



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company				Kerr-McGee Oil & Gas Onshore, L.P.				
Well				Badding 16C-35HZ				
Field				Wattenberg				
County				Weld				
State				Colorado				
Location:				API # : 05-123-38337				
SHL: 350' FSL 652' FEL Lat/Long: 40.103004/-104.737199				Other Services Gauge Ring MIT				
SEC 26 TWP 2N RGE 66W				Elevation				
Permanent Datum		Ground Level		Elevation		5115'		
Log Measured From		Kelly Bushing		14 FT		K.B. 5129' D.F. 5128' G.L. 5115'		
Drilling Measured From		Kelly Bushing						
Date				28-MAR-2014				
Run Number				Two				
Depth Driller				---				
Depth Logger				Not Tagged				
Bottom Logged Interval				6986 FT				
Top Log Interval				Surface				
Open Hole Size				8.750"				
Type Fluid				Water				
Density / Viscosity				8.4 lbm/gal				
Max. Recorded Temp.				219°F				
Estimated Cement Top				48 FT				
Time Well Ready				ROA				
Time Logger on Bottom				10:00				
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	Size	Weight	From	To
Casing Record		Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom		
Surface Casing		9-5/8"	36#	J-55	Surface	1322 FT		
Intermediate #1		7"	26#	HCP-110 LTC	Surface	7571 FT		
Intermediate #2								
Liner		4-1/2"	11.6#	P-110	6950 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 @ 6950 FT
RCBL-CIL ran at 2200 PSI surface induced pressure.
Estimated Cement Top recorded at 48 FT

Thank you for choosing FMC Technologies Completion Services, Inc.

Main Pass



Recorded With 2200 PSI Surface Induced Pressure

Database File: 0512338337_anadarko_badding 16c-35hz_03-28-14_mit_rbl.db

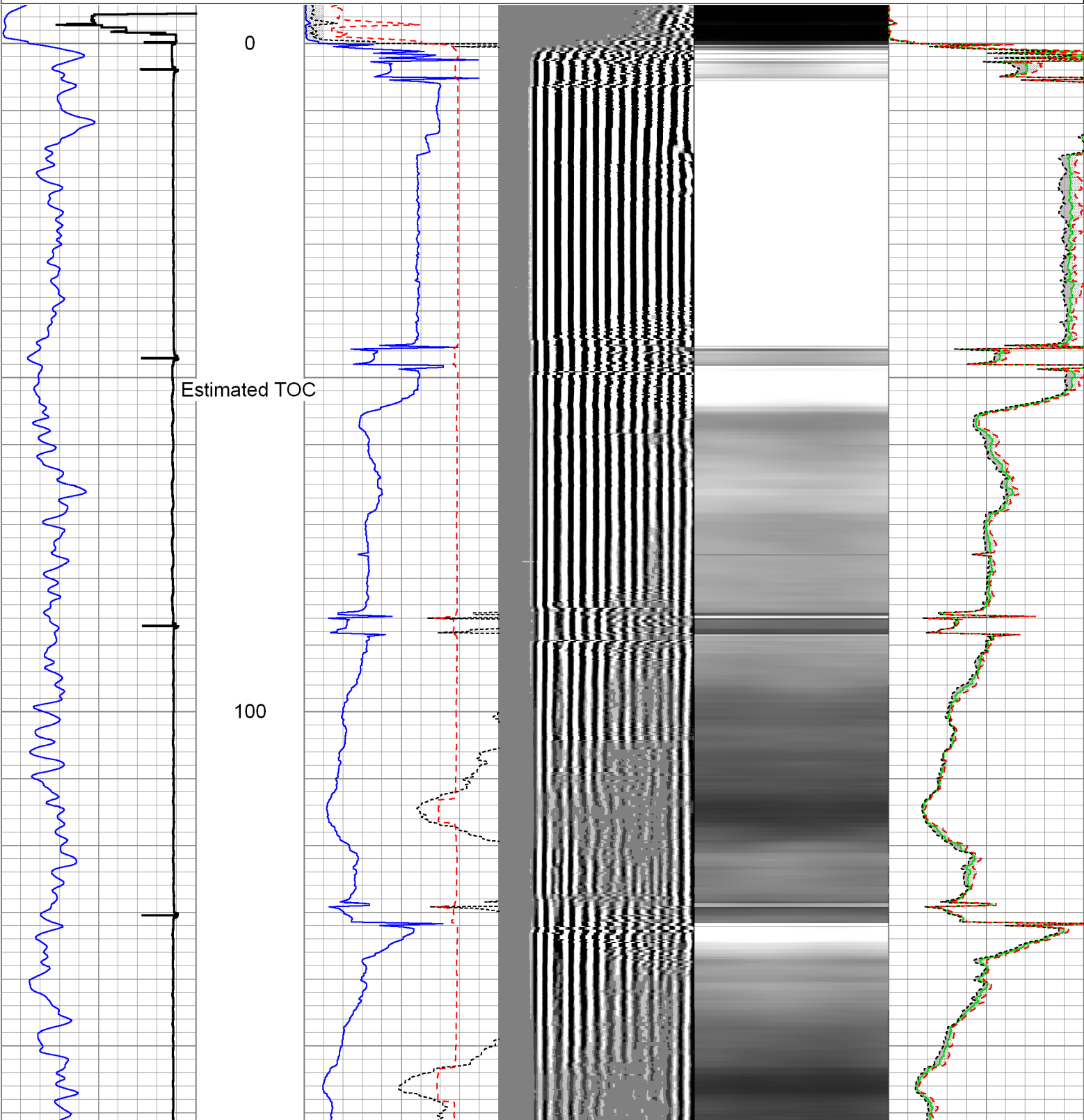
Dataset Pathname: main

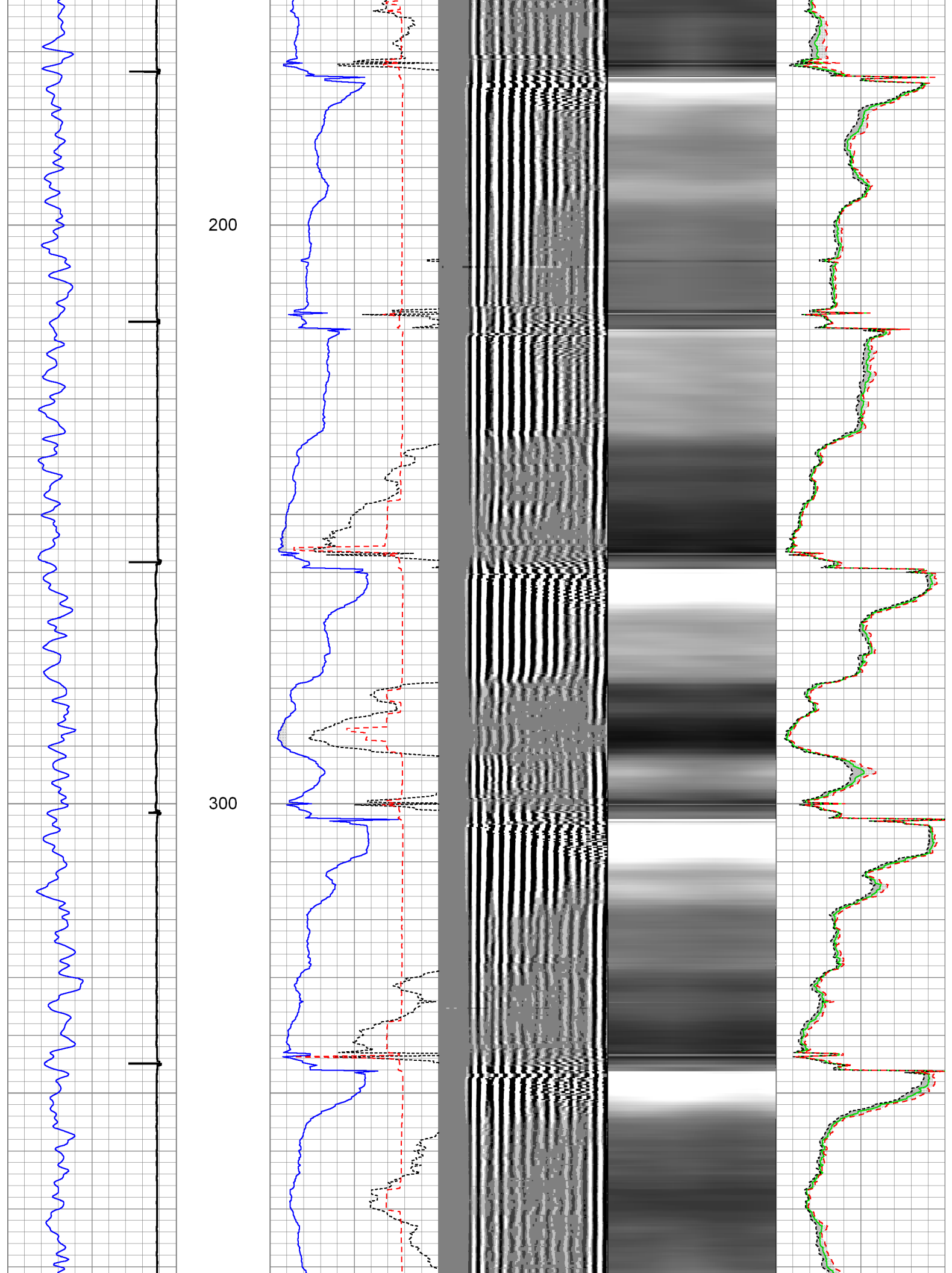
Presentation Format: rbt007

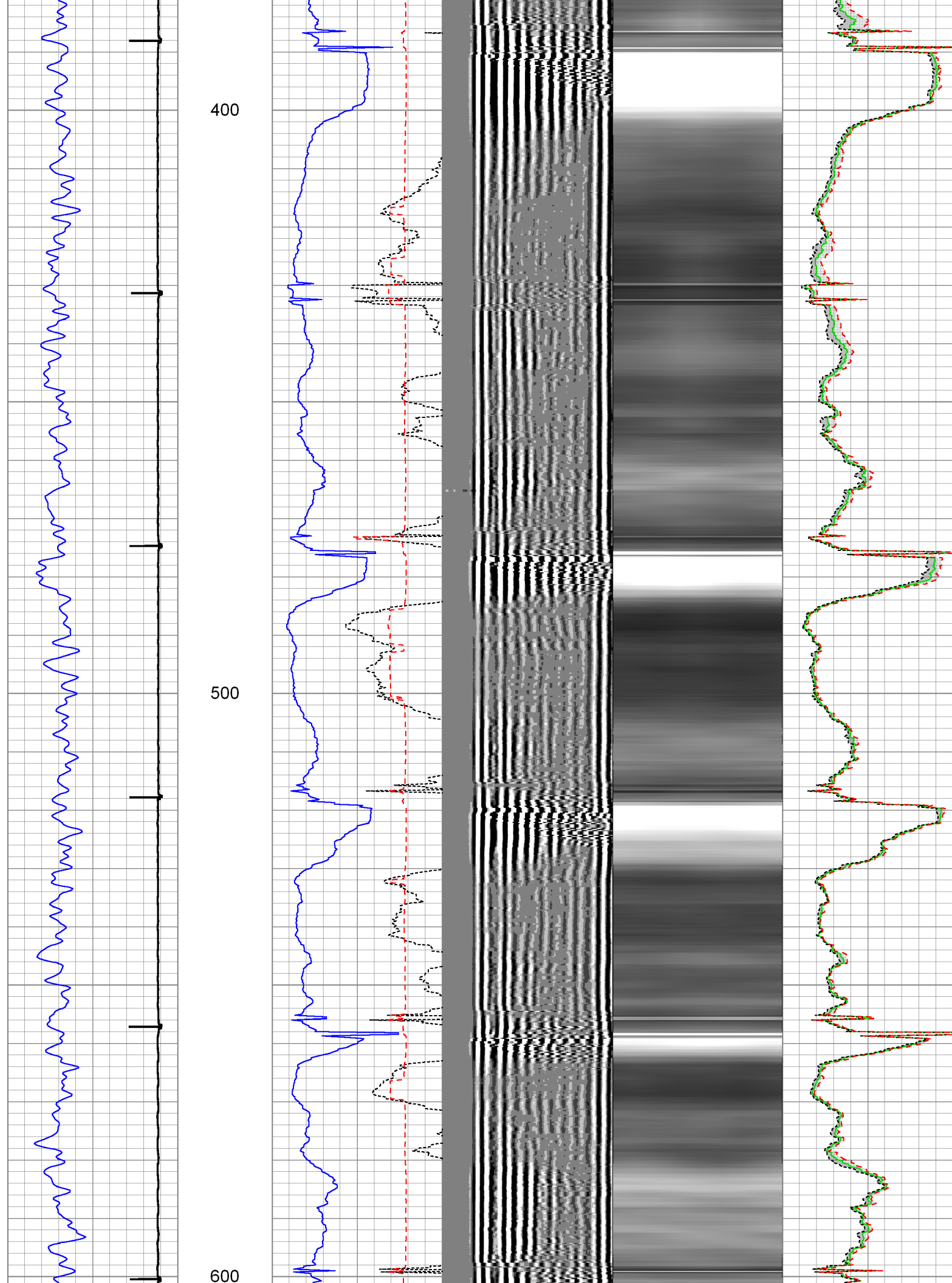
Dataset Creation: Fri Mar 28 09:06:27 2014 by Log Sondex V7.03

