



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 Badding 36C-35HZ				Well Badding 36C-35HZ				
Field Wattenberg				Field Wattenberg				
County Weld				County Weld				
State Colorado				State Colorado				
Location:				API # : 05-123-38409				
SHL: 350' FSL 1979' FEL Lat/Long: 40.102987/-104.741943				Other Services Gauge Run CIL Set Plug				
SEC 26 TWP 2N RGE 66W				Elevation				
Permanent Datum		Ground Level		Elevation		5114'		
Log Measured From		Kelly Bushing		17 FT		K.B. 5131' D.F. 5130' G.L. 5114'		
Drilling Measured From		Kelly Bushing						
Date		29-March-2014						
Run Number		One						
Depth Driller		13,715 FT						
Depth Logger		7100 FT						
Bottom Logged Interval		7095 FT						
Top Log Interval		Surface						
Open Hole Size		9.625"						
Type Fluid		Water						
Density / Viscosity		8.34 LB/GAL						
Max. Recorded Temp.		231°F						
Estimated Cement Top		627 FT						
Time Well Ready		ROA						
Time Logger on Bottom		13:45						
Equipment Number		HD 0324						
Location		Fort Lupton, CO						
Recorded By		Brent Kalkwarf						
Witnessed By		Eric 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	1330 FT		
Intermediate #1		7	26	P-110	Surface	8034 FT		
Intermediate #2								
Liner		4 1/2	11.6	P-110	7029 FT	13,700 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 - Caliper Log is the first recorded log in hole.  
Depth reference to Casing Talley reported Liner Top at 7029 FT.  
RCBL-CIL ran with 2200 PSI surface induced pressure.

Thank you for choosing FMC Technologies Completion Services, Inc.

Main Pass



Recorded At 2200 PSI Surface Induced Pressure

Database File: 0512338409\_anadarko\_badding 36c-35hz\_03-29-14\_mit\_rbl.db

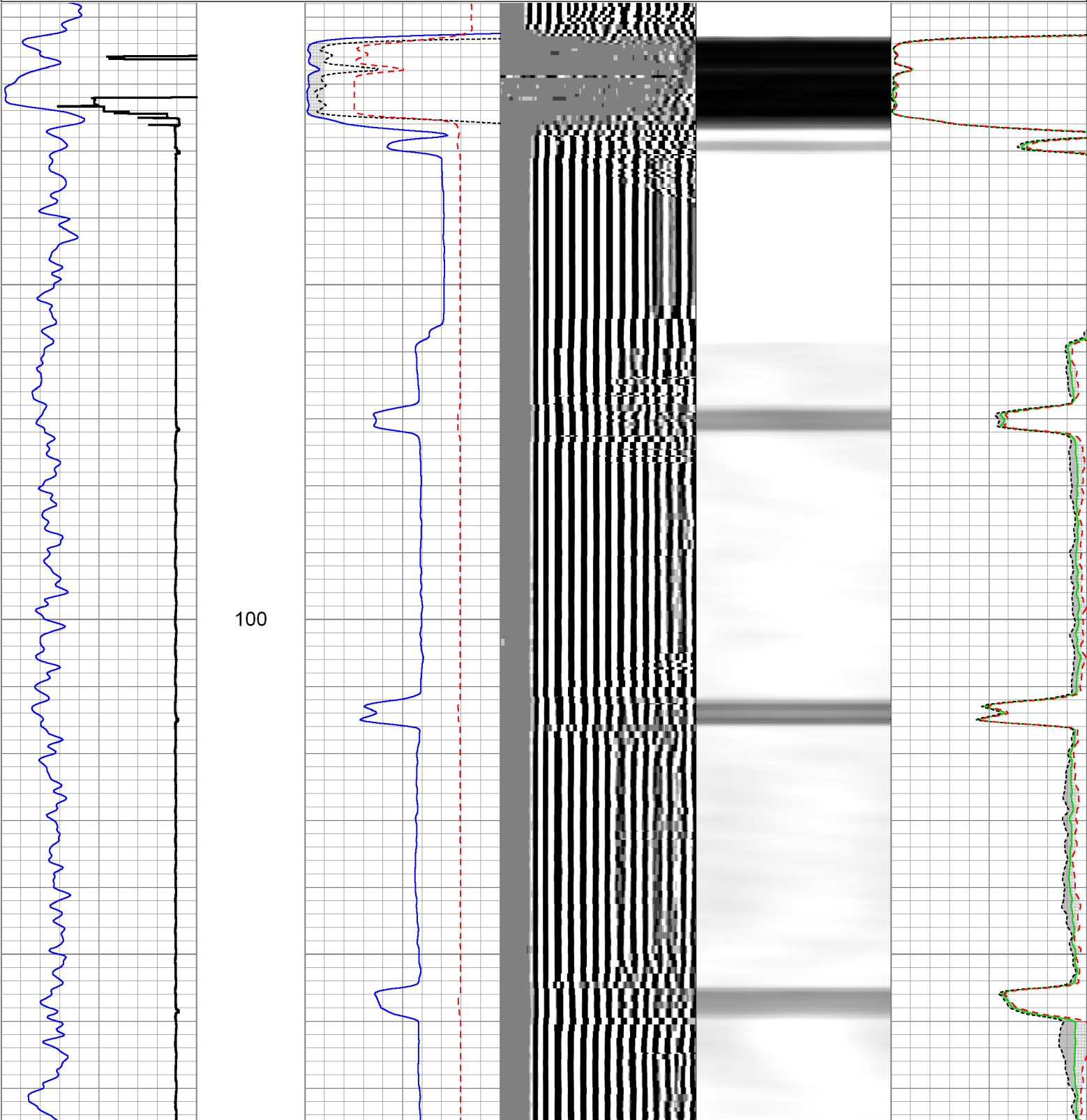
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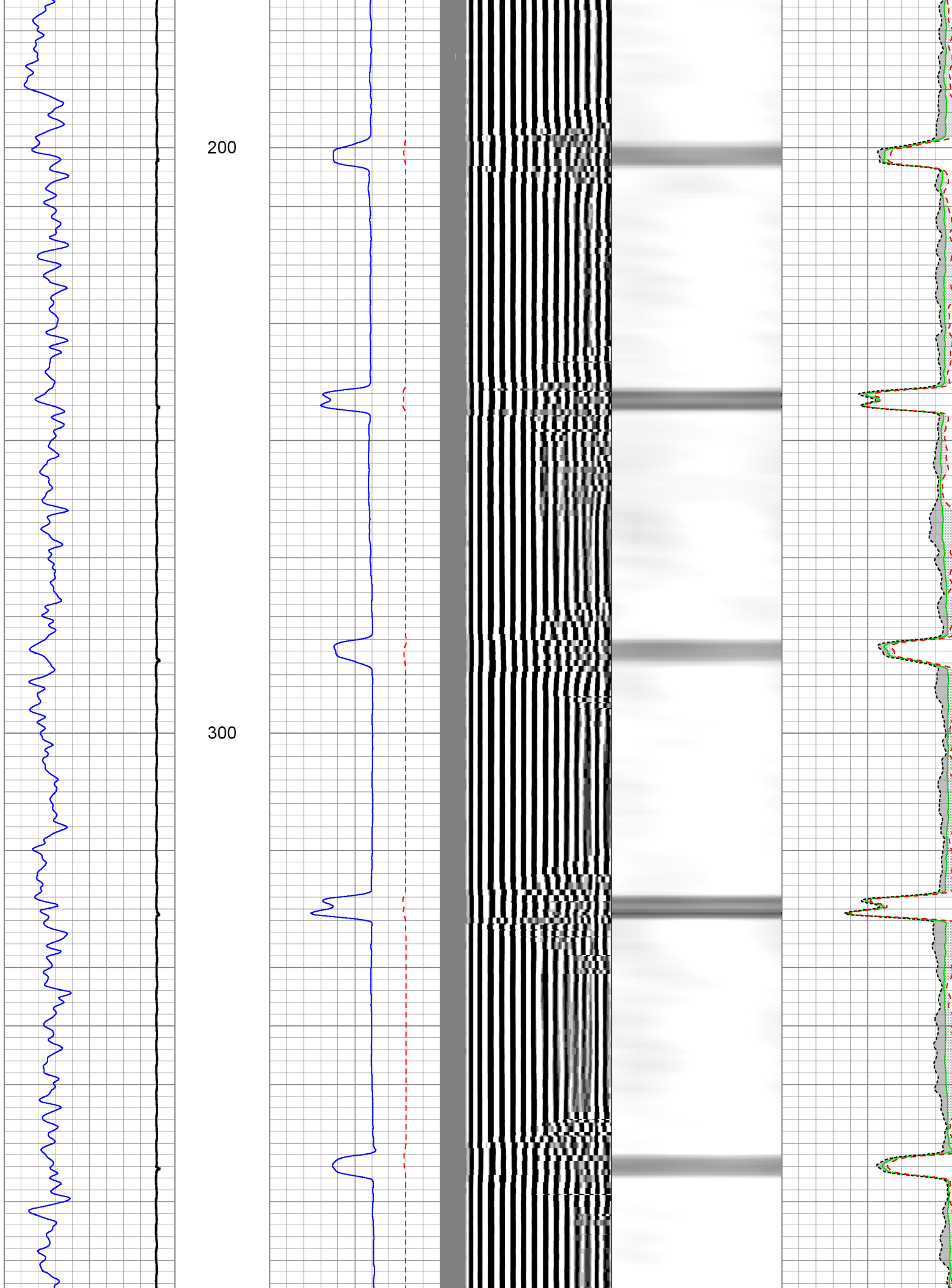
Presentation Format: rbt007

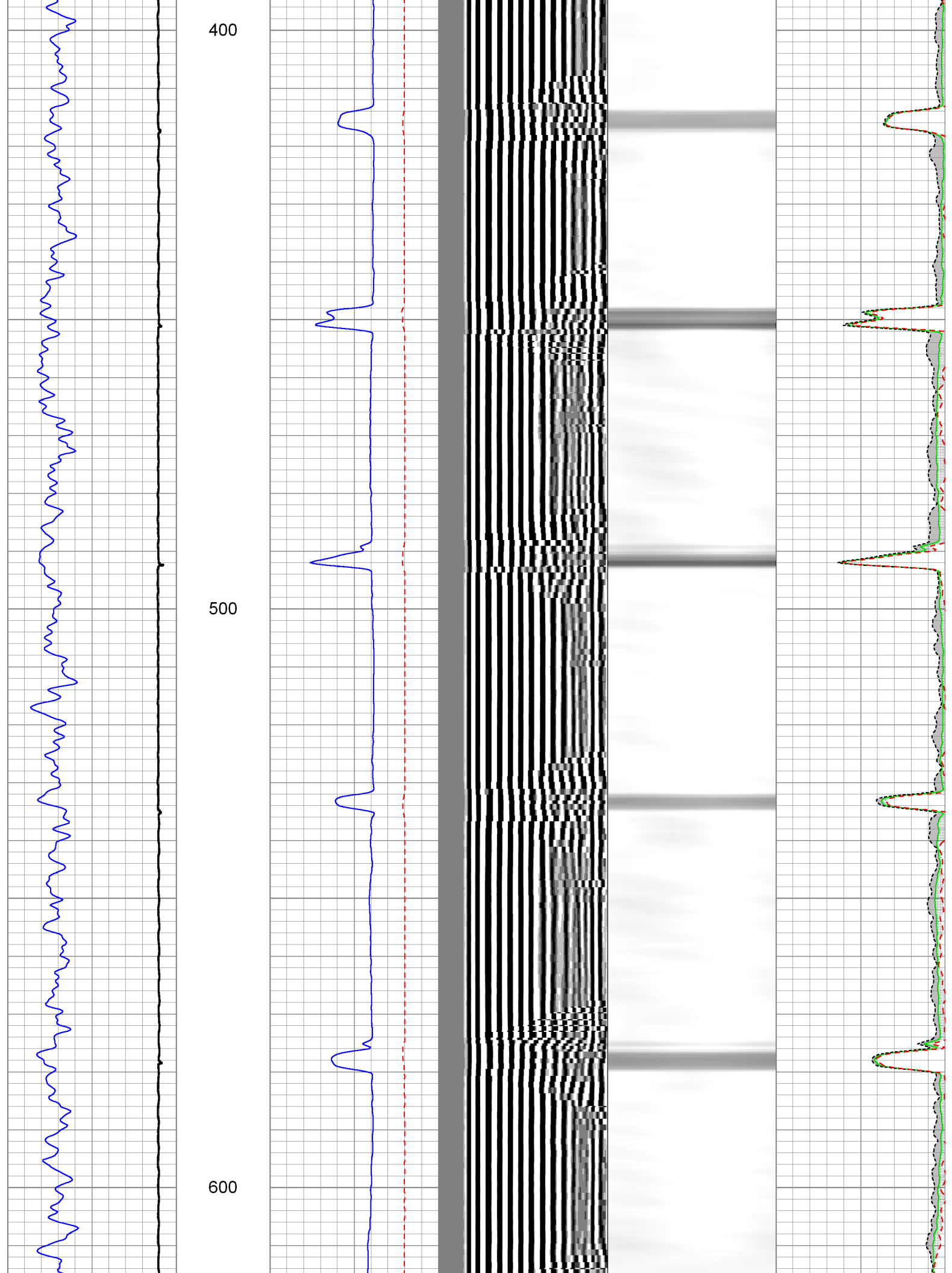
Dataset Creation: Sat Mar 29 13:11:50 2014 by Log Sondex V7.03

Charted by: Depth in Feet scaled 1:240

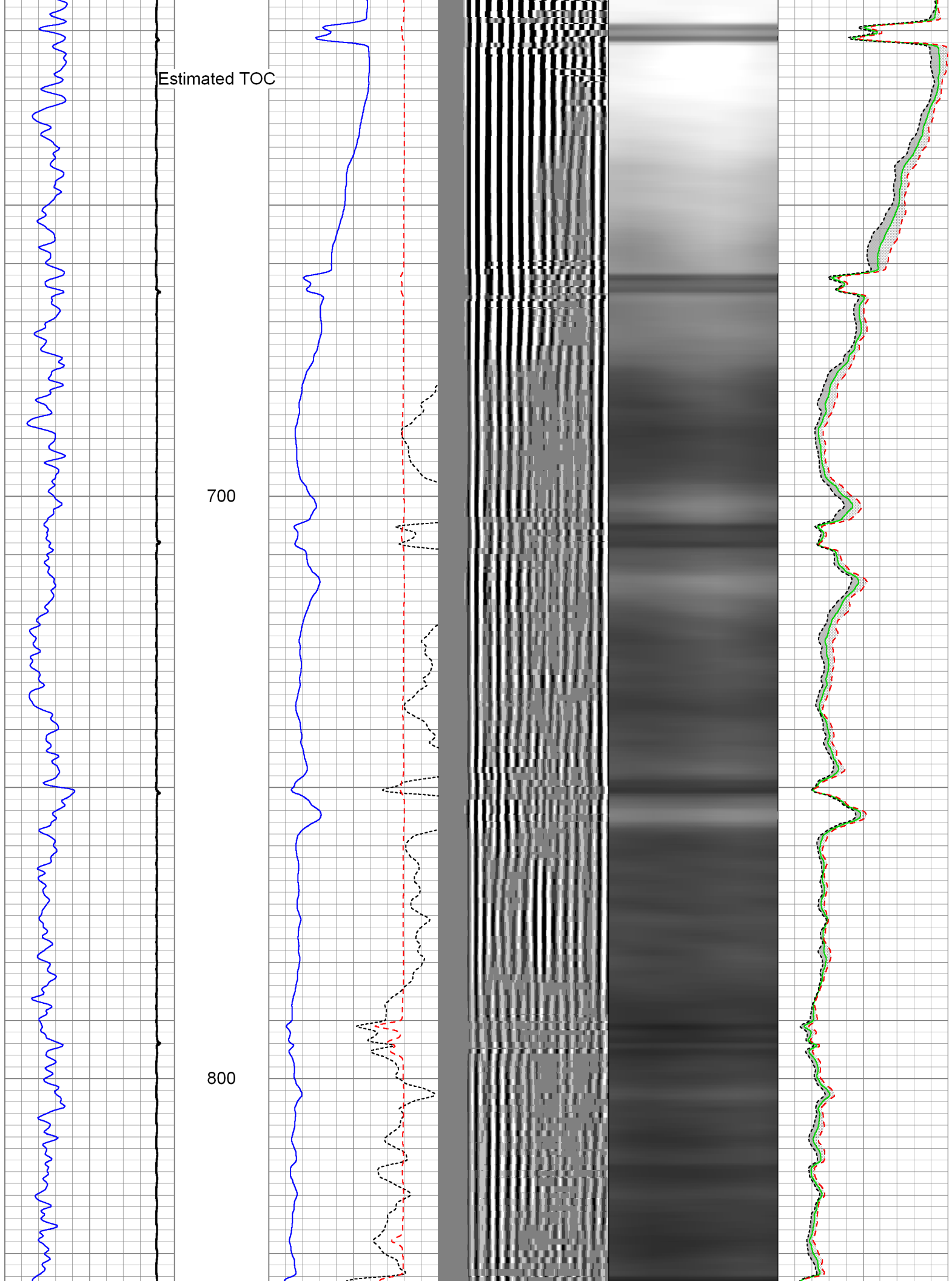
Gamma Ray		3' Amplitude		5' Variable Density Log		Sector Map		Average Amplitude	
0	(GAPI) 120	0	(mV) 100	200	1200			0	100
Collar Locator		3' Amplitude x 5						Minimum Amplitude	
		0	(mV) 20					0	100
		3' Travel Time						Maximum Amplitude	
		650	(usec) 150					0	100

