



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr McGee Oil & Gas Onshore LP		Company Kerr McGee Oil & Gas Onshore LP	
Well Sack 16N-6HZ		Well Sack 16N-6HZ	
Field Wattenberg		Field Wattenberg	
County Weld		County Weld	
State Colorado		State Colorado	
Location:		API #: 05-123-39623	
SEC 31 TWP 1N RGE 67W		Other Services JB/GR MIT	
Permanent Datum		Ground Level	
Log Measured From		Kelly Bushing	
Drilling Measured From		Kelly Bushing	
Elevation 5055'		Elevation	
K.B. 5080'		D.F. 5079'	
G.L. 5055'			
Date 11/02/2014			
Run Number One			
Depth Driller 12870 FT			
Depth Logger 7800 FT			
Bottom Logged Interval 7795 FT			
Top Log Interval Surface			
Open Hole Size 9.625"			
Type Fluid Water			
Density / Viscosity 8.34 lbm/gal			
Max. Recorded Temp. 229°F			
Estimated Cement Top 156 FT			
Time Well Ready R.O.A.			
Time Logger on Bottom 9:00AM			
Equipment Number HD-0119			
Location Ft. Lupton, CO			
Recorded By Brent Kalkwarf			
Witnessed By Jeff Hammond			
Borehole Record		Tubing Record	
Run Number		To	
Bit		From	
Size		Weight	
From		To	
Casing Record		Top	
Surface Casing 9.625		J-55	
Intermediate #1 7		HCP-110	
Intermediate #2		Surface	
Liner 4.5		P-110	
		6956 FT	
		12860 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

Log ran as per customer request.
Depth reference to Casing Tally reported Liner Top at 6956 FT.
Adjusted +2 FT to correlate to liner top.
Gauge Ring/Junk Basket ran to 7834 FT.
Log ran from 7800 FT to Surface
Log ran with 2800 PSI surface induced pressure.
Logging tools were clean and free of any debris upon completion of operations.

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



7" Main Pass

Recorded At 2800 PSI Surface Incuded Pressure

Database File:processed_0512339623_anadarko sack 16n-6hz_11-02-14_mit_rbl.db

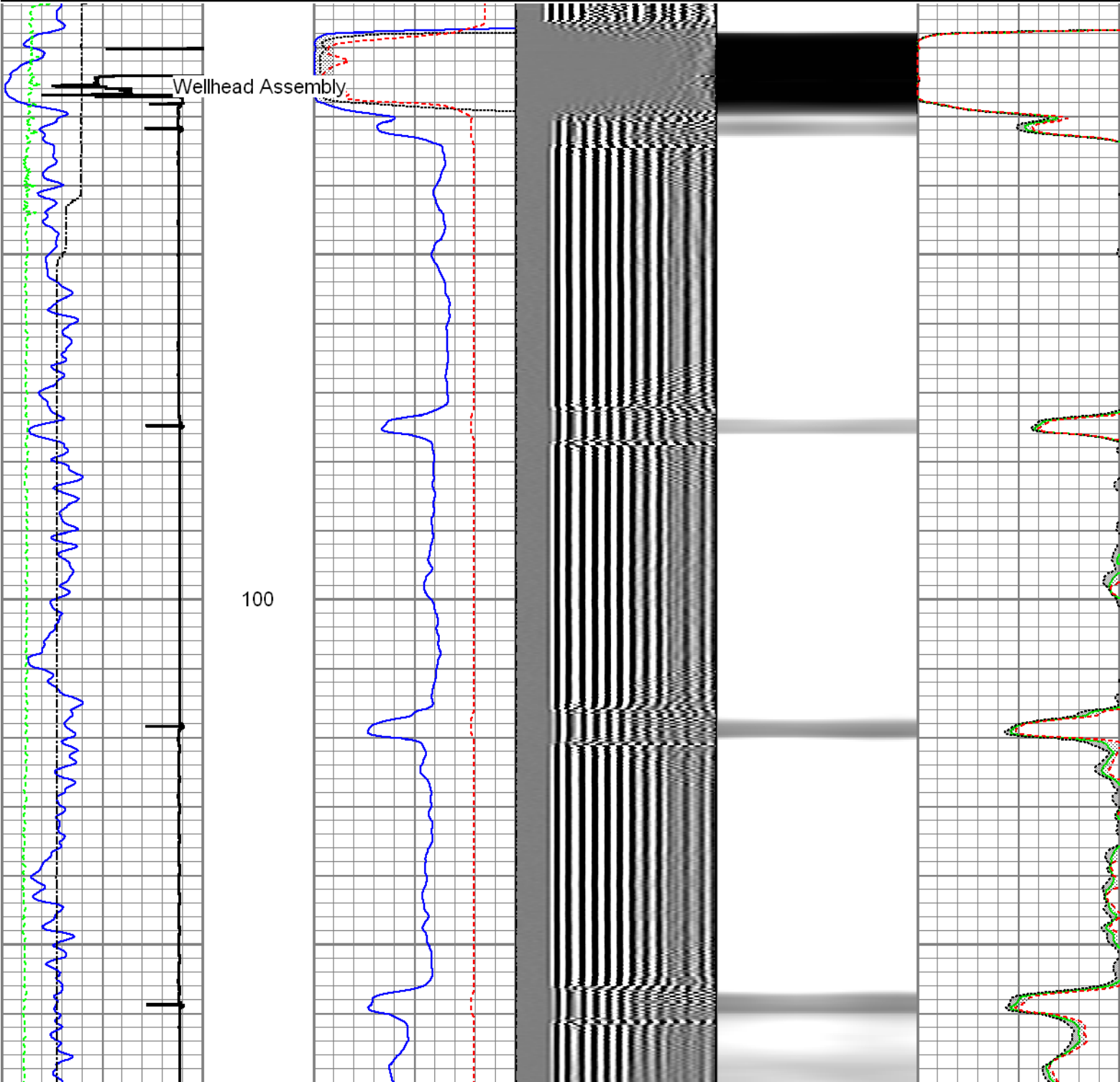
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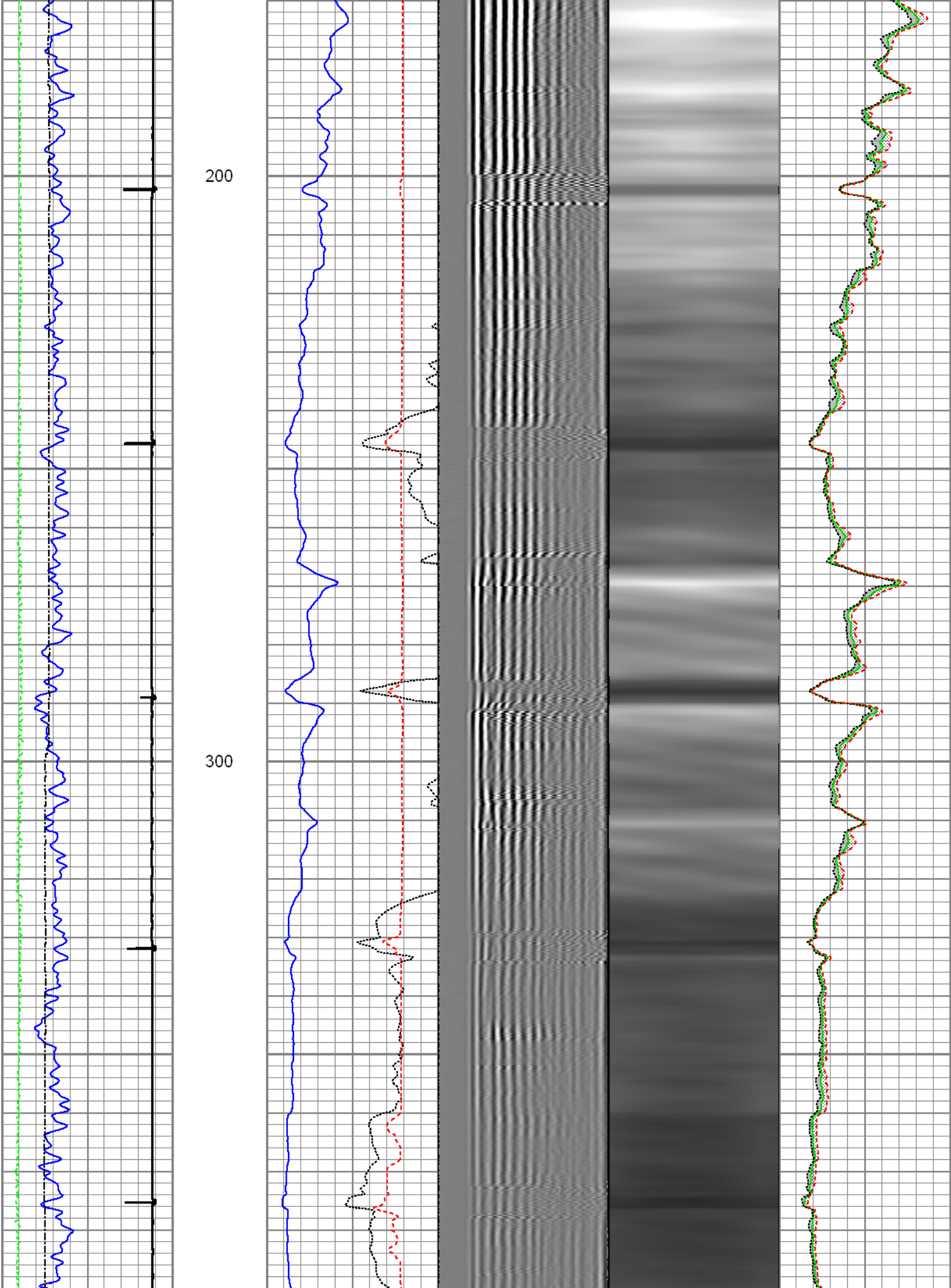
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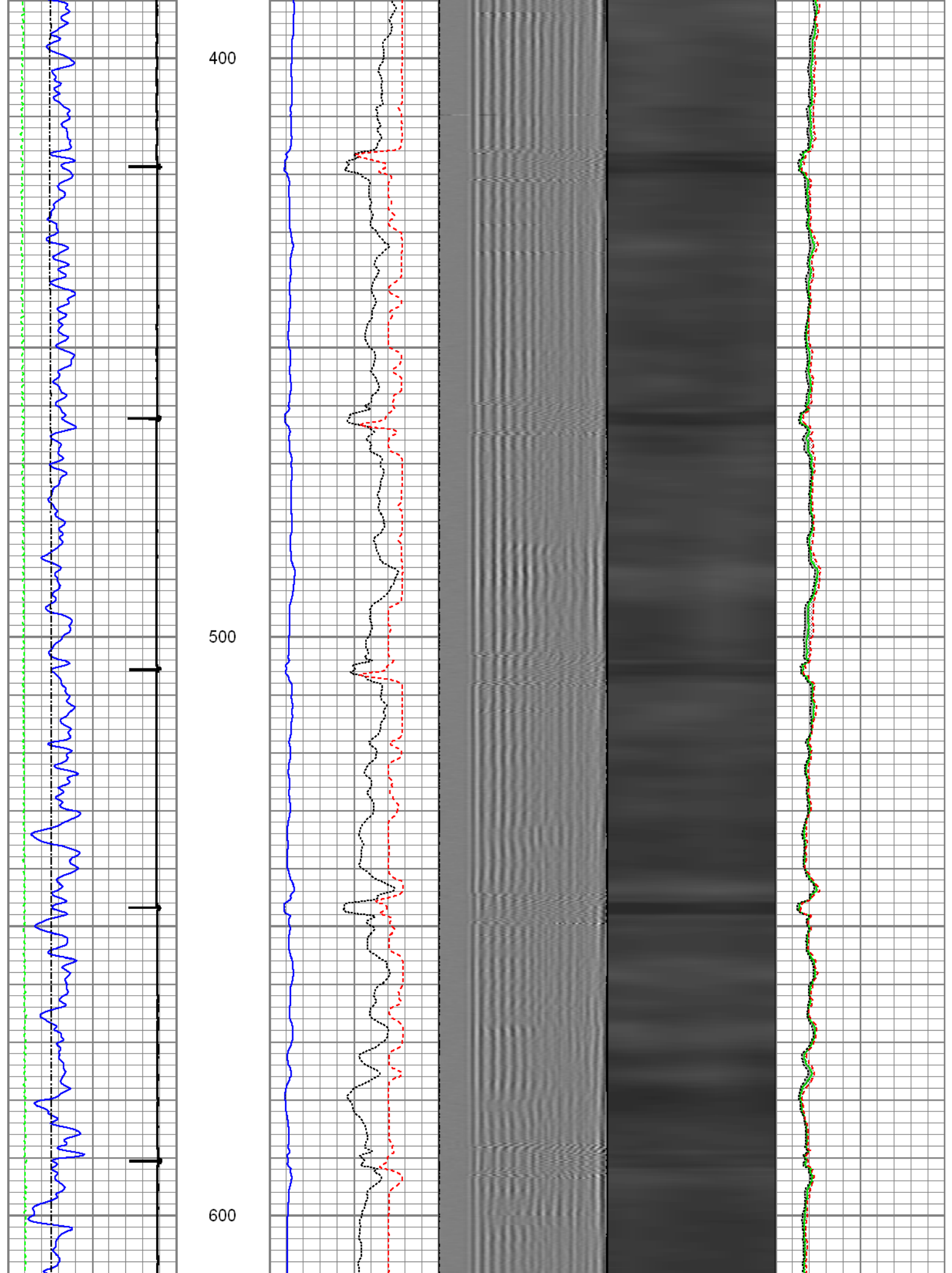
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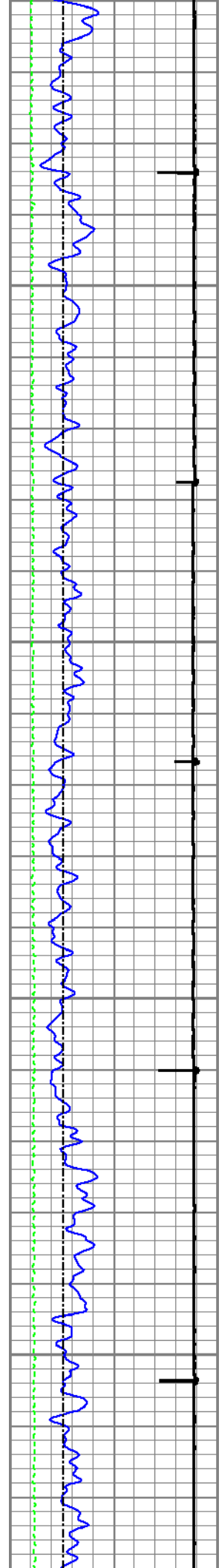
Charted by:Depth in Feet scaled 1:240

Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Line Speed	0 (mV) 20			0 100
-100 (ft/min) 100	3' Travel Time			Maximum Amplitude
Line Tension	650 (usec) 150			0 100
0 (lb) 2000				



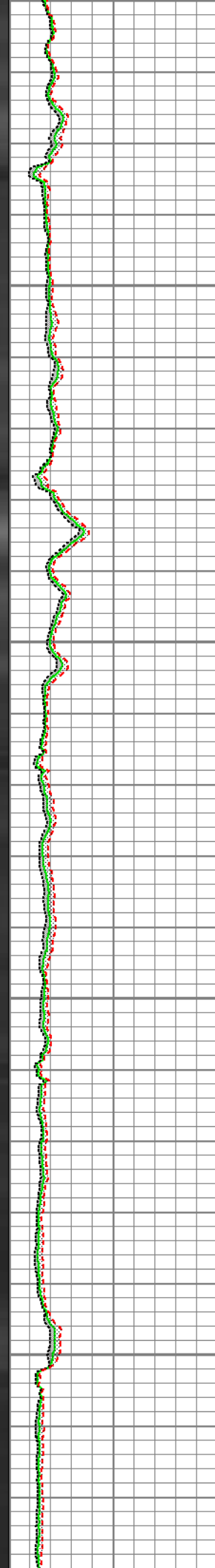
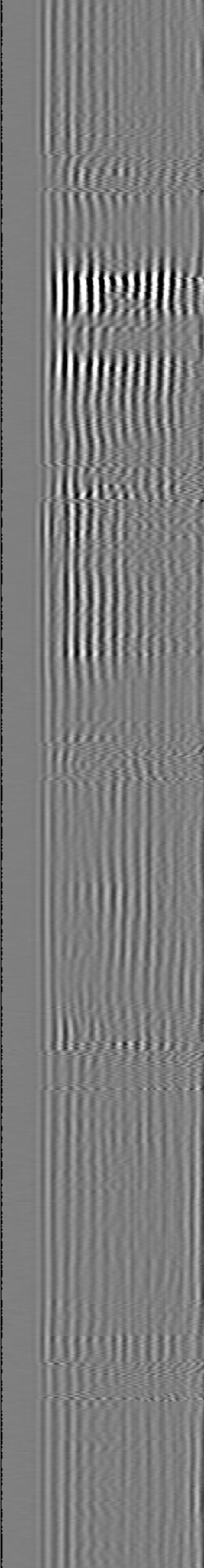
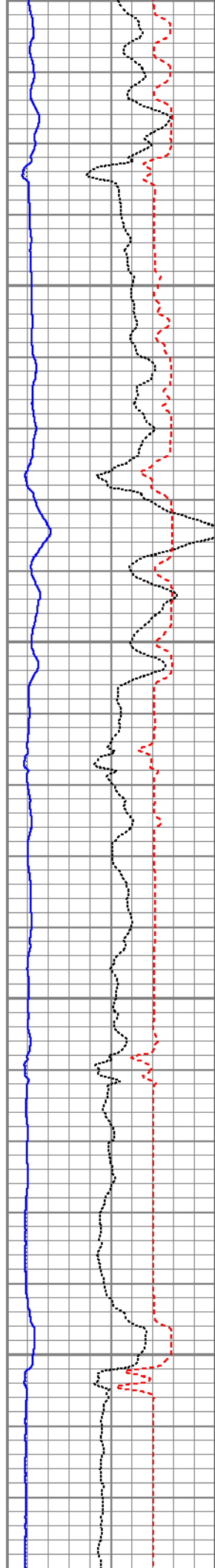


