



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 Scott 27N-32HZ				Well Scott 27N-32HZ			
Field Wattenberg				Field Wattenberg			
County Weld				County Weld			
State Colorado				State Colorado			
Location:				Location:			
SHL: 2446' FNL 930' FEL				SHL: 2446' FNL 930' FEL			
Lat/Long: 40.168447/-104.90774				Lat/Long: 40.168447/-104.90774			
SEC 5 TWP 2N RGE 67W				SEC 5 TWP 2N RGE 67W			
Permanent Datum				Permanent Datum			
Log Measured From				Log Measured From			
Ground Level				Ground Level			
Kelly Bushing				Kelly Bushing			
Elevation				Elevation			
16 FT				16 FT			
Drilling Measured From				Drilling Measured From			
Kelly Bushing				Kelly Bushing			
4874'				4874'			
Other Services				Other Services			
RCBL/MIT				RCBL/MIT			
Elevation				Elevation			
K.B. 4890'				K.B. 4890'			
D.F. 4889'				D.F. 4889'			
G.L. 4874'				G.L. 4874'			
Date				Date			
June 3, 2014				June 3, 2014			
Run Number				Run Number			
One				One			
Depth Driller				Depth Driller			
14542 FT				14542 FT			
Depth Logger				Depth Logger			
7245 FT				7245 FT			
Bottom Logged Interval				Bottom Logged Interval			
7245 FT				7245 FT			
Top Log Interval				Top Log Interval			
Surface				Surface			
Open Hole Size				Open Hole Size			
8.750"				8.750"			
Type Fluid				Type Fluid			
Water				Water			
Density / Viscosity				Density / Viscosity			
8.34 lbm/gal				8.34 lbm/gal			
Max. Recorded Temp.				Max. Recorded Temp.			
228°F				228°F			
Estimated Cement Top				Estimated Cement Top			
64 FT				64 FT			
Time Well Ready				Time Well Ready			
ROA				ROA			
Time Logger on Bottom				Time Logger on Bottom			
10:15				10:15			
Equipment Number				Equipment Number			
HD-0325				HD-0325			
Location				Location			
Fort Lupton, CO				Fort Lupton, CO			
Recorded By				Recorded By			
Ryan Harris				Ryan Harris			
Witnessed By				Witnessed By			
Keith Kallsen				Keith Kallsen			
Borehole Record				Borehole Record			
Run Number				Run Number			
Bit				Bit			
From				From			
To				To			
Size				Size			
Weight				Weight			
From				From			
To				To			
Casing Record				Casing Record			
Size (in)				Size (in)			
Wgt (lbs/Ft)				Wgt (lbs/Ft)			
Grade				Grade			
Top				Top			
Bottom				Bottom			
Surface Casing				Surface Casing			
9 5/8"				9 5/8"			
36				36			
J-55				J-55			
Surface				Surface			
1029 FT				1029 FT			
Intermediate #1				Intermediate #1			
7"				7"			
26				26			
P-110				P-110			
Surface				Surface			
6579 FT				6579 FT			
Intermediate #2				Intermediate #2			
4 1/2"				4 1/2"			
11.6				11.6			
P-110				P-110			
Surface				Surface			
14542 FT				14542 FT			
Liner				Liner			

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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 Talley reported cement top at 6579 FT.
Adjusted log 10 FT to correlate with Liner Top.
Log ran to surface.
Log ran with 2800 PSI surface induced pressure.
No debris found on logging tools upon completion of operations.

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



Main Pass

Logged With 2800 PSI At Surface

Database File:0512338826_anadarko_scott 27n-32hz_06-03-14_mit_rbl.db

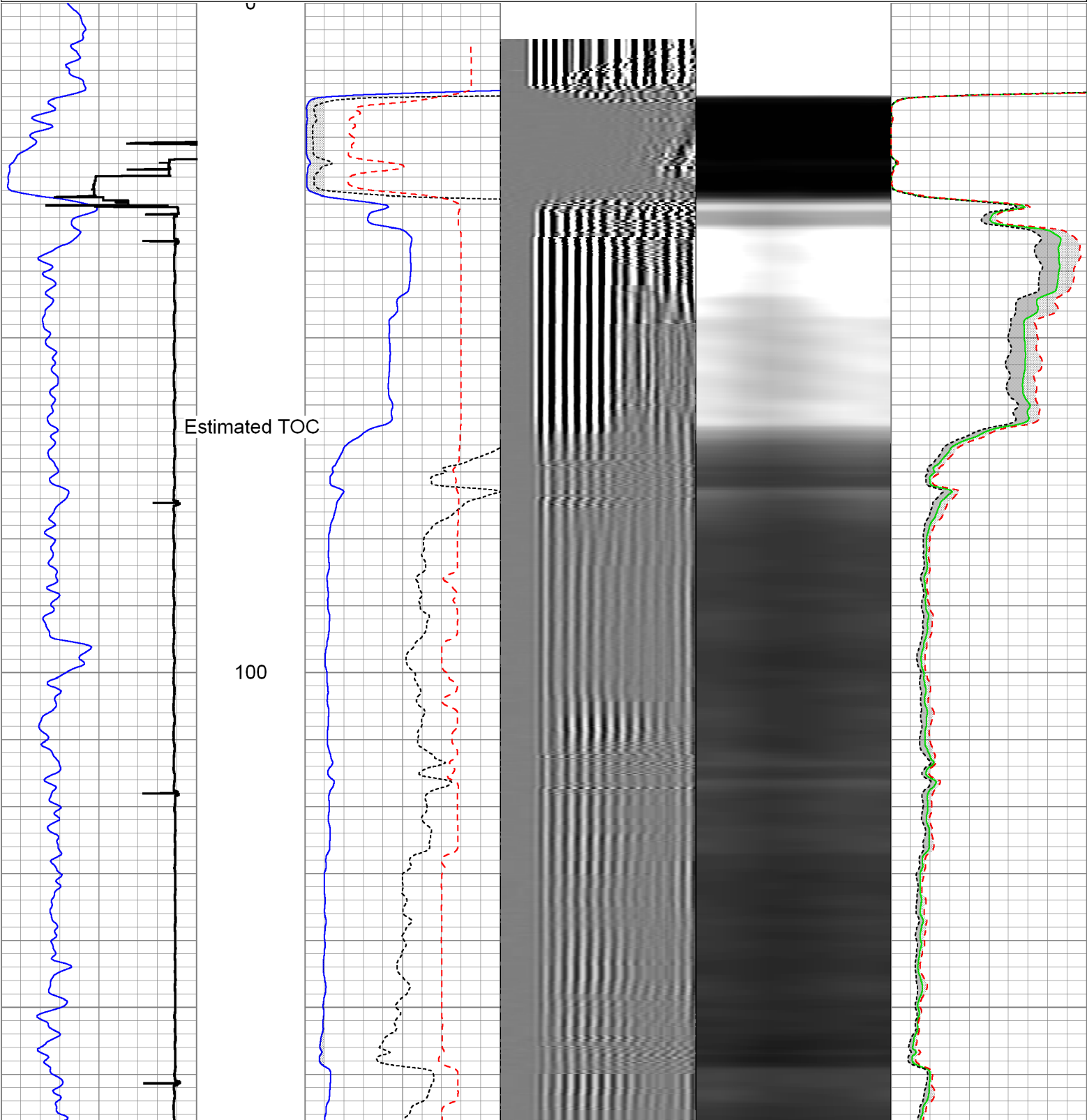
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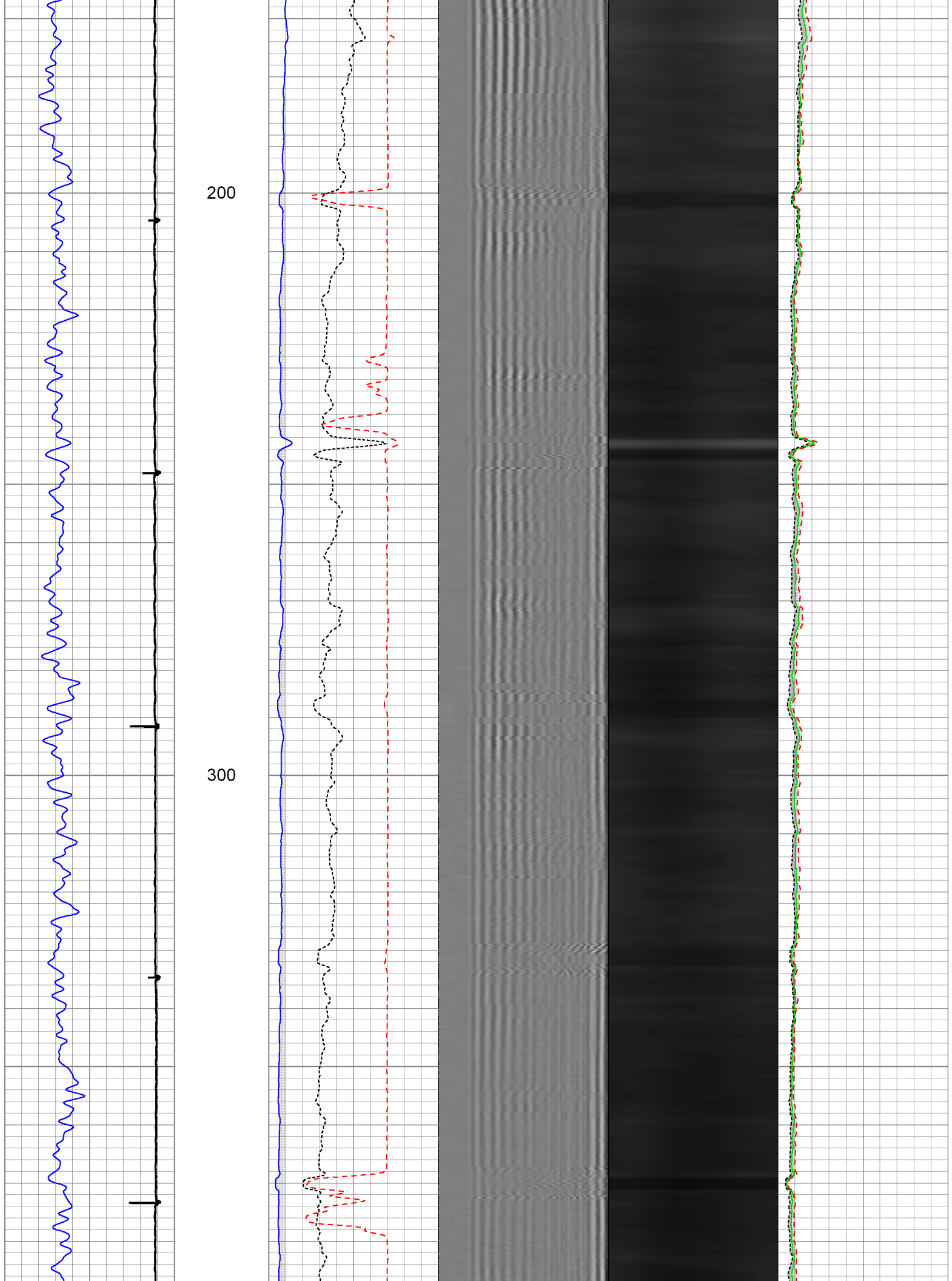
Presentation Format:rbt4_mit

Dataset Creation:Tue Jun 03 12:15:55 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
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
	3' Travel Time			Maximum Amplitude
	650 (usec) 150			0 100