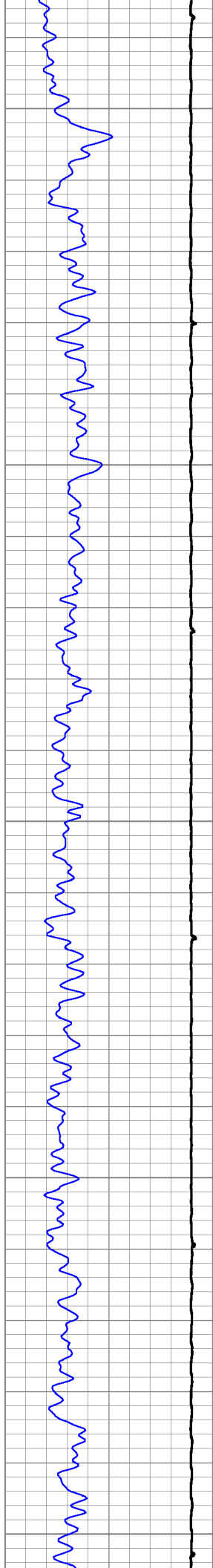






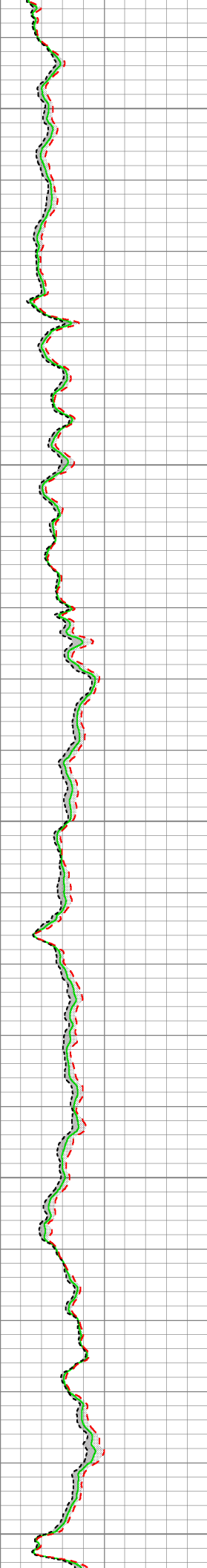
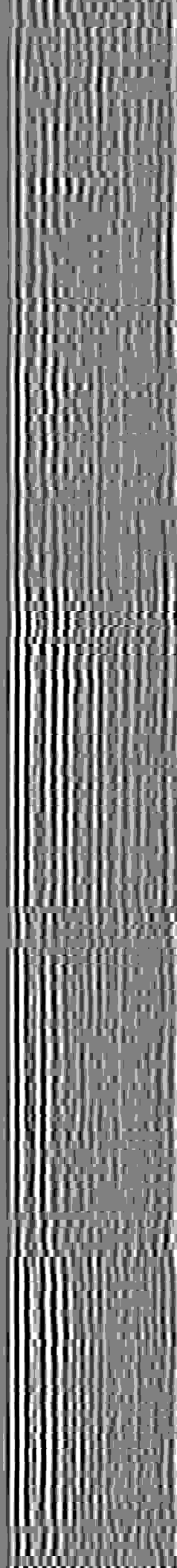
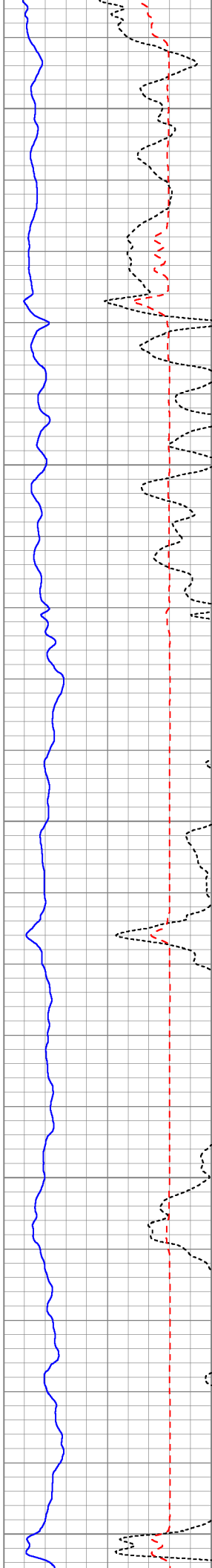






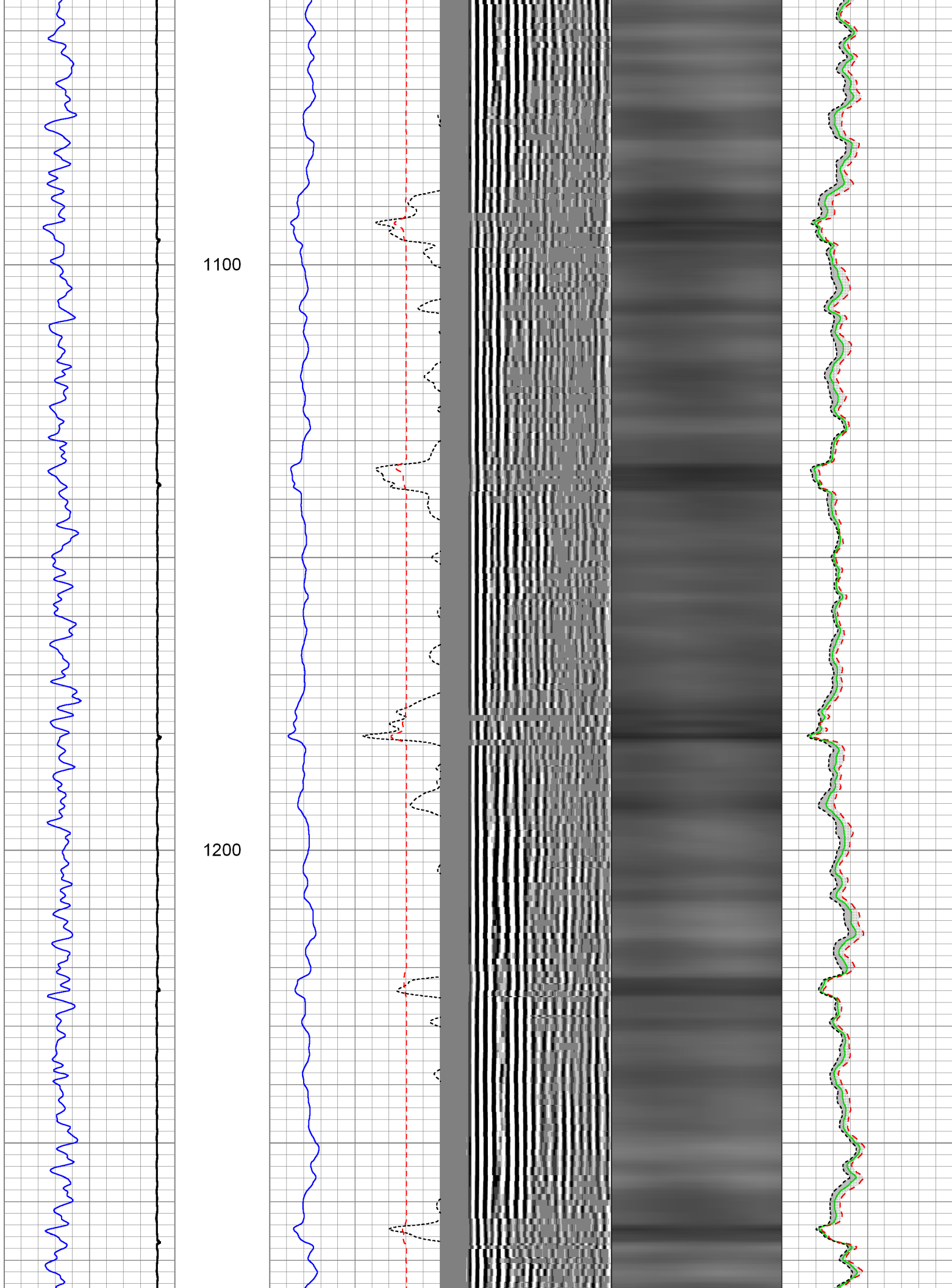
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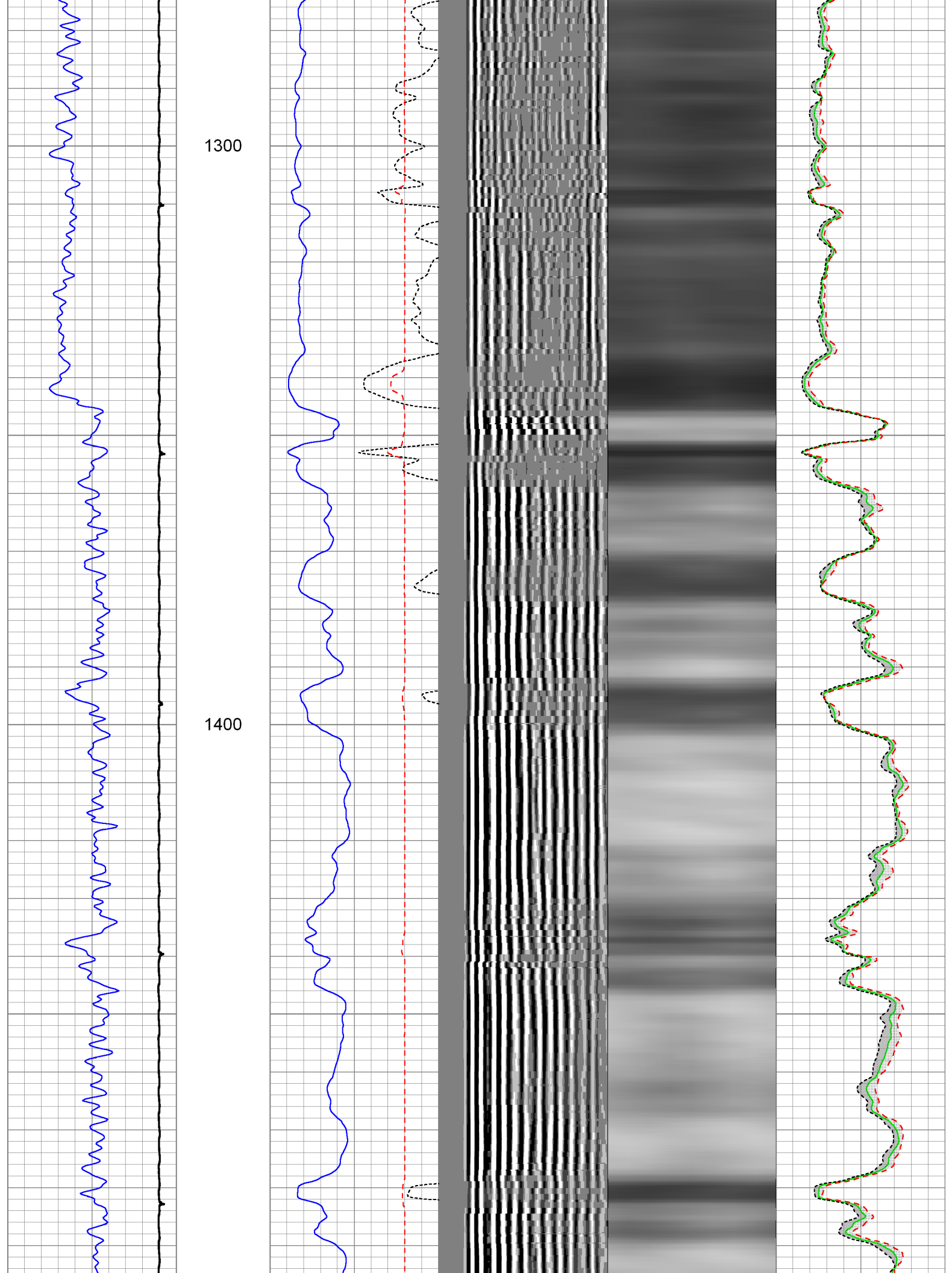
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1100

