



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company				Kerr-McGee Oil & Gas Onshore, L.P.			
Well				Maverick 2N-13HZ			
Field				Wattenberg			
County				Weld			
State				Colorado			
Location:				API # : 05-123-36552			
Permanent Datum				SHL: 302' FSL & 2115' FEL SWSE			
Log Measured From				Lat / Long: 40.218893 / -104.723325			
Drilling Measured From				SEC 13 TWP 3N RGE 66W			
Ground Level				Elevation 5059'			
Kelly Bushing				13 FT			
Kelly Bushing				Elevation 5059'			
Date				14-June-2014			
Run Number				One			
Depth Driller				11768 FT			
Depth Logger				6729 FT			
Bottom Logged Interval				6725 FT			
Top Log Interval				Surface			
Open Hole Size				8.765"			
Type Fluid				Water			
Density / Viscosity				8.34 lbm/gal			
Max. Recorded Temp.				211°F			
Estimated Cement Top				41 FT			
Time Well Ready				ROA			
Time Logger on Bottom				12:45			
Equipment Number				HD-0324			
Location				Fort Lupton, CO			
Recorded By				J. Raby			
Witnessed By				Donnie Fredrick			
Borehole Record				Tubing Record			
Run Number				Bit From To			
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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.  
All wireline depths measured from KB zero at 13 FT.  
Depth reference to Casing Tally reported Liner Top at 6696 FT.  
Adjusted log +8 FT from KB zero to correlate with Liner Top.  
Retrievable Bridge Plug set at 6770 FT.  
Log ran from below Liner Top to surface.  
Log ran with 2200 PSI surface induced pressure.

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



Main Pass

Recorded with 2200 PSI surface induced pressure

Database File:0512336552\_anadarko\_maverick 2n-13hz\_06-14-14\_mit\_rbl.db

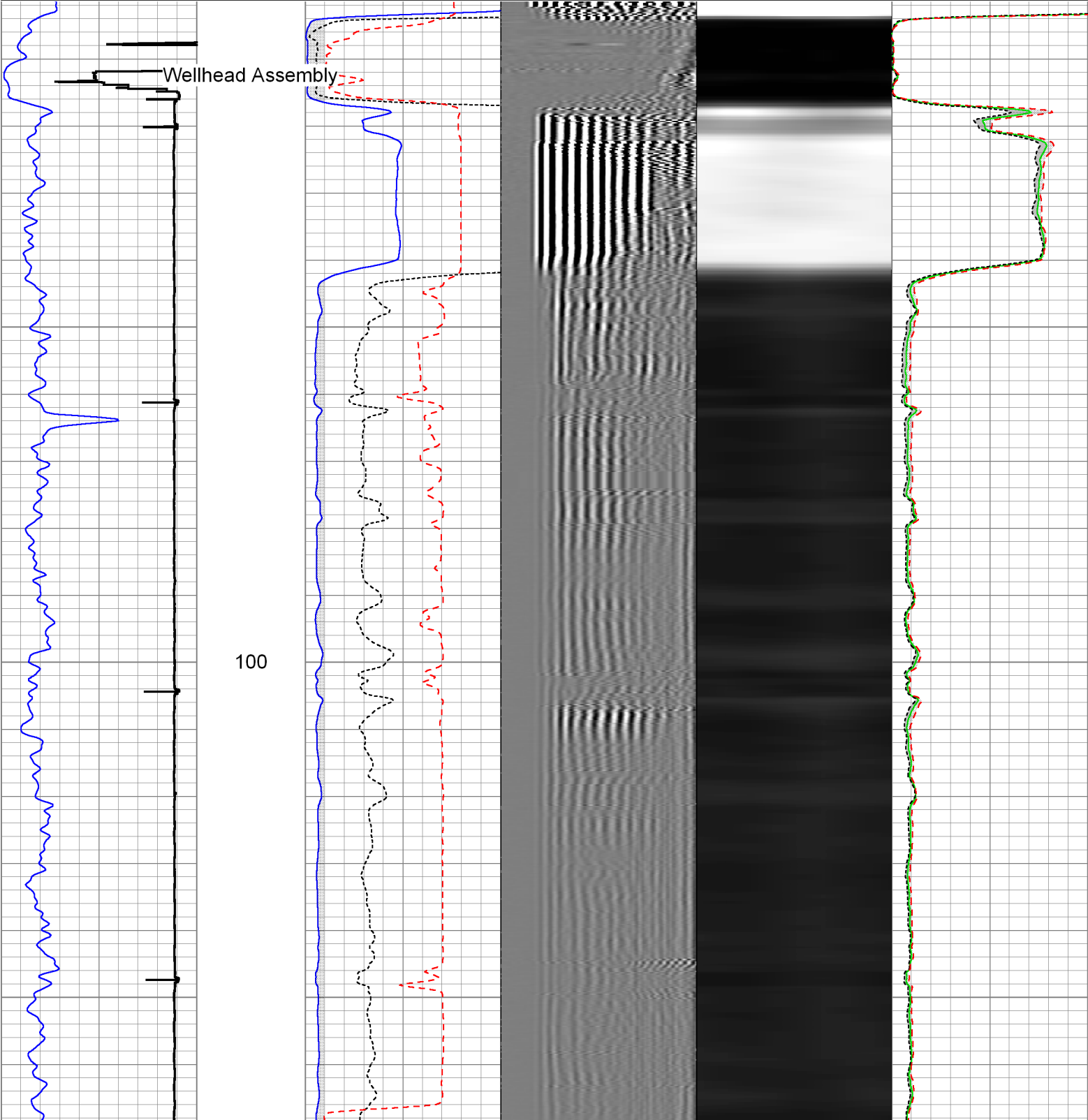
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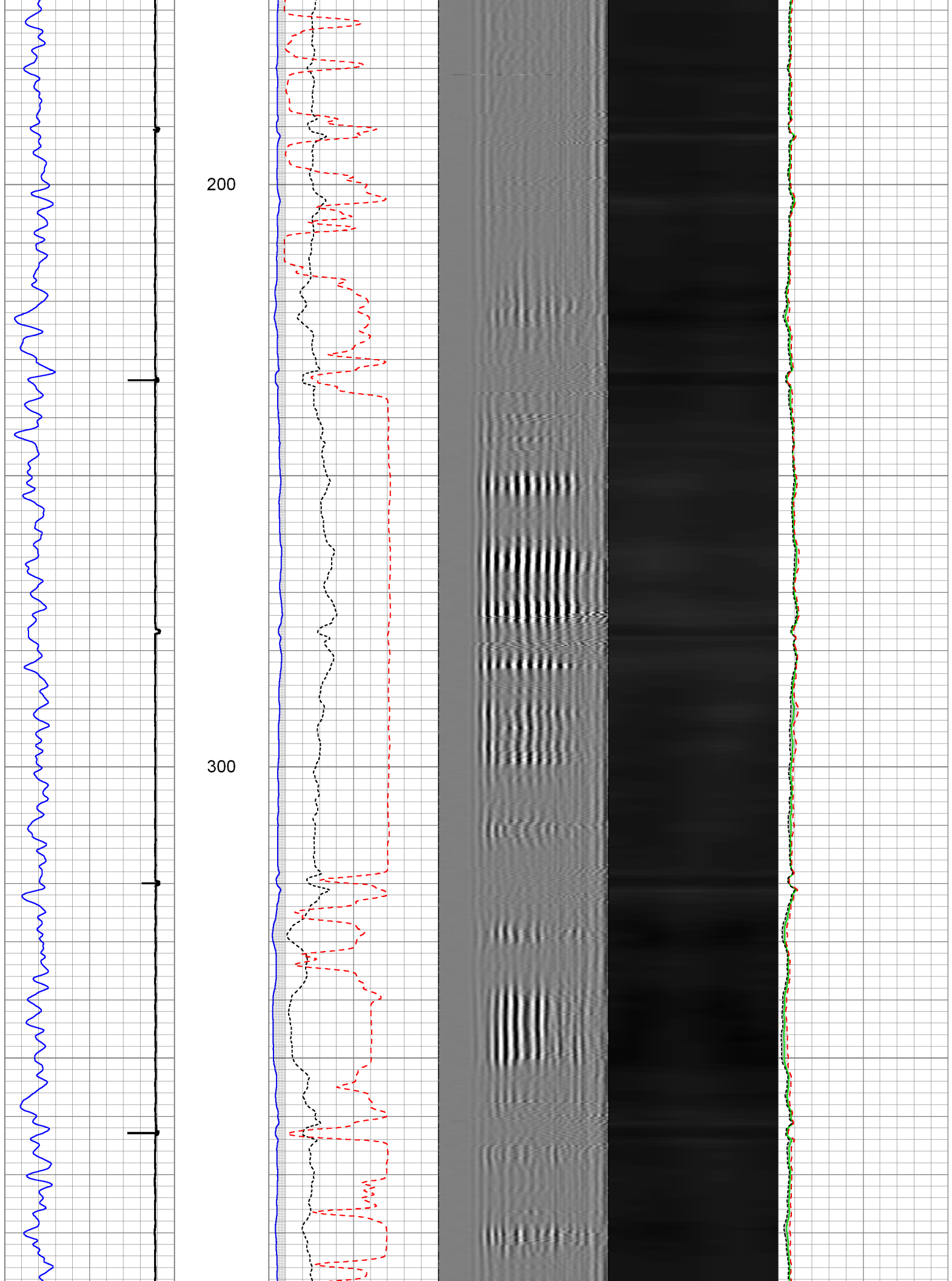
Presentation Format:rbt4\_mit

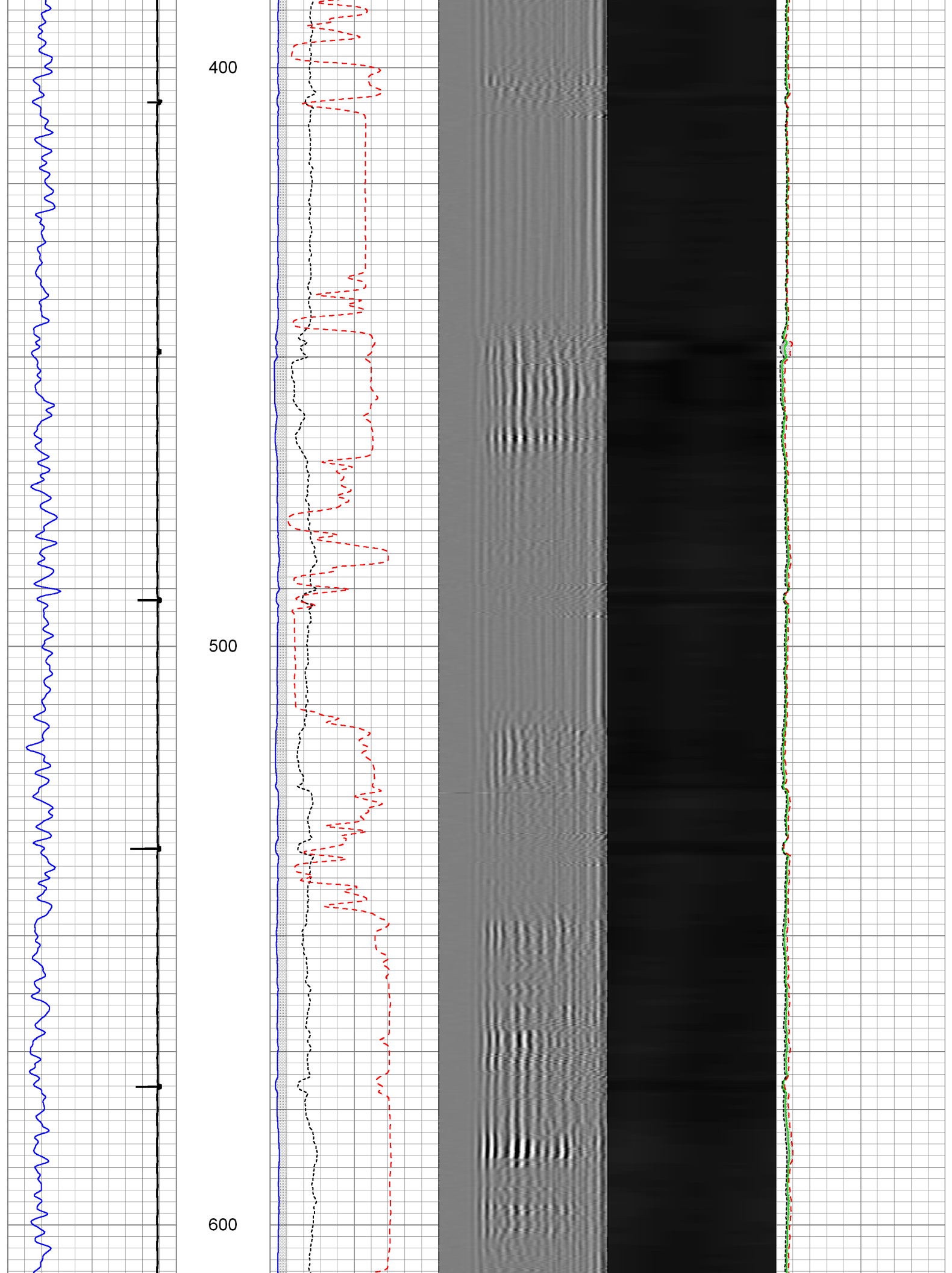
Dataset Creation:Sat Jun 14 12:37:45 2014 by Log 7.0 B1

Charted by:Depth in Feet scaled 1:240

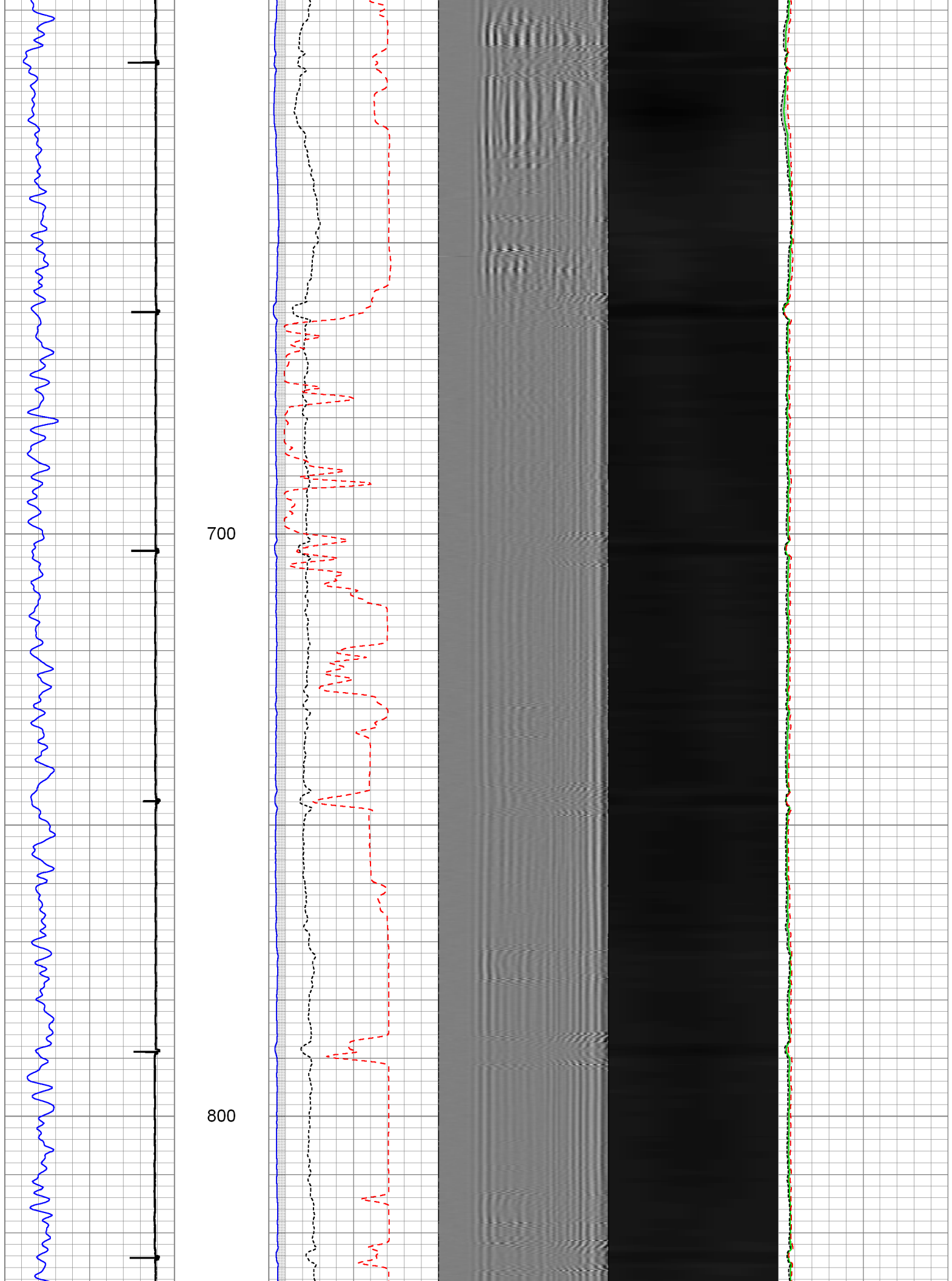
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
	3' Travel Time			Maximum Amplitude
	650 (usec) 150			0 100