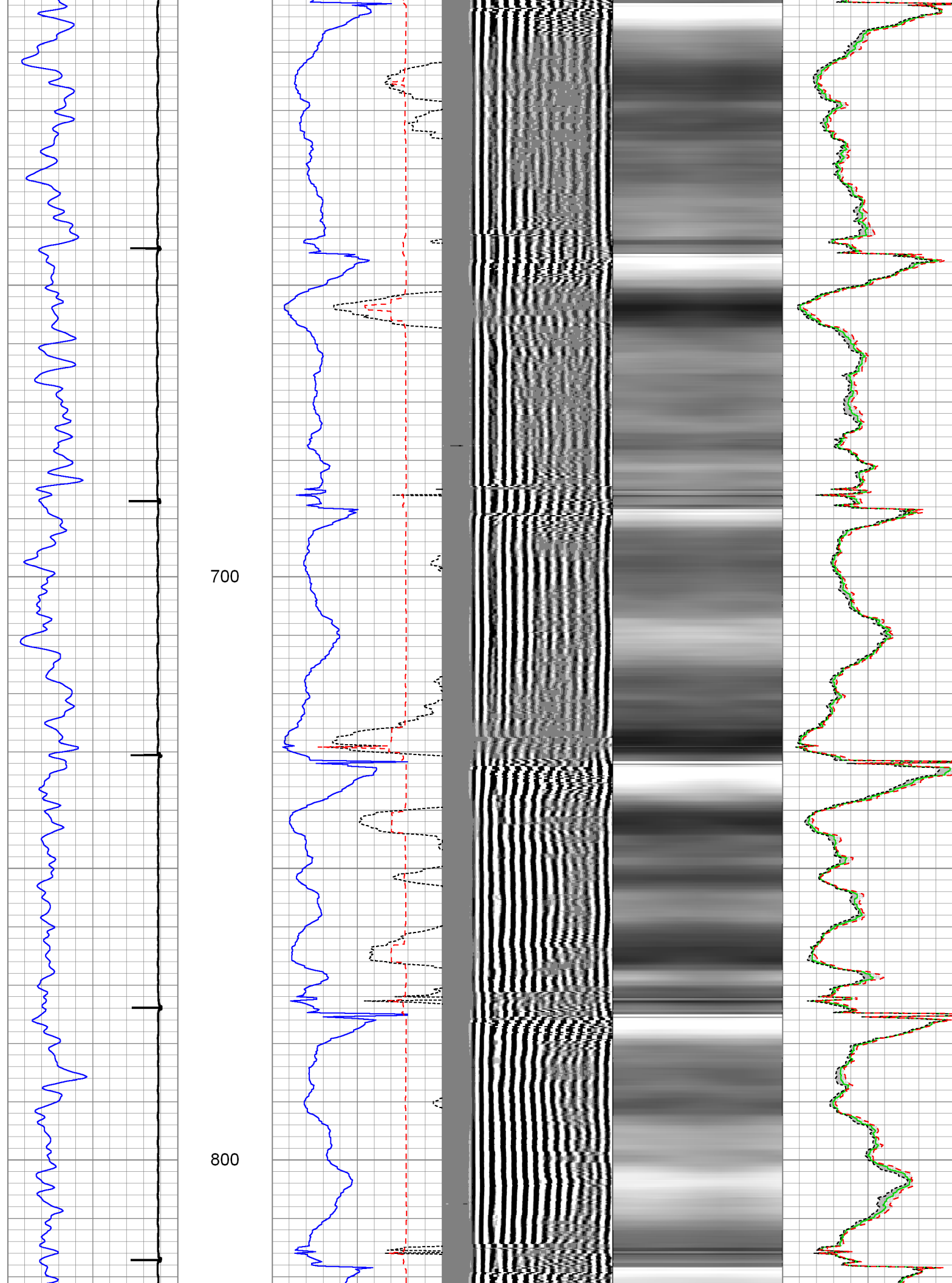
Charted by: Depth in Feet scaled 1:240

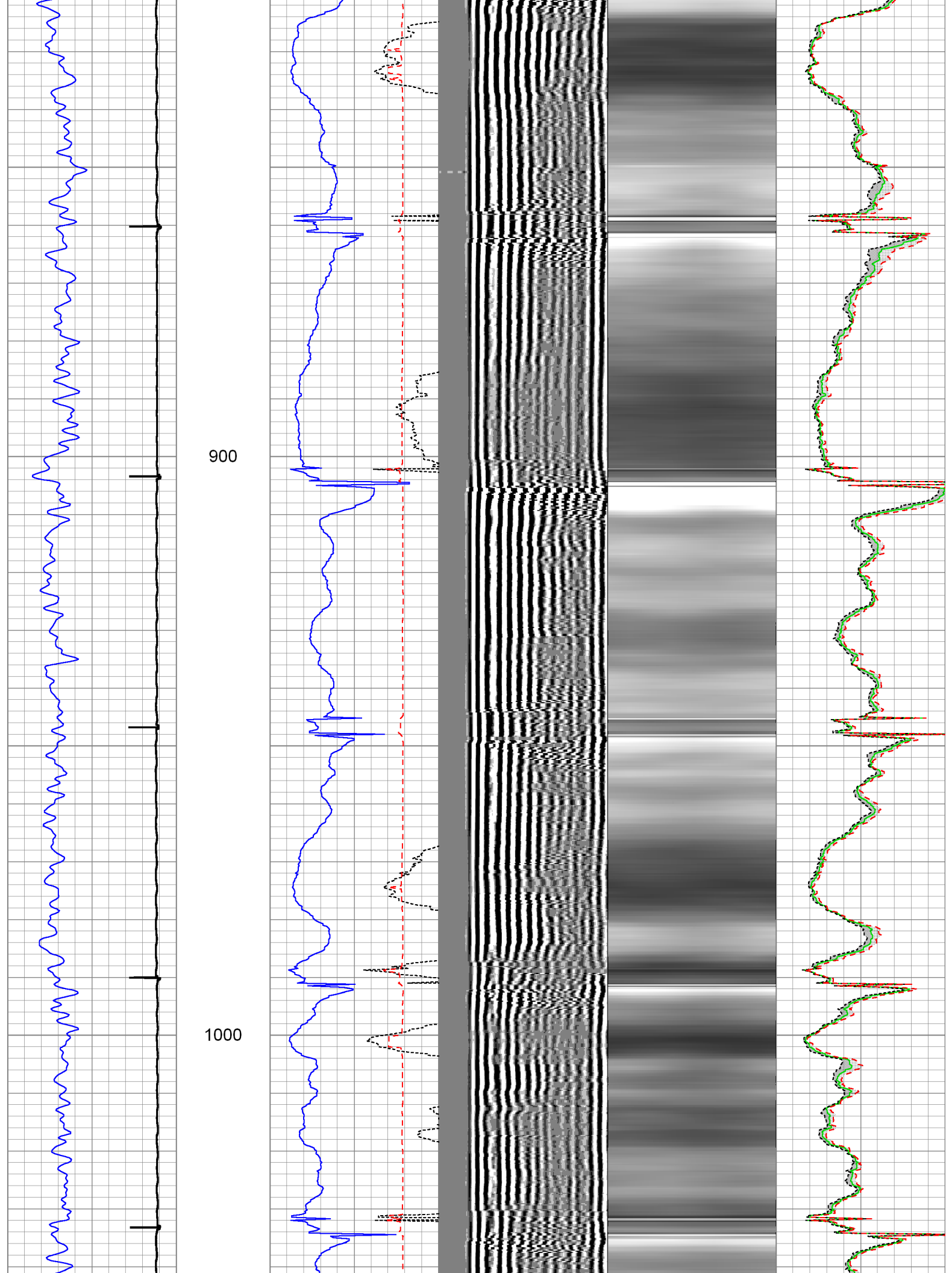
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
	3' Travel Time			Maximum Amplitude
	650 (usec) 150			0 100





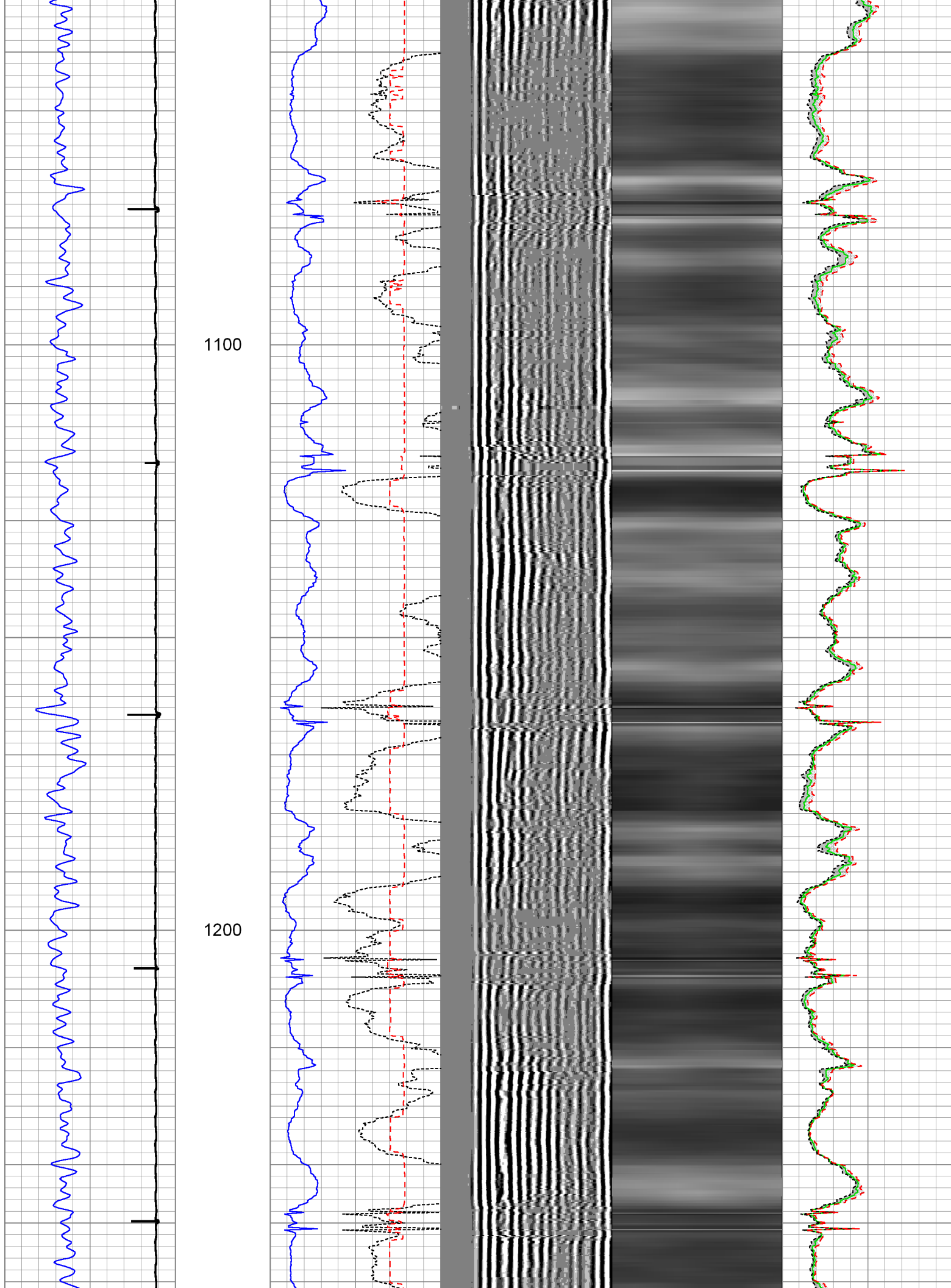






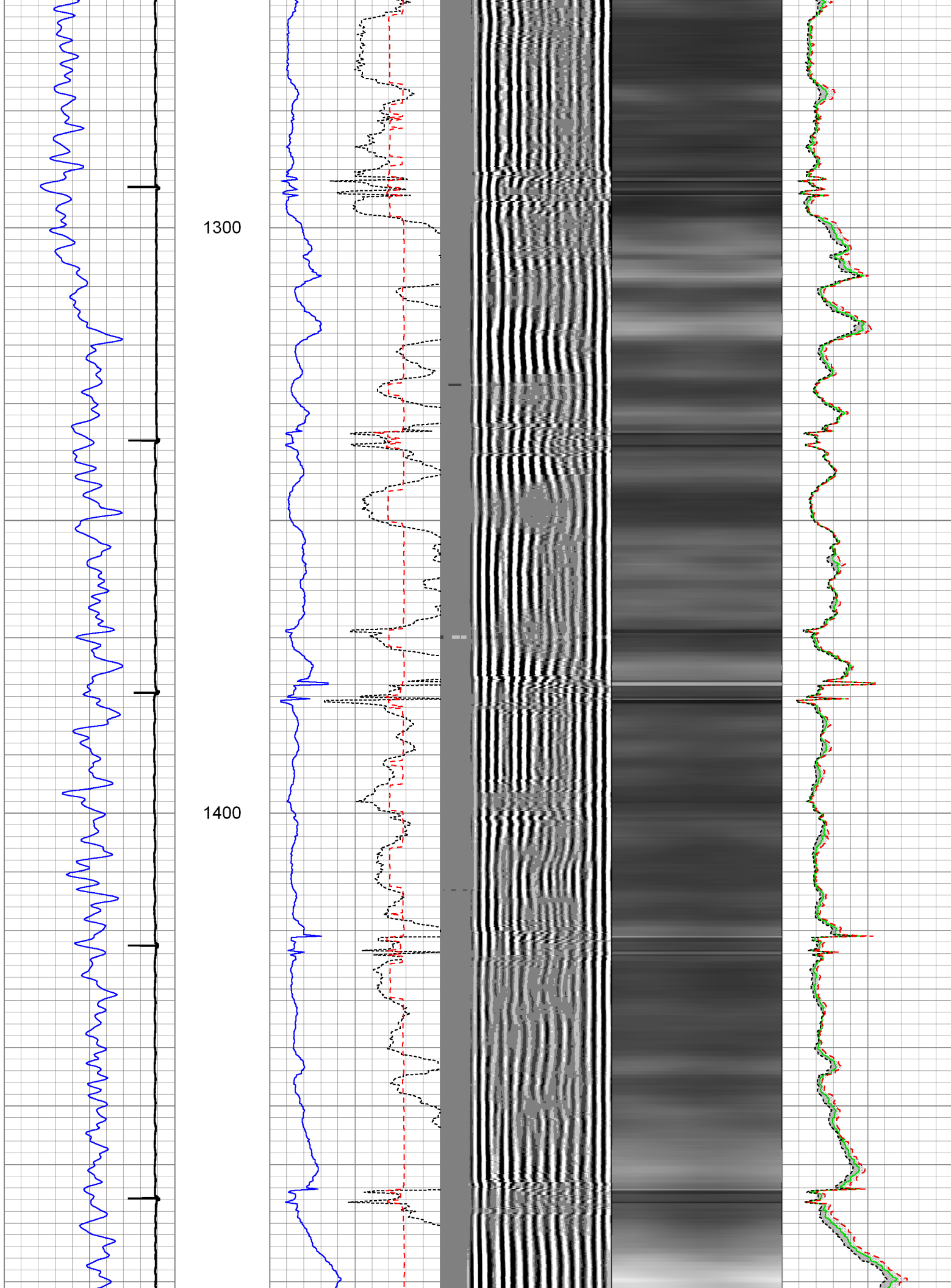
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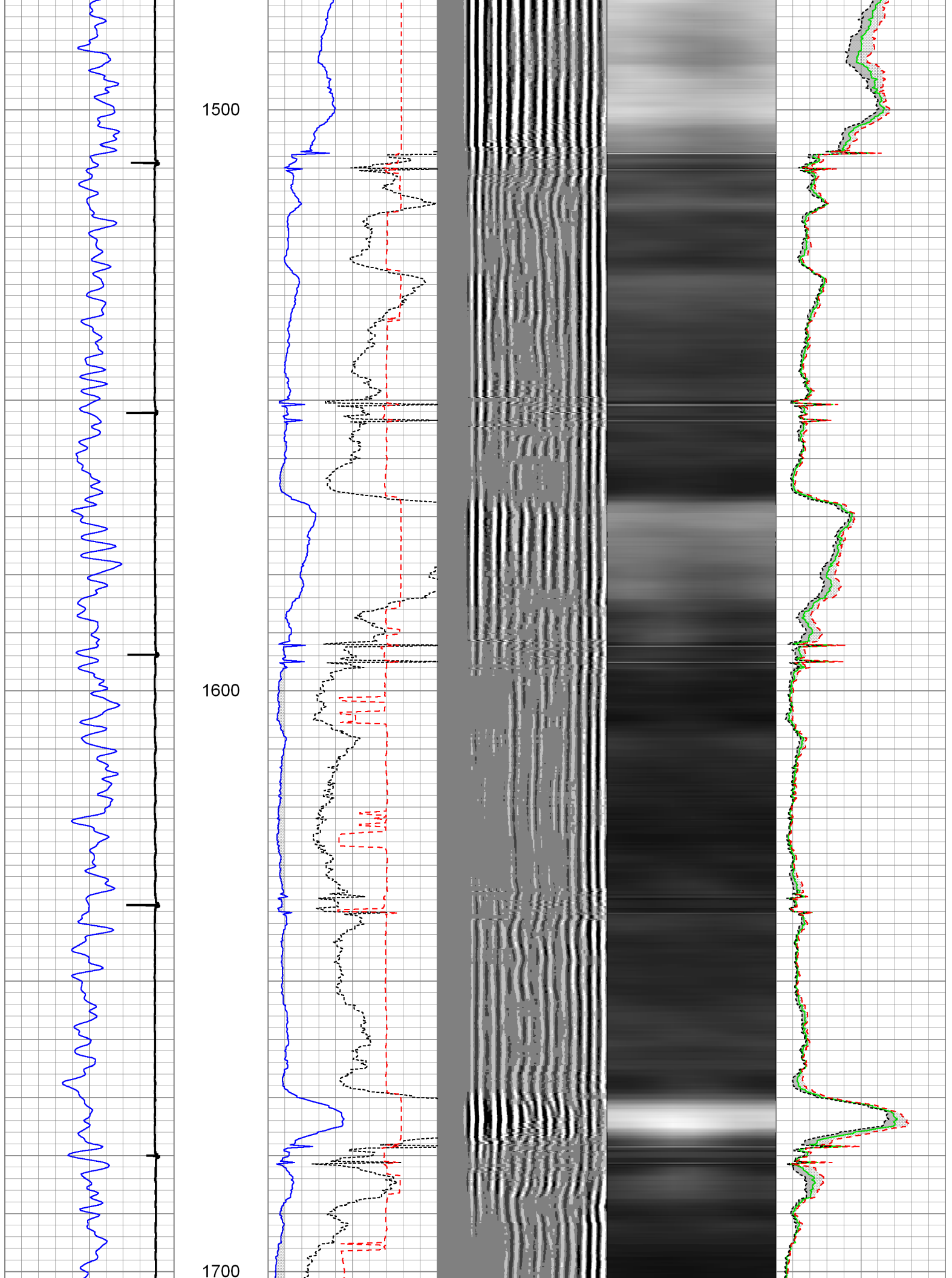
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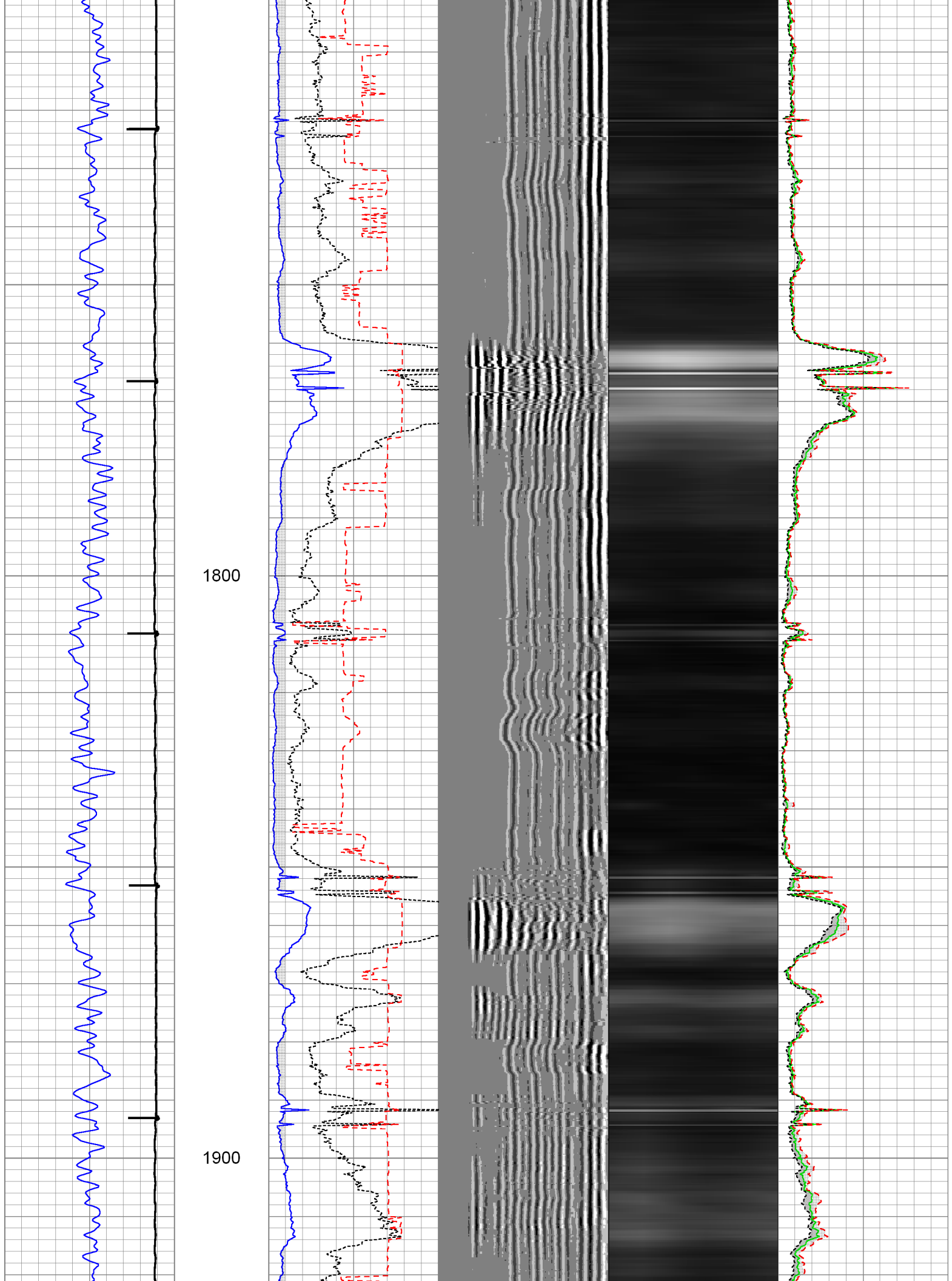