1200

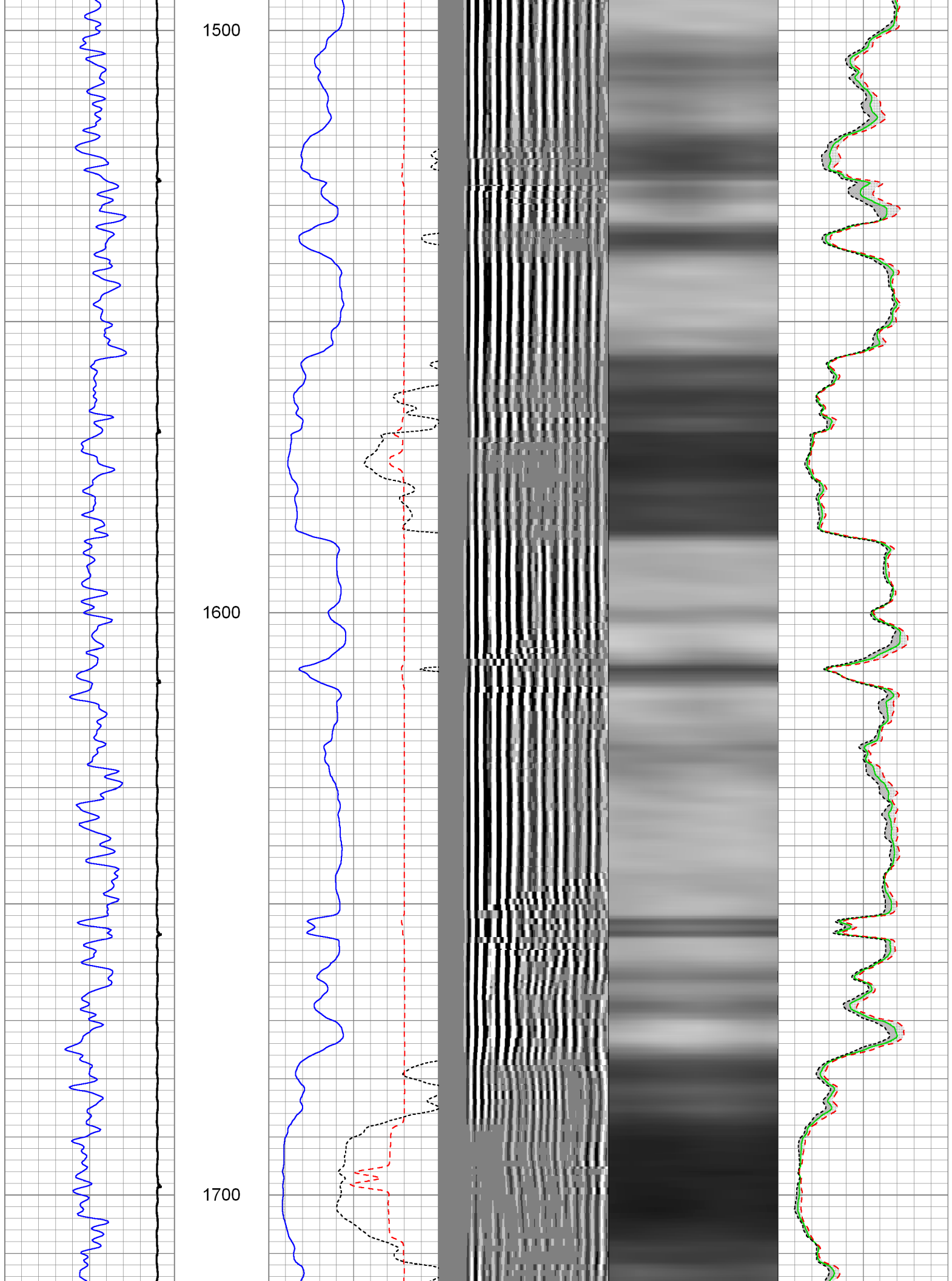


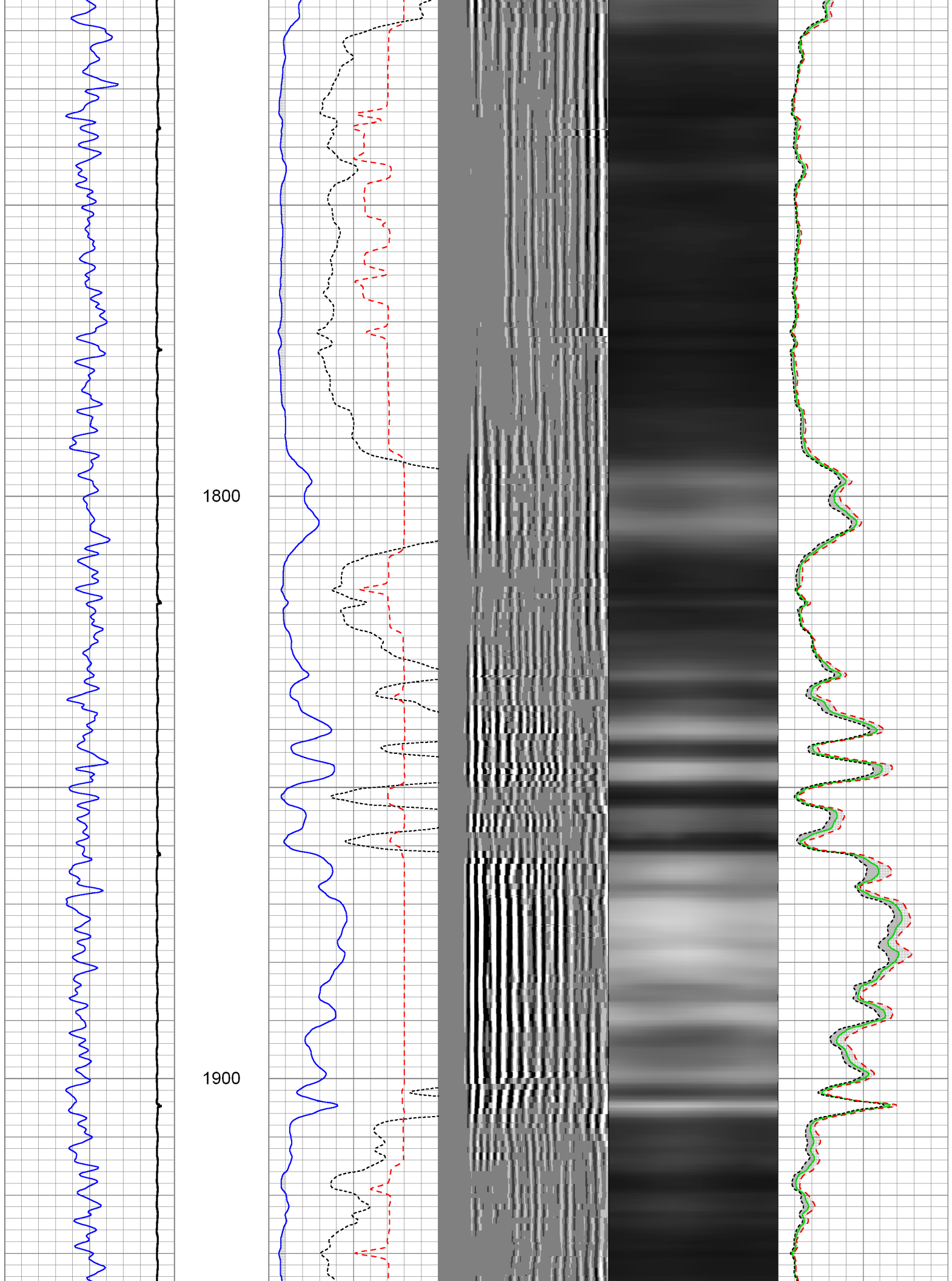


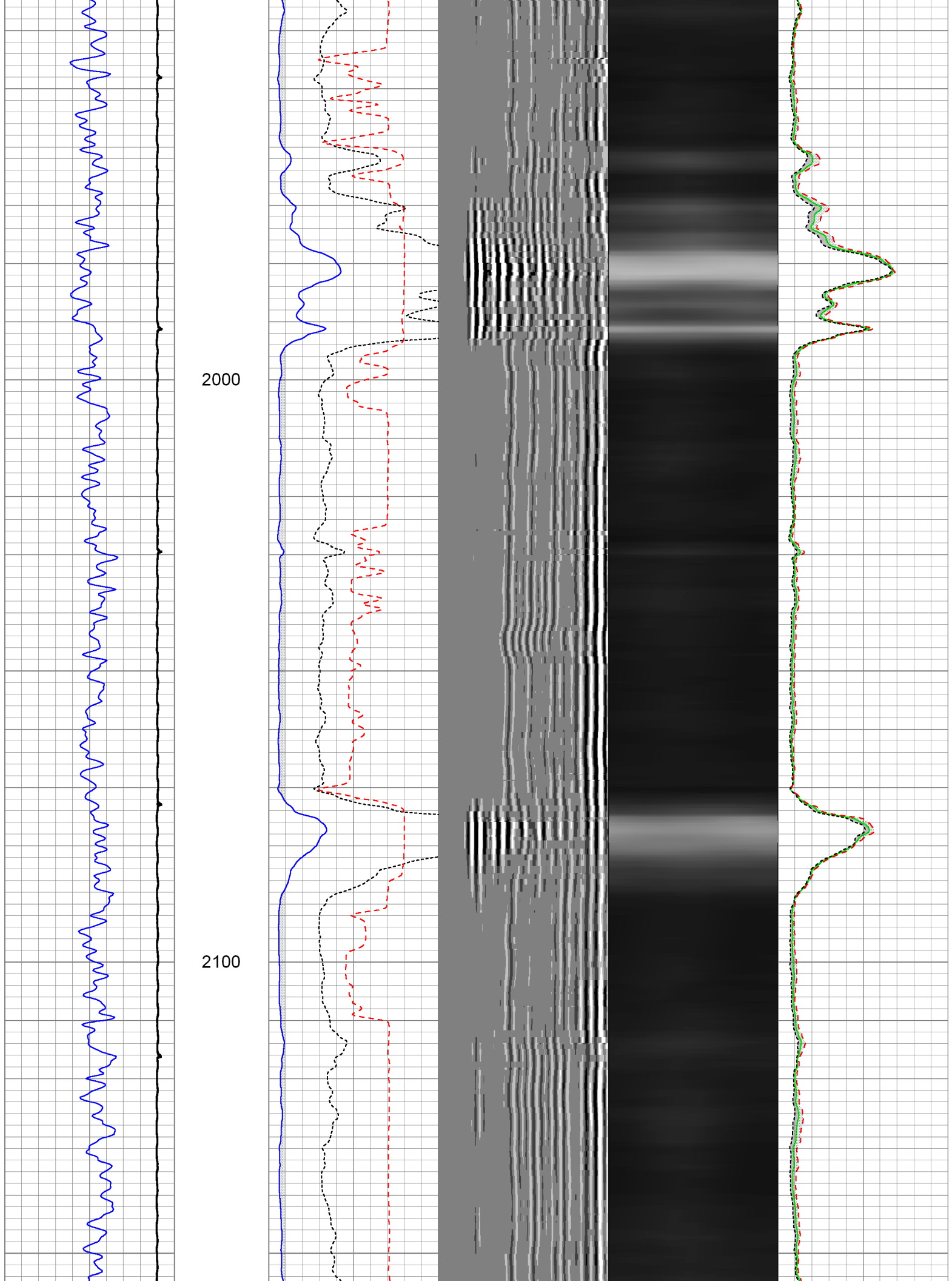
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1700



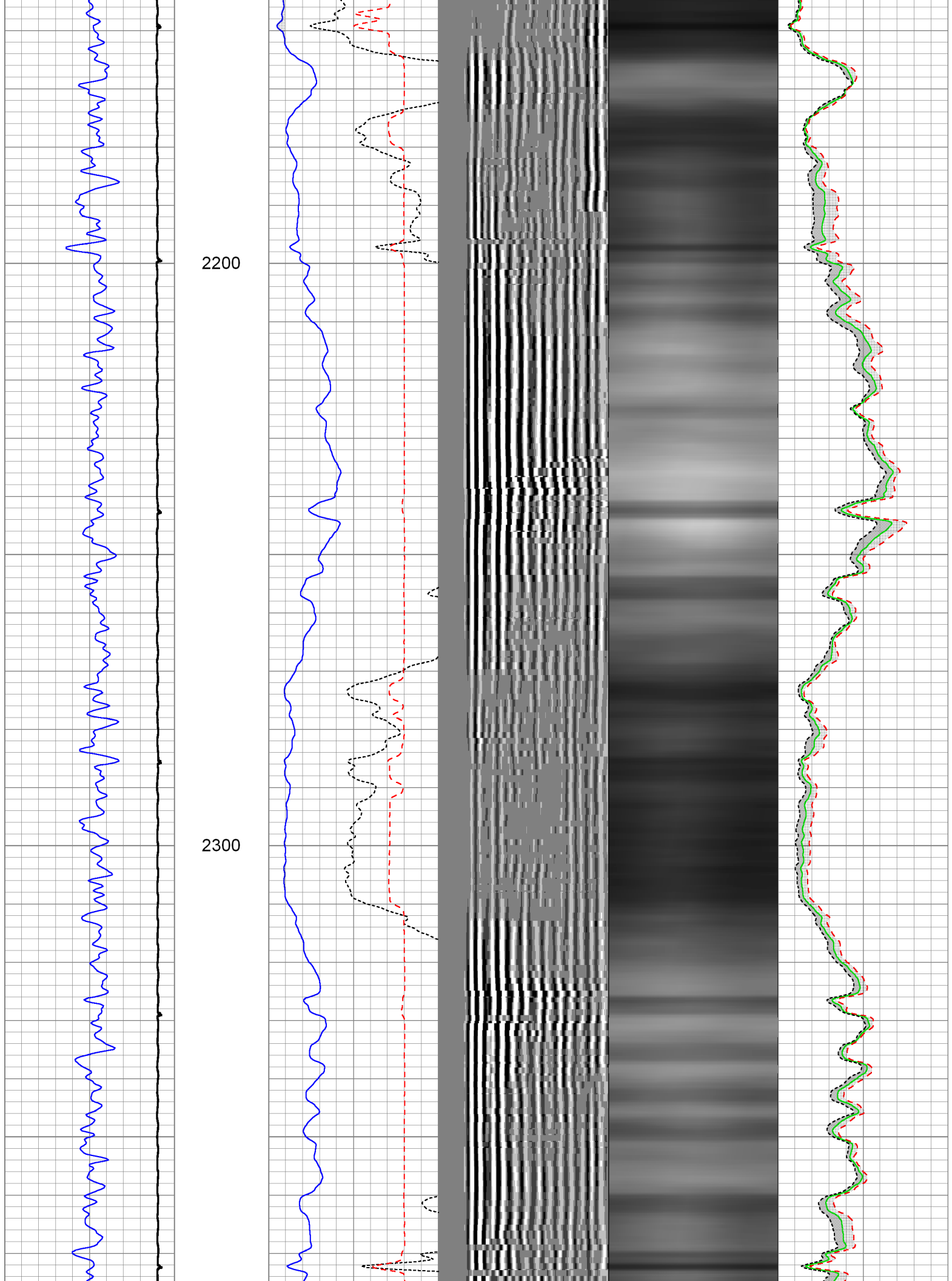






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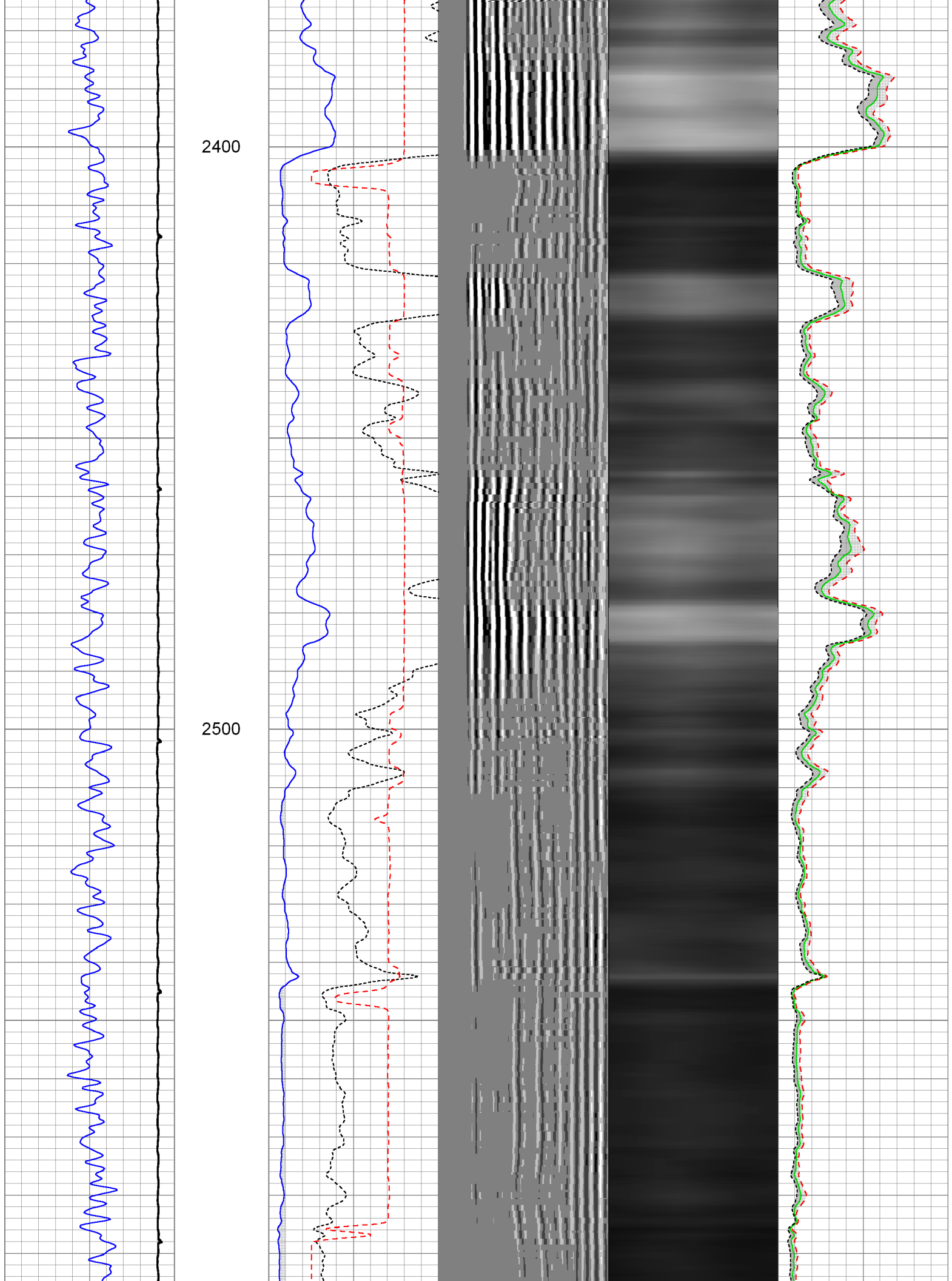
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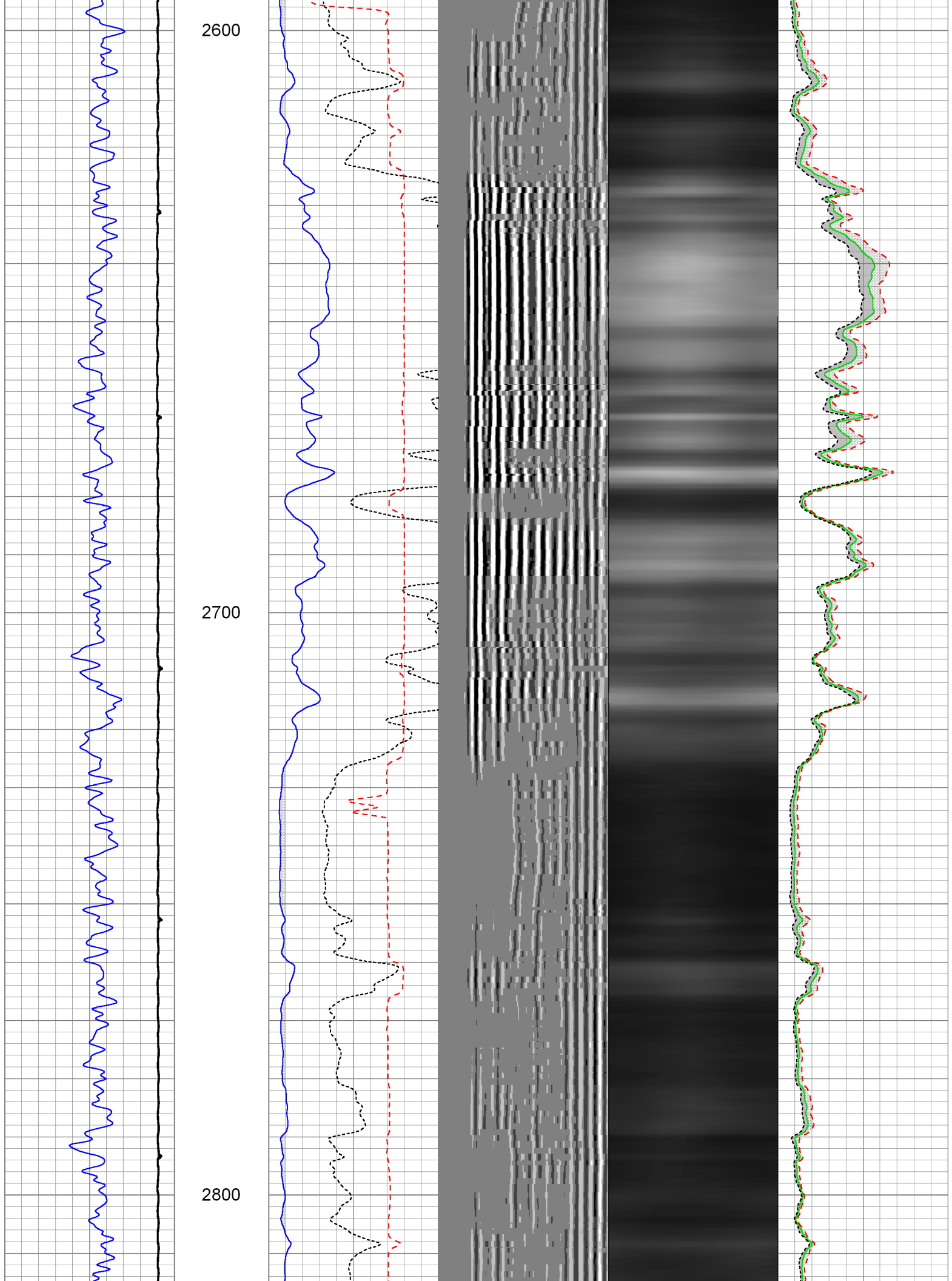
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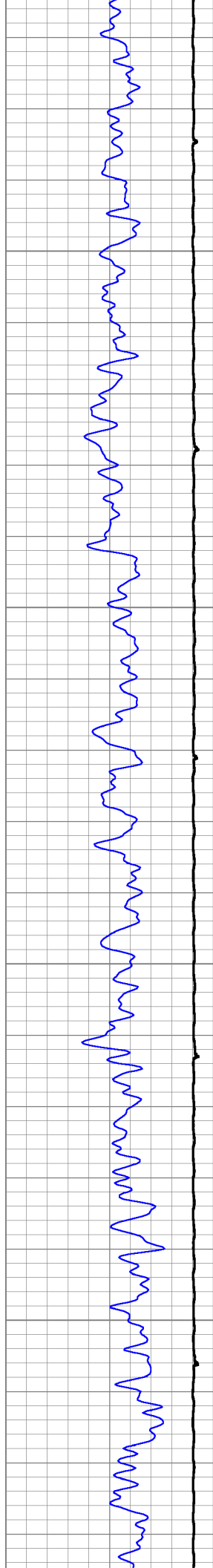