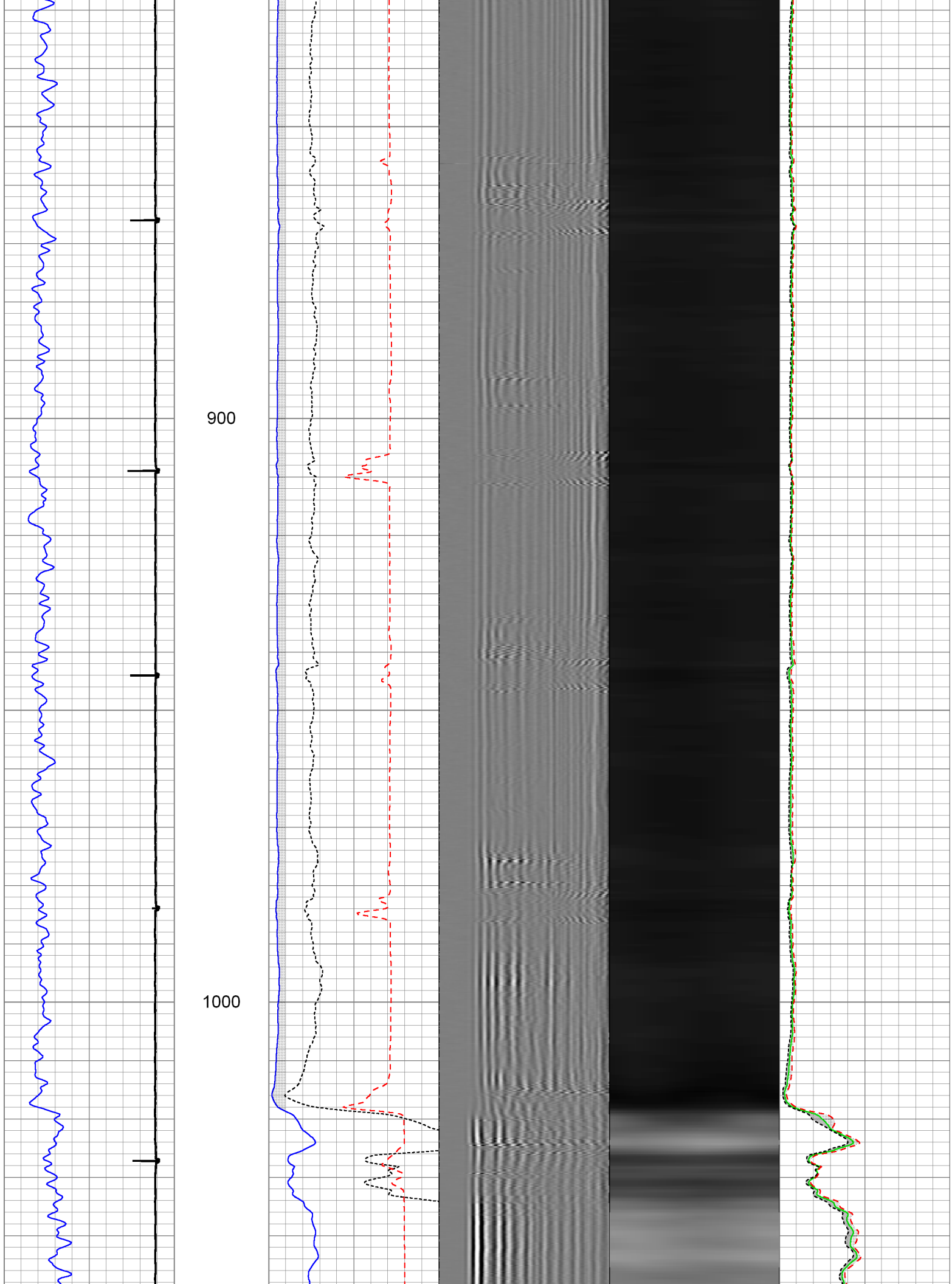






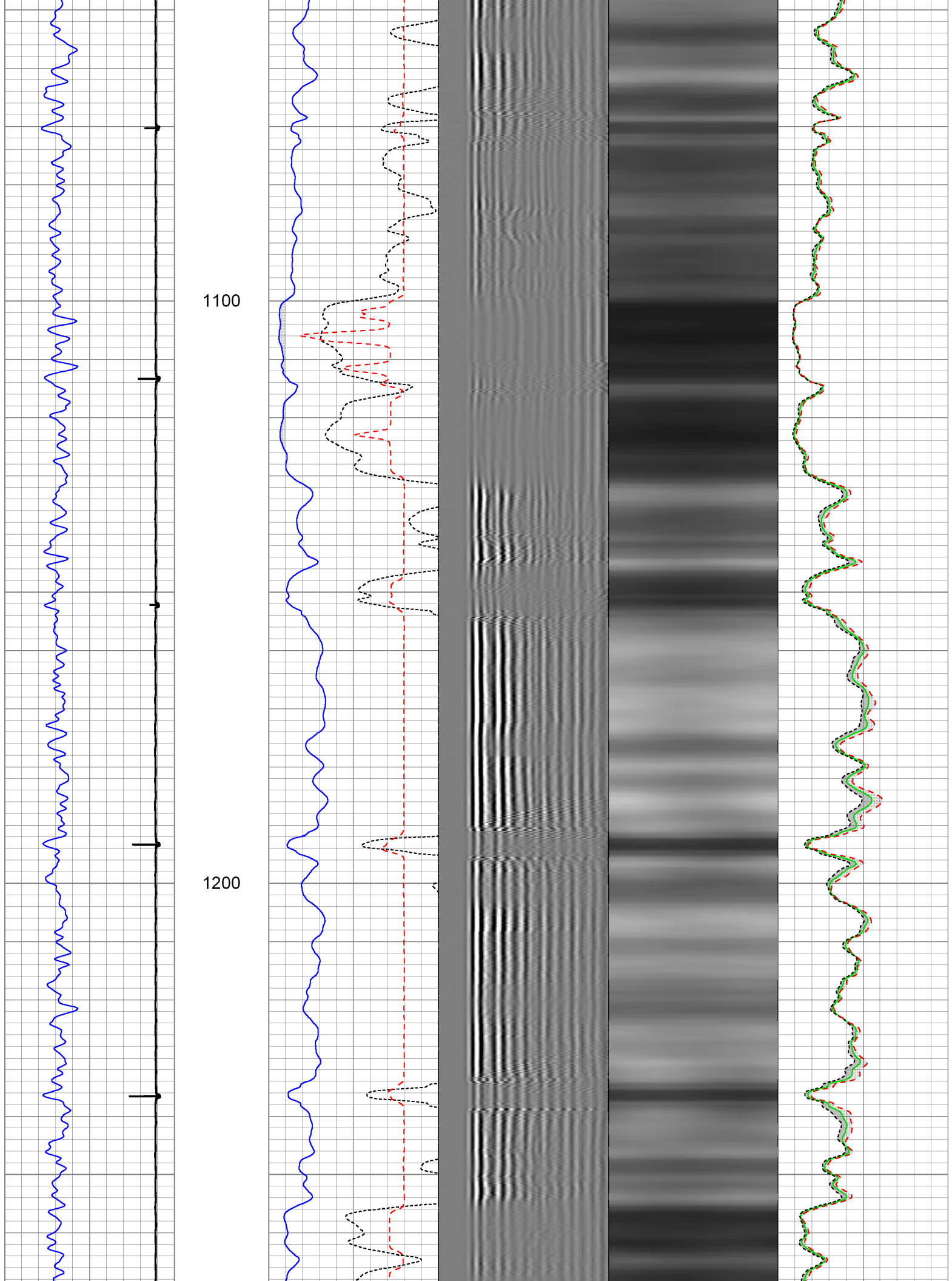






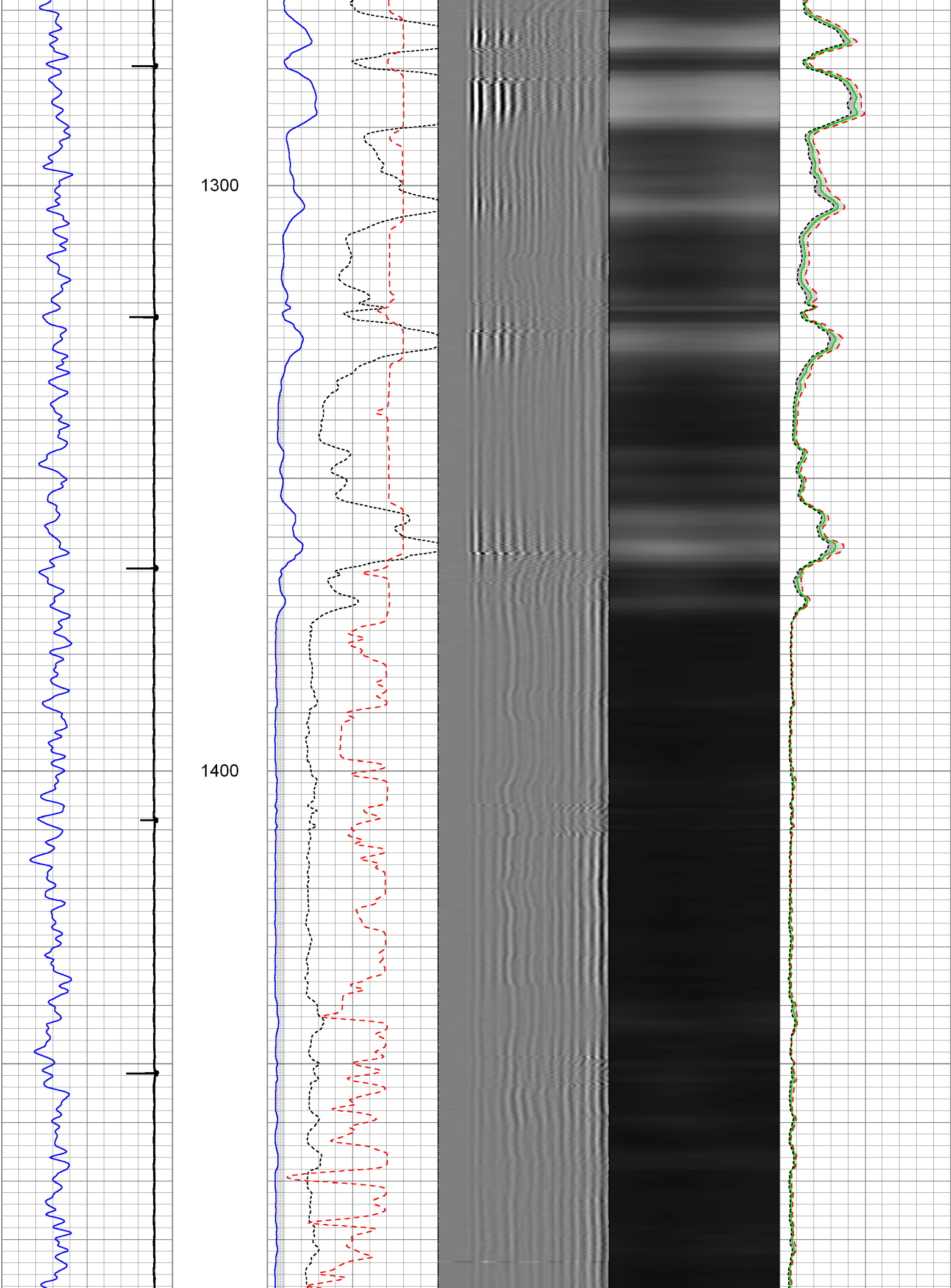
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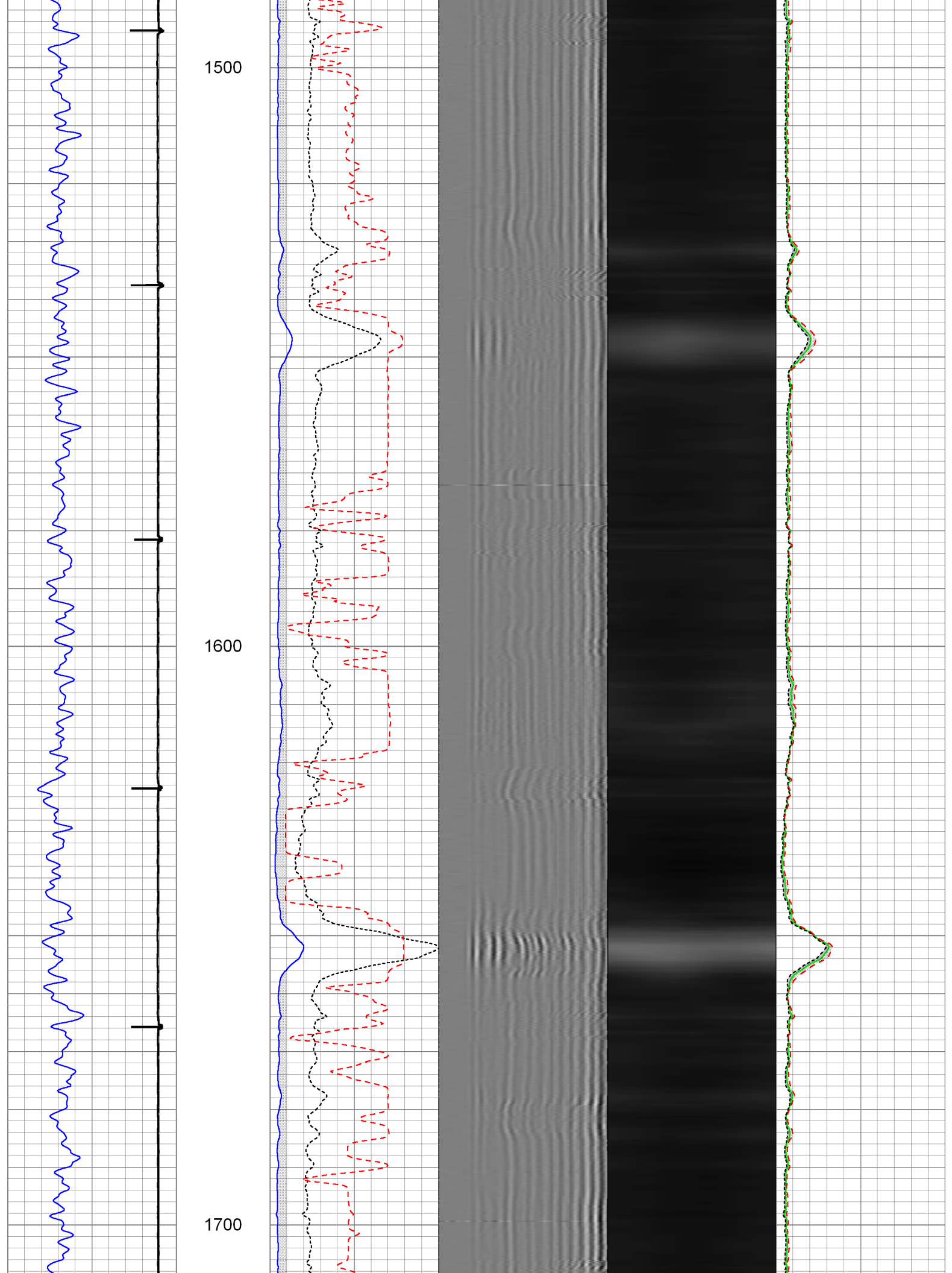
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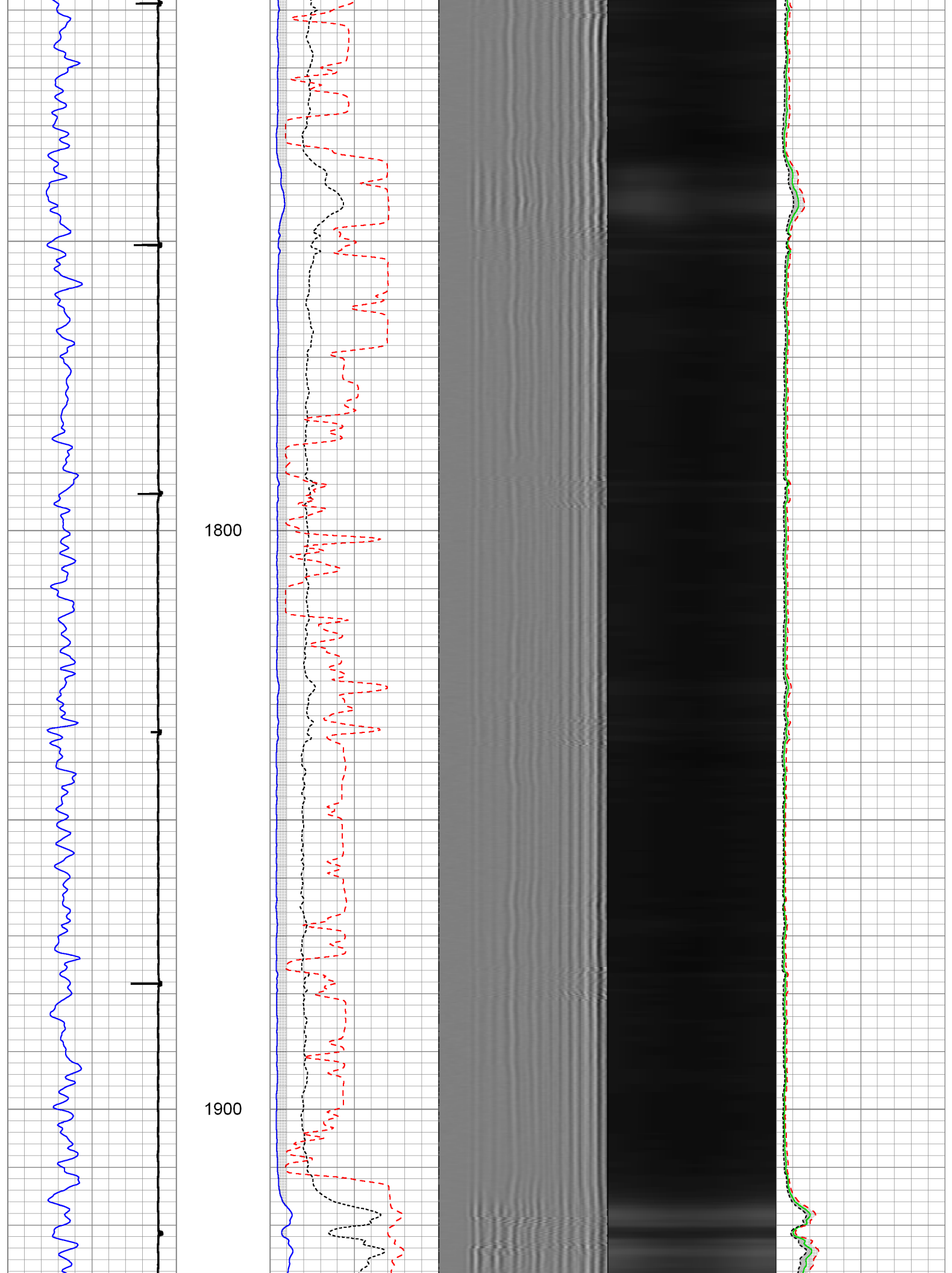
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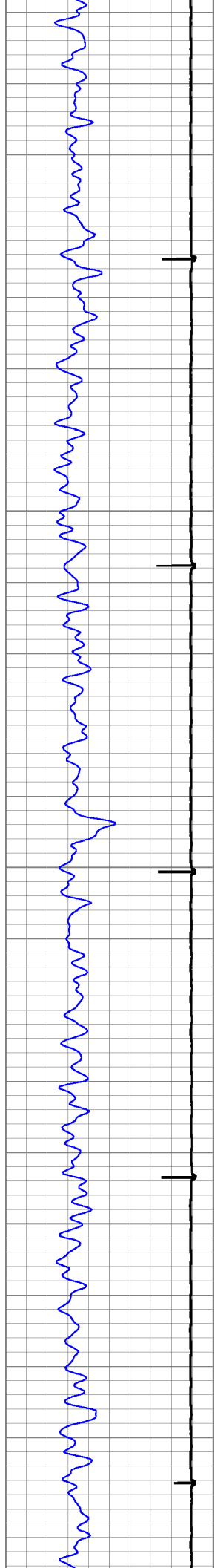
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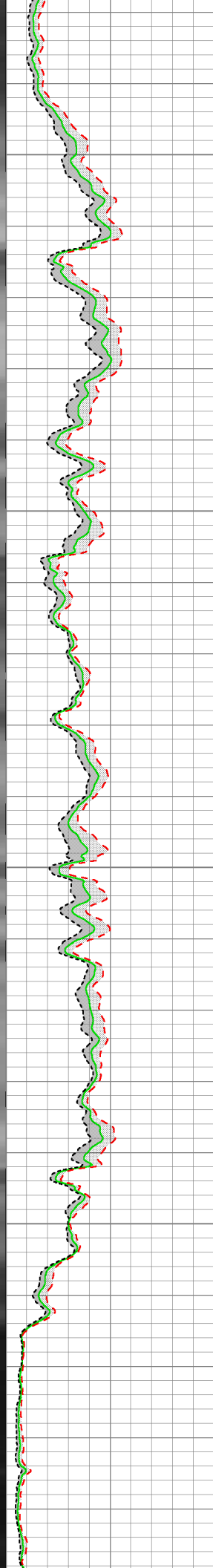
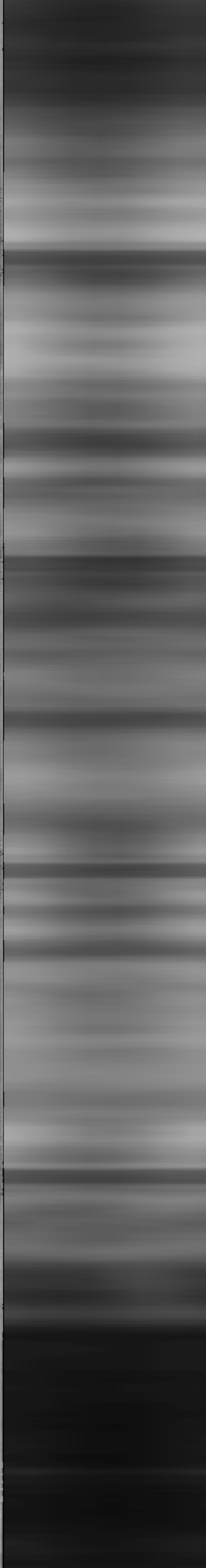
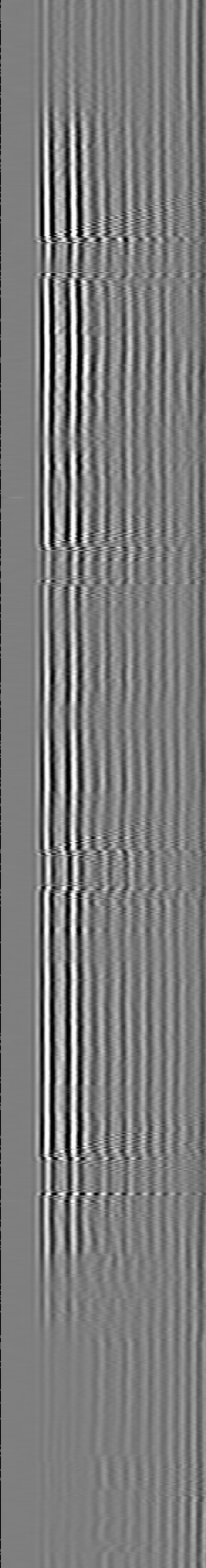
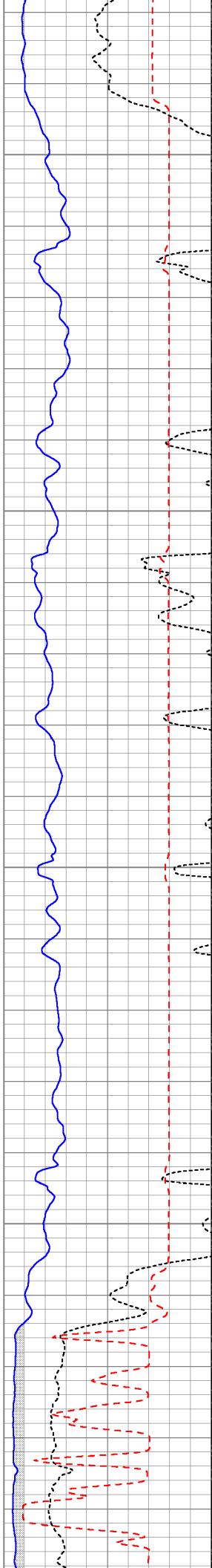






