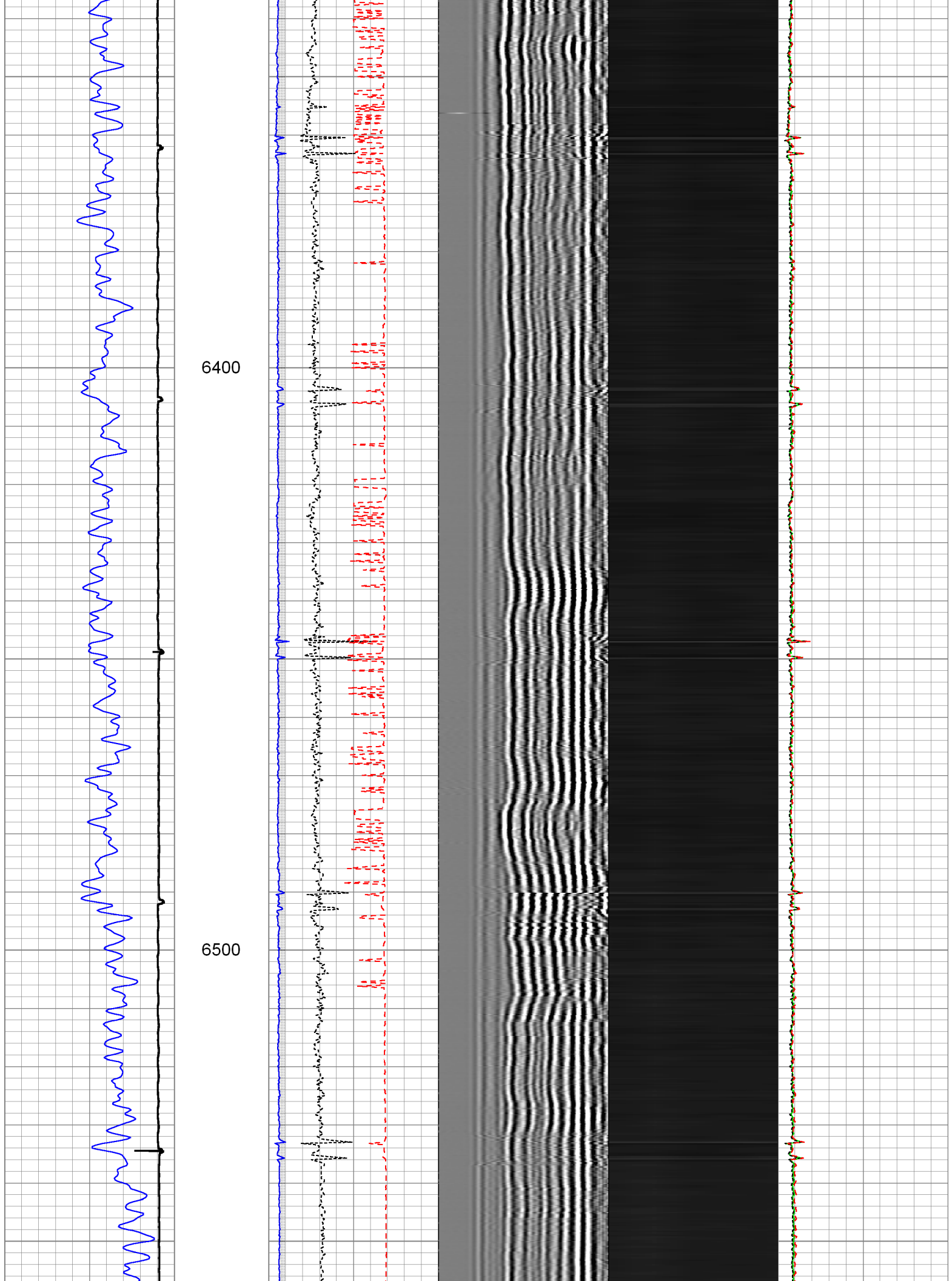
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