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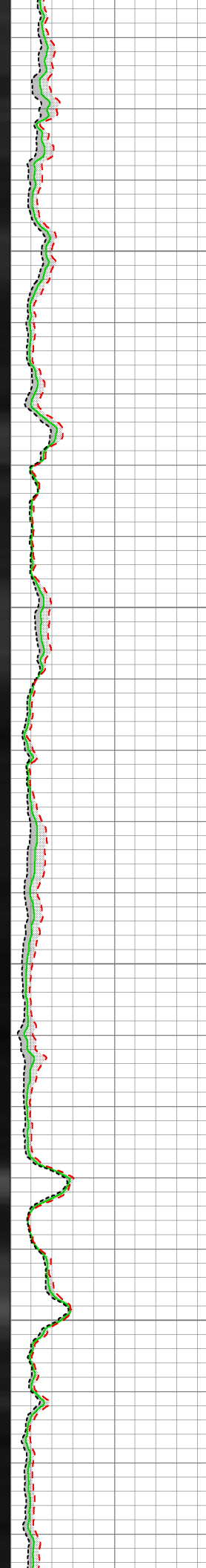
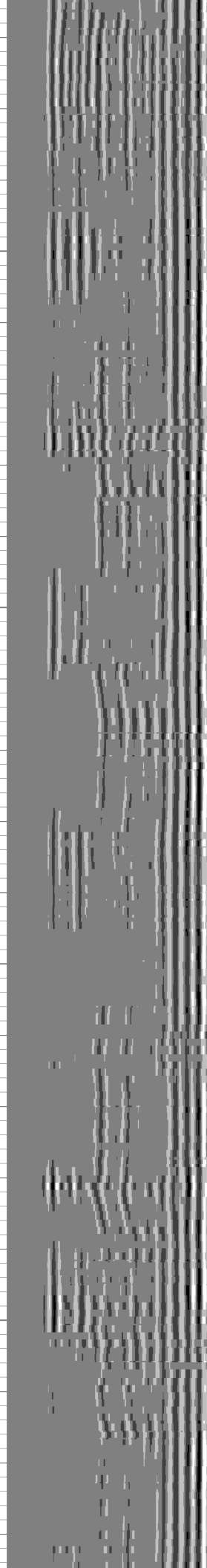
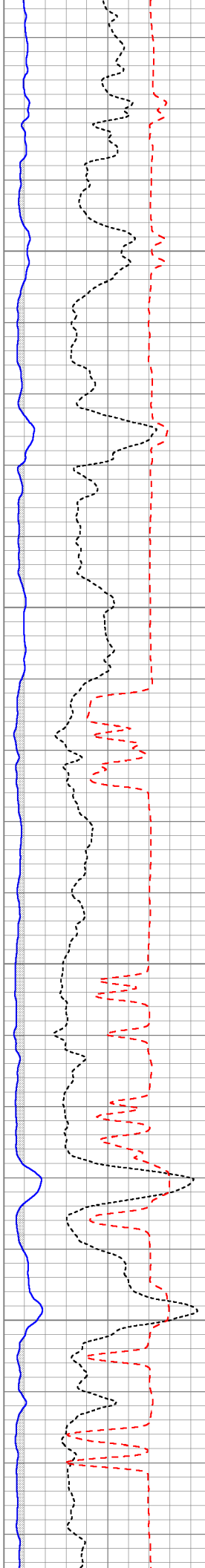
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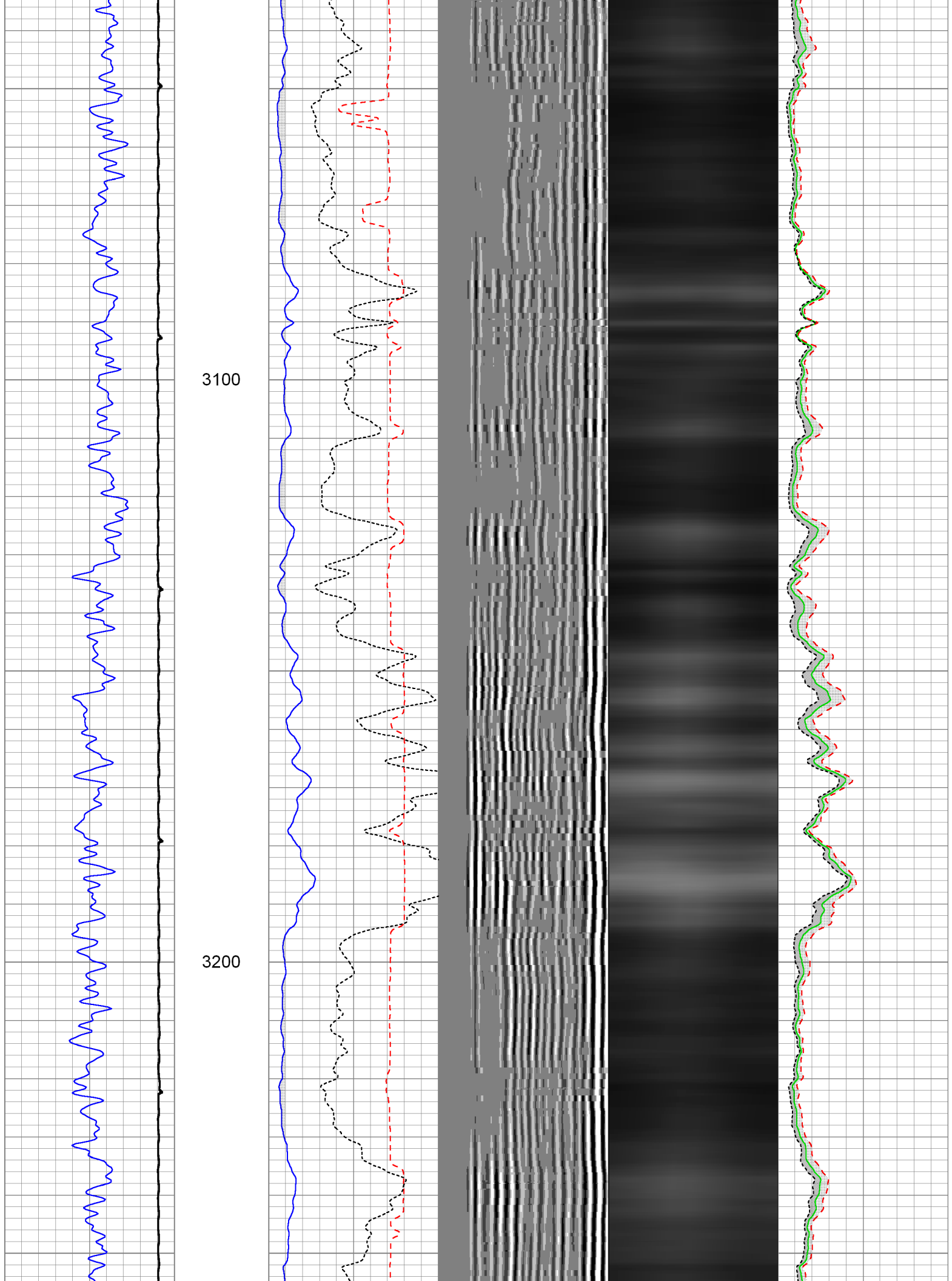
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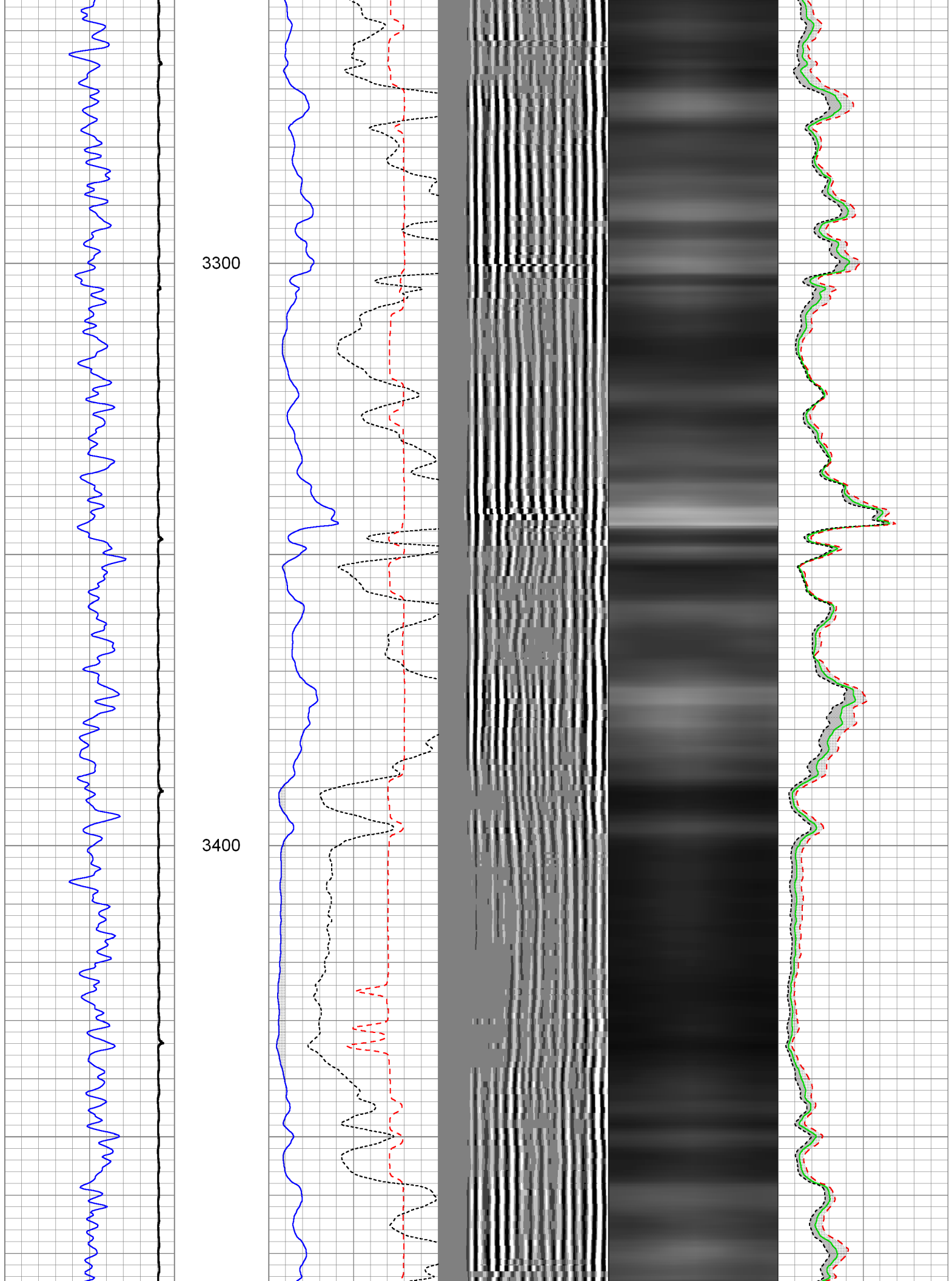
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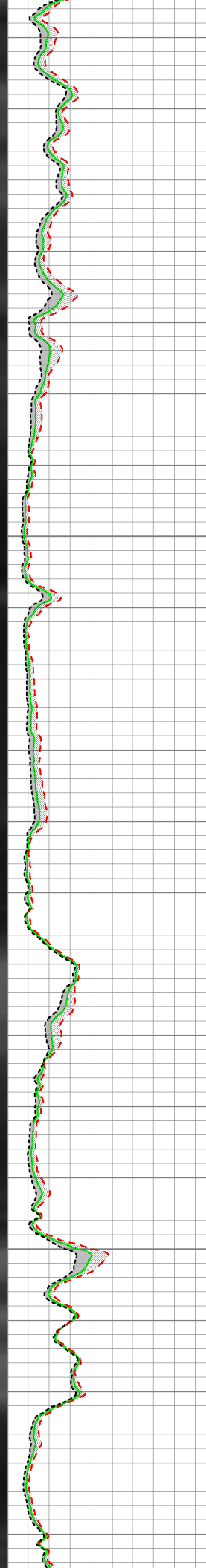
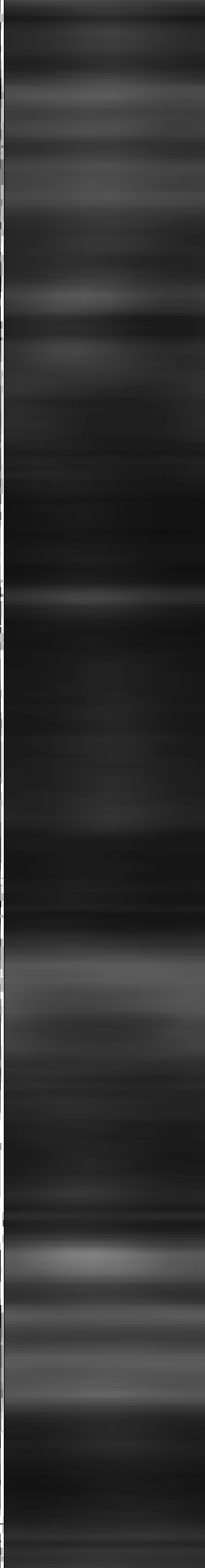
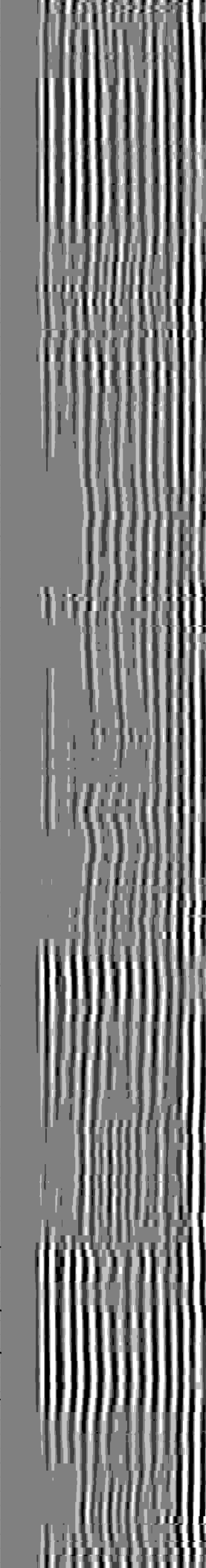
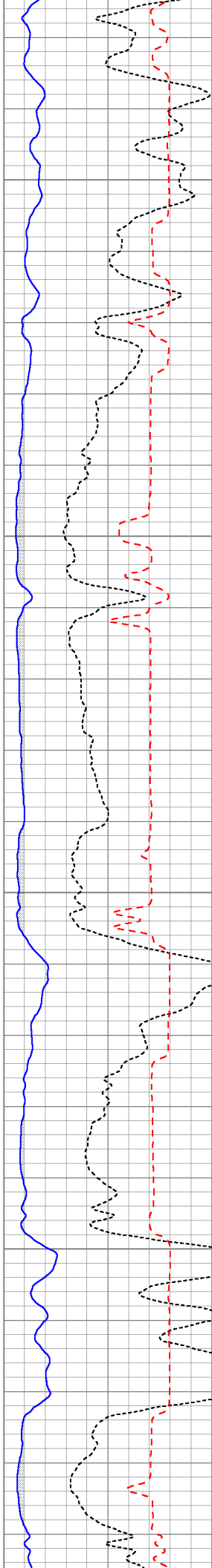
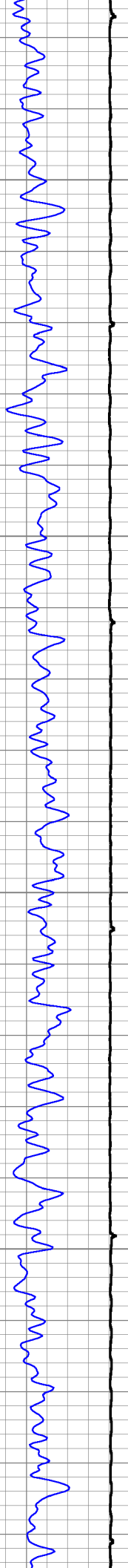
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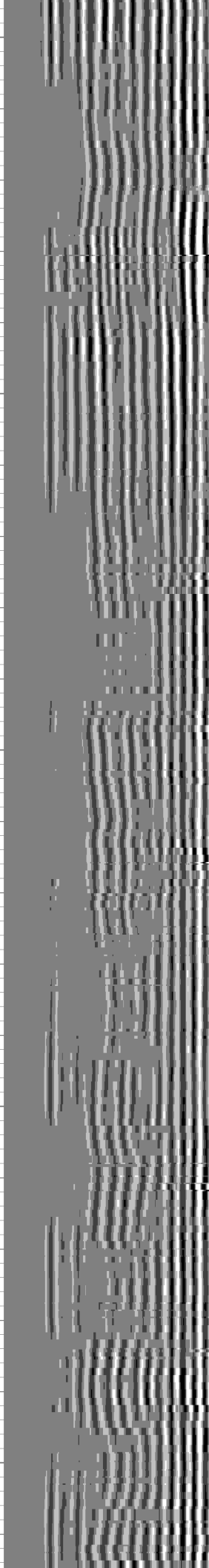
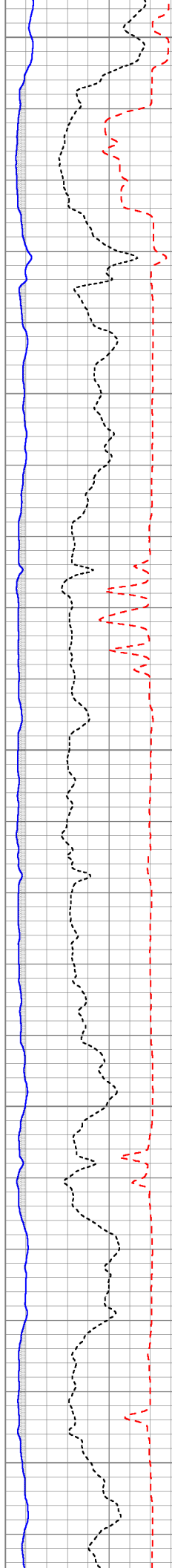
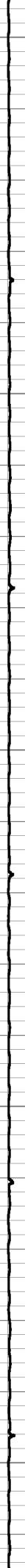
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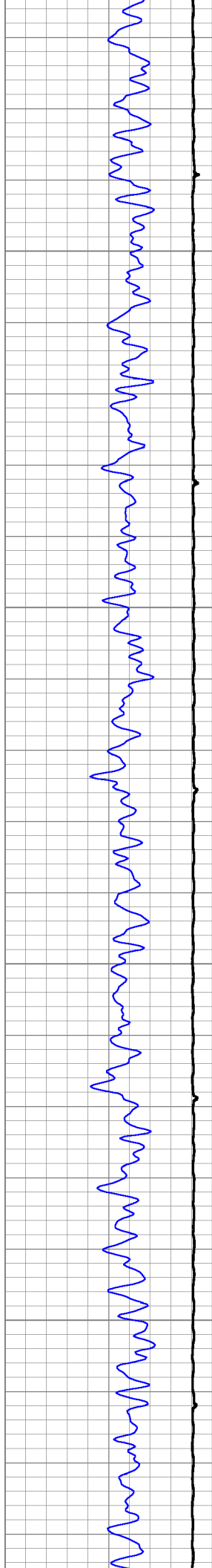
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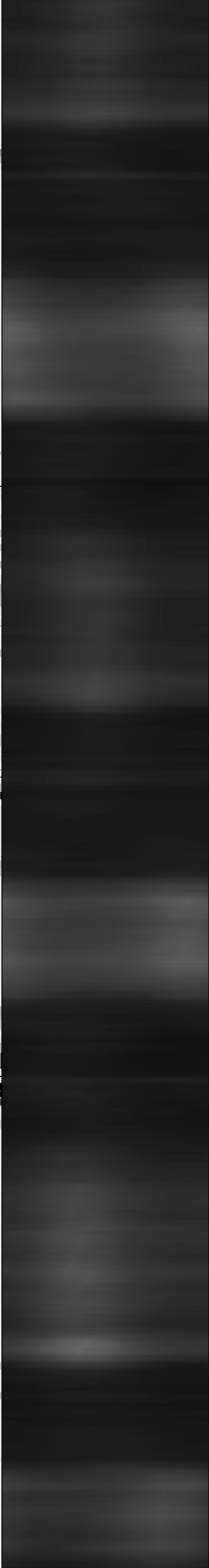
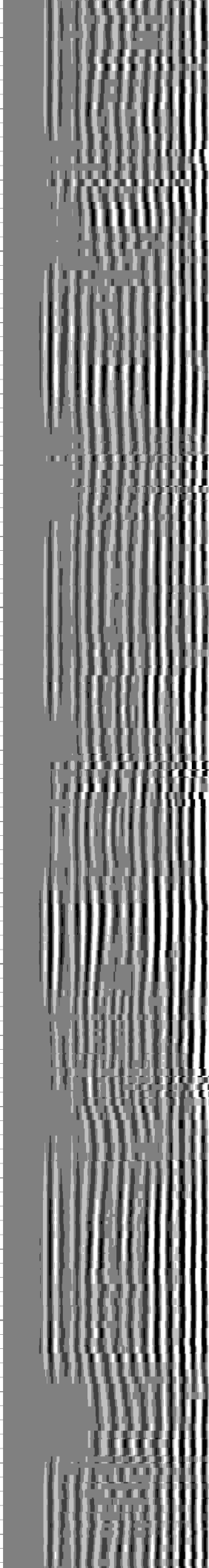
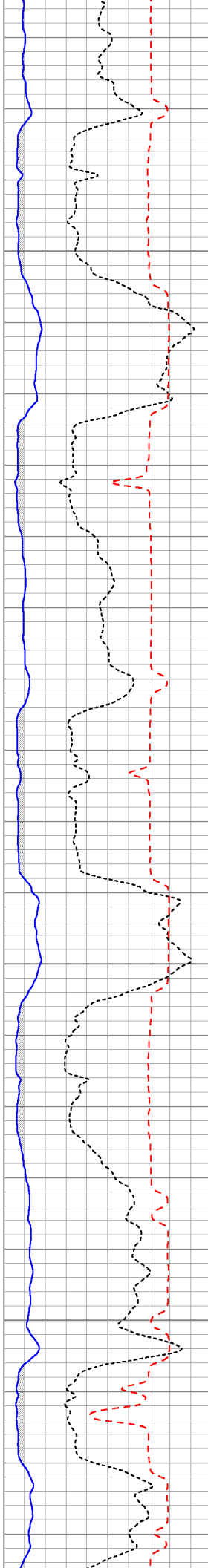