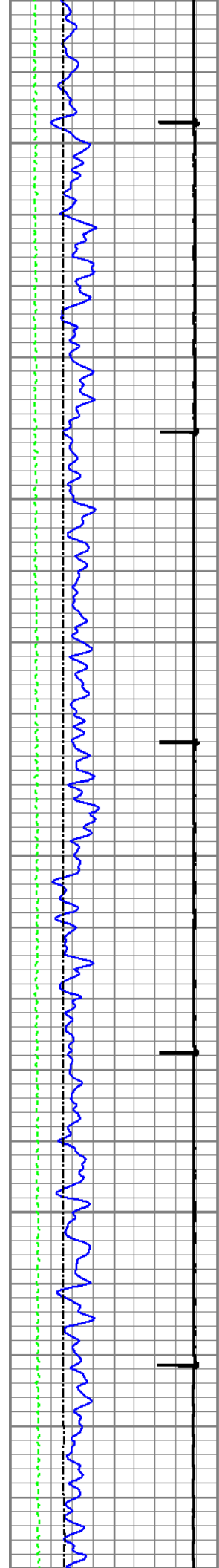




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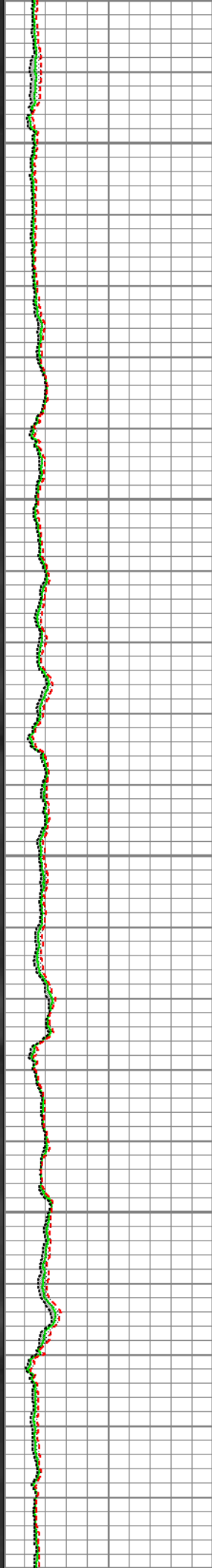
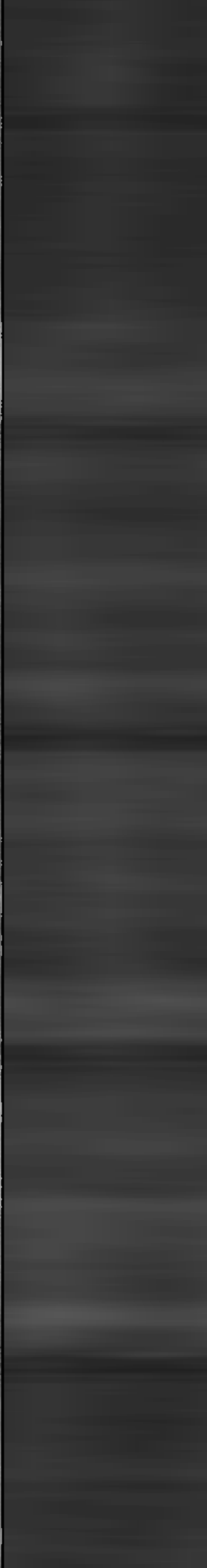
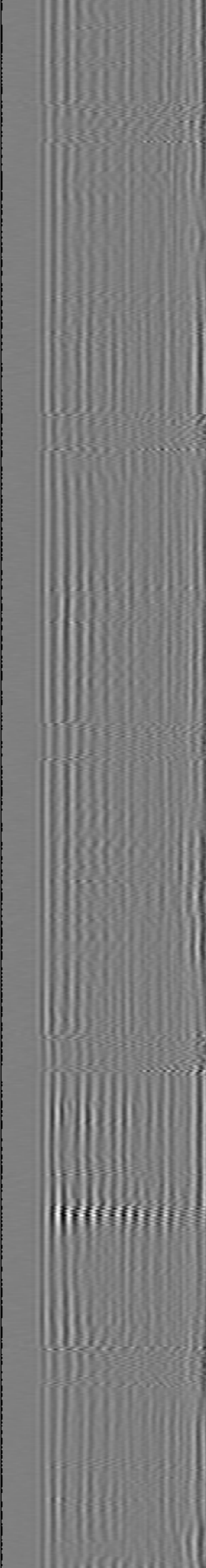
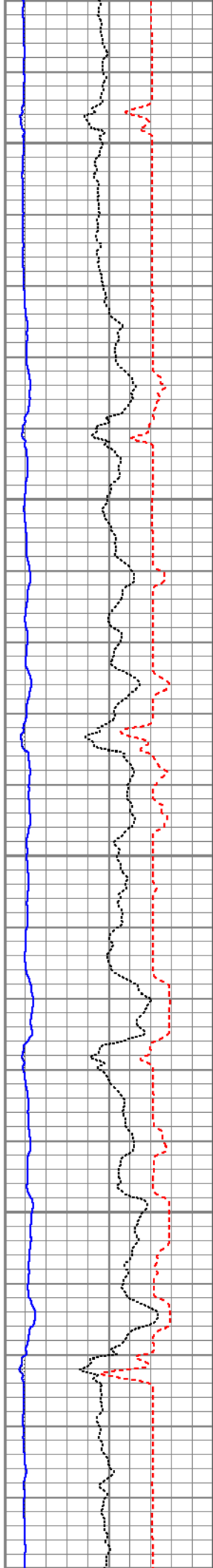
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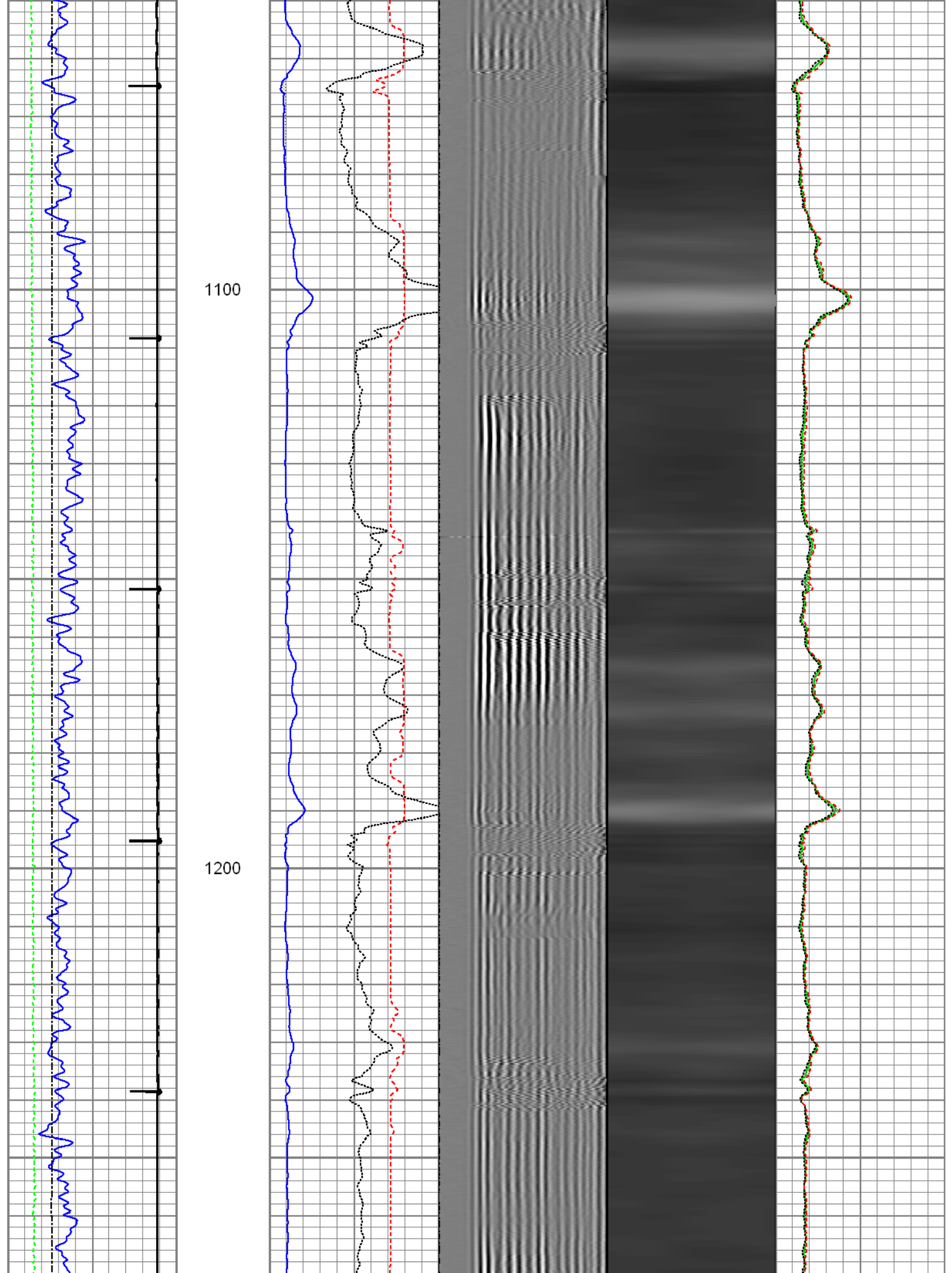


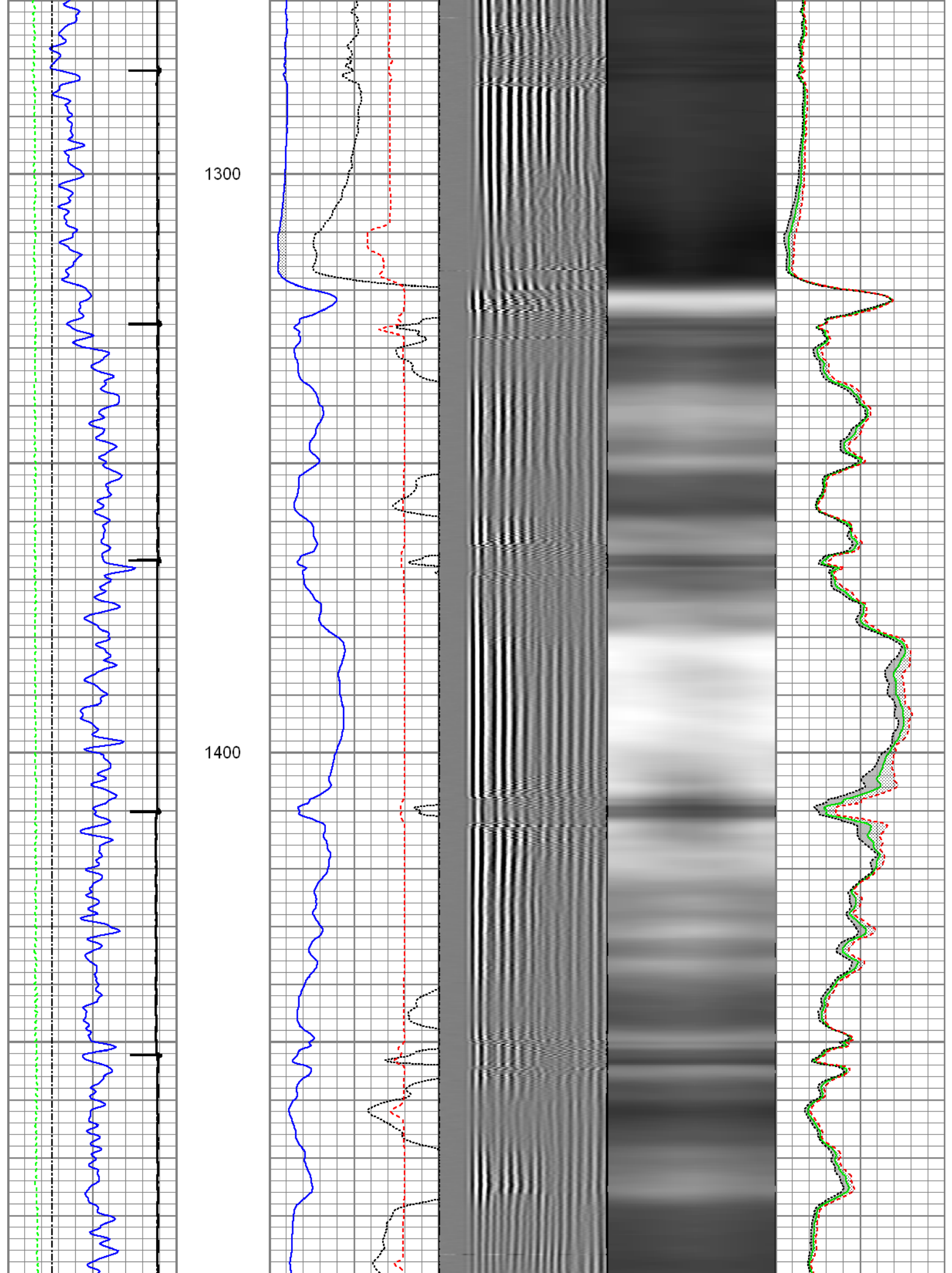


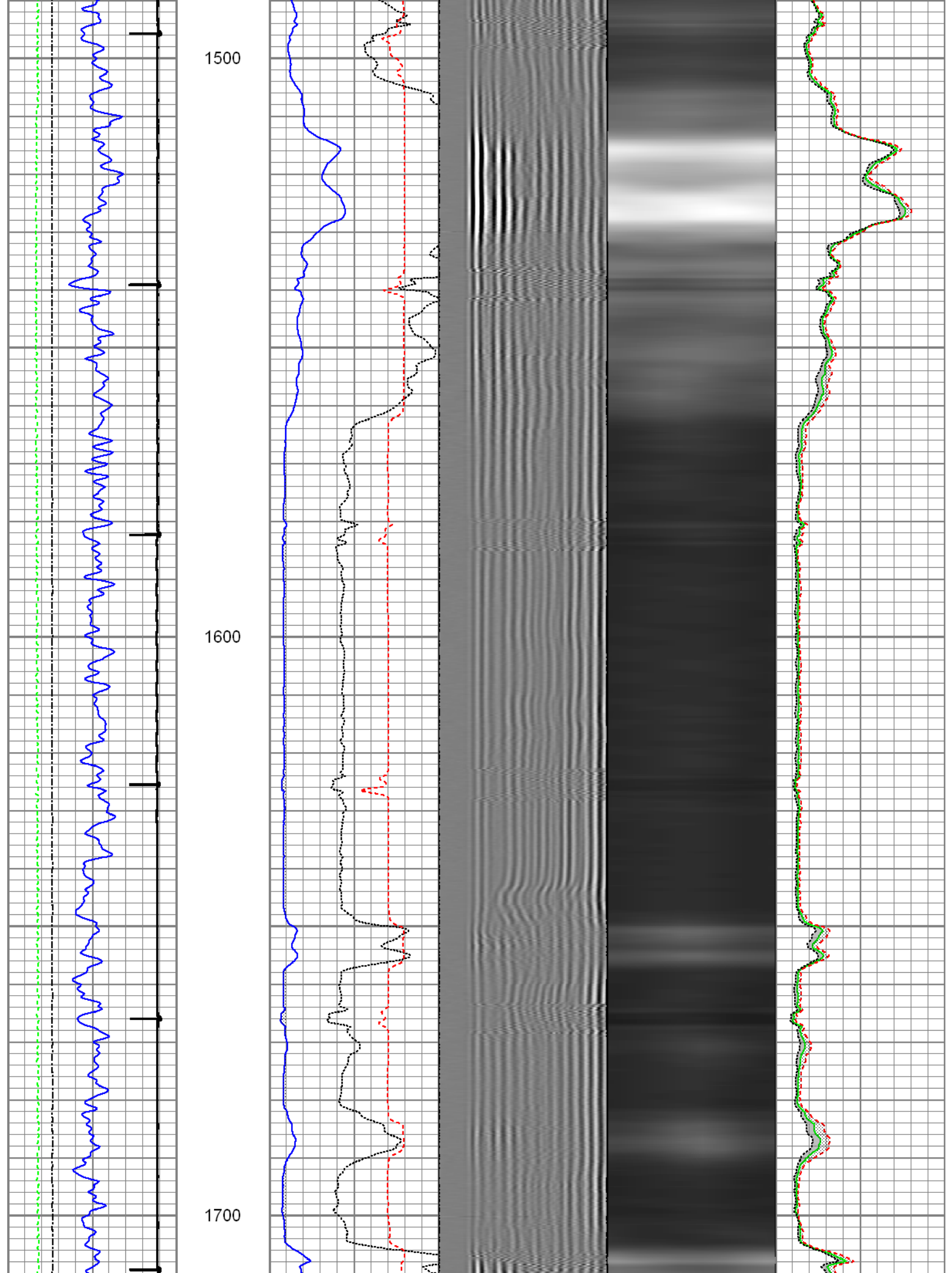
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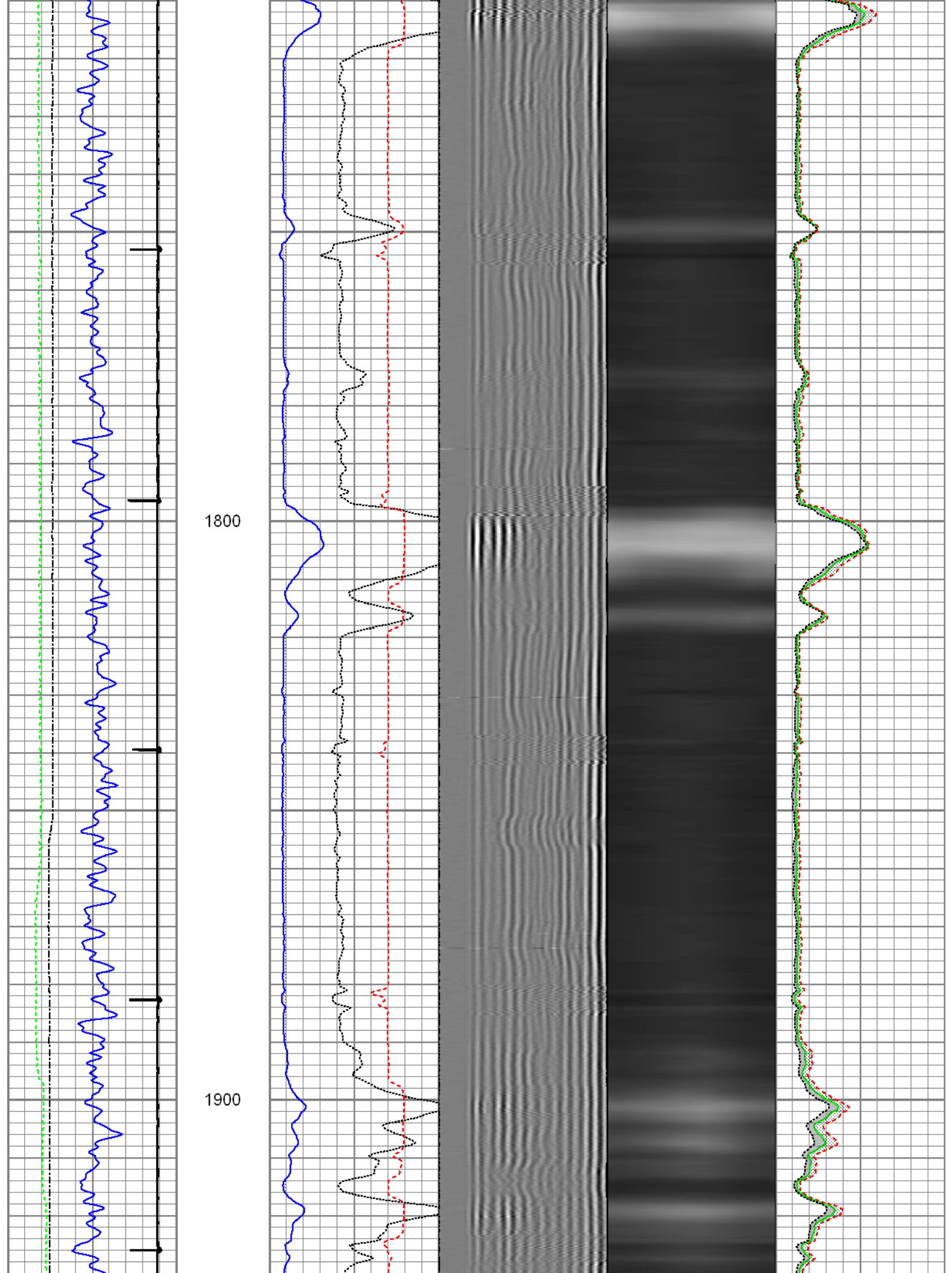
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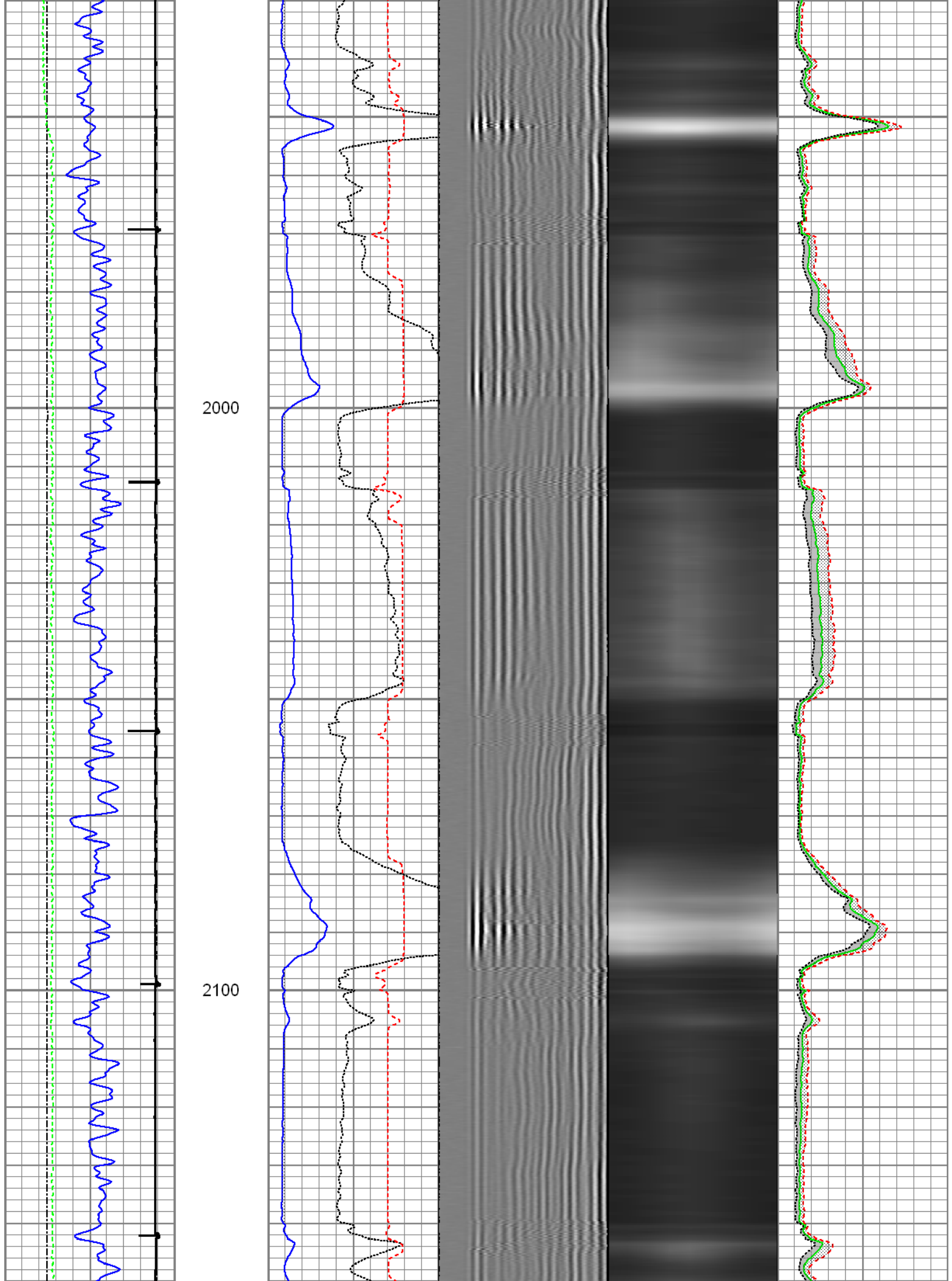