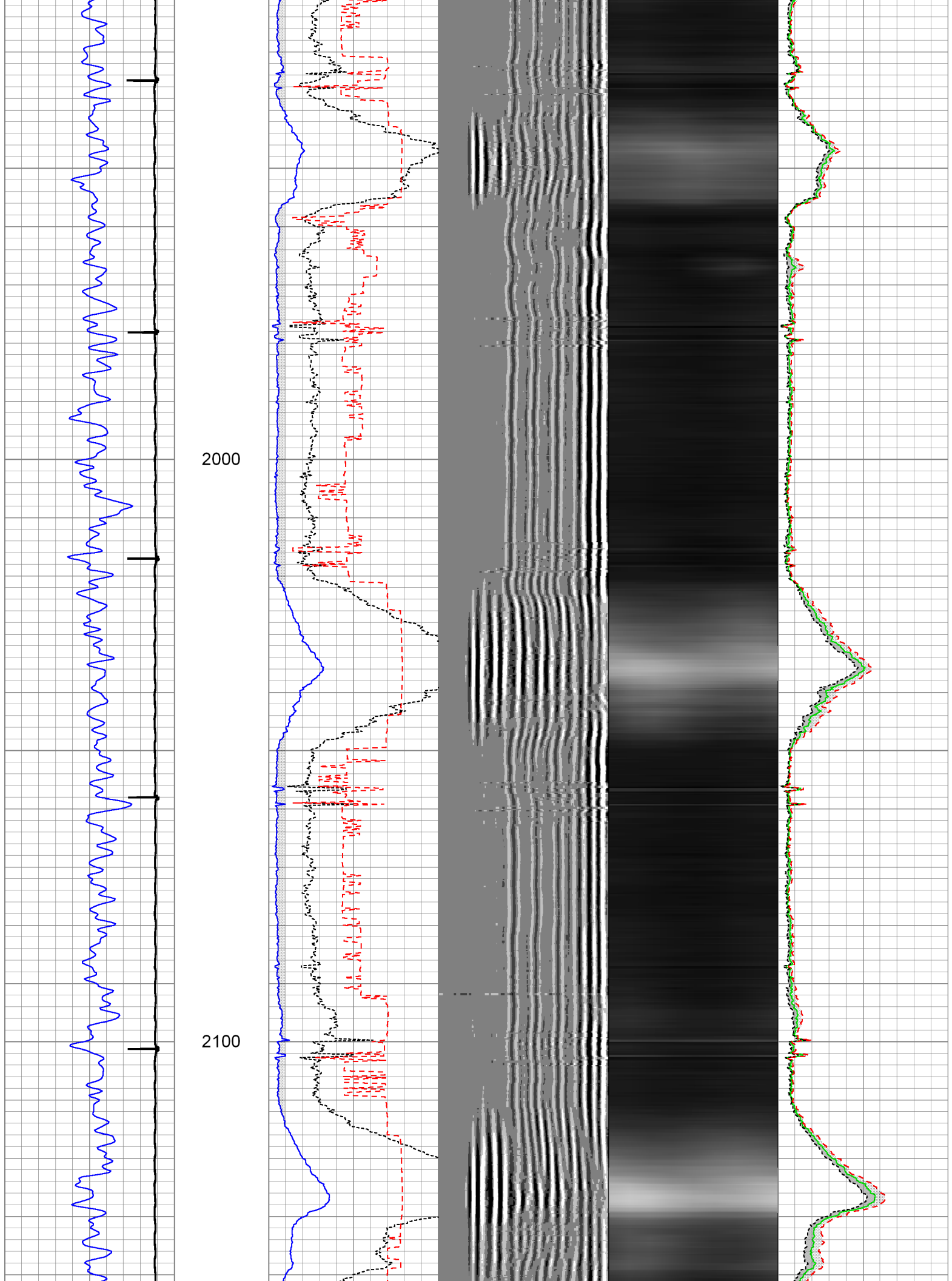
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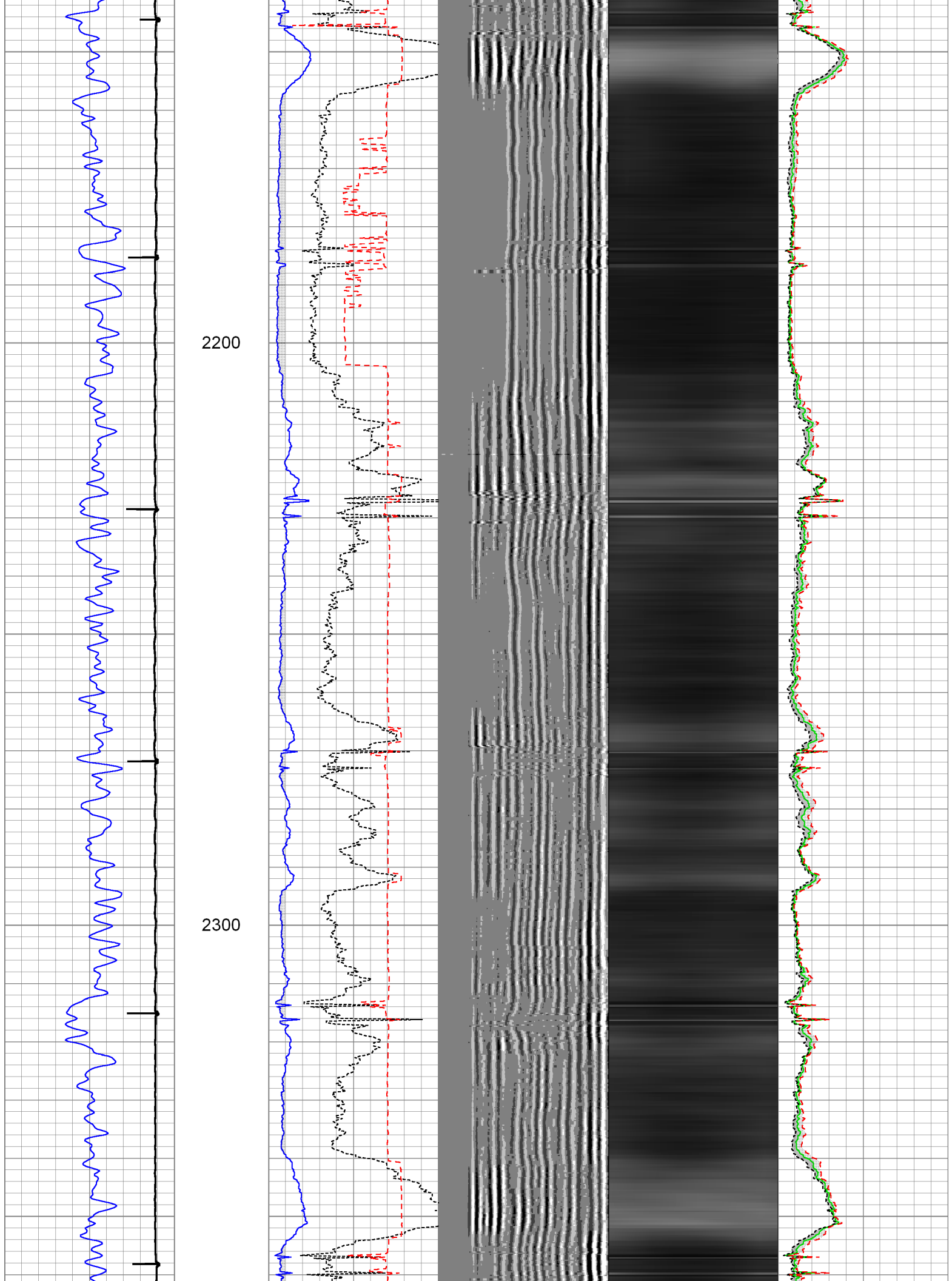
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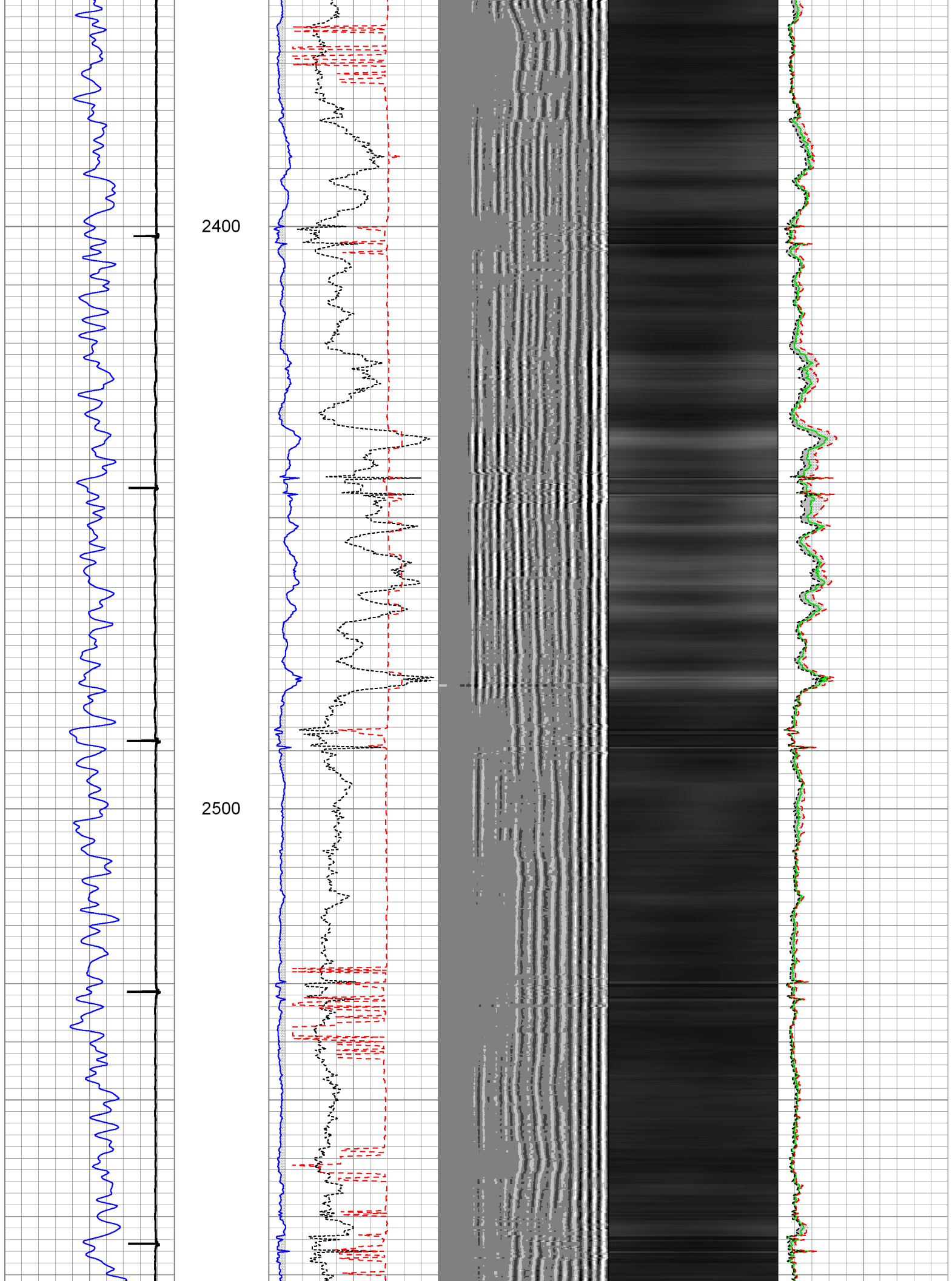