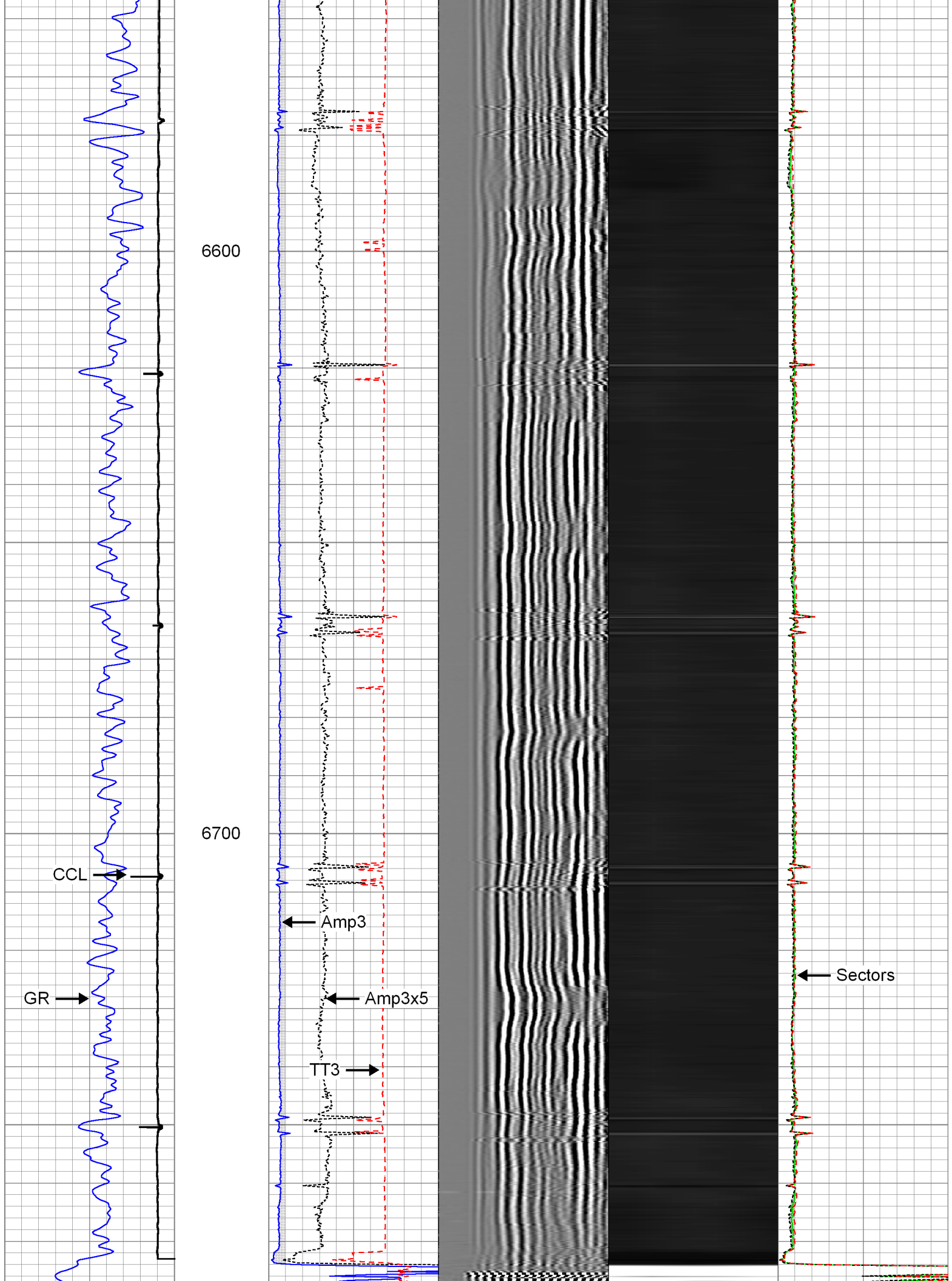
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