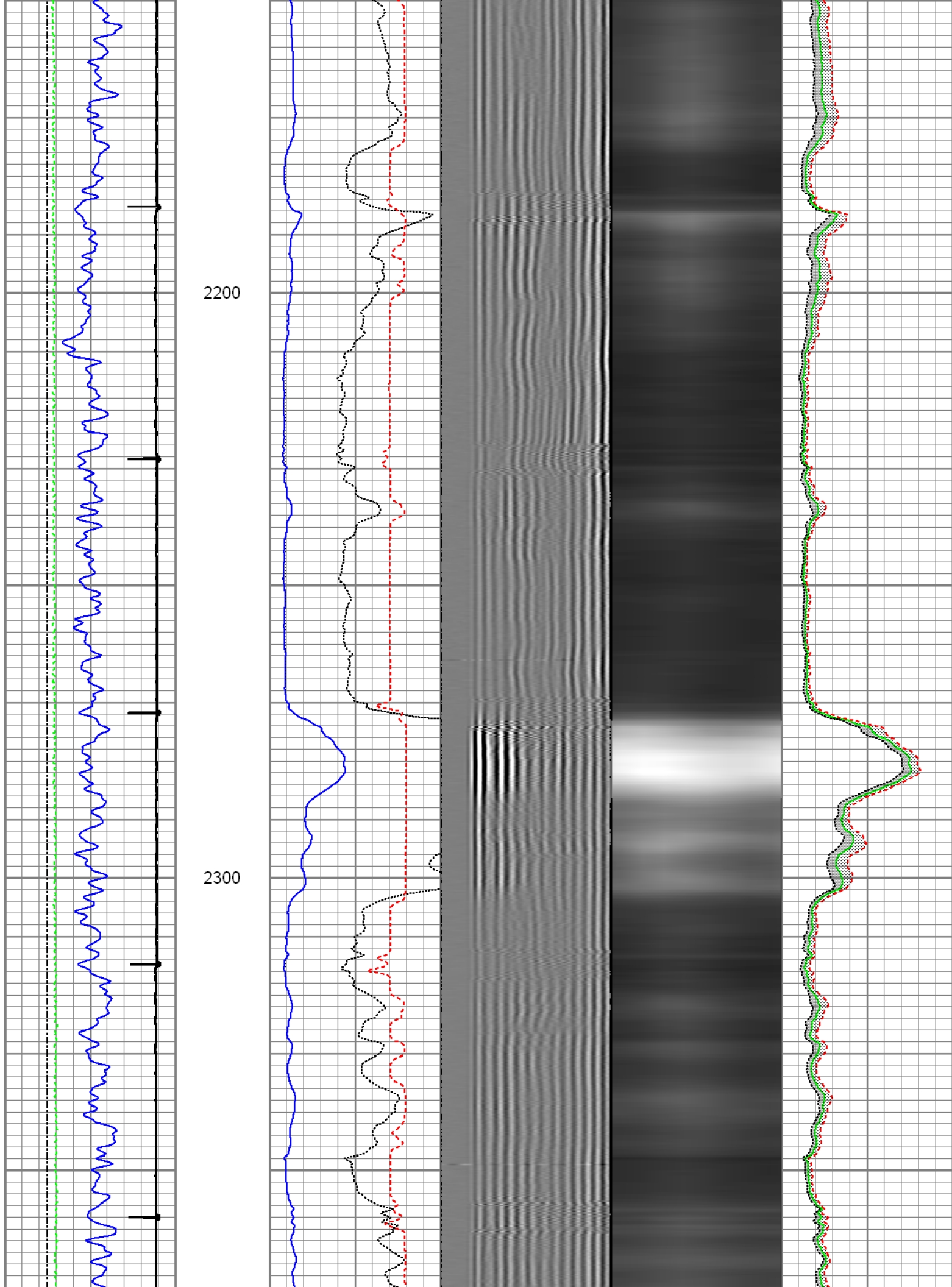






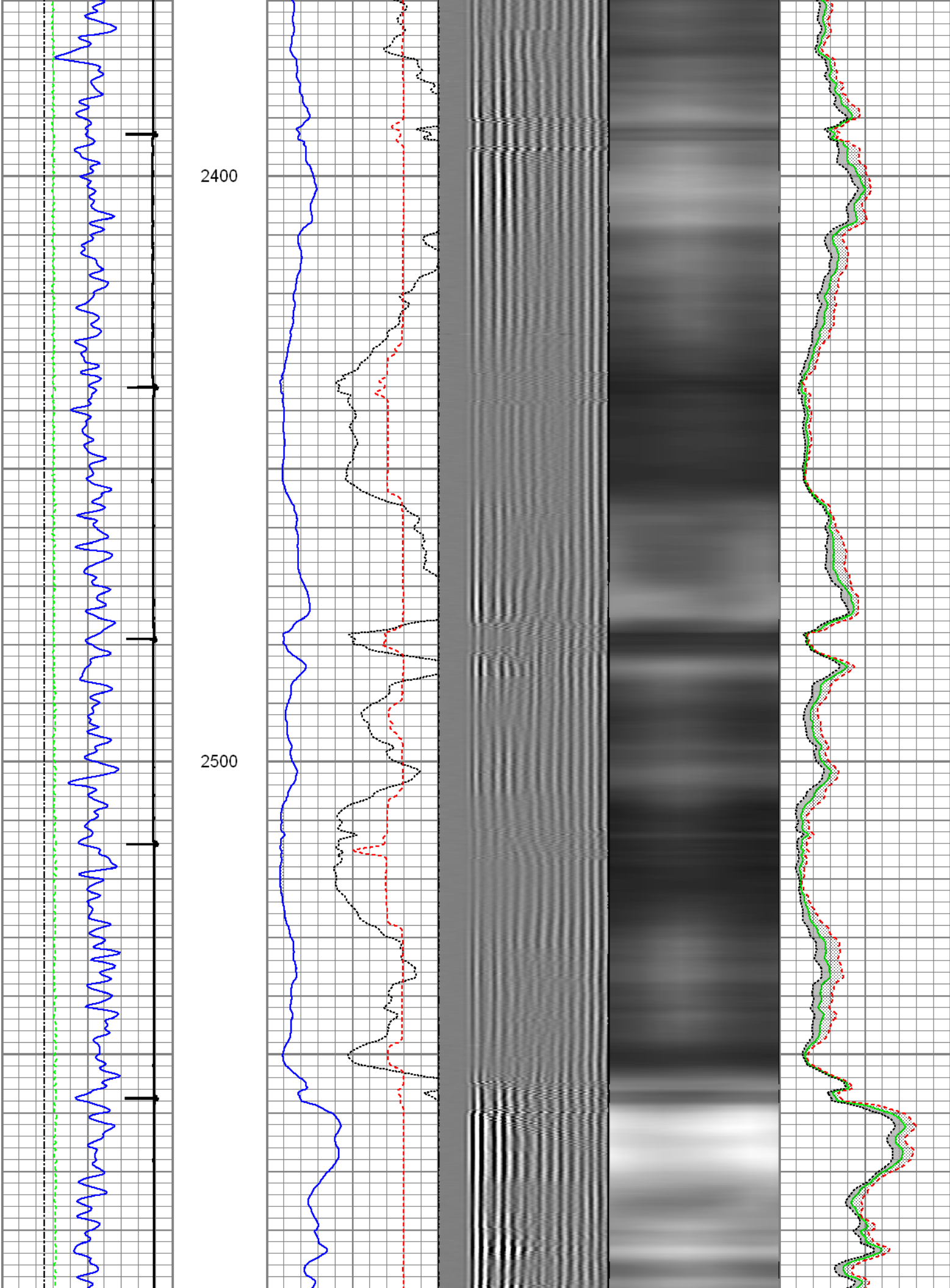
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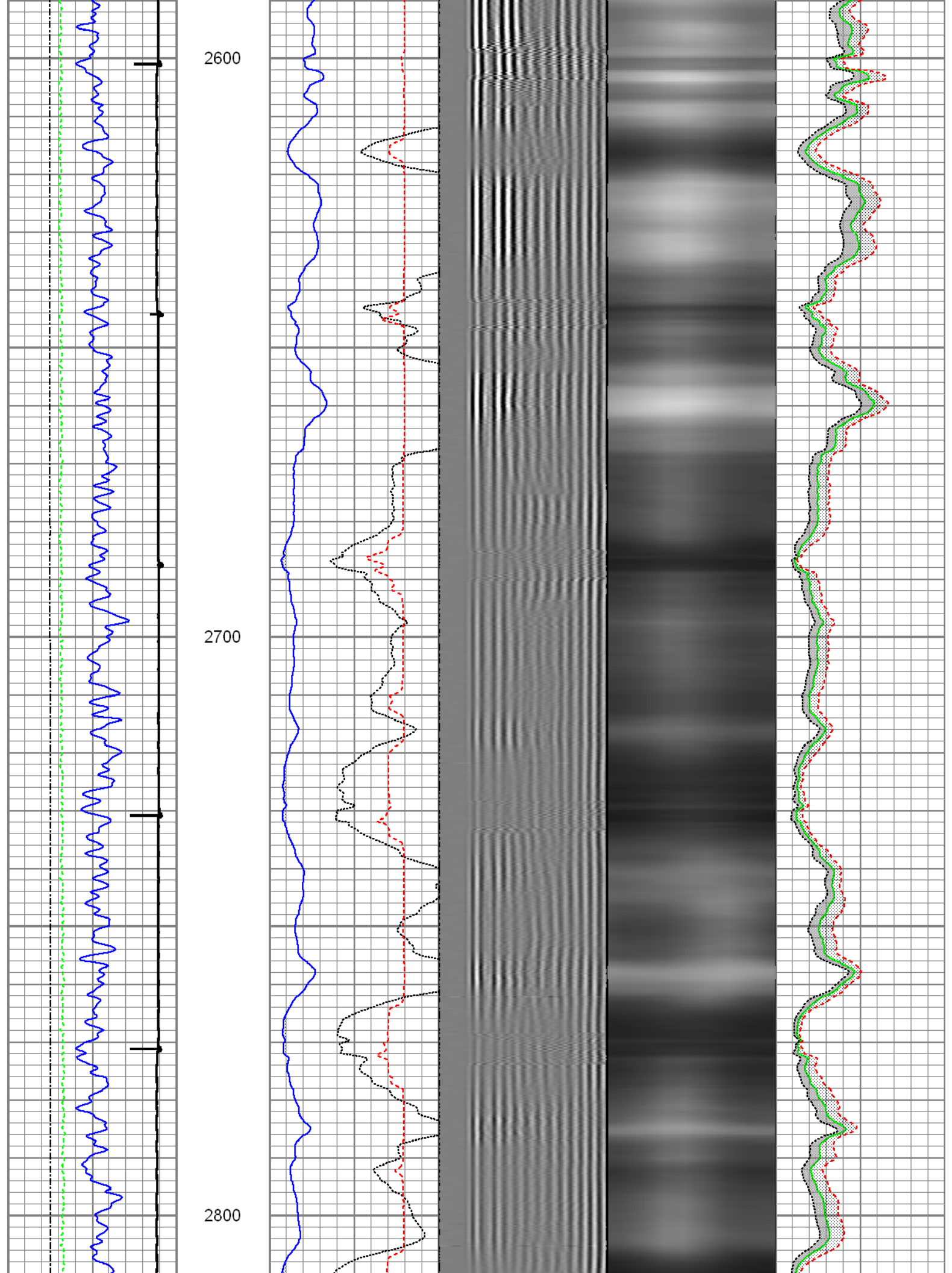
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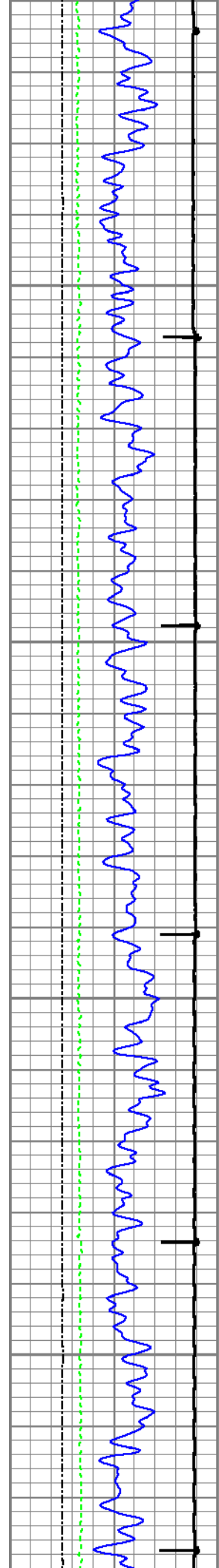


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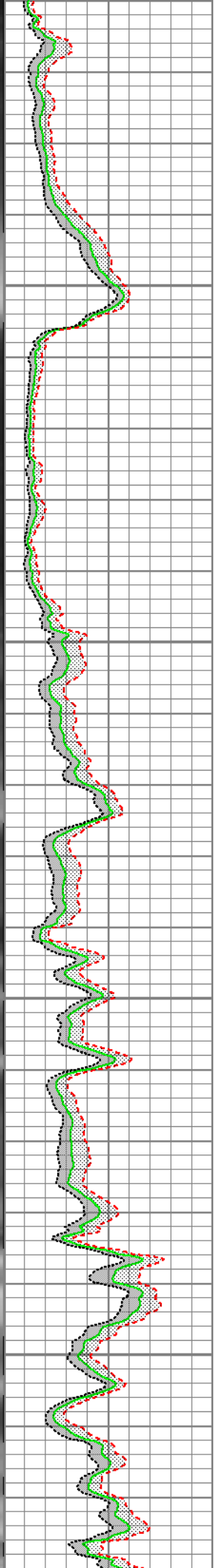
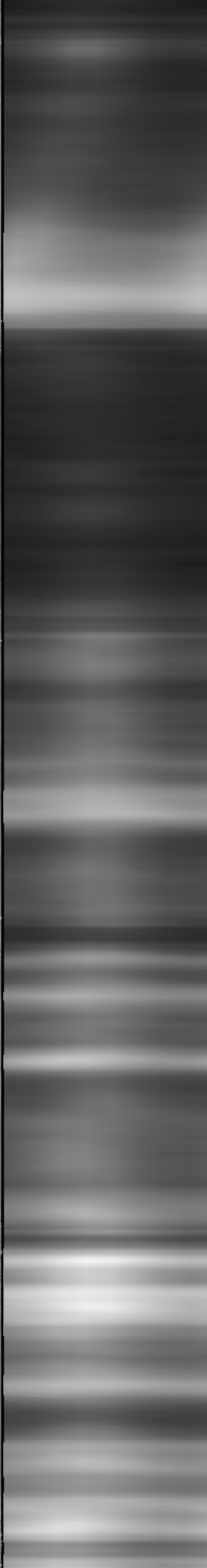
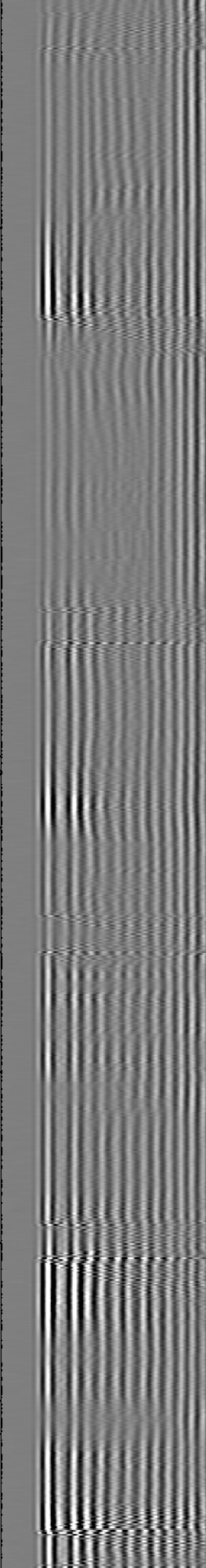
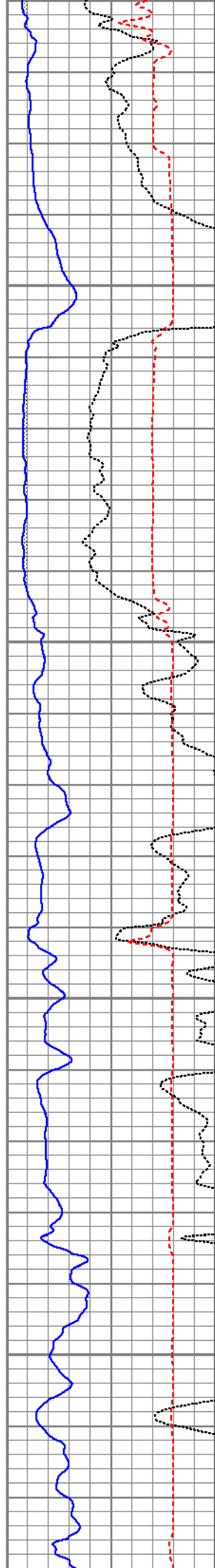