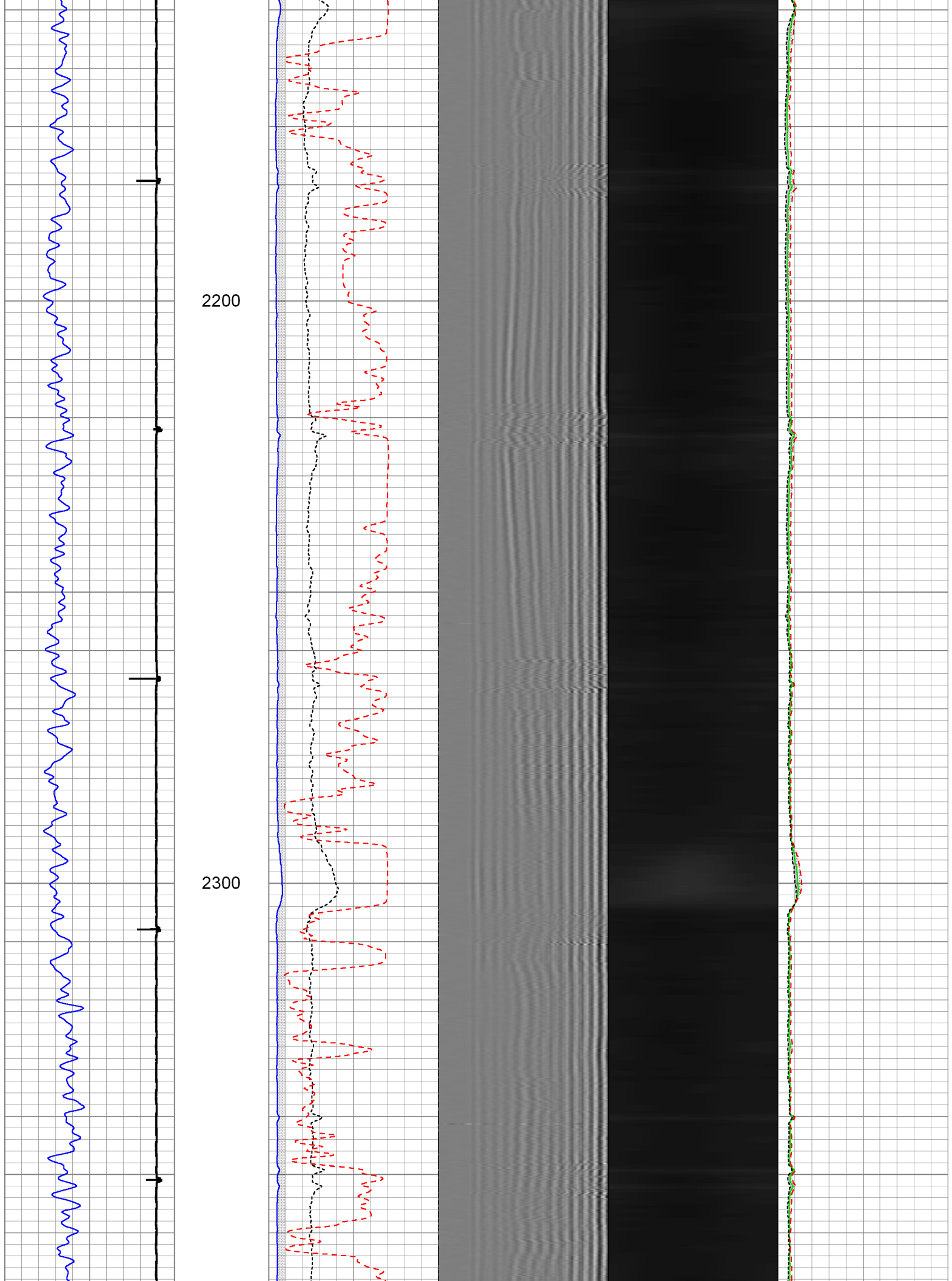
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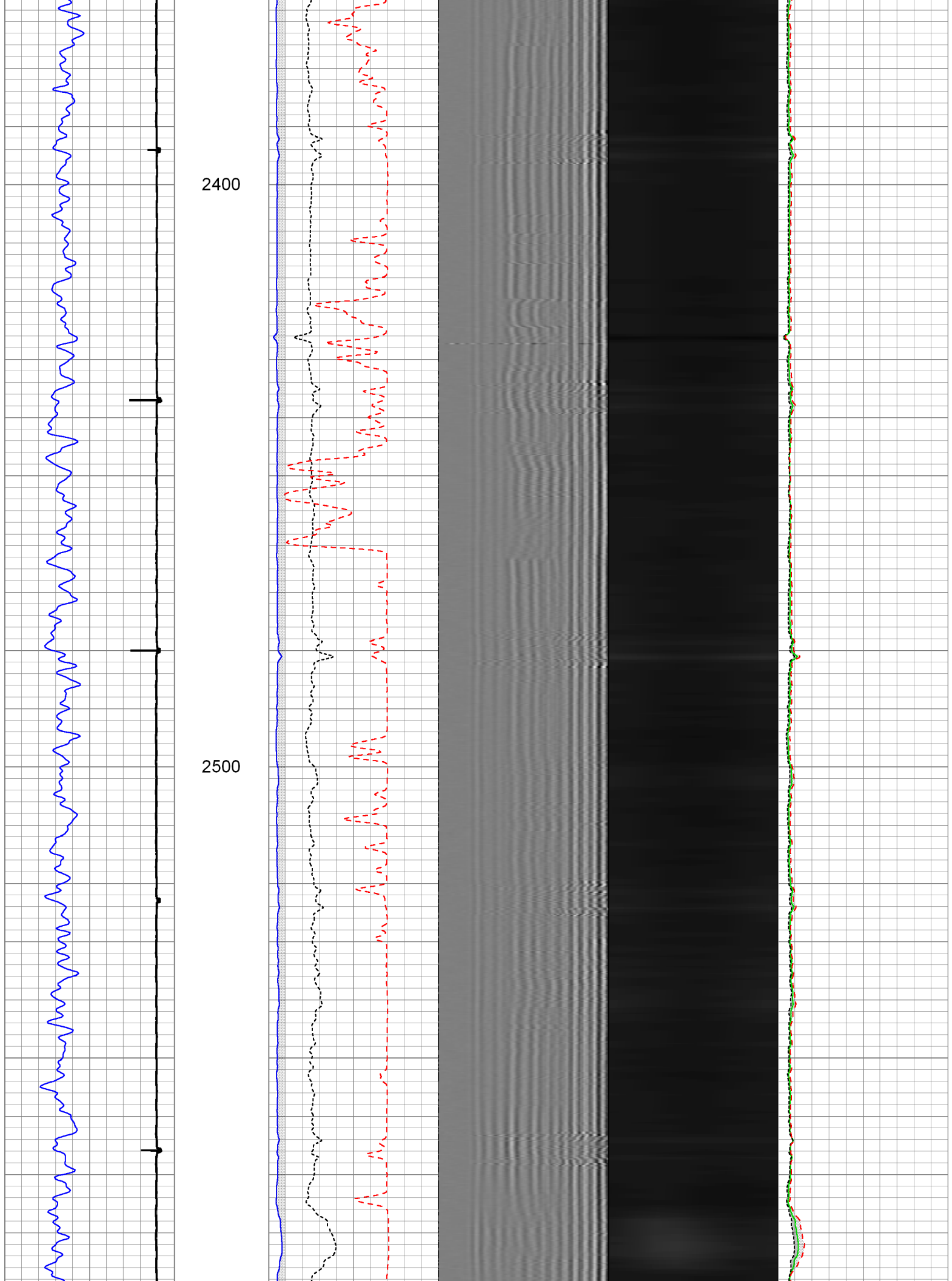
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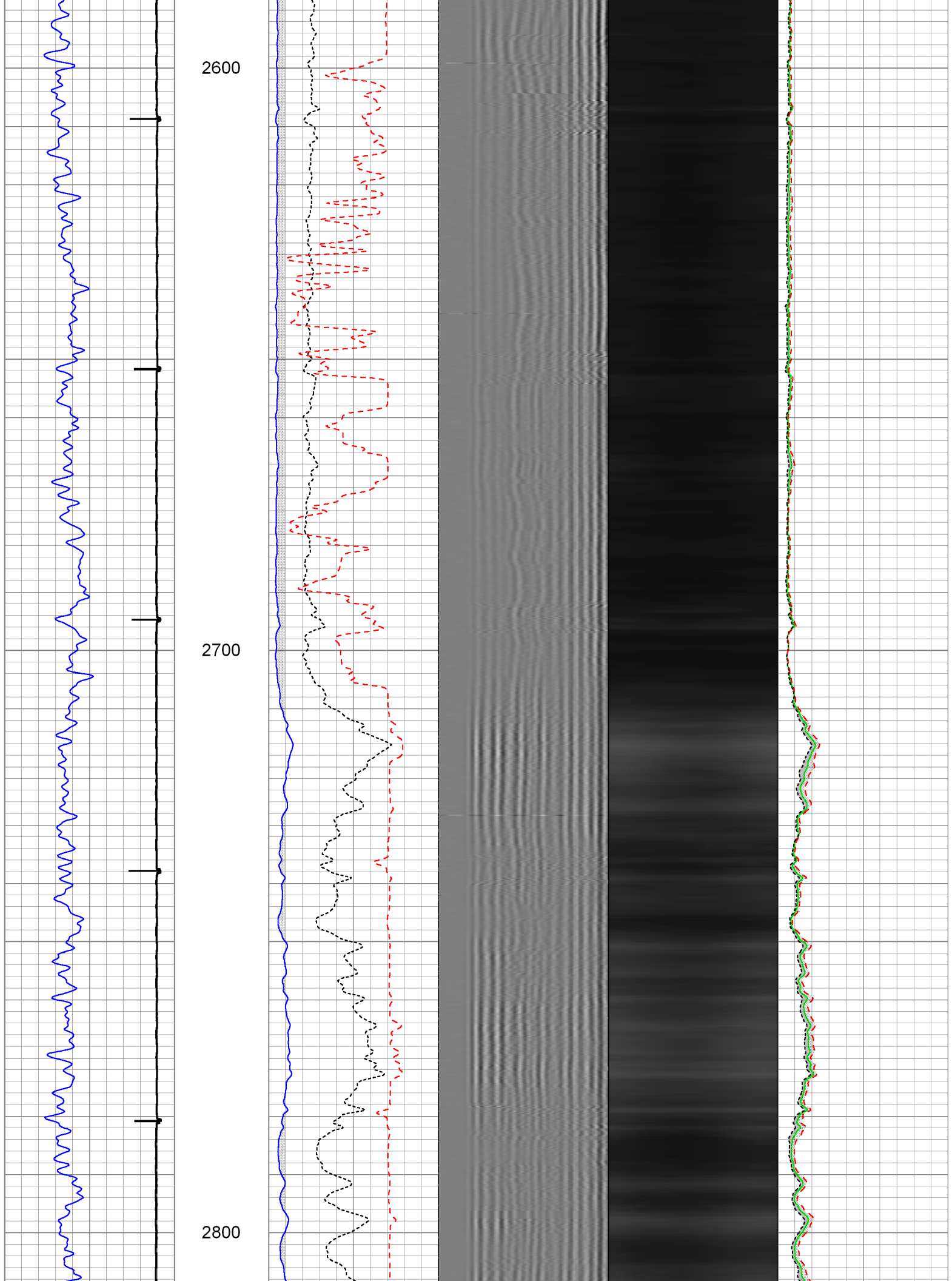
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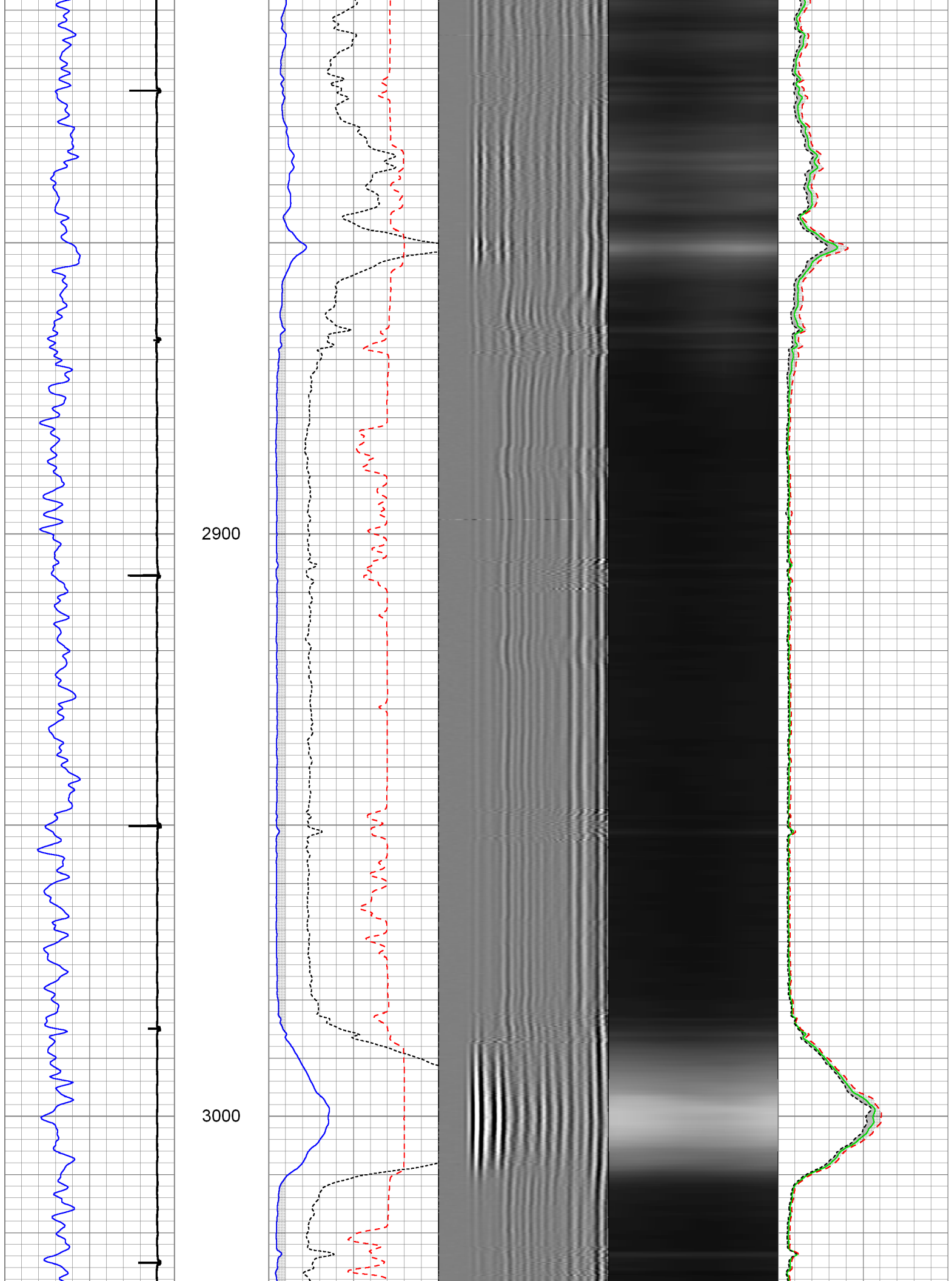
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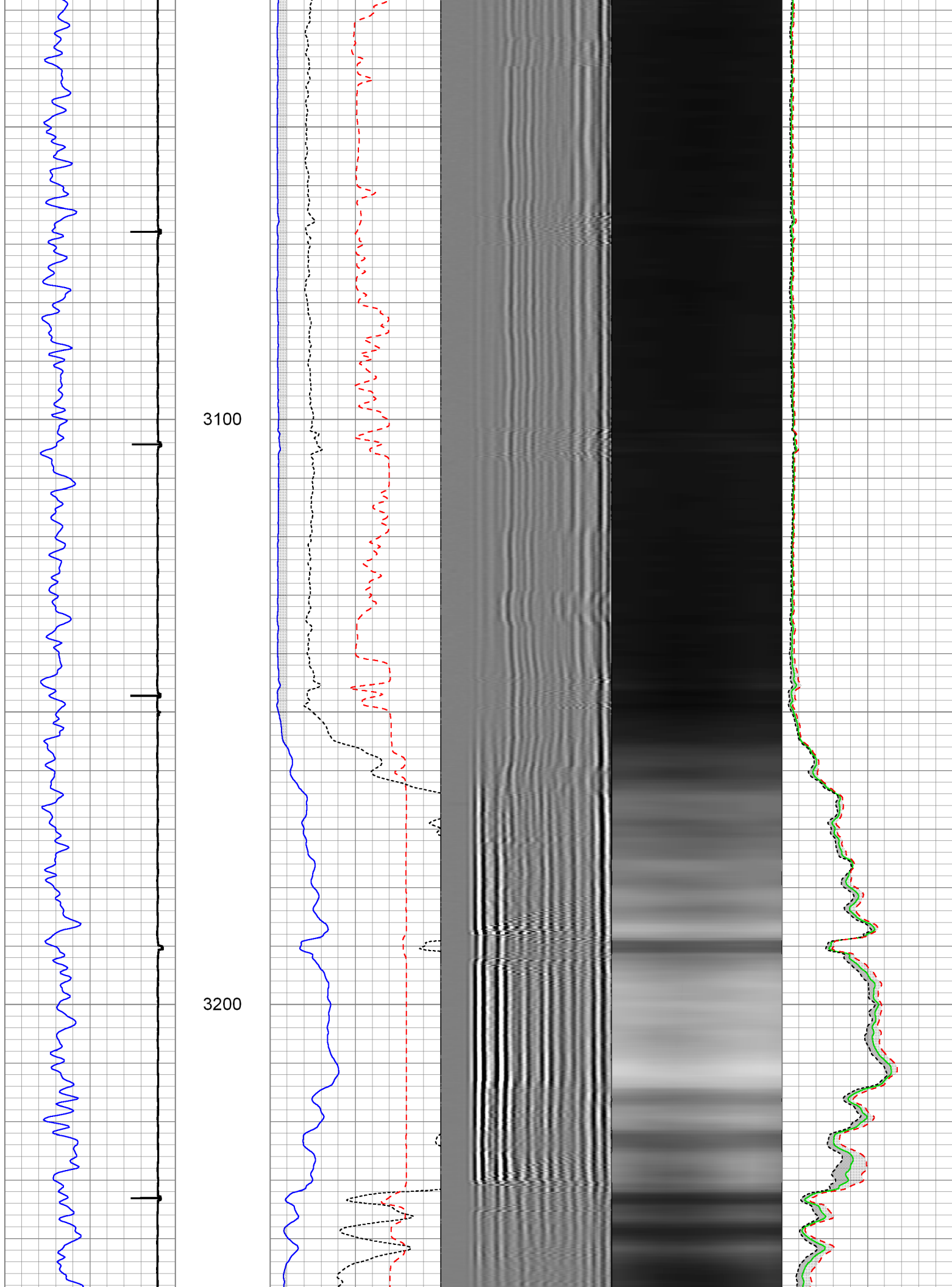