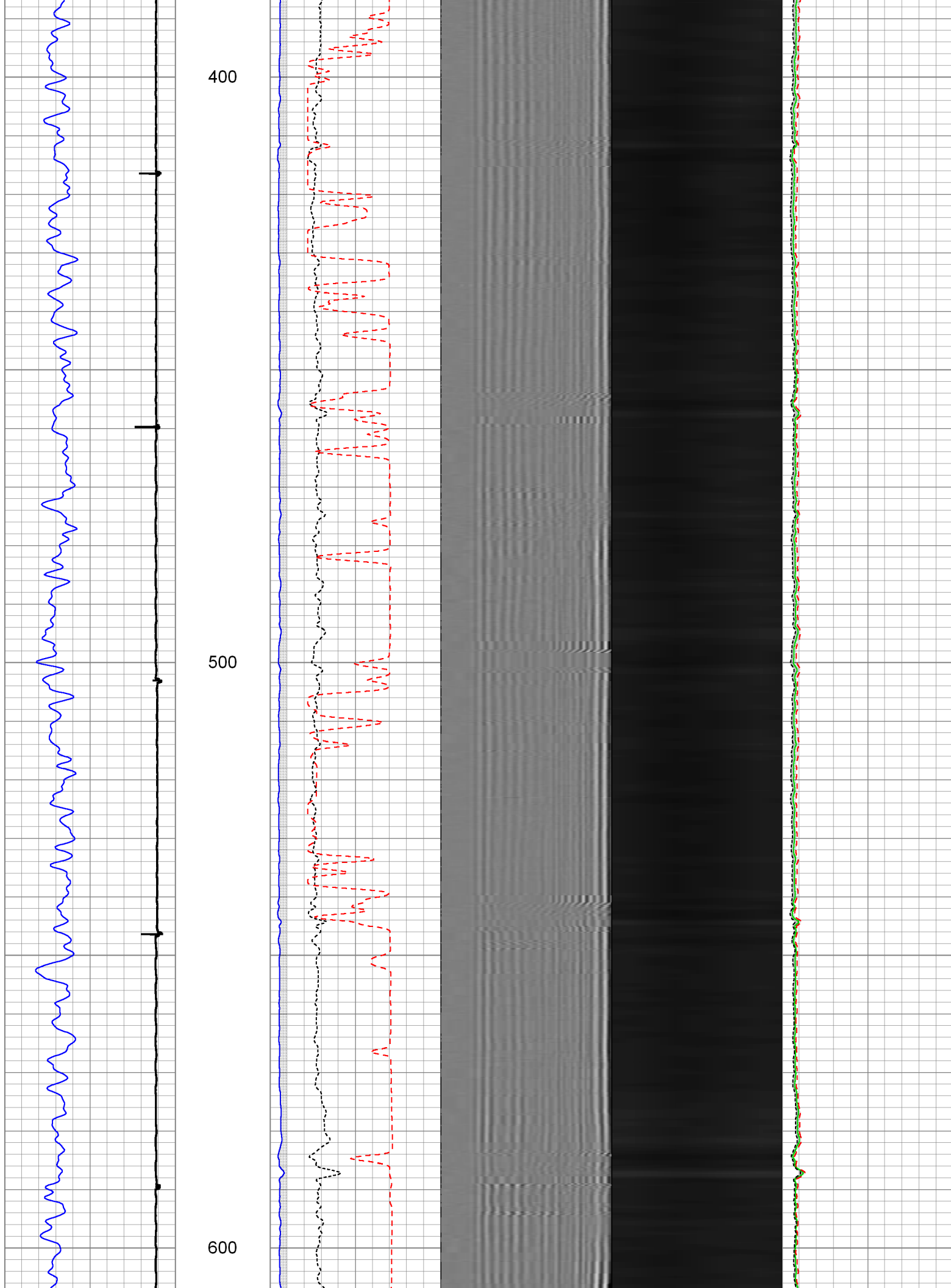


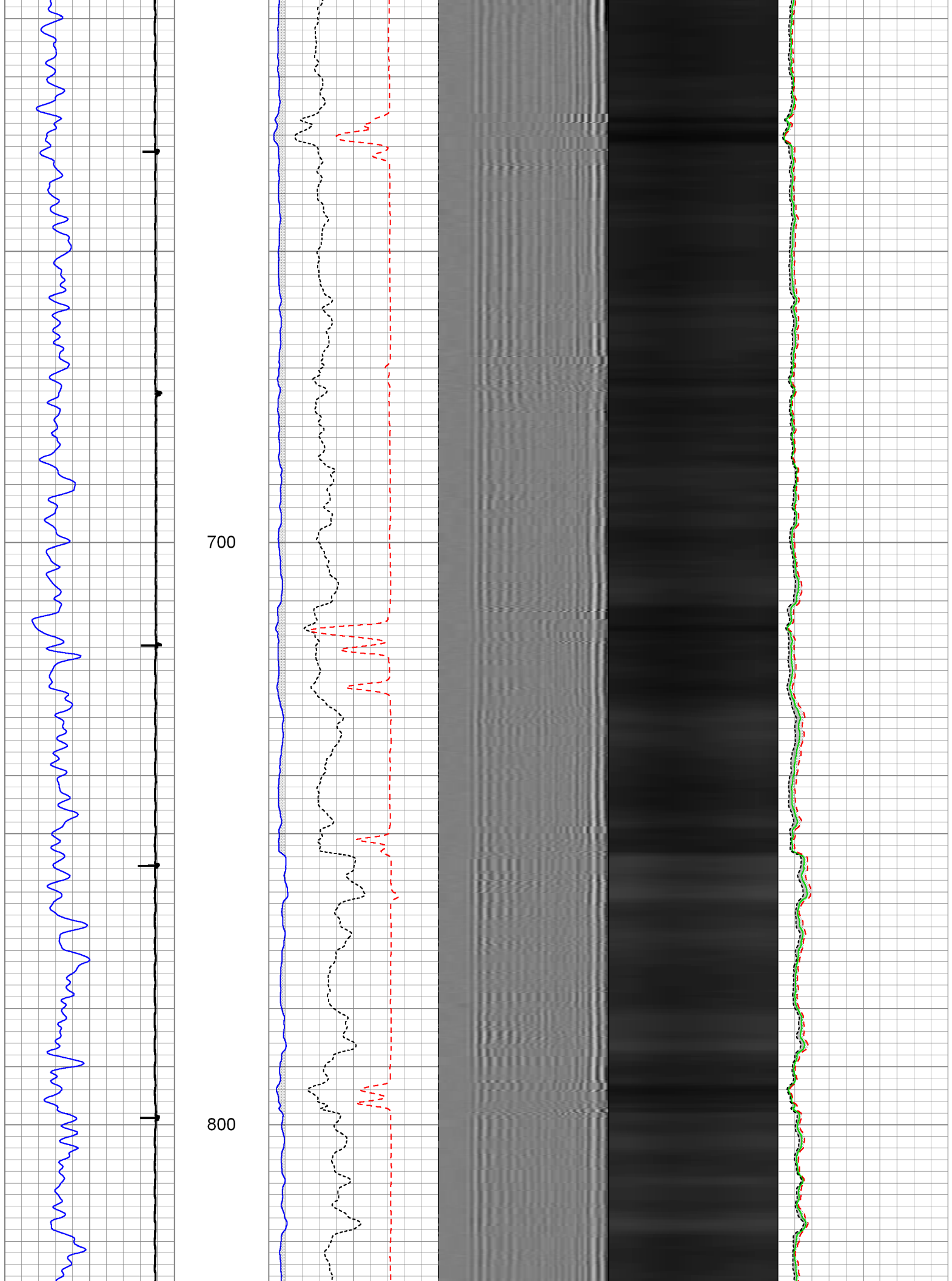


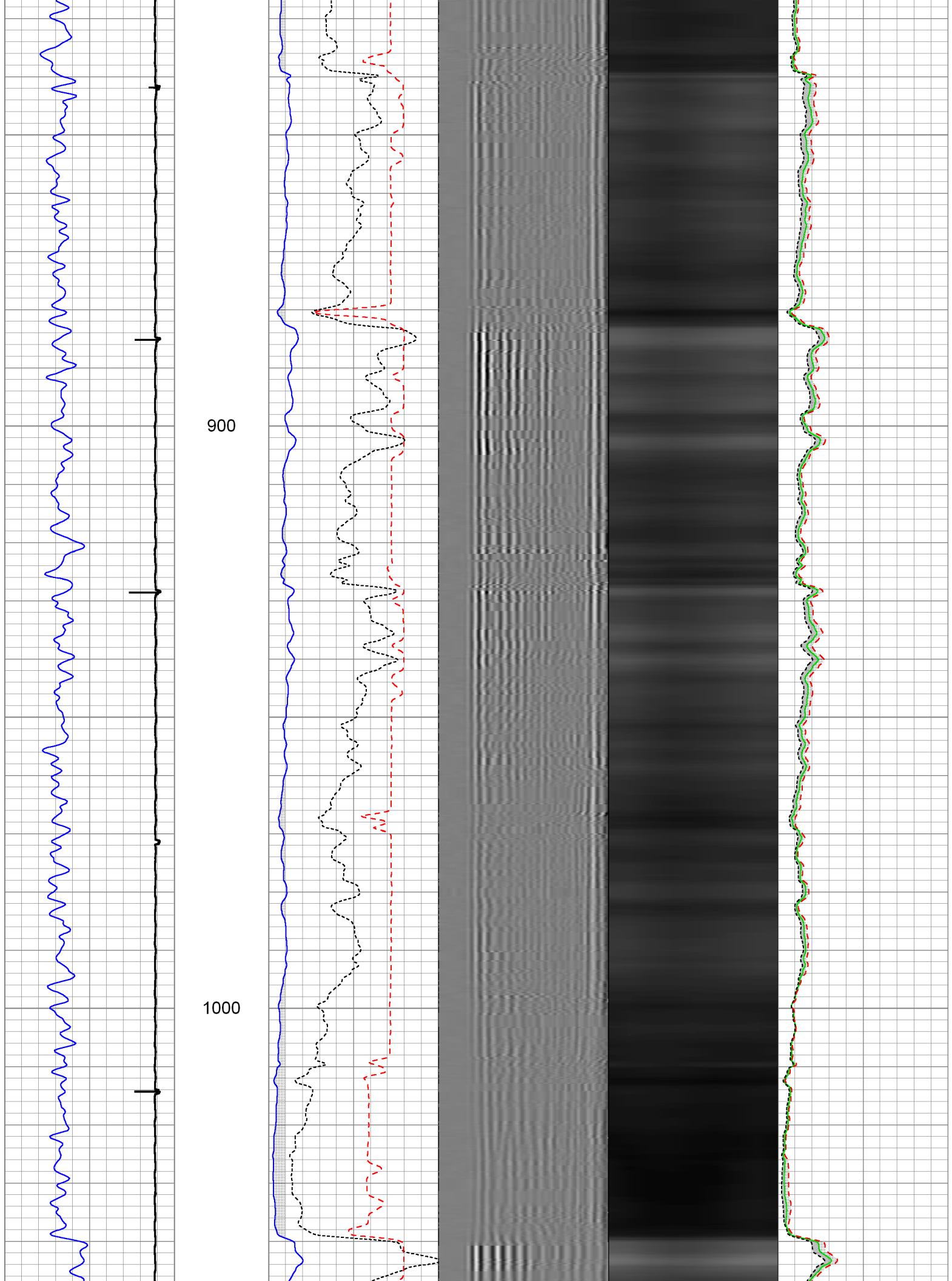
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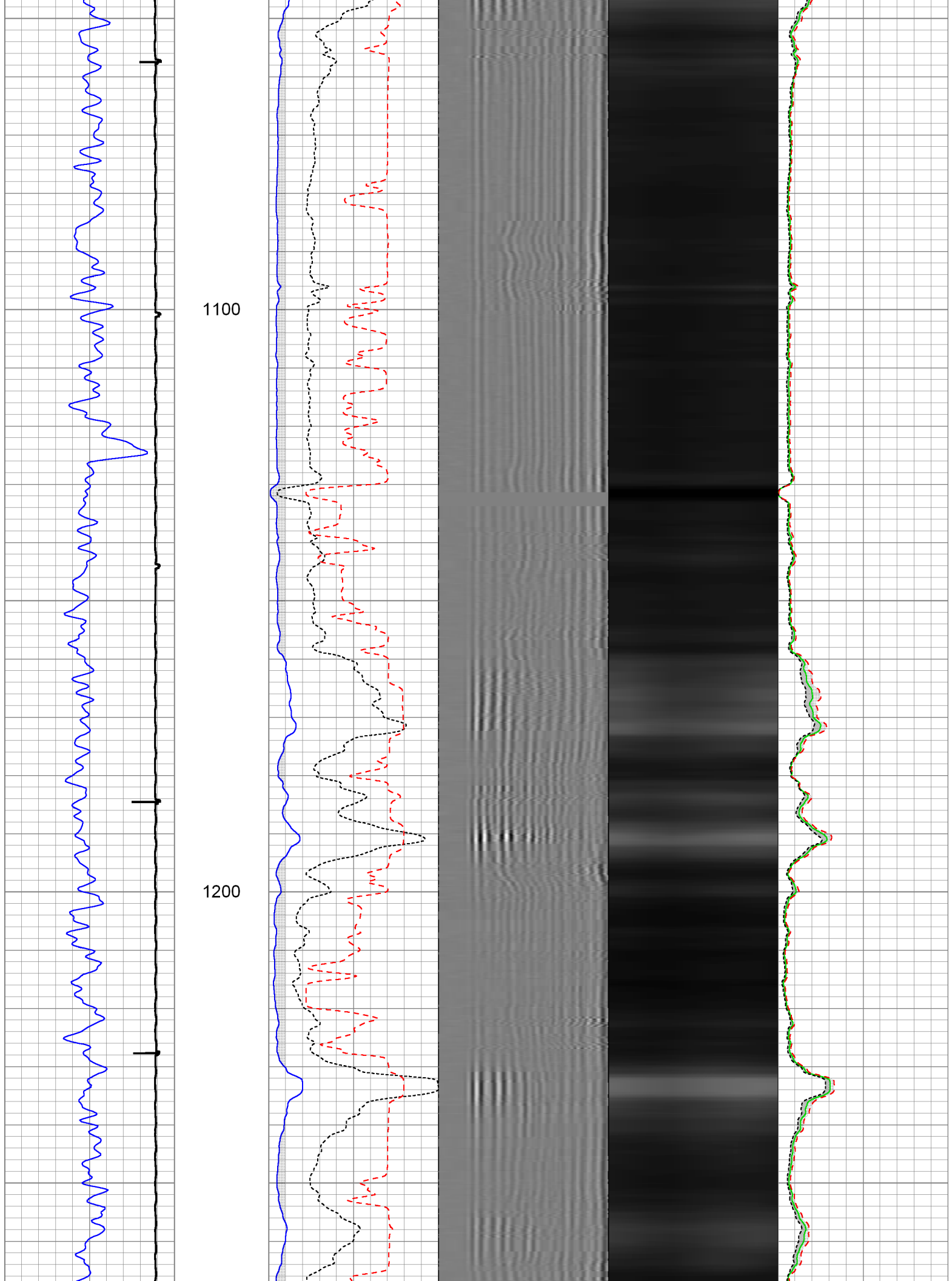
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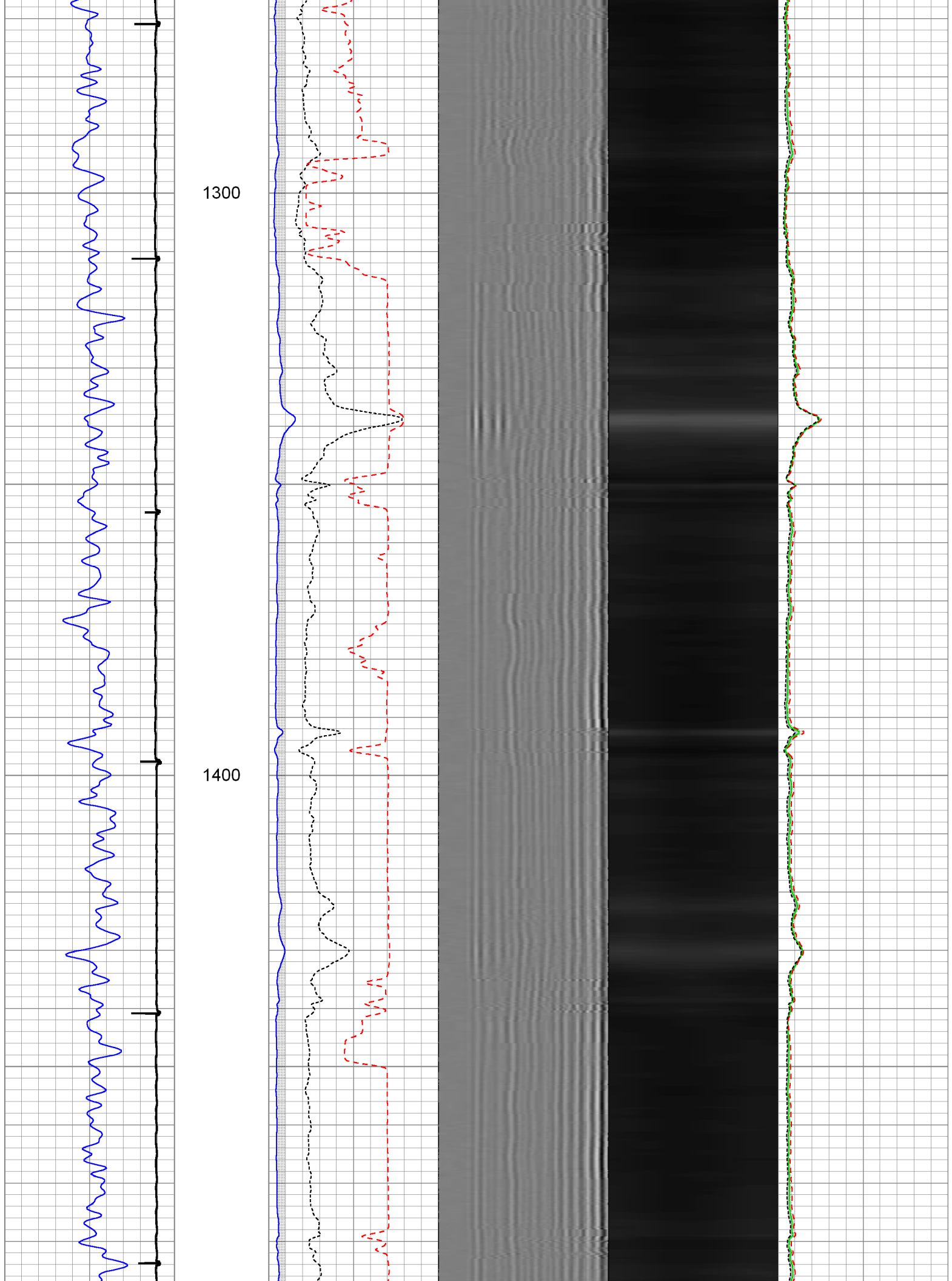
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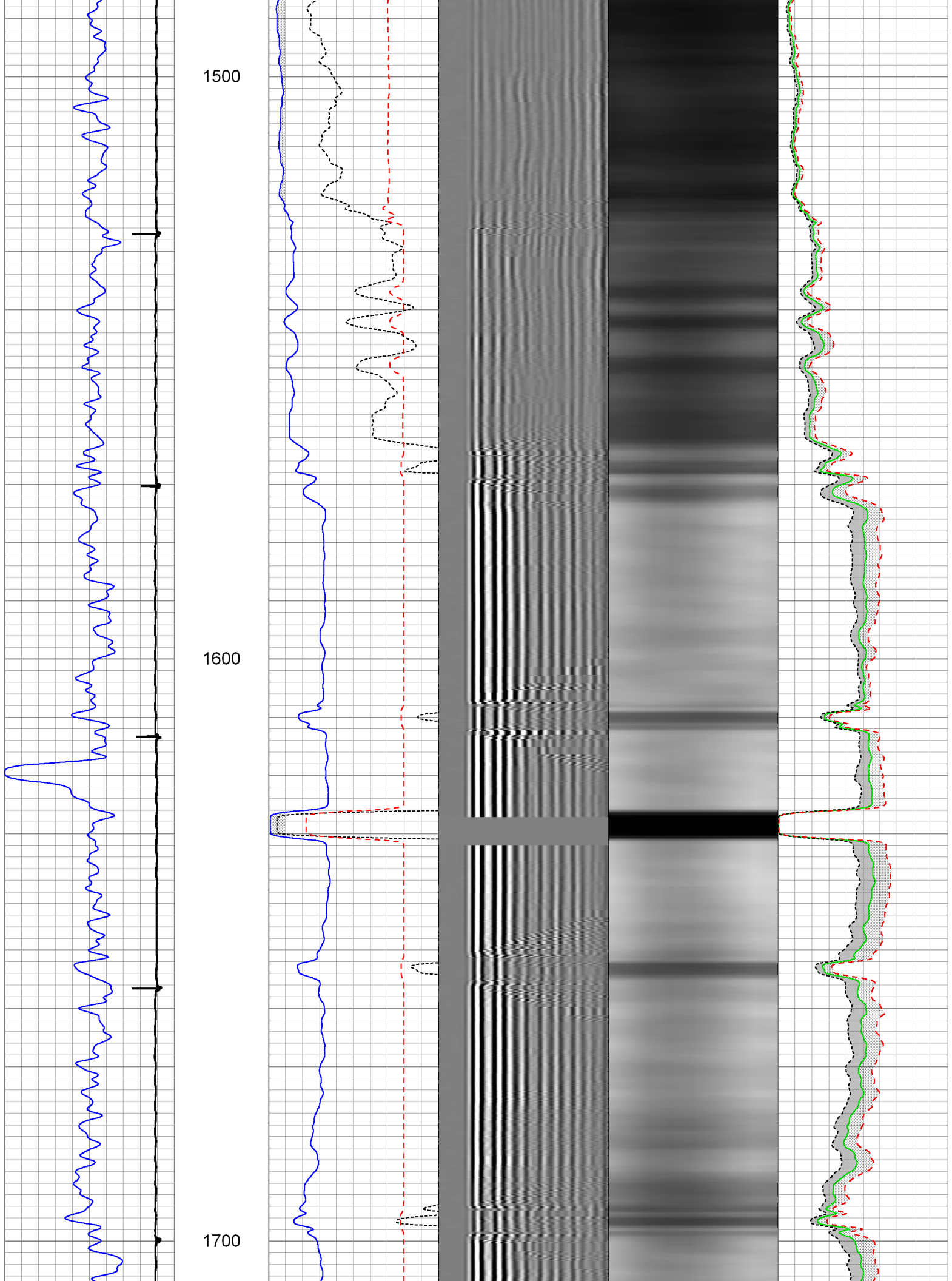