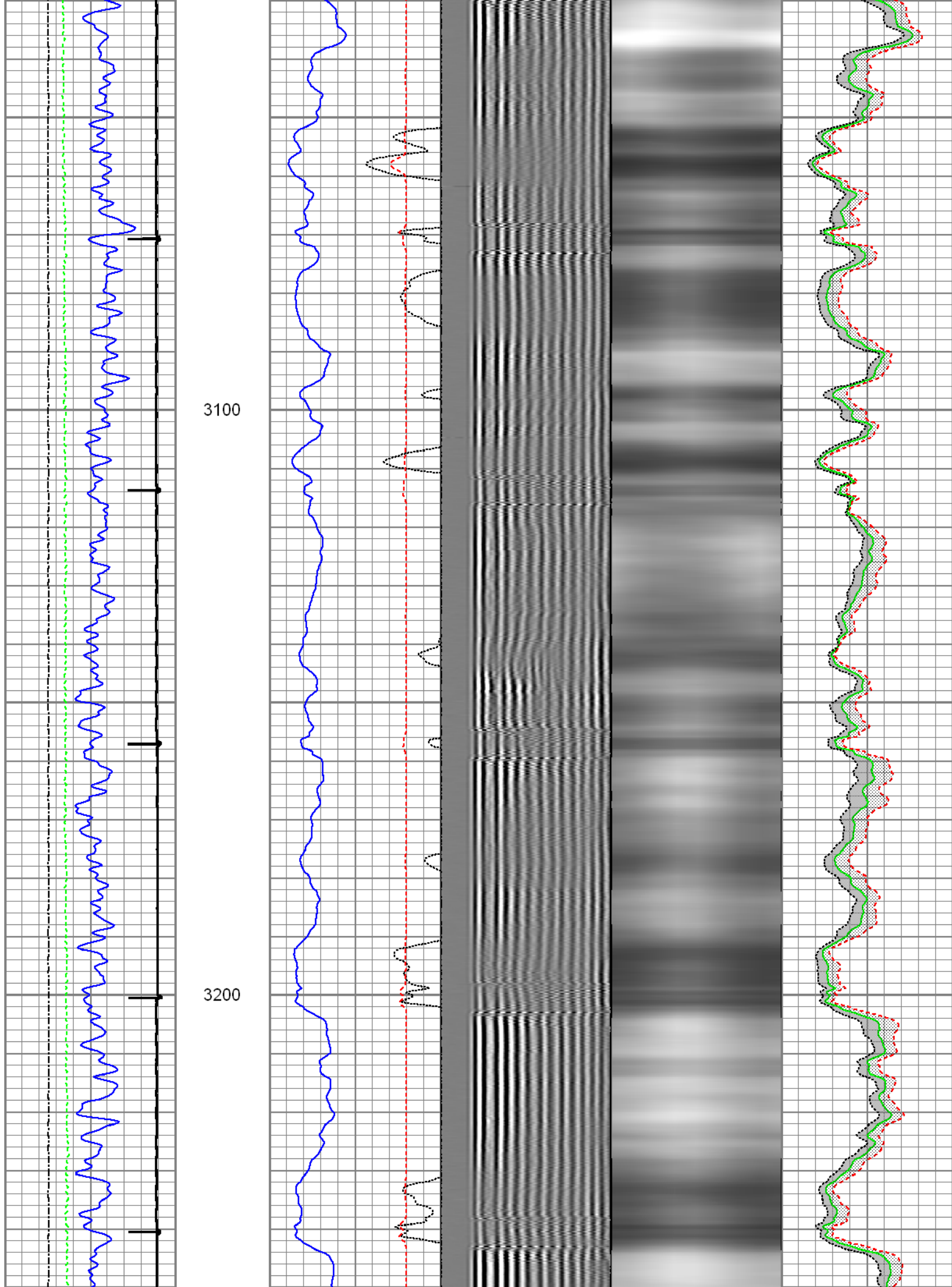
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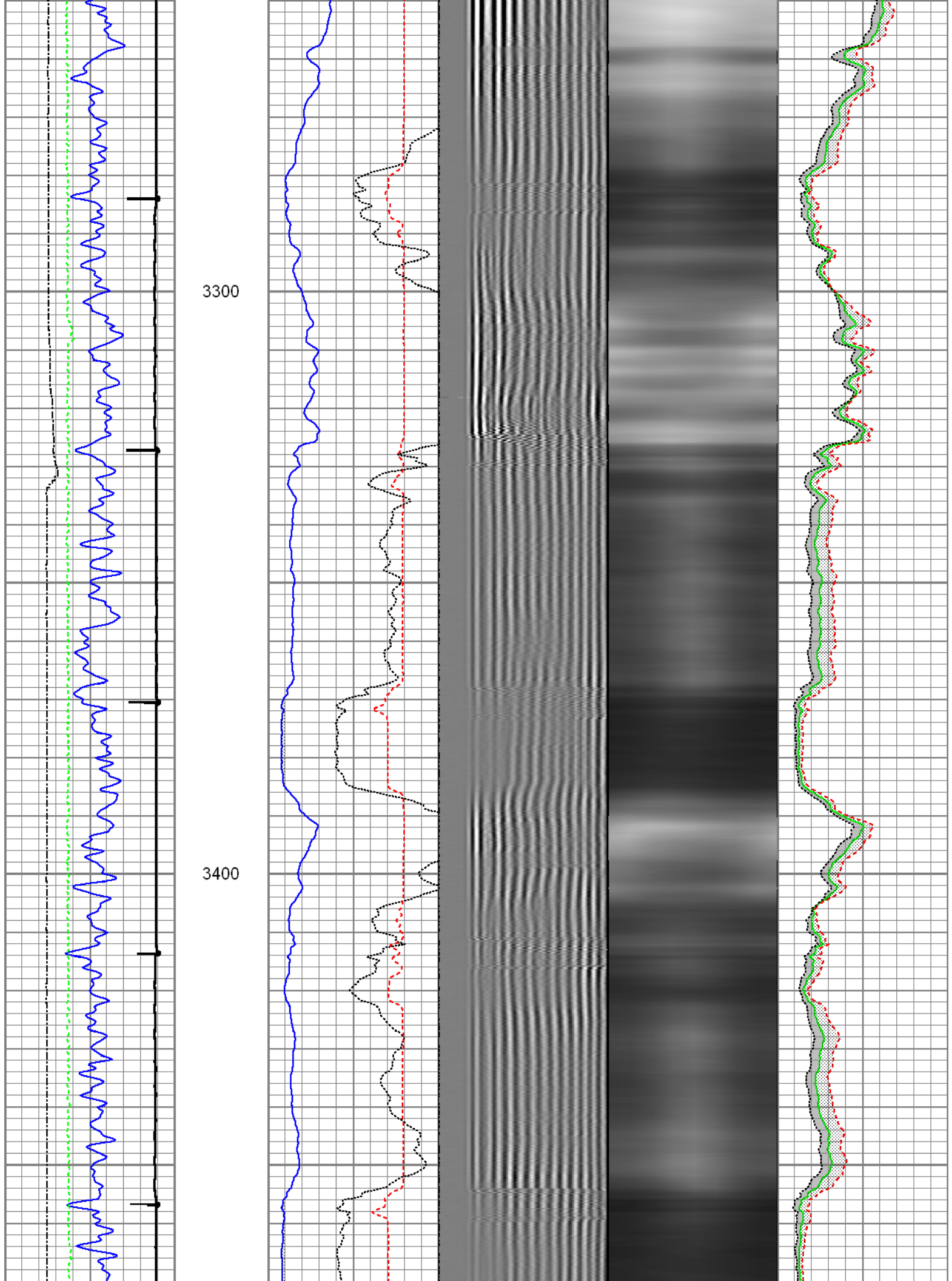
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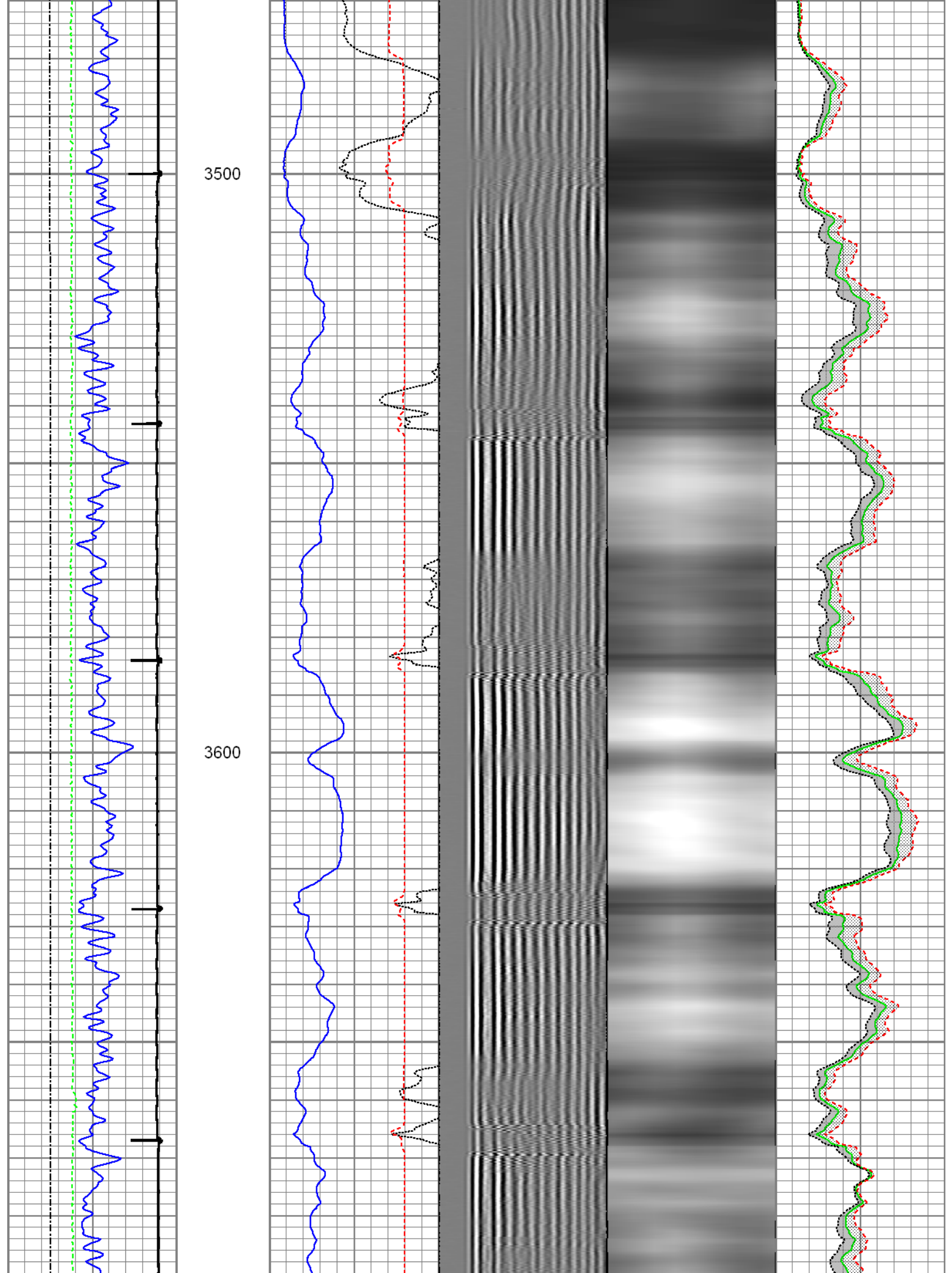


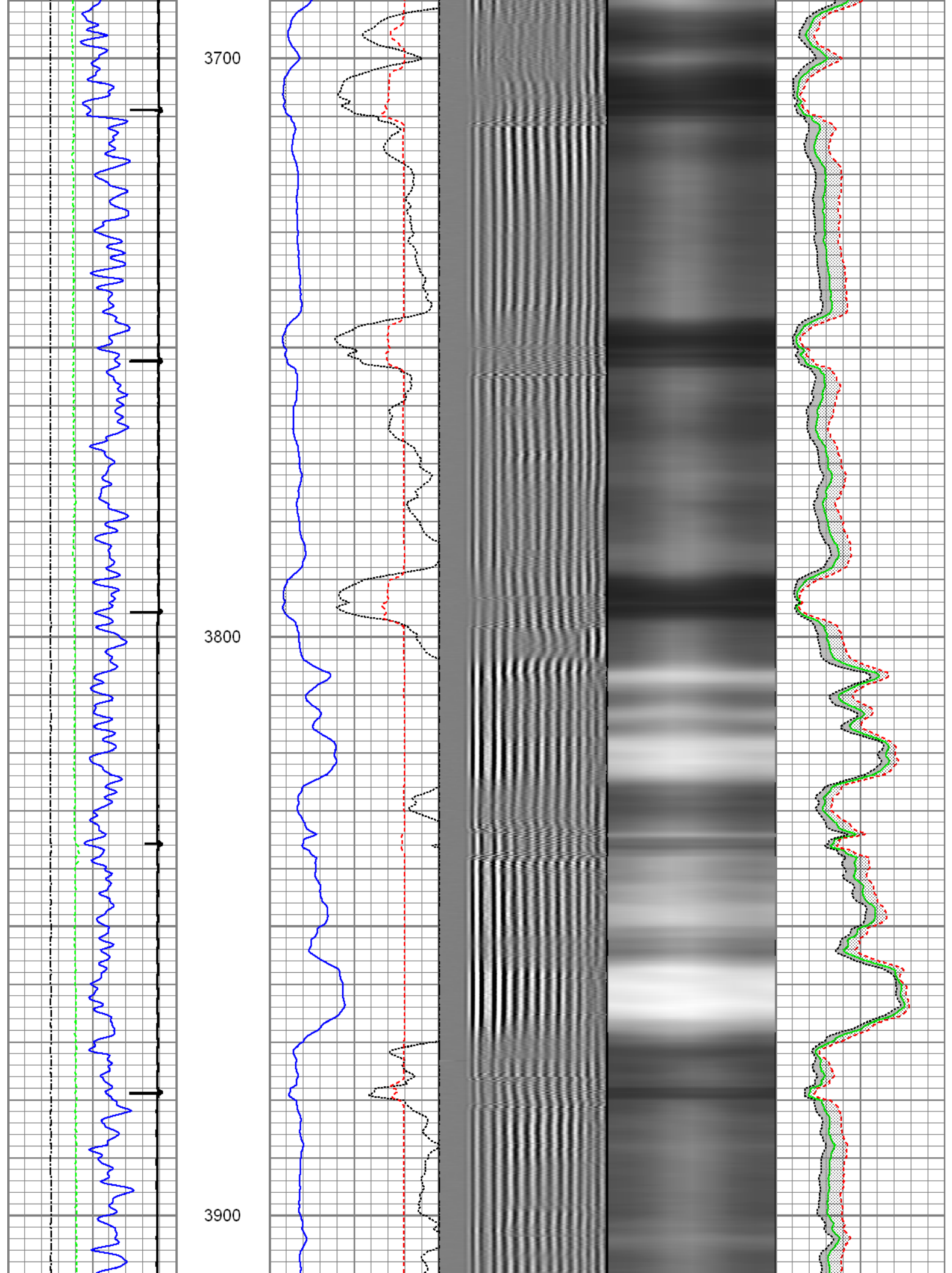
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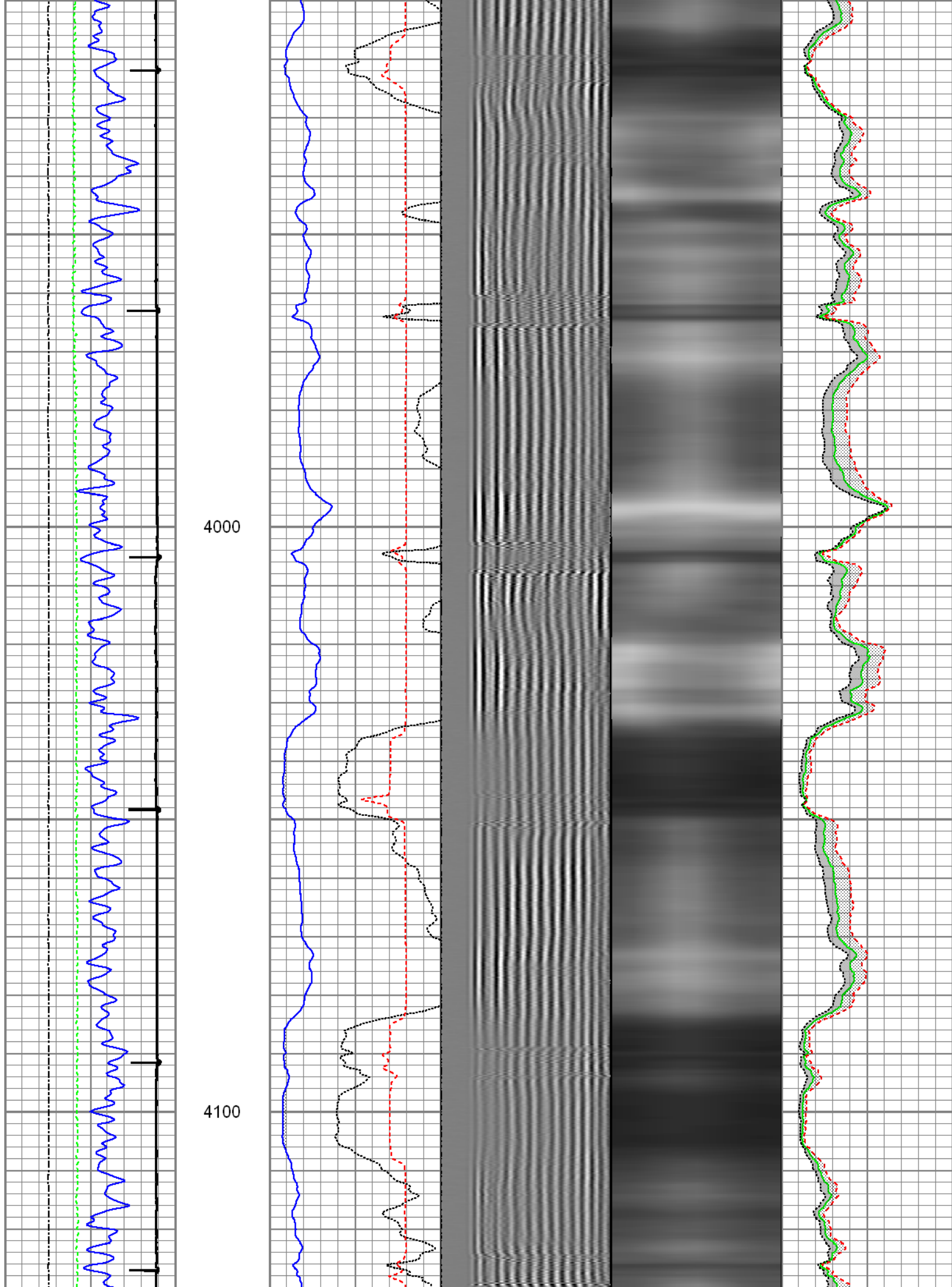
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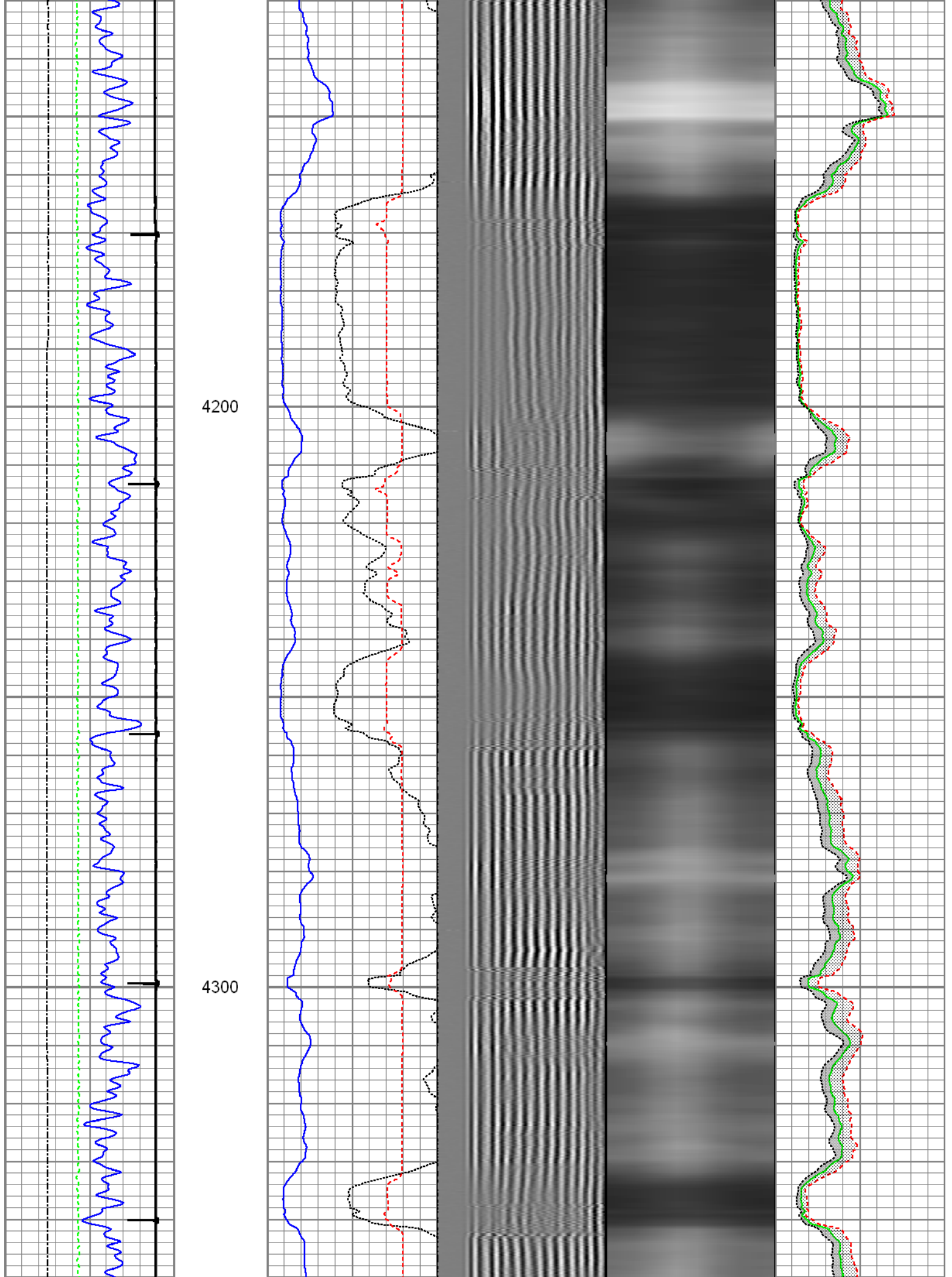