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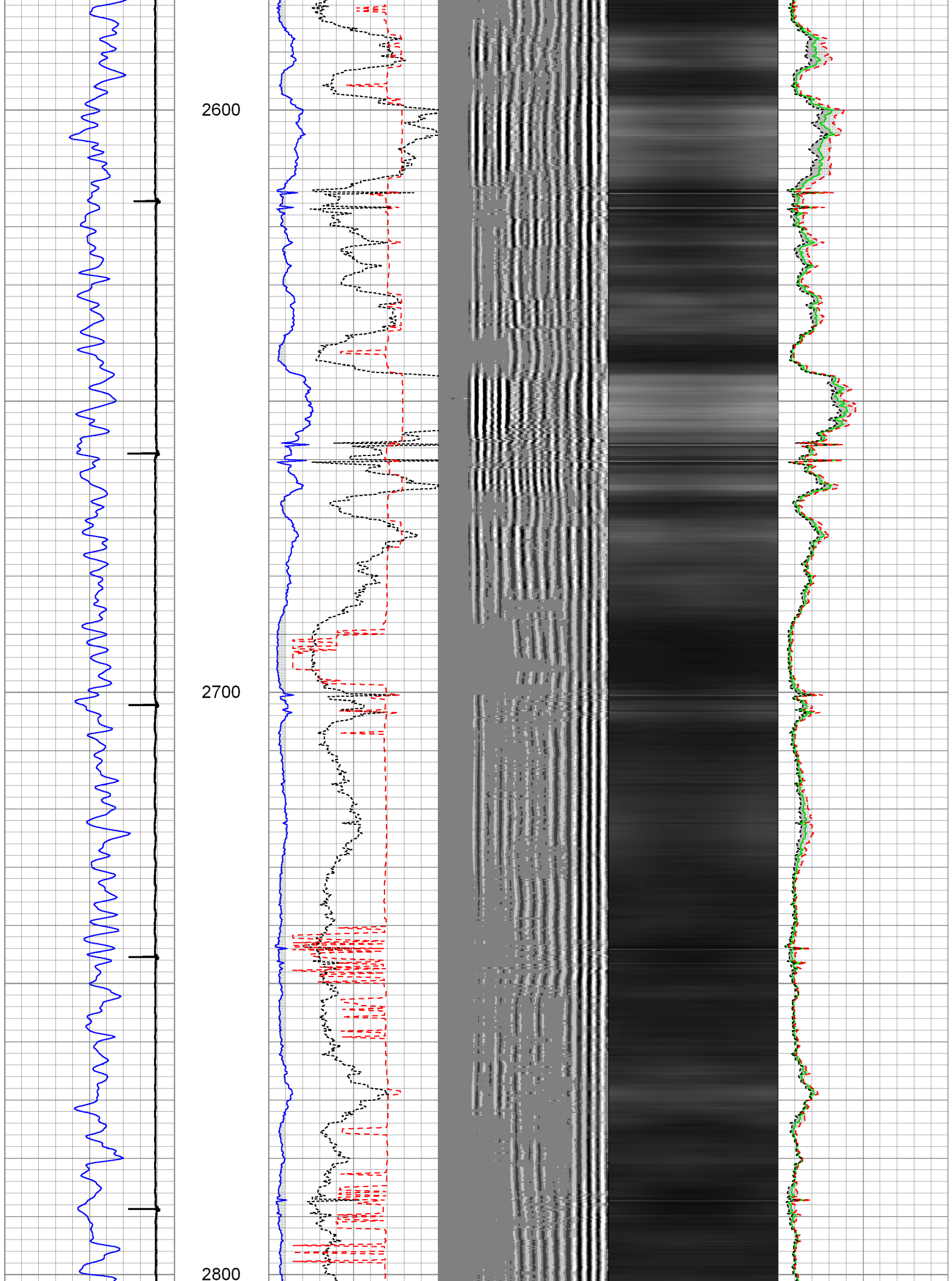
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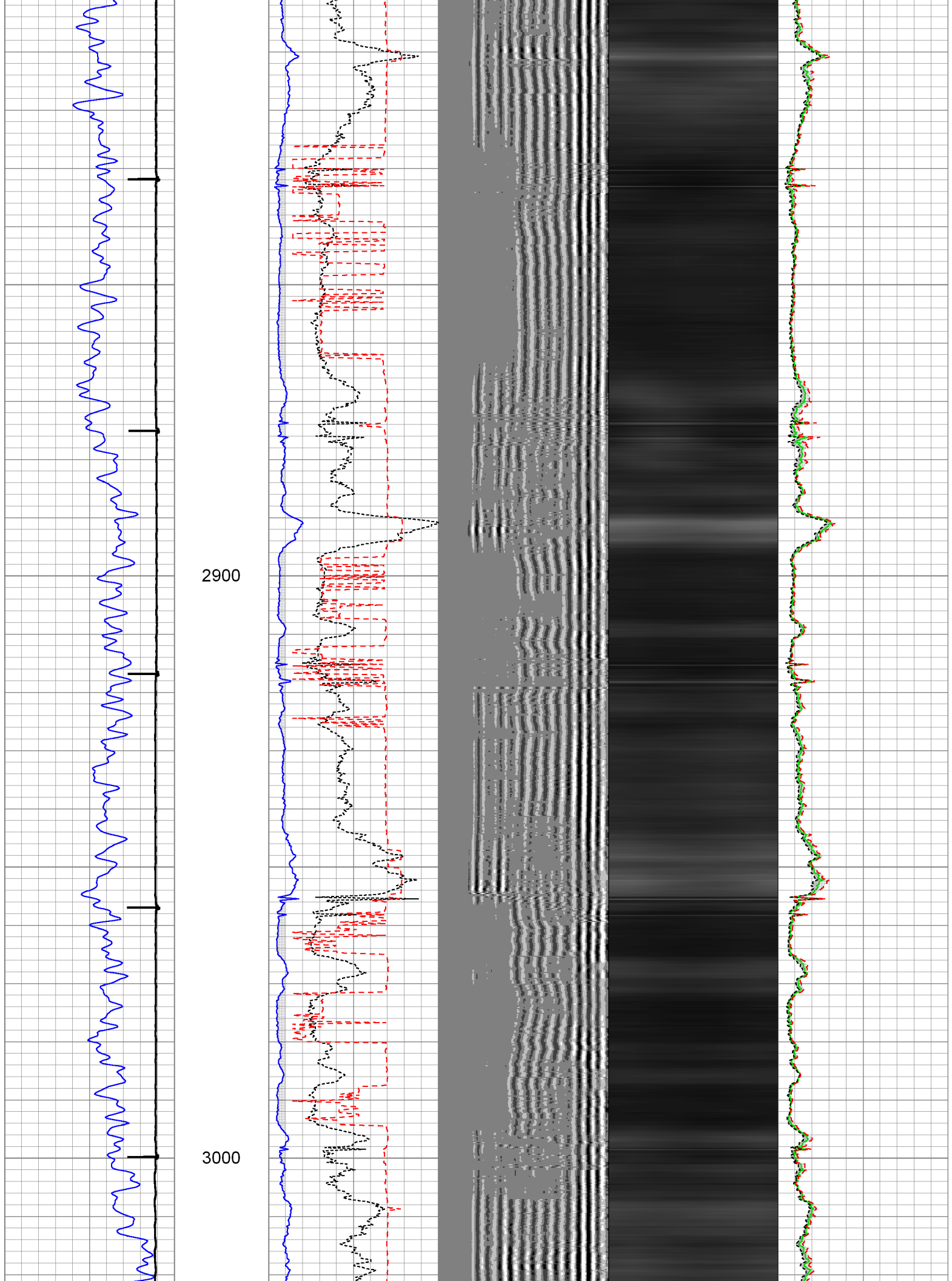


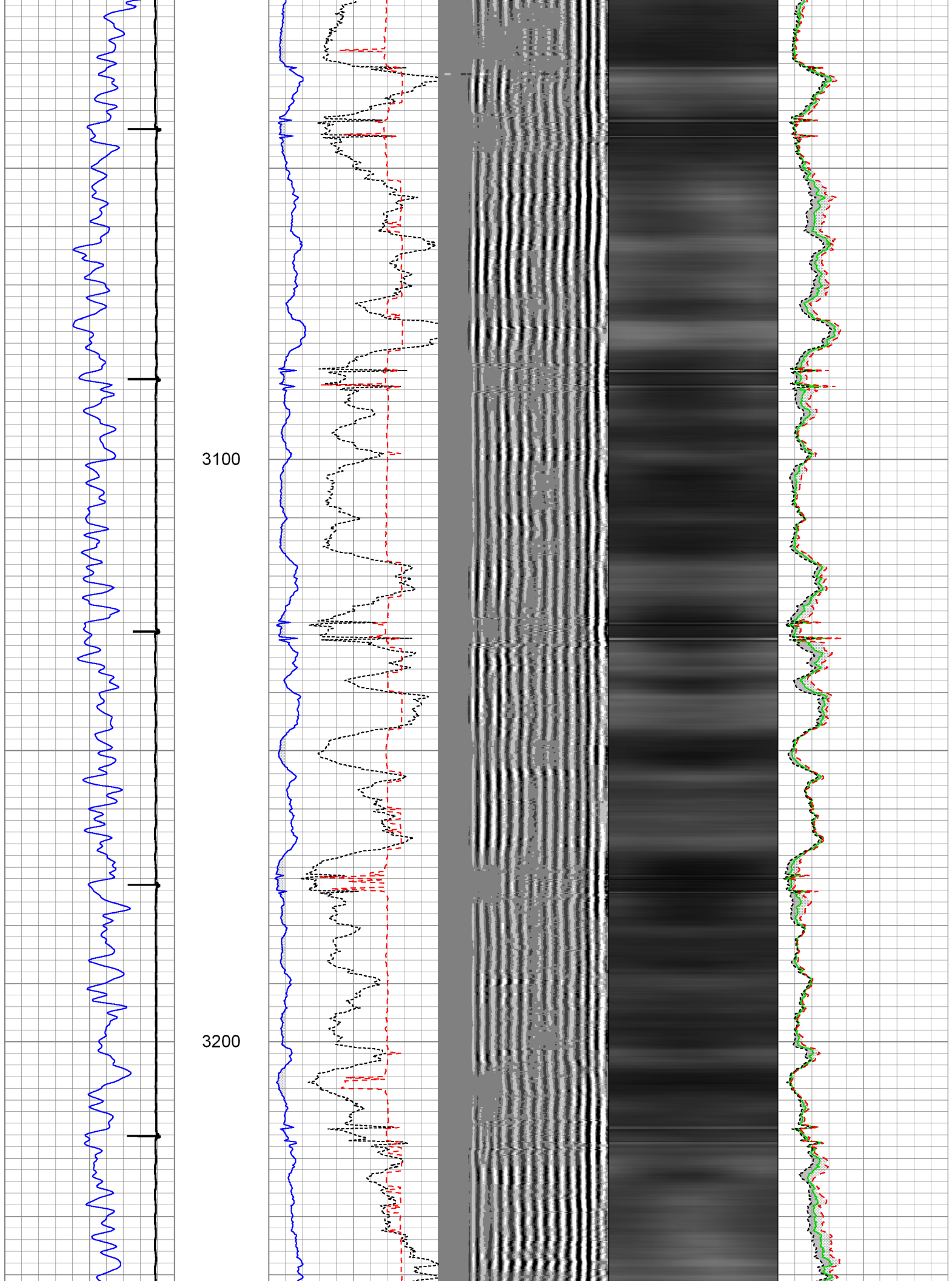
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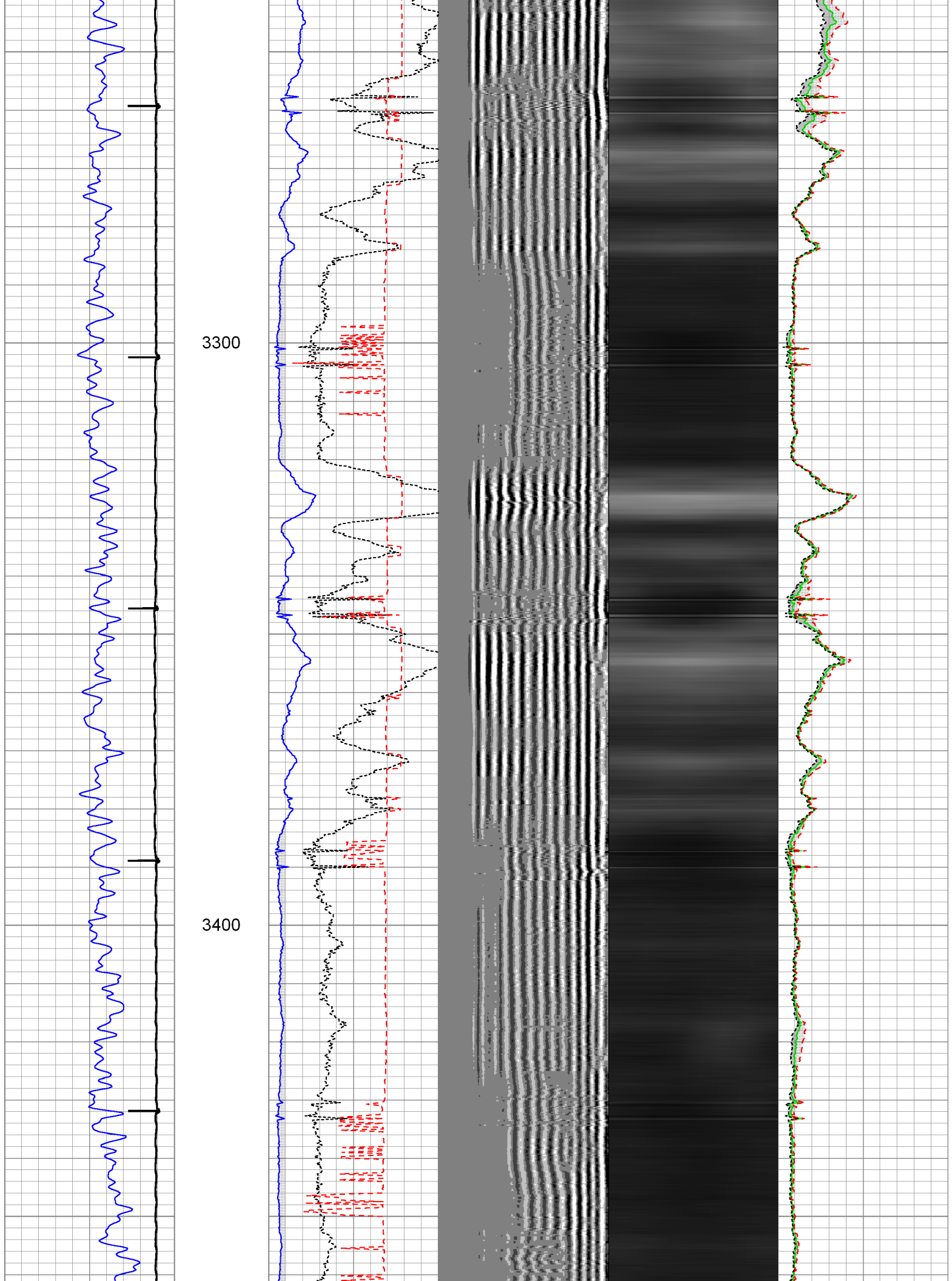
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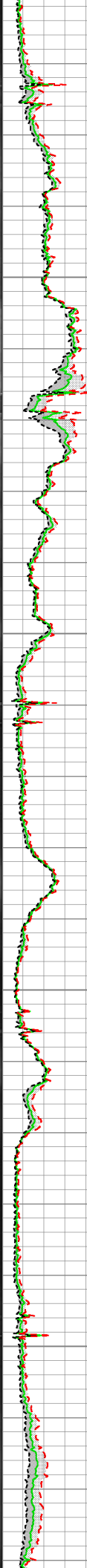
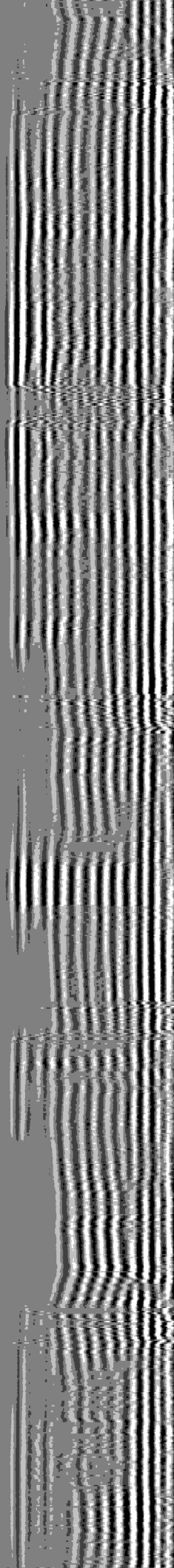
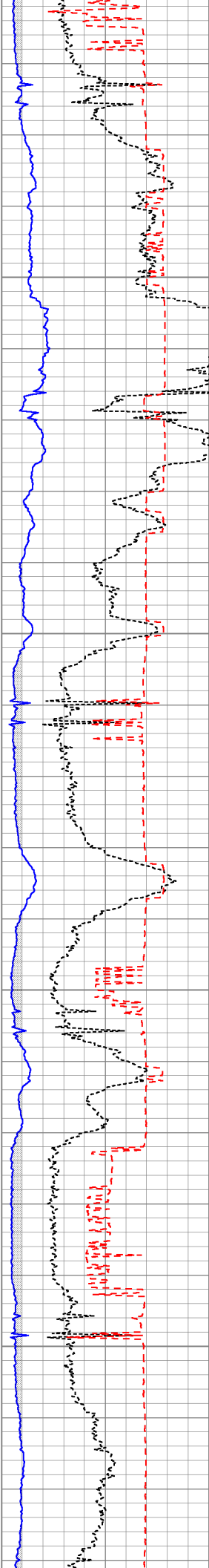
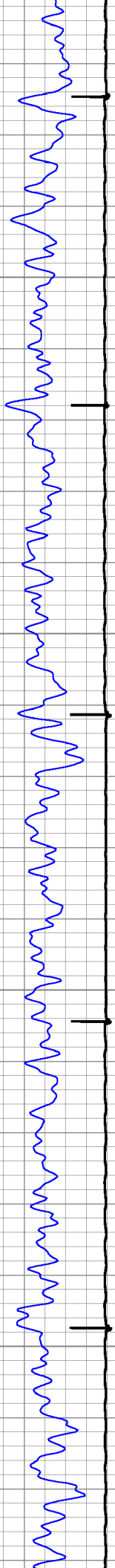