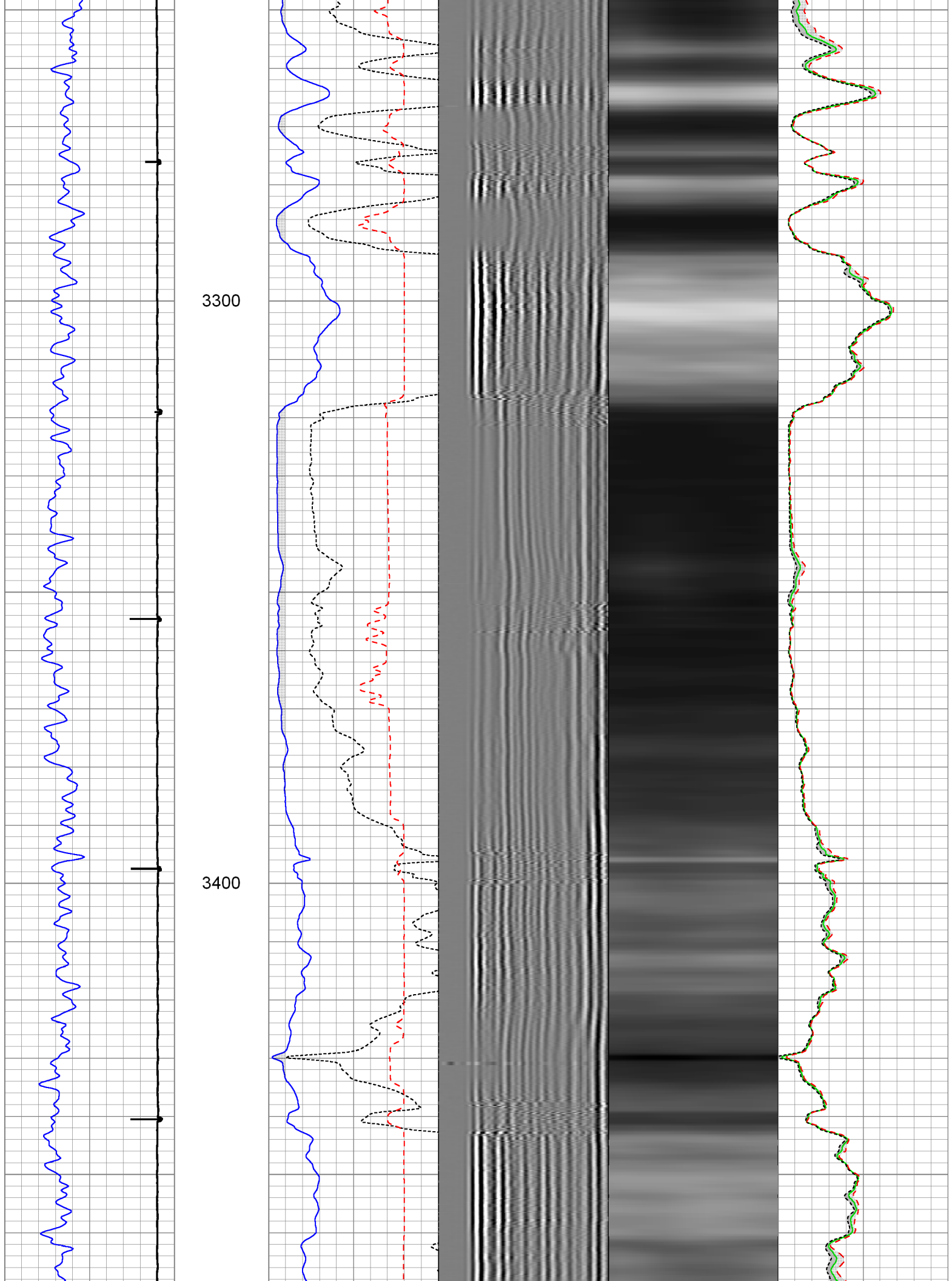




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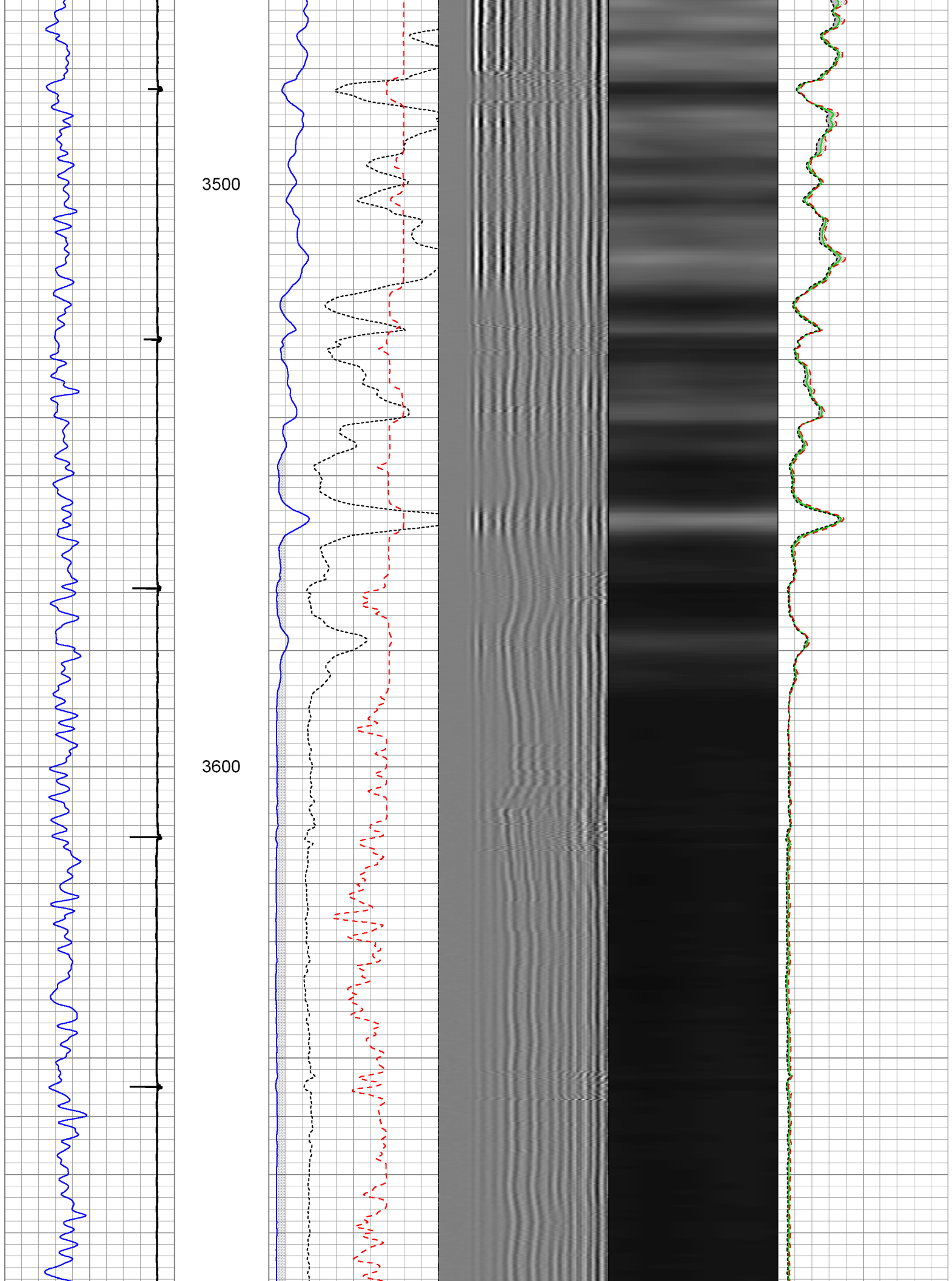
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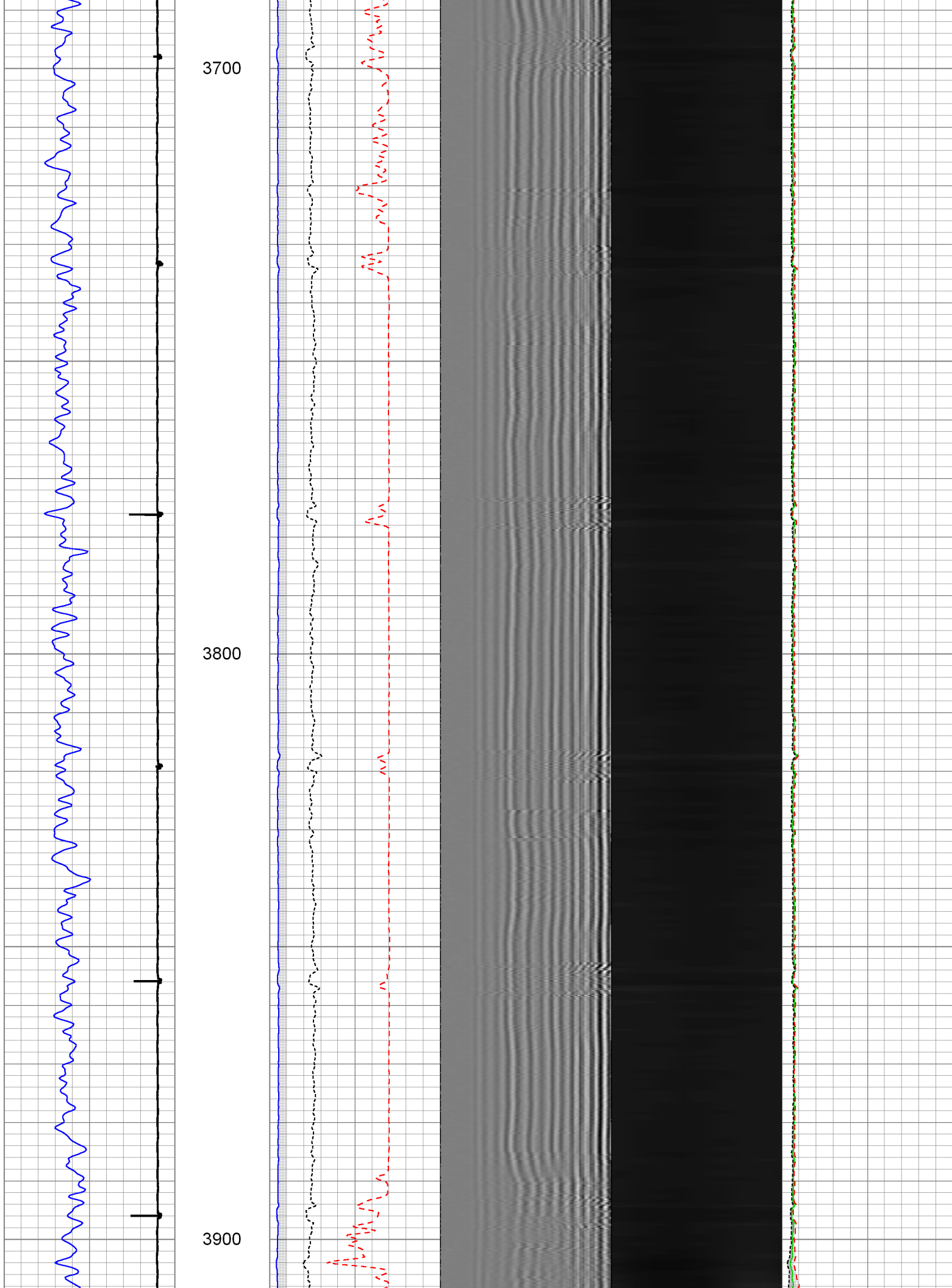
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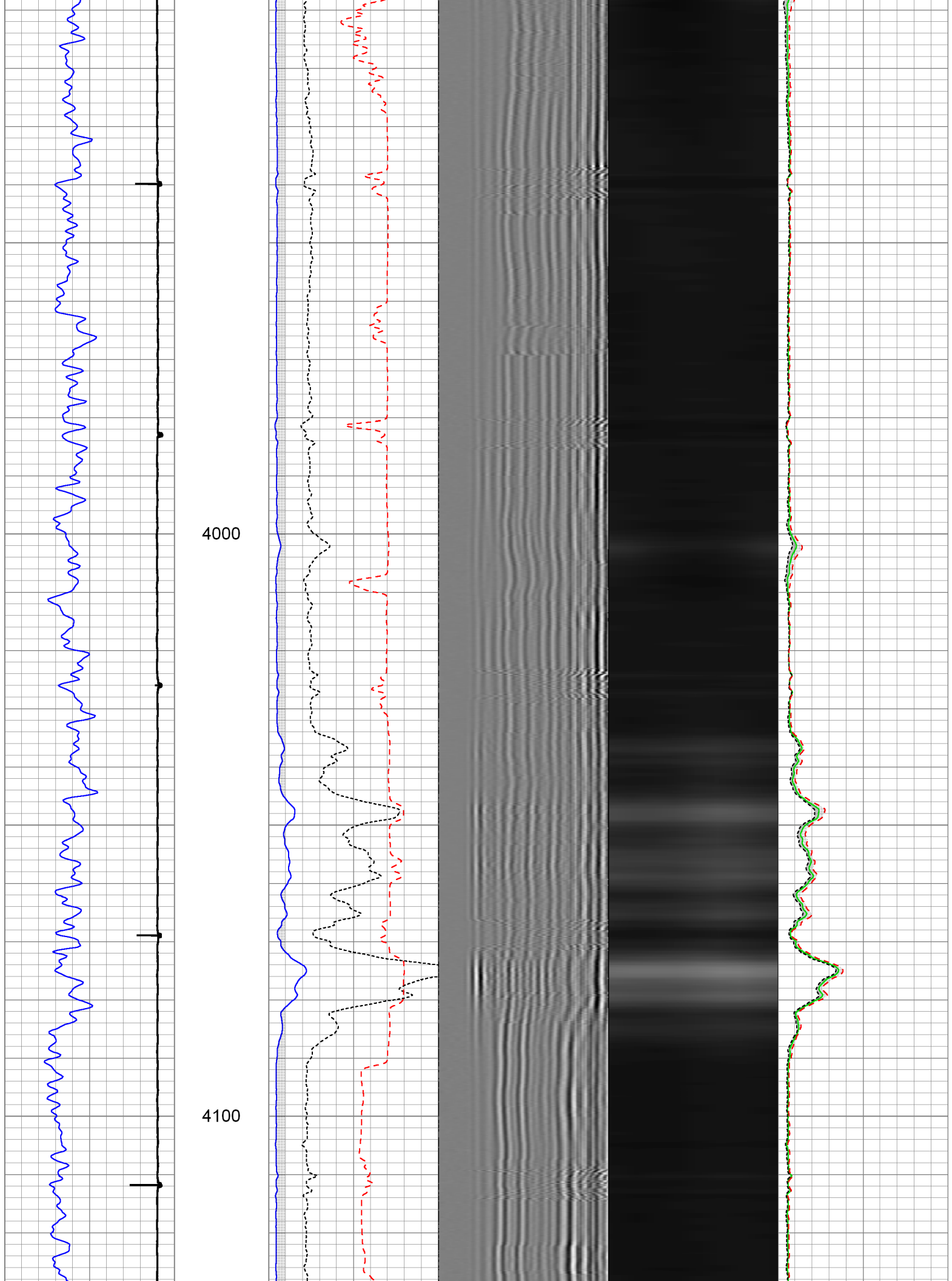