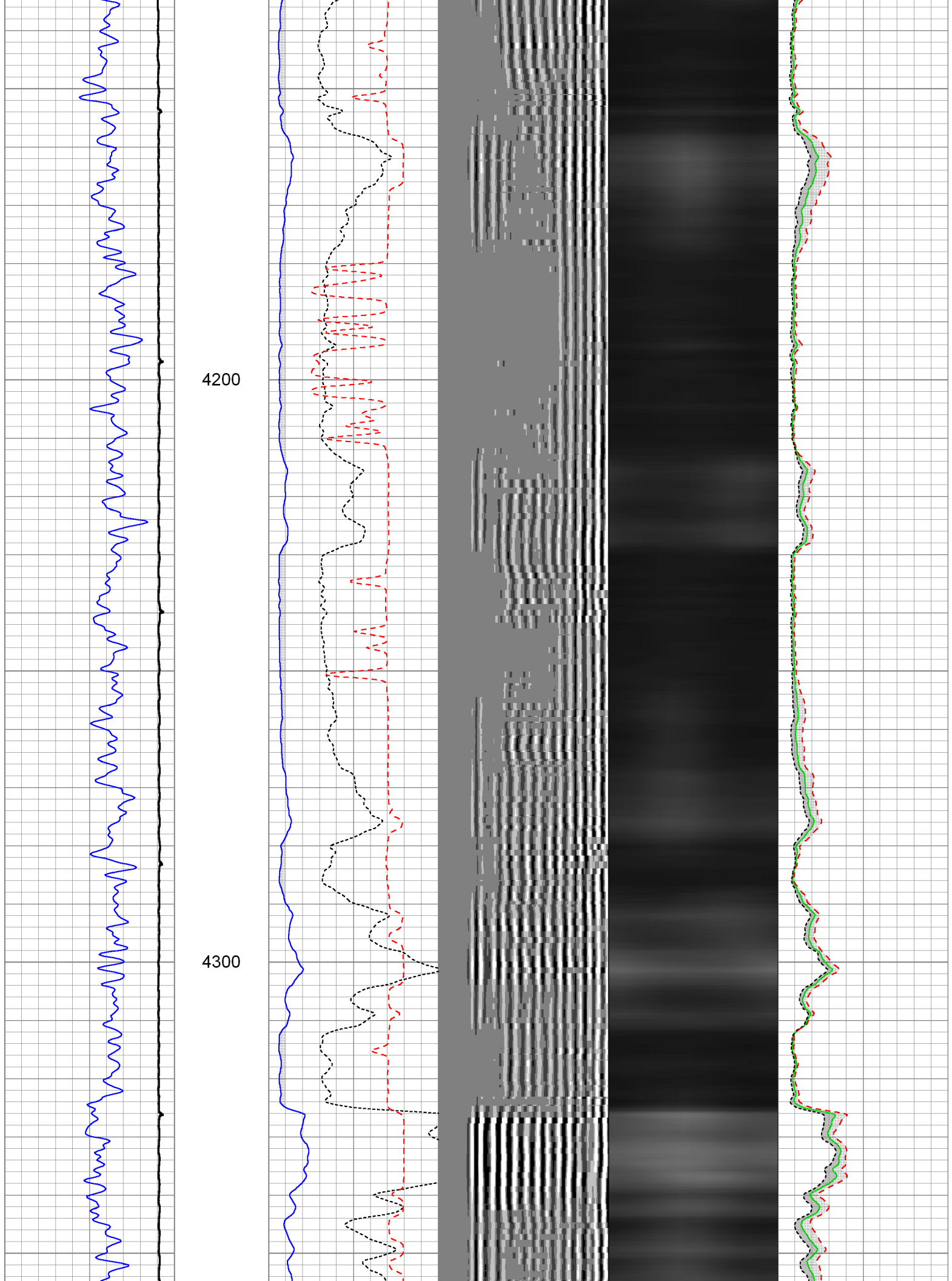


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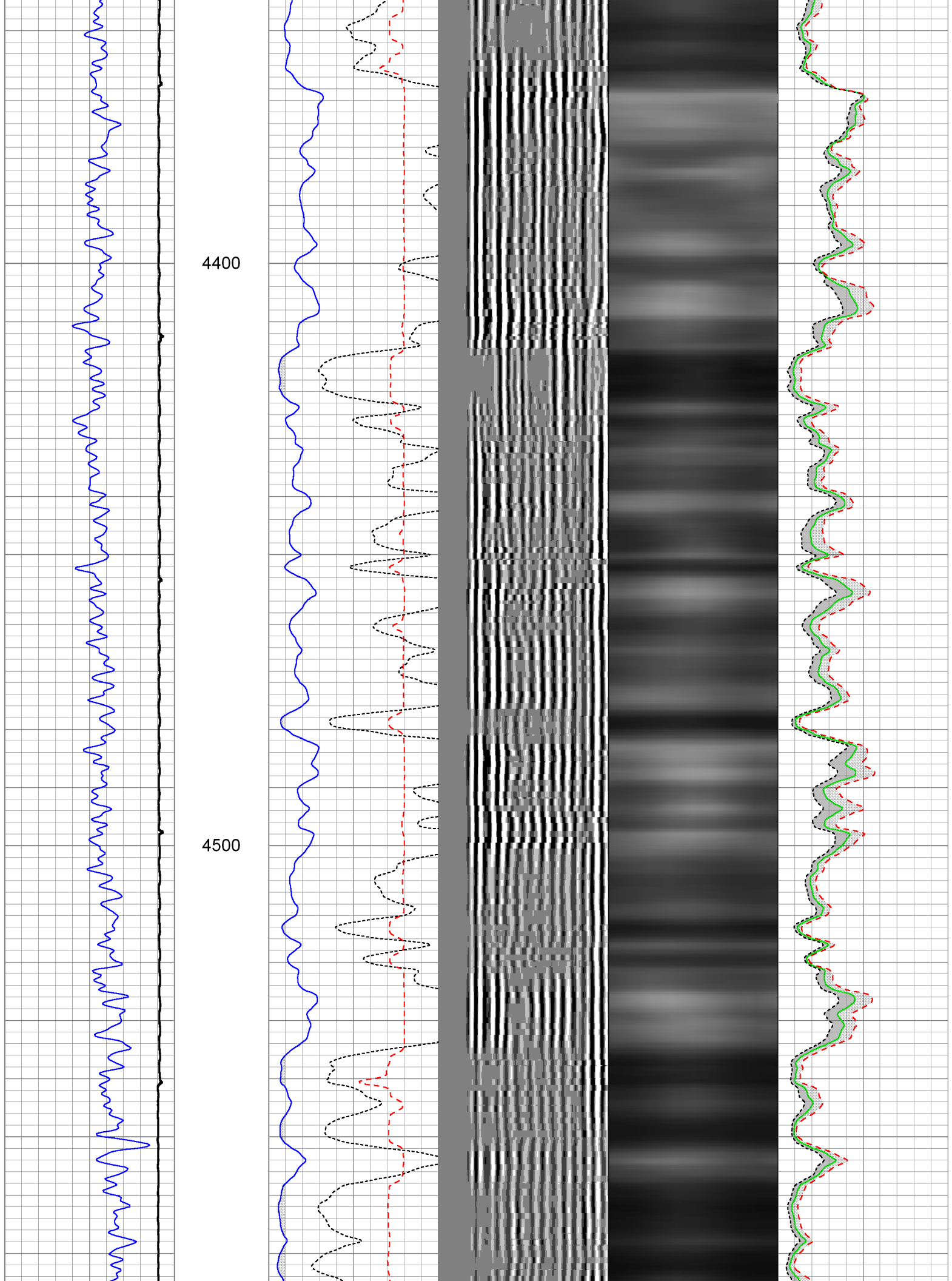