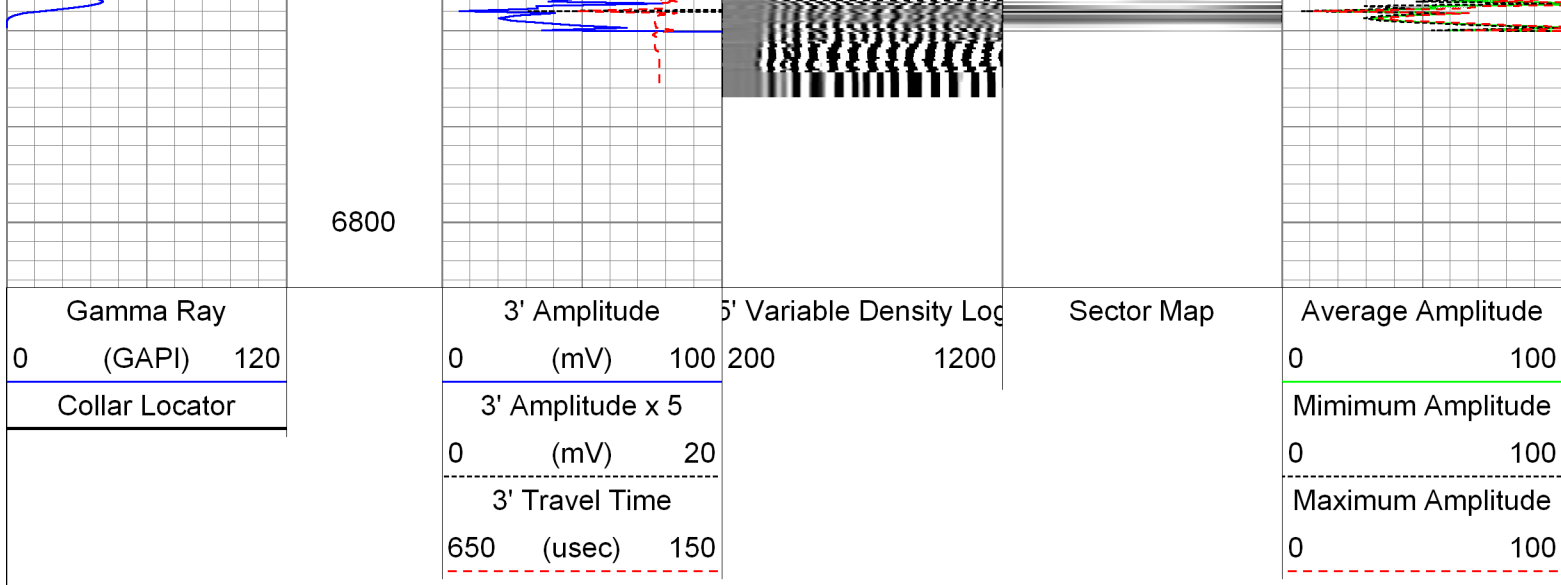
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