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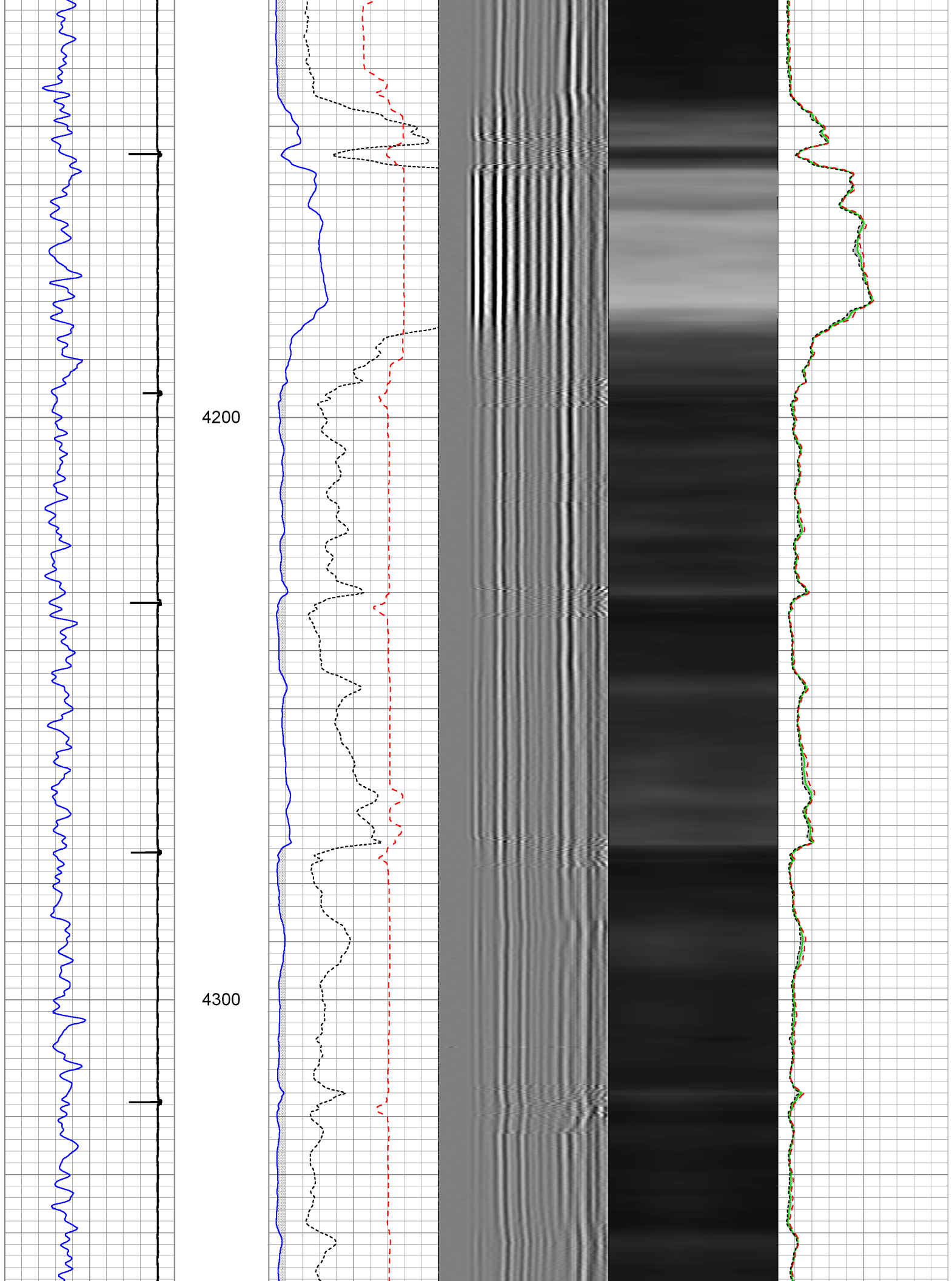
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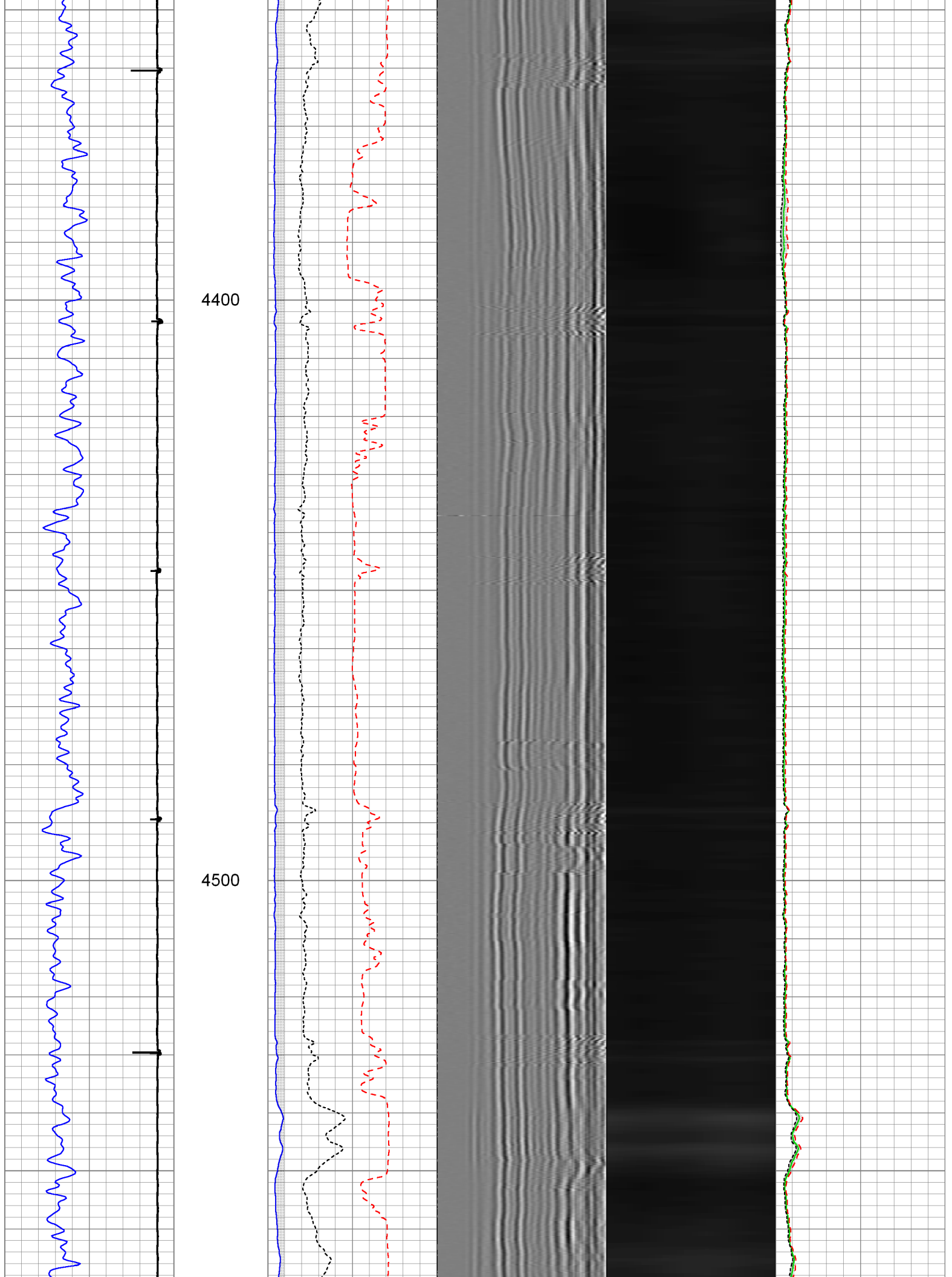
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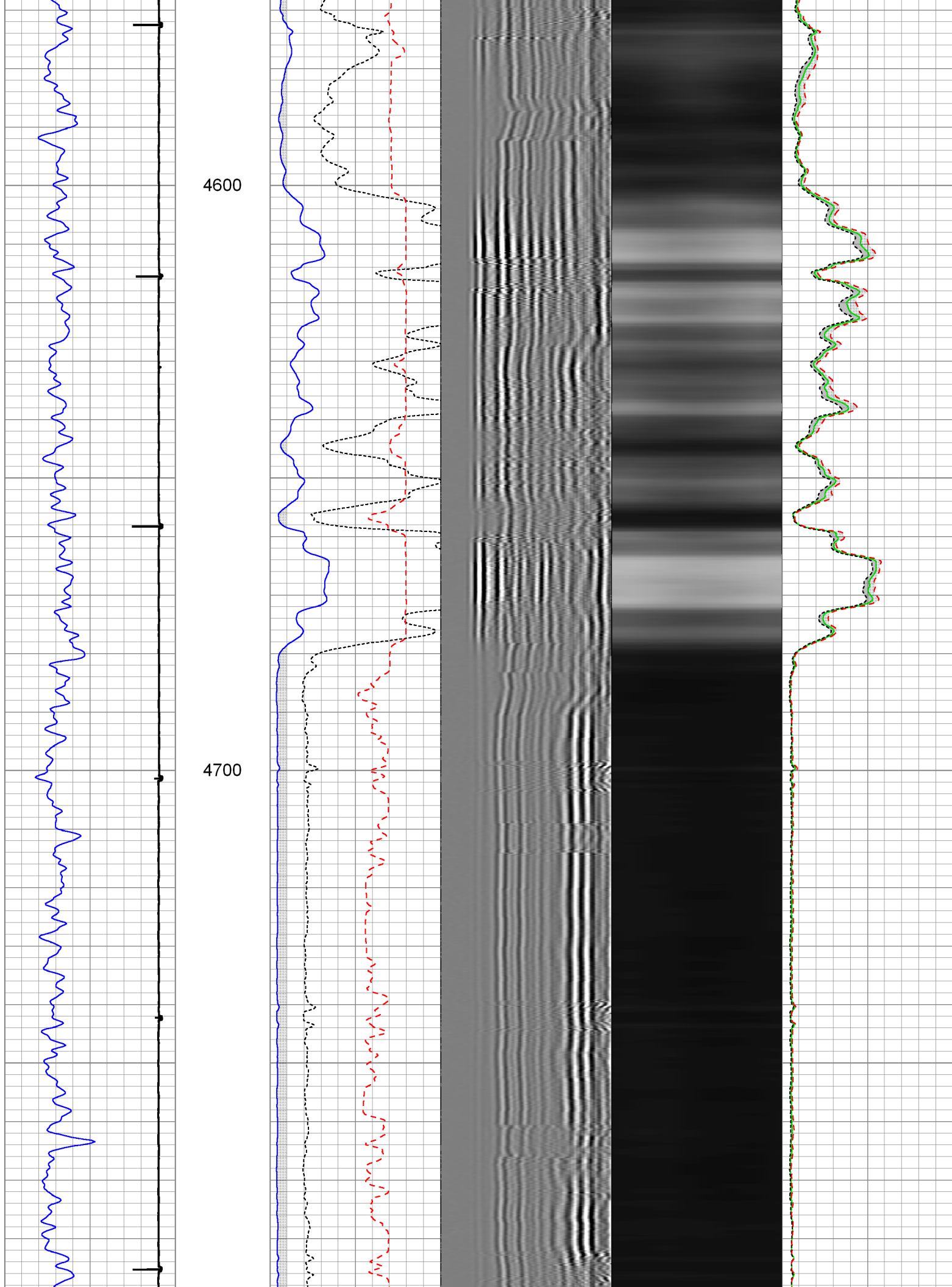