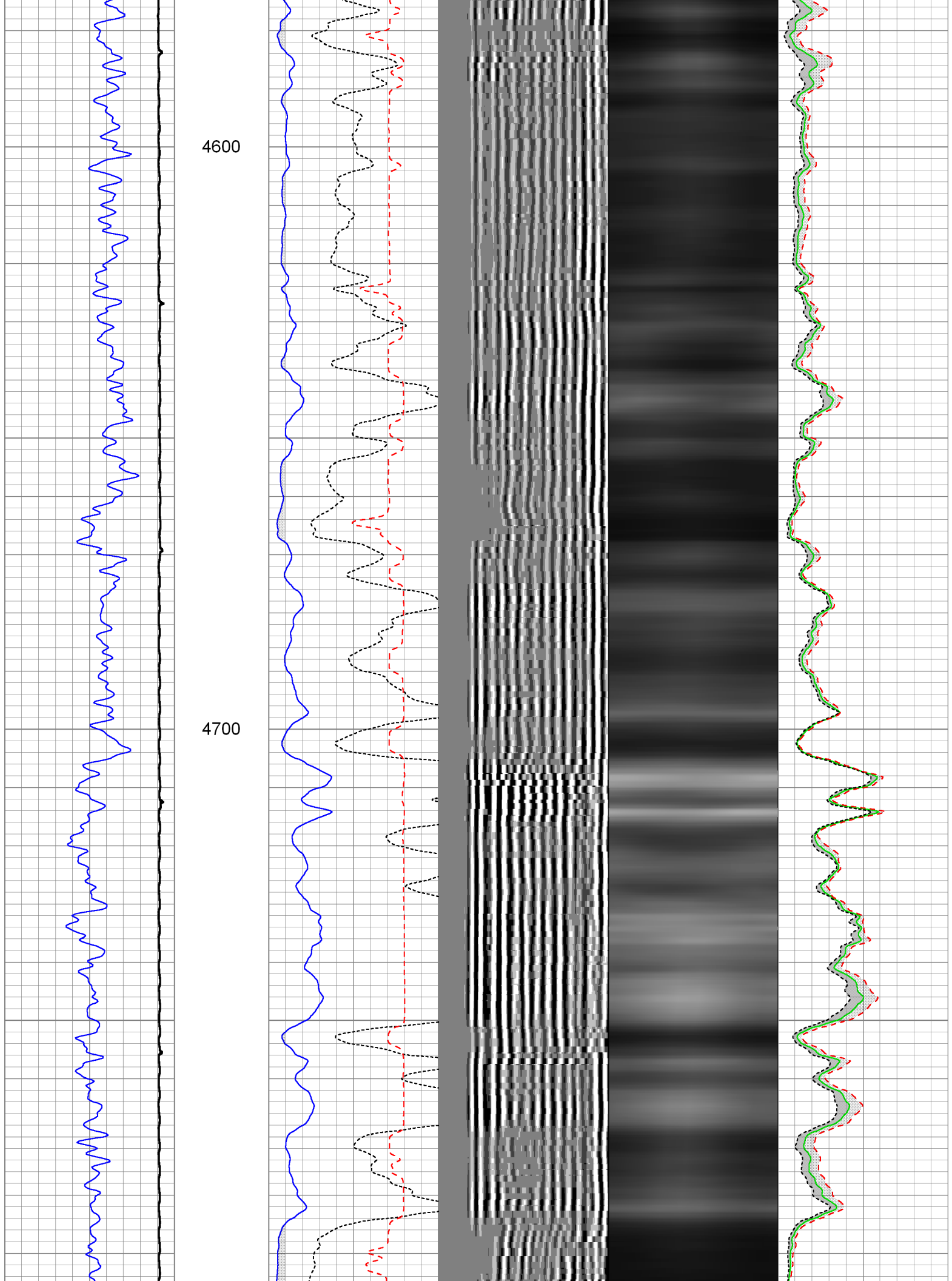
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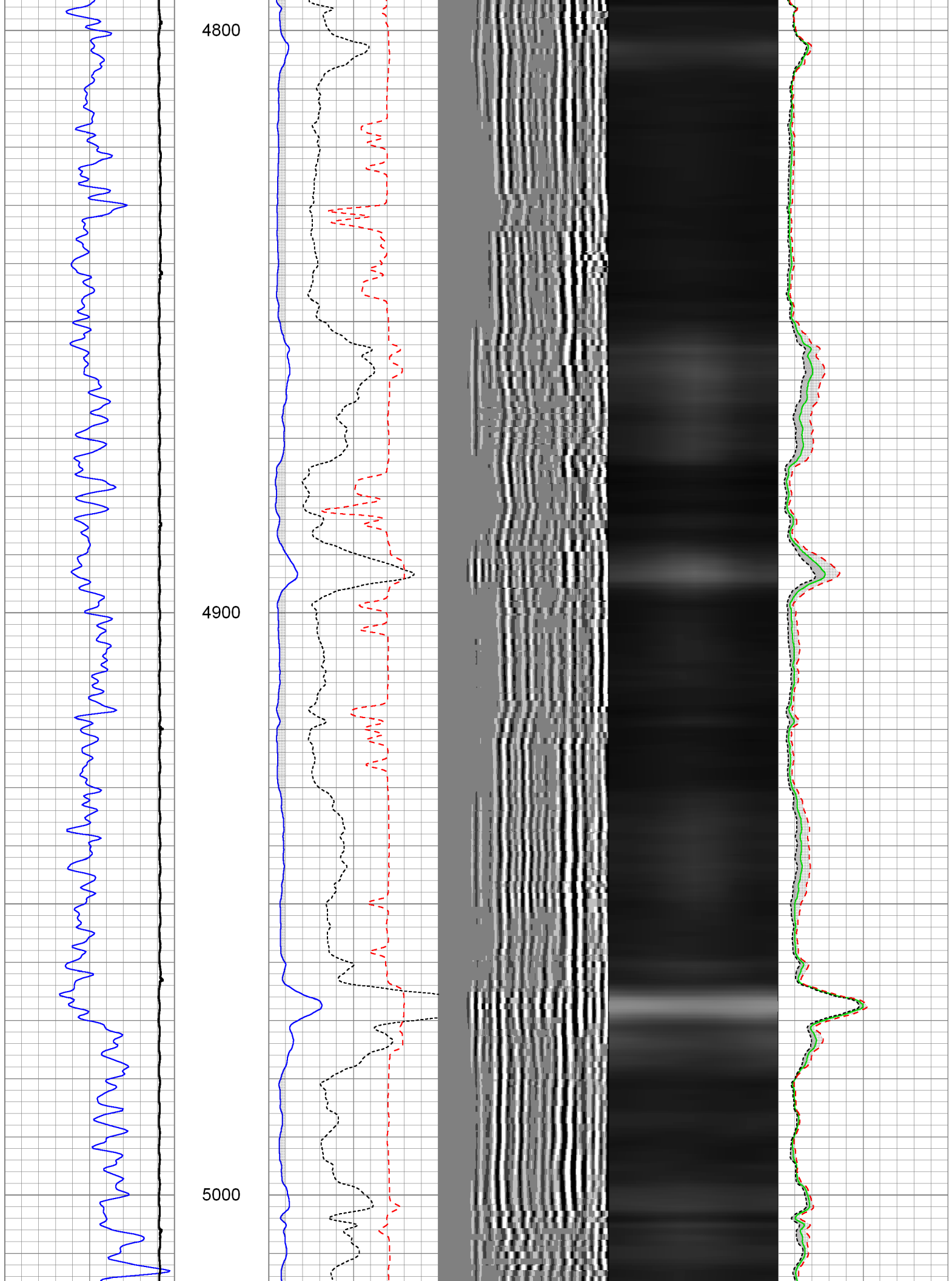
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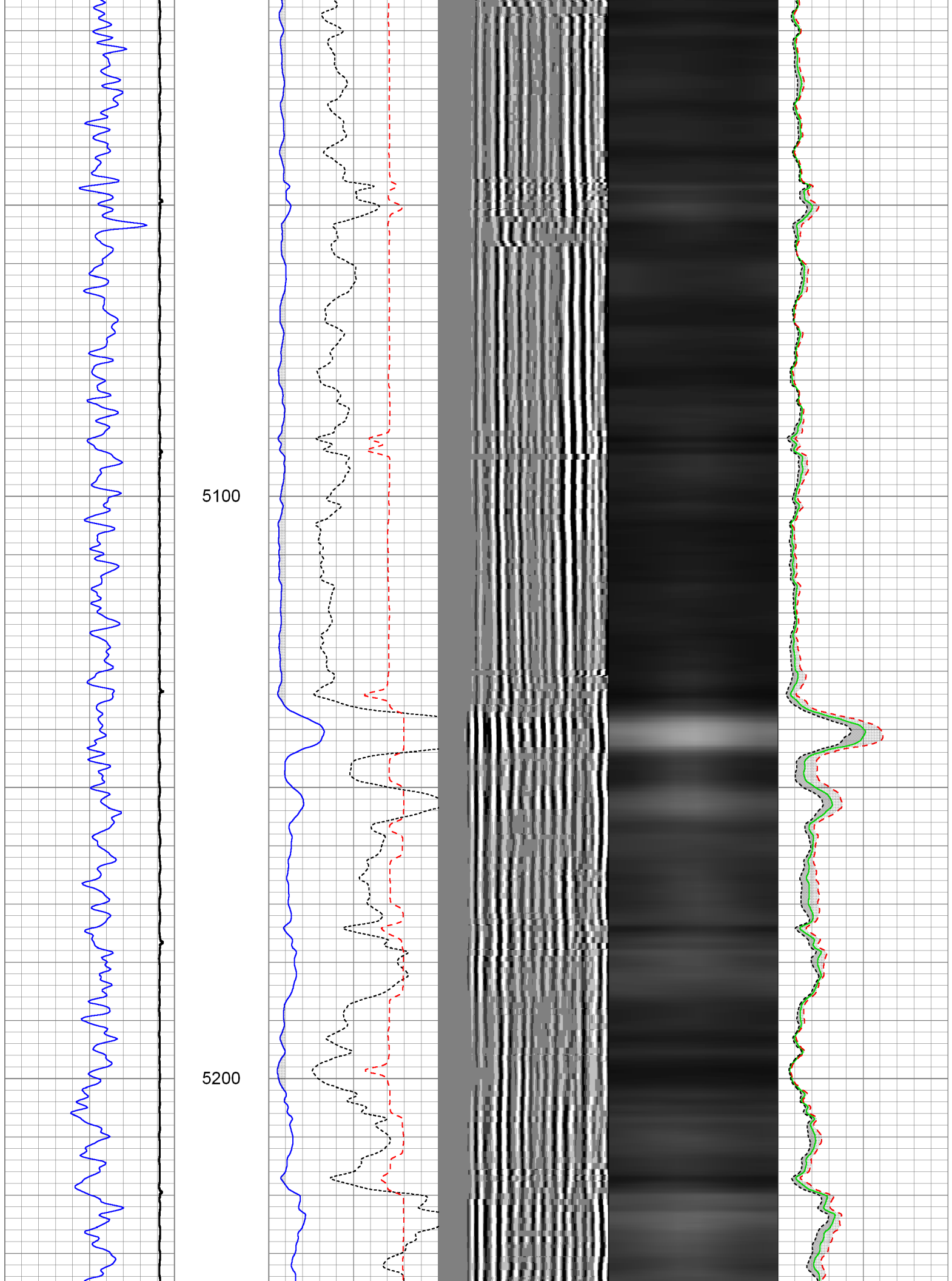


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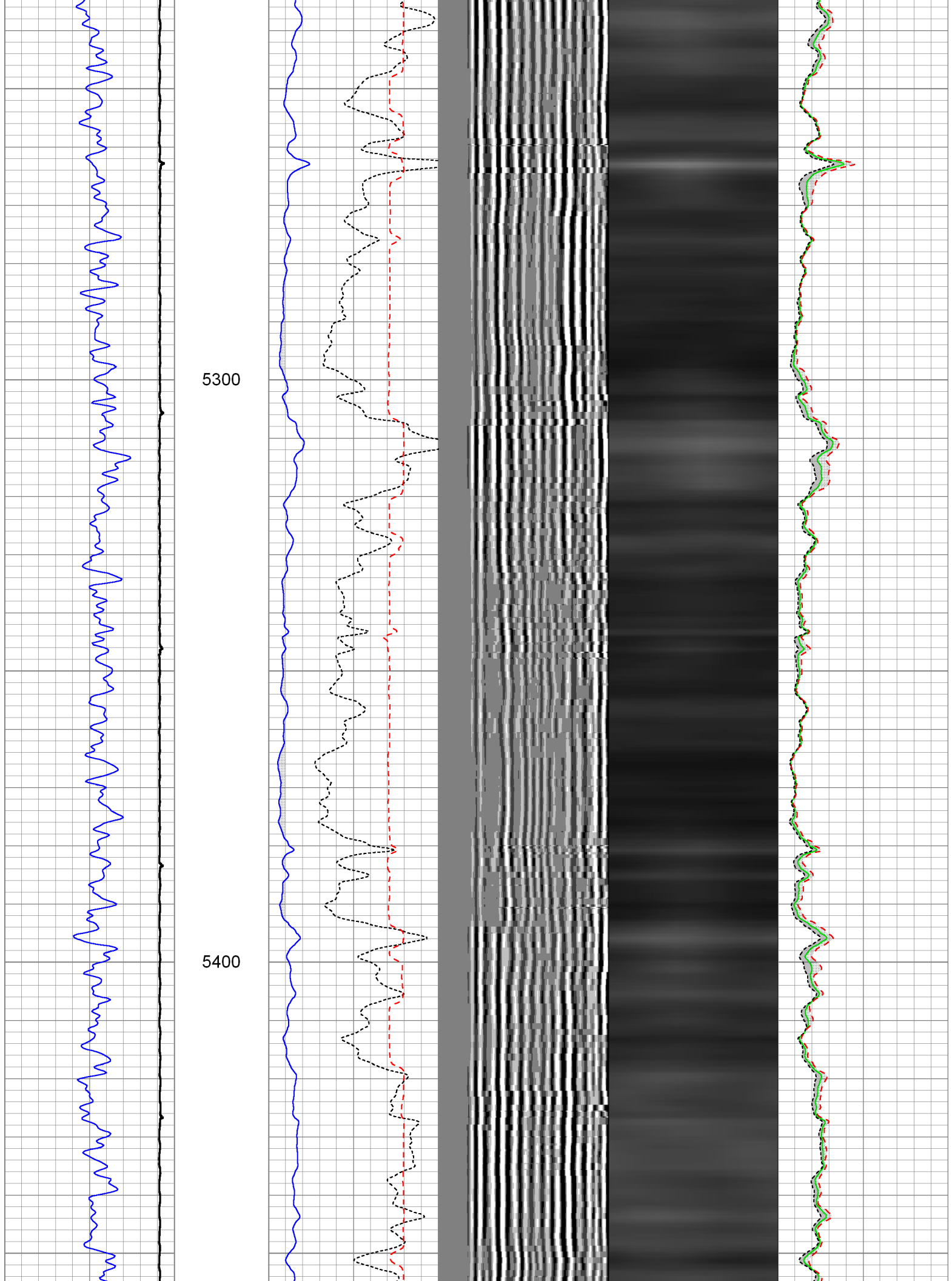
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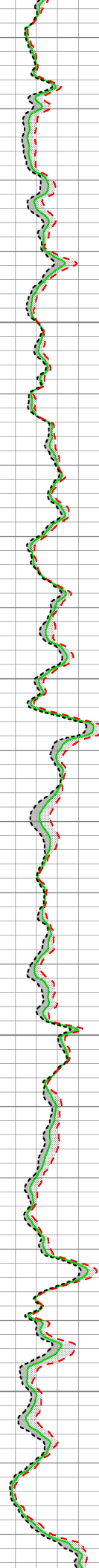
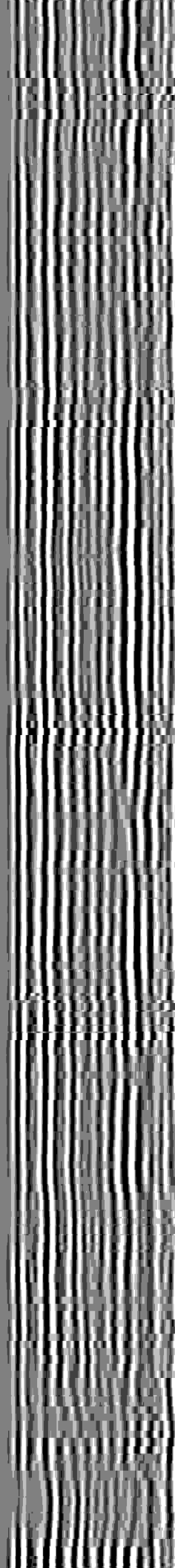
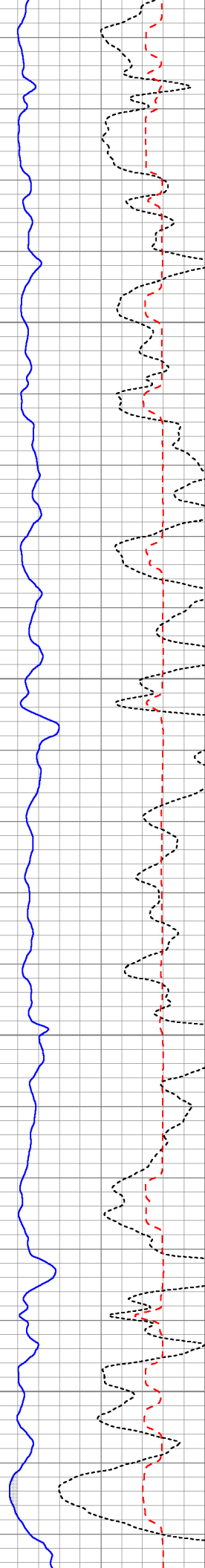
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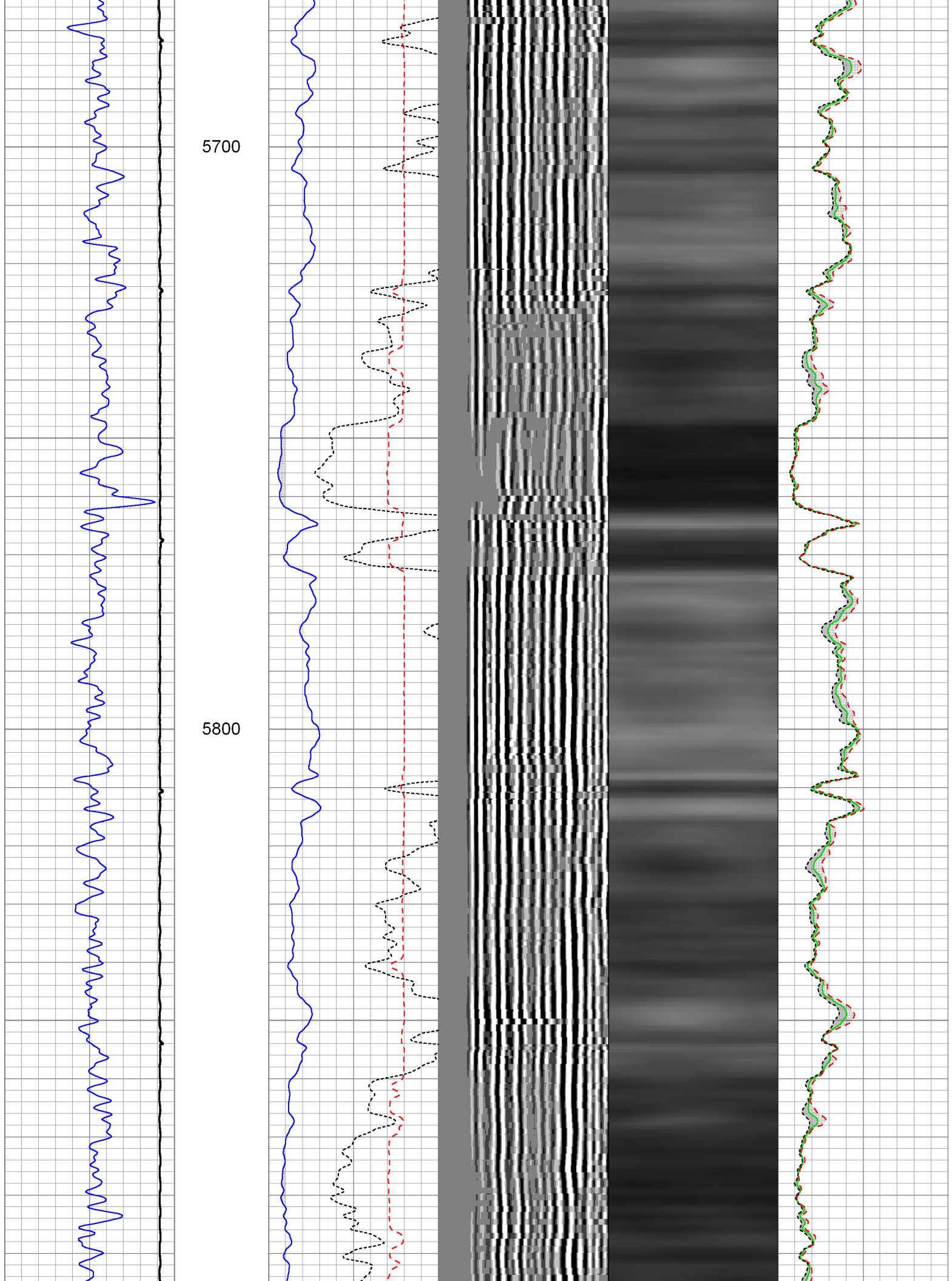
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5700

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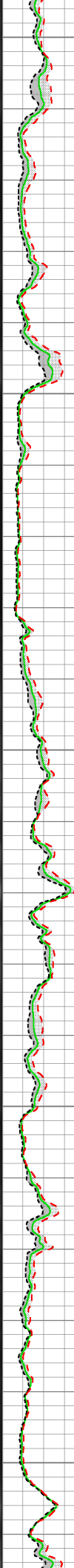
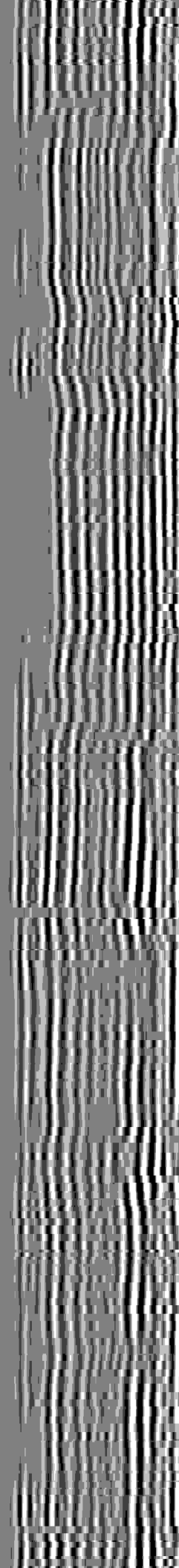
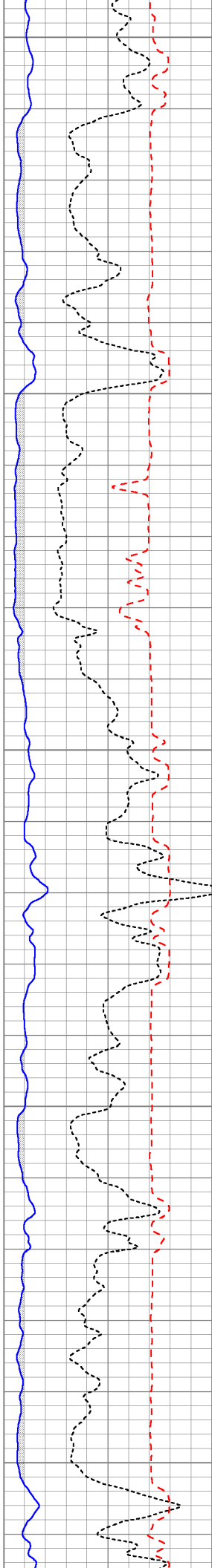