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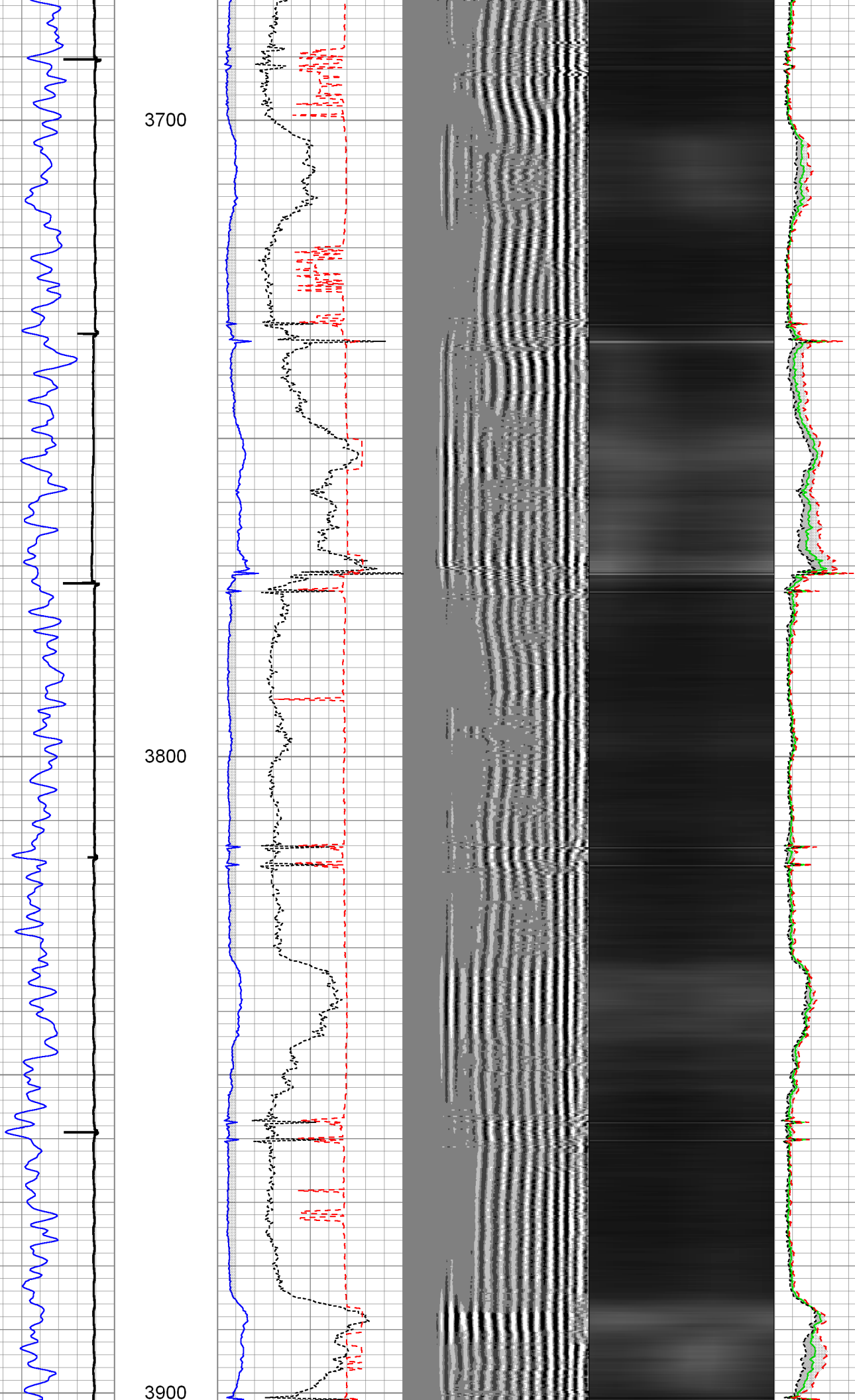
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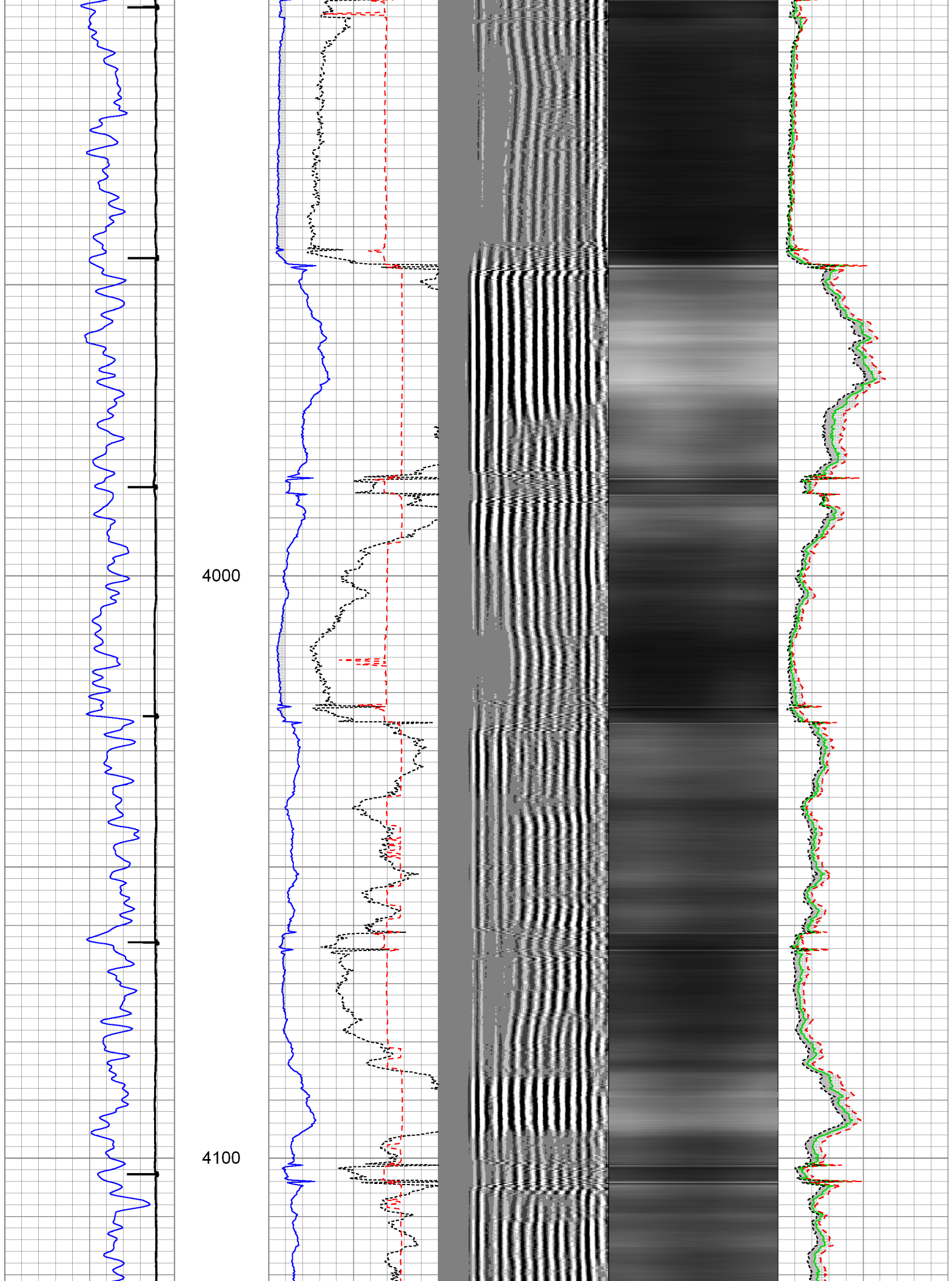


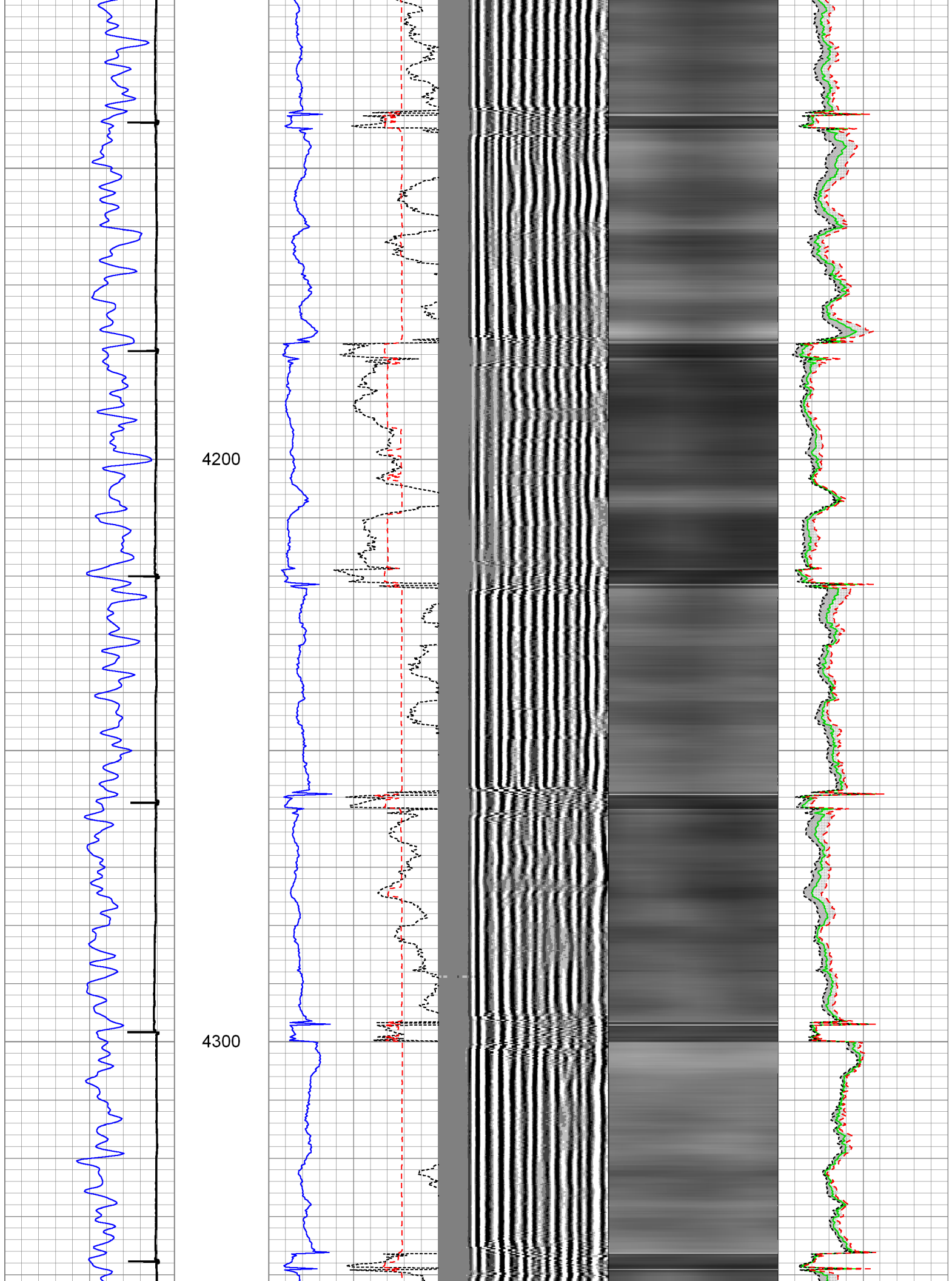
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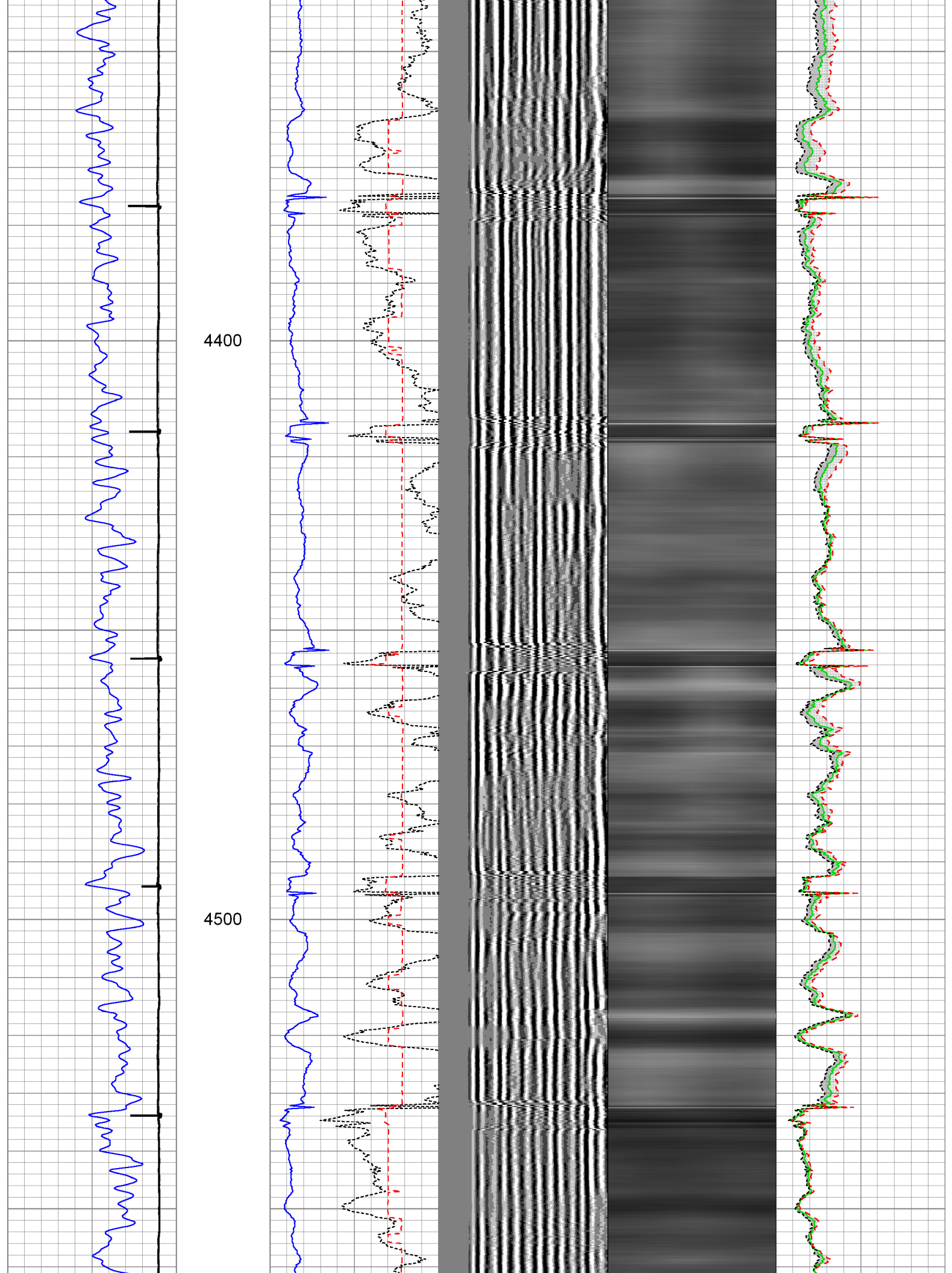
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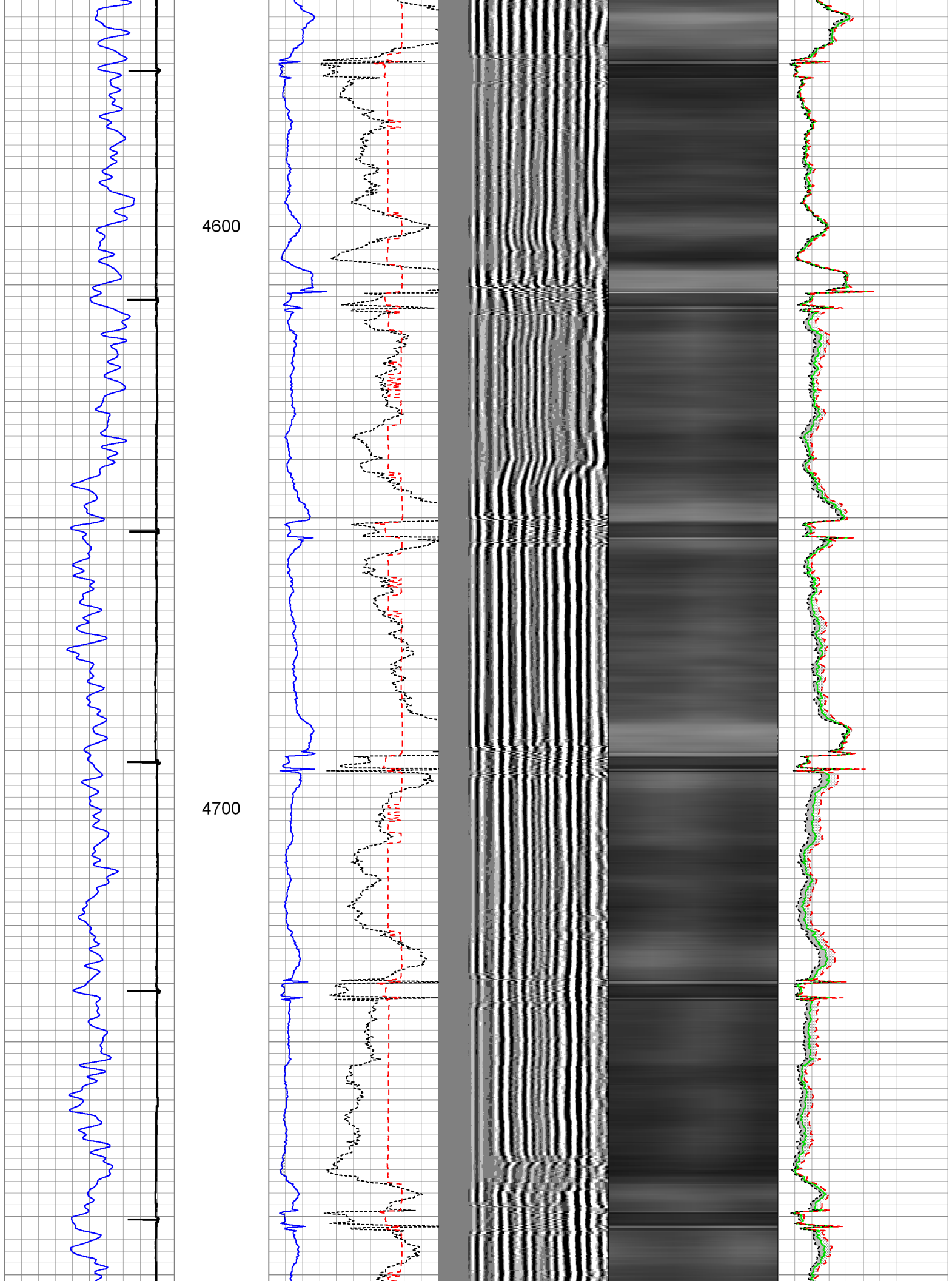
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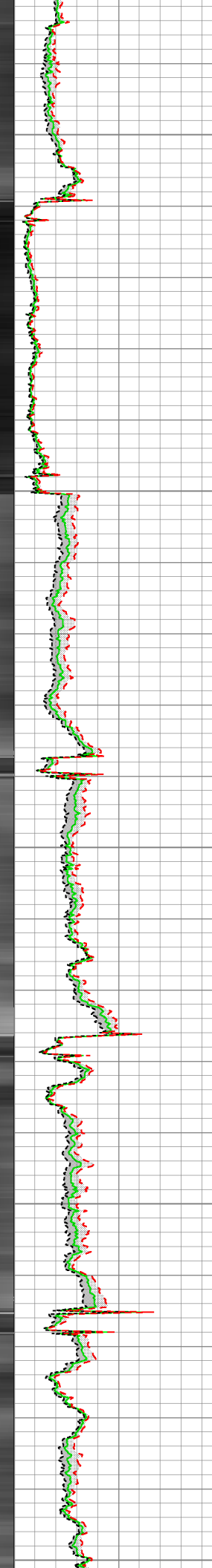
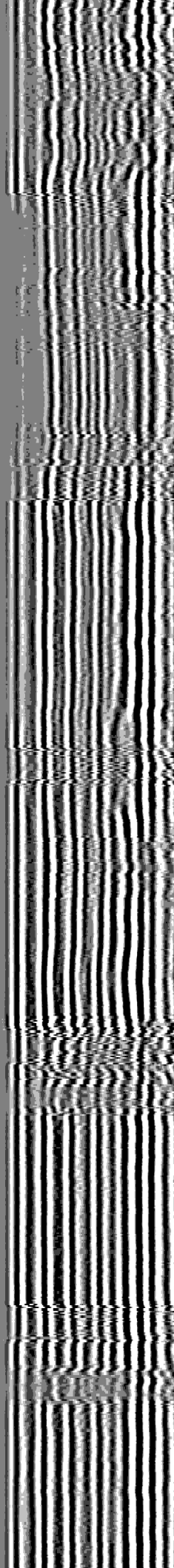
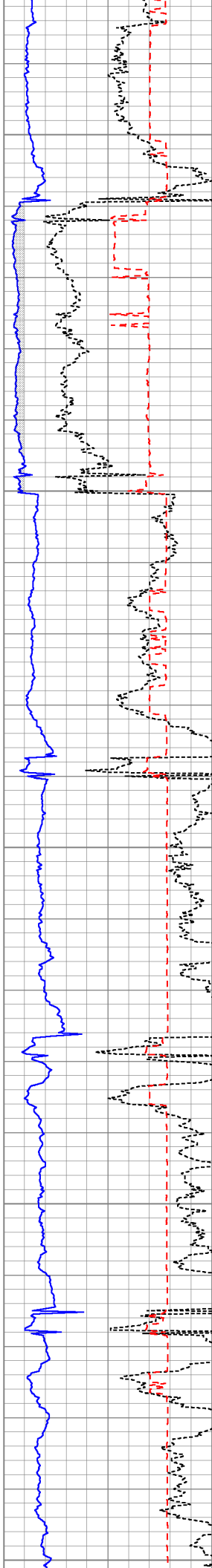