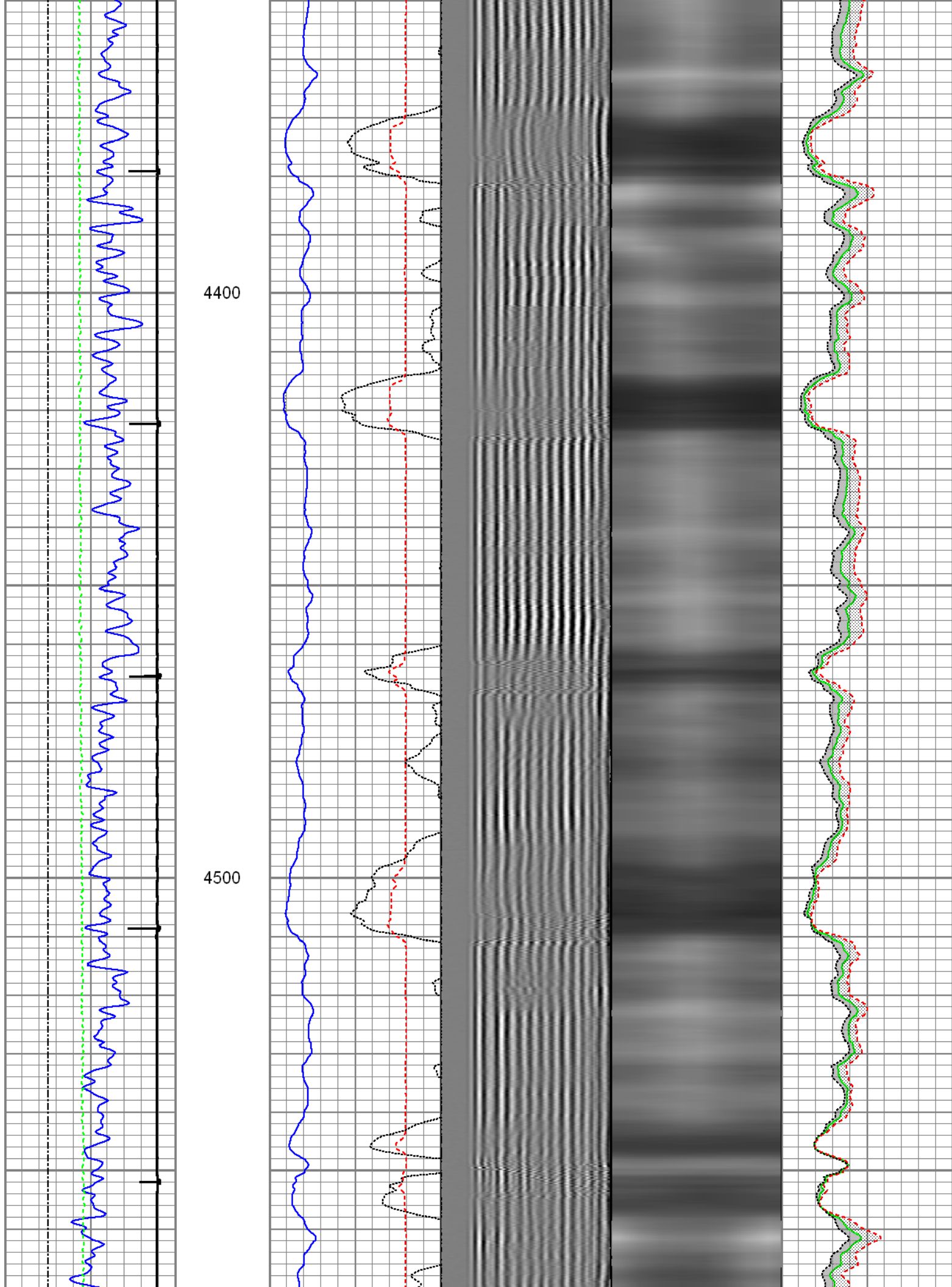






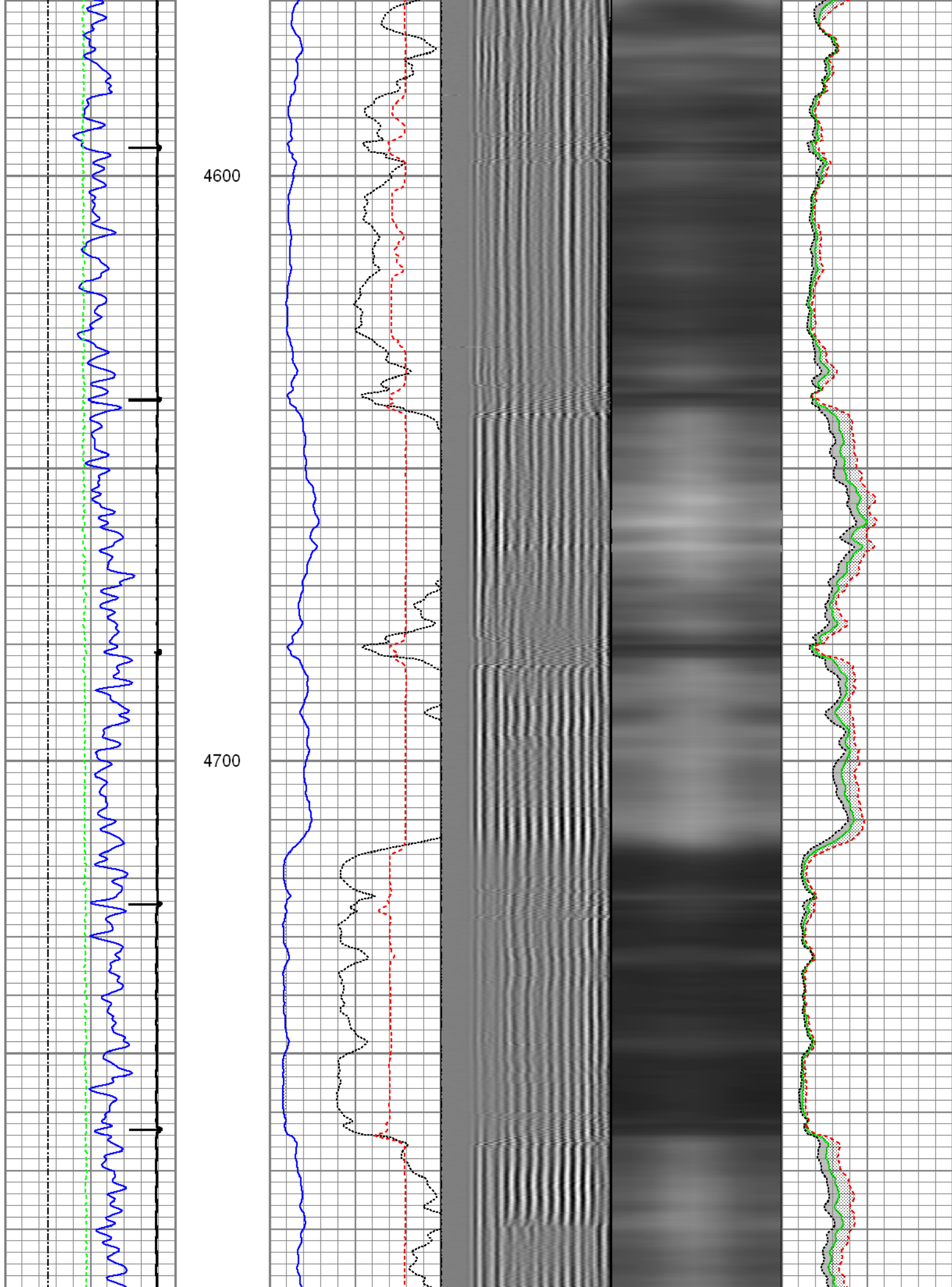
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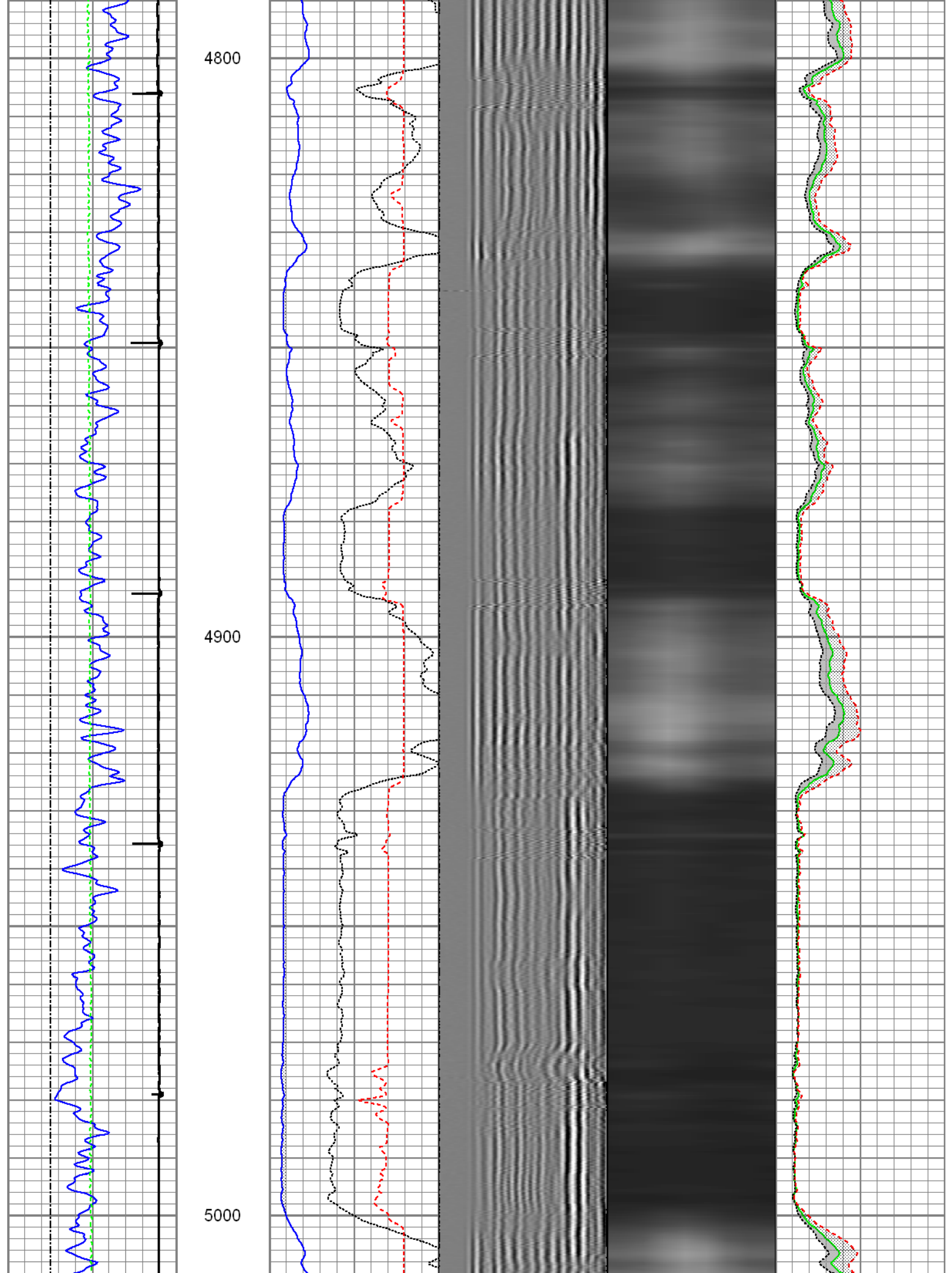
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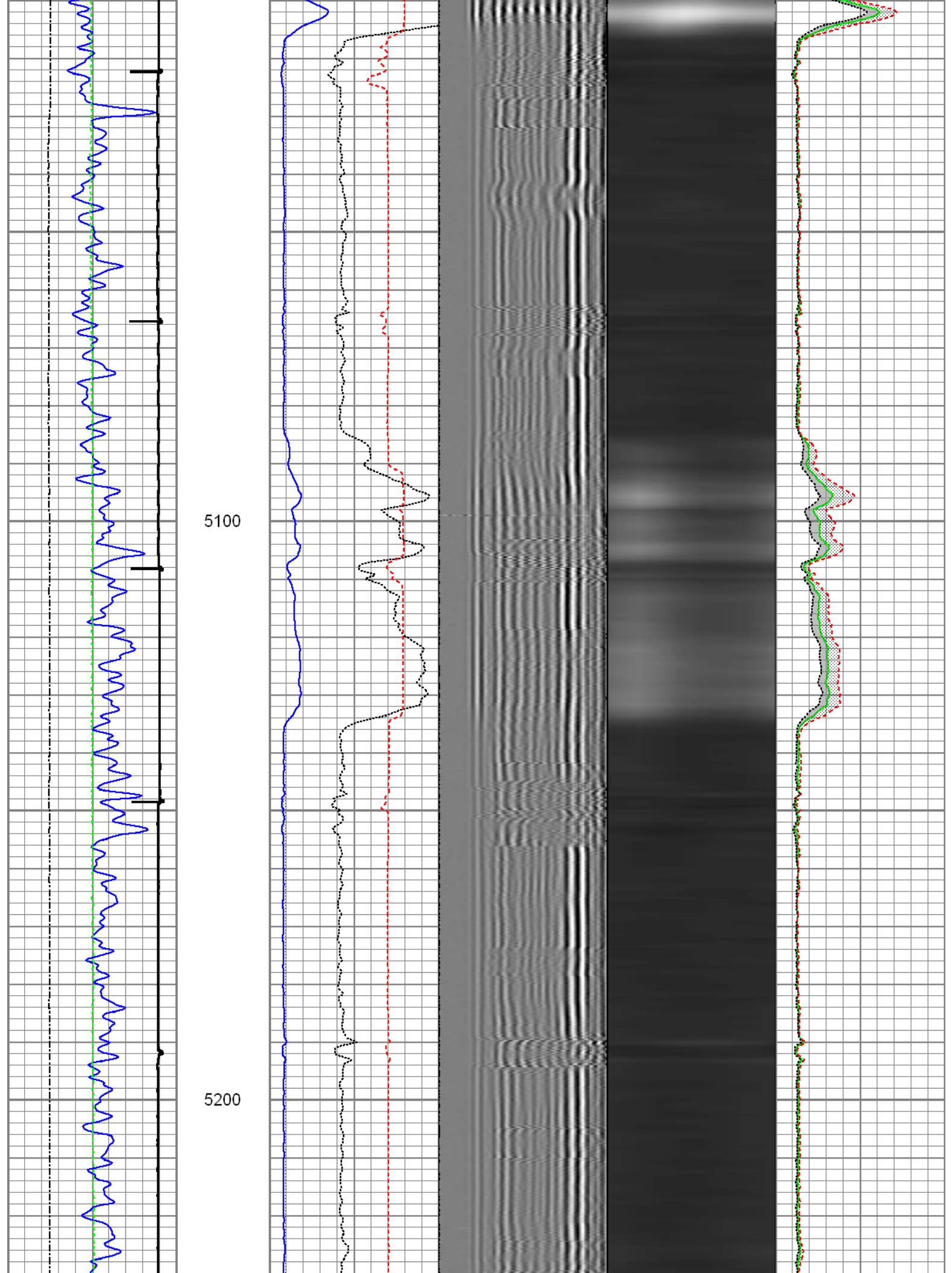


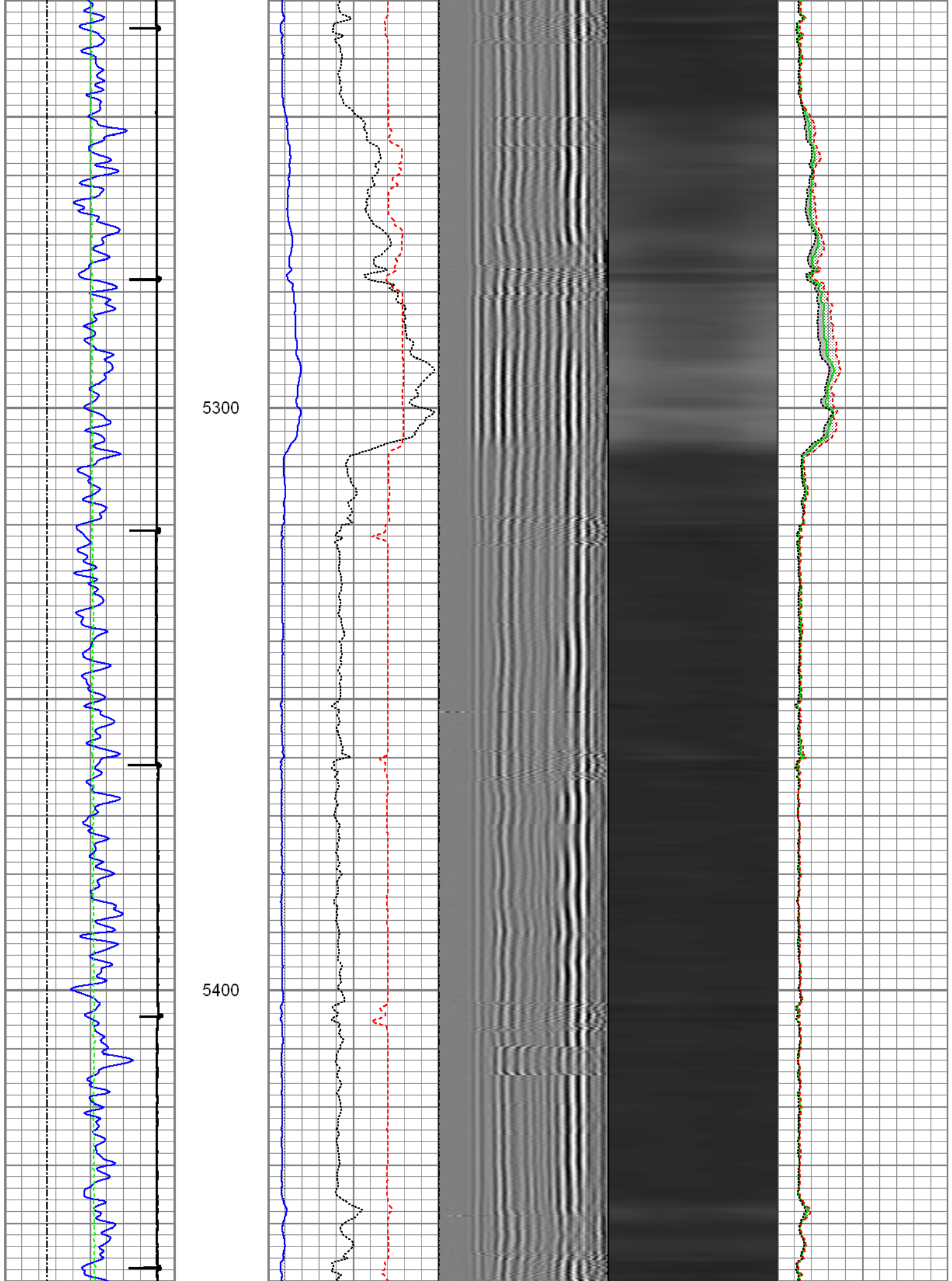
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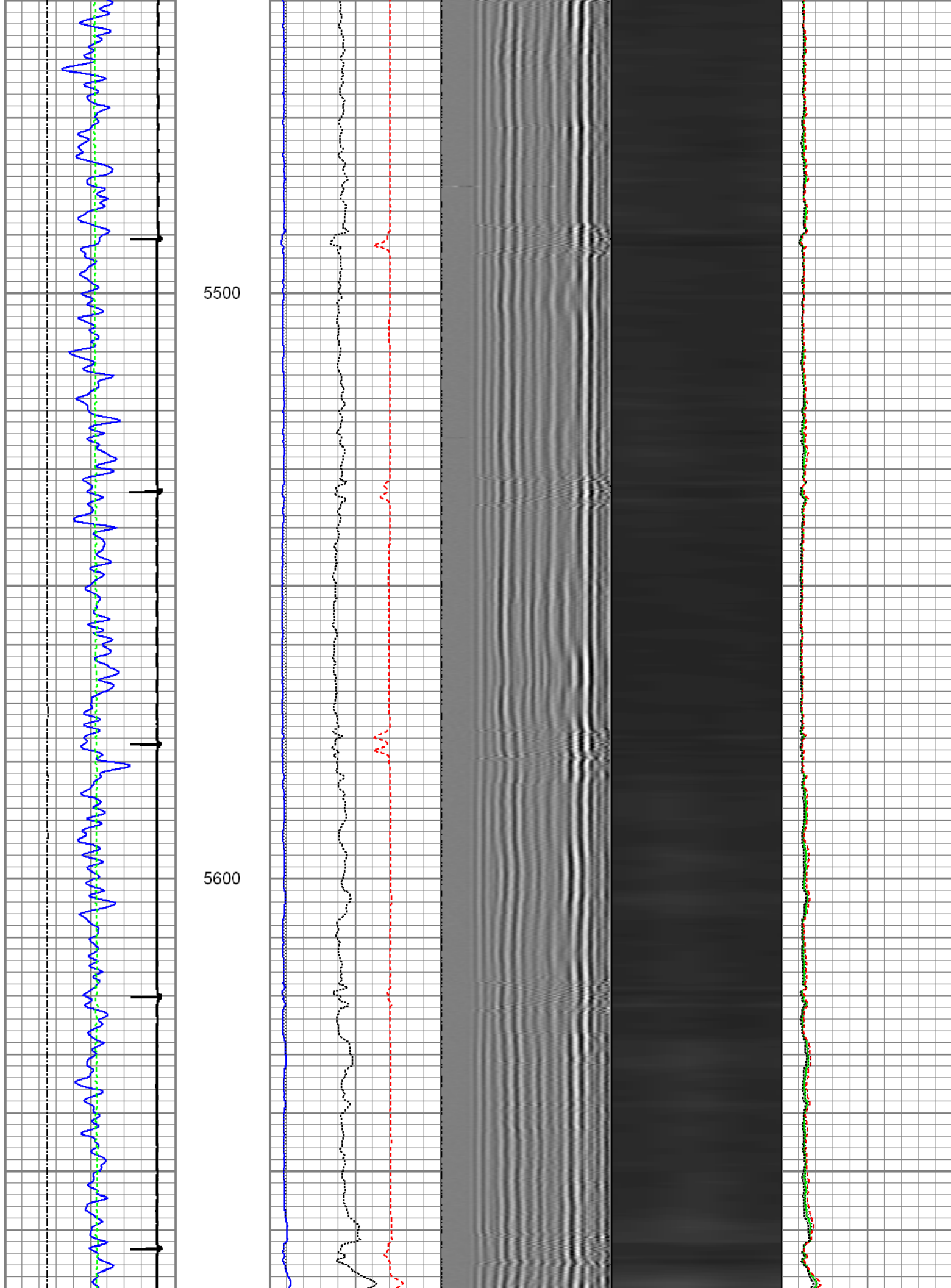