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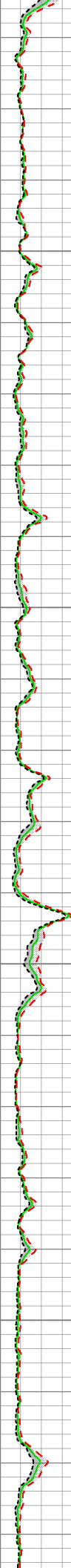
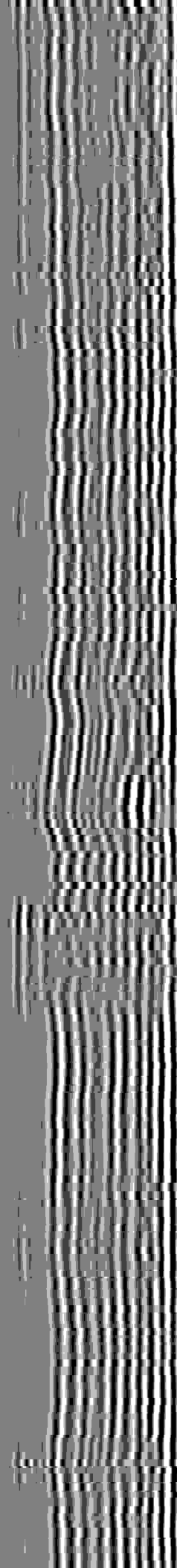
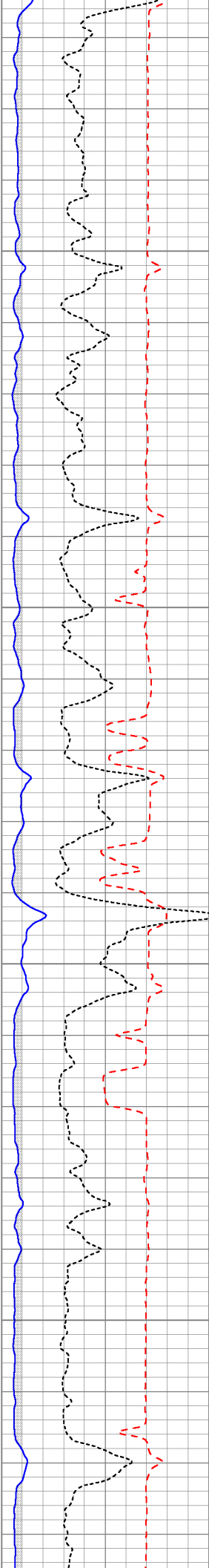
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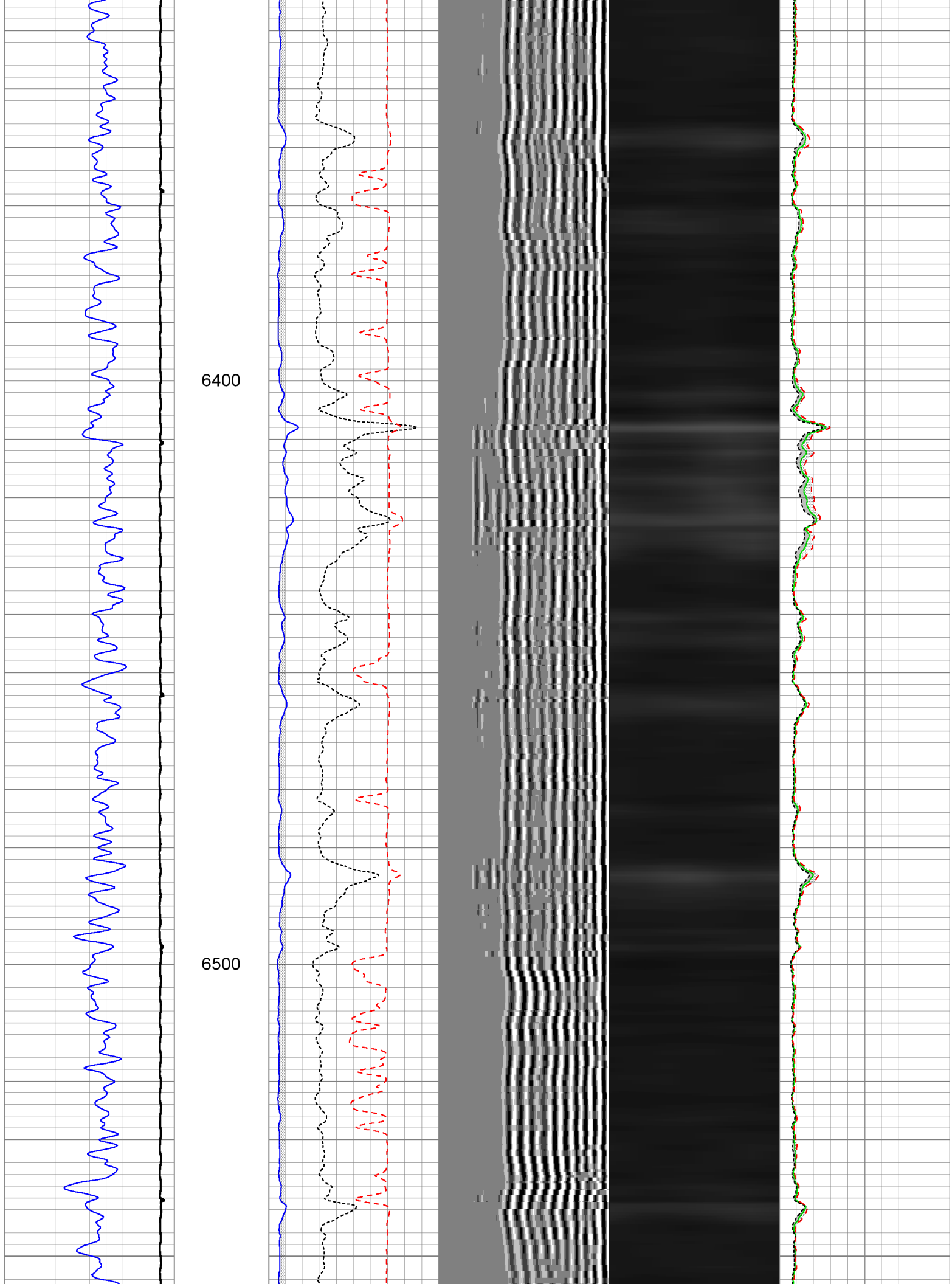