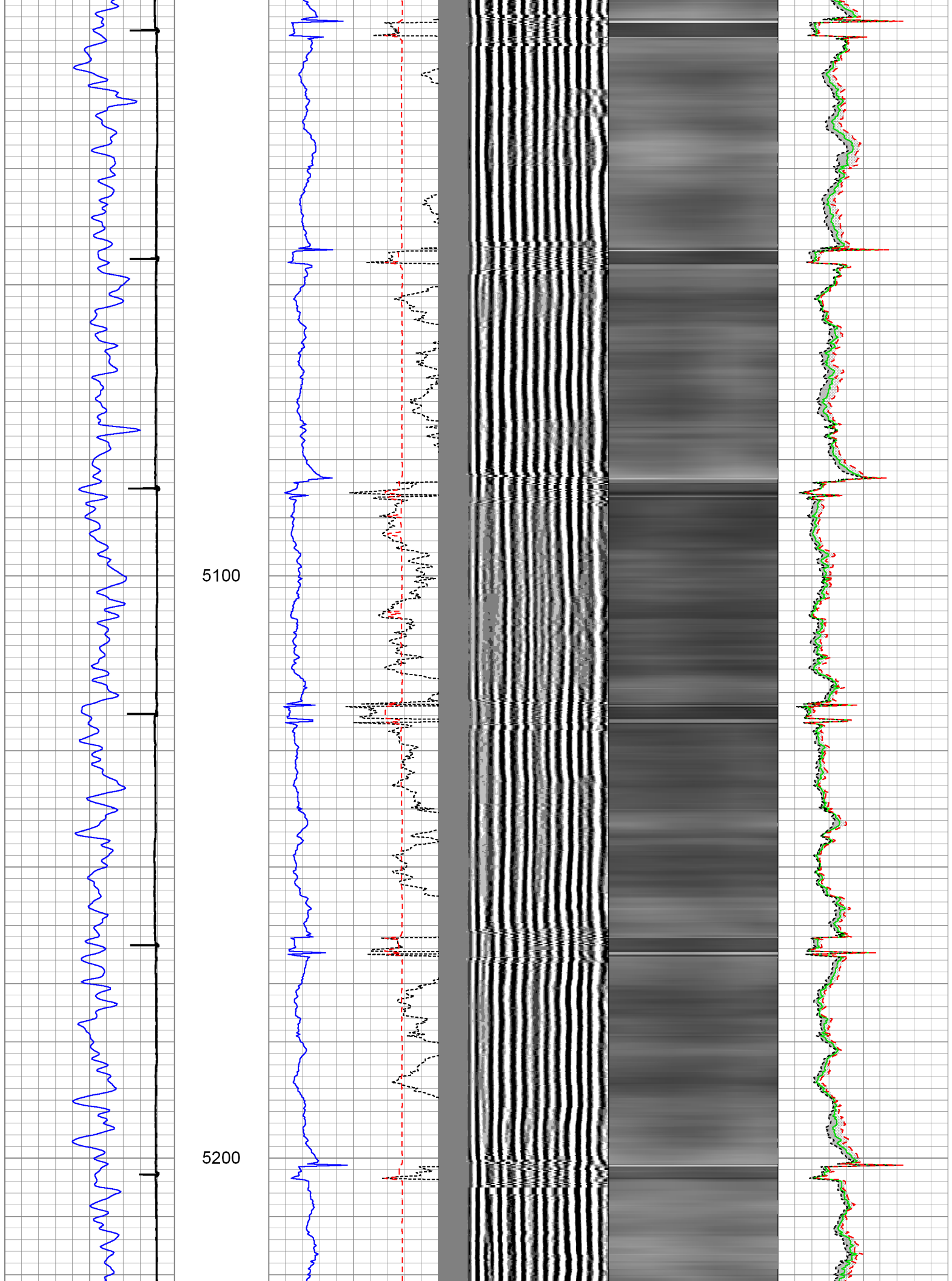


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4900

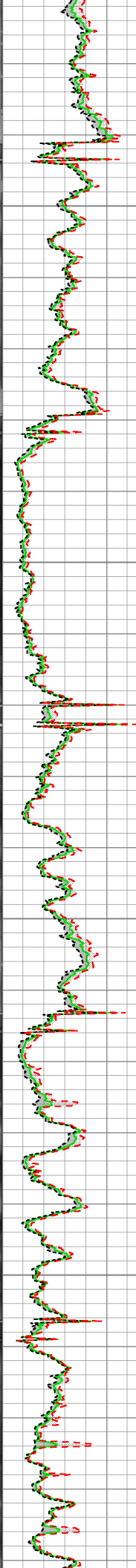
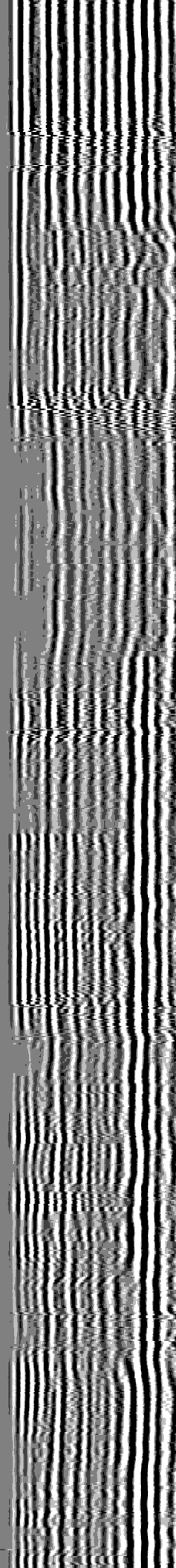
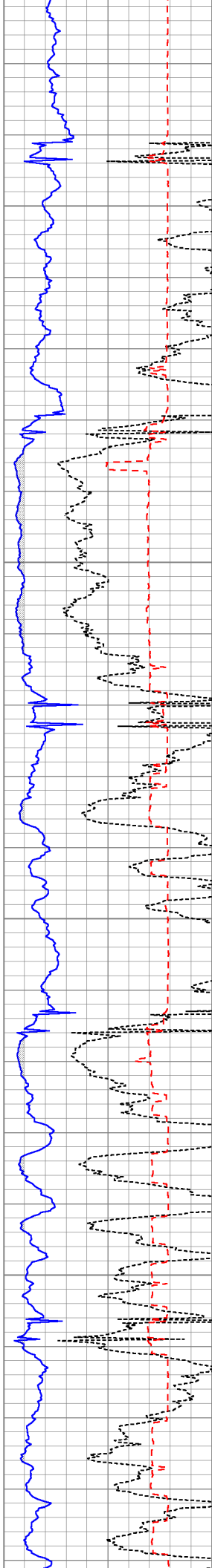
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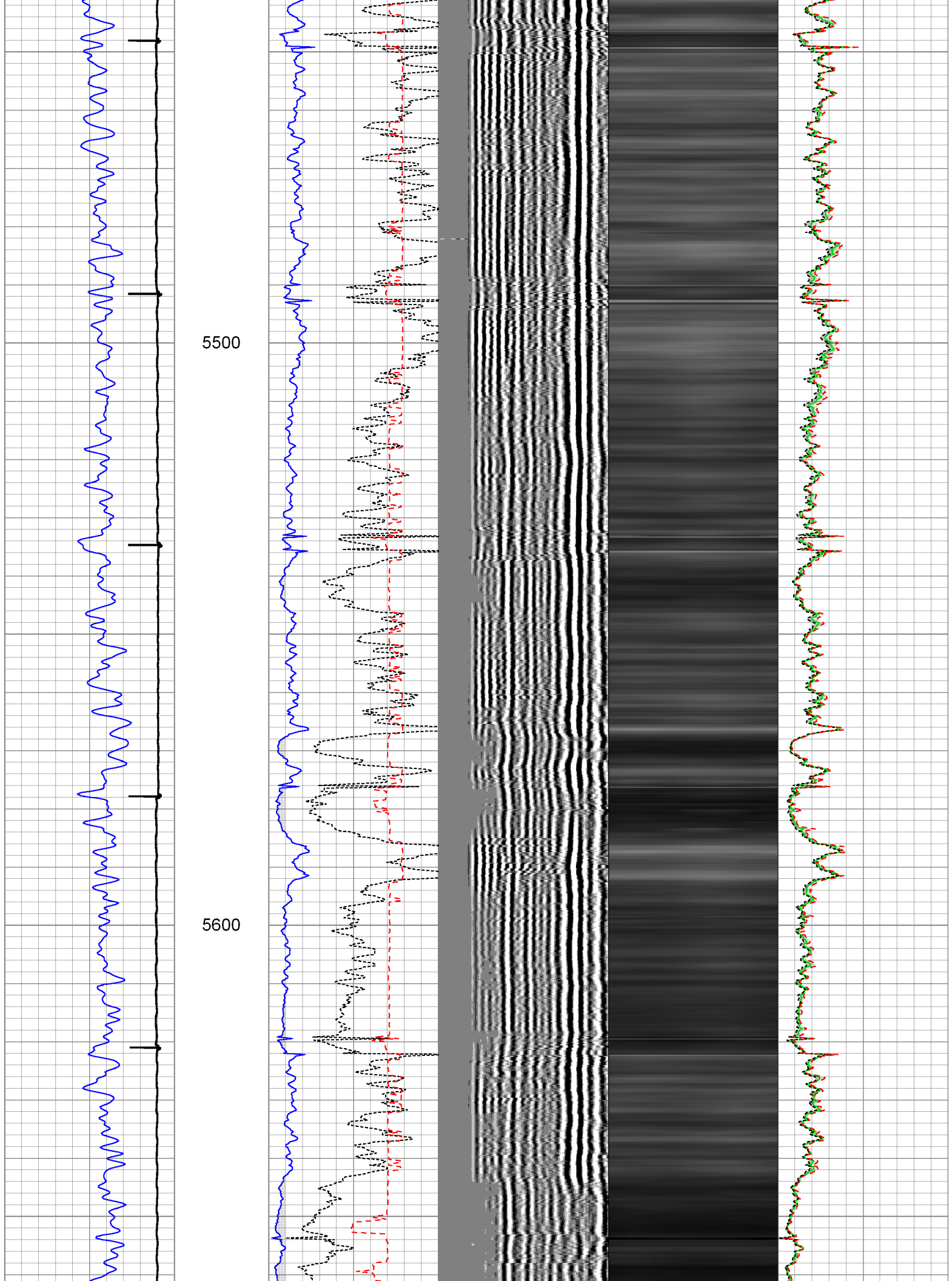
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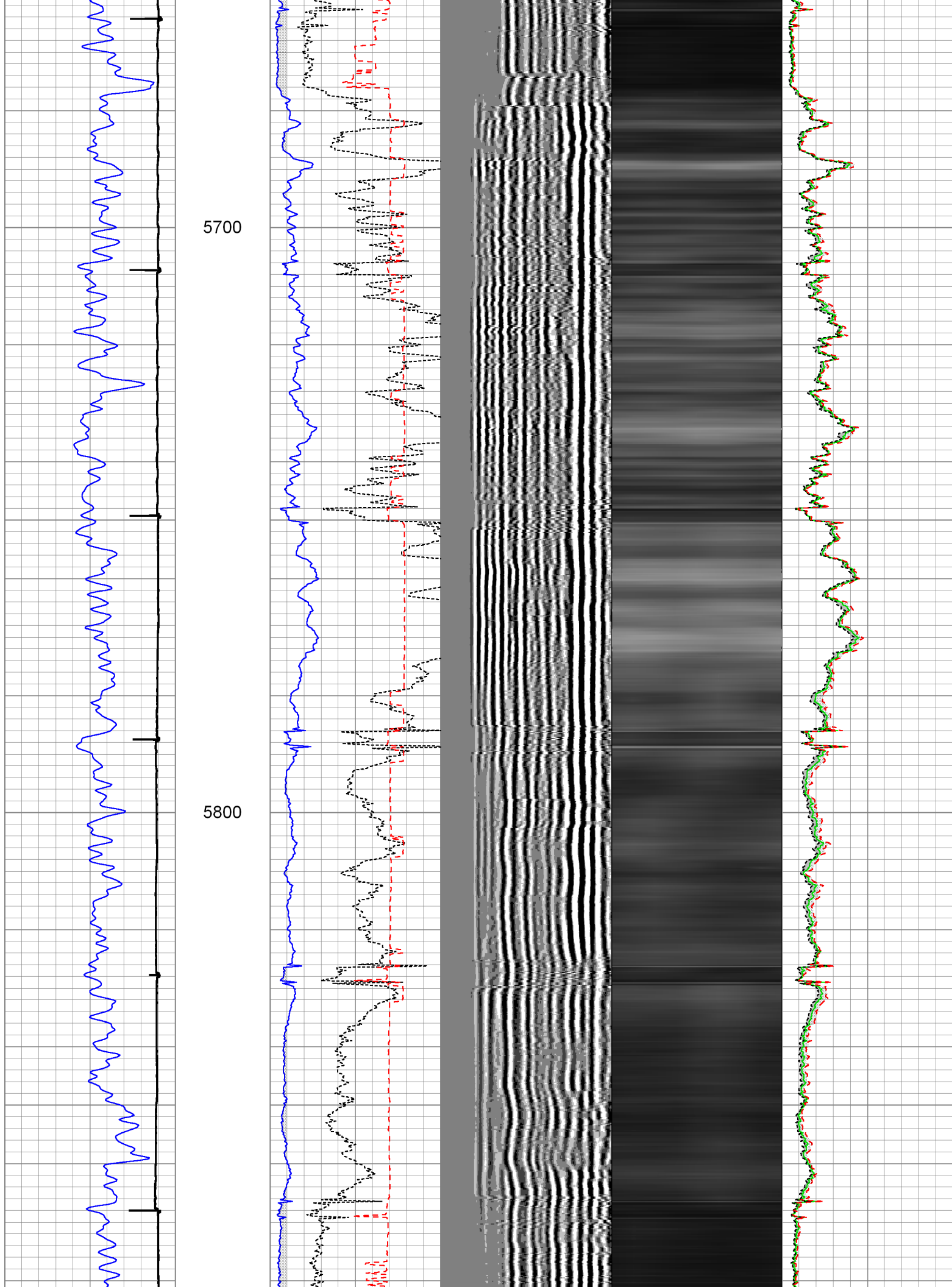
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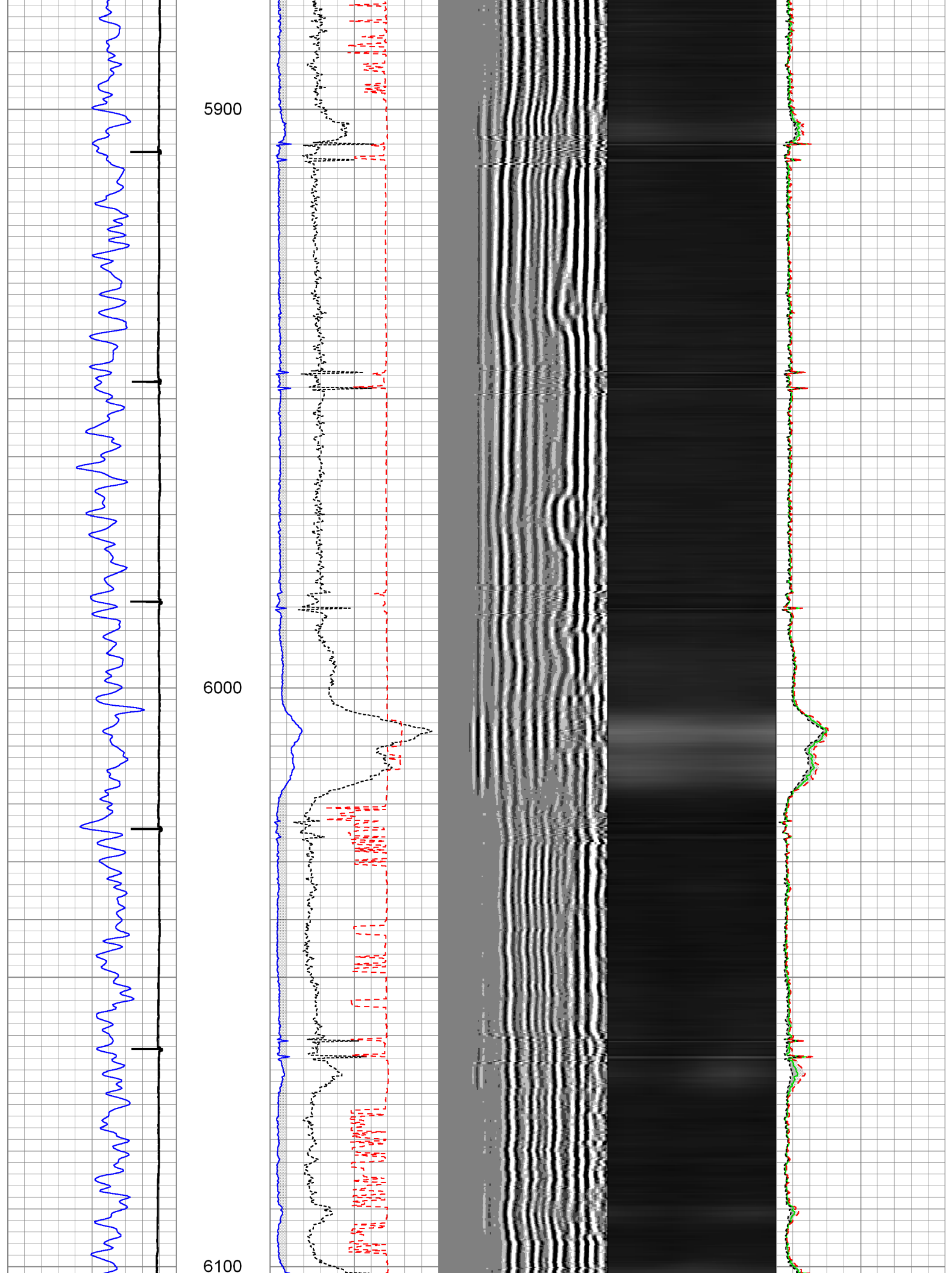