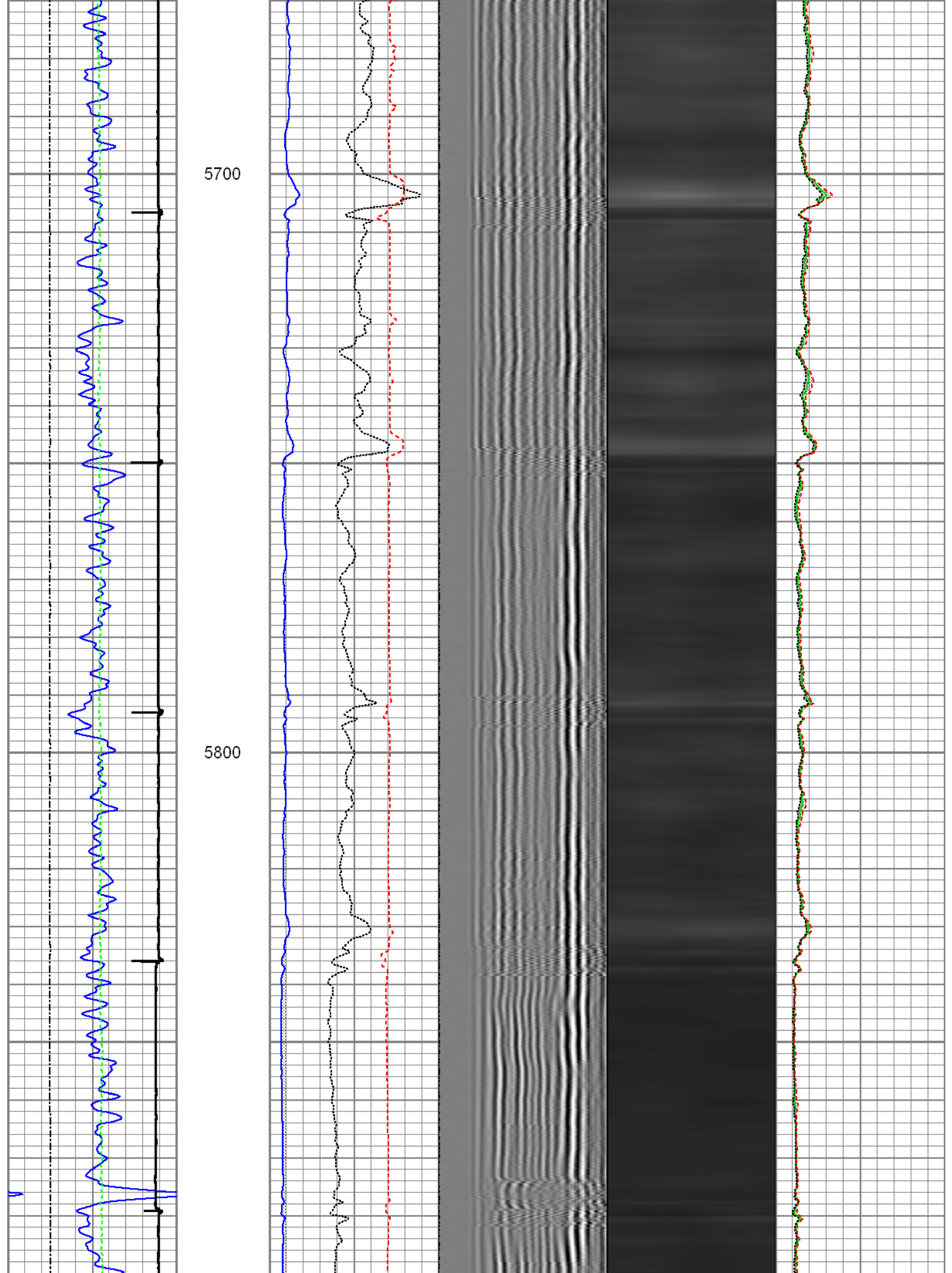


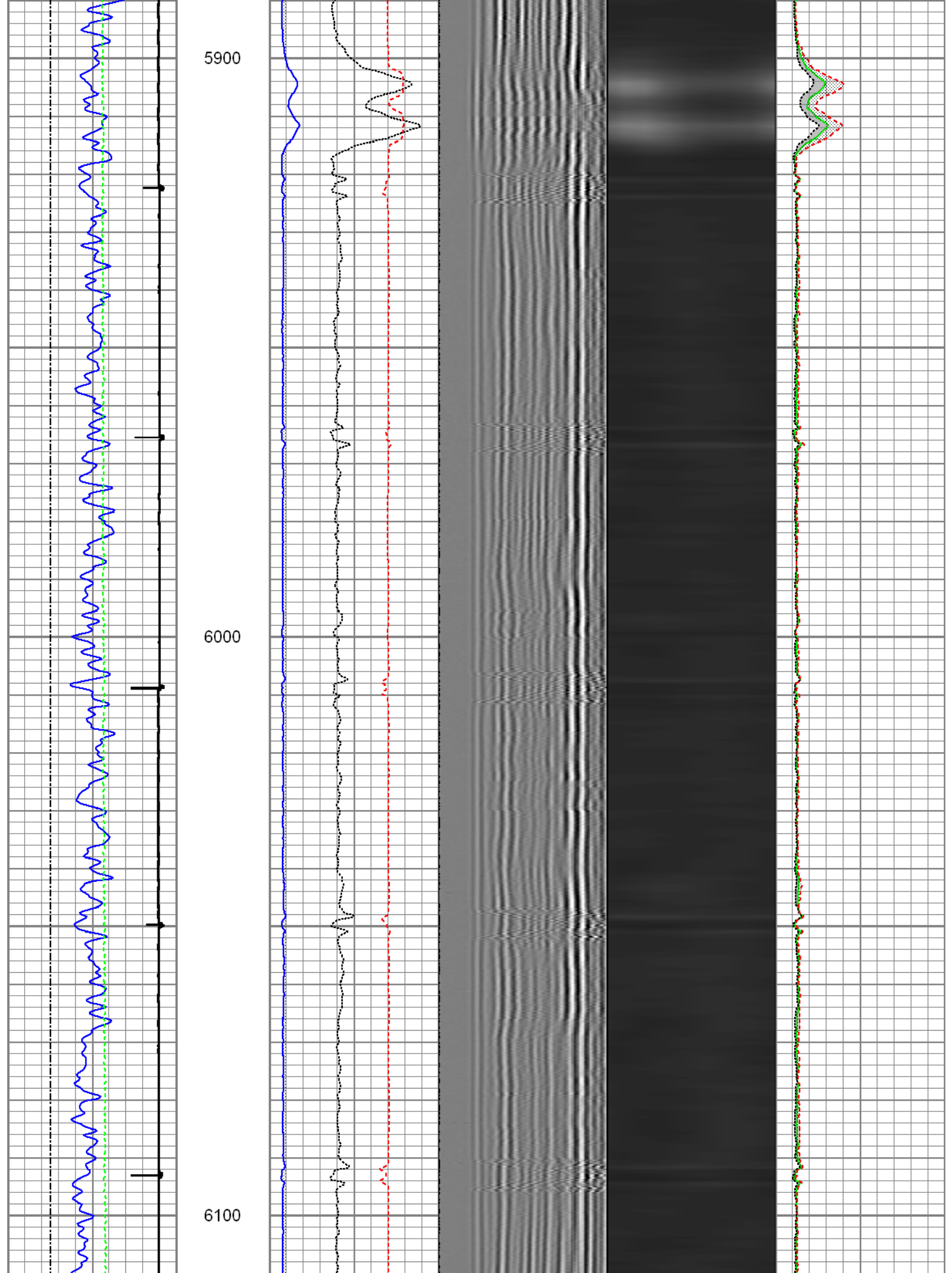


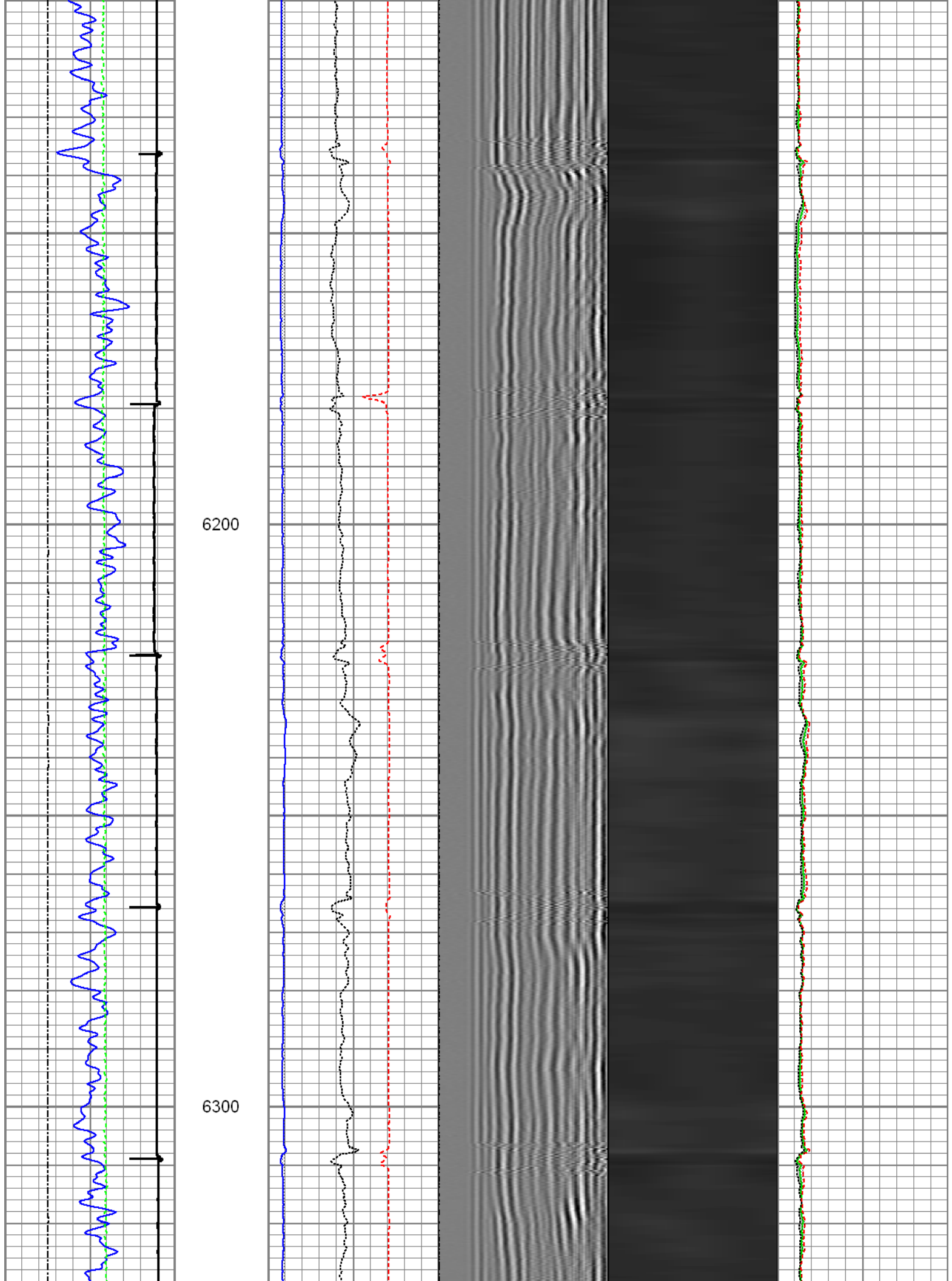
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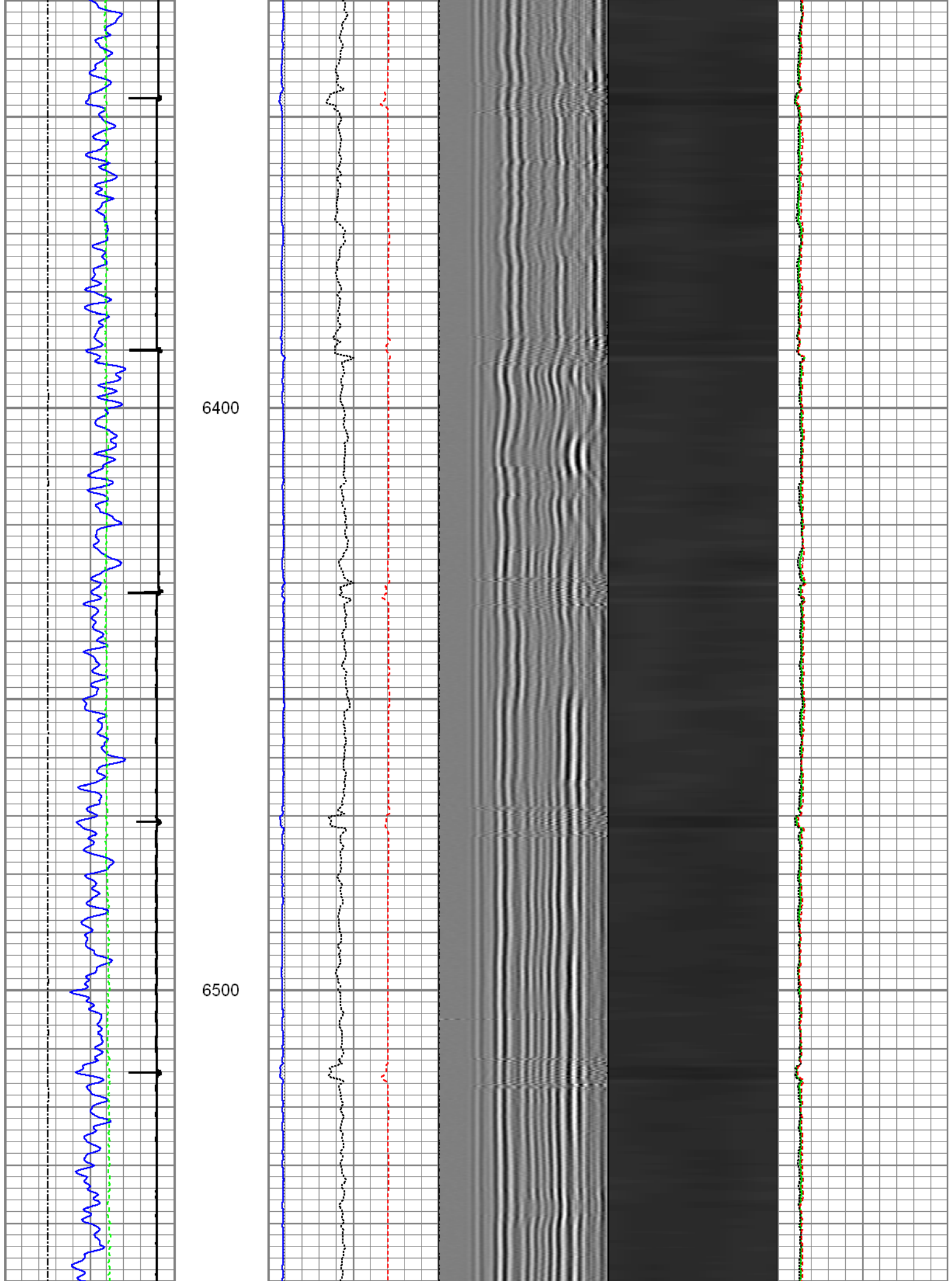
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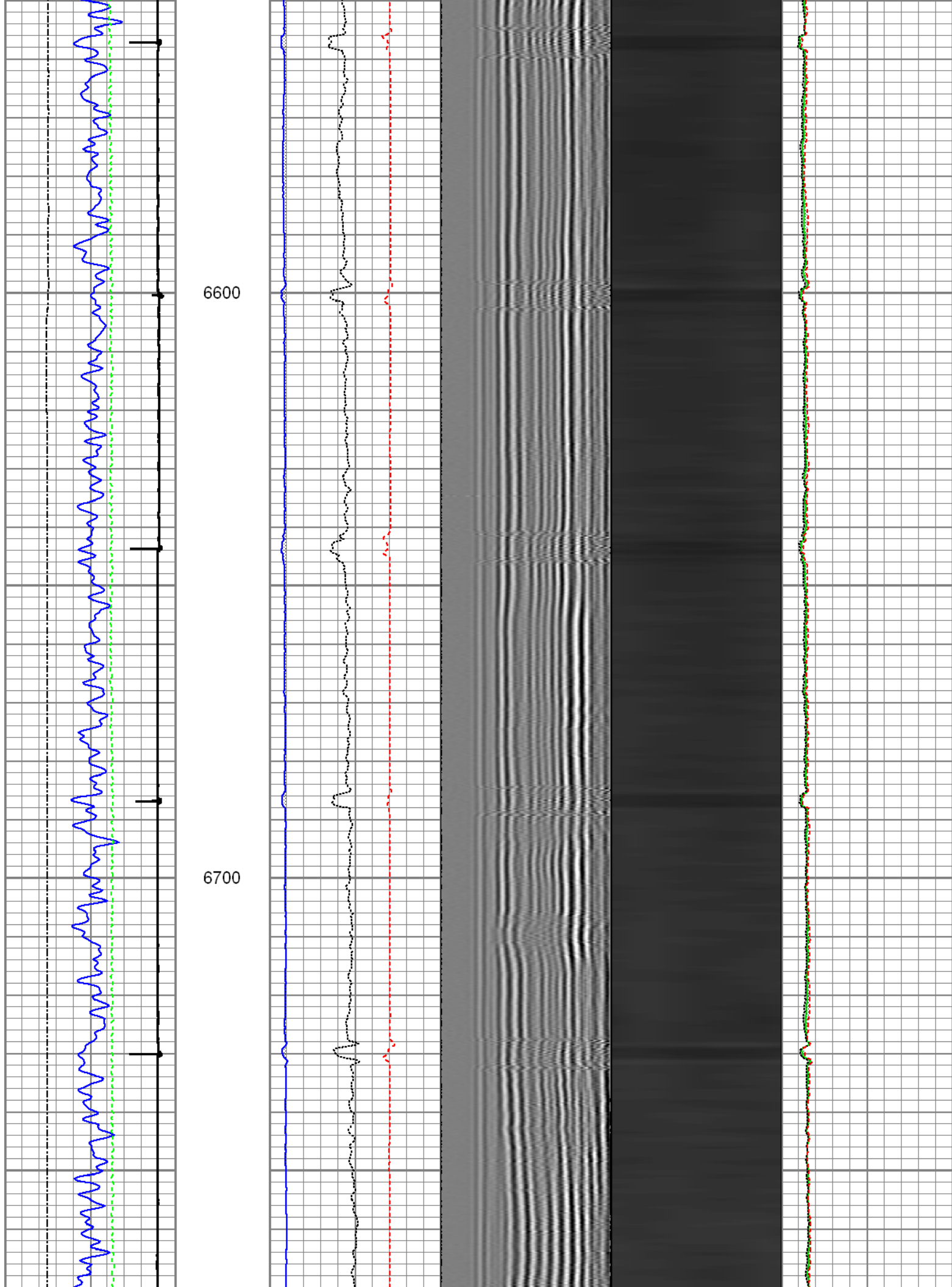