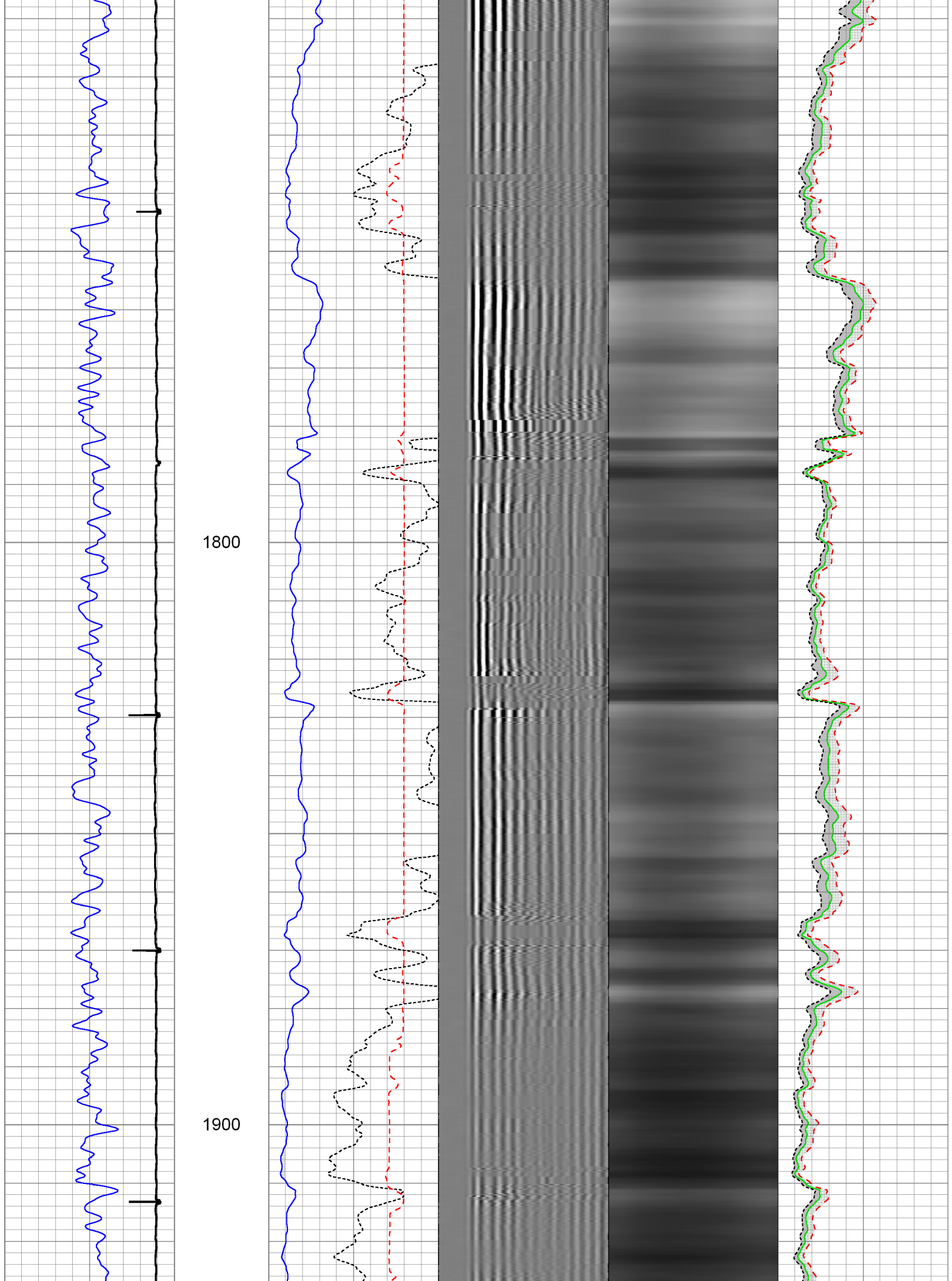


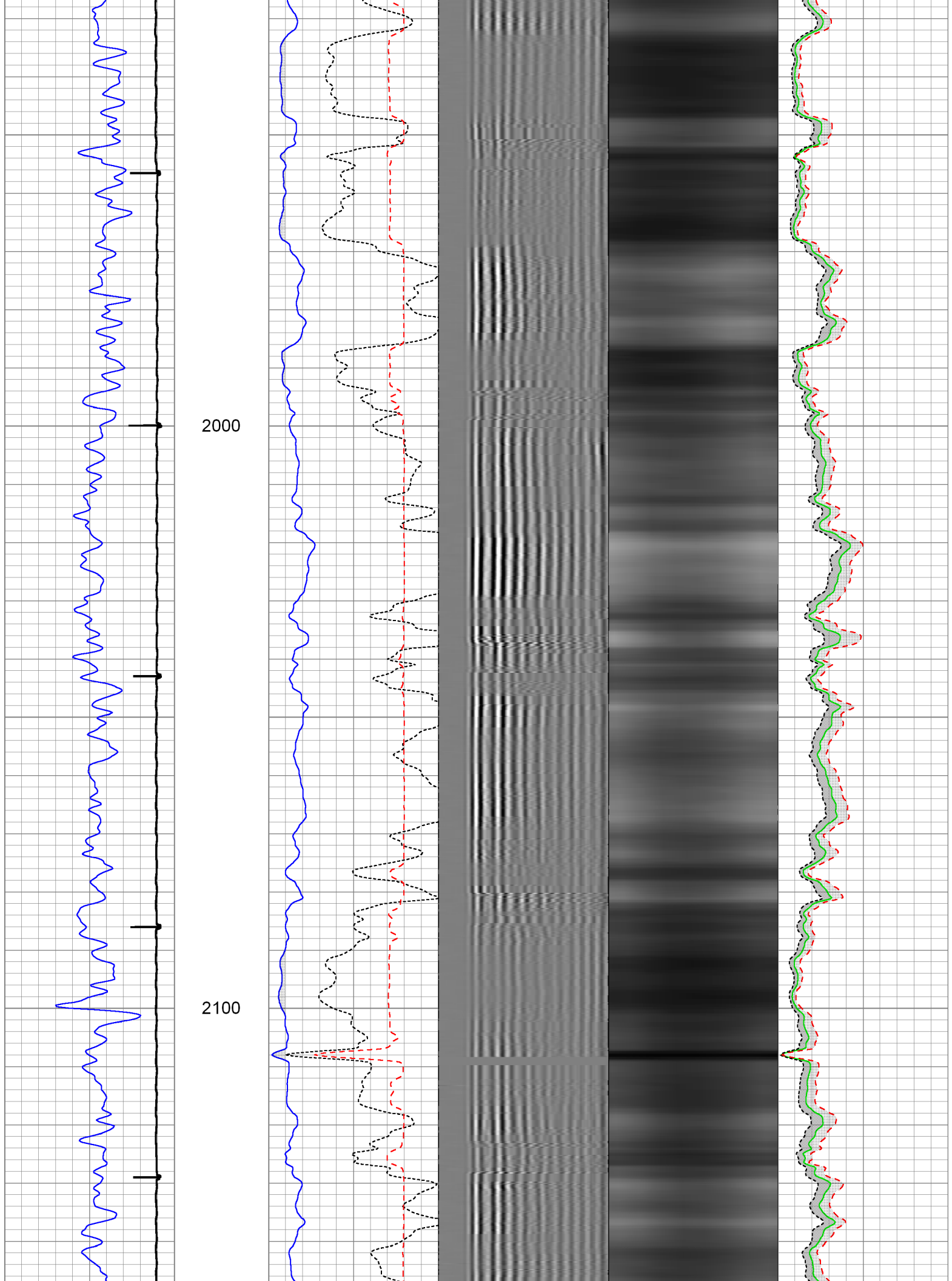






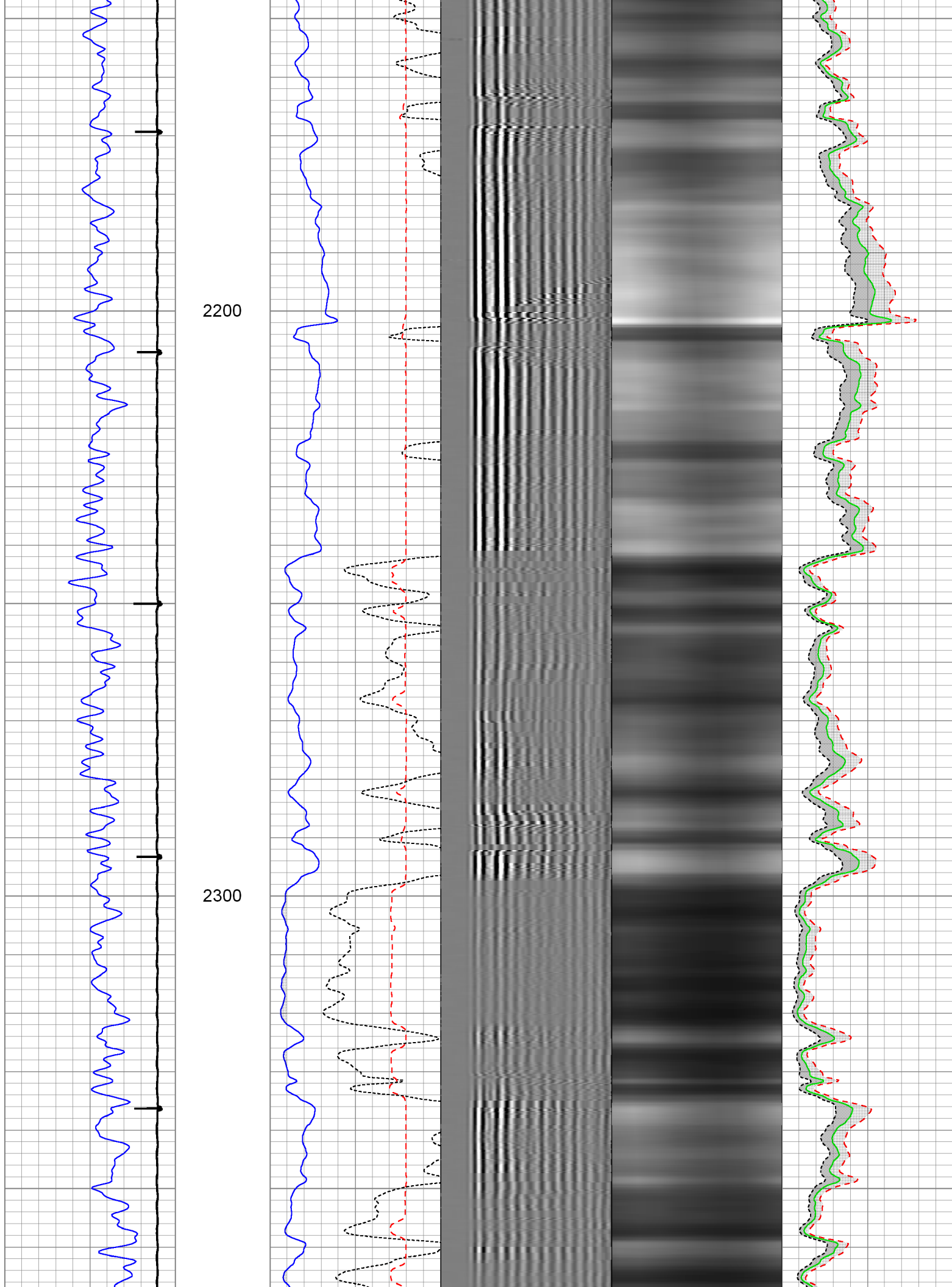






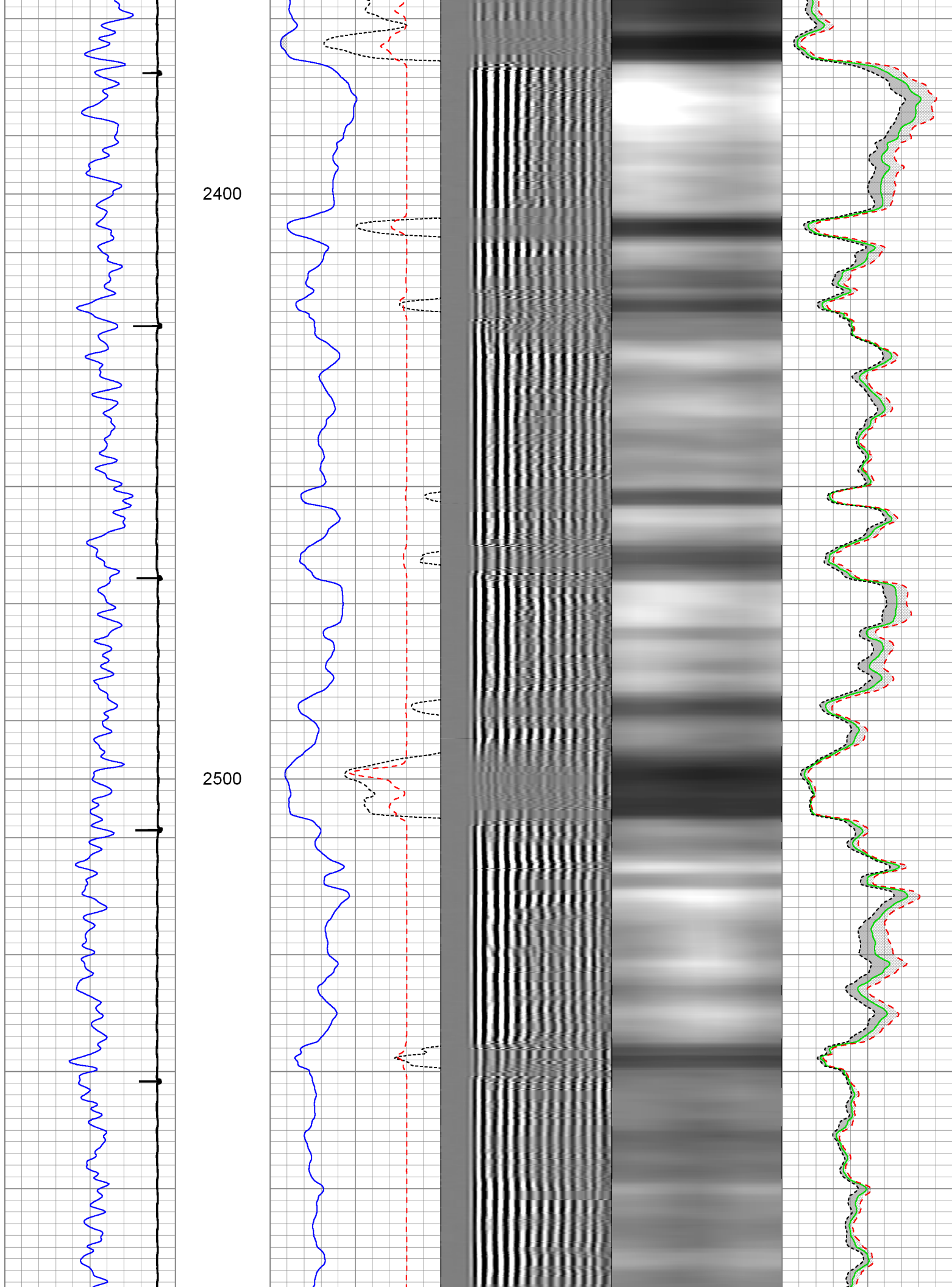
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2300