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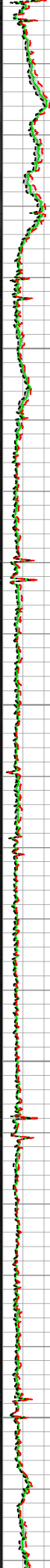
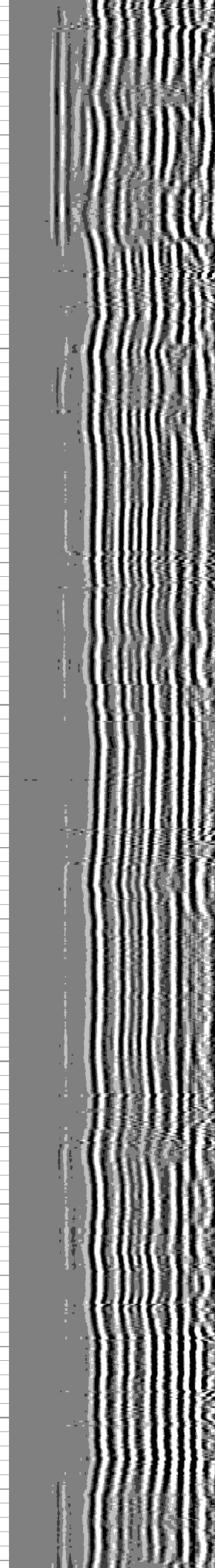
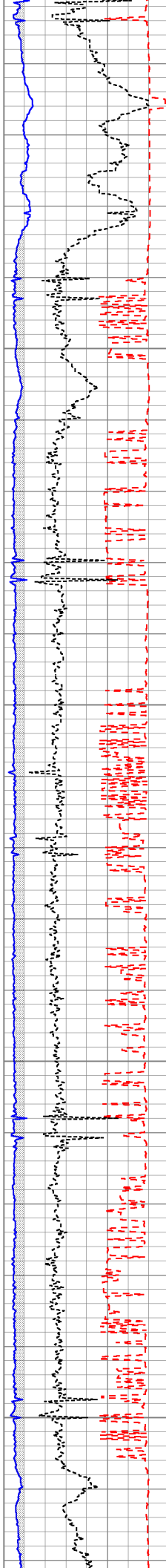






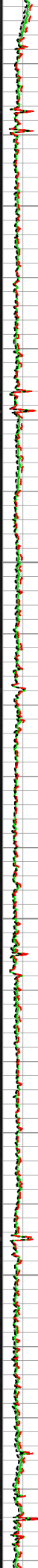
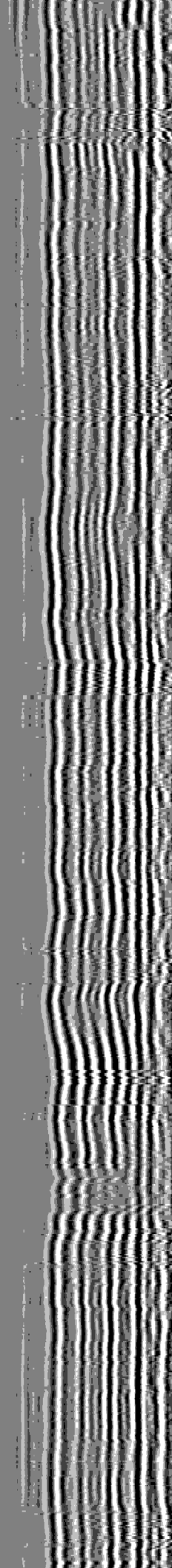
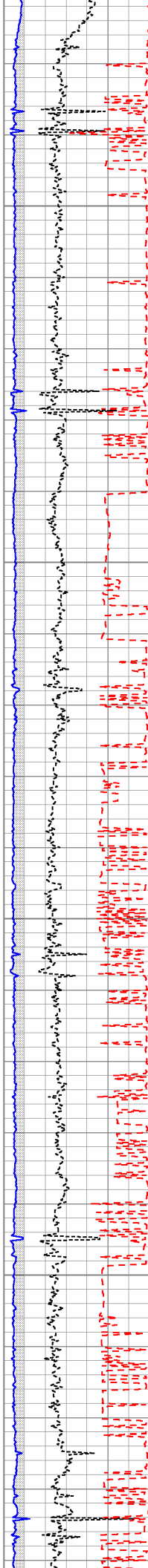
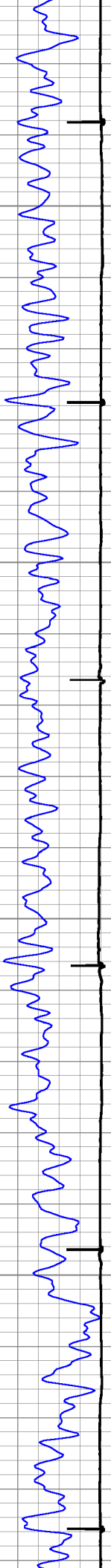
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6300



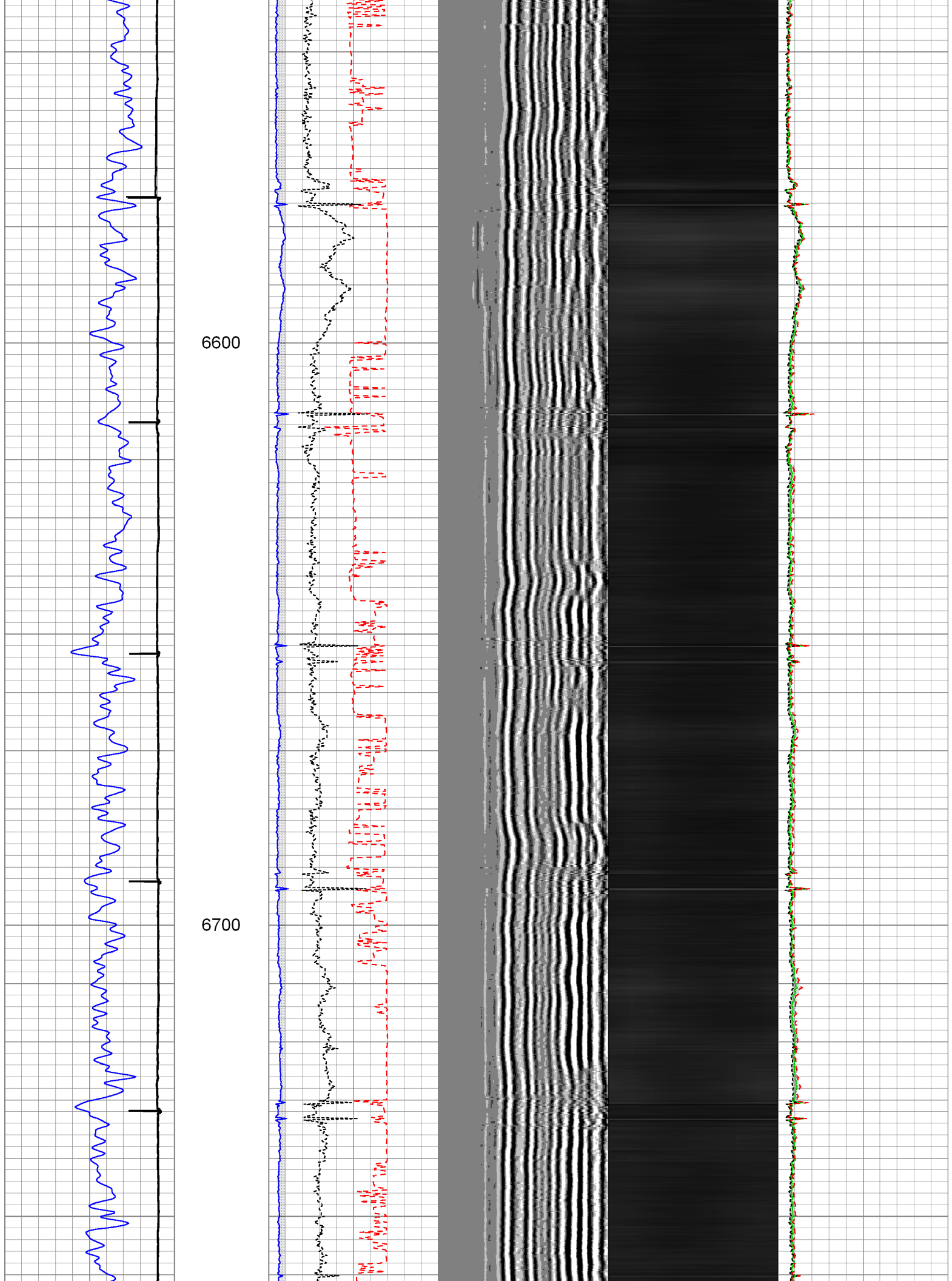
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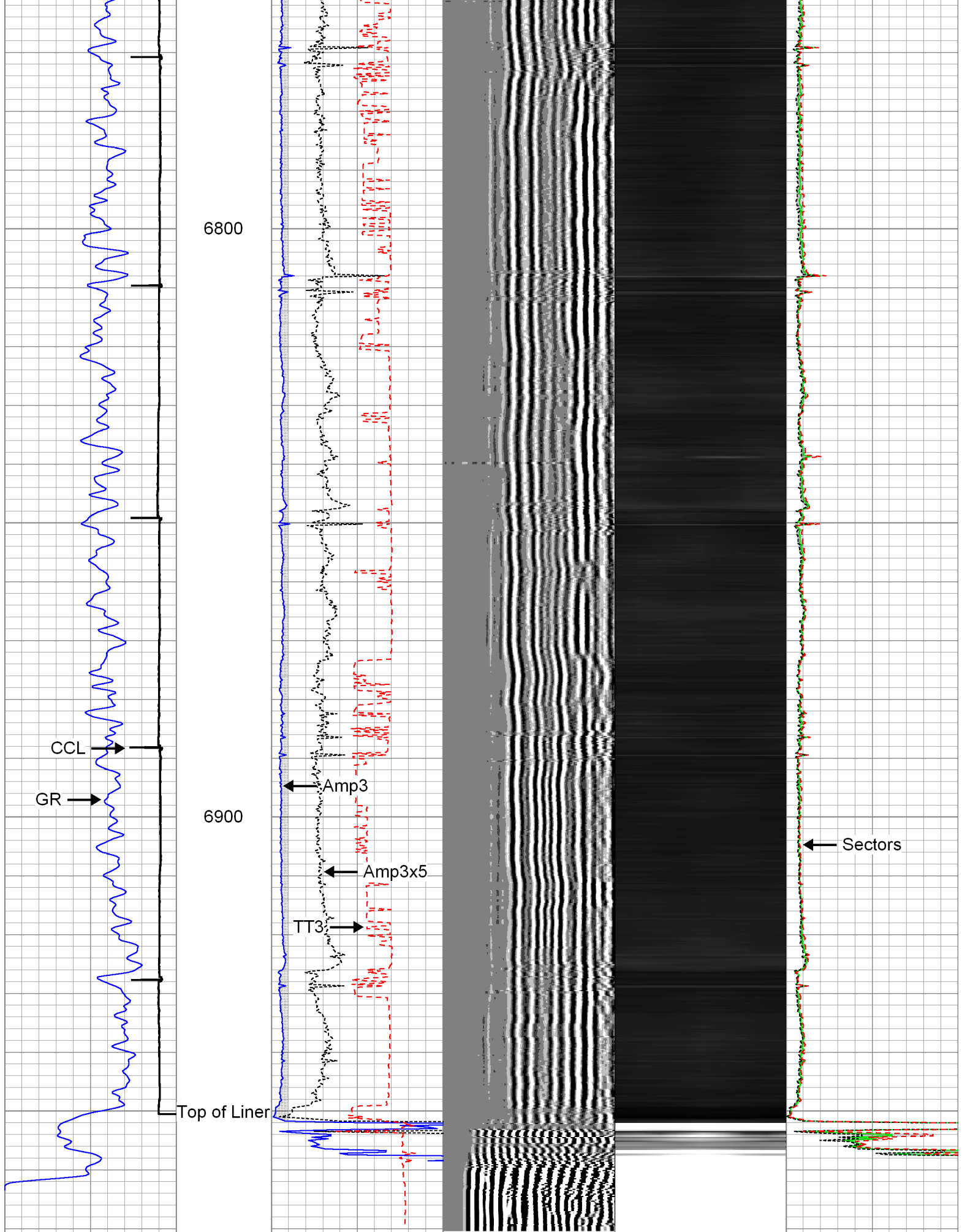
6500