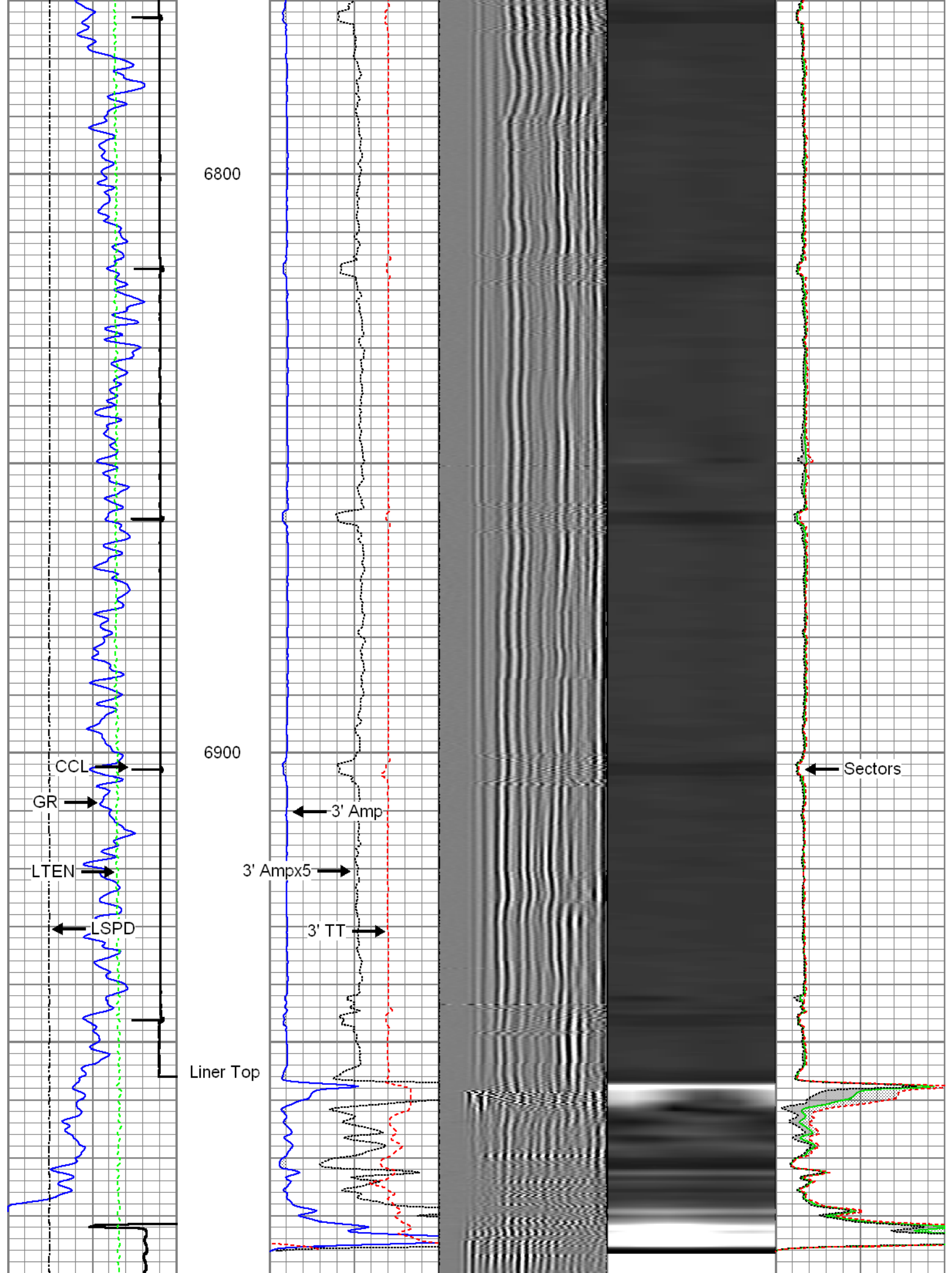


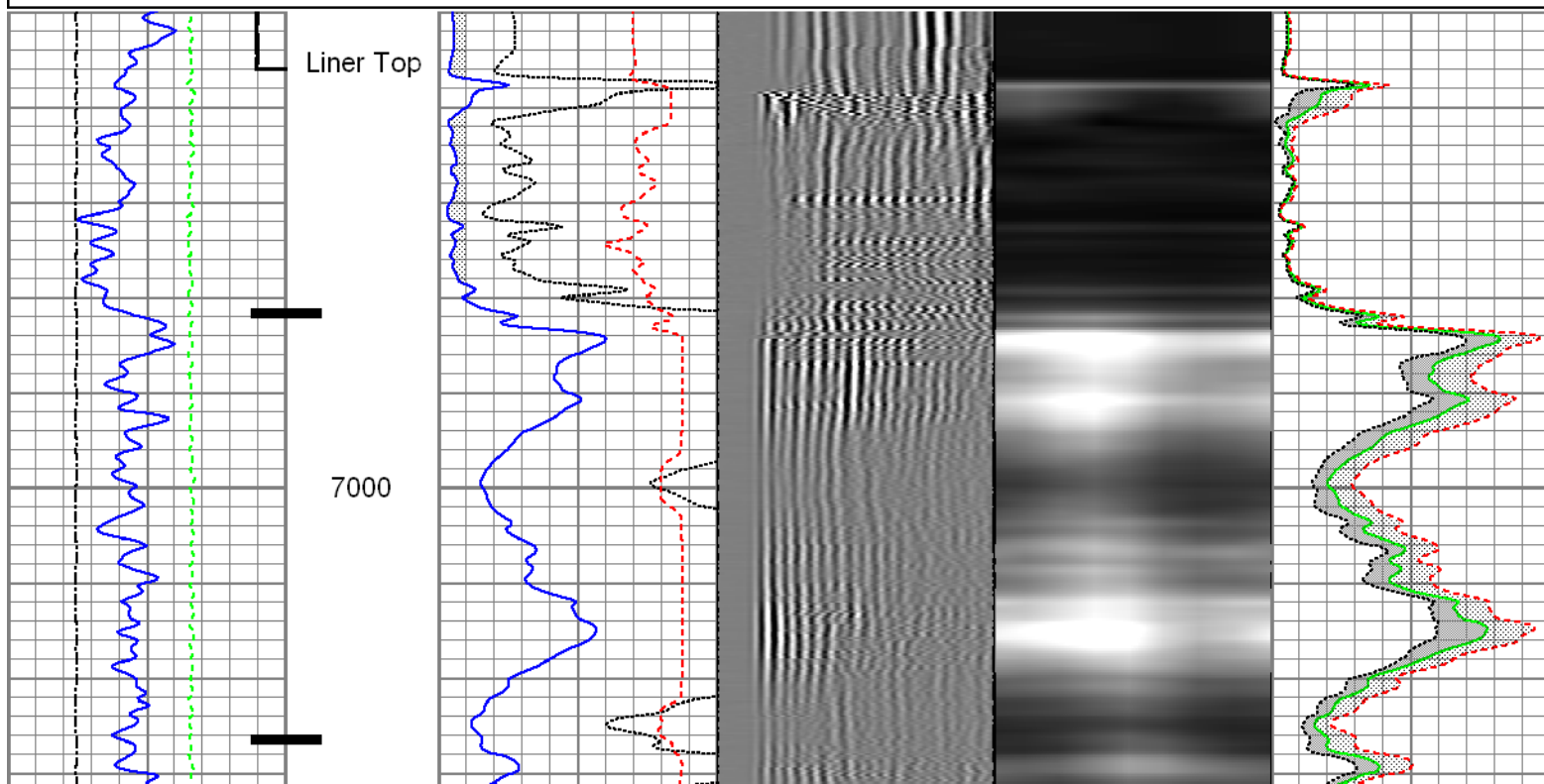
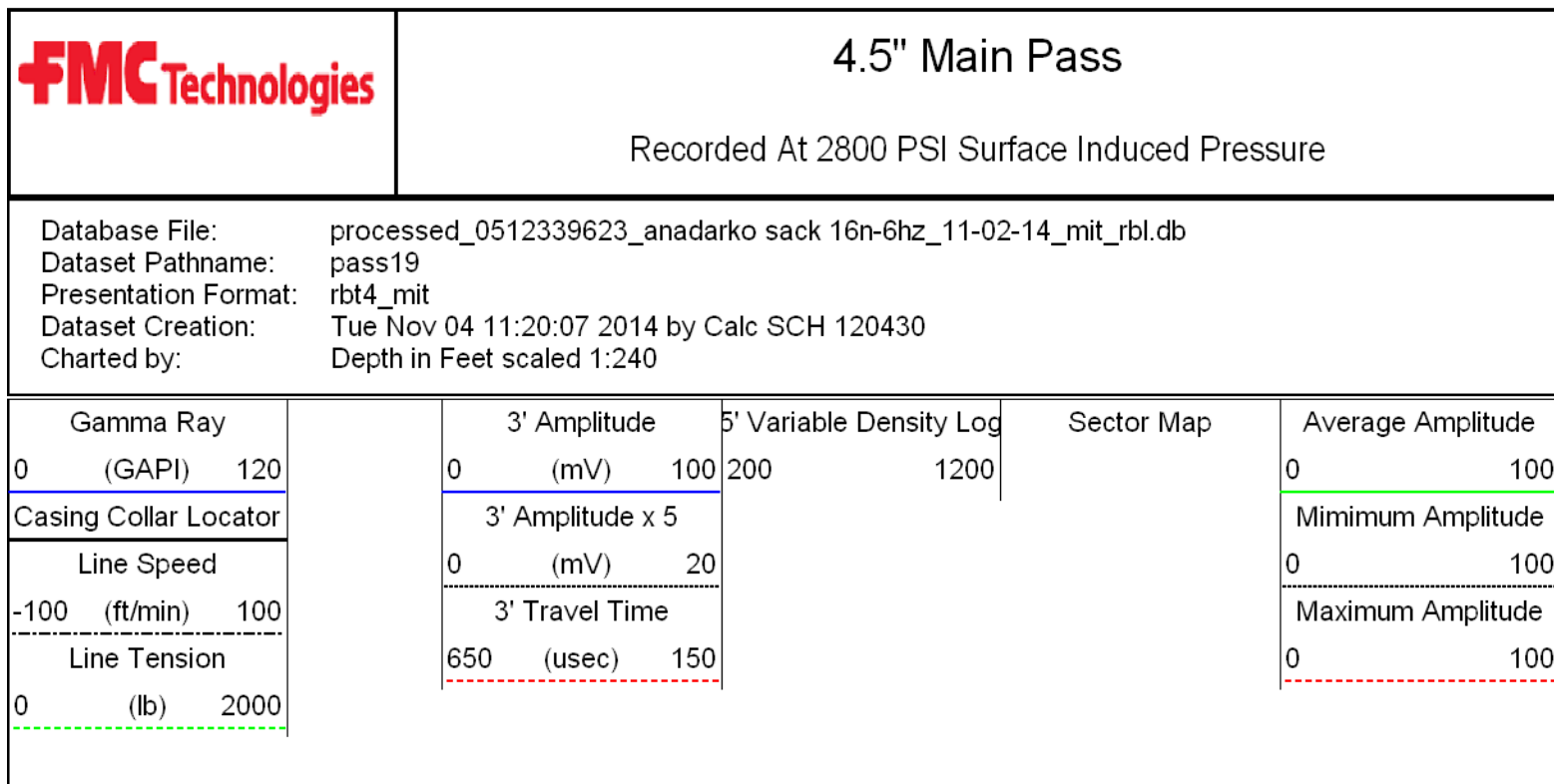
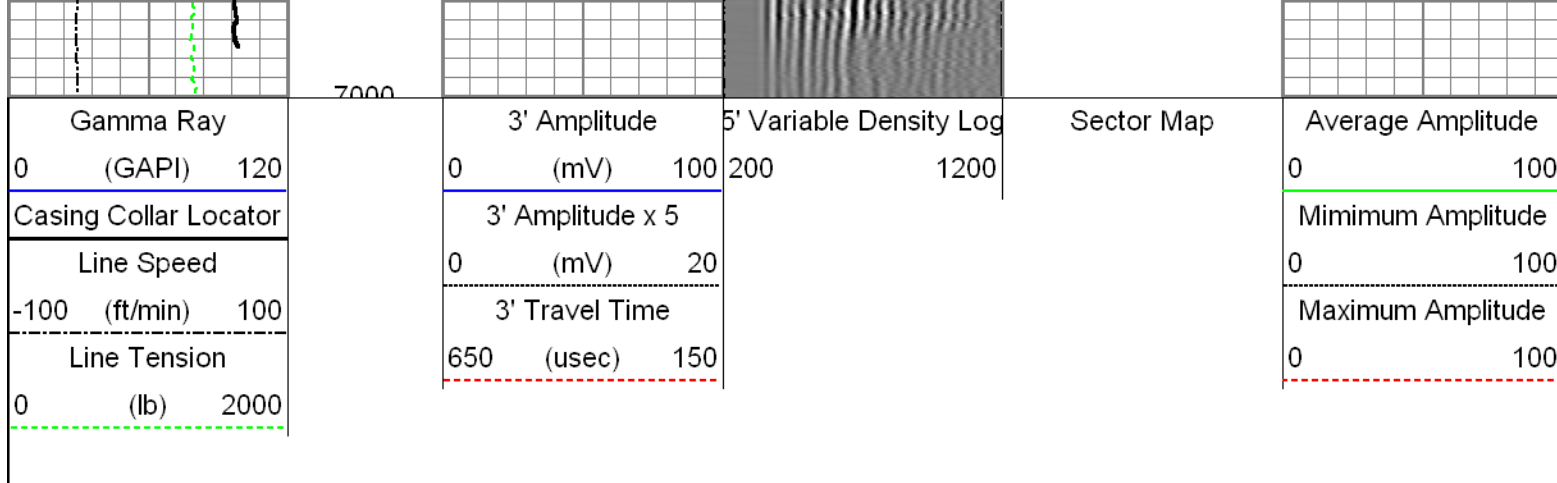


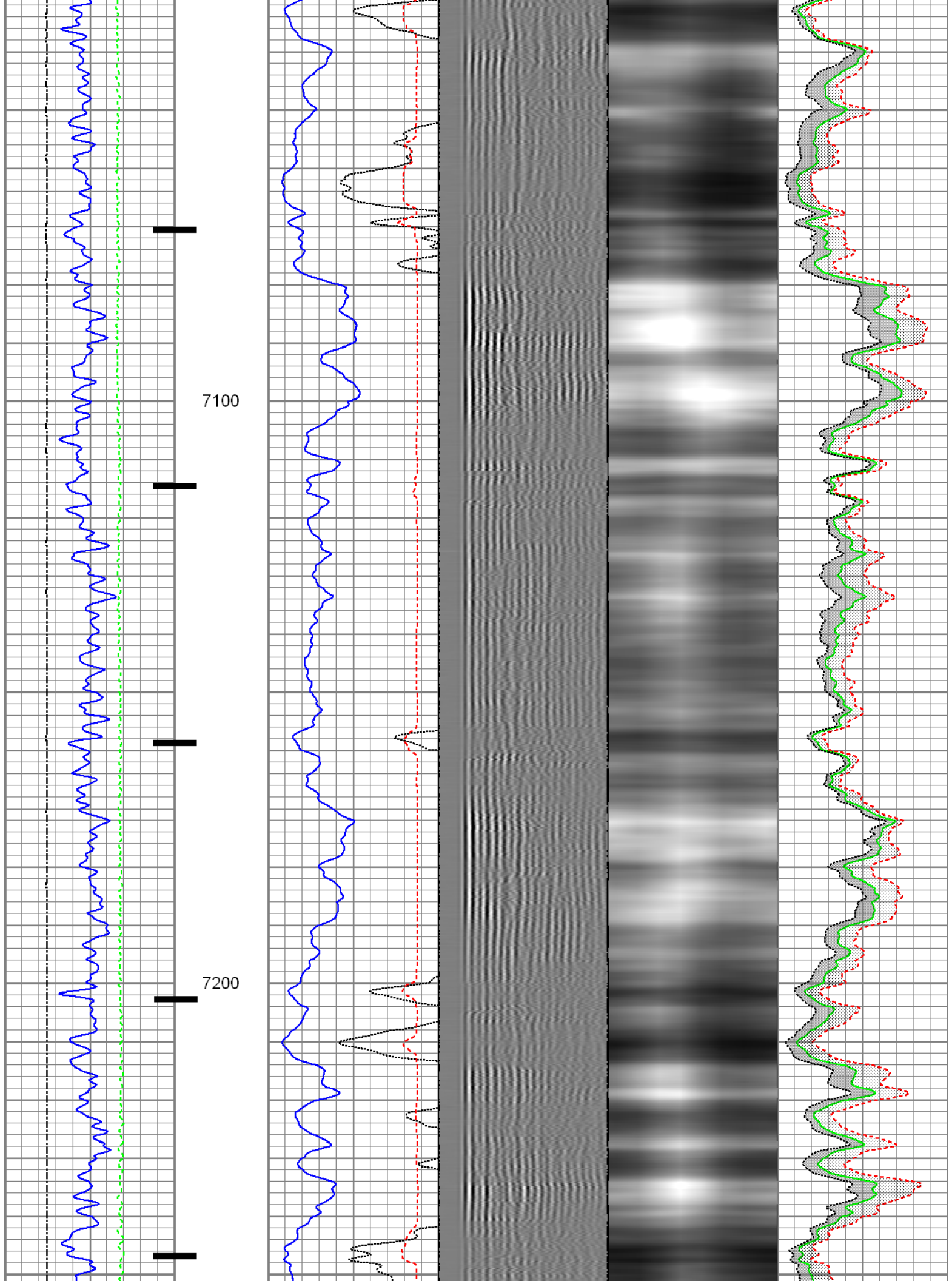
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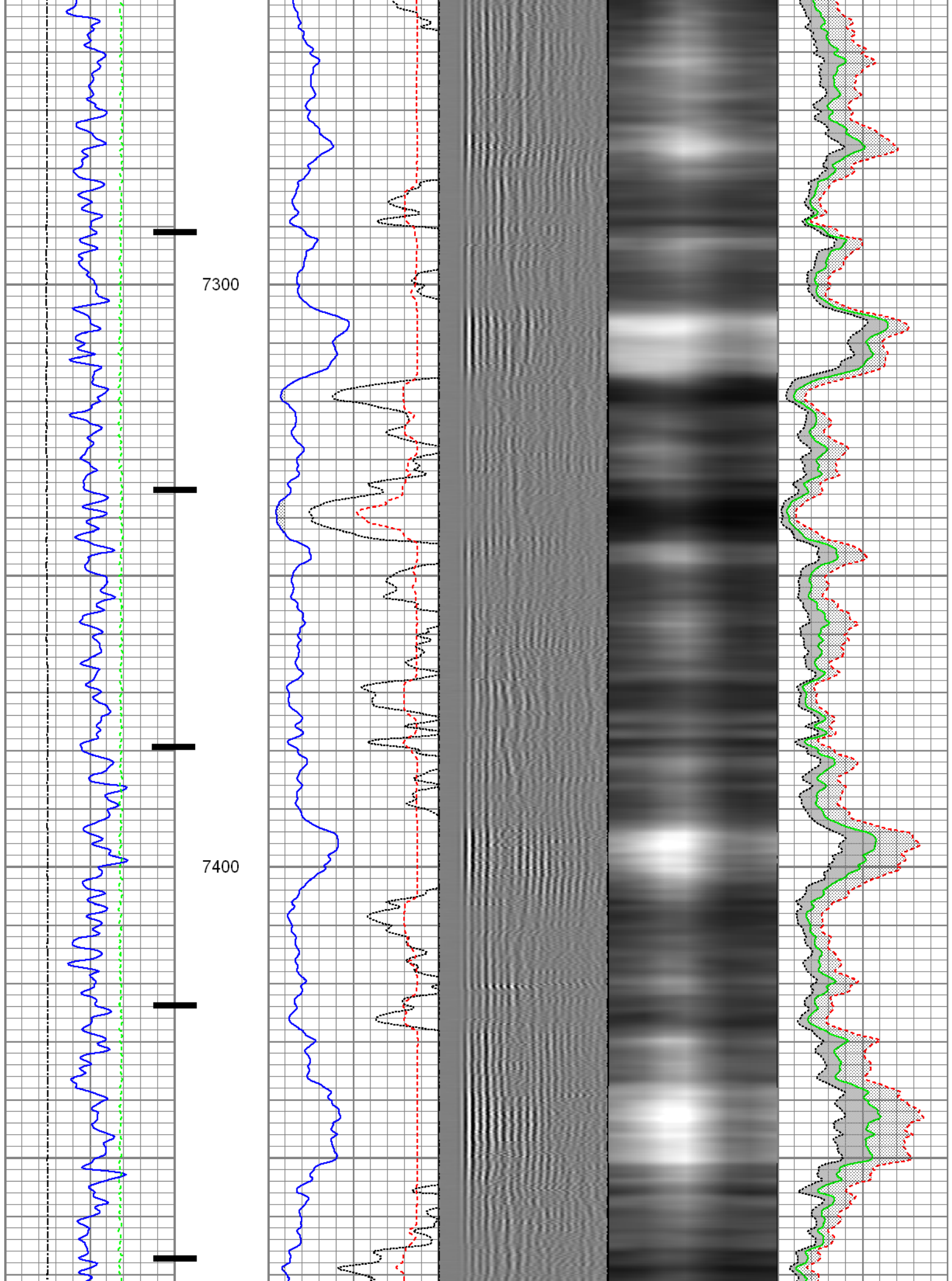
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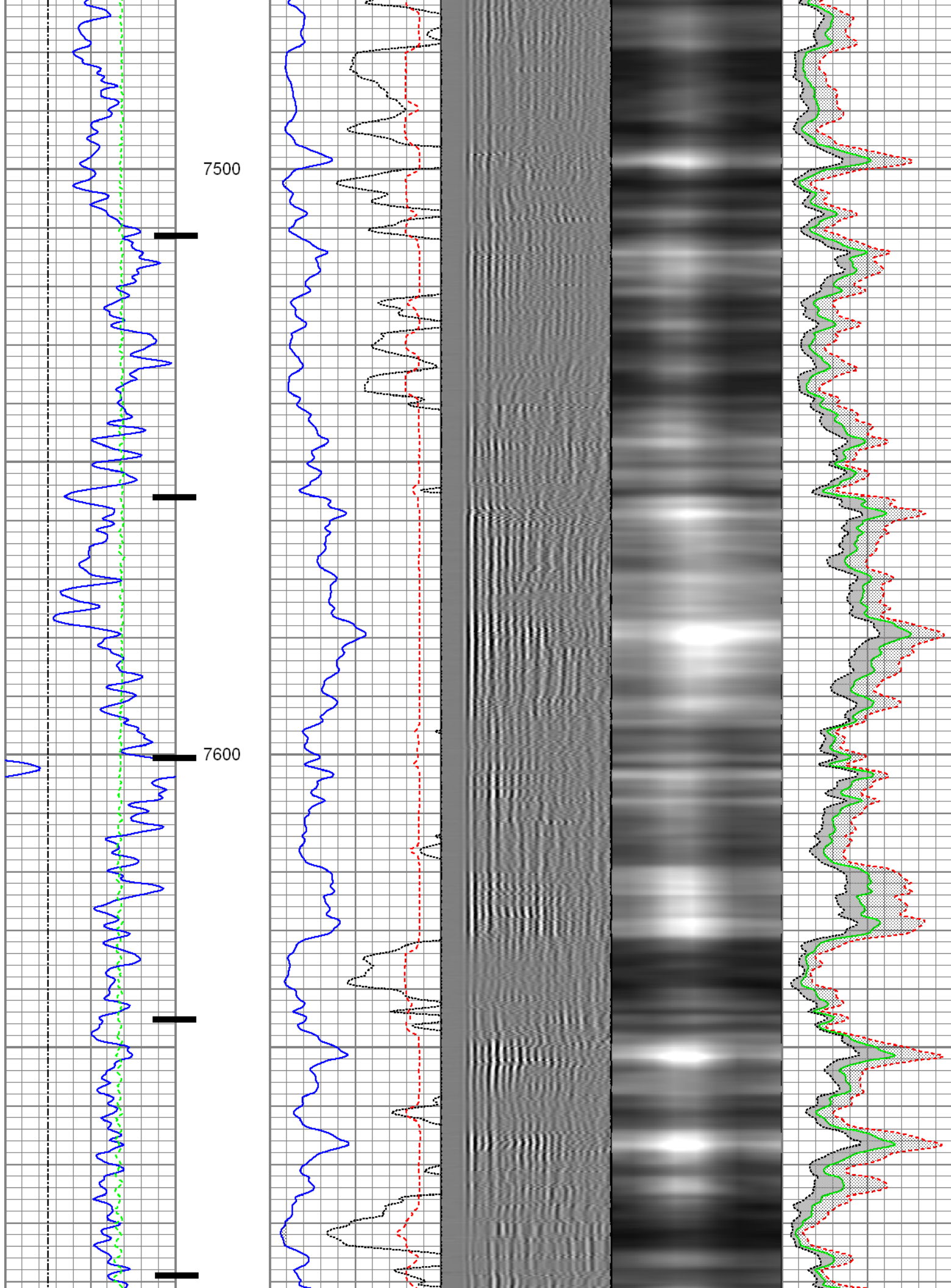