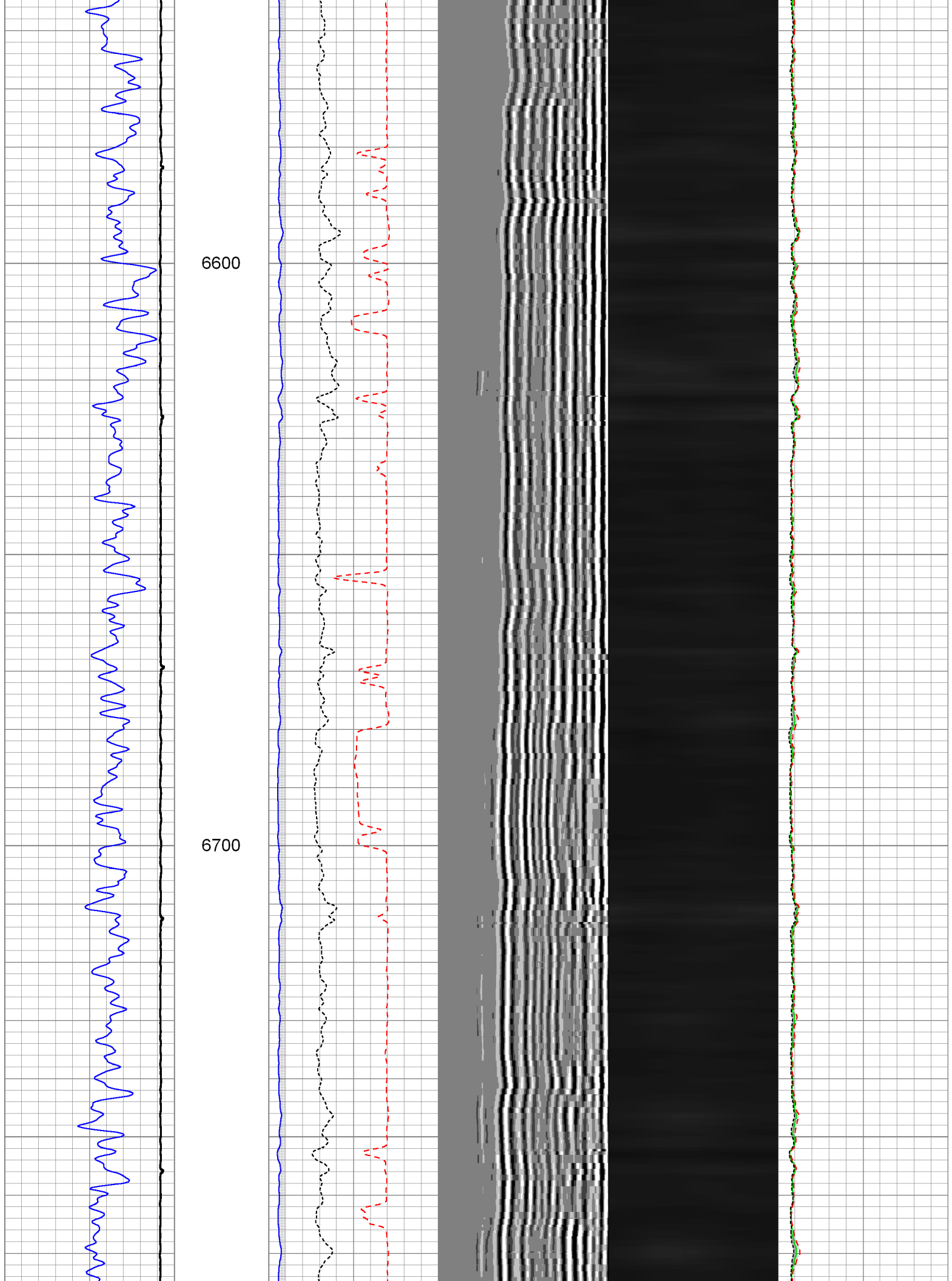


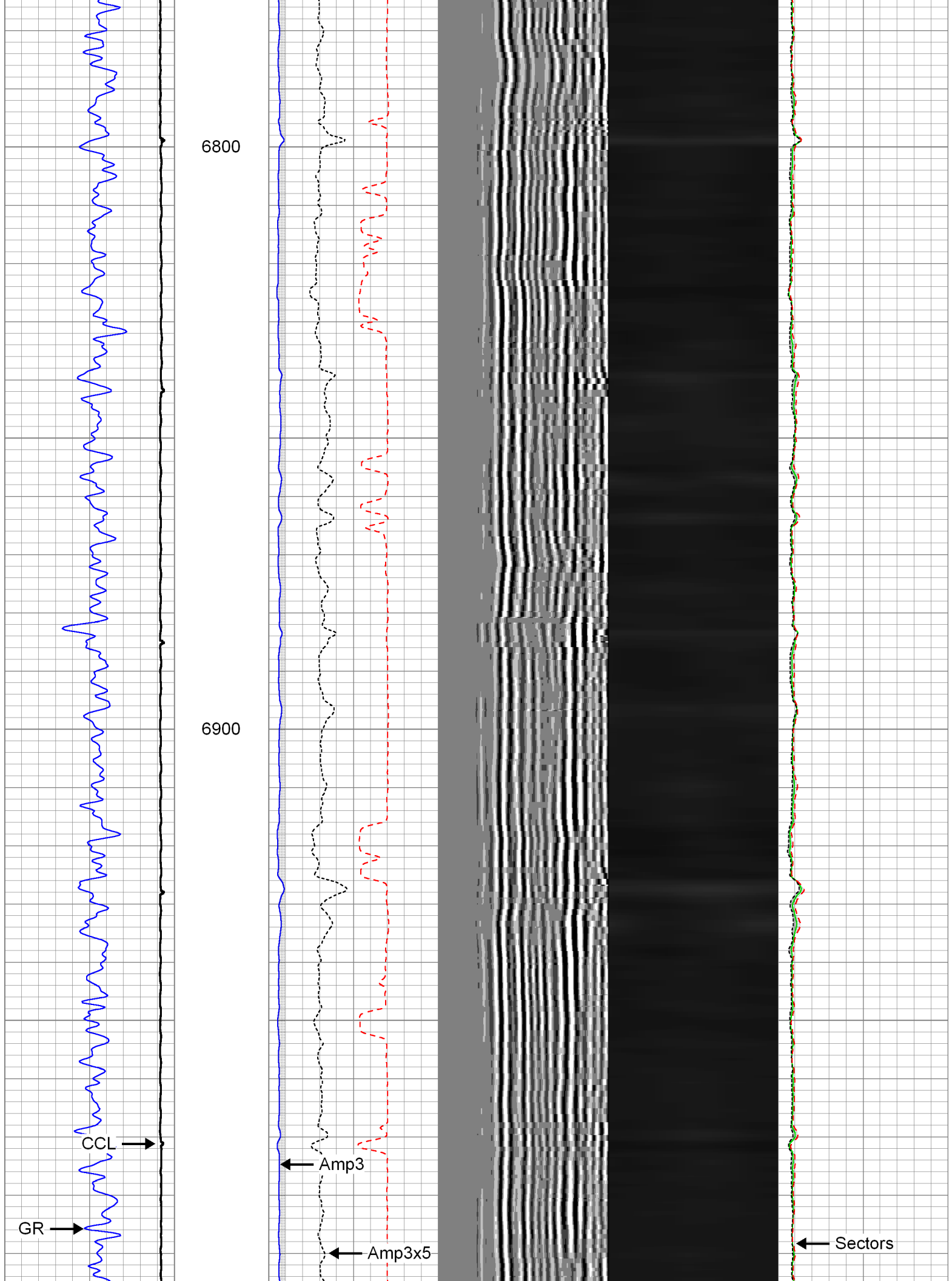
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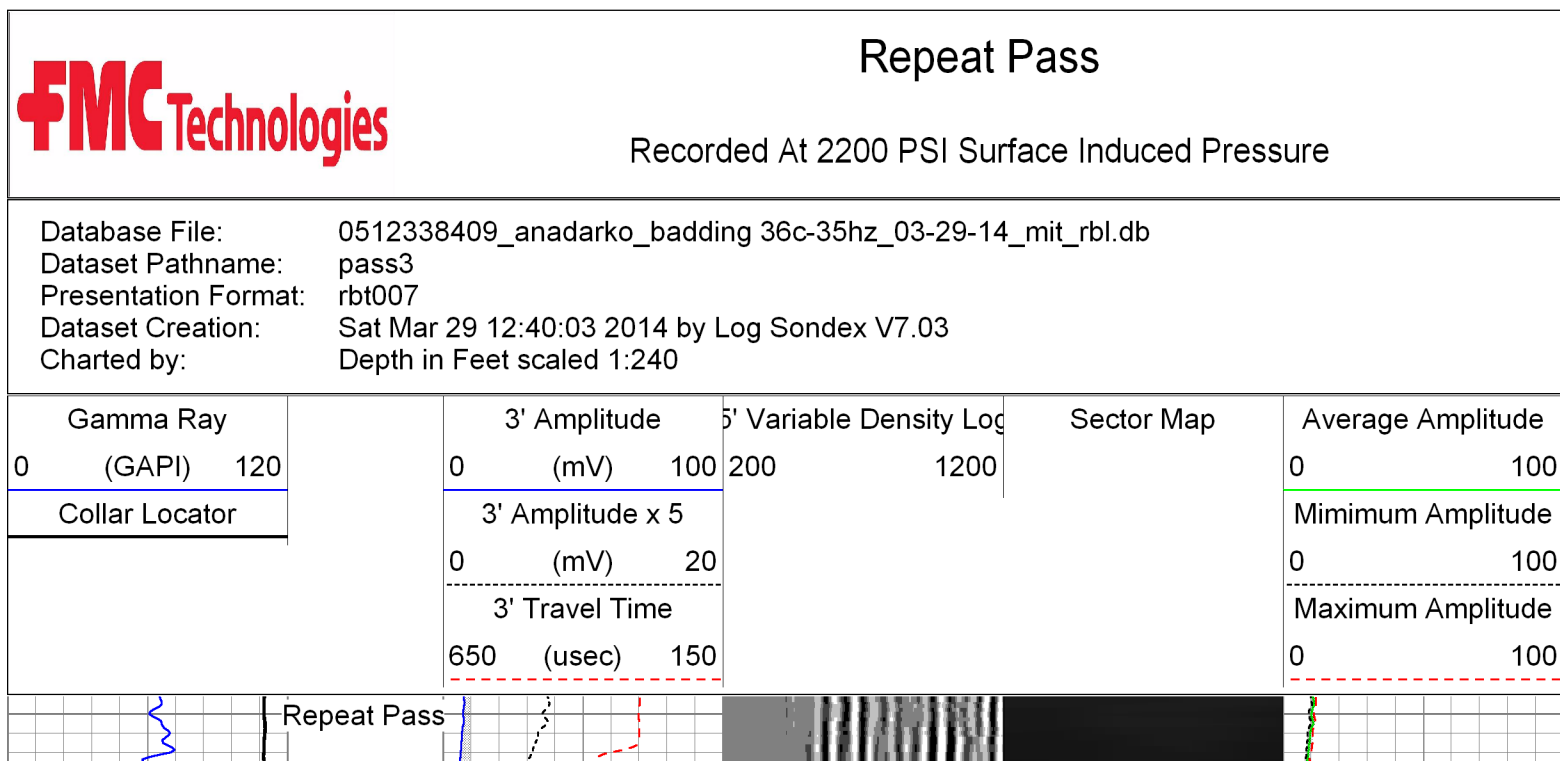
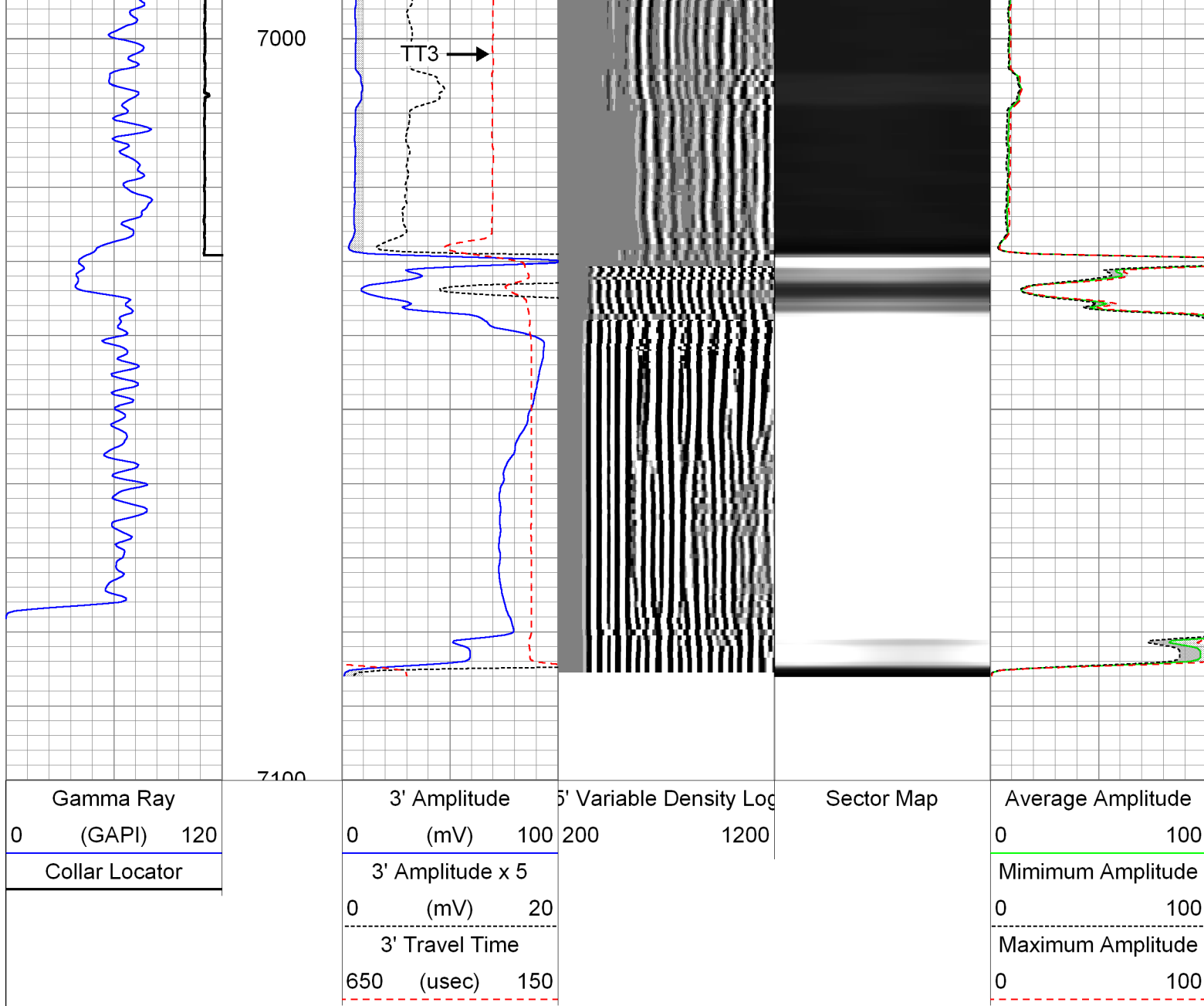
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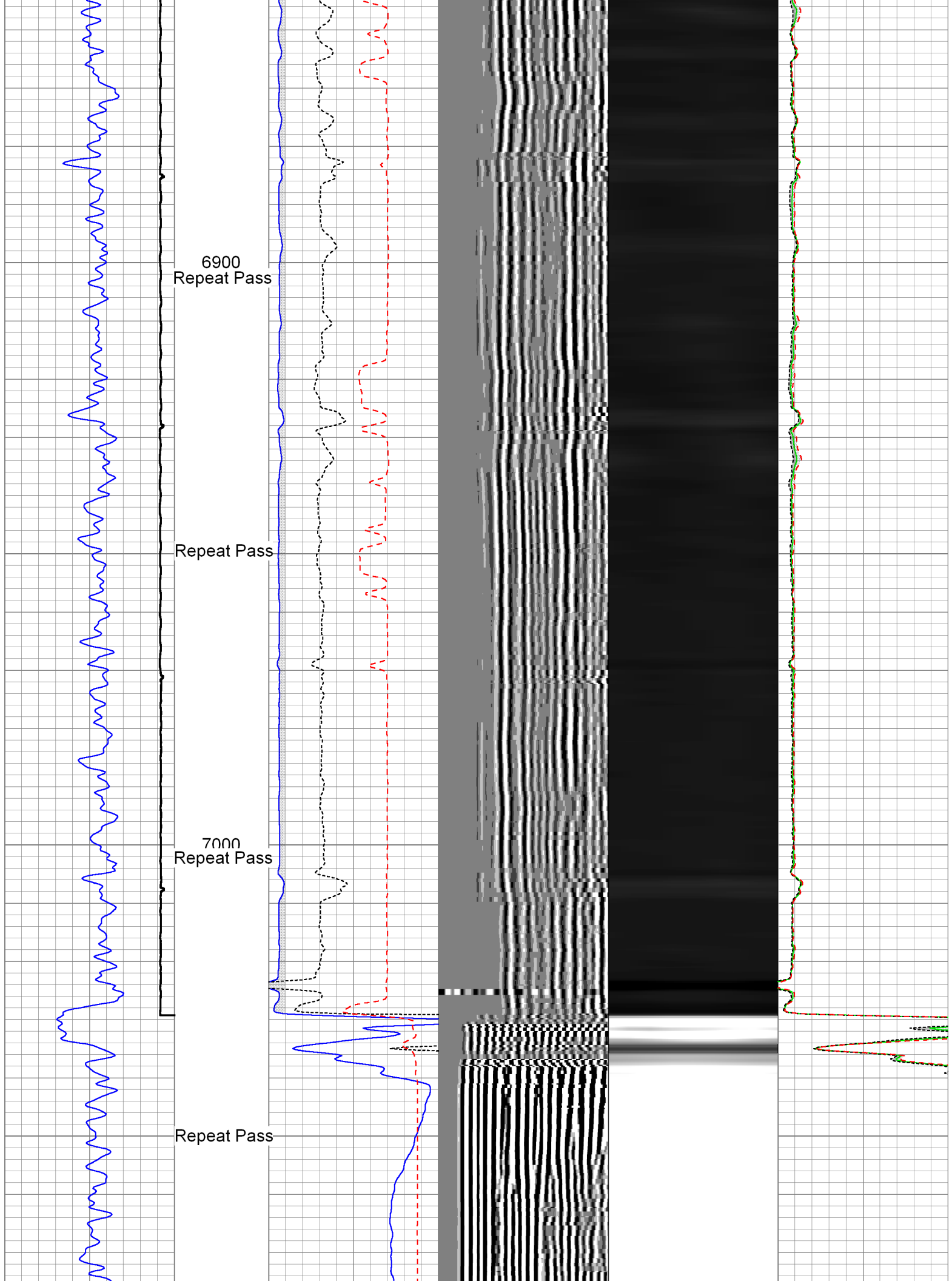




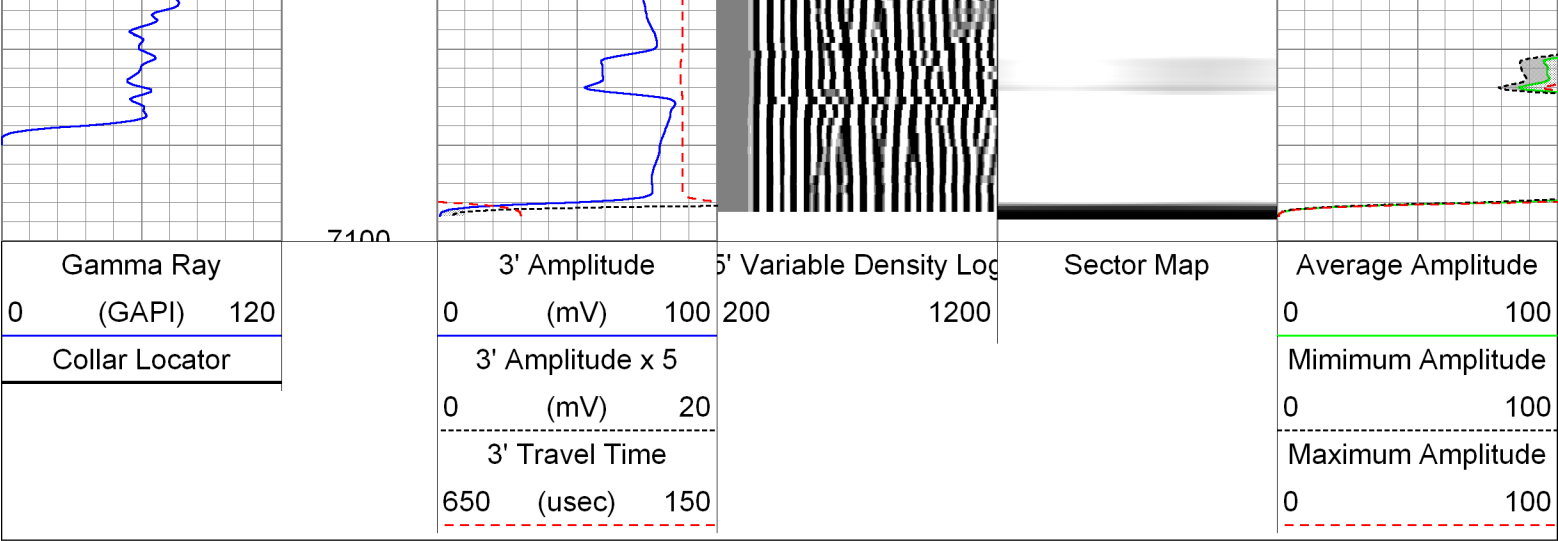




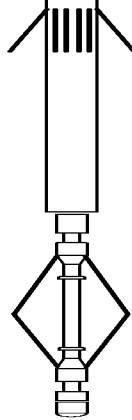








Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	23.29		CHD-AES (000001) Cable Head	1.04	1.69	2.00
			XTU-001 (000001) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			PGR-020 (000001) Production Gamma Ray	1.93	1.69	9.50
			PRC-034 (000005) Production Roller Centraliser (4 Arm)	2.91	1.69	13.00
WVF3FT	15.54		RBT-004 (1066in7) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
WVFS1	15.54					
WVFS2	15.54					
WVFS3	15.54					
WVFS4	15.54					
WVFS5	15.54					
WVFS6	15.54					
WVFS7	15.54					
WVFS8	15.54					
CBLTEMP	15.54					
CBLROT	15.54					
WVF5FT	14.54					
			PRC-034 (000006) Production Roller Centraliser (4 Arm)	2.91	1.69	13.00

MIT	5.30		MIT-027 (10012912) Multifinger Imaging Tool (UW 40F)	4.54	2.75	61.10	
TSTAMP	0.00		PRC-057 (000007) Production Roller Centraliser (4 Arm)	2.74	2.75	32.00	
			BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20	
Dataset: 0512338409_anadarko_badding 36c-35hz_03-29-14_mit_rbl.db: field/well/run1/pass5 Total Length: 27.33 ft Total Weight: 278.30 lb O.D. 3.13 in							

Calibration Report	
Database File:	0512338409_anadarko_badding 36c-35hz_03-29-14_mit_rbl.db
Dataset Pathname:	pass5
Dataset Creation:	Sat Mar 29 13:11:50 2014 by Log Sondex V7.03

### Multi-finger Imaging Tool Calibration Report

Serial Number:	10012912
Number of Fingers:	40
Tool Model:	027

Inclinometer Calibration Report			
Performed:	Mon, Oct, 06 14:03:04 2008		
Calibration Angle:	45		
	Inc X	Inc Y	
Vertical:	1996	1984	
Finger 1 up:	1780	1738	
Finger 31 up:	2235	1756	
Finger 21 up:	2216	2228	
Finger 11 up:	1736	2196	
Sensitivity ratio:	1.0062		
X-axis angle:	131.534		
Deviation const.:	331.322		

### Finger Calibration Report

Performed: Sat Mar 29 13:03:37 2014

Ring size:	4		5		6		7
(in)		Sens		Sens		Sens	
Finger 01:	1114	375.0	1489	368.0	1857	403.0	2260
Finger 02:	1116	384.0	1500	374.0	1874	407.0	2281
Finger 03:	1062	395.0	1457	393.0	1850	418.0	2268
Finger 04:	1091	387.0	1478	377.0	1855	414.0	2269
Finger 05:	1101	402.0	1503	391.0	1894	399.0	2293
Finger 06:	1110	412.0	1522	392.0	1914	396.0	2310
Finger 07:	1073	411.0	1484	389.0	1873	395.0	2268
Finger 08:	1098	408.0	1506	383.0	1889	393.0	2282
Finger 09:	1104	416.0	1520	387.0	1907	387.0	2294
Finger 10:	1092	415.0	1507	388.0	1895	387.0	2282
Finger 11:	1112	417.0	1529	392.0	1921	378.0	2299
Finger 12:	1098	412.0	1510	391.0	1901	384.0	2285
Finger 13:	1120	416.0	1536	391.0	1927	373.0	2300
Finger 14:	1113	420.0	1533	400.0	1933	388.0	2321
Finger 15:	1030	418.0	1448	411.0	1859	405.0	2264
Finger 16:	1042	414.0	1456	412.0	1860	407.0	2276

Finger 16:	1042	414.0	1436	413.0	1869	407.0	2276
Finger 17:	1040	410.0	1450	413.0	1863	414.0	2277
Finger 18:	1116	397.0	1513	398.0	1911	392.0	2303
Finger 19:	1058	388.0	1446	407.0	1853	401.0	2254
Finger 20:	1031	394.0	1425	415.0	1840	420.0	2260
Finger 21:	1063	397.0	1460	415.0	1875	408.0	2283
Finger 22:	1029	381.0	1410	416.0	1826	428.0	2254
Finger 23:	991	377.0	1368	424.0	1792	445.0	2237
Finger 24:	1069	373.0	1442	402.0	1844	407.0	2251
Finger 25:	1016	381.0	1397	417.0	1814	449.0	2263
Finger 26:	1121	357.0	1478	387.0	1865	409.0	2274
Finger 27:	1048	354.0	1402	407.0	1809	435.0	2244
Finger 28:	1092	348.0	1440	393.0	1833	424.0	2257
Finger 29:	1005	354.0	1359	410.0	1769	450.0	2219
Finger 30:	1057	349.0	1406	400.0	1806	439.0	2245
Finger 31:	1077	347.0	1424	391.0	1815	435.0	2250
Finger 32:	1041	353.0	1394	402.0	1796	448.0	2244
Finger 33:	1132	351.0	1483	374.0	1857	414.0	2271
Finger 34:	1117	351.0	1468	379.0	1847	432.0	2279
Finger 35:	1037	360.0	1397	405.0	1802	458.0	2260
Finger 36:	1050	355.0	1405	389.0	1794	442.0	2236
Finger 37:	1122	369.0	1491	383.0	1874	431.0	2305
Finger 38:	1108	359.0	1467	377.0	1844	411.0	2255
Finger 39:	1131	361.0	1492	370.0	1862	409.0	2271
Finger 40:	1069	375.0	1444	380.0	1824	426.0	2250

#### Segmented Cement Bond Log Calibration Report

Serial Number: 1066in7  
Tool Model: 004

Calibration Casing Diameter: 7.000 in  
Calibration Depth: 151.017 ft

Master Calibration, performed Sun Mar 02 16:30:51 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.004	0.717	0.800	62.165	85.210	1.106
5FT	-0.007	0.772	0.800	62.165	78.746	1.377
S1	-0.003	0.679	0.000	100.000	146.553	0.445
S2	-0.005	0.696	0.000	100.000	142.673	0.686
S3	-0.005	0.710	0.000	100.000	139.922	0.637
S4	-0.005	0.730	0.000	100.000	136.067	0.659
S5	-0.003	0.741	0.000	100.000	134.379	0.382
S6	-0.004	0.748	0.000	100.000	132.996	0.482
S7	-0.003	0.740	0.000	100.000	134.593	0.434
S8	-0.003	0.703	0.000	100.000	141.539	0.441

#### 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	Badding 36C-35HZ
Field	Wattenberg
County	Weld
State	Colorado