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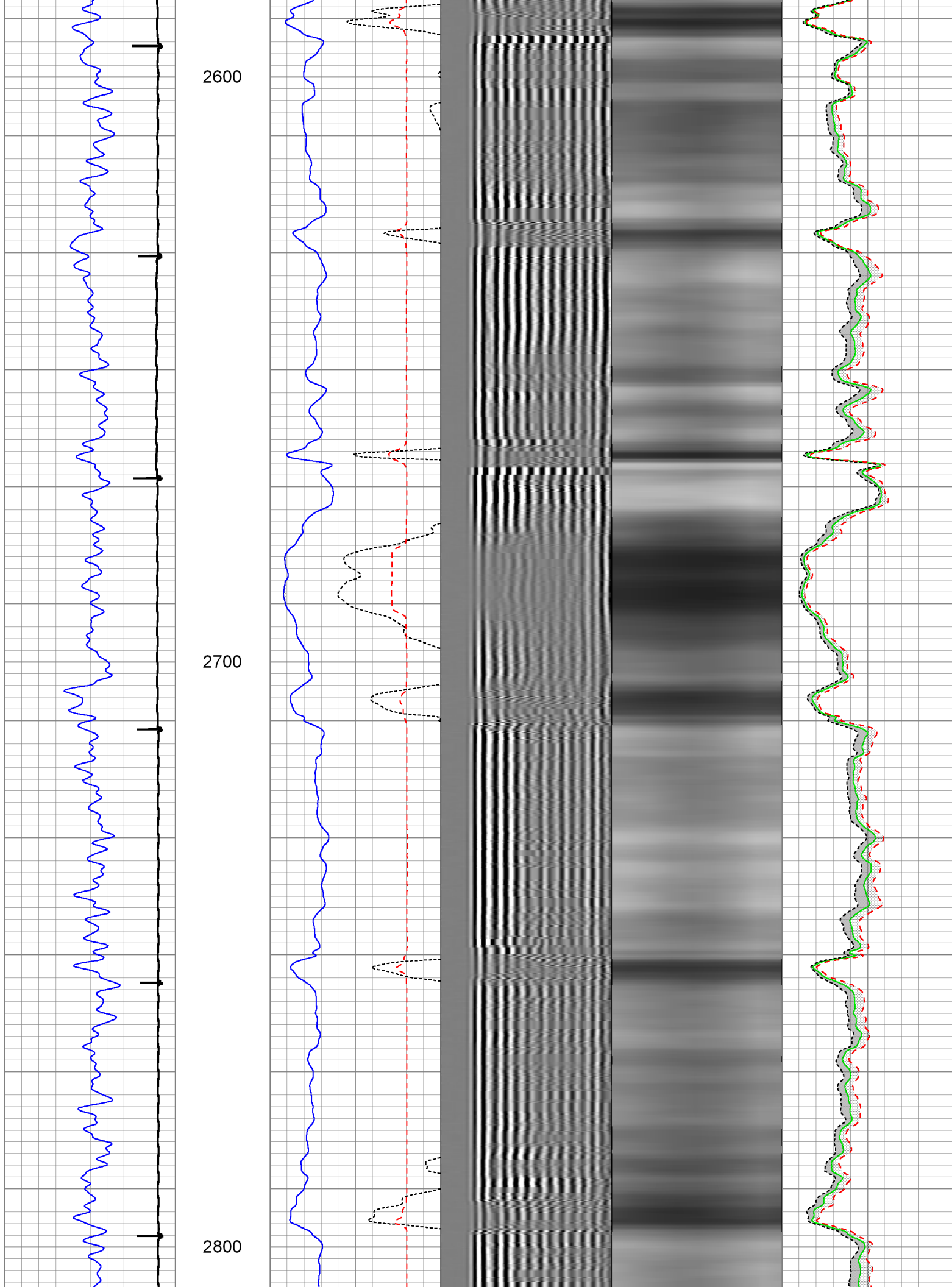
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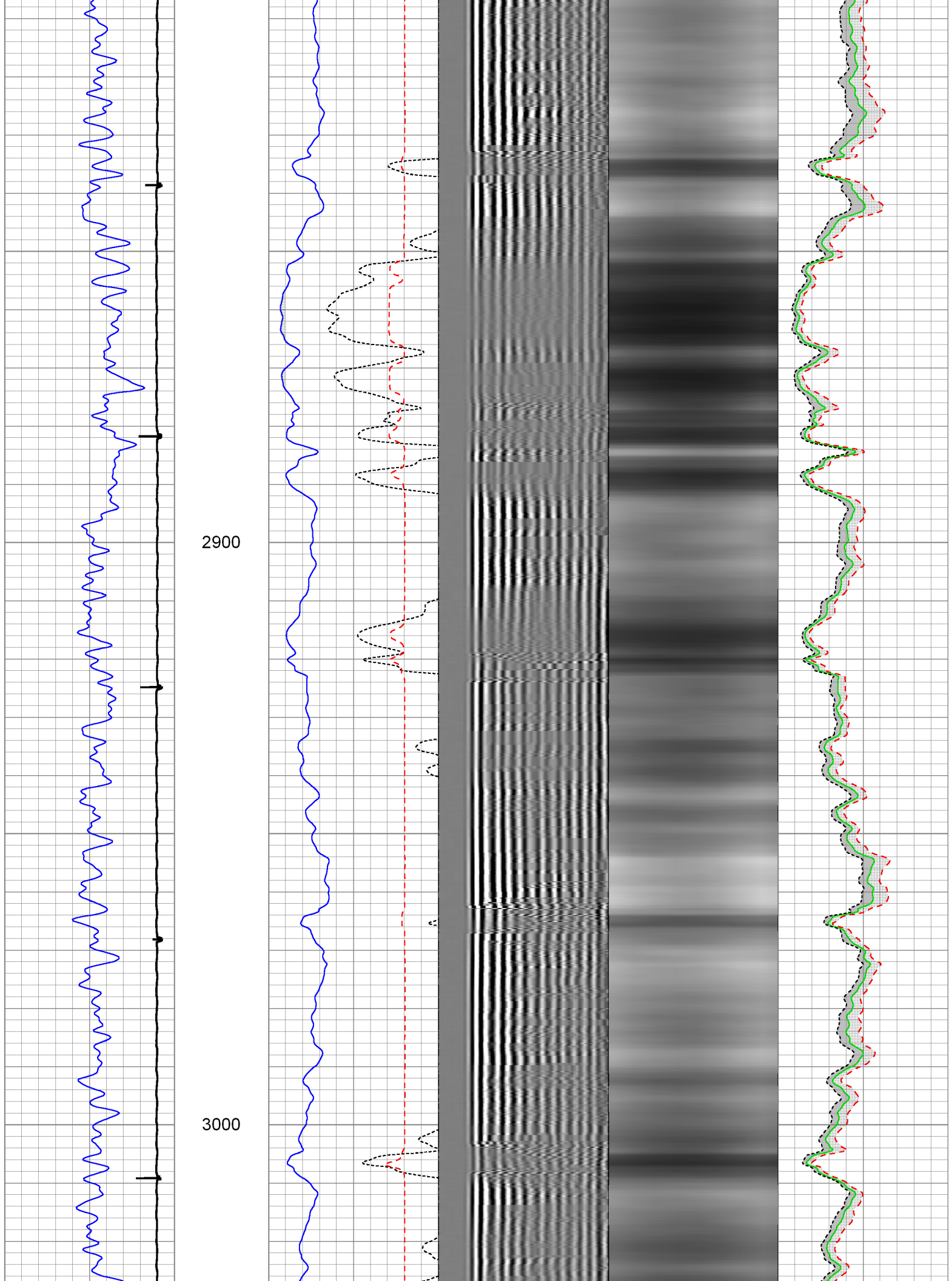
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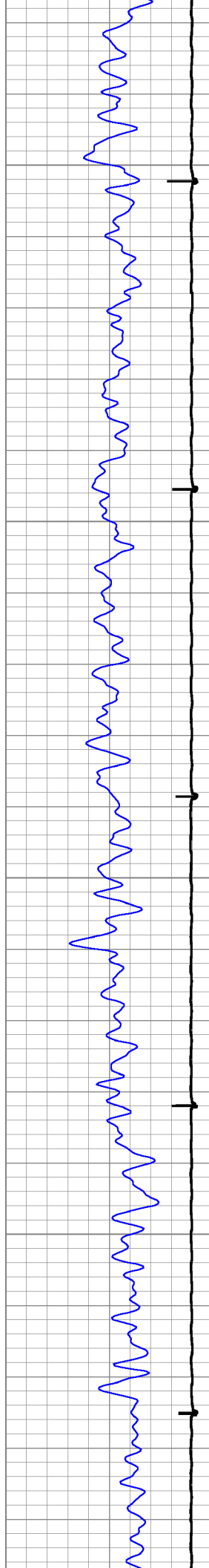
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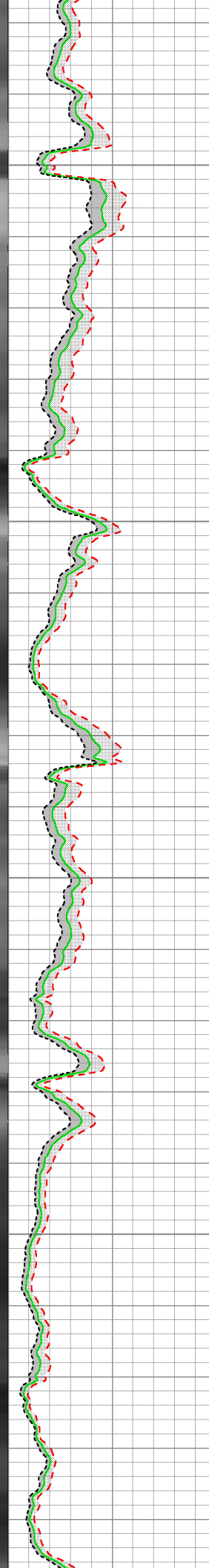
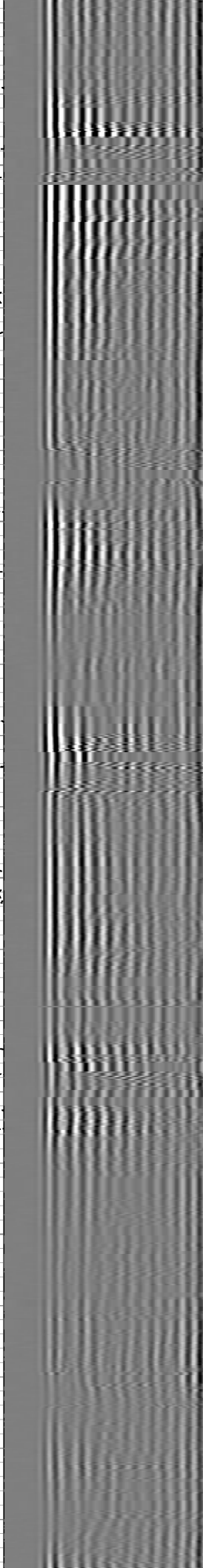
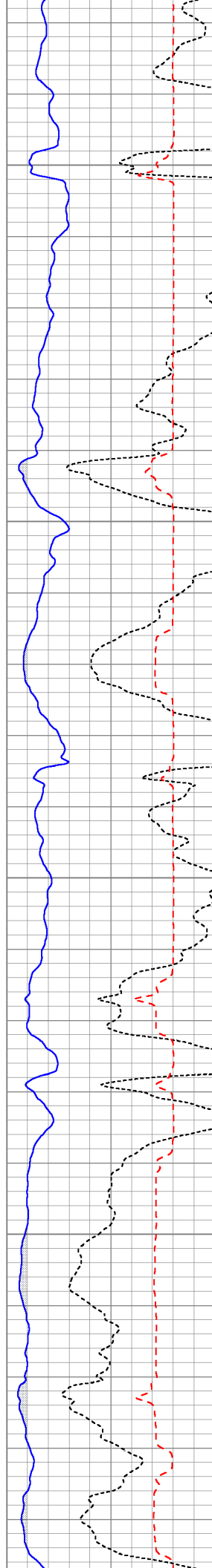
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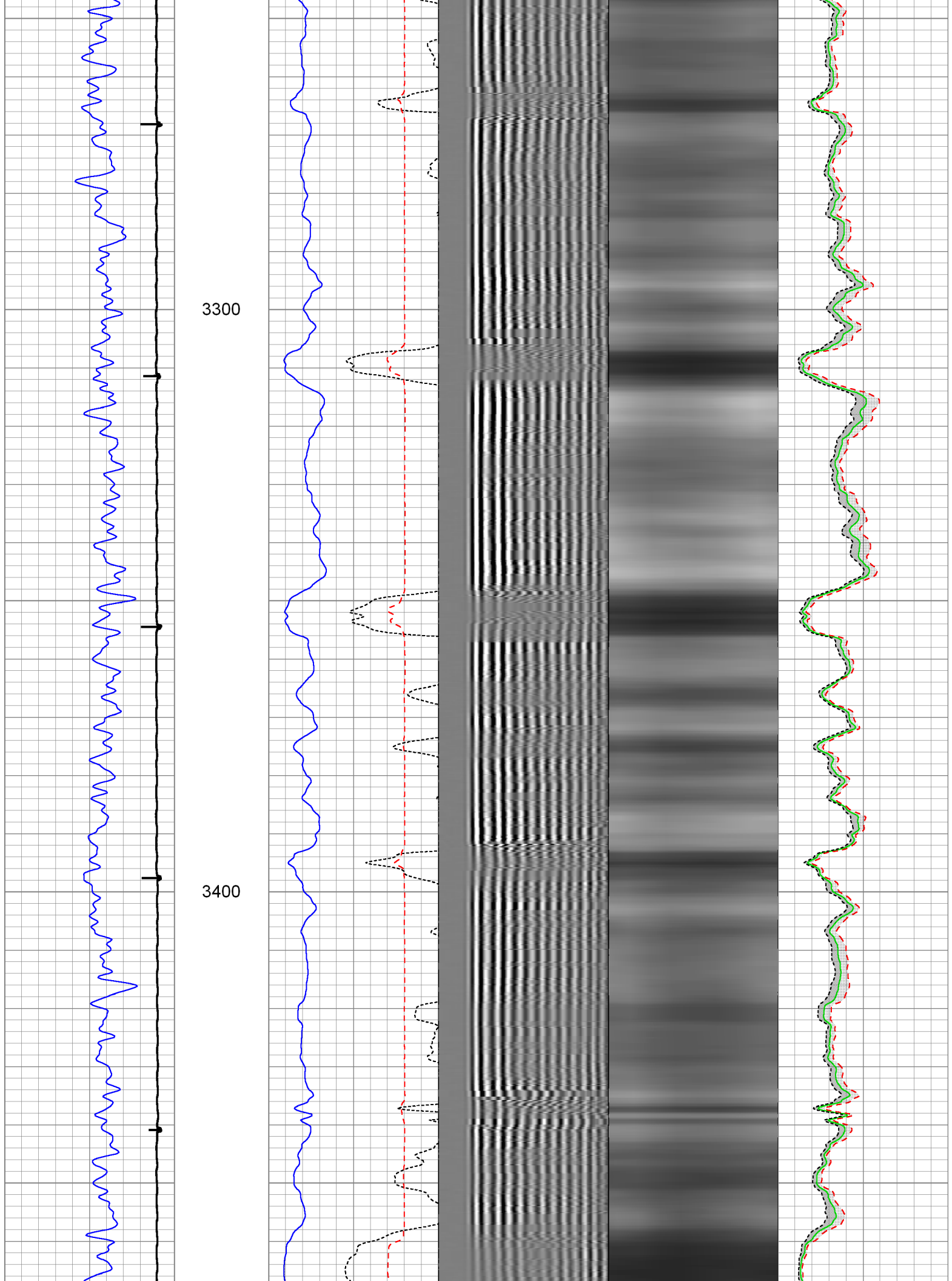
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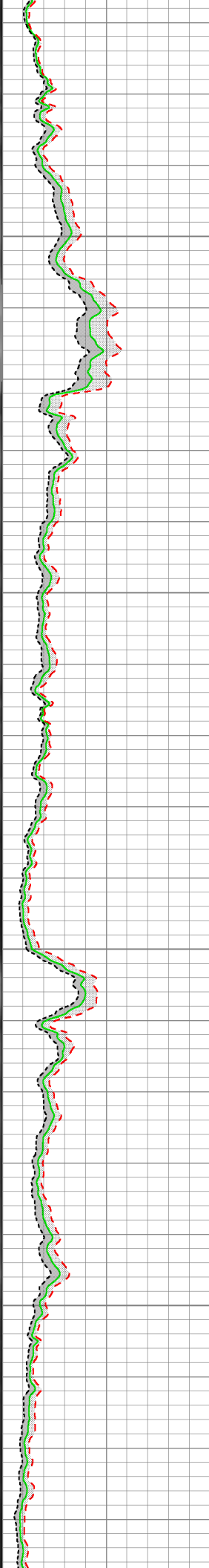
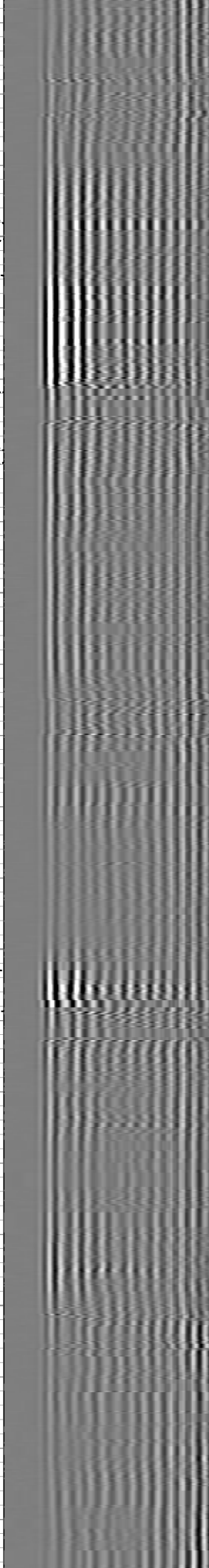
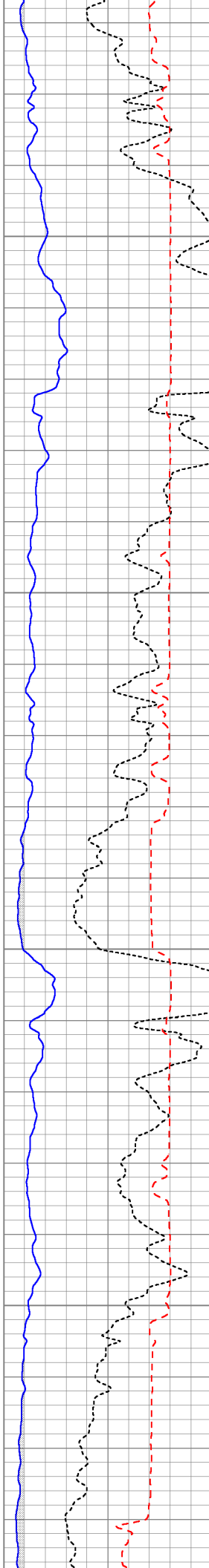
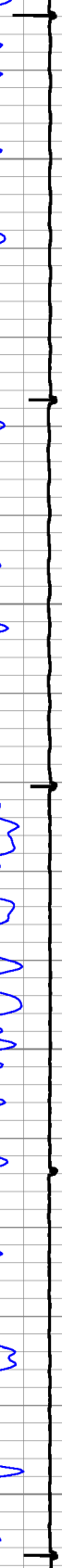
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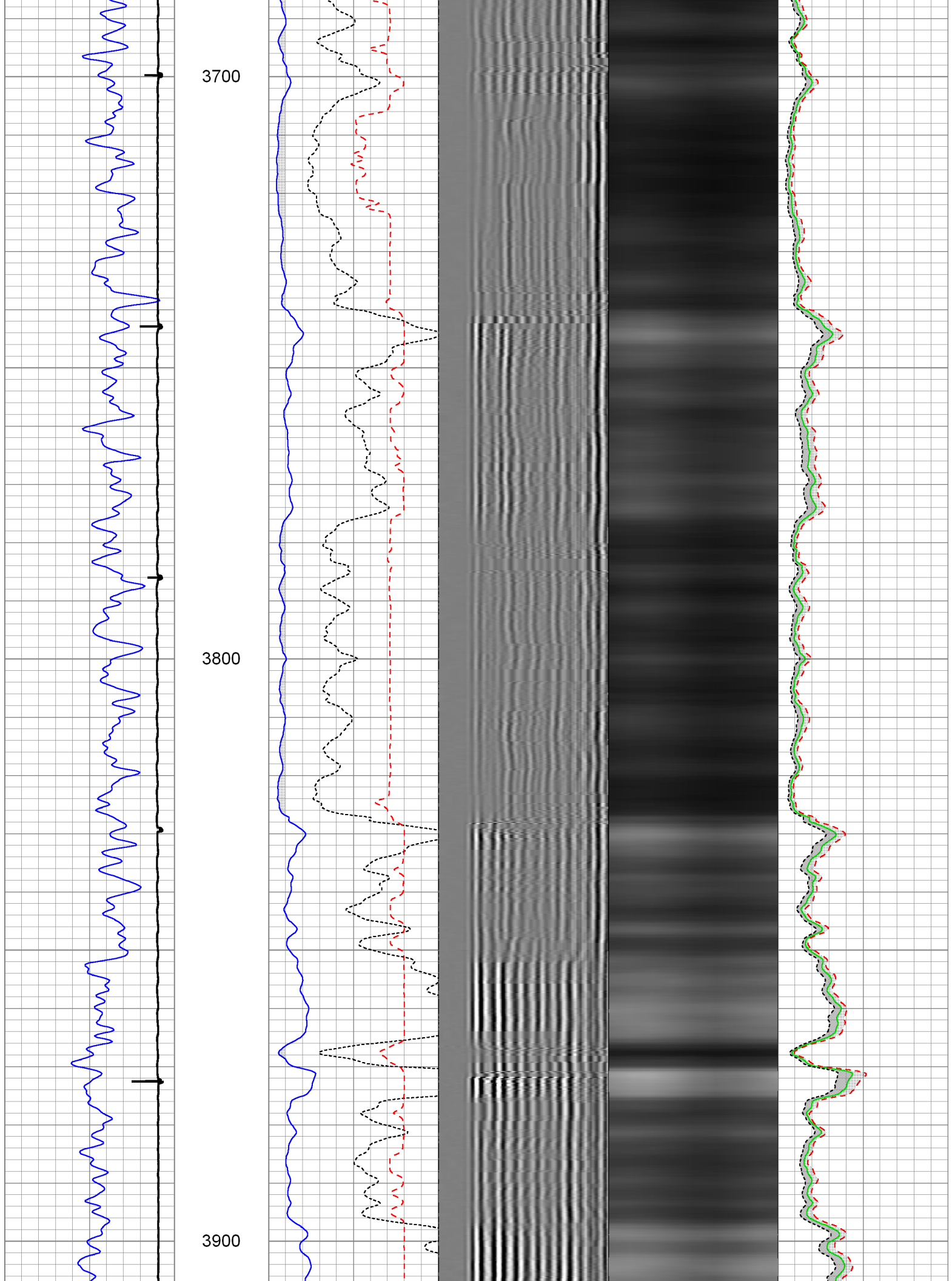
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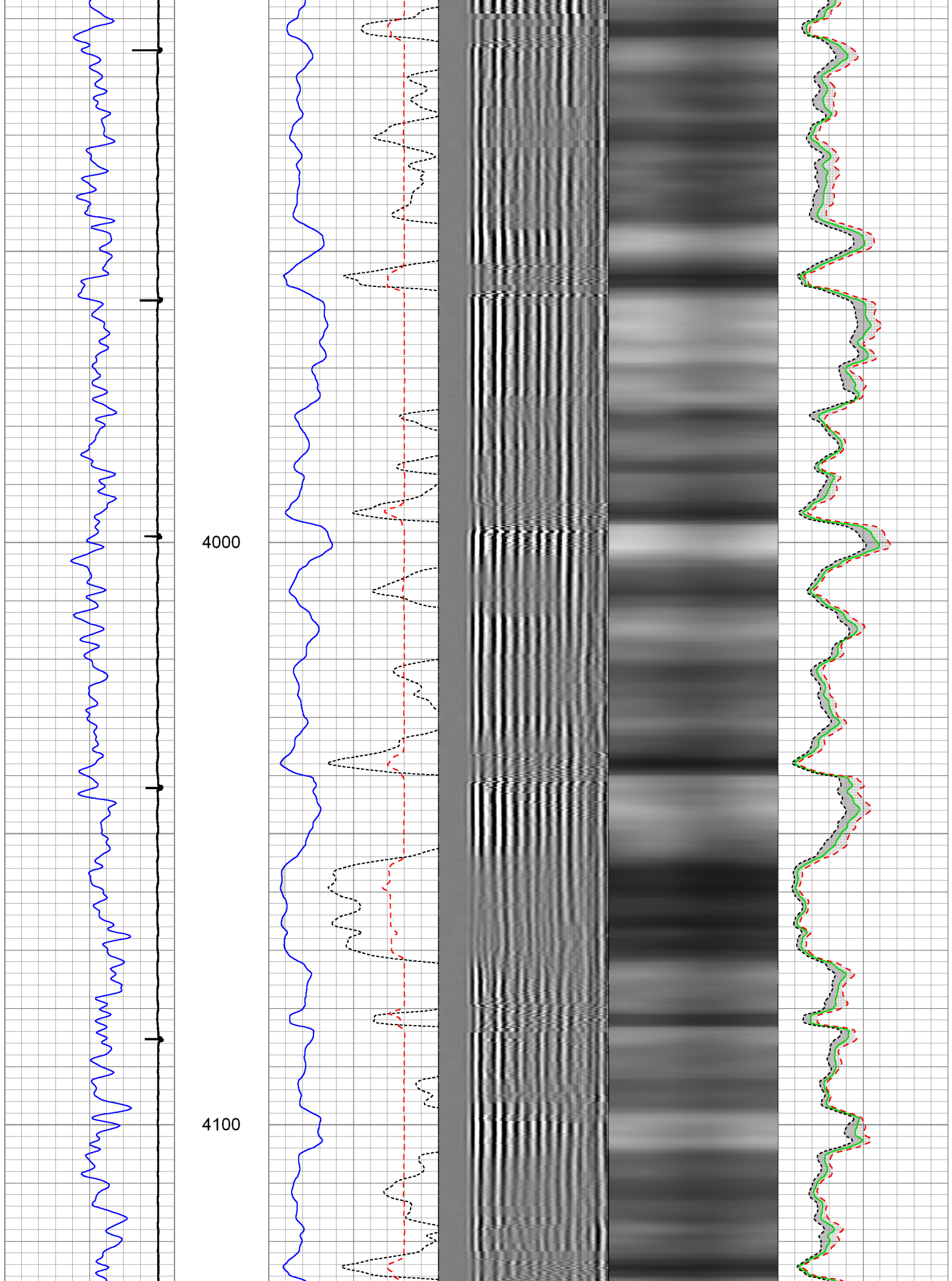