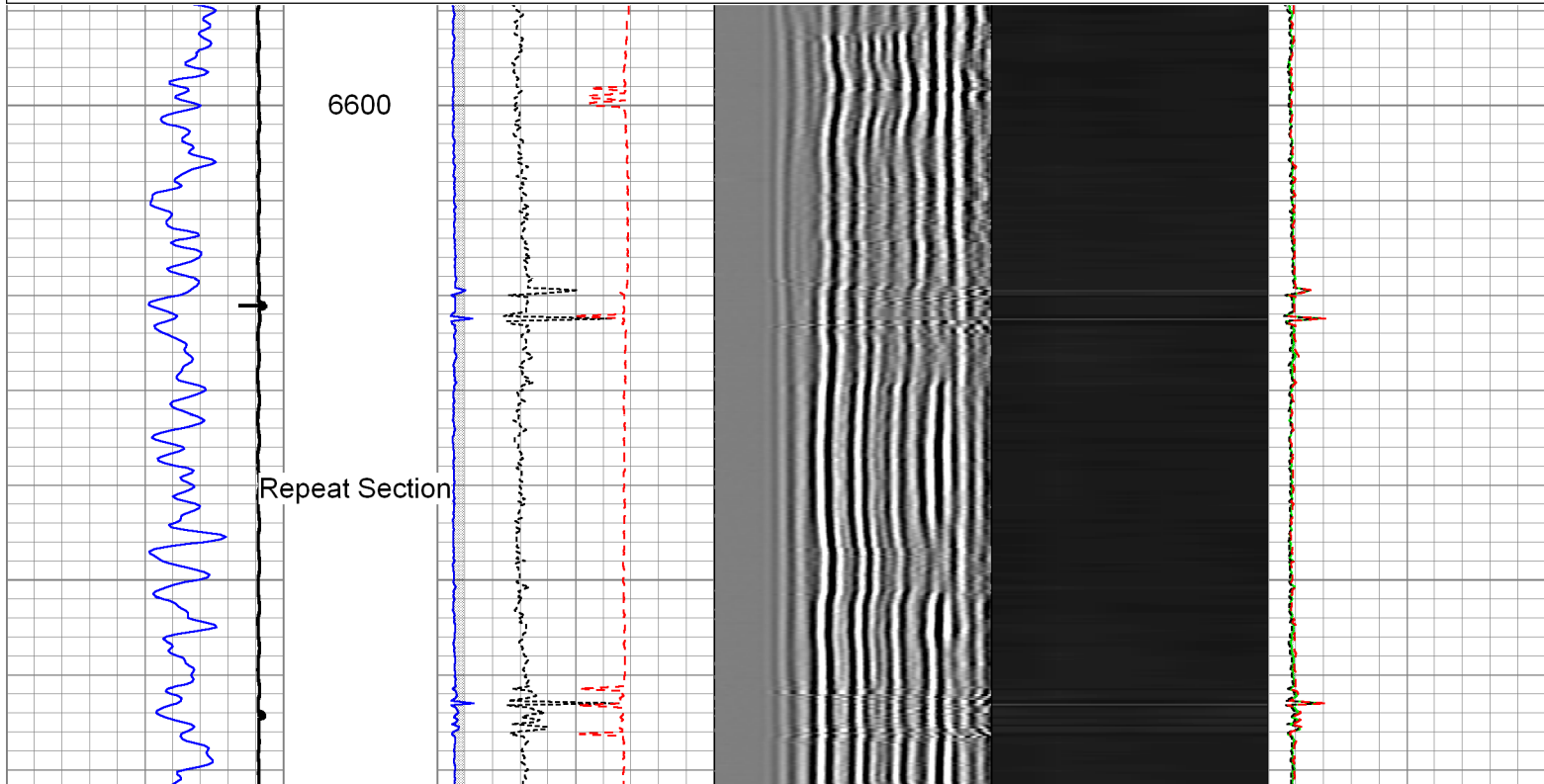
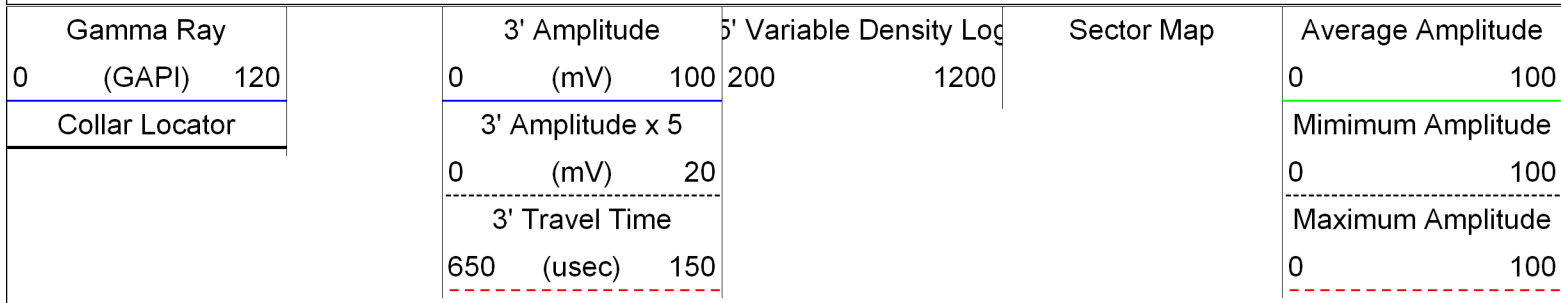