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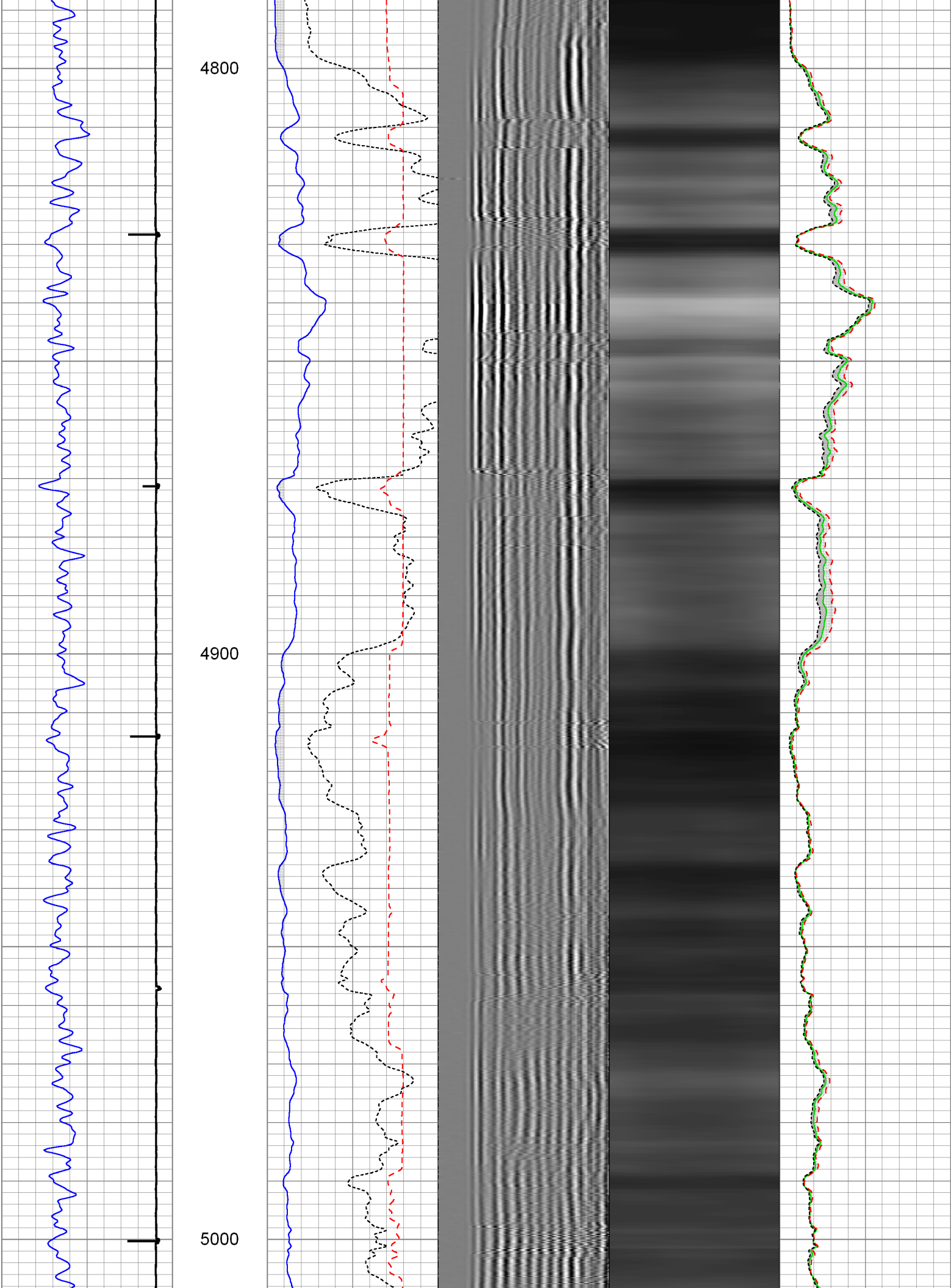
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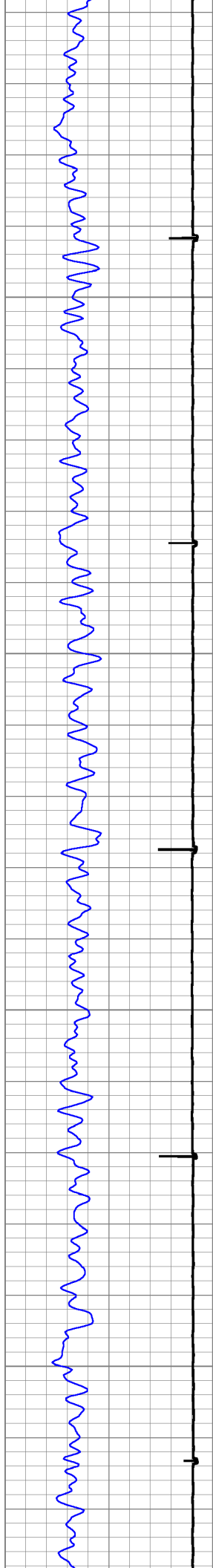
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4900

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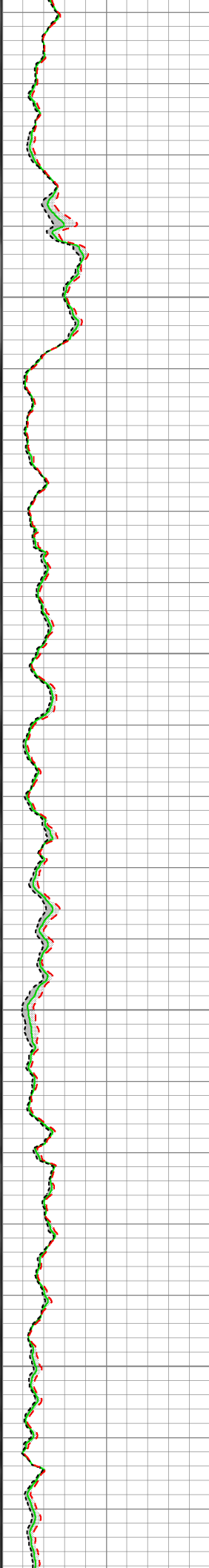
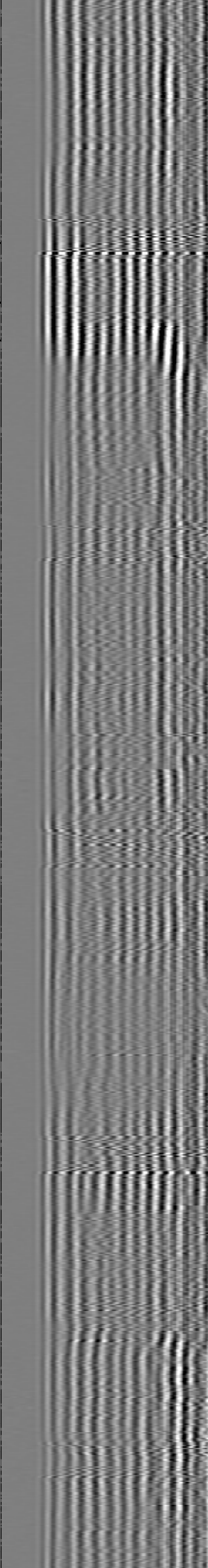
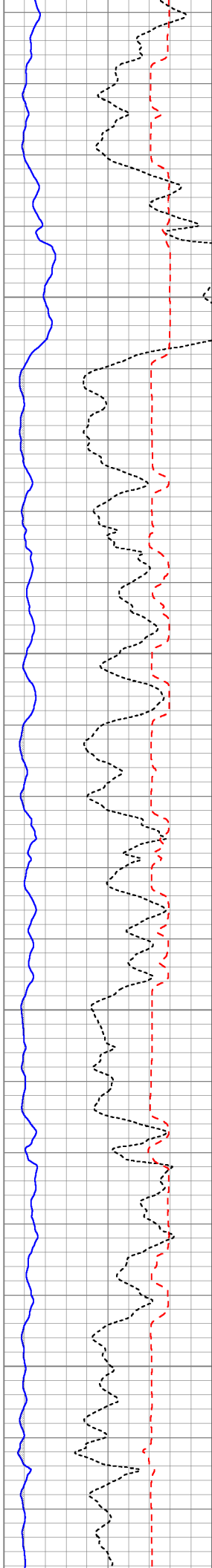