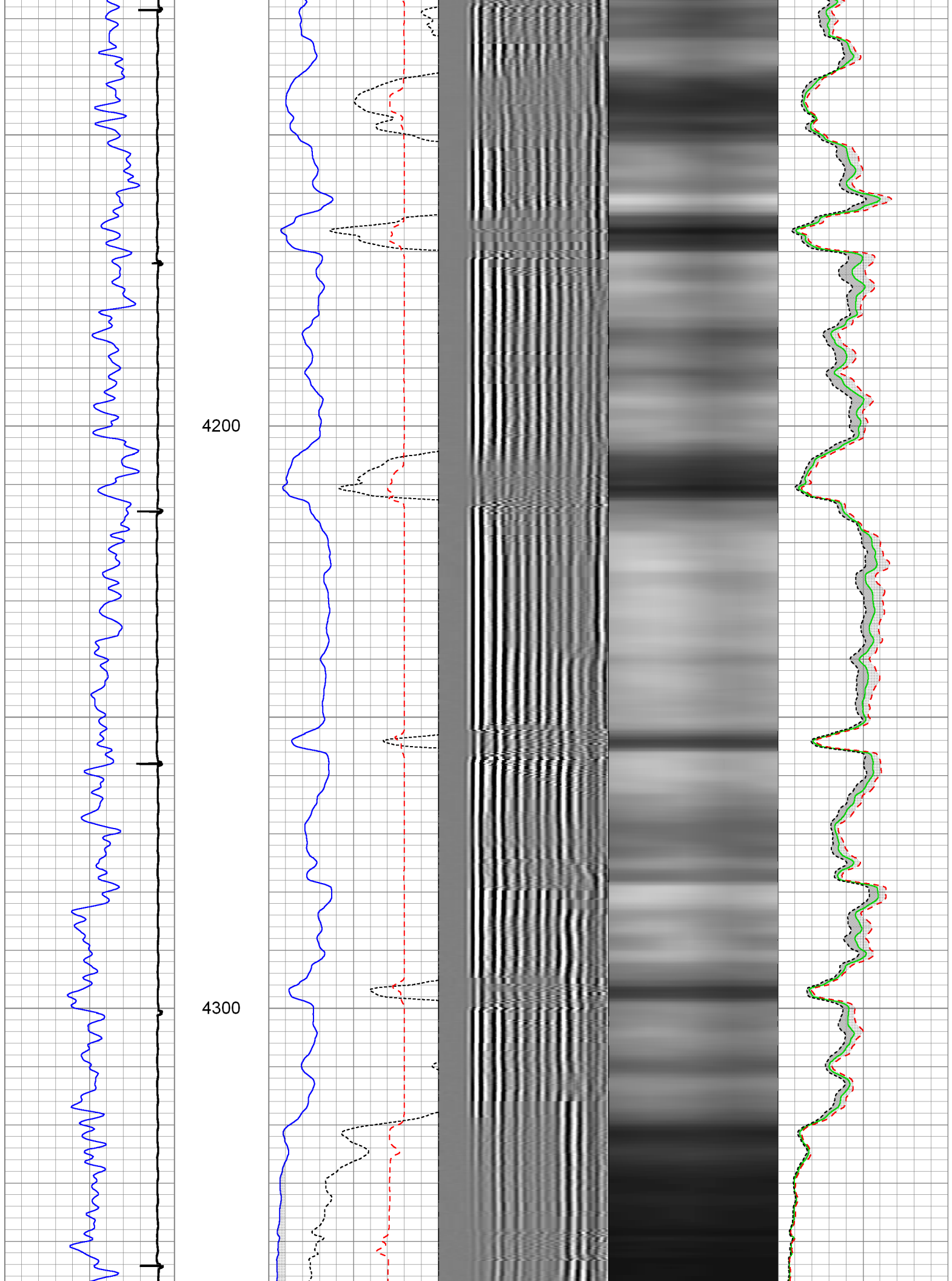
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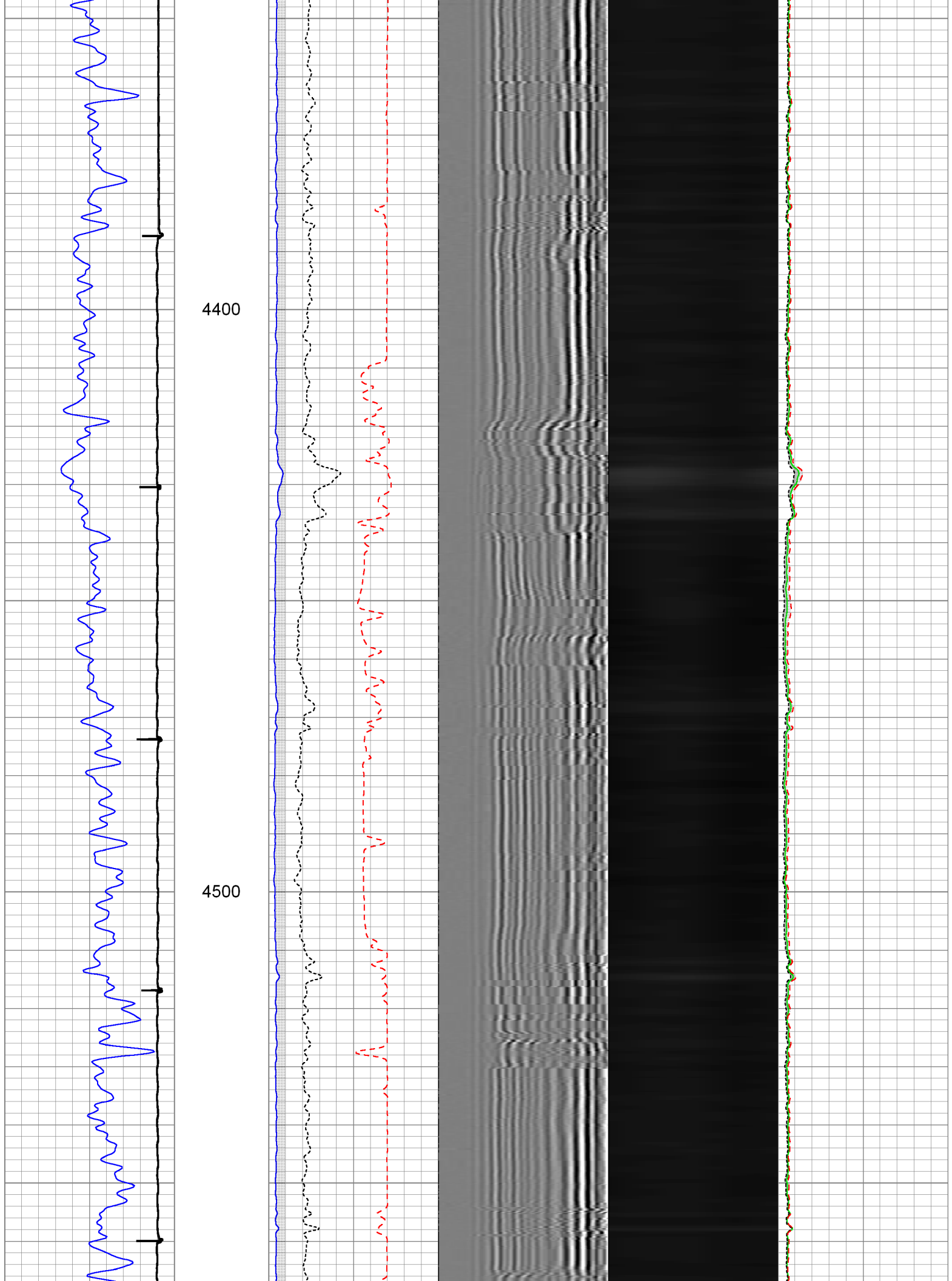
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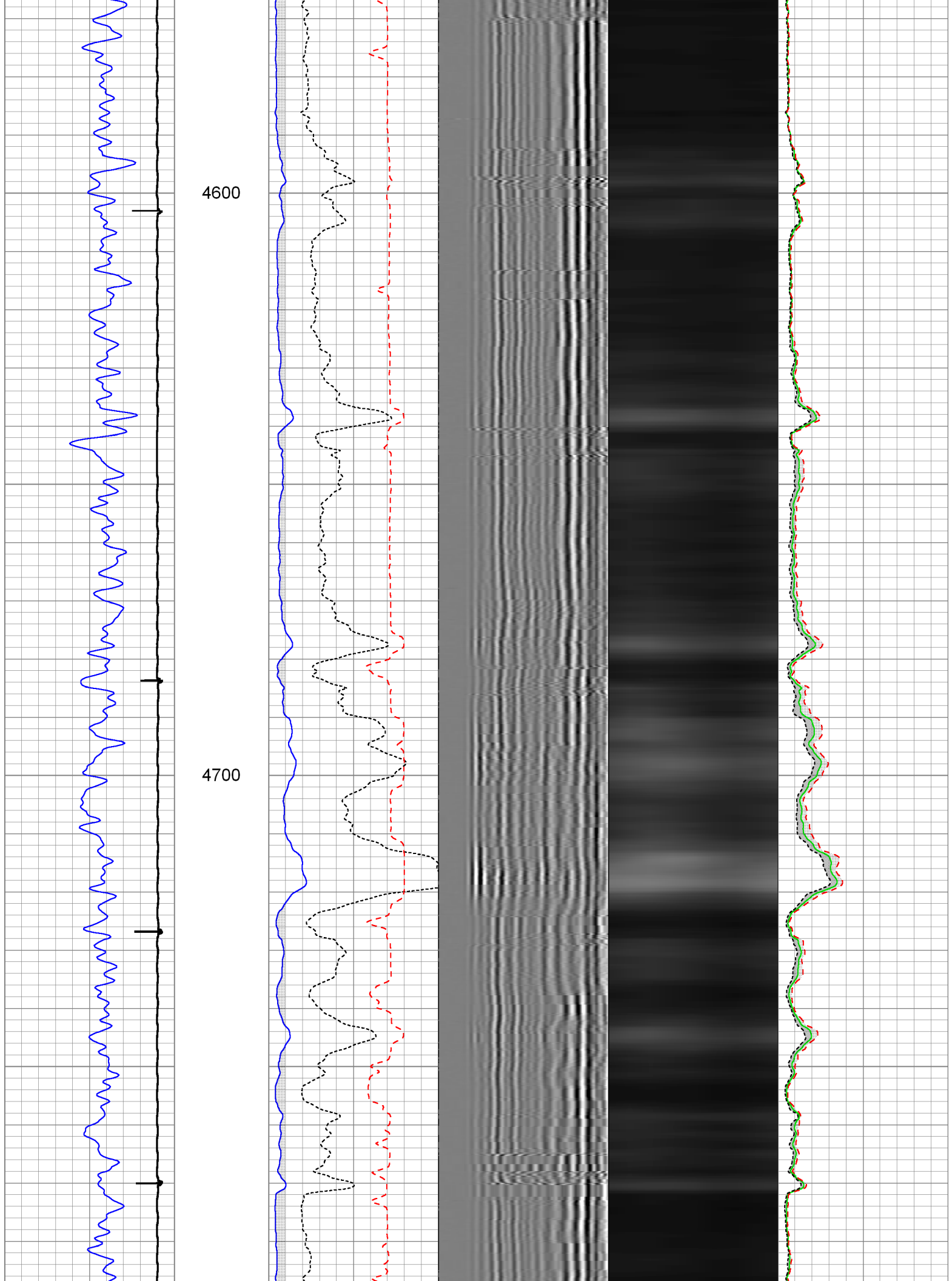