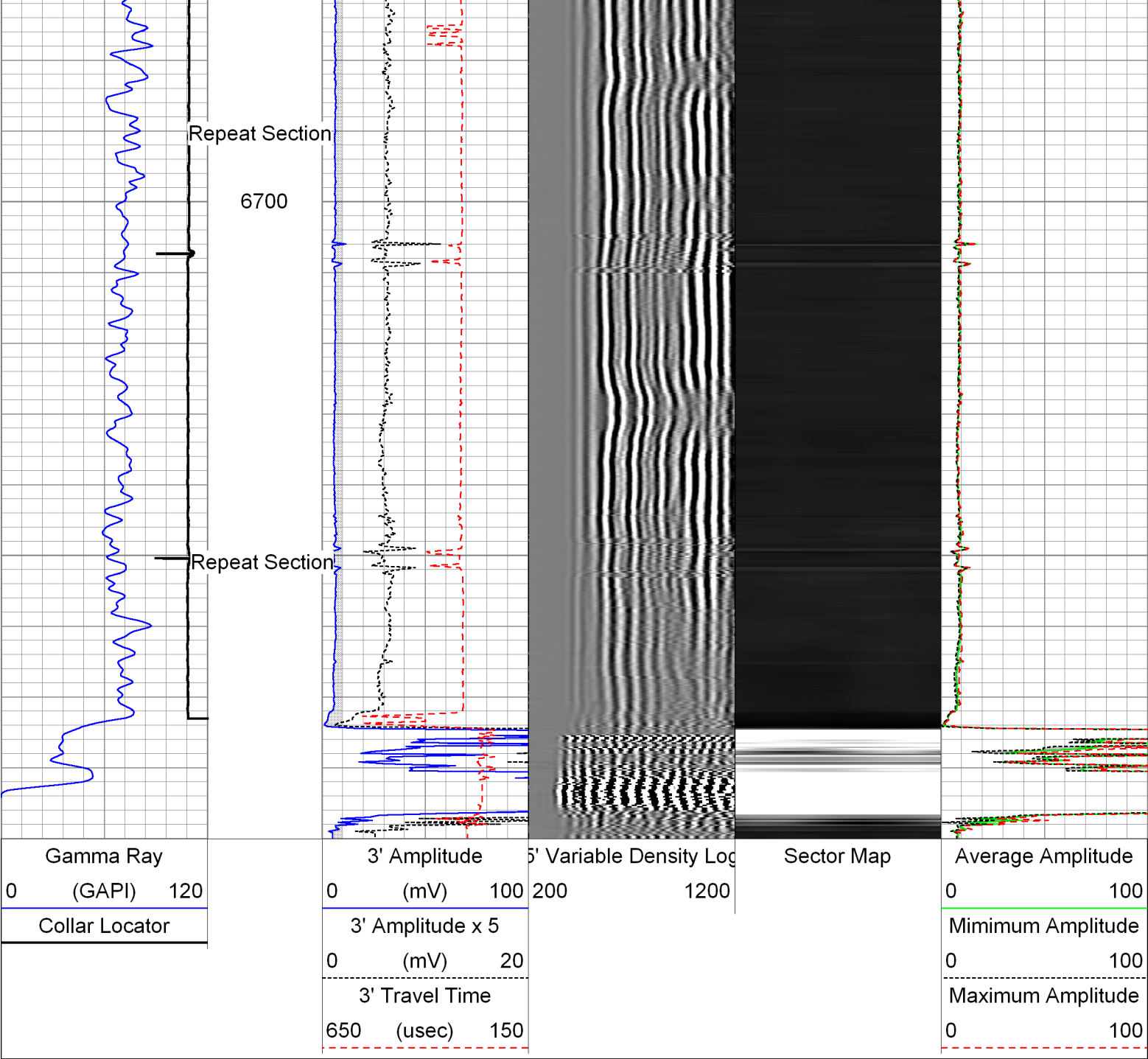




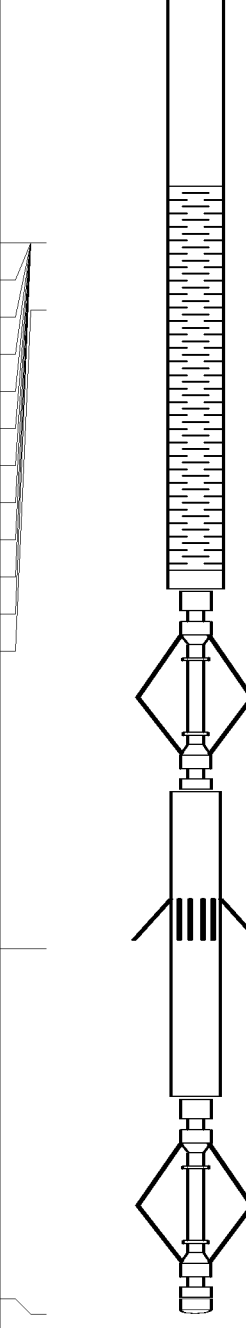
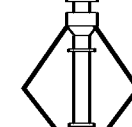
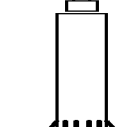
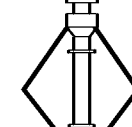
Repeat Pass

Database File: c:\warrior\data\0512338410\_anadarko\_badding 15n-35hz\_03-29-14\_mit\_rbl\0512338410\_anada  
Dataset Pathname: repeat  
Presentation Format: rpt007  
Dataset Creation: Sat Mar 29 13:44:46 2014 by Log Sondex V7.03  
Charted by: Depth in Feet scaled 1:240





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	23.67		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 (051219) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			PGR-020 (10013899) Production Gamma Ray	1.93	1.69	9.50
			PRC-057 (1101) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00

WVF3FT	15.85		RBT-004 (10012639in7) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
WVFS1	15.85					
WVFS2	15.85					
WVFS3	15.85					
WVFS4	15.85					
WVFS5	15.85					
WVFS6	15.85					
WVFS7	15.85					
WVFS8	15.85					
CBLTEMP	15.85		PRC-057 (1102) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