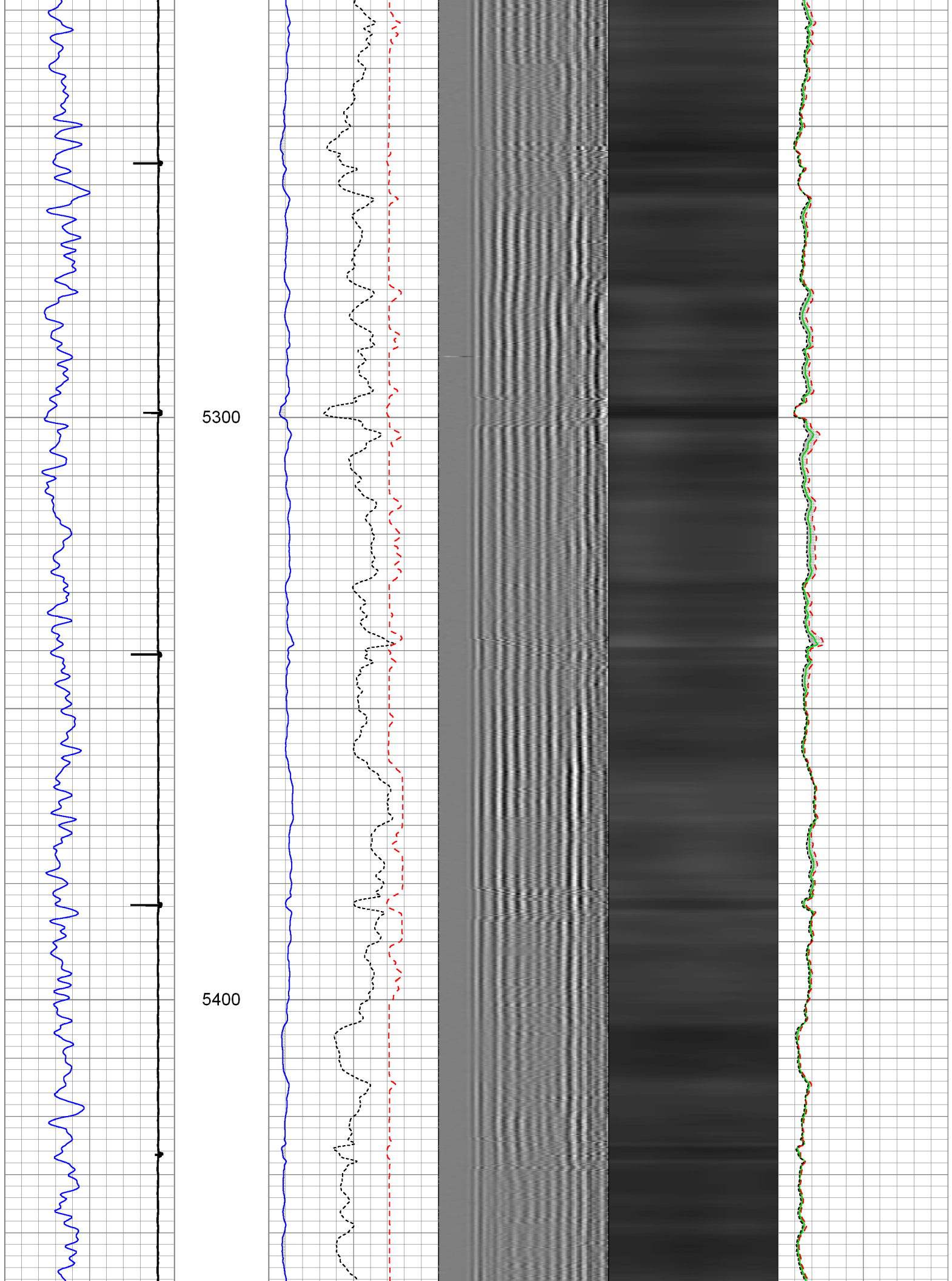


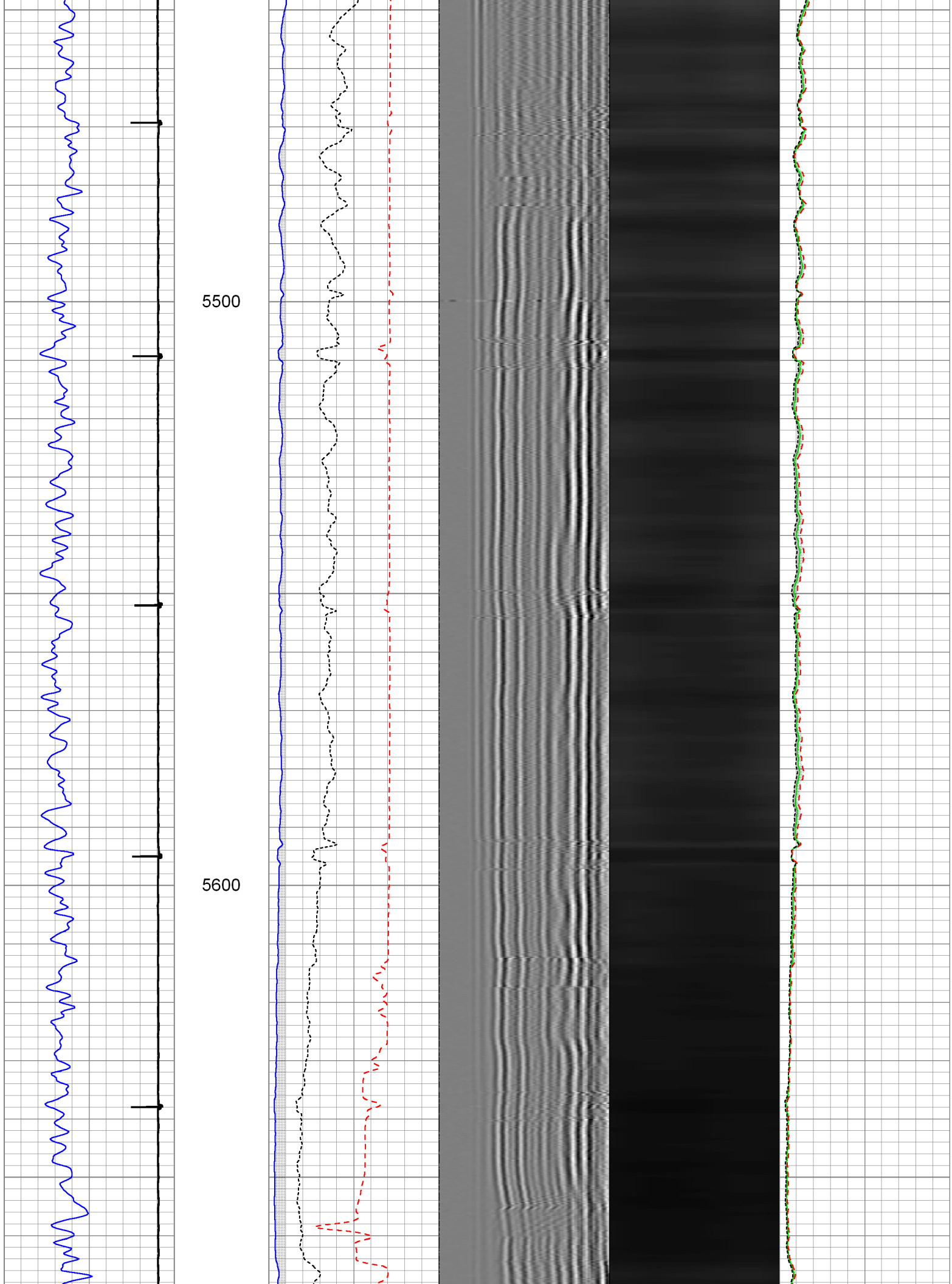


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5200

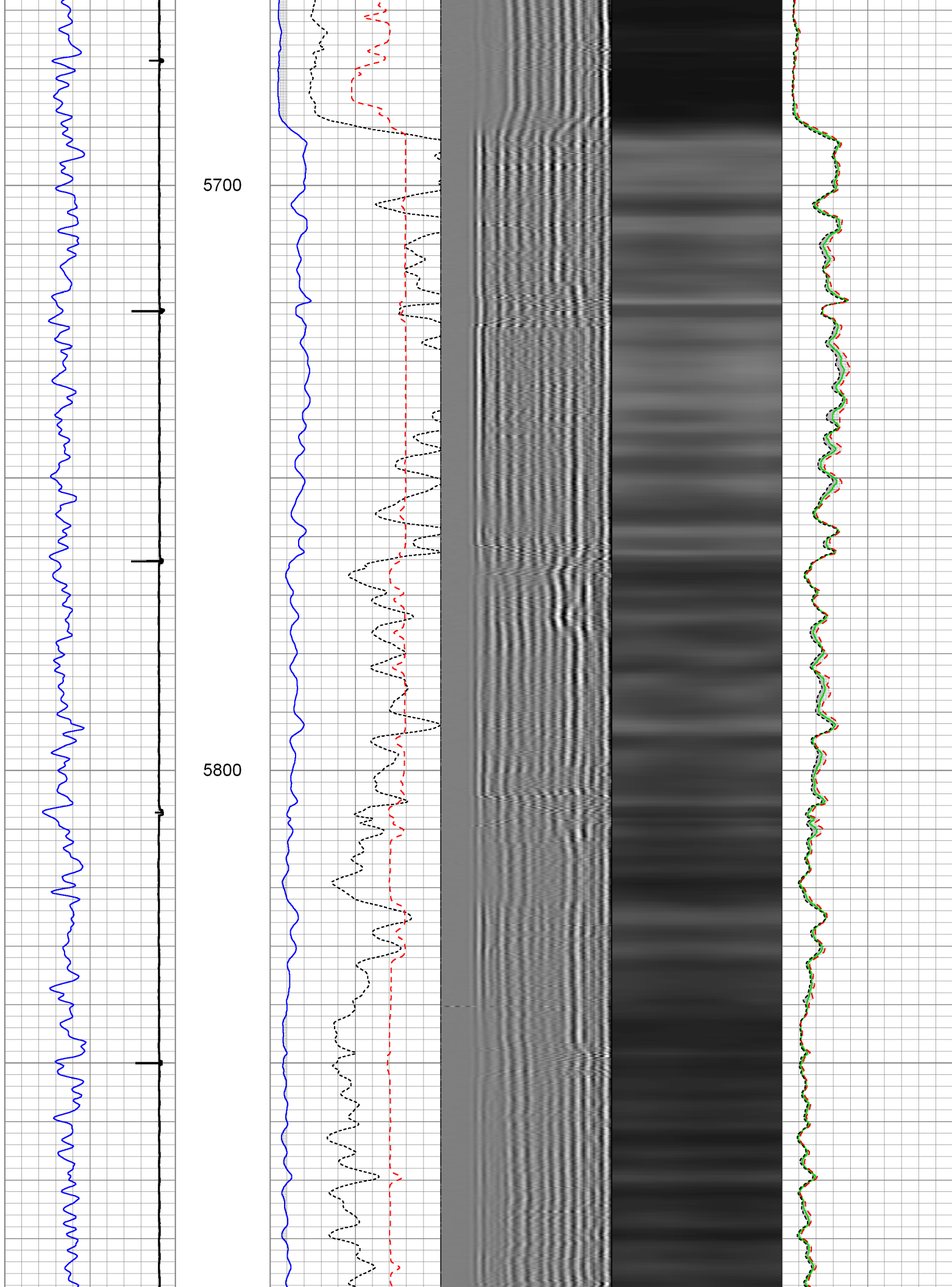






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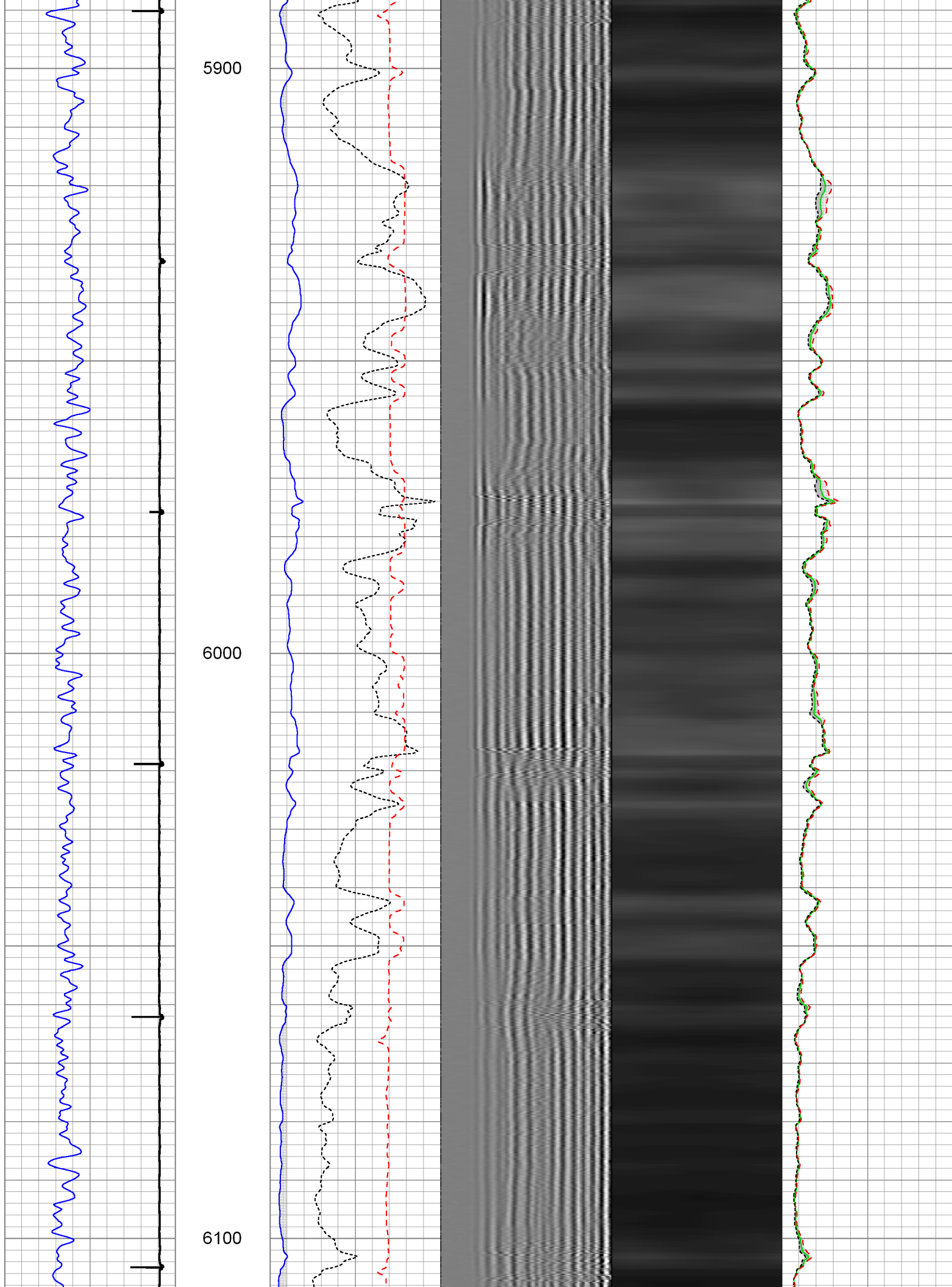
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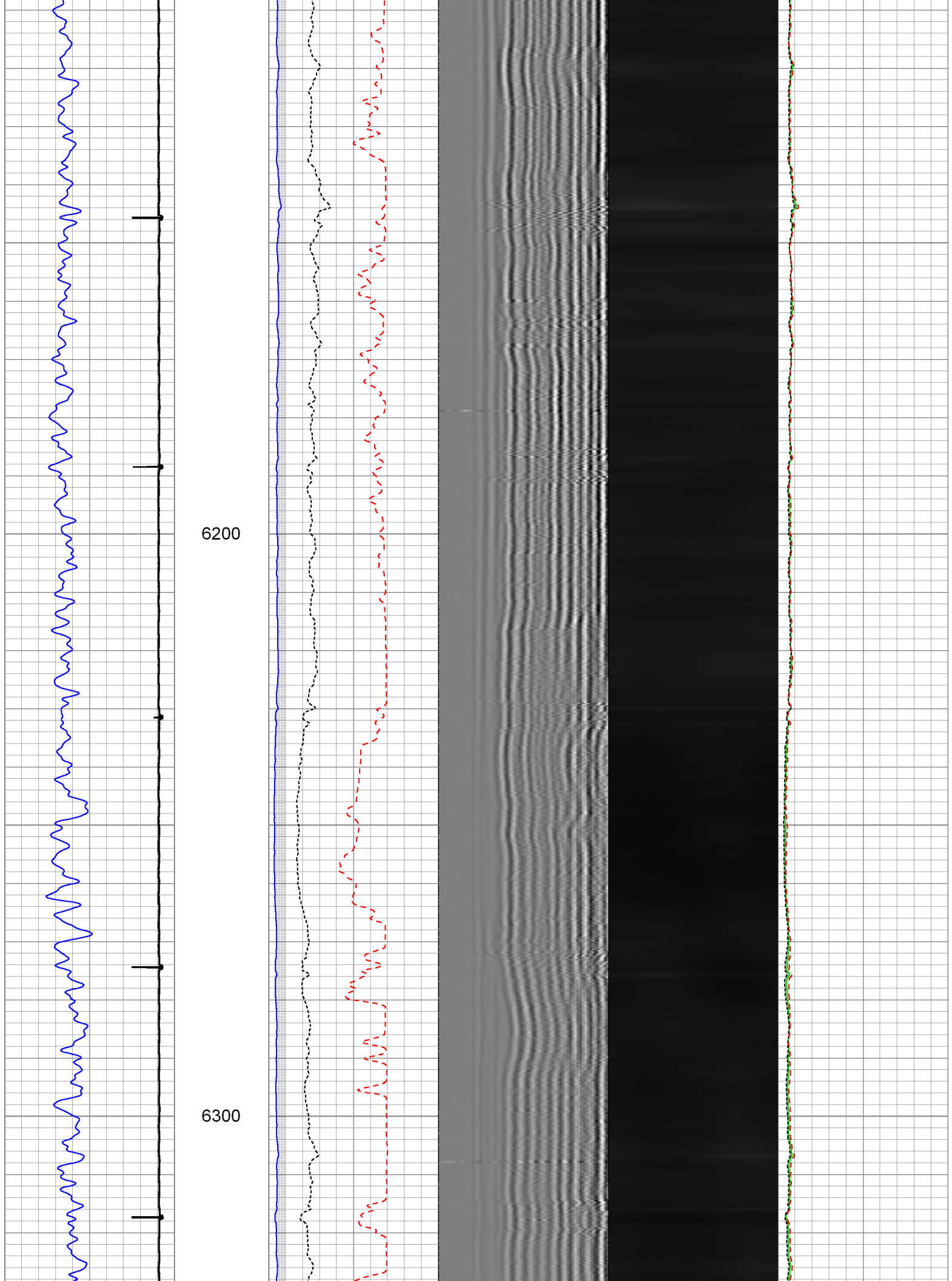
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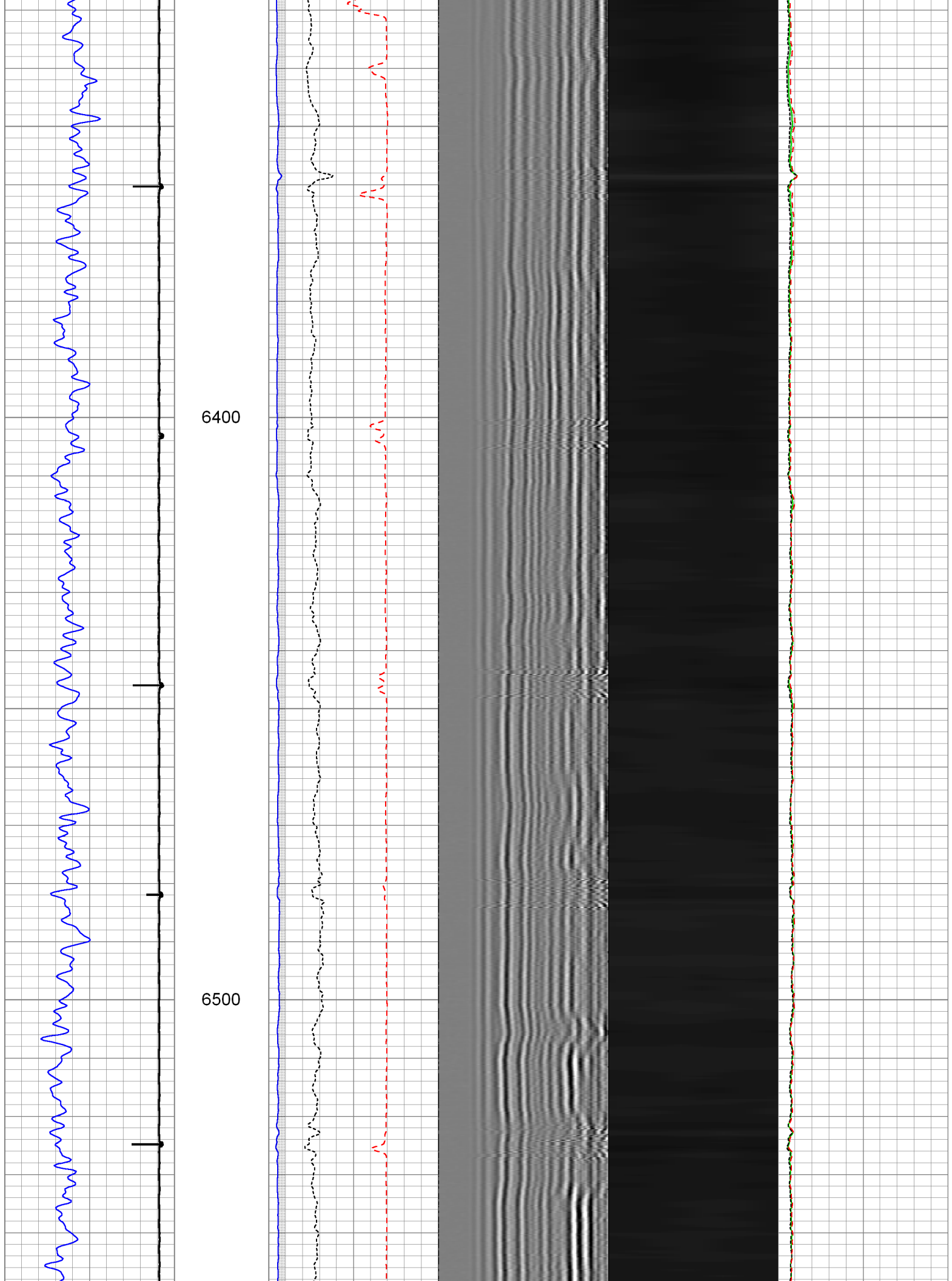
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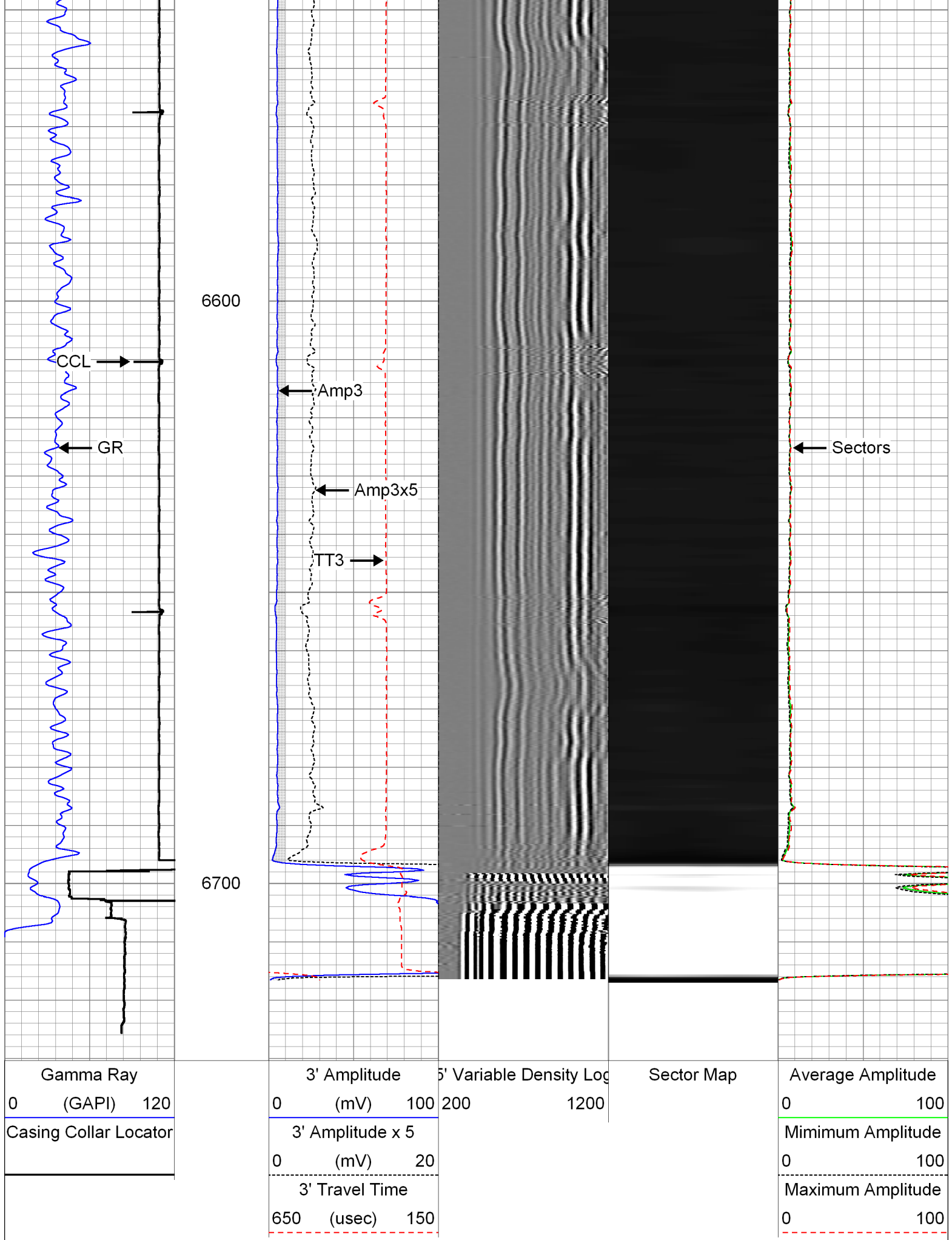