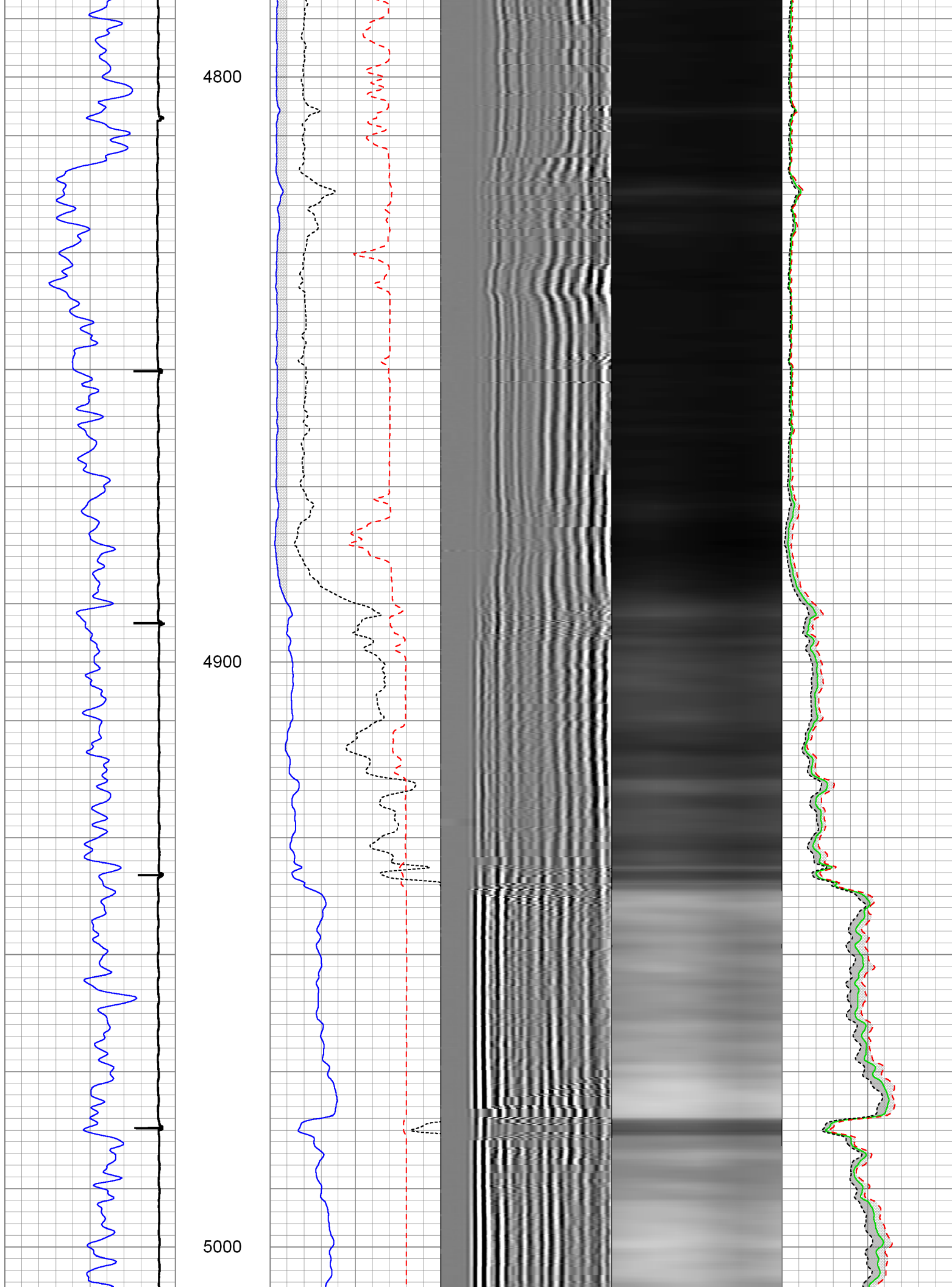


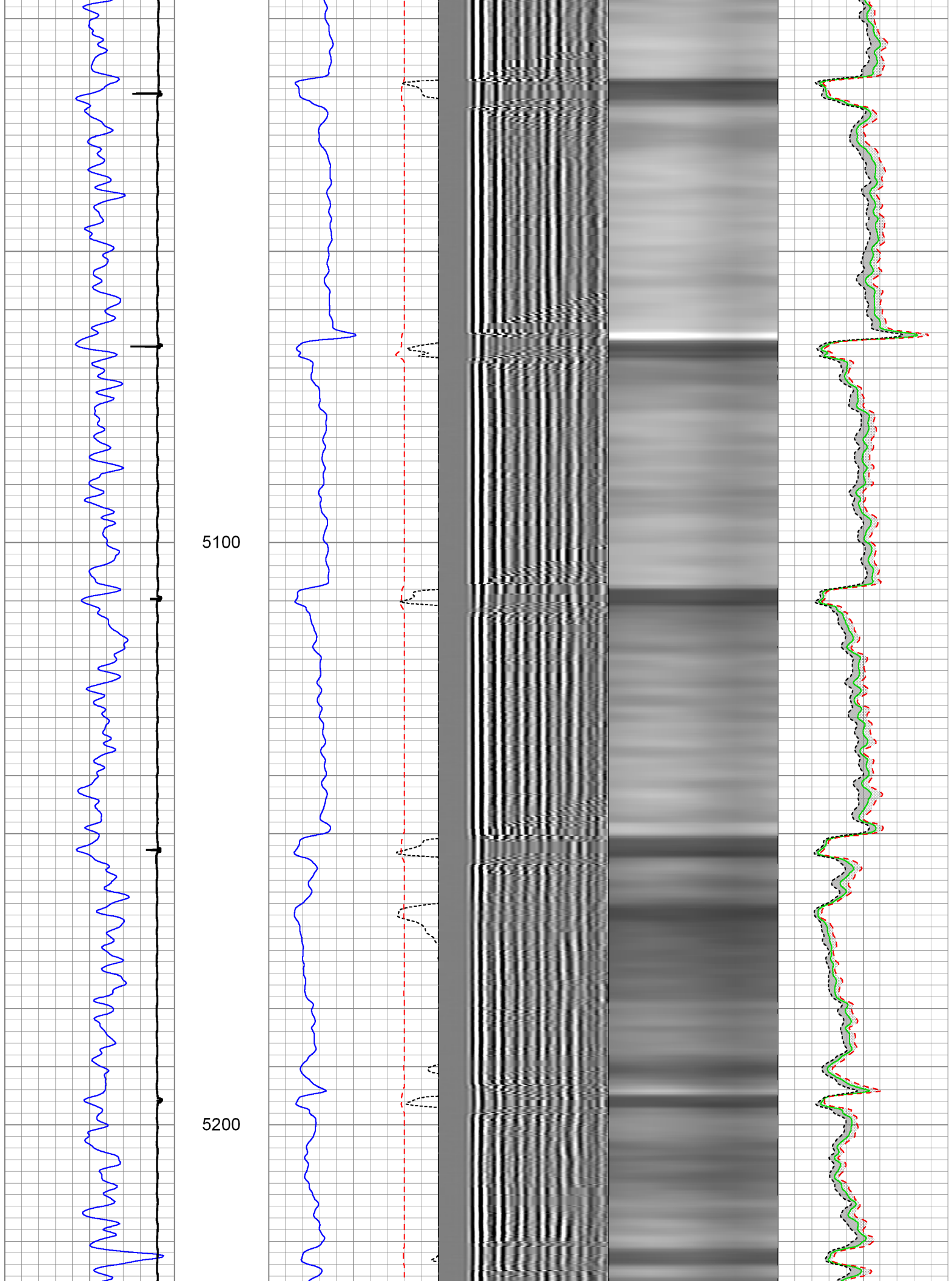


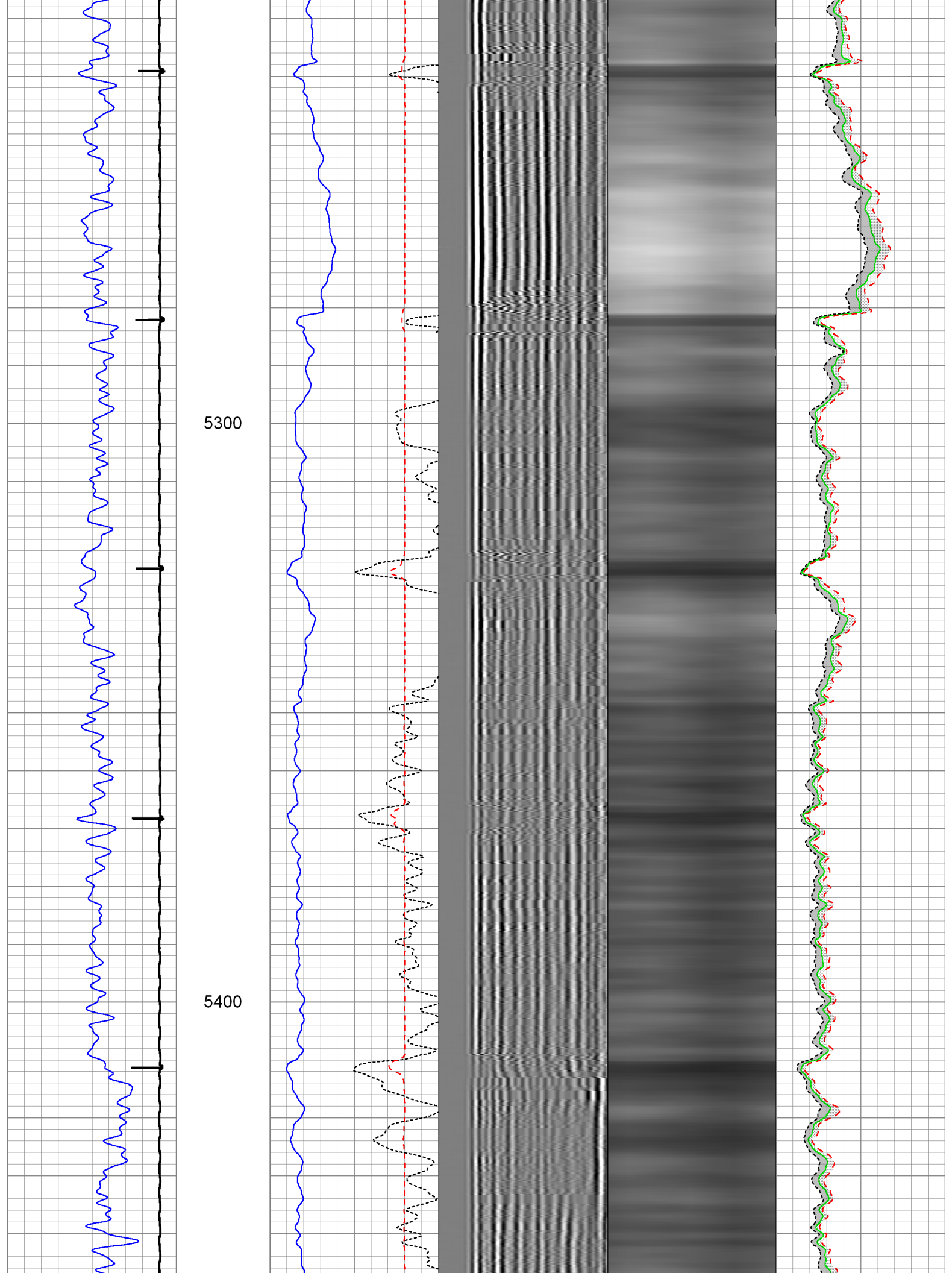
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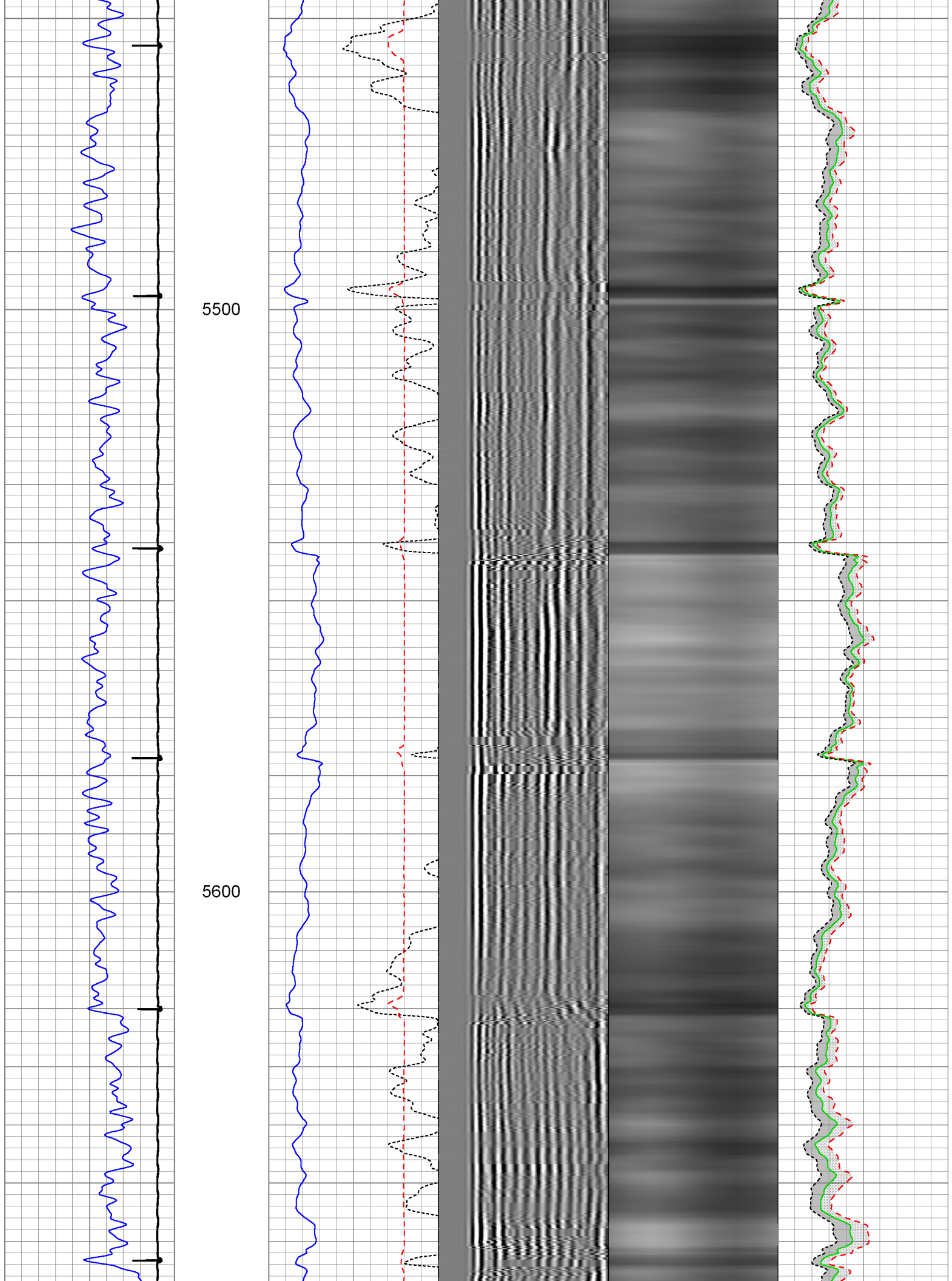
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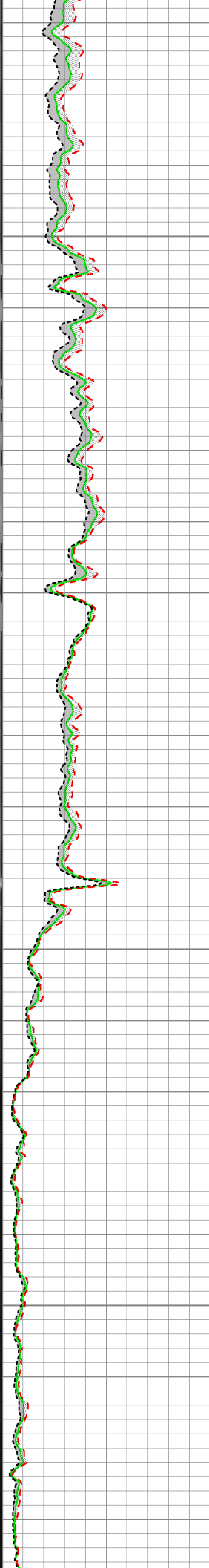
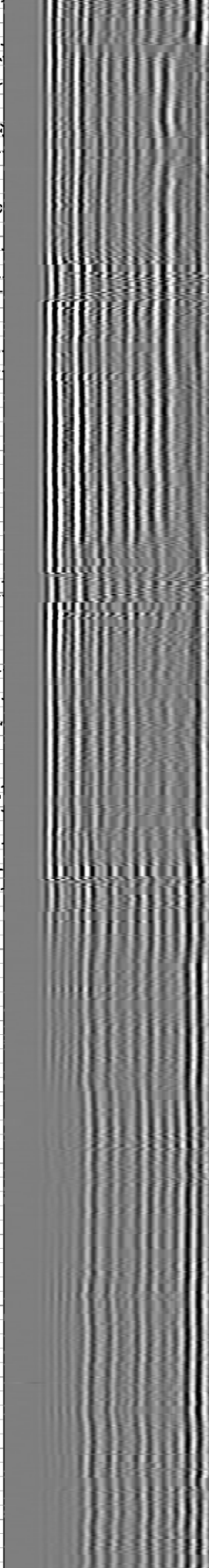
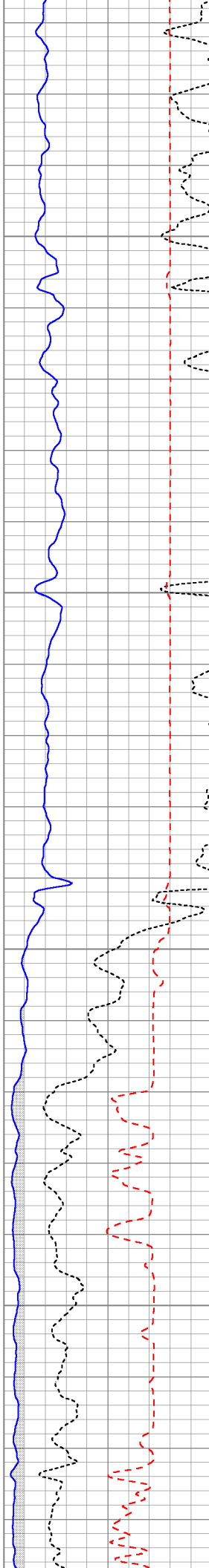