CBLROT	15.85					
WVF5FT	14.85					
MIT	5.41		MIT-042 (10014703) 40 Multifinger Imaging Tool	4.54	2.75	61.10
TSTAMP	0.00		PRC-057 (1037) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
			BUL-006 (218707) Bullnose Terminator	0.22	1.69	1.20
Dataset: 0512338410_Anadarko_Badding 15N-35HZ_03-29-14_MIT_RBL.db: field/well/run1/main Total Length: 27.97 ft Total Weight: 316.30 lb O.D. 3.13 in						

Calibration Report			
Database File:	C:\Warrior\Data\0512338410_Anadarko_Badding 15N-35HZ_03-29-14_MIT_RBL\0512338410_Anadarko_Badding 15N-35HZ_03-29-14_MIT_RBL		
Dataset Pathname:	main		
Dataset Creation:	Sat Mar 29 13:57:46 2014 by Log Sondex V7.03		
Multi-finger Imaging Tool Calibration Report			
Serial Number:	10014703		
Number of Fingers:	40		
Tool Model:	042		
Inclinometer Calibration Report			
Performed:	Fri Sep 20 11:47:48 2013		
Calibration Angle:	45		
Vertical:	Inc X	Inc Y	
Finger 1 up:	1963	1960	
	1718	1727	

Finger 1 up:		1748	1727
Finger 31 up:		2195	1742
Finger 21 up:		2178	2188
Finger 11 up:		1727	2173
Sensitivity ratio:	1.00706		
X-axis angle:	132.825		
Deviation const.:	317.775		