6600

6700





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

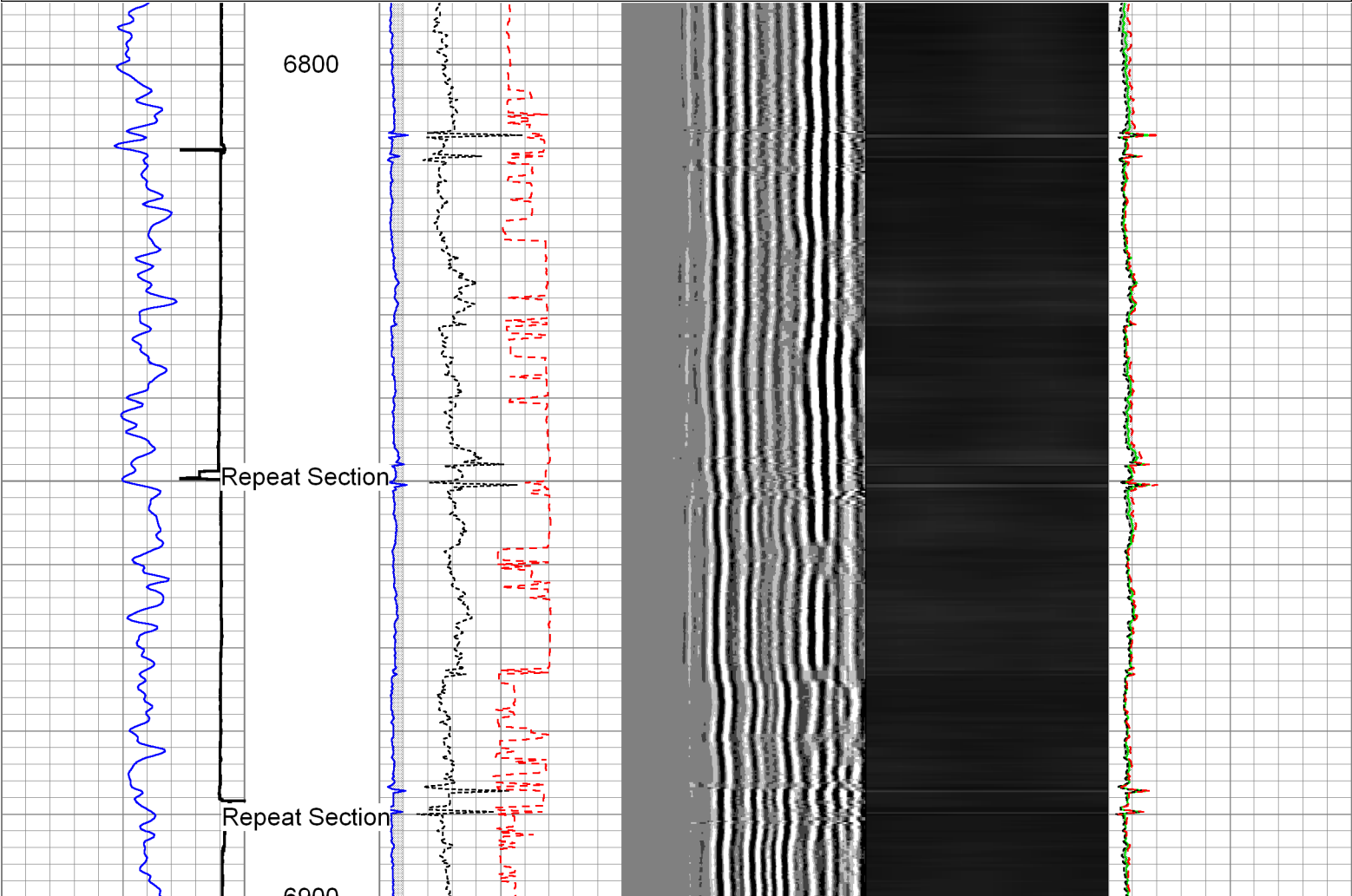


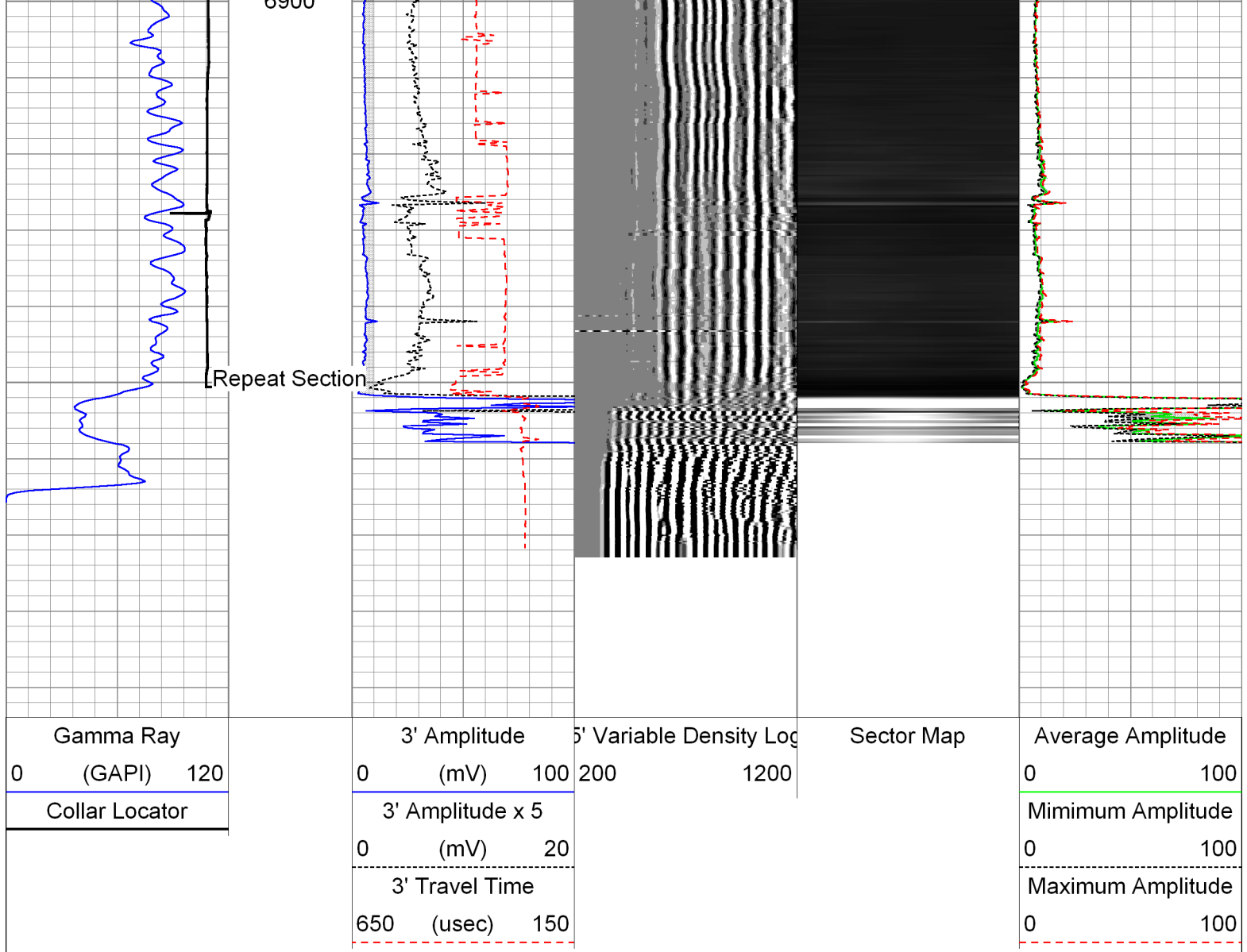
Repeat Pass

Database File:
Dataset Pathname:
Presentation Format:
Dataset Creation:
Charted by:

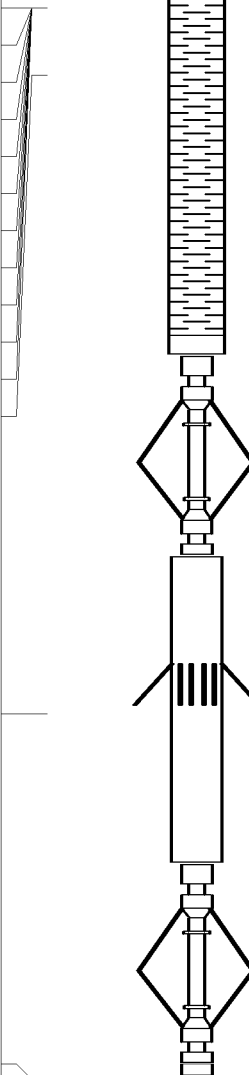
0512338337_anadarko_badding 16c-35hz_03-28-14_mit_rbl.db
pass4
rbt007
Fri Mar 28 08:54:32 2014 by Log Sondex V7.03
Depth in Feet scaled 1:240

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





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					
CBLROT	15.85					
WVF5FT	14.85		PRC-057 (1102) 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
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: 0512338337_anadarko_badding 16c-35hz_03-28-14_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:	0512338337_anadarko_badding 16c-35hz_03-28-14_mit_rbl.db	
Dataset Pathname:	main	
Dataset Creation:	Fri Mar 28 09:06:27 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	
	Inc X	Inc Y
Vertical:	1963	1960
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:

Fri Mar 28 08:48:53 2014

Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1101	370.0	1471	400.0	1871	392.0	2263
Finger 02:	1057	366.0	1423	425.0	1848	413.0	2261
Finger 03:	1060	352.0	1412	421.0	1833	405.0	2238
Finger 04:	1020	353.0	1373	451.0	1824	429.0	2253
Finger 05:	1053	335.0	1388	429.0	1817	398.0	2215
Finger 06:	1044	341.0	1385	452.0	1837	415.0	2252
Finger 07:	1053	338.0	1391	445.0	1836	409.0	2245
Finger 08:	1013	336.0	1349	465.0	1814	427.0	2241
Finger 09:	1073	337.0	1410	451.0	1861	402.0	2263
Finger 10:	1040	334.0	1374	454.0	1828	411.0	2239
Finger 11:	1012	332.0	1344	454.0	1798	420.0	2218
Finger 12:	1091	334.0	1425	428.0	1853	386.0	2239
Finger 13:	1020	335.0	1355	440.0	1795	419.0	2214
Finger 14:	1003	348.0	1351	451.0	1802	438.0	2240
Finger 15:	974	351.0	1325	446.0	1771	443.0	2214
Finger 16:	1007	354.0	1361	425.0	1786	424.0	2210
Finger 17:	1037	354.0	1391	406.0	1797	408.0	2205
Finger 18:	1059	361.0	1420	396.0	1816	407.0	2223
Finger 19:	1023	373.0	1396	397.0	1793	420.0	2213
Finger 20:	937	377.0	1314	396.0	1710	432.0	2142
Finger 21:	1029	382.0	1411	371.0	1782	415.0	2197
Finger 22:	1005	395.0	1400	370.0	1770	422.0	2192
Finger 23:	1117	380.0	1497	334.0	1831	386.0	2217
Finger 24:	1021	412.0	1433	357.0	1790	420.0	2210
Finger 25:	1025	410.0	1435	349.0	1784	419.0	2203
Finger 26:	1055	416.0	1471	335.0	1806	403.0	2209
Finger 27:	1071	408.0	1479	324.0	1803	402.0	2205
Finger 28:	1034	424.0	1458	334.0	1792	413.0	2205
Finger 29:	1014	430.0	1444	339.0	1783	424.0	2207
Finger 30:	1011	428.0	1439	337.0	1776	421.0	2197
Finger 31:	1069	425.0	1494	327.0	1821	396.0	2217
Finger 32:	1017	425.0	1442	338.0	1780	412.0	2192
Finger 33:	1035	425.0	1460	343.0	1803	410.0	2213
Finger 34:	1032	420.0	1452	357.0	1809	416.0	2225
Finger 35:	1095	403.0	1498	342.0	1840	388.0	2228
Finger 36:	1033	406.0	1439	366.0	1805	410.0	2215
Finger 37:	1147	387.0	1534	350.0	1884	380.0	2264
Finger 38:	1100	385.0	1485	369.0	1854	394.0	2248
Finger 39:	1054	386.0	1440	390.0	1830	408.0	2238
Finger 40:	992	387.0	1379	420.0	1799	434.0	2233

Segmented Cement Bond Log Calibration Report

Serial Number: 10012639in7
Tool Model: 004

Calibration Casing Diameter: 7.000 in
Calibration Depth: 198.085 ft

Master Calibration, performed Fri Mar 28 09:13:59 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.000	0.640	0.800	62.165	95.843	0.816
5FT	-0.005	0.686	0.800	62.165	88.830	1.217
S1	-0.000	0.680	0.000	100.000	147.003	0.048
S2	-0.001	0.621	0.000	100.000	160.647	0.190
S3	-0.000	0.582	0.000	100.000	171.769	0.034

S4	-0.002	0.579	0.000	100.000	172.119	0.338
S5	-0.000	0.613	0.000	100.000	163.029	0.006
S6	0.000	0.667	0.000	100.000	149.867	-0.018
S7	-0.001	0.709	0.000	100.000	140.824	0.088
S8	-0.001	0.716	0.000	100.000	139.567	0.077

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 16C-35HZ
Field	Wattenberg
County	Weld
State	Colorado