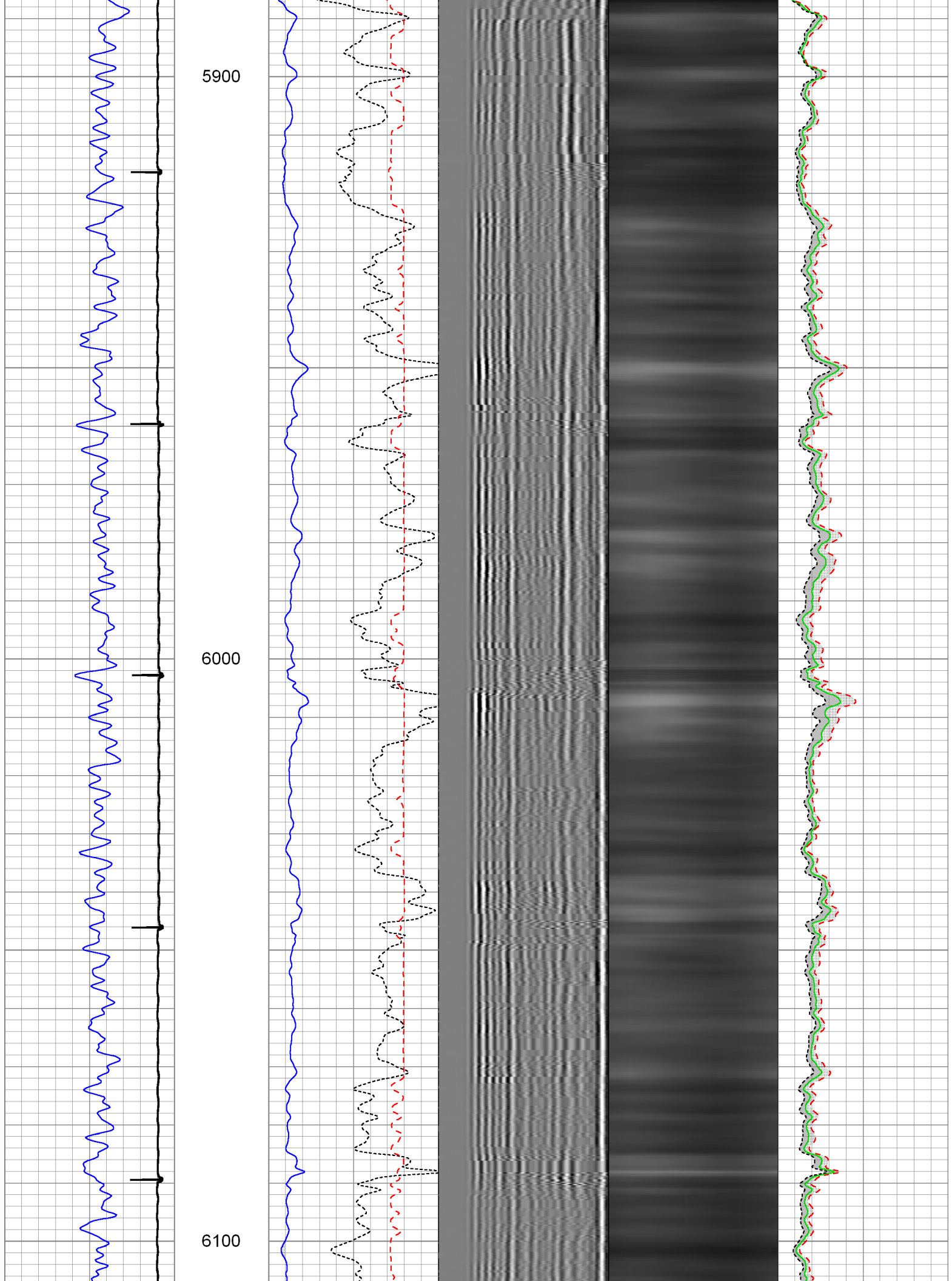


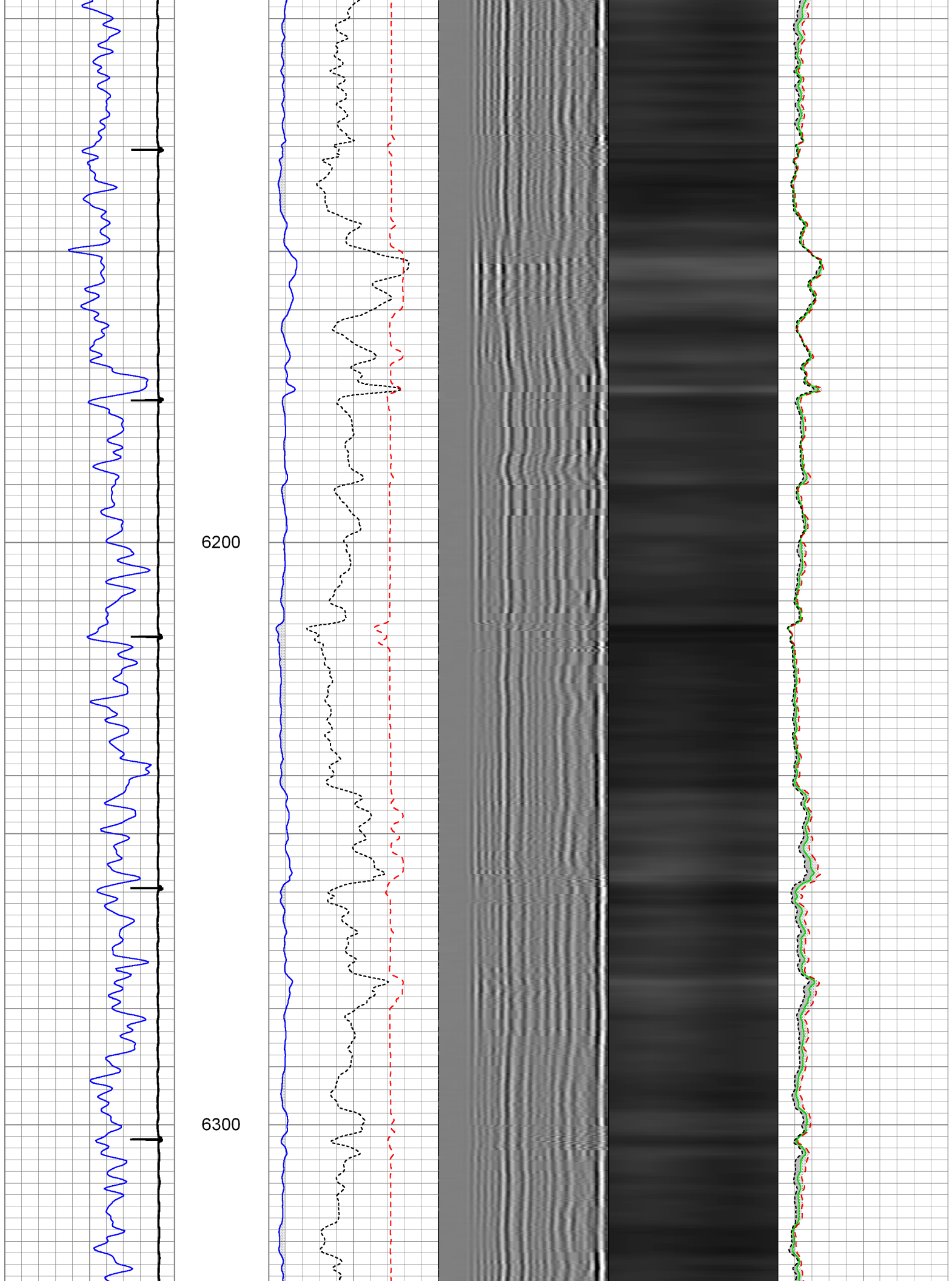


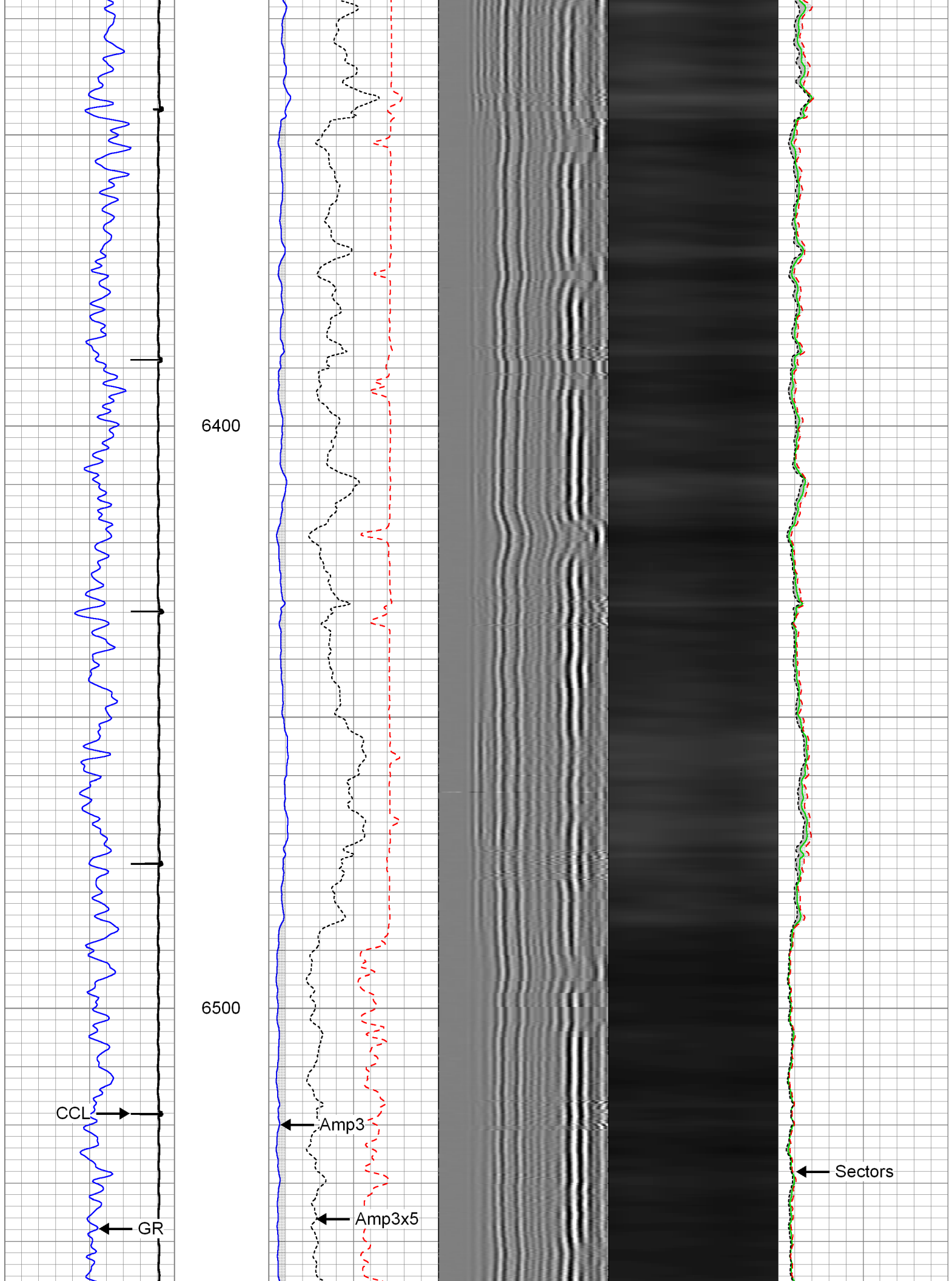
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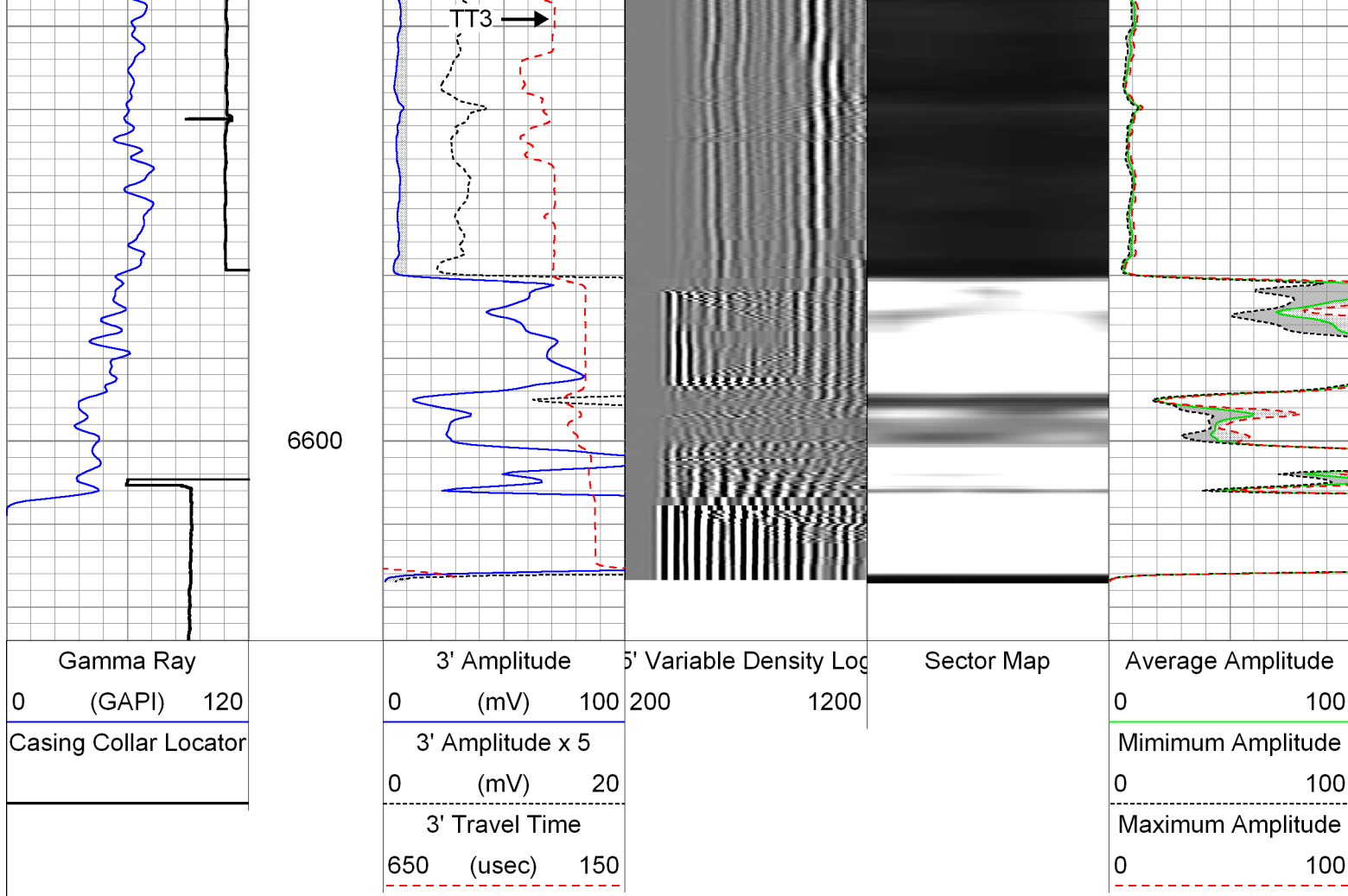
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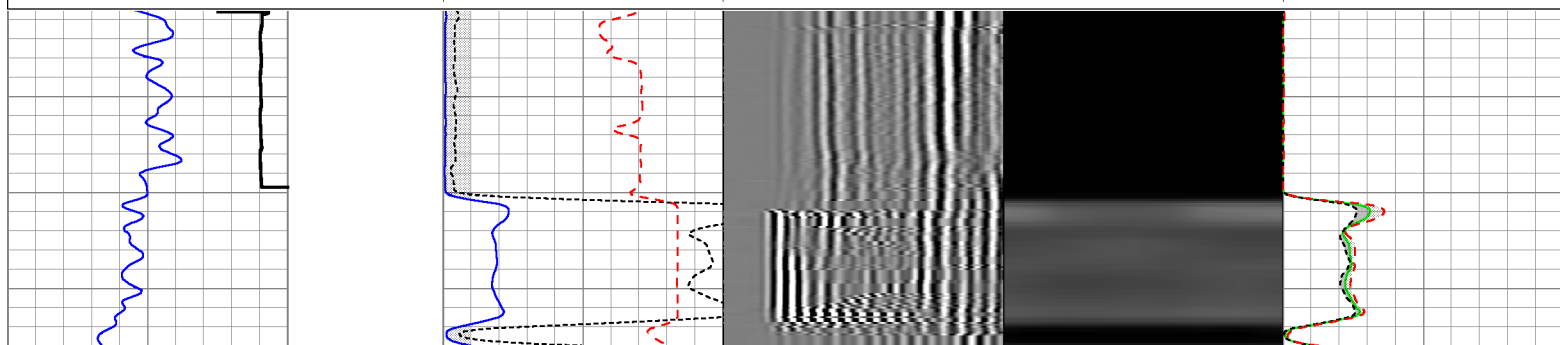
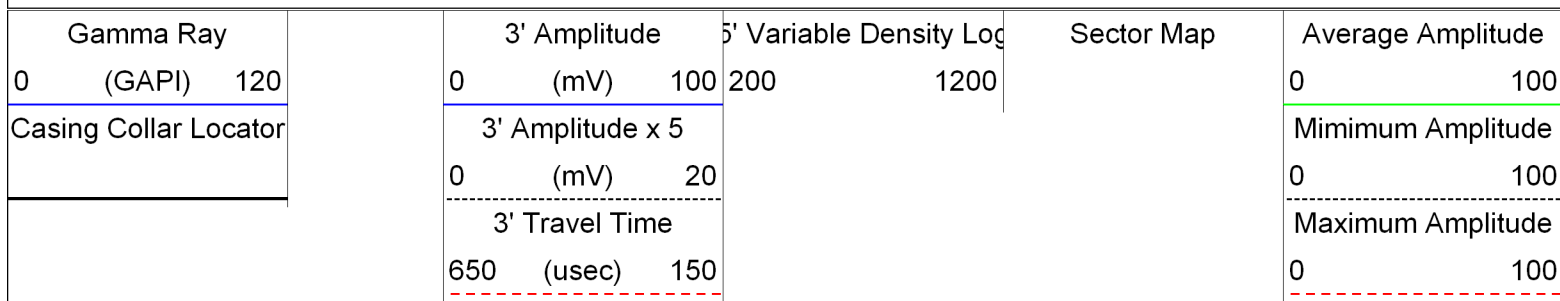




Main Pass 4.5

Logged With 2800 PSI At Surface

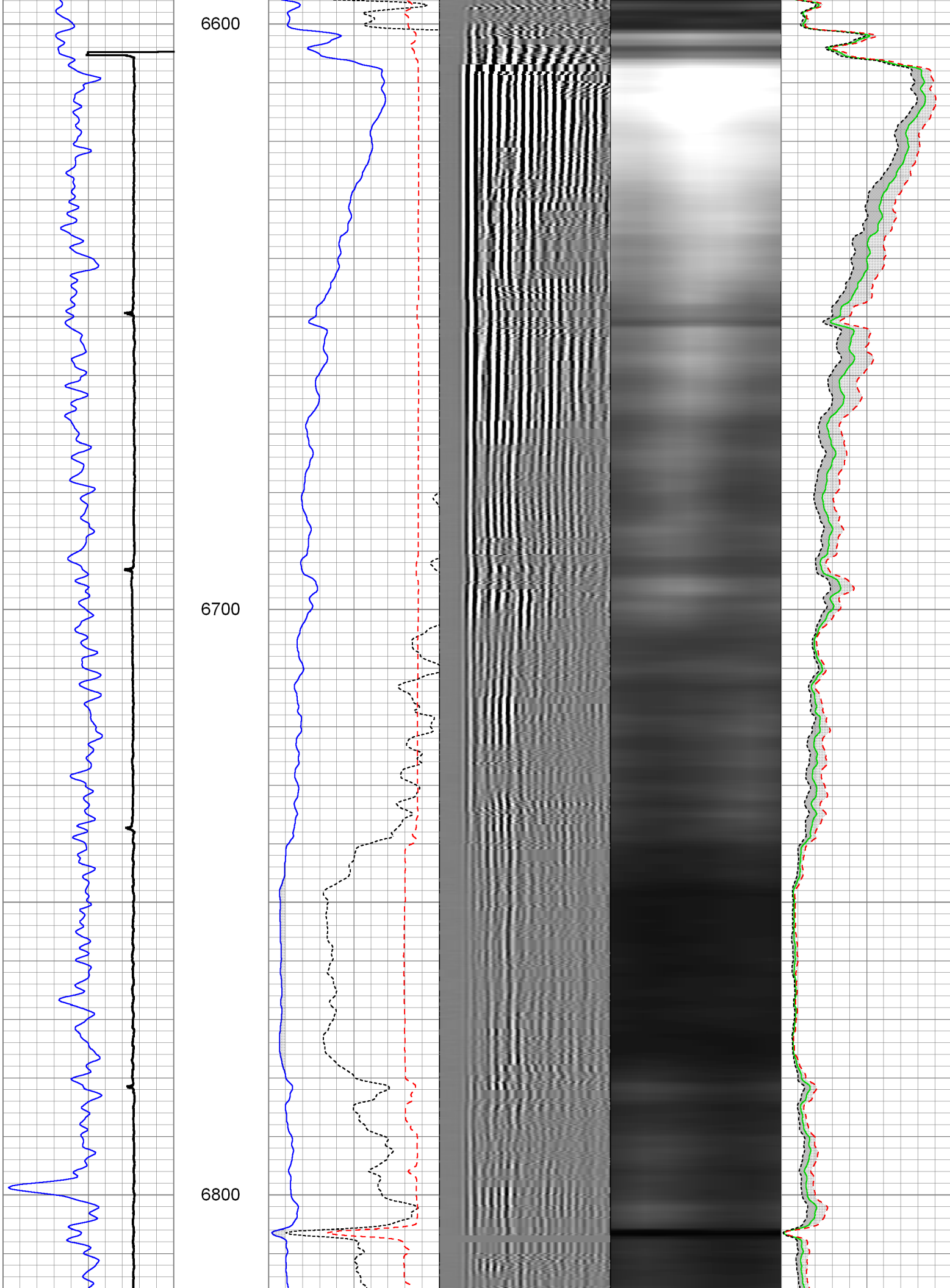
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 Presentation Format: rbt007
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 Charted by: Depth in Feet scaled 1:240