### Finger Calibration Report

Performed: Sat Mar 29 14:00:18 2014

Ring size:	4		5		6		7
(in)		Sens		Sens		Sens	
Finger 01:	1066	394.0	1460	360.0	1820	402.0	2222
Finger 02:	1018	398.0	1416	374.0	1790	419.0	2209
Finger 03:	1025	384.0	1409	366.0	1775	406.0	2181
Finger 04:	983	390.0	1373	387.0	1760	425.0	2185
Finger 05:	1022	372.0	1394	365.0	1759	388.0	2147
Finger 06:	1017	380.0	1397	382.0	1779	400.0	2179
Finger 07:	1031	376.0	1407	378.0	1785	388.0	2173
Finger 08:	993	375.0	1368	396.0	1764	404.0	2168
Finger 09:	1057	374.0	1431	386.0	1817	380.0	2197
Finger 10:	1030	369.0	1399	393.0	1792	384.0	2176
Finger 11:	1007	366.0	1373	396.0	1769	391.0	2160
Finger 12:	1089	365.0	1454	379.0	1833	358.0	2191
Finger 13:	1022	360.0	1382	398.0	1780	389.0	2169
Finger 14:	1011	374.0	1385	417.0	1802	404.0	2206
Finger 15:	985	373.0	1358	421.0	1779	408.0	2187
Finger 16:	1023	369.0	1392	414.0	1806	398.0	2204
Finger 17:	1054	364.0	1418	399.0	1817	389.0	2206
Finger 18:	1078	373.0	1451	398.0	1849	387.0	2236
Finger 19:	1045	376.0	1421	416.0	1837	399.0	2236
Finger 20:	959	376.0	1335	426.0	1761	418.0	2179
Finger 21:	1050	376.0	1426	410.0	1836	408.0	2244
Finger 22:	1028	384.0	1412	421.0	1833	413.0	2246
Finger 23:	1136	366.0	1502	386.0	1888	386.0	2274
Finger 24:	1040	394.0	1434	423.0	1857	420.0	2277
Finger 25:	1043	389.0	1432	415.0	1847	429.0	2276
Finger 26:	1070	392.0	1462	406.0	1868	413.0	2281
Finger 27:	1082	387.0	1469	391.0	1860	422.0	2282
Finger 28:	1041	401.0	1442	404.0	1846	436.0	2282
Finger 29:	1017	406.0	1423	411.0	1834	453.0	2287
Finger 30:	1010	403.0	1413	405.0	1818	450.0	2268
Finger 31:	1067	401.0	1468	384.0	1852	426.0	2278
Finger 32:	1008	405.0	1413	390.0	1803	447.0	2250
Finger 33:	1022	409.0	1431	388.0	1819	443.0	2262
Finger 34:	1015	409.0	1424	389.0	1813	450.0	2263
Finger 35:	1074	396.0	1470	364.0	1834	419.0	2253
Finger 36:	1010	404.0	1414	376.0	1790	441.0	2231
Finger 37:	1117	393.0	1510	353.0	1863	404.0	2267
Finger 38:	1070	394.0	1464	361.0	1825	416.0	2241
Finger 39:	1023	401.0	1424	367.0	1791	426.0	2217
Finger 40:	956	406.0	1362	390.0	1752	446.0	2198

### Segmented Cement Bond Log Calibration Report

Serial Number:	10012639in7
Tool Model:	004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	16.460 ft

Master Calibration, performed Sat Mar 29 14:02:16 2014:

Raw (v)	Calibrated (mv)	Results
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	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.001	0.640	0.800	62.165	96.018	0.704
5FT	-0.004	0.686	0.800	62.165	88.963	1.126
S1	0.001	0.680	0.000	100.000	147.389	-0.214
S2	0.000	0.621	0.000	100.000	160.953	0.000
S3	0.000	0.582	0.000	100.000	171.924	-0.057
S4	-0.001	0.579	0.000	100.000	172.329	0.217
S5	0.001	0.613	0.000	100.000	163.334	-0.181
S6	0.001	0.667	0.000	100.000	150.056	-0.145
S7	0.000	0.709	0.000	100.000	140.974	-0.019
S8	-0.000	0.716	0.000	100.000	139.672	0.002

Gamma Ray Calibration Report

Serial Number:	10013899	
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	Badding 15N-35HZ
	Field	Wattenberg
	County	Weld
	State	Colorado