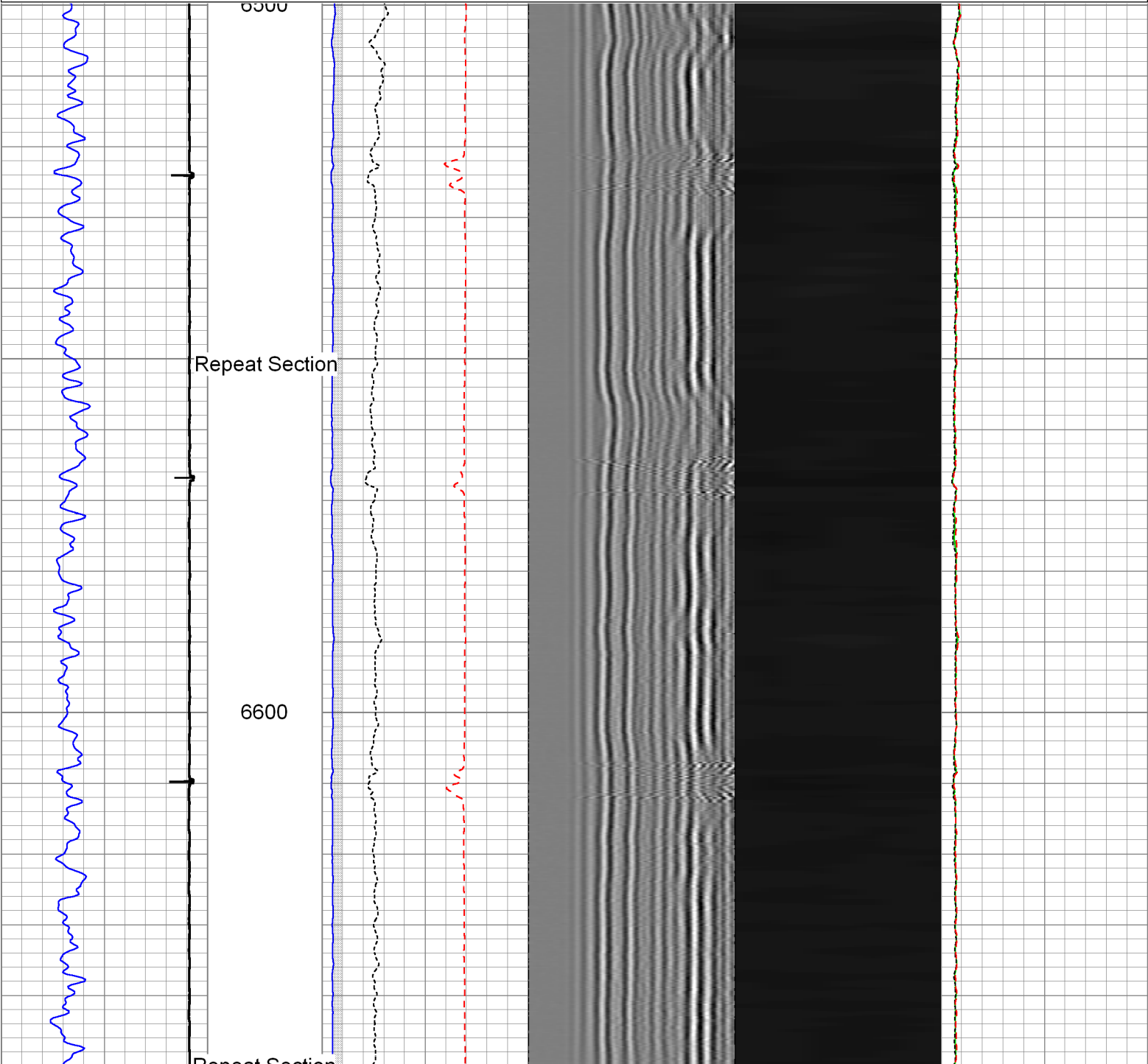


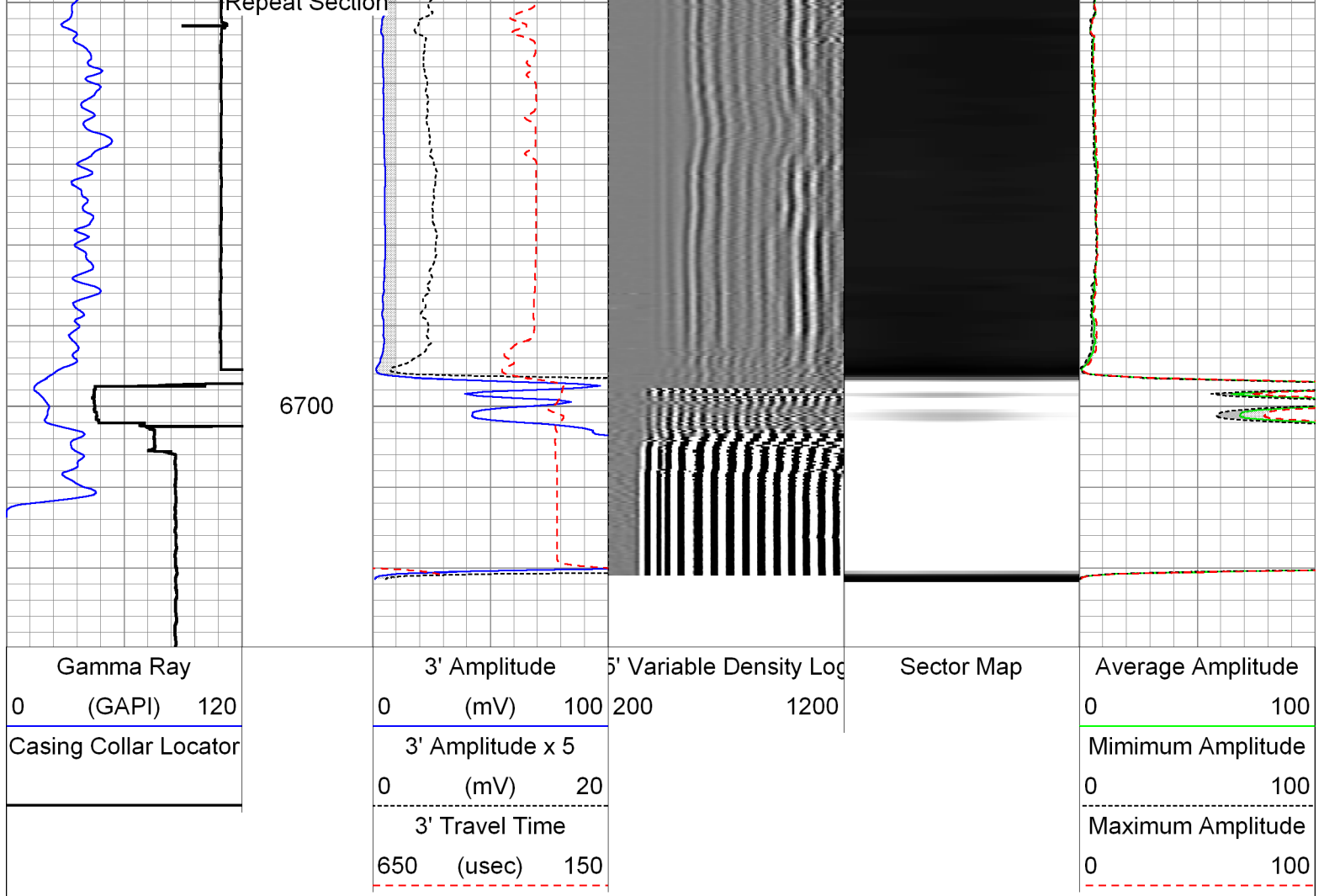


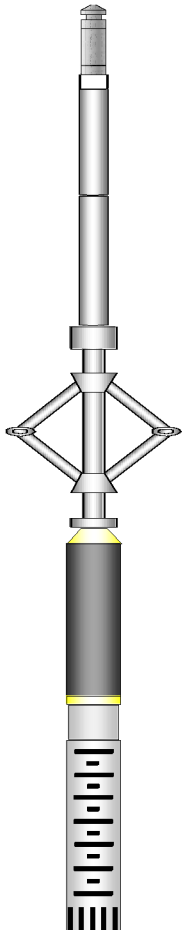

# Repeat section

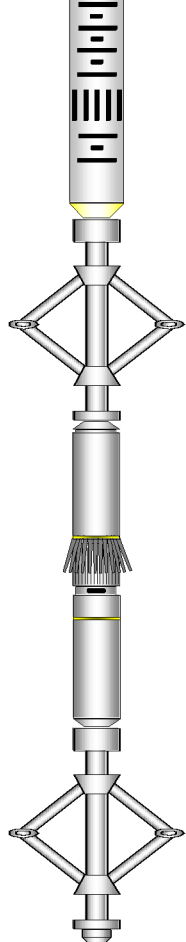




Database File: 0512336552\_anadarko\_maverick 2n-13hz\_06-14-14\_mit\_rbl.db  
Dataset Pathname: pass4  
Presentation Format: rbt4\_mit  
Dataset Creation: Sat Jun 14 12:29:25 2014 by Log 7.0 B1  
Charted by: Depth in Feet scaled 1:240

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





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	23.67		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 (10010522) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (050836) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC #3 -UW_PRC_057 (1038) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
WVFS3	15.85		UW_RBT-UW_RBT_004 (1063) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS2	15.85					
WVFS1	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					
		UW_PRC #4 -UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00	
		UW_MIT-UW_MIT40_042 (10012912) 40 Multifinger Imaging Tool	4.54	2.75	61.10	
		UW_PRC-UW_PRC_057 (1101) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00	
		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20	
MIT	5.41					
TSTAMP	0.00					
Dataset: 0512336552_Anadarko_Maverick 2N-13HZ_06-14-14_MIT_RBL.db: field/well/run1/pass5						
Total Length: 27.92 ft						
Total Weight: 319.30 lb						
O.D. 3.13 in						



(in)	Sens		Sens		Sens		
Finger 01:	1462	275.0	1737	290.0	2027	306.0	2333
Finger 02:	1558	252.0	1810	253.0	2063	263.0	2326
Finger 03:	1429	280.0	1709	290.0	1999	309.0	2308
Finger 04:	1445	286.0	1731	288.0	2019	298.0	2317
Finger 05:	1476	274.0	1750	276.0	2026	287.0	2313
Finger 06:	1414	283.0	1697	292.0	1989	309.0	2298
Finger 07:	1416	282.0	1698	292.0	1990	304.0	2294
Finger 08:	1442	278.0	1720	283.0	2003	299.0	2302
Finger 09:	1427	285.0	1712	295.0	2007	305.0	2312
Finger 10:	1458	274.0	1732	283.0	2015	299.0	2314
Finger 11:	1425	278.0	1703	287.0	1990	307.0	2297
Finger 12:	1408	287.0	1695	294.0	1989	310.0	2299
Finger 13:	1512	266.0	1778	265.0	2043	282.0	2325
Finger 14:	1453	272.0	1725	281.0	2006	300.0	2306
Finger 15:	1442	283.0	1725	292.0	2017	311.0	2328
Finger 16:	1468	275.0	1743	287.0	2030	302.0	2332
Finger 17:	1445	277.0	1722	293.0	2015	307.0	2322
Finger 18:	1484	268.0	1752	277.0	2029	292.0	2321
Finger 19:	1478	272.0	1750	293.0	2043	295.0	2338
Finger 20:	1474	269.0	1743	289.0	2032	298.0	2330
Finger 21:	1448	280.0	1728	307.0	2035	313.0	2348
Finger 22:	1493	264.0	1757	288.0	2045	284.0	2329
Finger 23:	1486	270.0	1756	286.0	2042	293.0	2335
Finger 24:	1490	269.0	1759	288.0	2047	285.0	2332
Finger 25:	1481	275.0	1756	287.0	2043	295.0	2338
Finger 26:	1472	273.0	1745	296.0	2041	296.0	2337
Finger 27:	1508	264.0	1772	287.0	2059	283.0	2342
Finger 28:	1493	275.0	1768	292.0	2060	288.0	2348
Finger 29:	1551	259.0	1810	278.0	2088	276.0	2364
Finger 30:	1454	269.0	1723	296.0	2019	298.0	2317
Finger 31:	1467	276.0	1743	300.0	2043	299.0	2342
Finger 32:	1525	266.0	1791	280.0	2071	275.0	2346
Finger 33:	1467	275.0	1742	306.0	2048	298.0	2346
Finger 34:	1450	271.0	1721	304.0	2025	298.0	2323
Finger 35:	1511	253.0	1764	278.0	2042	271.0	2313
Finger 36:	1496	263.0	1759	289.0	2048	286.0	2334
Finger 37:	1462	277.0	1739	299.0	2038	297.0	2335
Finger 38:	1543	254.0	1797	264.0	2061	269.0	2330
Finger 39:	1482	273.0	1755	283.0	2038	287.0	2325
Finger 40:	1421	286.0	1707	300.0	2007	312.0	2319

Post Survey Calibration Check								
Performed:					Sat Jun 14 15:10:33 2014			
Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	4.000	-0.000	5.001	0.000	6.002	0.001	6.982	-0.009
Finger 02:	4.000	0.000	4.994	-0.003	5.999	-0.000	7.001	0.001
Finger 03:	3.995	-0.002	4.996	-0.002	5.998	-0.001	7.000	0.000
Finger 04:	4.010	0.005	5.000	-0.000	6.004	0.002	7.010	0.005
Finger 05:	4.003	0.002	5.001	0.001	5.998	-0.001	6.999	-0.001
Finger 06:	3.996	-0.002	4.997	-0.001	5.997	-0.002	7.001	0.000
Finger 07:	4.001	0.000	5.009	0.005	5.990	-0.005	7.000	0.000
Finger 08:	4.001	0.000	5.005	0.003	5.997	-0.001	7.000	-0.000
Finger 09:	4.000	0.000	5.034	0.017	6.004	0.002	6.996	-0.002
Finger 10:	4.001	0.001	5.001	0.000	5.995	-0.002	6.988	-0.006
Finger 11:	3.997	-0.001	5.005	0.002	6.002	0.001	7.004	0.002
Finger 12:	3.998	-0.001	4.995	-0.003	5.994	-0.003	6.998	-0.001
Finger 13:	4.011	0.005	4.999	-0.000	6.006	0.003	6.998	-0.001
Finger 14:	4.006	0.003	5.000	0.000	6.005	0.003	7.001	0.001
Finger 15:	4.006	0.003	5.006	0.003	6.007	0.003	6.998	-0.001
Finger 16:	4.007	0.003	5.010	0.005	6.008	0.004	6.998	-0.001
Finger 17:	4.011	0.006	5.006	0.003	6.008	0.004	6.998	-0.001
Finger 18:	4.004	0.002	4.993	-0.003	6.005	0.003	6.996	-0.002
Finger 19:	4.008	0.004	5.015	0.007	5.982	-0.009	7.000	-0.000

Finger 20:	3.999	-0.001	5.005	0.003	5.995	-0.002	7.004	0.002
Finger 21:	4.006	0.003	5.009	0.005	5.996	-0.002	6.988	-0.006
Finger 22:	4.003	0.001	5.003	0.002	5.990	-0.005	7.013	0.006
Finger 23:	3.995	-0.002	4.993	-0.003	6.006	0.003	6.993	-0.004
Finger 24:	4.003	0.002	4.997	-0.002	5.997	-0.001	6.997	-0.001
Finger 25:	4.004	0.002	4.989	-0.005	6.004	0.002	6.995	-0.003
Finger 26:	4.001	0.001	5.003	0.001	6.007	0.004	6.996	-0.002
Finger 27:	3.998	-0.001	5.008	0.004	5.999	-0.000	7.000	-0.000
Finger 28:	4.006	0.003	4.999	-0.000	6.000	0.000	7.011	0.005
Finger 29:	4.001	0.001	5.009	0.005	6.003	0.002	6.994	-0.003
Finger 30:	3.994	-0.003	5.007	0.004	5.998	-0.001	6.995	-0.003
Finger 31:	3.999	-0.000	5.003	0.002	6.000	0.000	7.002	0.001
Finger 32:	4.019	0.009	5.011	0.006	6.004	0.002	6.998	-0.001
Finger 33:	3.995	-0.002	5.004	0.002	5.990	-0.005	6.999	-0.001
Finger 34:	4.003	0.001	5.015	0.007	6.002	0.001	6.999	-0.001
Finger 35:	4.002	0.001	5.007	0.004	5.997	-0.002	6.998	-0.001
Finger 36:	4.006	0.003	5.008	0.004	5.999	-0.001	6.995	-0.003
Finger 37:	4.008	0.004	5.004	0.002	6.003	0.001	7.001	0.001
Finger 38:	4.010	0.005	4.996	-0.002	5.999	-0.000	7.001	0.000
Finger 39:	4.008	0.004	4.999	-0.000	6.003	0.001	7.004	0.002
Finger 40:	4.007	0.003	5.005	0.003	6.010	0.005	6.993	-0.003
Average:	4.003	0.002	5.004	0.002	6.000	0.000	6.999	-0.001

Segmented Cement Bond Log Calibration Report								
Serial Number:			1063					
Tool Model:			UW_RBT_004					
Calibration Casing Diameter:			7.000		in			
Calibration Depth:			837.102		ft			

Master Calibration, performed Sat Jun 14 12:14:53 2014:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.003	0.680	0.800	62.165	89.809	1.052
5FT	-0.005	0.690	0.800	62.165	88.232	1.255
S1	-0.004	0.694	0.000	100.000	143.292	0.525
S2	-0.005	0.649	0.000	100.000	152.870	0.746
S3	-0.003	0.617	0.000	100.000	161.425	0.412
S4	-0.005	0.635	0.000	100.000	156.265	0.729
S5	-0.002	0.666	0.000	100.000	149.629	0.349
S6	-0.003	0.705	0.000	100.000	141.171	0.481
S7	-0.002	0.739	0.000	100.000	134.853	0.329
S8	-0.003	0.728	0.000	100.000	136.842	0.359

Gamma Ray Calibration Report			
Serial Number:		050836	
Tool Model:		UW_PGR_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 I P	
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Company	Refrigerant and Gas Engineers, Ltd.
Well	Maverick 2N-13HZ
Field	Wattenberg
County	Weld
State	Colorado