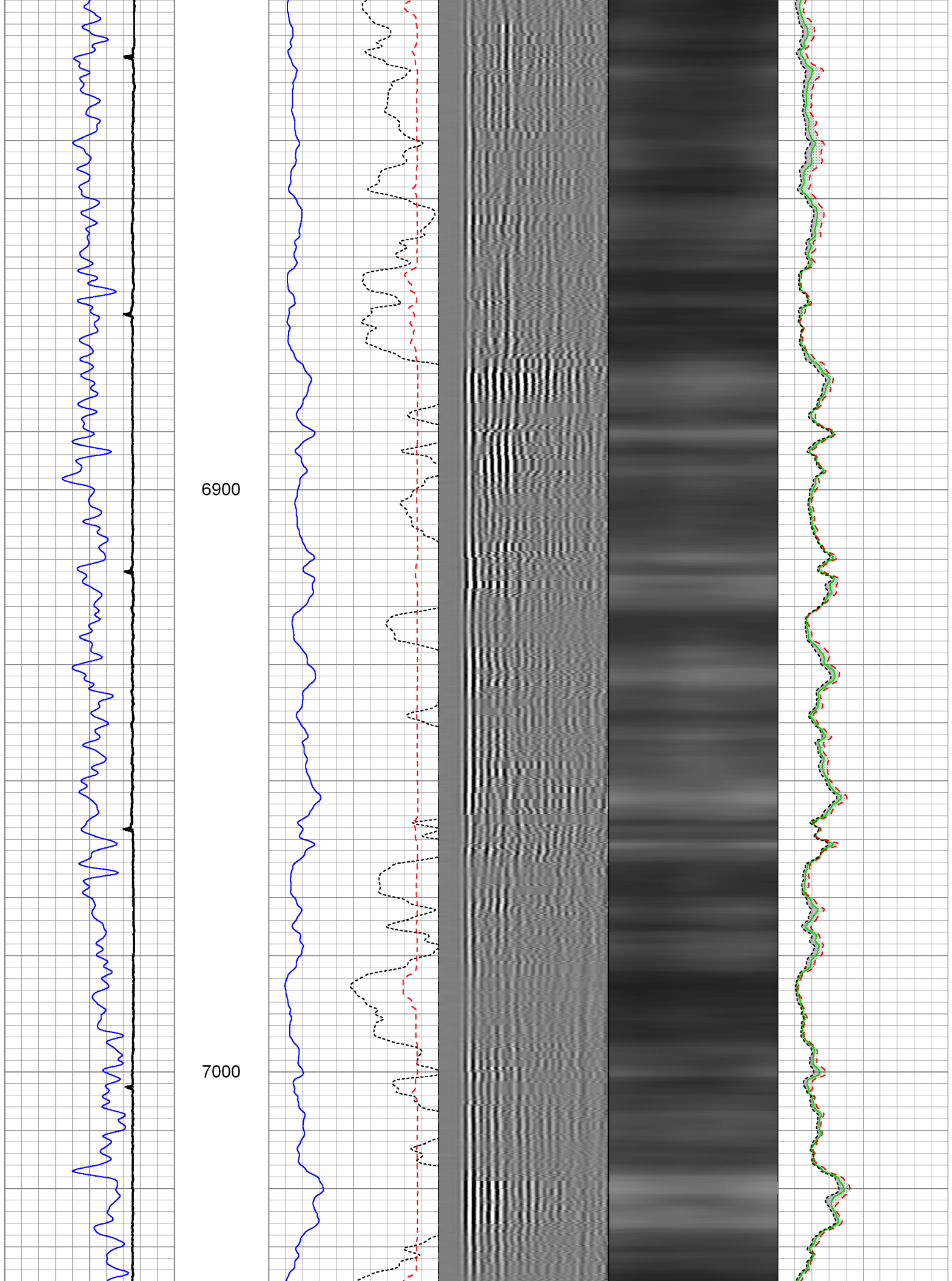


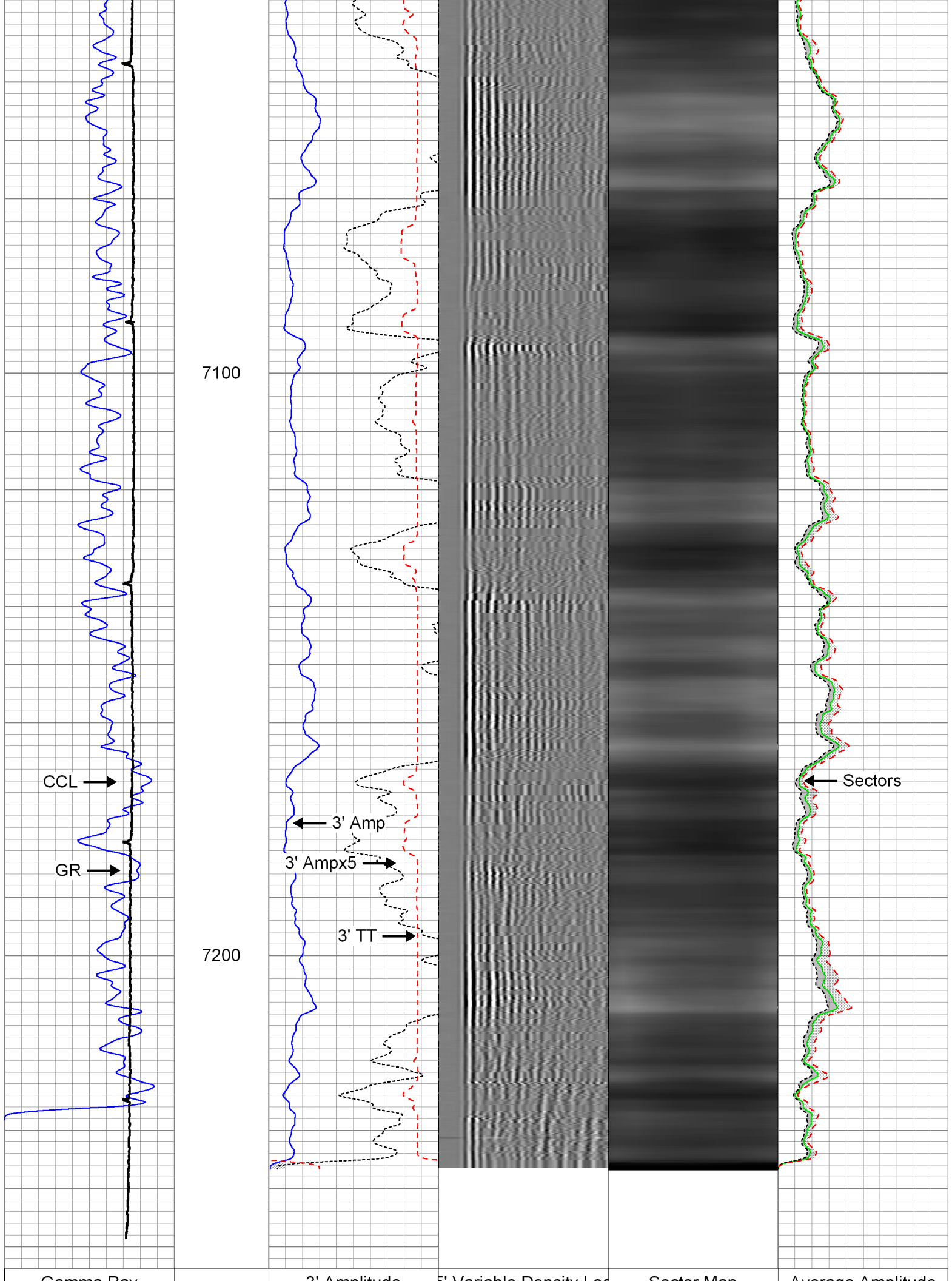
6600

6700


6800

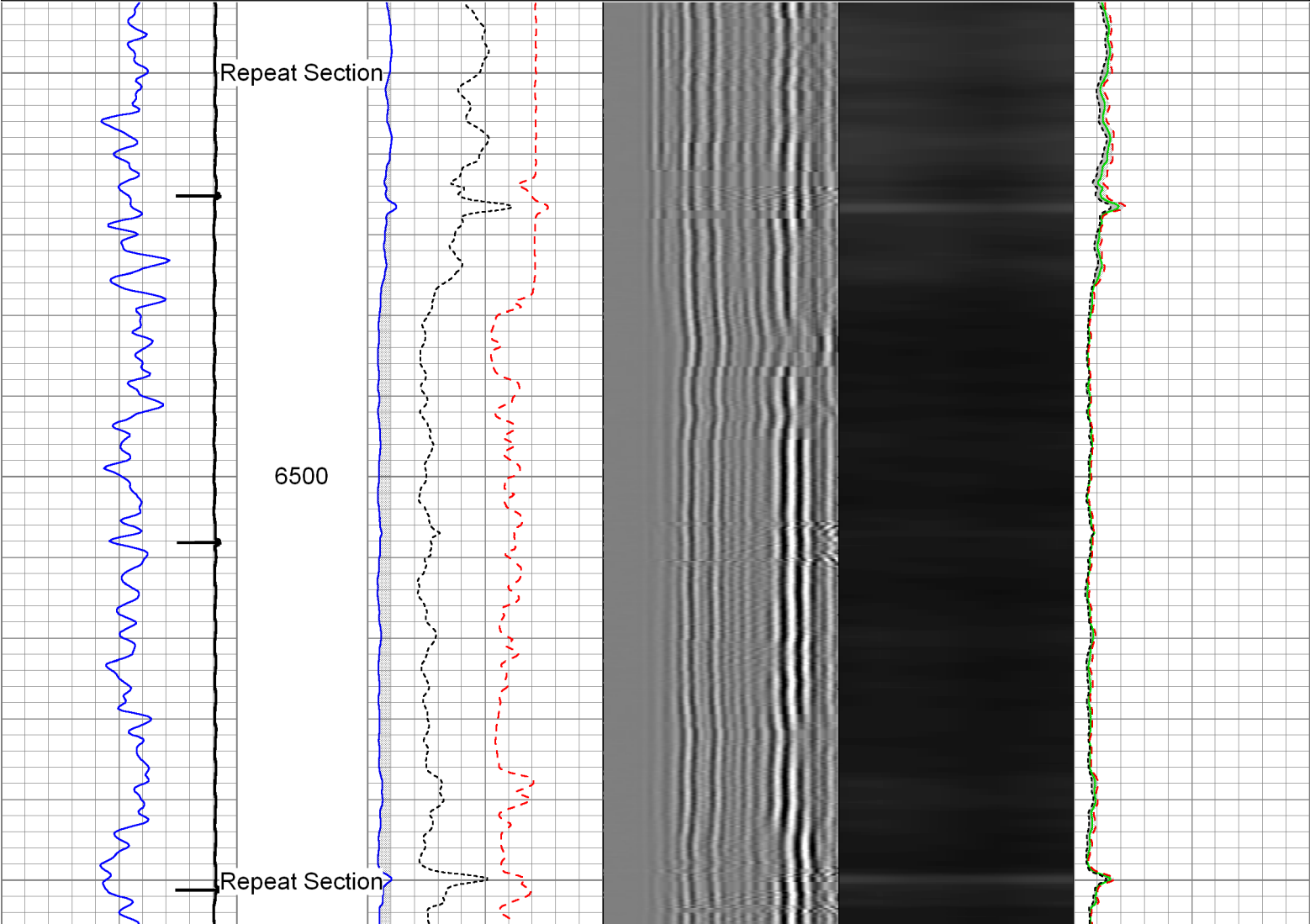


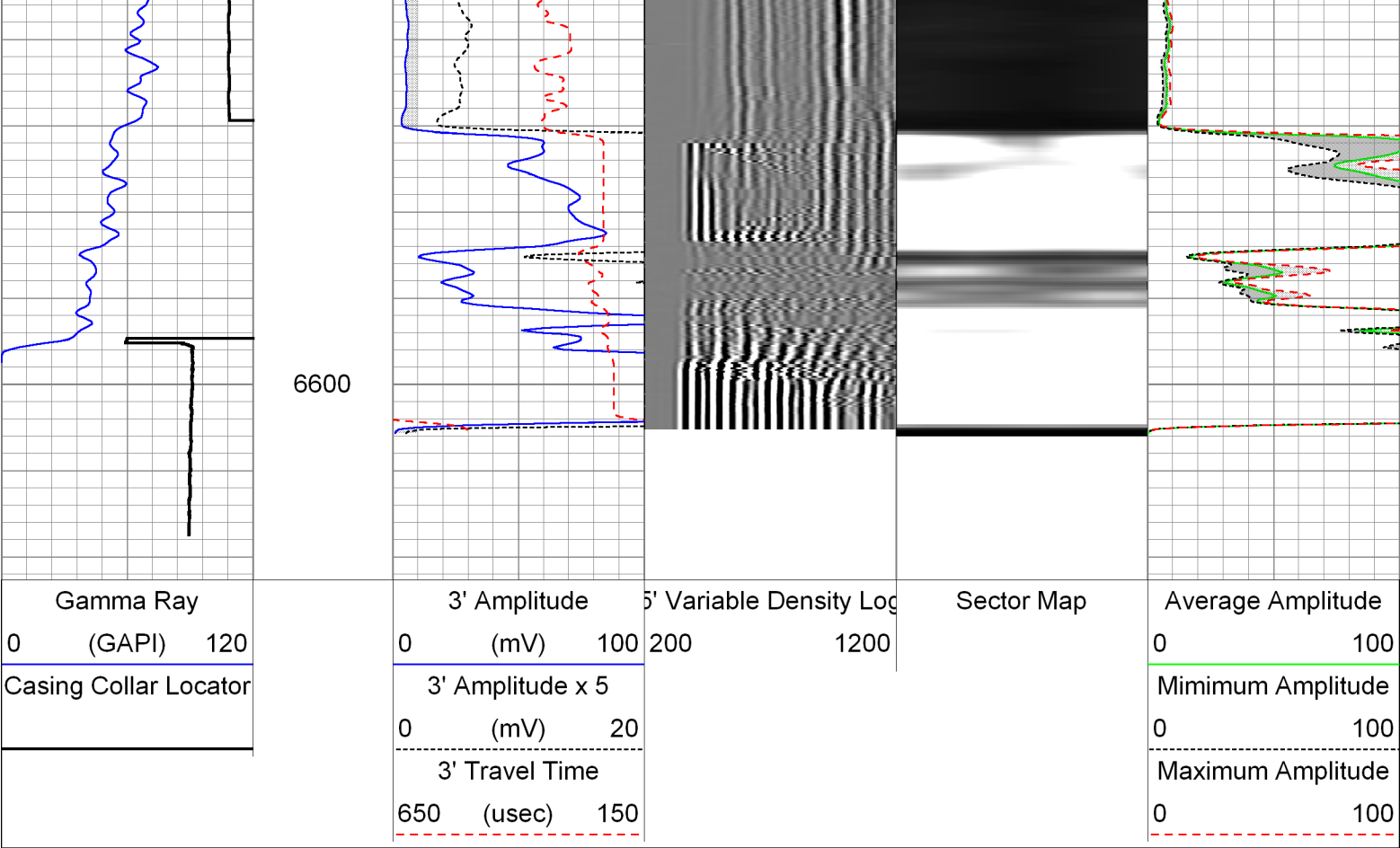




Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
	0 (mV) 20			0 100
	3' Travel Time			Maximum Amplitude
	650 (usec) 150			0 100

<div>  </div>		<div>Repeat Pass</div> <div>Logged With 2800 PSI At Surface</div>			
<div> <div>Database File:</div> <div>Dataset Pathname:</div> <div>Presentation Format:</div> <div>Dataset Creation:</div> <div>Charted by:</div> </div>		<div> 0512338826_anadarko_scott 27n-32hz_06-03-14_mit_rbl.db repeat rbt4_mit Tue Jun 03 11:40:02 2014 by Log Sondex V7.03 Depth in Feet scaled 1:240 </div>			
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	
	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	27.09		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
			PSJ-008 (000001) Production Swivel Joint	0.91	1.69	6.10
			PRC-034 (000007) Production Roller Centralizer (4 Arm)	2.90	2.75	32.00
WVFS1	18.45		RBT-004 (1066) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
WVFS2	18.45					
WVFS3	18.45					
WVFS4	18.45					
WVFS5	18.45					
WVFS6	18.45					
WVFS7	18.45					
WVFS8	18.45					

Finger 04:	1461	279.0	1740	291.0	2031	299.0	2330
Finger 05:	1489	270.0	1759	282.0	2041	287.0	2328
Finger 06:	1426	279.0	1705	298.0	2003	311.0	2314
Finger 07:	1426	278.0	1704	299.0	2003	305.0	2308
Finger 08:	1450	273.0	1723	294.0	2017	299.0	2316
Finger 09:	1431	291.0	1722	300.0	2022	302.0	2324
Finger 10:	1459	271.0	1730	296.0	2026	298.0	2324
Finger 11:	1417	284.0	1701	300.0	2001	306.0	2307
Finger 12:	1404	283.0	1687	309.0	1996	312.0	2308
Finger 13:	1505	263.0	1768	283.0	2051	280.0	2331
Finger 14:	1441	269.0	1710	296.0	2006	300.0	2306
Finger 15:	1431	281.0	1712	310.0	2022	303.0	2325
Finger 16:	1454	277.0	1731	301.0	2032	298.0	2330
Finger 17:	1431	278.0	1709	306.0	2015	304.0	2319
Finger 18:	1466	268.0	1734	290.0	2024	288.0	2312
Finger 19:	1462	271.0	1733	296.0	2029	297.0	2326
Finger 20:	1454	270.0	1724	296.0	2020	296.0	2316
Finger 21:	1431	283.0	1714	311.0	2025	305.0	2330
Finger 22:	1473	269.0	1742	286.0	2028	283.0	2311
Finger 23:	1469	272.0	1741	287.0	2028	290.0	2318
Finger 24:	1473	275.0	1748	286.0	2034	284.0	2318
Finger 25:	1466	278.0	1744	286.0	2030	290.0	2320
Finger 26:	1458	281.0	1739	286.0	2025	294.0	2319
Finger 27:	1497	268.0	1765	274.0	2039	282.0	2321
Finger 28:	1487	277.0	1764	283.0	2047	284.0	2331
Finger 29:	1543	263.0	1806	266.0	2072	273.0	2345
Finger 30:	1454	274.0	1728	280.0	2008	298.0	2306
Finger 31:	1465	279.0	1744	286.0	2030	300.0	2330
Finger 32:	1529	265.0	1794	265.0	2059	275.0	2334
Finger 33:	1472	278.0	1750	286.0	2036	300.0	2336
Finger 34:	1452	278.0	1730	284.0	2014	300.0	2314
Finger 35:	1518	259.0	1777	261.0	2038	271.0	2309
Finger 36:	1505	266.0	1771	273.0	2044	287.0	2331
Finger 37:	1470	281.0	1751	284.0	2035	301.0	2336
Finger 38:	1556	251.0	1807	253.0	2060	270.0	2330
Finger 39:	1496	273.0	1769	279.0	2048	287.0	2335
Finger 40:	1436	286.0	1722	294.0	2016	309.0	2325

Post Survey Calibration Check								
Performed: Tue Jun 03 14:58:45 2014								
Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	3.979	-0.011	4.994	-0.003	5.990	-0.005	6.988	-0.006
Finger 02:	3.985	-0.007	4.988	-0.006	5.994	-0.003	7.004	0.002
Finger 03:	3.994	-0.003	4.987	-0.006	5.975	-0.013	6.986	-0.007
Finger 04:	3.984	-0.008	4.987	-0.006	5.991	-0.005	6.996	-0.002
Finger 05:	3.980	-0.010	4.984	-0.008	5.986	-0.007	6.996	-0.002
Finger 06:	3.985	-0.008	4.988	-0.006	5.990	-0.005	6.991	-0.004
Finger 07:	3.986	-0.007	4.992	-0.004	5.980	-0.010	6.994	-0.003
Finger 08:	3.988	-0.006	4.993	-0.004	5.992	-0.004	6.993	-0.003
Finger 09:	3.985	-0.008	4.950	-0.025	5.971	-0.014	6.986	-0.007
Finger 10:	3.976	-0.012	4.980	-0.010	5.987	-0.006	6.998	-0.001
Finger 11:	4.011	0.005	4.983	-0.008	5.987	-0.007	6.987	-0.006
Finger 12:	3.985	-0.008	4.980	-0.010	5.987	-0.007	6.983	-0.008
Finger 13:	3.989	-0.006	4.991	-0.004	5.995	-0.003	7.000	-0.000
Finger 14:	3.968	-0.016	4.970	-0.015	5.985	-0.008	6.992	-0.004
Finger 15:	3.988	-0.006	4.984	-0.008	5.979	-0.010	6.992	-0.004
Finger 16:	3.958	-0.021	4.970	-0.015	5.971	-0.014	6.989	-0.006
Finger 17:	3.989	-0.005	4.992	-0.004	5.994	-0.003	6.996	-0.002
Finger 18:	3.992	-0.004	4.985	-0.007	5.988	-0.006	6.995	-0.002
Finger 19:	3.983	-0.008	4.983	-0.008	5.988	-0.006	6.990	-0.005
Finger 20:	3.991	-0.005	4.994	-0.003	5.993	-0.004	6.993	-0.004
Finger 21:	3.991	-0.005	4.990	-0.005	5.981	-0.010	6.996	-0.002
Finger 22:	3.987	-0.007	4.984	-0.008	5.983	-0.008	6.998	-0.001
Finger 23:	3.989	-0.006	4.990	-0.005	5.976	-0.012	6.982	-0.009

Finger 24:	3.981	-0.009	4.979	-0.011	5.983	-0.009	6.998	-0.001
Finger 25:	3.995	-0.002	4.989	-0.006	5.986	-0.007	6.994	-0.003
Finger 26:	3.988	-0.006	4.978	-0.011	5.990	-0.005	6.986	-0.007
Finger 27:	3.977	-0.011	4.982	-0.009	5.990	-0.005	7.004	0.002
Finger 28:	3.988	-0.006	4.986	-0.007	5.981	-0.010	6.994	-0.003
Finger 29:	3.983	-0.009	4.980	-0.010	5.991	-0.004	6.998	-0.001
Finger 30:	3.981	-0.009	4.983	-0.008	5.986	-0.007	6.979	-0.011
Finger 31:	3.992	-0.004	4.991	-0.005	5.987	-0.007	6.983	-0.008
Finger 32:	3.982	-0.009	4.979	-0.010	5.988	-0.006	6.993	-0.004
Finger 33:	3.974	-0.013	4.978	-0.011	5.990	-0.005	6.998	-0.001
Finger 34:	3.990	-0.005	4.976	-0.012	5.979	-0.011	6.992	-0.004
Finger 35:	3.985	-0.008	4.980	-0.010	5.980	-0.010	6.993	-0.004
Finger 36:	3.982	-0.009	4.975	-0.012	5.973	-0.013	6.987	-0.007
Finger 37:	3.990	-0.005	4.983	-0.008	5.996	-0.002	6.997	-0.001
Finger 38:	3.981	-0.010	4.977	-0.011	5.989	-0.005	7.000	-0.000
Finger 39:	3.984	-0.008	4.983	-0.009	5.970	-0.015	6.985	-0.007
Finger 40:	3.994	-0.003	4.993	-0.004	5.992	-0.004	6.995	-0.003
Average:	3.985	-0.007	4.983	-0.008	5.985	-0.007	6.992	-0.004

Segmented Cement Bond Log Calibration Report

Serial Number: 1066
Tool Model: 004

Calibration Casing Diameter: 7.000 in
Calibration Depth: 41.600 ft

Master Calibration, performed Tue Jun 03 09:19:36 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.003	0.760	0.800	62.165	80.470	1.002
5FT	-0.005	0.735	0.800	62.165	82.908	1.213
S1	-0.004	0.736	0.000	100.000	135.184	0.495
S2	-0.005	0.779	0.000	100.000	127.608	0.623
S3	-0.002	0.798	0.000	100.000	124.892	0.305
S4	-0.004	0.800	0.000	100.000	124.331	0.552
S5	-0.002	0.777	0.000	100.000	128.478	0.226
S6	-0.003	0.755	0.000	100.000	131.966	0.371
S7	-0.002	0.744	0.000	100.000	133.953	0.317
S8	-0.002	0.729	0.000	100.000	136.814	0.309

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 Scott 27N-32HZ
Field Wattenberg

	County	Weld
	State	Colorado