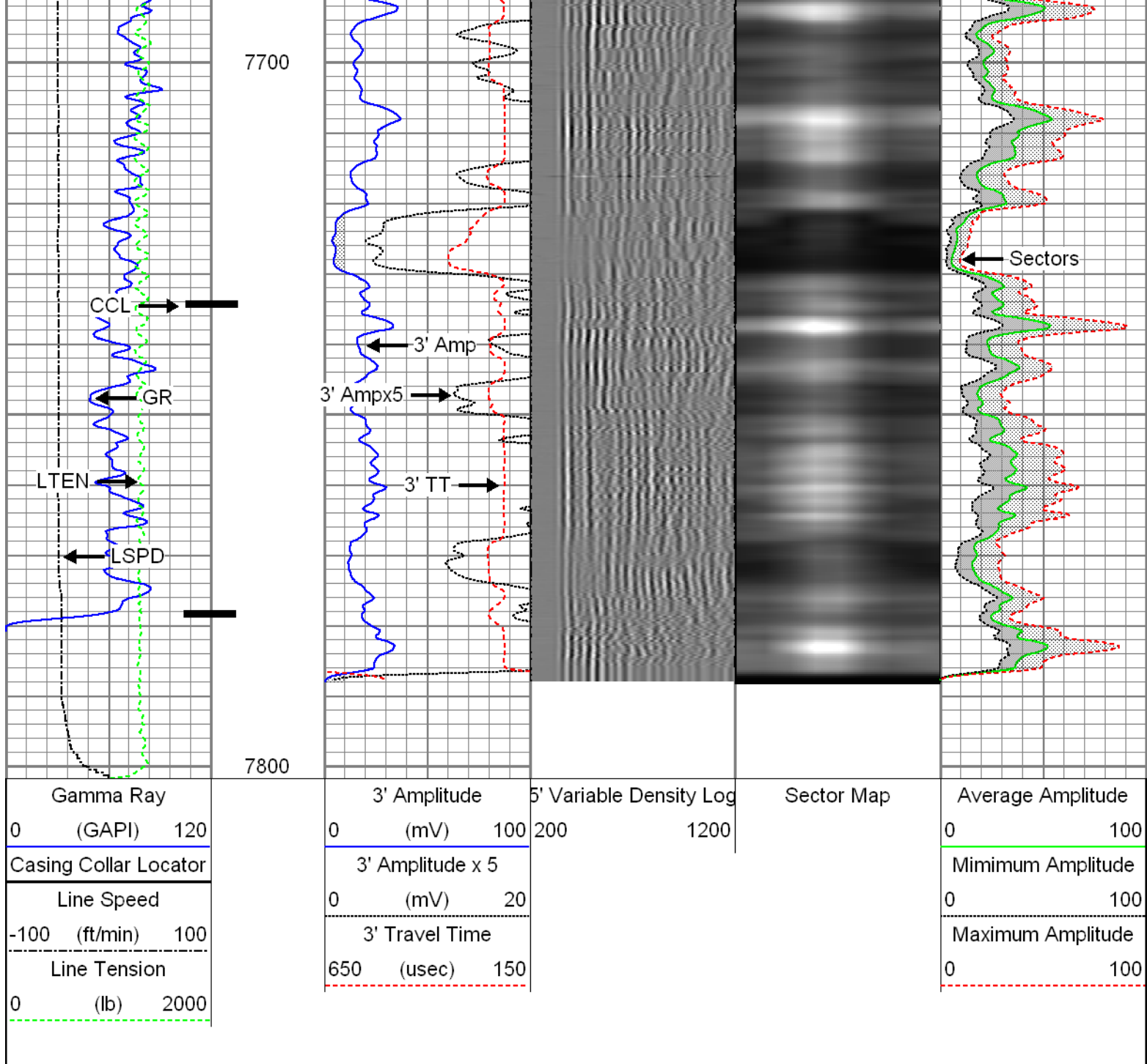








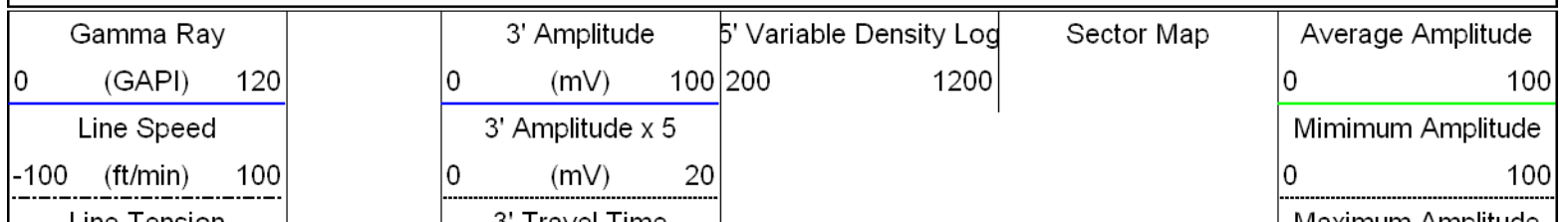


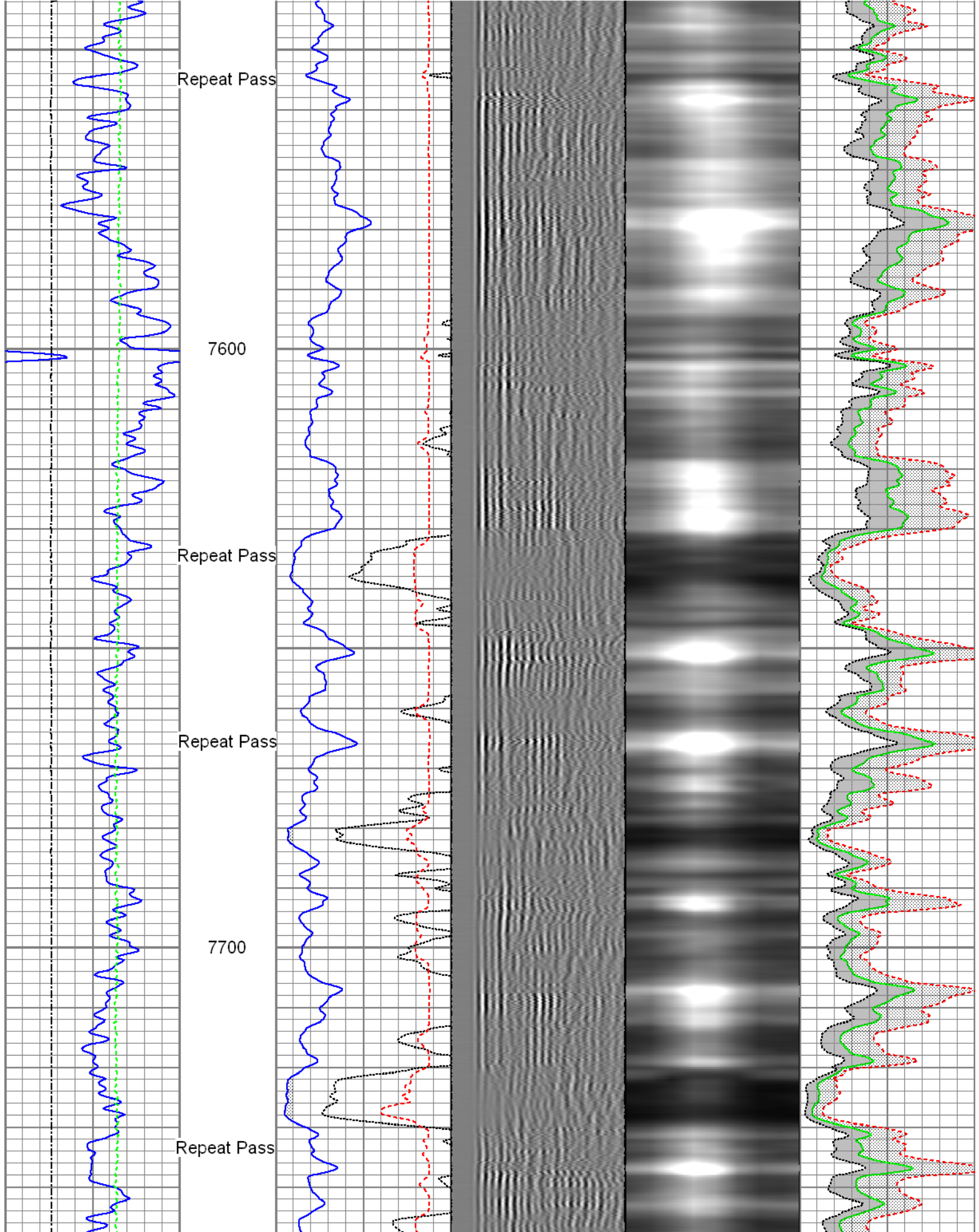
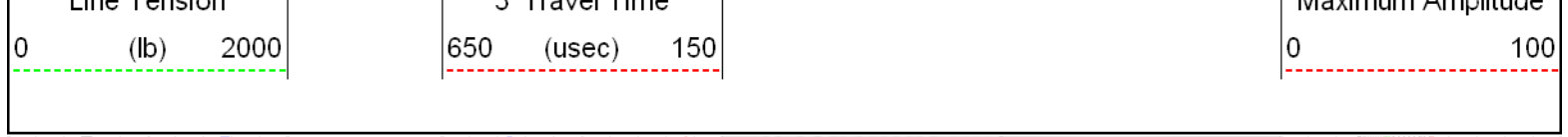


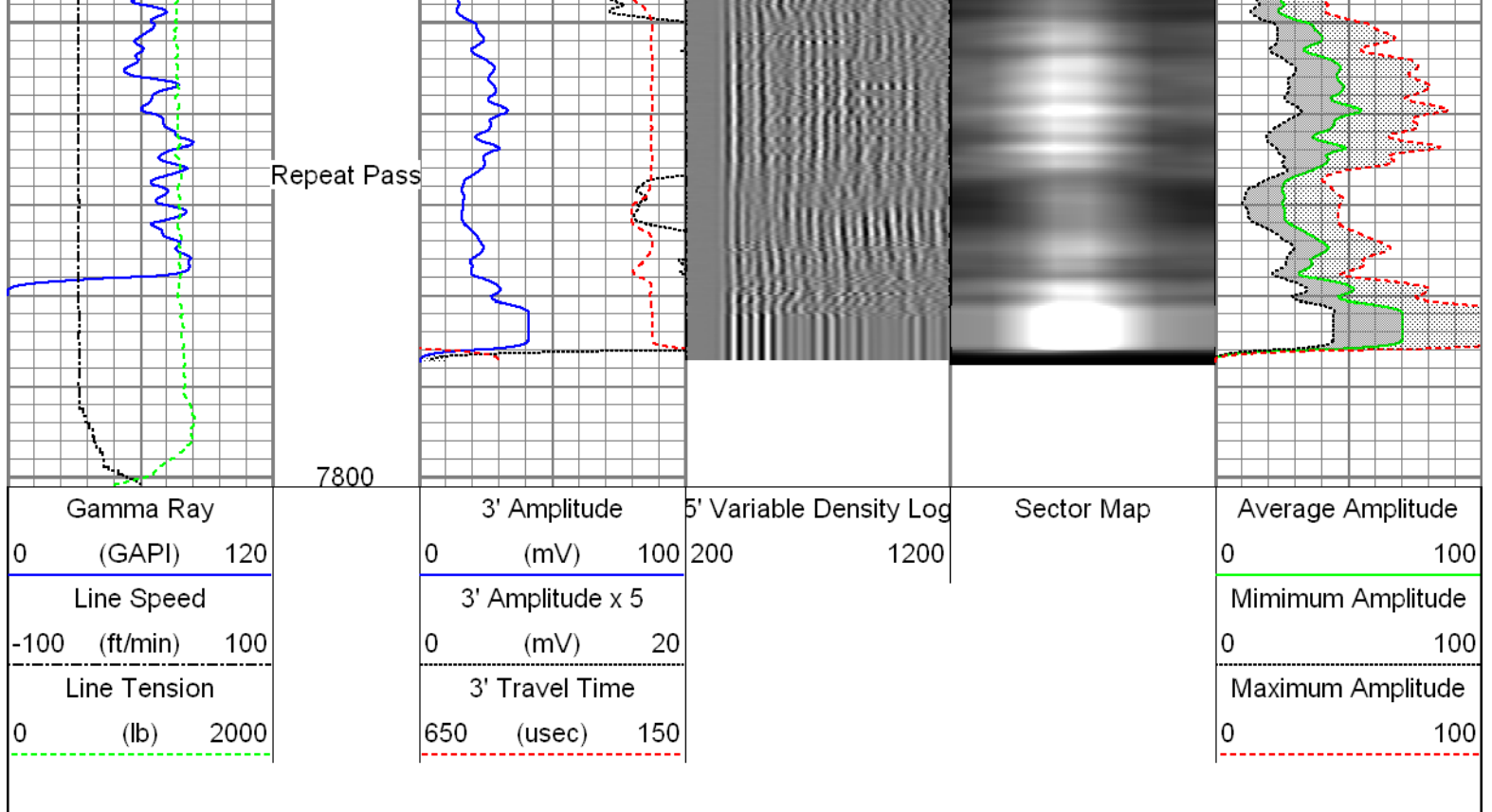
Repeat Pass

Recorded At 2800 PSI Surface Induced Pressure

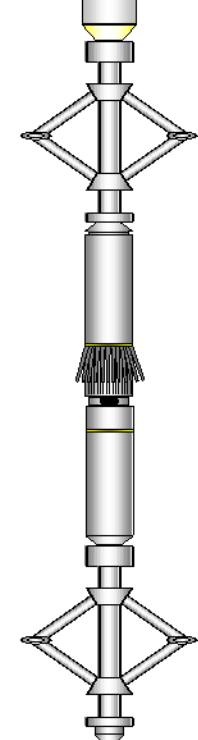
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 Dataset Pathname: pass6
 Presentation Format: rbt4_mit
 Dataset Creation: Sun Nov 02 08:58:01 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	22.37		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (211461) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10019072) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC #4 -DSSRAC (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
WVFS3FT	14.99		UW_RBT-UW_RBT_004 (1066) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS1	14.99					
WVFS2	14.99					
WVFS3	14.99					
WVFS4	14.99					
WVFS5	14.99					
WVFS6	14.99					
WVFS7	14.99					
WVFS8	14.99					
CRTEMP	14.99					

CBLR1	14.99		UW_PRC-DSSRAC (081) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
CBLROT	14.99					
WVF5FT	13.99					
MIT	4.97		UW_MIT-UW_MIT40_042 (10014703) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			UW_PRC #3 -DSSRAC (082) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
			UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
TSTAMP	0.00					
Dataset: processed_0512339623_anadarko sack 16n-6hz_11-02-14_mit_rbl.db: field/well/run1/pass16.2 Total Length: 26.62 ft Total Weight: 319.30 lb O.D. 3.13 in						

Calibration Report			
Database File:	processed_0512339623_anadarko sack 16n-6hz_11-02-14_mit_rbl.db		
Dataset Pathname:	pass16.2		
Dataset Creation:	Tue Nov 04 13:20:45 2014 by Calc SCH 120430		
Multi-finger Imaging Tool Calibration Report			
Serial Number:	10014703		
Number of Fingers:	40		
Tool Model:	UW_MIT40_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: Sun Nov 02 08:14:31 2014						
Ring size:	4	5	6	7			
(in)							
	Sens	Sens	Sens				
Finger 01:	1098 363.0	1461 381.0	1842 396.0	2238			
Finger 02:	1073 370.0	1443 398.0	1841 418.0	2259			
Finger 03:	1067 361.0	1428 387.0	1815 406.0	2221			
Finger 04:	1028 372.0	1400 408.0	1808 435.0	2243			
Finger 05:	1047 353.0	1400 381.0	1781 401.0	2182			
Finger 06:	1000 350.0	1365 390.0	1755 414.0	2160			

Finger 06:	1006	339.0	1365	390.0	1755	414.0	2169
Finger 07:	1053	367.0	1420	389.0	1809	408.0	2217
Finger 08:	1018	371.0	1389	403.0	1792	429.0	2221
Finger 09:	1085	373.0	1458	388.0	1846	401.0	2247
Finger 10:	1035	369.0	1404	390.0	1794	407.0	2201
Finger 11:	1031	367.0	1398	394.0	1792	416.0	2208
Finger 12:	1112	367.0	1479	374.0	1853	381.0	2234
Finger 13:	1077	370.0	1447	391.0	1838	414.0	2252
Finger 14:	1033	378.0	1411	404.0	1815	427.0	2242
Finger 15:	997	374.0	1371	406.0	1777	432.0	2209
Finger 16:	1038	369.0	1407	395.0	1802	417.0	2219
Finger 17:	1082	366.0	1448	384.0	1832	401.0	2233
Finger 18:	1080	358.0	1438	378.0	1816	403.0	2219
Finger 19:	1075	373.0	1448	390.0	1838	411.0	2249
Finger 20:	977	368.0	1345	401.0	1746	427.0	2173
Finger 21:	1077	366.0	1443	387.0	1830	411.0	2241
Finger 22:	1070	370.0	1440	391.0	1831	411.0	2242
Finger 23:	1114	369.0	1483	391.0	1874	415.0	2289
Finger 24:	1100	345.0	1445	362.0	1807	384.0	2191
Finger 25:	1102	375.0	1477	397.0	1874	411.0	2285
Finger 26:	1047	359.0	1406	384.0	1790	407.0	2197
Finger 27:	1228	384.0	1612	393.0	2005	401.0	2406
Finger 28:	1075	348.0	1423	372.0	1795	401.0	2196
Finger 29:	1057	366.0	1423	392.0	1815	421.0	2236
Finger 30:	1044	370.0	1414	395.0	1809	417.0	2226
Finger 31:	1240	385.0	1625	403.0	2028	417.0	2445
Finger 32:	1092	362.0	1454	376.0	1830	393.0	2223
Finger 33:	1091	380.0	1471	403.0	1874	424.0	2298
Finger 34:	1075	365.0	1440	381.0	1821	402.0	2223
Finger 35:	1164	380.0	1544	404.0	1948	419.0	2367
Finger 36:	1055	344.0	1399	371.0	1770	393.0	2163
Finger 37:	1132	377.0	1509	400.0	1909	419.0	2328
Finger 38:	1099	356.0	1455	379.0	1834	398.0	2232
Finger 39:	1100	351.0	1451	368.0	1819	388.0	2207
Finger 40:	1018	379.0	1397	409.0	1806	437.0	2243

Segmented Cement Bond Log Calibration Report						
Serial Number:		1066				
Tool Model:		UW_RBT_004				
Calibration Casing Diameter:		5.500	in			
Calibration Depth:		3.861	ft			
Master Calibration, performed Sun Nov 02 08:16:07 2014:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.005	1.758	1.000	61.000	85.000	0.838
5FT	-0.001	0.810	1.000	61.000	81.000	1.090
S1	0.005	1.627	0.000	100.000	134.700	-0.005
S2	0.004	1.636	0.000	100.000	132.500	0.138
S3	0.004	1.697	0.000	100.000	130.318	0.145
S4	0.004	1.798	0.000	100.000	127.606	0.156
S5	0.004	1.860	0.000	100.000	126.432	0.000
S6	0.004	1.954	0.000	100.000	125.000	0.153
S7	0.004	1.949	0.000	100.000	125.000	0.153
S8	0.004	1.786	0.000	100.000	130.262	0.154

Gamma Ray Calibration Report							
Serial Number:		10019072					
Tool Model:		UW_PGR_020					
Tool Depth:		12.000 ft					

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 LP
Well	Sack 16N-6HZ
Field	Wattenberg
County	Weld
State	Colorado